

# Local Project Administration Certification Course

## DESIGN & DELIVERY



# Project Schedule

## ❖ To deliver a project successfully:

- Set realistic schedule based on activities, durations & milestones, using **Critical Path Method**
- Major milestones:
  - Kickoff
  - **Preliminary Design Report (PDR)** ~ 60% complete
  - Public Meeting / Formal Public Contact
  - **Plan Impacts Complete (PIC)** ~ 90% complete
  - National Environmental Policy Act (NEPA) Complete
  - Right of Way Certified: **12 to 14 months after PIC**
  - **Final Plans, Specifications, & Estimate (PS&E)**

# Preliminary Design Report

## ❖ PDR must include:

- **PURPOSE AND NEED**, clearly defined
- Narrative of chosen design
- Alternatives evaluated
- Anticipated impacts
- In-depth discussion of decisions/exceptions
  - MaineDOT policies for ADA, Complete Streets, etc.
- **UPDATED CONSTRUCTION ESTIMATE**
  - Based on the preliminary engineering

# Preliminary Design Report

## ❖ PDR Format:

Form is online: [www.maine.gov/mdot/lpa/lpadocuments/](http://www.maine.gov/mdot/lpa/lpadocuments/)

Click on “Design → Preliminary Design Report Form”

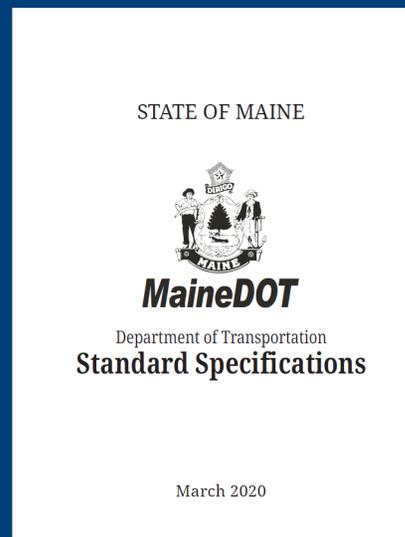
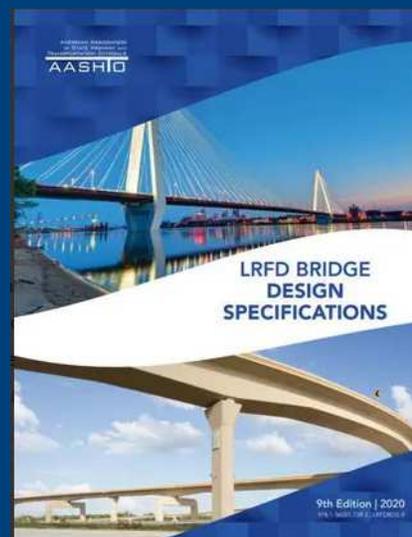
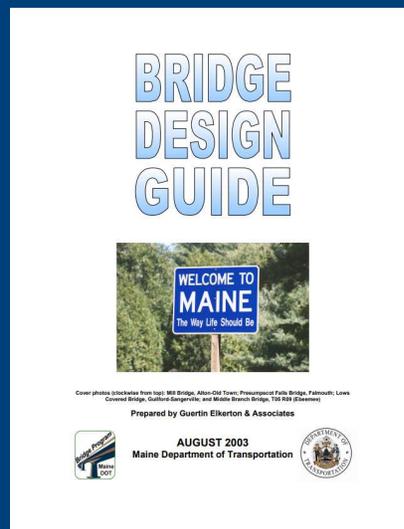
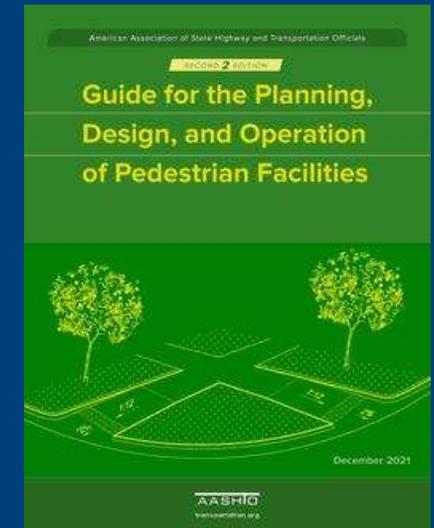
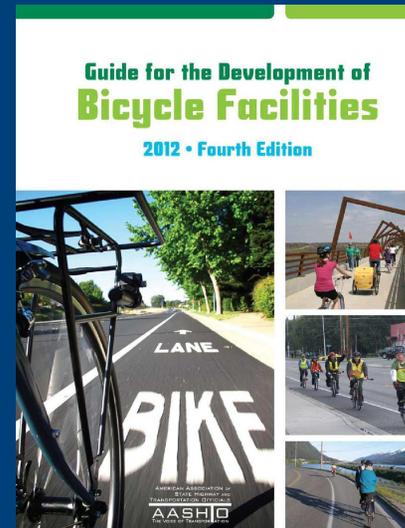
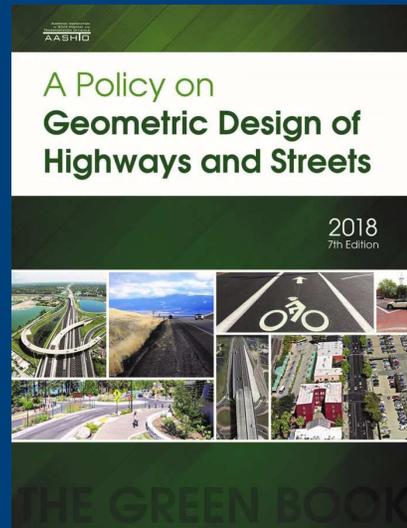
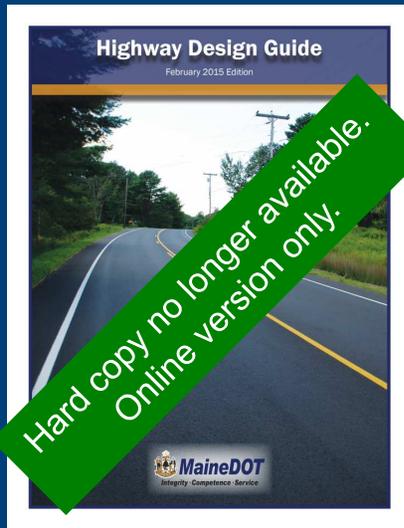


