

ALUMINUM SUNSHADE AND AIRFOIL MASTER PLAN SHEET

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DESIGN NOTES:

MAXIMUM DESIGN PRESSURES:

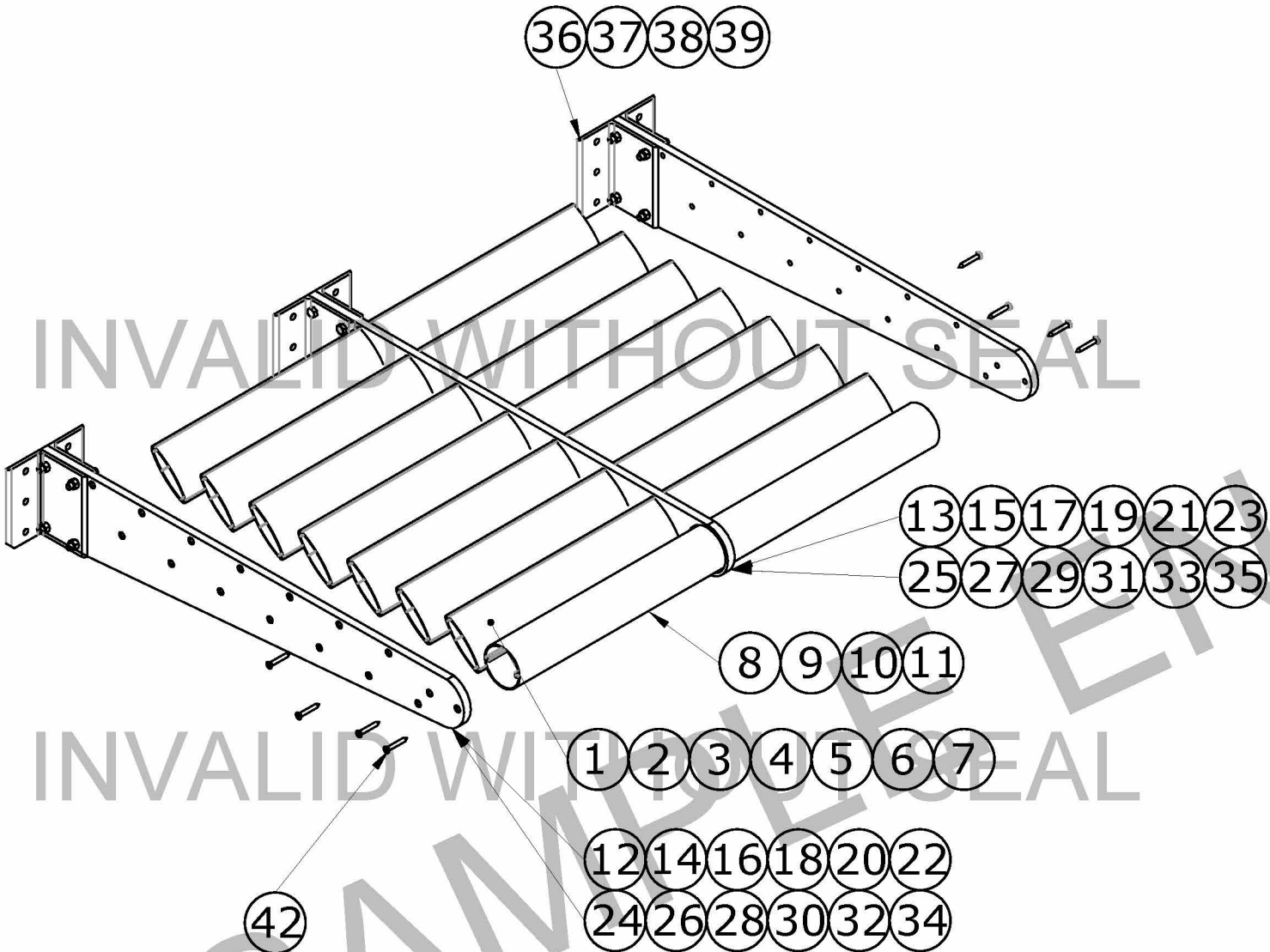
+42 / -33 PSF ASD GRAVITY LOAD COMBINATION

**GRAVITY LOAD COMBINATION TO CONSIDER ALL CODE-REQUIRED
LOADING CONDITIONS INCLUDING BUT NOT LIMITED TO
2 PSF DEAD LOAD, 20 PSF LIVE LOAD, AND SITE-SPECIFIC WIND & SNOW LOADS*

- DESIGN CONDITIONS ARE NOT TO EXCEED THE FOLLOWING DESIGN CRITERIA:
MAX WIND SPEED: 175 MPH
EXTREME EXPOSURE CATEGORY: C
- THIS MASTER PLAN IS VALID FOR SITE-CONDITIONS WITHIN THE ABOVE LIMITATIONS
(DESIGN ASSUMPTIONS INCLUDE LOADING CONDITIONS AS LISTED, BUT ENGINEERING
REMAINS VALID FOR ALTERNATE LOAD COMBINATIONS THAT REMAIN WITHIN NOTED LIMITS)
- *SITE SPECIFIC PRESSURES TO BE CALCULATED SEPARATELY AT BUILDING OFFICIAL DIRECTION
USING CODES AND STANDARDS STATED HEREIN. DESIGN CRITERIA OR SPANS BEYOND WHAT IS
STATED HEREIN MAY REQUIRE ADDITIONAL SITE SPECIFIC SEALED ENGINEERING.
- THE SYSTEM HAS BEEN DESIGNED FOR A 300 LB CONCENTRATED LOAD PLACED ANYWHERE ON THE
STRUCTURE APPLIED WITHIN 1 FT².

GENERAL NOTES:

- THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE
REQUIREMENTS OF THE FLORIDA BUILDING CODE 7TH EDITION (2020). ALSO APPLICABLE FOR THE
FBC 6TH EDITION (2017), IBC/IRC (2015 & 2018), AS WELL AS CURRENT VERSIONS OF THE MN, NC,
NJ, NY, OH, SC, & VA BUILDING CODES AS APPLICABLE. CODE ENFORCED COMPLIES WITH STATE OF
SEAL AND IF MULTIPLE VERSIONS ARE LISTED THEN MOST STRINGENT APPLIES. DESIGN SHALL
UTILIZE ASD DESIGN METHOD USING ASCE 7-16 OR ASCE 7-10 CODES FOR SITE SPECIFIC
APPLICATIONS AS APPLICABLE.
- WIND LOADS ACTING SIMULTANEOUSLY WITH ROOF LIVE LOAD OF 20 PSF. DESIGN PRESSURES
HAVE BEEN BASED ON LOAD COMBINATIONS PER THE FLORIDA BUILDING CODE SEVENTH EDITION
(2017).
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SEAL OF THE CERTIFYING P.E. SELECTED ABOVE. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS
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- THE EXISTING STRUCTURE MUST BE CAPABLE OF SUPPORTING THE LOADED ALUMINUM SUNSHADE
AND AIRFOIL AS DETERMINED BY OTHERS OR BY SPECIAL ENGINEERING BY UNDERSIGNED
ENGINEER ATTACHED HERETO. NO WARRANTY IS CONTAINED HEREIN.
- SYSTEM COMPONENTS SHALL BE AS NOTED HEREIN. ALL REFERENCES TO EXTRUSIONS AND
INSTALLATION SHALL CONFORM TO MANUFACTURER'S SPECIFICATIONS AS SUMMARIZED HEREIN.
- ALL ALUMINUM SHALL BE 6063-T6 ALLOY AND TEMPER UNLESS NOTED OTHERWISE.
- ALL FASTENERS TO BE #14 OR GREATER AND 304/410 SS UNLESS NOTED OTHERWISE. FASTENERS
SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY
WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION 5.2.1 BY THE ALUMINUM
ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
- FOR ALUMINUM MEMBERS ALL ANCHORS SHALL BE SPACED WITH 2xDIAMETER END DISTANCE AND
2.5xDIAMETER MIN. SPACING TO ADJACENT ANCHORS, UNLESS NOTED OTHERWISE.
- ALUMINUM WELDING SHALL BE PERFORMED IN ACCORDANCE WITH WELD FILLER ALLOYS MEETING
ANSI/AWS A5.10 STANDARDS TO ACHIEVE ULTIMATE DESIGN STRENGTH IN ACCORDANCE WITH THE
ALUMINUM DESIGN MANUAL PART I-A, TABLE A.3.6. ALL ALUMINUM CONSTRUCTION SHALL BE IN
CONFORMANCE WITH THE TOLERANCES, QUALITY, AND METHODS OF CONSTRUCTION AS SET FORTH
IN THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE-ALUMINUM (D1.2). MINIMUM
WELD IS 1/8" THROAT FULL PERIMETER FILLET WELD UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO
PREVENT ELECTROLYSIS.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
EMBEDMENT SHALL BE AS NOTED HEREIN. EMBEDMENT AND MINIMUM EDGE DISTANCE EXCLUDES
STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
- ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS
SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL
COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL
FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED
FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS
ARE INTENDED.



