

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

# NOTICE OF ACCEPTANCE (NOA)

Arrow United Industries 314 Riverside Drive Wyalusing, PA 18853

SCOPE: This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami Dade County Product Control Division (in Miami-Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade county Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: MDH-4 Architectural & Non-Architectural Louver System.

APPROVAL DOCUMENT: Drawing No.35972-4, titled "EA-22 Test Louver Architectural & Non-Architectural Louver" dated 06/16/00 with no revisions on, prepared by W.W. Schaefer Engineering & Consulting, PA, signed and sealed by W. W. Schaefer P.E., bearing the Miami-Dade County Product Control Renewal stamp with the NOA number and expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no

change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA # 99-1228.01 consists of this page 1 as well as approval document mentioned above. The submitted documentation was reviewed by Candido F. Font PE.



NOA No: 03-0210.03 Expiration Date: July 27, 2008 Approval Date: April 03, 2003

Page 1

### NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

(For File ONLY. Not part of NOA)

#### A. DRAWINGS.

1. Drawing prepared by United Arrow Industries titled "EA-22 Test Louver Architectural & Non-Architectural Louver," Drawing No. 35972-4, dated 06/16/00 with no revisions. signed and sealed by W. W. Shaefer, PE.

#### B. TESTS.

- 1. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of "AUI EA-22 Architectural & Non-Architectural Fixed Louver", prepared by Hurricane Test Laboratory, Inc., report No. 0199-0518-99, dated 05/26/99 to 06/11/99, signed and sealed by V. J. Abraham, PE
- 2. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of "AUI EA-22 Architectural & Non-Architectural Fixed Louver", prepared by Hurricane Test Laboratory, Inc, report No. 0199-0615-99, dated 06/24/99, signed and sealed by V. J. Abraham, PE.

#### C. CALCULATIONS.

- 1. Allowable Load Calculations, dated 11/12/99, pages 1 to 3 of 3, prepared by W. W. Schaefer Engineering & Consulting, PA., signed and sealed by W. W. Schaefer. PE.
- 2. Allowable Load Calculations, dated 04/14/00, pages 1 to 6 of 6, prepared by W. W. Schaefer Engineering & Consulting, PA signed and sealed by W. W. Shaefer. PE.

#### D. MATERIAL CERTIFICATIONS.

1. Tensile Test report on 4 inch louver, prepared by Q. C. Metallurgical, Inc., No. 9LM-2586, dated 12/27/99, signed and sealed by F. Grate, PE.

#### E. STATEMENTS

- 1. Test compliance letter issued by Hurricane Test Laboratory, Inc. on 12/08/99, signed and sealed by V. J. Abraham, PE.
- 2. Code compliance letter issued by W. W. Schaefer Engineering & Consulting, PA. On 11/15/99, signed and sealed by W. W. Schaefer, PE.
- 3. No interest letter issued by W. W. Schaefer Engineering & Consulting, P.A. on 11/15/99,

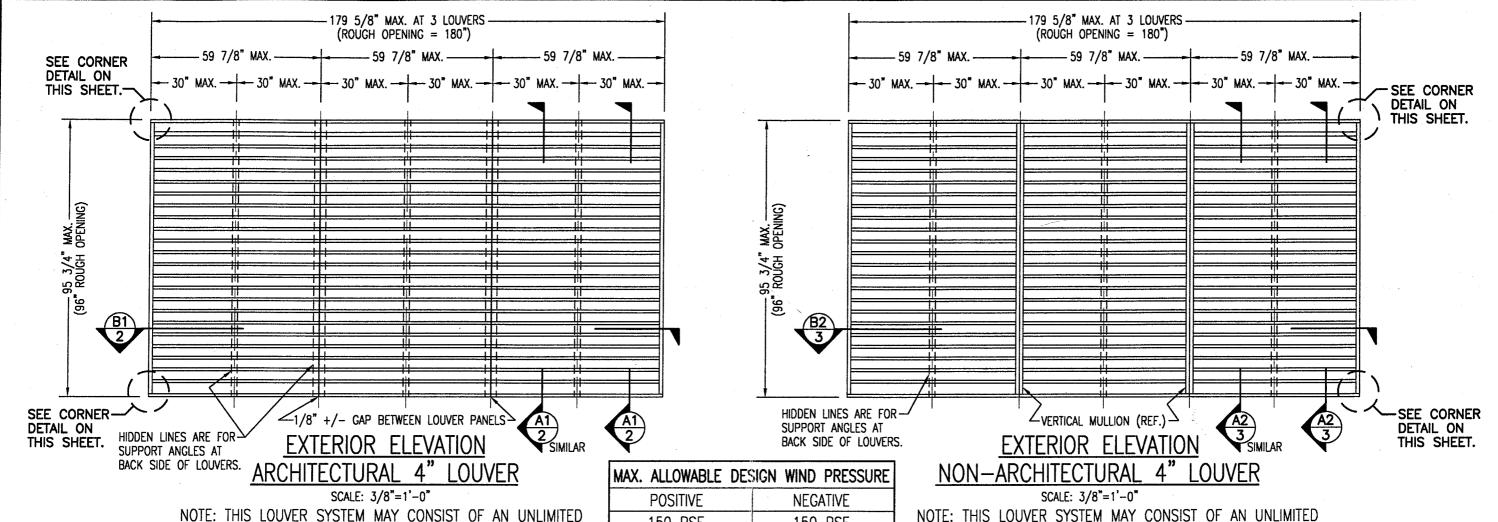
signed and sealed by W. W. Schaefer, PE.