[www.maine.gov/mdot/lpa/docs/lpadocs/2019/PDRFormRevAug2019.docx](http://www.maine.gov/mdot/lpa/docs/lpadocs/2019/PDRFormRevAug2019.docx)

- ❖ Must be signed by highest-ranking LPA certified official
- ❖ Must be co-signed by MaineDOT Multimodal Program Manager

# Design Standards

(LPA MANUAL, SECTION 3)



[www.maine.gov/mdot/engineering/highway/](http://www.maine.gov/mdot/engineering/highway/)  
[www.maine.gov/mdot/publications/](http://www.maine.gov/mdot/publications/)

# MaineDOT Engineering Requirements

- **Intended to provide design flexibility**
  - Complements the Highway Design Guide
- **Practical Design**
  - **Appropriate** widths for travel lanes, shoulders
  - Clear zones based on posted speeds, traffic volumes, corridor consistency, level of risk to travelers
  - By Highway Corridor Priority: 1-4 (state) and 5 (local)
- **Crosswalk Design**
- **Entrance Design**

# MaineDOT Design Policies

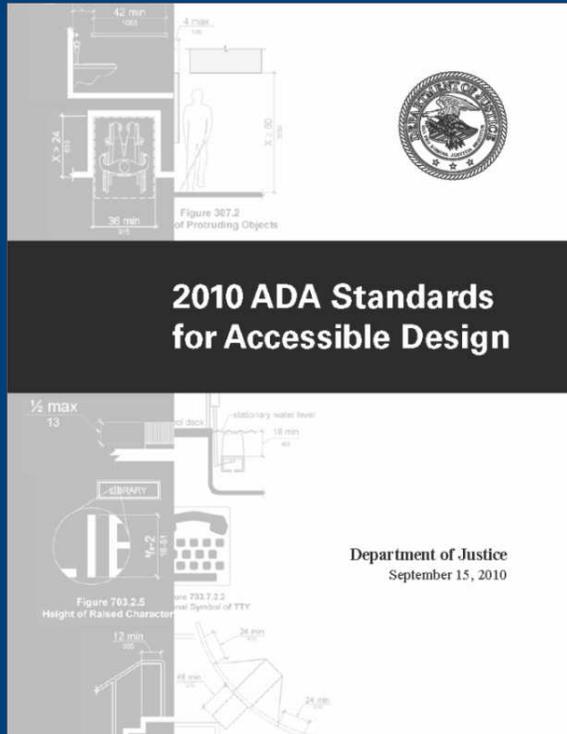
- **ADA Compliance**
  - Construction & Maintenance
- **Complete Streets**
- **Temporary Traffic Signals**
- **Guardrail & Guardrail Terminal**

Policies on the Internet:

[www.maine.gov/mdot/engineering/policies/](http://www.maine.gov/mdot/engineering/policies/)

Also, part of Highway Design Guide

# Americans with Disabilities Act (ADA)



- NOT an engineering standard;  
– **IT'S THE LAW!**
- See MaineDOT ADA Compliance Policy
  - When a roadway is altered:
    - Defined by MaineDOT & US DOT
  - Guidance in MaineDOT's policy

- ADA will be presented in-depth later today

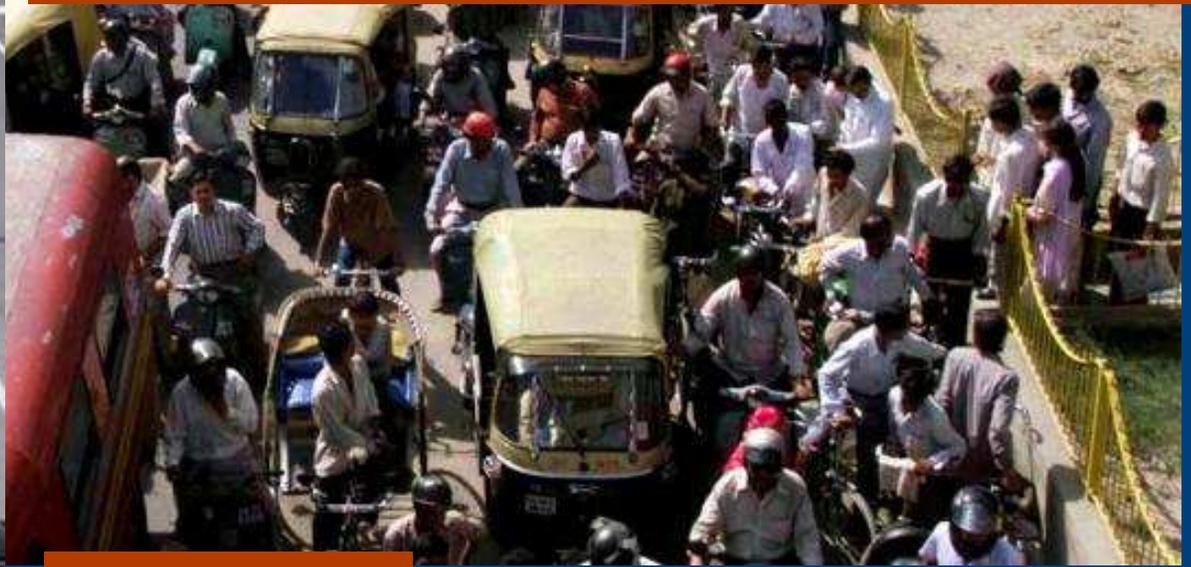
**WHEN DOES ADA APPLY?**

**ALWAYS!**

# Complete Streets



It's actually this.  
Believe it or not this is New York City



Is it this?

