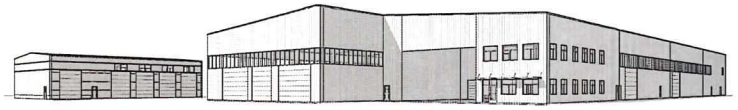
# PACIFIC FERN BUSINESS PARK

## GRANDE WEST

## 5435 LA BOUNTY RD FERNDALE, WA 98248



| | | |
|---|---|---|
| FABER CONSTRUCTION | 6851 HANNEGAN ROAD, LYNDEN WA 98264 PHONE: 1.360.354.3500 EMAIL: raymond@faberconstruction.com | OWNER / CONTRACTOR |
| KING ARCHITECTURE, LLC | 401 HARRIS AVE STE 100 BELLINGHAM WA 98225 PHONE: 1.360.201.3418 EMAIL: tim@king-architecture.com | ARCHITECT |
| APC ENGINEERS | 1401 ASTOR ST BELLINGHAM WA 98225 PHONE: 1.360.671.1146 EMAIL: nathan@apcengineers.com | CIVIL ENGINEER |
| ZEEGERS ENGINEERING INC | 2115 ELECTRIC AVE BELLINGHAM WA 98229 PHONE: 1.360.676.2659 EMAIL: zeiconsult64@gmail.com | STRUCTURAL ENGINEER |
| BERONA ENGINEERS, INC | 4630 200TH ST SW STE #C LYNNWOOD WA 98036 PHONE: 1.425.744.6033 EMAIL: mberona@beronaengineers.com | MECHANICAL ENGINEER |
| AWA ELECTRICAL CONSULTANTS, LLC | 19015 36TH AVE. WEST STE. E LYNNWOOD WA 98036 PHONE: 1.425.775.1799 ext. 103 EMAIL: brad@awaelec.com | ELECTRICAL ENGINEER |
| LYNDEN SHEET METAL | 837 EVERGREEN ST. LYNDEN WA 98264 PHONE: 1.360.354.3991 EMAIL: britton@lyndensheetmetal.com | MECHANICAL CONTRACTOR |
| LIGHTNING ELECTRIC, LLC | 1262 E. SMITH RD. BELLINGHAM WA 98226 PHONE: 1.360.351.4811 EMAIL: jesse@lightningelectricllc.com | ELECTRICAL CONTRACTOR |

City of Ferndale
Reviewed for Code Compliance

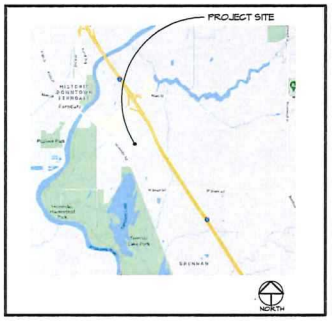
Plans Examiner: KyleHuebner Date: 07/28/2021

I HAVE REVIEWED ALL NOTES AND CHANGES TO THIS CONSTRUCTION DRAWING PRIOR TO ISSUANCE OF BUILDING PERMIT

SIGNED _____

DATE _____

### VICINITY MAP




### DRAWING INDEX


**GENERAL**
A0.1 COVER SHEET
A0.5 CODE REVIEW PLANS

**CIVIL**
C1 COVER SHEET & GENERAL NOTES
C2 SITE PLAN
C3 TESCP
C4 SWPPP
C5 SEWER PLAN & PROFILE
C6 GRADING LOT 7
C7 GRADING LOTS 8 & 9
C8 GRADING LOT 10
C9 DETAILS
C10 DETAILS

**LANDSCAPING**
L1.1 LANDSCAPING PLAN

**ARCHITECTURAL**
A1.1 SITE PLAN
A2.1 MAIN & MEZZANINE FLOOR PLANS EAST
A2.2 MAIN & MEZZANINE FLOOR PLANS WEST
A2.3 ROOF PLANS
A2.4 SHOP BUILDING FLOOR PLAN & EXTERIOR ELEVATIONS
A2.5 REFLECTED CEILING PLANS
A3.1 EXTERIOR ELEVATIONS
A4.1 BUILDING SECTIONS
A4.2 WALL SECTIONS
A5.1 MAIN & MEZZANINE ENLARGED FLOOR PLANS
A5.2 TOILET ROOM ELEVATIONS
A6.1 INTERIOR ELEVATIONS
A6.2 INTERIOR ELEVATIONS
A7.1 FINISH SCHEDULE & DOOR SCHEDULE
A8.1 VERTICAL CIRCULATION

**STRUCTURAL**
S0.0 STRUCTURAL NOTES
S1.0 SHOP MEZZANINE FRAMING & MAIN FLOOR PLAN
S2.0 SHOP FOUNDATION PLAN
S3.0 MAIN BUILDING MEZZANINE & MAIN FLOOR PLAN
S4.0 MAIN BUILDING FOUNDATION PLAN
S5.0 FRAMING DETAILS
S6.0 FOUNDATION DETAILS

**MECHANICAL**
M0.0 LEGENDS, NOTES MECHANICAL
M0.1 HVAC SCHEDULES
M0.2 HVAC SCHEDULES
M0.3 SPECS
M0.4 SPECS
M0.5 SPECS
M0.6 SPECS
M1.0 FOUNDATION OVERALL HVAC PLAN
M1.0E FOUNDATION HVAC PLAN - EAST
M1.0W FOUNDATION HVAC PLAN - WEST
M1.1 LEVEL 1 OVERALL HVAC PLAN
M1.1E LEVEL 1 HVAC PLAN - EAST
M1.1W LEVEL 1 HVAC PLAN - WEST
M2.2 LEVEL 2 OVERALL HVAC PLAN
M2.2E LEVEL 2 HVAC PLAN - EAST
M2.2W LEVEL 2 HVAC PLAN - WEST
M3.0 ENLARGED HVAC PLANS
M4.0 HVAC DETAILS
M4.1 HVAC DETAILS
M5.1 PIPING DIAGRAMS
P0.0 LEGENDS & NOTES PLUMBING
P0.1 PLUMBING SCHEDULES
P1.0 FOUNDATION OVERALL PLUMBING PLAN
P1.0E FOUNDATION PLUMBING PLAN - EAST
P1.0W FOUNDATION PLUMBING PLAN - WEST
P1.1 LEVEL 1 OVERALL PLUMBING PLAN
P1.1E LEVEL 1 PLUMBING PLAN - EAST
P1.1W LEVEL 1 PLUMBING PLAN - WEST
P2.2 LEVEL 2 OVERALL PLUMBING PLAN
P2.2E LEVEL 2 PLUMBING PLAN - EAST
P2.2W LEVEL 2 PLUMBING PLAN - WEST
P4.0 PLUMBING DETAILS
P4.1 PLUMBING DETAILS
P5.0 NATURAL GAS RISER DIAGRAM

**ELECTRICAL**
E0.0 ELECTRICAL COVER SHEET
E1.0 ELECTRICAL SITE PLAN
E1.1 SITE LIGHTING PLAN
E1.2 PGEC
E2.0 LIGHTING PLAN - NORTH
E2.1 LIGHTING PLAN - SOUTH
E2.2 ENLARGED LIGHTING PLANS
E2.3 ENLARGED LIGHTING PLANS
E3.0 POWER PLAN - NORTH
E3.1 POWER PLAN - SOUTH
E3.2 ENLARGED POWER PLANS
E3.3 ENLARGED POWER PLANS
E3.4 POWER PLANS - EQUIPMENT LIST
E4.1 OUT BUILDING ELECTRICAL PLAN
E5.0 ONE-LINE DIAGRAM, LOAD SUMMARY


### DEFERRED SUBMITTAL ITEMS

1. PLANS FOR RACKING SYSTEM
2. FIRE SPRINKLER DESIGN
3. FIRE ALARM SYSTEM
4. PRE-ENGINEERED METAL BUILDING SHOP DRAWINGS & CALCULATIONS
5. PAINT BOOTH

### GENERAL PROPERTY DATA

**LOCATIONS:**

5463,5457, 5453 & 5433 LABOUNTY ROAD - LOTS 7, 8, 9 & 10 FERNDALE WA 98248

**ZONING:**

PACIFIC FERN BUSINESS PARK
GENERAL BUSINESS - SEE 21001-CUP FOR CONDITIONAL USE FOR BUS ASSEMBLY

**PARCEL #S:**

390 228 012 143, 390 228 037 145 & 390 228 050 017

**LOT COVERAGE:**

SEE LANDSCAPING PLAN

**PARKING:**

2,404 S.F. OFFICE / 300 = 5
55,550 S.F. FACTORY = 32
BASED ON LARGEST SHIFT IN FACTORY = 37
PARKING STALLS PROVIDED = 50

JOB SITE COPY
Approved Permit and Plans Shall Remain on Site at ALL times

ANY DEVIATION IN CONSTRUCTION FROM APPROVED PLANS REQUIRES PRIOR REVIEW AND APPROVAL

### CODE REVIEW

INTERNATIONAL BUILDING CODE INTERNATIONAL EXISTING BUILDING CODE:
BUILDING CODES: 2018 IBC W/ WASHINGTON STATE AMENDMENTS.
OCCUPANCY = D, S-1 (Storage areas) F-1 (Plant Assembly) & A-2 (Break Room 207)
CONSTRUCTION TYPE: II-B
STORIES: 1 Story w/ (2) Mezzanines
SEPARATION: Allowable area and height based on different uses being separated by fire barriers. Allowed area based on sum of the ratios. (506.4.2)

SITE DESCRIPTION: (506.3.2 and 202 FIRE SEPARATION DISTANCE)
The north side has a lot line. Distance to lot line = 10.0
Length of perimeter facing lot line = 405.0 This side is not accessible from a street or approved fire lane.
The east side has a public way. Distance to public way = 26.0 width = 32.0
Length of perimeter facing the public way = 154.0 This side can be accessed from a street or approved fire lane
The south side has a lot line. Distance to lot line = 40.0
Length of perimeter facing lot line = 405.0 This side can be accessed from a street or approved fire lane.
The west side has a lot line. Distance to lot line = 10.0
Length of perimeter facing lot line = 154.0 This side is not accessible from a street or approved fire lane.
Perimeter of the entire building = 1,118.0 feet.
Perimeter which fronts a public way or accessible open space = 559.0 feet.
Weighted average of the width of public way or accessible open space = 50.9 feet. (506.3.3)
Allowable area increased 42.50% due to frontage. (506.3.3, Exception)

BUILDING INTERIOR:
ALLOWABLE AREA AND HEIGHT:

| FL | NAME | OCC | MAX FLRS | AREA | ALLOWED | RATIO | STATUS |
|---|---|---|---|---|---|---|---|
| F1M | Business areaB | A | | 1728 | Mezzanine area NC (505.2) | | |
| F1M | Dining room | A2 | 3 | 1260 | Mezzanine area NC (505.2) | | |
| F1M | Business area | B | 4 | 576 | Mezzanine area NC (505.2) | | |
| F1 | Factory | F1 | 3 | 44150 | 82555.84 | 0.54 | OK |
| F1 | Business areaB | | 4 | 1854 | 101128 | 0.02 | OK |
| F1 | Storage area | F1 | 3 | 11400 | 82555.84 | 0.11 | OK |
| TOTAL FOR FLOOR | | | | 57404 | 84285.55 | 0.83 | OK |
| BUILDING TOTAL | | | | 57404 | 84285.55 | 0.83 | OK |

OCCUPANCY: SEE CODE REVIEW PLAN
EXIT REQUIREMENTS:

| FL | NAME OF AREA | NUMB OF OCC | MIN NUMB EXIT | PANIC HDWR | DOOR SWNG | FIRE RATING | CORRIDOR RATING | MAX TRVL DIST | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| F1M | Business area | 53 | 2 | YES | OUT | N/A | | 300 | 1 & 12 |
| F1M | Dining room | 79 | 2 | YES | OUT | N/A | | 250 | 1 & 12 |
| F1M | Business area | 29 | 1 | no | any | N/A | | 300 | |
| F1 | Factory | 442 | 2 | no | OUT | N/A | | 250 | 1 & 2 |
| F1 | Business area | 12 | 1 | no | any | N/A | | 300 | |
| F1 | Storage area | 38 | 1 | no | any | N/A | | 250 | |
| TOTAL 1st FLOOR | | 649 | 5 | YES | OUT | N/A | | 250 | 9 & 12 |

FOOTNOTES:
1. Two exits are required from this area since the occupant load exceeds allowable in Table 1006.2.1
2. Two exits are required from this area since the common path of egress limits in Table 1006.2.1
9. Number of exits from this floor is based on Section 1006.3.2
12. Panic hardware is required when the occupant load is 50 or more. (1010.1.10)

REQUIRED SEPARATION OF OCCUPANCIES: (508.4.4 & Table 508.4)
Between occupancy F1 and A2, a 1-hour fire barrier is required. (Table 508.4)
Between occupancy B and A2, a 1-hour fire barrier is required. (Table 508.4)
ACCESSORY OCCUPANCY OF WEST MEZZANINE IS LESS THAN 10% OF THE F-1 MAIN OCCUPANCY F-1 = 44,150 S.F. X 10% = 4,415 S.F. (A2 OCCUPANCY AT WEST MEZZANINE IS ONLY 1,260 S.F.
Accessory occupancies shall not occupy more than 10% of the area of the story where they are located and shall not exceed the values in Table 508.2 without increases. (508.2.3)
No separation is required between accessory occupancies or the main occupancy. (508.2.4)
SMOKE AND HEAT REMOVAL:
If there is over 50,000 sq.ft. of undivided area, smoke and heat vents are required. (910.2.1)
Areas containing high piled combustible combustible storage require smoke and heat removal when required by Table 3206.2 of the IFC. Design to comply with Section 910.3 or 910.4.

Note: Where areas of buildings are equipped with early suppression fast-response (ESFR) sprinklers, automatic smoke and heat vents shall not be required within these areas. (910.2, Exception 2) *FIRE SPRINKLER SYSTEM IN THIS BUILDING WILL BE EQUIPPED WITH ESFR SPRINKLERS, NO AUTOMATIC SMOKE AND HEAT VENTS REQUIRED.
COMMON PATH OF EGRESS: 100'
415.3 - FIRE ALARM SYSTEM: FIRE ALARM SYSTEM REQUIRED IN ACCORDANCE WITH SECTION 907.2
903.2.4 & 903.2.9 - FIRE SPRINKLING REQUIRED TO MEET NFPA 13 WITH ESFR SPRINKLERS
907 - FIRE ALARM: REQUIRED TO MEET NFPA 72

### CODE REVIEW FOR SHOP BUILDING

INTERNATIONAL BUILDING CODE INTERNATIONAL EXISTING BUILDING CODE:
BUILDING CODES: 2018 IBC W/ WASHINGTON STATE AMENDMENTS.
OCCUPANCY = F-1 (Plant Assembly)
CONSTRUCTION TYPE: II-B
STORIES: 1 Story
SEPARATION: no separation required

ALLOWABLE AREA: 15,500 S.F.

ACTUAL AREA: 9,432 S.F.

COMMON PATH OF EGRESS: 100'
415.3 - FIRE ALARM SYSTEM: NOT REQUIRED
903.2.4 - FIRE SPRINKLER SYSTEM - NOT REQUIRED BUILDING LESS THAN 12,000 S.F.


KING ARCHITECTURE

KING ARCHITECTURE LLC
401 HARRIS AVENUE, SUITE 100
BELLINGHAM WA 98225
V 360.647.5464 x11
E tim@kingarchitecture.com



King Architecture LLC is not responsible for safety programs, methods and procedures of operations, or the construction of the design shown on these drawings. Drawings are for use on this project only and are not intended for reuse without written approval. Drawings are not to be used in any manner that would constitute a detriment or liability directly or indirectly to King Architecture
© COPYRIGHT 2021
If this drawing image is less than 22 1/2" x 34 1/16", it has been reduced and must be scaled accordingly. Contractor shall verify and be responsible for all dimensions and conditions on the job. King Architecture is to be notified of any variations from the dimensions and conditions shown on the drawings, or discrepancies found within the drawings. Shop drawings, etc., are to be submitted to King Architecture for review prior to fabrication and/or installation.