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MASTER PLAN
FBC 7TH ED (2020) & IBC (2018)

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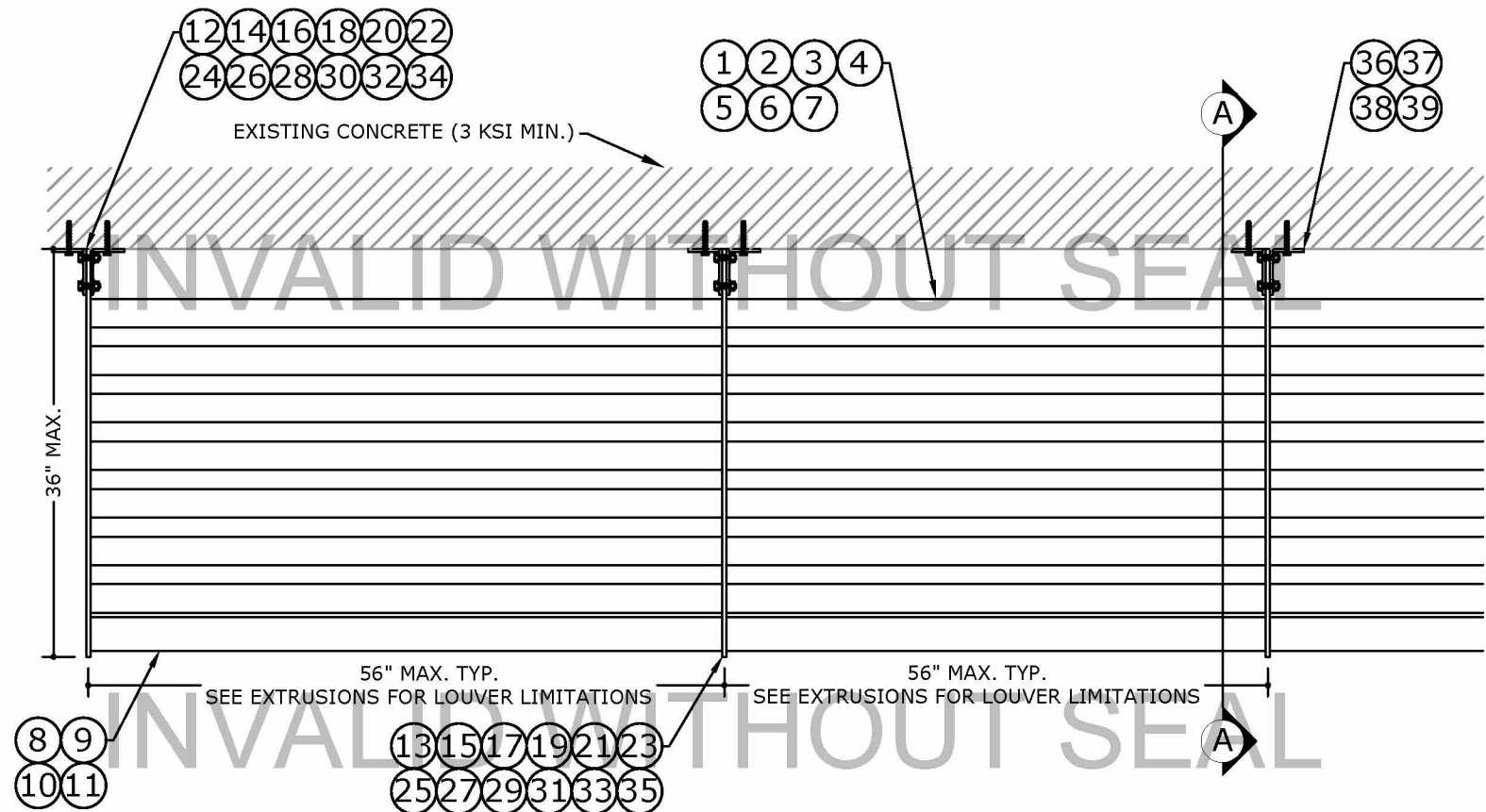
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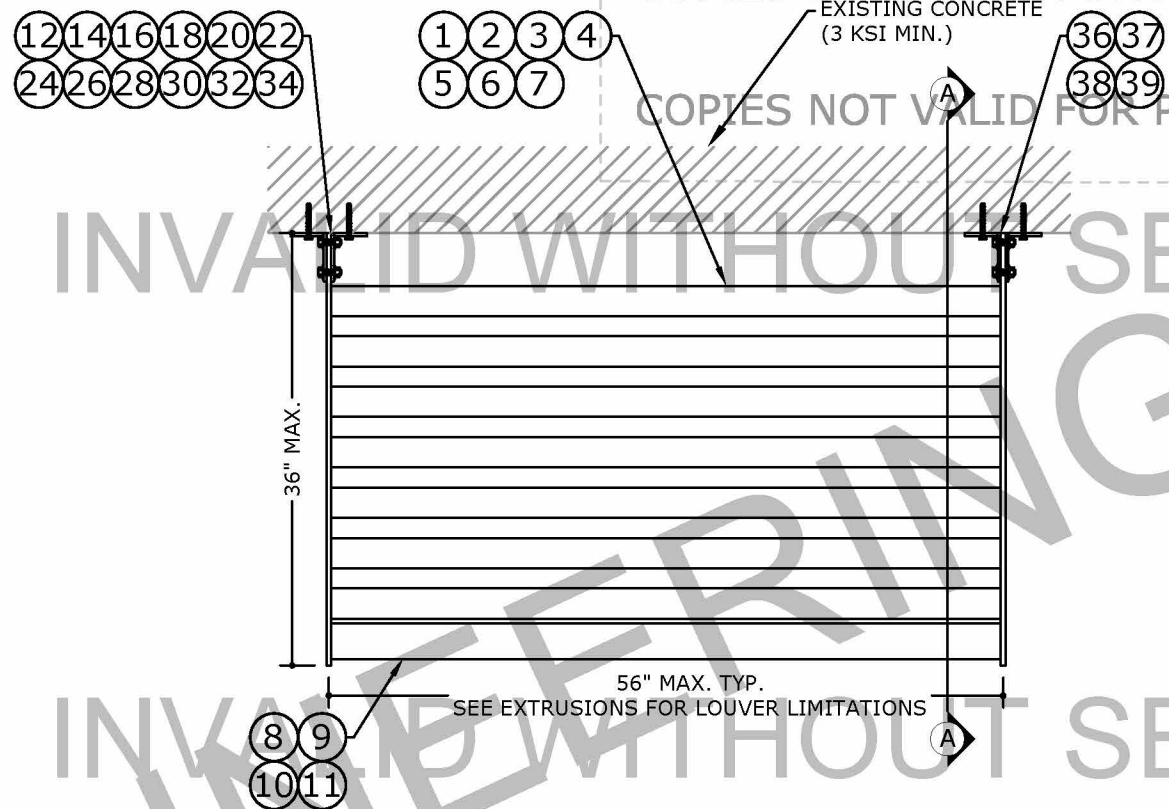
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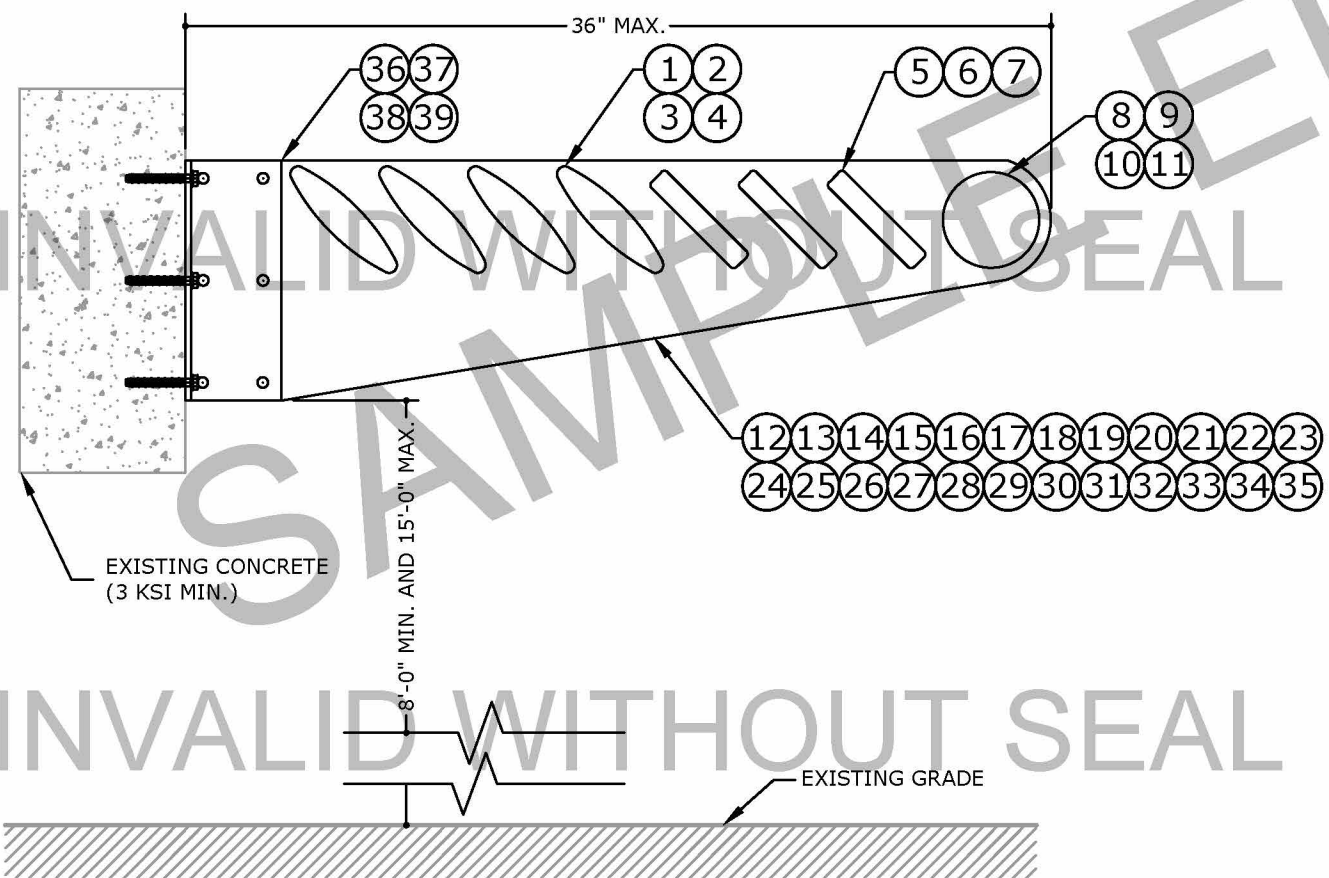
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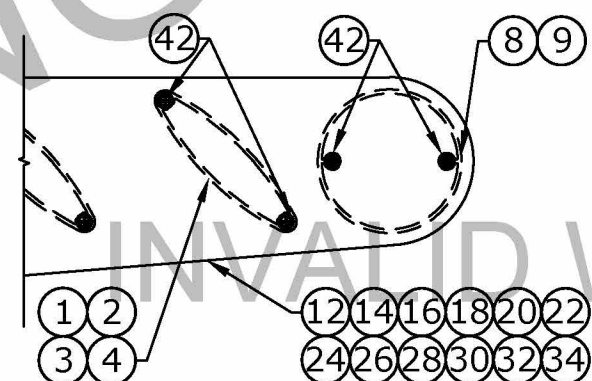
TYPICAL MULTIPLE BAY SUNSHADE PLAN



