

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
EQUIPMENT AND PROCUREMENT DIVISION  
BID INVITATION

Bid Number: M-15-028P

**BID OPENING LOCATION:**  
AHTD Equipment and Procurement Division  
11302 W. Baseline Road  
Little Rock, AR 72209

**MAIL TO:**  
AHTD Equipment and Procurement Division  
P.O. Box 2261  
Little Rock, AR 72203

**DELIVER TO:**  
AHTD Equipment and Procurement Division  
11302 W. Baseline Road  
Little Rock, AR 72209

Bid Opening Date: January 6, 2015 Time: 11:00 a.m.

Sealed bids for furnishing the commodities and/or services described below, subject to the Conditions on Page 2 of this Bid Invitation will be received at the above-noted mail and delivery locations until the above-noted bid opening date and time, and then publicly opened at the above-noted bid opening location. **Bids must be submitted on this form, with attachments when appropriate, or bids will be rejected. Late bids and unsigned bids will not be considered.**

In compliance with this Bid Invitation and subject to all the Conditions thereof, the undersigned offers and agrees to furnish any and all items upon which prices are quoted, at the price set opposite each item.

Company Name: \_\_\_\_\_

Name (Type or Print): \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Federal Tax ID or Social Security No.: \_\_\_\_\_

**Signature:** \_\_\_\_\_

Signature must be legible, original (not photocopied) and in ink.  
Unsigned bids will be rejected.

Item No.	Description	Quantity	Unit	Unit Price	Amount
----------	-------------	----------	------	------------	--------

1. New Salt Storage Facility to be located at the Arkansas State Highway and Transportation Department Jackson County Area Headquarters, 401 Andy Dole Farm Road, Newport, AR 72112. (Job #5-31)

LUMP SUM \_\_\_\_\_

To meet the requirements of Arkansas State Highway and Transportation Department Drawing and Specifications attached to and made a part of this bid.

**CONTACT PERSON(S):** Stacey Caplener or Bruce Street - (870-251-2374)

Bid price shall include all labor, materials, and equipment necessary to perform the work as specified, and shall further include all licenses, fees, permits, royalties, and all taxes. Bid price shall represent full compensation for completion of the work. This provision supersedes Condition 4 on page 2 of Bid Invitation. Payment will be made in accordance with Arkansas Highway & Transportation Department Standard Specifications and Applicable Special Provisions.

Subsection 105.04, 108.07, 109.01 and 109.02 of the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, Edition of 2014, will be in effect. (Specifications are accessible on our web site at [www.arkansashighways.com](http://www.arkansashighways.com).)

If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.

**Bid Bond** in the amount of 5% of total bid price required of all bidders at time of bid opening or bid will be rejected. **Personal and company checks are not acceptable as Bid Bonds.** See Condition 3 on page 2 of Bid Invitation.

**Performance Bond** only (no checks of any kind allowed) in the amount of 100% of total bid price will be required of successful bidder prior to providing goods/services. See Condition 3 on page 2 of Bid Invitation.

The successful bidder will be required to complete within 60 days after notice to begin.

Arkansas Contractor's License No. \_\_\_\_\_

Current Arkansas Contractor's License Number must be listed or bid will be rejected (A.C.A. ¶17-25-101 et.seq.).

Bids and Specifications are available on-line by going to the AHTD Web Site – [www.arkansashighways.com](http://www.arkansashighways.com) and clicking on "Commodities and Services Bids/Contracts Information". Tabulations will also be available at this site within 72 hours after bid opening. If you have any questions, call this office at 501-569-2667.

(35-1050) 55-00 & 55-10

## STANDARD BID CONDITIONS

## M-15-028P

1. **ACCEPTANCE AND REJECTION:** The Arkansas State Highway and Transportation Department (AHTD) reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
2. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
3. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by AHTD or fails to honor their bid. When a bidder claims and can show clear and convincing evidence that a material mistake was made in the bid and was not the bid intended, the bidder may be permitted to withdraw their bid prior to award without forfeiture of bid bond. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). These bonds shall not only serve to guarantee the completion of the work, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled. In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
4. **TAXES:** The AHTD is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the AHTD as an addition thereto, and should be added to the billing to the AHTD. The AHTD is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the AHTD.
5. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
6. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
7. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
8. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
9. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.
10. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of AHTD request, and free demonstrations within 30 days, unless AHTD extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by AHTD. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
11. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
12. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the AHTD, as soon as possible, of the reason for any delay and the expected delivery date. The AHTD has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
13. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by AHTD after delivery. Default in promised delivery or failure to meet specifications authorizes the AHTD to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
14. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **NOTICE OF NONDISCRIMINATION**

The Arkansas State Highway and Transportation (Department) complies with the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, Title VI of the Civil Rights Act of 1964 and other federal equal opportunity laws and therefore does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in admission or access to and treatment in Department programs and activities, as well as the Department's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Department's nondiscrimination policies may be directed to Joanna P. McFadden, Section Head - EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501) 569-2298, (Voice/TTY 711), or the following email address: [Joanna.Mcfadden@arkansashighways.com](mailto:Joanna.Mcfadden@arkansashighways.com).

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

JOB 5-31

### SPECIFICATIONS

#### DESCRIPTION

A new Salt Storage Facility is to be constructed at the new Jackson County Area Headquarters site, located at 401 Andy Dole Farm Road, Newport as called for in these Specifications, or as directed by the Engineer. These Specifications and the Plans cover the furnishing of all materials, labor, tools, equipment, machinery drayage, rigging, fees, permits and any and all incidental items required to provide a complete, in place and operating Storage Facility.

#### GENERAL CONDITIONS

The applicable portions of the General Provisions of the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, Edition of 2014, as amended by Supplemental Specifications, together with applicable Special Provisions, shall govern where appropriate.

#### DEFINITIONS

- A. Wherever the term "Department" is used in these Specifications, it shall refer to the Arkansas State Highway and Transportation Department. All papers required for delivery to the Department shall be delivered to the attention of the District 5 Engineer, Arkansas State Highway and Transportation Department Building, 1673 Batesville Blvd, Batesville, Arkansas 72503. Other than bid, submittal data and other documents and correspondence should be submitted to the designated Resident Engineer's Office. The Arkansas State Highway and Transportation Department and the Contractor are treated throughout the Contract Documents as if each were of the singular number and masculine gender.
- B. The term "Project" includes the salt storage structure, adjacent structures, together with all related appurtenances such as excavations, utilities, etc.
- C. The term "Subcontractor", as employed herein, includes only those having a direct contract with the Contractor and it includes one who furnished material worked to a special design according to the Plans or Specifications of this work.

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

- D. Written notice shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered mail to the last business address known to him who gives the notice.
- E. The laws of the place of building shall govern the construction of this Contract.

### **LOCAL CONDITIONS**

Bidders are required to visit the site prior to submission of proposal to familiarize themselves with local conditions, including general characteristics of the site and accessibility of the work.

### **PROGRESS SCHEDULE**

Immediately after being awarded the Contract, the Contractor shall prepare an estimated Progress Schedule and submit same to the Department. It shall indicate the dates for the starting and completion of the various stages of construction.

### **SHOP DRAWINGS AND SAMPLES**

The Contractor shall submit to the Department such shop and setting drawings and schedules as are required by the Specifications or that are requested by the Department. Shop Drawings submitted by the Contractor shall be prepared by a person thoroughly competent and qualified to prepare such Shop Drawings. Incomplete or poorly prepared Shop Drawings will be returned to the Contractor to be redrawn.

By submitting a Shop Drawing or Drawings, the Contractor represents and certifies that the above requirements have been complied with and that, in the review of the drawing or drawings by the Department, the Contractor will hold the Department harmless against claims for losses or injury caused by errors or omissions on the Shop Drawings made by the person, persons or company preparing these particular Shop Drawings.

The Contractor shall furnish for review, with reasonable promptness, all submittals/samples required. The Department shall review such submittals/samples, with reasonable

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

promptness, only for conformance with the design concept of the Project. The work shall be in accordance with selected submittals/samples.

The following schedule is to be used as a guide only and in no way limits the data that may be requested where there is question concerning the quality or proper function of a particular product or piece of equipment:

#### **SHOP AND/OR LAYOUT DRAWINGS:**

- (1) Reinforcing Steel, Fabricating and Placing
- (2) Miscellaneous Metals
- (3) Hardware Schedule
- (4) Trusses (Wood)

#### **SAMPLES:**

- (2) Shingles
- (3) Paint and/or Other Finish
- (4) Finishes where selection is necessary

#### **MATERIALS, APPLIANCES, EMPLOYEES**

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, sanitary and other facilities necessary for the execution and completion of the work.

Unless otherwise specified, all materials shall be new and both the result of the Contractor's workmanship and materials used shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

#### **ROYALTIES AND PATENTS**

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Department harmless from loss of account thereof, including costs and attorney's fees.

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

#### **BUILDER'S RISK INSURANCE**

The successful bidder for this project will be required to obtain Builder's Risk Insurance coverage in a minimum amount equal to the total amount bid for the salt storage facility, and to provide coverage for all existing structures on the job site.

The Builder's Risk Insurance Policy shall name the Department and the Contractor as named insureds, as their interests may appear, and shall include coverage for loss caused by fire, lightning, the extended coverage perils and vandalism and malicious mischief. The coverage shall remain in force until the building or buildings have been completed and accepted by the Department.

The insurance policy, certifies and endorsements shall be submitted to the Engineer prior to the issuance of a Work Order.

#### **PERMITS, INSPECTIONS, AND TAXES**

The Contractor shall give all necessary notices; obtain and pay for all permits, licenses, certificates, inspection and other legal fees required and other costs in connection with his work, both permanent and temporary, including utility taps and/or connections; file all necessary plans; prepare all documents and obtain all necessary approvals of all governmental departments having jurisdiction; and obtain required certificates of inspection for his work and deliver same to the Department.

The Contractor shall include in the work, without extra cost to the Department, all labor, materials, services, apparatus, drawings, and related items in order to comply with all laws, ordinances, rules and regulations, whether or not shown on the Plans and/or in these Specifications.

The Contractor shall include in his bid all State Sales Tax, Social Security Taxes, State Unemployment Compensation Insurance, and all other such items of like nature. It is the intent that the bid shall represent the total cost to the Department of all work included in this Contract.

#### **INDEMNIFICATION**

The Contractor shall indemnify and hold harmless the Department and his agents and employees from and against all claims, damages, losses and expenses including attorneys'

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (b) is caused in whole or in part by a negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified thereunder.

The obligations of the Contractor shall not extend to the liability of the Department, his agents or employees arising out of (a) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or Specifications, or (b) the giving of or the failure to give directions or instructions by the Department, his agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

### **ACCIDENT PREVENTION**

Precaution shall be exercised at all times for the protection of persons and property. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment and other hazards shall be guarded in accordance with safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable laws. The Contractor shall be responsible for any damage which may be caused by workers during the performance of the work.

### **SUPERINTENDENT: SUPERVISION**

The Contractor shall furnish during progress of the work, a competent Superintendent acceptable to the Department and any necessary assistants. The Superintendent shall not be changed except with the consent of the Department, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The Superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor. The Department shall not be responsible for the acts or omissions of the Superintendent or his assistants.



# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

#### **ACCESS TO THE WORK**

The Engineer or his representatives shall have access to the work at all times, shall be permitted to approach, enter or examine all stages or phases of the work as it progresses and shall have the authority to reject work which is defective in workmanship or material.

#### **CORRECTION OF WORK BEFORE FINAL PAYMENT**

The Contractor shall remove from the premises all work condemned by the Department as failing to conform to the Contract, whether incorporated or not, and the Contractor shall replace and re-execute his own work in accordance with the Contract and without expense to the Department and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

#### **WARRANTY**

All materials and workmanship shall be warranted against defects for a period of one (1) year from the date of acceptance by the Department, with a 10-year warranty on the structural integrity of the building, and a 20-year warranty on the exterior waterproofing.

#### **THE DEPARTMENT'S RIGHT TO DO WORK**

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the Department, after seven (7) days written notice to the Contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

#### **DAMAGES**

Should either party to this Contract suffer Damages because of any wrongful act or neglect of the other party or of anyone employed by him, claim shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the final payment, except as expressly stipulated otherwise in the case of faulty work or materials, and shall be adjusted by agreement or arbitration.

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

#### **LIENS**

The satisfaction of all Liens (including but not limited to labor, material, worker's compensation and otherwise) arising out of this Contract and incurred by the Contractor or his Subcontractor shall be exclusive responsibility of the Contractor and/or the Contractor's bonding company and the Department shall have the right to withhold payment to the Contractor or recover from the Contractor and/or the Contractor's bonding company all damages, including costs and attorney's fees, as a result of liens being filed or asserted as a result of the performance of this Contract.

#### **ASSIGNMENT**

Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him thereunder, without the previous written consent of the Department.

#### **SEPARATE CONTRACTS**

The Department reserves the right to let other contracts in connection with this work under similar General Conditions. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

If any part of the Contractor's work depends for proper execution or results upon the work of any other contractor, the Contractor shall inspect and determine any defects in such work that render it unsuitable for such proper execution and results. His failure to so inspect and determine shall constitute an acceptance of the other contractor's work as fit and proper for the reception of this work, except as to defects which may develop in the other contractor's work after the execution of this work.

#### **SUBCONTRACTS**

The Contractor agrees that he is as fully responsible to the Department for the acts and omissions of his Subcontractors and suppliers and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by himself.

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

Nothing contained in the Contract Documents shall create any contractual relation between any Subcontractor and the Department.

#### **USE OF PREMISES**

The Contractor shall confine his apparatus, the storage of materials and the operations of his workers to limits indicated by the Engineer, and shall not unreasonably encumber the premises with his materials.

#### **CUTTING, PATCHING**

The Contractor shall do all cutting, fitting or patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors shown upon, or reasonably implied by, the Plans and Specifications for the completed structure.

