TABLE OF QUANTITIES FOR OUTLET STRUCTURE

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excavation</td>
<td>Cub. yds</td>
<td>7/2</td>
</tr>
<tr>
<td>Concrete</td>
<td>Cub. yds</td>
<td>23.93</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>lbs.</td>
<td>154.32</td>
</tr>
<tr>
<td>Loose Rock Riprap</td>
<td>Cub. yds</td>
<td>6/2</td>
</tr>
</tbody>
</table>

NOTES:
1. Place bolts in the locations shown. The bolts, 3/4" dia., are to be set 6" in the concrete (if needed).
2. Place bolts in the locations shown. The bolts, 3/4" dia., are to be set 6" in the concrete (if needed).
# Contract Modification No. 1

**Watershed:** Home Supply  
**To:** Sundance Construction Company,  
Box 507, Palmer Lake, Colorado 80133

You are hereby requested to comply with the following:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Applicable General Provision</th>
<th>CHANGE</th>
<th>Increase in Contract Cost</th>
<th>Decrease in Contract Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>Modify the Lon Hagler Outlet Structure per attached drawings, sheets 13 &amp; 14.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Revise bid schedule quantities as follows:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increase concrete from 23.2 cu. yds. to 24.8 cu. yds.</td>
<td>$88.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.6 cu. yds. @ $55.00/cu. yds.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8a</td>
<td></td>
<td>Reinforcing Steel - 260 Lbs. - Job</td>
<td>52.00</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Wood Planks &amp; 18 galv. bolts - Job</td>
<td>50.50</td>
<td></td>
</tr>
</tbody>
</table>

**REVISED CONTRACT PRICE**  
Original Contract Price $3,569.27  
Revised Contract Price $3,759.77

**THIS MODIFICATION IS HEREBY MADE A PART OF THE CONTRACT.**

**Accepted:**  
Sundance, Aug 25, 68  
(Contractor)

**Approval:**  
July 29, 1968  
(State Administrative Officer)
CONSTRUCTION SPECIFICATION

15. TIMBER FABRICATION AND INSTALLATION

1. SCOPE

The work shall consist of the construction of timber structures and the timber portions of composite structures.

2. STRUCTURAL TIMBER AND LUMBER

Structural timber and lumber shall conform to the requirements of Material Specification 115. Treated timber and lumber shall be impregnated with the specified type and quantity of preservative and in the manner specified in Material Specification 116.

3. METAL HARDWARE AND ACCESSORIES

Hardware, except cast iron, shall be galvanized as specified for iron and steel hardware in Material Specification 119. Unless otherwise specified, structural steel shapes, plates and rods shall not be galvanized.

Bolts and nuts, driftbolts, dowels and screws shall be either wrought iron or medium steel. Unless otherwise specified bolts shall have square heads and nuts and both bolts and nuts shall be semi-finished, Class C steel, conforming to the requirements of Federal Specification FF-B-571.

Nails shall be common cut steel nails of standard form. Spikes shall be common cut steel spikes, round steel wire spikes, or wrought iron boat spikes with oval heads. Nails and spikes shall conform to the requirements of Federal Specification FF-S-606.

Washers shall be ogee gray iron castings or malleable iron castings unless washers cut from medium steel or wrought iron plate are specified on the drawings. Cast washers shall have a thickness equal to the diameter of the bolt and a diameter equal to four times the thickness. For plate washers the thickness shall be equal to one-half the diameter of the bolt, and the sides of the square shall be equal to four times the diameter of the bolt. Holes in washers shall be not more than one-eighth inch greater in diameter than the bolt. Split ring connectors, tooth ring connectors and pressed steel shear plate connectors shall be manufactured from hot-rolled, low carbon steel conforming to the requirements of ASTM Designation A 273, Grade 1015. Malleable iron shear plate connectors and spike grid connectors shall be manufactured in conformance with the requirements of ASTM Designation A 47, Grade No. 35018. All connectors shall be of approved design and the type and size specified.
Structural shapes, rods and plates shall be structural steel conforming to the requirements of Material Specification 117. No welds will be permitted in truss rods or other main members of trusses or girders.

