



U.S. Department
of Veterans Affairs

ISSUED FOR CONSTRUCTION

Renovate 4th Floor, Building 138

PROJECT NO. 610-17-101

AE Renovate 4th Floor, Building 138

Marion, IN

March 19, 2018

I. GENERAL

A. PROJECT OBJECTIVES

The objective of this project is to provide a 100% design to renovate approximately 24,000 GSF of the 4th floor in Building 138 comprised of clinic/exam rooms and associated support offices for the Audiology, Eye, and Dental Clinics relocating to level 4 from level 2 as necessitated by functional and operational requirements at the VA Northern Indiana Health Care System, Marion Campus, 1700 E. 38th St., Marion, IN 46953, based on the contract Scope of Work.

B. CODES, REGULATIONS, AND DESIGN STANDARDS

All design will satisfy the applicable portions of the following codes, regulations, and standards:

1. International Building Code, 2015
2. US Department of Veterans Affairs – Design Manuals & Standards
3. National Standard Plumbing Code (NSPC)
4. Occupational, Safety and Health Administration (OSHA) Standards
5. Uniform Federal Accessibility Standards (UFAS)
6. Guidelines for Design & Construction of Hospital & Health Care Facilities 2006
7. ACI 117-06 Specifications for Tolerances for Concrete Construction and Materials
8. ACI 302.1R-89, Guide for Concrete Floor and Slab Construction
9. ACI 318-2008, Building Code Requirements for Structural Concrete
10. ACI 347R-94, Recommended Practice for Concrete Formwork
11. ACI Detailing Manual, SP66(04)
12. Americans with Disabilities Act (ADAAG)
13. ASCE 7-05, Minimum Design Loads for Buildings and Other Structures
14. ASHRAE Standards
15. The City of Marion Water Utility Specifications and Standard Construction Drawings
16. The City of Marion Construction and Material Specifications and Standard Construction Drawings
17. The State of Indiana Department of Transportation (ODOT) Construction and Material Specifications, 2012
18. City of Marion Fire Department Requirements
19. City of Marion Infrastructure Design and Construction Requirements
20. CRSI "Placing Reinforcing Bars," 2006, 8th edition
21. Design Manual No. 31 for Roof Decks, November 2007, by the Steel Deck Institute
22. Diaphragm Design Manual, Third Edition (DDM03) September 2004, by the Steel Deck Institute
23. Factory Mutual (FM)
24. Illuminating Engineering Society Recommended Practice (IES)
25. Joint Commission Requirements (as applicable to outpatient facilities)

26. Manual of Steel Construction, Load and Resistance Factor Design, Thirteenth Edition, 2005
27. National Design Specification for Wood Construction, by the American Forest and Paper Association, 2005 Edition
28. National Electric Code (NEC)
29. National Fire Protection Association Codes (NFPA)
30. National Sanitation Foundation (NSF)
31. NFPA 24 – Standard for the Installation of Private Fire Service Mains and their Appurtenances
32. Indiana Basic Building Code
33. Indiana Department of Health Requirements
34. Indiana Environmental Protection Agency standards and the Green Lights Program
35. Indiana Environmental Protection Agency – Standard Erosion and Sediment Control Practices, General Permit No. OHC0000003
36. Plywood Design Specification, November 2003 by APA – Engineered Wood Association
37. Specification for Design of Steel Buildings, by the American Institute of Steel Construction (AISC)
38. Specification for Structural Joints using ASTM A325 or A490 bolts (June 30, 2004)
39. Specification for Structural Steel Buildings (March 9, 2005)
40. Standard Specifications for Open Web Steel Joists, K-Series (adopted November 4, 1985; revised to November 10, 2003)
41. State of Indiana Department of Transportation Construction and Material Specifications, 2008
42. Structural Welding Code – Steel AWS D1.1/D1.1M:2008, Paragraph 6.6.5 specifically excluded
43. Underwriters Laboratories, Inc. (UL)
44. VA Seismic Design Requirements (H-18-8)
45. VA Physical Security Design Manual for Life Safety Protected Facility, Jan 2015
46. WRI "Manual of Standard Practice" July 2001, 6th edition

Local codes: As an agency of the federal government, the VA is not subject to local imposition of code reinforcement procedures. The VA functions as the Authority Having Jurisdiction (AHJ) and thus has responsibility to guard public health and safety through enforcing its adopted codes. However, local authorities should be notified about planned projects and given opportunity to review documents.



C. DESIGN TEAM

Architectural:	HDR Architecture, Inc.	Minneapolis MN	(612) 524-6000
Amy Williams	Project Principal		
Michael Nelson	Project Manager		
Tina Vasinda	Project Planner		
Michael Nelson	Senior Project Architect		
Cynthia Adams	Space Planning		
Roy Gikonyo	Project Coordinator		
Patricia Paulson	Interior Designer		
Engineering:	Korda/Nemeth Engineering	Columbus OH	(614) 487-1650
Nick Constantine	Structural Engineer		
Phil Stafa	Mechanical/Plumbing/Fire Protection Engineer		
Stan Kmonk	Electrical/Fire Alarm Engineer		
Estimating:	BCC	Omaha, NE	(402) 298-8260
Dennis Sieh	Cost Estimator		

II. SUBMISSIONS

A. SITE DEVELOPMENT

1. Not Applicable: All work contained within existing Building 138, Level 4 footprint and roof level.

B. ARCHITECTURAL

1. Design Development Plans
 - a. Refer to **Submission Drawings** for Construction Document plans showing:
 - Rooms
 - Door locations, sizes, and swings
 - Corridors
 - Basic column grid/sizes
 - Expansion and seismic joints
 - Electrical closets
 - Equipment rooms
 - Signal and telephone closets
 - Mechanical shafts and space
 - Stairs
 - Penthouse
 - Roof plan
 - Reflected Ceiling
 - Demolition plan
 - Room names and numbers
 - Program net / designed net
 - Departmental plans
 - Wall thickness and chase walls
 - Fixed equipment
 - Plumbing fixtures
 - Wheelchair accessible facilities
 - Wall sections
 - Building sections
 - Fire and smoke rated partitions
 - Lead-lined and radio-frequency-shielded partitions
 - Fire extinguisher cabinets
 - Construction details
 - Drafting symbols, abbreviations, and general notes
 - Finish schedule
 - b. Existing exterior building envelope for floors 4 and below to remain.
 - c. Existing finish floor elevations: To remain.
 - d. Fire and smoke rated partitions:
 - Interior finish materials: Flame spread ratings to be in accordance with 2015 IBC chapter 8.

- e. Lead abatement: As required.

C. FIRE PROTECTION

1. Refer to **Submission Drawings** for Construction Document Life Safety and Fire Protection plans.
2. Sprinkler Systems
 - a. The renovation areas will be fully protected with a wet-pipe sprinkler system.
 - b. The new penthouses will be fully protected with a wet-pipe sprinkler system extended from the existing system.
 - c. The existing distribution system will be reworked to accommodate the new wall and ceiling layouts based on the requirements of NFPA 13.
 - d. All clinical, administrative and public spaces will be protected as Light Hazard Occupancy 0.10 gpm/ft² (0.07 liter/sec/m²) over the most remote 1500 ft² (139 m²); the maximum sprinkler coverage will be 225 ft²/head (20.9 m²/head).
 - e. All storage, mechanical, electrical, loading dock and shell spaces will be protected as Ordinary Hazard I Occupancy 0.15 gpm/ft² (0.1 liter/sec/m²) over the most remote 1500 ft² (139 m²); the maximum sprinkler coverage will be 130 ft²/head (12.1 m²/head).
3. Fire Alarm System/Sprinkler Piping Interface
 - a. Electronically supervised shutoff valves and waterflow detection switches will be provided in each sprinkler zone, as well as for all mechanical rooms. Alarm signals from these devices, as well as from alarm valves, will be routed to the building fire alarm panel.
4. Fire and Smoke Separation
 - a. Corridor fire-resistance rating not required per IBC 2015 Section 1020.
 - b. For ambulatory buildings that exceed 10,000 SF, smoke barriers shall be used to separate into two or more smoke compartments not to exceed 22,500sf, per IBC 2015.
5. Egress
 - a. Occupant load to be calculated per 2015 IBC chapter 10 for institutional outpatient facilities and concentrated assembly.
 - b. Exit paths from each zone: Travel distance between smoke compartments shall not exceed 200' per 2015 IBC. Patient corridor width shall be no less than 72" and aisle width shall be no less than 44" per 2015 IBC section 1020. Door clear openings shall be no less than 32" per 2015 IBC section 1010.
6. Exit Calculations



- a. Two exits are required based on an occupant load of 227 occupants. Section 1006 of the 2015 IBC states that no more than two exits are required for an occupant load of less than 500 occupants. Three existing exit stairs are to remain.
7. Fire Extinguisher Cabinets
- a. Portable fire extinguishers to be provided per 2015 IBC chapter 9. See Submission Drawings for locations.

D. INTERIOR DESIGN

1. General:

The interior design concept developed for the fourth floor renovation at the VA, located in Marion, Indiana will keep the existing integrity of the facility throughout remodeling and construction while also implementing the latest in design technologies. The aesthetic approach is based on combining a modern clinical environment within an existing historical structure.

Evidence-based design (EBD) and sustainable design are both guiding principles of the entire project. Therefore selection and specification of the finishes, furniture and furnishings must reinforce both. Safety and infection control have been considered with the selection of materials. The utilization of natural light in all areas possible and the color selections appropriate to the natural environment were considered.

The materials within the space shall have soothing colors and visual textures that will create an environment that is calming and comfortable. This is achieved through finishes and textiles by using neutral tones throughout with accents and patterns to enhance the design.

As the interior design package has developed throughout the project, it has maintained conformance to the following guidelines:

- VA Design Guides PG-18-12
- Design Manuals PG-18-10
- Space Planning Criteria PG-19-9
- VISN 11 Sustainability Issues with Design (Jan 2012)

2. Design Solution for interior spaces:

The level and quality of finishes that have been selected can be found within the Schedule for Finishes, 09 06 00 specification section.

a. Refer to **Submission Drawings** Construction Document showing:

- Plans
- Details
- Elevations
- Sections
- Wayfinding
- Floor patterns
- Wall patterns
- Lighting
- Signage
- Handrails
- Bumper guards
- Perspectives

b. Refer to **Construction Document Specifications** for material information.

c. Refer to **Appendix A** for Material sample board.



E. STRUCTURAL

1. Design Criteria

The design concept for the building foundation and structural systems is based upon creating a foundation system, a structural grid, and a framework to best accommodate the current building requirements as well as remaining flexible to future changes.

Floor Loading:

Ceiling and MEP	Dead Load	10 psf
Partition walls	Live Load	15 psf
Mechanical Room	Live Load	150 psf
Light Storage	Live Load	125 psf
Floor Areas	Live Load	65 psf
Stairs	Live Load	100 psf

Note: Certain live loads are reducible per Code.

Roof Loading:	Snow	20 psf plus
		the effects of
		drifting snow

Importance Factor **1**

Wind Loading:	Basic Wind Speed	115 MPH
	Exposure Category	B

Seismic Loading:

0.2 Second Spectral Response Acceleration (S_s)	0.151g
1 Second Spectral Response Acceleration (S_1)	0.067g
Assumed Site Class	D (T.B.D.)
0.2 Second Spectral Response Acceleration (S_{DS})	0.161g
1 Second Spectral Response Acceleration (S_{D1})	0.107g
Risk Category	II
Seismic Risk Category	B
Importance Factor	1



2. Feasibility Analysis

1. Penthouse addition. A feasibility study will be performed to determine whether a penthouse can be constructed at the top of the existing building. According to the IBC, an addition is allowed without strengthening the existing building only when:
 - a. The total gravity load after the addition is no more than 5% of the gravity load at any member of the existing building before the addition, and,
 - b. The total lateral impact due to wind and seismic forces with the addition is no more than 10% at any member of the existing building without the addition.
2. The existing building was built in 1954 when the wind pressure requirements were different and the seismic forces negligible. Today's buildings are designed for substantially higher wind and seismic forces. Therefore, the construction of a new penthouse must be verified based on the above IBC requirements. We assume that the intent is not to strengthen the existing building.
3. An enclosed penthouse will have a floor supported by steel beams placed a little higher than the existing roof. Steel columns bearing on the existing concrete columns will support the floor and roof framing. The floor will be concrete fill on metal deck. The roof framing will be metal deck bearing on steel beams. Diagonal rod or angle bracing will provide the lateral resistance for the roof level.
4. If the weight of a concrete floor is too heavy for the existing building, then, the elimination of a floor could be considered so that the construction is lighter. The new mechanical units will be bearing on steel beams and the floor will consist of metal grating. The roof framing will be metal deck bearing on steel beams. Diagonal rod or angle bracing will provide the lateral resistance for the roof level.
5. In case the construction of the penthouse is not feasible, then the mechanical units will be bearing on steel framing supported by the existing concrete columns and they will be exposed to the weather.
6. Elevator shafts may be partially infilled and new slab openings may be required for the distribution of the technical services.
7. Security Level of Protection
 - a. The existing structure of Building 138 will remain as existing.
8. **See Appendix B for structural calculations.**

F. PLUMBING SYSTEMS

1. Domestic Cold Water System
 - a. The domestic water will be supplied from the existing domestic water system within the building. There will be no need to provide any makeup water to any HVAC systems as they are all going to be fed from existing central heating and cooling hydronic systems. No humidification is needed either.
2. Domestic Hot Water System
 - a. The existing domestic hot water supply piping distribution mains and branch lines will be revised to serve the plumbing fixtures of the renovated areas.
3. Sanitary Waste and Vent System

- a. Sanitary waste and vent piping will be routed throughout the building to vent and collect the discharge from the plumbing fixtures and drains. The sanitary piping will be collected within the building and will tie into the existing sanitary mains.
- b. The sanitary vent piping will be collected in the renovated areas within the building and will be extended through the roof, or connected to the existing plumbing venting system.

4. Storm Water System

- a. The storm water piping from the roofs of the new penthouses will be collected within the building and routed to the existing storm water system.
- b. Secondary (Emergency) roof drains shall be provided for the new penthouses. Storm water piping will be connected to the existing emergency storm water system within the building, down spouted onto the existing roof, or handled by scupper drains

5. Natural Gas Piping System

- a. No usage of natural gas is anticipated.

6. Medical Oxygen System

- a. If medical oxygen is needed, then the existing distribution system will be tied into.
- b. The medical oxygen system will be distributed with ASTM B-819, Type K or L, hard drawn seamless medical gas copper tubing. Fittings will be wrought copper or bronze designed expressly for brazed connection per ANSI B16.22.

7. Medical Vacuum System

- a. If a medical vacuum system is required, then the existing medical vacuum system in the facility will be extended to serve the addition with a dedicated zone shut-off valve and alarm panel.
- b. The medical vacuum system will be distributed with ASTM B-819, Type K or L, hard drawn seamless medical gas copper tubing. Fittings will be wrought copper or bronze designed expressly for brazed connection per ANSI B16.22.

8. Medical Air System

- a. If a medical air system is required, then the existing medical air system in the facility will be extended to serve the addition with a dedicated zone shut-off valve and alarm panel.



- b. The medical air system will be distributed with ASTM B-819, Type K or L, hard drawn seamless medical gas copper tubing. Fittings will be wrought copper or bronze designed expressly for brazed connection per ANSI B16.22.

9. Plumbing Fixtures

- a. Water closets will be wall hung, or floor-mounted if space for a plumbing chase is unavailable. Water closets shall have elongated bowls, constructed of white vitreous china, utilizing sensor operated flush valves for public restrooms and lever operated flush valves for patient, private, or staff restrooms. Water closets for bariatric patients will be floor-mounted, white vitreous china, utilizing sensor-operated flush valves. All water closets will be low flow and/or dual flush.
- b. Urinals will be wall hung, white vitreous china, utilizing sensor operated flush valves.
- c. Handwashing lavatories will be wall hung, white vitreous china, utilizing sensor operated faucets for public restrooms and wristblade indexed lever handles for patient, private or staff restrooms.
- d. Wall hung, self-contained, electric water coolers will be provided throughout the facility. Where only one unit is to be installed, a hi-low unit will be provided.
- e. Service sinks will be monolithic, floor-type with mixing valve faucet.
- f. Hose bibbs will be provided in all mechanical spaces.

10. See Appendix C for Plumbing Fixture cut sheets.

G. HVAC

1. Design Conditions

a. Outdoor Design Conditions:

Winter Dry Bulb	-20° C (4°F)
Summer Dry Bulb	32.8° C (91°F)
Summer Wet Bulb	25° C (77°F)

b. Equipment Operating Temperatures:

Chilled water supply	6.7° C (44°F)
Chilled water return	13.3° C (56°F)
Supply air (Air Handling Unit coil leaving air temperature)	12° C (54°F)
Heating water supply (steam to hot water heat exchangers)	94° C (200°F)
Heating water return temperature (steam to hot water heat exchangers)	76° C (170°F)
Plant steam supply pressure	105 kPA (15 psig)

2. Heating System
 - a. The new hot water system will utilize existing steam within the building that will be converted in the basement and extended to serve the new air handlers and new terminal box layout.
 - b. The new air handling unit will be provided with a circulation pump on the heating coil to protect against freezing.
 - c. Three-way control valves will be provided as required to maintain a minimum 15% flow within the system. Two-way control valves will be provided for all other devices.
3. Steam System
 - a. No humidification is anticipated for this project, so no steam will be extended to the new air handlers.
 - b. Steam will be converted to hot water for heating
4. Cooling System
 - a. Chilled water mains have been provided in another project up to near the base of the existing elevator that is going to be removed before the being of construction for this project. The chilled water mains will be extended up the abandoned elevator shaft and into the new penthouses to serve the new air handler in this project as well as the future air handler planned for another phase.
 - b. The control valves for the air handling units will typically be two-way type.
 - c. New chilled water pumps will be installed to serve the new air handlers.
5. Air Handling Units
 - a. System Selection: A variable Air Volume (VAV) system is selected because of energy efficiency, flexibility for future system modifications, and the ability to easily provide a large number of control zones.
 - b. The air handling units for the renovation will be located in two new penthouses and will be interior, modular units. One will serve the east half of the fourth floor and one will serve the west half of the fourth floor. Space will be allocated for two future air handlers that will serve the third floor.
 - c. The air handling units will be modular air handling units consisting of return air fans, economizer, mixing box, filters, access sections, heating coils, cooling coils, supply fans, diffusers, final filters and discharge plenums. No humidifier will be selected at this time, but a space for a future humidifier will be included. The supply and return air fans will be provided with variable frequency drives to modulate the air volume. The supply fan air volume will be varied to maintain a constant duct static pressure in the ductwork 2/3 of the way down the supply air main. The volume of the supply and return fans will be monitored with airflow measuring stations. The return fan air volume will be varied to maintain a fixed offset between the supply and return fans. The air handling units will operate with air economizer when the outside air temperature is less than 60°F (15°C).

- d. Main ducts will distribute cool air to the terminal boxes. The boxes will house a volume damper and a reheat coil, whose operation will be controlled by a thermostat mounted in the space served by the box. When cooling is required, the reheat coil will not be operational and the volume damper will modulate the discharge cold air into the space at the rate to satisfy the temperature setting. When cooling is not required, the volume damper will modulate to a predetermined minimum airflow rate. When heating is required, the reheat coil, through modulation of the two-way hot water control valve, will raise the temperature of the discharge air to the level required to satisfy the heating demand. The terminal boxes will be sized based on heating the supply air from 55°F (13°C) to 95°F (35°C) at the minimum airflow rate.
6. Air Distribution
 - a. The air will be distributed throughout the building with high velocity supply ductwork. Generally, the ductwork will be single wall galvanized duct with external insulation. All building return and exhaust air will be ducted.
7. Zone Control
 - a. Zone control will be provided by Variable Air Volume (VAV) or Constant Air Volume (CAV) terminal boxes with hot water reheat coils located throughout the renovated areas. All perimeter rooms will be provided with individual temperature control. As many as four small interior rooms, and three perimeter spaces, of similar function and load may be grouped into one zone. All procedure rooms shall be provided with individual temperature control. The controls for the terminal boxes will be DDC and will be tied into the Building Management System. A two-way hot water control valve will be provided with each terminal box. The terminal boxes will have internal insulation with a metal foil facing to prevent the fiberglass from being exposed to the supply air. The minimum and maximum flow rates will be determined based on the loads and air change requirements of each space.
8. Exhaust Systems
 - a. The exhaust systems will be centralized manifold systems in order to allow flexibility with respect to future modifications and to conserve space. Exhaust will be collected into mains, which connect to centrally located main duct risers. The main ducts of these larger central systems can be easily tapped into or capped off as the need arises. The fans will be located on the discharge end of the system, to ensure that all ductwork is under negative pressure to prevent leakage out of the exhaust ductwork.
 - b. The toilet exhaust systems will be as described above and will be dedicated to serve the toilet rooms, patient bathrooms, janitor closets, and other comparable odorous spaces. These exhaust systems will not serve any other spaces.
 - c. General Exhaust: The remaining areas that require exhaust will be served by the general exhaust systems with risers as described in item "1" above.
9. Supplemental Cooling Systems

- a. The telephone equipment and data rooms with the building will be provided with a computer room air conditioning unit with air cooled condensing unit with low ambient operation capability. The rooms shall also be served by the building air handling systems. The building air handling systems and computer room units shall each be sized for 100% of the load.

10. Control Systems

- a. A Building Management System (BMS) will be used to control all the HVAC equipment, interface with the fire alarm systems, the building lighting, elevator monitoring, and security. A computer connected to the BMS will be provided in the security office and will be provided with an uninterruptible power source.
- b. Electric motor operated valves and dampers will be used at all major pieces of equipment. The terminal boxes and small valves located on the floors will be by low voltage electric actuation.
- c. The BMS will have a connection to the emergency power system to monitor when normal power has been interrupted. Upon loss of normal power, all mechanical systems will be temporarily disabled and the chilled water control valves of all air handling units will be closed. After a one minute delay, the mechanical systems that operate on emergency power will individually be brought back into operation by the system.
- d. The BMS will seamlessly connect to the temperature control system operating the main building.

11. See Appendix D for HVAC calculations & equipment cut sheets.

H. ELECTRICAL

1. Normal Power Distribution and Equipment

- a. Electrical power will be extended from the existing main switchboard located in the lower level of the building up to new panelboards located on the 4th floor.

2. Emergency Power Distribution and Equipment

- a. Emergency power will be extended from the existing distribution panel located in the lower level up to new panelboards on the 4th floor.
- b. The following equipment will be powered from the Life Safety Branch.
 - i. Automatic Doors
 - ii. Illumination of means of egress
- c. The following equipment will be powered from the Critical Branch:
 - i. Task illumination, fixed equipment, and selected receptacles serving patient care areas, medication, nurse stations
 - ii. Nurse call systems
 - iii. Central suction systems
 - iv. Additional specialized areas where needed

3. Receptacles and Power Connections
 - a. All receptacles throughout the building will conform to NEMA heavy-duty standards, healthcare hospital grade. Devices will be white, except for those served from emergency panels, which will be red in color.
 - b. Receptacles in restrooms, near counter top sinks, vending, and drinking fountains will be ground fault circuit interrupting type.
4. Lighting System
 - a. See **Appendix E** for Electrical Exhibits.
 - b. Light fixtures will be located in all areas in quantities as necessary to provide light levels in accordance with VA Guidelines. IESNA Standards will be used for applications not covered in the VA Guidelines. Emergency egress light levels will have a minimum maintained light level of one footcandle in egress and exit discharge paths.
 - c. Lighting throughout the building will be from LED fixtures in various fixture types as follows:
 - i. Campus standard recessed acrylic lensed fixtures and LED down lights will be used in offices, exam rooms, procedure rooms, restrooms, and other spaces with ceilings.
 - ii. Open type industrial fixtures with wire guards will be used in mechanical/electrical rooms, janitor, and other exposed rooms.
 - iii. All fixtures in offices, procedure, and exam will have dimming capability.
 - iv. Exit signs will be LED type and installed in all egress paths.
 - v. Specialty lighting fixtures will be provided in selected areas such as lobbies.
 - d. Emergency egress lighting will be provided by powering selected fixtures from the emergency generator life safety branch.
 - e. Lighting control will be as follows:
 - i. Public spaces will be controlled by a master lighting switch/relay system.
 - ii. Offices, exam, procedure and other private spaces will have occupancy sensors with dimming, and override-off control.
 - iii. Other spaces will have occupancy sensors only.
5. Fire Alarm
 - a. The existing fire alarm system in the building will be extended to the 4th floor.
 - b. Devices will be located as follows:
 - i. Manual pullstations at all exit doors from a floor.
 - ii. Duct mounted smoke detectors in air handling units.
 - iii. Heat detectors in mechanical/electrical rooms.
 - iv. Audible/visual units throughout the building meeting ADA requirements.
 - v. Waterflow/tamper switch supervision.
 - vi. Door hold open devices.

- c. Audible/Visual units will be combination audible/visual devices and will have 15/75 or 110 candela depending on room size. Flash rate synchronizing modules will be provided on each annunciation device circuit.
- d. All air handling units and return air fans will shut down when smoke is detected by duct mounted smoke detectors. Shutdown will be achieved by relay closure signaled by the fire alarm panel. Remote test stations with visual indication and reset will be provided for all duct mounted smoke detectors.
- e. Doors with magnetic holders or electro-mechanical closer-holders will be wired to the fire alarm system and will release doors on alarm or power failure. Door holders will be released locally by wiring them through auxiliary relays in smoke detector bases.
- f. Duct mounted smoke dampers will be signaled to close by an auxiliary relay base in the local duct mounted smoke detector.
- g. Sprinkler waterflow and tamper switches will be supervised for alarm and trouble conditions.

I. TECHNOLOGY

1. Structured Cabling System (Voice/Data)
 - a. A structured cabling system will be extended up from the Main Telecom Room in the building to the 4th floor telecom room.
 - i. Cable tray system will be provided through corridors (above the ceilings) extended from the rack locations.
 - ii. Conduit for voice/data drops will be 1" and will run from the cable tray to 4" square boxes in the walls.
 - iii. Grounding system will be extended from the Main Telecom Room to the new addition telecom room.
 - iv. Category 6 Unshielded Twisted Pair cabling for horizontal connection between the technology rooms and computer workstations, display control devices telephone handsets, CATV/streaming video distribution, and VASS CCTV cameras.
 - v. 50 Micron Laser Optimized Multi-mode minimum OM3 Fiber - Backbone connections for data streams between technology rooms.
 - vi. Structured cabling in equipment rooms will include cabinets, racks, patch panels, cable management, telecommunications grounding, patch cables, and wall fields.
 - vii. Data electronics will be provided by the VA
 - viii. Telephone System will be supplied by the VA
2. Cable TV Distribution System (CATV)
 - a. The TV signal distribution system shall include cabling, amplifiers, devices, racks, surge suppressors, and outlets to provide a strong TV signal to each TV monitor.
3. Video Assessment and Surveillance (VASS)

- a. An IP Video Surveillance System will be extended to the 4th floor to cover these areas:
 - i. Corridors
 - ii. Medication areas
 - b. A complete intrusion detection alarm system will be provided in selected areas. These intrusion detection alarms will be remotely monitored.
 - c. A complete duress alarm system shall be provided at selected locations to call internal and external security personnel.
4. Physical Access Control System (PACS)
- a. This system shall include card readers, keypads, electromagnetic locks and strikes, and electronic security management system (SMS). PACS devices shall be used to control access and monitor entrances, sensitive areas, and mission critical asset areas. The system will also remotely control doors, detect intrusions (motion sensors, door contacts), and act as a deterrent.

J. SPACE PLANNING

The planning and design of the VA Marion, Indiana renovation of Building 138, Level 4 Clinics reflects the concepts that are outlined in the VA *Dental Service Design Guide*, dated June, 2014, and the VA PG-18-9 *Space Planning Criteria, Chapter 233* dated December of 2008 and PG-18-5 Equipment Guide List in lieu of the VA *Eye Clinic Design Guide*, which has been rescinded and is currently under revision. These documents identify the main goals for the clinics which includes; bringing care to the patient, support flexibility and adaptability, provide privacy and security, streamline processes, enhance teamwork, and simplify wayfinding. These concepts are the driving force in the design of this clinic facility and are reflected in this schematic design.

The Program for Design (PFD) for this project is created using the Space Planning Criteria for VA Chapter 204, VA Chapter 222, and VA Chapter 233 and implemented in the Space and Equipment Planning System (SEPS). The functional areas generated for this project include:

1. Audiology and Speech Pathology Service Reception Area
2. Audiology and Speech Pathology Service Patient Area
3. Audiology and Speech Pathology Service Support Area
4. Audiology and Speech Pathology Service Staff and Administrative Area
5. Audiology and Speech Pathology Service Education Area
6. Dental Service Reception Area
7. Dental Service Treatment Patient Area
8. Dental Service Surgery Suite Patient Area
9. Dental Service Dental Laboratories
10. Dental Service Support Area
11. Dental Service Staff and Administrative Area
12. Eye Clinic Reception Area
13. Eye Clinic Patient Area
14. Eye Clinic Support Area

15. Eye Clinic Staff and Administrative Area

The Reception Areas include space to receive patients as well as general and family waiting areas, patient education, and visitor toilet facilities.

