











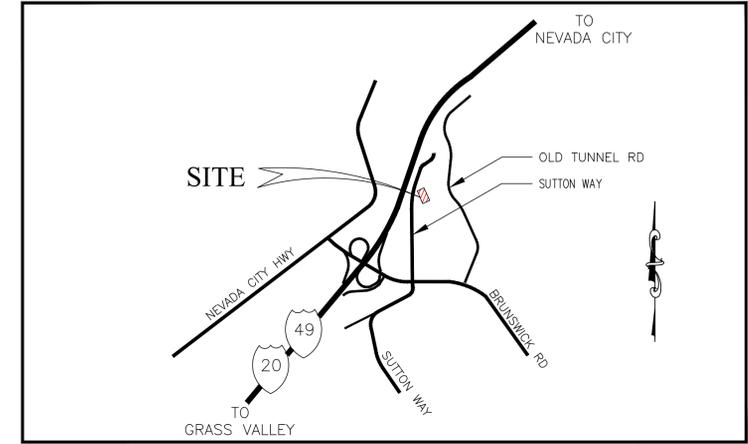




IMPROVEMENT PLANS FOR:  
**SUTTON WAY WELLNESS CENTER ADA RETROFIT**

1103 SUTTON WAY, GRASS VALLEY, CALIFORNIA

APN 035-400-042-000



**VICINITY MAP**  
N.T.S.

**PROJECT INFORMATION**

**OWNER/DEVELOPER:**

COUNTY OF NEVADA  
 950 MAIDU AVE STE 130  
 NEVADA CITY, CA 95959  
 (530) 559-1087  
 CONTACT:  
 EMAIL: @NEVADACOUNTYCA.GOV

**ARCHITECT:**

WALLIS DESIGN STUDIO  
 415 W MAIN ST  
 GRASS VALLEY, CA 95945  
 CONTACT: ROBERT WALLIS  
 (530)264-7010  
 EMAIL: ROBERT.WALLIS@MDSA.US

**CIVIL ENGINEERING:**

SCO PLANNING & ENGINEERING, INC.  
 140 LITTON DRIVE, SUITE 240  
 GRASS VALLEY, CA 95645  
 (530) 272-5841  
 CONTACTS: JASON BARNUM, P.E.  
 EMAIL: JASON@SCOPEINC.NET

**PROPERTY ADDRESS**

1103 SUTTON WAY  
 GRASS VALLEY, CA, 95945

**APN**

035-400-042-000

**PARKING:**

EXISTING STALLS: 30  
 PROPOSED STALLS: 27  
 REQUIRED ADA STALLS: 2  
 PROPOSED ADA STALLS: 2

**ABBREVIATIONS**

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
BC	BEGIN CURVE
BOW	BACK OF WALK
C	CONCRETE
CB	CATCH BASIN
CL	CENTERLINE
CR	CURB RETURN
DET	DETAIL
DI	DRAINAGE INLET
EG	EXISTING GROUND
EP	EDGE OF PAVEMENT
(E)	EXISTING
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOW LINE
FR	FIBER ROLLS
G	GAS
HP	HIGH POINT
IE	INVERT ELEVATION
JT	JOINT TRENCH
LP	LOW POINT
P	PAVING
PE	POLYETHYLENE
PVC	POLYVINYL CHLORIDE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SL	STREET LIGHT
STND.	STANDARD
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
TC	TOP OF CURB
TOW	TOP OF WALL
TYP	TYPICAL
W	WATER

**SHEET INDEX**

C1	COVER SHEET
C2	NOTES
C3	EXISTING TOPOGRAPHY AND DEMOLITION PLAN
C4	GRADING AND DRAINAGE PLAN
C5	DETAILS
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**BASIS OF BEARING**

THE MERIDIAN OF THIS SURVEY IS NAD 83, CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 2 (EPOC 2010.00). BASED ON GPS TIES TO THE NATIONAL GEODETIC SURVEY (NGS) PUBLISHED: PONDEROSA & DELPHINE.

DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND ARE IN U.S. SURVEY FEET AND DECIMALS THEREOF. TO CONVERT GROUND DISTANCES TO GRID DISTANCES MULTIPLY BY CF OF .99979537.



**OVERALL SITE PLAN**

SCALE: 1"=20'

DESIGNED: JB
DRAWN: NJB
PROJ. NO: 202306
DATE: MAY, 2023
DWG: SEE DAY STAMP

NO.	REVISIONS	DATE

CIVIL IMPROVEMENT PLANS  
**SUTTON WAY WELLNESS CENTER**  
 COVER SHEET  
 CALIFORNIA  
 GRASS VALLEY



GRASS VALLEY  
 (530) 272-5841  
 TRUCKEE  
 (530) 582-4043



C1

**GENERAL NOTES:**

1. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION IS ON LANDS OF THE OWNER, NEVADA COUNTY, IN EASEMENTS OBTAINED FROM THE CITY OR PUBLIC AGENCIES. THE CONTRACTOR SHALL OBTAIN THE REQUIRED ENCROACHMENT PERMITS FROM THE APPROPRIATE PUBLIC AGENCIES. WHERE WORK IS LOCATED IN EASEMENTS, TRAVERSING LANDS OTHER THAN THOSE OF THE COUNTY, THE CONTRACTOR SHALL MAKE ALL APPROPRIATE NOTIFICATIONS AND CONFINE HIS/HER OPERATIONS WITHIN THE EASEMENT BOUNDARIES.
2. THE LOCATIONS OF ALL UNDERGROUND FACILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL UNDERGROUND FACILITIES. HOWEVER, THE DESIGN ENGINEER ASSUMES NO LIABILITY FOR THE ACCURACY OF COMPLETENESS OF THE EXISTING FACILITIES SHOWN HEREON OR FOR THE EXISTENCE OF OTHER UNDERGROUND UTILITIES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CALL U.S.A. UNDERGROUND SERVICE ALERT AT 811, OR 1-800-227-2600 AND HAVE UTILITIES MARKED AT LEAST 72 HOURS BEFORE BEGINNING WORK. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING FACILITIES AND IMMEDIATELY NOTIFY THE DESIGN ENGINEER IF ANY SUCH FACILITIES INTERFERE WITH THE CONSTRUCTION OF IMPROVEMENTS. IF SO DIRECTED BY THE DESIGN ENGINEER, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY UNTIL REMEDIAL ACTION CAN BE TAKEN. ANY COST RESULTING FROM THE CONTRACTORS FAILURE TO REPORT FAILURE TO STOP WORK AS DIRECTED, WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS, IF REVISIONS ARE NECESSARY BECAUSE OF THE LOCATION OF EXISTING UTILITIES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EXISTING PUBLIC AND PRIVATE IMPROVEMENTS. ANY DAMAGED IMPROVEMENTS SHALL BE REPLACED BY THE CONTRACTOR TO EQUAL OR BETTER THAN PRE-PROJECT CONDITIONS INCLUDING, BUT NOT LIMITED TO, ROADWAYS, DRAINAGE STRUCTURES, DRIVEWAYS, AND UTILITIES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL CURRENTLY APPLICABLE SAFETY LAWS AND REGULATIONS OF ANY JURISDICTIONAL BODY. FOR INFORMATION CONTACT THE STATE INDUSTRIAL SAFETY DEPT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SURVEY MONUMENTS AND MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS DESTROYED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
7. PRIOR TO ANY CORRECTIVE ACTION BY THE CONTRACTOR WHICH IS NECESSARY DUE TO STAKING ERRORS, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER FOR VERIFICATION AND RESTAKING.
8. WHEN THE CONTRACTOR'S OPERATIONS TEMPORARILY INTERFERE WITH THE EXISTING FLOW OF SEWAGE, WATER, GAS, ELECTRICITY, TELEPHONE COMMUNICATION, OR THE OPERATION OF ANY OTHER FACILITY, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCY/UTILITY AT LEAST THREE (3) DAYS PRIOR TO THE INTERFERENCE, AND PROVIDE OR MAKE ARRANGEMENTS FOR SATISFACTORY BYPASS FACILITIES.
9. THE CONTRACTOR SHALL REQUEST PERMISSION TO INTERFERE WITH SAID UTILITIES BY APPLYING TO THE RELATED UTILITY AND SHALL COMPLY WITH THEIR RECOMMENDATIONS AND ORDINANCES IN EACH CASE. SAID BYPASS FACILITIES SHALL BE SO CONSTRUCTED AS TO PROVIDE A NON-INTERRUPTIVE SERVICE OF SAID UTILITY.
10. IF BYPASS FACILITIES ARE NOT FEASIBLE OR REASONABLE, AS DETERMINED BY THE ENGINEER, THE RESIDENTS AND/OR OWNERS OF ALL PROPERTIES AFFECTED BY A TEMPORARY INTERRUPTION (LESS THAN 8 HOURS) MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE INTERRUPTION BY THE CONTRACTOR.
11. ALL INSTALLATIONS SHALL FOLLOW MANUFACTURERS RECOMMENDATIONS AND GUIDELINES UNLESS OTHERWISE NOTED ON THE PLANS. MANUFACTURERS INSTALLATION GUIDELINES SHALL BE ON CONSTRUCTION SITE AT ALL TIMES.
12. DURING THE PROGRESS OF THE WORK, THE CONTRACTOR SHALL KEEP THE ENTIRE JOB SITE IN A CLEAN AND ORDERLY CONDITION. EXCESS UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE JOB SITE. SPILLAGE RESULTING FROM CONTRACTOR'S ACTIVITY SHALL BE REMOVED BY THE CONTRACTOR. ALL GUTTERS AND ROADSIDE DITCHES SHALL BE KEPT FREE AND CLEAR FROM OBSTRUCTIONS. ANY DEVIATION FROM THE ABOVE PRACTICE SHALL HAVE PRIOR WRITTEN APPROVAL FROM THE ENGINEER.
13. THE CONTRACTOR SHALL PROVIDE ONE COMPLETE SET OF AS-BUILT CHANGES. THE CHANGES SHALL BE PLACED ON A CLEAN SET OF BLUELINE DRAWINGS IN RED AND GIVEN TO THE DESIGN ENGINEER AT JOB COMPLETION.
14. THE CONTRACTOR SHALL AT HIS OWN EXPENSE, PROVIDE ALL PERMITS, CERTIFICATES AND LICENSES REQUIRED BY LAW.
15. WHEN TRANSPORTING ANY MATERIAL DURING CONSTRUCTION, CARE SHOULD BE TAKEN TO PREVENT MATERIAL FROM BLOWING OR SPILLING ONTO STREETS AND HIGHWAYS. EARTHEN MATERIAL, IF TRANSPORTED, SHALL BE ADEQUATELY SPRAYED WITH WATER PRIOR TO TRANSPORT ONTO PUBLIC ROADS. VEGETATIVE MATERIAL SHALL BE COVERED OR TARPED PRIOR TO TRANSPORT.
16. INERT WASTE SUCH AS CONCRETE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
17. TOXIC WASTE (PETROLEUM AND OTHER CHEMICAL PRODUCTS), IF ENCOUNTERED, SHALL BE IDENTIFIED, SEPARATED AND DELIVERED TO THE PROPER LANDFILL AREA.
18. THE CONTRACTOR SHALL CHIP OR HAUL TO AN APPROVED DUMP SITE OR LANDFILL, ALL CLEARED VEGETATION.
19. ALL AREAS WITH VEHICLE TRAFFIC SHALL BE WATERED OR HAVE DUST PALLIATIVE APPLIED AS NECESSARY FOR REGULAR STABILIZATION OF DUST EMISSIONS.
20. SHOP DRAWINGS – THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AS MAY BE NECESSARY FOR THE PROSECUTION OF THE WORK, AS REQUIRED BY THESE NOTES. THE ENGINEER SHALL PROMPTLY REVIEW ALL SHOP DRAWINGS. THE ENGINEER'S REVIEW OF ANY SHOP DRAWING SHALL NOT RELEASE THE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS FROM THE CONTRACT DOCUMENTS.
21. MATERIALS, SERVICES AND FACILITIES – MATERIALS AND EQUIPMENT SHALL BE SO STORED AS TO INSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK. STORED MATERIALS AND EQUIPMENT TO BE INCORPORATED IN THE WORK SHALL BE LOCATED SO AS TO FACILITATE PROMPT INSPECTION.
22. ALL MATERIAL SHALL BE UNLOADED, STORED, LOWERED INTO THE TRENCH AND JOINED, USING SUITABLE TOOLS AND EQUIPMENT AND IN A MANNER THAT WILL PREVENT DAMAGE TO THE MATERIAL, JOINTS, COATING, OR LINING. STORAGE AND HANDLING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
23. DAMAGED MATERIAL WILL BE REJECTED. THE CONTRACTOR SHALL CLEARLY MARK THE REJECTED MATERIAL AND REMOVE IT FROM THE IMMEDIATE CONSTRUCTION AREA. WHEN APPROVED BY THE ENGINEER, DAMAGED MATERIAL MAY BE REPAIRED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND USED IN THE CONSTRUCTION. REPLACEMENT OR REPAIR OF REJECTED MATERIAL SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND AT NO EXPENSE TO THE OWNER.
24. INSPECTION AND TESTING – ALL MATERIALS MAY BE INSPECTED, SAMPLED AND TESTED BY THE OWNER. THE CONTRACTOR SHALL GIVE SUFFICIENT ADVANCE NOTICE OF PLACING OF ORDER TO PERMIT TESTS TO BE COMPLETED BEFORE THE MATERIALS ARE INCORPORATED IN THE WORK AND HE SHALL AFFORD SUCH FACILITIES AS THE OWNER MAY REQUIRE FOR COLLECTING AND MAKING INSPECTIONS. ALL SAMPLES SHALL BE FURNISHED BY THE CONTRACTOR WITHOUT COST TO THE OWNER. THE OWNER MAY WAIVE SAMPLING AND TESTING IF ADEQUATE INFORMATION, PROPERLY CERTIFIED, IS AVAILABLE TO INDICATE THAT MATERIALS COMPLY WITH TERMS OF THE SPECIFICATIONS.
25. THE CONTRACTOR SHALL FURNISH THE OWNER WITH EVERY REASONABLE FACILITY FOR ASCERTAINING WHETHER OR NOT THE WORK AS PERFORMED IS IN ACCORDANCE WITH THE REQUIREMENTS AND INTENT OF THE CONTRACT. IF THE OWNER REQUESTS IT, THE CONTRACTOR AT ANY TIME BEFORE ACCEPTANCE OF THE WORK SHALL REMOVE OR UNCOVER SUCH PORTIONS OF THE FINISHED WORK AS MAY BE DIRECTED. AFTER EXAMINATION, THE CONTRACTOR SHALL RESTORE SAID PORTIONS OF THE WORK TO THE STANDARDS REQUIRED BY THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
26. WATER AND POLLUTION – THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS PERTAINING TO WATER POLLUTION AND SOIL EROSION INCLUDING THE PAYMENT OF ANY FINES OR PENALTIES IMPOSED BY ANY GOVERNMENT AGENCY AS A RESULT OF WORK PERFORMED BY THE CONTRACTOR.
27. THE CONTRACTOR SHALL COMPLY WITH ALL AIR POLLUTION CONTROL RULES, REGULATIONS, ORDINANCES AND STATUTES WHICH APPLY TO THE WORK AREA. NEVADA COUNTY AIR POLLUTION CONTROL OFFICE CAN BE CONTACTED AT TELEPHONE 916-265-1398.
28. CONSTRUCTION SAFETY – THE CONTRACTOR SHALL FOLLOW CONSTRUCTION PROCEDURES NECESSARY TO PROVIDE A SAFE WORKING CONDITION THROUGH ALL PHASES OF THE PROJECT. SAID PROCEDURES SHALL CONFORM TO THE SAFETY ORDERS, DIVISION OF INDUSTRIAL SAFETY, TITLE 8, CALIFORNIA ADMINISTRATIVE CODE AND ALL OTHER PROVISIONS REQUIRED BY FEDERAL, STATE AND COUNTY LAW OR ORDINANCE.
29. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OUTLINING THE SAFETY PROCEDURES TO BE FOLLOWED BY ITS WORKMEN, ALL SUBCONTRACTORS, AND RELATED TRADES WORKING ON ITS JOBS AND EFFECTIVELY ASSURING COMPLIANCE WITH SUCH PROCEDURES. IT SHALL ALWAYS PROVIDE FOR THE SAFETY OF THE PUBLIC BOTH DAY AND NIGHT WHERE THEY ARE EXPOSED TO ITS CONSTRUCTION OPERATION.
30. PROJECT CLEANUP AND FINISHING – THE CONTRACTOR SHALL REMOVE FROM THE VICINITY OF THE COMPLETED WORK ALL RUBBISH, UNUSED MATERIAL, FORMS, CONSTRUCTION STAKES, ETC. BELONGING TO HIM OR USED UNDER HIS DIRECTION DURING CONSTRUCTION. THE WORK SHALL BE LEFT IN A NEAT AND PRESENTABLE MANNER AT ALL TIMES INSOFAR AS CONSTRUCTION CONDITIONS PERMIT. AS PORTIONS OF THE WORK ARE COMPLETED, THE CONTRACTOR SHALL CLEAN THE INDIVIDUAL SITES.

