

# Local Agency Bridge Funding Program

Bridge Program & Standards Engineer

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Senior Local Bridge Standards Engineer

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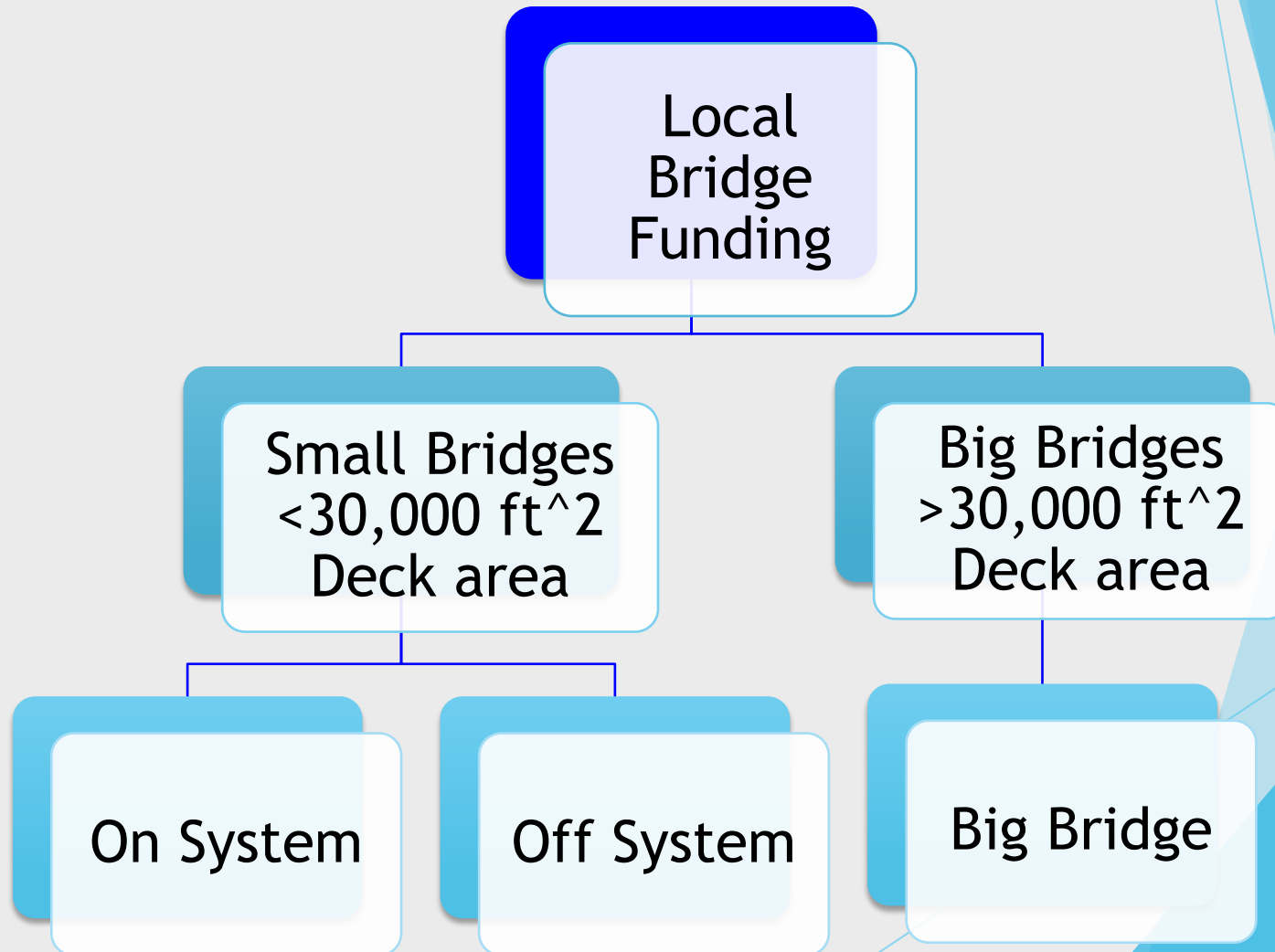
# Outline

