APN 007-171-008

IMPROVEMENT PLANS
FOR
INTERIM HOUSING SHELTER SOLUTIONS PROJECT

900 HOPPER STREET
PETALUMA CALIFORNIA

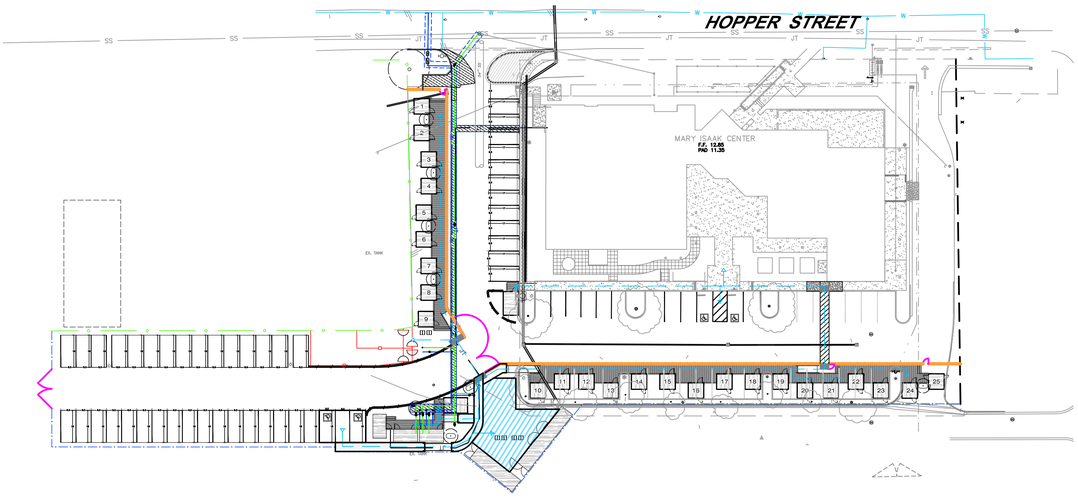
CONSULTANTS

CIVIL ENGINEER LAND SURVEYOR LANDSCAPE ARCHITECT	STEVEN J. LAFRANCHI & ASSOCIATES, INC. STEVEN LAFRANCHI 140 SECOND STREET, SUITE 312 PETALUMA, CALIFORNIA 94952 707.762.3122 VOICE 707.762.3239 FAX steve@sjla.com
ARCHITECT	MAD ARCHITECTURE INC. 12 WESTERN AVENUE, SUITE 2 PETALUMA, CALIFORNIA 94952 707.765.9222 VOICE chrisheath@madarc.com
DRY UTILITIES	BROKAW DESIGN P.O. BOX 3103 ROHNERT PARK, CA 94927 707.799.6822 VOICE courtney.chuenyane@brokawdesign.com

ABBREVIATIONS

AC	ASPHALT CONCRETE	PVC	POLYVINYL CHLORIDE PIPE
APN	ASSESSOR'S PARCEL NUMBER	R.C.E.	REGISTERED CIVIL ENGINEER
BC	BEGINNING OF CURVE	SF	SQUARE FEET
CB	CATCH BASIN	SD	STORM DRAIN
CL, C/L	CENTERLINE	SDMH	STORM DRAIN MANHOLE
COP	CITY OF PETALUMA	SDR	STANDARD DIMENSION RATIO
EG	EXITING GROUND	SDR	STANDARD DIMENSION RATIO
DI	DROP INLET	SS	SANITARY SEWER
FC	FACE OF CURVE	SSCO	SANITARY SEWER CLEAN OUT
FG	FINISH GRADE	SSMH	SANITARY SEWER MANHOLE
FH	FIRE HYDRANT	TC	TOP OF CURB
GV	GATE VALVE	W, WTR	WATER
HP	HIGH POINT	WM	WATER METER
INV, IG	INVERT GRADE	WV	WATER VALVE
JT	JOINT TRENCH		
LF	LINEAL FOOT		

SHEET INDEX



SITE DIAGRAM
SCALE: 1" = 40'

REVISION LOG
2021.11.05 ADDENDA 1
CLARIFICATION & ADJUST FOR COP COMMENTS 1

OWNER / APPLICANT
CITY OF PETALUMA PUBLIC WORKS AND UTILITIES
PROJECT MANAGER, JOSH MINSHALL, SENIOR CIVIL ENGINEER
202 N. McDOWELL BLVD, PETALUMA, CA 94954
707.776.3785 VOICE
jminshall@cityofpetaluma.org

LEGEND

EXISTING	PROPOSED	
		(E) CHAINLINK FENCE – PRIVACY SLATS TO BE ADDED
		NEW CHAINLINK FENCE WITH PRIVACY SLATS
		PROPERTY LINE/RW
		EASEMENT LINE
		CONCRETE
		CURB & GUTTER
		EDGE OF PAVEMENT
		ASPHALT CONCRETE
		ASPHALT / CONCRETE TO BE REMOVED
		PATIO
		ADA WALKWAY
SS	SS	SANITARY SEWER/CLEANOUT
		SANITARY SEWER MANHOLE
		GATE VALVE
		FIRE HYDRANT
W	W	WATER LINE
		WATER METER
		DROP INLET/STORM DRAIN
	JT	JOINT TRENCH
		SURFACE FLOW
		6" ASPHALT DIKE

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

DATE: 11/05/2021 1
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

COVER SHEET

SCALE: AS SHOWN

SHEET
C-1

STANDARD NOTES

1. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE CITY OF PETALUMA STANDARD DETAILS AND SPECIFICATIONS
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS IS BASED ON THE BEST INFORMATION AVAILABLE. THE CITY OF PETALUMA AND THE ENGINEER ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION SHOWN, OR FOR THE INADVERTENT OMISSION OF ANY SUCH INFORMATION.
3. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY COMPANIES AND OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF THIS PROJECT.
4. THE CONTRACTOR SHALL SECURE A TRENCH PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO EXCAVATION OF ANY TRENCH OVER 5 FT. IN DEPTH.
6. WATER MAIN SHALL BE DUCTILE IRON, C151, CLASS 50 MINIMUM OR PVC C900, CLASS 200 MINIMUM.
7. SEWER MAIN SHALL BE PVC SDR-35. SEWER SERVICE LATERAL SHALL BE SAME MATERIAL AS SEWER MAIN.
8. ALL EXCESS TRENCH SPOILS SHALL BE REMOVED FROM THE SITE.
9. PRIOR TO INSTALLATION OF SANITARY SEWER, STORM DRAIN AND WATER, THE CONTRACTOR SHALL UNCOVER AND VERIFY THE LOCATION, SIZE AND DEPTH OF WHERE THESE LINES CONNECT TO THE EXISTING SYSTEMS AND AT ALL CROSSINGS.
10. ANY DISCREPANCY DISCOVERED IN THESE PLANS OR ANY FIELD CONDITIONS DISCOVERED THAT MAY INHIBIT THE PROPER COMPLETION OF THE WORK PER THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY UPON DISCOVERY.
11. CONSTRUCTION CONTRACTOR ASSUMES SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD ENGINEER, OWNER, AND CITY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF ENGINEER, OWNER, AND CITY.
12. LINEAL DIMENSIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE, BASED ON RECORD INFORMATION. CONTRACTOR SHALL INSTALL THE PIPES AS SHOWN, ASSUMING RESPONSIBILITY FOR DETERMINING THE ACTUAL MATERIAL QUANTITIES NEEDED TO COMPLETE THE WORK.
13. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITY COMPANIES 48 HOURS PRIOR TO ANY EXCAVATION SO THAT THEIR LINES CAN BE MARKED.
14. THE ENGINEER AND CITY ACCEPT NO LIABILITY FOR THE EXISTENCE OR NONEXISTENCE OF UTILITIES. CONTRACTOR AND OTHERS USING THIS DRAWING MUST CONFIRM THE LOCATION OF UNDERGROUND LINES OR STRUCTURES WITH THE UTILITY COMPANIES PRIOR TO COMMENCING CONSTRUCTION. CONTACT USA 800-227-2600 FOR MARKING OF UTILITY LINES.
15. CONTRACTOR SHALL PROVIDE TEMPORARY SAFETY BARRICADES AND OTHER PRECAUTIONS FOR PUBLIC SAFETY DURING CONSTRUCTION AS REQUIRED BY THE CITY OF PETALUMA.
16. THE CITY INSPECTOR SHALL BE GIVEN 48 HOURS ADVANCE NOTICE OF ANY CONSTRUCTION.
17. ALL TRENCHES OR HOLE OPENINGS SHALL BE PROTECTED AGAINST CAVE-IN EITHER BY SUITABLE SHORING, CAGES OR PROPER SLOPING.
18. ALL WORK AND EQUIPMENT SHALL COMPLY WITH THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY REQUIREMENTS.
19. VARIANCES FROM CITY OF PETALUMA STANDARDS OR FROM THESE PLANS REQUIRE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
20. ALL NEW STREET CONSTRUCTION, SEWER, WATER AND STORM DRAIN CONSTRUCTION AND OTHER PUBLIC IMPROVEMENTS SHALL BE ACCURATELY LOCATED BY THE CONTRACTOR AND SHOWN UPON THE CONSTRUCTION PLANS. ONE SET OF "AS-BUILT" CONSTRUCTION PLANS SHALL BE RETURNED TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
21. IF A STREET HAS BEEN CUT TO INSTALL UTILITIES OR TO MATCH EXISTING PAVEMENT, THE STREET SHALL BE SLURRY SEALED IN ACCORD WITH STANDARD SPECIFICATIONS OF THE STATE OF CALIF. SECTION 37-2. THE EXTENT OF AREA TO BE SEALED SHALL BE DETERMINED BY THE CITY INSPECTOR.
22. AN ENCROACHMENT PERMIT SHALL BE REQUIRED FOR ALL WORK WITHIN PUBLIC RIGHT OF WAY.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF EXISTING CONDITIONS INCLUDING, BUT NOT LIMITED TO SURFACING, LANDSCAPING AND UTILITIES, DUE TO THE CONSTRUCTION OF TRENCHES. RESTORATION SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF A COMPLETION NOTICE UNLESS OTHERWISE SPECIFICALLY APPROVED IN ADVANCE BY THE CITY OF PETALUMA.

GENERAL NOTES

1. THE PROJECT ENGINEER SHALL HAVE A 48 HOUR NOTICE FOR ANY REQUIRED INSPECTIONS.
2. UNAUTHORIZED CHANGES AND USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
3. THE CONTRACTOR SHALL BE CHARGED FOR THE COST OF ALL LABORATORY AND FIELD TESTS WHERE TEST RESULTS DO NOT MEET SPECIFICATIONS.
4. ROUTES OF INGRESS TO AND EGRESS FROM PROJECT SITE FOR ALL HEAVY CONSTRUCTION VEHICLES SHALL BE FROM CASA GRANDE ROAD AND SHALL BE APPROVED BY THE CITY OF PETALUMA.
5. THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE BEST AVAILABLE INFORMATION, HOWEVER, THE CITY OF PETALUMA, SONOMA COUNTY WATER AGENCY AND THE DESIGN ENGINEER ASSUME NO RESPONSIBILITY FOR THE INADVERTENT OMISSION OF ANY SUCH INFORMATION.
6. CONTRACTOR SHALL REPLACE AND REPAIR, AT HIS OWN EXPENSE, DAMAGED, REMOVED OR OTHERWISE DISTURBED EXISTING IMPROVEMENTS.
7. ALL UNUSABLE EXCESS SOIL MATERIAL, STUMPS AND BOULDERS SHALL BE REMOVED AND DISPOSED OFF THE PROJECT SITE.
8. GRADING MUST BE CERTIFIED WHEN COMPLETED BY A CIVIL ENGINEER TO INDICATE COMPLIANCE WITH APPROVED PLANS AND WILL BE REQUIRED PRIOR TO OCCUPANCY.
9. BENCHMARK: TOP OF 2" BRASS DISC & PUNCH IN MONUMENT WELL IN CENTER OF SONOMA MOUNTAIN PARKWAY ROUNDABOUT, ELEVATION = 42.57 NAVD 1988.
10. THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN, ARE THE SOLE PROPERTY OF STEVEN J. LAFRANCHI and ASSOCIATES. UNAUTHORIZED USE, COPYING, DISCLOSURE OR PUBLICATION BY ANY METHOD IS PROHIBITED WITHOUT THE WRITTEN APPROVAL OF STEVEN J. LAFRANCHI and ASSOCIATES. STEVEN J. LAFRANCHI and ASSOCIATES TAKES NO RESPONSIBILITY FOR ANY UNAUTHORIZED DUPLICATION OF INFORMATION THAT MAY APPEAR ON ANOTHER PLAN OR MAP.
11. FIVE HOURS MAXIMUM SHUTDOWN TIME OF EXISTING MAINS WHILE MAKING CONNECTIONS. TWENTY-FOUR (24) HOUR NOTICE OF SHUTDOWN TO BE GIVEN BY SUBDIVIDER TO ALL WATER CUSTOMERS. EXISTING VALVES TO BE OPERATED BY CITY WATER DEPARTMENT PERSONNEL ONLY.
12. WATER SERVICES SHALL BE PLACED OVER THE TOP OF THE UNDERGROUND JOINT TRENCH UTILITIES. WATER SERVICES SHALL NOT BE WITHIN CURB CUTS FOR DRIVEWAYS.

SURVEY NOTES

1. TOPOGRAPHIC INFORMATION SHOWN HERE IS BASED UPON A FIELD SURVEY PERFORMED BY STEVEN J. LAFRANCHI & ASSOCIATES, INC. ON SEPTEMBER 30, 2021.
2. VERTICAL DATUM: NGVD29, BASED ON AERIAL MAPPING PREPARED BY TOWILL, INC. AND IS BASED ON THE CONTROL NETWORK PREPARED BY DAVID L. CRAMER, P.L.S. A LOCAL JOB BENCHMARK HAS BEEN ESTABLISHED ON SITE, BEING A MAG NAIL & WASHER, STAMPED "SJLA CONTROL" AT EDGE OF EXISTING ASPHALT PARALLEL TO SMART RAIL TRACKS, ELEVATION=9.28', NGVD29 DATUM.
3. HORIZONTAL DATUM: RECORD OF SURVEY, FILED IN BOOK 600 OF MAPS, AT PAGE 32, SONOMA COUNTY RECORDS.
4. NO TITLE REPORT WAS REVIEWED IN CONJUNCTION WITH THIS MAPPING. IT IS RECOMMENDED THAT A TITLE REPORT BE RECEIVED FROM THE OWNER TO VERIFY THE EXISTENCE OF ANY ADDITIONAL EASEMENTS OF RECORD OR LOT LINE ADJUSTMENTS THAT MAY HAVE ALTERED THE INFORMATION SHOWN HEREON PRIOR TO ANY DESIGN AND/OR CONSTRUCTION.
5. THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF STEVEN J. LAFRANCHI AND ASSOCIATES, INC. UNAUTHORIZED USE, COPYING, DISCLOSURE OR PUBLICATION BY ANY METHOD IS PROHIBITED WITHOUT THE WRITTEN APPROVAL OF STEVEN J. LAFRANCHI AND ASSOCIATES, INC. STEVEN J. LAFRANCHI AND ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR ANY UNAUTHORIZED DUPLICATION OF INFORMATION THAT MAY APPEAR ON ANOTHER PLAN OR MAP.

GENERAL NOTES (CON'T):

13. ALL WATER MAINS, WATER SERVICES AND SEWER LATERALS REQUIRING RELOCATION SHALL BE ACCURATELY LOCATED BY THE SUBDIVIDER'S CONTRACTOR AND SHOWN UPON THE CONSTRUCTION PLANS. ONE SET OF "DRAWING OF RECORD" PLANS SO MARKED AND CERTIFIED AS TO ACCURACY AND COMPLETENESS BY THE SUBDIVIDER'S CONTRACTOR SHALL BE RETURNED TO THE CITY ENGINEER BY THE SUBDIVIDER.
14. WHERE UTILITIES CROSS UNDER CURBS, THE SUBDIVIDER'S CONCRETE CONTRACTOR SHALL STAMP THE LETTER 'S' ON THE FACE OF CURB DIRECTLY ABOVE THE SEWER LATERAL, 'W' ON THE FACE OF CURB DIRECTLY ABOVE THE WATER SERVICES AND 'B' ON THE FACE OF CURB ABOVE A BLOWOFF OR AIR RELIEF VALVE. LETTERS SHALL BE NEAT, CLEAR AND 4" HIGH.
15. GRADE BREAKS ON CURBS AND SIDEWALKS TO BE ROUNDED OFF IN FORM WORK AND FINISHED SURFACING.
16. INSTALL SIGNING AND STRIPING TO CONFORM TO THE CURRENT EDITION OF THE CALTRANS TRAFFIC MANUAL.
17. TREES TO REMAIN SHALL BE PROTECTED FROM DAMAGE INCIDENT TO SITE PREPARATION AND CONSTRUCTION OPERATIONS BY THE ERECTION OF BARRIERS AT THE DRIP LINE OF SAID TREES. (SEE ARBORIST REPORTS)
18. IT IS THE OWNERS RESPONSIBILITY TO MAKE THESE PLANS AVAILABLE TO ANY DESIGN CONSULTANTS WHO MAY PREPARE ANY ADDITIONAL PLANS (BUILDING, FOUNDATION, ETC.) OR REPORTS WITHIN THE LIMITS OF THIS DESIGN. STEVEN J. LAFRANCHI & ASSOCIATES TAKES NO RESPONSIBILITY FOR CONFLICTS THAT MAY ARISE DUE TO PLANS NOT BEING PROVIDED TO SAID CONSULTANTS. IT IS THE OWNERS AND ALL DESIGN CONSULTANTS RESPONSIBILITY TO CONTACT STEVEN J. LAFRANCHI & ASSOCIATES IF ANY ADDITIONAL PLAN OR REPORT IS PREPARED IN CONJUNCTION WITH THIS PROJECT.
19. ALL CONTRACTORS SHALL BE PROVIDED A COMPLETE SET OF PLANS THAT INCLUDES ALL DRAWINGS AND REPORTS PREPARED BY ALL CONSULTANTS FOR THIS PROJECT FOR THE PURPOSE OF BIDDING AND CONSTRUCTION.
20. STEVEN J. LAFRANCHI & ASSOCIATES, INC. DOES NOT SPECIFY NOR RECOMMEND THE USE OR INSTALLATION OF ANY MATERIAL OR EQUIPMENT WHICH IS MADE FROM, OR WHICH CONTAINS ASBESTOS FOR USE IN THE CONSTRUCTION OF THESE IMPROVEMENTS. ANY PARTY INSTALLING OR USING SUCH MATERIALS OR EQUIPMENT SHALL BE SOLELY RESPONSIBLE FOR ALL INJURIES, DAMAGES, OR LIABILITIES OF ANY KIND, CAUSED BY THE USE OF SUCH MATERIALS OR EQUIPMENT. THE PROVISIONS OF THIS NOTE SHALL APPLY UNLESS THEY ARE EXPRESSLY WAIVED IN WRITING BY STEVEN J. LAFRANCHI & ASSOCIATES, INC. CONTRACTOR SHALL COMPLY FULLY WITH THE REQUIREMENTS OF ASSEMBLY BILL (2040) DAVIS, ASBESTOS.
21. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT STEVEN J. LAFRANCHI & ASSOCIATES, INC. AT (707)762-3122 FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
23. THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXEMPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
24. EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEETED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT ALL EXISTING IMPROVEMENTS OF ANY KIND WILL BE FULLY PROTECTED FROM DAMAGE. ANY DAMAGE RESULTING FROM A LACK OF ADEQUATE SHORING, BRACING AND SHEETING, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HE SHALL EFFECT NECESSARY REPAIRS OR RECONSTRUCTION AT HIS OWN EXPENSE. WHERE THE EXCAVATION FOR A CONDUIT TRENCH, AND/OR STRUCTURE IS FIVE FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING, SHORING AND BRACING OR EQUIVALENT METHOD, FOR THE PROTECTION OF LIFE, OR LIMB, WHICH SHALL CONFORM TO THE APPLICABLE CONSTRUCTION SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA, THE CONTRACTOR SHALL ALWAYS COMPLY WITH OSHA REQUIREMENTS.
25. THE CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS FOR PRIVATE PROPERTY ADJACENT TO WORK THROUGHOUT THE PERIOD OF CONSTRUCTION. THE PROJECT ENGINEER SHALL HAVE TWENTY-FOUR (24) HOUR NOTICE FOR ANY REQUIRED INSPECTIONS. THE CONTRACTOR SHALL CONFIRM THE APPROVAL OF THE HAUL ROUTE FOR ALL MATERIALS TO AND FROM THE PROJECT WITH THE CITY ENGINEER PRIOR TO ISSUANCE OF AN ENCROACHMENT PERMIT.
26. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGGERS OR OTHER DEVICES NECESSARY TO PROVIDE FOR SAFETY.
27. ANY EXTRA CONSTRUCTION STAKING NECESSITATED SOLELY BY THE CONTRACTOR'S NEGLIGENCE WILL BE CHARGED TO THE CONTRACTOR ON A TIME AND EXPENSES BASIS AND PAID FOR BY THE CONTRACTOR.
28. ALL RETURN RADII AND CURB DATA ARE TO FACE OF CURB.
29. ALL QUANTITIES AND PAY ITEMS ARE AND WILL BE BASED ON HORIZONTAL MEASUREMENTS.
30. LENGTHS OF SANITARY SEWERS AND STORM DRAINS ARE HORIZONTAL DISTANCES FROM THE CENTER TO CENTER OF STRUCTURES, ROUNDED OFF TO THE NEAREST FOOT.
31. THE CONSTRUCTION OF ALL GRAVITY UNDERGROUND LINES (SANITARY SEWERS AND STORM DRAINS) SHALL BEGIN AT THE MOST DOWNSTREAM END, UNLESS OTHERWISE SPECIFICALLY APPROVED BY STEVEN J. LAFRANCHI & ASSOCIATES, INC.

GRADING

1. THE CONTRACTOR SHALL ENLIST THE SERVICES OF A REGISTERED GEOTECHNICAL ENGINEER TO PROVIDE INTERMITTENT SITE OBSERVATIONS AND TESTING BY A QUALIFIED TECHNICIAN AND, UPON SATISFACTORY COMPLETION OF THE GRADING, A WRITTEN REPORT SUMMARIZING THE RESULTS OF THESE OBSERVATIONS AND TESTS ALONG WITH "PROFESSIONAL OPINIONS" AS TO THE ADEQUACY OF THE WORK PERFORMED BY THE CONTRACTOR.
2. CUT SLOPES SHALL BE EQUAL TO OR LESS THAN 2:1 WITH A GEOTECHNICAL ENGINEER'S WRITTEN PERMISSION, WEATHERED ROCK CUTS MAY BE STEEPENED. FILL SLOPES SHALL BE EQUAL TO OR LESS THAN 2:1.
3. ALL EXCESS SOIL MATERIAL, STUMPS AND BOULDERS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ANY ENVIRONMENTAL REGULATIONS AND PERMIT RESOURCE MANAGEMENT DEPARTMENT GRADING ORDINANCE AS THEY MAY APPLY.
4. IF CONSTRUCTION IS PERFORMED EARLIER THAN MAY 1 OR LATER THAN OCTOBER 1 IN ANY GIVEN YEAR, AN APPROVED SILTATION CONTROL PLAN, DESIGNED BY A CIVIL ENGINEER OR APPROVED, COMPETENT INDIVIDUAL IS REQUIRED.
5. PERFORM GRADING IN ACCORDANCE WITH THE LATEST EDITION OF APPENDIX CHAPTER 33 OF THE CALIFORNIA BUILDING CODE AND APPLICABLE SONOMA COUNTY REGULATIONS.
6. EXISTING DRAINAGE COURSES RECEIVING WATERS FROM THIS SITE AND LOCATED THROUGHOUT THIS SITE SHALL REMAIN OPEN AND CLEAR OF DEBRIS TO PROPERLY CONVEY STORM WATER. IN ANY EVENT, THE OWNER AND/OR CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGE DUE TO OBSTRUCTING NATURAL DRAINAGE PATTERNS.
7. RETAINING WALLS ARE NOT APPROVED UNDER THIS GRADING PERMIT. RETAINING WALLS REQUIRE A SEPARATE BUILDING PERMIT, UNLESS EXEMPT.
8. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER UPON DISCOVERING SIGNIFICANT DISCREPANCIES, ERRORS OR OMISSIONS IN THE PLANS. PRIOR TO PROCEEDING, THE OWNER SHALL HAVE THE PLANS REVISED TO CLARIFY IDENTIFIED DISCREPANCIES, ERRORS OR OMISSIONS. THE REVISED PLANS SHALL BE SUBJECT TO REVIEW BY THE CHIEF BUILDING OFFICIAL.
9. IN THE EVENT CULTURAL RESOURCES (I.E., HISTORICAL, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES, AND HUMAN REMAINS) ARE DISCOVERED DURING GRADING OR OTHER CONSTRUCTION ACTIVITIES, WORK SHALL BE HALTED WITHIN A 100 FOOT RADIUS OF THE FIND. THE NORTHWEST INFORMATION CENTER SHALL NOTIFIED AT (707) 664-0880. A QUALIFIED ARCHEOLOGIST SHALL BE CONSULTED FOR AN ON-SITE EVALUATION. ADDITIONAL MITIGATION MAY BE REQUIRED BY THE COUNTY PER THE ARCHEOLOGIST'S RECOMMENDATIONS. IF HUMAN BURIALS OR HUMAN REMAINS ARE ENCOUNTERED, THE CONTRACTOR SHALL ALSO NOTIFY THE COUNTY CORONER AT (707) 565-5070.
10. SHOULD GRADING OPERATIONS ENCOUNTER HAZARDOUS MATERIALS, OR WHAT APPEAR TO BE HAZARDOUS MATERIALS, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND CONTACT 911 OR THE APPROPRIATE AGENCY FOR FURTHER INSTRUCTION.
11. THE GRADING PERMIT AND AN APPROVED COPY OF THE GRADING PLANS SHALL BE MAINTAINED ON THE PROJECT SITE THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
12. DRAINAGE FACILITIES AND GRADING SHALL BE INSPECTED BEFORE RECEIVING FINAL APPROVAL. THE CONTRACTOR SHALL CONSULT THE REQUIRED INSPECTIONS NOTES FOR COORDINATION OF INSPECTION REQUESTS.
13. TESTING FOR RELATIVE DENSITIES SHALL BE IN ACCORDANCE WITH CALTRANS TEST METHOD NO. 216 PART II OR ASTM 1557. THE USE OF SAND CONE METHODS – SUCH AS ASTM 1556 OR CALTRANS 216, PART I – SHALL NOT BE ALLOWED.
14. PLACEMENT OF MAILBOXES MUST BE COORDINATED WITH AND APPROVED BY THE LOCAL BRANCH OF THE UNITED STATES POST OFFICE.
15. GRADING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION PREPARED BY PJC AND ASSOCIATES, INC., JOB No. 9158.01 DATED SEPTEMBER 27, 2019. THE GEOTECHNICAL RECOMMENDATIONS CONTAINED IN THE REPORT, LETTER AND MEMO ARE BY REFERENCE INCORPORATED IN THESE PLANS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE GROUND ELEVATIONS AND OVERALL TOPOGRAPHY OF THE SITE PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY STEVEN J. LAFRANCHI & ASSOCIATES, INC. IN WRITING IMMEDIATELY OF ANY DIFFERENCES IN TOPOGRAPHY FROM THAT SHOWN ON THIS PLAN WHICH MAY REQUIRE CHANGES IN DESIGN AND/OR EFFECT THE EARTHWORK QUANTITY.
17. EARTHWORK QUANTITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY. THEY HAVE BEEN CALCULATED FROM EXISTING GROUND BASED ON THE TOPOGRAPHY REFERENCED ABOVE TO FINISHED GRADE. THE ACTUAL AMOUNT OF EARTH MOVED WILL VARY DEPENDING ON COMPACTION, CONSOLIDATION, STRIPPING AND THE CONTRACTOR'S METHOD OF OPERATION.
18. THE CONTRACTOR SHALL CONFIRM THE EARTHWORK QUANTITIES TO HIS SATISFACTION PRIOR TO THE START OF CONSTRUCTION AND SHALL ARRANGE FOR DISPOSAL OF EXCESS MATERIAL OR ACQUISITION OF IMPORT MATERIAL AS REQUIRED TO COMPLETE THE GRADING AS SHOWN ON THESE PLANS. NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY EXPORT OR IMPORT REQUIRED.
19. THE CONTRACTOR SHALL GRADE EACH PAD TO WITHIN 0.1 FOOT OF THE PAD GRADE ELEVATIONS SHOWN ON THESE PLANS.
20. A REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER SHALL BE AVAILABLE FOR SUPPLEMENTAL SITE OBSERVATIONS AND CONSULTATION WITH THE CONTRACTOR AND / OR OTHER ENGINEERS AS REQUIRED OR REQUESTED IN ORDER TO RESPOND TO GEOTECHNICAL RELATED CONCERNS OR CHANGED CONDITIONS AS THEY ARISE.

NOTE: ALL SITE AND PAD GRADING SHALL BE CERTIFIED BY THE PROJECT ENGINEER AND THE PROJECT GEOTECHNICAL ENGINEER. SAID CERTIFICATION SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

21. COMPREHENSIVE TRAFFIC CONTROL MEASURES SHALL BE IMPLEMENTED, INCLUDING SCHEDULING OF MAJOR TRUCK TRIPS, AND DELIVERIES SHALL AVOID PEAK TRAVEL HOURS AND PROPER LANE CLOSURE PROCEDURES SUCH AS FLAGGER STATIONS, SIGNAGE, CONES, AND OTHER WARNING DEVICES SHALL BE PRACTICED.
22. MASS GRADING ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 8:00 A.M. AND 5:00 P.M. MONDAY THRU FRIDAY, UNLESS PRIOR WRITTEN APPROVAL IS GRANTED BY THE CITY ENGINEER. GENERALLY, NO GRADING SHALL BE ALLOWED TO OCCUR BETWEEN OCTOBER 15 AND APRIL 1 OF ANY YEAR WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER. GRADING WORK CAN OCCUR THROUGHOUT THE YEAR IF WEATHER CONDITIONS PERMIT AND APPROPRIATE EROSION CONTROL/STORM WATER QUALITY MEASURES ARE IN PLACE, SUBJECT TO APPROVAL BY THE CITY ENGINEER.
23. ALL INTERNAL COMBUSTION ENGINES ON GRADING OR CONSTRUCTION EQUIPMENT USED AT THE PROJECT SHALL BE EQUIPPED WITH A MUFFLER EQUAL TO OR BETTER THAN THAT SUPPLIED BY THE VEHICLE MANUFACTURER. ALL EQUIPMENT SHALL BE MAINTAINED IN GOOD MECHANICAL CONDITION SO AS TO MINIMIZE NOISE AND AIR POLLUTION FROM FAULTY ENGINE, DRIVE TRAIN, AND OTHER COMPONENTS. NO MUFFLER OR EXHAUST SYSTEM SHALL BE EQUIPPED WITH CUTOUT, BYPASS, OR SIMILAR DEVICE INTENDED TO THWART QUIETING.
24. TRASH, CONSTRUCTION DEBRIS, OR CONSTRUCTION MATERIALS SHALL NOT BE ALLOWED OFF-SITE, IN CREEK AREAS, OR NEAR SIGNIFICANT VEGETATION DURING ANY PHASE OF DEVELOPMENT OF THE PROJECT. PROPERTY OWNER SHALL CLEAN UP TRASH OR CONSTRUCTION DEBRIS PRIOR TO ACCEPTANCE OF IMPROVEMENTS BY THE CITY.
25. DUST CONTROL BEST MANAGEMENT PRACTICES, AS APPROVED BY THE CITY ENGINEER SHALL BE FOLLOWED AT ALL TIMES DURING GRADING AND CONSTRUCTION OPERATIONS. SUCH MEASURES MAY INCLUDE WATERING OF EXPOSED SURFACES TWICE A DAY, AND MORE FREQUENT WATERING WHEN WIND SPEEDS EXCEED 15 MPH; COVERING OF STOCKPILED EARTH; COVERING OF TRUCKS HAULING DIRT IF WINDY CONDITIONS PREVAIL. FAILURE TO KEEP DUST UNDER CONTROL MAY RESULT IN THE STOPPAGE OF ALL WORK UNTIL A MODIFIED PLAN ACCEPTABLE TO THE CITY ENGINEER IS APPROVED AND IMPLEMENTED.
26. PRIOR TO GRADING CONSTRUCTED AFTER OCTOBER 1 AND BEFORE MAY 1, STORM DRAINS, OUTLET STRUCTURES, CHECK DAMS AND DITCHES SHALL BE CONSTRUCTED.
27. SPRINKLE ALL CONSTRUCTION AREAS WITH WATER (RECYCLED WHEN POSSIBLE) AT LEAST TWICE A DAY, DURING EXCAVATION AND OTHER GROUND-PREPARING OPERATIONS, TO REDUCE FUGITIVE DUST EMISSIONS.
28. APPROPRIATE EROSION CONTROL DEVICES SHALL BE UTILIZED TO RETAIN SEDIMENT WITHIN THE PROJECT AREAS DURING THE CONSTRUCTION SEASON.
29. THE CONTRACTOR SHALL COMPLY WITH "BEST MANAGEMENT PRACTICES" AS DEFINED IN CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICES HANDBOOKS "CONSTRUCTION ACTIVITY" AND ALL REQUIREMENTS OF THE STATE OF CALIFORNIA "GENERAL CONSTRUCTION ACTIVITY STORM WATER PERMIT".
30. SUBGRADE FOR BUILDING PADS SHOULD BE COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION.
31. SUBGRADE AND CLASS 2 AGGREGATE BASE FOR DRIVEWAYS SHOULD BE COMPACTED TO 95% RELARIVE COMPACTION PER ASTM D1557.

PROJECT NOTES:

1. CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING WITH THE PETALUMA CITY ENGINEER, THE DEVELOPER OR DEVELOPER'S REPRESENTATIVE AND CIVIL ENGINEER BEFORE START OF CONSTRUCTION. CONTRACTOR SHALL CONTACT PUBLIC WORKS INSPECTION AT (707)778-4301 TO ARRANGE THE MEETING.
2. THE DEVELOPER'S ENGINEER WILL PROVIDE THE CONSTRUCTION STAKES. THE NUMBER AND LOCATION OF WHICH SHALL BE DETERMINED BEFORE THE CONSTRUCTION BEGINS. ALL STAKING REQUESTS SHOULD BE DIRECTED TO THE ENGINEER A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO ACTUAL NEED. ANY ADDITIONAL STAKING OR RESTAKING WILL ONLY BE DONE AS DIRECTED AND AUTHORIZED BY THE DEVELOPER OR HIS AUTHORIZED AGENT. THE CITY ENGINEER HAS THE AUTHORITY TO REQUIRE THE DEVELOPER OR HIS AUTHORIZED AGENT TO PLACE ADDITIONAL STAKES OR RESTAKES AS HE DEEMS NECESSARY FOR PROPER CONSTRUCTION OR TO AVOID CONFLICTS.
3. THE CONTRACTOR SHALL NOT DESTROY ANY PERMANENT SURVEY POINTS WITHOUT THE CONSENT OF THE CITY ENGINEER. ANY PERMANENT MONUMENTS OR POINTS DESTROYED SHALL BE REPLACED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR LICENSED IN THE STATE OF CALIFORNIA AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING STREETS, SURROUNDING LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, SIDEWALKS, GRADING ETC., AND AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES, LOW SPOTS, OR HAZARDOUS CONDITIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING REQUIRED INSPECTIONS AND SHALL NOTIFY THE APPROPRIATE INDIVIDUAL OR AGENCY TWO (2) WORKING DAYS PRIOR TO THE TIME THAT THE CONTRACTOR WISHES THE INSPECTION TO BE MADE.
6. THESE PLANS AND SPECIFICATIONS, INCLUDING GRADES AND STREET DRAINAGE ARE SUBJECT TO MODIFICATION DURING CONSTRUCTION SHOULD CONDITIONS APPEAR THAT WERE NOT APPARENT DURING DESIGN. ANY SUCH MODIFICATION SHALL BE APPROVED BY THE CITY OF PETALUMA CITY ENGINEER.
7. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE LOCAL AGENCY ENGINEER OR STEVEN J. LAFRANCHI & ASSOCIATES, INC. ANY DEVIATIONS OR CHANGES IN THESE PLANS WITHOUT OFFICIAL APPROVAL OF THE CIVIL ENGINEER SHALL ABSOLVE THE CIVIL ENGINEER OF ANY AND ALL RESPONSIBILITY OF SAID DEVIATION OR CHANGE.
8. A REGISTERED GEOTECHNICAL ENGINEER FIRM SHALL PROVIDE A QUALIFIED FIELD TECHNICIAN, WORKING UNDER THE DIRECTION OF A GEOTECHINICAL ENGINEER, TO BE ON SITE INTERMITTENTLY AS REQUIRED TO OBSERVE AND TEST THE SITE GRADING WORK AND UNDERGROUND UTILITY TRENCH BACKFILLING / COMPACTION TO CHECK THAT THE WORK IS PERFORMED IN ACCORDANCE WITH THE INTENT OF THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. THE RESULTS OF THESE OBSERVATIONS AND TESTS WILL THEN BE PRESENTED IN A WRITTEN REPORT UPON SATISFACTORY COMPLETION OF THE WORK.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY NOTIFY THE CITY, THE CITY INSPECTOR AND THE CIVIL ENGINEER UPON DISCOVERY OF ANY FIELD OR PLAN CONFLICTS.
10. ANY EXISTING WELLS ENCOUNTERED SHALL BE ABANDONED AND SEALED BY THE CONTRACTOR PER COUNTY OF SONOMA AND STATE REQUIREMENTS.
11. ALL DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH CAL GREEN REQUIREMENTS.