#### **QUALITY OF MATERIAL**

All material, appliances or appurtenances furnished under these Specifications shall be new and unused and shall be free from defects and imperfections. Any material, appliance or appurtenance thereto found to be defective shall be replaced by the Contractor at no cost to the Arkansas Highway and Transportation Department. All material shall comply with the requirements and applicable provisions of the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, Edition of 2014, as amended by Supplemental Specifications, and these Specifications. Any material not covered in the Specifications above shall be approved by the Engineer.

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

#### **SUBSTITUTION OF MATERIAL**

Where a definite material is specified, it is not the intent to discriminate against any equal product of another manufacturer. It is the intent to set a definite standard. Open competition is expected, but in all cases, complete data must be submitted on all proposed substitutions and samples shall be submitted for comparison and testing when requested.

No substitution shall be made unless authorized in writing by the Department. If the Contractor intends to substitute an equal product, he shall make this fact known, in writing, to the Department within thirty (30) days after the award of the Contract. Otherwise, the Contractor will be required to furnish materials and specialties of the brands named in the Specifications. Should a substitution be accepted and should the substituted material prove defective or otherwise unsatisfactory for the service intended and within the guaranty period, the Contractor shall replace this material or equipment with the material or equipment specified by name at no cost to the Department.

#### **PLANS AND SPECIFICATIONS**

Titles to Sections and Paragraphs in these Contract Documents are introduced merely for convenience and shall not be taken as a correct or complete segregation of the several units of materials and labor. No responsibility, either direct or implied, is assumed by the Department for omissions or duplications by the Contractor, or his Subcontractor, due to real or alleged error in arrangement or matter in these Contract Documents.

The Contractor is cautioned to examine the Plans before submitting his bid, and in all cases large scale details shall take precedence over small scale general drawings. In cases where floor elevations are shown, they are to be checked back carefully against detailed sections, and the Contractor will be responsible for all heights shown or marked on small scale drawings.

#### **MEASUREMENTS**

Before ordering any material or doing any work, the Contractor shall verify all Measurements at the building and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of differences between architectural dimensions and the Measurements indicated on the drawings; any difference which may be found shall be submitted to the Department for consideration before proceeding with the work.

# **ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

## **JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY**

### **JOB 5-31**

### **SPECIFICATIONS**

#### **COLD WEATHER**

All concrete masonry, painting, or other work subject to damage by cold weather shall not be executed when the temperature falls below forty (40) degrees F., except upon permission of the Department and their approval of measures taken to protect the work from freezing; said permission of the Department is not to relieve the Contractor his responsibility for damage which may occur to the work from cold weather.

#### **CLEANING UP**

The Contractor shall at the completion of the work, remove all his rubbish from and about the building and all his tools, scaffolding and surplus materials and shall leave his work "broom-clean" or its equivalent.

#### **CONDITION OF BIDDING**

The Contractor represents, as a Condition of Bidding and Contracting for the Project, that he is thoroughly familiar with all of the processes and methods necessary to safely construct and complete the Project according to the Plans and Specifications, including all necessary safety measures to protect property and persons from injury and loss. Such representation includes, but is not limited to, the use of and methods required for all materials specified, soil test information, scaffolding, bracing, shoring, etc.

#### **SCOPE OF WORK**

The Contractor shall provide all items, articles, materials, operations, tools, equipment, labor, and incidentals necessary and required to complete in an acceptable manner all work under the above Heading, as indicated, implied, mentioned, shown, or scheduled on the Drawings, and/or as specified herein, or both.

Materials normally delivered labeled shall be received with manufacturer's original label and instructions, or else shall be subject to rejection. Materials shall be stored under adequately clean and dry conditions, and all work shall be performed according to the best practice of the trades. Manufacturer's specifications and instructions for products specified herein, or approved equals, become part of these specifications and all such instructions are to be followed accordingly.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

All work shall be completed in compliance with the latest edition of the prevailing fire prevention and building codes in effect in the State of Arkansas.

#### GENERAL

- A. All required submittals shall be made to the Owner for review
- B. Submittals (such as brochures, schedules, performance charts, etc.) that show more than one item or piece of equipment shall be clearly marked to show which item is being submitted for approval.
- C. Each submittal shall bear the following:
  - 1. Owner's name
  - 2. Project name and address
  - 3. Contractor's/Subcontractor's name
  - 4. Manufacturer's or Supplier's name
- D. Any work which is the subject of a required submittal shall be commenced only after approval of the submittal has been obtained.

#### SHOP DRAWINGS AND PRODUCT DATA

- A. Form of Submittals: shop drawings, prints, brochures, catalog pages, cut sheets, schedules
- B. Shop Drawings
  - 1. Shall be drawn to scale and dimensioned.
  - 2. Shall show all information needed to establish compliance with Specifications and job conditions.
  - 3. Shall indicate adjoining work in sufficient detail to show proper installation and connections.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

#### SPECIFICATIONS

- C. Checking by Contractor: the Contractor shall check each submittal, mark up if required, indicate his approval, and date, before submitting each item. The Engineer shall return unchecked all submittals not so marked and properly identified by the Contractor. The Contractor shall assume responsibility for dimensions to be confirmed at the job site to insure that the items furnished fit the space available.
- D. Resubmittals
1. Drawings and material returned "No Exceptions Taken" need not be resubmitted.
  2. Drawings and materials returned "Provide as Corrected" or "Make Corrections as Noted" need not be resubmitted unless resubmission is indicated on the stamp.
  3. Drawings and materials returned "Revise and Resubmit," "Amend and Resubmit," or "Rejected" shall be revised as required and then resubmitted.
- E. Review and approval of submittals by the Engineer is only for conformance with the design concept of the Project, and for compliance with the information given in the Contract Documents; it does not relieve the Contractor of his responsibility for confirming dimensions and correlating dimensions at the Project Site, for information that pertains solely to the fabrication processes or to techniques of construction, and for coordination of the work of all Trades.

#### COLOR SAMPLES

All color selection is to be done by Owner, unless otherwise noted. Contractor shall submit color samples or chips as specified under the appropriate Divisions of the Specifications.

#### SITework AND PAVING

##### GENERAL

A. Related Documents

All Work under this division shall be performed in accordance with the Drawings and the provisions of the Contract, including General Conditions, Supplementary General Conditions, and General Requirements of these Specifications.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### B. Scope of Work

Owner and Contractor shall coordinate the Work of this division so as to avoid delays to the greatest extent possible.

##### 1. Work to be done by Owner

###### a. Excavation and Filling

The Owner shall prepare the site for the Contractor so that the Contractor has only to excavate and backfill for the foundation. The Owner shall perform all other excavation and filling.

###### b. Site Grading and Drainage

The Owner shall grade the site so that it is level to plus or minus 0.1 foot inside the building area. The Owner shall be responsible for all site drainage, including grading of the area surrounding the building so that slope away from the building is adequate to insure proper drainage. The Owner shall provide for all final grading and site restoration.

The Owner shall also designate and provide a level area near the building where the truss frames may be laid out and assembled.

###### c. Paving

The Owner shall design, furnish and install all flooring and paving both inside and outside the building.

##### 2. Work to be done by Contractor

The Contractor shall excavate and backfill to original grade for all foundation work. The Contractor shall have no responsibility for work more than ten feet (10') outside the building wall or lean-to foundations.



# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### PROTECTION

- A. Owner and Contractor shall provide complete surface protection of their respective portions of the Work so as to protect both workers and the general public, and shall do so in complete accordance with local regulations.
- B. All surface drainage shall be diverted during construction in such a manner as to avoid damage to the site or any adjacent area.

#### MATERIALS

Any fill which is to be placed directly under foundations or paved areas shall be crushed gravel graded with 100% passing a 1-1/2" sieve and not more than 7% passing a No. 200 sieve.

#### EXECUTION

- A. Excavate to lines and grades indicated on the drawings for all footings.
- B. No foundation work shall begin until the Engineer or the Owner's designated representative has approved the excavations.
- C. No backfilling shall be done until:
  - 1. the foundations have been inspected and approved by the Engineer or the Owner's designated representative.
  - 2. the pipe bollards (door jamb guard posts) have been painted Federal Yellow.
- D. Compact fill material in lifts not exceeding 6" to 95% of its Proctor density.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### CAST-IN-PLACE CONCRETE

##### GENERAL

##### **Related Documents**

All Work under this division shall be performed in accordance with the Drawings and the provisions of the Contract, including General Conditions, Supplementary General Conditions, and General Requirements of these Specifications.

##### **Scope of Work**

Work under this division shall consist of concrete footings as shown on Drawings.

##### **Quality Assurance**

1. Codes and Standards  
Comply with provisions of the following codes, specifications, and standards, except where more stringent requirements are shown or specified:
  - a. ACI-301, "Specifications for Structural Concrete for Buildings."
  - b. ACI-318, "Building Code Requirements for Reinforced Concrete."
  - c. Concrete Reinforcing Steel Institute, "Manual of Standard Practice."
2. Earth cuts may be used to form concealed vertical surfaces of footings. Earth forms shall be sharp and true to line and dimension.

##### **Submittals**

1. **Material Certificate:** submit certificate from concrete supplier, showing compliance with design requirements for strength.
2. **Product Data:** submit data for proprietary materials and items, including reinforcement and forming accessories, admixtures, and others as requested by Engineer or Owner's designated representative.

##### **Environmental Requirements**

1. Provide cold weather and/or hot weather protection as recommended in ACI-305 and ACI-306.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

2. Unless adequate protection is provided, concrete shall not be placed during rain, sleet, or snow. Protect concrete from rain water, maintain cement:water ratio, and protect concrete surface.
3. All concrete shall be adequately protected after pouring to prevent damage from freezing, by the use of suitable covers and adequate heating equipment. Frozen and damaged concrete must be removed and replaced at the Contractor's expense. Do not place concrete on frozen earth.

### PRODUCTS

#### Reinforcing Materials

1. Reinforcing bars shall conform to "Specifications for Deformed Billet—Steel Bars for Concrete Reinforcement," ASTM A-615 Grade No. 60, having a minimum yield strength of 60,000 psi.
2. Tie wire shall be black annealed wire, 16 gauge minimum.
3. Bar supports shall conform to the "Bar Support Specification" contained in the "Manual of Standard Practice" as published by CRSI and WCRSI. Bar and accessories within 1/2" of the surface of concrete exposed to weather shall be non-corrosive.

#### Concrete Material

1. Cement shall be grey Portland Cement, Type I or II, conforming to ASTM C-150. Use same brand for all exposed work.
2. Concrete aggregates shall conform to ASTM C-33. Fine and coarse aggregates shall be regarded as separate ingredients, and each shall conform to the appropriate grading requirements of ASTM C-33.
3. Water shall be potable, clean, and free from impurities affecting the strength of the concrete, in accordance with ACI and ASTM requirements.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### Proportioning and Design of Mixes

1. All concrete shall be of normal weight, consisting of a proportioned mixture of Portland Cement, coarse aggregate, fine aggregate, and water.

Concrete proportions shall be selected on the basis of trial mixes conforming to ACI 211.1.

2. All concrete, unless otherwise noted, shall have a minimum compressive strength of 3,000 psi at 28 days.
3. All concrete, unless otherwise noted, shall be proportioned to have a slump of 3" minimum to 4" maximum. Tolerance in slump shall not exceed ACI recommendation.
4. Admixtures to retard or accelerate setting, to reduce water ratio, or to prevent freezing shall not be used without prior approval from the Engineer or the Owner's designated representative. No admixtures containing calcium chloride may be used.
5. Maximum aggregate size shall conform to the following, and shall not exceed tolerances on oversize as per ASTM C-33.

Footings, grade beams, and foundations	3/4"
Concrete fill	1/2"

#### Concrete Production

1. Ready-mixed concrete shall conform to ASTM C-94 and the National Ready Mix Concrete Association. Use of non-agitating trucks is not permitted.
2. Use of retempered concrete is not permitted.
3. The addition of water at the job site is permitted providing that only sufficient water is used to provide a workable mix, and that neither the design water:cement ratio nor the maximum slump is exceeded. The addition of cement at the job site to maintain the water:cement ratio is not permitted.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### EXECUTION

##### Placing Reinforcement

1. Comply with CRSI's recommended practice for "Placing Reinforcing Bars" for details and methods of reinforcement placement and supports, and as herein specified.
2. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.
3. Accurately position, support, and secure reinforcement against displacement by framework, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as required.
4. Coverage: all reinforcing bars below ground shall have minimum 3" concrete cover.
5. Place reinforcement to obtain at least minimum coverages for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so that ends are directed into concrete, and not toward exposed concrete surfaces.
6. Heating of reinforcement for bending will not be permitted.

##### Placement of Concrete

1. Consolidate all concrete in accordance with provisions of ACI-309.
2. Consolidate each layer of concrete immediately after placing, by use of internal concrete vibrators supplemented by hand-spading, rodding, or tamping.
3. Limit duration of vibration to time necessary to produce satisfactory consolidation without causing segregation of aggregate.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### MISCELLANEOUS METALS

##### GENERAL

##### Related Documents

All Work under this division shall be performed in accordance with the Drawings and the provisions of the Contract, including General Conditions, Supplementary General Conditions, and General Requirements of these Specifications.

##### Scope of Work

Work under this section shall include truss bearing plates, truss connector plates, joist hangers, angles, bolts, washers, nails, hurricane straps, spike grids, and bollards.

##### Submittals

1. Refer to Submittals.
2. Truss Bearing Plate Assembly: submit shop drawings for approval.
3. Spike Grids: submit manufacturer's specifications and technical information.

#### MATERIALS

Truss bearing plate assembly, bolts, and washers shall be AISI Type 304 stainless steel as detailed on Drawings.

Truss connector plates:

1. In the salt storage area: galvanized steel, epoxy coated
2. In the lean-to: galvanized steel.

Joist hangers shall be JUS26 18 gauge slant nail joist hangers with triple zinc coating by USP Structural Connectors ([www.USPconnectors.com](http://www.USPconnectors.com), 1-800-328-5934), or equal.

Angles connecting endwall knee braces to the top and bottom chords of trusses shall be USP Structural Connectors field adjustable framing angles, MP series, JA5-HDG, 14 gauge hot-dip galvanized steel, 2.5 x 2.5 x 5 inches, or equal.