31. TOUCHUP AND REPAIR – THE CONTRACTOR SHALL TOUCHUP OR REPAIR ALL FINISHED SURFACES ON STRUCTURES, EQUIPMENT, FIXTURES, OR WHATEVER, THAT HAVE BEEN DAMAGED PRIOR TO FINAL ACCEPTANCE. SURFACE ON WHICH SUCH TOUCHUP OR REPAIR CANNOT BE SUCCESSFULLY ACCOMPLISHED SHALL BE COMPLETELY REFINISHED OR IN THE CASE OF HARDWARE AND SIMILAR SMALL ITEMS, THE ITEMS SHALL BE REPLACED.
  32. CEMENT MATERIALS – PORTLAND CEMENT SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR TYPE "II" PORTLAND CEMENT OF THE AMERICAN SOCIETY FOR TESTING MATERIALS. ALL CEMENT SHALL BE OF THE SAME BRAND.
  33. UNLESS OTHERWISE SPECIFIED HEREIN, CEMENT GROUT OR MORTAR SHALL BE COMPOSED OF ONE PART CEMENT TO TWO PARTS FINE AGGREGATE MIXED WITH WATER IN A MECHANICAL BATCH MIXER TO PRODUCE A PLASTIC WORKABLE MIXTURE.
  34. STEEL REINFORCEMENT – THE CONTRACTOR SHALL FURNISH AND PLACE ALL STEEL REINFORCEMENT OF THE SIZES AND SHAPES AS SHOWN ON THE PLANS OR SPECIFIED HEREIN. MATERIAL AND PLACEMENT SHALL CONFORM TO REQUIREMENTS OF SECTION 52 OF STANDARD SPECIFICATIONS. STEEL SHALL BE A.S.T.M. A615, GRADE 40 UNLESS CALLED OUT OTHERWISE ON THE DRAWINGS.
  35. FORM AND FORMWORK – THE FORMS SHALL BE SMOOTH, MORTARTIGHT, TRUE TO THE REQUIRED LINES AND GRADES, AND OF SUFFICIENT STRENGTH TO SUPPORT THE WEIGHT OF THE FRESH CONCRETE WITHOUT SPRINGING OUT OF SHAPE OR APPRECIABLE DEFLECTION DURING THE PLANING OF THE CONCRETE. ALL EXPOSED SHARP EDGES SHALL BE CHAMFERED WITH TRIANGULAR FILETS NOT LESS THAN 0.75" BY 0.75", UNLESS OTHERWISE SHOWN ON THE PLANS. FORMS PREVIOUSLY USED SHALL BE THOROUGHLY CLEANED OF ALL DIRT, MORTAR AND FOREIGN MATTER BEFORE BEING REUSED.
  36. INSERTS – THE CONTRACTOR SHALL, BEFORE PLACING CONCRETE, MAKE PROVISION FOR ALL CORED HOLES, HANGERS, ANCHOR AND OTHER BOLTS, CONDUITS, PIPES, WATER SEALS AND OTHER INSERTS TO BE PLACED IN THE CONCRETE. HE SHALL VERIFY THE LOCATIONS AND DETAILS OF ALL SUCH WORK AND SHALL PREVENT THE DISTURBANCE OF SUCH INSERTS DURING THE PLANING OF THE CONCRETE.
  37. IF ANY EXISTING FACILITIES ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR/DEVELOPER SHALL BE RESPONSIBLE FOR REPAIR AT NO COST TO THE OWNER.
  38. THAT PRIOR TO ANY WORK BEING CONDUCTED WITHIN THE STATE, COUNTY OR CITY RIGHT OF WAY, THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FROM THE APPROPRIATE AGENCY.
  39. ALTERNATIVES TO DIESEL GENERATOR SETS (SUCH AS GRID POWER) SHALL BE USED FOR ON-SITE ELECTRICAL NEEDS DURING CONSTRUCTION, UNLESS DEEMED INFEASIBLE BY THE AIR POLLUTION CONTROL OFFICER AND STATED IN WRITING.
  40. IF GRADING OR OTHER CONSTRUCTION OPERATIONS UNEARTH ARCHEOLOGICAL OR HISTORICAL ARTIFACTS OF RESOURCES, CONSTRUCTION ACTIVITIES SHALL CEASE, THE PLANNING DEPARTMENT SHALL BE NOTIFIED OF THE EXTENT AND LOCATION OF DISCOVERED MATERIALS SO THAT THEY MAY BE RECORDED BY A QUALIFIED ARCHAEOLOGIST. DISPOSITION OF ARTIFACTS SHALL COMPLY WITH STATE AND FEDERAL LAWS.
  41. PRIOR TO FINAL PREPARATION OF THE SUBGRADE AND PLACEMENT OF PAVEMENT BASE MATERIALS, ALL UNDERGROUND UTILITIES SHALL BE INSTALLED AND SERVICE CONNECTIONS STUBBED OUT BEHIND THE HARDSCAPE IMPROVEMENT. PUBLIC UTILITIES, CABLE TV, SANITARY SEWERS, AND WATER LINES, SHALL BE INSTALLED IN A MANNER WHICH WILL NOT DISTURB THE STREET PAVEMENT, CURB, GUTTER AND SIDEWALK, WHEN FUTURE SERVICE CONNECTIONS OR EXTENSIONS ARE MADE.
  42. IF GRADING IS TO TAKE PLACE BETWEEN OCTOBER 15 AND APRIL 15, BOTH TEMPORARY AND PERMANENT EROSION CONTROL PLANS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL ALONG WITH THE GRADING PLAN. PERMANENT EROSION CONTROL MEASURES SHALL INCLUDE TREATMENT ALL GRADED SLOPES WITHIN 60 DAYS OF COMPLETION OF GRADING. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OCTOBER 15.
- EARTHWORK AND GRADING NOTES**
1. NO CLASSIFICATION OF MATERIAL TO BE EXCAVATED IS MADE WITH THESE PLANS AND SPECIFICATIONS. EXCAVATION SHALL INCLUDE THE REMOVAL AND SUBSEQUENT HANDLING OF ALL EARTH, GRAVEL, ROCK, OR OTHER MATERIAL ENCOUNTERED REGARDLESS OF THE TYPE, CHARACTER, COMPOSITION, OR CONDITION OF THE MATERIAL IN ACCORDANCE WITH THESE NOTES AND APPLICABLE LAWS AND CODES.
  2. GRADING – FINISH GRADES AND EXISTING OR NATURAL GRADES ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL DO ALL GRADING, FILLING-IN OR EXCAVATING AS REQUIRED TO COMPLETELY GRADE THE SITE TO LINES AND GRADES SHOWN, AND TO PROVIDE FOR THE INDICATED DRAINAGE. WHERE FINISH GRADE CORRESPONDS PRACTICALLY WITH EXISTING GRADE, THE GROUND SHALL BE WORKED UP AND GRADED OFF EVENLY WITH EXISTING GRADE. THE GRADING OPERATION SHALL GENERALLY CONSIST OF MOVING AND TRANSPORTING MATERIALS WITHIN THE AREA; HOWEVER, THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL FILL MATERIAL IF NECESSARY TO COMPLETE THE SITE GRADING TO THE ELEVATIONS SHOWN, OR OFFHAUL ANY EXCESS MATERIAL WHICH MAY RESULT.
- EROSION AND DUST CONTROL NOTES**
1. THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL ADEQUATE DUST CONTROLS MEASURES ARE IMPLEMENTED IN A TIMELY MANNER DURING ALL PHASES OF PROJECT DEVELOPMENT AND CONSTRUCTION.
    - 1a. ALL MATERIAL EXCAVATED, STOCKPILED, OR GRADED SHALL BE SUFFICIENTLY WATERED, TREATED, OR COVERED TO PREVENT DUST FROM LEAVING THE PROPERTY BOUNDARIES AND CAUSING A PUBLIC NUISANCE OR A VIOLATION OF AN AMBIENT AIR STANDARD. WATERING SHOULD OCCUR AT LEAST TWICE DAILY, WITH COMPLETE SITE COVERAGE.
    - 1b. ALL LAND CLEARING, GRADING, EARTH MOVING, OR EXCAVATION ACTIVITIES ON THE PROJECT SHALL BE SUSPENDED AS NECESSARY TO PREVENT EXCESSIVE WINDBLOWN DUST WHEN WINDS ARE EXPECTED TO EXCEED 20 MPH.
    - 1c. ALL INACTIVE PORTIONS OF THE DEVELOPMENT SITE SHALL BE COVERED, SEEDED, OR WATERED UNTIL A SUITABLE COVER IS ESTABLISHED. ALTERNATIVELY, THE OWNER, OR CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING CITY APPROVED NON-TOXIC SOIL STABILIZERS (ACCORDING TO MANUFACTURES SPECIFICATIONS) TO ALL INACTIVE CONSTRUCTION AREAS (PREVIOUSLY GRADED AREAS WHICH REMAIN INACTIVE FOR 96 HOURS) IN ACCORDANCE WITH THE LOCAL GRADING ORDINANCE.
    - 1d. ALL AREAS WITH VEHICLE TRAFFIC SHALL BE WATERED OR HAVE DUST PALLIATIVE APPLIED AS NECESSARY FOR REGULAR STABILIZATION OF DUST EMISSIONS.
    - 1e. ALL MATERIAL TRANSPORTED OFF-SITE SHALL BE EITHER SUFFICIENTLY WATERED, OR SECURELY COVERED TO PREVENT PUBLIC NUISANCE.
    - 1f. PAVED STREETS ADJACENT TO THE PROJECT SHALL BE SWEEPED OR WASHED AT THE END OF EACH DAY, OR AS REQUIRED TO REMOVE EXCESSIVE ACCUMULATIONS OF SILT AND/OR MUD WHICH MAY HAVE RESULTED FROM ACTIVITIES AT THE PROJECT SITE.
    - 1g. NO BURNING OF WASTE MATERIAL OR VEGETATION SHALL TAKE PLACE ON-SITE.
  2. IF PERMANENT EROSION CONTROL MEASURES ARE NOT INSTALLED BY OCTOBER 15 OF CONSTRUCTION SEASON, TEMPORARY MEASURES, SUCH AS STRAW BALE SEDIMENT BARRIERS, CHECK DAMS, SEDIMENT TRAPS SHALL BE INSTALLED IN ACCORDANCE WITH THE SWPPP. THESE MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION.

DESIGNED: JB	DATE
DRAWN: NUB	
PROJ. NO: 202306	
DATE: MAY, 2023	
DWG: SEE DAY STAMP	

NO.	REVISIONS

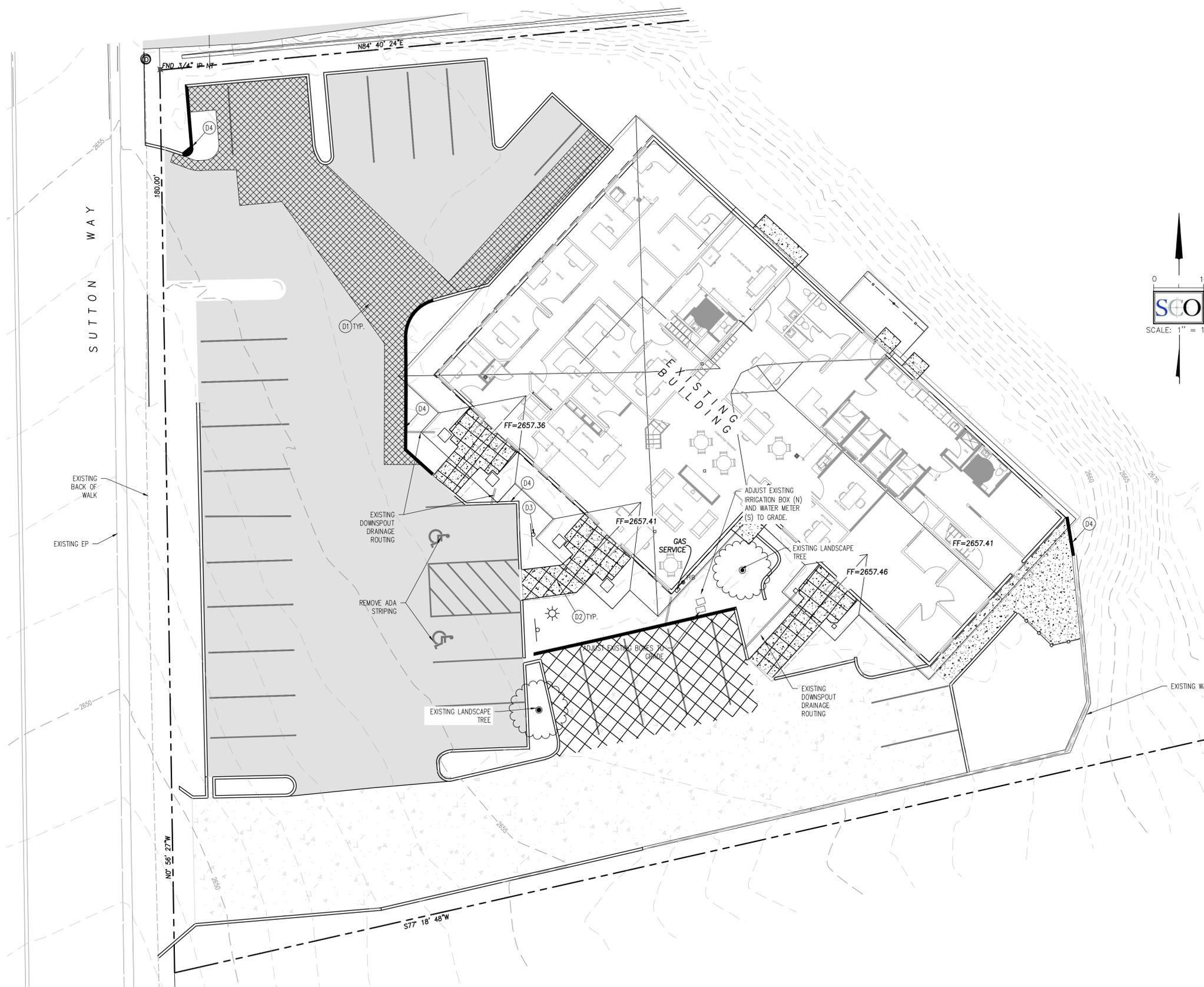
CIVIL IMPROVEMENT PLANS  
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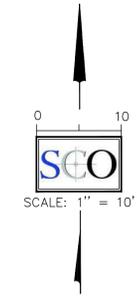
C2



- DEMOLITION NOTES:**
- D1 SAWCUT AND REMOVE ASPHALT SEE DETAIL 1 SHEET C5.
  - D2 REMOVE CONCRETE P.C.C. FLATWORK.
  - D3 REMOVED EXISTING ADA SIGNAGE.
  - D4 REMOVE EXISTING CURB

**LEGEND**

- CONCRETE TO BE REMOVED
- ASPHALT TO BE REMOVED
- EXISTING ASPHALT
- EXISTING CONCRETE FLATWORK
- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- EXISTING LANDSCAPE TREE
- EXISTING LIGHT POLE



DESIGNED: JB		DATE		NO. REVISIONS	
DRAWN: NJB					
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DWG: SEE DAY STAMP					

**SCO**  
PLANNING • ENGINEERING • SURVEYING

GRASS VALLEY  
(530) 272-5841  
TRUCKEE  
(530) 582-4043

511812023

**C3**



**LEGEND**

- EXISTING ASPHALT PAVEMENT
- PROPOSED ASPHALT PAVEMENT (GRIND)
- PROPOSED CONCRETE (DETAIL 8, 88A/SHT 5)
- TRUNCATED DOMES (DETAIL 8, 88A/SHT 5)
- LANDSCAPE DRAIN (SIZE AS NOTED)
- SEWER LATERAL (SIZE AS NOTED)
- EXISTING DOWNSPOUT DRAIN
- PROPERTY BOUNDARY
- EXISTING LANDSCAPE TREE
- EXISTING LIGHT POLE

**STORM DRAIN STRUCTURE TABLE**

NAME:	PIPES IN:	PIPES OUT:	DETAILS
DI-1		6" INV OUT =2655.50	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-2	6" INV IN =2655.37	6" INV OUT =2655.27	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-3	6" INV IN =2655.23 4" INV IN =2655.23	6" INV OUT =2655.13	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-4	6" INV IN =2654.62	6" INV OUT =2654.52	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-5	6" INV IN =2654.04 4" INV IN =2654.04	8" INV OUT =2653.94	INSTALL 18" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-7	8" INV IN =2652.60		INSTALL 24" SQUARE DRAINAGE INLET/BUBBLER W/ TRAFFIC/BICYCLE PROOF GRATE SEE DETAIL 2 SHEET 6
DI-9		4" INV OUT =2655.44	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-10	4" INV IN =2655.39	4" INV OUT =2655.29	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-11	4" INV IN =2655.07	4" INV OUT =2654.97	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-12	4" INV IN =2654.88	4" INV OUT =2654.78	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-13	4" INV IN =2654.70	4" INV OUT =2654.60	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-14	4" INV IN =2654.54	4" INV OUT =2654.44	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-15	4" INV IN =2654.41 4" INV IN =2654.41	4" INV OUT =2654.31	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-16	4" INV IN =2654.22	4" INV OUT =2654.12	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-17		4" INV OUT =2654.46	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-18	6" INV IN =2654.99	6" INV OUT =2654.89	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6
DI-19		4" INV OUT =2655.27	INSTALL 6" DIA LANDSCAPE DRAIN WITH ATRIUM GRATE SEE DETAIL 1 SHEET 6

**DRAINAGE NOTES:**

- LANDSCAPE DRAIN LOCATIONS AND INVERTS ARE APPROXIMATE. CONTRACTOR TO FIELD DETERMINE LANDSCAPE DRAINAGE ROUTING TO BEST AVOID EXISTING LANDSCAPING AND UTILITIES.
- LANDSCAPE DRAIN PIPING SHALL HAVE MINIMUM 0.5% SLOPE AND 6" OF COVER WHEN IN LANDSCAPE AREAS.
- LANDSCAPE DRAIN PIPING SHALL HAVE MINIMUM 1.5' OF COVER WHEN INSTALLED UNDER PAVEMENT (1' WITH SLURRY CAP, SEE DETAIL 3 SHEET C6).
- CONNECT EXISTING ROOF DOWNSPOUTS INTO LANDSCAPE DRAIN SYSTEM.
- LANDSCAPE DRAINS SHALL BE PLACED SUCH THAT SURROUNDING LANDSCAPING DRAINS INTO SYSTEM.
- LANDSCAPE DRAINAGE SHALL HAVE MIN. 2" HORIZONTAL AND 1" VERTICAL CLEARANCE OVER SEWER LATERAL.

**SEWER NOTES:**

- INSTALL CLEANOUT TO GRADE, TWO WAY CLEANOUT TO GRADE WITHIN 5' OF BUILDING.
- INSTALL BACKFLOW ASSEMBLY SEE DETAIL 5 SHEET C5
- INSTALL 4" SDR35 PVC SEWER PIPING 2% MIN SLOPE, 24" MIN COVER.
- CONNECT TO EXISTING SEWER. CONTRACTOR TO POTHOLE AND VERIFY DEPTH AND LOCATION
- SEE PLANS BY OTHERS FOR BUILDING CONNECTION SPECIFICS

**GRADING NOTES:**

- NEW ASPHALT PAVEMENT PER DETAIL 1. REPLACE ASPHALT TO MINIMUM THICKNESS (DETAIL 7a/SHT 5).
- INSTALL CONCRETE FLATWORK (DETAIL 9/SHT C5).
- CRACK CONTROL JOINTS TO BE PROVIDED EVERY 8' MAX. (TYPICAL)
- INSTALL TRUNCATED DOMES (DETAIL 8, 88A/SHT C5).
- STRIPE ADA PARKING AREA PER DETAIL 6/SHT C5.
- CONSTRUCT CONCRETE CURB SHOWN PER DETAIL 4, SHEET C5, MATCH EXISTING BATTER WIDTH.
- INSTALL ADA PARKING SIGNAGE/VERIFY THAT EXISTING SIGNAGE MATCHES DETAIL 2 AND 3, SHEET C5.
- EXISTING LANDSCAPE AREA
- INSTALL CURB RAMP PER DETAIL 88A SHT C5.
- INSTALL TRASH ENCLOSURE CONCRETE SECTION PER DETAIL 10 SHT C5
- INSTALL 4" WHITE STRIPING
- INSTALL REINFORCED CONCRETE FLATWORK (DETAIL 7b/SHT C5), OR MATCH EXISTING SECTION WHICHEVER IS GREATER.
- INSTALL KEYSTONE BLOCK WALL TO GRADES SHOWN 4' MAX HEIGHT SEE DETAIL 4 SHT C6

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DATE: MAY, 2023
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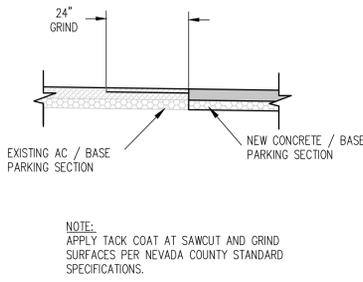
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 SUTTON WAY WELLNESS CENTER  
 GRADING AND DRAINAGE PLAN  
 CALIFORNIA



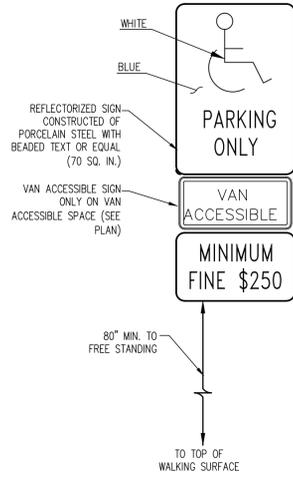
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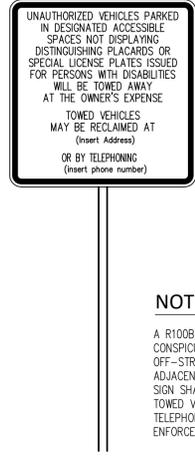
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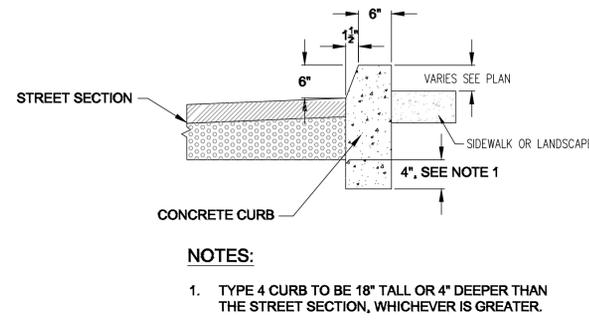
**1 JOIN EXISTING ASPHALT**  
NTS



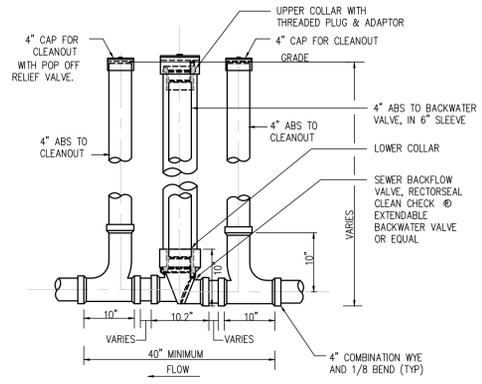
**2 ADA PARKING SIGN**  
NTS



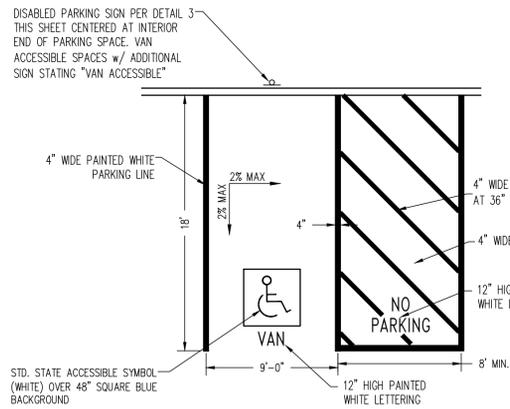
**3 UNAUTHORIZED VEHICLE SIGN**  
NTS



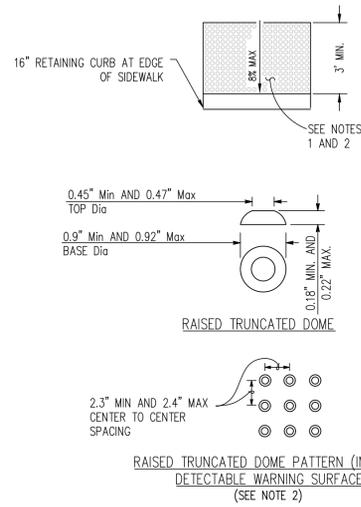
**4 BARRIER CURB DETAIL**  
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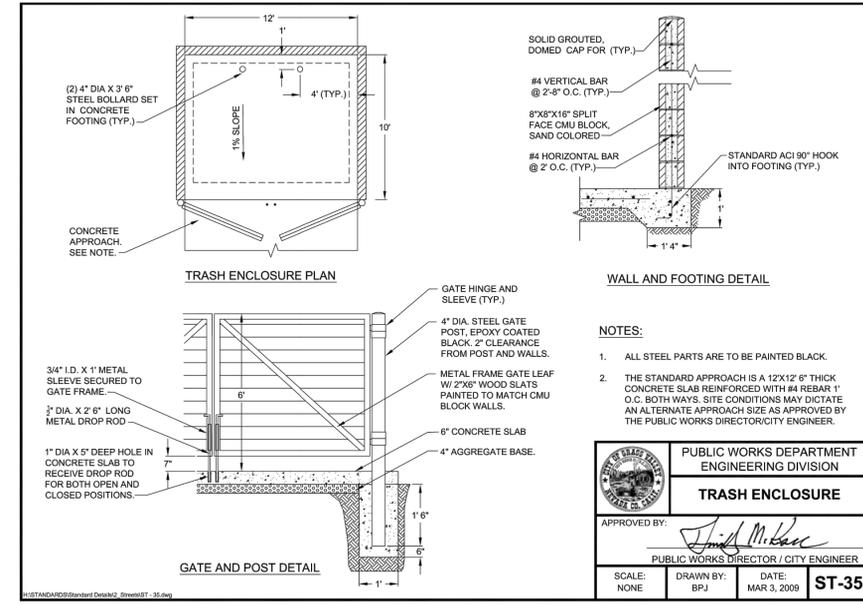
**5 SEWER BACKFLOW VALVE AND CLEANOUT DETAIL**  
NTS