PACIFIC FERN BUSINESS PARK

GRANDE WEST

8819 REGISTERED ARCHITECT TIMOTHY P FABER STATE OF WASHINGTON

**PERMIT SET**

18 JUNE 21

ISSUE: PERMIT SET
DATE ISSUED: 18 JUNE 21

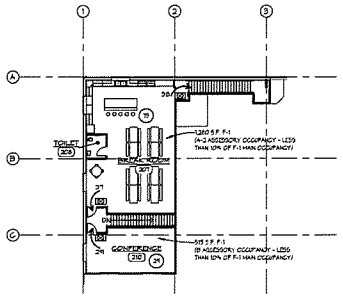
REVISIONS

| NO | DATE | ISSUE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

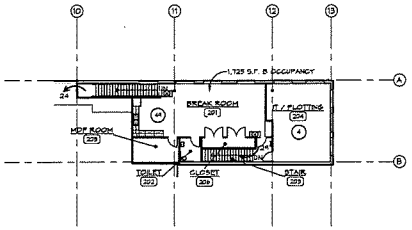
COVER SHEET

PROJECT NO:
SCALE:
DRAWN BY:
FILE: Pacific Fern Business Park.Pkt

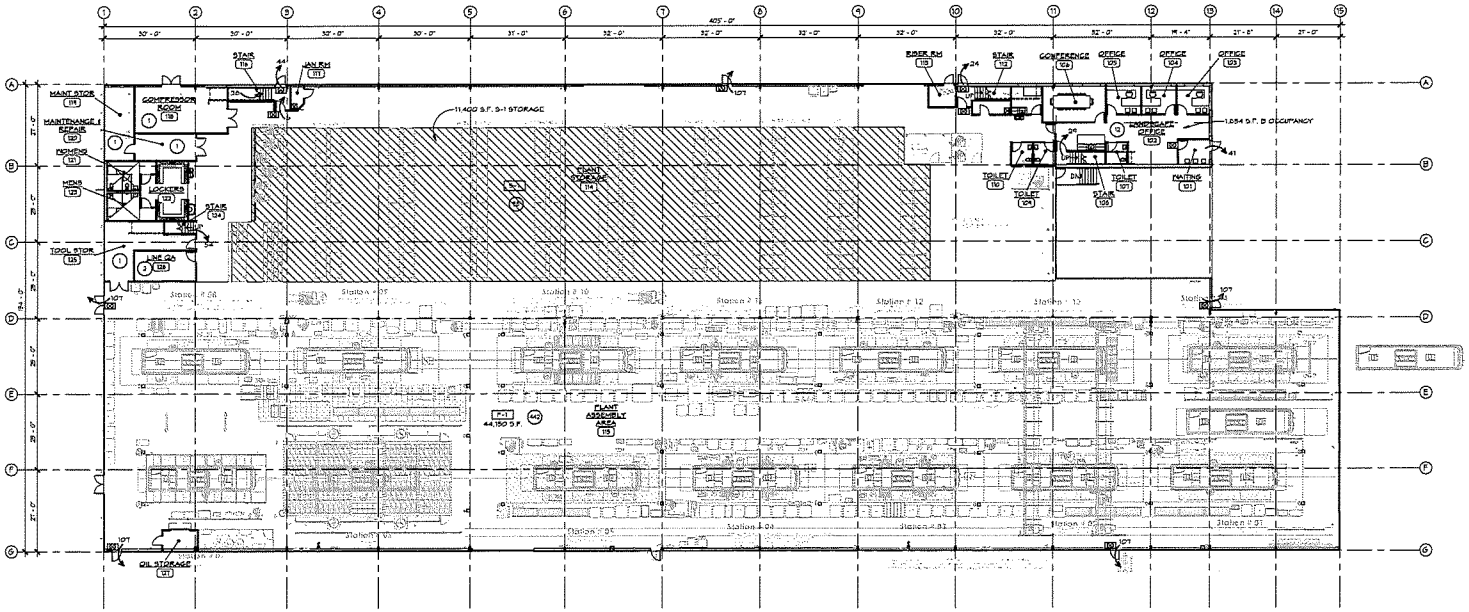
A0.1




2 A0.3 WEST MEZZANINE FLOOR - CODE REVIEW PLAN
1/16" = 1'-0"



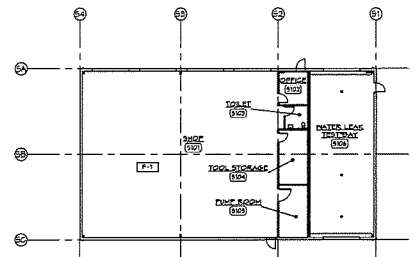

3 A0.3 EAST MEZZANINE FLOOR - CODE REVIEW PLAN
1/16" = 1'-0"




1 A0.3 MAIN FLOOR - CODE REVIEW PLAN
1/16" = 1'-0"

CODE REVIEW LEGEND:

- X = REQUIRED EXIT & NUMBER OF OCCUPANTS
- X = NUMBER OF OCCUPANTS
- F-1 = OCCUPANCY CLASSIFICATION
- EXIT SIGN




4 A0.3 SHOP - MAIN FLOOR - CODE REVIEW PLAN
1/16" = 1'-0"

KING ARCHITECTURE

KING ARCHITECTURE LLC
401 HARRIS AVENUE, SUITE 100
BELLINGHAM WA 98225
V 360.647.5484 X13
E MARK@KINGARCHITECTURE.COM

King Architecture LLC is not responsible for safety programs, methods and procedures of operations, or the construction of the design shown on these drawings. Drawings are for use on this project only and are not intended for reuse without written approval. Drawings are not to be used in any manner that would constitute a detriment or liability directly or indirectly to King Architecture
© COPYRIGHT 2021
If this drawing image is less than 22 1/2" x 34 1/16" it has been reduced and must be scaled accordingly. Contractor shall verify and be responsible for all dimensions and conditions on the job. King Architecture is to be notified of any variations from the dimensions and conditions shown on the drawings, or discrepancies found within the drawings. Shop drawings, etc., are to be submitted to King Architecture for review prior to fabrication and/or installation.

PACIFIC FERN BUSINESS PARK

GRANDE WEST

8619 REGISTERED ARCHITECT TIMOTHY P PARKER STATE OF WASHINGTON

PERMIT SET

18 JUNE 21

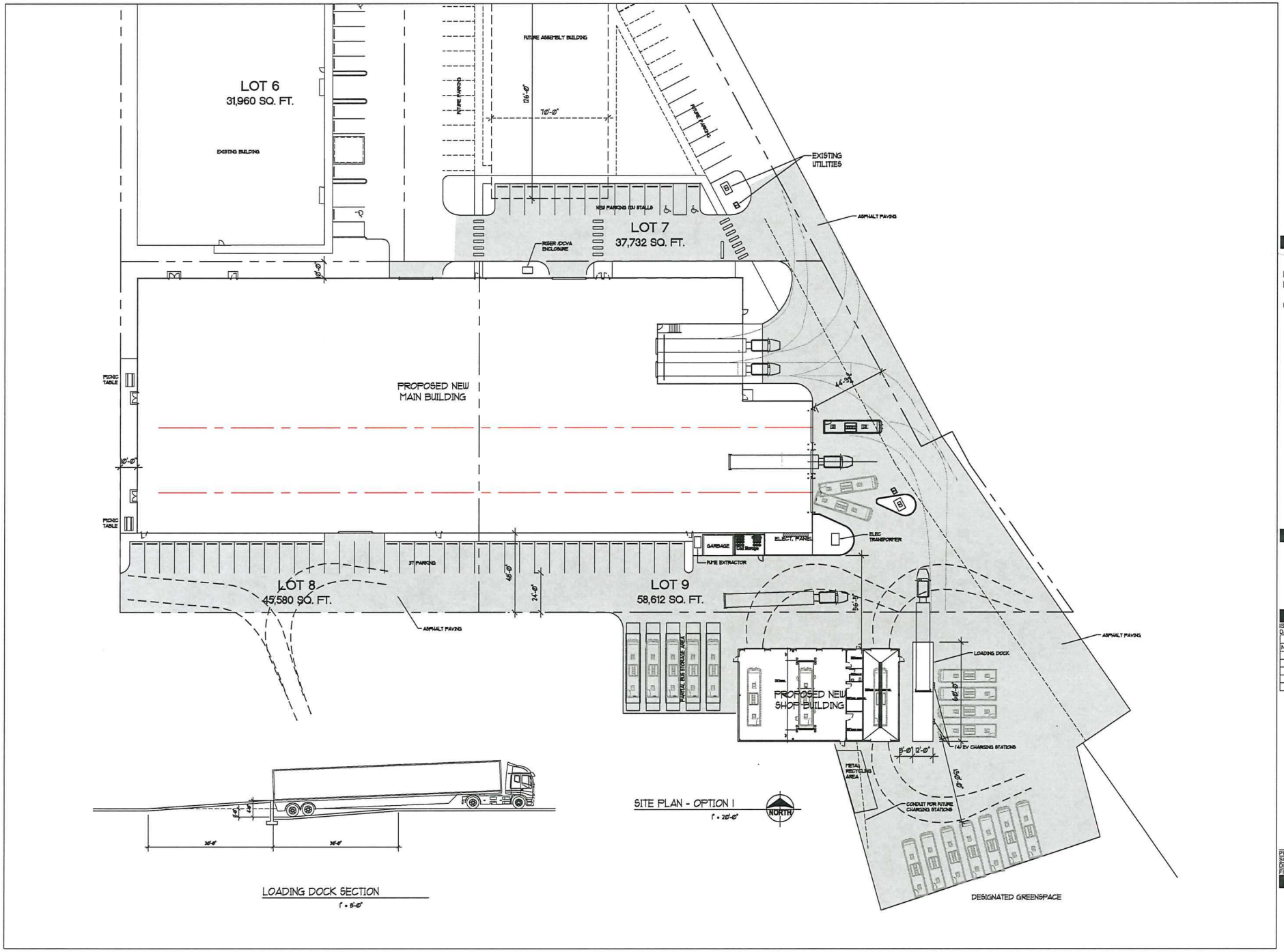
ISSUE:
DATE ISSUED:

| REVISIONS | | |
|---|---|---|
| NO | DATE | ISSUE |
| | | |
| | | |
| | | |
| | | |
| | | |

CODE REVIEW PLANS

PROJECT NO:
SCALE: 1/16" =
DRAWN BY: AJ/PJ/
FILE:

A0.3




KING ARCHITECTURE

KING ARCHITECTURE LLC
401 NORTHWEST, SUITE 100
BELLINGHAM, WA. 98225
P 360.647.8400 x13
E tim@king-architecture.com

King Architecture LLC is not responsible for safety programs, methods and procedures of operations, or the construction of the design shown on these drawings. Drawings are for use on this project only and are not intended for reuse without written approval. Drawings are not to be used in any manner that would constitute a commitment or liability on the part of King Architecture.

© COPYRIGHT 2021

If this drawing image is less than 22 1/2" x 34 1/16", it has been reduced and must be scaled accordingly. Contractor shall verify and be responsible for all dimensions and conditions on the job. No deviations shall be the basis of any variations to the dimensions and conditions shown on the drawings, or discrepancies found within the drawings. Shop drawings, etc., are to be submitted to King Architecture for review prior to fabrication and/or installation.

PACIFIC FERN BUSINESS PARK

GRANDE WEST

8819 REGISTERED ARCHITECT TIMOTHY P. KING STATE OF WASHINGTON

**PERMIT SET**

18 JUNE 21

ISSUE: PERMIT SET
DATE ISSUED: 6/18/21

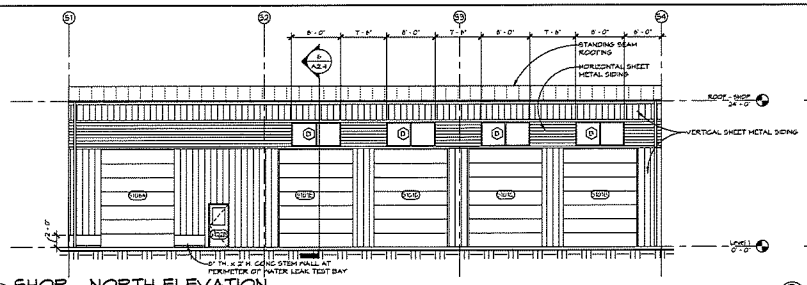
REVISIONS

| NO | DATE | ISSUE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

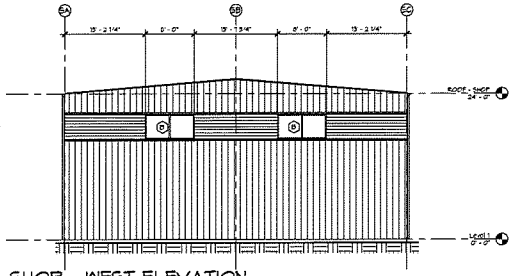
SITE PLAN

PROJECT NO:
SCALE:
DRAWN BY:
FILE:

A1.1




2 SHOP - NORTH ELEVATION
A2.4 1/8" = 1'-0"




3 SHOP - WEST ELEVATION
A2.4 1/8" = 1'-0"

| EXTERIOR FINISH SCHEDULE | |
|---|---|
| ITEM / DESCRIPTION | FINISH & MATERIAL |
| DOWNSPOUTS | 24 GA. SHEET METAL / PRE-PAINTED |
| GUTTERS | 24 GA. SHEET METAL / PRE-PAINTED |
| FASCIA | 24 GA. SHEET METAL / PRE-PAINTED |
| SOFFIT | 26 GA. S.M. PANELS / PRE-PAINTED |
| METAL SIDING | 26 GA. S.M. PANELS / PRE-PAINTED |
| FLASHING | 24 GA. SHEET METAL / PRE-PAINTED |
| MTL. DOORS & FRAMES | H.M. / PAINT |
| VENTS & LOUVERS | MTL. / PAINT TO MATCH ADJACENT SURFACES |
| EXPOSED STEEL CANOPY | STRUCTURAL STEEL / PAINTED |
| ROOFING | 24 GA. STANDING SEAM METAL ROOFING / PRE PAINTED |
| OVER HEAD DOORS | INSULATED METAL DOORS / PRE-PAINTED |
| WINDOWS | VINYL - DARK BRONZE COLOR |

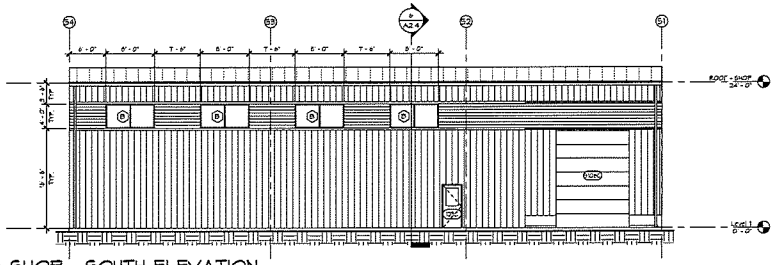
## WALL HATCH LEGEND

INT. WALL - 4" STL. STUDS 16" O.C. W/ R21 BATT NSUL, 5/8" GYP. BD. EACH SIDE AT S102, S105 & S106

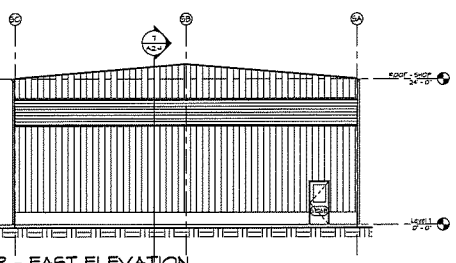
EXT. WALL - SEE PLANS, ELEVATIONS AND SECTIONS (THIS SHEET)

GENERAL NOTES:

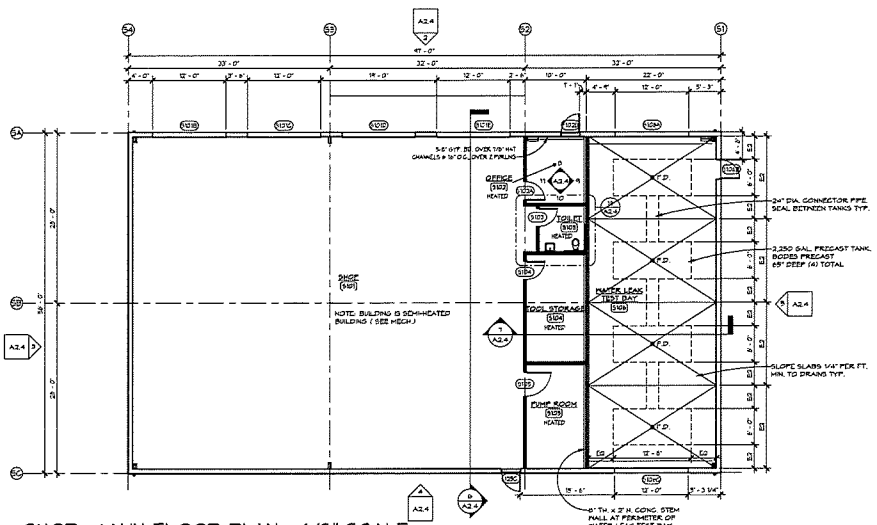
1. ALL RELIEF, OUTDOOR AIR INTAKE AND EXHAUST OPENINGS SHALL BE PROVIDED WITH DAMPERS IN ACCORDANCE WITH MECHANICAL SECTION C403.7.3
2. VESTIBULES NOT REQUIRED AT EXTERIOR DOORS BASED ON C403.5.1 EXCEPTION 1. DOORS ARE NOT INTENDED TO BE USED AS PUBLIC ENTRANCES EXCEPT DOOR D2 WHICH COMPLIES WITH EXCEPTION 2. THIS DOOR DOES NOT OPEN UP TO A SPACE LARGER THAN 3,000 S.F. AND EXCEPTION 7. BUILDING IS NOT MORE THAN 3 STORIES.
3. SUBMIT BUILDING ENCLOSURE AIR LEAKAGE TEST REPORTS TO JURISDICTION AND OWNER. IF INITIAL TEST RESULT EXCEEDS 0.25 CFM/FT2 (1.5 L/S/M2), INDICATE THAT INSPECTION AND ALL PRACTICAL CORRECTIVE ACTIONS BE COMPLETED AND DOCUMENTED IN THE AIR LEAKAGE TEST REPORT AND THE BUILDING SHALL BE RE-TESTED. INDICATE THAT CORRECTIVE MEASURES AND RETESTING MUST BE REPEATED UNTIL THE TEST RESULT IS 0.40 CFM/FT2 (2.0 L/S/M2) OR LESS. INCLUDE AIR BARRER TEST REPORT IN PROJECT CLOSE OUT DOCUMENTATION PROVIDED TO BUILDING OWNER.
4. PROJECT CLOSE OUT DOCUMENTATION IS REQUIRED INCLUDING APPLICABLE CALCULATIONS, NSEC ENVELOPE COMPLIANCE REPORTS, AND FENESTRATION NFRC RATING CERTIFICATES.




4 SHOP - SOUTH ELEVATION
A2.4 1/8" = 1'-0"

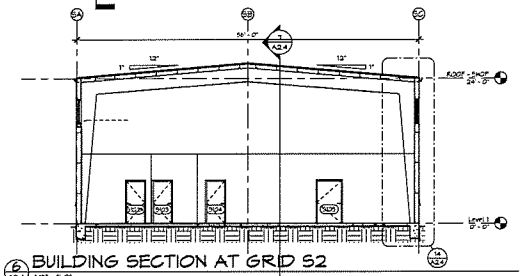



5 SHOP - EAST ELEVATION
A2.4 1/8" = 1'-0"

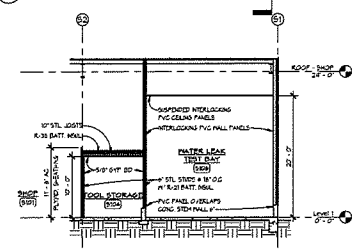



1 SHOP - MAIN FLOOR PLAN - 1/8" SCALE
A2.4 1/8" = 1'-0"

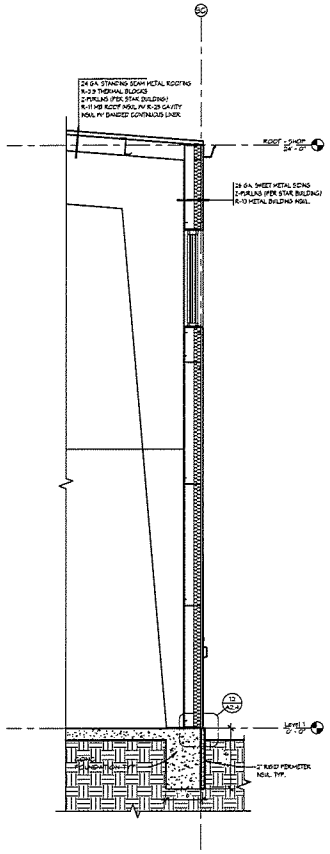
NOTE: ROOMS S102, S103, S104, & S105 ARE HEATED WALLS TO HAVE R-21 BATT NSUL. & CEILING R-38 BATT NSUL TYP.