All bolts (other than those used for the truss bearing plates) and washers shall be made of ASTM A-307 steel, and shall be galvanized.

Hurricane straps fastening lean-to trusses to beams shall be Simpson Strong-Tie model MTS-12, galvanized, as shown on Drawings, or equal.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### Nails

Materials: All nails, other than roofing nails, shall be ring-shank, double hot dipped, galvanized coated steel.

#### Sizes

<u>Location</u>	<u>Size</u>	<u>Remarks</u>
stress skin panel frames and blocking	16d	
plywood skins to panels	8d	
interior liner to panels	8d	
battens to exterior panels	8d	
nails used for trusses	40d 60d	for 5-ply trusses for 6-ply trusses
upper hip purlins (joist hangers)	8d	
x-bracing, lateral bracing, lower hip purlins, and girts	16d	
angles fastening endwall knee braces to trusses	*	*as per manufacturer
exterior siding	8d	do not use power nails
roofing nails	*	*as per manufacturer
roof deck	8d	
Simpson Strong-Ties	*	*as per manufacturer

Spike Grids: Connections between trusses shall be made with spike grids of malleable iron in accordance with ASTM Specification A-47, Grade 32510, flat type, as manufactured by Cleveland Steel (14400 South Industrial Avenue, Cleveland, OH 44137, [www.clevelandsteel.com](http://www.clevelandsteel.com), 1-800-251-8351), or equal shear connector as approved by the Engineer. Size, number, and location shall be as shown on Drawings.

Bollards (door jamb guard posts) shall consist of minimum 6" OD standard weight steel structural pipe, filled with concrete. Form concrete crown at top of bollard. Locations, dimensions, and depth of footings and bollards shall be as shown on Drawings.

#### EXECUTION

Roof sheathing shall be attached to purlins with nails 6" on center.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

Endwall siding shall be attached to girts with nails 6" on center.

Splice members shall be attached to endwall columns with nails 6" on center, staggered.

### CARPENTRY

#### GENERAL

#### Related Documents

All Work under this division shall be performed in accordance with the Drawings and the provisions of the Contract, including General Conditions, Supplementary General Conditions, and General Requirements of these Specifications.

#### Scope of Work

This section shall cover the labor and material necessary to furnish and install the following:

- Wood barrier wall and liner
- Rough framing and sheathing
- Prefabricated wood trusses
- Hi-Arch Gambrel™ frames
- Exterior wood siding and wood trim

All lumber shall be grade-marked with the Association stamp, showing species, grade, and mill number; lumber shall be kiln-dried and marked as such. For southern pine, the term "Association" refers to the Southern Pine Inspection Bureau.

#### Submittals

Pressure Treated Members: submit certificate of treatment from lumber supplier, showing sizes of members and treatment for each.

Plywood: American Plywood Association (APA) stamp should be visible on all plywood to verify grade.

Trusses: submit stamped truss design drawings by truss manufacturer; see PREFABRICATED WOOD TRUSSES for detailed requirements.



# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

JOB 5-31

### SPECIFICATIONS

#### BARRIER WALL

##### Description

The barrier wall, as detailed on the Drawings, shall be a composite retaining wall consisting of 4' x 16' wood stress-skin panels, spanning between wood columns and braces located 8'-0" on center which support the roof trusses. A wood liner shall be applied to the interior surface of the barrier wall.

##### Materials

###### General

- a. All applicable wood panel members (studs, beams, battens, plywood skins and liner) shall receive water-borne CCA 0.40 treatment in accordance with AWPA Standard U1 to the requirements of Use Category UC4A.
- b. Pressure treatment for wood columns and braces, and for 6x6 members at base of crib wall, shall receive water-borne CCA 0.60 treatment in accordance with AWPA Standard U1 to the requirements of Use Category UC4B.
- c. Moisture Content: Any wood components with a nominal thickness of 2" or less shall have a moisture content not to exceed 19% when installed.
- d. Cuprinol Wood Preservative #10 (green) or approved equal, shall be applied to cut ends of all members required to be pressure-treated. Product is available through Sherwin-Williams, 1-800-424-5837, <http://www.sherwin-williams.com>.

**Wood Columns and Braces shall be pressure-treated kiln-dried #2 or better southern pine.**

###### Shop Fabricated Stress Skin Panels

- a. Exterior (perimeter) panel studs shall be 2x6 pressure treated wood studs, #2 southern pine.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

- b. Interior panel studs shall be 2x6 non-pressure treated wood studs, #2 southern pine, 8" o.c.
- c. Blocking: 4x6 solid wood blocking at points of attachment to columns, 8' o. c.; see Drawings for details.
- d. Exterior panel skin: 1/2" pressure treated exterior structural plywood, grade APA-AC or APA-BC, sanded.
- e. Interior panel skin: 3/4" pressure treated CDX plywood.
- f. Nails fastening the exterior and interior plywood skins to the panels shall be galvanized 8d nails as called for on Drawings.
- g. Adhesive (glue) shall be heavy duty Titebond construction adhesive by Franklin International, Columbus, OH, 614-443-0241, or equal.
- h. Bolts fastening the panels to the columns shall be galvanized lag bolts, recessed as shown on Drawings.

#### Interior Plywood Liner

- a. Liner shall consist of 3/4" pressure treated CDX plywood.
- b. Nails fastening the interior liner to the panels shall be galvanized 8d nails, as shown on Drawings.

#### Battens

- a. Battens for application over exterior horizontal panel joints shall be 1x2 pressure treated #2 southern pine. Top edges of battens shall chamfered at a 45-degree angle to provide drainage away from the panel face.
- b. Nails for battens shall be galvanized 8d nails.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### **Fabrication of Panels**

1. Panels, including studs, beams, and plywood skins, shall be shop manufactured.
2. Reinforcement: panels shall be reinforced with solid wood blocking as shown on Drawings.
3. Both the exterior and interior plywood skins shall be glued and nailed to the panel frame as shown on Drawings.
4. A continuous bead of adhesive shall be applied to the entire perimeter frame and to the face of each stud, to which panel skins are to be attached. Spot application is not adequate.

#### **Installation**

1. Stress Skin Panels: The panels shall be fastened to the columns with galvanized lag bolts, recessed as shown on Drawings.
2. Interior Liner: The interior liner shall be field applied to the interior surface of the barrier wall and shall be nailed only as shown on Drawings. Carefully follow Drawings for liner layout (staggering panel joints) and for nailing pattern.

#### **ROUGH FRAMING AND SHEATHING**

##### **Materials**

1. Rough framing includes such lumber as joists, rafters, studs, plates, furring, backing, copings, fascias, curbs, framing, grounds, sleepers, blocking, etc.
2. All lumber for rough carpentry shall be construction-grade lumber, with extreme fiber stress of not less than 1,200 psi.
3. Wood columns installed above the crib wall shall be 6x6 members of #1 or better southern pine.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### Installation

All framing shall be carefully and accurately laid out, shall be erected and secured in accordance with best building practice, and shall be of size and spacing indicated on the drawings.

#### PREFABRICATED WOOD TRUSSES

##### **Submittals**

Submit drawings and design calculations, provided by the truss manufacturer, and stamped by an engineer licensed in the State of Arkansas. Trusses shall be designed for loading requirements as shown on Drawings. Submittals must show the following:

1. Space diagram with panel point loading
2. Force diagram
3. Truss configuration, showing slope and span
4. All joint details indicating connector plate size and position
5. Size and grade of lumber (to be southern pine)
6. Camber to allow for dead load deflection and connector construction.
7. Design calculations for truss member sizes. In no case shall members of smaller size than those shown on the drawings be used.

The increase in unit stress for short term loading shall be a maximum of 15%, or in accordance with state and local regulations.

##### **Materials**

1. Trusses shall be fabricated from lumber as designated by truss manufacturer (grade and size of members).
2. All load bearing lumber and all components of roof trusses shall have 1,200-psi minimum working stress at 19% maximum moisture content.
3. Toothed truss connector plates shall be Alpine or approved equal, galvanized steel, treated as specified under Painting.
4. The net area of connector plate shall not include the area within 1/2" from the edge or end of the connected member.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

5. The plate at the peak must be capable of carrying one half the design stress in the member.
6. All other plates must carry the full design stress across the joint.

#### **Fabrication**

1. Trusses to be shop assembled; all wood members shall have full bearing.
2. Plates shall be positioned as shown on approved shop drawings, and pressed into wood members so that full penetration of the teeth is obtained without crushing surfaces of wood.
3. All connections shall be made with connectors as required to transmit the stresses fully. Connectors shall conform to Truss Plate Institute "Design Specifications for Light Metal Connected Wood Trusses-TP-166".
4. Wood members shall be designed in accordance with National Design Specifications for wood construction by the NFPA for stress graded lumber.
5. Trusses shall be constructed true to line and dimensions within a tolerance of 1/4" for length and 1/8" for height.
6. All trusses to be stored at the job site in a manner to prevent warping or twisting of trusses.

#### **HI-ARCH GAMBREL™ FRAMES**

##### **Materials**

The Hi-Arch Gambrel™ truss frames, or approved equivalent, are to be constructed of prefabricated wood trusses tied together with spike grids as shown on the drawings.

1. Prefabricated wood trusses are specified in Section 6.4 above.
2. Spike grids are specified in Miscellaneous Metals.

##### **Installation**

Assemble the rigid Hi-Arch Gambrel™ frames, or equal, in the following manner:

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

1. Designate an area adjacent to the building as a staging area. The truss frames will then be laid out in that area.
2. Fabricate the trusses into frames as follows:
  - a. The top truss or trusses (as applicable), having a horizontal bottom chord, are to be sandwiched between two trusses setting diagonally on each side.
  - b. The trusses are to be bolted into a frame and made rigid by the use of spike grids, installed where shown on the drawings, in accordance with manufacturer's instructions, and using equipment as recommended or mandated by connector manufacturer. For truss-to-truss connections, bolts alone are not acceptable.
  - c. Where the side trusses are separated by 1-1/2", 2x4 spacers shall be installed intermittently or continuously. Where the side trusses are separated by 3", two 2x4 spacers shall be installed intermittently or continuously.
3. Furnish and install temporary bracing and stiffeners as needed during erection process, in accordance with the most current version of Bracing Wood Trusses published by the Truss Plate Institute.
4. Trusses shall be erected in locations and at spacings shown on Drawings. Provide complete lateral bracing during erection, and permanent lateral bracing as shown on Drawings, or as required by truss manufacturer.
5. See Miscellaneous Metals, and Drawings for base plate details.
6. Any trusses that are damaged during delivery or erection shall be replaced at no extra cost to the Owner.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### EXTERIOR WOOD SIDING AND WOOD TRIM

- A. Furnish and install where shown on Drawings 19/32" exterior grade rough-sawn siding with shiplap vertical edges and grooves 8" o.c., product to be Duratemp by Roseburg Forest Products, Roseburg, OR (800-245-1115, [www.roseburg.com](http://www.roseburg.com)), or approved equal.
- B. Panels to be 4' x 8' or 4' x 10' as required.
- C. Use 8d galvanized casing nails for application. Power nails are not to be used on exterior siding.
- D. Provide Z-molding at all horizontal joints.
- E. Wood trim to be 1x6 southern pine as shown on Drawings.

#### MOISTURE PROTECTION

#### GENERAL

##### Related Documents

All Work under this division shall be performed in accordance with the Drawings and the provisions of the Contract, including General Conditions, Supplementary General Conditions, and General Requirements of these Specifications.

##### Scope of Work

The Work under this division shall include all materials and labor required to install an uninsulated roofing system consisting of metal panels installed upon a plywood deck, attached to the truss frame system specified under CARPENTRY

##### Submittals

- 1. Submittals.
- 2. Submit manufacturer's warranty certificate for metal roof panels.
- 3. Submit manufacturer's specifications and instructions for the following items:
  - a. Metal roof panels

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

- b. Profiled gasketing
  - c. Color matched fasteners
  - d. Ridge vent
  - e. Fiberglass skylight panels
4. Submit color samples or chips for the following items:
- a. Metal roof panels
  - b. Color matched fasteners
  - c. Ridge vent

#### **Delivery, Storage and Handling of Metal Panels**

1. Panels and flashings shall be protected and properly packaged to protect against transportation damage in transit to the jobsite.
2. Deliver panels and all other components in manufacturer's original and unbroken packaging. Any materials damaged during shipment or delivery shall be rejected and replaced.
3. Panels and flashings shall be handled during unloading, stacking, moving, storing, and erection so as to prevent twisting, bending, warping, and surface damage.
4. Stack materials in a safe, dry environment on platforms or pallets, covered with tarpaulins or other suitable weathertight ventilated covering, to prevent water damage and condensation. Do not store panels in contact with other materials that might cause staining, denting, or other surface damage. Panels and flashings with strippable film shall not be stored in direct sunlight.
5. Upon installation immediately remove strippable film from panels and flashings. Protect panels and flashings from foot traffic and from all other trades.

#### **ROOFING**

##### **Materials**

1. Roof panels shall be 29 gauge galvanized coated steel, GrandRib 3® PLUS profile, with Ceram-a-Star® 1050 paint finish. Panels to be by Fabral (3449 Hempland Road, Lancaster, PA 17601, Tel. 717-397-2741, Fax 717-397-1040, [www.fabral.com](http://www.fabral.com)), or approved equal. Color as selected by Owner.



# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

2. Roofing underlayment shall be Titanium UDF-30 by InterWrap, Inc.(Roof Products Division, Head Office, 32923 Mission Way, Mission, British Columbia, Canada, V2V 6E4, 640-820-5400, [www.interwrap.com/titanium](http://www.interwrap.com/titanium)), or approved equivalent.
3. Screws shall be #14 standard galvanized roofing screws, 1-1/2" and 2" long, with sealing washers colored to match material being fastened and as recommended by the roofing manufacturer. Screws into wood framing or decking shall penetrate the supporting member by a minimum 1". All fasteners shall be applied in accordance with the manufacturer's fastening schedule.
4. Flashings between main building and lean-to shall consist of shop fabricated galvanized sheet metal and 0.045 inch EPDM membrane, as shown on Drawings. EPDM membrane shall be equal to Firestone EPDM Formflash. All other flashings, rake edges and "J" channels shall be shop fabricated of galvanized sheet metal.
5. Sheathing shall be 5/8" thick four-ply CDX plywood, or approved equal, where called for on drawings, approved by the American Plywood Association, and fastened with galvanized 8d nails 6" on center.
6. Ridge vent shall be RR-1 Ridge Cap with CoraVent by Fabral, or equal, color selected by Owner, as manufactured for use with specified roofing panels.
7. Skylights shall be Marlon CS Longlife polycarbonate rooflights, Profile P1434 nine-inch (9") opal tinted panels, manufactured by Brett Martin Ltd. and distributed by MWI Components, 1015 32nd Avenue West, Spencer, Iowa 51301, tel. 800-360-6467, fax 800-361-3452 ,[www.mwicomponents.com](http://www.mwicomponents.com), or approved equivalent.
  - a. At the top edge of the skylight panels, install a galvanized steel J-channel, Fabral AJ3 or approved equal. Install tightly against upper roof deck.
  - b. At the bottom edge of skylight panels, install a closure strip as per manufacturer's recommendation.

### EXECUTION

- A. Contractor shall inspect the structure to insure that the plywood deck is securely anchored and properly aligned to provide a flat plane for the roof panels.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

- B. All materials shall be installed in complete accordance with manufacturer's instructions, which hereby become a part of this Specification.

#### GUARANTEE

The Contractor shall guarantee the installation of the roof for a period of two years after substantial completion.

#### PAINTING

##### GENERAL

##### Related Documents

All Work under this division shall be performed in accordance with the Drawings and the provisions of the Contract, including General Conditions, Supplementary General Conditions, and General Requirements of these Specifications.

##### Scope of Work

The work covered in this section will include all painting and staining of exterior wood surfaces, painting of bollards and pile height line, and treatment of truss connector plates.

**Definition:** For purposes of this specification, the terms "paint" and "painting" refer to the application of any paint or stain materials specified in these documents.

##### Submittals

1. Refer to Submittals.
2. Submit manufacturer's specifications and instructions for all paint, stain, and epoxy coating products used.
3. Submit color samples or chips for paint and stain.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### PAINTING OF EXTERIOR WOOD SURFACES

##### Materials

1. Primer shall be exterior grade latex wood primer, Sherwin Williams A-100, or approved equal.
2. Stain shall be exterior grade solid color acrylic latex stain, Sherwin Williams WoodScapes® A15 series, or approved equal; colors to be selected by the Owner. PLEASE NOTE: vinyl acrylic stain or paint may not be used on Duratemp siding.

##### Preparation and Application

1. Refer to and follow manufacturer's instructions for surface preparation and application.
2. All surfaces to be painted shall be dry and clean. Before painting, all surfaces shall be thoroughly cleaned of all dust, dirt, oil, grease, rust, scale, and other foreign matter. The cleaning shall be done with sandpaper, steel scraper, or wire brushes, as necessary.
3. Follow manufacturer's instructions regarding air, surface and material temperatures, other weather conditions, and time between coats and touchups or recoats.
4. Apply materials as follows:
  - a. Primer: one coat.
  - b. Paint: two coats, or as recommended by the manufacturer.

#### PAINTING OF BOLLARDS

All bollards shall be painted with two coats of rust inhibitive paint equal to Rustoleum, color to be Federal yellow. Surfaces shall be dry and clean, as per manufacturer's instructions. Paint shall be applied to entire length of pipe, including the joint between pipe and footing, prior to backfilling.

#### TREATMENT OF INTERIOR METAL SURFACES

Materials: All truss connector plates within the main storage structure shall be treated with Sherwin Williams Macropoxy® 646 fast-cure epoxy coating, or approved equal.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### Preparation and Application

1. For surface preparation, mixing, and application, follow manufacturer's instructions for use on galvanized steel surfaces.
2. Truss connector plates shall be painted prior to erection of trusses; damaged surfaces shall be touched up after installation.

#### **PAINTING OF INTERIOR PILE HEIGHT LINE**

A 4" wide line will be painted as shown on Drawings around the perimeter of the interior of the barrier wall. The line shall be located 2'-0" below the top of the wall. At the entranceway, this line shall extend from the bottom of the door jamb, upward at an angle of 45°, until reaching a height of 10'-0" above finished floor (2' below top of wall).

Paint shall be Federal yellow traffic marking paint for exterior use as manufactured by Devoe or equal.

#### **ELECTRICAL WORK**

#### **GENERAL**

#### Scope of Work

The Owner shall supply and connect power to the building, furnish and install overhead lights within the building, exterior lighting, disconnect panel, switches, outlets, wiring, and conduit, as shown on the drawings. All electrical work shall be completed in accordance with the requirements of the National Electric Code.

#### MATERIALS

Electrical Panel shall be a 100 amp panel with main breaker and QO HID (high intensity discharge) circuit breakers. Panel shall be in a NEMA-3R enclosure, mounted where shown on Drawings. Panel shall be grounded as required by the local utility company.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### Interior Lighting

1. Lights shall consist of Lithonia JHBL 24000LM GL WD MVOLT GZ10 40K 70CRI WGX CR DWH or approved equal, mounted where shown on Drawings. These are noted on drawings as Fixture #1.
2. Half-inch (1/2") threaded rods shall be used for installation, according to manufacturer's specifications.
3. Switch: interior lights shall be controlled by one switch with dust-tight weatherproof cover, mounted where shown on Drawings.

#### Exterior Lighting

1. Exterior lighting shall consist of Lithonia TWR2 LED 1 50K MVOLT DDB and photo cell, mounted where shown on Drawings. This is noted on drawings as Fixture #2.
2. These fixtures shall also be connected to a photo cell override switch, single pole, dust-tight, weatherproof, mounted where shown on Drawings.

#### Wiring and Conduit

1. All wiring inside the building shall be type THHN solid copper, no smaller than #12 with #12 grounds.
2. Conduit shall be Schedule 40 PVC, with expansion coupling between lights. Provide adequate support for PVC conduit.
3. All conduits shall include ground conductors sized in accordance with NEC, Article 250.
4. All systems to be "dust tight."
5. Installation of wiring and conduit shall be concealed where possible; otherwise, locate as directed by Engineer.

#### INSTALLATION

All electrical materials shall be installed in accordance with the National Electrical Code, with the manufacturers' specifications, and with the Drawings.

# ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

## JACKSON COUNTY AREA HEADQUARTERS SALT STORAGE FACILITY

### JOB 5-31

### SPECIFICATIONS

#### FEES, PERMITS, AND INSPECTIONS

All required fees, permits and inspections shall be obtained and paid for by the Contractor under the Section of the Specifications for which they are required.

#### **GENERAL**

All materials and workmanship, which are a part of this Contract, shall be warranted against defects and imperfections for a period of one (1) year from date of acceptance by the Arkansas State Highway and Transportation Department.

#### **METHOD OF MEASUREMENT**

Jackson County Area Headquarters Salt Storage Facility, complete and in place, as indicated on the Plans, as called for in these Specifications, or as directed by the Engineer and accepted, will be measured for payment by the "Lump Sum".

#### **BASIS OF PAYMENT**

Work completed and accepted and measured as provided above, will be paid for at the lump sum price bid for "Jackson County Area Headquarters Salt Storage Facility", which shall be full compensation for all materials, labor, tools, equipment, machinery, drayage, rigging, fees, permits, clean-up, guarantees and any and all incidental items required to complete the work.

#### **PAY ITEM**

#### **PAY UNIT**

Jackson County Area Headquarters Salt Storage Facility

Lump Sum

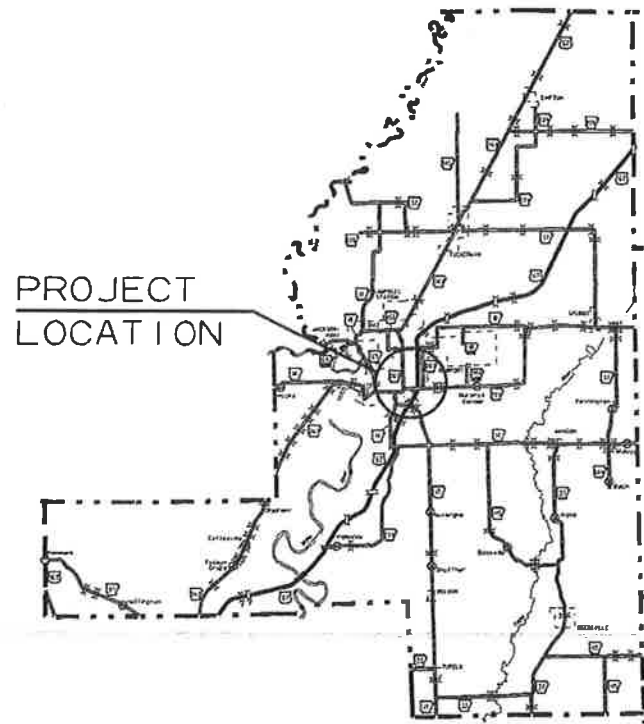
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
 CONSTRUCTION PLANS FOR STATE HIGHWAY

JACKSON CO. AHQ  
 SALT STORAGE FACILITY

JACKSON COUNTY  
 ROUTE 384 SECTION 3

JOB 5-31

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	050268	1
						4	JACKSON CO. AHQ SALT STORAGE FACILITY	