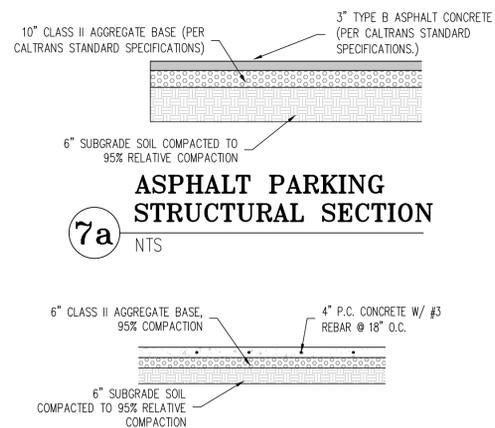
**6 ADA PARKING SPACE**  
NTS



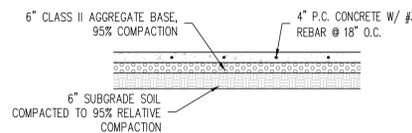
**8 TRUNCATED DOME DETAIL**  
NTS



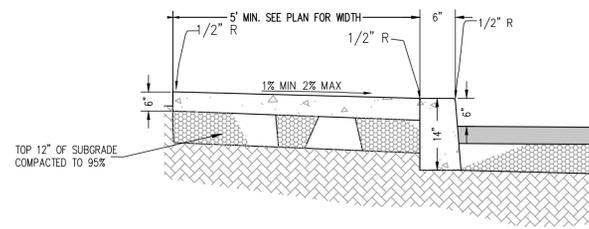
**10 TRASH ENCLOSURE SECTION**  
NTS



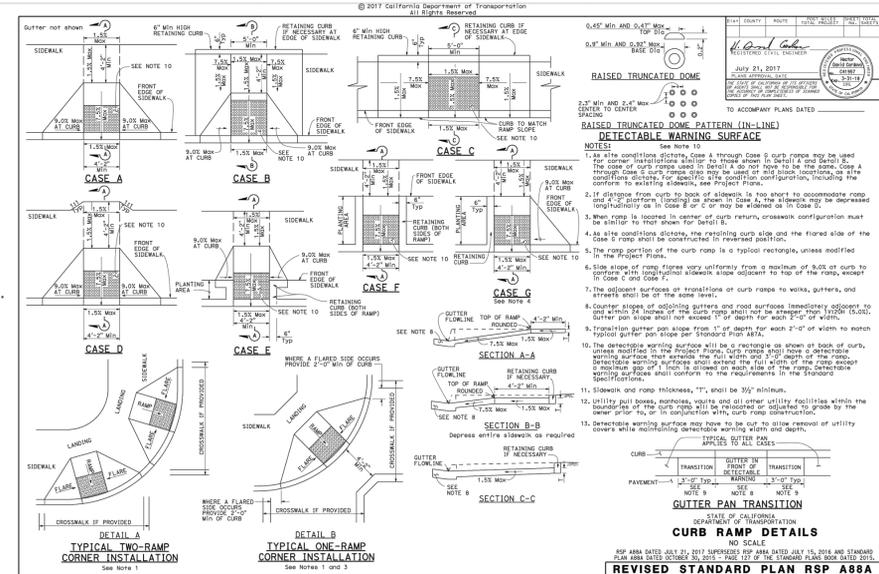
**7a**  
NTS



**7b TYPICAL CONCRETE STRUCTURAL SECTION**  
NTS



**9 SIDEWALK DETAIL**  
NTS



**2015 REISED STANDARD PLAN RSP A88A**

DESIGNED: JB
DRAWN: NUB
PROJ. NO: 202306
DATE: MAY, 2023
DWG: SEE DAY STAMP

NO. REVISIONS	DATE

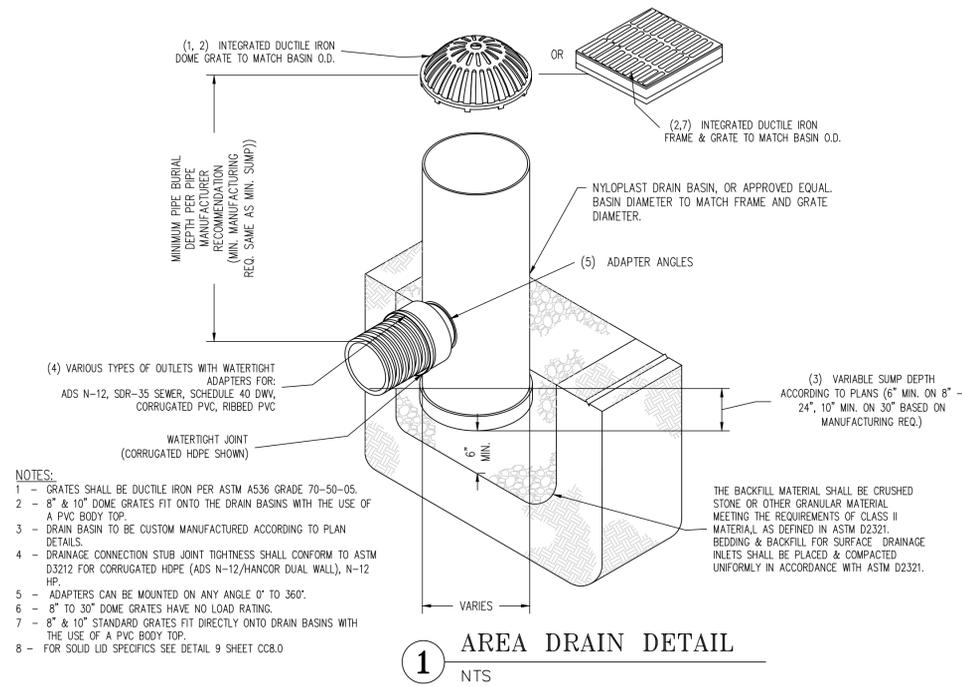
CIVIL IMPROVEMENT PLANS  
**SUTTON WAY WELLNESS CENTER**  
 DETAILS  
 CALIFORNIA  
 GRASS VALLEY



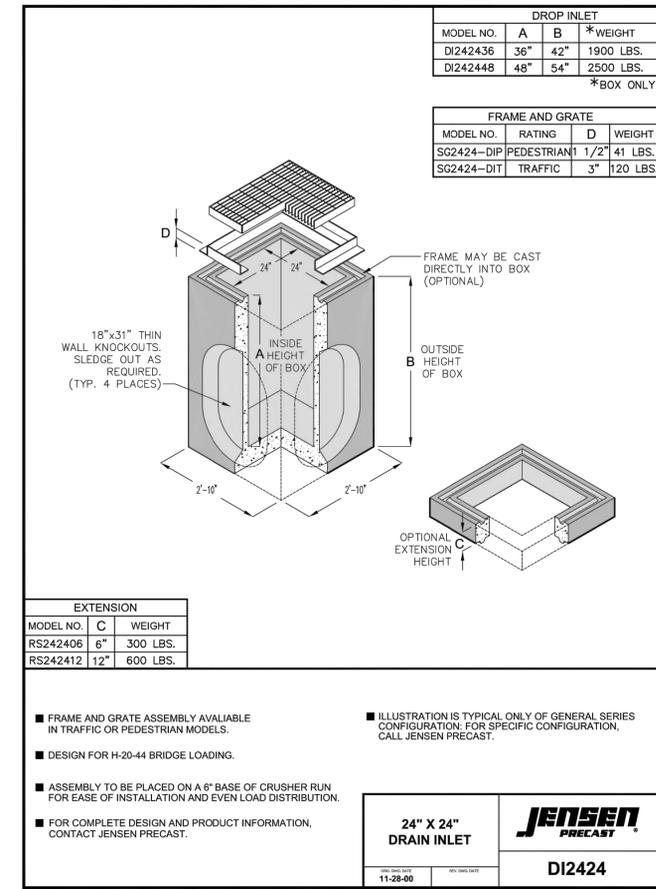
GRASS VALLEY  
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TRUCKEE  
(530) 582-4048



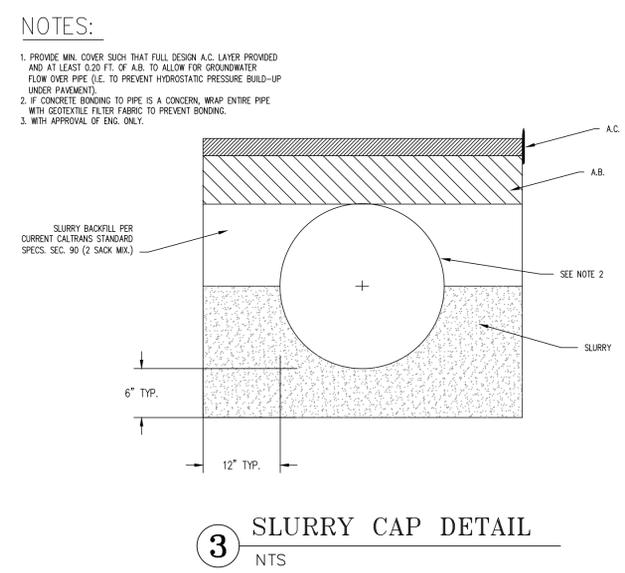
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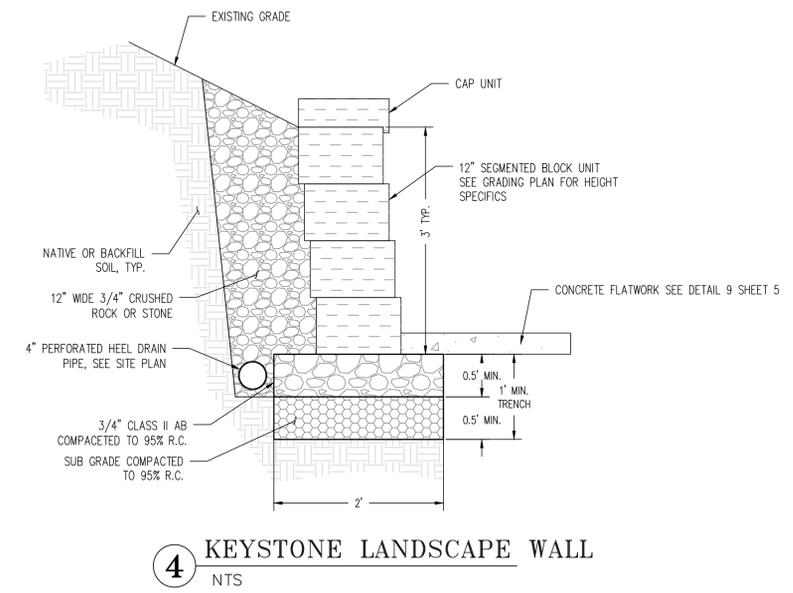
- NOTES:**
- GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
  - 8" & 10" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP.
  - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
  - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP.
  - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°.
  - 8" TO 30" DOME GRATES HAVE NO LOAD RATING.
  - 8" & 10" STANDARD GRATES FIT DIRECTLY ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP.
  - FOR SOLID LID SPECIFICS SEE DETAIL 9 SHEET C08.0



- FRAME AND GRATE ASSEMBLY AVAILABLE IN TRAFFIC OR PEDESTRIAN MODELS.
  - DESIGN FOR H-20-44 BRIDGE LOADING.
  - ASSEMBLY TO BE PLACED ON A 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
  - FOR COMPLETE DESIGN AND PRODUCT INFORMATION, CONTACT JENSEN PRECAST.
- ILLUSTRATION IS TYPICAL ONLY OF GENERAL SERIES CONFIGURATION. FOR SPECIFIC CONFIGURATION, CALL JENSEN PRECAST.
- JENSEN PRECAST**  
DI2424
- 11-28-00



- NOTES:**
- PROVIDE MIN. COVER SUCH THAT FULL DESIGN A.C. LAYER PROVIDED AND AT LEAST 0.20 FT. OF A.B. TO ALLOW FOR GROUNDWATER FLOW OVER PIPE (I.E. TO PREVENT HYDROSTATIC PRESSURE BUILD-UP UNDER PAVEMENT).
  - IF CONCRETE BONDING TO PIPE IS A CONCERN, WRAP ENTIRE PIPE WITH GEOTEXTILE FILTER FABRIC TO PREVENT BONDING.
  - WITH APPROVAL OF ENG. ONLY.



DESIGNED: JB  
DRAWN: NJB  
PROJ. NO: 202306  
DATE: MAY, 2023  
DWG: SEE DAY STAMP

NO. REVISIONS  
DATE

CIVIL IMPROVEMENT PLANS  
SUTTON WAY WELLNESS CENTER  
DRAINAGE / WALL DETAILS  
GRASS VALLEY, CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER  
STATE OF CALIFORNIA  
511512023

C6













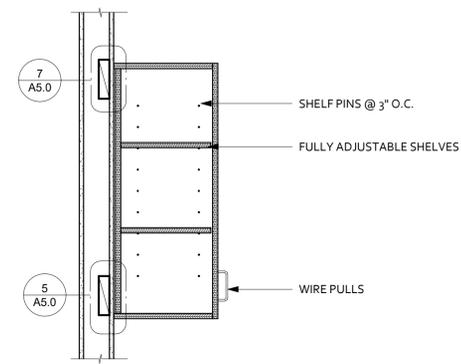




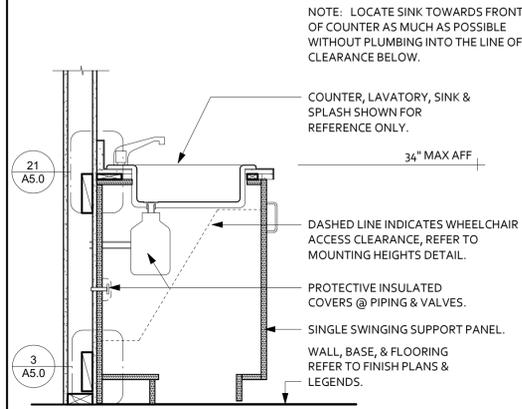




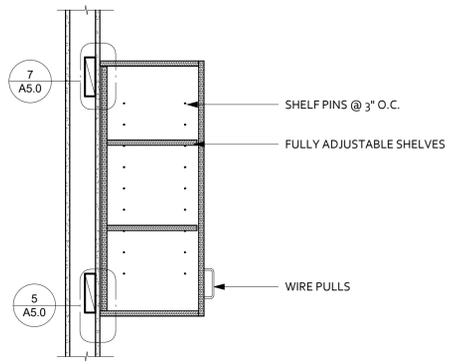




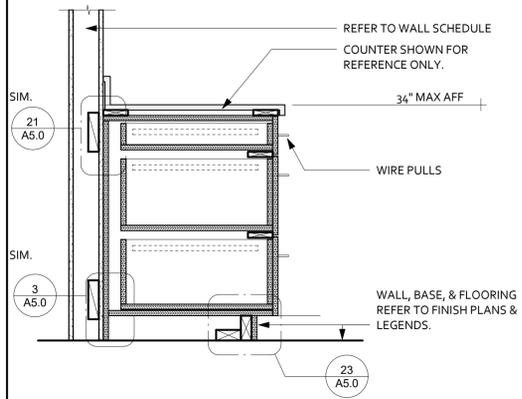
9 154 BASE - SINK 2 DOOR  
1" = 1'-0"



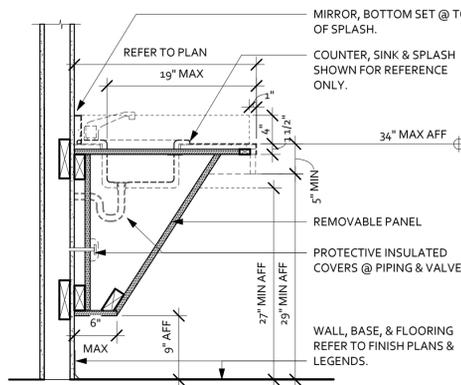
9 154 BASE - SINK 2 DOOR  
1" = 1'-0"



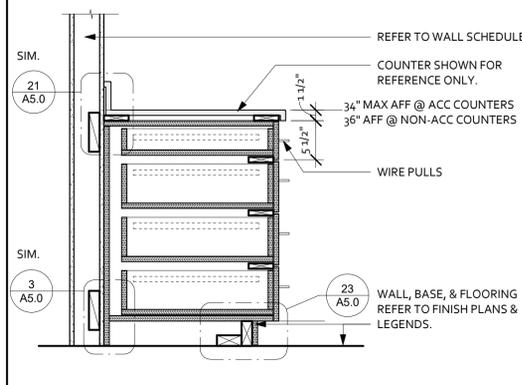
14 302 UPPER - 2 DOORS  
1" = 1'-0"



10 230 BASE - 3 DRAWER  
1" = 1'-0"



11 254 BASE - 4 DRAWER  
1" = 1'-0"



11 254 BASE - 4 DRAWER  
1" = 1'-0"

Schedule - Equipment				
Mark	Type	Manufacturer	Model	Schedule Note:
EQ1	Towel_Dispenser-Automatic-Bohrick-ClassicSeries-3974-150	Owner selected, Contractor Installed	TBD	
EQ2	Waste-Receiptable_Bohrick_B-277	Owner selected, Contractor Installed	TBD	
EQ3	Toilet Tissue Dispenser	Bohrick Washroom Equipment, Inc.	B-2740	
EQ4	Mirror Tilted	Owner selected, Contractor Installed	TBD	
EQ5	Grab Bar	Owner selected, Contractor Installed	TBD	
EQ6	Grab Bar	Owner selected, Contractor Installed	TBD	
EQ7	Laundry_-_Compact_Stacked_Washer_Dryer_-_Whirlpool_21328	Kenmore	Model # 41162	
EQ8	Washer and Dryer Set - Front Load	Owner selected, Contractor Installed	TBD	
EQ9	Seat Cover Dispenser	Bohrick Washroom Equipment, Inc.	B-221	
EQ12	Metal_See_Through_Lockers-Salsbury_Industries-5_52000_Series-3_Wide_Units	Salsbury Industries	S-52365	2
EQ13	Soap-Dispenser_Bohrick_B-2012	Bohrick Washroom Equipment, Inc.	B-2012	
EQ14	Accessory_Shelf-Rag-Hook-Broom-Holder_Bohrick_B-224	Bohrick Washroom Equipment, Inc.	B-224	

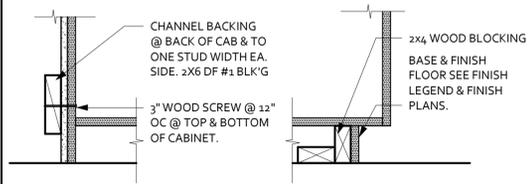
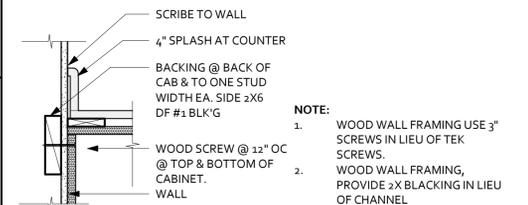
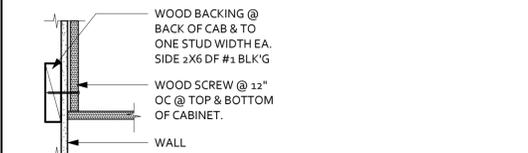
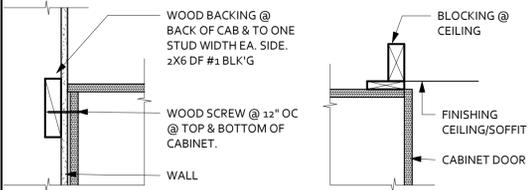
### EQUIPMENT NOTES

- (OPCI) OWNER PROVIDED, CONTRACTOR INSTALLED.

### SCHEDULE NOTES:

- PROVIDE GARBAGE DISPOSAL W/ A PRESSURE SWITCH. FINISH OF SWITCH TO MATCH CABINET HARDWARE.
- QUANTITY 11 UNITS.

Schedule - Casework							
Mark	Description	Width	Height	Depth	CDS	Finish	Schedule Note:
1	Base Cabinet w/o Drawers	3'-0"	2'-8"	2'-0"	154	L1	
2	Wall Hung Cabinet	2'-6"	3'-0"	1'-2"	302	L1	
3	Wall Hung Cabinet	2'-6"	3'-0"	1'-2"	302	L1	
4	Base Cabinet w/ Drawers	1'-10"	2'-8"	2'-0"	254	L1	
5	Base Cabinet w/ Drawers	2'-6"	2'-8"	2'-0"	212		
6	Base Cabinet w/ Drawers	2'-6"	2'-8"	2'-0"	212		
7	Base Cabinet w/ Drawers	2'-6"	2'-8"	2'-0"	254	L1	
8	Base Cabinet w/ Drawers	3'-0"	2'-8"	2'-0"	154	L1	
9	Wall Hung Cabinet	3'-0"	3'-0"	1'-2"	302	L1	
10	Wall Hung Cabinet	3'-0"	3'-0"	1'-2"	302	L1	
11	Base Cabinet w/ Drawers	3'-0"	2'-8"	2'-0"	212		
12	Base Cabinet w/o Drawers	3'-0"	2'-8"	2'-0"	142		
16	Base Cabinet w/ Drawers	1'-6"	2'-8"	2'-0"	254	L1	
17	Base Cabinet w/ Drawers	3'-0"	2'-8"	2'-0"	212		
18	Base Cabinet w/ Drawers	1'-6"	2'-8"	2'-0"	254	L1	
19	Tall Storage Cabinet	4'-0"	7'-0"	2'-0"	439	NO DOOR S-mail slot	
20	Tall Storage Cabinet	4'-0"	7'-0"	2'-0"	444	packag e slot	



8 CABINET ANCHORAGE  
1 1/2" = 1'-0"

### B. CASEWORK

- REFER TO ARCHITECTURAL WOODWORK STANDARDS CASEWORK DESIGN SERIES (CDS) FOR ADDITIONAL INFORMATION.
- FIELD VERIFY ROUGH OPENING DIMENSION PRIOR TO FABRICATING CASEWORK. REVIEW ANY REQUIRED ADJUSTMENTS TO HEIGHT, DEPTH OR WIDTH OF CASEWORK UNITS WITH ARCHITECT.
- REFER TO CASEWORK DETAILS SHEET FOR FURTHER INFORMATION.