The Patient Areas includes clinical space for patient exam, consultation, and procedures. Space for patient screening and patient toilet facilities are also included in this functional area.

The Support Area includes support space for the Patient Area. Spaces include clean and soiled utility rooms, medical equipment storage, and medication storage and dispensing as required by SEPS.

The Staff and Administrative Area include staff office space, conference, and staff lounge and toilets as required by SEPS.

Refer to **Appendix F** for updated Program for Design.

Refer to **Appendix G** for original SEPS Input Data.

K. CRITICAL PATH METHOD (CPM)

1. See Submission Drawings for Phasing of Construction.
2. Phasing Requirements
 - a. Contractor shall construct dust partitions prior to the start of demolition and they must remain in place until the completion of that phase or subsequent phases where required.
 - b. Contractor shall perform all work in or adjacent to VA occupied areas in such a manner to ensure:
 - i. The continuous and uninterrupted use of all occupied areas, including the applicable mechanical and electrical systems serving these areas.
 - ii. Protection of patients and personnel in occupied areas from the hazards and dust associated with a construction environment.
 - iii. The work areas are to be kept clear, clean, and free of loose debris, construction materials and partially installed work which would create a safe hazard or interfere with patient and personnel duties and traffic. The contractor shall sweep the areas clean at the end of each work day and make every effort to keep dust and noise to a minimum at all times.
 - iv. Temporary interruptions or shutdown of any utility or electrical/mechanical system should be requested from the COTR 48 hours prior to the desired time, and should be performed at times other than the station's normal hours of operation or as directed by the COTR.
 - v. Two weeks (14 calendar days) prior to starting work in any phase the contractor shall notify the COTR, in writing, of date he plans to complete the preceding phase. In no case will be contractor begin work in any phase without obtaining written approval from the COTR.



3. Standardized Definitions:

- a. Joint Occupancy: Those area(s) designated as being jointly occupied means that the contractor will be able to complete the work necessary in the building(s), room(s), or area(s) designated in particular phase, while remaining occupied by the VA personnel and/or patients. The contractor shall, in all jointly occupied area(s), protect VA personnel/patients and existing equipment from the hazards of dust, materials, tools, etc., associated with a construction environment. The contractor shall keep these jointly occupied area(s) clear, clean, and free of loose debris, construction materials and partially installed work which would create a safety hazard or interfere with VA personnel or patients. The contractor will pay particular attention to leaving these jointly occupied area(s) clean at the end of each work shift.
- b. Vacated Areas: Those area(s) designated as being vacated area(s) means that the contractor will be able to complete the work necessary in the building(s), room(s), or area(s) designated in a particular phase, without the presence of VA personnel and/or patients. In equipment from the hazards of dust, materials, tools, etc., associated with a construction environment; however, the contractor will be required to observe any restraint(s) outlined under the "Special Phasing Requirements", section 01010, of the Contract Specifications.
- c. Room-by-Room Basis: Those area (s) designated as being completed on a room by room basis means that the contractor will be allowed to complete the work necessary in that room, whether the particular room is a 'jointly occupied area' or a 'vacated area', and that all work in that particular room must be completed in full and accepted by the VA prior to starting work in another room so designated in that particular phase. The contractor will observe those phasing restraint(s) outlined and pertaining to 'jointly occupied' areas or 'vacated area' under Section 01010 of the Contract Specifications.
- d. After Normal Working Hours: Those area(s) designated as being worked after normal working hours means that the contractor will be able to perform the work necessary in the building(s), room(s), or area(s) designated in a particular phase, only during the hours that the VA considers to be other than their normal hours. Work performed outside normal working hours requires prior approval from the COTR. Normal hours are Monday through Friday between 8:00 am to 4:30 PM. The contractor must allow enough time at the end of each shift to clean and return the area(s) back to the station prior to the start of the station's normal hours of operation. Existing equipment in the area(s) shall be protected from the hazards of dust, materials, tools, etc., associated with a construction restraint(s) as outlined and pertaining to these area(s), under the "Special Phasing Requirements", Section 01010, of the Contract Specifications.

L. COST ESTIMATING

Refer to **Appendix H** for cost estimate.



M. SUSTAINABILITY

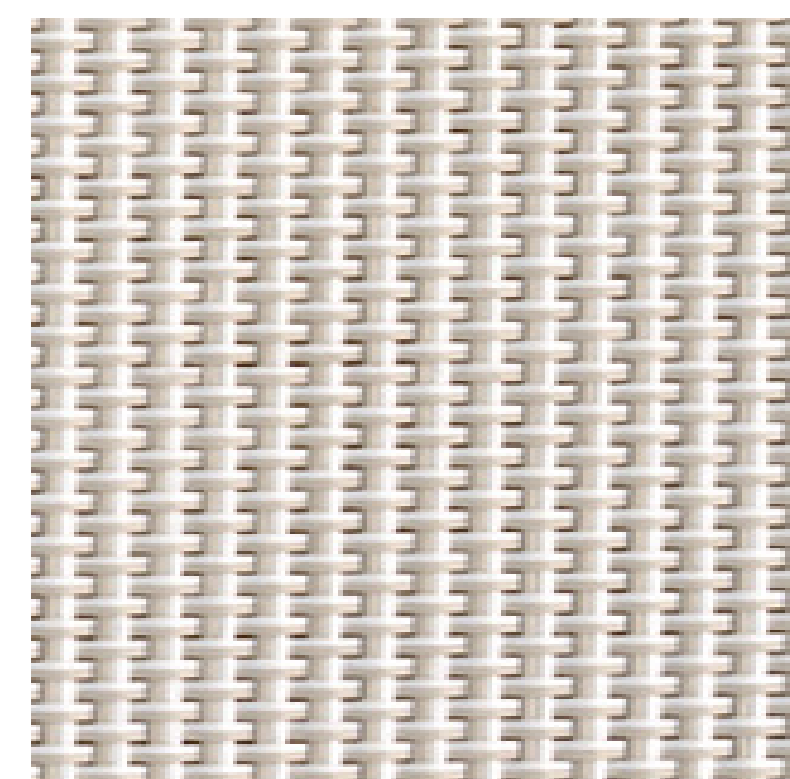
The VA will employ a third party commissioning agent to certify the design and construction meets Federal Mandates requiring whole building commissioning and enhanced commissioning requirements of Green Globes. The third party commissioning agent will concurrently review submittals for compliance with applicable ANSI/ASHRAE Standards and Green Globes requirements.



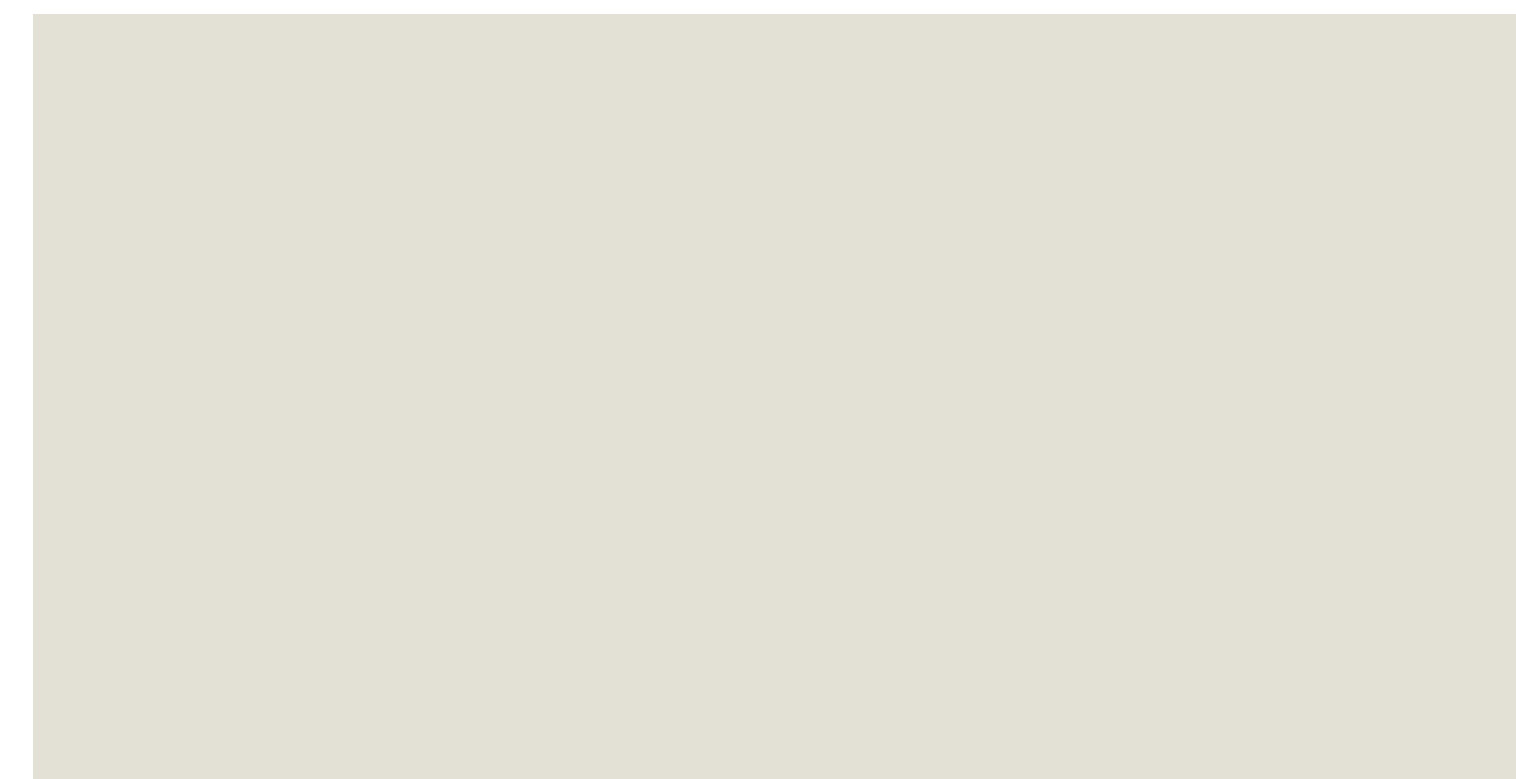
APPENDIX A - INTERIORS



MECHANICAL PENTHOUSE EXTERIOR
FOAM FILLED METAL PANELS &
PREFINISHED METAL ROOF COPING



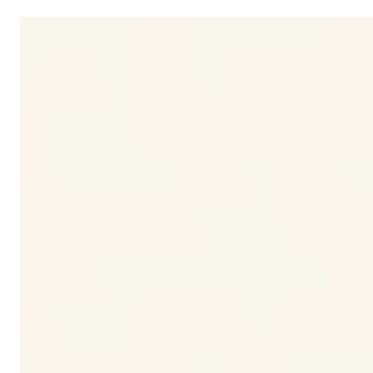
ROLLER SHADE



GENERAL PAINT



ACCENT PAINT



SOLID SURFACE



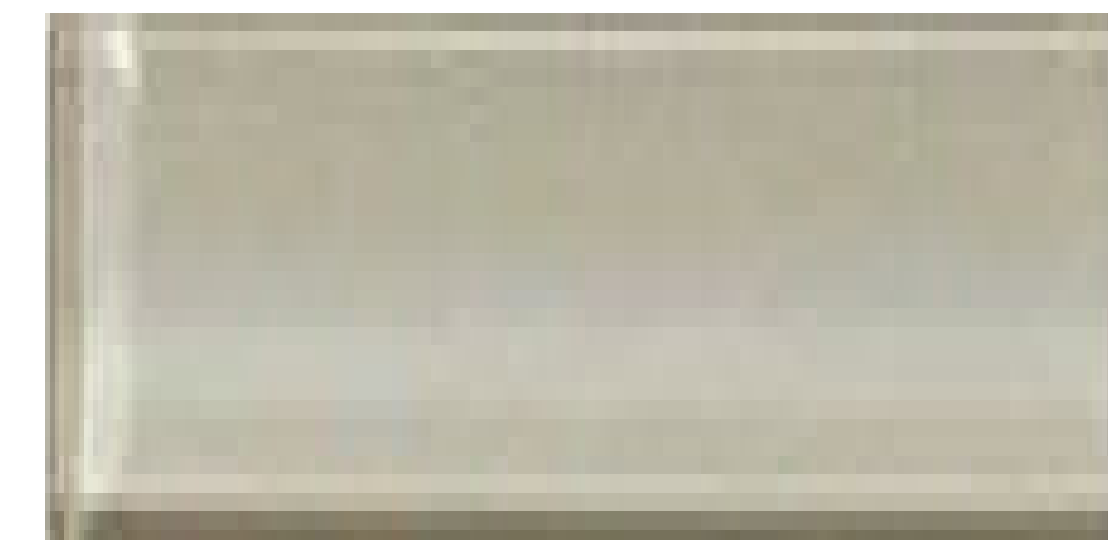
RUBBER BASE



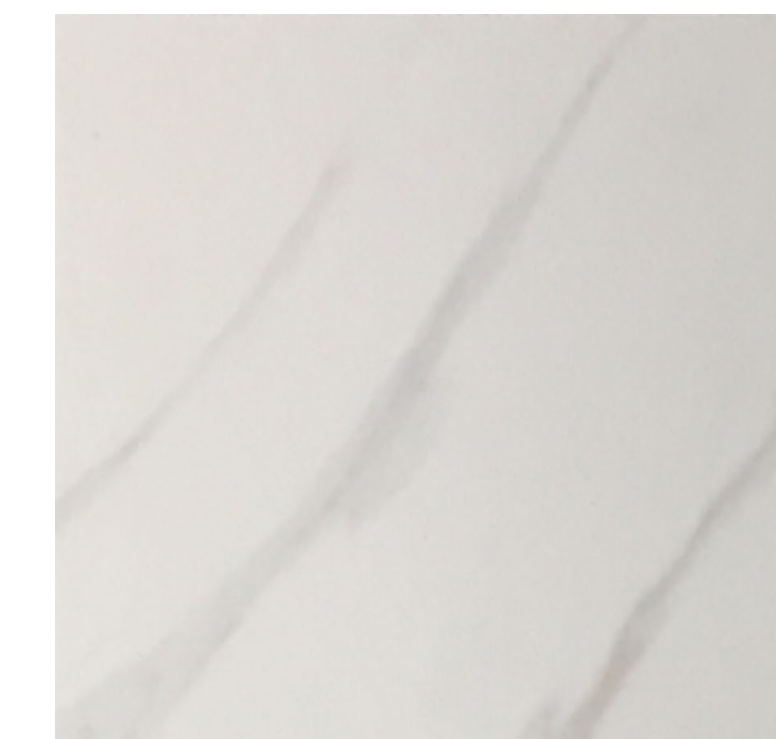
WOOD-LOOK
LAMINATE



SHEET RUBBER FLOORING, AND INTEGRAL BASE



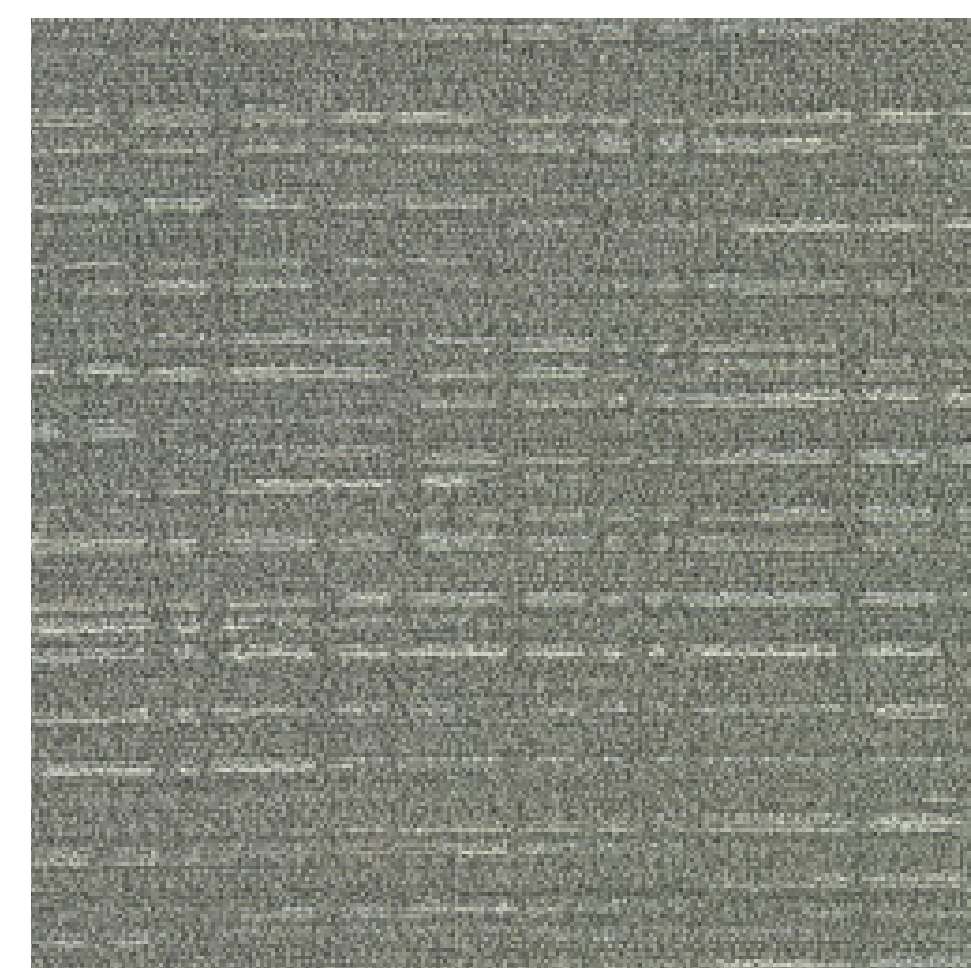
ACCENT WALL TILE - TOILET ROOMS



PORCELAIN WALL TILE
TOILET ROOMS



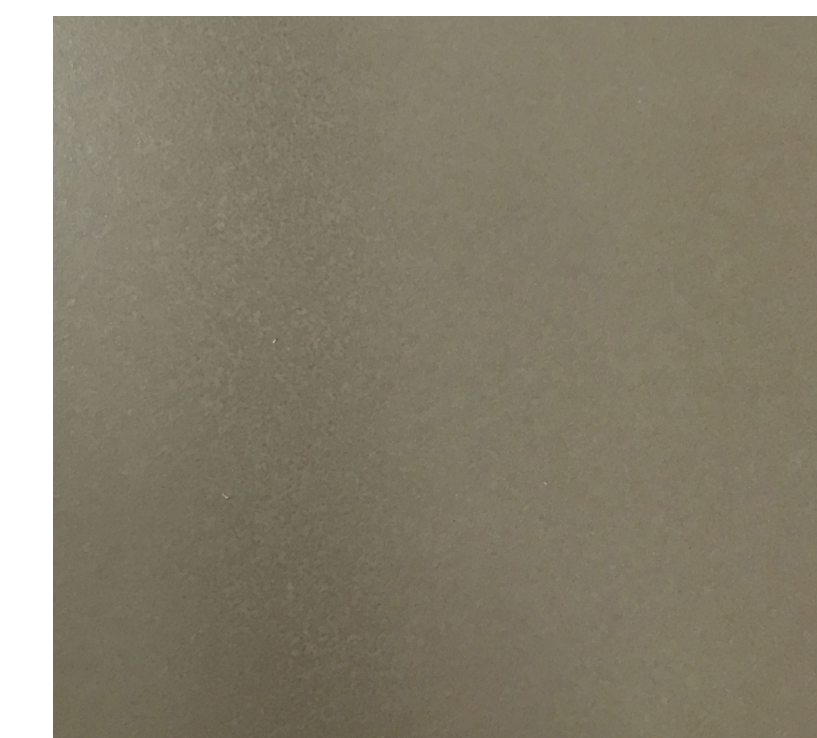
LUXURY VINYL TILE PLANK FLOORING



MODULAR CARPET TILE



STONE TILE FLOOR - LOBBY AND TOILET ROOMS





APPENDIX B - STRUCTURAL

Current Date: 5/24/2017 3:06 PM

Units system: English

File name: H:\Projects\2016\2016-0205_00 VA Marion Building 138 - 4th Floor Renovation\Structural\Calculations\Penthouse frame Line B.etz\

Steel Code Check

Report: Summary - For all selected load conditions

Load conditions to be included in design :

com1=DL+LL

com2=DL+0.75LL+0.75WL

com3=0.6DL+WL

com4=DL+WL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
<i>T2LU 5X3-1_2X5_16X3_4LLBB7</i>	<i>W 10X22</i>		com1 at 100.00%	0.01	OK	Eq. H1-1b
			com2 at 0.00%	0.12	OK	Sec. E4
			com3 at 0.00%	0.15	OK	Sec. E4
			com4 at 0.00%	0.15	OK	Sec. E4
		1	com1 at 100.00%	0.08	OK	Eq. H1-1b
			com2 at 100.00%	0.12	OK	Eq. H1-1b
			com3 at 100.00%	0.22	OK	Eq. H1-1b
			com4 at 100.00%	0.20	OK	Eq. H1-1b
		2	com1 at 100.00%	0.04	OK	Eq. H1-1b
			com2 at 100.00%	0.07	OK	Eq. H1-1b
			com3 at 100.00%	0.06	OK	Eq. H1-1b
			com4 at 100.00%	0.07	OK	Eq. H1-1b
		3	com1 at 100.00%	0.08	OK	Eq. H1-1b
			com2 at 100.00%	0.26	OK	Eq. H1-1b
			com3 at 100.00%	0.28	OK	Eq. H1-1b
			com4 at 100.00%	0.30	OK	Eq. H1-1b
		4	com1 at 100.00%	0.04	OK	Eq. H1-1b
			com2 at 0.00%	0.02	OK	Eq. H1-1b
			com3 at 100.00%	0.03	OK	Eq. H1-1b
			com4 at 100.00%	0.02	OK	Eq. H1-1b
<i>W 14X26</i>		5	com1 at 50.00%	0.08	OK	Eq. H1-1b
			com2 at 100.00%	0.15	OK	Eq. H1-1b
			com3 at 100.00%	0.15	OK	Eq. H1-1b
			com4 at 100.00%	0.17	OK	Eq. H1-1b
		6	com1 at 50.00%	0.04	OK	Eq. H1-1b
			com2 at 50.00%	0.03	OK	Eq. H1-1b
			com3 at 0.00%	0.01	OK	Eq. H1-1b
			com4 at 0.00%	0.02	OK	Eq. H1-1b

Analysis result

Forces diagram printout

Load conditions

com1=DL+LL

com2=DL+0.75LL+0.75WL

com3=0.6DL+WL

com4=DL+WL

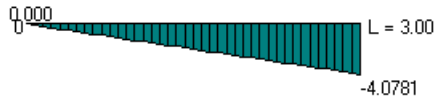
MEMBER	:	1	Length	:	3.000 [ft]	Node J	:	1
Material	:	A992 Gr50	Section	:	W 10X22	Node K	:	5

Condition : com1=DL+LL

M33 bending moment

Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

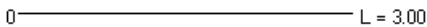


Min : -4.0781[Kip*ft] at 3.00[ft] from J

M22 bending moment

Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces

Forces [Kip], Length [ft]

Max : -7.1190[Kip] at 0.00[ft] from J

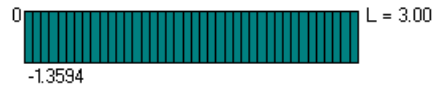


Min : -7.1190[Kip] at 0.00[ft] from J

V2 shear forces

Forces [Kip], Length [ft]

Max : -1.3594[Kip] at 0.00[ft] from J

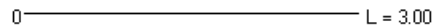


Min : -1.3594[Kip] at 0.00[ft] from J

V3 shear forces

Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

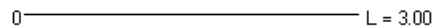


Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments

Moments [Kip*ft], Length [ft]

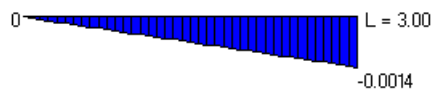
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

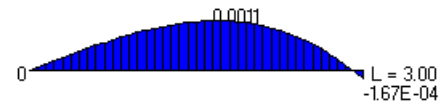
Max : 0.000 at 0.00[ft] from J



Min : -0.0014 at 3.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0011 at 1.65[ft] from J



Min : -1.67E-04 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

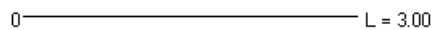
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 3.14E-05 at 0.00[ft] from J

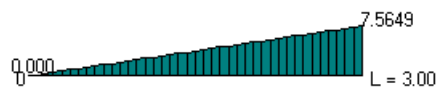


Min : -2.26E-04 at 3.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

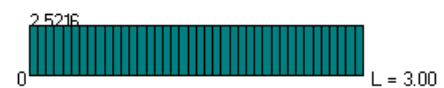
Max : 7.5649[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

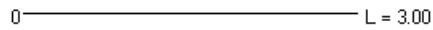
Max : 2.5216[Kip] at 0.00[ft] from J



Min : 2.5216[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

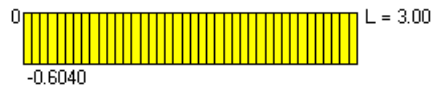
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

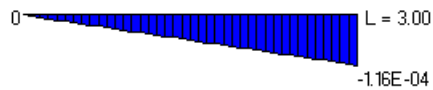
Max : -0.6040[Kip] at 0.00[ft] from J



Min : -0.6040[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -1.16E-04 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

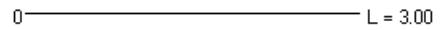
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

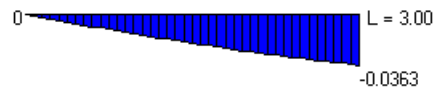
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0363 at 3.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

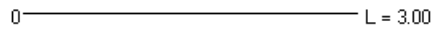
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -5.96E-04 at 3.00[ft] from J

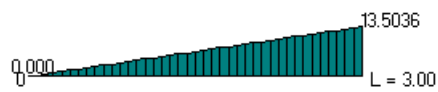


Min : -0.0011 at 0.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

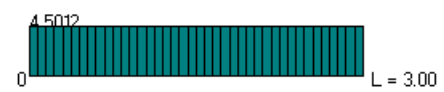
Max : 13.5036[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

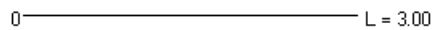
Max : 4.5012[Kip] at 0.00[ft] from J



Min : 4.5012[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

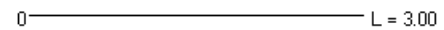
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

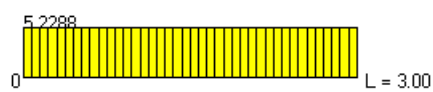
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

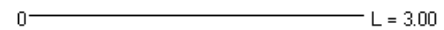
Max : 5.2288[Kip] at 0.00[ft] from J



Min : 5.2288[Kip] at 0.00[ft] from J

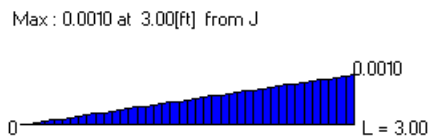
Torsional moments
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



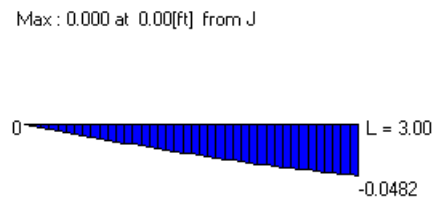
Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



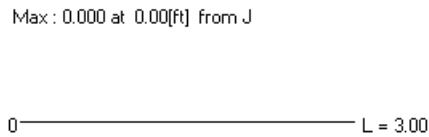
Min : 0.000 at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



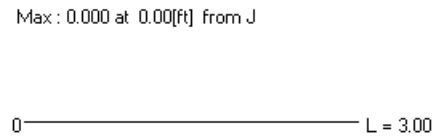
Min : -0.0482 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]



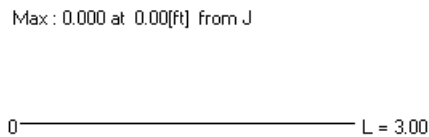
Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]



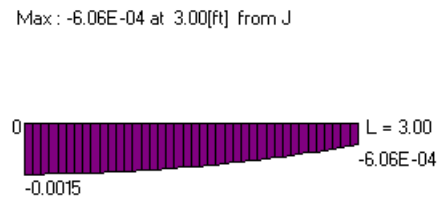
Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]



Min : 0.000 at 0.00[ft] from J

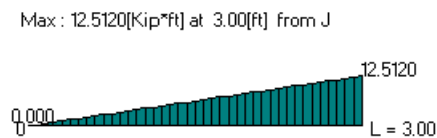
Rotation about axis 3
Rotation [Rad], Length [ft]