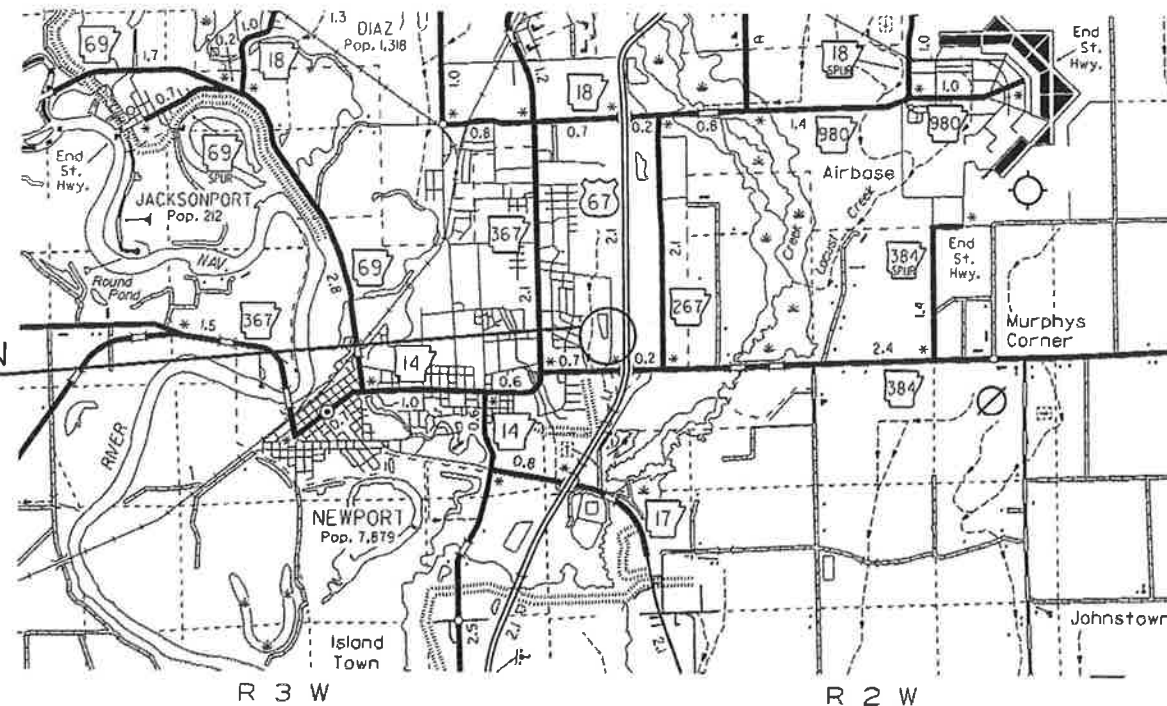
VICINITY MAP



ARK. HWY. DIST. NO. 5

PROJECT LOCATION

911 ADDRESS  
 401 ANDY DOLE ROAD  
 NEWPORT AR, 72043

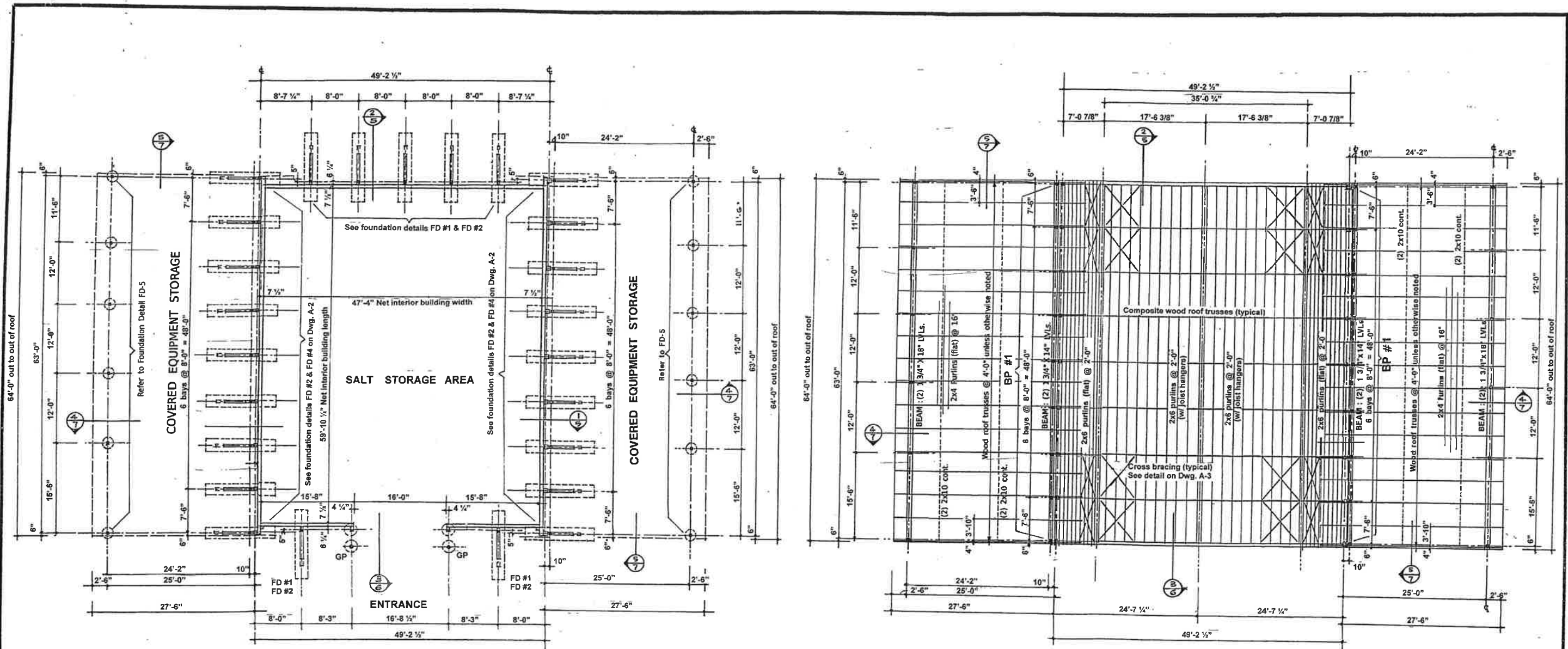


T 12 N

T 11 N



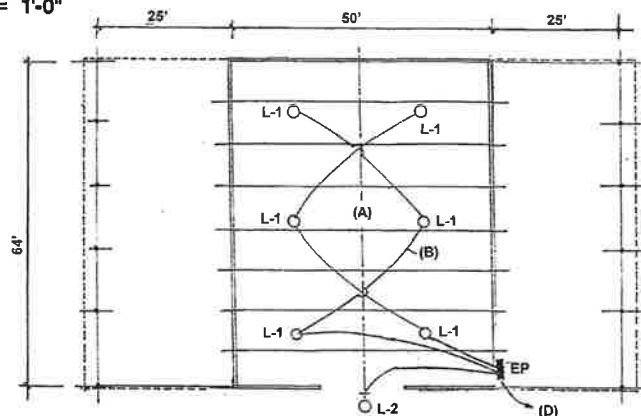
MID-POINT OF PROJECT  
 LAT. = N 35°36' 32"  
 LONG. = W 91°14' 31"



**FLOOR / FOUNDATION PLAN SCALE 1/8" = 1'-0"**  
 NOTE : REFER TO FOUNDATION DETAILS ON DWG. A-2

**ROOF FRAMING PLAN SCALE 1/8" = 1'-0"**

- ELECTRICAL NOTES**
- L-1 46000 LUMENS LED LIGHT FIXTURE
  - L-2 12000 LUMENS LED DUSK-TO-DAWN LIGHT FIXTURE
  - (A) LIGHTS TO BE LOCATED NO LOWER THAN BOTTOM OF TRUSSES (30')
  - (B) 3 # 12 / 1/2" PVC CONDUIT
  - EP 100 AMP ELECTRICAL PANEL
  - (D) CONNECTION TO SERVICE BY OWNER



**LIGHTING PLAN (NIC) SCALE 1/16" = 1'-0"**  
 NOTE: LIGHTING WORK SHOWN IS NOT IN CONTRACT

**INDEX OF DRAWINGS**

- A-1 FLOOR/FOUNDATION PLAN, ROOF FRAMING PLAN LIGHTING PLAN (NIC), INDEX OF DRAWINGS
- A-2 FOUNDATION DETAILS, BARRIER WALL DETAILS
- A-3 BUILDING SECTIONS, TRUSS BEARING PLATES, STRUCTURAL DETAILS
- A-4 BUILDING ELEVATIONS, LONGITUDINAL SECTION
- A-5 TYPICAL WALL SECTIONS
- A-6 WALL SECTION AND DETAILS
- A-7 LEAN-TO WALL SECTIONS AND DETAILS

**DESIGN PARAMETERS**

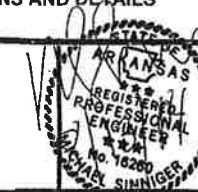
OCCUPANCY CLASSIFICATION	S-2
TYPE OF CONSTRUCTION	V-B
GROUND SNOW LOAD	10 PSF
UNBALANCED SNOW LOAD	15 PSF
DEAD LOAD	8 PSF
WIND SPEED	90 MPH, Exposure C
SEISMIC SITE CLASS	D
SOIL BEARING PRESSURE	2600 PSF

NEW 50' X 64' X 12'  
**SALT STORAGE BUILDING**  
 ARKANSAS HIGHWAY & TRANSPORTATION DEPT.  
 JACKSON COUNTY AREA HEADQUARTERS

FLOOR/FOUNDATION PLAN  
 ROOF FRAMING PLAN  
 LIGHTING PLAN (ALT. #2)  
 INDEX OF DRAWINGS

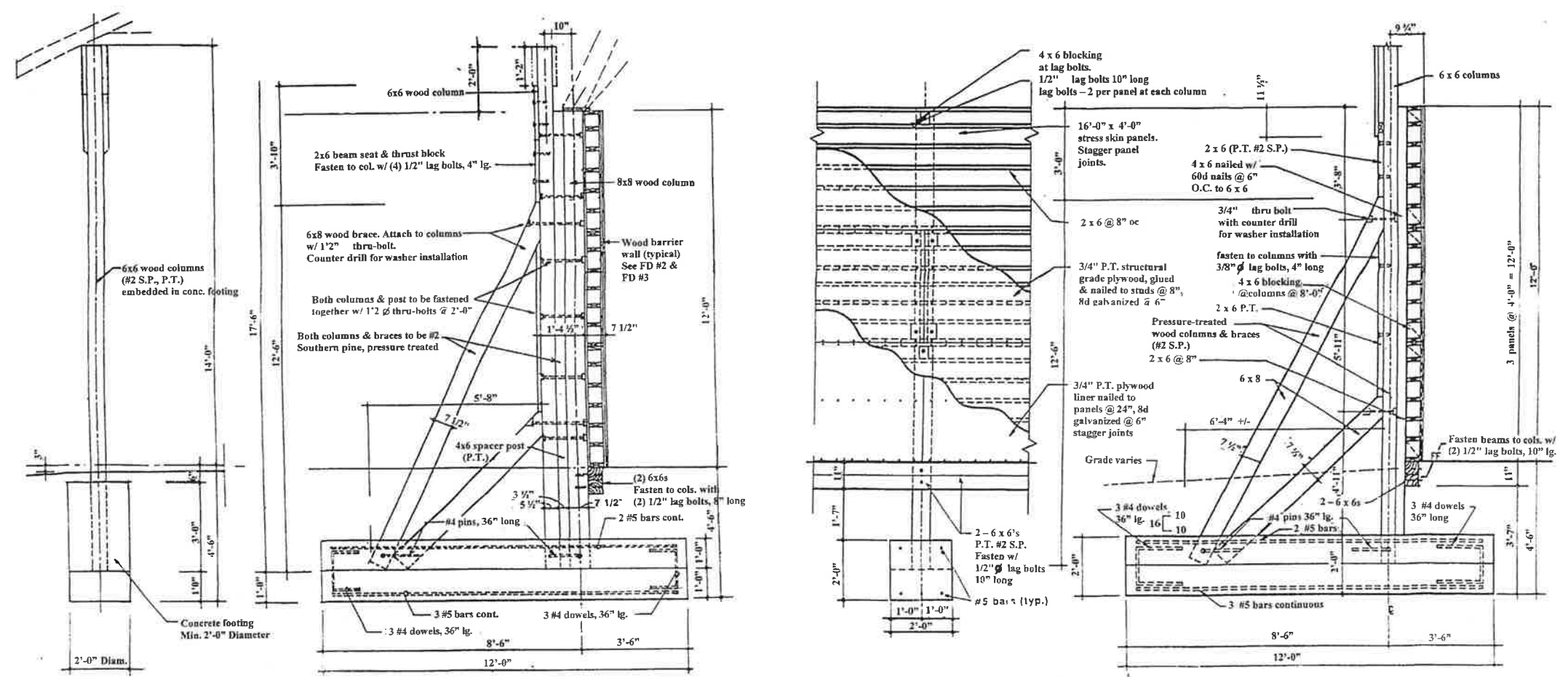
**AST**  
 ADVANCED STORAGE TECHNOLOGY, INC.  
 4053 Maple Rd. Suite 106  
 Amherst, NY 14226-1058  
 Tel. 716-833-6212  
 www.saltstorage.com

Michael A. Sinniger, P.E.



FROM: LARCH GAMBREL U.S. PATENT NO. 4,483,117 CANADIAN PATENT NO. 1,194,444 REVISIONS Sept. 2014 - revise electrical ISSUED 8/14/2014	DRAWN: MO CHECKED: BB SCALE: 1/8" = 1'-0" ISSUED:	JOB NO.: 14-278 DWG. NO.: A-1
---	--	----------------------------------





FD #5 LEAN-TO COLS.

FD #4 FOUNDATION AT SIDEWALL COLUMNS

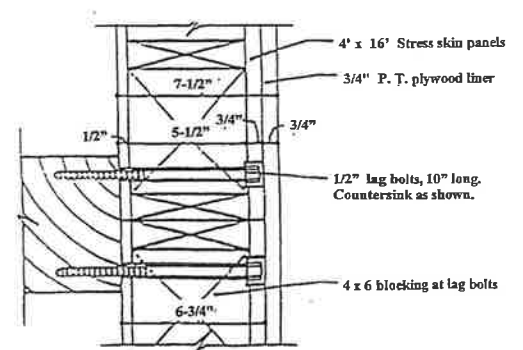
FD #2 BARRIER WALL ELEVATION

FD #1 FOUNDATION AT ENDWALL COLUMNS

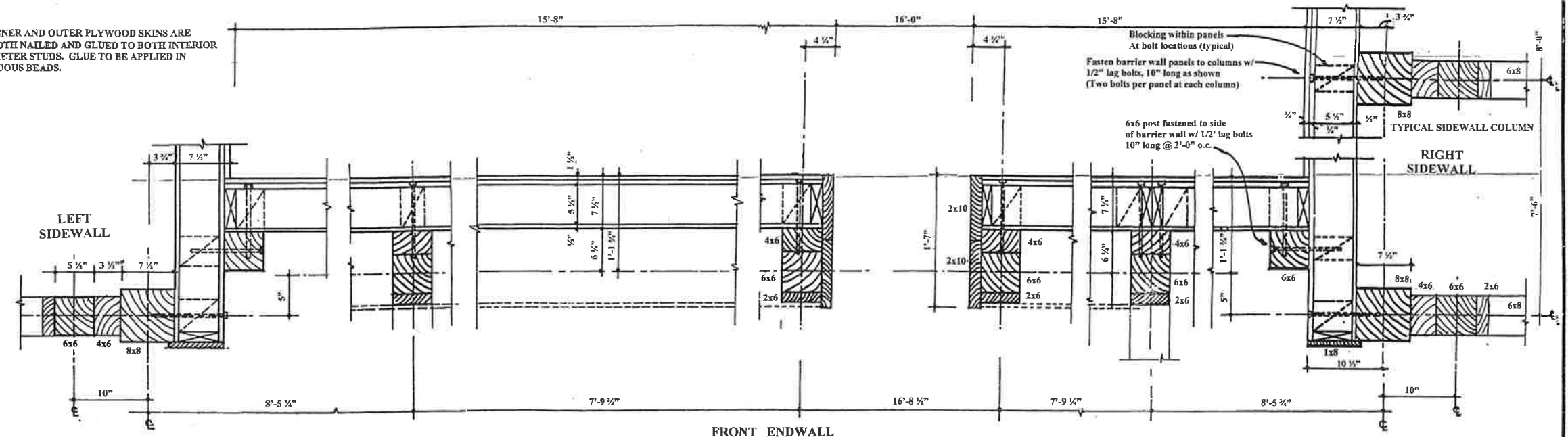
TYPICAL COLUMN FOUNDATION DETAILS  
SCALE: 1/2" = 1'-0"

- STRESS SKIN PANELS**  
4'-0" wide panels consisting of:
- 2x6 pressure treated perimeter studs
  - 2x6 internal wood studs @ 8" oc
  - Outer skin: 1/2" pressure treated exterior structural plywood, grade APA, A-C, sanded
  - Interior skin: 3/4" pressure treated CDX plywood
  - Interior liner: 3/4" pressure treated CDX plywood
  - 1x2 pressure treated wood battens at exterior horizontal joints
  - Nailing: as shown on drawings and in specifications
  - Adhesive: PL 500
  - Refer to specifications for lumber grade and types

**NOTE:** BOTH INNER AND OUTER PLYWOOD SKINS ARE TO BE BOTH NAILED AND GLUED TO BOTH INTERIOR & PERIMETER STUDS. GLUE TO BE APPLIED IN CONTINUOUS BEADS.



BARRIER WALL FASTENING DETAIL  
SCALE: 3" = 1'-0"



FRONT ENDWALL

TYPICAL BARRIER WALL DETAILS

SCALE: 1 1/2" = 1'-0"

NEW 50' X 64' X 12'  
**SALT STORAGE BUILDING**  
ARKANSAS HIGHWAY & TRANSPORTATION DEPT.  
JACKSON COUNTY AREA HEADQUARTERS

FOUNDATION DETAILS  
BARRIER WALL DETAILS

**ASTA**  
ADVANCED STORAGE TECHNOLOGY, INC.  
4053 Maple Rd. Suite 106  
Amherst, NY 14226-1058  
Tel. 716-833-6212  
www.saltstorage.com

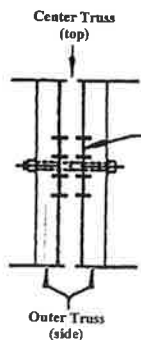
Michael A. Sinniger, P.E.