### SCHEDULE NOTES:

- INSTALL GARBAGE DISPOSAL PRESSURE SWITCH WITHIN ACCESSIBLE REACH RANGE. MOUNT DISPOSAL AT REAR OF SINK TO ALLOW FOR REQUIRED NEW CLEARANCE. REFER TO DETAIL 9/A5.0.









WALLIS DESIGN STUDIO ARCHITECTS, INC.

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Grass Valley, CA 95945  
(530) 264-7010  
WallisDesignStudio.com

NC - COMMONS RESOURCE CENTER

COUNTY OF NEVADA

1105 SUTTON WAY  
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CONSTRUCTION DOCUMENTS

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No.	Description	Date

Proj. No.: 2022011

Date: 05/30/2023

Scale: As indicated

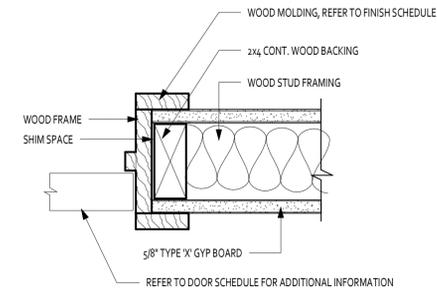
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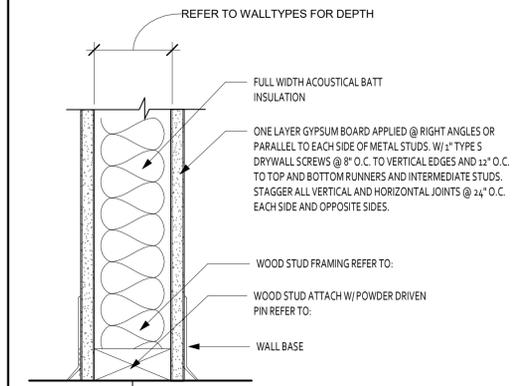
INTERIOR DETAILS

Drawing Number:

A7.0

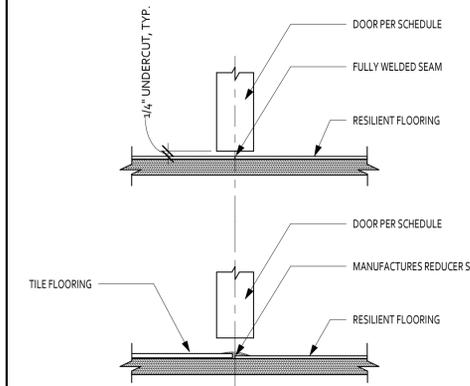


5 DOOR - JAMB @ GYP BOARD  
3" = 1'-0"

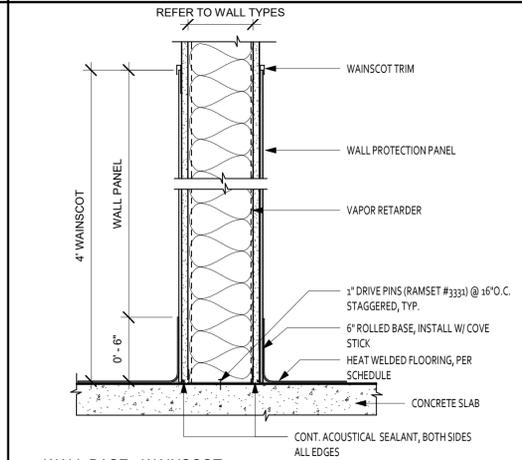


NOTE:  
1. ACOUSTIC CAULK ALL PENETRATIONS AT WALLS

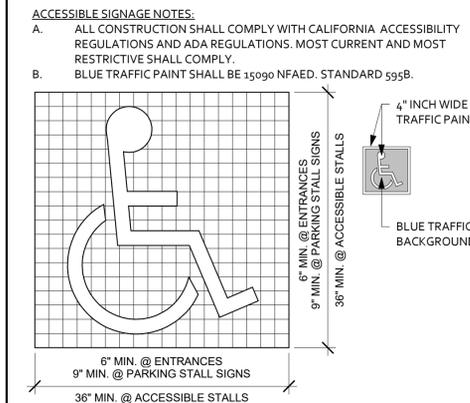
1 WALL BASE - TYPICAL  
3" = 1'-0"



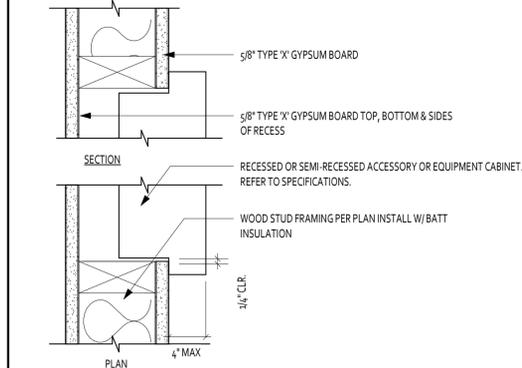
6 DOOR - INT THRESHOLD  
3" = 1'-0"



2 WALL BASE - WAINSCOT  
1 1/2" = 1'-0"



7 SYMBOL - ISA1  
1" = 1'-0"



NON RATED CONDITION

3 FES - SEMI RECESSED CABINET  
3" = 1'-0"



4 DOOR - HEAD @ GYP BOARD  
3" = 1'-0"







### HVAC LEGEND

	12"x6" SA 40 CFM	SUPPLY DIFFUSER SIZE AND FLOW RATE LISTED. ARROWS INDICATE THROW PATTERN.
	24"x12" RA 40 CFM	RETURN GRILLE, SIZE AND FLOW RATE LISTED.
	EA 4"x12" 40 CFM	CEILING EXHAUST GRILLE, SIZE AND FLOW RATE LISTED.
		RECTANGULAR SUPPLY AIR CROSS SECTION
		RECTANGULAR RETURN AIR CROSS SECTION
		RECTANGULAR EXHAUST AIR CROSS SECTION
		THERMOSTAT
		BALANCING DAMPER
		RIGID DUCT
		FLEXIBLE DUCT
		EQUIPMENT TAG
AC		ABOVE CEILING
F		FURNACE
CU		CONDENSING UNIT
HP		HEAT PUMP
FC		FAN COIL UNIT
CFM		CUBIC FEET PER MINUTE
EF		EXHAUST FAN
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR

### HVAC NOTES

**SCOPE OF WORK**

- REUSE EXISTING HVAC EQUIPMENT AND RECONFIGURE DUCTING AS INDICATED ON PLANS.
- INSTALL NEW DUCTLESS MINI-SPLIT FOR NEW LAUNDRY AREA.
- INSTALL NEW EXHAUST FANS AS INDICATED.
- ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS DISCOVERED DURING DEMOLITION SHALL BE BROUGHT TO THE ARCHITECT AND ENGINEER'S ATTENTION TO REVISE PLANS AS NECESSARY.

2. FURNISH AND INSTALL ALL MATERIALS AND PERFORM ALL LABOR NECESSARY FOR A COMPLETE INSTALLATION OF HVAC WORK INDICATED ON THE DRAWINGS. ALSO, PROVIDE ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED, WHICH CAN REASONABLY BE INFERRED OR TAKEN AS BELONGING TO THE WORK AND NECESSARY TO PROVIDE THE COMPLETE SYSTEM.

3. IT IS THE INSTALLING CONTRACTOR'S RESPONSIBILITY TO ASSURE ALL MECHANICAL SYSTEMS FUNCTION PROPERLY, SAFELY, AND MEET ALL LOCAL, STATE AND REGIONAL CODES.

4. ALL WORK SHALL CONFORM TO THE ACCEPTED STANDARDS OF THE TRADE. THE ENGINEER IS TO BE NOTIFIED IF ANY SUBSTITUTIONS ARE SEEN TO BE NECESSARY.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL OF EQUIPMENT INDICATED TO BE REMOVED, UNLESS OTHERWISE INSTRUCTED BY THE OWNER. EXISTING REFRIGERANT SHALL BE RECLAIMED AND PROPERLY DISPOSED OF IN ACCORDANCE WITH THE 1990 CLEAN AIR ACT AMENDMENT.

6. THE CONTRACTOR SHALL PARTICIPATE IN BID WALK-THRU AND SHALL FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS. BIDS SHALL BE ADJUSTED TO ACCOMMODATE ANY EXISTING CONDITIONS WHICH ARE NOT SHOWN ON PLANS AND ARE VISIBLE DURING WALK-THRU. ANY AND ALL DEVIATIONS FROM PLANS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION.

**7. CONTROLS - GENERAL**

A. THE VENTILATION SYSTEM SHALL BE WIRED TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS. DURING UNOCCUPIED HOURS THE UNIT SHALL CYCLE ON AND OFF WITH A DEMAND FOR HEATING AND COOLING.

B. ROOM THERMOSTATS SHALL BE PROGRAMMABLE WITH 5-1-1 DAY PROGRAMMING AND 24-HOUR HEATING AND COOLING SETBACK CAPABILITY.

C. THERMOSTATS SHALL BE INSTALLED WHERE INDICATED ON PLANS, 48 INCHES ABOVE FINISHED FLOOR LEVEL.

E. INSTALLING SUB-CONTRACTOR SHALL PROVIDE ENGINEER WITH COMPLETE CONTROL SCHEMATIC INCLUDING SUBMITTALS FOR EACH COMPONENT.

**8. ZONE CONTROL SYSTEM FOR (E) RTU-3**

9. AIR DIFFUSERS AND RETURN/EXHAUST GRILLES SHALL BE SHOEMAKER OR EQUAL. PROPOSED MODEL NUMBERS FOR DIFFERENT APPLICATIONS ARE AS FOLLOWS:

APPLICATION	MODEL #	REMARKS
CLG T-BAR SUPPLY	100 MA	MODULAR CORE WITH T-BAR PANEL THROW PATTERN INDICATED
CLG GYPSUM SUPPLY	MA (W/ OBD)	MODULAR CORE THROW PATTERN INDICATED
SPIRAL DUCT SIDEWALL SUPPLY	R834	DOUBLE DEFLECTION RADIUS SPIRAL PIPE DIFFUSER PROVIDE HALF LENGTH SCOOP EXTRACTOR
SPIRAL DUCT CEILING SUPPLY	RD	ADJUSTABLE ROUND CEILING DIFFUSER
SPIRAL DUCT RETURN	R852	SINGLE DEFLECTION RADIUS SPIRAL PIPE GRILLE
CLG GYPSUM RETURN	915	HORIZONTAL BAR FIXED BLADE
CLG GYPSUM EXHAUST DOOR LOUVER	600 4000	EGGCRATE GRILLE VISION PROOF ALUMINUM TRANSFER GRILLE
EXTERIOR LOUVER	4525	STORM RESISTANT, DRAINABLE BLADE EXTERIOR LOUVER WITH BIRDSCREEN

10. FOR THE EXACT LOCATION OF DIFFUSERS AND GRILLES REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.

11. PROVIDE CAM-FARR, 2 INCH DEEP, MERV-13 FILTERS IN RETURN AIR PLENUM OF AIR HANDLERS. INSTALL DOWNSTREAM OF RETURN AIR AND FRESH AIR INTAKE.

12. FLUES AND COMBUSTION INLETS FOR FURNACES SHALL TERMINATE A MINIMUM OF THREE (3) FEET ABOVE ANY FRESH AIR INLET WITHIN TEN (10) FEET.

13. OUTSIDE AIR INTAKE SHALL BE A MINIMUM OF 10 FEET AWAY OR 3 FEET BELOW EXHAUST AIR DISCHARGE OR PLUMBING VENTS. COVER AIR INTAKE WITH 1" MESH WIRE.

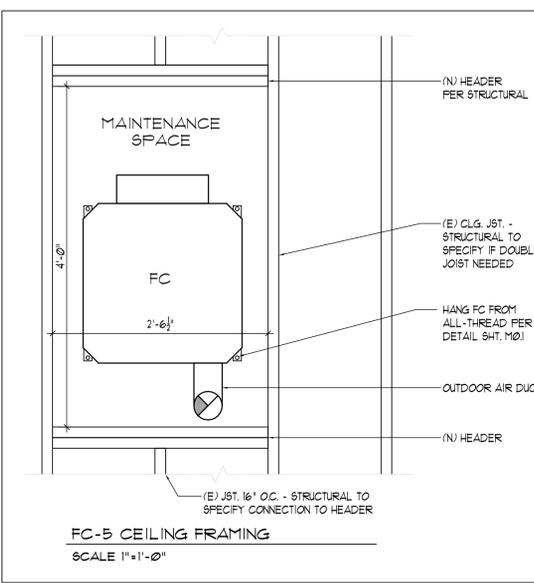
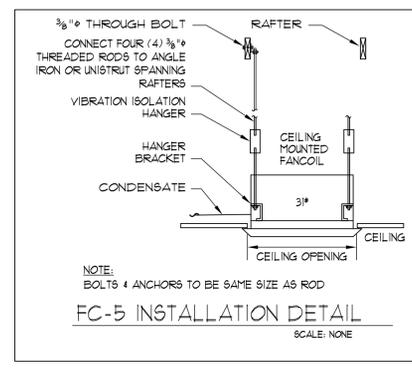
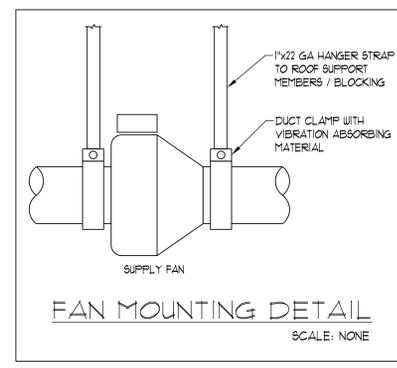
14. SLOPE ALL CONDENSATE LINES AT 1/4" PER FOOT. PRIMARY CONDENSATE SHALL TERMINATE INDIRECTLY TO APPROVED PLUMBING FIXTURE. IN LIEU OF SECONDARY DRAIN FLOAT SWITCH FOR FC-5 WILL INTERRUPT POWER TO THE FANCOIL UNIT WHEN MOISTURE IS DETECTED IN THE DRAIN PAN. PIPING SHALL BE 3/4" SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.

15. DUCT MATERIAL AND SEALING:  
A. DUCTING IN CONCEALED LOCATION SHALL BE GALVANIZED SHEET METAL. PRE-INSULATED FLEX DUCT MAY BE USED AS LEADERS (5' MAX.) TO AND FROM AIR TERMINALS, PER CMC §03.4.1. DUCT SHALL BE MANUFACTURED IN ACCORDANCE WITH CHAPT. 6 OF THE 2019 CMC AND SMACNA GUIDELINES.  
B. PRE-INSULATED FLEX DUCT SHALL HAVE AN R-VALUE = 8.0.  
C. DUCTING EXPOSED TO THE INSIDE SHALL BE SPIRAL DUCT AS MANUFACTURED BY SPIRAL MANUFACTURING CO. INC. INSTALL PAINT GRADE DUCTING AND PAINT NEW DUCTING TO MATCH EXISTING DUCTING.  
D. FACTORY-FABRICATED DUCT SYSTEMS SHALL COMPLY WITH UL181.  
E. METAL TO METAL JOINTS SHALL BE SEALED WITH MASTIC SEALANT TO PROVIDE AIRTIGHT PROTECTION PRIOR TO INSULATION. APPLY SEALANT ACCORDING TO MANUFACTURER'S RECOMMENDATION.  
F. INNER LINING OF FLEX DUCTING SHALL BE SECURELY FASTENED WITH A FANDUIT STRAP. THE EXTERIOR LINING (INSULATION) SHALL BE SECURELY TAPED TO THE SHEET METAL FITTING.  
G. WHERE TURNS AND/OR TRANSITIONS EXCEED 45 DEGREES USE SHEET METAL FITTINGS AND ELBOWS. PROVIDE SHEET METAL ELBOWS FOR ALL SPICES. HALL TAPES AND MASTIC SEALANTS SHALL COMPLY WITH UL181, UL 181A, OR UL181B.  
16. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE WHEREVER POSSIBLE. DIVERGENCE UPSTREAM OF EQUIPMENT SHALL NOT EXCEED 20 DEGREES; CONVERGENCE DOWNSTREAM SHALL NOT EXCEED 30 DEGREES.  
17. SUPPORTS AND HANGERS FOR DUCTING SHALL BE IN ACCORDANCE WITH THE 2019 UNIFORM MECHANICAL CODE AND IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. DUCTS SHALL BE SUPPORTED AT EACH CHANGE OF DIRECTION, SUPPORTS AND 8' INTERVALS (MIN.).  
18. WRAP ALL UNLINED CONCEALED SUPPLY AND RETURN DUCTS WITH O.C. FIBERGLASS DUCT WRAP OR JM MICROLITE, 2" THICK AND 1" PER CUBIC FOOT DENSITY. WRAP INSULATION ENTIRELY AROUND DUCT AND WIRE SECURELY IN PLACE WITH #6 WIRE 12" O.C. ON EACH SIDE OF STANDING SEAM AND OVER INSULATION JOINT. LAP ALL INSULATION JOINTS 3" MIN. INSULATE DUCTS TIGHT AGAINST OTHER WORK BEFORE HANGING IN PLACE.  
19. AIR DISTRIBUTION SYSTEM SHALL BE BALANCED WITH AN APPROVED AND CALIBRATED AIR FLOW MEASURING DEVICE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). PROVIDE INDICATED AIR FLOW RATES (WITHIN ±5%). PROVIDE OWNER WITH COMPLETE AIR BALANCE REPORT.  
20. NO DUCTED OR NON-DUCTED AIR MOVING DEVICE SHALL TERMINATE IN ATTIC.  
21. INSULATE CONDENSATE LINE WITH ARMSTRONG® 1/2" WALL THICKNESS "DG TUBO-BLIT" COND #029 (BTU-IN/HR-°F) AT 15°F IN ACCORDANCE WITH ASTM C 117 OR C 518 WITH THIRD PARTY TESTING SUPERVISION. WHERE PIPING IS EXPOSED TO WEATHER PROVIDE PVC JACKETING AROUND INSULATION.

