Additional Documents List
Regular City Council Meeting
February 3, 2021 (@5:05 p.m.)

Item No.	Agenda Item Description	Distributor	Document
15(1)	**Authorize City Manager to Request Authorization from Metro to Repurpose the City's Cycle 3 Open Streets Grant Award for "Award for "ArroyoFest" to Support Pandemic Recovery**	Joanna Hankamer, Planning and Community Development Director	Memo updating Staff Recommendation
15(2)	**Authorize City Manager to Request Authorization from Metro to Repurpose the City's Cycle 3 Open Streets Grant Award for "ArroyoFest" to Support Pandemic Recovery**	Joanna Hankamer, Planning and Community Development Director	Memo updating attachment(s)
17	**Public Hearing: Project No. 2171-CUP/DRX/TTM/TRP – Seven Patios Mixed-Use Residential and Commercial Project at 845/899 El Centro Street**	Joanna Hankamer, Planning and Community Development Director Kanika Kith, Planning Manager	**PUBLIC HEARING TO BE CONTINUED TO MARCH 3, 2021**
PC	**Emailed Public Comment for Item Nos: Closed Session "A"; Regular Session #2, 15, and 17**		

City of South Pasadena
Planning and Community Development Department

Memo

Date: February 1, 2021

To: Honorable Mayor and Council Members

From: Joanna Hankamer, Planning and Community Development Director

Re: **Additional Document for Item No. 15 – Authorize City Manager to Request Authorization from Metro to Repurpose the City's Cycle 3 Open Streets Grant Award for "ArroyoFest" to Support Pandemic Recovery**

Metro has authorized an extension for expenditures for Open Streets Grant Program from June 30, 2021 to December 30, 2021. In order to account for this extension, and possible future extensions beyond December 31, 2021, staff recommends changing the Recommendation Action in the staff report as such:

> **Recommendation Action**
> It is recommended that the City Council authorize the Interim City Manager to request authorization from Metro to repurpose the City's $420,000 Cycle 3 Open Streets grant award for "ArroyoFest" to support pandemic recovery through the Al Fresco Program and Implementation of Slow Streets ~~through June 2021~~.

Based on additional questions submitted from the public on this item, staff is providing the below clarifications:

1. The list of potential Slow Streets included in the letter to Metro is preliminary only, and is subject to change. If Metro authorizes the repurposing of grant funds, staff will work with the Mobility and Transportation Infrastructure Commission (MTIC) to select appropriate streets for the Open Streets program.
2. The bollards on El Centro and Meridian are proposed to provide additional pedestrian safety for the weekly Farmer's Market.
3. The traffic study proposed for closing Meridian Avenue between Mission Street and El Centro Avenue would determine if such a closure is feasible. Pending available funds, the City Council previously directed staff to study the potential to temporarily close the street segment for the Al Fresco Program; and to work with the MTIC on a recommendation to City Council upon completion of the traffic study.

City of South Pasadena
Planning and Community Development Department

Memo

Date: February 1, 2021

To: Honorable Mayor and Council Members

From: Joanna Hankamer, Planning and Community Development Director

Re: **Additional Document No. 2 for Item No. 15 – Authorize City Manager to Request Authorization from Metro to Repurpose the City's Cycle 3 Open Streets Grant Award for "ArroyoFest" to Support Pandemic Recovery**

Staff has revised the draft letter to Metro, to include minor revisions in the body of the letter, and to reflect the revised program duration (through December 31, 2021) on Exhibit A-2 Revised Scope of Work. See attached revised draft letter.

CITY OF SOUTH PASADENA

OFFICE OF THE CITY MANAGER
1414 MISSION STREET, SOUTH PASADENA, CA 91030
TEL: (626) 403-7210 ▪ FAX: (626) 403-7211
WWW.SOUTHPASADENACA.GOV

February 3, 2021

Brett Thomas
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012

RE: REVISED SCOPE OF WORK AND FINANCIAL PLAN FOR METRO OPEN STREETS GRANT

Dear Mr. Thomas:

The City of South Pasadena (City) is writing to request an administrative scope change based on the Los Angeles County Metropolitan Transportation Authority (Metro) Board of Directors' approved Motion that authorizes administrative scope changes to awarded events in the Open Streets Grant Program. The revised scope of work contains efforts related to COVID-19 response Slow Streets, including but not limited to creating spaces within the public right-of-way to support economic activity such as dining and vending; and providing education, encouragement, and monitoring for safe physical distancing in accordance with the Safer at Home Order in partnership with and supporting community-based leadership. More detail about the City's proposed scope of work is included in the attachments.

The City greatly appreciates Metro's commitment to reimburse the City for the funds that have already been expended for its Open Streets events and the flexibility to repurpose the funds to support the community during the pandemic. Should you have any questions, please contact Joanna Hankamer, Director of Planning and Community Development at JHankamer@SouthPasadenaCA.gov.

Thank you for your ongoing assistance.

Sincerely,

Sean Joyce
Interim City Manager

Attachments:
1. Exhibits A-1 and B-1 – Original Scope of Work and Financial Plan
2. Exhibits A-2 and B-2 – Revised Scope of Work and Financial Plan

EXHIBIT A-1
ORIGINAL SCOPE OF WORK

Event Name: 626 Golden Streets | ArroyoFest

Event Date and Time: Sunday, November 9, 2020 (7am-2pm)

Event Description:

626 Golden Streets *ArroyoFest* will invite the public to experience the Metro Gold Line and the historic Arroyo Seco Parkway in a truly unique fashion. Connecting the communities of South Pasadena, Pasadena, and Los Angeles, this innovative ciclovia will bridge the divide between northeast LA County's disparate transit, active transportation, and highway programs by temporarily opening 7 miles of City streets and scenic byway most commonly experienced at 50+mph. In the process event participants will have the opportunity to learn about sustainable mobility, sample local food, experience local greenways and park space, and enjoy live music, arts, and food at a historic activity hub in South Pasadena.

Event Location:

Cities of South Pasadena, Pasadena, Los Angeles.

Roles and Responsibilities:

- **Lead City** (South Pasadena) - Primary liaison with Metro staff; will facilitate event within City boundaries and support general planning.

- **Caltrans** - Coordinate use and temporary closure of the historic Arroyo Seco Parkway.

- **BikeSGV** - Non-profit partner BikeSGV will facilitate collaboration between participating jurisdictions, community organizations and stakeholder groups; develop event materials; conduct community outreach; recruit and manage event volunteers; lead event marketing/promotion; and conduct project evaluation.

Contact Information:

Margaret Lin
City of South Pasadena
Principal Management Analyst
mlin@southpasadenaca.gov
(626) 403-7236

EXHIBIT B-1
ORIGINAL FINANCIAL PLAN

The total cost of the Project is **$525,000**. The following is a description of the funding category and the corresponding funding amounts and funding source to implement the Project.

Category	Metro Grant Award	Local Match
Non-Infrastructure	$420,000	$105,000

Sources of Local Financial Assistance

Funding Source	Amount
In-kind	$105,000

Funding Resources Table:

Funding Source	Total	PC25 (Metro)	Local Match* (Grantee)
1. Metro Grant and Local Match	$525,000	$420,000	$105,000

Event Budget Table:

Item Description	Total	PC25 (80%) (Metro)	Local Match* (20%) (Grantee)
Public Outreach Program	$125,000	$100,000	$25,000
Pre-Event Planning	$185,000	$148,000	$37,000
Event Day costs (Staffing, rentals, permits, etc.)	$215,000	$172,000	$43,000
Totals	**$525,000**	**$420,000**	**$105,000**

* = In-kind local contribution as required by the Metro Open Streets Grant Program.


626 GOLDEN STREETS
ARROYO FEST
PRESENTED BY METRO
N
HIGHLAND PARK STATION
ARROYO SECO PKWY
MISSION ST
SOUTH PASADENA STATION
GARFIELD PARK
NASHUE PARK
SOUTHWEST MUSEUM STATION
ARROYO SECO PKWY
ERNEST E. DEBS REGIONAL PARK
RIO DE LOS ANGELES PARK
ELYSIAN PARK
HERITAGE SQUARE STATION
ARROYO SECO PKWY
LINCOLN CYPRESS STATION
ALHAMBRA PARK
NOV 15, 2020
626 GOLDEN STREETS ROUTE
RUTA DE 626 GOLDEN STREETS
626黃金開放街道節活動路線
FESTIVAL HUBS
CENTROS DE ACTIVIDAD
活動中心
METRO GOLD LINE STATION
ESTACIONAMIENTO DE MÉTRO GOLD LINE
金線地鐵站
OPEN STREETS
MADE POSSIBLE BY
Metro
ACTIVE SGV

EXHIBIT A-2
REVISED SCOPE OF WORK

Program Name: South Pasadena Safe, Healthy, Active Streets

Program Period: February – December 2021

Program Description:

In response to COVID-19, the City of South Pasadena proposes repurposing its Cycle 3 Open Streets grant award for "ArroyoFest" to support pandemic recovery. Funding will be utilized to cover the cost of traffic studies, traffic control management plans, traffic control device rentals, program equipment and signage, public education, and associated staff planning, setup, monitoring, breakdown, coordination, and evaluation for temporary outdoor business, active transportation safety, and Slow Streets programs.

The City has developed an Al Fresco Dining and Retail Pilot Program to provide support to local businesses during the pandemic. The City has provided businesses with options to locate within their existing off-street parking lots, sidewalks, and designated parking lanes. In order to expand the project the City will need to conduct a traffic study to analyze options to close a travel lane in each direction on Mission Street between Orange Grove Avenue and Fair Oaks Avenue; and the closure of Meridian Avenue between Mission Street and El Centro Avenue. The lane closures would be able to provide local businesses with additional space to bring their operations outside to continue conducting their businesses while maintaining social distancing protocols.

In an effort to provide space for residents to more safely walk and roll while practicing physical distancing, cities around the U.S. are creating "Slow Streets" that make it clear people may be in the roadway. These temporary interventions do not close streets to cars, they simply limit cut-through traffic and encourage the safe sharing of road space. Delivery vehicles, emergency vehicles, and people who live on these streets are still able to drive on them. This is accomplished via the use temporary barricades, cones, signage, and/or other traffic calming equipment. South Pasadena Slow Streets will build upon the experience and expertise of these early adopters by deploying Type 2 barricades, cones, and informational signage on a network of residential streets in the City of South Pasadena. Streets will be selected based on their proximity and connectivity to multi-unit housing, key destinations, transit, and dedicated active transportation infrastructure. Preliminary street selection has been informed by the network of Class III routes identified in the City's adopted 2011 Bicycle Master Plan, and includes:

- Diamond Avenue (Pine Street to El Centro Street)
- Oak Street(Meridian Avenue to Garfield Avenue)
- El Centro Street (Orange Grove Avenue to Brent Avenue)
- Brent Avenue (El Centro Street to Oxley Street)
- Oxley Street (Brent Avenue to Garfield Avenue)
- Arroyo Parkway (Pasadena Avenue to Columbia Avenue)
- Rollin Street (Diamond Avenue to Fair Oaks Avenue)

In addition, the City would like to request reallocating a portion of the funds to purchase traffic bollards to increase pedestrian safety on Meridian Avenue and El Centro Street in the heart of the City's downtown business district. As the pandemic continues, the need for outdoor space will become more important for safe shopping and outdoor business opportunities, such as the City's popular farmers market which attracts visitors from surrounding communities and neighborhoods. The use of traffic bollards will increase safety while providing adequate access for public safety vehicles, creating a more attractive option for individuals to conduct their weekly shopping in a safer outdoor environment.

Program Location:

The program will take place in the city of South Pasadena.

Roles and Responsibilities:

- **Lead** (City of South Pasadena) - Primary liaison with Metro staff; will facilitate program implementation.

- **ActiveSGV** - Will support community education, outreach, and programming.

Contact Information:

Margaret Lin
City of South Pasadena
Principal Management Analyst
mlin@southpasadenaca.gov
(626) 403-7236

Joanna Hankamer
City of South Pasadena
Planning and Community Development Director
jhankamer@southpasadenaca.gov
(626) 403-7222

EXHIBIT B-2
REVISED FINANCIAL PLAN

The total cost of the Project is **$525,000**. The following is a description of the funding category and the corresponding funding amounts and funding source to implement the Project.

Category	Metro Grant Award	Local Match
Non-Infrastructure	$420,000	$105,000

Sources of Local Financial Assistance

Funding Source	Amount
In-kind	$105,000

Funding Resources Table:

Funding Source	Total	PC25 (Metro)	Local Match* (Grantee)
1. Metro Grant and Local Match	$525,000	$420,000	$105,000

Event Budget Table:

Item Description	Total	PC25 (80%) (Metro)	Local Match* (20%) (Grantee)
Public Outreach Program			
Pre-Event Planning (including outreach)	$185,000	$148,000	$37,000
Program costs (Traffic control rentals, equipment, staffing, programming, etc.)	$340,000	$272,000	$68,000
Totals	**$525,000**	**$420,000**	**$105,000**

City of South Pasadena
Planning and Community Development Department

Memo

Date:	February 3, 2021
To:	Mayor and Members of the City Council
From:	Sean Joyce, Interim City Manager
Prepared By:	Joanna Hankamer, Planning and Community Development Director Kanika Kith, Planning Manager
Re:	Additional Document for **Item No. 17** – Seven Patios Mixed-Use Project – Request for Continuation

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Staff and the applicant are requesting the City Council to continue this project to March 3, 2021. Staff requests that the Council continues the entire public hearing, including presentation of the project, to March 3, 2021.

Attachment:

1. Request for Continuation from Applicant's Attorney

Attachment 1

Request for Continuation - Applicant’s Attorney

[redacted]

From: Richard McDonald [redacted]
Sent: Wednesday, February 3, 2021 10:53 AM
To: Sean Joyce
Cc: Teresa Highsmith; Kanika Kith; Burke Farrar; Joel C. Bryant
Subject: Seven Patios

Dear Sean - On behalf of the applicant, we would request a continuance of the City Council hearing/call for review for the above referenced project from tonight to March 3, 2021. We have spoken to the Planning and CD staff and understand they are agreeable to it. Please let me know if we this can continue the matter for only one month. Thank you.

Richard A. McDonald, Esq.
Of Counsel, Carlson & Nicholas, LLP
301 E. Colorado Blvd., Suite 320
Pasadena, CA 91101

Telephone: [redacted]
Cell: [redacted]
E-mail: [redacted]

Website: www.carlsonnicholas.com

Sent from my iPhone

Special Closed Session City Council Meeting
E-mail Public Comment 2/03/2021

AGENDA ITEM A.
Existing Litigation

1. Chris Bray
2. Stephen Rossi

From: Chris Bray [redacted]
Sent: Wednesday, February 3, 2021 3:23 PM
To: City Council Public Comment <ccpubliccomment@southpasadenaca.gov>
Cc: Steven Lawrence <[redacted]>; Jon Primuth <jprimuth@southpasadenaca.gov>; Diana Mahmud <dmahmud@southpasadenaca.gov>; Jack Donovan <jdonovan@southpasadenaca.gov>; Michael Cacciotti <mcacciotti@southpasadenaca.gov>; Evelyn Zneimer <ezneimer@southpasadenaca.gov>
Subject: Public Comment, Special Closed Session, Feb. 3, Item #1

(Public Comment, Special Closed Session, Feb. 3, Item #1, "Existing litigation," Smith v. City of South Pasadena)

Councilmembers,

You should know the answers to these questions tonight:

1.) On Friday, Jennifer Pancake told the judge that she didn't know if the other judge who signed the inspection warrant allowing city officials to enter Alison Smith's home was told that the city was engaged in ongoing litigation with Alison at the time they requested the warrant. You should know the answer to this question. (Read the warrant application and supporting affidavit yourselves -- the answer is no.)

2.) It's exceptionally convenient that the city got an "anonymous" complaint against Alison Smith just as the city happened to be involved in litigation with her, and it's exceptionally convenient that the complaint just happened to give the city the ability to inspect the portions of Alison's property that were at the center of the ongoing litigation. In what form was the complaint submitted? Can the complaint be read by the council, or otherwise reviewed, or is it a mystical chimera that has returned to the fogs of Brigadoon? What was this complaint, and where did it come from? I continue to hope that the Public Integrity Division is going to come up with the answer to this question, because I have a pretty good suspicion about the identity of the "anonymous" person who filed the conveniently timed complaint. So do you.

3.) Alison Smith claims that Craig Melicher submitted an affidavit in support of the warrant that alleged changes in Alison's house, but it was based on photographs of a neighboring house rather than photographs of Alison's house. Is this true? You should review the affidavit, look at the pictures with your own eyes, and see for yourself what your building official has told a court in your name. If you did to me what you've done to Alison, I would have filed a perjury complaint with the Public Integrity Division. You're benefitting from Alison's politeness, and it's a shame.

4.) How does Jennifer Pancake know what cars were parked in Alison Smith's driveway two years after the sewage leak?

The City of South Pasadena is **abusing** Alison Smith. This is abuse. Your lawyers have lost perspective and are taking the case personally. The legal process is out of control, and you have a

duty to regain control from lawyers who show no ability to restrain themselves. This is now a moral question. When you find your lawyer saying things like *gosh, your honor, I don't know if that other judge was told about the litigation,* you've painted yourselves into a corner. Staff isn't going to fix it, and your lawyers aren't capable of fixing it. You fix it.

Chris Bray
(South Pasadena resident)

From: Stephen Rossi <[redacted]>
Sent: Wednesday, February 3, 2021 4:02 PM
To: City Clerk's Division <CityClerk@southpasadenaca.gov>; Maria Ayala <mayala@southpasadenaca.gov>
Cc: Michael Cacciotti <mcacciotti@southpasadenaca.gov>; Evelyn Zneimer <ezneimer@southpasadenaca.gov>; Jon Primuth <jprimuth@southpasadenaca.gov>; Jack Donovan <jdonovan@southpasadenaca.gov>; Sean Joyce <sjoyce@southpasadenaca.gov>
Subject: PUBLIC COMMENT

PUBLIC COMMENT, Special closed session for Feb 3, Item #1, "Existing Litigation," Smith v. City of South Pasadena

City Councilmembers,

Yet again, there has been a fair amount of activity on social media this past week regarding the City's approach to the Smith litigation. I'd like to posit a few items for your consideration ahead of tonight's meeting:

1. The City has failed to comply with the 2011 Consent Judgement between South Pasadena and the State of California. In that consent judgment, South Pasadena was required to take proactive measures to mitigate the possibility of sewer overflows within the City. The Consent Judgement was required because of the City's historical and epic failure to maintain it's main line sewer system, literally causing Los Angeles beaches to be shut down as a result. Part of that agreement was to take CCTV video footage of 100% - yes 100% - of the main line sewer system no less than every two years. If the City failed to comply, there's a $1,000 PER DAY penalty for non-compliance. The City has likely not complied likely since 2013 - over 7 years ago.

This footage was required in order to force the City to conduct PREVENTATIVE maintenance on sewer lines. Had the City complied with this requirement, the blockage in the main line behind Smith's house would have been caught and fixed prior to an overflow on the property.

This is something that our City Attorney is supposed to ensure we as a City comply with. Our City Attorney failed in this respect.

2. Since 2013, the City has failed to comply with the policies and procedures outlined in the State-mandated and City-adopted Sanitary Sewer Management Plan. The City Attorney would have the City Council believe that the SSMP is irrelevant to a case about a sewer overflow. This is blatantly incorrect. The entire case was caused due to the City's failure to follow the City's own policies regarding how to respond to a sewer overflow as outlined in Section 6 - the emergency response plan. Part of the failure to comply was the fact that the City forgot an SSMP even existed, despite the fact that it is required to be audited for performance no less than every 2 years and readopted by the City Council no less than every 5 years.

This is something that our City Attorney is supposed to ensure we as a City comply with and audit/readopt as necessary. Our City Attorney failed in this respect.

3. In numerous instances, Colantuono, Highsmith, and Whatley have claimed that the blockage must have actually been in Smith's lateral line initially and dislodged into the main line by Smith's own workers. If this is true - or even in the slightest believable - why has the City not provided a declaration or deposition from any of the employees/consultants who were on site during the spill, on the City's behalf, to attest to this narrative? I would ask the City Attorney and her colleagues if anyone from CHW has had any discussions with the Public Works employees who were onsite, whether they concurred this was a possible answer to the problem, and if so why or why not was the City Council apprised of their responses?

4. Soil Samples: Has the City Council been provided with a copy of the soil sample results taken by the City in May 2018? If they were clean, why would the City have not presented that as part of the case to show that no issues existed with Smith's back yard? If they aren't clean, has the City Council ever been apprised of this information? Further, if the soil samples aren't clean…why has the City refused to tell the resident for 3 years that there was an environmental hazard on their property?

Highsmith can claim what she wants - but Judge Kralik was clear in his ruling on Friday. The City should not be using anti-SLAPPs to prevent residents from protecting themselves from City abuse of power. Between CHW's fees for the making the SLAPP claim, and the likely attorney fees spent by Smith's attorney to defend it…successfully I might add….the City is likely now on the hook for at least another $100K of attorneys fees that didn't need to be spent. Now there's talk of filing an appeal. Sure, rack up another $100K of fees that the City will have to cover.

However, don't forget that the crux of this case is a sewer spill. A sewer spill that was in the City's main line. A sewer spill that our former City Manager decided NOT to clean up. A sewer spill that regardless of whether you think the resident should have known a backflow valve would be useful (despite the City's own website saying it was only "recommended" not "required"), the moment Ms. Smith called the City with notification of sewage seeping onto her yard, the City was REQUIRED to comply with the City's own SSMP protocols. Protocols that the City forgot even existed. Primarily because our City Attorney failed in her job to ensure that the City was compliant with law.

Stephen Rossi
Resident

Regular City Council Meeting
E-mail Public Comment 2/03/2021

AGENDA ITEM NO. 2
General Public Comment

1. Jonathan Hawes
2. Ella Hushagen

From: Jonathan Hawes <[redacted]>
Sent: Monday, February 1, 2021 12:04 PM
To: City Clerk's Division <CityClerk@southpasadenaca.gov>
Subject: Public comment for next city council meeting

Good evening. My name is Jonathan Hawes. I served as El Monte City Clerk from 2013 to 2018. Since 2015 I have been a whistleblower on Andre Quintero and Team El Monte's embezzlement of $10 million from the El Monte Promise Foundation scholarship fund. I have interviewed dozens of El Monte residents who have privately confirmed that Promise funds were used for fraudulent trips to Vietnam and Haiti, a bogus consultant in Salt Lake City, house repairs, and other criminal activities. I have myself been interviewed by the FBI about two dozen times. Documents proving the embezzlement have been submitted to the FBI and the District Attorney's Office and are now available to the public online (https://drive.google.com/file/d/1mH4CC1BCQtj4Lwa7ne9uR33Jf_yZlVrH/view?usp=sharing). I am asking the South Pasadena City Council to call out these crimes and protect the vulnerable residents of one of the poorest cities in southern California. El Monte children, who should've been provided with college scholarships, were robbed. Andre Quintero and Team El Monte members must go to prison. If you have any questions, please call or text me at [redacted]. Thank you.

February 3, 2021
General Public Comment, Open Session

We heartily applaud South Pasadena's Planning Department for proposing an inclusionary zoning ordinance. We are asking the Councilmembers to endorse key components of the draft ordinance, and instruct the Planning Commission to move swiftly to finalize its recommendation.

The Planning Department's ordinance will maximize affordable housing development in the city. New housing developments with more than 10 units will be required to include between 15% to 20% affordable units, and developments with more than 25 units will have to build 20% affordable units. These robust requirements for affordable development are on par with what the city of Pasadena requires. Pasadena has observed no disincentive to development since strengthening its inclusionary zoning ordinance.[1]

We support the Planning Department's decision to allow developments with three or fewer units to pay in-lieu of fees rather than develop affordable units. This provision will optimize South Pasadena's development of affordable housing by not taking smaller developments with four or more units off the table. In-lieu of fees are generally ineffective. Small cities face special challenges in collecting and leveraging such fees to develop affordable housing.

It is imperative for South Pasadena to adopt an aggressive ordinance, and quickly. First, and most critically, your constituents in South Pasadena support development of affordable housing. The pandemic has illustrated the grave public health crisis caused by a lack of affordable housing in our broader community: people forced to crowd into apartments and houses to make the rent are infected with and die from COVID-19 at significantly higher rates than people who do not live in overcrowded housing.[2] COVID-19 deaths in our greater Los Angeles County are disproportionately impacting Black and Latinx households—increasing by 1000% from November to January—due largely to overcrowded housing and the lack of affordable housing which increases the spread of the virus.[3] This is neither the first nor last public health crisis we will face. The city's moral responsibility to build affordable housing has never been more stark.

Second, the city has fallen far behind in the production of affordable housing. ***In six years, from 2013-2019, the city produced merely 10 affordable units*** out of 93 total units. The city has approved a number of developments in the heart of downtown that contain zero affordable units, like Mission Bell and Seven Patios. The ordinance is designed to make up ground on this disappointing record.

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[1] PASADENA NOW, January 25, 2021, "Developers Not Discouraged by Inclusionary Housing Ordinance Amendment." Available online at https://www.pasadenanow.com/main/developers-not-discouraged-by-inclusionary-housing-ordinance-amendment/

[2] Mejia, Brittny, LOS ANGELES TIMES, January 29, 2021, "When coronavirus invaded their small apartment, children desperately tried to protect dad." Available online at https://www.latimes.com/california/story/2021-01-29/how-overcrowded-housing-led-to-covid-death-la-family

[3] Lin, Rong-Gong & Money, Luke, LOS ANGELES TIMES, January 30, 2021, "Latino COVID-19 deaths hit 'horrifying' levels, up 1,000% since November in L.A. County." Available online at https://www.latimes.com/california/story/2021-01-29/la-latino-covid-19-deaths-up-1000-percent-since-november

Finally, South Pasadena appealed its RHNA allocation on the basis that the city is built out and no room remains for new construction. The appeal was unsuccessful; the city would be prudent to operate as though the RHNA allocation will stand. If space is a precious commodity, South Pasadena must optimize remaining sites to develop 1,151 affordable units required by state law.

At the Planning Commission meeting, a number of the commissioners expressed concern that the ordinance seemed rushed. It is not. Inclusionary zoning has been on the city's agenda since 2018. There have been multiple stakeholder meetings about it. The commissioners have previously lamented their inability to require developers to build affordable units without an inclusionary zoning ordinance.

We agree with Commissioner Padilla, who appealed to her colleagues that, "speaking from [her] heart," the inclusionary zoning ordinance is the most critical work the Planning Commission has before it. Commissioner Padilla urged her colleagues to be bold. She cast doubt on fears that the ordinance will deter developers from building in South Pasadena. After all, South Pasadena has the trifecta of outstanding schools, metro access, and walkable streets.

We ask the Council to direct the Planning Commission to recommend the Planning Department's inclusionary zoning ordinance at its next upcoming meeting, and send it to the City Council for first reading by **February 17, 2021**.

Signed,

1. Sean Abajian
2. Alexander Aquino
3. Ahilan Arulanantham
4. Anne Bagasao
5. Kerrie Barbato
6. Matthew Barbato
7. Chris Becker
8. Robin Becker
9. Sierra Betinis
10. Katrina Bleckley
11. Felicie Borredon
12. Laurent Borredon
13. Anny Celsi
14. Janna Conner-Niclaes
15. Frederick Eberhardt
16. Jonathan M. Eisenberg
17. Richard Elbaum
18. Owen Ellickson
19. Alan Ehrlich
20. Justin Ehrlich
21. Stephanie Ehrlich
22. Betty Emirharian
23. Sarah Erlich

24. Margaret Farrand
25. Will Hoadley-Brill
26. Laboni Hoq
27. Che Hurley
28. Ella Hushagen
29. Phung Huynh
30. Amy Davis Jones
31. Mariana Huerta Jones
32. Amber Jaeger
33. Caroline Kimbel
34. Kristen Kuhlman
35. Caitlin Lainoff
36. Tony Lockhart
37. Ian Marshall
38. Jan Marshall
39. Richard Marshall
40. Robin Meyer
41. Abby McCrate
42. Jenny Munninopas
43. Ayaka Nakaji
44. Raf Niclaes
45. Joanne Nuckols
46. Victoria Patterson
47. Noah Perez-Silverman
48. Sarah Perez-Silverman
49. Myron Dean Quon
50. Alexandra Ramirez
51. Minoli Ratnatunga
52. Allie Schreiner
53. Barrett Schreiner
54. Andrea Seigel
55. Delaine Shane
56. Alexandra Shannon
57. Sean Singleton
58. Allison Smith
59. Christopher Smith
60. John Srebalus
61. Levi Srebalus
62. Kathleen Telser
63. Andrew Terhune
64. Casssandra Terhune
65. Helen Tran
66. Jean Yu

Regular City Council Meeting
E-mail Public Comment 2/03/2021

AGENDA ITEM NO. 15
Authorize the Interim City Manager to Request Authorization from Metro to Repurpose the City's Cycle 3 Open Streets Grant Award for "ArroyoFest" to Support Pandemic Recovery

1. Laurie Wheeler

From: Laurie Wheeler <[redacted]>
Sent: Wednesday, February 3, 2021 2:09 PM
To: City Council Public Comment <ccpubliccomment@southpasadenaca.gov>
Subject: Open Session, Agenda Item 15

This is public comment for the open session of the February 3, 2021 City Council meeting, agenda item 15.

The South Pasadena Chamber of Commerce is in support of the authorization request to repurpose the Metro Open Streets grant funding to locally support pandemic recovery for our business community. The grant funding was to be used originally to encourage outdoor healthy activities at the popular Open Streets event. This repurposed request keeps that original mission in focus, as it directs the funds more appropriately and timely during this unprecedented COVID pandemic.

Among the items that are included in the proposal are retractable bollards for the Meridian and El Centro area. The subject location is adjacent to the Gold Line station and is the site of the weekly South Pasadena Farmers' Market that temporarily uses public streets during setup, event, and take down. The bollards will significantly improve the safety of the pedestrians and vendors at the market. This area is also used often for city and community outdoor events; enhanced safety will increase these opportunities, greatly reduce liability for the city and all involved in managing events here, and help make this location the safest place it can be for all.

Community initiated traffic studies will provide additional information and insight as other options are considered to implement a Slow Streets or walkable village program to allow more outdoor activities, that will, in turn, help to enhance the downtown shopping and dining experience for patrons and ultimately provide more business vitality for our community.

Also included in the request is funding for additional signage that could include needed visible directional signage to public parking areas. This will help all the businesses by assisting customers to the many available parking lots in and around the business district that are not as first visible or known to potential out of town customers.

Thank you for your consideration and this opportunity to provide input.

Warm Regards,
Laurie

Laurie Wheeler
President/CEO
South Pasadena Chamber of Commerce

Regular City Council Meeting
E-mail Public Comment 2/03/2021

AGENDA ITEM NO. 17
Public Hearing: Project No. 2171-CUP/DRX/TTM/TRP – Seven Patios Mixed-Use Residential and Commercial Project at 845/899 El Centro Street

1. Delaine Shane
2. Victoria Fierce
3. Matthew Gelfand
4. Tara Kawakami

From: D. Shane <[redacted]>
Sent: Monday, February 1, 2021 7:41 PM
To: Maria Ayala <mayala@southpasadenaca.gov>; City Council Public Comment <ccpubliccomment@southpasadenaca.gov>
Cc: Diana Mahmud <dmahmud@southpasadenaca.gov>; Michael Cacciotti <mcacciotti@southpasadenaca.gov>; Evelyn Zneimer <ezneimer@southpasadenaca.gov>; Jack Donovan <jdonovan@southpasadenaca.gov>; Jon Primuth <jprimuth@southpasadenaca.gov>; Sean Joyce <sjoyce@southpasadenaca.gov>; Tamara Binns <tbinns@southpasadenaca.gov>; Joanna Hankamer <jhankamer@southpasadenaca.gov>; Kanika Kith <kkith@southpasadenaca.gov>; Shahid Abbas <sabbas@southpasadenaca.gov>; Janet Braun <[redacted]>; Lawrence Abelson <[redacted]>; Kim Hughes <[redacted]>; John E. Fisher <[redacted]>
Subject: City Council Meeting for February 3rd: Public Comment Agenda Item No. 17: Project No. 2171-CUP/DRX/TTM/TRP – Seven Patios Mixed-Use Residential and Commercial Project at 845/899 El Centro Street
Importance: High

Hello Maria:

Enclosed please find my public comment letter in response to City Council Agenda Item No. 17 (i.e., Appeal of Planning Commission's Approval of Seven Patios Mixed-Use Development Project and CEQA Documentation). The first pdf file is the letter plus three attachments (A, B, and C).

FYI, Attachments A and B are my previous comment letters to the Planning Commission in 2020. Three additional exhibits that were part of my first comment letter (Attachment A) are included as background information should the newly elected City Council Members need to refer to such documentation. Unfortunately, I am not able to combine those pdf files with Attachment A.

What is newly presented in this email is the seven-page comment letter to the appeal and Attachment C.

Thank you for your efforts.