# MaineDOT Complete Streets Policy

- 🚗 Transportation system should benefit all users
  - 🚲 Pedestrian & bicycle infrastructure
    - ♿ Sidewalks, bike lanes, transit stops, etc.
    - ♿ All ages & abilities
- 🚗 Where & when does this apply?
  - 🚲 New construction & rehabilitation projects
  - 🚲 Ask: Will a project accommodate safe inclusion of:
    - ♿ Sidewalks, bike lanes, transit stops, etc.
- 🚗 Matrix provided in MaineDOT policy

**MAINEDOT PDR FORM HAS NARRATIVE OUTLINE**

**- Must Be Discussed -**

# Traffic Management



# TAME

## Traffic Analysis Management and Evaluation

- For MaineDOT
  - Projects on system: Traffic management during construction
- Process establishes **when** and **why** to TAME
  - Initial traffic management provisions drafted by Designer/PM
  - If project is going to have a Preliminary Design Report
    - Submit request **4 weeks** before final PDR
  - If no PDR: submit request **10 weeks** before final PS&E
  - Average Annual Daily Traffic: 15,000
    - > Traffic control provisions go to MaineDOT TAMEing Committee.
    - < Certification issued with or without additional conditions

# TAMEing

(Continued)

- **Doesn't Just Cover Motor Vehicle Traffic**
  - **Pedestrian and bicycle passage**
    - Pedestrian passage in work zone must meet the ADA
- **When Inside an Urban Compact Area:**
  - **Can detour onto local roads ... but**
    - Detour proposal must come from a local agency
    - Restoration of local road so-used is non-reimbursable.

# Electronic Design Files

- ❖ If computer-aided design and drafting (CADD) files will be provided to MaineDOT:
  - CADD files must meet MaineDOT's standards
  - MaineDOT: Bentley Systems
    - OpenRoads Designer CONNECT (ORD)
  - No translation by MaineDOT staff shall be required
    - IMPORTANT FOR RIGHT-OF-WAY PLANS (Next slide)
    - If something is wrong, **WE WILL SEND BACK THE FILE!**

# Electronic Design Files

## For On-System Right-Of-Way Plans

- Plans must be consistent with MaineDOT line styles
- If you use something other than MicroStation:
  - Recommend using a professional service to convert files
- Plans are used for MaineDOT to prepare RoW plans
  - These become legal recorded documents
  - Will cost you more money in the end if not done correctly
  - IF SOMETHING IS WRONG, **WE WILL SEND BACK THE FILE**
- Design based on roadway centerline
  - Don't use gutter line or curb line

# Bipartisan Infrastructure Law (BIL)

## Build America, Buy America Act (BABA)

- NEW INTERPRETATION – “FINAL”: “Clarifies” that an article, material, or supply should only fall within one of the following categories:
  - iron or steel;
  - manufactured product;
  - construction material;
  - materials identified in BABA: Section 70917(c) materials
    - cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.
  - **Existing Waivers still in effect (for now)**

<https://www.federalregister.gov/documents/2023/08/23/2023-17724/guidance-for-grants-and-agreements>

# Bipartisan Infrastructure Law (BIL) Build America, Buy America Act (BABA)

- Construction Materials: articles, materials, or supplies that consist of only one of the following:
  - Non-ferrous metals;
  - Plastic and polymer-based products;
  - Glass (including optic glass);
  - Fiber optic cable (including drop cable);
  - Optical fiber;
  - Lumber;
  - Engineered wood;
  - Drywall.
- Start date: October 23, 2023