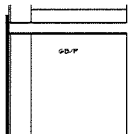



6 BUILDING SECTION AT GRID S2
A2.4 1/8" = 1'-0"

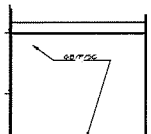



7 SECTION THRU RMS. S104 & S106
A2.4 1/8" = 1'-0"

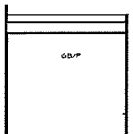


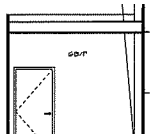

8 OFFICE S102 - N
A2.4 1/4" = 1'-0"



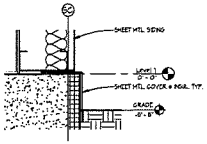

9 OFFICE S102 - E
A2.4 1/4" = 1'-0"



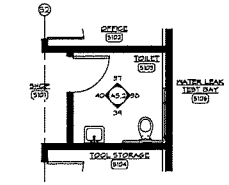

10 OFFICE S102 - S
A2.4 1/4" = 1'-0"




11 OFFICE S102 - W
A2.4 1/4" = 1'-0"




12 EXT. WALL @ FOUNDATION
A2.4 1 1/2" = 1'-0"




13 SHOP - TOILET PLAN
A2.4 1/4" = 1'-0"

14 SHOP BUILDING WALL SECTION
A2.4 1/2" = 1'-0"

KING ARCHITECTURE

KING ARCHITECTURE LLC
401 HAMILTON AVENUE, SUITE 100
BELLINGHAM WA 98225
V 360.947.9484 x19
E KIMBER@KINGARCHITECTURE.COM

King Architecture LLC is not responsible for safety programs, methods and procedures of operations, or the construction of the design shown on these drawings. Drawings are for use on this project only and are not intended for reuse without written approval. Drawings are not to be used in any manner that would constitute a detriment or liability directly or indirectly to King Architecture © COPYRIGHT 2021
If this drawing image is less than 22 1/2" x 34 1/16", it has been reduced and must be scaled accordingly. Contractor shall verify and be responsible for all dimensions and conditions on the job. King Architecture is to be notified of any variations from the dimensions and conditions shown on the drawings, or discrepancies found within the drawings. Shop drawings, etc., are to be submitted to King Architecture for review prior to fabrication and/or installation.

PACIFIC FERN BUSINESS PARK

GRANDE WEST

8619 REGISTERED ARCHITECT
KIMBERLY M PARKER
STATE OF WASHINGTON

PERMIT SET

18 JUNE 21

ISSUE:
DATE ISSUED:

| REVISIONS | | |
|---|---|---|
| NO | DATE | ISSUE |
| | | |

SHOP BUILDING FLOOR PLAN & EXTERIOR ELEVATIONS

PROJECT NO:
SCALE: As
DRAWN BY: Author
FILE: Name.rvt

A2.4

## FINISH SCHEDULE

| RM. | ROOM USE | FLOOR | BASE | CLG | CLG. HT. | North Wall | East Wall | South Wall | West Wall | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 101 | PATRIO | CPT | 4" RB | SAT | 10'-0" | GB/P | GB/P | GB/P | GB/P | |
| 102 | LANDSCAPE OFFICE | CPT/SV | 4" RB | SAT | 10'-0" | GB/P | GB/P | GB/P/CASE | GB/P | |
| 103 | OFFICE | CPT | 4" RB | SAT | 10'-0" | GD/P | GD/P | GD/P | GD/P | |
| 104 | OFFICE | CPT | 4" RB | SAT | 10'-0" | GB/P | GB/P | GB/P | GB/P | |
| 105 | OFFICE | CPT | 4" RB | SAT | 10'-0" | GD/P | GD/P | GD/P | GD/P | |
| 106 | CONFERENCE | CPT | 4" RB | SAT | 10'-0" | GB/P | GB/P | GB/P | GB/P | |
| 107 | TOILET | SV | 6" CSV | SAT | 11'-0" | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | |
| 108 | STAIR | SC | 4" RB | SAT | VARIES | GD/P | GD/P | GD/P | GD/P | |
| 109 | TOILET | SV | 6" CSV | SAT | 11'-0" | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | |
| 110 | TOILET | SV | 6" CSV | SAT | 11'-0" | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | |
| 111 | SIGN RM | SV | 6" CSV | SAT | 11'-0" | GB/P | GB/P | GB/P/CASE | GB/P | |
| 111A | JAN RM | SC | 4" RB | SAT | 11'-0" | GB/P | GB/P/FRP | GB/P/FRP | GB/P | |
| 112 | STAIR | SC | 4" RB | SAT | VARIES | 1 HP | GD/P | GD/P | GD/P | |
| 113 | KOOK RM | SC | 4" RB | ES | - | 1 HP | GB/P | GB/P | GB/P | |
| 114 | PLANT STORAGE | SC | 4" RB1 | ES | VARIES | 1 HP | 1 HP | 1 HP | 1 HP | *4" RB @ FINISHED WALLS ONLY |
| 115 | PLANT ASSEMBLY AREA | SC | 4" RB1 | ES | VARIES | 1 HP | 1 HP | 1 HP | 1 HP | *4" RB @ FINISHED WALLS ONLY |
| 116 | STAIR | SC | 4" RB | SAT | VARIES | 1 HP | GB/P | GB/P | GB/P | |
| 117 | JAN RM | SC | 4" RB | SAT | 11'-0" | 1 HP | GB/P | GB/P/FRP | GB/P/FRP | |
| 118 | COMPRESSOR ROOM | SC | 4" RB | ES | - | 1 HP | GB/P | GB/P | GB/P | |
| 119 | MAINT STOR | SC | 4" RB | ES | - | 1 HP | GB/P | GB/P | 1 HP | |
| 120 | MAINTENANCE & REPAIR | SC | 4" RB | ES | | GD/P | GD/P | GD/P | GD/P | |
| 121 | PORCHS | SV | 6" CSV | GB/P | 12'-2" | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | |
| 122 | LOCKERS | SC | 4" RB | GD/P | 12'-2" | GD/P | GD/P | GD/P | GD/P | |
| 123 | MENS | SV | 6" CSV | GB/P | 12'-2" | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | |
| 124 | STAIR | SC | 4" RB | SAT | VARIES | GB/P | GB/P | GB/P | GB/P | |
| 125 | TOOL STOR | SC | 4" RB | ES | - | GD/P | GD/P | GD/P | 1 HP | |
| 126 | LINE QA | SC | 4" RB | GB/P | 12'-2" | GB/P | GB/P | GB/P | GB/P | |
| 127 | OIL STORAGE | SC | 4" RB | GD/P | 10'-0" | GD/P | GD/P | 1 HP | GYP.P | |
| 201 | BREAK ROOM | SV | 4" RB | SAT | 10'-0" | GB/P | GB/P | GB/P | GB/P/CASE | |
| 202 | TOILET | SV | 6" CSV | SAT | 11'-0" | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | |
| 203 | STAIR | SC | 4" RB | SAT | VARIES | GD/P | GD/P | GD/P | GD/P | |
| 204 | IT / PLOTTING | SV | 4" RB | SAT | 10'-0" | GB/P | GB/P | GB/P | GB/P | |
| 205 | MEP ROOM | SV | 4" RB | SAT | 10'-0" | GB/P | GD/P | GD/P | GD/P | |
| 206 | CLOSET | SV | 4" RB | SAT | 11'-0" | GB/P | GB/P | GB/P | GB/P | |
| 207 | BREAK ROOM | SV | 4" RB | SAT | 10'-0" | GB/P/CASE | GB/P | GB/P | GB/P/CASE | |
| 208 | TOILET | SV | 6" CSV | SAT | 11'-0" | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | GB/P/EN/FLAM | |
| 209 | MOLET | SV | 4" RB | SAT | 10'-0" | GB/P | GB/P | GB/P | GB/P | |
| 210 | CONFERENCE | CPT | 4" RB | SAT | 10'-0" | GB/P | GB/P | GB/P | GB/P | |
| 5101 | SHOP | SC | - | ES | VARIES | ES | AC FLYWD/SE/P | ES | ES | |
| 5102 | OFFICE | SC | 4" RB | GB/P | 10'-0" | GB/P | GB/P/SC | GB/P | GB/P | |
| 5103 | TOILET | SV | 6" CSV | GB/P | 10'-0" | GB/P/EN/FLAM/SC | GB/P/EN/FLAM/SC | GB/P/EN/FLAM | GB/P/EN/FLAM | |
| 5104 | TOOL STORAGE | SC | 4" RB | GB/P | 10'-0" | AC FLYWD/P | AC FLYWD/P/SC | AC FLYWD/P | AC FLYWD/P | |
| 5105 | PUMP ROOM | SC | 4" RB | GD/P | 10'-0" | AC FLYWD/P | AC FLYWD/P/SC | AC FLYWD/P | AC FLYWD/P | |
| 5106 | WATER LEAK TEST BAY | SC | - | 1 PVCP | 30'-0" | 1 PVCP/SC | 1 PVCP/SC | 1 PVCP/SC | 1 PVCP/SC | |

ABBREVIATIONS:

| | |
|---|---|
| SC | = SEALED CONCRETE |
| CPT | = CARPET TILE |
| SV | = SHEET VINYL |
| SA | = SHEET ATHLETIC FLOORING W/ GAME LINES |
| GB | = GYPSUM BOARD |
| P | = PAINT |
| ES | = EXPOSED STRUCTURE PAINTED |
| CSV | = COVED SHEET VINYL |
| FRP | = FIBERGLASS REINFORCED PANEL |
| PLAM | = PLASTIC LAMINATE |
| RB | = RUBBER BASE |
| SAT | = SUSPENDED ACOUSTICAL TILE |
| 1 PVCP | = INTERLOCKING PVC PANEL |
| 1 HP | = PREFINISHED NSUL METAL PANEL |
| CASE | = CASEWORK |
| AC FLYWD | = AC PLYWOOD |
| EN | = |

## DOOR SCHEDULE

| DR. NO. | QTY. | DOOR TYPE | DOOR FIN. & MAT. | FRAME FIN. & MAT. | OPENING SIZE WIDTH | OPENING SIZE HEIGHT | DOOR THICK | DOOR & FRAME DETAILS HEAD | JAMB | THRESH. | GLASS | HDW. | FRAME TYPE | FIRE RATING | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101A | 1 | C | ALUM | ALUM | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | INSULATED EXTERIOR DOOR |
| 101B | 1 | C | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | CLOSER & LOCKSET |
| 102 | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | CLOSER & LOCKSET |
| 103 | 1 | C | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET OFFICE FUNCTION |
| 104 | 1 | C | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET OFFICE FUNCTION |
| 105 | 1 | C | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET OFFICE FUNCTION |
| 106 | 1 | C | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PASSAGE |
| 107 | 1 | A | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | PRIVACY LOCKSET |
| 108 | 1 | C | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 5/4" | | | | SAFETY | - | A | - | PASSAGE |
| 109 | 1 | A | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | PRIVACY LOCKSET |
| 110 | 1 | A | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | PRIVACY LOCKSET |
| 111 | 1 | C | RD/P F.P. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET OFFICE FUNCTION |
| 111A | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | STORE ROOM LOCKSET |
| 112A | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 5/4" | | | | SAFETY | - | A | - | PANIC HARDWARE |
| 112B | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HDWR & THRESHOLD & SEALS |
| 113 | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | STORE ROOM LOCKSET THRESHOLD & SEALS |
| 114A | 1 | D | METAL/ F.F. | METAL/P | 20' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 114B | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HDWR & THRESHOLD & SEALS |
| 114C | 1 | D | METAL/ F.P. | METAL/P | 20' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 114D | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HDWR & THRESHOLD & SEALS |
| 114E | 1 | D | METAL/ F.F. | METAL/P | 8' - 0" | 10' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 114F | 1 | D | METAL/ F.F. | METAL/P | 8' - 0" | 10' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 115A | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HDWR & THRESHOLD & SEALS |
| 115B | 1 | D | METAL/ F.F. | METAL/P | 20' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 115C | 1 | D | METAL/ F.F. | METAL/P | 14' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 115D | 1 | D | METAL/ F.F. | METAL/P | 20' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 115E | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HDWR & THRESHOLD & SEALS |
| 115F | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HDWR & THRESHOLD & SEALS |
| 115G | 1 | D | METAL/ F.F. | METAL/P | 20' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 115H | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HDWR & THRESHOLD & SEALS |
| 115I | (2) 1 | B | HM/P | HM/P | 6' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | INACTIVE LEAF FLUSH BOLTS, ACTIVE LEAF LOCKSET THRESHOLD & SEALS |
| 115J | (2) 1 | B | HM/P | HM/P | 6' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | INACTIVE LEAF FLUSH BOLTS, ACTIVE LEAF LOCKSET THRESHOLD & SEALS |
| 116B | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HDWR & THRESHOLD & SEALS |
| 117 | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | STORE ROOM LOCKSET |
| 118A | (2) 1 | A | HM/P | HM/P | 6' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | FLUSH BOLTS LOCKSET |
| 118B | (2) 1 | A | HM/P | HM/P | 6' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | FLUSH BOLTS LOCKSET, THRESHOLD & SEALS |
| 119 | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | LOCKSET - STOREROOM |
| 120 | (2) 1 | D | HM/P | HM/P | 6' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | FLUSH BOLTS LOCKSET |
| 120A | 1 | D | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET - STOREROOM |
| 120B | (2) 1 | A | HM/P | HM/P | 6' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | FLUSH BOLTS & LOCKSET STOREROOM |
| 120C | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET, THRESHOLD & SEALS |
| 120D | 1 | A | RD/P F.F. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | STORE ROOM LOCKSET |
| 120E | 1 | A | RD/P F.F. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | PRIVACY LOCKSET |
| 120F | 1 | D | RD/P F.F. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HARDWARE |
| 120G | (2) 1 | A | RD/P F.F. | HM/P | 6' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | FLUSH BOLTS & LOCKSET STOREROOM |
| 120H | (2) 1 | A | RD/P F.F. | HM/P | 6' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | FLUSH BOLTS & LOCKSET STOREROOM |
| 120I | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HARDWARE |
| 120J | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | PRIVACY LOCKSET |
| 120K | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | PRIVACY LOCKSET |
| 120 | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET OFFICE FUNCTION |
| 120A | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | LOCKSET - STOREROOM |
| 120B | 1 | D | METAL/ F.F. | METAL/P | 8' - 0" | 10' - 0" | 3" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 204 | 1 | B | RD/ F.F. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET OFFICE FUNCTION |
| 208 | 1 | A | RD/ F.F. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | PRIVACY LOCKSET |
| 209 | 1 | B | RD/ F.F. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HARDWARE |
| 210 | 1 | B | RD/ F.F. | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | PANIC HARDWARE |
| 5101D | 1 | D | METAL/ F.F. | METAL/P | 12' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 5101E | 1 | D | METAL/ F.F. | HM/P | 12' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 5101F | 1 | D | METAL/ F.F. | HM/P | 12' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 5101E | 1 | D | METAL/ F.F. | METAL/P | 12' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 5102A | 1 | B | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET OFFICE FUNCTION |
| 5102D | 1 | D | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET ENTRANCE THRESHOLD & SEALS |
| 5103 | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | - | - | PRIVACY LOCKSET |
| 5104 | 1 | A | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | LOCKSET - STOREROOM |
| 5105 | 1 | A | HM/P | HM/P | 4' - 0" | 7' - 0" | 1 3/4" | | | | - | - | A | - | LOCKSET - STOREROOM |
| 5106A | 1 | D | METAL/ F.F. | METAL/P | 12' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |
| 5106B | 1 | D | HM/P | HM/P | 3' - 0" | 7' - 0" | 1 3/4" | | | | SAFETY | - | A | - | LOCKSET ENTRANCE |
| 5106C | 1 | D | METAL/ F.F. | METAL/P | 12' - 0" | 16' - 0" | 1 1/2" | | | | - | - | - | - | SECTIONAL OHD NSUL PANEL |

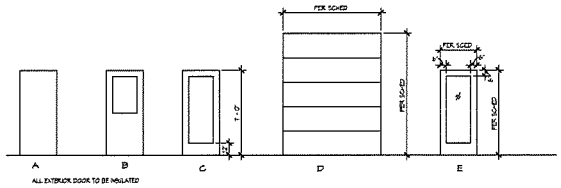
1. ALL GLAZING IN DOORS TO BE SAFETY GLASS (SEE SPEC)
2. OPENING FORCE OF THE EXIT DOORS WITHIN THE ACCESSIBLE ROUTE OF TRAVEL SHALL NOT EXCEED 8.5 LBS.
3. LOCKS AND LATCHSETS SHALL HAVE LEVER, PUSH BAR, BY OTHER DEVICES WHICH WILL PERMIT OPERATION BY WRIST OR ARM PRESSURE.

F.P. = FACTORY FINISH
H.M. = HOLLOW METAL
MFR. = MANUFACTURER
P. = PAINT
ALUM. = ALUMINUM
WD. = WOOD

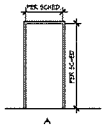
ALL LOCKSETS SCHLAGE "AL SERIES STANDARD DUTY COMMERCIAL" OR EQUIV.
ALL CLOSERS CORBIN / RUSSWIN "D.C. 2000 SERIES" OR EQUIV.
ALL HINGES STANLEY "T199 1MB BALL BEARING TYPE" OR EQUIV.