February 1, 2021

South Pasadena Mayor and City Council
1414 Mission Street
South Pasadena, CA 91030

Subject: Seven Patios Mixed-Use Residential & Commercial Project (No. 2171-CUP/DRX/TTM/TRP) City Council Agenda Item #17 for February 3, 2021

Dear Mayor Mahmud and City Council Members:

Please do not adopt a Resolution on February 3rd upholding the Planning Commission's adoption of a Mitigated Negative Declaration (MND), its Mitigation Monitoring and Reporting Program, and its approval of the subject Project with related permit conditions. The environmental review of the Seven Patios Project (Project) does not comply with the California Environmental Quality Act (CEQA). A focused environmental impact report (EIR) should have been prepared and processed instead of the MND, along with a proper soil bore sampling program for testing the presence of possible contaminants.

Pertinent California Code of Regulations (CCR)
(Title 14, Division 6, Chapter 3)

According to the *State CEQA Guidelines*, § 15063(b)(2): "The Lead Agency shall prepare a Negative Declaration if there is no substantial evidence that the project or any of its aspects may cause a significant effect on the environment."

Additionally, § 15070(b)(2) of the *State CEQA Guidelines* states that an MND can be prepared when: "The initial study identifies potentially significant effects, but: (1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment."

The main takeaway from these two sections is that the overall finding in any MND is that a proposed project, when constructed and operated, must not cause a "significant effect[1]" on the physical environment based on "substantial evidence[2]."

[1] 14 CCR § 15382: "**Significant effect on the environment**" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

[2] 14 CCR § 15384: (a) "**Substantial evidence**" as used in these guidelines means enough relevant information and reasonable inferences from this information that **a fair argument** can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence.

Potentially Significant Environmental Impacts Not Addressed in MND

While several environmental issues should have been analyzed in depth and within the context of an EIR (see Attachments A and B), for this appeal, two issues are presented for your consideration: unknown, buried hazardous materials/wastes and cumulative traffic impacts.

Unknown, Buried Hazardous Materials/Waste

The Project site is located at 845 El Centro Street/832 Orange Grove Place, with a common reference of 899 El Centro Street. Within this site, a warehouse at 855 El Centro Street once stood as noted on an old Sanborn Fire Insurance Map, as well as some residential structures elsewhere on the proposed Project.

Converse Engineers conducted a Phase I Environmental Site Assessment (ESA) and the final report is Appendix D to the MND. No soil bore testing program for contaminants was done. A walk through (on a property that is developed—building and parking lot with some trees), limited literature and map review, and government hazmat database queries were carried out as part of the ESA effort.

Unknown, Buried Hazardous Materials/Waste—Sources and Contract Planner's Response

As presented in Attachments A and B, a high probability exists for unknown, buried contamination from at least three different sources (a roofing company onsite, nearby train activities, and residential refuse—either burned or buried in the early to mid20th century). The contract planner for the City responded that no significant hazmat sites were noted in the government databases pertaining to these issues, that the surface was fill material, and that Fisk & Mason Roofing Company was not on the site because there was no building permit in the City's archives. In fact, the ESA report does note the existence of Fisk & Mason, but only occurring from a reference from the 1958 City Directory for South Pasadena (see Attachment C).

Unknown, Buried Hazardous Materials/Waste—High Probability Still Exists

Since the Project will entail two subterranean levels for parking, as well as the construction of a mixed-use development, a fair amount of excavation and grading will occur onsite. The top layer of pavement, building, and fill will be removed. However, what exactly lies below that is not known and therein lies the concerns. A carefully planned out series of soil borings at certain depths based on where older structures existed would aid greatly in answering such concerns.

It is naïve to think that the sediments are absolutely "clean" soil beneath the current structures. I personally witnessed the same attitude when I was an environmental consultant with the Metropolitan Water District of Southern California in the early 1990s. When the new headquarters was to be built adjacent to the Union Station off Alameda Street, nothing

(b) Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.

underground was expected per the CEQA analysis. After several feet of fill was removed for the two subterranean parking levels, many surprises came to light. Old underground storage tanks with contaminated oils were removed and the site was remediated. Also, an array of thousands of archeological materials and artifacts were discovered including portions of the original Los Angeles Chinatown, the Red-Light District adjacent to Union Station, a winery owned and operated by Matthew Keller (an early agriculturalist, vintner, and distiller in Los Angeles), and a mix of residential homes. With regards to Native Americans sites, two distinct burial grounds (one area with cremations and one other site with intact skeletal remains) were uncovered as well and later reburied in an undisclosed location with participation by the local Native Americans.

Attachment C shows the history, as best I could research under these pandemic conditions, the fact that Fisk & Mason was in South Pasadena at 855 El Centro starting in the late 1920s through the mid/late 1950s. They dealt with roofing materials but also other construction activities. The fact that there is no building permit for this company does not negate the evidence in Attachment C. Has the City a perfect record keeping system for its official documentation from one hundred years ago? Could the company have operated without a business permit? Whatever the consultant was unable to find, the City Archives (City Council Meeting Minutes) does indicate that Fisk & Mason was paid in 1927 for some service they provided to the Water Department at the charge of $4.80. Hence, Fisk & Mason was known to the City at that time. The attachment also includes an *LA Times* ad from the 1930s, four WWII draft cards of gentlemen signing up to serve our country while indicating their employer was Fisk & Mason, and one being a mechanic. Other evidence of the 1950s is also provided, including a 17-month picket of the company because the Union wanted the employees to be unionized. The evidence clearly supports the fact that this company was physically at 855 El Centro from the late 1920s to the mid/late 1950s.

What were the construction practices of Fisk & Mason in that era? It would also seem that they might have had some vehicles that required maintenance given the presence of at least one mechanic in the late 1930s or early 1940s. How were unused materials no longer needed after a job was done, and today possibly deemed as hazardous materials, disposed of by this company? Where did the lubricants and oils from vehicles and machinery go? I have absolutely no idea, but on a large site with a warehouse, there are always possibilities, especially during the era of when this company operated.

Converse Engineers did note that there were a small number of residential units in the early 20th century. How was the residential refuse disposed of? Was it burned or buried? Even if the refuse was burned, the ashes would have been buried and would undoubtedly contain contaminants. The Union Station site example I mentioned previously for Metropolitan's headquarters contained several remnants of outhouses and cisterns with loads of refuse that were uncovered once the surface area was excavated. Are there possible sites at the current Project site? We do not know because the surface was disturbed with the construction of the parking lot and office building. At the Metropolitan site, it too had a parking lot and the building (before it was razed) was a two-story baggage handling facility for Union Station passengers.

Being adjacent to a railroad track is also of concern. This line predates the Gold Line and the previous tracks were undoubtedly made partly of wood. Such wood was routinely coated with

creosote and other cancer-causing/toxic chemicals to make them last longer against the effects of the sun and rain. Other rail activities, including emergency maintenance activities could have been done adjacent to the Project site. Such contaminants can occur and leach into the ground.

With respect to another rationale presented by the contract planner, how could anyone think that every single hazmat site would be listed in one of the several government databases that was examined in the Phase 1 ESA report? The databases only list KNOWN hazmat sites.

Just like a list of known archaeological sites are managed by the State Historic Preservation Office (SHPO), given the right conditions, an unknown archaeological site can be encountered during excavation related to new development (whether the site is a vacant lot, a grassy knoll, or already disturbed by some previous development). It is then the responsibility of the professional archeologist, when encountering a previously unknown archaeological site, to report the new finding to SHPO for inclusion into its database.

This archaeological update process of listing newly identified archeological sites is somewhat similar as well for hazmat databases operated by the various government agencies tasked to monitor hazmat sites. Once new hazmat sites are found by accidental/emergency spills, accidental discovery during excavation, or soil bore testing, the environmental compliance professional then reports to the concerned government entity or entities so that the update is made in the applicable computer databases.

The question is why would our City risk exposing its residents and construction workers to possible unknown, buried contamination in the soils based on no examination of the soils given the site's historical uses? Why not carry out a well-conceived soil bore testing program, analyze the results, and then develop feasible mitigations, as required under CEQA and the *State CEQA Guidelines* before the Project is approved?

If one argues that the possibility of finding contamination is speculative, then why is the applicant agreeing to Native American monitoring for unknown buried tribal cultural resources? Because there is a high degree of possibility of finding such resources. The Project site is not far from the Arroyo Seco and the occupation of the Gabrielinos in the region is well documented. The same rationale holds true with the high potential for unknown buried contamination, given the historic use of the Project site for over 100 years through urbanization and industrialization.

Unknow, Buried Hazardous Materials/Waste—Recommendation: Focused EIR/Soil Sampling

Given the information provided in this letter and its attachments concerning pre-existing sources of contamination, substantial evidence of possible unknown, buried contamination exists. Particular concern of encountering buried contaminants would be during ground-disturbing activities associated with the construction phase of the Project. This activity could therefore result in a potentially significant environmental impact. Hence, a fair argument[3] can be made for

[3] 14 CCR § 15064(f)(1): (f) The decision as to whether a project may have one or more significant effects shall be based on substantial evidence in the record of the lead agency.

preparing a focused EIR for this Project. An analysis in a focused EIR, backed by a qualified soil sampling program onsite with applicable mitigation measures to avoid or substantially reduce significant contamination, is the best outcome for all and is legally defensible.

Cumulative Transportation Analysis Lacking

An MND is not required to have a cumulative impact analysis; however, one was done, albeit, insufficiently. Appendix F to the MND is the traffic study report by GANDDINI Group Inc.

On page 30, Table 4, the following related projects are identified:

Table 4
Other Development Trip Generation

ID	Project Description	Quantity[1]	AM Peak			PM Peak			Daily
			In	Out	Total	In	Out	Total	
SP1	1101-1115 Mission Bell Mixed-Use Development								
	Apartments	36 DU	--	--	--	--	--	--	--
	Specialty Retail	2.325 TSF	--	--	--	--	--	--	--
	High-Turnover Restaurant	2.142 TSF	--	--	--	--	--	--	--
	Café-Style Restaurant	0.797 TSF	--	--	--	--	--	--	--
	Existing Retail & Restaurant Uses to be Displaced	-9.480 TSF							
	Subtotal - Mission Bell Mixed-Use [2]		*30*	*35*	*65*	*30*	*22*	*52*	*504*
SP2	Mission Street Project								
	Multi-Family Housing	38 DU	19	2	21	10	18	28	304
	General Office	3.585 TSF	5	1	6	1	4	5	39
	Subtotal - Mission Street [3]		*24*	*3*	*27*	*11*	*22*	*33*	*343*
SP3	South Pasadena Downtown Revitalization Project								
	Condominiums	210 DU	3	17	20	16	8	24	264
	Senior Housing	9.000 TSF	0	0	0	1	0	1	42
	Bowling Alley	208 DU	11	8	19	7	14	21	200
	General Office	5.029 TSF	12	2	14	2	11	13	98
	Specialty Retail	600 DU	0	0	0	17	22	39	633
	Quality Restaurant	13.872 TSF	0	0	0	24	12	36	728
	High-Turnover Restaurant	172 DU	18	17	35	11	7	18	366
	Subtotal - Downtown Revitalization [3]		*44*	*44*	*88*	*78*	*74*	*152*	*2,331*
SP4	625 Fair Oak Ave Senior Housing Mixed-Use[4]	86 DU	7	14	21	15	10	25	367
TOTAL OTHER DEVELOPMENT TRIPS GENERATED			**105**	**96**	**201**	**134**	**128**	**262**	**3,545**

Notes:
(1) TSF = Thousand Square Feet; DU = Dwelling Units
(2) Source: Traffic Study for the Mission View Mixed-Use Development Project , Table 8, page 34 (Gibson Transportation Consultants, Inc., January 2017).
(3) Source: Traffic Study for the Mission View Mixed-Use Development Project , Table 5, page 26 (Gibson Transportation Consultants, Inc., January 2017).
(4) Source: ITE Trip Generation Manaul (10th Edition, 2017), Land Use Code 251.

(1) If the lead agency determines there is substantial evidence in the record that the project may have a significant effect on the environment, the lead agency shall prepare an EIR (Friends of B Street v. City of Hayward (1980) 106 Cal. App. 3d 988). Said another way, if a lead agency is presented with a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect (No Oil, Inc. v. City of Los Angeles (1974) 13 Cal. 3d 68).

This is information from 2017 and so many more development projects are well now known within the context of the soon to be released 2021 General Plan Update, the new proposal at the former SPUSD schoolyard, the eventual redevelopment of Carrows, as well as neighboring cities including The Villages of The Alhambra at 1000 South Fremont Avenue in the City of Alhambra. Many more are in the planning horizon, whether an application has been officially submitted or not to the Planning Department. To not conduct a thorough analysis of traffic patterns with these proposals, including major known developments in Alhambra, Pasadena, and City of Los Angeles (El Sereno, Garvanza, and Highland Park), makes the traffic study for the Project above simply useless for predicting and forecasting future transportation cumulative impacts. The whole point of CEQA is to provide full disclosure of the potentially significant impacts to the public and the decision-making body. The current study falls short of that expectation. For example, the description of The Villages will have a substantial environmental impact to the region, including cumulative traffic patterns and congestion in South Pasadena:

> "The proposed project is a redevelopment of a 20.61-acre portion of the Alhambra with residential uses and a parking structure. The project would retain 912,146 square feet of existing office space, demolish approximately 104,242 square feet of office, industrial and storage buildings, and construct 516 new for-sale dwelling units in stacked flat and townhome configurations, 545 new rental apartments in 5-story stacked flat configurations, and one 490-stall parking garage."

It is also a fact that the GANDDINI Group Inc. traffic study was never reviewed nor recommended to the Planning Commission for approval by the former Freeway and Transportation Commission, the former/current Public Works Commission, or the newly formed Mobility and Transportation Infrastructure Commission. There was/is a wealth of considerable knowledge and expertise from MTIC Commissioners that could provide meaningful review and further guidance to the applicant and to the City to fully comply with CEQA with respect to traffic and its circulation patterns.

Cumulative Transportation Analysis—Recommendation

Let the MTIC review and comment on the traffic study, especially with regards to cumulative impacts. If a focused EIR is ultimately required by the City Council because of the lack of information and analysis regarding unknown, buried hazardous materials and waste contamination, then the cumulative traffic analysis should not only include a more robust list of related projects, including those outside of the City's jurisdiction, but also that a proper traffic study on vehicle miles traveled (VMT) rather than levels of service (LOS) be carried out. This VMT requirement from the State is for projects that required EIRs to be published after July 1, 2020 (Senate Bill, Steinberg, 2013).

Other issues, including the lack of affordable units, can be found in Attachment A.

Finally, I am not against our City having new development. But that development must be assessed correctly and adequately to comply with CEQA and the *State CEQA Guidelines*, along with related environmental laws and regulations. As a retired environmental planner with over

37 years of experience, my professional views are that the MND does not fully disclose potentially significant environmental impacts as stated in this letter and attachments, nor does it attempt to mitigate those potentially significant impacts related to unknown, buried contamination in the soil or to those impacts generated by the Project in conjunction with cumulative traffic from various proposed developments inside the City and nearby in neighboring cities.

Thank you for the opportunity to comment on this appeal. I commend Mayor Pro Tem Michael Cacciotti and former Interim Council Member Stephen Rossi for requesting this appeal and thereby allowing residents another chance to voice legitimate concerns concerning this Project that will greatly affect the community.

Sincerely,

Delaine W. Shane

Delaine W. Shane
2003 Meridian Avenue
South Pasadena, CA 91030
wehoa_402@outlook.com

cc: City Manager
Public Works Director
Planning Department Director
Senior Planning Manager
Planning Commission
Mobility and Transportation Infrastructure Commission

ATTACHMENT A:

COMMENT LETTER DATED JULY 29, 2020

Please note that Attachments 2-4 to this original letter are pdf files that are included in the email for the appeal request (and are not in this electronic file) as well as part of the Final MND packet approved by the Planning Commission.

July 29, 2020

City of South Pasadena

Attention: Kanika Kith, Planning Manager
1414 Mission Street
South Pasadena, CA 91030
Email: kkith@southpasadenaca.gov

Subject: Seven Patios Project—Proposed Mitigated Negative Declaration

Dear Ms. Kith:

As a concerned resident of South Pasadena and a retired environmental planner with 37 years of experience in CEQA analysis, I have reviewed the Seven Patios Project Mitigated Negative Declaration (MND). Informed by Sections 15105 and 15072 of the *State CEQA Guidelines,* I am submitting my comments to the City of South Pasadena during the public review period, in particular the attachments to this letter, to add a more robust discussion on the issues created by this Project and what sorts of mitigations need to be applied that are not presented in the MND.

As you know, the MND functions as full public disclosure of the impacts (both direct and indirect) that Seven Patios may generate and what mitigations need to be adopted to ensure that potentially significant impacts are reduced to less than significant with mitigation. The legal gold standard between an MND and an Environmental Impact Report (EIR) is that ALL potentially significant impacts (no matter how rare) are mitigated to less than significant in an MND (*State CEQA Guidelines*, Section 15371). An EIR is not held to that standard and is given sometimes a "free pass" when a Statement of Overriding Considerations is adopted by the lead agency's decision makers.

The MND, as currently written, has several environmental issues that are not fully analyzed and possibly may require mitigation. Attachment No. 1 to this letter offers specific comments. Broadly speaking, the analyses of air toxics (especially with respect to the lack of analysis for Orange Grove Park and Arroyo Vista Elementary School), potentially contaminated soils due to industrial and residential uses (see next paragraph), hazardous waste practices, housing (affordability and RHNA), traffic, public utilities, and public services are narrowly examined and use the general plan to opt out of any responsibility on the part of the developer to fully mitigate the Project's share of impacts to the community. It also appears that meaningful consultation with responsible agencies, such as L.A. Metro, were either not conducted or the consultant team failed to disclose the specifics to the public.

A key omission is the existence of Fisk & Mason Roofing Company. This company was not noted in the Phase I, ESA Report (Appendix D) but was indeed on the Project site between 1927 and mid1950s. Appendix D found that a warehouse was present on the Sanborn Fire Insurance Map of 1928. Unfortunately, the consultant did not pursue this warehouse use in the report. Construction practices of this era would indicate a high likelihood that production, storage, and disposal of building materials and hazardous wastes would be suspect and would require soil sampling and soil boring for depths to the second level parking structure. Additionally, sanitary landfills did not come into practice until the 1940s leading one to wonder what did the residents and businesses do on the Project site between the late 1890s to the 1940s in terms of refuse disposal? Could there be creosote contamination from the wooden ties from the original railway bordering the Project site? We simply do not know from reviewing the MND or Appendix D.

Of equal concern are the projected increasing vehicle numbers (i.e., ADT numbers) from currently 9,800 at Meridian Avenue and Monterey Road to at least 10,200 in matter of two or three years. Save Meridian Avenue for Its Residents (SMART) Families support traffic calming measures to mitigate pedestrian safety. The proposed Project will further exacerbate the dangerous situation in an indirect, significant impact both specifically and cumulatively. The developer and/or the City need to install traffic calming measures to ensure pedestrian safety with the increases to this collector street that normally should be for traffic volumes between 3,000 to 6,000 ADT.

It is also unfortunate, but for those of us that don't want to unnecessarily expose ourselves to the COVID pandemic by going to the City Hall Administration Building, shouldn't the City have posted links to all documents referenced in the MND? Section 15072(g)(3) of the *State CEQA Guidelines* requires that such documentation be made available to the public during the public review period. In fact, isn't it the case where the Building's availability has been shut down for the near term due to HVAC issues?

For detailed specifics on my comments to the MND analyses and conclusions, please refer to the four attachments, especially Attachment No. 1.

Thank you.

Sincerely,

Delaine W. Shane

Delaine W. Shane

2003 Meridian Avenue
South Pasadena, CA 91030
wehoa_402@outlook.com

Attachment No. 1: Specific Comments on Seven Patios MND

Attachment No. 2: Internet Information on Shingles and Treatment

Attachment No. 3: L.A. Times Article on Usage of Mission-Meridian Garage and No MTA Commuters

Attachment No. 4: SouthPasadenan Article on Meridian Avenue Collisions

[Attachments 2-4 are included in the email and not added here.]

<table>
<tr><th>No.</th><th>Location of Concern</th><th>Concern</th><th>Comment</th></tr>
<tr><td>1</td><td>P. 1-2</td><td>Existing Planning Documents-No Explicit Mention of SCAG's 5th RHNA Planning Cycle</td><td>Though listed as broadly termed "housing" in the approved General Plan, the bullet listing of documents reviewed in preparing the proposed MND should also include explicitly the approved 2014-2021 RHNA projections for SCAG's 5th planning cycle.
Taken from Table VI-24 on page 32 of the Housing Element, : https://www.southpasadenaca.gov/home/showdocument?id=4066
<table><tr><th colspan="2">Regional Housing Assessment 2014-2021</th></tr><tr><td>Total Construction Need</td><td>63</td></tr><tr><td>Very Low Income</td><td>17</td></tr><tr><td>Low Income</td><td>10</td></tr><tr><td>Moderate Income</td><td>11</td></tr><tr><td>Upper Income</td><td>25</td></tr></table></td></tr>
<tr><td>2</td><td>P. 2-8/ P. 3-1</td><td>Permit Approvals-Is the Listing Complete?</td><td>Are there other City approvals that are required to implement this Project such as a demolition permit and a grading permit? Street closure permit? Fire Department clearance? Building occupancy clearance? A full listing of all City approvals needs to be provided so that the environmental document can be relied on for all such future permits.</td></tr>
<tr><td>3</td><td>P. 2-20, Section 2.5/ P. 3-2</td><td>Outside Agency Approvals-Is the Listing Complete?</td><td>The listing for other agencies, especially responsible agencies, does not appear to be complete. See L.A. Metro: https://media.metro.net/projects_studies/joint_development/images/mad_factsheet.pdf.
"To ensure safety, developers, utility companies, and other third parties must consult with Metro for development, construction, and maintenance activities occurring within 100 feet from Metro right-of-way (ROW) and other real estate assets."
The Project site to the east is bordered by the Gold Line rail right-of-way (R-O-W). Additionally, the Gold Line station is relatively close by, where construction traffic and street closures could indirectly impact L.A. Metro's facilities and access by train riders to the Gold Line station. Did the preparation of the proposed MND involve consultation with L.A. Metro? Did the proposed MND consider potential Best Management Practices (BMP), conditions, or mitigations that L.A. Metro could require during the construction and operation of the Project, that in turn may cause Project impacts to the physical environment in the areas of traffic, parking, and transit?</td></tr>
<tr><td>4</td><td>P. 4.3-6</td><td>Cumulative Air Quality Analysis Does Not Specifically consider Orange Grove Park, AV Elementary, or</td><td>The air quality analysis in Section 4.3 does NOT specifically call out Orange Grove Park and the children activities that normally occur during the year, including after-school programs, competitive sporting activities at the field area, and Camp Med. This sensitive receptor is very near to the Project site and would be impacted by the Project in conjunction with potential construction activities by Mission Bell Project and possibly other developments, such as a proposed hotel on the former South Pasadena Unified School District, that could occur in the next couple of years or so. Therefore, the LST threshold should have been at a 500-meter radius as opposed to merely 25-meter radius to include the playground and facility at Orange Grove Park. Additionally, while somewhat beyond the quarter mile (roughly 0.4 mile) lies the Arroyo Vista Elementary School with nearly 700 students. The City's obligation to ensure that these children are not impacted during the</td></tr>
</table>

No.	Location of Concern	Concern	Comment
		Other Projects in the Vicinity	intensive ground-disturbing activities, such as excavation for the two underground parking levels, should also have an air analysis that includes potential impacts and mitigation to the school area.
5	P. 4.3-11	TAC Impacts Not Discussed Relating to Children at Orange Grove Park or AV Elementary	"The closest sensitive receptors to the project site are single-family residential uses located approximately 20 feet west of the project construction zone." The discussion fails to acknowledge or analyze TAC impacts to the children who would utilize the facility, field area, and playground at Orange Grove Park, which is within 500 meters of the Project site, during the construction of the Project, both individually and cumulatively (i.e., other developments also being built during the project construction phase). While somewhat further, an analysis on TAC impacts to children of Arroyo Vista Elementary School should also be included to ensure that that sensitive receptor will not be harmed during construction.
6	P. 4.5-2, Item (b)	Unenforceable Statement on Discovery of Potential Archaeological Resources	"If evidence of subsurface archaeological resources is found during construction, excavation and other construction activity in that area would be required to cease and the construction contractor would contact the City of South Pasadena Community Development Department. With direction from the Community Development Department, an archaeologist certified by the County of Los Angeles would be retained to evaluate the discovery prior to resuming grading in the immediate vicinity of the find. If warranted, the archaeologist would collect the resource and prepare a technical report describing the results of the investigation. The test-level report would evaluate the site including discussion of significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates. A less than significant impact would occur in this regard." Who will determine if subsurface archaeological resources have been discovered? Will there be a qualified archaeologist onsite monitoring during ground disturbing activities? I see no evidence here that none will be, so how can this statement be enforced? Shouldn't it be a mitigation measure? Even though the likelihood is low, the City is stating that there is a slight chance of occurrence. Either this statement is committed to by the City as a mitigation, thereby revising the determination to less than significant with mitigation or this non-legally binding statement leads to the determination that this impact could be potentially significant and an EIR is required. Please clarify.
7	P. 4.5-2 and P. 4.5-3, Item (c)	Accidental Discovery of Human Remains Does Involve Mitigation	On page 4.5-3, the CEQA determination for accidental discovery of human remains cites the PRC sections and involvement of the coroner and thereby, this is a less-than-significant impact and no mitigation is required. No one is disputing that there is no known cemetery on the premises. However, in Section 4.18, the Native Americans have identified the site as being a potential burial ground for their ancient ancestors and the City has agreed to the determination that uncovering their ancestors' remains would be less than significant with mitigation (MM TR-4 through MM TR-8). Hence, the CEQA determination on page 4.5-3 should cross reference the section on tribal cultural resources, along with cross-referencing the mitigation measures proposed (MM TR-4 through MM TR-8).
8	P. 4.6-1	Energy Consumption Post Construction: was SCE or	Given that the development will include 60 new residential units and over 6,100 square feet of commercial/retail space for multiple tenants, has the City contacted SCE and SoCalGas to find out if new substations and/or distribution pipelines will be required to support the development? And if such new facilities are required, would they be installed onsite or offsite? Either way, was this construction impact also analyzed in the MND and not merely as conclusory statements with no backup data?

No.	Location of Concern	Concern	Comment
		SoCalGas Consulted?	
9	P. 4.6-1	Renewable Energy Designs, Goals and Policies Not Specific in the MND for Impact Analysis	"Proposed buildings would be designed to include energy-saving features and would conform to the California Building Standards Code to meet energy efficiency requirements." No examples are given. Please indicate what types of features will be incorporated. Will this also include charging stations for electric vehicles? "The project would be consistent with the City of South Pasadena's land use and zoning designations, as well as energy conservation goals and policies outlined in the City of South Pasadena's General Plan." Name some of the energy conservation goals and policies that this development will align with and were such Project features analyzed in Section 4.6? It is difficult to draw any conclusions from Section 4.6 because it does not fully disclose what energy-saving features would be installed for either energy efficiency requirements or meeting the energy conservation goals and policies of the City. How do these features meet the goals also embodied on the City's website? https://www.southpasadenaca.gov/government/departments/management-services/environmental-programs
10	P. 4.7-4	No Commitment by City Regarding Geotechnical Engineering Report Recommenda-tions for Potential Liquefaction During Construction	"Although liquefaction is not anticipated to occur on the project site, incorporation of engineering recommendations contained within the Final Soils/Geotechnical Engineering Report would ensure compliance with the design parameters of the Geotechnical Study regarding earthwork and site grading; foundation design; and construction, and any recommendations identified by the City Engineer are incorporated into the project." The proposed MND does not indicate any commitment or conditions of approval from the consultant's report. Because this CEQA document is an MND and not an EIR, more certainty is required regarding measures that could reduce potentially significant impacts (though considered rare in occurrence for liquefaction). Such measures, in turn, must be examined in the CEQA document to ensure that the mitigation will in and of itself not result in potentially significant impacts. Please list the potential recommendations applicable to liquefaction, what kind and magnitude of impacts they might cause, and what are the binding commitments by the City to ensure they are to be carried out either as mitigation or conditions of approval.
11	P. 4.7-5	No Commitment by City Regarding Geotechnical Engineering Report Recommenda-tions for Subsidence or Unstable Soils	"The Geotechnical Study provides an estimate of potential subsidence (0.15 feet) as a result of remedial grading and recommends field-testing using the actual equipment and grading techniques be conducted to provide more accurate estimates. Incorporation of engineering recommendations contained within the Final Soils/Geotechnical Engineering Report for the project would minimize potential impacts associated with unstable soils to a less than significant level." The proposed MND does not indicate any commitment or conditions of approval from the consultant's report. Because this CEQA document is an MND and not an EIR, more certainty is required regarding measures that could reduce potentially significant impacts (though considered rare in occurrence for subsidence or unstable soils). Such measures, in turn, must be examined in the CEQA document to ensure

No.	Location of Concern	Concern	Comment
		During Construction	that the mitigation will in and of itself not result in potentially significant impacts. Please list the potential recommendations applicable to subsidence and/or unstable soils, what kind and magnitude of impacts they might cause, and what are the binding commitments by the City to ensure they are to be carried out either as mitigation or conditions of approval.
12	P. 4.7-5 through P. 4.7-6	No Commitment by City Regarding Geotechnical Engineering Report Recommenda-tions for Soil Expansion Potential During Construction	"According to the Geotechnical Study, the near-surface earth materials have a low expansion potential. However, the expansion potential could change during grading activities. Therefore, the Geotechnical Study recommends the expansion potential of site soils be verified after grading; refer to Appendix C. Incorporation of engineering recommendations contained within the Final Soils/Geotechnical Engineering Report for the project would minimize potential impacts associated with expansive soils to a less than significant level." The proposed MND does not indicate any commitment or conditions of approval from the consultant's report. Because this CEQA document is an MND and not an EIR, more certainty is required regarding measures that could reduce potentially significant impacts (though considered rare in occurrence for soil expansion potential). Such measures, in turn, must be examined in the CEQA document to ensure that the mitigation will in and of itself not result in potentially significant impacts. Please list the potential recommendations applicable to soil expansion potential, what kind and magnitude of impacts they might cause, and what are the binding commitments by the City to ensure they are to be carried out either as mitigation or conditions of approval.
13	P. 4-7.6	No Commitment by City to Mitigate Potentially Significant Impacts to Accidental Discovery of Paleontological Resources During Construction	"Thus, ground-disturbing activities could unearth undocumented subsurface paleontological resources. If evidence of subsurface paleontological resources is found during construction, excavation and other construction activity in that area would be required to cease and the construction contractor would contact the City of South Pasadena Planning and Building Department. With direction from the Planning and Building Department, a paleontologist certified by the County of Los Angeles would evaluate the find prior to resuming grading in the immediate vicinity of the find. If warranted, the paleontologist would prepare and complete a standard Paleontological Resources Mitigation Program for the salvage and curation of identified resources. Impacts would be less than significant in this regard." Who is going to train construction personnel to watch out for rare paleontological resources? Will there be an onsite paleontologist monitoring ground-disturbing activities? The proposed MND does not indicate any commitment or conditions of approval regarding recovery of rare paleontological resources. Because this CEQA document is an MND and not an EIR, more certainty is required regarding measures that could reduce potentially significant impacts (though considered rare in occurrence for paleontological resources). Such measures, in turn, must be examined in the CEQA document to ensure that the mitigation will in and of itself not result in potentially significant impacts. What are the binding commitments by the City to ensure they are to be carried out either as mitigation or conditions of approval? Otherwise, even if the possibility is small, the harm to uncovered paleontological resources during construction could result in potentially significant impacts, which triggers an EIR and not an MND.

No.	Location of Concern	Concern	Comment
14	P. 4.9-3	Property Listing Records Review of Phase I ESA is Incomplete	The discussion of historic land uses fails to disclose the business known as Fisk & Mason Roofing Company at 855 El Centro Street circa 1927-mid 1950s. It subsequently relocated to Pasadena on Fair Oaks by the late 1950s. The Phase I ESA report did note on page 12 of Phase I ESA report (Appendix D) that a 1928 topo map indicated a large warehouse onsite. Presumably, that was the Fisk & Mason Roofing Company that stored their building materials. My limited review indicates that it did offer other building construction supplies and services. Wood shingles and machine-grooved shakes/rebutted-rejointed shingles were possibly produced and/or stored and distributed: https://books.google.com/books?id=LTZ5koE088cC&pg=PA11&lpg=PA11&dq=%22Fisk+%26+Mason%22+shingles+south+pasadena+ca&source=bl&ots=n1OAcXU8AP&sig=ACfU3U3jxPJHeGfN8VX2-_O1ziyGp9txEg&hl=en&sa=X&ved=2ahUKEwjZz6_h7PDqAhUyMX0KHXygCpYQ6AEwAnoECAUQAQ#v=onepage&q=%22Fisk%20%26%20Mason%22%20shingles%20south%20pasadena%20ca&f=false It is not certain without more in-depth review exactly what was produced, stored, and sold at this facility. Nor can one say with certainty what kinds of hazardous materials were used for wood and other types of shingles, including but not limited to asbestos and creosote, to act as fire retardants or eliminate mold and mildew. The 1935 *Los Angeles Times* snippet shows an add from this roofing company:  **Roofing Shingles** The firm of Fisk and Mason was chosen to re-roof this old house during the modernization process and was asked to select the best shingle from the standpoint of general-utility. "We selected the 16 inch shingle, known to the trade as 'Perfect,'" said Mr. Mason, "because it is the most economical over a long period of years as well as in its initial cost. The old shingles lasted over 47 years and we certainly expect the new ones to make an even better record. If we could induce the general public to insist on vertical grain No. 1 shingles, they, too, could have a roof expectancy of a half-century." FISK & MASON 855 El Centro St., South Pasadena Phone: BL. 71515 The internet has information that suggests that wood shingles may have been treated with fire retardant. It is presently unknown if Fisk & Mason had other types of shingles, which might have included such compounds as asbestos. However, it is now demonstrated that this business was active at this site for well over 25 years and that according to later ads (for the Pasadena facility) that at some point they expanded to building room additions and kitchen remodeling. An attachment to this letter includes information on wood shingles and other shingles that might have been treated even back in the 1920s. While the old warehouse was demolished long ago, the fact remains is that without soil samples and deep soil borings, no one knows what lies beneath the soil at this time. All surface evidence is gone. It is imperative that the City require mitigation for this hazardous waste issue before action is taken on this Project.

