

## **DEFERRED SUBMITTALS:**

- ACOUSTICAL CEILING SUSPENSION SYSTEM
- FIRE ALARM SYSTEMS FIRE SPRINKLER
- SEISMIC BRACING FOR PERMANENTLY INSTALLED HVAC AND MECAHNICAL EQUIPMENT
- SEISMIC BRACING FOR PERMANENTLY INSTALLED ELECTRICAL EQUIPMENT

- SEISMIC BRACING FOR PERMANENTLY INSTALLED PLUMBING EQUIPMENT **COLD FORMED METAL FRAMING** 
  - EMERGENCY RESPONDER RADIO SYSTEM TESTING AND/OR SYSTEM
- INSTALLATION FIRESTOPPING - INCLUING RATED EXPANSION JOINTS SPECIAL INSPECTIONS REQUIRED FOR FIRE-RESISTANT PENETRATIONS AND JOINT SYSTEMS.

NOTE: DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW THEM WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING PER OSSC 107.3.4.1.

#### **JURISDICTION:**

- **BUILDING & LAND USE: WASHINGTON COUNTY** (UNINCORPORATED WASHINGTON COUNTY)
- SANITATION: CLEAN WATER SERVICES
- WATER: TUALATIN VALLEY WATER FIRE DISTRICT: TUALATIN VALLEY FIRE & RESCUE
- PARK DISTRICT: TUALATIN HILLS PARKS & RECREATION DISTRICT
- NORTH BETHANY THPRD AREA GARBAGE: WASTE MANAGEMENT OF OREGON

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### **PROJECT TEAM:**

OWNER: BEAVERTON SCHOOL DISTRICT 16550 SW MERLO RD **BEAVERTON, OR 97003** ATTN: DOAA ELHAGGAN & PATRICK O'HARROW 503-356-4433

ARCHITECTURE 110 SW YAMHILL ST, STE 105 PORTLAND, OR 97204 ATTN: JANE GOODING & TIM GANEY 503-274-2675

CIVIL: WH PACIFIC 9450 SW COMMERCE CIR, STE 300 WILSONVILLE, OR 97070 ATTN: TYLER OTT 503-626-0455

LANDSCAPE: **CAMERON MCCARTHY** 220 NW 8TH AVE PORTLAND, OR 97214 ATTN: MATT KOEHLER & JASON GILLIES 503-705-4345

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PLANNING: MIG | APG 921 SW WASHINGTON ST, STE 468 PORTLAND, OR 97205 ATTN: FRANK ANGELO 503-227-3664



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**BID/PERMIT** 06/10/2022 REVISIONS

74-22109-00

COVER SHEET PROJECT INFORMATION **&SHEET INDEX** 

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2019 OSSC)	BUILDING CODE ANALYSIS         Applicable Codes         •       2019 Oregon Structural Specialty Code         •       2021 Oregon Zero Energy Ready Commercial Code (ASHRAE Standard 90.1)         •       2009 ICC / ANSI A117.1 Accessibility Code         •       2019 Oregon Mechanical Specialty Code         •       2021 Oregon Plumbing Specialty Code         •       2021 Oregon Fire Code         •       2019 Oregon Fire Code         •       Washington County Environmental Health         Deferred Submittals:       •         •       Fire Sprinkler & Fire Alarm Design: Fire Alarm plan review and installation must be completed prior to final inspection per OFC 907.2.3.	SGROUP
ove-grade wall	<ul> <li>Construction Type Occupancy</li> <li>Business Group B (uses for office or service-type transactions, including storage of records and accounts; counseling, administration, teacher offices, etc.)</li> <li>Education Group E (use by six or more personas at any one time for education purposes through the 12th grade)</li> </ul>	DLR Group
:MAIN.)	Building Type:         • II-B         Fire Protection:         • Automatic sprinkler system installed in accordance with 903.3.1.1 or 903.3.1.2         • Emergency voice/alarm communication system in accordance with Section 907.5.2.2         • Fire Extinguisher Cabinets (EXISTING FEC's ANE FE's SALVAGED AND RELOCATED THIS PROJECT)	SERED ARCA
elope	<ul> <li>Building element fire rating requirement (Per Table 601):</li> <li>0 HR = Primary structural frame</li> <li>0 HR = Bearing Walls, Exterior</li> <li>0 HR = Bearing Walls, Interior</li> <li>0 HR = Non-bearing walls and partitions, Exterior (Per Table 602), if greater than 10'-0" fire separation distance</li> <li>0 HR = Non-bearing walls and partitions, Interior</li> <li>0 HR = Floor construction and secondary members</li> <li>0 HR = Roof construction and secondary members</li> </ul>	PORTLAND, OR 6821 0F
	<ul> <li><u>Definition:</u> <ul> <li>Area, Building: The area included within the surrounding exterior walls (or exterior walls and fire walls), exclusive of vent shafts and courts. Areas of the building not provided with surroundings walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.</li> </ul> </li> <li><u>Allowable Building Area Calculation:</u> <ul> <li>Per 506.1, the building areas indicated by Table 506.2 include:</li> <li>Occupancy Classification</li> </ul> </li> </ul>	
	Occupancy classification       E         Type of Construction       II-B         Multiple Stories       SM         Tabular Allowable Area Factor (At)       43,500 SF         •       Proposed Building Area: NOTE: This project involves south building Level 1 only. (See adjacent code plan diagram.) South Building, Level 1         South Building, Level 1       22,544 SF	
se in the educational	Interior Finish Requirements Controls, operating mechanisms and hardware intended for operation by the occupant, including switches that control lighting and ventilation and electrical convenience outlets, in accessible spaces, along accessible routes or as parts of accessible elements shall be accessible. Per Section 1109.13 (OSSC)	
010 female occupants	Combustible trim, excluding handral and guardralis, shall not exceed 10 percent of the specific wall or celling area to which it is attached. Per Section 806.5 (OSSC) Interior floor-wall base that is 6 inches or less in height shall be tested in accordance with Section 804.2 and shall not be less than Class II. Per Section 806.6 (OSSC) Per Table 803.9	
BLY MODE. used concurrently with	<ul> <li>Occupancy Type A-2         <ul> <li>Occupancy Type A-2</li> <li>Class B = Vertical enclosures and exit passageways</li> <li>Class B = Corridors</li> <li>Class C = Rooms and enclosed spaces</li> </ul> </li> </ul>	
ation. Rooms available and office spaces), ge spaces), kitchen computer lab). 9 female	<ul> <li>Occupancy Types B and E Class B = Vertical enclosures and exit passageways Class C = Corridors Class C = Rooms and enclosed spaces</li> <li><u>Definitions:</u> Class B = Flame spread index 26-75; smoke developed index 0-450 Class C = Flame spread index 76-200; smoke developed index 0-450</li> <li><u>Occupant Loads</u> Maximum floor area allowances per occupant per Table 1004.1.1. See code plan for egress calculations per room.</li> </ul>	
	Room Floor Area in SF per Occupant	
	Assembly - Concentrated 7 net     Assembly - Unconcentrated 15 net     Classroom 20 net	
	<ul> <li>Library - Reading rooms</li> <li>Business areas</li> <li>Library - Stack area</li> <li>Library - Stack area</li> <li>Kitchens, commercial</li> <li>Accessory storage areas, mechanical</li> <li>a00 gross</li> <li>Accessory storage areas, mechanical</li> <li>a00 gross</li> </ul>	
	Means of Egress         Minimum egress width per 1005.1:         • Stairways       0.3 inches per occupant         • Other egress components       0.2 inches per occupant	S ADI DOL DISTF
	<ul> <li>Maximum Common Path of Egress Travel (per Table 1014.3 with sprinkler system):</li> <li>100 ft = B Occupancy</li> <li>75 ft = E Occupancy</li> <li>30 ft = A Occupancy with fixed seating per 1028.8</li> </ul>	TON SCH
	<ul> <li>250 ft = A and E Occupancies</li> <li>300 ft = B Occupancy</li> <li>Corridors</li> <li>Fire-resistance = 0 HR per Table 1018.1 (A, E, and B Occupancy types with sprinkler system)</li> </ul>	<b>SAT</b> BEAVER
	<ul> <li>Corridor width per Table 1018.2 44" minimum per 1005.1 72" minimum in Group E occupancy where the corridor has the required capacity of 100 or more</li> <li>1018.4 Dead ends</li> </ul>	
	<ul> <li>Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet.</li> <li>-<u>Exception 2</u> - In occupancies in Groups B and E, wherer teh building is equipped thorughout with an automatic sprinkler system in accordance with Section 903.3.1.1 the length of the dead-end corrdiors shall not exceed 50 feet.</li> <li>-<u>Exception 3</u> - A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor</li> </ul>	BID/PERMIT 06/10/2022 REVISIONS
ROOM)	Minimum Number of ExitsOccupant Load (persons per story)1 - 500501-1,000More than 1,000	
		74-22109-00 CODE PLAN
IESE EQUALS		
		CP1.1





20 0 10 ( FEET ) 1 INCH = 20 FT.





### GRADING, STREET AND UTILITY EROSION AND SEDIMENT CONSTRUCTION NOTES:

1. SEED USED FOR TEMPORARY SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED: A. VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE

- RESTORATION PLAN FOR APPROPRIATE SEED MIX. B. DWARF GRASS MIX (MIN. 100 LB./AC.)
- 1. DWARF PERENNIAL RYEGRASS (80% BY WEIGHT) 2. CREEPING RED FESCUE (20% BY WEIGHT)
- C. STANDARD HEIGHT GRASS MIX (MIN. 100LB./AC.)
- 1. ANNUAL RYEGRASS (40% BY WEIGHT) 2. TURF-TYPE FESCUE (60% BY WEIGHT)

2. SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.

3. LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.

4. TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.

5. STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.

6. EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.

7. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.

8. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

9. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.

10. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.

11. AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERMS OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.

12. SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.

13. AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.

14. USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.

### **EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:**

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

2. ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.

3. LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.

4. THE STORM WATER FACILITY SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER SYSTEM FUNCTIONING AND SITE PAVING.

5. INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.

THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" CONSTRUCTION MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

## **EROSION CONTROL LEGEND**

- ¢\_0 INLET PROTECTION CONCRETE WASHOUT
- SF ---- SEDIMENT FENCE
- FLOW ARROW

CONSTRUCTION ENTRANCE

## CONSTRUCTION KEYNOTES

- (1)INSTALL INLET PROTECTION PER DETAIL 1 SHEET C2.1
- (2) INSTALL CONCRETE WASHOUT PER DETAIL 2 SHEET C2.1.
- INSTALL SEDIMENT FENCE PER DETAIL 3 SHEET C2.1 (3)
- (4)INSTALL CONSTRUCTION ENTRANCE PER CWS STANDARD DETAIL 855 SHEET C2.1











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EROSION



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SEDIMENT FENCE SCALE: N.T.S.

18"	2
4'	

→ 30 MIL IMPERMEABLE LINER TO PROTECT NATIVE SOIL

4'X4' BOTTOM, 2 TO 1 SLOPE TO SIDES CONTRACTOR SHALL TAKE PRECAUTIONS TO NOT OVERFLOW PIT.

NOTE: CONTRACTOR CAN USE MANUFACTURED TRAY'S (ECO-PAN OR EQUAL), OR A LINED PIT AS SHOWN ABOVE.



NOT	ES:
1.	WHEN RAINFALL AND RUNOFF OCCURS, A KNOWLEDGEABLE AND EXPERIENCED PERSON IN THE PRINCIPLES, PRACTICES, INSTALLATION, AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS WHO WORKS FOR THE PERMITTEE MUST PROVIDE DAILY INSPECTIONS OF THE EROSION AND SEDIMENT CONTROLS AND DISCHARGE OUTFALLS.
2.	CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND FROM OCTOBER 1 THROUGH MAY 31ST EACH YEAR.
3.	DURING WET WEATHER PERIOD, TEMPORARY STABILIZATION OF THE SITE MUST OCCUR AT THE END OF EACH WORK DAY.
4.	SEDIMENT CONTROLS MUST BE INSTALLED AND MAINTAINED ON ALL DOWN GRADIENT SIDES OF THE CONSTRUCTION SITE AT ALL TIMES DURING CONSTRUCTION. THEY MUST REMAIN IN PLACE UNTIL PERMANENT VEGETATION OR OTHER PERMANENT COVERING OF EXPOSED SOIL IS ESTABLISHED.
5.	ALL ACTIVE INLETS MUST HAVE SEDIMENT CONTROLS INSTALLED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. UNLESS OTHERWISE APPROVED, A SURFACE MOUNTED AND ATTACHABLE, U-SHAPED FILTER BAG IS REQUIRED FOR ALL CURB INLET CATCH BASINS.
6.	SIGNIFICANT AMOUNTS OF SEDIMENT THAT LEAVES THE SITE MUST BE CLEANED UP WITHIN 24 HOURS AND PLACED BACK ON THE SITE AND STABILIZED OR PROPERLY DISPOSED. THE CAUSE OF THE SEDIMENT RELEASE MUST BE FOUND AND PREVENTED FROM CAUSING A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PREFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIME FRAME.
7.	SEDIMENT MUST NOT BE INTENTIONALLY WASHED INTO STORM SEWERS, DRAINAGE WAYS, OR WATER BODIES.
8.	SEDIMENT MUST BE REMOVED FROM BEHIND ALL SEDIMENT CONTROL MEASURES WHEN IT HAS REACHED A HEIGHT OF 1/3-RD THE BARRIER HEIGHT AND PRIOR TO THE CONTROL MEASURES REMOVAL.
9.	CLEANING OF ALL STRUCTURES WITH SUMPS MUST OCCUR WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY 50% AND AT COMPLETION OF PROJECT.
10.	ANY USE OF TOXIC OR OTHER HAZARDOUS MATERIALS MUST INCLUDE PROPER STORAGE, APPLICATION, AND DISPOSAL.
11.	THE PERMITTEE MUST PROPERLY MANAGE HAZARDOUS WASTES, USED OILS, CONTAMINATED SOILS, CONCRETE WASTE, SANITARY WASTE, LIQUID WASTE, OR OTHER TOXIC SUBSTANCES DISCOVERED OR GENERATED DURING CONSTRUCTION.
12.	THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS. NUTRIENT RELEASES FROM FERTILIZERS TO SURFACE WATERS MUST BE MINIMIZED. TIME RELEASE FERTILIZERS SHOULD BE USED AND CARE SHOULD BE MADE IN APPLICATION OF FERTILIZERS WITHIN ANY WATER WAY RIPARIAN ZONE.
13.	OWNER OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH CURRENT CLEAN WATER SERVICES STANDARDS AND STATE, AND FEDERAL REGULATIONS.
14.	PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BOUNDARIES OF THE CLEARING LIMITS, VEGETATED BUFFERS, AND ANY SENSITIVE AREAS SHOWN ON THIS PLAN SHALL BE CLEARLY DELINEATED IN THE FIELD. UNLESS OTHERWISE APPROVED, NO DISTURBANCE IS PERMITTED BEYOND THE CLEARING LIMITS. THE OWNER/PERMITTEE MUST MAINTAIN THE DELINEATION FOR THE DURATION OF THE PROJECT. NOTE: VEGETATED CORRIDORS TO BE DELINEATED WITH ORANGE CONSTRUCTION FENCE OR APPROVED EQUAL.
15.	PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BMPS THAT MUST BE INSTALLED ARE GRAVEL CONSTRUCTION ENTRANCE, PERIMETER SEDIMENT CONTROL, AND INLET PROTECTION. THESE BMPS MUST BE MAINTAINED FOR THE DURATION OF THE PROJECT.
16.	IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAN SEPTEMBER 1ST; THE TYPE AND PERCENTAGES OF SEED IN THE MIX ARE AS IDENTIFIED ON THE PLANS OR AS SPECIFIED BY THE DESIGN ENGINEER.
17.	WATERTIGHT TRUCKS MUST BE USED TO TRANSPORT SATURATED SOILS FROM THE CONSTRUCTION SITE. AN APPROVED EQUIVALENT IS TO DRAIN THE SOIL ON SITE AT A DESIGNATED LOCATION USING APPROPRIATE BMPS; SOIL MUST BE DRAINED SUFFICIENTLY FOR MINIMAL SPILLAGE.
18.	ALL PUMPING OF SEDIMENT LADEN WATER MUST BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP (I.E. FILTER BAG).
19.	THE ESC PLAN MUST BE KEPT ONSITE. ALL MEASURES SHOWN ON THE PLAN MUST BE INSTALLED PROPERLY TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER A SURFACE WATER SYSTEM, ROADWAY, OR OTHER PROPERTIES.
20.	THE ESC MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE MEASURES SHALL BE UPGRADED AS NEEDED TO MAINTAIN COMPLIANCE WITH ALL REGULATIONS.
21.	WRITTEN ESC LOGS ARE SUGGESTED TO BE MAINTAINED ONSITE AND AVAILABLE TO DISTRICT INSPECTORS UPON REQUEST.
22.	IN AREAS SUBJECT TO WIND EROSION, APPROPRIATE BMPS MUST BE USED WHICH MAY INCLUDE THE APPLICATION OF FINE WATER
22	ALL EXPOSED SOLLS MUST BE COVERED DURING WET WEATHER REPROVED MEASURES.
23.	
	STANDARD EROSION CONTROL
	NOTES FOR SITES LESS THAN 1 Clean Water Services
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80% CD 05/13/2022 REVISIONS

74-21102-00

DETAILS

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- 1. Refer to architectural, electrical and civil for additional demolition or protection measures required.
- 2. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
- Barricade and protect trunks, limbs, roots and root zones beyond dripline of existing trees and plant materials to remain as directed by Owner's Representative. Cut no limbs or roots larger than 2" in diameter without approval of Owner's Representative. Notify Owner's Representative prior to performing any excavation within protection areas.
- 4. Salvage plants from plant beds as needed to complete plant restoration as shown on site plan.

### LEGEND



EXISTING TREES

SALVAGED BIKE RACK

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DEMO PAVING/HARDSCAPE. SEE CIVIL, ELECTRICAL, AND ARCHITECTURAL FOR ADDITIONAL WORK

SAWCUT LINE



ARCHITE , Eugene, , Ste. 410, nccarthy.	CTURE & PLAN OR 97401 Portland, OR 972
AVERTON SCHOOL DISTRICT	5 NW KAISER RD, PORTLAND, OR 97229

74-22109-00

DEMO PLAN

L1.1



- 1. Refer to architectural, electrical and civil for additional demolition or protection measures required.
- Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
- 3. Barricade and protect trunks, limbs, roots and root zones beyond dripline of existing trees and plant materials to remain as directed by Owner's Representative. Cut no limbs or roots larger than 2" in diameter without approval of Owner's Representative. Notify Owner's Representative prior to performing any excavation within protection areas.
- 4. Salvage plants from plant beds as needed to complete plant restoration as shown on site plan.

### LEGEND



0' 5' 10' 20'

1" = 10'-0"

	© DLR Group
A BEGIS	TERED 538 VS. KOEHLER REGON V21/03 E ARCHIT
CAMP McCC/ LANDSCAPE ARCH 160 E Broadway, Eug 133 SW 2nd Ave. Ste. 541.485-7385 www.cameronmcca	ERON RECOVER ALLECTURE & PLANNING ene, OR 97401 410, Portland, OR 97204 rthy.com
SATO ES ADDITION BEAVERTON SCHOOL DISTRICT	7775 NW KAISER RD, PORTLAND, OR 97229
BID / PEF 06/10/2022 REVISIONS	RMIT
74-22109-0 DEMO F	oo PLAN
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1. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.

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REGISTERED 538

538 MATTHEWS. KOEHLER OREGON 1/21/03 CAPE ARCHIT

CAMERON McCARTHY

LANDSCAPE ARCHITECTURE & PLANNIN

133 SW 2nd Ave. Ste. 410, Portland, OR 97204

160 E Broadway, Eugene, OR 97401

- 2. Barricade and protect trunks, limbs, roots and root zones beyond dripline of existing trees and plant materials to remain as directed by Owner's Representative. Cut no limbs or roots larger than 2" in diameter without approval of Owner's Representative. Notify Owner's Representative prior to performing any excavation within protection areas.
- 3. Install new utilities so that rim elevations are flush with finish grades at pavement, lawn and plant beds. Adjust rim elevations of existing utilities accordingly.
- 4. All accessible components including, but not limited to signs, ramps, tactile warning, markings, etc. shall conform to all Oregon State Standards for parking and access for the disabled. Obtain Owner's Representative approval prior to installing any related work.
- 5. Verify existing elevations where new work abuts existing to remain. Notify Owner's Representative of any discrepancies.
- 6. Salvage or install new plant material at plant bed restoration areas. Install sod at any lawn areas damaged by construction activity.
- 7. Bike Racks. Eight (8) bike racks (16 spaces) have been identified on the site plan to accommodate the four (4) classroom additions and meet current code requirements. These racks were not previously included in the original land use approval.

#### LEGEND



1" = 10'-0"



1. Refer to general site plan notes on sheet L2.1.

### LEGEND









- 1. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
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- Install new utilities so that rim elevations are flush with finish grades at pavement, lawn and plant beds. Adjust rim elevations of existing utilities accordingly.
- Verify existing elevations where new work abuts existing to remain. Notify Owner's Representative of any discrepancies prior to any construction.
- PEGISTERED 538 Adjust rim elevations of existing utilities so that rims are flush with finish grade at new paving and lawns.
- 6. Blend all new elevations back to existing grade to create a uniform slope. Maximum slope, 4:1.
- 7. Construct smooth transitions between new paving improvements and existing paving to remain.
- 8. Fire Lane to remain accessible when school is inhabited. Schedule work in this area for weekends.

#### LEGEND

FFE	FINISH FLOOR ELEVATION
	EXISTING CONTOUR (1' INTERVAL)
222	NEW CONTOUR (1' INTERVAL)
XX.XX	SPOT ELEVATION SEE NOTE 1
VM(XX.XX)	VERIFY / MATCH EXISTING ELEVATION
TC XX.XX BC XX.XX	TOP OF CURB ELEVATION ELEVATION BOTTOM OF CURB SEE NOTE 1
TW XX.XX BW XX.XX	TOP OF WALL ELEVATION BOTTOM OF WALL ELEVATION SEE NOTE 1
CB RIM XX.XX	CATCH BASIN RIM ELEVATION SEE NOTE 1
AD RIM XX.XX	AREA DRAIN RIM ELEVATION SEE NOTE 1
DD RIM XX.XX	DECK DRAIN RIM ELEVATION SEE NOTE 1
TD RIM XX.XX	TRENCH DRAIN RIM ELEVATION SEE NOTE 1

TD RIM XX.XX



BREAK IN PLANE ARROW INDICATES DIRECTION OF FLOW



MATTHEW S. KOEHLER OREGON 11/21/03 CAPE ARCHIT CAMERON McCARTHY LANDSCAPE ARCHITECTURE & PLANNIN 160 E Broadway, Eugene, OR 97401 133 SW 2nd Ave. Ste. 410, Portland, OR 97204 541-485-7385 www.cameronmccarthy.com **ADDITION** С Ш

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**BID / PERMIT** 06/10/2022 REVISIONS

74-22109-00

GRADING PLAN

L4.1



- 1. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
- 2. All accessible components including, but not limited to signs, ramps, tactile warning, markings, etc. shall conform to all Oregon State Standards for parking and access for the disabled. Obtain Owner's Representative approval prior to installing any related work.
- 3. Install new utilities so that rim elevations are flush with finish grades at pavement, lawn and plant beds. Adjust rim elevations of existing utilities accordingly.
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- 5. Adjust rim elevations of existing utilities so that rims are flush with finish grade at new paving and lawns.
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- 7. Construct smooth transitions between new paving improvements and existing paving to remain.
- 8. Fire Lane to remain accessible when school is inhabited. Schedule work in this area for weekends.

#### LEGEND

FFE	FINISH FLOOR ELEVATION
— —222— —	EXISTING CONTOUR (1' INTERVAL)
222	NEW CONTOUR (1' INTERVAL)
• XX.XX	SPOT ELEVATION SEE NOTE 1
VM(XX.XX)	VERIFY / MATCH EXISTING ELEVATION
TC XX.XX BC XX.XX	TOP OF CURB ELEVATION ELEVATION BOTTOM OF CURB SEE NOTE 1
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CB RIM XX.XX	CATCH BASIN RIM ELEVATION SEE NOTE 1
AD RIM XX.XX	AREA DRAIN RIM ELEVATION SEE NOTE 1
DD RIM XX.XX	DECK DRAIN RIM ELEVATION SEE NOTE 1
TD RIM XX.XX	TRENCH DRAIN RIM ELEVATION SEE NOTE 1
	BREAK IN PLANE ARROW INDICATES DIRECTION OF FLOW



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06/10/2022 REVISIONS

74-22109-00

GRADING PLAN



L4.2







Image: Set of the set	
(E) IRRIGATION HEAD TO BE REMOVED (E) IRRIGATION CONTROLLER	
(E) IRRIGATION CONTROLLER	
POC (E) POINT OF CONNECTION	
(E) QUICK COUPLER ASSEMBLY	
IRRIGATION MAINLINE TO BE REMOVED	
IRRIGATION MAINLINE SIZE: 2" THROUGHOUT	
IRRIGATION SLEEVE	
41   ZONE CONTROL VALVE	
Valve Number	

## IRRIGATION HEAD SCHEDULE

### NON-ROTOR TYPE HEADS

SYMBOL	MANUFACTURER/MODEL	PSI
<b>ю Ф</b>	RAIN BIRD 1812-SAM-PRS-U U10 SERIES	30
<u>ତ</u> େଡ	Hunter MP3000 PROS-12-PRS40-CV	40
LST RST SST	Hunter MP Strip PROS-12-PRS40-CV	40

0' 5' 10' 20'

1" = 10'-0"

### NOTES

1. REFER TO SHEET L5.1 FOR IRRIGATION NOTES.

SATO ES ADDITION Not and a statement SATO ES ADDITION	BEAVERTON SCHOOL DISTRICT	DIF Group Contraction on 97204 Contraction	
BID / F	BEAVERTON SCH	TT5 NW KAISER RD, POR	
06/10/202 REVISION 74-221	22 S 09-00 SATI(	ON	
	_5	.2	

SHUT OFF VALVE	
FINISH GRADE AT PLANT BED	
MULCH	
SOIL MATERIAL	
IRRIGATION VALVE BOX	
BOLT SECURELY TO	
BOTTOM BOX	
IRRIGATION MAINLINE -	
WITH SAND BEDDING	
AND BACKFILL	

SEE SPECIFICATIONS

QUICK COUPLER









MULCH -

BACKFILL TAMPED IN

SECTION







### ABBREVIATIONS

Α

	A AMP	
	A AAP	AREA ALARM PANEL
	AAV	
	ABS	ACRYLONITRILE-BUTADIENE-STYRENE
	AC AC	ACOUSTICAL CEILING
	ACC	AIR COOLED CONDENSER
	ACCU ACM	AIR COOLED CONDENSING UNIT ALUMINUM COMPOSITE MATERIAL
	ACST	ACOUSTIC
	AD AD	ACCESS DOOR AREA DRAIN
	ADDN	ADDITION OR ADDITIONAL
	ADJ ADJT	ADJOSTABLE ADJACENT
	AFF	ABOVE FINISH FLOOR
	AHJ AHU	AUTHORITY HAVING JURISDICTION
	AI	AREA INLET
	AL I ALUM	ALTERNATE
	AMB	AMBIENT
	ANCH	ACCESS PANEL
		ACOUSTICAL PANEL CEILING
	AR	ACID RESISTING
	ARCH ASB	ARCHITECTURAL
	ASPH	ASPHALT
	AUTO AV	AUTOMATIC ACID VENT
	AV	
	AW	ACID WASTE
	AWG AWP	AMERICAN WIRE GAUGE
	B to B	BACK TO BACK
	BC	BALANCING COCK
	BCMU BD	BURNISHED CONCRETE MASONRY UNIT
	BD	BACK DRAFT DAMPER
	BE I BFP	BETWEEN BACKFLOW PREVENTOR
	BFR	BELOW FLOOR
	BF BFV	BUTTERFLY VALVE
	BHP	BREAK HORSE POWER
	BL	BUILDING LINE
	BLDG BLK	BUILDING BLOCK
	BLKG	BLOCKING
	BLKHD BM	BEAM
	BM	BENCH MARK
	BOF	BOTTOM OF FOOTING
	BOTT BRDG	BOTTOM BRIDGING
	BRG	BEARING
	BSMT	BASEMENT
	BT	
	BTUH	BRITISH THERMAL UNIT PER HOUR
	BUR Biv	BUILT UP ROOFING BONDEANSER WATER
	C	CONDUIT
	CAB	CABINET
	CANT CAP	CANTILEVER
	CAS	CASING
	CBD CD	CHALKBOARD CONDENSATE DRAIN
	CCTV	CLOSED CIRCUIT TELEVISION
	CE	CEMENT
	CENT CER	CENTRIFUGAL
	CF	CUBIC FEET
	CFH CFM	CUBIC FEET PER HOUR CUBIC FEET PER MINUTE
	CG	CORNER GUARD
ļ	CI	CAST IRON
	CI CIP	CURB INLET CAST IN PLACE
	CIP	
	CIRC	CONTROL JOINT
	CJA CKT	CONTROL JOINT ABOVE
	CKT BK	CIRCUIT BREAKER
	CL CI	CENTERLINE CIRCUIT LINE
	CLG	CEILING
	CLOS	CLEAR
	CM CMP	CEILING MOUNTED
	CMUCON	ICRETE MASONRY UNIT
	CO CO	CLEAN OUT CONDUIT ONLY
	CO2	CARBON DIOXIDE
	COL	COMMON
ļ		
	COMP	COMPOSITE
	COMP COMPR	COMPRESSOR UNIT
ļ	CONC	CONCRETE
ļ	CONF	CONFIGURATION
ļ		CONNECT
	CONST	CONSTRUCTION
	CONT CONTR	CONTINUOUS CONTRACTOR OR CONTRACT
	CONV	CONVECTOR
ļ	COKK	CONDENSER PUMP
ļ	CP CPS	COVER PLATE
	CPT	
1	K	

CR	CORROSION RESISTANT	<u>FB</u>
CS	COUNTERSINK	FC
CS	COMBINATION SEWER	FCO
CSK	COUNTERSUNK	FCU
CSMU	CALCIUM SILICATE MASONRY UNIT	FD
CSP	COMBINATION STANDPIPE	FDC
CSWK	CASEWORK	FDN FDR
CT	COOLING TOWER	FE
CT	CERAMIC TILE	FEC
CTR	CENTER	FFF
CU	COPPER	FH
CU	CONDENSING UNIT	FHC
CU	COMBINATION UNIT	FIG
CUH	CABINET UNIT HEATER	FIX
CW	COLD WATER	FL
CWR	CONDOM VENDOR CHILLED WATER RETURN	FLA
CWS	CHILLED WATER SUPPLY	FLU
CY	CUBIC YARD	FLG
6 <sup>YL</sup>	6 KANDER	FLM
D		FM
DB	DRY BULB	FME
DB	DECIBEL	FO
DBA	DEFORMED BAR ANCHOR	FO
DC	DIRECT CURRENT	FOF
DC	DUST COLLECTOR	FOF
DCJ	DUMMY CONTROL JOINT	FOR
a DDC	DIRECT DIGITAL CONTROL	FOS
DE	DEIONIZED WATER	FOS
DEG		FOV
DEPR	DEPRESS(ION)(ED) DEPARTMENT	FP
DET	DETENTION	FPD
DF		FPM
DFR	DIESEL FUEL RETURN DIESEL FUEL SUPPLY	FR
DFV	DIESEL FUEL VENT	FRP
DG	DOOR GRILLE	FS
DH	DUCT HEATER DISTULED WATER	FSD
DI	DUCTILE IRON	FSS
DIA	DIAMETER	FT
	DIAGONAL	FT
DIM	DIMENSION	FTG
DISC SW	DISCONNECT SWITCH	FUT
DISC	DISCONNECT	FVC Øwc
DISCH	DISTRIBUTION	G
DL	DEAD LOAD	GA
DMDD	DAMPER MOTOR	GAL
DMPR	DOWN	GB
DN	DOWNSPOUT NOZZLE	GC
DO OR "	DITTO	GCU
DPFG	DAMPROOFING DIFFERENTIAL PRESSURE SWITCH	GD
DR	DOOR	GEN
DR	DRAIN	GEN GEA
DS	DOWNSPOUT DISTULIED WATER	GFI
DSP	DRY STANDPIPE	GFR
DTL	DETAIL	GHR
DTR	DUCT THRU ROOF	GI
DWG	DRAWING	GL
DWL	DOWEL	GL
DWR		GNC
Evo Evo	EXCH	GOV
EA	EXHAUST AIR	GPH
EAT	ENTERING AIR TEMPERATURE	GPIN
EB	EXPANSION BOLT	GR
EC FDH	ELECTRICAL CONTRACTOR ELECTRIC DUCT HEATER	GR
EE	EACH END	GRC
EER	ENERGY EFFICIENCY RATIO	GRG
EEWS	EMERGENCY EYEWASH	GRS
EF	EACH FACE	GS
EF	EXHAUST FAN	GW
EFF		GWE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	βYP
EJ	EXPANSION JOINT	Н 1Е НР
EL	ELEVATION	HC
ELEC	ELECTRIC(AL)	HC
ELEV	ELEVATOR	HCB
EMER		HCS
EMD	ELECTRICAL METALLIC TUBING	HD
EMV	EMERGENCY MIXING VALVE	HDB
ENCL	ENCLOSURE	HDR
		HDV
EP	ELECTRO-PNEUMATIC	HEV
EP	EXPLOSION PROOF	HID HM
EPO FRF		HOA
EQ	EQUAL	HOR
EQUIP	EQUIPMENT	HP HP
EK ES	EXHAUST REGISTER EMERGENCY SHOWER	HP
ES	EXTRA STRONG	HPR
ESP	EXTERNAL STATIC PRESSURE	HPS HPS
EST ET	ESTIMATE EXPANSION TANK	HR
EW	EACH WAY	HR
EWC	ELECTRIC WATER COOLER	HS
EWH		HST
EXC	EXCAVATE	ΗT
EXH	EXHAUST	HTG
EXIST	EXISTING	HTW
EV EXb		HTW
EXPL	EXPLOSION	HUN
EXT	EXTERIOR	HV H\/∆
F		HW
F	FURNACE	HWC
FA	FIRE ALARM	HWF HW/9
FA		HX
		HZ

FOOT CANDLE FC FCMU FLUTED CONCRETE MASONRY UNIT FCO FLOOR CLEAN OUT FCU FAN COIL UNIT FD FIRE DAMPER FLOOR DRAIN FD FIRE DEPARTMENT CONNECTION FDC FDN FOUNDATION FDR FEEDER FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FEC FINISH FLOOR FINISH FLOOR ELEVATION FFE FIRE HYDRANT FH FIRE HOSE CABINET FHC FIG FIGURE FIN FINISH FIX FIXTURE FLOOR FL FLASH FLASHING FLEX FLEXIBLE FLUOR FLUORESCENT FLG FLOORING FLM FULL LENGTH MIRROR FACTORY MUTUAL FM FIRE MAIN FM FLOW MEASURING EQUIPMENT FME FACE OF FO FINISH OPENING FO FOC FACE OF CONCRETE FACE OF FINISH FOF FOF FUEL OIL FILL FACE OF MASONRY FOM FOR FUEL OIL RETURN FACE OF STUD FOS FOS FUEL OIL SUPPLY FOV FUEL OIL VENT FOW FACE OF WALL FIREPROOFING FPD FIRE PUMP DISCHARGE FEET PER MINUTE FPM FIRE RESISTIVE FRAME FIBERGLASS REINFORCED PANEL FRP FLOOR SINK FLOW SWITCH FIRE/SMOKE DAMPER FSD FOLDING SHOWER SEAT FSS FEET (FOOT) FIN TUBE FLOW TRANSMITTER FT FOOTING FTG FUTURE FUT FVC FIRE VALVE CABINET ₽₩C FRERIE WALL COVERING NATURAL GAS GAUGE GA GALLON GAL GALV GALVANIZED GB GRAB BAR GENERAL CONTRACTOR GC GCO GRADE CLEAN OUT GCMU GLAZED CONCRETE MASONRY UNIT GD GARBAGE DISPOSAL GEN GENERAL GEN GENERATOR GFA GROSS FLOOR AREA GROUND FAULT INTERRUPTER GFI GFRC GLASS FIBER REINFORCED CONCRETE GHR GLYCOL-WATER HEATING RETURN GLYCOL-WATER HEATING SUPPLY GHS GALVANIZED IRON GLUE LAMINATED GL GLASS GLASS MASONRY UNIT GMU GND GROUND GOVT GOVERNMENT GPH GALLONS PER HOUR GPM GALLONS PER MINUTE GR GUARD RAIL GRADE GR GRILLE GR GRC GLAVANIZED RIGID CONDUIT GLASS REINFORCED CONCRETE GRC GRGP GLASS REINFORCED GYPSUM PLASTER GRS GALVANIZED RIGID STEEL GS GASOLINE GV GATE VALVE GW GREASE WASTE GWB GYPSUM WALL BOARD ſ₽YP **HERSHM** H 1E HOOK ONE END HOSE BIB HANDICAP HOLLOW CORE HANDICAP BENCH HCB HCR HOT / CHILLED WATER RETURN HCS HOT / CHILLED WATER SUPPLY HAND DRYER OR HAIR DRYER HD HDBD HARDBOARD HDR HEADER HDWD HARDWOOD HDWR HARDWARE HEV HOSE END VALVE HID HIGH INTENSITY DISCHARGE HOLLOW METAL HM HOA HAND OFF AUTOMATIC HORIZ HORIZONTAL HEAT PUMP HP HIGH PRESSURE HORSEPOWER HIGH PRESSURE STEAM RETURN HPR HIGH PRESSURE SODIUM HPS HPS HIGH PRESSURE STEAM SUPPLY HANDRAIL HR HR HOUR HEADSTUD HS HSS HOLLOW STRUCTURAL SECTION HSTR HIGH STRENGTH ΗT HEIGHT HTG HEATING HTR HEATER HTWR HIGH TEMP HOT WATER RETURN HTWS HIGH TEMP HOT WATER SUPPLY HUM HUMIDIFIER HEATING VENTILATING UNIT HV HEATING VENTILATING AND AIR CONDITIONING HVAC DOMESTIC HOT WATER HW HWC DOMESTIC HOT WATER RECIRCULATING LOW TEMP HOT WATER RETURN HWR HWS LOW TEMP HOT WATER SUPPLY HEAT EXCHANGER HFRT7