Min : -0.0015 at 0.00[ft] from J

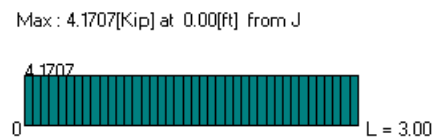
Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]



Min : 0.000[Kip*ft] at 0.00[ft] from J

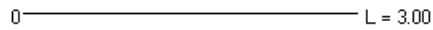
V2 shear forces
Forces [Kip], Length [ft]



Min : 4.1707[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

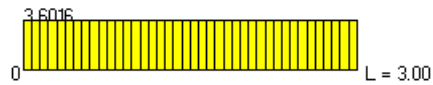
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

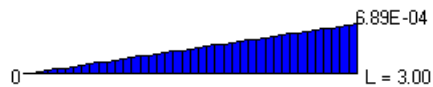
Max : 3.6016[Kip] at 0.00[ft] from J



Min : 3.6016[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 6.89E-04 at 3.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

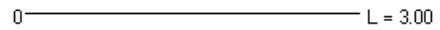
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

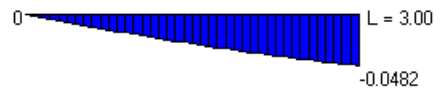
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0482 at 3.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

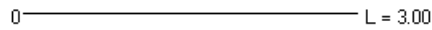
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -6.61E-04 at 3.00[ft] from J



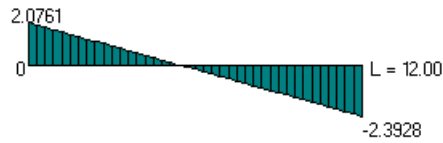
Min : -0.0015 at 0.00[ft] from J

MEMBER	:	2	Length	:	12.000 [ft]	Node J	:	2
Material	:	A992 Gr50	Section	:	W 10X22	Node K	:	5

Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]

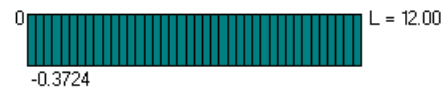
Max : 2.0761[Kip*ft] at 0.00[ft] from J



Min : -2.3928[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

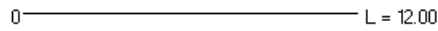
Max : -0.3724[Kip] at 0.00[ft] from J



Min : -0.3724[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

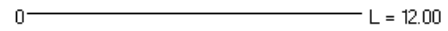
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

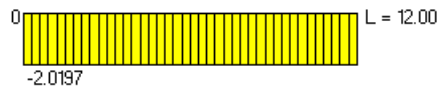
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

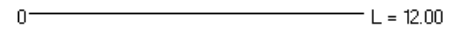
Max : -2.0197[Kip] at 0.00[ft] from J



Min : -2.0197[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

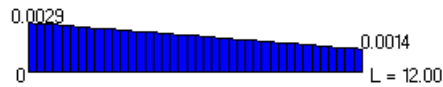
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

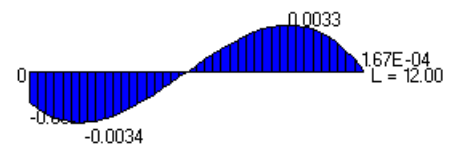
Max : 0.0029 at 0.00[ft] from J



Min : 0.0014 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

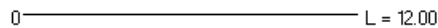
Max : 0.0033 at 9.30[ft] from J



Min : -0.0034 at 1.80[ft] from J

Translation in 3
Deflection [in], Length [ft]

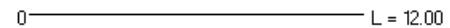
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

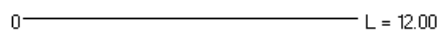
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

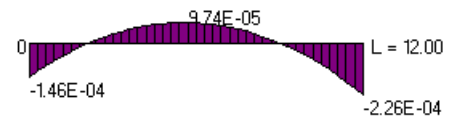
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 9.74E-05 at 5.70[ft] from J

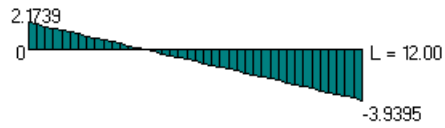


Min : -2.26E-04 at 12.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

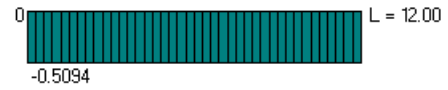
Max : 2.1739[Kip*ft] at 0.00[ft] from J



Min : -3.9395[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.5094[Kip] at 0.00[ft] from J



Min : -0.5094[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

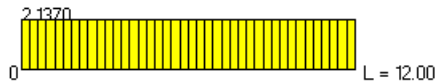
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : 2.1370[Kip] at 0.00[ft] from J



Min : 2.1370[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

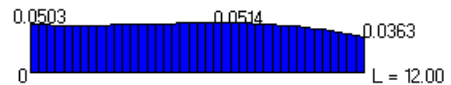
Max : 1.16E-04 at 12.00[ft] from J



Min : -0.0015 at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0514 at 6.60[ft] from J



Min : 0.0363 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 4.46E-05 at 4.20[ft] from J

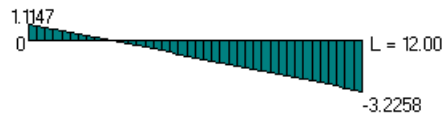


Min : -5.96E-04 at 12.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

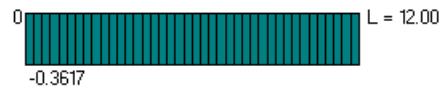
Max : 1.1147[Kip*ft] at 0.00[ft] from J



Min : -3.2258[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.3617[Kip] at 0.00[ft] from J



Min : -0.3617[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

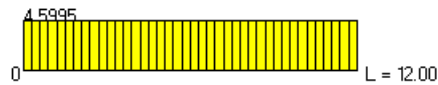
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : 4.5995[Kip] at 0.00[ft] from J



Min : 4.5995[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

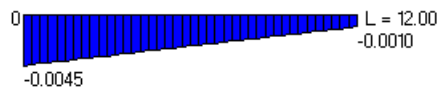
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

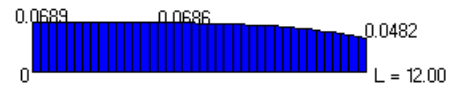
Max : -0.0010 at 12.00[ft] from J



Min : -0.0045 at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

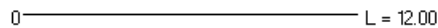
Max : 0.0689 at 0.00[ft] from J



Min : 0.0482 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

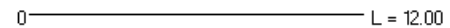
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

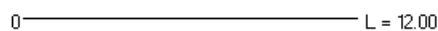
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -6.02E-07 at 3.00[ft] from J

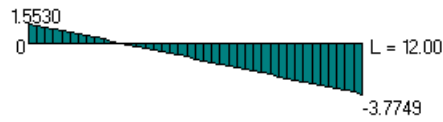


Min : -6.06E-04 at 12.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

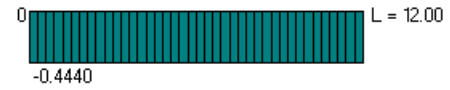
Max : 1.5530[Kip*ft] at 0.00[ft] from J



Min : -3.7749[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.4440[Kip] at 0.00[ft] from J



Min : -0.4440[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

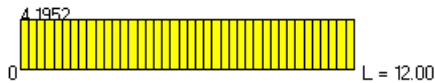
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : 4.1952[Kip] at 0.00[ft] from J



Min : 4.1952[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

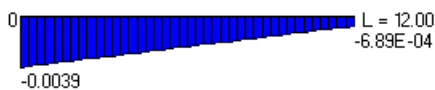
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

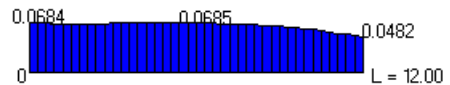
Max : -6.89E-04 at 12.00[ft] from J



Min : -0.0039 at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0685 at 5.40[ft] from J



Min : 0.0482 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

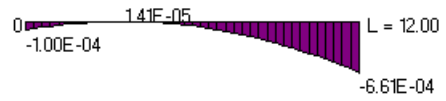
Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.41E-05 at 3.60[ft] from J



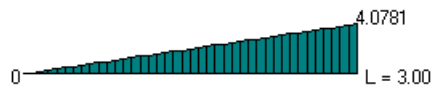
Min : -6.61E-04 at 12.00[ft] from J

MEMBER	:	3	Length	:	3.000 [ft]	Node J	:	3
Material	:	A992 Gr50	Section	:	W 10X22	Node K	:	6

Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]

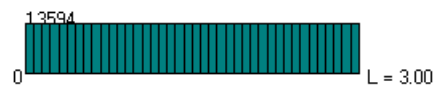
Max : 4.0781[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 1.3594[Kip] at 0.00[ft] from J



Min : 1.3594[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

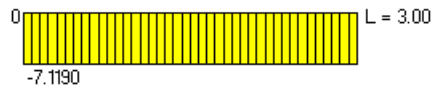
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

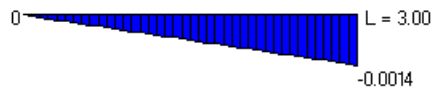
Max : -7.1190[Kip] at 0.00[ft] from J



Min : -7.1190[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0014 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

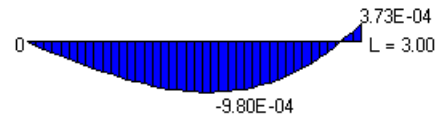
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 3.73E-04 at 3.00[ft] from J



Min : -9.80E-04 at 1.65[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

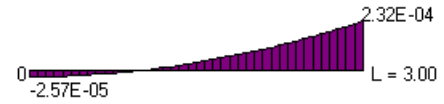
Max : 0.000 at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.32E-04 at 3.00[ft] from J

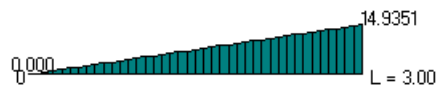


Min : -2.57E-05 at 0.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

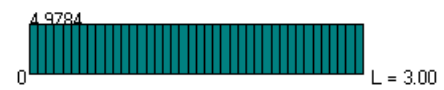
Max : 14.9351[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 4.9784[Kip] at 0.00[ft] from J



Min : 4.9784[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

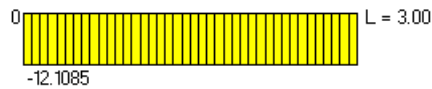
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -12.1085[Kip] at 0.00[ft] from J



Min : -12.1085[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

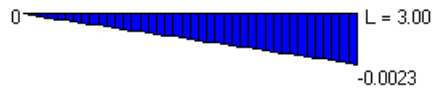
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

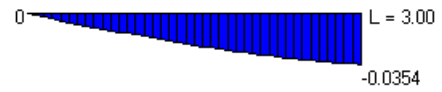
Max : 0.000 at 0.00[ft] from J



Min : -0.0023 at 3.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0354 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

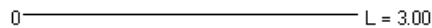
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -1.74E-04 at 3.00[ft] from J

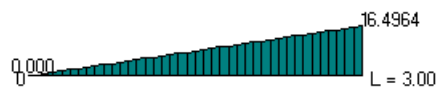


Min : -0.0011 at 0.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

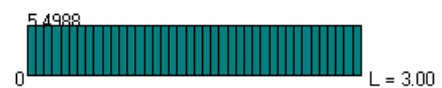
Max : 16.4964[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

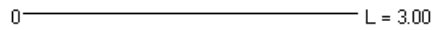
Max : 5.4988[Kip] at 0.00[ft] from J



Min : 5.4988[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

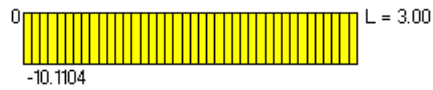
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

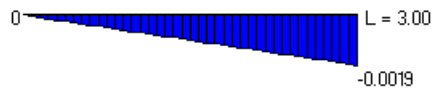
Max : -10.1104[Kip] at 0.00[ft] from J



Min : -10.1104[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0019 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

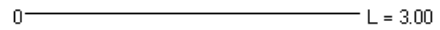
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

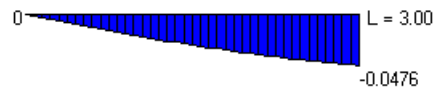
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0476 at 3.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

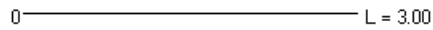
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -4.26E-04 at 3.00[ft] from J

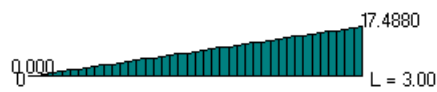


Min : -0.0015 at 0.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

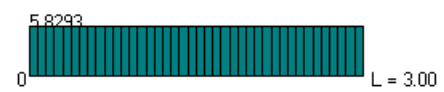
Max : 17.4880[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

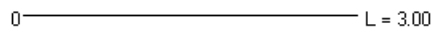
Max : 5.8293[Kip] at 0.00[ft] from J



Min : 5.8293[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

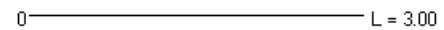
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

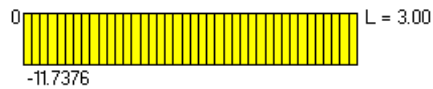
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -11.7376[Kip] at 0.00[ft] from J



Min : -11.7376[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

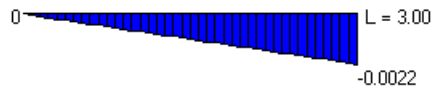
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

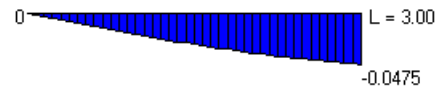
Max : 0.000 at 0.00[ft] from J



Min : -0.0022 at 3.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0475 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -3.70E-04 at 3.00[ft] from J

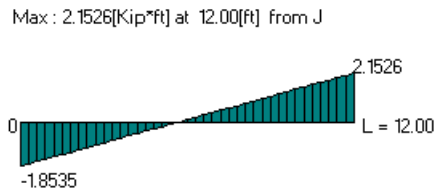


Min : -0.0015 at 0.00[ft] from J

MEMBER	:	4	Length	:	12.000 [ft]	Node J	:	4
Material	:	A992 Gr50	Section	:	W 10X22	Node K	:	6

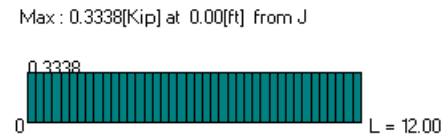
Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]



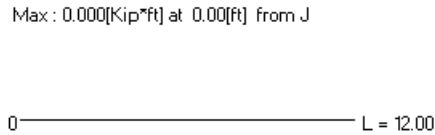
Min : -1.8535[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



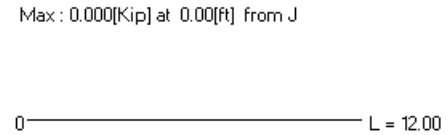
Min : 0.3338[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



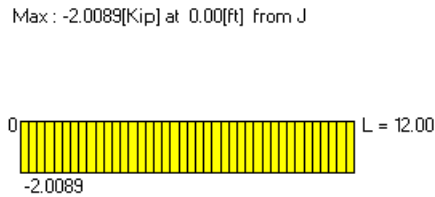
Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



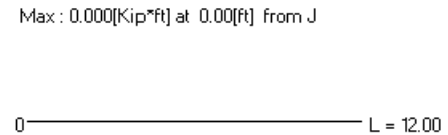
Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



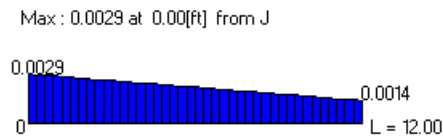
Min : -2.0089[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



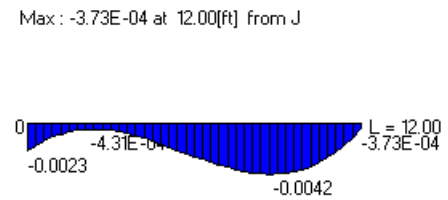
Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



Min : 0.0014 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0042 at 8.70[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

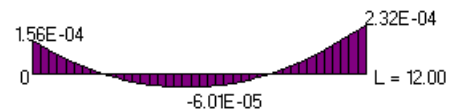
Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.32E-04 at 12.00[ft] from J

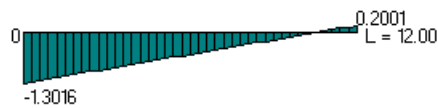


Min : -6.01E-05 at 5.70[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

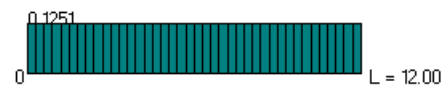
Max : 0.2001[Kip*ft] at 12.00[ft] from J



Min : -1.3016[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 0.1251[Kip] at 0.00[ft] from J



Min : 0.1251[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

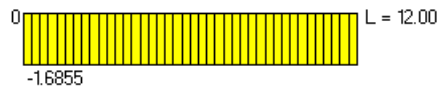
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

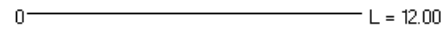
Max : -1.6855[Kip] at 0.00[ft] from J



Min : -1.6855[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

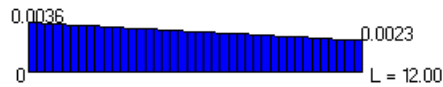
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

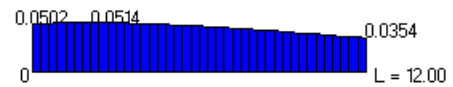
Max : 0.0036 at 0.00[ft] from J



Min : 0.0023 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

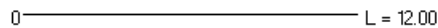
Max : 0.0514 at 2.10[ft] from J



Min : 0.0354 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

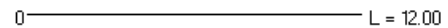
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

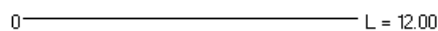
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

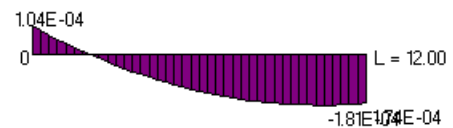
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.04E-04 at 0.00[ft] from J

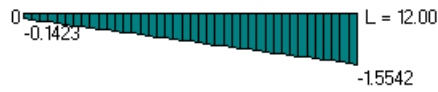


Min : -1.81E-04 at 10.50[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

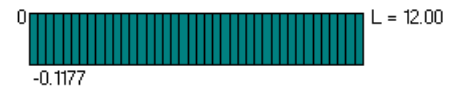
Max : -0.1423[Kip*ft] at 0.00[ft] from J



Min : -1.5542[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.1177[Kip] at 0.00[ft] from J



Min : -0.1177[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

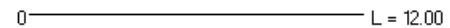
Max : -0.5064[Kip] at 0.00[ft] from J



Min : -0.5064[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

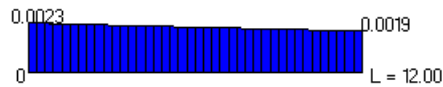
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

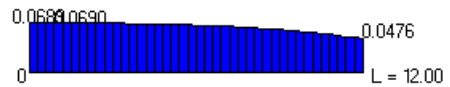
Max : 0.0023 at 0.00[ft] from J



Min : 0.0019 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0690 at 0.90[ft] from J



Min : 0.0476 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

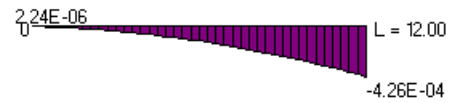
Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.24E-06 at 0.00[ft] from J



Min : -4.26E-04 at 12.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : -0.5328[Kip*ft] at 0.00[ft] from J



Min : -1.0569[Kip*ft] at 12.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

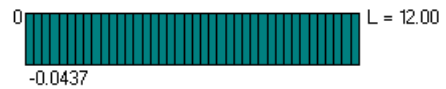
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0437[Kip] at 0.00[ft] from J



Min : -0.0437[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

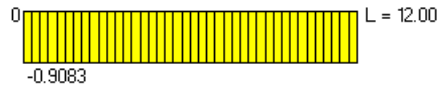
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -0.9083[Kip] at 0.00[ft] from J



Min : -0.9083[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

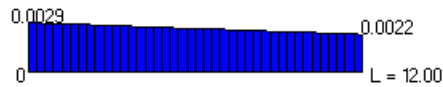
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

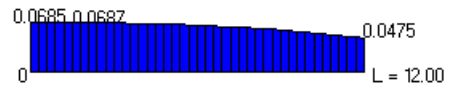
Max : 0.0029 at 0.00[ft] from J



Min : 0.0022 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

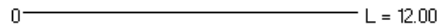
Max : 0.0687 at 1.50[ft] from J



Min : 0.0475 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

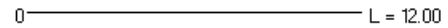
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

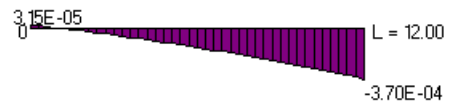
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 3.15E-05 at 0.00[ft] from J

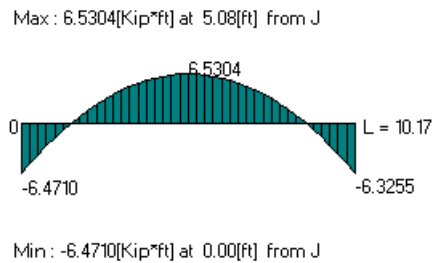


Min : -3.70E-04 at 12.00[ft] from J

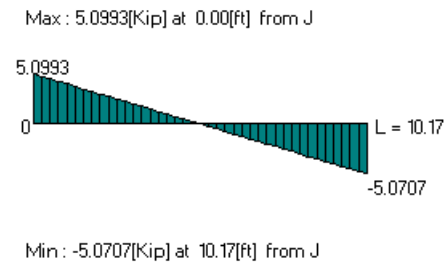
MEMBER	: 5	Length	: 10.170 [ft]	Node J	: 5
Material	: A992 Gr50	Section	: W 14X26	Node K	: 6

Condition : com1=DL+LL

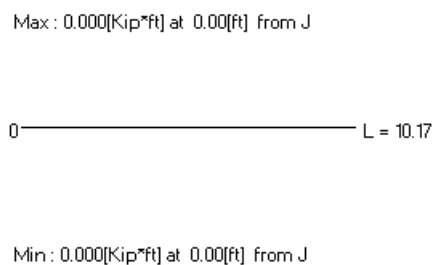
M33 bending moment
Moments [Kip*ft], Length [ft]



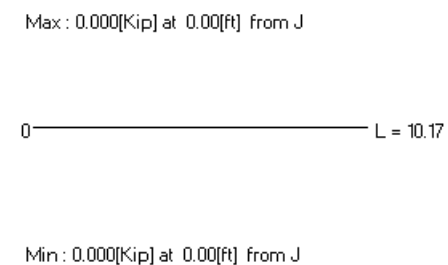
V2 shear forces
Forces [Kip], Length [ft]



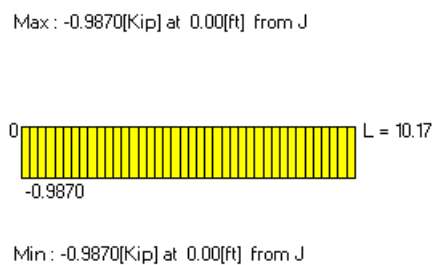
M22 bending moment
Moments [Kip*ft], Length [ft]



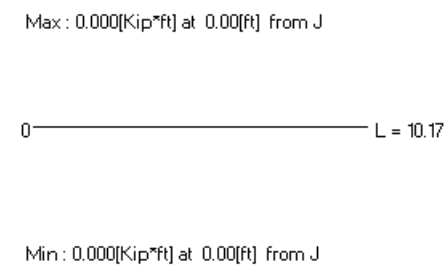
V3 shear forces
Forces [Kip], Length [ft]



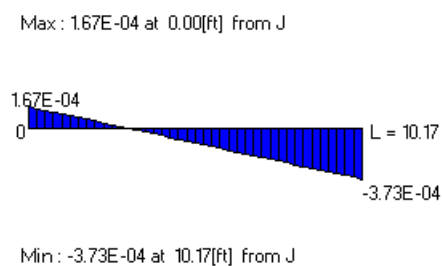
Axial forces
Forces [Kip], Length [ft]



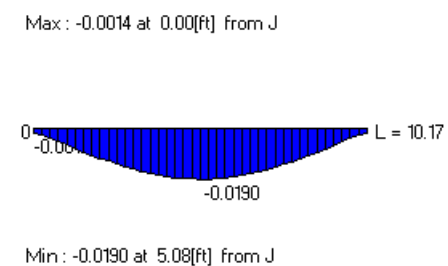
Torsional moments
Moments [Kip*ft], Length [ft]



Translation in 1
Deflection [in], Length [ft]



Translation in 2
Deflection [in], Length [ft]



Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

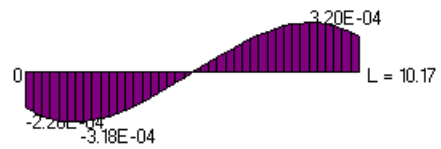
Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 3.20E-04 at 8.64[ft] from J

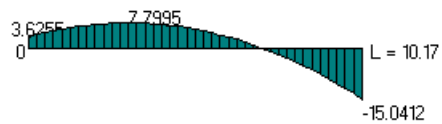


Min : -3.18E-04 at 1.53[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 7.7995[Kip*ft] at 3.05[ft] from J



Min : -15.0412[Kip*ft] at 10.17[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

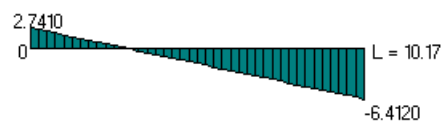
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 2.7410[Kip] at 0.00[ft] from J



Min : -6.4120[Kip] at 10.17[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

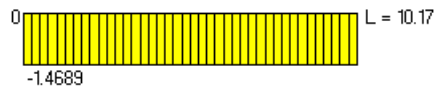
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

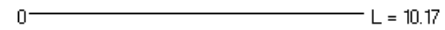
Max : -1.4689[Kip] at 0.00[ft] from J



Min : -1.4689[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

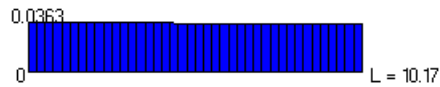
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

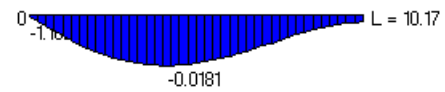
Max : 0.0363 at 0.00[ft] from J



Min : 0.0354 at 10.17[ft] from J

Translation in 2
Deflection [in], Length [ft]

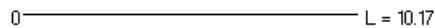
Max : -1.16E-04 at 0.00[ft] from J



Min : -0.0181 at 4.07[ft] from J

Translation in 3
Deflection [in], Length [ft]

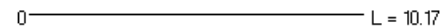
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

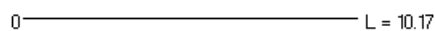
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

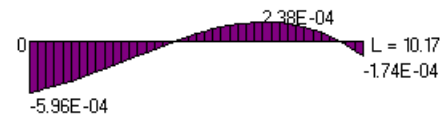
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

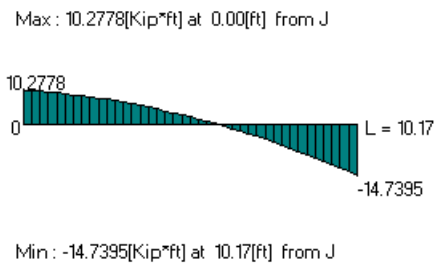
Max : 2.38E-04 at 7.12[ft] from J



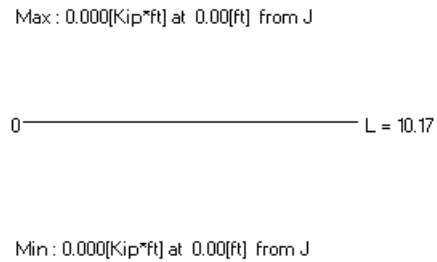
Min : -5.96E-04 at 0.00[ft] from J

Condition : com3=0.6DL+WL

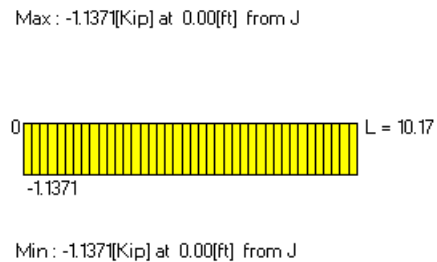
M33 bending moment
Moments [Kip*ft], Length [ft]



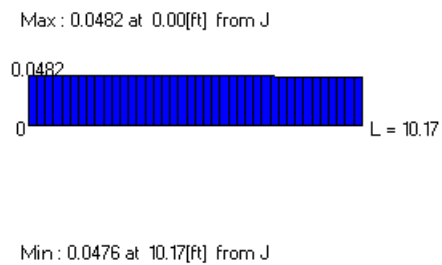
M22 bending moment
Moments [Kip*ft], Length [ft]