No.	Location of Concern	Concern	Comment
15	P. 4.9-3	Adjoining Listing Records Review of Phase I ESA is Not Comprehensive	This site has had numerous uses over the year that are known, but other potential uses or adjacent uses that were not considered nor addressed in the Phase 1 ESA report. For example, there was an agreement to use the onsite parking area for interim use by Gold Line commuters at 845/899 El Centro (http://opengov.southpasadenaca.gov/WebLink/DocView.aspx?id=1081&page=7&searchid=f0382ba5-1ad7-4f6f-85c7-cbacd3bb678e). Prior to that time, was the site used during the construction of the Gold Line Station? If so, were there any hazardous materials or hazardous wastes that were generated, spilled, or removed? In an older MTA EIR document, the area around the Highland Park alignment of the Gold Line had unofficial landfills. The entire EIR can be found at: http://libraryarchives.metro.net/DPGTL/eirs/PasadenaBlueGold/1989Pasadena-LosAngelesFinalDraftEIR.pdf . In that report, Section 4.8 Risk of Upset on page 4-115: "The Highland Park and North Main Street alignments are also located above a number of known or suspected landfills. No excavation at these locations is planned and construction and operation of the LRT will not affect or be affected by the landfills. Mitigation Measures: geotechnical and hazardous materials investigations will be conducted in subsequent phases of planning after final selection of the preferred alignment is made. This investigation will include field surveys, soil samplings, and soil borings." One landfill was in the Arroyo Seco Park; however, that was a known site. Since the Seven Patios site is in a former residential and industrial area, there is a high possibility of previously disposed refuse and hazardous waste in the soils (between the 1890s and the 1940s). However, low the occurrence, an accidental and unexpected encounter with methane gas could be a significant public safety issue due to its explosive nature as what occurred years ago at Farmer's Market with the construction of The Grove. What about possible contamination from the former tracks (use of wooden ties) for the former R-O-W of the Atchison Topeka and Santa Fe Railway? To extend the life of the wooden ties, they were treated with all sorts of preservatives, most commonly by creosote. However, other types used in this period were also chromated copper arsenate and pentachlorophenol.
16	P. 4.9-4 through P. 4.9-5	Short-term Construction Impacts Should be Less Than Significant with Mitigation Included	According to the proposed MND, the CEQA finding for hazardous waste, short-term construction impact was found to be less than significant because BMPs and construction practices would be applied to limit any asbestos or other possible contaminants that may be in the existing building and released during demolition activities. However, as noted in Comment No. 14, previous uses on site included a roofing company between circa 1927 and the mid1950s that was not known to the consultants who prepared the Phase I ESA Report. The extent of building supplies and equipment used during this period should be acknowledged as unknown until a much more thorough review is undertaken. Though it was a roofing company, at some point, it also was involved with constructing room additions and remodeling residences. It should also be noted that hazardous materials and wastes generated, building practices of those times, and disposal of such waste in the early to mid20th century would not be in conformance with today's regulations and may in fact be contributors to current hazardous waste sites, that may or may not be listed on today's recognized hazardous waste databases. As mentioned in the above comment (Comment No. 15), the area may have also had illegal, unknown small landfills or refuse piles as noted by L.A. Metro's studies in the late 1980s associated with the planning of the Gold Line for the Highland Park alignment. Unless it is known how residential and industrial waste was disposed of between the late 1890s when the Project site was occupied through the 1940s, there could have been refuse pits, abandoned cisterns, or outhouses no longer in use that were used onsite for disposal of waste (including hazardous waste) and whose surfaces were obliterated long ago. In cases where methane gas pockets have formed, a dangerous situation could occur during excavation, including explosions and release of toxic gas. Additionally, creosote or other wood preservative compounds from the adjacent railroad R-O-W might have leached into the soils over time and contaminated adjacent soils on the Project site.

No.	Location of Concern	Concern	Comment
			Additionally, the following disclaimer is stated in the Phase I ESA (Appendix D) on page 3: This report should not be regarded as a guarantee that no further contamination, beyond that which could be detected within the scope of this assessment, is present at the Property. Converse makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. It is possible that information exists beyond the scope of this assessment. It is not possible to absolutely confirm that no hazardous materials and/or substances exist at the Property. If none are identified as part of a limited scope of work, such a conclusion should not be construed as a guaranteed absence of such materials, but merely the results of the evaluation of the property at the time of the assessment. Also, events may occur after the Property visit, which may result in contamination of the Property. Additional information, which was not found or available to Converse at the time of report preparation, may result in a modification of the conclusions and recommendations presented. Given the incomplete information from the Phase I, ESA report (Appendix D) and that this CEQA document is an MND and not an EIR, mitigation measures are warranted to ensure that the excavation and grading will not result in significant hazardous impacts such as release of toxic air compounds to nearby residents and children at the Orange Grove Park and at the Arroyo Vista Elementary School. Mitigation measures would include soil samples, soil borings, and employing other investigative measures prior to ground-breaking activities. Listing possible measures in the event hazardous waste encountered must be included now in the proposed MND and will vary depending on the type and extent of such materials identified.
17	P. 4.9-5, Item c)	Hazardous Emissions and Schools Not Properly Characterized or Analyzed	"The closest school, El Centro School, is located approximately 704 feet east of the project site." El Centro School is a former elementary school and until recently the headquarters for the South Pasadena Unified School District. El Centro School held classes until the late 1970s. Even though the distance between the Project site and Arroyo Vista Elementary School (west of the Project site) is about 0.4 mile apart rather than a quarter of a mile, the hazardous emissions analysis should be undertaken and mitigations to be undertaken to ensure that an estimated 700 young children will not be impacted by hazardous, toxic air contaminants during ground-disturbing activities.

18	P. 4.10-3 & Reference to Public Utilities on P. 4.19-1 through P 4.19-3 dealing with drinking water supply	Uncertainty About Drinking Water Supply Based on 2016 Urban Water Management Plan	"The project would increase water demand over existing conditions. However, as discussed in Response 4.19(a), the proposed development would be consistent with the General Plan land use designation for the site and within the growth projections anticipated by the General Plan for the City. Thus, the project would be within the growth projections considered by the City's Urban Water Management Plan (UWMP). Th e City's UWMP indicates the City can meet its water demands during normal, single dry, and multiple dry years over the next 25 years. Thus, adequate water supplies, including groundwater resources, would be available to serve the project and impacts to water supplies would be less than significant." In looking at the projected population growth in the 2016 UWMP, the assumptions appear to be outdated: **Table 3-1 Retail: Population - Current and Projected** Population Served: 2015: 24,040; 2020: 24,157; 2025: 24,281; 2030: 24,405; 2035: 24,530; 2040(opt): 24,656 U.S. Census count for South Pasadena population in 2019 was 25,329 (https://www.census.gov/quickfacts/southpasadenacitycalifornia). Given the RHNA housing numbers now being discussed and with the additional individuals expected in the future, will the City meet it water demands under all conditions with the now fourth development project approved in recent years? The three other projects are 820 Mission Street Project, Mission Bell Project, and 625 South Fair Oaks. A boutique hotel is now being planned for the former El Centro Street Elementary School/South Pasadena Unified School District facility. Table 6-9 from the 2016 UWMP also appears to be out of date. What were the available water volumes for all sources in 2019? Does it exceed the project water supply numbers in Table 6-9?

Table 6-9 Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply (Report To the Extent Practicable)									
		2020		2025		2030		2035		2040 (opt)	
Drop down list. May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Add additional rows as needed											
Groundwater	Main Basin	3,889		3,909		3,929		3,950		3,970	
Purchased or Imported Water	MWD USG-2	152		153		154		154		155	
Purchased or Imported Water	Pasadena	18		18		18		18		18	
	Total	4,059	0	4,080	0	4,101	0	4,122	0	4,143	0

Table 7.2 of the 2016 UWMP may also show that the assumptions for normal water demands may not be able to keep up with the accelerated development now occurring. Hence, can the proposed MND truly state that for the next 25 years, the City's water supply can keep pace with water demand for this Project and others without modernizing the City's infrastructure, building new facilities, and/or

<table>
<tr><th>No.</th><th>Location of Concern</th><th>Concern</th><th>Comment</th></tr>
<tr><td></td><td></td><td></td><td>purchasing imported water at much higher prices due to exceeding pricing water tiers? Will additional water mitigation be necessary to retain the water supply demand from the proposed Project for the next 20 years?
<table>
<tr><th colspan="6">Table 7-2 Retail: Normal Year Supply and Demand Comparison</th></tr>
<tr><td></td><td>2020</td><td>2025</td><td>2030</td><td>2035</td><td>2040 (Opt)</td></tr>
<tr><td>Supply totals (autofill from Table 6-9)</td><td>4,059</td><td>4,080</td><td>4,101</td><td>4,122</td><td>4,143</td></tr>
<tr><td>Demand totals (autofill from Table 4-3)</td><td>4,059</td><td>4,080</td><td>4,101</td><td>4,122</td><td>4,143</td></tr>
<tr><td>Difference</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
</table></td></tr>
<tr><td>19</td><td>P. 4.13-1</td><td>Sensitive Noise Receptors Should Include Children at Orange Grove Park</td><td>Construction noise discussion should also note the Orange Grove Park, just 0.2 mile west of the Project site. This park is utilized by residents, school-age children participating in youth sports organization events, and City programs like Camp Med. This chapter should include an analysis of noise and ground vibration that may impact children and park visitors at Orange Grove Park, as well as applicable mitigation.</td></tr>
</table>

20	P. 4.13-6 and P.4.13-7 Tables 4.13-3 and 4.13-4	Indirect Impacts to Meridian Avenue, south of Monterey Road Receives Minimal Attention and No Proposed Mitigation	

Table 4.13-3
Existing and Project Traffic Noise Levels

Roadway Segment	Existing		Existing Plus Project		Project Change from Existing Conditions	Significant Impact?
	ADT	dBA CNEL[1]	ADT	dBA CNEL[1]		
El Centro Street						
West of Orange Grove Ave	2,900	55.3	2,900	55.3	0.0	No
Orange Grove Ave to Project Driveway	4,500	57.2	4,800	57.5	0.3	No
Project Driveway to Meridian Ave	4,500	57.2	4,900	57.6	0.4	No
East of Meridian Ave	3,700	56.3	3,700	56.3	0.0	No
Monterey Road						
West of Orange Grove Ave	18,500	63.4	18,600	63.4	0.0	No

[9] Federal Highway Administration, *Highway Traffic Noise Analysis and Abatement Policy and Guidance, Noise Fundamentals*, https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed February 13, 2020.

Orange Grove Ave to Meridian Ave	21,000	63.9	21,000	63.9	0.0	No
East of Meridian Ave	17,800	63.2	18,000	63.3	0.1	No
Orange Grove Avenue						
North of El Centro St	3,400	53.6	3,600	53.9	0.3	No
El Centro St to Monterey Rd	1,300	49.5	1,400	49.8	0.3	No
South of Monterey Rd	200	41.3	200	41.3	0.0	No
Meridian Avenue						
North of El Centro St	3,600	53.9	3,800	54.2	0.3	No
El Centro St to Monterey Rd	5,500	55.7	5,700	55.9	0.2	No
South of Monterey Rd	9,800	58.2	9,900	58.3	0.1	No

Source: Based on traffic data provided by Ganddini Group, Inc., February 2020. Refer to Appendix A of the *Acoustical Assessment* (February 2020) for traffic noise modeling results.

ADT = average daily trips; dBA = A-weighted decibels; CNEL= Community Equivalent Noise Level
Notes:
1. Traffic noise levels are at 100 feet from the roadway centerline.

Table 4.13-4
Opening Year and Opening Year Plus Project Traffic Noise Levels

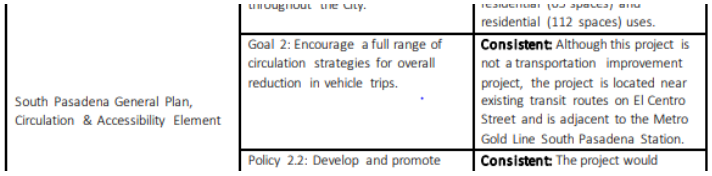
Roadway Segment	Opening Year		Opening Year Plus Project		Project Change from Opening Year Conditions	Significant Impact?
	ADT	dBA CNEL[1]	ADT	dBA CNEL[1]		
El Centro Street						
West of Orange Grove Ave	3,100	55.6	3,100	55.6	0.0	No
Orange Grove Ave to Project Driveway	4,600	57.3	4,900	57.6	0.3	No
Project Driveway to Meridian Ave	4,600	57.3	5,000	57.6	0.3	No
East of Meridian Ave	3,900	56.6	3,900	56.6	0.0	No
Monterey Road						
West of Orange Grove Ave	18,900	63.5	19,000	63.5	0.0	No
Orange Grove Ave to Meridian Ave	21,400	64.0	21,400	64.0	0.0	No
East of Meridian Ave	18,200	63.3	18,400	63.4	0.1	No
Orange Grove Avenue						
North of El Centro St	3,600	53.9	3,800	54.1	0.2	No
El Centro St to Monterey Rd	1,400	49.8	1,500	50.1	0.3	No
South of Monterey Rd	300	43.1	300	43.1	0.0	No
Meridian Avenue						

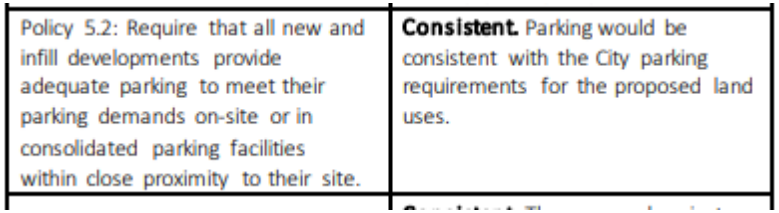
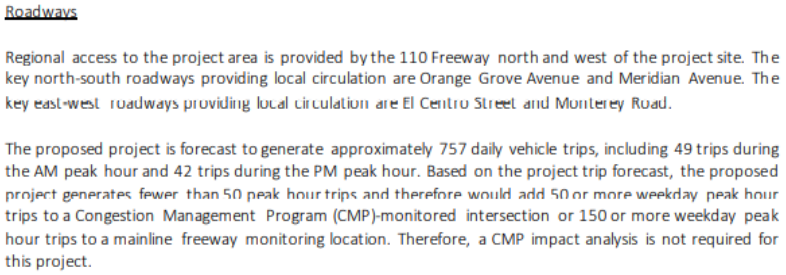
North of El Centro St	3,700	54.1	3,900	54.3	0.2	No
El Centro St to Monterey Rd	5,700	55.9	5,900	56.0	0.1	No
South of Monterey Rd	10,100	58.4	10,200	58.4	0.0	No

Source: Based on traffic data provided by Ganddini Group, Inc., February 2020. Refer to Appendix A of the *Acoustical Assessment* (February 2020) for traffic noise modeling results.

ADT = average daily trips; dBA = A-weighted decibels; CNEL= Community Equivalent Noise Level
Notes:
1. Traffic noise levels are at 100 feet from the roadway centerline.

No.	Location of Concern	Concern	Comment
			Tables 4.13-3 and 4.13-4 indicate an increase of roughly 400 vehicles travelling down Meridian Avenue from 9,800 to 10,200 with Project implementation by 2022 and beyond. Between Monterey Road and Kendall Avenue, there have been numerous accidents on Meridian Avenue as noted in the recent SouthPasadenan.com article: https://southpasadenan.com/meridian-ave-traffic-issues-addressed-transportation-commission-forwards-recommendation/ . The proposed Project will indirectly impact and exacerbate an already dangerous street. Save Meridian Avenue for its Residents (SMART) Families supports two three-way stop signs at Meridian/Oak and Meridian/Maple to provide pedestrian safety, especially for school-aged children that walk to the South Pasadena Senior High School, the South Pasadena Middle School, and the Holy Family Church school. Action by the City Council is tentatively slated at its August 5th meeting. If no stop signs are designated for the Meridian intersections, then Seven Patios Project will have an indirect and potentially significant traffic impact to pedestrian safety that must be mitigated through traffic calming mitigation.
21	P. 4.14-1	No Discussion of RHNA and Consistency with City's Affordability Goals	With 60 residential units planned, please indicate the level of income that these units are geared to with respect to the 5th planning cycle of SCAG's RHNA numbers. Will these units be for moderate income and/or upper income individuals? With the City's policy on affordability and that there are well over 50% of South Pasadena residents that rent, why aren't some of the units meant to be affordable? Lacking affordable units is not consistent with the currently approved City's Housing Element and the RHNA for the 5th Planning Cycle, which are both part of the currently approved General Plan.
22	P. 4.14-1 & P. 4.14-2 AND P. 4.19-2	No Evidence Presented on Public Utilities Improvements	"Public utilities would be extended to the site from existing facilities located adjacent to the site without the need for expansion of capacity." No evidence has been provided in the proposed MND to support this conclusory statement. Has the City contacted the public utilities, such as SCE or SoCalGas to determine what might be involved and if those potential impacts, including additional trenching or adding poles, will impact adjacent residences and L.A. Metro facilities and R-O-W? Telecommunications improvements?
23	P. 4.15-3 (also relevant to Recreation on P.4.16-1)	Potentially Significant Impact Not Mitigated	"Based upon the City's General Plan park standard of 4.0 acres per 1,000 residents, the project would generate the need for approximately 0.6-acre of additional park." The proposed Project is creating a need for additional park and the City is placing that back on the taxpayers' shoulders instead of the developer's responsibility. The City budget cannot secure additional park for the foreseeable future. Given that we have two former Caltrans lots that are supposed to be pocket parks at Berkshire and at Grevelia, the developer could fund minor improvements to make these two vacant lots into simple and useable pocket parks with minor landscaping, signage, park benches, picnic tables, and trash cans. With that mitigation, additional park would be generated for the residents and would fulfill the developer's responsibility to not increase the park deficit with the proposed Project.

No.	Location of Concern	Concern	Comment
24	P. 4.17-1	Indirect Traffic Impact to Meridian Avenue Not Analyzed for Pedestrian Safety	As discussed in Response 4.9(a), all construction staging for the project would occur within the boundaries of the project site and would not interfere with circulation along El Centro Street, Orange Grove Place, or any other nearby roadways. Although the project does not involve any modifications to El Centro Street, Orange Grove Place, or any other roadways in the project vicinity, there is the potential for traffic lanes, bike routes, or pedestrian facilities immediately adjacent to the project site to be temporarily blocked or closed during construction activities. However, any lane, bike route, or pedestrian facility closures would be temporary, and detours would be provided such that access would not be impaired on the surrounding roadways. Construction activities would not disrupt transit routes. Trucks, including construction trucks of over 3 tons, are not permitted to traverse Meridian Avenue, especially south of Monterey Road. The specific construction vehicles route is not delineated in the Project description but is presumed to include Meridian, south of Monterey, since the traffic studies alluded to the LOS D level of Meridian and Monterey, as well as mentioning the number of vehicles and increase in ambient noise levels south of Monterey via Meridian. Refer to Comment No. 20 for further discussion of this indirect, potentially significant traffic impact to Meridian Avenue, south of Monterey Road, to pedestrian safety and proposed mitigation.
25	P. 4.17-1	No Evidence Regarding Consultation with L.A. Metro on Street Closures	Construction activities would generate trips from moving construction equipment, commuting to the project site, and hauling materials. Construction-generated traffic would be dispersed over multiple roadways. In addition, construction vehicles and equipment on the roadways surrounding the construction site would only be present for the short-term and would be removed following construction. Project construction would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Nothing is provided in the proposed MND to indicate if L.A. Metro was contacted and consulted with regarding L.A. Metro facilities adjacent to the proposed Project. It would appear that because of the Gold Line Station, railway R-O-W, and appurtenant structures owned and operated by L.A. Metro, this agency would be identified as a responsible agency. As such, it is the responsibility of the lead agency, City of South Pasadena, to consult with L.A. Metro during the planning phase and provide sufficient information and possible mitigation, if applicable, so that the proposed MND can also be relied on by L.A. Metro for its own CEQA decision-making. L.A. Metro is not listed as an outside agency as noted in Comment No. 3. Please clarify.
26	P. 4.17-2 Table 4.17-1	No Evidence Provided that Residents Living at Seven Patios Will Use the Gold Line on a Regular Basis	 throughout the City. / residential (112 spaces) uses. South Pasadena General Plan, Circulation & Accessibility Element Goal 2: Encourage a full range of circulation strategies for overall reduction in vehicle trips. — **Consistent:** Although this project is not a transportation improvement project, the project is located near existing transit routes on El Centro Street and is adjacent to the Metro Gold Line South Pasadena Station. Policy 2.2: Develop and promote — **Consistent:** The project would With 112 spaces proposed for 60 residential units, each unit could support two cars. Anyone paying over $1 million (presumed) for these lovely units are highly unlikely to use the Gold Line on a regular basis. I have personally used the Gold Line since moving to South Pasadena in 2008. It has steadily deteriorated in terms of reliability, convenience, comfort, and safety. Prime AM and PM peaks require a jammed and deeply uncomfortable experience with all aisles filled. This is deeply disconcerting when the air conditioner inside the train fails during the summer periods with the train cars filled with people. Off peak periods have several of the homeless population with their belongings and a lack of personal hygiene. Before I retired, while not interacting with him, a white middle-aged male who was clearly mentally ill kept saying

No.	Location of Concern	Concern	Comment
			through the 13-minute trip from South Pasadena to Union Station that he was going to slit my throat. Obviously, it didn't happen, but it was a frightening experience and unfortunately, violence is not uncommon among the lines, including the Gold Line. The only councilmembers I have seen on a regular basis is Councilmember Michael Cacciotti and occasionally Councilmember Dr. Schneider. Additionally, an *L.A. Times* study on the Mission-Meridian garage showed that people parking their cars there were not taking the Gold Line train. That news article is included as a pdf attachment to this letter.
27	P. 4.17-3 Table 4.17-1	No Discussion of Visitor Parking and Possible Increases in VMT	 Policy 5.2: Require that all new and infill developments provide adequate parking to meet their parking demands on-site or in consolidated parking facilities within close proximity to their site. | **Consistent.** Parking would be consistent with the City parking requirements for the proposed land uses. With an additional 148 residents estimated to live in the new housing, where will their guests and out-of-town family members park their cars? Without a doubt, parking problems will be exacerbated on El Centro Street, Orange Grove Avenue, Orange Grove Place, Adelaine Avenue, Palm Avenue, Hawthorne Street, and Meridian Avenue. From the General Plan Update charettes of a few years ago, we learned that people walk up to ¼ mile to typically get to their destination. Parking is not considered an impact to be analyzed under CEQA; however, such premium limits on parking will increase the number of times people will be driving around the area to find a parking space. Hence, VMT reduction benefits with this Project may be overly estimated. Increases in illegal parking (such as partially blocking driveways or parking on sidewalks) could well indeed tax the Police Department services (not stated in the proposed MND's Public Services section).
28	P. 4.17-5	Roadways-No CMP Done for Meridian Avenue	 Roadways Regional access to the project area is provided by the 110 Freeway north and west of the project site. The key north-south roadways providing local circulation are Orange Grove Avenue and Meridian Avenue. The key east-west roadways providing local circulation are El Centro Street and Monterey Road. The proposed project is forecast to generate approximately 757 daily vehicle trips, including 49 trips during the AM peak hour and 42 trips during the PM peak hour. Based on the project trip forecast, the proposed project generates fewer than 50 peak hour trips and therefore would add 50 or more weekday peak hour trips to a Congestion Management Program (CMP)-monitored intersection or 150 or more weekday peak hour trips to a mainline freeway monitoring location. Therefore, a CMP impact analysis is not required for this project. The MND acknowledges that the major roadways are Orange Grove AND Meridian avenues. The LOS D intersection at Monterey Road and Meridian Avenue is unacceptable as existing conditions. The projected increase from 9,800 ADT to 10,200 ADT is clearly unacceptable for a collector road with NO traffic controls for pedestrian safety. School-aged children use the intersections of Meridian/Oak (even with yield signs present, many of our children have experienced near misses by cars in broad daylight) and Meridian/Maple. This project will result in indirect, significant impacts and requires mitigation, otherwise this CEQA process should be carried out via EIR preparation and processing. A CMP should be done to assess impacts to all the streets to be directly and indirectly impacted by this project, including that of the long, neglected Meridian Avenue. Meridian Avenue, as a narrow and winding 2-lane street is handling many times more the daily traffic and now

No.	Location of Concern	Concern	Comment
			with this project, the ADT will increase to 10,200! This is a potentially significant and indirect traffic impact. Traffic calming measures are warranted to mitigate. The currently approved General Plan's Circulation and Accessibility Element on page III-3 states that collector streets have up to 6,000 ADT (NOTE that Meridian Avenue does NOT border commercial uses…it is strictly for residential uses and the high school stadium.): • **Collector Streets** Collector streets are intended to carry traffic between residential neighborhoods and the arterial street network. They are generally two and four-lane roadways that have a mixture of residential and commercial land uses along them. Average daily traffic volumes on collector streets are generally between 2,000 and 6,000. Higher density residential land uses or side yards of single-family homes may be located adjacent to collector streets. Higher traffic volumes may be acceptable on certain collector streets such as those fronting commercial uses.
29	P. 4.17-6	Analysis Fails to Discuss Meridian Avenue Impacts	This page discusses the impacts and alludes to the streets that will have LOS A. However, the Meridian Avenue data indicates the increases to the LOS D and that the number of ADT will increase by 400 onto an already dangerous street. Traffic calming measures are not proposed as mitigation for this potentially significant and indirect traffic impact.
30	P. 4.17-7 & P. 4.17-8	Tables 4.17-2 & 4.17-3 Do Not Demonstrate the Whole Story about Meridian Avenue Impacts	As noted in Comment No. 28, Meridian, south of Monterey Road, is a narrow, winding two-lane street that has experienced dangerous drivers. The noted tables do not demonstrate the danger that pedestrians face while walking and crossing Meridian, along with a number of parked cars on Meridian being totaled by speeding cars (many of which are hit-and-run drivers). A recent newspaper article (attached to this letter) reveals that in a five-year period, over 50 collisions have occurred. The proposed Project will add in full build out another 400 ADT. This will further increase an already dangerous conditions and further burden a collector street. Traffic calming measures to handle this increased volume in the next two to three years is needed so that children and the elderly can cross the street safely and knowingly that they will not be hit.
31	P. 4.17-10	Project Does Not Demonstrate Reduced VMTs	The project site is located within one-half mile of the Metro Gold Line South Pasadena Station. Therefore, the proposed project VMT impact may be presumed less than significant unless any of the above exclusions might apply. As noted in previous comments, there is no evidence that the new residents will use the Gold Line on a regular basis, or that the guests visiting the new residents will be spending little time driving around to find increasingly non-existent on-street parking. The projected VMT savings may be overstated.
32	P. 4.17-11	Primary & Emergency Access Through El Centro May Cause Impacts Not Discussed	The proposed MND does not detail how vehicles entering and leaving the main entrance to the proposed Project (El Centro driveway) will affect traffic on El Centro, especially during times of arrival/departure of the Gold Line trains or when the guard arms randomly fail and come down, blocking El Centro Avenue (this is by no means a rare occurrence). The MND analysis is lacking for both construction as well as operation of Seven Patios. Will there be an access through Orange Grove Place? Residents on that street have been plagued by parking (legal and illegal) of those individuals now using the Gold Line station. These intersections at Orange Grove Avenue and Orange Grove Place, along with El Centro and the project's driveway, need to be studied with the Gold Line operations to determine access impacts. Has the City

No.	Location of Concern	Concern	Comment
			contacted L.A. Metro on this matter? Does L.A. Metro have conditions on locating a major development project next to its critical facilities that have been analyzed in the proposed MND? Such L.A. Metro conditions may also limit or go counter to South Pasadena Police and Fire Department policies. If so, which conditions controlling access (primary and emergency) would prevail and have they been discussed in the MND adequately with applicable mitigation?
33	P. 4.19-2	Low Water Pressure Not Mentioned & What Remedies Will Be Done	Will there need to be devices or equipment installed to increase water pressure? According to the draft general plan update, water pressure in the downtown area is low and problematic. Will remedies for the low water pressure at the Project site result in upgrades to the City's water supply system in some manner? If so, please discuss such improvements and whether this will result in direct or indirect significant impacts and if mitigations are therefore required.
34	P. 4.19-2	Unknown Capacity of Wastewater Facilities to Support New Development	Wastewater. Wastewater generated within the City is collected through local City-maintained sewer lines and conveyed to regional trunk sewers for treatment by the County Sanitation Districts of Los Angeles County (District No. 16). As stated, the project would involve increased development on the site beyond existing conditions. However, the proposed development would be consistent with the General Plan land use designation for the site and within the growth projections anticipated by the General Plan for the City. Thus, the project would be within the growth projections considered by the Districts for conveyance and treatment. Thus, adequate treatment capacity would be available to serve the project and impacts to wastewater treatment facilities would be less than significant. Similar to the water mainlines, wastewater mainlines are currently located with El Centro Street and Orange Grove Place. The project would construct on-site wastewater lines and connect to the existing mainlines within the adjacent right-of-way. The extension of the on-site wastewater lines to the local mainlines would not cause a significant environmental effect. Given the lack of information in the proposed MND, it must be stated that it is not enough to state that this development is consistent with the General Plan, if in fact our city is running out of wastewater capacity at the present time. Please indicate how much capacity is currently available for downtown development and how much (estimated of course) will be needed to support this development. There is no evidence stated in the proposed MND to arrive at a less-than-significant impact determination—at best, a conclusory statement without justification. Please cite specific sources and provide such basic information.
35	P4.21-1 Item a)	Mandatory Findings of Significance Needs Further Evidence	The first portion of Mandatory Findings section, Item a, states: "Does the project have the potential to substantially degrade the quality of the environment…" The remainder of it focuses on biota and cultural resources. However, that first phrase is broad enough to include all aspects of the environment. Previous comments in this comment table note that many environmental areas including air, soils, hazardous waste, water supply, traffic, public services and public utilities, may indeed have the potential to substantially degrade the quality of environment. Since the proposed MND does not delve into these issues in a meaningful way and does not provide full public disclosure, how can the City rely on item a's overall CEQA determination of less than significant with mitigation?

No.	Location of Concern	Concern	Comment
36	P.4.21-2 Item b)	Mandatory Findings of Significance on Cumulative Impacts is Insufficient	Mandatory Findings section, Item c, states: **Less Than Significant Impact.** A significant impact may occur if a proposed project, in conjunction with related projects, would result in impacts that are less than significant when viewed separately, but would be significant when viewed together. As concluded in Sections 4.1 through 4.20, the proposed project would not result in any significant and unavoidable impacts in any environmental categories with implementation of project mitigation measures. Implementation of mitigation measures at the project-level would reduce the potential for the incremental effects of the proposed project to be considerable when viewed in connection with the effects of past projects, current projects, or probable future projects. From previous comments, such as air, hazardous waste and toxic air contaminants, traffic, water supply and utilities, the proposed MND has not provided sufficient evidence to suggest that it will not result in significant cumulative impacts (direct and indirect). Even if a project has project-specific impacts that are less than significant, the additive nature of that project with other developments (including 820 Mission, Mission Bell Project, 625 South Fair Oaks, and the planning of the hotel on the former SPUSD school yard) could indeed result in a significant cumulative impact, both direct and indirect, unless mitigation is implemented. How can the City rely on item b's overall CEQA determination?

