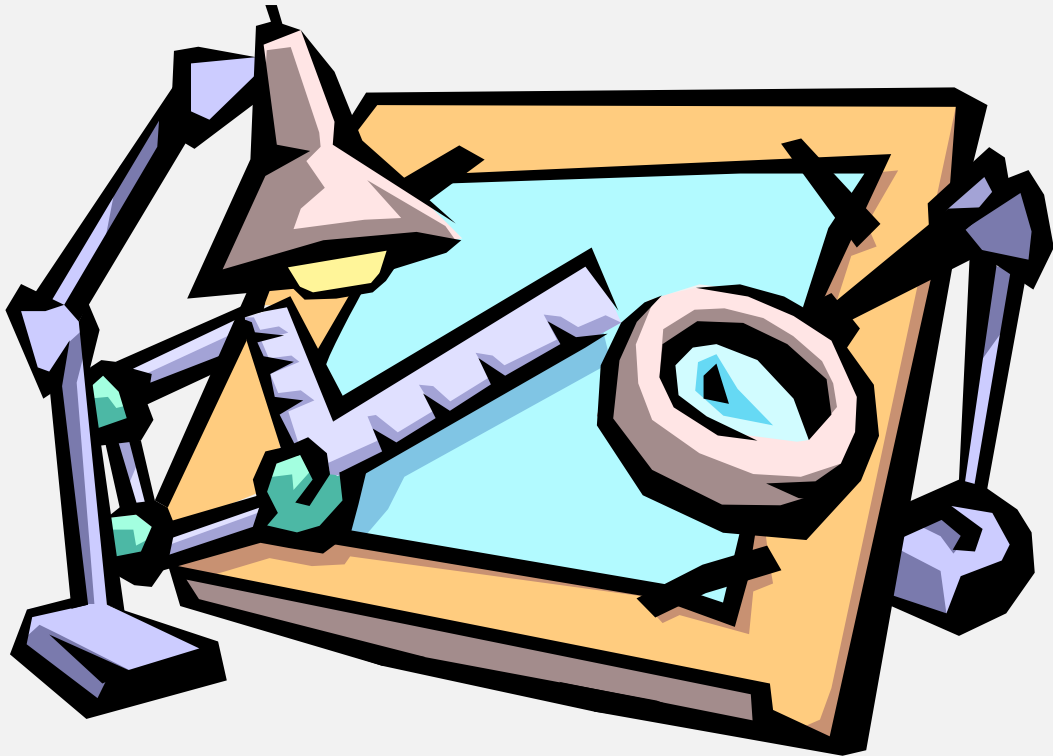


# Local Project Administration Certification Course

## Design and Delivery



# Project Schedule

## To deliver a project successfully:

- Set a 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: 14 to 16 months after PIC
  - Final Plans, Specifications, & Estimate (PS&E)

# Where to Find Information Online

The screenshot shows the MaineDOT Intranet website. The browser address bar displays [maine.gov/dot/](http://maine.gov/dot/), highlighted with a red arrow. The website header includes the MaineDOT logo, navigation links for Agencies, Online Services, and Help, and a search bar labeled "Search DOT". The main navigation menu is expanded, showing categories like Stay Informed, Programs & Services, Projects, Publications, Doing Business, and About. The "Programs & Services" menu is open, listing various services such as Active Transportation, Aviation, Bridges, Community Services and Local Roads, Environmental Efforts, Freight, Guidance for Local Project Administration, Highway, Passenger Services, Planning, Safer Roads, and Snow and Ice Control. A red arrow points to the "Guidance for Local Project Administration" menu item. A red circle highlights the sub-menu items: "Certification and Training Materials", "Documents and Resources", and "Manual and Reference Guide". The background of the website features a photograph of a street scene with a yellow pedestrian crossing sign.

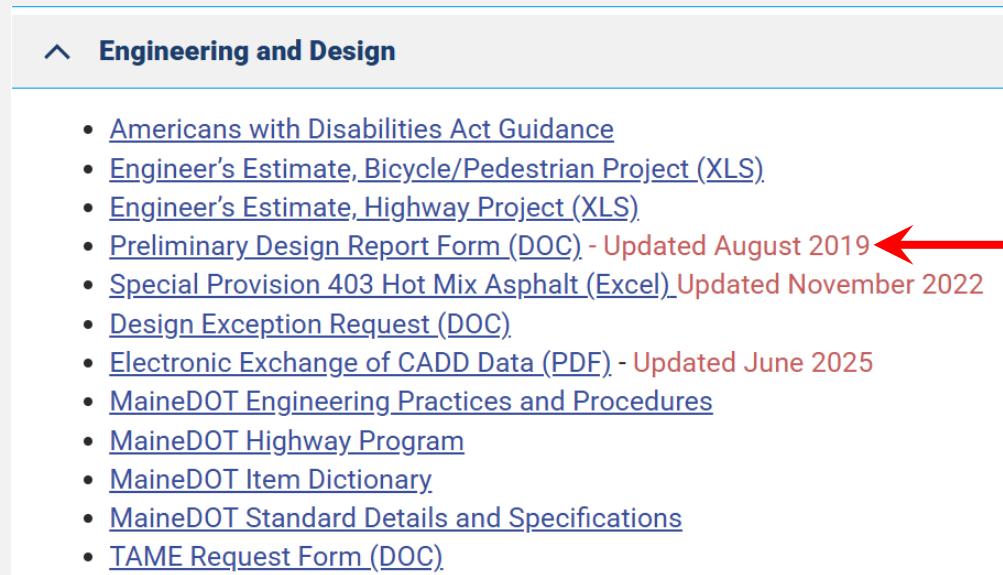
# Preliminary Design Report

## \* **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.
- **CONSTRUCTION ESTIMATE**
  - Based on the preliminary engineering

