

ENGINEERING DIRECTIVE

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CHIEF ENGINEER

Incentive/Disincentive and Lane Rental Contract Provisions

Effective immediately, the Highway Division will implement schedule Incentive/Disincentive (I/D) or lane rental provisions on carefully selected construction projects in order to encourage early completion and to minimize road user impacts during construction.

FHWA's Technical Advisory T 5080.10, dated April 4, 2011, defines an I/D provision as follows: "...a contract provision which compensates the contractor a specified amount of money for each day identified critical work is completed ahead of schedule and assesses a deduction for each day the contractor overruns the I/D time." This Technical Advisory also indicates that I/D provisions should not be used routinely. "Generally, I/D provisions should be limited to those projects whose construction would severely disrupt highway traffic or highway services, significantly increase road user costs, have significant impact on adjacent neighborhoods or businesses, or close a gap thereby providing a major improvement in the highway system."

The lane rental concept was developed to provide contractors with an incentive to minimize road user impacts during construction through shorter duration and less lane closures. Lane rental is generally utilized when detours are not feasible due to the length or impracticality of the detour, or when peak traffic flow is impacted significantly. Typically, projects that include multi-lane roadways with high traffic volume are more suited for lane rental where at least one lane remains open to traffic through the work zone.

The purpose of this Engineering Directive is to provide guidance for evaluating proposed construction projects to determine if an I/D or lane rental provision is appropriate and also to describe a procedure for implementing these provisions when applicable.

This Engineering Directive is applicable to all Design/Bid/Build and Design/Build projects with an Office Estimate greater than \$10 million and identified as one of the following project types in ProjectInfo:

- Bridge Reconstruction/Rehabilitation
- Bridge Replacement
- Highway Reconstruction – Added Capacity
- Highway Reconstruction – Major Widening
- Highway Reconstruction – Minor Widening
- Highway Reconstruction – No Added Capacity

- Highway Reconstruction – Restoration/Rehabilitation
- New Bridge, Painting – Structural
- Reclamation
- Tunnels

Projects that involve Accelerated Construction Techniques or an overriding public interest shall also be subject to this Engineering Directive, regardless of the amount of the Office Estimate.

Upon receipt of the 25% Submittal, the Project Manager is responsible for evaluating the project utilizing the Incentive/Disincentive and Lane Rental Checklist, Part I (available on mass.gov at <https://www.mass.gov/lists/massdot-highway-project-development-tools>). This checklist is intended to be used as a tool to evaluate the applicability of an I/D or lane rental provision based on various characteristics of the project. If this evaluation determines that this project could be a candidate for an I/D or lane rental provision, the Project Manager is responsible for submitting a copy of the Part I Checklist to the Boston Construction Section and obtaining concurrence with this determination. The Project Manager is also responsible for ensuring that the Contract Advertising and Planning Estimator (CAPE) includes an amount equal to 5% of the project Office Estimate under ITEM 999.785 INCENTIVE. The CAPE shall also reflect an amount of \$0.00 under ITEM 999.786 DISINCENTIVE. For Federal Aid projects, these costs must be incorporated into the Total Federal Participating Construction Costs for the purpose of programming the project on the STIP (Statewide Transportation Improvement Program).

Upon receipt of the 75% Submittal, the Project Manager is responsible for updating Part I of the Incentive/Disincentive and Lane Rental Checklist and preparing Part II, Project Requirements. The Project Manager is also responsible for submitting copies of both the Part I and Part II Checklists to the Boston Construction Section and obtaining concurrence with the determinations. If the determinations are negative and the Boston Construction Section concurs with them, the incentive/disincentive or lane rental provision will be removed from the project and no further work will be performed on it. If the determinations are positive and the Boston Construction Section concurs with them, the Project Manager is responsible for obtaining the following information from the Designer of Record:

1. A proposed base case construction schedule that shows the duration(s) of the milestone(s) to be incentivized based on a standard 5-day work week of 8 hours per day.
2. A proposed accelerated case construction schedule that shows the duration of the milestone(s) to be incentivized based on an extended workday and/or work week. For example, a 6-day work week of 10 hours per day or other accelerated work schedule.
3. The estimated construction costs for the milestone(s) that are to be incentivized.
4. For projects that do not require a detour, the expected increase in time necessary to pass through the work zone based on the length of the work zone and the anticipated reduction in travel speed due to a reduction in the number of lanes, reduction in the width of travel lanes, reduction in the offset to obstructions, posted speed reductions, or other traffic impacts during both peak and off-peak travel periods. The methodology for performing these calculations shall take into account the existing and induced traffic volumes for both peak and off-peak travel periods, and any signal timing adjustments that may be required.

