Hearn Community Hub

Phase 1 Project Criteria Documents

Contract No: C02460

File No: 2023-0032

April 24, 2024

GROUP 4 ARCHITECTURE

This document is part of the Criteria Documents. Please review this document in parallel to the other attachments: Criteria Documents for Hearn Community Hub (drawings), Preliminary Geotechnical Report, Preliminary Survey [KCEM to complete]. This attachment lists specifics, preferences, deviations, and overall design considerations of the Proposer to consider supportive of that provided in the DB Agreement.

Abbreviations

Abbreviations and Names: Abbreviations and acronyms are frequently used in the Project Manuals and other Contract Documents to represent the name of a trade association, standards-developing organization, authorities having jurisdiction, or other entity in the context of referencing a standard or publication. Where abbreviations and acronyms are used in the Project Manuals or other Contract Documents, they mean the recognized name of these entities. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

AA Aluminum Association
AABC Associated Air Balance Council
AAMA American Architectural Manufacturers Association
AAN American Association of Nurserymen (See ANLA)
AASHTO American Association of State Highway and Transportation Officials
ABMA American Boiler Manufacturers Association
ACI American Concrete Institute
ACPA American Concrete Pipe Association
ADA Americans with Disabilities Act
ADC Air Diffusion Council
AFPA American Forest and Paper Association (Formerly: National Forest Products Association)
AGA American Gas Association
AHA American Hardboard Association
AI Asphalt Institute
AIA The American Institute of Architects
AIA American Insurance Association
AISC American Institute of Steel Construction
AISI American Iron and Steel Institute
AITC American Institute of Timber Construction
ALA American Laminators Association (See LMA)
ALCA Associated Landscape Contractors of America
ALI Associated Laboratories, Inc.
ALSC American Lumber Standards Committee
AMCA Air Movement and Control Association International, Inc.
ANLA American Nursery and Landscape Association (Formerly: American Association of Nurserymen)
ANSI American National Standards Institute
APA APA-The Engineered Wood Association (Formerly: American Plywood Association)
APA Architectural Precast Association
APHA American Public Health Association

ARI Air-Conditioning and Refrigeration Institute
ARMA Asphalt Roofing Manufacturers Association
ASA Acoustical Society of America
ASC Adhesive and Sealant Council
ASCA Architectural Spray Coaters Association
ASCE American Society of Civil Engineers
ASHRAE American Society of Heating, Refrigerating and
ASLA American Society of Landscape Architects
ASME American Society of Mechanical Engineers
ASPE American Society of Plumbing Engineers
ASQ American Society for Quality
ASSE American Society of Sanitary Engineering
ASTM American Society for Testing and Materials
ATIS Alliance for Telecommunications Industry Solutions (Formerly: Exchange Carriers Standards Association)
AWCI Association of the Wall and Ceiling Industries—International
AWCMA American Window Covering Manufacturers Association (See WCMA)
AWI Architectural Woodwork Institute
AWPA American Wood-Preservers' Association
AWPB American Wood Preservers' Bureau (This organization is now defunct.)
AWS American Welding Society
AWWA American Water Works Association
BAAQMD Bay Area Air Quality Management District
BAC Brick Association of the Carolinas (Formerly: Brick Association of North Carolina)
BHMA Builders Hardware Manufacturers Association
CAGI Compressed Air and Gas Institute
CBMA Certified Ballast Manufacturers Association
CCC Carpet Cushion Council
CGA Compressed Gas Association
CISCA Ceilings and Interior Systems Construction Association
CISPI Cast Iron Soil Pipe Institute
CLFMI Chain Link Fence Manufacturers Institute
CPA Composite Panel Association (Formerly: National Particleboard Association)
CRI Carpet and Rug Institute
CRSI Concrete Reinforcing Steel Institute
CTI Ceramic Tile Institute of America
DASMA Door and Access Systems Manufacturers Association, International (Formerly: National Association of Garage Door Manufacturers)
DHI Door and Hardware Institute (Formerly: National Builders Hardware Association)
DIPRA Ductile Iron Pipe Research Association
DLPA Decorative Laminate Products Association (Dissolved in 1995 - Now part of KCMA.)
ECMS Electronic Construction Management System (See Section 01305)
ECSA Exchange Carriers Standards Association (See ATIS)
EIA Electronic Industries Association
EJMA Expansion Joint Manufacturers Association
FCI Fluid Controls Institute
FCICA Floor Covering Installation Contractors Association
FGMA Flat Glass Marketing Association (See GANA)

FHWA Federal Highway Administration
FM Factory Mutual System
GA Gypsum Association
GANA Glass Association of North America (Formerly: Flat Glass Marketing Association)
HI Hydronics Institute Division of Gas Appliance Manufacturers Association
HMA Hardwood Manufacturers Association (Formerly: Southern Hardwood Lumber Manufacturers Ass)
HPVA Hardwood Plywood and Veneer Association
ICEA Insulated Cable Engineers Association
IEC International Electrotechnical Commission (Available from ANSI)
IEEE Institute of Electrical and Electronics Engineers
IESNA Illuminating Engineering Society of North America
IGCC Insulating Glass Certification Council
INCE Institute of Noise Control Engineering
ISA ISA - International Society for Measurement and Control
ISEA Industrial Safety Equipment Association
ISS Iron and Steel Society
KCMA Kitchen Cabinet Manufacturers Association (Formerly: National Kitchen Cabinet Association)
LEED Leadership in Energy and Environmental Services
LGSI Light Gage Structural Institute
LMA Laminating Materials Association (Formerly: American Laminators Association)
LPI Lightning Protection Institute
MBMA Metal Building Manufacturers Association
MCAA Mechanical Contractors Association of America
MFMA Maple Flooring Manufacturers Association (Formerly: Wood and Synthetic Flooring Institute)
MFMA Metal Framing Manufacturers Association
MIA Marble Institute of America
MIA Masonry Institute of America
ML/SFA Metal Lath/Steel Framing Association
MSS Manufacturers Standardization Society of the Valve and Fittings Industry
NAA National Arborist Association
NAAMM National Association of Architectural Metal Manufacturers
NAAMM North American Association of Mirror Manufacturers (See GANA)
NACE NACE International (Formerly: National Association of Corrosion Engineers)
NAIMA North American Insulation Manufacturers Association (Formerly: Thermal Insulation Manufacturers Ass)
NAPA National Asphalt Pavement Association
NBHA National Builders Hardware Association (See DHI)
NCAC National Council of Acoustical Consultants
NCCA National Coil Coaters Association
NCMA National Concrete Masonry Association
NEBB Natural Environmental Balancing Bureau
NECA National Electrical Contractors Association
NEI National Elevator Industry
NEMA National Electrical Manufacturers Association
NETA InterNational Electrical Testing Association
NFPA National Fire Protection Association
NFPA National Forest Products Association (See AFPA)
NFRC National Fenestration Rating Council Incorporated
NGA National Glass Association

NHLA National Hardwood Lumber Association
NIA National Insulation Association (Formerly: National Insulation and Abatement Contractors Association)
NIAC National Insulation and Abatement Contractors Association (See NIA)
NKCA National Kitchen Cabinet Association (See KCMA)
NLGA National Lumber Grades Authority
NPCA National Paint and Coatings Association
NRCA National Roofing Contractors Association
NRMCA National Ready Mixed Concrete Association
NSF NSF International (Formerly: National Sanitation Foundation)
NSSEA National School Supply and Equipment Association
NTMA National Terrazzo and Mosaic Association
NUSIG National Uniform Seismic Installation Guidelines
NWMA National Woodwork Manufacturers Association (See NWWDA)
NWWDA National Wood Window and Door Association (Formerly: National Woodwork Manufacturers Association)
PCA Portland Cement Association
PCI Precast / Prestressed Concrete Institute
PDCA Painting and Decorating Contractors of America
PDI Plumbing and Drainage Institute
PGI PVC Geomembrane Institute/Technology Program
PPFA Plastic Pipe and Fittings Association
PPI Plastics Pipe Institute (The Society of the Plastics Industry, Inc.)
RCMA Roof Coatings Manufacturers Association
RFCI Resilient Floor Covering Institute
RMA Rubber Manufacturers Association
SAE SAE International
SDI Steel Deck Institute
SDI Steel Door Institute
SGCC Safety Glazing Certification Council
SIGMA Sealed Insulating Glass Manufacturers Association
SMA Screen Manufacturers Association
SMACNA Sheet Metal and Air Conditioning Contractors' National Association
SPI The Society of the Plastics Industry, Inc.
SPRI SPRI (Formerly: Single Ply Roofing Institute)
SSINA Specialty Steel Industry of North America
SSPC SSPC: The Society for Protective Coatings
STI Steel Tank Institute
SWRI Sealant, Waterproofing and Restoration Institute
TCA Tile Council of America
TIMA Thermal Insulation Manufacturers Association (See NAIMA)
UL Underwriters Laboratories Inc.
USGBC United States Green Building Council
WA Wallcoverings Association
WCMA Window Covering Manufacturers Association (Formerly: American Window Covering Manufacturers Ass)
WEF Water Environment Federation (Formerly: Water Pollution Control Federation)
WIC Woodwork Institute of California
WMMPA Wood Moulding & Millwork Producers Association
WPCF Water Pollution Control Federation (See WEF)

WRI Wire Reinforcement Institute
WSC Water Systems Council
WSFI Wood and Synthetic Flooring Institute (See MFMA)
WWPA Western Wood Products Association

Design and Construction Standards and Requirements

Currently Applicable Codes and Standards (through January 1, 2026)

- PART 1, 2022 CALIFORNIA ADMINISTRATIVE CODE, TITLE 24, CHAPTER 4
- PART 2, 2022 CALIFORNIA BUILDING CODE, TITLE 24 C.C.R.
- PART 3, 2022 CALIFORNIA ELECTRICAL CODE, TITLE 24 C.C.R.
- PART 4, 2022 CALIFORNIA MECHANICAL CODE, TITLE 24 C.C.R.
- PART 5, 2022 CALIFORNIA PLUMBING CODE, TITLE 24 C.C.R.
- PART 6, 2022 CALIFORNIA ENERGY CODE, TITLE 24 C.C.R.
- PART 9, 2022 CALIFORNIA FIRE CODE, TITLE 24 C.C.R.
- PART 11, 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
- CALIFORNIA GREEN BUILDING STANDARDS CODE SECTION 5.507.4 - ACOUSTICAL CONTROL
- PART 12, 2022 CALIFORNIA REFERENCE STANDARDS CODE, TITLE 24 C.C.R.
- SANTA ROSA 2023 CITY CODE
- Santa Rosa Storm Drain Standards
- CITY OF SANTA ROSA DESIGN AND CONSTRUCTION STANDARDS
- CALTRANS DESIGN MANUAL
- ANSI-ASA S12.60 - ACOUSTICAL PERFORMANCE CRITERIA, DESIGN REQUIREMENTS, AND GUIDELINES FOR SCHOOLS
- NFPA 72 NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED)
- NFPA 1500: STANDARD ON FIRE DEPARTMENT OCCUPATIONAL SAFETY AND HEALTH PROGRAM
- NFPA 1581: STANDARD ON FIRE DEPARTMENT INFECTION CONTROL PROGRAM
- NFPA 1710: STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION OPERATIONS, EMERGENCY MEDICAL OPERATIONS AND SPECIAL OPERATIONS TO THE PUBLIC BY CAREER FIRE DEPARTMENTS
- NFPA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
- ASHRAE HANDBOOK - HVAC APPLICATIONS
- ASHRAE STANDARD 49 – NOISE AND VIBRATION CONTROL
- ASHRAE STANDARD 55 – THERMAL ENVIRONMENTAL CONDITIONS FOR HUMAN OCCUPANCY
- ASHRAE Std 62.1 - VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY
- SMACNA (DCS) - HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE
- ANSI/TIA-568.1-D (2015) Commercial Building Telecommunications Infrastructure Standard.
- ANSI/TIA-569-D (2015) Telecommunications Pathways and Spaces
- ANSI/TIA-606-C Administration Standard for Telecommunications Infrastructure
- ANSI-J-STD-607-D, Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises.

- BICSI Telecommunications Distribution Methods Manual (TDMM), 14th edition
- AES2-1984 (r1997) AES Recommended Practice Specification of Loudspeaker Components Used in Professional Audio and Sound Reinforcement
- AES5-1998 (Revision of AES5-1984) AER recommended practice for professional digital audio – Preferred sampling frequencies for applications employing pulse-code modulation
- AES14-1992 (r1998) AES standard for professional audio equipment – Application of connectors, part 1, XLR-type polarity and gender
- AES20-1996 AES recommended practice for professional audio – Subjective evaluation of loudspeakers
- AES26-2001 Revision of AES26-1995 AES recommended practice for professional audio interconnections – Conservation of the polarity of audio signals
- AES-R2-1998 AES project report for articles on professional audio and for equipment specifications – Notations for expressing levels
- AVIXA A102.01:2017 Formerly ANSI/INFOCOMM A102.01:2017 Audio Coverage Uniformity in Listener Area
- AVIXA V202.01:2016 (Formerly ANSI/INFOCOMM V202.01:2016), Display Image Size for 2D Content in Audiovisual Systems
- ANSI/INFOCOMM 10:2013 Audiovisual Systems Performance Verification
- EIA-160 Sound Systems
- EIA-310-E Racks, Panels and Associated Equipment
- EIA-101-A Amplifiers for Sound Equipment
- EIA SE-103 Speakers for Sound Equipment
- EIA SE-104 Engineering Specifications for Amplifiers for Sound Equipment
- IEC 268-3 (1988) Sound system equipment – Part 3: Amplifiers
- IEC 268-5 (1989) Sound system equipment – Part 5: Loudspeakers
- IEC 268-12 (1987) Sound system equipment – Part 12: Application of Connectors for Broadcast and Similar Use.
- ONVIF Core Specification 21.06 or latest edition.
- U.S. National Archives and Records Administration (NARA) 47 CFR 15 Radio Frequency Devices
- UL 1037 (1999; Rev thru Sep 1999) Antitheft Alarms and Devices
- UL 1076 (1995; Rev thru Feb 1999) Proprietary Burglar Alarm Units and Systems
- UL 1610 (1998; Rev Aug 2001) Central-Station Burglar-Alarm Units
- UL 294 (1999; Rev thru Oct 2001) Access Control System Units
- UL 636 (1996; Rev thru Mar 2001) Holdup Alarm Units and Systems
- UL 639 (1997; Rev thru Sep 2002) Intrusion Detection Units
- UL 681 (1999; Rev thru Jan 2001) Installation and Classification of Burglar and Holdup Alarm Systems
- UL 796 (1999; Rev thru Dec 2003) Printed-Wiring Boards (1982 issue or latest revision
- City of Santa Rosa Public Storm Drain Standards
- Sonoma Water's Flood Management Design manual
- Urban Hydrology for Small Watersheds (TR-55)

Accessibility

The building and site must be in compliance with ALL accessibility standards. A California Certified Access Specialist (CASp) to be included in the design team.

Design Services Terms

- Submit electronic format and paper copies of complete plans and specifications per (typical 40, 75, 100 submittals): 8 sets of project plans on 24" x 36" white bond paper, and 3 copies of the schedule of values in Microsoft (MS) Excel spreadsheet. 3 copies of draft Technical Specifications (MS Word) as applicable.
- Prepare project plans IN THE CITY-OWNED PUBLIC STREETS RIGHT OF WAY using Autodesk AutoCAD Civil 3D 2011 to 2018. Obtain prior written approval from the City of Santa Rosa's (City) project manager to use a different product version of AutoCAD. Provide final approved electronic project plans to the City in AutoCAD (*.dwg) format and all related files on CD or DVD with instructions to the City regarding how to access and use the files and the interrelationships among them. These instructions shall include a list describing what is contained in each drawing (.dwg) file.
- Prepare most other documents using Microsoft (MS) Word and Excel 2007 or more recent versions.
- Submit project plans that conform to the City's drafting standards manual and contain the original unedited topographic and control layers along with the design layers. Coordinates shall be based on City's coordinate system. Consultant shall use the same coordinates provided in the topographic survey and shall not modify any value.
    - Each plan and/or profile sheet submitted by Consultant shall include the following:
        - Location and coordinates of control points, point number, elevation, and description.
        - Graphic scale.
        - North arrow.
        - Mapping showing streets (edge of pavement, face of curb).
        - Elevations of all existing features, structures, or utilities.
        - Match lines with appropriate sheet numbers.
- Use City established title blocks or request an alternative to be approved by the city prior to use.
- Indicate the plan completion percentage (40%/75%/100%) near the project title area of the border on sheet one of the plans.

Surveying and Construction Staking

A signed hard copy of the Topographic map prepared by the City in PDF format and an AutoCAD .dwg file is available as a reference document to the RFP. Upon selection of a Proposer this provided map shall be verified by the Design Builder prior to use in the design and construction. The Design-Builder is responsible for additional project design surveys and all project construction staking.

Survey General Notes:

1. Horizontal and vertical control points have been set in the field by the City for the boundary and topographic survey. The survey control points shall be verified by the Design Builder and that their horizontal and vertical relationships are suitable for use in construction. This work shall be confirmed the Design Builder and reported to the City prior to actual construction of the project and included in the design plans.

- The project vertical control is based on the City's Benchmark Network (NGVD 1929). Establishment of new vertical control necessary for design and/or construction shall be set to an accuracy ratio of 0.04 feet times the square root of the distance in miles. The basis for the project horizontal coordinates is the City's Horizontal Control Network (California Zone 2 NAD83, Epoch 2010.00.) Establishment of new horizontal control necessary for design and/or construction shall meet a minimum accuracy ratio of 1: 20,000.

2. The Design Builder shall provide civil drawings based on the topographic map provided and if any discrepancy is found, the Design Builder is to note it immediately. Upon receipt of the City the 40% plans, and without any comments received, we will consider this item as resolved.
3. Monuments are to be preserved. Notify City 2 weeks prior to removal if found necessary for construction activities.