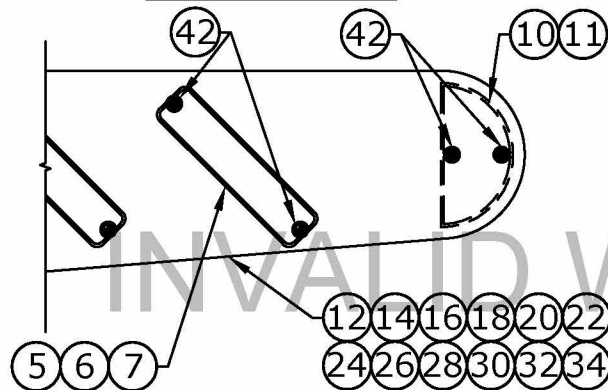
TYPICAL SINGLE BAY SUNSHADE PLAN



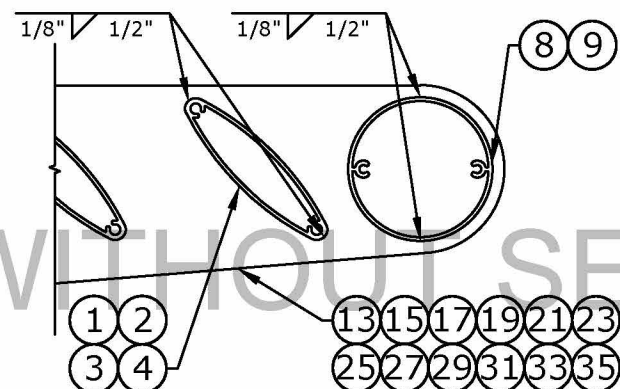
SECTION A-A



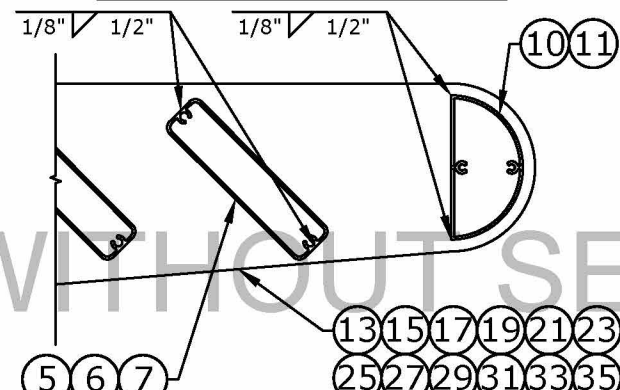
AIR FOIL/BULL NOSE END CONNECTION



TUBE/HALF ROUND NOSE END CONNECTION



AIR FOIL/BULL NOSE CENTER CONNECTION



TUBE/HALF ROUND NOSE CENTER CONNECTION

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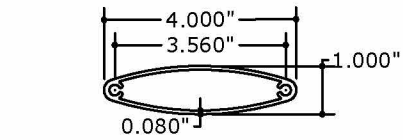
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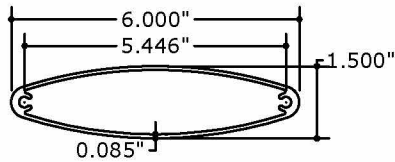
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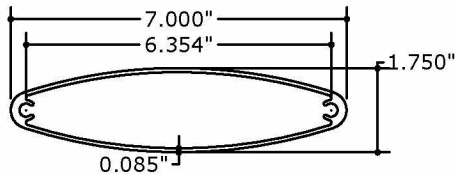
SUNSHADE AND AIRFOIL EXTRUSIONS
EXTRUSION TOLERANCES TO BE PER INDUSTRY STANDARDS



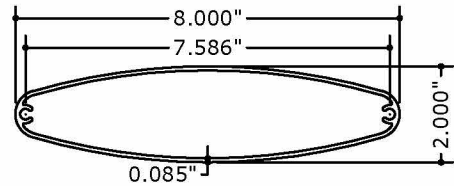
1 4" AIRFOIL
EMS 56-63-400



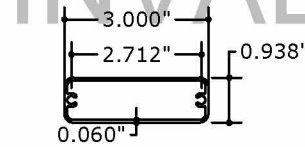
2 6" AIRFOIL
EMS 56-63-600



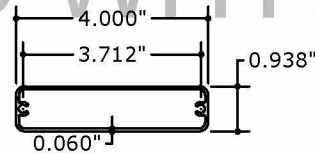
3 7" AIRFOIL
EMS 56-63-12534



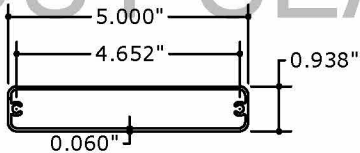
4 8" AIRFOIL
EMS 56-63-800



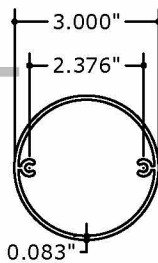
5 3" RADIUS TUBE
EMS 40-63-722



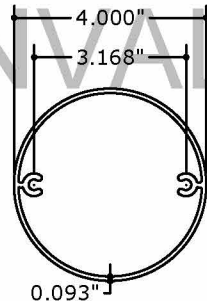
6 4" RADIUS TUBE
EMS 40-63-724



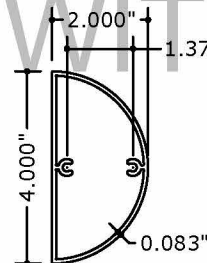
7 5" RADIUS TUBE
EMS 40-63-723



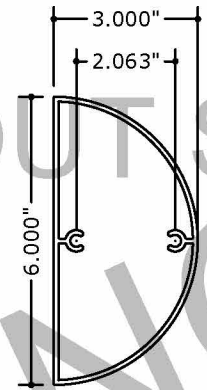
8 3" ROUND BULL NOSE
EMS 56-63-201



9 4" ROUND BULL NOSE
EMS 56-63-204

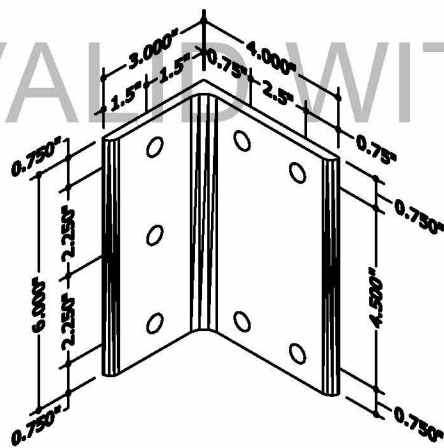


10 4" HALF ROUND NOSE
EMS 56-63-202

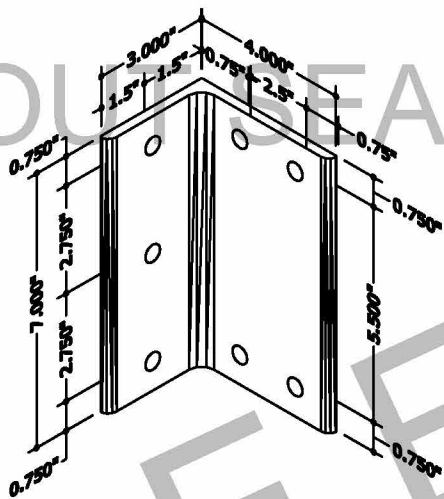


11 6" HALF ROUND NOSE
EMS 56-63-205

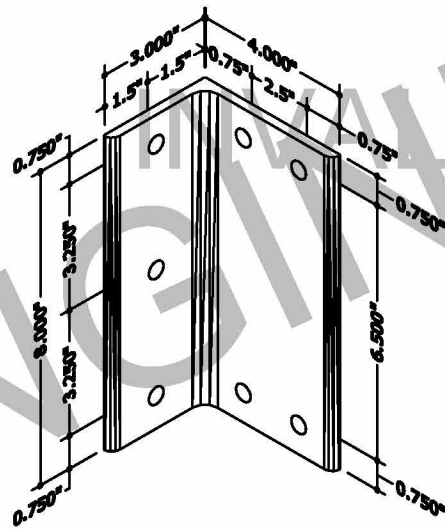
* MAX. SPAN BETWEEN
OUTRIGGERS IS 44 IN.



