PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Communications Division
Broadband, Video and Market Branch

RESOLUTION T-17791
June 8, 2023

R E S O L U T I O N

RESOLUTION T-17791: Approval of fourteen (14) public housing infrastructure projects for grant funding from the California Advanced Services Fund's Broadband Public Housing Account totaling $951,068.94.

I. SUMMARY

This Resolution approves grant funding in the amount of $951,068.94 from the California Advanced Services Fund (CASF) Broadband Public Housing Account (BPHA) for 14 projects from five applicants. These 14 projects will deploy both wireless and wired broadband infrastructure utilizing wi-fi and copper technologies capable of 25 Megabits per second (Mbps) download and 3 Mbps upload for 830 living units in these publicly supported housing developments. The deployment of broadband in public housing for the purpose of offering free internet access to those who do not already have access to a free broadband network will improve public safety by providing enhanced access to government, e-health, and online education opportunities.

Table 1, below, lists the 14 public housing infrastructure grants approved, and Appendix B shows a map of proposed project locations.

Table 1						
Applicant	**Project Name**	**Address**	**City**	**Zip Code**	**Grant**	**Units**
CHISPA, Inc.	East Garrison Apts	21131 and 21231 Ord Avenue	Monterey	93933	$134,777.76	66
Eden Housing	Blue Oak Landing	2118 Sacramento Street	Vallejo	94590	$108,887.94	75
RCD Housing	Coliseum Place	7120 Hawley Street	Oakland	94621	$65,077.00	59
RCD Housing	Maudelle Miller Shirek	2001 Ashby Ave.	Berkley	94703	$78,387.00	87
RCD Housing	Sango Court	355 Sango Ct	Milpitas	95035	$80,580.00	102
RCD Housing	Madrone Terrace	16060 E. 14th St.	San Leandro	94578	$79,553.00	79
RCD Housing	Rick Judd Commons	1315 Galindo St.	Concord	94520	$64,790.00	62
RCD Housing	Bell Gardens	4103 Mowry Avenue	Fremont	94547	$114,176.00	128
Self Help Enterprises	Woodlake Townhomes	354 Danielle Way	Woodlake	93286	$37,950.00	11
Self Help Enterprises	Mt. Whitney Place	181 E. Honolulu St.	Lindsay	93247	$35,525.00	29
Self Help Enterprises	Dinuba Manor	1333 S. Greene Ave.	Dinuba	93618	$57,240.00	36
Self Help Enterprises	Valley Oaks	40410 Redbud Dr.	Oakhurst	93644	$48,600.00	24
Self Help Enterprises	The Haven	231 Quantico Ave.	Bakersfield	93307	$38,400.00	24
Shelter Inc	Project Homekey	2441 Broadway St.	Vallejo	94589	$81,903.00	48
			Total:		**$951,068.94**	**830**

II. BACKGROUND

On May 19, 2022, the Commission issued Decision (D.) 22-05-029 which implemented changes to the BPHA enacted by Senate Bill 156 and programmatic changes for publicly supported housing developments, including farmworker housing, and allocated $15 million funding for Fiscal Year 2022-2023.

Key provisions of the Decision relevant to this Resolution include:

- The Commission authorized CD staff (Staff) to review and approve applications through ministerial review that meet all of the ministerial review criteria.[1] Applications not meeting the ministerial review criteria may still be considered for a grant but may only be approved by the Commission via Resolution.

[1] D. 22-05-029, Appendix 1, p. 11

- Grants can be awarded to finance up to 100 percent of the installation costs (inside wiring and equipment), but not maintenance or operation costs.
- Grantees must maintain and operate the network for five years after project completion.
- The proposed network should be capable of offering residents Internet service speeds of at least 25 Mbps download and 3 Mbps upload service for an average user during peak and off-peak hours or current state standard, whichever is higher.[2]
- Applicant attests that no broadband service provider offers free service that meets state standards, as defined in Section III of the BPHA Guidelines, to the subject low-income community.
- Applicant attests that it will not charge residents for broadband internet services.
- Applicant agrees to complete the project within 12 months from the date of Commission approval.
- Applicant has an identified internet service provider with the required internet bandwidth capacity at the Minimum Point of Entry (MPOE).

