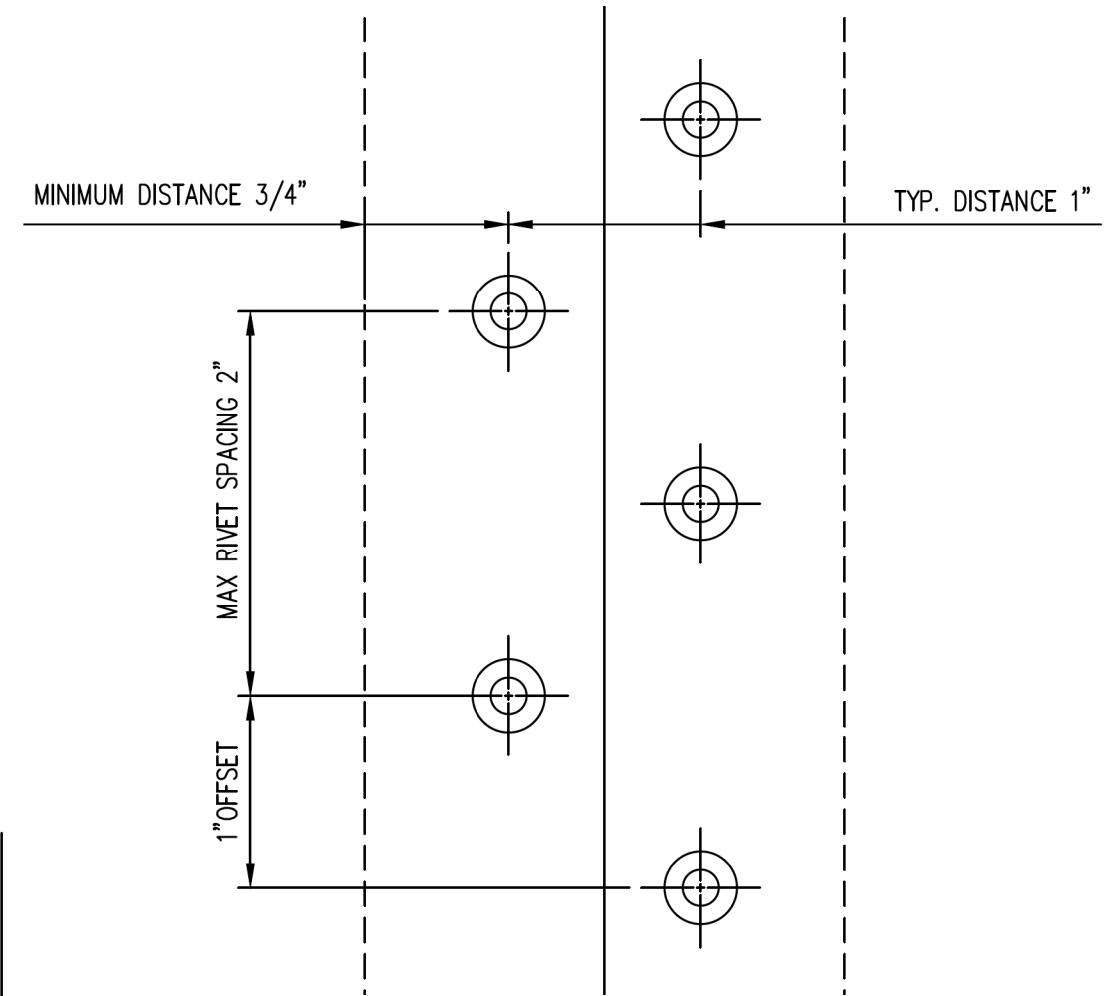