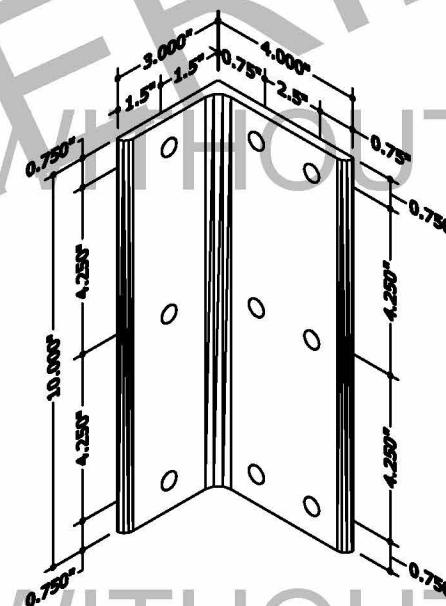
36 3"x4"x6"x1/4" MOUNTING BRACKET



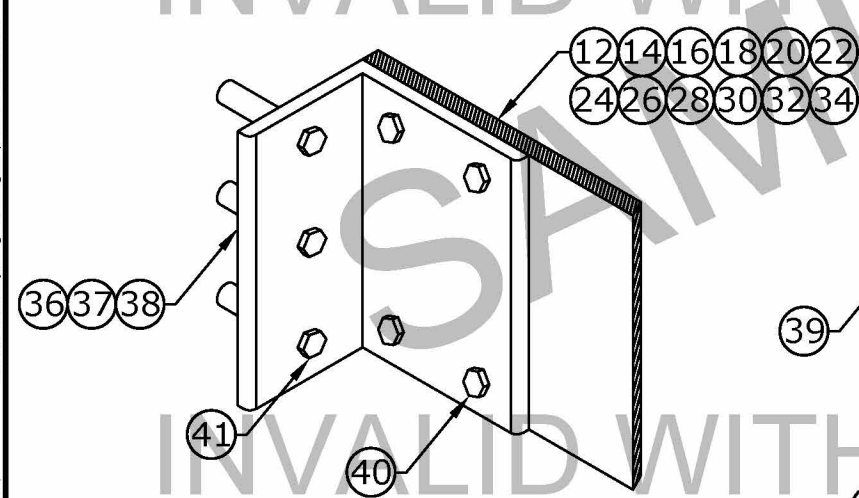
37 3"x4"x7"x1/4" MOUNTING BRACKET



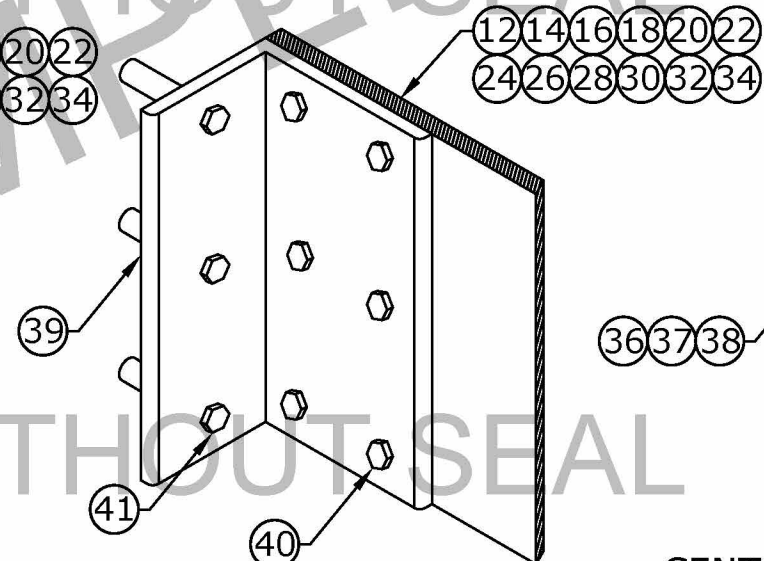
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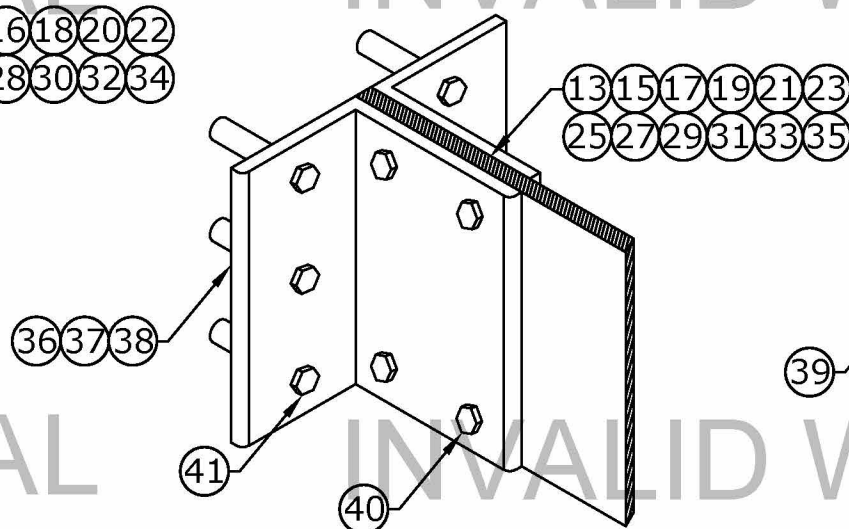
39 3"x4"x10"x1/4" MOUNTING BRACKET



