

Planning Construction Projects



1

Introduction

- **Presenter**

- Kevin Beswick
- Bachelor Degree (*ISU*)
- Indiana OSHA
- RMS Safety (*Consultant*)
- Miller Pipeline (*Safety Director*)
- RMS Safety (*President*)




- *Jesus*
- *Family*
- *Coaching*



2

Introduction

- RMS Services
 - Safety Programs
 - Safety Training
 - Site Inspections
 - Part-Time Safety Director
 - Project Safety Management






3

Introduction

- Session Outline
 - The Value of Planning
 - Methods of Planning
 - SSSP's
 - Closing

Overview

4

Section 1

The Value of Planning

5

The Value of Planning

- Why is planning important?



CHAOS is the result of improper planning!



6

The Value of Planning

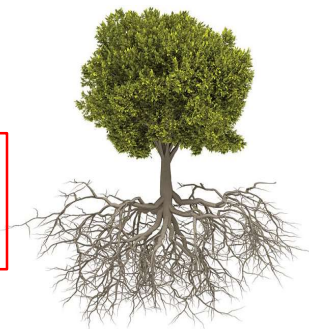
- Have you seen these? Why does this happen?



7

The Value of Planning

- Study done by “WorkNest” in 2022.
 - Intent = ID Common Root Causes
 - 200 random organizations
 - 10 different industries
 - Results
 - 48.5% = Lack of Planning (#1 cause)
 - 32.5% = Failure to Assess Risk (#2)



81%!!!

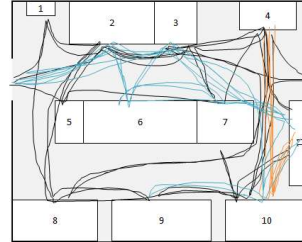
Quoted from an “HR News” article on 7/3/22.



8

The Value of Planning

- Planning can save time & stress.
 - Have you ever...
 - Not had the right tool for the job?
 - Had to stop or reschedule work?
 - Studied a “spaghetti diagram”?



9

The Value of Planning

- Planning can save lives!



10

The Value of Planning

- Planning can save lives!



11

The Value of Planning

- Planning can save lives!



12

Section 2

Methods of Planning

13

Methods of Planning

- Planning Methods
 - Job Specs
 - Pre-Construction Meetings
 - Site-Specific Safety Plans
 - Job Safety Analysis
 - Daily Safety Meetings



What are some things/processes that can be used to help plan for safety?



14

Methods of Planning

- Job Specs
 - Inexperienced Workforce
 - Inadequate Manpower
 - Unreasonable Completion Date

*When should you consider **not** bidding a job for safety reasons?*

CONSTRUCTION SPECIFICATION	
valves shall not be installed where COMPANY Representative determines condensate may accumulate and freeze up the valves.	
14.2.4 All exposed hot piping, rotating or reciprocating machine parts, and other hazardous locations shall be suitably equipped with guards or marked as directed by COMPANY Representative to protect personnel.	
15.0 RADIOGRAPHY	
15.1 General	
15.1.1 Each radiographer shall present a copy of his/her most recent radiography certificate to the COMPANY Representative. The radiographer shall follow the requirements of API 1164 Section 5 and 8 (latest edition) for pipelines, compressor station, and plant work, and ASME Section IX QW-191 for welding on pressurized piping systems covered by ASME B31.8 code.	
15.1.2 100% of all welds within the fence or defined property boundary shall be radiographically inspected prior to backfill or start-up of facility.	
15.1.3 Radiography shall be performed to COMPANY Requirements.	
16.0 CLEANUP	
16.1 General	
16.1.1 CONTRACTOR shall collect and remove all paint barrels, skids, welding rod, defective material and all other construction debris within the plant, station or storage areas, etc. at the completion of construction and in areas of finished construction to the satisfaction of the property owner and COMPANY Representative. In no case shall the above-mentioned, or any other, material be buried and covered as a means of disposal.	
16.1.2 All surplus material furnished by COMPANY shall be hauled and delivered by CONTRACTOR to points designated by COMPANY.	
16.1.3 Large rocks, stumps, etc. shall be removed from the site by CONTRACTOR and hauled, at CONTRACTOR'S expense, to some location agreeable to the COMPANY Representative and the landowner or other authority having jurisdiction.	
16.1.4 The CONTRACTOR will fill and recompact all ditches to minimize settling in accordance with Section 5.5. CONTRACTOR shall dispose of excess backfill to locations designated by the COMPANY Representative and meeting the requirements of such landowner or tenant.	
16.1.5 Pipeline markers shall be furnished by the COMPANY and shall be installed by the CONTRACTOR at fence lines, road crossings and any other location designated by COMPANY Representative. The marker shall be placed approximately twelve (12) inches away from the pipeline and installed to a depth of approximately thirty six (36) inches into the backfill.	
Revision Date:	Spec Number: 16-XXXXXX-COMEST-XXX Page 23 of 23



15

Methods of Planning

- Pre-Construction Meetings
 - Have all key people attend.
 - Bring a prepared list of questions.
 - Physically walk the site (if possible).