**MELAS ENERGY ENGINEERING**

ENERGY & MECHANICAL CONSULTANTS

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### HVAC EQUIPMENT SCHEDULE

SYMBOL	AREA SERVED	COOLING			HEATING		FAN			ELECT.				MFGR & MODEL NO.	WEIGHT (LBS)	EFFICIENCY	REMARKS
		TOTAL (BTU/HR)	SENSIBLE (BTU/HR)	COIL EDB/EWB (°F)	HIGH INPUT/OUTPUT (BTU/HR)	DB (°F)	CFM (1)	S.P. (WC)	O.A. (CFM)(1)	VOLTAGE	MCA	COMP. LRA	FUSE/MOCP				
F-1 (E)	WEST OFFICES	---	---	---	120,000/113,000	25	1,900	0.6	370	115 V. 1 PHASE	19.2	---	20	BRYANT #355MAV060120	156	AFUE = 92	EXISTING FURNACE MOUNTED IN UPFLOW POSITION
CU-1 (E)	WEST OFFICES	51,350	47,800	80/63	---	---	---	---	---	208/230 V. 1 PHASE	37.5	165	60	BRYANT #105ANA060	294	SEER = 14.0	EXISTING GROUND MOUNT CONDENSING UNIT
DX-1 (E)	WEST OFFICES	PERFORMANCE FOR CU-1 ABOVE IS BASED ON THIS COIL										BRYANT # CKS8XA060	81	---	EXISTING DIRECT EXPANSION COIL		
F-2 (E)	RECEPTION LOUNGE	---	---	---	120,000/113,000	25	1,900	0.6	300	115 V. 1 PHASE	19.2	---	20	BRYANT #355MAV060120	156	AFUE = 92	EXISTING FURNACE MOUNTED IN HORIZONTAL POSITION
CU-2 (E)	RECEPTION LOUNGE	51,350	47,800	80/63	---	---	---	---	---	208/230 V. 1 PHASE	37.5	165	60	CARRIER #38BRC060	294	SEER = 10.0	EXISTING GROUND MOUNT CONDENSING UNIT
DX-2 (E)	RECEPTION LOUNGE	PERFORMANCE FOR CU-2 ABOVE IS BASED ON THIS COIL										BRYANT # CKS8XA060	81	---	EXISTING DIRECT EXPANSION COIL		
F-3 (E)	BREAKROOM COMPUTER TRAINING	---	---	---	40,000/36,800	25	1,200	0.6	275	115 V. 1 PHASE	13	---	15	BRYANT #355MAV042040	120	AFUE = 92	EXISTING FURNACE MOUNTED IN UPFLOW POSITION
CU-3 (E)	BREAKROOM COMPUTER TRAINING	32,600	32,300	80/62	---	---	---	---	---	208/230 V. 1 PHASE	25.5	137	30	BRYANT #563CN036	225	SEER = 12.0	EXISTING GROUND MOUNT CONDENSING UNIT
DX-3 (E)	BREAKROOM COMPUTER TRAINING	PERFORMANCE FOR CU-3 ABOVE IS BASED ON THIS COIL										BRYANT # CKS8XA048	81	---	EXISTING DIRECT EXPANSION COIL		
F-4 (E)	MEETING ROOMS PHASE II	---	---	---	80,000/73,600	25	1,400	0.6	TBD (2)	115 V. 1 PHASE	13	---	15	BRYANT #355MAV042040	120	AFUE = 92	EXISTING FURNACE MOUNTED IN HORIZONTAL POSITION
CU-4 (E)	MEETING ROOMS PHASE II	32,600	32,300	80/62	---	---	---	---	---	208/230 V. 1 PHASE	26.3	115	40	BRYANT #563CN048	225	SEER = 12.0	EXISTING GROUND MOUNT CONDENSING UNIT
DX-4 (E)	MEETING ROOMS PHASE II	PERFORMANCE FOR CU-4 ABOVE IS BASED ON THIS COIL										BRYANT # CKS8XA048	81	---	EXISTING DIRECT EXPANSION COIL		
FC-5 (N)	LAUNDRY	18,000	12,500	80/67	11,000	17	560	---	160 (3)	(4)	0.5	(4)	(4)	MITSUBISHI # NTXCKS18A112AA	31	---	NEW CEILING CASSETTE FANCOIL PROVIDE CONDENSATE PUMP (5) DIMENSIONS: H=9'-9 1/2", W=22'-7 1/2", D=22'-7 1/2" BUILT-IN FLOAT SWITCH FOR CONDENSATE SOUND - 44 DBA
HP-5 (N)	LAUNDRY	18,000	12,500	80/67	11,000	17	---	---	---	208/230 V. 1 PHASE	14	---	24	MITSUBISHI # NTXCKS18A112AA	127	HSPF2 = 10.0 SEER2 = 21.0 EER2 = 12.5	NEW WALL MOUNTED OUTDOOR HEAT PUMP SOUND - 53 DBA DIMENSIONS: H=34.5/8", W=33-1/8", D=13" PROVIDE DIVERSITECH QSB2000M WALL BRACKET

- NOTES:**
- INSTALL NEW BALANCING DAMPERS IN RA AND OA DUCTING FROM RA PLENUM AND ADJUST TO PROVIDE INDICATED VENTILATION.
  - OUTSIDE AIR FOR F-4 WILL BE DETERMINED ONCE THE SCOPE FOR PHASE II HAS BEEN DETERMINED.
  - OUTSIDE AIR FOR FC-5 WILL BE PROVIDED BY SUPPLY FAN, SF-5, DUCTED TO FANCOIL.
  - ELECTRICAL FOR INDOOR UNITS, FC-# WILL BE PROVIDED BY OUTDOOR UNITS, HP-#.
  - CONDENSATE PUMP SHALL BE G0BI II, MANUFACTURED BY REFCO. SPECIFICATIONS: 1.5 GPH, HEAD = 65 FT, 1.3 LBS, 20 DBA.

### FAN SCHEDULE

SYMBOL	QTY.	AREA SERVED	DESCRIPTION	CFM	FAN		ELECT.			MFGR & MODEL NO.	WEIGHT (LBS)	SONES	REMARKS
					S.P. (WC)	RPM	VOLTAGE	BHP	WATTS				
EF-1 (N)	1	STAFF RR	CEILING CABINET FAN	80	0.25	---	115 V. 1 PHASE	---	9.4	PANASONIC WHISPERGREENFIT™ FV-0511VF1	11.2	0.8	UNIT HAS BUILT-IN BACKDRAFT DAMPER EXHAUST FAN SHALL HAVE 4" DUCT CONNECTION FAN HAS 3 HIGH SPEED SETTINGS: 50, 80, OR 110 CFM FAN SHALL BE ENERGIZED BY ROOM LIGHT SWITCH
EF-2 (N)	1	BREAK ROOM	CEILING CABINET FAN	111	0.25	---	115 V. 1 PHASE	---	16.4	PANASONIC WHISPERCEILING™ SMARTFLOW™ FV-0511VQ1	11	0.9	UNIT HAS BUILT-IN BACKDRAFT DAMPER EXHAUST FAN SHALL HAVE 6" DUCT CONNECTION FAN SHALL BE ENERGIZED BY FAN IN F-3. PROVIDE CONTROL WITH SEPARATE SWITCH SELECT DESIRED AIRFLOW (50-80-110 CFM)
EF-3 (N)	1	SHOWERS	IN-LINE EXHAUST FAN	200	0.4	---	115 V. 1 PHASE	---	53.2	PANASONIC WHISPERLINE™ FV-20-NL1	19.1	1.2	UNIT HAS BUILT-IN BACKDRAFT DAMPER FAN SHALL BE ENERGIZED BY FAN IN FC-5. PROVIDE CONTROL WITH SEPARATE SWITCH. SUSPEND FAN FROM ROOF FRAMING L=13'-3/8", W=9'-1/2", H=7'-7/8"
EF-4 (N)	1	JANITOR	CEILING CABINET FAN	80	0.25	---	115 V. 1 PHASE	---	9.4	PANASONIC WHISPERGREENFIT™ FV-0511VF1	11.2	0.8	UNIT HAS BUILT-IN BACKDRAFT DAMPER EXHAUST FAN SHALL HAVE 4" DUCT CONNECTION FAN HAS 3 HIGH SPEED SETTINGS: 50, 80, OR 110 CFM FAN SHALL BE ENERGIZED BY ROOM LIGHT SWITCH
EF-5 (E)	1	PHASE II RR	CEILING CABINET FAN	80	0.25	---	115 V. 1 PHASE	---	9.4	PANASONIC WHISPERGREENFIT™ FV-0511VF1	11.2	0.8	UNIT HAS BUILT-IN BACKDRAFT DAMPER EXHAUST FAN SHALL HAVE 4" DUCT CONNECTION FAN HAS 3 HIGH SPEED SETTINGS: 50, 80, OR 110 CFM FAN SHALL BE ENERGIZED BY ROOM LIGHT SWITCH
SF-5 (N)	1	LAUNDRY	IN-LINE SUPPLY FAN	160	0.3	4046	120 V. 1 PHASE	---	17.1	FANTECH FG 4XL EC	5.5	N/A	FAN SHALL BE ENERGIZED BY FAN IN FC-7 SEE DETAIL, SHT MO.1 SUSPEND FAN FROM ROOF FRAMING

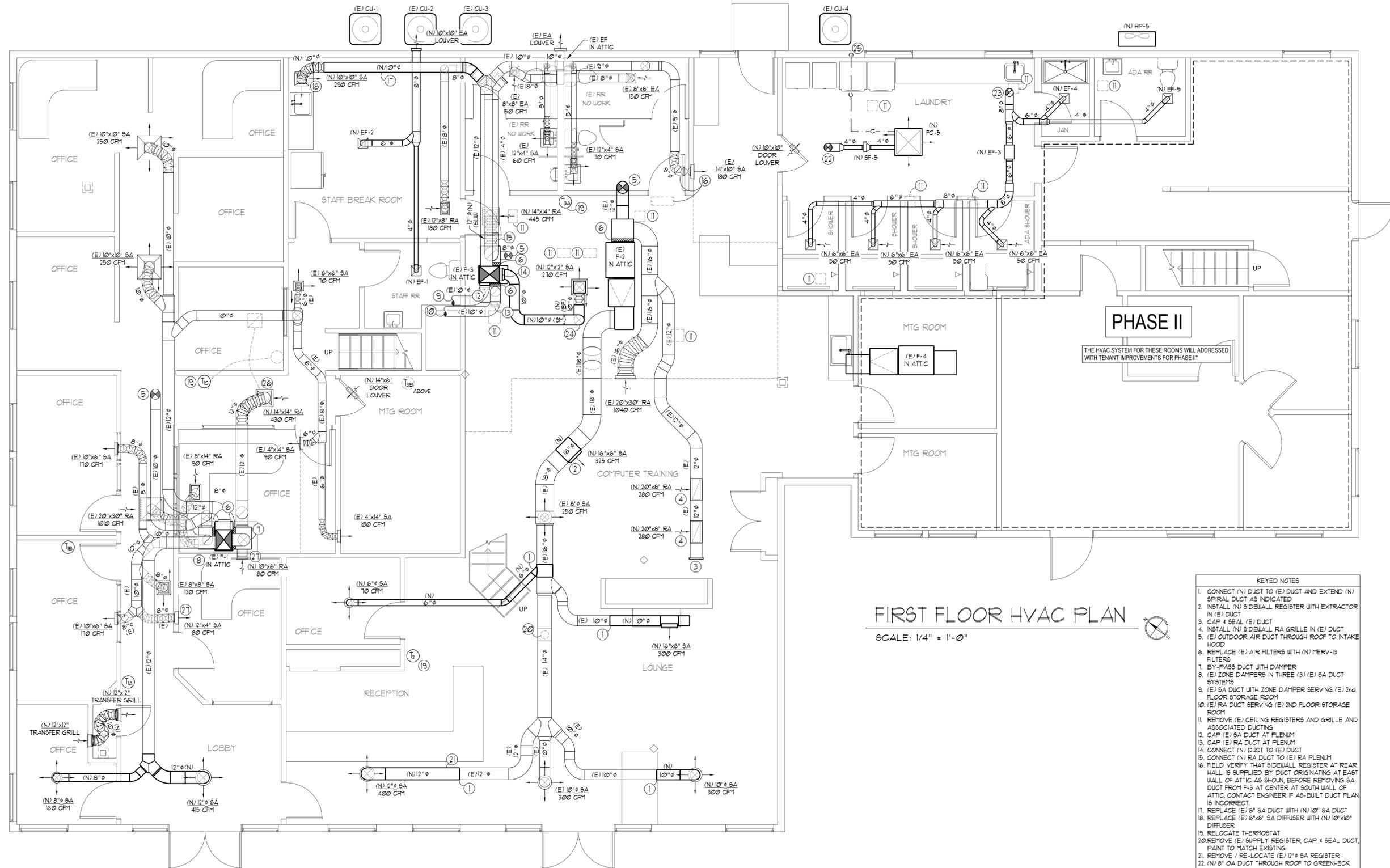
**NOTES:**

- INSTALL/MOUNT EXHAUST FANS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- FIELD LOCATE DUCT TERMINATIONS FOR EXHAUST FANS. THEY SHALL NOT TERMINATE IN ATTIC OR WITHIN 3 FEET OF OPERABLE DOOR OR WINDOW.

**NC - HOMELESS RESOURCE CENTER**  
 1105 SUTTON WAY  
 GRASS VALLEY, CA 95945  
 Project Location:  
 Project Title:  
 Sheet Title:

Revisions:  
 No. Date: By: Description:  
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Plot Date: 6/5/2023  
 Job # **23-153**  
 Scale **as noted**  
 Date 1st Issued **N/A**  
 Sheet Number **MO.1**



**FIRST FLOOR HVAC PLAN**

SCALE: 1/4" = 1'-0"

**KEYED NOTES**

1. CONNECT (N) DUCT TO (E) DUCT AND EXTEND (N) SPIRAL DUCT AS INDICATED
2. INSTALL (N) SIDEWALL REGISTER WITH EXTRACTOR (N) (E) DUCT
3. CAP & SEAL (E) DUCT
4. INSTALL (N) SIDEWALL RA GRILLE IN (E) DUCT
5. (E) OUTDOOR AIR DUCT THROUGH ROOF TO INTAKE HOOD
6. REPLACE (E) AIR FILTERS WITH (N) MERV-13 FILTERS
7. BY-PASS DUCT WITH DAMPER
8. (E) ZONE DAMPERS IN THREE (3) (E) SA DUCT SYSTEMS
9. (E) SA DUCT WITH ZONE DAMPER SERVING (E) 2nd FLOOR STORAGE ROOM
10. (E) RA DUCT SERVING (E) 2ND FLOOR STORAGE ROOM
11. REMOVE (E) CEILING REGISTERS AND GRILLE AND ASSOCIATED DUCTING
12. CAP (E) SA DUCT AT PLENUM
13. CAP (E) RA DUCT AT PLENUM
14. CONNECT (N) DUCT TO (E) DUCT
15. CONNECT (N) RA DUCT TO (E) RA PLENUM
16. FIELD VERIFY THAT SIDEWALL REGISTER AT REAR HALL IS SUPPLIED BY DUCT ORIGINATING AT EAST WALL OF ATTIC AS SHOWN, BEFORE REMOVING SA DUCT FROM F-3 AT CENTER AT SOUTH WALL OF ATTIC. CONTACT ENGINEER IF AS-BUILT DUCT PLAN IS INCORRECT.
17. REPLACE (E) 8" SA DUCT WITH (N) 10" SA DUCT
18. REPLACE (E) 8"x8" SA DIFFUSER WITH (N) 10"x10" DIFFUSER
19. RELOCATE THERMOSTAT
20. REMOVE (E) SUPPLY REGISTER, CAP 4 SEAL DUCT, PAINT TO MATCH EXISTING
21. REMOVE / RE-LOCATE (E) 12"x6" SA REGISTER
22. (N) 8" OA DUCT THROUGH ROOF TO GREENHECK GR81-8 INTAKE HOOD
23. (N) 8" EA DUCT THROUGH ROOF TO GREENHECK GR8R-8 EXHAUST HOOD, MAINTAIN 10' MIN. CLEARANCE TO OA INTAKE HOOD
24. (N) 10" SA DROP TO BELOW FLOOR
25. TERMINATE CONDENSATE INDIRECTLY TO WASHER TAIL PIECE
26. RELOCATE RA GRILLE
27. INSTALL (N) SIMILAR SIZED REGISTERS WITH OBD TO PROVIDE INDICATED AIRFLOW

Project Title: **NC - HOMELESS RESOURCE CENTER**

Project Location: **1105 SUTTON WAY  
GRASS VALLEY, CA 95945**

Sheet Title: **1ST FLOOR HVAC PLAN**

Revisions:

No.	Date:	By:	Description:
-	-	-	-
-	-	-	-

Plot Date: 6/5/2023

Job #: **23-153**

Scale: **as noted**

Date 1st Issued: **N/A**

Sheet Number: **M1.1**

**PLUMBING SYMBOLS AND LEGEND**

AC	ABOVE CEILING
UC	UNDER COUNTER
BF	BELOW FLOOR
BS	BELOW SLAB
BG	BELOW GROUND
IW	IN WALL
SM	SURFACE MOUNT
VR	VENT RISER
VTR	VENT THRU ROOF
UDR	WASTE DROP, RISER
WH	WATER HEATER (SEE SCHEDULE)
CURD	COLD WATER RISER DROP
HURD	HOT WATER RISER, DROP
HURT	HOT WATER RETURN
WCO, GCO	WALL CLEANOUT, GRADE CLEANOUT
P.O.C.	POINT OF CONNECTION
	CLEANOUT
	CW COLD WATER PIPING
	HU HOT WATER PIPING
	HURT HOT WATER RETURN PIPING
	W SANITARY WASTE PIPING
	V VENT PIPING
	SHUT OFF VALVE (S.O.V.) (LINE SIZED)
	G GAS PIPING, SIZE INDICATED
	1" G (3"18) INDICATED IN PARENTHESIS
	GAS REGULATOR
	GAS SHUT-OFF BIBB

**PIPE MATERIAL SCHEDULE**

**SANITARY WASTE & VENTING MATERIALS**  
 (A) DRAINAGE WASTE AND VENT PIPING SHALL BE SCHEDULE 40 A53 DUCTILE IRON CAST IRON OR OTHER APPROVED MATERIAL HAVING A SMOOTH AND UNIFORM BORE. FITTINGS SHALL BE MADE OF SIMILAR MATERIAL.  
 EXCEPTION:  
 1) NO HUB CAST IRON SHALL BE USED WHERE SLOPE OF WASTE LINE IS LESS THAN 1/8" PER FOOT, OR WHERE WASTE PIPING IS ROUTED BETWEEN FLOORS OR RISERS IN WALLS.  
 (B) VENT PIPING SHALL EXTEND 12" ABOVE THE ROOF (MIN) AND SHALL BE FLASHED WITH GALVANIZED ROOF JACKS AND RUBBER WATERPROOF VENT COLLARS. THE MINIMUM VENT SIZE AT VENT EXTENSION THROUGH ROOF SHALL BE 3" (MIN) TO PREVENT FROST/SNOW CLOSURE. THE CHANGE IN DIAMETER SHALL BE MADE INSIDE THE BUILDING AT LEAST ONE (1) FOOT BELOW THE ROOF. VENTS SHALL BE FLASHED ADJACENT TO UPPER RIDGE OF ROOF AND SHALL BE PROTECTED BY "MURPHY SPLITTER" OR METAL FORMED CRICKET APPROVED BY ADMINISTRATIVE AUTHORITY.

**POTABLE WATER PIPING**  
 (A) SCHEDULE 40 PVC PIPE MEETING THE REQUIREMENTS OF ASTM D 1785 MAY BE USED FOR COLD WATER DISTRIBUTION OUTSIDE THE BUILDING. FITTINGS SHALL BE IN COMPLIANCE ASTM 2464.  
 (B) WATER PIPE AND FITTINGS SHALL BE TYPE K COPPER, ASTM B88. COPPER PIPING SHALL BE JOINED WITH VIEGA® PRESS FITTING. ALL MATERIAL USED WITHIN THE WATER SUPPLY SYSTEM, EXCEPT VALVES AND SIMILAR DEVICES, SHALL BE OF SIMILAR MATERIAL, EXCEPT WHERE OTHERWISE APPROVED BY THE ADMINISTRATIVE AUTHORITY.

**FUEL GAS PIPING**  
 (A) SCHEDULE 40 BLACK STEEL PIPE, ASTM A53, SCHEDULE 40 BLACK, WITH MALLEABLE IRON OR FORGED STEEL FITTINGS, SCREWED (THROUGH 2"). PROVIDE GAS COCK, DIRT LEG AND UNION AT EACH CONNECTION. GAS PIPING SHALL NOT BE BURIED BELOW SLAB UNLESS SPECIFICALLY INDICATED ON PLANS AND MEETING THE REQUIREMENTS OF CPC SECTION 1211.6.  
 (B) PLASTIC PIPE SHALL BE INSTALLED OUTSIDE UNDERGROUND ONLY. PIPING SHALL BE POLYETHYLENE CONFORMING TO ASTM D 2513. BURIED GAS PIPING MAY BE BLACK STEEL PIPE WITH FACTORY WRAPPED PLASTIC COVER AS APPROVED BY LOCAL ADMINISTRATIVE AUTHORITY, ASTM A53, SCHEDULE 40 BLACK, WITH MALLEABLE IRON OR FORGED STEEL FITTINGS, SCREWED (THROUGH 2").

