

TRACTOR'S SUBMITTAL TRANSMITTAL
DIV 4-4355/3 (Rev. 6/76)

40/2
02A

FROM CONTRACTOR
Trader Construction Company
 TO
Lockwood Greene/Six Associates

CONTRACT NO. **81-C-1766**
 TRANSMITTAL NO. **39F**
 PROJECT TITLE AND LOCATION
Public Works
MCB
Camp Lejeune, N.C.
 DATE
April 17, 1984

CONTRACTOR USE ONLY
 *List only one specification division per form.

Contractor Approved

List only one of the following categories on each transmittal form, and indicate which is being submitted

OICC Approval

Deviation/Substitution For OICC Approval

REVIEWER USE ONLY

**ACTION CODES
 A-Approved
 D-Disapproved
 AN-Approved as noted
 RA-Receipt acknowledged.
 C-Comments
 R-Resubmit

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	REVIEWER USE ONLY	
				ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
132	07410	Letter from Manufacturer on salt spray & Abrasion resistance	7	RA	406 CMT 5/4/84
		Copies of Naval specification on the above	7	RA	406 CMT 5/4/84

CONTRACTOR'S COMMENTS

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC
ROICC, Camp Lejeune, N.C.

DATE RECEIVED BY REVIEWER
26 APR 84

FROM (Reviewer)
LANTDIV

CONTRACTOR REPRESENTATIVE (Signature)
Kale Stallman
 TO
TRADER / ROICC

Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
 Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

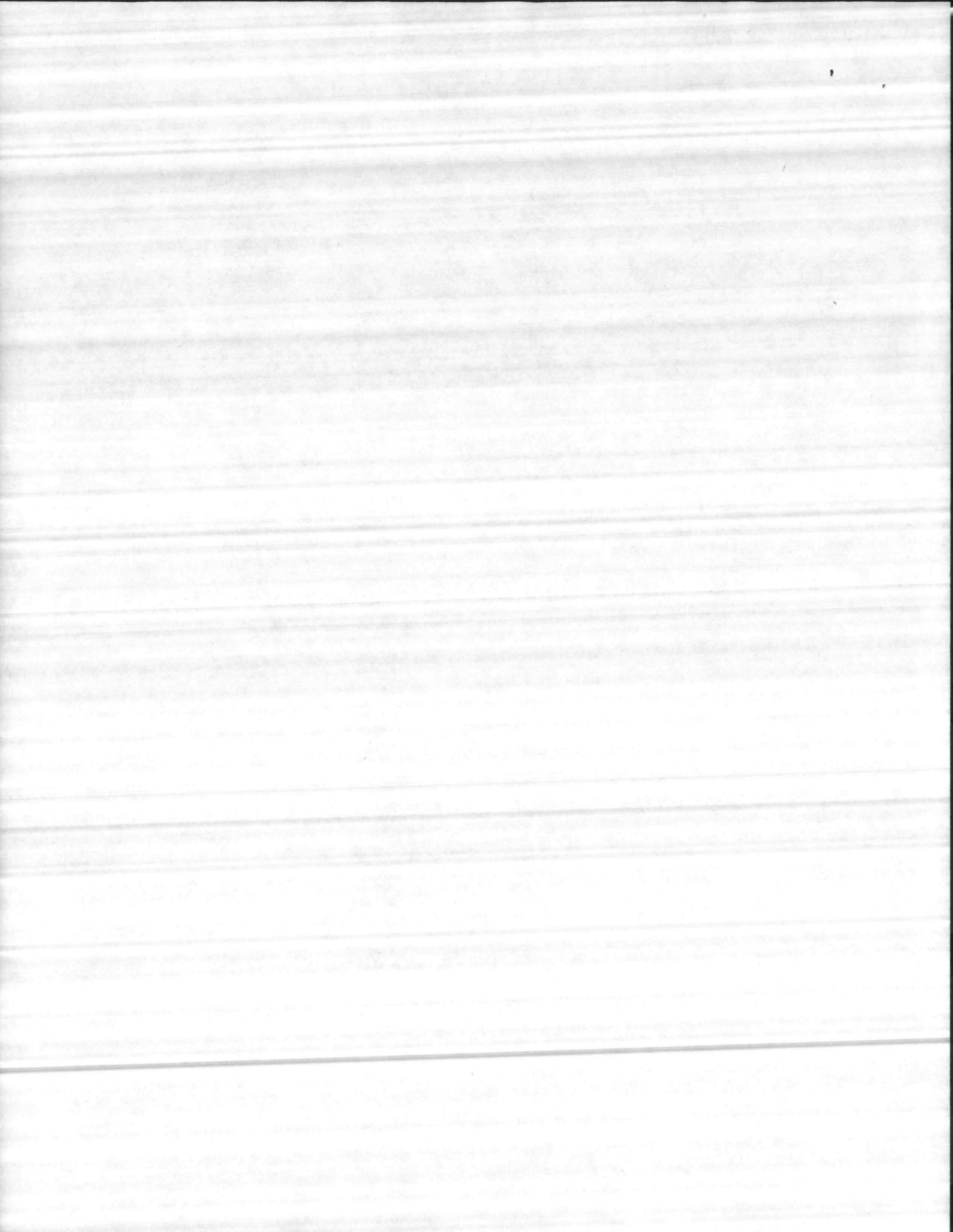
REVIEWER'S COMMENTS
DEVIATIONS FROM SPECIFIED TEST RESULTS IS APPROVED (SALT SPRAY & ABRASION RESISTANCE) NO CHANGE IN COST OR TIME.

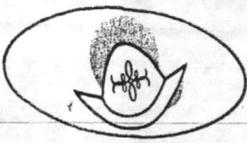
0:
2 (2)
3/4 (1)

DATE
4 MAY 84

SIGNATURE
[Signature]

*CFP
 Filed
 5-16-84
 Mew*





DeSoto, Inc.

ADMINISTRATIVE AND RESEARCH CENTER

1700 SOUTH MOUNT PROSPECT ROAD, DES PLAINES, ILLINOIS 60018 TELEPHONE 312-391-9000

February 28, 1984

Ed Williams
Duraseal Corp.
P.O. Box 128
Kinston, NC 28501

Re: Public Works Building
Camp Lejune, N.C.

Dear Mr. Williams:

The following are our opinions regarding certain portions of the Navy specification for the above building.

"It is hereby certified that the (equipment) (material) shown and marked in this submit-
tal is that proposed to be incorporated into
Contract Number N62470-81-C-1766 in
compliance with the Contract drawings and
specifications, can be installed in the allocat-
ed spaces, and is submitted Government
approval.

Certified by D. Stallings

Date 4-2-84

1. Abrasion resistance. 100 liters of sand is meaningless unless the film thickness in mils is stated. In order to follow ASTM D-968, the results must be calculated and stated as a coefficient of abrasion, which is volume of sand in liters divided by film thickness in mils.
2. Salt spray. Because of the varying nature of G-90 hot dipped galvanized steel, we feel that 3/16" creepage from the scribe and a few #8 blisters on the field is representative of coated metal now being marketed. These are average results from our testing of coated HDG over the years. At times the results are better and occasionally worse.

As I explained during our conversation, the Navy has rewritten certain roofing and siding specifications now in effect at the Kings Bay Trident Submarine Base in Kings Bay, GA.

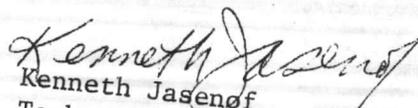
Both specifications allow for some field blistering and more creep on the score in the B-117 salt spray test.

The abrasion resistance now calls for a coefficient of abrasion and not just liters of sand.