# Preliminary Design Report

- ❖ **PDR Format;** Form is online, 1<sup>st</sup> click on “Documents and Resources”
- ❖ Then click on “Engineering and Design”



<https://www.maine.gov/dot/programs-services/guidance-for-locally-administered-projects/documents-and-resources>

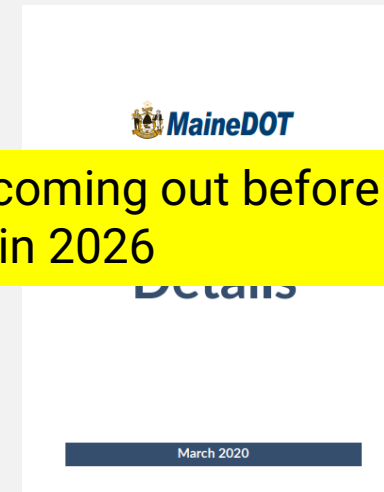
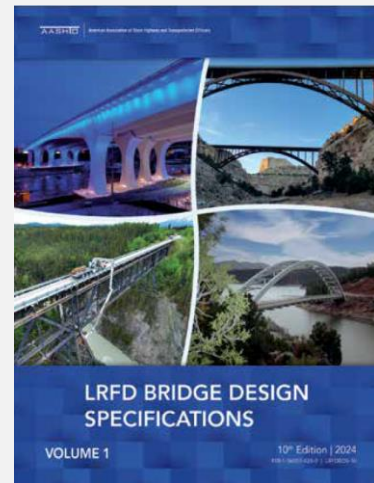
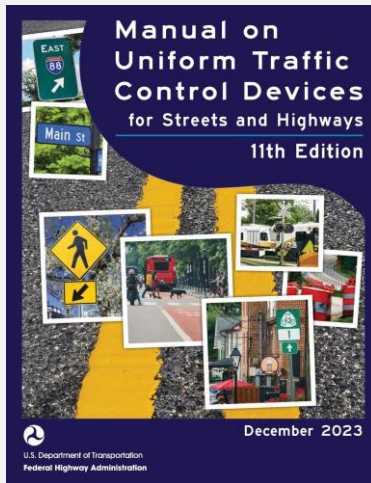
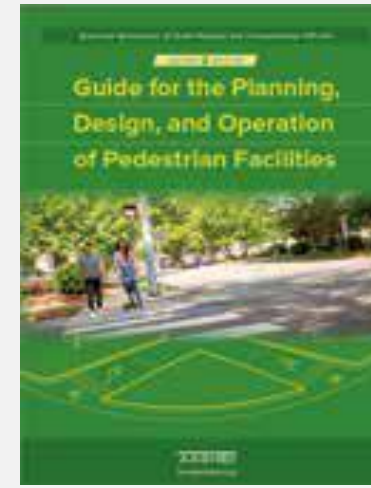
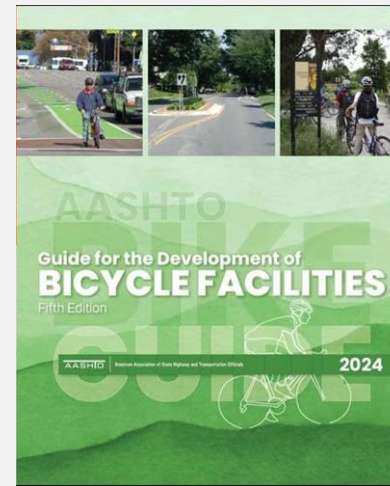
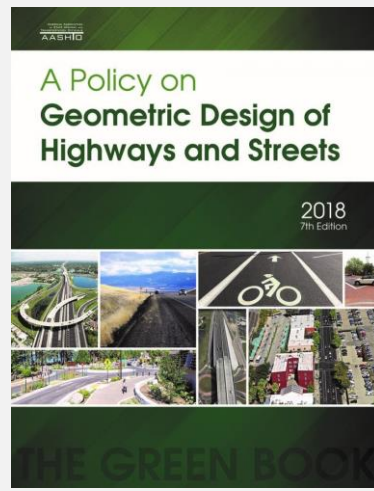
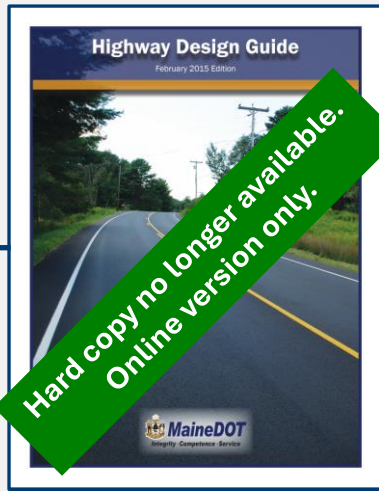
Or to go directly to the PDR form:

<https://www.maine.gov/dot/sites/maine.gov.dot/files/inline-files/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)**