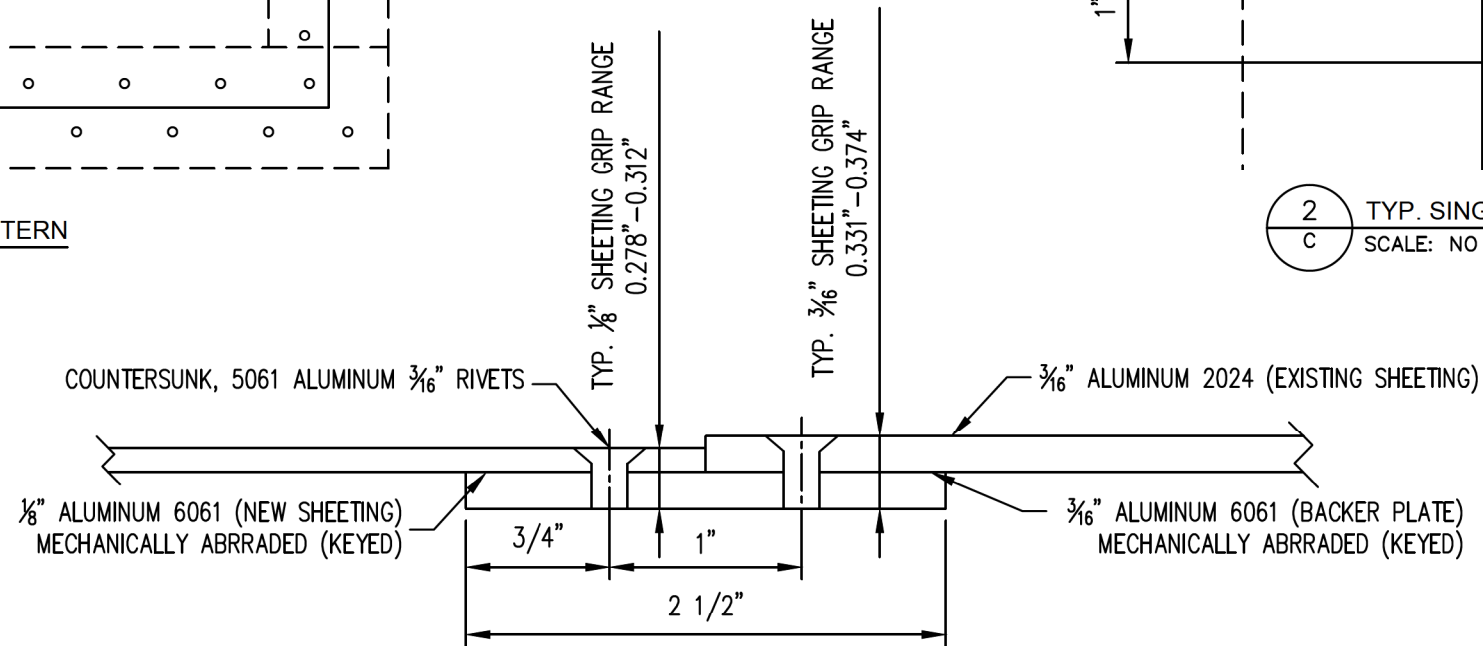


