Purpose
This application note is a basic explanation of how to create four-section right-turn flashing yellow arrow (FYA) overlaps in the software of the ASC/3 controller family.

Prerequisites
To implement a single right turn FYA, you must program two overlaps in the controller:
- An overlap for the solid GA, YA, and RA indications
- An overlap for the FYA indication

Depending on the type of conflict monitor and cabinet used, two physical load switches may be necessary or, if the "Ped Yellow" output mode is used, one full load switch, and a single pedestrian yellow output is necessary.

**Important:** You must pay careful attention to the allocation of channels in the cabinet, especially if there are left turn flashing yellow arrows at the same intersection.

Note that one extra single output is necessary for each left turn FYA, and each right turn FYA uses an entire overlap channel in addition to an extra single output.

Procedure
1. In **MM-2-2**, create a standard overlap (OTHER/ECONOLITE or NORMAL type) that includes any phases during which the right turn movement can be protected. For a standard quad intersection, this overlap will include phase 1, 3, 5, or 7. This overlap must also be assigned to a channel in the phase-to-load-switch assignment submenu (**MM-1-3**) and a physical load switch in the cabinet because it will control the GA, YA, and RA indications for the right turn FYA.

```
TMG VEH OVLP...[M] TYPE:OTHER/ECONOLITE
  PHASES 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6
  INCLUDED .. X                     
  PROTECT     . . . . . . . . . . . .
  PED PRTC    . . . . . . . . . . . .
  NOT OVLP    . . . . . . . . . . . .
  FLSH GRN    . . . . . . . . . . . .
  LAG X PH    . . . . . . . . . . . .
  LAG 2 PH    . . . . . . . . . . . .
  LAG GRN 0.0 YEL 0.0 RED 0.0 ADV GRN 0.0
```

**MM-2-2**

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1 GA = Green Arrow, YA = Yellow Arrow, RA = Red Arrow
2. In **MM-2-2**, create a PPLT/FYA\(^2\) type overlap that uses the overlap created in Step 1 for the PROTECTED LEFT TURN movement, and the compatible opposing through phase for the OPPOSING THROUGH movement. For a standard quad intersection, the OPPOSING THROUGH PHASE will be phase 2, 4, 6, or 8. This overlap must also be assigned to a channel in the phase-to-load-switch assignment submenu (**MM-1-3**) and, at a minimum, its green output must be mapped to a load switch output in the cabinet. This output controls the FYA indication.

<table>
<thead>
<tr>
<th>TMG VEH OVL...[2] TYPE: ......PPLT FYA</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROTECTED LEFT TURN.... OVERLAP M</td>
</tr>
<tr>
<td>OPPOSING THROUGH....... PHASE 6</td>
</tr>
<tr>
<td>FLASHING ARROW OUTPUT.....CH12 GRN OLP</td>
</tr>
<tr>
<td>DELAY START OF: FYA..0.0 CLEARANCE. 0.0</td>
</tr>
<tr>
<td>ACTION PLAN SF BIT DTSABLE........... 0</td>
</tr>
<tr>
<td>PED PROTECTED ENABLE ............... NO</td>
</tr>
</tbody>
</table>

**MM-2-2**

3. For the PPLT/FYA overlap, choose whether FLASHING ARROW OUTPUT should be Green Overlap (GRN OLP), Isolate, or Ped Yellow (PED YEL) type.

- **Green Overlap** is most commonly used with Reno conflict monitors and requires two complete load switches in the cabinet.
- **Isolate** is most commonly used with EDI conflict monitors and also requires two load switches.
- **Ped Yellow** can be used with either type of monitor and only requires one complete load switch, and a singular ped yellow output. The complete scope of cabinet configurations and monitoring options is beyond the scope of this application note.

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**Notes on Pedestrian Protected Mode**

As of software Version 2.65.00, FYAs may be ped-protected in which the FYA signal displays a solid red indication while the programmed pedestrian movement is timing its walk or pedestrian clearance intervals.

This ped protect mode is compatible with the above programming steps for a right turn FYA if the opposing through movement is a phase; if the opposing through movement is programmed as an overlap, the ped protect entries will not be shown in the menu because they are not available in this configuration.

To enable Ped Protection, select YES in the last line in the screen above, PED PROTECTED ENABLE.

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\(^2\) PPLT/FYA = Protected Permissive Left Turn / Flashing Yellow Arrow