4. No change letter issued by Arrow United Industries on 02/04/03 and signed by V. Kreglewicz.

Candido F. Font PE.

Sr. Product Control Examiner
NOA No 03-0210.03

Expiration Date: July 27, 2008 Approval: Date: April 3, 2003



NOTE: SEE LOAD TABLE ON SHEET 7 FOR

VARIATIONS OF PRESSURES WITH RESPECT TO PANEL WIDTH & CLIP SPACING

150 PSF

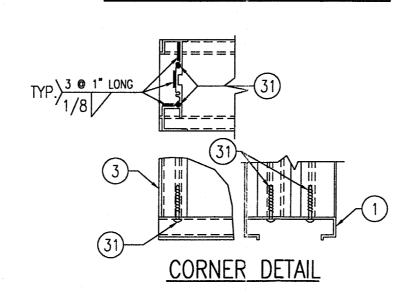
## **GENERAL NOTES:**

- MAXIMUM ALLOWABLE INDIVIDUAL PANEL SIZE = 59 7/8" X 95 3/4"
- 2. MAXIMUM ASSEMBLY SIZE = UNLIMITED WIDTH, UP TO 95 3/4" HEIGHT.
- ASSEMBLIES/SECTIONS MAY BE STACKED VERTICALLY PROVIDING A STRUCTURAL SUPPORT IS DESIGNED AND INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERED FROM THE LOUVER ASSEMBLY.

NUMBER OF SECTIONS PROVIDING EACH SECTION DOES NOT

EXCEED 59 7/8" X 95 3/4" IN SIZE.

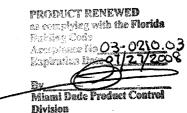
- MAXIMUM UNSUPPORTED BLADE LENGTH SHALL NOT EXCEED 30".
- ALL FASTENERS SHALL BE PLATED STEEL OR 304 STAINLESS STEEL
- SEPARATION OF DISSIMILAR MATERIALS MUST BE MAINTAINED PER SECTION 3004.4 OF THE SOUTH FLORIDA BUILDING CODE 1994 EDITION.
- APPROVED TYPES OF OPENINGS: 3000 PSI CONCRETE/MASONRY, WOOD OR STEEL. SEE SHEETS 4 & 5 FOR ANCHORING DETAILS.
- THESE LOUVER SYSTEMS HAVE BEEN TESTED, ANALYZED AND APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE LOAD TABLE ON SHEET 7.
- 9. THIS SYSTEM HAS NOT BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS NOT A WATER RESISTANT SYSTEM.
- 10. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE DESIGNED & INSTALLED TO WITHSTAND WIND LOADS AS DETERMINED FOR EACH APPLICATION.
- 11. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THESE DRAWINGS.
- 12. THE DETAILS & SPECIFICATIONS HERE-IN REPRESENT THE PRODUCTS PROPOSED FOR IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH DADE COUNTY PROTOCALS PA-201, 202 & 203 FOR BOTH IMPACT & NON-IMPACT LOUVERS.
- 13. THESE LOUVER SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE SOUTH FLORIDA BUILDING CODE 1994 EDITION.
- 14. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH DADE COUNTY PROTOCALS PA-201. 202 & 203 FOR LARGE MISSLE IMPACT, STRUCTURAL & CYCLIC TESTING.



150 PSF

IS. THESE LOUVERS ARE TO BE INSTALLED IN ALOCATION WHERE W. W. SCHAEFER ENGINEERING THE ROOM BEHIND THE LOUVER IS DESIGNED TO DRAIN & CONSULTING, P.A. THE ROOM BEHIND THE LOUVER IS DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM, AND THE ROOM WILL HOUSE WATER RESISTANT/WATER PROOF EQUIPMENT COMPONENTS OR SUPPLIES.

NOTE: THIS LOUVER SYSTEM MAY CONSIST OF AN UNLIMITED NUMBER OF SECTIONS PROVIDING EACH SECTION DOES NOT EXCEED 59 7/8" X 95 3/4" IN SIZE.