No.	Location of Concern	Concern	Comment
37	P. 4.21-2 Item c)	Incomplete Information on Impacts to Humans Does Not Support CEQA Finding	**Mitigation Measures:** No mitigation measures are required. **c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?** **Less Than Significant Impact.** Previous sections of this Initial Study reviewed the proposed project's potential impacts related to aesthetics, air quality, noise, hazards and hazardous materials, transportation, and other issues. As concluded in these previous discussions, the proposed project would not have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly, following conformance with the existing regulatory framework and mitigation measures. Further, as a mixed-use development, project features would be designed to meet the needs of humans and are not anticipated to result in direct or indirect adverse effects. Impacts would be less than significant in this regard. **Mitigation Measures:** No mitigation measures are required. As noted in previous comments, no health risk assessment, especially toxic air contaminants, was done for sensitive receptors, i.e., children at Orange Grove Park or at Arroyo Vista Elementary. The fact that *the State CEQA Guidelines* states an analysis within one quarter of a mile is a disserve to the parents of children attending that school and accessing that park. The guidelines designate a minimum, but the lead agency, City of South Pasadena should be protective of its citizen's children and extend the analysis to the school kids too. The proposed MND fails to provide an analysis of the activities of the former Fisk & Mason Roofing Company and the potential materials stored and disposed of between the late 1920s through the mid1950s. Additionally, the site has been used for over 100 years and there is no knowledge of refuse disposal from the residents and/or commercial/industrial activities up to the 1940s. By not conducting soil samples and soil borings to the level of the second underground parking area, begs the question of how accurate the analysis on hazardous waste is and whether one can really state that extensive excavation may uncover carcinogenic, toxic, or other forms of pollutants and expose the population to elevate air toxic emissions. In a rare possibility, accidental discovery of methane gas pockets could have the potential of explosion. Additional mitigation must be required by the City. Lastly, there is evidence of indirect and potentially significant impacts to nearby streets, including Meridian Avenue that require traffic calming measures to protect pedestrians crossing the street.
38	P. 4.22-1 through P 4.23-3	No Mention of Agencies or Individuals Contacted	The References and Personnel/Consultants sections do not indicate the agencies and staff representatives who were contacted to gain meaningful information about what might be required to implement the proposed Project. For example, no evidence is provided that the City or its consultants contacted L.A. Metro, other than perhaps sending them a copy of the proposed MND during public review. That action does NOT constitute meaningful consultation with a potential responsible agency.
39	P. 5-1	Consultant Recommenda-tion Should Not Be Part of MND	In the 37 years that I was an environmental planner for three major public agencies, I have never seen a consultant recommendation section included in the CEQA documentation. This is clearly inappropriate. It is the lead agency's sole responsibility to exercise its independent judgment to make this CEQA determination (Public Resources Code, Section 21082.1). It is also the lead agency that is the final author that determines the adequacy of the CEQA document. A consultant's role is to provide objective information and assist in the technical analyses. Nothing more. This section should be deleted prior to the MND submittal to the Planning Commission for Project approval.

ATTACHMENT B:

COMMENT LETTER DATED NOVEMBER 16, 2020

November 16, 2020

City of South Pasadena

Attention: Kanika Kith, Planning Manager
1414 Mission Street
South Pasadena, CA 91030
Email: kkith@southpasadenaca.gov

Subject: Planning Commission Meeting for November 17, 2020—Agenda Item No. 2. Project No. 2171-CUP/DRX/TTM/TRP – Seven Patios Mixed-Use Residential and Commercial Project at 845/899 El Centro Street

Dear Ms. Kith:

I have reviewed the City's documentation related to the subject project. I respectfully do not agree with many of the responses provided by the consultant regarding my public comments; however, at this stage of the process, I would request careful consideration to revising a couple of permit conditions for the sake of the community. I have included a couple of other comments in this letter as well.

- *PW-11: "A focused traffic study shall be prepared by a CA licensed traffic engineer and submitted to the Public Works Department for review and approval. The study shall focus on onsite and offsite circulation including, but not limited to access locations, inbound/outbound turning movements, internal circulation, parking operations, ADT and daily truck volume, and ADT during peak flow hours to determine the need for additional striping, pavement markings, and signage that will improve motor vehicle and pedestrian safety."*

  This permit condition is not clear as to when this would be carried out, i.e., during the final design phase of the project, the construction phase, or the operation phase (either initially or after full occupancy). Please consider adding applicable language from what was required by the approved Mission Bell Project. Also, offsite circulation patterns that will be indirectly impacted by this project should be studied as part of this permit condition including the intersection at Monterey Road/Meridian Avenue.

- PW-23.5. Soil Testing and Disposal. Prior to obtaining a grading permit, the applicant shall retain a qualified environmental site assessor to conduct soil samples on the Project site to ascertain if there is contamination at the location of the former warehouse and near the rail road tracks. Any contamination found shall be removed following applicable hazardous regulatory standards and laws and will be disposed of in a licensed hazardous waste landfill facility.

  This is not an existing permit condition, and I am taking liberty with the numbering system. Most importantly, soil samples need to be taken to test for possible hazardous waste contamination prior to the commencement of ground-disturbing activities. I do not agree with the response to my comment regarding the Fisk & Mason Roofing Company, not to mention potential residential dumping beneath the surface. The response by the consultant is that no building permit for this company was found and there is "no evidence" of hazardous waste. Yet, no actual testing was done and just because no building permit was found does not mean that the company was not operating as advertised in the local newspapers of the time.

Let's be realistic that paperwork from that era is likely to be incomplete and/or missing. The ice company could have subleased part of its warehouse to the roofing company without the City's knowledge. Such possible activities though do merit a deep concern to the nearest neighbors, the children at Orange Grove Park, and the children that will eventually return to Arroyo Vista Elementary School that could be at risk during intense excavation and grading activities. Just because there is nothing in a government database concerning these known contaminants (building construction materials from the 1920s, residential dumps, and creosote from railroad tracks) does not mean that they do not exist beneath the surface. It is prudent for the City to request testing for soil contaminants on behalf of the community. Please consider this issue carefully and not dismiss it. Permit Conditions BD-10 through BD-12 do require a soils survey; however, that survey will not deal with contaminated soils.

- PL-27: *"**Ground-disturbing c**~~**C**~~**onstruction** activities ~~**crease**~~ **cease** during the setup and operation of the weekly Thursday Farmers Market."*

  In fairness to the applicant, construction activities inside the buildings, such as plumbing installations and electrical connections would not impact the Farmers Market.

Additionally, on page 21 of the staff report, it states:

> ***Traffic Impact–Non-project related***
>
> "Some concerns were received regarding traffic from the existing Farmers Market onto residential streets such as Glendon Court and Meridian Avenue. Public Works is working on a Neighborhood Traffic Management Plan, is aware of these concerns, and will be reaching out to the community to address these issues. Staff recommends that the Planning Commission provide a recommendation to the Mobility and Transportation Infrastructure Commission (MTIC) to review and consider the traffic issues raised by the community."
>
> As a founding member of **SMART Families** (Save Meridian Avenue for Its Residents Together), I completely concur with this staff report recommendation. Traffic impacts will indirectly affect Meridian Avenue and our neighbors, whether it is 100 or more additional daily vehicle trips down on our corridor due to the Seven Patios Project. **SMART Families** has been recently coordinating with the Public Works Department and MTIC on near-term improvements to Meridian and look forward to transforming our street into a safe thoroughfare for all in the near future.

Thank you for allowing me the opportunity to comment on this proposed development.

Sincerely,

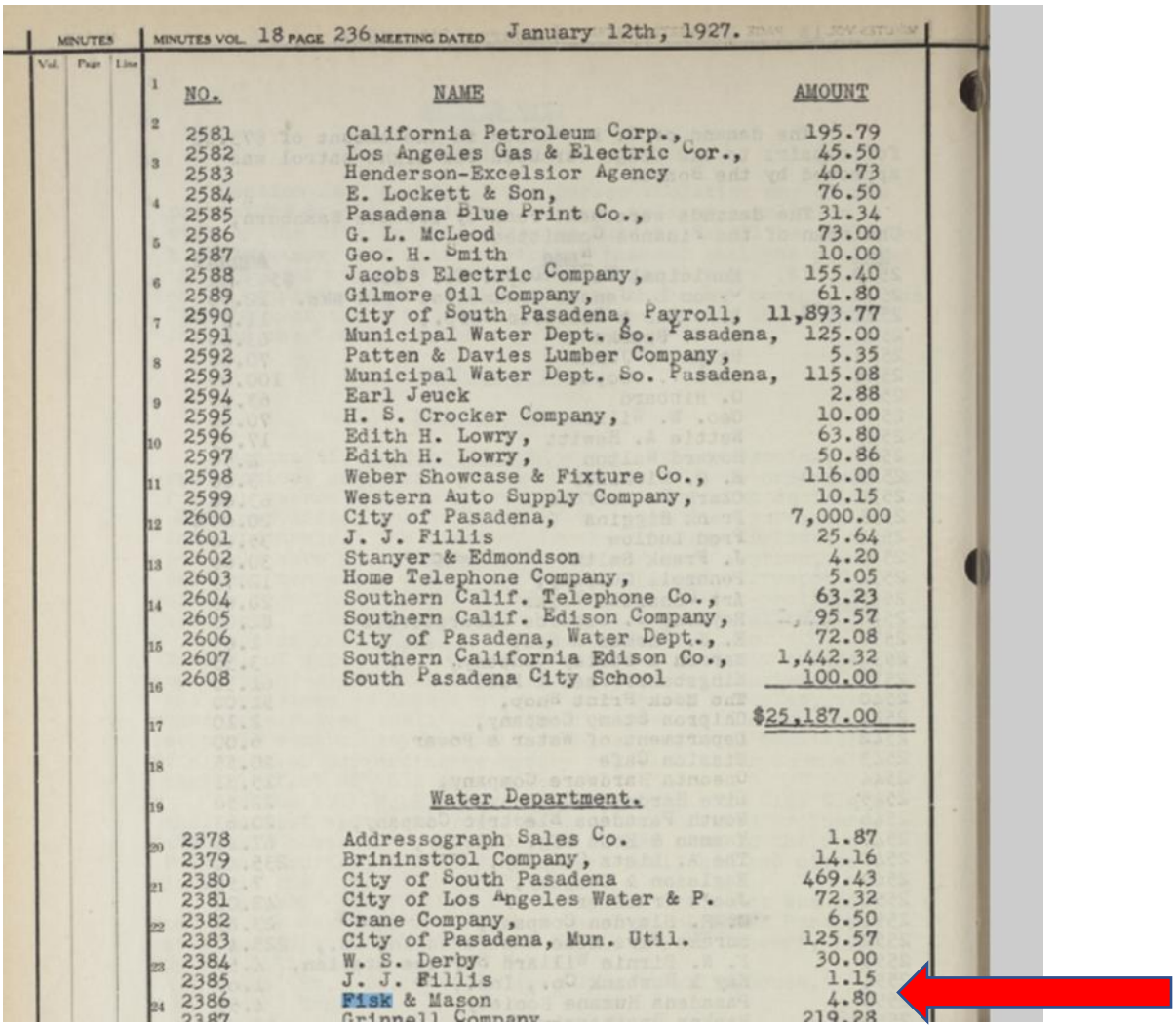
Delaine W. Shane

2003 Meridian Avenue
South Pasadena, CA 91030
wehoa_402@outlook.com

ATTACHMENT C:

EVIDENCE OF FISK & MASON ROOFING COMPANY AT 855 EL CENTRO STREET, SOUTH PASADENA BETWEEN THE LATE 1920s AND THE MID/LATE 1950s

1. **1920s: Invoice Paid by City South Pasadena Water Department to Fisk and Mason in 1927 (see last row in the following snippet):**



MINUTES | MINUTES VOL. 18 PAGE 236 MEETING DATED January 12th, 1927.

NO.	NAME	AMOUNT
2581	California Petroleum Corp.,	195.79
2582	Los Angeles Gas & Electric Cor.,	45.50
2583	Henderson-Excelsior Agency	40.73
2584	E. Lockett & Son,	76.50
2585	Pasadena Blue Print Co.,	31.34
2586	G. L. McLeod	73.00
2587	Geo. H. Smith	10.00
2588	Jacobs Electric Company,	155.40
2589	Gilmore Oil Company,	61.80
2590	City of South Pasadena, Payroll,	11,893.77
2591	Municipal Water Dept. So. Pasadena,	125.00
2592	Patten & Davies Lumber Company,	5.35
2593	Municipal Water Dept. So. Pasadena,	115.08
2594	Earl Jeuck	2.88
2595	H. S. Crocker Company,	10.00
2596	Edith H. Lowry,	63.80
2597	Edith H. Lowry,	50.86
2598	Weber Showcase & Fixture Co.,	116.00
2599	Western Auto Supply Company,	10.15
2600	City of Pasadena,	7,000.00
2601	J. J. Fillis	25.64
2602	Stanyer & Edmondson	4.20
2603	Home Telephone Company,	5.05
2604	Southern Calif. Telephone Co.,	63.23
2605	Southern Calif. Edison Company,	95.57
2606	City of Pasadena, Water Dept.,	72.08
2607	Southern California Edison Co.,	1,442.32
2608	South Pasadena City School	100.00
		$25,187.00

Water Department.

2378	Addressograph Sales Co.	1.87
2379	Brininstool Company,	14.16
2380	City of South Pasadena	469.43
2381	City of Los Angeles Water & P.	72.32
2382	Crane Company,	6.50
2383	City of Pasadena, Mun. Util.	125.57
2384	W. S. Derby	30.00
2385	J. J. Fillis	1.15
2386	Fisk & Mason	4.80
2387	Grinnell Company	219.28

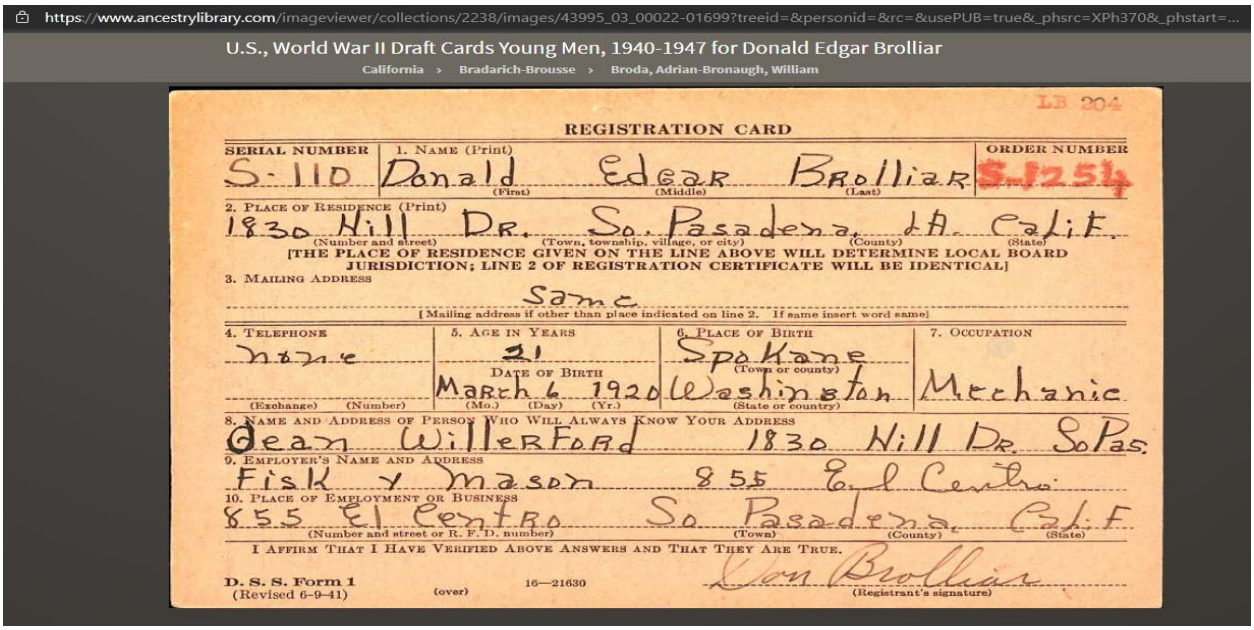
2. **1930s: *Los Angeles Times*, Snippet from 1935, advertisement for Fisk & Mason:**

Roofing Shingles

The firm of Fisk and Mason was chosen to re-roof this old house during the modernization process and was asked to select the best shingle from the standpoint of general-utility. "We selected the 16 inch shingle, known to the trade as 'Perfect,'" said Mr. Mason, "because it is the most economical over a long period of years as well as in its initial cost. The old shingles lasted over 47 years and we certainly expect the new ones to make an even better record. If we could induce the general public to insist on vertical grain No. 1 shingles, they, too, could have a roof expectancy of a half-century."

FISK & MASON
855 El Centro St., South Pasadena
Phone: BL. 71515

3. 1940s: World War II Draft Registration Cards of 4 Men Who Identified Fisk & Mason at 855 El Centro Street, South Pasadena, as their Employer:



https://www.ancestrylibrary.com/imageviewer/collections/2238/images/43995_03_00022-01699?treeid=&personid=&rc=&usePUB=true&_phsrc=XPh370&_phstart=...

U.S., World War II Draft Cards Young Men, 1940-1947 for Donald Edgar Brolliar

California › Bradarich-Brousse › Broda, Adrian-Bronaugh, William

LB 204

REGISTRATION CARD

SERIAL NUMBER: S-110 | 1. NAME (Print): Donald (First) Edgar (Middle) Brolliar (Last) | ORDER NUMBER: S-1254

2. PLACE OF RESIDENCE (Print): 1830 Hill Dr. (Number and street) | So. Pasadena (Town, township, village, or city) | LA. (County) | Calif. (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS: Same

[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE (Exchange) (Number)	5. AGE IN YEARS / DATE OF BIRTH (Mo.) (Day) (Yr.)	6. PLACE OF BIRTH (Town or county) (State or country)	7. OCCUPATION
None	21 / March 6 1920	Spokane / Washington	Mechanic

8. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Dean Willerford 1830 Hill Dr. So Pas.

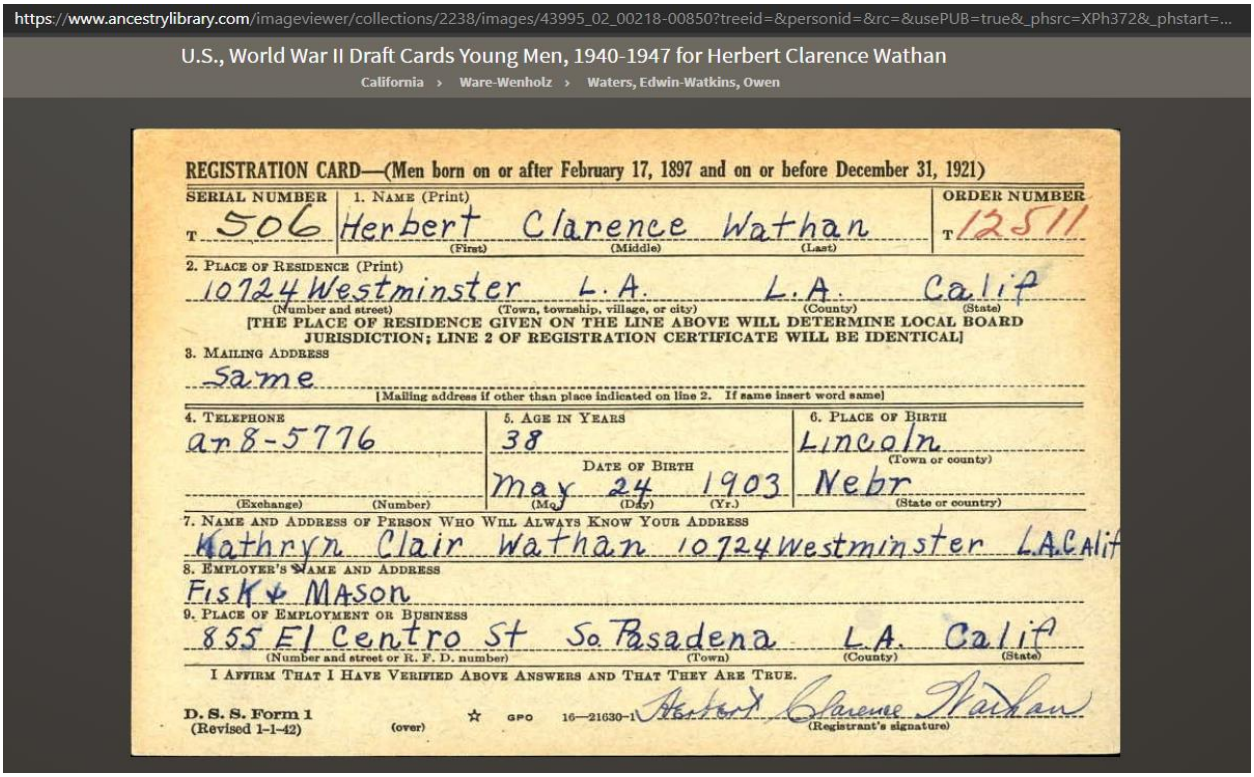
9. EMPLOYER'S NAME AND ADDRESS: Fisk & Mason 855 El Centro

10. PLACE OF EMPLOYMENT OR BUSINESS: 855 El Centro (Number and street or R. F. D. number) | So. Pasadena (Town) | Cal. (County) | F. (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

D. S. S. Form 1 (Revised 6-9-41) (over) 16—21630

Don Brolliar (Registrant's signature)



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U.S., World War II Draft Cards Young Men, 1940-1947 for Herbert Clarence Wathan

California › Ware-Wenholz › Waters, Edwin-Watkins, Owen

REGISTRATION CARD—(Men born on or after February 17, 1897 and on or before December 31, 1921)

SERIAL NUMBER: T 506 | 1. NAME (Print): Herbert (First) Clarence (Middle) Wathan (Last) | ORDER NUMBER: T 12511

2. PLACE OF RESIDENCE (Print): 10724 Westminster (Number and street) | L.A. (Town, township, village, or city) | L.A. (County) | Calif (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS: Same

[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE (Exchange) (Number)	5. AGE IN YEARS / DATE OF BIRTH (Mo.) (Day) (Yr.)	6. PLACE OF BIRTH (Town or county) (State or country)
an 8-5776	38 / May 24 1903	Lincoln / Nebr

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Kathryn Clair Wathan 10724 Westminster L.A. Calif

8. EMPLOYER'S NAME AND ADDRESS: Fisk & Mason

9. PLACE OF EMPLOYMENT OR BUSINESS: 855 El Centro St (Number and street or R. F. D. number) | So. Pasadena (Town) | L.A. (County) | Calif (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

D. S. S. Form 1 (Revised 1-1-42) (over) ☆ GPO 16—21630-1

Herbert Clarence Wathan (Registrant's signature)

https://www.ancestrylibrary.com/imageviewer/collections/2238/images/43995_12_00004-01587?treeid=&personid=&rc=&usePUB=true&_phsrc=XPh372&_phstart=...

U.S., World War II Draft Cards Young Men, 1940-1947 for Roy A Barker

California › Baratari-Baum › Barit,Salustiano-Barkley,Burfard

LB 204

FORM APPROVED
Budget Bureau No. 33-R012-42

REGISTRATION CARD (Men born on or after July 1, 1924, and on or before December 31, 1924)
(Also for the registration of men as they reach the 18th anniversary of the date of their birth on or after January 1, 1943.)

SERIAL NUMBER W 339-A | 1. NAME (Print) Roy (First) A. (Middle) Barker (Last) | ORDER NUMBER W-12372-A

2. PLACE OF RESIDENCE (Print)
1023 Orange Grove Avenue (Number and street) So.Pasadena (Town, township, village, or city) L.A. (County) California (State)

[THE PLACE OF RESIDENCE GIVEN ON LINE 2 ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS
Same as above.
(Mailing address if other than place indicated on line 2. If same, insert word same)

4. TELEPHONE None (Exchange) (Number)
5. AGE IN YEARS 18 DATE OF BIRTH Jan. (Mo.) 9, (Day) 1928 (Yr.)
6. PLACE OF BIRTH Roscoe (Town or county) California (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS
June Hewittee 1023 Orange Grove Avenue So.Pasadena, Sister.

8. EMPLOYER'S NAME AND ADDRESS
Fisk and Mason 855 El Centro So.Pasadena,California

9. PLACE OF EMPLOYMENT OR BUSINESS
Same as above.
(Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

DSS Form 1 (Rev. 11-16-42) 16—21630-4 (OVER) Roy A. Barker (Registrant's signature)

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U.S., World War II Draft Cards Young Men, 1940-1947 for Douglas Burpee McAlpine

California › McAlma-McGrisken › McAlma, Fred-McBride, Burtis

11340

REGISTRATION CARD—(Men born on or after February 17, 1897 and on or before December 31, 1921)

SERIAL NUMBER T 157 | 1. NAME (Print) Douglas (First) Burpee (Middle) McAlpine (Last) | ORDER NUMBER T 11340

2. PLACE OF RESIDENCE (Print)
169 S. Mentor (Number and street) Pasadena (Town, township, village, or city) Los Angeles (County) California (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS
169 S. Mentor Pasadena Los Angeles California
[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE Sycamore (Exchange) 24075 (Number)
5. AGE IN YEARS 41 DATE OF BIRTH Oct. (Mo.) 11, (Day) 1900 (Yr.)
6. PLACE OF BIRTH Vancouver (Town or county) Canada (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS
Mrs. (Clarence S.) Josephine Hearn At. 72349 2021 S. Santa Anita Arcadia, Calif.

8. EMPLOYER'S NAME AND ADDRESS
Fisk and Mason

9. PLACE OF EMPLOYMENT OR BUSINESS
855 El Centro So. Pasadena Los Angeles Calif
(Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

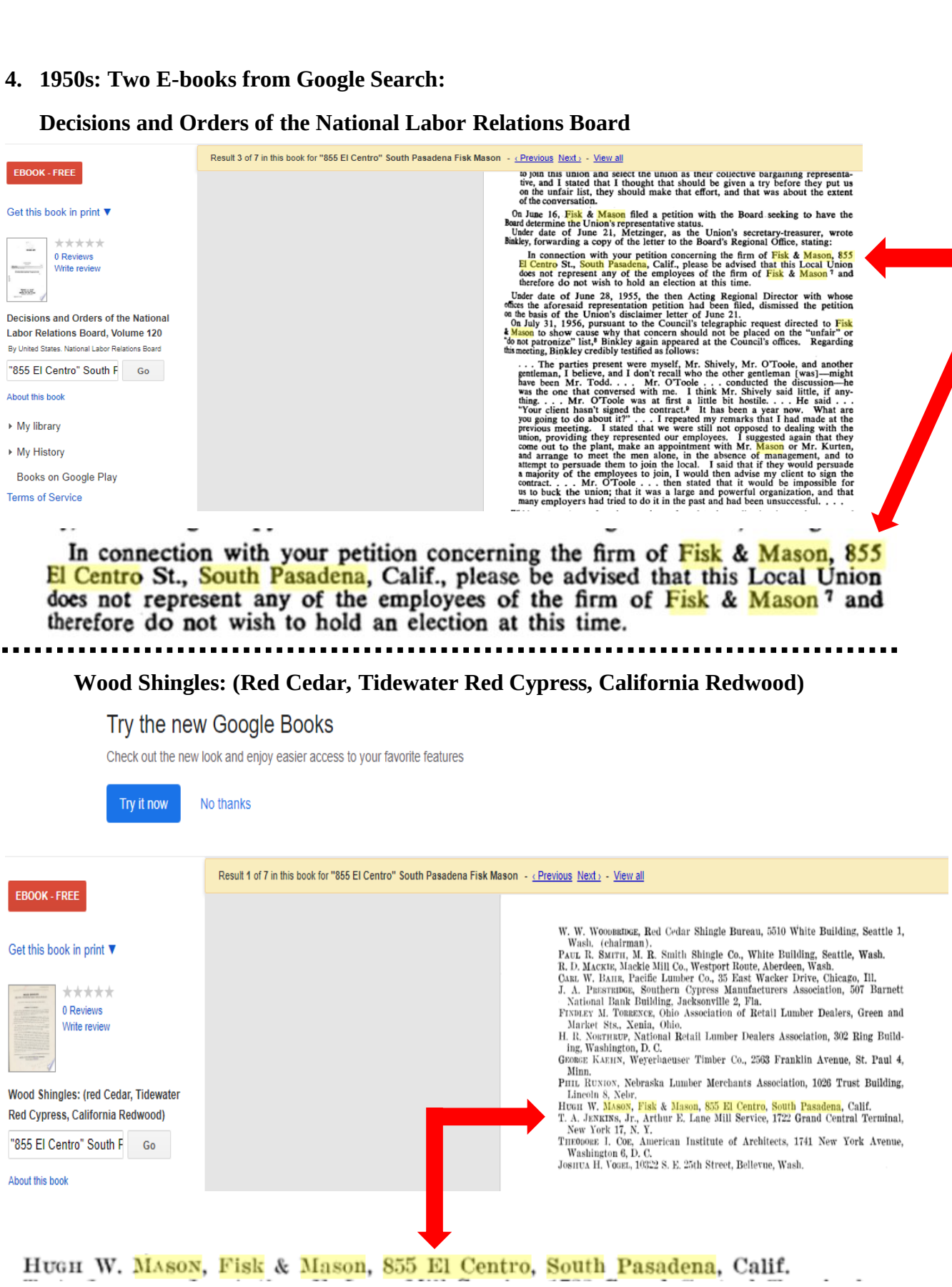
D. S. S. Form 1 (Revised 1-1-42) (over) ☆ GPO 16—21630-1 D.B. McAlpine (Registrant's signature)

4. 1950s: Two E-books from Google Search:

Decisions and Orders of the National Labor Relations Board

In connection with your petition concerning the firm of Fisk & Mason, 855 El Centro St., South Pasadena, Calif., please be advised that this Local Union does not represent any of the employees of the firm of Fisk & Mason [7] and therefore do not wish to hold an election at this time.

Wood Shingles: (Red Cedar, Tidewater Red Cypress, California Redwood)



Hugh W. Mason, Fisk & Mason, 855 El Centro, South Pasadena, Calif.

5. **1950s: Labor Issues at Fisk & Mason Roofing Company:**

Teamsters Stop Picketing Plant
Los Angeles Times (1923-1995); Apr 26, 1958; ProQuest Historical Newspapers: Los Angeles Times
pg. 3

Teamsters Stop Picketing Plant

In response to a National Labor Relations Board order, Teamsters Union Local 420 yesterday terminated 17 months of picketing at Fisk & Mason Co.'s South Pasadena shingle plant.

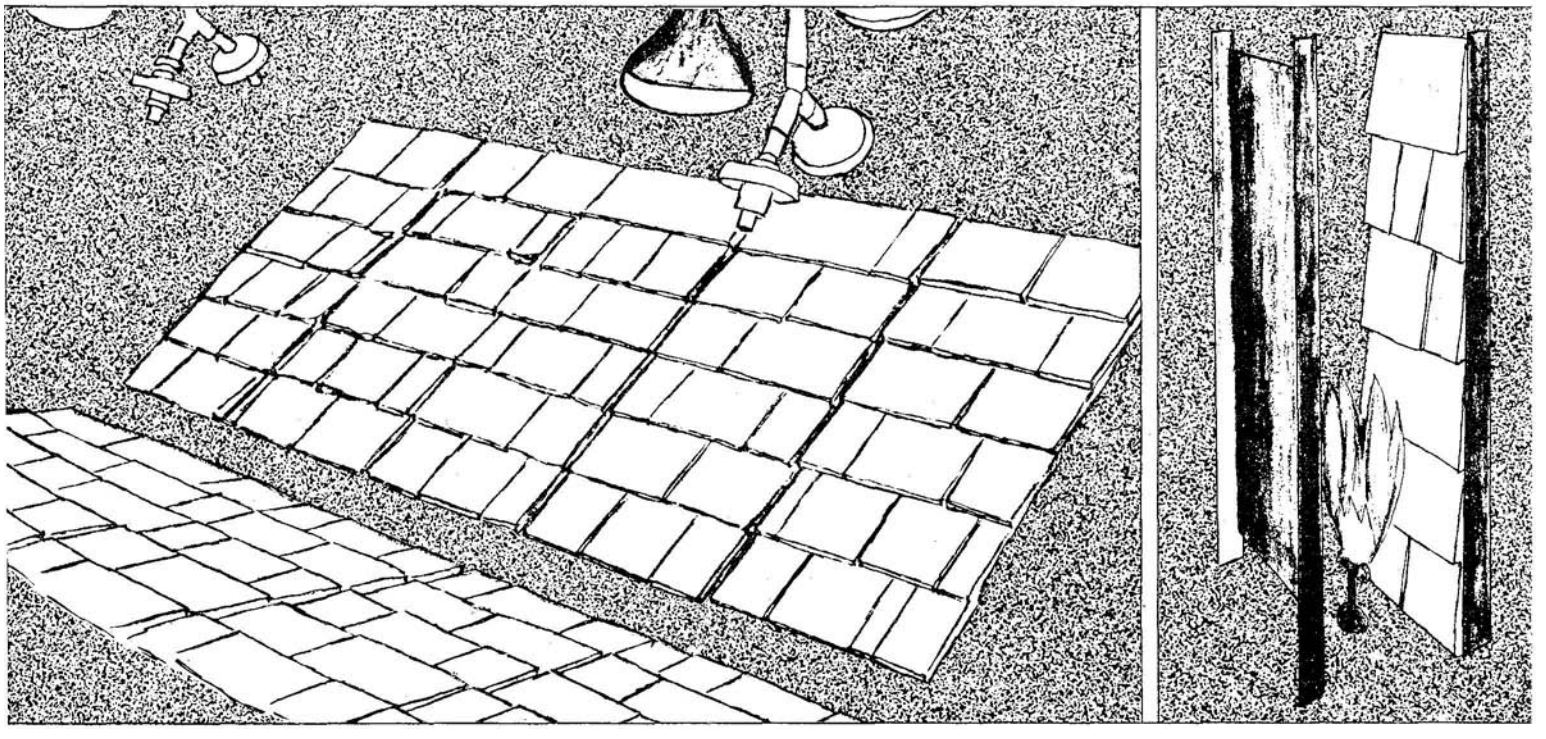
An NLRB ruling upheld the company's contention that the picketing constituted unfair labor practice. The picketing started in November, 1956, after the company declined to sign a contract unless the union could show it represented a majority of the plant employees.