Warranty

In addition to the one-year warranty as required in the Contract the Design-Builder shall provide the following manufacturer's warranties for parts and labor:

- Roof: Minimum 10-year
- HVAC units: Minimum 10-year
- Exhaust fume extraction system: Minimum 5-year
- Diesel generator: Minimum 5-year
- Kitchen and laundry/extraction appliances: Minimum 3-year
- Solar system: Minimum 15-year
- Electrical equipment extended warranties

Reference Documents

Available per the RFP

Grant award letters shall be included as part of the RFP and the requirements stated therein shall be followed by the Design Build Entity

Project Communication and Delivery Documents

Meetings and Communications

Design-Builder to attend one (1) kick-off meeting lead by the City or City Representative. Prior to meeting the Design-Builder shall:

1. Prepare a project execution plan (PEP) prior to starting work. The PEP should include at a minimum; Safety protocols, Design and Construction Quality control program and procedures, Waste management plan, Design Build team including roles and responsibilities, and sequence of construction.
2. Design-Builder to provide an emergency communication process. Prepare emergency reporting protocol card with telephone tree including project and City contacts.
3. Design-Builder shall lead an 80% Completion Meeting at the appropriate time to establish closeout procedures, final inspections, training, and handover protocols with the relevant occupying entities. Design-Builder shall prepare a Project Closeout Plan.

Thereafter, the Design-Builder shall lead weekly Design-Build team meetings inviting the City and the Design-Builder's subconsultants / subcontractors as applicable throughout the project until the Notice of Completion is filed.

- Weekly OAC meetings are expected to demonstrate progress of the Design-builder including, but not limited to:
    - Schedules-Detailed 3 to 6 week look ahead- daily activities to include subcontractors working on site, deliveries, inspections, important meetings, milestones, and impacts.
    - Design/Permitting
    - RFI log
    - Submittal log
    - Cost event log
- Submit a progress Schedule (monthly with every pay application schedule of values approved by the City)
- Design-Builder shall submit payment application schedule of values within 30 days after notice of award for approval. Funding sources will require allocation of costs for specific scopes of work.
- Provide agendas and minutes for these meetings within 48 hours prior and after the scheduled meeting.
- Design-Builder should have a designated stakeholder engagement manager responsible for coordinating and sharing input
- Presubmittal meeting for the Building Department. Outline of proposed permitting package(s) to be provided prior to meeting for the Building Department's review.

Design-Builder to notify neighbors within 400 feet of construction as requested by the City.

Design-Builder shall lead design review board meeting. Design-Builder shall also provide public outreach information for the project starting a month after notice to proceed is issued for the project; including but not limited to; monthly newsletter(to be approved by the city), monthly pictures and narratives for city website, and support for community outreach events related to the project.
Community Poster Board Deliverable- PLACEHOLDER- G4 to provide suggestions
Design-Builder to provide a digital Public Outreach presentation board with the following requirements:
1. Digital - 36 x 48 PDF at minimum 96 DPI for digital and 300 DPI for physical printing.

2. Site Plan with building total square footages and footprints of Phase 1 build out with future elements identified per the preliminary drawings provided. Site plans should show the full City owned parcel limits.
3. Elevation from Hearn
4. Elevation from Dutton Ave extension
5. Public space rendering of their choice
6. Project Name
7. Design Builders Name
8. Key elements / themes / color schemes
9. I want to also give individual? QR codes and a link to the survey as standard in the submission.

Design-Builder to provide notice to City before starting any on site activity – Two (2) weeks minimum for mobilization and minor work One (1) month for most construction activities.

Submittals – Design Phase

During the project design, the Design-Builder must submit to the City's Representative the following progress sets and allow sufficient time to review, discuss and comment, as outlined in the General Conditions. Design-Builder shall include the City's Surveying Team in plan checks at 40%, 75%,and 100% completion milestones.

40% Design

- Perform and submit site investigations required for the design, including any geotechnical investigations, utility location and soil testing required after the geotechnical study provided during the RFP.
- DBE shall get approval from city representative to confirm geotechnical investigative soil boring layout prior to start of boring activity. City representative to add up to 6 additional borings at no additional cost to the Owner.
- DBE shall include the original Survey Control supplied by the City and any additional Survey Control established by the Design Builder on the 40% Design drawings
- The Design Builder shall show the centerline of Dutton Ave Extension with all curve and tangent data including coordinates for begin and end of Extension centerline on the 40% plans. Show curve and tangent data in a Table and in Plan View. The Design Builder will also note to monument all BC's, EC's, ANG.PTS, and CL-intersections per City Std. No. 280 on the 40% plans.
- The Design Builder shall show coordinates and design elevations for all improvements (including finish grade at centerline on Dutton Extension) on 40% plans so any discrepancies between civil drawings and original topographic map can be discovered and addressed at an early stage of design.
- Provide sketches that describe or depict alternative design approaches for review by City staff. Provide cost implications in these alternatives (i.e., high cost, medium cost, low cost) to assist in City selecting the preferred alternative.
- Design Build entity shall provide a full cost estimate for review at each design phase submittal.
- Provide value engineering considerations.
- Submit electronic format and paper copies of 40% complete plans and specifications per the attached Design Services Terms.
- Submit Preliminary stormwater LID report

City Planning Committee Presentation Set

- Bring updated 40% Design to City Planning Committee for recommendations to be considered prior to 75% review.
- Public Meeting led by the Design Builder and coordinated with City staff.

75% Design

- Prepare design for the finalized scope of work.
- Respond to the City's Representative in writing if any of the City's 40% review comments cannot be incorporated into the plans and provide an explanation. (These responses must be delivered prior to submitting the 75% plan set.)
- Submit electronic format and paper copies of 75% complete plans and specifications per the attached Design Services Terms.
- DBE shall include the original Survey Control supplied by the City and any additional Survey Control established by the Design Builder on the 75% Design drawings
- The Design Builder shall show the centerline of Dutton Ave Extension with all curve and tangent data including coordinates for begin and end of Extension centerline on the 75% plans. Show curve and tangent data in a Table and in Plan View. The Design Builder will also note to monument all BC's, EC's, ANG.PTS, and CL-intersections per City Std. No. 280 on the 75% plans.
- The Design Builder shall show coordinates and design elevations for all improvements (including finish grade at centerline on Dutton Extension) on 75% plans
- Civil plans shall provide an appropriate amount of information to perform construction staking without supplemental files.
- If applicable, provide a draft design exception memo for any curb ramp that could not be designed as directional.
- Provide value engineering options for City's consideration.
    - City will make final value engineering option selection at the 75% review
- Submit draft of Hydrologic and Hydraulics report. Include information on any pump stations.
- A planting and irrigation plan for the LID BMPs shall be submitted and shall include selected plants listed by plant genus species and common mane, maximum spacing, total number of plants to be installed, and a table with mature plant size(canopy).
- A erosion control plan shall be submitted for the LID BMPs with sufficient measures to provide soil stabilization and treatment until plant maturity (e.g. ground-up, arbor mulch on all bare soils with rock inlet protection).
- Plant selection must conform with the LID Manual Approved Plant List, Appendix F, and is required to have at least 50% vegetative cover (excluding trees) within three years or at completet plant maturity, whichever is sooner.
- Improvement plans shall have separate sheets highlighting LID features(s) project placement and design(s). On LID details, for any planted feature, note requirement that "minimum 50% vegetative cover (excluding trees) is rquired within three years or plant maturity whichever is sooner" for all plant-based features.

On plan set details for LID, note that if used, "non-floatable surface mulching material is required to prevent clogging of downstream inlets."

100% Construction Documents

- Respond to the City's Representative in writing if any of the City's 75% review comments cannot be incorporated into the plans and provide an explanation. (These responses must be delivered prior to submitting the 100% plan set.)
- Provide the results of Certified Access Specialist (CASp) peer review with 100% plan set that incorporate the required changes.

- Document Quality Control process review and provide to City for its records.
- DBE shall include the original Survey Control supplied by the City and any additional Survey Control established by the Design Builder on the 100% Design drawings
- The Design Builder shall show the centerline of Dutton Ave Extension with all curve and tangent data including coordinates for begin and end of Extension centerline on the 100% plans. Show curve and tangent data in a Table and in Plan View. The Design Builder will also note to monument all BC's, EC's, ANG.PTS, and CL-intersections per City Std. No. 280 on the 100% plans.
- The Design Builder shall show coordinates and design elevations for all improvements (including finish grade at centerline on Dutton Extension) on 100% plans
- Submit electronic format and paper copies of 100% complete plans and specifications per the attached Design Services Terms. The 100% submittal must be complete from the design team's perspective, including all details, and is the last review that the City project management team will perform on the project.
- Submit draft Final SWLID and draft Final Hydrologic and Hydraulics report

Permit Submission Set

- Prior to submitting final plans, respond to the City's Representative in writing if any of the City's 100% review comments cannot be incorporated into the plans and provide an explanation.
- Design-Builder shall provide the Survey Team stakeholder a CAD file of any storm drain alignment between the south parcel line and the northerly toe/bank of Lower Colgan Creek in AutoCAD Civil 3D 2018 or 2022 (so a storm drain easement document may potentially be prepared by the Survey Team stakeholder).
- Prior to submitting final plans, provide to the City Project Manager design exception memo(s), signed by the engineer of record. Curb Ramp design exception memos are intended to be kept on file to document non-standard conditions or designs, and the reasoning behind the decisions made during design. Provide a memo documenting each issue during design.
- Submit electronic format and hardcopy complete stamped and signed plans, and specifications for Permit as required.
- Design-Builder shall prepare and submit all documents required for necessary permits and approvals, and shall request documents and assistance from appropriate City representatives and agencies in a timely manner.
- DESIGN-BUILDER after permitting to provide finalize mylars to City Representative for City Signatures.
    - Final project plans shall be on archival quality white mylars (durable, dimensionally stable polyester) that are 24" x 36" and made with archival quality permanent ink that does not smear even if wet. Pencil originals and sticky backs are not acceptable.
    - Submit Final SWLID and H&H reports

For Design-Build, the project management team will make all attempts to pursue partial permits with the Design-Builder. Approvals for partial permitting are at the discretion of the Building Department and not under the control of the Project Management Team, Design Builder and City to work closely in the DB process to achieve an optimized delivery. At this time, Building permits are expected to take 8 to 12 weeks for the first review and ½ the time for subsequent review at this time. The Building Department is flexible with partial permitting considerations for the project citing a grubbing and clearing permit, rough grading permit, site infrastructure and final grading, and building permit as options to consider.

Submittals – Construction Phase

Design-Builder shall submit to the City's Representative a list of all materials proposed to be used on this project and any supporting documentation and/or samples required and source of supply.

Mock-up of materials and rooms expected during the submittal approval process.

The City's Representative shall be given the opportunity to review all submittals and if comments are given, the submittal shall be rerouted as appropriately to the Designer, and the final accepted copy submitted to the City's Representative for our records. Allow for two (2) week reviews for the City's Representative in the schedule.

For material listed on the "Engineer's List of Approved Items" which is located in the Sewer and Water sections only of the City Standards, the City's Representative shall be provided with the name of the manufacturer and model/part number for all material proposed for this project, unless that item has been replaced per the project plans.

For all other materials used on this project, regardless of the type of work, DESIGN-BUILDER shall provide to the City's Representative the name of the manufacturer and model/part number along with supporting documentation and/or samples that will allow the City's Representative to determine the material's acceptability.

The City's Representative reserves the right to reject any proposed material, whether on the City's "Engineer's List of Approved Items" or not. If the City obtains information indicating that a listed item is not performing satisfactorily or is found to be defective, that item will be rejected, and DESIGN-BUILDER shall submit a replacement for review at no additional cost to the City.

Daily Reports

Design-Builder shall be responsible for providing the City with daily reports containing the following:

- Weather Conditions
- Work performed, Including labor hours.
- Minimum of six(6) site/building photos
- Subcontractors on site
- Any deliveries, if applicable
- Inspections that took place, if applicable
- Reportable incidents, if applicable
- Name and Signature of Design-Builder representative

Daily Reports must be submitted by 10:00AM of the following working day

The Design-Builder may not start construction on the project until authorized by City's Representative. See required
submittals within this scope of work and for ALL materials provided for the project for review and approval. The following construction phase submittals are the typical required documents to have been reviewed and accepted prior to ground disturbing activities (assume up to a month of City Representative reviews and
revisions of these documents):

- Detailed construction schedule
    - Critical Path Method Schedule required for this project per the General Conditions

    - Schedules shall not contain activities more than 10 work days in duration
- Evacuation Route Plan
- Excavation Plan:
    - Clarifying solutions if boulders are found in the excavated area.
- Soil Disposal Plan
- Injury Illness and Prevention Plan (IIPP)
- LID soil mix shall have batch plant certification or Geotech report from a registered Engineer/Geologist for approval from City of Santa Rosa materials lab prior to placement of soil mix. Certification shall provide information describing soil mix and conformance with design standards.
- Storm Water Pollution Prevention Plan (SWPPP)
    - Include maintenance and oversight roles of the Design-Build team
        - Identify the Design-Builders QSP/QSD oversighting with contact information
    - Design-Builder responsible for SWPPP to align with the SMARTS system and will be responsible for input, maintenance, and coordination for City approval in the SMARTS system (https://smarts.waterboards.ca.gov/smarts/)
- Staging Plan
- Traffic Control Plan
- Permits obtained
- Special Inspection List
- CEQA MMRP preconstruction items completed
- Native American observation requirements
- Compliance with environmental concerns, including but not limited to bird nesting season, any local endangered species. DBE to manage start of construction to avoid environmental issues at no cost to Owner, including schedule impacts.
- All submittals required under the Project Labor Agreement and Community Workforced Agreement.

Project Closeout

Prior to the filing of the Notice of Completion, the DESIGN-BUILDER must submit to the City (hard copies unless otherwise noted):

- Any Final documents
- Record Plans (digital acceptable)
- All requested construction correspondence
- All invoicing and auditing documentation required by the grant funding agency
- Copies of the permits and inspection card signed off by the permitting agency
- All warranty documents
- Operation and Maintenance manuals
- Weekly Construction Photos (Flash Drive and 6 per printed sheet)
- Inspection Reports
- Electronic copies of updated final reports including, but not limited to, the Final SWLID and H&H reports, if revisions were made after the approved “Permit Submission Set”
- Final inspection and approval of LID features is required by the Storm Water division. Prior to final inspection the following documents shall be provided: Final Improvement plan, Final LID submittal, and Engineer of Record (EOR) shall provide certification, and supporting documentation, that the LID features have been designed in accordance to and are constructed/functioning per the current LID Manual and approved Final LID specifications.

Performance Criteria

Design and Construction Scope of Work

The following Performance Criteria are the result of months of collaboration and coordination between the design team, the City of Santa Rosa, the Santa Rosa Fire Department, the Sonoma County Library, and the citizens of Santa Rosa. The criteria describe operational and design intent to inform a DBE procurement that delivers buildings and landscapes that reflect stated values and baseline functional needs.

Prescriptive items in the following sections shall be considered required unless marked with a "**" to delineate a preference in lieu of a requirement.

Design Values

The design team engaged in outreach around "design values" as a way of ensuring that the architectural expression of the buildings at Hearn Community Hub align to community values. More than simple aesthetic preferences, we asked questions to get to the heart of what the community values and how that might be reflected in architecture and landscape.

The highlights of the Design Values engagement process include:

- The buildings should be warm and inviting, with lots of natural light and opportunities for indoor-outdoor activities. Its architecture should be inspired by nature.
- The buildings' exterior should be reflective of Roseland and Santa Rosa's agricultural identity and history, with modest but robust materials, simple forms, and clean details.
- The buildings' interiors should be inspired by nature. The images presented to the community during design values activities are enclosed with these criteria documents for reference.

Earthwork and Demolition

Design-Builder to arrange for a subsurface exploration and evaluation and analyze the information relative to the site and subsurface conditions. The subsurface data provided by the City to support the RFP is general in nature and is not intended to be an adequate representation of the entire site. The Design-Builder must insure adequate subsurface information to determine the construction feasibility of the project.

- Demolition of above-ground structures shall be completed by others
- Hazardous materials abatement of existing structures shall be completed by others
- See Reference Documents – Geotechnical Report for expected soil and excavation considerations.
- Demolish all existing slabs-on-grade, concrete and asphalt paving, landscape elements and structures in their entirety within the project boundary line unless noted otherwise.
- Demolish all existing fencing within the boundaries of the site in their entirety. Retain and protect all existing site boundary fencing except as required for site access from Hearn Ave.
- Clear and grub existing vegetation in entirety, except existing trees noted to remain

- Demolish all existing underground utilities in their entirety within the property line, replace with imported fill as coordinated with the City. Cap existing utilities at the property line.
- Grade Site to achieve balanced earthwork quantities as best as possible.
- Grade site to achieve slopes for proper drainage and ADA compliance.
- City Representatives state that an existing well is present onsite. The well does not appear in public records and is assumed to be private and undocumented. Design-Builder to confirm the presence and location of any wells or septic leach fields and to remove or cap associated elements as required to construct the proposed buildings and site features.
- Provide compliant erosion control per City standards

Utilities and Infrastructure

- Initial geotechnical explorations indicate that in situ soils are not suitable for passive percolation of stormwater. Stormwater must be treated and conveyed to piped storm sewers. Surrounding areas drain to Colgan Creek, which has been partially improved to increase capacity and flow. The site's natural grade slopes down to the southwest. Existing storm sewers at Hearn Avenue do not have adequate capacity to accept stormwater from the HCH site. These factors combine to inform the stormwater management strategy exhibited in the criteria drawings. The strategy includes a pump station to convey stormwater from the site to new storm sewers to the north of the project site. New storm sewers continue onto Victoria Dr and David Lee Ct before entering existing storm sewers and conveying stormwater to Colgan Creek. Final design shall be coordinated with the City of Santa Rosa. Public and private storm drain infrastructure shall be clearly labeled on the improvement plans.
- Draft and Final SWLID and H&H reports are required deliverables for the storm drain infrastructure as outlined in the Project Delivery documents section of this criteria.
- Offsite LID features are not provided on the criteria drawings. The Design-Build contract shall provide an off-site offest LID features to mitigate the off-site frontage and storm drain infrastructure.
- Connect to City sanitary sewer, domestic water, fire water, and storm sewer systems. Refer to Civil drawings for points of connection. Minimum cover and pipe materials to adhere to the city and utility agency requirements. Connections occurring offsite, including Hearn Avenue, Victoria Drive, and David Lee Court, shall require replacement and restoration of city street, curb, gutter and related elements in accordance with City of Santa Rosa standards. Pavement shall adhere to standard #215.
- ** The Criteria Civil Engineer studied, at the request of the City of Santa Rosa, an approach to stormwater drainage that pipes storm drainage by gravity to the south of the HCH site, terminating in a new outflow into Colgan Creek. This option is only feasible if an access and utility easement is established between the City of Santa Rosa and the current landowners in control of the parcel(s) abutting the HCH site to the south. If such an easement is established, Design-Builder shall prepare storm drainage and grading drawings, specifications, and calculations to support the alternative drainage approach.
- Connect to PG&E natural gas and electricity systems.
- Provide two new PG&E electrical services, one for the new Fire Station and a second service for the Library.
- Provide Storm water management facilities per City of Santa Rosa LID Manual.