2
A TYP. SINGLE RIVET PATTERN
SCALE: NO SCALE



2
C TYP. SINGLE RIVET PATTERN DETAILS
SCALE: NO SCALE

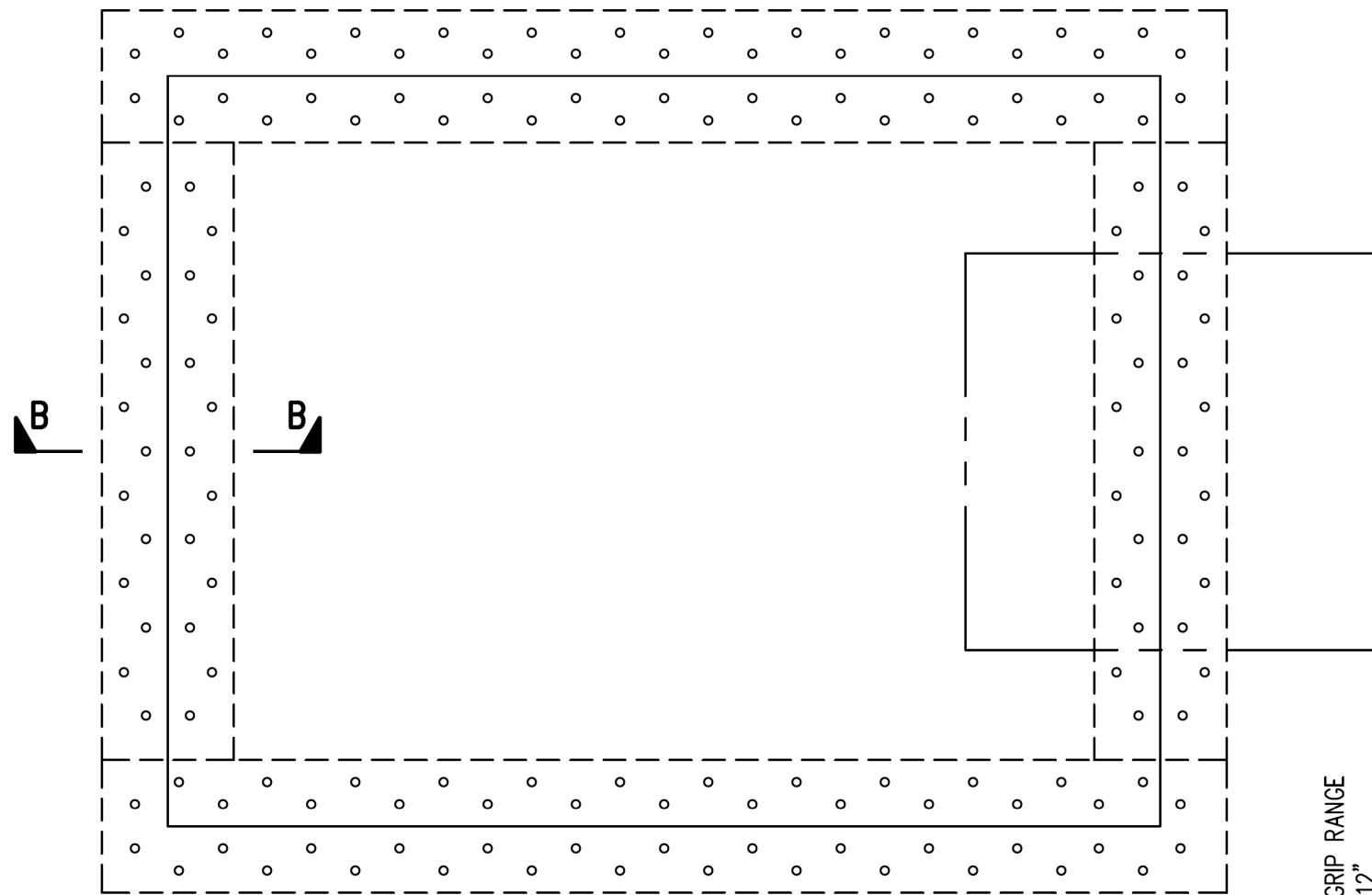


2
B TYP. SINGLE RIVET PATCH CROSS SECTION A-A
SCALE: NO SCALE

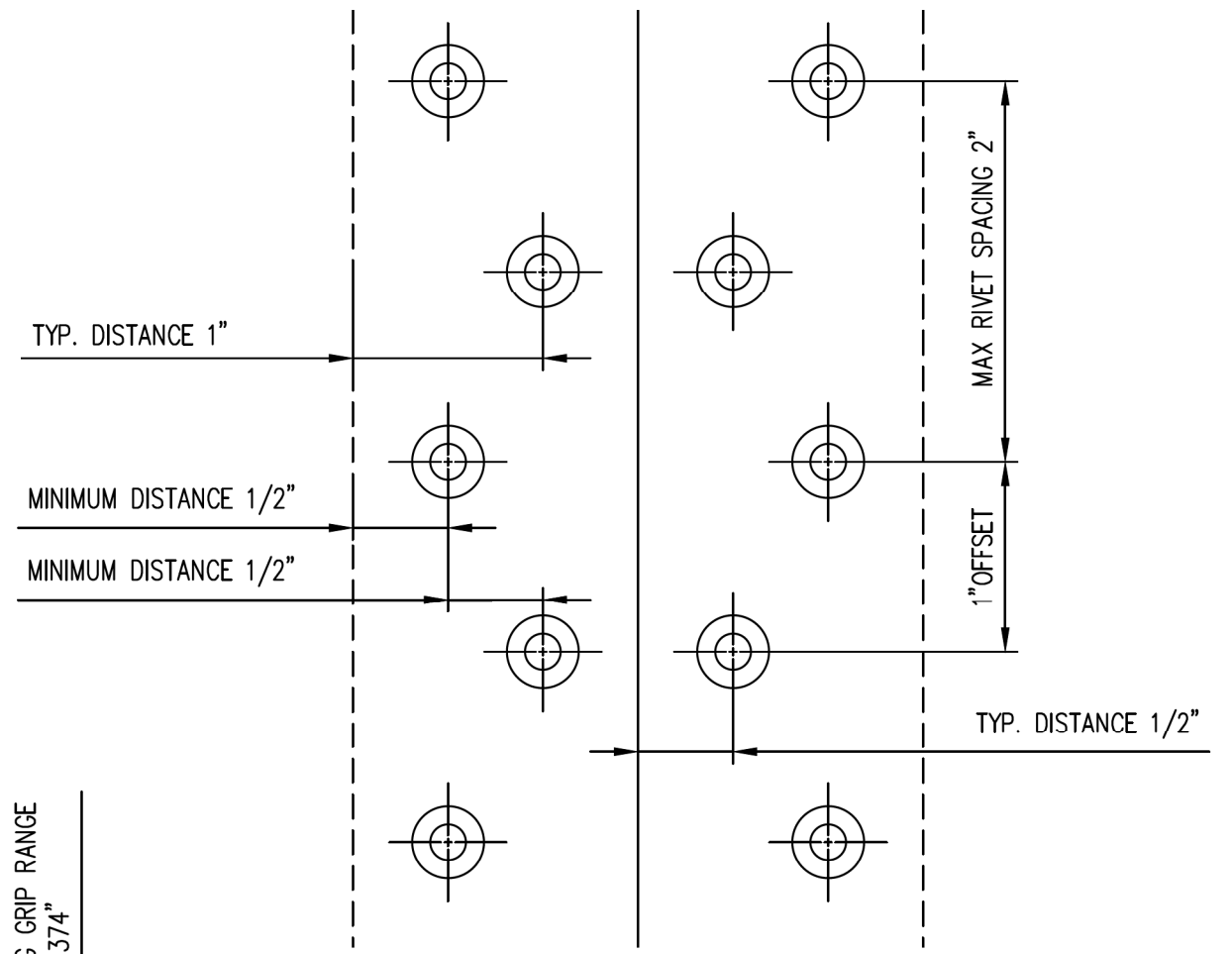
NOTES:

1. ALL METAL CONTACT SURFACES BEING USED FOR MOUNTING MUST HAVE ALL SCALE/DEBRIS REMOVED AND BE MECHANICALLY ABRADED TO CREATE A PROFILE BETWEEN 3 AND 4 MILS.
2. 3/16" ALUMINUM 6061 BACKER PLATE SHALL BE A MINIMUM 2-1/2" WIDE AND FULLY EXTEND THE LENGTH OF PANEL REPAIR. FABRICATE THE BACKER PLATES FROM ARRC PROVIDED MATERIAL AND MECHANICALLY KEY THE CONTACT SURFACE PRIOR TO INSTALLATION. INSTALL WITH ADHESIVE UNIFORMLY APPLIED BETWEEN THE BACKER PLATE, ORIGINAL SHEETING AND NEW SHEETING.
3. MAXIMUM RIVET PITCH 2" BETWEEN EACH RIVET AND 1" OFFSET BETWEEN EACH ROW TO PROVIDE UNIFORM CLAMPING. ALL RIVET HOLES MUST BE PREDRILLED AND COUNTERSUNK PRIOR TO ADHESIVE APPLICATION AND RIVET INSTALLATION TO PROVIDE A FLUSH HEAD.
4. APPROVED RIVETS INCLUDE 3/16" MAGNA-LOK, ALUMINUM COUNTERSUNK HEAD (PART# MGL-100-B6-6 & MGL-100-B6-9).
5. SINGLE RIVET PATTERN IS TO BE USED ONLY IF THE PANEL REPAIR IS LESS THAN FOUR (4) SQUARE FEET AND FULLY ENCLOSED WITHIN AN EXISTING PANEL.