<https://www.maine.gov/dot/programs-services/highway/highway-engineeringstop>

<https://www.maine.gov/dot/publications/brochures-guides>

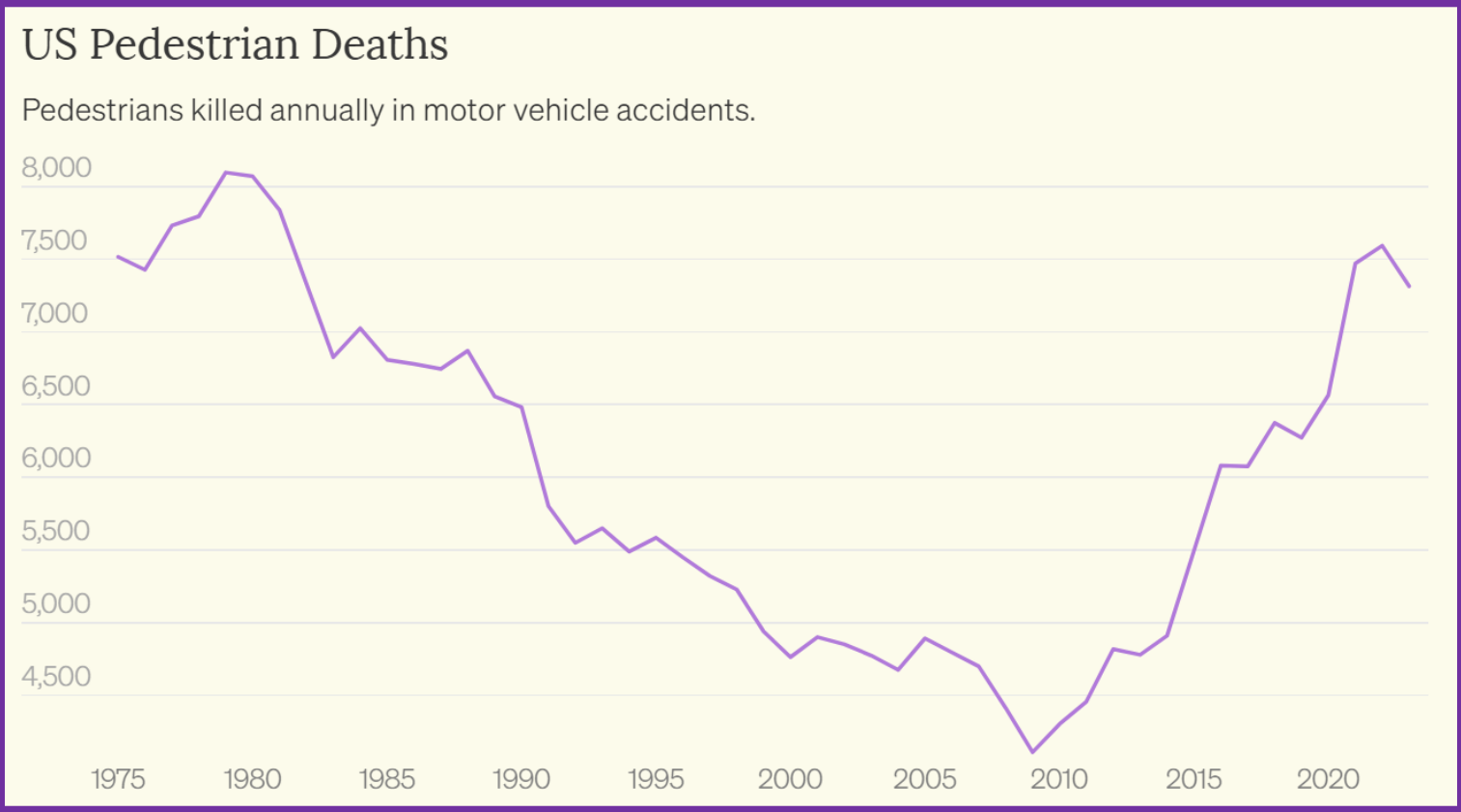
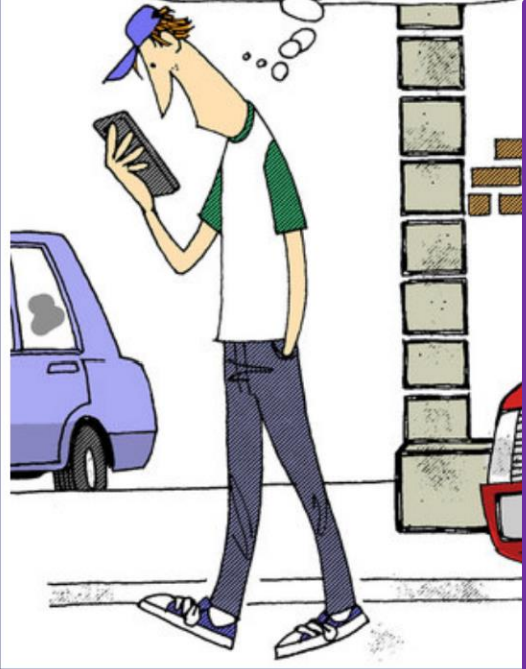
<https://store.transportation.org/>