**PLUMBING NOTES**

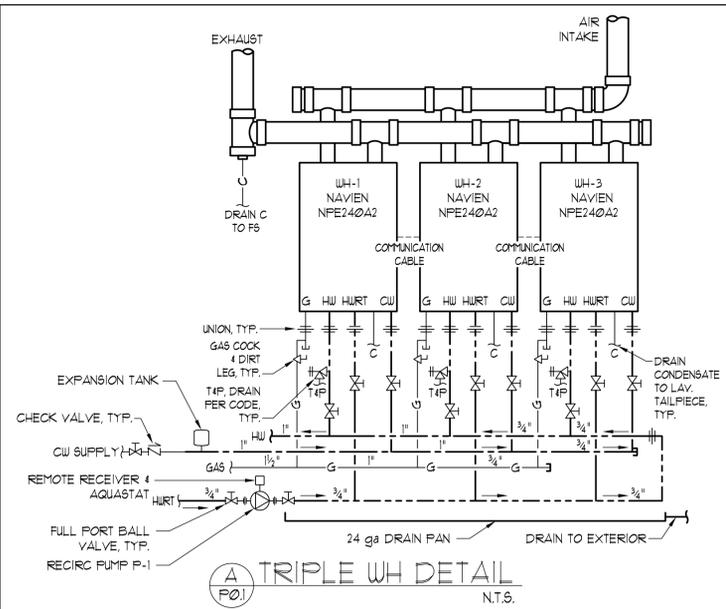
- SCOPE OF WORK**
  - INSTALL THREE (3) NEW INSTANTANEOUS GAS WATER HEATERS AS INDICATED ON PLANS.
  - CONTRACTOR SHALL SCOPE EXISTING WASTE SYSTEM TO VERIFY THE LOCATION AND SIZE IS AS INDICATED ON PLANS. VERIFY INVERT ELEVATION AS WELL.
  - FIELD VERIFY PIPING CONFIGURATION. ANY ALTERATION FROM WHAT IS INDICATED ON PLANS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION.
  - REMOVE EXISTING PIPING NOT SHOWN TO BE REUSED ON PLANS.
  - SAWCUT EXISTING SLAB FOR NEW WASTE PIPING AS INDICATED ON PLANS. PATCH TO MATCH EXISTING.
- ALL WATER AND WASTE PLUMBING INSTALLATION WORK AND ALL PLUMBING MATERIALS SHALL BE IN ACCORDANCE WITH THE 2022 CALIFORNIA PLUMBING CODE.
- IT IS THE INSTALLING CONTRACTORS' RESPONSIBILITY TO ASSURE ALL MECHANICAL SYSTEMS FUNCTION PROPERLY, SAFELY, AND MEET ALL LOCAL, STATE AND REGIONAL CODES.
- ALL WORK SHALL CONFORM TO THE ACCEPTED STANDARDS OF THE TRADE. THE ENGINEER IS TO BE NOTIFIED IF ANY SUBSTITUTIONS ARE SEEN TO BE NECESSARY.
- HOT AND COLD WATER PIPE SIZING IS BASED ON CHART A 1051 OF THE 2022 CPC AT THE FRICTION LOSS PER 100 FT INDICATED ON WATER AND WASTE SERVICE CALCULATIONS.
- THE GAS PIPE SIZING MEETS OR EXCEEDS THE APPROPRIATE ROW FOR PIPE LENGTH IN TABLE 1216.2(1).
- GAS PIPING SIZED ACCORDING TO TABLE 1216.2(1) OF THE 2022 CPC. PIPE SIZING FOR NATURAL GAS LESS THAN 2 PSI WITH PRESSURE DROP = 0.5 IN.WC.
  - DISTANCE FROM METER TO FURTHEST APPLIANCE = 75 FEET.
  - FITTING EQUIVALENT LENGTH = 12 FEET.
  - USE 90 FEET ROW IN TABLE 1216.2(1).
  - GAS PIPING SHALL SCHEDULE 40 BLACK STEEL.
- PROVIDE SHUTOFF VALVES OR STOPS AT EACH CONNECTION, AT GAS CONNECTIONS, PROVIDE GAS COCK, DIRT LEG, UNION AND FLEX CONNECTION.
- CONTRACTORS SHALL PARTICIPATE IN BID WALK-THRU AND SHALL FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS. BIDS SHALL BE ADJUSTED TO ACCOMMODATE ANY EXISTING CONDITIONS WHICH ARE NOT SHOWN ON PLANS AND ARE VISIBLE DURING WALK-THRU. ANY AND ALL DEVIATIONS FROM PLANS SHALL BE BROUGHT TO THE ENGINEERS' ATTENTION.
- CONTRACTOR SHALL VERIFY SITE DIMENSIONS. NO CHANGE ORDERS WILL BE ALLOWED FOR CONDITIONS WHICH COULD BE VERIFIED BEFORE CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE WITH OTHER TRADES. NO CHANGE ORDERS WILL BE ALLOWED FOR ITEMS THAT COULD HAVE BEEN COORDINATED IN THE FIELD.
- PLUMBING FIXTURES NOT SPECIFIED ON PLANS SHALL BE SELECTED BY THE INSTALLING SUBCONTRACTOR AND SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL. FIXTURES SHALL MEET 2022 CPC AND CAL-GREEN CODES. MAXIMUM FLOW RATES SHALL BE AS FOLLOWS:
  - SINKS 18 GPM
  - LAVATORIES (COMMERCIAL) 05 GPM
  - SHOULDERS 18 GPM
  - WATER CLOSETS 128 GPF
  - URINALS 0125 GPF
  - METERING FAUCETS 025 GAL/CYCLE
- FURNISH AND INSTALL ALL MATERIALS AND PERFORM ALL LABOR NECESSARY FOR A COMPLETE INSTALLATION OF PLUMBING WORK INDICATED ON THE DRAWINGS. PROVIDE ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED WHICH CAN REASONABLY BE INFERRED OR TAKEN AS BELONGING TO THE WORK AND NECESSARY TO PROVIDE THE COMPLETE SYSTEM.
- PROVIDE ALL NECESSARY PLUMBING CONNECTIONS TO EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OR SECTION OR BY OWNERS. PROVIDE SHUTOFF VALVES OR STOPS AT EACH CONNECTION.
- PIPING IS TO BE FIELD LOCATED IN SUCH A WAY AS TO AVOID OBSTACLES. MEET CALIFORNIA PLUMBING CODE (CPC) REQUIREMENTS AND ALLOW SERVICE CLEARANCE TO AREAS AND EQUIPMENT THAT MAY REQUIRE SERVICING.
- ALL HORIZONTAL WASTE / VENT PIPES SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT. IF EXISTING INVERT ELEVATION DOES NOT FOR 1/4" PER FOOT, 1/8" PER FOOT WILL BE ALLOWED WITH THE WASTE PIPING UPSIZED.
- HORIZONTAL VENT PIPE SHALL BE 90 GRADDED AND CONNECTED AS TO DRIP BACK BY GRAVITY TO THE DRAINPIPE IT SERVES PER 2022 CPC 905.2. VENT PIPE SHALL TERMINATE A MINIMUM OF 10 FEET FROM FRESH AIR INTAKE.
- INSULATE ALL POTABLE HOT WATER SUPPLY & RETURN PIPING WITH K-FLEX 3/4" WALL THICKNESS INSUL-TUBE® OR EQUAL. CONDUCTIVITY 0.23 (BTU-IN/HR-°F) AT 75°F IN NON-CONDITIONED SPACE, IN ACCORDANCE WITH ASTM C111 OR C518.
- FOR EXACT LOCATION OF PLUMBING FIXTURES AND MOUNTING HEIGHTS, SEE ARCHITECTURAL ELEVATIONS.
- PIPING SHALL BE SUPPORTED AND BRACED IN ACCORDANCE WITH CHAPTER 3 OF THE 2022 CPC WITH SUPERSTRUT HANGERS, OR EQUAL. PROVIDE ISOLATORS AT ALL HANGERS WHERE PIPING IS NOT INSULATED.
- TRAP PRIMERS SHALL BE PROVIDED FOR ALL FLOOR DRAINS.
- CLEANOUTS IN FIRE RATED WALLS SHALL HAVE BOTH METAL BODY AND COVER CONSISTENT WITH PIPE MATERIAL SCHEDULE.
- PLUMBING VENTS SHALL BE AT LEAST 10' FROM OR 3' ABOVE ANY DOOR, OPENABLE WINDOW, MECHANICAL AIR INTAKE, OR OTHER INLETS INTO THE BUILDING PER CPC 906.2.

- DISINFECTION OF WATER SYSTEM**
  - PRIOR TO FINAL INSPECTION, CLEAN AND DISINFECT DOMESTIC HOT AND COLD WATER PIPING CONNECTED TO DOMESTIC WATER MAINS.
  - PIPING SHALL BE SENSITIZED WITH A MIXTURE OF 2 POUNDS CHLORINATED LIME TO EACH 1,000 GALLONS OF WATER (50 PPM OF AVAILABLE CHLORINE).
  - RETAIN THE MIXTURE IN PIPES 24 HOURS AND FLUSH IT THOROUGHLY WITH POTABLE WATER PRIOR TO PLACING IT IN SERVICE.
  - PERFORM ALL WORK PER AWWA STANDARD PROCEDURES FOR DISINFECTING WATER MAINS AND AS REQUIRED BY LOCAL BUILDING AND HEALTH DEPARTMENT CODES.
- GAS PIPE TESTING**
  - ALL TESTING SHALL BE IN COMPLIANCE WITH SECTION 1916 OF THE 2022 CALIFORNIA MECHANICAL CODE.
  - TEST ALL NEW PIPING AT FOUR (4) TIMES THE WORKING PRESSURE BUT NOT LESS THAN 3 PSI FOR A PERIOD OF NOT LESS THAN TWO (2) HOURS. ANY LOSS IN PRESSURE DURING THAT TIME PERIOD WILL BE SEEN AS A LEAK IN THE SYSTEM. CONNECTIONS BETWEEN NEW PIPING AND EXISTING PIPING SHALL BE TESTED USING SOAP AND WATER OR OTHER APPROVED LEAK-DETECTING FLUID.
  - ALL JOINTS AND WELDS SHALL BE LEFT EXPOSED FOR EXAMINATION DURING TEST.
  - REPAIR ANY LEAKS FOUND BY REMAKING THE JOINT. DO NOT USE CAULKING OR SIMILAR METHODS TO CORRECT LEAKS. AFTER LEAKS ARE REPAIRED, AGAIN TEST THAT PORTION OF THE SYSTEM AS DESCRIBED ABOVE.
- TESTING OF PIPING**
  - ALL PIPING SHALL TESTED AT COMPLETION OF ROUGH-IN. TEST IN ACCORDANCE WITH THE FOLLOWING SCHEDULE TO SHOW NO LOSS IN PRESSURE OR VISIBLE LEAKS AFTER A MINIMUM DURATION OF FOUR (4) HOURS AT THE TEST PRESSURE INDICATED.
  - ISOLATE FROM THE SYSTEM ALL EQUIPMENT WHICH MAY BE DAMAGED BY TEST PRESSURE. TEST SCHEDULE AS FOLLOWS:
 

SYSTEM TESTED	TEST PRESSURE, PSIG	TEST WITH
ALL SOIL, WASTE, DRAIN AND VENT PIPING WITHIN BUILDINGS.	FILL WITH WATER TO TOP OF HIGHEST JOINT IN SYSTEM; ALLOW TO STAND 2 HOURS OR LONGER AS DIRECTED BY INSPECTOR.	WATER
ALL HOT TEMPERED AND COLD PIPING.	150 PSIG	WATER

**PLUMBING EQUIPMENT SCHEDULE**

SYMBOL	DESCRIPTION	MFGR. & MODEL No.	SPECIFICATIONS	ACCESSORIES
WH-1	NPE SERIES TANKLESS GAS WATER HEATER	NAVIENT NPE-240A2	TANKLESS WATER HEATER, UEF=0.95 RECOVERY = 5.6 GPM AT 67°F RISE INPUT = 13,300 - 199,900 BTU/HR DIMENSIONS: 17.3"W x 13.2"D x 27.4" HT POWER: 120V, 350W, 4A	1. PROVIDE TWO (3) WATER HEATERS CONNECTED IN SERIES WITH JOINT RECIRCULATION PUMP 2. COMBINE 3- 2" PVC INTAKE VENTS INTO A 3" PVC VENT TO GABLE END SIDEWALL INTAKE CAP 3. COMBINE 3- 2" PVC EXHAUST VENTS INTO A 3" PVC VENT RISER THROUGH ROOF TO ROOF CAP 4. PROVIDE HARDWIRED PUSH BUTTONS AND OCCUPANCY SENSORS TO ENERGIZE RECIRCULATION PUMP. LOCATION OF CONTROLS INDICATED ON PLANS. 5. DRAIN CONDENSATE INDIRECTLY TO LAVATORY TAILPIECE



**RECIRCULATION LOOP**  
 SUPPLY AND INSTALL ONE (1) ACT D'MAND CONTROLS®, MODEL #853-200 HOT WATER RECIRCULATION LOOP. INSTALL PUMP ADJACENT TO WATER HEATER.  
 a) UNIT COMES WITH ONE GRUNDFOS MODEL #UFS 26-99-BFC PUMP.  
 - 115 VOLTS, 1.8 AMPS, 191 WATTS AND 1/6 HP.  
 - HEAD = 18' AT FLOW=16 GPM.  
 b) PROVIDE PUSH BUTTONS AND OCCUPANCY SENSORS WHERE INDICATED ON MECHANICAL PLANS. BUTTONS & OCCUPANCY SENSORS ENERGIZE RECIRCULATION PUMP.  
 c) INSULATE ENTIRE RECIRCULATION LOOP.

**EXPANSION TANK:**  
 EXPANSION TANK SHALL BE WILKINS MODEL # WXT-18, OR EQUAL. TANK VOL.=4.75 GALLONS, MAX WORKING PRESS.=150PSIG.

**WATER AND WASTE SERVICE CALCULATIONS**  
 1105 SUTTON WAY

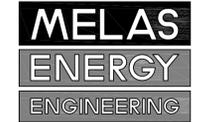
FIXTURE COUNT/DHW (EXISTING)					
Fixtures	Quantity	Fixture Units (Ea.)		D.H.W. (GPH) (Ea.)	
		Water	Waste	Water	Waste
Water Closet FT	3	2.5	4	7.5	12
Lavatory	2	1	1	6	2
Urinal	1	5	3	0	5
Kitchen Sink	1	1.5	3	20	1.5
Hose Bibbs	2	1.5	2	0	3
<b>Total</b>	<b>9</b>			<b>19</b>	<b>24</b>
Hot Water FU's		3.5 X 0.75 =		2.6 (2.5 GPM)	
Peak Flow =	15	(GPM) (Ref. Chart A-3 2022 CPC)			

FIXTURE COUNT/DHW (PROPOSED ADDED)					
Fixtures	Quantity	Fixture Units (Ea.)		D.H.W. (GPH) (Ea.)	
		Water	Waste	Water	Waste
Water Closet FT	2	2.5	4	0	5
Lavatory	2	1	1	6	2
Shower	4	2	3	30	8
Washer/Lau Sink	4	4	3	30	16
Mop Sink	1	3	3	30	3
Hose Bibbs	0	1.5	2	0	0
<b>Total</b>	<b>13</b>			<b>34</b>	<b>282</b>
Hot Water FU's		29 X 0.75 =		22 (16 GPM)	
Peak Flow =	22	(GPM) (Ref. Chart A-3 2022 CPC)			

Meter Total					
Water Fixture Units	53				
Peak Flow	30				
Pressure Available at Site			64	psi	
Pressure Booster			0	psi	
Total Available Pressure			64	psi	
3/4" Meter Loss at 30 GPM			7.5	psi	
Elevation Rise (Ft)	15		6.5	psi	
Backflow Preventer Loss			10	psi	
Required Residual Pressure required for WC			25	psi	
Equivalent pipe length from meter to most remote fixture			150	ft	
Friction Loss Available Pressure			15.0	psi	
Maximum Allowable Friction Loss (psi/100Ft)			10.0		
Minimum required water pipe size (inches)			1-1/2		
Minimum required waste pipe size (inches)			4		
Piping Outside the Building -			Sched. 40 PVC		
Piping downstream of SOV -			PEX		



ENERGY & MECHANICAL CONSULTANTS  
 541 UREN STREET  
 NEVADA CITY, CA 95959  
 PHONE (530) 265-2492  
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 GRASS VALLEY, CA 95945

PLUMBING NOTES AND SPECIFICATIONS

Project Title:

Project Location:

Sheet Title:

Revisions:

No.	Date:	By:	Description:
-	-	-	-
-	-	-	-

Plot Date:

6/5/2023

Job #

23-153

Scale

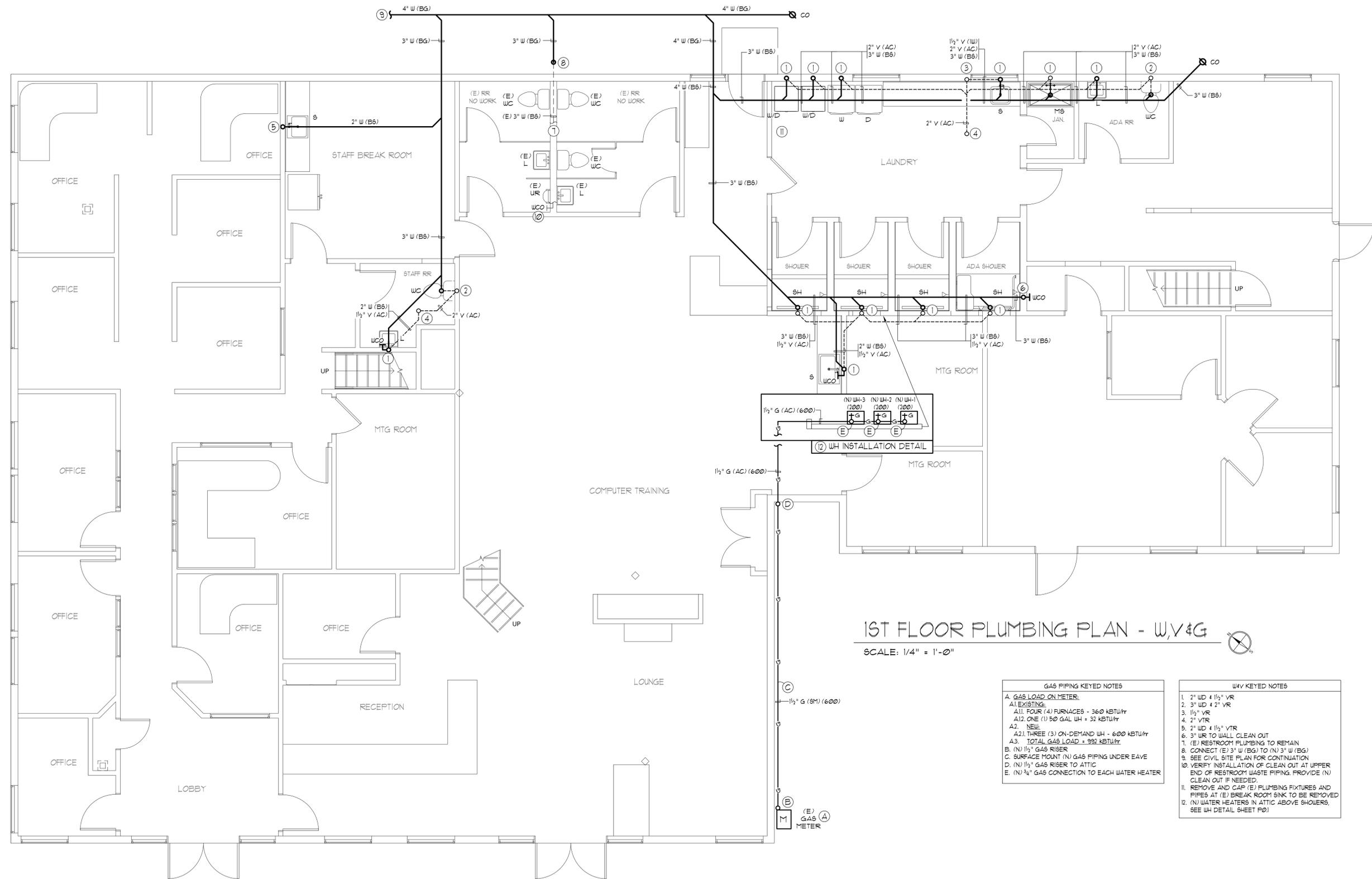
as noted

Date 1st Issued

N/A

Sheet Number

P0.1



**1ST FLOOR PLUMBING PLAN - W, V & G**

SCALE: 1/4" = 1'-0"

**GAS PIPING KEYED NOTES**  
A. GAS LOAD ON METER:  
A1. EXISTING:  
A11. FOUR (4) FURNACES - 360 KBTU/yr  
A12. ONE (1) 50 GAL WH + 32 KBTU/yr  
A2. NEW:  
A21. THREE (3) ON-DEMAND WH - 600 KBTU/yr  
A3. TOTAL GAS LOAD = 992 KBTU/yr  
B. (N) 1/2" GAS RISER  
C. SURFACE MOUNT (N) GAS PIPING UNDER EAVE  
D. (N) 1/2" GAS RISER TO ATTIC  
E. (N) 3/4" GAS CONNECTION TO EACH WATER HEATER

**W/V KEYED NOTES**  
1. 2" WD 4 1/2" VR  
2. 3" WD 4 2" VR  
3. 1/2" VR  
4. 2" VTR  
5. 2" WD 4 1/2" VTR  
6. 3" UR TO WALL CLEAN OUT  
7. (E) RESTROOM PLUMBING TO REMAIN  
8. CONNECT (E) 3" W (BG) TO (N) 3" W (BG)  
9. SEE CIVIL SITE PLAN FOR CONTINUATION  
10. VERIFY INSTALLATION OF CLEAN OUT AT UPPER END OF RESTROOM WASTE PIPING. PROVIDE (N) CLEAN OUT IF NEEDED.  
11. REMOVE AND CAP (E) PLUMBING FIXTURES AND PIPES AT (E) BREAK ROOM SINK TO BE REMOVED  
12. (N) WATER HEATERS IN ATTIC ABOVE SHOWERS, SEE WH DETAIL SHEET P01

Project Title: **NC - HOMELESS RESOURCE CENTER**

Project Location: **1105 SUTTON WAY  
GRASS VALLEY, CA 95945**

Sheet Title: **1ST FLOOR PLUMBING PLAN - W, V & G**

Project Title:

Revisions:			
No.	Date:	By:	Description:

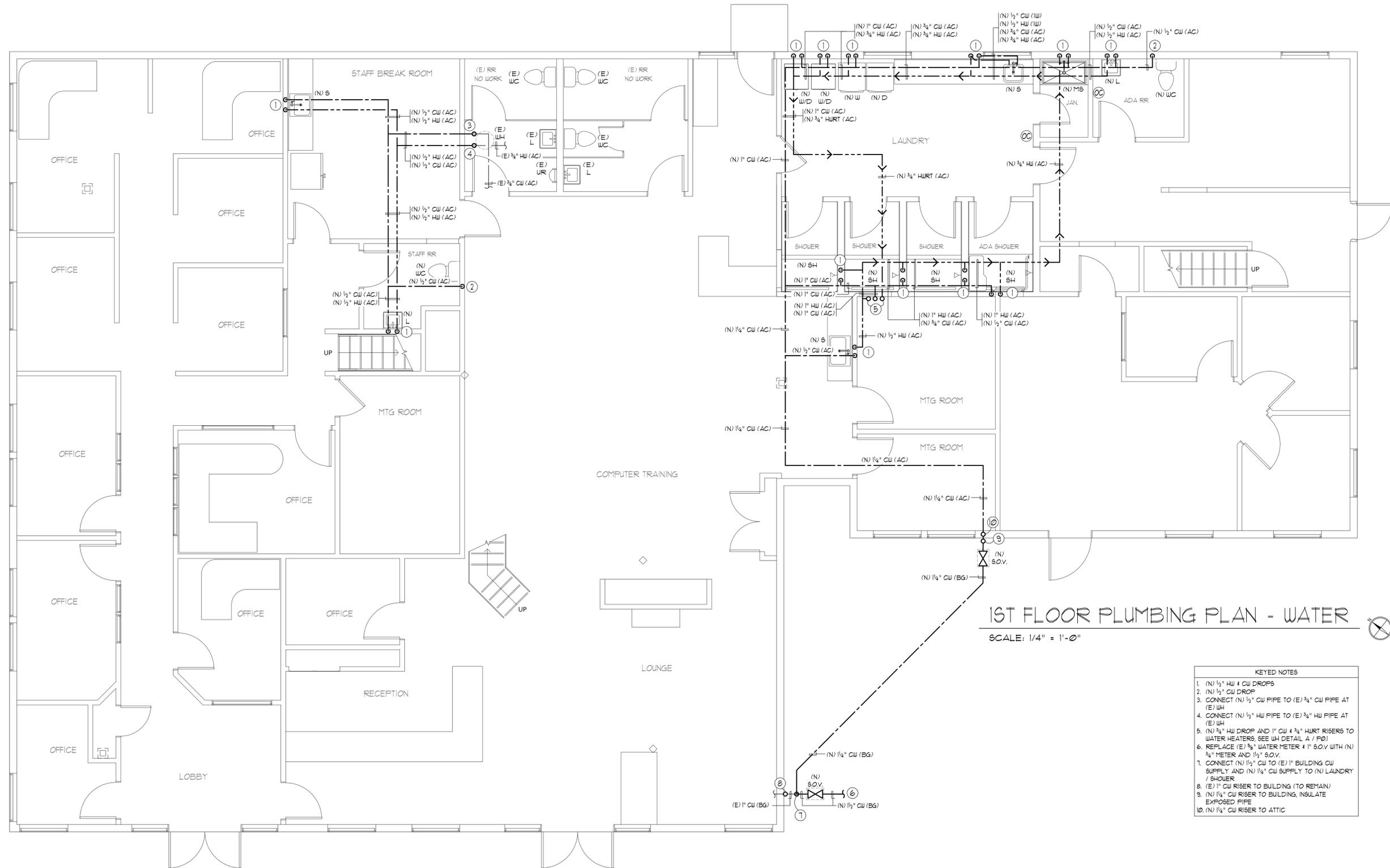
Plot Date: 6/5/2023

Job # **23-153**

Scale **as noted**

Date 1st Issued **N/A**

Sheet Number **P1.1**



**1ST FLOOR PLUMBING PLAN - WATER**  
SCALE: 1/4" = 1'-0"

KEYED NOTES			
1.	(N) 1/2" HW & CW DROPS		
2.	(N) 1/2" CW DROP		
3.	CONNECT (N) 1/2" CW PIPE TO (E) 3/4" CW PIPE AT (E) WH		
4.	CONNECT (N) 1/2" HW PIPE TO (E) 3/4" HW PIPE AT (E) WH		
5.	(N) 3/4" HW DROP AND 1" CW & 3/4" HW RT RISERS TO WATER HEATERS, SEE WH DETAIL A / FOI		
6.	REPLACE (E) 3/4" WATER METER 4 1" SOV WITH (N) 3/4" METER AND 1 1/2" SOV.		
7.	CONNECT (N) 1/2" CW TO (E) 1" BUILDING CW SUPPLY AND (N) 1/4" CW SUPPLY TO (N) LAUNDRY / SHOWER		
8.	(E) 1" CW RISER TO BUILDING (TO REMAIN)		
9.	(N) 1/4" CW RISER TO BUILDING, INSULATE EXPOSED PIPE		
10.	(N) 1/4" CW RISER TO ATTIC		

Project Title: **NC - HOMELESS RESOURCE CENTER**

Project Location: **1105 SUTTON WAY  
GRASS VALLEY, CA 95945**

Sheet Title: **1ST FLOOR PLUMBING PLAN - WATER**

Revisions:			
No.	Date:	By:	Description:

Plot Date:	6/5/2023
Job #	23-153
Scale	as noted
Date 1st Issued	N/A
Sheet Number	P1.2



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Table with 3 columns: No., Description, Date

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Date: Issue Date

Scale: AS NOTED

Drawn By: JL/JJP

Drawing Title:

ONE-LINE & PANEL SCHEDULE & NOTES

Drawing Number:

E1.0

SYMBOL LIST

- RECESSED LIGHT FIXTURE
SURFACE MOUNTED LIGHT FIXTURE
STRIPLIGHT
RECESSED FIXTURE
SURFACE MOUNTED LIGHT FIXTURE
WALL MOUNTED LIGHT FIXTURE
EXIT LIGHT - CEILING MOUNTED WITH ARROWS AS SHOWN
EXIT LIGHT - WALL MOUNTED WITH ARROWS AS SHOWN
EMERGENCY LIGHTING FIXTURE - SURFACE MOUNTED
SINGLE POLE TOGGLE SWITCH, @ +44" UNO
TWO POLE TOGGLE SWITCH, @ +44" UNO
THREE-WAY TOGGLE SWITCH, @ +44" UNO
DIMMER SWITCH, @ +44" UNO
KEY OPERATED SINGLE POLE TOGGLE SWITCH, @ +44" UNO
WALL / CEILING MOUNTED OCCUPANCY SENSOR
FIXTURE TAG; LETTER INDICATES TYPE
JUNCTION BOX, SIZE & TYPE AS INDICATED OR AS REQUIRED
15 AMP 125V 3W NEMA 5-15R DUPLEX RECEPTACLE, @ +18" UNO
DEDICATED, 15 AMP 125V 3W NEMA 5-15R DUPLEX RECEPTACLE, @ +18" UNO
SWITCHED, 15 AMP 125V 3W NEMA 5-15R DUPLEX RECEPTACLE, @ +18" UNO
15 AMP 125V 3W NEMA 5-15R DOUBLE DUPLEX RECEPTACLE, @ +18" UNO
MOTOR RATED SINGLE POLE SWITCH, @ UNIT UNO
NON-FUSED DISCONNECT SWITCH
CIRCUIT BREAKER DISCONNECT SWITCH
FUSED DISCONNECT SWITCH, SIZE PER UNIT LABEL
MOTOR, N.I.E.S. CONNECT AS REQUIRED, NUMBER INDICATES HP
CONTROL EQUIPMENT, N.I.E.S. CONNECT AS REQUIRED
PANELBOARD - SEE SCHEDULE
MAIN SWITCHBOARD OR MOTOR CONTROL CENTER, SEE ONE LINE DIAGRAM
TELEPHONE OUTLET, 4" SQ. BOX w/ SINGLE DEVICE RING & PLATE @ +18" UNO
DATA OUTLET, 4" SQ. BOX w/ SINGLE DEVICE RING & PLATE @ +18" UNO
COMBINATION PHONE/DATA OUTLET, 4" SQ. BOX w/ SINGLE DEVICE RING & PLATE @ +18" UNO
TELEPHONE TERMINAL BACKBOARD; 4' x 8' x 3/4" PLYWOOD OR AS NOTED w/ DOUBLE DUPLEX RECEPTACLE & 1 #6 GND
CONDUIT RUN CONCEALED BELOW FLOOR OR FINISHED GRADE
CONDUIT CONCEALED IN CEILING OR WALL
HOMERUN TO RESPECTIVE PANEL OR TERMINAL CABINET
CONDUIT RISER - UP
CONDUIT RISER - DOWN
BRANCH CIRCUIT WITHOUT FURTHER DESIGNATION INDICATES A 2 #12 WIRE CIRCUIT
ADDITIONAL NO. OF #12: -H- = 1, 3 #12; -H- = 2, 2 #12 & 1 #12 GND; -HH- = 5 #12 & 1 #12 GND; ETC. OTHER WIRE SIZES: -H- = 2 #10 & 1 #12 GND; -H- = 3 #4 & 1 #8 GND; ETC.
MT EMPTY CONDUIT WITH PULLSTRING
EL EMERGENCY LIGHT
NL NIGHT LIGHT
(E) EXISTING
C. CONDUIT
WP WEATHERPROOF
DT DUAL-TECH
OR OVERRIDE
PIR PASSIVE INFRARED
@ SMOKE DETECTOR
FACP FIRE ALARM CONTROL PANEL
NIES NOT IN ELECTRICAL SECTION OF THESE PLANS & SPECIFICATIONS
UNO UNLESS NOTED OTHERWISE
FLAG NOTE SHOWN ON SAME SHEET
SECTION DESIGNATION; TOP LETTER INDICATES SECTION, BOTTOM LETTER/NUMBER INDICATES SHEET
DETAIL DESIGNATION; TOP NUMBER INDICATES DETAIL, BOTTOM LETTER/NUMBER INDICATES SHEET
MECHANICAL & PLUMBING EQUIPMENT DESIGNATION
SPECIAL OUTLET. SEE PLANS FOR SPECIFICATION

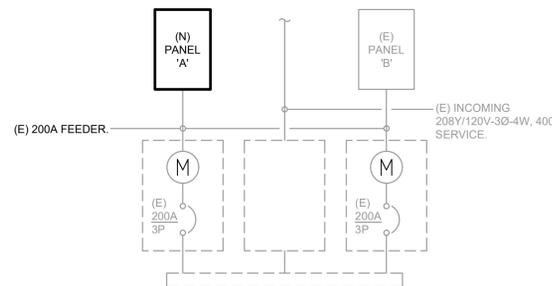
NOTE TO CONTRACTOR

THE CONTRACTOR SHALL THOROUGHLY REVIEW THESE ELECTRICAL CONSTRUCTION DOCUMENTS PRIOR TO PREPARING A BID FOR THE ELECTRICAL WORK SHOWN. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING ELECTRICAL SERVICES AND CONNECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICTS OR DISCREPANCIES FOUND PRIOR TO BID. BY SUBMITTING A BID FOR THE ELECTRICAL WORK, THE ELECTRICAL CONTRACTOR IS AFFIRMING THAT THE REQUIRED FIELD VERIFICATION OF EXISTING CONDITIONS HAS BEEN COMPLETED AND ASSUMES FULL RESPONSIBILITY FOR CONFLICTS FOUND AFTER THE AWARD OF THE ELECTRICAL CONTRACT. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR CONFLICTS AND/OR DISCREPANCIES FOUND TO EXIST AFTER THE AWARD OF THE ELECTRICAL CONTRACT.

Table for Panel A: NEW/EXISTING, VOLTAGE: 208Y/120V-3Ø-4W, BUS: 225A, MOUNTING: FLUSH, LOCATION: CLOSET. Includes load descriptions like GREG OFFICE RECS & LTG, OFFICE LTG, OFFICE RECS, HALL LTG & RECS, WATER HEATERS, LIGHTING, RECEPTION AREA RECS, etc.

Table for Panel B: NEW/EXISTING, VOLTAGE: 208Y/120V-3Ø-4W, BUS: 225A, MOUNTING: FLUSH, LOCATION: ATTIC. Includes load descriptions like RECEPTION RECS, STAIRWAY LTG, PROCESS RECS, COPY & HALL LTG, HVAC ROOM LTG, LOAN LTG, HVAC REC, SPARE, HVAC REC, STORAGE RECS, UTILITY ROOM RECS, SPARE, etc.

1 E.C. TO VERIFY BREAKER SIZE W/ MECHANICAL INSTALLER.



1 ONE-LINE DIAGRAM SCALE: NONE

LOAD & FEEDER CALCS

Table for Panel A: LIGHTING 12,700, SERVER 1,500, WATER HEATER: 3 @ 480 W EACH 1,440, METAL DETECTOR 1,000, RECIRC PUMP 260, (E) AIR-CONDITIONER "AC-3" 3,952, (E) AIR-CONDITIONER "AC-4" 5,158, HEAT PUMP "HP-5" / FAN COIL "FC-5" 2,912, WASHER: 3 @ 1,500 W EACH 4,500, DRYER: 3 @ 5,000 W EACH 15,000, RECEPTACLES: 71 @ 180 W EACH 12,780, 1ST 10KW @ 100% 10,000, REMAINDER @ 50% 1,390, SUBTOTAL 59,812, 25% CONTINUOUS LOAD 3,175, 25% LARGEST MOTOR 1,232, TOTAL 64,219

AMPS @ 208Y/120V-3Ø-4W 178
EXISTING 200 AMP FEEDER IS ADEQUATE.

Table for Panel B: LIGHTING 5,700, DRINKING FOUNTAIN/BOTTLE FILLER 600, (E) FIRE ALARM 300, (E) AIR-CONDITIONER "AC-1" 4,644, (E) AIR-CONDITIONER "AC-2" 4,644, (E) FURNACE: 4 @ 909 W EACH 3,636, RECEPTACLES: 72 @ 180 W EACH 12,960, 1ST 10KW @ 100% 10,000, REMAINDER @ 50% 1,480, SUBTOTAL 31,004, 25% CONTINUOUS LOAD 375, 25% LARGEST MOTOR 1,782, TOTAL 33,161

AMPS @ 208Y/120V-3Ø-4W 92
EXISTING 200 AMP FEEDER IS ADEQUATE.

Table for Service Calc: PANEL 'A' 64,219, PANEL 'B' 33,161, TOTAL 97,380

AMPS @ 208Y/120V-3Ø-4W 271
EXISTING 400 SERVICE IS ADEQUATE.

NOTE:

E.C. SHALL VERIFY (E) CIRCUITING & MAKE ADJUSTMENTS WHERE NECESSARY. PROVIDE TYPED, UPDATED PANEL SCHEDULES AFTER COMPLETION OF WORK.









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Drawn By: JL/JP

Drawing Title:

LIGHT FIXTURE & CONTROL SCHEDULES

Drawing Number:

E3.1

LIGHTING GENERAL NOTES:

- 1. ALL EMERGENCY & EXIT SIGN LUMINAIRES SHALL BE CONNECTED TO THE UNSWITCHED SIDE OF THE LIGHTING BRANCH CIRCUIT. LIGHT FIXTURES W/ EMERGENCY DRIVERS SHALL BE NORMALLY SWITCHED & CONTROLLED W/ THE AREA LIGHTING. HOWEVER, THEIR EMERGENCY DRIVERS SHALL BE CONNECTED UPSTREAM OF THE AREA LIGHT SWITCH, LIGHTING CONTROL PANEL OR RELAY. FIXTURES ARE TO REMAIN ON FOR NOT LESS THAN 90 MINUTES PER NATIONAL ELECTRIC CODE REQUIREMENTS.
2. IT IS THE INTENT OF THESE CONSTRUCTION DOCUMENTS THAT ALL CONDUIT IS TO BE INSTALLED WITHIN WALLS, ABOVE CEILINGS, & CONCEALED WHERE POSSIBLE.
3. COORDINATE ALL MOUNTING HEIGHTS OF CORD, PENDANT, OR WALL HUNG LUMINAIRES W/ ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN OF ELECTRICAL BOXES.
4. ELECTRICIAN TO VERIFY LUMINAIRE DIMMING CONTROLS & TO PROVIDE NECESSARY WIRING & DEVICES REQUIRED FOR DIMMING OPERATION.
5. ALL LUMINAIRE & FIXTURE DRIVERS TO BE CONCEALED IN ACCESSIBLE LOCATIONS, OUT OF DIRECT VIEW OF BUILDING OCCUPANTS.
6. LIGHTING CONTROL SYSTEM BASIS OF DESIGN IS ACUITY BRANDS SENSOR SWITCH & nLIGHT DIGITAL LIGHTING SYSTEM. ELECTRICAL CONTRACTOR TO SEE MANUFACTURER SHOP DRAWINGS & DESIGN FOR A COMPLETE AN OPERATIONAL SYSTEM. PROVIDE ALL HARDWARE, SET-UP, PROGRAMMING, ETC., PER OWNER & TITLE-24 REQUIREMENTS.

LIGHTING FIXTURE SCHEDULE

Table with columns: TAG, DESCRIPTION, MANUFACTURER, V, LAMPS, W, DIMMING, MOUNTING, REMARKS. Includes items like 2FT x 4FT SURFACE MOUNTED LED TROFFER, 6" DIA. RECESSED DOWNLIGHT, 6" DIA. RECESSED ADJUSTABLE DOWNLIGHT, 36" OVER THE MIRROR VANITY LIGHT, TWIN HEAD EMERGENCY EGRESS LIGHT, and COMBO LED EXIT & TWIN HEAD EMERGENCY LIGHT SIGN.

LINE VOLTAGE LIGHTING CONTROL SCHEDULE

Table with columns: TAG, DESCRIPTION, MANUFACTURER, OPERATION, REMARKS. Includes items like WALL MOUNTED SINGLE POLE SWITCH w/ 0-10V DIMMING, WALL MOUNTED SINGLE POLE SWITCH w/ INTEGRATED LINE VOLT. INFRARED OCC. SENSOR, WALL MOUNTED SINGLE POLE SWITCH w/ INTEGRATED LINE VOLT. IR OCC. SENSOR, WET, WALL MOUNTED SINGLE POLE SWITCH w/ INTEGRATED LINE VOLT. DUAL TECH OCC. SENSOR, WALL MOUNTED 6-16V DIMMER SWITCH w/ INTEGRATED DUAL TECH OCC. SENSOR, WALL BOX MOUNTED INFRARED OCCUPANCY SENSOR WITH LIGHT & FAN CONTROL, WALL MOUNTED 6-16V DIMMER SWITCH w/ INTEGRATED DUAL TECH OCC. SENSOR, CEILING MOUNTED INFRARED RANGE OCCUPANCY SENSOR, CEILING MOUNTED INFRARED EXTENDED RANGE OCCUPANCY SENSOR, and CEILING MOUNTED DUAL-TECH OCCUPANCY SENSOR.

LOW VOLTAGE LIGHTING CONTROL SCHEDULE

Table with columns: TAG, DESCRIPTION, MANUFACTURER, OPERATION, REMARKS. Includes items like nLIGHT SINGLE POLE DIMMING WALL SWITCH, nLIGHT DUAL POLE DIMMING WALL SWITCH, nLIGHT SINGLE POLE DIMMING WALL SWITCH w/ INTEGRAL INFRARED OCCUPANCY SENSOR, nLIGHT SINGLE POLE DIMMING WALL SWITCH w/ INTEGRAL DUAL-TECH OCC. SENSOR, nLIGHT CEILING MOUNT INFRARED OCCUPANCY SENSOR, nLIGHT RECESSED IN CEILING MOUNT INFRARED OCCUPANCY SENSOR, nLIGHT CEILING MOUNT DUAL TECH OCCUPANCY SENSOR, nLIGHT DUAL ZONE AUTOMATIC DIMMING CONTROL PHOTOCELL, nLIGHT POWER PACK, and TOUCHSCREEN LIGHTING CONTROL INTERFACE.

LIGHTING CONTROL NOTES (CA-24) :

