

Garfield County

No.

10688

Building & Sanitation Department

108 8th Street, Suite #401 Glenwood Springs, Co. 81601

Office 945-8212 Inspection Line 384-5003

Job Address: 3780 Cr 233, Rifle

Locality: 2177-012-00-040

Use of Building: green house - Commercial Business

Owner: Deboer, skyler

Contractor: Rocky Mtn Native Plants

Amount of Permit: \$2,887.09

Date: 10-10-07

Clerk: J Taylor

GARFIELD COUNTY BUILDING PERMIT APPLICATION

108 8th Street, Suite 401, Glenwood Springs, CO 81601
Phone: 970-945-8212 / Fax: 970-384-3470 / Inspection Line: 970-384-5003

Permit No: 10688

Parcel/Schedule No: 217701200404

Job Address: 3780 County Rd. 233, Rifle, Co. 81650 (Corner Property)

| | | | | |
|----|-----------------------|-----------------|-------------------------|----------------|
| 1 | Lot No: | Block No: | Subd. / Exemption: | |
| 2 | Owner: | Address: | Ph: | Wk Ph: |
| 3 | Contractor: | Address: | Ph: | Lic. No. |
| 4 | Architect/Engineer: | Address: | Ph: | Lic. No. |
| 5 | Sq. Ft. of Building: | Sq. Ft. of Lot: | Height: | No. of Floors: |
| 6 | Use of Building: | | | |
| 7 | Describe Work: | | | |
| 8 | Class of Work: | | | |
| 9 | Garage: | | Carport: | |
| 10 | Driveway Permit | | On-Site Sewage Disposal | |
| 11 | Valuation of Work: \$ | | Adjusted Valuations: | |
| 12 | Special Conditions: | | | |

| | | |
|--|---------------------------|----------------------|
| <p align="center">NOTICE</p> <p>A SEPARATE ELECTRICAL PERMIT IS REQUIRED AND MUST BE ISSUED BY THE STATE OF COLORADO.</p> <p>THIS PERMIT BECOMES NULL AND VOID IF WORK OR CONSTRUCTION AUTHORIZED IS NOT COMMENCED WITHIN 180 DAYS, OR, IF CONSTRUCTION OR WORK IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AT ANY TIME AFTER WORK IS COMMENCED.</p> <p>I HEREBY CERTIFY THAT I HAVE READ AND EXAMINED THIS APPLICATION AND KNOW THE SAME TO BE TRUE AND CORRECT. ALL PROVISIONS OF LAWS GOVERNING THIS TYPE OF WORK WILL BE COMPLETED WITHIN WHETHER SPECIFIED HEREIN OR NOT. THE GRANTING OF A PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PERFORMANCE OF CONSTRUCTION.</p> | Plan Check Fee: | Permit Fee: |
| | Total Fee: | Dated Permit Issued: |
| | OCC Group: | Const. Type: |
| | Zoning: | Setbacks: |
| SIGNATURE OF OWNER | DATE | Manu. Home: |
| BLDG. DEPT. APPROVAL/DATE | PLNG. DEPT. APPROVAL/DATE | ISDS No. & Fee: |

AGREEMENT

PERMISSION IS HEREBY GRANTED TO THE APPLICANT AS OWNER, CONTRACTOR AND/OR THE AGENT OF THE CONTRACTOR OR OWNER TO CONSTRUCT THE STRUCTURE AS DETAILED ON PLANS AND SPECIFICATIONS SUBMITTED TO AND REVIEWED BY THE BUILDING DEPARTMENT. IN CONSIDERATION OF THE ISSUANCE OF THIS PERMIT, THE SIGNER, HEREBY AGREES TO COMPLY WITH ALL BUILDING CODES AND LAND USE REGULATIONS ADOPTED BY GARFIELD COUNTY PURSUANT TO AUTHORITY GIVEN LN 30.28.201 CRS AS AMENDED. THE SIGNER FURTHER AGREES THAT IF THE ABOVE SAID ORDINANCES ARE NOT FULLY COMPILED WITH IN THE LOCATION, ERECTION, CONSTRUCTION, AND USE OF THE ABOVE DESCRIBED STRUCTURE, THE PERMIT MAY BE REVOKED BY NOTICE FROM THE COUNTY AND THAT THEN AND THERE IT SHALL BECOME NULL AND VOID. THE ISSUANCE OF A PERMIT BASED UPON PLANS, SPECIFICATIONS AND OTHER DATA SHALL NOT PREVENT THE BUILDING OFFICIAL FROM THEREAFTER REQUIRING THE CORRECTION OF ERRORS IN SAID PLANS, SPECIFICATIONS AND OTHER DATA OR FROM PREVENTING BUILDING OPERATION BEING CARRIED ON THEREUNDER WHEN IN VIOLATION OF THIS CODE OR ANY OTHER ORDINANCE OR REGULATION OF THIS JURISDICTION. THE REVIEW OF SUBMITTED PLANS AND SPECIFICATIONS AND INSPECTIONS CONDUCTED THEREAFTER DOES NOT CONSTITUTE AN ACCEPTANCE OF ANY RESPONSIBILITIES OR LIABILITIES BY GARFIELD COUNTY FOR ERRORS, OMISSIONS OR DISCREPANCIES. THE RESPONSIBILITY FOR THESE ITEMS AND IMPLEMENTATION DURING CONSTRUCTION RESTS SPECIFICALLY WITH THE ARCHITECT, DESIGNER, BUILDER, AND OWNER. COMMENTS ARE INTENDED TO BE CONSERVATIVE AND IN SUPPORT OF THE OWNERS INTEREST.

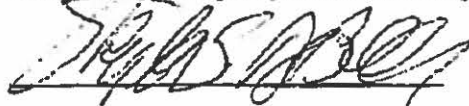
I HEREBY ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THE AGREEMENT ABOVE (INITIAL): SP

CK 2632 9/17/07 \$ 1424.90 BP-10-1009
CK 2646
\$ 1462.19

The following items are required by Garfield County for a final inspection:

1. A final Electrical Inspection from the Colorado State Electrical Inspector;
 2. Permanent address assigned by Garfield County Building Department posted where readily visible from access road;
 3. A finished roof, a lockable house, complete exterior siding, exterior doors and windows installed, a complete kitchen with cabinets, a sink with hot & cold running water, non-absorbent kitchen floor coverings, counter tops and finished walls, ready for stove and refrigerator, all necessary plumbing;
 4. All bathrooms must be complete, with washbowl, tub or shower, toilet stool, hot and cold running water, non-absorbent floors and walls finished and a privacy door;
 5. All steps outside or inside over three (3) steps must have handrails, guard rails on balconies or decks over 30" high constructed to all IBC and IRC requirements;
 6. Outside grading done to where water will detour away from the building;
 7. Exceptions to the outside steps, decks and grading may be made upon the demonstration of extenuating circumstances, i.e. weather, but a Certificate of Occupancy will not be issued until all the required items are completed and a final inspection made;
 8. A final inspection sign off by the Garfield County Road & Bridge Department for driveway installation, where applicable; as well as any final sign off by the Fire District, and/or State Agencies where applicable.
 9. If you will be connecting to a public water and/or sewer system, proof of the tap fees have been paid and the connections inspected by the service provider prior to issuance of a C.O.
- A CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL ALL THE ABOVE ITEMS HAVE BEEN COMPLETED.**
- ****A CERTIFICATE OF OCCUPANCY MAY TAKE UP TO 5 BUSINESS DAYS TO BE PROCESSED AND ISSUED.**
- ****CANNOT OCCUPY OR USE DWELLING UNTIL A CERTIFICATE OF OCCUPANCY (C.O.) IS ISSUED. OCCUPANCY OR USE OF DWELLING WITHOUT A C.O. WILL BE CONSIDERED AN ILLEGAL OCCUPANCY AND MAY BE GROUNDS FOR VACATING PREMISES UNTIL ABOVE CONDITIONS ARE MET.**

I understand and agree to abide by the above conditions for occupancy, use and the issuance of a Certificate of Occupancy for the dwelling under building permit # 10688



9/20/07

Signature
Bpapplicationoctober2006

Date

VALUATION/FEE DETERMINATION

Applicant DeBoer
Address 3750 CA 233
Date 10-4-07

Subdivision _____
Lot/Block _____
Contractor owner

Finished (Livable Area):

Main
Upper
Lower
Other

Total Square Feet
Valuation

Basement:

Unfinished
Conversion of Unfinished to Finished
Plan Check Fee for Conversion
Valuation

Garage:

Valuation

Crawl Space:

Valuation

Decks/Patios:

Covered
Valuation
Open
Valuation

Total Valuation

NO value for type of
const use
Contract Amount
235 000

GARFIELD COUNTY BUILDING AND PLANNING
970-945-8212

**MINIMUM APPLICATION REQUIREMENTS
FOR
CONSTRUCTION OF
COMMERCIAL OR MULTI-FAMILY RESIDENTIAL BUILDINGS**
Including
**NEW CONSTRUCTION
ADDITIONS
ALTERATIONS**
And
MOVED BUILDINGS

In order to understand the scope of the work intended under a permit application and expedite the issuance of a permit it is important that complete information be provided. When reviewing a plan and it's discovered that required information has not been provided by the applicant, this will result in the delay of the permit issuance and in proceeding with building construction. The owner or contractor shall be required to provide this information before the plan review can proceed. Other plans that are in line for review may be given attention before the new information may be reviewed after it has been provided to the Building Department.

Please review this document to determine if you have enough information to design your project and provide adequate information to facilitate a plan review. Also, please consider using a design professional for assistance in your design and a construction professional for construction of your project. Any project with more than ten (10) occupants requires the plans to be sealed by a Colorado Registered Design Professional.

To provide for a more understandable plan and in order to determine compliance with the building, plumbing and mechanical codes, applicants are requested to review the following checklist prior to and during design.

Plans to be included for a Building Permit must be on draft paper at least 18"x 24"" and drawn to scale.

Plans must include a floor plan, a concrete footing and foundation plan, elevations all sides with decks, balcony steps, hand rails and guard rails, windows and doors, including the finish grade and original grade line. A section showing in detail, from the bottom of the footing to the top of the roof, including re-bar, anchor bolts, pressure treated plates, floor joists, wall studs and spacing, insulation, sheathing, house-rap, (which is required), siding or any approved building material. Engineered foundations may be required. Check with the Building Department.

A window schedule. A door schedule. A floor framing plan, a roofing framing plan, roof must be designed to withstand a 40 pound per square foot up to 7,000 feet in elevation, a 90 M.P.H. windspeed, wind exposure B or C, and a 36 inch frost depth.

All sheets need to be identified by number and indexed. All of the above requirements must be met or your plans will be returned.

All plans submitted must be in compliance with the 2003 IBC, IPC, IMC and IFGC.

Applicants are required to indicate appropriately and to submit completed checklist at time of application for a permit:

1. Is a site plan included that identifies the location of the proposed structure, additions or other buildings, setback easements, and utility easements showing distances to the property lines from each corner of the proposed structure prepared by a licensed surveyor and has the surveyors signature and professional stamp on the drawing? Slopes of 30% or more on properties must be show on site plan. (NOTE: Section 106.2) Any site plan for the placement of any portion of a structure within 50 ft. of a property line and not within a previously surveyed building envelope on a subdivision final plat shall be prepared by a licensed surveyor and have the surveyors signature and professional stamp on the drawing. Any structure to be built within a building envelope of a lot shown on a recorded subdivision plat, shall include a copy of the building envelope as it is shown on the final plat with the proposed structure located within the envelope.
Yes X

2. Does the site plan when applicable include the location of the I.S.D.S. (Individual Sewage Disposal System) and distances to the property lines, wells (on subject property and adjacent properties), streams or water courses? This information must be certified by a licensed surveyor with their signature and professional stamp on the design.
Yes _____ No _____ Not necessary for this project X

3. Does the site plan indicate the location and direction of the State, County or private road accessing the property?
Yes X

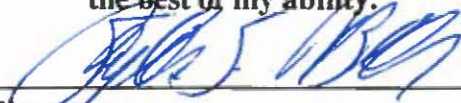
4. Is the I.S.D.S. (Individual Sewage Disposal System) designed, stamped and signed by a Colorado Registered Engineer?
Yes _____ No _____ Not necessary for this project
5. Are the plans submitted for application review **construction drawings** and not drawings that are stamped or marked identifying them as "Not for construction, for permit issuance only", "Approval drawings only", "For permit issuance only" or similar language?
Yes No _____ Not necessary for this project _____
6. Do the plans include a foundation plan indicating the size, location and spacing of all reinforcing steel in accordance with the uniform building code or per stamped engineered design?
Yes No _____ Not necessary for this project _____
7. If the building is a pre-engineered structure, is there a stamped, signed engineered foundation plan for this building?
Yes No _____ Not necessary for this project _____
8. Do the plans indicate the location and size of ventilation openings for under floor crawl spaces and the clearances required between wood and earth?
Yes _____ No _____ Not necessary for project
9. Do the plans indicate the size and location of the ventilation openings for the attic, roof joist spaces and soffits?
Yes _____ No _____ Not necessary for this project
10. Do the plans include design loads as required under the IBC or IRC for roof snowloads, (a minimum of 40 pounds per square foot in Garfield County)?
Yes No _____ Not necessary for this project _____
11. Do the plans include design loads as required for floor loads under the IBC or IRC?
Yes _____ No _____ Not necessary for this project
12. Does the plan include a building section drawing indicating foundation, wall, floor, and roof construction?
Yes No _____ Not necessary for this project _____
13. Is the wind speed and exposure design included in the plan?
Yes No _____ Not necessary for this project _____
14. Does the building section drawing include size and spacing of floor joists, wall studs, ceiling joists, roof rafters or joists or trusses?
Yes No _____ Not necessary for this project _____

15. Does the building section drawing or other detail include the method of positive connection of all columns and beams?
 Yes No Not necessary for this project
16. Does the elevation plan indicate the height of the building or proposed addition from the **undisturbed grade** to the midpoint between the ridge and eave of a gable or shed roof or the top of a flat roof? (Check applicable zone district for building height maximum)
 Yes No Not necessary for this project
17. Does the plan include any stove or zero clearance fireplace planned for installation including make and model and Colorado Phase II certifications or Phase II EPA certification?
 Yes No Not necessary for this project
18. Does the plan include a masonry fireplace including a fireplace section indicating design to comply with the IBC or IRC?
 Yes No Not necessary for this project
19. Does the plan include a window schedule or other verification that egress/rescue windows from sleeping rooms and/or basements comply with the requirements of the IBC or IRC?
 Yes No Not necessary for this project
20. Does the plan include a window schedule or other verification that windows provide natural light and ventilation for all habitable rooms?
 Yes No Not necessary for this project
21. Do the plans indicate the location of glazing subject to human impact such as glass doors, glazing immediately adjacent to such doors; glazing adjacent to any surface normally used as a walking surface; sliding glass doors; fixed glass panels; shower doors and tub enclosures and specify safety glazing for these areas?
 Yes No Not necessary for this project
22. Do the plans include a complete design for all mechanical systems planned for installation in this building?
 Yes No Not necessary for this project
23. Have all areas in the building been accurately identified for the intended use? (Occupancy as identified in the IBC Chapter 3)
 Yes No Not necessary for this project
24. Does the plan indicate the quantity, form, use and storage of any hazardous materials that may be in use in this building?
 Yes No Not necessary for this project

25. Is the location of all natural and liquid petroleum gas furnaces, boilers and water heaters indicated on the plan?
 Yes _____ No _____ Not necessary for this project X
26. Do the plans indicate the location and dimension of restroom facilities and if more than four employees and both sexes are employed, facilities for both sexes?
 Yes _____ No _____ Not necessary for this project X
27. Do the plans indicate that restrooms and access to the building are handicapped accessible?
 Yes _____ No _____ Not necessary for this project X
28. Have two (2) complete sets of construction drawings been submitted with the application?
 Yes X No _____
29. Have you designed or had this plan designed while considering building and other construction code requirements?
 Yes X No _____ Not necessary for this project _____
30. Does the plan accurately indicate what you intend to construct and what will receive a final inspection by the Garfield County Building Department?
 Yes X No _____
31. Do your plans comply with all zoning rules and regulations in the County related to your zone district? For corner lots see supplemental section 5.05.03 in the Garfield County Zoning Resolution for setbacks.
 Yes X No _____
32. Do you understand that approval for design and/or construction changes are required **prior** to the implementation of these changes?
 Yes X No _____
33. Do you understand that the Building Department will collect a "Plan Review" fee from you at the time of application and that you will be required to pay the "Permit" fee as well as any "Septic System" or "Road Impact" fees required, at the time you pick up your building permit?
 Yes X No _____
34. Are you aware that you are required to call for all inspections required under the IBC including approval on a final inspection **prior** to receiving a Certificate of Occupancy and occupancy of the building?
 Yes X No _____

35. Are you aware that the Permit Application must be signed by the Owner or a written authority be given for an Agent and that the party responsible for the project must comply with the Uniform Codes?
Yes No
36. Are you aware that you must call in for an inspection by 3:30 the business day before the requested inspection in order to receive it the following business day? Inspections will be made between 7:30 a.m. and 3:30 p.m. Monday through Friday. Inspections are to be called in to 384-5003.
37. Are you aware that requesting inspections on work that is not ready or not accessible will result in a \$50.00 re-inspection fee?
Yes No
38. Are you aware that prior to issuance of a building permit you are required to show proof of a driveway access permit or obtain a statement from the Garfield County Road & Bridge Department stating one is not necessary? You can contact the Road & Bridge Department at 625-8601.
Yes No
39. Do you understand that you will be required to hire a State of Colorado Licensed Electrician and Plumber to perform installations and hookups? The license number will be required at time of inspection.
Yes No
40. Are you aware, that on the front of the building permit application you will need to fill in the Parcel/ Schedule Number for the lot you are applying for this permit on prior to submittal of the building permit application? Your attention in this is appreciated.
Yes No
41. Do you know that the local fire district may require you to submit plans for their review of fire safety issues? Yes No (Please check with the building department about this requirement)
42. Do you understand that if you are planning on doing any excavating or grading to the property prior to issuance of a building permit that you will be required to obtain a grading permit?
Yes
43. Did an Architect seal the plans for your commercial project? State Law requires any commercial project with occupancy of more than 10 persons as per Section 1004 of the IBC to prepare the plans and specifications for the project.
Yes No Not Necessary for this project

I hereby acknowledge that I have read, understand, and answered these questions to the best of my ability.



Signature

9/17/07

Date

Phone: (970) 25-4469 (days); (970) 319-6562 (evenings)

Project Name: Rocky Mt. Native Plants Co. Greenhouse

Project Address: 3780 Sil + Mesa Rd, Rifle, CO 81650

Note:

If you answered "No" on any of these questions you may be required to provide this information at the request of the Building Official prior to beginning the plan review process. Delays in issuing the permit are to be expected. Work may not proceed without the issuance of the permit.

*If you have answered "Not necessary for this project" on any of the questions and it is determined by the Building Official that the information is necessary to review the application and plans to determine minimum compliance with the adopted codes, please expect the following:

- A. The application may be placed behind more recent applications for building permits in the review process and not reviewed until required information has been provided and the application rotates again to first position for review.
- B. Delay in issuance of the permit.
- C. Delay in proceeding with construction.

*If you answered "No" to this question the circumstances described in the question could result in a "Stop Work Order" being issued or a "Certificate of Occupancy" not being issued.