6. **From Converse Engineers Phase I ESA Report on Page 15 (a portion of the table):**

Table 2 – City Directory Summary

Listing	Year
Reeder Salt Company/Violet Ray Ice Company (845 El Centro Street) Residential (830-832 Orange Grove Place)	1950
Creamery Products Corporation/Ordnance Associates Inc./Randolph Philip R Company/Violet Ray Ice Company (845 El Centro Street), Residential (830 Orange Grove Place)	1957
Creamery Products Corporation/Ordnance Associates Inc. /Randolph Philip R Company/Violet Ray Ice Company Creamery Products Corporation (845 El Centro Street); Fisk & Mason Inc. Shingles & Shakes (855 El Centro Street	1958
Residential (830 Orange Grove Place)	1960

EVALUATION OF FIRE-RETARDANT TREATMENTS FOR WOOD SHINGLES



U.S.D.A. FOREST SERVICE RESEARCH PAPER FPL 158-1971

U.S. Department of Agriculture • Forest Service • Forest Products Laboratory • Madison, Wis.

SUMMARY

Wood shingles and shakes are esthetically desirable and durable, but have been restricted for some uses because of their performance under fire conditions. Suitable fire-retardant systems would further improve the utility of shingles and shakes and insure consumer confidence. For this reason, numerous fire-retardant treatment systems were evaluated for their fire performance and durability.

The evaluation used western redcedar shingles in two phases of the study. In the first phase, the fire-retardant treatments were evaluated for method of application and general fire performance under three fire test methods. In the second phase of the study, the more promising treatment systems were evaluated for durability by weathering exposure under two conditions, and then fire tested.

Four treatment systems promised the most fire-retardant effectiveness following weather and leaching exposures. Three were impregnationtreatments in which the chemical fire retardants were heat cured in the shingles to reduce their water solubility: (1) Tris (1-aziridinyl) phosphine oxide, (2) tetrakis (hydroxymethyl) phosphonium chloride with urea and a melamine, and (3) dicyandiamide and phosphoric acid. The fourth treatment was an impregnation with formulation AWPA Type D, followed by coating with a sealer solution containing tricresyl phosphate added as a fire-retardant. A coating of an epoxy paint also gave satisfactory performance, except for resistance to severe flaming ignition.

All four treatment systems need further work to develop optimum treatment levels which give sufficient fire-retardant effectiveness, durability, and acceptable treated-wood properties and yet are economically feasible for the product.

EVALUATION OF FIRE-RETARDANT

TREATMENTS FOR WOOD SHINGLES

Contents

ACKNOWLEDGMENT

Grateful acknowledgment is made to the many contributors to this research study. Particular appreciation is extended to E. L. Schaffer and H. W. Eickner who prepared the original study plan, and to D. H. Fisher and R. O. Knispel for special contributions in the experimental work.

EVALUATION OF FIRE-RETARDANT TREATMENTS FOR WOOD SHINGLES

by
C. A. HOLMES, Forest Products Technologist

Forest Products Laboratory,[1] Forest Service, U.S. Department of Agriculture

INTRODUCTION

Wood shingles have been used as roof coverings in the United States beginning with the early settlers (7).[2] A cypress wood-shingled roof at Greenwich, Conn., was reported to be serving well 250 years later (11). Some of the original wood-shingled roof covering remained on the Mount Vernon home of George Washington for 170 years (12). The availability, economy, and durability of wood shingles meant that up until the early 1900's many roof coverings were of wood shingles. However, criticism of wood shingles increased because they could burn. By the early 1920's, municipal ordinances and building and fire codes were including restrictions on the use of wood shingles for roofing (14).

However, in recent years wood shingles and-shakes have gained increased acceptance for use on wood-frame construction. The low fire risk of this type of roof covering is reflected by insurance rates. The differential rate against the use of wood shingles and shakes has been removed in 32 states and reduced in the other 18 states.

Today a large demand exists for shingles and shakes because of their architectural usefulness and desirable appearance. They are being used in both commercial and residential constructions in a variety of new ways, in interior as well as exterior applications. The availability of acceptable fire-retardant treatments would further improve the utility and fire performance of these products and insure consumer confidence.

Because of the recent interest in fire-retardant treatments for wood shingles, the Laboratory initiated a program of study in this area. The purpose was not to originate new treatments, but to empirically examine fire-retardant treatments that might be suitable for wood shingles, determine their durability by accelerated weathering and exterior exposure tests, and evaluate their fire resistance by established fire testing methods. The program was designed to provide a distinct differentiation between treatments that could or could not be expected to maintain good fire behavior in exterior service.

General Plan of Study

Selected fire-retardant chemicals, and the methods for applying them to shingles most effectively, were first evaluated by preliminary testing without regard to durability. Three fire tests on panels of treated shingles were used in this preliminary phase, They were the 8-foot tunnel furnace, ASTM Standard Method E 286-69 @; the modified Schlyter test (19); and a modified class-C burning-brand test, ASTM Standard Method E 108-58 (1). The less effective treatments were eliminated and the more promising ones given further study.

Durability testing of the shingle treatment systems was accomplished by exposures under two conditions. One 28-day outdoor exposure included a daily leaching spray (and natural rainfall) totaling 30 inches of water over the exposure period. This eliminated the less durable treatments and provided information for making any needed adjustments in the amount of chemical retention. The promising treatments were also subjected to a 1,000-hour cycling exposure in a weathering apparatus using water spray and sunlamp exposure at 150° F. After exposure, the specimen panels were given the modified Schlyter and the burning-brand fire tests.

[1] Maintained at Madison, Wis., in cooperation with the University of Wisconsin.
[2] Underlined numbers in parentheses refer to Literature Cited at the end of the report.

MATERIALS AND METHODS

Shingles used in this study were western redcedar (Thuja plicata Donn), conforming to the grading rules of Commercial Standard CS-31-52 (18), as No. 1 Grade, 16" - 5/2" (16 inches long and 2 inches across the butts of five shingles). These random-width sawn shingles were edge grain and 100 percent clear heartwood. Shingles were purchased from a local lumber dealer, and treated at the Forest Products Laboratory.

The shakes were labeled as meeting requirements of No. 1 Grade by the Red Cedar Shingle & Handsplit Shake Bureau (shakes are not included in the Commercial Standard). Two sizes of treated shakes were obtained: 18" x 1/2" - 3/4", and 24" x 3/4" - 5/4", randomwidth, handsplit, and resawn. Untreated shakes, purchased locally, were of the former size.

During the period of this investigation commercially treated shingles and shakes became available which had the class-C rating from Underwriters' Laboratories, Inc. Shingles and shakes with the U.L. class-C label indicated acceptable performance of shingles and shakes similarly treated under ASTM E 108-58 (1), "Standard Methods of Fire Tests of Roof Coverings." To provide some data by which to judge the severity of the test procedures used in this study, some factory-treated, class C labeled shingles and shakes were included. These were furnished by one commercial treater.

Preparation of Specimens

General Procedure for Chemical Treatment of Shingles.--The chemicals or treatments were applied using relatively heavy applications for the preliminary testing without attempting to determine any minimum retention. Subsequent treatments for the exposure tests were corrected or changed depending on the results of the fire tests. The commercial shingle treatments examined were applied using the manufacturers' recommended procedure and chemical retention or coating weight.

The impregnation treatments, unless described otherwise, were made by the full-cell, vacuum-pressure process. The air-dry bundles of shingles, with the shipping bands replaced with string, were measured for volume, weighed, and placed in the treating cylinder. The sealed cylinder was evacuated to 27-1/2 inches of mercury, and this vacuum was held for 15 to 30 minutes. The treating solution was then drawn into the cylinder and a pressure of 75 to 90 pounds per square inch was maintained for 1-1/2 to 2 hours. Solution temperature depended on type and solubility of chemical. After treatment, the bundles were drained and weighed to obtain the treating solution pickup. The dry chemical retention in pounds per cubic foot (p.c.f.) of wood was then determinedfor each bundle from the solution concentration. The treated shingles were either air dried or kiln dried. Specimen panels of the shingles were made up as described later and conditioned to equilibrium at 80° F. and 30 percent relative humidity. The equilibrium moisture content of untreated wood under these conditions is about 6 percent, based on the ovendry weight. This conditioning was carried out on all panels prior toanyexposure or fire testing.

Coating treatments by brush or spray were applied only to the shingles of a panel that had been previously conditioned to constant weight at 80° F. and 30 percent relative humidity. After treatment, the panel was again conditioned for at least 30 days to insure evaporation of the solvent.

Table 1 gives the various chemical treatments and coatings evaluated in this study. An identifying code number is included. Further information on the resultant chemical retention or spread rates for the various specimens is included in later tables. Where commercial products were included, they are identified by code letter.

Construction of Test Panels.--Each test specimen consisted of a panel made up of shingles and a supporting deck or backing to which the shingles were nailed. The size and type of deck were determined by the fire test method used to evaluate the treatment applied to the shingles. The wood used for the deck was untreated.

The shingles were applied to the decks following the recommendations of the Red Cedar Shingle & Handsplit Shake Bureau (16). In all exposure testing, the shingle panels were placed at a slope of 5-in-12. The shingles were nailed to the deck to provide a weather exposure of 5 inches, which is the recommended standard for 16-inch shingles on roofs with a 5-in-12 slope.

The 18-inch shakes were laid with a 5-inch exposure to the weather, and the 24-inch shakes with

Table 1.--Description of fire-retardant treatments for western redcedar shingles and shakes

Code No.	Treatment method[1]	Description of treatment formulation
1	None	--
2	None (shakes)	--
3	Brush coating	One coat: Monoammonium phosphate 15%, water 85%.
4	Brush coating	Four undercoats: (AWPA Type D) Zinc chloride 5.25%, ammonium sulfate 5.25%, boric acid 3.75%, sodium dichromate 0.75%, water 85.0%. Three topcoats: Sealer A 80%, tricresyl phosphate 20%. Sealer A is a mineral spirits solution containing a water repellent, pentachlorophenol, and other chlorophenols. It meets Federal Specification TT-W-572 Type II.
5	Brush coating	One coat: Pentachlorophenol 3%, diesel oil 57%, fire-retardant chemical solution B 40%. Solution B is a water solution of sodium calcium borate and emulsifiers.
6	Brush coating	One coat: Pentachlorophenol 4.5%, diesel oil 85.5%, fire-retardant chemical solution C 10.0%. Solution C contains tris alkyl phenyl phosphate.
10	Brush coating	One coat: Forest Products Laboratory exterior house paint formulation with pure oxidizing alkyd, titanium dioxide, and cobalt and calcium naphthenate driers.
11	Brush coating	One coat: Same as Code No. 10 but with antimony oxide 8.4% of paint solids.
12	Brush coating	One coat: Same as Code No. 10 but with antimony oxide 16.7% of paint solids.
13	Brush coating	One coat: Fire-retardant epoxy paint D. Manufactured commercially in accordance with Military Specification MIL-C-46081.
14	Brush coating	One coat: Ashes (boiler) 14%, mica powder 12%, borax 6%, asbestos powder 4%, zinc oxide 4%, urea-formaldehyde glue 10%, water 50%.[2]
15	Brush coating	One coat: Fire-retardant asphalt emulsion E.
16	Brush coating	One coat: Tetrakis (hydroxymethyl) phosphonium chloride (80% in water) 44.1%, ethanolamine 2.0%, trimethylolmelamine 19.6%, urea 11.7%, water 22.6%.
17	Pressure impregnation	Treating solution: Sodium tetraborate decahydrate (borax) 18.9%, water 81.1%.
18	Pressure impregnation	Treating solution: Sodium tetraborate decahydrate 25.3%, monoammonium phosphate 6.6%, water 68.1%.
19	Pressure impregnation	Treating solution: (AWPA Type B) Chromated zinc chloride 9.08%, boric acid 1.06%, ammonium sulfate 1.06%, water 88.80%.
20	Pressure impregnation	Treating solution: Monoammonium phosphate 2.59%, boric acid 2.59%, zinc chloride 4.31%, copper sulfate (anhydrous) 1.34%, sodium dichromate (anhydrous) 2.95%, water 86.22%.[2]

(Page 1 of 2)

Table 1.--Description of fire-retardant treatments for western redcedar shingles and shakes--continued

Code No.	Treatment method[1]	Description of treatment formulation
21	Pressure impregnation, double-salt treatment	Treating solution 1: Sodium tetraborate decahydrate 18.9%, water 81.1%. Treating solution 2: Zinc chloride 10%, water 90%.
22	Pressure impregnation, double-salt treatment	Treating solution 1: Sodium tetraborate decahydrate 37.8%, water 62.2%. Treating solution 2: Zinc chloride 15%, water 85%.
23	Pressure impregnation and brush coating	Treating solution: Sodium tetraborate decahydrate 25.3%, monoammonium phosphate 6.6%, water 68.1%. Brush coating: Three coats sealer A.
24	Pressure impregnation and spray coating	Treating solution: (AWPA Type D) Zinc chloride 5.95%, ammonium sulfate 5.95%, boric acid 4.26%, sodium dichromate 0.85%, water 83.0%. Spray coating: Five coats sealer A 80%, tricresyl phosphate 20%.
25	Pressure impregnation	Treating solution: Tris (1-aziridinyl) phosphine oxide (72% in methylene chloride-acetone solvent) 20.8%, water 79.2%.
26	Pressure impregnation	Treating solution: Tris (1-aziridinyl) phosphine oxide (72% in methylene chloride-acetone solvent) 12.5%, water 87.5%.
27	Pressure impregnation	Treating solution: Tetrakis (hydroxymethyl) phosphonium chloride 34.31%, ethanolamine 1.96%, trimethylolmelamine 19.61%, urea 11.76%, water 32.36%.
28	Pressure impregnation	Treating solution: Tetrakis (hydroxymethyl) phosphonium chloride (80% in water) 5.02%, sodium hydroxide (50% in water) 0.87%, urea 0.80%, a liquid melamine 1.74%, water 91.57%.
29	Pressure impregnation	Treating solution: Tetrakis (hydroxymethyl) phosphonium chloride (80% in water) 10.04%, sodium hydroxide (50% in water) 1.74%, urea 1.60%, a liquid melamine 3.48%, water 83.14%.
30	Pressure impregnation	Treating solution: Dicyandiamide 9.3%, phosphoric acid (85%) 12.6%, water 78.1%.
31	Pressure impregnation	Treating solution: Dicyandiamide 6.82%, phosphoric acid (85%) 9.38%, formaldehyde (37%) 0.66%, water 83.14%. Solution prereacted.
32	Pressure impregnation	Treating solution: Dicyandiamide 9.10%, phosphoric acid (85%) 12.50%, formaldehyde (37%) 0.88%, water 77.52%. Solution prereacted.
33	Pressure impregnation	Treating solution: Dicyandiamide 6.98%, phosphoric acid (85%) 9.45%, water 83.60%.
34	Pressure impregnation	Treating solution: Dicyandiamide 9.3%, phosphoric acid (85%) 12.6%, water 78.1%.
35	Pressure impregnation	Treating solution: Zinc sulfate 16.5%, zinc silicofluoride 18.1%, urea 10.4%, water 55.0%.
36	Factory treated	Commercial treatment, Class C labeled by Underwriters' Laboratories, Inc.
37	Factory treated shakes	Commercial treatment, Class C labeled by Underwriters' Laboratories, Inc.

[1] Applied on shingles unless shakes are specifically noted.

[2] "A note on fire-resistive-cum-antiseptic composition and fire-resistive paint," by A. Purushotham, J. N. Pande, and J.S. Sud, Journal of the Timber Driers & Preservers Association, Vol. IX, No. 3, July 1963.

a 10-inch exposure. Since the upper surface of handsplit and resawn shakes is irregular, they were applied with an underlayment of type 15 (15-pound) asphalt-saturated organic roofing felt.

Shingles for preliminary testing of treatment in the 8-foot tunnel furnace were applied to a deck consisting of a single piece of 3/8-inch Douglas-fir plywood, 13-3/4 inches wide by 8 feet long.

Two specimen panels were required for each modified Schlyter test. The deck of each panel was 3/8-inch Douglas-fir plywood, 11-7/8 inches wide by 31 inches long.

The size of the test specimen for the class-C burning-brand test prescribed by ASTM Standard E 108-58 is a roof section 40 inches wide by 52 inches long. However, to economize in the amount of test material required, test panel inserts with a deck size of 12 by31 inches (fig. 1) were developed for use withinthe standard-size roof section. This insert panel was about the same size as the Schlyter test panel. Therefore, the mounting racks for the outdoor and weathering apparatus exposures were constructed to accommodate both types of specimen panels. Except for the overall size, the test panel was constructed according to the intent and purpose of the ASTM standard. The deck or backing of the insert panel (fig. 2) was made of western white pine boards, 3-1/2 inches wide by 1-inch nominal thickness, laid across the shorter dimension of the deck and spaced 1-1/2 inches apart, Side rails of 3/4- by 1-inchpine were nailed to the ends of the deckboards. The top and bottom deck boards were cut 2-1/2 inches wide. The first course of shingles extended 1 inch beyond the bottom of the deck. The bottom, or butt edge, of each of the succeeding courses was directly over the upper edge of the space between the deck boards.

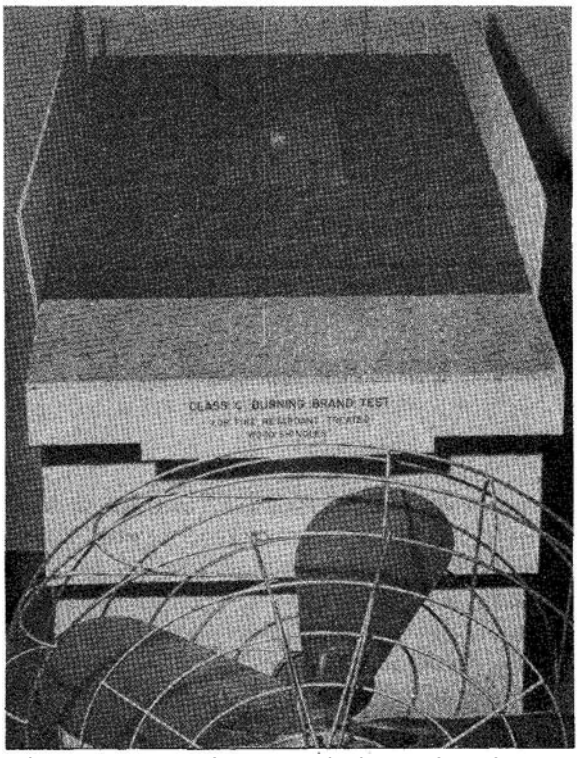


Figure 1.--Test frame and large fan for conducting the class-C burning-brand test. The roof assembly includes the shingle specimen under test as an insert in the standard size roof deck. (M 138 153-1)

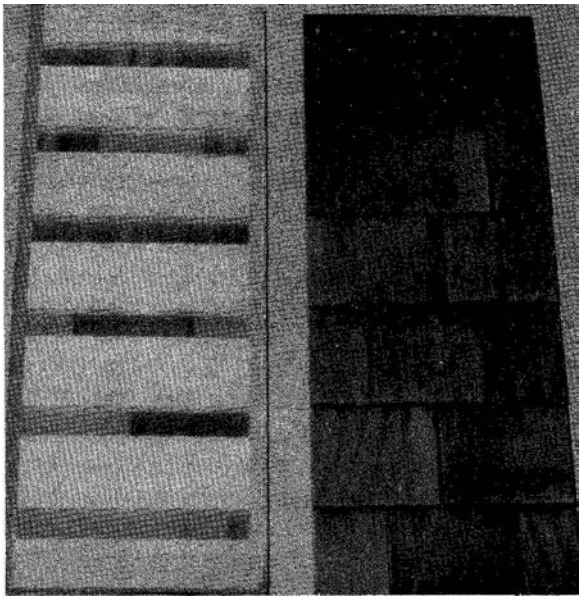


Figure 2.--Shingle specimen panel (right) used for the modified class-C burning-brand test, showing construction of the deck or backing (left). M 138 595

Fire Test Methods

Modified Class-C Burning-Brand Test.--ASTM E 108-58 (1), "Standard Methods of Fire Tests of Roof Coverings," prescribes the standard tests for prepared roof-covering materials as class A, B, or C, depending on the maintenance requirements of the material after installation on a roof and on its effectiveness against fire exposure. (Most asphalt shingle roofing, widely used on residential construction, meets the class C requirements.)

The ASTM standard includes three different tests for determining the fire-retardant charac-

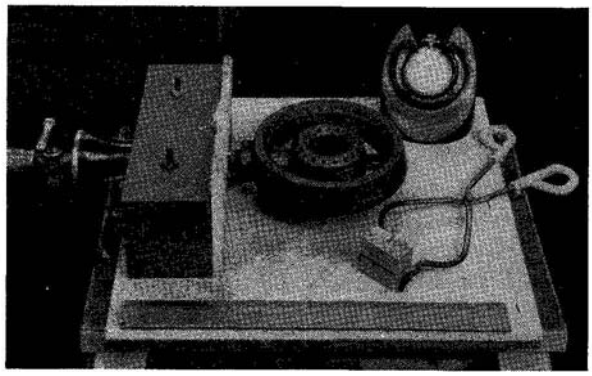


Figure 3.--Igniting burner and class-C brand. (M 127 767)

teristics of roof coverings. These are: (1) Intermittent flame exposure test, (2) spread of flame test, and (3) burning-brand test. In the ASTM method, the three tests are varied in severity for the class of roofing under evaluation.

The evaluations in this study were limited to a modified ASTM E 108 class-C burning-brand test.. The flame tests prescribed by this ASTM standard were not used because of the large size of specimen and special equipment required. Instead, the flame-spread characteristics were evaluated by the 8-foot tunnel furnace and Schlyter panel methods.

The burning-brand test measures the resistance of the treated shingles to the penetration of fire. The most important fire-retardant properties of a roof covering are the ability to withstand ignition from burning materials falling on its surface and the subsequent penetration of the fire through the covering to the deck below. The roofing material itself must not produce any flaming or glowing brands which can blow away to cause other fires.

In the standard class-C burning-brand method, the test roof-section assembly (fig. 1) consists of a 40- by 52-inch section of a shingled roof, with a simulated eave and cornice, elevated off the floor at a convenient working height. The section of roof is constructed with a slope of 5-in-12 and covered with 16-inch western redcedar shingles with a 5-inch exposure. The supporting structure is enclosed on the front and sides. The rear is open in order that the underside of the specimen panel deck may be observed for fire penetration during a test. This arrangement for holding the specimen panel provides for a uniform flow of air current over its surface from the large fan positioned in front of the test frame.

The class-C brand is a block of clear white pine, 1-1/2 by 1-1/2 inches square by 25/32 inch thick, with 1/8-inch-wide saw kerfs one-half the thickness of the brand, across the center of the top and bottom faces, at right angles to each other (fig. 3). The brand is ovendried to constant weight so that at time of test the conditioned weight is 9-1/4 ± 1-1/4 grams. The gas burner for igniting the brands is adjusted to give a blue flame of maximum intensity having a temperature of 1,630° ± 50" F. at a height of 2-5/16 inches above the top of the burner.

In preparation for the burning-brand test, the conditioned specimen panel was inserted in the roof section. The fan, 60 inches from the front edge of the deck, was adjusted to supply the desired airflow over the face of the roof section and specimen panel. The required velocity of 12 ± 0.05 miles per hour was measured with an air velocity meter midway up the slope of the specimen panel at its center and edges. The class-C brand was ignited by holding it in the gas flames of the igniting burner, exposing each of the square surfaces to the flames for 1 minute. The burningbrand was then placed on the test panel (fig. 4). A soft-iron wire, stretched across each shingle course, held the brand in place throughout the test. The ignited brand was centered over the joint between two shingles in the same course and just below the butt edge of a shingle in the course above. This position was directly above the space between the

Figure 4.--Class-C burning-brand test in progress on a shingle specimen. (M 138 153-8)

deck boards. Due to the lengthwise taper of the shingles, this location had the minimum thickness of shingles protecting the deck. This complied with the ASTM standard requirement that the brands be placed in ". . . positions considered most vulnerable with respect to ignition of the roof deck."

The number of brands that can be used on a specimen panel was limited by the number and location of these joints. At least five and as many as eight brands were used on one specimen panel.

The test was continued for each brand until it was consumed and all evidence of flame, glowing, and smoke had disappeared, or until failure by occurrence of sustained flaming on the underside of the deck. Brands that did not show progressive and substantially complete consumption were disregarded. The following observations were recorded for each brand:

1. Location of the brand shown on a diagram of the specimen panel.
2. Time of shingle specimen ignition and duration of combustion, either flaming or glowing.
3. Duration of combustion of brand.
4. Exposure of the specimen deck by burnthrough, breaking, cracking, or warping.
5. Appearance and duration of any glowing or flame on the underside of the specimen deck.
6. Production of flying, flaming, or glowing brands--other than from the test brand--which are blown or fall away from the specimen panel.

When the flaming ignition was sustained on the underside of the specimen deck, this was considered as a failure for that individual brand test. The specimen failed the test if at any time there was a production of burning brands from the shingles, item 6.

Modified Schlyter Test.--The Schlyter test (19) was used to give a measure of theflame-spreading property of the vertical surface of a material. The results of the test are decidedly influenced by treatments on the surface and to about 1/4-inch penetration of the specimen material. Since the leaching effect of rainfall is mostly an action on or slightly below the surface, this test was considered of particular value in evaluating fire-retardant treatments and their resistance to leaching exposure. The test is also of sufficient severity to distinguish degrees of resistance to the spread of fire.

The testing apparatus for the Schlyter test is shown in figure 5. The two matched specimenpanels are held in a parallel, vertical position with the test surfaces facing each other and 2 inches apart. The bottom of one panel is supported 4 inches higher than the bottom of the other. Behind the testing rack is a scale graduated in inches and used by the test observer to measure the flame height during a test. This arrangement of the panels not only gives a flue effect to promote combustion but a synergistic effect as well. One panel radiates heat to the other to accelerate the flaming process.

The test can be made using either a "mild" or a "severe" method, depending on the size of the gas burner used for the igniting flame. In the mild test, the lower panel rests on the surface of the test table, and gas is regulated at 6 cubic feet per hour through a flowmeter to a Bunsen burner fitted with a wing top. (Nominal heat content ofthenatural gas used was 1,000 B.t.u. per cu. ft.) For the severe test, a Fisher No. 3-900 burner with a special "T" head is supplied gas at 18 cubic feet per hour. The

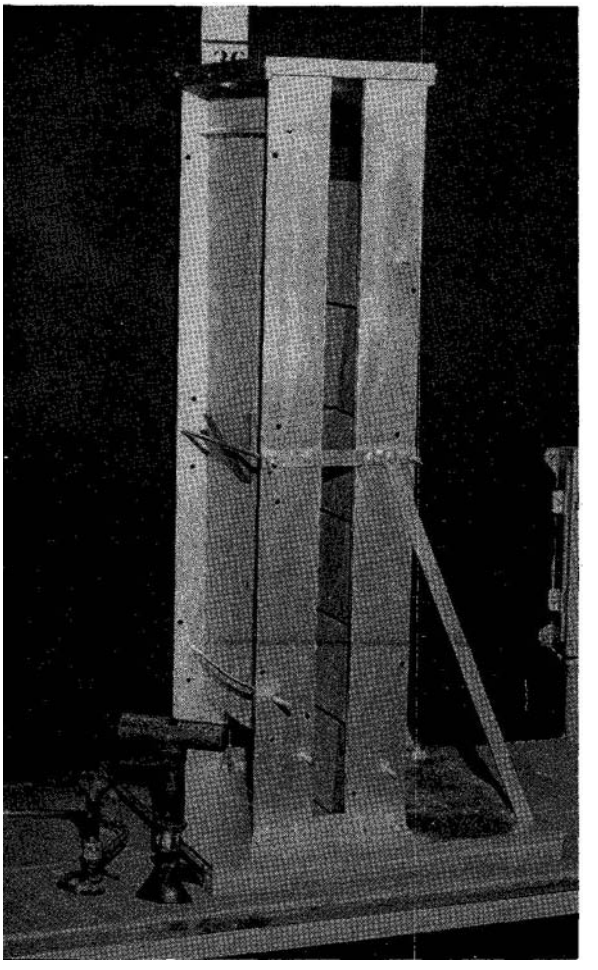


Figure 5.--Modified Schlyter test apparatus.
(M 138 074-4)

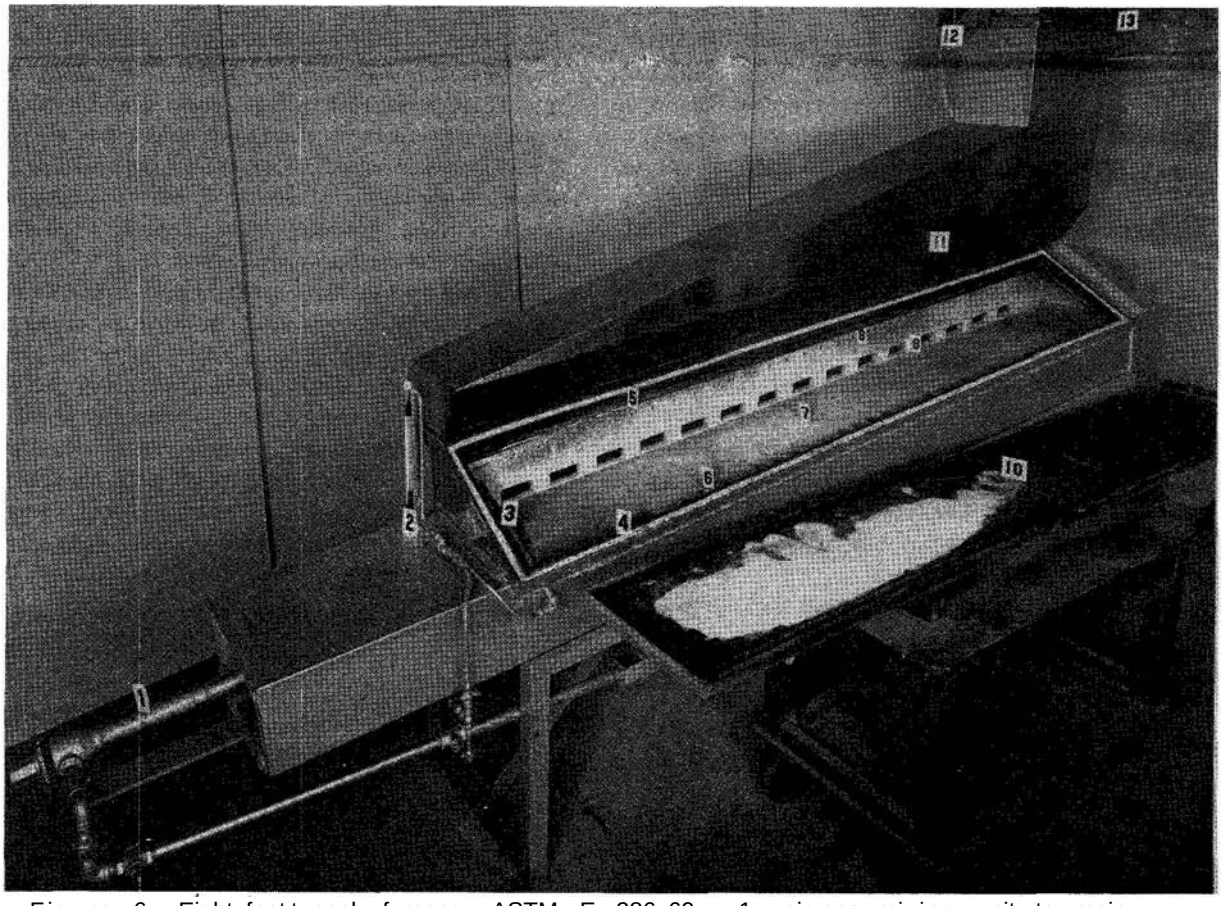


Figure 6.--Eight-foot tunnel furnace, ASTM E 286-69. 1, air-gas mixing unit to main burner;, 2, gas flowmeter to igniting burner; 3, igniting burner; 4, sand seal for cover; 5, angle-iron specimen holder; 6, holes in partition plate with Meker burner-tops; 7, partition plate; 8, observation ports; s, natural draft air inlets; 10, specimen cover; 11, hood for collecting combustion gases; 12, photoelectric device for smoke-density measurement; 13, thermocouple for stack temperature measurement. (M 119 375)

horizontal part of the "T" head is of brass tubing, 1-1/4-inch diameter by 5-1/8 inches long, and enclosed at the ends. The top of the tubing has two rows of 14 holes for gas emission. The test is conducted with both panels raised 2 additional inches to provide a greater air draft.

