



MASSDOT ACEC/MA WEBINAR OCTOBER 18, 2019

TEAM INTRODUCTION



MASSDOT HIGHWAY DIVISION



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ACTING DIRECTOR FOR BRIDGE PROJECT MANAGEMENT



JOHN DELEIRE
DIRECTOR FOR RIGHT-OF-WAY

DISCUSSION TOPICS

- IMPROVING THE HIGHWAY DIVISION'S CAPITAL PROGRAM DELIVERY
- EXISTING AND PROPOSED GOALS AND PERFORMANCE MEASURES
- FFY 2019 ACCOMPLISHMENTS AND LESSONS LEARNED
- FFY 2020 OUTLOOK
- WHAT'S NEXT
- Q&A



- INCREASE PUBLIC CONFIDENCE IN PROJECT DELIVERY DATES AND PROJECT COSTS
- EFFICIENT USE OF STAFF
- REDUCE OCCURENCES OF SCHEDULE DRIVEN DECISION MAKING
- REDUCE # OF STIP AMENDMENTS
- INCREASED CONFIDENCE IN OUR INVESTMENT PLANS
- INCREASE PREDICTABILITY IN CONSTRUCTION PHASE: i.e. BIDDING, SCHEDULES, COST



BENEFITS OF BEING ON-TIME AND ON-BUDGET

DIAGNOSING THE PROBLEM USING PERFORMANCE INDICATORS

HIGH LEVEL INDICATORS OF A HEALTHY CAPITAL DELIVERY PROGRAM



ON-TIME ADVERTISING



DISTRIBUTION OF ADVERTISEMENTS ACROSS THE FISCAL YEAR



ADHERE TO PROGRAM PLANNING DOCUMENTS i.e. STIP/CIP

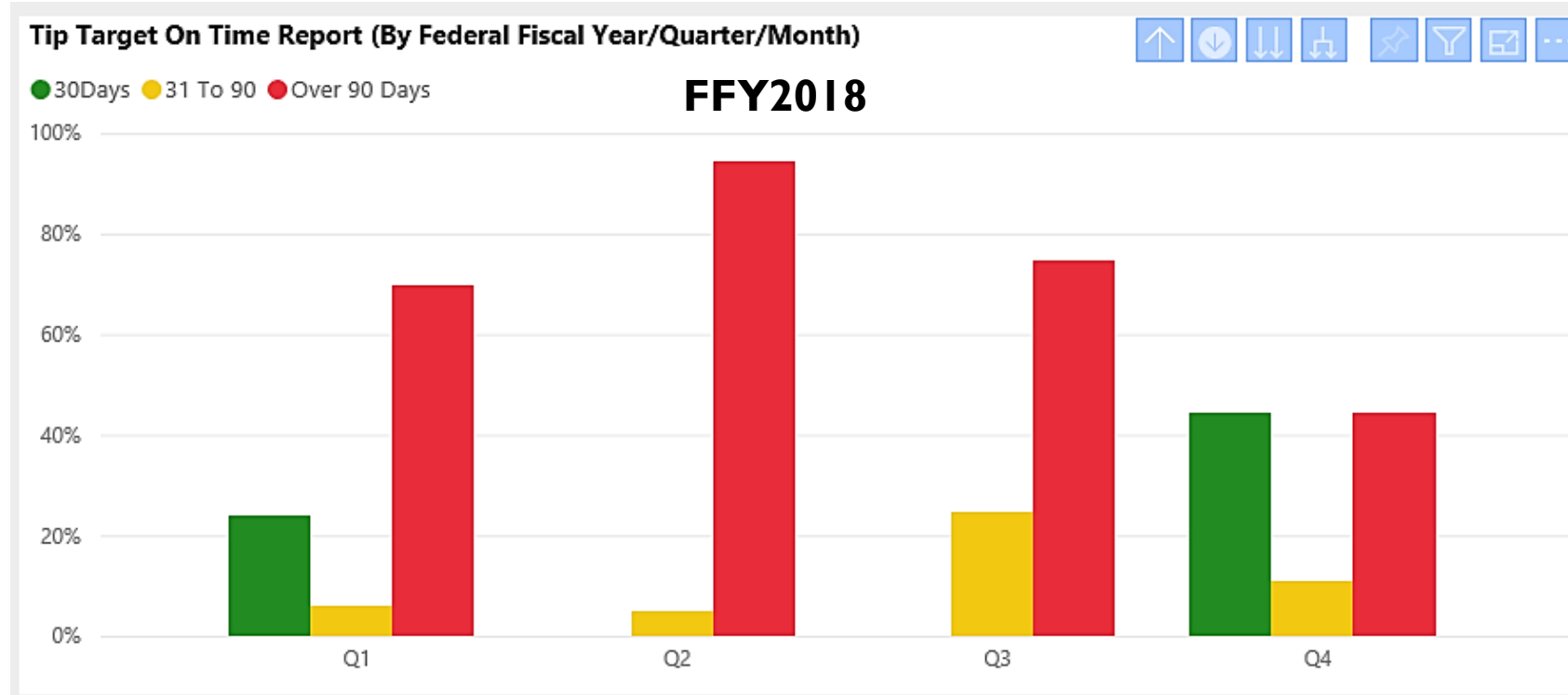


ACCURATE COST ESTIMATES



ON-TIME NOTICE TO PROCEED FOR CONSTRUCTION

ADVERTISEMENTS- ON-TIME PERFORMANCE AND DISTRIBUTION

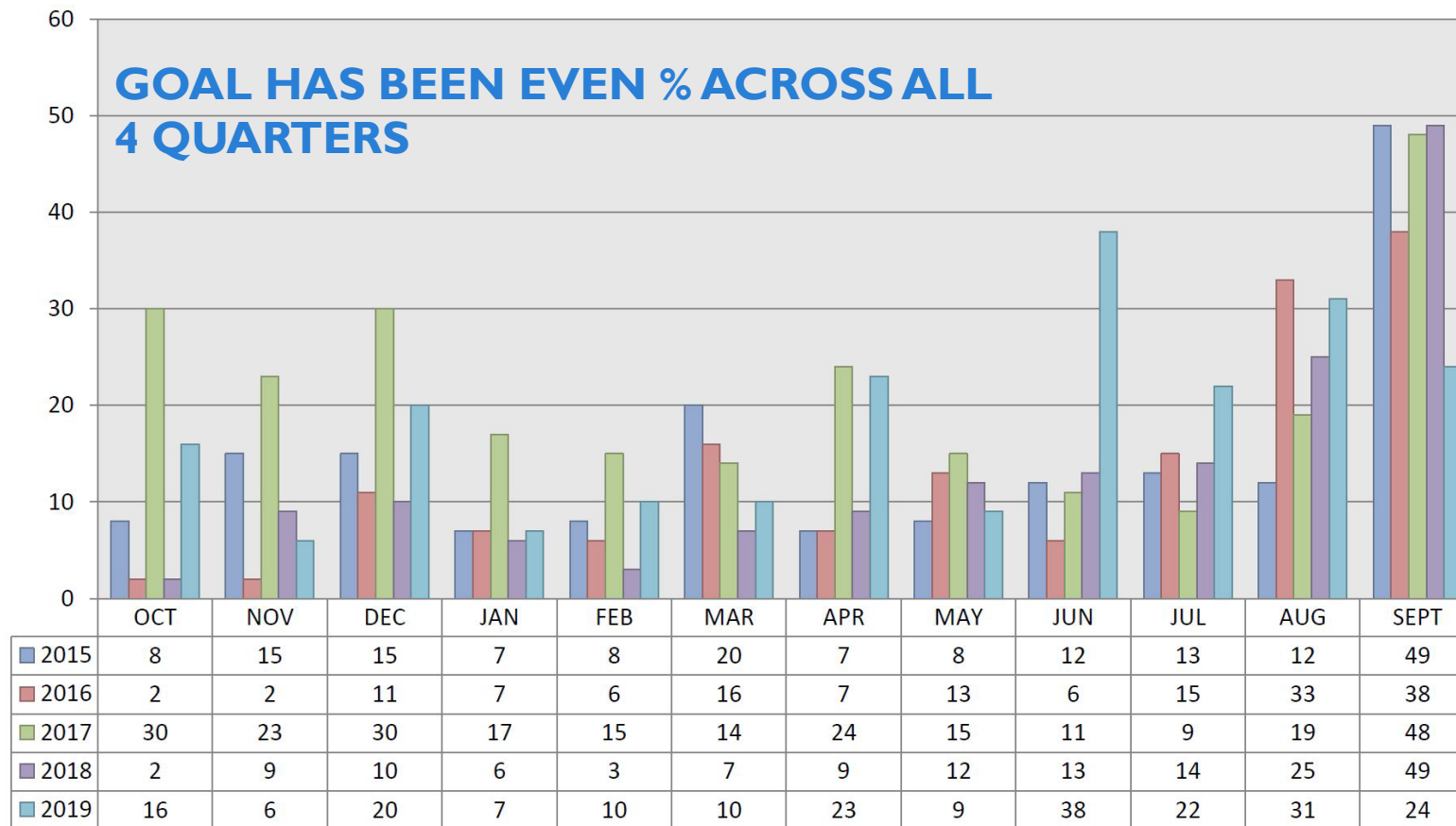


FederalFiscalYear	2018	
Days Over	Count	% of Total
<= 30 Days 🧐	16	17.78%
31 to 90 Days	8	8.89%
Over 90 Days 😞	66	73.33%
Total	90	100.00%

ADVERTISEMENTS – ON-TIME PERFORMANCE AND DISTRIBUTION

MASSDOT ADVERTISING PROGRAM

MASSDOT ADVERTISING PROGRAM
NUMBER OF PROJECTS ADVERTISED FROM FY15 TO PRESENT (MONTHLY)