- Program Overview
- Program Policy Goals
- Selection Criteria- TRS
- Application Process
- Schedule for 2027-2030 STIP
- Bridge Database Update -SNBI



# Highway Local Bridge Program

ODOT/AOC/LOC Agreement



# Off-System Bridge



**Bridge 59C379, Thorn Hollow Road, Umatilla County.  
This bridge failed due to flood damage in February 2020**



# Off-System Bridge



**Bridge 45C110, Vale Canal, Malheur County, “poor” condition  
6 Average Daily Traffic, built from railroad flatcar.**

**(Not all railroad flatcar bridges are Off-System Bridges)**



# Off-System Bridge

- **Federal requirement to program funds for Off-System Bridges. IIJA has emphasis on Off-System Bridges (No Waiver). Provision for no match**
- **Local Agencies – 2282 Bridges / 182 Poor Condition**
- **ODOT – 121 Bridges / 1 Poor Condition**
  - ▶ **24-27 STIP Local Bridge Programming:**
  - ▶ **Big Bridge - \$31M**
  - ▶ **Small On -\$42.8M**
  - ▶ **Small Off - \$47.6M + \$20M = \$67.6M**



# Local Agency Bridge Selection Committee

State Bridge Engineer, Ray Bottenberg, Chair

## Three ODOT

State Bridge  
Engineer

Sr. Local Bridge  
Standards Engr

Planning Manager

## Three County

Multnomah

Umatilla

Douglas

## Three City

Portland

Salem

Klamath  
Falls





# Program Goals

## Improve/maintain local agency bridges- Criteria



### Primary Criteria

- Structural deficiency from load deficient -capacity
- Improve the Safe and prolong the service life of structures

### • Secondary

- Additional Bridge width to bring to standards
- not identified as deficient





# Program Goals

Improve/maintain local agency bridges- Criteria

## Primary Criteria

- Emergency Bridge Funding



- Umatilla County Floods

- Feb 2020

- Bridge Rail dipped due to footing settlement



# Selection Criteria: TRS

## Technical Ranking System Formula

$$\text{Formula} = \frac{(\text{SRF} + \text{TBF} + \text{LDF} + \text{UBF})}{2} \text{BNM} \times \text{FCM}$$

Max. Points=105



SRF = Points Based on Sufficiency Rating

TBF = Points Based on Timber Deficiency

LDF = Points Based on Load Deficiency

UBF = Points Based on Use Benefit

BNM = Bonus Needs Multiplier

FCM = Functional Class Multiplier



# Application Process

## ODOT Process Applications per IGA

ODOT review all information for accuracy

- National Bridge Inspection Standards (NBIS)
- Rank small bridge replacements using Technical Ranking System, TRS
- LABSC selects scoping list, 150% of funding



# Scoping

Final scoping list from LABSC from TRS

ODOT Regions will be Involved - May 2024?

- LALs, LPA
- R/w, Roadway, Environmental, & Bridge
- ▶ Schedule each region for field scoping
- ▶ Re-calculate the TRS scores
- ▶ Final Selection by LABSC