KH

ΚV

KW

LA

LAB

LAT

LB

LBR

LBS

LF

LKR

LL

LLH

LLV

LOC

LOX

LPG

LT

LTD

LV

LV

MA

MAX

MCB

MCM

MH

ML

MTL

N2O

NITROUS OXIDE

N/A NOT APPLICABLE

В

FACE BRICK

IAQ	
IBC	IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE
IC D	
IE	INVERT ELEVATION
IES IF	ILLUMINATING ENGINEERING SOCIETY
IG	ISOLATED GROUND
IH IJ	INTAKE HOOD ISOLATION JOINT
IJS	IN JOIST SPACE
INC	INTERMEDIATE METAL CONDUIT
INSUL	INTERIOR
IP	
JAN	JANITOR
JB JCT	JUNCTION BOX JUNCTION
JST	JOIST
JFB JT	JOINT FILLER BOARD JOINT
KCJ	KEYED CONSTRUCTION JOINT
KCP KD	KEENE'S CEMENT PLASTER KNOCKDOWN
KH	KITCHEN HOOD
KHS	KITCHEN HOOD EXHAUST FAN KITCHEN HOOD SUPPLY FAN
KIT	KITCHEN
KS	KITCHEN SINK
KV κνα	KILOVOLT KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW KWH	KILOWATT
	ANGLE
LA	LABORATORY COMPRESSED AIR
LAB LAM	LABORATORY LAMINATF(D)
LAT	LEAVING AIR TEMPERATURE
LAV LB	LAVATORY POUND
LBR	
LBS LDG	LOADING
LF	
LG LIN	LINEAR
	LIVE LOAD
	LONG LEG HORIZONTAL
LOC	LOCATION
LONG LOX	LONGITUDINAL LIQUID OXYGEN
LPG	LIQUEFIED PETROLEUM GAS
lpr lps	LOW PRESSURE STEAM RETURN LOW PRESSURE STEAM SUPPLY
LR	
LS LSC	LAWN SPRINKLER LIFE SAFETY CODE
LT	
LTG	LIGHTING
LV	
LW	LONG WAY
MWT MA	
MA	MEDICAL COMPRESSED AIR
MAC MAG	MACHINE MAGNETIC
MAINT	MAINTENANCE
MAN MAS	MANUAL MASONRY
MATL	MATERIAL
MAU MAV	MAKEUP AIR UNIT MANUAL AIR VENT
MAX	
MB MB	MOP BASIN
MBD	
MBTUH	THOUSAND BTU PER HOUR
MC MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MCB MCM	MAIN CIRCUIT BREAKERJ THOUSAND CIRCULAR MILLS
MD	MANUAL VOLUME DAMPER
MDO MECH	MEDIUM DENSITY OVERLAY MECHANICAL
MEMB	MEMBRANE
MEZZ	METAL
MFR	
MG	MOTOR GENERATOR
MH MH	MANHOLE METAL HALIDE
MH	MOP HOLDER
MIN MISC	MINIMUM MISCELLANEOUS
ML	
MLO	MAIN LUGS ONLY
MLWK	
MPG	MEDIUM PRESSURE GAS
MPR MPC	MEDIUM PRESSURE STEAM RETURN
MR	MIRROR
MR/S	MIRROR WITH SHELF MAGNETIC STARTER
MTD	MOUNTED
MTG MTI	MOUNTING METAL
MTWR	MEDIUM TEMP HOT WATER RETURN
MTWS MUL	MEDIUM TEMP HOT WATER SUPPLY
MV	
wv MW	MARKER WALL
N	NITROGEN

NC	NOISE CRITERIA
NC	NURSE CALL
NEC NEMA	NATIONAL ELECTRIC CODE NATIONAL ELECTRICAL MANUFACTURERS ASSN
NEUT	
NO	NORMALLY OPEN
NO NO	NUMBER NITROUS OXIDE
NOM NS	NOMINAL NEUTRAL SENSOR
NTS	
O to O	OUT TO OUT
OA OA	OUTSIDE AIR
OBSC OC	OBSCURE ON CENTER
OD OD	OUTSIDE DIAMETER OVERFLOW DRAIN
OF OVEL	OUTSIDE FACE
OFC	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OWNER FURNISHED OWNER INSTALLED
OHP OHT	OVERHEAD POWER OVERHEAD TELEPHONE
OPG OPP	OPENING OPPOSITE
OSD	OVERFLOW STORM DRAIN
OTCS	OPEN TO CEILING SPACE
ovhd Øx	overhead Paingen
P P/T	POLE PRESSURE/TEMPERATURE TEST PORT
P	
PA PAN B	POBLIC ADDRESS PANIC BOLT
PAR PB	PARALLEL PARTICLE BOARD
PB PB	PULL BOX PUSH BUTTON
PBS	PUSH BUTTON STATION
PC PC	PUMPED CONDENSATE
PCD PCF	PAPER CUP DISPENSER POUNDS PER CUBIC FOOT
PCT PD	PORCELAIN CERAMIC TILE PRESSURE DROP
PD	
PENT	PENTHOUSE
PERF PERP	PERFORATED PERPENDICULAR
PF PG	POWER FACTOR PRESSURE GAGE
PH	
PI	
PIC PIV	POST INDICATOR VALVE
PL PL	PLACE(S) PLATE
PLAM;PL PLAS	PLASTIC LAMINATE PLASTER
	PLUMBING
PNEU	PNEUMATIC
PNL POC	PANEL POINT OF CONNECTION
PORC PPM	PORCELAIN PARTS PER MILLION
PR preear	
PROJ	PROJECTION
PRV PS	PRESSURE REDUCING VALVE PIPE SUPPORT
PS PSF	PROJECTION SCREEN POUNDS PER SQUARE FOOT
PSI PSV	POUNDS PER SQUARE INCH PRESSURE SAFETY VALVE
PT	PLASTER TRAP
PT	POTENTIAL TRANSFORMER
PTD PTD/R	COMBINATION TOWEL DISPENSER
PTN PVC	PARTITION POLYVINYL CHLORIDE
PVI PVT	POINT OF VERTICAL INTERSECTION POINT OF VERTICAL TANGENCY
PWL	SOUND POWER LEVEL
QT	QUARRY TILE
OTR RND	QUARTER ROUND
RA RAD	RETURN AIR RADIATOR
RAD or R RB	RADIUS RUBBER BASE
RC	
RCP	REINFORCED CONCRETE PIPE
RD	RECIPROCATING CHILLER JOINT ROOF DRAIN
RD RECP	REFRIGERANT DISCHARGE RECEPTACLE
REF RFFI	REFERENCE REFLECTED
REFR	REFRIGERANT
REG	REGISTER
REINF REM	REINFORCEMENT REMOVABLE
REQ(D) RESIL	REQUIRE(D) RESILIENT
RET	RETAINING (WALL) REVISIONS
RF	RETURN FAN
RFM	RECESSED FLOOR MAT
RH RH	RELATIVE HUMIDITY RELIEF HOOD
RHC RH	REHEAT COIL ROBE HOOK
RHG	
RIJS	RISE IN JOIST SPACE
kl RM	ROOM
RND	ROUND

С

RO

ROUGH OPENING

RPM RP7	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RWL	RAIN-WATER-LEADERS SENSOR
S	SANITARY SEWER - IS OF INSTITUTION SOAP DISH
S S SA	SPRINKLER LINE SHOCK ABSORBER
SA	SUPPLY AIR
SAN	SANITARY WASTE
SC	SECURITY
SC	SOLID CORE
SC	SHOWER CURTAIN
SC	SPECIAL COATING
SCD	SEAT COVER DISPENSER
SCH	SHOWER CURTAIN HOOKS
SCHED	SCHEDULE
SCR	SHOWER CURTAIN ROD
SCUT	SCUTTLE SOFT COLD WATER
SD	SOAP DISPENSER
SD	SMOKE DAMPER
SD	SMOKE DETECTOR
SD	STORM DRAIN
SE	STEAM EXHAUST VENT
SEC	SECONDARY
SECT	SECTION SECRETARY
SENS SF	SENSIBLE SQUARE FOOT SLIPPLY FAN
SFCMU	SPLIT-FACED CONCRETE MASONRY UNIT
SFU	STRUCTURAL FACING UNIT
SGL	SINGLE
SH	SHOWER
SHEATH	SHEATHING
SHM	SECURITY HOLLOW METAL
SHI	SHEET
SHW	SOFT HOT WATER
SIM	SIMILAR
SL	SHORT LEG
SI NT	SEALANT
SM	SHEET METAL
SM	SPRINKLER MAIN
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SP	STATIC PRESSURE (H2O)
SP	STAND PIPE
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SPL	SOUND PRESSURE LEVEL SPECIAL
SPL BLK	SPLASH BLOCK SQUARE
SS	STAINLESS STEEL
SSA	STORM SHELTER AREA
SS	SERVICE SINK
SS	SOLID SURFACE
ST	STAIR
ST	STORM SEWER
STACID	STAGGERED
STC	SUND TRANSMISSION CLASS STANDARD
STE	SINGLE TAPERED END
STGR	STRINGER
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL - STRUCTURE
SUB	SUBSTATION
SUBFL	SUBFLOOR SURFACE
SV SV	SUENOID VALVE
SW	SHORT WAY
SW	SWITCH
SWBD	SWITCH BOARD
SWP	STEAM WORKING PORESSURE
SYM	SYMMETRICAL
T	TEMPERED
T	THERMOSTAT
T & B	TOP & BOTTOM
TAG T	TREAD
TAB	TEST AND BALANCE
TAN	TANGENT
TB	TERMINAL BOX
TB	TOWEL BAR
TBD	TACK BOARD
TC	TEMPERATURE CONTROL
TC TD TD	TIME CLOCK TRANSFER DUCT
TD TDH TEI	TOTAL DYNAMIC HEAD
TEMP	TEMPERED - TEMPORARY TEMPERATURE
TERR	TERRAZZO
TEXT	TEXTURED
TGL	TOGGLE
TH	THRESHOLD
TH	TOWEL HOOK
THK	THICK(NESS)
TMR TMV TOB	THEI MIRROR UNIT THERMOSTATIC MIXING VALVE
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOIL	TOILET
TOP	TOP OF PAVING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TR	I KAP PRIMER TRIP TRANSVERSE
TRD	TREAD TEMPERATURE SENSOR
TSP	TOTAL STATIC PRESSURE
TT	TEMPERATURE TRANSMITTER
TT	TERRAZZO TILE
TTD	TOILET TISSUE DISPENSER
ΓV TW TVD	TACK WALL
11P	
UC	UNIT COOLER
UG	UNDERGROUND

LIGE	
UGT	UNDERGROUND TELEPHONE
UH	UNIT HEATER
	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
URD	UNDERGROUND RESIDENTIAL DISTRIBUTION
US	
UV	UNIT-VENTILATOR
V	
v	VACUUM
VA	VALVE
VAC	
VAV VB	VARIABLE AIR VOLUME VAPOR BARRIER
VB	VINYL BASE
VBF	VENT BELOW FLOOR
VCB	
VCP	VINITED CLATFIPE VINYL COMPOSITION THE
VD	VOLUME DAMPER - MANUAL
VEL	VELOCITY
VENT	
	VENTICAL
VEST	VESTIBULE
VF	VINYL FLOOR
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VP	VENEER PLASTER
VP	VACUUM PUMP
VSMC	VARIABLE SPEED MOTOR CONTROLLER
VTR	VENT THROUGH ROOF
χуус	
Ŵ	WIDE; WIDTH
W	WASTE (PLUG)
W	WATT
W	WIDE FLANGE
W/	WITH
W/O	WITHOUT
WC WC	WALL COVERING
WC	WATER COLUMN
WC	WATER CLOSET
WCC	WATER COOLED CONDENSER
WCO	WALL CLEAN OUT
WD	WOOD
WDW	
WH	WASH FOONTAIN
WFMD	WATER FLOW MEASURING DEVICE
WH	WATER HEATER
WHM	
WLR	WATER LOOP RETURN
WLS	WATER LOOP SUPPLY
WMG	WATER MOTOR GONG
WNSCT	WEATHERPROOF
WPB	WHIRLPOOL BATH
WPF	WATERPROOF
WPFG WP	
WR	WASTE RECEPTACLE
WSP	WET STAND PIPE
WT	WEIGHT
WWF	
XFMR	TRANSFORMER
XMTR	TRANSMITTER
YD	YARD
YH	YARD HYDRANT
Z	
ZUV ZVB	ZONE CONTROL VALVE ZONE VALVE BOX
&	AND
@	AT
i.e. #	THAT IS
#	

D

THE FOLLOWING ABBREVIATIONS

ARE USED WITH GLAZING:		
CG	CLEAR FLOAT GLASS	
CIG	CLEAR INSULATING GLASS	
CTG	CLEAR TEMPERED FLOAT GLASS	
CTIG	CLEAR TEMPERED INSULATING GLASS	
LG	LAMINATED GLASS	
PG	PATTERN GLASS	
PIG	PATTERN INSULATING GLASS	
SG	SPANDREL GLASS	
TG	TINTED FLOAT GLASS	
TIG	TINTED INSULATING GLASS	
TTG	TINTED TEMPERED FLOAT GLASS	
TTIG	TINTED TEMPERED INSULATING GLASS	
WG	POLISHED WIRE GLASS	

Ε

## **GENERAL SYMBOLS**

	2 SIM			FADTU
	???			EARTH
		SIMILAR OR TYPICAL REFERENCE		GRAVEL/BALLAST
	? SIM	WALL SECTION		SAND
	777	SIMILAR OR TYPICAL REFERENCE	0. <u>0</u>	CONCRETE
	? SIM		. O	PRECAST CONCRETE
	333	DETAIL REFERENCE		STEEL
9		м		GYM FLOOR
	???????????????????????????????????????	BUILDING SECTION		WOOD (CONTINUOUS BLOCKING)
	ast			WOOD (NON-CONTINUOS BLOCKING)
	?	INTERIOR ELEVATION		WOOD (TRIM/FINISH)
				GLASS
	XX/ A11.X	CASEWORK ELEVATION		STONE
	$\sim$			SHINGLES
	(?)—⁄	LEGEND/KEY NOTE		CONCRETE MASONRY UNIT
	(?)	COLUMN LINE	777777	BRICK VENEER
				METAL STUDS
	ROOM NAME			STEEL (LARGE SCALE)
				PLYWOOD (LARGE SCALE)
	?	DOOR NUMBER	<u>();; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;</u>	GYPSUM WALL BOARD (LARGE SCALE)
	(n)	WINDOW NUMBER		BATT INSULATION
	$\sim$			RIGID INSULATION
	$\langle ? \rangle$	WALL TYPE		PROTECTION BOARD
				CARPET (LARGE SCALE)
		KEVIƏION NUMBEK		ACOUSTICAL TILE (LARGE SCALE)
				TILE (LARGE SCALE)

## **GENERAL NOTES**

GENERAL NOTES APPLY TO ALL DRAWINGS

- . ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF METAL STUDS, FACE OF MASONRY OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
- GENERAL CONTRACTOR SHALL FURNISH AND INSTALL 2" X 10" CONTINUOUS FIRE-TREATED WOOD BLOCKING IN STUD PARTITIONS FOR ANCHORAGE OF WALL ATTACHED ITEMS, INCLUDING BUT NOT LIMITED TO, THE FOLLOWING: GRAB BARS, TOILET ACCESSORIES, WALL CABINETS, AND WALL MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS
- LOCATE CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CJA) WHERE SHOWN ON THE DRAWINGS OR AS REQUIRED BY MATERIALS. ISOLATE GYPSUM BOARD SURFACES WITH CONTROL JOINTS WHERE:
- A) CEILING ABUTS A STRUCTURAL ELEMENT, DISSIMILAR WALL OR PARTITION OR OTHER VERTICAL
- PENETRATION. B) CONSTRUCTION CHANGES WITHIN PLANES OF THE
- CFILING.
- C) CEILING RUN EXCEEDS 30 LINEAL FEET.
- D) CONTROL JOINTS OCCUR IN STRUCTURAL
- ELEMENTS OF THE BUILDING. E) PARTITION OR FURRING RUN EXCEEDING 30 L.F.

ELECTRICAL PLANS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPES, CONDUIT, WIRING, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING AND EXISTING CONDITION. LOCATION OF THESE ITEMS MAY BE ADJUSTED CONDITIONAL UPON THE SATISFACTORY COMPLIANCE WITH ALL OTHER REQUIREMENTS.

. SEE PLANS FOR FIRE EXTINGUISHER AND FIRE EXTINGUISHER CABINET (FEC) LOCATIONS.

- SEE SHEET CP1.1 FOR LOCATIONS OF FIRE RATED WALLS WHERE APPLICABLE.
- . ALL WALL PENETRATIONS AT RATED WALL LOCATIONS REQUIRED FOR PIPES, CONDUIT, DUCTING ETC. SHALL BE SEALED TO STOP PASSAGE OF FIRE AND / OR SMOKE WITH FIRE SAFING AND APPROVED FIRESTOPPING SEALANT PER DETAILS ON SHEET A0.3.
- THE GENERAL CONTRACTOR SHALL COORDINATE CUT-OUTS FOR CASEWORK, MILLWORK, OR OTHER EQUIPMENT AS REQUIRED.

- 10. ALL ASPECTS OF THE WORK AND ITEMS NOT SPECIFICALLY MENTIONED, BUT WHICH ARE NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED, AND INDICATED IN THE CONTRACTORS BID.
- 11. NO ASBESTOS OR PCB CONTAINING MATERIALS SHALL BE USED ON THIS PROJECT.
- 12. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS ARE RESPONSIBLE FOR PROPER REMOVAL AND DISPOSAL OF ALL DEBRIS GENERATED BY CONSTRUCTION OF THIS PROJECT. THE REMOVAL AND DISPOSAL OF ALL CONSTRUCTION DEBRIS SHALL BE IN FULL COMPLIANCE WITH ALL FEDERAL. STATE AND LOCAL REGULATIONS. THE PREMISES SHALL BE KEPT CLEAN AND FREE FROM ALL WASTE MATERIALS.
- 13. GENERAL CONTRACTOR SHALL PROTECT NEW CONSTRUCTION FROM DAMAGE BY ALL TRADES. ALL SUCH DAMAGE CAUSED BY THE CONTRACTOR DURING THE COURSE OF THIS WORK SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.
- 14. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS AND FIELD CONDITIONS PRIOR TO ORDERING OR INSTALLING MATERIALS OR EQUIPMENT.
- 15. ALL PIPING AND CONDUITS SHALL BE CONCEALED WITHIN WALLS, UNDERGROUND, ABOVE CEILINGS OR IN ARCHITECT APPROVED UTILITY SPACES IN ALL CASES UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. EXPOSED ITEMS MUST BE LOCATED IN AREAS APPROVED BY THE ARCHITECT. EXPOSED ITEMS SHALL BE INSTALLED AND FINISHED TO PROVIDE MINIMAL VISUAL IMPACT. ALL EXPOSED ITEMS ARE TO BE PAINTED TO MATCH THE ADJACENT SURFACES UNLESS SCHEDULED FOR AN ACCENT COLOR.
- 16. FLOOR SPOT ELEVATIONS ARE SHOWN THUS: 0'-0"
- 17. ARCHITECTURAL FINISH FLOOR ELEVATIONS 0'-0" EQUALS ACTUAL SITE REFERENCE OF FINISH FLOOR:
- 18. PLAN SYMBOL INDICATES WALL TYPE SEE SHEET A0.2 FOR DESCRIPTION OF WALL TYPES
- 19. SCRIBE GYPSUM BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF STRUCTURE AND ROOF DECK ABOVE.
- 20. PROVISIONS SHALL BE MADE AT FULL HEIGHT NON-BEARING WALLS FOR 2- INCH VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH FIRE SAFING INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. FILL AT SMOKE PARTITIONS WITH MATERIALS CAPABLE OF RESISTING THE PASSAGE OF SMOKE. SEE DETAILS ON CODE RATING DETAIL SHEETS.



GENERAL NOTES, SYMBOLS & ABBREVIATIONS

A0.1







**INTERIOR PARTITIONS** 











## **DEMOLITION GENERAL NOTES**

Ε

- A. DEMOLITION GENERAL NOTES APPLY TO ALL DEMOLITION
- SHEETS. B. COORDINATE DEMOLITION AND PHASING EFFORTS WITH ARCHITECT AND OWNER. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS AND TO PROVIDE BUILDING USER'S SAFETY. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH OWNER.
- COORDINATE DISRUPTION OF UTILITY SERVICES WITH OWNER AND AS SPECIFIED.
- CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE DEMOLITION AND CONSTRUCTION WORK FROM GENERAL PUBLIC AND AS DEEMED NECESSARY BY OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
- MAINTAIN A SECURE AND WEATHER-TIGHT ENCLOSURE. VERIFY EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS AND NOTIFY ARCHITECT OF DISCREPANCIES.
- REMOVE EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERBOARDS, ETC. IN THEIR ENTIRETY AND AS REQUIRED TO EXECUTE DEMOLITION AND CONSTRUCTION WORK DESCRIBED ON THE DRAWINGS.
- H. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS. PROVIDE PROTECTION FOR EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO DEMOLITION OR
- CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT. REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND
- /OR CONDITION. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED
- OTHERWISE OR AS AUTHORIZED BY ARCHITECT. VERIFY AND MAINTAIN LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION
- OF SERVICE. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR REROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, ETC. AS REQUIRED TO MAINTAIN FIRE SEPARATIONS. MATCH FINISH OF NEW OR EXISTING ADJACENT SURFACES.
- N. CAP DISCONNECTED MECHANICAL PIPING LINES WITHIN WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK. AVOID DISTURBING OF SOILS WITHIN ZONE OF INFLUENCE
- AROUND EXISTNG FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
- Q. SEE CIVIL, LANDSCAPE, STRUCTURAL, FIRE, PLUMBING, MECHANICAL, AND ELECTRICAL SHEETS FOR ADDITIONAL DEMO SCOPE.

## SHEET NOTES

- 02 01 DEMO CONCRETE ASSEMBLY EXTERIOR WALL. SEE DETAIL 1A THIS SHEET FOR REFERENCE.
- 02 02 DEMO (HM OR ALUM) FRAME AND GLAZING 02 03 DEMO EXISTING EXTERIOR SLAB-ON-GRADE IN ITS ENTIRETY TAKING CARE NOT TO DAMAGE EXISTING COLUMNS, FOUNDATIONS, CONCRETE PEDESTALS, AND PROTECTIVE CONCRETE ENCASEMENT AROUND EXISTING COLUMNS. COORDINATE WITH STRUCTURAL AND LANDSCAPE FOR EXTENTS
- OF WORK. 02 04 DEMO INTERIOR PARTITION
- 02 05 DEMO HM FRAME AND DOOR
- 02 06 SALVAGE FIRE EXTINGUISHER AND RECESSED CABINET FOR NEW WORK
- 02 08 PROTECT EXISTING BRACE FRAME FURRED WALL. PATCH AS NEEDED FOR NEW CONSTRUCTION.
- 02 09 DEMO FINISH FLOOR (CARPET, VIF) AND WALL BASE
- 02 10 DEMO FINISH FLOOR (VCT, VIF) AND WALL BASE 02 11 COORDINATE EXTERIOR DEMO WITH LANDSCAPE, CIVIL AND
- STRUCTURAL WORK, TYPICAL. 02 12 DEMO GLAZING IN EXISTING FRAME. FRAME TO REMAIN.
- 02 13 SALVAGE CIRCULATION DESK CASEWORK, INCLUDING LOW WALL STEEL SUPPORTS AND SIT/STAND DESK. REINSTALL AS PART OF NEW WORK.
- 02 14 SALVAGE BASE CABINETS AND REINSTALL AS PART OF NEW WORK. DEMO P-LAM COUNTERTOPS AT SALVAGED BASE CABINETS AND REPLACE WITH NEW AS PART OF NEW WORK. 02 15 SALVAGE UPPER CABINETS AND REINSTALL AS PART OF NEW
- WORK 02 16 SALVAGE SINK AND REINSTALL AS PART OF NEW WORK
- (ALTERNATE #2)
- 02 17 SALVAGE MARKERBOARD, TYPICAL OF 2 AND REINSTALL AS PART OF NEW WORK
- 02 18 SALVAGE TOWEL AND SOAP DISPENSER AND REINSTALL AS PART OF NEW WORK
- 02 19 SALVAGE WALL MOUNTED PROJECTOR AND REINSTALL AS PART OF NEW WORK
- 02 20 DEMO RAISED PLANTER. COORDINATE WITH LANDSCAPE FOR EXTENTS OF WORK.
- 02 21 SEE MECHANICAL FOR DEMO EXTENTS IN BOILER & MECHANICAL ROOM, ABOVE CEILINGS, AND ON ROOFTOP 02 27 SALVAGE ROLLER SHADES ON EXTERIOR WINDOWS AND
- REINSTALL AS PART OF NEW WORK. 02 28 DEMO EXTERIOR FENCING AND GATE AT AREA OF NEW WORK. SEE LANDSCAPE.
- 02 30 DEMO EXTERIOR CONCRETE SEATING



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SATO ES ADDITION	<b>BEAVERTON SCHOOL DISTRICT</b>	7775 NW KAISER RD, PORTLAND, OR 97229	

**BID/PERMIT** 06/10/2022 REVISIONS

74-22109-00

**FIRST FLOOR** DEMOLITION PLAN

AD1.1



#### **DEMOLITION GENERAL NOTES**

Ε

- A. DEMOLITION GENERAL NOTES APPLY TO ALL DEMOLITION
- SHEETS. B. COORDINATE DEMOLITION AND PHASING EFFORTS WITH ARCHITECT AND OWNER. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS AND TO PROVIDE BUILDING USER'S SAFETY. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH
- OWNER. C. COORDINATE DISRUPTION OF UTILITY SERVICES WITH OWNER AND AS SPECIFIED.
- D. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE DEMOLITION AND CONSTRUCTION WORK FROM GENERAL PUBLIC AND AS DEEMED NECESSARY BY OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
- E. MAINTAIN A SECURE AND WEATHER-TIGHT ENCLOSURE. F. VERIFY EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS AND NOTIFY ARCHITECT OF DISCREPANCIES.
- G. REMOVE EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERBOARDS, ETC. IN THEIR ENTIRETY AND AS REQUIRED TO EXECUTE DEMOLITION AND CONSTRUCTION WORK DESCRIBED ON THE DRAWINGS.
- H. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS. PROVIDE PROTECTION FOR EXISTING BUILDING MATERIALS AND
- EQUIPMENT FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
- REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND /OR CONDITION.
- K. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
- VERIFY AND MAINTAIN LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF SERVICE.
- M. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR REROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, ETC, AS REQUIRED TO MAINTAIN FIRE SEPARATIONS. MATCH FINISH OF NEW OR EXISTING ADJACENT SURFACES.
- N. CAP DISCONNECTED MECHANICAL PIPING LINES WITHIN WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
- O. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK. P. AVOID DISTURBING OF SOILS WITHIN ZONE OF INFLUENCE
- AROUND EXISTNG FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER. Q. SEE CIVIL, LANDSCAPE, STRUCTURAL, FIRE, PLUMBING,
- MECHANICAL, AND ELECTRICAL SHEETS FOR ADDITIONAL DEMO SCOPE.





## SHEET NOTES

SALVAGE WALL MOUNTED SHORT THROW PROJECTOR AND INSTALL IN NEW CONSTRUCTION

- SEE MECHANICAL FOR DEMO EXTENTS IN BOILER & MECHANICA ROOM, ABOVE CEILINGS, AND ON ROOFTOP SALVAGE EXTERIOR LIGHT FIXTURE AND REINSTALL AS PART
- NEW WORK 02 23 DEMO EXTERIOR METAL SOFFIT AND LIGHT FIXTURES, U.N.O. 02 24 DEMO INTERIOR LIGHT FIXTURES IN AREAS OF WORK, TYP. 02 25 DEMO CEILING DIFFUSERS AND GRILLES IN AREAS OF WORK, T

#### DEMO CEILING (HARD LID AND ACT CEILING, VIF) IN AREAS OF WORK, TYP. DEMO GWB SOFFITS AND FRAMING WHERE OCCUF AREAS OF WORK, TYP. 02 29 SALVAGE EXIT LIGHT AND REINSTALL THIS DOOR

SALVAGE/PROTECT LINEAR METAL PANEL CEILING AND REINST AS PART OF NEW WORK.



KEY PLAN



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**BID/PERMIT** 06/10/2022 REVISIONS

74-22109-00

**FIRST FLOOR** REFLECTED CEILING DEMOLITION PLAN AD3.1



### **GENERAL PLAN NOTES**

Ε

#### A. GENERAL NOTES APPLY TO ALL SHEETS.

- B. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE. C. WALL TYPES SHALL BE DESIGNED ON FLOOR PLANS THUS X. SEE SHEET A0.2 FOR WALL TYPES. INTERIOR PARTITIONS
- ARE WALL TYPE "S6b" UNLESS NOTED OTHERWISE. D. INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE.
- E. PROVISIONS SHALL BE MADE AT FULL HEIGHT NONBEARING WALLS FOR 1-INCH VERTICAL MOVEMENT OF BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. SEE DETAILS ON SHEET A0.3.
- SEE SHEET CP1.1 FOR LOCATION OF EXISTING FIRE-RESISTANCE-RATED WALLS. FIELD VERIFY ALL CONDITIONS. EXISTING FIRE RESISTANCE-RATED WALLS NEED TO RETAIN THEIR PERFORMANCE UPON COMPLETION OF NEW WORK.
- . SEAL PENETRATIONS THROUGH FIRE-RESISTANCE-RATED CONSTRUCTIONS WITH THROUGH- PENETRATION FIRESTOP MATERIAL AS REQUIRED TO ACHIEVE RESPECTIVE FIRE-RESISTIVE RATING AND SMOKE STOPPAGE. SEE DETAILS ON
- SHEET A0.3. H. FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING IN STEEL STUD PARTITIONS FOR PROPER ANCHORAGE OF WALL ATTACHED ITEMS; I.E. TOILET ACCESSORIES, TOILET PARTITIONS, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKERBOARDS, TACKBOARDS,
- DOOR STOPS, AUDIO VISUAL BRACKETS, ETC. GYPSUM BOARD SHALL BE ISOLATED WITH CONTROL JOINTS WERE INDICATED ON DRAWINGS AND/OR AS DESCRIBED IN THE SPECIFICATIONS.
- J. CONTROL JOINTS (CJ) SHALL BE LOCATED AS INDICATED ON FLOOR PLANS AND BUILDING ELEVATIONS. K. THE OWNER SHALL FURNISH AND INSTALL THE FOLLOWING: 1. ???, 2. ????
- INCLUDE OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER FURNISHED AND CONTRACTOR INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND COORDINATE WITH OWNER TO ACCOMMODATE THESE ITEMS.
- M. COORDINATE MECHANICAL AND PLUMBING CHASE SIZES WITH MECHANICAL AND PLUMBING CONTRACTORS. N. "MBD AND TBD" INDICATE MARKERBOARDS AND
- TACKBOARDS ON FLOOR PLANS. LENGTH PRECEDES THE DESIGNATION (EXAMPLE 8' MBD). BOARDS ARE 48 INCHES TALL. SEE WALL ELEVATIONS OR SPECIFICATIONS FOR MOUNTING HEIGHT.
- O. ARCHITECTURAL FINISH FLOOR ELEVATION 100'-0" EQUALS ACTUAL SITE REFERENCE ELEVATION OF FINISH FLOOR 309.5 FEET. VERIFY WITH LANDSCAPE AND CIVIL DRAWINGS.
- P. SCRIBE GYPSUM BOARD OF WALL AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND PENETRATIONS.
- Q. PROVIDE SEISMIC BRACING FOR SUSPENDED CEILINGS.

## SHEET NOTES

- 05 01 FUR WALL TO INFILL AT EXISTING EXPOSED CONCRETE (PREVIOUS WORKROOM). MATCH ADJACENT WALL. 05 02 FUR WALL TO WINDOW SILL HEIGHT TO INSTALL OUTLETS, IF
- ADDITIONAL WALL DEPTH REQUIRED. FINISH WITH WOOD SILL ALONG LENGTH OF WALL. 06 01 REINSTALL SALVAGED CASEWORK. COORDINATE WITH
- ELECTRICAL. 10 01 FIRE EXTINGUISHER AND CABINET, SALVAGED AND
- REINSTALLED 10 02 WALL MOUNTED PROJECTOR, SALVAGED AND REINSTALLED
- 10 03 BOLLARD. SEE DETAIL ON SHEET A9.1.



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SATO WINDOW SCHEDULE															
	FRAME DETAILS														
TYPE MARK	MATERIAL	HEAD	JAMB LEFT	JAMB RIGHT	SILL	COMMENTS									
13	HM	1C/A8.4	3B/A8.4	3B/A8.4	3D/A8.4										
14	HM	1C/A8.4	3B/A8.4	3B/A8.4	3D/A8.4	MID JAMB DETAIL = 3C/A8.4									
15	HM	1C/A8.4	3B/A8.4	3B/A8.4	3D/A8.4	MID JAMB DETAIL = 3C/A8.4									
G	ALUM	1E/A8.4	3E/A8.4	3E/A8.4	2E/A8.4										
Н	ALUM	1E/A8.4	3E/A8.4	3E/A8.4	2E/A8.4										
М	ALUM	(VIF)	3E/A8.4 (VIF)	3E/A8.4 (VIF)	2E/A8.4 (VIF)	EXISTING FRAME TO REMAIN (REPLACE GLAZING)									





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											JF				DOLL		
				DOOR	PANEL		DOOR FRAME						DETAILS				
DOOR	TO ROOM	NO. OF PANELS	WIDTH	HEIGHT	THICK NESS	MAT'L	GLAZE	TYPE	WIDTH	MAT'L	TYPE	HDWR SET	HEAD	JAMB LEFT	JAMB RIGHT	SILL	COMMENTS
G100	CIRCULATION	2	3' - 0"	7' - 0"	0' - 1 3/4"	ALUM	ICTG	D2	0' - 2"	ALUM	A	SEE SPEC	1E/A8.4	3E/A8.4 & 4E/A8.4	3E/A8.4 & 4E/A8.4	4C/A8.4	ADA OPERATOR AND CARD READER. LOCATE ON SQUARE BOLLARDS. TEMPERED GLAZING. PUSH BA PER SECTION 1010.1.9 (OSSC) . SEE HARDWARE SET.
G101	RESTROOM	1	3' - 0"	7' - 0"	0' - 1 3/4"	HM		D1	0' - 2"	HM	1	SEE SPEC	1B/A8.4	2C/A8.4	2D/A8.4		PROVIDE 1" UNDERCUT AT DOOR.
G102	CLASSROOM	1	3' - 0"	7' - 0"	0' - 1 3/4"	WD	-	D1	0' - 2"	HM	5	SEE SPEC	1B/A8.4 & 1C/A8.4	2D/A8.4 & 3B/A8.4	2C/A8.4 & 3B/A8.4		TEMPERED GLAZING IN RELITE
G103	RESTROOM	1	3' - 0"	7' - 0"	0' - 1 3/4"	HM		D1	0' - 2"	HM	1	SEE SPEC	1B/A8.4	2D/A8.4	2C/A8.4		PROVIDE 1" UNDERCUT AT DOOR.
G104	CLASSROOM	1	3' - 0"	7' - 0"	0' - 1 3/4"	WD	-	D1	0' - 2"	HM	5	SEE SPEC	1B/A8.4 & 1C/A8.4	2D/A8.4 & 3B/A8.4	2C/A8.4 & 3B/A8.4		TEMPERED GLAZING IN RELITE
G106	CLASSROOM	1	3' - 0"	7' - 0"	0' - 1 3/4"	WD	-	D1	0' - 2"	HM	5	SEE SPEC	21/A9.7	2C/A8.4 & 3B/A8.4	2D/A8.4 & 3B/A8.4		TEMPERED GLAZING IN RELITE
G108	CLASSROOM	1	3' - 0"	7' - 0"	0' - 1 3/4"	WD	-	D1	0' - 2"	HM	5	SEE SPEC	1B/A8.4 & 1C/A8.4	2D/A8.4 & 3B/A8.4	2C/A8.4 & 3B/A8.4		TEMPERED GLAZING IN RELITE
G110	LIBRARY	2	3' - 0"	7' - 0"	0' - 1 3/4"	WD	-	D1	0' - 2"	HM	1	SEE SPEC	1B/A8.4	2D/A8.4	2D/A8.4		PUSH BAR PER SECTION 1010.1.9 (OSSC) . SEE HARDWARE SET.
G110A	COURTYARD	1	3' - 0"	7' - 0"	0' - 1 3/4"	ALUM	ICTG	D2	0' - 2"	ALUM	F	SEE SPEC	1E/A8.4	4D/A8.4 & 4E/A8.4	4D/A8.4 & 4E/A8.4	2E/A8.4 & 4C/A8.4	TEMPERED GLAZING AT DOOR PANEL & ADJACENT GLAZING. PUSH BAR PER SECTION 1010.1.9 (OSS SEE HARDWARE SET.
G112	LIBRARY WORK ROOM	1	3' - 0"	7' - 0"	0' - 1 3/4"	WD	-	D1	0' - 2"	HM	1	SEE SPEC	1B/A8.4	2D/A8.4	2C/A8.4		
G114	COMPUTER LAB	1	3' - 0"	7' - 0"	0' - 1 3/4"	WD	-	D1	0' - 2"	HM	5	SEE SPEC	1B/A8.4	2C/A8.4	2D/A8.4		TEMPERED GLAZING IN RELITE
G114A	COMPUTER LAB	1	3' - 0"	7' - 0"	0' - 1 3/4"	WD	CTG	D3	0' - 2"	HM	1	SEE SPEC	1B/A8.4	2C/A8.4	2D/A8.4		

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# 2B HM JAMB DETAIL AT OUTSIDE CORNER A8.4 SCALE: 3" = 1'-0"




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	E	
Image: second	<ul> <li>INTERIOR ELEVATION GENERAL NOTES</li> <li>A. INTERIOR ELEVATION GENERAL NOTES APPLY TO ALL INTERIOR ELEVATION SHEETS.</li> <li>B. NOT ALL FLOOR AND WALL FINISHES ARE NOTED ON THE INTERIOR ELEVATION SHEETS. SEE ROOM FINISH SCHEDULE FOR FLOOR AND WALL FINISHES NOT NOTED.</li> <li>C. SEE COLOR AND MATERIALS SCHEDULE FOR MATERIALS DESCRIPTIONS.</li> <li>D. ALL WALLS TO BE PT-1 UNLESS NOTED OTHERWISE.</li> <li>E. ALL EXPOSED HVAC, DUCTS, MECH SYSTEMS AND EXPOSED STRUCTURE TO BE PAINTED PT-1 UNLESS NOTED OTHERWISE IN ROOM FINISH SCHEDULE, OR IF OCCUR IN MECHANICAL ROOM.</li> <li>F. REFER TO SIGNAGE FOR ALL SPECIALIZED WALL GRAPHICS FOR COLOR, MATERIAL, AND DIMENSIONS.</li> <li>G. ALL WALLS TO RECEIVE RB-1 WALL BASE UNLESS NOTED OTHERWISE.</li> <li>H. ALL HOLLOW METAL DOOR AND WINDOW FRAMES TO RECEIVE PT-3 UNLESS NOTED OTHERWISE.</li> <li>I. 4' TALL WAINSCOT IN HALLWAYS WITH MDF-1.</li> </ul>	AND A DANCHINA JANE E. GOODING
L ELEVATION MIRRORED FOR CLASSROOM G104		PORTLAND, OR 6821 OF OF
A112 A112 B A112 B C A112 C A112 C C C C C C C C C C C C C		
		NO
MB-1 MB-3 B-3 G-3 G-3 G-3 G-3 G-3 G-3 G-3 G-3 G-3 G		SATO ES ADDIT BEAVERTON SCHOOL DISTRICT 7775 NW KAISER RD, PORTLAND, OR 9729
(NEW) PLAM-2 COUNTER SALVATED BASE CABINETS		BID/PERMIT 06/10/2022 REVISIONS
REINSTALLED IN WORKROOM, TYP (NEW) RB-1		74-22109-00 INTERIOR ELEVATIONS



D







4C TYP. BASE CABINET OPEN BELOW A11.2 SCALE: 1" = 1'-0"

#### (3D) WARDROBE / TALL STORAGE CABINET A11.2 SCALE: 1" = 1'-0"

- PLAM COUNTERTOP &

BACKSPLASH

-W

CABLE TRAY

ALL COUNTERTOPS

EDGEBAND WD-1

- PROVIDE MDO SUBSTRATE FOR

PROVIDE BEVELED HARDWOOD





D

	SEWORK AND MILLWORK GENERAL NOTES
Α.	CASEWORK AND MILLWORK GENERAL NOT

F

- TES APPLY TO ALL CASEWORK AND MILLWORK SHEETS. B. ELEVATIONS DENOTED AS MILLWORK ARE SPECIFIED UNDER DIVISION 06. OTHERS CONSIDERED CASEWORK SPECIFIED UNDER DIVISION 12, UNLESS NOTED OTHERWISE.
- C. BASE AND TALL STORAGE CABINETS: 24 INCHES DEEP, UNLESS NOTED OTHERWISE.
- D. WALL CABINETS: 14 INCHES DEEP, UNLESS NOTED OTHERWISE.
- E. TALL STORAGE UNITS TO BE 24 INCHES DEEP, UNLESS NOTED OTHERWISE.
- F. PROVIDE ADJUSTABLE SHELVING IN CASEWORK, UNLESS NOTED OTHERWISE. G. WHERE ELECTRICAL DEVICES ARE LOCATED IN
- CASEWORK, CASEWORK CONTRACTOR SHALL PROVIDE FINISHED OPENINGS. COORDINATE LOCATION AND QUANTITY WITH ELECTRICAL CONTRACTOR.
- H. PROVIDE JOINT SEALANT AT PERIMETER JOINTS WHERE COUNTERTOPS, BACK AND SIDE SPLASHES, CASEWORK, AND MILLWORK ABUT WALLS. I. FIELD VERIFY DIMENSIONS OF CABINET LOCATIONS IN
- CASEWORK AND MILLWORK. PLASTIC LAMINATE COVERED.
- RESIN/PLASTIC PANELS OCCURS, PATTERN TO RUN VERTICALLY AND MATCH EXISTING, UNLESS NOTED
- N. PROVIDE T-MOLDING AT ALL EXPOSED EDGES OF COLOR OF ADJACENT PLAM AND EXISTING, UNLESS NOTED OTHERWISE.
- O. PROVIDE WD-1 BEVELED HARDWOOD EDGE BAND AT ALL PLAM COUNTERTOPS. PROVIDE WF-1 SEALER ON EDGEBAND, TYP.
- P. ALL CABINETS TO BE PLAM-1 UNO, ALL COUNTERTOPS & BACKSPLASH TO BE PLAM-2 UNO.



