

# I-81 CORRIDOR IMPROVEMENT PLAN PROJECT SCHEDULING

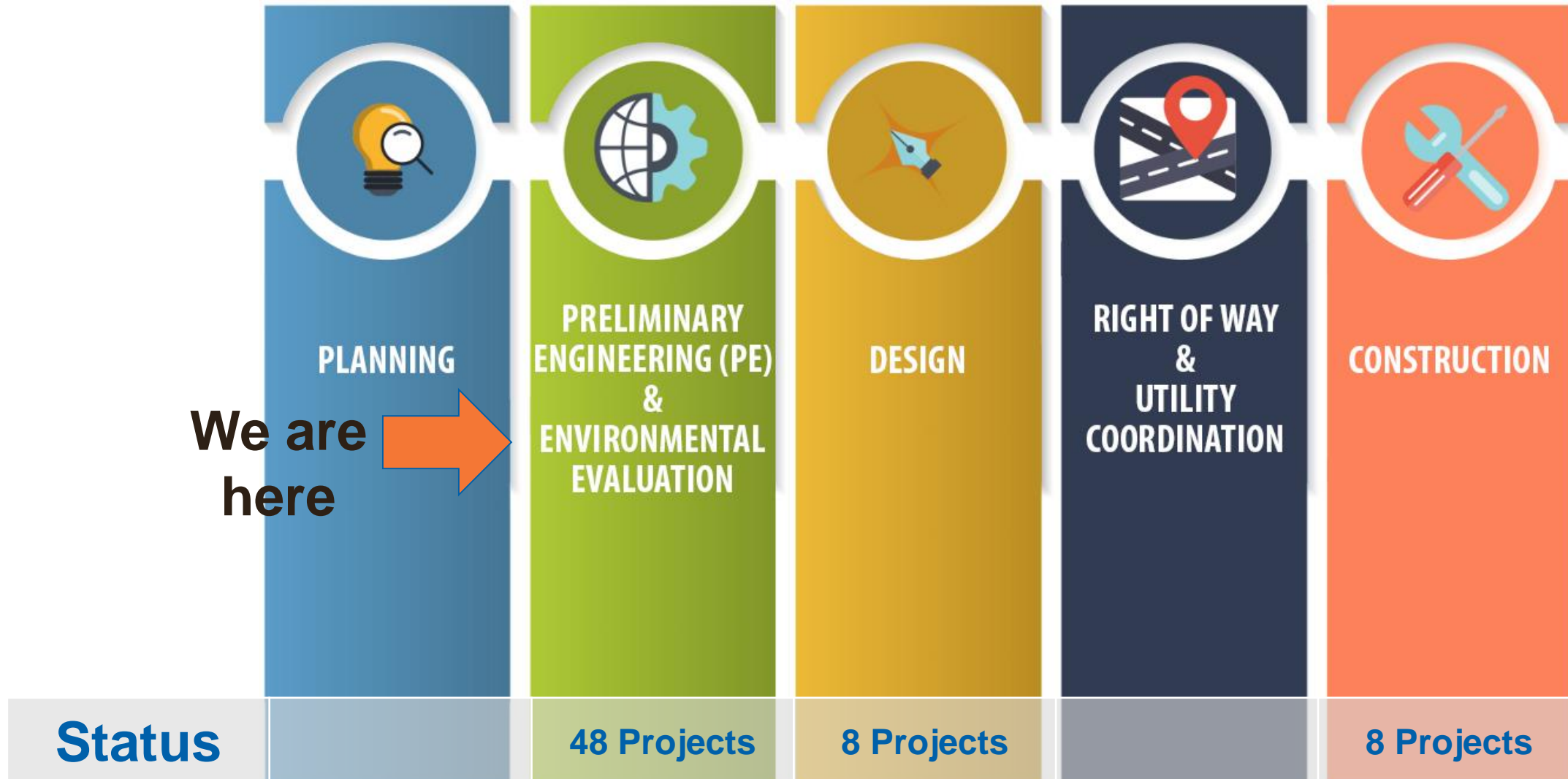
I-81 Commonwealth Transportation Board Briefing

