Course information

**Time:** Tuesdays 2:00 pm - 4:50 pm  
**Location:** Room 61-262, Center for Health Sciences (UCLA Fielding School of Public Health)  
**Units:** 4  
**Instructor:** Richard J Jackson MD, MPH, FAAP,HonAIA, HonASLA  
Professor, Environmental Health Sciences  
UCLA School of Public Health  56-070 CHS  
650 Charles E Young Drive  
Los Angeles, California 90095-1772  
Phone 310 206-8522 (I don’t check voice mail, better to email please)  
Cell 510 295 5674 (for urgent use only)  
dickjackson@ucla.edu  
**Office Hours:** By appointment

Course Description

An interdisciplinary course on **Built Environment and Health (BEH)** with an emphasis on creating health-based change

The US and other developed and developing countries face epidemics of acute and chronic diseases that can originate or accelerate due to land use and built environment (BE) decisions. While the hazards presented by air and water pollution are well recognized to result in infectious and toxicologic illnesses, there has been increased recognition of the hazards presented by building and community designs that fail to optimize human health. Land use and built environment decisions have impacts for good or ill in every locality and for every age, social, economic and racial group, and these impacts range from the very acute (e.g. motor vehicle trauma) to the long term (e.g. obesity, diabetes, cancer, heart disease).

BE decisions are largely based on financial, regulatory, insurance, political, cultural and other factors. BE changes are made in the context of cultural and community values, vested interests, environmental and budget constraints, and more—how is health connected to those issues? How can health considerations be made more cogent and effective? This course will explore the “networks” around the BE, especially the health connections. Students will analyze these factors and related disease endpoints with an emphasis on exploring solutions-oriented approaches that confer substantial co-benefits for health, environment, equity and economy. Students will learn the vocabulary of related disciplines, the history, values, and some of the tools to effect change. Because they are essential skills to be a change agent, the course will have an emphasis on students’ communication and leadership skills.

Over the last 15 years research into BEH has advanced substantially. International, national, state and local BEH efforts are developing rapidly. Awareness of the health implications of the built environment has grown exponentially. BEH concepts are now increasingly embraced at the “top” by various elected and appointed leaders, planning directors and enlightened developers; and increasing at the “bottom” by recently trained individuals entering the profession and by energized communities. The course will focus on strategizing ways to move health into all policies, through applied participatory and communication skillsets.

While the advancement of the field of BEH contains elements that are strongly positive for both current and future health, all successes contain within them dangers and the seeds for failure. A genuine danger is that health issues may become the next mere design fad, and just as new buildings and developments are being “greenwashed”, so “healthwashing” may erode substantive improvements to health and the built environment. The future of BEH efforts will succeed or fail depending on the cogency of data and clarity of the messaging by future practitioners of public health, urban planning, architecture, business, law and related fields.
Course objectives

By completing the class assignments, required readings, and through active participation, students will be able to:

1. Understand how the built environment impacts health both positively and negatively.
2. Have a basic knowledge of the literature and issues regarding the built environment and health.
3. Develop vocabulary and skills to represent the significance of public health in policymaking settings, including those pertaining to the built environment.
4. Identify resources available to shape the built environment to improve public health.
5. Be conversant with built environment remedies that confer co-benefits in terms of health, sustainability, and economy.
6. Understand and be able to participate in the built environment decision-making process.

ASPH Competencies

A number of core competencies developed by the Association of Schools of Public Health were identified to enhance the education and training of public health graduates. The following are some of the ways this course equips students with analytical and problem-solving skills to address public health issues while considering relevant core competencies.