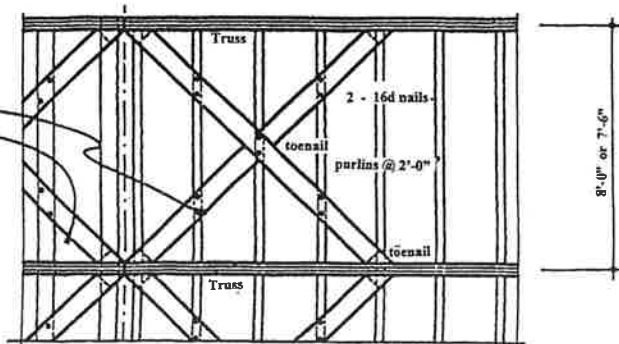
DRAWN	MO	JOB NO.
CHECKED	BB	14-278
SCALE	AS NOTED	DWG. NO.
ISSUED	8/14/2014	A-2

**NOTES**

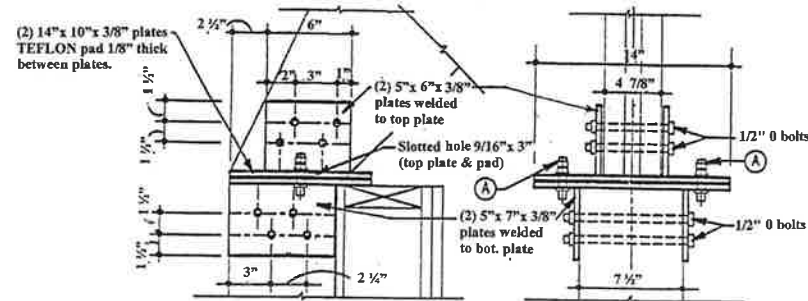
- (1) REFER TO TRUSS MANUFACTURER'S DESIGN DRAWINGS FOR SIZE & LUMBER GRADES OF TRUSS MEMBERS, CONNECTOR PLATE SIZES, ETC.
- (2) ALL PLATES & FASTENERS TO BE GALVANIZED WITH FIELD APPLIED EPOXY COATING. SEE SPECIFICATIONS.
- (3) COMPOSITE WOOD ROOF TRUSSES TO BE DESIGNED ASSUMING "PIN-ROLLER" CONNECTIONS WITHOUT LIMITING HORIZONTAL DEFLECTION.
- (4) LEAN-TO ROOF TRUSSES TO BE DESIGNED IN ACCORDANCE WITH APPLICABLE CODES FOR INCREASED SNOW LOADING CAUSED BY SNOW DRIFTING OR SLIDING OFF ADJACENT HIGHER SLOPING ROOFS.



**TRUSS CONNECTOR DETAIL**  
SCALE: 2" = 1'-0"



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



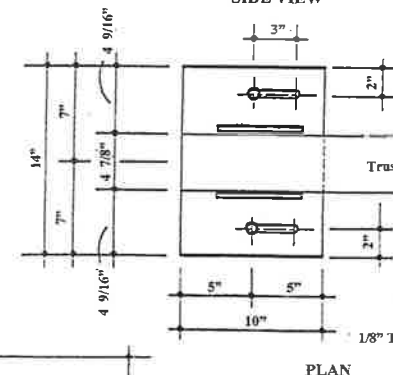
**SIDE VIEW**

**FRONT VIEW**

NOTE:

(A) 1/2" bolts  
Bottom nut to be hand tightened firmly lock with additional nut. Provide Teflon washer under stainless steel washer

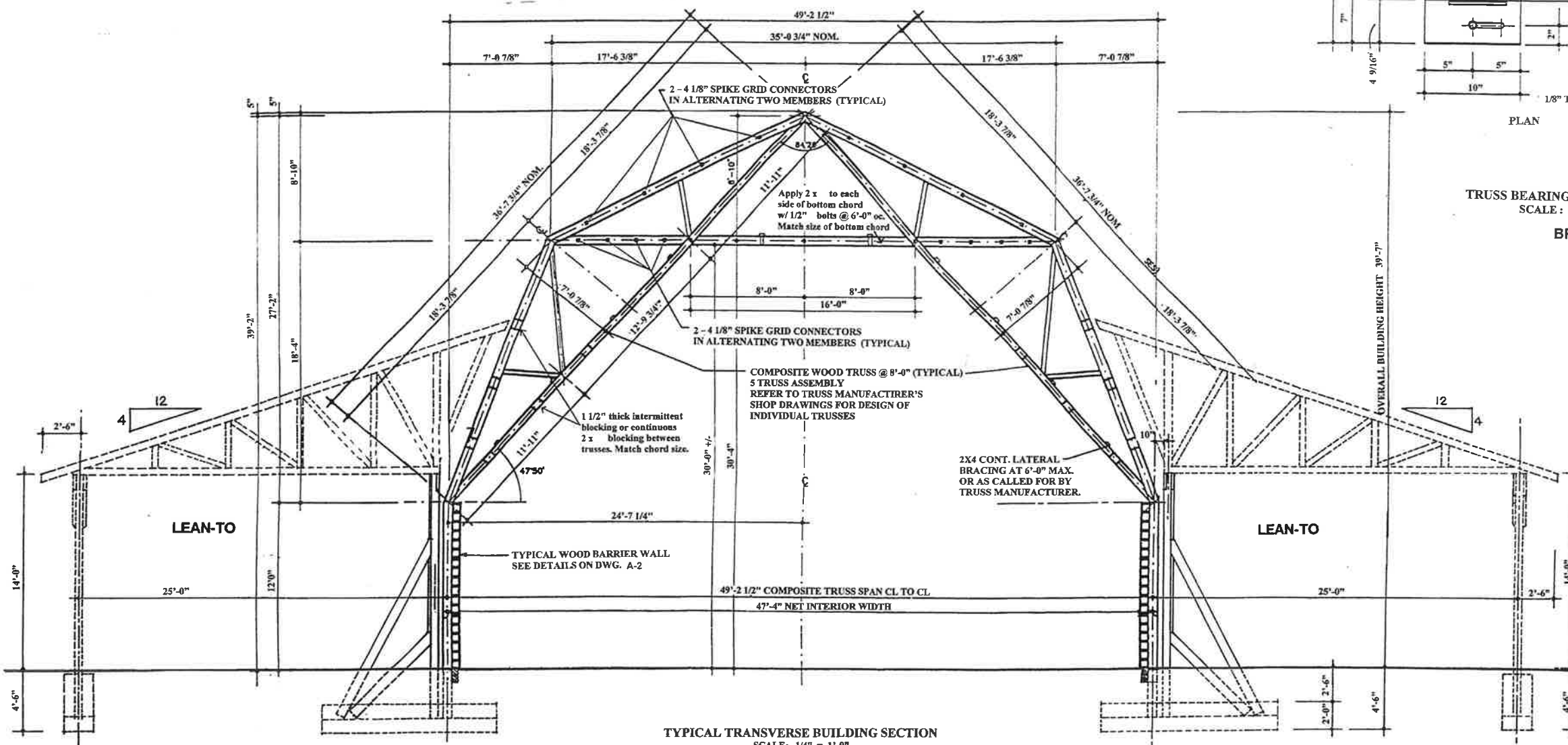
NOTE:  
All plates, bolts & washers to be stainless steel as specified.



**PLAN**

**TRUSS BEARING PLATE DETAILS**  
SCALE: 2" = 1'-0"

**BP #1**



**TYPICAL TRANSVERSE BUILDING SECTION**  
SCALE: 1/4" = 1'-0"

**NEW 50' X 64' X 12'**  
**SALT STORAGE BUILDING**  
ARKANSAS HIGHWAY & TRANSPORTATION DEPT.  
JACKSON COUNTY AREA HEADQUARTERS

**BUILDING SECTIONS.**  
**TRUSS BEARING PLATES.**  
**STRUCTURAL DETAILS**

**AST**  
ADVANCED STORAGE TECHNOLOGY, INC.  
4053 Maple Rd. Suite 106  
Amherst, NY 14226-1058  
Tel. 716-833-6212  
www.saltstorage.com

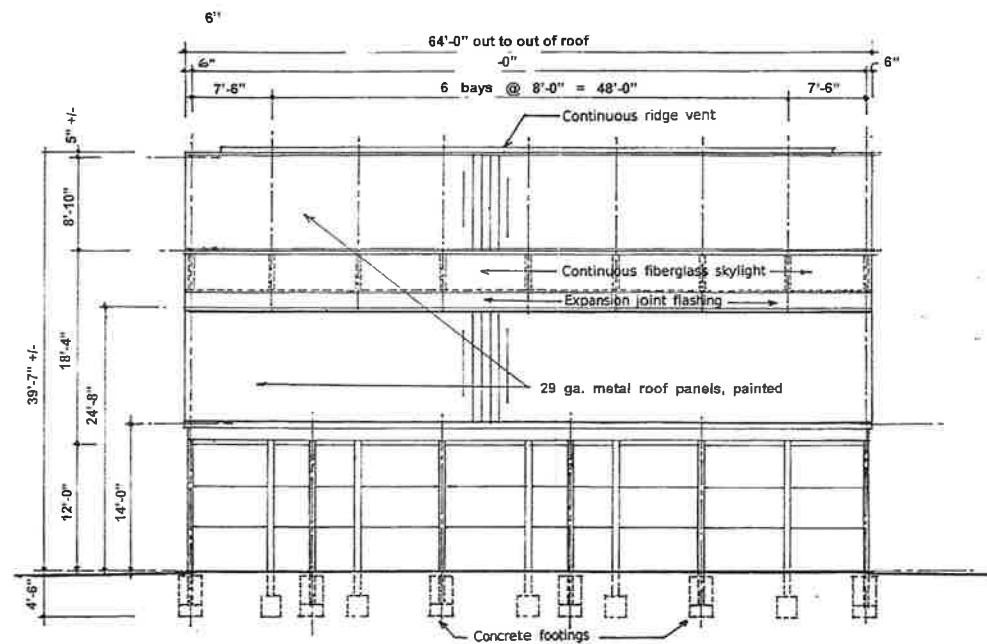
**Michael A. Sinniger, P.E.**



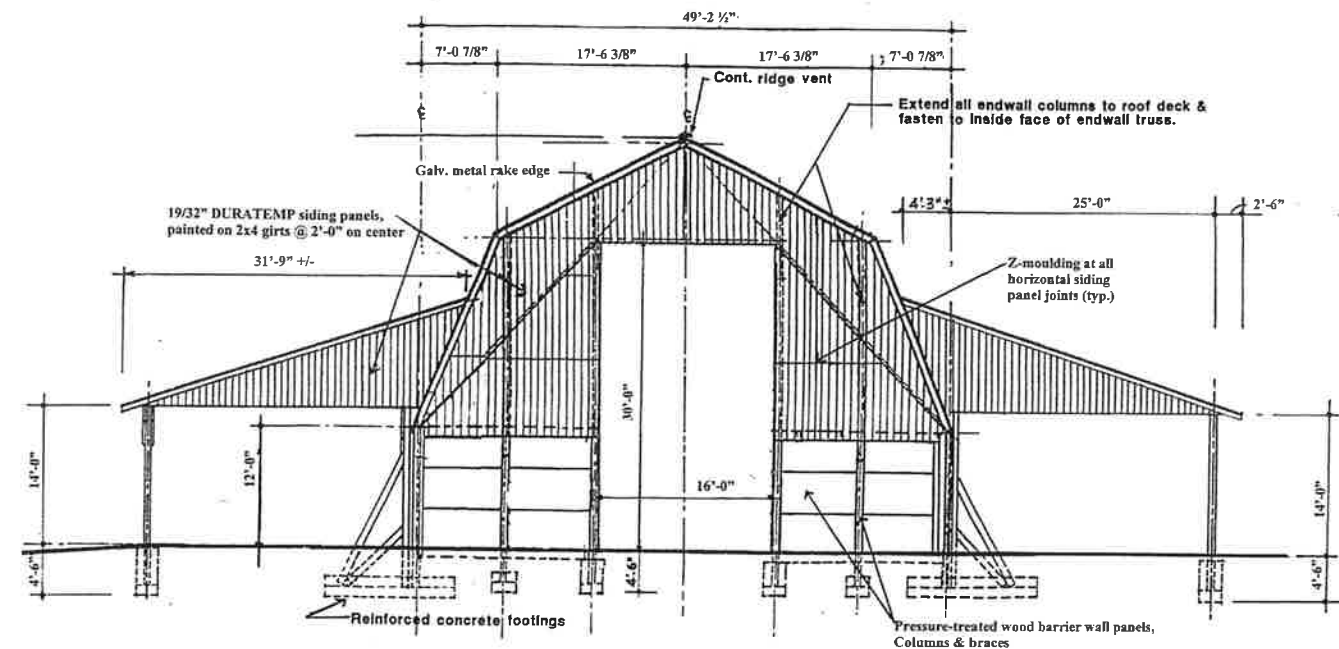
HIGH-ARCH BARREL,  
U.S. PATENT NO. 4,653,117  
CANADIAN PATENT NO. 1,194,444