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I-81 Program Delivery Director

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# Project Development Process



Status

48 Projects

8 Projects

8 Projects

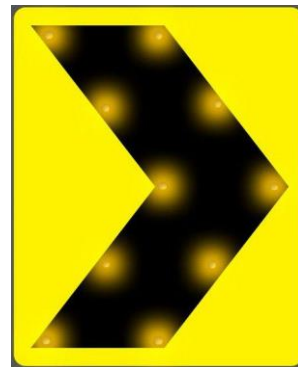
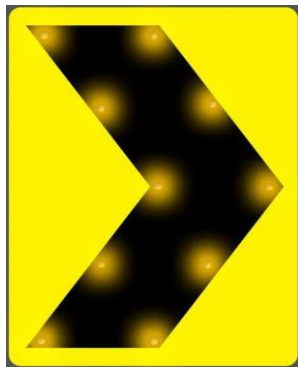
# \$2 billion in I-81 Plan Capital Improvements

District	Number of Projects by Type							Total Number of Projects	Total Cost (millions \$) 2018 \$
	Widening	Auxiliary Lane	Truck Climbing Lane	Acceleration Lane Extension	Deceleration Lane Extension	Curve Improvement	Shoulder Widening		
Bristol District	1	3	3	6	10	4	0	27	\$285.3
Salem District	5	0	0	4	2	3	0	14	\$875.4
Staunton District	4	1	2	10	4	1	1	23	\$838.1
<b>Total I-81 Corridor Number of Improvements</b>	<b>10</b>	<b>4</b>	<b>5</b>	<b>20</b>	<b>16</b>	<b>8</b>	<b>1</b>	<b>64</b>	<b>\$1,998.8</b>

# Mainline Safety Capital Improvements Underway

## Curve Improvements (Static and/or Flashing Chevrons)

District	Number of Locations	Planned Installation Date
Bristol District	4	Fall 2019
Salem District	3	Fall 2019
Staunton District	1	Fall 2019
<b>Total</b>	<b>8</b>	



# Mainline Capital Improvements Under Design

## Acceleration/Deceleration Lane Extensions

District	Number of Locations	Project Status
Bristol District	2	Underway
Salem District	1	Underway
Staunton District	5	Underway
<b>Total</b>	<b>8</b>	

- All of these projects are included in the FY20-25 Six-Year Improvement Program
- Of the 16 initial programmed projects, 8 will be complete, and 5 will be under construction in 2020



# 48 Remaining Capital Improvement Highlights

## Bristol District

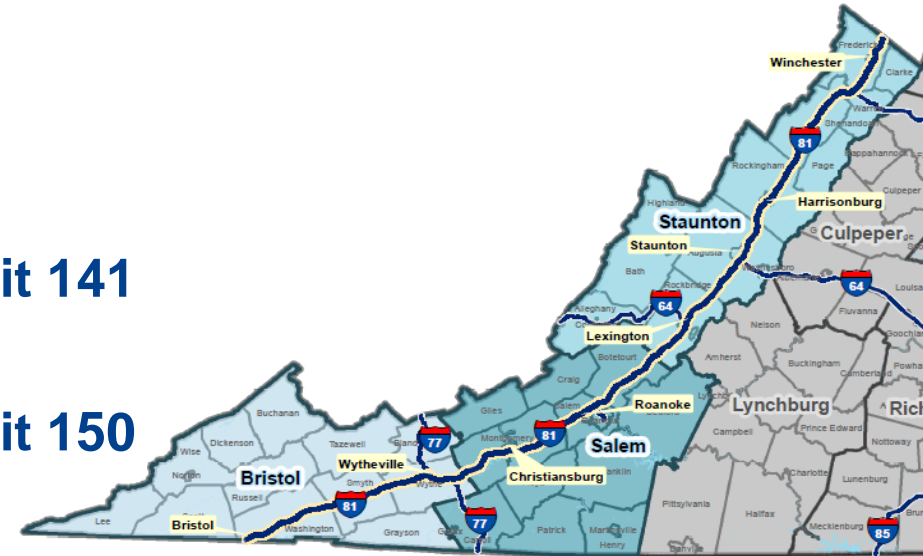
- Add northbound truck climbing lane from Exit 32 and from Exit 39
- Add a southbound truck climbing lane (Chilhowie)
- Various improvements at both I-77/I-81 interchanges