SOUTH FLORIDA BUILDING CODE BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE

ACCEPTANCE NO. 99-1228.01

REVISION

JUN 16 2000 WARREN W. SCHAEFER, P.E.

STRUCTURAL ENGINEER P.E. No. 44135

STRUCTURAL CONSULTING ENGINEERS 600 SANDTREE DRIVE; SUITE 203B PALM BEACH GARDENS, FL 33403 PHONE: 561-775-4902

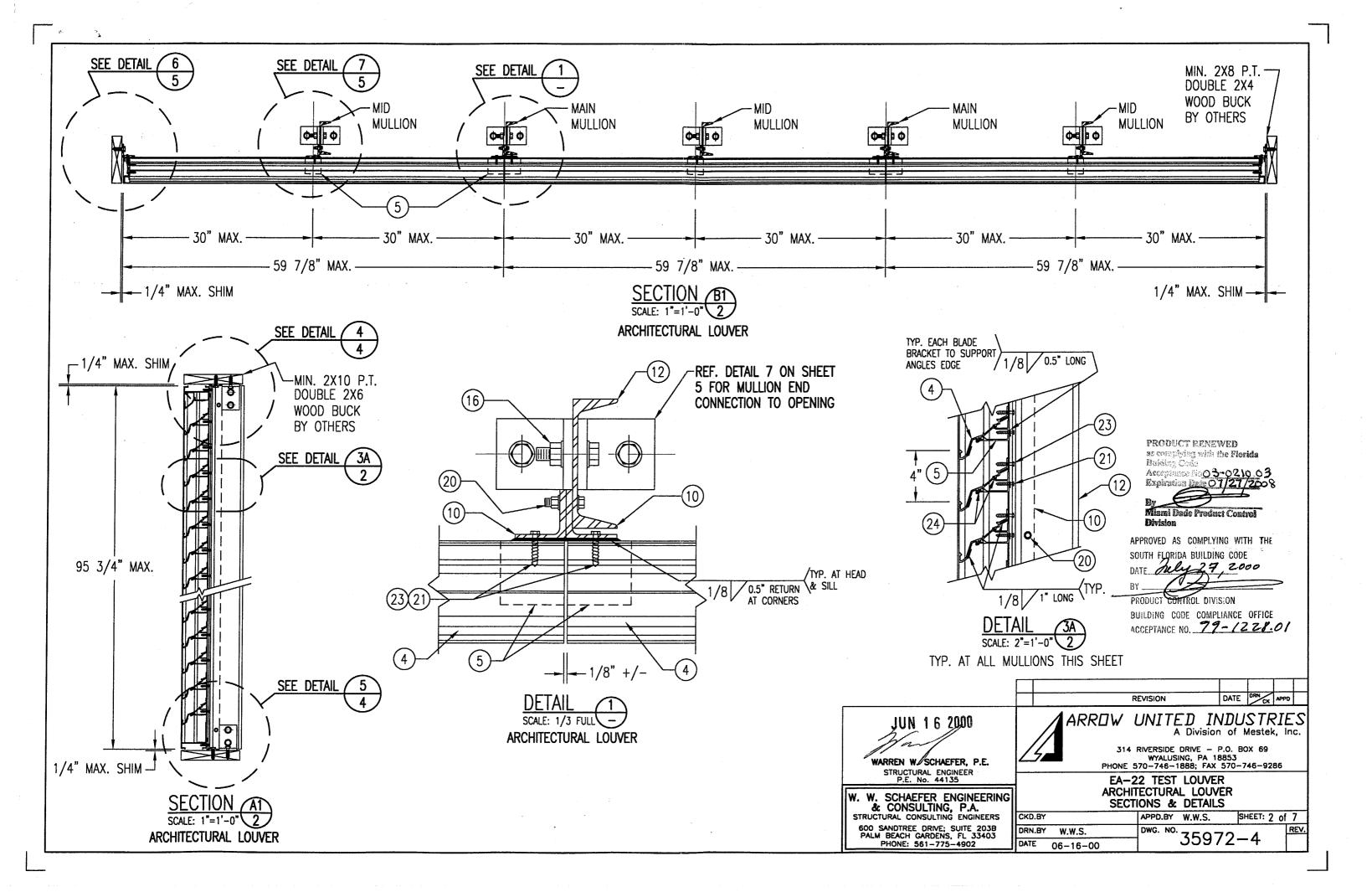
UNITED INDUSTRIES A Division of Mestek, Inc.