## WINDOW SCHEDULE

| TYPE | QTY | WIDTH | HEIGHT | SILL HEIGHT | HEAD HEIGHT | WINDOW DETAILS HEAD | JAMB | SILL | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| A | 16 | 5' - 0" | 6' - 0" | | | | | | |
| B | 21 | | | | | | | | |




DOOR TYPES




FRAME TYPES

### WINDOW / STOREFRONT - MAIN BUILDING

| 'W' | '1' | TYPE | FRAME | GLAZING | REMARKS | COUNT |
|---|---|---|---|---|---|---|
| A | 11'-0" x 11'-0" | CASEMENT FIXED | VINYL, THERMAL BREAK WINDOW FRAME, COLOR "DARK BRONZE" | TYPE 1 = ALL EAST & NORTH ELEVATIONS - GUARDIAN SNX LOW E OR PPG SOLARBAN 60 VLT = 69% U-VALUE = 0.25 MAX SHGC = 0.28 MAX<br>TYPE 2 = ALL WEST & SOUTH ELEVATIONS - GUARDIAN SNX LOW E OR PPG SOLARBAN 67 VLT = 54% U-VALUE = 0.25 MAX SHGC = 0.28 MAX | WINDOW SYSTEM U-VALUE 0.3 MAX | 17 |
| B | 11'-0" x 11'-0" | CASEMENT FIXED | VINYL, THERMAL BREAK WINDOW FRAME, COLOR "DARK BRONZE" | | WINDOW SYSTEM U-VALUE 0.3 MAX | 4 |
| | | | | | | |
| 101A | 6'-2" x 8'-2" | FIXED ENTRY DOOR | THERMALLY BROKEN ALUMINUM COLOR "DARK BRONZE" | | KAWNEER TRIFAB 451 UT OR EFCO 4130 OR EHS 68 ALUMIHIDE STOREFRONT SYSTEM U-VALUE 0.32 MAX | 1 |

### WINDOW / STOREFRONT - SHOP BUILDING

| 'W' | '1' | TYPE | FRAME | GLAZING | REMARKS | COUNT |
|---|---|---|---|---|---|---|
| | | | | TYPE 1 = ALL EAST & NORTH ELEVATIONS - GUARDIAN SNX LOW E OR PPG SOLARBAN 60 VLT = 69% U-VALUE = 0.25 MAX SHGC = 0.28 MAX<br>TYPE 2 = ALL WEST & SOUTH ELEVATIONS - GUARDIAN SNX LOW E OR PPG SOLARBAN 67 VLT = 54% U-VALUE = 0.25 MAX SHGC = 0.28 MAX | | |
| B | 11'-0" x 11'-0" | FIXED | VINYL, THERMAL BREAK WINDOW FRAME, COLOR "DARK BRONZE" | | WINDOW SYSTEM U-VALUE 0.3 MAX | 10 |
| | | | | | | |
| | | | | | | |

KING ARCHITECTURE


KING ARCHITECTURE LLC
401 NORTH AVENUE, SUITE 100
BELLEVUE, WA 98004 98227
(425) 641 4444 FAX
E: info@kingarchitecture.com



King Architecture LLC is not responsible for safety programs, methods and procedures of operation, or the construction of the design shown on these drawings. Drawings are for use on this project only and are not intended for reuse without written approval. Drawings are not to be used in any manner that would constitute a detriment or liability directly or indirectly to King Architecture
© COPYRIGHT 2021
If this drawing image is less than 22 1/2" x 34 7/16" it has been reduced and must be scaled accordingly. Contractor shall verify and be responsible for all dimensions and conditions on the job. King Architecture is to be notified of any variations from the dimensions and conditions shown on the drawings, or discrepancies found within the drawings. Shop drawings, etc., are to be submitted to King Architecture for review prior to fabrication and/or installation.


PACIFIC FERN BUSINESS PARK

GRANDE WEST

8819 REGISTERED ARCHITECT THOMAS P. KING STATE OF WASHINGTON

**PERMIT SET**

18 JUNE 21

ISSUE:
DATE ISSUED:

| REVISIONS | | |
|---|---|---|
| NO | DATE | ISSUE |
| | | |
| | | |
| | | |
| | | |

FINISH SCHEDULE & DOOR SCHEDULE

PROJECT NO:
SCALE: As
DRAWN BY: Rethana
FILE: PACIFIC FERN BUSINESS PARK - GRANDE WEST BUILDING.DWG

A7.1

## Structural Notes

### Loads

Ground Snow Load = 25 psf I=1.0
Sprinklered Building = 250# concentrated & self wt.
Floor Live Load = 50 psf (mezzanine)
Wind: 110 mph exp. C I=1.0
Seismic Site Class D
Seismic Risk Category = II Ie=1.0
Ss=0.95
S1=0.374
Fa=1.12
Fv=1.653

### Codes

2018 International Building Code (IBC)
ASCE / SEI 7-10
American Concrete Institue ACI 318-11

### Miscellaneous

Contractor will verify all dimensions in field, and cross reference them with the dimensions found on the architectural drawings. The contractor will ultimately be responsible for the plan accuracies.

Contractor will be responsible for providing all temporary bracing until all permanent connections and stiffenings have been installed.

For areas not specifically called out, similar details will be used as a reference, or the project engineer of record will be notified.

Pre-fabricated items are to be handled and installed per the manufacturer's specifications.

The project engineer of record will be notified of any structural deviations from the engineered design plans.

### Steel

Miscellaneous structural steel will be A36 grade. W shapes shall conform to A992 grade 50.

Connect structural steel with ASTM A325-N galvanized bolts through 1/16" oversized holes. Torque bolts to:
1/2" ø galv.....100-117 (ft-#)
5/8" ø galv.....99-120 (ft-#)
3/4" ø galv.....175-213 (ft-#)
7/8" ø galv.....284-343 (ft-#)

All welds will be 70xx electrode, and welded by a AWS certified welder. All fillet welds will be 1/4" min. unless noted otherwise. Quality welding processes and welding operators in accordance with AWS D1.1 "Structural Welding Code - Steel".

When grout under steel column base plate is used, it will have a compressive strength of 3000 psi (min.) and be non-shrink.

Shop painting of priming and surface preparation will be in accordance with the provisions of the code of standard practice of the AISC. Unless specified otherwise, all steelwork will be galvanized per ASTM A123 specifications.

Foundation contractor to provide anchor bolts meeting ASTM F1554 Grade 55 standards.

### Soil

Soil design bearing strength of 1500 psf used, unless specified otherwise by soils report. This structural package takes no responsibility for site and soil conditions. That will be the sole responsibility of the owner/contractor.

Extend all footings down to undisturbed soil of the specified strength with a minimum of 18" below adjacent grade.

Center all columns on footings unless specified otherwise on plans.

Compacted fill to be well graded and granular with not more than 5% passing a 200 sieve. Place in 6" loose lifts and compact to 95% modified AASHTO density at optimum moisture content.

Inspection of soil conditions below bearing walls and footings will be required throughout project, prior to foundation placement throughout .

### Special Inspections

An approved agency shall provide all information necessary that the following special inspections meet the applicable requirements.

The approved agency shall provide all necessary equipment to performthe required tests. The equipment shall beperiodically calibrated to the equipment manufactured specifications.

### Special Inspection & Testing Schedule

| types of inspections & tests performed | Continuous | Periodically | IBC Reference Sections(s) |
|---|---|---|---|
| 1. High Strength Bolting | | X | 1705.2.10 |
| 2. Post Installed Adhesive Anchors | | X | Table 1705.3 48 |
| 3. Seismic Resistance (high strength bolting) | | X | 1705.12 |
| 4. Reinforcing Rebar Inspection | | X | Table 1705.3, 1908.4 |
| 5. Anchor Bolt Placement | X | | Table 1705.3 |
| 6. Verifying Concrete Mix Design | | X | Table 1705.3, 1904.1 |
| 7. Slump, Air Content tests | X | | 1705.3 |
| 8. Formwork Inspection | | X | Table 1705.3 |

### Floor Diaphragm

3/4" thick T&G APA rated sheathing screwed to metal floor decking with #8 x 1" screws @ 12" o.c. Apply sheathing per case 1 configuration.

### Concrete

Concrete compressive strength for footings will be f'c=3000 psi at 28 days, and contain no less than 5 1/2 sacks of cement per cubic yard of concrete with a maximum slump of 4" to be tested with each new batch. Concrete exposed to weather shall have an air content of 5% +/- 1 1/2%.

Interior concrete slabs shall have a compressive strength of f'c=2500 psi at 28 days.

Concrete will be type1A, normal air-entrained with the admixture conforming to ASTM C260 & ASTM C226. Portland Cement used shall conform to ASTM C150. A 5/8" (max.) aggregate will be used, and conform to ASTM C33. Only potable water to be used that is free from oils, acids, alkalis, salts, organic materials, or other substances deleterious to concrete or reinf. shall conform to ASTM C109. A water-cement ratio of 0.50 will be used.

Reinforcing steel Fy=40 ksi for #4 or smaller, & Fy=60 ksi for #5 or larger, and conform to ASTM A615. Detail, fabricate and place in accordance with the latest edition of ACI's "*Manual of Standard Practice*".

Concrete cover over reinforcing steel (clear dimensions) unless noted otherwise.
Vertical face exposed to weather or earth.....1 1/2"
Bottom of footing to earth.....3"

Lap all field splices 44 diameters with a minimum of 24". Bend outer wall and footing rebar 24" (min.).

Slab on grade: Roll and moisten subgrade before pour. Install vapor barrier beneath all slabs. Sawcut control joints within 24 hours of pour, or install zip strip. Control joints (cj) should be 1/8" wide x D/4 deep, where D=slab thickness. Space control joints 12'-0" o.c. maximum, unless noted otherwise on plans.

Where epoxied threaded rods have been called out, use HAS Standard ASTM A36 rods. Epoxy should be HILTI HY-150 (see ICBO evaluation report number 5193). An equivalent epoxy can be used provided the engineer of record's written approval. Special inspection is required for all epoxied structural items.

### Shearwalls Schedule

**SW1**
1/2" APA rated wall sheathing attached to stud flanges with @13 x 3/4" @ 6" o.c. edge dist. & 12" o.c. field dist.

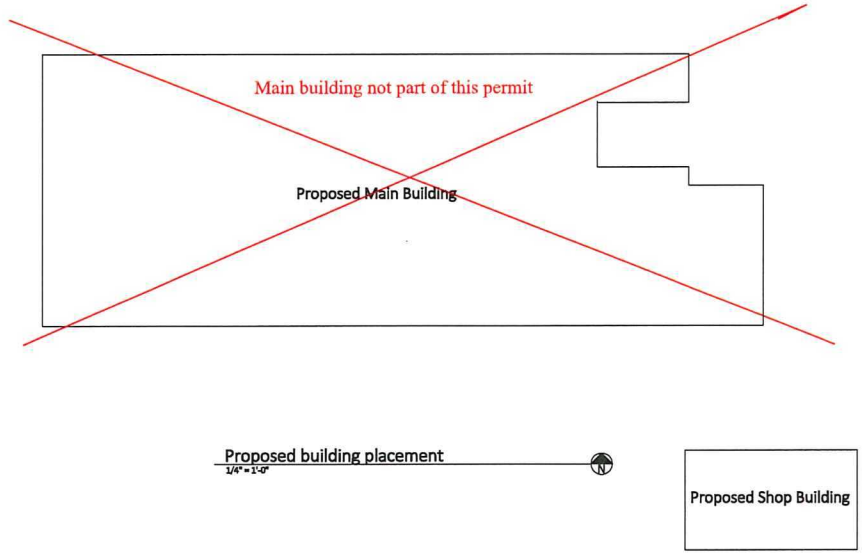
**SW2**
1/2" (min. see Arch. Dwg's.) GWB wall cladding each side of wall. Attach to framing with #8 wallboard screws @ 12" o.c.

### Holdown Schedule

1 Simpson HTT5 screwed to (2) jamb stud webs with #12 x 3/4" screws. Use either approved anchor bolts, or a 5/8" ø threaded rod epoxied a minimum 9" into concrete with Hilti HY-150 epoxy provided a minimum 2 1/2" edge from the concrete's edge.

### Sheet Index


S 0.0 Structural notes
S 1.0 Shop mezzanine framing & main floor plan
S 2.0 Shop foundation plan
S 3.0 Main Building mezzanine & main floor plan
S 3.1 Northwest mezzanine framing plan
S 3.2 Northeast mezzanine framing plan
S 4.0 Main building foundation plan
S 5.0 Framing details
S 6.0 Foundation details



21115 Electric Ave.
Bellingham, WA 98229
(360) 676-2659

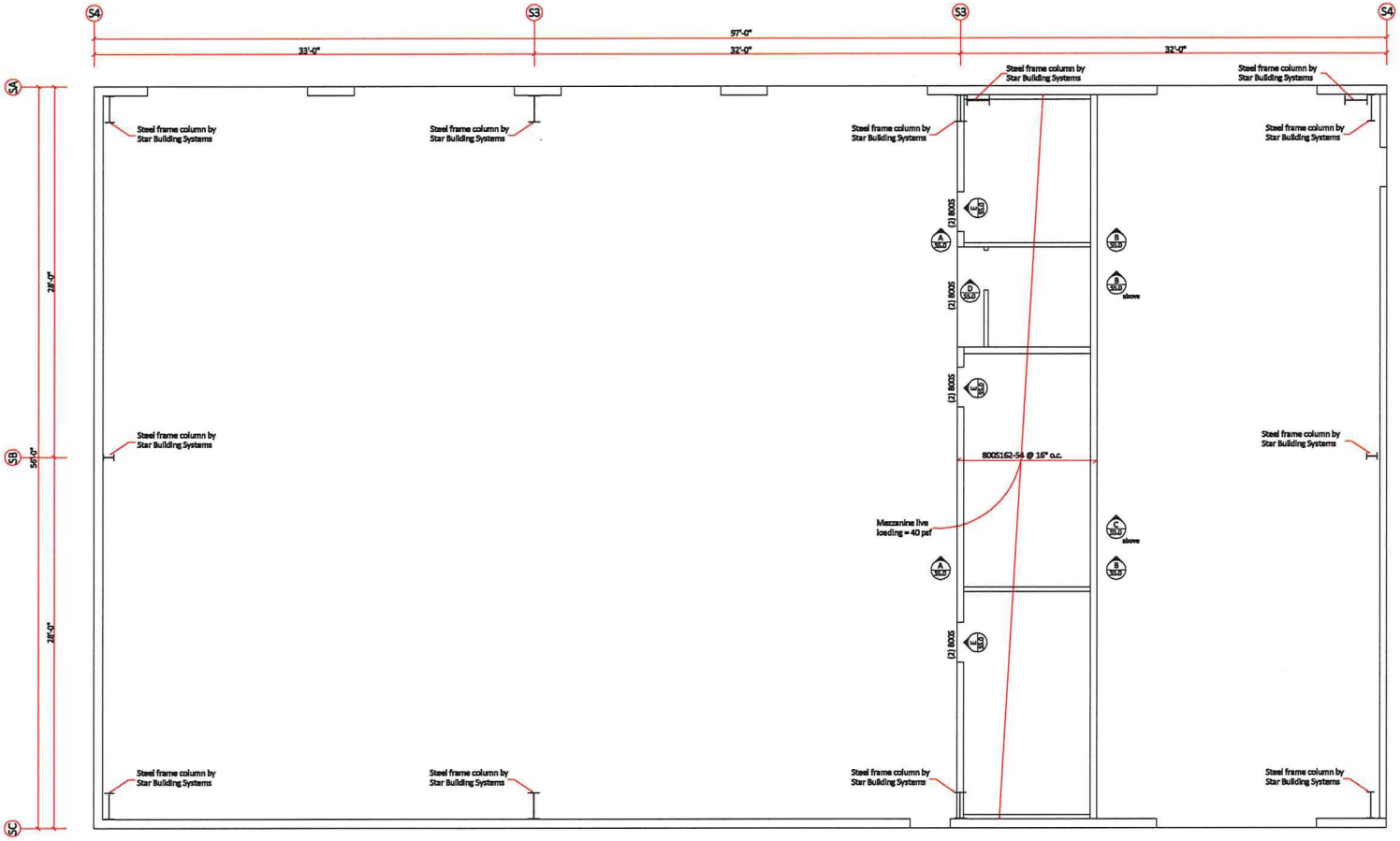

Electronically signed 6/23/2021

Grande West
5453 Pacific Fern Dr.
Ferndale, WA

Revisions:

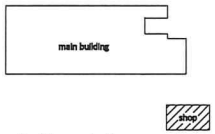
Job #: 2127
Date: 6-23-2021
Drawn By: JZ

S 0.0




Mezzanine framing & main floor plan

1/4" = 1'-0"




Lot layout plan

N.T.S.


21115 Electric Ave.
Bellingham, WA 98229
(360) 676-2659

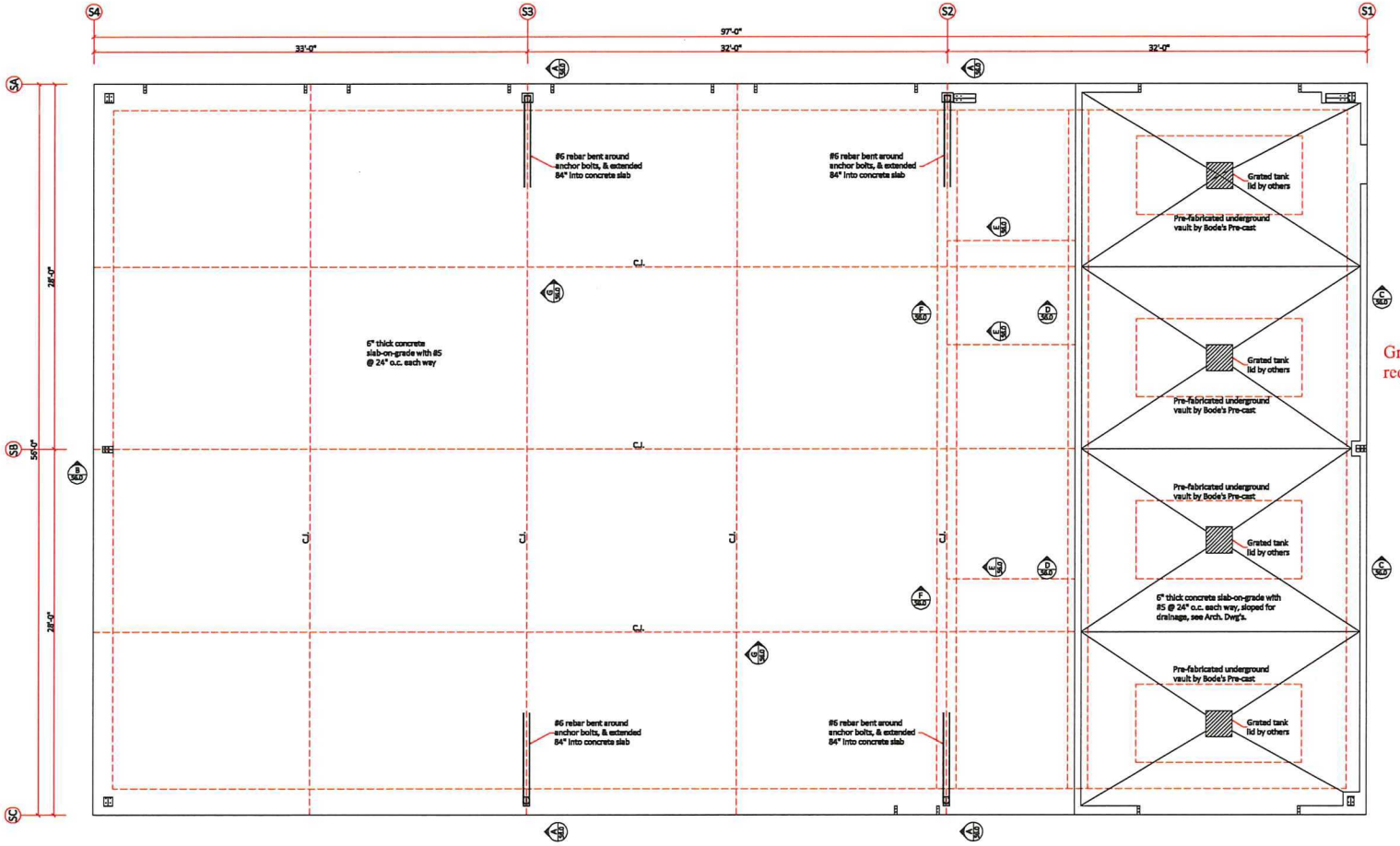

Electronically signed 6/23/2021

# Grande West - shop building

5453 Pacific Fern Dr.
Ferndale, WA

| Revisions: | |
|---|---|
| | |
| | |
| | |
| Job #: | 2127 |
| Date: | 6-23-2021 |
| Drawn By: | JZ |

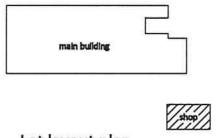
S 1.0




Grease / particulate interceptor required to be installed.