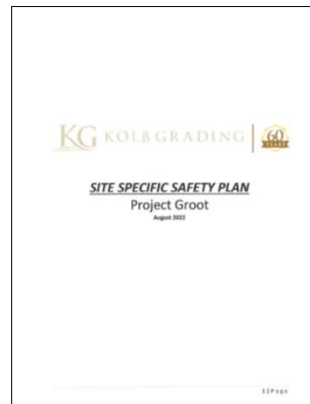
How can you get the most out of pre-construction meetings?



16

Methods of Planning

- Site-Specific Safety Plans
 - Who should write these?
 - When should they be written?



We will talk about the content later.



17

Methods of Planning

- Job Safety Analysis
 - Created with employee's help.
 - Risk levels ranked.
 - Reviewed daily & after lunch.

Job Safety Analysis (JSA) Form		Risk Assessment (RA) Matrix	
Job Title	Job Description	Risk Level	Control Measures
1. Job Title	Job Description	High	Control Measures
2. Job Title	Job Description	Medium	Control Measures
3. Job Title	Job Description	Low	Control Measures
4. Job Title	Job Description	High	Control Measures
5. Job Title	Job Description	Medium	Control Measures
6. Job Title	Job Description	Low	Control Measures
7. Job Title	Job Description	High	Control Measures
8. Job Title	Job Description	Medium	Control Measures
9. Job Title	Job Description	Low	Control Measures
10. Job Title	Job Description	High	Control Measures

What are some “best practices”?



18

Methods of Planning

- Daily Huddles
 - Tasks can change.



Why should planning happen DAILY?



19

Methods of Planning

- Daily Huddles
 - Tasks can change.
 - Conditions can change.



Why should planning happen DAILY?



20

Methods of Planning

- Daily Huddles
 - Tasks can change.
 - Conditions can change.
 - Work areas can change.



Why should planning happen DAILY?



21

Methods of Planning

- Daily Huddles
 - Tasks can change.
 - Conditions can change.
 - Work areas can change.
 - Environments can change.



Why should planning happen DAILY?



22

Methods of Planning

- Daily Huddles
 - Involve all crew members!
 - Make it a group discussion.
 - Review yesterday's concerns.
 - Discuss the plan for today.
 - Walk the job as a group (daily).



What are some "best practices"?



23

Methods of Planning

- Here is why involving EVERYONE is so valuable.
 - You will be shown an image for 7-seconds.
 - Look around & try to remember as much as possible.
 - You will be given a quiz after.



24



25

Methods of Planning

- Who saw...
 - Burger King?
 - Nerf?
 - Radio?
 - Ronald Regan?
 - Reggie Jackson?

You get 20 points per item seen. Passing is 80 points.



26


Module 3

Site-Specific Safety Plans (SSSP's)


27

Site-Specific Safety Plans

- What should SSSP's consist of?
 - Only information that is unique and specific to the project.



Don't recreate your Safety Manual!



28

Site-Specific Safety Plans

- General Content
 - Scope of Work
 - Key Personnel
 - Safety Responsibilities
 - Proposed Work Shifts



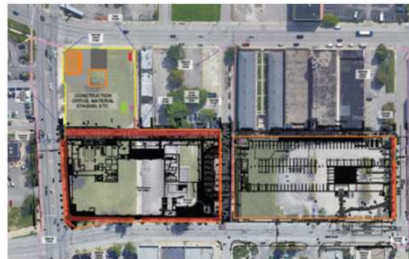
Who should be included as “Key Personnel”?



29

Site-Specific Safety Plans

- Designated Locations
 - Trailers
 - Storage (flammables, other)
 - Laydown
 - Disposal
 - Restrooms
 - Smoking
 - Shelter/Rally
 - Roof Access



What areas/locations should be marked on a map?



30

Site-Specific Safety Plans

- Site-Specific Hazards

- Fall Anchor Points
- Hazardous Chemicals
- Health Hazards (asbestos, lead)
- Hoisting Areas
- Ladder Height
- Overhead Powerlines
- Pedestrian Entrances/Walkways
- Private Utilities
- Traffic Control



What site-specific hazards should be in a SSSP?



31

Site-Specific Safety Plans

- Unique Owner Requirements

- Barricading (Types/Colors)
- Electrical Cord Suspension
- Excavation Soil Classification
- Equipment Inspections (documented)
- Fall Protection Height
- Permits (various types)
- PPE Requirements
- Speed Limits
- Tool Restrictions



What unique requirements have you experienced?