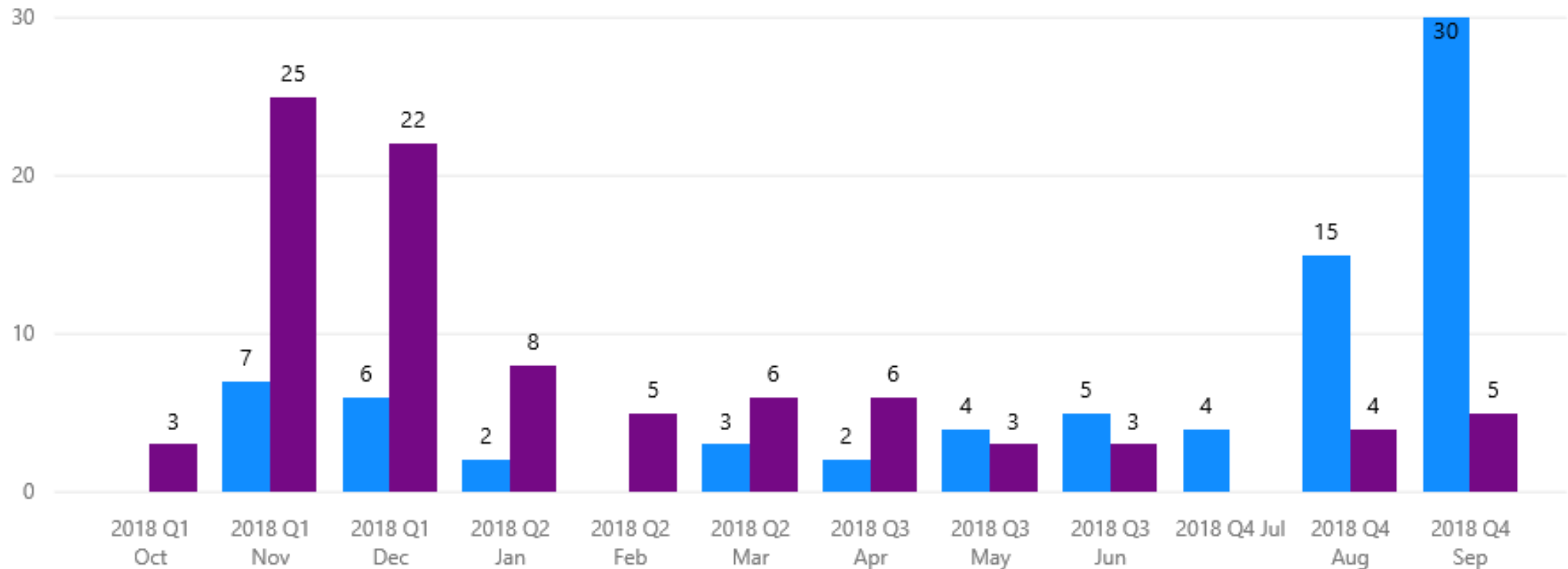


ADVERTISEMENTS – ON-TIME PERFORMANCE AND DISTRIBUTION

TIP Advertised (By Federal Fiscal Year/Quarter/Month)

