

**PPD 531L: Transportation Studio  
Fall Semester 2022**

**Tuesday 6:00pm – 9:20pm Pacific Time  
VPD LL101**

**Supply Chain Congestion:  
What do we need to know and how does our practice impact  
movements of goods?**

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## Course Objectives:

1. View the evolving goods movement (supply chain, intermodal freight) through the lens of urban planning and public policy
2. Examine the complex and interrelated relationship between private enterprise, public entities, incentives, regulations, workforce, and volatile global supply chain by modes, commodity, and/or trades
3. Gain understanding of goods movement and its impact on transportation planning practice, infrastructure development, project deliveries and community impacts in Southern California
4. Explore the roles of planners and opportunities in the new landscape of supply chain resilience

### I. COURSE DESCRIPTION

Welcome to PPD531L Fall 2022 class and explore a series of real-world goods movement/supply chain issues during this unprecedented moment in our lifetime in real-time. This course is structured to reflect a “real-world”, task-oriented, and building-block style of learning centered around the on-going supply chain congestion.

While goods movement has been an integral part in every community, most American consumers show no little interest in such complex yet essential activities. During the early stage of global pandemic, consumers were stunned to find empty store shelves and with limits to purchase toilet papers and hand sanitizers. On-line shopping and home deliveries quickly transformed consumers’ behaviors as many of us began working/studying from home. In a span of less than 12 months (spring 2020-spring 2021), the global supply chain experienced unprecedented shocks, contraction, surge in demand yet severe shortage in raw materials and workforce needed to move freight domestically and internationally. The congestion at major US seaports exposes the long-existed fragile supply chain because of globalization in the last three-plus decades. However, why should planners, engineers, or policymakers care about supply chain and how does our current practice affecting the myriad of problems in moving goods?

Through reading, breakout sessions, and lectures, students will understand goods movements and its inter-relationship with our built environment. Students will assess a wide range of objectives and practices along the complex supply chain. Students will apply planning theories and knowledge, and review land use and zoning practices at various levels of governments that affect freight movement. Lastly, students will examine the intended and unintended consequences due to policies, standards, regulatory frameworks and offer potential solutions.

Each student is expected to produce professional grade of deliverables (written reports, multimedia, and communications) and complete each assignment “on-time, within budget”. Throughout the course, students are expected to work independently, think critically, articulate professionally, and collaborate with others as paraprofessionals.

## II. BACKGROUND

The global pandemic has exposed vulnerabilities along the supply chain, particularly within suppliers and semi-products that rely on foreign sources from a single country. Since the invention of electronic shopping by English inventor Michael Aldrich in 1979<sup>1</sup> and online marketplace such as Amazon in mid-1994, e-commerce has been steadily gaining market share in the last two decades here in the U.S. and globally. Several prominent supply chain models have been invented to move goods efficiently, reliably, or at lowest cost. Nevertheless, many nodes along a particular supply chain may have different objectives and constraints.

When severe congestion occurred at the Ports of Los Angeles and Long Beach in 2004 and 2015 arose after labor disputes and caused severe delay in cargo handling, many major Beneficiary Cargo Owners (such as Walmart, Home Depot, or Target) and shippers adopted “four-corner strategy” around the country to diversify cargo handling through different gateway regions. Such strategy has fueled new development opportunities along coastal regions in the Pacific Northwest, Gulf, and Southeast.

Early on during the COVID lockdown, many companies reconsidered their supply chain system either by re-shoring, where they find domestic supply sources, or distributing their suppliers between different countries. Contrary to the initial projected decline at many gateway regions, the Ports of Los Angeles and Long Beach began to experience a significant rebound in container throughputs in August 2020, less than 6 months into the lockdown. Both ports recorded the busiest cargo handling during calendar year 2021<sup>2</sup>. While both ports are dealing with record cargo movements, shortages of drivers and warehouse workers due to health concerns continue to add pressure on freight handling. Communities near ports are heavily impacted by idling and parked trucks. Many cities across the country are seeing traditional mega shopping malls becoming fulfillment centers for online retailers as many of these shopping malls have sat empty – before, during, and possibly after the pandemic.