# Example of TRS Calculation

## Local Agency Bridge Qualification for Funding List

BRIDGE_ID	STRUCNAME	SR	ftLong	detour	brAction	sqrFeet	LR_3S2	_sys_
246105	Quartz Creek, Ward Rd	26.6	43	0	replace	1088	0.53	off
520604	Thompson Creek, Parker Ln	39.3	49	100	replace	510	1.23	off
33C04A	Jumpoff Joe Creek, Merlin Galice Rd	41.2	348	32	replace	10649	1.7	on
369025	Bear Creek, Slate Creek Rd	43.9	29	123.7	replace	652	1	off
145005	Grave Creek, Carrie St	44.5	79	10.7	replace	1446	1.29	off
07895	Galice Creek, Merlin Galice Rd	47.8	116	42	replace	2970	1.58	on
07896	Taylor Creek, Merlin Galice Rd	49.9	157	32	replace	4223	2.22	on
555020	Rock Creek, Lone Mountain Rd	52.3	26	123.7	rehab	419	1.2	off
582035	Page Creek, Takilma Rd	54.3	22	123.7	rehab	614	1.41	off
531510	Kerby Slough, Finch Rd	55.1	40	10.7	rehab	940	1	off
141005	Grave Creek, Sunny Valley Loop	56.5	220	1.9	rehab	4180	1.17	on

## TRS Formula

$$\text{Points} = \frac{(\text{SRF} + \text{TBF} + \text{LDF} + \text{UBF}) \text{BNM} \times \text{FCM}}{2}$$



# Example of TRS Calculations

SRF = NBIS Sufficiency Factor = (50 - Sufficiency Rating)

## Oregon Department of Transportation Bridge Inspection Report

**District :** 8  
**Fac Crossed :** QUARTZ CREEK  
**Suff Rating :** 26.6  
**AC Depth :** 3.00  
**Bridge Length :** 43.00 ft

**Structure :** Quartz Creek, Ward Rd  
**Owner :** County Hwy Agency  
**County :** Josephine  
**Record Type :** 1  
**Insp Freq :** 12  
**Bridge Width :** 25.30 ft

**Bridge ID :** 246105  
**Fac Carried :** WARD ROAD  
**Mile Point :** 0.12 mi  
**Insp Date :** 07/25/2023  
**Inspector 1 :** Will Strehler (C0093)  
**Inspector 2 :**

## TRS Formula

$$\text{Points} = \frac{(\text{SRF} + \text{TBF} + \text{LDF} + \text{UBF}) \text{BNM} \times \text{FCM}}{2}$$





# TBF = Timber Deficiency Factor [Max. 5 points]

- ▶ If the bridge has a major super or substructure element made of timber, then:
- ▶ If the bridge is greater than 50 years old, then TBF = 5
- ▶ If the bridge is from 30 to 50 years old, then TBF prorated between 1 and 5
- ▶ If the bridge is less than 30 years old, then TBF = 0

Element Condition States (New AASHTO report)

Element	Structure Unit	Environment	Quantity	Units	CS 1	CS 2	CS 3	CS 4
<b>31-Timber Deck</b>	<b>1</b>	<b>3</b>	<b>1100</b>	<b>(SF)</b>	<b>1100</b>	<b>0</b>	<b>0</b>	<b>0</b>
511-AC Wearing Surface	1	3	1100	(SF)	1000	100	0	0
3221-AC Crack (Wearing Surface)	1	3	100	(SF)	0	100	0	0
<b>111-Timber Open Girder</b>	<b>1</b>	<b>3</b>	<b>538</b>	<b>(LF)</b>	<b>321</b>	<b>185</b>	<b>10</b>	<b>22</b>
1140-Decay/Section Loss	1	3	20	(LF)	0	0	10	10
1150-Check/Shake	1	3	182	(LF)	0	182	0	0
1170-Split/Delamination (Timber)	1	3	12	(LF)	0	0	0	12



# LDF = Load Deficiency Factor [Max. 25 points]

- ▶ If Load Rating less than 5 tons, then LDF = 25
- ▶ If Load Rating from 5 to 40 tons, then LDF prorated between 25 and 5
- ▶ If Load Rating 40 tons or more, then LDF = 0