- Provide storm water positive relief away from buildings during a 100-yr storm event. Include in drainage report as well.
- Locate fire hydrants, along Dutton Avenue extension per Santa Rosa Fire Department requirements.
- Provide water connections from the main at Hearn Avenue in accordance with the Criteria Documents. Water line design to meet City standards considering both the current planned and future planned use. Coordinate with the City's master plan for the area.
- Provide underground communications utility connections from the MDF to the Public Right of Way in accordance with the engineering standards of the serving communications utilities, the utility standards of the City of Santa Rosa and CPUC General Order 128.
    - For Fire Station 8 Replacement
        - Provide 2-4" ducts for AT&T terminated in an underground vault at the point of connection designated by the AT&T BIC.
        - Provide 2-2" ducts minimum for Comcast terminated in an underground vault at the point of connection designated by Comcast. Comcast Ethernet fiber service will be the primary WAN service for the Fire Station.
        - Provide 1-2" duct for future City of Santa Rosa Fiber MAN, stubbed out to the public right of way and terminated in an underground vault in the vicinity of the vaults provided for AT&T and Comcast.
    - For the Roseland Branch Library
        - Provide 2-4" ducts for AT&T terminated in an underground vault at the point of connection designated by the AT&T BIC. CENIC fiber service provided over AT&T fiber will be the primary WAN service for the Library.
        - Provide 1-2" duct minimum for Comcast terminated in an underground vault at the point of connection designated by Comcast.
        - Provide 1-2" duct minimum for Sonic terminated in an underground vault at the point of connection designated by Sonic.
- Provide 2-2" ducts between the Fire Station and Library BDF locations with pull tape for future expansions or resource sharing
- Provide 1-2" duct for future City of Santa Rosa Fiber MAN, stubbed out to the public right of way and terminated in an underground vault in the vicinity of the vaults provided for AT&T and Comcast.
- Place all electrical and telecom infrastructure pathways under proposed roadways or sidewalks (Phase 1 and Phase 2), providing efficient paths connecting trunk lines to Phase 1 buildings.
- All utility trenching and separation requirements shall adhere to City of Santa Rosa and Utility Agency requirements.
- Provide PG&E electrical transformers adjacent to buildings in visually unobtrusive ground-level locations. Provide all housekeeping pads, protective bollards, vaults, sumps, grounding, primary and secondary conduits.
- Coordinate all efforts with the appropriate utility providers, permitting agencies, and provide required notices and inspections prior to covering or encapsulating infrastructure or equipment.
- Backfill all trenches with approved fill per Geotechnical Report and comply with all utility company requirements.
- Provide power to stormwater and sanitary sewer pumping stations from Library. Pump stations to be provided with portable generator hook up.

Circulation and Library Parking

- Provide parking spaces in parking area(s), in accordance with City of Santa Rosa parking regulations and applicable codes and standards to include accessible spaces and EV spaces. The parking space count will account for the proposed Library and future expansion of a 20,000 SF Multi-Cultural Center. The future Multi-Cultural Center parking does not have to be developed however space needs to be be clearly accounted for in the design.
- Provide concrete curb and gutter per City of Santa Rosa standards
- Emergency Vehicle pathways, including all apparatus bays, driveways, aprons, and sidewalks that comprise the fire apparatus/emergency vehicle circulation shall be designed appropriately based on input from stakeholders meetings, final geotechnical report and City standards.
- Asphalt Paving
    - Design-Builder to coordinate final pavement profiles with City Materials Lab for projected traffic index.
    - Truck rated AC pavement to be provided at the public parking area at the fire station. Recommended that "H-20" Load rated concrete be used for these locations.

Right-of-Way and Intersection Improvements

- Dutton Ave must eventually extend to the southernmost part of the property. It is not required to construct the road to the south property line however design shall account for this future work. (Access to FH verbiage)
- Dutton Avenue extension shall include the following:
    - 11' travel lane (1 in each direction)
    - 12' median/turn lane
    - 6' class 2 bike lanes
    - 6' minimum sidewalk
    - 8' planter strip
    - 300' minimum radius
- Design construction for emergency vehicle access shall be considered to the library.
- Refer to C3.0 drawing sheet for striping and signal improvements for reference. Provide all required striping and signal modifications for the new 4-way intersections configuration as required for the project and City of Santa Rosa
- Signal modification design to be performed by a licensed Traffic Engineer.
- Cut existing curbs on Hearn Ave to extend Dutton Avenue to the south and create a 4-way intersection.
- Construct Dutton Ave extension per City of Santa Rosa requirements for collector roadways; include curb cuts and inlets for storm water management
- DBE to establish easements in coordination with City of Santa Rosa and relevant utilities to provide access for maintenance.
- Replace existing curbs along Hearn Ave frontage in their entirety to current City Standards.
- Provide accessible directional curb ramps at all roadway crossings, as required by the City of Santa Rosa. However, there is not enough room for two ramps on each corner at the Dutton & Hearn intersection.
- Modify and/or replace traffic signal devices and supporting structures for modified intersection flow

- New warning lights to alert traffic to emergency vehicle ingress/egress at Fire Station apron to Hearn Ave.
- Coordinate traffic signal programming changes with City Traffic Engineering department.
- Provide inground loop detection on the south leg of Dutton Avenue
- Provide Hearn Ave and Dutton Ave sidewalks and planting strips
- Provide street lighting required per City zoning ordinance and standards.
- Provide pedestrian push buttons and pedestrian crossing devices at all (4) crossing of Hearn Ave and Dutton Ave.
- Replace, relocate, and provide new street signage as required for the improvement of the intersection.
- All improvements shall adhere to California Manual on Uniform Traffic Control Devices and City of Santa Rosa Standards.
- Coordinate the new Opticom system with the existing traffic signals at the corner of Hearn and Dutton. Opticom reader to be directly across Hearn Avenue from the apparatus bays.
- Coordinate with City traffic engineering to stop Dutton north and south bound traffic and to clear the west and east bound traffic along Hearn when there is an emergency response.

Landscape and Open Space

- Protect existing trees to remain with temporary fencing at the drip line. Water existing trees during construction to ensure continued viability.
- Planting and irrigation design shall meet City of Santa Rosa's Water Efficient Landscape Ordinance (WELO).
- See drawings for plant spacing.
- The shown useable lawn areas shall be 90% Dwarf Fescue/10% Bluegrass sod SWA:
- Stormwater Treatment Basins shall be planted with:
    - 70% Juncus Patens (CA Gray Rush)
    - 20% Carex Tumulicola (Berkeley Sedge)
    - 10% Iris Douglasiana (Douglas Iris)
- To meet the City of Santa Rosa's WELO, generally use drip irrigation to support the establishment and maintenance of the planting. Provide a smart controller to adapt watering cycles to weather and climate conditions. Spray irrigation shall be limited to useable lawn areas and stormwater basins.
- Low Impact Development features as required by the city of Santa Rosa LID Manual.
- Drainage and stormwater management systems to be coordinated with the city of Santa Rosa.
- All disturbed areas shall receive appropriate erosion control measures during construction. Final storm water management systems shall be in place before removal of Erosion Control BMPs.
- All unused native soils shall be removed from the site. Consult the City prior to removal for possible distribution to other City projects and sites.
- Provide manufactured site furnishings in a material palette of powder coated metal and non-tropical wood.
- Site plan shall account for an approximate 20,000 SF footprint for a future Multicultural center and parking.

- Provide multi-use path 12’ wide (16 feet total clear width with shoulders) on the east side of property from Hearn Ave to the southern most part of the property. Final location shall be coordinated with the City.
  Temporary Facilities
- The Design-Builder shall provide the City Representatives with an on-site office of sufficient size to accommodate needs of City personnel. Office space can be shared within Design-Builder temporary facility. The office shall be in place by the time the Design-Builder occupies the site. Furnish and equip offices as follows:

    - Location as directed by the City of Santa Rosa representative.
    - Furniture required for project-site documents includes plan tables, plan racks, and bookcases. Provide minimum of (2) two complete vertical walled enclosed offices Each office to have:
    - A workstation of working surface no less than 36 by 60 inch with two utility drawers and one file drawer.
    - Network connection, minimum 2 data.
    - Power service and minimum one 120Vac duplex receptacle on each individual office wall.
    - Task and individual lighting and lighting controls.
    - Drinking water: Minimum three 5 gallon per month with dispenser.
    - Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 degrees Fahrenheit.
    - Lighting fixtures capable of maintaining average illumination of 20fc at desk level.
    - Wireless Internet connectivity: Provide independent wireless internet connectivity; connectivity should be DSL or better, with capacity for all City personnel in the office.
    - Toilet facilities consisting of one lavatory and one water closet complete with connections to water and sewer mains or holding tank (with service).
    - Trailer-Type Mobile Office: The Contractor shall furnish and maintain a trailer- type mobile office acceptable to the Contracting Officer and providing as a minimum the facilities specified above. The trailer shall be securely anchored to the ground at all four corners to guard against movement during high winds. Access to the trailer, i.e., ramps, shall be securely anchored with hand and guardrails and shall have adequate landing space, as required. Trailer access, e.g., stairs, shall be properly secured and provide OSHA complaint components such as railings and proper space for landing.
    - The City Field Office (either a prefabricated facility built on-site or mobile office trailers) shall be engineered, designed, and constructed off site in a controlled environment, with quality inspections by an independent third party. The temporary facility shall meet all applicable Federal, State, and Local codes.
    - Exterior and Interior Doors and Frames: Exterior doors shall be insulated steel, in steel frames.
    - Windows: Windows shall be double insulated, with mini-blinds.
    - HVAC System: The HVAC system shall be a central heating and cooling system.
    - Temporary Wiring: Provide temporary wiring in accordance with NFPA 241, and NFPA 70 Article 305-6(b) Assured Equipment Grounding Conductor Program. Include frequent inspection of all equipment and apparatus.

- Trailer-type mobile office(s) and its equipment shall not be removed until coordinated with the City representative.

Fire Station #8 Replacement

Summary

The northern portion of the Hearn Community Hub site shall be allocated to the Fire Station component. Ingress and egress locations and key dimensions shall be as shown on project site plans. The Fire Station building shall be a minimum of 10,000 assignable square feet and one story above grade. Maximum building height is limited to 35 feet above grade. Fire Station building shall adhere to all requirements for Essential Services Buildings included in applicable codes and regulations. The preferred operational space adjacencies are indicated on provided drawings.

Design-Builder Requirements

- Host a minimum of three (3) two-hour workshops to include City and Fire Department representatives to confirm final floor plan layout, exterior and interior architectural expression and materials, and building HVAC, plumbing, electrical, and low-voltage systems.
- Fire Station design shall comply with accessibility regulations throughout.

Design Components

- **General Requirements**
  - All systems shall be compliant with applicable codes and regulations
  - Fire protection system, including alarms
  - The entire building shall be fully sprinklered. The Design-Builder shall provide a new complete water-based fire protection system designed by the Design-Builder following NFPA 13 Standard for the Installation of Sprinkler Systems.
  - Fire alerting and radio system that connects to and works with the City's existing emergency radio alerting system is required to include infrastructure, speakers, base radio, radio equipment and devices for a complete system

- **Superstructure**
  - The structural steel design has advantages that complement the architecture. Structural steel allows for the building to efficiently incorporate large open fire apparatus bays, multiple roof slopes and the use exterior glazing around the building. To accommodate the various roof heights, each roof volume is designed with its own lateral system assuming flexible diaphragms.

    The Fire Station is classified as an "essential facility" and assigned Risk Category IV per California Building Code Table 1604.5. The lateral system is designed for 50% higher seismic loads (Ie=1.5) than non-essential facilities (Ie=1.0) including additional testing and inspections during construction. The lateral force resisting system uses a combination of Special Moment Resisting Frames (SMRF) that utilize steel wide flange beams and columns and Braced Frames that utilize steel columns and tube steel braces. The moment frames are provided in the apparatus bays to accommodate the large garage doors at the north and south sides. The tube steel braces have two potential options, the special concentric braced frame system (SCBF) or the Buckling Resistant Braced Frame (BRBF) system. The BRBF system provides higher seismic performance than the SCBF but the BRB braces include a cost premium. The bare metal deck roof diaphragms are designed as flexible diaphragms.

AESS finish (Architectural Exposed Structural Steel) can be provided on exposed structural steel elements where required for design.

- **Foundations**
  - The preliminary geotechnical report by A3Geo Engineers, dated June 13, 2023, is provided for reference only. Design-Builder shall commission a final geotechnical report based on final design for project-specific recommendations. The slab at the apparatus bays should be minimum 8"-10" thick due to heavier loading and wear and tear due to the fire apparatus. Depending on the soil bearing capacity, that is not currently provided in the geotechnical report, the foundations can be spread footings with interconnecting grade beams connected by a concrete slab-on-grade or a ~24" thick mat foundation, locally thickened under columns as required. .
- **Plumbing Systems**
  - All-electric domestic hot water heaters. Provide heat pump water heaters for areas with larger loads; instantaneous electric is acceptable for small loads (ex. an isolated lavatory sink).
  - Domestic and fire water systems include backflow prevention and pressure regulation assemblies
  - Domestic water plumbing systems include building isolation valves in a valve box at the exterior of each building and isolation valves for every fixture. Also include interior zone isolation valves for the following zones or fixture clusters, piped in parallel allowing any one zone to be isolated while others remain active; locations shall be concealed and easily accessible locations such as above removable tile ceilings of behind access doors.
    - Decon & Turnout wing
    - NW Kitchen & offices areas
    - Split restrooms with showers and adjacent janitor into two zones
  - Air source heat pump storage water heater(s) located in the janitor room(s), routed to dorm showers and kitchen with timer and aquastat controlled recirculation pumps.
- **Interior Architecture**
  - Interior Finishes shall be resilient and low-maintenance and consist of no less than:
    - Walls: gypsum wall board; level 4 finish, impact-resistant GWB to 48" AFF, typical unless noted otherwise
    - Ceilings: acoustic ceiling panel, 24"x48", high CAC (>35), white
    - Base: rubber 6" high, typical. 4" high at casework.
    - Provide corner guards at all outside corners. Guards shall be full-height, 16 gauge, type 304 stainless steel.
    - Provide 2" crash rails at corridor walls. Rails shall be type 304 stainless steel.
  - Interior Partitions shall be STC-rated according to room adjacencies:
    - Classrooms, adjacent to:
      - Hallways, open offices, and common areas: STC-45
      - Private offices or conference rooms: STC-50
      - Restrooms: STC-53
      - Mechanical equipment or exercise rooms: STC-60*
    - Private Offices, adjacent to:
      - Hallways, open offices, and common areas: STC-45

        - Private offices or conference rooms: STC-50
        - Restrooms: STC-45
        - Mechanical equipment or exercise rooms: STC-55*
    - Dorm Rooms, adjacent to:
        - Hallways, open offices, and common areas: STC-45
        - Private offices or conference rooms: STC-50
        - Restrooms: STC-45
        - Mechanical equipment or exercise rooms: STC-55*

  *STC ratings for walls around mechanical rooms should be adjusted based off mechanical equipment data to ensure noise criteria of adjacent rooms is not exceeded

  - All casework to be Architectural Woodwork Standards premium grade
- **Electrical Systems**
    - Occupancy sensors, Daylighting controls and all required Title 24 controls.
    - All LED lighting
    - Indirect lighting fixtures preferred
    - Exterior lighting on timers and/or daylighting sensors per code
    - Emergency lighting
    - New electrical service
    - Main Switchboard and all required equipment and feeders
    - Power metering system
    - Transient voltage surge suppression system
    - EV Chargers
    - Branch circuiting
    - Fire Alarm System.
    - Distributed Antenna System for emergency responders
    - Emergency generator and Automatic Transfer Switches
    - All required electrical work for the project.
    - Additional electrical and lighting scope as outlined in this document.
    - Electric Shade system
- **HVAC Systems**
  - Energy compliance and efficiency – The Design-Builder team may provide a prescriptively compliant building and MEP designs, BUT we encourage the team to explore and implement architectural-MEP cost transfers to achieve superior building value for the owner. Using the performance approach to energy code compliance and creative transfers, the Design-Builder team may deliver a final product that provides an envelope that is much better than code which results in smaller MEP systems, which saves project costs that can pay for the architectural upgrades. The result is a project with more investments in low/zero maintenance features like insulation, overhangs, etc. And smaller, simpler MEP systems to maintain over the life of the building. See below for a graphical representation of the cost-transfer integrated-design approach.