# MaineDOT Engineering Requirements

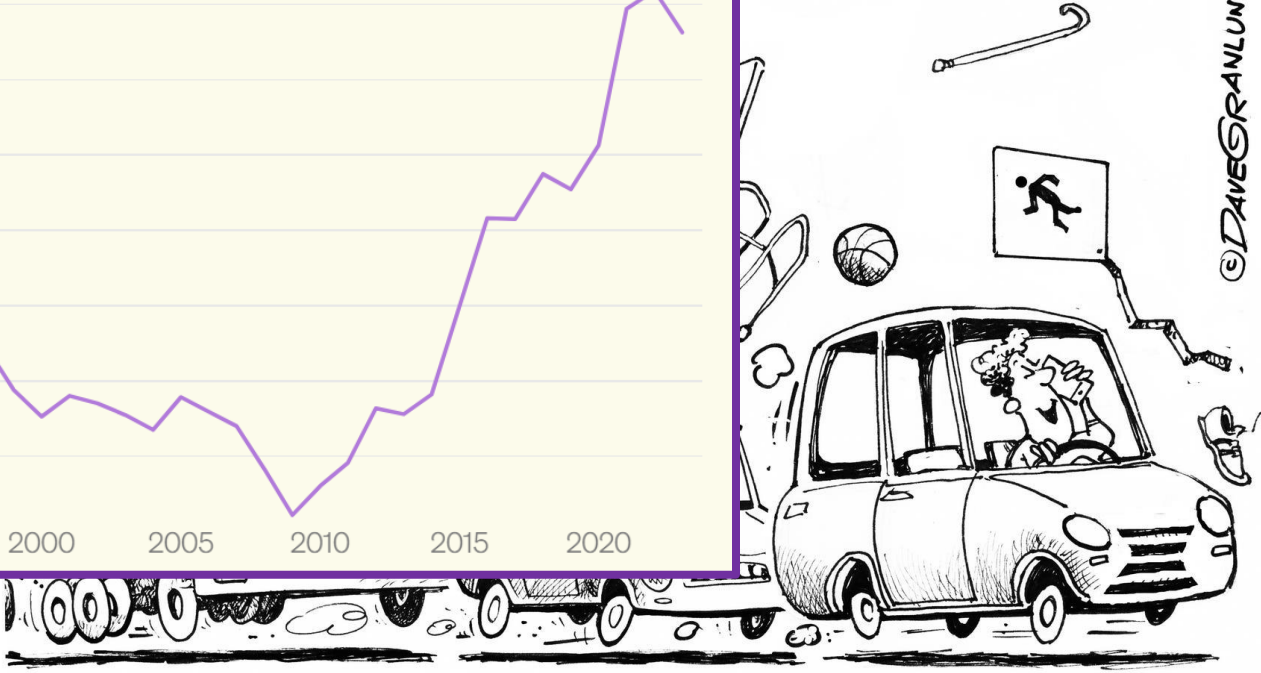
- **Intended to provide design flexibility**
  - Complements the Highway Design Guide
- **Practical Design**
  - Appropriate widths for travel lanes, shoulders
  - Clear zones based on posted speeds, traffic volumes, corridor consistency, level of risk to travelers
  - By Highway Corridor Priority: 1-4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

RECORD  
PEDESTRIAN  
FATALITIES?  
I WONDER WHY?

RECORD  
PEDESTRIAN  
FATALITIES?  
I WONDER WHY?



highest in 30 years...



© DAVE GRANLUND.COM

# MaineDOT Design Policies

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

Policies on the Internet:

<https://www.maine.gov/dot/doing-business/engineering-policies>

Also, part of Highway Design Guide

# Americans with Disabilities Act (ADA)

- NOT an engineering standard;  
– IT'S THE LAW!

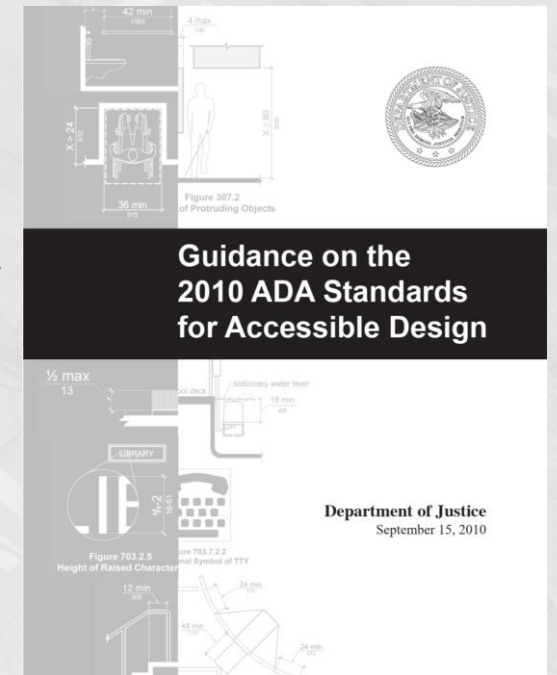
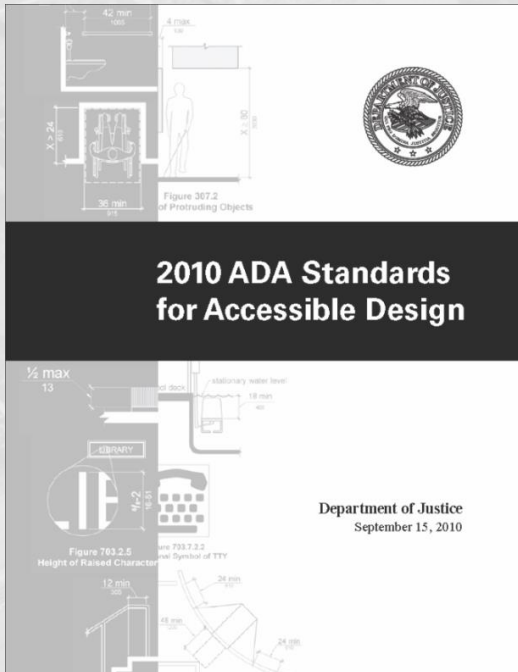
<https://www.ada.gov/law-and-regs/design-standards/>