● # Advertised ● # Scheduled On TIP for Advertise

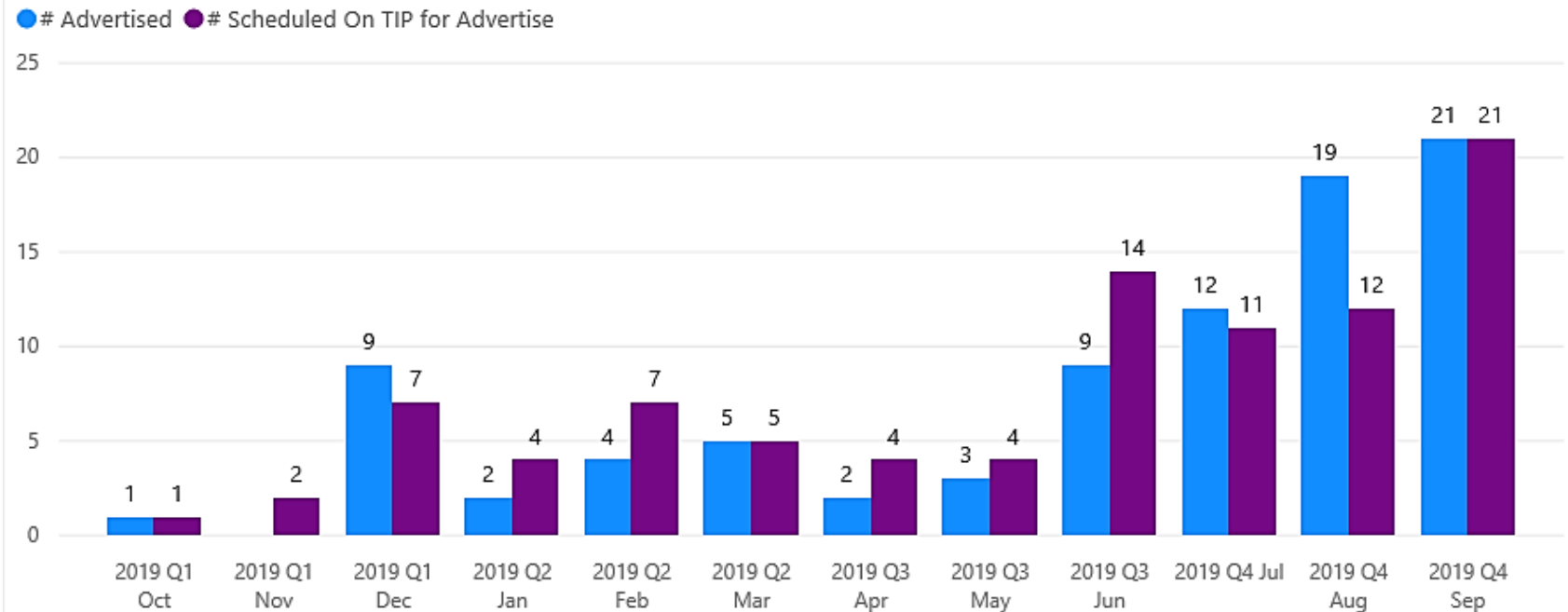
FFY2018



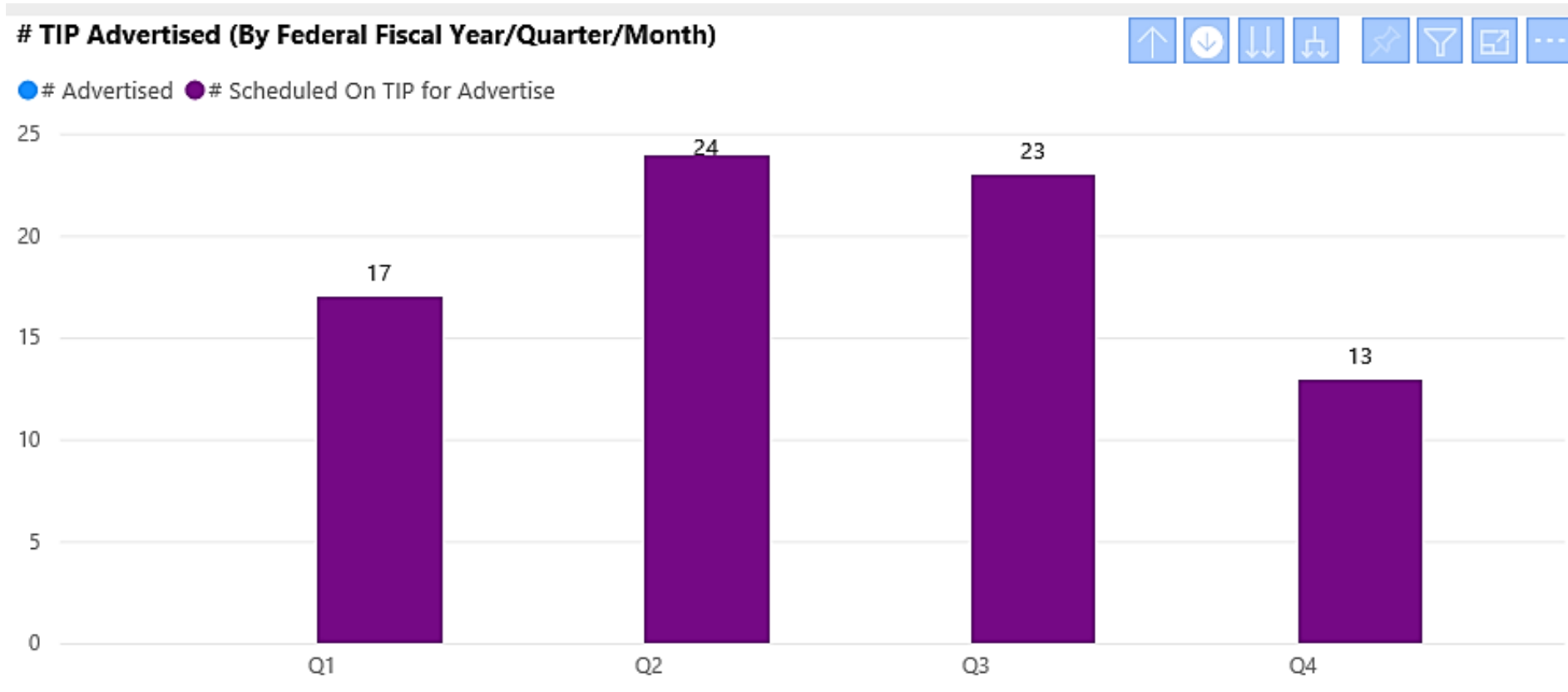
ADVERTISEMENTS – ON-TIME PERFORMANCE AND DISTRIBUTION

- INTRODUCED ON-TIME PERFORMANCE METRIC IN FFY 2019. ACTUAL ADVERTISEMENT IS WITHIN 30 DAYS OF SCHEDULED ADVERTISEMENT.
- 😊 IMPROVED FROM 18% ON-TIME (FFY 18) TO 77% ON-TIME (FF 19)
- FFY 2020 GOAL IS 85% ON-TIME PERFORMANCE
- FFY 2021 GOAL GOES TO 90%