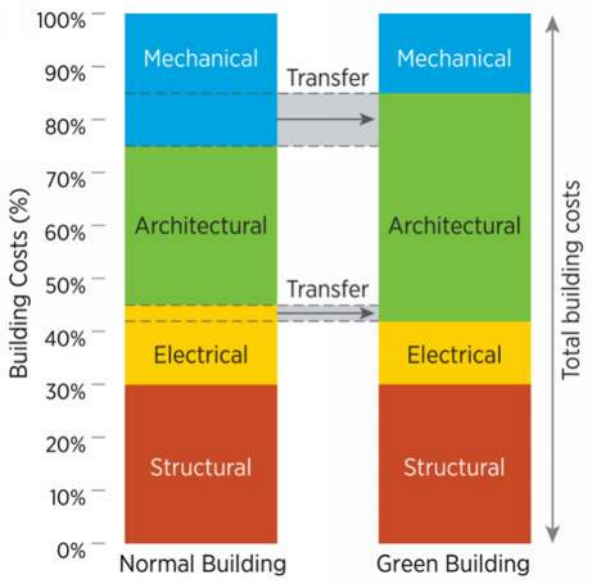

Figure by Stacy Buchanan, NREL

- All-electric Heating, Ventilation and Air Conditioning (HVAC) system using a combination of packaged heat pumps where ducting is convenient and split systems where needed to minimize long exposed duct runs.
  - Minimum zoning for efficient performance
  - Minimum 4" deep MERV 14 filtration (except where not possible, such as ceiling cassettes)
  - Airside economizers where prescriptive by code, regardless of compliance method
  - Demand Control ventilation where prescriptive by code, regardless of compliance method
  - GPS Needlepoint BiPolar Ionization purification for all supply air HVAC systems (or equal)
  - HVAC system shall use R-454B refrigerant or comparable approved A2L refrigerant with <750 GWP as required by state codes and regulations.
- HVAC Controls – Building BMS using open protocol DDC controls that allows the owners to program, monitor, and schedule each HVAC zone remotely using nothing more than a web browser. Solutions that require software licenses, or can only be maintained, programmed or upgraded by a single local provider are not acceptable. Any DDC controls solution shall include integration and compatibility with the owner's existing central Automated Logics Controls (ALC) interface. The owner will allow site access through the building's WAN connection and LAN infrastructure. Simpler HVAC controls solutions may be provided as a deductive alternate when accompanied by a detailed comparison of reduced or removed features. The following are unique or special controls modes that are required for the project
  - Bad air mode: The owner shall have a means of switching over the building into a "bad air mode" that is intended to maximize indoor air quality when the outside air is considered unhealthy by the owners (ex. nearby wildfires).

- **Communications Infrastructure**
  - Structured Cabling

        - Provide horizontal structured cabling throughout, serving all data devices, including but not limited to security cameras, access control, intrusion detection, Wi-Fi AP's, audiovisual systems equipment racks, convenience data, display and presentation devices, workstations, computers and peripherals
        - Horizontal structured cabling to meet NEC or NFPA 70 requirements, shall meet ANSI/TIA Category 6A standards with Work Area Outlet (WAO's) and modular rack mount patch panels terminated to industry standard keystone format jacks and openings. Pair color code to be as per ANSI/TIA T568B.
        - Select jacket type for conformance with the California Electric Code.
        - Unless otherwise noted, WAO's shall have at least two jacks/cables each.
        - Test all Structured Cabling installed under the work project in accordance with ANSI-J-STD-607-D using a meter meeting Level IIIe for field testers as defined in ANSI/TIA-1152 and with current calibration. Provide electronic copies of the test reports demonstrating passing cabling to the City.
    - Cable Labeling
        - Conform with ANSI/TIA 606-C and the City of Santa Rosa's standards in providing the required cabling numbering and labeling of Work Area Outlets, Horizontal and Backbone Cabling, Patch Panels, Racks, Ground Bars, Pathway, Terminal Blocks and related Structured Cabling Infrastructure.
    - Communications Interior Pathway
        - Unless otherwise noted, WAO''s to terminate in 2-1/8" deep, 5S backboxes minimum. Provide communications interior pathway sized for 25% fill maximum at concealed locations, including in wall and at exposed ceiling conditions, where they occur. "Ring and string" cabling placement of cabling in wall cavities without conduit not permitted. J-hook cabling support in areas exposed to view by staff or public not permitted.
        - At accessible above ceiling areas, provide J-hook support for cable bundles of 20 or fewer cables. For larger cable bundles at accessible ceiling areas, provide basket tray support.
    - Bonding
        - Bond communications infrastructure in accordance with the most restrictive of the CEC and ANSI/TIA-607-D 2019.
- **Wi-Fi**
    - Design to provide for ubiquitous IEEE 802.11 AX networking throughout the building's interior and across the Fire Station site using City and Fire staff cell phones, laptops and tablets and the Wi-Fi infrastructure installed by the Project. Design-Builder's design to utilize a three-dimensional enterprise wireless prediction methodology equivalent to the planning manager in Ekahau Pro to locate access points (AP's). Contractor's WiFi design shall be prepared by an individual trained and holding current certification equivalent to that of an Ekahau Certified Survey Engineer (ECSE) for the planning tooled used by the Contractor. Contractor's design to incorporate City of Santa Rosa standard Extreme Networks AP antenna characteristics and Extreme Network's best practices design recommendations.
    - WAO's for Wi-Fi AP's to be provided with two jacks/cables each. Access points and POE network switches are City furnished and installed using the infrastructure provided by the Design-Builder.

- **Fire Alert, Public Address and Radio Systems**
  - Provide a complete station fire alert system based on an alerting headend feeding a distributed 70V constant voltage speaker system throughout the fire station, including ceiling and wall mounted speakers with Red Alert LED's in all occupied space including dorms, offices, dayroom, kitchen, classroom, restrooms, lobby, exercise, hallways/vestibule and storage, and high output public address horns/omni-directional speakers with Red LED's distributed to cover spaces between parked engines in apparatus bay and in shop. Provide waterproof cone speakers in turnout and restrooms with showers. Provide speaker distribution with wall and/or face of speaker volume control as directed by the City. Provide sufficient devices in each space to maintain uniformity of coverage of +/- 3 dBA measured with pink noise input at 5'' AFF. Provide at least two channels of amplification feeding alternating areas/zones of the system so that failure of a single amplifier does not result in complete loss of altering. Zone system as directed by the City to enable selective callout of individual dorms based on alert received.
  - Fire Alert system will receive its primary alert notification by TCP/IP over the selected WAN provider. Backup alert signaling to be provided by radio. Fire alert public address system to additionally reproduce the audio of the selected public safety radio channels throughout the system. Design-Builder to interface the supplied Fire Alert headend to the City furnished public safety radio receiver and coordinate in the commissioning of the integrated system. Design-Builder to determine the make and model of the Fire Alert Headend to be provided in consultation with City Representatives based on the new City standard Alert system.
  - Interface Fire Alert to City of Santa Rosa standard GTT/Miovision Opticom signalization to control traffic lights in the vicinity of the Fire Station.
  - Provide appliance shutoff of major kitchen and laundry appliances, outdoor BBQ, dayroom entertainment, classroom AV system on receipt of alert. Provide for one button restoral of normal operation on return of the first responders to the station.
  - Provide 4 hour minimum UPS back-up power system for the fire alerting and the City furnished base radio and equipment
- **Public Safety Radio**
  - The City and its vendors will provide a City standard Motorola Radius CM200 Mobile Radio (VHF) with outdoor antenna for use in feeding the Fire Alert system.
  - Design-Builder to provide at least (3) 2" C pathway with 36" minimum sweeps from the MDF to the room, with a weatherhead cap at the roof formed using a NEMA 3R can, with support adjacent at a parapet with embedded rows of fiberglass strut for the City to mount antennas.
  - ERRCS. Provide as required by Code. Design shall not interfere with the operation of the Public Safety radio receiver/antenna system.
- **Audiovisual System**
  - The principal distribution of television signal in the building will be as wired TCP/IP connectivity to wall mounted smart TV's with wired Ethernet ports and RG-6 connections. Provide a WAO with 1 jack of each type behind each television location required by the City – refer to Structured Cabling requirements herein above.
  - At the Dayroom and the Fitness Room, as described in the room descriptions, provide additionally for traditional CATV broadband distribution using an engineered RG-6

minimum based cable distribution system. Provide connectivity for DirectTV and Comcast services similar to other Fire Stations. Provide space and power at the backboard of the MDF to accommodate installation of the headend components.

- At the Classroom, provide a flat panel display or display array, sized in accordance with AVIXA ANSI/Infocomm V202.01:2016 Basic Decision Making (BDM) Guidelines mounted to the front wall. Provide a powered soundbar fed from the display. Provide a waterproof floorbox meeting UL 514C scrub water protection with a flip lid located at the presentation position and providing access to an HDMI port to the display to permit presentation from a laptop to the display. Provide pathways of at least 2-1" C for AV from the floorbox to the accessible ceiling and from the back of the display to the accessible ceiling in addition to those required for data and power functionality. Provide a WAO behind the display with at least two jacks/cables and an additional one in the floorbox with at least 4 jacks/cables. Provide wireless control of the display on/off state and input select, augmented by a wall mount button panel providing redundant functionality.

- **Electronic Security Systems**
  - Access Control Systems
    - Provide access control based on HID Seos cards and fobs and compatible Smart card readers interfaced to City of Santa Rosa standard C-Cure iStarPro access control panels provided under the work of the Project. The City operates an existing access control headend database server based on C-Cure 9000. Design-Builder to coordinate commissioning of the access control system with the City including demonstrating local control of the door openings and complete interconnection of the installed access control panels with the City C-Cure 9000 headend.
    - All card readers and electronic security system devices shall be hard-wired type, not wireless, and shall include a keypad in addition to the reader interface to provide 2-factor authentication and/or keypad only entry as directed by the City. Readers shall be manufactured by Software House.
    - Each access-controlled opening should be provisioned with a door position switch, and electronic lock with either an integral REX microswitch or the opening shall be provisioned with an independent head of door infrared-based REX detector.
    - The access control design and system should enable the City to selectively implement varying levels of restrictions at controlled door openings based on time of day of week.
      - Provide card reader control of the exterior doors of the building.
      - At main entry doors providing ADA compliant accessibility, access control should be integrated with the design of the powered operators to ensure operator actions cannot be initiated until a valid card has been detected.
      - Access Controlled Openings at the Interior: The Fire Station Medical Storage Room, Telecommunications rooms and similar sensitive high-value spaces within the buildings should be provisioned with card readers. Where Interior doors are intended to separate the public from fire station staff space, card reader access control to be provided.

        - Vehicular gate ingress shall be operated by access control long-throw RFID controller/reader mounted on a pedestal. Design-Builder to determine type of RFID subsystem required to match standards used at other City sites.
    - Intrusion Detection Systems
        - Provide a commercial multi-zone burglar alarm panel (Bosch G series or equivalent) with an SIA standard monitoring interface suitable for remote monitoring by the City's selected Central Station provider – ADT. System to provide flexible scheduling and arming, include the ability to arm automatically in response to callout of the station by the Fire Alert System. Provide with zone count and field devices as appropriate to exposure of building's design and Fire Department's intended hours of occupancy of the public areas of the building, after-hours programs and provisions for building cleaning. Design-Builder to determine alarm panel, zoning and field devices to be provided in response to the above requirements.
        - System to monitor exterior doors, operable windows, apparatus bay doors, roof hatches, gate operations and similar. Provide casework mounted duress alarms at public facing service counters at lobby and similar.
        - System shall include a cellular card for communication in lieu of a POTS (telephone) line connection.
    - Video Surveillance Systems
        - Video Surveillance shall provide uniform coverage of all interior public spaces, the building exterior perimeter, drives and vehicle aprons. Multi-imager cameras can be used in lieu of multiple single imager cameras to provide the required coverage.
            - Cameras to be located within 11-14 feet above finish floor/grade in the area of observation.
            - Interior cameras to be ceiling-mounted where feasible
            - Exterior cameras to be located at where not readily subject to vandalism due to adjacent opportunities for climbing/access.
        - Minimum Camera functionality:
            - Cameras shall be Hanwhat Vision NDAA approved and compatible with Ocularis VMS systems
            - Minimum resolution: Not less than 3 Megapixels per imager. Select cameras to provide minimum pixel density in each area of coverage as follows:
                - Entries and building interior spaces accessed by the public: 75 pixels/foot (identification) at farthest point of view.
                - Building perimeter, driveways and apron to farthest point of view (recognition): 20 pixels/foot
                - Outer edges of fire station site: 10 pixels/foot (detection).
            - Minimum frames per second: Not less than 15 frames per second (fps) on motion detection.
            - Minimum illumination to produce a useable picture through the VMS system. Include infrared/night vision.
            - Not more than 0.09 lux at 1/30s shutter, no sens up allowed.

- Camera to provide mechanical cut filter.
- At cameras facing glass doors to the exterior, with a view to exterior windows or other sources of varying light, provide with Wide Dynamic Range (WDR) compensation, 100 dB min.
- Video Codec: Provides H.265 compression minimum.
- Lensing. Provide with varifocal lens or fixed zoom lensing to suit proposed field of view.
- Focus. Provide and implement manual focus at time of installation. Camera to support remote autofocus or auto backfocus to permit accommodation of changes over time.
- Vandal resistant construction at exterior: IK10 minimum.
- At exterior locations with minimal night lighting, cameras to be selected with integral IR illuminators.

  - Station cabling to support TCP/IP cameras to be ANSI/TIA Cat 6A category cabling installed using means and methods as outlined under the Structured Cabling section. To ensure long-term maintainability of the system each cable used for TCP/IP cameras shall be terminated at a surface mounted biscuit box placed internal to the rough-in for the camera and a patch cord shall be extended from the permanently installed surface mount box to the camera network port. It shall not be permitted to terminate RJ45's directly on the ends of the installed permanent link station cabling.
  - POE network switches are City furnished.
  - Video Management System. Provide Qognify Occularis Video Management Server (VMS) with an initial 60 days of storage calculated assuming 40% activity (motion present 40% of period) and 15 frame per second motion recording on the installed cameras. Install in four post cabinet in MDF and provide with rack mounted monitor/keyboard/mouse assembly to administer. VMS to readily accommodate expansion of storage by the City using industry standard means to provide for 365 of days of image retention following Substantial Completion.

- **Doors and Windows**
  - Operable windows are required for emergency egress at all Dorm Rooms.
  - Insect screens at all operable windows
  - Manual dual shades at all Dorm Rooms and Classroom to include one blackout shade and one shade with 1% perforations. Trim around the window jambs and sill of the window to house the two shades.
  - Manual single shades at all non-operable exterior windows with 1% perforations
  - Stainless steel push and kick plates at all doors
  - Minimum 36” x 84” clear landing opening at each door
  - Door and windows in STC-rated walls shall themselves be STC rated. STC ratings shall be sufficient so as to not significantly compromise the STC rating of the parent wall.
- **Signage**
  - Code-required signage, including building address, emergency egress, room ID, ADA, restroom, and parking/directional. Include required contrasting lettering and braille.
- **Exterior**

  - Lighted monument sign, address sign, electronic messaging sign at Hearn Ave frontage/elevation
  - Lockable, post-mounted mailbox
  - Lighted flagpole, 30 feet tall
  - Concrete monument sign with City and Fire Department logos. Individual letters to spell out building name and address.
  - Provide lockable exterior electrical outlets for holiday lighting.
  - Provide an analog 911 phone instrument with direct connect (ringdown) to City Emergency Dispatch. Wall mount phone to be located immediately adjacent to the main front door at the Lobby, intended by its manufacturer for outdoor service and provided with ADA compliant labeling and a swing cover door to protect from the elements when not in service.
  - Provide a doorbell immediately adjacent to the main front door at the Lobby, audible in the selected areas and interfaced to one of more zones of the public address system. Design-Builder to determine areas of coverage to be provided in conjunction with the City's Representative.
  - Lighting for parking areas, outdoor walkways, outdoor exercise area, fueling and refilling area, operations yard.
  - Building-mounted lighting for egress lighting levels
  - Full cutoff exterior lighting to mitigate light pollution and trespass
  - Include decorative red light "beacon" sconces in between front Apparatus Bay entry doors
  - Fire hydrant, backflow preventor, and FDC to be located per Santa Rosa Fire Department requirements.
- **Captain's Office (min. 150SF)**
  - Minimum four (4) power
  - Direct/indirect lighting.
  - Minimum three WAO's with not fewer than 2 jacks/cables each.
  - Flooring: polished concrete
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
  - The reverberation time in the room shall not exceed 0.6 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Station Office (min. 300SF)**
  - Casework laminate-clad open counter with fixed glass opening to lobby for public counter
    - Wall and window construction at public-facing openings shall meet Level 3 UL Ballistics Resistance Rating
  - Casework laminate-clad open countertop to accommodate three (3) staff workstations, to integrate with freestanding furniture components.
  - Minimum two (2) power receptacles for each workstation (6).
  - Dedicated power circuit for each photocopier.
  - Direct/indirect lighting.
  - Undercabinet lighting at upper cabinet locations.
  - Minimum two WAO's with not fewer than 2 jacks/cables each.
  - Custom-built glass-fronted display case with lockable doors and adjustable shelving

  - Flooring: polished concrete
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-40 or 45 dBA.
  - Ceiling shall be acoustically absorptive and rated at least NRC 0.80.
  - The reverberation time in the room shall not exceed 0.8 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Lobby (min. 80SF)**
  - Provide access control of entry door with remote release from City's designated locations(s).
  - Casework solid surface-clad public counter facing the Hallway or Station Office
  - Concealed duress alarm mechanically fastened below counter surface
  - Flooring: polished concrete
  - Walls: painted drywall
  - Ceiling: painted drywall
  - Minimum two (2) power receptacles
  - Multi-layered lighting approach.
  - Minimum two WAO's with not fewer than 2 jacks/cables each.
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-40 or 45 dBA.
  - The reverberation time in the room shall not exceed 1.0 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Accessible Gender Neutral Restroom**
  - Flooring: polished concrete
  - Walls: coved base tile and tile to 84 inches
  - Ceiling: painted drywall
  - Individual exhaust and supply/make-up provisions per stall
  - GFI receptacle adjacent to sink.
  - Wall mounted lighting adjacent or above vanity stations.
- **Hallway outside of Station Office and Lobby**
  - Casework laminate-clad countertop with base and upper cabinets
  - Minimum four (4) power (1 dedicated circuit)
  - Minimum one WAO with not fewer than 4 jacks/cables
  - Floor area for 30" x 60" copier/printer/scanner
  - Flooring: polished concrete
  - Walls: painted drywall
  - Ceiling: acoustical tiles
  - Recessed troffer luminaires.
- **Dorm Rooms (5 total/min. 125SF per Dorm room)**
  - Egress window
  - Solid wood blocking for wall-mounted display
  - (2) 84" high power at wall-mounted display location
  - Ceiling fans
  - Minimum one WAO with two jacks/cables.
  - Minimum two (2) power for convenience locations. A high wall mounted power outlet for TV.
  - Wall mounted articulated bedside reading lights.