Bpcomm
April 2006

PLAN REVIEW CHECKLIST

Applicant DeBoer

Date 10-4-07

Building

- Engineered Foundation
- Driveway Permit
- Surveyed Site Plan *more 50'*
- Septic Permit and Setbacks
- MP* Grade/Topography 30%
- MP* Attach Residential Plan Review List
- Minimum Application Questionnaire
- Subdivision Plat Notes
- MP* Fire Department Review
- Valuation Determination/Fees
- Red Line Plans/Stamps/Sticker
- MP* Attach Conditions
- Application Signed
- Plan Reviewer To Sign Application
- Parcel/Schedule No.
- MP* 40# Snowload Letter- Manf. Hms.
- Soils Report

Planning/Zoning

- Property Line Setbacks
- 30ft Stream Setbacks
- Flood Plain
- Building Height
- Zoning Sign-off
- Road Impact Fees
- HOA/DRC Approval
- Grade/Topography 40%
- Planning Issues
- Subdivision Plat Notes

GENERAL NOTES:

p.3

970-927-0919

Skyler DeBoer

Sep 20 07 11:50a

ACCOUNT # R20965
PARCEL # 21704 00104
TAX DISTRICT 021

RURAL PROPERTY TAX NOTICE
2006 TAXES DUE IN 2007

GEORGIA CHAMBERLAIN
TREASURER
P.O. Box 1066
Glenwood Springs, CO 81602-1066
www.garfield-county.com



Sep 20 07 11:16a

Rocky Mtn Native Plants

(970) 625-3276

P2

| TAX AUTHORITY | TAX LEVY | TEMP. TAX CREDIT | GENERAL TAX | VALUATION | ACTUAL | ASSESSED | | | | | | | | | | | | |
|--|--------------|--------------------|-------------|--|---------|----------|---------|----------|--------|------------|--------------|-------------|-------------|--------------|-------------|--------------|--------------|-------------|
| GARFIELD COUNTY | 3.425 | | 463.30 | | | | | | | | | | | | | | | |
| RIFLE & RURAL FIRE | 6.284 | | 536.90 | LAND/ | 68,300 | 19,810 | | | | | | | | | | | | |
| COLO RIVER WATER CONS | 0.253 | 0.032 | 18.83 | BUILDING/IMPROV | 303,040 | 65,630 | | | | | | | | | | | | |
| SILT WATER CONS | 0.904 | | 77.24 | PERSONAL | 0 | 0 | | | | | | | | | | | | |
| GRAND RIVER HOSPITAL | 4.597 | 0.673 | 430.71 | TOTAL | 371,340 | 85,440 | | | | | | | | | | | | |
| SCHOOL DISTRICT RE-2 | 7.672 | | 672.58 | NET TOTAL | 371,340 | 85,440 | | | | | | | | | | | | |
| COLORADO MTN COLLEGE | 3.997 | | 341.50 | MESSAGES | | | | | | | | | | | | | | |
| GARFIELD ROAD & BRIDGE | 3.700 | | 316.13 | SENIOR PROPERTY TAX EXEMPTION | | | | | | | | | | | | | | |
| GARFIELD HUMAN SERVICES | 0.930 | | 79.46 | To qualify for the Senior Exemption, taxpayers must be at least 66 years old on January 1 of the year the application is filed and must have owned and lived in their homes for at least 10 years. Individuals, who qualified for the exemption on January 1, 2007, and have not yet been approved, may file an application with the County Assessor by July 16, 2007. Please contact your Assessor at 970-945-9134. | | | | | | | | | | | | | | |
| GARFIELD CAP EXPEND | 3.600 | | 307.58 | | | | | | | | | | | | | | | |
| SCHOOL DISTRICT RE-2 BOND | 7.060 | | 603.21 | | | | | | | | | | | | | | | |
| RIFLE & RURAL FIRE BOND | 0.104 | | 8.89 | | | | | | | | | | | | | | | |
| GRAND RIVER HOSPITAL BOND | 0.673 | | 57.50 | | | | | | | | | | | | | | | |
| TOTAL | NET LEVY --> | 45.694 | 3904.08 | | | | | | | | | | | | | | | |
| | | SILT WATER PROJECT | 240.00 | | | | | | | | | | | | | | | |
| | | GRAND TOTAL | \$ 4,144.08 | | | | | | | | | | | | | | | |
| SB 25 - In absence of State Legislative Funding, your School General Fund Levy would have been 19.481 | | | | | | | | | | | | | | | | | | |
| LEGAL DESCRIPTION OF PROPERTY | | | | Unpaid prior year taxes: | | | | | | | | | | | | | | |
| SECT,TWN,RNG:1-6-03 DIST: SEC 1 LOT 3 (54.06AC), N2SE1/4 AKA TRACTS 5,6,11,12 DESC: 21 & 22 ANTLERS ORCHARD DEVELOPMENT. BK:0867 PG:0771 BK:0755 PG:0127 BK:0754 PG:0597 BK:1063 PG:0135 BK:1063 PG:0131 BK:1063 PG:0129 BK:1063 PG:0127 BK:1063 PG:0128 ADDITIONAL LEGAL DESC. ON FILE WITH ASR | | | | <table border="1"> <thead> <tr> <th>PAYMENT</th> <th>DUE DATE</th> <th>AMOUNT</th> </tr> </thead> <tbody> <tr> <td>FIRST HALF</td> <td>FEB 28, 2007</td> <td>\$ 2,072.04</td> </tr> <tr> <td>SECOND HALF</td> <td>JUN 15, 2007</td> <td>\$ 2,072.04</td> </tr> <tr> <td>FULL PAYMENT</td> <td>APR 30, 2007</td> <td>\$ 4,144.08</td> </tr> </tbody> </table> | | | PAYMENT | DUE DATE | AMOUNT | FIRST HALF | FEB 28, 2007 | \$ 2,072.04 | SECOND HALF | JUN 15, 2007 | \$ 2,072.04 | FULL PAYMENT | APR 30, 2007 | \$ 4,144.08 |
| PAYMENT | DUE DATE | AMOUNT | | | | | | | | | | | | | | | | |
| FIRST HALF | FEB 28, 2007 | \$ 2,072.04 | | | | | | | | | | | | | | | | |
| SECOND HALF | JUN 15, 2007 | \$ 2,072.04 | | | | | | | | | | | | | | | | |
| FULL PAYMENT | APR 30, 2007 | \$ 4,144.08 | | | | | | | | | | | | | | | | |
| PROPERTY DESCRIPTION: 001404 223 COUNTY RD | | | | | | | | | | | | | | | | | | |

DEBOER, SKYLER S
2730 SNOWMASS CREEK ROAD
SNOWMASS, CO 81654

PAID 2/21/07 ck# 18744 2072.04
PAID 6/15/07 ck# 19177 2072.04

RETAIN TOP PORTION FOR YOUR RECORDS

Make Checks Payable To:
GARFIELD COUNTY TREASURER
POST DATED CHECKS ARE NOT ACCEPTED
DO NOT PAY THIS BILL IF YOUR MORTGAGE COMPANY WILL MAKE THIS PAYMENT.
SEE ADDITIONAL IMPORTANT INFORMATION ON BACK OF THIS NOTICE.



Application for Driveway Permit

Person Obtaining Permit: Rocky Mountain Native Plants

Application Date: 9/13/2007

County Road Number: CR 233

District: Rifle

Permit Number: GRB07-D-100

Termination Date: ~~10/13/2007~~

Inspector: Jake Mall 5/1/2008 J.B. Mall

hereby requests permission and authority from the Board of County Commissioners to construct a driveway approach (es) on the right-of-way off of County Road, CR 233, n/a of At address, located on the East side of road for the purpose of obtaining access to property.

Applicant submits herewith for the consideration and approval of the Board of County Commissioners, a sketch of the proposed installation showing all the necessary specification detail including:

1. Frontage of lot along road.
2. Distance from centerline of road to property line.
3. Number of driveways requested
4. Width of proposed driveways and angle of approach.
5. Distance from driveway to road intersection, if any.
6. Size and shape of area separating driveways if more than one approach.
7. Setback distance of building(s) and other structure improvements.
8. No unloading of equipment on county road, any damage caused to county road will be repaired at subdivision expense.
9. Responsible for two years from the date of completion.

General Provisions

- 1) The applicant represents all parties in interest, and affirms that the driveway approach (es) is to be constructed by him for the bona fide purpose of securing access to his property and not for the purpose of doing business or servicing vehicles on the road right of way.
- 2) The applicant shall furnish all labor and materials, perform all work, and pay all costs in connection with the construction of the driveway(s). All work shall be completed within thirty (30) days of the permit date.
- 3) The type of construction shall be as designated and/or approved by the Board of County Commissioners or their representative and all materials used shall be of satisfactory quality and subject to inspection and approval of the Board of County Commissioners or their representative.
- 4) The traveling public shall be protected during the installation with proper warning signs and signals and the Board of County Commissioners and their duly appointed agents and employee shall be held harmless against any action for personal injury or property damage sustained by any reason of the exercise of the Permit.
- 5) The Applicant shall assume responsibility for the removal or clearance of snow, ice, or sleet upon any portion of the driveway approach (es) even though deposited on the driveway(s) in the course of the County snow removal operations.

- 6) In the event it becomes necessary to remove any right-of-way fence, the posts on either side of the entrance shall be surely braced before the fence is cut to prevent any slacking of the remaining fence and all posts and wire removed shall be turned over to the District Road Supervisor of the Board of County Commissioners.
- 7) No revisions or additions shall be made to the driveway(s) or its appurtenances on the right-of-way without written permission of the Board of County Commissioners.
- 8) Provisions and specifications outlined herein shall apply on all roads under the jurisdiction of the Board of County Commissioners of Garfield County, Colorado, and the Specifications, set forth on the attached hereof and incorporated herein as conditions hereof.
- 9) **Final inspection of driveway will be required upon completion and must be approved by person issuing permit or representative of person issuing permit.**
The inspection and sign off must be done prior to any CO from the Building and Planning Department being issued.
- 10) **Contractor agrees to all Provisions in Exhibit A.**

Special Conditions:

1. **Driveway Width-**
2. **Culvert required? False Size: by 25**
3. **Asphalt or concrete pad required? True Size of pad: 25'X20'X4"**
4. **Gravel portion required? True Length: 50ft**
5. **Trees, brush and/or fence need to be removed for visibility? False**
6. **Distance and Direction:**
7. **Certified Traffic Control Required? False**
8. **Work zone signs required? True**
9. **Stop sign required**

In signing this application and upon receiving authorization and permission to install the driveway approach (es) described herein the Applicant signifies that he has read, understands and accepts the foregoing provisions and conditions and agrees to construct the driveway(s) in accordance with the accompanying specification plan reviewed and approved by the Board of County Commissioners.


Signed: 
 Rocky Mountain Native Plants

Address: 3780 S. H Mesa Road, Rifle, CO 81650

Telephone Number: (970) 625-4769

Permit granted 9/13/2007, subject to the provisions, specifications and conditions stipulated herein.

For Board of County Commissioners' of Garfield County, Colorado:


 Representative of Garfield County Road and Bridge Signature

Specifications

1. A driveway approach is understood to be that portion of the county road right-of way between the pavement edge and the property line that is designed and used for the interchange of traffic between the roadway and abutting property.
2. At any intersection, a driveway shall be restricted for a sufficient distance from the intersection to preserve the normal and safe movement of traffic. (It is recommended for rural residence entrances that a minimum intersection clearance of 50 feet be provided and for rural commercial entrances a minimum of 100 feet be provided.)
3. All entrances and exits shall be so located and constructed that vehicles approaching or using them will be able to obtain adequate sight distance in both directions along the county road in order to maneuver safely and without interfering with county road traffic.
4. The Applicant shall not be permitted to erect any sign or display material, either fixed or movable, on or extending over any portion of the county road right-of-way.
5. Generally, no more than one approach shall be allowed any parcel or property the frontage of which is less than one hundred (100) feet. Additional entrances or exits for parcels having a frontage in excess of one hundred (100) feet shall be permitted only after showing of actual convenience and necessity.
6. All driveways shall be so located that the flared portion adjacent to the traveled way will not encroach upon adjoining property.
7. No commercial driveway shall have a width greater than thirty (30) feet measured at right angles to the centerline of the driveway except as increased by permissible radii. No noncommercial driveway shall have a width greater than twenty (20) feet measured at right angles to the centerline of the driveway, except as increased by permissible radii.
8. The axis of an approach to the road may be at a right angle to the centerline of the county road and of any angle between ninety (90) degrees and sixty (60) degrees but shall not be less than sixty (60) degrees. Adjustment will be made according to the type of traffic to be served and other physical conditions.
9. The construction of parking or servicing areas on the county road right-of-way is specifically prohibited. Commercial establishments for customer vehicles should provide off-the-road parking facilities.
10. The grade of entrance and exit shall slope downward and away from the road surface at the same rate as the normal shoulder slope and for a distance equal to the width of the shoulder but in no case less than twenty (20) feet from the pavement edge. Approach grades are restricted to not more than ten percent (10%).
11. All driveways and approaches shall be so constructed that they shall not interfere with the drainage system of the street or county road. The Applicant will be required to provide, at his own expense, drainage structures at entrances and exits, which will become an integral part of the existing drainage system. The Board of County Commissioners or their representative, prior to installation, must approve the dimensions and types of all drainage structures.

Note: This permit shall be made available at the site where and when work is being done. A work sketch or drawing of the proposed driveway(s) must accompany application. No permit will be issued without drawing, blueprint, or sketch.



Division of Registrations

Electrical and Plumbing Permits Online

View Permit 642655

Requestor

Company Name: FLATOPS ELECTRIC
 First Name: STEVEN
 Last Name: HISCOCK
 Address: 3720 CR 214
 City: SILT
 State: CO
 Zipcode: 81652
 Phone: (970) 876-5520
 Fax: (970) 876-5520
 Email Address: flatops@sopris.net
 License Number: 3344

Fax to 625 3276

ATTN KRISTINE

FINAL Insp REPORT

GREEN HOUSE

Site

Property Type: PRIVATE
 Property Owner: ROCKY MOUNTAIN NATIVE PLANTS
 Job Site Address: 1404 CR 223
 City: RIFLE
 State: CO
 Zipcode:
 County: GARFIELD
 Power: XCEL - RIFLE
 Building Type: OTHER
 Construction Type: NEW
 Misc Construction: COMMERCIAL OTHER

| Inspections | | |
|----------------|-------|----------|
| Inspected Date | Type | Status |
| 04/17/2008 | FINAL | ACCEPTED |
| | | |

Status/Actions

ZJS Engineering Services, Inc.

380 S. Milliken Ave., Suite A, Ontario, California 91781
(909) 974-4150 Fax (909) 974-4153

November 16, 2007

Russ Jorgenson
Conley's Manufacturing & Sales
4344 Mission Blvd.
Montclair, CA 91763

Re: Footings for the 6500 Series Greenhouses for Rocky Mountain Native Plants
located at 3780 Silt Mesa Rd., Rifle, CO
ZJS Job #21521-07

Dear Mr. Jorgenson:

This is to certify that it is acceptable to pour concrete into the footings that have water in them. This will not affect the stability or structural integrity of either the foundations or the building.

If there are any additional questions, or if we can be of further assistance, please contact the writer.

Sincerely,


John Horn, P.E.
ZJS Engineering Services, Inc.



JB/ltm

Licensed Professional Engineers
Alabama, Arizona, California, Colorado, Florida, Georgia, Nebraska, Nevada
New Mexico, North Carolina, Oregon, South Carolina, Utah, Virginia & Washington

p2

(970) 825-3276

Rocky Mtn Native Plants

Dec 17 07 04:11p

Mall,

Sorry for sending this late I am a bit behind the 8 ball.

At the time you said sending this letter to have in our file was sufficient for clarification.

Please call if you have questions

Thanks so much,

Kristine E.J.

(970) 379-3168

COUNTY OF GARFIELD - BUILDING DEPARTMENT

CORRECTION NOTICE

108 8th St., Suite 201 / Glenwood Springs, Colorado
Phone (970) 945-8212

Job located at 3780 C.H. 237

Permit No. 10688

I have this day inspected this structure and these premises and found the following corrections needed:

- 1) Have Engineer sign off on footing due to ground water present in holes
- 2) Call for Re-Inspection

You are hereby notified that the above correction must be inspected before covering.

When correction(s) have been made, call for inspection at 970-384-5003.

Date 11-15-07 20

Building Inspector Mark W. [Signature]

Phone (970) 945-8212

Rocky Mountain Native Plants Company

To: Matt

Date: 12-17-07

From: Kristine Edge

Fax #: (970) 384-3470

Number of Pages (including cover): 3

Message:

Matt - Here is the letter you asked for
sorry for the delay.

Kristine Edge

3780 Silt Mesa Road, Rifle, CO 81650
Phone (970) 625-GROW (4769) - Fax (970) 625-FARM (3276)
E-mail - native@rmnativeplants.com

COUNTY OF GARFIELD - BUILDING DEPARTMENT
CORRECTION NOTICE

108 8th St., Suite 201

Glenwood Springs, Colorado

Phone (970) 945-8212

Job located at 3780 CR 233

Permit No. 10688

I have this day inspected this structure and these premises and found the following corrections needed:

* Have Engineer sign off on footers
due to ground water present
in holes

* Call for Re-Inspection

* 3-28-08 paid \$50 F/RE-INSP W/CK 38399 BY STmail:

You are hereby notified that the above correction must be inspected before covering.

When correction(s) have been made, call for inspection at 970-384-5003.

Date 11-15-07 20

Building Inspector Mark M. Brown

Phone (970) 945-8212

No. 10688

Assessor's Parcel No. 2177-012-00-404

Date 10-10-07

BUILDING PERMIT CARD

Job Address 3780 Cr 233-Rifle

Owner DeBoer, Skulpr Address 1404 Cr 233 Phone # 379-6562

Contractor Rocky mtn Native plants Address 3780 Cr 233 Phone # 625-4769

Setbacks: Front _____ Rear _____ RH _____ LH _____ Zoning _____

Commercial-green house

INSPECTIONS

Soils Test _____

Footing OK By Engineer

Foundation _____

Grout _____

Underground Plumbing _____

Rough Plumbing _____

Framing 2-7-08 AM

Insulation _____

Roofing _____

Drywall _____

Gas Piping 1-18-08 AM

2-7-08 AM Ind Gas Line OK

Weatherproofing _____

Mechanical 2-7-08 AM

Electrical Rough (State) _____

Electrical Final (State) 4-17-08

Final 8-21-08 Checklist Completed? AM

Certificate Occupancy # 6044

Date ISSUED 9-23-08

Septic System # _____

Date _____

Final _____

Other Driveway. OK

NOTES

(continue on back)

**INSPECTION WILL NOT BE MADE UNLESS
THIS CARD IS POSTED ON THE JOB**

24 HOURS NOTICE REQUIRED FOR INSPECTIONS

BUILDING PERMIT

GARFIELD COUNTY, COLORADO

Date Issued 10-10-08 Zoned Area..... Permit No. 10688

AGREEMENT

In consideration of the issuance of this permit, the applicant hereby agrees to comply with all laws and regulations related to the zoning, location; construction and erection of the proposed structure for which this permit is granted, and further agrees that if the above said regulations are not fully complied with in the zoning, location, erection and construction of the above described structure, the permit may then be revoked by notice from the County Building Inspector and IMMEDIATELY BECOME NULL AND VOID.

Use Green house - Commercial Business
 Address or Legal Description 3780 Cr 233-2410
 Owner Deboer - Skyler Contractor Rocky mtn native plants
 Setbacks Front Side Side Rear

This Card Must Be Posted So It is Plainly Visible From The Street Until Final Inspection.

INSPECTION RECORD

| | |
|---|--|
| Footing <u>OK by Engineer (see file 5)</u> | Driveway <u>GR807 - D-100 OK per Jake</u> |
| Foundation <u>na</u> | Insulation <u>na</u> |
| Underground Plumbing <u>na</u> | Drywall <u>na</u> |
| Rough Plumbing <u>na</u> | Electric Final (by State Inspector) <u>4-17-08</u> |
| Chimney & Vent <u>7-08 DM</u> | Final <u>8-21-08 DM</u> |
| Gas Piping <u>1-18-08 DM (2 houses) (by 4-08)</u> | Septic Final |
| Electric Rough (By State Inspector) | Notes: |
| Framing <u>7-08 DM</u> (To include Roof in place and Windows and Doors installed). | |

26-1085

ALL LISTED ITEMS MUST BE INSPECTED AND APPROVED BEFORE COVERING - WHETHER INTERIOR OR EXTERIOR, UNDERGROUND OR ABOVE GROUND.

THIS PERMIT IS NOT TRANSFERABLE

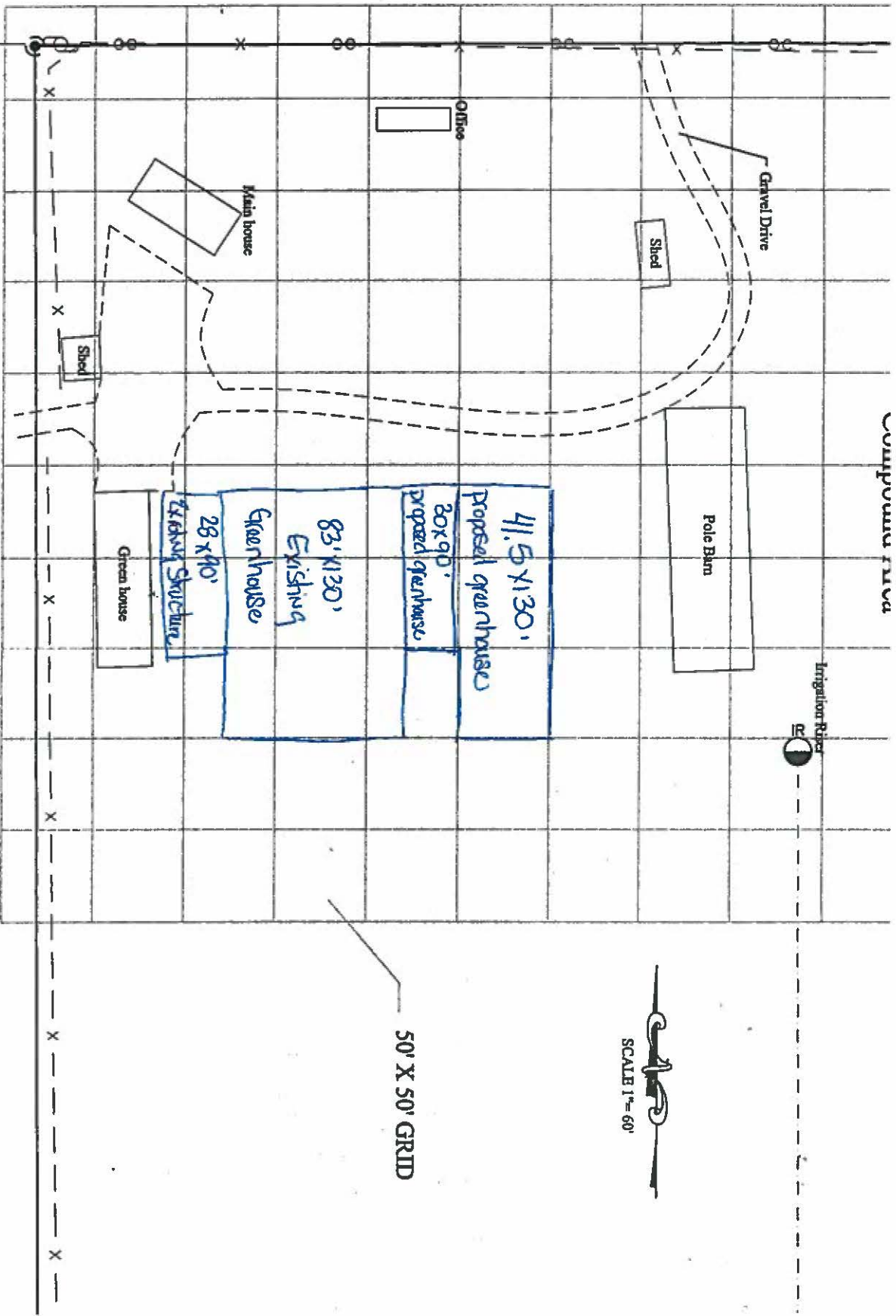
For Inspections Call 384-5003 108 8th Street Glenwood Springs, Colorado

