



**AGC**  
THE CONSTRUCTION  
ASSOCIATION

Navigating the Outbreak Series

**March 27, 2020**

**Thank you for logging into this  
AGC Webinar. Please stand by.  
The program will begin shortly.**



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THE CONSTRUCTION  
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Navigating the Outbreak Series

**March 27, 2020**

# The Components of a Project Continuity Plan

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## Construction Continues

Diminished Labor Force

Supply Chain Issues

Availability of Non-  
Construction Personnel,  
Resources

Planning Uncertainty

## Construction Shutdown

Safety, Security and  
Protective Measures

Extended General  
Conditions and Overhead

Stop Work Orders

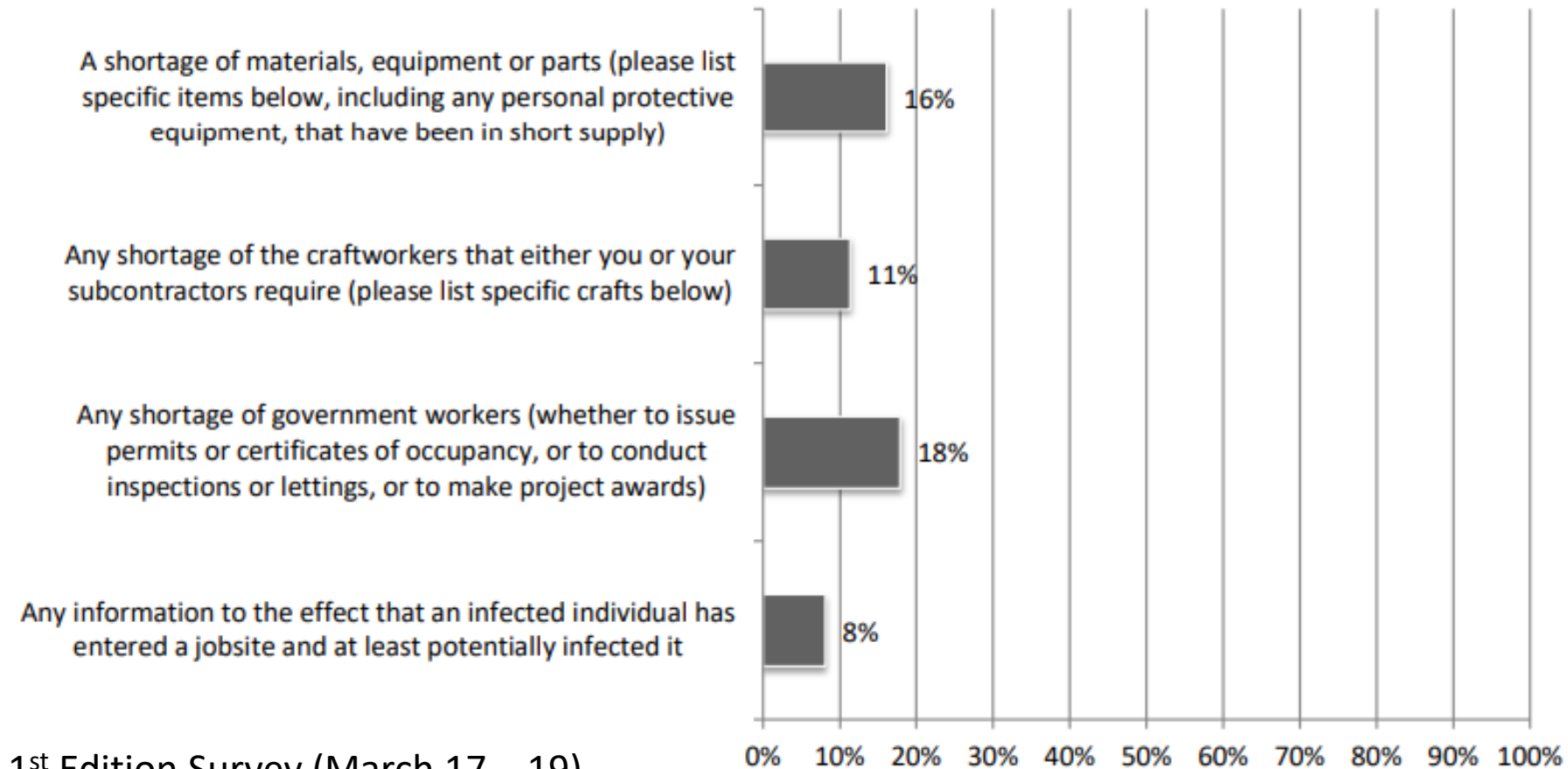
Longer Term Planning

Delay Damages and  
Consequential Impacts

Safety / Sanitation Protocols

Preparatory Measures -  
Administrative

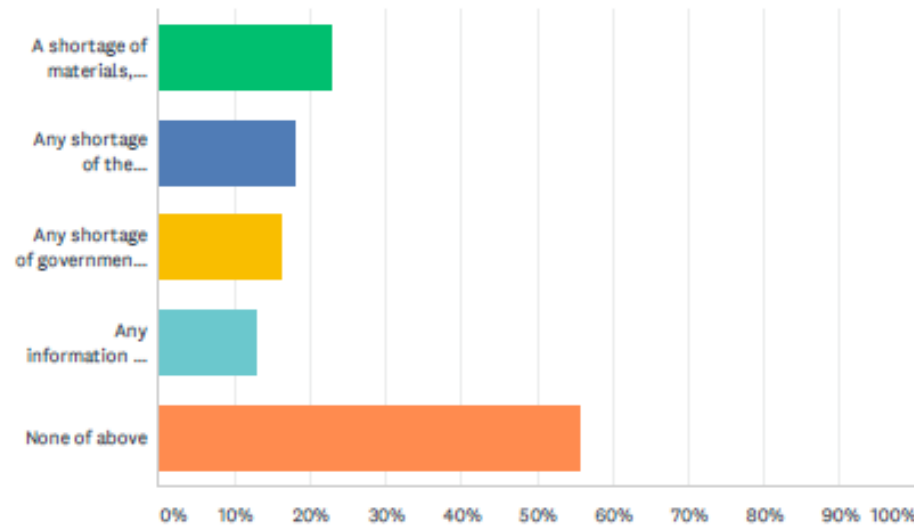
**3. Have you experienced any project delays or disruptions due to the following? (Check all that apply)**



1<sup>st</sup> Edition Survey (March 17 – 19)

## Q4 Have you experienced any project delays or disruptions due to the following (check all that apply):

Answered: 1,317 Skipped: 189



ANSWER CHOICES	RESPONSES	
A shortage of materials, equipment or parts (please list specific items below, including any personal protective equipment, that have been in short supply)	22.70%	299
Any shortage of the craftworkers that either you or your subcontractors require (please list specific crafts below)	18.07%	238
Any shortage of government workers (whether to issue permits or certificates of occupancy, or to conduct inspections or lettings, or to make project awards)	16.17%	213
Any information to the effect that an infected individual has entered a jobsite and at least potentially infected it	12.98%	171
None of above	55.66%	733
Total Respondents: 1,317		



2nd Edition Survey (as of 3/25/20, 9:00 am EDT)

# Construction Continues



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Location	Confirmed cases	Cases per 1M people	Recovered	Deaths
 Worldwide	549,474	77.98	128,701	24,883
 United States	86,105	263.25	753	1,314
 China	81,340	59.23	74,588	3,292
 Italy	80,589	1275.84	10,361	8,215

As of March 27, 2020

# Construction Workers



**HOUSEHOLD DATA**  
**ANNUAL AVERAGES**  
**18b. Employed persons by detailed industry and age**  
 [Numbers in thousands]

Industry	2019								
	Total, 16 years and over	16 to 19 years	20 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and over	Median age
Total employed	157,538	5,150	14,172	35,807	33,127	32,042	26,893	10,347	42.3
Construction	11,373	193	875	2,502	2,831	2,454	1,909	609	42.6