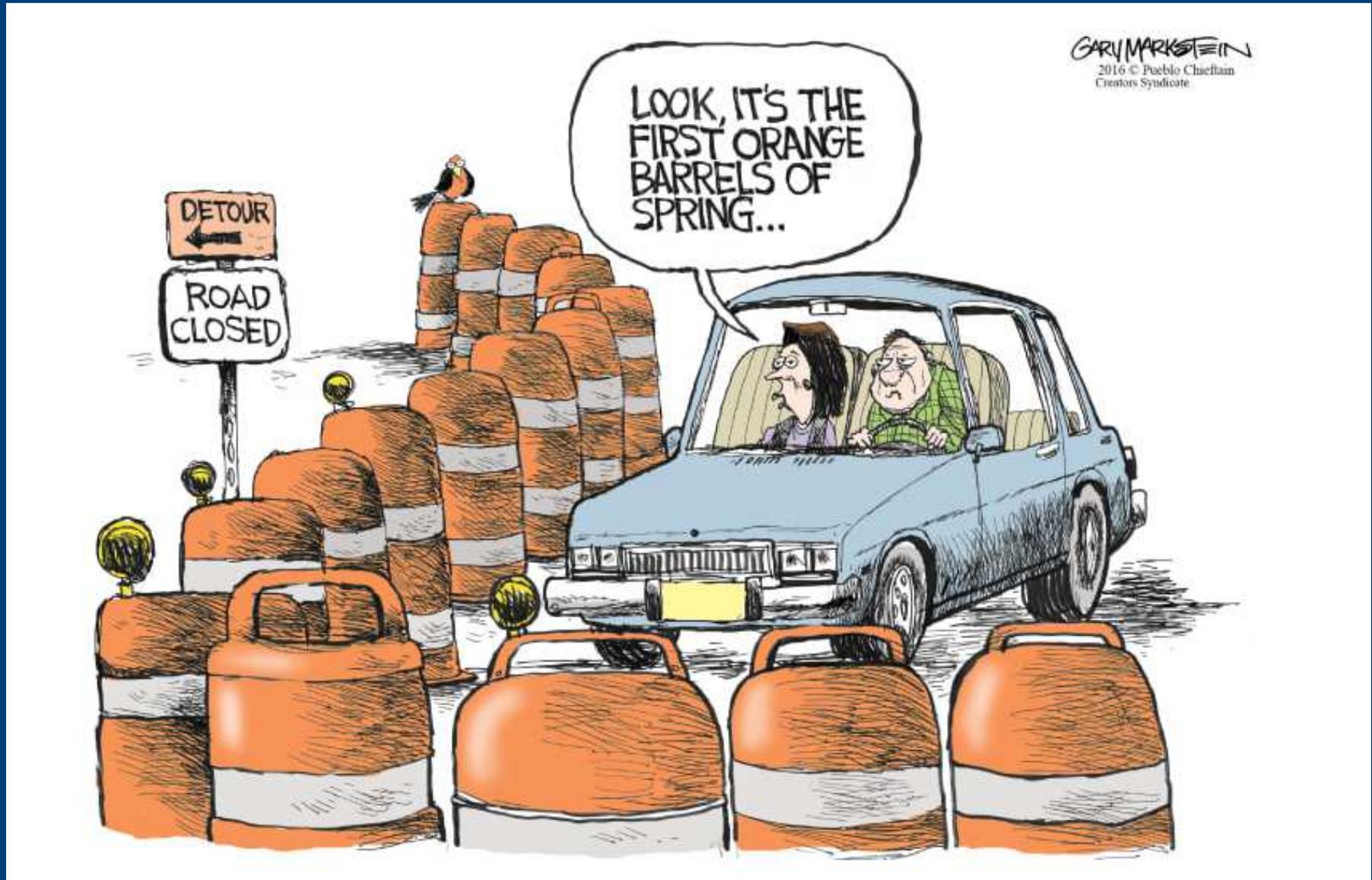
Applies everywhere in the US, except states and territories located in areas designated as part of the Pacific Islands.