III. APPLICANTS' REQUEST

On January 1, 2023, Community Housing Improvement Systems and Planning Association (CHISPA) (1 project), Eden Housing (1 project), Resources for Community Development (RCD Housing) (6 projects), Self Help Enterprises (SHE) (5 projects), and Shelter Inc. (1 project) submitted applications for CASF BPHA funding. All 14 projects exceed the cost per unit benchmark established in the ministerial review criteria in D.22-05-029 and are therefore ineligible for ministerial review. This Resolution addresses all 14 projects from these five applicants.

Applicants: All five applicants are eligible applicants as defined in D.22-05-029.[3]

CHISPA has been approved by the Internal Revenue Service (IRS) as a 501(c)(3) nonprofit organization for providing affordable housing since 1980. CHISPA is the largest private, nonprofit housing developer based in Monterey County. CHISPA has built and renovated 2,447 single-family homes and apartments for low and moderate-income people in Monterey, San Benito, and Santa Cruz Counties.

[2] Peak hours mean 7 p.m. to 11 p.m. local time.; https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-fixed-broadband-eleventh-report

[3] D.22-05-029, Appendix 1, p. 5.

Eden Housing has been approved by the IRS as a 501(c)(3) nonprofit organization for providing affordable housing since 1968. Eden Housing currently serves a diverse population of 22,000 low-income residents from all cultures and backgrounds including very low, low and moderate-income families, seniors, veterans, people living with physical, mental, or developmental disabilities, and the formerly homeless.

RCD Housing has been approved by the IRS as a 501(c)(3) nonprofit organization for providing affordable housing since 1984. RCD Housing has developed or preserved over 65 communities that provide affordable, high-quality, and service-enriched rental housing to over 2,200 low-income households throughout the Bay Area

SHE has been approved by the IRS as a 501(c)(3) nonprofit organization for providing affordable housing since 1965. SHE is a nationally recognized community development organization whose mission is to work together with low-income families to build and sustain healthy homes and communities. Since 1965, Self-Help Enterprises' efforts have affected over 55,000 families.

Shelter Inc. has been approved by the IRS as 501(c)(3) nonprofit organization for providing affordable housing since 1986. Shelter Inc. works to prevent and end homelessness for low-income residents by providing resources that lead to self-sufficiency.

Projects:

CHISPA, Eden Housing, RCD Housing (Sango Court project only), SHE (Woodlake Townhomes, Mt. Whitney Place, Dinuba Manor, Valley Oaks, and The Haven projects) and Shelter Inc. request funding for the installation of a wireless 2.4GHz and 5GHz WiFi 802.11ac Wave 2 and 802.11ax network architecture utilizing Cambium, Cisco and Ruckus WiFi access points, switches, and bridges to provide wireless broadband coverage to each residential unit.

According to CHISPA, Eden Housing, RCD Housing SHE, and Shelter Inc., these installations will be able to provide a minimum download speed of 25 Mbps during peak use hours.

RCD Housing (Coliseum Place, Maudelle Miller Shirek, Madrone Terrace, Rick Judd Commons, Bell Gardens, projects only) request funding for the installation of a combined wireless and wired network architecture utilizing 802.11ac wave 2 and 802.11ax WiFi wireless routers that are connected to distributed wired switched ethernet networks using inside copper wiring to deploy broadband service each residential unit.

According to RCD Housing, this installation will be able to provide a minimum download speed of 25 Mbps during peak use hours.

All 14 projects include equipment for broadband traffic management, deployment, security, monitoring and reporting, consisting of layer 2 or layer 3 switches and a firewall that interfaces to the Wide Area Network Internet Service Provider (ISP) equipment providing the broadband service.