Source: <https://www.bls.gov/cps/cpsaat18b.htm>



# Project Supervision

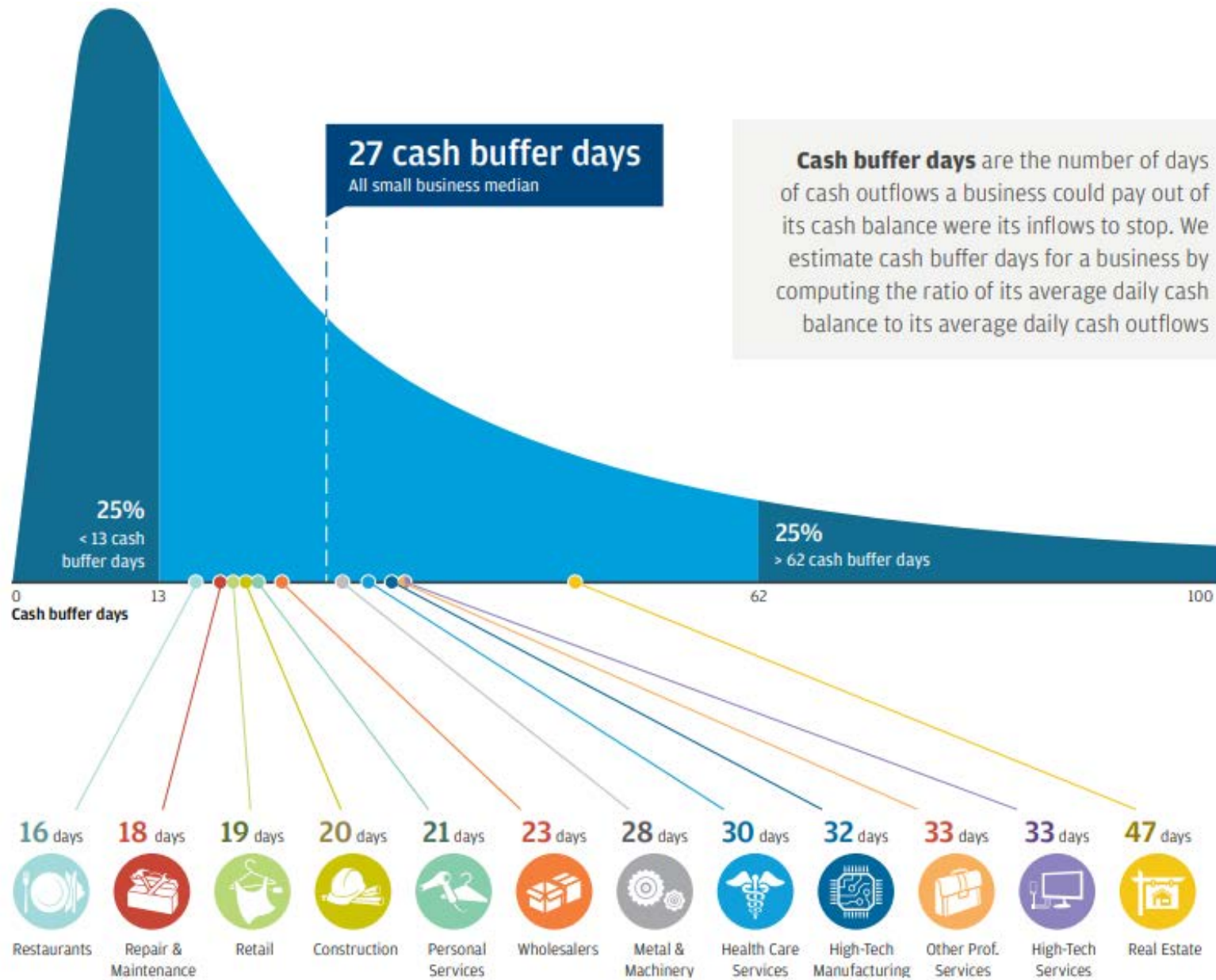


- Separating project teams and limiting who is onsite
- Local resources
- Key personnel
  - Some sites require Licensed Superintendents and Safety Professionals – if these staff members are out sick, they must be replaced or permitted work cannot be performed.
  - Security clearances

# Subcontractors



- Subguard Insurance
- Performance Bonds
- Refusal to work
- Ability to supplement



Source:  
<https://www.jpmorganchase.com/corporate/institute/document/jpmc-institute-small-business-report.pdf>

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BUSINESS NEWS

MARCH 2, 2020 / 10:32 AM / 20 DAYS AGO

# U.S. manufacturing sector stalls as coronavirus hits supply chains

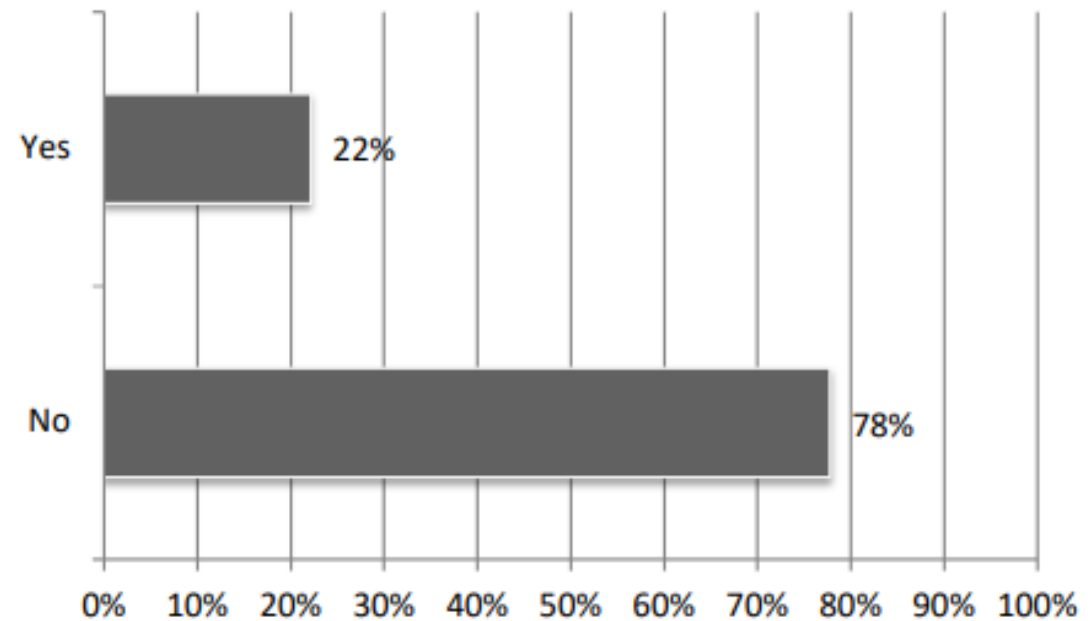
Lucia Mutikani

6 MIN READ



WASHINGTON (Reuters) - U.S. factory manufacturing activity slowed in February as new orders contracted, reflecting worries about supply chain disruptions related to the fast-spreading coronavirus outbreak, which has revived financial market fears of a recession.

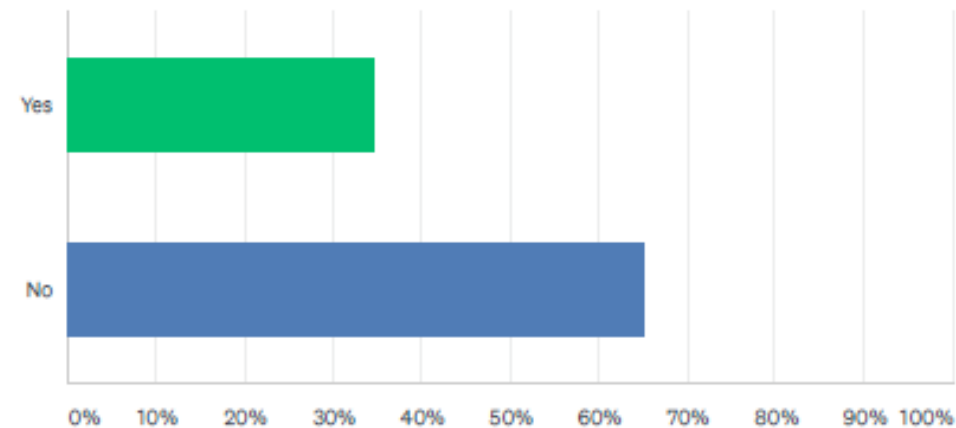
**4. Have any suppliers notified you or (to the best of your knowledge) your subcontractors that their deliveries will be late or cancelled? Responses: 901.**



1<sup>st</sup> Edition Survey (March 17 – 19)

Q5 Have any suppliers notified you or (to the best of your knowledge) your subcontractors that their deliveries will be late or cancelled?