TIP Advertised (By Federal Fiscal Year/Quarter/Month)



FORECASTED STIP PROJECT ADVERTISEMENTS - FFY 2020 BY QUARTER



AD DISTRIBUTION

FFY 2020 – MAX % IN ANY QUARTER
IS 35% (# OF PROJECTS)

ADHERENCE TO PROGRAM PLANNING DOCUMENTS

STIP PERFORMANCE (% OF ORIGINAL STIP ADVERTISED)

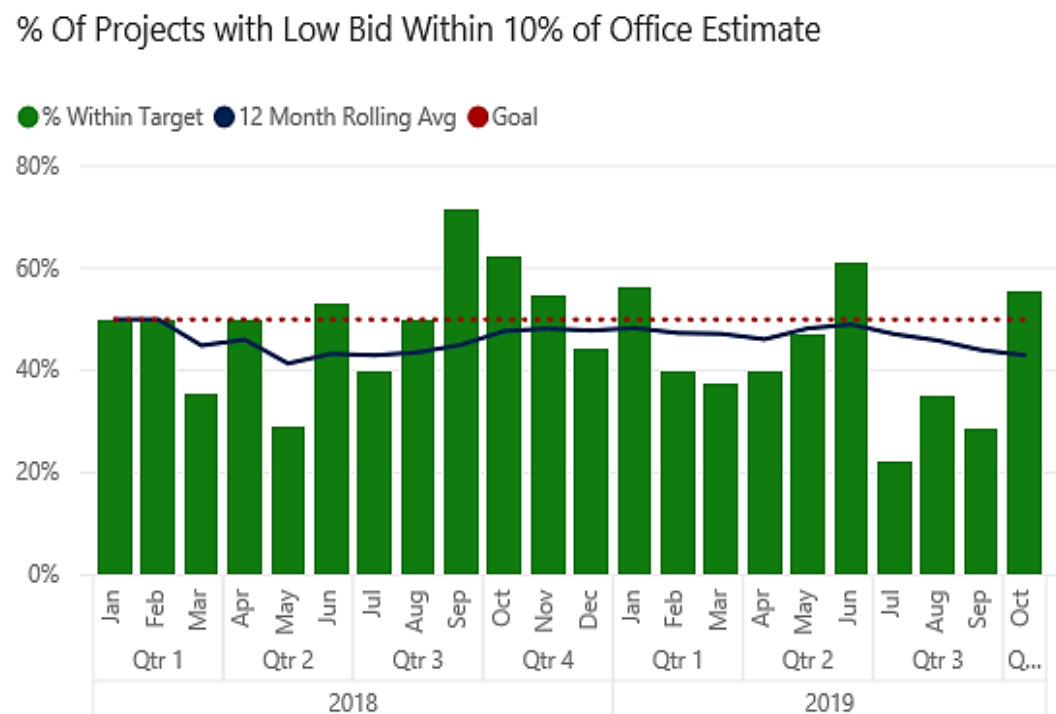
- CURRENT PERFORMANCE TARGET IS 80%
- PERFORMANCE HAS BEEN CONSISTENTLY AT OR ABOVE 80%
- TARGET IN FFY 2020 IS 85%
- WILL GO TO 90% IN FFY 2022

NUMBER OF PROJECTS ON ORIGINAL STIP (O-STIP) AND NUMBER OF PROJECTS ADVERTISED FROM THAT:

- **FY17 → 97%**
 - O-STIP = 105
 - ADV FROM O-STIP = 102
- **FY18 → 88.8%**
 - O-STIP = 90
 - ADV FROM O-STIP = 80
- **FY19 → 94.5%**
 - O-STIP = 92
 - ADV FROM O-STIP = 87