WATER SYSTEM

1. BEDDING AND BACKFILL SHALL COMPLY WITH THE CITY OF PETALUMA STANDARD SPECIFICATIONS AND STD. 219.
2. EXCAVATIONS MUST BE KEPT DEWATERED AT ALL TIMES SO AS NOT TO ALLOW CONTAMINATED WATER TO ENTER WATER MAINS.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION, DIAMETER, AND TYPE OF EXISTING PIPE SO THAT THE NEW PIPE CAN BE PROPERLY ALIGNED WITH AND FITTED TO THE EXISTING PIPE.
4. MISALIGNMENTS SHALL BE CORRECTED BY THE REALIGNMENT OF EITHER OR BOTH PIPES TO BE CONNECTED. CONTRACTOR SHALL PROVIDE ALL FITTINGS AND PIPE MATERIALS NEEDED TO CONNECT THE NEW PIPE TO THE EXISTING PIPE.
5. DEFLECTION OF PIPE AT JOINTS SHALL COMPLY WITH MANUFACTURER'S SPECIFICATIONS.
6. BENDS MAY NOT BE USED EXCEPT WHEN PROVIDED FOR ON THESE PLANS OR PERMITTED BY THE CITY ENGINEER.
7. THRUST BLOCKS SHALL BE PROVIDED AT TEES AND BENDS 22-1/2 DEGREES OR GREATER. CONCRETE THRUST BLOCKS SHALL BE INSTALLED PER CITY STD. PLAN 854.
8. WATER SERVICE AND METER SHALL BE INSTALLED PER CITY STD. 863. WATER SERVICE ONSITE SHALL BE SCHEDULE 40 PVC. ALL NEW WATER SERVICES SHALL BE 1.5 INCHES WITH 1 INCH METERS.
9. TIE-INS BY THE CONTRACTOR MUST BE COORDINATED WITH THE CITY INSPECTOR AT LEAST 48 HOURS IN ADVANCE OF WORK. EXCAVATIONS BY THE CONTRACTOR FOR TIE-INS MUST BE APPROVED BY THE CITY ENGINEER OR AUTHORIZED REPRESENTATIVE THE DAY BEFORE WORK IS COMMENCE AT EACH TIE-IN.
10. ALL FITTINGS, VALVES AND MATERIALS TO ACCOMPLISH ALL TIE-INS SHALL BE ON THE JOB, AND EXISTING LINES EXPOSED AND CHECKED FOR PROPER FIT BY THE CITY PRIOR TO ANY SHUTDOWN.
11. THE INSIDE OF ALL PIPE AND FITTINGS MUST BE DISINFECTED WITH A PROPER DISINFECTING AGENT PER CITY OF PETALUMA SPECIFICATIONS.
12. TIE-IN TO THE EXISTING CITY WATER SYSTEM SHALL BE MADE ONLY IN THE PRESENCE OF AND WITH THE APPROVAL OF THE CITY ENGINEER. THE OPERATION OF VALVES IN THE EXISTING CITY SYSTEM BY OTHER THAN CITY PERSONNEL WILL NOT BE PERMITTED. NO TIE-INS TO EXISTING MAINS WILL BE PERMITTED UNTIL CERTIFICATION (DISINFECTION) PER CITY STANDARDS IS ACCOMPLISHED.
13. WATER METERS SHALL NOT BE LOCATED IN DRIVEWAYS. DRIVEWAY CUTS SHALL BE STAKED BEFORE SERVICE LATERALS ARE INSTALLED.
14. FIRE HYDRANTS TO BE INSTALLED AT LOCATIONS SHOWN ON PLANS IN ACCORDANCE WITH CITY STD. 857.01. A BREAK-AWAY AVK'S SHALL BE INSTALLED IN ALL FIRE HDRANTS. THE BLUE MARKER INDICATING EXISTENCE OF FIRE HYDRANTS SHALL BE INSTALLED PER CITY STANDARDS.
15. ALL FIRE HYDRANT INSTALLATIONS WILL BE SUBJECT TO INSPECTION AND APPROVAL BY THE CITY ENGINEER OR AUTHORIZED REPRESENTATIVE. INSPECTION BY THE FIRE MARSHALL WILL ONLY BE MADE AT THE DISCRETION OF THE AGENCY INSPECTOR AT SUCH TIME AS ALL WORK ON THE WATER SUPPLY SYSTEM HAS BEEN COMPLETED.
16. WHENEVER WATER MAINS CROSS STORM OR SANITARY SEWER LINES, DUCTILE IRON PIPE AS SPECIFIED HEREIN, SHALL BE USED AS FOLLOWS:
    - A. WHEN THE WATER LINE CROSSES UNDER A SANITARY SEWER LINE REGARDLESS OF CLEARANCE.
    - B. WHEN THE WATER LINE CROSSES UNDER A STORM DRAIN WITH LESS THAN ONE FOOT OF CLEARANCE.
    - C. WHEN THE WATER LINE CROSSES OVER A STORM OR SANITARY SEWER WITH LESS THAN ONE FOOT OF CLEARANCE. CONSTRUCTION SHALL BE BASED ON THE MOST CURRENT STANDARDS AT THE TIME OF CONSTRUCTION.

SEWER NOTES

1. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF PETALUMA CONSTRUCTION STANDARDS AND SPECIFICATIONS, INCLUDING STANDARD DRAWINGS (LATEST REVISION).
2. THE PROJECT DESIGN ENGINEER SHALL VERIFY THE INVERT OF THE EXISTING SEWER WHEN IT IS EXPOSED AND ADJUST THE GRADE OF THE NEW SEWER CONSTRUCTION ACCORDINGLY.
3. NO BUILDING SHALL BE CONNECTED TO THE MAINLINE SEWER UNTIL THE MAINLINE SEWER HAS BEEN INSPECTED AND ACCEPTED BY THE CITY OF PETALUMA.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE INSPECTED BY AN INSPECTOR FROM THE CITY OF PETALUMA BUILDING DEPARTMENT. 48 HOUR ADVANCE NOTICE IS REQUIRED FOR ALL INSPECTIONS.
5. INSPECTION WILL OCCUR WHEN EXCAVATION OF SEWER INSTALLATION IS COMPLETED. NO BEDDING, PIPE OR BACKFILL OR OTHER MATERIAL SHALL BE PLACED IN THE EXCAVATION UNTIL THE EXCAVATION HAS BEEN INSPECTED AND ACCEPTED BY THE INSPECTOR. 48 HOUR ADVANCE NOTICE IS REQUIRED FOR ALL INSPECTIONS.
6. SEWER LATERALS SHALL HAVE A MIN. OF 3.0 FEET OF COVER (AT BACK OF PUE) AND SHALL NOT HAVE LESS THAN 2% MIN SLOPE, IT SHALL BE PLACED UNDER THE UNDERGROUND JOINT TRENCH UTILITIES AND KEPT CLEAR OF DRIVEWAYS.
7. ALL EXISTING SEPTIC TANKS AND LEACHFIELDS SHALL BE ABANDONED PER SONOMA COUNTY ENVIRONMENTAL HEALTH DEPARTMENT.
8. CONSTRUCTION SHALL BE BASED ON THE MOST CURRENT STANDARDS AT THE TIME OF CONSTRUCTION.

REVISION LOG

2021.11.05 ADDENDA 1 △1

ASPHALT PAVING

1. THE MATERIAL AND METHODS USED SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PETALUMA SPECIFICATIONS OR THE CURRENT EDITION OF THE CALTRANS STANDARD SPECIFICATIONS, EXCEPT THAT COMPACTION REQUIREMENTS FOR THE SOIL SUBGRADE AND AGGREGATE BASE ROCK SHALL BE BASED ON ASTM D-1557. AGGREGATE USED FOR THE BASE COURSE SHALL COMPLY WITH THE MINIMUM REQUIREMENTS SPECIFIED IN CALTRANS STANDARD SPECIFICATIONS, SECTION 26, FOR CLASS II AGGREGATE BASE.
2. PAVEMENTS SHALL BE CONSTRUCTED DURING THE DRY SEASON TO AVOID THE SATURATION OF THE SUBGRADE AND BASE MATERIALS WHICH OFTEN OCCURS DURING THE WET WINTER MONTHS. IF PAVEMENTS ARE CONSTRUCTED DURING THE WINTER AND EARLY SPRING, A COST INCREASE RELATIVE TO DRIER WEATHER CONSTRUCTION SHOULD BE ANTICIPATED. UNSTABLE AREAS SHALL BE OVER EXCAVATED TO REMOVE SOFT SOILS. THE EXCAVATIONS WILL PROBABLY REQUIRE GEOTEXTILE FABRIC AND BACKFILLING WITH IMPORTED CRUSHED ROCK. THE GEOTECHNICAL ENGINEER SHALL BE CONSULTED FOR RECOMMENDATIONS AT THE TIME OF CONSTRUCTION.
3. ASPHALT CONCRETE SHALL BE TYPE A, 1/2-INCH MAXIMUM, MEDIUM GRADATION AND SHALL CONFORM TO SECTION 39 OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. ASPHALT BINDER TO BE MIXED WITH THE AGGREGATE SHALL BE PAVING ASPHALT AR-4000.
4. EXISTING IMPROVEMENTS THAT ARE DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR.
5. THE ASPHALT CONCRETE SHALL HAVE A RELATIVE COMPACTION OF AT LEAST 95%.
6. A SOILS OR GEOTECHNICAL ENGINEER SHALL TEST, AND APPROVE THE CONSTRUCTION OF ROADS, AND, IF REQUIRED, PARKING AREAS. THE GEOTECHNICAL ENGINEER SHALL PROVIDE COPIES OF THE TEST RESULTS AND WRITTEN APPROVALS TO THE CITY INSPECTOR WITHIN THREE WORK DAYS OF TESTING OR APPROVAL. THE APPROVAL SHALL INCLUDE THE STABILITY AND RELATIVE DENSITY OF SUBGRADES AND BASE COURSES PRIOR TO THE PLACEMENT OF ASPHALT CONCRETE. A FINAL GEOTECHNICAL REPORT SHALL BE SUBMITTED BY THE GEOTECHNICAL ENGINEER TO THE CITY ENGINEER WHICH CONTAINS AN ANALYSIS OF THE SOILS ENCOUNTERED AND COMPILATION OF COMPACTION TESTS PERFORMED.
7. THE CLASS II AGGREGATE BASE SHALL HAVE A RELATIVE COMPACTION OF AT LEAST 95%, SHALL BE FREE OF LOOSE OR EXTRANEOUS MATERIAL, AND BE A TIGHT NON-YIELDING SURFACE WITH NO VISIBLE DISPLACEMENT.
8. AGGREGATE BASE MATERIALS SHALL BE PLACED IN ACCORDANCE WITH SECTION 26-1.04 OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA, LATEST EDITION.

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

DATE: 11/05/2021 △1
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

GENERAL NOTES

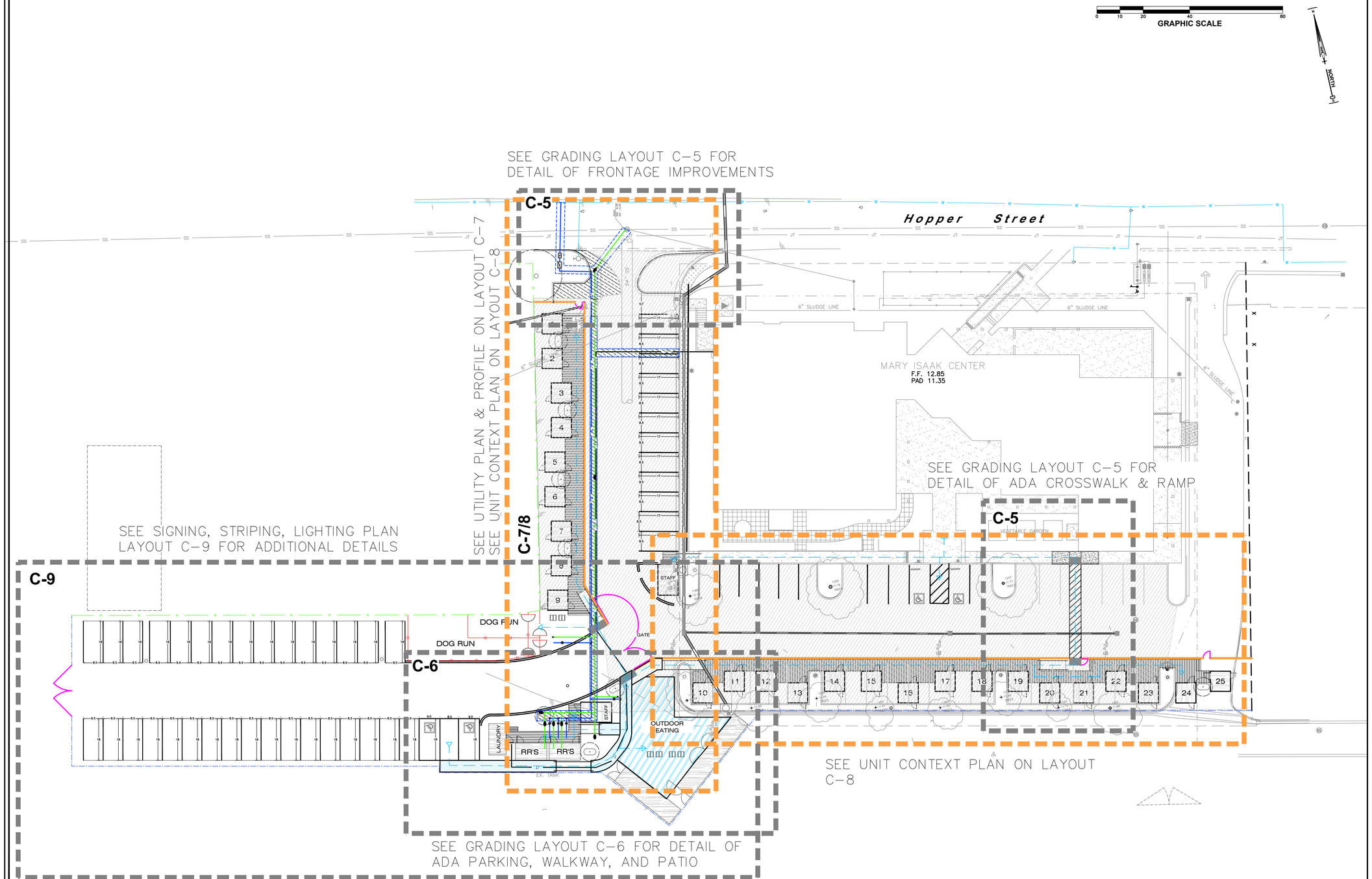
SCALE: 1" = 20'

SHEET
C-2

2 OF 24

REVISION LOG

2021.11.05 ADDENDA 1 △



PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

DATE: 11/05/2021 △
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

KEYMAP PLAN

SCALE: 1" = 20'

SHEET
C-3

DEMOLITION KEYNOTES

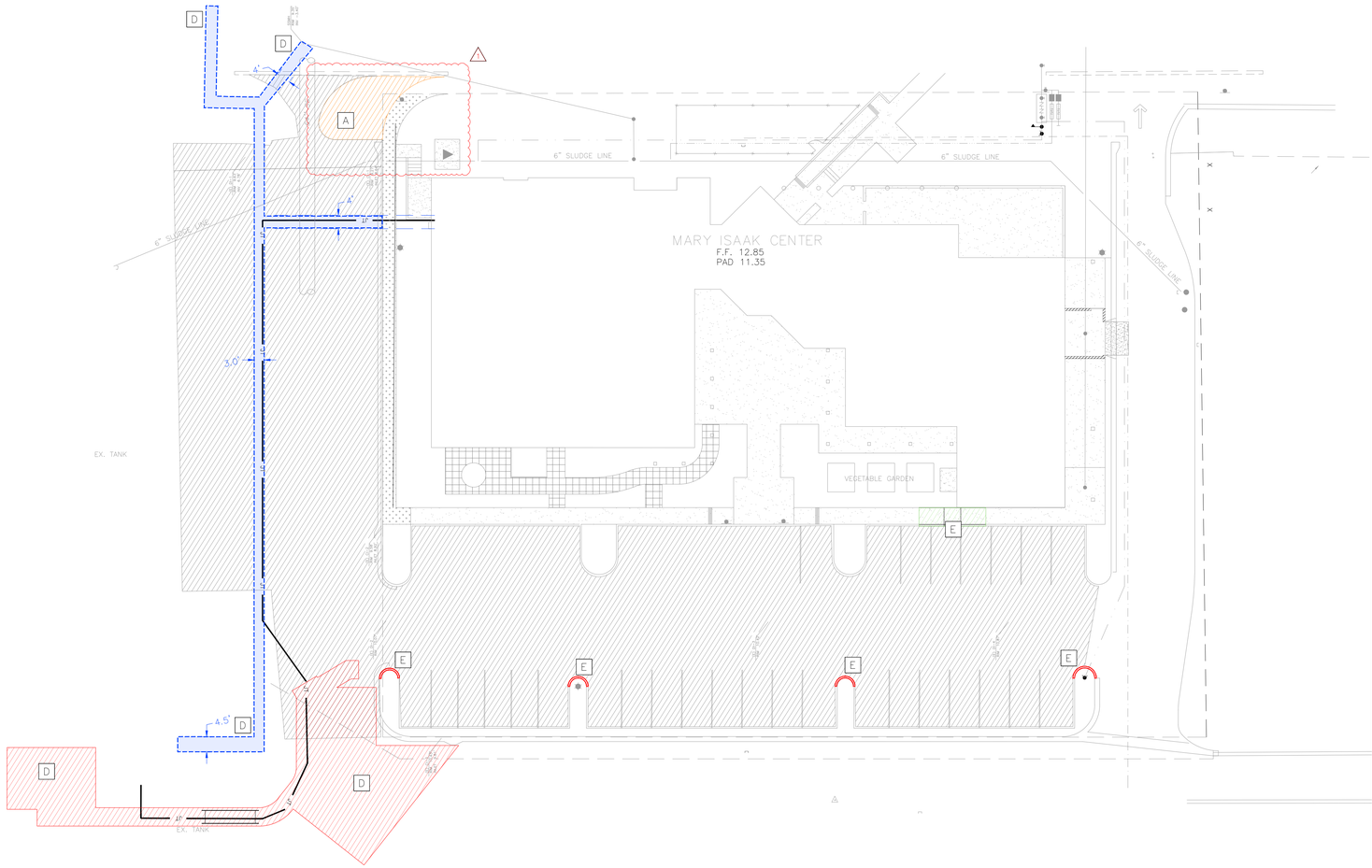
A — EXISTING ASPHALT PAVING AT SITE ENTRANCE TO BE REMOVED AS SHOW.
[1,150 SQ. FT +/-]

B — APPROXIMATE LIMITS OF ASPHALT DEMOLITION & REMOVAL AS NEEDED FOR NEW PARKING, WALKWAY, AND PATIO AREA. SEE OTHER LAYOUTS THIS SET FOR ADDITIONAL DETAIL. CONTRACTOR TO ADJUST LIMITS OF AC REMOVAL AS NEEDED TO PREPARE FOR INSTALLATION.
[2,500 SQ. FT +/-]

C — PORTION OF EXISTING SIDEWALK / CURB & GUTTER TO BE REMOVED AS NEEDED FOR INSTALLATION OF ADA COMPLIANT CURB RAMP. SEE OTHER LAYOUTS THIS SET FOR DETAILS OF PROPOSED FLAT WORK.
[96 SQ. FT +/-]

D — APPROXIMATE LIMITS OF ASPHALT REMOVAL AS NEEDED FOR WATER LINE & SEWER LINE INSTALLATION. TRENCH WIDTH VARIES 3-4 FT. RESTORE ASPHALT PAVEMENT CONSISTENT WITH (E) PAVEMENT SECTION, 4"AC/8" AB CL-II ASSUMED, TO BE VERIFIED IN FIELD.
[1,035 SQ. FT +/-]

E — SAWCUT & REMOVE CURB FROM PLANTING MEDIANS ALONG SOUTHERLY SIDE OF DRIVE AISLE AS SHOWN. INTENT FOR CURB TO BE CUR AT START OF CURVES.
[40 LINEAL FT +/-]



REVISION LOG

2021.11.05 ADDENDA 1 △1

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

DATE: 11/05/2021 △1
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

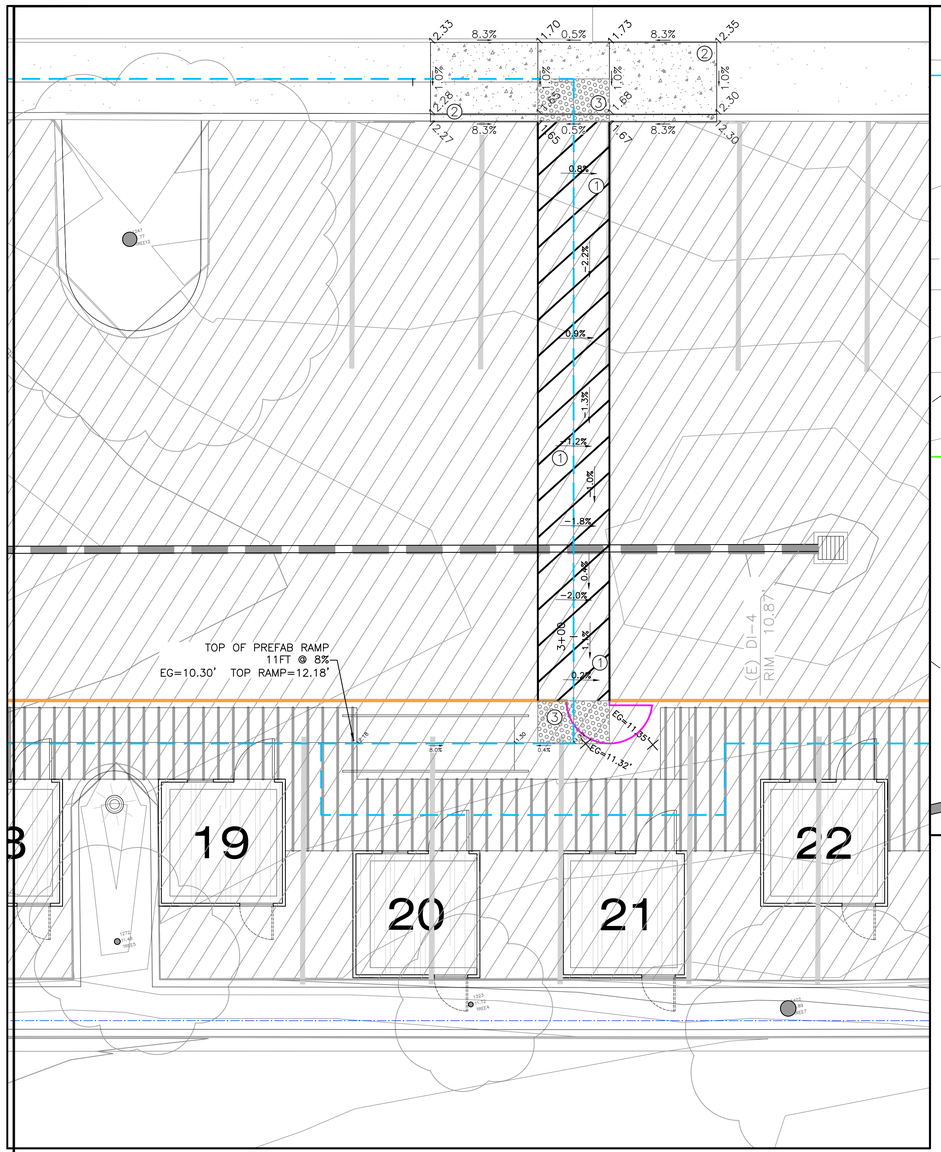
CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

DEMO PLAN

SCALE: 1" = 20'

SHEET
C-4



CROSSWALK & CURB RAMP DETAIL

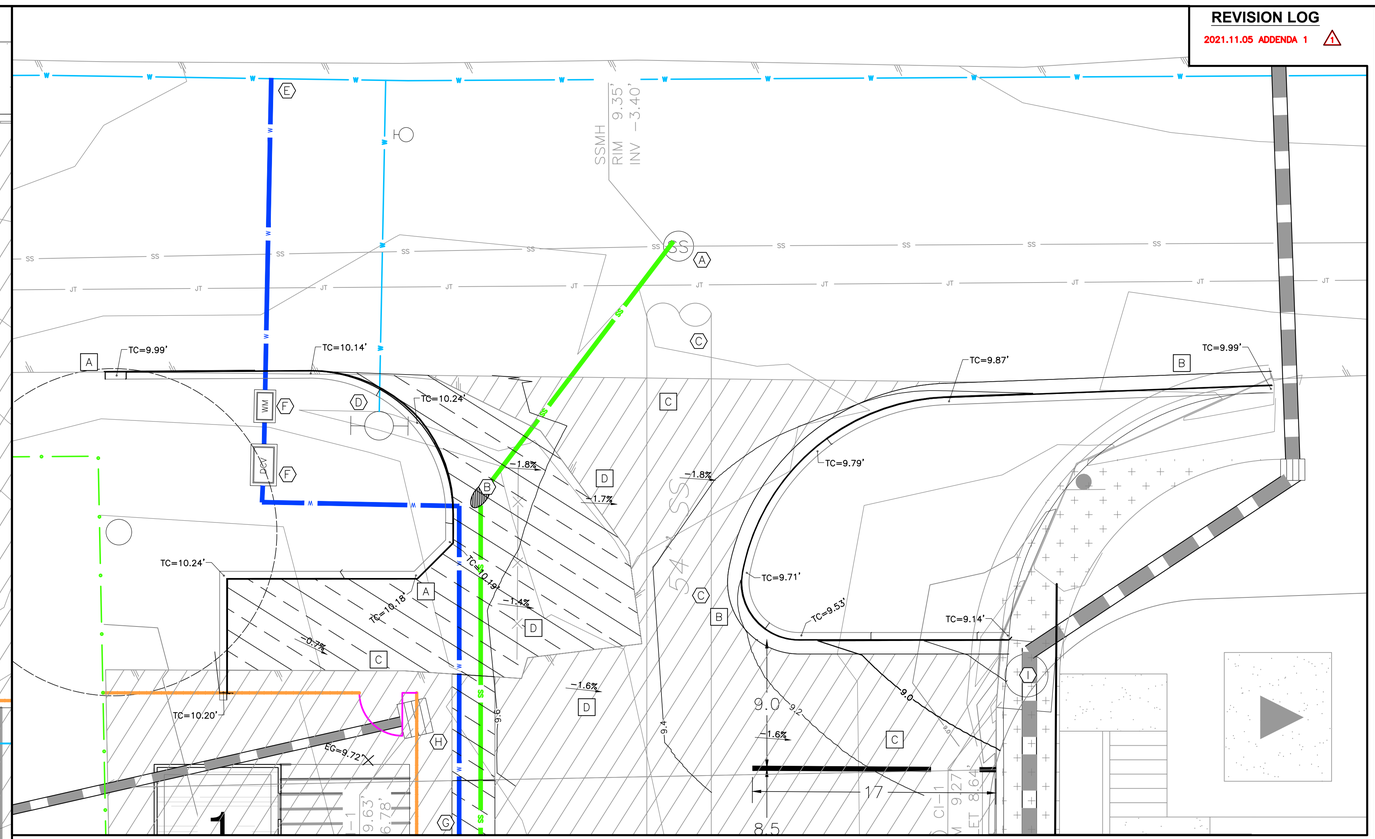
SCALE: 1" =5'

GRAPHIC SCALE 0 2.5 5 10 20

NORTH

CROSSWALK & RAMP GRADING KEYNOTES

1. RUNNING SLOPE & CROSS SLOE FOR EXISTING ASPHALT SURFACE. CONFIRM THAT RUNNING SLOPES ARE LESS THAN 5% AND CROSS SLOPE IS LESS THAN 2% FOR ADA COMPLIANCE. INTENT IS THAT EXISTING PAVEMENT SURFACE CAN BE MAINTAINED. MIN 5FT WIDTH TO BE STRIPED TO DENOTE ACCESSIBLE ROUTE.
2. SAWCUT & REMOVE PORTION OF EXISTING SIDEWALK AS NEEDED TO ESTABLISH NEW CURB RAMP.
3. TRUNCATED DOMES TO BE INSTALLED AT EITHER END OF WALKWAY / RAMPS. MIN 3FTX5FT AREA.



HOPPER FRONTAGE IMPROVEMENT DETAIL

SCALE: 1" =5'

GRAPHIC SCALE 0 2.5 5 10 20

NORTH

FRONTAGE UTILITY KEYNOTES

- (A) EXISTING SANITARY SEWER MANHOLE, POINT OF CONNECTION FOR NEW SITE MAIN. INSIDE DROP INTENDED FOR (N) 4" SANITARY SEWER MAIN, SEE CITY STD. DETAIL 503.
- (B) SANITARY SEWER CLEAN OUT, MIN PLACEMENT AT TURNING POINTS & 100 FT INTERVAL ALONG LINE. SEE CITY STD. DETAIL 506.
- (C) HISTORIC 54" SANITARY SEWER LINE ALIGNMENT, NO ACTIONS ANTICIPATED, INFORMATIONAL ONLY
- (D) EXISTING FIRE HYDRANT ALONG HOPPER STREET TO BE MAINTAINED. CURB RETURN TO BE INSTALLED SUCH THAT HYDRANT IS A MIN OF 24" BEHIND FACE OF CURB.
- (E) ANTICIPATED POINT OF CONNECTION TO (E) WATER MAIN, NEW **1-1/2"** WATER LINE ROUTED TO SITE.
- (F) **1-1/2" MASTER WATER METER PER CITY STANDARD 862 WITH 1-1/2" SERVICE LINE. INSTALL DOUBLE CHECK VAVEL ASSEMBLE PER CITY STANDARD 874.**
- (G) PRIVATE WATER LATERAL CONTINUES ON SITE, SEE LAYOUT C-4 FOR ADDITIONAL DETAIL
- (H) EXISTING DROP INLET STRUCTURE TO BE MAINTAINED, CONFORM TO GRATE AS NEEDED.
- (I) EXISTING CURB INLET STRUCTURE TO BE MAINTAINED, CONFORM TO INLET AS NEEDED.

FRONTAGE GRADING KEYNOTES

- [A] INSTALL NEW 6" VERTICAL CURB ALONG WESTERLY LIMITS SITE ENTRANCE
- [B] INSTALL NEW CURB & GUTTER WITH 1FT GUTTER PAN (MATCH EXISTING) ALONG EASTERLY LIMITS OF SITE ENTRANCE
- [C] EXISTING ASPHALT TO BE CUT OUR & REPLACED AS NEEDED OR GROUND AND OVERLAID. EXISTING DROP INLET & EXISTING CURB INLET STRUCTURES TO REMAIN.
- [D] CROSS SLOPE FOR DRIVE AISLE VARIES 5-2% MAX

PAVEMENT LEGEND – see demo plan for additional context

EXISTING ASPHALT TO REMAIN

NEW ASPHALT TO BE ADDED OR AREAS NEEDING RESTORATION AFTER UTILITY WORK

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

REVISION LOG

2021.11.05 ADDENDA 1 ⚠

DATE: 11/05/2021 ⚠
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA

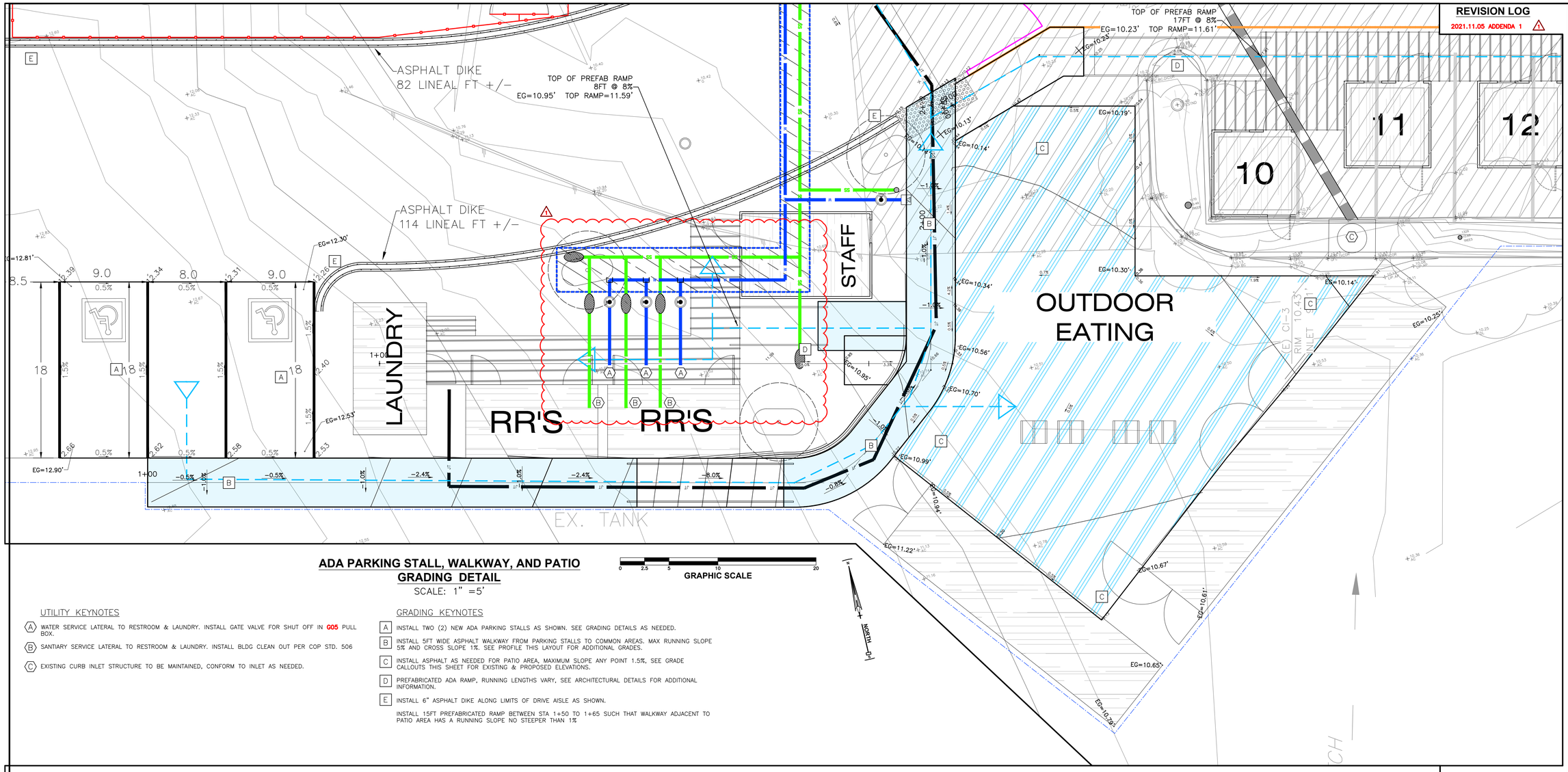
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

GRADING DETAIL 1
FRONTAGE
& ADA CROSSING

SCALE: 1" = 5'

SHEET
C-5



REVISION LOG

2021.11.05 ADDENDA 1 △1

ADA PARKING STALL, WALKWAY, AND PATIO GRADING DETAIL

SCALE: 1" =5'

UTILITY KEYNOTES

- (A) WATER SERVICE LATERAL TO RESTROOM & LAUNDRY. INSTALL GATE VALVE FOR SHUT OFF IN G05 PULL BOX.
- (B) SANTIARY SERVICE LATERAL TO RESTROOM & LAUNDRY. INSTALL BLDG CLEAN OUT PER COP STD. 506
- (C) EXISTING CURB INLET STRUCTURE TO BE MAINTAINED, CONFORM TO INLET AS NEEDED.

GRADING KEYNOTES

- A INSTALL TWO (2) NEW ADA PARKING STALLS AS SHOWN. SEE GRADING DETAILS AS NEEDED.
- B INSTALL 5FT WIDE ASPHALT WALKWAY FROM PARKING STALLS TO COMMON AREAS. MAX RUNNING SLOPE 5% AND CROSS SLOPE 1%. SEE PROFILE THIS LAYOUT FOR ADDITIONAL GRADES.
- C INSTALL ASPHALT AS NEEDED FOR PATIO AREA, MAXIMUM SLOPE ANY POINT 1.5%, SEE GRADE CALLOUTS THIS SHEET FOR EXISTING & PROPOSED ELEVATIONS.
- D PREFABRICATED ADA RAMP, RUNNING LENGTHS VARY, SEE ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION.
- E INSTALL 6" ASPHALT DIKE ALONG LIMITS OF DRIVE AISLE AS SHOWN.

INSTALL 15FT PREFABRICATED RAMP BETWEEN STA 1+50 TO 1+65 SUCH THAT WALKWAY ADJACENT TO PATIO AREA HAS A RUNNING SLOPE NO STEEPER THAN 1%

HOLD WALKWAY AT 0.5% WHERE BEHIND AISLE FOR ADA PARKING

BEHIND RESTROOM IMPLETMENT 15FT +/- PREFABRICATED RAMP RUN.

INTENT FOR WALKWAY TO BE AT 1% RUNNING SLOPE OR LESS AT STA 1+65, AND AREAS ADJACENT TO PATIO / EATING AREA

ADA PARK to NEXUS
SCALE: 1"=8' H, 1"=4' V

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

DATE: 11/05/2021 △1
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

GRADING DETAIL 2
PARKING, WALKWAY
& ADA PATIO AREA

SCALE: 1" = 5'

SHEET
C-6

6 OF 24

UTILITY KEY NOTES

A. EXISTING SANITARY SEWER MANHOLE, POINT OF CONNECTION FOR NEW SITE MAIN. INSIDE DROP INTENDED FOR (N) 4" SANITARY SEWER MAIN, SEE CITY STD. DETAIL 503.

B. SANITARY SEWER CLEAN OUT, MIN PLACEMENT AT TURNING POINTS & 100 FT INTERVAL ALONG LINE. SEE CITY STD. DETAIL 506.

C. HISTORIC 54" SANITARY SEWER LINE ALIGNMENT, NO ACTIONS ANTICIPATED, INFORMATIONAL ONLY

D. EXISTING FIRE HYDRANT ALONG HOPPER STREET TO BE MAINTAINED. CURB RETURN TO BE INSTALLED SUCH THAT HYDRANT IS A MIN. OF 24" BEHIND FACE OF CURB.