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<tr>
<th>Learning Objectives</th>
<th>ASPH Competencies</th>
<th>Course Application</th>
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<tr>
<td>1. Exploring how the physical environment, specifically the built environment, directly and indirectly impacts health.</td>
<td>B.1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents. B.3. Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues. B.5. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.</td>
<td>* Through textbook and journal readings, students will become fluent in terminology essential to public health and urban planning fields. * Assignments require students to incorporate technical knowledge and vocabulary to demonstrate mastery of basic concepts. * Class discussion will provide space for open exploration of BEPH issues.</td>
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<td>2. Understanding specific environmental vectors including air, water, chemical toxicants and how they are facilitated or impeded by the built environment.</td>
<td>B.3. Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues. B.5. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety. B.7. Discuss various risk management and risk communication approaches in relation to issues of environmental justice and equity.</td>
<td>* Through textbook and journal readings, students will become fluent in environmental terminology essential to public health and urban planning fields. * Assignments require students to incorporate technical knowledge and vocabulary to demonstrate mastery of basic concepts. * Lectures will emphasize environmental challenges.</td>
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<td>3. Exploring ways in which social, cultural and economic factors affect human health through the medium of the built environment; specifically to understand the history of health disparities as imbedded in built environment and health decisions.</td>
<td>B.2. Describe genetic, physiologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards. B.7. Discuss various risk management and risk communication approaches in relation to issues of environmental justice and equity.</td>
<td>* Through reading responses students will explore the complexity and breadth of BEPH issues. * Students are expected to apply critical thought to presentations, responses, and discussions. * Guided discussions aim to explore full scope of BEPH disparities.</td>
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<td>4. Specifically examining federal, state and local laws, codes and regulations that shape the built environment, which in turn shapes health.</td>
<td>B.3. Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues. B.5. Specify approaches for assessing,</td>
<td>* Each class will examine legislative framework for leading BEPH topics. * Students are expected to incorporate policy analysis into final group presentations and discussion.</td>
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Class Structure and Participation

The first two lectures will be didactic. Examples of previous presentations and oral perspectives will be given. The remaining eight classes will include a combination of presentations by the instructor, student discussion, guest speakers and the student presentations. In-class dialog is essential as this is an active seminar-style class. Students who are disengaged doing other activities risk zeroing their participation score. All students are expected to read the assigned readings and submit responses and assignments by the deadlines listed below.

Course Grading

1. Participation: 20%
2. Radio Perspective Piece: 15%
3. Weekly Reading Responses: 25%
4. Three or four class quizzes (less than 20 minutes) on prior assigned readings: 15%
5. Final BEH Issue Group Project: 25%

Radio Perspective, Weekly Reading Responses, Take-home Midterm Exam, and Final Group Project

1. **Radio Perspective:** Each student is expected to prepare a two-minute (~117 second) oral “perspective” piece on BEH. The student will submit an edited recording for the entire class to listen to and participate in a constructive feedback dialog. The perspective should work on a personal, emotional (versus intellectual) level, and must not use jargon or overly technical language. Please refrain from using background noises for effect in your recording. Humans have learned from storytelling for thousands of years; this method of communication is an important tool for influencing policy change. For examples of perspectives go to: [http://www.kqed.org/radio/programs/perspectives/](http://www.kqed.org/radio/programs/perspectives/)
   - More resources and editing guide posted to [https://ccle.ucla.edu](https://ccle.ucla.edu)
Perspective presentations will take place Weeks 3 and 4. Sign-up will be on Week 2.

2. **Required Reading and Quizzes:** students must complete the required readings. Quizzes at the beginning of at least 3 classes will review the prior 2 weeks of assigned readings. Lowest quiz score will be dropped.

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December 8, 2016
3. **FINAL: BEH Issue Group Project:** Students will work in groups of 3-4 students on a project and presentation that investigates an assigned and specific Built Environment issue that will address context, policy, finance, legal, cultural issues. The presentations will require that students scope the context of an issue, the challenges and assets, obstacles and opportunities, and map out a strategy for dealing with these and possible tactics. The best work groups are composed of students with different background and skills. **Opinions are inadequate!** The presentation to the class must incorporate qualitative and quantitative data and research results into their analyses and strategies for remedy.

Possible Presentation Projects:

- **Specific Comments on the State General Plan:** What’s new? What’s good? How to make it stick?
- **The Los Angeles River:** How to improve without damaging communities already present?
- **The Los Angeles Mobility Plan:** What is it? How can it be altered to improve health? How to assure that Measure M implementation adequately promotes health.
- **What are the next strategies to improving biking at UCLA, then environs, then Los Angeles?**
- **Homelessness:** the most important built environment is shelter. How to address? Uses and limitations of Measure HHH
- **How to take high-end built environment changes, e.g. Delos, and scale them to serve all?** How to deal with the housing kleptocrats.
- **How do fiscal and tax policies**, such as AB 8, Prop 13, Sales tax initiatives, mortgage tax deductions, depreciation schedules, and more change the built environment in ways that impact health.
- **High Speed Rail in the Central Valley:** how it can help and not harm health?
- **Inevitable Carbon Tax:** How to optimize expenditures?