## Foundation plan

1/4" = 1'-0"




## Lot layout plan

N.T.S.


2115 Electric Ave.
Bellingham, WA 98229
(360) 676-2659


Electronically signed 6/23/2021

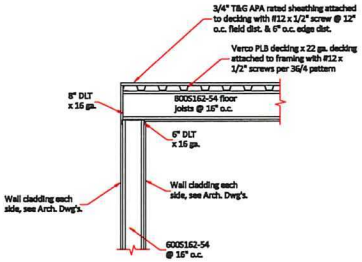
# Grande West - shop building

5453 Pacific Fern Dr.
Ferndale, WA

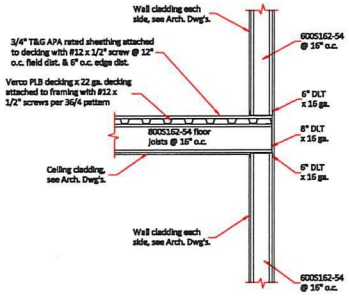
| Revisions: | |
|---|---|
| | |
| | |
| | |
| Job #: | 2127 |
| Date: | 6-23-2021 |
| Drawn By: | JZ |

S 2.0

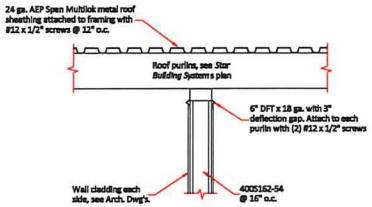
2115 Electric Ave.
Bellingham, WA 98229
(360) 676-2659



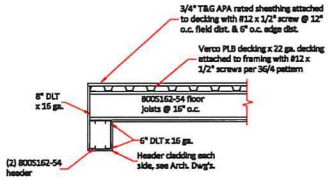

Ⓐ WF beam to column detail
3/4" = 1'-0"




Ⓑ Mezzanine joists to wall detail
3/4" = 1'-0"

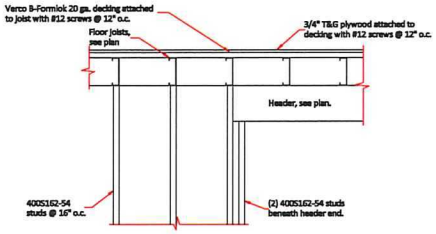



Ⓒ Interior wall to roof purlins detail
3/4" = 1'-0"

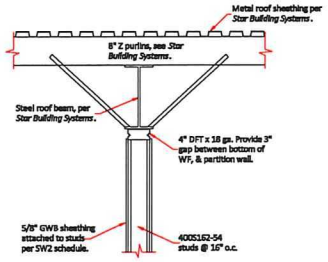



Ⓓ Typical header detail
3/4" = 1'-0"

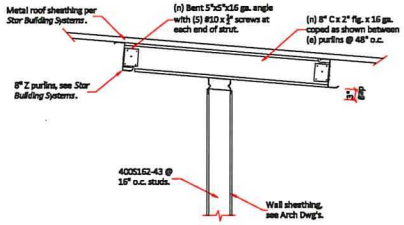
Electronically signed 6/23/2021



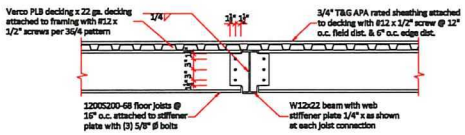

Ⓔ Typical header to wall detail
3/4" = 1'-0"



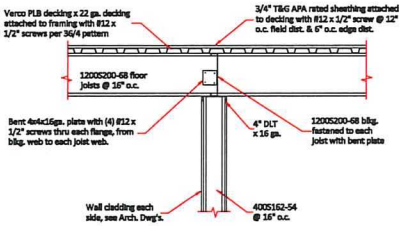

Ⓕ Interior wall to steel roof beam detail
3/4" = 1'-0"



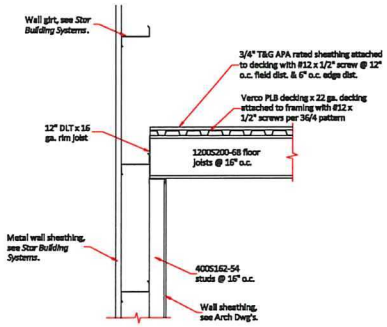

Ⓖ Interior wall perp. to purlins detail
3/4" = 1'-0"




Ⓗ Floor joist to WF beam detail
3/4" = 1'-0"




Ⓙ Floor joists over bearing wall detail
3/4" = 1'-0"



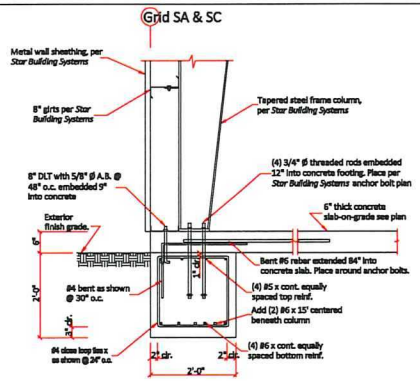

Ⓚ Furred wall to exterior girt detail
3/4" = 1'-0"

# Grande West - framing detail

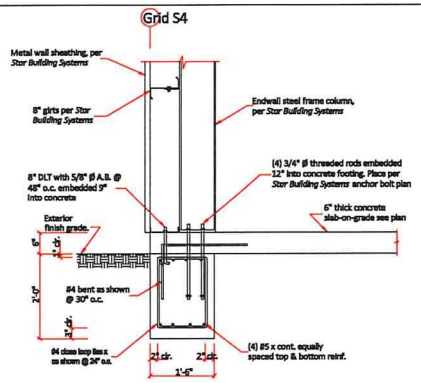
5453 Pacific Fern Dr.
Ferndale, WA

| Revisions: | |
|---|---|
| | |
| | |
| | |
| Job #: | 2127 |
| Date: | 6-23-2021 |
| Drawn By: | JZ |

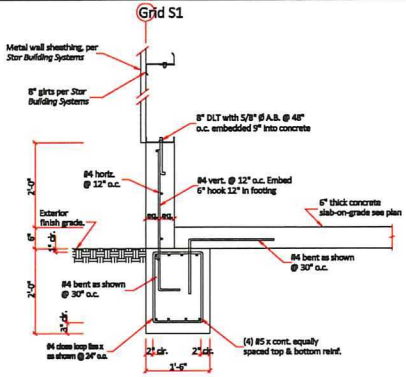
S 5.0



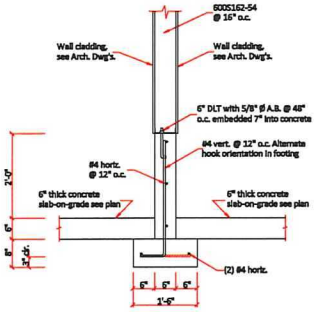

Ⓐ Typical exterior foundation detail
3/4" = 1'-0"



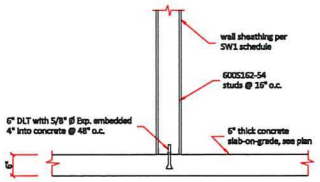

Ⓑ Typical exterior endwall foundation detail
3/4" = 1'-0"



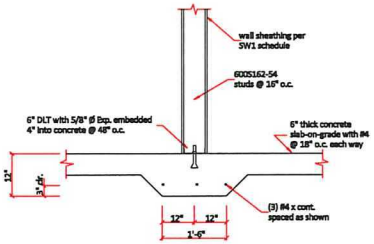

Ⓒ Typical endwall foundation detail
3/4" = 1'-0"



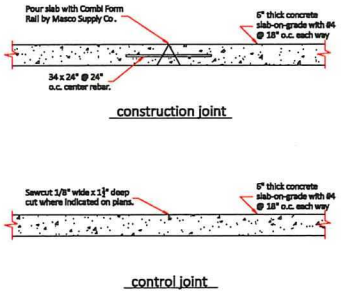

Ⓓ Interior concrete foundation deetail
3/4" = 1'-0"



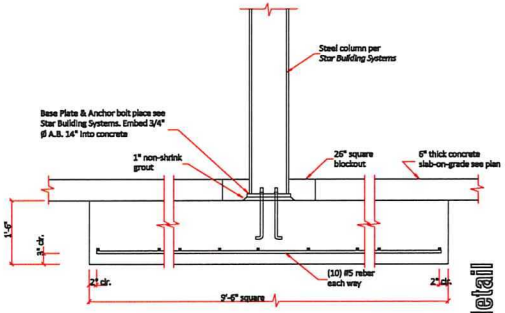

Ⓔ Partition wall to concrete slab detail
3/4" = 1'-0"



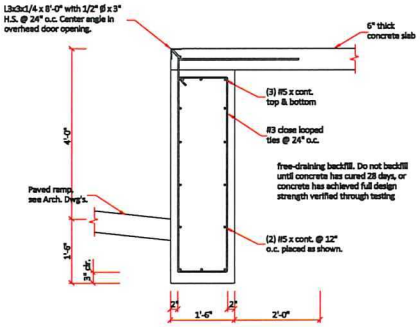

Ⓕ Typical mezzanine bearing wall footing
3/4" = 1'-0"



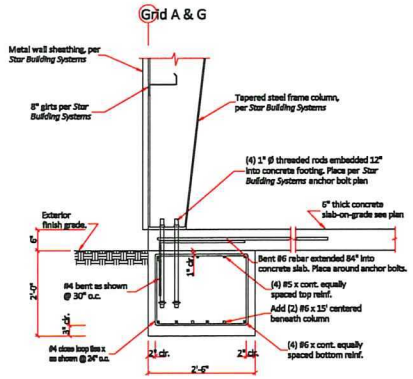

Ⓖ Typical control joinst detail
3/4" = 1'-0"



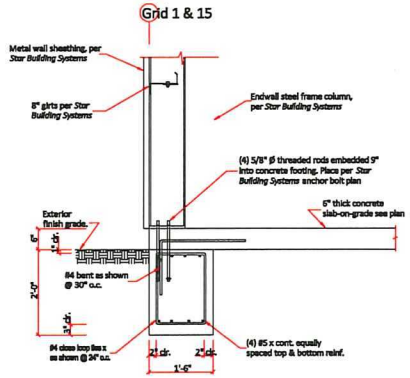

Ⓗ Typical center column footing detail
3/4" = 1'-0"



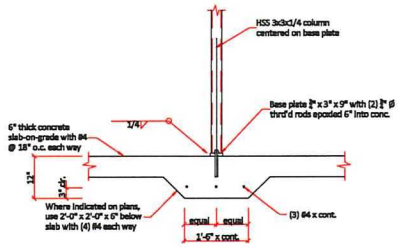

Ⓙ Typical loading ramp foundation detail
3/4" = 1'-0"




Ⓚ Typical exterior foundation detail
3/4" = 1'-0"




Ⓛ Typical exterior endwall foundation detail
3/4" = 1'-0"




Ⓜ HSS column to foundation detail
3/4" = 1'-0"

# Grande West - framing detail

5453 Pacific Fern Dr.
Ferndale, WA

| | |
|---|---|
| Revisions: | |
| Job #: | 2127 |
| Date: | 6-23-2021 |
| Drawn By: | JZ |

S 6.0

## GENERAL

- NORTH ARROW
- SECTION CALLOUT
- DETAIL CALLOUT
- POINT OF CONNECTION
- REVISION NOTE
- FLAG NOTE (CONSTRUCTION)
- EF-3 — EQUIPMENT IDENTIFIER
- LIGHT LINE WEIGHT INDICATES EXISTING WORK
- BOLD LINE WEIGHT INDICATES NEW WORK
- LIGHT DASHED LINES INDICATE WORK TO BE ABANDONED OR REMOVED
- SLASHED LINES INDICATE EXISTING WORK TO BE DEMOLISHED

## HVAC

- CUBIC FEET PER MINUTE
- CENTER LINE
- ROUND DUCT INDICATOR
- THERMOSTAT LINE
- RISE — DIRECTION OF RISE FOR DUCT
- 24x12 — DUCT (FIRST FIGURE DENOTES VIEW SHOWN)
- 24x12 / 10x8 — SINGLE LINE DUCTWORK INDICATES DUCT WITH VIEW DIMENSION LESS THAN 12 INCHES
- SUPPLY OR EXHAUST TAKEOFF
- SUPPLY DUCT TURNING TOWARD, UP
- SUPPLY DUCT TURNING AWAY
- EXHAUST DUCT TURNING TOWARD, UP
- EXHAUST DUCT TURNING AWAY
- ROUND DUCT TURNING TOWARD, UP
- ROUND DUCT TURNING AWAY
- CONICAL WYE
- CONICAL TEE
- VOLUME DAMPER(VD)
- FIRE SMOKE DAMPER(FSD)
- MOTORIZED DAMPER(FD)
- FIRE DAMPER(FD)
- 3-WAY SUPPLY DIFFUSER
- 2-WAY SUPPLY DIFFUSER
- 2-WAY CORNER SUPPLY DIFFUSER
- 1-WAY SUPPLY DIFFUSER
- DOUBLE LINE, LINED DUCT/ ACOUSTIC DUCT
- SINGLE LINE, LINED DUCT/ ACOUSTIC DUCT
- TV — RECTANGULAR 90° ELBOW W/ TURNING VANES TYPICAL
- 30X20 / 18"Ø — RECTANGLE TO ROUND FITTING
- SOUND ATTENUATOR
- ACCESS DOORS
- FLEXIBLE DUCT
- T — THERMOSTAT OR TEMPERATURE SENSOR
- T — THERMOSTAT OR TEMPERATURE SENSOR(CEILING)
- 203 — DUCT SMOKE DETECTOR
- DPT — DIFFERENTIAL PRESSURE TRANSDUCER
- ROUND SUPPLY AIR DIFFUSER
- ROUND SUPPLY AIR DIFFUSER WITH PORTION BLANKED OFF

## HVAC (CONT.)

- LINEAR SUPPLY AIR DIFFUSER
- SQUARE SUPPLY AIR DIFFUSER
- SQUARE RETURN AIR GRILLE
- SQUARE EXHAUST AIR GRILLE
- SIDEWALL SUPPLY AIR GRILLE OR REGISTER
- SIDEWALL RETURN/EXHAUST AIR GRILLE OR REGISTER
- AIR FLOW DIRECTION THRU DOOR GRILLE OR UNDERCUT

## ABBREVIATIONS

| | |
|---|---|
| AC | AIR CONDITIONING |
| ACF | AIR CURTAIN FAN |
| ADA | AMERICAN DISABILITIES ACT |
| AD | AREA DRAIN |
| ADJ | ADJACENT, ADJUST, ADJUSTABLE, ADJUSTMENT |
| AFF | ABOVE FINISHED FLOOR |
| AL | ACOUSTIC LINED |
| ALIGN | ALIGNMENT |
| AP | ACCESS PANEL |
| APPROX | APPROXIMATELY |
| ARCH | ARCHITECTURAL |
| ASME | AMERICAN SOCIETY OF MECHANICAL ENGINEERS |
| AVG | AVERAGE |
| BDD | BACKDRAFT DAMPER |
| BFF | BELOW FINISH FLOOR |
| BHP | BRAKE HORSEPOWER |
| BLDG | BUILDING |
| BOD | BOTTOM OF DUCT |
| BOP | BOTTOM OF PIPE |
| BPD | BACKFLOW PREVENTION DEVICE |
| BTU | BRITISH THERMAL UNIT |
| BTUH | BRITISH THERMAL UNITS PER HOUR |
| BV | BALANCING VALVE |
| CD | CEILING DIFFUSER |
| CFM | CUBIC FEET PER MINUTE |
| CG | CEILING GRILLE |
| CI | CAST IRON |
| CLG | CEILING |
| CO | CLEANOUT |
| CONN | CONNECT, CONNECTED, CONNECTION |
| CONST | CONSTRUCTION |
| CONT | CONTINUOUS, CONTINUATION |
| COORD | COORDINATE |
| CORR | CORRIDOR |
| COTG | CLEANOUT TO GRADE |
| CU FT | CUBIC FEET |
| CU IN | CUBIC INCHES |
| CW | COLD WATER |
| DB | DRY BULB TEMPERATURE |
| DCV | DEMAND CONTROL VENTILATION |
| DCVA | DOUBLE CHECK VALVE ASSEMBLY |
| DEG | DEGREE |
| DET | DETAIL |
| DFU | DRAINAGE FIXTURE UNIT |
| DIA | DIAMETER |
| DIFF | DIFFERENTIAL, DIFFERENT, DIFFUSER |
| DIM | DIMENSION |
| DISCH | DISCHARGE |
| DN | DOWN |
| DOM | DOMESTIC |
| DR | DRAIN |
| DS | DOWNSPOUT |
| DSD | DUCT SMOKE DETECTOR |
| DWG | DRAWING |
| EA | EACH |
| EAT | ENTERING AIR TEMPERATURE |
| EF | EXHAUST FAN |
| EFF | EFFICIENCY |
| EG | EXHAUST GRILLE |
| ELECT | ELECTRICAL |
| ELEV | ELEVATION |
| EMERG | EMERGENCY |
| ENT | ENTERING |
| EXH | EXHAUST |
| EXIST/E | EXISTING |
| EXP | EXPANSION |
| F | FAHRENHEIT |
| FC | FANCOIL |
| FCO | FLOOR CLEANOUT |
| FD | FIRE DAMPER, FLOOR DRAIN |
| FDC | FIRE DEPARTMENT CONNECTION |
| FIO | FURNISHED AND INSTALLED BY OWNER |
| FLA | FULL LOAD AMP |
| FLEX | FLEXIBLE |
| FLR | FLOOR |
| FPM | FEET PER MINUTE |
| FPS | FEET PER SECOND |
| FSD | FIRE SMOKE DAMPER |
| FT | FOOT, FEET |
| FU | FIXTURE UNITS |
| G | GAS |
| GA | GAGE |
| GAL | GALLON |
| GALV | GALVANIZED |
| GC | GENERAL CONTRACTOR |
| GEN | GENERAL |
| GND | GROUND |
| GPH | GALLONS PER HOUR |
| GPM | GALLONS PER MINUTE |
| GW | GREASE WASTE |
| H | HEIGHT, HIGH |
| HB | HOSE BIBB |
| HP | HORSEPOWER |
| HR | HOUR |
| HTG | HEATING |
| HVAC | HEATING VENTILATING AND AIR CONDITIONING |
| HW | HOT WATER |
| HWC | HOT WATER CIRCULATING |
| HZ | HERTZ |
| IBC | INTERNATIONAL BUILDING CODE |
| IE | INVERT ELEVATION |
| IMC | INTERNATIONAL MECHANICAL CODE |
| IN | INCH |
| INSUL | INSULATE, INSULATION |