- COAT ROD

- ADJUSTABLE SHELVING

/ PLASTIC LAMINATE ALL EXPOSED SURFACES,

DRAWERS TYP.

SIZE & CONFIGURATION VARIES

5 1/2"

ANCHORS AD
LIBRARY CIRCULATION DESK SECTION (EXISTING - FOR REFERENCE ONLY) A11.2 SCALE: 1" = 1'-0"

BASE AS SCHEDULED

SOLID SURFACE,

WRAP EDGES AND CORNERS

VERTICAL POST

LOCATIONS

EACH END

MDF

HSS 1X1X3/16, PROVIDE AT EACH

WHITE MELAMINE COVER PLATE

GROMMET WITH BLK PLASTIC

TRIM INSERT. SEE PLAN FOR

BRACING WITH OPENINGS FOR

1/4" RP W/1/8" RADIUSED EDGE,

DRIVE HEAD, STAINLESS

OF RP, PAINT REVEAL BLACK

@ 4'-0" O.C. MAX. AND 6" FROM

5X8X3/8 BASEPLATE W/(2) 1/2" DIA X2 1/2" EMBEDDED ÈXPANSION

ELECTRICAL ROUTING WHERE REQD.

OVER RECESSED 1/4" MDF BACKER

COUNTER SUNK SCREW, FLUSH WITH

SURFACE, 1/2" DIA. ALLEN OR SQUARE

1/4" MDF REVEAL , 1/4" IN FROM EDGE

HSS 3X3X1/4 TUBE STEEL SUPPORT

DIVIDER PANELS BETWEEN

PLAM-1

BUILDING PRIOR TO FABRICATION.

J. PROVIDE LOCKS AT DOORS AND DRAWERS. K. PROVIDE FINISHED ENDS AT ALL EXPOSED ENDS OF

- L. ALL EXPOSED SURFACES IN OPEN SHELVING SHALL BE M. WHEN LINEAR PATTERN ON PLAM, SOLID SURFACE OR
- OTHERWISE.
- CABINETS, OR CUBBIES UNO. T-MOLDING TO MATCH



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						SATO ROOM	FINISH SCF	IEDULE		
	ROOM	FLOOR		WALL				CEILING		
NUMBER NAME		FINISH	BASE FINISH	NORTH	EAST	SOUTH	WEST	FINISH	WDW SHADES	
G100	CIRCULATION	PC	RB-1	PT-1	PT-1	PT-1	PT-1			SI
G101	RESTROOM	CT-1	CT-2B/CT-2C	PT-1	CT-2/CT-3/CT-2A/PT-1	CT-2/CT-3/CT-2A/PT-1	PT-1	PT-1		
G102	CLASSROOM	PC, CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1		SHADE-1,HLB-1	
G103	RESTROOM	CT-1	CT-2B/CT-2C	CT-2/CT-3/CT-2A/PT-1	CT-2/CT-3/CT-2A/PT-1	PT-1	PT-1	PT-1		
G104	CLASSROOM	PC, CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1		SHADE-1,HLB-1	
G106	CLASSROOM	PC, CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1		SHADE-1,HLB-1	
G108	CLASSROOM	PC, CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1		SHADE-1,HLB-1	
G110	LIBRARY	CPT-1, CPT-2	RB-1	PT-1	PT-1	PT-1	PT-1		SHADE-1,HLB-1	
G112	WORK ROOM	PC	RB-1	PT-1	PT-1	PT-1	PT-1		HLB-1	
G114	COMPUTER LAB	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1/EXP		SHADE-1.HLB-1	

	SAT	TO COLOR AN	ID MATERIALS SCHEDULE -	<b>BASIS OF DESIGN</b>
	GENERAL_LOCATION	MANUFACTURER	PRODUCT NAME	COLOR / FINISH
CPT-1	GENERAL	MANNINGTON	SOCIAL	LINKED 14199
CPT-2	ACCENT IN LIBRARY	MANNINGTON	OFFLINE LOOP	LINKED 14199
CEILING				
APC-1	CLASSROOMS, GENERAL	ARMSTRONG	FINE FISSURED, LAY-IN	WHITE W/ SATIN ALUMINUM PRELUD 15/16"
LMC-1	EXTERIOR SOFFIT	LONGBOARD		COMMON WHITE YA0157
CONCRETE FLOORING				
PC SC	CORRIDORS / DINING COMMONS MISC.	RETROPLATE	RETROPLATE -	NATURAL, NO FINISH/DYE SEALED CONCRETE
CORNER GUARD				
	CORNERS, TTP. WHERE GWB & WDF OCCORS		TAPE-ON CORNER GOARD 430, 10-0A0GE	STAINLESS STEEL
MARKERBOARDS	CLASSROOMS	CLARIDGE	STANDARD MAGNETIC MARKERBOARD	WHITE W/ SQUARE MITERED WHITE
MB-2		CLARIDGE	STANDARD MAGNETIC MARKERBOARD	WHITE W/ SQUARE MITERED WHITE
MB-3	CLASSROOMS	CLARIDGE	STANDARD MAGNETIC MARKERBOARD	WHITE W/ SQUARE MITERED WHITE
PAINT				
PT-2	GENERAL WALL ACCENT, YELLOW	BENJAMIN MOORE	- -	AMERICAN CHEESE 2019-40
PT-3	DARK GREY	BENJAMIN MOORE	•	WILDWOOD CREST 1538
PLASTIC LAMINATE				
PLAM-1	CABINETS	FORMICA	-	NATURAL CANE 6930-NT NATURELLE
PLAM-2	GENERAL COUNTERTOPS	FORMICA	-	MINERAL SPA 6920-58 MATTE
PLAM-3	CASEWORK INTERIOR CUBBIES, YELLOW	WILSONART	-	SUNSHINE D499-60 MATTE
	CIRCULATION DESR, BODT	FORMICA	•	GRAFTITE TWILL 0029-30 MATTE
RESILIENT BASE	GENERAL	JOHNSONITE	TRADITIONAL RUBBER BASE	BURNT UMBER 63
CB-1	COVE BASE AT HANDWASHING AREA	ALTRO	COVE FORMER	C-8 CAP TILE, WHITE
RES-1	HANDWASHING AREA	ALTRO	MAXIS UNITY	ICE RINK UB 12514
RESIN PANELS		250014		
		SFORM		STREAM LONGITUDE
RP-4	KAISER - RECEPTION AND CIRCULATION CASEWORK ACCENT	3FORM	100 PERCENT - SANDSTONE FINISH	
SCHLUTER SYSTEMS				
SCHL-1	EDGING AT FLASH COVE BASE AREAS	SCHLUTER	SCHIENE	SATIN ANODIZED ALUMINUM
SCHL-2	PROFILE FOR OUTSIDE CORNERS AT WALL TILE	SCHLUTER	RONDEC	SATIN ANODIZED ALUMINUM
TACKBOARD				
IBD-1	GENERAL TACK BOARDS	CLARIDGE/FORBO	BULLETIN BOARD	BLANCHED ALMOND 2186
TBD-2	CORRIDOR TACK STRIP	CLARIDGE	BULLETIN BOARD TACK STRIP	BLANCHED ALMOND 2186
TBD-3	TACK BOARDS (3' WIDE)	CLARIDGE/FORBO	BULLETIN BOARD	BLANCHED ALMOND 2186
TILING				
CT-1	FLOOR TILE IN TOILET ROOMS	DALTILE	KEYSTONES	DESERT GRAY SPECKLE D200
CT-2		DALTILE	SEMI-GLOSS	DESERT GRAY X114
CT-2B	GENERAL BOLLNOSE WALL TILE IN TOILET ROOM GENERAL COVE BASE WALL TILE IN TOILET ROOMS W/ FLAT	DALTILE	SEMI-GLOSS - BOLLINOSE 34449 SEMI-GLOSS - COVE BASE A3401	DESERT GRAY X114
CT-2C	TOP SANITARY COVE BASE WALL TILE IN TOILET ROOMS W/ BULL	DALTILE	SEMI-GLOSS - COVE BASE S-3419T	DESERT GRAY X114
CT-3	ACCENT WALL TILE, YELLOW	DALTILE	BISQUE QTC1 (441P)	QH 97 DAISY
G-1	WALL TILE GROUT	LATICRETE	EPOXY	78 STERLING SILVER
G-2	FLOOR TILE GROUT			60 DUSTY GREY
WALL COVERING				
WC-1	HANDWASHING AREA		SANI-SURFACE HYGIENIC WALL CLADDING	
WINDOW SHADES				
SHADE-1	GENERAL	MECHOSHADE	METAL BLINDS - RIVIERA MANUAL CLUTCH ROLLER SHADE - 3% OPENNESS	5310 NICKEL
WOOD				
MDF-1 WD-1	MDF WAINSCOT IN CORRIDORS COUNTERTOP HARDWOOD EDGING	-	MDF ASH HARDWOOD	CLEAR COAT (WF-1) CLEAR COAT (WF-1)
WOOD FINISH WF-1	CLEAR COAT FOR MDF-1.WD-1 & WD-1	LENMAR	DURALAQ-WB 1WB.10x	CLEAR COAT. SATIN FINISH
	- ,=			· · · · · · · · · · · · · · · · · · ·

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	REMA	RKS
ISH PLAN FO	R MDF-1 AND TBD-2 WA	INSCOT EXTENTS
	SIZE	REMARKS
2' X 2' MOE		INSTALL IN BRICK PATTERN
2' X 2' MOL	JULAR TILE	
24" X 48" X	5/8"	
6 W PLAN	15	
-		
4'-0" x 0'-1	1/2"	START INSTALL ABOVE BASE
<u>/'\// ∨    ⊏'</u> /		
DRAWING	GHT AS INDICATED ON GHT AS INDICATED ON	1'-0" POWDER COAT WHITE NO ACCESSORY TRAY
2' W X HEI DRAWINGS	S GHT AS INDICATED ON S	NO ACCESSORY TRAY
		1
- - -		HM DOOR FRAMES, UNO
-		GRAIN DIRECTION TO RUN VERTICAL UNLESS NOTED OTHERWISE ON A11s
-		GRAIN TO RUN VERTICAL UNLESS
4"H		
4"H		COVE BASE FOR RES-1, ALTROMASTIC FOR TRANSITION TO RB-1
ROLL 6'-7" 2.5mm	X 66', THICKNESS	
1/4" GAUG	E	GRAIN DIRECTION TO RUN VERTICAL
1/4" GAUG	E	GRAIN DIRECTION TO RUN VERTICAL UNLESS NOTED OTHERWISE ON A11s
-		
4' W X HEI	GHT AS INDICATED ON	
VARIES	5	TOP OF TACKSTRIP FRAME ALIGNS WITH TOP OF DOOR FRAME
3' W X HEI DRAWING	GHT AS INDICATED ON S	
2" X 2"		
4.25" X 4.25 4.25" X 4.25 4.25" X 4.25	5" 5" 5"	5" WAINSCUT MIXED W/CT-3 TOP ROW OF WALL TILE BOTTOM ROW OF WALL TIL F
4.25" X 6"		COVE BASE ON NON-WET WALL
4.25" X 4.2	5"	ACCENT (SEE ELEVATION ON A2.1)
-		
4'-0" X 8'-0'	1	
FIELD MEA	ASURE	INSTALL ON INTERIOR RELITES
HIELD MEA	ASURE	ALL EXTERIOR WINDOWS
3/4"		WAINSCOT UP TO 4' A.F.F EDGE BANDIMG FOR PLAM

ROOM FINISH SCHEDULE GENERAL NOTES

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- A. DESIGN INTENT IS TO MATCH EXISTING BUILDING'S COLORS AND MATERIALS. FIELD VERIFY ALL ITEMS IN THE COLOR AND MATERIALS SCHEDULE TO MATCH EXISTING.
- B. SEE SPECIFICATIONS FOR PAINTING OF ITEMS NOT NOTED IN THE ROOM FINISH SCHEDULE. C. REFER TO INTERIOR FINISH PLANS, INTERIOR ELEVATOINS,
- AND REFLECTED CEILING PLANS FOR MORE INFORMATION ON FINISH EXTENTS AND PATTERS AND CEILING HEIGHTS. D. EXPOSED CONCRETE FLOOR SLABS NOT SCHEDULED TO RECEIVE A FINISH SHALL RECEIVE A CURING AND SEALING
- COMPOUND UNLESS OTHERWISE NOTED. E. ALL GWB CEILINGS, SOFFITS, AND BULKHEADS SHALL BE PAINTED PT-1 UNLESS OTHERWISE NOTED.
- F. CEILING HEIGHTS, AS NOTED ON THE REFLECTED CEILING, PLANS ARE MEASURED FROM THE FINISH FLOOR OF THE ROOM. G. FURNISH AND INSTALL WALL BASE AROUND CASEWORK
- AND MILLWORK. H. WHERE FLOOR FINISH CHANGES FROM ONE ROOM TO
- ANOTHER, SET JOINT OF THE MATERIALS AT THE CENTER OF THE COMMUNICATING DOOR. I. SEE SHEET A11.1 FOR TYPICAL TACKWALL DETAILS. J. SEE REFLECTED CEILING PLANS FOR CEILING TYPES AND
- HEIGHT. K. REFER TO DOOR SCHEDULE AND SPECS FOR ADDITIONAL INFORMATION OF PAINTING AND STAINING OF DOORS AND
- FRAMES. L. PAINT ALL ACCESS PANELS TO MATCH ADJACENT WALL FINISH.
- M. ALL EXTERIOR WINDOWS TO RECEIVE SHADE-1, ALL INTERIOR WINDOWS RECEIVE HLB-1, UNO.
- N. EXTERIOR DOORS WITH GLAZING TO RECEIVE SHADE-1 ON UPPER HALF (ABOVE EGRESS BAR).





		A
& @ %%D, DEG %%C, DIA (E), EXIST #, NO #, LB	-AND -AT -DEGREE -DIAMETER -EXISTING -NUMBER -POUND	
AB ABV ADDL ADH ADJ AFS ALT ALUM APPROX AR ARCH ASPH ASMBY	-ANCHOR BOLT -ABOVE -ADDITIONAL -ADHESIVE -ADJACENT -ABOVE FINISHED SLAB -ALTERNATE -ALUMINUM -APPROXIMATE -AS REQUIRED -ARCHITECTURAL -ASPHALT -ASSEMBLY	
BASE PL BLDG BLKG BLW BM(S) BO xxx BOT BRB BRG BS BTWN	-BASE PLATE -BUILDING -BLOCKING -BELOW -BEAM(S) -BOTTOM OF XXX -BOTTOM -BUCKLING RESTRAINED BRACE -BEARING -BOTH SIDES -BETWEEN	
C CANT CDF CEM PLAS CIP CJ CJP CL CLR CLR CLSM CMU COL CONC CONC CONN CONSTR COORD CSK	-CHANNEL -CANTILEVER -CONTROLLED DENSITY FILL -CEMENT PLASTER -CAST-IN-PLACE -CONSTRUCTION JOINT/CONTROL JOINT -COMPLETE JOINT PENETRATION WELD -CENTER LINE -CLEAR(ANCE) -CONTROLLED LOW STRENGTH MATERIAL -CONCRETE MASONRY UNIT -COLUMN -CONCRETE -CONNECTION -CONTRACTOR -COORDINATE -COUNTER SUNK	
CTR D DC DBL DEG DEMO DET DEV DIAG DIM DIST DN DWG DWL	-CENTER(ED) -DEPTH/DEEP -DEMAND CRITICAL -DOUBLE -DEGREE -DEMOLITION -DETAIL -DEVELOPMENT/DEVELOPER -DIAGONAL/DIAGRAM -DIMENSION -DISTANCE -DOWN -DRAWING -DOWEL	

ELEV

FMBFD

EOS

EOD

EQUIP

EQL SPCD

EQ

ES

EW

EXP

FX

FIF

FOC

FO

FOS

GALV

GEN

GLB

GR

GB

GYP BD

BFAM

HGR

HLDN

HORIZ

HSS

HVAC

INFC

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ESC

		D
-EACH -EACH FACE	L LBR	-ANGLE/LENGTH -LUMBER
-EXPANSION JOINT	LLBB	-LONG LEG BACK TO BACK
-ELEVATION -FLECTRICAL		-LONG LEG HORIZONTAL
-ELEVATOR	LOC	-LOCATION
-EMBEDMENT/EMBEDDED	LSH	-LONG SLOTTED HOLE
-EDGE OF SLAB	MAX	-MAXIMUM
-EQUAL	MB	-MACHINE BOLT
-EQUALLY SPACED -FQUIPMENT	MBR	-MEMBER -MECHANICAI
-EACH SIDE	MEZZ	-MEZZANINE
	MTL	
-EXPANSION	MRR REC	-MANUFACTURER'S
-EXTERIOR	NAL I	RECOMMENDATIONS
-FINISH(FD)	MH MID	-MANHOLE -MIDDI F
-FLANGE	MIN	-MINIMUM
	MISC	-MISCELLANEOUS
-FACE OF CONCRETE	NA	-NOT APPLICABLE
-FACE OF FINISH	NIC	-NOT IN CONTRACT
-FIREPROOF(ING)/FIRE	NORM	-NORMAL
PROTECTION	NS	-NEAR SIDE
-FIRE RETARDANT TREATED -FAR SIDE	NIS	-NOT TO SCALE
-FOOT, FEET	OC	-ON CENTER
-FOOTING	OD OF	-OUTSIDE DIAMETER
-GAGE/GAUGE	OFS	-OUTSIDE FACE OF STUDS
-GALVANIZED	OL	-OUTSIDE LAYER
-GENERAL -GLUE LAMINATED TIMBER	OPH	-OPPOSITE HAND
-GRADE	OPP	-OPPOSITE
-GRADE BEAM -GYPSUM BOARD	OVS	-OVERSIZED
	PAF	-POWER ACTUATED FASTE
	PAR	-PARALLEL/PARAPET
-HANGER	PEN	-PENETRATE/PENETRATIO
-HOLDDOWN	PIL	
-HOLLOW STRUCTURAL SECTIONS	FJF	WELD
	PL PL OD	-PLATE
AIR CONDITIONING	PLCS	-PLACES -PANEL
	PREFAB	-PREFABRICATED
-INSIDE DIAMETER -INSIDE FACE	PSF PSI	-POUNDS PER SQUARE FO -POUNDS PER SQUARE IN(
-ISOLATION JOINT	PT	-POST TENSIONED/PRESS
-INFORMATION	TOR	-I OREINS
-INSULATE/INSULATION	D	
	RC	-REINFORCED CONCRETE
-JOIST	RD	-ROOF DRAIN
-JOIN I	REF RFINF	-KEFERENCE -REINFORCING
-1,000 POUNDS	REQD	-REQUIRED
-KIPS PER SQUARE INCH	RO RTU	
	1110	

SCHED BACK TO BACK SECT HORIZONTAL SEOR SLBB SFRS SHT SHTHG SIM SMS SPEC SPCS SQ SSH SST STD STIF STL STL JST STRUCT SYMM TPRD ΤB TBC TBR THK TO xxx, T/xxx TOC TOF FACE OF STUDS TOGB TOS TOSL TOW TRANS\ TRTD TYP CTUATED FASTENER T/C T&B T&G TE/PENETRATION UON IOINT PENETRATION VIF VNR VERT PER SQUARE FOOT WD PER SQUARE INCH WF ISIONED/PRESSURE WO WT

В





-SLIP CRITICAL -SCHEDULE -SECTION -STRUCTURAL ENGINEER OF RECORD -SHORT LEG BACK TO BACK -SEISMIC FORCE RESISTING SYSTEM

-SHEET -SHEATHING -SIMII AR -SHEET METAL SCREW -SPECIFICATION -SPACES -SQUARE

-SHORT SLOTTED-HOLE -STAINLESS STEEL -STANDARD

-STIFFENER -STEEL -STEEL JOIST

-STRUCTURAL -SYMMETRICAL

-TAPERED -THROUGH BOLT

-THREADED BAR COUPLER -TO BE REMOVED -THICK(NESS) -TOP OF xxx

-TOP OF CONCRETE -TOP OF FOOTING

- -TOP OF GRADE BEAM -TOP OF STEEL
- -TOP OF SLAB -TOP OF WALL
- -TRANSVERSE -TREATED
- -TYPICAL -TENSION/COMPRESSION CORD

-TOP AND BOTTOM -TONGUE AND GROOVE

-UNLESS OTHERWISE NOTED

-VERIFY IN FIELD -VENEER -VERTICAL

-WIDE/WIDTH -WOOD -WIDE FLANGE -WHERE OCCURS -WATERPROOFING/WORK POINT

-WFIGHT -WELDED HEADED STUD -WELDED WIRE FABRIC

-WITH -WITHOUT

-YARD

WHS

WWF

W/O

YD

**USE OF DRAWINGS** 

- 1. ALL TYPICAL DETAILS AND NOTES SHOWN IN THE DRAWINGS SHALL APPLY UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE DRAWINGS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.
- 2. NOTES ON THE STRUCTURAL GENERAL NOTES SHEETS ARE APPLICABLE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- 3. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, MECHANICAL AND OTHER DRAWINGS FOR BIDDING AND CONSTRUCTION. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR EMBEDS, OPENINGS, SLEEVES, ETC NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE WORK AND VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY BETWEEN TRADES AND EQUIPMENT PURCHASED. NOTIFY OWNER'S REPRESENTATIVE OF DISCREPANCIES PRIOR TO CONSTRUCTION.
- 4. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO CONSTRUCTION.
- 5. DIMENSIONS NOTED PLUS OR MINUS (+/-) OR AS 'FIELD VERIFY' INDICATE UN-VERIFIED DIMENSIONS THAT REQUIRE CONFIRMATION OR DETERMINATION BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF CONFLICTS OR VARIATIONS FROM INDICATED DIMENSIONS.
- 6. IF ANY ERRORS OR OMISSIONS APPEAR TO EXIST IN THESE DRAWINGS, SPECIFICATIONS, OR OTHER CONTRACT DOCUMENTS; THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OR ARCHITECT IN WRITING OF SUCH OMISSION OR ERROR BEFORE PROCEEDING WITH THE WORK.
- 7. IF ANY STRUCTURAL NOTES ARE IN CONFLICT WITH EACH OTHER ARCHITECTURAL, OTHER DRAWINGS. OR THE SPECIFICATIONS. USE THE MOST STRINGENT REQUIREMENT FOR BIDDING AND CONSTRUCTING THE WORK.
- 8. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT AND BE ACCOMPANIED BY SUBSTANTIATING CALCULATIONS.

#### MEANS AND METHODS

- 1. DLR GROUP, NOR ANY OF ITS EMPLOYEES, SHALL NOT HAVE CONTROL OF, OR BE RESPONSIBLE FOR, THE CONSTRUCTION MEANS AND METHODS, TECHNIQUES, PROCEDURES, SEQUENCES, ACTS OR OMISSIONS OF THE CONTRACTOR OR ANY OTHER PERSONS PERFORMING THE WORK, OR FOR THE FAILURE OF ANY OF INDIVIDUAL OR COMPANY TO SAFELY CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 2. THE CONTRACTOR SHALL PROVIDE NECESSARY BRACING AND SHORING AS REQUIRED UNTIL THE BUILDING'S STRUCTURAL SYSTEMS HAVE BEEN COMPLETED. THE STRUCTURE SHALL NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL RETAIN A QUALIFIED LICENSED STRUCTURAL ENGINEER WHO SHALL DETERMINE WHERE TEMPORARY SHORING/BRACING IS REQUIRED AND PROVIDE ITS DESIGN. PROVIDE TEMPORARY BRACING AS REQUIRED TO STABILIZE THE STRUCTURE AND ITS COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED ACCORDING TO THE CONTRACT DOCUMENTS.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE STRUCTURE DURING CONSTRUCTION. WHERE CONSTRUCTION SEQUENCING AND STAGING ARE LIKELY TO CREATE OVERLOADING, THE CONTRACTOR SHALL RETAIN A QUALIFIED STRUCTURAL ENGINEER TO DETERMINE HOW TO TEMPORARILY SHORE AND SUPPORT THE OVERLOADED ELEMENTS IN A MANNER THAT DOES NOT EXCEED THE STRESS LIMITS OF THE ELEMENTS AND THE SUPPORTING FOUNDATION AS DEFINED BY THE APPLICABLE BUILDING CODES.

STRUCTURAL OBSERVATION

- 1. STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH BUILDING CODE SECTION 1704.6. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEMS AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED PER BUILDING CODE SECTION 110 OR SPECIAL INSPECTION IN ACCORDANCE WITH IBC SECTION 1705.
- 2. THE OWNER SHALL EMPLOY AN ENGINEER OR ARCHITECT LICENSED TO PERFORM STRUCTURAL OBSERVATION IN THE PROJECT JURISDICTION.
- 3. THE STRUCTURAL OBSERVER SHALL PROVIDE A LETTER TO BE SUBMITTED TO THE BUILDING OFFICIAL BEFORE THE FIRST SITE VISIT IDENTIFYING THE FREQUENCY AND EXTENT OF STRUCTURAL OBSERVATIONS.
- 4. THE STRUCTURAL OBSERVER SHALL SUBMIT A WRITTEN STATEMENT TO THE BUILDING OFFICIAL AT THE CONCLUSION OF ALL STRUCTURAL WORK THAT SITE VISITS HAVE OCCURRED AND THE OBSERVER SHALL REPORT ANY DEFICIENCIES THAT HAVE NOT BEEN RESOLVED.
- 5. THE CONTRACTOR SHALL SCHEDULE EACH OBSERVATION AT LEAST TWO WEEKS PRIOR TO DATE OF THE PROPOSED OBSERVATION.
- 6. THE STRUCTURAL OBSERVER SHALL PERFORM OBSERVATIONS AT THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES:
- CONSTRUCTION STAGES ELEMENTS/CONNECTIONS TO BE OBSERVED a) PRIOR TO CONCRETE PLACEMENT, OBSERVE FOUNDATION REINFORCEMENT AND ANCHOR
- BOI TS b) AT SUBSTANTIAL COMPLETION OF THE PRIMARY STRUCTURE.

## **SUBMITTALS**

1. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION/ERECTIONS/INSTALLATION. THESE ITEMS ARE IN ADDITION TO ANY SUBMITTAL REQUIREMENTS SPECIFIED ON THESE PLANS OR IN THE PROJECT SPECIFICATIONS.

	STRUCTURAL SUBMITTALS				
ITEM	PROD DATA	SHOP DWGS	TEST RESULTS	CAL	
STRUCTURAL STEEL	-	YES	-	-	
CONCRETE MATERIALS	YES	-	YES	-	
BASEPLATE GROUT	YES	-	-	-	
COLD FORMED STEEL	YES	YES	-	YE	
EPOXY AND EXP ANCHORS	YES	-	-	-	
ANCHORAGE FOR MECH/ELEC EQUIPMENT	-	YES	-	YE	
MEP EQUIPMENT/CONDUIT SEISMIC BRACING	YES	YES	-	YE	
ACOUSTICAL PANEL CEILING SEISMIC BRACING	YES	YES	-	YE	

2. "PROD DATA" - SUBMIT ADEQUATE DOCUMENTATION THAT THE PRODUCT PROPOSED TO BE USED MEETS THE REQUIREMENTS ON THESE PLANS AND THE PROJECT SPECIFICATIONS.

- 3. "SHOP DWGS" SUBMIT COMPLETE SHOP DRAWINGS SUFFICIENT TO SHOW QUANTITIES AND KINDS OF MATERIALS, METHODS OF ASSEMBLY, AND ALL DATA REQUIRED FOR FABRICATION. ERECTION, AND INSTALLATION. THE PURPOSE OF THESE DRAWINGS IS TO DEMONSTRATE THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT DOCUMENTED HEREIN. SUBMITTALS CONSISTING OF DRAWINGS TAKEN DIRECTLY FROM THESE PLANS WILL NOT BE APPROVED.
- 4. "TEST RESULTS" SUBMIT RESULTS FOR ANY TESTING REQUIRED BY BUILDING CODE OR THESE PLANS.
- 5. "CALCS" SUBMIT CALCULATIONS SIGNED AND SEALED BY A DESIGN PROFESSIONAL AUTHORIZED TO PERFORM WORK IN THE PROJECT JURISDICTION.
- 6. "DEFERRED SUBMITTAL" SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE BUILDING DEPARTMENT FOR APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF THE BUILDING DEPARTMENT IS RECEIVED.





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### SPECIAL STRUCTURAL INSPECTIONS:

- 1. SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE BUILDING CODE, SECTION 1704, AS NOTED BELOW. TESTING AND INSPECTION SHALL BE BY AN INDEPENDENT TESTING/INSPECTION FIRM UNDER THE SUPERVISION OF A LICENSED ENGINEER EMPLOYED BY THAT FIRM. THIS ENGINEER SHALL BE DEEMED THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS PERFORMED BY HIS FIRM OR HIS CONSULTANTS. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
- 2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE BUILDING OFFICIAL, AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE BUILDING CODE.
- 3. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE LOCAL DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY SECTION 110 OF THE BUILDING CODE.
- 4. CONCRETE: PER SECTION 1705.3 AND TABLE 1705.3, THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: ALL CONCRETE EXCEPT: SIDE WALKS, AND DRIVEWAYS.
- 5. PROVIDE INSPECTION PER SECTION 1704.2.5 FOR STRUCTURAL LOADING-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE INSPECTIONS SHALL BE AT CONTRACTOR'S EXPENSE IF THE FABRICATOR IS NOT AN APPROVED FABRICATOR PER SECTION 1704.2.5.2.
- 6. STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360 AS AMENDED BY THE BUILDING CODE AND THE REQUIREMENTS OF SECTION 1705.2 AND TABLE 1705.2 OF THE BUILDING CODE.
- 7. SPECIAL INSPECTION FOR SEISMIC RESISTANCE IS REQUIRED AND SHALL COMPLY WITH SECTION 1705.11 INCLUDING ARCHITECTURAL, ELECTRICAL, AND MECHANICAL COMPONENTS.
- 8. STEEL DETAILING: THE SPECIAL INSPECTOR SHALL PERFORM AN INSPECTION OF THE STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENING, MEMBER LOCATIONS, AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION
- 9. SOILS: PER SECTION 1705.6 AND TABLE 1705.6. SEE CIVIL DRAWINGS AND SPECIFICATION DIVISION 2.
- 10. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHOR: INSPECTOR TO VERIFY INSTALLATION IN ACCORDANCE WITH ESR REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.
- 11. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
- 12. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE BUILDING OFFICIAL AND TO THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL.
- 13. THE TESTING/INSPECTION FIRM'S ENGINEER SHALL COMPLETE, SIGN AND SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

#### COLD FORMED METAL FRAMING

- 1. ALL COLD FORMED METAL FRAMING, EXTERIOR AND INTERIOR, SHALL BE DESIGNED BY THE CONTRACTOR'S DELEGATED ENGINEER. COLD FORMED METAL FRAMING SHOWN IN THESE DRAWINGS SHALL BE THE MINIMUM REQUIRED WHERE INDICATED. TYPICAL DETAILS AND SECTIONS ARE PROVIDED TO SHOW INTENT ONLY.
- 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUPPORTING CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT STATE FOR REVIEW PRIOR TO CONSTRUCTION. SHOP DRAWING SUBMITTAL SHALL CONTAIN THE FOLLOWING MINIMUM INFORMATION:
- A. PLANS INDICATING FRAMING LAYOUT B. SECTIONS SHOWING MEMBER SIZE, CONNECTION GEOMETRY, CLIPS, AND REQUIRED FASTENERS C. ELEVATIONS INDICATING OPENING FRAMING
- D. FRAMING MEMBER PHYSICAL AND MATERIAL PROPERTIES E. ALL FASTENERS AND CLIPS - PHYSICAL AND MATERIAL PROPERTIES
- F. SUPPORTING CALCULATIONS
- 3. 16 GAUGE (54 MIL) AND HEAVIER COLD FORMED STRUCTURAL TRACKS, STUDS AND JOISTS SHALL BE FORMED FROM ASTM A653 WITH A MINIMUM YIFLD STRENGTH OF 50 KSL ALL 18 GAUGE (43 MIL) AND LIGHTER COLD FORMED STRUCTURAL TRACKS, STUDS AND JOISTS SHALL BE FORMED FROM ASTM A653, WITH A MINIMUM YIELD STRENGTH OF 33 KSI. ALL STUDS, TRACKS AND JOISTS SHALL BE GALVANIZED ACCORDING TO ASTM A924. STUDS, RUNNERS (TRACK), BRACING AND BRIDGING SHALL BE MANUFACTURED PER ASTM C955.
- 4. ALL EXTERIOR METAL FRAMING AND METAL FRAMING BACKING UP MASONRY VENEER SHALL BE 18 GAUGE (43 MIL) MINIMUM
- 5. EXTERIOR METAL FRAMING SPACING SHALL NOT EXCEED 16" ON CENTER.
- 6. ALIGN PREPUNCHED HOLES IN STUDS FOR PLUMBING AND ELECTRICAL CONDUITS.
- 7. SPLICING OF FRAMING COMPONENTS SHALL NOT BE PERMITTED.

