Track Preparation

- Prior to track disassembly; stake out the alignment of the crossing with offsets located every six track feet.
- Remove the existing crossing surface to a minimum width of 10’, allowing for clearance on each side of the 8’3” wide modules.
- Remove the rails, ties and ballast to a distance of 5’ beyond each end of the crossing.
- Remove all fouled materials and replace with select compacted backfill per the Plans and specifications.

Installation Steps

STEP #1
Mark the centerline of the track. For a curved crossing, use offsets from the centerline at six foot increments. Begin placing modules from the end of the crossing where indicated on the Plans. When placing the subsequent modules, use ¼” wood lath or another suitable means to obtain an expansion gap between modules. For curved crossings, ensure that stamped logos in trough face the same direction.

STEP #2
Be careful to match the vertical and horizontal alignment of rail troughs. If the vertical alignment of adjoining rail trough surfaces mismatch by more than 1/8”, lift the module and adjust the fines to correct the module heights.
STEP #3
When all modules have been placed, use compressed air and brooms to clean all debris out of the rail troughs.

STEP #4
Be sure that all debris and dirt is brushed from the surface of the rail base and web. At rail joints, the rail boot can be cut to allow joint assembly. Minimize the amount of rail boot that is cut by only cutting what is necessary to install the joint plate.

STEP #5
Place the 4x4 timbers used for shipment and storage over the rail trough and place the new rail on top of the timbers in preparation for the rail booting process. Unroll the boot on top of the modules alongside the rail, and orient so that when upright, the taller flap points to the field side of the track.

STEP #6
Lubricate the base of the rail trough with a mixture of dish soap and water. Always use adequate lubrication. Beginning at one end of the crossing, pick and raise the rail to install the boot around the rail. Be sure the boot is fully seated so that the base is completely flat.

STEP #7
Verify that the taller flap of the rail boot is pointed to the field side of the track. Begin removing the 4x4 timbers and slowly lower the booted rail into the trough. Place the base of the booted rail between the cast-in Pandrol shoulders.

STEP #8
Place the plastic insulators into the gap between the rail base and the cast-in Pandrol shoulders, 6 needed per trough, 12 per module. Adjustment of the rail may be necessary to widen the gap between the shoulder and the rail, so that the clips drop into place. Do not install the Pandrol e-clips into the shoulders until insulators have been installed at least 3 rows ahead.
STEP #9
Install the Pandrol e-clips into the shoulders. Place the flat end of the e-clip atop the insulator, and the round bar into the cast-in shoulder. Hold the e-clip secure with a boot (never a hand) and drive the e-clip longitudinally into the shoulder with a sledge. Be sure not to over-drive the e-clip; the curved section of clip should not be in contact with the cast-in shoulder.

STEP #10
When the rail is clipped down on the first module, proceed to the next adjacent module. Do not skip modules, or start from two ends and work toward the middle. Starting from one end, or the middle and working outward, is acceptable.

STEP #11
After the rail in the modules is connected to the existing track outside the crossing, space the first tie 4” away from the module to allow for bar tamping and room to apply double rail anchors.

STEP #12
Install Hot Mix Asphalt inside the troughs per the Plans and specifications.