III. NOTICES

On January 13, 2023, Staff posted the proposed project descriptions on the Commission's BPHA webpage.[4]

IV. PROJECT REVIEW

CHISPA's 1 project (East Garrison Apartments) is currently under construction and is due for completion in late summer of 2023. RCD Housing's 2 projects (Madrone Terrace and Maudelle Miller) are either planned construction or are currently under construction. These 3 buildings are due for completion at the end of 2023.

The Wireless installations for the CHISPA (East Garrison Apartments), Eden Housing (Blue Oak Landing), and Shelter Inc. (Project Homekey) which use the latest WiFi standards, require more expertise to properly design, configure and deploy the wireless equipment to meet the coverage needs of multiple housing facilities and to properly interface together as a local area network to connect to the ISP. In addition, the wireless mesh[5] equipment utilized in wireless installations for the RCD Housing (Sango Court project only), and SHE (Woodlake Townhomes, Mt. Whitney Place, Dinuba Manor, Valley Oaks, and The Haven) projects are more resilient, as it can be self-adapting to changes in wireless conditions. The use of the latest WiFi standard[6] in all these projects offers greater throughput and wireless link management capability and can carry more traffic.

[4] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/bpha/january-2023-broadband-public-housing-account-grant-request.pdf

[5] A mesh network is a network composed of multiple nodes that work together as one large system. In WiFi networks, mesh is a feature of an automated path selection among the distributed wireless access points to their destination for the most optimal path

[6] 802.11AC Wave2 (WiFi-5 wave2) or 802.11ax WiFi standard per BPHA guidelines, p.2.

The projects propose multiple Intermediate Distribution Frame (IDF)[7] that connect to Main Distribution Frame (MDF)[8] in a star network topology.[9] Each IDF will serve as the local collection point for the distributed access points, providing wireless coverage to the residential units in each housing facility. Projects utilize both wired and wireless bridge connections to bring IDFs back to the MDF, depending on the physical barriers, ease of access, and existing pre-built pathways present within the property to connect to the IDFs that serve each building.

IDFs distribute WiFi access equipment to serve the buildings, and the Cambium and Cisco Meraki wireless equipment being proposed are WiFi access points that use 802.11ac wave2 or 802.11ax standard. In addition, the Ruckus Wireless equipment being proposed are wireless mesh[10] capable WiFi access points that use either the 802.11ac wave2 or 802.11ax standards. All of the access points include the latest technology advancements that greatly improve capacity and performance by enabling more simultaneous connections and a more thorough use of spectrum[11], while maintaining backwards compatibility to older WiFi standards.

The wireless mesh equipment utilized in these projects is more costly but provides the flexibility and scalability for future expansion. All proposed wireless projects are 100 Mbps download/20 Mbps upload speed ready. In addition, with a minor hardware upgrade[12], all proposed wireless projects are capable of exceeding 100 Mbps download/20 Mbps upload speed, with better speeds for the wireless projects using the 802.11ax WiFi standard.[13]

---

[7] Intermediate Distribution Frame (IDF) is a localized hub and a cable distribution point, typically a rack or a cabinet, which brings internal lines to all locally distributed computing devices to the Main Distribution Frame.

[8] The Main Distribution Frame (MDF) is the centralized distribution point for all IDFs and is the terminating point for all of the computing devices within the local network. The MDF connects and manages telecommunications between the local facility and the outside world.

[9] A star network is a network topology in which all nodes of computing devices are directly connected to a common central location. A star network is often referred to as a hub-and-spoke. https://en.wikipedia.org/wiki/Star_network#/media/File:Star_Topology.png

[10] A mesh network is a network composed of multiple nodes that work together as one large system. In WiFi networks, mesh is a feature of an automated path selection among the distributed wireless access points to their destination for the most optimal path.