  - Ceiling fan light kit or recessed downlight coordinated with ceiling fan location to prevent stroboscopic effects.
  - Flooring: polished concrete
  - Walls: painted drywall
  - Ceiling: painted drywall
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
  - The reverberation time in the room shall not exceed 1.0 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Dorm Restrooms (3 Dorm restrooms)**
  - Non-porous solid surface countertop, undermount lavatory sink, wall-mount water closet.
  - Toilet room accessories, including: toilet tissue dispenser, paper towel dispenser, sanitary napkin disposal, toilet seat cover dispenser, waste receptacle, soap dispenser, hand dryer, grab bars at accessible water closet
  - Flooring: porcelain tile
  - Walls: Tile at wet walls, painted moisture-resistant drywall elsewhere
  - Shower Walls: Tile, full height
  - Shower Floor: surface mounted solid shower pan
  - Ceiling: painted moisture-resistant drywall
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-35 or 40 dBA.
  - GFI receptacle adjacent to sink.
  - Wall mounted lighting adjacent or above vanity stations.
  - Recessed shower trim downlight.
- **Captain's Dorm (min. 150SF) & Restroom(min. 90SF)**
  - All components of Dorm Rooms
  - Egress window
  - Private accessible restroom with solid surface countertop, undermount lavatory sink, wall-mount water closet, tiled shower, tiled walls to 84" AFF.
  - Toilet room accessories, including toilet tissue dispenser, paper towel dispenser, sanitary napkin disposal, toilet seat cover dispenser, waste receptacle, soap dispenser, hand dryer, grab bars
  - Dorm Room Flooring: polished concrete
  - Dorm Walls: painted drywall
  - Restroom flooring: porcelain tile
  - Shower Walls: Tile, full height
  - Shower Floor: recessed solid shower pan
  - Ceiling: painted drywall
  - Identical noise and reverberation time requirements as Dorm Rooms.
  - GFI receptacle adjacent to sink.
  - Wall mounted articulated bedside reading lights.
  - Ceiling fan light kit or recessed downlight coordinated with ceiling fan location to prevent stroboscopic effects.
  - Wall mounted lighting adjacent or above vanity stations.
  - Recessed shower trim downlight.
  - Minimum one WAO with two jacks/cables.

  - Minimum two (2) power for convenience locations. A high wall mounted power outlet for TV.

- **Janitor/Laundry (min. 85SF)**
  - Dedicated exhaust system
  - Commercial grade washer and dryer
  - Trench drain with sump to handle the water discharge from the turnout washer.
  - Flooring: sealed concrete flooring and curbs with floor drain
  - Walls: resilient sheet to 96” high on top of the concrete curbs, painted drywall above
  - Ceiling: painted gypsum board
  - Minimum one WAO with two jacks/cables. Stainless steel faceplate.
  - Minimum four (4) power receptacles
  - Power to washer/dryer
  - Wet location luminaires for general lighting.
  - Stainless steel floor mounted service sink
  - Stainless steel shelving for equipment and cleaning products

- **Kitchen/Dining/Dayroom (min. 980SF)**
  - Space for dining table with ten (10) dining seats and six (6) lounge seats
  - Access to exterior patio area
  - Casework, plywood boxes with solid wood faces, base cabinets with 16 ga stainless steel countertop and backsplash
    - Base cabinets: 50% drawers, full extension, including deep drawers for pots and vertical cutting board storage.
    - Upper cabinets: adjustable shelves
    - Soft close cabinet hardware
  - Three (3) 24”D x 36”W x 96”H pantry cabinets, plywood boxes, solid wood faces
  - Space for waste receptacles: waste, compost, recycling
  - Stainless steel undermount 30-inch-wide sink
  - 24-inch undercounter dishwasher; provide power, water, and drain
  - 48-inch gas range with two (2) dual-fuel ovens and required vent hood with fan and lighting; provide required power circuits
  - Minimum four (4) power for entertainment system
  - Minimum two WAO’s of 2 jacks/cables each data receptacles, including for use with entertainment system. Provide additionally a minimum of 2 CATV RG6 drops.
  - Minimum eight (8) power and two (2) data receptacles for convenience outlets.
  - Minimum three (3) power and (3) water connections for refrigerators/freezers
  - Minimum ten (10) power receptacles at countertop level for appliances with GFI type were required by code.
  - Multi-layered lighting approach for living/day use areas.
  - Water connection for coffee maker at countertop level
  - Solid wood backing for all wall-mounted cabinets and displays.
  - Flooring: polished concrete
  - Walls: painted drywall
  - Ceiling: acoustically absorptive tiles

  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-40 or 45 dBA.
  - The reverberation time in the room shall not exceed 1.0 seconds for the 500, 1000, and 2000 Hz octave bands.
  - Range shut off connected to alerting system.
  - Garbage disposal power outlets and switches.
- **Classroom (min. 500SF)**
  - Minimum five (5) WAO's of 2 jack/cable each, evenly spaced at walls.
  - Minimum two (2) power and data recessed floor mounted boxes at each row of desks. Coordinate with quantity of wall mounted WAO's to provide support for up to 18 attendees. Minimum twelve (12) power receptacles, evenly spaced on the walls.
  - Wall mounted receptacles at wall mounted TV's.
  - Direct/indirect lighting.
  - Refer additionally to Audiovisual Section for additional WAO''s required at AV equipment and required AV functionality.
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed either NC-30, 35 dBA, or 55 dBC.
  - The reverberation time in the room shall not exceed 0.6 seconds for the 500, 1000, and 2000 Hz octave bands.
  - Flooring: polished concrete
  - Walls: painted drywall
  - Ceiling: acoustical ceiling tiles
- **Classroom Storage (min. 80SF)**
  - Minimum four (4) power (1 dedicated circuit) receptacles
  - Surface or pendant mounted general lighting.
  - Owner provided storage shelving
  - Flooring: sealed concrete
  - Walls: painted drywall
  - Double door entry
- **Exercise Room (min. 450SF)**
  - Access to exterior exercise patio area
  - Wall-mounted mirrors to 96" along one wall
  - Solid wood backing for all wall-mounted displays
  - Two (2) ceiling fans
  - Minimum ten (10) power receptacles, evenly spaced for exercise equipment.
  - Surface mounted wet location listed luminaires.
  - Minimum ten (10) WAO's of 1 jack/cable each, evenly spaced for exercise equipment Provide additionally a minimum of 2 CATV RG6 drops.
  - Flooring: sealed concrete under rubber floor tile
  - Walls: painted drywall
  - Ceiling: painted drywall
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-45 or 50 dBA.
  - The reverberation time in the room shall not exceed 1.2 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Apparatus Bays (3 total min. 70' clear length)**

  - Drive-thru apparatus bays per floor plan drawings
  - Flooring: see Circulation and Parking section for concrete profile
  - Flooring finish: epoxy-aliphatic polyester polyurethane cementitious mortar system
  - Concrete floor shall be sloped to drain and include minimum two (2) floor drains at each bay. Provide a minimum of 3 floor drains at the App Bay 2.
  - Oil/Water Separator serving the floor drains. Provide large volume separator with downstream isolation valve to allow manual release to sewer system.
  - **Three (3) power-operated four-panel folding doors, 14-foot x 14-foot minimum dimension, with clear tempered glass panels. Doors shall fully open in 8 seconds.
    - Push-button activation adjacent to each door with a master switch panel at each vestibule entrance to apparatus bay
    - Remote controller system with an antenna and remote controller each apparatus vehicle
    - Manual override by pull chain.
  - Three (3) power operated coiling overhead doors, 14-foot x 14-foot minimum dimension with clear tempered glazing panels. Doors shall fully open in 8 seconds.
    - Push-button activation adjacent to each door with a master switch panel at each vestibule entrance to apparatus bay
    - Remote controller system with an antenna and a remote controller in each apparatus vehicle
    - Manual override by pull chain.
  - Adequate lighting for apparatus bay operations
  - Dedicated Plymovent exhaust fume extraction system with direct tailpipe exhaust in each apparatus bay.
  - Ceiling mounted reel with air compressor connection. Minimum of 2 in between each app bay
  - Ceiling-mounted electrical cable drops at driver's side of each vehicle position with breakaway connections for trickle charging
  - Minimum ten (10) power spaced evenly for equipment access
  - Minimum five (5) WAO's of two jacks/cables each, spaced evenly for equipment access
  - Minimum one (1) WAO of two jacks/cables each at ceiling for WAP connection.
  - HVAC systems as required maintain an extended range negative pressure environment of 60ºF to 80ºF. Include residual fire engine heat in cooling load assumptions.
  - Maintain positive pressure in vestibules connecting Apparatus Bay.
  - General exhaust to be provided in the apparatus bays
  - Walls: resilient sheet to 96" AFF on top of concrete curb
  - Ceiling: open to structure above
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation will not exceed NC-45 or 50 dBA.
- **Shop (min. 180SF)**
  - Casework: Base cabinets with no doors and a 16-gauge galvanized steel countertop and backsplash. Open upper shelving. Wall mounted peg board along wall in between countertop and upper shelving
  - Multiple compressed air chucks along wall at workbench
  - Floor space to accommodate rolling tool chest and a rated flammables storage cabinet
  - Minimum eight (8) power receptacles

  - Minimum one (1) 220V power receptacle
  - Adequate general lighting for shop operations.
  - Undercabinet lighting at casework locations with upper cabinets.
  - Minimum one WAO with not fewer than 2 jacks/cables above work bench
  - Dedicated exhaust system
  - Flooring: sealed concrete
  - Walls: FRP to 96" high AFF, painted drywall above
  - Ceiling: open to structure above
- **Turnout Laundry Area**
  - Dedicated exhaust system
  - Stainless steel hanging rods at the hanging area(s) for drying cleaned turnout gear
  - Commercial grade washer and dryer
  - Commercial grade turnout washer/extractor with a trench drain in the slab behind the washer. Concrete slab to be a minimum of 12 inches to accommodate the extractor unit anchors
  - Trench drain with sump to handle the water discharge from the turnout washer.
  - Flooring: sealed concrete flooring and curbs with floor drain
  - Walls: resilient sheet to 96" high on top of the concrete curbs, painted drywall above
  - Ceiling: painted gypsum board
  - Minimum one WAO with two jacks/cables. Stainless steel faceplate.
  - No natural daylight, windows or skylights are desired in this space
  - Minimum four (4) power receptacles
  - Power to washer/dryer
  - Wet location luminaires for general lighting.
- **Turnout Storage Area**
  - Minimum twenty-six (26) wall mounted turnout gear lockers. Provide solid blocking at walls. Lockers to be 20 inches wide x 24 inches deep to accommodate two full sets of turnouts. Shelf at the top of the lockers will accommodate storage of the "out of county" bags.
  - Dedicated exhaust system and unit heater
  - LED lighting selection to not harm or degrade the coating on the turnout gear
  - Flooring: sealed concrete flooring and curbs
  - Walls: resilient sheet to 96" high on top of the concrete curbs, painted drywall above
  - Ceiling: painted gypsum board
  - No natural daylight, windows or skylights are desired in this space
  - Minimum two (2) power receptacles.
  - Wet location luminaires for general lighting.
- **Decontamination Area**
  - Stainless steel 2-compartment sink with washboards on both sides of the sink
  - Emergency eye wash station
  - Shower enclosure with recessed shower pan to clean large objects
  - Floor drain
  - Flooring: sealed concrete
  - Walls: resilient sheet to 96" AFF, painted drywall above
  - Ceiling: open to structure
  - Minimum three (3) power receptacles.

  - Wet location luminaires for general lighting.
- **Storage Room**
  - Minimum four (4) power (1 dedicated circuit) receptacles
  - Surface or pendant mounted general lighting.
  - Owner provided storage shelving
  - Flooring: sealed concrete
  - Walls: painted drywall
  - Ceiling: open to structure
- **Mechanical Room**
  - Minimum four (4) power (1 dedicated circuit) receptacles
  - Surface or pendant mounted general lighting.
  - Minimum one WAO with not fewer than 4 jacks/cables and one WAO with 2 jacks/cables.
  - Floor drain
  - Flooring: sealed concrete
  - Walls: resilient sheet to 96" AFF, painted drywall above
  - Ceiling: open to structure
- **Compressor Area**
  - Minimum four (4) power (1 dedicated circuit) receptacles
  - Minimum one (1) WAO with 2 jacks/cables.
  - Surface or pendant mounted general lighting.
  - Flooring: sealed concrete
  - Walls: painted drywall
  - Ceiling: open to structure
  - Power to compressor.
- **Janitor - Area**
  - Stainless steel floor mounted service sink
  - Stainless steel shelving for equipment and cleaning products
  - Floor drain
  - Flooring: sealed concrete
  - Walls: resilient sheet to 96" AFF, painted drywall above
  - Ceiling: open to structure
  - Minimum two (2) power receptacles.
  - Surface or pendant mounted general lighting.
- **Server/MDF/TR Room (min. 110SF)**
  - Provide a backboard space for carrier Entrance Facility (EF)/Minimum Point of Entry (MPOE). The purpose of this space will be to provide a dedicated facilities where the carriers can terminate their entrance cabling.
  - The room will also serve as a Main Distribution Facility (MDF) for all horizontal station cabling in the building. It should be located so as required to comply with ANSI/TIA-568-D requirements of a maximum cable length to 295 feet from patch panel to the farthest faceplate (WAO).
  - Provide two post relay racks in quantity as required to terminate the station cabling of the building with not more than 200 station cables terminating in a single rack on 48 port 2U modular patch panels with 2U horizontal wire management provided above and below each patch panel.

- Provide a separate two post relay rack for use in hosting the project provided fire alert and public address systems headend and City furnished public safety radio receiver(s).
- Provide an additional empty two relay rack for future use by the City.
- Each relay rack to be 7 foot tall (at least 43 RU) with vertical rails and threaded holes at ANSI 310-D on center spacing to support use of 19 inch equipment, patch panels and similar. Racks to have a seismic (dynamic) load rating of at least 900 pounds supported by NEBS GR-63-Core dynamic testing or equivalent means provided by the manufacturer. Between each rack and at the end of each row of racks provide vertical wire managers that are at least 10 inch wide and 19 inches deep, with hinged cover doors that swing in either direction and with continuous fingers permitting cabling to enter the sidewalls of the manager.
- Provide a four-post cabinet to hold the Video Management headend as described under Electronic Security Systems herein below. This cabinet to also be 7' tall with integral vertical wire managers and identically seismically qualified as for the relay racks, but with a footprint of at least 42" deep and 30" wide (including integral vertical wire managers and a dynamic (seismic) load rating of 1100 pounds. The cabinet mounting rails to have DIN square hole openings in the front and rear mounting rails on EIA 310-D centers.
- All interior walls of the MDF to be treated with ¾" minimum fire treated plywood backboard from +6" to 8-6" AFF.
- MDF room size. Room to be sized to accommodate placement of racks in a single row, with front, rear and side clearance to meet the requirements of the CEC and OSHA, including not less than 36" front clearance from the front face of the racks, 50" rear clearance from the rear face of the relay racks prior to rack mount equipment installation and 30" net rear clearance behind the 4 post cabinet and 30" side clearance of at least one end of rack row, including the specified vertical wire management, plywood backboard, space for carrier termination, and any project provided backboard mounted electronic security system panels. Provide overhead cable tray system type NEMA 12B sized for 30% fill at opening with waterfall dropouts at equipment racks to maintain cabling bend radius.
- Provide dedicated HVAC cooling and exhaust designed to protect the MDF equipment to ASHRAE TC9.9 standards 24x7x365.
- Provide two locking power receptacles on dedicated circuits above each equipment rack, each at least L5-20R or required by the load.
- Arrange lighting to light the front and rear faces of the equipment racks and backboards.
- Flooring: sealed concrete
- Walls: insulated metal stud framing, faced with fire-rated plywood, painted
- Ceiling: open to structure above
- Ground bus with grounding conductor to main switchboard
- Minimum eight (8) wall mounted receptacles on dedicated circuits.
- Surface or pendant mounted general lighting.

- **Electrical Room**
  - Dedicated HVAC cooling and exhaust
  - Automatic transfer switch for backup generator power
  - Fire-rated construction as required.
  - Controls for irrigation
  - Minimum one WAO with not fewer than 4 jacks/cables.