E. ANTICIPATED POINT OF CONNECTION TO (E) WATER MAIN, NEW **1-1/2"** WATER LINE ROUTED TO SITE.

F. **1-1/2" MASTER WATER METER PER CITY STANDARD 862 WITH 1-1/2" SERVICE LINE. INSTALL DOUBLE CHECK VAVEL ASSEMBLE PER CITY STANDARD 874.**

G. WATER SERVICE LATERAL TO RESTROOM & LAUNDRY. INSTALL GATE VALVE FOR SHUT OFF IN **G05** PULL BOX

H. SANITARY SERVICE LATERAL TO RESTROOM & LAUNDRY. INSTALL BLDG CLEAN OUT PER COP STD. 506

I. WATER SERVICE LATERAL TO HOSE BIB AT DOG RUN. INSTALL GATE VALVE FOR SHUT OFF IN **G05** PULL BOX.

J. EXISTING DROP INLET STRUCTURE TO BE MAINTAINED, CONFORM TO GRATE AS NEEDED.

K. EXISTING CURB INLET STRUCTURE TO BE MAINTAINED, CONFORM TO INLET AS NEEDED.

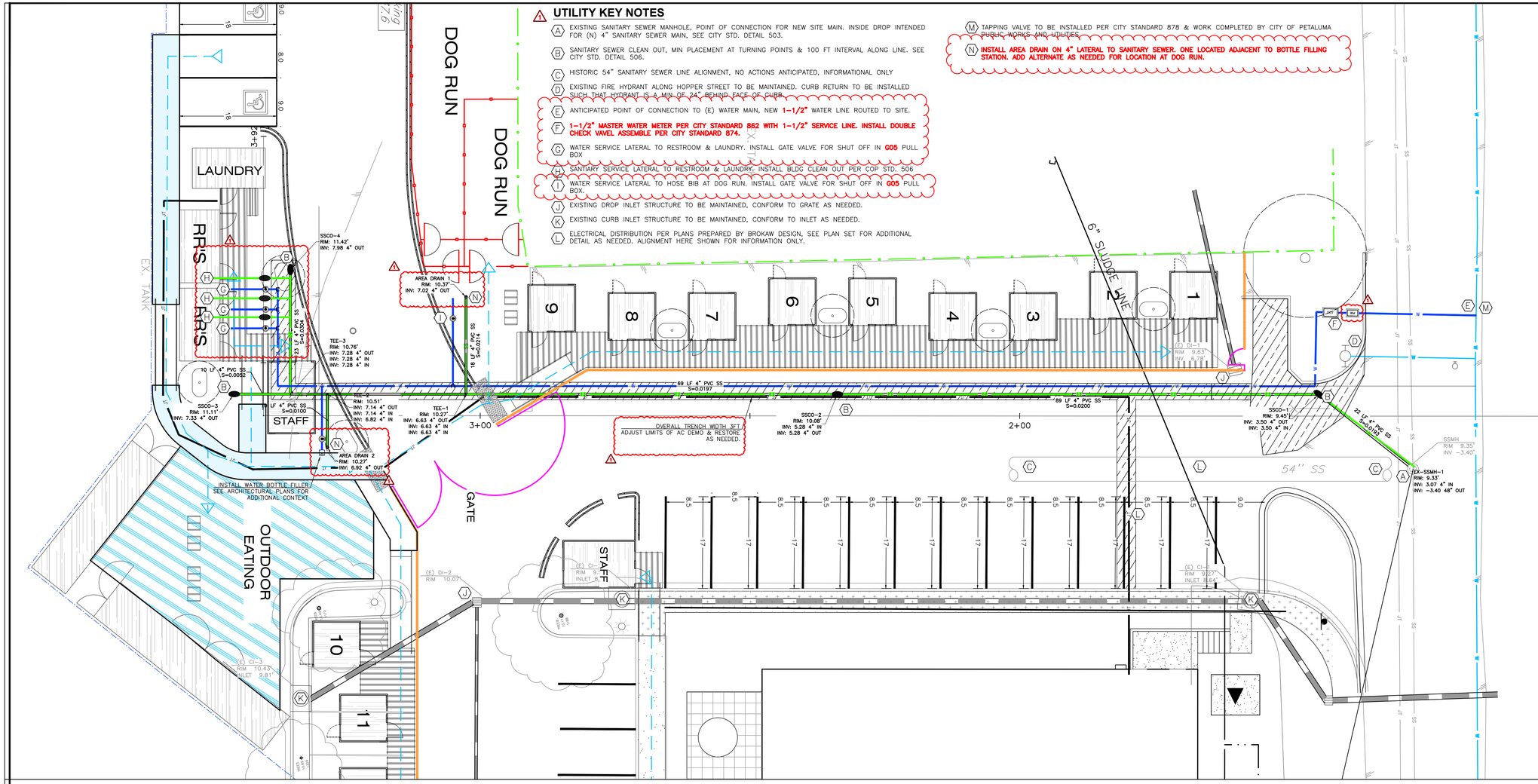
L. ELECTRICAL DISTRIBUTION PER PLANS PREPARED BY BROKAW DESIGN, SEE PLAN SET FOR ADDITIONAL DETAIL AS NEEDED. ALIGNMENT HERE SHOWN FOR INFORMATION ONLY.

M. TAPPING VALVE TO BE INSTALLED PER CITY STANDARD 878 & WORK COMPLETED BY CITY OF PETALUMA PUBLIC WORKS AND UTILITIES

N. **INSTALL AREA DRAIN ON 4" LATERAL TO SANITARY SEWER. ONE LOCATED ADJACENT TO BOTTLE FILLING STATION. ADD ALTERNATE AS NEEDED FOR LOCATION AT DOG RUN.**

REVISION LOG

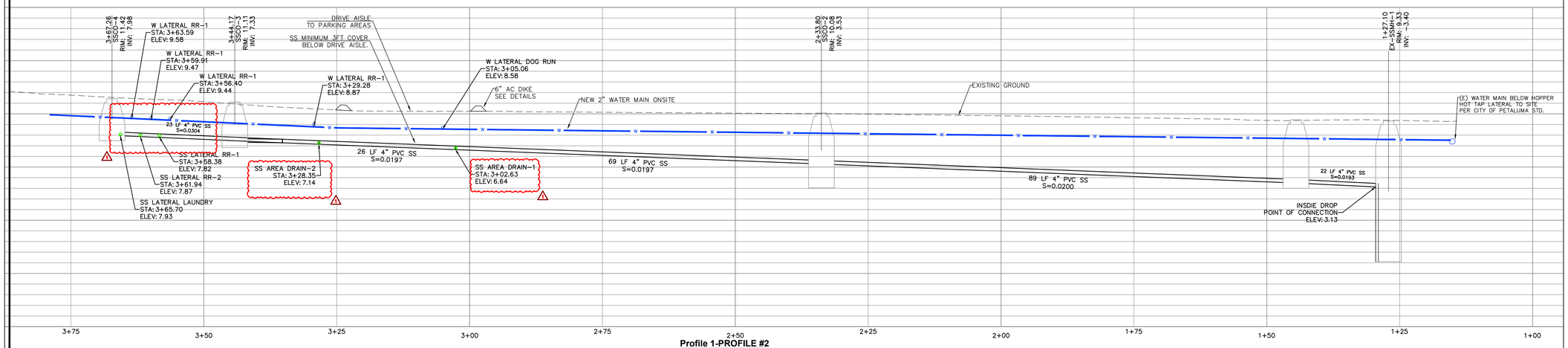
2021.11.05 ADDENDA 1 1



UTILITY PLAN VIEW
SCALE: 1" =10'

GRAPHIC SCALE 0 5 10 20 40

NORTH



Profile 1-PROFILE #2
SCALE: 1"=10' H, 1"=5' V

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

DATE: 11/05/2021
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA

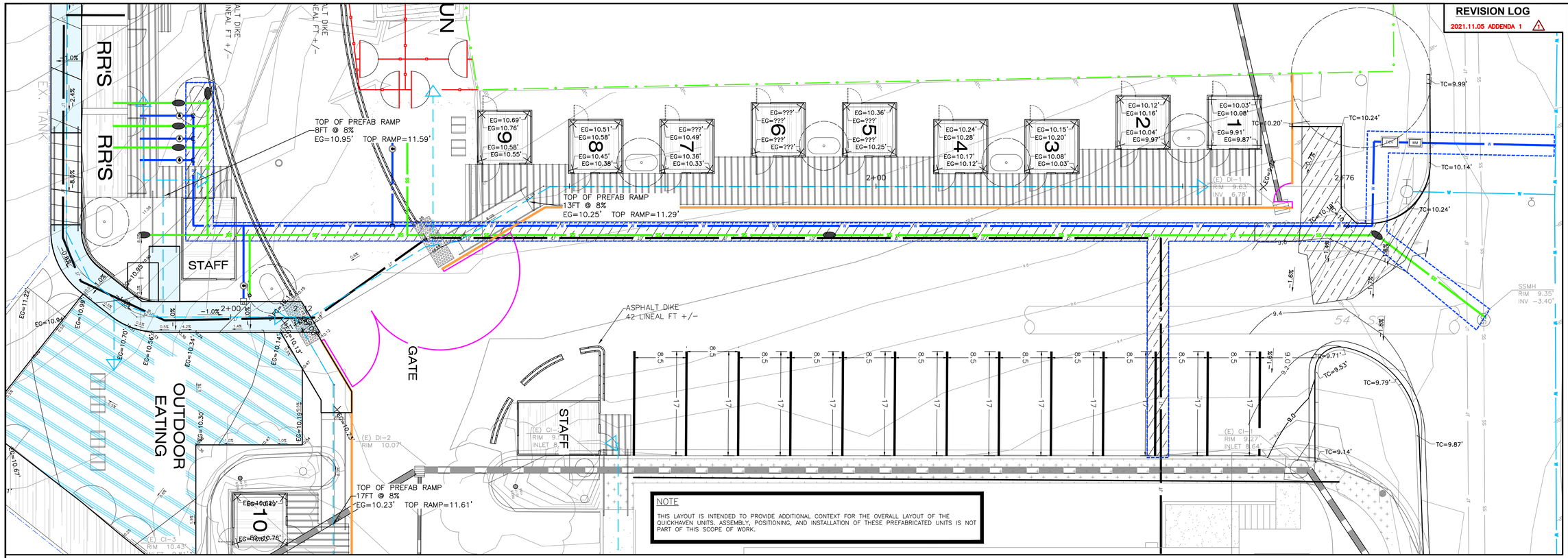
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

UTILITY PLAN & PROFILE

SCALE: 1" = 10'

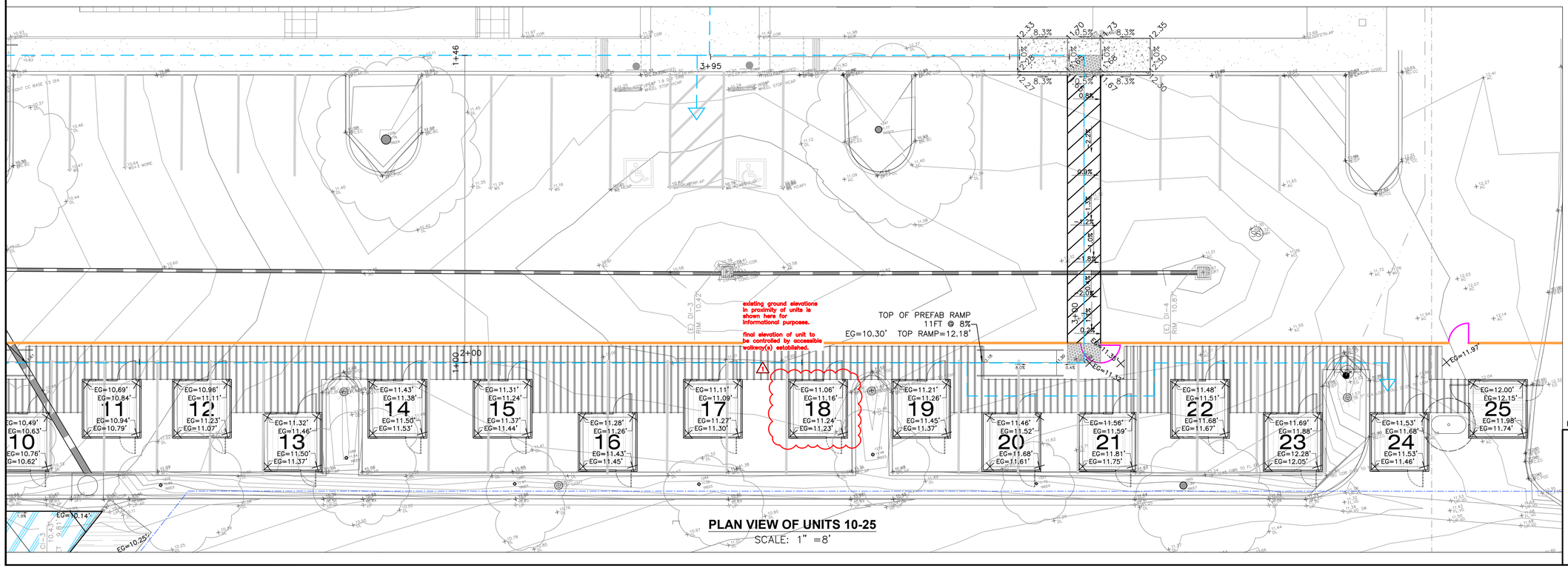
SHEET
C-7



PLAN VIEW OF UNITS 1-9
SCALE: 1" =8'

GRAPHIC SCALE 0 4 8 16 32

NORTH



PLAN VIEW OF UNITS 10-25
SCALE: 1" =8'

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

REVISION LOG
2021.11.05 ADDENDA 1 △1

DATE: 11/05/2021 △
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

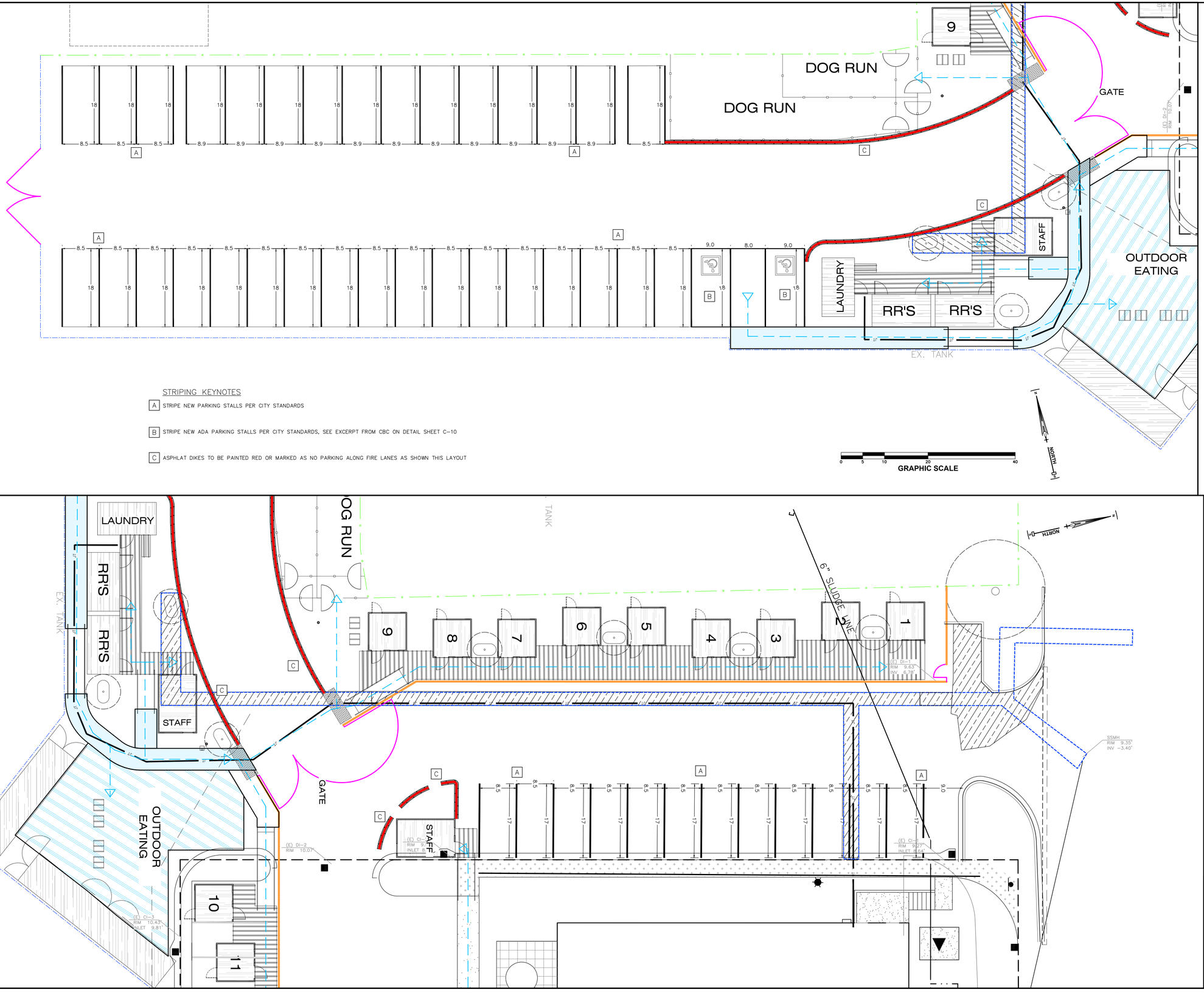
CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

UNIT CONTEXT PLAN

SCALE: 1" = 8'

SHEET
C-8

8 OF 24



STRIPING KEYNOTES

A STRIPE NEW PARKING STALLS PER CITY STANDARDS

B STRIPE NEW ADA PARKING STALLS PER CITY STANDARDS, SEE EXCERPT FROM CBC ON DETAIL SHEET C-10

C ASPHLAT DIKES TO BE PAINTED RED OR MARKED AS NO PARKING ALONG FIRE LANES AS SHOWN THIS LAYOUT

REVISION LOG

2021.11.05 ADDENDA 1 △1

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

DATE: 11/05/2021 △1
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

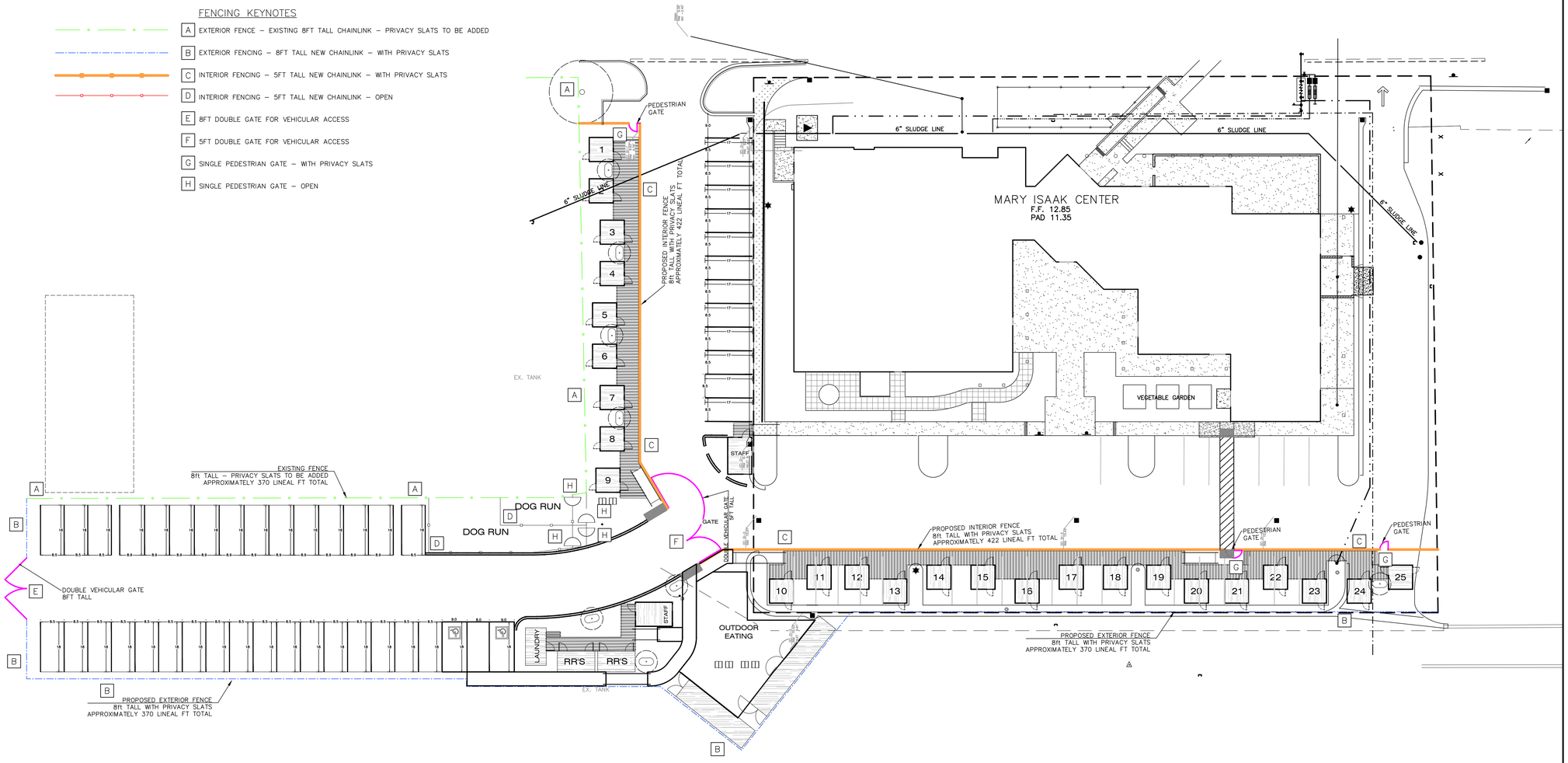
SIGNAGE STRIPING PLAN

SCALE: 1" = 10'

SHEET
C-9

FENCING KEYNOTES

- A EXTERIOR FENCE – EXISTING 8FT TALL CHAINLINK – PRIVACY SLATS TO BE ADDED
- B EXTERIOR FENCING – 8FT TALL NEW CHAINLINK – WITH PRIVACY SLATS
- C INTERIOR FENCING – 5FT TALL NEW CHAINLINK – WITH PRIVACY SLATS
- D INTERIOR FENCING – 5FT TALL NEW CHAINLINK – OPEN
- E 8FT DOUBLE GATE FOR VEHICULAR ACCESS
- F 5FT DOUBLE GATE FOR VEHICULAR ACCESS
- G SINGLE PEDESTRIAN GATE – WITH PRIVACY SLATS
- H SINGLE PEDESTRIAN GATE – OPEN



REVISION LOG

2021.11.05 ADDENDA 1 △1

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

DATE: 11/05/2021 △1
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

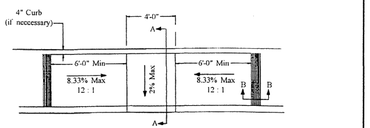
CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

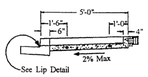
CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

FENCING PLAN

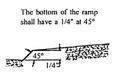
SCALE: 1" = 20'

SHEET
C-10

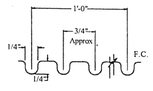




SECTION A - A



LIP DETAIL



SECTION B - B

NOTE:

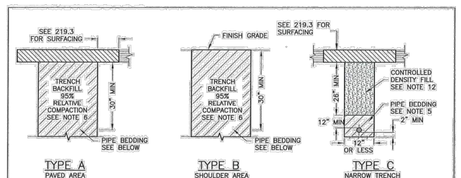
1. Design shall conform to these requirements except as otherwise approved by the Director of Engineering.
2. For subdivisions where sidewalks are not required for street improvements, curb depressions for curb ramps shall be omitted.
3. The surface of each curb ramp shall be slip resistant and shall be of contrasting finish from that of the adjacent sidewalk.
4. Type "B" or "C" ramp to be used in situations when 5'-0" minimum landing can not be obtained.
5. Sidewalk and ramp thickness shall be 4" of P.C.C with two No.4 rebar continuous over 4" of Class 2 A.B. compacted to 95%.
6. If curb exists, 1/2" dowels are required at 4'-0" on center between existing curb and new construction.

CITY OF PETALUMA
Department of Engineering
Thomas S. Hargis R.C.E. 22566

Standard
CURB RAMP
TYPE - B
Detail

Drawn by: Butch Smith
Scale: N. T. S
Date: February 9th 1998 (Rev.)
File Number: Std.Det. SSD 0000 206

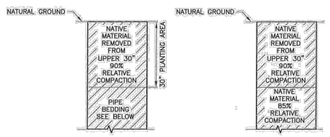
Page 206



TYPE A
PAVED AREA

TYPE B
SHOULDER AREA

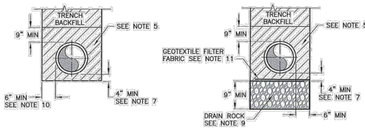
TYPE C
NARROW TRENCH



TYPE D
PUBLIC UTILITY EASEMENT
NON TRAFFIC LOADING AREA

TYPE E
PUBLIC UTILITY EASEMENT
UNDEVELOPED AREAS
(APPROVAL REQUIRED)

TRENCH BACKFILL



STABLE TRENCH

PIPE BEDDING

UNSTABLE TRENCH

NOTES:
1. SEE 219.2 FOR NOTES

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. TEL: 707-778-4549
PETALUMA, CALIFORNIA 94954 FAX: 707-778-4508

STANDARD TRENCH DETAILS

DATE: JAN 7, 2019 SCALE: N.T.S.
APPROVED BY:
Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: TKM NO. 219.1

NOTES:

1. REFER TO ORDINANCE 2266 N.C.S. FOR PAVEMENT CUT IN STREETS WITH 5 YEARS FOR NEWLY CONSTRUCTED, RECONSTRUCTED, OR RESURFACED AND 2 YEARS FOR RESURFACING FOR SLURRY SEAL OR MICROSURFACE.
2. ASPHALTIC CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SECTION 39.
3. SAW CUT PAVEMENT NEAT LINE STRAIGHT, AS SHOWN ON STD DETAIL 219.1, FROM TRENCH WALL TO SUBGRADE. PAINT BINDER (TACK COAT) SHALL BE APPLIED TO ALL VERTICAL SURFACES, MATCH EXISTING A.C. THICKNESS OR USE A.C. THICKNESS TABLE WHICHEVER IS GREATER.

   ADDITIONAL PAVEMENT REMOVAL:
   REMOVE ADDITIONAL PAVEMENT TO A PAINTED VEHICLE LANE STRIPE, LIP OF GUTTER, CURB, A CENTERLINE OR EDGE OF PAVEMENT IF SUCH STREET FEATURE IS WITHIN 3' (FEET) OF THE FINAL SAW CUT, SUBJECT TO CITY APPROVAL. REMOVAL OF ADDITIONAL PAVEMENT TO ADJACENT EXISTING OR NEW PAVEMENT PATCH, IF PATCH IS WITHIN 5' OF FINAL SAWCUT.
4. DIFFERENT TRENCH SECTIONS MAY BE REQUIRED AND SPECIFIED BY PUBLIC WORKS & UTILITIES.
5. PIPE BEDDING MATERIAL SHALL BE CLASS 2 AGGREGATE BASE COMPACTED TO 90% RELATIVE COMPACTION AT OPTIMUM MOISTURE OR AS APPROVED BY PUBLIC WORKS & UTILITIES.
6. TRENCH BACKFILL SHALL BE CLASS 2 AGGREGATE BASE, THE UPPER 30" SHALL BE COMPACTED AT OPTIMUM MOISTURE AND SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SECTION 26 OR AS APPROVED BY PUBLIC WORKS & UTILITIES. (USE OF RECYCLED CLASS 2AB ONLY UPON APPROVAL BY THE CITY AND PROJECT GEOTECHNICAL ENGINEER.)
7. 1/4 PIPE OUTSIDE DIAMETER MINIMUM WHEN EXCAVATION IS IN ROCKY GROUND.
8. OPTIONAL BACKFILL– CONTROLLED DENSITY FILL (C.D.F.): MIX NO. 1500 (95% RELATIVE COMPACTION) SHALL CONFORM TO NOTE 12.
9. DRAIN ROCK MAY BE USED AS BEDDING UNDER PIPE FOR SLOPES LESS THAN 8%. DRAIN ROCK SHALL BE 100% CRUSHED AND SHALL CONFORM TO THE FOLLOWING GRADING:

1-1/2"	1"	1/2"	#4
100	95-100	0-30	0-4

   DRAIN ROCK SHALL BE COMPACTED WITH A SURFACE VIBRATOR. PIPE BEDDING MATERIAL WHEN PLACED OVER DRAIN ROCK SHALL BE SEPARATED BY GEOTEXTILE FILTER FABRIC (MIRAFI 140NC) TO PREVENT MIGRATION AND COMPACTED WITH A SURFACE VIBRATOR CONFORMING TO NOTE 5.
10. IF PIPE DIAMETER IS LESS THAN 18" = 9" MAX.
    IF PIPE DIAMETER IS GREATER THAN 18" = 12" MAX.
11. GEOTEXTILE FILTER FABRIC (MIRAFI 140NC OR EQUAL) SHALL BE APPLIED AS SHOWN IN THE UNSTABLE TRENCH DETAIL WRAPPED AROUND THE DRAIN ROCK WITH A 1' (ONE FOOT) MINIMUM OVERLAP.
12. CONTROL DENSITY FILL (CDF):
    SHALL BE MIX DESIGN NO. 1500 MANUFACTURED BY SHAMROCK MATERIALS, INC. OR MIXTURE OF PORTLAND CEMENT, SAND AND 1" MAXIMUM COARSE AGGREGATE, AIR ENTRAINING AGENT AND WATER, BATCHED BY A READY-MIXED CONCRETE PLANT AND DELIVERED TO THE JOB SITE BY MEANS OF TRANSIT MIXING TRUCKS. CONTROL DENSITY FILL MAY ALSO CONTAIN CLASS F POZZOLAN (FLY ASH).
    CONTROL DENSITY FILL SHALL BE FREE OF ASPHALTIC MATERIAL.

    MATERIALS:
    CEMENT SHALL MEET THE STANDARDS AS SET FORTH IN ASTM C-150, TYPE II CEMENT.
    FLY ASH SHALL MEET THE STANDARDS AS SET FORTH IN ASTM C-618, FOR CLASS F POZZOLANS. THE FLY ASH SHALL NOT INHIBIT THE ENTRAINMENT OF AIR.

    AGGREGATE SIZE 1" MAX.
    SAND – ASTM C33

    MIX PROPORTIONS:
    THE MIX PROPORTIONS SHALL BE DETERMINED BY THE PRODUCER OF THE CONTROL DENSITY FILL TO PRODUCE A FLOWABLE FILL MIXTURE WHICH WILL NOT SEGREGATE, EACH YARD SHALL CONTAIN NOT LESS THAN 50 POUNDS OF CEMENT AND NOT LESS THAN A TOTAL OF 100 POUNDS OF CEMENTIOUS MATERIAL. THE CONTRACTOR SHALL SUPPLY A MIX DESIGN TWO WEEKS PRIOR TO ANY USE OF CONTROL DENSITY FILL.

    MIXTURE PROPERTIES:
    COMPRESSIVE STRENGTH 75-200 PSI AT 28 DAYS
    SLUMP = FLOWABLE (6"-9")

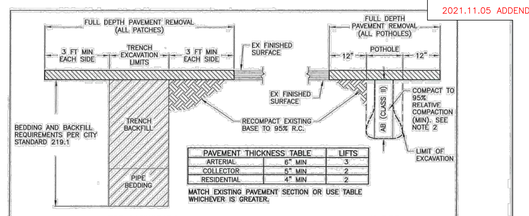
    THE CONSISTENCY OF CDF SHALL BE SUCH THAT ALL TRENCH VOIDS ARE FILLED WITH MINIMUM RODDING OR VIBRATING BUT NOT SO WET AS TO CAUSE EXCESSIVE SHRINKAGE.

    PAVING:
13. PERMANENT PAVEMENT MAY BE PLACED DIRECTLY UPON THE CONTROL DENSITY FILL AS SOON AS IT HAS CONSOLIDATED FOR THE SURFACE TO WITHSTAND THE PROCESS OF PAVING WITHOUT DISPLACEMENT. THE SURFACE OF THE CONTROL DENSITY FILL SHALL BE FIRM AND NON-YIELDING AND SHALL CONFORM TO VERTICAL AND HORIZONTALITY OF THE CONTROL DENSITY FILL UNDER THE ACTION OF COMPACTION EQUIPMENT OR OTHER MINIMUM REQUIREMENTS. FAILURE SHALL BE CONSIDERED AS EVIDENCE THAT THE CONTROL DENSITY FILL DOES NOT MEET THIS REQUIREMENT. THE CONTRACTOR SHALL PROVIDE TRENCH PLATES TO ALLOW TRAFFIC FLOW FOR ALL LOCATIONS UNTIL CONTROL DENSITY FILL IS READY TO BE PAVED.
14. FULL TACK COAT COVERAGE ON ALL VERTICAL SURFACES.
15. TRENCH SHALL BE PAVED WITH ASPHALT CONCRETE WHERE THICKNESS IS EQUAL TO THE THICKNESS OF THE EXISTING PAVEMENT BUT IN NO CASE SHALL THICKNESS BE LESS THAN SHOWN IN THE ASPHALT CONCRETE THICKNESS TABLE. ASPHALT SHALL BE 2" TYPE A CONFORMING TO SECTION 39 OF THE STANDARD SPECIFICATIONS.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. TEL: 707-778-4549
PETALUMA, CALIFORNIA 94954 FAX: 707-778-4508

STANDARD TRENCH DETAILS (NOTES)

DATE: JAN 3, 2019 SCALE: N.T.S.
APPROVED BY:
Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: TKM NO. 219.2

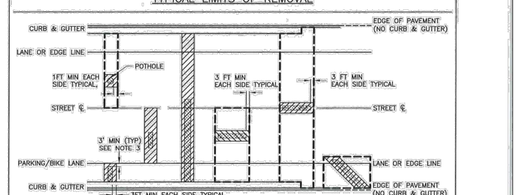


PAVEMENT THICKNESS TABLE	LIFTS
ARTERIAL 6" MIN	3
COLLECTOR 5" MIN	2
4" MIN	2

MATCH EXISTING PAVEMENT SECTION OR USE TABLE WHICHEVER IS GREATER.