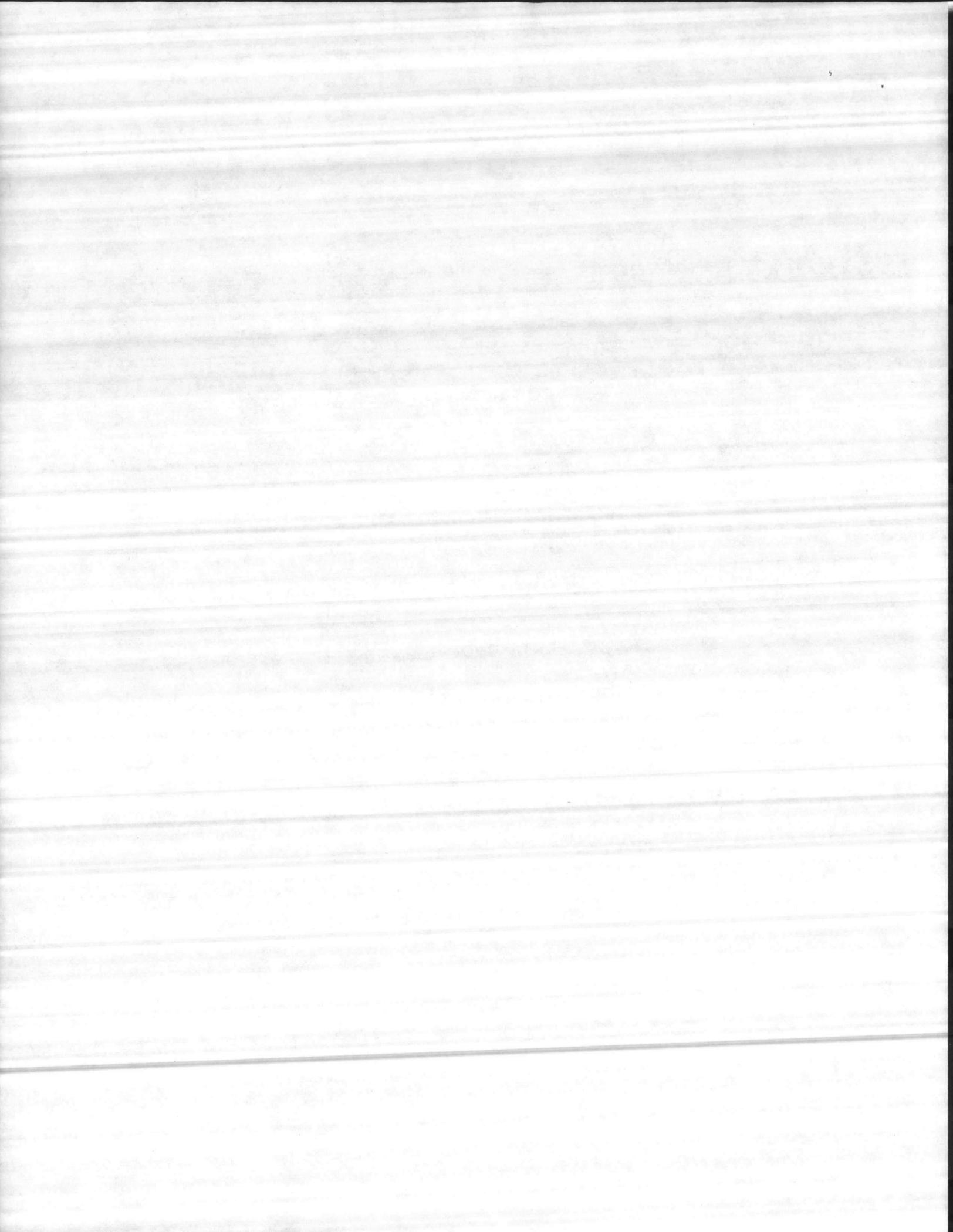
I have enclosed copies for your review.

Please contact me if you have any further questions.

Sincerely,


Kenneth Jasenof
Technical Manager-Coil Coatings

KJ:ak
Enclosures



Date _____
Approved by _____
SECTION 07410

07410KB
(FEB 84)

PREFORMED METAL [ROOFING] [AND] [SIDING]

(B)
(A)
(C)

PART 1 - GENERAL
1.1 APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

1.1.1 Federal Specification (Fed. Spec.):
TT-C-1796A

Calking Compounds, Metal Seam and Wood Seam

1.1.2 American Society for Testing and Materials (ASTM) Publications:
A 366-72
(R 1979)

Steel-Sheet, Carbon, Cold-Rolled Sheet, Commercial Quality

A 446-76
(R 1981)

Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality

B 117-73
(R 1979)

Salt Spray (Fog) Testing

B 209-82B

Aluminum and Aluminum-Alloy Sheet and Plate
Specular Gloss

D 523-80

Evaluating Degree of Chalking of Exterior Paints
Evaluating Degree of Blistering of Paints

D 659-80

Operating Light- and Water-Exposure Apparatus (Carbon-Arc Type) for Testing Paint, Varnish, Laquer, and Related Products

D 714-56
(R 1981)

Abrasion Resistance of Coatings by the Falling Abrasive Tester

D 822-80
(R 1981)

Painted or Coated Specimens Subjected to Corrosive Environments

D 968-81

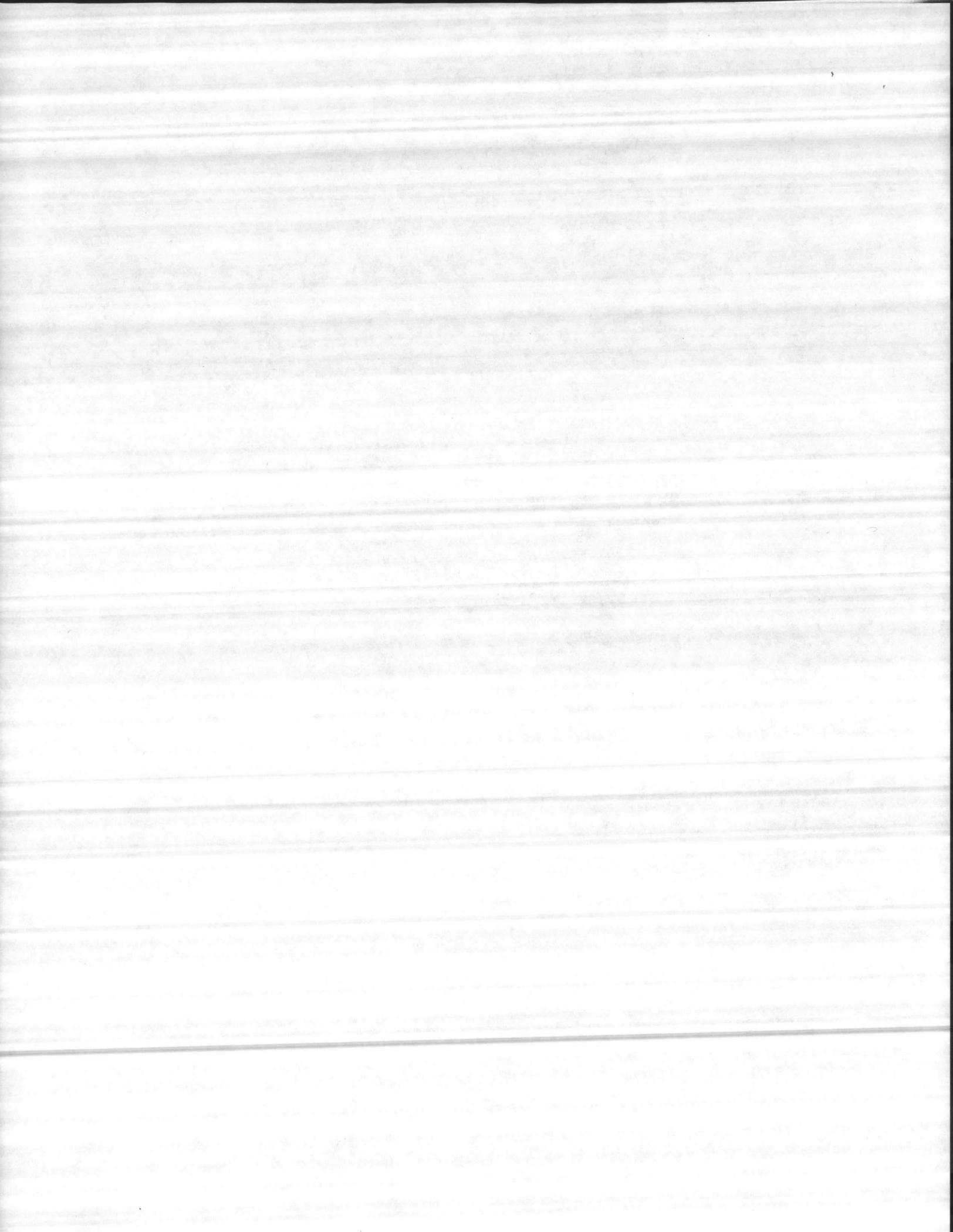
Elongation of Attached Organic Coatings with Cylindrical Mandrel Apparatus