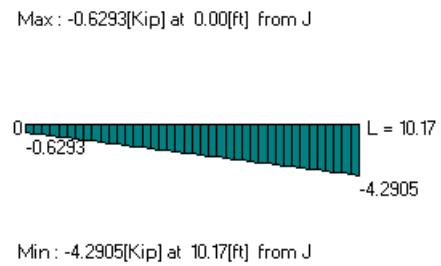
Axial forces
Forces [Kip], Length [ft]



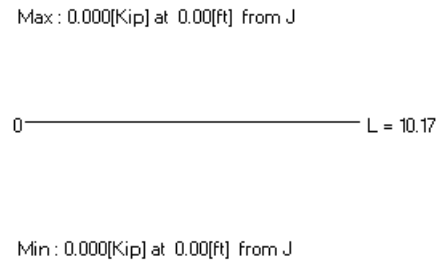
Translation in 1
Deflection [in], Length [ft]



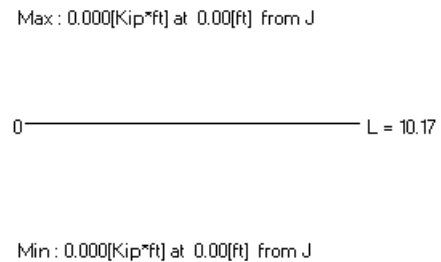
V2 shear forces
Forces [Kip], Length [ft]



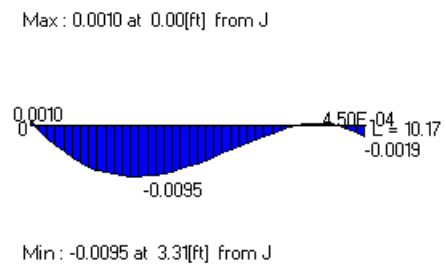
V3 shear forces
Forces [Kip], Length [ft]



Torsional moments
Moments [Kip*ft], Length [ft]



Translation in 2
Deflection [in], Length [ft]



Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.51E-04 at 6.10[ft] from J

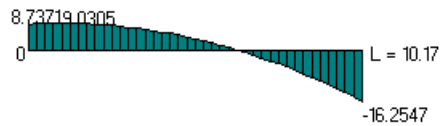


Min : -6.06E-04 at 0.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

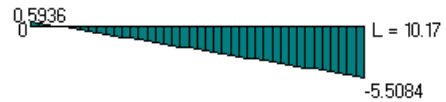
Max : 9.0305[Kip*ft] at 1.02[ft] from J



Min : -16.2547[Kip*ft] at 10.17[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 0.5936[Kip] at 0.00[ft] from J



Min : -5.5084[Kip] at 10.17[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

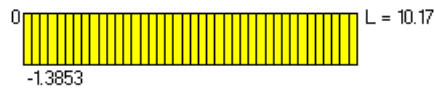
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

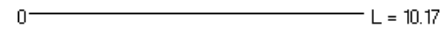
Max : -1.3853[Kip] at 0.00[ft] from J



Min : -1.3853[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

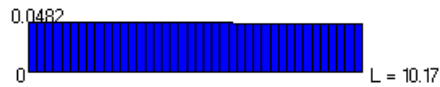
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

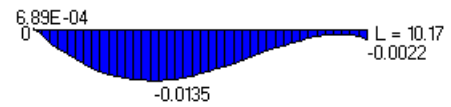
Max : 0.0482 at 0.00[ft] from J



Min : 0.0475 at 10.17[ft] from J

Translation in 2
Deflection [in], Length [ft]

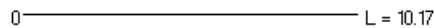
Max : 6.89E-04 at 0.00[ft] from J



Min : -0.0135 at 3.56[ft] from J

Translation in 3
Deflection [in], Length [ft]

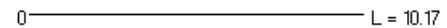
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

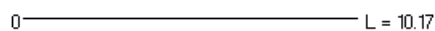
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.87E-04 at 6.36[ft] from J

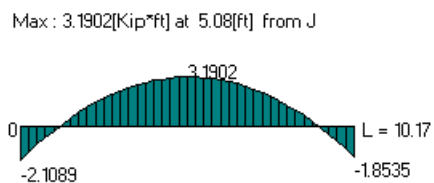


Min : -6.61E-04 at 0.00[ft] from J

MEMBER	: 6	Length	: 10.170 [ft]	Node J	: 2
Material	: A992 Gr50	Section	: W 14X26	Node K	: 4

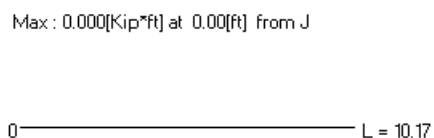
Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]



Min : -2.1089[Kip*ft] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



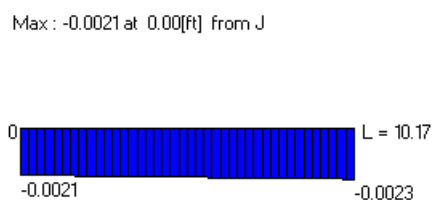
Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



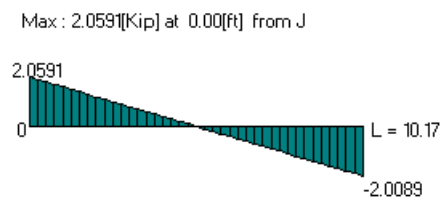
Min : -0.3338[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



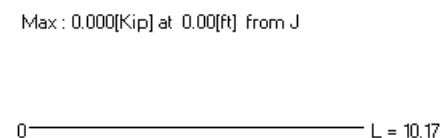
Min : -0.0023 at 10.17[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



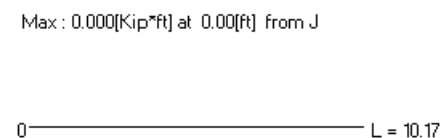
Min : -2.0089[Kip] at 10.17[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



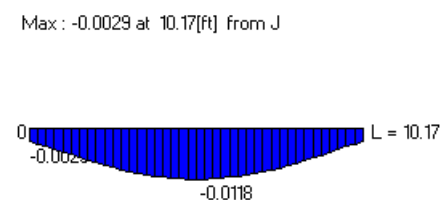
Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0118 at 5.08[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

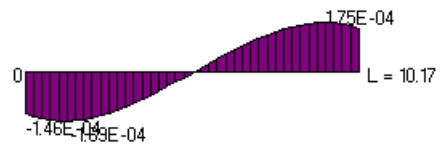
Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.75E-04 at 9.15[ft] from J

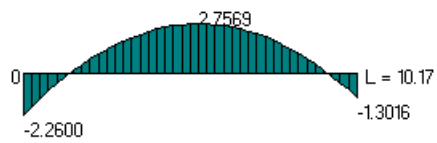


Min : -1.69E-04 at 1.27[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 2.7569[Kip*ft] at 5.34[ft] from J



Min : -2.2600[Kip*ft] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

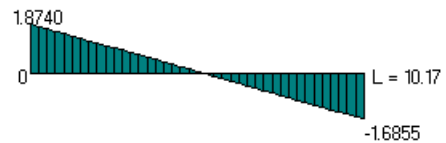
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 1.8740[Kip] at 0.00[ft] from J



Min : -1.6855[Kip] at 10.17[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

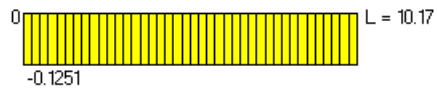
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

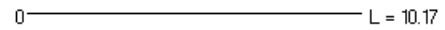
Max : -0.1251[Kip] at 0.00[ft] from J



Min : -0.1251[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

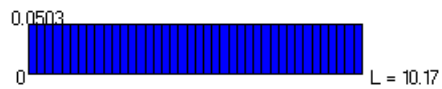
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

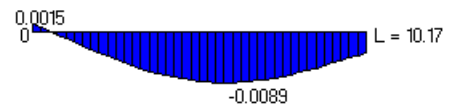
Max : 0.0503 at 0.00[ft] from J



Min : 0.0502 at 10.17[ft] from J

Translation in 2
Deflection [in], Length [ft]

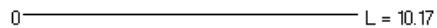
Max : 0.0015 at 0.00[ft] from J



Min : -0.0089 at 5.85[ft] from J

Translation in 3
Deflection [in], Length [ft]

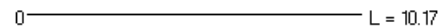
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

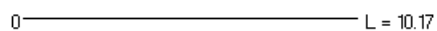
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

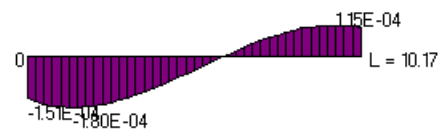
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.15E-04 at 9.41[ft] from J

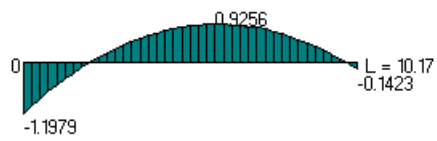


Min : -1.80E-04 at 1.27[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

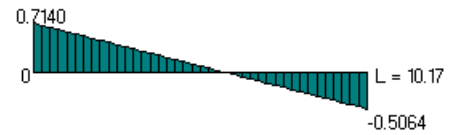
Max : 0.9256[Kip*ft] at 5.85[ft] from J



Min : -1.1979[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 0.7140[Kip] at 0.00[ft] from J



Min : -0.5064[Kip] at 10.17[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : 0.1177[Kip] at 0.00[ft] from J



Min : 0.1177[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

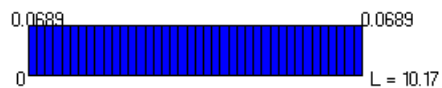
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

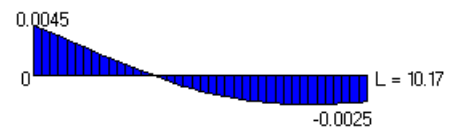
Max : 0.0689 at 10.17[ft] from J



Min : 0.0689 at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0045 at 0.00[ft] from J



Min : -0.0025 at 8.39[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

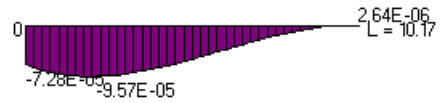
Max : 0.000 at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.64E-06 at 9.92[ft] from J

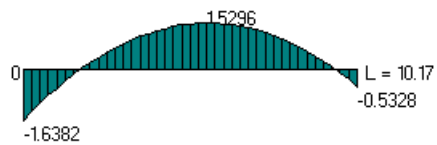


Min : -9.57E-05 at 2.03[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

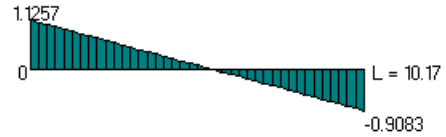
Max : 1.5296[Kip*ft] at 5.59[ft] from J



Min : -1.6382[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 1.1257[Kip] at 0.00[ft] from J



Min : -0.9083[Kip] at 10.17[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

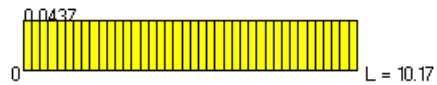
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 10.17

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

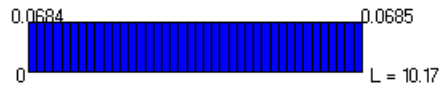
Max : 0.0437[Kip] at 0.00[ft] from J



Min : 0.0437[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

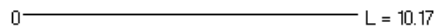
Max : 0.0685 at 10.17[ft] from J



Min : 0.0684 at 0.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

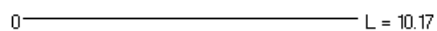
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

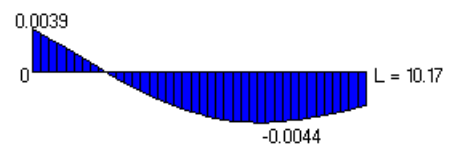
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

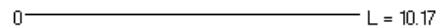
Max : 0.0039 at 0.00[ft] from J



Min : -0.0044 at 6.86[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 3.47E-05 at 9.66[ft] from J

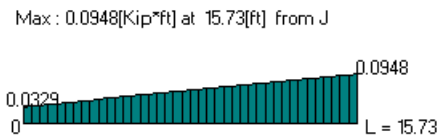


Min : -1.27E-04 at 1.78[ft] from J

MEMBER	: 7	Length	: 15.730 [ft]	Node J	: 2
Material	: A36	Section	: T2LU 5X3-1_2X5_16X3_4LLBB	Node K	: 6

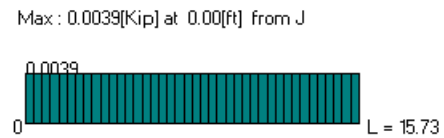
Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]



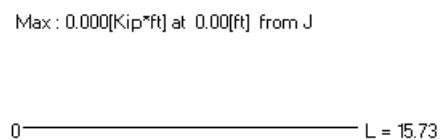
Min : 0.0329[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



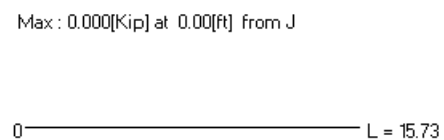
Min : 0.0039[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



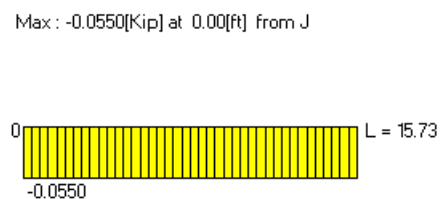
Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



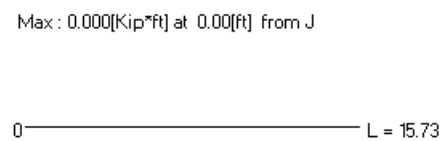
Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



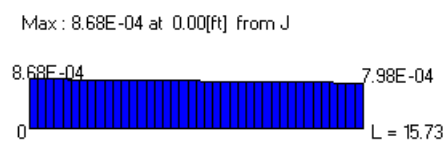
Min : -0.0550[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



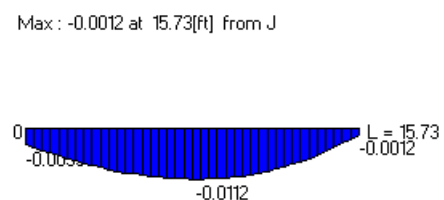
Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



Min : 7.98E-04 at 15.73[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0112 at 7.86[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.32E-04 at 15.73[ft] from J

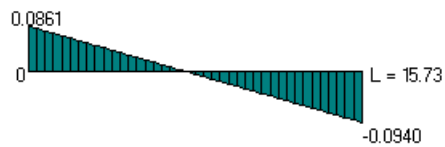


Min : -1.46E-04 at 0.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.0861[Kip*ft] at 0.00[ft] from J



Min : -0.0940[Kip*ft] at 15.73[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

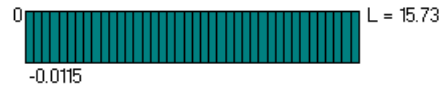
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0115[Kip] at 0.00[ft] from J



Min : -0.0115[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

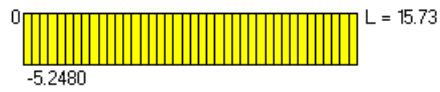
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

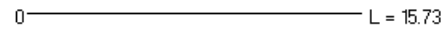
Max : -5.2480[Kip] at 0.00[ft] from J



Min : -5.2480[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

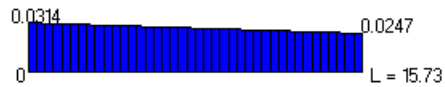
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

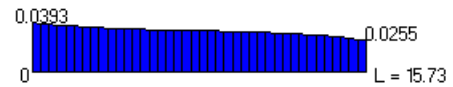
Max : 0.0314 at 0.00[ft] from J



Min : 0.0247 at 15.73[ft] from J

Translation in 2
Deflection [in], Length [ft]

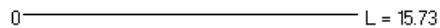
Max : 0.0393 at 0.00[ft] from J



Min : 0.0255 at 15.73[ft] from J

Translation in 3
Deflection [in], Length [ft]

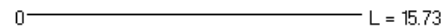
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

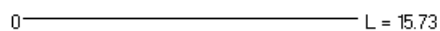
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

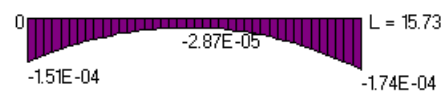
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -2.87E-05 at 7.47[ft] from J

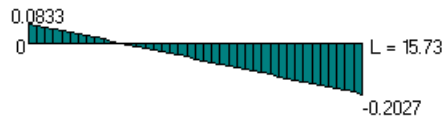


Min : -1.74E-04 at 15.73[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

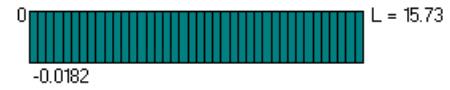
Max : 0.0833[Kip*ft] at 0.00[ft] from J



Min : -0.2027[Kip*ft] at 15.73[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0182[Kip] at 0.00[ft] from J



Min : -0.0182[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

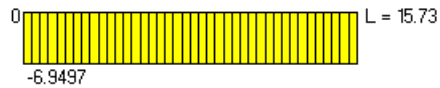
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -6.9497[Kip] at 0.00[ft] from J



Min : -6.9497[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

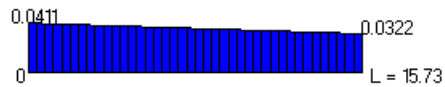
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

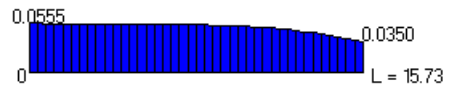
Max : 0.0411 at 0.00[ft] from J



Min : 0.0322 at 15.73[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0555 at 0.00[ft] from J



Min : 0.0350 at 15.73[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -1.16E-06 at 4.72[ft] from J

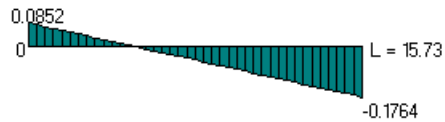


Min : -4.26E-04 at 15.73[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

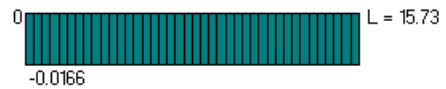
Max : 0.0852[Kip*ft] at 0.00[ft] from J



Min : -0.1764[Kip*ft] at 15.73[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0166[Kip] at 0.00[ft] from J



Min : -0.0166[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

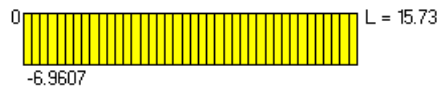
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 15.73

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

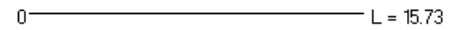
Max : -6.9607[Kip] at 0.00[ft] from J



Min : -6.9607[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

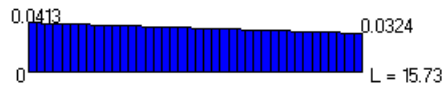
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

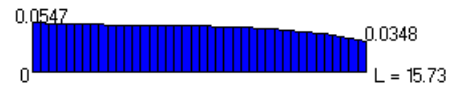
Max : 0.0413 at 0.00[ft] from J



Min : 0.0324 at 15.73[ft] from J

Translation in 2
Deflection [in], Length [ft]

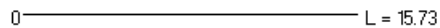
Max : 0.0547 at 0.00[ft] from J



Min : 0.0348 at 15.73[ft] from J

Translation in 3
Deflection [in], Length [ft]

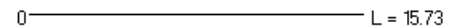
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

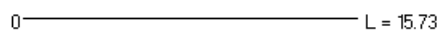
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

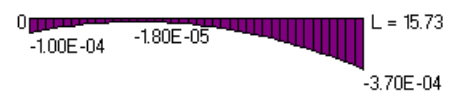
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -1.80E-05 at 5.11[ft] from J



Min : -3.70E-04 at 15.73[ft] from J

Current Date: 5/24/2017 3:15 PM

Units system: English

File name: H:\Projects\2016\2016-0205_00 VA Marion Building 138 - 4th Floor Renovation\Structural\Calculations\Penthouse frame Line F.etz\

Steel Code Check

Report: Summary - For all selected load conditions

Load conditions to be included in design :

com1=DL+LL

com2=DL+0.75LL+0.75WL

com3=0.6DL+WL

com4=DL+WL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
<i>T2LU 5X3-1_2X5_16X3_4LLBB7</i>	<i>W 10X22</i>		com1 at 100.00%	0.03	OK	Eq. H1-1b
			com2 at 0.00%	0.20	OK	Sec. E4
			com3 at 100.00%	0.28	OK	Eq. H1-1a
			com4 at 100.00%	0.27	OK	Eq. H1-1a
		1	com1 at 100.00%	0.32	OK	Eq. H1-1b
			com2 at 100.00%	0.11	OK	Eq. H1-1b
			com3 at 100.00%	0.13	OK	Eq. H1-1b
			com4 at 100.00%	0.07	OK	Eq. H1-1b
		2	com1 at 100.00%	0.19	OK	Eq. H1-1b
			com2 at 100.00%	0.21	OK	Eq. H1-1b
			com3 at 100.00%	0.13	OK	Eq. H1-1b
			com4 at 100.00%	0.17	OK	Eq. H1-1b
		3	com1 at 100.00%	0.32	OK	Eq. H1-1b
			com2 at 100.00%	0.47	OK	Eq. H1-1b
			com3 at 100.00%	0.36	OK	Eq. H1-1b
			com4 at 100.00%	0.44	OK	Eq. H1-1b
		4	com1 at 100.00%	0.18	OK	Eq. H1-1b
			com2 at 0.00%	0.13	OK	Eq. H1-1b
			com3 at 0.00%	0.03	OK	Eq. H1-1b
			com4 at 0.00%	0.07	OK	Eq. H1-1b
<i>W 14X26</i>		5	com1 at 0.00%	0.47	OK	Eq. H1-1b
			com2 at 100.00%	0.54	OK	Eq. H1-1b
			com3 at 100.00%	0.33	OK	Eq. H1-1b
			com4 at 100.00%	0.44	OK	Eq. H1-1b
		6	com1 at 50.00%	0.17	OK	Eq. H1-1b
			com2 at 0.00%	0.15	OK	Eq. H1-1b
			com3 at 0.00%	0.07	OK	Eq. H1-1b
			com4 at 0.00%	0.10	OK	Eq. H1-1b

Current Date: 5/24/2017 3:16 PM

Units system: English

File name: H:\Projects\2016\2016-0205_00 VA Marion Building 138 - 4th Floor Renovation\Structural\Calculations\Penthouse frame Line F.etz\

Analysis result

Forces diagram printout

Load conditions

com1=DL+LL

com2=DL+0.75LL+0.75WL

com3=0.6DL+WL

com4=DL+WL

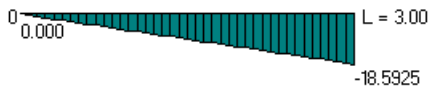
MEMBER	:	1	Length	:	3.000 [ft]	Node J	:	1
Material	:	A992 Gr50	Section	:	W 10X22	Node K	:	5

Condition : com1=DL+LL

M33 bending moment

Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

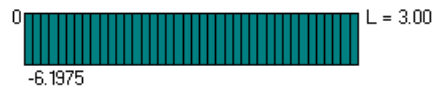


Min : -18.5925[Kip*ft] at 3.00[ft] from J

V2 shear forces

Forces [Kip], Length [ft]

Max : -6.1975[Kip] at 0.00[ft] from J

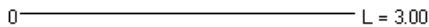


Min : -6.1975[Kip] at 0.00[ft] from J

M22 bending moment

Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

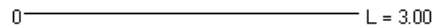


Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces

Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

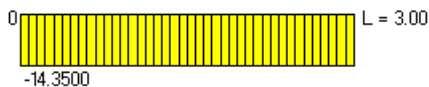


Min : 0.000[Kip] at 0.00[ft] from J

Axial forces

Forces [Kip], Length [ft]

Max : -14.3500[Kip] at 0.00[ft] from J



Min : -14.3500[Kip] at 0.00[ft] from J

Torsional moments

Moments [Kip*ft], Length [ft]

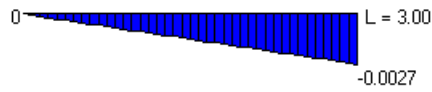
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

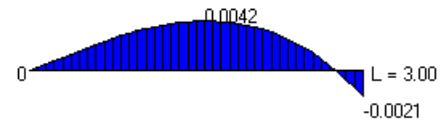
Max : 0.000 at 0.00[ft] from J



Min : -0.0027 at 3.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0042 at 1.58[ft] from J



Min : -0.0021 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

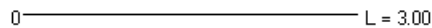
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

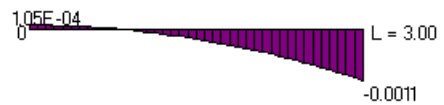
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.05E-04 at 0.00[ft] from J

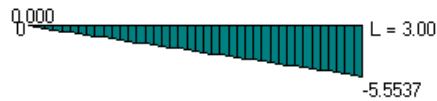


Min : -0.0011 at 3.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

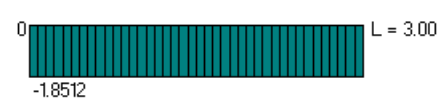
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : -5.5537[Kip*ft] at 3.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

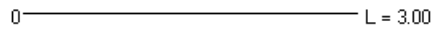
Max : -1.8512[Kip] at 0.00[ft] from J



Min : -1.8512[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

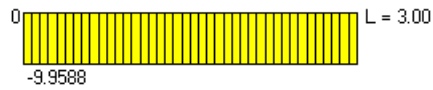
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

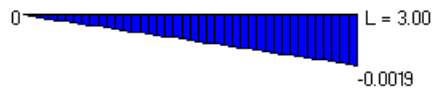
Max : -9.9588[Kip] at 0.00[ft] from J



Min : -9.9588[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0019 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

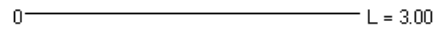
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

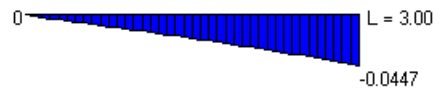
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0447 at 3.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

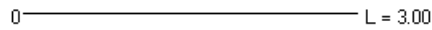
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -0.0012 at 0.00[ft] from J

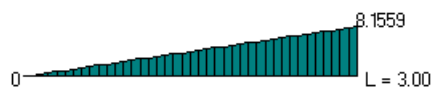


Min : -0.0015 at 3.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

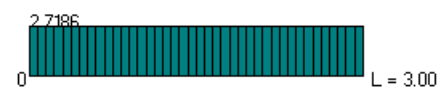
Max : 8.1559[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

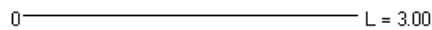
Max : 2.7186[Kip] at 0.00[ft] from J



Min : 2.7186[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

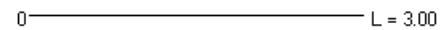
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

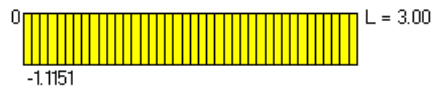
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -1.1151[Kip] at 0.00[ft] from J



Min : -1.1151[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

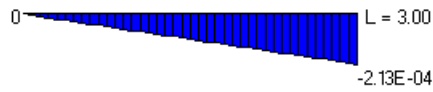
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

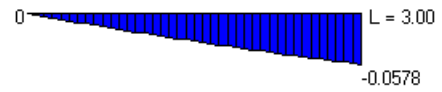
Max : 0.000 at 0.00[ft] from J



Min : -2.13E-04 at 3.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0578 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

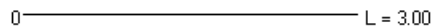
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -0.0012 at 3.00[ft] from J

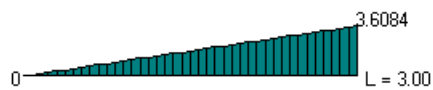


Min : -0.0017 at 0.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

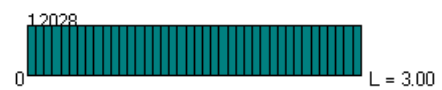
Max : 3.6084[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 1.2028[Kip] at 0.00[ft] from J



Min : 1.2028[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

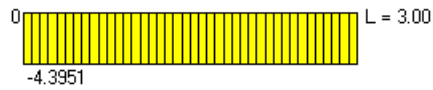
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

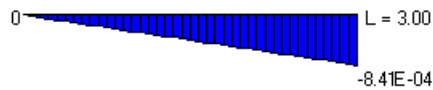
Max : -4.3951[Kip] at 0.00[ft] from J



Min : -4.3951[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -8.41E-04 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

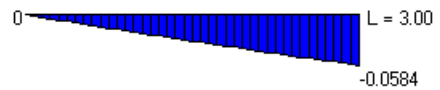
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0584 at 3.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

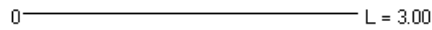
Max : 0.000 at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -0.0014 at 3.00[ft] from J