Answered: 1,315 Skipped: 191



ANSWER CHOICES	RESPONSES	
Yes	34.83%	458
No	65.17%	857
TOTAL		1,315

2nd Edition Survey (as of 3/25/20, 9:00 am EDT)

# Supply Chain



FABRICATE AND DELIVER - LONG LEAD ITEMS	
NH5708	Fab and Deliver Structural Steel Framing - Bldg 254
NH5711	Fab and Deliver Steel Joist Framing - Bldg 254
NH5714	Fab and Deliver Steel Decking - Bldg 254
NH5750	Fab and Deliver Metal Wall Panels - Bldg 254
NH5753	Fab and Deliver Fab. Wall Panel Assem.-254
NH5765	Fab and Deliver Fabric Draft Curtain-254
NH5783	Fab and Deliver Vert. Lift Fabric Doors-254
NH5843	Fab and Deliver Trlly Beam Rail Fall Prot.-254
NH5921	Fab and Deliver Condensing Boilers - Bldg 254
NH5924	Fab and Deliver Low-Intensity, Gas-Fired, Heater-254

- In the case of a subcontractor default, no excusable delay under FAR 52-249-8(d) if supplies or services “supplies or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery schedule”



# Equipment and Facilities



- Owner FF&E
- Temporary hoist for elevator
- Cx, Startup, TAB
- Cranes and derricks
- Specialty equipment
- Concrete and asphalt plants
- Waste facilities
- Material supply companies, rental companies

# Second-Degree Risks



- Substitution requests and assumption of liability
- Price differentials
- Escalation
- Out-of-sequence work
  - Project conditions
  - Productivity impacts
  - Constructability

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# Disruption of Other Parties to the Construction Process



- **Non-essential vs. essential**
- Accounts payable
- Owner / Architect availability and responsiveness
- State and AHJ Inspections
- Manufacturer's representatives
  - Certifications
  - Start-up
- Permit and permit renewals
  - DEP, DOT, DOB, etc.
- Road closures
- Project financing
  - Recorder's Office closure
- Security clearances and badging
- Lodging, Food
- Notary for pay applications

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# Project Planning Impacts



- Multi-day activity risks
  - Open excavations
  - Concrete curing
  - Steel erection
  - Mobilization of costly equipment
    - Pile Driving
    - Dewatering System
- Worker proximity
- Subcontractor mobilization risk
- Multi-prime construction

# Project Pacing



- “A delay resulting from a conscious and contemporaneous decision to pace progress of an activity against another activity experiencing delay due to an independent cause.”
- Know your schedule, available float and float ownership
- Document your manpower management – justifying reductions is key

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<b>Critical</b>	<b>OR</b>	<b>Noncritical</b>
<b>Excusable</b>	<b>OR</b>	<b>Inexcusable</b>
<b>Compensable</b>	<b>OR</b>	<b>Non-compensable</b>
<b>Concurrent</b>	<b>OR</b>	<b>Non-concurrent</b>

# Potential Delays



- Material delivery / supply chain delays
- Lost productivity
- Lack of timely inspections
- Owner responses / approvals

# Contract Clauses



- FAR 52.243-1 through -4 Changes clause may be best avenue for cost and schedule relief if Government directs performance – typically requires direction from the Contracting Officer
- FAR 52.249-14 (Excusable Delays) excuses a contractor's default “because of any failure to perform [the] contract under its terms if the failure arises from causes beyond the control and without the fault or negligence of the Contractor.”
  - Epidemics and quarantines
  - Need to prove actual delay – schedule relief, but no cost
  - Can provide relief from subcontractor defaults

# Business Policy Delays



- Independent decision to protect personnel / company policy
  - May be no contractual relief
  - Review situation with Contracting Officer
  - “Commercial impracticability”

# Best Practices



- **Bucketize:** Segregate and track costs
- **Document:** Include detail of impacts in project documentation (daily reports, meeting minutes); include comments in schedule updates with delay factors and efforts to overcome; increase frequency of schedule updates
- **Mitigate:** Ensure costs are reasonable; take proactive measures to avoid disruptions and delays
- **Owner acknowledgement:** Have tickets signed contemporaneously, seek change orders
- **Notify:** Comply with notice requirements of contract

# Float Path Analysis



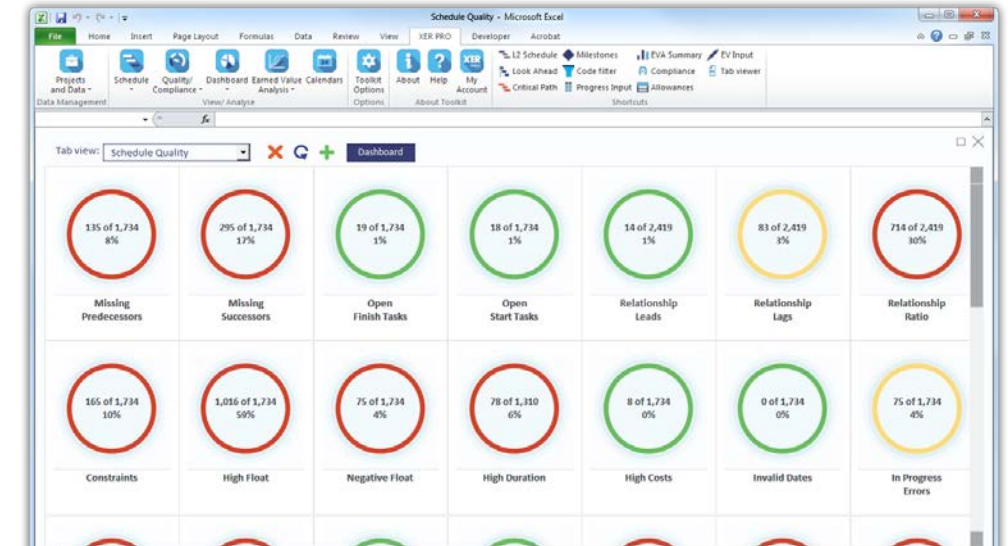
- Total Float is measurement of “schedule flexibility” or slack of a particular activity sequence
- Total Float values tell you the number of days a given activity can be delayed before it will delay the project
- Identify the critical and near-critical work activities
- Tracking manpower impacts to these paths is critical

Activity ID	Activity Name	Original Duration	Total Float
= 0		56	0
01140	*Phase 3 Start	0	0
01160	*Phase 3 Complete	0	0
01170	*Project Complete	0	0
= 1		32	1
3-D-1770	Remove Kitchen Equipment	2	1
3-D-1080	Rough In Power in Walls	10	1
3-D-1090	Rough-in Telecom/DATA in Walls	10	1
3-D-1200	Install Stage Lighting	20	1
3C-LIB-1230	Rough in Overhead Lighting controls	10	1
3C-LIB-1260	Rough in Overhead Intercom/Clock/PA	10	1
3-D-1210	Rough In Overhead Telecom/Data	10	1
3-D-1280	Install Drops in Walls	4	1
3-D-1300	EXT WINDOWS REVISIONS	5	1
3-D-1330	Install Stage Sound	10	1
3C-LIB-1360	Pull Lighting Control Wiring	10	1

# Schedule Upkeep



- Completeness – deliverables and significant DFOV; material deliveries
- Sufficient detail
- Open-ended activities
  - Missing predecessors and/or successors
- Delineation of responsibilities
  - Separation of activities that require multiple parties' input
  - Work performed by Owner and others that may affect performance
- Contract / Specification compliant
- Constraints and calendars
- Leads and lags