D 1654-79A

Coated Metal Specimens at 100 Percent Relative Humidity

D 1737-62
(R 1979)

D 2247-68
(R 1980)



E 84-81A

G 23-81

Surface Burning Characteristics of Building Materials
Operating Light-Exposure Apparatus (Carbon-Arc Type)
With and Without Water for Exposure of Nonmetallic
Materials

1.2 SUBMITTALS:

1.2.1 Descriptive Data: Submit descriptive data on materials to be provided. Data shall be sufficient to indicate conformance to specified requirements.

1.2.2 Installation Instructions and Diagrams: Submit instructions and diagrams required to install components, including the following:

- a. Fastener layouts and sizes
- b. Joint sealing
- c. Flashings
- d. Accessory installation
- e. Details and instructions necessary for complete installation
- f. Shop drawings as necessary to supplement the instructions and diagrams, if required for proper installation of the preformed sheets

1.2.3 Certificates: Submit certificated laboratory test reports for required tests specified herein.

1.2.4 Samples: Submit one sample of each color selected for verification that finishes match the colors indicated.

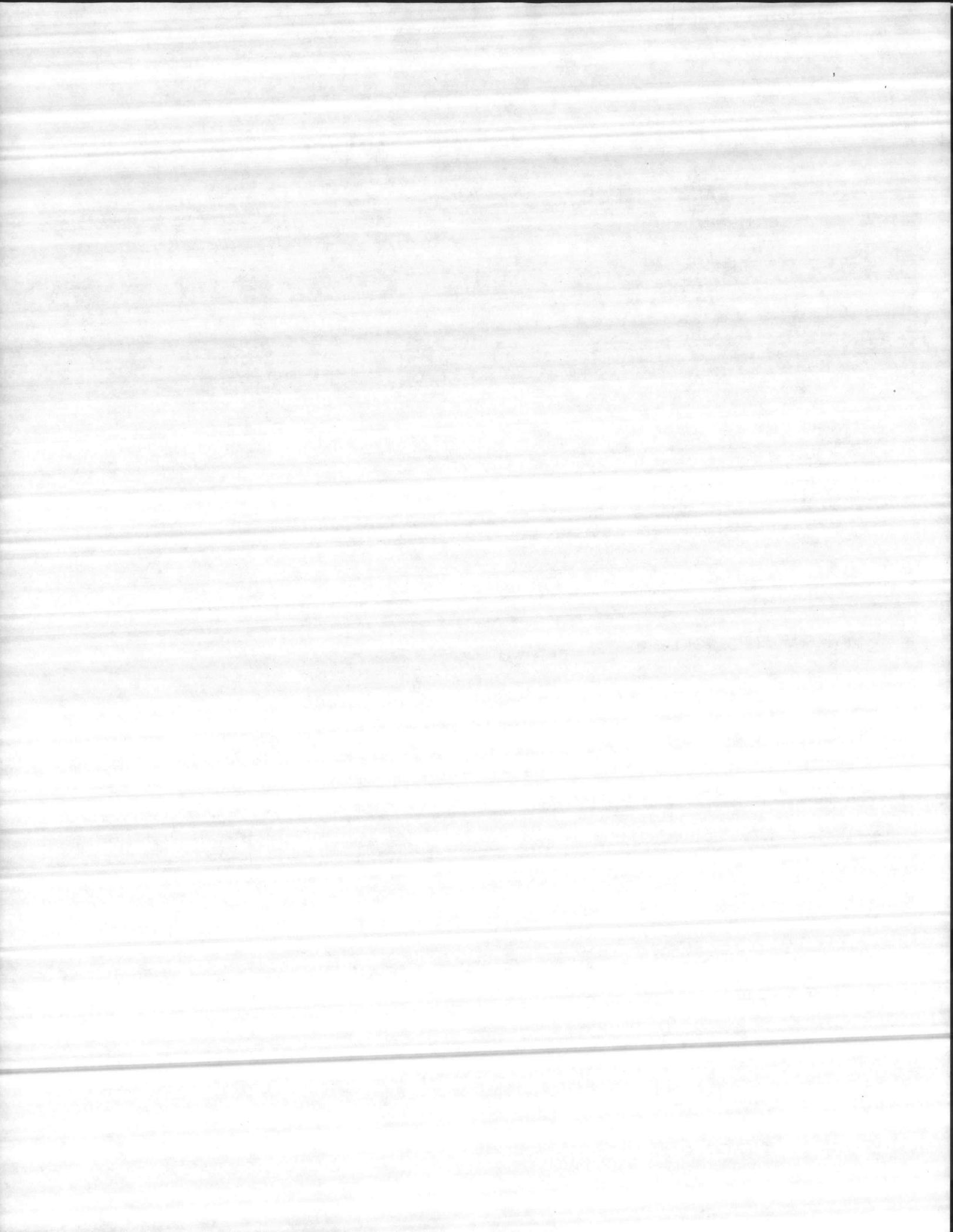
1.3 DELIVERY AND STORAGE: Deliver, store, and handle preformed sheets and other manufactured items so that they will not be damaged or deformed. Stack materials stored on the site on platforms or pallets and cover with tarpaulins or other suitable weathertight covering. Store all metal sheets so that water which might have accumulated during transit or storage will drain off; do not store the sheets or panels in contact with materials that might cause staining. Inspect the sheets upon arrival; if wet, remove the moisture and restack and protect the sheets until used.

1.4 FACTORY TESTS: The manufacturer shall have conducted tests on previously manufactured sheets of the same type and finish as proposed for the project to assure conformance. The term "appearance of base metal" refers to the [aluminum base metal] [or] [the galvanized coating on steel]. Sheets shall pass the following tests:

1.4.1 Salt Spray Test: A sample of the sheets shall withstand a salt spray test for a minimum of 1000 hours in accordance with ASTM B 117, including the scribe requirement in the test. Immediately upon removal of the panel from

Date _____
4-2-84
Certified by D. Johnson
Contract for work shown on drawings and specifications, and is certified Government approval.
"It is hereby certified that the equipment (material) shown and marked in the equipment tag is that produced and incorporated into the project as indicated on drawings and specifications, and is certified Government approval."
81-5-176

(D)



the test, blistering shall not exceed 5 percent No. 6 blisters in the field (ASTM D 1654). No more than 1/8 inch creep corrosion and tape-off from area scribed to base metal.