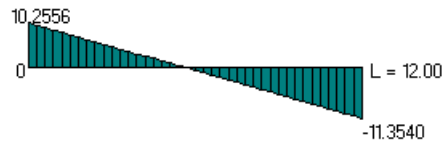
Min : -0.0017 at 0.00[ft] from J

MEMBER	:	2	Length	:	12.000 [ft]	Node J	:	2
Material	:	A992 Gr50	Section	:	W 10X22	Node K	:	5

Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]

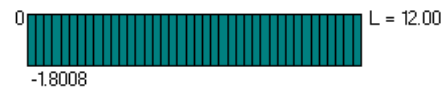
Max : 10.2556[Kip*ft] at 0.00[ft] from J



Min : -11.3540[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -1.8008[Kip] at 0.00[ft] from J



Min : -1.8008[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

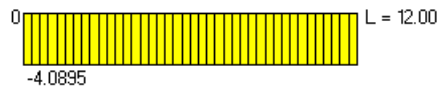
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

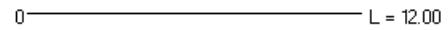
Max : -4.0895[Kip] at 0.00[ft] from J



Min : -4.0895[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

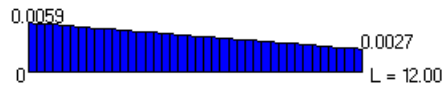
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

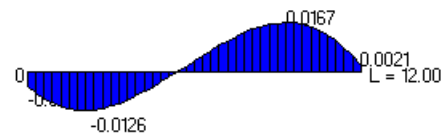
Max : 0.0059 at 0.00[ft] from J



Min : 0.0027 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

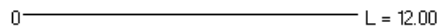
Max : 0.0167 at 9.30[ft] from J



Min : -0.0126 at 2.10[ft] from J

Translation in 3
Deflection [in], Length [ft]

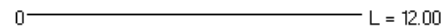
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

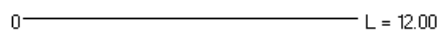
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

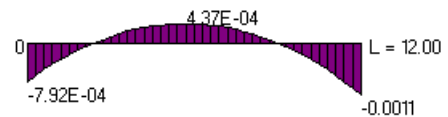
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 4.37E-04 at 5.70[ft] from J

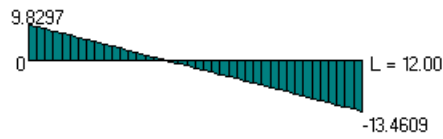


Min : -0.0011 at 12.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

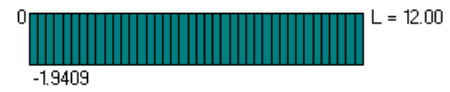
Max : 9.8297[Kip*ft] at 0.00[ft] from J



Min : -13.4609[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -1.9409[Kip] at 0.00[ft] from J



Min : -1.9409[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

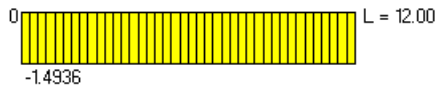
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -1.4936[Kip] at 0.00[ft] from J



Min : -1.4936[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

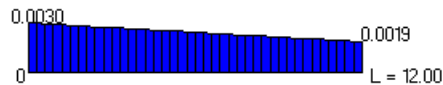
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

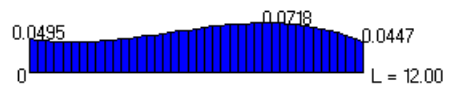
Max : 0.0030 at 0.00[ft] from J



Min : 0.0019 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0718 at 8.40[ft] from J



Min : 0.0445 at 1.50[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 4.22E-04 at 5.10[ft] from J

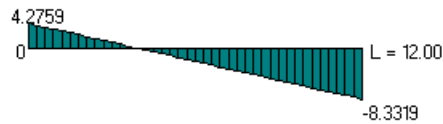


Min : -0.0015 at 12.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 4.2759[Kip*ft] at 0.00[ft] from J



Min : -8.3319[Kip*ft] at 12.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

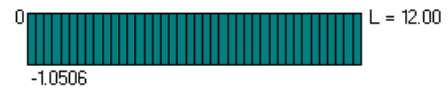
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -1.0506[Kip] at 0.00[ft] from J



Min : -1.0506[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

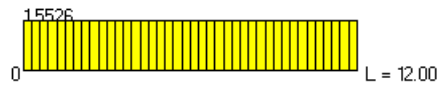
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

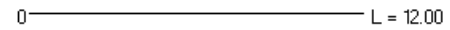
Max : 1.5526[Kip] at 0.00[ft] from J



Min : 1.5526[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

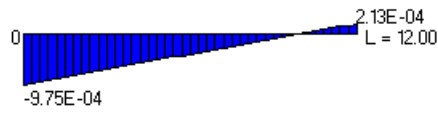
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

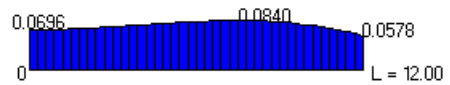
Max : 2.13E-04 at 12.00[ft] from J



Min : -9.75E-04 at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0840 at 7.50[ft] from J



Min : 0.0578 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

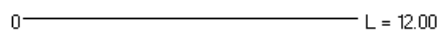
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

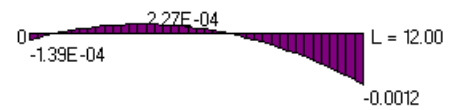
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.27E-04 at 4.20[ft] from J

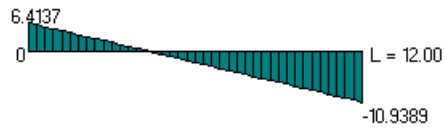


Min : -0.0012 at 12.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

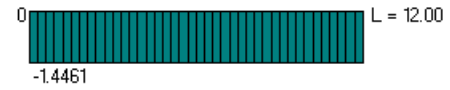
Max : 6.4137[Kip*ft] at 0.00[ft] from J



Min : -10.9389[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -1.4461[Kip] at 0.00[ft] from J



Min : -1.4461[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : 0.7346[Kip] at 0.00[ft] from J



Min : 0.7346[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

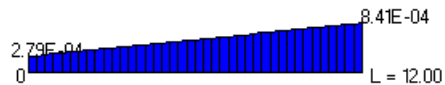
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

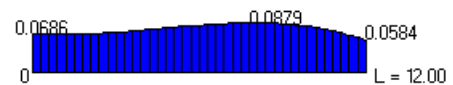
Max : 8.41E-04 at 12.00[ft] from J



Min : 2.79E-04 at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0879 at 7.80[ft] from J



Min : 0.0584 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

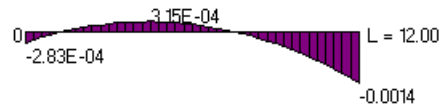
Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 3.15E-04 at 4.50[ft] from J



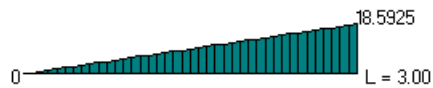
Min : -0.0014 at 12.00[ft] from J

MEMBER	:	3	Length	:	3.000 [ft]	Node J	:	3
Material	:	A992 Gr50	Section	:	W 10X22	Node K	:	6

Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]

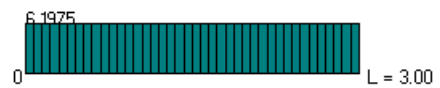
Max : 18.5925[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 6.1975[Kip] at 0.00[ft] from J



Min : 6.1975[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

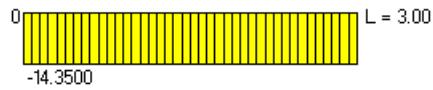
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

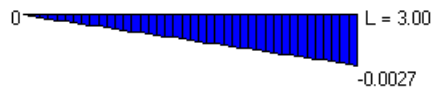
Max : -14.3500[Kip] at 0.00[ft] from J



Min : -14.3500[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0027 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

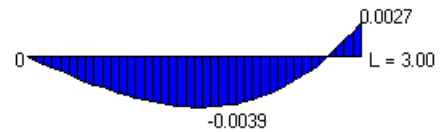
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0027 at 3.00[ft] from J



Min : -0.0039 at 1.58[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

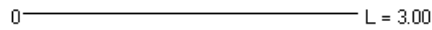
Max : 0.000 at 0.00[ft] from J

0 ————— L = 3.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

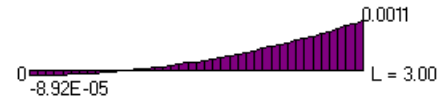
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0011 at 3.00[ft] from J

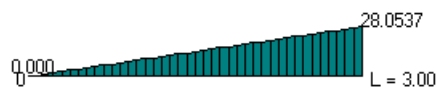


Min : -8.92E-05 at 0.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

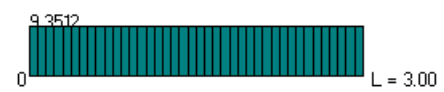
Max : 28.0537[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

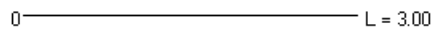
Max : 9.3512[Kip] at 0.00[ft] from J



Min : 9.3512[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

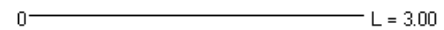
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

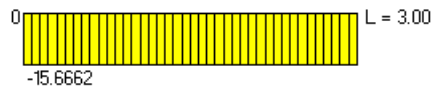
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -15.6662[Kip] at 0.00[ft] from J



Min : -15.6662[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

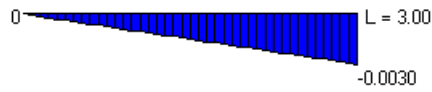
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

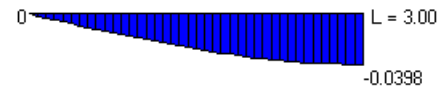
Max : 0.000 at 0.00[ft] from J



Min : -0.0030 at 3.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0398 at 2.93[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

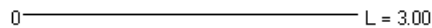
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

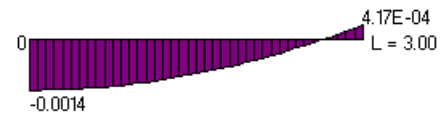
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 4.17E-04 at 3.00[ft] from J

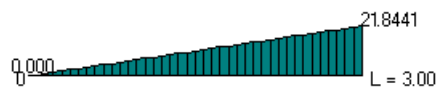


Min : -0.0014 at 0.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

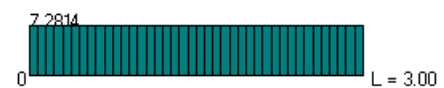
Max : 21.8441[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

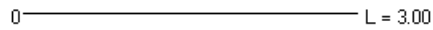
Max : 7.2814[Kip] at 0.00[ft] from J



Min : 7.2814[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

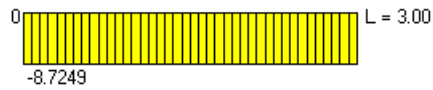
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

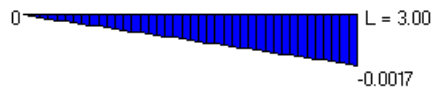
Max : -8.7249[Kip] at 0.00[ft] from J



Min : -8.7249[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0017 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

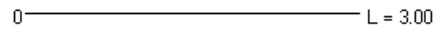
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

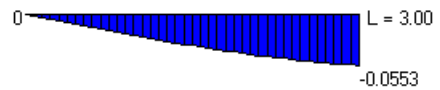
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0553 at 3.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

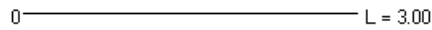
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -3.52E-04 at 3.00[ft] from J

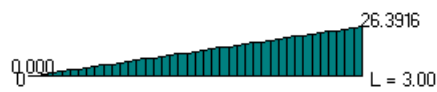


Min : -0.0017 at 0.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

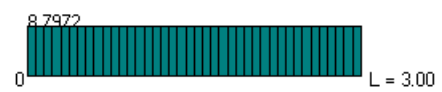
Max : 26.3916[Kip*ft] at 3.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 8.7972[Kip] at 0.00[ft] from J



Min : 8.7972[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

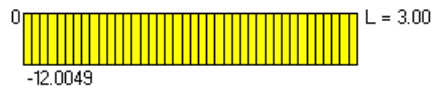
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -12.0049[Kip] at 0.00[ft] from J



Min : -12.0049[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

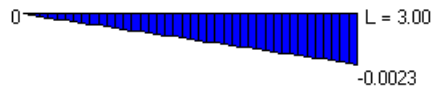
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

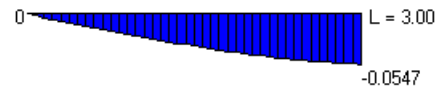
Max : 0.000 at 0.00[ft] from J



Min : -0.0023 at 3.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -0.0547 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

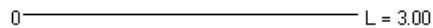
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

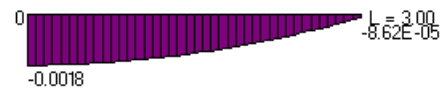
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -8.62E-05 at 3.00[ft] from J

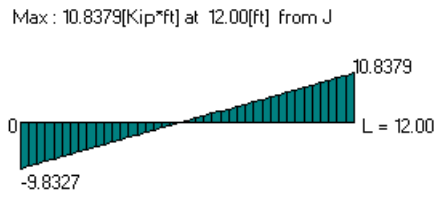


Min : -0.0018 at 0.00[ft] from J

MEMBER	: 4	Length	: 12.000 [ft]	Node J	: 4
Material	: A992 Gr50	Section	: W 10X22	Node K	: 6

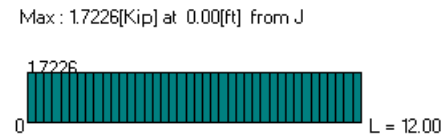
Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]



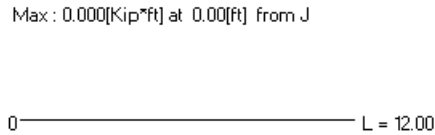
Min : -9.8327[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



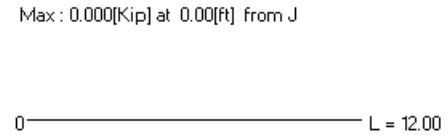
Min : 1.7226[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



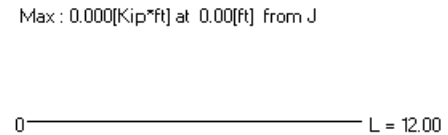
Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



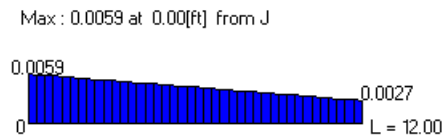
Min : -4.0735[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



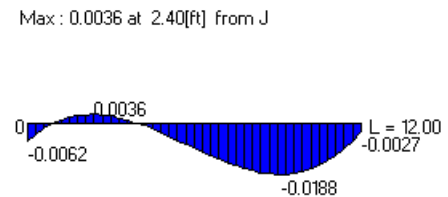
Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



Min : 0.0027 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0188 at 9.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

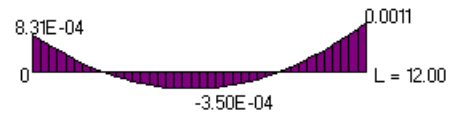
Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0011 at 12.00[ft] from J

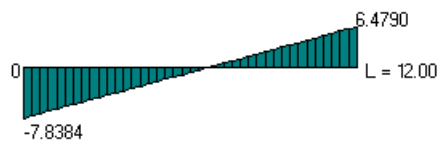


Min : -3.50×10^{-4} at 5.70[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 6.4790[Kip*ft] at 12.00[ft] from J



Min : -7.8384[Kip*ft] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

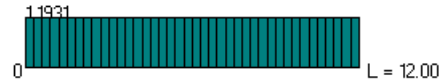
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 1.1931[Kip] at 0.00[ft] from J



Min : 1.1931[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

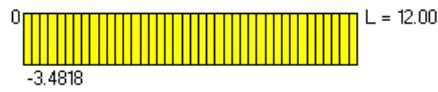
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

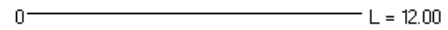
Max : -3.4818[Kip] at 0.00[ft] from J



Min : -3.4818[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

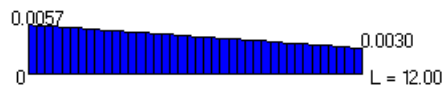
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

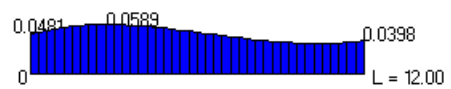
Max : 0.0057 at 0.00[ft] from J



Min : 0.0030 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

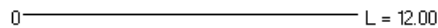
Max : 0.0589 at 2.70[ft] from J



Min : 0.0364 at 10.50[ft] from J

Translation in 3
Deflection [in], Length [ft]

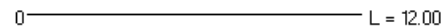
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

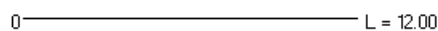
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

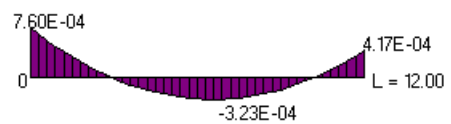
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 7.60E-04 at 0.00[ft] from J



Min : -3.23E-04 at 6.60[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

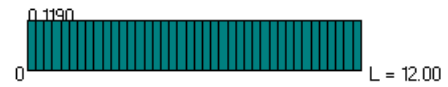
Max : -0.5450[Kip*ft] at 12.00[ft] from J



Min : -1.9735[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 0.1190[Kip] at 0.00[ft] from J



Min : 0.1190[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

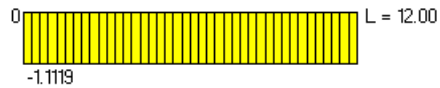
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

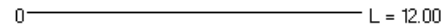
Max : -1.1119[Kip] at 0.00[ft] from J



Min : -1.1119[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

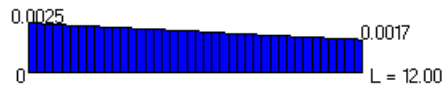
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

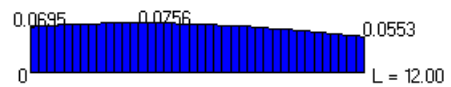
Max : 0.0025 at 0.00[ft] from J



Min : 0.0017 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0756 at 3.90[ft] from J



Min : 0.0553 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

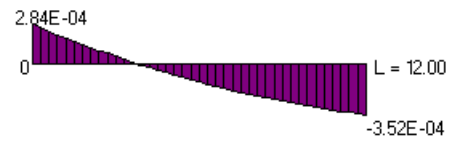
Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.84E-04 at 0.00[ft] from J

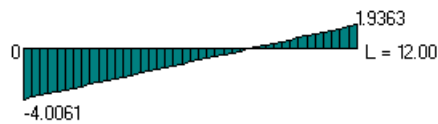


Min : -3.52E-04 at 12.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

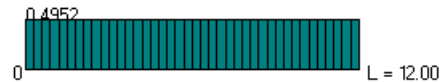
Max : 1.9363[Kip*ft] at 12.00[ft] from J



Min : -4.0061[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 0.4952[Kip] at 0.00[ft] from J



Min : 0.4952[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

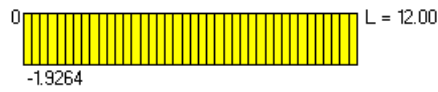
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

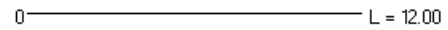
Max : -1.9264[Kip] at 0.00[ft] from J



Min : -1.9264[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

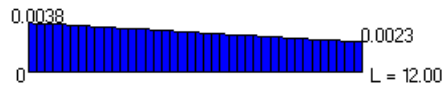
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

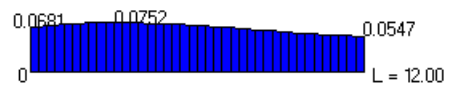
Max : 0.0038 at 0.00[ft] from J



Min : 0.0023 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

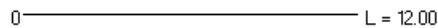
Max : 0.0752 at 3.00[ft] from J



Min : 0.0547 at 12.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

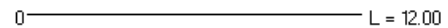
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

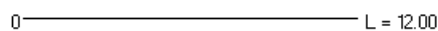
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

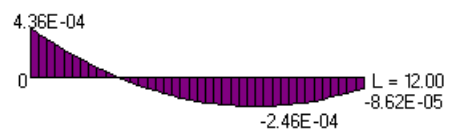
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 4.36E-04 at 0.00[ft] from J

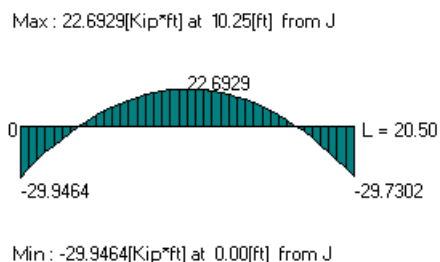


Min : -2.46E-04 at 8.10[ft] from J

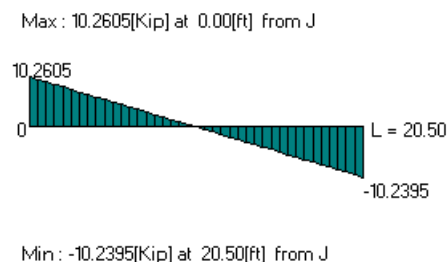
MEMBER	: 5	Length	: 20.500 [ft]	Node J	: 5
Material	: A992 Gr50	Section	: W 14X26	Node K	: 6

Condition : com1=DL+LL

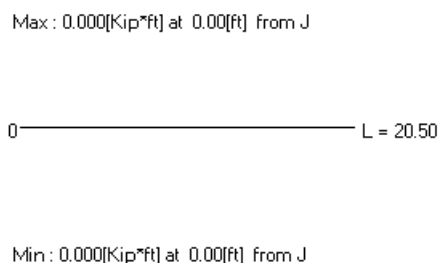
M33 bending moment
Moments [Kip*ft], Length [ft]



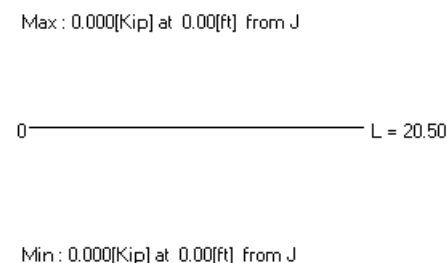
V2 shear forces
Forces [Kip], Length [ft]



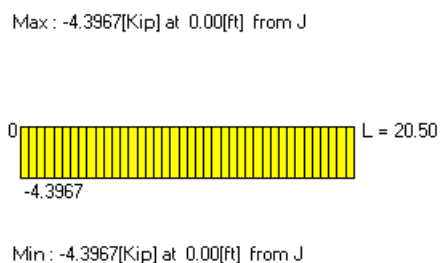
M22 bending moment
Moments [Kip*ft], Length [ft]



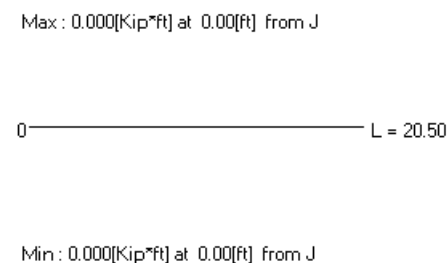
V3 shear forces
Forces [Kip], Length [ft]



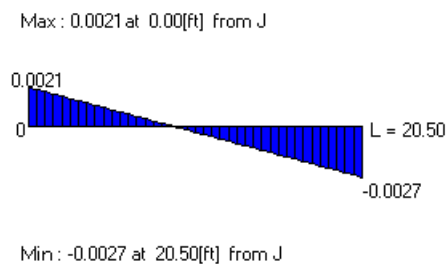
Axial forces
Forces [Kip], Length [ft]



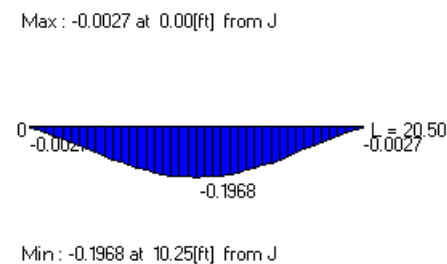
Torsional moments
Moments [Kip*ft], Length [ft]



Translation in 1
Deflection [in], Length [ft]



Translation in 2
Deflection [in], Length [ft]



Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

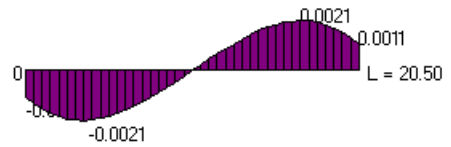
Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0021 at 16.91[ft] from J

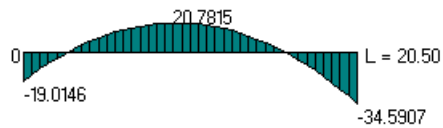


Min : -0.0021 at 3.59[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

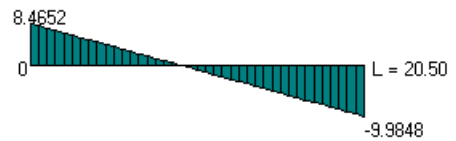
Max : 20.7815[Kip*ft] at 9.23[ft] from J



Min : -34.5907[Kip*ft] at 20.50[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 8.4652[Kip] at 0.00[ft] from J



Min : -9.9848[Kip] at 20.50[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

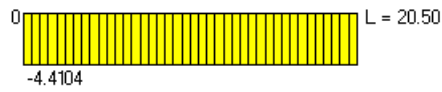
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

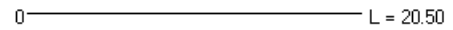
Max : -4.4104[Kip] at 0.00[ft] from J



Min : -4.4104[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

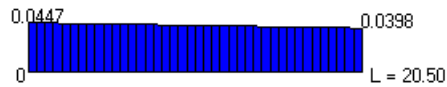
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

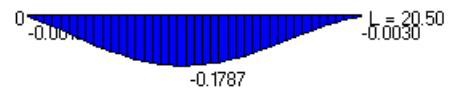
Max : 0.0447 at 0.00[ft] from J



Min : 0.0398 at 20.50[ft] from J

Translation in 2
Deflection [in], Length [ft]

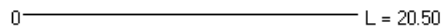
Max : -0.0019 at 0.00[ft] from J



Min : -0.1787 at 9.74[ft] from J

Translation in 3
Deflection [in], Length [ft]

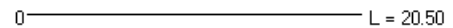
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

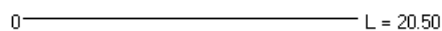
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

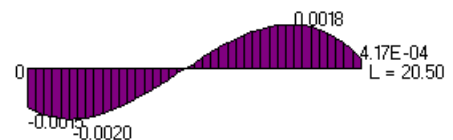
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0018 at 16.40[ft] from J

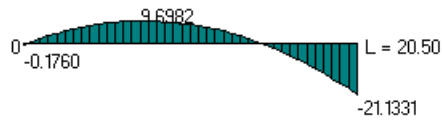


Min : -0.0020 at 2.56[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 9.6982[Kip*ft] at 7.17[ft] from J



Min : -21.1331[Kip*ft] at 20.50[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

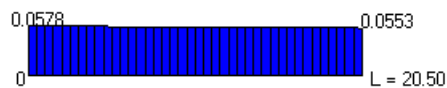
Max : -2.2307[Kip] at 0.00[ft] from J



Min : -2.2307[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

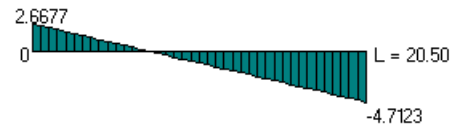
Max : 0.0578 at 0.00[ft] from J



Min : 0.0553 at 20.50[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 2.6677[Kip] at 0.00[ft] from J



Min : -4.7123[Kip] at 20.50[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

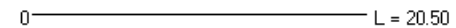
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

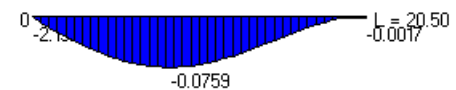
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : -2.13E-04 at 0.00[ft] from J



Min : -0.0759 at 8.20[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

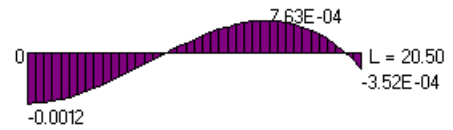
Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 7.63E-04 at 14.86[ft] from J

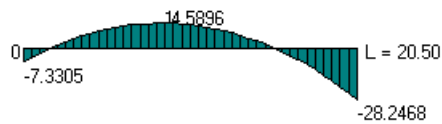


Min : -0.0012 at 0.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 14.5896[Kip*ft] at 8.71[ft] from J



Min : -28.2468[Kip*ft] at 20.50[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

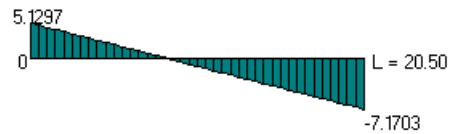
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 5.1297[Kip] at 0.00[ft] from J



Min : -7.1703[Kip] at 20.50[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