[11] https://www.wi-fi.org/discover-wi-fi/wi-fi-certified-6

[12] Based on the proposed engineering designs submitted, for the wired projects using switched ethernet technology and wireless projects using 802.11ax WiFi technology, upgrading the layer 2/layer 3 switching equipment and the firewall equipment would enable speeds greater than 100 Mbps download/20 Mbps upload toward gigabit capability.

[13] All WiFi access point hardware and router hardware proposed in the projects from Eden Housing, RCD Housing, SHE and Shelter Inc. are 802.11ax (WiFi-6) based.

The RCD Housing (Coliseum Place, Maudelle Miller Shirek, Madrone Terrace, Rick Judd Commons, and Bell Gardens projects only) projects combine wired and wireless installations propose connecting wired residential buildings, that use inside copper wiring to connect each residential units in a building, using to the MDF in another building that interfaces with the ISP. In addition, 802.11ax WiFi routers[14] are deployed at each of the residential spaces to provide wireless coverage.

All proposed combined wired and wireless projects are 100 Mbps download/20 Mbps upload speed ready. In addition, projects are capable of exceeding 100 Mbps download/20 Mbps upload speed with a minor hardware upgrade.[15]

The wireless projects listed access limitations within the property as the primary reason for choosing wireless deployment. The complexity[16], labor and material cost[17] of wireless deployment has been rising thus increasing the project costs but remains a viable and less costly engineering option of system deployment as compared to direct connection, when heavy construction is required that involve structural modification, trenching, laying conduits, feedthrough and backfill. In addition, wireless bridge connections can be engineered and deployed relatively quickly, as compared to heavy construction, which often require review and approvals in addition to lengthy project planning.

In addition, the unusual market conditions of the past few years[18] [19] [20] (supply crunch, high commodity prices, shortage of labor force, high energy cost) continue to linger, and the program savings encouraged through the use of the economy of scale via the unit caps continue to fall behind, as a result of the rapid inflationary pressures in the marketplace.

Based on staff research discussed above, Staff finds the reasons for the extra cost per unit reasonable and recommends approval.

---

[14] Per RCD design documentation, each residential space will be provisioned with Netgear Rax10 WiFi6 router.

[15] Based on the proposed engineering designs submitted, for the wired projects using switched ethernet technology and wireless projects using 802.11ax WiFi technology, upgrading the layer 2 or layer 3 switching equipment and the firewall equipment would enable speeds greater than 100 Mbps download/20 Mbps upload toward gigabit capability.

[16]: https://wballiance.com/industry-report-reveals-33-plan-to-deploy-wi-fi-7-by-2024/

[17] Applicants in Table 1 have indicated that projects are experiencing high material costs and supply chain delays.

[18] https://research.stlouisfed.org/publications/review/2022/02/07/global-supply-chain-disruptions-and-inflation-during-the-covid-19-pandemic

[19] https://www.reuters.com/business/global-inflation-stay-stubbornly-high-wrecked-supply-chains-persist-2022-04-28/

[20] https://www.whitehouse.gov/cea/written-materials/2021/07/06/historical-parallels-to-todays-inflationary-episode/

V. COMPLIANCE REQUIREMENTS

CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. are required to comply with all the guidelines, requirements, and conditions associated with the grant of CASF funds as specified in D. 22-05-029. Such compliance includes, but is not limited to the following:

A. California Environmental Quality Act (CEQA)

All CASF grants are subject to CEQA requirements unless the projects are statutorily or categorically exempt pursuant to the CEQA Guidelines.

All 14 projects require limited modifications of existing structures.

The wireless projects are based on 802.11ac Wave2 and 802.11ax wireless network architectures consisting of ISP Modem(s), network switching equipment and wireless access points. This requires installation/mounting of equipment in existing structures such as ceilings or rooftops.