1.4.2 Formability Test: When subjected to a 180 degree bend over a 1/8-inch-diameter mandrel in accordance with ASTM D 1737, exterior coating film shall show only slight microchecking of the exterior film and there shall be no loss of adhesion.

1.4.3 Accelerated Weathering Test: A sample of the sheets shall withstand a weathering test a minimum of 2000 hours in accordance with ASTM D 822 apparatus D, for 2000 hours, there shall be no more than slightly perceptible color change or chalking. There shall be no checking nor adhesion loss. Protective coating that can be readily removed from the base metal with a penknife blade or similar instrument shall be considered to indicate loss of adhesion.

1.4.4 Chalking Resistance: After the 2000-hour weatherometer test, exterior coating shall not chalk greater than No. 8 rating when measured in accordance with ASTM D 659 test procedures.

1.4.5 Color Change: After the 2000 hour weatherometer test, exterior coating color change shall not exceed 3 NBS units when measured in accordance with ASTM G 23 test procedure.

1.4.6 Coefficient of Abrasion Resistance Test for Color Coating: When subjected to the falling sand test in accordance with ASTM D 968, coating system shall provide a coefficient of abrasion of not less than 65.

1.4.7 Humidity Test: When subjected to a humidity cabinet test in accordance with ASTM D 2247 for 1000 hours, the coating shall show no softening or color change and there shall be a minimum of 95 percent of the area with no blisters. No blisters shall be larger than ASTM No. 8 when evaluated in accordance with ASTM D 714.

1.4.8 Fire Hazard: Factory-fabricated sheets shall have a flame spread rating of not more than 50 when tested in accordance with ASTM E 84. *(Material shown and the ASTM E 84 submitted is that proposed to be incorporated into the contract drawings and specifications, can be installed in the allocated spaces, and is submitted for Government approval.)*

1.4.9 Gloss: The gloss of the finished surface shall be a minimum of 80 percent in accordance with ASTM D 523. *(Contract drawings and specifications, can be installed in the allocated spaces, and is submitted for Government approval.)*

PART 2 - PRODUCTS:

2.1 MATERIALS:

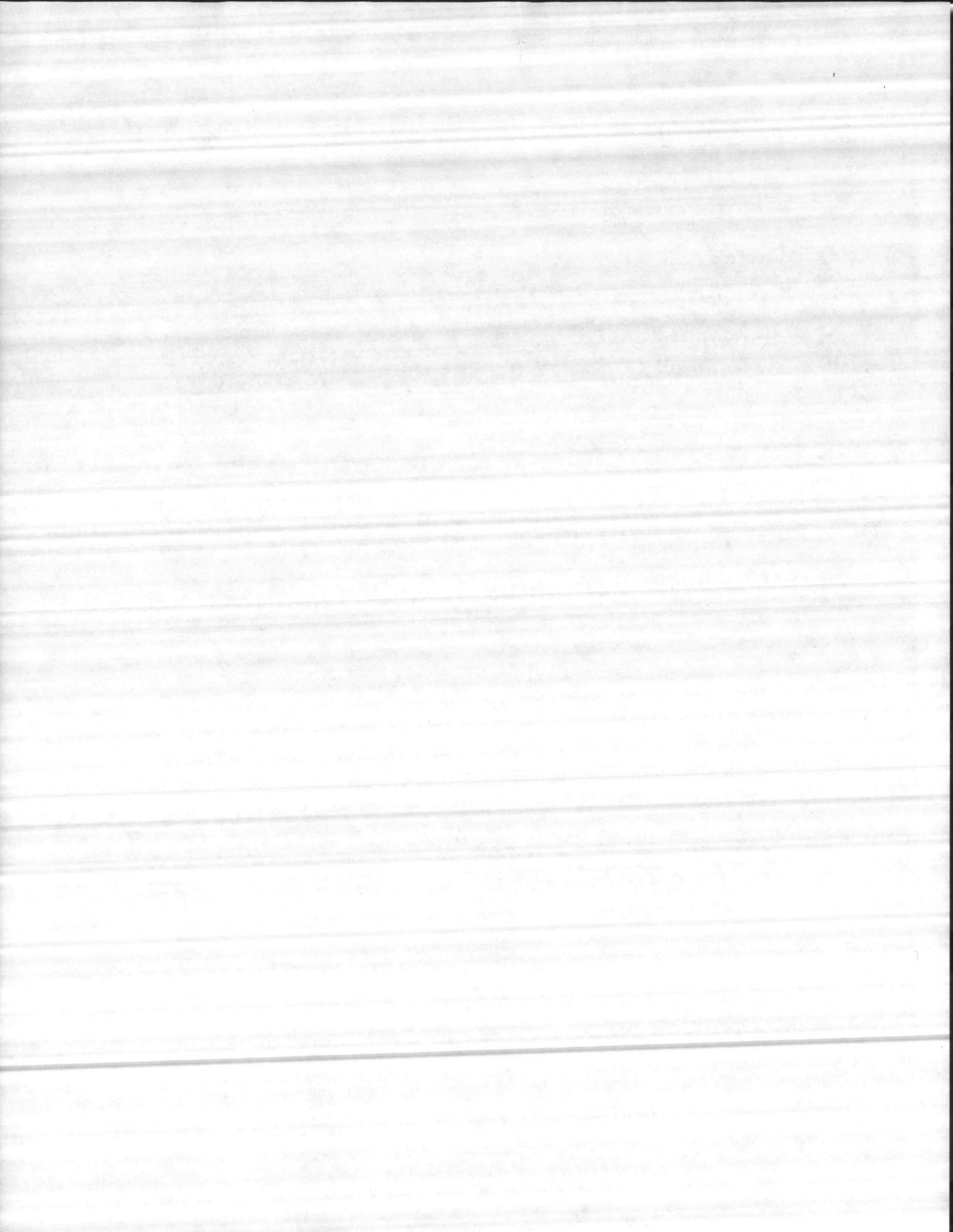
2.1.1 Prefinished [Roofing] [and] [Siding] Sheets: "Formed or coated" steel. Sheets shall be capable of supporting design loads between unsupported spans with deflection of not greater than 1/120 of the span width on walls and not greater than 1/180 of the span width on roofs, but in no case shall the wall thickness of the sheets be less than specified herein. Where gages are specified, they are subject to normal manufacturing tolerances.

"It is hereby certified that the flame spread rating of not more than 50 when tested in accordance with ASTM E 84 submitted is that proposed to be incorporated into the contract drawings and specifications, can be installed in the allocated spaces, and is submitted for Government approval."

Certified by D. Stallings
Date 4-2-84

(E)

(F)



It is hereby certified that the (equipment) (material) shown and marked in this submittal is that proposed to be incorporated into

07410KB
(FEB 84)

Contract Number N000170-81-C-1766

2.1.1.1 Coated steel sheets for siding shall be sloped-rib type. Ribs shall be 8 inch or 9 inch o.c. and 1 1/2 inch in depth. Sheets for roofing shall be rib type. Ribs shall be 12 inch o.c. Form sheets of galvanized steel conforming to ASTM A 366 or ASTM A 446, coating class G90. Steel sheets shall be not lighter than 22-gage for roofing and not lighter than 24 gage for siding, but in no case lighter than required to meet the deflection requirements specified herein for maximum deflections.

2.1.1.2 Coating systems: Sheets shall be prefinished with one of the following coating systems. Color shall be as indicated.