## Load Rating

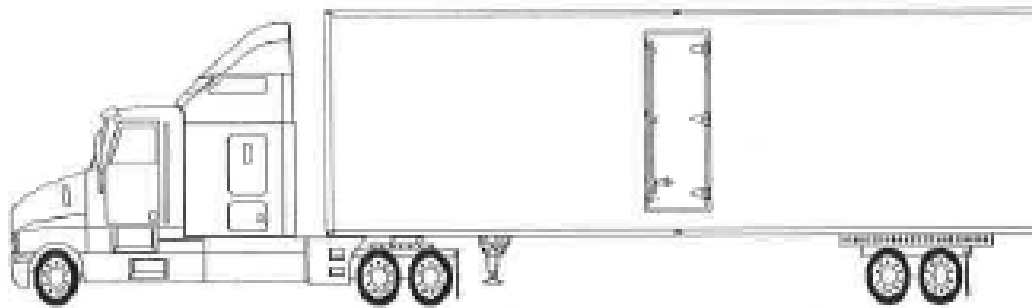
<b>Rating Date :</b>	01/24/2022	<b>Posting Req :</b>	0 >39.9% below
<b>Design Load :</b>	2 M 13.5 (H 15)	<b>Posting Status :</b>	P Posted for load
<b>Operating Load :</b>	10.7 ton	<b>OR Method :</b>	8 LRFR RF HL93
<b>Inventory Rating :</b>	8.3 ton	<b>IR Method :</b>	8 LRFR RF HL93

Truck	Rating Factor	% Below	Posting Required	Controlling Member	Actual Posting
Type 3	0.53	0 >39.9% below	Yes	Ext. stringer, span 1 of 2 +M at 0.5L	13.0
Type 3S-2	0.53	0 >39.9% below	Yes	Ext. stringer, span 1 of 2 +M at 0.5L	21.0
Type 3-3	0.64	1 30.0-39.9%below	Yes	Ext. stringer, span 1 of 2 +M at 0.5L	25.0



# LDF = Load Deficiency Factor

## Type 3-S2 Legal Truck



20,000 Max Single Axle

34,000 Max Tandem

**(80,000 Pounds)**

**Type 3S2 Legal Truck:** The Oregon Type 3S2 legal vehicle is a five axle semi-tractor and trailer combination with a gross vehicle weight of 80,000 LBS (40 tons). This Oregon vehicle model is heavier than the 72,000 LBS (36 tons) national Type 3S2 vehicle model.



# UBF = Use Benefit Factor [Maximum 25 points]

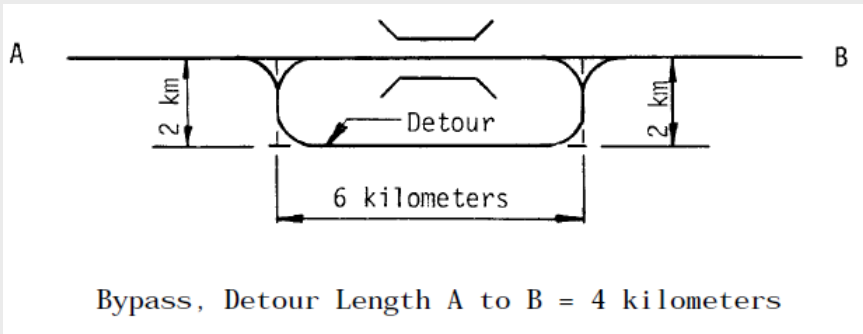
$$\text{UBF} = 25 - 0.05 \times \frac{\text{Cost of Bridge Replacement}}{\text{ADT} \times \text{Detour Length}}$$

(19) Bypass Detour	0.02 mi
(20) TOLL	3 On free road
(21) Custodian	County Highway Agency
(22) Owner	County Highway Agency
(26) Func Class	09 Rural Local
(27) Year Built	1960
<b>(28) Lanes</b>	<b>on: 2 / under: 0</b>
(29) Average Daily Traffic	2480
(30) Year of ADT	2020



# Detour Length - NBI/SNBI Definition

- ▶ Detour length is the additional travel resulting from a closure of the bridge



Highway feature carried on the bridge with a 4-mile detour (Figure 102). Report 4.

