**Traffic Flow Options Inside Work Zones**

**Compendium of Traffic Control Options**

| **Option & Objectives** | **Pros** | **Cons** | **Restrictions** | **When to Use**  | **Cost** |
| --- | --- | --- | --- | --- | --- |
| **Temporary Pavements** **(Widen)****1, 2, 4** | Allows for more lanes to stay open.Creates greater capacity through the construction zone - less backups. | Expensive and time consuming while constructing. | Bridges and other roadway items. | When volumes warrant keeping all lanes open.When construction is expected to produce backups.When project is of long duration. | MTC↑, RUC↓ |
| **Use Existing Shoulders****1, 2** | Keeps flow normal.Allows wider work space or increases capacity.Low cost.Quick. | Requires more maintenance.Trucks may damage weak shoulders.No room for breakdowns/ emergency stops unless parking lots created.Closer to guardrail, embankmentand piers. | Must have full shoulder widths, level bridges.Bridges must be able to accommodate.Put trucks in left lane if possible.Must coordinate with District Pavement Engineer to evaluate shoulders during design.Should have full width approach slabs. | High volume.When backups expected.Moving projects. |  |
| Legend: Objectives: 1 = Reduce Complaints; 2 = Maximize Corridor Capacity; 3 = Minimize duration of motorist inconvenience; 4 = Maximize motorist / worker safetyCost: CC = Construction Cost; MTC = Maintenance of Traffic Cost; RUC = Road User Cost; ↑= Cost Increase; ↓= Cost Decrease; CC + MTC = Contract Cost |

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**Compendium of Traffic Control Options** (continued)

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| --- | --- | --- | --- | --- | --- |
| **Temporary Signals****(At ramps and on express- ways includes construction vehicle crossing and ramp metering)****1, 2, 4** | Helps maintain ramp and detour capacity. | Change traffic patterns on cross roads. | Should be warranted. | When additional capacity is needed for the short term. | Low. |
| **Reversible Lanes****(May use movable barriers)****2** | Flexible to accommodate fluctuations in traffic peak flow direction. | Confusing to infrequent user.Labor intensive. | Need majority commuting traffic. | Large variances in directional volumes between AM and PM; and number of lanes limited. | MTC↑, RUC↓ |
| **Movable Barrier Systems****2, 3, 4** | Ability to provide for peak flow capacity. | More costly than drums and fixed barriers. | Shift distance must be a constant.Must determine appropriate end treatment. | When you have a need for repeated barrier shifts. | MTC↑, RUC↓ |
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| --- | --- | --- | --- | --- | --- |
| **Ramp Closures****2, 3, 4** | Can pave/repair ramp full width.Better, safer construction.See “Close & Detour.”Reduces mainline congestion.Reduces cross road congestion.Easy to sign in rural area. | Blocks traffic pattern.See “Close & Detour.”Forces new traffic pattern.Moves congestion elsewhere.In urban area, may have negative impact on next intersection. | Should give definite time limit.See “Close & Detour.”Best if only two ramps at a time (to and from directional pairs). | When other ramps are close by, or when bridges on mainline are too close to utilize exit and/or entrance ramps.See “Close & Detour.”Use when you have high-traffic volumes.In areas where alternate routes exists. | Relatively cheap.See “Close & Detour.” |
| **Glare/Gawk Screens****2, 4** | Effective way to separate work and keep traffic moving.Safer for work.Reduce rubber-necking. | Longer to set up than drums.Higher cost than 32 inches.Maintenance of glare screen, if used.If present on both sides, may reduce drive speed.Barrier can interfere with wide loads. | Widths in certain areas.Sight restrictions at intersections and ramps. | When view of intense construction is likely to reduce capacity.With all part-width construction at restricted areas to control headlight glare. | MTC↑ |
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| **Highway Advisory Radio****1** | Provides real time information to motorists. | Limited ranges.Low usage rate by motorists due to difficulty tuning in station. | Information needs to be current.May work best with repeat drivers.Should be limited to project specific information. | When alternate routes are available.Long duration of construction. | RUC↓ |
| **Owner Imposed Design Restrictions****1, 3** | Can reduce actual construction duration. | Requires advance planning during design.Could increase cost. |  | For certain time critical phases. |  |
| **Use of Owner Supplied or Stockpiled Materials****1, 3** | Can reduce actual construction duration. | Requires advance planning. |  | For time-critical phases to shorten duration. | Inexpensive. |
| **Control of Contractor’s Access to the Work** **(By location or time of day.)****2, 4** | Eliminates potential conflicts between construction traffic and motorist.Improves through put of motorists. | May reduce contractor productivity. | Must provide reasonable access for contractor. | Where capacity is critical.Where conflicts between contractor’s equipment and motorists is expected to impact capacity and safety, possibly on grades or locations with poor sight distances. | CC↑, RUC↓ |
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