#### POST INSTALLED ANCHORAGE

- 1. ADHESIVE ANCHORAGES, WHERE SPECIFIED ON THE DRAWINGS, SHALL CONFORM TO THE FOLLOWING:
- A. CONCRETE HILTI HIT-RE 500-V3 ESR-3814 2. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS AND IN ACCORDANCE WITH SPACING AND EDGE
- CLEARANCES INDICATED ON THE DRAWINGS.
- 3. HOLES FOR INSTALLING REINFORCING BARS, BOLTS, THREADED RODS AND INSERTS SHALL BE DRILLED USING THE ICC APPROVED DRILLING METHOD FOR THE ANCHOR TO BE INSTALLED. NON-DESTRUCTIVELY LOCATE EXISTING REINFORCING PRIOR TO DRILLING. DO NOT CUT EXISTING REINFORCING.
- 4. SPECIAL CONDITIONS SUCH AS WATER SATURATED CONCRETE, WATER-FILLED HOLES, UNDERWATER AND OVERHEAD INSTALLATIONS MUST BE APPROVED BY THE ENGINEER OF RECORD AND COMPLY WITH THE APPLICABLE ICC-ES REPORT.
- 5. STEEL ANCHORING ELEMENTS SHALL BE THE SIZE AND GRADE SHOWN ON THE DRAWINGS AND MUST BE CLEAN, DRY AND FREE OF ANY CONTAMINANTS.
- 6. SUBSTITUTIONS FOR ANCHOR SYSTEMS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO INSTALLATION AND SHALL HAVE A VALID ICC-ES EVALUATION IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.
- 7. ALL ANCHOR EMBED DEPTHS SPECIFIED ON THESE DRAWINGS ARE EFFECTIVE EMBEDMENT DEPTHS. ADDITIONAL ANCHOR LENGTH AND OR HOLE DEPTH SHALL BE PROVIDED AS REQUIRED BY THE ANCHOR MANUFACTURER AND ASSOCIATED CODE APPROVALS.
- 8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS.
- 9. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND BE MADE AVAILABLE TO THE EOR AS REQUESTED.

- STRUCTURAL STEEL
- 1. ALL STRUCTURAL STEEL DESIGN, DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO THE AISC STEEL CONSTRUCTION MANUAL LOAD AND RESISTANCE FACTOR DESIGN AND THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
- 2. STRUCTURAL STEEL FABRICATION AND ERECTION SHALL CONFORM TO AISC REQUIREMENTS AND THE PROJECT SPECIFICATIONS.
- 3. STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION OF ELEMENTS AND CONNECTIONS MARKED 'SFRS' SHALL CONFORM TO AISC-341.

4.	STF	RUCTURAL STEEL SHALL CONFORM TO THE FO	LLOWING, UNLESS OTH
	DR/	AWINGS:	
	Α.	WIDE FLANGE SHAPES	ASTM A992, Fy=50 KSI
	Β.	COLUMN BASE PLATES	ASTM 572, GRADE 50 (
	C.	PLATES AND BARS	ASTM A36, Fy=36 KSI
			ASTM A572 GRADE 50
	D.	CHANNELS AND ANGLES	ASTM A36, Fy=36 KSI
	Ε.	HOLLOW ROUND SECTIONS	ASTM A500C, Fy=46 KS
	F.	HOLLOW RECTANGULAR SECTIONS	ASTM A500C, Fy=50 KS
	G.	ROUND PIPE	ASTM A53B, Fy=35 KSI
	Η.	COLUMN ANCHOR RODS	ASTM F1554 GRADE 55
	I.	THREADED RODS FOR EPOXY ANCHORAGE	ASTM A193 GRADE B7

- CONNECTION BOLTS F3125 GRADE A325N (7/8" DIA) WELDING ELECTRODES F70XX WELDED HEADED STUDS (WHS)
- ASTM A108, Fu=65 KSI, TYPE B M. WELDED THREADED STUDS (WTS) ASTM A108, Fu=65 KSI, TYPE B
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES AND OTHER AIDS, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND TAPERS OF UNEQUAL PARTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION OF A METHOD TO TRANSFER GRAVITY AND LATERAL LOADS FROM NON-STRUCTURAL ITEMS OCCURRING BETWEEN STRUCTURAL FRAMING TO ADJACENT FRAMING MEMBERS. IF STRUCTURAL FRAMING CONSISTS OF JOISTS OR JOIST GIRDERS, SPECIAL PROVISIONS APPLY. SEE STEEL JOIST AND JOIST GIRDER NOTES FOR FURTHER INFORMATION.
- STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A123. GALVANIZE BOLTS AND SIMILAR THREADED FASTENERS EXPOSED TO WEATHER IN ACCORDANCE WITH ASTM A153, CLASS C AND D, AS APPLICABLE. ALL FIELD WELDS EXPOSED TO WEATHER SHALL BE COATED WITH BRUSH APPLIED ZINC-RICH PAINT COMPLYING WITH ASTM A780 (GALVACON OR EQUIVALENT).
- 8. PROTECT ALL STEEL BELOW GRADE BY ENCASING IN CONCRETE OR PAINTING WITH BITUMASTIC PAINT.
- 9. COLUMN ANCHOR RODS: PROVIDE HEAVY HEX NUTS AND WASHERS COMPLYING WITH THE REQUIREMENTS OF TABLE 14-2 IN THE AISC STEEL CONSTRUCTION MANUAL UNLESS THICKER AND/OR LARGER WASHERS ARE NOTED ON THE DRAWINGS. HOLE DIAMETER IN WASHERS SHALL BE THE ANCHOR ROD DIAMETER + 1/16 INCH. IN LIEU OF HEADED RODS, THREADED RODS WITH A HEAVY HEX NUT FULLY ENGAGED AND TACK WELDED TO THE EMBEDDED END MAY BE USED.
- 10. COLUMN ANCHOR BOLT HOLES SHALL BE OVERSIZED IN ACCORDANCE WITH THE FOLLOWING: A. ROD DIAMETERS 3/4 INCH TO 1 INCH - 5/16 INCH OVERSIZE ROD DIAMETERS 1 INCH TO 2 INCH - 1/2 INCH OVERSIZE ROD DIAMETERS OVER 2 INCH - 1 INCH OVERSIZE
- 11. GROUT USED UNDER COLUMN BASE PLATES SHALL BE CEMENT BASED, NON-SHRINK, NON-METALLIC GROUT. THE GROUT SHALL EXHIBIT NO SHRINKAGE IN ACCORDANCE WITH ASTM C827 AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7,000 PSI WHEN TESTED IN ACCORDANCE WITH ASTM C109.
- 12. BASE PLATE CONNECTIONS ARE NOT DESIGNED TO PROVIDE STABILITY OF COLUMNS DURING ERECTION. COLUMNS SHALL BE TEMPORARILY BRACED BY THE ERECTOR PRIOR TO RELEASE OF THE COLUMN FROM THE HOISTING EQUIPMENT.
- 13. MINIMUM CONNECTIONS: ALL BOLTED CONNECTIONS SHALL BE MADE WITH A MINIMUM OF TWO 7/8 INCH DIAMETER ASTM A325 BOLTS IN SINGLE SHEAR BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE. IN NO CASE SHALL THE LENGTH OF A CONNECTION BE LESS THAN ONE HALF OF THE TEE DIMENSION OF THE BEAM WEB. ALL BOLTS IN BEARING TYPE CONNECTIONS SHALL BE TIGHTENED TO AT LEAST THE SNUG TIGHT CONDITION AS DEFINED BY AISC. BOLTS IN CONNECTIONS THAT ARE DESIGNATED AS SLIP CRITICAL, FULLY TENSIONED, OR SUBJECT TO TENSION LOADS, SHALL BE FULLY TENSIONED USING LOAD INDICATING WASHERS OR TENSION CONTROL BOLTS. ALL BEAM-TO-BEAM AND BEAM-TO-COLUMN CONNECTIONS SHALL BE SIMPLE OR PARTIALLY-RESTRAINED (PR) MOMENT CONNECTIONS IN ACCORDANCE WITH AISC SPECIFICATION B3.6. ALL STEEL BEAM CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE DESIGNED BY THE STRUCTURAL STEEL FABRICATOR BASED ON THESE NOTES.
- 14. BOLTED CONNECTIONS OF MEMBERS MARKED 'SFRS' SHALL BE PRETENSIONED AND SHALL MEET THE REQUIREMENTS FOR A CLASS A FAYING SURFACE. CONNECTIONS AT THESE MEMBERS SHALL BE MADE USING STANDARD HOLES IN ALL PLYS.
- 15. HARDENED WASHERS SHALL BE INSTALLED OVER SHORT SLOTTED OR OVERSIZE HOLES OCCURRING IN THE OUTER PLY OF A CONNECTION. A PLATE WASHER AT LEAST 5/16 INCH THICK WITH STANDARD HOLES SHALL BE INSTALLED OVER LONG SLOTTED HOLES OCCURRING IN AN OUTER PLY OF A CONNECTION.
- 16. TENSION CONTROL BOLTS MAY BE SUBSTITUTED FOR THE BOLTS SPECIFIED IN THESE PLANS AT THE DISCRETION OF THE CONTRACTOR. ASTM F3125 GRADE F1852 BOLTS MAY BE SUBSTITUTED FOR ASTM F3125 GRADE A325 BOLTS AND ASTM F3125 GRADE 2280 BOLTS MAY BE SUBSTITUTED ASTM F3125 GRADE A490 BOI TS.
- 17. A449, A193 GRADE B7, OR F1554 GRADE 105 THREADED ROD SHALL BE USED WHERE THRU BOLT LENGTH DOES NOT ALLOW FOR STANDARD F3125 GRADE A325 BOLTS. PROVIDE ASTM A563 NUTS WITH MATCHED WASHERS AT BOTH ENDS.
- 18. USE DOUBLE NUTS OR SINGLE NUT AND PEENED THREADS AT BOLTED CONNECTIONS WITH LONG SLOT HOLES.
- 19. WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS. ALL WELDS SHALL BE PREQUALIFIED AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS USING ASTM E70 SERIES ELECTRODES FOR SHOP WELDING A36 STEEL, AND E70 SERIES LOW HYDROGEN ELECTRODES FOR ALL WELDING OF HIGH STRENGTH STEELS AND FOR ALL FIELD WELDING.
- 20. ONLY PREQUALIFIED WELDS AS DEFINED BY AWS SHALL BE USED. WELDS SHOWN ON THE DRAWINGS ARE THE MINIMUM SIZE. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON PLATE THICKNESS. MINIMUM WELD SIZE SHALL BE 3/16 INCH. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS.
- 21. WHEN WELDS ARE NOT CALLED-OUT ON DRAWINGS, THEY ARE MINIMUM SIZE CONTINUOUS FILLET WELDS IN ACCORDANCE WITH AWS D1.1. FILLET WELDS NOT SPECIFIED AS TO LENGTH SHALL BE CONTINUOUS.
- 22. PROVIDE FILLET WELDS AT ALL CONTACT JOINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT.
- 23. ALL FILLET WELDS BY EACH WELDER SHALL BE VISUALLY INSPECTED. ALL COMPLETE PENETRATION GROOVE WELDS SHALL BE INSPECTED BY ULTRASONIC TESTING.
- 24. IN ALL CASES, SUPPORT OF THE METAL DECK AROUND COLUMN CLOSURES AND SCREED PLATES AROUND OPENINGS AND SLAB EDGES SHALL BE PROVIDED BY THE CONTRACTOR.
- 25. SHEAR STUDS SHALL BE 3/4-INCH DIAMETER UNLESS NOTED OTHERWISE AND AUTOMATICALLY END WELDED IN THE FIELD THROUGH THE METAL DECK TO STEEL BEAMS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. STUD LENGTHS AFTER WELDING SHALL BE AS SHOWN ON THE DRAWINGS. STEEL STUD MATERIAL, WELDING, AND INSPECTION SHALL BE IN ACCORDANCE WITH AWS D1.1.
- 26. BEAMS AND GIRDERS SHALL NOT SUPPORT PIPING LARGER THAN 10" DIAMETER WITHOUT THE REVIEW OF THE STRUCTURAL ENGINEER OF RECORD.

HERWISE NOTED ON THE STRUCTURAL

(Fy = 50 KSI)

WHERE NOTED AS GRADE 50

CONCRETE 1. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH IBC SECTION 1905 AND ACI 301.

- 2. THE CONCRETE MIX TABLE SHOWN BELOW SHALL APPLY TO ALL CONCRETE MIX DESIGNS USED ON THIS PROJECT. MIX DESIGN SUBMITTALS SHALL BE IDENTIFIED FOR INTENDED STRUCTURAL USE AND SUBMITTED TO THE OWNER'S REPRESENTATIVE AND STRUCTURAL ENGINEER FOR REVIEW TWO WEEKS PRIOR TO PLACING ANY CONCRETE.
- 3. ALL CONCRETE MIX DESIGNS SHALL BE PROPORTIONED IN ACCORDANCE WITH SECTION 5.3 (FIELD EXPERIENCE AND/OR TRIAL MIXTURES) OF ACI 318. SUBMIT MIX DESIGN FOR EACH CLASS OF CONCRETE. IF A STANDARD DEVIATION ANALYSIS IS USED, THE CONCRETE SHALL ACHIEVE AN AVERAGE STRENGTH IN ACCORDANCE WITH TABLE 5.3.2.2 OF ACI 318. SUBMITTALS MADE WHICH DO NOT CONFORM TO ACI 318 SECTION 5.3 SHALL BE REJECTED.

SEE ADDITIONAL REQUIREMENTS THIS SHEET FOR SLAB ON GRADE

- 4. SCHEDULE CEMENT CONTENT IS THE MINIMUM TOTAL CEMENTITIOUS MATERIALS CONTENT INCLUDING PORTLAND CEMENT AND FLY ASH.
- 5. FLY ASH SHALL CONFORM TO ASTM C618, TYPE C OR F. PERCENTAGE SCHEDULED IS BY WEIGHT OF TOTAL CEMENTITIOUS MATERIAL INCLUDING ASTM C150, C595, C845, AND C1157 CEMENT. DO NOT USE FLY ASH IF CONTENT WITHIN THE PERCENTAGES SHOWN CANNOT BE ACHIEVED.
- 6. WATER-REDUCING ADMIXTURES CONFORMING TO ASTM C494 MAY BE INCORPORATED IN THE CONCRETE MIX DESIGNS AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CALCIUM CHLORIDE OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.
- 7. AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260 SHALL BE USED IN ALL CONCRETE MIXES FOR WORK THAT IS EXPOSED TO WEATHER. WHERE ENTRAINED AIR IS NOT SCHEDULED, DO NOT ALLOW THE AIR CONTENT OF SLABS TO EXCEED 3% NATURALLY. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE END OF THE PLACING HOSE.
- 8. SCHEDULED SLUMP IS THE MAXIMUM ALLOWED AND SHALL BE ACHIEVED PRIOR TO ADDING ANY WATER REDUCING ADMIXTURES OR PLASTICIZERS.
- 9. LABORATORY TESTING WILL BE REQUIRED IN ACCORDANCE WITH ASTM C31. PERFORM COMPRESSION TEST PER ASTM C39; AIR CONTENT TEST PER ASTM C138 (GRAVIMETRIC METHOD), ASTM C173 (VOLUMETRIC METHOD), OR ASTM C231 (PRESSURE METHOD); SLUMP TEST PER ASTM C143.
- 10. LABORATORY SHALL TEST THE NUMBER OF CYLINDERS SPECIFIED BELOW FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF: 2 AT 7 DAYS FOR INFORMATION 2 AT 28 DAYS FOR ACCEPTANCE
- 11. REFER TO DRAWINGS OF OTHER DISCIPLINES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS.
- WHEN RUN IN SLABS, ELECTRICAL CONDUIT SHALL BE RUN AT MID-DEPTH OF THE SLAB AND CONDUIT SIZE SHALL NOT EXCEED 33 PERCENT OF THE SLAB DEPTH. NO CONDUIT SHALL BE PLACED IN SLABS WITH ACTUAL CONCRETE THICKNESS LESS THAN 3 INCHES, NOT INCLUDING METAL DECK DEPTH. THERE SHALL BE A MINIMUM OF 3 INCHES OF CLEAR SPACE BETWEEN CONDUITS. ALUMINUM CONDUIT IS PROHIBITED. ADDITIONAL REINFORCEMENT, #3 AT 12" OC, SHALL BE PLACED PERPENDICULAR TO THE CONDUIT ABOVE AND BELOW THE CONDUIT. THE ADDED REINFORCING SHALL EXTEND 1' - 0" BEYOND THE CONDUITS ON BOTH SIDES.
- 13. <u>REINFORCING STEEL MATERIALS</u>: DEFORMED BARS SPECIAL DUCTILE QUALITY WELDABLE DEFORMED BARS ASTM A706, GRADE 60 LOW ALLOY SMOOTH WELDED WIRE FABRIC (WWF) ASTM A185 (Fy = 65,000 PSI)
- 14. SPECIAL DUCTILE QUALITY (SDQ) REBAR SHALL BE USED IN DUCTILE FRAME MEMBERS AND SHEAR WALL BOUNDARY MEMBERS. GRADE 60 REINFORCEMENT COMPLYING WITH ACI 318 SECTION 21.1.5.2 SHALL BE PERMITTED.

ASTM A615, GRADE 60

- 15. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.
- ALL REINFORCEMENT SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 315 DURING CONCRETE PLACEMENT. REINFORCING PLACEMENT SHALL BE APPROVED BY THE ARCHITECT OR THEIR AUTHORIZED REPRESENTATIVE BEFORE CONCRETE IS PLACED.
- LAP REINFORCING BARS AS NOTED ON THE DRAWINGS. WHERE SPLICE LENGTH IS NOT SHOWN, USE TYPE 'Ls' SPLICE PER DEVELOPMENT AND SPLICE LENGTH SCHEDULE. MECHANICAL OR WELDED BUTT SPLICES SHALL BE SUBJECT TO STRUCTURAL ENGINEER'S APPROVAL. MECHANICAL SPLICES, WHERE ALLOWED ON THE PLANS. SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE SPLICED BARS IN BOTH TENSION AND COMPRESSION. LAP SPLICES OF BOTTOM BARS SHALL OCCUR AT A SUPPORT. LAP SPLICES OF TOP STEEL SHALL OCCUR AT MID SPAN.
- 18. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY DETAILED AS SUCH OR APPROVED BY THE STRUCTURAL ENGINEER.
- 19. REINFORCING BARS SHALL NOT BE WELDED OR TACK WELDED TO OTHER BARS OR TO PLATES, ANGLES, ETC. UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS DI.4. WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS QUALIFIED FOR WELDS USING APPROVED ELECTRODES.
- 20. CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE: CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH .....

EXPOSED TO EARTH OR WEATHER #5 OR SMALLER #6 OR LARGER	1 1/2" 2"
NOT EXPOSED TO EARTH OR WEATHE	R OR IN CONTACT WITH GROUND

SLABS, WALLS, JOISTS #11 OR SMALLER... ALL OTHER .... ..1 1/2" BEAMS, COLUMNS

PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS......1 1/2"

- 21. CONTRACTOR SHALL PROVIDE ADEQUATE BRACING FOR ALL CONCRETE WALLS DURING CONSTRUCTION AND UNTIL LATERAL SUPPORTS AND DIAPHRAGMS HAVE BEEN ATTACHED AND CONCRETE HAS ATTAINED THE SPECIFIED DESIGN STRENGTH. BACK FILLING SHALL NOT OCCUR UNTIL PERMANENT LATERAL RESTRAINTS ARE INSTALLED IN THEIR ENTIRETY.
- 22. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC UNLESS NOTED OTHERWISE.
- 23. COORDINATE CONCRETE EQUIPMENT PAD AND HOUSE KEEPING PAD LOCATIONS AND DIMENSIONS WITH ARCH, MECHANICAL, ELECTRICAL, PLUMBING, AND OWNER REQUIREMENTS.

24. STRUCTURAL RIGID FOAM SHALL CONFORM TO ASTM D6817 AND THE PROJECT SPECIFICATIONS. UNLESS OTHERWISE NOTED, FOAM SHALL BE EPS22 WITH 7.3 PSI CAPACITY AT 1% DEFORMATION.





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STRUCTURAL NOTES

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- FOUNDATION PLAN NOTES: 1. ELEVATIONS ARE BASED ON A REFERENCE FLOOR ELEVATION OF 100'-0", UON. TOP OF SLAB ON GRADE IS AT THE REFERENCE ELEVATION UNLESS NOTED OTHERWISE.
- SLAB ON GRADE IS 5 INCHES THICK AND REINFORCED WITH #4 @ 18" OC EACH WAY. SLAB ON GRADE SHALL BE PLACED OVER A VAPOR BARRIER AND COMPACTED GRANULAR FILL IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. SEE TYPICAL SLAB ON GRADE DETAILS FOR MORE INFORMATION.
- 3. SEE TYPICAL FOOTING BEARING AND DRAINAGE DETAIL FOR FOUNDATION BEARING AND DRAINAGE REQUIREMENTS. REFER TO GENERAL NOTES AND GEOTECHNICAL REPORT FOR MORE INFORMATION.
- 4. T/ INTERIOR FOOTING ELEVATION = 99'-4", TYP, UON
- 5. T/ EXTERIOR FOOTING ELEVATION = 98'-8, TYP, UON
- 6. ( ) INDICATES TOP OF FOOTING ELEVATION AT NON-TYPICAL LOCATIONS.
- 7. 'F#.#' INDICATES COLUMN OR ISOLATED SPREAD FOOTING MARK. SEE SCHEDULE FOR SIZE AND
- REINFORCEMENT. 8. 'WF#.#' INDICATES WALL OR CONTINUOUS FOOTING MARK. SEE SCHEDULE FOR SIZE AND REINFORCEMENT.
- 9. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- 10. COORDINATE LOCATION OF ALL EMBEDS WITH MECHANICAL, ELECTRICAL, PLUMBING, AND EXTERIOR WALL SYSTEMS PRIOR TO CASTING THE SLAB ON GRADE.
- 11. FOR SIDEWALKS, PAVING, AND SITE DETAILS AT THE BUILDING EXTERIOR, SEE ARCHITECTURAL AND CIVIL DRAWINGS.
- 12. REFERENCE ALL CONSTRUCTION DOCUMENTS FOR THE LOCATION, SIZE, AND EXTENT OF CONCRETE CURBS, HOUSEKEEPING PADS, CMU WALLS, PLATER WALLS, BOLLARDS, EDGE ANGLES, AND SLAB PENETRATIONS. REFINFORCE PER TYPICAL DETAILS.





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FOUNDATION PLAN

S1.1



1. FIELD VERIFY ALL EXISTING FRAMING ELEVATIONS.

- 2. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- NEW RTU NOTES 1. EXISTING CURB AND SUPPORT FRAMING TO REMAIN.
- 2. PROVIDE ADAPTER CURB FOR NEW UNIT & UTILIZE EXISTING CURB.
- CONTRACTOR'S DESIGNATED ENGINEER IS RESPONSIBLE FOR ANALYZING EXISTING CURB, NEW ADAPTER, CONNECTIONS, AND SEISMIC BRACING OR CURBS AND NEW UNIT.
- 4. MAXIMUM WEIGHT OF EXISTING CURB, NEW CURB ADAPTER, AND NEW UNIT = 6,000 LBS TOTAL.



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STRUCTURAL STERED PROFESS STERED PROFESS 94665 William S. Realend I OREGON MOREGON STEVEN RAGE
EXPIRES: 12/31/2022

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74-22109-00

FLOOR FRAMING PLAN

S2.1











![](_page_48_Figure_3.jpeg)

![](_page_48_Figure_4.jpeg)

![](_page_48_Figure_9.jpeg)

![](_page_49_Figure_0.jpeg)

D

![](_page_49_Figure_2.jpeg)

PROTECTION

PLAN AND NOTES

F1.1

ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET.

THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.

# Α

#### **GENERAL NOTES**

- 1 REMOVE ALL UNUSED PIPING, DUCTWORK AND ACCESSORIES.
- 2 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID, ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN TENANT SPACE AND WITHIN CLOSE PROXIMITY OF TENANT SPACE.
- 3 THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND BELTS, INSPECT, REPAIR, OR REPLACE THE ECONOMIZERS, DRIVES AND FAN BEARINGS, MOTORS, CONTROL COMPONENTS, VALVES AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL AUTHORITY HAVING JURISDICTION.
- 4 WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- 5 COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- 6 THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT. 7 FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL
- REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- 9 ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
- 10 LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE
- ELECTRICAL PANELS. TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT. 11 FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO
- SPECIFICATION. 12 PROVIDE SLEEVES AND SLEEVE SEALS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- 13 ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
- 14 REFER TO PLUMBING SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.
- 15 PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN. 16 FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- 17 INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- 18 LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- 19 INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

#### **GENERAL PLUMBING NOTES**

- FIELD VERIFY ALL NEW WATER, WASTE, AND VENT PIPING CONNECTIONS AND PROVIDE NEW 1 CONNECTIONS AS REQUIRED FOR PROPERLY OPERATING SYSTEMS.
- PITCH UNDERFLOOR SANITARY WASTE PIPING AT 1/4" PER FOOT, UNLESS NOTED OTHERWISE. PITCH UNDERFLOOR STORM PIPING 3" AND GREATER AT 1/8" PER FOOT, UNLESS NOTED OTHERWISE.
- PITCH ALL OTHER STORM PIPING AT 1/4" PER FOOT UNLESS OTHERWISE NOTED. FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION.
- ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY SEWER, AND STORM SEWER SERVICES TO 5 SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.
- WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR SHALL BE 2" MINIMUM.
- 7 PROVIDE CLEANOUT IN ACCESSIBLE LOCATION AT THE BASE OF ALL PLUMBING RISERS.

# GOVERNING CODES

- 2019 OREGON MECHANICAL SPECIALTY CODE (OMSC) 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC)
- 2021 OREGON PLUMBING SPECIALTY CODE 2019 OREGON FIRE CODE

# DEFFERRED SUBMITTALS

- FIRE PROTECTION • SEISMIC BRACING FOR PERMANENTLY INSTALLED HVAC AND MECHANICAL EQUIPMENT SEISMIC BRACING FOR PERMANENTLY INSTALLED PLUMBING EQUIPMENT
- PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR ALL HVAC SYSTEMS COMPONENTS AND EQUIPMENT

#### .PLUMBING.

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- P0.1 PLUMBING GENERAL NOTES, SYMBOLS, & ABBREVIATIONS
- PD2.1 FIRST LEVEL PLUMBING DEMOLITION PLAN
- UNDERGROUND PLUMBING PLAN P1.1
- P2.1 FIRST LEVEL PLUMBING PLAN
- P4.1 PLUMBING RISER DIAGRAMS
- P5.1 PLUMBING DETAILS & SCHEDULES

3

SCHEMATIC	3D	DESCRIPTION
<b>≻</b> CW <b>`</b>	<b></b> CW <b></b> S	DOMESTIC COLD WATER
<u>۲</u>		DOMESTIC COLD WATER (LINETYPE)
нw—	<b>٤</b> HWع	DOMESTIC HOT WATER
<u>۲</u>		DOMESTIC HOT WATER (LINETYPE)
<b>→</b> 110 HW →	<b>٤</b> 110 HWع	DOMESTIC HOT WATER (110 °F)
<b>┌──</b> 140 HW <b>───</b>	<b>٤</b> 140 HWع	DOMESTIC HOT WATER (140 °F)
<b>≻</b> −−−−	E HWC	DOMESTIC HOT WATER RECIRCULATING
<u>۲</u>		DOMESTIC HOT WATER RECIRC (LINETYPE)
<b>→ 110 HWC</b>	<b>1</b> 10 HWC	DOMESTIC HOT WATER RECIRCULATING (110 °
<b>├</b> 140 HWC <b></b>	<b>1</b> 40 HWC	DOMESTIC HOT WATER RECIRCULATING (140 °
<b>≻</b> SD <b>`</b>	sd sd	STORM DRAIN
	COSD SD	OVERFLOW STORM DRAIN
<b>∠</b> G <b></b> ₹	GS	NATURAL GAS
<u>≻ − AV- − →</u>		ACID VENT
<b>≻</b>	<b>هـــــــ</b> AW	ACID WASTE
<u> → - GV· </u>		GREASE VENT
<b>∠</b> GW <b>`</b>	<b></b> GW <b></b> \$	GREASE WASTE
<b>∠</b> CWV <b>~</b>	6CWV9	COMBINATION WASTE AND VENT
∽w	<b>د</b> w <b></b> s	SANITARY WASTE
<u>≻ - ∨</u>		SANITARY VENT
	CO	CLEAN OUT
	<u>wco</u>	WALL CLEAN OUT
	<u>      ∎ø    FCO</u>	FLOOR CLEAN OUT
	<u>GCO</u>	GRADE CLEAN OUT (DOUBLE CLEAN OUT)
		FLOOR DRAIN / FLOOR SINK
0	<b>O</b>	ROOF DRAIN / OVERFLOW DRAIN
<u>}</u>	€ <b></b> ₽	DOWNSPOUT NOZZLE
< <u>→</u> ++		WALL HYDRANT
<u> </u>		HOSE BIBB
. ∅		
<u>}</u>		WATER HAMMER ARRESTER
0-	<u>8" ORD-#</u> 1,500 SF	ROOF DRAIN TAG
	— <u>3" FS-#</u>	PLUMBING FIXTURE TAG

С

PIPING		S AND FITTINGS
SCHEMATIC	3D	DESCRIPTION
⊃		PIPE DROP
<b>o</b>		PIPE RISE
<b>; ;</b> ;		PIPE TEE DOWN
<b>→</b>		PIPE TEE UP
<b>≻</b> →		CONCENTRIC REDUCER
<b>├───</b>		ECCENTRIC REDUCER
	8	PIPE CAP
	s	PIPE ALIGNMENT GUIDE
<b>∕──</b> ★──₹		PIPE ANCHOR
<b>├───</b>		FLOW DIRECTION
		EXPANSION JOINT
<b>€XX3</b>		FLEXIBLE CONNECTION
, , , , , , , , , , , , , , , , , , ,		UNION
→ → → → → → → → → → → → → → → → → → →	·»	DIRECTION OF PIPE PITCH
ج <b>ـــــ</b> ۲		AQUASTAT
		EXPANSION LOOP
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		BALANCING VALVE
<b>;;₩i</b> ;		BALANCING VALVE W/ METERING POINTS
,ιδι		BALL VALVE
<u>ک</u> ــــــ		BUTTERFLY VALVE
		CHECK VALVE
		STEAM TRAP
	() [4]]	
<u>}</u>		MANUAL AIR VENT
<u>ک</u> ۲ → ۲	<b>1</b>	AUTOMATIC AIR VENT
\i⊽i\		PLUG VALVE
ج <b>ــــــخ</b>		PRESSURE GAUGE
		SOLENOID VALVE
		ANGLE VALVE
<b>∠</b> ∕		AUTOMATIC CONTROL VALVE 2-WAY
		AUTOMATIC CONTROL VALVE 3-WAY
		AUTOMATIC FLOW CONTROL VALVE
<b>⊱</b>		STRAINER
		PRESSURE AND TEMPERATURE TEST PORT
		THERMOMETER
		PRESSURE REDUCING VALVE (WATER SYSTEMS) PRESSURE REGULATING VALVE (GAS SYSTEMS)
		RELIEF VALVE
		FLOW MEASURING DEVICE
	── <del></del>	BACKFLOW PREVENTER
		UNION

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![](_page_50_Picture_50.jpeg)

<u>\* NOTE \*</u>

ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET.

THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.

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![](_page_51_Figure_0.jpeg)

![](_page_52_Figure_0.jpeg)

![](_page_53_Figure_0.jpeg)

![](_page_54_Figure_0.jpeg)

![](_page_55_Figure_0.jpeg)

PLUMBING FIXTURE SCHEDULE										
			LOCAL CONN	ECTIONS (INCHES)						
MARK	FIXTURE	WASTE	VENT	COLD WATER	HOT WATER	BASIS OF DESIGN	NOTES			
EWC-1	ELECTRIC WATER COOLER, BI-LEVEL FILTERED COOLER WITH BOTTLE FILLING STATION	1-1/2"	1-1/2"	1/2"	-	ELKAY MODEL LZSTLR8WS WITH LKAPREZL APRON, WALL CARRIER MLP200	-			
L-1	LAVATORY - WALL MOUNTED - ADA	1-1/2"	1-1/2"	1/2"	1/2"	WALL HUNG, AMERICAN STANDARD LUCERNE 0355.012 WHITE LAVATORY W/ CHICAGO 802-VE2805-665ABCP	1, 2			
S-1	CLASSROOM SINK W/ BUBBLER	2"	1-1/2"	1/2"	1/2"	ELKAY #DRKAD2517 W/ CHICAGO FAUCET 50-ABCP, BUBBLER 748-665ABCP	-			
S-2	UTILITY SINK, WALL MOUNT - ADA	2"	1-1/2"	1/2"	1/2"	WALL MOUNTED ELKAY EWMADA2420 W/ CHICAGO 631-XKABCP, PROVIDE W/CLAY TRAP, JAY R SMITH 8730 SUSPENDED CLAY TRAP	-			
WC-1	WATER CLOSET, WALL MOUNT - ADA	4"	2"	1"	-	AMERICAN STANDARD AFWALL MILLENNIUM FLOWISE ELONGATED WHITE TOILET WITH SLOAN ROYAL 111-1.28 (1.28 GPF) - MOUNT AT ADA HEIGHT	-			

3

NOTES:

2. PROVIDE FAUCET STEM WITH DOUBLE NUTS.

1. PROVIDE LAVS/SINKS WITH DRAINS, TRAPS, AND APPURTENANCES PER SPECS. PROVIDE ALL LAVS WITH TRUEBRO LAVGUARD 2 103E-Z FOR TWO SUPPLIES, TRAP, AND OFFSET TAILPIECE.

![](_page_55_Figure_4.jpeg)

![](_page_55_Figure_5.jpeg)

![](_page_55_Picture_7.jpeg)

# А

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- LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING. 9 ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
- 10 LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE
- ELECTRICAL PANELS. TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT. 11 FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO
- SPECIFICATION.
- 12 PROVIDE SLEEVES AND SLEEVE SEALS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- 13 ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT. 14 REFER TO PLUMBING SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.
- 15 PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- 16 FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- 17 INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS. 18 LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE
- APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- 19 INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

#### GENERAL HVAC NOTES

- 1 SUPPLY AND RETURN PIPING TO COILS ARE THE SAME SIZE.
- 2 CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 48" AFF MAX, A MINIMUM OF 8" FROM LIGHT SWITCH.
- REFER TO PIPING DRAWINGS FOR THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS. CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES.
- CONDENSATE PIPING SHALL BE TYPE "L" COPPER. PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUIPMENT. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.
- 6 ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.
- 7 THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

# **GOVERNING CODES**

- 2019 OREGON MECHANICAL SPECIALTY CODE (OMSC) 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC)
- 2021 OREGON PLUMBING SPECIALTY CODE 2019 OREGON FIRE CODE

# DEFFERRED SUBMITTALS

- FIRE PROTECTION
- SEISMIC BRACING FOR PERMANENTLY INSTALLED HVAC AND MECHANICAL EQUIPMENT SEISMIC BRACING FOR PERMANENTLY INSTALLED PLUMBING EQUIPMENT PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR ALL HVAC SYSTEMS COMPONENTS AND • EQUIPMENT

#### .MECHANICAL

В

- **MECHANICAL NOTES, SYMBOLS, & ABBREVIATIONS** M0.1
- MD1.0 UNDERGROUND HVAC DEMOLITION PLAN MD1.1 FIRST LEVEL HVAC DEMOLITION PLAN MD1.3 ROOF MECHANICAL DEMOLITION PLAN
- MD2.1 FIRST LEVEL HVAC PIPING DEMOLITION PLAN
- M1.0 UNDERGROUND HVAC PLAN
- FIRST LEVEL HVAC PLAN M1.1 ROOF MECHANICAL PLAN M1.3
- M2.1 FIRST LEVEL HVAC PIPING PLAN
- M4.1 MECHANICAL CONTROLS
- MECHANICAL DETAILS AND SECTIONS M5.1
- M6.1 MECHANICAL SCHEDULES

#### .PLUMBING.

P0.1	PLUMBING GENERAL NOTES, SYMBOLS, & ABBREVIATIONS
PD2.1	FIRST LEVEL PLUMBING DEMOLITION PLAN
P1.1	UNDERGROUND PLUMBING PLAN
P2.1	FIRST LEVEL PLUMBING PLAN
P4.1	PLUMBING RISER DIAGRAMS
P5.1	PLUMBING DETAILS & SCHEDULES

#### .FIRE PROTECTION.

F1.1 FIRST LEVEL FIRE PROTECTION PLAN AND NOTES

**^** 

![](_page_56_Figure_48.jpeg)

![](_page_56_Figure_49.jpeg)

![](_page_56_Figure_50.jpeg)

![](_page_56_Figure_51.jpeg)

# **MECHANICAL PIPING SYSTEMS**

SCHEMATIC	3D	DE
HWR	E HWR 3	HOT WATER RETU
HWS	E HWS	HOT WATER SUPP
RADON	RADON S	RADON PIPING/CO

# DESCRIPTION

ITEM TO BE DEMOLISHED - (D) or DEMO

PIPE SIZE TAG (DIAMETER WITH SYSTEM NAME)

MECHANICAL EQUIPMENT CLEARANCE

ESCRIPTION IRN ľΥ ONVEYANCE DUCT  $\frown$ 

**BID/PERMIT** 06/10/2022 REVISIONS

74-22109-00

MECHANICAL NOTES. SYMBOLS, & ABBREVIATIONS

M0.1

<u>\* NOTE \*</u>

ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET.

THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.