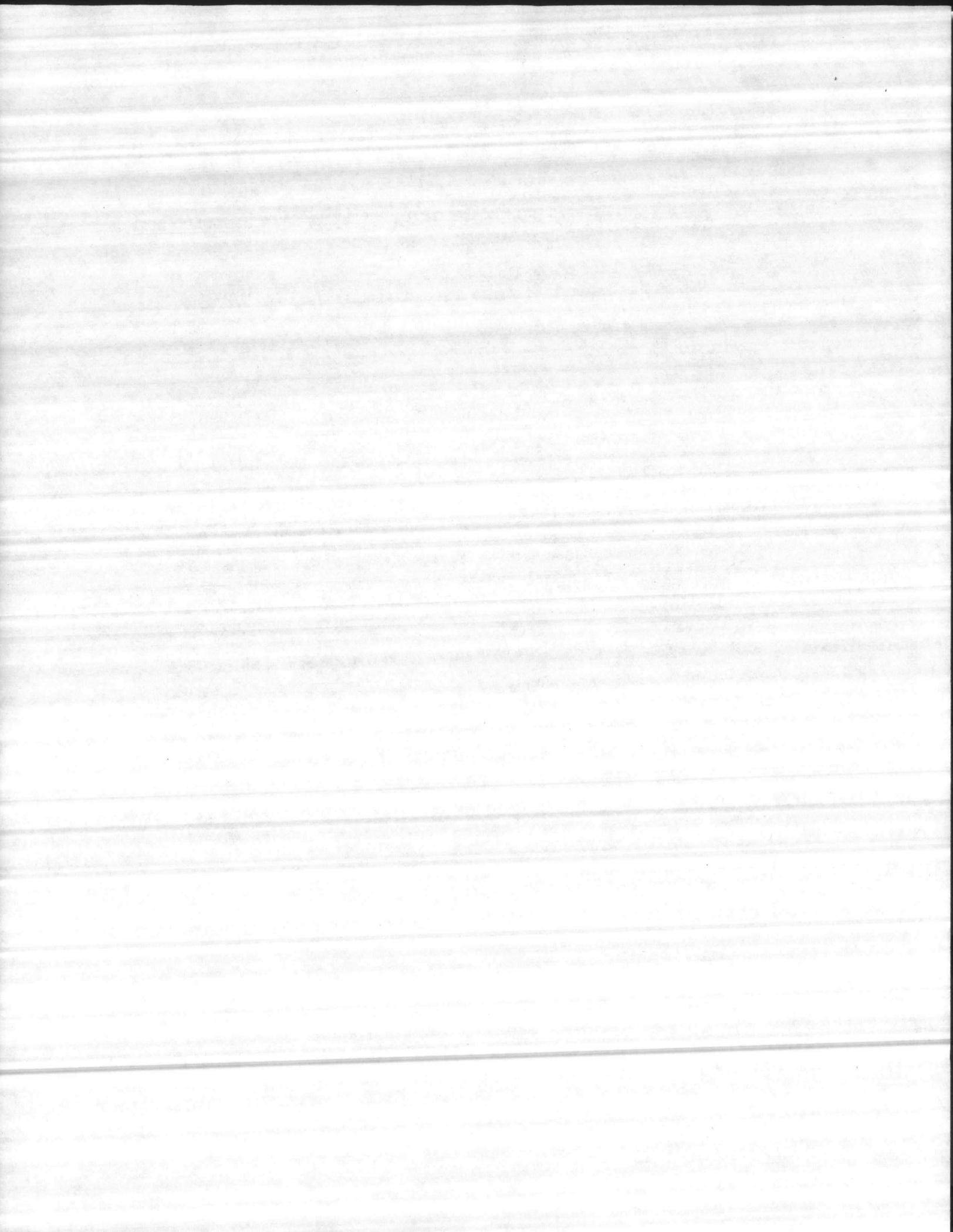
- a. Factory applied base coat of epoxy to a total dry film thickness of 3 mils ± 0.2 mil on both sides. With a final color coating of modified polyester in a nominal thickness of 6 mils on both sides of the sheet.
- b. Factory applied chromate-bearing epoxy prime coat with a minimum dry film thickness of .2 mils on both sides with a final color coating of pigmented urethane applied to a dry film thickness of .8 mils both sides.
- c. Factory applied prime coat to a total dry film thickness of .2 - .3 mils on both sides. With a final color coating of 70 percent polyvinylidene fluoride in a thickness of not less than 0.75 mils on both sides of the sheet.

(G)

2.1.2 Accessories: Sheet metal flashings, trim, moldings, closure strips, caps, and other similar sheet metal accessories used in conjunction with preformed metal sheets shall be of the same material and finish as used for the sheets, except that such items which will be concealed after installation may be provided without the finish if they are aluminum or zinc-coated steel. Metal shall be of thickness not less than that used for the sheets. Molded closure strips shall be closed-cell or solid-cell synthetic rubber, neoprene, or polyvinyl chloride premolded to match the configurations of the preformed metal sheets.

2.1.3 Fasteners: Fasteners for attachment to structural supports and fasteners for attachment to adjoining sheets or panels shall be as approved and in accordance with the manufacturer's recommendation. Unless specified otherwise herein, the fasteners shall be either self-tapping screws, bolts and nuts, self-locking rivets, self-locking bolts, end-welded studs, bolted or riveted studs, or step rivets held by aluminum straps. Design the fastening system to withstand the design loads indicated. Fasteners shall be Series 305 stainless steel or aluminum. Fasteners, with the exception of those having integral hex washer heads and those having aluminum drive caps, shall have composite metal and neoprene composition washers. Fasteners having integral hex washer heads and fasteners having aluminum drive caps shall have polychloroprene washers. [Heads of screws or bolts exposed on exterior face of factory-finished wall coverings shall be nylon headed to match color of coverings.]

2.1.3.1 Screws: Not less than No. 14 diameter self-tapping type or self-drilling and self-tapping type.



Contract Number 100170-81-C-1766

07410KB
(FEB 84)

... certified that the (equipment) ... and marked in this submittal is that proposed to be incorporated into ... structural supports ... movement as standard with ... drawings and ... in the allocation spaces, and is submitted Government approval.

2.1.3.2 Fasteners for attachment of roofing sheets shall be designed and installed to allow for thermal movement as standard with manufacturer.

2.1.3.3 Blind Rivets: ~~Blind Rivets~~ Blind Rivets shall be 1/8-inch nominal diameter shank or aluminum with 1/8-inch diameter shank. ~~Use of headed stem type rivets for other than the fastening of trim.~~ Rivets with hollow stems shall be closed.