(TRENCH EXCAVATION) (POTHOLE)

TYPICAL LIMITS OF REMOVAL



TYPICAL PAVEMENT CUTS

- REPLACEMENT LIMIT FOR ASPHALT 5 YEARS & NEWER, MICROSURFACE/SLURRY SEAL 2 YEARS & NEWER – 2" GRIND AND OVERLAY
- REPLACEMENT LIMIT FOR ASPHALT OLDER THAN 5 YEARS, MICROSURFACE/SLURRY SEAL OLDER THAN 2 YEARS – TYP. TRENCH SECTION (ABOVE)
- EXCAVATED AREA

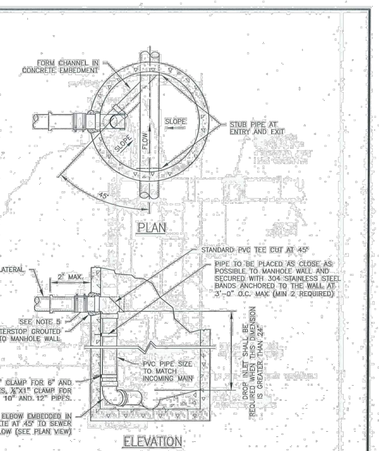
NOTES:

1. PAVEMENT SURFACING SHALL CONFORM TO: CITY ORDINANCE NO. 2266 N.C.S. RESTRICTIONS ON EXCAVATION IN NEWLY CONSTRUCTED OR RESURFACED PUBLIC RIGHT-OF-WAY.
2. COMPACTION TESTS SHALL BE REQUIRED AS DEEMED NECESSARY BY THE CITY ENGINEER OR INSPECTOR.
3. SEE STANDARD 219.2 FOR ADDITIONAL NOTES.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES

PAVEMENT RESURFACING
LIMITS FOR PUBLIC
RIGHT-OF-WAY

DATE: JAN 9, 2019 SCALE: N.T.S.
APPROVED BY:
Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: TKM NO. 219.3



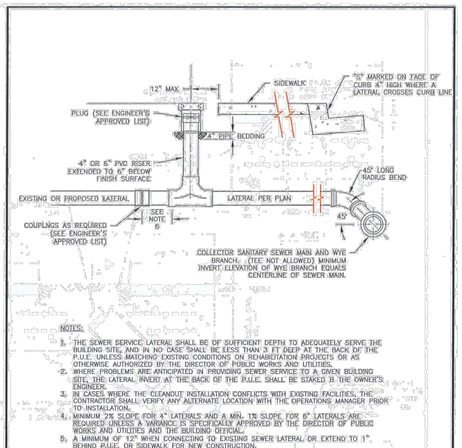
NOTES:

1. INSTALL WATERSTOP IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AS SHOWN.
2. NEW MANHOLES CONSTRUCTED USING THIS STANDARD SHALL BE 60 INCHES IN DIAMETER, AND INSTALLED IN CONFORMANCE WITH STANDARD 503.
3. SEE STANDARD 504 FOR STANDARD OUTSIDE DROP INSTALLATION.
4. ALL DROP PIPING AND FITTINGS TO BE PVC (SDR 26). REMOVE BELL.
5. FLEXIBLE RUBBER COUPLING WITH STAINLESS STEEL SHEAR BAND REQUIRED IF MAIN OR LATERAL IS NOT PVC MATERIAL.
6. INSTALL WATERSTOP IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, AS SHOWN.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. TEL: 707-778-4549
PETALUMA, CALIFORNIA 94954 FAX: 707-778-4508

STANDARD DETAILS
INSIDE DROP-IN
SANITARY SEWER
MANHOLE

DATE: DECEMBER 2020 SCALE: N.T.S.
APPROVED BY:
Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: TM NO. 503



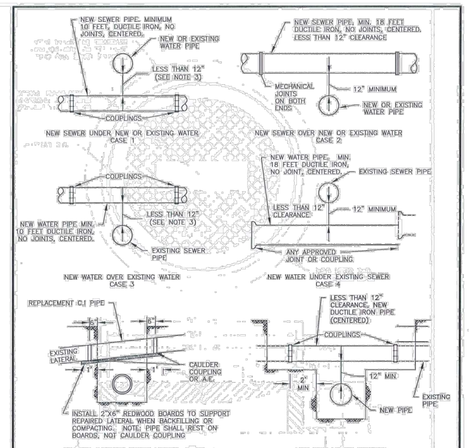
NOTES:

1. THE SEWER SERVICE LATERAL SHALL BE OF SUFFICIENT DEPTH TO ADEQUATELY SERVE THE BUILDING SITE, AND IN NO CASE SHALL BE LESS THAN 3 FT DEEP AT THE BACK OF THE P.U.E. UNLESS MATCHING EXISTING CONDITIONS ON REHABILITATION PROJECTS OR AS OTHERWISE AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS AND UTILITIES.
2. WHERE PROBLEMS ARE ANTICIPATED IN PROVIDING SEWER SERVICE TO A GIVEN BUILDING SITE, THE LATERAL INVERT AT THE BACK OF THE P.U.E. SHALL BE STAKED BY THE OWNER'S ENGINEER.
3. IN CASES WHERE THE CLEANOUT INSTALLATION CONFLICTS WITH EXISTING FACILITIES, THE CONTRACTOR SHALL VERIFY ANY ALTERNATE LOCATION WITH THE OPERATIONS MANAGER PRIOR TO INSTALLATION.
4. MINIMUM 2% SLOPE FOR 4" LATERALS AND A MIN. 1% SLOPE FOR 6" LATERALS ARE REQUIRED UNLESS A VARIANCE IS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS AND UTILITIES AND THE BUILDING OFFICIAL.
5. A MINIMUM OF 12" WHEN CONNECTING TO EXISTING SEWER LATERAL OR EXTEND TO 1'. BEHIND P.U.E., OR SIDEWALK FOR NEW CONSTRUCTION.
6. FOR NEW CONSTRUCTION, INSTALL CAP OR PLUG AT END OF SERVICE LATERAL.
7. LATERAL MATERIAL SHALL BE PVC SDR 26 OR DUCTILE IRON PIPE. RISER PIPE SHALL BE SDR 26.
8. CLEANOUT COMPONENTS SHALL BE THE SAME SIZE AS THE LATERAL.
9. TAP FITTINGS ON MAINS SMALLER THAN 12" MAY ONLY BE USED UNDER THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS AND UTILITIES.
10. INSTALL #12 TRACER WIRE OVER LATERALS THAT CANNOT BE INSTALLED PERPENDICULAR TO SEWER MAIN.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. TEL: 707-778-4549
PETALUMA, CALIFORNIA 94954 FAX: 707-778-4508

STANDARD DETAILS
4" AND 6" SERVICE
LATERAL AND
CLEANOUT

DATE: DECEMBER 2020 SCALE: N.T.S.
APPROVED BY:
Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: TM NO. 506



NOTES:

1. THIS STANDARD APPLIES TO PIPES UP TO AND INCLUDING 16" DIAMETER. ALL CROSSINGS OF LARGER DIAMETER SHALL BE APPROVED BY THE DIRECTOR OF PUBLIC WORKS AND UTILITIES.
2. ALL NEW DUCTILE IRON SHALL BE WRAPPED IN POLYETHELENE PER CITY OF PETALUMA STANDARD DETAILS.
3. WHERE SEWER CROSSES ABOVE OR BELOW A WATER MAIN WITH 1'=0" OR MORE VERTICAL CLEARANCE, NO SPECIAL INSTALLATION IS REQUIRED. IF SEWER LATERAL IS 12" OR MORE ABOVE WATER MAIN, DI IS NOT REQUIRED.
4. "NEW PIPE"UNDER EXISTING (CASE 5) SHALL BE USED WHEN THE EXISTING PIPE HAS A JOINT OVER OR WITHIN 2'0" OF THE NEW TRENCH.
5. ANY PIPE-PIPE CROSSING WITH LESS THAN 6" VERTICAL CLEARANCE SHALL NOT BE INSTALLED WITHOUT APPROVAL OF THE DIRECTOR OF PUBLIC WORKS AND UTILITIES.
6. FOR WATER MAIN LOWERING DETAIL, SEE CITY WATER MAIN STANDARDS.
7. ALL CROSSINGS SHALL REFER TO DEPARTMENT OF HEALTH SERVICES REGULATIONS.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. TEL: 707-778-4549
PETALUMA, CALIFORNIA 94954 FAX: 707-778-4508

STANDARD DETAILS
PIPE-PIPE
CROSSING

DATE: DECEMBER 2020 SCALE: N.T.S.
APPROVED BY:
Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: TM NO. 512

REVISION LOG

2021.11.05 ADDENDA 1 △

DATE: 11/05/2021 △
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

DETAILS

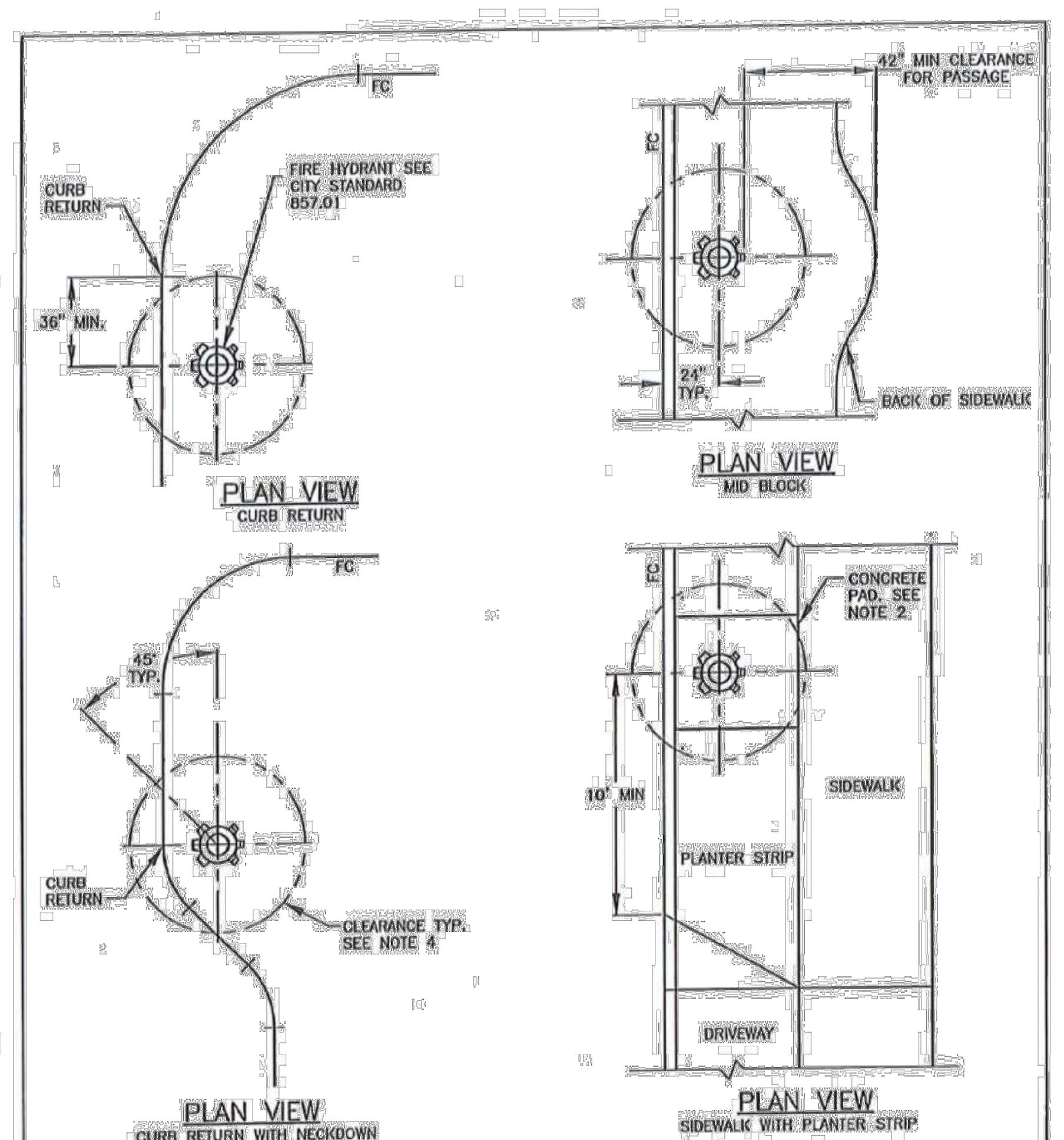
PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER
STEVEN J. LAFRANCHI
No. 49302
CIVIL
STATE OF CALIFORNIA

SCALE: AS NOTED

SHEET
C-11

11 OF 24



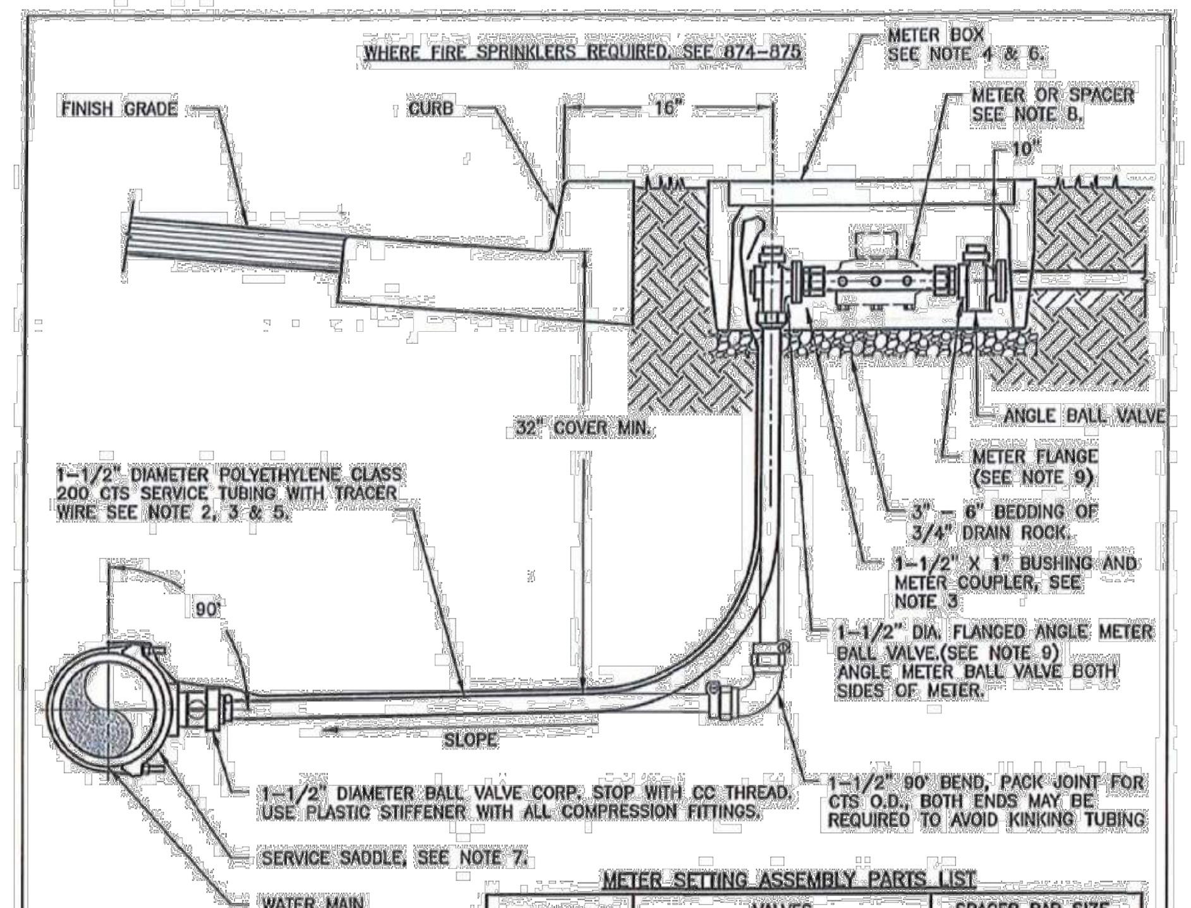
NOTES:

1. SEE WATER SYSTEM DESIGN GUIDELINES.
2. WHERE NO SIDEWALK EXISTS, OR WHERE HYDRANT IS INSTALLED IN PLANTER STRIP, A 6" THICK 4' X 4' CONCRETE PAD SHALL BE INSTALLED.
3. RESIDENTIAL FIRE HYDRANTS HAVE TWO 2-1/2" & ONE 4-1/2" OUTLETS. COMMERCIAL FIRE HYDRANTS HAVE ONE 2-1/2" & TWO 4-1/2" OUTLETS. ON COMMERCIAL HYDRANTS: FACE 4 1/2" OUTLETS TO STREET.
4. MAINTAIN A MINIMUM OF 36" OPERATIONAL CLEARANCE ALL AROUND.
5. FOR DESIGNATED "NO PARKING" AREAS SEE STREET DESIGN AND CONSTRUCTION STANDARDS.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. PETALUMA, CALIFORNIA 94954 TEL. 707-778-4546 FAX. 707-778-4508

FIRE HYDRANT LOCATION

DATE: MARCH 2016 | SCALE: N.T.S.
APPROVED BY: Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: JDL | NO. 857.02



METER SETTING ASSEMBLY PARTS LIST

METER SIZE	VALVES	SPACER BAR SIZE (SEE NOTE 9.)
1"	SEE APPROVED MATERIALS LIST	1 1/4" DIA X 11" LONG SCH. 80 PVC PIPE W/WASHERS, 11 1/4" TOTAL

NOTES:

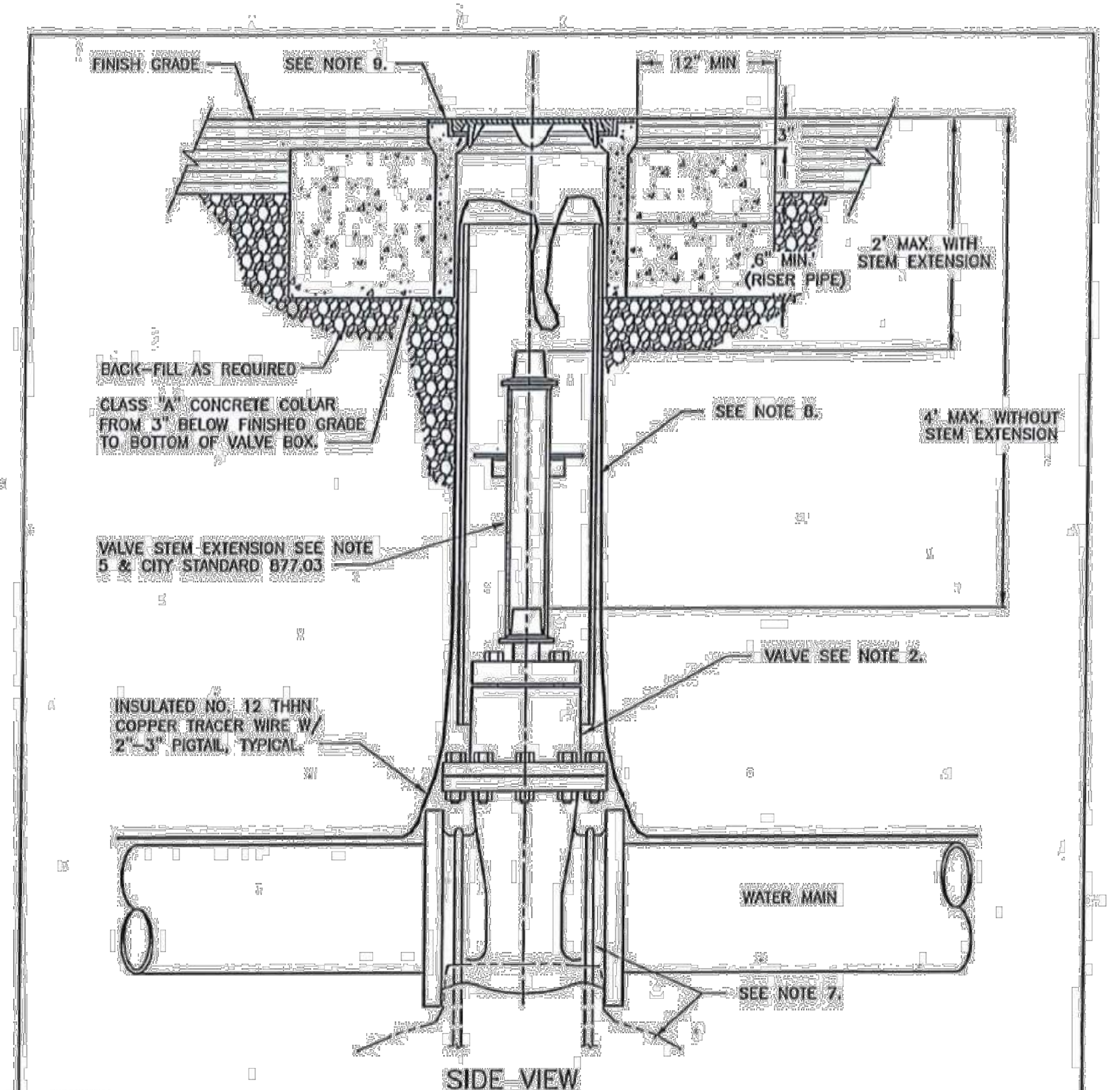
1. SEE WATER SYSTEM DESIGN GUIDELINES.
2. THE SERVICE SHALL NOT BE SIZED SMALLER THAN THE METER. IF FIRE SPRINKLERS ARE REQUIRED SEE CITY STANDARD DETAIL 863.
3. USE INSULATED NO. 12 THHN WIRE.
   - ALL WIRE CONNECTIONS SHALL BE MADE WITH MECHANICAL WIRE CONNECTORS WRAPPED WITH ELECTRICAL TAPE.
   - END OF TRACER WIRE TO BE EXPOSED 6" MINIMUM INSIDE OF METER BOX.
4. METER BOXES SHALL BE LOCATED OUT OF TRAFFIC LOADING AREAS WHERE POSSIBLE. TRAFFIC LOADING BOX & LID TO BE INSTALLED IN ALL LOCATIONS WHERE VEHICULAR TRAFFIC MAY OCCUR, THE STEEL LID SHALL BE SET FLUSH WITH FINISHED SURFACE. BOX PIPE KNOCKOUTS TO BE GROUTED TO PREVENT DIRT INTRUSION WHERE REQUIRED.
5. TRENCH BACKFILL REQUIREMENTS – SEE CITY STANDARD DETAIL 852.01.
6. METER BOX AND COVER SHALL BE B-30 – SEE APPROVED MATERIALS LIST.
7. TAPPING SERVICE SADDLES – SEE APPROVED MATERIALS LIST.
8. FOR NEW SERVICES CONTRACTOR SHALL INSTALL SCHEDULE 80 PVC SPACER PIPE WITH 1/2" DIAMETER HOLES DRILLED THRU PIPE AT 2" ON CENTER, THREAD BOTH ENDS. CITY PUBLIC WORKS AND UTILITIES PERSONNEL TO REMOVE SPACER PIPE AND INSTALL METER. SEE METER SETTING ASSEMBLY PARTS LIST.
9. INSTALL BRASS METER FLANGE, 1-1/2"X1" BUSHING AND 1"X2" METER COUPLING. SET 2" MIN. FROM SIDE OF BOX. USE 316 SS HARDWARE.
10. ALL FLANGE BOLTS FOR METERS TO HAVE THREADS FACING AWAY FROM METER. INCLUDES 1-1/2" AND 2" METERS.

1

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. PETALUMA, CALIFORNIA 94954 TEL. 707-778-4546 FAX. 707-778-4508

1-1/2" WATER SERVICE FOR 1" METER (NEW RESIDENTIAL SERVICE)

DATE: AUGUST 2019 | SCALE: N.T.S.
APPROVED BY: Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: JDL | NO. 862



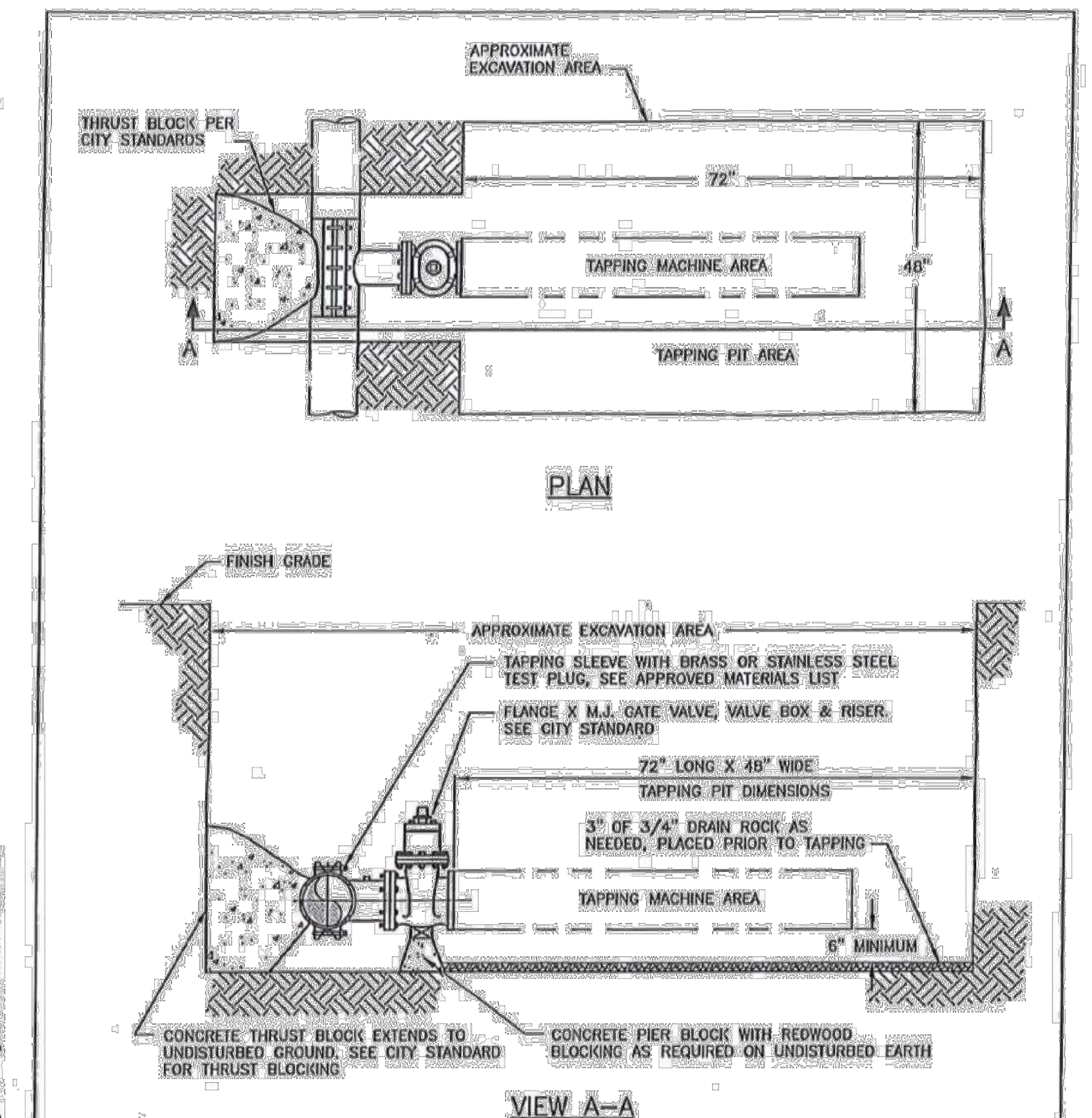
NOTES:

1. SEE WATER SYSTEM DESIGN GUIDELINES.
2. VALVES 2" THROUGH 12" SHALL BE RESILIENT SEATED GATE VALVES AND VALVES 16" AND LARGER SHALL BE BUTTERFLY VALVES (SEE WATER SYSTEN DESIGN GUIDELINES) UNLESS OTHERWISE APPROVED BY PUBLIC WORKS AND UTILITIES.
3. GATE VALVES SHALL CONFORM TO THE CITY WATER SYSTEM DESIGN GUIDELINES.
4. ALL EXTERNAL BOLTS AND NUTS ON VALVES SHALL BE TYPE 316 STAINLESS STEEL.
5. IF VALVE IS INSTALLED SO THAT THE TOP OF THE OPERATING NUT IS MORE THAN 4' BELOW FINISHED GRADE, THE VALVE STEM RISER SHALL BE REQUIRED.
6. FOR INSTALLATION OF BUTTERFLY VALVE AND TAPPING VALVE, SEE STANDARD.
7. SEE CITY STANDARD DETAIL NO. 877.02 FOR VALVE TIE DOWN REQUIREMENTS.
8. 8" DIA. SDR 35 PVC SEWER PIPE CONFORMING TO ASTM3034. RISER PIPE TO BE PLUMB AND CENTERED OVER VALVE STEM AND SHALL BE CONSTRUCTED FROM A SINGLE LENGTH OF PIPE WITH NO JOINT. (IF VALVE RISER PIPE IS EXISTING AND VALVE BOX IS RAISED, A BELL JOINT EXTENSION IS ALLOWED). VALVE RISER PIPE MUST EXTEND INTO VALVE BOX.
9. SET VALVE BOX FLUSH WITH STREET SURFACE OR FINISHED GRADE WITH CAST IRON RING AND COVER MARKED "WATER". VALVE BOX TO BE CHRISTY G5 OR G8 OR APPROVED EQUAL WITH TRAFFIC LID.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. PETALUMA, CALIFORNIA 94954 TEL. 707-778-4546 FAX. 707-778-4508

GATE VALVE, STEM EXTENSION AND BOX WITH RISER

DATE: AUGUST 2016 | SCALE: N.T.S.
APPROVED BY: Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: JDL | NO. 877.01



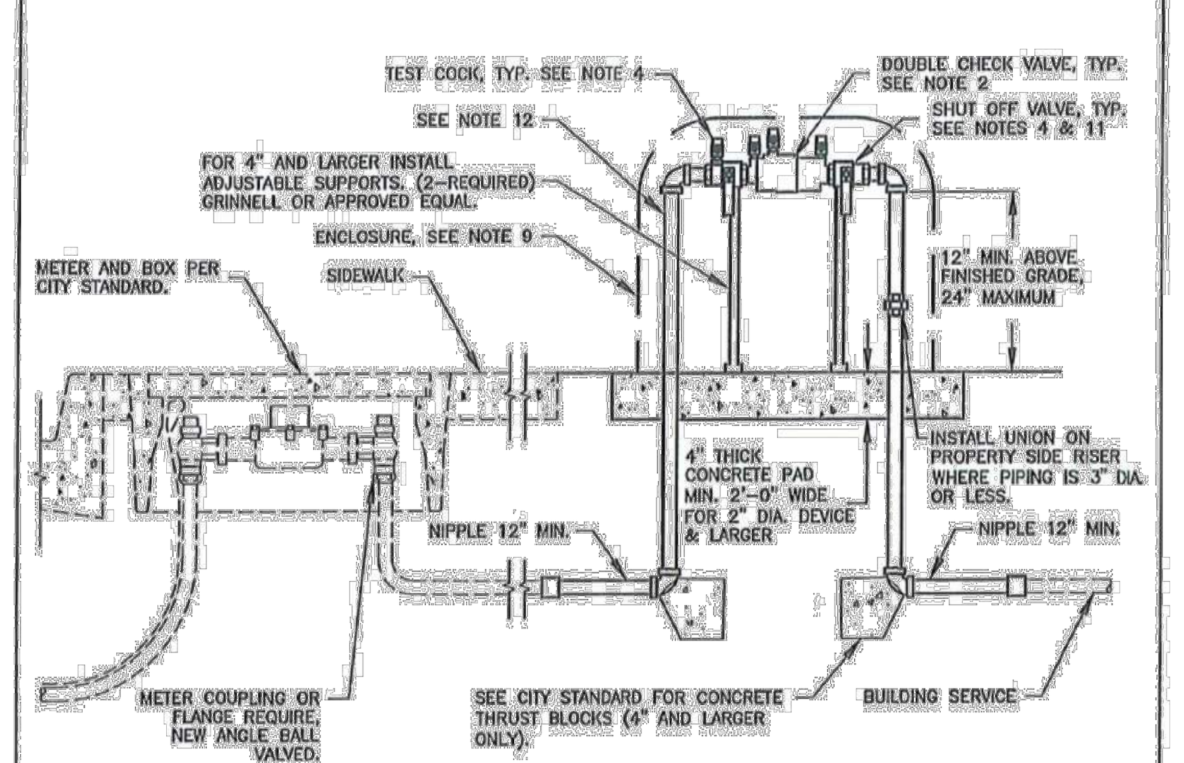
NOTES:

1. SEE WATER SYSTEM DESIGN GUIDELINES FOR TAPPING LOCATION REQUIREMENTS.
2. ALL EXTERNAL NUTS AND BOLTS ON VALVES SHALL BE TYPE 316 STAINLESS STEEL.
3. TAPS LARGER THAN 2 INCH SHALL BE MADE BY THE CITY PUBLIC WORKS & UTILITIES AT THE CONTRACTORS EXPENSE.
4. INSTALL SHORING PER OSHA REQUIREMENTS.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. PETALUMA, CALIFORNIA 94954 TEL. 707-778-4546 FAX. 707-778-4508

TAPPING VALVE AND PIT

DATE: MARCH 2016 | SCALE: N.T.S.
APPROVED BY: Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: JDL | NO. 878



NOTES:

1. SEE WATER SYSTEM DESIGN GUIDELINES.
2. DOUBLE CHECK VALVE ASSEMBLIES SHALL BE INSTALLED ADJACENT TO AND ON THE PROPERTY SIDE OF SIDEWALK WHERE APPLICABLE. WHERE NO SIDEWALK EXISTS, THE DOUBLE CHECK VALVE ASSEMBLIES SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE WATER METER LOCATION. THERE SHALL BE NO TEE OR BRANCH LINES BETWEEN THE WATER METER AND ASSEMBLIES. ANY CONFLICTS SHALL BE RESOLVED BY PUBLIC WORKS AND UTILITIES.
3. APPROVED DOUBLE CHECK VALVES SHALL BE AS SHOWN ON "LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES" (LATEST REVISION) BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES.
4. ALL DOUBLE CHECK VALVE ASSEMBLIES SHALL BE PROVIDED WITH A MINIMUM OF FOUR (4) TEST COCKS. AND (2) SHUT OFF VALVES.
5. THIS STANDARD APPLIES TO RESIDENTIAL CONNECTIONS WITH AUXILIARY WATER SUPPLIES ON SITE, FIRE SPRINKLERS OR WHERE A POTENTIAL HAZARD EXISTS, AS DETERMINED BY PUBLIC WORKS AND UTILITIES.
6. THE PIPING FROM THE METER TO THE DOUBLE CHECK VALVE ASSEMBLY AND THE REDUCED PRESSURE BACKFLOW ASSEMBLY ITSELF MUST BE THE SAME SIZE AS THE METER UNLESS OTHERWISE APPROVED BY PUBLIC WORKS AND UTILITIES.
7. NOT FOR USE ON INDUSTRIAL OR COMMERCIAL PROPERTY SERVICES.
8. IF ABOVE GROUND INSTALLATION IS NOT FEASIBLE OBTAIN APPROVAL FROM PUBLIC WORKS AND UTILITIES FOR SPECIAL INSTALLATION STANDARDS.
9. AN ENCLOSURE IS RECOMMENDED FOR PROTECTION FROM FREEZING AND VANDALISM.
10. A THERMAL EXPANSION TANK WHEN USED ON A DOMESTIC SERVICE SHALL BE SIZED AND INSTALLED PER MANUFACTURES RECOMMENDATION ON THE COLD WATER SUPPLY LINE TO THE WATER HEATER.
11. SHUT OFF VALVES:
    1. 2" AND LESS SHALL BE BALL VALVE
    2. 2 1/2" AND GREATER SHALL BE RESILIENT SEAT GATE VALVE.
12. ALL PIPING, VALVES, NIPPLES, ETC.:
    3. 2" AND LESS SHALL BE TYPE "L" HARD-TEMPER COPPER OR LEAD FREE BRASS.
    4. 2 1/2" AND GREATER SHALL BE FLANGED DUCTILE IRON.
13. PVC PIPE OR FITTINGS SHALL NOT BE USED.
14. IF PROPOSING TO INSTALL THIS DEVICE IN A FLOOD ZONE, CONTACT PUBLIC WORKS AND UTILITIES FOR APPROVAL.

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
UTILITIES DIVISION
202 N. McDOWELL BLVD. PETALUMA, CALIFORNIA 94954 TEL. 707-778-4546 FAX. 707-778-4508

ABOVE GROUND DOUBLE CHECK VALVE BACKFLOW ASSEMBLY

DATE: AUGUST 2019 | SCALE: N.T.S.
APPROVED BY: Kent R. Carothers, P.E. Operations Manager C60071
DRAWN BY: JDL | NO. 874

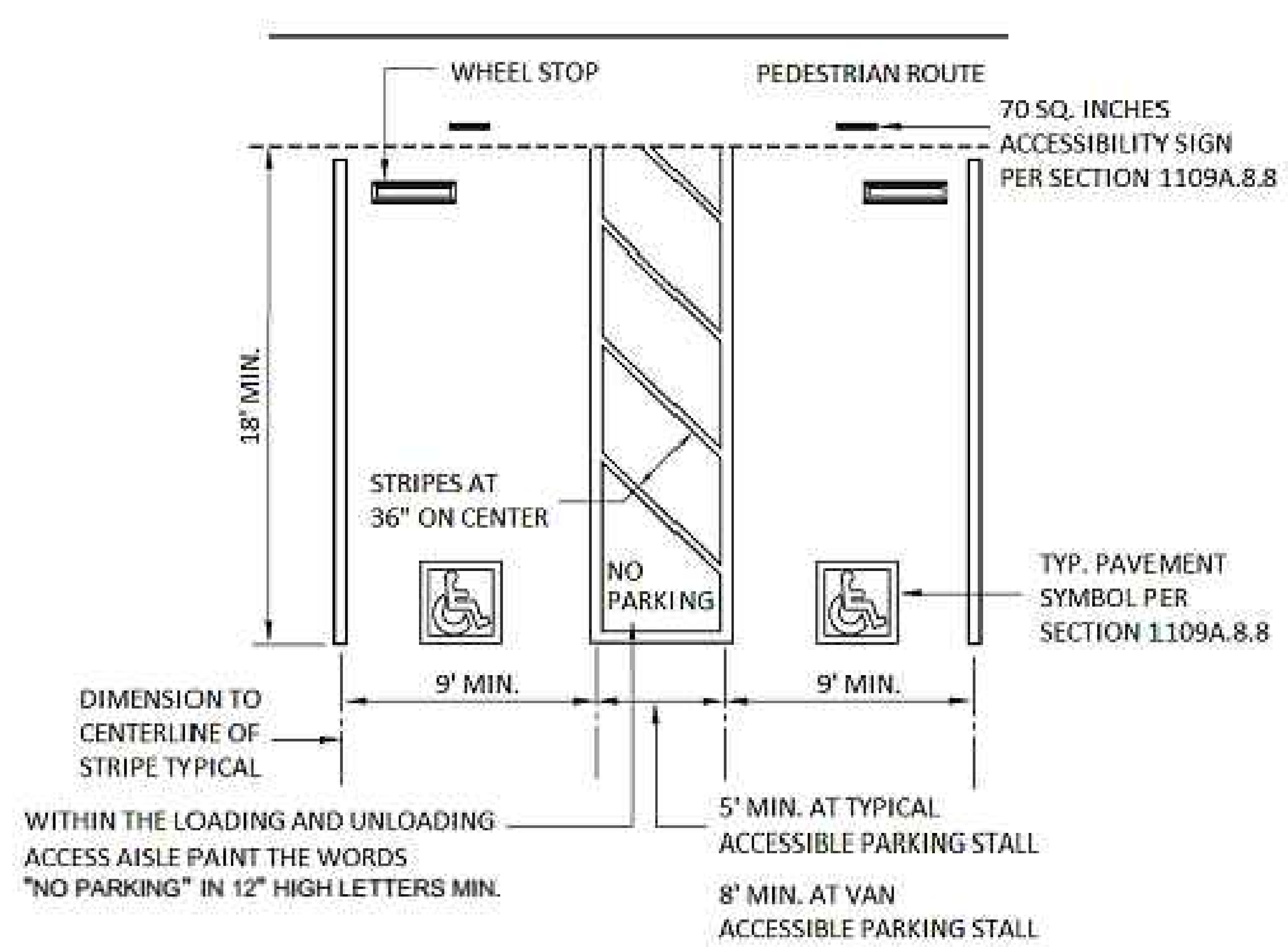
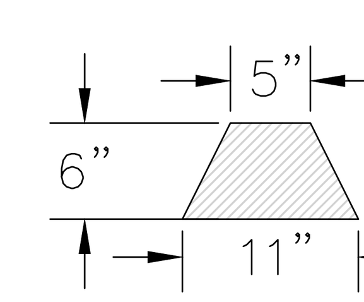


FIGURE 11A-2A
DOUBLE PARKING STALLS

CBC EXCERPT FOR ADA PARKING STALL STRIPING
SCALE: NOT TO SCALE



6" ASPHALT CONCRETE DIKE
SCALE: NOT TO SCALE

REVISION LOG
2021.11.05 ADDENDA 1

DATE: 11/05/2021
DESIGNED BY: NOF
DRAWN BY: NOF
CHECKED BY: SJL

STEVEN J. LAFRANCHI & ASSOCIATES, INC.
CIVIL ENGINEERS ~ LAND SURVEYORS
LAND PLANNERS ~ LANDSCAPE ARCHITECTS
PETALUMA THEATRE SQUARE
140 SECOND STREET, SUITE 312
PETALUMA, CA 94952
(707) 762-3122 FAX (707) 762-3239

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

PETALUMA 1858

CITY OF PETALUMA INTERIM HOUSING SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

DETAILS

PROJECT NO. H00202500

REGISTERED PROFESSIONAL ENGINEER STEVEN J. LAFRANCHI No. 49302 CIVIL STATE OF CALIFORNIA

SCALE: AS NOTED
SHEET
C-12
12 OF 24

H00202500

Hopper Street

MARY ISAAK CENTER
F.F. 12.85
PAD 11.35

6" SLUDGE LINE

FIRE LANE

VEGETABLE GARDEN

PARKING
13 SPACES
FIRE LANE

PARKING
34 SPACES

PARKING
18 SPACES
FIRE LANE

DOG RUN

DOG RUN

STAFF

STAFF

ENTRY

VEHICLE GATE, KEYPAD

GATE, KEYPAD

GATE, KEYPAD

OUTDOOR EATING

SMOKING

LAUNDRY

RR'S

RR'S

STORAGE

STORAGE

EMERGENCY ACCESS

(2) BIKE RACKS

(4) BIKE RACKS

(E) TREE

(E) BUILDING REMOVED, N.I.C.