  - Flooring: sealed concrete
  - Walls: Rated plywood, painted
  - Ceiling: open to structure above
  - One (1) receptacle on a dedicated circuit
  - Surface or pendant mounted general lighting.
  - Space for future solar photovoltaic array system including battery
- **Roof**
  - Single-ply membrane roof with rigid insulation and premolded penetration flashings at flat roofs. Rigid insulation for crickets. Painted galvanized metal parapet copings. Sumped roof drains and overflows to run in the exterior walls and to be direct piped to the storm drainage system.
  - **Standing seam metal roofing system for pitched roofs with galvanized metal gutters and downspouts. Downspouts to be piped and connected to the storm drainage system.
  - Rooftop HVAC units on perimeter vibration curbs. Rooftop unit mounting to incorporate acoustical vibration isolation.
  - Metal screening with metal siding for HVAC units with minimum 48” working clearance.
  - Roof hatch and roof access ladder at the flat roofs with mechanical equipment. Lockable roof hatch on the interior
  - Provide convenience hose bibs and electrical outlets on the flat roofs for maintenance.
  - Fall arrest anchors rated for 5000 lb will be required at the sloping roofs. No such anchors are required if min 3’-6” tall parapets are provided on flat roofs per OSHA requirements.
  - Space for future solar photovoltaic array

Sitework

- **Operations Yard**
  - Emergency Diesel Generator: min. 150 kilowatt capable of powering all building and site electrical systems, within a lockable and sound enclosure.
  - Generator shall be sound-rated such that it does not cause noise levels at neighboring property lines to exceed their respective noise limits outlined in the City Municipal Code or other applicable local ordinance.
  - Provide emergency shut-off switch a minimum of 20 feet away from the emergency generator.
  - 500-gallon above grade diesel fuel storage tank to provide for refueling of fire apparatus with fuel dispensing station and metering. Fuel tank to have built in secondary containment and fuel dispensing system to include:
    - Fuel dispenser unit with metering and a 20 foot long retractable hose to reach apparatus vehicles
    - Location of tank and dispenser shall be approved by Fire Department
    - Explosion proof electrical lighting and outlets are required for anything within a 20 foot radius of the fueling system
  - 2000 gallon above grade diesel fuel storage tank to provide fuel for the emergency generator. Fuel tank to have built in secondary containment and fuel dispensing system to include:
    - Fuel line to dispenser unit and fuel line and circulation pump to the emergency generator

        - Location of tank and dispenser shall be approved by Fire Department
        - Explosion proof electrical lighting and outlets are required for anything within a 20 foot radius of the fueling system
        - Concrete containment curb around the fuel tank for spill containment
    - 8 foot high enclosure and fixed bollards to be provided around the emergency generator and the above grade fuel tank.
    - 6 foot high enclosure and fixed bollards to be provided around the above grade fuel tank and dispensing station.
    - 6 foot high enclosure for waste receptacles. Enclosure to accommodate space for residential scale refuse, recycling, and compost bins. No large dumpsters. Provide lockable gates, pedestrian gate, interior light, hose bib, and vented sewer drain. Concrete pavement in the enclosure and concrete apron in front of the enclosure opening.
    - (1) encased lockable, non-freeze, anti-siphon, automatic draining hose bib on each building face at locations to be reviewed and approved by the Fire Department.
    - 2.5-inch water service to refill fire apparatus vehicles
        - Accessible to apparatus
        - Minimum 2-inch water connection with ball valve
    - A total (12) secured personnel parking spaces, which will accommodate for the on-duty crew as well as for shift change. Provide conduit and sizing of the electrical power system for two EV charging units for two parking spaces.
    - A total of (5) public visitor parking spaces, which will include one accessible parking space, one accessible EV parking space, and one regular EV parking space. All ADA stalls will include a concrete base.
    - 8-foot high privacy fence. Perimeter fencing to enclose the secured personnel parking area and **hose drying rack.
    - Provide (1) pedestrian swinging gate with access control and exiting gate hardware and (1) automatic vehicular sliding gate with pedestal and card key access. Sliding gate to have RFID reader for department vehicles and apparatus assigned to the station.
    - 8-foot high privacy fencing around the outdoor exercise area immediately outside of the Exercise Room.
    - Apparatus washing station to include hose bibs and the sewer drains to a sand/oil separator and sewer. The sand/oil separator can be shared with the one tied to the Apparatus Bay floor drains.

Library

Summary

The new Roseland Branch of the Sonoma County Library shall be approximately 15,000 - 20,000 gross square feet on one story above grade. The Library desires a 20,000 square foot facility. The base program includes 15,000 square feet; two alternates of 2,500 square feet each establish programs for facilities of 17,500 and 20,000 square feet, respectively. A reference document outlining the preferences for the base program and alternate programs are included for reference. Maximum building height is limited to 35 feet above grade. Preferred operational adjacencies are depicted on provided drawings. Furniture is not included in the scope of work. Design-Builder shall coordinate furniture layout with Library and FF&E provider.

Design-Builder Requirements

- Host a minimum of three (3) two-hour workshops to include City and Library representatives to confirm final floor plan layout, exterior and interior architectural expression and materials, and building structural, HVAC, plumbing, electrical, and low-voltage systems.
- Library design shall comply with local, state, and federal accessibility regulations throughout.

Design Components

- **General Requirements**
  - All systems shall be compliant with applicable codes and regulations
  - Fire protection system, including alarms
  - The entire building shall be fully sprinklered. The Design-Builder shall provide a new complete water-based fire protection system designed by the Design-Builder following NFPA 13 Standard for the Installation of Sprinkler Systems. The NFPA Occupancy Hazzard Classification for each building shall be primarily Light Hazard, to establish water supply design and allowable square footage per sprinkler head. Mechanical rooms, electrical rooms, and storage rooms shall be classified as Ordinary Hazard Group 1 for preliminary purposes.
- **Superstructure**
  - A Structural Steel design option has advantages that complement the architecture. Structural steel allows for the building to efficiently incorporate large open spaces, multiple roof slopes and the use exterior glazing around the building. To accommodate the various roof heights, each roof volume is designed with its own lateral system assuming flexible diaphragms.

    The lateral force resisting system uses a Brace Frame system that utilizes steel columns and tube steel braces. The Braces are located in areas integrated with the architectural design concept, with AESS finish (Architectural Exposed Structural Steel) where required, per AISC requirements, to ensure they meet the visual criteria. The tube steel braces may have two potential options, special concentric braced frame system (SCBF) or the Buckling Resistant Braced Frame (BRBF). The BRBF system provides higher seismic performance than the SCBF but BRB braces include a cost premium. The bare metal deck roof diaphragms are designed as flexible diaphragms. The standing seam deck will serve as the architectural roof finish over the structural metal deck.
- **Foundations**

  - The preliminary geotechnical report by A3Geo Engineers, dated June 13, 2023,is provided for reference. The differential settlement should be accounted for in spread footing design and in its impact on the superstructure.

- **Plumbing Systems**
  - All-electric domestic hot water heaters. Provide heat pump water heaters for areas with larger loads; instantaneous electric is acceptable for small loads (ex. an isolated lavatory sink).
  - Domestic and fire water systems include backflow prevention and pressure regulation assemblies.
  - Domestic plumbing systems include isolation valves in a valve box at the exterior of each building and isolation valves for every fixture. Provide solar powered flushometers in public areas and manual flushometers in staff areas.
  - Air source heat pump storage water heater for each janitor room, routed to nearby restroom HW loads with timer and aquastat controlled recirculation pumps. Instantaneous or point of use water heaters may be used for remote locations such as the break room family RR in the SE corner.
- **Interior Architecture**
  - Interior Finishes shall be resilient and low-maintenance.
    - Walls: gypsum wall board; minimum level 4 finish; impact-resistant GWB to 48" AFF
    - Ceilings: acoustic ceiling panel, 24"x48", high CAC (>35), white
    - Base: 1x6 painted wood in public spaces; rubber 6" high in back-of-house spaces
    - Provide corner guards at all outside corners. Guards shall be full-height, 16 gauge, type 304 stainless steel.
  - Interior Partitions shall have minimum STC ratings according to room adjacencies:
    - Study Rooms and Conference Rooms, adjacent to:
      - Hallways, open offices, and common areas: STC-45
      - Restrooms: STC-45
      - Community Rooms and Maker Space: STC-50
      - Private offices: STC-50
      - Mechanical equipment or systems rooms: STC-60*
    - Private Offices adjacent to:
      - Hallways, open offices, and common areas: STC-45
      - Restrooms: STC-45
      - Community Rooms and Maker Space: STC-50
      - Private offices: STC-50
      - Mechanical equipment or systems rooms: STC-60*
    - Community Room and Maker Space, adjacent to:
      - Hallways, open offices, and common areas: STC-40
      - Restrooms: STC-40
      - Private offices: STC-50
      - Study Rooms and Conference Rooms: STC-50
      - Mechanical equipment or exercise rooms: STC-50*

  - *STC ratings for walls around mechanical rooms should be adjusted based off mechanical equipment data to ensure room noise criteria of adjacent rooms is not exceeded.

- **Electrical Systems**
  - Occupancy sensors, Daylighting controls and all required Title 24 controls.
    - All LED lighting
    - Indirect lighting fixtures preferred
    - Exterior lighting on timers and/or daylighting sensors per code
    - Emergency lighting
    - New electrical service
    - Main Switchboard and all required equipment and feeders
    - Power metering system
    - Transient voltage surge suppression system
    - EV Chargers
    - Branch circuiting
    - Fire Alarm System.
    - Distributed Antenna System for emergency responders
    - PV System and battery system.
    - All required electrical work for the project
    - Additional electrical and lighting scope as outlined in this document
    - Electric Shade System
- **HVAC Systems**
  - Energy compliance and efficiency – The Design-Builder team may provide a prescriptively compliant building and MEP designs, BUT we encourage the team to explore and implement architectural-MEP cost transfers to achieve superior building value for the owner. Using the performance approach to energy code compliance and creative transfers, the Design-Builder team may deliver a final product that provides an envelope that is much better than code which results in smaller MEP systems, which saves project costs that can pay for the architectural upgrades. The result is a project with more investments in low/zero maintenance features like insulation, overhangs, etc. And smaller, simpler MEP systems to maintain over the life of the building. See below for a graphical representation of the cost-transfer integrated-design approach.

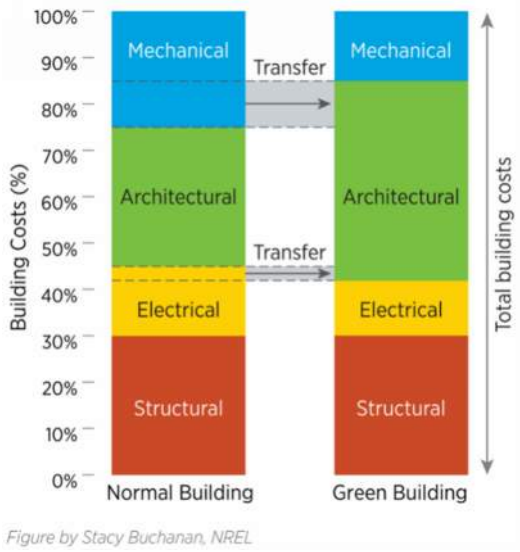

Figure by Stacy Buchanan, NREL

- All-electric Heating, Ventilation and Air Conditioning (HVAC) system using a combination of packaged heat pumps where ducting is convenient and variable refrigerant volume (VRV or VRF) systems where needed to minimize East-West exposed duct runs.
  - Minimum zoning as indicated on zoning maps. Reduced zoning layouts only considered as deductive alternates.
  - Minimum 4" deep MERV 14 filtration (except where not possible, such as ceiling cassettes)
  - Airside economizers where prescriptive by code, regardless of compliance method
  - Demand Control ventilation where prescriptive by code, regardless of compliance method
  - HVAC system shall use R-454B refrigerant or comparable approved A2L refrigerant with <750 GWP as required by state codes and regulations.
- HVAC Controls – building BMS using open protocol DDC controls that allows the owners to program, monitor, and schedule each HVAC zone remotely using nothing more than a web browser. Solutions that require software licenses, or can only be maintained, programmed or upgraded by a single local provider are not acceptable. Any DDC controls solution shall include integration and compatibility with the owner's existing Library Portal interface using Automated Logics Controls (ALC). The owner will allow site access through the building's WAN connection and LAN infrastructure. Simpler HVAC controls solutions may be provided as a deductive alternate when accompanied by a detailed comparison of reduced or removed features. The following are unique or special controls modes that are required for the project
- Bad air mode: The owner shall have a means of switching over the building into a "bad air mode" that is intended to maximize indoor air quality when the outside air is considered unhealthy by the owners (ex. nearby wildfires).
- GPS Needlepoint BiPolar Ionization purification for all supply air HVAC systems (or equal)

- **Communications Infrastructure**
  - Structured Cabling
    - Provide horizontal structured cabling throughout, serving all data devices, including but not limited to security cameras, access control, intrusion detection, Wi-Fi AP's, audiovisual systems equipment racks, dedicated function and convenience data, display and presentation devices, workstations, computers and peripherals
    - Horizontal structured cabling to meet NEC of NFPA 70 requirements and ANSI/TIA Category 6A standards with Work Area Outlet (WAO's) and modular rack mount patch panels terminated to industry standard keystone format jacks and openings. Cable jackets to be blue. Pair color code to ANSI TIA T568A unless otherwise directed by the Library's Representatives.
    - Select jacket type for conformance with the California Electric Code.
    - Unless otherwise noted, WAO's shall have at least two jacks/cables each.
    - Test all Structured Cabling installed under the work project in accordance with ANSI-J-STD-607-D using a meter meeting Level IIIe standards as defined in ANSI/TIA-1152 and with current calibration. Provide electronic copies of the test reports demonstrating passing cabling to the Library.
  - Cable Labeling
    - Conform with ANSI/TIA 606-C and the Sonoma County Library's standards in providing the required cabling numbering and labeling of Work Area Outlets,

Horizontal and Backbone Cabling, Patch Panels, Racks, Ground Bars, Pathway, Terminal Blocks and related Structured Cabling Infrastructure.

- Communications Interior Pathway
  - Unless otherwise noted, WAO's to terminate in 2-1/8" deep, 5S backboxes minimum.
  - Provide communications interior pathway sized for 25% fill maximum at concealed locations, including in wall and at exposed ceiling conditions, where they occur. "Ring and string" cabling placement of cabling in wall cavities without conduit not permitted. J-hook cabling support in areas exposed to view by staff or public not permitted.
  - At accessible above ceiling areas, provide J-hook support for cable bundles of 20 or fewer cables. For larger cable bundles at accessible ceiling areas, provide basket tray support.
  - Floor boxes to place devices recessed below the floor line, with metal, non-skid lids and meeting UL 514C scrub water protection. Floor boxes and pokethru's placing data and/or AV devices exposed to surface of floor not acceptable.
- Bonding
  - Bond communications infrastructure in accordance with the most restrictive of the CEC and ANSI/TIA-607-D 2019.

- **Wi-Fi**
  - Design to provide for ubiquitous IEEE 802.11 AX networking throughout the Library's interior and at the occupied upper-level exterior areas and on site in the vicinity of the Library, including designated outdoor gathering areas using Library staff and patron cell phones, laptops and tablets and the Wi-Fi infrastructure installed by the Project. Design-Builder's design to utilize a three-dimensional enterprise wireless prediction methodology equivalent to the planning manager in Ekahau Pro to locate access points (AP's). Contractor's WiFi design shall be prepared by an individual trained and holding current certification equivalent to that of an Ekahau Certified Survey Engineer (ECSE) for the planning tooled used by the Contractor. Contractor's design to incorporate County of Sonoma's standard Cisco AP antenna characteristics and Cisco's best practices design recommendations as expressed in the Ekahau design software.
  - WAO's for Wi-Fi AP's to be provided with two jacks/cables each.
  - Access points and POE network switches are County of Sonoma furnished and installed using the infrastructure provided by the Design-Builder.
- **Electronic Security Systems**
  - Access Control Systems
    - Provide access control based on County Library standard cards, fobs and compatible card readers interfaced to County Library standard Avigilon brand/Mercury Security manufactured access control panels provided under the work of the Project. Design-Builder to determine the type of access control credentials required to match existing County Library standards. The County Library operates an existing Avigilon access control headend database server. Design-Builder to coordinate commissioning of the access control system with the County Library including demonstrating local control of the door openings and complete interconnection of the installed access control panels with the County Library Avigilon headend.

- All card readers and electronic security system devices shall be hard-wired type, not wireless, Software House brand
- Each access-controlled opening should be provisioned with a door position switch, and electronic lock with either an integral REX microswitch or the opening shall be provisioned with an independent head of door infrared based REX detector.
- The access control design and system should enable the County Library to selectively implement varying levels of restrictions at controlled door openings based on time of day of week.
    - Provide card reader control of the exterior doors of the building.
    - At main entry doors providing ADA compliant accessibility, access control should be integrated with the design of the powered operators to ensure operator actions cannot be initiated until a valid card has been detected.

- Access Controlled Openings at the Interior: Interior doors to the selected rooms at the interior, including the AMH room, the Telecommunications rooms and similar sensitive high-value spaces within the buildings should be provisioned with card readers. Where Interior doors are intended to separate the patrons from the Library staff space, card reader based access control to be provided. The Design-Builder to determine where interior access controlled openings are required to meet the Library's space program and intended usage.
- Intrusion Detection Systems
    - Provide a commercial multi-zone burglar alarm panel (Bosch G series or equivalent) with an SIA standard monitoring interface suitable for remote monitoring by the Library's selected Central Station provider. System to provide flexible scheduling and arming, include the ability to arm/disarm automatically through integration with the access control system. Provide with zone count and field devices as appropriate to exposure of building's design and Library's intended hours of occupancy, public/after-hours programs and provisions for building cleaning. Design-Builder to determine alarm panel, zoning and field devices to be provided in response to the above requirements. Provide casework mounted duress alarms at public service counters.
    - Intrusion Detection Panel to utilize Verizon Cellular LTE as a backup alarm circuit in lieu of a POTS (telephone) connection.
- Video Surveillance Systems
    - Video Surveillance shall provide uniform coverage of all entrances and the exterior building perimeter. Multi-imager cameras can be used in lieu of multiple single imager cameras to provide the required coverage.
        - Cameras to be located within 11-14 feet above finish floor/grade in the area of observation.
        - Exterior cameras to be located at where not readily subject to vandalism due to adjacent opportunities for climbing/access.
        - Cameras shall be Hanwha Vision NDAA approved and compatible with Ocularis system
    - Minimum Camera functionality:

- Minimum resolution: Not less than 3 Megapixels per imager. Select cameras to provide minimum pixel density in each area of coverage as follows:
  - Entries: 75 pixels/foot (identification) at farthest point of view.
  - Building perimeter (recognition): 20 pixels/foot
- Minimum frames per second: Not less than 15 frames per second (fps) on motion detection.
- Minimum illumination to produce a useable picture through the VMS system, including infrared/night vision
- Not more than 0.09 lux at 1/30s shutter, no sens up allowed.
- Camera to provide mechanical cut filter.
- At cameras facing glass doors to the exterior, with a view to exterior windows or other sources of varying light, provide with Wide Dynamic Range (WDR) compensation, 100 dB min.
- Video Codec: Provides H.265 compression minimum.
- Lensing. Provide with varifocal lens or fixed zoon lensing to suit proposed field of view.
- Focus. Provide and implement manual focus at time of installation. Camera to support remote autofocus or auto backfocus to permit accommodation of changes over time.
- Vandal resistant construction at exterior: IK10 minimum.
- At exterior locations with minimal night lighting, cameras to be selected with integral IR illuminators.