How should cities and regions adapt to the ever-changing logistic industry and supply chain? How would the short-range and long-range transportation plan account for more door-to-door freight deliveries? Even if more vehicles, trucks, and trains are using renewable fuels and switching to zero-emission engines, how will we contain the growth in vehicle-miles-travelled by passengers and for freight delivery?

As most universities have not incorporated goods movement in their transportation planning curricula, students in this studio class will have a unique opportunity to examine the evolving industry while the COVID-19 pandemic continues to reshape the world’s economy and stability.

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<sup>1</sup> Source: <https://healthcaremba.gwu.edu/history-of-ecommerce/>

<sup>2</sup> <https://www.portoflosangeles.org/about>; <https://polb.com/port-info/news-and-press/port-of-long-beach-breaks-cargo-record-12-09-2021/>

Last edited: 8/12/2022

ppd531f22 syllabus v2.docx

### III. REQUIRED READING, REFERENCES & RECOMMENDED READINGS

Category	Title/Link
Required	<a href="#"><i>"Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-based Growth."</i></a> June 2021
Required	<a href="#">National Freight Strategic Plan 2020, USDOT</a>
Required	<a href="#">California Freight Mobility Plan 2020</a>
Required	<a href="#">SCAG Freight Works</a>
Required	<a href="#">LA County Goods Movement Strategic Plan 2021</a>
Required	<i>"Introduction to Economics"</i> by Dr. Anamitra Roy. 2020 (PowerPoint file to be distributed via email)
Reference	<a href="#">NCFRP Report 13</a> : "Freight Facility Location Selection: A Guide for Public Officials"
Reference	<a href="#">NCFRP Report 16</a> : "Preserving and Protecting Freight Infrastructure and Routes"
Reference	<a href="#">NCFRP Report 19</a> : "Freight Trip Generation and Land Use"
Reference	<a href="#">NCFRP Report 20</a> : "Guidebook for Assessing Evolving International Container Chassis Supply Models"
Reference	<a href="#">NCFRP Report 23</a> : "Synthesis of Freight Research in Urban Transportation Planning"
Reference	<a href="#">NCFRP Report 24</a> : "Smart Growth and Urban Goods Movement"
Reference	<a href="#">NCFRP Report 29</a> : "Making Trucks Count: Innovative Strategies for Obtaining Comprehensive Truck Activity Data"
Reference	<a href="#">TRB Special Report 297: Funding Options for Freight Transportation Projects</a>
Recommended	<a href="#">City of Seattle (WA) Freight Master Plan 2016</a>
Recommended	<a href="#">"Why We Need Economic Planning" by Leigh Phillips Michal Rozworski</a> , March 30, 2020
Recommended	<i>"The Box: How the shipping container made the world smaller and the world economy bigger"</i> . 2 <sup>nd</sup> edition. Marc Levinson
Recommended	<i>"Ninety Percent of Everything – Inside Shipping: The invisible industry that puts clothes on your back, gas in your car, and food on your plate"</i> . Rose George.