REVISIONS  
Sept. 2014 - revise dwg. note

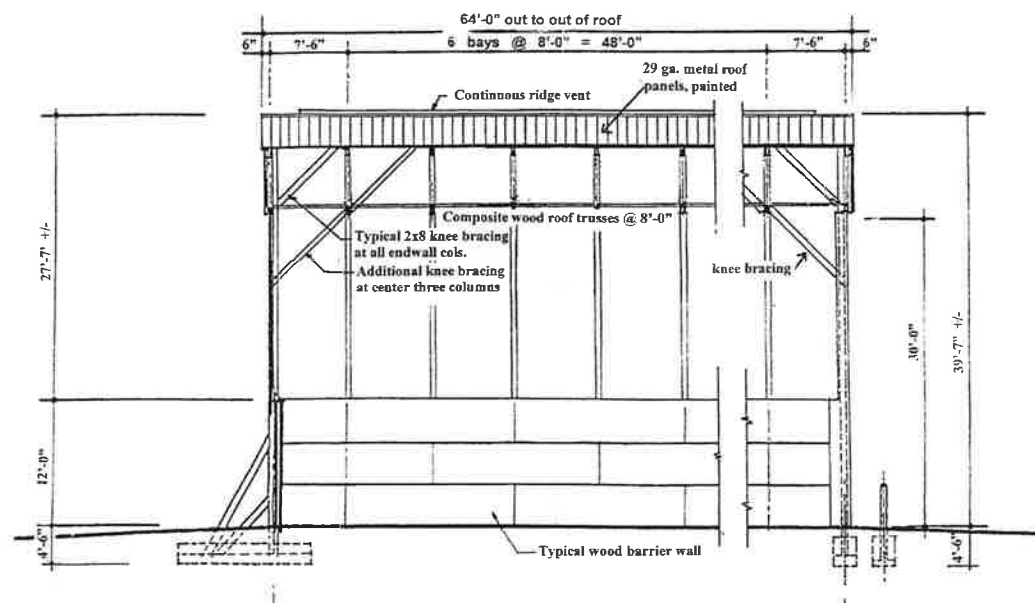
DATE	MO	JOB No.
CHECKED	BB	14-278
SCALE	AS NOTED	DWG. NO.
ISSUED	8/14/2014	<b>A-3</b>



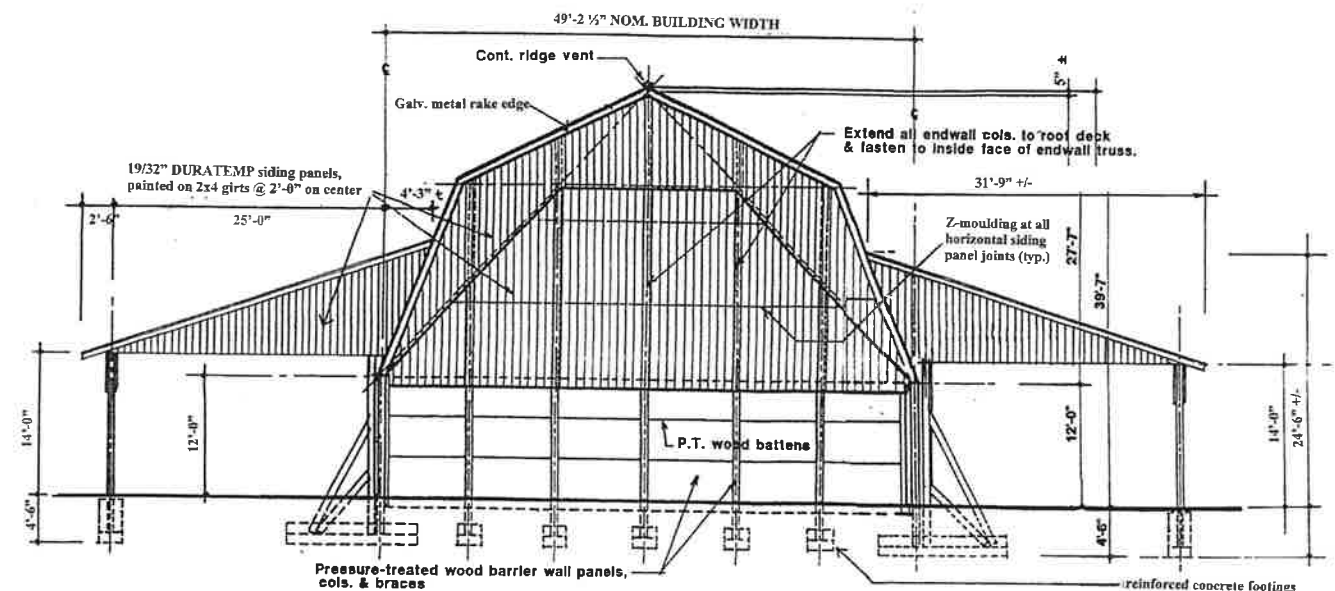
LEFT SIDE ELEVATION SCALE: 1/8" = 1'-0"  
(REVERSE FOR RIGHT SIDE ELEVATION)



FRONT ELEVATION SCALE 1/8" = 1'-0"



LONGITUDINAL BUILDING SECTION  
SCALE 1/8" = 1'-0"



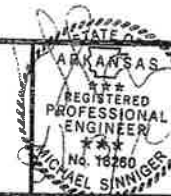
REAR ELEVATION SCALE 1/8" = 1'-0"

NEW 50' X 64' X 12'  
**SALT STORAGE BUILDING**  
ARKANSAS HIGHWAY & TRANSPORTATION DEPT.  
JACKSON COUNTY AREA HEADQUARTERS

BUILDING ELEVATIONS  
LONGITUDINAL SECTION

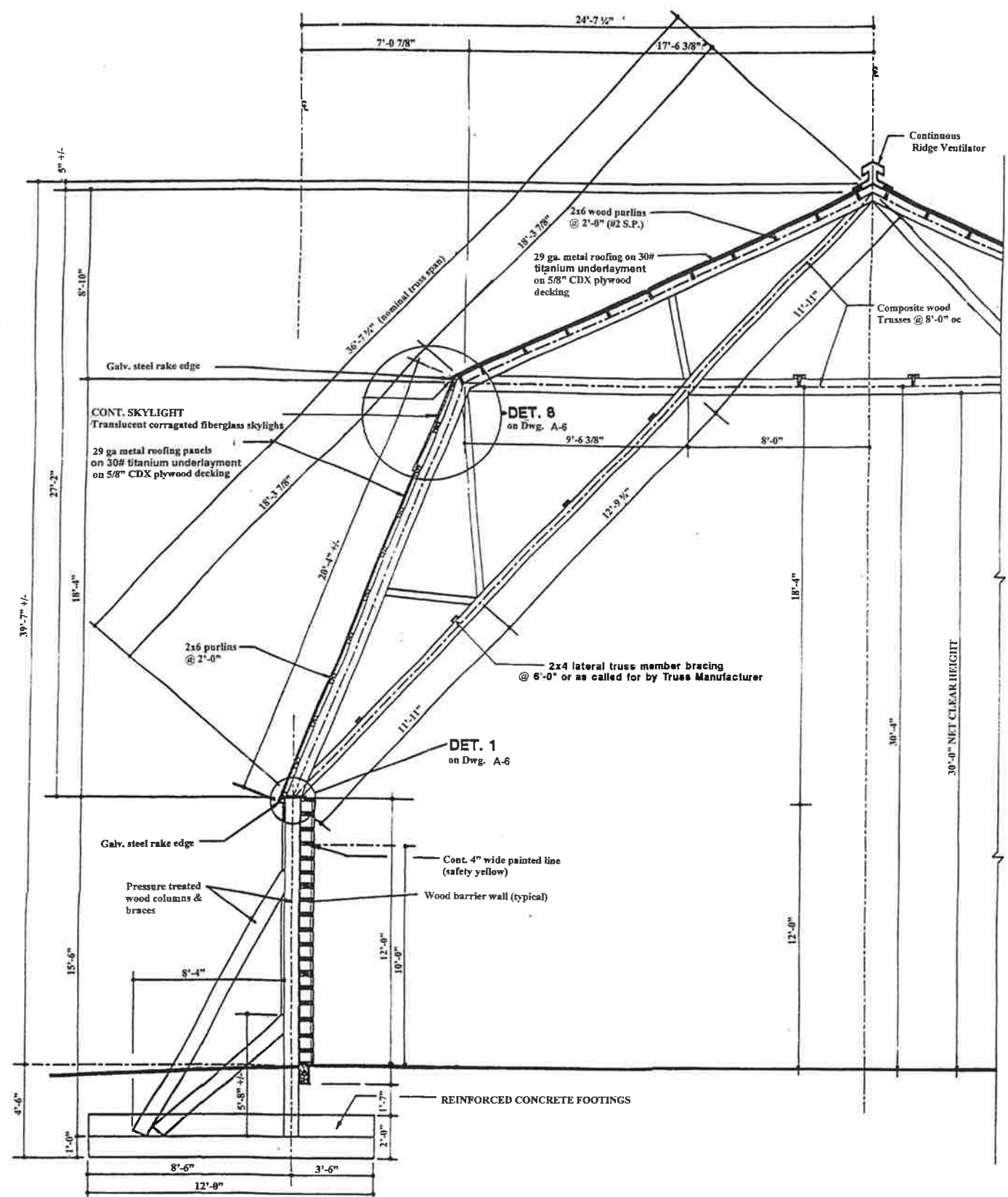
**ASTA**  
ADVANCED STORAGE TECHNOLOGY, INC.  
4053 Maple Rd. Sulta 106  
Amherst, NY 14226-1058  
Tel. 716-833-8212  
www.saltstorage.com

Michael A. Sinniger, P.E.

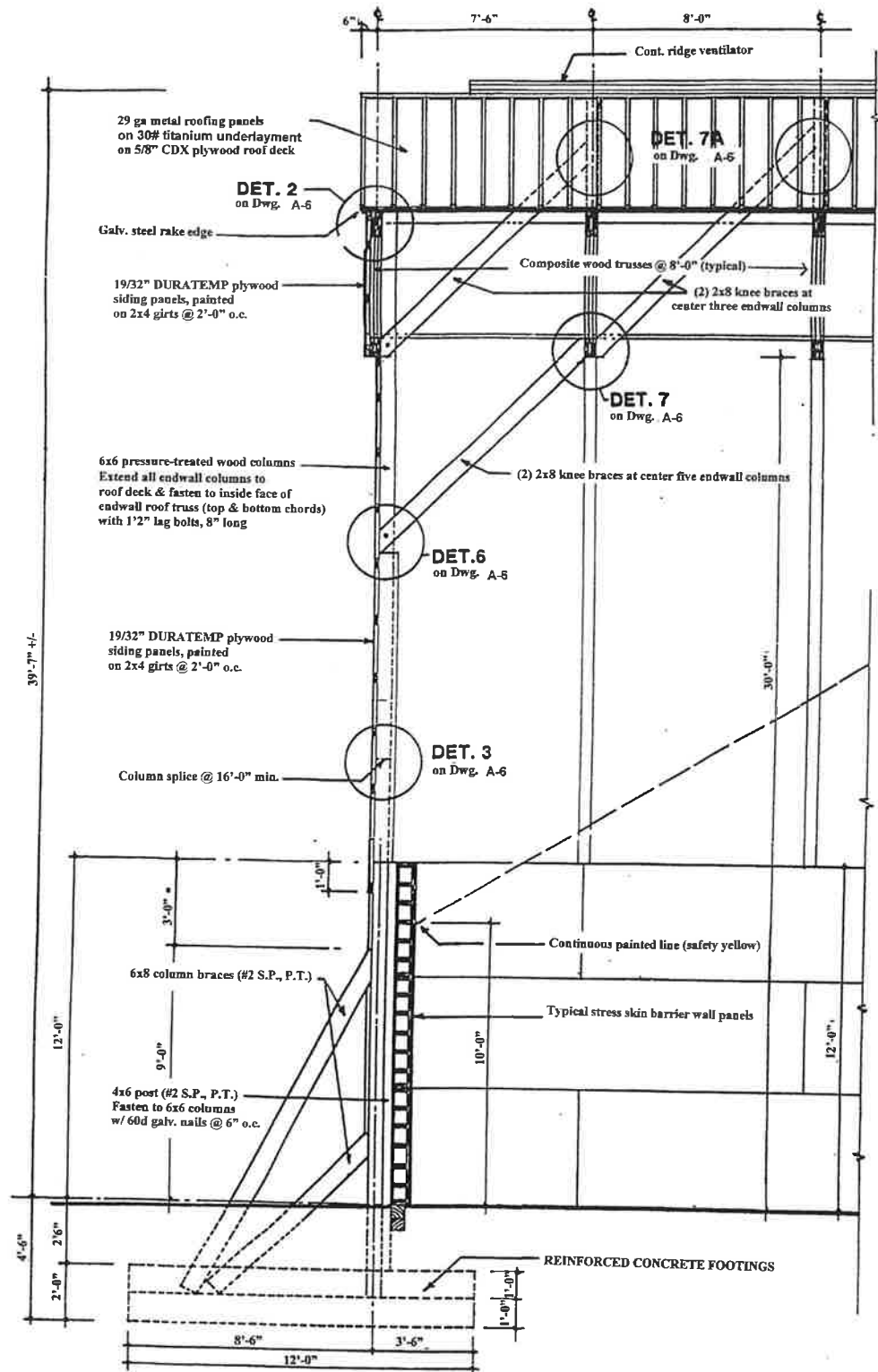


HUGH ARCH GAUBRELL  
U.S. PATENT NO. 4,433,117  
CANADIAN PATENT NO. 1,156,464  
REVISIONS

DRAWN	MO	JOB NO.
CHECKED	BB	14-278
SCALE	1/8" = 1'-0"	DWG. NO.
ISSUED	8/14/2014	A-4



**SECTION (1) THRU SIDEWALL** SCALE: 3/8" = 1'-0"  
 NOT FULLY APPLICABLE BECAUSE OF SIDEWALL LEAN-TOS



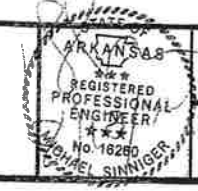
**SECTION (2) THRU ENDWALL** SCALE: 3/8" = 1'-0"

NEW 50' X 64' X 12'  
**SALT STORAGE BUILDING**  
 ARKANSAS HIGHWAY & TRANSPORTATION DEPT.  
 JACKSON COUNTY AREA HEADQUARTERS