- 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?**

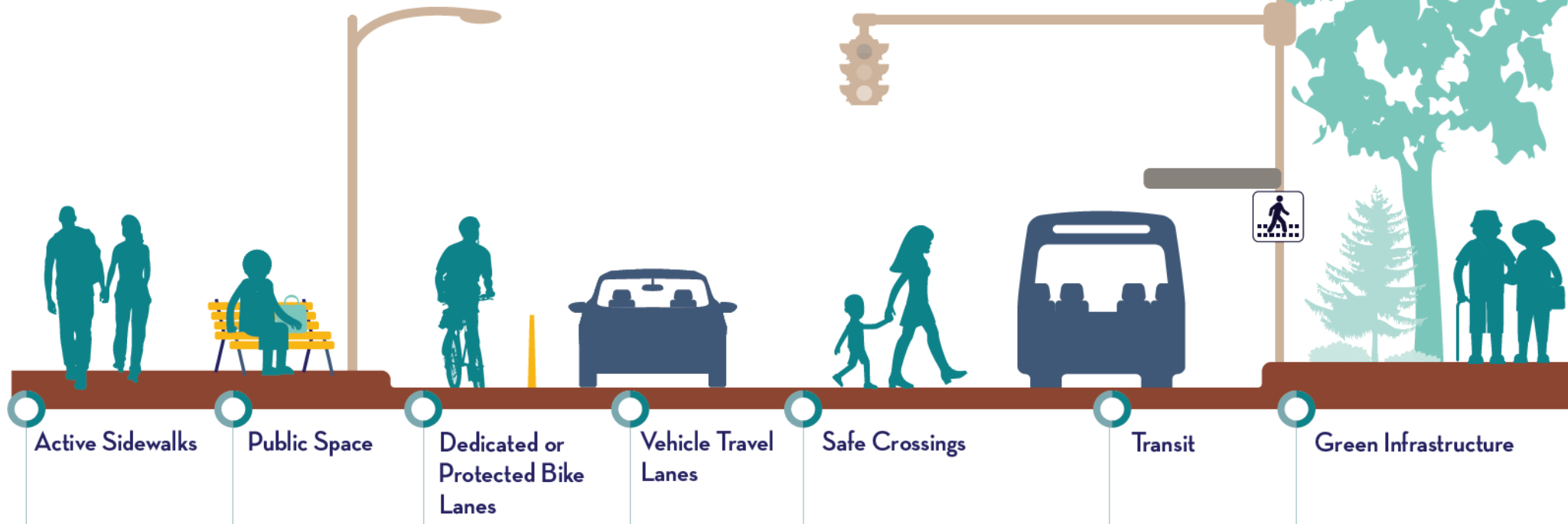
**ALWAYS!**



# Complete Streets

Complete Streets is an approach to planning, designing, building, operating, and maintaining streets that enables safe access for all people who need to use them, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities

## WHAT IS A COMPLETE STREET?





# Complete Streets



before

Nanaimo, British Columbia,  
Canada

after



# 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



# Traffic Analysis Management and Evaluation **TAME**

- **Process establishes when and why to TAME**
  - **Average Annual Daily Traffic: 15,000**
    - > Traffic control provisions go to MaineDOT TAMEing Committee.
    - < Certification issued with or without additional conditions
  - **Projects on system: Traffic management during construction**
  - **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**

**TAME request form**

<https://www.maine.gov/tools/whatsnew/attach.php?id=817161&an=11>

# 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

## ❖ Computer-Aided Design and Drafting (CADD) files will be provided to MaineDOT:

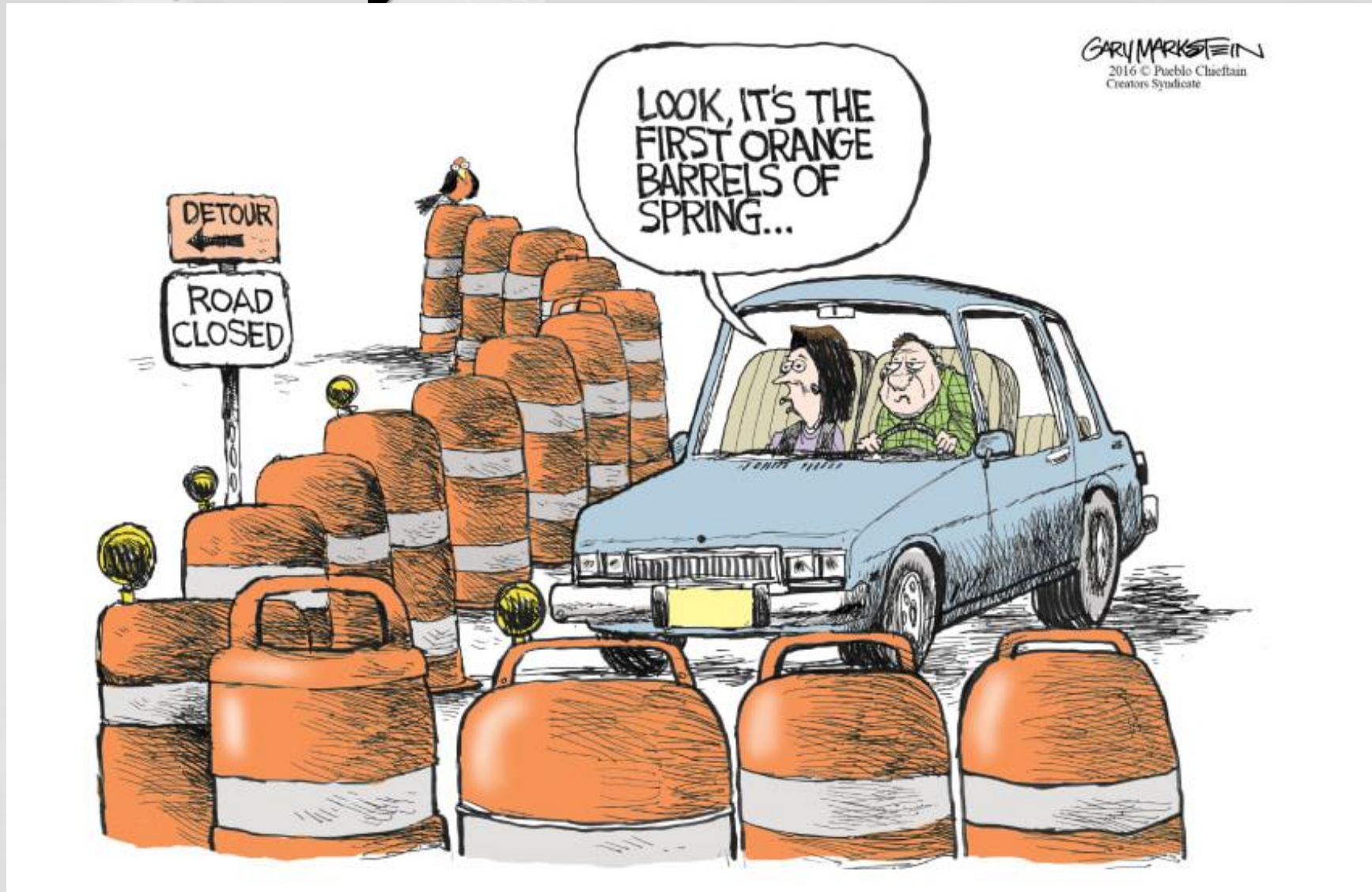
- CADD files must meet MaineDOT's standards
- MaineDOT: Bentley Systems
  - OpenRoads Designer CONNECT (ORD)
    - This also means that survey needs to be in ORD
- No translation by MaineDOT staff shall be required
  - IMPORTANT FOR RIGHT-OF-WAY PLANS (Next slide)
  - If something is wrong, **WE WILL SEND BACK THE FILE!**