![](_page_57_Figure_0.jpeg)

3

Α

![](_page_57_Figure_32.jpeg)

В

![](_page_58_Figure_0.jpeg)

3

Α

(AE)-

(AF)-

(AG)-

(AG.8)-

(AH)-

(AJ)—

В

![](_page_58_Figure_31.jpeg)

![](_page_59_Figure_0.jpeg)

![](_page_60_Figure_0.jpeg)

![](_page_61_Figure_0.jpeg)

KEY NOTES	L L
E SUBSLAB SOIL EXHAUST DUCT (SSESD) USING ACTIVE SOIL PRESSURIZATION (ASD) SYSTEM USING GAS CONVEYANCE NG SYSTEM COMPLYING WITH 2010 OSSC 1811.3.4. SHALL BE TALLED FOR EVERY 15,000 SF OR PORTION THEROF OF LLDING SUBSLAB.	SROL
PIPE SHALL BE EMBEDDED IN THE MIDDLE OF A MINIMUM 12" WE X 8" DEEP GRAVEL TRENCH WITH THE PERFORATION LES ORIENTED TO ALLOW FOR BOTH THE FREE CONVEYANCE GAS INTO THE PIPE AND THE DRAINAGE OF ANY NDENSATION WHICH MAY COLLECT. THE PIPING SHALL BE A NDARD 3" DIAMETER PERFORATED PVC, EPDM OR NEOPRENE E.	
HIN 5 FEET FROM EXTEROR WALL FOOTING OR INTERIOR LL CUT-OFF FOOTING.	
SD'S SHALL BE EMBEDDED VERTICALLY INTO THE SUB-SLAB GREGATE OR OTHER PERMEABLE MATERIAL BEFORE THE B IS CAST. A "T" FITTING OR EQUIVALENT METHOD SHALL BE D TO ENSURE THAT THE SSESD OPENING REMAINS	STERED PROFESSO STERED PROFESS
RADON GENERAL NOTES	THE CONTRACTOR
ES BELOW ARE IN ADDITION TO THOSE APPLICABLE ON ET M0.1 CONVEYANCE PIPING SHALL NOT BE TRAPPED AND SHALL A MINIMUM SLOPE OF ONE-PERCENT. COSCC 2010 (WITH 2013 UPDATES): ONE LENGTH OF FORATED PIPE SHALL BE PROVIDED FOR EACH 50 LINEAL T OR PORTION THEREOF OF THE AREA TO BE SERVED ASURED IN ANY RIGHT ANGLE TO THE PERIMETER. PIPE GTHS SHALL TERMINATE NO FURTHER THAN 5 FEET FROM EXTERIOR WALL FOOTING OR INTERIOR WALL CUT-OFF DTING TILIZING THE EXCEPTION TO 1811.3.2, BY LOCATING ONE SD FOR EVERY 15 000 SE ALL PIPING AT INTERSECTIONS	EXPIRES: 12/31/2022
AT THE TRANSITION TO THE SSESD SHALL BE POSITIVELY INECTED SUCH THAT NO AIR LEAKAGE OCCURS AT THE PIPE INS.	
SETS IN PIPING AND TRANSITIONS AROUND OBSTRUCTIONS DERGROUND PIPING, FOOTINGS, ETC) SHALL BE PROVIDED NO COST TO THE OWNER. OW GRADE PIPE SHALL BE SOLVENT-WELDED, GASKETED OR CHANICALLY JOINED PER OSSC 1811.3.3.2 CIAL INSPECTION REQUIRED FOR RADON MITIGATION TEM PER OSSC SECTION 1705.8	
ER TO ARCHITECTURAL AND STRUCTURAL DETAILS AND CIFICATIONS FOR SUBFLOOR RADON MITIGATION PLAN CRIPTIONS RELATED TO SUBFLOOR PREPARATION, IBRANES, SEALS, AND CONCRETE TREATMENT	
	NO
	L DISTR ID, OR 9722
	ESCHOO SCHOO , PORTLAN
	TO ERTON (
KEY PLAN	BID/PERMIT
	REVISIONS
	74-22109-00
	UNDERGROUND HVAC PLAN
	M1.0

![](_page_62_Figure_0.jpeg)

![](_page_63_Figure_0.jpeg)

![](_page_64_Figure_0.jpeg)

![](_page_65_Figure_2.jpeg)

#### **RUN CONDITIONS:** THE UNIT SHALL RUN BASED UPON SIGNAL RECEIVED FROM THE BUILDING AUTOMATION SYSTEM VIA BACNET, WHICH SHALL BE BASED ON A USER DEFINABLE SCHEDULE AND SPACE CONDITIONS. OCCUPIED/UNOCCUPIED MODE SHALL BE DETERMINED BY THE BUILDING AUTOMATION SYSTEM.

#### SUPPLY FAN CONTROL:

ALARMS SHALL BE PROVIDED AS FOLLOWS:

SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.

THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN.

• SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON. SUPPLY FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.) (FOR FILTER CHANGE NOTIFICATION).

SUPPLY AIR DUCT STATIC PRESSURE CONTROL: THE BUILDING AUTOMATION SYSTEM SHALL MEASURE DUCT STATIC PRESSURE. UNIT CONTROLLER SHALL MODULATE THE SUPPLY FAN SPEED TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT AS RECEIVED FROM THE CENTRAL DDC SYSTEM VIA BACNET. THE SPEED SHALL NOT DROP BELOW 30% (ADJ.). THE STATIC PRESSURE SETPOINT SHALL BE RESET BASED ON ZONE COOLING REQUIREMENTS.

- THE INITIAL DUCT STATIC PRESSURE SETPOINT SHALL BE 0.5 IN. H2O (ADJ.).
- THE BUILDING AUTOMATION SYSTEM SHALL CONTINUOUSLY MONITOR THE DAMPER POSITION OF ALL VAV TERMINAL UNITS. THE DISCHARGE DUCT STATIC PRESSURE SHALL BE SENSED IN A NON-TURBULENT LOCATION 2/3 OF THE WAY DOWN THE DUCT TEN DUCT WIDTHS FROM ANY ELBOW
- PRESSURE SETPOINT SHALL BE RESET UPWARD BY 5% (ADJ.) OF THE MAXIMUM SYSTEM STATIC PRESSURE SETPOINT AT A FREQUENCY OF 10 MINUTES (ADJ.) UNTIL NO DAMPER IS MORE THAN 95% OPEN OR THE STATIC PRESSURE SETPOINT HAS RESET UPWARD TO THE SYSTEM MAXIMUM SETTING OR THE VARIABLE FREQUENCY DRIVE ARE AT THEIR MAXIMUM SETTING.
- WHEN ALL DAMPERS ARE LESS THAN 85% (ADJ.) OPEN, THE SUPPLY FAN DISCHARGE DUCT STATIC PRESSURE SETPOINT SHALL BE RESET DOWNWARD BY 5% (ADJ.) OF THE MAXIMUM SYSTEM STATIC PRESSURE SETPOINT AT A FREQUENCY OF 10 MINUTES (ADJ.) UNTIL ANY DAMPER IS MORE THAN 85% OPEN OR THE STATIC PRESSURE SETPOINT HAS RESET DOWNWARD TO THE SYSTEM MINIMUM SETTING OR THE VARIABLE FREQUENCY DRIVE ARE AT THEIR MINIMUM SETTING.
- THE CONTROL BANDS, SETPOINT INCREMENT VALUES, SETPOINT DECREMENT VALUES AND ADJUSTMENT FREQUENCIES SHALL BE ADJUSTED TO MAINTAIN MAXIMUM STATIC PRESSURE OPTIMIZATION WITH STABLE SYSTEM CONTROL AND MAXIMUM COMFORT CONTROL
- THE CONTRACTOR SHALL SUBMIT A WRITTEN SEQUENCE OF OPERATION AND SAMPLE PROGRAMMING REQUIRED TO DETERMINE THE DUCT STATIC PRESSURE SETPOINT.
- PRIOR TO FINAL SYSTEM ACCEPTANCE, A TREND LOG OF ACTUAL AIR SYSTEM OPERATION OVER A TYPICAL FORTY-EIGHT HOUR PERIOD SHALL BE REQUIRED BY THE ENGINEER AND OWNER. SYSTEM OPERATING CONDITIONS TO BE LOGGED INCLUDE: VAV BOX AIR VALVE POSITIONS, DUCT STATIC PRESSURE, DUCT STATIC PRESSURE SETPOINT AND VARIABLE SPEED DRIVE SPEED INDICATION AT 10-MINUTE INTERVALS.
- ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS 25% (ADJ.) GREATER THAN SETPOINT. SUPPLY FAN VFD FAULT.

#### EXHAUST FAN CONTROL:

OCCUPIED MODE:

- WHEN THE OUTSIDE AIR DAMPER IS 100% (ADJ) OPEN, ACTIVATE RTU EXHAUST FAN. BUILDING AUTOMATION SYSTEM WILL READ THE SUPPLY FAN SPEED AND SEND BACK UNIT EXHAUST FAN SPEED. EXHAUST FAN SPEED WILL BE DETERMINED BY TRACKING WITH THE SPEED OF THE SUPPLY FAN MINUS AN OFFSET (ADJ) AS DETERMINED BY THE TEST AND BALANCE CONTRACTOR. OFFSET SHALL ACCOUNT FOR EXHAUST AIRFLOW DRIVEN BY EXHAUST FANS IN THE ZONE OF ASSOCIATED RTU. BUILDING STATIC PRESSURE, MEASURED WITH REFERENCE TO OUTSIDE, WILL BE MONITORED BUT, WILL NOT BE USED TO DETERMINE SPEED OF EXHAUST FAN.
- DEACTIVATE HEAT WHEEL WHEN EXHAUST FAN IS TURNED OFF DUE TO ECON DAMPER POSITION.

#### UNOCCUPIED MODE:

- WHEN THE OUTSIDE AIR DAMPER IS 100% (ADJ) OPEN, ACTIVATE RTU EXHAUST FAN. BUILDING AUTOMATION SYSTEM WILL READ THE SUPPLY FAN SPEED AND SEND BACK UNIT EXHAUST FAN SPEED. EXHAUST FAN SPEED WILL BE DETERMINED BY TRACKING WITH THE SPEED OF THE SUPPLY FAN MINUS AN OFFSET (ADJ) AS DETERMINED BY THE TEST AND BALANCE CONTRACTOR. BUILDING STATIC PRESSURE, MEASURED WITH REFERENCE TO OUTSIDE, WILL BE MONITORED BUT, WILL NOT BE USED TO DETERMINE SPEED OF EXHAUST FAN. DEACTIVATE EXHAUST FAN WHEN OSA DAMPER DECREASES TO LESS THAN 60% (ADJ).
- DEACTIVATE HEAT WHEEL WHEN EXHAUST FAN IS TURNED OFF DUE TO ECON DAMPER POSITION.
- ALARMS SHALL BE PROVIDED AS FOLLOWS:
- EXHAUST FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- EXHAUST FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON. EXHAUST FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).
- EXHAUST FAN VFD FAULT.

#### SUPPLY AIR DISCHARGE TEMPERATURE SETPOINT:

- OCCUPIED MODE: THE UNIT CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT
- RECEIVED FROM BUILDING AUTOMATION SYSTEM VIA BACNET. • THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET BY THE BUILDING AUTOMATION SYSTEM FOR COOLING BASED ON ZONE
- COOLING REQUIREMENTS AS FOLLOWS:
- HEATING AND COOLING CONTROL- THE HEATING AND COOLING SHALL MODULATE IN SEQUENCE TO MAINTAIN THE DISCHARGE AIR
- TEMPERATURE SETPOINT OF 60° F (ADJ.). IF THE VARIABLE SPEED DRIVE RAMPS TO 100% (ADJ), THE DISCHARGE AIR SETPOINT SHALL BE RESET 5° F LOWER TO 55° F (ADJ.). THE DISCHARGE AIR SETPOINT SHALL REMAIN AT 55° F, UNTIL THE VARIABLE SPEED DRIVE SLOWS TO 90% (ADJ) AT WHICH POINT THE
- DISCHARGE AIR TEMPERATURE SHALL BE RESET HIGHER BY 5° FOLLOWING THE SEQUENCE IN REVERSE.

UNOCCUPIED MODE: THE UNIT CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT RECEIVED FROM BUILDING AUTOMATION SYSTEM VIA BACNET.

OUTSIDE AIR TEMPERATURE IS GREATER THAN 60°F (ADJ.).

THE HEAT RECOVERY WHEEL (HRW-C) SPEED WILL BE CONTROLLED BY UNIT CONTROLLER TO MAINTAIN DISCHARGE AIR TEMPERATURE

TEMPERATURE (EAHR-T) BELOW THE HEAT RECOVERY LOW LIMIT SETPOINT (HRLL-SP), THE HEAT RECOVERY LOOP WILL CHANGE MODES

AND SHALL BE ENABLED WHEN THE ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN THE RETURN AIR TEMPERATURE (RA-T) AND THE

OUTDOOR AIR TEMPERATURE (OA-T) IS GREATER THAN THE HEAT RECOVERY SETPOINT (HRT-SP). ON A DROP IN EXHAUST AIR

TO MAINTAIN A MINIMUM EXHAUST AIR TEMPERATURE (EAHR-T) TO PREVENT FREEZING. UPON A LOSS OF HEAT RECOVERY WHEEL STATUS (HRW-S), THE HEAT RECOVERY WHEEL WILL ATTEMPT TO AUTOMATICALLY RESTART UNTIL POSITIVE STATUS IS RECEIVED.

THE UNIT CONTROLLER WILL MODULATE THE COOLING COIL TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT (DAT-SP).

HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) GREATER THAN SETPOINT.

DX COOLING, GAS HEATING, VARIABLE AIR VOLUME UNIT

#### COOLING DISCHARGE AIR TEMPERATURE SETPOINT: 55°F.

### HEATING DISCHARGE AIR TEMPERATURE SETPOINT: 95°F

COOLING SHALL BE ENABLED WHENEVER:

AND THE SUPPLY FAN STATUS IS ON.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

AND HEATING IS NOT ACTIVE.

HEAT RECOVERY:

DX COOLING:

ヽ(RTU-5)

M4.1 / NO SCALE

#### HEATING (GAS):

 UNIT CONTROLLER SHALL MODULATE GAS HEATING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT (DAT-SP). THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE HEATING TO MAINTAIN ITS HEATING SETPOINT

- HEATING SHALL BE ENABLED WHENEVER: • OUTSIDE AIR TEMPERATURE IS LESS THAN 65° F (ADJ.).
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE COOLING IS NOT ACTIVE. ALARMS SHALL BE PROVIDED AS FOLLOWS:

LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°(ADJ.) LESS THAN SETPOINT.

#### RTU OPTIMAL START:

THE BUILDING AUTOMATION SYSTEM SHALL START THE UNIT PRIOR TO SCHEDULED OCCUPANCY BASED ON THE TIME NECESSARY FOR THE ZONES TO REACH THEIR OCCUPIED SETPOINTS. THE START TIME SHALL AUTOMATICALLY ADJUST BASED ON CHANGES IN OUTSIDE AIR TEMPERATURE AND ZONE TEMPERATURES. DURING MORNING WARM UP / COOL DOWN, THE OUTDOOR AIR AND EXHAUST AIR DAMPERS SHALL BE CLOSED, THE EXHAUST FAN SHALL BE DISABLED, IN THIS MODE THE RTU SHALL OPERATE TO RECIRCULATE RETURN AIR. THE ECONOMIZER MODE SHALL BE AVAILABLE DURING OPTIMAL START IF THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE SUPPLY AIR TEMPERATURE SETPOINT IN COOLING OR MORE THAN THE SUPPLY AIR TEMPERATURE IN HEATING. OPTIMAL START SHALL OPTIMIZE SUPPLY AIR TEMPERATURE SETPOINTS AND START TIME TO REACH OCCUPIED SETPOINTS IN NO MORE THAN 3 HRS (ADJ) FROM START TIME.

- INITIAL SUPPLY AIR TEMPERATURE SETPOINTS: MORNING WARM UP SUPPLY AIR SETPOINT: 100°F (ADJ.)
- MORNING COOL DOWN SUPPLY AIR SETPOINT: 60°F (ADJ.)

#### UNOCCUPIED OVERRIDE:

A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR AN ADJUSTABLE PERIOD OF TIME. AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE. PROVIDE A PANEL OF SWITCHES/BUTTONS TIED TO A LOCAL CONTROLLER IN THE MECHANICAL ROOM WITH COMMUNICATION TO EACH UNIT OVER THE NETWORK.

SMOKE DETECTION: THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A RETURN AIR SMOKE DETECTOR STATUS AND/OR RETURN AIR SMOKE DETECTOR STATUS. UNIT SHALL BE ALLOWED TO RESTART UP TO 3 TIMES IN ANY 24 HOUR PERIOD (ADJ.) UPON ACKNOWLEDGEMENT OF ALARM AT USER INTERFACE. UPON 4TH ALARM IN 24 HOUR PERIOD (ADJ.), LOCAL MANUAL RESET SHALL BE REQUIRED.

#### MINIMUM OUTSIDE AIR

UNIT CONTROLLER SHALL MONITOR OUTSIDE AIR FLOW AT AIRFLOW MEASURING STATION AND SHALL MODULATE OA & RA DAMPER IN SEQUENCE TO MAINTAIN MINIMUM OUTSIDE AIR SETPOINT AS DETERMINED BY BUILDING AUTOMATION SYSTEM. DURING UNOCCUPIED MODE, MINIMUM OUTSIDE AIR SHALL BE SET TO ZERO. DURING OCCUPIED MODES, MINIMUM OUTSIDE AIR SHALL BE AS SCHEDULED FOR EACH INDIVIDUAL UNIT.

#### ECONOMIZER:

ECONOMIZER SHALL BE ENABLED WHENEVER: THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE BY 3°F (ADJ.) AND THE SUPPLY FAN STATUS IS ON.

#### ECONOMIZER SHALL CLOSE WHENEVER:

- THE OUTSIDE AIR TEMPERATURE IS MORE THAN THE RETURN AIR TEMPERATURE
- MIXED AIR TEMPERATURE DROPS BELOW 40°F (ADJ.) OR THE FREEZESTAT IS ON.
- OR ON LOSS OF SUPPLY FAN STATUS.

#### EMERGENCY SHUTDOWN:

UPON A SIGNAL BY A MANUAL SWITCH LOCATED IN THE ADMIN AREA, THE RTU UNIT WILL STOP RUNNING. THE RTU WILL BE ABLE TO BE REACTIVATED USING A NETWORK COMMAND.

#### EMERGENCY VENTILATION:

IF SIGNAL INDICATING EMERGENCY GENERATOR IS RUNNING IS DETECTED, RTU UNIT WILL OPERATE IN VENTILATION MODE ONLY. POWER TO THE COOLING SECTION WILL BE SHUT DOWN. FANS WILL OPERATE TO PROVIDE UNCONDITIONED AIRFLOW EQUAL TO THE LOW LIM. CFM VALUE LISTED IN THE RTU SCHEDULE. WHEN EMERGENCY GENERATOR OPERATION SIGNAL IS OFF, RTU WILL RETURN BACK TO REGULAR SCHEDULED OPERATION MODE.

#### ADDITIONAL POINTS MONITORED BY THE BMS:

 EXHAUST AIR CO2 (EA-Q) BUILDING STATIC PRESSURE (BLDG-P)

- HEAT RECOVERY TEMPERATURE (HR-T)
- EXHAUST FAN STATUS (EF-S) OTHER POINTS AS SHOWN ON SCHEMATIC

TYPE	NAME	DESCRIPTION
AI	BLDG-P	BUILDING STATIC PRESSURE
AO	CLG1-DX	COOLING MODULATION
AI	DA1-P	DISCHARGE AIR STATIC PRESSURE 1
AI	DA-T	DISCHARGE AIR TEMPERATURE
BO	HTG1-MOD	HEATING MODULATION
BI	LT-A	LOW TEMPERATURE ALARM
Al	MA-T	MIXED AIR TEMPERATURE
AO	OAD-O	OUTDOOR AIR DAMPER OUTPUT
AI	PFILT-DP	PREFILTER DIFFERENTIAL PRESSURE
AO	RAD-O	RETURN AIR DAMPER OUTPUT
AI	RA-Q	RETURN AIR CO2 LEVEL
BO	RLF-C	RELIEF FAN COMMAND
AO	RLF-O	RELIEF FAN OUTPUT
BI	RLF-S	RELIEF FAN STATUS
BO	SF-C	SUPPLY FAN COMMAND
AO	SF-O	SUPPLY FAN OUTPUT
BI	SF-S	SUPPLY FAN STATUS
BO	SDR-1	SHUT DOWN RELAY - SUPPLY FAN VFD
BO	SDR-2	SHUT DOWN RELAY - EXHAUST FAN VFD
BO	SDR-3	SHUT DOWN RELAY - HEAT RECOVERY WHEEL VFD

![](_page_65_Picture_92.jpeg)

C

OCCUPIED MODE

WHEN THE ZONE TEMPERATURE (ZN-T) IS BETWEEN THE OCCUPIED HEATING (EFFHTG-SP) AND COOLING (EFFCLG-SP) SETPOINTS (INSIDE OF THE BIAS), THE PRIMARY AIR DAMPER (DPR-O) WILL BE AT THE MINIMUM CFM (SA-F) AND THERE WILL BE NO MECHÁNICAL HEATING. ON A RISE IN ZONE TEMPERATURE (ZN-T) ABOVE THE COOLING SETPOINT (EFFCLG-SP), THE PRIMARY AIR DAMPER (DPR-O) WILL INCREASE THE CFM (SA-F) AND THERE WILL BE NO MECHANICAL HEATING. ON A DROP IN ZONE TEMPERATURE (ZN-T) BELOW THE HEATING SETPOINT (EFFHTG-SP), THE REHEAT COIL WILL BE USED TO MAINTAIN THE ZONE TEMPERATURE (ZN-T) AND THE DAMPER (DPR-O) IS CONTROLLED TO PROVIDE A MINIMUM CFM (SA-F). WHEN ADDITIONAL HEATING IS REQUIRED AFTER DISCHARGE AIR TEMPERATURE REACHES THE MAXIMUM SETPOINT OF 85°F (ADJ), ZONE DAMPER SHALL MODULATE BETWEEN MINIMUM COOLING CFM AND MAXIMUM HEATING CFM. WHEN EVEN ADDITIONAL HEATING IS REQUIRED AFTER ZONE DAMPER MODULATES TO MAXIMUM HEATING CFM, THE DISCHARGE AIR SETPOINT SHALL BE INCREASED 1°F (ADJ.) EVERY 10 MIN (ADJ.) UNTIL THE ZONE IS SATISFIED.

#### **UNOCCUPIED MODE:**

WHEN IN THIS MODE, WHILE THE ZONE TEMPERATURE (ZN-T) IS BETWEEN THE UNOCCUPIED HEATING (EFFHTG-SP) AND COOLING (EFFCLG-SP) SETPOINTS (INSIDE OF THE BIAS), THE PRIMARY AIR DAMPER (DPR-O) WILL BE AT THE MINIMUM CFM (SA-F) AND THERE WILL BE NO MECHANICAL HEATING. ON A RISE IN ZONE TEMPERATURE (ZN-T) ABOVE THE UNOCCUPIED COOLING SETPOINT (EFFCLG-SP), THE PRIMARY AIR DAMPER (DPR-O) WILL INCREASE THE CFM (SA-F) (IF AVAILABLE) AND THERE WILL BE NO MECHANICAL HEATING. ON A DROP IN ZONE TEMPERATURE (ZN-T) BELOW THE UNOCCUPIED HEATING SETPOINT (EFFHTG-SP), THE REHEAT COIL WILL BE USED TO MAINTAIN THE ZONE TEMPERATURE (ZN-T) AND THE PRIMARY AIR DAMPER (DPR-O) WILL BE AT THE MINIMUM CFM (SA-F).

# CO2 FLOW RESET:

THE CO2 LEVEL IN THE ZONE (ZN-Q) WILL BE MONITORED AND WILL RESET THE MINIMUM FLOW SETPOINTS FOR THE BOX AS SCHEDULED. ON RISING CO2 CONCENTRATIONS, OVERRIDING NORMAL DAMPER OPERATION TO MAINTAIN A CO2 SETPOINT OF NOT MORE THAN 800 PPM (ADJ.). ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH ZONE CARBON DIOXIDE CONCENTRATION: IF THE ZONE CO2 CONCENTRATION IS GREATER THAN 1000 PPM (ADJ.).

#### **OPTIMAL START:**

PROVIDE OPTIMAL START ALGORITHM FOR MORNING START-UP. ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP/COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD. START TIME SHALL AUTOMATICALLY ADJUST BASED ON CHANGES IN OUTSIDE AIR TEMPERATURE AND ZONE TEMPERATURES. START UP SHALL INITIALLY UTILIZE THE MAXIMUM CFM THAT CAN BE DELIVERED TO THE SPACE TO REDUCE THE TIME TO MEET SETPOINTS. THE HEATING COIL SHALL BE AVAILABLE TO MAINTAIN THE DISCHARGE AIR SETPOINT SHALL BE 100°F (ADJ.) IN MORNING WARMUP.

#### TEMPERATURE SETPOINT:

OCCUPIED MODE: COOLING: 74° F (ADJ.) PLUS 1°F OFFSET HEATING: 70° F (ADJ.)\* MINUS 1°F OFFSET

#### UNOCCUPIED MODE: COOLING: 81° F (ADJ.)

HEATING: 60° F (ADJ.)

ALARMS SHALL BE PROVIDED AS FOLLOWS: UNIT ENABLE: A NETWORK UNIT ENABLE (UNITEN-MODE) SIGNAL WILL CONTROL THE MODE OF THE BOX.

### NETWORK WARMUP-COOLDOWN:

BELOW	THE EFFECTIN	E HEATING SET
TEMPE	RATURE (ZN-T)	. WHEN THE BOX
COMMA	AND HAS BEEN	REMOVED.
TYPE	NAME	DESCRIPTION
Al	DA-VP	DISCHARGE AII
Al	DA-T	DISCHARG
PAO	DPR-O	SUPPLY AIR DA
PAO	HTG-O	HEATING OUTP
MO	OCC-MODE	OCCUPANCY S
Al	ZN-Q	ZONE CO2
Al	ZN-SP	ZONE SETPOIN
AI	ZN-T	ZONE TEM

![](_page_65_Picture_111.jpeg)

![](_page_65_Picture_113.jpeg)

BI - Fan Status \_BO - Fan Start/Stop\_

RUN CONDITIONS - SCHEDULED: THE FAN SHALL RUN ACCORDING TO A USER DEFINABLE SCHEDULE.

THE CONTROLLER SHALL MONITOR THE FAN STATUS. FAN FAILURE SHALL TRIGGER THE EXISTING AUDIBLE ALARM LABELED "RADON FAN FAILURE" LOCATED IN THE JANITORS OFFICE TO INDICATE FAN MALFUNCTION IN ACCORDANCE WITH OSCC 2010 1811.3.3.1

ALARMS SHALL BE PROVIDED AS FOLLOWS: • FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF. • FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.

![](_page_65_Figure_119.jpeg)

DEADBAND = 5°F (MINIMUM DIFFERENCE BETWEEN COOLING AND HEATING SETPOINT) \*WHEN OCCUPANCY SENSOR INDICATES NO OCCUPANCY, SET POINT SHALL BE REDUCED BY 1° F (ADJ.)

ZONE SETPOINT ADJUST: DDC SHALL ADJUST ZONE TEMPERATURE FROM FRONT END. THE OCCUPANT SHALL NOT BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR.

HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.). LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

WARM-UP AND COOLDOWN MODES WILL BE ACTIVATED BY A NETWORK COMMAND (WC-C). WHEN THE ZONE TEMPERATURE (ZN-T) IS POINT (EFFHTG-SP), THE BOX WILL USE WARM AIR FLOW, THEN REHEAT COIL TO MAINTAIN THE ZONE X IS SATISFIED THE FLOW WILL REMAIN AT THE WARM-UP MINIMUM POSITION UNTIL THE WARM-UP

> R VELOCITY PRESSURE GE AIR TEMPERATURE AMPER OUTPUT

STATUS DISPLAY

ZONE TEMPERATURE

![](_page_65_Picture_130.jpeg)

![](_page_66_Figure_0.jpeg)

1	\
r	٦

							SUPPLY FA	AN			EXAF	HUST FAN			OUTS	SIDE AIR	
MARK		SERVICE			SA MAX	SA MIN	ESP (IN.	FAN RPM	MOTOR HP	EA DESIGN	ESP (IN	N. FAN RPM	MOTOR H	P UPPE	ER LIMIT	LOWER LIMIT	AIRFLOW CFM
RTU-5	AREA C - L	LIBRARY, COMP LAF	AB, CLASSROOM	DMS	7,500	4500	1.5"	1660	15	7500	1"	2140	(2) 4	4	4500	1100	4500
IERAL NOTES:																	
A.AL B.RE C.MI D.PF E.AL F.PF G.UN H.AL I.PF J.AL K.AL L.CC M.RE	LL UNITS TO BE PROV EVIEW MANUFACTUR INIMUM COOLING EFF ROVIDE MFGR'S FACT LL STARTERS TO BE I ROVIDE FACTORY MC NITS SHALL HAVE MIN LL AHU'S SHALL MEET ROVIDE VARIABLE FR LL BURNERS AND IND LL UNITS TO BE DOUE ONTRACTOR SHALL B EFRIGERANT IS R-410	VIDED WITH 100% RI ER'S RIGGING AND FICIENCIES BASED ( FORY MOUNTED CO PROVIDED AS PART JUNTED DISCONNEC VIMUM 65,000 SCCR T REQUIREMENTS ( REQUENCY DRIVE FO VIRECT FIRED HEAT BLE WALL CONSTRU E RESPONSIBLE FO Ja.	RECIRCULATION D LIFTING INSTF ON AHRI 340/3 ONTROLLER WI RT OF DIVISION ECT(S) R RATING. OF 2016 ASHR/ FOR SUPPLY AI T EXCHANGERS RUCTION. FOR ALL POWE	JN CAPABILITIES IRUCTIONS PRICE 360. VITH INTERFACE N 23 WORK. RAE 90.1, TABLE AND EXHAUST F RS TO BE STAINI ER AND CONTRO	S AND 100% OR TO INSTA E TO EMCS. E 6.8.1. FANS. LESS STEEL DL WIRING, I		MIZER CAPA	PROVIDE .	A FULLY FUNC	'IONAL SYSTE	И						
1 D> 2 HE 3 PF 4 MI 5 PF	X COIL FACE VELOCIT EAT RECOVERY CAPA ROVIDE VARIABLE SP IN EER = 11 ROVIDE FACTORY AD	TY SHALL BE LESS	S THAN 500 FPN N 75/62.6° F DB/ YERY WHEEL. N MATCH EXISTIN	M. /WB SUMMER IN NO BYPASS ON NG FOOTPRINT .	NTERIOR AN RECOVERY AND PROVIE	d 70° f db v Wheel. De spring 1:	VINTER. SOLATOR.										
V TERMINAL UN												DDIMA		M			
NEW TAG		ROOM SERVED			NE	W OR EXIST	ÎNG		EXISTIN	G TAG	UN	NIT N	IAX.	CC	:OOLING MIN	HEA	ring M
VAV-G102		G102 CLASSROC	ОМ		١	NEW VAV BC	X		-		RT	U-5	365		260	7(	15
VAV-G104 VAV-G106		G104 CLASSROO	OM OM		N 5.4107-111	NEW VAV BC			-		RT	U-5	365 945		260 285	70	0
VAV-G107 VAV-G108		G107 WORKROO	OM OM		EXISTIN	G TO BE REI G TO BE REI			VAV-5	-103 101A	RT	U-5 U-5	255 915		275	7(	15
VAV-G110A VAV-G110B		G110 LIBRARY N	N		EXISTIN	G TO BE REI	LOCATED		VAV-	-102		U-5 1	,445 180		435 355	1,0	10 60
VAV-G114 DTES: . FACTORY INST, . BOTTOM ACCES . WIDTH DIMENS . NC RATINGS BA . MINIMUM COOL HEATING COIL S THE DUCT BRAN	ALL CONTROLS FURM SS, DOUBLE WALL CO SION INCLUDES CONT ASED ON 1.0" WC PRE LING CFM BASED ON I SHALL BE SIZED AT 30 NCH TO VAV BOXES S	G110 LIBRARY : G114 COMPUTER : NISHED AS PART OF ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I ) F DELTA TEMP ON HALL BE ONE SIZE	S R LAB OF SPECIFICATI R MODEL INDICA N AIR SIDE ANI E HIGHER THAN	FION 230900. CATED AT 0.03" V ND 20 F ON WAT	EXISTIN EXISTIN WC MIN TRAI ER SIDE. SE INECTION S	NEW VAV BC G TO BE REI NSDUCER D ELECTION BA	)X LOCATED IFFERENTIAI ASED ON WA	L PRESSU	- VAV-5 RE. ACTUAL MI ROPYLENE GL	101B NIMUM COOLII (COL).	G CFM T	U-5 1	EQUIPME	NT PROV	355 VVIDED.	1,2	45
VAV-G114 IOTES: 1. FACTORY INST 2. BOTTOM ACCE 3. WIDTH DIMENS 4. NC RATINGS BA 5. MINIMUM COOL . HEATING COIL S . THE DUCT BRAN . MINIMUM 2-ROW	ALL CONTROLS FURM SS, DOUBLE WALL CO SION INCLUDES CONT ASED ON 1.0" WC PRE LING CFM BASED ON I SHALL BE SIZED AT 30 NCH TO VAV BOXES S V HEATING COIL	G110 LIBRARY : G114 COMPUTER ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I 0 F DELTA TEMP ON HALL BE ONE SIZE	S R LAB OF SPECIFICATI MODEL INDICA N AIR SIDE ANI E HIGHER THAN	FION 230900. ATED AT 0.03" V D 20 F ON WAT N THE BOX CON	NC MIN TRAI ER SIDE. SE	NEW VAV BC	)X LOCATED IFFERENTIAI ASED ON WA	L PRESSU	- VAV-5 RE. ACTUAL MI ROPYLENE GL	101B NIMUM COOLII (COL).	G CFM T	D BE BASED ON	EQUIPME	NT PRO\	355 IVIDED.	1,2	45
VAV-G114 OTES: . FACTORY INST, . BOTTOM ACCES . WIDTH DIMENS . NC RATINGS BA . MINIMUM COOL HEATING COIL S THE DUCT BRAN MINIMUM 2-ROW	ALL CONTROLS FURM SS, DOUBLE WALL CO SION INCLUDES CONT ASED ON 1.0" WC PRE LING CFM BASED ON I SHALL BE SIZED AT 30 NCH TO VAV BOXES S V HEATING COIL	G110 LIBRARY : G114 COMPUTER ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I 0 F DELTA TEMP ON 3HALL BE ONE SIZE	S R LAB OF SPECIFICATI MODEL INDICA NAIR SIDE ANI E HIGHER THAN	FION 230900.	NC MIN TRAI ER SIDE. SE NNECTION S	NEDUCER D ELECTION BA IZE.	IFFERENTIAI ASED ON WA	L PRESSU	EXTERNAL S.	101B NIMUM COOLII (COL). P. F/	G CFM TO	D BE BASED ON	EQUIPME	NT PRO\	355 XVIDED.	CONTROL	45 DRIVE
VAV-G114 DTES: . FACTORY INST/ . BOTTOM ACCES . WIDTH DIMENS . NC RATINGS BA . MINIMUM COOL HEATING COIL S THE DUCT BRAN MINIMUM 2-ROW	ALL CONTROLS FURM SS, DOUBLE WALL CO SION INCLUDES CONTR ASED ON 1.0" WC PRE LING CFM BASED ON I SHALL BE SIZED AT 30 NCH TO VAV BOXES S V HEATING COIL SERV	G110 LIBRARY : G114 COMPUTER ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I 0 F DELTA TEMP ON HALL BE ONE SIZE	S R LAB	FION 230900.	WC MIN TRAI ER SIDE. SE NECTION S	NEW VAV BC G TO BE REI NSDUCER D ELECTION BA IZE. VHEEL TYPE	IFFERENTIAI ASED ON WA	L PRESSUI TER (NO P	EXTERNAL S. (IN WG)	101B		SOUND (SONES)	EQUIPME MOTOR DAME	NT PROV	355 VVIDED.	CONTROL	45 DRIVE TYPE
VAV-G114 TES: FACTORY INST, BOTTOM ACCES WIDTH DIMENS NC RATINGS BA MINIMUM COOL HEATING COIL S IHE DUCT BRAN MINIMUM 2-ROW NSCHEDULE MARK EF-G101 EF-G103	ALL CONTROLS FURM SS, DOUBLE WALL CO SION INCLUDES CONTR ASED ON 1.0" WC PRE LING CFM BASED ON 1 SHALL BE SIZED AT 30 NCH TO VAV BOXES S V HEATING COIL SERV G101 RES G103 RES	G110 LIBRARY : G114 COMPUTER ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I 0 F DELTA TEMP ON SHALL BE ONE SIZE	S RLAB OF SPECIFICATI MODEL INDICA NAIR SIDE ANI E HIGHER THAN HIGHER THAN	FAN TYPE	VC MIN TRAI EXISTIN ER SIDE. SE NNECTION S	NEW VAV BC G TO BE REI NSDUCER D ELECTION BA IZE. VHEEL TYPE TRIFUGAL TRIFUGAL	IFFERENTIAI ASED ON WA	ATA ATA	EXTERNAL S. (IN WG) 0.25 0.25	101B	G CFM T( G CFM T( 1 1	0         0         1           U-5         1           D BE BASED ON           SOUND           (SONES)           0.5           0.5	EQUIPME MOTOR DAME	NT PROV	355 DVIDED.	CONTROL	45 DRIVE TYPE DIRECT DIRECT
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VAV-G114 DTES: . FACTORY INST/ . BOTTOM ACCES . WIDTH DIMENS . NC RATINGS BA . MINIMUM COOL HEATING COIL S THE DUCT BRAN MINIMUM 2-ROW AN SCHEDULE MARK EF-G101 EF-G103 DTES: 1.DIS 2.PR 3.CC 4.PR	ALL CONTROLS FURN SS, DOUBLE WALL CO SION INCLUDES CONTI ASED ON 1.0" WC PRE LING CFM BASED ON I SHALL BE SIZED AT 30 NCH TO VAV BOXES S V HEATING COIL SERV G101 RES G103 RES G103 RES SCONNECT SWITCH E ROVIDE CLASS 1 MOT DNTROL BY SECTION ROVIDE WITH EC MOT	G110 LIBRARY : G114 COMPUTER NISHED AS PART OF ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I 0 F DELTA TEMP ON SHALL BE ONE SIZE //ICE	S ALAB  F SPECIFICATI MODEL INDICA MODEL INDICA NAIR SIDE ANI HIGHER THAN CEILI CEILI CEILI CEILI TARTERS BY M DAMPER AS P/ PER INTERLOC	FION 230900.	VC MIN TRAI EXISTIN R SIDE. SE UNECTION S V V C CEN CEN	NSDUCER D ELECTION BA IZE. VHEEL TYPE TRIFUGAL TRIFUGAL	IFFERENTIA ASED ON WA		EXTERNAL S. (IN WG) 0.25 0.25 0.25 0.25	101B         NIMUM COOLIN         (COL).         P.       FA         P.       Intervention         Intervention       Intervention         RADON FA       Intervention         FAN       Intervention         Intervention       Intervention         Interventinter       Interventinterventinter <td></td> <td>0       0       1         U-5       1         D BE BASED ON       0         SOUND       0         (SONES)       0         0.5       0         0.5       0         0.5       0         EDULE       0         EXTERNAL S       0         (IN WG)       0</td> <td>EQUIPME MOTOR DAMF YES YES S.P. FAI</td> <td>NT PROV</td> <td>355 WIDED. UIDED. UIDED. L L L L DUND DNES)</td> <td>CONTROL IGHTING OCC IGHTING OCC IGHTING OCC DAMPER</td> <td>45 DRIVE TYPE 0 DIRECT DIRECT 0 0 0 0 0 0 0 0 0 0 0 0 0</td>		0       0       1         U-5       1         D BE BASED ON       0         SOUND       0         (SONES)       0         0.5       0         0.5       0         0.5       0         EDULE       0         EXTERNAL S       0         (IN WG)       0	EQUIPME MOTOR DAMF YES YES S.P. FAI	NT PROV	355 WIDED. UIDED. UIDED. L L L L DUND DNES)	CONTROL IGHTING OCC IGHTING OCC IGHTING OCC DAMPER	45 DRIVE TYPE 0 DIRECT DIRECT 0 0 0 0 0 0 0 0 0 0 0 0 0
VAV-G114 IOTES: 1. FACTORY INST/ 2. BOTTOM ACCES 3. WIDTH DIMENS 4. NC RATINGS BA 5. MINIMUM COOL 4. HEATING COIL S 1. HEATING COIL S 1. THE DUCT BRAN MINIMUM 2-ROW FAN SCHEDULE MARK EF-G101 EF-G103 IOTES: 1. DIS 2. PR 3. CC 4. PR 4. PR	ALL CONTROLS FURM SS, DOUBLE WALL CO SION INCLUDES CONTR ASED ON 1.0" WC PRE ING CFM BASED ON I SHALL BE SIZED AT 30 NCH TO VAV BOXES S V HEATING COIL SERV G101 RES G103 RES G103 RES SCONNECT SWITCH E ROVIDE CLASS 1 MOT ONTROL BY SECTION ROVIDE WITH EC MOT	G110 LIBRARY : G114 COMPUTER ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I 0 F DELTA TEMP ON SHALL BE ONE SIZE //ICE //	S ALAB	FAN TYPE ING MOUNT ING MOUNT ING MOUNT ING MOUNT ING WITH FAN CKED WITH FAN SOIL EXHAU	VC MIN TRAI EXISTIN R SIDE. SE INECTION S CENT CENT CENT	NSDUCER D ELECTION BA IZE. VHEEL TYPE TRIFUGAL TRIFUGAL	IFFERENTIAI ASED ON WA		EXTERNAL S. (IN WG) 0.25 0.25 0.25 0.25	101B         NIMUM COOLIN         (COL).         P.       F4         P.       11         11		SOUND (SONES) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	EQUIPME MOTOR DAME YES S.P. FAI S.P. FAI 282	NT PROV	355 WIDED. UIDED. UIDED. L L L L L C DUND ONES) 6.3	CONTROL IGHTING OCC IGHTING OCC IGHTING OCC DAMPER DAMPER	45 DRIVE TYPE DIRECT DIRECT DIRECT CONTROI CONTINUOI
VAV-G114 IOTES: 1. FACTORY INST 2. BOTTOM ACCES 3. WIDTH DIMENS 4. NC RATINGS BA 5. MINIMUM COOL 4. NC RATING COIL S 1. HEATING COIL S 1. THE DUCT BRAN MINIMUM 2-ROW FAN SCHEDULE MARK EF-G101 EF-G103 IOTES: 1. DIS 2. PR 3. CC 4. PR MARK EF-R1 NOTES:	ALL CONTROLS FURN SS, DOUBLE WALL CO SION INCLUDES CONTRA ASED ON 1.0" WC PRE LING CFM BASED ON I SHALL BE SIZED AT 30 NCH TO VAV BOXES S V HEATING COIL SERV SERV G101 RES G103 RES SCONNECT SWITCH E ROVIDE CLASS 1 MOT DNTROL BY SECTION ROVIDE WITH EC MOT 1. DISCONNE 2. RADON AL 3. CONTROL BY	G110 LIBRARY : G114 COMPUTER MISHED AS PART OF ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I 0 F DELTA TEMP ON SHALL BE ONE SIZE //ICE //	S ALAB  S ALAB  S S ALAB  S S S S S S S S S S S S S S S S S S	FAN TYPE FAN TYPE ING MOUNT ING MOUNT ING MOUNT ING MOUNT CKED WITH FAN CAL. STARTE SOIL EXHAU SOIL EXHAU	EXISTIN EXISTIN WC MIN TRAI ER SIDE. SE UNECTION S V V C CENT CENT CENT O ALERT S O WITH FAN.	NSDUCER D ELECTION BA IZE. VHEEL TYPE TRIFUGAL TRIFUGAL CHOOL A	IFFERENTIA IFFERENTIA SED ON WA FAN D/ CFM 0 70 70 70 1 1 1 1 1 1 1 1 1 1 1 1 1		EXTERNAL S. (IN WG) 0.25 0.25 0.25	101B         NIMUM COOLIN         (COL).         P.       F4         P.       I         I       11         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I       I         I		SOUND (SONES) 0.5 0.5 0.5 0.89 EDULE EXTERNAL S (IN WG) 0.89	EQUIPME MOTOR DAME YES S.P. FAI S.P. FAI 282	NT PROV	355 WIDED. UIDED. UIDED. UIDED. CUND CONES) 6.3	CONTROL IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC	45 DRIVE TYPE DIRECT DIRECT CONTROL CONTROL CONTINUOI
VAV-G114           OTES:           1. FACTORY INST/ 2. BOTTOM ACCES           3. WIDTH DIMENS           4. NC RATINGS BA           5. MINIMUM COOL           HEATING COIL S           THE DUCT BRAN           MINIMUM 2-ROW           AN SCHEDULE           MARK           EF-G101           EF-G103           OTES:           1. DIS           MARK           MARK           MARK           MARK	ALL CONTROLS FURM SS, DOUBLE WALL CO SION INCLUDES CONTRA ASED ON 1.0" WC PRE LING CFM BASED ON I SHALL BE SIZED AT 30 NCH TO VAV BOXES S V HEATING COIL SERV SERV G101 RES G103 RES SCONNECT SWITCH E ROVIDE CLASS 1 MOT DNTROL BY SECTION ROVIDE WITH EC MOT 1. DISCONNE 2. RADON AL 3. CONTROL BY MAX STATIC PD (IN WG)	G110 LIBRARY : G114 COMPUTER G114 COMPUTER INISHED AS PART OF ONSTRUCTION. ROL ENCLOSURE. ESSURE DROP. MFGR'S DATA FOR I O F DELTA TEMP ON SHALL BE ONE SIZE //ICE	S ALAB  S ALAB  S S ALAB  S S S S S S S S S S S S S S S S S S	FAN TYPE FAN TYPE ING MOUNT ING MOUNT ING MOUNT ING MOUNT CKED WITH FAN CAL. STARTE SOIL EXHAU CAL. STARTE	EXISTIN EXISTIN AVC MIN TRAI ER SIDE. SE VNECTION S V CENT CEN CENT C	NSDUCER D ELECTION BA IZE. VHEEL TYPE TRIFUGAL TRIFUGAL CHOOL A SRILLE SCHE	IFFERENTIA IFFERENTIA SED ON WA FAN D/ CFM 0 70 70 70 1 1 1 1 1 1 1 1 1 1 1 1 1		EXTERNAL S. (IN WG) 0.25 0.25 0.25 0.25	101B         NIMUM COOLIN         (COL).         P.       F4         P.       Intervention         Intervention       Intervention         P.       FAN         Intervention       Intervention         Intervention       Interventin <tr< td=""><td></td><td>0       0       1         UJ5       1         D BE BASED ON       1         SOUND       1         (SONES)       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.89       1         0.89       1         ATE REPAIR       1         MECH       1         MECH       1         MECH       1         MECH       1</td><td>EQUIPME MOTOR DAME YES S.P. FAI S.P. FAI 282</td><td></td><td>355 WIDED. UIDED. UIDED. UIDED. CUND CONES) 6.3</td><td>CONTROL IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC</td><td>45 DRIVE TYPE DIRECT DIRECT CONTROL CONTROL CONTINUO</td></tr<>		0       0       1         UJ5       1         D BE BASED ON       1         SOUND       1         (SONES)       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.5       1         0.89       1         0.89       1         ATE REPAIR       1         MECH       1         MECH       1         MECH       1         MECH       1	EQUIPME MOTOR DAME YES S.P. FAI S.P. FAI 282		355 WIDED. UIDED. UIDED. UIDED. CUND CONES) 6.3	CONTROL IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC IGHTING OCC	45 DRIVE TYPE DIRECT DIRECT CONTROL CONTROL CONTINUO

