

Innovation

Field-Driven Ideas for Improvement

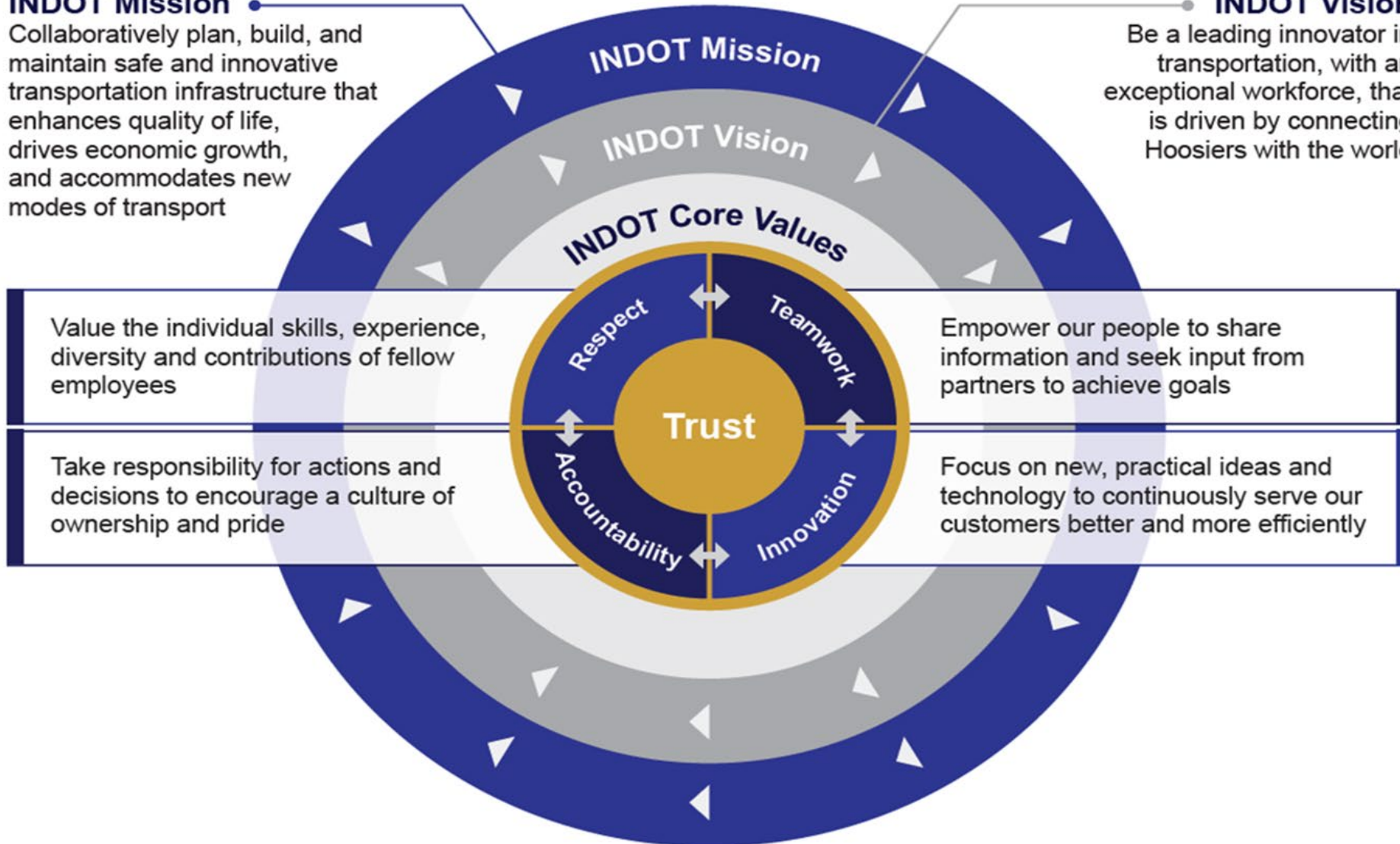
Mission Vision & Values now include Innovation

INDOT Mission

Collaboratively plan, build, and maintain safe and innovative transportation infrastructure that enhances quality of life, drives economic growth, and accommodates new modes of transport

INDOT Vision

Be a leading innovator in transportation, with an exceptional workforce, that is driven by connecting Hoosiers with the world



Innovation Department is 1 Year Old!!!!



Congratulations you have a new Department

NOW

WHAT!!!!??????

4 States aided INDOT's design



PennDOT 20/20 is an umbrella program for solving current and future programs, and ensuring that thoughts are gathered from all of their employees and business partners to direct research and innovation efforts in a cohesive way



A crowdsourcing tool that provides a platform which empowers employees at all levels to participate in improving what we do and how we do it emphasizing innovation. Engaging ALL employees at all levels of the organization in brainstorming activities, moving good ideas into implemented solutions.



Research Section's mission is to deliver knowledge solutions and innovations so that MoDOT can make informed decisions. Research projects are focused on ways MoDOT can change processes, products or materials in order to perform in the most efficient and economical manner



Research & Innovation Division was specifically created to encourage, facilitate, & simplify the process by which ideas are implemented at UDOT with techniques, information, tools, products, resources, and training.

Keys to Success



Willing to think differently and replace resistance to change with openness



Yes, How?



Give employees permission to ask "Why?", and not interpret as a challenge



Communicate
Talk
Assume good intent
Question for understanding

Keys for Success



A Drive to
Stay
Relevant

Create a willingness
to look externally
and change as the
world changes
around us



- UAV's
- Connected Vehicles
- Paperless



Focus on
Recognition

Recognize and
reinforce employee
contributions to
innovation



Recognize people how
THEY want to be
recognized

Keys for Success (2)