**Existing Waivers Still in Effect (for Now)**

<https://www.federalregister.gov/documents/2023/08/23/2023-17724/guidance-for-grants-and-agreements>

# Quality Control & Assurance



# Quality Control & Assurance

## ❖ Make QC/QA Part of Consultant Selection

- It's the **designer's** responsibility to provide QC
  - Professional engineering responsibility
- Check for construction, maintenance issues

## ❖ Quality Assurance

- **Municipality** (verify that design meets expectations)
- **MaineDOT** (review design at 60% & 95% complete)
  - Make sure Federal & State standards met
  - Depth of review depends on project location & scope

ULTIMATELY, THE MUNICIPALITY IS RESPONSIBLE

# Final Plans, Specifications, & Estimate

(LPA Manual, Section 7)

- **Final Plans**

- Stamped by Maine P.E., as required by law
- Reviewed, approved by MaineDOT



- **Engineer's Estimate**

- Based on estimated quantities; must be in synch with plans
- Use MaineDOT item numbers, unless unavailable
- RECENT BID HISTORY

- **Certifications**

- Environmental, Utilities, Right of Way, Railroad, TAMEing

- **Final specifications**

- Stamped by Maine P.E.
- Reviewed, approved by MaineDOT



# Final Plans, Specifications, & Estimate

(See checklist in LPA Manual: Page 7-9)

- **Bid Documents**

- Notice to Contractors
- Contract Agreement, Offer and Award Form
- Bonding Requirements
- Davis-Bacon wage rates (Federal)
- Electronic payroll requirements (Federal)
- Form FHWA-1273 (Federal)
- Signed Title VI Assurances (Federal)

- **Certifications to PM** (Not In Bid Book)

- Environmental (Communication 12)
- Utilities (Communication 13)
- Right-of-way (Communication 14)
- TAME (State Traffic Engineer)

**THIS IS NOT  
EVERYTHING!**



Engineering Estimates are confidential by Maine statute 23 M.R.S.A. § 63 and cannot be disseminated outside MaineDOT