The hybrid projects that use both wired and wireless network architecture consists of ISP modem(s), networking switching equipment and wireless routers. This requires installation/mounting of equipment in existing structures, such as ceilings or rooftops and installation of inside copper wiring and conduits on existing structures such as walls, hallways, or in the roof.

Based on the above information, these projects meet the criteria of the CEQA categorical exemption for existing facilities (CEQA Guidelines § 15301) and CEQA Guidelines Section 15303 – New Construction or Conversion of Small Structures, involving construction, installation, and/or conversion of limited numbers of new and/or existing facilities/structures.

B. Execution and Performance

CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must start the projects within 30 days from the date this Resolution is approved and complete the project within a 12-month timeframe. Should the grantee or Contractor fail to begin work within 30 days of grant approval, the Commission or Director of Communications Division, upon 5 days written notice to the grantee, reserves the right to terminate the award. If the grantee is unable to complete the proposed project within the required 12-month timeframe, it must notify the Commission as soon as it becomes aware of this prospect.

If such notice is not provided, the Commission reserves the right to reduce or withhold payment for failure to satisfy this requirement.

Grantees must operate and maintain the network for a minimum of five years after it has been installed. The grantee must complete all the performance on the project before the termination date in accordance with the terms of approval granted by the Commission. In the event that CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. fail to complete the project or subsequently operate and maintain the network service in accordance with the terms of approval granted by the Commission and compliance with the CASF program guidelines, CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must reimburse some or all of the CASF BPHA funds that it has received.

CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must sign a consent form within 30 days from the date of the award agreeing to the terms stated in the Resolution authorizing the CASF award. Should CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. not accept the award through failure to submit the consent form within 30 calendar days from the date of the award, the Commission will deem the grant null and void.

Material changes in the entries for this application, such as discontinuing operation or bankruptcy, or change of name (DBA), change of address, telephone, fax number or e-mail address must be reported immediately by a letter to the CPUC, Director of the Communications Division, 505 Van Ness Avenue, San Francisco, CA 94102.

C. Project Audit

The Commission has the right to conduct any necessary audit, quality check, verification, and discovery during project implementation and post-project completion to ensure that CASF funds are spent in accordance with the terms of approval granted by the Commission. Invoices submitted will be subject to financial audit by the Commission at any time within 5 years of the release of the final payment. [21]

D. Reporting

CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. are required to submit a project status report within six months of the project award date if the project has not been completed, irrespective of whether the grantee requests reimbursement or payment.

[21] D. 22-05-029, Appendix 1, p. 16.

Project status reporting requirements can be found at the Commission's website.[22] CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must identify foreseeable risks that might prevent it from meeting future milestones. Before full payment of the project, CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must submit a project completion report. CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. shall also include speed test results in its completion report. CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must certify that each progress and completion report is true and correct under penalty of perjury.

CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. are required to maintain the broadband network for five years after it has been installed. After installation, for a five-year period, they must also submit quarterly reports showing the percentage of up time, the number of unique log-ons (either by individuals or by units) and the amount of data used.[23]

E. Payments

Submission of invoices from and payments to CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. shall be made at completion intervals in accordance with D.22-05-029, Section X, Appendix 1 and according to the guidelines and supporting documentation required in D.22-05-029. Project status and completion reports must be submitted with all required supporting documentation in order to receive payment. Payments are based on submitted receipts, invoices and other supporting documentation showing expenditures incurred and work done on the project in accordance with the approved CASF funding budget included in the application. CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must submit a project completion report before full payment. Final requests for payment must be submitted no later than 90 days after project completion.

Payment CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. will be made in accordance with, and within the time specified in California Government Code § 927 *et seq*.

If any portion of reimbursement is found to be out of compliance, CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. will be responsible for refunding any

[22] https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-public-housing-account
[23] D.22-05-029 Appendix 1, p. 14.

disallowed amount along with appropriate interest rates determined in accordance with applicable Commission decisions.

VI. SAFETY CONSIDERATIONS

The deployment of affordable broadband in public housing will improve access to government and e-health services, which improves safety.