## ABBREVIATIONS (CONT.)

| | |
|---|---|
| KW | KILOWATT |
| KWH | KILOWATT HOUR |
| L | LENGTH |
| LAV | LAVATORY |
| LAT | LEAVING AIR TEMPERATURE |
| LBS | POUNDS |
| LF | LINEAL FOOT |
| LVG | LEAVING |
| MA | MIXED AIR |
| MAX | MAXIMUM |
| MBH, MBTU | THOUSAND BRITISH THERMAL UNITS PER HOUR |
| MCA | MINIMUM CIRCUIT AMPACITY |
| MD | MOTORIZED DAMPER |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MIN | MINIMUM, MINUTE |
| MISC | MISCELLANEOUS |
| MOD | MOTOR OPERATED DAMPER |
| MTD | MOUNTED |
| MTG | MOUNTING |
| NA | NOT APPLICABLE |
| NC | NOISE CRITERIA |
| NTS | NOT TO SCALE |
| OAC | OUTDOOR AIR CONDITIONER |
| OAT | OUTSIDE AIR TEMPERATURE |
| OD | OUTSIDE DIAMETER, OVERALL DIAMETER |
| ORD | OVERFLOW ROOF DRAIN |
| OSA | OUTSIDE AIR |
| P | PUMP |
| PD | PRESSURE DROP, PIT DRAIN |
| PH | PHASE |
| POC | POINT OF CONNECTION |
| PRELIM | PRELIMINARY |
| PRESS | PRESSURE |
| PRV | PRESSURE REDUCING VALVE |
| PSI | POUNDS PER SQUARE INCH |
| PSIG | POUNDS PER SQUARE INCH GAGE |
| RA | RETURN AIR |
| RD | ROOF DRAIN |
| RG | RETURN GRILLE |
| RECIRC | RECIRCULATING |
| RECT | RECTANGULAR |
| REF | REFERENCE |
| REG | REGULATOR |
| REQD | REQUIRED |
| RND | ROUND |
| RPBP | REDUCED PRESSURE BACKFLOW PREVENTER |
| RPM | REVOLUTIONS PER MINUTE |
| RTU | ROOFTOP UNIT |
| RV | RELIEF VALVE |
| SA | SUPPLY AIR |
| SAN | SANITARY |
| SCHED | SCHEDULE |
| SD | SUPPLY DIFFUSER |
| SF | SUPPLY FAN, SQUARE FEET |
| SG | SUPPLY GRILLE |
| SO | SCREENED OPENING |
| SOV | SHUT OFF VALVE |
| SP | STATIC PRESSURE |
| SPEC | SPECIFICATION |
| SPECD | SPECIFIED |
| SST | STAINLESS STEEL |
| SS | SOIL STACK, SANITARY SEWER |
| STRUCT | STRUCTURAL |
| SWG | SUPPLY WALL GRILLE |
| SWR | SUPPLY WALL REGISTER |
| TBD | TO BE DETERMINED |
| TEMP | TEMPERATURE, TEMPORARY |
| TSTAT | THERMOSTAT |
| THRU | THROUGH |
| TOD | TOP OF DUCT |
| TOP | TOP OF PIPE |
| TP | TRAP PRIMER |
| TS | TEMPERATURE SENSOR |
| TV | TURNING VANE |
| TW | TEMPERED WATER |
| TWR | TEMPERED WATER RECIRCULATE |
| TYP | TYPICAL |
| UPC | UNIFORM PLUMBING CODE |
| UTR | UP THRU ROOF |
| V | VENT |
| VAV | VARIABLE AIR VOLUME |
| VB | VACUUM BREAKER |
| VD | VOLUME DAMPER |
| VEL | VELOCITY |
| VERT | VERTICAL |
| VOL | VOLUME |
| VS | VENT STACK |
| VTR | VENT TO ROOF |
| W | WASTE |
| WCO | WALL CLEAN OUT |
| WB | WET BULB TEMPERATURE |
| WEF | WALL EXHAUST FAN |
| WG | WATER GAGE |
| WHA | WATER HAMMER ARRESTOR |
| W/ | WITH |
| W/O | WITHOUT |
| WS | WASTE STACK |
| WT | WEIGHT |
| WSFU | WATER SUPPLY FIXTURE UNIT |

## GENERAL HVAC NOTE:

1. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES TO THE SITE CONDITIONS. THE CONTRACTOR SHALL IDENTIFY IN WRITING ANY AND ALL CONFLICTS, DISCREPANCIES, AND ALL POSSIBLE AND NECESSARY ADJUSTMENTS OR MODIFICATIONS PRIOR TO INSTALLATION AND AWAIT RESPONSE BY THE OWNER/ARCHITECT FOR DIRECTION.
2. LOCATE ALL TEMPERATURE, DEVICES IN DUCTWORK LOCATIONS WITH STRAIGHT SECTION OF DUCT UP AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
3. COORDINATE AND PROVIDE ALL DUCT TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT DIMENSIONS BEFORE FABRICATION.
4. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED AS REQUIRED TO PROVIDE A VIBRATION FREE INSTALLATION, AND SEISMICALLY BRACED AS REQUIRED. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.
5. CERTAIN ITEMS SUCH AS RISES AND DROPS IN DUCTWORK, ACCESS DOORS, VOLUME DAMPERS, ETC; ARE INDICATED ON THECONTRACT DOCUMENT DRAWINGS FOR CLARITY FOR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE ITEMS.
6. UNLESS OTHERWISE SHOWN, LOCATE ALL ROOM THERMOSTATS 4'-0" (CENTERLINE) ABOVE FINISHED FLOOR, NOTIFY THE ENGINEER OF ANY ROOMS WHERE THE ABOVE LOCATION CANNOT BE MAINTAINED OR WHERE THERE IS A QUESTION ON LOCATION.
7. ALL DUCTWORK SHALL CLEAR DOORS AND WINDOWS.
8. PROVIDE ALL 90 DEGREE SQUARE ELBOWS WITH DOUBLE RADIUS TURNING VANES UNLESS OTHERWISE INDICATED. PROVIDE ACCESS DOORS UPSTREAM OF ALL ELBOWS WITH TURNING VANES.
9. UNLESS OTHERWISE NOTED, ALL DUCTWORK IS OVERHEAD, TIGHT TO THE UNDERSIDE OF THE STRUCTURE (WITHIN TRUSSES), WITH SPACE FOR INSULATION IF REQUIRED.
10. MAXIMUM LENGTH OF FLEXIBLE DUCTS LOCATED ABOVE HARD CEILINGS SHALL BE AS CODE PERMITS BUT NO LONGER THAN 4 FEET.
11. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
12. PROVIDE ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL VOLUME DAMPERS AND OTHER ITEMS LOCATED IN THE DUCTWORK WHICH REQUIRE SERVICE AND/OR INSPECTION.
13. ALL DUCTS SHALL BE GROUNDED ACROSS FLEXIBLE CONNECTIONS WITH FLEXIBLE COPPER GROUNDING STRAPS. GROUNDING STRAPS SHALL BE BOLTED OR SOLDERED TO BOTH THE EQUIPMENT AND THE DUCT.
14. ALL OSA, RELIEF/EXHAUST AIR, AND RETURN AIR DAMPERS SHALL BE MOTORIZED CONTROL AND SHALL HAVE A MAX LEAKAGE OF 4CFM/FT² @ 1.0"WG IN ACCORDANCE W/ AMCA 500D.

## GENERAL NOTES:

1. COMPLETE INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE PER THE LATEST ADOPTED VERSION OF INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), WASHINGTON STATE ENERGY CODE (WSEC), UNIFORM PLUMBING CODE (UPC), INTERNATIONAL FUEL GAS CODE (IFGC), INTERNATIONAL FIRE CODE (IFC), NFPA AND HEALTH CODES AND REGULATIONS AS ADOPTED BY THE LOCAL JURISDICTIONS.
2. CONTRACTOR SHALL COORDINATE DIFFUSER, GRILLE AND REGISTER LOCATIONS AND DUCT ROUTING CLEARANCES WITH THE STRUCTURAL, REFLECTED CEILING AND LIGHTING PLANS.
3. MAKE ACCEPTABLE ACCESS PROVISIONS FOR REMOVAL OF FILTER AND MAINTENANCE FOR ALL INDOOR UNITS. REFER TO MANUFACTURER'S INSTALLATION GUIDE.
4. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE.
5. WHEN MECHANICAL WORK (HVAC, PLUMBING, SHEET METAL, FIRE PROTECTION, ETC.) IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS, WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR.
6. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE DOCUMENTS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
7. ALL GAS EQUIPMENT SHALL BE INSTALLED PER THEIR LISTINGS, IMC, UPC, IFGC AND LOCAL CODES.
8. ALL ROOF PENETRATIONS SHALL BE MINIMUM OF 5 FEET AWAY FROM THE AREA/OCCUPATION SEPARATION WALLS. ALL PIPE, DUCT AND CONDUIT PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE FIRE AND SMOKE STOPPED PER CODE.
9. ALL EQUIPMENT, DAMPERS, PIPING, AND ACCESSORIES IN CONCEALED SPACES REQUIRING ACCESS SHALL HAVE ACCESS DOORS. ALL ACCESS DOORS IN FIRE RATED STRUCTURE SHALL BE FIRE RATED, COORDINATE LOCATIONS WITH ARCHITECT, CONTRACTOR TO PROVIDE ACCESS DOORS.
10. ALL EQUIPMENT SHALL BE FREE FROM DEFECTS IN MATERIAL, WORKMANSHIP, AND SHALL BE OF THE KIND AND QUALITY DESCRIBED HEREIN.
11. COORDINATE WITH THE STRUCTURAL ENGINEER AND GENERAL CONTRACTOR TO PROVIDE STRUCTURAL SUPPORT AND SEISMIC RESTRAINTS FOR ALL EQUIPMENT.
12. ALL EQUIPMENT SHALL BE APPROVED FOR INSTALLATION IN THE STATE OF WASHINGTON AND SHALL HAVE ALL CERTIFICATIONS AND RATINGS REQUIRED TO MEET ALL ENERGY, POLLUTION, ENVIRONMENTAL, SEISMIC, ETC. CODES AND REGULATIONS.
13. VERIFY ALL THE MECHANICAL EQUIPMENT'S ELECTRICAL LOADS VOLTAGE/PHASE, ETC. WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
14. WHERE MULTIPLE RISERS OR HORIZONTAL LOOPS ARE USED, BALANCING VALVES IN THE RETURN LINES ARE REQUIRED. A CHECK VALVE SHALL BE PROVIDED IN EACH RETURN TO PREVENT TEMPORARY REVERSAL OF FLOW.
15. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS IDENTIFIED ON THE DRAWINGS AND/OR AS SPECIFIED AND AS REQUIRED BY IMC, UPC, IBC, WASHINGTON STATE ENERGY CODE AND ALL APPLICABLE LOCAL AMMENDEMENTS.
16. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
17. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL WORK, ETC., SHOWN ON CONTRACT DOCUMENT DRAWINGS.
18. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.
19. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE NEBB STANDARDS. AABC ACCEPTABLE PENDING AGENCY APPROVAL.
20. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
21. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
22. REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION.
23. RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE AS REQUIRED BY SECTION 1418.1 OF THE WSEC. THE DRAWINGS SHALL INDICATE THE LOCATION AND PERFORMANCE DATA OF EQUIPMENT, GENERAL CONFIGURATION OF DUCTWORK AND PIPING DISTRIBUTION SYSTEMS, INCLUDING FLOW RATES AS A MINIMUM, THAT HAVE BEEN DEVIATED FROM THESE DOCUMENTS, A COMPLETE RECORD OF CHANGES SHALL BE KEPT TO DATE ON A DAILY BASIS AND MADE ACCESSIBLE TO OWNER AND ENGINEER.

## GENERAL HVAC NOTE: (CONT.)

16. ACCEPTABLE ACCESS PROVISIONS FOR REMOVAL OF FILTER AND MAINTENANCE FOR ALL INDOOR UNITS.
17. ALL AIR DISTRIBUTION SUPPLY OUTLETS AND RETURN/EXHAUST INLETS SHALL HAVE VOLUME CONTROL DEVICES.
18. ALL 90 DEGREE TRUNK DUCT ELBOWS SHALL BE SMOOTH-ROUND OR SQUARE WITH TURNING VANES.
19. CONTRACTOR SHALL LOCATE AND COORDINATE EXACT LOCATION OF DUCTWORK WITHIN THE STRUCTURE AT SITE.
20. ALL FAN SYSTEMS WITH OVER 2000 CFM SHALL HAVE SMOKE/DUCT DETECTORS TO SHUT-DOWN FAN UPON DETECTION. DUCT/SMOKE DETECTORS FURNISHED AND INSTALLED BY ELECTRICAL AND WIRED BY ELECTRICAL. DUCT/SMOKE DETECTORS SHALL BE LISTED BY AN APPROVED AGENCY AND FOR INSTALLATION IN AIR DUCTS PER IMC.
21. ALL DUCT PENETRATIONS THROUGH RATED ENCLOSURES SHALL BE FIRE DAMPERED AND/OR SMOKE DAMPERED AS REQUIRED.
22. ALL MECHANICAL HEATING AND VENTILATION EQUIPMENT SHALL CONFORM TO SMACNA, LOCAL AND STATE REGULATIONS FOR SEISMIC RESTRAINT (INCLUDING PIPING AND DUCTWORK). COORDINATE WITH STRUCTURAL.
23. ALL RECTANGULAR DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. SUPPLY AND RETURN DUCTWORK FOR HVAC TO HAVE 1" SOUNDLINING FOR THE FIRST 10 FEET FROM UNIT DISCHARGE OUTLET. ALL DUCT LINING TO MEET AND EXCEED MOLD, HUMIDITY, EROSION RESISTANT, ETC. TO MEET IMC CHAPTER 6. ALL DUCTWORK TO BE CLASS-I AIR DUCTS. CLASS-II DUCTS SHALL NOT BE USED.
24. PROVIDE COMPLETE REFRIGERATION PIPING, INSULATION AND CONTROLS TO ALL MECHANICAL REFRIGERANT EQUIPMENT

## 2018 WASHINGTON STATE ENERGY CODE (WSEC) NOTES

1. HVAC EQUIPMENT SHALL HAVE MINIMUM PERFORMANCE AT SPECIFIED RATING CONDITIONS NOT LESS THAN THE VALUES INDICATED IN TABLE C403.2.2(1) THRU C403.3.2(12) OF THE WSEC AND AS INDICATED ON THE CONTRACT DOCUMENTS.
2. PROVIDE DEADBAND BETWEEN HEATING/COOLING SPACE SENSOR SETPOINTS OF 5 DEGREES AS REQUIRED BY SECTION C403.4.1.2 OF THE WSEC OR AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
3. HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF ACCOMPLISHING SETBACK OR SHUTDOWN DURING UNOCCUPIED PERIODS AS REQUIRED BY SECTION C403.4.2 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
4. PROVIDE BALANCING DEVICES IN ALL BRANCH DUCTS AND PIPE RUNS TO TERMINAL DEVICES AS REQUIRED BY SECTION C408.2.2 AND C408.2.2.1 OF THE WSEC AND AS INDICATED ON THE CONTRACT DOCUMENTS.
5. ALL DUCTWORK SHALL COMPLY WITH SMACNA STANDARDS FOR CONSTRUCTION OF GALVANIZED DUCTWORK. ALL DUCTWORK SHALL BE SEALED AS REQUIRED BY SECTION C403.10.1 "DUCT AND PLENUM INSULATION AND SEALING" OF THE WSEC. DUCT TAPE NOT ALLOWED.
6. ALL DUCTWORK SHALL BE INSULATED AS REQUIRED BY SECTION C403.10.1 "DUCT AND PLENUM INSULATION AND SEALING" OF THE WSEC.
7. ALL PIPING SHALL BE INSULATED AS REQUIRED BY SECTION C403.10.3 OF THE WSEC.
8. HEATING AND COOLING EQUIPMENT FANS, CIRCULATION PUMPS AND TERMINAL UNIT FANS SHALL BE SHUT OFF DURING UNOCCUPIED PERIODS AS REQUIRED BY SECTION C403.3.5.2 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
9. SUPPLY AIR AND WATER TEMPERATURES SHALL BE AUTOMATICALLY RESET AS REQUIRED IN SECTION C403.4.4 AND C403.8.4 OF THE WSEC OR AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
10. ALL AIR SYSTEMS SHALL BE PROVIDED WITH A 100% CAPABLE AIR ECONOMIZER CAPABILITY AS REQUIRED BY THE SECTION C403.5 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
11. AIR ECONOMIZERS SHALL BE CAPABLE OF PROVIDING PARTIAL COOLING EVEN WHEN ADDITIONAL MECHANICAL COOLING IS REQUIRED TO MEET THE REMAINDER OF THE COOLING LOAD, AS REQUIRED IN SECTION 403.5.1 OF THE WSEC.
12. SIMULTANEOUS HEATING AND COOLING TO INDIVIDUAL ZONES SHALL BE PROHIBITED AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES EXCEPT WHERE PERMITTED IN SECTION C403.4.1, EXCEPTIONS 1 THROUGH 3 OF THE WSEC.
13. VARIABLE FREQUENCY DRIVES SHALL BE PROVIDED FOR VARIABLE FLOW HEATING AND AIR HANDLING SYSTEMS AS REQUIRED BY SECTION C403.2.3 OF THE WSEC AND AS DESCRIBED IN THE CONTRACT DOCUMENTS INCLUDING TEMPERATURE CONTROL SEQUENCES, IF PROVIDED.
14. MOTOR EFFICIENCY SHALL NOT BE LESS THAN THE MINIMUM CALLOUTS PER SECTION C405.8 OF THE WSEC FOR FULL LOAD EFFICIENCIES.
15. HVAC SYSTEMS SHALL BE BALANCED AS REQUIRED BY SECTION C408.2 OF THE WSEC.
16. ELECTRIC WATER HEATERS LOCATED IN UNCONDITIONED SPACES OR ON CONCRETE FLOORS SHALL BE SEPARATED FROM THE SUPPORTING SURFACE WITH R-10 RIGID INSULATION AS DESCRIBED IN SECTION C404.5 OF THE WSEC.
17. DOMESTIC HOT WATER CIRCULATION PUMPS SHALL BE AUTOMATICALLY SHUT DOWN DURING UNOCCUPIED PERIODS AS REQUIRED BY SECTION C404.7.1 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES IF PROVIDED.
18. OPERATION AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE OWNER AS REQUIRED BY SECTION C103.8.2 OF THE WSEC. AS A MINIMUM, THE MANUALS SHALL INCLUDE:

A. SUBMITTAL DATA.
B. OPERATION AND MAINTENANCE DATA FOR EQUIPMENT.
C. NAMES AND ADDRESSES OF SERVICE AGENCIES.
D. HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION.