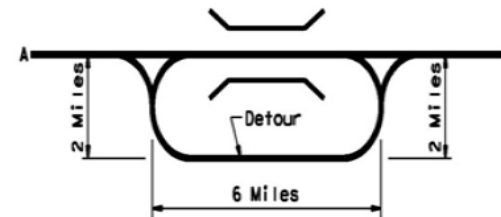
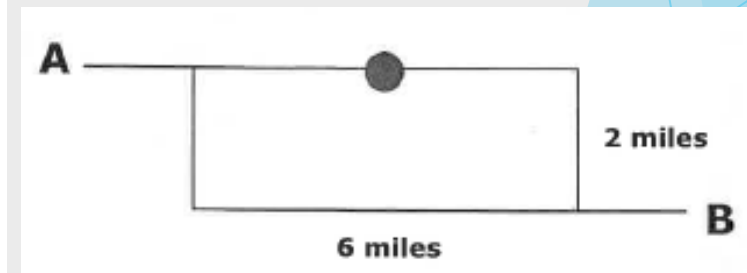
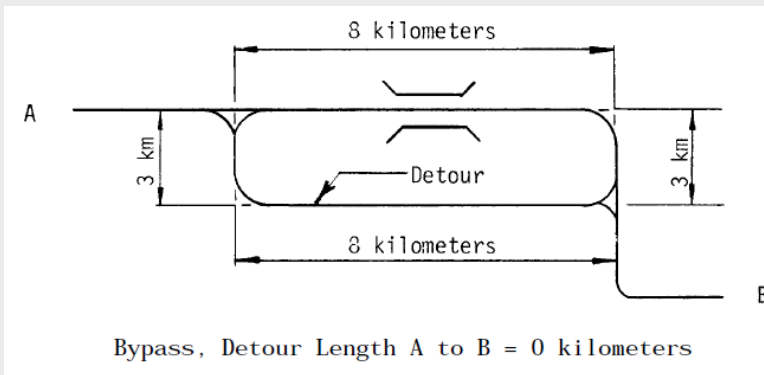


Figure 102. Detour map for a highway feature carried on the bridge.



# BNM = Bonus Need Multiplier [Maximum 1.414]

The largest of any of the following

- A. Sole Access, Factor = 1.414
- B. Near Fire Station, Factor = 1.414
- C. High use needed by overweight permitted trucks, but bridge not capable of carrying those trucks, Factor = 1.414
- D. Truck Miles Traveled

Truck Miles Traveled	Factor
<b>4000</b>	1.414
<b>1500</b>	1.300
<b>500</b>	1.200
<b>120</b>	1.100
<b>0</b>	1.000

B. Is the bridge heavily used by fire trucks? To meet this threshold at least 25% of the responses from a fire station must use the bridge.

C. Bridge is not capable of carrying those trucks? To meet this threshold the agency must submit data to support truck need and structural limitation of the bridge.





# Example of TRS

FCM = Functional Classification Multiplier [Maximum 1.414]

(26) Func Class

09 Rural Local

Functional Classification		
Functional Classification	Required Width	Importance Factor
1 Rural Interstate	88	1.414
2 R. Principal Art.	88	1.414
6 R. Min. Art	42	1.414
7 R. Maj. Collector	36	1.300
8 R. Min. Col.	32	1.200
9 R. Local	28	1.000
14 U. Other Prin. Art.	42	1.400
16 U. Min. Art	42	1.400
17 U. Coll.	36	1.250
19 U. Local	32	1.000



# TRS Formula

$$\text{Points} = \frac{(\text{SRF} + \text{TBF} + \text{LDF} + \text{UBF})}{2} \text{BNM} \times \text{FCM}$$

