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Attachment 1: Additional Context for Applying DES-01 to Project Work

Background

Funding Levels

Even with the recent state transportation funding increase, there is still not enough funding to sustain the condition of the state transportation system.

The Oregon Transportation Plan contemplated this circumstance and provided the following guidance in 2006:

“Response to Flat Funding includes the adjustments necessary if there are no additional transportation funds available. This investment level emphasizes preservation and operational improvements to maximize system capacity. With no additional investments, even these improvements would have to be triaged. Over the next 25 years, inflation alone will reduce spending power by 40 to 50 percent.”

The Oregon Transportation Commission has followed this guidance by progressively investing more in Fix-It over the years. In the 2018-21 STIP, Fix-It received 87 percent of available funding. This funding level is expected to continue into the 2021-24 STIP cycle. Even at this rate of investment, the condition of each of the Fix-It assets is forecast to decline.

Strategies and Resources

ODOT has developed tools to provide a framework for maximizing the efficiency and effectiveness of its investments.

Guidance Documents

ODOT has developed guidance documents to help provide a framework for effective decision making, including:

- **The OTC Investment Strategy (2017)**
- **Practical Design Manual** – for keeping projects in context with their location and circumstances.
- **System Preservation Strategy Work Plan for Bridge** – to help maintain focus for bridge expenditure.



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- **Bridge Aesthetics Guidelines** – to help outline a balance between community preferences and cost.
- **Scoping Framework and Expectations** – see Highway Division Scope and Select Leadership Team documentation
 - **Guiding Principles for Enhance/Fix-It Project Selection** – to ensure integrated and coordinated decision-making between the Fix-It Program and ODOT Regions during STIP updates
 - **Scoping Expectations Framework** – establishes inputs and outputs and objectives associated with the scoping phase
- **Business Case Template** – to help establish the relationship between the system need and solution.
- **Project Delivery Guide** – to provide an overview of how projects are selected, developed, delivered and maintained
- **Project Development Change Request** – see Highway Division Project Delivery Leadership Team Operational Notice PD-02
- **Transportation Project Lifecycle Workflow** – to provide common understanding of project delivery processes and sequence.

While this list is not exhaustive, it demonstrates guidance that is available to aid staff in making informed, efficient and effective decisions related to project development and delivery.

Asset Management

The Asset Data Management Committee provides a forum for leadership and guidance to the benefit of asset management data users in:

- Complying with asset management policies and directives;
- Identifying strategies for advancing asset management practice and change; and
- Applying technology and tools to their business lines and projects.

The ADMC shares experience and lessons learned for ODOT's gain, helping staff work smarter and avoid costly mistakes through coordination and collaboration.

Priority Routes

Beginning with the OTIA III Bridge Program in 2003, ODOT has identified priority corridors along key freight routes as well as lifeline routes connecting the coast to the



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valley. Select Fix-It programs, i.e. bridge, pavement, culverts, apply added significance to these routes, recognizing their importance to emergency responders as major thoroughfares.

By focusing on priority routes, ODOT is able to maximize the condition of its backbone system to provide a more resilient system statewide. This method requires ODOT to accept reduced conditions along other routes; however, strategic investments will continue on all routes to sustain the system overall. Attachment 2 shows the current Fix-It priority routes.

Leveraging

As construction contract values increase, contractor overhead and ODOT costs to prepare plans and oversee construction are proportionally smaller. For example, by combining many small projects into a few large projects, an overall cost savings may occur allowing for more improvement investments. ODOT takes advantage of these types of cost savings wherever practical. This is also a fundamental concept behind the Leverage programs which provide opportunity to combine relatively small Active Transportation, Enhancement, and Safety improvements with larger Fix-It improvements into one project; or in combining various Fix-It category improvements into one project.

STIP Development

Each of the Fix-It program areas has a specific goal and approach to condition assessment, data evaluation and needs prioritization, as described in Attachment 3. Typically, condition assessment and data evaluation are conducted independently by the central program managers. However, the subsequent activities of STIP development are a collaborative effort, as described in Attachment 4.

Both Pavement and Operations program processes include central and regional program managers with responsibilities of refining the initial needs lists for the related program areas.