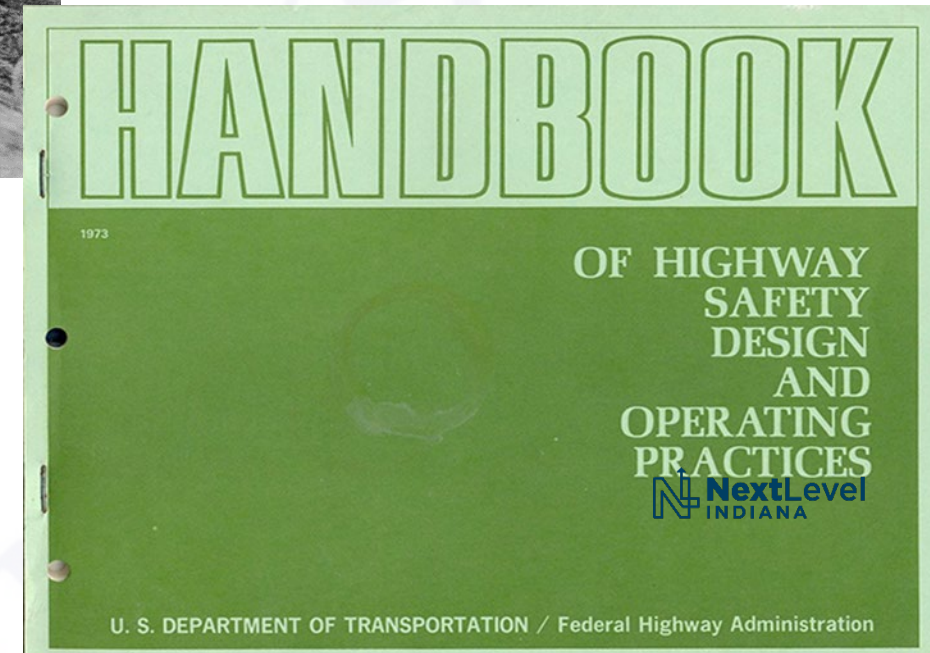
Rejecting the Status Quo



Replace “what we’ve always done” with how it needs to be done



Pappy!!



Our Mission

Innovation & Process Improvement keenly focused on implementing technologies, best practices and new applications in the field.

We gather information and input from ALL levels of INDOT, focusing on solutions while fostering an environment of idea-sharing and implementation.

Web Page Launch 7/21/2019



Years of Service

INDOT is pleased to recognize all employees that are celebrating years of service milestones this year. Thank you for your years of service and dedication to the state.



Our Stories



March 2, 2020

The public weighs in on how well we're doing in the just-released Customer Satisfaction Survey.

[Read more](#)



Feb. 25, 2020

Bridges like this one in Allen County are part of \$120.8 million in funding awarded to rural portions of Indiana.

[Read more](#)

[Previous Stories](#)

Popular Applications

- ITAP
- SPMS
- WMS
- Chronolog
- CAPWise
- Collaborative GIS
- LRS
- EPS
- SharePoint Directory

Agency Information


- [INDOT Public Website](#)
- [INDOT News Releases](#)
- [Next Level Roads](#)
- [INDOT Design Manual](#)
- [Customer Service](#)


Employee Resources


- Time & Labor
- State Holidays
- SPD Website
- New Faces & New Places
- INDOT Jobs Feed
- Information for Visitors
- RED - Request for Employee Development
- PVMP - Pool Vehicle Management Program
- ITR Transponder Request
- Facilities Service Request
- Graphics Request Form
- Content Order Form
- Search ERIN
- INDOT Strategic Plan
- From the Commissioner
- INDOT Policies
- Procurement
- INDOT Cares
- INDOT Apparel, Online
- Innovation at INDOT
- Popular Topics

Innovation Portal

ERIN Employee
Resources
Internal News

 Share

 Search this site

 Send by email

Published 2/7/2020

Portal for Innovative Ideas

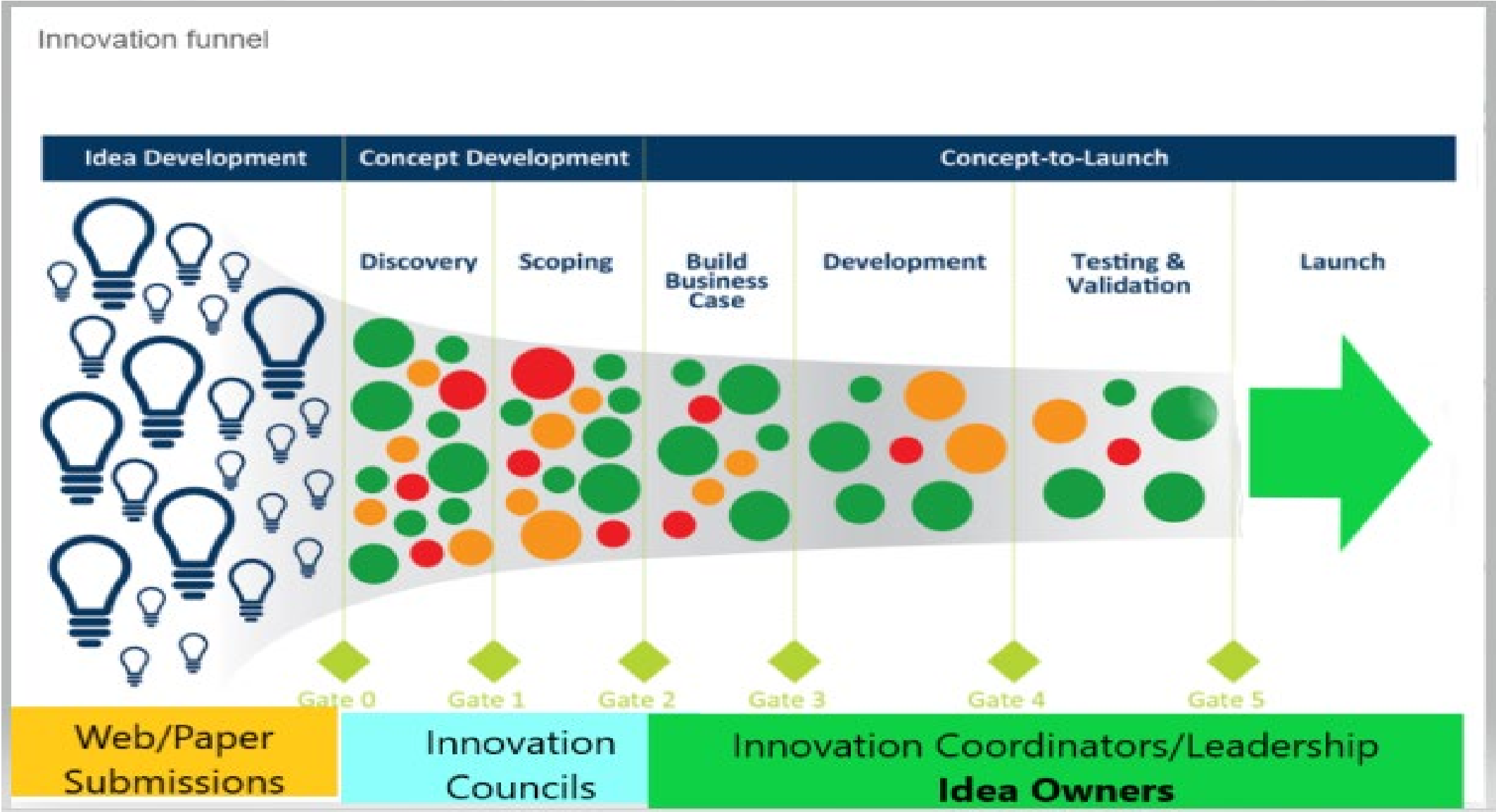
INNOVATION at INDOT

[Submit an Innovative Idea](#)

[View Innovative Ideas](#)

 **NextLevel**
INDIANA

We have the Ideas....Now What?