At the start of the test the burner is placed between the panels and the gas is ignited. The initial height of the gas flame is immediately recorded. Thereafter, the height of the flame is recorded at 15-second intervals. At the end of 3 minutes of exposure, the gas flame is shut off and the burner removed. A record is made of the time when all flaming stops, and the presence and duration of any afterglowing are noted. If flaming or glowing does not appear to be self-extinguishing, it is put out with water at the end of 5 minutes. The flame spread for each time interval is the flame height reading obtained less the initial gas flame height.

The significant results of the Schlyter test in this study were the average flame height for the 3-minute period and the glowing and self-extinguishing properties of the treated shingles.

Eight-Foot Tunnel Furnace Test.--This test was used only for the preliminary evaluation of the various fire-retardant treatment systems. Tests were limited to treated shingles without leaching exposures.

ASTM E 286-69 gives the detailed description of the equipment and the test procedure. The furnace and the method of test were developed at the Forest Products Laboratory for measuring the surface flame-spread property of wood and wood products (19, 20). The general construction of the furnace is shown in figures 6 and 7.

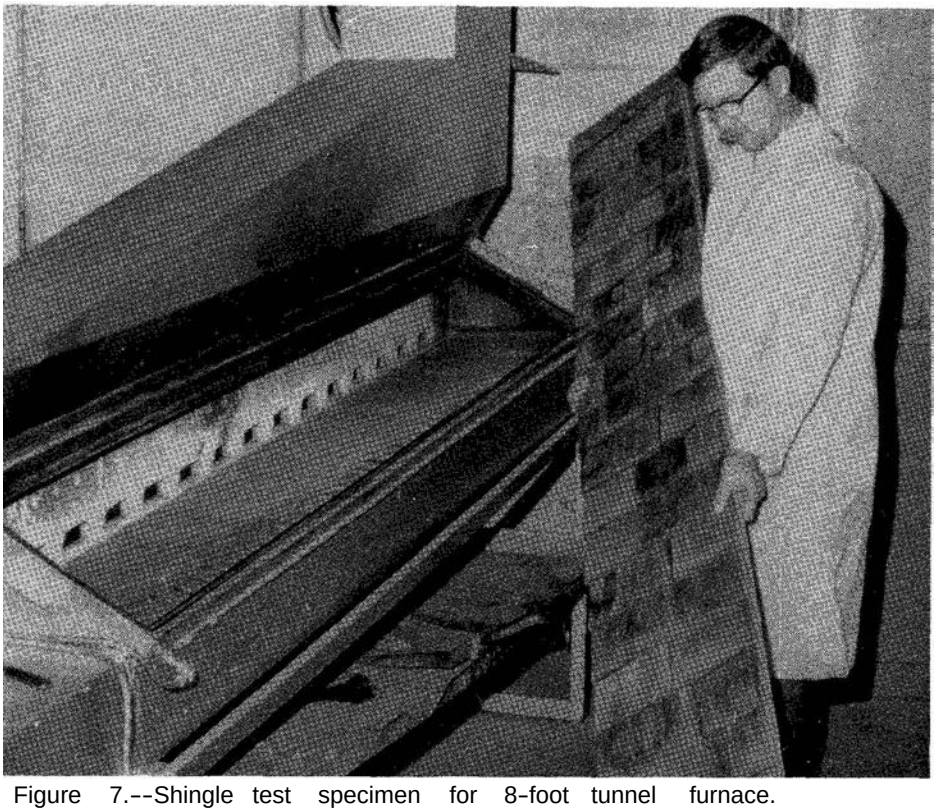


Figure 7.--Shingle test specimen for 8-foot tunnel furnace. (M 138 593)

The results of the fire test are used to calculate a flame-spread index value for the specimen tested. This value indicates the relative rate of flame spread on the specimen material as compared with the rate of flame spread on asbestos millboard and on a red oak standard. Asbestos millboard is assigned an index value of 0, and the red oak is assigned an index value of 100. A smoke-density index and fuel-contributed index are also obtained in the 8-foot tunnel furnace test.

PRELIMINARY TESTING AND EVALUATION

In the preliminary screening of the various fire-retardant treatments, the test panels of the treated shingles were brought to equilibrium at 80° F. and 30 percent relative humidity and tested by the three fire test methods. One test panel was given the modified class-C burning-brand test in which five to eight burning brands were used. Two tests were made by the modified Schlyter method. The first was conducted by the mild procedure. If the results of the mild test showed an average flame spread to 3 minutes not greater than 15 inches and the flaming went out of its own accord after the burner gas was shut off, then the second was conducted by the severe procedure. Finally, one test was made in the 8-foot tunnel furnace to determine the performance of the treatment by this relatively severe flame-spread method.

DURABILITY TEST METHODS

Twenty-Eight-Day Exposure

Four Schlyter test panels and one burning-brand test panel of each treatment system were placed outdoors at the Forest Products Laboratory. They were placed in racks with the panels facing south at a slope of 5-in-12. The panels were given a water spray each working day of the week amounting to 1-1/2 inches, including any rainfall. During the 28-day period, the panels had received a total of 30 inches of water. This compared with the average annual precipitation in the Madison area and was also the approximate average for the United States as a whole.

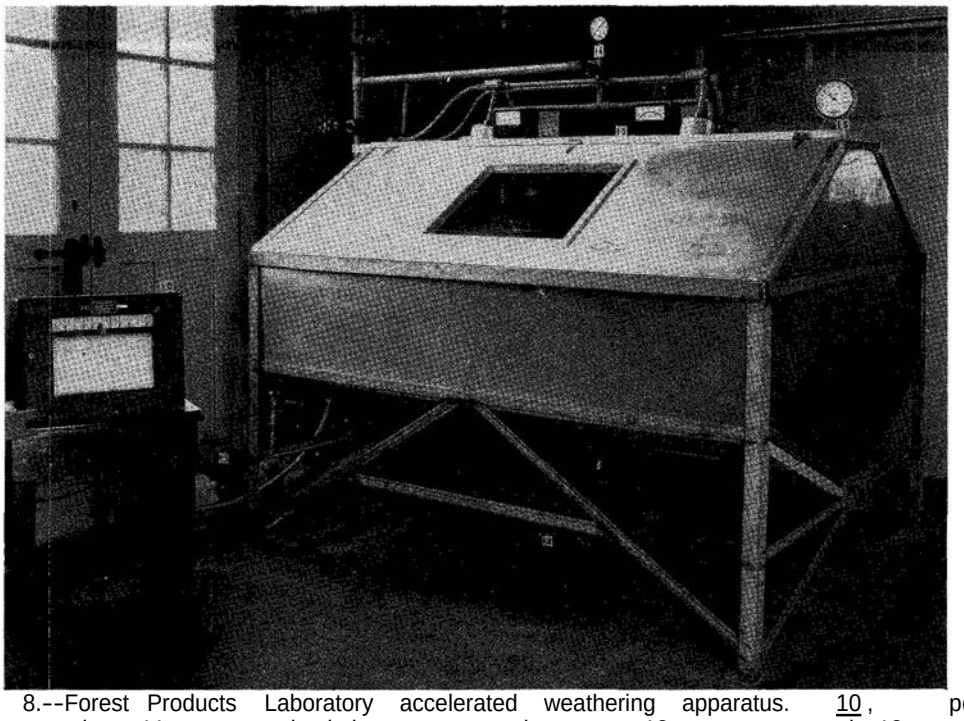


Figure 8.--Forest Products Laboratory accelerated weathering apparatus. 10, potentiometer recorder; 11, water circulation pump and motor; 12, water reservoir; 13, radiation monitor; 14, water pressure gage; 15, dial thermometer.
(M 133 931)

During the exposure period the shingles were observed for any change in theirphysical appearance. At the end of the period, the panels were weighed and placed in the conditioning room preparatory to fire testing.

Accelerated Weathering Exposure

The weathering apparatus used for this stage of the exposure testing was designed andconstructed at the Forest Products Laboratory (figs. 8 and 9) (3). It produced the exposure conditions similar to those specified in Resolution No. 648, July 1, 1964, of the Board of Building and Safety Commissioners of the City of Los Angeles for a weathering test of fire-retardant-treated shingles and shakes. The accelerated weathering exposure test was part of the requirements that had to be met in order to obtain approval fortheuse of wood shingles and shakes, in lieu of class "C" roofing, in the Mountain Fire District of Los Angeles.

The Forest Products Laboratory weathering apparatus consisted of a stainless steel tank or chamber in which are two panel racks facing each other and at a slope of 5-in-12. Each rack held six of the modified Schlyter or burning-brand test panels. Over each rack were two type RS sunlamps directed normal to, and 26 inches from, the faces of the specimens: the 275-watt sunlamps provided ultraviolet radiation from 2,800 to 4,000 angstroms wavelength with peak output at 3,654 angstroms. Also mounted over each rack were two water-spray nozzles. The required temperature was maintained during the exposure by circulating air heated by three 1,800-watt controlled heater elements in the blower-fan duct mounted externally on the chamber, A water pump, circulated water from a separate reservoir through the spray nozzles onto the specimens and back to the reservoir through the drain at the bottom of the chamber. Solenoid-operated valves controlled the supply of fresh tapwater into the reservoir and the drain of the leach water into the sewerline. A program timer controlled the time cycles of water spray, sunlamp radiation, and rest periods.

Each fire-retardant system that showed some measure of durability in the 28-day exposure was tested in the weathering apparatus for 1,000 hours. Four Schlyter and two burning-brand test panels of each treatment were given this exposure test. The

24-hour cycle of the apparatus consisted of:

4 hours' water spray
4 hours' sunlamp exposure at 150° F.
4 hours' water spray
4 hours' sunlamp exposure at 150° F,
8 hours' rest

During the water-spray period, the spray rate was about 0.3 gallon per square foot of specimen surface per minute. A supply of fresh tapwater was used at the start of each 4-hour water-spray period. An airtemperature of 150° F. was obtained at shielded thermocouples placed 1 inch above the specimen surface and directly below the lamps. This temperature was reached in 15 minutes or less after the lamps were switched on. During the rest period of 8 hours, the weathering apparatus was idle until the start of the next 24-hour cycle.

The specimen panels were rotated twice a week in their positions on the rack to equalize any unevenness of the water spray and sunlamp radiation. At the conclusion of the 1,000-hour exposure, the panels were weighed and placed in the conditioning room at 80° F. and 30 percent relative humidity. After they had come to equilibrium, two Schlyter tests were made on four panels andburning-brand tests were made on two panels.

The weathering apparatus provides a very severe exposure condition with cycling of water spray and ultraviolet light at high temperature. If the water falling on the shingle specimens is compared with rainfall, the total water is 10,000 inches over the 1,000-hour period. The amount of water sprayed onto any one shingle specimen during the period is equivalent to the total amount of rainfall, at 40 inches per year, that would fall on and flow over this size specimen in a 35-year period if placed at the eave end of an average 18-foot roof slope,

The high-temperature condition of the shingles at 150° F., followed by the cold-water spray, gives a hot-and-cold bath effect. This forces the spray deeper into the wood to dissolve or further dilute any water-sensitive fire-retardant chemicals and thus accelerates the leaching action.

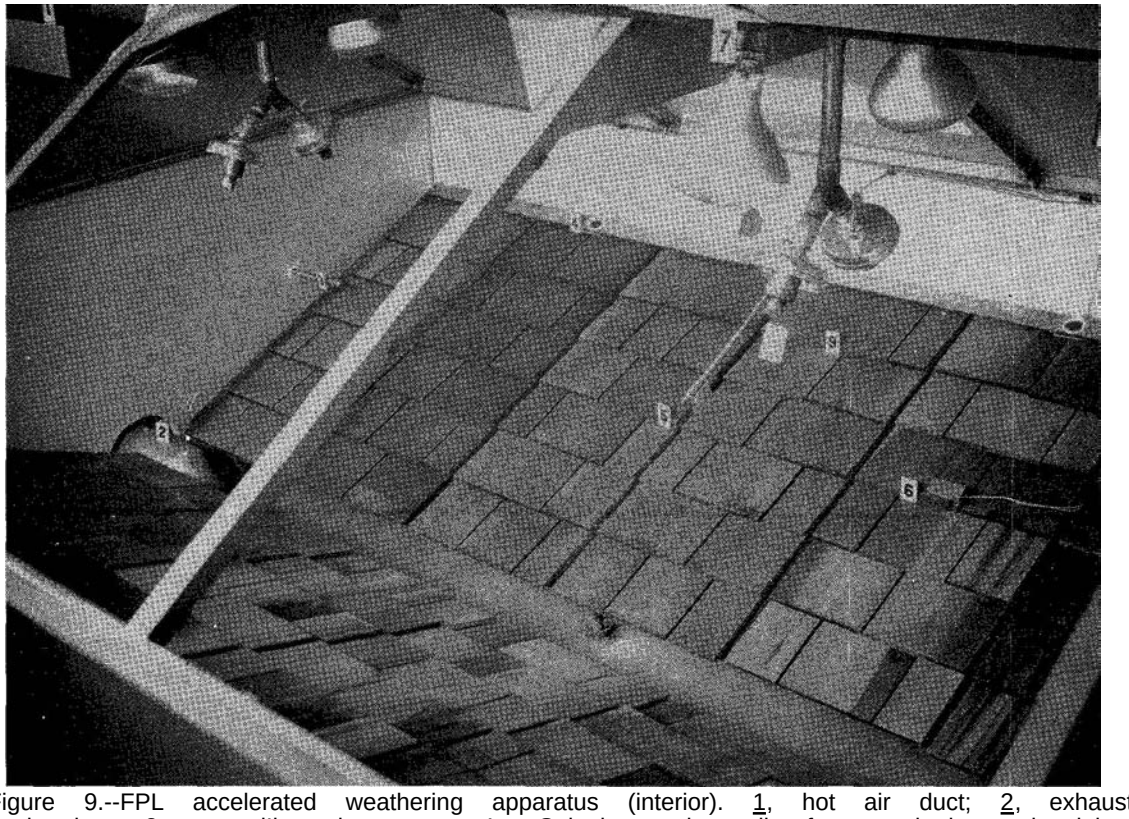


Figure 9.--FPL accelerated weathering apparatus (interior). 1, hot air duct; 2, exhaust air duct; 3, controlling thermostat; 4, Selenium photocell for monitoring ultraviolet light; 5, temperature-sensor for dial-thermometer; 6, thermocouple with radiation shield; 7, type RS sunlamp, 275 watts; 8, water-spray nozzle; 9, shingle test specimen panel. (M 133 928)

RESULTS AND DISCUSSION

The fire test results obtained in the preliminary evaluation of the shingle treatments in the unexposed condition are given in table 2. Table 2 also gives the results in the modified ASTM E 108 class-C burning-brand test and in the modified Schlyter test after the outdoor exposure of 28 days and 30 inches of water-spray leaching.

Table 3 presents the fire test results on the selected treatments after the 1,000-hour exposure in the weathering apparatus.

The complete results obtained with the individual brands in the burning-brand test conducted on shingle specimens after the 1,000-hour exposure are given in the appendix.

The various treatment systems are separated for discussion into two main groups: Fire-retardant coatings and impregnation treatments.

Fire-Retardant Coatings

A variety of coating formulations was included to determine the types of coatings which would offer the most promise of fire-retardant effectiveness and durability on western redcedar shingles.

The coatings used were separated by type as follows:

Type of coating	Code numbers in table 2
Non-film-forming solutions or penetrating solutions of fire-retardant chemicals	3, 4, 5, 6
Film-forming coatings	
Conventional exterior paints	10, 11, 12, 13
Mastics and other film formers	14, 15, 16

The non-film-forming solutions, which were brushed on the surface and are intended to carry the fire-retardant chemical into the wood, were generally ineffective. Depth of penetration into the western redcedar shingles was very shallow. The amount of fire-retardant chemical deposited was insufficient to noticeably improve fire resistance in the preliminary testing, or was easily leached out by the 28-day leaching exposure. The only treatment that showed some effectiveness--although insufficient--was the one consisting of four brush coats of American Wood-Preservers' Association Type D formulation (4), followed by three brush coats of a nonaqueous sealer solution, A, containing tricresyl phosphate as a fire-retardant additive (code 4).

The alkyd exterior paints, codes 10, 11, and 12, showed no promise even with the fire-retardant pigment, antimony oxide, included to a high loading of 16.7 percent of the paint solids. Fair results were obtained in the burning-brand test, but performance in the Schlyter test indicated no improvement over the flame-spread results obtained on untreated shingles.

The two-component (catalyzed) epoxy paint D, code 13, was the only coating system that remained intact and gave an acceptable fire performance after the 28-day durability exposure. A single-brush coating of the paint was applied to the specimens. There was no indication the coating deteriorated during either the 28-day or the 1,000-hour weathering exposure. The epoxy paint formulation used for the 1,000-hour exposure was from a different production lot than that used in the 28-day exposure and contained an ultraviolet inhibitor. There were no failures of the 16 brands in the burning-brand test after the 1,000-hour exposure. When subjected to a flame, as in the Schlyter fire test, the coating usually intumesces to form a puffed char layer up to 3 inches thick, which significantly reduces flame spread and retards fire penetration. In the severe Schlyter test, however, the intumescent property of the coating was less effective, and an average flame spread to 3 minutes of 36 inches was obtained. The performance of this coating in the 8-foot tunnel furnace (flame spread 75), and in the severe Schlyter tests after the 28-day and 1,000-hour exposures, indicates a weakness in resistance to flame spread under more severe flaming ignition sources.

Asphalt emulsion coating E, code 15, contained an inert filler and a chlorine-base material. This mastic-like coating was applied in a heavy layer about 1/16 inch thick. In the short-term leaching exposure, checking or cracks occurred in this film at the joints and laps between shingles. In the burning-brand test there were no failures. However, on the basis of its relatively poor performance in the severe Schlyter test and its poor appearance and deep surface checking, this treatment system was not included in the weathering apparatus exposures.

THPC, code 16, was applied as a surface coating, but severe photodegradation of the film was observed.

Pressure Impremation Treatments

With Water-Soluble Salts.--Tables 2 and 3 show three groups of impregnation treatments. The first group consists of some inorganic, water-soluble salt treatments. Sodium tetraborate (borax), alone and with monoammonium phosphate to control afterglowing, was included for comparisonpurposes and to determine how quickly a leachable treatment will lose its effectiveness. The impregnation with borax alone, code 17, failed the burning-brand test after the 28-day exposure but did fairly well in the Schlyter tests at a 3.8-p.c.f. loading. For the 1,000-hour exposure the treatment formula was changed to include monoammonium phosphate at 33 percent of the solids to inhibit glowing and the retention level was increased to 6.4 p.c.f. (code 18). However, the severe 1,000-hour leaching exposure removed most of the treatment chemicals as evidenced by a poor fire performance.

Also included in this group weretwotreatments which have been reported to exhibit some leach resistance. These were AWPA Type B (4) or chromated zinc chloride (FR), and a double-salt treatment of sodium tetraborate and zinc chloride, codes 19, 21, and 22. The loss of chemical by leaching during the 28-day exposure was sufficient to cause all these treatments with water-soluble salts to fail the burning-brand test. The heavy afterglow, characteristic of borax-treated wood, also contributed to the poor fire performance. The CZC (FR) indicated some resistance to leaching in the 28-day exposure, but again the failure in the burning-brand test was due primarily to heavy afterglowing which penetrated through to the deck,

The double-treatment method with borax and zinc chloride was first suggested and investigated by R. E. Prince at the Forest Products Laboratory in 1914 (15). This method is mostly of academic interest because the process is very lengthy to produce the final product with the precipitated zinc borate in the wood. The shingles were first impregnated with a solution of borax. Shingles were next dried and then impregnated with a solution of zinc chloride. The shingles were again dried and then leached in running water to remove the corrosive byproduct, sodium chloride. Since the treatment showed some fire-retardant effectiveness at 1.8-p.c.f. loading after the 28-day exposure, it was repeated for the 1,000-hour exposure. For this run a higher loading of 7 p.c.f. was obtained, code 22. Excessive burning-brand failures occurred due to heavy afterglow but the good Schlyter performance of only 3 inches average flame spread in the mild test and 15 inches in the severe test indicated a definite leach resistance,

With Sealer Coatings.--To determine the effectiveness of a sealer coating, two pressure treatments of shingle specimens were made using water-soluble salts. After treatment, the shingles were dried to 6 percent equilibrium moisture content.

The first treatment, code 23, consisted of a solution containing 25.3 percent borax and 6.6 percent monoammonium phosphate. The dried shingle specimens were brush coated with sealer solution A containing a wax and a pentachlorophenol preservative in mineral spirits.

The second treatment, code 24, was an impregnation of AWPA formulation Type D. The dried shingles were spray coated with the same sealer solution A. Tricresyl phosphate was added to the sealer as a fire retardant at 20 percent by weight.

Both systems, codes 23 and 24 in table 2, gave a good performance in the fire tests after the 28-day exposure. However, after the severe 1,000-hour exposure (table 3), very little fire-retardant effectiveness remained in the borax-monoammonium phosphate-treated shingles with the sealer. On the other hand, the AWPA Type D treatment at 6.3 p.c.f. and with a sealer coating of about 26 grams per square foot gave a good performance after the weathering exposure. There were no burning-brand failures and the Schlyter tests indicated good flame-spread resistance.

With an Additional Reaction Process.--Four treatment systems were evaluated in which the shingles were first pressure impregnated with

Table 2.--Results of fire tests on western redcedar shingles and shakes in preliminary testing without exposure and after a 28-day leaching exposure

Code No.	Treating process[1]	Results of burning brand tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Burning brands (failures/applied): Preliminary	Burning brands (failures/applied): After 28 days	Results of Schlyter tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Type of test	Average flame spread: Preliminary	Average flame spread: After 28 days	Results of 8-foot tunnel furnace tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Index numbers: Flame spread	Index numbers: Fuel contributed	Index numbers: Smoke density
		P.c.f.					P.c.f.				In.	In.	P.c.f.					
	FACTORY TREATED																	
36	Factory treated, U.L. Class C labeled	(4)	--	--	0/5	--	(4)	--	--	Mild	4	--	(4)	--	--	28	12	650
	do	(4)	--	--	--	0/5	(4)	--	--	Severe	12	--	--	--	--	--	--	--
	do	--	--	--	--	--	(4)	--	--	Mild	--	3	--	--	--	--	--	--
	do	--	--	--	--	--	(4)	--	--	Severe	--	22	--	--	--	--	--	--
37	Factory treated shakes, U.L. Class C labeled[5]	(4)	--	--	--	0/5	(4)	--	--	do	8	--	--	--	--	--	--	--
	do[5]	--	--	--	--	--	(4)	--	--	Mild	--	2	--	--	--	--	--	--
	do[5]	--	--	--	--	--	(4)	--	--	Severe	--	3	--	--	--	--	--	--
	UNTREATED CONTROLS																	
1	Untreated	0	0	0	5/5	--	0	0	0	Mild	42	--	0	0	0	113	135	197
	do	0	0	0	8/8	--	0	0	0	do	36	--	0	0	0	114	145	226
	do	0	0	0	8/8	--	0	0	0	Severe	43	--	0	0	0	136	136	262
	do	--	--	--	--	--	0	0	0	Mild	--	37	--	--	--	--	--	--
	do	--	--	--	--	--	0	0	0	do	--	35	--	--	--	--	--	--
	do	--	--	--	--	--	0	0	0	do	--	32	--	--	--	--	--	--
2	Untreated - shakes[5]	0	0	0	3/3	--	0	0	0	do	28	--	--	--	--	--	--	--
	do[5]	0	0	0	--	5/5	0	0	0	Severe	40	--	--	--	--	--	--	--
	do[5]	--	--	--	--	--	0	0	0	Mild	--	32	--	--	--	--	--	--
	do[5]	--	--	--	--	--	0	0	0	Severe	--	40	--	--	--	--	--	--
	FIRE-RETARDANT COATINGS																	
3	Coating of monoammonium phosphate	0	108	6.1	0/5	--	0	112	5.9	Mild	7	--	0	132	5.0	85	63	214
	do	0	98	6.8	--	5/5	0	123	5.4	do	8	--	--	--	--	--	--	--
	do	--	--	--	--	--	0	122	5.5	do	9	--	--	--	--	--	--	--
	do	--	--	--	--	--	0	124	5.4	do	--	31	--	--	--	--	--	--
	do	--	--	--	--	--	0	114	5.8	do	--	35	--	--	--	--	--	--
4	Coating of AWPA type D, and sealer A with tricresyl phosphate	0	[6]51,94	23.6	1/5	--	0	[6]46,91	25.1	do	10	--	0	[6]46,82	26.5	98	73	1109
	do	0	[6]56,82	24.4	0/8	--	0	[6]48,87	25.1	Severe	37	--	--	--	--	--	--	--
	do	0	[6]48,70	28.1	--	2/7	0	[6]53,94	23.1	Mild	--	18	--	--	--	--	--	--
	do	--	--	--	--	--	0	[6]48,81	26.2	do	--	17	--	--	--	--	--	--
5	Coating of pentachlorophenol, diesel oil, F-R chemical solution B	0	137	5.2	1/5	--	0	115	7.8	do	34	--	0	117	5.2	113	89	398
	do	--	--	--	--	--	0	126	7.6	do	33	--	--	--	--	--	--	--
6	Coating of pentachlorophenol, diesel oil, F-R chemical solution C	0	105	13.7	0/5	--	0	120	12.7	do	45	--	0	116	12.2	116	96	526
	do	0	118	15.1	--	3/5	0	124	13.3	do	44	--	--	--	--	--	--	--
	do	--	--	--	--	--	0	116	15.4	do	--	28	--	--	--	--	--	--
	do	--	--	--	--	--	0	118	15.0	do	--	28	--	--	--	--	--	--

Table 2.--Results of fire tests on western redcedar shingles and shakes in preliminary testing without exposure and after a 28-day leaching exposure (continued)

Code No.	Treating process[1]	Results of burning brand tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Burning brands (failures/applied): Preliminary	Burning brands (failures/applied): After 28 days	Results of Schlyter tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Type of test	Average flame spread: Preliminary	Average flame spread: After 28 days	Results of 8-foot tunnel furnace tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Index numbers: Flame spread	Index numbers: Fuel contributed	Index numbers: Smoke density
		P.c.f.					P.c.f.				In.	In.	P.c.f.					
10	Coating of FPL house paint without antimony oxide	0	133	41.7	1/5	--	0	186	31.2	..do..	42	--	0	155	36.8	138	95	308
	..do..	--	--	--	--	--	0	180	31.4	..do..	42	--	--	--	--	--	--	--
11	Coating of FPL house paint with antimony oxide 8.4% of solids	0	188	29.6	2/5	--	0	220	26.4	..do..	41	--	0	145	36.2	123	99	362
	..do..	--	--	--	--	--	0	168	34.4	..do..	41	--	--	--	--	--	--	--
12	Coating of FPL house paint with antimony oxide 16.7% of solids	0	161	36.1	1/5	--	0	192	30.2	..do..	41	--	0	147	39.4	129	96	430
	..do..	--	--	--	--	--	0	173	34.0	..do..	41	--	--	--	--	--	--	--
13	Coating of F-R epoxy paint D	0	174	23.2	0/5	--	0	192	21.1	..do..	13	--	0	170	22.9	75	34	863
	..do..	0	149	26.7	--	0/5	0	170	23.4	..do..	7	--	--	--	--	--	--	--
	..do..	--	--	--	--	--	0	154	25.5	..do..	--	3	--	--	--	--	--	--
	..do..	--	--	--	--	--	0	151	26.0	Severe	--	31	--	--	--	--	--	--
14	Coating (see table 1 for description)	0	12	193	0/5	--	0	10.5	228	Mild	8	--	0	11	210	38	21	254
	..do..	0	8	270	--	5/5	0	11.0	220	..do..	6	--	--	--	--	--	--	--
	..do..	--	--	--	--	--	0	11.5	201	..do..	--	24	--	--	--	--	--	--
	..do..	--	--	--	--	--	0	10.5	198	..do..	--	24	--	--	--	--	--	--
15	Coating of F-R asphalt emulsion E	0	33.8	91	0/5	--	0	30.5	102	..do..	8	--	0	32.3	96	91	73	1228
	..do..	0	33	92	--	0/5	0	30.5	104	..do..	6	--	--	--	--	--	--	--
	..do..	--	--	--	--	--	0	32.5	96	..do..	--	7	--	--	--	--	--	--
	..do..	--	--	--	--	--	0	32.5	97	Severe	--	33	--	--	--	--	--	--
16	Coating of THPC	0	447	7.7	0/5	--	0	387	8.8	Mild	6	--	0	374	7.5	84	87	655
	..do..	0	405	6.2	--	1/5	0	437	8.0	..do..	7	--	--	--	--	--	--	--
	..do..	--	--	--	--	--	0	442	5.6	..do..	--	23	--	--	--	--	--	--
	..do..	--	--	--	--	--	0	412	6.2	..do..	--	22	--	--	--	--	--	--

Table 2.--Results of fire tests on western redcedar shingles and shakes in preliminary testing without exposure and after a 28-day leaching exposure (continued)

Code No.	Treating process[1]	Results of burning brand tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Burning brands (failures/applied): Preliminary	Burning brands (failures/applied): After 28 days	Results of Schlyter tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Type of test	Average flame spread: Preliminary	Average flame spread: After 28 days	Results of 8-foot tunnel furnace tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Index numbers: Flame spread	Index numbers: Fuel contributed	Index numbers: Smoke density
		P.c.f.					P.c.f.				In.	In.	P.c.f.					
	VACUUM-PRESSURE IMPREGNATIONS																	
17	Impregnated, sodium tetraborate	3.2	0	0	1/5	--	3.2	0	0	Mild	0	--	3.2	0	0	44	11	55
	do	3.8	0	0	--	5/5	3.2	0	0	Severe	10	--	--	--	--	--	--	--
	do	--	--	--	--	--	3.8	0	0	Mild	--	5	--	--	--	--	--	--
	do	--	--	--	--	--	3.8	0	0	Severe	--	26	--	--	--	--	--	--
19	Impregnated, AWPA type B	2.1	0	0	0/5	--	2.1	0	0	Mild	1	--	2.1	0	0	74	39	192
	do	2.8	0	0	--	3/5	2.1	0	0	Severe	24	--	--	--	--	--	--	--
	do	--	--	--	--	--	2.8	0	0	Mild	--	6	--	--	--	--	--	--
	do	--	--	--	--	--	2.8	0	0	Severe	--	31	--	--	--	--	--	--
20	Impregnated (see table 1 for description)	3.1	0	0	1/5	--	3.1	0	0	Mild	3	--	3.1	0	0	76	42	59
	do	3.6	0	0	--	5/5	3.1	0	0	Severe	30	--	--	--	--	--	--	--
	do	--	--	--	--	--	3.6	0	0	Mild	--	24	--	--	--	--	--	--
	do	--	--	--	--	--	3.6	0	0	..do..	--	26	--	--	--	--	--	--
21	Impregnated, double-salt: sodium tetraborate-zinc chloride[8]	1.4	0	0	2/5	--	1.4	0	0	..do..	6	--	1.4	0	0	97	44	65
	do[8]	1.4	0	0	--	4/5	1.4	0	0	Severe	28	--	--	--	--	--	--	--
	do[8]	--	--	--	--	--	1.4	0	0	Mild	--	18	--	--	--	--	--	--
	do[8]	--	--	--	--	--	1.4	0	0	..do..	--	22	--	--	--	--	--	--
22	Impregnated, double-salt: sodium tetraborate-zinc chloride[8]	2.6	0	0	1/7	--	2.6	0	0	..do..	3	--	2.6	0	0	72	26	86
	do[8]	1.8	0	0	--	5/7	2.6	0	0	Severe	21	--	--	--	--	--	--	--
	do[8]	--	--	--	--	--	1.8	0	0	Mild	--	6	--	--	--	--	--	--
	do[8]	--	--	--	--	--	1.8	0	0	Severe	--	27	--	--	--	--	--	--
	VACUUM-PRESSURE IMPREGNATIONS WITH SEALER COATINGS																	
23	Impregnated, sodium tetraborate-monoammonium phosphate; coating of sealer A	4.7	39.3	12.0	0/5	--	4.7	38.8	12.0	Mild	2	--	4.7	42.9	11.0	31	8	718
	do	4.2	39.2	12.0	--	0/5	4.7	34.8	12.2	Severe	8	--	--	--	--	--	--	--
	do	--	--	--	--	--	4.2	37.6	12.5	Mild	--	3	--	--	--	--	--	--
	do	--	--	--	--	--	4.2	37.8	12.4	Severe	--	14	--	--	--	--	--	--
24	Impregnated, AWPA type D; coating of sealer A with tricresyl phosphate	3.8	40.8	26.0	0/5	--	3.8	40.9	26.0	Mild	5	--	3.8	39.2	27.1	45	8	2260
	do	5.0	40.0	26.6	--	0/7	3.8	42.2	25.0	Severe	25	--	--	--	--	--	--	--
	do	--	--	--	--	--	5.0	40.4	26.2	Mild	--	4	--	--	--	--	--	--
	do	--	--	--	--	--	5.0	39.8	26.6	Severe	--	14	--	--	--	--	--	--

Table 2.--Results of fire tests on western redcedar shingles and shakes in preliminary testing without exposure and after a 28-day leaching exposure (continued)

Code No.	Treating process[1]	Results of burning brand tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Burning brands (failures/applied): Preliminary	Burning brands (failures/applied): After 28 days	Results of Schlyter tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Type of test	Average flame spread: Preliminary	Average flame spread: After 28 days	Results of 8-foot tunnel furnace tests: Chemical retention (dry)	Coating: Spread rate[2]	Coating: Dry weight[3]	Index numbers: Flame spread	Index numbers: Fuel contributed	Index numbers: Smoke density
		P.c.f.					P.c.f.				In.	In.	P.c.f.					
	VACUUM-PRESSURE IMPREGNATIONS AND ADDITIONAL REACTIONS																	
25	Impregnated, APO	4.0	--	--	0/8	--	4.0	--	--	Mild	5	--	4.0	--	--	28	10	1172
	do	5.2	--	--	--	0/8	4.0	--	--	Severe	20	--	--	--	--	--	--	--
	do	5.2	--	--	--	0/5	5.2	--	--	Mild	--	4	--	--	--	--	--	--
	do	--	--	--	--	--	5.2	--	--	Severe	--	16	--	--	--	--	--	--
27	Impregnated, THPC	6.0	--	--	0/5	--	6.0	--	--	Mild	2	--	6.0	--	--	28	18	1078
	do	8.6	--	--	--	0/5	6.0	--	--	Severe	31	--	--	--	--	--	--	--
	do	--	--	--	--	--	8.6	--	--	Mild	--	4	--	--	--	--	--	--
	do	--	--	--	--	--	8.6	--	--	Severe	--	20	--	--	--	--	--	--
28	do	2.1	--	--	0/5	--	2.1	--	--	Mild	27	--	2.1	--	--	116	78	209
	do	2.3	--	--	--	0/7	2.1	--	--	do	20	--	--	--	--	--	--	--
	do	--	--	--	--	--	2.3	--	--	do	--	16	--	--	--	--	--	--
	do	--	--	--	--	--	2.3	--	--	do	--	23	--	--	--	--	--	--
29	do	3.5	--	--	0/5	--	3.5	--	--	do	12	--	3.5	--	--	69	55	492
	do	4.4	--	--	--	0/5	3.5	--	--	Severe	45	--	--	--	--	--	--	--
	do	--	--	--	--	--	4.4	--	--	Mild	--	9	--	--	--	--	--	--
	do	--	--	--	--	--	4.4	--	--	Severe	--	37	--	--	--	--	--	--
30	Impregnated, dicyandiamide-phosphoric acid	6.8	--	--	0/5	--	6.8	--	--	Mild	3	--	6.8	--	--	0	8	636
	do	6.8	--	--	--	0/5	6.8	--	--	Severe	10	--	--	--	--	--	--	--
	do	--	--	--	--	--	6.8	--	--	Mild	--	3	--	--	--	--	--	--
	do	--	--	--	--	--	6.8	--	--	Severe	--	10	--	--	--	--	--	--
35	Impregnated, zinc sulfate-zinc silicofluoride-urea	8.4	--	--	0/7	--	8.4	--	--	Mild	8	--	8.4	--	--	59	30	226
	do	9.5	--	--	--	0/6	8.4	--	--	Severe	13	--	--	--	--	--	--	--
	do	--	--	--	--	--	9.5	--	--	Mild	--	10	--	--	--	--	--	--
	do	--	--	--	--	--	9.5	--	--	Severe	--	26	--	--	--	--	--	--

[1] Applied on shingles unless shakes are specifically noted.