# Electronic Design Files (continued)

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

- Plans must be consistent with MaineDOT line styles
- If you use something other than MicroStation-ORD:
  - 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

# 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
- Specifications
  - Current Version of MaineDOT Stated Construction Specifications
- Special Provisions
  - Stamped by Maine P.E.
  - Reviewed, approved by MaineDOT



# Build America, Buy America Act (BABA)

## BUY AMERICA REQUIREMENTS

- Any Article, Material, or Supply that is permanently incorporated into a Title 23 Federal-Aid project shall be classified into one and only one of the following categories:
  - Iron or steel;
  - Manufactured product;
  - Construction material; or
  - Excluded material: 2 CRF§184.3, Section 70917(c) cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. An example of an aggregate binding agent is bituminous asphalt.

\*Two special exceptions: Precast Concrete & ITS Products

# Build America, Buy America Act (BABA)

## BUY AMERICA REQUIREMENTS page 2

- Iron or Steel
  - Consist wholly or predominantly iron or steel, > \$50%.
- Construction Material
  - Nonferrous metals;
  - Plastic and polymer-based products;
  - Glass (including optic glass);
  - Fiber Optic Cable (including drop cable);
  - Lumber;
  - Engineered Wood;
  - Drywall

# Build America, Buy America Act (BABA)

## BUY AMERICA REQUIREMENTS page 3

- **Manufactured Products**
  - **Material classification: status of material when brought to worksite.**
    - **Currently: for projects obligated up to September 30, 2026**
      - Iron & Steel Components must be of US origin
      - Origin of non-iron/steel components does not matter
      - Final assembly must occur in the US
    - **Starting for projects obligated on or after October 1, 2026**
      - In addition to final assembly, the cost of all components of products that are mined, produced, or manufactured in the US must be greater than 55% of the total cost of all components of the Manufactured Product.
      - Iron & Steel Components must be of US origin

# Build America, Buy America Act (BABA)

## BUY AMERICA REQUIREMENTS page 4

- Manufactured Products Special Cases
  - Precast Concrete & ITS Systems
    - Precast Concrete: Reinforcing Steel = 100% Domestic; Cement = Aggregate Binding Agent – Nondomestic.
    - ITS System: Cabinet = Domestic Steel Cabinet; Cabinet + Components Contained within > \$55%
  - > \$50% of any manufactured item is Iron & Steel
    - Falls under Iron & Steel.
  - Kits
    - Electronic elements assembled on site to perform one specific function
      - From 1 supplier: Each element must be from same manufacturer. U.S. Steel & > \$55%

For more information:

[https://www.fhwa.dot.gov/construction/contracts/buyam\\_qa.cfm](https://www.fhwa.dot.gov/construction/contracts/buyam_qa.cfm)

[https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.fhwa.dot.gov%2Fconstruction%2Fcqit%2FHCC\\_CLEARED\\_\(8.8.25\)\\_PPT\\_PRESENTATION\\_ON\\_FINAL\\_RULE\\_ON\\_MANUFACTURED\\_PRODUCT.pptx&wdOrigin=BROWSELINK](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.fhwa.dot.gov%2Fconstruction%2Fcqit%2FHCC_CLEARED_(8.8.25)_PPT_PRESENTATION_ON_FINAL_RULE_ON_MANUFACTURED_PRODUCT.pptx&wdOrigin=BROWSELINK)

# Build America, Buy America Act (BABA) BUY AMERICA REQUIREMENTS page 5

- Waivers for De Minimis Costs
  - < \$500,000
  - Lesser of \$1,000,000 or 5% of total applicable costs

## MaineDOT Recommendation:

If you think your project is eligible, complete research and present to the Department. Ultimately the local entity is responsible for any nonparticipating costs. WHICH MAY INCLUDE THE ENTIRE PROJECT!