District/CO Innovation Councils Formed

- Over 90 total members statewide
- Average size 10 Members
- Diverse representation of multiple departments
- Added 2 Innovation Coordinators
 - Mitch Ison
 - Rhoni Oliver
- Scoring Rubric Developed using AASHTO Criteria
 - Technology Description – “Technology” may include processes, products, techniques, procedures, and practices.
 - State of Development – Has the idea been implemented successfully somewhere at INDOT? Favors innovations that have advanced beyond the research stage, at least to the pilot deployment stage, and preferably into routine use.
 - Payoff Potential – Offers a high benefit in terms of cost savings, improved efficiency, or increased productivity.
 - Market Readiness – Requires a reasonable level of cost, time, and effort for integration across INDOT.

Website Results 7/21-10/31

Submissions by Districts and Central Office

167

- 117 people submitted ideas
- All districts and Central Office were represented
- Approximately 5 “non-ideas”

Idea Vetting District Councils

First Round Winners

56



District Winners

35

Idea Vetting for Statewide Implementation

District Winners

35

- Each District Determined their top 4-5
- Leaders of the Innovation Councils voted for statewide implementation
- Voting was done using AASHTO rubric based upon final presentations
- Non-Winners can be re-submitted for 2020 and or implemented/tested within districts

District/CO vetting and scoring

State Winners

14

Cable Barrier Rail Spreader

Ryan Gerhart - Ft. Wayne



The cable rail spreader is designed to easily and safely install cable rail post. The tool currently supplied has long handles and is unstable creating a "swing back zone" of the handles; the new tool eliminates this.





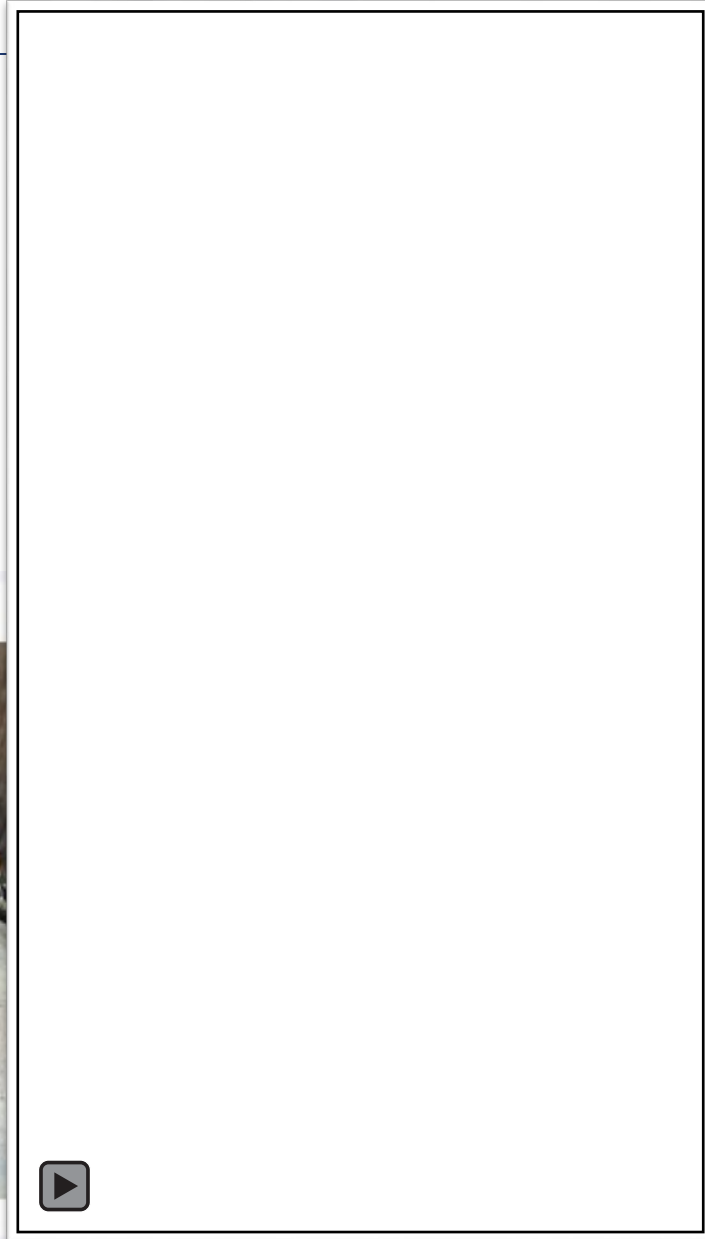
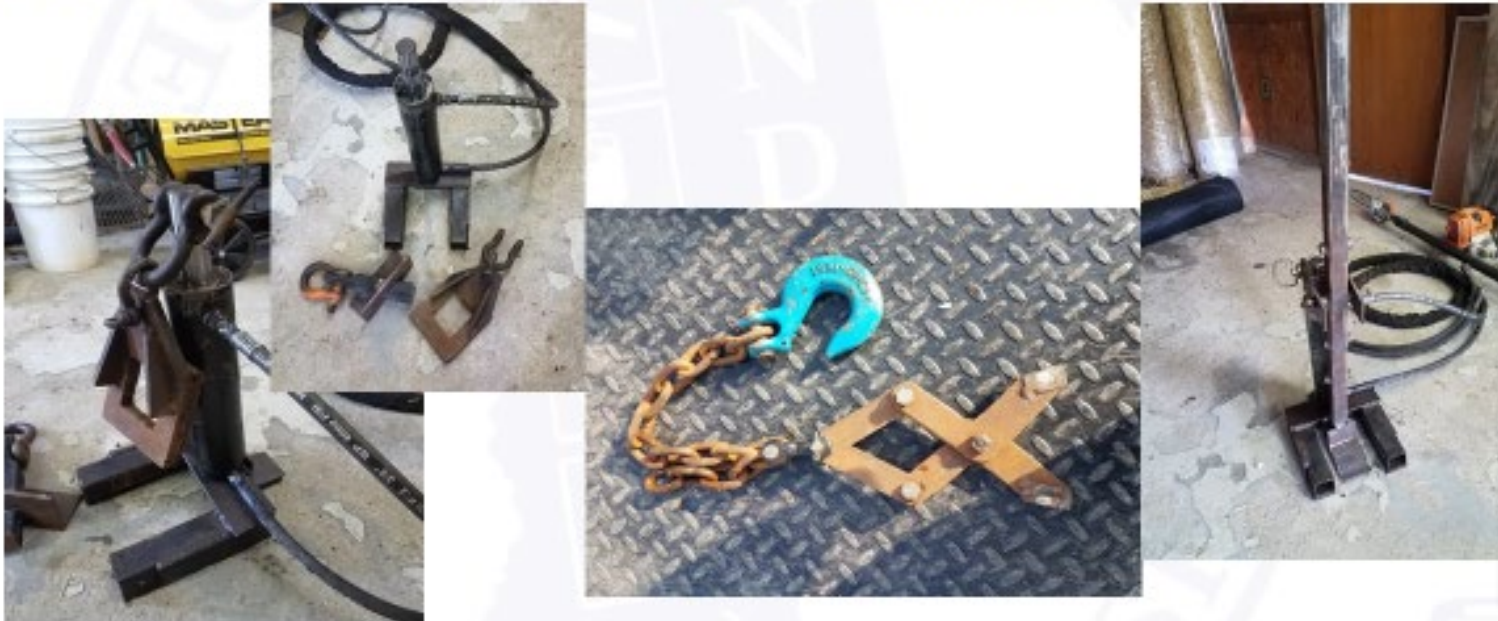
Cable Barrier Tool Kit