2



SRF = Sufficiency Rating

TBF = Timber Deficiency

LDF = Load Deficiency

UBF = Use Benefit

BNM = Bonus Needs Multiplier

FCM = Functional Class Multiplier

SRF=50-26.4=23.6

TBF: 5 built 1960

LDF= 13.4

UBF = 0

BNM =1.0

FCM= 1.0

TRS=21.0



# Example of TRS

## Overall Bridge rating of Super & Sub structure

**NBI Category**






<b>Category</b>	<b>NBI #</b>	<b>Rating</b>
Deck Condition	58	7 Good
Superstructure	59	5 Fair
Substructure	60	5 Fair
Channel	61	5 Bank Prot Eroded

ODOT Information from NBI, Bridge Inspection Report



# Application Request documents

**Selection Policy:** If the local agency believes any of the ODOT provided NBIS data elements are incorrect, a statement of what the local agency believes the correct data element should be.

Subject		27_30 LBP Invitation    RV    Josephine County	
 Local_Agency_Information.xlsx .xlsx File	▼	 ODOT Project Business Case template.pdf .pdf File	▼
 Project_Prospectus.pdf .pdf File	▼	 Josephine County.pdf .pdf File	▼
 Jurisdiction-Specific LBP Eligible Bridges.pdf .pdf File	▼		

Input from Owner:

- Fire Station
- Use by Permit Vehicles
- If posted: Average Daily Traffic
  - Truck Percent



# Application information request

## 2025-2027 Local Bridge Program - Additional Bridge Information

*Agency*

*Bridge ID*

*Estimated Cost*

*Bridge Near Fire Station? (Please provide map or letter from fire department)*

*Functional Classification*

*Detour Length (Miles)*

*Age of Bridge (if timber super- or sub-structure)*

*Average Daily Traffic (ADT) (Please provide traffic study if different from inspection reports)*

*Average Daily Truck Traffic (% of ADT)*

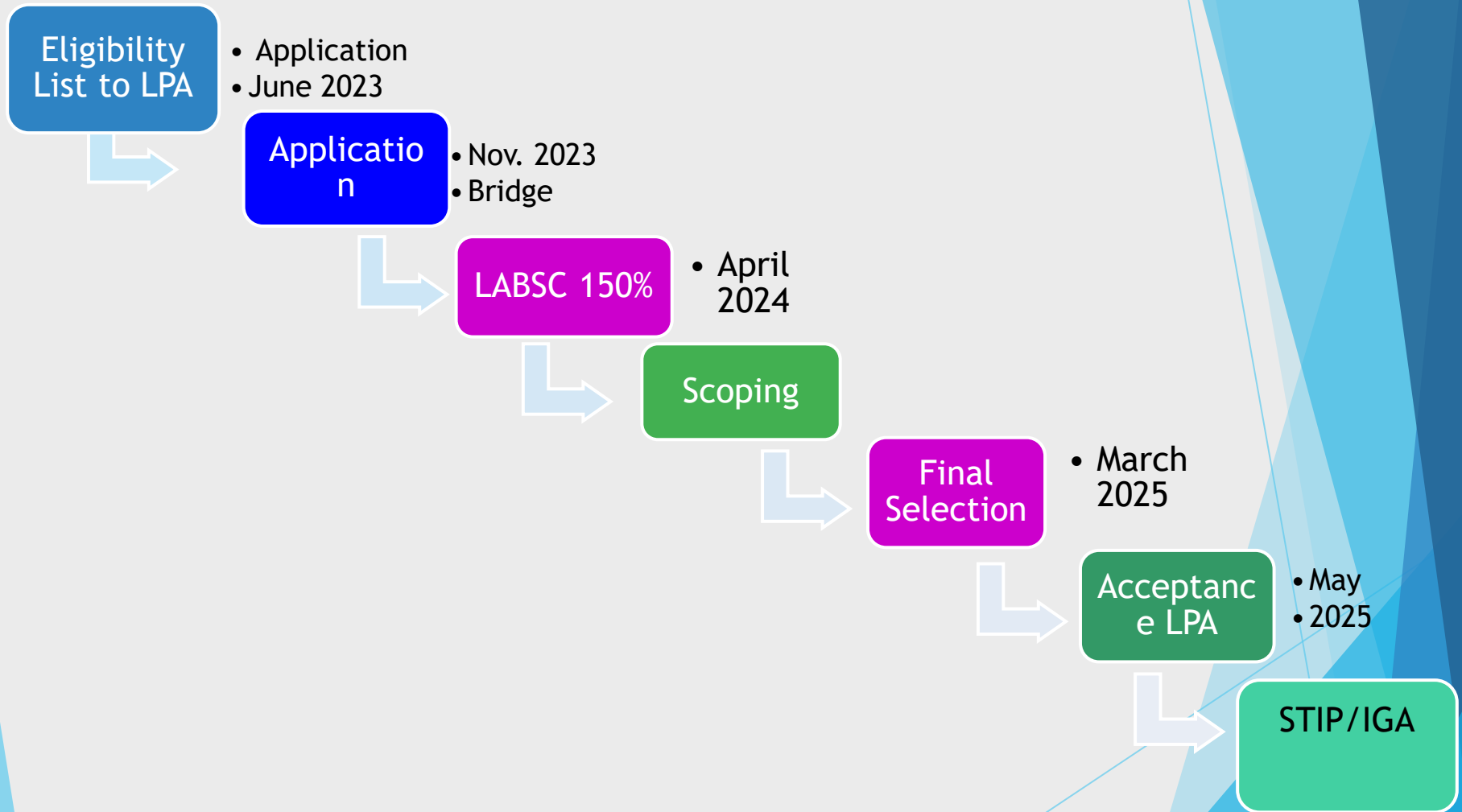
*Type 352 Truck Load Rating Factor (Please provide recent load rating if applicable)*