- Station cabling to support TCP/IP cameras to be ANSI/TIA Cat 6A category cabling installed using means and methods as outlined under the Structured Cabling section. To ensure long-term maintainability of the system each cable used for TCP/IP cameras shall be terminated at a surface mounted biscuit box placed internal to the rough-in for the camera and a patch cord shall be extended from the permanently installed surface mount box to the camera network port. It shall not be permitted to terminate RJ45's directly on the ends of the installed permanent link station cabling.
- POE network switches are County Library furnished.
- Video Management System. Provide Video Management Server (VMS) with an initial 60 days of storage calculated assuming 40% activity (motion present 40% of period) and 15 frame per second motion recording on the installed cameras. Design-Builder to determine the brand of VMS to be provided based on the standard used at other County Libraries.

- Broadband/Franchise Television
  - Provide pathway, amplification, and distribution of AT&T and (1) additional TV provider from MPOE to tuners located within AV program spaces as indicated below. Provide pathway from carrier demarc(s) to MPOE.
- Room Scheduling

        - Provide pathway, cabling, touch screen panels and commissioning of room scheduling system compatible with City's calendaring software.
    - Public Address: Provide Building-wide Public Address System. PA system may include talkback/2-way communication, VOIP and/or station microphone(s) origination. Design-Builder to coordinate final scope with owner.
- **Doors and Windows**
    - **Automatic roller shades at all exterior windows; controls centralized and accessible only to staff
    - Insect screens at all operable windows
    - Stainless steel push and kick plates at all doors
    - Minimum 36" x 84" door clear opening
- **Signage**
    - Code-required signage, including emergency egress, room ID, restroom, and parking/directional. Include required contrasting lettering and braille.
- **Exterior**
    - Lighted monument sign, address sign, electronic messaging sign at Dutton Ave frontage
    - Lockable, post-mounted mailbox
    - Lighting for parking areas, outdoor walkways, outdoor plaza areas
    - Building-mounted lighting for egress lighting levels
    - Full cutoff exterior lighting to mitigate light pollution and trespass
    - Fire hydrant, backflow preventor, and FDC to be located per Santa Rosa Fire Department requirements.
    - Demonstration Garden in proximity to, and with access from, the Children's Library
    - Exterior overhangs are preferred, of a size that would allow for functional outdoor program space shaded from sun and rain.
    - A "social slope" is included in the criteria drawings for reference. The Library desires a dynamic and engaging outdoor social space that could accommodate multiple types of programming.
- **Marketplace/Popular Collections**
    - Minimum 30' x 30' grid of multi-service power/and data capable recessed floor boxes. Each floor box to have at least one WAO with 2 jacks/cable in the low voltage compartment. Data pathway to each box to be individually run, not daisy-chained. Each floor box provided with a duplex receptacle.
    - Motorized security grille: 6'H (bi-parting, lockable), Lawrence Doors LT Series or equal shall be provided to allow for the Lobby, Community Room, Maker Space, and Restrooms to be operated after hours when the rest of the Library is closed.
    - Flooring: polished concrete
    - Decorative accent and general illumination light fixtures
    - Stack lighting at stacks over 48" high
    - Ceiling: **9wood slat system or equal. NRC 1.0 acoustical material behind slats, with adequate slat spacing that the acoustical absorption remains effective.
    - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
    - The reverberation time in the room shall not exceed 1.0 seconds for the 500, 1000, and 2000 Hz octave bands.
    - **Acoustical wall panels from 48" AFF to 96" AFF, NRC 1.0, 2" thick fabric-wrapped.

  - Provide power to photo copiers.
  - Minimum twenty (20) wall mounted receptacles with USB outlets.
- **Community Room**
  - Minimum nine (9) multi-service (class divided) power/and data capable recessed floor boxes – coordinate placement and type selected for each location with the Library to support flexibility in future usage. Each floor box to have at least one WAO with 2 jacks/cable in the low voltage compartment and duplex power in the power compartment. Data pathway to each box to be individually run, not daisy-chained. At least one multiservice power/data/AV capable floor box with device compartment depth to accommodate AV transmitters necessary to meeting AV presentation functionality. Floor box to have at least one WAO with 4 jacks/cable in the low voltage data compartment. Floor boxes to have at least one empty module with conduit and pull string run to adjacent accessible ceiling for future expansion.
  - Power and data circuits to projectors.
  - Power and data circuits to wall mounted monitors.
  - Minimum twelve (12) wall mounted receptacles with USB ports.
  - Two (2) GFI Receptacles at counter tops.
  - Power and water to refrigerator.
  - Multi-layered lighting approach with general, decorative, and accent lighting.
  - AV systems in Community Room shall be oriented to face West (long) wall of room. "Front of Room" below refers to this wall. Provide infrastructure for the following:
    - Seismically certified 4-post equipment rack(s) located with code-required front- and rear-clearances to accommodate systems described below.
    - Front of Room Presentation Lectern
    - Accessibility code compliant stowable Front of Room Presentation Lectern presentation lectern
    - Large-capacity flush in-slab floorbox(es) with class separations and 12-gang spaces to accommodate AV, power, and data.
    - Floorbox Lid to include cable-pass-thru to allow lid to remain closed during use, and an appropriate means to match/incorporate floor finish. Floorbox location(s) to coordinate with preferred furniture configurations [to be determined by Owner].
    - Detachable loomed umbilical of AV cabling capable extending from floorbox jacks to Presentation Lectern surface.
    - Front of Room Display System sized appropriately for preferred seating and furniture configurations [to be determined by Owner].
    - Supplemental (e.g. side/rear wall) displays to facilitate sight lines for preferred seating and furniture configurations [to be determined by Owner].
    - Ceiling/pole mounted hi-lumens DLP projector projector and flush in-ceiling motorized retractable projection screen, flat panel display(s), flat panel array(s), or a combination thereof sufficient to provide good legibility to all seated positions in room, i.e. height of nearest display is no less than 0.2 (1/5) the distance to viewers' eyes.
  - Media Connectivity and Routing
    - Matrix or IP switching of digital media up to 4k 4:4:4 with stereo embedded audio.

- Inputs for 4k HDMI with embedded audio at Presentation Lectern floorbox
- Input for 4k HDMI with embedded audio at least one (1) location on wall
- Wireless collaboration/casting receiver with moderation, e.g. Crestron Airmedia, Extron Sharelink.
- Broadband Tuner(s) in quantity [to be determined by Owner]
- Network –accessible recorder/archiver/streamer for Brown Act recording.
- Video output format compatibility with/ and video output formatted for consumption by City (E) iCompass legislative meeting management and YouTube streaming platform
- Signal extenders for video, audio, USB, control as required.
- TCP/IP and RG-6 coaxial connections at all display monitors

- Video Teleconferencing
  - In-ceiling microphone array
  - (2) PTZ cameras, one to capture presenter, one to capture audience.
  - Multi-window compositor to reduce (2) camera views to single video window
  - Integration of City-furnished (OFE) computer for teleconferencing
  - Means (“bridge”) to allow peripherals above for use with OFE Computer video-conferencing or with “bring your own device” laptop video-conferencing.
  - Keyboard/Mouse signal (e.g. USB) extenders for control of OFE computer at Presentation Lectern Position or other location within room, as required by City
  - Power to PTZ Cameras.
- Audio
  - (8) each wireless handheld and body-worn lavalier and wireless handheld microphones and associated wireless receivers, antennae, and antenna distribution
  - Serial/IP controllable multichannel digital programmable audio Digital Signal Processor (DSP)
  - Breakout of embedded audio from video sources
  - 8-ohm wall-mounted and 70v in-ceiling loudspeakers and associated amplification
  - Assistive Listening transmitter, antenna and receivers
  - Shunting of in-room audio in the event of fire event or all-call priority (override) audio from building-wide PA
- Control
  - Programmable Control Processor with IP/Serial and contact closure
  - Touch-screen control surfaces at Presentation Lectern, AV Racks, and at least (1) location on wall
  - Network switches and PoE+ for Control network and media endpoint transceivers
  - Incorporation of recalling presets from Lighting Control Panel and Shade Control Panel, if any
- Provide WAO with 6 jack/cables minimum at AV rack. Direct/indirect general illumination lighting fixtures
- Casework: plywood construction, AWS custom grade, laminate-clad base cabinets with solid surface countertop and undermount stainless steel sink
- Interior aluminum storefront with ¼” glass infill

  - Flooring: engineered wood; basis of design: Nydree Maple or equal
  - Acoustical wall panels, NRC 1.0, 2" thick fabric-wrapped; Conwed Respond A or equal, placed as required to meet acoustic goals.
  - NRC 1.0 acoustically absorptive ceiling.
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
  - The reverberation time in the room shall not exceed 1.0 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Maker Space-**
  - Minimum nine (9) multi-service (class divided) power/and data capable recessed floor boxes. Each floor box to have at least one WAO with 2 jacks/cable in the low voltage compartment and GFI duplex power in the power compartment. Data pathway to each box to be individually run, not daisy-chained.
  - At least one multiservice power/data/AV capable floor box with device compartment depth to accommodate AV transmitters necessary to meeting AV presentation functionality. Floor box to have at least one WAO with 4 jacks/cable in the low voltage data compartment.
    - Sway bracing is provided at suspended equipment utilizing ~12GA steel wires or metal studs to prevent the suspended equipment from pounding into walls and ceilings and eventually losing gravity support causing a falling hazard.
  - Provide seismically certified wall or floor mounted AV equipment rack sufficient to accommodate equipment supporting the systems described below
  - Provide dedicated power outlets and circuits at all equipment racks.
  - Display System
    - (2) wall-mounted flat panel displays, 80" diagonal class or larger, with mounting brackets and class-separated multi-gang recessed backboxes, e.g. FSR PWB-100
  - Media Connectivity and Routing
    - Matrix or IP switching of digital media
    - (2) wall-mounted inputs for 4k HDMI with embedded audio
    - Wireless collaboration/casting receiver with moderation, e.g. Crestron Airmedia, Extron Sharelink.
    - Broadband Tuner
    - Signal extenders
  - Video Teleconferencing
    - Ceiling microphone array
    - (1) PTZ camera to capture a presenter
    - (1) ceiling-mounted document camera with 30x or more zoom
    - Multi-window compositor to reduce (2) camera views to single video window
    - Signal converters and USB-HUB to convert and consolidate peripherals for use with "bring your own device" laptop
    - Zoom compatibility
    - Power circuits to PTZ cameras and document cameras.
  - Audio
    - (1) each wireless handheld and body-worn lavalier and wireless handheld microphone and associated wireless receiver, and antenna
    - Breakout of embedded audio from video sources

        - 70v in-ceiling loudspeakers and associated amplification
        - Assistive Listening transmitter, antenna and receivers
        - Shunting of in-room audio in the event of fire event or all-call priority (override) audio from building-wide PA
    - Control
        - Programmable Control Processor with IP/Serial and contact closure
        - Touch-screen control surface at (1) location on wall
        - Network switches and PoE+ for Control network and media endpoint transceivers
        - Incorporation of recalling presets from Lighting Control Panel and Shade Control Panel, if any
    - Provide WAO with 4 jack/cables minimum at AV rack.
    - Casework: plywood construction, custom grade, laminate-clad base cabinets with solid surface countertop and undermount stainless steel sink
    - Direct/indirect general illumination lighting fixtures, and undercabinet lighting.
    - Interior aluminum storefront with ¼" glass infill
    - Flooring: polished concrete
    - NRC 1.0 acoustically absorptive ceiling.
    - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-40 or 45 dBA.
    - The reverberation time in the room shall not exceed 1.2 seconds for the 500, 1000, and 2000 Hz octave bands.
    - Minimum (16) wall mounted receptacles with USB ports.
    - Minimum eight (8) ceiling mounted pull down drop cords with 120 volt receptable.
    - Four (4) above counter mounted GFI receptacles.
    - Power to all equipment including 3D Printers.
- **Adult Library**
    - Minimum twelve (12) multi-service (class divided) power/and data capable recessed floor boxes. Each floor box to have at least one WAO with 2 jacks/cable in the low voltage compartment and duplex power in the power compartment. Data pathway to each box to be individually run, not daisy-chained.
    - Minimum ten (10) power locations around the perimeter for convenience; include USB ports at power receptacles.
    - Minimum ten (10) WAO's with 2 jacks/cables distributed around the perimeter for convenience and future portable kiosk positions.
    - Direct/indirect general illumination lighting fixtures and undercabinet lighting.
    - Stack lighting at stacks over 48" high.
    - **Acoustical wall panels, 2" thick fabric-wrapped; Conwed Respond A or equal placed as required to meet acoustic goals.
    - Flooring: carpet tile; basis of design: Shaw ST392, 9" x 36" or equal
    - NRC 1.0 acoustically absorptive ceiling.
    - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
    - The reverberation time in the room shall not exceed 1.0 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Teen Library**

  - Minimum six (6) multi-service (class divided) power/and data capable recessed floor boxes. Each floor box to have at least one WAO with 2 jacks/cable in the low voltage compartment and duplex power in the power compartment. Data pathway to each box to be individually run, not daisy-chained.
  - Minimum ten (10) power locations around the perimeter for convenience; include USB ports at power receptacles
  - Minimum five (5) WAO's with 2 jacks/cables each, distributed around the perimeter for convenience.
  - Direct/indirect general illumination lighting fixtures
  - Stack lighting at stacks over 48" high.
  - **Acoustical wall panels, 2" thick fabric-wrapped; Conwed Respond A or equal placed as required to meet acoustic goals.
  - Flooring: carpet tile; basis of design: Shaw ST392, 9" x 36" or equal
  - NRC 1.0 acoustically absorptive ceiling.
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
  - The reverberation time in the room shall not exceed 1.0 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Children's Library**
  - Minimum eight (8) multi-service (class divided) power/and data capable recessed floor boxes. Each floor box to have at least one WAO with 2 jacks/cable in the low voltage compartment and duplex power in the power compartment. Data pathway to each box to be individually run, not daisy-chained.
  - Minimum ten (10) power locations around the perimeter for convenience; include USB ports at power receptacles
  - Minimum five (5) WAO's with 2 jacks/cables each, distributed around the perimeter for convenience.
  - Direct/indirect general illumination lighting fixtures
  - **Acoustical wall panels, 2" thick fabric-wrapped; Conwed Respond A or equal placed as required to meet acoustic goals.
  - Flooring: carpet tile; basis of design: Shaw ST392, 9" x 36" or equal
  - NRC 1.0 acoustically absorptive ceiling.
  - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
  - The reverberation time in the room shall not exceed 1.0 seconds for the 500, 1000, and 2000 Hz octave bands.
  - Access to secured outdoor area is preferred.
- **Group Study Rooms**
  - Minimum four (4) power receptacles with USB ports.
  - Minimum one WAO with two (2) jacks/cables.
  - Provide dedicated power and data for wall-mounted displays.
  - Display System
    - (1) wall-mounted flat panel display, 55"-65" diagonal class, with mounting bracket and class-separated multi-gang recessed backbox, e.g. FSR PWB-100
  - Media Connectivity and Routing
    - (1) wall-mounted inputs for 4k HDMI with embedded audio

        - Signal extenders
    - Control
        - Programmable Control Processor with IP/Serial and contact closure
        - Pushbutton (RS232) AV controller at (1) location on wall
    - Direct/indirect general illumination lighting fixtures
    - Interior aluminum storefront with ¼" glass infill
    - Flooring: carpet tile; basis of design: Shaw ST389, 24"x24" or equal
    - NRC 0.80 acoustically absorptive ceiling.
    - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
    - The reverberation time in the room shall not exceed 0.8 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Conference Rooms**
    - Coordinate FF&E furniture design with the Library. Where furniture is to located in middle of room, provide:
        - Minimum one (1) multi-service (class divided) with dublex power/and data capable recessed floor box. Floor box to have at least one WAO with 2 jacks/cable in the low voltage compartment and duplex power in the power compartment. Quantity of floor boxes to be based on CEC code requirements with one minimum floor box.
        - At least one multiservice power/data/AV capable floor box with device compartment depth to accommodate AV transmitters necessary to meeting AV presentation functionality. Floor box to have at least one WAO with 4 jacks/cable in the low voltage data compartment, and one power duplex receptacle.
        - Minimum four (4) wall mounted receptacles with USB ports.
    - Provide seismically certified wall or floor mounted AV equipment rack sufficient to accommodate equipment supporting the systems described below
    - Display System
        - Wall-mounted flat panel display,65"- 80" diagonal class with mounting bracket and class-separated multi-gang recessed backbox, e.g. FSR PWB-100
    - Media Connectivity and Routing
        - Presentation Switch or IP switching of digital media
        - (1) inputs at floorbox for for 4k 4:4:4 HDMI with embedded audio
        - Wireless collaboration/casting receiver with moderation, e.g. Crestron Airmedia, Extron Sharelink.
        - Signal extenders
    - Video Teleconferencing
        - Ceiling or table microphone array
        - (1) conferencing camera
        - Signal converters and USB-HUB to convert and consolidate peripherals for use with "bring your own device" laptop
        - Zoom compatibility
    - Audio
        - 70v in-ceiling loudspeakers and associated amplification
        - Assistive Listening transmitter, antenna and receivers