Hydraulic Tools

Ryan Gerhart - Ft. Wayne



- Repurposed hydraulic piston from snowplow.
- Tool connects to truck via same connections/fittings.



Cable Winch

Joshua Stutesman - Seymour



Contract Closeout in Public Sharepoint

Nathan Butts-LaPorte

All contracts undergo a review/audit of the material record and the final construction record. Communicating the corrections that are required by the PE/S to satisfy the review/audit, as well as communicating when those corrections are satisfactorily completed is a challenge. Using a transparent, shared, checklist on a Public SharePoint site is a solution to this challenge.

Allowing all parties involved access to the list(s) through a public SharePoint allows for better, real-time communication of the corrections as they are being made

Implementing this idea should reduce material record and final construction record review time by many hours, if not days per week for each reviewer/auditor involved in the processes. The implementation of this idea drastically improves the timeliness of contract closeouts.



Contract Closeout Currently

Butts, Nathan

From: Butts, Nathan
Sent: Tuesday, February 13, 2018 1:06 PM
To: 'eetter@hwochner.com'
Cc: Warfield, Patricia A; Woods, Heather; Ready, Lara
Subject: B-33357: Material Record Corrections Needed

Importance: High

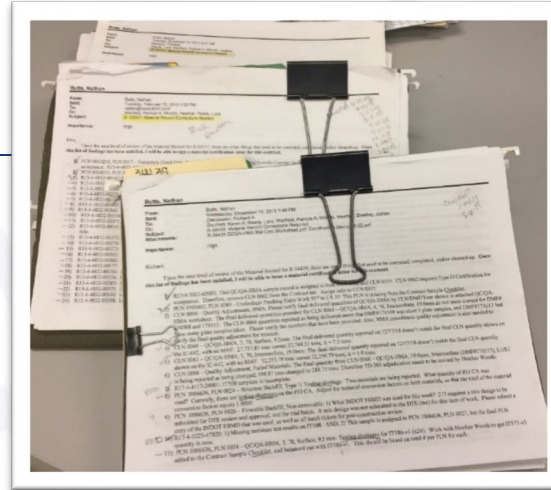
Eric,

Upon the next level of review of the Material Record for B-33357, there are some things that need to be corrected, completed, and/or cleaned-up. **Once this list of findings has been satisfied, I will be able to sign a material certification letter for this contract.**

- 1) PCN 0014210, PLN 0017 – Temporary Check Dam, Revetment Rip Rap: PLN is missing from the Contract Sample Checklist. D# and Q# are required for acceptance. R13-4-4832-00219 is already completed and assigned.
- 2) PCN 0014210, PLN 0019 – Temporary Silt Fence: PLN is missing from the Contract Sample Checklist. A Type C Certification is required.
- 3) R13-4-4832-00342: Location information is missing from the test template (IT508). *line only*
- 4) R13-4-4832-00360: Location information is missing from the test template (IT508). *Station only*
- 5) R13-4-4832-00288: The D# provided is not correct.
- 6) R13-4-4832-00375: Location information is missing from the test template (IT508). *Station only*
- 7) R13-4-4832-00359: Location information is missing from the test template (IT508). *" "*
- 8) R13-4-4832-00357: Location information is missing from the test template (IT508).
- 9) R13-4-4832-00365: Location information is missing from the test template (IT508).
- 10) R13-4-4832-00374: Location information is missing from the test template (IT508).
- 11) R13-4-4832-00371: Location information is missing from the test template (IT508).
- 12) R13-4-4832-00341: 1) Location information is missing from the test template (IT508). And, 2) IT508 test template needs to be marked as pass, fail, or info. *line only*
- 13) R13-4-4832-00372: Location information is missing from the test template (IT508).
- 14) R13-4-4832-00276: Location information is missing from the test template (IT508).
- 15) R13-4-4832-00373: Location information is missing from the test template (IT508).

Rick Newton

*Checked 6-15-18
 6-20-18
 8-27-18
 9-5-18
 9-12-18
 9-25-18
 12-4-18
 1-24-19
 3-21-19
 4-10-19
 4-18-19
 5-1-19
 6-28-19*



Contract Closeout via Public Sharepoint

https://ingov.sharepoint.com/... Contract Closeout (public) - R-... R-37658 Materials.xls

Excel - Read-Only Butts, Nathan

Contract Closeout (public) > R-37658 R-37658 Materials Edit Workbook Print Share Data

Contract: R-37658
 PE/S: Sharon Boda

Below is a list of Material Record Corrections required for the contract listed above before the Material Certification Letter may be issued.