19. COMMISSIONING SHALL BE PROVIDED AND A REPORT OF COMMISSIONING BE SUBMITTED TO THE OWNER AS REQUIRED BY SECTION C408 OF THE WSEC. AND CONTRACTOR SHALL SUBMIT FORM "FIGURE C408.1.4.1" COMMISSIONING COMPLIANCE CHECKLIST.
20. THE MECHANICAL SYSTEM SHALL COMPLY WITH ALL THE REQUIREMENTS OF SECTION C403.6 "DEDICATED OUTDOOR AIR SYSTEMS (DOAS) OF THE WSEC.
21. IF NOT SPECIFICALLY STATED ABOVE, CONTRACTOR SHALL COMPLY WITH THE WSEC ITEMS THAT DO APPLY TO THIS PROJECT.

### BASIS OF DESIGN

CODE
- (WSBC) 2018 WASHINGTON STATE BUILDING CODE
- (WSEC) 2018 WASHINGTON STATE ENERGY CODE
- (WSPC) 2018 WASHINGTON STATE PLUMBING CODE
- (WSFGC) 2018 WASHINGTON STATE FUEL GAS CODE

## 2018 WASHINGTON - HVAC

© COPYRIGHT 2009

LYNDEN SHEET METAL INC.

Grande West:
Shop Bldg.
Ferndale,Wa

Date: 05/19/2021

Bittner Bldg Arch

M-1

## MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE

| Tag Reference | Model Number | Nominal Cooling Capacity (BTU/h) | Nominal Heating Capacity (BTU/h) | Cooling EFficiency EER/SEER (Btu/Wh) | Heating COP @ 47F (Btu/Wh) | Design Cooling Outdoor Temp DB (°F) | Design Heating Outdoor Temp DB (°F) | Corrected Cooling Total Capacity (BTU/h) | Corrected Heating Capacity (BTU/h) | Electrical Per Module 208/230 or 240/60/1 | | | | Notes / Options |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Voltage / Phase | MCA 208/230 or 240/60/1 | RFS | MOCP | |
| OD-1 | MUZ-FS09NA-U1 | 8,500.0 | 9,700.0 | 19.95 (13.1) | 9 (8.5) | 75.0 | 21.1 | 8,481.1 | 11,723.9 | 208/230V / 1-phase | 10 | 15 | 15 | 1 |

Notes & Options
1. Install with 24" Sump Pieces

## MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE

| Room Name | Tag Reference | M-NET Address | Model | Type | Connected Capacity: Nominal Cooling Capacity (BTU/h) | Nominal Heating Capacity (BTU/h) | Cooling Total Capacity (BTU/h) | Cooling Sensible Capacity (BTU/h) | Heating Capacity (BTU/h) | Estimated Cooling Coil LAT (°F) / (°C) | Estimated Heating Coil LAT (°F) / (°C) | Refrig Pipe Dim Liquid/Suction (inch) | Fan Speed Setting | Peak Fan Airflow (cfm) / (l/s) (m³/h) | Sound Pressure Per Fan Speed 230V/220V (dBA) | Voltage / Phase | Electrical MCA/MFS | Notes / Options |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Office | D-1 | N/A | MSZ-FS09NA-U1 | Wall-Mounted | 8,500.0 | 9,700.0 | 8,481.1 | 6,952.7 | 11,723.9 | 62.6 | 94.9 | 3/8 / 1/4 | HIGH | 477 | 40-38-29-23-20/42-38-29-24 | 208/230V/1-phase | Powered by Outdoor | 1, 2 |

Notes & Options
1. Install with MHC wall mounted controller
2. Route Condensate to Plumber provided drain

## ELECTRIC WALL HEATER SCHEDULE

| MARK | MANUF | MODEL | SERVING | CFM | E.S.P. | VOLT/PH. | WATTS | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| EWH-1 | KING | PAW1215-W | Restroom | - | - | 120/1 | 1500 | 8 | 1,2,3 |
| EWH-2 | KING | PAW1215-W | Tool Storage | - | - | 120/1 | 1500 | 8 | 1,2,3 |
| EWH-3 | KING | PAW1215-W | Pump Room | - | - | 120/1 | 1500 | 8 | 1,2,3 |

NOTES:
1. POWER WIRING, CONDUIT AND DISCONNECT BY ELECTRICAL CONTRACTOR.
2. CONTROL WITH INTEGRAL THERMOSTAT.
3. MOUNT AT 12" AFF.

## INFRARED HEATER SCHEDULE

| MARK | MANUF | MODEL | SERVING | INPUT MBH | OUTPUT | VOLT/PH. | MCA | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| RH-1 | SPACE-RAY | LTU-75-30 | Shop Bldg. | 75 | N/A | 120/1 | 2.6 | 250 | 1,2,3,4 |
| | | | | | | | | | |
| | | | | | | | | | |

NOTES:
1. POWER WIRING, CONDUIT AND DISCONNECT BY ELECTRICAL CONTRACTOR.
2. SPACE RAY LINE VOLTAGE DIGITAL SETBACK 5000, SURFACE MOUNTED, WITH LOCKED BOX COVER THERMOSTAT.
3. MAINTAIN ALL CLEARANCES TO COMBUSTIBLES PER MFR INSTRUCTIONS.
4. USE TYPE FLUE VENT AS REQUIRED BY MFR, INSULATE TO MITIGATE POSSIBLE FLUE CONDENSATION PER MFR INSTRUCTIONS.

## PROPELLER FAN SCHEDULE (BASIS OF DESIGN)

| MARK | MANUF | MODEL | SERVING | BLADE SIZE | MOTOR HP | VOLT/PH. | MCA | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| PF-1 | BAF | PFX3-20 | ASSEMBLY, STORAGE | 20 FT | 2.0 | 480/3 | 10.0 | 290 | 1,2 |
| | | | | | | | | | |
| | | | | | | | | | |

NOTES:
1. POWER WIRING, CONDUIT AND DISCONNECT BY ELECTRICAL CONTRACTOR.
2. PROVIDE WITH STANDARD CONTROLLER

## LOUVER SCHEDULE:

| TAG: | MANUFACTURER: | SERVING: | FREE AREA | DEPTH | TYPE | DIMENSIONS: | NOTES: |
|---|---|---|---|---|---|---|---|
| L1 | WARMING AIR / LE-21 | PUMP ROOM E/A | 8.24 SQ FT. | 4" | BOX FRAME | 48" X 48" | 1,3 |
| L2 | WARMING AIR / LE-21 | PUMP ROOM I/A | 8.24 SQ FT. | 4" | BOX FRAME | 48" X 48" | 2,3 |

1-Include gravity back draft damper and bird screen.
2-Incude motorized intake damper and 120v actuator.
3-Provide with color to match building.

## EXHAUST FAN SCHEDULE:

| TAG: | MANUFACTURER: | SERVING: | CAPACITY: | CFM: | VOLTAGE: | AMPS/HP | WATTS | DIMENSIONS: | WEIGHT: | EFF: | NOTES: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-1 | Panasonic FV-0511VKS1 | Restroom | | 50 | 120 | 0.2 | N/A | N/A | N/A | | 1 |
| EF-2 | Fantech 1WMC30FY | Pump Room | | 4,000 | 460/3ph | 1.6 | 815 | 34 1/4 X 34 1/4 | 165 | | 3 |
| ERV-1 | Panasonic FV-04VE1 | Office | | 40 | 120 | 0.15 | N/A | N/A | N/A | | 2 |

1-Install with Motion Sensor
2-Install with Concentric wall cap and 24hr timer provide by Mechanical and installed by Electrical.
3-Install with VFD (Provided by Mechanical and installed by Electrical

## OUTSIDE AIR CALCULATIONS

| ROOM ID | AREA (FT²) (A_z) | OCCUP. LOAD (#P/1000 FT²) | FIXTURES | OCCUPANTS (# PEOPLE) | OUTSIDE AIR REQ'D: CFM/P (R_p) | CFM/FT² (R_a) | BREATHING ZONE OSA (V_bz) | ZONE EFFECT. (E_z) | ZONE OSA (VOZ) | SUPPLY AIRFLOW (P_sz) | EXHAUST AIRFLOW | AIR SYSTEM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHOP | 2240 | 0 | 0 | 0 | 0 | 0.06 | 0 | 0 | 0 | 0 | 0 | NATURAL |
| OFFICE | 80 | 5 | 0 | 1 | 0 | 0.06 | 5 | 0.8 | 6 | 0 | 0 | ERV-1 |
| RESTROOM | 36 | 0 | 1 | 1 | 0 | 0 | 0 | 0.8 | 0 | 0 | 50 | EF-1 |
| TOOL STORAGE | 112 | 0 | 0 | 0 | 0 | 0.06 | 0 | 0 | 0 | 0 | 0 | NATURAL |
| PUMP ROOM | 112 | 0 | 0 | 0 | 0 | 0.06 | 0 | 0 | 0 | 0 | 0 | NATURAL |
| LEAK TEST BAY | 726 | 0 | 0 | 0 | 0 | 0.06 | 0 | 0 | 0 | 0 | 0 | NATURAL |
| TOTAL | 3306 | | 1 | 2 | | | 5 | | 6 | 0 | 50 | |

2.1 / 1

## EXHAUST EXTRACTION SCHEDULE:

| TAG: | MANUFACTURER: | SERVING: | CAPACITY: | CFM: | VOLTAGE: | AMPS/HP | WATTS | DIMENSIONS: | WEIGHT: | EFF: | NOTES: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HRF-1 | FUME-A -VENT HRF-1-3 | BUS BAY | 6" EXHAUST | 770 | 460/3ph | TBD/1 | NA | 18 1/2" X 18 1/2" | 54 | | 1,2,3 |

1-Install with vent exterior and wall cap.
2-Install with HRS-3-0625 hose reel assembly and 400 degree hose.
3-Install with TPA-04-06 exhaust tip to connect to bus tail pipe.

## AIR COMPRESSOR (IAC) SCHEDULE

| MARK NUMBER | MANUFACTURER AND MODEL | CAPACITY | COOLING AND INLET AIR | | COMPRESSOR TYPE | MOTOR DATA | | | | ELECTRICAL DATA | | | WEIGHT | SOUND POWER (dBA) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SCFM @150 PSIG | °F DB | °F WB | | SERVICE | DRIVE TYPE | HP | RPM | VOLT/PHASE | MCA | MOCP | | | |
| IAC-3 | Rogers KI-30-150 | 99 | 95 | 79 | ROTARY SCREW | 1.25 | VARIABLE | 30 | 3600 | 460/3 | 51 | 80 | 2485 | 74 | 1 |
| | | | | | | | | | | | | | | | |

1-Integral dryer requires separate 1/60/115 power

LYNDEN SHEET METAL INC.

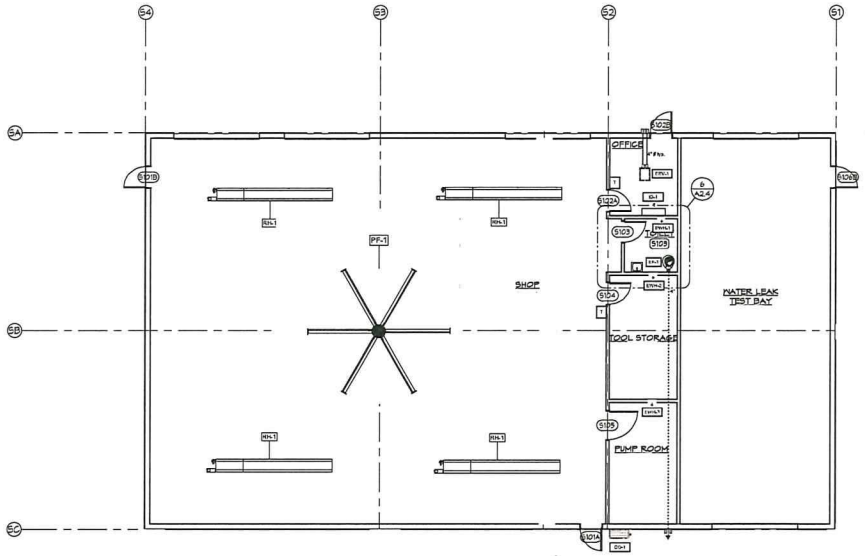
Grande West:
Shop Bldg.
Ferndale,Wa

Date: 05/19/2021

Revision Date

M-2

© COPYRIGHT 2009




1 A2.4 SHOP - HVAC Plan:
1/8" = 1'-0"

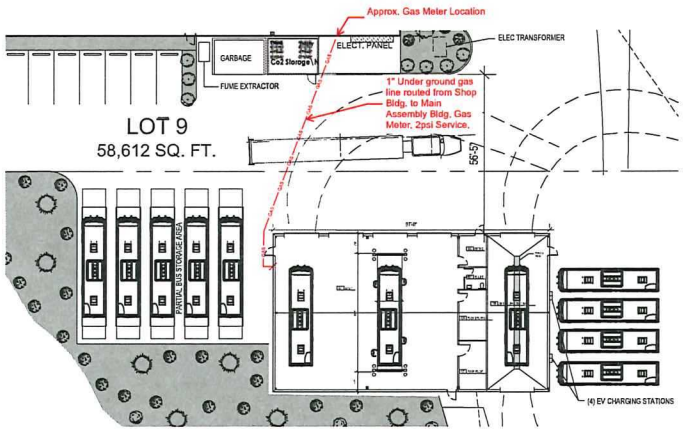
LYNDEN SHEET METAL INC.

Grande West:
Shop Bldg.
Ferndale,Wa

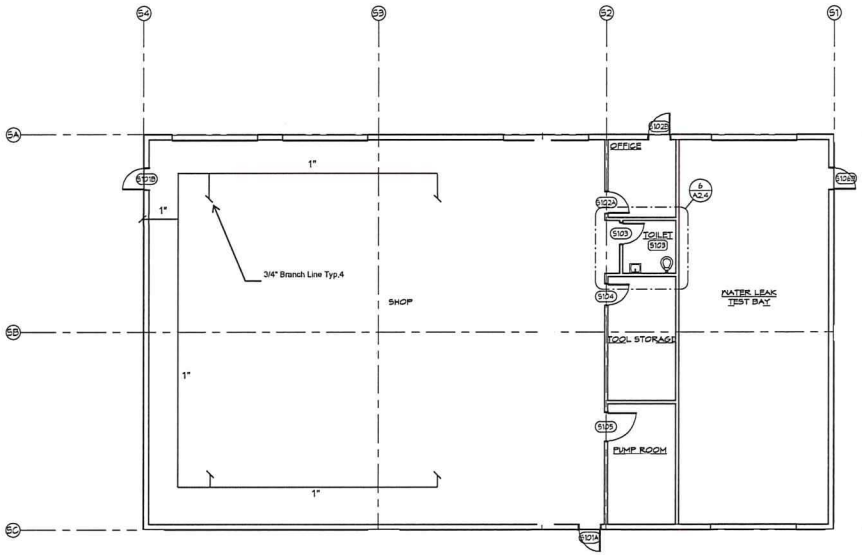
Date: 05/19/2021

M-3

© COPYRIGHT 2009




1 A2.4 SHOP - Site Plan:
1/8" = 1'-0"




1 A2.4 SHOP - Gas Piping Plan:
1/8" = 1'-0"

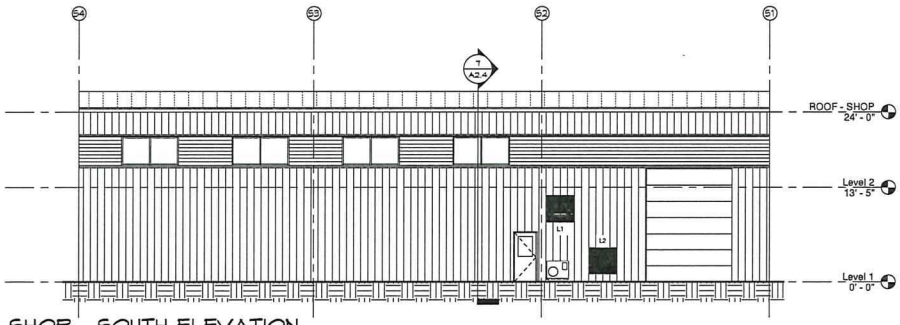
LYNDEN SHEET METAL INC.