## Salem District

- Widen northbound from Exit 119 to Exit 137
- Widen northbound and southbound from Exit 137 to Exit 141
  - Connects to active widening from Exit 141 to Exit 143
- Widen northbound and southbound from Exit 143 to Exit 150

## Staunton District

- Widen northbound and southbound from Exit 222 to Exit 225 (Staunton)
- Add northbound and southbound truck climbing lanes (Weyers Cave)
- Widen northbound and southbound from Exit 243 to 248 (Harrisonburg)
- Widen northbound and southbound from Exit 313 to Exit 317 (Winchester)



# Develop Planning Level Costs and Schedule

- **Planning level cost estimates have been reviewed and refined**
  - **VDOT internal review**
  - **Independent consultant**
- **Costs are still at an order of magnitude level and will change as VDOT progresses through scoping and design-**
  - ***“we don’t know what we don’t know”***
- **Draft project schedules, anticipated environmental clearances and spend plans developed**

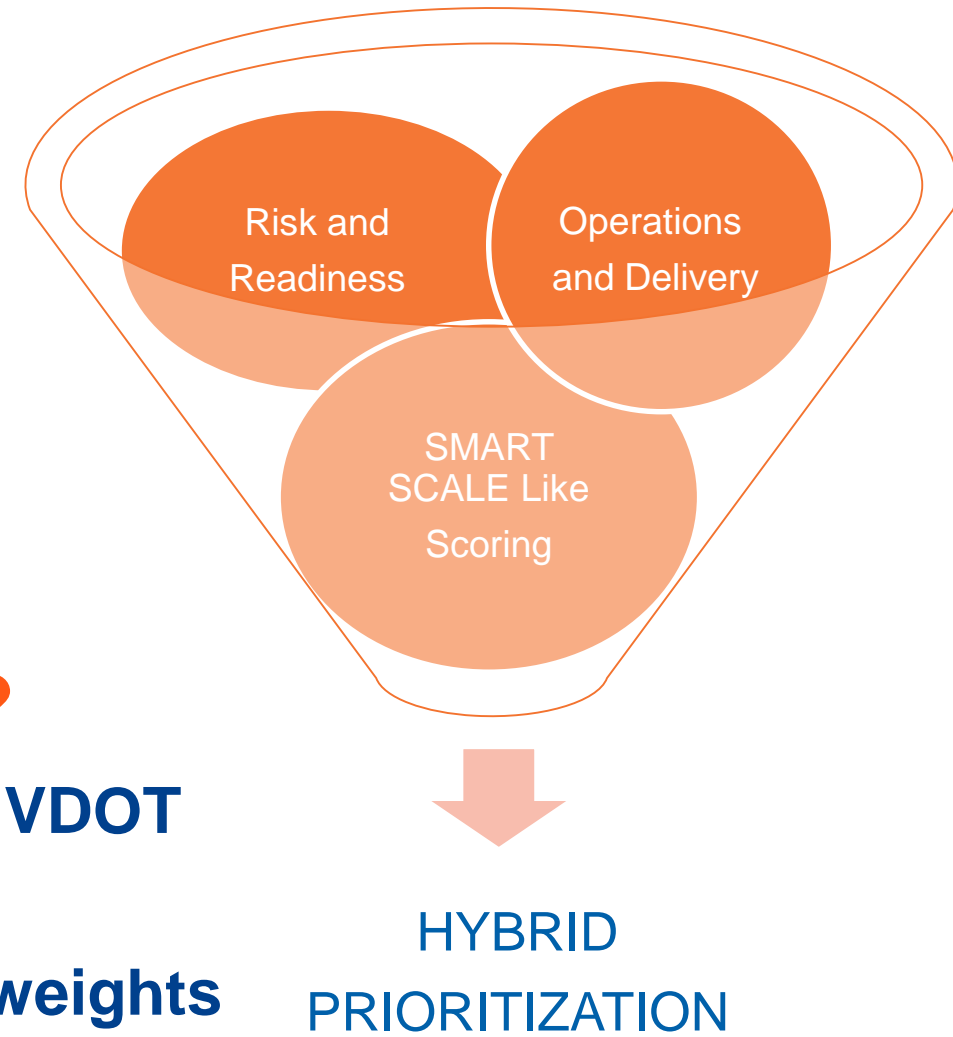
# Hybrid Prioritization

## Hybrid Prioritization =

- “SMART SCALE-like” scoring (25%)  
+
- Project Risk and Readiness (15%)  
+
- Operations and Delivery (60%)

## Are Project Risk and Readiness and Operations and Delivery quantitative?

- Scores are based on cumulative knowledge of VDOT staff
- Process enabled VDOT to assign quantitative weights to value judgements