(E) 6' CHAIN LINK FENCE, ADD (N) SLATS

(E) 6' CHAIN LINK FENCE, ADD (N) SLATS

(E) FENCE

GALVANIZED CORRUGATED OVAL PLANTERS WITH DECIDUOUS TREES, N.I.C. TYPICAL

(E) 6' CHAIN LINK FENCE, ADD (N) SLATS

EMERGENCY / ESCAPE OPENINGS / ACCESS

(N) 6' CHAIN LINK FENCE AND GATE WITH SLATS

(N) 6' CHAIN LINK FENCE WITH SLATS

THESE UNIT SIZES TO BE DETERMINED

(N) 6' CHAIN LINK FENCE WITH SLATS

(N) 6' CHAIN LINK FENCE WITH SLATS

(N) 6' CHAIN LINK FENCE AND GATES WITH SLATS, GATE LEAFS ARE 9' AND 13' WIDE

(N) 6' CHAIN LINK FENCE AND GATES WITH SLATS INCLUDING DUMPSTER ENCLOSURE

NEW CURBS

NEW STRIPING

NEW STRIPING OR CURB

ELEVATED WALKWAYS

ELEVATED WALKWAYS

ELEVATED WALKWAYS

ACCESSIBLE ROUTE OF TRAVEL

ACCESSIBLE ROUTE OF TRAVEL

(N) 6' CHAIN LINK FENCE WITH SLATS

ENTRANCE DOORS

REMOVE ASPHALT PAVING WITHIN DOG RUNS ADD PEA GRAVEL, CONCRETE PAD REMOVAL IS N.I.C.

DOG RUNS: (N) 6' CHAIN LINK FENCE AND GATES WITHOUT SLATS

6"X6" FREE-STANDING ASPHALT CURBS

GALVANIZED CORRUGATED OVAL PLANTERS WITH DECIDUOUS TREES, N.I.C. TYPICAL

(N) 24" WIDE TRUNCATED DOME STRIPS

BOTTLE FILLER STATION

CUT CURBS FOR RAMP AND STAIRS

CUT CURB FOR WALKWAY

CUT CURB FOR WALKWAY

ACCESSIBLE ROUTE OF TRAVEL

(N) 6' CHAIN LINK FENCE WITH SLATS

(N) 6' CHAIN LINK FENCE WITH SLATS

(N) 24" WIDE TRUNCATED DOME STRIP

(N) STRIPING

DEMO SIDEWALK AND INSTALL (N) CONCRETE CURB RAMP WITH 24" WIDE TRUNCATED DOME STRIP

(N) 6' CHAIN LINK FENCE AND GATE WITH SLATS

(E) HYDRANT AT EDGE OF WALKWAY

CUT CURB FOR WALKWAY

GALVANIZED CORRUGATED OVAL PLANTERS WITH DECIDUOUS TREES, N.I.C. TYPICAL

ELEVATED WALKWAYS

(E) LIGHT, STRIPING EQUAL DISTANCE EACH SIDE

(E) LIGHT, STRIPING EQUAL DISTANCE EACH SIDE

(E) LIGHT

(E) LIGHT

(E) LIGHT

(E) LIGHT

VERIFY EMERGENCY ESCAPE/RESCUE WINDOW SWING CLEARANCE TO (E) TREE AND LIMBS

(3) SPACES AT 8'-0" WIDE EACH

(11) SPACES AT 8'-11½ WIDE EACH

RAMP DOWN 1:12 / 8.33

RAMP DOWN 1:12 / 8.33

RAMP DOWN 1:12 / 8.33

1:12 MAX

1:12 MAX

DOWN 2R OR 3R

DOWN 2R OR 3R

DOWN 2R OR 3R

DOWN 2R OR 3R

10.80

11.08

11.40

11.70

12.18

12.02

12.18

11.97

11.99

NOTES:

1. MINIMUM ELEVATIONS ABOVE EXISTING GRADES (CONTRACTOR TO CONFIRM):
   - QUICKHAVEN UNITS, F.F.: +0.55'
   - TOP OF WALKWAYS AND DECKS: +0.72'
2. RAMPS: EZ-ACCESS 'TITAN' SERIES, OR APPROVED EQUAL. SEE CUT SHEETS.
3. NO TREES TO BE REMOVED UNLESS AUTHORIZED BY THE CITY OF PETALUMA. FIELD VERIFY AND NOTIFY THE CITY IF TREE LIMBING IS REQUIRED.
4. WHERE 'KEYPAD' IS NOTED, GATES TO HAVE POWERED ELECTRONIC LOCKS WITH KEY CODES, REMOTELY PROGRAMMABLE.
5. ALL PEDESTRIAN GATES TO HAVE AUTOMATIC CLOSERS COMPLIANT WITH CBC 11B-404.2.8.
6. BIKE RACKS: GLOBAL INDUSTRIAL 'SURF 6', BLACK POWDER COATED STEEL, OR APPROVED EQUAL. (6) UNITS, 36 BIKES MAXIMUM CAPACITY.
7. OUTDOOR BOTTLE FILLER: GLOBAL INDUSTRIAL 'OUTDOOR PEDESTAL BOTTLE FILLING STATION, BLACK, OR APPROVED EQUAL.
8. ~~UNITS 1-25, STAFF UNITS, RESTROOM UNITS, AND LAUNDRY UNIT ARE~~ N.I.C., ASSEMBLY AND POSITIONING N.I.C.
9. EXACT MODELS AND OTHER DESIGN PARAMETERS STAFF UNITS, RESTROOM UNITS, AND LAUNDRY UNIT HAVE NOT BEEN DETERMINED AND ARE A DEFERRED SUBMITTAL

PLAN NORTH

SITE PLAN

SCALE: 1/16"=1'-0"

DATE: 11 / 5 / 2021 △1
DESIGNED BY:
DRAWN BY: CH
CHECKED BY: MD

MAD architecture
12 WESTERN AVENUE, #2
PETALUMA, CA 94952
TEL 707 . 765 . 9222
www.madarc.com

SEAL AND SIGNATURE

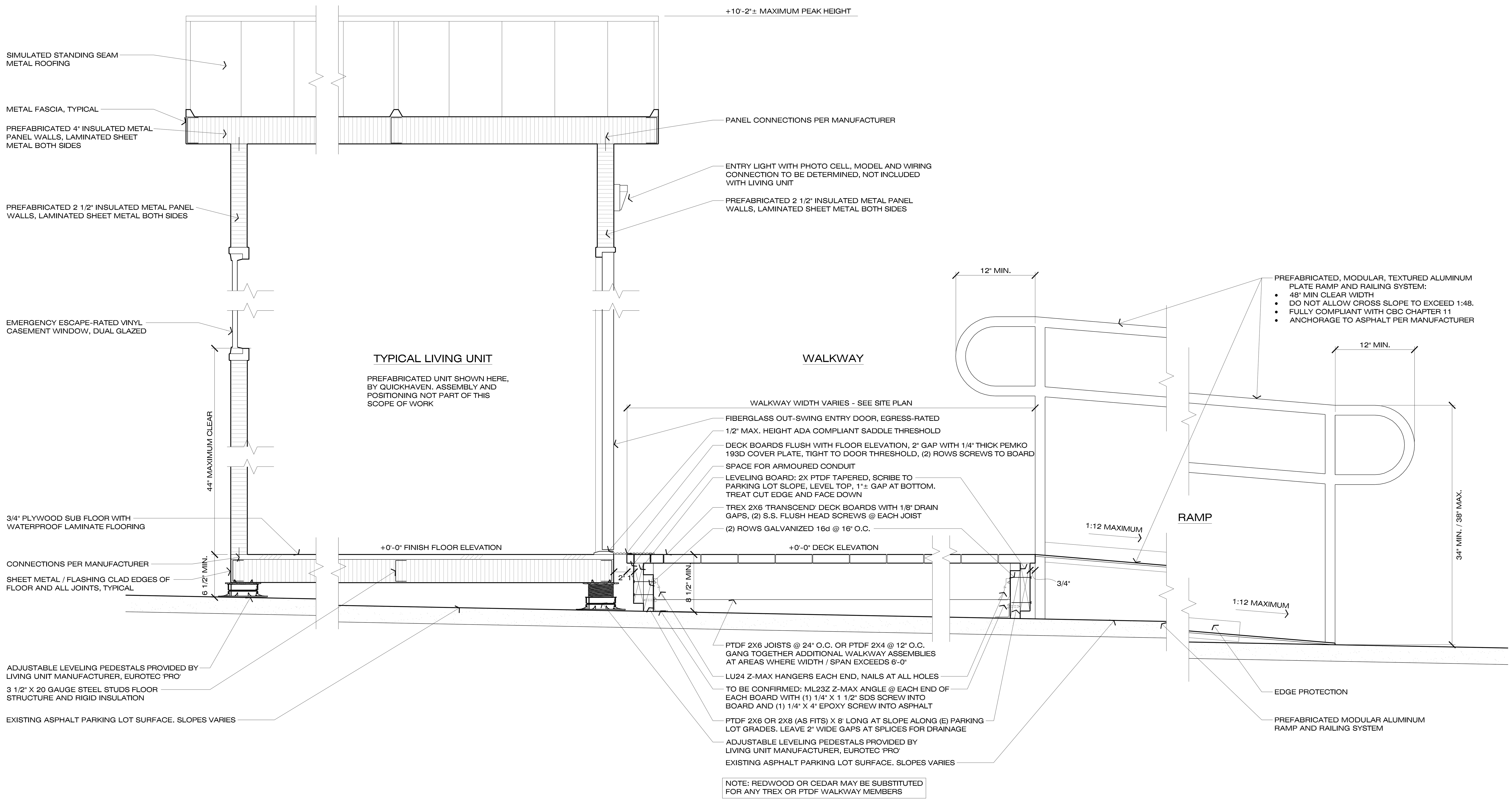
LICENSED ARCHITECT MARY A. DIODATI REN. 06/30/22 STATE OF CALIFORNIA

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

SITE PLAN

SHEET
A1



1 UNIT SECTION
SCALE: 1 1/2"=1'-0"

2 WALKWAY SECTION
SCALE: 1 1/2"=1'-0"

3 RAMP SECTION
SCALE: 1 1/2"=1'-0"

H00202500

DATE: 11 / 5 / 2021
DESIGNED BY:
DRAWN BY: CH
CHECKED BY: MD

MAD architecture
12 WESTERN AVENUE, #2
PETALUMA, CA 94952
TEL 707 . 765 . 9222
www.madarc.com

SEAL AND SIGNATURE

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA CA 94952

DETAILS

SHEET
A2

ELECTRICAL DEVICES

- JUNCTION BOX - WALL MOUNTED +18" A.F.F. U.O.N.
- JUNCTION BOX - FLOOR MOUNTED
- JUNCTION BOX - CEILING MOUNTED
- POWER OUTLET , DUPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
- POWER OUTLET, DEDICATED DUPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
- POWER OUTLET, SWITCHED DUPLEX - +18" A.F.F. U.O.N.
- POWER OUTLET, FOURPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
- POWER OUTLET, DEDICATED FOURPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
- POWER OUTLET, SIMPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
- POWER OUTLET, DUPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
- POWER OUTLET, DEDICATED DUPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
- POWER OUTLET, FOURPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
- POWER OUTLET, DEDICATED FOURPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
- POWER OUTLET, DUPLEX - CEILING MOUNTED
- POWER OUTLET, DEDICATED DUPLEX - CEILING MOUNTED
- POWER OUTLET, FOURPLEX - CEILING MOUNTED
- POWER OUTLET, DEDICATED FOURPLEX - CEILING MOUNTED

NOTE:
ALL 15- AND 20-AMPERE, 125- AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN PRESCHOOLS AND ELEMENTARY EDUCATION FACILITIES SHALL BE TAMPER-RESISTANT TYPE.

CONTROLS

- $ SWITCH, SINGLE CONTROL - WALL MOUNTED +42" A.F.F. U.O.N.
- $3 SWITCH, 3-WAY CONTROL - WALL MOUNTED +42" A.F.F. U.O.N.
- $4 SWITCH, 4 WAY CONTROL - WALL MOUNTED +42" A.F.F. U.O.N.
- $M SWITCH, MOTOR RATED - NOTED MOUNTING
- $D SWITCH, DIMMER CONTROL - WALL MOUNTED +42" A.F.F U.O.N.
- $VD SWITCH, DIMMER WITH VACANCY CONTROL - WALL MOUNTED +42" A.F.F U.O.N.
- $V1 SWITCH, VACANCY CONTROL - SINGLE POLE - WALL MTD +42" A.F.F U.O.N.
- $V2 SWITCH, VACANCY CONTROL - DUAL POLE - WALL MOUNTED +42" A.F.F U.O.N. (FAN CONTROL SHALL BE PROVIDED WITH TIME DELAY)
- DX LV SWITCH, UP TO FOUR ZONES, EACH WITH ON/OFF AND DIMMER CONTROL - WALL MOUNTED +42" A.F.F U.O.N.
- Sx LV SCENE SWITCH - WALL MOUNTED +42" A.F.F U.O.N. (NUMBER OF SCENE BUTTONS AS INDICATED)
- M LV MASTER CONTROL - WALL MOUNTED +42" A.F.F U.O.N.
- V LV VACANCY SENSOR CONTROL - CEILING MOUNTED
- DL LV DAYLIGHTING SENSOR CONTROL - DUAL ZONE - CEILING MOUNTED
- PLC PLUG LOAD CONTROLLER - MOUNT IN ACCESSIBLE LOCATION
- RCx ROOM LIGHTING CONTROLLER - MOUNT IN ACCESSIBLE LOCATION (NUMBER OF ZONES AS INDICATED)
- PC SWITCH, PHOTO CELL
- TC ASTRONOMICAL TIME CLOCK

LOW VOLTAGE

- CEILING SPEAKER
- WALL MOUNTED SPEAKER: +96" A.F.F. U.O.N., 3/4" CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE CEILING
- WP WP EXTERIOR SPEAKER: +96" A.F.F. U.O.N., 3/4" CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE CEILING
- SPEAKER/ CLOCK: +96" A.F.F. U.O.N., 1" CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE CEILING
- DATA OUTLET - WALL MOUNTED +18" A.F.F.
- DATA OUTLET - NOTED MOUNTED
- WP WAP DATA OUTLET FOR EXTERIOR WIRELESS ACCESS POINT, +10'-0" A.F.F.
- VOICE/DATA OUTLET - WALL MOUNTED +18" A.F.F.
- VOICE/DATA OUTLET - NOTED MOUNTING
- VOICE OUTLET - WALL MOUNTED +18" A.F.F.
- VOICE OUTLET - +48" A.F.F. TO CENTER WITH PHONE MOUNT KEYSTONE WALL PLATE, SINGLE GANG, 1-PORT STAINLESS STEEL
- DATA OUTLET - FLOOR MOUNTED
- VOICE OUTLET - FLOOR MOUNTED
- VOICE/DATA OUTLET - FLOOR MOUNTED
- DATA OUTLET - CEILING MOUNTED
- WAP DATA OUTLET - CEILING MOUNTED FOR WIRELESS ACCESS POINT.
- TV TV OUTLET, WALL MOUNTED +18" A.F.F., U.O.N., 3/4" CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE CEILING
- AV1 4-GANG IN-WALL A/V CONNECTION ENCLOSURE (HUBBELL #NSAV124M) WITH (1) RECEPTACLE POWER KIT MOUNTED AT +60" AT FLAT PANEL LOCATION. PROVIDE 1" CONDUIT TO ACCESSIBLE CEILING SPACE

SECURITY

- MS SECURITY MOTION SENSOR: +84" AFF TO TOP OF SINGLE GANG BOX, 3/4" CONDUIT STUBBED TO ACCESSIBLE SPACE ABOVE CEILING
- K INTRUSION ALARM KEYPAD: +44" TO TOP OF SINGLE GANG BOX, 3/4" CONDUIT STUBBED TO ACCESSIBLE SPACE ABOVE CEILING
- C SINGLE GANG BOX FOR SECURITY CAMERA: 3/4" CONDUIT TO ACCESSIBLE SPACE ABOVE CEILING, MOUNT HIGH ON WALL, VERIFY BOX LOCATIONS AND HEIGHTS WITH DISTRICT PRIOR TO ROUGH-IN
- DC SECURITY DOOR CONTACT: 1/2" CONDUIT FROM DOOR FRAME STUBBED TO ACCESSIBLE SPACE ABOVE CEILING

APPLICABLE CODES & STANDARDS REFERENCES

PARTIAL LIST OF APPLICABLE CODES AS OF January 1, 2020*

2019 California Administrative Code (CAC), Part 1, Title 24 CCR*
2019 California Building Code (CBC), Part 2, Title 24 CCR
(2018 International Building Code, Vol. 1 & 2, and 2019 California amendments)
2019 California Electrical Code (CEC), Part 3, Title 24 CCR
(2017 National Electrical Code and 2019 California Amendments)
2019 California Mechanical Code (CMC), Part 4, Title 24 CCR
(2018 IAPMO Uniform Mechanical Code and 2019 California amendments)
2019 California Plumbing Code (CPC), Part 5, Title 24 CCR
(2018 IAPMO Uniform Plumbing Code and 2019 California amendments)
2019 California Energy Code (CEC), Part 6, Title 24 CCR
2019 California Fire Code (CFC), Part 9, Title 24 CCR
(2018 International Fire Code and 2019 California Amendments)
2019 California Existing Building Code (CEBC), Part 10, Title 24 CCR
(2018 International Existing Building Code and 2019 California Amendments)
2019 California Green Building Standards Code (CALGreen), Part 11, Title 24 CCR
2019 California Referenced Standards Code, Part 12, Title 24 CCR
Title 19 CCR, Public Safety, State Fire Marshal Regulations
2016 ASME A17.1/CSA B44-13 Safety Code for Elevators and Escalators *(per 2019 CBC Part 2 Ch 35)*
Note: Cal/OSHA Elevator Unit enforces CCR Title 8 and uses the 2004 ASME A17.1 by adoption

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13 - Standard for the Installation of Sprinkler Systems (CA amended)......................2016 Edition
NFPA 14 - Standard for the Installation of Standpipe and Hose Systems (CA amended)....2016 Edition
NFPA 17 - Standard for Dry Chemical Extinguishing Systems..2017 Edition
NFPA 17A - Standard for Wet Chemical Extinguishing Systems...2017 Edition
NFPA 20 - Standard for the Installation of Stationary Pumps for Fire Protection..................2016 Edition
NFPA 22 - Standard for Water Tanks for Private Fire Protection...2013 Edition
NFPA 24 - Standard for the Installation of Private Fire Service Mains and
Their Appurtenances (CA amended)..2016 Edition
NFPA 72 - National Fire Alarm and Signaling Code (CA amended)....................................2016 Edition
NFPA 80 - Standard for Fire Doors and Other Opening Protectives....................................2016 Edition
NFPA 2001 - Standard on Clean Agent Fire Extinguishing Systems (CA amended)............2015 Edition
UL 300 - Standard for Fire Testing of Fire Extinguishing Systems for
Protection of Commercial Cooking Equipment...2005 (R2010)
UL 464 - Audible Signaling Devices for Fire Alarm and Signaling Systems,
Including Accessories...2003 Edition
UL 521 - Standard for Heat Detectors for Fire Protective Signaling Systems.......................1999 Edition
UL 1971 - Standard for Signaling Devices for the Hearing Impaired...................................2002 (R2010)
ICC 300 - Standard for Bleachers, Folding and Telescopic Seating, and Grandstands........2017 Edition

For a complete list of applicable NFPA standards refer to 2019 CBC (SFM) Chapter 35 and California Fire Code Chapter 80.

See California Building Code Chapter 35 for State of California amendments to the NFPA Standards.

*All parts of the 2019 California Building Code become effective January 1, 2020 except the effective date for the use of the 2019 Building Energy Efficiency Standards (Title 24, Part 1, Chapter 10) is January 8, 2019 and the effective date for the use of the California Administrative Code (Title 24, Part 1, Chapter 4) is January 8, 2019.

CIRCUITING

- CIRCUIT - CONCEALED
- CIRCUIT - EXPOSED
- CIRCUIT - UNDER FLOOR, GROUND OR SLAB
- CIRCUIT - HOME RUN
- CIRCUIT - STUB OUT
- CIRCUIT - STUB DOWN
- CIRCUIT - STUB UP
- CIRCUIT - COMPLETE CONNECTION

EQUIPMENT

- DISCONNECT, NON-FUSED
- DISCONNECT, WITH FUSE
- STARTER, NON-FUSED
- STARTER, WITH FUSE
- DIVISION 15 FAN
- STARTER, WITH CIRCUIT BREAKER
- PANELBOARD FLUSH
- PANELBOARD SURFACE
- ENCLOSURE FLUSH
- ENCLOSURE SURFACE
- DISTRIBUTION BOARD
- METER SECTION
- MOTOR
- MTTB
- SITE PULL BOX / VAULT
- T TRANSFORMER

LIGHT FIXTURES

- LIGHT FIXTURE, 1 x 4 - PENDANT MOUNTED
- LIGHT FIXTURE, 1 x 8 - PENDANT MOUNTED
- LIGHT FIXTURE, 1 x 4 - RECESSED MOUNTED
- LIGHT FIXTURE, 1 x 8 - RECESSED MOUNTED
- LIGHT FIXTURE, 1 x 4 - SURFACE MOUNTED
- LIGHT FIXTURE, 1 x 8 - SURFACE MOUNTED
- LIGHT FIXTURE, 2 x 2 - RECESSED MOUNTED
- LIGHT FIXTURE, 2 x 4 - RECESSED MOUNTED
- LIGHT FIXTURE, 2 x 2 - SURFACE MOUNTED
- LIGHT FIXTURE, 2 x 4 - SURFACE MOUNTED
- LIGHT FIXTURE, 4' STRIP - SURFACE MOUNTED
- LIGHT FIXTURE, 8' STRIP - SURFACE MOUNTED
- LIGHT FIXTURE, EXIT WITH EGRESS - WALL/CEILING MOUNTED
- LIGHT FIXTURE, EGRESS - WALL MOUNTED
- LIGHT FIXTURE, EXIT DOUBLE FACE - CEILING MOUNTED
- LIGHT FIXTURE, EXIT DOUBLE FACE - WALL MOUNTED
- LIGHT FIXTURE, EXIT SINGLE FACE - CEILING MOUNTED
- LIGHT FIXTURE, EXIT SINGLE FACE - WALL MOUNTED
- LIGHT FIXTURE - PENDANT MOUNTED
- LIGHT FIXTURE - RECESSED MOUNTED
- LIGHT FIXTURE, WALL WASH - RECESSED MOUNTED
- LIGHT FIXTURE - SURFACE MOUNTED
- LIGHT FIXTURE - WALL MOUNTED
- LIGHT FIXTURE - POLE MOUNTED
- LIGHT FIXTURE, NO ARM - POLE MOUNTED OR BOLLARD

ADA REQUIREMENTS

A. ALL HEIGHTS CALLED OUT ON PLANS ARE TO CENTERLINE OF DEVICE, U.O.N.

B. FOLLOW ALL ADA REQUIREMENTS FOR DEVICE MOUNTING:
- MAX UNOBSTRUCTED FORWARD REACH 48-INCHES TO TOP OF DEVICE.
- MIN UNOBSTRUCTED FORWARD REACH 15-INCHES TO BOTTOM OF DEVICE.
- MAX OBSTRUCTED FORWARD REACH 44-INCHES TO TOP OF DEVICE.
- MAX OBSTRUCTED SIDE REACH 46-INCHES TO TOP OF DEVICE.

DIAGRAMS

- ATS — ATS
- PANEL 1LA — PANEL
- 100A 3P — CIRCUIT BREAKER
- XXXA XXP — FUSE
- XXXA XXP — UTILITY FUSE
- GROUND ROD
- M — METER
- M — METER CT
- TRANSFORMER

MISCELLANEOUS

- XX — DEMO KEYED NOTE TAG
- X — ELECTRICAL EQUIPMENT TAG
- 1 — KEYED NOTE TAG
- X X — MECHANICAL EQUIPMENT TAG
- X — REVISION DELTA
- 1 — EQUIPMENT MANUFACTURER'S IDENTIFICATION NUMBER
- X E- — DETAIL REFERENCE
- X E1 E2 — DETAIL REFERENCE
- NORTH — PLAN NORTH ARROW

ABBREVIATIONS

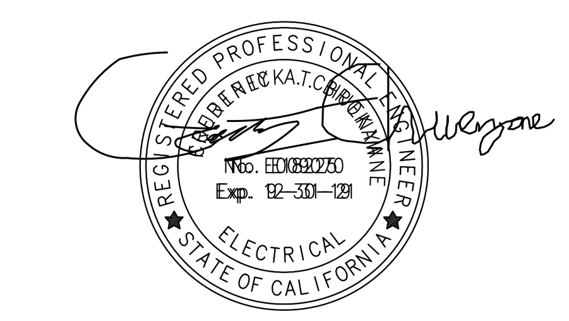
A	AMPERES	HVAC	HEATING, VENTILATION & AIR-COND.
AC	ALTERNATING CURRENT	IG	ISOLATED GROUND
A.F.F.	ABOVE FINISHED FLOOR	IMC	INTERMEDIATE METAL CONDUIT
AFG	ABOVE FINISHED GRADE	JB	JUNCTION BOX
AHJ	AUTHORITY HAVING JURISDICTION	KV	KILO VOLT
AHU	AIR HANDLING UNIT	KVA	KILO VOLT-AMP
AL	ALUMINUM	KW	KILO WATT
ANN	ANNUNCIATOR	LV	LOW VOLTAGE
APPROX	APPROXIMATE	MAX	MAXIMUM
ARF	ABOVE RAISED FLOOR	MC	METAL-CLAD
AWG	AMERICAN WIRE GAUGE	MCC	MOTOR CONTROL CENTER
BAT	BATTERY	MFR, MFGR	MANUFACTURER
BFG	BELOW FINISH GRADE	MIC	MICROPHONE
	CENTERLINE	MIN	MINIMUM
C, CND	CONDUIT	MDP	MAIN DISTRIBUTION BOARD
CB	CIRCUIT BREAKER	MSB	MAIN SWITCHBOARD
CKT	CIRCUIT	MTD	MOUNTED
CO	CONDUIT ONLY	(N)	NEW
COMM	COMMUNICATIONS	N, NEUT	NEUTRAL
CONST	CONSTRUCTION	N/A	NOT APPLICABLE
CONT	CONTINUED	NC	NORMALLY CLOSED
CP	CONTROL PANEL	NIC	NOT IN CONTRACT
CPT	CONTROL POWER TRANSFORMER	NO	NORMALLY OPEN
CT	CURRENT TRANSFORMER	NTS	NOT TO SCALE
CU	COPPER	OC	ON CENTER
DC	DIRECT CURRENT	PNL	PANEL
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
(E)	EXISTING	PB	PULL BOX, ELECTRICAL
EA	EACH	REQD	REQUIRED
EF	EXHAUST FAN	RGS, RSG	RIGID GALVANIZED STEEL
EMT	ELECTRICAL METALLIC CONDUIT	RTU	REMOTE TERMINAL UNIT
ENT	ELECTRICAL NON-METALLIC CONDUIT	SP	SPACE, SPARE
EP	EXPLOSION PROOF	SS	STAINLESS STEEL
EQ	EQUAL	SW	SWITCH
EVACS	EMERGENCY VOICE & COMMUNICATIONS SYSTEM	SWBD	SWITCHBOARD
		SWGR	SWITCHGEAR
(F)	FUTURE	TP	TAMPER PROOF
FA	FIRE ALARM	TYP	TYPICAL
FACP	FIRE ALARM CONTROL PANEL	UF	UNDER FLOOR
FC	FAN COIL	UG	UNDER GROUND
G, GND	GROUND	U.O.N.	UNLESS OTHERWISE NOTED
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	V	VOLT
		VA	VOLT-AMP
GFI	GROUND FAULT INTERRUPTER	W/0	WITHOUT
HV	HIGH VOLTAGE	WP	WEATHER PROOF
		XFMR	TRANSFORMER

ELECTRICAL SHEET INDEX

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:



0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT

900 HOPPER STREET, PETALUMA, CA

SHEET NAME:

ELECTRICAL LEGEND AND ABBREVIATIONS

ISSUE DATE: Project Issue Date

PREPARATION AND REVIEW

DRAWN BY: -
DESIGNER: -
PROJ MGR: -
PEER REVIEW: -

SHEET NUMBER:

E001

ELECTRICAL SPECIFICATIONS 26 00 00

ELECTRICAL

1.01- RELATED DOCUMENTS
A. The General Conditions, Supplementary Conditions and Division 1 apply to the electrical work.

1.02 - WORK INCLUDES
A. Work included in this section: All materials, labor, equipment, services, and incidentals necessary to install the Electrical Work as shown on the drawings and as specified hereinafter, including, but not limited to the following:
1. Distribution system, including main switchboard, panelboards, and feeders.
2. Branch circuit wiring, wiring devices and connections to all equipment requiring electrical service.
3. Lighting fixtures with hangers, anchors and supports. Lighting Controls.
4. Electrical equipment grounding system.
5. Telecommunication boxes, outlets, raceways and cabletrays.
6. Mechanical equipment power and control connections as stated in the mechanical and electrical specifications and as shown on the mechanical and electrical drawings.
7. Fire alarm system shall be Design Build by a Fire Alarm contractor.
8. Security and access control.
9. Raceways, outlet boxes and power connections for security and access control system. Coordinate all requirements with Owner.
10. Sleeves, inserts and blocking in cast concrete as required for work in this section.
11. All required incidental work, such as excavating and backfilling, roof flashing, and testing.
12. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.

1.03 - INCORPORATED DOCUMENTS
A. Requirements of the general conditions, supplementary conditions, and division 1. sections apply to all work in this section, unless modified herein.
B. Published specifications, standard tests or recommended methods of trade, industry or government organizations apply to work of this section where cited by abbreviations noted below, unless modified herein.
1. NATIONAL ELECTRICAL CODE, LATEST EDITION, (NEC).
2. NEMA STANDARDS
3. UNDERWRITERS' LABORATORIES, INC. (UL).
4. LOCAL UTILITY COMPANY REGULATIONS.
5. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

1.04 - CONDITIONS AT SITE:
A. Visit to site is required of all bidders prior to submission of bid. All will be held to have familiarized themselves with all discernible conditions and no extra payment will be allowed for work required because of these conditions, whether specifically mentioned or not.

1.05 - QUALITY ASSURANCE
A. Conformance:
1. All work shall conform to the applicable requirements of Article 1.03 above.
2. The Contractor shall notify the Architect, prior to submission of bid, about any part of the design which fails to comply with abovementioned requirements.
3. If after contract is awarded, minor changes and additions are required by aforementioned authorities, even though such work is not shown on drawings or covered in specifications, they shall be included at Contractor's expense.
B. Coordination:
1. The Contractor shall become familiar with the conditions at the job site, and with the drawings and specifications and plan the installation of the electrical work to conform with the existing conditions and that shown and specified so as to provide the best possible assembly of the combined work of all trades.
2. The Contractor shall work out in advance all "tight" conditions, involving all trades and if found necessary, supplementary drawings shall be prepared by this Contractor, for the Architect's approval, before work proceeds in these areas. No additional costs will be considered for work which must be relocated due to conflicts with the work of other trades.

1.06 - SUBMITTALS
A. Product Data:
1. Comply with the General Provisions of the Contract.
2. Within 15 days after award of the Contract, submit:
a. Complete material list of all items proposed to be furnished and installed under this Section, including but not limited to the following items: Circuit breakers, lighting fixtures, conduit, devices, enclosures, etc.
b. Manufacturers' specifications and other data required to demonstrate compliance with the specified requirements.
c. Manufacturers' recommended installation procedures which, when approved by the Architect, shall become the basis for inspecting and accepting or rejecting actual installation procedures used on the work.
3. Shop Drawings: Furnish shop drawings and/or equipment cuts for the following:
a. Light Fixtures
b. Switchboard
c. Panelboards
d. Motor Starters, Control Equipment, and Control Relays
e. Disconnect Switches
f. Fire Alarm System
g. Lamps
h. Ballasts
i. Lighting Control System
j. Security and access Control
k. Switches, receptacles and faceplates.
4. Test Reports:
a. Factory Tests where indicated for specific equipment.
b. Field Tests: Performance tests as specified for specific equipment.
c. When series rated circuit breakers are used, provide a letter from the manufacturer of the equipment confirming that U.L. series rating exists for all protective devices. State the available fault current from the Utility Company and indicate that the overcurrent devices exceed the available fault current at the respective point of protection.

1.07- MATERIALS
A. Materials of the same type or classification, used for the same purpose, shall be the product of the same manufacturer.

1.08 - ACCEPTABLE MANUFACTURERS
A. Materials shall be of make mentioned elsewhere in this specification. All materials shall be the best of their several kinds, perfectly new and approved by the Underwriters' Laboratories.
B. Where material, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired quality, style and utility and shall be the basis of the bid. Materials so specified shall be furnished under the contract unless changed by written approval of the Owner's Representative. Where two or more designations are listed, choice shall be optional with this Contractor, but this Contractor must submit his choice for final approval.

1.09 - DELIVERY, STORAGE AND HANDLING
A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all trades.
B. Delivery and Storage: Deliver all materials to the job site in their original containers with all labels intact and legible at time of use. Store in strict accordance with approved manufacturers' recommendations.
C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.
D. This Contractor shall personally, or through an authorized representative, check all materials upon receipt at jobsite for conformance with approved shop drawings and/or plans and specifications.

1.10 - SCHEDULING/SEQUENCING
A. Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet the construction schedule, together with any special handling charges, shall be borne by this Contractor.

1.11 - REQUIREMENTS
A. The contract drawings indicate the extent and general arrangements of the conduit wiring systems, etc. If any departures from the contract drawings are deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted as soon as practicable, and within 10 days after award of the electrical contract.
B. UNLESS MATERIAL LIST AND DATA IS RECEIVED AS A COMPLETE AND ALL INCLUSIVE SUBMITTAL WITHIN THE STIPULATED TIME ALL ITEMS SHALL BE PROVIDED AS SPECIFIED-WITH NO DEVIATIONS PERMITTED.
C. Any and all additional costs incurred by the substitution of electrical material or equipment, or installation thereof, whether architectural, structural, plumbing, mechanical or electrical, shall be borne by the Contractor under this section.

1.12 - IDENTIFICATION
A. Switchboards, feeder circuit breakers in switchboards, panels, disconnect switches, motor starters and motor disconnect switches, cabinets, and other apparatus used for the operation of, or control of circuits, appliances or equipment, shall be properly identified by means of engraved laminated plastic descriptive nameplates mounted on apparatus using stainless steel screws. Nameplates shall have white letters with black background and be submitted to the Architect for approval. Cardholders in any form are not acceptable.
B. Each branch circuit of panelboards to have a permanently fixed number with directory, mounted under celluloid on inside of cabinet door, showing circuit numbers, room number feed and typewritten description of equipment supplied by breakers.
C. Each Panelboard, Switchboard and Motor Control Center shall be provided with an Arc-Flash warning label per NEC requirements.

PART 2 - PRODUCTS:

2.01 - GENERAL
A. Materials shall be new, packed in original containers, installed and turned over to the Owner free of defects.
B. Materials shall bear Underwriters' Laboratory label.
C. Furnish equipment and materials for any one system by same manufacturer.