DO NOT DESTROY THIS CARD

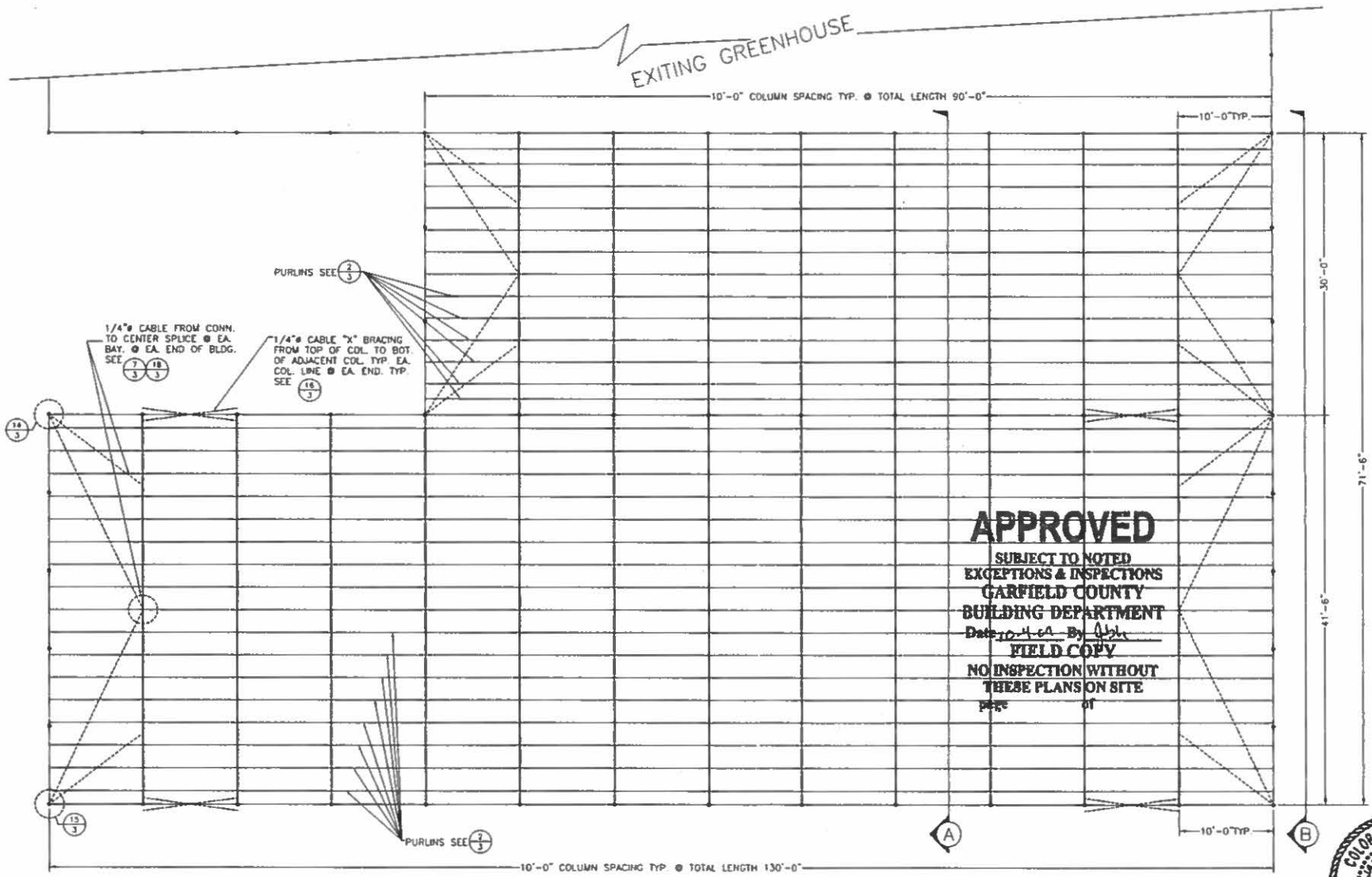
APPROVED

Date 10-10-08 By FSH

IF PLACED OUTSIDE - COVER WITH CLEAR PLASTIC



EXITING GREENHOUSE





APPROVED

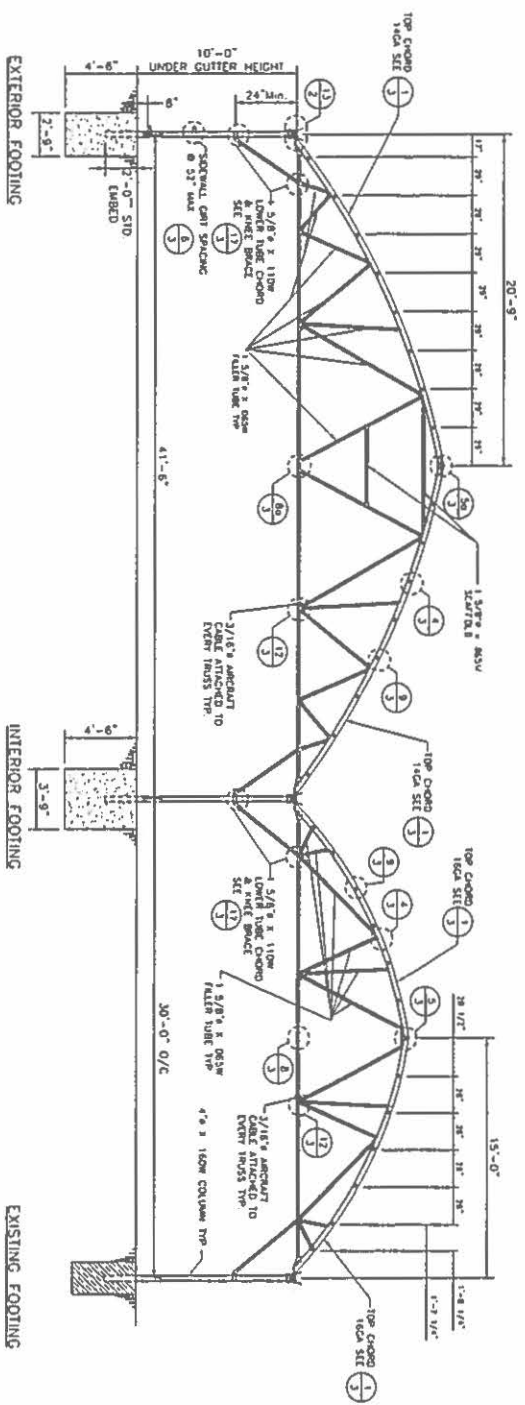
SUBJECT TO NOTED
EXCEPTIONS & INSPECTIONS
GARFIELD COUNTY
BUILDING DEPARTMENT
Date 10-1-04 By [Signature]
FIELD COPY
NO INSPECTION WITHOUT
THESE PLANS ON SITE
Page 01

PLAN VIEW & ROOF FRAME
SCALE: 3/32" = 1' - 0"

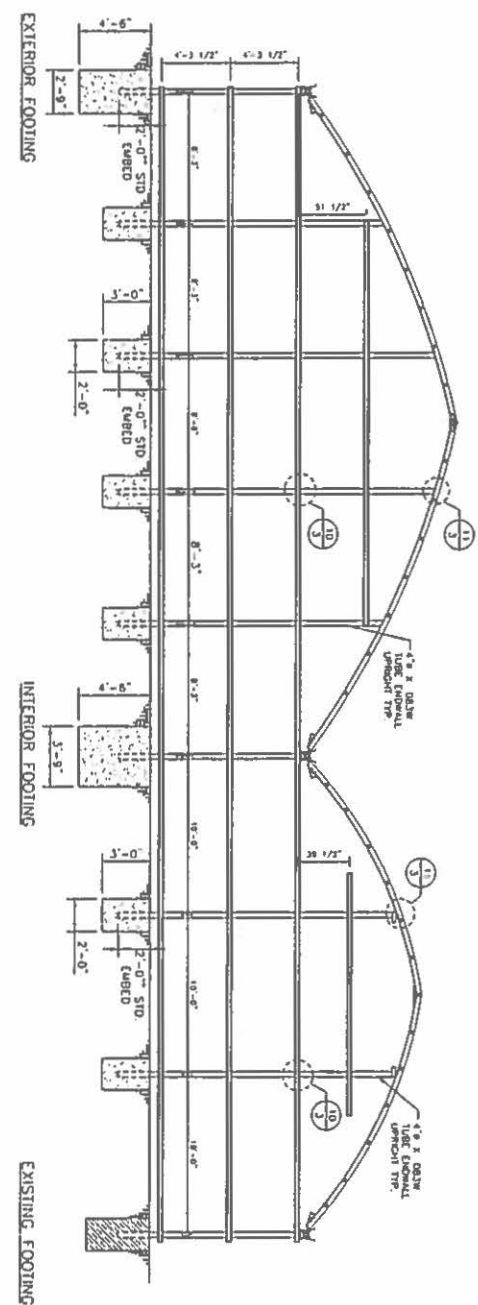


SEP 12 2007

| | |
|---|-------------------------------|
|  | |
| <small>This document is CONFIDENTIAL, and is the property of Conley's Eng. & Arch. No reproduction or use of any part of this document is permitted without the written permission of William Conley's Eng. & Arch.</small> | |
|  | |
| DATE | 08-14-07 |
| SCALE | NOTED |
| JOB NO. | 38233 |
| DESIGNED BY | EDL |
| APPROVED | |
| FILE | FLOOR & ROOF PLAN |
| ENGINEER | ROCKY MOUNTAIN NATIVE PLANTS |
| ENGINEER NO. | 21521-07 |
| LOADING | 40RS-90-B |
| DRAWING NO. | DE97539 |
| DRAWING SET | DE97539 DE97540 DE97541 |
| SHEET | 01 |



TYPICAL SECTION
SCALE 1/8" = 1'-0"



TYPICAL END TRUSS SECTION (B)
SCALE 1/8" = 1'-0"

BUILDING SPECIFICATIONS:

This structure was designed and detailed for the loads and conditions shown on these drawings. Any alteration to the structural system or material or any other detail shown on these drawings without the approval of the Designer is prohibited. The Designer is not responsible for the construction of the structure or for the condition of the structure at any time after the completion of the construction. The Designer is not responsible for the condition of the structure at any time after the completion of the construction. The Designer is not responsible for the condition of the structure at any time after the completion of the construction.

CONCRETE NOTES:

1. ALL CONCRETE SHALL BE PLACED IN 2500 PSI PER SQUARE YARD (MINIMUM COMPRESSIVE STRESS) AT 28 DAYS.
2. CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF THE DATE OF POURING.
3. ALL CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF THE DATE OF POURING.
4. ALL CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF THE DATE OF POURING.
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9. ALL CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF THE DATE OF POURING.
10. ALL CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF THE DATE OF POURING.

STEEL NOTES:

1. ALL CONSTRUCTION TO COMPLY WITH THE LATEST EDITION OF THE AISC AND AISC.
2. ALL WELDED JOINTS TO COMPLY WITH A 5/16" A-307. WELDS SHALL BE BOTH DOWNTHE LINE 1/16" (P UNLESS OTHERWISE NOTED).
3. ALL NOT NOTED ON THIS DRAWING SHALL BE AS SHOWN ON THE DRAWING.
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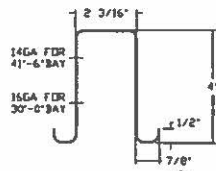


| NO. | REVISION | DATE |
|-----|----------|------|
| | | |
| | | |
| | | |
| | | |

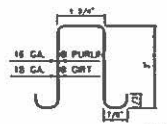


DATE 08-14-07
 SCALE NOTED
 JOB NO. 39253
 DRAWN BY EDL
 APPROVED _____
 PROJECT ROCKY MOUNTAIN NATIVE PLANTS
 LOCATION 40NS-90-B
 DRAWING NO. DE97540
 SHEET NO. 0297349
 0297348
 0297347
 0297346
 0297345
 0297344

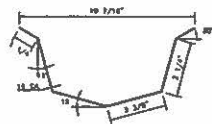
SEP 12 2007



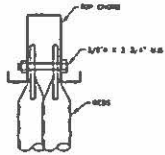
TOP CHORD
SCALE: NTS



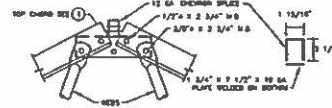
PURLIN / GIRT
SCALE: NTS



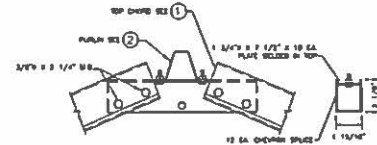
GUTTER
SCALE: NTS



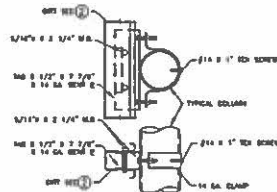
WEBS TO TOP CHORD
SCALE: NTS



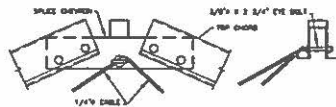
SPLICE CHEVRON
SCALE: NTS



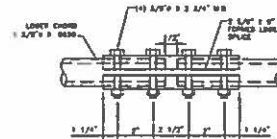
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SCALE: NTS



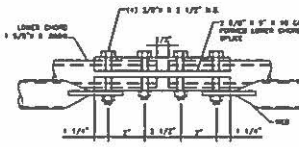
SIDEWALL GIRT CONN.
SCALE: NTS



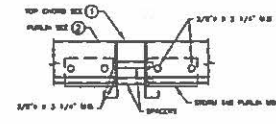
CABLE CONN. @ SPLICE CHEVRON
SCALE: NTS



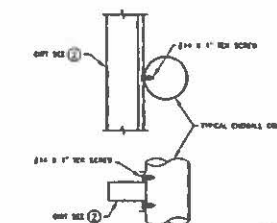
LOWER CHORD SPLICE
SCALE: NTS



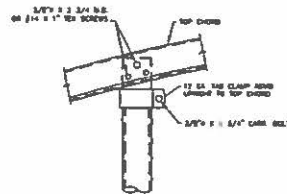
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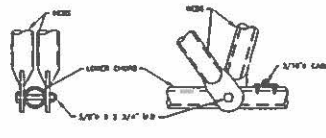
PURLIN TO TOP CHORD CONN.
SCALE: NTS



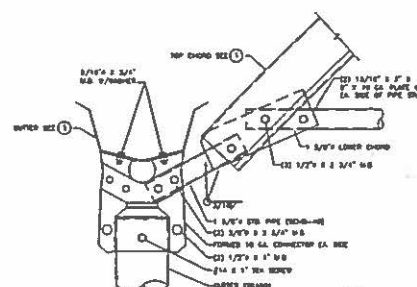
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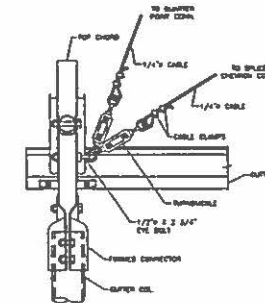
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SCALE: NTS



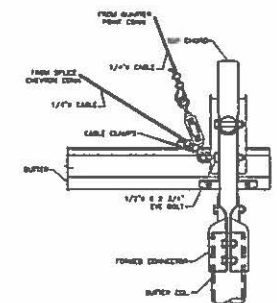
WEBS TO LOWER CHORD CONN.
SCALE: NTS



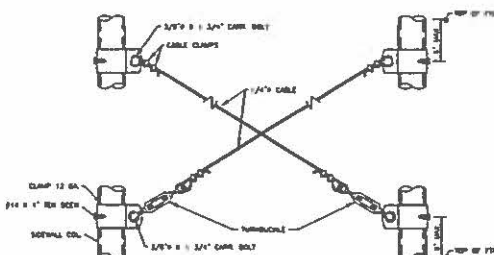
TOP CHORD / COLUMN CONN.
SCALE: NTS



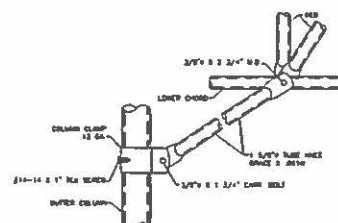
CABLE CONN. @ TERMINATION ENDS
SCALE: NTS



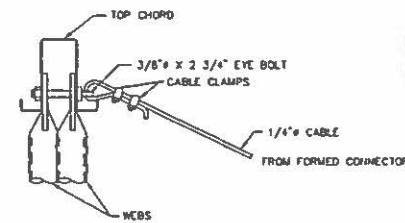
CABLE CONN. @ TERMINATION ENDS
SCALE: NTS



COLUMN 'X' BRACING
SCALE: NTS



KNEE BRACE CONN.
SCALE: NTS



CABLE CONN. @ QUARTER POINT
SCALE: NTS

THE VISIONS

CONLEY'S

DATE: 08-14-07
SCALE: NOTED
JOB NO: J2523
DRAWN BY: ECL
APPROVED:

DETAILS

TITLE: ROCKY MOUNTAIN NATIVE PLANTS

ENGINEER: 21521-07
LOADING: 40RS-90-B
DRAWING NO: DE97541
DESIGNED BY: DE97539
CHECKED BY: DE97540
DATE: 8/14/07

COLORADO REGISTERED
PROFESSIONAL ENGINEER
34107
SEP 12 2007

ZJS ENGINEERING SERVICES INC.
350 S. MILLIKEN, SUITE A
ONTARIO, CALIFORNIA 91761
PHONE : (909) 974 4150 FAX: (909) 974 4153

STRUCTURAL CALCULATIONS

CUSTOMER : Rocky Mountain Native Plants < Conley >

DATE : September 11, 2007

JOB NUMBER : 21521-07

CONTENTS :

41 ft - 6 in & 30 ft -0 in <6500 Series>

1. Basic Loads.....

2. Verical Load Resisting Systems.....

2.2. Check Roof Purlins/ Wall Girts.....

2.3. Check Trusses/Column Frame.....

3. Lateral Load Resisting Systems.....

3.1. Check For Lateral Loads in Transversal Direction..

3.2. Check For Lateral Loads in Longitudinal Direction..

4. Check Foundation.....

APENDIX.....

FIGURES.....



SEP 12 2007

| | | |
|---|---|--|
| <i>Designed By:</i> <i>Janos Boros P.E.</i> | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | <i>Job #</i> 21521-07 <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> <i>Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></i> | | |

DUPLEX PRINTING



SEP 15 2007

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

DESIGN CRITERIA

*This building was designed using the criteria listed below.
Capacity for loads greater than these or for load combinations other than shown below
specifically neither intended nor implied.*

1. BASIC LOADS

1.1. Dead Load

$$p_{DL} = 2.5 \frac{\text{lb}}{\text{ft}^2}$$

1.2. Snow Load

Governs Over Live Load Per Section 1607 of IBC 2003

$$p_{SN} = 40 \frac{\text{lb}}{\text{ft}^2}$$

1.3. Wind Load

Per ASCE 7 adopted by Section 1609.1.1. Of IBC 2003

LOW-RISE BUILDING per Section 6.2

1. mean roof height h less than or equal to 60 ft; and
2. mean roof height h does not exceed least horizontal dimension.

$$q_h = 0.00256 K_h K_{zt} K_d V^2 I = 13.03 \frac{\text{lb}}{\text{ft}^2}$$

$V = 90$ mph - 3s Gust

$h = 14$ ft. - Mean Height Of Roof

$K_h = 0.85$ - Per Table 6-3 for exposure C

$K_{zt} = 1.0$ - Topographic Factor per Figure 6.4

$K_d = 0.85$ - Directionality Factor per Table 6-4

$I = 0.87$ - Importance Factor per Table 6-1 for Category I

$GC_{pi} = \pm 0.18$ - Inter. Pressure Coeff. per Figure 6-5

| | | |
|---|--|--------------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A.ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Pressure Coefficient on Main Wind-Forced Resisting Systems

$G = 0.85$ - Gust Effect Factor Per Section 6.5.8.

$0.3 \leq r = 0.34 \leq 0.6$ Rise-to-span ratio On Arched Roofs Per Table 6-8.

$C_p = 2.75r - 0.7 = 0.24$ (windward 1/4 Roof) Ext. Press. Coeff. Per Table 6-8

$C_p = -0.7 - r = -1.04$ (center 1/2 Roof) Ext. Press. Coeff. Per Table 6-8

$C_p = -0.5$ (leeward 1/4 Roof) Ext. Press. Coeff. Per Table 6-8

Transversal Direction (CASE A) :

$GC_{pf} = 0.56$ (windward wall) - External Pressure Coefficients per Figure 6-10
[1]

$GC_{pf} = 0.20$ (windward 1/4 Roof)
[2]

$GC_{pf} = -0.88$ (center 1/2 Roof)
[23]

$GC_{pf} = -0.42$ (leeward 1/4 Roof)
[3]

$GC_{pf} = -0.37$ (leeward wall) - External Pressure Coefficients per Figure 6-10
[4]

Longitudinal Direction (CASE B) :

$\theta = 0^\circ$

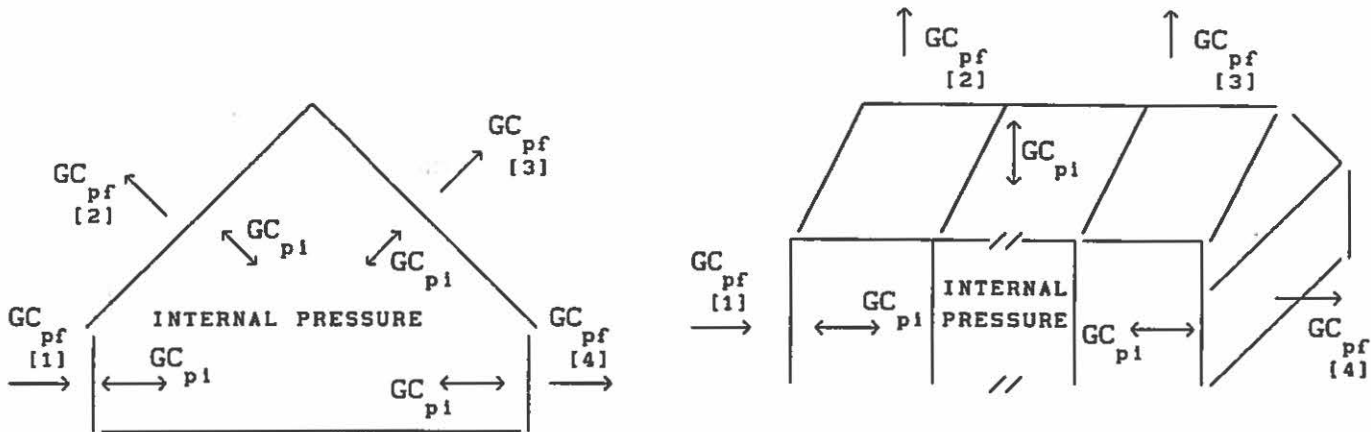
$GC_{pf} = 0.40$ (windward wall) - External Pressure Coefficients per Figure 6-10
[1]

$GC_{pf} = -0.69$ (windward roof) - External Pressure Coefficients per Figure 6-10
[2]

$GC_{pf} = -0.37$ (leeward roof) - External Pressure Coefficients per Figure 6-10
[3]

$GC_{pf} = -0.29$ (leeward wall) - External Pressure Coefficients per Figure 6-10
[4]

| | | |
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| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |



1.4. Seismic Load

Note : According to Section 1614.1 of IBC 2003 :

Exceptions:

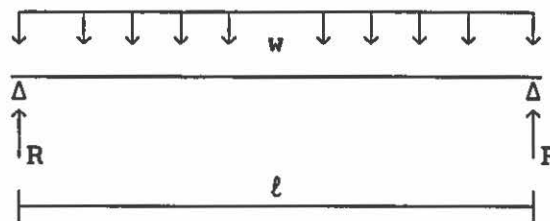
- 4. Agricultural storage structures intended only for incidental human occupancy are exempt from requirements of Sections 1613 through 1622.