2.1.3.4 Bolts: Not less than 1/4-inch diameter, shouldered or plain shank as required, with proper nuts.

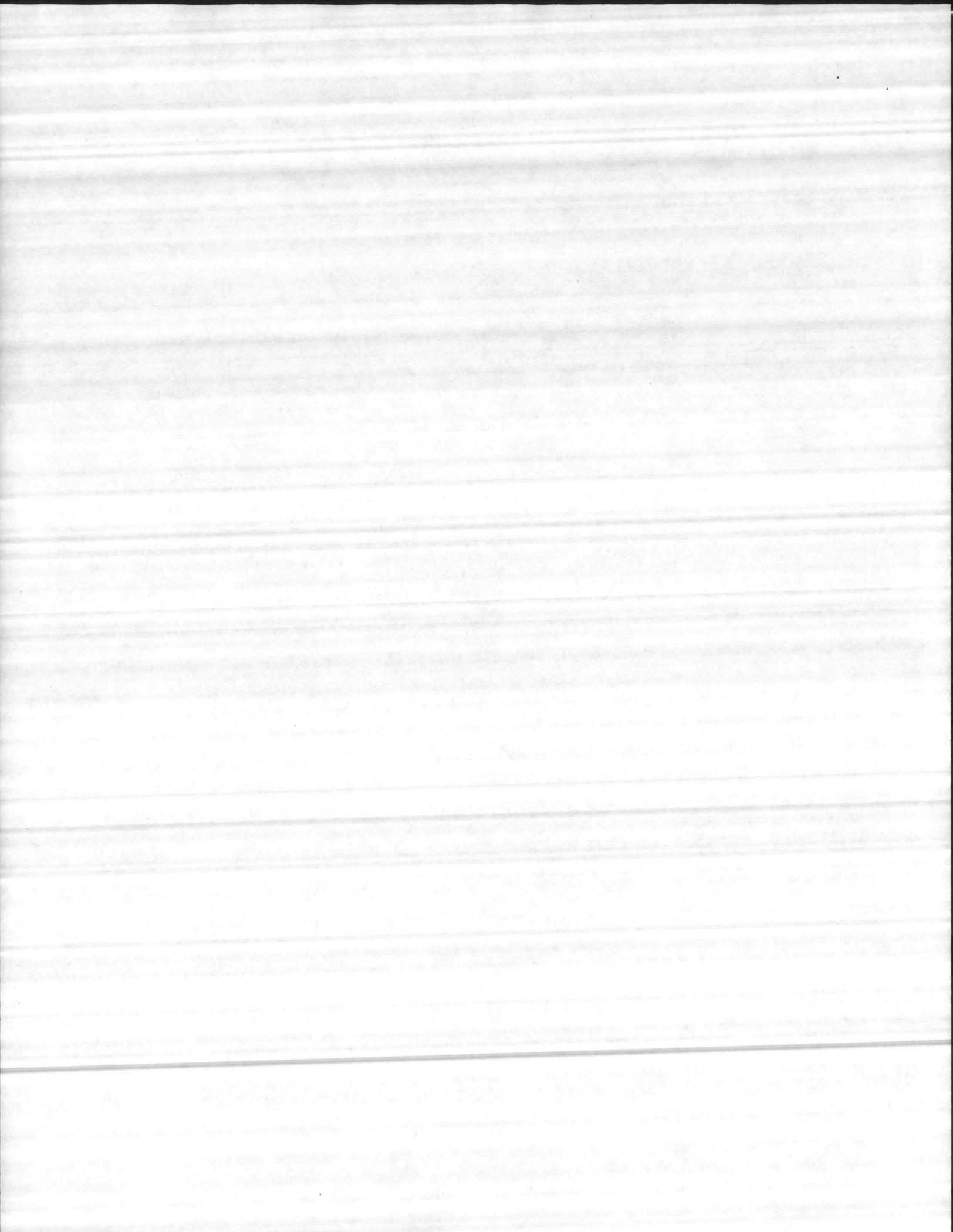
2.1.4 Joint Sealing Material: Fed. Spec. TT-C-1796, Type II, Class B ribbon form sealant[, except that it shall not contain bituminous type materials.]

PART 3 - EXECUTION:

3.1 INSTALLATION: Install in accordance with the manufacturer's approved erection instructions and diagrams, except as specified otherwise herein. Panels shall be in full and firm contact with supports and with each other at side and end laps. Where sheets are cut in the field, they shall, after the necessary repairs have been made with material of the same type and color as the weather coating, be approved before being installed. All cut ends and edges, including those at openings through the sheets, shall be sealed completely. Replace defective materials with nondefective materials. Provide molded closure strips where indicated and whenever sheets terminate with open ends after installation.

3.1.1 Wall Sheets: Apply sheets with the configurations in a vertical position. Provide sheets in [the longest obtainable lengths, with end laps occurring only at structural members] [full wall heights from base to eave with no horizontal joints except at the junctions of door frames, window frames, louver panels, and similar locations]. Seal side and end laps with joint sealing material. Flash and/or seal walls at the base, at the top, around windows, door frames, framed louvers, and other similar openings. Place closure strips, flashing, and sealing material to assure complete weathertightness. Flashing will not be required where approved "self-flashing" sheets or panels are used. Minimum end laps for all types of sheets shall be 4 inches and shall occur only over girts. Minimum side laps shall be one corrugation or one configuration.

3.1.2 Roof Sheets: Apply roofing sheets with the configurations parallel to the slope of the roof. Provide roofing sheets in [the longest lengths obtainable, with end laps occurring only at structural members] [full lengths from ridge [or ridge panel] to eaves [top to eaves on shed roofs], with no transverse joints except at the junction of ventilators, curbs, skylights, chimneys, and similar openings]. Lay all side laps away from the prevailing wind and seal side and end laps with joint sealing material. Flash and seal the roof at the ridge, at eaves and rakes, at projections through the roof, and elsewhere as necessary. Accomplish the placement of closure strips, flashing, and sealing material in an approved manner that will assure complete

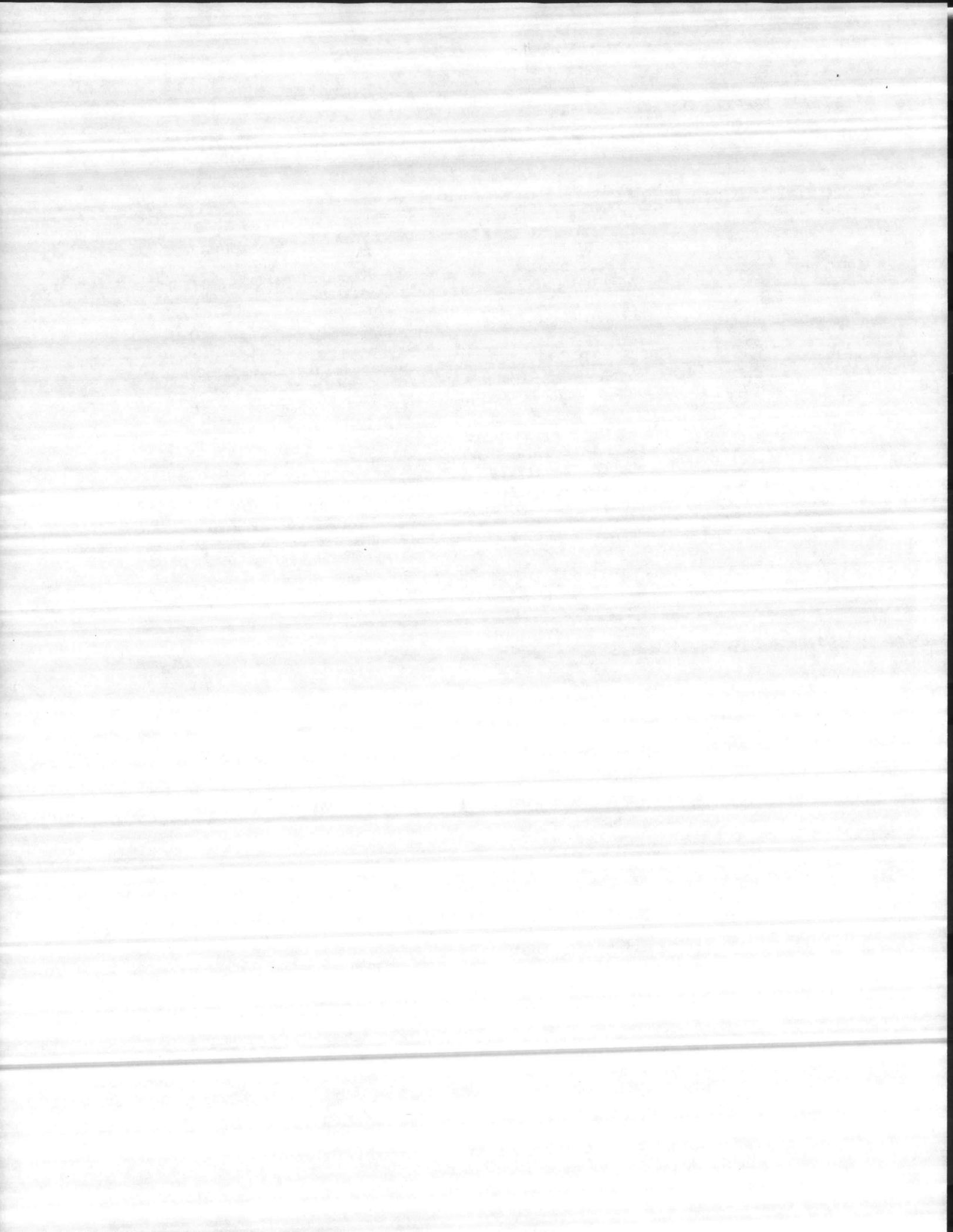


"It is hereby certified that the (equipment
(material) shown and marked in this submit-
tal is that proposed to be incorporated into