[2] In square feet per gallon of coating.

[3] Grams of dry coating per square foot of surface.

[4] Dry chemical retentions not known.

[5] 18-in. shakes exposed 5 in. to weather

[6] First number is spread rate of AWPA Type D; second number is spread rate of F-R Sealer A with tricresyl phosphate.

[7] Coating washed off during 28-day exposure.

[8] Dry chemical retentions are calculated as zinc borate.

Table 3.--results of fire tests on western redcedar singers after 1,000 hours' accelerated weathering

Code No.	Treating process	Results of burning brand tests: Chemical retention (dry)	Coating: Spread rate[1]	Coating: Dry weight[2]	Burning brands (failures/applied)	Results of Schlyter tests: Chemical retention (dry)	Coating: Spread rate[1]	Coating: Dry weight[2]	Type of test	Average flame spread
		P.c.f.				P.c.f.				In.
	FACTORY TREATED									
36	Factory treated, U. L. Class C. labeled	(3)	0	0	0/8	(3)	0	0	Mild	2
	do	(3)	0	0	0/8	(3)	0	0	Severe	13
	UNTREATED CONTROLS									
1	Untreated	0	0	0	7/7	0	0	0	Mild	38
	do	0	0	0	7/7	0	0	0	Severe	46
	FIRE-RETARDANT COATINGS									
13	Coating of F-R epoxy paint D	0	90	36.3	0/8	0	133	24.8	Mild	4
	do	0	132	21.2	0/8	0	133	26.4	Severe	36
	VACUUM-PRESSURE IMPREGNATIONS									
18	Impregnated, sodium tetraborate-monoammonium phosphate	6.4	0	0	4/8	6.4	0	0	Mild	16
	do	6.4	0	0	8/8	6.4	0	0	do	15
22	Impregnated, double-salt: sodium tetraborate and zinc chloride[4]	7.0	0	0	7/8	7.0	0	0	do	5/3
	do	7.0	0	0	6/7	7.0	0	0	Severe	6/15
	VACUUM-PRESSURE IMPREGNATIONS WITH SEALER COATINGS									
23	Impregnated, sodium tetraborate-monoammonium phosphate; coating of sealer A	5.9	31	15.0	7/8	5.9	34	13.7	Mild	7/15
	do	5.9	32	14.5	8/8	5.9	33	14.4	do	8/10
24	Impregnated, AWPA type D; coating of sealer A with tricresyl phosphate	6.3	42	25.0	0/7	6.3	41	25.9	do	3
	do	6.3	41	26.0	0/6	6.3	41	25.6	Severe	23
	VACUUM-PRESSURE IMPREGNATIONS AND ADDITIONAL REACTIONS									
25	Impregnated, APO	6.3	0	0	0/6	6.3	0	0	Mild	3
	do	6.3	0	0	0/7	6.3	0	0	Severe	14
26	do	3.8	0	0	0/8	3.8	0	0	Mild	3
	do	3.8	0	0	0/8	3.8	0	0	Severe	20
28	Impregnated, THPC	2.7	0	0	1/8	2.7	0	0	Mild	27
	do	2.7	0	0	1/7	2.7	0	0	do	27
29	do	4.8	0	0	0/8	4.8	0	0	do	20
	do	4.8	0	0	0/8	4.8	0	0	do	15
31	Impregnated, dicyandiamide-phosphoric acid-formaldehyde	5.0	0	0	3/8	5.0	0	0	do	3
	do	5.0	0	0	3/8	5.0	0	0	Severe	26
32	do	8.3	0	0	2/8	8.3	0	0	Mild	3
	do	8.3	0	0	1/8	8.3	0	0	Severe	16
33	Impregnated, dicyandiamide-phosphoric acid	7.3	0	0	2/8	7.3	0	0	Mild	4
	do	7.3	0	0	0/8	7.3	0	0	Severe	25
34	do	9.3	0	0	1/8	9.3	0	0	Mild	4
	do	9.3	0	0	1/7	9.3	0	0	Severe	20
35	Impregnated, zinc sulfate-zinc silicofluoride-urea	12.9	0	0	5/6	12.9	0	0	Mild	7
	do	12.9	0	0	4/7	12.9	0	0	Severe	32

[1] In square feet per gallon of coating.

[2] Grams of dry coating per square foot of surface.

[3] Dry chemical retention not known.

[4] Dry chemical retentions are calculated as zinc borate.

[5] Panels had a light glow on butt edges for about 11 min.

[6] Heavy afterglowing. Extinguished with water after 10 min.

[7] Afterglow along several of the butt edges. Extinguished with water after 27 min. Glowing may have continued until the plywood backing ignited.

[8] Afterglow along butt edge at one place. Self-extinguished at 24.7 min.

chemicals, and then heat cured during drying to react the chemicals and decrease water solubility. Three systems investigated in this study have shown promise for imparting durable fire retardancy to wood for exterior use.

The general procedure consisted first of pressure impregnating a water solution of the chemicals--for example, organic phosphates--into the wood. The shingles were then partially or completely kiln dried at a relatively low temperature--below 150° F.--to prevent collapse of the cedar cellular structure. After the shingles were dried to the desired moisture content level, the temperature was elevated to polymerize the chemicals or react a new compound having considerably better leach resistance than the original formula chemicals.

Tris (1-aziridinyl) phosphine oxide.--This chemical, referred to as APO, (also known as N, N', N"-Triethylenephosphoramide, or TEPA) has been investigated by USDA's Agricultural Research Service for imparting flame resistance to cotton fabric (6). Kenaga reported onlaboratory experimentation with APO for treating wood (13).

The tris (1-aziridinyl) phosphine oxide used in this study, codes 25 and 26, was in a 72 percent solution in acetone and methylene chloride. After the chemical was pressure impregnated into wood, it was heat cured to prevent it from being leached out.

Preliminary experiments with this chemical indicated that a good degree of curing--as evidenced by leach resistance--could be obtained by exposure at high temperatures. For example, after drying APO-impregnated fire-tube sticks for 8 hours with a gradual rise from 120° to 210° F., they were heated an additional 16 hour's at 240° F. The sticks were leached for 7 days in running water, reconditioned to equilibrium at 80° F. and 30 percent relative humidity, and tested in the fire-tube apparatus, ASTM E 69.

A final weight loss of 23 percent by this test method was recorded for one stick that started with a retention of 4.2 p.c.f. APO. This is comparable to results obtained with yellow pine at about 3 p.c.f. diammonium phosphate. In another experiment, cross-section wafers of western redcedar were treated with APO, cured for various periods at 170° to 190° F., and subsequently leached to determine effectiveness of curing. The following results were obtained

Curing time	Curing temperature	Loss of chemical in leaching
Hr.	°F.	Pct.
0	--	67.5
24	185	12.7
48	175	7.2
72	175	3.8
96	175	1.4

The treated shingles in the study were dried to about 6 percent moisture content using a kiln schedule that did not exceed 130° F. Temperature was then gradually increased over a 3-hour period to 185° F. dry bulb and 157° F. wet bulb and held for 95 hours. The shingle specimens at both low and high retentions, 3.8 and 6.3 p.c.f., codes 25 and 26 in table 3, gave excellent fire performance after the weathering exposure. Of all the pressure treatments examined, the APO treatment made the least change in the natural appearance of the shingles before treatment. This good appearance was maintained throughout the weathering exposure. Whereas untreated shingles lose their "new" appearance by the leaching and bleaching during the severe 1,000-hour exposure, the APO-treated shingles retained the bright appearance similar to new shingles.

One serious deterrent to the recommended use of this chemical is the toxicity of the unreacted monomer. Although APO had been used for a number of years--for example, in printing inks--an awareness of its toxicity was not realized or accepted until recently. It can be absorbed through the intact skin and may lead to serious systemic effects. After the curing reaction, the cross-linked polymer of APO reportedly shows no toxicity (13). The hazard, therefore, lies with the treater who must use utmost precautions in the handling of APO in all stages of processing from storage of the chemical to drying and curing of the treated wood,

Tetrakis (hydroxymethyl) phosphonium chloride.--This compound, abbreviated THPC, was also used by the Agricultural Research Service to develop an effective and durable flame retardant for cotton (17). The evaluation of THPC for use in treating shingles by #is Laboratory indicated that the chemical does have some promise in the fire-. retardant treatment of wood for exterior uses, codes 27, 28, and 29, The present limited overall

usage of THPC has kept its cost at a high figure. This has discouraged research in its use in the wood-treating industry.

The THPC was impregnated into the shingles in a water solution with a melamine and urea. The shingles were kiln dried for 90 hours using a schedule not exceeding 130° F., dry bulb. This reduced the moisture content to about 6 percent, After a conditioning period of 30 days at 80° F. and 30 percent relative humidity, the shingles were checked for effectiveness of the THPC polymerization under the low-temperature drying conditions used.

Shingle samples at two levels of treatment, 2.1 and 3.5 pounds of dry chemical per cubic foot of wood, were leached in running water for 7 days. Their change in weight was determined afterthey were air dried and brought to constant weight at 80" F. and 30 percent relative humidity. The shingles at 3.5 p.c.f. had a weight loss of less than 5 percent, and those at 2.1 p.c.f. less than 3 percent. Additional heating at 180° F. for 24 hours did not materially increase the degree of curing or polymerization.

Treated shingles at a total dry chemical solids retention of 4.8 p.c.f., code 29, passed the burning-brand test without failure after the 1,000-hour accelerated weathering exposure. Performance in the Schlyter spread-of-flame test, however, was only marginal. A higher retention level was apparently required. Preliminary experiments with this chemical indicated that it degraded under solar radiation. More research work is suggested with this system including the use of ultraviolet inhibitors and other treatment-formula changes to optimize the fire-retardant effectiveness and lower the chemical cost,

Dicyandiamide and phosphoric acid.--Another organo-phosphorus chemical combination that shows promise for exterior fire-retardant treatments is dicyandiamide (cyanoguanidine) and phosphoric acid (8). A small amount of formaldehyde may also be included to increase water solubility of the dicyandiamide (10). Wood may be pressure treated with these chemicals by two methods (9, 10). The only difference between the methods is that in one the aqueous treating solution is prereacted under exothermic conditions before it is used in the impregnation process. Hydrolysis of the dicyandiamide occurs in the presence of the phosphoric acid with equivalent amounts of these two chemicals to yield guanylurea phosphate. The reaction product remains in solution at elevated temperature. In the second method, the wood is impregnated with the unreacted solution and the reaction accomplished by heating the treated wood. In both methods the heating is required after impregnation and drying to "cure" or partially insolubilize the chemicals.

Shingles were pressure treated with unreacted solutions of dicyandiamide and phosphoric acid, kiln dried to 6 percent moisture content, and cured at 180° to 185° F. for 5 hours. The fire performance results in the preliminary phase testing and after the 28-day exposure were excellent (code 30 in table 2). A flame-spread index of zero was obtained in the 8-foot tunnel furnace test. No reduction in fire resistance was caused by the 28-day exposure as evidenced by the burning-brand and Schlyter tests on shingles treated to 6.8 p.c.f. retention. The 1,000-hour accelerated weathering exposure, however, did reveal increased flammability and burnthrough, indicating a loss of chemicals in these treated shingles, This was true for the high levels of retention of 7.3 and 9.3 p.c.f. (codes 33 and 34, table 3).

Shingles were also treated with prereacted solutions of dicyandiamide, phosphoric acid, and formaldehyde, slowly dried at not over 130° F. to 6 percent moisture content, and cured for 24 hours at 185° F. Results of the Schlyter test (code 32, table 3) indicate that shingles treated with the prereacted solution to 8.3 p.c.f. were slightly more durable in the 1,000-hour exposure test than shingles treated with solutions that were not prereacted (codes 33 and 34). Failures in the burning-brand test, however, which occurred at all retentions, show the leach resistance to be less than desired.

The treatment system in this study using dicyandiamide and phosphoric acid was not as effective as the systems using THPC or APO. More development work is needed on this formulation and with the treatment and curing variables to improve the leach resistance and performance after leaching exposure. From the standpoint of economy--lower chemical cost--and other factors such as treatment-related wood properties and appearance of the treated shingles, this system shows most promise compared to the other curing type fire-retardant treatments.

Zinc sulfate, zinc silicofluoride, and urea.-- This treatment method (5), code 35, was an unsuccessful attempt to obtain a good degree of insolubilization of zinc in redcedar shingles. Water-soluble zinc compounds, zinc sulfate and zinc silicofluoride together with urea, were first impregnated into the shingles by the usual full-cell pressure process to an elemental zinc retention of 1-1/2 to 2 p.c.f. The desired procedure was to dry the shingles in a kiln at a low temperature to about 40 to 60 percent moisture content. Subsequent heat curing causes the urea to break down to carbon dioxide and ammonia. The latter then reacts with the zinc compounds to form more basic zinc compounds that are insoluble in water and have fire-retardant properties.

In the shingles treated in this study, the moisture content could not be held high enough during the curing stage at 182" F. to maintain a sufficient water content for the reaction to be completed. Only about 20 percent of the zinc was converted to an insoluble form. As a consequence, the shingle specimens performed very unsatisfactorily in the fire tests after the 1,000-hour exposureinthe weathering apparatus. The most detrimental characteristic of this treatment was the severe glowing that occurred in the burning-brand fire-penetration test. Even in the absence of a flame, a persistent afterglow penetrated through the shingle covering and deck boards and then burst into flame as the underside of the deck was exposed.

Commercial Factory-Treated Shingles

A comparison of the test results obtained on the class C-labeled shingles (code 36) with those obtained on the other treatments indicates that the fire-test methods employed were adequately severe. It is also indicated that the exposure programs, particularly the 1,000-hour, was sufficiently rigorous but not too rigorous. If the class C-labeled material performed outstandingly superior in all test methods, then it may be questioned if the methods were severe enough. On the other hand, if the performance was poor, the test procedures employed may be considered as too severe. The specific results of the Class C-labeled material suggest that an adequate balance in severity has been achieved for research and developmental evaluation.

CONCLUSIONS

The results of this research indicated that the procedures employed were adequate for evaluating the fire performance of fire-retardant treatments applied to wood shingles. An exposure program, particularly the use of an accelerated weathering apparatus, was sufficiently severe so that fire test results could separate out the less leach-resistant treatments and discriminate between treatment levels. A modified burning-brand test was effective in determining resistance to fire penetration, and the modified Schlyter test and the 8-foot tunnel furnace were effective in determining resistance to vertical and horizontal spread of flame.

The results obtained on factory-treated, Class C-labeled shingles confirmed that the test procedures selected were appropriately severe. Further, using the results obtained on the Class C-labeled shingles as a reference, the treatment systems considered to have merit as durable and effective fire-retardant treatments for wood shingles and shakes are:

1. Vacuum-pressure impregnations containing tris (1-aziridinyl) phosphine oxide at 3.8 and 6.3 pounds of chemical per cubic foot of wood. Shingles were kiln dried at not over 130° F. and then heat cured at 185° F. (See codes 25 and 26.)

2. Vacuum-pressure impregnation containing tetrakis (hydroxymethyl) phosphonium chloride, urea, and a melamine at 4.8 p.c.f. Shingles were kiln dried and cured at not over 130°F. (See code 29.) A somewhat higher retention level was indicated to improve resistance to spread of flame.

3. (a) Vacuum-pressure impregnations with a solution containing dicyandiamide and phosphoric acid at chemical retentions of 7.3 and 9.3 p.c.f. Shingles were kiln dried at not over 130° F. and then heat cured at 185° F. (See codes 33 and 34.)

(b) Vacuum-pressure impregnation with a solution containing dicyandiamide, phosphoric acid, and formaldehyde preheated to obtain exothermic reaction. Chemical retention, 8.3 p.c.f. Shingles were kiln dried at not over 130° F. and heat cured at 185° F. (See code 32.).

4. Vacuum-pressure impregnation of AWPA formulation type D to a chemical retention of 6.3 p.c.f. Shingles were air dried andgivenfive spray applications of a sealer solution to which had been added 20 percent, by weight, tricresyl phosphate. Dry coating weight of sealer was about 26 grams per square foot. (See code 24.).

A fire-retardant paint, epoxy type (code 13), could also be added to this list but the Schlyter tests indicated that it was somewhat lacking in resistance to severe flaming ignition.

The four fire-retardant treatment systems listed above, which were made at the Forest Products Laboratory, were not fully investigated. Additional important information on these systems other than their fire performance was given only cursory consideration. The chemical formulations need to be evaluated to determine their most favorable makeup. Optimum treatment levels and the best drying and curing schedules need to be established. The effect of the treatments on related wood properties besides fire performance also needs to be investigated, such as corrosivity, acidity, hygroscopicity, appearance, and resistance to biodegradation. And finally, economic practicability of the treatment systems should be evaluated.

Although this research was directed primarily toward treatments for wood shingles, the results have shown that there are durable fire-retardant treatments with promise for exterior applications to other wood products..

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APPENDIX I

Results of Class C burning brand test, ASTM E-108, on western redcedar shingles after 1,000-hour accelerated weathering exposure

Code No.	Brand No.	Treatment	Chemical retention (dry)	Ignition time after brand placed on specimen		Time combustion continued after brand out		Time burn through to deck
				Glow	Flame	Glow	Flame	
			P.c.f.	Min.	Min.	Min.	Min.	Min.
36	1	Factory treated, U.L. Class C	Not	(1)	1.10	0	0	--
	2	labeled	known	(1)	.80	0	0	--
	3			(1)	.90	0	0	--
	4			.70	.55	0	0	--
	5			1.20	None	0	0	--
	6			None	1.10	0	0	--
	7			None	.85	0	0	--
	8			None	None	0	0	--
	1	....do....	....do....	(1)	.95	0	0	--
	2			None	.80	0	0	--
	3			None	None	0	0	--
	4			(1)	1.80	0	0	--
	5			None	None	0	0	--
	6			(1)	None	0	0	--
	7			(1)	.75	0	0	--
	8			(1)	.45	0	0	--
1	1	Untreated	0	0.40	0.60	(2)	(2)	4.70
	2			.20	.45	(2)	(2)	5.80
	4			.10	.15	(2)	(2)	4.15
	5			.10	.10	(2)	(2)	3.75
	6			.10	.30	(2)	(2)	4.50
	7			.15	.30	(2)	(2)	5.55
	8			.20	.45	(2)	(2)	4.75
	1	....do....	0	.20	.60	(2)	(2)	5.05
	3			.10	.10	(2)	(2)	4.20
	4			.20	.35	(2)	(2)	4.30
	5			.10	.10	(2)	(2)	2.90
	6			.10	.10	(2)	(2)	6.65
	7			.15	.30	(2)	(2)	6.85
	8			.10	.15	(2)	(2)	4.40
13	1	Coating of F-R epoxy paint D	36.3[3]	None	1.15	0	0	--
	2			None	.85	0	0	--
	3			None	.75	0	0	--
	4			None	.45	0	0	--
	5			None	1.20	0	0	--
	6			None	None	0	0	--
	7			None	1.70	0	0	--
	8			None	None	0	0	--
	1	....do....	21.2[3]	None	None	0	0	--
	2			None	1.25	0	0	--
	3			None	None	0	0	--
	4			None	None	0	0	--
	5			None	None	0	0	--
	6			None	None	0	0	--
	7			None	None	0	0	--
	8			None	None	0	0	--
18	1	Impregnated, sodium tetraborate-	6.4	.90	1.30	7.00	0	--
	2	monoammonium phosphate		.45	.50	(2)	(2)	3.50
	3			.80	.85	(2)	(2)	4.70
	4			.50	1.30	2.40	0	--
	5			.50	.50	(2)	(2)	4.10
	6			.85	.90	1.75	0	--
	7			.80	.85	(2)	0	7.80
	8			1.05	1.10	4.05	0	--
	1	....do....	6.4	.70	.75	(2)	(2)	2.60
	2			.40	.75	(2)	(2)	2.85
	3			.65	.70	(2)	(2)	3.75
	4			.90	1.35	(2)	(2)	3.30
	5			.80	.85	(2)	(2)	2.65
	6			.75	1.25	(2)	.15	4.80
	7			.60	.80	(2)	(2)	3.95
	8			.45	.50	(2)	(2)	4.55

Results of Class C burning brand test. ASM E-108, on western redcedar shingles after 1,000-hour accelerated weathering exposure

Code No.	Brand No.	Treatment	Chemical retention (dry)	Ignition time after brand placed on specimen		Time combustion continued after brand out		Time burn through to deck
				Glow	Flame	Glow	Flame	
			P.c.f.	Min.	Min.	Min.	Min.	Min.
22	1	Impregnated, double-salt:	[4]7.0	0.60	1.05	(2)	(2)	3.70
	2	sodium tetraborate-zinc		.30	1.20	(2)	(2)	4.40
	3	chloride		.40	1.50	(2)	(2)	5.80
	4			.30	.80	(2)	(2)	2.90
	5			.35	None	0	0	--
	6			.35	7.80	(2)	(2)	8.30
	7			.30	1.20	(2)	(2)	9.10
	8			.30	.50	(2)	(2)	3.60
	1	.....do.....	[4]7.0	.65	1.85	(2)	(2)	5.00
	2			.20	.45	(2)	(2)	4.15
	3			.30	1.70	(2)	(2)	4.65
	4			.40	2.40	(2)	0	6.15
	5			.75	None	(2)	0	11.10
	6			.25	1.05	(2)	(2)	5.60
	7			.30	.40	(2)	(2)	3.50
	8			1.00	None	1.05	0	--
23	1	Impregnated, sodium tetraborate-	5.9	1.90	2.10	(2)	0	6.60
	2	monoammonium phosphate;		.70	.70	(2)	(2)	2.45
	3	coating of sealer A	[3]15.0	1.85	1.85	(2)	0	5.75
	4			.95	1.05	(2)	0	7.90
	5			1.10	1.40	(2)	(2)	4.00
	6			2.75	None	2.30	0	--
	7			.50	.02	(2)	0	6.40
	8			3.55	3.55	(2)	.05	8.70
	1	.....do.....	5.9	1.00	2.25	(2)	.15	4.40
	2			1.20	1.40	(2)	0	10.20
	3		[3]14.5	.90	.90	(2)	0	17.75
	4			1.00	1.00	(2)	.20	5.60
	5			.95	1.00	(2)	(2)	4.30
	6			.60	.60	(2)	0	7.70
	7			1.85	1.85	(2)	0	9.25
	8			.50	.50	(2)	(2)	4.55
24	1	AWPA type D and sealer A with	6.3	.30	.90	6.85	0	--
	2	tricresyl phosphate		.30	.90	45.15	0	--
	4			.35	1.30	0	0	--
	5		[3]25.0	.35	None	0	0	--
	6			.40	None	0	0	--
	7			.35	.45	0	0	--
	8			.30	.90	0	0	--
	1	.....do.....	6.3	.25	1.25	.45	0	--
	2			.45	.70	1.40	0	--
	3			.30	None	0	0	--
	4		[3]25.0	.30	None	0	0	--
	5			.30	.30	0	0	--
	6			.15	.20	.30	0	--
25	1	Impregnated, APO	6.3	None	.20	0	0	--
	2			None	.10	0	0	--
	3			None	.70	0	0	--
	4			None	None	0	0	--
	5			None	1.30	0	0	--
	6			None	None	0	0	--
	1	.....do.....	6.3	None	.60	0	0	--
	2			None	.85	0	0	--
	3			None	.80	0	0	--
	4			None	None	0	0	--
	5			None	None	0	0	--
	6			None	[5]0	0	0	--
	7			None	1.40	0	0	--
26	1	Tris (1-aziridinyl) phosphine	3.8	None	1.05	0	0	--
	2	oxide		None	2.55	0	0	--
	3			None	1.25	0	0	--
	4			None	.40	0	0	--
	5			None	1.10	0	0	--
	6			None	1.40	0	0	--
	7			None	.90	0	0	--
	8			None	.90	0	0	--
	1	.....do.....	3.8	None	.65	0	.05	--
	2			None	.35	0	0	--
	3			None	.85	0	0	--
	4			None	.85	0	0	--
	5			None	.30	0	0	--
	6			None	.15	0	0	--
	7			None	.85	0	0	--

Results of Class C burning brand test, ASTM E-108, on western redcedar shingles after 1,000-hour accelerated weathering exposure

Code No.	Brand No.	Treatment	Chemical retention (dry)	Ignition time after brand placed on specimen		Time combustion continued after brand out		Time burn through to deck
				Glow	Flame	Glow	Flame	
			P.c.f.	Min.	Min.	Min.	Min.	Min.
28	1	Impregnated, THPC	2.7	.25	.75	.90	.35	--
	2			.50	.60	(2)	(2)	5.05
	3			.35	.55	0	0	--
	4			.10	.10	.05	0	--
	5			.25	.10	.05	0	--
	6			.40	.50	.25	.10	--
	7			.40	.10	0	0	--
	8			.20	.40	.50	.40	--
	1	....do....	2.7	.25	.30	0	0	--
	2			.30	.70	(2)	(2)	5.70
	3			.25	.55	3.55	2.50	--
	4			.30	1.10	0	0	--
	5			.50	.90	0	0	--
	6			.50	.95	0	0	--
	7			.30	.90	0	0	--
	8			.40	.05	.30	0	--
29	1	Impregnated, THPC	4.8	1.00	1.10	0	0	--
	2			.30	.30	0	0	--
	3			.35	.50	.65	0	--
	4			.60	1.00	0	0	--
	5			.55	.60	0	0	--
	6			None	2.30	0	0	--
	7			.90	1.05	0	0	--
	8			None	.95	0	0	--
	1	....do....	4.8	.25	None	0	0	--
	2			.30	None	0	0	--
	3			.30	.30	0	0	--
	4			.40	.65	.80	0	--
	5			1.05	1.05	0	0	--
	6			None	None	0	0	--
	7			.95	None	0	0	--
	8			.75	None	0	0	--
31	1	Impregnated, dicyandiamide-phosphoric acid-formaldehyde	4.97	1.20	1.00	(2)	(2)	6.50
	2			.65	.60	(2)	(2)	5.25
	3			.55	.50	(2)	(2)	4.70
	4			.30	.20	0	0	--
	5			1.00	.40	.05	.05	--
	6			(4)	50	--	0	--
	7			(4)	.20	--	0	--
	8			(4)	2.00	--	0	--
	1	....do....	4.97	.60	.95	0	0	--
	2			.55	.45	(2)	(2)	5.15
	3			.45	.25	(2)	.60	6.10
	4			.70	.55	.10	0	--
	5			.75	.55	(2)	(2)	5.00
	6			.70	.40	.15	.05	--
	7			1.00	1.05	.15	0	--
	8			.80	None	0	--	--
32	1	Impregnated, dicyandiamide-phosphoric acid-formaldehyde	8.3	(1)	.60	0	0	--
	2			1.00	.90	(2)	.15	5.10
	3			.75	.70	2.30	.25	--
	4			.95	.80	0	0	--
	5			1.30	1.10	.35	0	--
	6			.95	.90	(2)	.20	16.30
	7			(1)	.95	0	0	--
	8			.75	.70	.65	0	--
	1	....do....	8.3	.70	.65	1.20	.10	--
	2			.95	50	(2)	(2)	5.25
	3			1.00	1.05	0	0	--
	4			.65	.75	.95	.45	--
	5			.75	.80	.15	0	--
	6			1.45	1.35	.05	0	--
	7			.50	.10	.05	0	--
	8			.85	.75	0	0	--

Results of Class C burning brand test, ASTM E-108, on western-redcedar shingles after 1,000-hour accelerated weathering exposure

Code No.	Brand No.	Treatment	Chemical retention (dry)	Ignition time after brand placed on specimen: Glow	Ignition time after brand placed on specimen: Flame	Time combustion continued after brand out: Glow	Time combustion continued after brand out: Flame	Time burn through to deck
			P.c.f.	Min.	Min.	Min.	Min.	Min.
33	1	Impregnated, dicyandiamide-phosphoric acid	7.3	.50	2.90	0	0	--
	2			.75	2.00	(2)	.25	7.40
	3			1.00	.40	0	0	--
	4			.80	.85	(2)	(2)	2.85
	5			1.40	1.30	.55	0	--
	6			None	None	0	0	--
	7			.45	.50	0	0	--
	8			.85	.90	0	0	--
	1	....do....	7.3	.85	.85	0	0	--
	2			1.35	None	0	0	--
	3			2.20	2.20	0	0	--
	4			1.20	1.20	0	0	--
	5			None	None	0	0	--
	6			.95	--	.10	0	--
	7			None	None	0	0	--
	8			2.65	2.70	0	0	--
34	1	Impregnated, dicyandiamide-phosphoric acid	9.3	.60	.65	.15	0	--
	2			1.35	1.70	(2)	(2)	5.70
	3			1.40	1.45	0	0	--
	4			.45	2.20	.70	0	--
	5			1.70	1.75	0	0	--
	6			.75	.80	.05	.05	--
	7			.80	1.05	1.05	.05	--
	8			1.60	1.65	0	0	--
	1	....do....	9.3	.50	.55	(2)	(2)	3.05
	2			.60	.65	.40	.05	--
	3			.95	1.00	.90	0	--
	4			2.80	None	.70	0	--
	5			None	None	0	0	--
	6			None	None	0	0	--
	7			None	None	0	0	--
35	1	Impregnated, zinc sulfate-zinc silicofluoride-urea	12.9	1.00	1.70	(2)	0	8.90
	2			.40	1.60	(2)	.05	5.80
	3			.50	.80	(2)	(2)	6.10
	4			.50	1.35	(2)	3.95	16.40
	6			.15	.10	2.90	0	--
	7			.40	.70	(2)	0	4.00
	1	....do....	12.9	.75	1.95	.20	0	--
	2			.45	.80	0	0	--
	3			.45	1.10	(2)	.15	7.65
	4			.65	1.00	(2)	.15	8.05
	5			.35	1.10	(2)	0	7.20
	6			1.20	1.95	1.50	0	--
	7			.60	1.75	(2)	(2)	11.25

[1] Glowing combustion not definitely determinable.
[2] Extinguished with water at the time flames appeared on the underside of test deck.
[3] Dry sealer-coating weight, grams per square foot.
[4] Calculated as zinc borate.
[5] Flaming ignition of specimen occurred almost immediately upon placement of brand.