2. CHECK VERTICAL LOAD RESISTING SYSTEMS

2.1. Check Roof Purlins/ Wall Girts

Simple Span Condition

- w - Uniform Load
- M_{MAX.} - Max. Moment
- S_{RQ.} - Required Section Modulus



- E = 29. 10³ ksi - Modulus Of Elasticity Of Steel
- Fy = 55.0 ksi - Yield Stress

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A.ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

2.2.1. For 4.36 ft Spacing, 6 ft Long <Purlin>

Use: 3" x 1 ³/₄" x 16 GA. or Equivalent

Material : Steel , ASTM A446 Grade D
For Allowable Loads See APPENDIX

MA = 15.4 kip-in - Allowable Bending Moment

b = 2.41 ft - Spacing Of The Purlin: 29"

ℓ = 10 ft - Span Between Two Supports

For Dead Load + Snow Load

$$w_{DL+SL} = (p_{DL} + p_{SL}) b = 102.4 \frac{lb}{ft}$$

$$R_{DL+SL} = \frac{w_{DL+SL} \ell}{2} = 0.51 \text{ kips}$$

$$M_{DL+SL} = \frac{w_{DL+SL} \ell^2}{8} = 15.36 \text{ kip-in} < MA = 15.4 \text{ kip-in OK See Appendix}$$

For Dead Load + Wind Load

Effective wind areas of roof :

$$A_{EFF} = b \ell = 24.10 \text{ ft}^2 \text{ or } A_{EFF} = \frac{\ell}{3} \ell = 33.33 \text{ ft}^2$$

$$A_{EFF} = 24.10 \text{ ft}^2 \text{ Controls !} \longrightarrow GC_P = 1.49 - \text{Refer to Figure 6-11B}$$

$$q_h (GC_P + GC_{pi}) = 21.76 \frac{lb.}{ft^2} - \text{max. wind pressure}$$

$$w_{DL+WL} = [q_h (GC_P + GC_{pi}) - p_{DL}] b = 46.41 \frac{lb.}{ft.}$$

$$R_{DL+WL} = \frac{w_{DL+WL} \ell}{2} = 0.23 \text{ kips}$$

$$M_{DL+WL} = \frac{w_{DL+WL} \ell^2}{8} = 6.96 \text{ kip-in} < 1.33 MA = 20.48 \text{ kip-in OK See Appendix}$$

| | | |
|---|---|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

2.2.2. For 4.36 ft Spacing, 10 ft Long <Girt>

Use: 3" x 1 ³/₄ " x 18 GA. or Equivalent

Material : Steel , ASTM A446 Grade D
For Allowable Loads See APPENDIX

MA = 12.10 kip-in [Allowable Moment For Bending -See APPENDIX]

ℓ = 10.00 ft. - Span Between Two Supports

b = 4.29 ft. - Spacing Of The Girt

$A_{EFF} = b \ell = 42. \text{ ft}^2 \longrightarrow GC_P = 1.2$ - Refer to Figure 6-11B

$$w_{WL} = q_h GC_P b = 67.0 \frac{\text{lb.}}{\text{ft.}}$$

$$R_{WL} = \frac{w_{WL} \ell}{2} = 0.33 \text{ kips}$$

$$M_{WL} = \frac{w_{WL} \ell^2}{8} = 10.05 \text{ kip-in.} < 1.33 MA = 16.09 \text{ kip-in}$$

2.2. Check Trusses/Column Frame

2.3.1. 41'-6" and 30' Span Arch 6500 See Figure 1.

Units : lb,in

Spacing Of The Truss = 10. ft

$$p_{DL} = 2.5 \frac{\text{Lb}}{\text{Ft}^2} \quad p_{SL} = 40 \frac{\text{Lb}}{\text{Ft}^2}$$

$$p_{WL} = 13.03 \frac{\text{Lb}}{\text{Ft}^2} [90 \text{ mph Exp. 'c' }]$$

M I C R O S A F E --- STRUCTURAL ANALYSIS BY FINITE ELEMENTS
Version: SAFE2STA (2-D) Rel. 4.0 9/12/2007 0:09:07

Input data file : 21521.INP
Output data file : WORK.OUT

| | | |
|---|--|--------------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

SIZE OF THE STRUCTURE

| | | |
|---|---|----|
| Number of nodes | : | 39 |
| Number of materials | : | 6 |
| Number of beams | : | 70 |
| Number of beam end releases | : | 73 |
| Number of plates | : | 0 |
| Number of fasteners | : | 0 |
| Number of primary loadcases | : | 3 |
| Number of superposition loadcases | : | 2 |
| Number of restrained degrees of freedom | : | 9 |

NODE COORDINATES

| Node | Coordinate X | Coordinate Y |
|------|--------------|--------------|
| 1 | .00000 | -24.00000 |
| 2 | .00000 | 96.00000 |
| 3 | 35.77000 | 96.00000 |
| 4 | 99.00000 | 177.30000 |
| 5 | 199.00000 | 220.55000 |
| 6 | 249.00000 | 234.40000 |
| 7 | 249.00000 | 96.00000 |
| 10 | 346.00000 | 96.00000 |
| 11 | 299.00000 | 220.55000 |
| 12 | 399.00000 | 177.30000 |
| 14 | 152.00000 | 96.00000 |
| 15 | 498.00000 | 96.00000 |
| 16 | 498.00000 | -24.00000 |
| 17 | .00000 | 72.00000 |
| 18 | 498.00000 | 72.00000 |
| 19 | 462.23000 | 96.00000 |
| 20 | 224.00000 | 158.28000 |
| 21 | 274.00000 | 158.28000 |
| 22 | 49.00000 | 141.00000 |
| 23 | 149.00000 | 203.00000 |
| 24 | 349.00000 | 203.00000 |
| 25 | 449.00000 | 141.00000 |
| 26 | 74.00000 | 96.00000 |
| 27 | 424.00000 | 96.00000 |
| 105 | 543.00000 | 128.50000 |
| 106 | 543.00000 | 96.00000 |
| 107 | 588.00000 | 155.00000 |
| 108 | 628.00000 | 96.00000 |
| 109 | 628.00000 | 171.50000 |
| 112 | 678.00000 | 180.00000 |
| 114 | 728.00000 | 171.50000 |
| 115 | 728.00000 | 96.00000 |

| | | |
|---|---|-----------------------|
| <i>Designed By:</i> | Z. J. S. ENGINEERING SERVICES INC. | <i>Job #</i> 21521-07 |
| <i>Janos Boros P.E.</i> | 350 S. Milliken, #A. ONTARIO, Ca91761 PHONE (909) 974-4150 | <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> | | |
| <i>Description: 41 ft - 6 in & .30 ft -0 in <6500 Series></i> | | |

| | | |
|-----|-----------|-----------|
| 116 | 768.00000 | 155.00000 |
| 117 | 813.00000 | 96.00000 |
| 118 | 813.00000 | 128.50000 |
| 119 | 858.00000 | 96.00000 |
| 120 | 858.00000 | 72.00000 |
| 121 | 858.00000 | 15.00000 |
| 122 | 858.00000 | -24.00000 |

MATERIAL PROPERTIES

| Code | Young's modulus | Poisson's ratio | Specific weight |
|------|-----------------|-----------------|-----------------|
| 1 | 29000000. | .300000 | .000 |
| 2 | 29000000. | .300000 | .000 |
| 3 | 29000000. | .300000 | .000 |
| 4 | 29000000. | .300000 | .000 |
| 5 | 29000000. | .300000 | .000 |
| 6 | 29000000. | .300000 | .000 |

BEAM DATA

| Beam | I | J | Length | Area | M. Inertia | Material |
|------|----|----|---------|--------|------------|-----------------|
| 1 | 17 | 2 | 24.000 | 1.9300 | 3.56000 | 4"dia.16 |
| 2 | 15 | 18 | 24.000 | 1.9300 | 3.56000 | 4"dia.16 |
| 5 | 2 | 22 | 66.528 | .9100 | 1.93000 | TC2:4"hat14ga |
| 6 | 4 | 23 | 56.218 | .9100 | 1.93000 | TC2:4"hat14ga |
| 7 | 5 | 6 | 51.883 | .9100 | 1.93000 | TC2:4"hat14ga |
| 10 | 6 | 11 | 51.883 | .9100 | 1.93000 | TC2:4"hat14ga |
| 11 | 11 | 24 | 52.991 | .9100 | 1.93000 | TC2:4"hat14ga |
| 12 | 12 | 25 | 61.787 | .9100 | 1.93000 | TC2:4"hat14ga |
| 13 | 2 | 3 | 35.770 | .5200 | .15000 | BC :1-5/8dia.11 |
| 14 | 3 | 26 | 38.230 | .5200 | .15000 | BC :1-5/8dia.11 |
| 15 | 7 | 10 | 97.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 16 | 14 | 5 | 133.123 | .3200 | .10000 | W :1-5/8dia.065 |
| 17 | 14 | 7 | 97.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 18 | 10 | 27 | 78.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 19 | 11 | 10 | 133.123 | .3200 | .10000 | W :1-5/8dia.065 |
| 20 | 15 | 19 | 35.770 | .5200 | .15000 | BC :1-5/8dia.11 |
| 21 | 1 | 17 | 96.000 | 1.9300 | 3.56000 | 4"dia.16 |
| 22 | 16 | 18 | 96.000 | 1.9300 | 3.56000 | 4"dia.16 |
| 23 | 17 | 3 | 43.075 | .5200 | .15000 | K :1-5/8dia.11 |
| 24 | 19 | 18 | 43.075 | .5200 | .15000 | K :1-5/8dia.11 |
| 25 | 3 | 22 | 46.905 | .3200 | .10000 | W :1-5/8dia.065 |
| 26 | 4 | 14 | 97.050 | .3200 | .10000 | W :1-5/8dia.065 |
| 27 | 5 | 20 | 67.101 | .3200 | .10000 | W :1-5/8dia.065 |

| | | |
|---|---|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A. ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

| | | | | | | |
|-----|-----|-----|---------|--------|---------|-----------------|
| 28 | 20 | 21 | 50.000 | .3200 | .10000 | W :1-5/8dia.065 |
| 29 | 11 | 21 | 67.101 | .3200 | .10000 | W :1-5/8dia.065 |
| 30 | 12 | 10 | 97.050 | .3200 | .10000 | W :1-5/8dia.065 |
| 31 | 19 | 25 | 46.905 | .3200 | .10000 | W :1-5/8dia.065 |
| 32 | 7 | 20 | 67.110 | .3200 | .10000 | W :1-5/8dia.065 |
| 33 | 7 | 21 | 67.110 | .3200 | .10000 | W :1-5/8dia.065 |
| 34 | 26 | 14 | 78.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 35 | 26 | 22 | 51.478 | .3200 | .10000 | W :1-5/8dia.065 |
| 36 | 26 | 4 | 85.057 | .3200 | .10000 | W :1-5/8dia.065 |
| 37 | 14 | 23 | 107.042 | .3200 | .10000 | W :1-5/8dia.065 |
| 38 | 10 | 24 | 107.042 | .3200 | .10000 | W :1-5/8dia.065 |
| 39 | 27 | 12 | 85.057 | .3200 | .10000 | W :1-5/8dia.065 |
| 40 | 27 | 25 | 51.478 | .3200 | .10000 | W :1-5/8dia.065 |
| 41 | 27 | 19 | 38.230 | .5200 | .15000 | BC :1-5/8dia.11 |
| 42 | 22 | 4 | 61.787 | .9100 | 1.93000 | TC2:4"hat14ga |
| 43 | 23 | 5 | 52.991 | .9100 | 1.93000 | TC2:4"hat14ga |
| 44 | 24 | 12 | 56.218 | .9100 | 1.93000 | TC2:4"hat14ga |
| 45 | 25 | 15 | 66.528 | .9100 | 1.93000 | TC2:4"hat14ga |
| 46 | 5 | 11 | 100.000 | .3200 | .10000 | W :1-5/8dia.065 |
| 104 | 18 | 106 | 51.000 | .5200 | .15000 | K :1-5/8dia.11 |
| 105 | 15 | 105 | 55.509 | .7300 | 1.58000 | TC1:4"hat16ga |
| 106 | 15 | 106 | 45.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 107 | 105 | 107 | 52.223 | .7300 | 1.58000 | TC1:4"hat16ga |
| 108 | 106 | 107 | 74.202 | .3200 | .10000 | W :1-5/8dia.065 |
| 109 | 106 | 108 | 85.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 110 | 107 | 108 | 71.281 | .3200 | .10000 | W :1-5/8dia.065 |
| 111 | 107 | 109 | 43.270 | .7300 | 1.58000 | TC1:4"hat16ga |
| 112 | 108 | 112 | 97.755 | .3200 | .10000 | W :1-5/8dia.065 |
| 113 | 108 | 115 | 100.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 114 | 109 | 112 | 50.717 | .7300 | 1.58000 | TC1:4"hat16ga |
| 115 | 106 | 105 | 32.500 | .3200 | .10000 | W :1-5/8dia.065 |
| 118 | 117 | 118 | 32.500 | .3200 | .10000 | W :1-5/8dia.065 |
| 121 | 112 | 114 | 50.717 | .7300 | 1.58000 | TC1:4"hat16ga |
| 122 | 115 | 112 | 97.755 | .3200 | .10000 | W :1-5/8dia.065 |
| 123 | 114 | 116 | 43.270 | .7300 | 1.58000 | TC1:4"hat16ga |
| 124 | 115 | 116 | 71.281 | .3200 | .10000 | W :1-5/8dia.065 |
| 125 | 115 | 117 | 85.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 126 | 116 | 117 | 74.202 | .3200 | .10000 | W :1-5/8dia.065 |
| 127 | 116 | 118 | 52.223 | .7300 | 1.58000 | TC1:4"hat16ga |
| 128 | 117 | 119 | 45.000 | .5200 | .15000 | BC :1-5/8dia.11 |
| 129 | 118 | 119 | 55.509 | .7300 | 1.58000 | TC1:4"hat16ga |
| 130 | 119 | 120 | 24.000 | 1.9300 | 3.56000 | 4"dia.16 |
| 131 | 120 | 121 | 57.000 | 1.9300 | 3.56000 | 4"dia.16 |
| 132 | 121 | 122 | 39.000 | 1.9300 | 3.56000 | 4"dia.16 |
| 133 | 120 | 117 | 51.000 | .5200 | .15000 | K :1-5/8dia.11 |
| 135 | 108 | 109 | 75.500 | .3200 | .09700 | TC1:4"hat16ga |
| 136 | 115 | 114 | 75.500 | .3200 | .09700 | TC1:4"hat16ga |

| | | |
|---|--|--------------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

PRIMARY LOADCASES

Loadcase name : DEAD LOAD
 Loadcase number : 1
 Number of loaded nodes : 0
 Number of loaded beams : 18
 Number of loaded plates : 0
 Gravity loads factor : .00000

BEAM LOADS

| Beam | Loading direction | End Distributed Loads | |
|------|-------------------|-----------------------|----------|
| 5 | Global Y axis | -1.00000 | -1.00000 |
| 42 | Global Y axis | -1.00000 | -1.00000 |
| 6 | Global Y axis | -1.00000 | -1.00000 |
| 43 | Global Y axis | -1.00000 | -1.00000 |
| 7 | Global Y axis | -1.00000 | -1.00000 |
| 10 | Global Y axis | -1.00000 | -1.00000 |
| 11 | Global Y axis | -1.00000 | -1.00000 |
| 44 | Global Y axis | -1.00000 | -1.00000 |
| 12 | Global Y axis | -1.00000 | -1.00000 |
| 45 | Global Y axis | -1.00000 | -1.00000 |
| 105 | Global Y axis | -1.00000 | -1.00000 |
| 107 | Global Y axis | -1.00000 | -1.00000 |
| 111 | Global Y axis | -1.00000 | -1.00000 |
| 114 | Global Y axis | -1.00000 | -1.00000 |
| 121 | Global Y axis | -1.00000 | -1.00000 |
| 123 | Global Y axis | -1.00000 | -1.00000 |
| 127 | Global Y axis | -1.00000 | -1.00000 |
| 129 | Global Y axis | -1.00000 | -1.00000 |

Loadcase name : SNOW LOAD
 Loadcase number : 2
 Number of loaded nodes : 0
 Number of loaded beams : 18
 Number of loaded plates : 0
 Gravity loads factor : .00000

BEAM LOADS

| Beam | Loading direction | End Distributed Loads | |
|------|-------------------|-----------------------|----------|
| 5 | Global Y axis | -1.00000 | -1.00000 |
| 42 | Global Y axis | -1.00000 | -1.00000 |
| 6 | Global Y axis | -1.00000 | -1.00000 |
| 43 | Global Y axis | -1.00000 | -1.00000 |
| 7 | Global Y axis | -1.00000 | -1.00000 |

| | | |
|---|---|----------------|
| Designed By: | Z. J. S. ENGINEERING SERVICES INC. 350 S. Milliken, #A. ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 |
| Janos Boros P.E. | | Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

| | | | |
|-----|---------------|----------|----------|
| 10 | Global Y axis | -1.00000 | -1.00000 |
| 11 | Global Y axis | -1.00000 | -1.00000 |
| 44 | Global Y axis | -1.00000 | -1.00000 |
| 12 | Global Y axis | -1.00000 | -1.00000 |
| 45 | Global Y axis | -1.00000 | -1.00000 |
| 105 | Global Y axis | -1.00000 | -1.00000 |
| 107 | Global Y axis | -1.00000 | -1.00000 |
| 111 | Global Y axis | -1.00000 | -1.00000 |
| 114 | Global Y axis | -1.00000 | -1.00000 |
| 121 | Global Y axis | -1.00000 | -1.00000 |
| 123 | Global Y axis | -1.00000 | -1.00000 |
| 127 | Global Y axis | -1.00000 | -1.00000 |
| 129 | Global Y axis | -1.00000 | -1.00000 |

Loadcase name : WIND LOAD
Loadcase number : 3
Number of loaded nodes : 0
Number of loaded beams : 23
Number of loaded plates : 0
Gravity loads factor : .00000

BEAM LOADS

| Beam | Loading direction | End Distributed Loads | |
|------|-------------------|-----------------------|---------|
| 1 | Global X axis | .56000 | .56000 |
| 21 | Global X axis | .56000 | .56000 |
| 5 | Local Y axis | -.02000 | -.02000 |
| 42 | Local Y axis | -.02000 | -.02000 |
| 6 | Local Y axis | -.02000 | -.02000 |
| 43 | Local Y axis | 1.06000 | 1.06000 |
| 7 | Local Y axis | 1.06000 | 1.06000 |
| 10 | Local Y axis | 1.06000 | 1.06000 |
| 11 | Local Y axis | 1.06000 | 1.06000 |
| 44 | Local Y axis | .60000 | .60000 |
| 12 | Local Y axis | .60000 | .60000 |
| 45 | Local Y axis | .60000 | .60000 |
| 105 | Local Y axis | -.02000 | -.02000 |
| 107 | Local Y axis | -.02000 | -.02000 |
| 111 | Local Y axis | 1.06000 | 1.06000 |
| 114 | Local Y axis | 1.06000 | 1.06000 |
| 121 | Local Y axis | 1.06000 | 1.06000 |
| 123 | Local Y axis | 1.06000 | 1.06000 |
| 127 | Local Y axis | .60000 | .60000 |
| 129 | Local Y axis | .60000 | .60000 |
| 130 | Global X axis | .37000 | .37000 |
| 131 | Global X axis | .37000 | .37000 |
| 132 | Global X axis | .37000 | .37000 |

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

SUPERPOSITION LOADCASES

Loadcase name : DEAD LOAD + SNOW LOAD
Loadcase number : 4
Number of superpositions : 2

LOADCASE Superposition factor

1 2.08: 2.5 PSF @ 10'
2 33.33: 40.0 PSF @ 10'

Loadcase name : DEAD LOAD + WIND LOAD
Loadcase number : 5
Number of superpositions : 2

LOADCASE Superposition factor

1 2.08: 2.5 PSF @ 10'
3 10.85: 13.0 PSF @ 10'