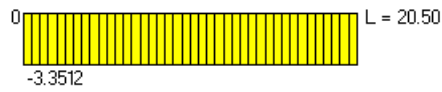
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

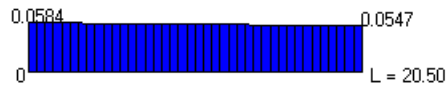
Max : -3.3512[Kip] at 0.00[ft] from J



Min : -3.3512[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

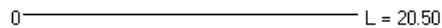
Max : 0.0584 at 0.00[ft] from J



Min : 0.0547 at 20.50[ft] from J

Translation in 3
Deflection [in], Length [ft]

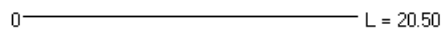
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

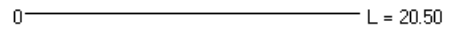
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

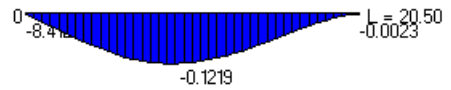
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

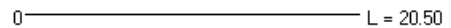
Max : -8.41E-04 at 0.00[ft] from J



Min : -0.1219 at 9.23[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

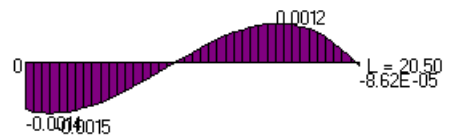
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0012 at 15.37[ft] from J



Min : -0.0015 at 1.54[ft] from J

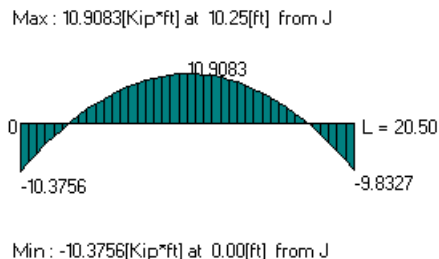
MEMBER : 6
Material : A992 Gr50

Length : 20.500 [ft]
Section : W 14X26

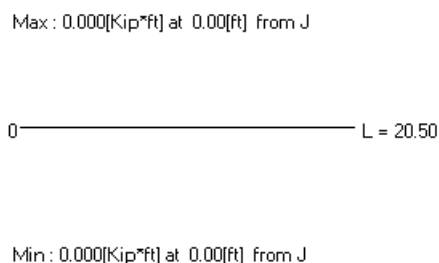
Node J : 2
Node K : 4

Condition : com1=DL+LL

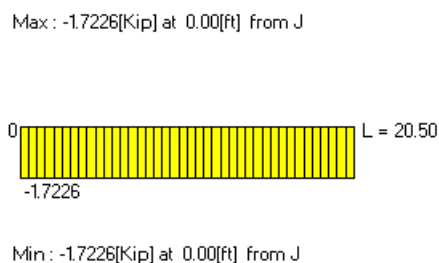
M33 bending moment
Moments [Kip*ft], Length [ft]



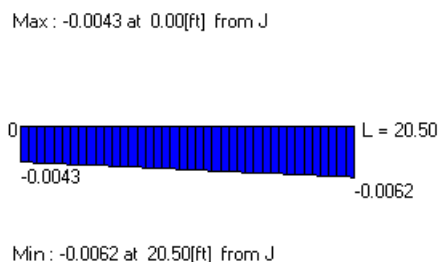
M22 bending moment
Moments [Kip*ft], Length [ft]



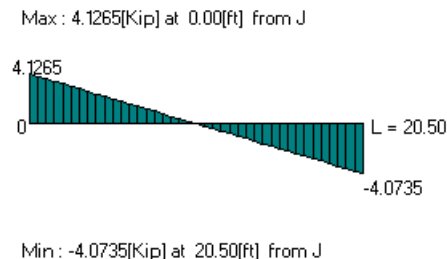
Axial forces
Forces [Kip], Length [ft]



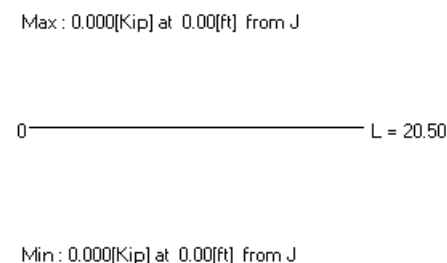
Translation in 1
Deflection [in], Length [ft]



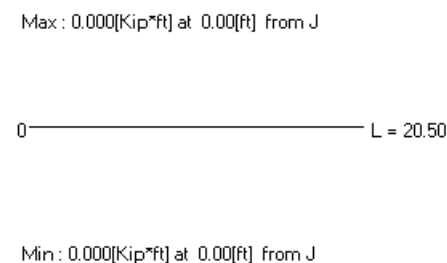
V2 shear forces
Forces [Kip], Length [ft]



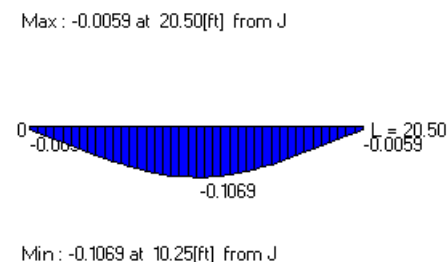
V3 shear forces
Forces [Kip], Length [ft]



Torsional moments
Moments [Kip*ft], Length [ft]



Translation in 2
Deflection [in], Length [ft]



Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

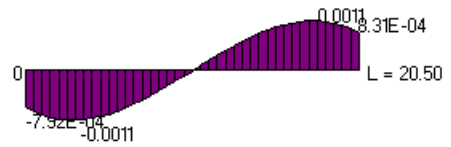
Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0011 at 17.94[ft] from J

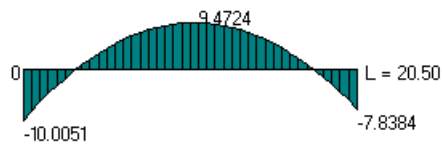


Min : -0.0011 at 3.08[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 9.4724[Kip*ft] at 10.76[ft] from J



Min : -10.0051[Kip*ft] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

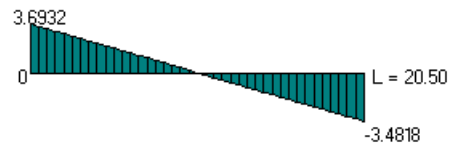
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 3.6932[Kip] at 0.00[ft] from J



Min : -3.4818[Kip] at 20.50[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

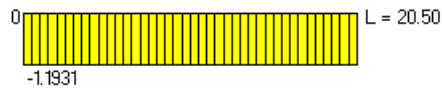
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

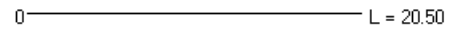
Max : -1.1931[Kip] at 0.00[ft] from J



Min : -1.1931[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

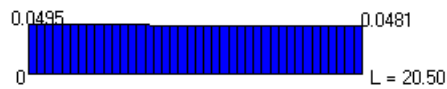
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

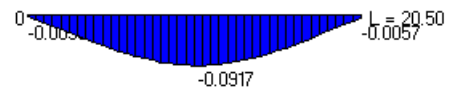
Max : 0.0495 at 0.00[ft] from J



Min : 0.0481 at 20.50[ft] from J

Translation in 2
Deflection [in], Length [ft]

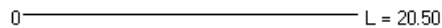
Max : -0.0030 at 0.00[ft] from J



Min : -0.0917 at 10.25[ft] from J

Translation in 3
Deflection [in], Length [ft]

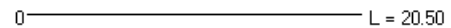
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

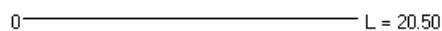
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

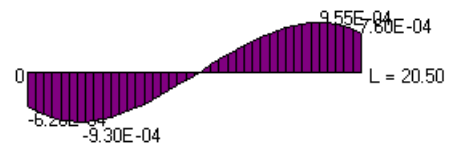
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

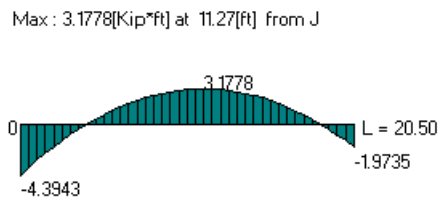
Max : 9.55E-04 at 17.94[ft] from J



Min : -9.30E-04 at 3.08[ft] from J

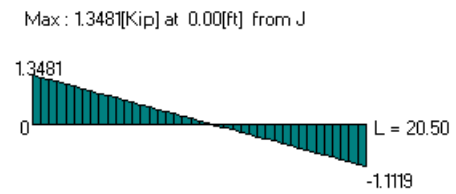
Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]



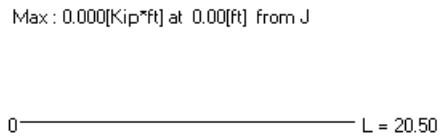
Min : -4.3943[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



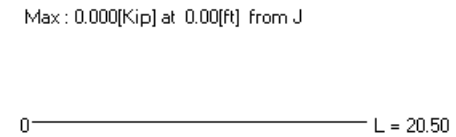
Min : -1.1119[Kip] at 20.50[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



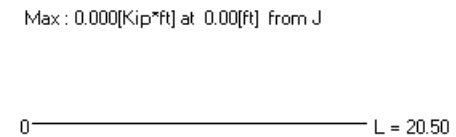
Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



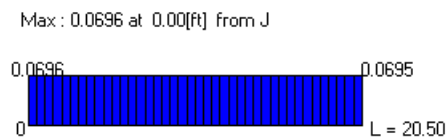
Min : -0.1190[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



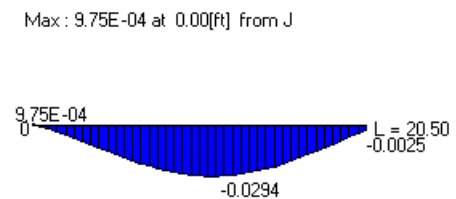
Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



Min : 0.0695 at 20.50[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0294 at 11.27[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

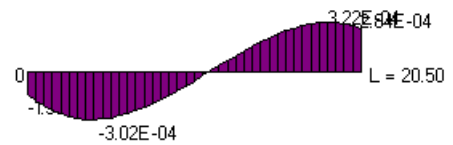
Max : 0.000 at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 3.22E-04 at 18.45[ft] from J

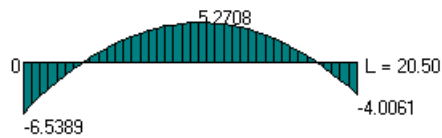


Min : -3.02E-04 at 4.10[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

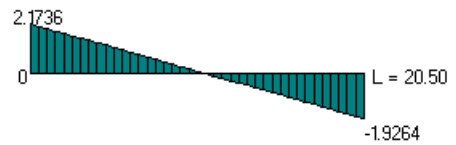
Max : 5.2708[Kip*ft] at 10.76[ft] from J



Min : -6.5389[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 2.1736[Kip] at 0.00[ft] from J



Min : -1.9264[Kip] at 20.50[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

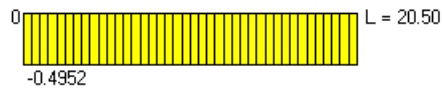
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 20.50

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

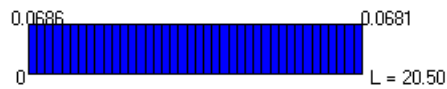
Max : -0.4952[Kip] at 0.00[ft] from J



Min : -0.4952[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

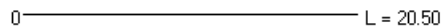
Max : 0.0686 at 0.00[ft] from J



Min : 0.0681 at 20.50[ft] from J

Translation in 3
Deflection [in], Length [ft]

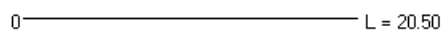
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

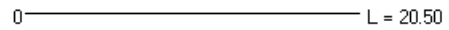
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

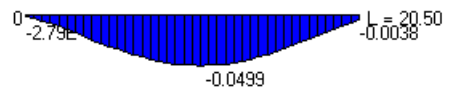
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

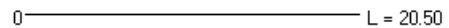
Max : -2.79E-04 at 0.00[ft] from J



Min : -0.0499 at 10.76[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

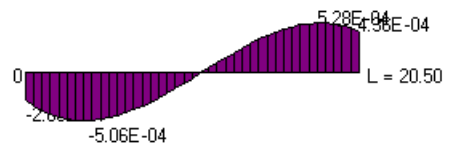
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 5.28E-04 at 17.94[ft] from J

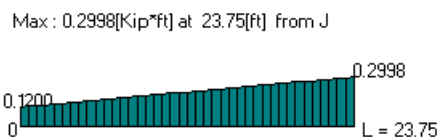


Min : -5.06E-04 at 3.59[ft] from J

MEMBER	: 7	Length	: 23.754 [ft]	Node J	: 2
Material	: A36	Section	: T2LU 5X3-1_2X5_16X3_4LLBB	Node K	: 6

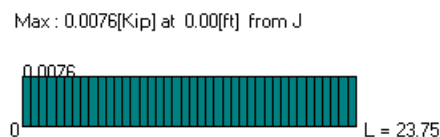
Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]



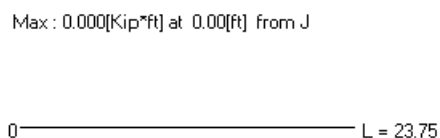
Min : 0.1200[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



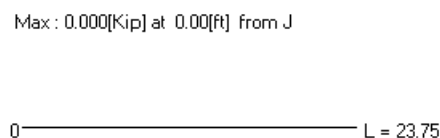
Min : 0.0076[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



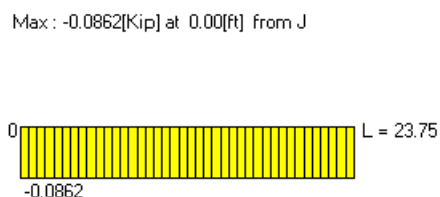
Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



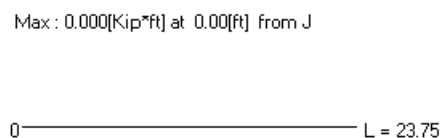
Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



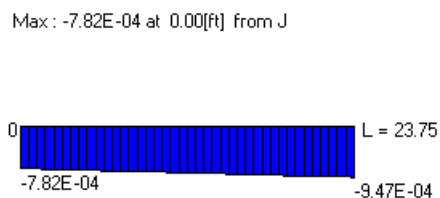
Min : -0.0862[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



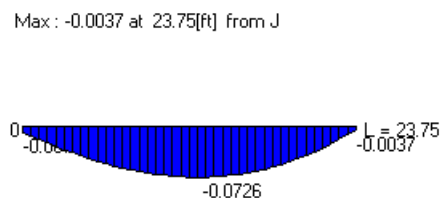
Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



Min : -9.47E-04 at 23.75[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0726 at 12.47[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

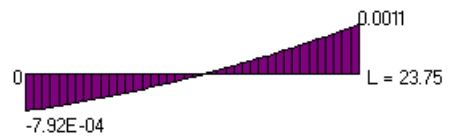
Max : 0.000 at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0011 at 23.75[ft] from J

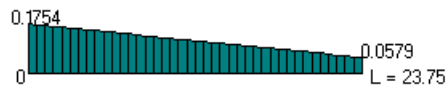


Min : -7.92E-04 at 0.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.1754[Kip*ft] at 0.00[ft] from J



Min : 0.0579[Kip*ft] at 23.75[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

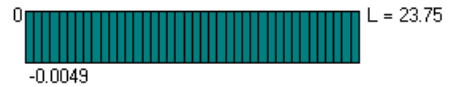
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0049[Kip] at 0.00[ft] from J



Min : -0.0049[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

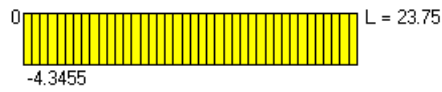
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

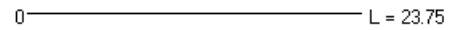
Max : -4.3455[Kip] at 0.00[ft] from J



Min : -4.3455[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

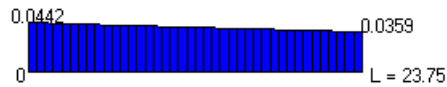
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

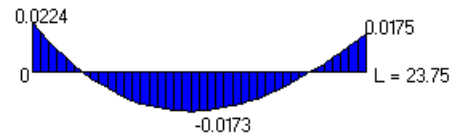
Max : 0.0442 at 0.00[ft] from J



Min : 0.0359 at 23.75[ft] from J

Translation in 2
Deflection [in], Length [ft]

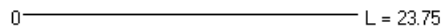
Max : 0.0224 at 0.00[ft] from J



Min : -0.0173 at 11.28[ft] from J

Translation in 3
Deflection [in], Length [ft]

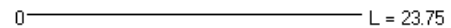
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

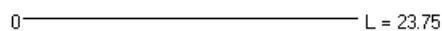
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 4.17E-04 at 23.75[ft] from J

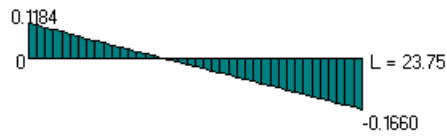


Min : -6.26E-04 at 0.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

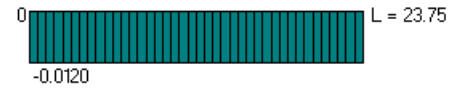
Max : 0.1184[Kip*ft] at 0.00[ft] from J



Min : -0.1660[Kip*ft] at 23.75[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0120[Kip] at 0.00[ft] from J



Min : -0.0120[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

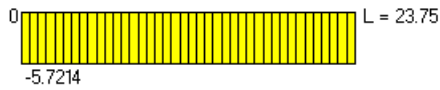
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

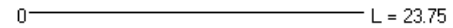
Max : -5.7214[Kip] at 0.00[ft] from J



Min : -5.7214[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

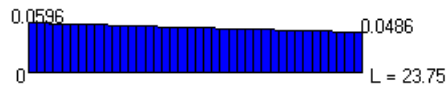
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

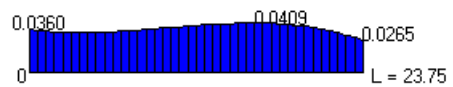
Max : 0.0596 at 0.00[ft] from J



Min : 0.0486 at 23.75[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0409 at 16.03[ft] from J



Min : 0.0265 at 23.75[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

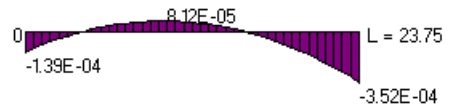
Max : 0.000 at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 8.12E-05 at 10.10[ft] from J

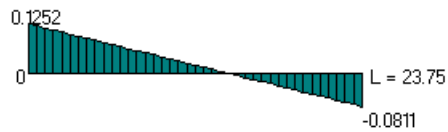


Min : -3.52E-04 at 23.75[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.1252[Kip*ft] at 0.00[ft] from J



Min : -0.0811[Kip*ft] at 23.75[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

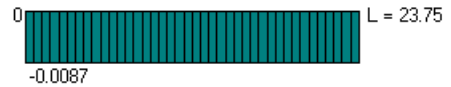
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0087[Kip] at 0.00[ft] from J



Min : -0.0087[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

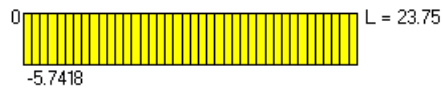
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 23.75

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

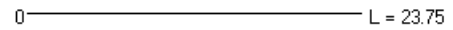
Max : -5.7418[Kip] at 0.00[ft] from J



Min : -5.7418[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

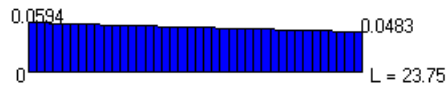
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

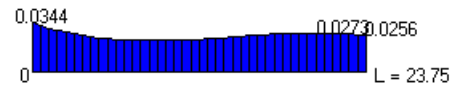
Max : 0.0594 at 0.00[ft] from J



Min : 0.0483 at 23.75[ft] from J

Translation in 2
Deflection [in], Length [ft]

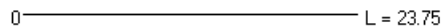
Max : 0.0344 at 0.00[ft] from J



Min : 0.0220 at 8.31[ft] from J

Translation in 3
Deflection [in], Length [ft]

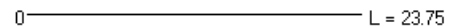
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

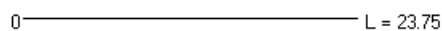
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 5.63E-05 at 14.25[ft] from J



Min : -2.83E-04 at 0.00[ft] from J

Current Date: 5/24/2017 3:31 PM

Units system: English

File name: H:\Projects\2016\2016-0205_00 VA Marion Building 138 - 4th Floor Renovation\Structural\Calculations\Penthouse frame Line 4.7 and 7.3.etz\

Steel Code Check

Report: Summary - For all selected load conditions

Load conditions to be included in design :

com1=DL+LL
com2=DL+0.75LL+0.75WL
com3=0.6DL+WL
com4=DL+WL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
B4.1 B4.1 B4.1 B4.1 B4.1 B4.1 B4.1 B4.1	<i>T2LU 5X3-1_2X5_16X3_4LLBB7</i>	1	com1 at 0.00%	0.04	OK	Eq. H1-1b
			com2 at 0.00%	0.10	OK	Sec. E4
			com3 at 0.00%	0.13	OK	Sec. E4
			com4 at 0.00%	0.13	OK	Sec. E4
	<i>W 10X26</i>		com1 at 0.00%	0.06	OK	Sec. E1
			com2 at 0.00%	0.05	OK	Sec. E1
			com3 at 0.00%	0.06	OK	Sec. G2, Sec. G2.1(a), T.
			com4 at 0.00%	0.06	OK	Sec. G2, Sec. G2.1(a), T.
			com1 at 0.00%	0.24	OK	Eq. H1-1b
			com2 at 0.00%	0.20	OK	Eq. H1-1b
			com3 at 0.00%	0.06	OK	Eq. H1-1b
			com4 at 0.00%	0.10	OK	Eq. H1-1b
			com1 at 0.00%	0.06	OK	Sec. E1
			com2 at 0.00%	0.08	OK	Sec. G2, Sec. G2.1(a), T.
			com3 at 0.00%	0.06	OK	Sec. G2, Sec. G2.1(a), T.
			com4 at 0.00%	0.07	OK	Sec. G2, Sec. G2.1(a), T.
			com1 at 0.00%	0.23	OK	Eq. H1-1b
			com2 at 0.00%	0.20	OK	Eq. H1-1b
			com3 at 0.00%	0.07	OK	Eq. H1-1b
			com4 at 0.00%	0.11	OK	Eq. H1-1b
	<i>W 14X22</i>		com1 at 0.00%	0.29	OK	Eq. H1-1b
			com2 at 100.00%	0.24	OK	Eq. H1-1b
			com3 at 100.00%	0.06	OK	Eq. H1-1b
			com4 at 100.00%	0.10	OK	Eq. H1-1b
	<i>W 14X26</i>		com1 at 50.00%	0.30	OK	Eq. H1-1b
			com2 at 50.00%	0.26	OK	Eq. H1-1b
			com3 at 50.00%	0.09	OK	Eq. H1-1b
			com4 at 50.00%	0.15	OK	Eq. H1-1b

Analysis result

Forces diagram printout

Load conditions

com1=DL+LL

com2=DL+0.75LL+0.75WL

com3=0.6DL+WL

com4=DL+WL

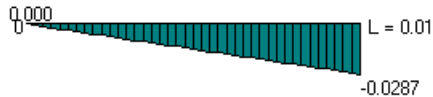
MEMBER	:	1	Length	:	0.010 [ft]	Node J	:	1
Material	:	A992 Gr50	Section	:	W 10X26	Node K	:	5

Condition : com1=DL+LL

M33 bending moment

Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

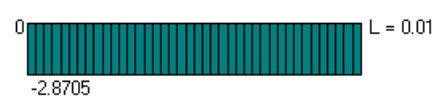


Min : -0.0287[Kip*ft] at 0.01[ft] from J

V2 shear forces

Forces [Kip], Length [ft]

Max : -2.8705[Kip] at 0.00[ft] from J

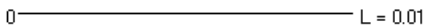


Min : -2.8705[Kip] at 0.00[ft] from J

M22 bending moment

Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

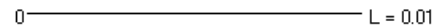


Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces

Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

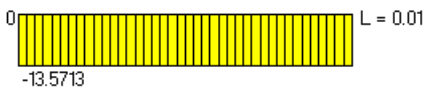


Min : 0.000[Kip] at 0.00[ft] from J

Axial forces

Forces [Kip], Length [ft]

Max : -13.5713[Kip] at 0.00[ft] from J

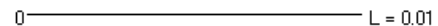


Min : -13.5713[Kip] at 0.00[ft] from J

Torsional moments

Moments [Kip*ft], Length [ft]

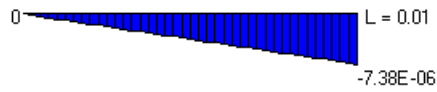
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

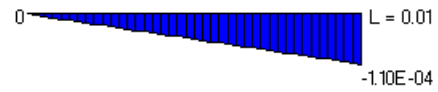
Max : 0.000 at 0.00[ft] from J



Min : -7.38E-06 at 0.01[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -1.10E-04 at 0.01[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

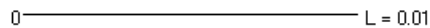
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -0.0010 at 0.00[ft] from J

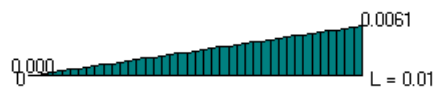


Min : -0.0010 at 0.01[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

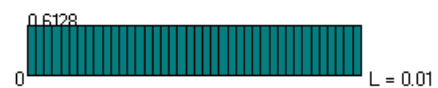
Max : 0.0061[Kip*ft] at 0.01[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 0.6128[Kip] at 0.00[ft] from J



Min : 0.6128[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

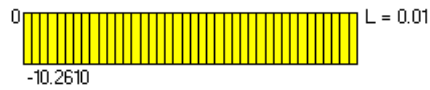
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

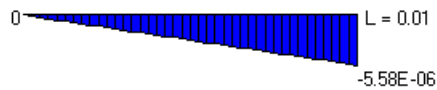
Max : -10.2610[Kip] at 0.00[ft] from J



Min : -10.2610[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -5.58E-06 at 0.01[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

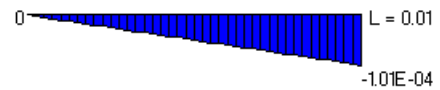
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -1.01E-04 at 0.01[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

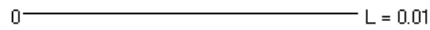
Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -8.22E-04 at 0.01[ft] from J

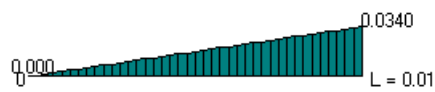


Min : -8.22E-04 at 0.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

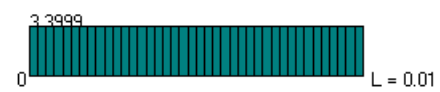
Max : 0.0340[Kip*ft] at 0.01[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

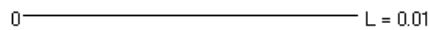
Max : 3.3999[Kip] at 0.00[ft] from J



Min : 3.3999[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

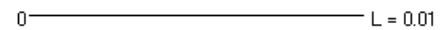
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

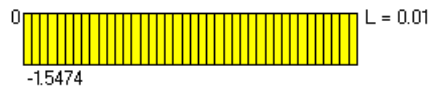
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -1.5474[Kip] at 0.00[ft] from J



Min : -1.5474[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

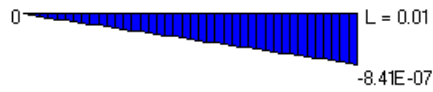
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

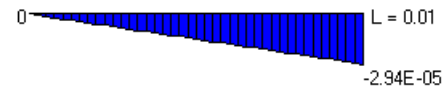
Max : 0.000 at 0.00[ft] from J



Min : -8.41E-07 at 0.01[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -2.94E-05 at 0.01[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

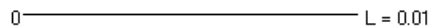
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -1.31E-04 at 0.01[ft] from J

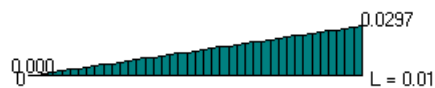


Min : -1.31E-04 at 0.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

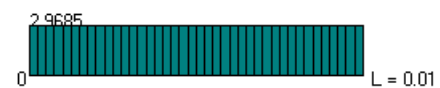
Max : 0.0297[Kip*ft] at 0.01[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 2.9685[Kip] at 0.00[ft] from J



Min : 2.9685[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

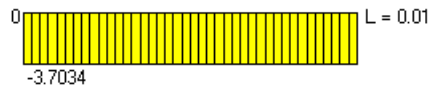
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

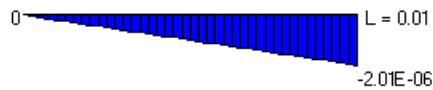
Max : -3.7034[Kip] at 0.00[ft] from J



Min : -3.7034[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -2.01E-06 at 0.01[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

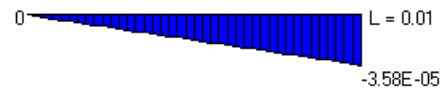
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -3.58E-05 at 0.01[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