TYPICAL WALL SECTIONS

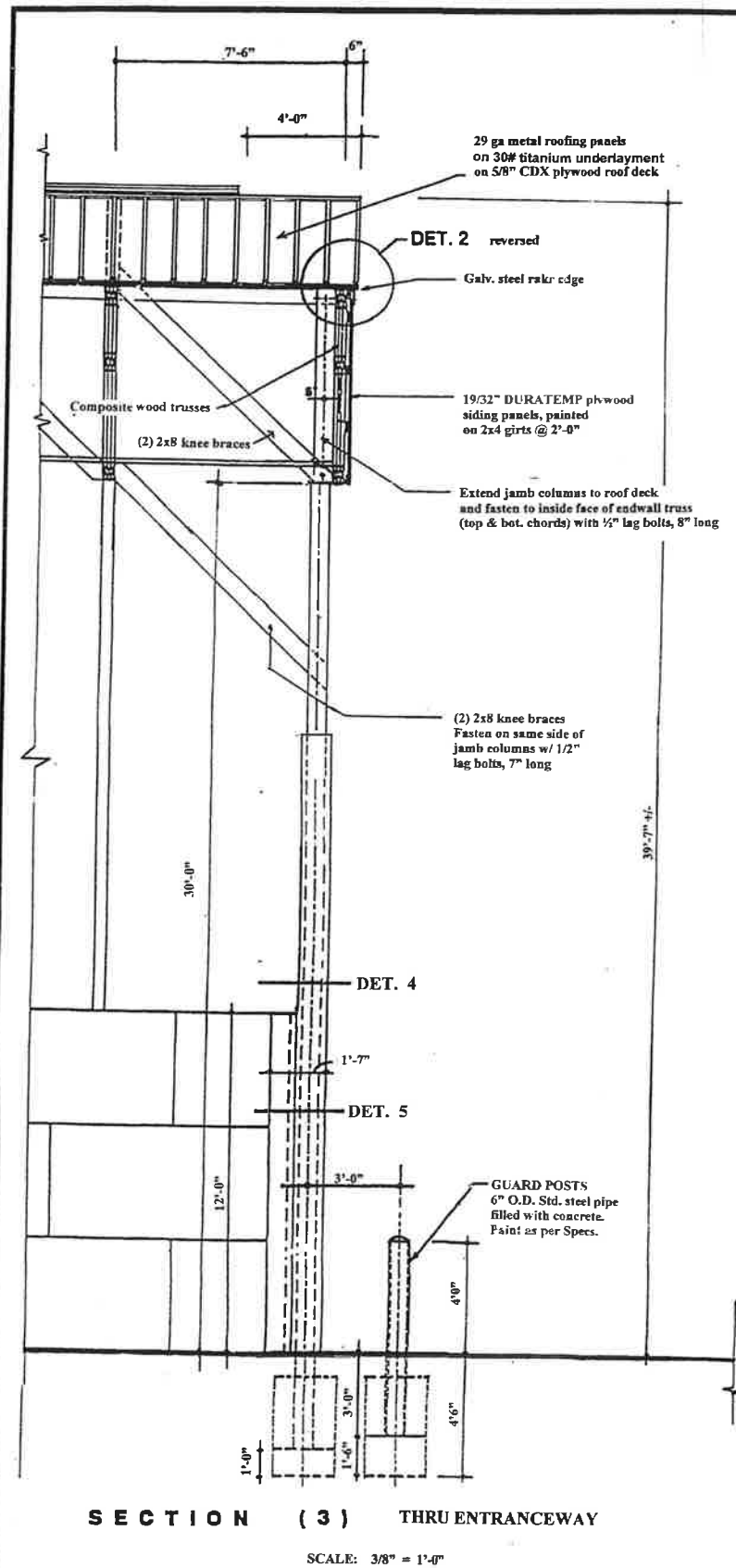
**AST**  
 ADVANCED STORAGE TECHNOLOGY, INC.  
 4053 Maple Rd. Suite 106  
 Amherst, NY 14226-1058  
 Tel. 716-833-6212  
 www.saltstorage.com

Michael A. Sinniger, P.E.

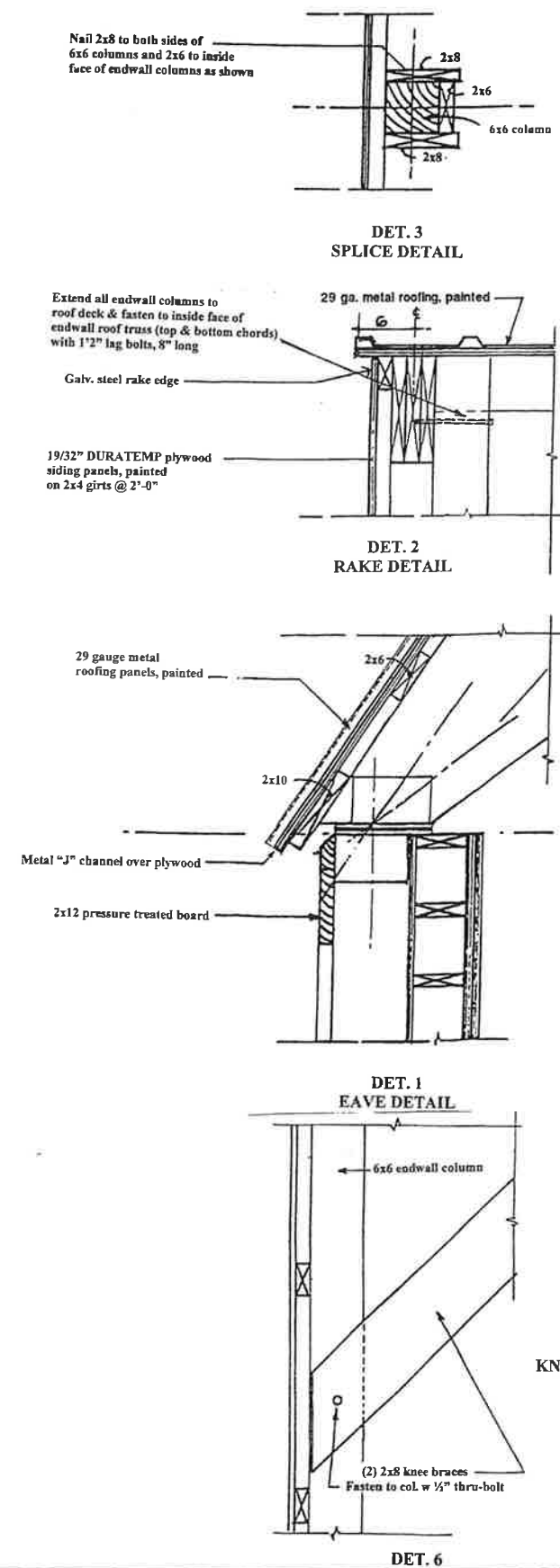


MARK LUCH GAMBREL  
 U.S. PATENT NO. 4,483,117  
 CANADIAN PATENT NO. 1,188,454  
 REVISIONS

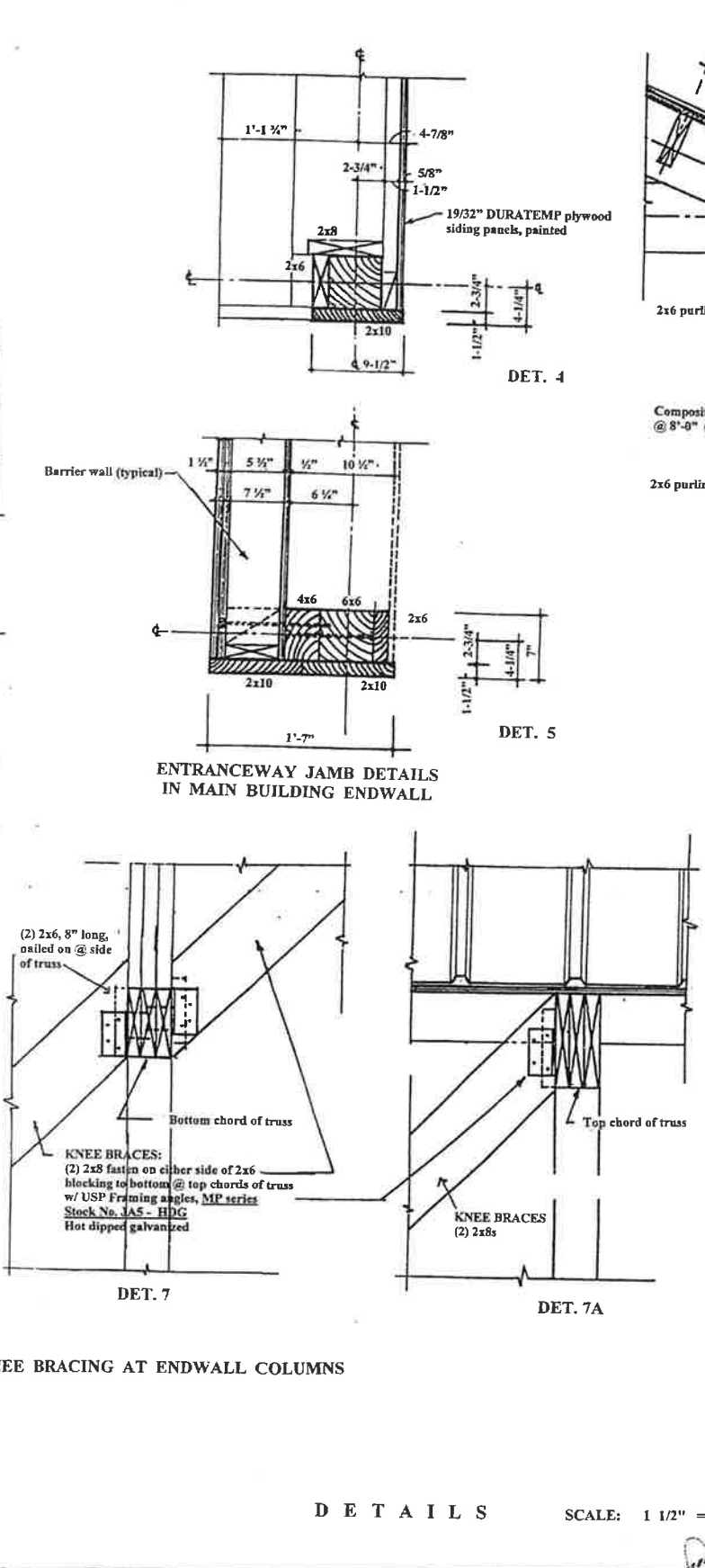
DRAWN	MO	JOB NO.
CHECKED	BB	14-278
SCALE	3/8" = 1'-0"	DWG. NO.
ISSUED	8/14/2014	<b>A-5</b>



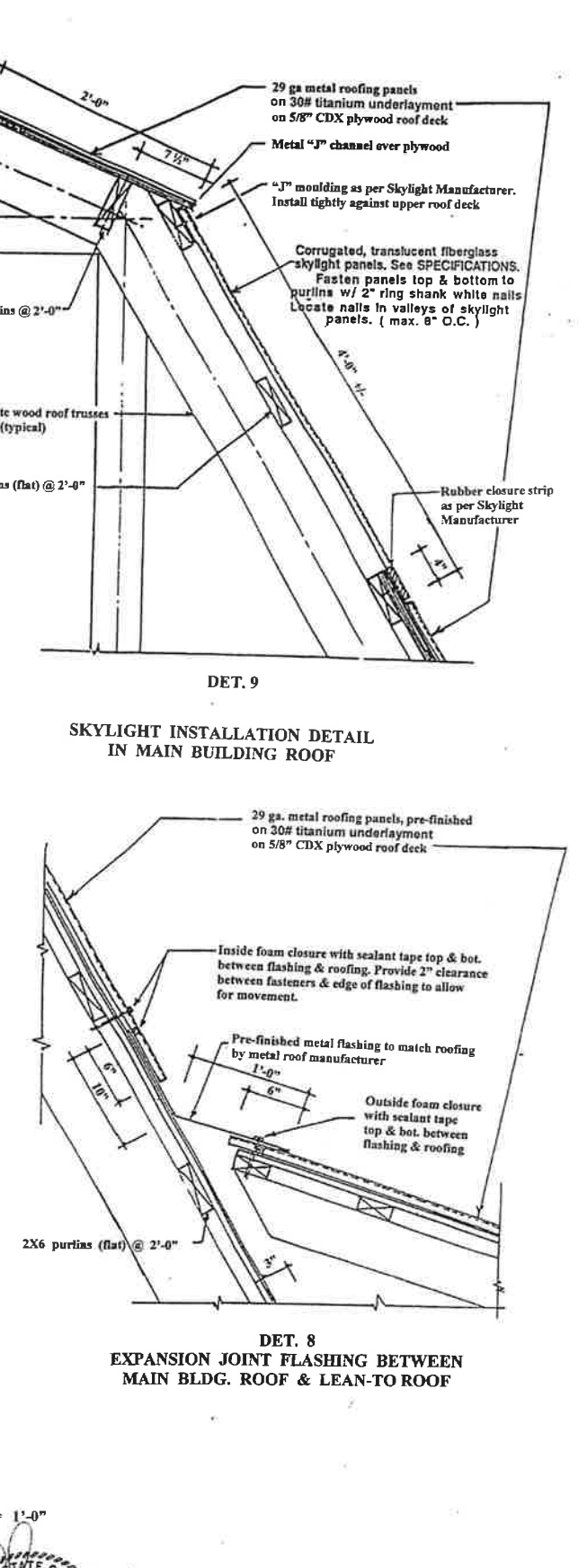
**SECTION (3) THRU ENTRANCEWAY**  
SCALE: 3/8" = 1'-0"



**DETAILS 1-3**



**DETAILS 4-7** SCALE: 1 1/2" = 1'-0"



**DETAILS 8-9**

NEW 50' X 64' X 12'  
**SALT STORAGE BUILDING**  
ARKANSAS HIGHWAY & TRANSPORTATION DEPT.  
JACKSON COUNTY AREA HEADQUARTERS

WALL SECTION & DETAILS

**AST**  
ADVANCED STORAGE TECHNOLOGY, INC.  
4053 Maple Rd. Suite 106  
Amherst, NY 14226-1058  
Tel. 716-833-8212  
www.saltstorage.com

Michael A. Sinniger, P.E.



1/2"=1'-0" GAUGE	U.S. PATENT NO. 4,483,117	CANADIAN PATENT NO. 1,196,464	REVISIONS
DRAWN	MO	CHECKED	BB
SCALE	AS NOTED	ISSUED	8/14/2014
JOB NO.	14-278	DWG. NO.	A-6