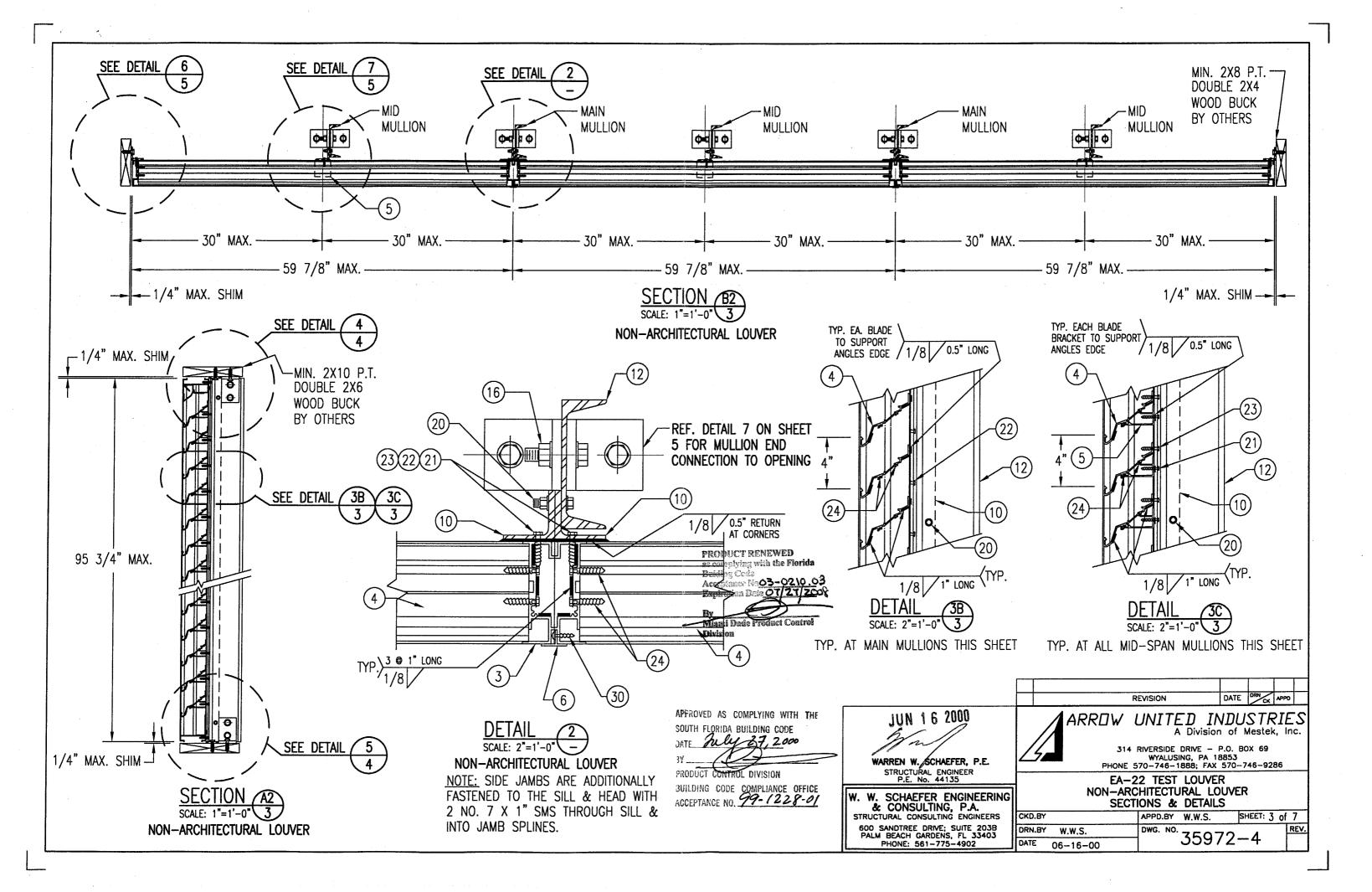
> 314 RIVERSIDE DRIVE - P.O. BOX 69 WYALUSING, PA 18853 PHONE 570-746-1888; FAX 570-746-9286