**AFTER REVIEW AND APPROVAL  
MAINEDOT WILL PROVIDE CONSTRUCTION AUTHORIZATION**

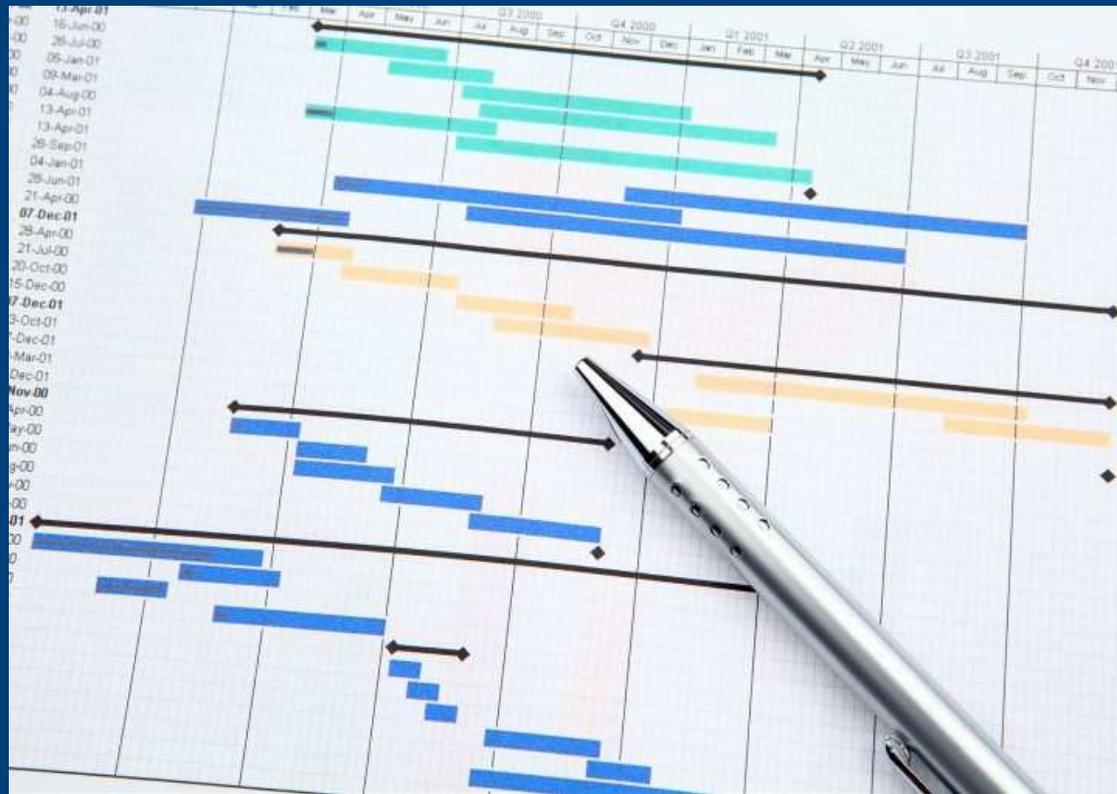
# Advertise & Award

(LPA Manual, Chapter 8)

- **Advertise**
  - Public Advertise; **3 week** minimum
- **Bidding Process**
  - Answer questions in absolutes
  - Same answer to all bidders
- **Open bids publicly, review bids**
  - Check for defects: “curable” and “non-curable”
  - Award to lowest responsive, responsible bidder
- **MaineDOT**
  - Review bids & approve before award



# Delivery Expectations



# Setting the Schedule

- **Should be realistic**
  - Allow reasonable time for design work, environmental reviews, right of way, MaineDOT review & approval
  - Critical Path Method Is **HIGHLY** Recommended.
- **Should be set in consultation with MaineDOT**
  - MaineDOT project manager must ensure that schedule is met
- **Should be reviewed, updated periodically**
  - Project Kickoff
  - Preliminary Design Report
  - Plan Impacts Complete
- **Communicate ... Communicate ... Communicate**

# Set a Realistic Schedule

## TYPICAL critical path items:

- ROW activities on MaineDOT Jurisdiction Roadways
  - Plan Impacts Complete Must Be Achieved before:
    - **Title Work & Final ROW Mapping**
  - Title Work and Final ROW Mapping Must Be Completed before:
    - **Valuation**
  - **NEPA** & Valuation Must Be Completed Before:
    - **ROW Negotiations**
  - ROW Negotiations Must Be Completed Before:
    - **Acquisition**

**ROW = 12 to 14 months from Plan Impacts Complete**

# Stay on Top of Things

- **BUDGET**



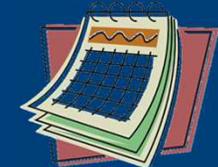
- You will be held to the funding approved and consistent with your application.
- Use latest bid price history for estimating

- **SCHEDULE**

- MaineDOT may withdraw funding if you don't advertise project within **3 years** of signing agreement.
- Set realistic milestones and plan ahead.