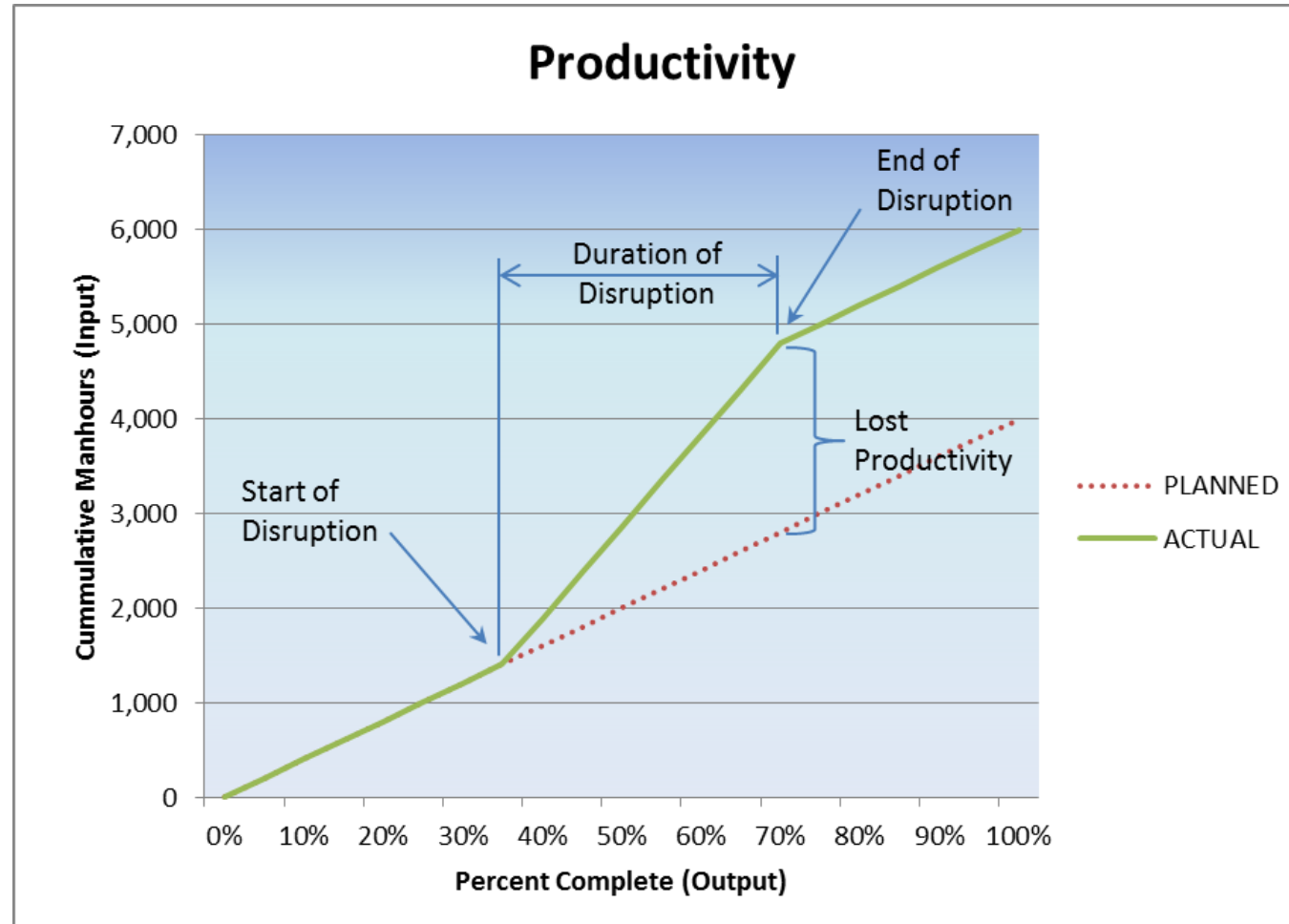
# Other Considerations



- Storage fees
- Warranties



# Productivity Impacts



# Measured Mile



- Establish baseline un-impacted period
- Needs to compare “identical” or very similar work
- Objective assessment of data

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# Controlling Infection Among Employees or Others Working on a Jobsite

## Site Decontamination

- Examples of what Companies are currently doing.
- Various levels of “Decontamination”
  - In-house laborers cleaning
  - Third party vendors
- General Protocols (e.g. CDC) vs Site Specific Protocols.

# Preventing Infection Among Employees or Others Working on a Jobsite

## General Site Decontamination Protocols

- Criteria to Consider:
  - Traffic Patterns
  - Use of Approved Chemicals vs. “household” chemicals
- Use or aerosol. Fogging and airless spraying
  - HVAC configurations in enclosed spaces.
  - HASP amendment and proper PPE.

# The Science of Infection Among Employees or Others Working on a Jobsite

## Summary of the Science

- Virus vs. a microbiological contaminant like mold
- Conflicts and uncertainty of spreading mechanisms
  - Touch surfaces
  - Hand to mouth
  - Close contact
  - Airborne ?
- Sanitization vs. Disinfection vs. Sterilization

# Contracting for Prevention of Infection Among Employees or Others Working on a Jobsite

## On-Call Contracts with Clean-Up Contractors

- Types and Examples of Companies that Can **Disinfect** Parts or All of A Project
- Qualifications to Consider
  - Approach
    - Written protocols
  - Biohazard experience
  - **IICRC certification**
- Contractual Issues to Consider
  - Project delivery
  - Guarantees
  - Insurance - Exclusions

# Construction Shutdown

Preparatory Measures -  
Administrative

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Stop Work Orders



## Pa. Contractors Rush To Respond to Construction Stop Order

Enforcement of state order to cease work begins March 21



The University of Pennsylvania Health System's \$200-million project in Radnor Township, Pa. was scheduled to open this spring when the state ordered operations of all "non-life sustaining businesses" to cease in an effort to stop the spread of COVID-19. Photo Courtesy of IMC Construction Inc.

## Boston 1st major US city to order halt on all construction



# Jobsite Documentation



- Photographs and videos
- Status construction schedule
- Payment application



# Administrative Steps



- Ensure insurance coverages are current, including Owner's policies and subcontractor policies
- Alert insurance and Builder's Risk carriers if project is abruptly shut down
- Review business interruption and supply chain insurance policies
- Review contract and subcontract provisions for Force Majeure, work stoppages, notice requirements
- Provide notice to proper parties regarding jobsite closure and potential impacts

**ACORD** **CERTIFICATE OF LIABILITY INSURANCE** DATE (MM/DD/YYYY)  
10/31/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME	
	PHONE (A/C, H/L, Ext):	FAX (A/C, H/L):
	E-MAIL ADDRESS:	
	ADDRESS:	
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:		
INSURER B:		
INSURER C:		
INSURER D:		
INSURER E:		
INSURER F:		

INSURED:  
The VERTEX Companies, Inc.  
400 Libbey Parkway  
Weymouth MA 02189

**COVERAGES** **CERTIFICATE NUMBER:** 52092884 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

REF. LINE	TYPE OF INSURANCE	ADDITIONAL COVER (IND. W/O)	POLICY NUMBER	POLICY EFF. DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EEL \$1M occur / \$2M agg retro date: 11/01/2005 GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	<input checked="" type="checkbox"/>		11/1/2019	11/1/2020	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (EA OCCURRENCE) \$300,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000
B	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED <input type="checkbox"/> AUTO ONLY <input checked="" type="checkbox"/> HIRED <input checked="" type="checkbox"/> AUTOS ONLY <input type="checkbox"/> SCHEDULED <input checked="" type="checkbox"/> NON-SCHEDULED <input checked="" type="checkbox"/> AUTOS ONLY	<input checked="" type="checkbox"/>		11/1/2019	11/1/2020	COMBINED SINGLE LIMIT (EA ACCIDENT) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> RETENTION \$10,000	<input checked="" type="checkbox"/>		11/1/2019	11/1/2020	EACH OCCURRENCE \$4,000,000 AGGREGATE \$4,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N	N/A	11/1/2019	11/1/2020	<input checked="" type="checkbox"/> PER <input type="checkbox"/> STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000 \$1,000,000 per occur / \$2,000,000 agg \$1,000,000 per claim / \$2,000,000 agg
A	Contractors Pollution Liability Professional Liability-claims made retro date: 11/1/2005			11/1/2019	11/1/2020	



# Technology Considerations



- Availability of documents onsite / remote access
- Cybercrime
  - Prepare staff for working remotely
- Online banking
- Payroll
- Accounts receivables

# Evaluation of Standard Contract Clauses



- ConsensusDocs 200: §6.3.1
- AIA A201: §8.3.1
- FAR § 52.249-10
- FAR § 52.249-14

FAR: Provide written notice to the Contracting Officer within 10 days from the beginning of a delay

Subcontractor flow-down provisions

# Key Considerations



- (1) Provide timely notice of delays
- (2) Document all evidence and attempts of efforts to meet construction schedule and overcome delays, and track resulting costs
  - Communications with suppliers
  - Communication with union hall
  - Efforts to mitigate damages

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# Considerations



- Remove critical project documents and valuables to secure location
- Instruct delivery services for rerouting or holding deliveries
- Advise local authorities of site closure
- Prevent site access from authorized personnel
- Maintain construction fencing and postings
- Safely store and maintain equipment
- Site security services
- Security lighting and cameras
  - Web-enabled cameras



# Material Storage

- Review contract and manufacturer recommendations for proper storage
- Temperature, humidity, moisture, UV-exposure, oxidation
- Flammable and hazardous materials
  - Remove any volatile gases and liquids
- Ballast light-weight materials
- Preventative maintenance



# Temporary Protection





# Exposed Elements of the Work



## LIMITATIONS

Perm-A-Barrier Wall Membrane systems must not be applied in areas where they will be permanently exposed to UV light and must be covered within a reasonable amount of time, not to exceed 30 days.

## PRECAUTIONS

AIR-SHIELD LSR is not designed to perform as a permanently exposed membrane. Maximum UV exposure period for membrane is four months. Keep containers tightly sealed. KEEP FROM FREEZING. Do not apply AIR-SHIELD LSR if rainfall or snow is forecast within 12 hours.