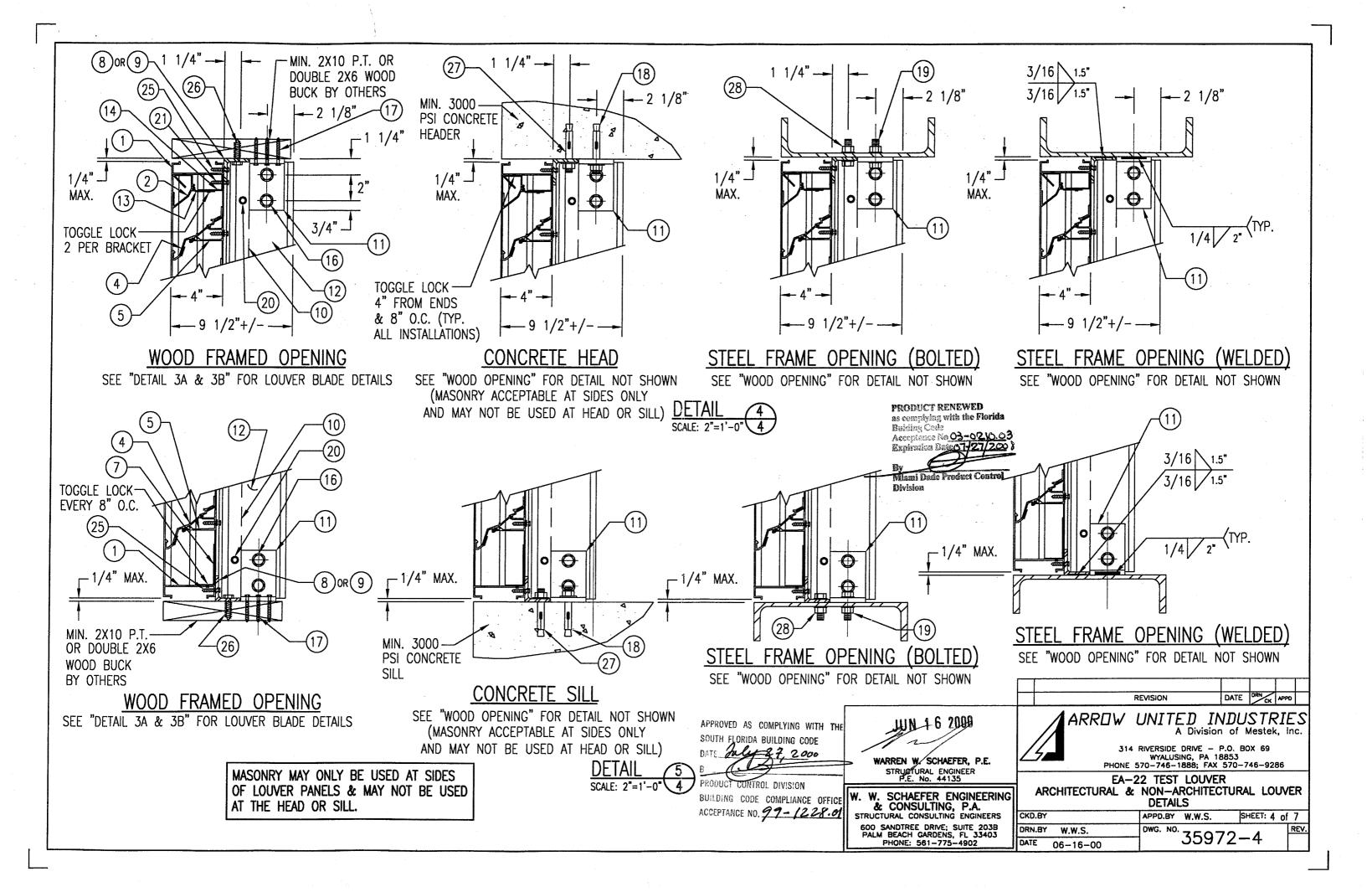
DATE DRN CK APPO

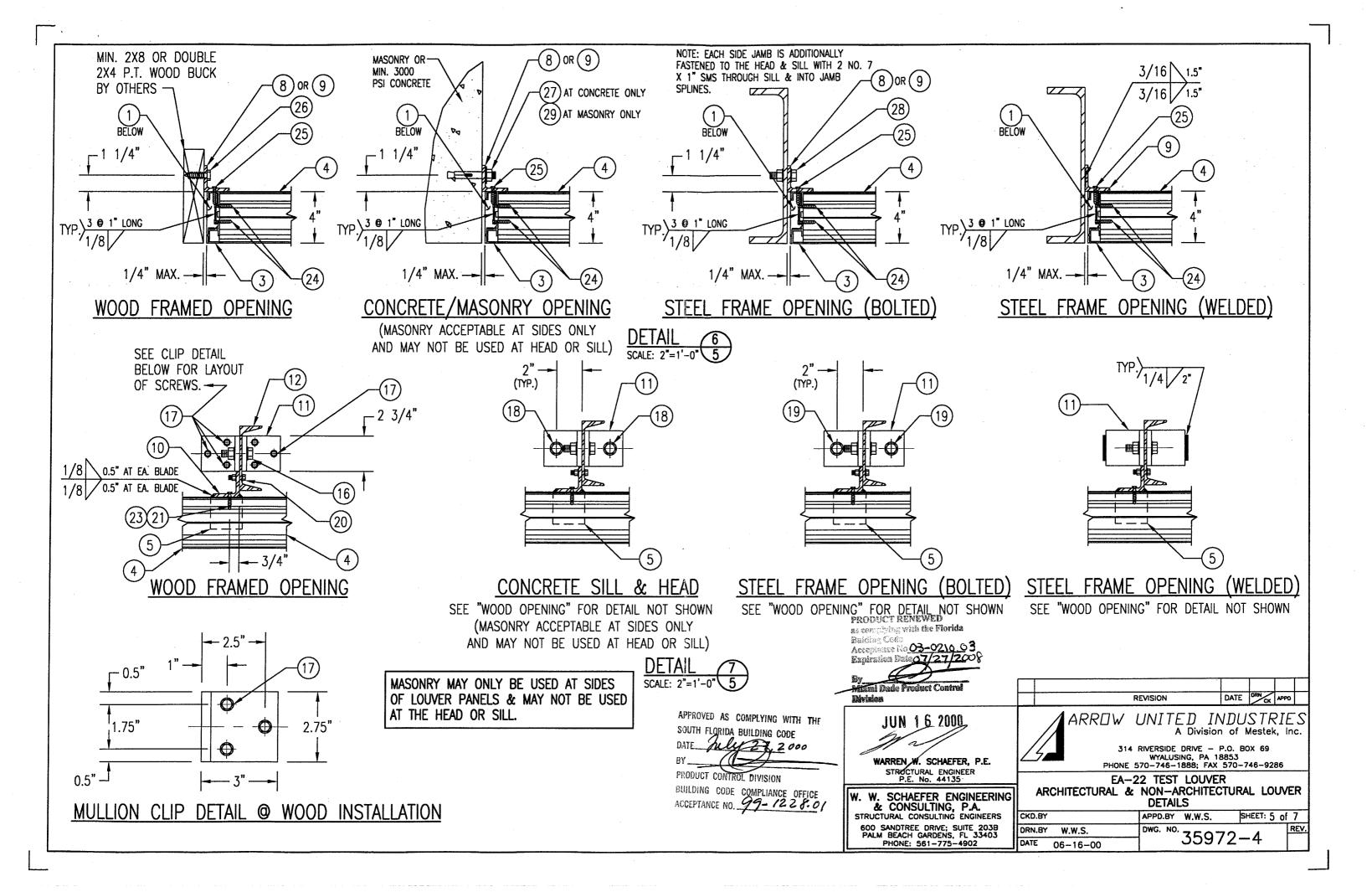
EA-22 TEST LOUVER ARCHITECTURAL & NON-ARCHITECTURAL LOUVER **ELEVATIONS & NOTES** 

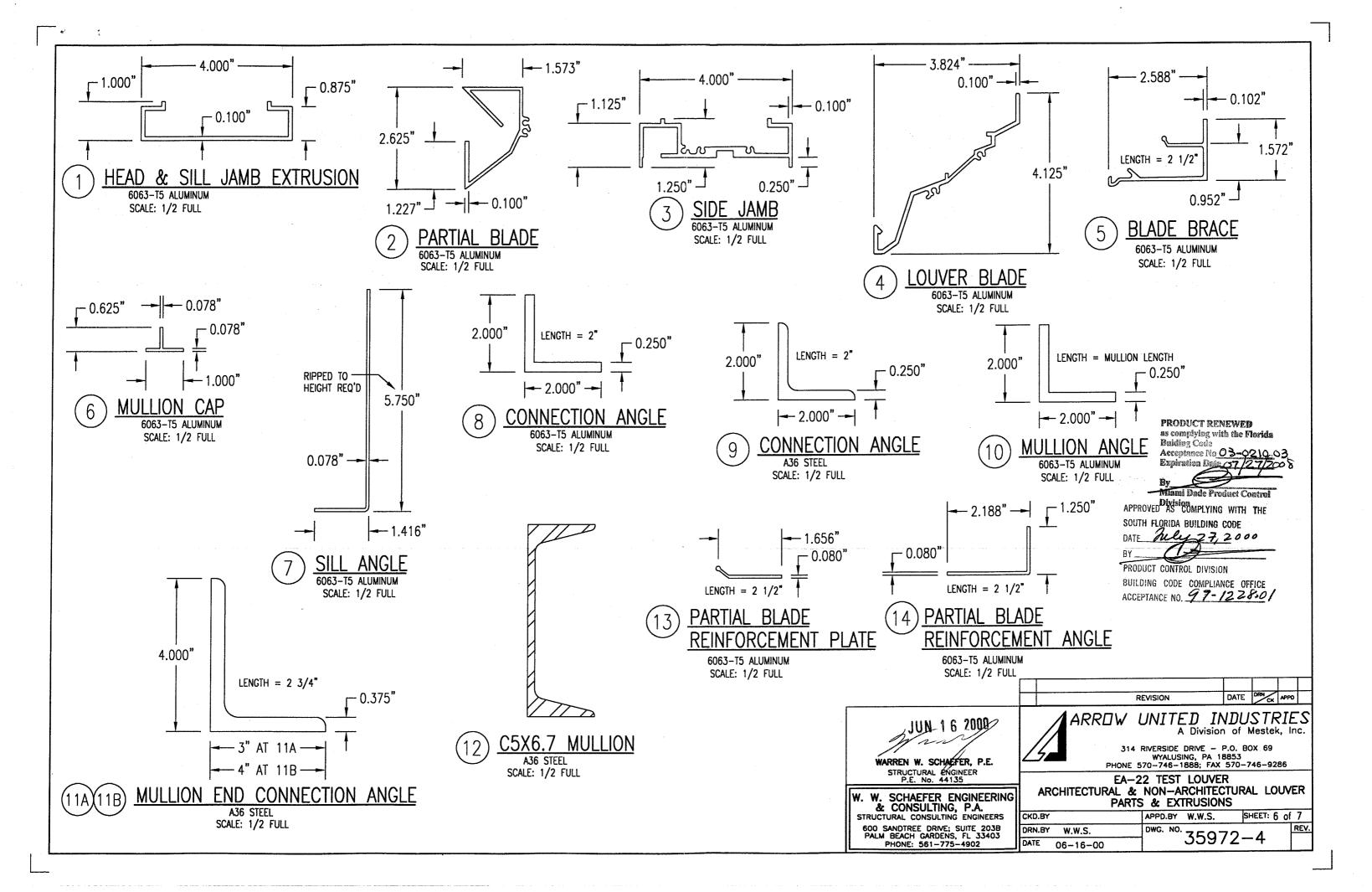
CKD.BY APPD.BY W.W.S. SHEET: 1 of 7 DRN.BY W.W.S. DWG. NO. 35972-4 DATE 06-16-00