COST ESTIMATES

OFFICE ESTIMATE VS. BID



GOAL IS 50% PROJECTS WITHIN 10%

FLUCTUATIONS DURING DESIGN DEVELOPMENT

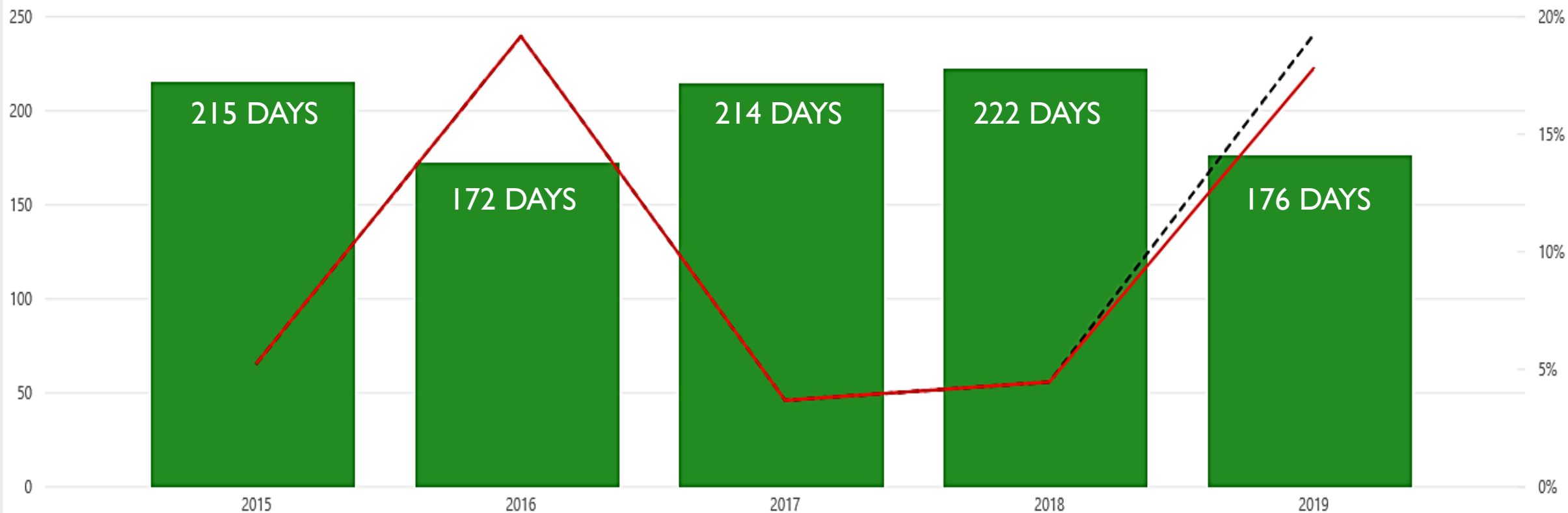
- MULTIPLE TIP AMENDMENTS
 - 1/3 OF THE PROGRAM IN FFY19 REQUIRED TIP AMENDMENTS
- IMPACTS FUTURE PROGRAM SIZES
- HAS A RIPPLE AFFECT ACROSS CURRENT AND FUTURE YEARS
- IMPACTS ON-TIME PERFORMANCE
 - CAN TAKE 3 MONTHS FOR A TIP AMENDMENT



ON-TIME NOTICE TO PROCEED

Adv to Bid Opening to NTP (Targets 60 and 120)

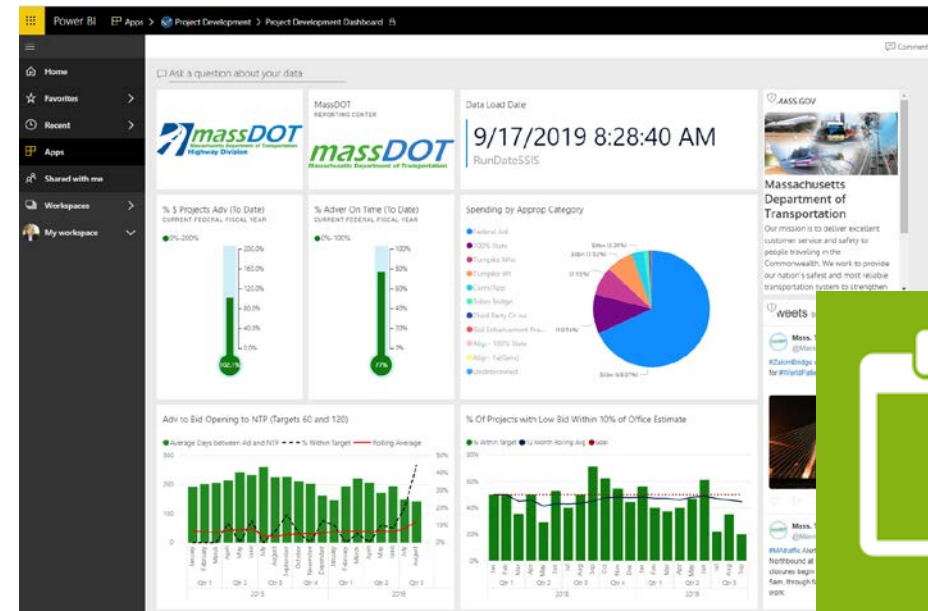
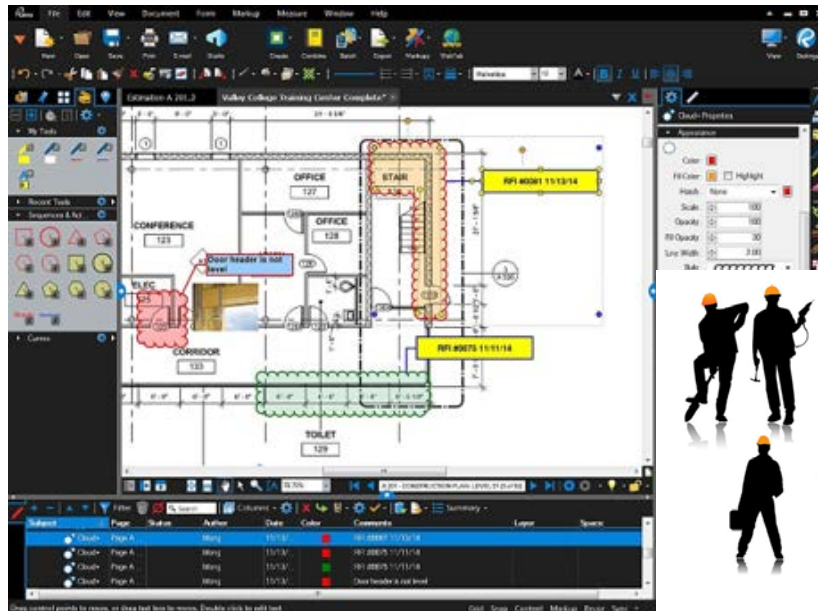
● Average Days between Ad and NTP - - % Within Target — Rolling Average