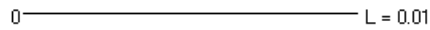
Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : -1.99E-04 at 0.01[ft] from J



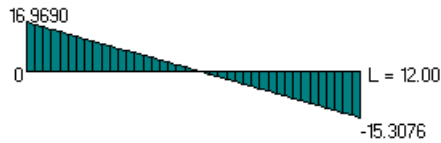
Min : -1.99E-04 at 0.00[ft] from J

MEMBER	:	2	Length	:	12.000 [ft]	Node J	:	2
Material	:	A992 Gr50	Section	:	W 10X26	Node K	:	5

Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]

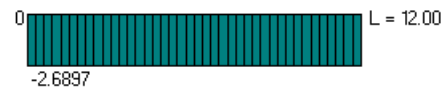
Max : 16.9690[Kip*ft] at 0.00[ft] from J



Min : -15.3076[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -2.6897[Kip] at 0.00[ft] from J



Min : -2.6897[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

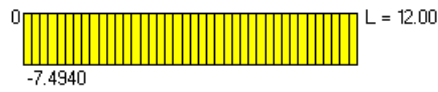
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

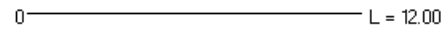
Max : -7.4940[Kip] at 0.00[ft] from J



Min : -7.4940[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

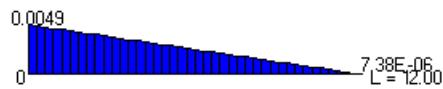
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

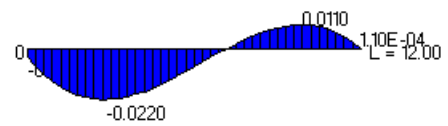
Max : 0.0049 at 0.00[ft] from J



Min : 7.38E-06 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

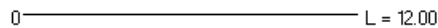
Max : 0.0110 at 9.90[ft] from J



Min : -0.0220 at 2.70[ft] from J

Translation in 3
Deflection [in], Length [ft]

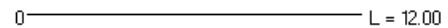
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

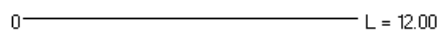
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

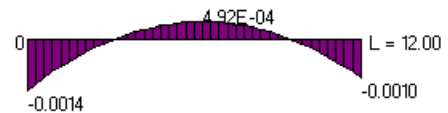
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

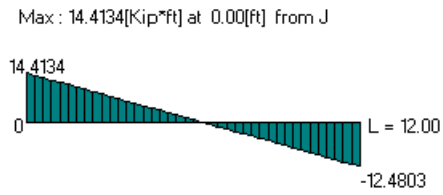
Max : 4.92E-04 at 6.30[ft] from J



Min : -0.0014 at 0.00[ft] from J

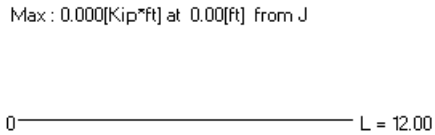
Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]



Min : -12.4803[Kip*ft] at 12.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



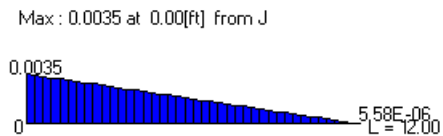
Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



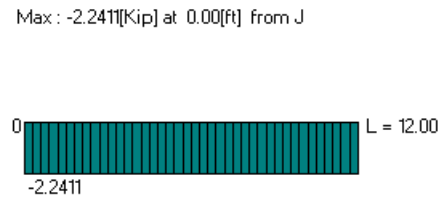
Min : -5.2936[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



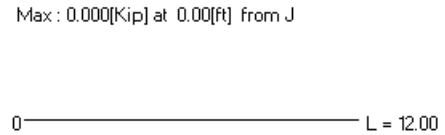
Min : 5.58E-06 at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



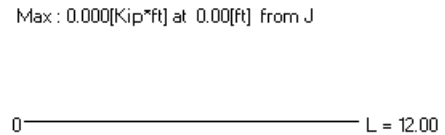
Min : -2.2411[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



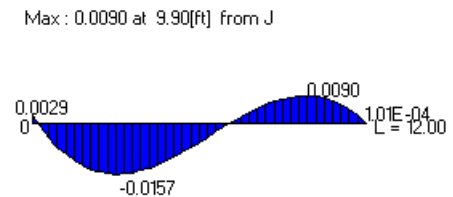
Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0157 at 3.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 3.76E-04 at 6.30[ft] from J

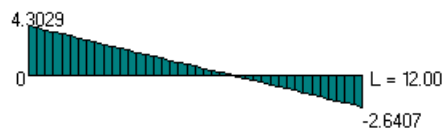


Min : -0.0012 at 0.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

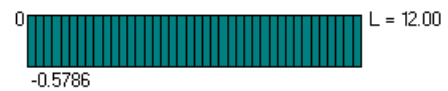
Max : 4.3029[Kip*ft] at 0.00[ft] from J



Min : -2.6407[Kip*ft] at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.5786[Kip] at 0.00[ft] from J



Min : -0.5786[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

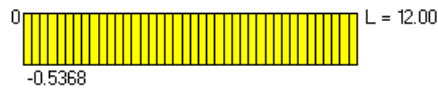
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

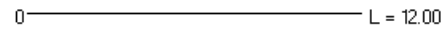
Max : -0.5368[Kip] at 0.00[ft] from J



Min : -0.5368[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

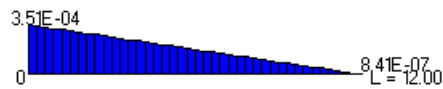
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

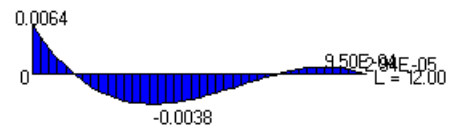
Max : 3.51E-04 at 0.00[ft] from J



Min : 8.41E-07 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

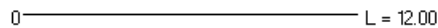
Max : 0.0064 at 0.00[ft] from J



Min : -0.0038 at 4.20[ft] from J

Translation in 3
Deflection [in], Length [ft]

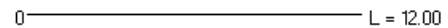
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

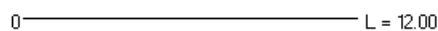
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

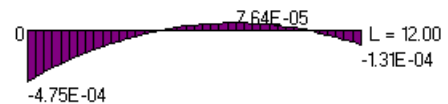
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

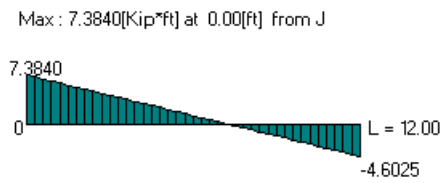
Max : 7.64E-05 at 7.50[ft] from J



Min : -4.75E-04 at 0.00[ft] from J

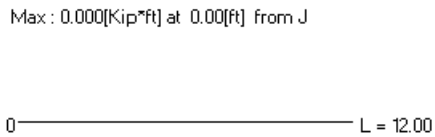
Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]



Min : -4.6025[Kip*ft] at 12.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



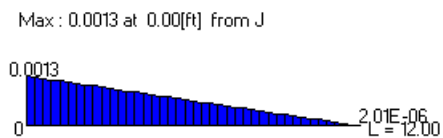
Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



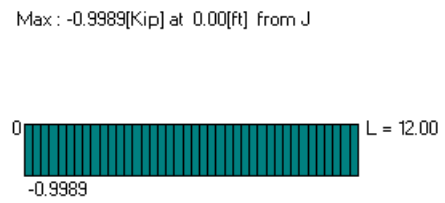
Min : -1.9956[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



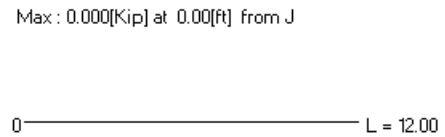
Min : 2.01E-06 at 12.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



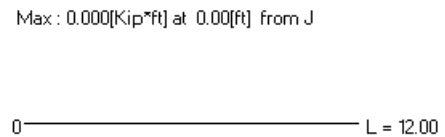
Min : -0.9989[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



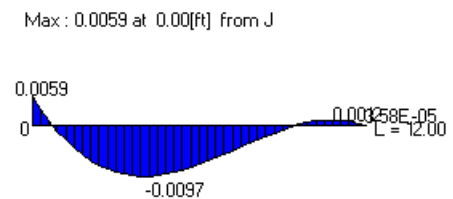
Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0097 at 3.90[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.66E-04 at 7.50[ft] from J



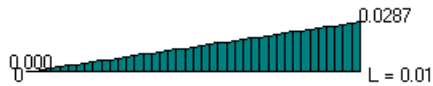
Min : -7.75E-04 at 0.00[ft] from J

MEMBER	: 3	Length	: 0.010 [ft]	Node J	: 3
Material	: A992 Gr50	Section	: W 10X26	Node K	: 6

Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]

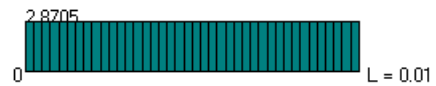
Max : 0.0287[Kip*ft] at 0.01[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 2.8705[Kip] at 0.00[ft] from J



Min : 2.8705[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

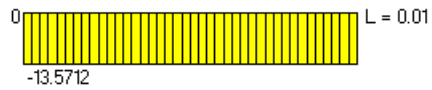
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

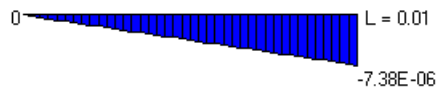
Max : -13.5712[Kip] at 0.00[ft] from J



Min : -13.5712[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -7.38E-06 at 0.01[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

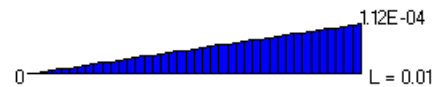
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 1.12E-04 at 0.01[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0010 at 0.01[ft] from J

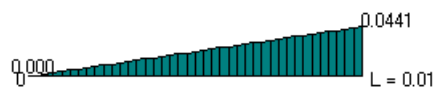


Min : 0.0010 at 0.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

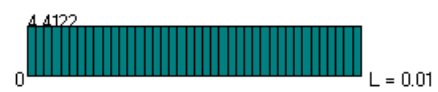
Max : 0.0441[Kip*ft] at 0.01[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 4.4122[Kip] at 0.00[ft] from J



Min : 4.4122[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

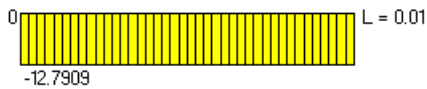
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -12.7909[Kip] at 0.00[ft] from J



Min : -12.7909[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

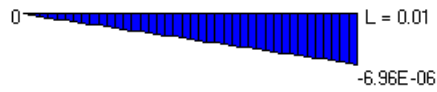
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

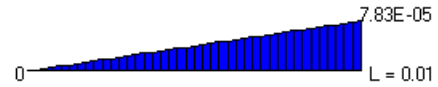
Max : 0.000 at 0.00[ft] from J



Min : -6.96E-06 at 0.01[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 7.83E-05 at 0.01[ft] from J



Min : 0.000 at 0.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

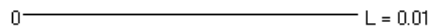
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 8.00E-04 at 0.01[ft] from J

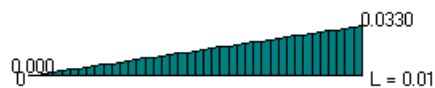


Min : 8.00E-04 at 0.00[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

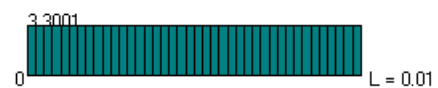
Max : 0.0330[Kip*ft] at 0.01[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 3.3001[Kip] at 0.00[ft] from J



Min : 3.3001[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

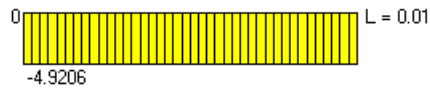
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

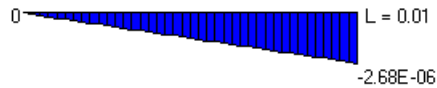
Max : -4.9206[Kip] at 0.00[ft] from J



Min : -4.9206[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -2.68E-06 at 0.01[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

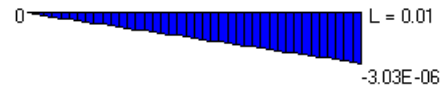
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : -3.03E-06 at 0.01[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 8.52E-05 at 0.01[ft] from J

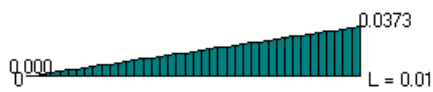


Min : 8.52E-05 at 0.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

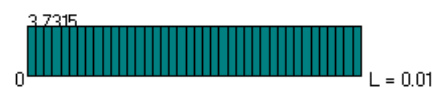
Max : 0.0373[Kip*ft] at 0.01[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 3.7315[Kip] at 0.00[ft] from J



Min : 3.7315[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

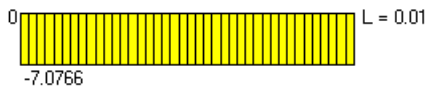
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -7.0766[Kip] at 0.00[ft] from J



Min : -7.0766[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

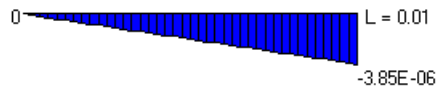
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 0.01

Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

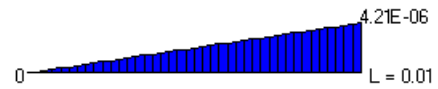
Max : 0.000 at 0.00[ft] from J



Min : -3.85E-06 at 0.01[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 4.21E-06 at 0.01[ft] from J



Min : 0.000 at 0.00[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

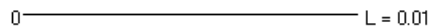
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.60E-04 at 0.01[ft] from J

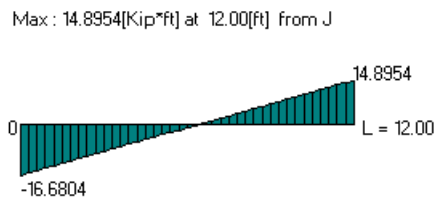


Min : 1.60E-04 at 0.00[ft] from J

MEMBER	:	4	Length	:	12.000 [ft]	Node J	:	4
Material	:	A992 Gr50	Section	:	W 10X26	Node K	:	6

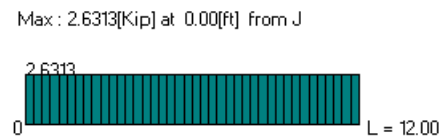
Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]



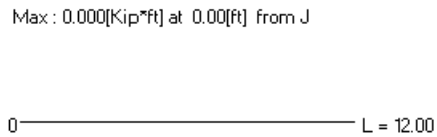
Min : -16.6804[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



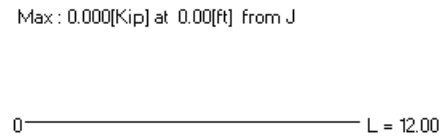
Min : 2.6313[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



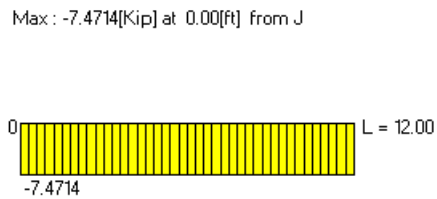
Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



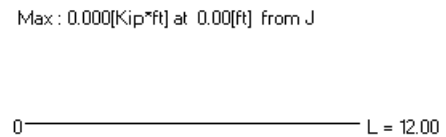
Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



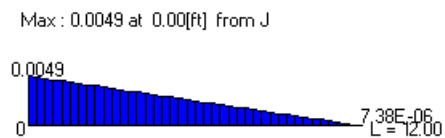
Min : -7.4714[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



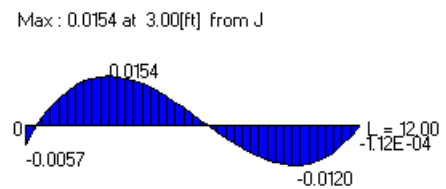
Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



Min : 7.38E-06 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0120 at 9.60[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

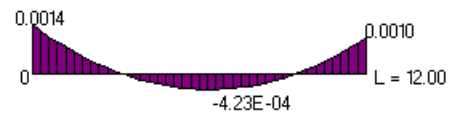
Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0014 at 0.00[ft] from J

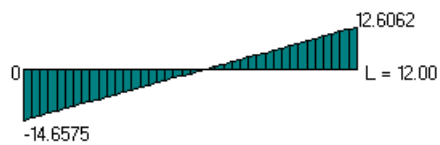


Min : -4.23E-04 at 6.30[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 12.6062[Kip*ft] at 12.00[ft] from J



Min : -14.6575[Kip*ft] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

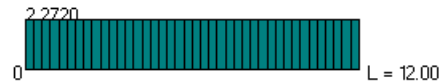
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 2.2720[Kip] at 0.00[ft] from J



Min : 2.2720[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

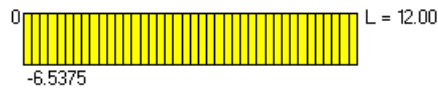
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

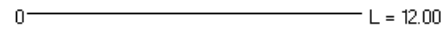
Max : -6.5375[Kip] at 0.00[ft] from J



Min : -6.5375[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

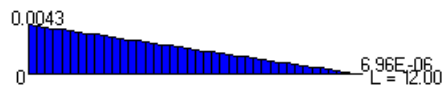
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

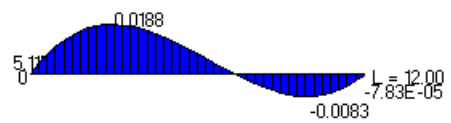
Max : 0.0043 at 0.00[ft] from J



Min : 6.96E-06 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

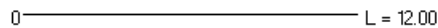
Max : 0.0188 at 3.00[ft] from J



Min : -0.0083 at 9.90[ft] from J

Translation in 3
Deflection [in], Length [ft]

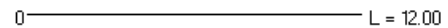
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

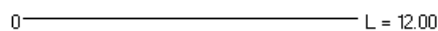
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

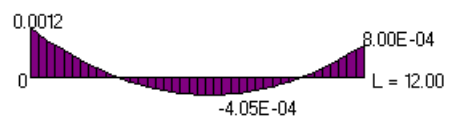
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0012 at 0.00[ft] from J

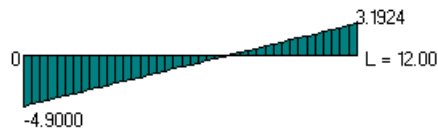


Min : -4.05E-04 at 6.60[ft] from J

Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

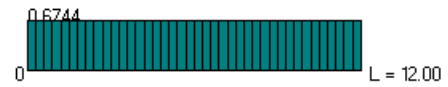
Max : 3.1924[Kip*ft] at 12.00[ft] from J



Min : -4.9000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 0.6744[Kip] at 0.00[ft] from J



Min : 0.6744[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

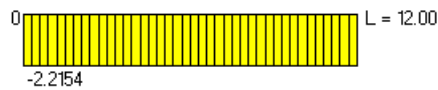
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

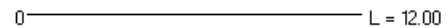
Max : -2.2154[Kip] at 0.00[ft] from J



Min : -2.2154[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

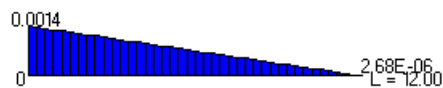
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

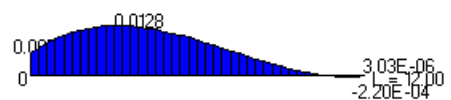
Max : 0.0014 at 0.00[ft] from J



Min : 2.68E-06 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0128 at 3.00[ft] from J



Min : -2.20E-04 at 11.40[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

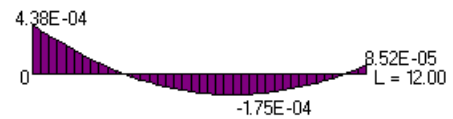
Max : 0.000 at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 4.38E-04 at 0.00[ft] from J

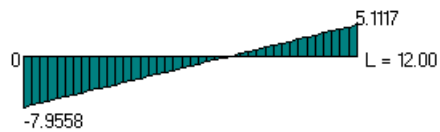


Min : -1.75E-04 at 7.20[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 5.1117[Kip*ft] at 12.00[ft] from J



Min : -7.9558[Kip*ft] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

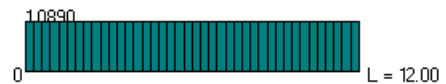
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 1.0890[Kip] at 0.00[ft] from J



Min : 1.0890[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

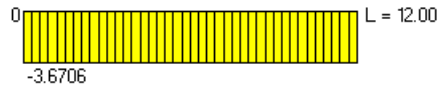
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 12.00

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -3.6706[Kip] at 0.00[ft] from J



Min : -3.6706[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

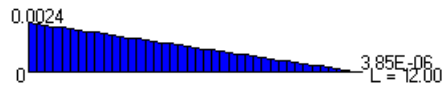
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

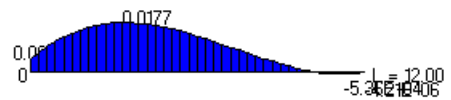
Max : 0.0024 at 0.00[ft] from J



Min : 3.85E-06 at 12.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : 0.0177 at 3.30[ft] from J



Min : -5.36E-04 at 11.10[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

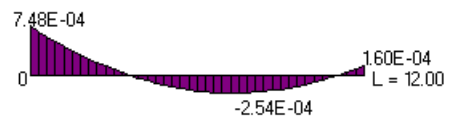
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 7.48E-04 at 0.00[ft] from J



Min : -2.54E-04 at 7.20[ft] from J

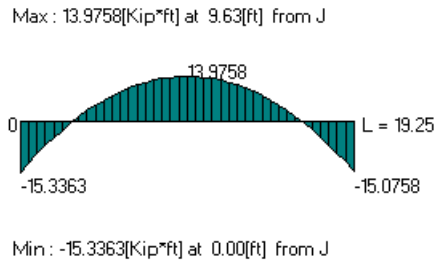
MEMBER : 5
Material : A992 Gr50

Length : 19.250 [ft]
Section : W 14X22

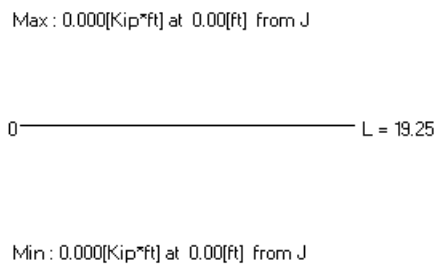
Node J : 5
Node K : 6

Condition : com1=DL+LL

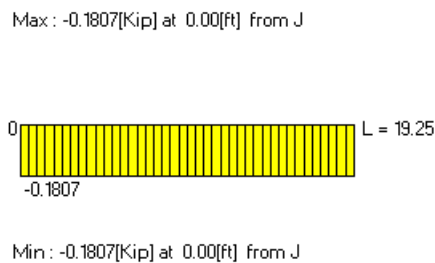
M33 bending moment
Moments [Kip*ft], Length [ft]



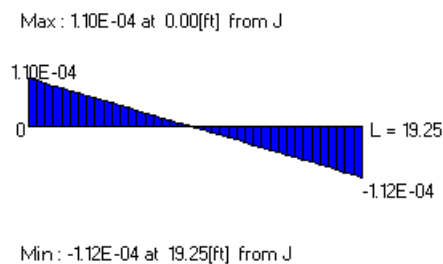
M22 bending moment
Moments [Kip*ft], Length [ft]



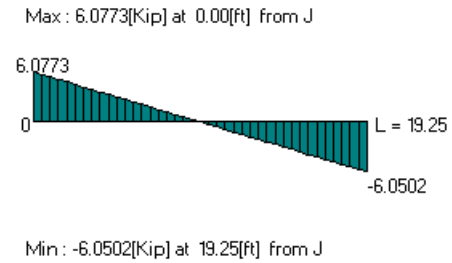
Axial forces
Forces [Kip], Length [ft]



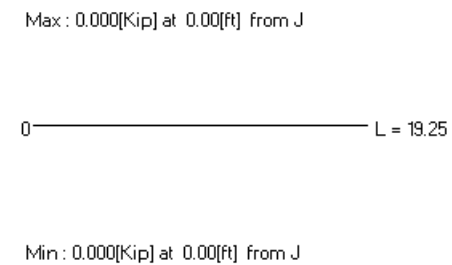
Translation in 1
Deflection [in], Length [ft]



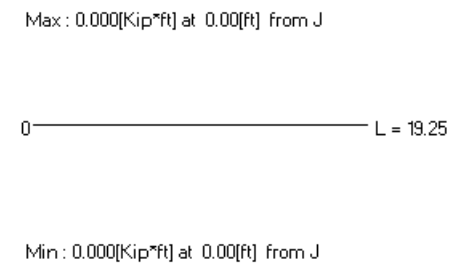
V2 shear forces
Forces [Kip], Length [ft]



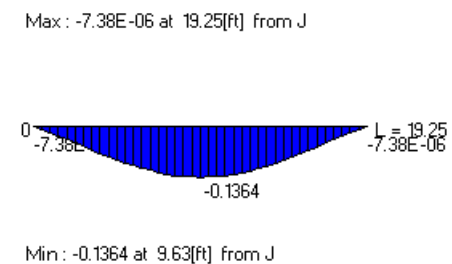
V3 shear forces
Forces [Kip], Length [ft]



Torsional moments
Moments [Kip*ft], Length [ft]



Translation in 2
Deflection [in], Length [ft]



Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

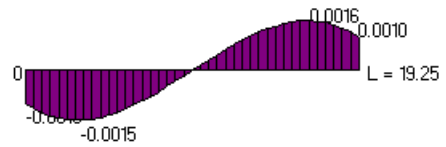
Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0016 at 16.36[ft] from J

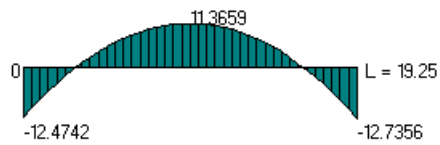


Min : -0.0015 at 2.89[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

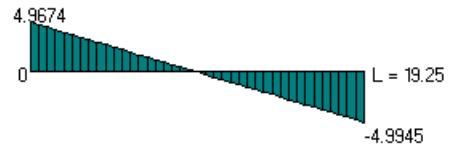
Max : 11.3659[Kip*ft] at 9.63[ft] from J



Min : -12.7356[Kip*ft] at 19.25[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 4.9674[Kip] at 0.00[ft] from J



Min : -4.9945[Kip] at 19.25[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

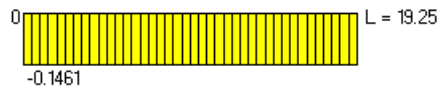
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

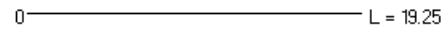
Max : -0.1461[Kip] at 0.00[ft] from J



Min : -0.1461[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

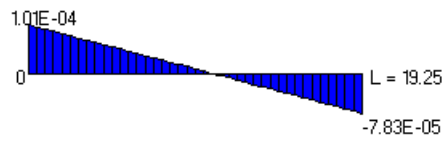
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

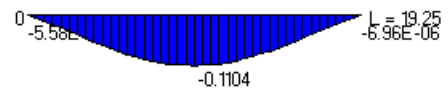
Max : 1.01E-04 at 0.00[ft] from J



Min : -7.83E-05 at 19.25[ft] from J

Translation in 2
Deflection [in], Length [ft]

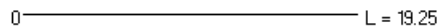
Max : -5.58E-06 at 0.00[ft] from J



Min : -0.1104 at 9.63[ft] from J

Translation in 3
Deflection [in], Length [ft]

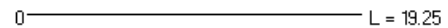
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

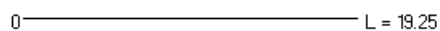
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

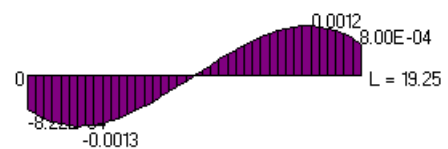
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

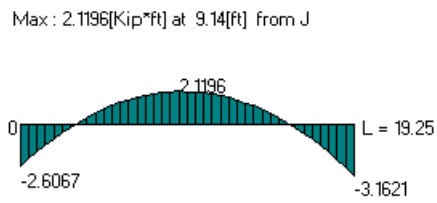
Max : 0.0012 at 16.36[ft] from J



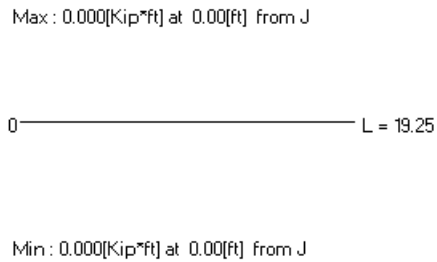
Min : -0.0013 at 2.89[ft] from J

Condition : com3=0.6DL+WL

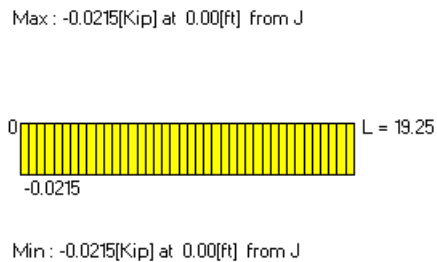
M33 bending moment
Moments [Kip*ft], Length [ft]