More information:

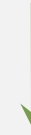
[https://www.fhwa.dot.gov/construction/contracts/buyam\\_qa\\_deminimis.cfm](https://www.fhwa.dot.gov/construction/contracts/buyam_qa_deminimis.cfm)

# Final Plans, Specifications, & Estimate Checklist in LPA manual, also online

<https://www.maine.gov/tools/whatsnew/attach.php?id=1967399&an=1>

- **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

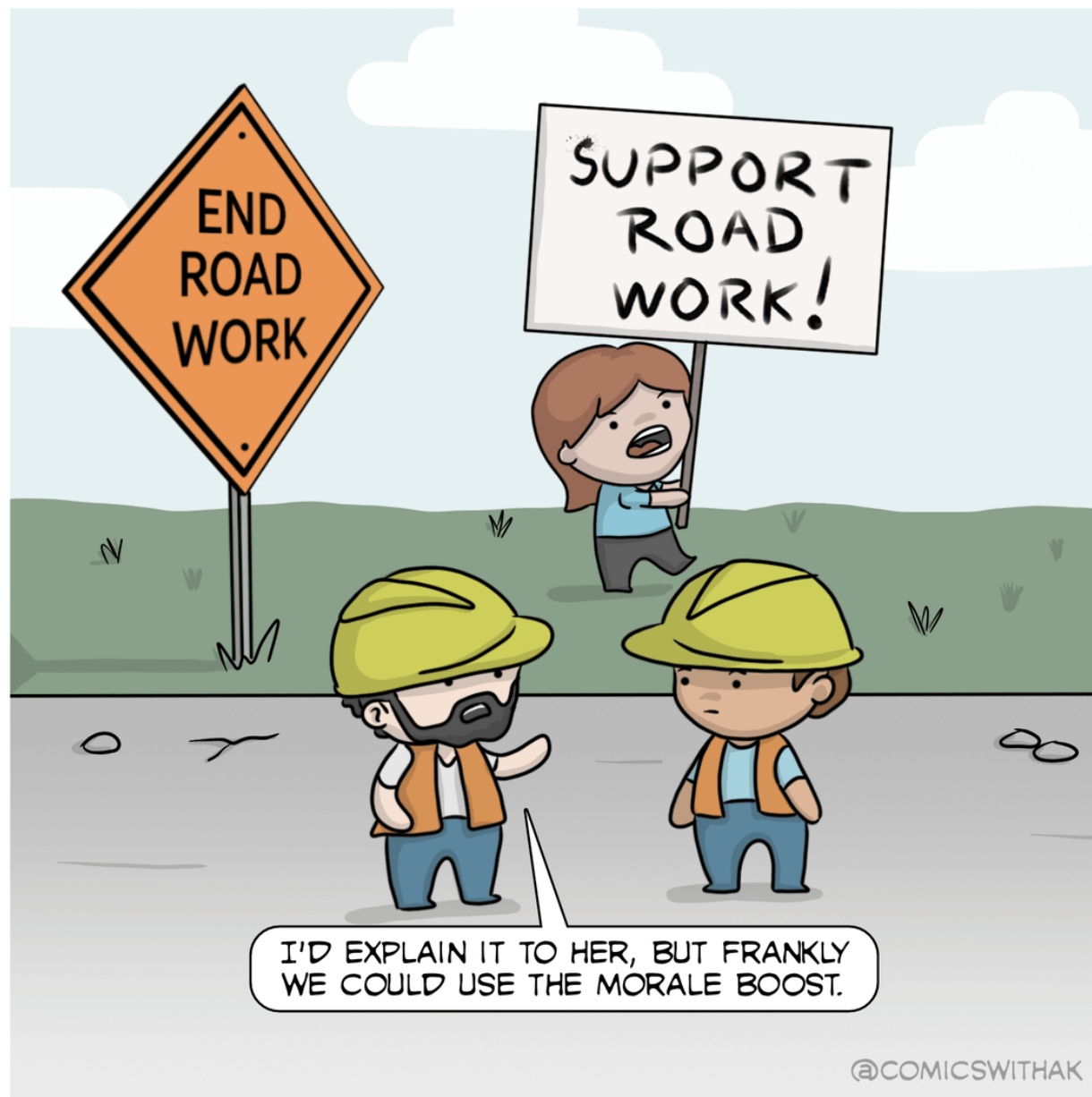


- **Open bids publicly, review bids**

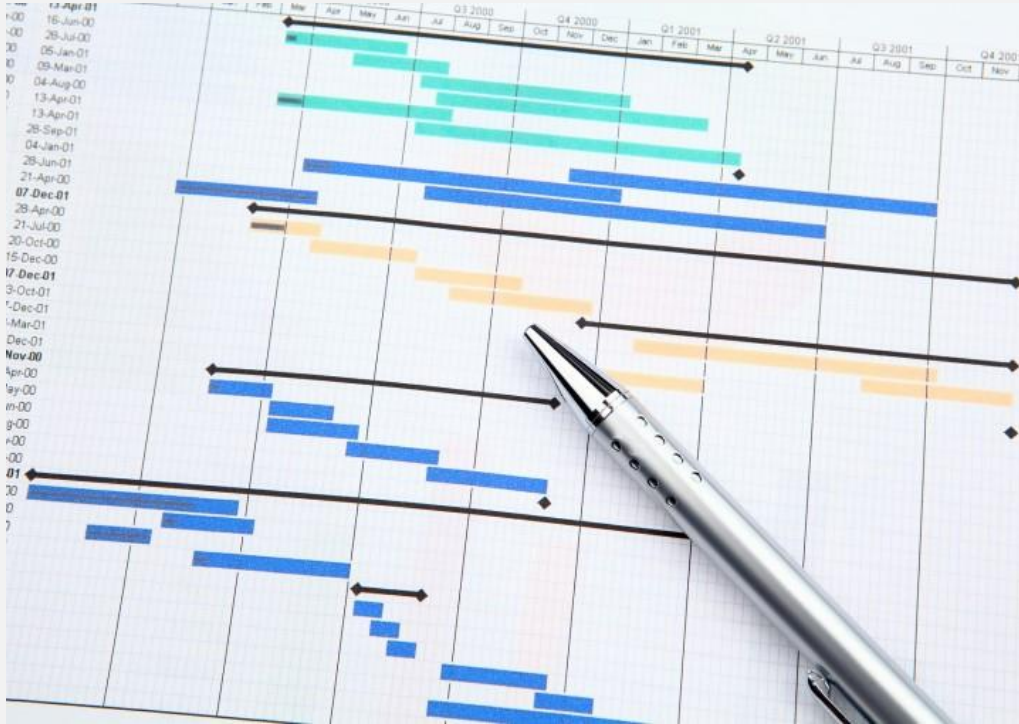
- Check for defects: “curable” and “non-curable”
- Award to lowest responsive, responsible bidder