MOVEMENT RESTRAINTS

| Node | Type of restraint | Restraint |
|------|--------------------------|-----------|
| 1 | Translation along X axis | .00000 |
| 1 | Translation along Y axis | .00000 |
| 1 | Rotation about Z axis | .00000 |
| 16 | Translation along X axis | .00000 |
| 16 | Translation along Y axis | .00000 |
| 16 | Rotation about Z axis | .00000 |
| 122 | Translation along X axis | .00000 |
| 122 | Translation along Y axis | .00000 |
| 122 | Rotation about Z axis | .00000 |

=====

RESULTS FOR LOADCASE 4 : DEAD LOAD + SNOW LOAD

=====

BEAM LOADS AND STRESSES

PX1 Or PX2 Axial Load At The Ends Of The Member
SX1 Or SX2 Axial Stress At The Ends Of The Member
+ : Tension , - : Compression
SH1 Or SH2 Shear At The Ends Of The Member
BM1 Or BM2 Bending Moment At The Ends Of The Member

| | | |
|--|---|-----------------------|
| <i>Designed By:</i> | Z. J. S. ENGINEERING SERVICES INC. | <i>Job #</i> 21521-07 |
| <i>Janos Boros P.E.</i> | 350 S. Milliken, #A. ONTARIO, Ca91761 PHONE (909) 974-4150 | <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> | | |
| <i>Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></i> | | |

| Beam | I | J | PX1 | SX1 | PX2 | SX2 |
|------|-----|-----|---------|---------|---------|---------|
| 1 | 17 | 2 | -8940. | -4632. | -8940. | -4632. |
| 2 | 15 | 18 | -9332. | -4835. | -9332. | -4835. |
| 5 | 2 | 22 | -12216. | -13425. | -10623. | -11674. |
| 6 | 4 | 23 | -10330. | -11352. | -9420. | -10352. |
| 7 | 5 | 6 | -4321. | -4748. | -3831. | -4209. |
| 10 | 6 | 11 | -3830. | -4209. | -4321. | -4748. |
| 11 | 11 | 24 | -8469. | -9307. | -9091. | -9990. |
| 12 | 12 | 25 | -8316. | -9138. | -9601. | -10551. |
| 13 | 2 | 3 | 9424. | 18124. | 9424. | 18124. |
| 14 | 3 | 26 | 8198. | 15765. | 8198. | 15765. |
| 15 | 7 | 10 | 7797. | 14993. | 7797. | 14993. |
| 16 | 14 | 5 | 694. | 2168. | 694. | 2168. |
| 17 | 14 | 7 | 8022. | 15427. | 8022. | 15427. |
| 18 | 10 | 27 | 7308. | 14053. | 7308. | 14053. |
| 19 | 11 | 10 | -84. | -263. | -84. | -263. |
| 20 | 15 | 19 | 11641. | 22387. | 11641. | 22387. |
| 21 | 1 | 17 | -9968. | -5165. | -9968. | -5165. |
| 22 | 16 | 18 | -18059. | -9357. | -18059. | -9357. |
| 23 | 17 | 3 | -1846. | -3550. | -1846. | -3550. |
| 24 | 19 | 18 | -8837. | -16994. | -8837. | -16994. |
| 25 | 3 | 22 | -1088. | -3399. | -1088. | -3399. |
| 26 | 4 | 14 | -119. | -371. | -119. | -371. |
| 27 | 5 | 20 | -302. | -944. | -302. | -944. |
| 28 | 20 | 21 | -1. | -2. | -1. | -2. |
| 29 | 11 | 21 | 303. | 946. | 303. | 946. |
| 30 | 12 | 10 | 875. | 2733. | 875. | 2733. |
| 31 | 19 | 25 | -5126. | -16019. | -5126. | -16019. |
| 32 | 7 | 20 | -302. | -943. | -302. | -943. |
| 33 | 7 | 21 | 303. | 947. | 303. | 947. |
| 34 | 26 | 14 | 8347. | 16052. | 8347. | 16052. |
| 35 | 26 | 22 | 200. | 626. | 200. | 626. |
| 36 | 26 | 4 | -176. | -551. | -176. | -551. |
| 37 | 14 | 23 | -550. | -1720. | -550. | -1720. |
| 38 | 10 | 24 | -654. | -2043. | -654. | -2043. |
| 39 | 27 | 12 | -1893. | -5914. | -1893. | -5914. |
| 40 | 27 | 25 | 2063. | 6448. | 2063. | 6448. |
| 41 | 27 | 19 | 5749. | 11056. | 5749. | 11056. |
| 42 | 22 | 4 | -11485. | -12621. | -10200. | -11209. |
| 43 | 23 | 5 | -9618. | -10569. | -8997. | -9887. |
| 44 | 24 | 12 | -8854. | -9730. | -9764. | -10730. |
| 45 | 25 | 15 | -5731. | -6298. | -7324. | -8049. |
| 46 | 5 | 11 | -4428. | -13837. | -4428. | -13837. |
| 104 | 18 | 106 | -8082. | -15542. | -8082. | -15542. |
| 105 | 15 | 105 | -5244. | -7184. | -4093. | -5607. |
| 106 | 15 | 106 | 10485. | 20163. | 10485. | 20163. |
| 107 | 105 | 107 | -4875. | -6678. | -3936. | -5392. |
| 108 | 106 | 107 | -2986. | -9331. | -2986. | -9331. |

| | | |
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| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,CA91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

| | | | | | | |
|------|-----|-----|--------|---------|---------|---------|
| 109 | 106 | 108 | 5165. | 9932. | 5165. | 9932. |
| 110 | 107 | 108 | 632. | 1974. | 632. | 1974. |
| 111 | 107 | 109 | -6712. | -9194. | -6127. | -8394. |
| 112 | 108 | 112 | -377. | -1177. | -377. | -1177. |
| 113 | 108 | 115 | 5712. | 10984. | 5712. | 10984. |
| 114 | 109 | 112 | -6171. | -8453. | -5870. | -8041. |
| 115 | 106 | 105 | -1431. | -4473. | -1431. | -4473. |
| 118 | 117 | 118 | -879. | -2747. | -879. | -2747. |
| 121 | 112 | 114 | -6387. | -8750. | -6688. | -9162. |
| 122 | 115 | 112 | 623. | 1946. | 623. | 1946. |
| 123 | 114 | 116 | -6695. | -9171. | -7279. | -9971. |
| 124 | 115 | 116 | -603. | -1883. | -603. | -1883. |
| 125 | 115 | 117 | 6369. | 12247. | 6369. | 12247. |
| 126 | 116 | 117 | 217. | 678. | 217. | 678. |
| 127 | 116 | 118 | -7547. | -10338. | -8485. | -11624. |
| 128 | 117 | 119 | 7807. | 15014. | 7807. | 15014. |
| 129 | 118 | 119 | -8005. | -10966. | -9156. | -12542. |
| 130 | 119 | 120 | -6057. | -3139. | -6057. | -3139. |
| 131 | 120 | 121 | -6755. | -3500. | -6755. | -3500. |
| 132 | 121 | 122 | -6755. | -3500. | -6755. | -3500. |
| 133 | 120 | 117 | -1482. | -2849. | -1482. | -2849. |
| 135 | 108 | 109 | -200. | -624. | -200. | -624. |
| 136 | 115 | 114 | -32. | -101. | -32. | -101. |
| Beam | I | J | SH1 | SH2 | BM1 | BM2 |
| 1 | 17 | 2 | -1040. | -1040. | -24952. | 0. |
| 2 | 15 | 18 | 137. | 137. | 0. | -3297. |
| 5 | 2 | 22 | -907. | 829. | 0. | -7024. |
| 6 | 4 | 23 | -901. | 869. | -8561. | -7659. |
| 7 | 5 | 6 | -710. | 1060. | -4137. | -13208. |
| 10 | 6 | 11 | -1062. | 709. | -13208. | -4041. |
| 11 | 11 | 24 | -812. | 958. | -4041. | -7921. |
| 12 | 12 | 25 | -877. | 894. | -8009. | -8526. |
| 13 | 2 | 3 | -9. | -9. | 0. | 307. |
| 14 | 3 | 26 | 6. | 6. | 307. | 60. |
| 15 | 7 | 10 | -0. | -0. | 0. | 46. |
| 16 | 14 | 5 | 0. | 0. | 0. | 0. |
| 17 | 14 | 7 | 1. | 1. | 60. | 0. |
| 18 | 10 | 27 | -1. | -1. | 46. | 122. |
| 19 | 11 | 10 | 0. | 0. | 0. | 0. |
| 20 | 15 | 19 | -1. | -1. | 0. | 44. |
| 21 | 1 | 17 | 493. | 493. | 22413. | -24952. |
| 22 | 16 | 18 | -70. | -70. | -3399. | 3297. |
| 23 | 17 | 3 | 0. | 0. | 0. | 0. |
| 24 | 19 | 18 | 0. | 0. | 0. | 0. |
| 25 | 3 | 22 | 0. | 0. | 0. | 0. |
| 26 | 4 | 14 | 0. | 0. | 0. | 0. |
| 27 | 5 | 20 | -0. | -0. | 0. | 24. |

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| <i>Designed By:</i> | Z. J. S. ENGINEERING SERVICES INC. | <i>Job #</i> 21521-07 |
| <i>Janos Boros P.E.</i> | 350 S. Milliken, #A. ONTARIO, Ca91761 PHONE (909) 974-4150 | <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> | | |
| <i>Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></i> | | |

| | | | | | | |
|-----|-----|-----|-------|-------|---------|---------|
| 28 | 20 | 21 | 0. | 0. | 0. | 0. |
| 29 | 11 | 21 | 0. | 0. | 0. | -25. |
| 30 | 12 | 10 | 0. | 0. | 0. | 0. |
| 31 | 19 | 25 | 0. | 0. | 0. | 0. |
| 32 | 7 | 20 | 0. | 0. | 0. | -24. |
| 33 | 7 | 21 | -0. | -0. | 0. | 25. |
| 34 | 26 | 14 | 0. | 0. | 60. | 60. |
| 35 | 26 | 22 | 0. | 0. | 0. | 0. |
| 36 | 26 | 4 | 0. | 0. | 0. | 0. |
| 37 | 14 | 23 | 0. | 0. | 0. | 0. |
| 38 | 10 | 24 | 0. | 0. | 0. | 0. |
| 39 | 27 | 12 | 0. | 0. | 0. | 0. |
| 40 | 27 | 25 | 0. | 0. | 0. | 0. |
| 41 | 27 | 19 | 4. | 4. | 122. | -44. |
| 42 | 22 | 4 | -860. | 910. | -7024. | -8561. |
| 43 | 23 | 5 | -952. | 819. | -7659. | -4137. |
| 44 | 24 | 12 | -884. | 887. | -7921. | -8009. |
| 45 | 25 | 15 | -851. | 884. | -8526. | 0. |
| 46 | 5 | 11 | 0. | 0. | 0. | 0. |
| 104 | 18 | 106 | 0. | 0. | 0. | 0. |
| 105 | 15 | 105 | -809. | 785. | 0. | -6699. |
| 106 | 15 | 106 | -2. | -2. | 0. | 87. |
| 107 | 105 | 107 | -833. | 760. | -6699. | -4784. |
| 108 | 106 | 107 | 0. | 0. | 0. | 0. |
| 109 | 106 | 108 | 0. | 0. | 87. | 61. |
| 110 | 107 | 108 | 0. | 0. | 0. | 0. |
| 111 | 107 | 109 | -686. | 730. | -4784. | -5737. |
| 112 | 108 | 112 | 0. | 0. | 0. | 0. |
| 113 | 108 | 115 | 1. | 1. | 61. | -5. |
| 114 | 109 | 112 | -839. | 932. | -5737. | -8090. |
| 115 | 106 | 105 | 0. | 0. | 0. | 0. |
| 118 | 117 | 118 | 0. | 0. | 0. | 0. |
| 121 | 112 | 114 | -938. | 833. | -8090. | -5436. |
| 122 | 115 | 112 | 0. | 0. | 0. | 0. |
| 123 | 114 | 116 | -696. | 721. | -5436. | -5977. |
| 124 | 115 | 116 | 0. | 0. | 0. | 0. |
| 125 | 115 | 117 | -3. | -3. | -5. | 271. |
| 126 | 116 | 117 | 0. | 0. | 0. | 0. |
| 127 | 116 | 118 | -829. | 765. | -5977. | -4305. |
| 128 | 117 | 119 | 6. | 6. | 271. | 0. |
| 129 | 118 | 119 | -741. | 852. | -4305. | 0. |
| 130 | 119 | 120 | 884. | 884. | 0. | -21209. |
| 131 | 120 | 121 | -424. | -424. | -21209. | 2938. |
| 132 | 121 | 122 | -424. | -424. | 2938. | 19460. |
| 133 | 120 | 117 | 0. | 0. | 0. | 0. |
| 135 | 108 | 109 | 0. | 0. | 0. | 0. |
| 136 | 115 | 114 | 0. | 0. | 0. | 0. |

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| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Type of beam : 4"dia.16

Maximum Stress - Compression [fa] : -9357. At Beam : 22
Maximum Bending Moment [M] : -24952. At Beam : 1

Type of beam : W :1-5/8dia.065

Maximum Stress - Compression [fa] : -16019. At Beam : 31
Maximum Stress - Tension [ft] : 6448. At Beam : 40

Type of beam : TC1:4"hat16ga

Maximum Stress - Compression [fa] : -10966. At Beam : 129
Maximum Bending Moment [M] : -8090. At Beam : 121

Type of beam : BC :1-5/8dia.11

Maximum Stress - Tension [ft] : 22387. At Beam : 20
Maximum Bending Moment [M] : 307. At Beam : 14

Type of beam : K :1-5/8dia.11

Maximum Stress - Compression [fa] : -16994. At Beam : 24

Type of beam : TC2:4"hat14ga

Maximum Stress - Compression [fa] : -13425. At Beam : 5
Maximum Bending Moment [M] : -13208. At Beam : 10

NODE INTERNAL FORCES AND REACTIONS

| Node | FX | FY | MZ |
|------|----------------|-----------------|---------|
| 1 | 493. Reaction | 9968. Reaction | -22413. |
| 16 | -70. Reaction | 18059. Reaction | 3399. |
| 122 | -424. Reaction | 6755. Reaction | 19460. |

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| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

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RESULTS FOR LOADCASE 5 : DEAD LOAD + WIND LOAD

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BEAM LOADS AND STRESSES

PX1 Or PX2 Axial Load At The Ends Of The Member
 SX1 Or SX2 Axial Stress At The Ends Of The Member
 + : Tension , - : Compression
 SH1 Or SH2 Shear At The Ends Of The Member
 BM1 Or BM2 Bending Moment At The Ends Of The Member

| Beam | I | J | PX1 | SX1 | PX2 | SX2 |
|------|----|----|--------|--------|--------|--------|
| 1 | 17 | 2 | -136. | -71. | -136. | -71. |
| 2 | 15 | 18 | 966. | 501. | 966. | 501. |
| 5 | 2 | 22 | -130. | -143. | -36. | -40. |
| 6 | 4 | 23 | 1214. | 1334. | 1267. | 1393. |
| 7 | 5 | 6 | 941. | 1034. | 969. | 1065. |
| 10 | 6 | 11 | 969. | 1065. | 941. | 1034. |
| 11 | 11 | 24 | 1842. | 2024. | 1805. | 1984. |
| 12 | 12 | 25 | 1732. | 1904. | 1657. | 1821. |
| 13 | 2 | 3 | -1092. | -2100. | -1092. | -2100. |
| 14 | 3 | 26 | 23. | 44. | 23. | 44. |
| 15 | 7 | 10 | -1334. | -2565. | -1334. | -2565. |
| 16 | 14 | 5 | 604. | 1887. | 604. | 1887. |
| 17 | 14 | 7 | -1110. | -2134. | -1110. | -2134. |
| 18 | 10 | 27 | -1425. | -2740. | -1425. | -2740. |
| 19 | 11 | 10 | -192. | -599. | -192. | -599. |
| 20 | 15 | 19 | -1626. | -3126. | -1626. | -3126. |
| 21 | 1 | 17 | 795. | 412. | 795. | 412. |
| 22 | 16 | 18 | 2146. | 1112. | 2146. | 1112. |
| 23 | 17 | 3 | 1671. | 3214. | 1671. | 3214. |
| 24 | 19 | 18 | 256. | 492. | 256. | 492. |
| 25 | 3 | 22 | 967. | 3022. | 967. | 3022. |
| 26 | 4 | 14 | -732. | -2289. | -732. | -2289. |
| 27 | 5 | 20 | -301. | -939. | -301. | -939. |
| 28 | 20 | 21 | 0. | 0. | 0. | 0. |
| 29 | 11 | 21 | 300. | 939. | 300. | 939. |
| 30 | 12 | 10 | 36. | 111. | 36. | 111. |
| 31 | 19 | 25 | 151. | 472. | 151. | 472. |
| 32 | 7 | 20 | -301. | -939. | -301. | -939. |
| 33 | 7 | 21 | 300. | 939. | 300. | 939. |
| 34 | 26 | 14 | -498. | -958. | -498. | -958. |
| 35 | 26 | 22 | -690. | -2156. | -690. | -2156. |
| 36 | 26 | 4 | 633. | 1977. | 633. | 1977. |
| 37 | 14 | 23 | 49. | 152. | 49. | 152. |

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| Designed By: | Z.J.S.ENGINEERING SERVICES INC. | Job # 21521-07 |
| <i>Janos Boros P.E.</i> | 350 S.Milliken,#A.ONTARIO, Ca91761 | Date 9-11-2007 |
| PHONE (909) 974-4150 | | |
| Reference: Rocky Mountain Native Plants < Conley > | | |
| Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

| | | | | | | |
|-------------|----------|----------|------------|------------|------------|------------|
| 38 | 10 | 24 | 150. | 468. | 150. | 468. |
| 39 | 27 | 12 | -38. | -119. | -38. | -119. |
| 40 | 27 | 25 | 40. | 126. | 40. | 126. |
| 41 | 27 | 19 | -1456. | -2800. | -1456. | -2800. |
| 42 | 22 | 4 | 641. | 704. | 716. | 787. |
| 43 | 23 | 5 | 1267. | 1393. | 1304. | 1433. |
| 44 | 24 | 12 | 1758. | 1932. | 1704. | 1873. |
| 45 | 25 | 15 | 1524. | 1675. | 1430. | 1572. |
| 46 | 5 | 11 | 797. | 2490. | 797. | 2490. |
| 104 | 18 | 106 | 2202. | 4235. | 2202. | 4235. |
| 105 | 15 | 105 | -135. | -184. | -67. | -92. |
| 106 | 15 | 106 | -1732. | -3331. | -1732. | -3331. |
| 107 | 105 | 107 | -122. | -167. | -67. | -91. |
| 108 | 106 | 107 | 1427. | 4461. | 1427. | 4461. |
| 109 | 106 | 108 | -654. | -1259. | -654. | -1259. |
| 110 | 107 | 108 | -618. | -1930. | -618. | -1930. |
| 111 | 107 | 109 | 1285. | 1760. | 1319. | 1807. |
| 112 | 108 | 112 | 371. | 1158. | 371. | 1158. |
| 113 | 108 | 115 | -1191. | -2290. | -1191. | -2290. |
| 114 | 109 | 112 | 1375. | 1884. | 1393. | 1908. |
| 115 | 106 | 105 | -100. | -314. | -100. | -314. |
| 118 | 117 | 118 | -23. | -73. | -23. | -73. |
| 121 | 112 | 114 | 1804. | 2472. | 1787. | 2447. |
| 122 | 115 | 112 | -425. | -1327. | -425. | -1327. |
| 123 | 114 | 116 | 1778. | 2436. | 1744. | 2389. |
| 124 | 115 | 116 | 393. | 1227. | 393. | 1227. |
| 125 | 115 | 117 | -1628. | -3131. | -1628. | -3131. |
| 126 | 116 | 117 | -745. | -2330. | -745. | -2330. |
| 127 | 116 | 118 | 2471. | 3385. | 2416. | 3309. |
| 128 | 117 | 119 | -919. | -1767. | -919. | -1767. |
| 129 | 118 | 119 | 2428. | 3326. | 2360. | 3233. |
| 130 | 119 | 120 | 1510. | 783. | 1510. | 783. |
| 131 | 120 | 121 | 891. | 462. | 891. | 462. |
| 132 | 121 | 122 | 891. | 462. | 891. | 462. |
| 133 | 120 | 117 | -1316. | -2531. | -1316. | -2531. |
| 135 | 108 | 109 | 194. | 607. | 194. | 607. |
| 136 | 115 | 114 | 38. | 119. | 38. | 119. |
| Beam | I | J | SH1 | SH2 | BM1 | BM2 |
| 1 | 17 | 2 | 999. | 1145. | 25433. | 0. |
| 2 | 15 | 18 | 1115. | 1115. | 0. | -26771. |
| 5 | 2 | 22 | -64. | 53. | 0. | -279. |
| 6 | 4 | 23 | -96. | 20. | -1057. | 1066. |
| 7 | 5 | 6 | 224. | -269. | 1751. | 2901. |
| 10 | 6 | 11 | 269. | -224. | 2901. | 1749. |
| 11 | 11 | 24 | 257. | -249. | 1749. | 1529. |
| 12 | 12 | 25 | 148. | -150. | 1258. | 1326. |
| 13 | 2 | 3 | -2. | -2. | 0. | 58. |