1,2,3

TITUS 350RS

NOTES:

ALUM N

LAY-IN

CONTRACTOR SHALL COORDINATE MOUNTING AND SURFACE CONSTRUCTION PRIOR TO FURNISHING MATERIAL.
 SEE PLANS FOR LOCATION, FRAME TYPE, AND CFM

3. NECK SIZE SHALL MATCH CONNECTED DUCT SIZE. REFERENCE PLAN FOR DUCT SIZE.

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0.1

G-1

74-2: PM

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L		

System name and number

			ROOFTOP U	NIT SCHEDULE - D	X COOLING,	INDIRECT GAS	FIRED HEATING	G, VARIABLE \	OLUME UNI	Г																		
ENER	BY RECOVERY	(SUMMER)		ENERGY	RECOVERY	(WINTER)			DX COOLI	NG COIL					GAS HEATING			CONDENSE	R FAN DATA	COMPRESS	OR DATA		ELECTRI	ICAL DATA	,	ΔΡΡΒΟΧ		
Г DB (F	) EAT WB (F)	MAX LAT DB (F)	MAX LAT WB (	(F) AIRFLOW CFM	EAT DB (F)	MIN LAT DB (F)	AIRFLOW CFI	M EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	MAX APD (IN WC)	AIRFLOW CFM	EAT DB (F)	LAT DB (F)	MIN OUTPUT (MBH)	MIN. TURNDOWN	QUANTITY	FLA (TOTAL)	QUANTITY	RLA (EACH)	V/PH	FLA	MCA	MOCP	WEIGHT (LBS)	(DAIKIN)	NOTES
89	67	84	66	4500	17	48	7500	84	66	53	53.0	0.5	6280	48	87.2	240	12:1	1	3.5	1	30.1	480/3	59.3	66.8	90	5000	DPS020A	1, 2, 3, 4, 5

			TT				I	ATA	HOT WATER COIL D			SOUND	URE	STATIC PRESSU		IAX PD @
	BASIS OF DESIGN	CONTROL VALVE	BRANCH SIZE TO COIL	EWT	MAX P.D.	GPM	CAPACITY	LAT	EAT	FACTORY SOUND	MAX RADIATED	MAX DISCHARGE	DOWN STREAM	INLET MAX	INLET SIZE (IN)	MAX FULL CFM
			(in)	(F)	(FT)		(MBH)	(F)	(F)	ATTENUATOR	NC	NC	(IN. W.C.)	(IN. W.C.)		(IN W.C.)
1-8	PRICE SDV5	2-WAY	3/4	125	6	2.50	22.9	85.0	55.0	Y	< 20	< 20	0.5	1.0	10"	0.5
1-8	PRICE SDV5	2-WAY	3/4	125	6	2.50	22.9	85.0	55.0	Y	< 20	< 20	0.5	1.0	10"	0.5
1-8	PRICE SDV5	2-WAY	3/4	125	6	2.50	23.1	85.0	55.0	Y	< 20	< 20	0.5	1.0	10"	0.5
1-8	-	3-WAY	1/2	125	6	0.75	7.2	85.0	55.0	Y	< 20	< 20	0.5	1.0	6"	0.5
1-8	-	2-WAY	3/4	125	6	2.50	22.9	85.0	55.0	Y	< 20	< 20	0.5	1.0	10"	0.5
1-8	-	2-WAY	1	125	6	3.50	32.9	85.0	55.0	Y	< 20	< 20	0.5	1.0	12"	0.5
1-8	PRICE SDV5	2-WAY	1	125	6	3.33	31.9	85.0	55.0	Y	< 20	< 20	0.5	1.0	12"	0.5
1-8	-	2-WAY	1	125	6	4.67	40.5	85.0	55.0	Y	< 20	< 20	0.5	1.0	14"	0.5

RTU-5

	MOTOR		BASIS OF DESIGN	NOTES
WATTS	V	PH		
20.7	120	1	PANASONIC FV-11VQ5	1, 2, 3, 4
20.7	120	1	PANASONIC FV-11VQ5	1, 2, 3, 4

			-				
		MOTOR					
ROL	DRIVE				BASIS OF DESIGN	NOTES	
	TYPE	HP	V	PH			
JOUS	DIRECT	1/4	120	1	FANTECH RN3	1-3	

Condition analyzed (impacts Ez, Vdz, Vpz and Vps)										
All zones are included in the VRP calculation	All zones are included in the VRP calculation Yes									
Zone Name and Number	Occupancy Category	Zone Floor Area	Are you using default value for zone population?	Zone Population	Zone Air Distribution Effectiveness	Zone Outdoor Airflow	Zone Discharge Airflow	Zone Primary Airflow	Zone Secondary Recirculation Fraction	Zone Primary Air Fraction
		Az		Pz	Ez	Voz	Vdz	Vpz	Er	Ep
		(sq ft)		(people)		(cfm)	(cfm)	(cfm)		
CORRIDOR N	Corridors	572	2 No	0.00	0.80	42.90	139	139	0.7	5 1.00
CORRIDOR S	Corridors	572	2 No	0.00	0.80	42.90	157	157	0.7	5 1.00
G102 CLASSROOM	Classrooms (ages 5-8)	875	5 No	31.00	0.80	518.75	701	701	0.7	5 1.00
G104 CLASSROOM	Classrooms (ages 5-8)	873	3 No	31.00	0.80	518.45	701	701	0.7	5 1.00
G106 CLASSROOM	Classrooms (ages 5-8)	886	i No	31.00	0.80	520.40	707	707	0.75	5 1.00
G107 WORKROOM	Computer Work Room (no printing)	476	i No	2.00	0.80	38.08	219	219	0.75	5 1.00
G108 CLASSROOM	Classrooms (ages 5-8)	889	) No	31.00	0.80	520.85	704	704	0.75	5 1.00
G110 LIBRARY N	Libraries	857	/ No	25.00	0.80	284.80	478	478	0.75	5 1.00
G110 LIBRARY S	Libraries	1,863	3 No	30.00	0.80	466.95	975	975	0.75	5 1.00
G114 COMPUTER LAB	Classrooms (ages 5-8)	912	2 No	37.00	0.80	599.30	809	809	0.75	5 1.00

System area	As	(sq ft)	8,775	Net occupiable
System population	Ps	(people)	218.00	
Sum of zone population	sum of Pz	(people)	218.00	∑Pz
Occupant diversity	D		1.00	Ps / ∑Pz
Uncorrected outdoor air intake	Vou	(cfm)	2,917.92	D ∑ (Rp Pz) +
System primary airflow (at condition analyzed)	Vps	(cfm)	7,200	
Average outdoor air fraction	Xs		0.40	Vou / Vps
Ventilation efficiency	Ev		0.66	Ventilation effic
Outdoor air intake flow (required by OMSC Ch. 4.)	Vot	(cfm)	4,421	Vou / Ev
Outdoor air intake flow provided (measured or design)		(cfm)	4,500	

D

<b>G</b> ROL
© DLR Group
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EXPIRES: 12/31/2022

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le floor area served by the ventilation system

+ ∑(Ra Az)

ficiency from critical zone

![](_page_67_Picture_19.jpeg)

**BID/PERMIT** 06/10/2022 REVISIONS

74-22109-00

MECHANICAL SCHEDULES

M6.1

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# **ABBREVIATIONS** (D) DEMOLISHED

(E) (R)	EXISTING RELOCATED
Ø	PHASE
A AMP AC	AMPERE ABOVE COUNTER
AF	AMP FRAME (CIRCUIT BREAKER)
AIC AL	AMPERE INTERRUPTING CAPACITY ALUMINUM
4P ^Τ	
ATS	AUTOMATIC TRANSFER SWITCH
BAS	BUILDING AUTOMATION SYSTEM
BJ BKR	BONDING JUMPER
BMS	BUILDING MANAGEMENT SYSTEM
C CATV	CONDUIT CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV CFCI	CLOSED CIRCUIT TELEVISION CONTRACTOR FURNISHED CONTRACTOR INSTALLED
СКТ	CIRCUIT
CU DB	COPPER DECIBEL
DC	DIRECT CURRENT
DISC DP	DISCONNECT DISTRIBUTION PANELBOARD
DW	
EGB	ELECTRICAL GROUNDING BUSBAR
EMD	ESTIMATED MAXIMUM DEMAND
EMGB EP	EXPLOSION PROOF
ER	EXISTING (TO BE ) RELOCATED
EWC	ELECTRIC WATER COOLER
FA EAA	
FACP	FIRE ALARM CONTROL PANEL
FC FLA	FOOT CANDLE
FS	FLOW SWITCH
FSD G	FIRE SMOKE DAMPER
GEN	GENERATOR
GFI, GFCI GFPE	GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT PROTECTION OF EQUIPMENT
GND	EQUIPMENT GROUNDING CONDUCTOR
HH HOA	HANDHOLE HAND-OFF-AUTOMATIC
HP	HORSE POWER
IC IG	INTERCOM ISOLATED GROUND
JB	
KAIC KV	KILOVOLT
KVA	KILOVOLT AMPERES
LT	LIGHT
MCB	MAIN CIRCUIT BREAKER
MCC MH	MOTOR CONTROL CENTER
MLO	MAIN LUGS ONLY
MOCP MRTS	MAXIMUM OVERCURRENT PROTECTION MOTOR RATED TOGGLE SWITCH
MSB	MAIN SWITCHBOARD
MTD MTG	MOUNTED MOUNTING
MTS	MAIN TRANSFER SWITCH
N N.C.	NEUTRAL NORMALLY CLOSED
N.O.	NORMALLY OPEN
NF NL	NON-FUSED NIGHT LIGHT
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
DS&Y P	POLE(S)
PA	PUBLIC ADDRESS
РВ РН	PHASE
	POST INDICATOR VALVE
RCP	REFLECTED CEILING PLAN
RECPT	RECEPTACLE
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DAMPER
SPD	SURGE PROTECTION DEVICE
SWBD	SWITCHBOARD
TC	TIME CLOCK
TGB TMGB	TELECOMMUNICATIONS GRONDING BUSBAR TELECOMMUNICATIONS MAIN GRONDING BUSBAR
TO	TELECOMMUNICATIONS OUTLET
TR TS	TELECOMMUNICATIONS ROOM TAMPER SWITCH
TV	TELEVISION
UPS	UNINTERRUPTABLE POWER SUPPLY
UPS V	UNINTERRUPTABLE POWER SUPPLY VOLT
UPS V VA VFD	UNINTERRUPTABLE POWER SUPPLY VOLT VOLT-AMPERE VARIABLE FREQUENCY DRIVE
UPS V VA VFD W	UNINTERRUPTABLE POWER SUPPLY VOLT VOLT-AMPERE VARIABLE FREQUENCY DRIVE WIRE
UPS V VA VFD W WA WG	UNINTERRUPTABLE POWER SUPPLY VOLT VOLT-AMPERE VARIABLE FREQUENCY DRIVE WIRE TELECOMMUNICATIONS WORK AREA WIRE GUARD
UPS V VA VFD W WA WG WP	UNINTERRUPTABLE POWER SUPPLY VOLT VOLT-AMPERE VARIABLE FREQUENCY DRIVE WIRE TELECOMMUNICATIONS WORK AREA WIRE GUARD WEATHER-PROOF (NEMA 3R)

# GENERAL NOTES

PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.

# **GENERAL DEMOLITION NOTES**

- 1 SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.
- 2 DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES AND LIGHTING FIXTURES IN DEMOLITION AREAS UNLESS NOTED OTHERWISE.
- 3 DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES IN WALLS TO BE DEMOLISHED. WALLS TO BE DEMOLISHED ARE SHOWN DASHED. DISCONNECT AND REMOVE ASSOCIATED CONDUIT AND WIRE BACK TO LAST REMAINING DEVICE. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF CIRCUIT(S) TO ANY EXISTING DEVICES TO REMAIN. COORDINATE AND VERIFY REQUIREMENTS WITH NEW WORK IN AREA.
- 4 FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF ANY FEEDERS OR BRANCH CIRCUITS ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY ELECTRICAL EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.
- 5 FURNISH AND INSTALL CONDUIT AND/OR COMMUNICATIONS/DATA WIRING AS NECESSARY FOR CONTINUITY OF ANY WIRING ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY COMMUNICATIONS/DATA EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.
- 6 DISCONNECT AND REMOVE LIGHT SWITCHES IN DEMOLITION AREAS AS NECESSARY TO ACCOMMODATE NEW DOOR CONFIGURATIONS.
- 7 DISCONNECT AND REMOVE ANY EXISTING ELECTRICAL DEVICES AND BACK BOXES AS NECESSARY WHERE NEW WALL CONSTRUCTION WILL INTERSECT AN EXISTING WALL. FURNISH AND INSTALL CONDUIT AND WIRE AS REQUIRED FOR CONTINUITY OF CIRCUIT(S).
- 8 FURNISH AND INSTALL BLANK COVER PLATES OVER ALL EXISTING UNUSED OPENINGS.

#### **GENERAL SITE PLAN NOTES**

- 1 ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 36" (MAXIMUM) BELOW FINISHED GRADE.
- 2 ALL COMMUNICATIONS CONDUIT AND CABLES SHALL BE INSTALLED 36" (MINIMUM) BELOW FINISHED GRADE.
- 3 ALL CONDUCTORS FOR EXTERIOR LIGHTING AND POWER CIRCUITS SHALL BE #10 AWG MINIMUM.
- 4 PROVIDE TRANSFORMER BASE AT ALL POLE MOUNTED FIXTURES, TAP 2 LEGS OF THREE PHASE FEEDER (CIRCUITS DENOTED), PROVIDE BALLAST FUSES AT TAP, AND PROVIDE BRANCH CIRCUITS TO FIXTURES.

#### GENERAL SITE DEMOLITION NOTES

- 1 SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.
- 2 DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES AND LIGHTING FIXTURES IN DEMOLITION AREAS UNLESS NOTED OTHERWISE.
- 3 COORDINATE AND VERIFY REQUIREMENTS WITH NEW WORK IN AREA.

## GENERAL LIGHTING NOTES

- 1 ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH 6' LONG FLEXIBLE METAL CONDUIT.
- 2 ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
- 3 SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTINGbHEIGHTS OF EXTERIOR LIGHTING FIXTURES.
- 4 REFER TO SECTION 26 0519 FOR MINIMUM CONDUCTOR SIZE ADJUSTMENTS FOR VOLTAGE DROP.
- 5 \*\*FOR TYPICAL PROJECTS WHERE WIRING IS SHOWN (EDIT AS NEEDED):.
- 6 WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
- 7 MODIFICATIONS TO NUMBER OF CONDUCTORS IN HOME RUNS IN ADDITION TO CIRCUITS INDICATED ON THIS DRAWING ARE PROHIBITED.
- 8 \*\*FOR TYPICAL PROJECTS WHERE WIRING IS NOT SHOWN (EDIT AS NEEDED):
- 9 CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.
- 10 PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
- 11 CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

# GENERAL SYSTEMS NOTES

- 1 ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS, EXCEPT ITEMS LISTED ON SHEET E0.01 GENERAL ELECTRICAL NOTES.
- 2 SEE FIRE ALARM ZONE SCHEDULE FOR INITIATING ZONES AND SIGNAL CIRCUITS.
- 3 MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS
- 1 INFORMATION OUTLET LOCATION: 1" 2 INFORMATION OUTLET LOCATIONS: 1 1/4" 3 INFORMATION OUTLET LOCATIONS: 1 1/2"
- 4 \*\*SELECT NEXT NOTE FOR PROJECT REQUIREMENT\*\*
- 5 ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT, CABLE TRAY, OR SUPPORTED BY CABLE HOOKS. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUIT WHERE STUBBED ABOVE ACCESSIBLE CEILINGS OR WHERE DROPPED INTO CABLE TRAY. PROVIDE CABLE HOOKS ABOVE ACCESSIBLE CEILINGS FOR CABLE INSTALLATION WHERE NOT INSTALLED IN CONDUIT OR CABLE TRAY.
- 6 ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT OR CABLE TRAY.

<u>* NOTE *</u>
L NOTES ON THIS SHEET ARE PLICABLE TO ALL OTHER SHEETS IN IS SET.

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THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.

# LIGHTING

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	LIGHTING FIXTURE, SEE FIXTURE SCHEDULE	
	LIGHTING FIXTURE ON EMERGENCY SYSTEM	
	TRACK LIGHTING FIXTURE, SIZE PER FIXTURE SCHEDULE	
	FLUORESCENT STRIP LIGHTING FIXTURE, SIZE PER FIXTURE SCHEDULE	
-51	WALL MOUNTED FLUORESCENT STRIP LIGHTING FIXTURE	
0	CEILING FIXTURE, SURFACE, RECESSED OR PENDANT, SEE FIXTURE SCHEDULE	
•	LIGHTING FIXTURE ON EMERGENCY SYSTEM	
$\bigcirc$	HIGH BAY LIGHTING FIXTURE	
Ю	WALL FIXTURE, BRACKET MOUNTED, SEE FIXTURE SCHEDULE	
	SELF CONTAINED EMERGENCY LIGHTING FIXTURE	
$\bigotimes_{\longleftrightarrow}$	EXIT SIGN, CEILING MOUNTED, DIRECTIONAL ARROW AS INDICATED	
$\xrightarrow{-}$	EXIT SIGN, WALL MOUNTED, DIRECTIONAL ARROW AS INDICATED	
$\bigcirc$	SITE LIGHTING - POLE	
-	POLE MOUNTED YOKE	
-	POLE MOUNTED AREA LIGHT	
-	WALL MOUNTED AREA LIGHT	
O	IN GRADE LIGHT FIXTURE, SEE FIXTURE SCHEDULE	[
⊗	BOLLARD LIGHT FIXTURE	

SWITCHES: I	SWITCHES: MOUNT 42" AFF UNO							
	SUPPERSCRIPT, SWITCH SHALL CONTROL FIXTURE DENOTED WITH SAME LOWER CASE LETTER							
s <del>x</del>	SWITCH SYMBOL							
	SUBSCRIPT, SWITCH TYPE - SEE BELOW							
	LINE THRU SWITCH INDICATES A KEY OPERATED SWITCH							
S	SWITCH, SINGLE POLE							
s <sub>2</sub>	SWITCH, DOUBLE POLE							
s <sub>3</sub>	SWITCH, THREE WAY							
s <sub>4</sub>	SWITCH, FOUR WAY							
s <sub>D</sub>	SWITCH, DIMMER							
s <sub>E</sub>	SWITCH, EMERGENCY							
s <sub>LV</sub>	SWITCH, LOW VOLTAGE							
s <sub>M</sub>	SWITCH, MASTER							
s <sub>o</sub>	SWITCH, WALL-BOX OCCUPANCY SENSOR							
s <sub>O2</sub>	SWITCH, WALL-BOX OCCUPANCY SENSOR, 2-POLE							
s <sub>P</sub>	SWITCH, WITH PILOT LIGHT							
s <sub>R</sub>	SWITCH, LOW VOLTAGE, ASSOCIATED WITH RELAY PANEL							
s <sub>T</sub>	SWITCH, TIMER							
s <sub>v</sub>	SWITCH, WALL-BOX VACANCY SENSOR							
s <sub>x</sub>	SWITCH, EXPLOSION-PROOF							
OC	OCCUPANCY SENSOR							
LCU	LIGHTING CONTROL UNIT							
PC	PHOTOCELL							

# COMMUNICATIONS

•	TELEPHONE OUTLET, WALL	н	CLOCK
⋖ <sub>w</sub>	TELEPHONE OUTLET FOR WALL-MOUNTED PHONE	$\vdash_{M}$	CLOCK - MASTER
<₽	PAY TELEPHONE OUTLET	⊦⊖ <sub>ds</sub>	CLOCK - DOUBLE FACE
	TELEPHONE CABINET (PBX)	⊢⊖c	CLOCK - OUTLET
	TELEPHONE BACKBOARD, SIZE AS SHOWN	TC	TIME CLOCK
<) x	TECHNOLOGY OUTLET, WALL (x - DATA)	H TV	TELEVISION OUTLET, WALL
≪ x AC	TECHNOLOGY OUTLET, WALL - ABOVE COUNTER (x - DATA)	TV	TELEVISION OUTLET, CEILING
$\triangleleft$ MM	MULTI-MEDIA TECHNOLOGY OUTLET, WALL	TV	TELEVISION TERMINAL CABINET
$\triangleleft$ SB	SMART-BOARD TECHNOLOGY OUTLET, WALL		BUZZER
$\lhd_{C}$	TECHNOLOGY OUTLET, CEILING (MULTI-MEDIA)	C /	CHIME
$\odot$	FLUSH FLOOR BOX WITH TECHNOLOGY OUTLET	⊢⟨s⟩	SPEAKER, WALL
MM⊘⊂	FLUSH FLOOR BOX WITH TWO (2) TECHNOLOGY OUTLETS (MULTI-MEDIA)	KIC	INTERCOM CALLBACK STATION, WALL
$\bigcirc$	WIRELESS ACCESS POINT, CEILING	HV	VOLUME CONTROL, WALL
WAP		KM	MICROPHONE CONTROL, WALL
KAV	WALL MOUNT TV SCREEN OUTLET (PROVIDE RCA STERIO AUDIO TO THE CLASSROOM AUDIO AMPLIFIER)	KSR	MONITOR SPEAKER RECEPTACLE, WALL
HPS	PRESENTER'S STATION, WALL @ +36" AFF	$\odot$ M	FLUSH FLOOR BOX WITH MICROPHONE OUTLET
Ś	AV SYSTEM SPEAKER, CEILING		DIRECTOR'S HEADSET, WALL
P	PAGING SPEAKER, CEILING		

## **SECURITY**

		•	
CR	CARD READER	KS	PAGING HORN
Ðss	SECURITY SYSTEM CALL BUTTON	$\leftarrow$	SOUND DETECTOR ALARM
IC	FACILITY INTERCOM	[GB]	GLASS BREAK DETECTOR
ic	HANDS FREE INTERCOM		VEHICLE DETECTION LOOP
	INTRUSION DETECTOR, CEILING		VIDEO CAMERA - CEILING
- (ID)	INTRUSION DETECTOR, WALL	H	VIDEO CAMERA - WALL
R	INTRUSION DETECTOR RECEIVER	VM	VIDEO MONITOR
R	INTRUSION DETECTOR TRANSMITTER		VISITOR INTERCOM
MD	MOTION DETECTOR	DCP	DOOR CONTROL PANEL
DC	DOOR CONTACT	ACC	ACCESS CONTROL COMPUTER
EL	ELECTRIC DOOR LATCH	SSP	SECURITY SYSTEM PANEL
	SECURITY CAMERA	◄ FM	EMERGENCY PHONE - WALL
ĸ	SECURITY KEYPAD	⊶ EM	EMERGENCY PHONE - BOLLARD
С	MAGNETIC CONTACT (DOOR POSTION SENSOR)	LBR	LASER BEAM RECEIVER
- x >	REQUEST-TO-EXIT MOTION SENSOR	LBT	LASER BEAM TRANSMITTER
Ðx	REQUEST-TO-EXIT BUTTON		SECURITY SYSTEM ALARM BUTTON

HU FACP FAA

NAC

### POWER

CIRCUIT HOME RUN	RECEPTACLES	
CONDUIT TURNING UP	DIAGONAL LINE	E THROUGH
CONDUIT TURNING DOWN	INDICATES MO	UNT DEVIC
CONDUIT STUB-UP	BOTTOM OF BO	DX 2" ABOV
CONDUIT SEAL	6" ABOVE COU	NTERTOP II
CONDUIT CONCEALED IN CEILING OR WALLS, POWER	$\vdash \bigcirc$	SIMPLEX
CONDUIT CONCEALED IN CEILING OR WALLS, OTHER (* = SEE ABBREVIATIONS)		DUPLEX F
CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWER		
CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, OTHER (* = SEE ABBREVIATIONS)		DUPLEX F
EXPOSED CONDUIT, POWER	$\rightarrow$	DUPLEX F
		DUPLEX F
( - SEE ADDREVIATIONS)		MOUNT A
TRANSFORMER	$\blacksquare$	FOURPLE
BRANCH CIRCUIT PANEL BOARD		FOURPLE
DISTRIBUTION PANEL BOARD		
EQUIPMENT CABINET, AS NOTED		
SWITCHBOARD		MOUNT A
CURRENT TRANSFORMER ENCLOSURE	$\rightarrow$	DUPLEX F
METER		
GENERATOR		DUPLEX
AUTOMASTIC TRANSFER SWITCH	H	DUPLEX F
SYSTEM GROUND ELECTRODE	H	DUPLEX F
THERMOSTAT	H	DUPLEX F MOUNT A
MUSHROOM		
ELECTRICAL MANHOLE		WEATHEF ROOF MC
ELECTRICAL HANDHOLE	└──┘ R	STRUCTU
MOTOR CONNECTION, HORSEPOWER AS INDICATED		WEATHER MOUNT 1
MANUAL SWITCH, WITH FUSE		IN-USE CO
MANUAL SWITCH, WITH THERMAL OVERLOAD	FWC	COOLER,
MAGNETIC MOTOR STARTER	$\sim$	DUPLEX F
DISCONNECT SWITCH, WITH FUSE	⇒ <sub>TV</sub>	MOUNT A
DISCONNECT SWITCH, WITHOUT FUSE	-	
COMBINATION MOTOR STARTER		DUPLEX F
RELAY		FOURPLE
		FOURPLE
		DUPLEX F
		DUPLEX F
	$\Rightarrow$	RANGE R
WITH FLEX CONNECTION	A (e)	FLUSH FL
FLUSH JUNCTION BOX, WALL MOUNTED		
SURFACE JUNCTION BOX, CEILING MOUNTED		FLUSH FL
SURFACE JUNCTION BOX, WALL MOUNTED	( e) ( )	FLUSH FL
PULL BOX	$\bigcirc$	MUTTE
EQUIPMENT CONNECTION		
EQUIPMENT CONNECTION	$\bigtriangleup$	

MULTI-RECEPTACLE STRIP, SPACING AS INDICATED DIVIDE USB OI

RECEP

VIDED RACEWAY	
B ONLY RECEPTACLE	
CEPTACLE WITH USB PORTS	<u>SAFETY</u>
FIRE ALARM CONTROL PANEL	
FIRE ALARM ANNUNCIATOR PANEL	
N.A.C. EXTENDER PANEL	

_	-	
F	MANUAL FIRE ALARM PULL STATION	$\langle P \rangle$
FO	FIRE ALARM BELL	$\bigcirc$
F⊲	FIRE ALARM HORN	$\langle \bigcirc$
F	FIRE ALARM VISUAL WARNING SIGNAL	$\langle \circ \rangle$
F	FIRE ALARM BELL, WITH VISUAL WARNING SIGNAL	$\langle \bullet \rangle$
F	FIRE ALARM HORN, WITH VISUAL WARNING SIGNAL	Sp
F	MINI FIRE ALARM HORN, WITH VISUAL WARNING SIGNAL	D
F	FIRE ALARM SPEAKER, WITH VISUAL WARNING SIGNAL	L
F F F - F	FIRE ALARM SPEAKER, FLUSH IN CEILING FIRE ALARM SPEAKER, WITH VISUAL WARNING SIGNAL, CEILING FIRE ALARM VISUAL WARNING SIGNAL, CEILING	OSY FS TS PIV
< E>	ECS SPEAKER, FLUSH IN CEILING	$\vdash \overline{T}$
E	ECS SPEAKER, WITH VISUAL WARNING SIGNAL, CEILING	$\vdash \!\! \langle R \rangle$
-(E)-	ECS VISUAL WARNING SIGNAL, CEILING	◄ FF
·		$\vdash \leftarrow$

#### H SYMBOL OR DENOTED 'AC' CE ABOUT COUNTER. IOUNT ABOVE COUNTER' MOUNT VE TOP OF BACKSPLASH OR IF NO BACKSPLASH EXISTS. ( RECEPTACLE RECEPTACLE RECEPTACLE, GFI TYPE RECEPTACLE, MOUNT ABOVE COUNTER RECEPTACLE, GFI TYPE, ABOVE COUNTER EX RECEPTACLE EX RECEPTACLE, GFI TYPE EX RECEPTACLE, MOUNT ABOVE COUNTER EX RECEPTACLE, GFI TYPE, ABOVE COUNTER RECEPTACLE, FLUSH IN CEILING RECEPTACLE, HORIZONTALLY MOUNTED RECEPTACLE, HORIZ. MTD, GFI TYPE RECEPTACLE, HORIZ. MTD, MOUNT ABOVE COUNTER RECEPTACLE, HORIZ. MTD, GFI TYPE, ABOVE COUNTER ER RESISTANT GFI DUPLEX RECEPTACLE, OUNT 18" ABOVE ADJACENT URE WITH A WEATHERPROOF, IN-USE COVER ER RESISTANT GFI DUPLEX RECEPTACLE, 18" AFF WITH A WEATHERPROOF, COVER RECEPTACLE TO SERVE ELECTRIC WATER , MOUNT AT HEIGHT PER EQUIPMENT ACTURER'S INSTALLATION GUIDELINES RECEPTACLE TO SERVE TELEVISION, AT SAME HEIGHT AND WITHIN 8" CENT TV OUTLET RECEPTACLE, EMERGENCY LEX RECEPTACLE, EMERGENCY EX RECEPTACLE, SWITCHED RECEPTACLE, LOWER SWITCHED RECEPTACLE, SWITCHED RECEPTACLE RECEPTACLE DICATES OUTLET IN SCHEDULE) LOOR OUTLET BOX LOOR BOX WITH DUPLEX RECEPTACLE LOOR BOX WITH FOURPLEX RECEPTACLE EVICE FLOOR BOX WITH DUPLEX AND JTLETS, DIVIDED 2 GANG BOX WITH GANG PLASTER RING

SMOKE DETECTOR - IONIZATION TYPE (D=DUCT)

SMOKE DETECTOR - IONIZATION TYPE

TEMPERATURE, 135°F

TEMPERATURE, 200°F

135°F

200°F

OS&Y VALVE

TAMPER SWITCH

BEAM TRANSMITTER

BEAM RECEIVER

SMOKE DETECTOR - PHOTOELECTRIC TYPE

HEAT DETECTOR RATE-OF-RISE AND FIXED

HEAT DETECTOR RATE-OF-RISE AND FIXED

HEAT DETECTOR FIXED TEMPERATURE ONLY,

HEAT DETECTOR FIXED TEMPERATURE ONLY,

SPRINKLER SYSTEM ELECTRONIC BELL ALARM

FIRE ALARM MAGNETIC DOOR HOLDER

REMOTE INDICATOR LAMP

WATER FLOW ALARM SWITCH

POST INDICATOR VALVE SWITCH

FIRE FIGHTER'S TELEPHONE

DISTRIBUTED ANTENNA (CEILING)

 $\left( \prod \right)$ 

SMOKE DETECTOR - PHOTOELECTRIC TYPE (D=DUCT)

Ζ Ο \_\_\_\_\_  $\square$ 4 S Ш Ο S B **BID/PERMIT** 06/10/2022 REVISIONS 74-22109-00 **ELECTRICAL** SYMBOLS AND ABBREVIATIONS E0.<sup>-</sup>

![](_page_68_Picture_64.jpeg)

![](_page_69_Figure_0.jpeg)

# **GENERAL NOTES**

Ε

- A. ALL LIGHTING, LIGHTING CONTROLS. POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
- B. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
- C. ALL NEW DEVICES IN THE CLASSROOMS TO MATCH EXISTING SCHOOL. D. EXISTING TO REMAIN ELEMENTS ARE INDICATED
- HALFTONE AND/OR INCLUDE (E) IN TAGS. ELEMENTS TO DEMOLISHED ARE INDICATED FULL TONE, DASHED AND/OR INCLUDE (X) IN TAGS.
- E. PRIOR TO SUMITTAL OF BID, CONTRACTOR TO VISIT JOBSITE AND BECOME FULLY ACQUAINTED WITH PROJECT SCOPE, AND EXISTING CONDITIONS OF ALL SYSTEMS. F. ALL UNUSED CONDUITS AND WIRING SHALL BE
- COMPLETELY STRIPPED AND REMOVED BACK TO SOURCE, EXCEPT WHEN LOCATED IN INACCESSIBLEE ASSEMBLIES NOT SCHEDULED FOR DEMOLITION. IN THIS CASE, CUT OFF AND PLUG OR CAP UNUSED CONDUITS FLUSH WITH EXISTING SURFACE.
- G. SALVAGED ITEMS WILL BE REMOVED BY OWNER PRIOR TO NTP. DISPOSE OF ALL REMAINING DEMOLITION ITEMS IN A LEGAL MANNER.
- H. COORDINATE AND SCHEDULE WITH OWNER'S REPRESENTATIVE ANY POWER OR SYSTEM SHUTDOWN REQUIRED BY THE WORK A MINIMUM OF 10 WORKING DAYS PRIOR. INCLUDE ANY TEMPORARY POWER AND/OR REROUTING SCOPE NECESSARY TO FEED AREAS OUTSIDE THE SCOPE OF WORK OR OTHERWISE AFFECTED BY SHUTDOWN. TEMPORARY POWER IF REQUIRED MAY BE OBTAINED FROM THE EXISTING BUILDING DISTRIBUTION
- INFASTRUCTURE. WHERE REMOVAL OF A DEVICE INTERRUPTS CONTINUITY OR OPERATION OF REMAINING ELEMENTS, PROVIDE ALL NECESSARY CONDUIT, CONDUCTORS, ETC. TO MAINTAIN FUNCTIONALITY OF ALL EXISTING ITEMS.