# Tower Cranes

- Weathervaning
- Store in accordance with crane manufacturer recommendations and engineering drawings



# Mothballing



- Check all guardrails, floor and shaft opening protection, hole covers, edge protection systems (netting, cocoon systems), temporary protective measures
- Maintain and secure all scaffolding, debris netting, sidewalk sheds and temporary walkways
- Maintain all adjoining property protection
- Eliminate tripping hazards, fall hazards
- Unplug and roll up electrical cords
- Secure all tools
- Provide subcontractors opportunity to remove personal tools

# Mothballing



- Close and lock doors, windows, gates
- Check site fencing
- Lock all mechanical, electrical, telecom, elevator equipment rooms
- Lock out all electrical equipment
- Lock all storage containers and trailers
- Barrier or cover all excavations. Ensure proper shoring of excavated sites or backfill
- Secure all scaffolding and remove any materials stored on scaffold
- Block access to scaffolding, ladders, elevated floors

# Mothballing



- Drain down all water systems if freeze / burst potential
- Rebar caps on exposed rebar
- Ensure roof and floor drains are clear. Prime drains as needed.
- Remove all trash and debris, eliminate any standing water
- Activate any available life safety systems
- Ensure positive drainage away from building
- Replace filters on HVAC system
- Ensure open ends of ductwork are sealed
- Ensure public walkways are clear and clean

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# Limiting General Conditions and HOOH



- Demobilization of rental equipment
  - Will equipment be available upon re-start?
- Rental rate reduction
  - Equipment will likely be in standby
- Movement / storage / security of equipment
- Utility usage
- Office rent abatement

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# Work Stoppage



- For Federal projects, a suspension under FAR § 52.242-14 is more favorable for equitable adjustment – but will need to demonstrate delay is for “unreasonable period of time”
- Both ConsensusDocs 200 (§11.5.1) and AIA A201 (§14.1.3): upon seven days written notice to the Owner, can terminate the Contract and recover from the Owner payment for Work executed and costs incurred by reason of such termination.

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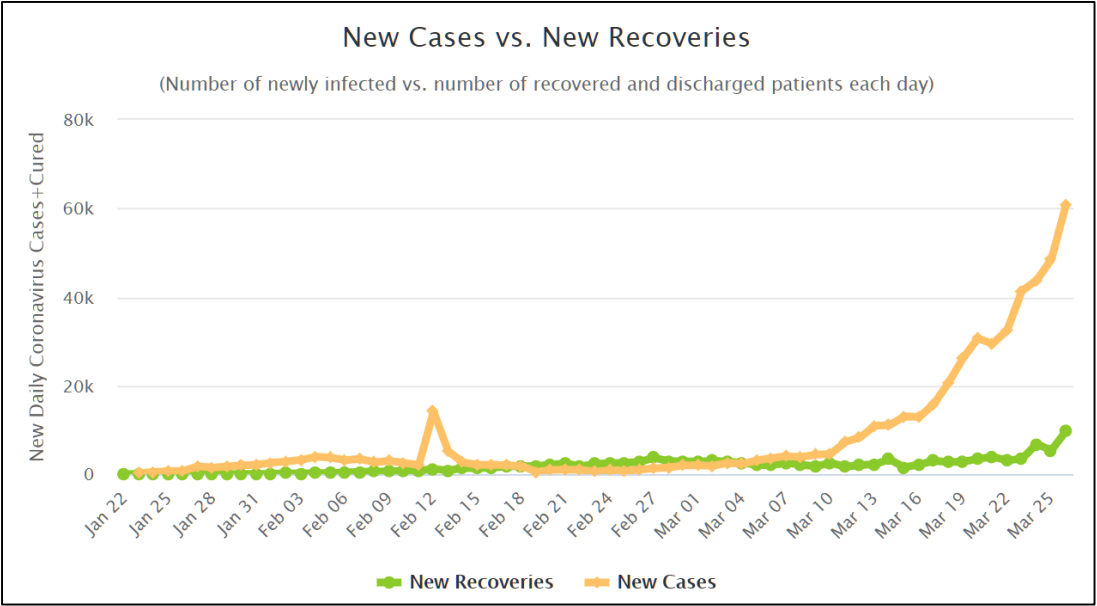
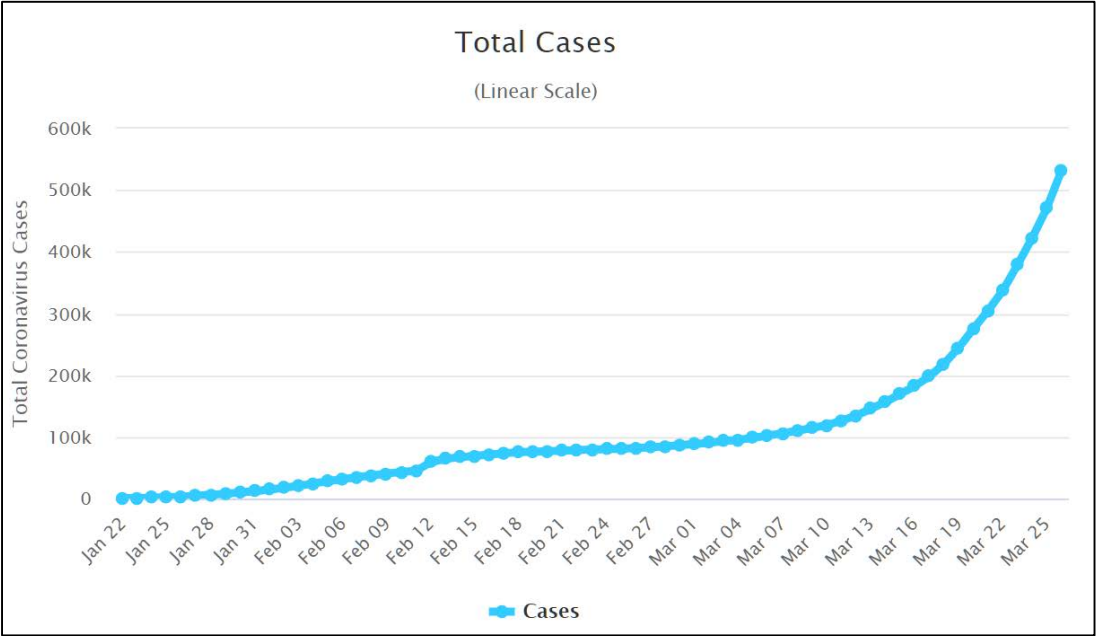
Longer Term Planning

# World

As of 03/26/20:

Coronavirus Cases:  
531,698

Active Cases:  
383,700 (72%)



# China

As of 03/26/20:

Coronavirus Cases:  
81,340

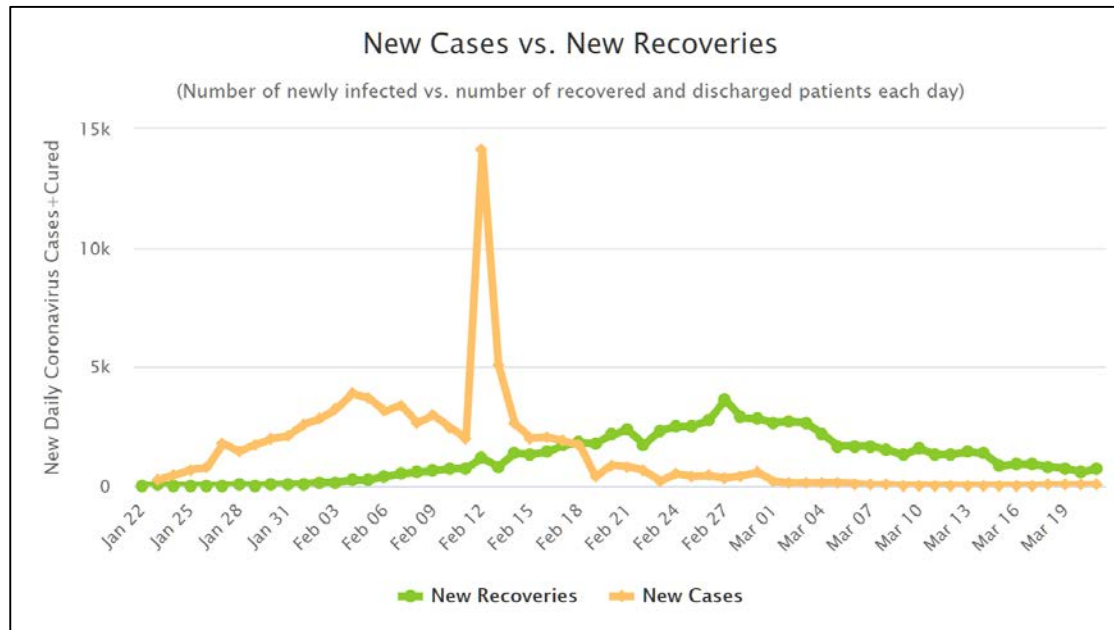
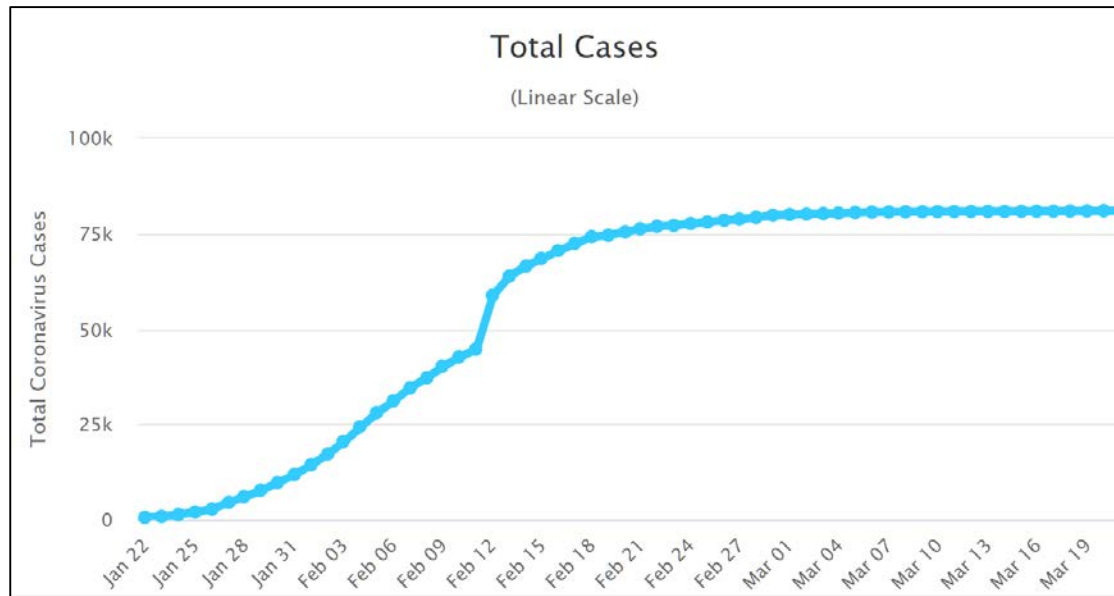
Active Cases:  
3,460 (4.2%)

Exponential Growth Date:  
Jan 22, 2020 (actual)

Curve Flattening Date:  
Feb 12, 2020 (actual)

New Recoveries > New Cases:  
Feb 18, 2020 (actual)

90+ Percent Recovered /  
Back to Work:  
Mar 22, 2020 (actual)



# China



- **~81k total cases; ~5k remaining active cases**
- On or about January 22nd, China's new case count started to spike exponentially. It took about 20 days from January 22nd before its overall case count started to level off and about 30 days before recoveries started to outpace new cases. After 60 days, or March 22nd, China is nearly fully recovered and has gone back to work.
- Trajectory: 20-day / 30-day / 60-day Cycle

# S. Korea

As of 03/26/20:

Coronavirus Cases:  
9,332

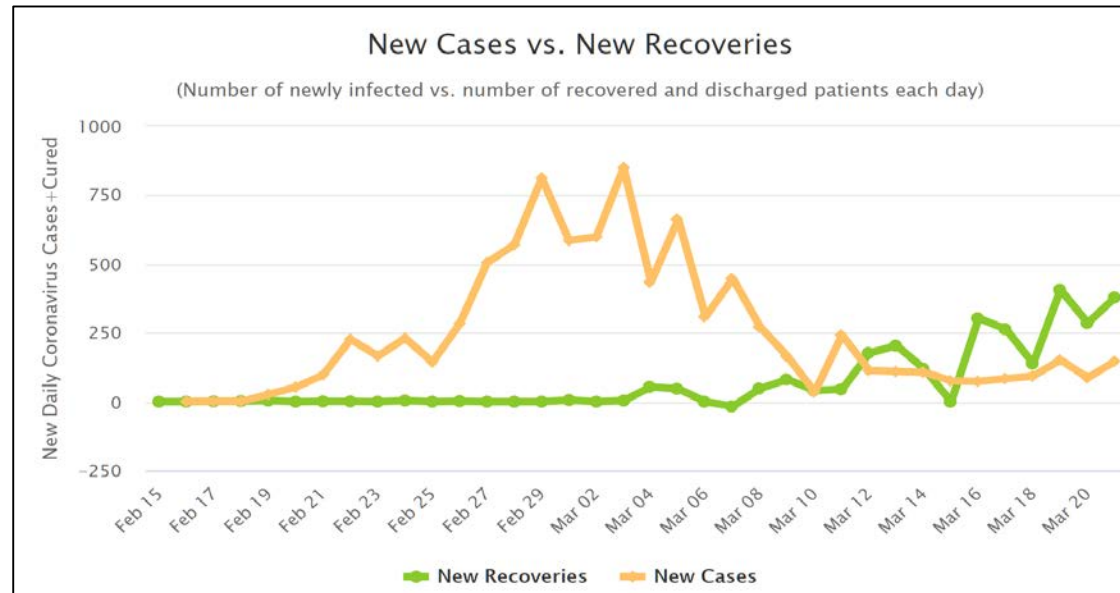
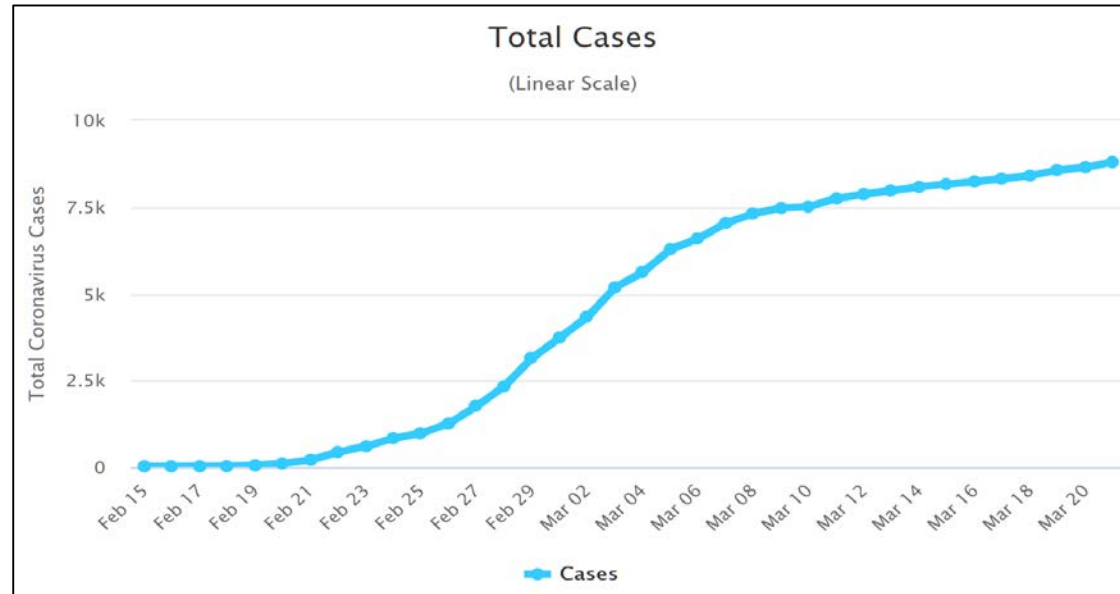
Active Cases:  
4,665 (50%)

Exponential Growth Date:  
Feb 21, 2020 (actual)

Curve Flattening Date:  
Mar 10, 2020 (actual)

New Recoveries > New Cases:  
Mar 15, 2020 (actual)

90+ Percent Recovered /  
Back to Work:  
Apr 21, 2020 (prediction)



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# South Korea



- **~9k total cases; ~6k active cases**
- On or about February 21<sup>st</sup>, South Korea's new case count started to spike exponentially. Similar to China, it took about 20 days before its overall new cases started to level off and about 30 days before recoveries started to outpace new cases (currently ~3k of ~9k cases are recovered). The 60-day mark for South Korea is April 21<sup>st</sup>, and South Korea is already starting to get back to work.
- Trajectory: 20-day / 30-day / 60-day Cycle