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| <i>Designed By:</i> | Z.J.S.ENGINEERING SERVICES INC. | <i>Job #</i> 21521-07 |
| <i>Janos Boros P.E.</i> | 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> | | |
| <i>Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></i> | | |

| | | | | | | |
|-----|-----|-----|-------|-------|---------|--------|
| 14 | 3 | 26 | 2. | 2. | 58. | -7. |
| 15 | 7 | 10 | 0. | 0. | 0. | -14. |
| 16 | 14 | 5 | 0. | 0. | 0. | 0. |
| 17 | 14 | 7 | 0. | 0. | -4. | 0. |
| 18 | 10 | 27 | 0. | 0. | -14. | -10. |
| 19 | 11 | 10 | 0. | 0. | 0. | 0. |
| 20 | 15 | 19 | -1. | -1. | 0. | 48. |
| 21 | 1 | 17 | -972. | -389. | -39897. | 25433. |
| 22 | 16 | 18 | -615. | -615. | -32286. | 26771. |
| 23 | 17 | 3 | 0. | 0. | 0. | 0. |
| 24 | 19 | 18 | 0. | 0. | 0. | 0. |
| 25 | 3 | 22 | 0. | 0. | 0. | 0. |
| 26 | 4 | 14 | 0. | 0. | 0. | 0. |
| 27 | 5 | 20 | 0. | 0. | 0. | -5. |
| 28 | 20 | 21 | 0. | 0. | 0. | 0. |
| 29 | 11 | 21 | 0. | 0. | 0. | 4. |
| 30 | 12 | 10 | 0. | 0. | 0. | 0. |
| 31 | 19 | 25 | 0. | 0. | 0. | 0. |
| 32 | 7 | 20 | 0. | 0. | 0. | 5. |
| 33 | 7 | 21 | 0. | 0. | 0. | -4. |
| 34 | 26 | 14 | 0. | 0. | -7. | -4. |
| 35 | 26 | 22 | 0. | 0. | 0. | 0. |
| 36 | 26 | 4 | 0. | 0. | 0. | 0. |
| 37 | 14 | 23 | 0. | 0. | 0. | 0. |
| 38 | 10 | 24 | 0. | 0. | 0. | 0. |
| 39 | 27 | 12 | 0. | 0. | 0. | 0. |
| 40 | 27 | 25 | 0. | 0. | 0. | 0. |
| 41 | 27 | 19 | 1. | 1. | -10. | -48. |
| 42 | 22 | 4 | -46. | 71. | -279. | -1057. |
| 43 | 23 | 5 | 240. | -266. | 1066. | 1751. |
| 44 | 24 | 12 | 136. | -126. | 1529. | 1258. |
| 45 | 25 | 15 | 158. | -173. | 1326. | 0. |
| 46 | 5 | 11 | 0. | 0. | 0. | 0. |
| 104 | 18 | 106 | 0. | 0. | 0. | 0. |
| 105 | 15 | 105 | -62. | 44. | 0. | 26. |
| 106 | 15 | 106 | -1. | -1. | 0. | 43. |
| 107 | 105 | 107 | -49. | 56. | 26. | -136. |
| 108 | 106 | 107 | 0. | 0. | 0. | 0. |
| 109 | 106 | 108 | 1. | 1. | 43. | -31. |
| 110 | 107 | 108 | 0. | 0. | 0. | 0. |
| 111 | 107 | 109 | 160. | -254. | -136. | 1909. |
| 112 | 108 | 112 | 0. | 0. | 0. | 0. |
| 113 | 108 | 115 | -0. | -0. | -31. | 13. |
| 114 | 109 | 112 | 235. | -244. | 1909. | 2155. |
| 115 | 106 | 105 | 0. | 0. | 0. | 0. |
| 118 | 117 | 118 | 0. | 0. | 0. | 0. |
| 121 | 112 | 114 | 252. | -227. | 2155. | 1533. |
| 122 | 115 | 112 | 0. | 0. | 0. | 0. |
| 123 | 114 | 116 | 208. | -206. | 1533. | 1488. |

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|---|---|--|
| <i>Designed By:</i> <i>Janos Boros P.E.</i> | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | <i>Job #</i> 21521-07 <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> <i>Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></i> | | |

| | | | | | | |
|-----|-----|-----|-------|-------|---------|---------|
| 124 | 115 | 116 | 0. | 0. | 0. | 0. |
| 125 | 115 | 117 | 1. | 1. | 13. | -92. |
| 126 | 116 | 117 | 0. | 0. | 0. | 0. |
| 127 | 116 | 118 | 152. | -95. | 1488. | 7. |
| 128 | 117 | 119 | -2. | -2. | -92. | 0. |
| 129 | 118 | 119 | 112. | -156. | 7. | 0. |
| 130 | 119 | 120 | 903. | 806. | 0. | -20319. |
| 131 | 120 | 121 | -355. | -584. | -20319. | 6426. |
| 132 | 121 | 122 | -584. | -740. | 6426. | 32240. |
| 133 | 120 | 117 | 0. | 0. | 0. | 0. |
| 135 | 108 | 109 | 0. | 0. | 0. | 0. |
| 136 | 115 | 114 | 0. | 0. | 0. | 0. |

Type of beam : 4"dia.16

| | | | |
|---------------------------------------|---------|-----------|----|
| Maximum Stress - Compression [fa] : | -71. | At Beam : | 1 |
| Maximum Stress - Tension [ft] : | 1112. | At Beam : | 22 |
| Maximum Bending Moment [M] : | -39897. | At Beam : | 21 |

Type of beam : W :1-5/8dia.065

| | | | |
|---------------------------------------|--------|-----------|-----|
| Maximum Stress - Compression [fa] : | -2330. | At Beam : | 126 |
| Maximum Stress - Tension [ft] : | 4461. | At Beam : | 108 |

Type of beam : TC1:4"hat16ga

| | | | |
|---------------------------------------|-------|-----------|-----|
| Maximum Stress - Compression [fa] : | -184. | At Beam : | 105 |
| Maximum Stress - Tension [ft] : | 3385. | At Beam : | 127 |
| Maximum Bending Moment [M] : | 2155. | At Beam : | 121 |

Type of beam : BC :1-5/8dia.11

| | | | |
|---------------------------------------|--------|-----------|-----|
| Maximum Stress - Compression [fa] : | -3331. | At Beam : | 106 |
| Maximum Stress - Tension [ft] : | 44. | At Beam : | 14 |
| Maximum Bending Moment [M] : | -92. | At Beam : | 128 |

Type of beam : K :1-5/8dia.11

| | | | |
|---------------------------------------|--------|-----------|-----|
| Maximum Stress - Compression [fa] : | -2531. | At Beam : | 133 |
| Maximum Stress - Tension [ft] : | 4235. | At Beam : | 104 |

Type of beam : TC2:4"hat14ga

| | | | |
|---------------------------------------|-------|-----------|----|
| Maximum Stress - Compression [fa] : | -143. | At Beam : | 5 |
| Maximum Stress - Tension [ft] : | 2024. | At Beam : | 11 |
| Maximum Bending Moment [M] : | 2901. | At Beam : | 10 |

| | | |
|---|--|----------------------------------|
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| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

NODE INTERNAL FORCES AND REACTIONS

| Node | FX | FY | MZ |
|------|----------------|-----------------|--------|
| 1 | -972. Reaction | -795. Reaction | 39897. |
| 16 | -615. Reaction | -2146. Reaction | 32286. |
| 122 | -740. Reaction | -891. Reaction | 32240. |

Find Maximum Stress/Moment For Each Member Types:

Type Of Member : 4"dia.16

Load Case Name : DEAD LOAD + SNOW LOAD

Maximum Stress - Tension [ft] :0.000
Maximum Stress - Compression [fa] :-9357.000
Maximum Bending Moment [M] :24952.000

Load Case Name : DEAD LOAD + WIND LOAD

Maximum Stress - Tension [ft] :1112.000
Maximum Stress - Compression [fa] :-71.000
Maximum Bending Moment [M] :39897.000

Type Of Member : W :1-5/8dia.065

Load Case Name : DEAD LOAD + SNOW LOAD

Maximum Stress - Tension [ft] :6448.000
Maximum Stress - Compression [fa] :-16019.000
Maximum Bending Moment [M] :0.000

Load Case Name : DEAD LOAD + WIND LOAD

Maximum Stress - Tension [ft] :4461.000
Maximum Stress - Compression [fa] :-2330.000
Maximum Bending Moment [M] :0.000

Type Of Member : TC1:4"hat16ga

Load Case Name : DEAD LOAD + SNOW LOAD

Maximum Stress - Tension [ft] :0.000
Maximum Stress - Compression [fa] :-10966.000
Maximum Bending Moment [M] :8090.000

Load Case Name : DEAD LOAD + WIND LOAD

Maximum Stress - Tension [ft] :3385.000
Maximum Stress - Compression [fa] :-184.000
Maximum Bending Moment [M] :2155.000

| | | |
|---|---|----------------------------------|
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| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Type Of Member : BC :1-5/8dia.11

Load Case Name : DEAD LOAD + SNOW LOAD
Maximum Stress - Tension [ft] :22387.000
Maximum Stress - Compression [fa] :0.000
Maximum Bending Moment [M] :307.000
Load Case Name : DEAD LOAD + WIND LOAD
Maximum Stress - Tension [ft] :44.000
Maximum Stress - Compression [fa] :-3331.000
Maximum Bending Moment [M] :92.000

Type Of Member : K :1-5/8dia.11

Load Case Name : DEAD LOAD + SNOW LOAD
Maximum Stress - Tension [ft] :0.000
Maximum Stress - Compression [fa] :-16994.000
Maximum Bending Moment [M] :0.000
Load Case Name : DEAD LOAD + WIND LOAD
Maximum Stress - Tension [ft] :4235.000
Maximum Stress - Compression [fa] :-2531.000
Maximum Bending Moment [M] :0.000

Type Of Member : TC2:4"hat14ga

Load Case Name : DEAD LOAD + SNOW LOAD/
Maximum Stress - Tension [ft] :0.000
Maximum Stress - Compression [fa] :-13425.000
Maximum Bending Moment [M] :13208.000
Load Case Name : DEAD LOAD + WIND LOAD
Maximum Stress - Tension [ft] :2024.000
Maximum Stress - Compression [fa] :-143.000
Maximum Bending Moment [M] :2901.000

| | | |
|---|---|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A. ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

3. LATERAL LOAD RESISTING SYSTEMS

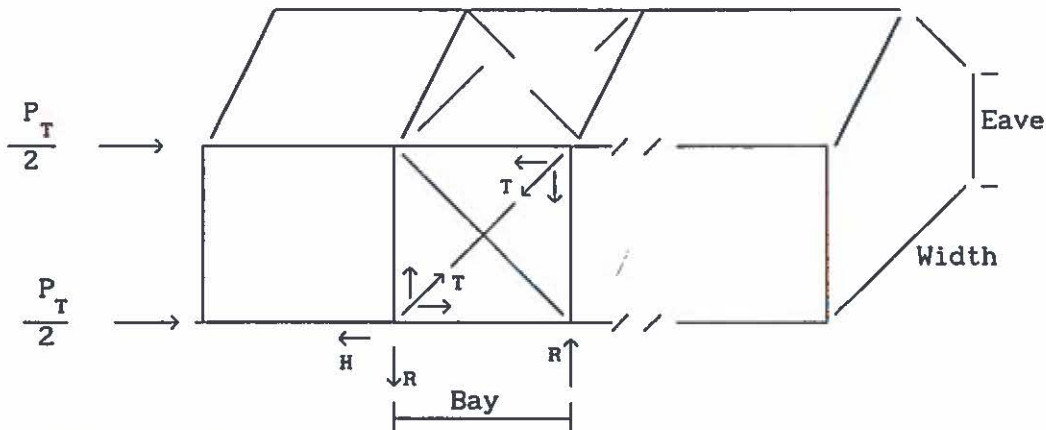
3.1. Check For Lateral Loads in Transversal Direction

See above 2.3. Check Trusses/Column Frame

3.2. Check For Lateral Loads in Longitudinal Direction

Check Longitudinal Bracing

| | | |
|--------|------------|--|
| Eave | = 10.0 ft | - Eave Height |
| Width | = 71.5 ft | - Width Of The Building |
| Length | = 130.0 ft | - Length Of The Building |
| Bay | = 10.0 ft | - Width Of The Braced Bay (Critical) |
| Ridge | = 15.0 ft | |



Check For Wind Load

Find Total Exposed Area At The End Of The Building At Each Side :

$$A_T = \left[\frac{\text{Ridge} + \text{Eave}}{2} \right] \text{Width} = 893.7 \text{ ft}^2$$

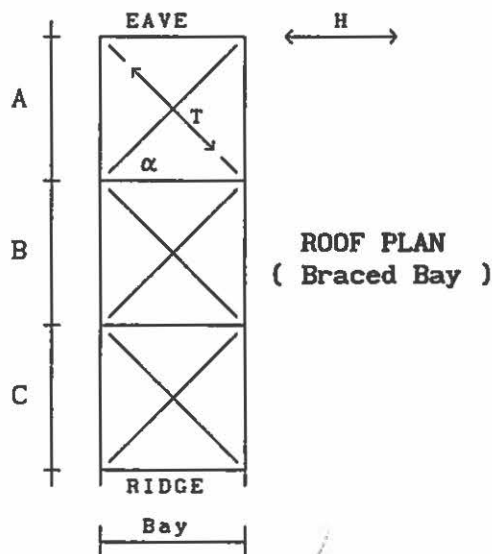
Total Wind Load At Each Side :

$$GC_{pf} = \begin{matrix} \text{LEEWARD} \\ 0.40 \\ + \\ 0.29 \\ \text{WINDWARD} \end{matrix} = 0.69$$

$$P_T = (GC_{pf} q_z) A_T = 8.03 \text{ kips}$$

| | | |
|---|--|----------------------------------|
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$$\text{Total force in a braced bay : } H = \frac{\frac{P_T}{2}}{2 \text{ BAYS}} = 2.00 \text{ kips}$$

Check Roof Bracing :

$$A = 10.00 \text{ ft}; B = 0.00 \text{ ft}; C = 0.00 \text{ ft}$$

Critical in the first set to the eave.

$$\alpha = \text{invtan} \left(\frac{A}{\text{Bay}/2} \right) = 45.0^\circ$$

Tension Force In (1) Set Of 1/4" Dia Cable By FWC :

$$T = \frac{H}{\cos \alpha} = 2.82 \text{ kips} < P_{1/4} = 1.33 (3325 \text{ lb}) = 4.42 \text{ kips} - \text{Refer To Appendix}$$

Check Wall Bracing :

Tension Force In (1) Set Of 1/4" Dia Cable By FWC

$$T = H \frac{\sqrt{\text{Eave}^2 + \text{Bay}^2}}{\text{Bay}} = 2.82 \text{ kip} < P_{1/4} = 1.33 (3325 \text{ lb}) = 4.42 \text{ kips} - \text{Refer To Appendix}$$

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A.ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Reactions For Anchorage :

$$H = 2.0 \text{ kip} \quad R = H \frac{\text{Eave}}{\text{Bay}} = 2.0 \text{ kip}$$

4. CHECK FOUNDATION

$$p_s = 1000 \frac{\text{Lb}}{\text{Ft}^2} \quad [\text{Min. Soil Pressure} \quad]$$

$$\gamma_c = 150 \frac{\text{Lb}}{\text{Ft}^3} \quad [\text{Specific Weight Of Concrete} \quad]$$

$$f'_c = 2500 \frac{\text{Lb}}{\text{in}^2} \quad [\text{Compressive Strength Of The Concrete}]$$

$$p_L = 100 \frac{\text{Lb}}{\text{Ft}^2} \quad [\text{Min. Lateral Bearing Pressure} \quad]$$

4.1 Typical At Side Wall

Use : 2 Ft. - 9 In. Dia. x 4 Ft. - 6 In. Deep Concrete Footing

$$D = 4.50 \text{ Ft} \quad [\text{Depth Of The Footing} \quad]$$

$$r = 1.38 \text{ Ft} \quad [\text{Radius Of The Footing} \quad]$$

$$A = r^2 \pi = 5.94 \text{ Ft.}^2 \quad [\text{Area Of The Bottom Of The Footing} \quad]$$

4.1.1. Vertical Down

$$P_{\text{VERT. DOWN}} = 9.96 \text{ kips}$$

$$1.70 p_s = 1700 \frac{\text{Lb}}{\text{Ft}^2} > \frac{P_{\text{VERT. DOWN}}}{A} = 1677 \frac{\text{Lb}}{\text{Ft}^2} \quad \text{OK}$$

DUE TO DEPTH

4.1.2. Vertical Up

$$P_{\text{VERT. UP}} = 0.79 \text{ kips}$$

$$P_{\text{WEIGHT FOOTING}} = A \quad D \quad \gamma_c = 4.01 \text{ kips}$$

| | | |
|---|--|----------------------------------|
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| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

$$\begin{aligned}
 & \downarrow \text{Safety} = 2 \quad \downarrow \text{Stress Increase Due To Wind Or Seismic} \\
 P_{\text{FRICT.}} &= \left(\frac{1}{2}\right) (2 \pi) \frac{1.33 P_s}{6} D = 4.32 \text{ kips} \\
 P_{\text{TOTAL RESISTING}} &= 8.33 \text{ kips} \\
 \text{Safety} &= \frac{P_{\text{TOTAL RESISTING}}}{P_{\text{VERT. UP}}} = 10.54 \quad \text{OK}
 \end{aligned}$$

Check For Lateral Load

Use : 2 ft - 9 in Dia. x 4 ft - 6 in Deep Round Footing

b = 2.75 ft - Diameter Of The Footing

d = 4.50 ft - Depth Of The Pile

$$p_a = 100 \frac{\frac{1b}{\text{ft}^2}}{\text{ft of Depth}} \quad \text{- Per Table 18-I-A Of UBC 1997}$$

$$\begin{aligned}
 & \downarrow \text{Footnote \#3 Table 18-I-A} \\
 S_3 &= 1.33 (2) (p_a) d = 1197 \frac{1b}{\text{ft}^2} \\
 & \uparrow \text{Load Due To Wind/ Or Seismic}
 \end{aligned}$$

$$S_1 = \frac{S_3}{3} = 399 \text{ psf}$$

$M_{\text{MAX}} = 39.89 \text{ kip-in}$ - Maximum Moment At The Base, See Page 22 Of The Calculations

$h = 10.00 \text{ ft}$ - Distance In Feet From Ground Surface To Point Of Application Of "P"

$$P = \frac{M_{\text{MAX}}}{h} = 332 \text{ lb} \quad \text{- Applied Lateral Force In Pounds}$$

$$A = \frac{2.34 P}{S_1 b} = 0.71$$

| | | |
|---|--|----------------------------------|
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| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

$$d = 4.50 \text{ ft} > \frac{A}{2} \left[1 + \sqrt{1 + \frac{4.36 h}{A}} \right] = 3.16 \text{ ft} \quad \text{OK}$$

Check Concrete For Reinforcement :

- $f'_c = 2500 \text{ psf}$ - Specified Compressive Strength Of Concrete
 f_t - Allowable Tensile Strength Of Concrete Without Reinforcement
 S - Section Modulus Of Footing

$$S = \frac{\pi b^3}{32} = 3528.11 \text{ in}^2$$

$$f_t = 1.6 \sqrt{f'_c} = 80.0 \text{ psi} > \frac{P h}{S} = 11.3 \text{ psi}$$

4.2 @ Interior Posts

Use : 3 Ft. - 9 In. Dia. x 4 Ft. - 6 In. Deep Concrete Footing

- $D = 4.50 \text{ Ft}$ [Depth Of The Footing]
 $r = 1.88 \text{ Ft}$ [Radius Of The Footing]
 $A = r^2 \pi = 11.04 \text{ Ft.}^2$ [Area Of The Bottom Of The Footing]

4.2.1. Vertical Down

$$P_{\text{VERT. DOWN}} = 18.06 \text{ kips}$$

$$1.70 p_s = 1700 \frac{\text{Lb}}{\text{Ft}^2} > \frac{P_{\text{VERT. DOWN}}}{A} = 1635 \frac{\text{Lb}}{\text{Ft}^2} \quad \text{OK}$$

DUE TO DEPTH

| | | |
|--|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & .30 ft -0 in <6500 Series> | | |

4.2.2. Vertical Up

$$P_{\text{VERT. UP}} = 2.14 \text{ kips}$$

$$P_{\text{WEIGHT FOOTING}} = A D \gamma_c = 7.46 \text{ kips}$$

↓ Safety = 2 ↓ Stress Increase Due
To Wind Or Seismic

$$P_{\text{FRICT.}} = \left(\frac{1}{2}\right) (2 \pi) \frac{1.33 p_s}{6} D = 5.89 \text{ kips}$$

$$P_{\text{TOTAL RESISTING}} = 13.35 \text{ kips}$$

$$\text{Safety} = \frac{P_{\text{TOTAL RESISTING}}}{P_{\text{VERT. UP}}} = 6.24 \quad \text{OK}$$

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A.ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

APPENDIX

Allowable Loads (lb) For Screws Per ICBO ER-5202, LARR 25294

| STEEL THICKNESS in. (GAUGE) | 1/4 - 14 SCREW | | #12 SCREW | | #10 SCREW | | #8 SCREW | | #6 SCREW | |
|-----------------------------------|-------------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|
| | SHEAR | PULL OUT | SHEAR | PULL OUT | SHEAR | PULL OUT | SHEAR | PULL OUT | SHEAR | PULL OUT |
| .1046 (12) | 1102 | 591 | 884 | 497 | 660 | 575 | 534 | 363 | 436 | 320 |
| .0747 (14) | 920 | 386 | 829 | 379 | 624 | 337 | 533 | 352 | 452 | 220 |
| .0598 (16) | 689 | 219 | 622 | 294 | 629 | 230 | 458 | 302 | 423 | 231 |
| .0478 (18) | 351 | 137 | 326 | 141 | 344 | 155 | 330 | 143 | 251 | 138 |
| .0359 (20) | 242 | 120 | 232 | 123 | 225 | 83 | 222 | 93 | 168 | 81 |

Steel Members shall conform to Section 2230, A3, of the code.

20 ga, 18 ga - ASTM A 653 Grade 33 S.Q. with a minimum of 33,000 psi yield strength.