*Splice Access? (Yes if no effective detour route exists or is greater than 120 miles)*

*High use needed by overweight, permitted trucks?*



# Local Agency Selection process





# 2027-2030 Program - (STIP) Schedule

Generate Preliminary Eligibility List	23-Mar
Generate Final Eligibility List from April 2023 Snapshot	May 2023
Sent Request for Applications to Owners	May-23
Application DUE DATE	Nov 6 2023
Share List of Applications with Area Managers and Regions	November 2023
Process Applications	Nov 2023
Refine Technical Ranking Score (TRS)	November 2023
Technical Ranking System Calculations to Generate a Prioritized List	December 2023
Local Agency Bridge Selection Committee meet to select scoping projects	March 2024
Final 150% Scoping list of Local Agency Bridge Selection Committee	April 2024
Finalize priority list from the scoping Data	October 2024
Develop Presentation for Local Agency Bridge Selection Committee	November 2024
Local Agency Bridge Selection Committee meet to select projects	March 2025
Final Selections List	April 25
Award letters to owners	May 25
Response return by bridge owners	June 25



# Project Delivery for 2027-2030

## STIP - Amendment to 2025-2026?

For On-time project  
delivery, Amend PE  
Design to  
STIP 2025-2026

IGA, Consultant  
Selection, Design  
How SFLP effect this  
process

Construction  
STIP 2028-2030



# Local Bridge Program

## Websites:

- ▶ ODOT/AOC/LOC agreement
  - ▶ [ODOT-AOC-LOC-Agreement-32588.pdf](#)  
[\(oregon.gov\)](#)
- ▶ Local agency Bridge funding information on
- ▶ Bridge Priority Selection Policy
- ▶ Local Agency HBP Selection Process
- ▶ Application forms
- ▶ [http://www.oregon.gov/ODOT/Bridge/Pages/Local-Agency.aspx](#)



# SNBI

- Significant data changes
- No Sufficiency Rating
- No “Structurally Deficient” or “Functionally Obsolete”
- Significant cost to implement - \$17.7M
- Significant ongoing cost due to increased inspection frequencies for scour critical bridges
- Please put an effort into finding plans that are missing



# *Thank You!*



# *Questions?*

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