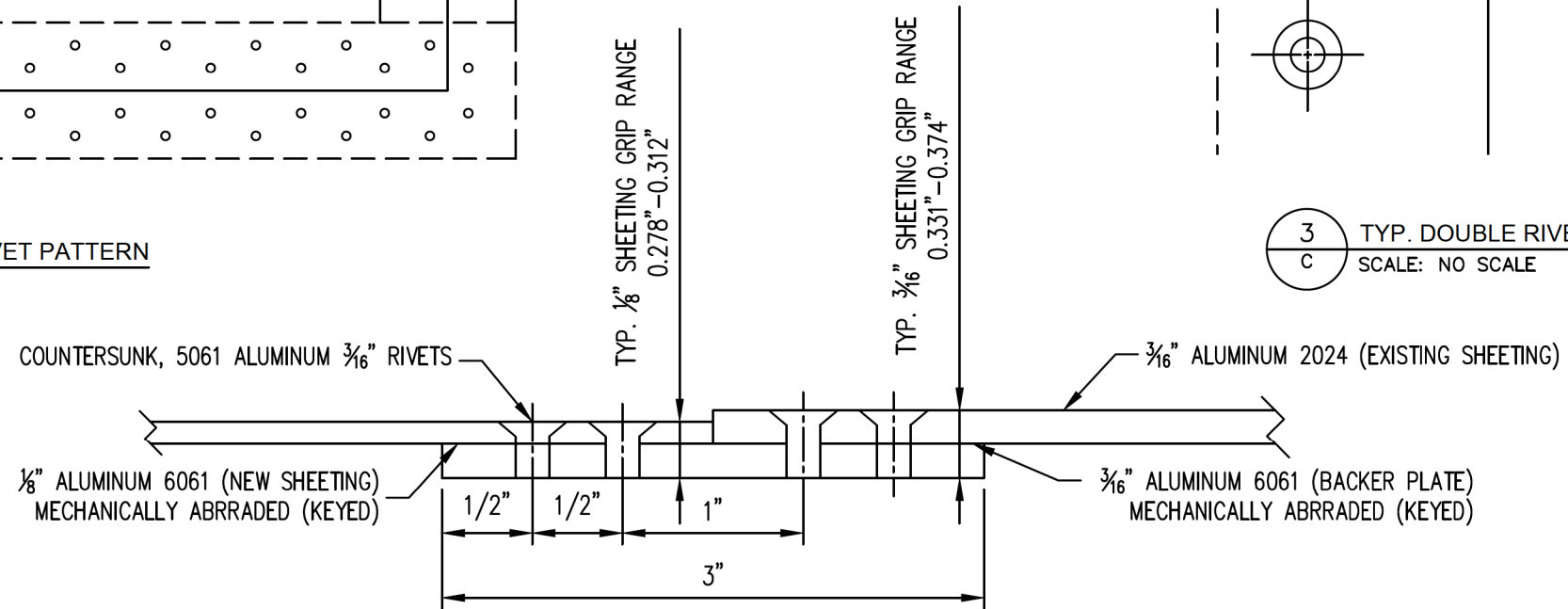
ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500		
PROJECT :		
MOTIVE POWER AND EQUIPMENT PASSENGER EQUIPMENT		
TITLE:		
ARRC STANDARD SHEETING REPAIR SINGLE ROW RIVET PATTERN		
DESIGNED BY: ARRC	SCALE : NO SCALE	AFE NO.:
DRAWN BY: ARRC	DATE : 03/20/2020	ACAD FILE:
CHECKED BY: ARRC		DWG NO. 1 OF 3
APPROVED BY: ARRC		