**CHECK EARLY & OFTEN**



# Performance Measures

MaineDOT's goal is **80%** On-Time Delivery

- Within **30 days** of Construction Advertise Plan date

# MaineDOT On-Time Delivery Rates

- 2018 = 87%
- 2019 = 85%
- 2020 = 94%
- 2021 = 90%
- 2022 = 92%

# LPA On-Time Delivery Rates

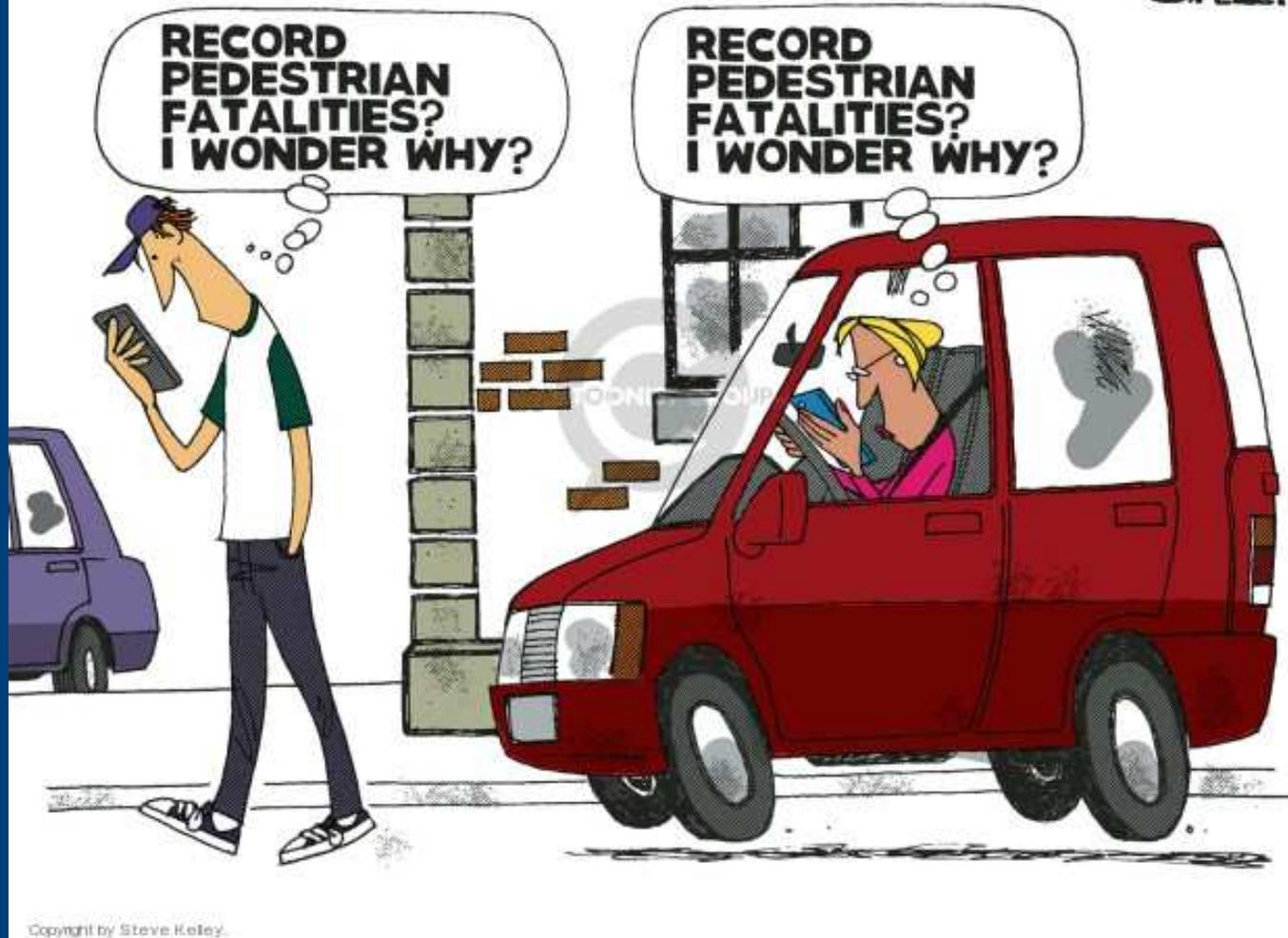
- 2018 = 42%
- 2019 = 34%
- 2020 = 63%
- 2021 = 63%
- 2022 = 74%

**MaineDOT's Overall Goal is 80%**

**For LPAs would like to see at least 70%**

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CREATORS SYNDICATE

SKILLEN



# CONSTRUCTION ESTIMATES





**Original Contract**

# \$ Grants, Grants & more Grants \$

- **Who Can Apply for Grants?**

- States, Counties, Towns, Indigenous American Tribes, Schools, Trail Organizations, etc.

- Before You Apply:



And Please Contact

Dale Doughty, Director of Planning, or;  
Jennifer Grant, Director of Planning Outreach, or;  
Regional Planner.



# QUESTIONS?