Near the rails but on the road; Billions have been spent on transit- friendly housing, but it appears people aren't leaving their cars behind.

Bernstein, Sharon; Vara-Orta, Francisco . Los Angeles Times ; Los Angeles, Calif. [Los Angeles, Calif]30 June 2007: A.1.

ABSTRACT (ABSTRACT)

The reporting showed that only a small fraction of residents shunned their cars during morning rush hour. Most people said that even though they lived close to transit stations, the trains weren't convenient enough, taking too long to arrive at destinations and lacking stops near their workplaces. Many complained that they didn't feel comfortable riding the MTA's crowded, often slow-moving buses from transit terminals to their jobs.

"You're seeing in California a whole trend toward moving into more urban settings," she said. "People like to walk around and go to a coffee shop, go to the movies. That is a very desirable way to live."

She loves the convenience of taking the Gold Line. But she's not so sure about her fellow tenants. "I save a lot of money on car expenses," [Cheanell Henderson] said. "But I haven't met any neighbors on the train yet."

FULL TEXT

TV cameras in tow and champagne at the ready, a dozen of the county's most powerful civic leaders -- including the mayor of Los Angeles, L.A. City Council members and county supervisors -- touted the latest and glitziest new development in Hollywood: the planned W Hotel and apartments at the storied corner of Hollywood and Vine.

This project, they pledged at the groundbreaking earlier this year, would restore a sagging neighborhood while also minimizing traffic -- an important promise in increasingly gridlocked Hollywood.

"People could live here and never use their cars," declared MTA Chief Executive Roger Snoble at the February event.

It's a vision expressed frequently by local government officials, who see building large mixed-use developments next to mass transit lines as a key solution for not just the region's traffic congestion but also its spread-out geography and reputation for being unfriendly to pedestrians.

In Los Angeles alone, billions of public and private dollars have been lavished on transit-oriented projects such as Hollywood &Vine, with more than 20,000 residential units approved within a quarter mile of transit stations between 2001 and 2005.

But there is little research to back up the rosy predictions. Among the few academic studies of the subject, one that looked at buildings in the Los Angeles area showed that transit-based development successfully weaned relatively few residents from their cars. It also found that, over time, no more people in the buildings studied were

taking transit 10 years after a project opened than when it was first built.

Los Angeles, with its huge geographic footprint and its limited public transportation system, can't offer residents of these developments the kinds of sophisticated transit networks available in cities like Washington, D.C. -- or even smaller ones like Portland -- where transit-oriented projects are believed by many to be working.

The Times decided to examine driving habits at four apartment and condominium complexes that have already been built at or near transit stations in South Pasadena, North Hollywood, Pasadena and Hollywood.

Reporters spent two months interviewing residents, counting cars going out of and into the buildings and counting pedestrians walking from the projects to the nearby train stations.

The reporting showed that only a small fraction of residents shunned their cars during morning rush hour. Most people said that even though they lived close to transit stations, the trains weren't convenient enough, taking too long to arrive at destinations and lacking stops near their workplaces. Many complained that they didn't feel comfortable riding the MTA's crowded, often slow-moving buses from transit terminals to their jobs.

Moreover, the attraction of shops and cafes that are often built into developments at transit stations can actually draw more cars to neighborhoods, putting an additional traffic burden on areas that had been promised relief.

Harry Cosmatos, a Kaiser Permanente radiation oncologist, is exactly the type of educated, upscale commuter that planners and transportation experts want to draw via transit-oriented developments.

In 2005, he purchased a townhouse in a project built partly atop the Mission Meridian Gold Line station in South Pasadena.

He works at Kaiser Sunset, which is at a Red Line stop in Hollywood.

He loves his new home, with its craftsman touches and picturesque South Pasadena setting, in arguably the best-designed transit- oriented development in the region.

Cosmatos also likes the Gold Line -- it reminds him of the village train near where he went to medical school on Long Island.

But the 36-year-old physician nevertheless drives to work.

The train?

"It's not for me," he said. "Maybe for other people, but not for me."

It takes two trains and at least 45 minutes to get to work on the Gold and Red lines, Cosmatos said.

Driving is 15 minutes faster, he said, and more convenient.

The problem -- reluctantly recognized by some of transit-based development's most influential boosters -- is that public transportation in Southern California is simply not convenient enough: Either it takes too long to get places or, more important, doesn't take people where they want to go.

The region's transit system is limited, experts say, because it was built on two assumptions that have since proved untrue: that most traffic was generated by commuting trips and that most people worked downtown.

Nowadays, people nationwide are driving so much to take their children to school, run errands and engage in other activities that these trips far outstrip commuting, according to federal transportation statistics.

To make matters worse, almost all of the transit-oriented construction that has so far been approved in the L.A. area is for housing rather than job centers or the village-style shopping areas that planners had originally envisioned.

Barring significant changes, this could mean that tens of thousands of residents will be clustered near train stations they only occasionally use. For most shopping, schools and jobs, they'll still get in their cars.

Film student Isaiah Eller is a good example of the quandary.

The 21-year-old left two cars behind in Michigan, figuring he wouldn't need them when he moved to the Mark apartment building in Hollywood last year.

Just two blocks away from the Hollywood and Vine Red Line station in a neighborhood with plenty of restaurants and shops, Eller considered the vintage building of 101 units a perfect place to live without a car.

But after just a few months, he says he's so frustrated trying to get around Los Angeles on public transportation that he's thinking of bringing both vehicles out from the Midwest.

Using the system here took too long, didn't go where he needed and was unpleasant, he said.

"I've only ridden the bus three times, and that was enough," Eller said.

He's not alone. Although several residents of his building said they had given up their cars, about 30 of the 54 cars in the garage pulled out during morning rush hour.

But such realities haven't stopped or even slowed the wave of projects planned or under construction.

Huge developments in the pipeline include the L.A. Live and Grand Avenue projects downtown and hundreds of units around Metro stations in Hollywood, North Hollywood and the Mid-Wilshire areas.

Countywide, massive apartment and condominium complexes have been developed in Pasadena, South Pasadena, Long Beach and elsewhere.

Backers -- who include planners, elected officials and builders - - say such development is the best way to avoid a traffic meltdown as 6.3 million anticipated new residents crowd Los Angeles, Orange, Riverside, San Bernardino and Ventura counties over the next 30 years.

Moreover, the developments are appealing to young people and empty nesters because they have a neighborhood feel that traditional sprawling subdivisions often lack, said Gail Goldberg, planning director for the city of Los Angeles.

"You're seeing in California a whole trend toward moving into more urban settings," she said. "People like to walk around and go to a coffee shop, go to the movies. That is a very desirable way to live."

But does that mean people will stop using their cars?

Two related studies, both conducted by UC Berkeley and Cal Poly Pomona, show that people who live near transit tend to use it more than people who don't. But the number is still minuscule compared with the number who drive.

Residents were more likely to use transit only if it took less time than driving, if they could walk to their destinations from the transit stop when they arrived, if they had flexible work hours and if they had limited access to a car.

Otherwise, researchers said, most people tend to drive -- particularly if they get free parking at their workplaces.

At the Pacific Court and Bellamar apartments in Long Beach, researchers found, just 6.3% of residents said they used the Metro Blue Line to go to work in 2003. More than 78% of the residents of the transit-based projects said they never used the line.

"The dilemma we have is the destinations," said Robert Cervero, a UC Berkeley urban planning professor who is coauthor of the two studies of transit-oriented developments.

Even though more people are living near transit stations, he said, in Southern California work and school sites are not necessarily near train and bus stops.

That's different from the older East Coast cities, where the urban grid is closely connected to the local transit system.

"That to me is the big difference as to why transit-oriented housing works a lot better in other parts of the world," Cervero said.

In other words, he and others said, in Southern California, the new, denser transit-based housing projects could actually lead to more congestion rather than less.

Take the development where Cosmatos, the cancer doctor, lives.

Before the 67-unit project was built, the land on which it stands held two bungalows, according to South Pasadena officials. If each household had two cars, that would mean a maximum of four cars going in and out each day.

But on the four days The Times counted cars entering and leaving the complex, the picture was quite different. From 6 to 9 a.m. on four weekdays earlier this year, 50 to 60 cars left the residents' parking lot. An additional 75 pulled into the streets around the development on each of the mornings so their drivers could patronize the coffee shop that is built into the project. Still more vehicles - - about 50 by 9 a.m. -- pulled into a parking lot at the development for people who drive there to use the nearby Gold Line station.

There is another issue facing transit-oriented development: Regional statistics gathered by the Southern California Assn. of Governments show that job centers are moving away from transit lines rather than toward them.

That's exactly what happened for construction industry worker Eric Johnson, who moved to South Pasadena's Mission Meridian project with the intention of taking the Gold Line to his job downtown.

But a few months ago, his company moved to Sun Valley -- far from a transit line. So now Johnson drives.

The Times found similar results at the other locations surveyed.

At Academy Village in North Hollywood, which sits about a third of a mile from the North Hollywood transit station, about 120 cars left the building each morning, while fewer than half a dozen residents set off on foot.

In Pasadena, a 350-unit building sits directly over the Del Mar Gold Line station; it was two-thirds leased when The Times did its survey. Of 225 people who got off the train on a recent evening, just one, Cheanell Henderson, headed toward the apartment complex.

She loves the convenience of taking the Gold Line. But she's not so sure about her fellow tenants. "I save a lot of money on car expenses," Henderson said. "But I haven't met any neighbors on the train yet."

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Illustration
Caption: GRAPHIC: MAP: Trains and automobiles; CREDIT: MARK HAFER Los Angeles Times; PHOTO: DISILLUSIONED: Isaiah Eller lives two blocks from a Red Line station but has found the transit system too frustrating to use.; PHOTOGRAPHER: Mel Melcon Los Angeles Times

Credit: Times Staff Writers

DETAILS

Subject:	Public opinion; Housing; Mass transit; Urban planning
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Meridian Ave Traffic Issues Addressed | Transportation Commission Forwards Recommendation

According to data, 54 collisions took place along the 1.7 mile stretch of Meridian Ave

By **Ben Tansey** - July 23, 2020

FILE PHOTO: Eric Fabbro | SouthPasadenan.com News | Shahid Abbas, South Pasadena Director of Public Works

Members of the city's Mobility, Transportation and Infrastructure Commission on Tuesday heard dozens of public comments attesting to the traffic carnage they have witnessed along Meridian Ave. in South Pasadena: speeding, parked cars demolished, bikers injured by cars, sideview mirrors regularly ripped off and more.

The comments, read by city staff during the teleconferenced meeting, also featured multiple accounts of near misses and scary moments at the T-intersection of Oak St., told by pedestrians and parents testifying to the fear they have about letting their children cross the intersection — a major crossing point for students on their way to and from the high school and middle school. Virtually all demanded installation of a three-way stop sign

But Public Works Director Shahid Abbas followed up with a report from W. G. Zimmerman Engineering of Huntington Beach concluding a three-way stop sign is not justified under the guidance supplied in the California Manual of Uniform Traffic Control and Devices. With some minor variation, these specs require five crashes within a 12-month period or minimum volumes of at least 300 vehicles per hour for 8 hours entering from major street approaches and at least 200 cars, pedestrians or bikes entering from minor street approaches. Smaller minimum approaches are allowed if most of the vehicles exceed 40 mph.

State accident records show that between Jan. 31, 2019 and Jan. 31, 2020, there was only one accident at Meridian and Oak St., when a car broadsided a bicycle. Zimmerman reported that while the average volume of vehicles on Meridian Ave. comes to 401 vehicles an hour, it did not take measurements at Oak, relying instead on extrapolations based on three "peak hours," none of which exceeded 150 per hour.

Commission members complained the peak measurements were taken during a day around Christmas that was likely not representative of average volumes. They also expressed concern that the Statewide Integrated Traffic Records System (SWITRS) from which the crash data was derived is known to be suspect.

Moreover, the report does not appear to have taken the simple step of asking the city's police or fire departments for their records. Earlier this year, the South Pasadenan News filed a public records request for collisions along several city streets during the five-year period ending Jan. 31, 2020. According to that data, 54 collisions took place along the 1.7 mile stretch of Meridian Ave., including eight in 2019 alone and four in January 2020. At least five of the collisions took place within a block of Oak, and three of those took place between February 9 and June 7 of 2017 (see chart). Notably, the city data does not appear to include the bike accident reported by SWITRS.

CAD Event	Report Number	CAD Date	Incident	Disposition	Street Name	Street Number
20-01-10-000877		1/10/2020 16:15	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	CLOSED BY DISPATCH	MERIDIAN AV	1934
20-01-09-000801		1/9/2020 20:51	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	INCIDENT REPORT ONLY	MERIDIAN AV	1934
20-01-09-000761	200070	1/9/2020 13:14	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/BONITA DR	
20-01-01-000052		1/1/2020 14:44	TRAFFIC COLLISION - HIT & RUN TRAFFIC COLLSION	ASSISTED	MERIDIAN AV	1321
19-11-19-025168		11/19/2019 16:39	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	CLOSED BY DISPATCH	MERIDIAN AVE	905
19-11-11-024479	192417	11/11/2019 19:35	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AVE	805
19-09-24-020638	192064	9/24/2019 13:44	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	2018
19-09-14-019850	191989	9/14/2019 12:26	TRAFFIC COLLISION - HIT&RUN MISD	REPORT TO FOLLOW	MERIDIAN AV	900BLK
19-08-18-017712	191780	8/18/2019 22:57	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/ MONTEREY RD	
19-04-04-007428	190700	4/4/2019 21:21	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	2018
19-01-17-001396	190123	1/17/2019 6:58	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/MONTEREY RD	
19-01-14-001182		1/14/2019 16:53	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN AV/ MISSION ST	
19-01-13-001097		1/13/2019 2:20	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	INCIDENT REPORT ONLY	MERIDIAN AV	1900BLK
18-12-03-030657	182601	12/3/2018 13:11	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/ HIGHLAND ST	
18-11-17-029312		11/17/2018 12:31	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	INCIDENT REPORT ONLY	MERIDIAN AV	1722
18-09-19-023978		9/19/2018 20:23	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	INCIDENT REPORT ONLY	MERIDIAN AV	2000BLK
18-09-11-023229	181953	9/11/2018 17:57	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	RIDIAN AV/ GILLETTE CRESCENT	
18-07-15-018317	181484	7/15/2018 13:59	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/MISSION ST	
18-07-11-018021	181453	7/11/2018 20:34	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	
18-05-26-013644		5/26/2018 10:43	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	INCIDENT REPORT ONLY	MERIDIAN AV	2067
18-05-14-012461	180988	5/14/2018 14:40	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	1730
18-05-05-011612	180915	5/5/2018 13:10	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/ BANK ST	
18-04-29-010934		4/29/2018 10:15	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	CLOSED BY DISPATCH	MERIDIAN AV/ MISSION ST	
18-04-21-010214		4/21/2018 20:08	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	INCIDENT REPORT ONLY	MERIDIAN AV/OAK ST	
18-02-22-004752	180401	2/22/2018 8:49	TRAFFIC COLLISION - HIT&RUN MISD	LOCATION CHECKS C4	MERIDIAN AV	1934
17-12-19-032507	172751	12/19/2017 19:24	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	1407
17-12-06-031319	172643	12/6/2017 10:57	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	1401
17-10-28-027613		10/28/2017 8:17	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	INCIDENT REPORT ONLY	MERIDIAN AVE	2000BLK
17-10-18-026676	172288	10/18/2017 6:21	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	2014
17-09-21-024281	172098	9/21/2017 19:26	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	1312
17-09-02-022412	171937	9/2/2017 4:08	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	2035
17-06-14-014890		6/14/2017 9:22	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN AV	1940
17-06-07-014358		6/7/2017 14:52	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	ASSISTED	MERIDIAN AV	1637
17-04-21-010407		4/21/2017 20:39	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	INCIDENT REPORT ONLY	MERIDIAN AV	1600
17-03-07-005858		3/7/2017 9:47	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN AV	1114
17-02-09-003389	170341	2/9/2017 23:00	TRAFFIC COLLISION - HIT & RUN TRAFFIC COLLSION	REPORT TO FOLLOW	MERIDIAN AV	1721
17-01-30-002358	170243	1/30/2017 17:31	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/ HOPE ST	
17-01-16-001221		1/16/2017 19:18	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	INCIDENT REPORT ONLY	MERIDIAN AV/ BONITA	
16-11-25-027889		11/25/2016 22:25	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN AV/MISSION ST	
16-11-03-025975	162331	11/3/2016 4:57	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/MONTEREY RD	
16-08-17-018780	161678	8/17/2016 14:51	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV/MONTEREY RD	
16-07-22-016422	161471	7/22/2016 7:55	TRAFFIC COLLISION - HIT&RUN MISD	REPORT TO FOLLOW	MERIDIAN AV	1111
16-07-03-014861	161330	7/3/2016 2:50	TRAFFIC COLLISION - NON INJURY TRAFFIC COLLISION-HIT & RUN	REPORT TO FOLLOW	MERIDIAN AV	801
16-06-24-014193		6/24/2016 22:17	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN / MISSION	
16-05-02-009828		5/2/2016 8:04	TRAFFIC COLLISION - NON INJURY COLLISION-CPD	ASSISTED	RIDIAN AVE/GILLETTE CRESCENT	
16-04-23-009227		4/23/2016 14:39	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN AV/MONTEREY RD	
16-01-02-000022		1/2/2016 10:28	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN AV	1912
15-12-19-030148	152819	12/19/2015 11:21	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	1011
15-12-03-028780		12/3/2015 17:11	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	CONTACTED / ADVISED	MERIDIAN AV/HOPE ST	
15-11-18-027586	152598	11/18/2015 17:36	TRAFFIC COLLISION - INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AVE	1500BLK
15-06-02-012848		6/2/2015 15:04	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN/MONTEREY	
15-03-02-005091		3/2/2015 17:25	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	ASSISTED	MERIDIAN AVE	1815
15-02-19-004114	150404	2/19/2015 12:41	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	REPORT TO FOLLOW	MERIDIAN AV	633
15-02-09-003152		2/9/2015 10:58	TRAFFIC COLLISION - NON-INJURY TRAFFIC COLLISION	INCIDENT REPORT ONLY	MERIDIAN	1108

All vehicle and pedestrian accidents, including bikes, that took place on Meridian Ave. in South Pasadena between Jan. 31, 2015 and Jan. 31, 2020 as reported by South Pasadena police and fire departments. This list was released March 9 by the City of South Pasadena pursuant to a public records request

During the same five-year period, South Pasadena reported 192 collisions on Monterey Rd., 525 on Fair Oaks Ave., 417 on Fremont Ave. and 173 on Mission St.

The Oak Street intersection was one of only several reported on in the Zimmerman study, which concluded stop signs were also not justified at Meridian and Maple St. or at Meridian and Pine St., about which some of the public testimony on Tuesday expressed concerns.

Residents have asked for other improvements on Meridian such as speed feedback signs, red curbs at key intersection and others to make turning and backing out of driveways safer.

The commission also heard a lengthy presentation from public works director Abbas that focused mainly on long-term traffic enhancements compiled in 2011 by a firm long since acquired by Chicago-based AECOM. He also spoke of the city's vision to convert Meridian to a "Livable Complete Street" with "green street" and "smart mobility and active transportation" elements such as raised intersections and crosswalk improvements, protected intersections, "refuge islands" and median treatments. He described other option such as roundabouts, channelizers, green bike pavement markings and concrete "pinpoints" to slow traffic. He made similar recommendations for Fremont Ave.

Abbas offered a few potential short-term measures for Meridian including replacing faded striping, adding speed signage and more red curb painting.

Ultimately, said MTIC chair Sam Zneimer, the commission elected to provide city staff with recommendations for number of traffic safety options that could be installed relatively quickly and inexpensively. "As much as we thought Complete Street or Neighborhood Greenway concepts were nice and pie-in-the-sky," commissioners share the sense of urgency felt by residents who have been pressing for improvements, including a stop sign at Meridian and Oak for well over 20 years. They want measures to be taken while staff is developing plans for and finding funding for longer term solutions.

These near term options include installation of a rectangular flashing beacon that can be actuated by pedestrians, edge line striping to delineate space along the street, rumple strips in the center median to warn drivers from veering out of their lane, removal of parking spaces to improve site line visibility, and installation of non-concrete curb extensions to reduce the crossing distance for pedestrians.

Ben Tansey

https://southpasadenan.com

From: Victoria Fierce <[redacted]>
Sent: Tuesday, February 2, 2021 1:16 PM
To: CCO <cco@southpasadenaca.gov>; Teresa Highsmith <thighsmith@chwlaw.us>; City Clerk's Division <CityClerk@southpasadenaca.gov>; Jack Donovan <jdonovan@southpasadenaca.gov>; Evelyn Zneimer <ezneimer@southpasadenaca.gov>; Michael Cacciotti <mcacciotti@southpasadenaca.gov>; Diana Mahmud <dmahmud@southpasadenaca.gov>; Jon Primuth <jprimuth@southpasadenaca.gov>; City Council Public Comment <ccpubliccomment@southpasadenaca.gov>
Subject: Re: Proposal to construct 60 homes at 845 El Centro St

Honorable members of the South Pasadena City Council, City Attorney and City Clerk:

CaRLA submits this attached letter as a public comment for tomorrow night's city council meeting.

California Renters Legal Advocacy and Education Fund
360 Grand Ave, #323
Oakland, CA 94612
hi@carlaef.org

February 2, 2021

City of South Pasadena
1424 Mission St
South Pasadena, CA
91030

Re: Proposal to construct 60 homes at 845 El Centro St.

Dear South Pasadena City Council, and City Attorney,

The California Renters Legal Advocacy and Education Fund (CaRLA) submits this letter to inform the City of South Pasadena that they have an obligation to abide by all relevant state housing laws when evaluating the proposal to construct 60 homes at 845 El Centro St., including the Housing Accountability Act GOV 65589.5, which requires approval of zoning and general plan compliant projects unless findings can be made regarding specific, objective, written health and safety hazards. Additionally, the city is bound by the Permit Streamlining Act as amended by SB330 to approve this project within 90 days of the CEQA negative declaration adopted on November 17, 2020.

As you are well aware, California remains in the throes of a statewide crisis-level housing shortage. New housing such as this is a public benefit; it will bring increased tax revenue, new customers to local businesses, decarbonization in the face of climate crisis, but most importantly it will reduce displacement of existing residents into homelessness or carbon-heavy car commutes.

CaRLA is a 501(c)3 non-profit corporation whose mission includes advocating for increased access to housing for Californians at all income levels, including low-income households. The proposed Project will provide badly needed housing and increased public transit access. While no one project will solve the regional housing crisis, the proposed Seven Patios development is the kind of housing South Pasadena needs to mitigate displacement, provide shelter for its growing population, and arrest unsustainable housing price appreciation. You may learn more about CaRLA at www.carlaef.org.

Sincerely,

Dylan Casey
Executive Director
California Renters Legal Advocacy and Education Fund

From: Matthew Gelfand <[redacted]> **On Behalf Of** [redacted]
Sent: Tuesday, February 2, 2021 11:51 PM
To: City Council Public Comment <ccpubliccomment@southpasadenaca.gov>
Cc: Sean Joyce <sjoyce@southpasadenaca.gov>; Joanna Hankamer <jhankamer@southpasadenaca.gov>; Kanika Kith <kkith@southpasadenaca.gov>; Teresa Highsmith <thighsmith@chwlaw.us>
Subject: Correspondence from Californians for Homeownership

To the City Council:

Please see the attached correspondence regarding Agenda Item 17 being considered at your upcoming meeting.

Sincerely,

Matthew Gelfand

--

Matthew Gelfand
Counsel, Californians for Homeownership
[redacted]

Californians for Homeownership is a 501(c)(3) non-profit organization that works to address California's housing crisis through impact litigation and other legal tools.

CALIFORNIANS FOR HOMEOWNERSHIP

MATTHEW GELFAND, COUNSEL
MATT@CAFORHOMES.ORG
TEL: (213) 739-8206

February 2, 2021

VIA EMAIL

City Council
City of South Pasadena
1424 Mission Street
South Pasadena, CA 91030
Email: ccpubliccomment@southpasadenaca.gov

RE: Seven Patios Project (845/899 El Centro St.)
Application No. 2171-CUP/DRX/TTM/TRP

To the City Council:

Californians for Homeownership is a 501(c)(3) organization devoted to using legal tools to address California's housing crisis. We are writing regarding the Seven Patios project. The City's approval of this project is governed by the Housing Accountability Act, Government Code Section 65589.5. For the purposes of Government Code Section 65589.5(k)(2), this letter constitutes our written comments submitted in connection with the project. This letter is also intended to support the project's environmental review, which has met the requirements of the California Environmental Quality Act (CEQA).

The Housing Accountability Act generally requires the City to approve a housing development project unless the project fails to comply with "applicable, objective general plan, zoning, and subdivision standards and criteria, including design review standards, in effect at the time that the application was deemed complete." Gov. Code § 65589.5(j)(1). To count as "objective," a standard must "involve[e] no personal or subjective judgment by a public official and be[] uniformly verifiable by reference to an external and uniform benchmark or criterion available and knowable by both the development applicant or proponent and the public official." Gov. Code § 65589.5(h)(8). In making this determination, the City must approve the project if the evidence "would allow a reasonable person to conclude" that the project met the relevant standard. Gov. Code § 65589.5(f)(4). Projects subject to modified standards pursuant to a density bonus are judged against the City's standards as modified. Gov. Code § 65589.5(j)(3).

The City is subject to strict timing requirements under the Act. If the City desires to find that a project is inconsistent with any of its land use standards, it must issue written findings to that effect within 30 to 60 days after the application to develop the project is determined to be complete. Gov. Code § 65589.5(j)(2)(A). If the City fails to do so, the project is deemed consistent with those standards. Gov. Code § 65589.5(j)(2)(B).

525 S. Virgil Avenue
Los Angeles, CA 90020

If the City determines that a project is consistent with its objective standards, or a project is deemed consistent with such standards, but the City nevertheless proposes to reject it, it must make written findings, supported by a preponderance of the evidence, that the project would have a "specific, adverse impact upon the public health or safety," meaning that the project would have "a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete." Gov. Code § 65589.5(j)(1)(A); *see* Gov. Code § 65589.5(k)(1)(A)(i)(II). Once again, "objective" means "involving no personal or subjective judgment by a public official and being uniformly verifiable by reference to an external and uniform benchmark or criterion available and knowable by both the development applicant or proponent and the public official." Gov. Code § 65589.5(h)(8).

Even if the City identifies legally sufficient health and safety concerns about a project, it may only reject the project if "[t]here is no feasible method to satisfactorily mitigate or avoid the adverse impact . . . other than the disapproval of the housing development project . . . ." Gov. Code § 65589.5(j)(1)(B). Thus, before rejecting a project, the City must consider all reasonable measures that could be used to mitigate the impact at issue.

For projects that provide housing for lower-income families, the Act is even more restrictive. In many cases, the City must approve such a project even if it fails to meet the City's objective land use standards. *See* Gov. Code § 65589.5(d).

These provisions apply to the full range of housing types, including single-family homes, market-rate multifamily projects, and mixed-use developments. Gov. Code § 65589.5(h)(2); *see Honchariw v. Cty. of Stanislaus*, 200 Cal. App. 4th 1066, 1074-76 (2011). And the Legislature has directed that the Act be "interpreted and implemented in a manner to afford the fullest possible weight to the interest of, and the approval and provision of, housing." Gov. Code § 65589.5(a)(2)(L).

When a locality rejects or downsizes a housing development project without complying with the rules described above, the action may be challenged in court in a writ under Code of Civil Procedure Section 1094.5. Gov. Code § 65589.5(m). The legislature has significantly reformed this process over the last few years in an effort to increase compliance. Today, the law provides a private right of action to non-profit organizations like Californians for Homeownership. Gov. Code § 65589.5(k). A non-profit organization can sue without the involvement or approval of the project applicant, to protect the public's interest in the development of new housing. A locality that is sued to enforce Section 65589.5 must prepare the administrative record itself, at its own expense, within 30 days after service of the petition. Gov. Code § 65589.5(m). And if an enforcement lawsuit brought by a non-profit organization is successful, the locality must pay the organization's attorneys' fees. Gov. Code § 65589.5(k)(2). In certain cases, the court will also impose fines that start at $10,000 per proposed housing unit. Gov. Code § 65589.5(k)(1)(B)(i).

In recent years, there have been a number of successful lawsuits to enforce these rules:

- In *Honchariw*, 200 Cal. App. 4th 1066, the Court of Appeal vacated the County of Stanislaus's denial of an application to subdivide a parcel into eight lots for the development of market-rate housing. The court held that the county did not identify any objective standards that the proposed subdivision would not meet, and therefore violated the Housing Accountability Act in denying the application.

- In *Eden Housing, Inc. v. Town of Los Gatos*, Santa Clara County Superior Court Case No. 16CV300733, the court determined that Los Gatos had improperly denied a subdivision application based on subjective factors. The court found that the factors cited by the town, such as the quality of the site design, the unit mix, and the anticipated cost of the units, were not objective because they did not refer to specific, mandatory criteria to which the applicant could conform.

- *San Francisco Bay Area Renters Federation v. Berkeley City Council*, Alameda County Superior Court Case No. RG16834448, was the final in a series of cases relating to Berkeley's denial of an application to build three single family homes and its pretextual denial of a demolition permit to enable the project. The Court ordered the city to approve the project and to pay $44,000 in attorneys' fees.

- In *40 Main Street Offices v. City of Los Altos*, Santa Clara County Superior Court Consolidated Case Nos. 19CV349845 & 19CV350422, the court determined that the City violated the Housing Accountability Act, among other state housing laws, by failing to identify objective land use criteria to justify denying a mixed-use residential and commercial project. The Petitioners' application for over $1.7 million in attorneys' fees is pending before the court.

In other cases, localities have settled lawsuits by agreeing to approve the subject projects and pay tens or hundreds of thousands of dollars in legal expenses.

Approval of the project's requested entitlements is well-supported by the record before the City, and the Project's environmental review has met the requirements of CEQA.

Sincerely,

Matthew Gelfand

cc: City of South Pasadena
Sean Joyce, Interim City Manager (by email to sjoyce@southpasadenaca.gov)
Joanna Hankamer, Comm. Dev. Dir. (by email to jhankamer@southpasadenaca.gov)
Kanika Kith, Planning Manager (by email to kkith@southpasadenaca.gov)
Teresa L. Highsmith, Esq., City Attorney (by email to thighsmith@chwlaw.us)

Agenda item 17, Project 2385-RFR- Request to Review of Seven Patios

Mayor Mahmud and City Council Members,

Please do not adopt a Resolution upholding the Planning Commission's adoption of a Mitigated Negative Declaration (MND), its Mitigation Monitoring and Reporting Program, and its approval of the subject Project with related permit conditions until further steps have been taken to ensure all aspects and risks of this project have been thoroughly and properly explored.

Council has received information that shows Fisk & Mason Roofing Company formerly operated at 855 El Centro from the 1920's-1950's. Knowing such a company existed at the location, and the types of materials likely used, the potential for soil contaminants must not be overlooked. The project also lies adjacent to the Metro Gold line, the site of former railroad tracks made partially of wood and potentially coated in creosote. This again raises concerns for contaminated soil. The city must do its due diligence to ensure the health and safety of our neighborhood before it allows digging for two subterraneum levels of parking. Past usage of this land must be taken into consideration. An Environmental Impact Report needs to be done.

Neighbors have complained about traffic circulation and parking issues on El Centro, Orange Grove Ave, Orange Grove Place and Glendon Way. The Planning Commission recognized the neighbors concerns and added as a condition of this project, "The MTIC chair and PC chair will evaluate traffic within one year of operation and determine if a traffic study is needed." The Mobility and Transportation Infrastructure Commission should review the project and traffic circulation before it is built, not just within one year after. Proper analysis must be done beforehand so necessary steps can be taken to mitigate any potential issues. Less options may be available once the project is built.

Neighborhood Compatibility has not been properly considered in the Design Review Process for the 3 houses proposed for Orange Grove Place. The 3 homes, which are part of the Seven Patios project are 30' in height. Although within code limits for height, this should not be considered compatible with the neighborhood and would not be in line with requirements set for 2 recent projects on the street. 821 Orange Grove Place was approved to build at 24 ½' with the front part of the second story set back. 817 was approved for 24' for the highest part of the front house and the duplex in back of the property is approx. 29'. The lower height requirement aids in making these homes cohesive with the nature of the neighborhood, formally all single story homes. The homes planned for Orange Grove Place as part of the Seven Patios project should meet the same criteria as these other recently approved projects.

Thank you so much for taking your time in considering all aspects of this project before preparing to move forward.

Sincerely,

The Neighbors of Orange Grove Pl. and Orange Grove Ave.

Tara & Yosh Kawakami
825 Orange Grove Place

Roya Yasharpour & Mike Gold
831 Orange Grove Place

Mariela King (owner)
833 Orange Grove Place

Pam & Rick Steimer
818 Orange Grove Place

Paige Rothe & Wolf Steimer
820 Orange Grove Place

Alysia Gray Painter and Chris Painter
1030 Orange Grove Ave.

Judith Hoyt
813 Orange Grove Place

Jane Schirmeister
816 Orange Grove Place