3
A TYP. DOUBLE RIVET PATTERN
SCALE: NO SCALE




3
C TYP. DOUBLE RIVET PATTERN DETAILS
SCALE: NO SCALE



3
B TYP. DOUBLE RIVET PATCH CROSS SECTION B-B
SCALE: NO SCALE

NOTES:

1. ALL METAL CONTACT SURFACES BEING USED FOR MOUNTING MUST HAVE ALL SCALE/DEBRIS REMOVED AND BE MECHANICALLY ABRADED TO CREATE A PROFILE BETWEEN 3 AND 4 MILS.
2. $\frac{3}{16}$ " ALUMINUM 6061 BACKER PLATE SHALL BE A MINIMUM 3" WIDE AND FULLY EXTEND THE LENGTH OF PANEL REPAIR. FABRICATE THE BACKER PLATES FROM ARRC PROVIDED MATERIAL AND MECHANICALLY KEY THE CONTACT SURFACE PRIOR TO INSTALLATION. INSTALL WITH ADHESIVE UNIFORMLY APPLIED BETWEEN THE BACKER PLATE, ORIGINAL SHEETING AND NEW SHEETING.
3. MAXIMUM RIVET PITCH 2" BETWEEN EACH RIVET AND 1" OFFSET BETWEEN EACH ROW TO PROVIDE UNIFORM CLAMPING. ALL RIVET HOLES MUST BE PREDRILLED AND COUNTERSUNK PRIOR TO ADHESIVE APPLICATION AND RIVET INSTALLATION TO PROVIDE A FLUSH HEAD.
4. APPROVED RIVETS INCLUDE $\frac{3}{16}$ " MAGNA-LOK, ALUMINUM COUNTERSUNK HEAD (PART# MGL-100-B6-6 & MGL-100-B6-9).
5. DOUBLE RIVET PATTERN IS TO BE USED IF THE PANEL REPAIR IS LARGER THAN FOUR (4) SQUARE FEET, LOCATED ON A MANUFACTURERS SEAM OR NOT FULLY ENCLOSED WITHIN AN EXISTING PANEL.

 ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500		
PROJECT :		
MOTIVE POWER AND EQUIPMENT PASSENGER EQUIPMENT		
TITLE:		
ARRC STANDARD SHEETING REPAIR DOUBLE ROW RIVET PATTERN		
DESIGNED BY: ARRC	SCALE : NO SCALE	AFE NO.:
DRAWN BY: ARRC	DATE : 03/20/2020	ACAD FILE:
CHECKED BY: ARRC		DWG NO.
APPROVED BY: ARRC		2 OF 3

750C-Half.ctb
P:\Engineering\ACAD\PASSENGER COACHES\Passenger Equipment Rehab\2020 ARR 501 Body Patch\ARR 500 General Arrangement.dwg

BASED OFF THE FAILURE ANALYSIS OF ARR 501, ALL ALUMINUM SIDE SHEETING WILL BE REQUIRED TO BE REPAIRED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE. EXCEPTIONS MAYBE AUTHORIZED BY OWNER'S REPRESENTATIVE.