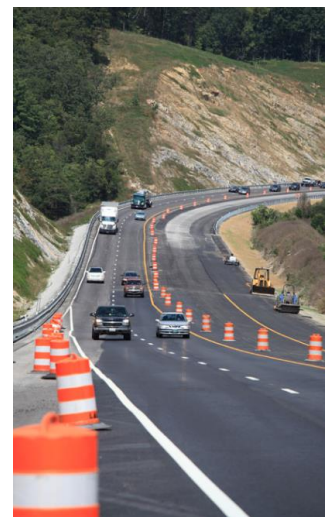




# Risk and Readiness

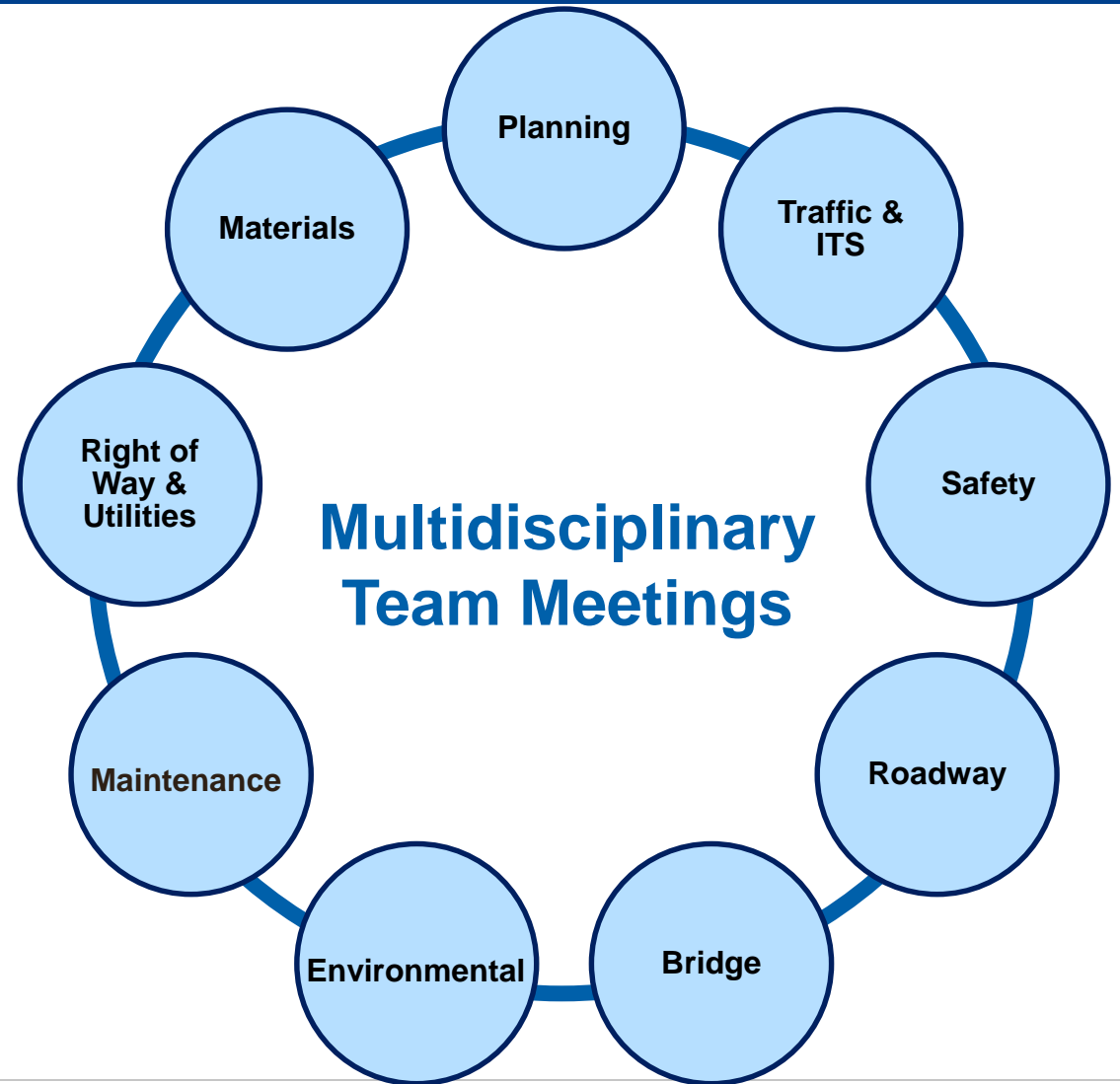
## Schedule, budget, and environmental:

- Constructability
- Right-of-way
- Utilities
- Soil/rock conditions
- Interchange impacts
- Structures (bridges, walls, etc.)
- Environmental permitting



# Operations and Delivery

- Value judgement by VDOT staff, focusing on efficient and economical delivery of program
- Considered:
  - Phasing
  - Maintenance of Traffic
  - Bundling projects
  - Project delivery based on scope