VII. COMMENTS

In compliance with Public Utilities Code, § 311(g)(1), a Notice of Availability was e-mailed on May 5, 2023, informing all parties on the CASF Distribution List of the availability of the draft of this Resolution for public comments at the Commission's website at http://www.cpuc.ca.gov/. This letter also serves to inform parties that the final conformed Resolution the Commission adopts will be posted and available on this same website. The Commission received no public comments.

VIII. FINDINGS

1. On January 1, 2023, CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. submitted applications for 14 projects totaling $951,068.94 for CASF funding.

   All 14 projects exceed the cost per unit benchmark established in the ministerial review criteria and are therefore ineligible for ministerial review.

2. Based on its review, Staff determined that all 14 projects meet BPHA eligibility requirements. Staff further determined that all 14 projects qualify for funding under BPHA guidelines per D.22-05-029 and recommends approval of all 14 projects.

3. The Commission has determined that these projects are categorically exempt from CEQA review, under section 15301 regarding exemption for existing facilities and section 15303 regarding minor modifications to existing structures.

4. A notice letter was e-mailed on May 5, 2023, informing all applicants filing for CASF funding, parties on the CASF distribution list of the availability of the draft of this Resolution for public comments at the Commissions website found here http://www.cpuc.ca.gov/PUC/documents/. The Commission received no public comments.

THERFORE, IT IS ORDERED that:

1. The Commission shall award the following grant amounts for the projects listed in Table 1:

    - $134,777.76 to CHISPA for one project;
    - $108,887.94 to Eden Housing for one project;
    - $482,563 to RCD Housing for six projects;
    - $217,715 to SHE for five projects;
    - $81,903 to Shelter Inc. for one project;

    The total grant award is $951,068.94. All awards are based on the descriptions of the projects as described herein and are predicated on commitments to install and operate broadband infrastructure as expressed in its application and compliance with the requirements in as specified in D.22-05-029 and this Resolution.

2. Grant payments of up to a total of $951,068.94 for these public housing projects shall be paid out of the CASF Public Housing Account in accordance with the guidelines adopted in D.22-05-029, including compliance with CEQA.

3. CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must complete and execute the consent form agreeing to the conditions set forth in this Resolution within 30 calendar days from the date of the award. Failure to submit the consent form within 30 calendar days from the date of the adoption of this Resolution will deem the grant null and void.

4. CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must each submit quarterly progress reports on the status of the project irrespective of whether reimbursement or payment is requested.

5. CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. are required to maintain the broadband network for five years after it has been installed.

6. Payments to CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. shall each be in accordance with D.22-05-029, Section X, Appendix 1 and in accordance with the process defined in the "Payments" section of this Resolution.

7. CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must each complete all performance under the award on or before 12 months from the date this Resolution is approved.

8. By receiving a CASF grant, CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. agree to comply with the terms, conditions and requirements of the

grant and thus submits to the jurisdiction of the Commission regarding disbursement and administration of the grant.

9. CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. are each required to comply with all guidelines, requirements and conditions associated with the CASF funds award as specified in D.22-05-029, and in accordance with the terms of the Commission's approval as set forth in this Resolution.

10. If CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. fail to complete the project in accordance with the terms outlined in D.22-05-029 and this Resolution, CHISPA, Eden Housing, RCD Housing, SHE, and Shelter Inc. must reimburse some or all CASF funds it has received.