List Type: FINAL (Review completed; all items listed)

The Material Certification Letter is due within 105-days from Contract Final Acceptance

DAYS REMAINING: PAST DUE

PE/S Completed	Flags	Verified	Ref #	Description of Correction Required
70% Complete		△ - 1		
			1	R184440900006 should be type "D"
			PE/S Remarks:	Changed to Type "D"
			2	CLN 0024 - QC/QA-HMA, 2, 64, Surface, 9.5 mm: Testing shortages. Since < 300 tons (original and final quantities), Type D Certification required for acceptance. Adjust Contract Sample Checklist and material record accordingly.
			PE/S Remarks:	Attached Type D cert for HMA Surface. Requested removal of Profilograph since it does not apply to this situation.
			3	CLN 0031 - Curb, Concrete: As it relates to REF#12. Testing shortage(s)
			PE/S Remarks:	Sample testing added for Curb, Concrete
			4	CLN 0048 has a testing shortage
			PE/S Remarks:	Retroreflect. Test requirement deleted.
			5	CLN 0049 has a testing shortage
			PE/S Remarks:	Retroreflect. test requirement deleted.
		X	6	CLN 0050 - Borrow: Testing shortage(s). 9/16/19-NEB: Refer to REF#9 and #15. 10/21/19-NEB: CLN 0050 was removed from R184520401801. SM is not refreshing properly. Testing shortages still exists even though the SM reports say otherwise. A new sample record needs to be created, if test results are available to be reported. Otherwise, a testing exception letter is required for testing shortage.
			PE/S Remarks:	
			7	CLN 0051 - Wall 112 Michigan Street Rolling Prairie IN: Testing shortages. The change order is not clear about how much concrete was used for this CLN. No Sample ID required if PLN quantity ≤ 40 CYS.
			PE/S Remarks:	
			8	R184440900006 needs authorized
			PE/S Remarks:	Authorized sample
			9	R184520401801: IT509 test template is incomplete. The District Lab, One Point or Approved Geotechnical Lab Results section of the template is blank. Without this missing information, there is no way to tell if this test is passing or otherwise.
			PE/S Remarks:	Requested 1-point Proctor from K&S Testing
			10	R184520402101: IT509 test template is incomplete. The District Lab, One Point or Approved Geotechnical Lab Results section of the template is blank. Without this missing information, there is no way to tell if this test is passing or otherwise.
			PE/S Remarks:	Requested 1-point Proctor from K&S Testing

Tow Plow Guidance Laser Miranda Orick - Greenfield



**LASER GUIDANCE
WING & TOW PLOWS**

The safer way to plow!
Used by over 40 DOTs and 150 municipalities to reduce plow strikes by over 90%!

US Patents Nos. 7,944,753, 7,820,340

Lets you know where your wing plow trailing edge will be **BEFORE** you get there!

Avoid costly plow damage and reduce downtime.



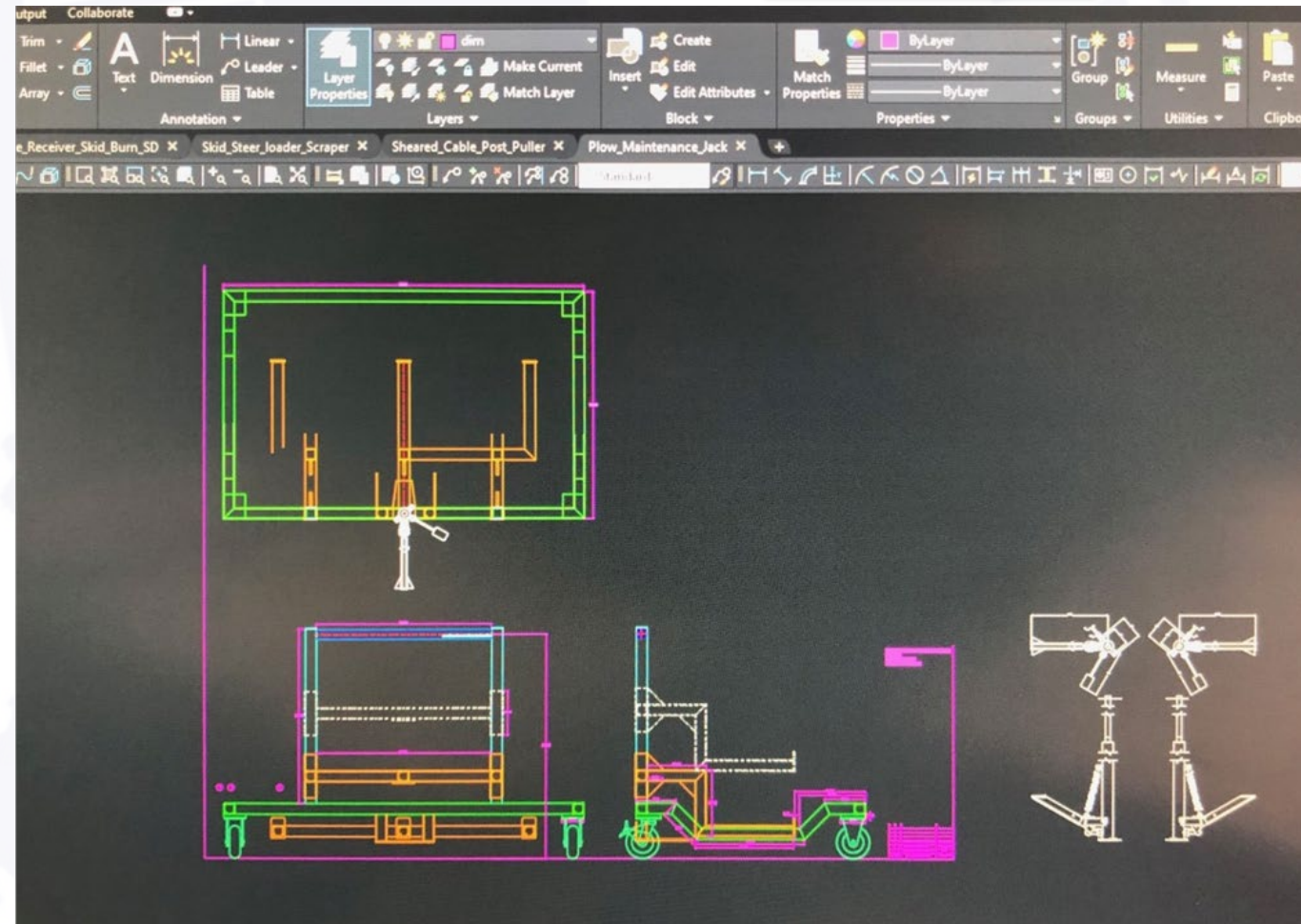
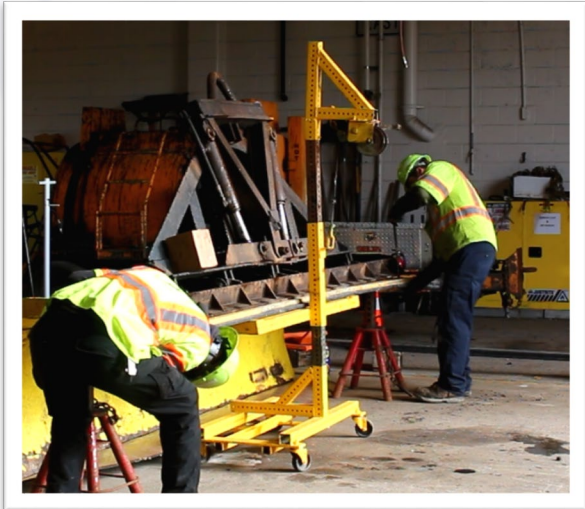
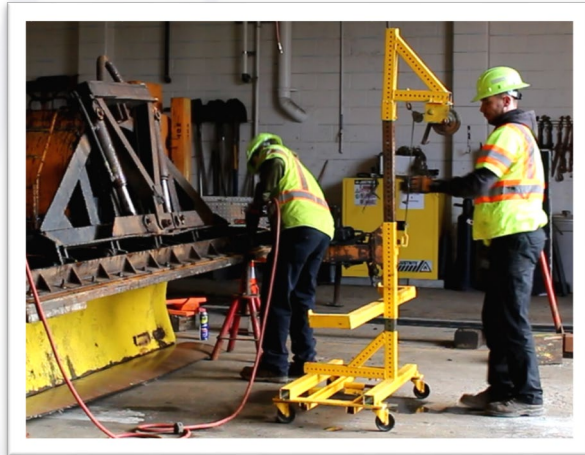
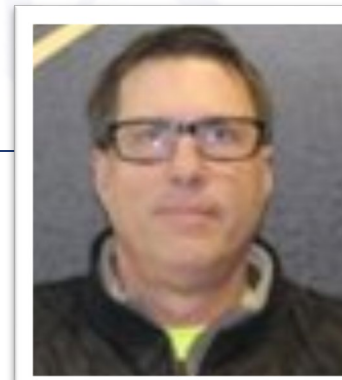
Snow Plow Bolt Clamp