ALLOWABLI		SSURE VS. JAMB C PANEL WIDTH	LIP SPACING
PANEL WIDTH	CLIP SPACING		ALLOWABLE PRESSURE
(INCHES)	(INCHES)	WITH MID SPAN MULLION (PSF)	
(HACUE2)	(INCHES)		(PSF)
	8	150	150
	12	150	150
16	16	150	140
,	20	150	105
· · · · · · · · · · · · · · · · · · ·	24	150	70
-	8	150	150
	12	150	140
20	16	150	112
	20	150	84
	24	150	56
	. 8	150	140
24	12	150	117
	16	150	93
	20	150	70
	24	125	47
	8	150	82
	12	150	68
28	16	150	54
	20	150	41
	24	107	27
	8	150	62
	12	150	52
30	16	. 150	41
	20	140	31
	24	93	
	8	150	_
	12	150	<u></u>
36	16	150	-
	20	125	-
	24	83	<u> </u>
	8	150	-
	12	150	<u>-</u>
42	16	142	<u> </u>
	20	107	
	24	71	_
	8	150	
	12	150	_
48	16	125	<b>-</b>
	20	93	***
	24	62	***
	8	150	
	12	138	· <b>-</b>
54	16	111	-
	20	83	
	24	55	-
	8	150	-
	12	125	: -
60	16	100	tion.
	20	75	-
	24	50	-