Contract Number DD Form 139-100-100-100 is in
Minimum side lap shall be one corrugation or interlocking
rib) [, except for standard corrugated sheets]. [End laps
shall be not less than 8 inches and shall occur only over purlins.]
approval.

3.1.3 Flashings: Provide all flashing and related closures and accessories
in connection with the preformed metal panels as indicated and as necessary to
provide a watertight installation. Details of installation which are not
indicated shall be in accordance with the panel manufacturer's printed
instructions and details or the approved shop drawings. Installation shall
allow for expansion and contraction of flashing.

3.1.4 Fasteners: Fastener spacings shall be in accordance with the
manufacturer's recommendations and as necessary to withstand the design loads
indicated. Install fasteners in valleys or crowns as recommended by the
manufacturer of the sheet being used. Install fasteners in straight lines
within a tolerance of 1/2 inch in the length of a bay. Drive exposed
penetrating type fasteners normal to the surface and to a uniform depth to
seat gasketed washers properly and drive so as not to damage factory applied
coating. Exercise extreme care in drilling pilot holes for fastenings to keep
drills perpendicular and centered in valleys, or crowns, as applicable. After
drilling, remove metal filings and burrs from holes prior to installing
fasteners and washers. Torque used in applying fasteners shall not exceed
that recommended by the manufacturer. Remove sheets deformed or otherwise
damaged by over-torqued fastenings, and provide new sheets. Remove metal
shavings and filings from roofs on completion to prevent rusting and
discoloration of the sheets.

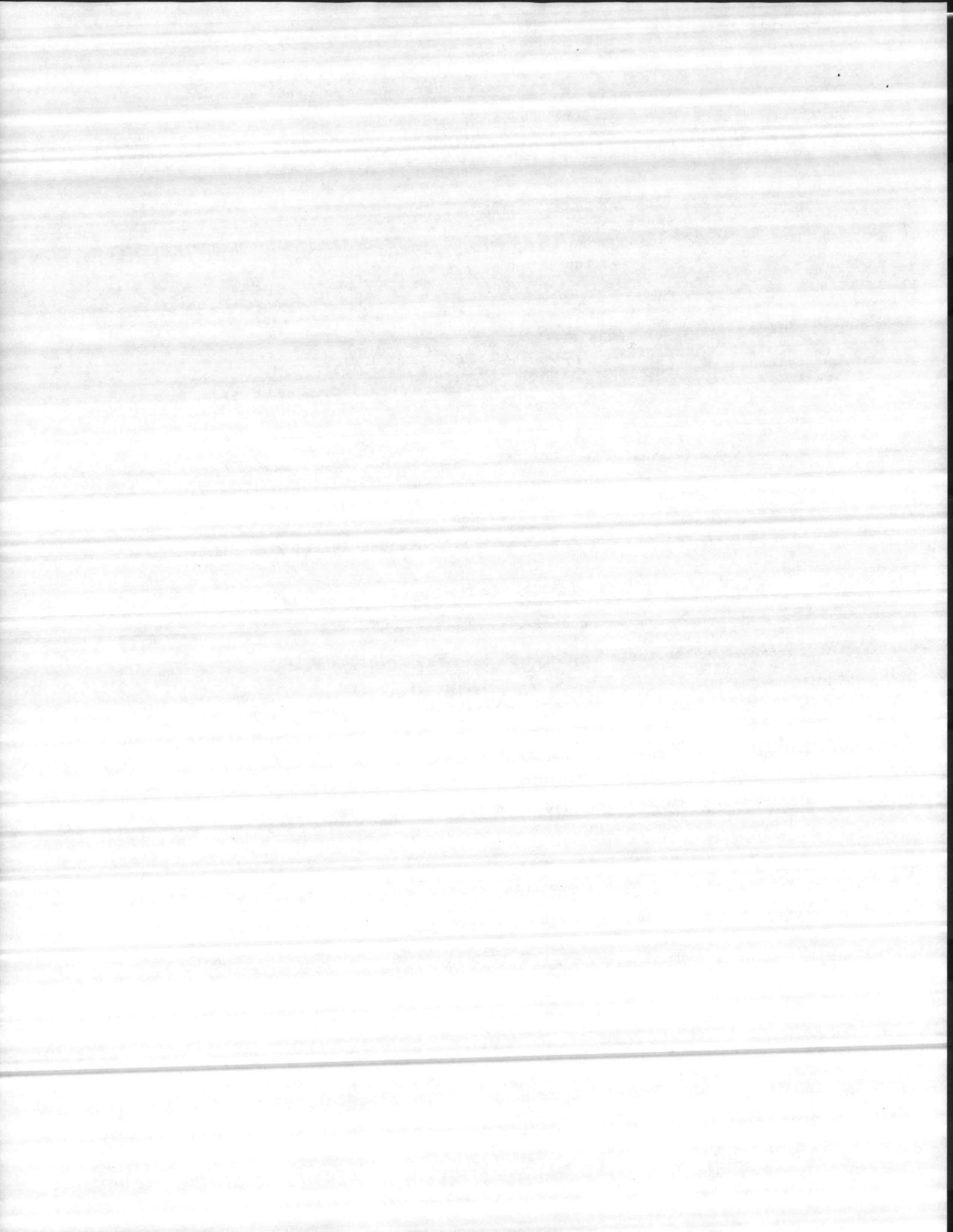


"It is hereby certified that the (equipment) (material) shown and marked in this submit- tal is that proposed to be incorporated into Contract Number ~~NAVFAC 81-0-1266~~ is in compliance with the Contract drawings and specifications, can be used in the allocat-

07410KB
(FEB 84)

GENERAL NOTES:

1. This guide specification ~~supersedes NAVFAC IS 07410~~ September 1980 with Amendment 1 of ~~January 1981~~.
 Certified by [Signature]
2. This guide specification ~~shall not be referenced~~ but is to be used as a manuscript in preparing project specifications. ~~APPROPRIATE CHANGES AND ADDITIONS AS MAY BE NECESSARY AND AS REQUIRED BY THE NOTES MUST BE MADE.~~ Where the phrase "unless indicated or specified otherwise", "as indicated", or words of similar import are used, appropriate requirements, as necessary, shall be included in the project drawings or specifications.
3. The capital letters in the right hand margins indicate that there is a technical note pertaining to that portion of the guide specification. It is intended that the letters in the margins be deleted before typing the project specification.
4. Where numbers, symbols, words, phrases, clauses, or sentences in this specification are enclosed in brackets [], a choice or modification must be made; delete inapplicable portion(s) carefully. Where blank spaces occur in sentences, insert the appropriate data. Where more than one paragraph has the same number, delete those paragraphs that are not applicable. Where entire paragraphs are not applicable, they should be deleted completely.
5. CAUTION: Coordination of this section with other sections of the specification and with the drawings is mandatory. If materials or equipment are to be furnished under this section, but installed, connected, or placed in operation under other sections of the specification and/or the drawings, then state that fact clearly and concisely in this section and in all other sections involved. EACH DISCIPLINE SHALL REVIEW THE ENTIRE SPECIFICATION TO INSURE THAT LANGUAGE IS INCLUDED TO PROVIDE COMPLETE AND OPERABLE SYSTEMS AND EQUIPMENT.
6. DO NOT INCLUDE TABLE OF CONTENTS, GENERAL NOTES, AND TECHNICAL NOTES IN THIS SECTION IN FINAL MANUSCRIPT.
7. The following information should be indicated on the project drawings:
 - a. Roof slope
 - b. Location, sizes, and details of flashings
 - c. Color schedule indicating color required for all factory finished surfaces
 - d. Depth and configuration of roof and wall coverings
 - e. Spacing of girts and purlins