4. WORKMANSHIP

All framing shall be true and exact. Timber and lumber shall be accurately cut and assembled to a close fit and shall have even bearing over the entire contact surfaces. No open or shimmed joints will be accepted. Nails and spikes shall be driven with just sufficient force to set the heads flush with the surface of the wood. Deep hammer marks in wood surfaces shall be considered evidence of poor workmanship and sufficient cause for rejection of the work. The workmanship on all metal parts shall conform to the requirements of Construction Specification 14.

Holes for round driftpins and dowels shall be bored with a bit one-sixteenth inch smaller in diameter than that of the driftpin or dowel to be used. The diameter of holes for square driftpins or dowels shall be equal to one side of the driftpin or dowel. Holes for machine bolts and rods shall be bored with a bit of the same diameter as that of the bolt. Holes for lag screws shall be bored with a bit not larger than the body of the screw at the base of the thread.

Washers shall be used in contact with all bolt heads and nuts that would otherwise be in contact with wood. Cast iron washers shall be used when the bolt will be in contact with earth. All nuts shall be checked or burred effectively with a pointed tool after being finally tightened.

Unless otherwise specified, surfaced, cutting and boring of timber and lumber shall be done before treatment. If cutting of treated timber and lumber is authorized, all cuts and abrasions shall be carefully trimmed and coated with not less than three brush coats of the same preservative used in the original treatment.

All recesses and holes cut or bored in treated timber and lumber shall be swabbed with not less than three coats of the same preservative used in the original treatment. After field treatment any unfilled holes shall be plugged with tightly fitting wooden plugs treated with the same preservative used in the original treatment.

5. HANDLING AND STORING MATERIALS

All timber and lumber stored at the site of the work shall be neatly stacked on supports at least twelve inches above the ground surface and protected from the weather by suitable covering. Un-
treated material shall be so stacked and stripped as to permit free circulation of air between the tiers and courses. Treated timber shall be close-stacked. The ground underneath and in the vicinity of all stacks shall be cleared of weeds and rubbish. The use of cant hooks, peavies, or other pointed tools, except end hooks will not be permitted in the handling of structural timber or lumber. Treated timber shall be handled with rope slings or other methods that will prevent the breaking or bruising of outer fibers, or penetration of the surface in any manner.

6. **PAINTING**

Surfaces designated for painting shall be painted in the manner specified in Construction Specification 23.

7. **MEASUREMENT AND PAYMENT**

(Method 1) The unit of measurement of lumber and timber will be the number of thousand feet board measure (MBM) of each type, size, species and grade of lumber and timber in place in the completed structure. The quantity of each type, size, species and grade will be computed from the nominal dimensions and actual lengths of the pieces in the completed structure and will not include waste timber used for erection purposes (such as falsework or temporary sheeting and bracing) or any portion of any pile or other round timber. The total quantity of lumber and timber in each type, size, species and grade will be computed to the nearest 0.1 MBM.

The unit of measurement of plywood will be the number of square feet of each type, species, grade and thickness in place in the completed structure.

Payment for each type, size, species and grade of lumber and timber will be made at the contract unit price for that type, size, species and grade. Payment for each type, species, grade and thickness of plywood will be made at the contract unit price for that type, species, grade and thickness. Such payment will be considered full compensation for all labor, equipment, transportation and materials and all other items necessary and incidental to the completion of the structure in place including hardware and accessories, paint and wood preservatives.

(Method 2) No measurement of material quantities will be made. Payment for each structure, complete in place, will be made at the contract lump sum price for that structure. Such payment will be considered full compensation for all labor, transportation, equipment and materials and all other items necessary and incidental to the completion of the work.
8. ITEMS OF WORK AND CONSTRUCTION DETAILS

Items of work to be performed in conformance with this specification and the construction details are:

a. Bid Item 12, Lumber

1. This item shall consist of furnishing and installing the lumber for catwalks.

2. Lumber shall be construction grade Douglas Fir.

3. All lumber shall be treated with coal-tar creosote or creosote-coal tar solutions with a minimum net preservative retention of 10 pounds per cubic foot.