2.02 - MATERIALS
A. Conduit
1. Conduit shall be delivered to the site of construction in the original bundles. Each length shall bear the label of the National Board of Fire Underwriters. All conduit subjected to rough usage while on the job, before installation, shall be removed from the premises upon notice.
2. Raceway and boxes located as indicated on drawings and at other locations required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements. Raceway and boxes are shown in approximate locations unless dimensioned. Provide raceway to complete wiring system.
3. Rigid Steel: Hot dipped galvanized, used exposed and in concrete slab, with completely watertight fittings.
4. "Schedule 40" PVC shall be provided with code size minimum bare No. 12 ground wire with "Schedule 80" elbows and stub-ups.
5. All rigid steel conduit, couplings and elbows in soil or under membrane to be 1/2 tape wrapped with Scotch #50 tape and threaded ends coated with red lead prior to installation of couplings.
6. Use flexible conduit for all motor connections; Flexible metal type provide with code size (minimum No. 12) bare ground wire in all flexible conduit.
7. Conduit Bends - Long Radius.
8. Provide conduit seals at all concrete slab penetrations.
9. Contractor shall xray all existing concrete slab before core drilling.
10. All indoor conduit shall be installed concealed in walls or above ceiling unless noted otherwise
11. Installation:
a. Outdoor Locations:
• Above Grade: Provide rigid steel conduit. Provide cast metal outlet, pull, and junction boxes.
• In Soil: Provide Sched 40 or 80 PVC with Sched 80 PVC elbows (in marine/high moisture environments) or Rigid Steel elbows wrapped.
• In Concrete: Provide hot dipped galvanized rigid steel or Sched 40 PVC Conduit.
• Flexible Connection: WP Flexible metal conduit.
• Watertight and corrosion resistant fittings, couplings, boxes, etc.
b. Indoor Locations:
• Exposed Dry Locations: Provide galvanized rigid steel conduit or Intermediate metal conduit. Provide cast boxes. Electric Metallic Tubing may be provided in unfinished areas.
• Concealed Dry Locations: Provide electrical metallic tubing for sizes less than 2-inches. Provide galvanized rigid steel or intermediate steel conduit in sizes 2-inches or larger. Provide cast or sheet metal boxes.
•• Electric non-metallic tubing may be used from data/voice outlet to above non plenum ceiling only, otherwise it is unacceptable.
•• Flexible Conduit/MC cable may be used for the following applications only if allowed by the latest NEC publications:
••• Between light fixtures / light switches (not for homerun)
••• Between general 20A receptacles within walls (not for homerun)
Cable must be the same size as the IMC or EMT conduit to which it is connected. Both the flexible metal conduit and it's fittings are to be listed for grounding. A green grounding conductor shall be installed. All connections are to be of a NEMA approved type.
• Electric non-metallic tubing may be used from data/voice outlet to above non plenum ceiling only, otherwise it is unacceptable.
• Locations subject to Corrosive Atmosphere: Provide PVC coated, galvanized rigid steel or intermediate steel conduit. Provide PVC coated cast or sheet metal boxes.
• Hazardous Locations (Per NEC Article 500): Galvanized rigid steel conduit. Cast iron boxes with threaded hubs for conduit entry. Conduit seals.
B. Conduit Fittings:
1. Fittings for rigid steel and flexible type conduit shall be of a type as required, malleable iron or steel, galvanized or sherardized.
C. Outlet Boxes and Junction Boxes:
1. Galvanized one piece steel knockout type, unless otherwise noted, sizes as required for conditions at each outlet or as noted, not smaller than 2 inches wide by 4 inches high, ganged where multiple switch locations are indicated.
2. Outlet boxes located on exterior to be flush type (unless notes otherwise) with Weatherproof extra duty In-Use cover with lockable covers for receptacles.
3. All connectors from conduit to junction or outlet boxes shall have integral insulated throats.
4. Flush Service Floor Boxes: Multi-gang, cast iron, watertight, with corrosion resistant finish, exterior levelling screws, removable partitions, adjustable before and after concrete pour, with gasketed cover, meeting U.L 514. Coordinate with Owner's Representative and provide brass or black carpet plate (per owners preference) where required.
5. Outlet boxes for telephone and cable TV outlets shall be 4" square minimum with single gang plaster rings.
D. Power Wire and Cable:
1. Copper 90% conductivity. Solid copper for conductors smaller than No. 8 AWG. Stranded copper for conductors No. 8 AWG and larger. No conductors smaller than No. 12 AWG, except as noted.
2. Insulation type: #12 to #1 AWG: THWN for wet locations and THHN for dry locations. #1/0 through #4/0 AWG: XHHW (55 Mils). 250MCM and larger: XHHW (65 Mils).
3. Conductors No. 8 and larger and as otherwise noted on drawings shall be stranded.
4. Connections to devices from "through_feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
5. Neutral conductor identified by white outer covering braid, with different tracers of "EZ" numbering tags used where more than one neutral conductor is contained in a single unit.
6. Neatly arrange and "marlin" wired in panels and other equipment with "T and B Ty-rap" or approved equal plastic type strapping.
7. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags.
8. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color coded as follows:

Voltage	Phasing	A Phase	B Phase	C Phase	Neutral
120\240	1p3w	Black	Red	-	White
120\208	3p 4w	Black	Red	Blue	White
208	3w	Black	Red	Blue	-
277\480	3p 4w	Brown	Orange	Yellow	White
480	3w	Brown	Orange	Yellow	-

E. Telecommunication Wiring/ Receptacles:
1. Category 6 UTP cable: Unshielded, 4 twisted-pair, 24 AWG copper, Category 6
2. Indoor Fiber Optic backbone cable: 12 strand, 62.5/125 m, multi-mode, riser type, NEC rated OFNR/FT4, color coded, ripcord, 900 m buffer coating
2. Telephone single port: Leviton 40644-00W or equal.
3. For Indoor TV outlets: single gang with cable TV jack.
4. Route in cable tray or on J-hooks (max 8ft on center where above accessible ceiling) or conduit (where non accessible).
F. Receptacles: Leviton Decora style or equal, 125 volts, specification grade, conventional style, white color, unless otherwise noted:
1. 15A 3PG 125 volt duplex TP - Leviton T5325-W or equal
2. 15A 3PG 125 volt duplex TP with USB - Leviton T5632-W
3. 20A 3PG 125 volt duplex TP - Leviton T5825-W or equal
2. 20A 3PG 125 volt duplex TP with USB - Leviton T5832-W
3. 15A 3PG 125 volt duplex AFCI TP - Leviton AFTR1-W or equal
4. 20A 3PG 125 volt duplex AFCI TP - Leviton AFTR2-W or equal
3. 20A 3PG 125 volt duplex GFCI/AFCI TP - Leviton AGTR2-W or equal
4. 20A 3PG 125 volt duplex GFCI TP - Leviton GFWT2-W or equal
5. 15A 3PG 125 volt duplex TP Pop-up floor box - Leviton PFTR1 (verify color)
5. 15A 3PG 125 volt duplex TP with USB Pop-up floor box - Leviton PFUS1 (verify color)
6. 20A 3PG 125 volt duplex TP Pop-up floor box - Leviton PFTR2 (verify color)
6. 20A 3PG 125 volt duplex TP with USB Pop-up floor box - Leviton PFUS2 (verify color)
7. 20A 3PG 125 volt isolated ground receptacle, 3 wire, orange color 1 I.G.
8. Special appliances receptacles: Match NEMA configuration of equipment plug.
H. Plates: Leviton white, or equal, except as noted:
1. For Indoor flush outlet boxes: Decora Style.
1.1. Single gang: Leviton 80301-SW (snap) or equal
1.2. Double gang: Leviton 80309-SW (snap) or equal
2. Plates for surface mounted outlets: galvanized steel unless otherwise noted.
3. Exterior Locations - Weatherproof extra duty In-Use cover - Leviton 5980-UCL or equal.
I. Motor Disconnect Switches and Safety Switches: Heavy Duty Type, cover interlocked with operating handle so that cover cannot be opened with switch in closed position and switch cannot be closed with cover in open position, 240 or 480 volt rating, as required or as noted on drawings, in Nema 1 enclosure indoors, 3R enclosure outdoors, or as otherwise noted. All motor circuit fuses shall be dual element type.
J. Lugs and Connectors: Thomas and Betts "lock-tite", for No. 4 and larger wire; "Scotchlock" with insulator for No. 6 and smaller wire.
K. Splice Insulation: "Scotch" electrical tape with vinyl plastic backing or rubber tape with protective friction tape for interior work.
L. Grounding:
1. Install ground wires in rigid conduit. Provide physical protection for grounding electrode and bonding conductors in accordance with nec 250-64. Grounding conductors shall be in conduit and installed in accordance with NEC 250-64(e).
2. All grounding electrode conductor connections "thermite" or "cad_weld" welded.
3. Use approved pressure type solderless connector or use fusion welding for all connections to and bonding of grounding electrode system. All connections shall be visible, readily accessible for testing purposes.
4. Terminate grounding conduits at equipment with ground bushing, with ground wire connected through bushing.
5. Provide No. 12 stranded (green) THHN conductor from outlet box to ground screw of every receptacle except isolated ground receptacles.
6. Ground all isolated sections of metallic raceways.
7. Provide #12 minimum stranded (green) THHN conductor sized per NEC, or as noted, connected continuously throughout branch circuit for all circuits, bonded to panel ground bus, and to all electrical devices and equipment enclosures.
8. After installation, test system, using the three-point fall of potential method only. Record results and submit to Architect for approval. If resistance to ground exceeds three (3) ohms, install additional ground rods, bonded and interconnected to grounding electrode system. Provide additional grounding until resistance is less than three (3) ohms.
M. Panelboards:
1. Surface or flush mounted, with branch circuits as shown on drawings.
2. Enclosures: code gauge galvanized sheet steel with welded full flange end pieces, stretcher_ leveled steel trim, backpan and door.
3. Bussing of copper with silver_plated contact surfaces.
4. Trims on surface_mounted cabinets secured with nickel_plated screws with cup washers, bottom of all trims to have lugs for resting on cabinet flange.
5. Panels shall be 20 inches minimum in width, provided with approved gutter space, barriers and adjustable supports. Doors mounted with concealed hinges provided with combination spring latch and lock. Doors and trims and surface mounted cabinets primed and finished with one coat baked on gray enamel.
6. Breakers on same phase to be aligned horizontally. Each panel provided with 5_handle locks.
7. Each branch circuit of panelboards to have a permanently fixed number with one word directory, mounted under celluloid on inside of cabinet door, showing circuit numbers and typewritten description of outlets controlled by breakers. Color code mains and each breaker terminal, same as conductor insulation.
8. Each panel shall be equipped with a copper ground bus.
N. Circuit Breakers:
1. General: Circuit breakers shall be molded case rated for 480 or 240 volts, multiple or single pole and amperage rating as shown on the drawings, bolt on, manually operated with "de-ion" arc chutes.
2. Distribution circuit breakers shall be rated for the amps interrupting capacity noted on the drawings or U.L. series rated with the main circuit breaker.
3. Branch circuit breakers shall be rated for the full interrupting amps capacity with main circuit breaker/panel rating.
4. Where mechanical equipment is U.L. listed for overcurrent protection with fuses or HACR type circuit breakers, provide fuses where a fused switch is shown. Where the overcurrent protection is a circuit breaker provide HACR, (HACR means Heating, Air-Conditioning and Refrigeration) type.
5. Provide type "SWD" circuit breakers were the circuit breaker is going to be used as a switching device in a panelboard.
6. Provide GFCI rated circuit breakers in all locations within 6-feet of water.
O. Starters:
1. Magnetic starters shall be rated in accordance with latest published NEMA standards for size and horsepower rating, Westinghouse A-200 series or equal. Provide with overload sensor in each phase, hand-off-auto switch, red "run" pilot light, in Indoor NEMA 1,Outdoor NEMA 4X, or NEMA 3R enclosure as shown. Coil shall be rated 120 VAC. Starters shall be across-the-line non-reversing unless otherwise noted.
2. Contacts: Across-the-line magnetic starters shall be equipped with double break silver alloy contacts. All contacts shall be replaceable without removing power wiring or removing starter from panel. The starter must have straight-through wiring.
3. Coils: Coils shall be of molded construction. All coils shall be replaceable from the front without removing the starter from the panel.
4. Overload Relays and Thermal Units: Overload relays shall be the melting
P. Motor Connections:
1. Install motor circuits complete for all motors by other trades as shown on drawings.
2. Furnish and install all disconnect switches, outlet boxes, starters, timeswitches etc., where noted.
3. All motor and temperature control low voltage wiring shall be installed and connected by Division 15 Section of specifications, unless otherwise indicated on electrical and mechanical drawings.
Q. Motor / Equipment Switches: Rated 20 amp, 277 volt, quiet type, white color, specification grade; unless otherwise noted.
1. Single Pole _ toggle or rocker switch
2. Wall mounted Occupancy Sensors- Dual Technology
R. Lighting Controls: Provide full room controls to provide the control requirements shown. Manufacturer shall have min 10yrs in manufacturing of similar products. All accessory items such as switches, light fixtures etc shall be specifically designed and approved by the manufacturer to function together. Manufacturer's include Wattstopper, Leviton, Lutron or equal. Provide detailed wiring diagrams, device layout locations, and devices controlled for approval.
As listed in fixture schedule, and on drawings as indicated by type letter, completely lamped with new lamps, properly operating at time of acceptance of electrical work. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
a) Standards:
• ENERGY STAR certified.
• California Title 24 compliant.
• UL Listing: Listed for damp location.
• Recessed luminaires shall comply with NEMA LE 4.
1. Lamps:
a. Unless otherwise noted, lamps described on the Drawings and in these Specifications, are ANSI nomenclature; lamps shall be manufactured by Osram/Sylvania, North American Philips, or approved equal.
b. All incandescent lamps and tungsten halogen lamps shall be 125 -130 volt rated extended life or 2,000 hour life whenever such designs are available.
c. T8 fluorescent lamps shall be 3500K-4100K color temperature, energy saving type suitable.
d. Compact fluorescent lamps shall be 3500K-4100K color temperature, twin-tube and double twin tube (as required for each fixture), as manufactured by North American Philips, approved equal.
e. LED lamps shall be 3500K-4100K color temperature. All LED shall be 0-10V dimming unless specifically stated otherwise. If contractor finds a fixture is not available with 0-10V dimming and the contractor shall alert the GC prior to Bid.
f. CRI of minimum 80. CCT
g. Rated lamp life of 35,000 hours to L70.
h. Lamps dimmable from 100 percent to 1 percent of maximum light outpu
3. Ballasts:
a. Fluorescent Lamp Ballasts: Solid State full light output Class P, ETL certified to CBM standards, high power factor one, two, three, or four lamp types; minimum starting temperature 50 degrees F. unless otherwise noted. Ballasts containing "PCB" are not permitted. The allowable total harmonic distortion shall be equal to or less than 10%. Maximum crest factor 1.4. Power factor .97 or greater. Advance, Magnetek, Lutron or Motorola.
b. Sound Ratings: "A", or the lowest rating available, for the number and types of lamps ballasted. Replace noisy ballasts at no cost to the Owner.
c. All ballasts shall be high power factor energy efficient type.
d. Ballasts in refrigerated spaces or outdoors shall be zero (0) degree F. temperature rated.
e. All ballasts shall be operated without excessive or unusual noise. Noisy or otherwise defective ballasts shall be replaced.
f. Contractor shall burn in lamps per manufacturer's instructions.
4. Plastic:
a. Translucent Plastic Components: Translucent plastic shall be made of smooth, white, 100 percent virgin acrylic material.
b. Plastic Lenses: Lenses shall be uncolored 100 percent virgin acrylic plastic.
5. Finish on Metal Parts:
a. Steel Reflectors: Unless otherwise specified, the reflector surface finish shall be of synthetic white enamel or polyester powder coating.
b. Aluminum Reflectors: Reflecting surfaces shall be provided with either a specular or diffuse finish as indicated.
c. Non_Reflecting Surfaces: Unless otherwise specified, the finish on all non_reflecting exterior surfaces shall be aluminum oxide or aluminum; white, gray or aluminum paint on steel; nickel or chromium plating on copper alloy. Fastening devices shall be nickel, chromium, cadmium or zinc plated.

PART 3 - EXECUTION

3.01 - INSPECTION

A. Examine the areas and conditions under which the work of this Section will be installed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 - PREPARATION
A. Drawings
1. The general arrangement and location of wiring and equipment is shown on the electrical drawings and shall be installed in accordance therewith, except for minor changes required by conflict with the work of other trades.
2. Drawings indicate the circuit and panel which supplies each device or fixture. Provide and install conduit and conductors to make all connections from panel to nearest device and from first device to additional devices on same circuit. Conduit size and fill shall satisfy NEC requirements. Two or three different phases supplied by a 3_phase panel may share a single neutral only if circuit positions are adjacent in the panel and the breakers will have to be provided with a handle tie or multi-pole breaker per NEC requirements. Do not exceed 4 #12 or 3 #10 conductors in a 1/2" conduit, 7 #12 or 5 #10 in a 3/4" conduit, or 11 #12 or 9 #10 in a 1" conduit, unless otherwise noted. If more than three current carrying conductors are installed in one conduit, conductor size shall be increased as required per Note 8 to Table 310_16 of the NEC.
3. Drawings indicate the location of all light switches. Where fixtures in a room are controlled by more than one switch, the same lower case letter is drawn adjacent a switch and each fixture controlled by that switch. Where no lower case letter is adjacent to a switch, all fixtures in the room are controlled by that switch. Provide and install conduit and wire from fixture to switch and between fixtures as required to accomplish switching shown. Do not route branch circuit wiring for light fixtures through switch boxes.
4. Control wiring is generally not shown on the plans. Contractor shall refer to control diagrams and provide and install all wiring and raceways required to make all interconnections.
5. All branch circuit wiring No. 12 or larger as noted, all control wiring No. 14 or larger.
6. All dimensions, together with locations of doors, partitions, etc. are to be taken from the Architectural Drawings, verified at site by this Contractor.
7. Maintain "as-constructed" Record Drawings at all times, showing the exact location of concealed conduits and feeders installed under this contract, and actual numbering of each circuit. Upon completion of work and before acceptance can be considered, this Contractor must forward to the Owner's Representative corrected Record Drawings in Autocad format indicating the electrical work as installed.

3.03 - FIELD QUALITY CONTROL
A. All workmanship shall be first class and carried out in a manner satisfactory to and approved by the Architect.
B. This Contractor shall personally, or through an authorized and competent representative, constantly supervise the work and so far as possible keep the same foreman and workmen on the job throughout.

3.04 - INSTALLATION/APPLICATION/ERECTION
A. Cutting, repairing and structural reinforcing for the installation of this work shall be done by the General Contractor in conformance with the Architect's requirements.
B. Provide and place in form work all conduit, inserts and sleeves in time to prevent any delay in the concrete work.

3.05 - ADJUSTING AND CLEANING
A. Main switchboard, panelboards and all other electrical equipment not "finish painted" under other sections shall be touched up where finished surface is marred or damaged. Panelboards in finished areas shall be painted to match wall.
B. All equipment, lighting fixtures, etc., shall be left in clean condition, with all shipping and otherwise unnecessary labels removed therefrom.
C. Excavate and trench as necessary for the electrical installation, and when the work has been installed, inspected and approved, backfill all excavations with imported sandy soil in maximum 8" (eight inch) layers, moisten and machine tamp to 95% compaction, and restore the ground and/or paving or floor surfaces to their original condition. Comply with requirements of Division 2.

3.06 - SCHEDULES
A. Coordination: Coordinate installation of electrical items with the schedule for other work to prevent unnecessary delays in the total Work.

3.07 - TESTING
A. Grounding System:
1. All ground connections shall be checked and the entire system shall be checked for continuity. The resistance of the ground system shall be measured using a 3 point fall_of_potential method. The maximum ground resistance shall be three ohms. If the measured ground resistance exceeds three ohms, additional ground rods shall be installed until a value of three ohms or less is obtained.
2. Ground tests shall meet the requirements of the National Electric Code.
B. Lighting Systems:
1. The interior and exterior lighting systems shall be checked for proper local controls and operation of entire installation, including the operation of the low voltage lighting control system.
C. Power Distribution System:
1. Tests: Test main switchboard, distribution boards,and panelboards for grounds and shorts with mains disconnected from feeders, branch circuits connected and circuit breakers closed, all fixtures in place and permanently connected and grounding jumper to neutral lifted and with all wall switches closed.
2. Test each individual circuit at each panelboard with equipment connected for proper operation. Inspect the interior of each panel.
3. Check verification of color coding, tagging, numbering, and splice make up.
4. Verify that all conductors associated with each circuit are in same conduit.
5. Demonstrate that all lights, jacks, switches, outlets,and equipment operate satisfactorily and as called for.
D. Fire Alarm System: Verify that all equipment, components, and devices function as specified and to the satisfaction of the Authority Having Jurisdiction.

WIRING NOTES

1. IF MORE THEN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED PER RACEWAY. CONTRACTOR SHALL DEMONSTRATE COMPLIANCE WITH NEC TABLE 310.15(B) (3) (a).
1.1. MAX (9) #12 AWG FOR 20A CIRCUITS.
1.2. MAX (6) #10 AWG FOR 30A CIRCUITS.
1.3. MAX (6) #8 AWG FOR 40A CIRCUITS.

2. FOR BRANCH CIRCUITS DO NOT EXCEED NEC CONDUIT FILL REQUIREMENTS, PROVIDE MAX:
2.1. MAX (9) #12 AWG THHN PER 3/4"EMT CONDUIT.
2.2. MAX (6) #10 AWG THHN PER 3/4" EMT CONDUIT.
2.3. MAX (4) #8 AWG THHN PER 3/4" EMT CONDUIT.
2.4. MAX (3) #6 AWG THHN PER 3/4"EMT CONDUIT.
2.5. MAX (2) #4 AWG THHN PER 3/4"EMT CONDUIT.
2.6. MAX (3) #4 AWG THHN PER 1" EMT CONDUIT.
2.6. MAX (2) #2 AWG THHN PER 1" EMT CONDUIT.
2.7. MAX (3) #2 AWG THHN PER 1 1/4" EMT CONDUIT.

3. FOR 20A CIRCUITS PROVIDE MINIMUM:
3.1. UP TO 75FT - #12 AWG
3.2. 75FT TO 150FT - #10 AWG
3.3. 150FT TO 250FT - #8 AWG

4. ADHERE TO VOLTAGE DROP LIMITS AS SHOWN BELOW:

SUMMARY OF VOLTAGE DROP LIMITS

CIRCUIT VOLTS (V)	2% VOLTAGE DROP (V)	3% VOLTAGE DROP (V)	TOTAL LOSS (V)
120	2.4	3.6	6.0
208	4.2	6.2	10.4
240	4.8	7.2	12.0
277	5.5	8.3	13.9
480	9.6	14.4	24.0

VOLTAGE DROP FOR COMMON COPPER WIRE GAUGES AND CURRENT LOADS

WIRE	CIRCUIT AMPS	MAXIMUM FEEDER LENGTH					MAXIMUM BRANCH CIRCUIT LENGTH				
		120	208	240	277	480	120	208	240	277	480
14	12	39	67	78	90	156	58	101	117	135	233
12	16	46	80	93	107	185	69	120	139	160	278
10	24	48	83	96	111	192	72	125	144	166	288
8	32	57	99	115	132	229	86	149	172	199	344
6	40	73	127	146	169	293	110	190	220	253	439
4	52	89	154	178	206	356	134	232	267	309	535
2	72	103	178	206	237	412	154	267	309	356	617
0	96	123	212	245	283	490	184	319	368	424	735
00	108	137	238	274	317	549	206	357	412	475	823
0000	144	163	283	327	377	654	245	425	490	566	980
250 (kcmil)	164	170	294	340	392	679	255	441	509	588	1019
300	184	181	314	362	418	725	272	471	543	627	1087
350	200	195	338	390	450	779	292	506	584	675	1169
500	248	224	388	448	517	896	336	582	672	776	1344

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:

0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT

900 HOPPER STREET, PETALUMA, CA

SHEET NAME:

ELECTRICAL SHEET SPECIFICATION

ISSUE DATE: Project Issue Date

PREPARATION AND REVIEW
DRAWN BY:
DESIGNER:
PROJ MGR:
PEER REVIEW:

SHEET NUMBER:

E002

KEYED NOTES - SITE (X)

1. X

SHEET NOTES - SITE ELECTRICAL

A. LOCATION OF INDICATED (E) U/G UTILITIES IS DIAGRAMMATIC. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES AND LOCATE NEW EQUIPMENT TO SUIT THE PROJECT CONDITIONS.

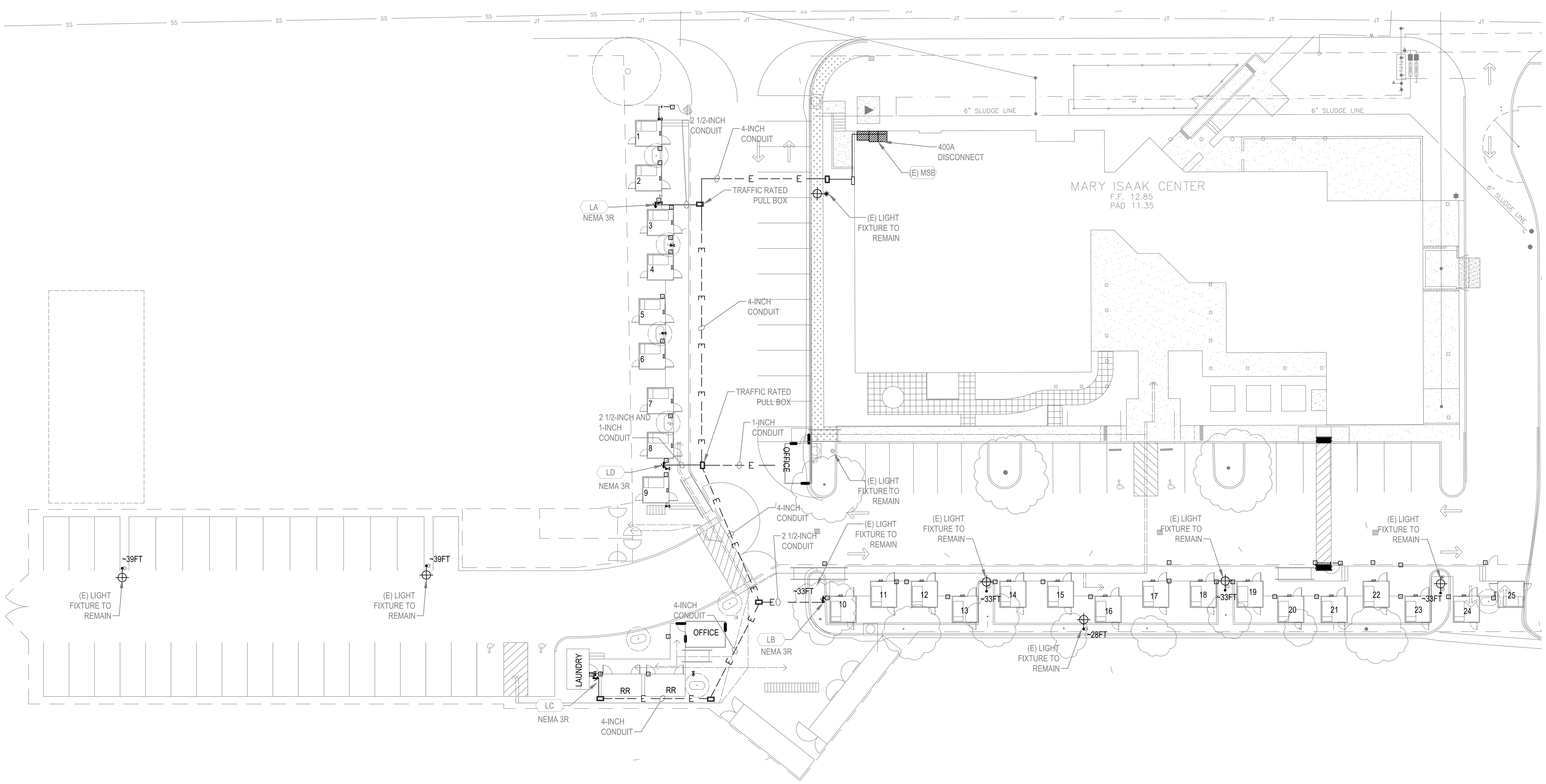
B. PROVIDE ALL NECESSARY SAW CUTTING AND REPAIR TO (E) FINISHED SURFACES REQUIRED TO PROVIDE ELECTRICAL AND TELEPHONE UTILITIES.

B. COORDINATE ALL REQUIRED WORK AND LOCATIONS OF SERVICE REQUIREMENTS WITH THE UTILITY COMPANIES PRIOR TO BEGINNING ANY EXCAVATION.

C. THE CONTRACTOR SHALL PROVIDE SCALE SHOP DRAWINGS FOR ALL SITE REQUIRED PULL BOX LOCATIONS. SHOP DRAWING SHALL INDICATE PULL BOX ORIENTATION, NOMENCLATURE, SIZE AND TRAFFIC RATING WHEN APPLICABLE.

D. MINIMUM SIZE OF UNDERGROUND CONDUIT SHALL BE 1".

E. TYPICAL 11X17 FLUSH-WITH-GRADE CONCRETE PULLBOX WITH BOLT-ON LID. PROVIDE TRAFFIC RATED WHERE IN VEHICULAR AREAS.



1 ELECTRICAL SITE PLAN

SCALE: 1" = 20'

PLAN NORTH

0 20' 40' 80'
SCALE : 1" = 20'

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:

REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
STATE OF CALIFORNIA

0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA, CA

SHEET NAME:

SITE ELECTRICAL PLAN

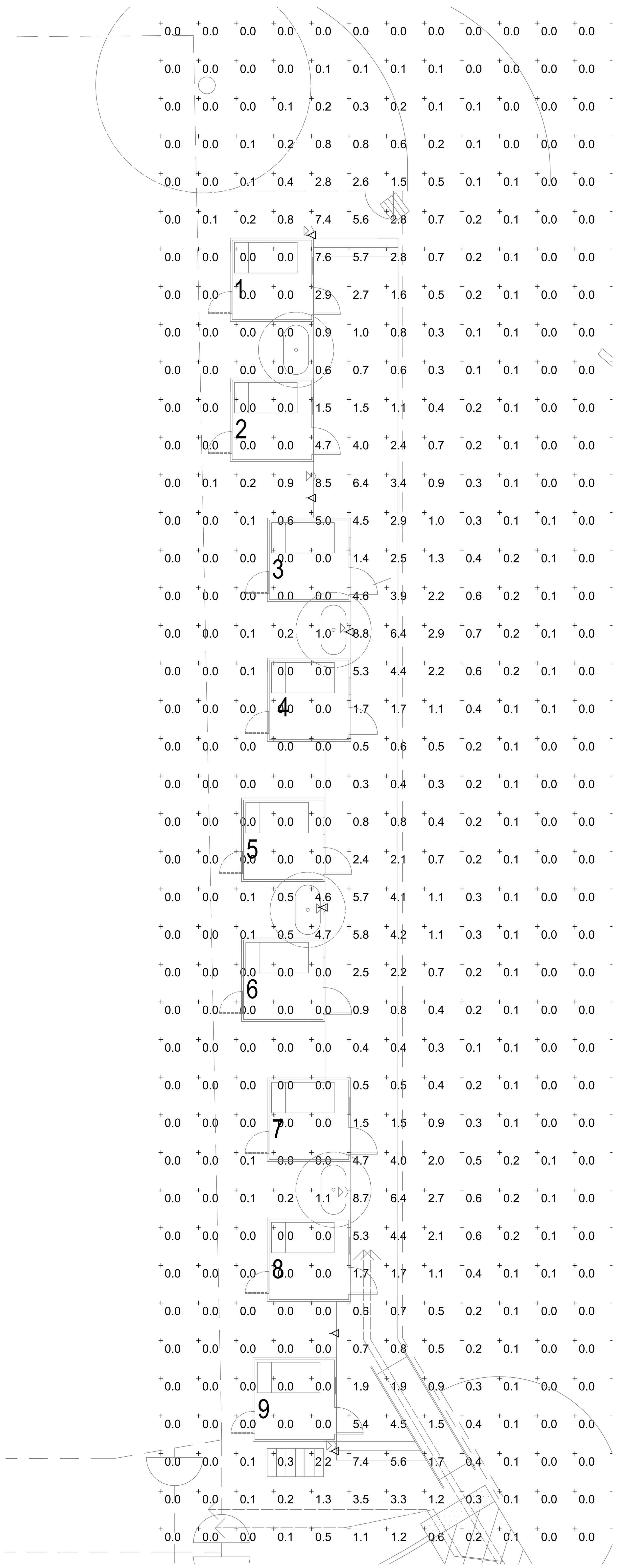
ISSUE DATE: Project Issue Date

PREPARATION AND REVIEW

DRAWN BY: -
DESIGNER: -
PROJ MGR: -
PEER REVIEW: -

SHEET NUMBER:

E101



LIGHTING FIXTURE SCHEDULE								
TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER	LAMP	FIXTURE INPUT WATTS	BUG	MOUNTING	NOTES
SA1	EXTERIOR WOOD POLE MOUNTED WITH INTEGRAL PHOTOCELL	LITHONIA	WDGE1 LED P1 27K 90CRI VF	LED	10	0-0-0	WOOD POST	

WDGE1 LED
Architectural Wall Sconce

Buy American

Catalog Number

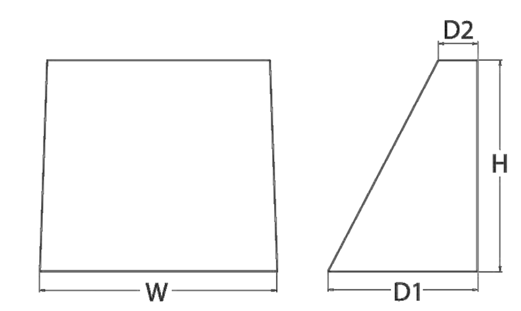
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 5.5"
Depth (D2): 1.5"
Height: 8"
Width: 9"
Weight: (without options) 9 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K) P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P1 P2	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K[1] 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[2]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[5] **Shipped separately** AWS 3/8inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.

Options
- E4WH[3] Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)
- PE[4] Photocell, Button Type
- DS Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)
- DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
- BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.

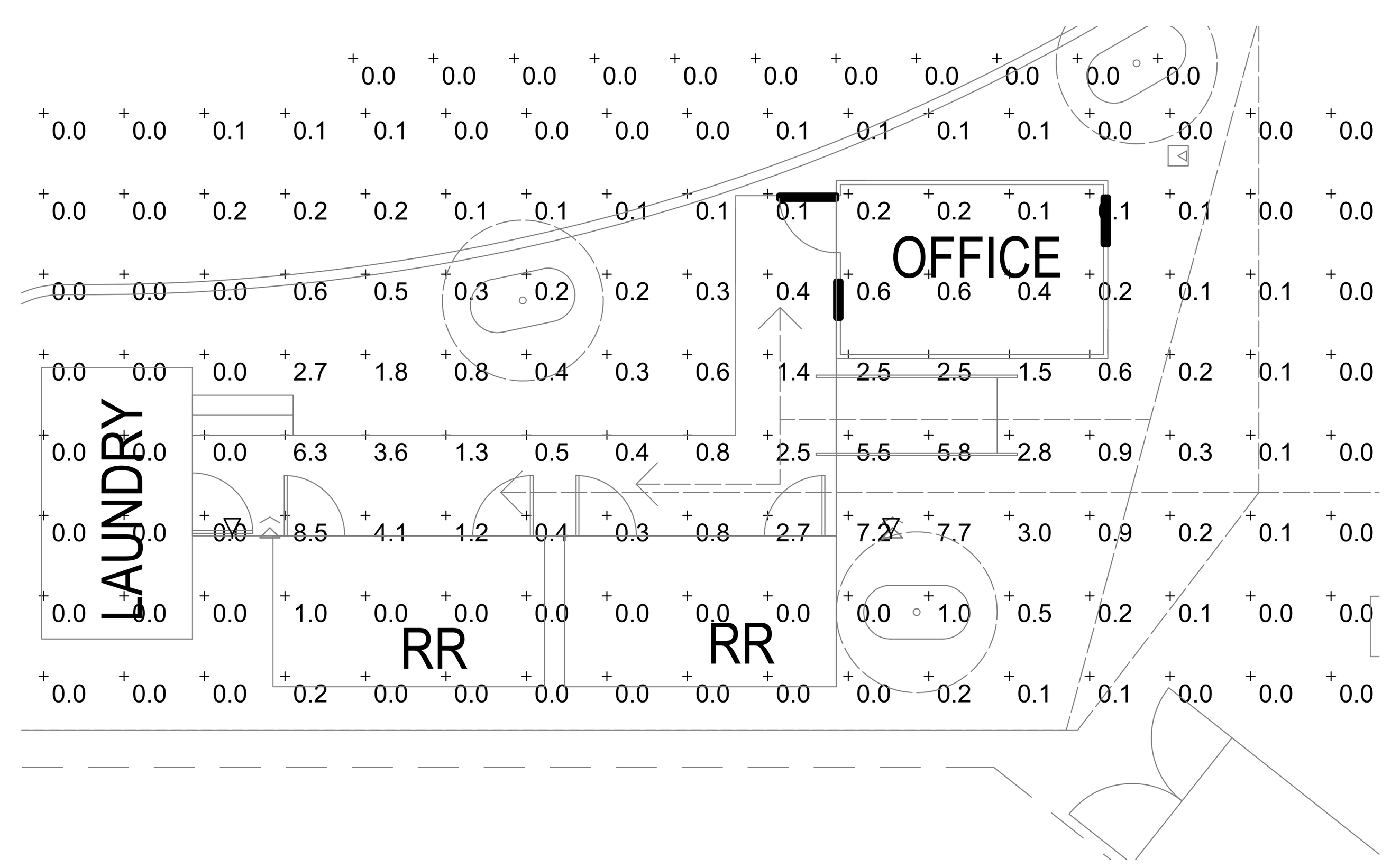
Finish
- DDBXD Dark bronze
- DBLXD Black
- DNAXD Natural aluminum
- DWHXD White
- DSSXD Sandstone
- DDBTXD Textured dark bronze
- DBLBXD Textured black
- DNATXD Textured natural aluminum
- DWHGXD Textured white
- DSSTXD Textured sandstone

Accessories
Ordered and shipped separately.
- WDGEAWS DDBXD WDGE 3/8inch Architectural Wall Spacer (specify finish)
- WDGE1PBBW DDBXD U WDGE1 surface-mounted back box (specify finish)

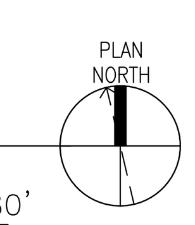
NOTES
1. 50K not available in 90CRI.
2. 347V not available with E4WH, DS or PE.
3. E4WH not available with PE or DS.
4. PE not available with DS.
5. Not qualified for DLC. Not available with E4WH.