NOTE: ALL LIGHTING TO BE PROGRAMMED AND CONTROLLED TO MEET TITLE-24 REQUIREMENTS

- 1. SMALL OFFICE <250 S.F. 130.1 (a) AREA LIGHTING CONTROL YES: WALL CONTROL N/A EXCEPTION: 130.1 (b) MULTI-LEVEL LIGHTING CONTROL YES: WALL DIMMER N/A EXCEPTION: 130.1 (c) AUTOMATIC SHUT-OFF CONTROL YES: SENSOR N/A EXCEPTION: 130.1 (d) AUTOMATIC DAYLIGHT CONTROL YES: N/A EXCEPTION: <120W IN EITHER ZONE 130.1 (e) DEMAND RESPONSE CONTROL YES: VIA NETWORK N/A EXCEPTION: 130.5 (d) CONTROLLED RECEPTACLES YES: SENSOR N/A EXCEPTION: SEQUENCE OF OPERATION: (STAND ALONE LOW VOLTAGE CONTROL NETWORK). PROGRAM: LIGHTING TO AUTO-ON TO 50% VIA OCCUPANCY DETECTION, MANUAL PUSH OF WALL SWITCH FOR 100% VACANCY-AUTO-OFF AFTER 15 MINS; CONTROLLED RECEPTACLES TO BE OCCUPANCY-ON / VACANCY-OFF AFTER 15 MINS.
2. LARGE OPEN OFFICE >250 S.F. 130.1 (a) AREA LIGHTING CONTROL YES: WALL CONTROL N/A EXCEPTION: 130.1 (b) MULTI-LEVEL LIGHTING CONTROL YES: WALL DIMMER N/A EXCEPTION: 130.1 (c) AUTOMATIC SHUT-OFF CONTROL YES: SENSOR N/A EXCEPTION: 130.1 (d) AUTOMATIC DAYLIGHT CONTROL YES: N/A EXCEPTION: <120W IN DAY ZONE 1 OR 2 130.1 (e) DEMAND RESPONSE CONTROL YES: N/A EXCEPTION: <4000W 130.5 (d) CONTROLLED RECEPTACLES YES: SENSOR N/A EXCEPTION: SEQUENCE OF OPERATION: (STAND ALONE LOW VOLTAGE CONTROL NETWORK). PROGRAM: LIGHTING TO AUTO-ON TO 50% VIA OCCUPANCY DETECTION, MANUAL PUSH OF WALL SWITCH FOR 100% VACANCY-AUTO-OFF AFTER 15 MINS; CONTROLLED RECEPTACLES TO BE OCCUPANCY-ON / VACANCY-OFF AFTER 15 MINS.
3. CORRIDOR 130.1 (a) AREA LIGHTING CONTROL YES: WALL CONTROL N/A EXCEPTION: 130.1 (b) MULTI-LEVEL LIGHTING CONTROL YES: OCC. SENSOR N/A EXCEPTION: 130.1 (c) AUTOMATIC SHUT-OFF CONTROL YES: OCC. SENSOR N/A EXCEPTION: 130.1 (d) AUTOMATIC DAYLIGHT CONTROL YES: N/A EXCEPTION: 130.1 (e) DEMAND RESPONSE CONTROL YES: N/A EXCEPTION: < 4,000W SEQUENCE OF OPERATION: (STAND ALONE LOW VOLTAGE LIGHTING CONTROL NETWORK). PROGRAM LIGHTING TO 100% ON / OFF AFTER 15 MINS.
4. BREAK ROOM 130.1 (a) AREA LIGHTING CONTROL YES: WALL CONTROL N/A EXCEPTION: 130.1 (b) MULTI-LEVEL LIGHTING CONTROL YES: WALL DIMMER N/A EXCEPTION: 130.1 (c) AUTOMATIC SHUT-OFF CONTROL YES: SENSOR N/A EXCEPTION: 130.1 (d) AUTOMATIC DAYLIGHT CONTROL YES: N/A EXCEPTION: <120W IN ZONE 1 OR 2 130.1 (e) DEMAND RESPONSE CONTROL YES: VIA NETWORK N/A EXCEPTION: <4,000W 130.5 (d) CONTROLLED RECEPTACLES YES: SENSOR N/A EXCEPTION: SEQUENCE OF OPERATION: (STAND ALONE LOW VOLTAGE LIGHTING CONTROL NETWORK). PROGRAM: LIGHTING TO AUTO-ON TO 50% VIA OCCUPANCY DETECTION, MANUAL PUSH OF WALL SWITCH FOR 100% VACANCY-AUTO-OFF AFTER 15 MINS; CONTROLLED RECEPTACLES TO BE OCCUPANCY-ON / VACANCY-OFF AFTER 15 MINS.
5. SINGLE STALL RESTROOM 130.1 (a) AREA LIGHTING CONTROL YES: WALL SWITCH N/A EXCEPTION: 130.1 (b) MULTI-LEVEL LIGHTING CONTROL YES: N/A EXCEPTION: NOT REQUIRED 130.1 (c) AUTOMATIC SHUT-OFF CONTROL YES: SENSOR N/A EXCEPTION: 130.1 (d) AUTOMATIC DAYLIGHT CONTROL YES: N/A EXCEPTION: 130.1 (e) DEMAND RESPONSE CONTROL YES: N/A EXCEPTION: SEQUENCE OF OPERATION: (STAND ALONE ROOM - LINE VOLTAGE CONTROLS POLE 1 - FAN; AUTO-ON OCCUPANCY / VACANCY OFF AFTER 15 MINS. POLE 2 - LIGHT; MANUAL ON / VACANCY OFF AFTER 15 MINS.
6. OTHER ROOM 130.1 (a) AREA LIGHTING CONTROL YES: WALL SWITCH N/A EXCEPTION: 130.1 (b) MULTI-LEVEL LIGHTING CONTROL YES: N/A EXCEPTION: <0.5W / SQ.FT. 130.1 (c) AUTOMATIC SHUT-OFF CONTROL YES: SENSOR N/A EXCEPTION: 130.1 (d) AUTOMATIC DAYLIGHT CONTROL YES: N/A EXCEPTION: <120W IN ANY ZONE 130.1 (e) DEMAND RESPONSE CONTROL YES: N/A EXCEPTION: SEQUENCE OF OPERATION: (STAND ALONE ROOM - LINE VOLTAGE CONTROLS MANUAL-ON / VACANCY OFF AFTER 15 MINS.
7. LARGE COMMON AREA 130.1 (a) AREA LIGHTING CONTROL YES: MASTER CONTROL N/A EXCEPTION: 130.1 (b) MULTI-LEVEL LIGHTING CONTROL YES: MASTER DIMMER N/A EXCEPTION: 130.1 (c) AUTOMATIC SHUT-OFF CONTROL YES: ASTRO TIMELOCK N/A EXCEPTION: 130.1 (d) AUTOMATIC DAYLIGHT CONTROL YES: AUTO DIM PC N/A EXCEPTION: 130.1 (e) DEMAND RESPONSE CONTROL YES: VIA NETWORK N/A EXCEPTION: <4,000W 130.5 (d) CONTROLLED RECEPTACLES YES: SENSOR & T-CLOCK N/A EXCEPTION: SEQUENCE OF OPERATION: (NETWORKED LOW VOLTAGE LIGHTING CONTROL NETWORK). PROGRAM: LIGHTING TO AUTO-ON TO 100% OR PRESET OWNER LEVEL, VIA OCCUPANCY DETECTION OR MANUAL PUSH OF WALL SWITCH AUTO-OFF VIA TIMELOCK OR MANUAL PUSH. CONTROLLED RECEPTACLES VIA TIMELOCK. 2 HR AFTR HOURS OVERRIDE PER OCC SENSOR OR MANUAL PUSH.



WALLIS DESIGN STUDIO ARCHITECTS, INC.

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NC - HOMELESS RESOURCE CENTER

1105 SUTTON WAY GRASS VALLEY, CA 95945

SCHEMATIC DESIGN

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Table with 2 columns: Date, Description, No.

Proj. No.: 23021

Date: Issue Date

Scale: AS NOTED

Drawn By: JL/JP

Drawing Title:

ELECTRICAL SPECIFICATIONS

Drawing Number:

E4.0

ELECTRICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

PART 1 GENERAL

1.01 WORK INCLUDED

- A. All labor, tools, and materials necessary to install, test, and place in operation complete and functional electrical systems, as shown on the plans and described herein.
B. Secure all permits and pay all fees necessary for the execution and completion of this work.

1.02 DRAWINGS

The electrical layouts are generally diagrammatic. The location of outlets and equipment are approximate unless dimensioned. The exact locations and routing of conduits shall be governed by structural conditions and physical interferences and by the location of electrical terminations of equipment.

1.03 QUALITY ASSURANCE

- A. All work shall be in full accordance with the latest edition of the National Electrical Code, all local, state, and federal codes, and with the requirements of the serving utility companies.
B. All electrical materials used on this project shall be best possible grade of their kinds, new, free from defects and, unless otherwise specifically noted, shall conform to applicable standards of National Electrical Manufacturers Association, the American National Standards Institute and Underwriters Laboratories, Inc. Each article of a kind shall be the standard product of a single manufacturer.
C. Specific brand names and catalog numbers are used to describe materials in order to establish standards of performance and quality. The decision of the Architect shall govern as to what materials may be substituted, but the burden of proof as to the equivalency of any proposed substitution shall be upon the Contractor.

1.04 SUBMITTALS

Submit to the Architect a complete list of materials and equipment stating manufacturer's names, catalog numbers, etc. No materials shall be installed until final approval is given.

Guarantee all work for one year from date of acceptance against all defects in material, equipment and workmanship.

PART 2 PRODUCTS

2.01 RACEWAYS

- A. Rigid Steel Conduit: Galvanized, complying with specifications UL-6, ANSI C80.1, Federal WW-C-58IE or latest revisions.
B. Intermediate Metallic Conduit (IMC): Galvanized, complying with specifications UL 1242, Federal WW-C-58IE of latest revisions.
C. Electrical Metallic Tubing (EMT): Galvanized, complying with specifications UL 797, ANSI C.80.3, Federal WW-C-563 or latest revisions.
D. Polyvinylchloride Conduit (PVC): Minimum Schedule 40.
E. Steel Flexible Conduit: Galvanized interlocking spirally wound steel.
F. Steel Liquidtight Flexible Conduit: Liquidtight, non-metallic, sunlight resistant jacket over flexible metal core.
G. Electrical Non-Metallic Tubing (ENT): A non-metallic pliable corrugated raceway, resistant to moisture and chemicals.

2.02 RACEWAY FITTINGS

- A. Rigid Steel Conduit and IMC:
1. Galvanized, waterproof, and threaded type.
B. Electrical Metallic Tubing:
1. Galvanized steel
2. Die cast
3. Compression ring type
4. Set screw type
C. Polyvinylchloride and ENT:
1. PVC Schedule 40, cemented type.
D. Metallic Flexible Conduit:
1. Galvanized, clamp, type, and approved for grounding.
E. Liquidtight Flexible Metal Conduit:
1. Galvanized, screw in type, approved for grounding.

2.03 WIRE AND CABLE

- A. Plainly marked with UL label, gauge, voltage and insulation type.
B. General Wiring: 600V type "TW" or "THHN" Copper, minimum size #12 AWG.
C. Feeders: 600V type "THW" Aluminum, or as shown on plans.

2.04 DEVICES

- A. Wall switches: "AC" rated, heavy duty, quiet type, rated 20 amperes at 120 volts AC. Special switches as noted.
B. Convenience outlets: Rated 15 amperes at 120 volts AC, 3-wire groundable type, Leviton #5262 duplex or #5261 single. Special outlets shall be as noted on plans.
C. Plates: Supply for all outlet or junction boxes, flush or surface. Two or more gangs in box shall have gang plates. Color of box covers to be selected by Architect.

PART 3 EXECUTION & APPLICATION

3.01 RACEWAY APPLICATION

- A. Rigid Steel Conduit and IMC:
1. May be exposed, concealed, installed underground, or in concrete.
2. Shall be installed per the designation on the plans.
B. Electrical Metallic Tubing:
1. Shall be concealed in protected attic spaces, or hollow stud spaces.
2. May be exposed in mechanical and electrical rooms where designated on the plans.
C. Polyvinylchloride Conduit:
1. Shall be a minimum of 3/4".
2. Shall only be installed beneath grade or in concrete.
3. A Maximum of 4 feet of exposed or concealed PVC may extend from grade or the concrete slab to the bottom or a switchboard, panelboard, device box, or similar equipment in electrical rooms only.
4. A maximum of 18 inches of PVC may extend from the concrete slab to the first device box when concealed in a stud space.
5. PVC shall not be installed in fire rated areas or where subject to mechanical damage.
D. Flexible Steel Conduit:
1. May be used in interior, dry, and non-hazardous locations only.
2. Shall be used in lengths no longer than 3 feet for motors and other equipment requiring flexible connections.
3. Shall be used in lengths no longer than 6 feet for connection of light fixtures.
E. Liquidtight Metallic Flexible Conduit:
1. Shall be used as indicated in item "D" above for damp or wet locations.

F. Electrical Non-Metallic Tubing:

- 1. May be installed in buildings not exceeding three stories.
2. Shall be concealed in walls, ceilings, and floors having a minimum finish rating of 15 minutes.
3. Shall not be installed in fire rated and assembly areas.

3.02 RACEWAY INSTALLATION

- A. Rigid or intermediate metal conduit shall have threads filled with conductive sealant before screwing into fittings.
B. Entire electrical raceway system shall form a continuous metallic electrical conductor from service point to every outlet, and shall be grounded by connection to main service ground conductor.
C. Install conduit runs exposed to view parallel or at right angles to structural members, walls or building lines.
D. Close open ends of conduit with factory made conduit seals during construction. Examine inside of each piece of conduit just before installation and remove any dirt or foreign objects.
E. Support conduit with one-hole malleable factory made pipe straps, fastened with screws; nails shall not be used.

3.03 WIRE INSTALLATION

- A. Make joints, splices, taps and connections of conductors with solderless connectors.
B. Provide grounding and bonding in accordance with applicable codes and regulations.
C. Connect all air conditioning motors to conduit systems with sections of flexible conduit to facilitate removal of motor. Use approved fittings only.

3.04 LIGHTING FIXTURE INSTALLATION

- A. Install fixtures complete with all necessary connectors and brackets. Remove all labels except UL label from exposed parts of fixtures. Clean fixtures upon project completion.
B. Where structural members or mechanical equipment prevent installation of fixtures as shown, resulting layout shall be symmetrical within ceiling space and approved by the Architect.
C. Install lamps of proper type.

3.05 TESTS

Test all systems upon completion of work to demonstrate that the equipment furnished and installed as connected functions electrically in the manner required.

END OF SPECIFICATION



STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Mechanical Systems**  
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**A. GENERAL INFORMATION**  
 01 Project Location (city): Grass Valley 04 Total Conditioned Floor Area: 468  
 02 Climate Zone: 16 05 Total Unconditioned Floor Area: 0  
 03 Occupancy Types Within Project: 06 # of Stories (Habitable Above Grade): 1  
 \* Support Areas: \* All Other Occupancies

**B. PROJECT SCOPE**  
 This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)(2) for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
<input type="checkbox"/> Mechanical Controls	<input type="checkbox"/> System Piping	<input checked="" type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input type="checkbox"/> Cooling Towers	<input type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input checked="" type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

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**C. COMPLIANCE RESULTS**  
 Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02	03	04	05	06	07	08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND Pumps 140.4(k), 170.2(c)(4)	AND Fans/Economizers 140.4(c), 140.4(e), 170.2(c)	AND System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND Ventilation 120.1, 160.2	AND Terminal Box Controls 140.4(g), 170.2(c)(4)(H)	AND Distribution 120.3, 140.4(i), 160.2, 160.3	AND Cooling Towers 110.2(e)(2)	COMPLIES
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	
Yes	AND	AND	AND	AND	AND	AND	AND	COMPLIES

Mandatory Measures Compliance (See Table Q for Details): COMPLIES

**D. EXCEPTIONAL CONDITIONS**  
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

**E. ADDITIONAL REMARKS**  
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

**F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)**

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
FC-S	1	Single zone	New/ Addition		<input type="checkbox"/>

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**F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)**  
 Dry System Equipment Sizing (Includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)(2) and 170.2(c)(3a)	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available <sup>1</sup> 140.4(a) and 170.2(c)(1)	Heating Output <sup>1,3</sup> Per Design (kBtu/h)	Cooling Output <sup>1,3</sup> Per Design (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)	Total Cooling Load (kBtu/h)
FC-S	Unitary Heat Pumps	Air-cooled, split [Phase]	Yes	2.57	11	0	16.41	12.5	40.36	10.49

<sup>1</sup> FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)(1). Healthcare facilities are exempted.  
<sup>2</sup> It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.  
<sup>3</sup> If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.  
<sup>4</sup> Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

**Dry System Equipment Efficiency (Other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)**

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
FC-S	<65,000		HSPF	7.5	10	SEER	14.3	21

**G. PUMPS**  
 This section does not apply to this project.

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**H. FAN SYSTEMS & AIR ECONOMIZERS**  
 This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(f), 170.2(c)(3), and 170.2(c)(4) for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in table H.

System Name	FC-S	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	560	Site Elevation	6,200	Economizer	NA: <=33 kBtu/h cooling
SF Supply	1									Base Allowance for system serving spaces <=6 floors away MERV 13-16 Filter upstream of thermal conditioning equipment Hydronic/DX cooling coil or heat pump coil	560 560 560				130 78 78
										Fan System Allowance (kW) <sup>1</sup>				Fan System Electrical Output (kW)	

<sup>1</sup> FOOTNOTES: Fans serving spaces with design background noise goals below NC35  
<sup>2</sup> Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.

**H. EXHAUST AIR HEAT RECOVERY 140.4(g), 170.2(c)(4D)**

01	02	03	04	05	06	07	08	09	10	11
Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(a) & 170.2(c)(4D)	Exhaust Air Heat Recovery 140.4(i) & 170.2(c)(4O)	Type Of Heat Recovery Recovery	Required Recovery Ratio	Energy Recovery Bypass

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**I. FAN ENERGY INDEX (FEI)**

01	02	03
Name or Item Tag	FEI Exception	FEI

**I. SYSTEM CONTROLS**  
 This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)(4D), 170.2(c)(4E) or requirements in 141.0(b)(2), 160.2(b)(2) for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area (ft²)	Thermostats 110.2(b) & (c), 130.2(a) 160.3(a)(2A) or 141.0(b)(2) & 180.2(b)(2)	Shut-Off Controls 120.2(a) & 160.3(a)(2)	Isolation Zone Controls 120.2(a) & 160.3(a)(2)	Demand Response 110.1, 120.2(b) & 160.3(a)(2)	Supply Fan Temp. Reset 140.4(f) & 170.2(c)(4D)	Window Interlocks per 140.4(i) & 170.2(c)(4D)
FC-S	Single zone	<= 25,000 ft²	Setback	4 Hour Time Zone	NA: Single Zone	DR 1stat per 110.12	Included	NA: Auto-closing doors

<sup>1</sup> FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

**J. VENTILATION AND INDOOR AIR QUALITY**  
 This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1, 120.2(c)(3), 140.4(g) and 140.4(i) for all nonresidential and hotel/motel and dist24ref/160.2, 160.3(a)(3D), 170.2(c)(4N), 170.2(c)(4O) for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflow may be shown on the plans or the calculations can be presented in a spreadsheet.

01	02	03	04	05	06	07	08	09
<input type="checkbox"/>								
01	02	03	04	05	06	07	08	09
01	02	03	04	05	06	07	08	09

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

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**J. VENTILATION AND INDOOR AIR QUALITY**

01	02	03	04	05	06	07
System Name	FC-S	System Design OA CFM Airflow <sup>1</sup>	360	System Design Transfer Air CFM	0	Air Filtration per 120.1(c)(4) & 160.2(c)(2) and 160.2(c)(2)1 <sup>2</sup>
08	09	10	11	12	13	14
08	09	10	11	12	13	14
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)(3) & 160.2(c)(3)	Exh. Vent per 120.1(c)(4) & 160.2(c)(4)	DCV or Sensor Controls per 120.1(d), 120.1(d)(5), and 120.1(e)(3) 160.2(c)(5D) 160.2(c)(5E) 160.2(c)(5D)	DCV or Sensor Controls per 120.1(d), 120.1(d)(5), and 120.1(e)(3) 160.2(c)(5D) 160.2(c)(5E) 160.2(c)(5D)	DCV or Sensor Controls per 120.1(d), 120.1(d)(5), and 120.1(e)(3) 160.2(c)(5D) 160.2(c)(5E) 160.2(c)(5D)	DCV or Sensor Controls per 120.1(d), 120.1(d)(5), and 120.1(e)(3) 160.2(c)(5D) 160.2(c)(5E) 160.2(c)(5D)
Laundry	Coin-operated Laundry	292	# of Shower heads/ toilets	43.8	0	160
Showers	Shower room - cont. exh.	176	4	0	80	200
17	Total System Required Min OA CFM	44	18	Ventilation for this System Complex?	Yes	

<sup>1</sup> FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system  
<sup>2</sup> Air filtration requirements apply to the following three system types per 120.1(c)(1A): space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.  
<sup>3</sup> Lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.  
<sup>4</sup> 120.2(e)(3) requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller; multipurpose rooms less than 1,000 ft²; classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stock aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

**Multifamily Dwelling Unit Ventilation Systems**

Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
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 Documentation Software: EnergyPro  
 Compliance ID: EnergyPro-3103-0623-0101  
 Report Generated: 2023-06-06 11:21:21

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Mechanical Systems**  
**CERTIFICATE OF COMPLIANCE** NRCC-MCH-4  
 Project Name: NC Homeless Resource Center Report Page: (Page 7 of 9)  
 Project Address: 1105 Sutton Way Date Prepared: 6/6/2023

**K. TERMINAL BOX CONTROLS**  
 This section does not apply to this project.

**L. DISTRIBUTION (DUCTWORK AND PIPING)**  
 This section does not apply to this project.

**M. COOLING TOWERS**  
 This section does not apply to this project.

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**N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**

Form/Title	01	02
NRCC-MCH-01-E - Must be submitted for all buildings		

**O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	FC-S;
NRCA-MCH-03-A - Constant Volume Single Zone HVAC Note: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	FC-S;
NRCA-MCH-11-A Automatic Demand Shed Controls	FC-S;

**P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION**  
 There are no NRCC forms required for this project.

**Q. MANDATORY MEASURES DOCUMENTATION LOCATION**  
 This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH	Yes
Mandatory Measures Note Block	Plan sheet or construction document location M-Sheets

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 Project Address: 1105 Sutton Way Date Prepared: 6/6/2023

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Chris Miller  
 Signature Date: 2023-06-06  
 Address: 547 Uren St., Nevada City CA 95959  
 Phone: 530 265-2492

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

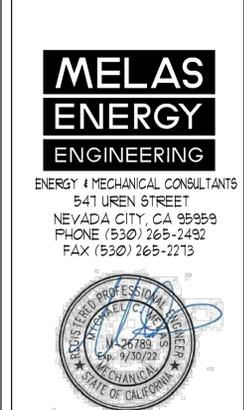
Responsible Designer Name: Michael Melas  
 Date Signed: 2023-06-06  
 Address: 547 Uren St., Nevada City CA 95959  
 Phone: 530 265-2492

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**ENERGY FEATURES SUMMARY**

SCOPE:	NEW HVAC SYSTEM IN THE LAUNDRY/SHOWER ROOM & REPLACED WATER HEATERS
PV SYSTEM:	NOT REQUIRED
SPECIAL FEATURES:	NONE
SPACE HEATING:	NEW HEAT PUMP (HSFP2=10)
SPACE COOLING:	NEW HEAT PUMP (SEER2=21 EER2=12.5)
DUCT INSULATION:	NONE
WATER HEATING:	(3) NEW GAS ON-DEMAND WATER HEATERS (UEF=0.95)
HERS TESTS:	NONE
ACCEPTANCE TESTS:	NRCA-MCH-02-A - OUTDOOR AIR, NRCA-MCH-03-A - CONSTANT VOLUME SINGLE ZONE HVAC, NRCA-MCH-11-A - DEMAND SHED CONTROLS

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ENERGY & MECHANICAL CONSULTANTS  
 547 UREN STREET  
 NEVADA CITY, CA 95959  
 PHONE (530) 265-2492  
 FAX (530) 265-2273

**NC - HOMELESS RESOURCE CENTER**

1105 SUTTON WAY  
 GRASS VALLEY, CA 95945  
 TITLE-24 ENERGY REPORT  
 NONRESIDENTIAL MECHANICAL FOR LAUNDRY

Project Title: NC - HOMELESS RESOURCE CENTER  
 Project Location: 1105 SUTTON WAY, GRASS VALLEY, CA 95945  
 Sheet Title: TITLE-24 ENERGY REPORT NONRESIDENTIAL MECHANICAL FOR LAUNDRY

Revisions:

No.	Date:	By:	Description:
.	.	.	.

Plot Date:

Job # 23-153

Scale N/A

Issued By 6/6/2023

Sheet Number T24-1