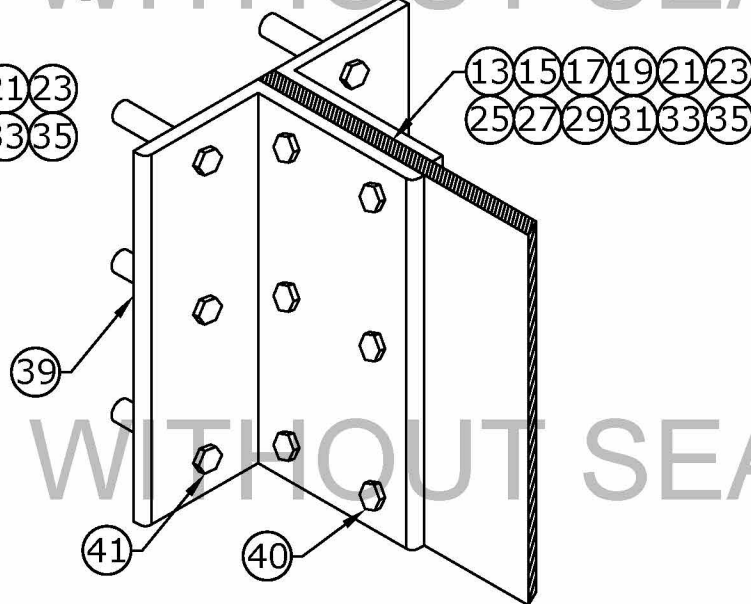
END OUTRIGGER ATTACHMENT FOR
6", 7", & 8" MOUNTING BRACKET



END OUTRIGGER ATTACHMENT
FOR 10" MOUNTING BRACKET



CENTER OUTRIGGER ATTACHMENT
FOR 6", 7", & 8" MOUNTING BRACKET



CENTER OUTRIGGER ATTACHMENT
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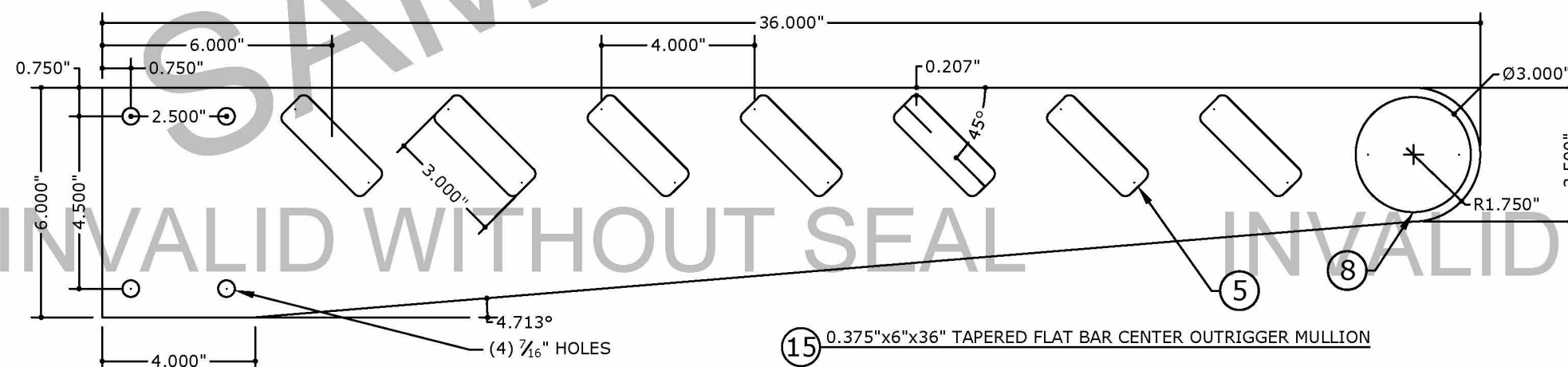
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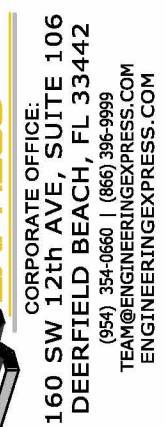
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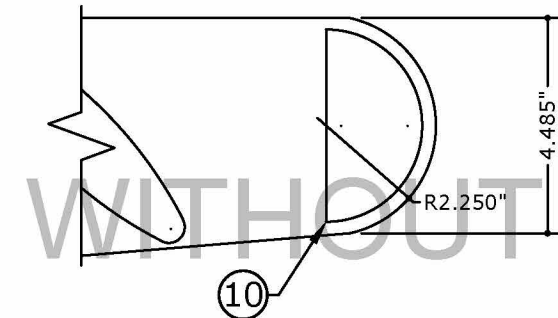
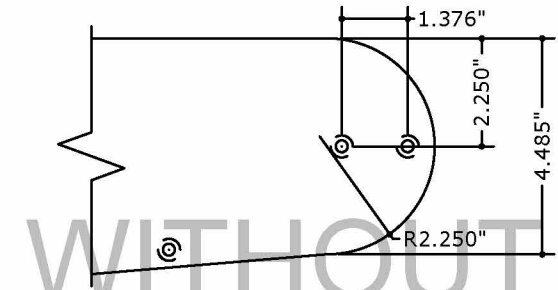
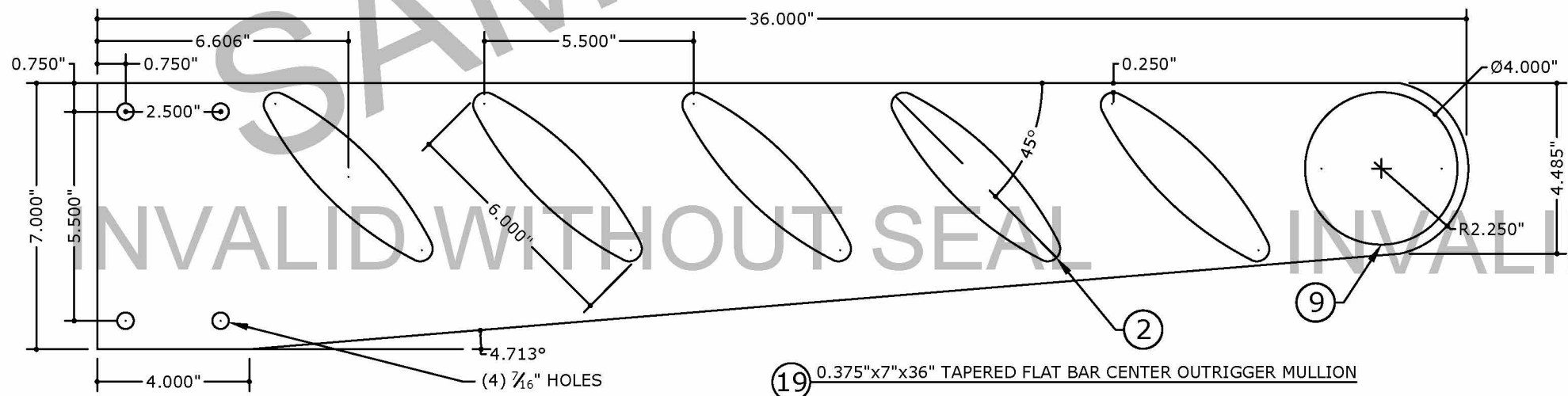
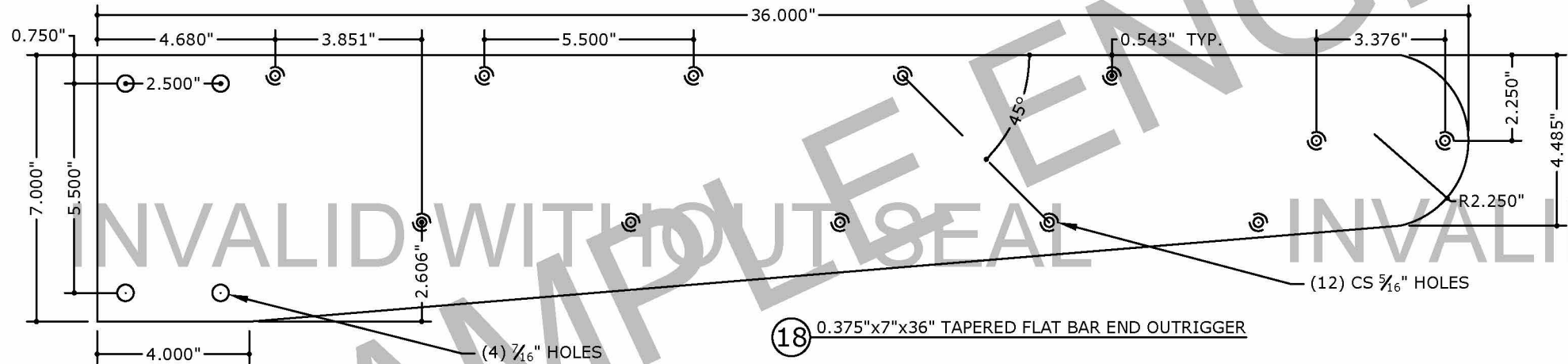
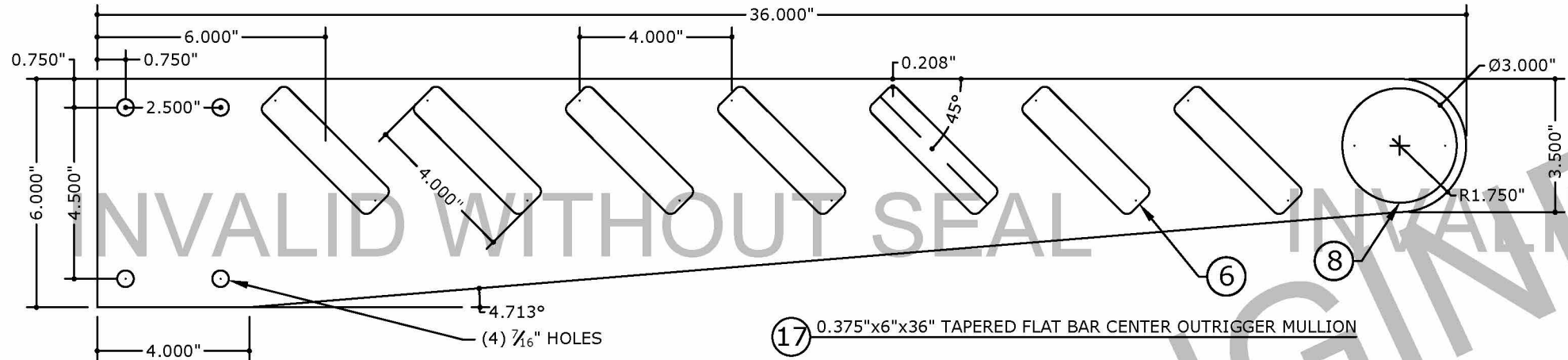
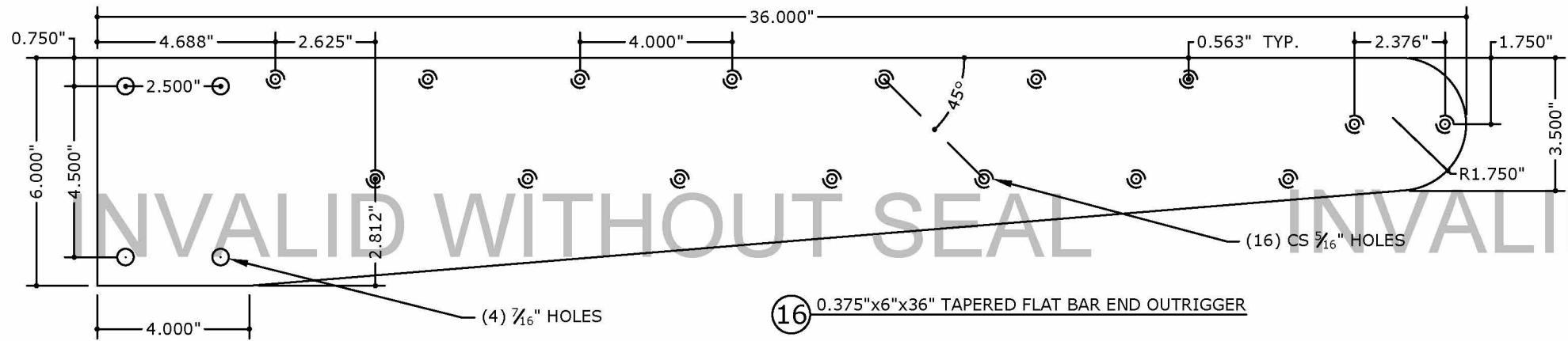