WHAT WAS NEW IN 2019

- FULL LAUNCH OF BLUE BEAM
- PRE-25% COORDINATION
- RE-ORGANIZATION OF RIGHT-OF-WAY

- HIGHWAY INFORMATION SYSTEMS INVESTMENTS AND POWER BI DASHBOARD
- EARLY PM SCHEDULE REVIEW AND LOCKING OF AD DATES



WHAT WAS NEW IN 2019

RISK REGISTER AND RISK ASSESSMENTS

- DESIGN STATUS
- MUNICIPAL RIGHT-OF-WAY
- STATE ROW
- ARTICLE 97
- COMMUNITY CONCERNS
- MUNICIPAL OFFICIALS
- ENVIRONMENTAL
- DESIGNER
- FUNDING
- UTILITIES



REDUCING ENVIRONMENTAL RISK TO PROJECT DELIVERY



CLICK FOR: [FORMS & DOCUMENTS - MASSDOT ENVIRONMENTAL SERVICES](#)

- USE OF 25% DESIGN EARLY ENVIRONMENTAL COORDINATION CHECKLIST
- EARLY COORDINATION WITH PM AND ENVIRONMENTAL SERVICES TO DISCUSS PROJECT SCOPE AND POTENTIAL IMPACTS
- TIMELY SUBMISSION: ASSESS PERMITS REQUIRED, SUBMISSION AND PROCESS TIMELINES
 - BE AWARE OF INTERDEPENDENCY ON REGULATORY PROCESS AND PERMIT ISSUANCE (e.g., MEPA-WQC-ACOE 404).
 - DO NOT RELY ON ADVERTISING DATE TO ESTABLISH PERMIT TIMELINE
- ACCOUNT FOR CRITICAL-PATH: DETERMINE LONGEST PERMIT TIMELINE
 - CHAPTER 91 OR USCG PERMIT CAN REQUIRE OVER A YEAR TO OBTAIN AND ARE THE LAST TO BE ISSUED
- QUALITY SUBMISSIONS: WETLAND APPLICATIONS; 25%/75% WATER QUALITY DATA FORM & REVIEW OF PROJECT AREA FOR LISTED HAZ MAT SITES.
- PERMIT PLANS: BE AWARE THAT EACH REGULATORY AGENCY HAS SPECIFIC PERMITTING PLAN REQUIREMENTS THAT MAY DIFFER FROM THE EXAMPLE PLAN SET.

WHAT WAS NEW IN 2019

- LAUNCH OF AGILE TEAMS WITH DEDICATED FOCUS ON SPECIFIC PROJECT DELIVERY PROCESS IMPROVEMENTS:
 - ADVERTISEMENT
 - ADVERTISEMENT TO BID
 - BID TO NTP
- DIVERSE TEAMS
- 12 WEEK CYCLES WITH SPECIFIC DELIVERABLES
- ACCESS/INVOLVEMENT OF OTHER DEPARTMENTS
- ENCOURAGES PROBLEM SOLVING AT LOWER LEVELS IN THE AGENCY

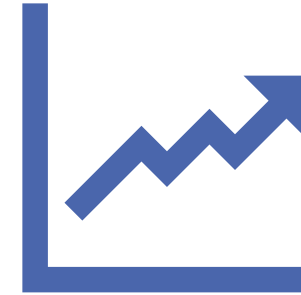


FY 2019 LESSONS LEARNED



MASSDOT NEEDS TO IMPROVE:

- SCOPE CREEP
- COST ESTIMATES
- ISSUE/COMMENT RESOLUTION
- EARLY COORDINATION
- TRANSITION TO CONSTRUCTION

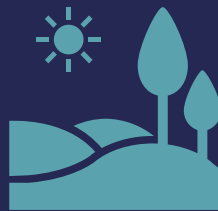


INDUSTRY NEEDS TO IMPROVE:

- | | |
|-------------------|----------------------|
| ▪ BASELINE SURVEY | ▪ COST ESTIMATES |
| ▪ UTILITY | ▪ SCOPE CREEP |
| ▪ COORDINATION | ▪ ON-TIME |
| ▪ ARTICLE 97 | ▪ SUBMISSIONS/DESIGN |
| ▪ ROW PLANS | ▪ SCHEDULES |
| | ▪ DESIGN QUALITY |