16 ga, 14 ga, 12 ga - ASTM A 653 Grade 50 S.Q. with a minimum of 50,000 psi yield strength.

| | | |
|---|---|----------------------------------|
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| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

APPENDIX

Allowable Shear (kips) For Bolts Per Table V-4.5 of the Cold-Formed Specifications By AISI

| STEEL THICKNESS in. (GAUGE) | 1/4" Dia. | | 3/8" Dia. | | 1/2" Dia. | | 5/8" Dia. | | 3/4" Dia. | |
|--------------------------------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
| | A307 | A325 | A307 | A325 | A307 | A325 | A307 | A325 | A307 | A325 |
| | 0.49 | 1.03 | 1.10 | 2.32 | 1.96 | 4.12 | 3.07 | 6.44 | 4.42 | 9.28 |
| .1046 (12) | 1.97 | 1.97 | 2.95 | 2.95 | 3.94 | 3.94 | 4.92 | 4.92 | 5.91 | 5.91 |
| .0747 (14) | 1.41 | 1.41 | 2.11 | 2.11 | 2.81 | 2.81 | 3.52 | 3.52 | 4.22 | 4.22 |
| .0598 (16) | 1.12 | 1.12 | 1.69 | 1.69 | 2.25 | 2.25 | 2.81 | 2.81 | 3.38 | 3.38 |
| .0478 (18) | 0.90 | 0.90 | 1.35 | 1.35 | 1.80 | 1.80 | 2.25 | 2.25 | 2.70 | 2.70 |
| .0359 (20) | 0.68 | 0.68 | 1.01 | 1.01 | 1.35 | 1.35 | 1.69 | 1.69 | 2.02 | 2.02 |

Steel Members shall conform to Section 2230, A3, of the code.

20 ga, 18 ga - ASTM A 653 Grade 33 S.Q. with a minimum of 33,000 psi yield strength.

16 ga, 14 ga, 12 ga - ASTM A 653 Grade 50 S.Q. with a minimum of 50,000 psi yield strength.

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix A

Section Properties For 3 IN HAT X 18 GA

(1986 AISI, 50.0 KSI STEEL; IX FOR DEFL., SX FOR STRESS)

| | | | | | |
|---------------|---|------------|------------------|---|-------------|
| DEPTH | = | 3.0000 IN | THICKNESS | = | 0.0480 IN |
| BOTTOM FLANGE | = | 0.8800 IN | TOP FLANGE | = | 1.7500 IN |
| WEB ANGLE | = | 90.0000 IN | INSIDE RADIUS | = | 0.1000 IN |
| BOTTOM LIP | = | 0.5000 IN | BOTTOM LIP ANGLE | = | 90.0000 DEG |

X-X AXIS EFFECTIVE PROPERTIES - LOAD DETERMINATION
TOP IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|--------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3520 | 0.3240 | 0.1140 | 0.0369 | 0.0036 |
| BOTTOM LIP CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 0.0240 | 0.0140 | 0.0003 | 0.0000 |
| BOTTOM WEB CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 1.5000 | 4.0560 | 6.0840 | 1.6476 |
| TOP WEB CORNER | 0.1947 | 2.9310 | 0.5708 | 1.6729 | 0.0003 |
| TOP FLANGE | 1.4376 | 2.9760 | 4.2783 | 12.7322 | 0.0000 |
| TOP WEB CORNER | 0.1947 | 2.9310 | 0.5708 | 1.6729 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 1.5000 | 4.0560 | 6.0840 | 1.6476 |
| BOTTOM WEB CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 0.0240 | 0.0140 | 0.0003 | 0.0000 |
| BOTTOM LIP CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM LIP | 0.3520 | 0.3240 | 0.1140 | 0.0369 | 0.0036 |
| SUM | 9.8861 | | 13.8147 | 28.3244 | 3.3041 |

YBAR = 1.4001 IN

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,CA91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

X-X AXIS EFFECTIVE PROPERTIES - DEFLECTION DETERMINATION
TOP IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|--------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3520 | 0.3240 | 0.1140 | 0.0369 | 0.0036 |
| BOTTOM LIP CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 0.0240 | 0.0140 | 0.0003 | 0.0000 |
| BOTTOM WEB CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 1.5000 | 4.0560 | 6.0840 | 1.6476 |
| TOP WEB CORNER | 0.1947 | 2.9310 | 0.5708 | 1.6729 | 0.0003 |
| TOP FLANGE | 1.4540 | 2.9760 | 4.3271 | 12.8775 | 0.0000 |
| TOP WEB CORNER | 0.1947 | 2.9310 | 0.5708 | 1.6729 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 1.5000 | 4.0560 | 6.0840 | 1.6476 |
| BOTTOM WEB CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 0.0240 | 0.0140 | 0.0003 | 0.0000 |
| BOTTOM LIP CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM LIP | 0.3520 | 0.3240 | 0.1140 | 0.0369 | 0.0036 |
| SUM | 9.9025 | | 13.8905 | 28.4696 | 3.3041 |

YBAR = 1.4027 IN

X-X AXIS EFFECTIVE PROPERTIES - LOAD DETERMINATION
BOTTOM IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|--------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3520 | 0.3240 | 0.1140 | 0.0369 | 0.0036 |
| BOTTOM LIP CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 0.0240 | 0.0140 | 0.0003 | 0.0000 |
| BOTTOM WEB CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 1.5000 | 4.0560 | 6.0840 | 1.6476 |
| TOP WEB CORNER | 0.1947 | 2.9310 | 0.5708 | 1.6729 | 0.0003 |
| TOP FLANGE | 1.4540 | 2.9760 | 4.3271 | 12.8775 | 0.0000 |
| TOP WEB CORNER | 0.1947 | 2.9310 | 0.5729 | 1.6729 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 1.5000 | 4.0560 | 6.0840 | 1.6476 |
| BOTTOM WEB CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 0.0240 | 0.0140 | 0.0003 | 0.0000 |
| BOTTOM LIP CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM LIP | 0.3520 | 0.3240 | 0.1140 | 0.0369 | 0.0036 |
| SUM | 9.9025 | | 13.8905 | 28.4696 | 3.3041 |

YBAR = 1.4027

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

X-X AXIS EFFECTIVE PROPERTIES - DEFLECTION DETERMINATION
BOTTOM IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|--------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3520 | 0.3240 | 0.1140 | 0.0369 | 0.0036 |
| BOTTOM LIP CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 0.0240 | 0.0140 | 0.0003 | 0.0000 |
| BOTTOM WEB CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 1.5000 | 4.0560 | 6.0840 | 1.6476 |
| TOP WEB CORNER | 0.1947 | 2.9310 | 0.5708 | 1.6729 | 0.0003 |
| TOP FLANGE | 1.4540 | 2.9760 | 4.3271 | 12.8775 | 0.0000 |
| TOP WEB CORNER | 0.1947 | 2.9310 | 0.5708 | 1.6729 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 1.5000 | 4.0560 | 6.0840 | 1.6476 |
| BOTTOM WEB CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 0.0240 | 0.0140 | 0.0003 | 0.0000 |
| BOTTOM LIP CORNER | 0.1947 | 0.0690 | 0.0134 | 0.0009 | 0.0003 |
| BOTTOM LIP | 0.3520 | 0.3240 | 0.1140 | 0.0369 | 0.0036 |
| SUM | 9.9025 | | 13.8905 | 28.4696 | 3.3041 |

YBAR = 1.4027 IN

Y-Y AXIS PROPERTIES (GROSS SECTION)

| | L | X | LX | LX2 | IO |
|--------------------|--------|---------|---------|--------|--------|
| BOTTOM LIP | 0.3520 | -1.6831 | -0.5924 | 0.9971 | 0.0000 |
| BOTTOM LIP CORNER | 0.1947 | -1.6379 | -0.3190 | 0.5225 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | -1.2670 | -0.7399 | 0.9375 | 0.0166 |
| BOTTOM WEB CORNER | 0.1947 | -0.8961 | -0.1745 | 0.1564 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | -0.8510 | -2.3011 | 1.9582 | 0.0000 |
| TOP WEB CORNER | 0.1947 | -0.8059 | -0.1569 | 0.1265 | 0.0003 |
| TOP FLANGE | 1.4540 | 0.0000 | 0.0000 | 0.0000 | 0.2562 |
| TOP WEB CORNER | 0.1947 | 0.8059 | 0.1569 | 0.1265 | 0.0003 |
| FULL WEB OR WEB B1 | 2.7040 | 0.8510 | 2.3011 | 1.9582 | 0.0000 |
| BOTTOM WEB CORNER | 0.1947 | 0.8961 | 0.1745 | 0.1564 | 0.0003 |
| BOTTOM FLANGE | 0.5840 | 1.2670 | 0.7399 | 0.9375 | 0.0166 |
| BOTTOM LIP CORNER | 0.1947 | 1.6379 | 0.3190 | 0.5225 | 0.0003 |
| BOTTOM LIP | 0.3520 | 1.6831 | 0.5924 | 0.9971 | 0.0000 |
| SUM | 9.9025 | | -0.0000 | 9.3963 | 0.2911 |

XBAR = -0.0000 IN

| | | |
|---|---|---|
| <p><i>Designed By:</i> <i>Janos Boros P.E.</i></p> | <p>Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO, Ca91761 PHONE (909) 974-4150</p> | <p><i>Job #</i> 21521-07 <i>Date</i> 9-11-2007</p> |
| <p><i>Reference: Rocky Mountain Native Plants < Conley ></i> <i>Description: 41 ft - 6 in & .30 ft -0 in <6500 Series></i></p> | | |

```

*****
*          Section Properties For 3 IN HAT X 18 GA          *
*          (1986 AISI, 50.0 KSI STEEL; IX FOR DEFL., SX FOR STREES) *
*
* DEPTH = 3.0000 IN      THICKNESS = 0.0480 IN *
* BOTTOM FLANGE = 0.8800 IN      TOP FLANGE = 1.7500 IN *
* WEB ANGLE = 90.000 DEG      INSIDE RADIUS = 0.1000 IN *
* BOTTOM LIP = 0.5000 IN      BOTTOM LIP ANGLE = 90.000 DEG *
*
* IXTC = 0.5899 IN4      SXTC = 0.3675 IN3      MATC = 12.10 KIP-IN *
* IXBC = 0.5899 IN4      SXBC = 0.4205 IN3      MABC = 13.85 KIP-IN *
*
* IY = 0.4650 IN4      SY = 0.2724      RY = 0.9891 IN *
*
* AREA = 0.4753 IN2      WT = 1.6161 PLF      AEFF = 0.4745 IN2 *
* VA = 2.5771 KIP      RX = 1.1140 IN      J = 0.0004 IN4 *
*
*                          BEARING LENGTH (IN) *
*                          1      2      3      4 *
* ALLOW. END BEARING (KIPS) 0.6580 0.7715 0.8850 0.9984 *
* ALLOW. INT. BEARING (KIPS) 1.8850 2.1249 2.3648 2.6047 *
*****

```

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix B

Section Properties For 3 IN HAT X 16 GA

(1986 AISI, 50.0 KSI STEEL; IX FOR DEFL., SX FOR STRESS)

| | | | | | |
|---------------|---|------------|------------------|---|-------------|
| DEPTH | = | 3.0000 IN | THICKNESS | = | 0.0600 IN |
| BOTTOM FLANGE | = | 0.8800 IN | TOP FLANGE | = | 1.7500 IN |
| WEB ANGLE | = | 90.0000 IN | INSIDE RADIUS | = | 0.1000 IN |
| BOTTOM LIP | = | 0.5000 IN | BOTTOM LIP ANGLE | = | 90.0000 DEG |

X-X AXIS EFFECTIVE PROPERTIES - LOAD DETERMINATION
TOP IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|--------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 0.0300 | 0.0168 | 0.0005 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 1.5000 | 4.0200 | 6.0300 | 1.6041 |
| TOP WEB CORNER | 0.2042 | 2.9228 | 0.5967 | 1.7441 | 0.0003 |
| TOP FLANGE | 1.4300 | 2.9700 | 4.2471 | 12.6139 | 0.0000 |
| TOP WEB CORNER | 0.2042 | 2.9228 | 0.5967 | 1.7441 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 1.5000 | 4.0200 | 6.0300 | 1.6041 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 0.0300 | 0.0168 | 0.0005 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| SUM | 9.8150 | | 13.8016 | 28.2420 | 3.2166 |

YBAR = 1.4062 IN

| | | |
|---|---|--|
| <i>Designed By:</i> <i>Janos Boros P.E.</i> | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | <i>Job #</i> 21521-07 <i>Date</i> 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

X-X AXIS EFFECTIVE PROPERTIES - DEFLECTION DETERMINATION
TOP IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|-----------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 0.0300 | 0.0168 | 0.0005 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 1.5000 | 4.0200 | 6.0300 | 1.6041 |
| TOP WEB CORNER | 0.2042 | 2.9228 | 0.5967 | 1.7441 | 0.0003 |
| TOP FLANGE | 1.4300 | 2.9700 | 4.2471 | 12.6139 | 0.0000 |
| TOP WEB CORNER | 0.2042 | 2.9228 | 0.5967 | 1.7441 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 1.5000 | 4.0200 | 6.0300 | 1.6041 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 0.0300 | 0.0168 | 0.0005 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| SUM | 9.8150 | | 13.8016 | 28.2420 | 3.2166 |
| YBAR = | 1.4062 IN | | | | |

| | | |
|---|---|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A. ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix

X-X AXIS EFFECTIVE PROPERTIES - LOAD DETERMINATION
BOTTOM IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|--------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 0.0300 | 0.0168 | 0.0005 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 1.5000 | 4.0200 | 6.0300 | 1.6041 |
| TOP WEB CORNER | 0.2042 | 2.9228 | 0.5967 | 1.7441 | 0.0003 |
| TOP FLANGE | 1.4300 | 2.9700 | 4.2471 | 12.6139 | 0.0000 |
| TOP WEB CORNER | 0.2042 | 2.9228 | 0.5967 | 1.7441 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 1.5000 | 4.0200 | 6.0300 | 1.6041 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 0.0300 | 0.0168 | 0.0005 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| SUM | 9.8150 | | 13.8016 | 28.2420 | 3.2166 |

YBAR = 1.4062

X-X AXIS EFFECTIVE PROPERTIES - DEFLECTION DETERMINATION
BOTTOM IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|--------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 0.0300 | 0.0168 | 0.0005 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 1.5000 | 4.0200 | 6.0300 | 1.6041 |
| TOP WEB CORNER | 0.2042 | 2.9228 | 0.5967 | 1.7441 | 0.0003 |
| TOP FLANGE | 1.4300 | 2.9700 | 4.2471 | 12.6139 | 0.0000 |
| TOP WEB CORNER | 0.2042 | 2.9228 | 0.5967 | 1.7441 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 1.5000 | 4.0200 | 6.0300 | 1.6041 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 0.0300 | 0.0168 | 0.0005 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| SUM | 9.8150 | | 13.8016 | 28.2420 | 3.2166 |

YBAR = 1.4062 IN

| | | |
|---|--|--------------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,CA91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

APPENDIX

Y-Y AXIS PROPERTIES (GROSS SECTION)

| | L | X | LX | LX2 | IO |
|--------------------|--------|---------|---------|--------|--------|
| BOTTOM LIP | 0.3400 | -1.6651 | -0.5661 | 0.9426 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | -1.6178 | -0.3303 | 0.5343 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | -1.2550 | -0.7028 | 0.8820 | 0.0146 |
| BOTTOM WEB CORNER | 0.2042 | -0.8922 | -0.1822 | 0.1625 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | -0.8450 | -2.2646 | 1.9136 | 0.0000 |
| TOP WEB CORNER | 0.2042 | -0.7978 | -0.1629 | 0.1299 | 0.0003 |
| TOP FLANGE | 1.4300 | 0.0000 | 0.0000 | 0.0000 | 0.2437 |
| TOP WEB CORNER | 0.2042 | 0.7978 | 0.1629 | 0.1299 | 0.0003 |
| FULL WEB OR WEB B1 | 2.6800 | 0.8450 | 2.2646 | 1.9136 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.8922 | 0.1822 | 0.1625 | 0.0003 |
| BOTTOM FLANGE | 0.5600 | 1.2550 | 0.7028 | 0.8820 | 0.0146 |
| BOTTOM LIP CORNER | 0.2042 | 1.6178 | 0.3303 | 0.5343 | 0.0003 |
| BOTTOM LIP | 0.3400 | 1.6651 | 0.5661 | 0.9426 | 0.0000 |
| SUM | 9.8150 | | -0.0000 | 9.1300 | 0.2749 |

XBAR = -0.0000 IN

```

*****
*           Section Properties For 3 IN HAT X 16 GA           *
*           (1986 AISI, 50.0 KSI STEEL; IX FOR DEFL., SX FOR STREES) *
*
*
* DEPTH          = 3.0000 IN          THICKNESS          = 0.0600 IN *
* BOTTOM FLANGE  = 0.8800 IN          TOP FLANGE         = 1.7500 IN *
* WEB ANGLE     = 90.000 DEG          INSIDE RADIUS      = 0.1000 IN *
* BOTTOM LIP    = 0.5000 IN          BOTTOM LIP ANGLE   = 90.000 DEG *
*
* IXTC = 0.7231 IN4          SXTC = 0.4537 IN3          MATC = 13.58 KIP-IN *
* IXBC = 0.7231 IN4          SXBC = 0.5142 IN3          MABC = 15.40 KIP-IN *
*
* IY  = 0.5643 IN4          SY  = 0.3329          RY  = 0.9789 IN *
*
* AREA = 0.5889 IN2          WT  = 2.0023 PLF          AEFF = 0.5889 IN2 *
* VA  = 3.2160 KIP          RX  = 1.1081 IN          J   = 0.0007 IN4 *
*
*
*                                     BEARING LENGTH (IN) *
*                                     1           2           3           4 *
* ALLOW. END BEARING (KIPS)          0.0487          1.1985          1.3483          1.4981 *
* ALLOW. INT. BEARING (KIPS)         2.8322          3.1281          3.4240          3.7199 *
*
*****
    
```

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix C

Section Properties For Top Chord 16 GA

(1986 AISI, 55.0 KSI STEEL; IX FOR DEFL., SX FOR STRESS)

| | | | | | |
|---------------|---|------------|------------------|---|-------------|
| DEPTH | = | 4.0000 IN | THICKNESS | = | 0.0600 IN |
| BOTTOM FLANGE | = | 0.8750 IN | TOP FLANGE | = | 2.1880 IN |
| WEB ANGLE | = | 90.0000 IN | INSIDE RADIUS | = | 0.1000 IN |
| BOTTOM LIP | = | 0.5000 IN | BOTTOM LIP ANGLE | = | 90.0000 DEG |

X-X AXIS EFFECTIVE PROPERTIES - LOAD DETERMINATION
TOP IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|---------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 0.0300 | 0.0167 | 0.0005 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 2.0000 | 7.3600 | 14.7200 | 4.1530 |
| TOP WEB CORNER | 0.2042 | 3.9228 | 0.8009 | 3.1417 | 0.0003 |
| TOP FLANGE | 1.8196 | 3.9700 | 7.2239 | 28.6788 | 0.0000 |
| TOP WEB CORNER | 0.2042 | 3.9228 | 0.8009 | 3.1417 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 2.0000 | 7.3600 | 14.7200 | 4.1530 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 0.0300 | 0.0167 | 0.0005 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| SUM | 12.1946 | | 23.8664 | 64.4822 | 8.3145 |

YBAR = 1.9571 IN

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix C

X-X AXIS EFFECTIVE PROPERTIES - DEFLECTION DETERMINATION
TOP IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|---------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 0.0300 | 0.0167 | 0.0005 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 2.0000 | 7.3600 | 14.7200 | 4.1530 |
| TOP WEB CORNER | 0.2042 | 3.9228 | 0.8009 | 3.1417 | 0.0003 |
| TOP FLANGE | 1.8675 | 3.9700 | 7.4149 | 29.4335 | 0.0000 |
| TOP WEB CORNER | 0.2042 | 3.9228 | 0.8009 | 3.1417 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 2.0000 | 7.3600 | 14.7200 | 4.1530 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 0.0300 | 0.0167 | 0.0005 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| SUM | 12.2425 | | 24.0565 | 65.2368 | 8.3145 |

YBAR = 1.9650 IN

| | | |
|---|--|--|
| <i>Designed By:</i> Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | <i>Job #</i> 21521-07 <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> <i>Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></i> | | |

X-X AXIS EFFECTIVE PROPERTIES - LOAD DETERMINATION
BOTTOM IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|---------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 0.0300 | 0.0167 | 0.0005 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 2.0000 | 7.3600 | 14.7200 | 4.1530 |
| TOP WEB CORNER | 0.2042 | 3.9228 | 0.8009 | 3.1417 | 0.0003 |
| TOP FLANGE | 1.8196 | 3.9700 | 7.2239 | 28.6788 | 0.0000 |
| TOP WEB CORNER | 0.2042 | 3.9228 | 0.8009 | 3.1417 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 2.0000 | 7.3600 | 14.7200 | 4.1530 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 0.0300 | 0.0167 | 0.0005 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| SUM | 12.1946 | | 23.8664 | 64.4822 | 8.3145 |

YBAR = 1.9571 IN

| | | |
|---|--|--------------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix C

X-X AXIS EFFECTIVE PROPERTIES - DEFLECTION DETERMINATION
BOTTOM IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|---------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 0.0300 | 0.0167 | 0.0005 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 2.0000 | 7.3600 | 14.7200 | 4.1530 |
| TOP WEB CORNER | 0.2042 | 3.9228 | 0.8009 | 3.1417 | 0.0003 |
| TOP FLANGE | 1.8675 | 3.9700 | 7.4149 | 29.4335 | 0.0000 |
| TOP WEB CORNER | 0.2042 | 3.9228 | 0.8009 | 3.1417 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 2.0000 | 7.3600 | 14.7200 | 4.1530 |
| BOTTOM WEB CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 0.0300 | 0.0167 | 0.0005 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | 0.0772 | 0.0158 | 0.0012 | 0.0003 |
| BOTTOM LIP | 0.3400 | 0.3300 | 0.1122 | 0.0370 | 0.0033 |
| SUM | 12.2425 | | 24.0565 | 65.2368 | 8.3145 |