150% List

Refining the initial needs lists to develop the 150% lists is typically a collaborative effort to evaluate potential projects for operational needs, situational challenges and opportunities, local interests, urgency, and established scope and select principles. Participants include central and region program managers, as well as maintenance managers and other potential internal stakeholders, all of whom bring valuable perspectives. Field trips are common during this phase. Leveraging opportunities are often identified, primarily focused between the various program areas or on



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maintenance-related condition improvements. Most of the program areas have oversight committees who provide concurrence on the 150% lists. Each of the entries in the 150% lists must have an initial draft business case completed. Once approved, the 150% lists are co-owned by regions/districts/other program managers and the respective program area.

Scoping

Ideally, each region gathers the 150% lists and initial draft business case documents from each STIP program area for a “pre-scoping regional project portfolio meeting,” as depicted in Attachment 5 Transportation Project Lifecycle Workflow. The initial draft business case is the primary reference document for assignment to a scoping lead and their team.

Each region identifies potential leveraging opportunities, and creates logical scoping projects from the suite of program lists. The regions form scoping teams with broad representation that may include Fix-It and other program managers, planners, designers, environmental, maintenance representatives, and others as needed. These scoping teams evaluate project concepts and conduct site visits with the goal of better defining individual project scope, schedule, budget and resourcing statements.

Leveraging opportunities are vetted and added to other projects as appropriate. ADA, Access Management and Work Zone Safety (for Decision Tree) conditions, and Intermodal opportunities are evaluated and project scope is added as appropriate.

At the end of scoping, the team’s findings are documented to support an updated draft business case for each project, which may include combining work and initial draft business cases into a single draft business case for one project.

100% List

Each region engages with Fix-It program managers independently to assemble its final 100% lists that will be recommend for inclusion in the STIP. Regions and Program Managers will give additional consideration to projects from the 150% lists that have been selected for the Leverage, Intermodal and other opportunities.

In the end, 100% lists for each region are completed according to each program’s prioritization process with the support of various stakeholders, including Fix-It program managers, and stays within funding limitations for each program. Every project on the 100% list must have a completed final business case.



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Documenting Funding Decisions

Scoping teams assess each project to develop an estimate and evaluate for risk. Depending on risk variables, and the relative severity of those variables, buffers are added to the estimate and carried through until bid let.

Funding plans are created as part of developing the final business case for each project. This plan may have one or more funding sources, if leveraging was feasible. Each final business case must be signed by each program manager contributing funding, as well as the project sponsor, and the appropriate district manager to confirm scope and funding agreements.

As change management activities are common, the Fix-It project elements will be distinctly identified in the final business case scope descriptions (and carried into the project charter) to provide clarity on the intent, and extent, of the Fix-It program justification and commitment. To the extent possible, Fix-It costs will be shown in isolated line items in cost estimates and bid items in construction contract bid items.

Project Delivery

Once the STIP is adopted by the FHWA, the identified projects are eligible to advance into the project development and construction phases, as outlined in Attachment 5. Each region has developed specific approaches to project delivery which include measures intended to sustain the original project intent and funding integrity.

Project Charter

The project charter serves as a clarifying document for the project team and acts as a primary assignment document from the project sponsor to the project leader/manager and project team. As the first step of project delivery after the STIP is approved, a charter is written for each project. The team validates scoping assumptions, confirms funding agreements with respective STIP program managers, clarifies regulatory compliance requirements, identifies delivery methods and risks, and affirms or recommends modification to target delivery year into construction.

Change Management

Inevitably, during design and construction, issues are discovered that can impact the project scope, schedule or budget, or all three. Each region has processes and documentation tools to manage these changes while sustaining the project intent and staying within program funding expectations and values. Concurrence of change management actions is required from all affected Fix-It program managers.