LITHONIA LIGHTING. COMMERCIAL OUTDOOR One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com

WDGE1 LED Rev. 08/31/21



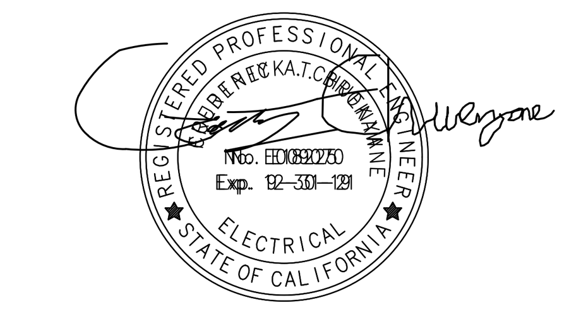
1 PHOTOMETRIC PLANS - NEW SITE LIGHTS
SCALE: 1/8" = 1'-0"



0 20' 40' 80'
SCALE : 1" = 20'

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:



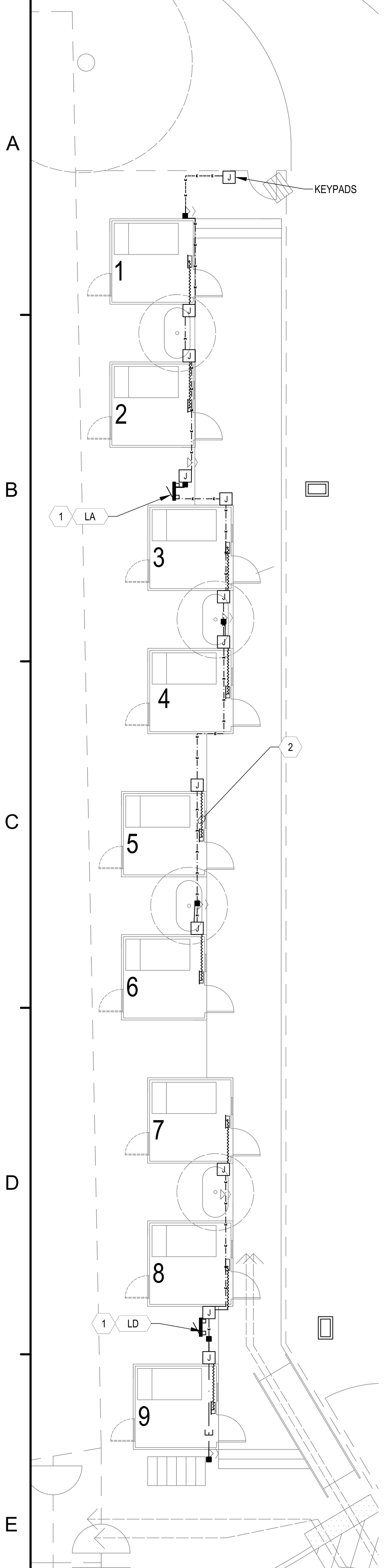
0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

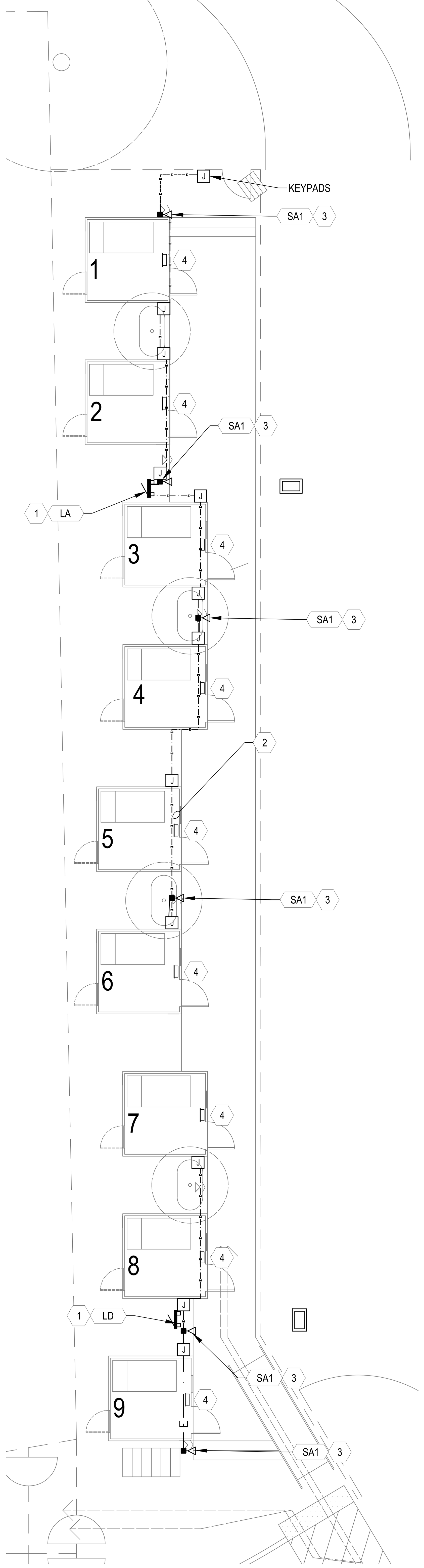
CITY OF PETALUMA INTERIM HOUSING SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA, CA

SHEET NAME:
PHOTOMETRIC CALCULATIONS

ISSUE DATE: Project Issue Date
PREPARATION AND REVIEW
DRAWN BY: -
DESIGNER: -
PROJ MGR: -
PEER REVIEW: -
SHEET NUMBER:
E102



1 ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"



2 LIGHTING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES - LIGHTING

A. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR COORDINATED CEILING INFORMATION. VERIFY THE CEILING TYPES IN ALL SPACES WITH THE ARCHITECTURAL DRAWINGS AND COORDINATE WITH THE LIGHT FIXTURES TO BE INSTALLED. MINOR ADJUSTMENTS IN LOCATION MAY BE REQUIRED BY THE CONTRACTOR AND PROVIDED AT NO ADDITIONAL COST TO THE OWNER AS DIRECTED BY THE OWNER'S REPRESENTATIVE. COORDINATE INSTALLATION OF ALL LIGHT FIXTURES WITH MECHANICAL SYSTEMS AND FIRE SPRINKLER HEADS AND PIPING PRIOR TO THE INSTALLATION OF ANY SYSTEMS

B. THE FIXTURE SHALL BE PROVIDED WITH ALL NECESSARY HARDWARE, CLIPS, TRIM, ETC. FOR A COMPLETE AND "FINISHED" INSTALLATION. PROVIDE ALL NECESSARY BLOCKING.

C. ALL LIGHTING CONSTRUCTION SHALL BE COORDINATED TO MAINTAIN WALL AND CEILING RATING INDICATED ON THE ARCHITECTURAL DOCUMENTS.

D. ALL LOW VOLTAGE (0-50 volt) LIGHTING CONTROL WIRING SHALL BE INSTALLED IN CONDUIT.

E. PROVIDE COMMON FACE PLATE FOR ALL SWITCHES IN GANGED GROUPS. INDIVIDUAL FACE PLATES FOR GROUPS OF SWITCHES WILL NOT BE ACCEPTED.

F. VERIFY ROUGH-IN LOCATIONS OF ALL DEVICES WITH THE OWNER'S REPRESENTATIVE. DO NOT PULL ANY CONDUCTORS OR CABLE UNTIL THE DEVICE LOCATIONS HAVE BEEN REVIEWED AND ACCEPTED.

G. EXTERIOR LIGHTING MOUNTED UNDER 24FT AND OVER 40W SHALL BE CONTROLLED BY A MOTION SENSOR AND SHALL REDUCE LIGHTING TO 50% WHEN UNOCCUPIED.

H. ALL EXTERIOR LIGHTING SHALL BE SET TO DUSK TO DAWN WITH PHOTOCONTROL OR ASTRONOMICAL TIMECLOCK.

I.

KEYED NOTES (X)

1. PROVIDE NEW EXTERIOR PANELBOARDS. ALL BOARDS SHALL BE PROVIDED WITH MAIN BREAKERS. FOR MOUNTING SEE E501. PANEL SHALL BE PROVIDED WITH LOCKABLE COVER.
2. ROUTE CONDUITS UNDER DECK. SEE E502
3. PROVIDE NEW EXTERIOR 12FT PRESSURE TREATED POST. MOUNT IN CONCRETE. MOUNT FIXTURE APPROX 8FT ABOVE GROUND. FIXTURE SHALL BE FULL CUTOFF AND CONTROLLED BY PHOTOCELL OR TIMECLOCK.
4. CONTRACTOR SUPPLIED RESIDENTIAL PORCH LIGHTS TO BE CONTROLLED BY SWITCH IN UNIT.
5. ROUTE NEW CONDUIT OVERHEAD OUT OF ELECTRICAL ROOM. PROVIDE EXTERIOR SURFACE MOUNTED BOX. CONTRACTOR TO VERIFY EXACT ROUTING IN FIELD.

SHEET NOTES - ELECTRICAL

A. ALL EXTERIOR MOUNTED DEVICES SHALL BE PROVIDED WITH WP OR NEMA 3R RATING.

B. PROVIDE HUB TYPE FITTINGS ON EXTERIOR CONDUITS.

C. ALL EMPTY BOXES SHALL BE PROVIDED WITH BLANK COVER PLATES.

D. VERIFY COLOR OF ALL DEVICES AND COVER PLATES WITH THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING.

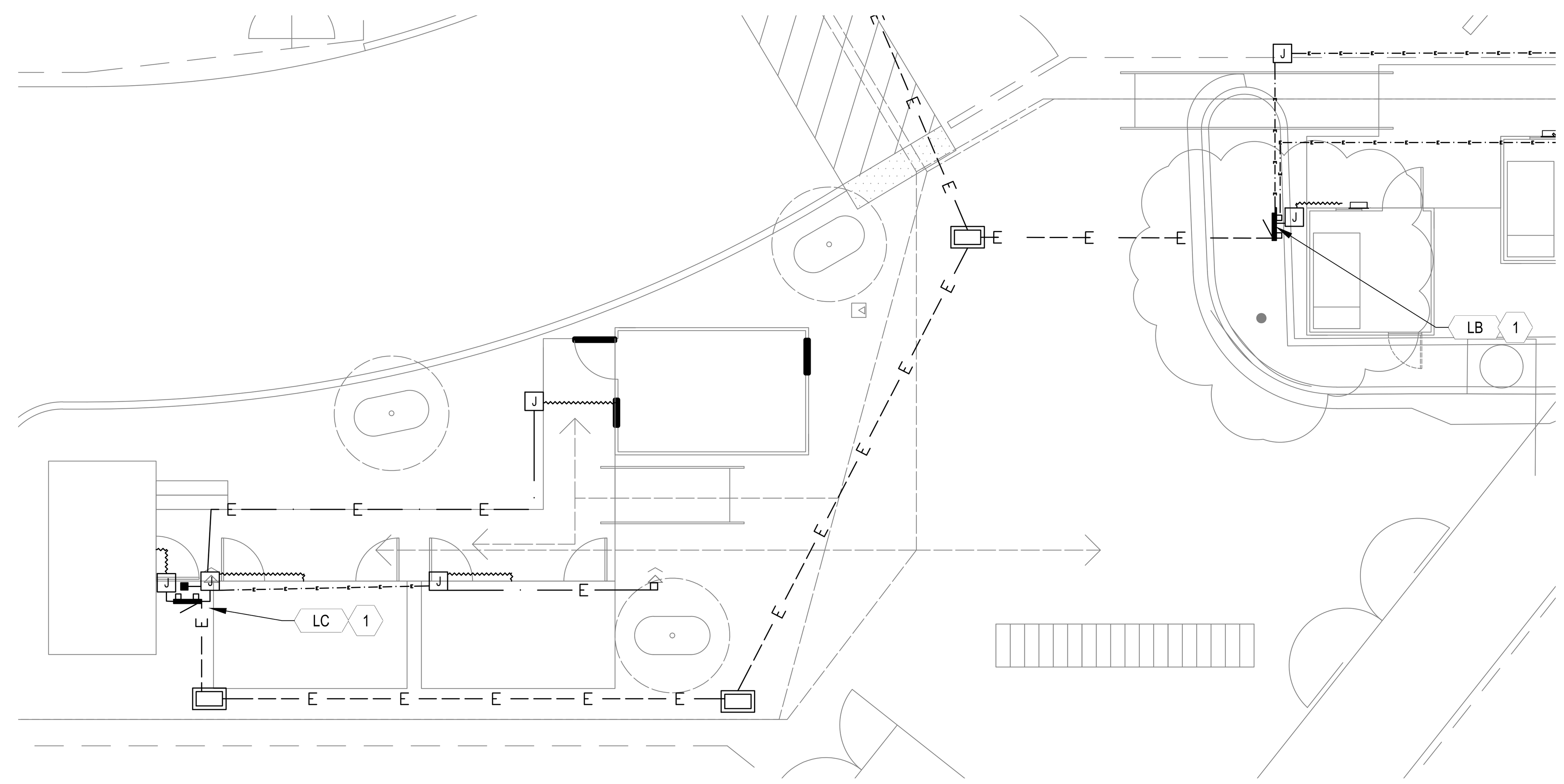
E. ALL EXTERIOR COVER PLATES SHALL BE STAINLESS STEEL.

F. RECEPTACLES PROVIDED AT COUNTER TOPS SHALL BE LOCATED AT +6" ABOVE BACK SPLASH. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

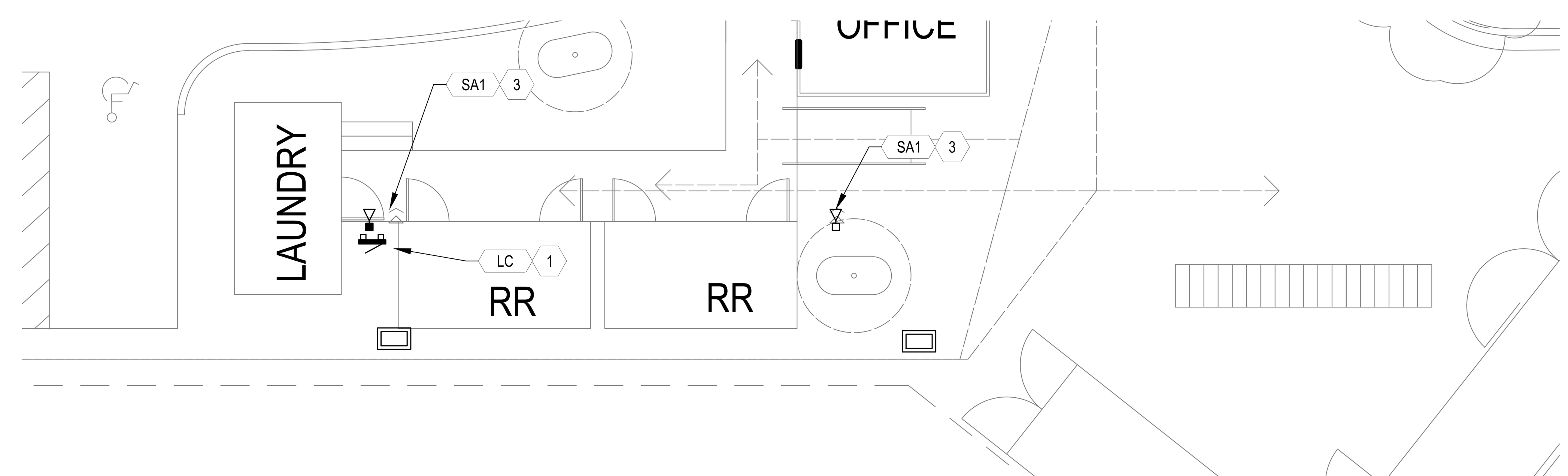
G. PROVIDE DUPLEX MECHANICAL EQUIPMENT MAINTENANCE RECEPTACLE WITHIN 25-FEET OF ALL EQUIPMENT TO BE SERVICED. LOCATE ON THE SAME LEVEL AS EQUIPMENT, INCLUDING ALL ATTICS, BASEMENTS AND CRAWL SPACES. IF LOCATED OUTDOOR OR BELOW GRADE GFCI PROTECTION IS REQUIRED.

H. ALL ELECTRICAL CONSTRUCTION SHALL BE COORDINATED TO MAINTAIN WALL AND CEILING RATING INDICATED ON THE ARCHITECTURAL DOCUMENTS.

I. PROVIDE TAMPER-RESISTANT RECEPTACLES ON ALL 15-20A 125-250V NON LOCKING TYPE RECEPTACLES IN THE FOLLOWING LOCATIONS PER ARTICLE 406.12 DWELLING UNITS, GUEST ROOMS OF HOTELS AND MOTELS, CHILD CARE FACILITIES, PRESCHOOLS AND ELEMENTARY EDUCATION FACILITIES, BUSINESS OFFICES, CORRIDORS, WAITING ROOMS AND THE LIKE IN CLINICS, MEDICAL AND DENTAL OFFICES AND OUTPATIENT FACILITIES, SUBSET OF ASSEMBLY OCCUPANCIES INCLUDING GYMNASIUMS, SKATING RINKS AND AUDITORIUMS AND DORMITORIES.



3 ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"



4 LIGHTING PLAN
SCALE: 1/8" = 1'-0"

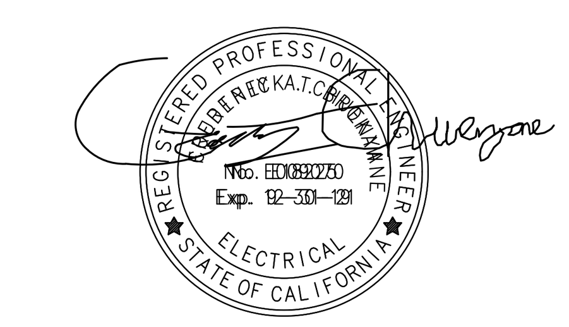
0 8' 16' 32'
SCALE : 1/8" = 1'-0"

PLAN NORTH

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:



0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA, CA

SHEET NAME:
ELECTRICAL PLAN
UNITS 1-9,
RESTROOMS

ISSUE DATE: Project Issue Date
PREPARATION AND REVIEW
DRAWN BY: -
DESIGNER: -
PROJ MGR: -
PEER REVIEW: -

SHEET NUMBER:
E111

SHEET NOTES - LIGHTING

A. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR COORDINATED CEILING INFORMATION. VERIFY THE CEILING TYPES IN ALL SPACES WITH THE ARCHITECTURAL DRAWINGS AND COORDINATE WITH THE LIGHT FIXTURES TO BE INSTALLED. MINOR ADJUSTMENTS IN LOCATION MAY BE REQUIRED BY THE CONTRACTOR AND PROVIDED AT NO ADDITIONAL COST TO THE OWNER AS DIRECTED BY THE OWNER'S REPRESENTATIVE. COORDINATE INSTALLATION OF ALL LIGHT FIXTURES WITH MECHANICAL SYSTEMS AND FIRE SPRINKLER HEADS AND PIPING PRIOR TO THE INSTALLATION OF ANY SYSTEMS

B. THE FIXTURE SHALL BE PROVIDED WITH ALL NECESSARY HARDWARE, CLIPS, TRIM, ETC. FOR A COMPLETE AND "FINISHED" INSTALLATION. PROVIDE ALL NECESSARY BLOCKING.

C. ALL LIGHTING CONSTRUCTION SHALL BE COORDINATED TO MAINTAIN WALL AND CEILING RATING INDICATED ON THE ARCHITECTURAL DOCUMENTS.

D. ALL LOW VOLTAGE (0-50 volt) LIGHTING CONTROL WIRING SHALL BE INSTALLED IN CONDUIT.

E. PROVIDE COMMON FACE PLATE FOR ALL SWITCHES IN GANGED GROUPS. INDIVIDUAL FACE PLATES FOR GROUPS OF SWITCHES WILL NOT BE ACCEPTED.

F. VERIFY ROUGH-IN LOCATIONS OF ALL DEVICES WITH THE OWNER'S REPRESENTATIVE. DO NOT PULL ANY CONDUCTORS OR CABLE UNTIL THE DEVICE LOCATIONS HAVE BEEN REVIEWED AND ACCEPTED.

G. EXTERIOR LIGHTING MOUNTED UNDER 24FT AND OVER 40W SHALL BE CONTROLLED BY A MOTION SENSOR AND SHALL REDUCE LIGHTING TO 50% WHEN UNOCCUPIED.

H. ALL EXTERIOR LIGHTING SHALL BE SET TO DUSK TO DAWN WITH PHOTOCONTROL OR ASTRONOMICAL TIMECLOCK.

I.

KEYED NOTES -LIGHTING (X)

1. X

KEYED NOTES (X)

1. PROVIDE NEW EXTERIOR PANELBOARDS. ALL BOARDS SHALL BE PROVIDED WITH MAIN BREAKERS. FOR MOUNTING SEE E501. PANEL SHALL BE PROVIDED WITH LOCKABLE COVER.
2. ROUTE CONDUITS UNDER DECK. SEE E502
3. PROVIDE NEW EXTERIOR 12FT PRESSURE TREATED POST. MOUNT IN CONCRETE. MOUNT FIXTURE APPROX 8FT ABOVE GROUND. FIXTURE SHALL BE FULL CUTOFF AND CONTROLLED BY PHOTOCELL OR TIMECLOCK.
4. CONTRACTOR SUPPLIED RESIDENTIAL PORCH LIGHTS TO BE CONTROLLED BY SWITCH IN UNIT.
5. ROUTE NEW CONDUIT OVERHEAD OUT OF ELECTRICAL ROOM. PROVIDE EXTERIOR SURFACE MOUNTED BOX. CONTRACTOR TO VERIFY EXACT ROUTING IN FIELD.

SHEET NOTES - ELECTRICAL

A. ALL EXTERIOR MOUNTED DEVICES SHALL BE PROVIDED WITH WP OR NEMA 3R RATING.

B. PROVIDE HUB TYPE FITTINGS ON EXTERIOR CONDUITS.

C. ALL EMPTY BOXES SHALL BE PROVIDED WITH BLANK COVER PLATES.

D. VERIFY COLOR OF ALL DEVICES AND COVER PLATES WITH THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING.

E. ALL EXTERIOR COVER PLATES SHALL BE STAINLESS STEEL.

F. RECEPTACLES PROVIDED AT COUNTER TOPS SHALL BE LOCATED AT +6" ABOVE BACK SPLASH. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

G. PROVIDE DUPLEX MECHANICAL EQUIPMENT MAINTENANCE RECEPTACLE WITHIN 25-FEET OF ALL EQUIPMENT TO BE SERVICED. LOCATE ON THE SAME LEVEL AS EQUIPMENT, INCLUDING ALL ATTICS, BASEMENTS AND CRAWL SPACES. IF LOCATED OUTDOOR OR BELOW GRADE GFCI PROTECTION IS REQUIRED.

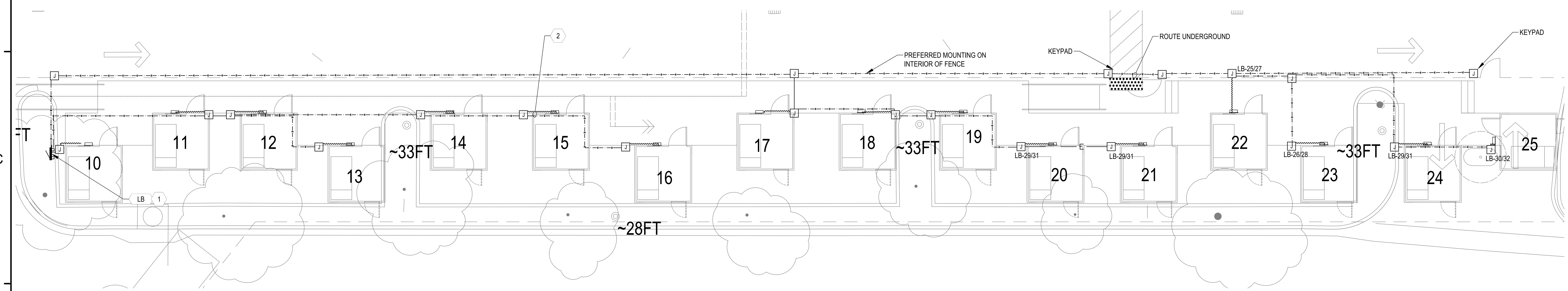
H. ALL ELECTRICAL CONSTRUCTION SHALL BE COORDINATED TO MAINTAIN WALL AND CEILING RATING INDICATED ON THE ARCHITECTURAL DOCUMENTS.

I. PROVIDE TAMPER-RESISTANT RECEPTACLES ON ALL 15-20A 125-250V NON LOCKING TYPE RECEPTACLES IN THE FOLLOWING LOCATIONS PER ARTICLE 406.12 DWELLING UNITS, GUEST ROOMS OF HOTELS AND MOTELS, CHILD CARE FACILITIES, PRESCHOOLS AND ELEMENTARY EDUCATION FACILITIES, BUSINESS OFFICES, CORRIDORS, WAITING ROOMS AND THE LIKE IN CLINICS, MEDICAL AND DENTAL OFFICES AND OUTPATIENT FACILITIES, SUBSET OF ASSEMBLY OCCUPANCIES INCLUDING GYMNASIUMS, SKATING RINKS AND AUDITORIUMS AND DORMITORIES.

J. WORKING CLEARANCES FOR PANELBOARDS AND DISTRIBUTION BOARDS (NOT SERVICE ENTRANCE) UNDER 600V SHALL BE AS FOLLOWS:
FOR 208V, 3P, 4W SYSTEMS MAINTAIN A MINIMUM 36-INCHES IN FRONT OF EQUIPMENT.
FOR 240V OR 480V SYSTEMS MAINTAIN A MINIMUM OF 48-INCHES ON FRONT OF EQUIPMENT.
PROVIDE MINIMUM 6'-6" HEADROOM AT ALL LOCATIONS.

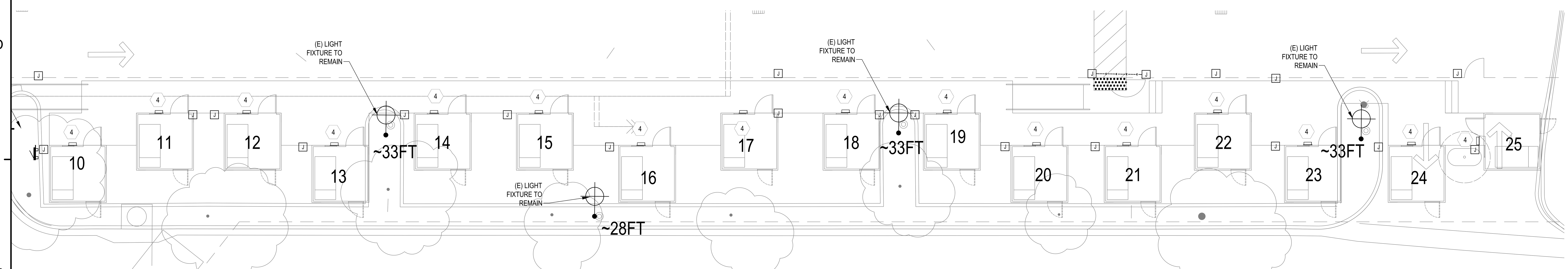
L. ALL NON-DWELLING KITCHEN RECEPTACLES, RATED 150V TO GROUND OR LESS, 50A OR LESS AND THREE PHASE RECP RATED 150V TO GROUND OR LESS AND 100A OR LESS SHALL BE GFCI PROTECTED PER CEC 210.8(B)(2).

M.



1 ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"



2 LIGHTING PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

0 8' 16' 32'

SCALE : 1/8" = 1'-0"

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:

REGISTERED PROFESSIONAL ENGINEER — ELECTRICAL — STATE OF CALIFORNIA

0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT

900 HOPPER STREET, PETALUMA, CA

SHEET NAME:

ELECTRICAL PLAN UNIT 10-25

ISSUE DATE: Project Issue Date

PREPARATION AND REVIEW

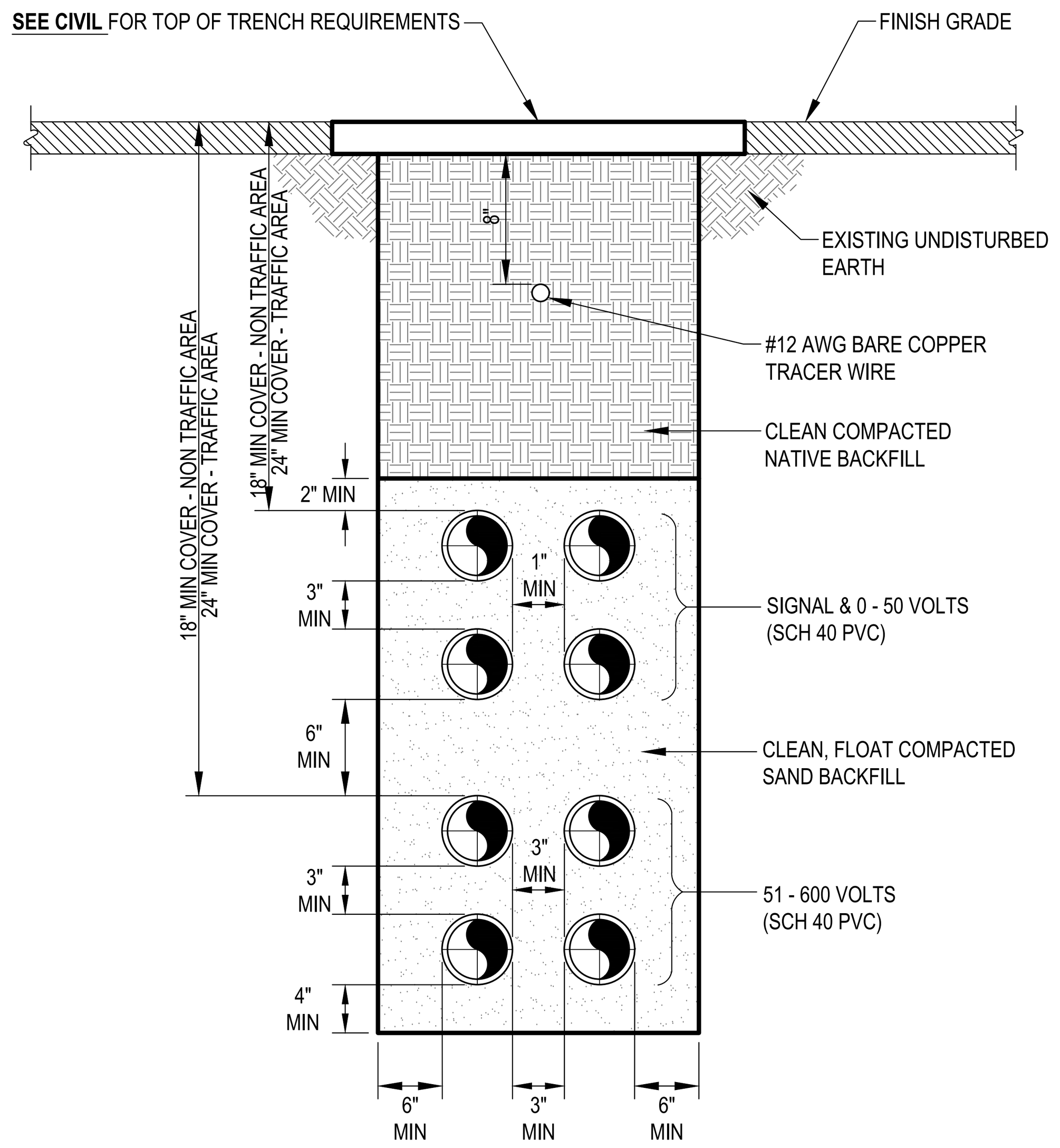
DRAWN BY: -
DESIGNER: -
PROJ MGR: -
PEER REVIEW: -

SHEET NUMBER:

E112

TABLE "A" - PVC		
CONDUIT SIZE	MINIMUM ELBOW RADIUS REQUIREMENTS	
	RUNS 0-100 FEET	RUNS GREATER THAN 101 FEET
1/2"	18"	24"
3/4"	18"	24"
1"	24"	36"
1 1/4"	24"	36"
1 1/2"	24"	36"
2"	24"	36"
2 1/2"	24"	36"
3"	36"	48"
4"	36"	48"
5"	36"	48"
6"	36"	48"

TABLE "B" - RSG		
CONDUIT SIZE	MINIMUM ELBOW RADIUS REQUIREMENTS	
	RUNS 0-100 FEET	RUNS GREATER THAN 101 FEET
1/2"	4"	4"
3/4"	4 1/2"	4 1/2"
1"	5 3/4"	5 3/4"
1 1/4"	7 1/4"	7 1/4"
1 1/2"	8 1/4"	8 1/4"
2"	9 1/2"	9 1/2"
2 1/2"	10 1/2"	11 7/16"
3"	13"	13 3/4"
4"	16"	18 1/4"
5"	24"	-
6"	30"	-



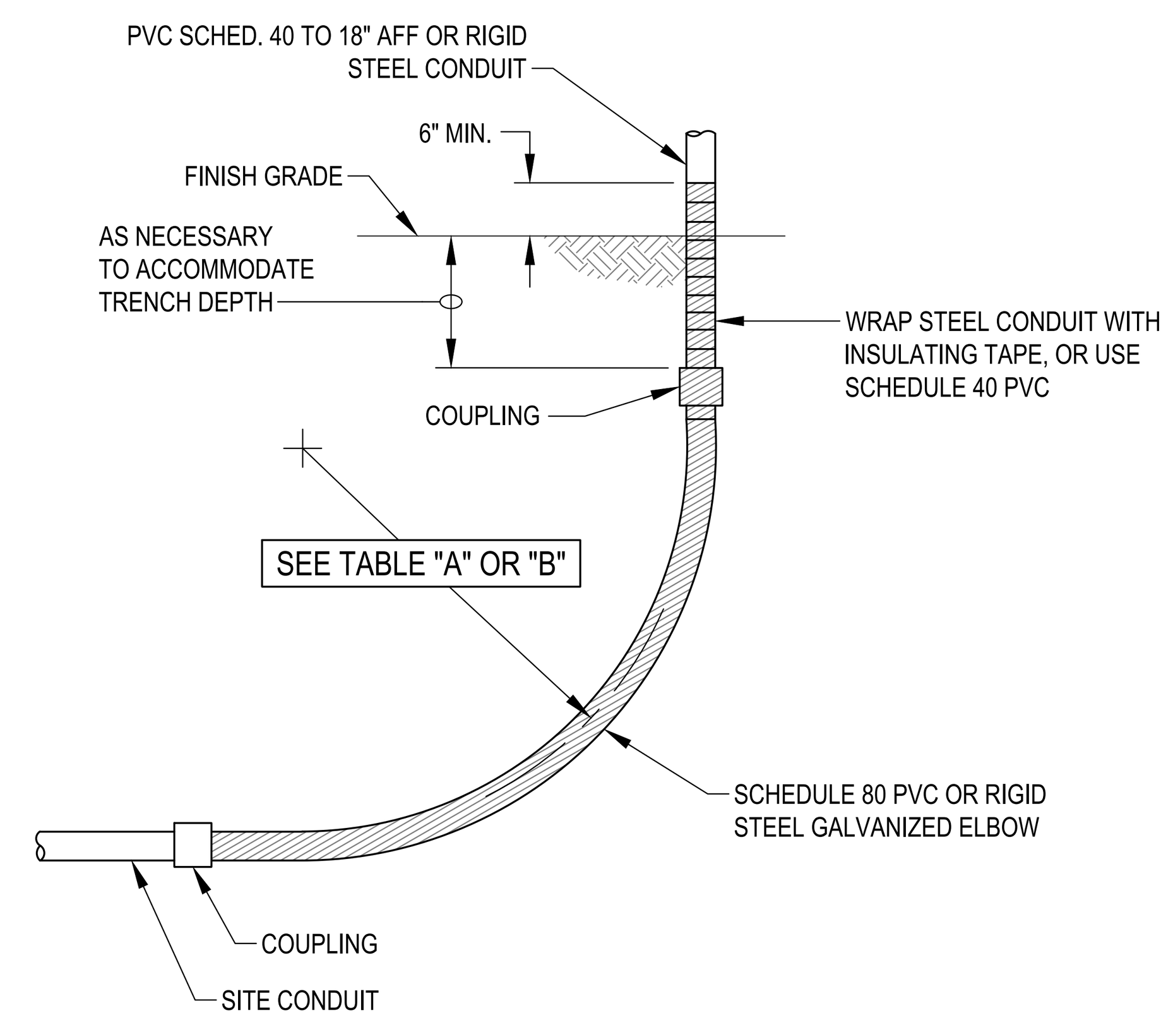
DETAIL NOTES

A. THE CONFIGURATION INDICATED IS DIAGRAMMATIC TO ILLUSTRATE THE REQUIRED MINIMUM SEPARATIONS FOR TRENCH UTILITIES.

B. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUITS PURSUANT TO THE PLANS AND DIAGRAMS.