YBAR = 1.9650 IN

| | | |
|---|---|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A. ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix C

Y-Y AXIS PROPERTIES (GROSS SECTION)

| | L | X | LX | LX2 | IO |
|--------------------|---------|---------|---------|---------|--------|
| BOTTOM LIP | 0.3400 | -1.8788 | -0.6388 | 1.2002 | 0.0000 |
| BOTTOM LIP CORNER | 0.2042 | -1.8315 | -0.3739 | 0.6849 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | -1.4713 | -0.8165 | 1.2013 | 0.0142 |
| BOTTOM WEB CORNER | 0.2042 | -1.1110 | -0.2268 | 0.2520 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | -1.0638 | -3.9146 | 4.1642 | 0.0000 |
| TOP WEB CORNER | 0.2042 | -1.0165 | -0.2075 | 0.2110 | 0.0003 |
| TOP FLANGE | 1.8675 | 0.0000 | 0.0000 | 0.0000 | 0.5428 |
| TOP WEB CORNER | 0.2042 | 1.0165 | 0.2075 | 0.2110 | 0.0003 |
| FULL WEB OR WEB B1 | 3.6800 | 1.0638 | 3.9146 | 4.1642 | 0.0000 |
| BOTTOM WEB CORNER | 0.2042 | 1.1110 | 0.2268 | 0.2520 | 0.0003 |
| BOTTOM FLANGE | 0.5550 | 1.4713 | 0.8165 | 1.2013 | 0.0142 |
| BOTTOM LIP CORNER | 0.2042 | 1.8315 | 0.3739 | 0.6849 | 0.0003 |
| BOTTOM LIP | 0.3400 | 1.8788 | 0.6388 | 1.2002 | 0.0000 |
| SUM | 12.2425 | | -0.0000 | 15.4269 | 0.5732 |

XBAR = -0.0000 IN

```

*****
*                               Section Properties For Top Chord                               *
*                               (1986 AISI, 55.0 KSI STEEL; IX FOR DEFL., SX FOR STRESSES) *
*                               *                                                                 *
* DEPTH = 4.0000                THICKNESS = 0.6000 IN *
* BOTTOM FLANGE = 0.8750 IN      TOP FLANGE = 2.1880 IN *
* WEB ANGLE = 90.000 DEG        INSIDE RADIUS = 0.1000 IN *
* BOTTOM LIP = 0.5000 IN        BOTTOM LIP ANGLE = 90.000 DEG *
*                               *                                                                 *
* IXTC = 1.5768 IN4             SXTC = 0.7662 IN3        MATC = 25.23 KIP-IN *
* IXBC = 1.5768 IN4             SXBC = 0.8025 IN3        MABC = 26.43 KIP-IN *
*                               *                                                                 *
* IY = 0.9600 IN4              SY = 0.5029                RY = 1.1432 IN *
*                               *                                                                 *
* AREA = 0.7345                WT = 2.4975 PLF          AEFF = 0.7317 IN2 *
* VA = 4.0267 KIP              RX = 1.4651 IN            J = 0.0009 IN4 *
*                               *                                                                 *
*                               BEARING LENGTH (IN) *
*                               1           2           3           4 *
* ALLOW. END BEARING (KIPS)    1.0505    1.2108    1.3622    1.5135 *
* ALLOW. INT. BEARING (KIPS)   2.9251    3.2307    3.5363    3.8419 *
*                               *                                                                 *
*****

```

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix D

Section Properties For Top Chord 14 GA

(1986 AISI, 55.0 KSI STEEL; IX FOR DEFL., SX FOR STRESS)

| | | | | | |
|---------------|---|------------|------------------|---|-------------|
| DEPTH | = | 4.0000 IN | THICKNESS | = | 0.0750 IN |
| BOTTOM FLANGE | = | 0.8750 IN | TOP FLANGE | = | 2.1880 IN |
| WEB ANGLE | = | 90.0000 IN | INSIDE RADIUS | = | 0.1000 IN |
| BOTTOM LIP | = | 0.5000 IN | BOTTOM LIP ANGLE | = | 90.0000 DEG |

X-X AXIS EFFECTIVE PROPERTIES - LOAD DETERMINATION
TOP IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|---------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3250 | 0.3375 | 0.1097 | 0.0370 | 0.0029 |
| BOTTOM LIP CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM FLANGE | 0.5250 | 0.0375 | 0.0197 | 0.0007 | 0.0000 |
| BOTTOM WEB CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| FULL WEB OR WEB B1 | 3.6500 | 2.0000 | 7.3000 | 14.6000 | 4.1523 |
| TOP WEB CORNER | 0.2159 | 3.9126 | 0.8449 | 3.3057 | 0.0004 |
| TOP FLANGE | 1.8380 | 3.9625 | 7.2831 | 28.8592 | 0.0000 |
| TOP WEB CORNER | 0.2159 | 3.9126 | 0.8449 | 3.3057 | 0.0004 |
| FULL WEB OR WEB B1 | 3.6500 | 2.0000 | 7.3000 | 14.6000 | 4.0523 |
| BOTTOM WEB CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM FLANGE | 0.5250 | 0.0375 | 0.0197 | 0.0007 | 0.0000 |
| BOTTOM LIP CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM LIP | 0.3250 | 0.3375 | 0.1097 | 0.0370 | 0.0029 |
| SUM | 12.1337 | | 23.9071 | 64.7526 | 8.1126 |

YBAR = 1.9703 IN

| | | |
|---|--|--|
| <i>Designed By:</i> Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A.ONTARIO, Ca91761 PHONE (909) 974-4150 | <i>Job #</i> 21521-07 <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> <i>Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></i> | | |

Appendix D

X-X AXIS EFFECTIVE PROPERTIES - DEFLECTION DETERMINATION
TOP IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|---------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3250 | 0.3375 | 0.1097 | 0.0370 | 0.0029 |
| BOTTOM LIP CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM FLANGE | 0.5250 | 0.0375 | 0.0197 | 0.0007 | 0.0000 |
| BOTTOM WEB CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| FULL WEB OR WEB B1 | 3.6500 | 2.0000 | 7.3000 | 14.6000 | 4.0523 |
| TOP WEB CORNER | 0.2159 | 3.9126 | 0.8449 | 3.3057 | 0.0004 |
| TOP FLANGE | 1.8380 | 3.9625 | 7.2831 | 28.8592 | 0.0000 |
| TOP WEB CORNER | 0.2159 | 3.9126 | 0.8449 | 3.2057 | 0.0004 |
| FULL WEB OR WEB B1 | 3.6500 | 2.0000 | 7.3000 | 14.6000 | 4.0523 |
| BOTTOM WEB CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM FLANGE | 0.5250 | 0.0375 | 0.0197 | 0.0007 | 0.0000 |
| BOTTOM LIP CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM LIP | 0.3250 | 0.3375 | 0.1097 | 0.0370 | 0.0029 |
| SUM | 12.1337 | | 23.9071 | 64.7526 | 8.1126 |

YBAR = 1.9703 IN

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

X-X AXIS EFFECTIVE PROPERTIES - LOAD DETERMINATION
BOTTOM IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|---------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3250 | 0.3375 | 0.1097 | 0.0370 | 0.0029 |
| BOTTOM LIP CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM FLANGE | 0.5250 | 0.0375 | 0.0197 | 0.0007 | 0.0000 |
| BOTTOM WEB CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| FULL WEB OR WEB B1 | 3.6500 | 2.0000 | 7.3000 | 14.6000 | 4.1523 |
| TOP WEB CORNER | 0.2159 | 3.9126 | 0.8449 | 3.3057 | 0.0004 |
| TOP FLANGE | 1.8380 | 3.9625 | 7.2831 | 28.8592 | 0.0000 |
| TOP WEB CORNER | 0.2159 | 3.9126 | 0.8449 | 3.3057 | 0.0004 |
| FULL WEB OR WEB B1 | 3.6500 | 2.0000 | 7.3000 | 14.6000 | 4.0523 |
| BOTTOM WEB CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM FLANGE | 0.5250 | 0.0375 | 0.0197 | 0.0007 | 0.0000 |
| BOTTOM LIP CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM LIP | 0.3250 | 0.3375 | 0.1097 | 0.0370 | 0.0029 |
| SUM | 12.1337 | | 23.9071 | 64.7526 | 8.1126 |

YBAR = 1.9703 IN

| | | |
|---|---|--|
| <i>Designed By:</i> <i>Janos Boros P.E.</i> | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150 | <i>Job #</i> 21521-07 <i>Date</i> 9-11-2007 |
| <i>Reference: Rocky Mountain Native Plants < Conley ></i> <i>Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></i> | | |

Appendix D

X-X AXIS EFFECTIVE PROPERTIES - DEFLECTION DETERMINATION
BOTTOM IN COMPRESSION

| | L | Y | LY | LY2 | IO |
|--------------------|-----------|--------|---------|---------|--------|
| BOTTOM LIP | 0.3250 | 0.3375 | 0.1097 | 0.0370 | 0.0029 |
| BOTTOM LIP CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM FLANGE | 0.5250 | 0.0375 | 0.0197 | 0.0007 | 0.0000 |
| BOTTOM WEB CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| FULL WEB OR WEB B1 | 3.6500 | 2.0000 | 7.3000 | 14.6000 | 4.0523 |
| TOP WEB CORNER | 0.2159 | 3.9126 | 0.8449 | 3.3057 | 0.0004 |
| TOP FLANGE | 1.8380 | 3.9625 | 7.2831 | 28.8592 | 0.0000 |
| TOP WEB CORNER | 0.2159 | 3.9126 | 0.8449 | 3.2057 | 0.0004 |
| FULL WEB OR WEB B1 | 3.6500 | 2.0000 | 7.3000 | 14.6000 | 4.0523 |
| BOTTOM WEB CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM FLANGE | 0.5250 | 0.0375 | 0.0197 | 0.0007 | 0.0000 |
| BOTTOM LIP CORNER | 0.2159 | 0.0874 | 0.0189 | 0.0017 | 0.0004 |
| BOTTOM LIP | 0.3250 | 0.3375 | 0.1097 | 0.0370 | 0.0029 |
| SUM | 12.1337 | | 23.9071 | 64.7526 | 8.1126 |
| YBAR = | 1.9703 IN | | | | |

| | | |
|---|--|----------------------------------|
| Designed By: Janos Boros P.E. | Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken, #A.ONTARIO, Ca91761 PHONE (909) 974-4150 | Job # 21521-07 Date 9-11-2007 |
| Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series> | | |

Appendix

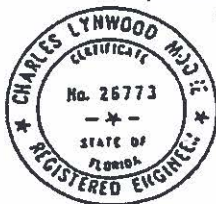


PITTSBURGH TESTING LABORATORY

ESTABLISHED 1961
1488 LANE AVENUE NORTH, JACKSONVILLE, FLORIDA 32206
AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS AND SPECIFICATIONS ARE THE SOLE PROPERTY OF PITTSBURGH TESTING LABORATORY AND WILL NOT BE REPRODUCED OR PUBLISHED IN ANY MANNER WITHOUT THE WRITTEN APPROVAL OF PITTSBURGH TESTING LABORATORY.
AREA CODE (904) 783-4300

| FLO-LOC TM Cat. No. | EHS STRAND -Per ASTM-A475- Size | EYEBOLT Size | MIN. ASSEMBLY Breaking Strength (Pounds) * | DESIGN STRENGTH WITH A FACTOR OF SAFETY OF 2 |
|-----------------------------------|---------------------------------------|-----------------|--|---|
| FWC 250 BA | 1/4" | 1/2" | 6,650 | 3,325 |
| FWC 312 BA | 5/16" | 5/8" | 11,200 | 5,600 |
| FWC 375 BA | 3/8" | 5/8" | 15,400 | 7,700 |
| FWC 437 BA | 7/16" | 3/4" | 20,800 | 10,400 |
| FWC 500 BA | 1/2" | 7/8" | 26,900 | 13,450 |

Tests were conducted using the Flo-Loc Strand Grips, FWC EHS strand and FWC eyebolts as set forth in the above table with all tested assemblies providing at least 100% of the strand rated breaking load per ASTM-A475.



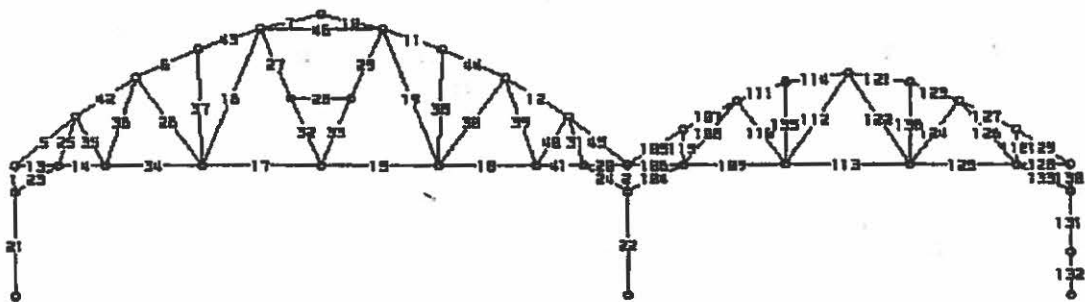
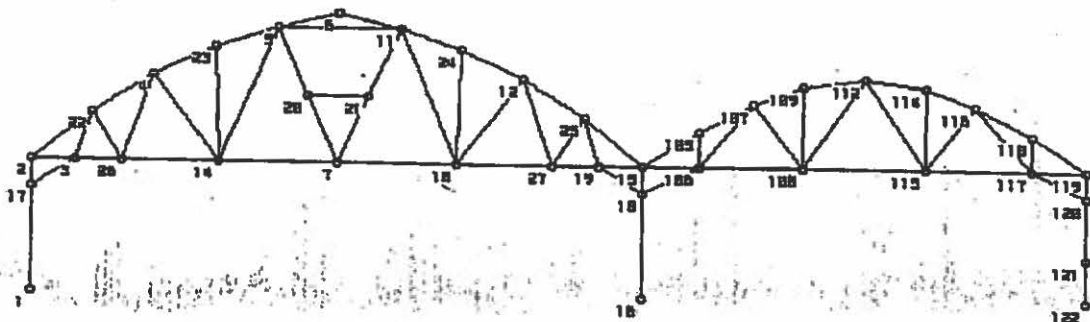
Certified PITTSBURGH TESTING LABORATOR

Charles L. Moore
Charles L. Moore, P. E.

*FWC guarantees that all cross brace assemblies fabricated in accordance with the above table will meet or exceed the specified minimum assembly breaking strength.

| | | |
|---|---|---|
| <p><i>Designed By:</i> Janos Boros P.E.</p> | <p>Z.J.S.ENGINEERING SERVICES INC. 350 S.Milliken,#A.ONTARIO,Ca91761 PHONE (909) 974-4150</p> | <p>Job # 21521-07 Date 9-11-2007</p> |
| <p>Reference: Rocky Mountain Native Plants < Conley > Description: 41 ft - 6 in & 30 ft -0 in <6500 Series></p> | | |

Figures



Garfield County Assessor/Treasurer

Parcel Detail Information

[Assessor/Treasurer Property Search](#) | [Assessor Subset Query](#) | [Assessor Sales Search](#)
[Clerk & Recorder Reception Search](#)

[Basic Building Characteristics](#) | [Tax Information](#)

[Parcel Detail](#) | [Value Detail](#) | [Sales Detail](#) | [Residential/Commercial Improvement Detail](#)
[Land Detail](#) | [Photographs](#)

| Tax Area | Account Number | Parcel Number | Mill Levy |
|----------|----------------|---------------|-----------|
| 021 | R210965 | 217701200404 | 45.694 |

Owner Name and Mailing Address

| |
|--------------------------|
| DEBOER, SKYLER S |
| 2730 SNOWMASS CREEK ROAD |
| SNOWMASS, CO 81654 |

Legal Description

| |
|-------------------------------------|
| SECT,TWN,RNG:1-6-93 DESC: SEC 1 LOT |
| 3 (54.06AC), N2SENW AKA TRACTS |
| 5,6,11,12 DESC: 21 & 22 ANTLERS |
| ORCHARD DEVELOPMENT. BK:0867 |
| PG:0771 BK:0755 PG:0127 BK:0754 |
| PG:0597 BK:1063 PG:0135 BK:1063 |
| PG:0131 BK:1063 PG:0129 BK:1063 |
| PG:0127 BK:1063 PG:0128 PRE:R210859 |
| SPEC ASMT: SILT WATER PROJECT |

Location

| | |
|--------------------------|--------------------------|
| Physical Address: | 1404 223 COUNTY RD RIFLE |
| Subdivision: | |
| Land Acres: | 76.06 |
| Land Sq Ft: | 0 |

| Section | Township | Range |
|---------|----------|-------|
| 1 | 6 | 93 |

Property Tax Valuation Information

| | Actual Value | Assessed Value |
|---------------|--------------|----------------|
| Land: | 66,610 | 19,320 |
| Improvements: | 191,240 | 24,750 |
| Total: | 257,850 | 44,070 |

| | |
|-------------|-----------|
| Sale Date: | 4/15/1998 |
| Sale Price: | 50,000 |

Basic Building Characteristics

| | |
|----------------------------------|---|
| Number of Residential Buildings: | 2 |
| Number of Comm/Ind Buildings: | 0 |

| Residential Building Occurrence 1 Characteristics | |
|---|---------------------------|
| TOTAL HEATED AREA: | 1,568 |
| ABSTRACT CODE: | FARM/RANCH RESIDENCE-IMPS |
| ARCHITECTURAL STYLE: | MANUFACTURED |
| EXTERIOR WALL: | MASONITE |
| ROOF COVER: | COMP SHNGL |
| ROOF STRUCTURE: | GABLE |
| INTERIOR WALL: | DRYWALL |
| FLOOR: | CARPET |
| FLOOR: | SHT VINYL |
| HEATING FUEL: | GAS |
| HEATING TYPE: | FORCED AIR |
| STORIES: | STORIES 1.0 |
| BATHS: | 2 |
| ROOMS: | 6 |
| UNITS: | 1 |
| BEDROOMS: | 3 |
| YEAR BUILT: | 1993 |

Tax Information

| Tax Year | Transaction Type | Amount |
|----------|--------------------------|--------------|
| 2006 | Tax Payment: Second Half | (\$1,952.04) |
| 2006 | Tax Payment: Second Half | (\$120.00) |
| 2006 | Tax Payment: First Half | (\$120.00) |
| 2006 | Tax Payment: First Half | (\$1,952.04) |
| 2006 | Tax Amount | \$240.00 |
| 2006 | Tax Amount | \$3,904.08 |
| 2005 | Tax Payment: Second Half | (\$120.00) |
| 2005 | Tax Payment: Second Half | (\$1,959.65) |
| 2005 | Tax Payment: First Half | (\$120.00) |
| 2005 | Tax Payment: First Half | (\$1,959.65) |
| 2005 | Tax Amount | \$240.00 |
| 2005 | Tax Amount | \$3,919.30 |
| 2004 | Tax Payment: Whole | (\$4,654.54) |
| 2004 | Tax Payment: Whole | (\$240.00) |
| 2004 | Tax Amount | \$240.00 |
| 2004 | Tax Amount | \$4,654.54 |
| 2003 | Interest Payment | (\$2.40) |
| 2003 | Interest Charge | \$2.40 |
| 2003 | Tax Payment: Second Half | (\$120.00) |
| 2003 | Interest Payment | (\$51.62) |
| 2003 | Interest Charge | \$51.62 |
| 2003 | Tax Payment: Second Half | (\$2,581.19) |
| 2003 | Tax Payment: First Half | (\$120.00) |
| 2003 | Tax Payment: First Half | (\$2,581.19) |
| 2003 | Tax Amount | \$240.00 |
| 2003 | Tax Amount | \$5,162.38 |
| 2002 | Interest Charge | \$25.47 |
| 2002 | Interest Payment | (\$1.20) |
| 2002 | Tax Payment: Second Half | (\$2,546.70) |
| 2002 | Tax Payment: Second Half | (\$120.00) |
| 2002 | Interest Charge | \$1.20 |
| 2002 | Interest Payment | (\$25.47) |
| 2002 | Tax Payment: First Half | (\$120.00) |
| 2002 | Tax Payment: First Half | (\$2,546.70) |
| 2002 | Tax Amount | \$5,093.40 |

| | | |
|------|--------------------------|--------------|
| 2002 | Tax Amount | \$240.00 |
| 2001 | Tax Payment: Second Half | (\$77.50) |
| 2001 | Tax Payment: Second Half | (\$2,601.44) |
| 2001 | Tax Payment: First Half | (\$77.50) |
| 2001 | Tax Payment: First Half | (\$2,601.44) |
| 2001 | Tax Amount | \$155.00 |
| 2001 | Tax Amount | \$5,202.88 |
| 2000 | Tax Payment: Second Half | (\$2,755.32) |
| 2000 | Tax Payment: Second Half | (\$77.50) |
| 2000 | Tax Payment: First Half | (\$77.50) |
| 2000 | Tax Payment: First Half | (\$2,755.32) |
| 2000 | Tax Amount | \$155.00 |
| 2000 | Tax Amount | \$5,510.64 |
| 1999 | Tax Payment: Second Half | (\$55.00) |
| 1999 | Tax Payment: Second Half | (\$572.29) |
| 1999 | Tax Payment: First Half | (\$55.00) |
| 1999 | Tax Payment: First Half | (\$572.29) |
| 1999 | Tax Amount | \$1,144.58 |
| 1999 | Tax Amount | \$110.00 |

[Top of Page](#)

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[Clerk & Recorder Database Search Options](#)

[Garfield County Home Page](#)

The Garfield County Assessor and Treasurer's Offices make every effort to collect and maintain accurate data. However, Good Turns Software and the Garfield County Assessor and Treasurer's Offices are unable to warrant any of the information herein contained.

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