4. Subsidiary Item - Galvanized bolts shall conform to construction specification 14.

5. Measurement and payment shall be by method 2a.
MATERIAL SPECIFICATION

115. STRUCTURAL TIMBER AND LUMBER

1. SCOPE

This specification covers the quality of structural timber, lumber and plywood used in the construction of permanent works of improvement.

2. GRADING

Structural timber and lumber shall be graded in accordance with the grading rules, applicable to the specified species, adopted by a lumber grading or inspection bureau or agency recognized as being competent and that conform to the basic provision of ASTM Designation D 245. The material supplied according to the commercial grading rules shall be of equal or greater stress value than the specified stress-grade.

Plywood shall be Douglas fir plywood conforming to the requirements of Commercial Standard CS 45, U. S. Department of Commerce, or western softwood plywood conforming to the requirements of Commercial Standard CS 122, U. S. Department of Commerce, whichever is specified.

3. QUALITY

All materials shall be sound wood free from decay. No boxed heart pieces of Douglas fir or redwood shall be used in stringers, floor beams, caps, posts, sills or other principal structural members. Boxed heart pieces are defined as timber so sawed that at any section in the length of a sawed piece the pith lies entirely inside the four faces.

4. HEARTWOOD REQUIREMENTS

All timber and lumber specified for use without preservative treatment shall contain not less than 75 percent heartwood on any diameter or on any side or edge, measured at the point where the greatest amount of sapwood occurs. This requirement shall not apply to timber and lumber for which pressure treatment with wood preservative is specified.

(115-1)

SCS-WEST 11-5-64
5. **SIZES**

The sizes specified are nominal sizes. Unless otherwise specified the material shall be furnished in American Standard dressed sizes.

6. **MARKING**

Each piece of timber and lumber shall be legibly stamped or branded with an official grade mark. Plywood shall be legibly stamped with an official mark designating the grade, type and surface finish as described in the cited Commercial Standards.
MATERIAL SPECIFICATION

116. WOOD PRESERVATIVES AND TREATMENT

1. SCOPE
This specification covers the quality of wood preservatives and methods of treatment of wood products.

2. TREATING PRACTICES
Treating practices and sampling, inspection and test procedures shall conform to the requirements of Federal Specification TT-W-571, "Wood Preservation: Treating Practices."

3. PRESERVATIVES
The wood shall be treated with the specified type of preservative. Wood preservatives shall conform to the requirements of the applicable specifications listed in Federal Specification TT-W-571, Section 2.1.

4. QUALITY OF TREATED MATERIALS
Treated lumber, timber, piles, poles, or posts shall be free from heat checks, water bursts, excessive checking, results of chafing or from any other damage or defects that would impair their usefulness or durability for the purpose intended. The use of "s" irons will not be permitted. Holes bored for tests shall be filled with tight fitting treated plugs.

5. INSPECTION, TESTING, CERTIFICATION AND MARKING
Treated wood products shall be inspected and tested by the methods prescribed in Federal Specification TT-W-571, Section 4.2. The material certification shall include a certified report from the treatment plant stating the amount and character of treatment applied to the materials. Each treated wood item delivered to the job site shall be marked as specified in Federal Specification TT-W-571, Section 3.7.

(116-1)
The change in plans, submitted from the Design Section, incorporates added stilling features to the structure.

Increased quantities and cost are estimated as follows:

Concrete - 1.6 cu. yds. @ $55.00/cu. yd. = $88.00
Reinforcing steel - 260 Lbs. @ $0.20 = 52.00
Wood Planks - 67.5 bdf @ $0.60 = 40.50
18 bolts - Job = 10.00

$190.50