The project consists of these components:

a. **Meet as a group with Instructor January 18, 19 or 30, 31 to conceptualize proposal.**

b. **One to Two-page Project Proposal:** A synopsis of the project description, literature review, research questions, and findings will be due by Feb 13.

c. **PowerPoint Presentation:** The group presentation in class would briefly outline the project history, obstacles, costs, cultural and other relevant factors, especially those related to health. Each group must present the project, research, and findings. The dates for presentations will be set by Week 4. Each group is given 20 minutes to present. Time will be kept to ensure students adhere to the time limit. Presentations should be creative, convincing, and insightful (e.g. include photos taken by the student on a site visit if possible). **DO NOT just read your PowerPoint. DO NOT present a visual summary that lacks insight into the “frame” of BE issue. Presentations must be specific to a place and time.** Presentations such as: “stairs or green roofs, farmers markets or school gardens are good etc…” are self-evident and lacking in original work or insight, and will receive negative feedback from the class and in grading. **New option for 2017. If your group would prefer, presenting a 7-10 minute video of the PowerPoint is fine, in fact, you will learn a lot in the preparation of the video.**

d. **Eight-page Project Report / Memo:** As a group, students will author a Project/Policy memo draft to a selected local official offering an outline of the goals, assets, challenges, and opportunities for a project. For example, a draft memo to the Chancellor of UCLA as to the benefits, challenges and opportunities presented by the chance that Los Angeles will “win” the bid to be the site of the 2024 Olympic Games. **(Part of the plan is for UCLA to be the “Olympic Village” and to house the athletes.)** The written report must be in more depth and more extensively referenced than the oral or video presentation. The group must outline not just the dangers to and opportunities for public benefit and health, but thoughts about the options you have considered, including brief assessments of the strengths and weaknesses of the options. Then include thoughts about how your group would advance public health as the project goes forward. **Thoughtfulness of the analysis, quality of the research, attention to political and economic realities will be evaluated in the grading process.**

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Richard J Jackson with Stacy Sinclair (2011). Designing Healthy Communities. ISBN: 978-1-1180-3366-1 Jossey-Bass (used copies are on Amazon; one will be put on reserve in the BioMed library.)


Additional required readings will be posted on the course website.

Strongly Recommended: this video series focuses on community issues and how positive change is created, rather than just why it is needed:


Additional recommended readings will be posted in the schedule and on the course website.

Additional Texts and Resources for Information:

- Jason Corburn (2009) Toward the Healthy City
- Active Living Research http://activelivingresearch.org

Radio Perspective Topics Used in the Past and Some Suggestions
(Remember, be specific to a time and place—you want to help your listener to care about the issue and you only have two minutes.)

Built Environment and Health Issues Related to:

- Active Design Guidelines (e.g. NYC)
- Agricultural Decisions and Policy
- Air Pollution
- All Cost Accounting, Life Cycle Analysis
- Automobiles, Speed, Policy
- Bicyclists/Cycling
- Billboards and Signage
- Climate Change (BE as a mitigator and adaptor)
- Disasters and BEH (a specific disaster)
- Drought and BEH
- Emerging Technologies (micro tracking, GIS, etc)
- Environmental Impact Mitigations (green roofs, etc)
- Fires and BEH
- General or Master Plans and BEH
- Gentrification – where is it good
- Gentrification – where is it bad
- Happiness and BEH
- Health Impact Assessment (specific sites)
- Hospitals and Medical Care Facilities and Health
- Impervious Surfaces
- International Experience (what you have learned from other cities and countries)
- Legislation (recently passed or pending)
- Mental health and BE
- National Defense and BEH
- Noise and BEH
- Parks and BEH
- Parking
- Pedestrians/Walking
- Physical Activity
- Policing
- Prisons
- Public Places/Spaces
- Rail and Bus Transit
- Resilient Cities
- Rural Health
- Schools and BEH
- Safety and Security of various BEs
- Sleep and BEH
- Stairways, elevators, and BEH
- Sports Facilities and BEH (stadiums, etc)
- Sustainability and BEH
- Tax Policy as BEH Policy
- Transportation (very specific topics)
- Tree Canopy and Health
- Vulnerable Populations (elderly, children, minorities, etc)
- Water Pollution and BEH

December 8, 2016
## Schedule of Weekly Classes:

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<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Required Readings and Assignments:</th>
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<tbody>
<tr>
<td>Week 1</td>
<td><strong>1. Introduction to Course:</strong> “Life, Liberty, and Happiness”</td>
<td><strong>Required Readings:</strong> (prior to next class)</td>
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<tr>
<td></td>
<td>• Overview of the course and subject area</td>
<td><em>Making Healthy Places: Preface and Introduction (Chapter 1) &amp; Chapter 9</em></td>
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<td></td>
<td>• Social determinants of health</td>
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<td></td>
<td>• Review syllabus, grading, brief introductions</td>
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<td><strong>2. Sample Radio Perspectives</strong></td>
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| Week 2 | **1. Lecture & Discussion:** Environmental Impacts on Air, Water, Vegetation, Biodiversity. Some Discussion of Climate Change and Health | **Required Readings:** |
|        | • Air Quality                                                           | *Making Healthy Places: Chapters 4, 6 & 16* |
|        | • Water Quality                                                        | Scan this, be prepared to discuss generally: |
|        | • Tree Canopies                                                        | KPCC story of AB 32 implementation and fuel fees. |
|        | • Biodiversity                                                         |                                    |
|        | • Climate change trends and BE                                         |                                    |
|        | • Natural & Man-Made Disasters: How BE can mitigate or aggravate       |                                    |
|        | • Community organizing and physical resilience                         |                                    |
2. Example of successful group project presentations by past students.

3. “Meet & Greet”:
Select presentation partners and potential topic

Look over these websites:

- [Local Government Commission](#) It is a very good group. Their next New Partners for Smart Growth national meeting is in St Louis Portland Feb 2-4, 2016
- American Lung Association is an important leader on respiratory health.  [National State of the Air](#)
- Also check out: [State of the Air Report for California](#).

### Recommended Readings:


#### Week 3

**Jan. 24**

**Needs to edited further:** this class will be led by Renee Fortier, the head of transportation and event for UCLA and by Ana Bonilla the TA for the Healthy Campus BE Well initiative. Likely will include the Westwood Village tour with the Westwood BID

- Introduction to Land Use Planning
- Draft General Plan for California
- Introduction to General Plans / Planning Frameworks
- Physical Planning: Where do things go?
- Urban Design

**Required Readings:**

- Making Healthy Places: Chapters 10 & 17

**Recommended Readings:**

- Building Health into Community Design: One Foundation’s Effort

1. Complete Radio Perspective Recording. Round 1 to submit to CCLE by Sunday, January 29th at 5:00PM.

1. Final Project groups: Try via email to set an appointment during Weeks 3 to 5 for your group’s in-person meeting with Dr. Jackson.

#### Week 4

**Jan. 31**

**1. Lecture & Discussion:**
**Walking, Chronic Disease**

- Urban River Parkways
- Obesity and Chronic Diseases
- Active Living, Fitness vs. Obesity
- Importance of Healthy Retail
- Comments on the Draft General Plan Housing as a health environment
- Tax policy, financing affordable housing
- Federal Reserve + bonds
- Super Storm Sandy
- Gentrification
- Neighborhood design (grids, access, walkability)
- Safety & perception issues, crime
- Legal Issues

**2. Student Perspectives**

**Required Readings for next class**

- Making Healthy Places: Chapters 11, 14, 18, & 20

Examine [ChangeLab Solutions Planning Website](#)

**Recommended Readings:**


1. Complete Radio Perspective Recording. Round 2 to
submit to CCLE by Sunday, Feb 5 at 5:00pm

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<tr>
<th>Week 5</th>
<th>Feb. 7</th>
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| 1. **Lecture & Discussion:**  
**Transportation and Health**  
- Injuries as leading cause of years of life lost  
- Traffic, trauma and health  
- Blood pressure, road rage, stress  
- Pedestrians: sidewalk/intersection design, walkable communities  
- Public transit, parking  
- Vehicles: SUVs, emergency vehicles  
- Comparative risks of transportation  
- Look at AB 32 and “Gas Tax”  
2. **Student Perspectives round 2** |
| **Required Readings:**  
*Making Healthy Places*: Chapters 5 & 7  
You already scanned this draft plan for California - be prepared to discuss in more depth:  
US DoT and CDC Transportation and Health Tool:  
http://www.transportation.gov/transportation-health-tool  
Dangerous by Design 2014. Transportation for America.  
Victoria Transport Policy Institute Website  
*A New Transport Safety Narrative*,  
CalTrans Strategic Management Plan 2015-2020  
**Recommended Readings:**  
*Putting Transit to Work in Main Street America: How Smaller Cities and Rural Places Are Using Transit and Mobility Investments to Strengthen Their Economies and Communities*