        - Shunting of in-room audio in the event of fire event or all-call priority (override) audio from building-wide PA
    - Control
        - Programmable Control Processor with IP/Serial and contact closure
        - Touch-screen control surface at table with connection at floorbox below
        - Network switches and PoE+ for Control network and media endpoint transceivers
    - Where furniture is located against wall, provide equivalent functionality at wall(s).
        - Provide WAO with 4 jack/cables minimum at AV rack.
    - Direct/indirect general illumination lighting fixtures
    - Interior aluminum storefront with ¼" glass infill
    - NRC 1.0 acoustically absorptive ceiling
    - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-30 or 35 dBA.
    - The reverberation time in the room shall not exceed 0.6 seconds for the 500, 1000, and 2000 Hz octave bands.
- **Sound Studio**
    - Minimum eight (8) IG Isolated Ground power receptacles
    - Minimum four (4) WAO each with two (2) jacks/cables
    - Flooring: carpet tile
    - Wall finish: painted GWB with 2" thick acoustic wall panels on all walls from 24"-96" AFF, or as necessary to achieve the required reverberation time.
    - NRC 1.0 acoustically absorptive ceiling with acoustic batts laid above
    - The noise level in the unoccupied room due to mechanical equipment or regular building operation shall not exceed NC-25 or 30 dBA.
    - The average reverberation time in the room shall not exceed 0.4 seconds. Reverberation time shall not deviate from the average by more than ±0.1 seconds for frequencies between 250-4000 Hz. Direct/indirect general illumination lighting fixtures
    - All studio walls shall be STC-55 or greater; studio windows and doors shall be STC-50 or greater.
    - HVAC duct penetrations through studio walls shall include a acoustical silencers designed to maintain specified sound isolation and interior room noise levels.
    - AV Panel with IG ground
- **Staff**
    - Installed power connections to a minimum of twelve (12) OFOI workstations, integrated into systems furniture.
    - Provide minimum three WAO's with 4 jacks/cables each and one wall phone plate (630A type) in stainless steel with one cable/jack for use with Library supplied instrument at designated copier/workroom locations.
    - Provide open plan furniture WAO flush in systems furniture with 2 jack/cable minimum at each of twelve (12) workstations. Provide protected data pathway from floor or where furniture adjacent to wall, from wall, and fully integrated into systems furniture low voltage class divided pathway.
    - Two (2) automated in-wall book drops, integrated into Automated Materials Handling (AMH) system, with dedicated power and data connections. Provide data WAO's'in

quantities and at locations as required by the AMH manufacturer's design guidelines and it representative. Direct/indirect general illumination lighting fixtures
    - Power to all AMH system equipment.
    - Provide dedicated panel for AMH system.
    - Flooring: carpet tile; basis of design: Shaw ST389, 24”x24”
    - Interior aluminum storefront with ¼” glass infill
    - NRC 1.0 acoustically absorptive ceiling.
    - The noise level in the unoccupied room due to mechanical equipment or regular building operation will not exceed NC-40 or 45 dBA.
    - The reverberation time in the room will not exceed 0.8 seconds for the 500, 1000, and 2000 Hz octave bands.
    - Minimum twelve (12) wall mounted receptacles with USB ports.
    - Private offices five (5) wall mounted receptacles with USB ports.
    - Dedicated power circuits to photocopiers.
    - Break room four (4) above counter GFI receptacles on dedicated circuits, and power to kitchen appliances.
    - Direct/indirect general lighting and undercabinet lighting.
- **All-Gender Restrooms**
    - Solid surface countertop, undermount lavatory sink, wall-mount water closet, tiled walls to 84” AFF.
    - Toilet room accessories, including: toilet tissue dispenser, paper towel dispenser, sanitary napkin disposal, sanitary napkin disposal, toilet seat cover dispenser, waste receptacle, soap dispenser, hand dryer, grab bars at accessible water closet
    - Full-height, gap-free, Compact Grade Laminate (CGL) toilet compartments. Dedicated lighting, sprinklers, and exhaust required for each compartment. Basis of Design: Bobrick Evolve or equal
    - Automatic hard-wired operation of water closets, urinals, sinks, soap dispensers, paper towel dispenser.
    - Vanity lighting and general illumination recessed cans
    - Flooring and Base: porcelain tile
    - Family Restrooms shall be outfitted with changing stations
    - The noise level in the unoccupied room due to mechanical equipment or regular building operation will not exceed NC-40 or 45 dBA.
    - One (1) GFI receptacle adjacent to sink area.
    - All-gender restrooms are required.
- **Telecom Room/MDF**
    - Provide a backboard space for carrier Entrance Facility (EF)/Minimum Point of Entry (MPOE). The purpose of this space will be to provide a dedicated room where the carriers can terminate their entrance cabling.
    - The room will also serve as a Main Distribution Facility (MDF) for all horizontal station cabling in the building. It should be located so as required to comply with ANSI/TIA-568-D requirements of a maximum cable length to 295 feet from patch panel to the farthest faceplate (WAO).
    - Provide two post relay racks in quantity as required to terminate the station cabling of the building with not more than 200 station cables terminating in a single rack on 48 port 2U

modular patch panels with 2U horizontal wire management provided above and below each patch panel.

- Each relay rack to be 7 foot tall (at least 43 RU) with vertical rails and threaded holes at ANSI 310-D on center spacing to support use of 19 inch equipment, patch panels and similar. Racks to have a seismic (dynamic) load rating of at least 900 pounds supported by NEBS GR-63-Core dynamic testing or equivalent means provided by the manufacturer. Between each rack and at the end of each row of racks provide vertical wire managers that are at least 10 inch wide and 19 inches deep, with hinged cover doors that swing in either direction and with continuous fingers permitting cabling to enter the sidewalls of the manager.

- Provide a four-post cabinet to hold the Video Management headend as described under Electronic Security Systems herein below. This cabinet to also be 7' tall with integral vertical wire managers and identically seismically qualified as for the relay racks, but with a footprint of at least 42" deep and 30" wide (including integral vertical wire managers and a dynamic (seismic) load rating of 1100 pounds. The cabinet mounting rails to have DIN square hole openings in the front and rear mounting rails on EIA 310-D centers.
- All interior walls of the MDF to be treated with ¾" minimum fire treated plywood backboard from +6" to 8-6" AFF.
- MDF room size. Room to be sized to accommodate placement of racks in a single row, with front, rear and side clearance to meet the requirements of the CEC and OSHA, including not less than 36" front clearance from the front face of the racks, 50" rear clearance from the rear face of the relay racks prior to rack mount equipment installation and 30" net rear clearance behind the 4 post cabinet and 30" side clearance at at least one ends of rack row, including the specified vertical wire management, plywood backboard, space for carrier termination, and any project provided backboard mounted electronic security system panels.
- Provide overhead cable tray system type NEMA 12B sized for 30% fill at opening with waterfall dropouts at equipment racks to maintain cabling bend radius.
- Provide dedicated HVAC cooling and exhaust designed to protect the MDF equipment to ASHRAE TC9.9 standards 24x7x365. Dedicated split-system cooling, ductless fan coil, and exhaust on emergency power. Design room for 81ºF setpoint at inlet to equipment for energy conservation.
- Provide two locking power receptacles on dedicated circuits above each equipment rack, each at least L5-20R or required by the load.
- Arrange surface or pendant mounted general lighting to light the front and rear faces of the equipment racks and backboards.
- Ground bus with grounding conductor to main switchboard
- Minimum eight (8) wall mounted receptacles on dedicated circuits.

- **Building Systems Room**
  - Dedicated HVAC cooling and exhaust
  - Fire-rated construction as required
  - Inverter for solar array
  - Inverter for backup lighting
  - Controls for irrigation
  - Minimum one WAO with not fewer than 6 jacks/cables.

  - Four (4) duplex receptacles.
  - Surface or pendant mounted general lighting.
- **Janitor**
  - Stainless steel or terrazzo floor-mounted service sink with wall mounted faucet, integrated bucket holder, brace and hose holder.
  - Stainless steel shelving for equipment and cleaning products
  - Flooring: sealed concrete
  - Walls: resilient sheet to 96" AFF
  - Minimum two (2) power receptacles.
  - Surface or pendant mounted general lighting.
- **Roof**
  - Roof: Single-ply membrane roof with premolded penetration flashings and/or
  - prefinished galvanized steel standing seam roof panels, matching fascia and trim
  - Prefinished galvanized steel copings and flashings
  - Rooftop HVAC units with required seismic and acoustic vibration isolation
  - Screening for HVAC units with minimum 48" working clearance; perforated prefinished exposed fastener metal panels, <50% openness
  - Roof hatch or exterior roof access ladder, lockable
  - Fall arrest anchors rated for 5000 lb will be required at the high roof. No such anchors are required if parapets are provided on low roofs that are minimum 3'-6" tall and serve as the fall protection mechanism.
  - Solar photovoltaic array and battery storage with minimum capacity calculated per Title 24, for new Library Building. Solar panels to be roof mounted. Battery system to ground mounted and installed outside and away from the building.
- Minimum four (4) roof mounted GFI receptacles.
- Wall mounted full cutoff downlight luminaires at mechanical enclosure.
- Social Stair
  - Accessible sloped ramps and landings meeting all ADA requirements.
  - Pedestrian stairs
  - Seat walls with seat platform 18" AFF
  - All components to be cast-in-place concrete
  - **weather-resistant hardwood or comparable seat finish
  - Planted areas as appropriate

APPENDIX: Community Outreach Round 1 Results

COMMUNITY OUTREACH

June 14 – July 9, 2023 (close date)

Over **892** community members participated through:

- Online Survey
- 2 iPad Kiosks
  - Roseland Regional Library
  - Finley Community Center
- Popup Kiosk
  - 6/21, Wednesday Night Market
  - 6/29, Mitote Food Park
  - 6/29, Roseland Library Program
- Community Meeting
  - 6/27, Virtual
  - 6/29, Roseland Elementary

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OUTREACH TAKEAWAYS

1: LIBRARY PROGRAM CONFIRMED

- Consider the Outreach results for the Meeting Spaces vs. Provisions (value in making them flexible spaces)

2: AQUATICS AT SOUTHWEST COMMUNITY PARK

- Larger facility
- Competition-hosting capabilities (8 lanes)
- Meet community priority in best available way

3: CULTURAL/REC CENTER TO INCLUDE GYM

- 20,000-26,000 SF size to be determined by budget
- Community's Top 4 program priorities and preferred community space work with - multi-purpose event and sport space (gymnasium)
- Optimal flexibility to meet community needs

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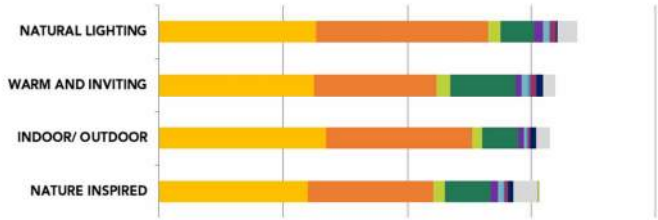
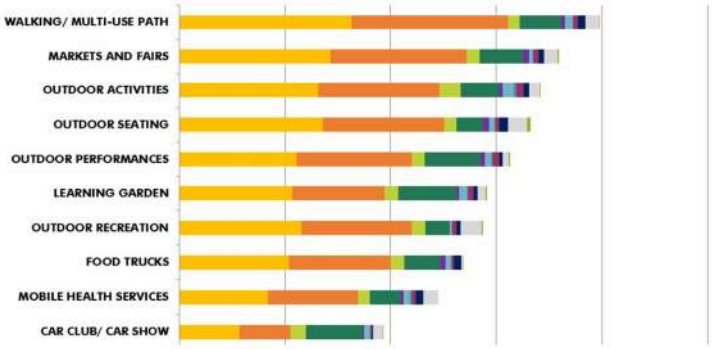
OUTREACH TAKEAWAYS

4: BUILDING DESIGN VALUES

- Top 4 picks



5: SITE OPPORTUNITIES



APPENDIX: Community Outreach Round 2 Results

COMMUNITY OUTREACH

October 9th – October 30th*

*November 9, 2023 (for hard copy surveys and the iPad Kiosks)

Over **596+** community members participated through:

- Online Survey
- 2 iPad Kiosks
  - Roseland Regional Library
  - Finley Community Center
- Popup Kiosk
  - 10/17, Mitote Taco Tuesday
  - 10/28, Roseland Library Program
  - 10/28, Finley Park Trunk-or-Treat
- Community Meeting
  - 10/25, Virtual
  - 10/26, Roseland Elementary

Round 2 Outreach 11/xx/2023
Hearn Community Hub Multicultural Center
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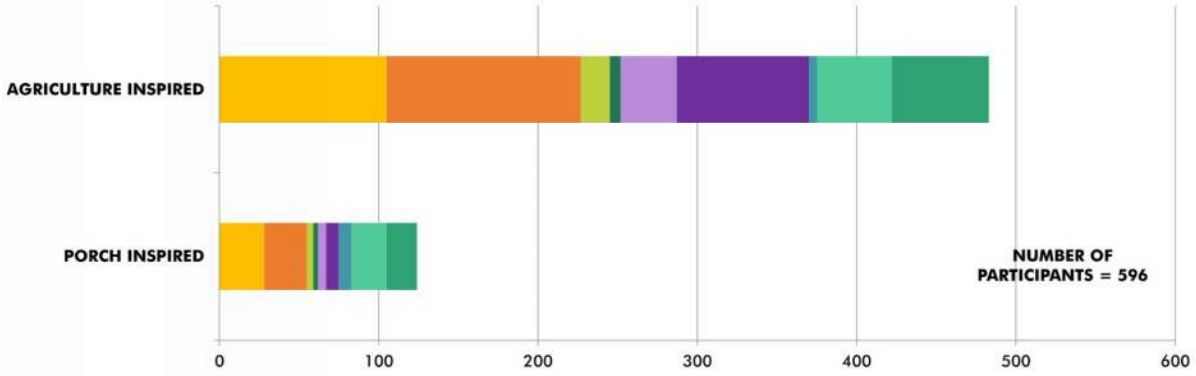
ARCHITECTURE INSPIRATION

Which reflects the values of Roseland and Santa Rosa? Vote for one or both.



- Online Survey + iPad Kiosks (RN)
- Online Survey + iPad Kiosks (SR)
- Hardcopy Surveys (RN)
- Hardcopy Surveys (SR)
- 10/17, Mitote Food Park (RN)
- 10/17, Mitote Food Park (SR)
- 10/25, Virtual Community Mtg
- 10/26, In-Person Commuinity Mtg (combined in 10/28 T or Treat)
- 10/28, Trunk or Treat (RN)
- 10/28, Trunk or Treat (SR)

Round 2 Outreach 11/xx/2023
Hearn Community Hub Multicultural Center
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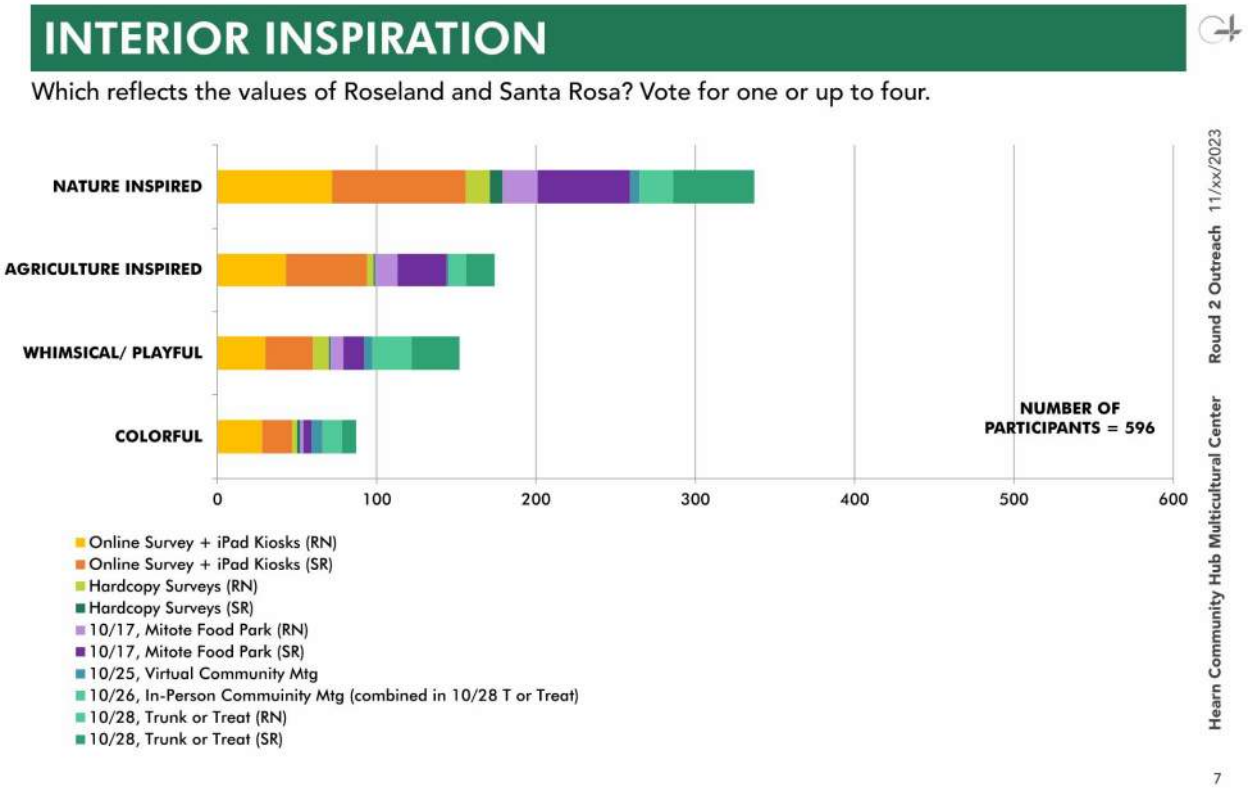
INTERIOR INSPIRATION
Which reflects the values of Roseland and Santa Rosa? Vote for one or up to four.
NATURE INSPIRED
AGRICULTURE INSPIRED
WHIMSICAL/ PLAYFUL
COLORFUL
NUMBER OF PARTICIPANTS = 596
0
100
200
300
400
500
600
Online Survey + iPad Kiosks (RN)
Online Survey + iPad Kiosks (SR)
Hardcopy Surveys (RN)
Hardcopy Surveys (SR)
10/17, Mitote Food Park (RN)
10/17, Mitote Food Park (SR)
10/25, Virtual Community Mtg
10/26, In-Person Commuinity Mtg (combined in 10/28 T or Treat)
10/28, Trunk or Treat (RN)
10/28, Trunk or Treat (SR)
Round 2 Outreach 11/xx/2023
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