![](_page_69_Picture_13.jpeg)

- 1 EXISTING LIGHT FIXTURE TO BE REMOVED AND REINSTALLED UNDER THE CENTER OF CANOPY.
- 2 EXISTING LIGHTING CONTROL UNIT TO BE RELOCATED WITH LIGHT FIXTURE.

![](_page_69_Picture_16.jpeg)

![](_page_69_Picture_17.jpeg)

# **LION** ADDI S Ш

**BID/PERMIT** 06/10/2022 REVISIONS

SA<sup>-</sup>

74-22109-00

![](_page_69_Picture_23.jpeg)

![](_page_70_Figure_0.jpeg)

# **GENERAL NOTES**

- A. ALL LIGHTING, LIGHTING CONTROLS. POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
- B. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
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- E. PRIOR TO SUMITTAL OF BID, CONTRACTOR TO VISIT JOBSITE AND BECOME FULLY ACQUAINTED WITH PROJECT SCOPE, AND EXISTING CONDITIONS OF ALL SYSTEMS.
- F. ALL UNUSED CONDUITS AND WIRING SHALL BE COMPLETELY STRIPPED AND REMOVED BACK TO SOURCE, EXCEPT WHEN LOCATED IN INACCESSIBLEE ASSEMBLIES NOT SCHEDULED FOR DEMOLITION. IN THIS CASE, CUT OFF AND PLUG OR CAP UNUSED CONDUITS FLUSH WITH EXISTING SURFACE.
- G. SALVAGED ITEMS WILL BE REMOVED BY OWNER PRIOR TO NTP. DISPOSE OF ALL REMAINING DEMOLITION ITEMS IN A LEGAL MANNER.
- H. COORDINATE AND SCHEDULE WITH OWNER'S REPRESENTATIVE ANY POWER OR SYSTEM SHUTDOWN REQUIRED BY THE WORK A MINIMUM OF 10 WORKING DAYS PRIOR. INCLUDE ANY TEMPORARY POWER AND/OR REROUTING SCOPE NECESSARY TO FEED AREAS OUTSIDE THE SCOPE OF WORK OR OTHERWISE AFFECTED BY SHUTDOWN. TEMPORARY POWER IF REQUIRED MAY BE OBTAINED FROM THE EXISTING BUILDING DISTRIBUTION INFASTRUCTURE.
- WHERE REMOVAL OF A DEVICE INTERRUPTS CONTINUITY OR OPERATION OF REMAINING ELEMENTS, PROVIDE ALL NECESSARY CONDUIT, CONDUCTORS, ETC. TO MAINTAIN FUNCTIONALITY OF ALL EXISTING ITEMS.

![](_page_70_Picture_12.jpeg)

![](_page_70_Picture_13.jpeg)

# **ADDITION** S Ш

**SATO** BEAVERTON

**BID/PERMIT** 06/10/2022 REVISIONS

74-22109-00

FIRST FLOOR POWER DEMOLITION PLAN

ED2.1

![](_page_71_Figure_0.jpeg)

# **GENERAL NOTES**

Ε

- A. ALL LIGHTING, LIGHTING CONTROLS. POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
- B. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
- C. ALL NEW DEVICES IN THE CLASSROOMS TO MATCH EXISTING SCHOOL. D. EXISTING TO REMAIN ELEMENTS ARE INDICATED
- HALFTONE AND/OR INCLUDE (E) IN TAGS. ELEMENTS TO DEMOLISHED ARE INDICATED FULL TONE, DASHED AND/OR INCLUDE (X) IN TAGS.
- E. PRIOR TO SUMITTAL OF BID, CONTRACTOR TO VISIT JOBSITE AND BECOME FULLY ACQUAINTED WITH PROJECT SCOPE, AND EXISTING CONDITIONS OF ALL SYSTEMS. F. ALL UNUSED CONDUITS AND WIRING SHALL BE
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- G. SALVAGED ITEMS WILL BE REMOVED BY OWNER PRIOR TO NTP. DISPOSE OF ALL REMAINING DEMOLITION ITEMS IN A LEGAL MANNER.
- H. COORDINATE AND SCHEDULE WITH OWNER'S REPRESENTATIVE ANY POWER OR SYSTEM SHUTDOWN REQUIRED BY THE WORK A MINIMUM OF 10 WORKING DAYS PRIOR. INCLUDE ANY TEMPORARY POWER AND/OR REROUTING SCOPE NECESSARY TO FEED AREAS OUTSIDE THE SCOPE OF WORK OR OTHERWISE AFFECTED BY SHUTDOWN. TEMPORARY POWER IF REQUIRED MAY BE OBTAINED FROM THE EXISTING BUILDING DISTRIBUTION
- INFASTRUCTURE. WHERE REMOVAL OF A DEVICE INTERRUPTS CONTINUITY OR OPERATION OF REMAINING ELEMENTS, PROVIDE ALL NECESSARY CONDUIT, CONDUCTORS, ETC. TO MAINTAIN FUNCTIONALITY OF ALL EXISTING ITEMS.

# KEY NOTES

- 1 EXISTING EXTERIOR CAMERA TO BE SALVAGED REUSED. SEE NEW LOCATION ON SHEET E3.1
- 2 EXISTING MOTION SENSORS TO BE SALVAGED AND REUSED WHERE POSSIBLE.

![](_page_71_Picture_15.jpeg)

![](_page_71_Picture_16.jpeg)

# **ADDITION** С Ш **SATO** BEAVERTON

**BID/PERMIT** 06/10/2022 REVISIONS

74-22109-00

![](_page_71_Picture_21.jpeg)


Ѕрасе Туре	Specific Rm#	Turn-on
All Spaces		If a fire alarm or intrusion alarm occurs all lights come to normal
Corridors & Circulation Spaces		Once the building is disarmed lights operate on occupancy senso
Classrooms	G102, G104, G106, G108, G114	Once the building is disarmed lights operate on occupancy senso set-up to be manual on, lights to be switched on. Auto-dimming Switched receptacles to be controlled by occupancy sensors.
Library	G110	Once the building is disarmed lights operate on occupancy senso Switched receptacles to be controlled by occupancy sensors and
Restroom	G101, G103	Lights operate on occupancy sensors.
Workroom	G112	Once the building is disarmed lights operate on occupancy senso Lights and autodimming for photo cells.
Exterior Building Mounted Lights		Lights are controlled based on the astronomical clock and intrusi mins before Sunset and when the building is disarmed in the mo

3

	Operating hours	Turn-off
function.		
rs	Lighting is control by Occupancy Sensors. Lights are 25% when spaces is unoccupied, 100% when spaces is occupied. Lights can be over ridden with key switch, key switch is 100% or OFF. Key switch must control both normal and emergency circuits, Em fixture must come on in the event of power loss even if key switch is off.	Once the building is armed lights cycle off after 10mins
rs and photo cells. Lights are for photocells.	There is a rocker at the door and 4 button scene switch with rocker at the presentation location (teacher's desk). Rocker turns all light on/off and can dim all lights. At the presentation location, scenes are 1. All on 2. All off 3. Presentation Mode; 'c' off/ others to 25% 4. Undecided Rocker dims all lights	When the rooms is un-occupied for 10 mins lights cycle off When the building arms, lights cycle off. Switched receptacles to be controlled by occupancy sensors.
rs. Lights are manual-on. photocells.	There are (2) 4- button and rocker stations to over ride the lights	When the room is unoccupied for 20 mins lights cycle off. When the building arms, lights cycle off
	In single occupancy restrooms there is a single button station. There is no diming in this space.	When the rooms is un-occupied 10 mins for single occupancy off. After 15 mins for gang restrooms. When the building arms, lights cycle off
rs and photo cells. Manual-on	Lights can be over ridden by the user. The user has the ability to turn lights on/off and dimming at button station near the door.	When the rooms is un-occupied for 20 mins lights cycle off When the building arms, lights cycle off
on system. Lights come on 30 rning.	Over-ride located in Main Elec. Room	When the building arms, lights cycle off after 15mins and the 30 mins after sunrise.

© DLR Group
STERED PROFESSION STERED PROFESSION STERED PROFESSION 85154PE ALCOREGON VER 13, 202 TEL 13, 202 NET P. RIDLET 06/09/2022 RENEWS DECEMBER 31, 2022
SATO ES ADDITIO BEAVERTON SCHOOL DISTRICT 7775 NW KAISER RD, PORTLAND, OR 97229
BID/PERMIT 06/10/2022 REVISIONS
74-22109-00 LIGHTING CONTROL INTENT PLAN E0.2

single occupancy the lights cycle lights cycle off

D

r 15mins and the lights cycle off



E	
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	SATO ES ADDITION BEAVERTON SCHOOL DISTRICT 7775 NW KAISER RD, PORTLAND, OR 97229
	BID/PERMIT 06/10/2022 REVISIONS 74-22109-00 FIRST FLOOR LIGHTING PLAN



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	SATO ES ADDITION BEAVERTON SCHOOL DISTRICT 7775 NW KAISER RD, PORTLAND, OR 9729
	BID/PERMIT 06/10/2022 REVISIONS 74-22109-00 FIRST FLOOR POWER PLAN



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-AG.8)		SATO ES ADDITION BEAVERTON SCHOOL DISTRICT 7775 NW KAISER RD, OR 9729
		BID/PERMIT 06/10/2022 REVISIONS 74-22109-00 ROOFTOP POWER PLAN E2.2



D





- р — —

Isc: 18,445 A -----(AVAILABLE FAULT

CURRENT PER PGE)

TRANSFORMER FEEDER TABLE						
	GENERAL PURPOS	E TRANSFORMERS				
KVA	PRI (PRIMARY)	SEC (SECONDARY)	GEC			
15	3#10,#10G-3/4"C	4#6,#8G-1"C	#8			
30	3#6,#10G-1"C	4#1,#6G-1 1/2"C	#6			
45	3#4,#8G-1 1/4"C	4#1/0,#6G-2"C	#6			
75	3#1,#8G-1 1/2"C	4#4/0,#2G-2 1/2"C	#2			
112.5	3#1/0,#6G-2"C	(2)2"C EACH WITH 4#3/0, #1/0G PARALLEL FEEDER	#1/0			
150	3#4/0,#2G-2 1/2"C	(2)3"C EACH WITH 4-250Kcmil, #1/0G-PARALLEL FEEDER	#1/0			
225	3-350Kcmil,#2G-3"C	(2)3"C EACH WITH 4-350Kcmil, #2/0G-PARALLEL FEEDER	#2/0			
	K4-RATED TF	RANSFORMERS				
15K	3#10,#10G-3/4"C	3#4,#2(N),#8G-1 1/2"C	#8			
30K	3#6,#10G-1"C	3#1/0,#3/0(N),#6G-2 1/2"C	#6			
45K	3#4,#8G-1 1/4"C	3#3/0,#250Kcmil(N),#4G-2 1/2"C	#4			
75K	3#1,#8G-1 1/2"C	3-300Kcmil,2#4/0(N),#1/0G-3"C	#1/0			
• GEC (0	GROUNDING ELECTROD	E CONDUCTOR PER NEC 250-66)				

	3ø Fl	EEDEI	R SCH	IEDUL	E (CC	)PPEF	R)	
MARK		FEEDER 4	W			FEEDER 3	3W	
(AMPACITY)	# SETS	ø & N	GND	С	# SETS	ø	GND	С
15	1	12	12	3/4"	1	12	12	3/4"
20	1	12	12	3/4"	1	12	12	3/4"
30	1	10	10	3/4"	1	10	10	3/4"
40	1	8	10	1"	1	8	10	3/4"
50	1	6	10	1"	1	6	10	1"
60	1	4	10	1 1/4"	1	4	10	1"
70	1	4	8	1 1/4"	1	4	8	1 1/4"
80	1	3	8	1 1/4"	1	3	8	1 1/4"
90	1	2	8	1 1/2"	1	2	8	1 1/4"
100	1	1	8	1 1/2"	1	1	8	1 1/2"
110	1	1	6	1 1/2"	1	1	6	1 1/2"
125	1	1/0	6	2"	1	1/0	6	1 1/2"
150	1	1/0	6	2"	1	1/0	6	1 1/2"
175	1	2/0	6	2"	1	2/0	6	2"
200	1	3/0	6	2"	1	3/0	6	2"
225	1	4/0	4	2 1/2"	1	4/0	4	2"
250	1	250	4	3"	1	250	4	2 1/2"
300	1	350	4	3"	1	350	4	3"
400	2	3/0	3	2 1/2"	2	3/0	3	2"
450	2	4/0	3	2 1/2"	2	4/0	3	2"
500	2	250	2	3"	2	250	2	2 1/2"
600	2	350	1	3"	2	350	1	3"
700	2	500	1/0	4"	2	500	1/0	3-1/2"
800	3	300	1/0	3"	3	300	1/0	2 1/2"
1000	3	400	2/0	3"	3	400	2/0	3"
1200	4	350	3/0	3-1/2"	4	350	3/0	3"
1600	5	400	4/0	3-1/2"	5	400	4/0	3"
2000	6	500	250	4"	6	500	250	3-1/2"
2500	7	500	350	4"	7	500	350	3-1/2"
3000	8	500	400	4"	8	500	400	3-1/2"
			NC	DTES				

5

FEEDER SHALL BE 4-WIRE (4W) UNLESS DENOTED OTHERWISE. ALL FEEDERS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR. NOT ALL SIZES USED

3ø FEEDER SCHEDULE (ALUMINUM)								
MARK		FEEDER 4	W			FEEDER 3	W	
(AMPACITY)	# SETS	ø & N	GND	С	# SETS	Ø	GND	С
125	1	2/0	4	2"	1	2/0	4	2"
150	1	3/0	4	2"	1	3/0	4	2"
175	1	4/0	4	2 1/2"	1	4/0	4	2"
200	1	250	4	2 1/2"	1	250	4	2 1/2"
225	1	300	2	3"	1	300	2	2 1/2"
250	1	350	2	3"	1	350	2	2 1/2"
300	1	500	2	3-1/2"	1	500	2	3"
400	2	250	1	2-1/2"	2	250	1	2 1/2"
450	2	300	1	3"	2	300	1	2 1/2"
500	2	350	1/0	3"	2	350	1/0	2 1/2"
600	2	500	2/0	3-1/2"	2	500	2/0	3"
700	3	350	3/0	3"	3	350	3/0	3"
800	3	400	3/0	3"	3	400	3/0	3"
1000	4	350	4/0	3"	4	350	4/0	2.5"
1200	5	500	250	3-1/2"	5	500	250	3"
1600	6	400	4/0*	3"	6	350	4/0*	3"
2000	7	500	250*	3-1/2"	7	500	250*	3"
2500	9	500	350*	3-1/2"	9	500	350*	3"
3000	10	500	400*	3-1/2"	10	500	400*	3"
NOTES								
ALUMINUM CONDUCTORS ARE PERMITTED FOR FEEDERS BETWEEN SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, MOTOR CONTROL CENTERS, DRY TYPE TRANSFORMERS AND BUSWAY PLUG-IN UNITS ONLY.								



CONDUCTORS.



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Т	TRANSFORMER FEEDER TABLE								
	GENERAL PURPOSE TRANSFORMERS								
KVA	PRI (PRIMARY)	SEC (SECONDARY)	GEC						
15	3#10,#10G-3/4"C	4#6,#8G-1"C	#8						
30	3#6,#10G-1"C	4#1,#6G-1 1/2"C	#6						
45	3#4,#8G-1 1/4"C	4#1/0,#6G-2"C	#6						
75	3#1,#8G-1 1/2"C	4#4/0,#2G-2 1/2"C	#2						
112.5	3#1/0,#6G-2"C	(2)2"C EACH WITH 4#3/0, #1/0G PARALLEL FEEDER	#1/0						
150	3#4/0,#2G-2 1/2"C	(2)3"C EACH WITH 4-250Kcmil, #1/0G-PARALLEL FEEDER	#1/0						
225	3-350Kcmil,#2G-3"C	(2)3"C EACH WITH 4-350Kcmil, #2/0G-PARALLEL FEEDER	#2/0						
	K4-RATED TF	RANSFORMERS							
15K	3#10,#10G-3/4"C	3#4,#2(N),#8G-1 1/2"C	#8						
30K	3#6,#10G-1"C	3#1/0,#3/0(N),#6G-2 1/2"C	#6						
45K	3#4,#8G-1 1/4"C	3#3/0,#250Kcmil(N),#4G-2 1/2"C	#4						
75K	3#1,#8G-1 1/2"C	3-300Kcmil,2#4/0(N),#1/0G-3"C	#1/0						
GEC (0		E CONDUCTOR PER NEC 250-66)							



	3ø Fl	EEDEI	R SCH	HEDUL	.E (CC	PPEF	<u></u> ()	
MARK		FEEDER 4	W			FEEDER 3W		
(AMPACITY)	# SETS	ø & N	GND	С	# SETS	ø	GND	С
15	1	12	12	3/4"	1	12	12	3/4"
20	1	12	12	3/4"	1	12	12	3/4"
30	1	10	10	3/4"	1	10	10	3/4"
40	1	8	10	1"	1	8	10	3/4"
50	1	6	10	1"	1	6	10	1"
60	1	4	10	1 1/4"	1	4	10	1"
70	1	4	8	1 1/4"	1	4	8	1 1/4'
80	1	3	8	1 1/4"	1	3	8	1 1/4
90	1	2	8	1 1/2"	1	2	8	1 1/4
100	1	1	8	1 1/2"	1	1	8	1 1/2'
110	1	1	6	1 1/2"	1	1	6	1 1/2'
125	1	1/0	6	2"	1	1/0	6	1 1/2
150	1	1/0	6	2"	1	1/0	6	1 1/2
175	1	2/0	6	2"	1	2/0	6	2"
200	1	3/0	6	2"	1	3/0	6	2"
225	1	4/0	4	2 1/2"	1	4/0	4	2"
250	1	250	4	3"	1	250	4	2 1/2'
300	1	350	4	3"	1	350	4	3"
400	2	3/0	3	2 1/2"	2	3/0	3	2"
450	2	4/0	3	2 1/2"	2	4/0	3	2"
500	2	250	2	3"	2	250	2	2 1/2'
600	2	350	1	3"	2	350	1	3"
700	2	500	1/0	4"	2	500	1/0	3-1/2
800	3	300	1/0	3"	3	300	1/0	2 1/2
1000	3	400	2/0	3"	3	400	2/0	3"
1200	4	350	3/0	3-1/2"	4	350	3/0	3"
1600	5	400	4/0	3-1/2"	5	400	4/0	3"
2000	6	500	250	4"	6	500	250	3-1/2
2500	7	500	350	4"	7	500	350	3-1/2'
3000	8	500	400	4"	8	500	400	3-1/2

**^** 

FEEDER SHALL BE 4-WIRE (4W) UNLESS DENOTED OTHERWISE. ALL FEEDERS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR. NOT ALL SIZES USED

3ø FEEDER SCHEDULE (ALUMINUM)								
MARK		FEEDER 4	W		FEEDER 3W			
(AMPACITY)	# SETS	ø & N	GND	С	# SETS	ø	GND	С
125	1	2/0	4	2"	1	2/0	4	2"
150	1	3/0	4	2"	1	3/0	4	2"
175	1	4/0	4	2 1/2"	1	4/0	4	2"
200	1	250	4	2 1/2"	1	250	4	2 1/2"
225	1	300	2	3"	1	300	2	2 1/2"
250	1	350	2	3"	1	350	2	2 1/2"
300	1	500	2	3-1/2"	1	500	2	3"
400	2	250	1	2-1/2"	2	250	1	2 1/2"
450	2	300	1	3"	2	300	1	2 1/2"
500	2	350	1/0	3"	2	350	1/0	2 1/2"
600	2	500	2/0	3-1/2"	2	500	2/0	3"
700	3	350	3/0	3"	3	350	3/0	3"
800	3	400	3/0	3"	3	400	3/0	3"
1000	4	350	4/0	3"	4	350	4/0	2.5"
1200	5	500	250	3-1/2"	5	500	250	3"
1600	6	400	4/0*	3"	6	350	4/0*	3"
2000	7	500	250*	3-1/2"	7	500	250*	3"
2500	9	500	350*	3-1/2"	9	500	350*	3"
3000	10	500	400*	3-1/2"	10	500	400*	3"
NOTES								
ALUMINUM CONDUCTORS ARE PERMITTED FOR FEEDERS BETWEEN SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, MOTOR CONTROL CENTERS, DRY TYPE TRANSFORMERS AND BUSWAY PLUG-IN UNITS ONLY.								

ALUMINUM CONDUCTORS ARE NOT PERMITTED FOR BRANCH CIRCUITS OR EQUIPMENT CONNECTIONS.

\*GROUNDING CONDUCTOR FOR CIRCUIT RATING OF 1600A AND HIGER SHALL BE COPPER CONDUCTORS.

# FOR REFERENCE ONLY



\_ <u>LEVEL 1</u> \_ LEVEL 2

# Ε GENERAL NOTES

- A. THE ENTIRE ELECTRICAL SERVICE AND DISTRIBUTION EQUIPMENT, BASIS OF DESIGN GE, INCLUDING ALL OVER-CURRENT PROTECTIVE DEVICES (OCP), SHALL BE UL LISTED AS A FULLY RATED SYSTEM. THE MANUFACTURER SHALL PROVIDE THE EQUIPMENT WITH SHORT CIRCUIT CURRENT RATINGS EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT CURRENT
- B. ALL CONDUCTORS SHALL HAVE 90° TEMPERATURE RATING WITH THE FOLLOWING INSULATION TYPES.

- THHN/THWN FOR ALL CONDUCTORS #6AWG AND SMALLER - XHHW-2 FOR ALL CONDUCTORS #4AWG AND LARGER

C. UNLESS INDICATED OTHERWISE, ALL FUSES SHALL BE DUAL ELEMENT, TIME-DELAY, CLASS RK-1. PROVIDE THE FOLLOWING FUSE TYPES AS MANUFACTURED BY 'BUSSMANN' OR COMPARABLE

- LPN-RK(250V) - LPS-RK(600V)

# **ABBREVIATIONS**

SES	SERVICE ENTRANCE RATED
S.U.S.E.	SUITABLE FOR USE AS SERVICE EQUIPMENT
SCCR	SHORT CIRCUIT CURRENT RATING
lsc:	AVAILABLE SHORT CIRCUIT CURRENT IN AMPERES

## SYMBOLS

GFP EQUIPMENT GROUND FAULT PROTECTION ST SHUNT-TRIP CIRCUIT INTERRUPTER





# **ADDITION** S Ш

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**BID/PERMIT** 06/10/2022 REVISIONS

74-22109-00

EXISTING ELECTRICA ONE-LINE DIAGRAM

E5.2





## **GENERAL NOTES**

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- CONDUITS AND BOXES INDICATED WITHIN FRAMES APPLY TO HOLLOW METAL DOORS ONLY. ALUMINUM STOREFRONTS WILL ONLY REQUIRE 1" CONDUIT (W/ PULLWIRE) STUBBED INTO FRAME. 2. DOOR HARDWARE CONFIGURATIONS WILL VARY.
- ILLUSTRATION IS A GENERAL REPRESENTATION OF CONDITIONS. REFER TO DIVISION 8 DOOR HARDWARE SETS FOR INDIVIDUAL HARDWARE REQUIREMENTS. 3. ALL DOORS WITH ADA DOOR OPERATOR SHALL HAVE CARD READER INSTALLED NEXT TO ADA
- DOOR OPERATOR PUSH BUTTON. ALL OTHER DOORS SHALL HAVE CARD READERS INTEGRATED INTO HARMONY DOOR LOCK. 4. DIVISION 26: PROVIDE ALL ROUGH-IN (BOTH LINE AND LOW VOLTAGE) AND LINE VOLTAGE
- CONNECTIONS AT ALL COMPONENT LOCATIONS FOR A COMPLETE AND OPERATIONAL SYSTEM. FOR ALL DOORS SHOWN ON DOOR HARDWARE SCHEDULE TO RECEIVE FUTURE ACCESS CONTROL SYSTEM, PROVIDE PROVISIONS FOR FUTURE LINE VOLTAGE CONNECTIONS TO POWER SUPPLIES AS REQUIRED AND PROVIDE ALL CONDUITS REQUIRED FOR ADDITION OF FUTURE ACCESS CONTROL HARDWARE.
- 5. INSTALLATION MEANS AND METHODS WILL VARY DEPENDING ON DOOR CONFIGURATIONS. CONCEAL ALL CARD READER ROUGH-IN BOXES, CONDUITS TO BOXES, CONDUITS TO DOOR HARDWARE AND FRAMES, AND CONDUITS TO/FROM POWER SUPPLIES (AND CARD READER MODULES) IN WALLS AND CEILINGS. EXPOSED RACEWAY IS UNACCEPTABLE.
- 6. ALL DOOR CONTROLLER DEVICE BOXES SHALL BE INSTALLED ON THE PROTECTED SIDE OF THE DOOR. (OPPOSITE SIDE OF THE DOOR AS CARD READER IS LOCATED ON)
- 7. COORDINATE ADA PUSH BUTTONS WITH ACCESS CONTROL.

A

В

						LIGHTI	NG FIX I URE S	SCHEDULE	
Туре	Manufacturer	Model	Lamp	Voltage	Apparent Load	Ballast(s)	Type Comments	Mounting	Description
CL1	LUMINII EQUAL BY: KELVIX	FLEXRAD-40-35-24-30-XX	LED 3500K	277V	3 VA	0-10V DIMMING DRIVER	LINEAR	SURFACE	TAPELIGHT MOUNTED ON SURFACE OF CLOUD CEILING. PROVIDE WITH LOW VOLTAGE POWER SUPPLY. COORDINATE EXACT LENGTH WITH CEILING INSTALLATION.UL LISTED.
DL1A	PHILIPS LIGHTOLIER EQUAL BY COOPER	4-R-N-UNV/P4R-DL-15-835-CC-W-Z10-U	LED 3500K	120V	17 VA	0-10V DIMMING DRIVER	4" DOWNLIGHT	RECESSED	RECESSED 4" ROUND DOWNLIGHT. 1500 NOMINAL LUMENS. 60 DEGREE CUTOFF AND COMFORT CLEAR REFLECTOR WITH WHITE FLANGE. UL DAMP RATED.
DL2	PHILIPS LIGHTOLIER EQUAL BY COOPER	6R-N-UNV/ C6L-15-8-35K-N-Z10-U, C6-R-DL-CL	LED 3500K	277V	18 VA	0-10V DIMMING DRIVER	6" DOWNLIGHT WITH DROP GLASS	RECESSED	RECESSED 6" ROUND DOWNLIGHT. 1500 NOMINAL LUMENS. ROUND ACRYLIC ACCESSORY RING WITH ALUMINUM INSERT. UL DAMP RATED.
ESL3	LIGMAN EQUAL BY BEGA	UGI-2X564-31601-W35-277-05-277V	LED 3500K	277V	16 VA	LED DRIVER	EXTERIOR WALL SCONCE	WALL 9'-0" AFF	EXTERIOR 8.5" X 4.5"X 3.25 LED SCONCE, 1000 NOMINAL LUMENS. UL LISTED FOR WET LOCATIONS. MATT SILVER FINISH.
PL1	PHILIPS LEDALITE EQUAL BY PEERLESS	7406-L-B-C-Q-N-08-7-D-E-W-24"	LED 3500K	277V	80 VA	0-10V DIMMING DRIVER	DIRECT/INDIRECT LINEAR	PENDANT 8'-6" AFF	8' DIRECT/INDIRECT SUSPENDED LINEAR LED FIXTURE. 4800 NOMINAL LUMENS/4FT SECTION. 75%UP/25% DOWN DISTRIBUTION. WHITE FINISH.
PL1-4	PHILIPS LEDALITE EQUAL BY PEERLESS	7406-L-B-C-Q-N-04-7-D-E-W-24"	LED 3500K	277V	40 VA	0-10V DIMMING DRIVER	DIRECT/INDIRECT LINEAR	PENDANT 8'-6" AFF	SAME AS PL1 EXCEPT 4' IN LENGTH
PL1-6	PHILIPS LEDALITE EQUAL BY PEERLESS	7406-L-B-C-Q-N-06-7-D-E-W-24"	LED 3500K	277V	60 VA	0-10V DIMMING DRIVER	DIRECT/INDIRECT LINEAR	PENDANT 8'-6" AFF	SAME AS PL1 EXCEPT 6' LENGTH
PL2	PHILIPS LEDALITE EQUAL BY PEERLESS	7406-L-B-C-Q-N-12-7-D-E-W-24"	LED 3500K	277V	120 VA	0-10V DIMMING DRIVER	DIRECT/INDIRECT LINEAR	PENDANT 8'-6" AFF	SAME AS PL2 EXCEPT 12' LENGTH
RL1	PHILIPS DAY-BRITE EQUAL BY COLUMBIA	2-STX-G-38L-835-2-DS-UNV-DIM-F1/D	LED 3500K	277V	45 VA	0-10V DIMMING DRIVER	2' X 2'	RECESSED GRID	2X2 RECESSED INDIRECT TROFFER, 3800 NOMINAL LUMEN LED. STEEL HOUSING WITH WHITE PAINTED REFLECTOR. SINGLE PIECE EXTRUDED DIFFUSE LENS WITH FULLY LUMINOUS HOUSING. WHITE PAINTED TRIM.
RL3-4	METALUMEN EQUAL BY ALW	RM2D-1L35K-4-M-W-L2-1-T-4	LED 3500K	277V	17 VA	0-10V DIMMING DRIVER	2" SLOT	RECESSED	RECESSED FLANGED 2" SLOT FIXTURE, 4' LENGTH, 1896 NOMINAL LUMENS PER 4' LENGTH. CONFIRM MOUNTING CONDITIONS. WHITE FINISH
UC1	KENALL EQUAL BY COOPER	AUCLED-I-MW-16L30K-36-277	LED 3000K	277V	18 VA	0-10V DIMMING DRIVER	36" LED UNDERCABINET	SURFACE	36" UNDERCABINET 1140 LUMEN LED LIGHT WITH EXTRUDED ALUMINUM HOUSING, UV STABILIZED ACRYLIC LENS, AND POLYCABONATE ENDCAPS.
WL1A	VOIGHT LIGHTING EQUAL BY PRUDENTIAL	TMC-320-LED-750LM-4-SQHFR-DWN-WH-UNIV	LED 3500K	120V	17 VA	0-10V DIMMING DRIVER	VANITY SCONCE	WALL SURFACE 7'-6" AFF	WALL MOUNTED WRAPAROUND STRIP , 1920 LUMEN. SATIN ACRYLIC LENS AND TEXTURES WHITE FINISH.
X1	PHILIPS CHLORIDE EQUAL BY LITHONIA	44RLU1R	RED LED	277V	5 VA		SINGLE SIDED EXIT	CEILING SURFACE AND WALL	LED CLEAR ACRYLIC EDGELIT EXIT SIGN. PROVIDE MOUNTING, NUMBER OF FACES AND DIRECTIONAL ARROWS AS INDICATED ON PLANS; SINGLE-SIDED SIGNS SHALL HAVE CLEAR BACKGROUND, DOUBLE-SIDED FACES SHALL HAVE MIRRORED BACKGROUND.
X3	PHILIPS CHLORIDE EQUAL BY LITHONIA	44RL1R	RED LED	277V	5 VA		SINGLE SIDED EXIT	WALL SURFACE	LED CLEAR ACRYLIC EDGELIT EXIT SIGN. PROVIDE MOUNTING, NUMBER OF FACES AND DIRECTIONAL ARROWS AS INDICATED ON PLANS; SINGLE-SIDED SIGNS SHALL HAVE CLEAR BACKGROUND.

### **GENERAL NOTES:**

- 3. ALL LOW VOLTAGE CABLING TO LIGHTING FIXTURES AND CONTROL DEVICES SHALL BE PLENUM RATED.
- 4. CIRCUIT EXIT SIGNS TO NEAREST EMERGENCY CIRCUIT SEARVING THE SPACE.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE											
EQUIPMENT SERVED	EQUIPMENT DESCRIPTION	HP/ W	DISCONNECT	ELECTRICAL DATA	FLA	MCA	МОСР	PANEL	CIRCUIT NUMBER	FEEDER SIZE	NOTES
											•
EF-G101	EXHAUST FAN	20.7 W	MOTOR RATED SWITCH	120 V/1-21 VA	0 A	0 A	15 A	2A1	57	2#12, #12G, 3/4"C	1
EF-G103	EXHAUST FAN	20.7 W	MOTOR RATED SWITCH	120 V/1-21 VA	0 A	0 A	15 A	2A1	57	2#12, #12G, 3/4"C	1
EF-R1	EXHAUST FAN		MOTOR RATED SWITCH	120 V/1-720 VA	6 A	8 A	15 A	2B1	41	2#12, #12G, 3/4"C	1
		1		-	1			-			
RTU-5	ROOF TOP UNIT		100 AS/90 AF	480 V/3-49302 VA	59 A	67 A	90 A	4B1	2,4,6	3#4, #8G, 1-1/4"C	2,3,4
	·	•	•						•	•	

## GENERAL MECHANICAL EQUIPMENT CONNECTION NOTES:

- B. LOCATE ALL DISCONNECTING MEANS PER NEC AND AHJ REQUIREMENTS. STARTERS ARE SEPARATELY MOUNTED UNLESS OTHERWISE NOTED.
- C. ALL DISCONNECTS ARE 3 POLE UNLESS OTHERWISE NOTED.