32

Site-Specific Safety Plans

- Other Details
 - Training Requirements
 - Site-Specific Orientation
 - Inspection Process
 - Recognition Programs
 - Rescue Plan(s)
 - Incident Reporting & Management



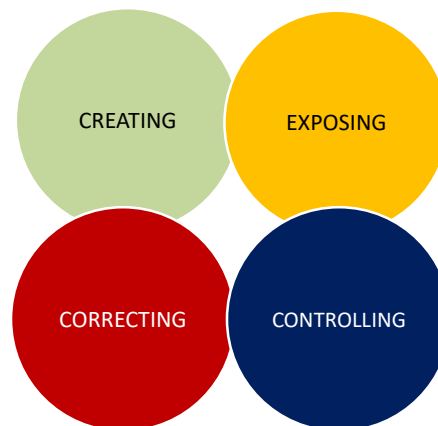
Can you think of anything additional?



33

Site-Specific Safety Plans

- Contractors should oversee & manage.



34

Section 4

Conclusion

35

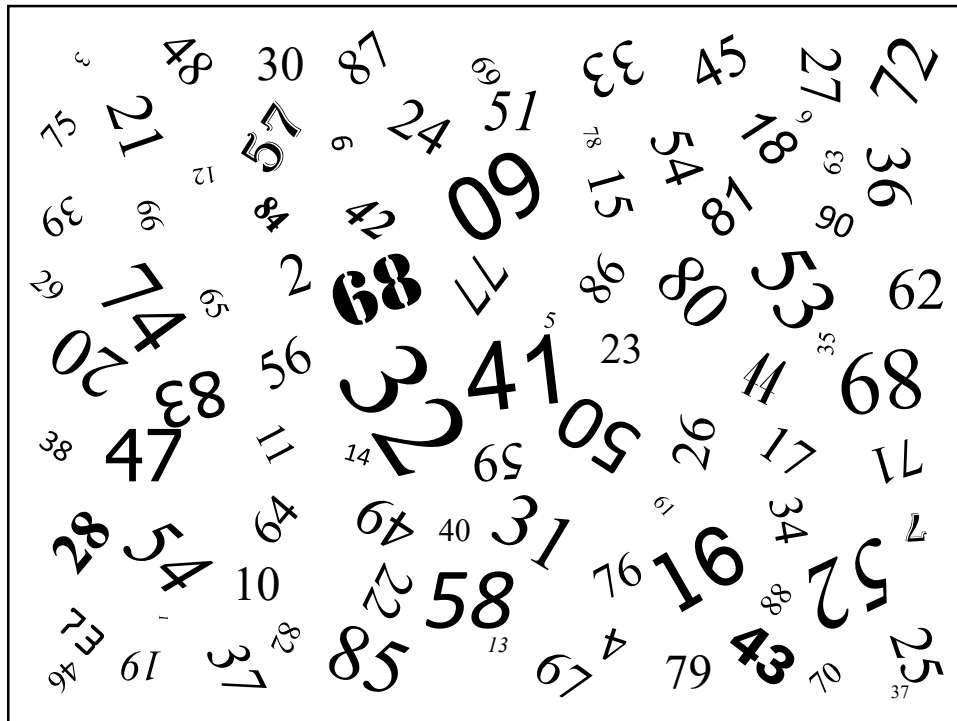
Conclusion

- Planning makes projects run better!
 - I'm giving you a job to do.
 - Find numbers 1-49.
 - You only have 20 seconds.
 - Ready???

Do you believe this? Let's test this theory.