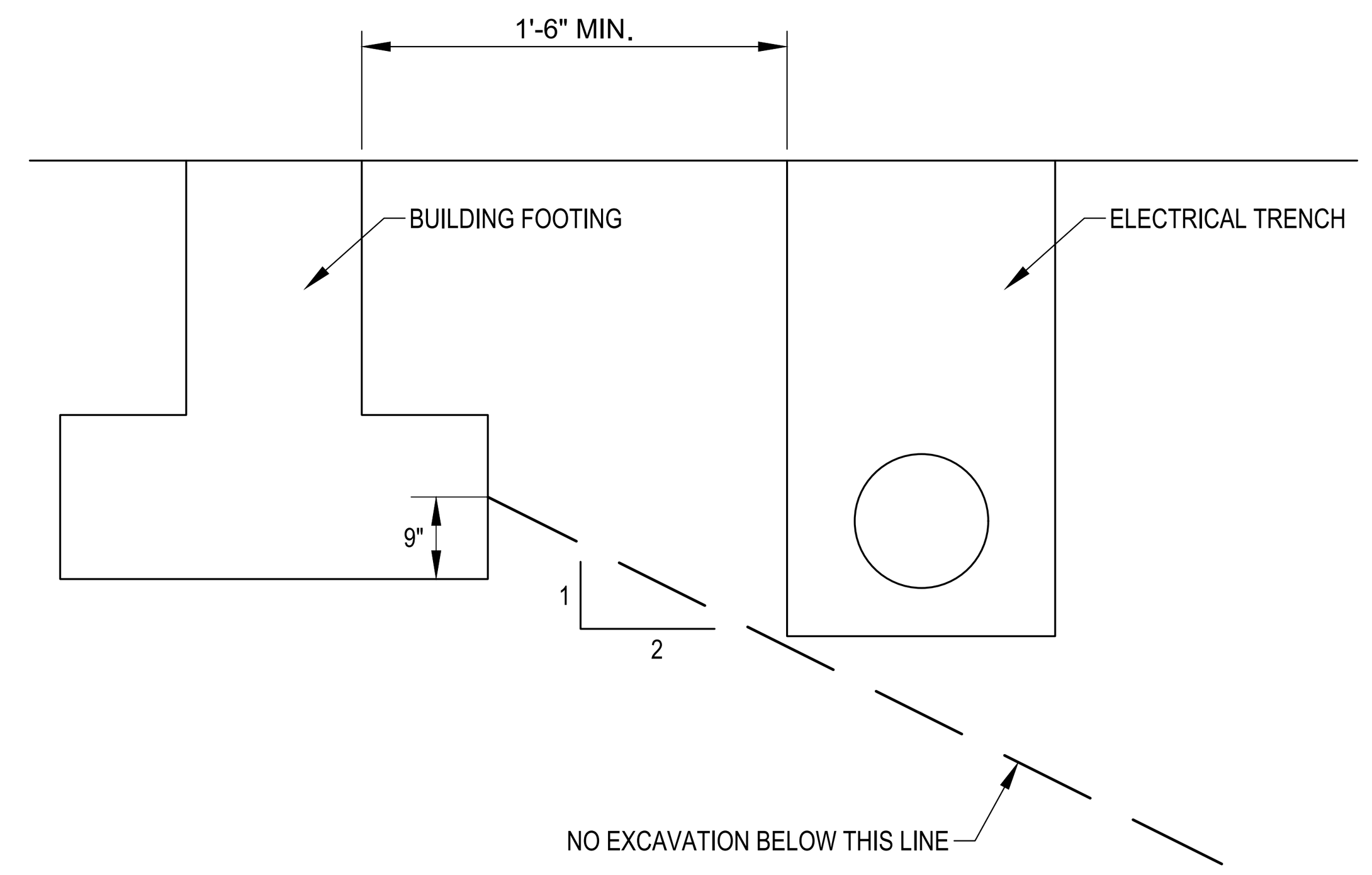
1 TYPICAL TRENCH REQUIREMENTS

NOT TO SCALE



2 CONDUIT SWEEP REQUIREMENTS

NOT TO SCALE

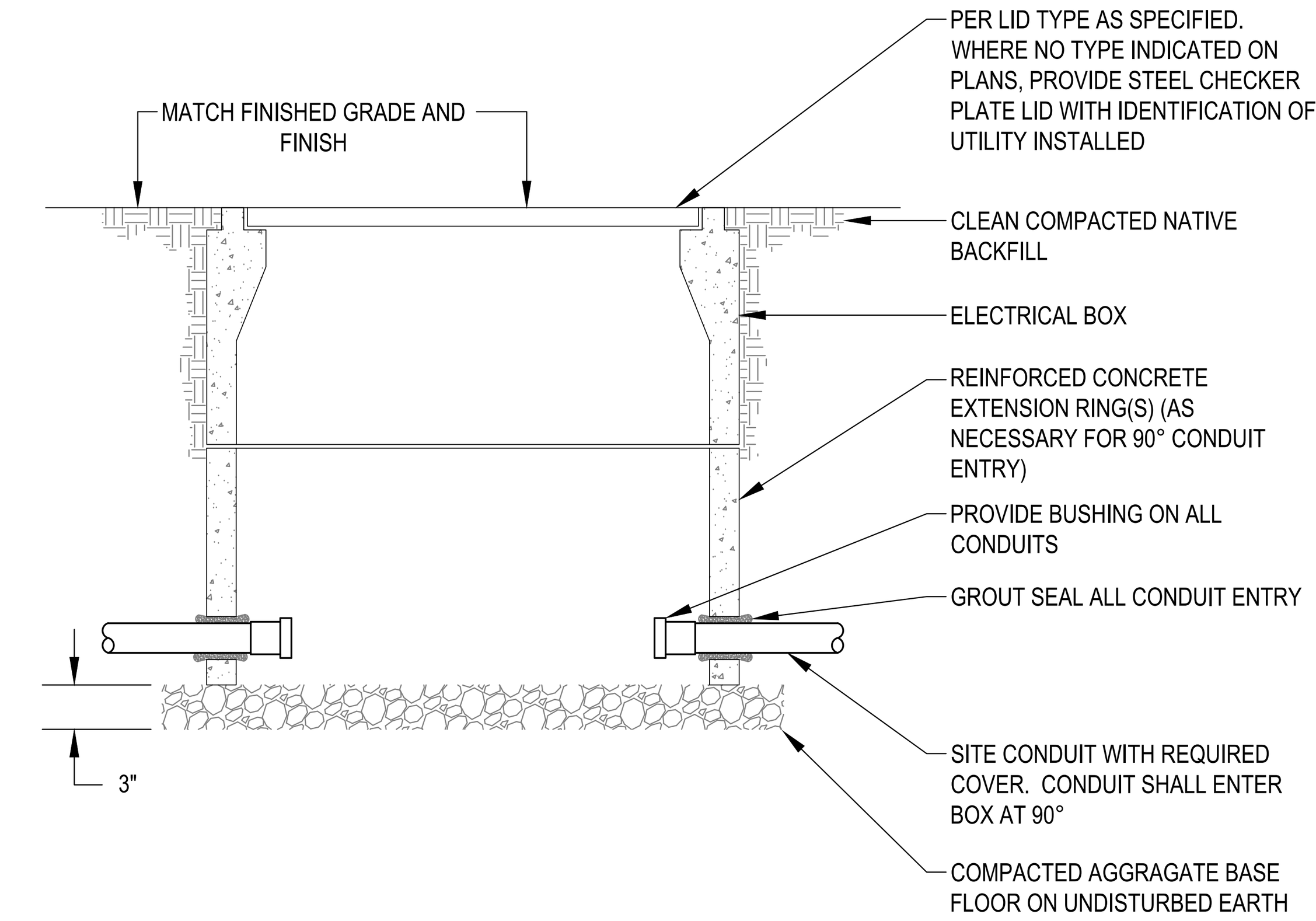


DETAIL NOTES

A. SEE STRUCTURAL FOR ADDITIONAL INFORMATION.

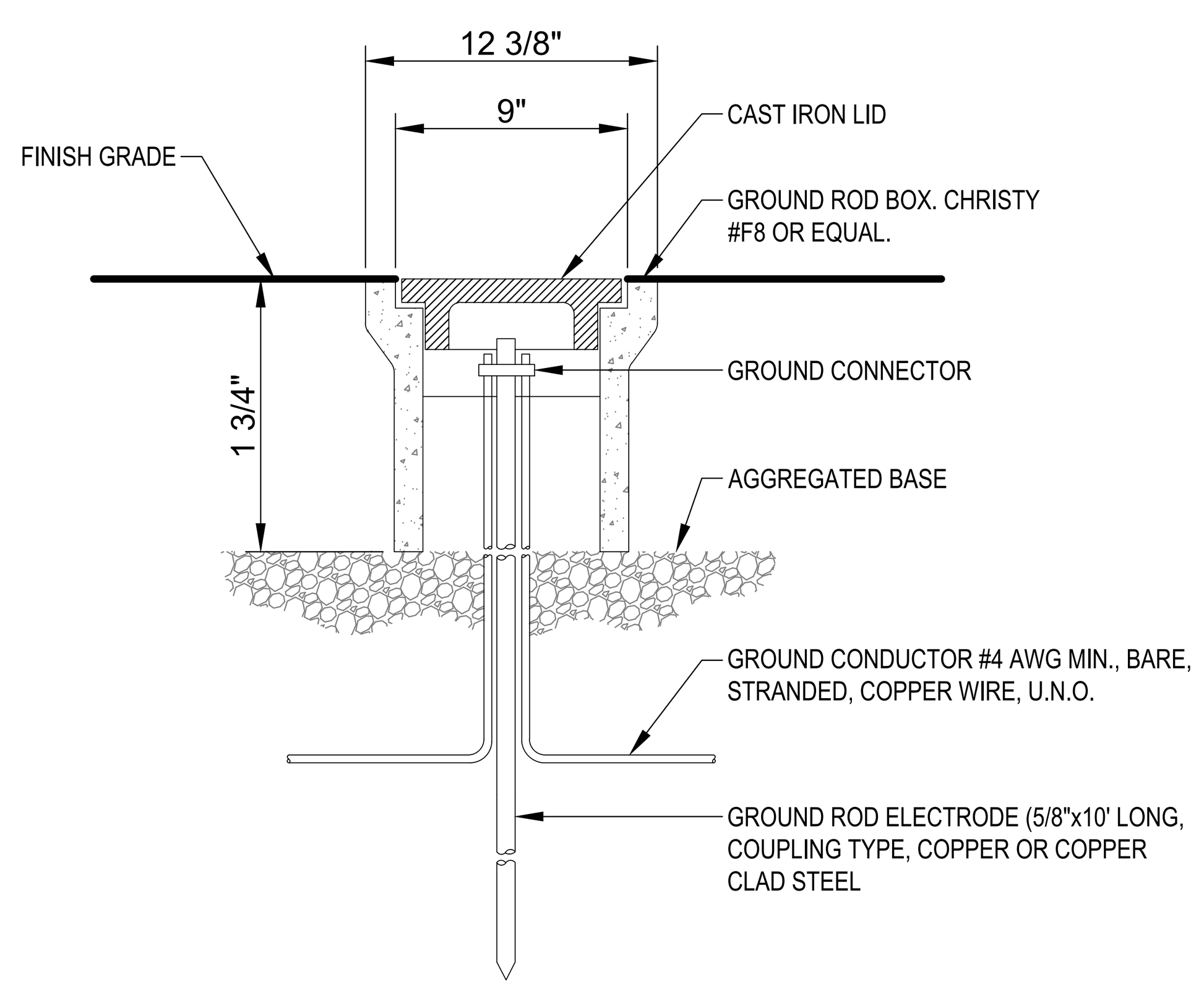
3 TRENCH LOCATION

NOT TO SCALE



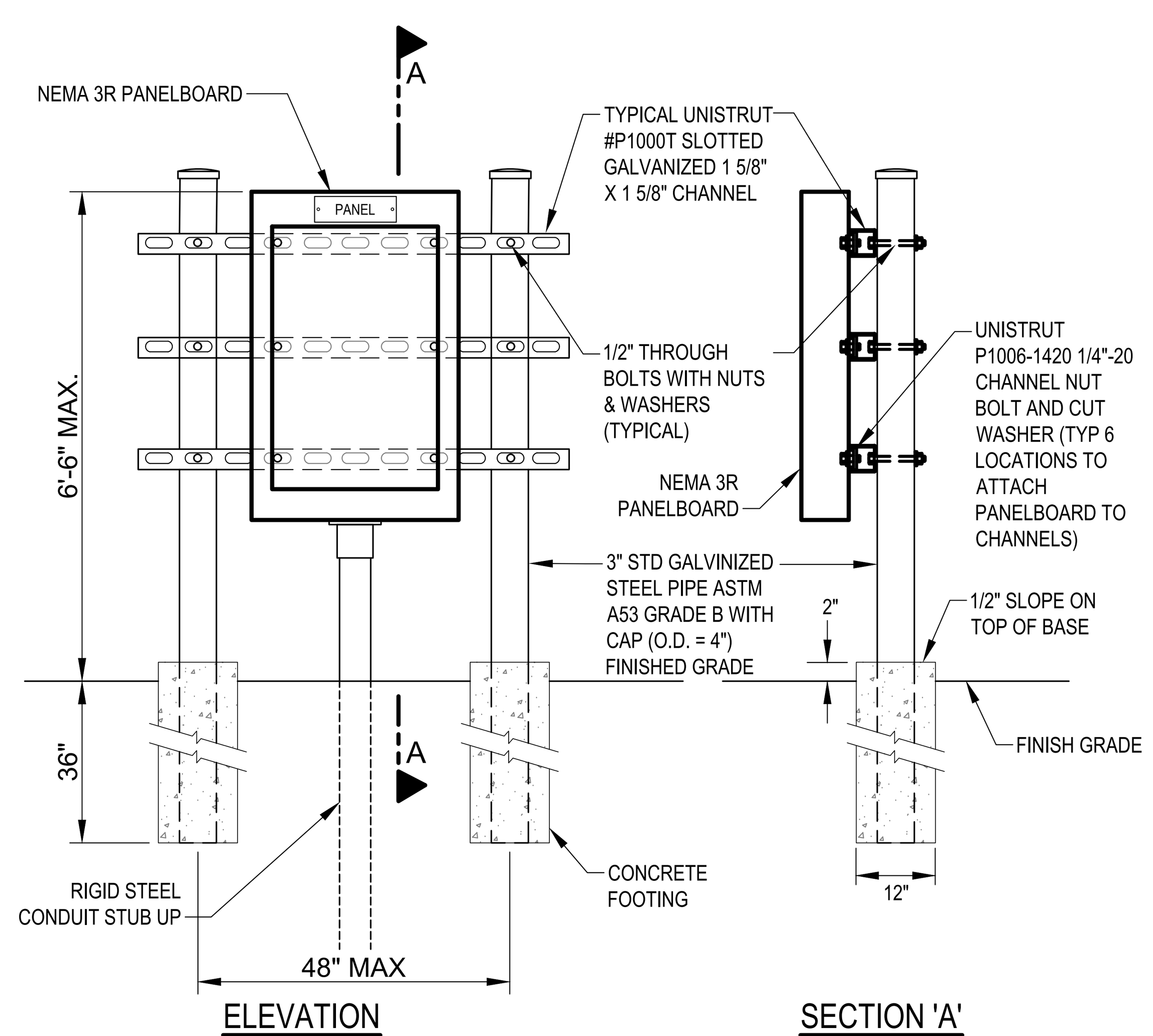
6 IN GROUND PULL BOX

NOT TO SCALE



5 GROUND ROD

NOT TO SCALE



NOTE:
MAXIMUM WEIGHT OF PANEL AND CONTENTS = 350 LBS MAXIMUM

6 PANELBOARD MOUNTING FREESTANDING - GROUND

NOT TO SCALE

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:

0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT

900 HOPPER STREET, PETALUMA, CA

SHEET NAME:

ELECTRICAL DETAILS

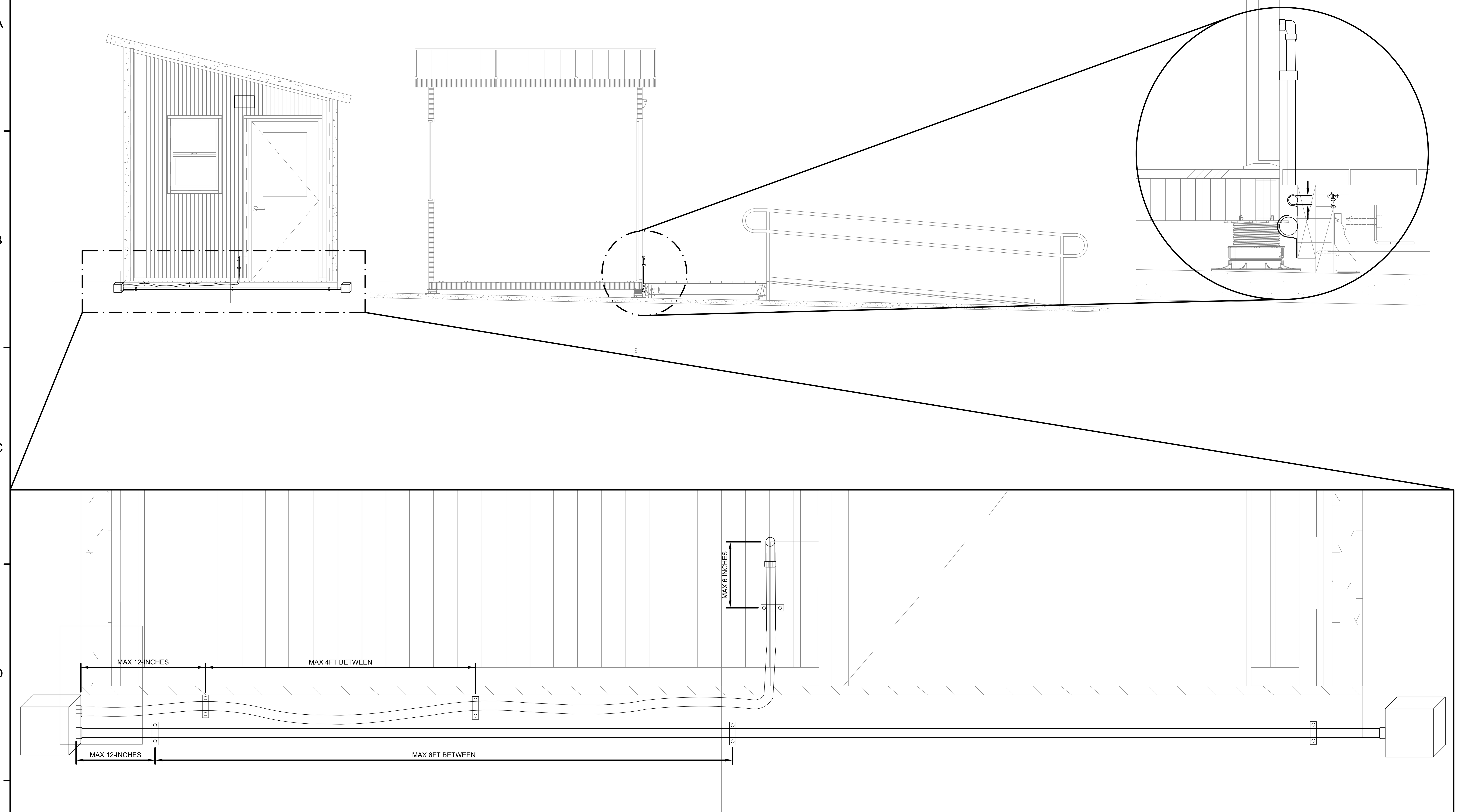
ISSUE DATE: Project Issue Date

PREPARATION AND REVIEW

DRAWN BY: -
DESIGNER: -
PROJ MGR: -
PEER REVIEW: -

SHEET NUMBER:

E501



REVISION SCHEDULE

NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:

REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
STATE OF CALIFORNIA

0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT

900 HOPPER STREET, PETALUMA, CA

SHEET NAME:

ELECTRICAL DETAILS

ISSUE DATE: Project Issue Date

PREPARATION AND REVIEW

DRAWN BY: -
DESIGNER: -
PROJ MGR: -
PEER REVIEW: -

SHEET NUMBER:

E502

LOAD SUMMARY - BUILDING TYPE										
			LOAD (VA)							
UNIT TYPE	SQFT	# OF UNITS IN BUILDING	LIGHTING / RECEPTACLE	AC	ELECTRIC RANGE	WATER HEATER	FIXED APPLIANCE	ELECTRIC DRYER	SOLAR	EV CHARGING
SLEEPING UNITS	800	25	90,000	37,500	-	-	25,000	-	-	-
RESTROOMS	1000	2	6,000	3,000	-	9,000	-	-	-	-
LAUNDRY	1000	1	4,500	1,500	-	-	2,000	12,000	-	-
			-	-	-	-	-	-	-	-
STAFF / HOUSE		1	7,000							
TOTAL		**28**	**107,500**	**42,000**	**-**	**9,000**	**27,000**	**12,000**	**-**	**-**

NEC STANDARD DEMAND LOAD CALCULATION										
			LOAD (VA)							
			LIGHTING/RECP	AC	RANGE	WH	APPLIANCE	DRYER	SOLAR	EV CHARGING
TOTAL			107,500	42,000	-	9,000	27,000	12,000	-	-
					DEMAND (220.55)	DEMAND (220.53)	DEMAND (220.53)	DEMAND (220.54)	DEMAND (690)	DEMAND
MULTIPLIER		FIRST 3 KVA @100%			24%	75%	75%	100%	125%	125%
			3,000.00		-	6,750	20,250	12,000	-	-
		UP TO 120K KVA @35%								
			36,575							
		ABOVE 120K REMAINING KVA @25%								
			-							
TOTAL		**Demand**	**39,575**	**42,000**	**-**	**9,000**	**20,250**	**12,000**	**-**	**-**
Standard Total Load Calculation	122,825	VA								
Using Option Load Calculation (T220.84) added in Range load 8000K per requirements. Only Applicable for Multi-family with 3 or more units	421,500	VA	x	**0.33**	**=**	**139,095.00**	VA	+ House Loads =	**146,095**	VA
									TOTAL DEMAND LOAD (KVA)	**122.8**
SERVICE VOLTAGE:	**208**								**TOTAL DEMAND LOAD (A)**	**341.2**
PHASE	**3**								**BUS SIZE**	**400A**

SHEET NOTES

A. ALL ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, METER SOCKETS AND MOTOR CONTROL CENTERS SHALL BE PROVIDED WITH A PERMANENTLY AFFIXED ARC FLASH WARNING LABELS PER CEC 110.16 AND 110.21 REQUIREMENTS. LABEL SHALL AT MINIMUM STATE "WARNING: ARC FLASH AND SHOCK HAZARD APPROPRIATE PPE REQUIRED".

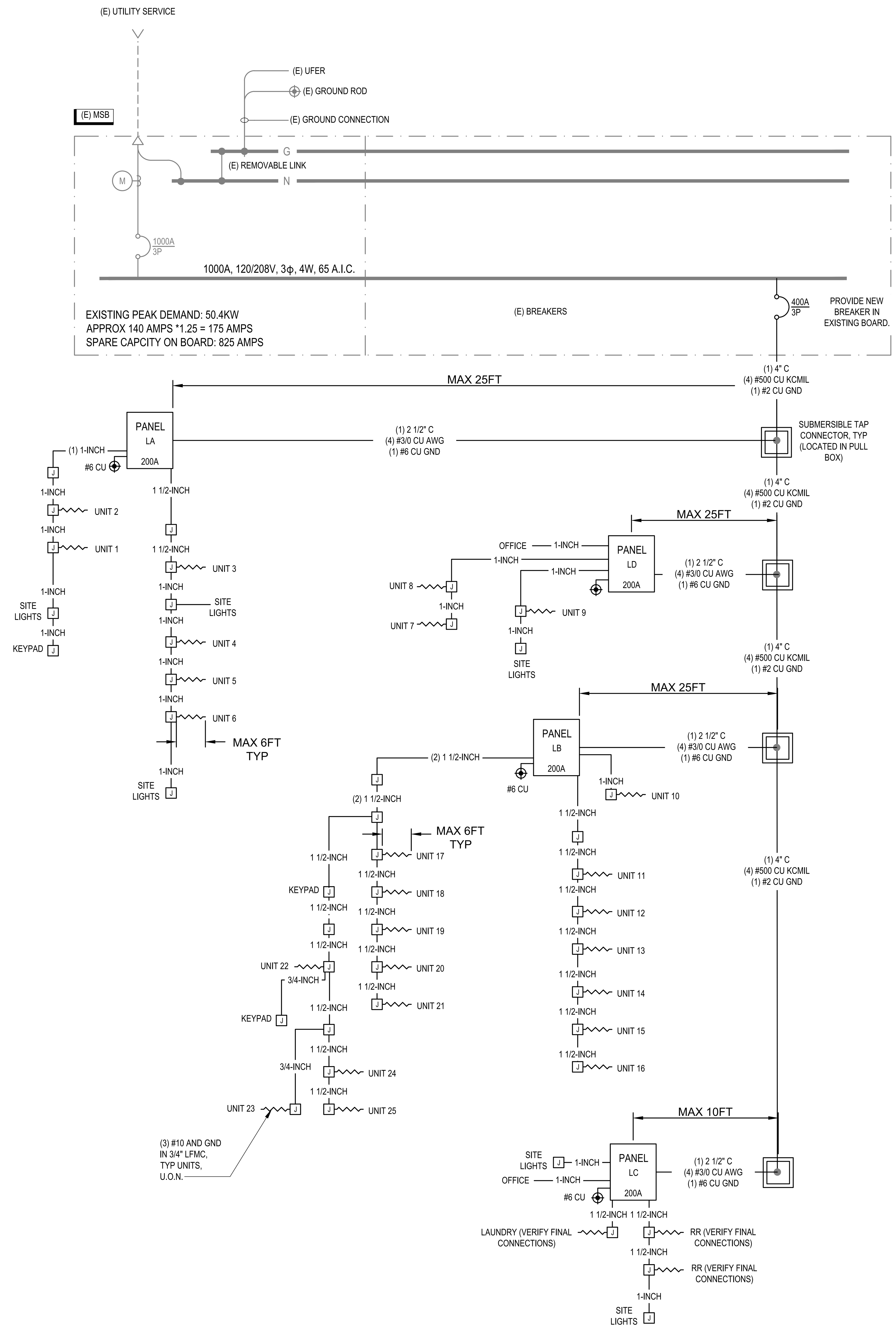
B. THE CONTRACTOR SHALL PERFORM ELECTRICAL DISTRIBUTION SYSTEM TESTING PRIOR TO ENERGIZING ANY FEEDERS.

C. PROVIDE GROUND ROD AND CONCRETE WELL WITH STEEL LID LABELED "GROUND". RESISTANCE OF GROUND ROD SHALL NOT EXCEED 0-25 OHMS. IF A SINGLE ROD EXCEEDS 25 OHMS, PROVIDE ADDITIONAL GROUND ROD(S) SPACED A MINIMUM OF 6-FEET APART IN ACCORDANCE WITH NEC 250-56. SEE DSA PC #02-116162 DETAIL 2/E5.01.

D. CONTRACTOR SHALL VERIFY AIC WITH UTILITY AND AIC OF NEW PANELBOARDS PRIOR TO ORDERING. ALL BREAKERS SHALL BE FULLY RATED TO MEET PANELBOARD RATING.

CIRCUIT NOTES

1. IF MORE THEN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED PER RACEWAY. CONTRACTOR SHALL DEMONSTRATE COMPLIANCE WITH NEC TABLE 310.15(B) (3) (a).
   - 1.1. MAX (9) #12 AWG FOR 20A CIRCUITS.
   - 1.2. MAX (20) #10 AWG FOR 20A CIRCUITS.
   - 1.3. MAX (40) #8 AWG FOR 20A CIRCUITS.
2. FOR BRANCH CIRCUITS DO NOT EXCEED NEC CONDUIT FILL REQUIREMENTS, PROVIDE MAX:
   - 2.1. MAX (29) #12 AWG THWN PER 1" IMC CONDUIT.
   - 2.2. MAX (18) #10 AWG THWN PER 1" IMC CONDUIT.
   - 2.3. MAX (6) #8 AWG THWN PER 3/4" IMC CONDUIT.
   - 2.4. MAX (10) #8 AWG THWN PER 1" IMC CONDUIT.
   - 2.3. MAX (24) #8 AWG THWN PER 1 1/2" IMC CONDUIT.
   - 2.3. MAX (39) #8 AWG THWN PER 2" IMC CONDUIT.
   - 2.4. MAX (7) #6 AWG THWN PER 1"IMC CONDUIT.
3. FOR 20A 208V (3% VD) CIRCUITS PROVIDE MINIMUM:
   - 3.1. UP TO 78FT - #12 AWG
   - 3.2. 78FT TO 130FT - #10 AWG
   - 3.3. 130FT TO 200FT - #8 AWG



1 SINGLE LINE DIAGRAM - POWER

NOT TO SCALE

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:

0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT

900 HOPPER STREET, PETALUMA, CA

SHEET NAME:

DIAGRAMS
ELECTRICAL
SITE

ISSUE DATE: Project Issue Date

PREPARATION AND REVIEW

DRAWN BY:
DESIGNER:
PROJ MGR:
PEER REVIEW:

SHEET NUMBER:

E601

PANEL SCHEDULE

PANEL NAME: **LA** VOLTAGE: 208 NEMA RATING: 3R NOTES:
MAINS RATING: 200 (A) PHASE: 3 AIC RATING: 1
BUS RATING: 225 (A) WIRE: 4 LOCATION: ELECTRICAL ROOM

CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1	10	10	R	UNIT 1	20/2		2.00	A	2.00		20/2	UNIT 2	R	10	10	2
3	10		R				2.00	B	2.00				R		10	4
5	10	10	R	UNIT 3	20/2		2.00	C	2.00		20/2	UNIT 4	R	10	10	6
7	10		R				2.00	A	2.00				R		10	8
9	10	10	R	UNIT 5	20/2		2.00	B	2.00		20/2	UNIT 6	R	10	10	10
11	10		R				2.00	C	2.00				R		10	12
13	10	10	R	UNIT 7	20/2		2.00	A	2.00		20/2	UNIT 8	R	10	10	14
15	10		R				2.00	B	2.00				R		10	16
17	10	10	R	UNIT 9	20/2		2.00	C								18
19	10		R				2.00	A								20
21	10	10	L	SITE LIGHTING	20/1		0.50	B								22
23	10	10	R	KEYPADS	20/1		0.20	C								24
25								A								26
27								B								28
29								C								30

LOADS:
PHASE A: 14.0 (KVA)
PHASE B: 12.5 (KVA)
PHASE C: 10.2 (KVA)
TOTAL: 36.7 (CONNECTED KVA)
101.9 (CONNECTED A)

USE LEGEND	LOAD TYPE
"H"	HVAC
"L"	LIGHTING
"M"	MOTOR
"O"	OTHER
"R"	RECEPTACLE
"P"	PANEL
"C"	COOKING
"E"	EV LOADS
"W"	WATER HEATER

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP
HT - HANDLE TIE
FA - DEDICATED CIRCUIT FOR FIRE ALARM, RED HANDLE, MARKED "FIRE ALARM CIRCUIT", LOCK-ON DEVICE. PERMANENTLY IDENTIFY CIRCUIT AT FIRE ALARM EQUIPMENT.

NEC DEMAND LOAD	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS	0.50	125%	0.63
TYPE "R": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "R": RECEPTACLES (OVER 10KVA)	26.20	50%	13.10
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "C": COOKING LOADS		65%	
TYPE "E": EV LOADS		125%	
TYPE "W": WATER HEATING LOADS		100%	
TYPE "O": OTHER LOADS		100%	
DEMAND KVA:			23.73
DEMAND AMPS:			65.9

PANEL SCHEDULE

PANEL NAME: **LB** VOLTAGE: 208 NEMA RATING: 3R NOTES:
MAINS RATING: 200 (A) PHASE: 3 AIC RATING: 22K
BUS RATING: 200 (A) WIRE: 4 LOCATION:

CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1	8	8	R	UNIT 10	20/2		2.00	A	2.00		20/2	UNIT 11	R	8	8	2
3	8		R				2.00	B	2.00				R		8	4
5	8	8	R	UNIT 12	20/2		2.00	C	2.00		20/2	UNIT 13	R	8	8	6
7	8		R				2.00	A	2.00				R		8	8
9	8	8	R	UNIT 14	20/2		2.00	B	2.00		20/2	UNIT 15	R	8	8	10
11	8		R				2.00	C	2.00				R		8	12
13	8	8	R	UNIT 16	20/2		2.00	A	2.00		20/2	UNIT 17	R	8	8	14
15	8		R				2.00	B	2.00				R		8	16
17	8	8	R	UNIT 18	20/2		2.00	C	2.00		20/2	UNIT 19	R	8	8	18
19	8		R				2.00	A	2.00				R		8	20
21	8	8	R	UNIT 20	20/2		2.00	B	2.00		20/2	UNIT 21	R	8	8	22
23	8		R				2.00	C	2.00				R		8	24
25	8	8	R	UNIT 22	20/2		2.00	A	2.00		20/2	UNIT 23	R	8	8	26
27	8		R				2.00	B	2.00				R		8	28
29	8	8	R	UNIT 24	20/2		2.00	C	2.00		20/2	UNIT 25	R	8	8	30
31	8		R				2.00	A	2.00				R		8	32
33	8	8	L	SITE LIGHTING	20/1		0.50	B								34
35	8	8	R	KEYPADS	20/1		0.20	C								36
37								A								38
39								B								40
41								C								42

LOADS:
PHASE A: 24.0 (KVA)
PHASE B: 20.5 (KVA)
PHASE C: 20.2 (KVA)
TOTAL: 64.7 (CONNECTED KVA)
179.7 (CONNECTED A)

USE LEGEND	LOAD TYPE
"H"	HVAC
"L"	LIGHTING
"M"	MOTOR
"O"	OTHER
"R"	RECEPTACLE
"P"	PANEL
"C"	COOKING
"E"	EV LOADS
"W"	WATER HEATER

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP
HT - HANDLE TIE
FA - DEDICATED CIRCUIT FOR FIRE ALARM, RED HANDLE, MARKED "FIRE ALARM CIRCUIT", LOCK-ON DEVICE. PERMANENTLY IDENTIFY CIRCUIT AT FIRE ALARM EQUIPMENT.

NEC DEMAND LOAD	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS	0.50	125%	0.63
TYPE "R": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "R": RECEPTACLES (OVER 10KVA)	54.20	50%	27.10
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "C": COOKING LOADS		65%	
TYPE "E": EV LOADS		125%	
TYPE "W": WATER HEATING LOADS		100%	
TYPE "O": OTHER LOADS		100%	
DEMAND KVA:			37.73
DEMAND AMPS:			104.8

PANEL SCHEDULE

PANEL NAME: **LC** VOLTAGE: 208 NEMA RATING: 3R NOTES:
MAINS RATING: 200 (A) PHASE: 3 AIC RATING: 22K
BUS RATING: 200 (A) WIRE: 4 LOCATION:

CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1	4	4	R	LAUNDRY (VERIFY)	60/2		6.00	A	3.00		30/2	OFFICE	R	8	8	2
3	4		R				6.00	B	3.00				R		8	4
5	6	6	R	RESTROOM (VERIFY)	40/2		4.00	C								6
7	6		R				4.00	A								8
9	6	6	R	RESTROOM (VERIFY)	40/2		4.00	B								10
11	6		R				4.00	C								12
13	10	10	L	SITE LIGHTING	20/1		0.02	A								14
15								B								16
17								C								18
19								A								20
21								B								22
23								C								24
25								A								26
27								B								28
29								C								30

LOADS:
PHASE A: 13.0 (KVA)
PHASE B: 13.0 (KVA)
PHASE C: 8.0 (KVA)
TOTAL: 34.0 (CONNECTED KVA)
94.5 (CONNECTED A)

USE LEGEND	LOAD TYPE
"H"	HVAC
"L"	LIGHTING
"M"	MOTOR
"O"	OTHER
"R"	RECEPTACLE
"P"	PANEL
"C"	COOKING
"E"	EV LOADS
"W"	WATER HEATER

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP
HT - HANDLE TIE
FA - DEDICATED CIRCUIT FOR FIRE ALARM, RED HANDLE, MARKED "FIRE ALARM CIRCUIT", LOCK-ON DEVICE. PERMANENTLY IDENTIFY CIRCUIT AT FIRE ALARM EQUIPMENT.

NEC DEMAND LOAD	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS	0.02	125%	0.03
TYPE "R": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "R": RECEPTACLES (OVER 10KVA)	24.00	50%	12.00
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "C": COOKING LOADS		65%	
TYPE "E": EV LOADS		125%	
TYPE "W": WATER HEATING LOADS		100%	
TYPE "O": OTHER LOADS		100%	
DEMAND KVA:			22.03
DEMAND AMPS:			61.2

PANEL SCHEDULE

PANEL NAME: **LD** VOLTAGE: 208 NEMA RATING: 3R NOTES:
MAINS RATING: 200 (A) PHASE: 3 AIC RATING: 22K
BUS RATING: 200 (A) WIRE: 4 LOCATION: ELECTRICAL ROOM

CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1	10	10	R	UNIT 7	20/2		2.00	A	2.00		20/2	UNIT 8	R	10	10	2
3	10		R				2.00	B	2.00				R		10	4
5	10	10	R	UNIT 9	20/2		2.00	C								6
7	10		R				2.00	A								8
9	8	8	R	OFFICE	30/2		3.00	B								10
11	8		R				3.00	C								12
13								A								14
15								B								16
17								C								18
19								A								20
21	10	10	L	SITE LIGHTING	20/1		0.50	B								22
23								C								24
25								A								26
27								B								28
29								C								30

LOADS:
PHASE A: 6.0 (KVA)
PHASE B: 7.5 (KVA)
PHASE C: 5.0 (KVA)
TOTAL: 18.5 (CONNECTED KVA)
51.4 (CONNECTED A)

USE LEGEND	LOAD TYPE
"H"	HVAC
"L"	LIGHTING
"M"	MOTOR
"O"	OTHER
"R"	RECEPTACLE
"P"	PANEL
"C"	COOKING
"E"	EV LOADS
"W"	WATER HEATER

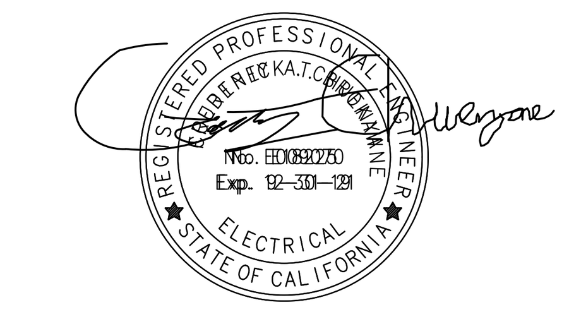
BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP
HT - HANDLE TIE
FA - DEDICATED CIRCUIT FOR FIRE ALARM, RED HANDLE, MARKED "FIRE ALARM CIRCUIT", LOCK-ON DEVICE. PERMANENTLY IDENTIFY CIRCUIT AT FIRE ALARM EQUIPMENT.

NEC DEMAND LOAD	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS	0.50	125%	0.63
TYPE "R": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "R": RECEPTACLES (OVER 10KVA)	8.00	50%	4.00
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "C": COOKING LOADS		65%	
TYPE "E": EV LOADS		125%	
TYPE "W": WATER HEATING LOADS		100%	
TYPE "O": OTHER LOADS		100%	
DEMAND KVA:			14.63
DEMAND AMPS:			40.6

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
	PERMIT	10-19-21

SEAL:



0/0/20

BrokawDesign
P.O. BOX 3103
ROHNERT PARK, CA 94927
www.brokawdesign.com

CITY OF PETALUMA
INTERIM HOUSING
SOLUTIONS PROJECT
900 HOPPER STREET, PETALUMA, CA

SHEET NAME:

SCHEDULES

ISSUE DATE: Project Issue Date

PREPARATION AND REVIEW

DRAWN BY: -
DESIGNER: -
PROJ MGR: -
PEER REVIEW: -

SHEET NUMBER:

E701