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Attachment 3: Fix-It Program

Figure 2: Fix-It Program Definitions

Program	Program Goal	Condition Assessment	Data Evaluation	Needs Prioritization
Pavement	Condition rating at or greater than target	Statewide condition surveys every two years.	Pavement data evaluated to classify segments as good, fair, or poor and identify project locations and treatment options to meet pavement condition goals at minimum long term lifecycle cost.	Follow a pavement preservation strategy which uses route priority, life cycle cost, traffic, and other factors to identify the initial list. Conduct road tours with Region Districts to further refine and prioritize needs and identify leverage opportunities.
Bridge	Provide safe and reliable bridges, preserved in the most cost effective manner, to meet or exceed the performance measure	Bridges are inspected at least every two years to meet the National Bridge Inspection Standards	Bridge inspection and load rating data are evaluated to rank bridges as distressed or non-distressed and identify preservation needs. Results are entered into the Bridge Management System.	Needs are prioritized based on information in the Bridge Management System and coordination with the region areas and districts to further refine and prioritize needs and identify leverage opportunities



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Program	Program Goal	Condition Assessment	Data Evaluation	Needs Prioritization
Culverts	Reduce number of Poor/Critical culverts	Statewide culvert inspections scheduled based on condition ratings	Culvert inspection data is evaluated to rank culverts into good, fair, poor, and critical conditions using the Drainage Facility Management System (DFMS).	Desk scoping using DFMS, Bridge inspection reports, and ODFW's Priority List provide data that supports the Statewide Culvert Leadership Team and Major Culvert Maintenance Leadership Team in their efforts to prioritize needs
Fish Passage	Replace or retrofit culverts to improve fish passage at existing fish passage barriers	Passage priority is documented ¹ and maintained by ODFW with input from ODOT.	Collaborative effort with ODFW to determine which projects maximize benefit for native migratory fish in a cost effective way	Desk scoping using ODFW's priority list data that supports the Statewide Culvert Leadership Team's effort to prioritize projects
Safety	Reduce number of Fatal and Serious crashes	Crash and roadway data is continually gathered and stored in Transportation Development Division databases	Crash and roadway data is obtained from the databases. Potential "Hot Spots" and "Systemic" sites are identified.	ODOT Regions and local agencies investigate potential sites and create project applications. Regions compile all applications and perform desk scoping. Regions and local agencies coordinate on final priority list.

¹ "Assessment of Road Culverts for Fish Passage Problems on State and County Owned Roads," 2006, and "Oregon Department of Fish and Wildlife Statewide Fish Passage Priority List," 2013



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Program	Program Goal	Condition Assessment	Data Evaluation	Needs Prioritization
ADA	Address lawsuit priority facilities. Bring all facilities into compliance	Condition and compliance status of ADA facilities is being gathered statewide.	Needs are being categorized according to urgency.	Priority projects identified in lawsuit settlement are being fast tracked. Remaining needs are being prioritized for inclusion in future STIP cycles.
Operations	Maintain Operations Asset conditions; fix priority hazardous slopes; address priority operational deficiencies	Annual condition ratings; assets beyond design life; hazardous slope rating system; region identified needs	Operations data analysis to identify priorities; District Managers work with technical specialists to identify potential projects and costs.	District Managers within Regions prioritize needs within available Operations funding.



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Attachment 4: Fix-It Responsibilities

Figure 3: Responsibilities during STIP project development

Responsibility	Step	Action
Fix-It Program Managers	Initial Needs List	Identify system needs separately for each program based on condition information and management systems.
Fix-It Program Managers, Regions Program Managers, and oversight groups.	150% List	Prioritize needs within each Fix-It program. Develop 150% lists of projects to be scoped. Prepare an initial business case for each need on the lists.
Region scoping team, Fix-It and other program managers, planners, designers, Districts, and others	Scoping	Scope projects consistent with practical design principles, Fix-It Program guidelines, and each program's discipline-specific scoping guidelines.
Fix-It Program Managers, Regions, Modal Program Managers, and various oversight groups.	100% List	Prioritize scoped projects and develop draft 100% STIP lists.
Regions and Fix-It Program Managers	Funding	Identify Fix-It Program funds needed for each project according to the criteria and scope set forth in those programs. Document funding agreements in the final business case.



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Figure 4: Responsibilities during project delivery

Responsibility	Step	Action
Region project teams (including Fix-It Program representative)	Project Initiation	Set project delivery in motion including project charter and other initial project documentation consistent with project intent as captured in the business case.
Region project teams, project sponsors, program managers, district managers	Change Management	Communicate when potential change is identified, collaborate on accommodating change, document change agreements