Marc Pulver - Ft. Wayne



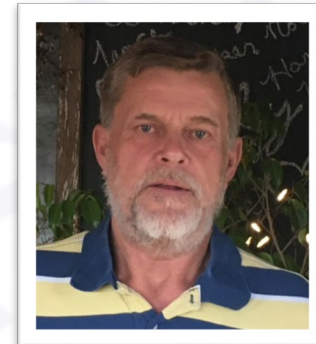
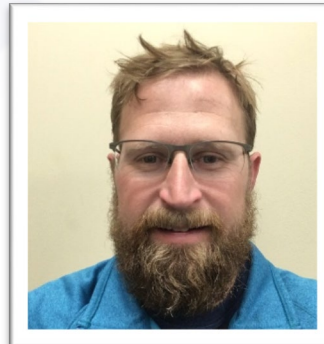
Safety Snow Plow Blade Changer

Kurt Farrell - LaPorte



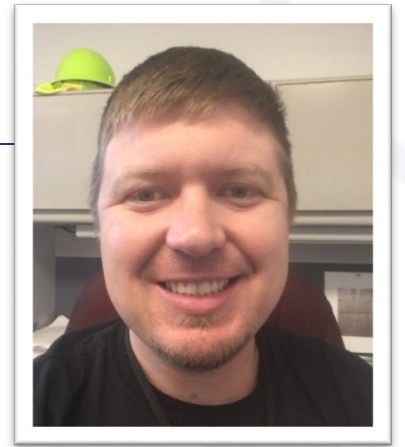
Jack Stands

Mick Brinkerhoff and Vern Van Allen- Crawfordsville



Alternative Blast Cleaning Equipment

Patrick Craig - Vincennes



- Dustless cleaning
- Mix of water and no-silica material
- Equipment, graffiti, temp. pavement marking

- Dry Ice Cleaning
- Tested in Gfield on paving equipment
- [The video is here](#)



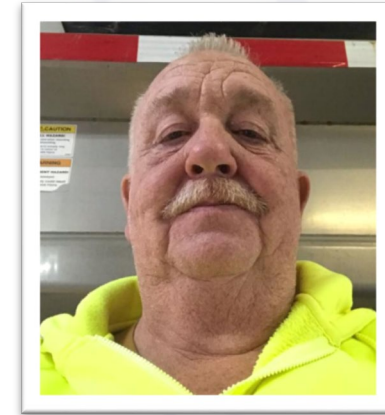
Portable Rumble Strips

Chris Hentzell and David Leiningner - Ft. Wayne



Battery Box/DEF Tank Cover

Denny Sutherlin, Lonnie Moreland, and Cecil Norman -
Crawfordsville



Printable Work Requests from WMS

Anthony Prentice - LaPorte



Request / (5205) - BROWNSTOWN UNIT 5 (PS065495) / MISON [htt](#)



MISON / (5205) - BROWNSTOWN UNIT 5 (PS065495) / *View Only / Report Rights *

0 Quick Links ▾ Settings ▾ Help (?)

Roadway ▾

[Production] Version AMS_IN 7.0.6.3-RELEASE app. 1810241643-1706191411 Build

Utilities ▾ Setup/Inventory ▾ Issue ▾ Progress ▾ Analysis and Budgets ▾ Reports ▾

⬆ Roadway > Issue > Work Request

Save Data Retrieve Data

6000314

Work Request Type
INDOT - Maintenance

District
Se...

County
33 Jackson

Lane

Inventory Asset

Caller
Stephen Hurst

Address

INDOT Tel #

Actions ▾

This pipe is being included on our 2025 call list, but that is 5 ye channel on each end of the pipe up to the apparent right-of-wa the depth of water in the pipe (RFT).