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<th>Week 6</th>
<th>Feb. 14</th>
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| 1. **Lecture & Discussion:**  
**Schools, Children, and Vulnerable Populations**  
- Child development, areas of exploration  
- Safe Routes to School  
- Funding, Budgets, and Legislation  
- Persons with Disabilities  
- School siting & design  
- Physical Education, Playgrounds, Recess  
- Cafeterias, food, vending machines  
- Edible School Yard  
2 Round 1 of Group Presentations |
| **Required Readings:** (for next class)  
*Making Healthy Places*:  
Chapters 3 (Food Environments) & 15 (Contact with Nature)  
*Edible School Yard*  
*HUD information on Persons with Disabilities*  
*Los Angeles County PLACE Program*  
Policies for Livable Active Communities and Environments  
*ParkScore at The Trust for Public Land* |
Week 7
Feb. 21

1. **Lecture & Discussion:**
   Parks, Greenspaces, Food Systems, and Urban Ag.
   - Urban parks, recreational spaces
   - Rural and agriculture issues
   - Farmers markets
   - Community Agriculture
   - Food Safety
   - Parkscore

2. **Guest Speaker:** TBD

3. **Lecture & Discussion:**
   PART 1: Architecture, Design, & Health
   - More on Climate Change
   - Designing for Health
   - Rebuild by Design
   - What is ‘sustainability’: Social, Economic & Environmental?
   - Energy efficiency
   - USGBC and LEED, Smart Growth, New Urbanism, AIA

1. Round 2 of Group Presentations

**Required Readings:**

Making Healthy Places: Chapters 8, 12, 13, and 19

Rebuild by Design. Hurricane Sandy Rebuilding Task Force.

AIA Local Leaders: Healthier Communities through Design

ULI Ten Principles to Build Healthy Places

ULI Business Case for Building for Health 2014

US Green Building Council Northern California Chapter Building Health Initiative

**Recommended Readings:**


Week 8
Feb. 28

1. **Lecture & Discussion:**
   PART 2: Architecture, Design, & Health, Hospitals
   - More on Climate Change
   - Designing for Health
   - Rebuild by Design
   - What is ‘sustainability’: Social, Economic & Environmental?
   - Energy efficiency
   - USGBC and LEED, Smart Growth, New Urbanism, AIA

2. **Guest Speaker:** TBD
   **Student Presentations**

**Required Readings:**

Making Healthy Places: Chapters 21, 22, & 24

2.
| Week 9 | Mar. 7 | 1. **Student Presentations** | 2. **Lecture & Discussion:**  
PART 1: Understanding ‘The System’ and Building Social Capital |
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<td>• Understanding the legal and political framework</td>
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<td>• How do we navigate?</td>
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<td>• 21st century environmentalism</td>
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<td>• Defining ‘equity’: Social, Economic &amp; Environmental?</td>
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<td>• How to build social capital at global and local scales?</td>
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<td>• Thinking about Detroit as a 20th Century casualty and its rebuilding</td>
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<td>• Creating change</td>
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<td>• How to build trust and leadership?</td>
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<td>3. <strong>Guest Speaker:</strong></td>
<td>PLACE Program</td>
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<td><strong>Required Readings:</strong></td>
<td>- review</td>
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<td>Examine the <a href="#">Congress for New Urbanism</a> Website</td>
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<td>Examine the <a href="#">Streetfilms</a> website.</td>
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<td>Examine the <a href="#">Detroit Future City</a> Executive Summary</td>
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| Week 1 | Mar. 14 | 1. **Lecture & Discussion:**  
Threat of Success; “Health Washing” and Power  
• Future of BEPH  
• What is success globally? Locally?  
• Who holds ‘power’? What is it?  
• How does ‘power’ manifest?  
• Defining and seeking justice  
• How to create a culture shift?  
21st century environmentalism  
PART 2: Understanding ‘The System’ and Building Social Capital  
Leadership |
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<td>2. <strong>Lecture &amp; Discussion:</strong></td>
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<td>1. <strong>Complete Course Evaluations</strong></td>
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