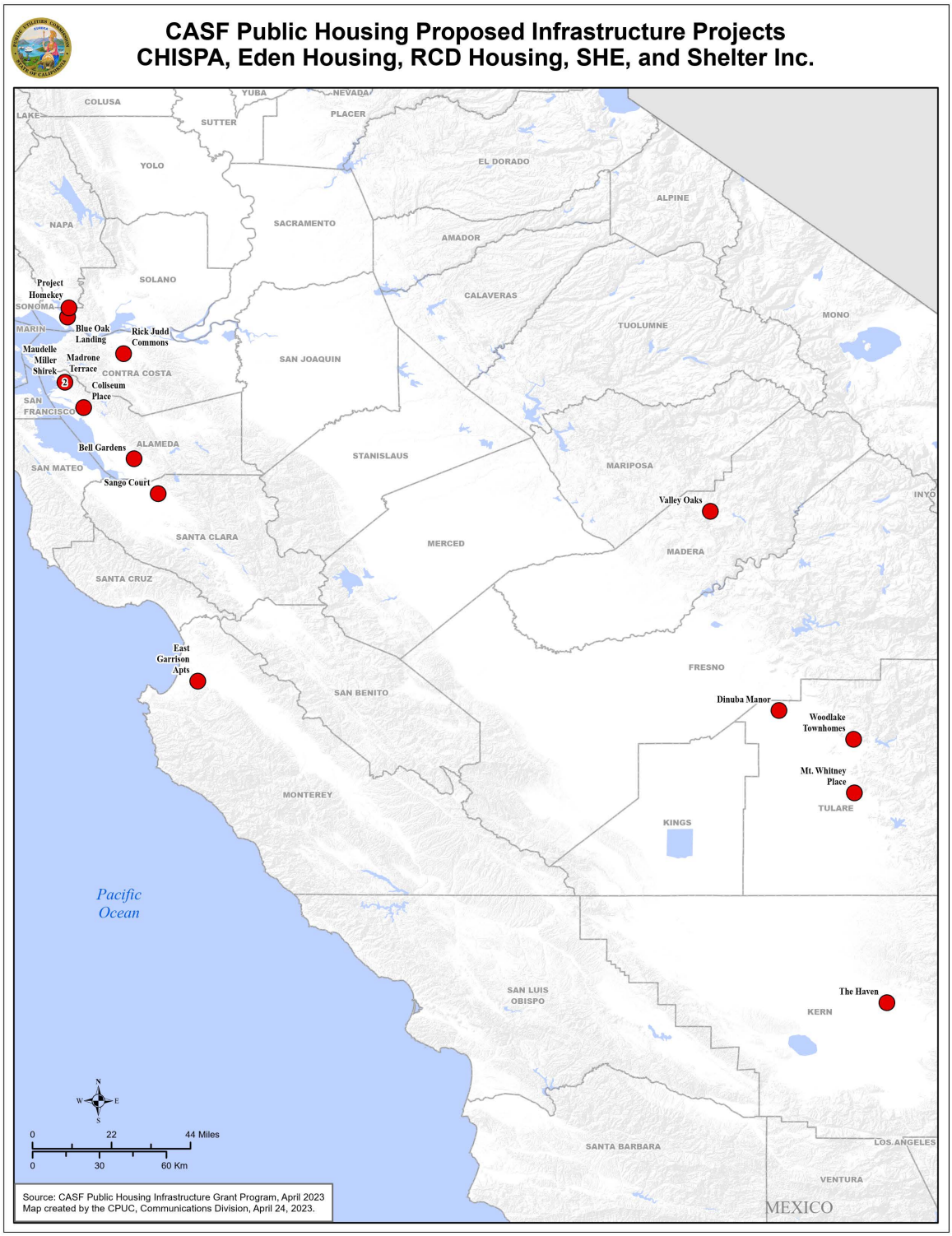
This resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed, and adopted at a meeting of the Public Utilities Commission of the State of California held on June 08, 2023, the following Commissioners voting favorable thereon:

/s/ RACHEL PETERSON
Rachel Peterson
Executive Director

ALICE REYNOLDS
President
GENEVIEVE SHIROMA
DARCIE L. HOUCK
JOHN REYNOLDS
KAREN DOUGLAS
Commissioners

APPENDIX A
Resolution T-17791
Public Housing Projects Locations



End of Appendix A