## MECHANICAL EQUIPMENT SCHEDULE NOTES:

- POWER TO MOTORIZED DAMPER THROUGH UNIT. 2. VFD PROVIDED BY DIVISION 23 AND CONNECTED BY DIVISION 26.
- FURNISH DUCT SMOKE DETECTOR FOR INSTALLATION BY DIVISION 23 CONTRACTOR. HVAC UNITS OVER 2000CFM TO HAVE DUCT DETECTOR IN THE RETURN AIR DUCT. COORDINATE WITH DIVISION 23 FOR QUANTITY REQUIRED. PROVIDE CONNECTION AT HVAC
- UNIT FOR SHUTDOWN ON ALARM AND CONNECTION TO THE FIRE ALARM CONTROL PANEL FOR DETECTOR CONNECTION AS REQUIRED. ALL WIRING TO BE IN EMT CONDUIT. 4. DISCONNECTING MEANS TO BE NEMA 3R RATED, FURNISHED BY RTU MANUFACTURER AND INSTALLED BY DIVISION 26.

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1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTINGHEIGHTS OF ALL LUMINAIRES. INFORM LIGHTING DESIGNER OF CONFLICTS. COORDINATE ALL LOCATIONS WITH DUCTWORKS, PIPING AND STRUCTURE.

2. CONTRACTOR IS RESPONSIBLE TO REVIEW ARCHITECTURAL DRAWINGS TO CONFIRM CEILING TYPES IN ALL ROOMS (ASSESSIBLE, EXPOSED OR HARD LID) AND TO USE THE APPROPROATE WIRING METHOD FOR EACH TYPE. ENSURE ALL J-BOXES ARE ACCESSIBLE AFTER OTHER TRADES' WORK IS COMPLETE. DO NOT LOCATE ANY J-BOXES ON OR IN HARD LID CEILINGS. ALL WIRING MUST BE ACCESSABLE THROUGH THE LUMINAIRE ONLY IN DAISY-CHAIN OR HOMERUNS TO EACH LUMINAIRE. J-BOXES MAY BE LOCATED ABOVE OTHER TRADES ACCESS PANELS IF FEASIBLE AND DOES NOT INTERFERE WITH ACCESS.

5. LUMINAIRE CATALOG/MODEL NUMBERS ARE PROVIDED FOR CONVENIENCE ONLY AND ARE SUBJECT TO CHANGE. CONTRACTOR TO GENERATE EXACT CATALOG NUMBERS AT TIME OF ORDER. DEFER TO PERFORMANCE SPECIFICATIONS LISTED IN THIS SCHEDULE IN EVENT OF CONFLICT OR CHANGE.

## 

A. THE ABOVE INFORMATION IS FOR A SPECIFIC MANUFACTURER. THE ACTUAL MANUFACTURER FOR THE EQUIPMENT MAY DIFFER. COORDINATE WITH MECHANICAL SUBMITTALS FOR ACTUAL LOADS, CIRCUIT AMPACITY, AND OVERCURRENT PROTECTION REQUIREMENTS PRIOR TO MAKING ELECTRICAL CONNECTIONS.

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PANEL: 4LS2

LOCATION: SUB ELECTRICAL ROOM ... BUS RATING: 100 A MAIN BREAKER: 50 A

VOLTS: 480/277 Wye PHASES: 3

В

WIRES: 4

1		CIRCUIT DESCRIPTION				ВК R	D	242	<b>A</b>	В		с	
3	(E) CIRCULATIO	ON C102	2 V	20 20 20	1		L			45	516	635	
7 9	SPARE SPARE			20 20	1			0	0	0	0		
11 13	(E) EXTERIOR SPARE			20 20	1		L 	0	0			14	
15 17	SPARE SPARE			20 20	1 1					0	0	0	
19 21	SPARE SPARE			20 20	1			0	0	0	0		
23 25	SPARE SPACE ONLY			20	1							0	
27 29	SPACE ONLY SPACE ONLY				1								
31 33 25	SPACE ONLY SPACE ONLY				1								
35 37 20	SPACE ONLY SPACE ONLY				1								
41	SPACE ONLY				1 <b>TO</b>		  -OAD:	32	2 VA		VA	658	3 V A
					то	TAL A	AMPS:	1	A	2	A	3	3 A
LO/ TYF		) TION		DEM/ D	<b>AN</b>	EST DE		D				DTES	
R		LES	0 VA	0.00	3% %		0 VA	FIR	ST 10KV	/A @1009	%, REMA	, INDER (	@
	LARGEST M	IOTOR	0 VA 0 VA	0.00	% %		0 VA 0 VA						
С				0.00	% %		0 VA 0 VA						
Oth	er OTHER		0 VA 0 VA	0.00	%		0 VA 0 VA						
	ES: EXISTING L STS IN ACCORD	PAN LOC BUS R	IEL: 4A ATION: MAIN ATING: 200 A MLO: 200 A OBTAINED FRO	<b>1</b> ELEC M AS <u>87 PR</u>	-BL			 IGS. C 3 ANY I	ONTRAC	VOLTS: PHASES: WIRES: TOR TO	: 480/277 : 3 : 4 CONFIRI	' Wye M ADEC	QUA
ск т	CIRCUIT			BKR TR	P	BK R	LOA D		Α	1	B		с
1 3	COMPUTER LA (E) BOILER & N	NB G114 MECHAN	ICAL ROOM	20 20	1		L	800	2,273	785	2,160		
5 7	(E) KITCHEN F1 CLASSROOM (	101 3108		20 20	1		L	720	410			748	1
9 11	CLASSROOM C	3106 3104		20 20	1 1		L			720	1,233	720	1
13 15	CLASSROOM G	3102 CANOPY	(	20 20	1		L	720	17	48	551		
17 19	CIRCULATION SPARE			20 20	1 1		L 	0	0			139	
21 23	SPARE SPARE			20 20	1 1					0	0	0	
25 27	SPACE ONLY SPACE ONLY				1								
29 31	SPACE ONLY SPACE ONLY				1								$\vdash$
33 35	SPACE ONLY SPACE ONLY				1								
37 39	4A2			100	3		Spare ; L	4,759	5,088	4,840	4,267	1 005	
41					TO TO	TAL I TAL A	LOAD: AMPS:	14,7 5	52 VA 4 A	14,53 53	36 VA 3 A	4,805 13,34 48	40 <u>4</u> 40 <u>8</u> 8 A
				DEM	AN	EST		D	DEM			DTES	
L	LIGHTING RECEPTACI	LES	41576 VA	125.0	)% %	51	970 VA 0 VA	CO FIR	NTINUO ST 10KV		) @ 125% %, REMA		@.
_ R			0 11 1	0.00	_		• • • •			<u>A</u> @1005			
  	KITCHEN	<b>IOTOR</b>	0 VA 0 VA	0.00 0.00 0.00	% %		0 VA 0 VA			/A @1005			
R K LN M C	KITCHEN LARGEST M MOTOR COOLING		0 VA 0 VA 0 VA 0 VA 0 VA	0.00 0.00 0.00 0.00 0.00	% % % %		0 VA 0 VA 0 VA 0 VA						
R LN M C H Oth	KITCHEN LARGEST M MOTOR COOLING HEATING TOTHER		0 VA 0 VA 0 VA 0 VA 0 VA 0 VA	0.00 0.00 0.00 0.00 0.00 0.00 0.00	% % % % %		0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA						
	KITCHEN LARGEST M MOTOR COOLING HEATING TOTHER ES: EXISTING I		0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA <b>IEL: 4B</b> CATION: MAIN CATING: 600 A MLO: 600 A	0.00 0.00	% % % % TR		0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA ROOM.		ONTRAC	VOLTS: PHASES: WIRES: TOR TO	: 480/277 : 3 : 4	' Wye	
	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L TS IN ACCORD	PAN LOC BUS R .OADS C	0 VA 0 VA	0.00 0.00	% % % % 		0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA		ONTRAC _OAD.	VOLTS: PHASES: WIRES: TOR TO	: 480/277 : 3 : 4 CONFIRI	' Wye	204
	KITCHEN LARGEST M MOTOR COOLING HEATING r OTHER ES: EXISTING L ISTS IN ACCORD CIRCUIT	PAN LOC BUS R OADS C DANCE W	0 VA 0 VA	0.00 0.00	% % % % 	ICAL	0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA		ONTRAC _OAD. _0AD.	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIRI	' Wye	
	KITCHEN LARGEST M MOTOR COOLING HEATING r OTHER ES: EXISTING L TS IN ACCORD CIRCUIT (E) RTU-8	PAN LOC BUS R .OADS C DANCE W	0 VA 0 VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C 3 ANY I 16,414	ONTRAC _OAD. A 16,434	VOLTS: PHASES: WIRES: TOR TO	: 480/277 : 3 : 4 CONFIRI <b>3</b> 16,434	' Wye M ADEC	
R     K       LM     M       Oth     M       Oth     S       CK     1       3     5       7     9	ES: EXISTING L COOLING HEATING I OTHER COOLING HEATING I OTHER CIRCUIT (E) RTU-8		0 VA 0 VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %	ICAL	0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA	 NGS. C B ANY I 16,414 9,301	ONTRAC _OAD. A 16,434 1,024	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIRI B 16,434	' Wye M ADEC	2UA
R K LM M C H Oth Oth SXIS CK T 1 3 5 7 9 11 13	ES: EXISTING L TS IN ACCORD (E) RTU-3 COM	PAN LOC BUS R OADS C DANCE W	0 VA 0 VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C S ANY I 16,414 9,301	ONTRAC _OAD. OAD. 	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIRI B 16,434 1,024	' Wye M ADEC 16,414 9,301	QU/ C
R     K       LM     M       C H     Oth       ST     7       9     11       13     15       17	ES: EXISTING L TS IN ACCORD (E) RTU-8 (E) RTU-3 COM	PAN LOC BUS R .OADS C DANCE W	0 VA 0 VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C B ANY I 16,414 9,301	ONTRAC _OAD. 16,434 1,024	VOLTS: PHASES: WIRES: XTOR TO	: 480/277 : 3 : 4 CONFIRI B 16,434 1,024	' Wye M ADEC 16,414 9,301	C 110 1
R K LM M C H Oth Oth T 1 3 5 7 9 11 13 15 17 19 21	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L TS IN ACCORD CIRCUIT (E) RTU-8 (E) RTU-3 COM		0 VA 0 VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C B ANY I 16,414 9,301	ONTRAC _OAD. 16,434	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIRI B 16,434 1,024	' Wye M ADEC 16,414 9,301	
R     M     C       M     C     H       Oth     T     1       S     7     9       11     13     15       17     19     21       225     1     13	KITCHEN LARGEST M MOTOR COOLING HEATING I COOLING HEATING TOTHER CONTER CIRCUIT (E) RTU-8 (E) RTU-3 COM		0 VA 0 VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C S ANY I 16,414 9,301	ONTRAC _OAD. A 16,434 1,024	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIR B 16,434 1,024	' Wye M ADEC 16,414 9,301	
R     K       LM     M       C     H       Oth     T       XIS     CK       T     1       3     5       7     9       11     13       15     17       19     21       23     25       27     29	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L STS IN ACCORD CIRCUIT (E) RTU-8 (E) RTU-3 COM		0 VA 0 D 0 A 0 D 0 A 0 D 0 D 0 D 0 D 0 D 0 D 0 D 0 D	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C B ANY I 16,414 9,301	ONTRAC _OAD. 16,434 1,024	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIR B 16,434 1,024	' Wye M ADEC 16,414 9,301	
R K LM M C H Oth Oth NOT XIS CK T 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 32 5	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L STS IN ACCORD CIRCUIT (E) RTU-8 (E) RTU-3 COM		0 VA 0 DETAINED FROM 0 VA 0 DETAINED FROM 0 VA 0 DETAINED FROM 0 DETAI	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C S ANY I 16,414 9,301	ONTRAC _OAD. A 16,434 1,024	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIRI B 16,434 1,024	' Wye M ADEC 16,414 9,301	
R     K       LM     M       C     H       M     C       H     Oth       XIS     CK       T     1       3     5       7     9       11     15       17     19       21     23       25     27       29     31       33     35       37     20	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L STS IN ACCORD CIRCUIT (E) RTU-8 (E) RTU-3 COM		0 VA 0 VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C ANY I 16,414 9,301	ONTRAC _OAD. A 16,434 1,024	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIR B 16,434 1,024	' Wye M ADEC 16,414 9,301	
R K LM M C H Oth Oth XIS CK T 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L STS IN ACCORD CIRCUIT (E) RTU-8 (E) RTU-3 COM (E) RTU-3 COM		0 VA 0 DE 0 0 A 0 DE 0 0 A 0 DE 0 0 A 0 DE 0 0 A 0 DE 0	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C ANY I 16,414 9,301	ONTRAC _OAD. A 16,434 1,024 1,024 31,260 31,260	VOLTS: PHASES: WIRES: CTOR TO 16,414 9,301 16,414 9,301	: 480/277 : 3 : 4 CONFIR 16,434 1,024 1,024	7 Wye M ADEC 16,414 9,301	
R K LM M C H Oth XIS CK T 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L STS IN ACCORD CIRCUIT (E) RTU-8 (E) RTU-3 COM (E) RTU-3 COM 4B2		O VA O VA O VA O VA O VA O VA O VA O VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0 VA 0 VA	 NGS. C S ANY I 16,414 9,301	ONTRAC _OAD. A 16,434 1,024 1,024 31,260 31,260 31,260 21 VA 33 A	VOLTS: PHASES: WIRES: CTOR TO	: 480/277 : 3 : 4 CONFIR 16,434 1,024 1,024 1,024 30,448 39 VA 6 A	7 Wye M ADEC 16,414 9,301 9,301 34,821 107,0 38	
R   K     K   LM     M   C     H   Oth     NOT   XIS     CK   T     1   3     5   7     9   11     13   5     7   9     11   13     15   7     9   11     13   15     27   29     31   33     35   37     39   41	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L CIRCUIT (E) RTU-8 (E) RTU-8 (E) RTU-3 COM (E) RTU-3 COM 4B2 4B2		O VA O VA O VA O VA O VA O VA O VA O VA	0.00 0.00	% % % % % % % % % % % % % % % % % % %		0   VA     0	 JGS. C ANY I 16,414 9,301 35,840 108,9 35,840 108,9 35	ONTRAC _OAD. A 16,434 1,024 31,260 31,260 021 VA 03 A DEM	VOLTS: PHASES: WIRES: CTOR TO 16,414 9,301 16,414 9,301 16,414 9,301 34,821 34,821 107,0 38 AND FAC	: 480/277 : 3 : 4 CONFIR B 16,434 1,024 1,024 30,448 39 VA 6 A <b>CONFIR</b>	7 Wye M ADEC 16,414 9,301 9,301 34,821 107,0 38 <b>)TES</b>	QUA C 11 1 1 30 30 339 36 A
R   K     K   LM     M   C     H   Oth     N   XIS     CK   T     1   3     5   7     9   11     13   5     7   9     11   13     15   17     19   21     23   25     27   29     31   33     35   37     39   41	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L STS IN ACCORD CIRCUIT (E) RTU-8 (E) RTU-3 COM (E) RTU-3 COM HEATING CIRCUIT (E) RTU-3 COM LIGHTING RECEPTACL		O VA O VA O VA O VA O VA O VA O VA O VA	0.00 0.00	% % % % % % % % % % % % % %		0   VA	 NGS. C ANY I 16,414 9,301 9,301 9,301 0 35,840 108,9 35,840 108,9 35,840 108,9 100,9 10,9 1	ONTRAC _OAD. A 16,434 1,024 1,024 31,260 31,260 221 VA 31,260 221 VA 33 A DEM NTINUO	VOLTS: PHASES: WIRES: CTOR TO 16,414 9,301 16,414 9,301 16,414 9,301 107,0 38 34,821 107,0 38 AND FAC	: 480/277 : 3 : 4 CONFIR 16,434 1,024 1,024 1,024 30,448 39 VA 6 A 39 VA 6 A	7 Wye M ADEC 16,414 9,301 9,301 16,414 9,301 34,821 107,0 38 <b>)TES</b>	
R   L   M   C   H   M	KITCHEN LARGEST M MOTOR COOLING HEATING PTOTHER ES: EXISTING L AB2 (E) RTU-3 (E) RTU-3 (E	PAN LOC BUS R -OADS C DANCE W DANCE W DESCR	0 VA     MLO: 600 A     MBTAINED FROM     DBTAINED FROM     DR	0.00 0.00	% % % % % % % 10F P 3 3 3 3 3 3 3 7 0 7 0 % % % %		0   VA     DRAWIN   ADDINC     LOA   D     LM   C     C   I     C   I     O   VA	 NGS. C 35,840 108,9 35,840 108,9 35,840 108,9 35	ONTRAC _OAD. A 16,434 1,024 1,024 31,260 31,260 221 VA 33 A DEM NTINUO ST 10KV	VOLTS: PHASES: WIRES: CTOR TO I 16,414 9,301 9,301 I 16,414 9,301 I 34,821 I 34,821 I 34,821 I 34,821 I 34,821 I JS LOAD X A @ 1009	: 480/277 : 3 : 4 CONFIR 16,434 1,024 1,024 1,024 30,448 39 VA 6 A <b>CONFIR</b>	7 Wye M ADEC 16,414 9,301 9,301 16,414 9,301 34,821 107,0 38 <b>)TES</b>	
R   L   M   C   H   M   M   C	KITCHEN LARGEST M MOTOR COOLING HEATING er OTHER ES: EXISTING L STS IN ACCORD CIRCUIT (E) RTU-8 (E) RTU-3 COM (E) RTU-3 COM CIRCUIT (E) RTU-3 COM LIGHTING RECEPTACL KITCHEN LARGEST M MOTOR COOLING HEATING		0 VA 0 VA	0.00 0.00	% % % % % % % % IOF P 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		0 VA 0 VA	 IGS. C ANY 1 16,414 9,301 9,301 108,9 108,9 108,9 0 108,9	ONTRAC _OAD. A 16,434 1,024 1,024 31,260 31,260 221 VA 33 A DEM NTINUOU ST 10KV	VOLTS: PHASES: WIRES: CTOR TO I 16,414 9,301 9,301 I 16,414 9,301 I 34,821 I 34,821 I 34,821 I 34,821 I 34,821 I 107,0 38 AND FAC	: 480/277 : 3 : 4 CONFIR 16,434 1,024 1,024 30,448 39 VA 6 A <b>CONFIR</b> 2000 2000 2000 2000 2000 2000 2000 20	7 Wye M ADEC 16,414 9,301 16,414 9,301 34,821 107,0 38 <b>)TES</b>	

**4** Sat

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# PANEL: 2A1

	NOTES: EXISTING LOADS OBTAINED FROM AS-BUILT DRAWINGS. CONTRACTOR TO CONFIRM ADEQUATE EXISTS IN ACCORDANCE WITH NEC 220.87 PRIOR TO ADDING ANY LOAD.																
CK T	CIRCUIT DESCRIPTION	BKR TR	P	BK R	LOA D		4	E	3	(	5	LOA D	BK R	Р	BKR TR	CIRCUIT DESCRIPTION	СК Т
1	(E) CIRCULATION	20	1		L	242	80					L		1	20	(E) SUB ELECTRICAL ROOM N207	2
3	(E) CIRCULATION C102	20	1		L			45	516			L		1	20	(E) LIGHTING LOAD	4
5	(E) WALL PACKS + NEW	20	1		L					635	10	L		1	20	(E) CIRCULATION N200	6
7	SPARE	20	1			0	0							1	20	SPARE	8
9	SPARE	20	1					0	0					1	20	SPARE	10
11	(E) EXTERIOR	20	1		L					14	0			1	20	SPARE	12
13	SPARE	20	1			0	0							1	20	SPARE	14
15	SPARE	20	1					0	0					1	20	SPARE	16
17	SPARE	20	1							0	0			1	20	SPARE	18
19	SPARE	20	1			0	0							1	20	SPARE	20
21	SPARE	20	1					0	0					1	20	SPARE	22
23	SPARE	20	1							0	0			1	20	SPARE	24
25	SPACE ONLY		1											1		SPACE ONLY	26
27	SPACE ONLY		1											1		SPACE ONLY	28
29	SPACE ONLY		1											1		SPACE ONLY	30
31	SPACE ONLY		1											1		SPACE ONLY	32
33	SPACE ONLY		1											1		SPACE ONLY	34
35	SPACE ONLY		1											1		SPACE ONLY	36
37	SPACE ONLY		1											1		SPACE ONLY	38
39	SPACE ONLY		1											1		SPACE ONLY	40
41	SPACE ONLY		1											1		SPACE ONLY	42
			то	TAL L	OAD:	322	VA	561	VA	658	VA						
		то	TAL A	MPS:	1	A	2	A	3	A	_						

MOUNTING: SURFACE

SCCR: 14,000

FED FROM: SEE ONE-LINE DIAGRAM

NOTES	BKR TYPE	PANEL	TOTALS
25%	G=GFCI (5mA)		
MAINDER @	GP=GFCI (30mA)	CONNECTED LOAD:	1525 VA
	ST=SHUNT TRIP	ESTIMATED	1907 VA
	LO=LOCK OUT	CONNECTED	2 A
		EMD CURRENT:	2 A

JATE				ę	SCCR: 25,000	
	LOA D	BK R	Ρ	BKR TR	CIRCUIT DESCRIPTION	Cł T
	L		1	20	(E) SITE LIGHTING	2
	L		1	20	(E) COVERED PLAY	4
1,600	L		1	20	(E) LOAD	6
	L		1	20	(E) CHAIR CART STORAGE C113	8
	Ligh		1	20	(E) STAGE C107	10
1,091	Ligh		1	20	LIBRARY G110	12
	L		1	20	CIRCULATION-1 C250-1	14
	L		1	20	WORK ROOM G112	16
0			1	20	SPARE	18
			1	20	SPARE	20
			1	20	SPARE	22
0			1	20	SPARE	24
			1		SPACE ONLY	26
			1		SPACE ONLY	28
			1		SPACE ONLY	30
			1		SPACE ONLY	32
			1		SPACE ONLY	34
			1		SPACE ONLY	36
	Spare		З	100	403	38
4,293	; L		Ŭ			42

	BKR TYPE	PANEL	TOTALS
	G=GFCI (5mA)		
<i>)</i>	GP=GFCI (30mA)	CONNECTED LOAD:	42614 VA
	ST=SHUNT TRIP	ESTIMATED	53267 VA
	LO=LOCK OUT	CONNECTED	51 A
		EMD CURRENT:	64 A

MOUNTING: SURFACE FED FROM: SEE ONE-LINE DIAGRAM SCCR: 25,000

NFIRI	M ADEQ	UATE							
	C		LOA D	BK R	Р	BKF TR	R CIRCUIT DE	SCRIPTION	CK T
									2
,434			M		3	90	RTU-5		4
	16,414	16,434	1						6
									8
024			M		3	15	(E) RTU-9 COMPRE	SSOR	10
	9,301	1,024	1						12
									14
									16
									18
									20
									22
									24
									26
									28
									30
									32
									34
									36
			0						38
,448					3	400	4B3		40
	34,821	30,448	, 0,						42
ΥA	107,0	39 VA							
	386	6 A							
r nc	TES		BKR	ΤΥΡΙ	Ε		PANEL	TOTALS	
125%	)	G=	GFCI (	5mA)					
EMA	INDER (	0 GF	P=GFCÌ	, (30m	A)	(	CONNECTED LOAD:	322997 VA	
		ST	=SHUN	IT TR	ΙP		ESTIMATED	369774 VA	
		LO	=LOCK	OUT	-		CONNECTED	389 A	
							EMD CURRENT:	445 A	

	LOCATION: M BUS RATING: 2 MLO: 2	AIN ELE 00 A 00 A	СТБ	RICAL ROOM	Л		VOLTS PHASES WIRES	: 120/208 : 3 : 4	3 Wye				MOUN FED I	NTING: SURFACE FROM: SEE ONE-LIN SCCR: 22,000	NE DIAGRAM	
	TES: EXISTING LOADS OBTAINED	FROM A	S-BI		INGS. C		CTOR TO	CONFIR	M ADEQU	ATE						
CK T		BKF TR	<b>₹</b> Ρ	BK LOA R D		<b>A</b>		В	С		LOA D	BK R P	BKR TR		SCRIPTION	Cł T
1 3	HAND DRYERS CIRCULATION DF	20 20 20	1	M R O: R	600	360	360	360	742	360	R R	1	20 20 20	COMUPTER LAB G COMPUTER LAB G	114 - 1 114 - 2 114 - 3	2
7 9	LIBRARY SPARE	20 20 20	1	R	180	360	0	720	142	500	R	1	20 20 20	COMPUTER LAB G	114 - 4 114 - 5	8
11 13	SPARE CLASSROOM G102 PROJECTOR	20 20	1	 R	500	720			0	720	R R	1	20 20	COMPUTER LAB G	114 - 6 114 - 7	12 14
15 17	CLASSROOM G102 - 1 CLASSROOM G102 - 2 CLASSROOM C102 - 2	20	1	R R R	500	500	720	360	720	500	R R	1	20 20 20	COMPUTER LAB G	114 - 8 114 - 9 114 PPO JECTOR	16
21 23	CLASSROOM G102 - 3 CLASSROOM G104 PROJECTOR CLASSROOM G104 - 2	20 20 20 20	1	R	500	500	500	500	720	540	R R	1	20 20 20	LIBRARY G110 PRC	DJECTOR	20
25 27	CLASSROOM G104 - 1 CLASSROOM G104 - 3	20 20	1	R R	720	360	500	180			R R	1	20 20	LIBRARY G110 - 2 LIBRARY G110 - 3		26 28
29 31	(E) CAFE TERIA COMMONS C10 (E) CUSTODIAL STORAGE F104	20	1	R Oth	. 900	540	740	<b>E40</b>	540	540	R R	1	20 20 20	LIBRARY G110 - 4 LIBRARY G110 - 5	2110	30
35 35 37	(E) F104, F102 (E) CIRCULATION F100 (E) SPEECH OFFICE B110	20	1	R; M R R	1 080	156	742	540	900	900	R M	1	20 20 15	(E) FLEX CONFERE	NCE ROOM B111	36 36
39 41	(E) SPEECH OFFICE B110 (E) TOILET F103	20 20	1	R L; R	.,		900	180	392	540	R	1	20 20	(E) FLEX CONFERE (E) IT SPECIALIST (	NCE ROOM B111 C118	40
43 45	(E) R STAGE C107 (E) F105, F101	20 20	1	R R	360	1,200	360	1,000			R R	1	20 20	(E) GYM PROJECT( WORK ROOM G112	DR PRINTER 1	44
47 49 51	(E) ROOF UNIT RTU-8 (E) ROOF UNIT RTU-5,9 (E) STORAGE C105A	20	1	R R R	360	1,200	180	360	360	2,456	R; M R R	1	20 20 20	(E) COMMONS PRC (E) STAGE C107	DJECTOR AND	48 50
53 55	(E) STAGE C120 (E) STAGE STORAGE C107A	20 20 20	1	R R	1,260	96			900	720	R	1	20 20 20	(E) PE INSTRUCTO (E) MONUMENT SIC	R OFFICE C111	54 56
57 59	BATHROOM SPACE ONLY	20	1	L; R		4.400	466	540		180	R R	1	20 20	(E) SERVICE ENCLO (E) MAIN ENTRY W	OSURE X003 ET LOCATION	58 60
61 63 65	(E) STAGE C107 (E) STAGE C107 (E) HAND DRYER GIRLS	20	1	R	360	1,180	360	540	0	1 000	R R R	1	20 20 20	LIBRARY G110 - 6 LIBRARY STACKS 1 WORK ROOM G112	PRINTER 2	62 64
67 69	(E) HAND DRYER BOYS WORK ROOM G112 - 2	20 20 20	1	 R	0	360	1,720	0		1,000	R 	1	20 20 20	WORK ROOM G112 (E) DOOR LOCKS	2-1	68 70
71 73	WORK ROOM G112 - 3 CLASSROOM G106 / G108	20 20	1	R R	1,000	0	500	0	540	0		1	20 20	(E) IRRIGATION CO (E) SUMP PUMP	NTROL	72
75 77 79	CLASSROOM G106 - 1 CLASSROOM G106 - 2 CLASSROOM G106 - 3	20 20 20	1	R	720	500	500		720	0	  R	1	20 20 20	(E)SUMP PUMP (E)SUMP PUMP CLASSROOM G108	- 3	78
81 83	CLASSROOM G108 - 1 CLASSROOM G108 - 2	20 20	1	R R			720		720			1		SPACE ONLY SPACE ONLY		82 84
			TC TC	TAL LOAD	: <u>16,0</u> : 13	72 VA 37 A	13,30 11	08 VA 1 A	15,639 133 /	VA A						
_0	AD LOAD CONNEC		IAN	ESTIMAT	ED											
TY L	PEDESCRIPTIOND LOALIGHTING196 V/	<b>D</b> . 125.0	 00%	DEMAN 244 VA	<b>D</b> CO		US LOAE	$\frac{1000}{2} = 0 = 0$		G=0	GFCI (	5mA)		PANEL	TOTALS	
F	R     RECEPTACLES     42620 \       K     KITCHEN     0 VA	A 61.7	3% )%	26310 V 0 VA	A FIR	ST 10K\	/A @100'	%, REMA	INDER @.	GP	=GFCI =SHUN	(30mA)	C	CONNECTED LOAD: ESTIMATED	45008 VA 28750 VA	
N	MOTOR 0 VA MOTOR 1939 V C COOLING 0 VA	A 100.0	)% )0% )%	1939 VA	A						-LUUr			EMD CURRENT:	80 A	
⊦ Otł	HEATING 0 VA her OTHER 180 VA	0.00	)% )0%	0 VA 180 VA												
	PANEL:	2B1														
	LOCATION: N		СТБ	ICAL ROOM	Л		VOLTS	: 120/208	3 Wye				MOUN	ITING: SURFACE		
	BUS RATING: 2 MLO: 2	A 00 A 00					PHASES	: 3 : 4					FED	FROM: SEE ONE-LIN SCCR: 22,000	NE DIAGRAM	
10 10	TES: EXISTING LOADS OBTAINED STS IN ACCORDANCE WITH NEC	FROM A 220.87 Pf	S-BI RIOI	JILT DRAW R TO ADDIN	INGS. C	ONTRAC	CTOR TO	CONFIR	M ADEQU	ATE						
CK T		BKF TR	א ר פ	BK LOA R D		A		В	с		LOA D	BK R P	BKR TR		SCRIPTION	CM T
1 3	(E) DWH-1 (E) DWH-2	15	1	H H	600	0	600	0				1	20 15	(E) LIBRARY COILIN SPARE	NG DOOR	2
5 7	(E) DWH-3 (E) DWH-4	15 15	1	H H	600	21			600		М	1	15	(E) EF-2G		6 8
9 11 13	SPARE	15	2		0	1 205	0	528	0	1,176	M M	1	15 20	(E) EF-6 (E) EF-15		10
15 15 17	SPARE	15	2	 M	0	1,295	0	1,295	1.176	1.295	М	3	20	(E) HHWP-1		16
19 21	(E) EF-8	50	1	LM	2,880	1,295	1,500	1,295		.,	М	3	20	(E) HHWP-2		20
23 25	(E) EUH-2	20	2	Н	1,500	0			1,500	1,295		2	15	SPARE		24 26
27 29 31	(E) BLR-1 (E) BLR-2	15	1	H	792	1 176	1,500	0	792	528	M	1	15	(E) EF-19 (E) EF-18		30
33 35	SPACE ONLY		1		102			161	4,661	0	M 	1	15 15	(E) MECH CP-1, CP (E) EF-9	-2	34
37 39	(E) 2B2	100	) 3	Spa	, 5,686	7,892	5,859	5,800			Motor	3	100	(E) 2B3		38 40
41 43 45	EF-R1 SPARE	20 20 20	1	M	0	0	0	0	720	5,300	, 	1	20	SPA	RE	42
47 49	SPACE ONLY SPACE ONLY		1										50			48
51 53	SPACE ONLY SPACE ONLY		1					0				1	20	METER C	ABINET	52 54
55			1			1,656				1 656	M	1	25	(E) BC	CP-1	56 58
57 59	SPACE ONLY SPACE ONLY SPACE ONLY		1		04.0	26 VA	17.9	72 VA	20,201	VA A	141	<u> </u>	J			
57 59	SPACE ONLY SPACE ONLY SPACE ONLY		1 TC TC	TAL LOAD	24,9	11 A	15	60 A	1717							
57	SPACE ONLY SPACE ONLY SPACE ONLY		1 TC TC	TAL LOAD TAL AMPS	24,9	11 A	15	60 A	1712							
57 59 -0 TY	AD LOAD CONNECT DESCRIPTION D LOA	TE DEM D 0.00	1 TC TC	TAL LOAD TAL AMPS ESTIMAT DEMAN	ED D		15	0 A CTOR NC	DTES	6-4	BKR	TYPE		PANEL	TOTALS	
57 59 -0 TY L F	AD LOAD CONNEC   PE DESCRIPTION D LOA   LIGHTING 0 VA   RECEPTACLES 1863 V   KITCHEN 0 VA	TE DEM D 0.00 A 100.00	1 TC TC IAN  0% 00%	TAL LOAD TAL AMPS ESTIMAT DEMAN 0 VA 1863 V/ 0 VA	ED 21 D CO	DEN NTINUO	15 14ND FA US LOAE /A @100	0 A CTOR NC 0 @ 125% %, REMA	DTES	G=0 GP ST=	BKR GFCI ( =GFCI =SHUN	TYPE 5mA) (30mA) IT TRIP	C	PANEL ONNECTED LOAD: ESTIMATED	<b>TOTALS</b> 63036 VA 64035 VA	
57 59 -0 TY LI LI	AD LOAD CONNEC   SPACE ONLY SPACE ONLY   SPACE ONLY SPACE ONLY   AD LOAD CONNEC   PE DESCRIPTION D LOA   LIGHTING 0 VA   RECEPTACLES 1863 V   KITCHEN 0 VA   M LARGEST MOTOR 4056 V   M MOTOR 32869 V	TE DEM D 0.00 A 100.0 A 125.0 A 100.0	1 TC TC 1AN             	ESTIMAT       DEMAN       0 VA       1863 V/       0 VA       32869 V	ED 22 ED 22 CO A FIR A A	DEN DEN NTINUO ST 10K\	15 14ND FA( US LOAE /A @1000	0 A CTOR NC 0 @ 125% %, REMA	DTES	G=0 GP ST= LO:	BKR GFCI ( =GFCI =SHUN =LOCK	TYPE 5mA) (30mA) IT TRIP OUT	C	PANEL CONNECTED LOAD: ESTIMATED CONNECTED EMD CURRENT:	63036 VA       64035 VA       175 A       178 A	
	AD LOAD CONNEC   SPACE ONLY SPACE ONLY   SPACE ONLY SPACE ONLY   AD LOAD CONNEC   PE DESCRIPTION D LOA   LIGHTING 0 VA   RECEPTACLES 1863 V   KITCHEN 0 VA   MOTOR 32869 V   COOLING 0 VA   HEATING 9493 V	TE DEM D 0.00 A 100.0 A 125.0 A 100.0 A 100.0 A 100.0 A 100.0 A 100.0	1 1 TC TC 1AN         	ESTIMAT       DEMAN       0 VA       1863 V/       0 VA       5070 V/       32869 V       0 VA       9493 V/	ED 27	DEN DEN NTINUO ST 10K\	15 14ND FA	0 A CTOR NC 0 @ 125% %, REMA	DTES	G=0 GP ST= LO=	BKR GFCI ( =GFCI =SHUN =LOCk	TYPE 5mA) (30mA) IT TRIP OUT	C	PANEL CONNECTED LOAD: ESTIMATED CONNECTED EMD CURRENT:	TOTALS 63036 VA 64035 VA 175 A 178 A	
57 59 59 LO LI LI K C Oth	SPACE ONLY     SPACE ONLY     SPACE ONLY     SPACE ONLY     SPACE ONLY     SPACE ONLY     LIGHTING   0 VA     RECEPTACLES   1863 V     KITCHEN   0 VA     LARGEST MOTOR   4056 V     MOTOR   32869 V     COOLING   0 VA     HEATING   9493 V     Der   OTHER   11406 V	TE DEM D. 0.00 A 100.0 A 125.0 A 100.0 A 100.0 A 100.0 A 100.0 A 100.0	1 1 TC TC 1AN  )% )00% )00% )00% )00% )00% )00%	TAL LOAD       TAL AMPS       ESTIMAT       DEMAN       0 VA       1863 V/       0 VA       32869 V       0 VA       9493 V/       11406 V	ED 27	DEN DEN NTINUO ST 10K\	15 14ND FA( US LOAE /A @100 <sup>4</sup>	0 A CTOR NC 0 @ 125% %, REMA	DTES	G=1 GP ST= LO:	BKR GFCI ( =GFCI =SHUN =LOCk	TYPE 5mA) (30mA) IT TRIP OUT		PANEL CONNECTED LOAD: ESTIMATED CONNECTED EMD CURRENT:	TOTALS 63036 VA 64035 VA 175 A 178 A	
57 59 10 11 11 11 11 11 11 11 11 11 11 11 11	SPACE ONLY     SPACE ONLY     SPACE ONLY     SPACE ONLY     SPACE ONLY     AD   LOAD   CONNEC     DESCRIPTION   D LOA     LIGHTING   0 VA     RECEPTACLES   1863 V     KITCHEN   0 VA     M LARGEST MOTOR   4056 V     MOTOR   32869 V     COOLING   0 VA     HEATING   9493 V     Der   OTHER   11406 V	TE DEM D 0.00 A 100.0 A 125.0 A 100.0 A 100.0 A 100.0 A 100.0 A 100.0	1 1 TC TC 1AN             	TAL LOAD       TAL AMPS       ESTIMAT       DEMAN       0 VA       1863 V/       0 VA       5070 V/       32869 V       0 VA       9493 V/       11406 V	ED 27	DEN NTINUO	15 15 15 15 15 100 100	0 A CTOR NC 0 @ 125% %, REMA	DTES	G=( GP ST= LO:	BKR GFCI ( =GFCI =SHUN =LOCk	TYPE 5mA) (30mA) IT TRIP OUT		PANEL CONNECTED LOAD: ESTIMATED CONNECTED EMD CURRENT:	TOTALS 63036 VA 64035 VA 175 A 178 A	

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	SCCR:	22.000	

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SATO ES ADDITION	BEAVERTON SCHOOL DISTRICT	7775 NW KAISER RD, PORTLAND, OR 97229
BID/PERMIT 06/10/2022 REVISIONS		
74-22109-00 PANEL SCHEDULES E8.1		