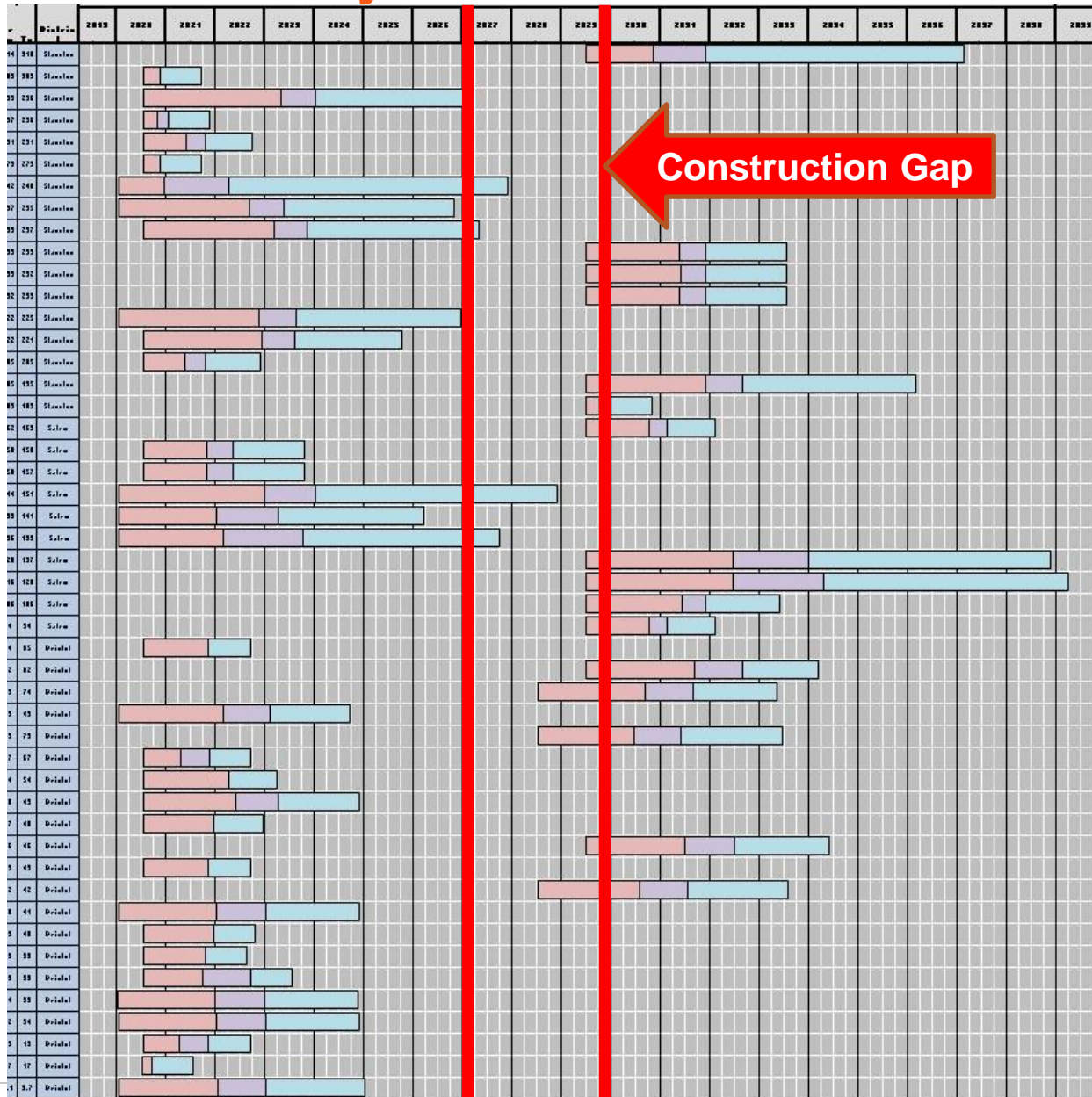


# Draft Schedule for Priority Recommendations

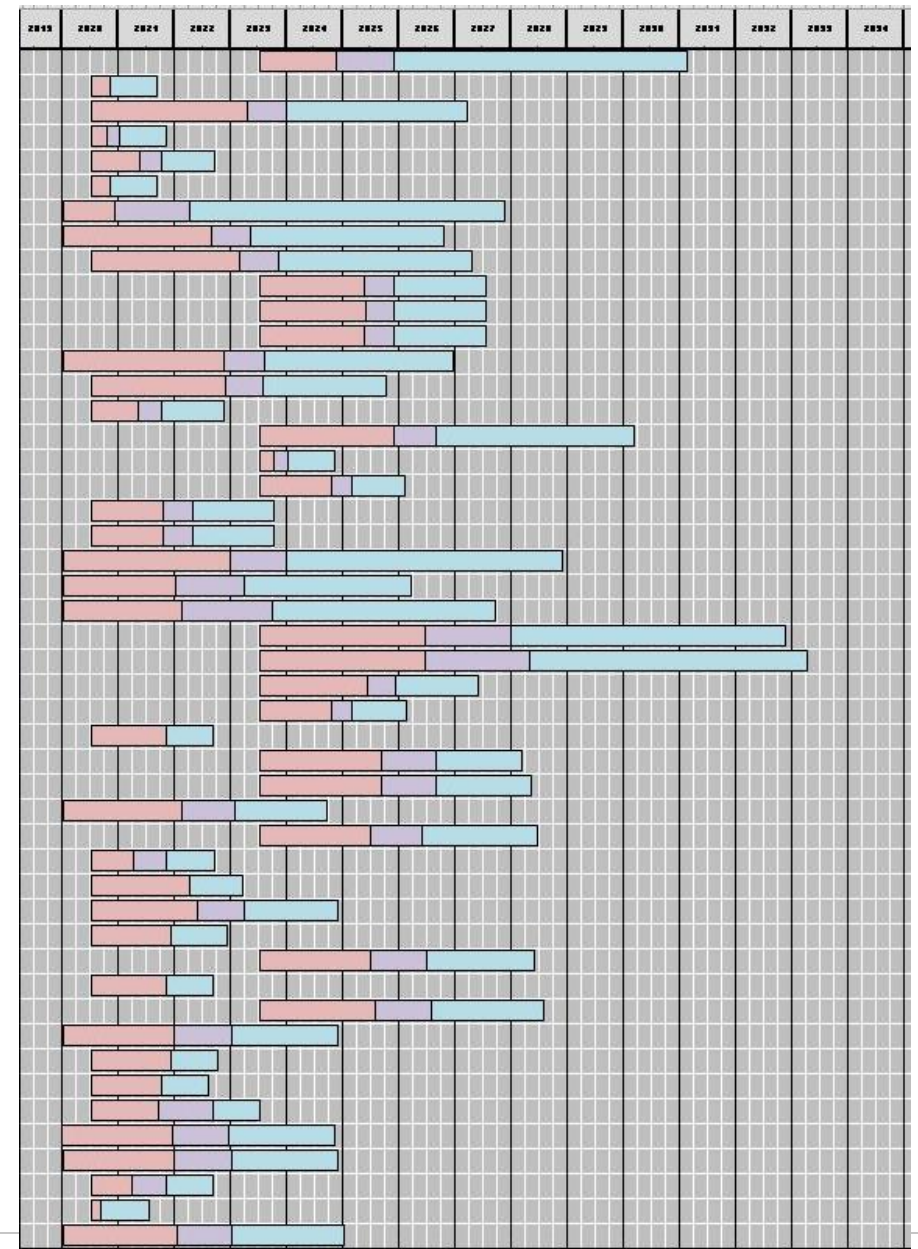
- **Reflects a hybrid prioritization**
- **Two scheduling options presented**
  - Existing revenue stream (pay-go)
  - Bonding/TIFIA
- **Existing revenue stream (pay-go)**
  - 48 out of 64 projects completed by 2028
- **Bonding/TIFIA option**
  - Creates sustainable pipeline of projects
  - Minimizes disruption for drivers and industry along corridor
  - 60 out of 64 projects completed by 2028



# Pay-Go Schedule



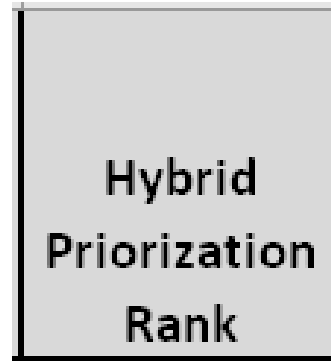
# Bonding/TIFIA Schedule



# Reading the Draft Schedule

Mile Marker		District	Jurisdiction	Study Project ID	Direction	Improvement Description	Hybrid Prioritization Rank	SMART SCALE Benefit/Mile Rank (25%)	Risk and Readiness Rank (15%)	Operations and Delivery (60%)	SMART SCALE Benefit Rank	Proposed Environmental Document Type	Proposed Delivery Method	Order of Magnitude Estimate Range
From	To													