# Iran

As of 03/26/20:

Coronavirus Cases:  
32,332

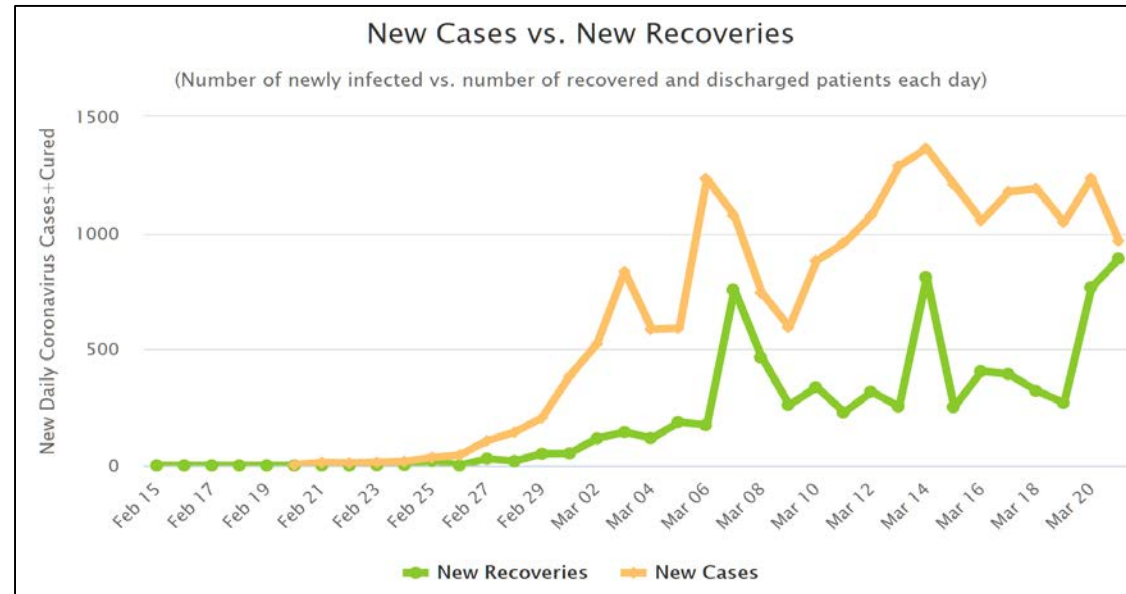
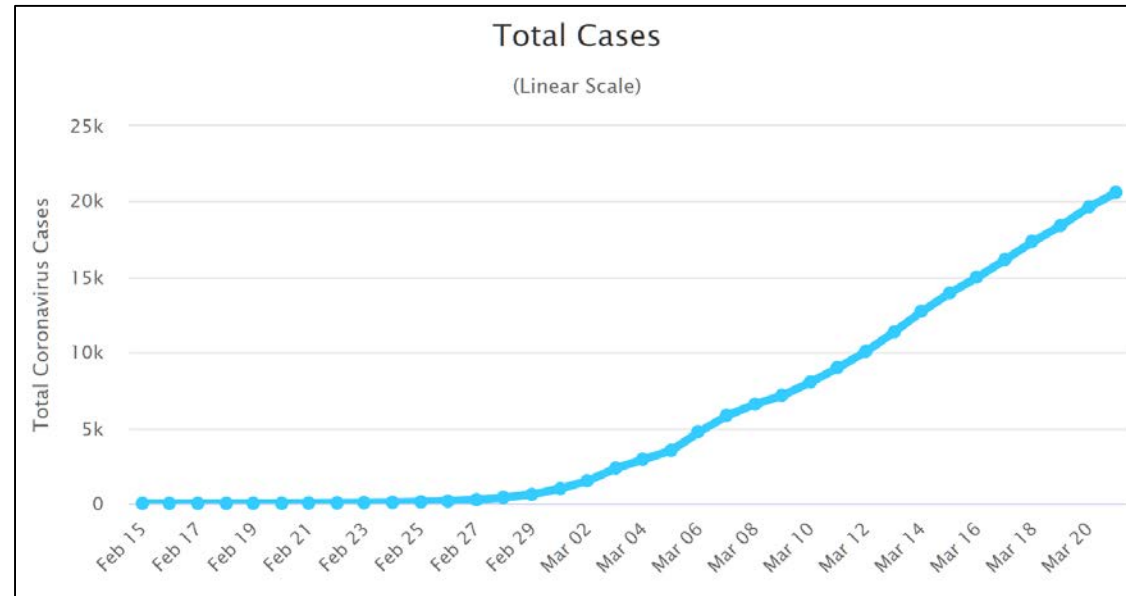
Active Cases:  
18,821 (58%)

Exponential Growth Date:  
Mar 1, 2020

Curve Flattening Date:  
Apr 1, 2020

New Recoveries > New Cases:  
Apr 10, 2020

90+ Percent Recovered /  
Back to Work:  
May 10, 2020



# Iran



- **~21k total cases; ~12k active cases**
- On or about February 25th, Iran's new case count started to spike exponentially. Unlike China and South Korea, Iran's new case count has yet to level off in earnest. Over the past couple days, Iran's new case count has declined, so it is likely that by a 30-day mark, Iran's overall new case count will start to level off. Also, as you can see from the second graph listed below, the daily recovered cases in Iran is just about to eclipse the daily new case mark, so by day 40, this should happen. If you set Iran's recovery mark at 70-days, this would mean that by May 5<sup>th</sup> Iran will be nearly at full recovery.
- Trajectory: 30-day / 40-day / 70-day Cycle

# Italy

As of 03/26/20:

Coronavirus Cases:  
80,589

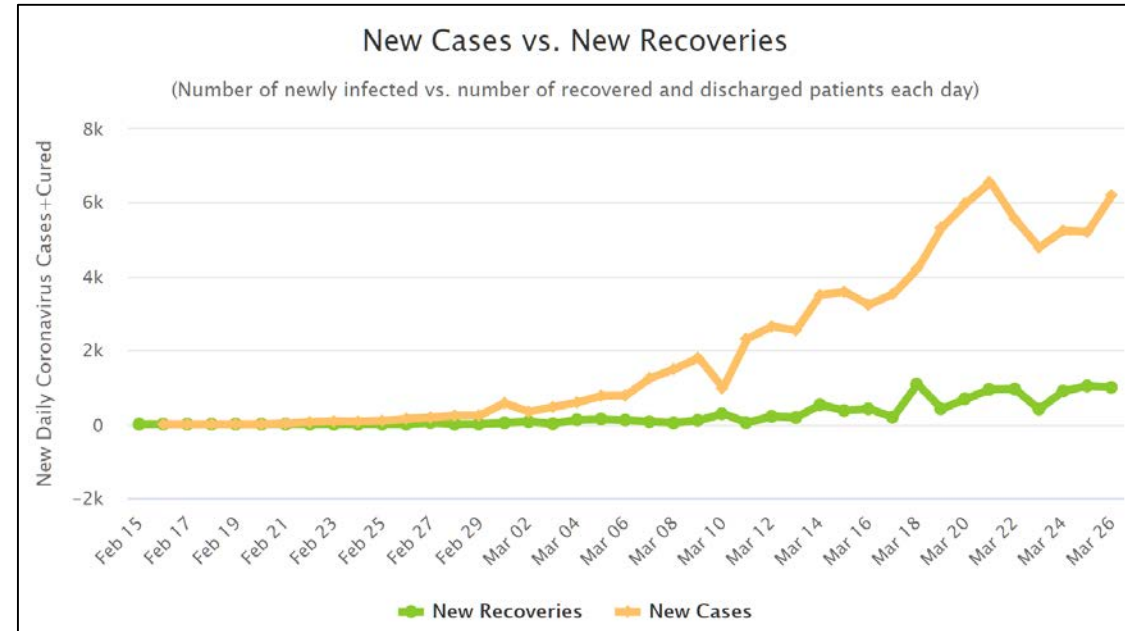
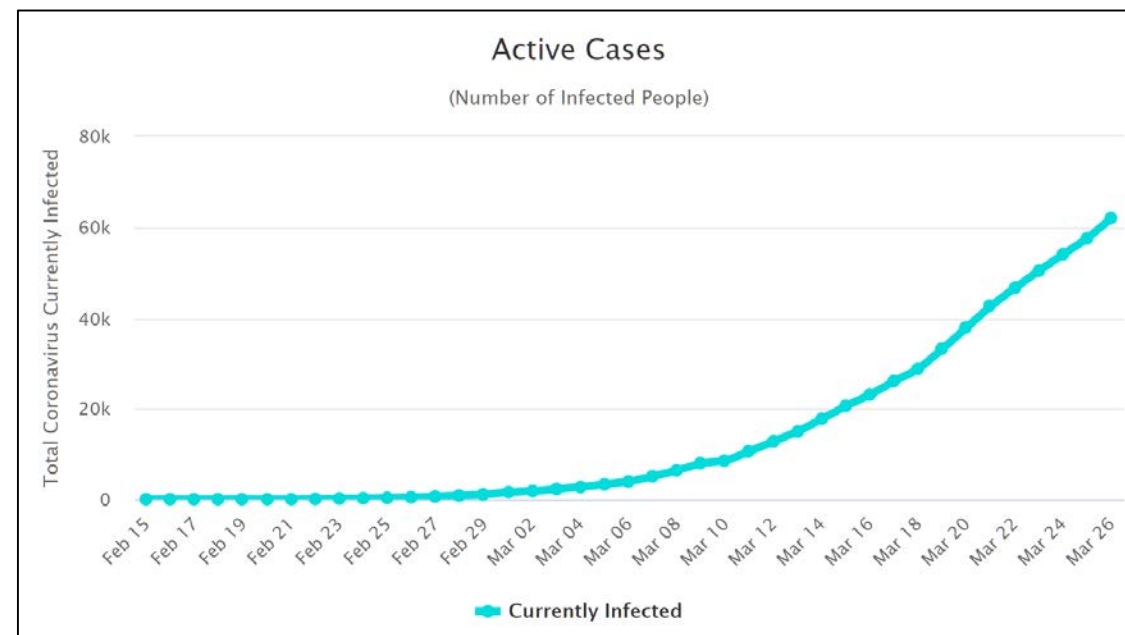
Active Cases:  
62,013 (77%)