36



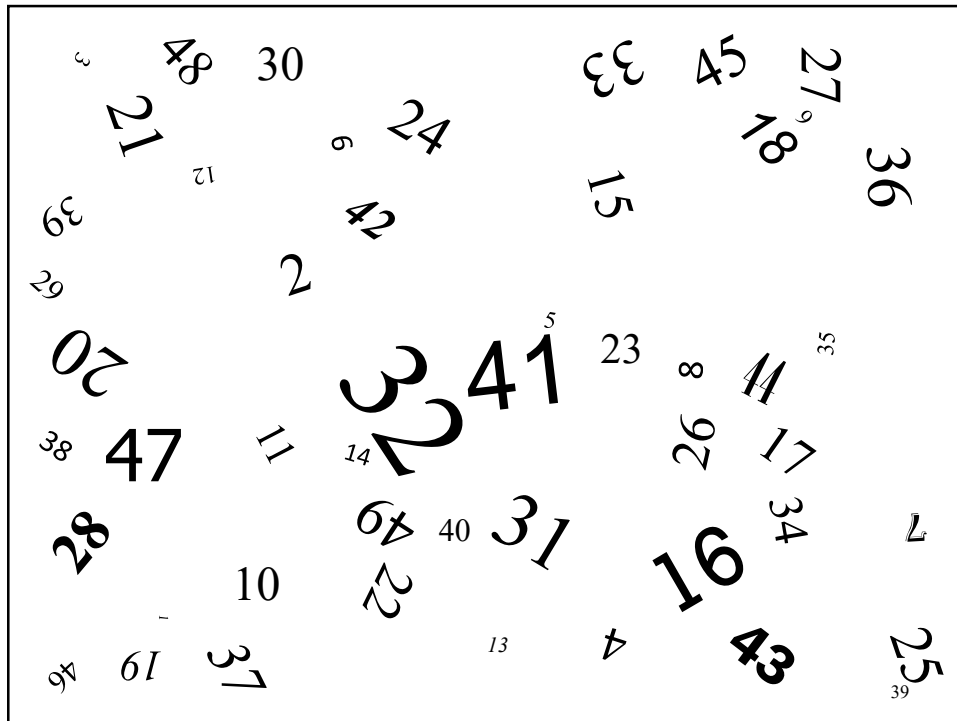
37

Conclusion

- Testing our theory...
 - How far did you get?
 - It looks like didn't bring a tool you needed (#8)!
 - Completing an equipment checklist could have avoided this.
 - You also spent time evaluating unnecessary things (#50-90).
 - Gathering information & evaluating the job before start could have avoided this.
 - Let's add #8, remove #50-90 and try again...



38






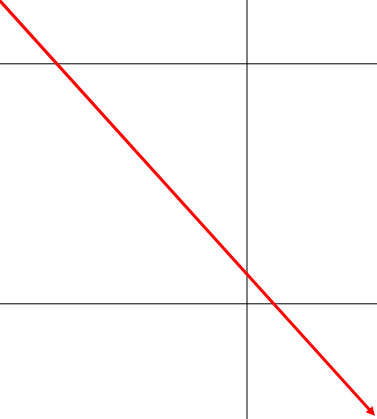
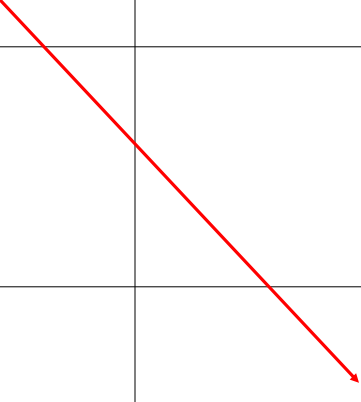

39

Conclusion

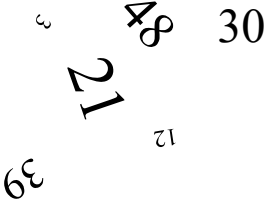
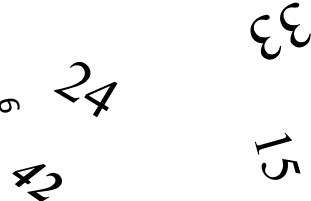
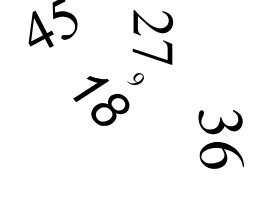
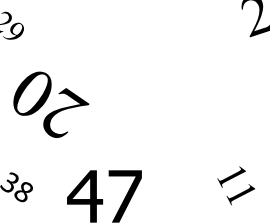

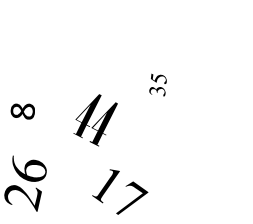
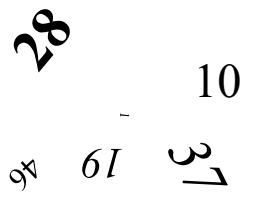
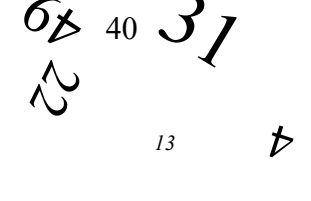
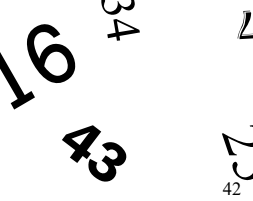
- Testing our theory...
 - Did you improve?
 - What if I hold a pre-con meeting & share information?
 - The numbers are in order within a grid (starting in the bottom left).
 - I will show you & then give you another chance.



40

		Conclusion
		
		
		

41

42

Conclusion

- Testing our theory...
 - Better?
 - What if you have a daily huddle & brainstorm as a team?
 - How can we make this job even easier? Ideas?
 - You have 20-seconds...



43

Numbers from 1 to 49

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	

44

Conclusion

- Planning makes the entire job run better!

“Plan your work &
work your plan.”

- Coach Marv Levy



45

Questions?

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46