*Additional reading materials will be assigned throughout the course*

IV. SCHEDULE – Tentative

Week #	Date	Course Presentations/Contents	Readings and/or Deliverable(s) Due
1	08/23/2022	Welcome & Course Overview Goods Movement Through the Lens of Urban Planning & Public Policy	Submit personal statement, brief bio, and resume to Professor Shen by WEDNESDAY 8/24/2022, 5pm PDT (for those who have not done so).  Design Team assignments – to be announced via email by SUNDAY 8/28/2022, 5pm PDT
2	08/30/2022	“Cargo is King” – How, what, and why goods are moved?	Watch TWO recordings:  (1) "The Emerging Future of Supply Chains" Professor Anne Strauss-Wieder. ENO Transportation Foundation Webinar (1 hour) <a href="https://youtu.be/lVFWuVHCQFA">https://youtu.be/lVFWuVHCQFA</a>  (2) Listen to recorded interview #1 with Professor Strauss-Wieder then submit <b>Technical Memorandum #1</b> via email by MONDAY 8/29/2022, 5pm PDT via email.  Submit draft topic and abstract on a commodity or product YOU (individual) would like to examine by FRIDAY 9/02/2022, 5pm PDT.
3	09/06/2022	Speed of goods movement vs infrastructure development: “Just-in-time”	Respond to Doodle poll for a mandatory 15 min. office-hour via Zoom between <b>9/7-9/10/2022</b>
4	09/13/2022	Infrastructure: What’s the Future Like?	Submit a proposed topic and abstract for the TEAM PROJECT by MONDAY 9/12/2022, 5pm PDT  Watch recorded interview assignment #2 with Mr. Paul Bingham then submit <b>Technical Memorandum #2</b> via email by MONDAY 9/19/2022, 5pm PDT.
5	09/20/2022	Urban Freight – Too complicated to deal with?	Submit Individual Project Progress Report #1 via email by FRIDAY 9/23/2022, 5pm PDT.
6	09/27/2022	Logistic Industry: Who are the movers and shakers?	Respond to Doodle poll for a mandatory 15 min. office-hour via Zoom between <b>9/21-9/24/2022</b> on the progress of TEAM PROJECT scope, research etc.
7	10/04/2022	Plans, plans, plans – How and when to take actions besides writing plans?	Individual project: multimedia and companion Technical Memorandum due via upload by FRIDAY 10/7/2022 5pm PDT
8	10/11/2022	Plans, plans, plans – How and when to take actions besides writing plans? (Cont.)	Submit Group Project Progress Report via email by MONDAY 10/17/2022, 5pm PDT
(8a)	10/14/2022	Make-up Session Freight Tour (tentative)	Location TBD

9	10/18/2022	Policy – Top-down or Bottom-up?	To be amended
10	10/25/2022	Funding – Who pays and who gets? Earmarks vs discretionary/competitive grants.	Watch recorded interview assignment #3 then submit Technical Memorandum #3 via email by MONDAY 10/31/2022, 5pm PDT
11	11/01/2022	Infrastructure Delivery – The good, bad, and ugly.	To be amended
12	11/08/2022	Environment and Regulations: Are zero-emission vehicles, trucks, trains, warehouses the solutions to congestion and freight in urban regions?	To be amended
13	11/15/2022	Guest Lecture (tentative)	To be amended
14	11/22/2022	No class due to lecturer's travel	Upload FINAL Team Project video production by MONDAY 11/28/2021, 5pm PST
15	11/29/2022	<b>FINAL – Showcasing Team Projects</b>	Submit FINAL Team Project report by MONDAY 12/5/2022, 5pm PST

**IV. STUDENT EVALUATION (subject to change)**

Category	Percentage
Three Technical Memorandums (letter grade), each worth 10%	30%
Individual Project – Multimedia Presentation and Report – (letter grade)	40%
Group Project – Group Grade	40%
<b>TOTAL</b>	<b>100%</b>
Individual Participation/Responsiveness (bonus)	5%

**v. IMPORTANT DUE DATES (all in Pacific Time)**

<b>Date &amp; Time</b>	<b>Item</b>
WEDNESDAY 08/24/2022 by 5pm	If you've not done so, submit personal statement, brief bio, and/or resume
MONDAY 08/29/2022 by 5pm	Technical Memorandum #1
FRIDAY 09/02/2022 by 5pm	The name/type of commodity or product you plan to examine
WED - SAT 09/07/2022 – 9/10/2022	Respond to Doodle poll for a mandatory 15-min. Zoom meeting on the progress of Individual Project scope, research etc.
MONDAY 09/12/2022 by 5pm	Proposed topic(s) and abstract for the team project
MONDAY 09/19/2022 by 5pm	Technical Memorandum #2
FRIDAY 09/23/2022 by 5pm	Individual Project progress report
WED - SAT 09/21/2022 – 09/24/2022	Mandatory 15-min. Zoom meeting on the progress of Team Project scope, research etc.
FRIDAY 10/7/2022 by 5pm	Individual project multimedia and companion Technical Memorandum
MONDAY 10/17/2022 by 5pm	Team Project progress report
MONDAY 10/31/2022 by 5pm	Technical Memorandum #3
MONDAY 11/28/2022 by 5pm	FINAL Team Project video production due
MONDAY 12/5/2022 by 5pm	FINAL Team Project written reports due

**Pre-Recorded Interviews with Guest Speakers**

Students will watch THREE pre-recorded interviews with distinguished guests (1 hour max/each) then submit summaries in the form of technical memorandums. The links to interviews with guest speakers will be published via emails.