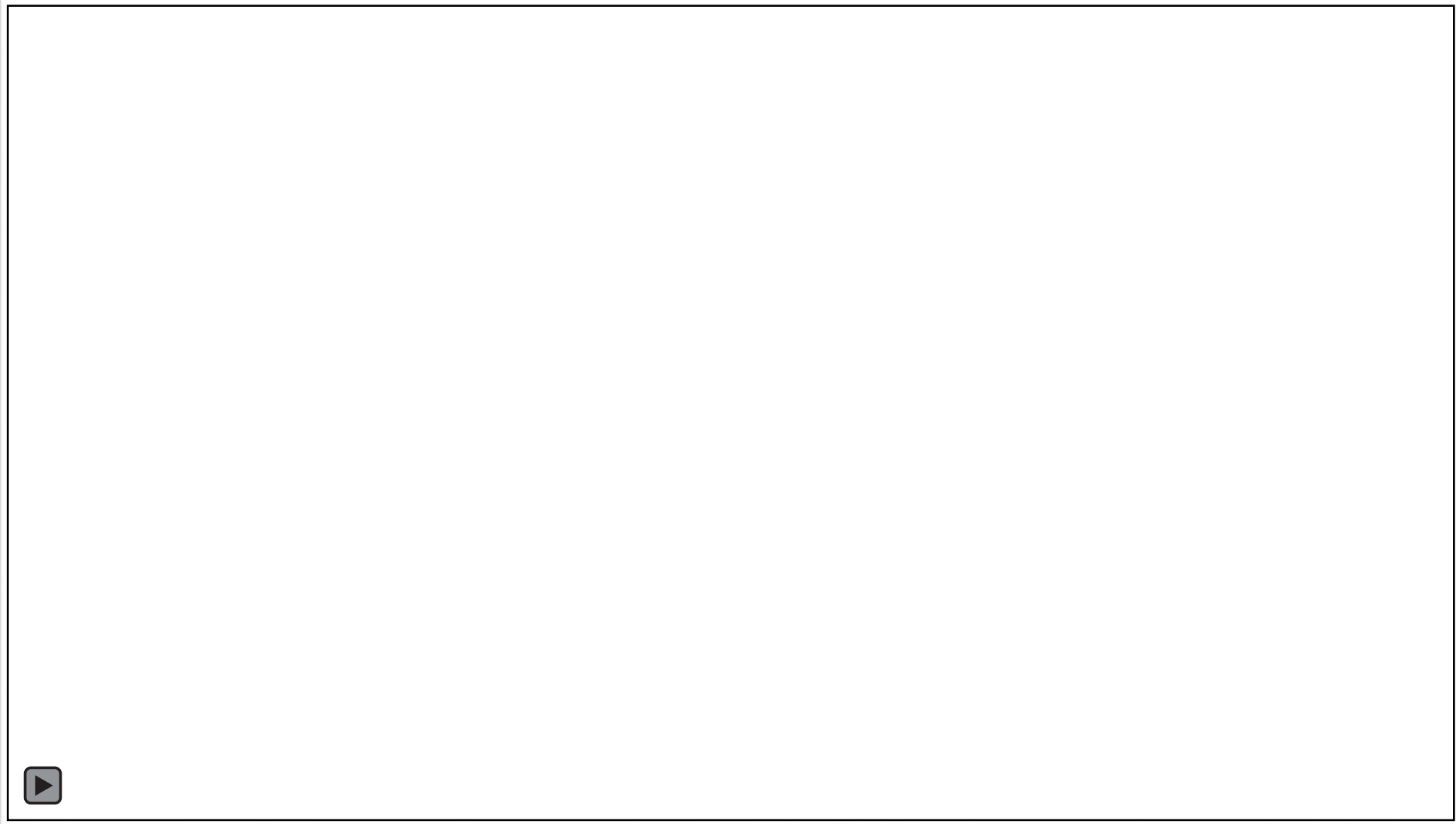
Actions ▾

This pipe is being included on our 2025 call list, but that is 5 ye channel on each end of the pipe up to the apparent right-of-wa the depth of water in the pipe (RFT).