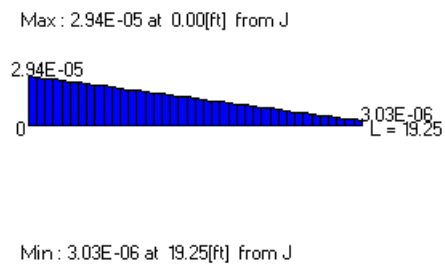
M22 bending moment
Moments [Kip*ft], Length [ft]



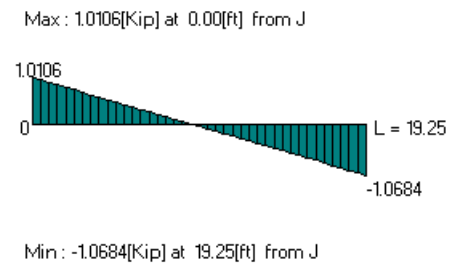
Axial forces
Forces [Kip], Length [ft]



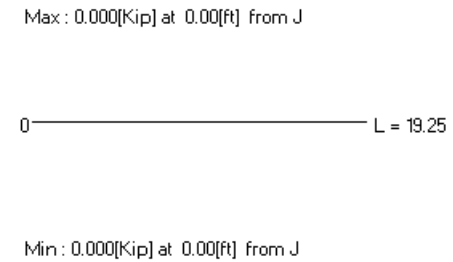
Translation in 1
Deflection [in], Length [ft]



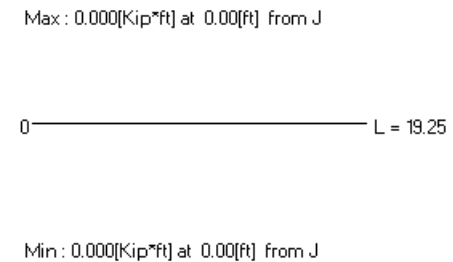
V2 shear forces
Forces [Kip], Length [ft]



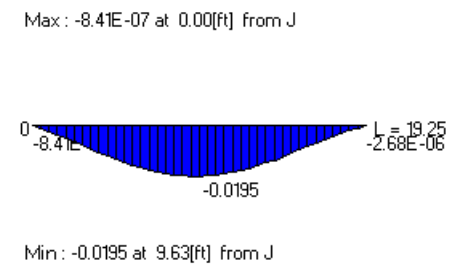
V3 shear forces
Forces [Kip], Length [ft]



Torsional moments
Moments [Kip*ft], Length [ft]



Translation in 2
Deflection [in], Length [ft]



Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

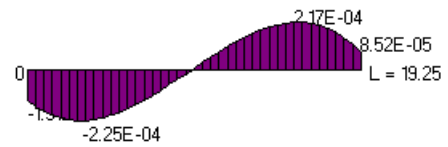
Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.17E-04 at 15.40[ft] from J

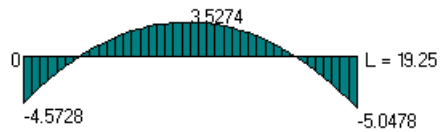


Min : -2.25E-04 at 2.89[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

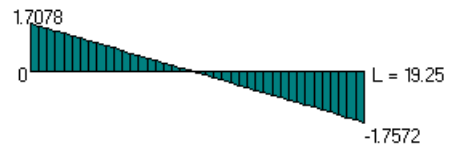
Max : 3.5274[Kip*ft] at 9.63[ft] from J



Min : -5.0478[Kip*ft] at 19.25[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 1.7078[Kip] at 0.00[ft] from J



Min : -1.7572[Kip] at 19.25[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

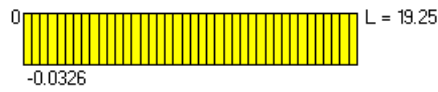
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

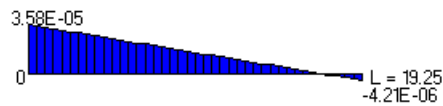
Max : -0.0326[Kip] at 0.00[ft] from J



Min : -0.0326[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

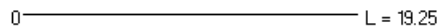
Max : 3.58E-05 at 0.00[ft] from J



Min : -4.21E-06 at 19.25[ft] from J

Translation in 3
Deflection [in], Length [ft]

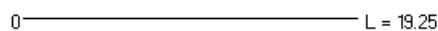
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

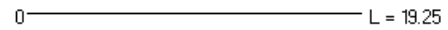
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

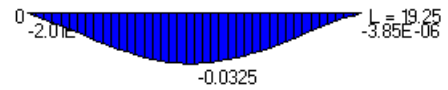
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]

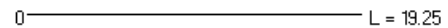
Max : -2.01E-06 at 0.00[ft] from J



Min : -0.0325 at 9.63[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

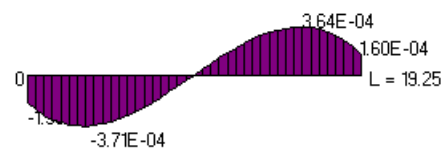
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 3.64E-04 at 15.88[ft] from J



Min : -3.71E-04 at 3.37[ft] from J

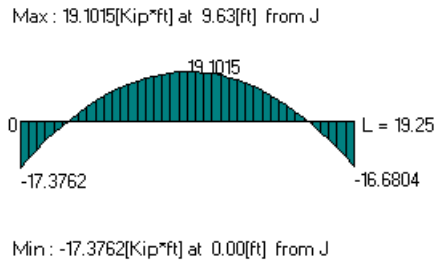
MEMBER : 6
Material : A992 Gr50

Length : 19.250 [ft]
Section : W 14X26

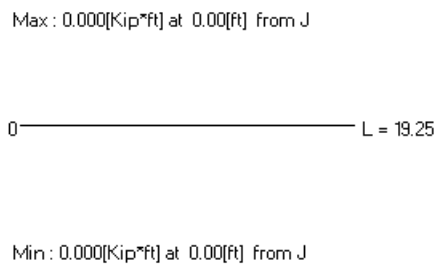
Node J : 2
Node K : 4

Condition : com1=DL+LL

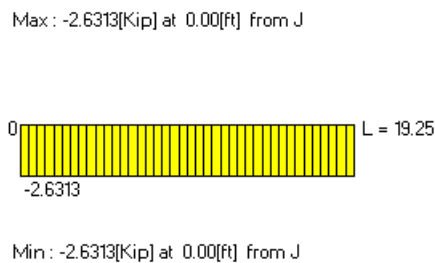
M33 bending moment
Moments [Kip*ft], Length [ft]



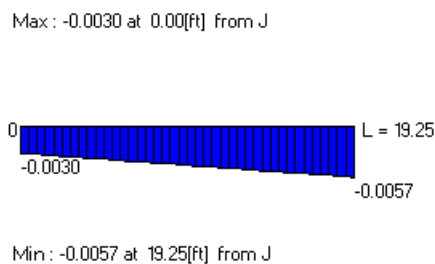
M22 bending moment
Moments [Kip*ft], Length [ft]



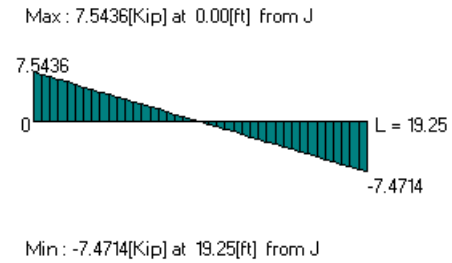
Axial forces
Forces [Kip], Length [ft]



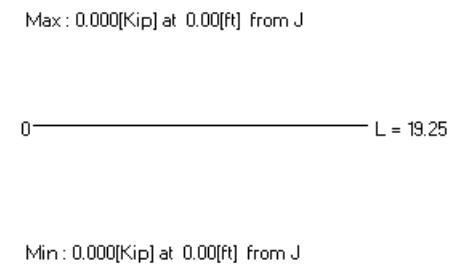
Translation in 1
Deflection [in], Length [ft]



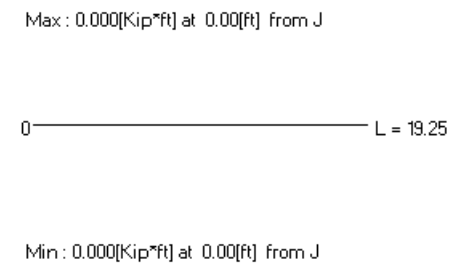
V2 shear forces
Forces [Kip], Length [ft]



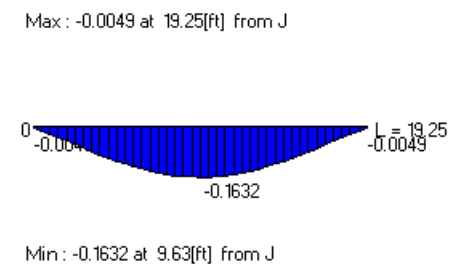
V3 shear forces
Forces [Kip], Length [ft]



Torsional moments
Moments [Kip*ft], Length [ft]



Translation in 2
Deflection [in], Length [ft]



Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

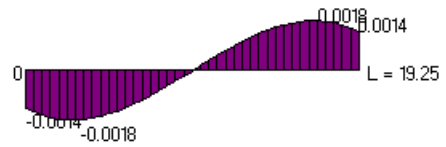
Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0018 at 16.84[ft] from J

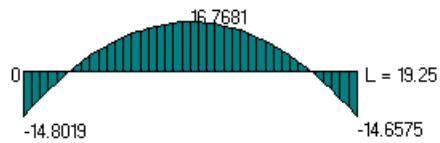


Min : -0.0018 at 2.89[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 16.7681[Kip*ft] at 9.63[ft] from J



Min : -14.8019[Kip*ft] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

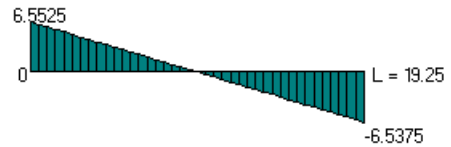
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 6.5525[Kip] at 0.00[ft] from J



Min : -6.5375[Kip] at 19.25[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

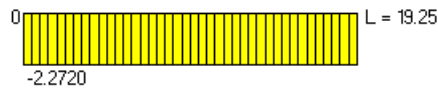
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

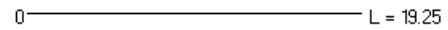
Max : -2.2720[Kip] at 0.00[ft] from J



Min : -2.2720[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

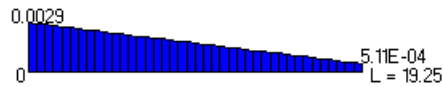
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

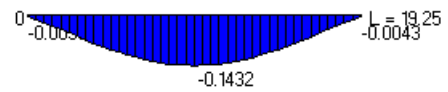
Max : 0.0029 at 0.00[ft] from J



Min : 5.11E-04 at 19.25[ft] from J

Translation in 2
Deflection [in], Length [ft]

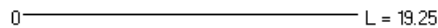
Max : -0.0035 at 0.00[ft] from J



Min : -0.1432 at 9.63[ft] from J

Translation in 3
Deflection [in], Length [ft]

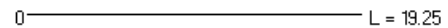
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

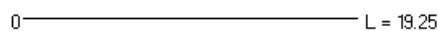
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

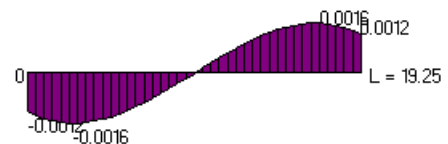
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

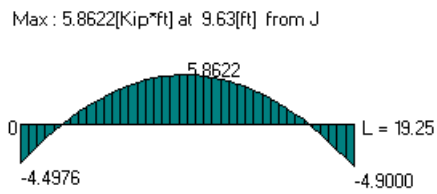
Max : 0.0016 at 16.84[ft] from J



Min : -0.0016 at 2.41[ft] from J

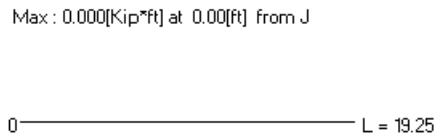
Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]



Min : -4.9000[Kip*ft] at 19.25[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



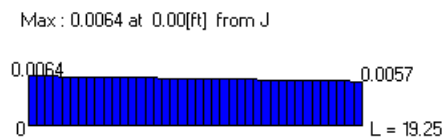
Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



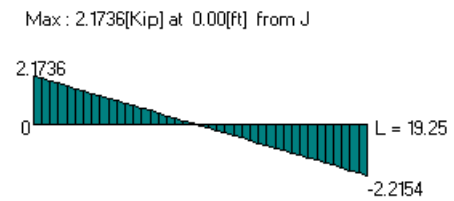
Min : -0.6744[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



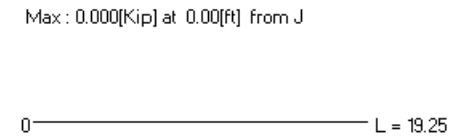
Min : 0.0057 at 19.25[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



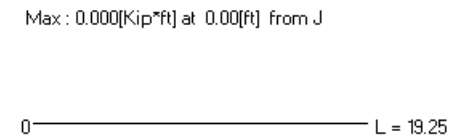
Min : -2.2154[Kip] at 19.25[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



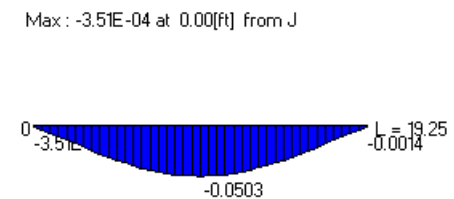
Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0503 at 9.63[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

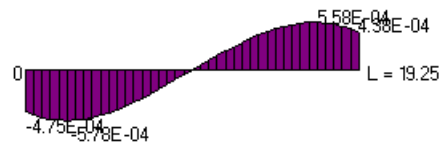
Max : 0.000 at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 5.58E-04 at 16.84[ft] from J

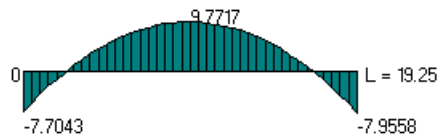


Min : -5.78E-04 at 2.41[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

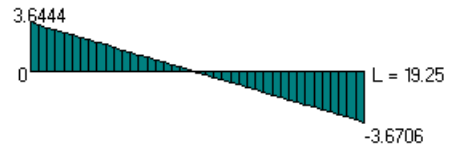
Max : 9.7717[Kip*ft] at 9.63[ft] from J



Min : -7.9558[Kip*ft] at 19.25[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : 3.6444[Kip] at 0.00[ft] from J



Min : -3.6706[Kip] at 19.25[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

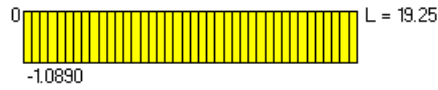
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 19.25

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -1.0890[Kip] at 0.00[ft] from J



Min : -1.0890[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

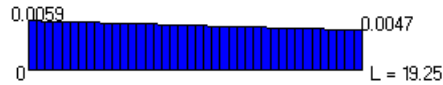
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

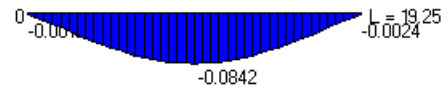
Max : 0.0059 at 0.00[ft] from J



Min : 0.0047 at 19.25[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : -0.0013 at 0.00[ft] from J



Min : -0.0842 at 9.63[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

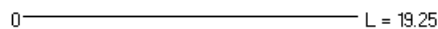
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

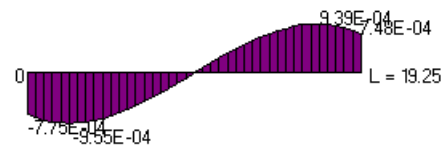
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 9.39E-04 at 16.84[ft] from J



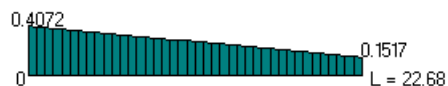
Min : -9.55E-04 at 2.41[ft] from J

MEMBER	: 7	Length	: 22.684 [ft]	Node J	: 2
Material	: A36	Section	: T2LU 5X3-1_2X5_16X3_4LLBB	Node K	: 6

Condition : com1=DL+LL

M33 bending moment
Moments [Kip*ft], Length [ft]

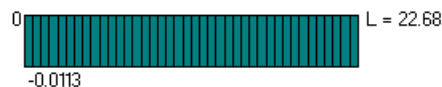
Max : 0.4072[Kip*ft] at 0.00[ft] from J



Min : 0.1517[Kip*ft] at 22.68[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0113[Kip] at 0.00[ft] from J



Min : -0.0113[Kip] at 0.00[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

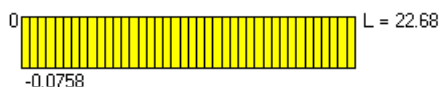
Max : 0.000[Kip] at 0.00[ft] from J



Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

Max : -0.0758[Kip] at 0.00[ft] from J



Min : -0.0758[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

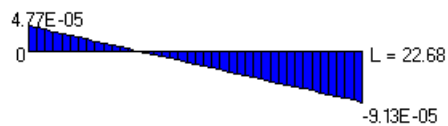
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

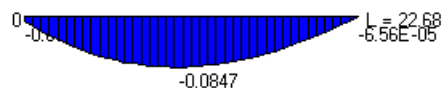
Max : 4.77E-05 at 0.00[ft] from J



Min : -9.13E-05 at 22.68[ft] from J

Translation in 2
Deflection [in], Length [ft]

Max : -6.56E-05 at 22.68[ft] from J



Min : -0.0847 at 10.21[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 0.0010 at 22.68[ft] from J

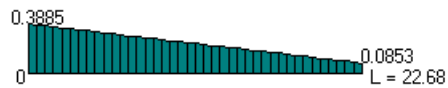


Min : -0.0014 at 0.00[ft] from J

Condition : com2=DL+0.75LL+0.75WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.3885[Kip*ft] at 0.00[ft] from J



Min : 0.0853[Kip*ft] at 22.68[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

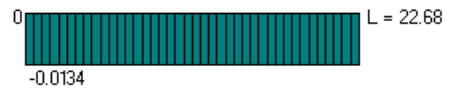
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0134[Kip] at 0.00[ft] from J



Min : -0.0134[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

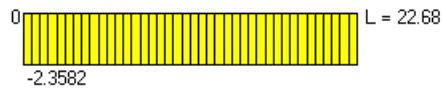
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

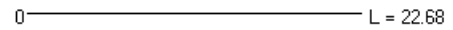
Max : -2.3582[Kip] at 0.00[ft] from J



Min : -2.3582[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

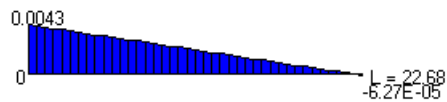
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

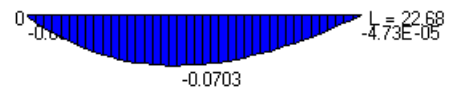
Max : 0.0043 at 0.00[ft] from J



Min : -6.27E-05 at 22.68[ft] from J

Translation in 2
Deflection [in], Length [ft]

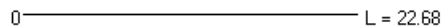
Max : -4.73E-05 at 22.68[ft] from J



Min : -0.0703 at 10.21[ft] from J

Translation in 3
Deflection [in], Length [ft]

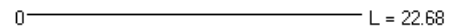
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

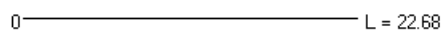
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

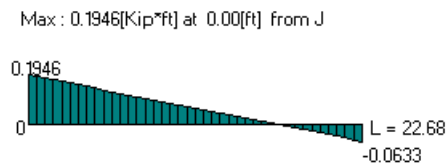
Max : 8.00E-04 at 22.68[ft] from J



Min : -0.0012 at 0.00[ft] from J

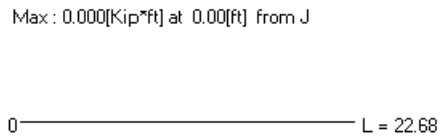
Condition : com3=0.6DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]



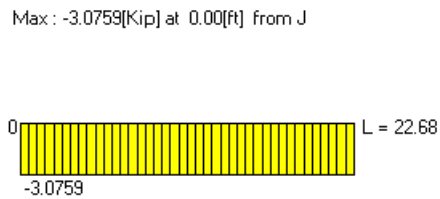
Min : -0.0633[Kip*ft] at 22.68[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]



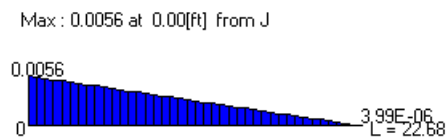
Min : 0.000[Kip*ft] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]



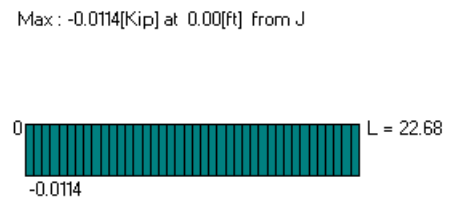
Min : -3.0759[Kip] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]



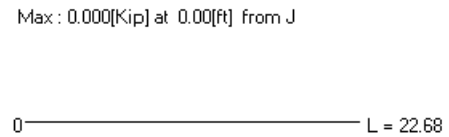
Min : 3.99E-06 at 22.68[ft] from J

V2 shear forces
Forces [Kip], Length [ft]



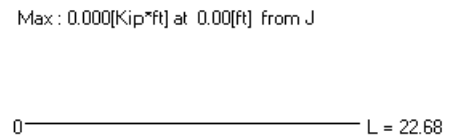
Min : -0.0114[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]



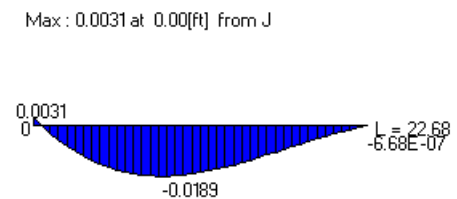
Min : 0.000[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 2
Deflection [in], Length [ft]



Min : -0.0189 at 8.51[ft] from J

Translation in 3
Deflection [in], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

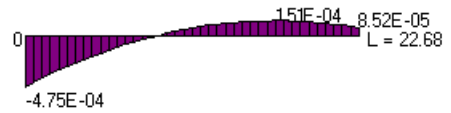
Max : 0.000 at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 1.51E-04 at 17.01[ft] from J

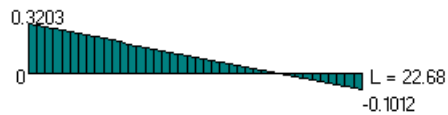


Min : -4.75E-04 at 0.00[ft] from J

Condition : com4=DL+WL

M33 bending moment
Moments [Kip*ft], Length [ft]

Max : 0.3203[Kip*ft] at 0.00[ft] from J



Min : -0.1012[Kip*ft] at 22.68[ft] from J

M22 bending moment
Moments [Kip*ft], Length [ft]

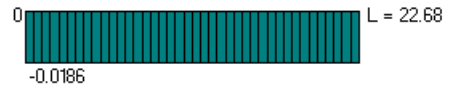
Max : 0.000[Kip*ft] at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000[Kip*ft] at 0.00[ft] from J

V2 shear forces
Forces [Kip], Length [ft]

Max : -0.0186[Kip] at 0.00[ft] from J



Min : -0.0186[Kip] at 0.00[ft] from J

V3 shear forces
Forces [Kip], Length [ft]

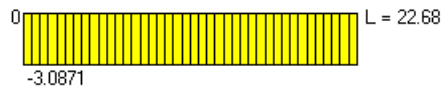
Max : 0.000[Kip] at 0.00[ft] from J

0 ————— L = 22.68

Min : 0.000[Kip] at 0.00[ft] from J

Axial forces
Forces [Kip], Length [ft]

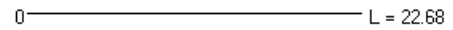
Max : -3.0871[Kip] at 0.00[ft] from J



Min : -3.0871[Kip] at 0.00[ft] from J

Torsional moments
Moments [Kip*ft], Length [ft]

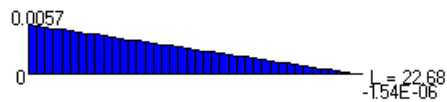
Max : 0.000[Kip*ft] at 0.00[ft] from J



Min : 0.000[Kip*ft] at 0.00[ft] from J

Translation in 1
Deflection [in], Length [ft]

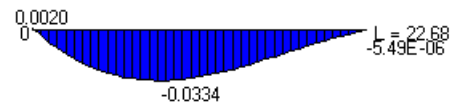
Max : 0.0057 at 0.00[ft] from J



Min : -1.54E-06 at 22.68[ft] from J

Translation in 2
Deflection [in], Length [ft]

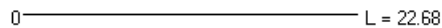
Max : 0.0020 at 0.00[ft] from J



Min : -0.0334 at 8.51[ft] from J

Translation in 3
Deflection [in], Length [ft]

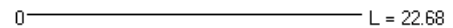
Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 1
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 2
Rotation [Rad], Length [ft]

Max : 0.000 at 0.00[ft] from J



Min : 0.000 at 0.00[ft] from J

Rotation about axis 3
Rotation [Rad], Length [ft]

Max : 2.63E-04 at 17.01[ft] from J



Min : -7.75E-04 at 0.00[ft] from J

Roof Beams:

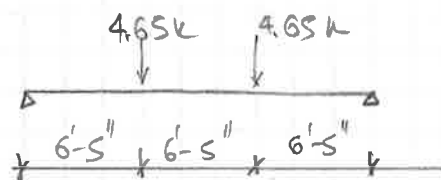
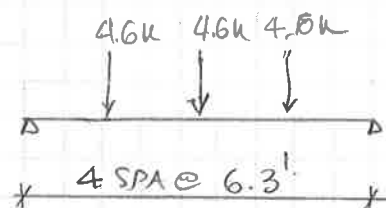
$$DL = 25 \text{ psf}$$

$$LL = 25 \text{ psf}$$

$$q = 50 \text{ psf}$$

Typical beam: $L = 29'-0"$ $W = 6'-5"$ $M = 34 \text{ k}' \rightarrow W14 \times 22$
OK

Typical girder:

 $M = 30 \text{ k}' \rightarrow W14 \times 22$
OK $M = 57 \text{ k}' \rightarrow W14 \times 22$
OK

See braced frames for additional beam sizes

Columns:

$$P = 334 \times 0.05 = 17 \text{ k} \rightarrow W10 \times 26 \text{ CL OK}$$

Check also braced frames -

Wind: 25 psf

$$P_W(E-W) = 3.6 \text{ k / Frame}$$

$$P_W(N-S) = 2.4 \text{ k / Frame}$$

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$$DL = 40 \text{ psf (Conc + slt)}$$

$$\text{Misc DL} = 5 \text{ psf}$$

$$q = 145 \text{ psf}$$

$$LL = 100 \text{ psf}$$

$$q_{\text{wall}} = 0.01 \times 15 = 0.15 \text{ W/F}$$

$$\text{Bm 1: } L = 19.25' \quad w = 9.8'$$

$$M = 66 \text{ k'} \rightarrow \text{W14x26 OK}$$

$$\text{Bm 2: } L = 19.25' \quad w = 5.2'$$

$$M = \frac{(19.25)^2}{8} \times (5.2 \times 0.145 + 0.15)$$

$$M = 42 \text{ k'} \rightarrow \text{W14x22 OK}$$

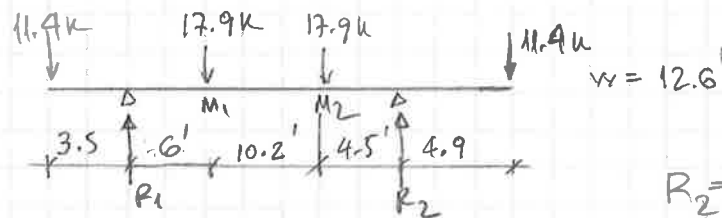
$$\text{Bm 3: } L = 15.04' \quad w = 9.8'$$

$$M = 40 \text{ k'} \rightarrow \text{W14x22 OK}$$

$$\text{Bm 4: } L = 10.17' \quad w = 9.8'$$

$$M = 19 \text{ k'} \rightarrow \text{W12x14 OK}$$

Bm 5:



$$M^{(-)} = 11.4 \times 4.9 = 55.8 \text{ k'}$$

$$M_1^{(+)} = 55 \text{ k'}$$

$$M_2^{(+)} = 34 \text{ k'}$$

$$R_2 = 31.4 \text{ k} \quad R_1 = 27.2 \text{ k}$$

$$J_{\text{eff}} = 1/8"$$

$$J_{\text{uglt}} = < 1/8" \quad \text{OK}$$

$$\text{W14x34}$$