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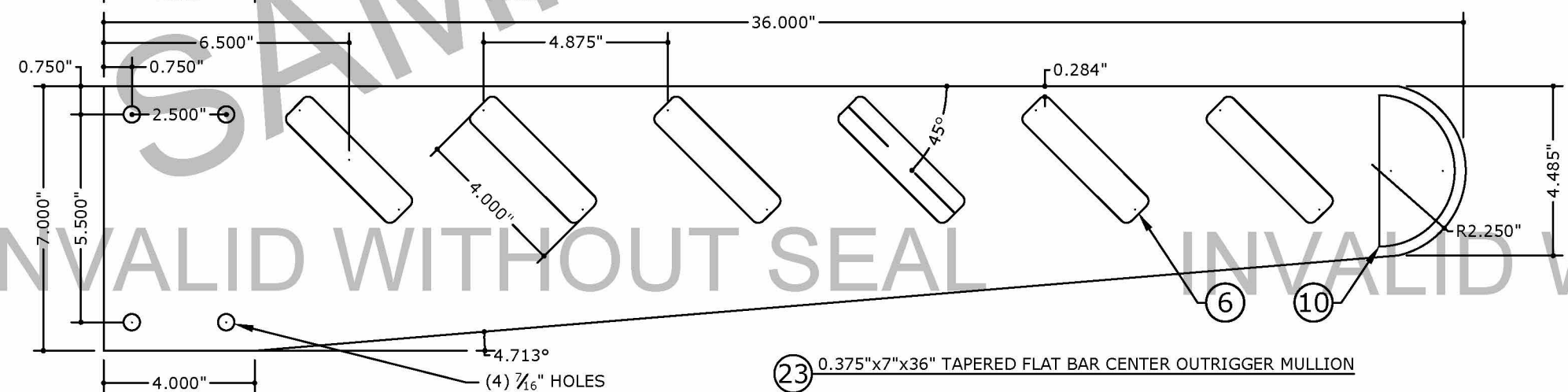
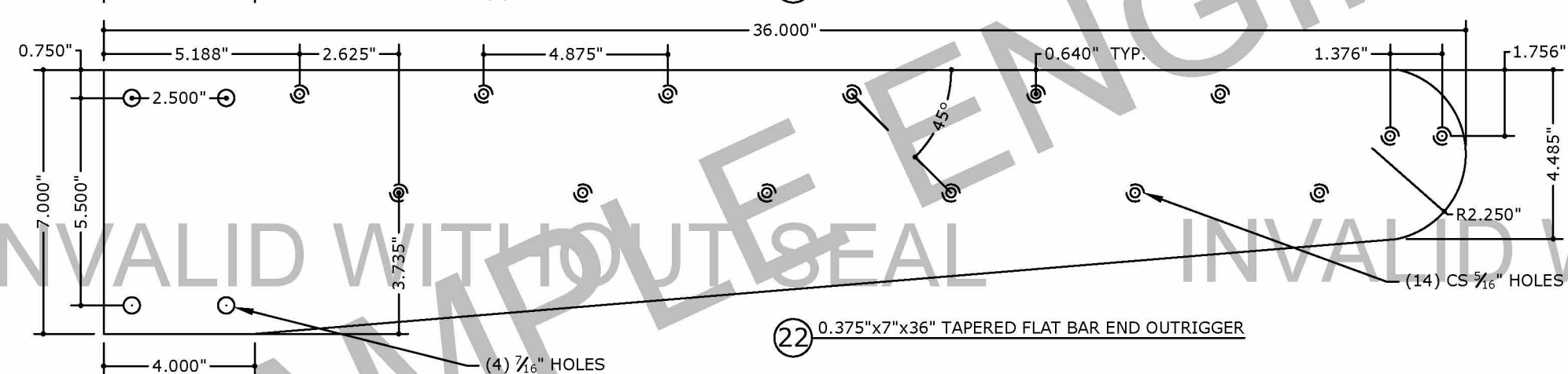
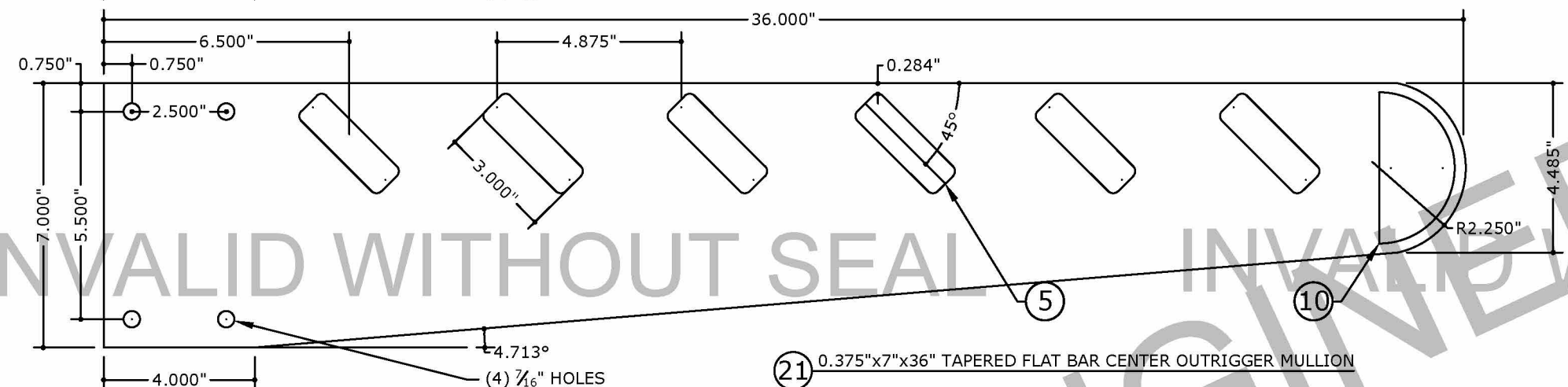
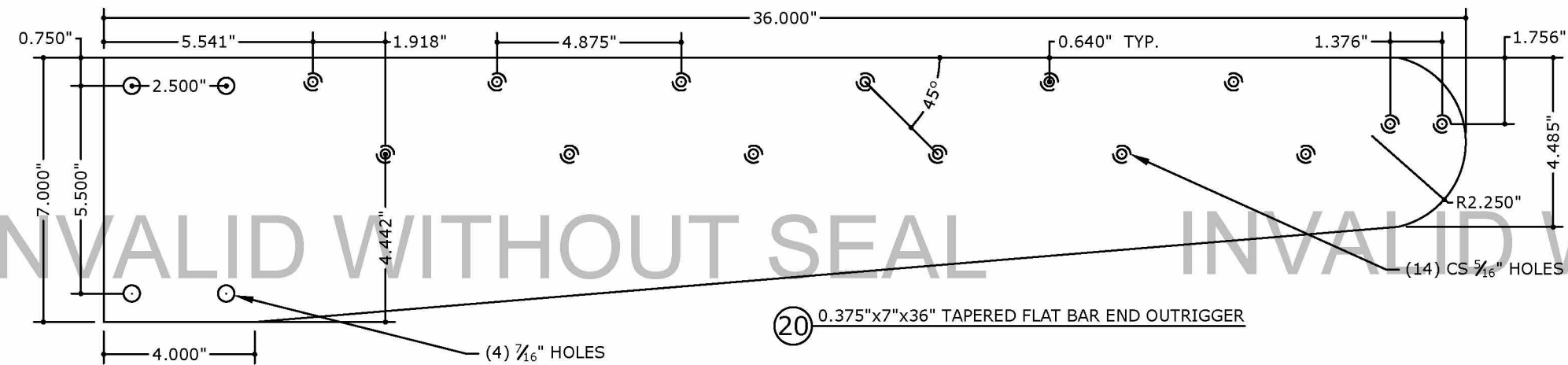
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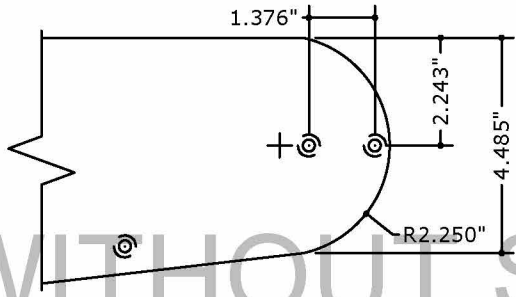
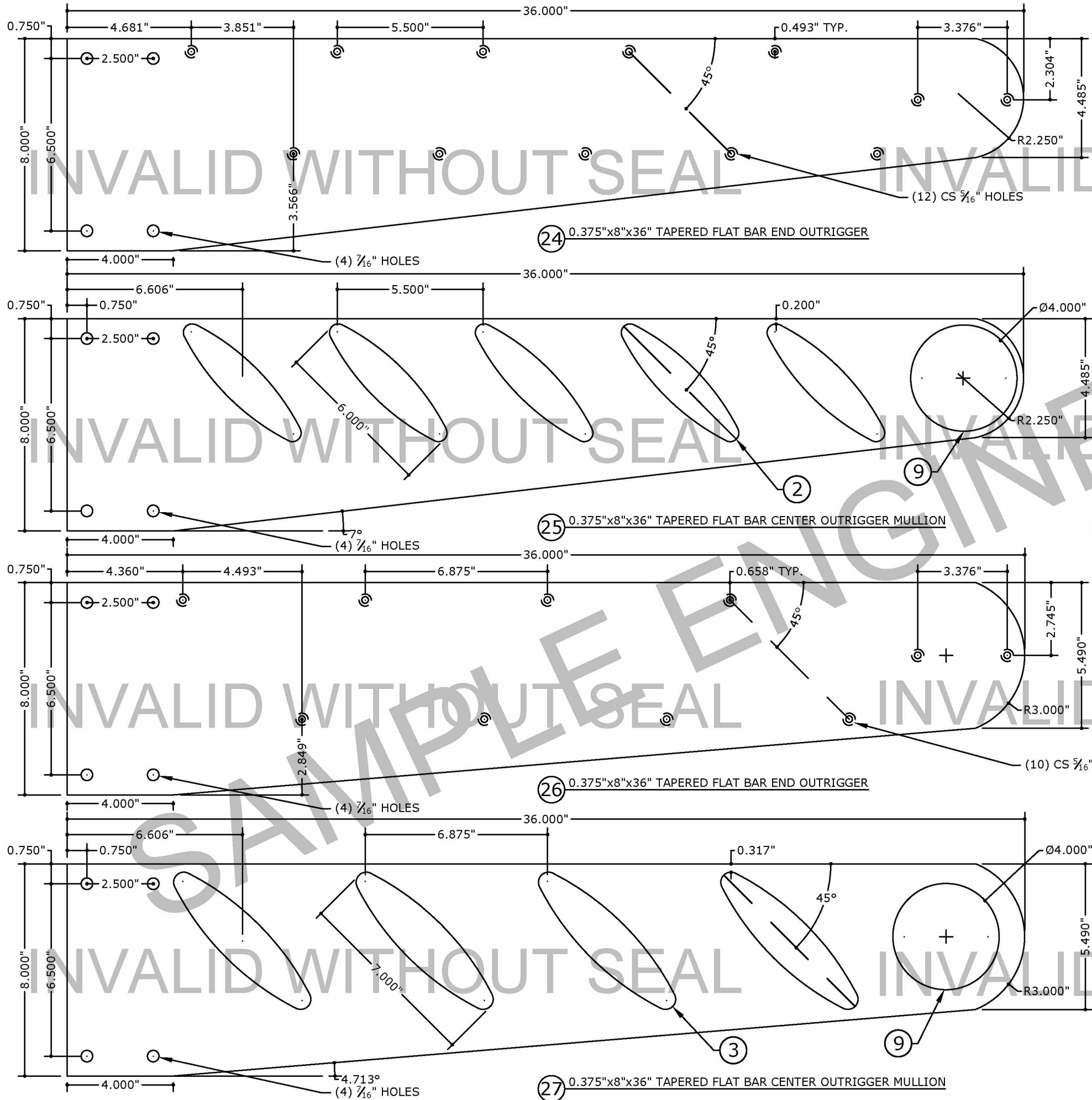
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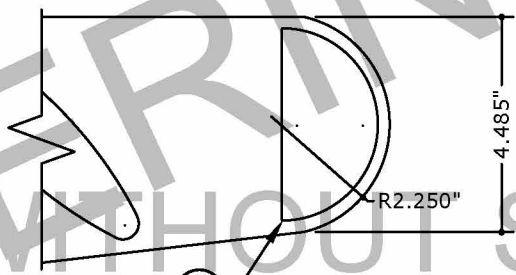
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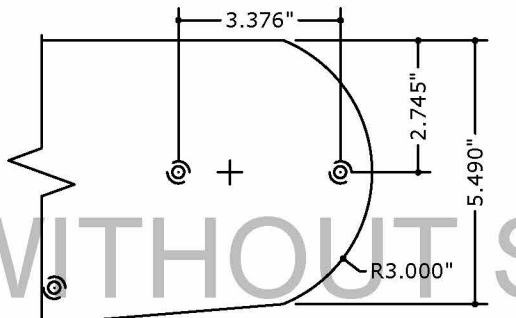
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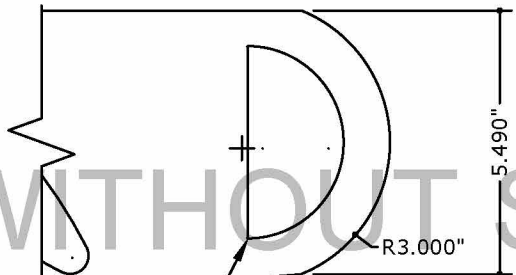
24 0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER



25A 0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER MULLION



26A 0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER



27A 0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER MULLION

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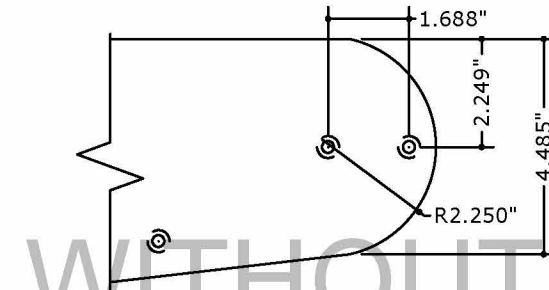
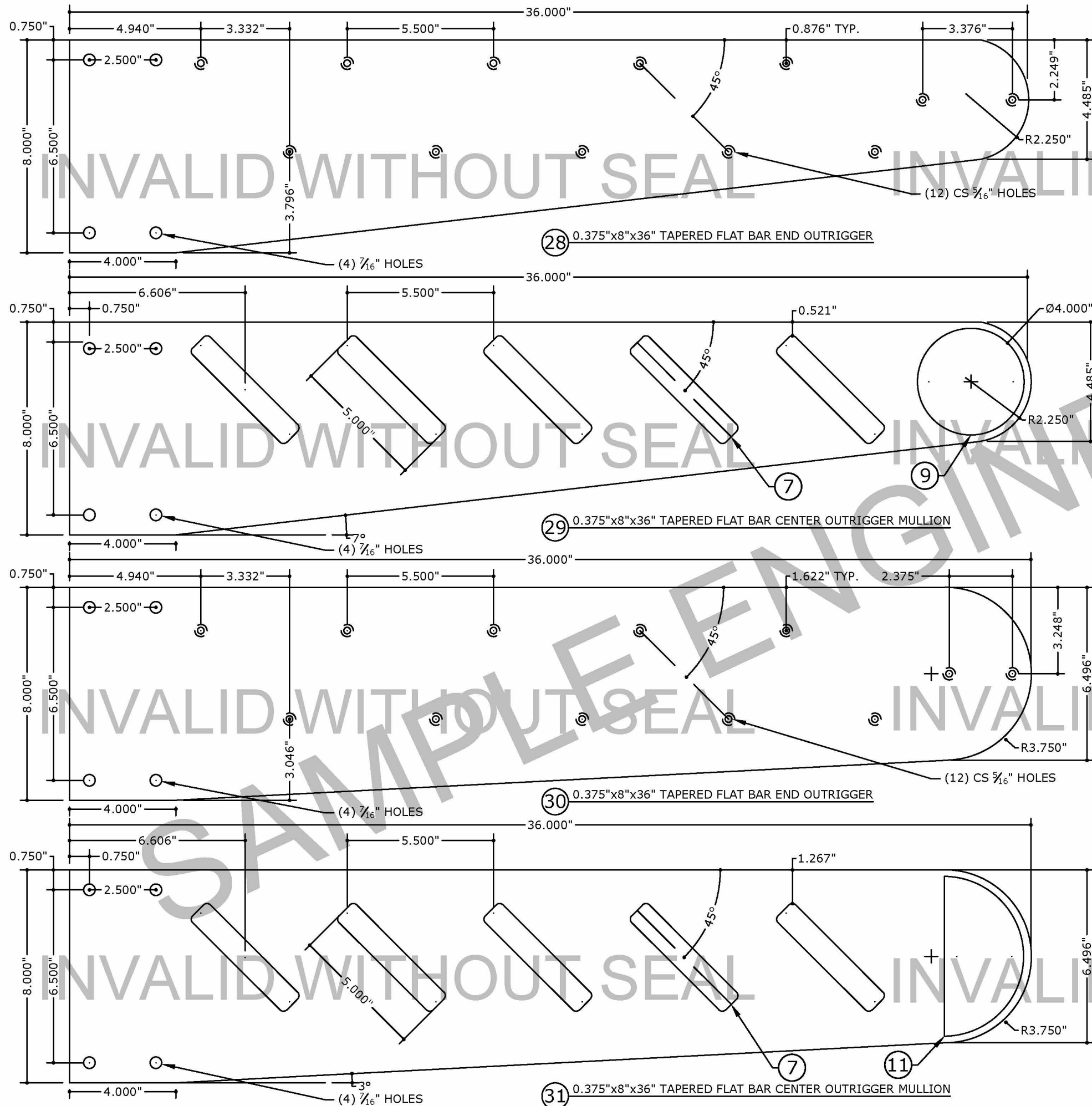
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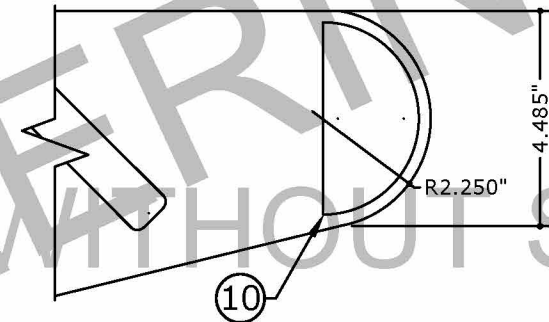
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29A 0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER MULLION