8. Suggestions for improvement of this specification will be welcomed and should be forwarded using the DD Form 1426 attached to this specification or in any other format to: (material) shown and marked in this submittal is that proposed to be incorporated into Contract Number N02470-81-C-1746 in compliance with the Contract drawings and specifications, can be installed in the allocated spaces, and is submitted for Government approval.

OICC TRIDENT
Code 0431
293 Point Peter Road
St. Marys, Georgia 31558

Certified by D. Stallings
Date 4-2-84

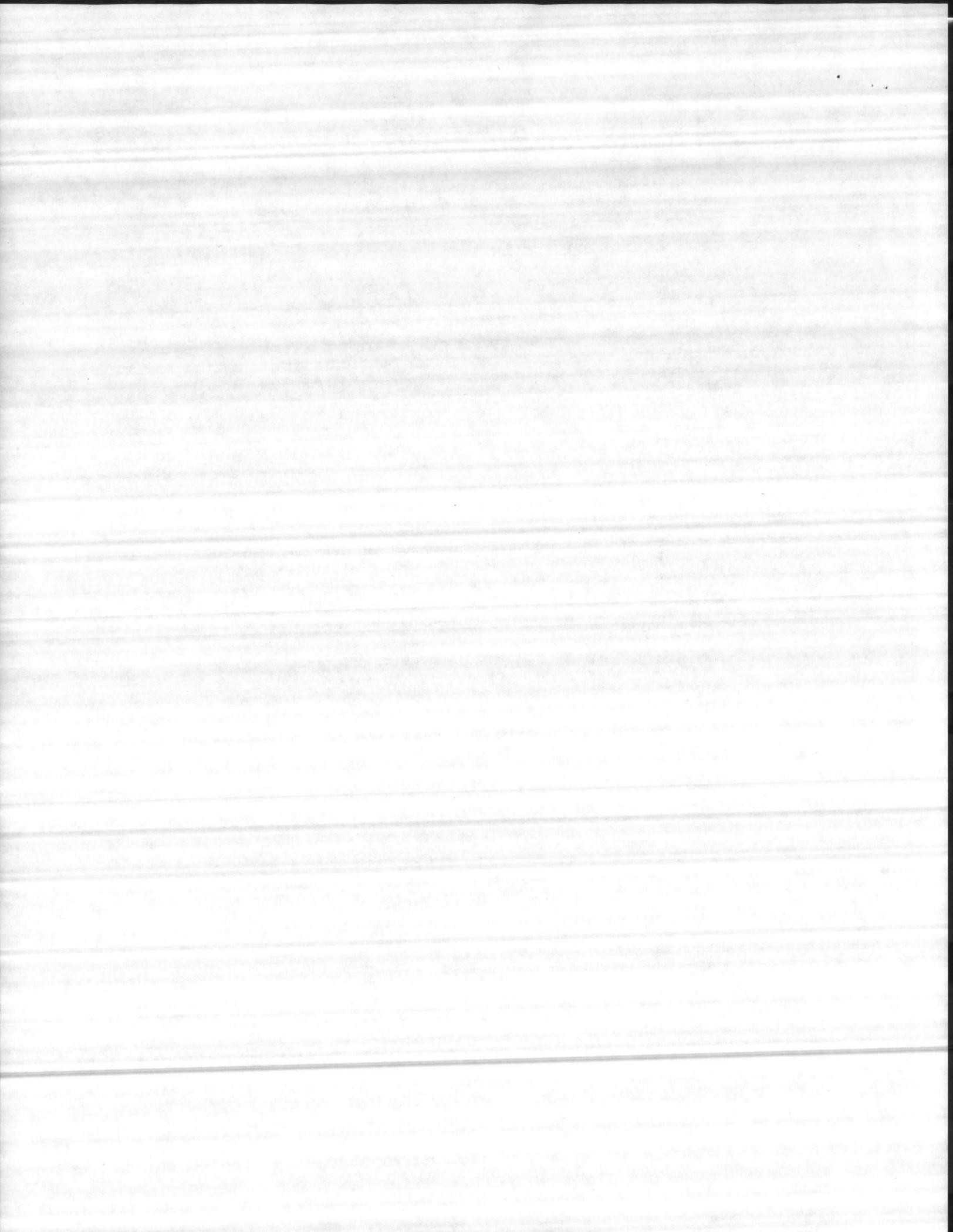
TECHNICAL NOTES

- A. This guide specification covers preformed metal roofing and siding sheets for field applications to exterior surfaces of structural girts and purlins for permanent heavy industrial and commercial type buildings. It does not cover light gage steel and aluminum siding of the types used on temporary construction, housing, and prefabricated metal buildings, or metal panels used primarily for aesthetic purposes. Insulation for use in conjunction with the roofing and siding sheets should be specified in an appropriate section in Division 7. Factory assembled insulated wall panels, systems utilizing special mechanical seaming systems, and concealed fasteners, field assembled roof and siding systems of the sandwich types, and types utilizing various insulation, sub-girts, facing, horizontal and vertical mullion, trim, and fastening components are not covered in this guide specification and should be specified in another section in Division 7 to adequately cover the necessary requirements for the type of roof or wall system desired. The types of roofing and siding covered in this section are of the prefinished type recommended for permanent construction. If there are requirements for unfinished zinc-coated steel or aluminum siding for temporary construction or for siding to have field-applied coatings, modify the guide to delete the prefinishing requirements.
- B. Specification, section, and page numbers shall be centered at the bottom of each page of this section.

EXAMPLE:

05-76-1776
07410-1

- C. Paragraph 1.1: The listed designations for publications are those that were in effect when this guide specification was being prepared. Designations that are known to be out of date when project specifications are prepared should be changed to those current at that time, and the nomenclature, type, grades, classes, etc., referenced in the guide should be checked for conformance to the latest revision or amendment. To minimize the possibility of error, the letter suffixes, amendments, and dates indicating specific issues should be retained here and omitted elsewhere in the project specification.



- D. This paragraph gives test requirements for projects located in corrosive atmospheres such as coastal areas and industrial buildings.
- E. Paragraph 2.1.1: Allow both aluminum and steel where no special limiting requirements apply. If special requirements limiting the type of siding exist, such as matching existing siding, edit the guide appropriately. If a specific material is specified, verify that the material required will meet testing requirements listed herein.
- ~~F.~~ . Verify that material options allowed will meet the structural (loading) requirements specified or indicated.
- G. Not recommended for dockside buildings over water

*** E N D ***
"It is hereby certified that the (equipment) (material) shown and marked in this submittal is that proposed to be incorporated into Contract Number NS2470 81-C-17616 in compliance with the Contract drawings and specifications, can be installed in the allocated spaces, and is submitted Government approval.
Certified by D. Stallings
Date 4-2-84"