**Individual Project**

Instructions to be provided separately.

**Team Project**

Instructions to be provided separately.

**Relevant Documents & Resources**

Note to students: Do not solely rely on Wikipedia for reference. When necessary, attempt to contact public agencies or private companies to inquire about relevant information for completing your individual project or group project. That is part of your “real-world” training.

**VI. SCHOOLWIDE POLICIES, EXPECTATIONS AND RESOURCES****Lecturer’s Expectations**

Please participate in course discussion enthusiastically; communicate with me (in person, via email or phone call or Zoom) openly; respond to my assignments/inquiries promptly; and collaborate, coordinate, cooperate with your team members. These are fundamental skills in the workplace.

**Etiquette - Expected Social Behavior**

1. **Be on time** - We will begin each class promptly at 6pm PDT.
2. To the extent possible, we will take **two 5-10 minutes of break**.
3. **Present yourself in a professional manner**. This course is part of a professional degree program and students are expected to act and present themselves accordingly. Adhere to the same **standard of behavior** in the classroom, online environment as you would in real life.
4. **Speak in a professional manner**: e.g., use neutral language, avoid labels and stereotypes or overgeneralizations about groups/populations.
5. Promote participation and **foster respect** among fellow students
6. Establish norms/standards/roles when you enter a breakout room
7. Every student is encouraged to participate actively in breakout discussion
8. When joining in discussion, provide thoughtful, succinct, and non-argumentative contributions to the discussion
9. **No multitasking**



## **Statement on Academic Conduct and Support Systems**

### **Academic Conduct:**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on [Research and Scholarship Misconduct](#).

### **Students and Disability Accommodations:**

USC welcomes students with disabilities into all of the University’s educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at [osas.usc.edu](http://osas.usc.edu). You may contact OSAS at (213) 740-0776 or via email at [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

### **Support Systems:**

*Counseling and Mental Health* - (213) 740-9355 – 24/7 on call [studenthealth.usc.edu/counseling](http://studenthealth.usc.edu/counseling)  
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

*National Suicide Prevention Lifeline* - 1 (800) 273-8255 – 24/7 on call [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org)  
Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

*Relationship and Sexual Violence Prevention Services (RSVP)* - (213) 740-9355(WELL), press “0” after hours – 24/7 on call [studenthealth.usc.edu/sexual-assault](http://studenthealth.usc.edu/sexual-assault)  
Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

*Office for Equity, Equal Opportunity, and Title IX (EEO-TIX)* - (213) 740-5086 [eeotix.usc.edu](http://eeotix.usc.edu)  
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

*Reporting Incidents of Bias or Harassment* - (213) 740-5086 or (213) 821-8298 [usc-advocate.symplicity.com/care\\_report](http://usc-advocate.symplicity.com/care_report)  
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

*The Office of Student Accessibility Services (OSAS)* - (213) 740-0776 [osas.usc.edu](http://osas.usc.edu)  
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

*USC Campus Support and Intervention* - (213) 821-4710 [campussupport.usc.edu](http://campussupport.usc.edu)

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

*Diversity, Equity and Inclusion* - (213) 740-2101 [diversity.usc.edu](http://diversity.usc.edu)

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

*USC Emergency* - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call [dps.usc.edu](http://dps.usc.edu), [emergency.usc.edu](http://emergency.usc.edu)

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

*USC Department of Public Safety* - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call [dps.usc.edu](http://dps.usc.edu)

Non-emergency assistance or information.

*Office of the Ombuds* - (213) 821-9556 (UPC) / (323-442-0382 (HSC) [ombuds.usc.edu](http://ombuds.usc.edu)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

*Occupational Therapy Faculty Practice* - (323) 442-3340 or [otfp@med.usc.edu](mailto:otfp@med.usc.edu), [chan.usc.edu/otfp](http://chan.usc.edu/otfp)

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.