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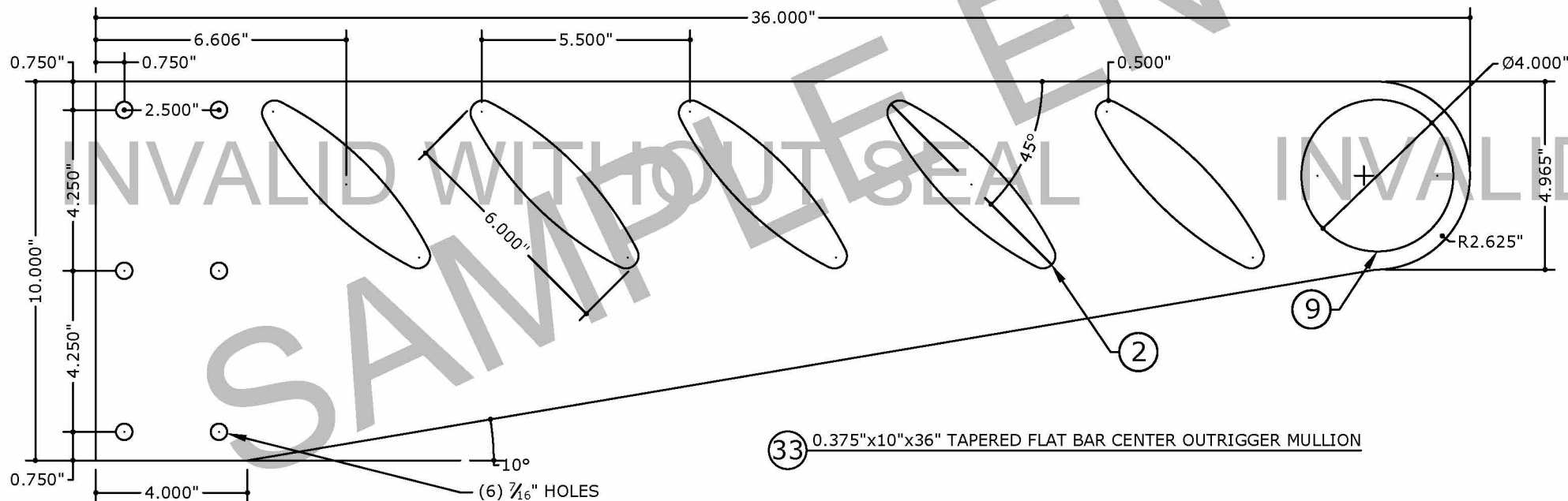
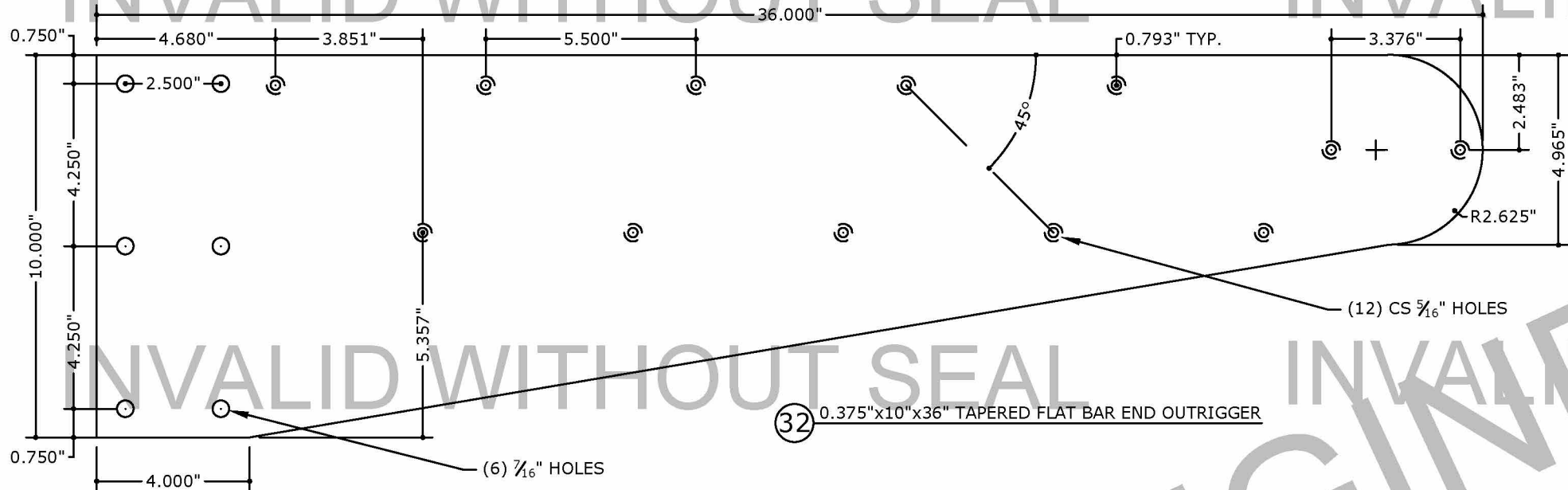
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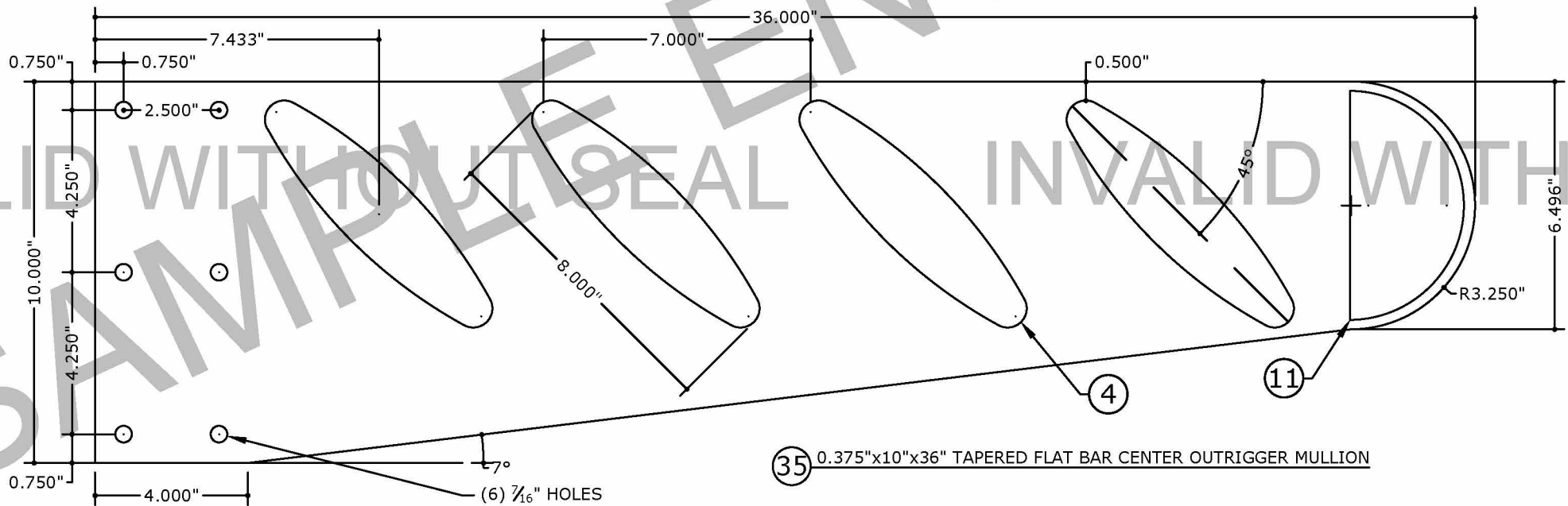
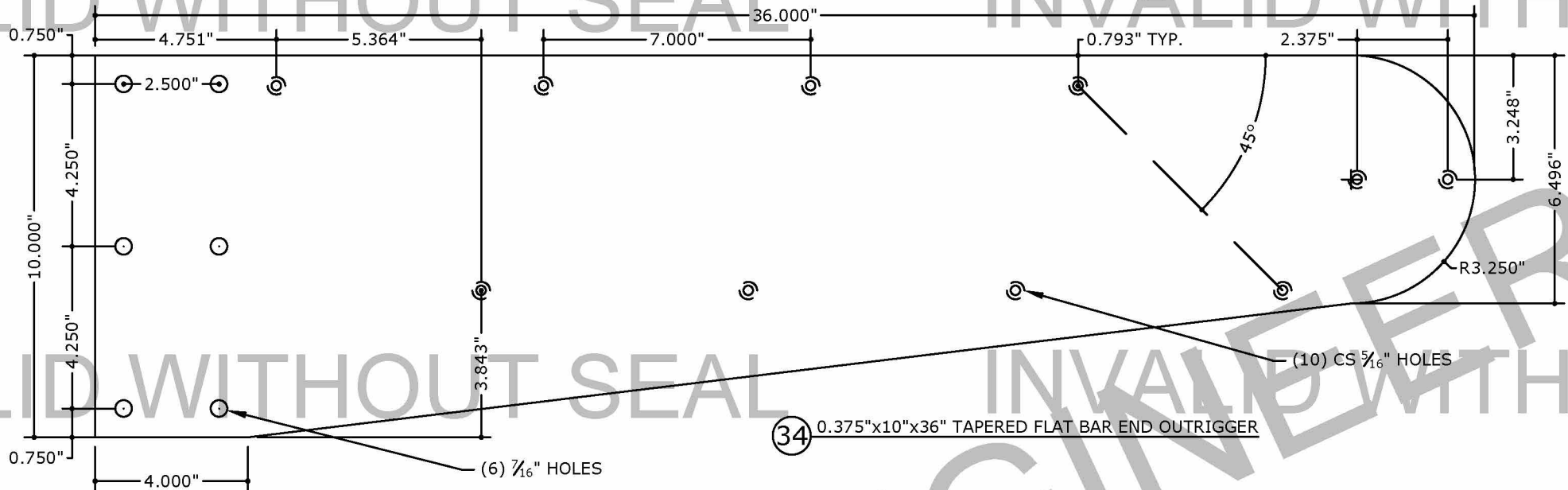
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BILL OF MATERIALS							
COMPONENT #	DESCRIPTION	MATERIAL	REMARKS	COMPONENT #	DESCRIPTION	MATERIAL	REMARKS
(1)	PROD-56-63-400 4" AIRFOIL	6063-T6 ALLOY	SEE SHEET 3	(24A)	0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 7
(2)	PROD-56-63-600 6" AIRFOIL	6063-T6 ALLOY	SEE SHEET 3	(25)	0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 7
(3)	PROD-56-63-12534 7" AIRFOIL	6063-T6 ALLOY	SEE SHEET 3	(25A)	0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 7
(4)	PROD-56-63-800 8" AIRFOIL	6063-T6 ALLOY	SEE SHEET 3	(26)	0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 7
(5)	PROD-40-63-722 3" RADIUS TUBE	6063-T6 ALLOY	SEE SHEET 3	(26A)	0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 7
(6)	PROD-40-63-724 4" RADIUS TUBE	6063-T6 ALLOY	SEE SHEET 3	(27)	0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 7
(7)	PROD-40-63-273 5" RADIUS TUBE	6063-T6 ALLOY	SEE SHEET 3	(27A)	0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 7
(8)	PROD-40-63-201 3" ROUND BULL NOSE	6063-T6 ALLOY	SEE SHEET 3	(28)	0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 8
(9)	PROD-40-63-204 4" ROUND BULL NOSE	6063-T6 ALLOY	SEE SHEET 3	(28A)	0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 8
(10)	PROD-40-63-202 4" HALF ROUND NOSE	6063-T6 ALLOY	SEE SHEET 3	(29)	0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 8
(11)	PROD-40-63-205 6" HALF ROUND NOSE	6063-T6 ALLOY	SEE SHEET 3	(29A)	0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 8
(12)	0.375"x6"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 4	(30)	0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 8
(13)	0.375"x6"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 4	(31)	0.375"x8"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 8
(14)	0.375"x6"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 4	(32)	0.375"x10"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 9
(15)	0.375"x6"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 4	(32A)	0.375"x10"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 9
(16)	0.375"x6"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 5	(33)	0.375"x10"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 9
(17)	0.375"x6"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 5	(33A)	0.375"x10"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 9
(18)	0.375"x7"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 5	(34)	0.375"x10"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 10
(18A)	0.375"x7"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 5	(35)	0.375"x10"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 10
(19)	0.375"x7"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 5	(36)	3"x4"x6" MOUNTING BRACKET	6061-T6 ALLOY	SEE SHEET 3
(19A)	0.375"x7"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 5	(37)	3"x4"x7" MOUNTING BRACKET	6061-T6 ALLOY	SEE SHEET 3
(20)	0.375"x7"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 6	(38)	3"x4"x8" MOUNTING BRACKET	6061-T6 ALLOY	SEE SHEET 3
(21)	0.375"x7"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 6	(39)	3"x4"x10" MOUNTING BRACKET	AISI 304 SERIES	SEE SHEET 3
(22)	0.375"x7"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 6	(40)	1/2"-13x3-1/2" SS BOLT W/ NUT & WASHER	AISI 304 SERIES S.S.	SEE DETAILS SHEET 3
(23)	0.375"x7"x36" TAPERED FLAT BAR CENTER OUTRIGGER	6061-T6 ALLOY	SEE SHEET 6	(41)	3/8"x4" S.S. DEWALT WEDGE-BOLT	AISI 410 SERIES S.S.	(3) REQ'D EACH MOUNTING BRACKET, 3" EMBED. & 3" MIN. EDGE DISTANCE BEYOND ANY FINISH. SEE DETAIL ON SHEET 3
(24)	0.375"x8"x36" TAPERED FLAT BAR END OUTRIGGER	6061-T6 ALLOY	SEE SHEET 7	(42)	1/4"x2" COUNTER SUNK S.S. SELF DRILLING SMS	AISI 410 SERIES S.S.	SEE DETAILS SHEET 2