	MATERIAL LIST					
NO.	DESCRIPTION	NOTES/SPECIFICATIONS				
	PARTS/EXTRUSIONS					
1	HEAD & SILL FRAME	6063-T5 ALUMINUM				
2	PARTIAL BLADE & HEAD	6063-T5 ALUMINUM				
3	SIDE JAMB FRAME	6063-T5 ALUMINUM				
4	LOUVER BLADE	6063-T5 ALUMINUM				
5	BLADE SUPPORT BRACKET (2 1/2" LONG)	6063-T5 ALUMINUM				
6	MULLION CAP	6063-T5 ALUMINUM; FULL LENGTH OF MULLION JAMBS				
7	SILL ANGLE	6063-T5 ALUMINUM; FULL WIDTH OF PANEL				
8	L2X2X1/4 JAMB CONNECTION ANGLE 2" LONG	6063-T5 ALUMINUM; WITHIN 4" OF JAMB ENDS & SPACED PER LOAD TABLE ON SHT. 2				
9	L2X2X1/4 OPTIONAL JAMB CONNECTION ANGLE 2" LONG	A36 STEEL; WITHIN 4" OF JAMB ENDS & SPACED PER LOAD TABLE ON SHT. 2				
10	L2X2X1/4 CONTINUOUS MULLION CONNECTION ANGLE	6063-T5 ALUMINUM; FULL LENGTH OF CHANNEL MULLION				
11	L4X3X3/8 MULLION END CONNECTION ANGLE 2 3/4" LONG	A36 STEEL; 2 PER MULLION END				
12	C5X6.7 MULLION	A36 STEEL; FULL HEIGHT OF PANELS				
13	PARTIAL BLADE REINFORCEMENT PLATE (2 1/2" LONG)	6063-T5 ALUMINUM				
14	PARTIAL BLADE REINFORCEMENT ANGLE (2 1/2* LONG)	6063-T5 ALUMINUM				
15	OPEN					
		FASTENERS				
16		WITH FLAT WASHERS, LOCK WASHER & NUT; 2 PER MULLION END				
17	NO. 14 S.S. SMS SCREWS	3 PER MULLION END CLIP WITH MIN. 1 1/2" WOOD EMBED				
18	5/8" X 2 1/4" SLEEVE ANCHOR WITH FLAT WASHER	USA KINGPIN ANCHOR; 1 PER CHANNEL END CONNECTION ANGLE INTO CONCRETE ONLY				
19		WITH FLAT WASHERS, LOCK WASHER & NUT; 1 PER CHANNEL END CONNECTION ANGLE INTO STEEL FRAME				
20		WITH FLAT WASHER, LOCK WASHER & NUT; WITHIN 4" OF MULLION ENDS & MAX. 8" O.C.				
21	NO. 8 X 3/4" SMS SCREW	1 AT EACH LOUVER BLADE SUPPORT BRACKET AT ARCHITECTURAL MAIN MULLIONS & ALL MID-SPAN MULLIONS				
22	NO. 14 X 1 1/4" HILTI TEK SCREW	WITHIN 3/4" OF MULLION ENDS & MAX. 4" O.C. INTO FRAME				
23	NO. 14 X 1" SMS SCREW	1 AT EACH LOUVER BLADE AT ALL ARCHITECTURAL MAIN MULLIONS & ALL MID-SPAN MULLIONS				
24	NO. 7 X 1" SMS SCREW	2 PER EACH LOUVER BLADE END THROUGH JAMB & INTO BLADE SPLINES				
25	NO. 14 X 1 1/4" HILTI TEK SCREW	2 PER EACH HEAD, SILL & SIDE JAMB CONNECTION ANGLE				
26	1/2" X 2" LAG SCREW WITH FLAT WASHER	1 PER EACH HEAD, SILL & SIDE JAMB CONNECTION ANGLE INTO WOOD FRAME				
27	5/8" X 2 1/4" SLEEVE ANCHOR WITH FLAT WASHER	USA KINGPIN ANCHOR; 1 PER EACH HEAD, SILL & SIDE JAMB CONNECTION ANGLE INTO CONCRETE ONLY				
28	1/2" X 2" HEX HEAD A307 PLATED STEEL OR S/STL BOLT	WITH FLAT WASHERS, LOCK WASHER & NUT; 1 PER EA. JAMB CONNECTION ANGLE INTO STEEL FRAME				
29	3/8" X 1 7/8" SLEEVE ANCHOR WITH FLAT WASHER	RED HEAD DYNABOLT WITH MIN 1 1/2" BLOCK/CONCRETE EMBED (1 PER FRAME SUPPORT CLIP)				
30	NO. 8 X 1/2" SMS SCREW	WITHIN 2" OF MULLION ENDS & MAX. 12" O.C. (MULLION CAP TO MULLION)				
31	NO. 7 X 1" SMS SCREWS	2 PER FRAME CORNER THROUGH SILL/HEAD FRAME & INTO JAMB SPLINES				

# PRESSURE TABLE NOTES:

1. WHEN THE PANEL WIDTH IS 30" OR LESS, NO MID SPAN MULLION IS REQUIRED PROVIDING COMPLIANCE WITH THE TABLE.

2. ALL PRESSURES IN THIS TABLE ARE FOR BOTH POSITIVE & NEGATIVE WIND PRESSURE.

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE DATE 11 27, 2000

PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 79-1228.01

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 03-02100
Expiration Date 07/27/2008

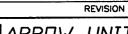
Mismi Dade Product Control
Division

JUN 16 2000

WARREN W. SCHAEFER, P.E. STRUCTURAL ENGINEER P.E. No. 44135

W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. STRUCTURAL CONSULTING ENGINEERS

600 SANDTREE DRIVE: SUITE 203B PALM BEACH GARDENS, FL 33403 PHONE: 561-775-4902



DATE DRN CK APPO

ARROW UNITED INDUSTRIES

A Division of Mestek, Inc.

314 RIVERSIDE DRIVE - P.O. BOX 69 WYALUSING, PA 18853 PHONE 570-746-1888; FAX 570-746-9286

EA-22 TEST LOUVER
ARCHITECTURAL & NON-ARCHITECTURAL LOUVER
MATERIAL LIST & LOAD TABLE

MAICRIAL	L LIST & LUAD TABLE	
CKD.BY	APPD.BY W.W.S. SHEET: 7 of 7	,
DRN.BY W.W.S.	DWG. NO. 35972-4	E۷.
DATE 06-16-00	7 33972-4	