FOR ALUMINUM SIDE SHEETING REPAIRS, THE EXISTING PROCEDURE SHALL BE MODIFIED TO INCLUDE:

ARRC AND THE CONTRACTOR SHALL DETERMINE THE AREAS FOR SHEETING PANEL REPLACEMENT DURING THE JOINT SHEETING INSPECTION. COMPROMISED SHEETING WILL BE CUT OUT WHILE TAKING CAUTION NOT TO DAMAGE ANY OF SUPPORTING STRUCTURE COVERED BY THE SHEETING. NEW SHEETING (1/8" 6061-T ALUMINUM - ARRC PROVIDED MATERIAL) SHALL BE SECURED TO THE EXISTING SHEETING USING BACKER PLATES (2-1/2" WIDE BY 3/16" THICK 6061-T ALUMINUM - CUT FROM ARRC PROVIDED MATERIAL). BACKER PLATES, NEW SIDING AND ORIGINAL SIDING MUST BE MECHANICALLY ABRADED (KEYED) PRIOR TO ADHESIVE APPLICATION. THIS IS TO BE PERFORMED BY GRIT BLASTING; OTHER MECHANICAL METHODS CAN BE PROPOSED FOR ARRC APPROVAL.


BACKER PLATES WILL BE FASTENED TO NEW SHEETING AND OLD SHEETING BY BLIND COUNTERSUNK 5056 ALUMINUM 3/16" DIAMETER BLIND RIVETS. DEPTH OF COUNTER SINK MUST BE LESS THAN THICKNESS OF THE SHEETING, IN ADDITION THE OVERALL LENGTH OF THE RIVET SHALL PROTRUDE ONE AND A HALF DIAMETERS BEYOND THE BACKER PLATE. RIVETS SHALL BE INSTALLED IN MAX SPACING OF 2", WITH 1" OFFSET BETWEEN ROWS AS SHOWN IN PREVIOUS DRAWINGS. RIVET MANUFACTURE'S GRIP RANGE MUST MEET THE COMBINED THICKNESS OF SHEETING AND BACKER PLATE. RIVETS SHOULD BE SIZED TO THE SHEETING REPAIR BEING MADE.

PRIOR TO INSTALLATION, PRE-DRILLING AND COUNTERSINKING WILL BE PERFORMED TO ALLOW FLUSH RIVET HEADS. ADHESIVES MUST BE UNIFORMLY APPLIED BETWEEN BACKER PLATE, ORIGINAL SHEETING AND NEW SHEATHING PATCH. FINAL INSTALLATION OF RIVETS MUST BE COMPLETED BEFORE ADHESIVES ARE SET. RIVET INSTALLATION SHALL BRING SHEATHING PLYS INTO FULL CONTACT FORCING OUT AIR BUBBLES AND CLOSING GAPS IN THE ADHESIVE JOINT.

IN LOCATIONS WHERE THE SHEETING MUST BE ATTACHED TO PASSENGER COACH STRUCTURE/ SUPPORT MEMBERS, CONTRACTOR AND ARRC REPRESENTATIVE SHALL INSPECT AND DETERMINE REWORK PLAN ON A CASE BY CASE BASIS.

SINGLE RIVET PATTERN (SHT 1) IS TO BE USED ONLY IF THE PANEL BEING REPLACED IS LESS THAN FOUR (4) SQUARE FEET AND FULLY ENCLOSED WITHIN AN EXISTING PANEL ON ALL SIDES.

DOUBLE RIVET PATTERN (SHT 2) IS TO BE USED IF THE PANEL BEING REPLACE IS LARGER THAN FOUR (4) SQUARE FEET OR LOCATED ON A MANUFACTURE'S SEAM OR NOT FULLY ENCLOSED WITHIN AN EXISTING PANEL.

		ALASKA RAILROAD CORPORATION	
		ENGINEERING SERVICES	
		P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500	
PROJECT :			
MOTIVE POWER AND EQUIPMENT PASSENGER EQUIPMENT			
TITLE:			
ARRC STANDARD SHEETING REPAIR NOTES			
DESIGNED BY:	ARRC	SCALE :	NO SCALE
DRAWN BY:	ARRC		
CHECKED BY:	ARRC	DATE :	03/20/2020
APPROVED BY:	ARRC		
		AFE NO.:	
		ACAD FILE:	
		DWG NO.	3 OF 3