Exponential Growth Date:  
Mar 1, 2020

Curve Flattening Date:  
Apr 1, 2020

New Recoveries > New Cases:  
Apr 10, 2020

90+ Percent Recovered /  
Back to Work:  
May 10, 2020



# Italy



- **~59k total cases; ~46k remaining cases**
- On or about March 1st, Italy's new case count started to spike exponentially. Like Iran, Italy's new case count continued to spike after its 20-day mark. If Italy's case count starts to flatten at Day 30 that will be April 1<sup>st</sup>. On or about April 10<sup>th</sup>, Italy's recoveries will likely start to outpace its new cases. The 70-day mark for Italy is on May 10<sup>th</sup>.
- Trajectory: 30-day / 40-day / 70-day Cycle

# USA

As of 03/26/20:

Coronavirus Cases:  
86,548

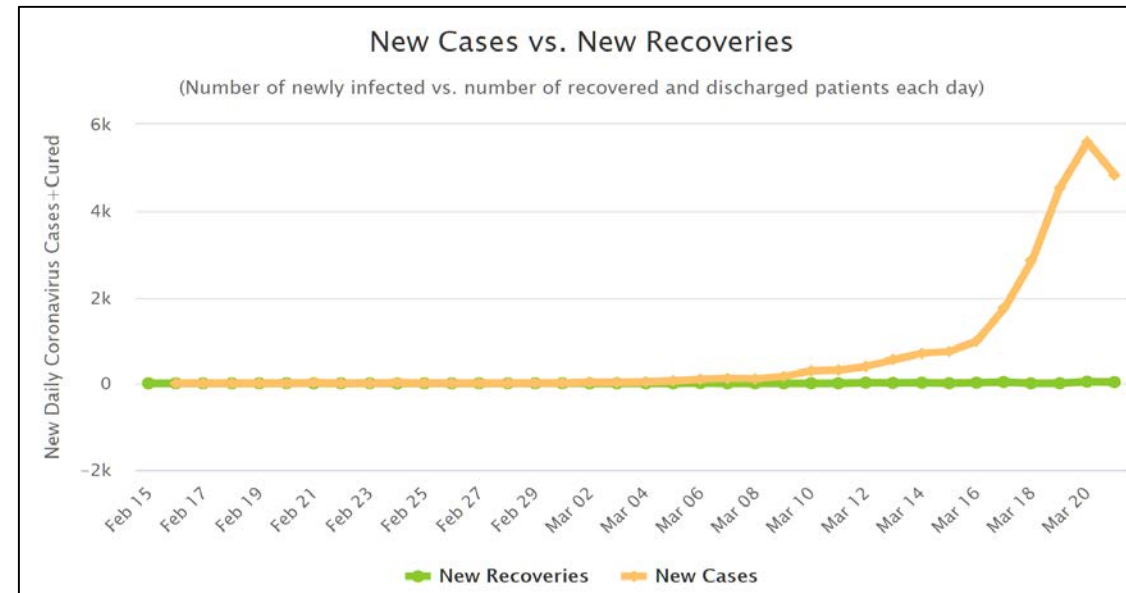
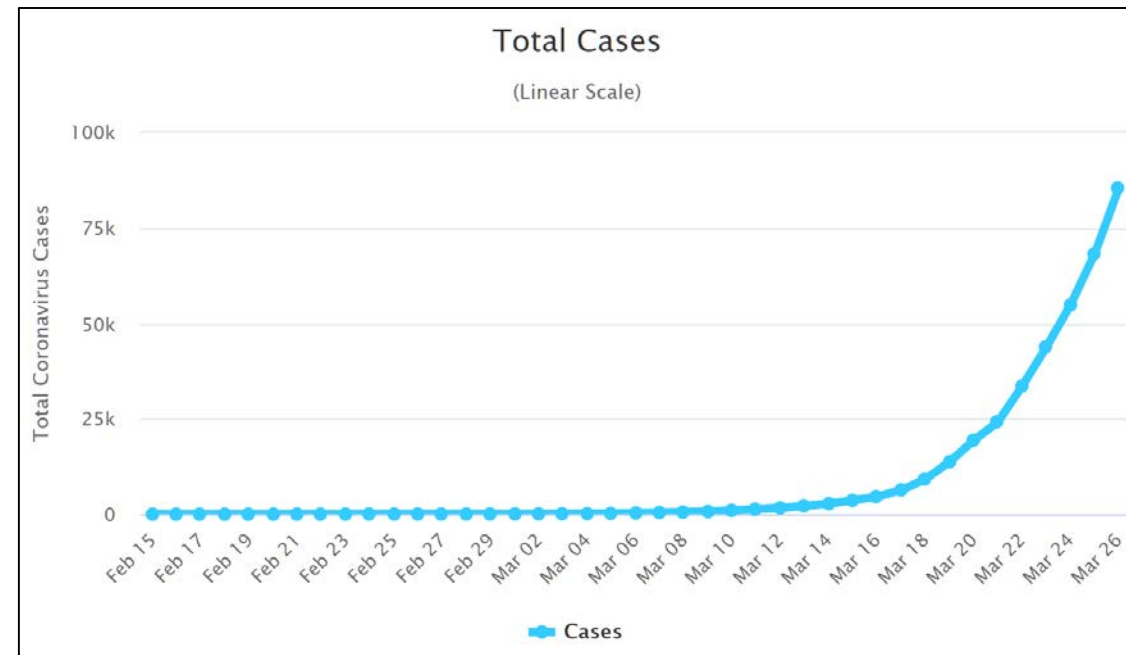
Active Cases:  
83,338 (96%)

Exponential Growth Date:  
Mar 10, 2020

Curve Flattening Date:  
Apr 10 - 20, 2020

New Recoveries > New Cases:  
Apr 20 - 30, 2020

90+ Percent Recovered /  
Back to Work:  
May 10 - 20, 2020



**AGC**  
THE CONSTRUCTION  
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# USA



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*The Washington Post*

## Where coronavirus outbreak started in Washington state, officials see hope as cases appear to be leveling off

Robert Klemko 13 hrs ago

- On or about March 10<sup>th</sup>, the USA's new case count started to spike exponentially. If USA follows the China/South Korea trend, USA's overall case count should start to flatten on or about April 1<sup>st</sup>. In terms of when new recoveries will start to outpace new cases, that would likely occur on or about April 10<sup>th</sup>. The USA's 60-day mark would be May 10<sup>th</sup>. If the USA follows an Iran/Italy-like trajectory, USA's overall cast count will flatten out around April 10<sup>th</sup>, and daily recoveries would start to outpace daily new cases on Apr 20<sup>th</sup>, and the 70-day mark would be on May 20<sup>th</sup>, at which point the population can get back to work in earnest.
- Trajectory: 30-day / 40-day / 70-day Cycle



# Questions?