5. For projects involving a detour, the route and increased time required to travel the proposed detour during both peak and off-peak travel periods.
6. The proposed number of hours per day that the detour or other traffic impact(s) will be in effect.
7. The hourly cost of a road user's time.
8. Traffic volumes for both peak and off-peak travel periods.
9. A completed Incentive/Disincentive and Lane Rental Daily Amount Worksheet (available on mass.gov at <https://www.mass.gov/lists/massdot-highway-project-development-tools>) for each milestone to be incentivized. The submitted worksheet(s) shall have incorporated all of the information listed in Items 1-8 above.

After receiving concurrence from the Boston Construction Section to proceed with an incentive/disincentive provision and after receiving Items 1-9 above from the Designer of Record, the Project Manager will prepare a transmittal from the Deputy Chief Engineer of Project Delivery to the Assistant Administrator for Construction requesting approval of the proposed overall strategy and the proposed dollar and time amounts of the I/D or lane rental provision.

This transmittal will include:

1. Items 1-9 listed above,
2. The scope of work for the project,
3. A narrative describing the increased travel time associated with the traffic management plan for each milestone work phase,
4. Completed Incentive/Disincentive and Lane Rental Checklist (Parts I and II),
5. Draft special provisions that include the proposed Subsection 8.03 – Milestones specification and the completed proposed schedule incentive/disincentive or lane rental specification containing the incentive/disincentive or lane rental daily amount and number of calendar days that can be incentivized in accordance with the completed Worksheet(s). There is no maximum total disincentive dollar amount or maximum number of calendar days that can be disincentivized. In other words, the disincentive is uncapped.

Even after concurring with a positive determination in the Parts I and II Checklists, the Boston Construction Section remains responsible for reviewing the completed proposed Incentive/Disincentive and Lane Rental Daily Amount Worksheet and the related proposed project documents to determine if an I/D or lane rental provision is still appropriate. The Boston Construction Section is also responsible for verifying that the District Office can support any extended work hours and for identifying other staff resources that may be necessary to implement the provisions.

Using an inter-office memorandum (IOM), the Assistant Administrator for Construction will notify the Deputy Chief Engineer of Project Delivery of the Boston Construction Section's determination regarding the use of an I/D or lane rental provision. This determination will either approve or reject the use of an I/D or lane rental provision. If the use of an I/D or lane rental provision is approved, this IOM will include an approval of the Incentive/Disincentive and Lane

Rental Daily Amount, an approval of the number of calendar days to be incentivized and disincentivized, the identification of any special staffing requirements associated with the use of any potential I/D or lane rental provisions and a brief explanation regarding how the determination was made.

If the Boston Construction Section determines that an I/D or lane rental provision is not appropriate for the project, this decision is final and no further action will occur.

If the Boston Construction Section determines that an I/D or lane rental provision is appropriate for the project, the Project Manager will prepare a written recommendation for use of an I/D or lane rental provision on the project for approval by the Chief Engineer.

For projects that are subject to FHWA oversight (refer to latest version of the Stewardship and Oversight Agreement), FHWA approval is required to use I/D or lane rental provisions. The Project Manager is responsible for obtaining this approval from the FHWA.

Once all necessary approvals are received, the Project Manager is responsible for ensuring that the Designer of Record, in coordination with the Boston Construction Section, incorporates the appropriate special provisions into the 100% Submittal. The Project Manager is responsible for ensuring that all documents relating to the decision-making process associated with the application of I/D or lane rental provisions are stored in ProjectInfo in the “General” folder for the project.

Prior to Advertisement, the Project Manager is responsible for reviewing Parts I and II of the Incentive/Disincentive and Lane Rental Checklist to ensure that the project characteristics and requirements have not changed since the 75% stage and that an I/D or lane rental provision is still appropriate for the project.