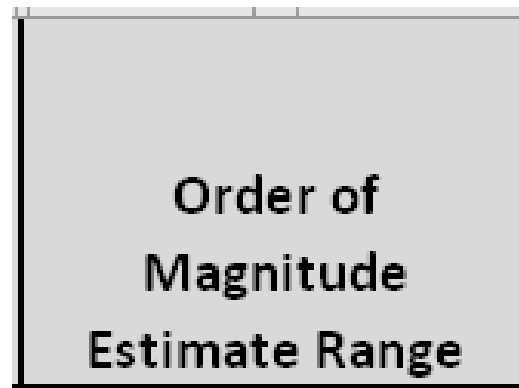
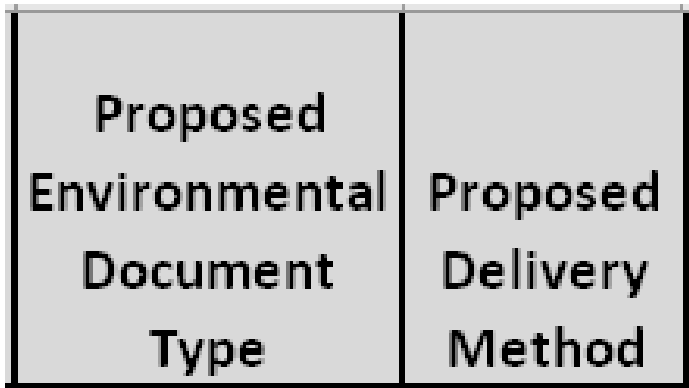
**Hybrid Prioritization Rank:** incorporates SMART SCALE benefit/mile (25% weight); Risk, Readiness, Operations and Delivery (75% weight)- includes sequencing and coordination with SYIP projects



## Hybrid Prioritization Key Factors

# Reading the Draft Schedule

Mile Marker		District	Jurisdiction	Study Project ID	Direction	Improvement Description	Hybrid Priorization Rank	SMART SCALE Benefit/Mile Rank (25%)	Risk and Readiness Rank (15%)	Operations and Delivery (60%)	SMART SCALE Benefit Rank	Proposed Environmental Document Type	Proposed Delivery Method	Order of Magnitude Estimate Range
From	To													



Refined order of magnitude level cost estimate range based on additional review

Anticipated level of environmental document required

Proposed delivery method- Design-Bid-Build (D/B/B) or Design-Build (D/B)

- Preliminary Engineering
- Right of Way Acquisition
- Construction



# Project Delivery Options

- **VDOT is collaborating with industry on the I-81 project listing and draft schedule**
- **Industry feedback on delivery timeframes is being incorporated**
- **Options for project delivery**
  - **Design-Bid-Build: projects are largely defined**
  - **Design-Build: opportunities identified for innovation and risk transfer**

# Takeaway Scorecard

Activity	Status	Anticipated Completion
Safety Service Patrol expansion	Complete	July 2019
Curve improvements (8)	Underway	Fall 2019
Initial accel/decel lane extensions (8)	Underway	Spring 2021
Additional cameras (51)	Underway	Spring 2020
Additional changeable message signs (31)	Underway	Spring 2020
Remaining capital projects (48)	TBD	Under Pay-Go scenario, 75% complete by 2028 Under bonding scenario, 94% complete by 2028

# I-81 Committee Meeting- October 1, 2019

- **At the October meeting, the I-81 Committee:**
  - **Endorsed the methodology used to draft I-81 program schedule**
  - **Endorsed pursuing bonding and TIFIA to advance the I-81 program**
  - **Recommended to the CTB the initial 31 projects to be added to the Six Year Improvement Program**

# Next Steps

- **Receive feedback**
- **Recognize schedules will change based on:**
  - **Financing options (to be determined)**
  - **Collaboration with industry**
- **Action to amend SYIP with an additional 31 capital improvement projects scheduled to start preliminary engineering by the end of the calendar year**
- **I-81 website: [www.VA81corridor.org](http://www.VA81corridor.org)**