RIGHT-OF-WAY

JOHN DELEIRE, DIRECTOR OF RIGHT-OF-WAY



RIGHT-OF-WAY

ROW FAILURES: there have been many recent projects that had incorrect and inaccurate information on the accepted ROW Plans that caused delays in the acquisition process, including:

- Incorrect existing layout information
 - Information not recreated correctly in CAD from record plans
- GIS data and information from the assessors' map used to place property lines on ROW plans
- A municipality contracted the original surveyor for a project to prepare the survey baseplan. The surveyor was not prequalified by MassDOT.
- Numerous parcel area differences between the accepted ROW plan and Layout plan
- Differences in information between ROW plan and Layout plans.
 - CAD file sharing issues between consultants
- Combo State/Municipal project with different and conflicting information between all sets of plans




When information on the accepted ROW Plans is shown incorrectly, the acquisition process is delayed.

RIGHT-OF-WAY PROCESS

- Qualified surveyors should be developing the ROW Plans, so the geometry and parcel configurations can be seamlessly utilized in the preparation of the Layout/Easement plans.
 - Often differences in calculations are discovered upon review of the Layout Plans which delays the acquisition process.
- Information provided to the property owners by the ROW agents and appraisers, early in the acquisition process, needs to match the recorded Layout/Easement Plans and instrument.
- The calculations and geometry on the ROW Plans must be developed precisely at the acceptance stage, to ensure the seamless transition in the eventual development of the Layout/Easement documents.
- The above is controlled by:
 - Code of Massachusetts Regulations Title 250
 - MassDOT Contract Standard Provisions – Division I
 - MassDOT Contract Standard Provisions – Division II
 - MassDOT Survey Manual

SURVEY BASEPLAN

It is critical that the consultant confirms the survey base plan is accurate before they begin the proposed design.

- Verify the existing location lines are accurate based on record information.
- Verify the property lines are placed accurately using record deed information.
 - GIS data and information from assessors' maps are NEVER  an acceptable source.
- Verify frontages shown on the plans are based on deed description.
- Verify the existing conditions shown on the plans match the actual conditions in the field.
- Verify land with any restrictions (Article 97, etc.) is called out on the plan.

RIGHT-OF-WAY

PROPOSED DESIGN

- When designing the project, it is important to minimize impacts to property owners and open space parcels.
 - Parking, utilities, slopes, federal land, open space parcels, etc.

ROW INFORMATION

- Parcel designation and abbreviations.
 - Ensure permanent and temporary acquisitions are made according to State and Federal laws.
 - Proposed easement cannot be excessive in size or nature.
 - Proposed easement cannot be overburdened

ROW INFORMATION cont.

- Dispositions for all privately-owned items, within a proposed parcel, are shown correctly.
 - Dispositions are a critical piece of the ROW Plans. It is how the appraisers determine what the property owner will be compensated for.
- Parcel Summary is filled out correctly.
 - Grouped together by titleholder, deed reference, proposed easement type.
- CAD Standard is followed.

RE-CAP OF PERFORMANCE TARGETS

ON-TIME ADVERTISING

85% (90% in FFY 2021)

- **AD DISTRIBUTION GOAL**
≤35% IN EACH QUARTER
- **STIP PERFORMANCE**
85% ADHERENCE (90% IN FFY 2022)
- **OFFICE ESTIMATE vs BID** → MIN.
50% OF PROJECTS WITHIN 10%

PLANS & RECORDS SUBMISSION CHECKLIST

- 19 DAYS BEFORE
ADVERTISEMENT

TIME FROM ADV TO NTP

- 120 DAYS

FY2020: A LOOK AHEAD



PS&E COMPLETENESS AT
ADVERTISEMENT



EXPEDITING CONTRACT
AND SPEC.'s PRE-BID
REVIEW/USE OF BLUE BEAM



IMPROVED COMMENT
RESOLUTION PROCESS



IMPLEMENTATION OF
ELECTRONIC SIGNATURES TO
EXPEDITE BID TO NTP
PROCESS



IMPROVE PROCESS FROM PRC
APPROVAL TO DESIGN NTP
FOR MUNICIPAL PROJECTS

FY2020: A LOOK AHEAD



REVISED ENGINEERING
DIRECTIVE ON
CONTROLLING
CRITERIA AND DER
PROCESS



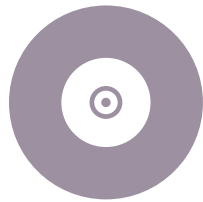
INCREASED MONITORING
OF ON-TIME DESIGN
SUBMISSIONS, INCLUDING
ON-TIME SCHEDULE
SUBMISSIONS



COMMITTEE RE-GROUP
ON COST ESTIMATING
BEST PRACTICES



NEXT ROUND OF
MSAs



REVISED PROCESS FOR
CTD's AND CD's



QUESTIONS?

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