- **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 = **16 to 18 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

- 2020 = 95%
- 2021 = 90%
- 2022 = 92%
- 2023 = 93%
- 2024 = 80%
- 2025 = 81%

# LPA On-Time Delivery Rates

- 2020 = 63%

- 2021 = 63%

- 2022 = 74%

- 2023 = 33%

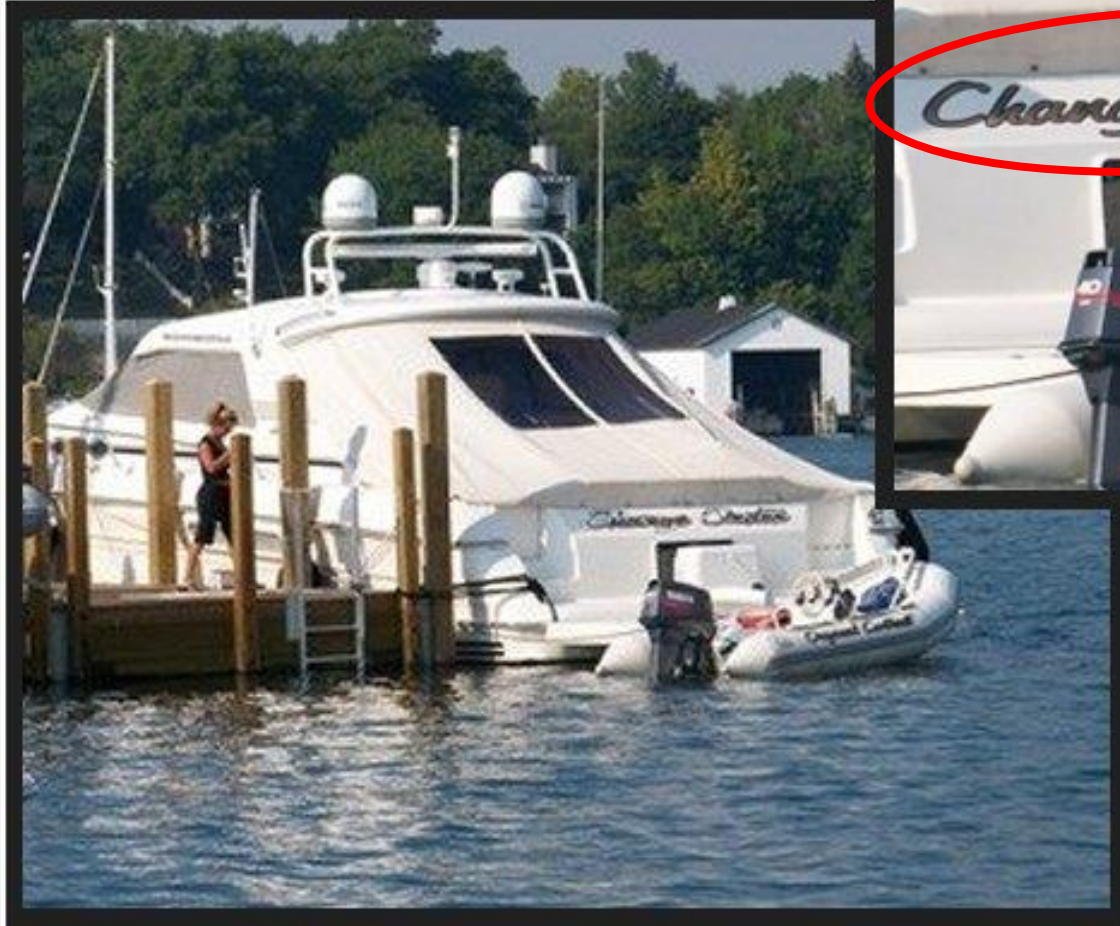
- 2024 = 63%

- 2025 = 43%

MaineDOT's Overall Goal is 80%  
For LPAs would like to see at least 70%

# 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

Jennifer Grant, Director of Planning, or;  
William Gayle, Director of Planning Outreach, or;  
Regional Planner.



# QUESTIONS?