<< 1 2 3 4 5 6 7 8 9 10 >> Row 1 of 26 total rows

Push Paver

Dale Gorham - Greenfield



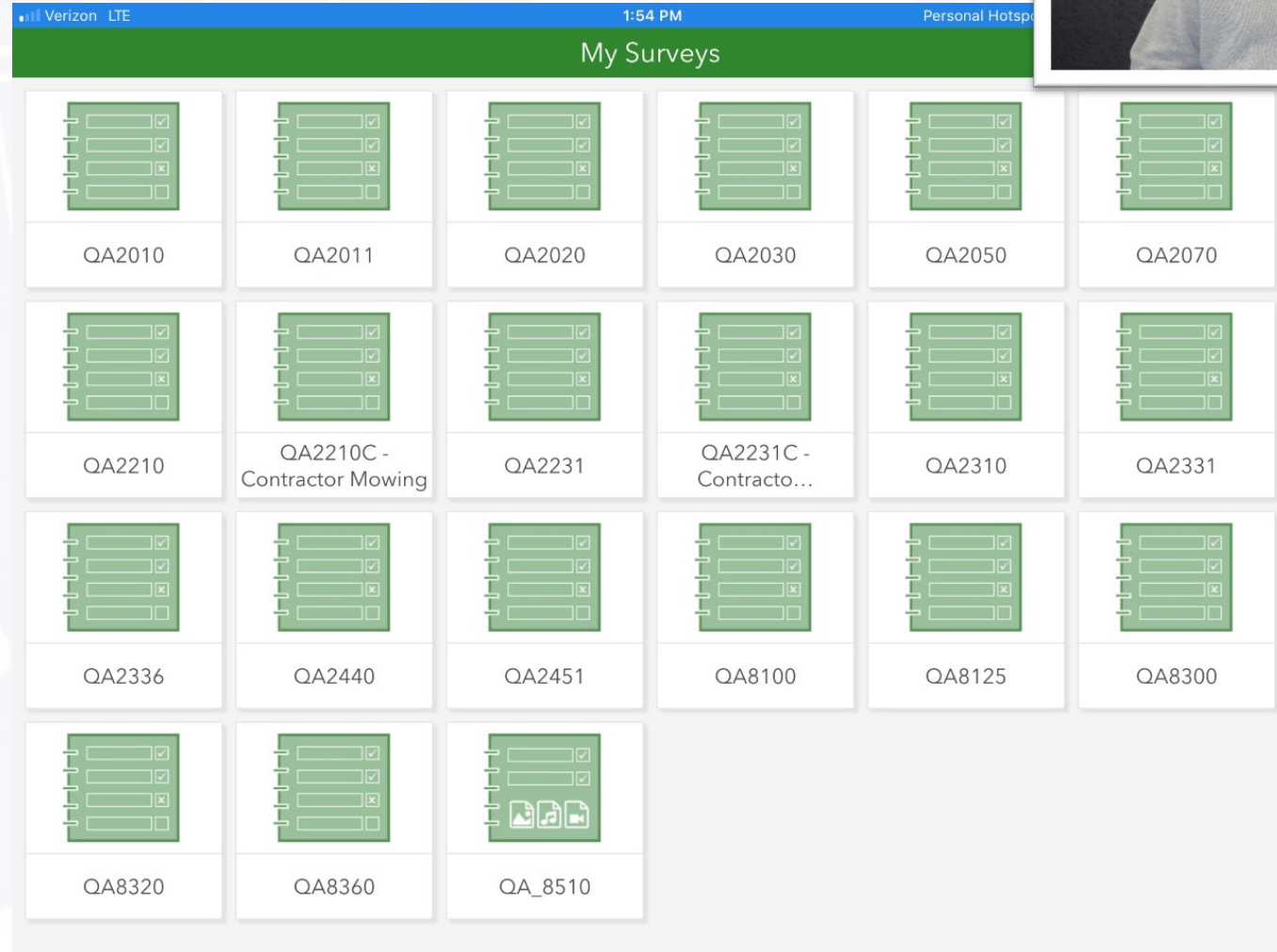
Testing Report App

Adrian Sharkey - LaPorte

- Working as a Lab Supervisor
- Currently maintains ~100 paper forms tracked in Excel

Using Survey 1-2-3

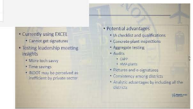
- Potential paperless solution
 - IA checklist and qualifications
 - Concrete plant inspections
 - Aggregate testing
 - Audits
 - CAPP
 - HMA plants
 - Includes photos and e-signatures
 - Consistency among districts
 - Analytic advantages by including all the districts



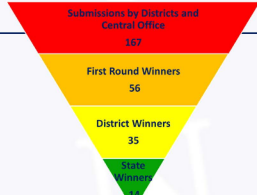
Idea: Testing Report App
 Submitter: Adrian Sharkey - LaPorte District





Efficiently Store Inspection Documents, Photos, and Signatures



INDOT Innovation Group
 INDOT Director of Innovation: Todd May
 Mitch Ison, Regional Innovation Coordinator
 Rhoni Oliver, Regional Innovation Coordinator



Idea: Tow Plow Laser Guide Beam
 Submitter: Miranda Orick - Greenfield District

Increase Tow Plow Safety

Idea: Battery Box / DEF Tank Cover
 Submitter: Denny Sutherland, Cecil Norman, Lonnie Moreland - Crawfordsville District



Idea: Plow Bolt Clamp
 Submitter: Marc Pulver - Fort Wayne District

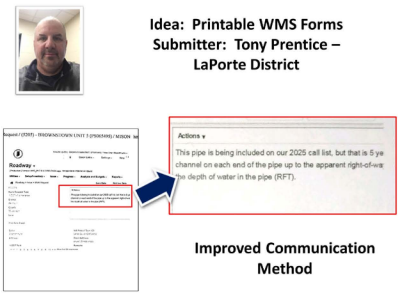


Idea: Portable Rumble Strips
 Submitter: Chris Hentzell & Dave Leininger - Fort Wayne District



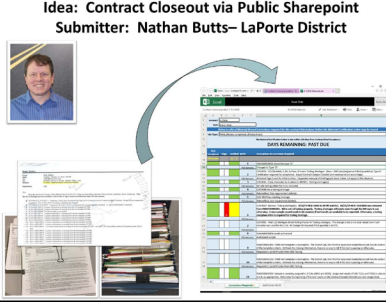
Improved Back of Queue Safety

Idea: Printable WMS Forms
 Submitter: Tony Prentice - LaPorte District

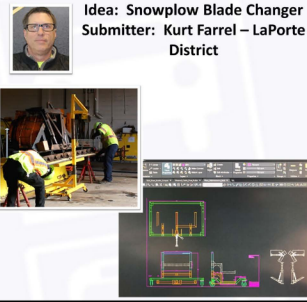


Improved Communication Method

Idea: Contract Closeout via Public Sharepoint
 Submitter: Nathan Butts - LaPorte District



Idea: Snowplow Blade Changer
 Submitter: Kurt Farrel - LaPorte District



Idea: Push Paver
 Submitter: Dale Gorman - Greenfield District



Complete Smaller Paving Jobs Efficiently

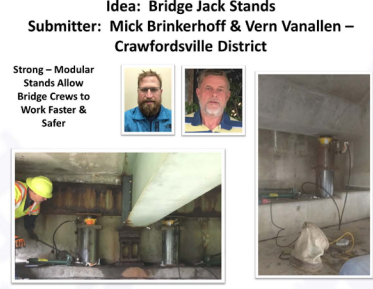
Idea: Concrete Testing Equipment Blast Cleaning
 Submitter: Patrick Craig - Vincennes District



Environmentally Safely Clean Concrete Testing Equipment, De-scale Vehicles, and Remove Graffiti

Idea: Bridge Jack Stands
 Submitter: Mick Brinkerhoff & Vern Vanallen - Crawfordsville District

Strong - Modular Stands Allow Bridge Crews to Work Faster & Safer



Idea: Cable Barrier Tool Kit
 Submitter: Ryan Gerhart - Fort Wayne District

Stuck Post Removal Tool
 Custom Fabricated Frame w/Hydraulic Cylinder



Cable Spreader
 Makes post replacement safer & faster

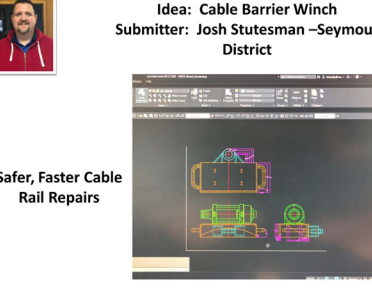


Sheared-Off Post Removal Tool



Idea: Cable Barrier Winch
 Submitter: Josh Stutesman - Seymour District

Safer, Faster Cable Rail Repairs



Learnings for 2020 and forward

- Communication
 - Internal
 - External
- Crowd Sourcing is key
 - Getting to the right person/people
 - Inclusion vs. Silos
- Stronger presence
 - Innovation Council Members
 - Innovation Coordinators
- Implementation
 - Hurry slow down

Thank you

- Everyone who submitted an idea through the portal
- District Leadership and team members
- District and Central Office Innovation Councils
- Exec Team