Grande West:
Shop Bldg.
Ferndale,Wa

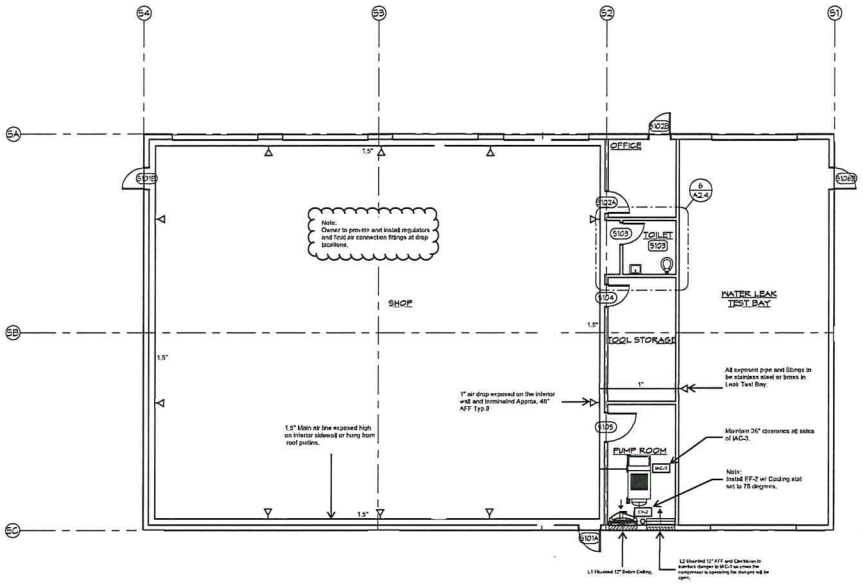
Date: 06/10/2021

M-4

© COPYRIGHT 2009




4 A2.4 SHOP - SOUTH ELEVATION
1/8" = 1'-0"




1 A2.4 SHOP - Air Compressor Plan:
1/8" = 1'-0"

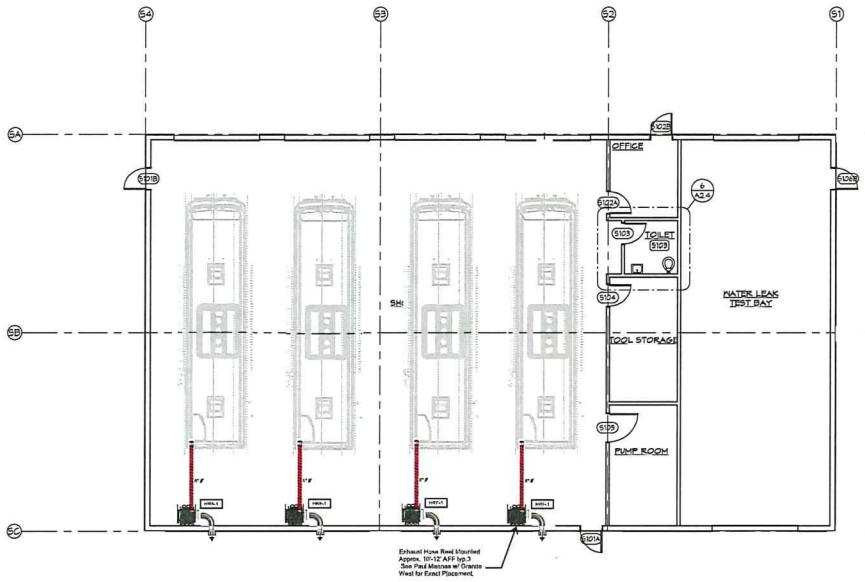
LYNDEN SHEET METAL INC.

Grande West:
Shop Bldg.
Ferndale,Wa

Date: 05/19/2021

M-5

© COPYRIGHT 2009




1 A2.4 SHOP - Exhaust Extraction System:
1/8" = 1'-0"

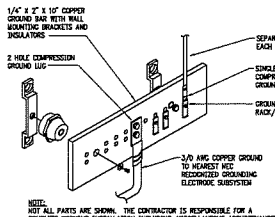
LYNDEN SHEET METAL INC.

Grande West:
Shop Bldg.
Ferndale,Wa

Date: 05/19/2021

M-6

© COPYRIGHT 2009




NOTE:
NOT ALL PARTS ARE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR A COMPLETE WORKING INSTALLATION INCLUDING, MISCELLANEOUS APPURTENANCES.

## GROUND BAR DETAIL

SCALE: NOT TO SCALE

## ELECTRICAL ABBREVIATIONS

| | | | |
|---|---|---|---|
| A or AMP | AMPERE | MCB | MAIN CIRCUIT BREAKER |
| A/E | ARCHITECT AND ENGINEER | MCC | MOTOR CONTROL CENTER |
| AFF | ABOVE FINISHED FLOOR | MDP | MAIN DISTRIBUTION PANEL |
| AFG | ABOVE FINISHED GRADE | MLO | MAIN LUGS ONLY |
| AIC | AVAILABLE INTERRUPTING CURRENT | MTD | MOUNTED |
| AHU | AIR HANDLING UNIT | | |
| AL | ALUMINUM | NC | NORMALLY CLOSED |
| | | NEC | NATIONAL ELECTRICAL CODE |
| C | CONDUIT | NEMA | NATIONAL ELECTRICAL |
| CKT | CIRCUIT | | MANUFACTURER'S ASSOCIATION |
| CLG | CEILING | NIC | NOT IN CONTRACT |
| CONN | CONNECTION | NO | NORMALLY OPEN |
| CU | COPPER | | |
| | | OH | OVERHEAD |
| DISC | DISCONNECT | OC | OCCUPANCY SENSOR |
| EMT | ELECTRIC METALLIC TUBING | PH | PHASE |
| EVSE | ELECTRIC VEHICLE SERVICE EQUIPMENT | PNL | PANEL |
| | | PVC | POLYVINYL CHLORIDE |
| F | FUSE | | |
| FA | FIRE ALARM | SPD | SURGE PROTECTION DEVICE |
| FLA | FULL LOAD AMPERES | | |
| | | TEL | TELEPHONE |
| GFCI or GFI | GROUND FAULT CIRCUIT INTERRUPTER | TYP | TYPICAL |
| GND or GRND | GROUND | | |
| GRS | GALVANIZED RIGID STEEL | UG | UNDERGROUND |
| HP | HORSEPOWER | V | VOLT |
| HTR | HEATER | VA | VOLT AMPERES |
| HZ | HERTZ | | |
| | | W | WATT |
| JB or J-BOX | JUNCTION BOX | WP | WEATHERPROOF |
| KV | KILOVOLT | XFMR | TRANSFORMER |
| KVA | KILOVOLT AMPERES | | |
| KW | KILOWATT | ø or PH | PHASE |
| LTG | LIGHTING | (E) | EXISTING |
| | | (N) | NEW |

## SYMBOL LEGEND

### LIGHTING FIXTURES

- SURFACE OR PENDANT MOUNTED
- WALL MOUNTED LINEAR, BATTERY BACKUP
- WALL MOUNTED LINEAR
- CEILING MOUNTED DOWN LIGHT
- RECESSED DOWNLIGHT
- GROUND MOUNTED UPLIGHT/LANDSCAPE
- PENDANT MOUNTED
- WALL MOUNTED
- EXIT SIGN — INDICATES DIRECTION OF ARROW, WITH 90 MINUTE BATTERY BACKUP
- COMBINATION EXIT SIGN/EMERGENCY LIGHTING UNIT, WITH 90 MINUTE BATTERY BACKUP
- EMERGENCY LIGHTING UNIT
- STEP LIGHT

### LIGHTING CONTROLS

- LINE VOLTAGE SINGLE POLE SWITCH – "a" INDICATES SWITCHLEG
- COMBINATION WALL SWITCH/VACANCY SENSOR
- WALL SWITCH/ OCCUPANCY SENSOR WITH MANUAL "ON"
- WALL SWITCH, WITH DIGITAL TIMER
- CEILING MOUNTED OCCUPANCY SENSOR, SEE LIGHTING/PLUG-LOAD CONTROL DIAGRAM
- CEILING MOUNTED DAYLIGHT SENSOR, SEE LIGHTING/PLUG-LOAD CONTROL DIAGRAM
- LOW VOLTAGE DIGITAL SWITCH, (0-10V DIMMING). "a" INDICATES CONTROL ZONE.

### LOW VOLTAGE / COMMUNICATIONS

- WALL MOUNTED TELEPHONE OUTLET – PROVIDE BACKBOX AND STUB 3/4"C. UP TO ACCESSIBLE CEILING SPACE
- WALL MOUNTED DATA OUTLET – PROVIDE BACKBOX AND STUB 3/4"C. UP TO ACCESSIBLE CEILING SPACE
- COMBINATION DATA/TELEPHONE OUTLET – PROVIDE BACKBOX AND STUB 3/4"C. UP TO ACCESSIBLE CEILING SPACE
- TELEVISION OUTLET, WALL MOUNTED – PROVIDE 3/4"C. UP TO ACCESSIBLE CEILING SPACE
- FLOOR MOUNTED COMBINATION DATA/TELEPHONE OUTLET
- FLOOR MOUNTED DATA OUTLET

### POWER

- DUPLEX RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE, FLOOR MOUNTED
- DUPLEX RECEPTACLE, MOUNTED ABOVE COUNTER AT +44" UNLESS NOTED OTHERWISE.
- CONTROLLED RECEPTACLE. SEE LIGHTING/ PLUG LOAD CONTROL DIAGRAM
- DUPLEX RECEPTACLE, GFCI TYPE
- DUPLEX RECEPTACLE, GFCI TYPE, ABOVE COUNTER +44" UNLESS NOTED OTHERWISE
- DOUBLE DUPLEX RECEPTACLE, GFCI TYPE, ABOVE COUNTER +44" UNLESS NOTED OTHERWISE.
- SPECIAL PURPOSE RECEPTACLE, AS NOTED
- JUNCTION BOX
- MOTOR CONNECTION
- EQUIPMENT CONNECTION (INCLUDES CONDUCTORS, TERMINATIONS, GROUNDING CONDUCTOR, ETC.)
- DISCONNECT SWITCH OR COMBINATION MOTOR STARTER/ DISCONNECT SWITCH. SEE EQUIPMENT SCHEDULES. SWITCH SHALL INCLUDE ALL REQUIRED CONNECTIONS. (80) INDICATES SWITCH AMPERAGE/ (40) INDICATES FUSE AMPERAGE.
- MANUAL MOTOR STARTER, WITH THERMAL OVERLOAD
- CIRCUIT HOMERUN – MIN 3/4"C–2#12 PLUS #12GND UNLESS NOTED OTHERWISE.
- CONDUIT CONCEALED IN WALLS OR CEILING.
- CONDUIT UNDER FLOOR OR UNDERGROUND.
- CONDUIT UP
- CONDUIT DOWN
- 208/120V PANELBOARD
- 480/277V PANELBOARD

### CALL OUTS

- DETAIL NOTE
- LIGHTING FIXTURE TYPE. SEE FIXTURE SCHEDULE.
- EQUIPMENT CALLOUT – SEE EQUIPMENT SCHEDULES
- SHORT CIRCUIT CALLOUT – SEE SHORT CIRCUIT CALCULATIONS

### HVAC

- ELECTRIC WALL HEATER – 208V–1PH. KING PAW 2022 HEATER OR EQUIVALENT.

## GENERAL NOTES

1. NOT ALL CONDUIT AND CONDUCTORS FOR BRANCH CIRCUITS HAVE BEEN SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR SHALL INSTALL ALL REQUIRED CONDUIT AND WIRE FOR A COMPLETE INSTALLATION
2. PROVIDE UNSWITCHED CIRCUIT FOR ALL EXIT SIGNS AND EGRESS LIGHTING, UNLESS NOTED OTHERWISE.
3. PROVIDE DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS
4. MINIMUM WIRE SIZES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
   - BRANCH CIRCUITS - #12Cu
   - CORRIDOR LIGHTING AND RECEPTACLE CIRCUITS - #10Cu
   - EXTERIOR BUILDING LIGHTING CIRCUITS - #10Cu
   - EXTERIOR SITE LIGHTING CIRCUITS - #6Cu
5. EXTERIOR LIGHTING SHALL BE CONTROLLED THROUGH BUILDING LIGHTING CONTROL SYSTEM. PROVIDE SEPARATE ZONING FOR: BUILDING, SITE, AND SIGNAGE, UNLESS NOTED OTHERWISE. PROVIDE LIGHTING CONTACTORS AS REQUIRED.
6. COORDINATE EXACT DEVICE HEIGHTS AND LOCATIONS WITH FURNITURE LAYOUT AND ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
7. COORDINATE EQUIPMENT REQUIREMENTS (LOCATION, CONNECTION TYPE, CONTROLS, LOAD, VOLTAGE, ETC.) WITH SUPPLIER PRIOR TO EQUIPMENT ORDERING AND ROUGH-IN
8. PROVIDE ALL CONDUIT AND 120V CONTROL WIRING FOR EQUIPMENT, INCLUDING, BUT NOT LIMITED TO: HVAC SYSTEMS, GARAGE CO SENSORS, THERMOSTATS, ETC.
9. VERIFY EQUIPMENT CONNECTION TYPE (RECEPTACLE OR HARD-WIRED CONNECTION) WITH EQUIPMENT SUPPLIER, PRIOR TO ROUGH-IN, AND PROVIDE REQUIRED RECEPTACLE OR CONNECTION.
10. PROVIDE CONNECTIONS FROM FIRE SPRINKLER P.I.V., FLOW SWITCHES AND TAMPER SWITCHES TO FIRE ALARM SYSTEM. COORDINATE EXACT LOCATIONS AND QUANTITY REQUIRED WITH GENERAL CONTRACTOR AND SCHEDULING WITH UTILITY COMPANIES. VAULTS, TRENCHING, CONDUIT, HANDHOLES, PULLBOXES, ETC. AS REQUIRED BY SERVING UTILITIES
11. UTILITY CO. COORDINATION: CONTRACTOR IS RESPONSIBLE FOR INCOMING SERVICES TO BUILDING (POWER, TELEPHONE, FIBER OPTIC CABLE, AND CABLE TV). THIS INCLUDES, BUT IS NOT LIMITED TO: COORDINATION AND SCHEDULING WITH UTILITY COMPANIES. VAULTS, TRENCHING, CONDUIT, HANDHOLES, PULLBOXES, ETC. AS REQUIRED BY SERVING UTILITIES

## LIGHTING CONTROL SEQUENCE

| ROOM | ON | OFF | TIME-OUT SETTING | DAYLIGHT CNTRL (AUTO DIMMING) | MANUAL CONTROL | LTG ROOM CONTROLLER (SEE DETAIL) | PLUG-LOAD CONTROLLER (SEE DETAIL) | TIME BASED (RELAY PANEL) |
|---|---|---|---|---|---|---|---|---|
| PROCESS, MANUFACTURING, OUT BUILDING | PROGRAMMABLE TIME BASED W/ LOCAL MANUAL OVERRIDE | TIME BASED | — | PHOTO SENSOR | ON/OFF NON-DIM | YES | — | YES |
| WAREHOUSE | PROGRAMMABLE TIME BASED W/ LOCAL MANUAL OVERRIDE | TIME BASED | — | PHOTO SENSOR | ON/OFF NON-DIM | YES | — | YES |
| OFFICE, ADMIN AREAS, CONFERENCE RMS | CEILING VACANCY SENSOR | CEILING OCC SENSOR | 30 MIN | PHOTO SENSOR | 0-10V DIMMING | YES | YES | - |
| MAINTENANCE, TOOL STORAGE, REPAIR | CEILING VACANCY SENSOR | CEILING OCC SENSOR | 30 MIN | PHOTO SENSOR | 0-10V DIMMING | YES | YES | - |
| BATHROOMS | WALL COMBO SWITCH/OCC SENSOR | WALL COMBO SWITCH/OCC SENSOR | 30 MIN | - | WALL COMBO SW/OCC SENSOR | - | - | - |
| UTILITY, JANITOR, STORAGE, IT | WALL COMBO SWITCH/OCC SENSOR | WALL COMBO SWITCH/OCC SENSOR | 30 MIN | - | WALL COMBO SW/OCC SENSOR | - | - | - |
| MECHANICAL, COMPRESSOR, RISER, ELECTRICAL RMS | MANUAL WALL SWITCH (SAFETY) | MANUAL WALL SWITCH (SAFETY) | — | - | — | - | - | - |
| EXTERIOR BUILDING MOUNTED | PHOTOCEL-DUSK | PHOTOCEL-DAWN | - | - | OVERRIDE AT PANEL | - | - | YES |
| EXTERIOR SITE POLES | PHOTOCEL-DUSK | PHOTOCEL-DAWN | - | - | OVERRIDE AT PANEL | - | - | YES |

NOTES:
1. TIMECLOCK SHALL BE ACUITY CONTROLS BLUTOOK LT, OR APPROVED EQUAL. MINIMUM 16 RELAYS. PROVIDE LOCAL MANUAL OVERRIDE AT PANEL.
2. THE EXACT QUANTITY OF ROOM CONTROLLERS SHALL BE DETERMINED BY THE LIGHTING CONTROLS SUPPLIER TO MEET THE DESIGN INTENT.

## SHEET INDEX

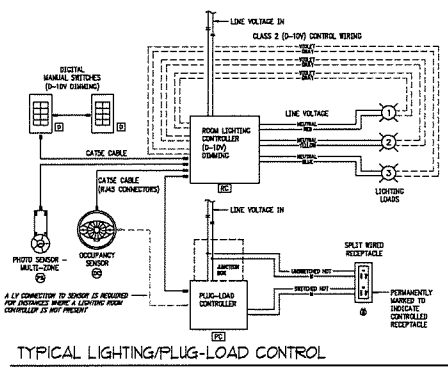

| | |
|---|---|
| E0.0 | COVER SHEET |
| E1.0 | SITE PLAN |
| E1.1 | SITE LIGHTING PLAN |
| E1.2 | WSDOT |
| E2.0 | LIGHTING PLAN – NORTH |
| E2.1 | LIGHTING PLAN – SOUTH |
| E2.2 | ENLARGED LIGHTING PLANS |
| E2.3 | ENLARGED LIGHTING PLANS |
| E3.0 | POWER PLAN – NORTH |
| E3.1 | POWER PLAN – SOUTH |
| E3.2 | ENLARGED POWER PLANS |
| E3.3 | ENLARGED POWER PLANS |
| E3.4 | POWER PLANS – EQUIPMENT LIST |
| E4.1 | OUT BUILDING ELECTRICAL PLAN |
| E5.0 | ONE-LINE DIAGRAM, LOAD SUMMARY |


## LIGHTING FIXTURE SCHEDULE

| TYPE | DESCRIPTION | LAMPS | MOUNTING | MANUFACTURER | VA |
|---|---|---|---|---|---|
| INDOOR | | | | | |
| F1 | 2X4 LED HIGH BAY | LED 10,000 LUMENS, 4000K | CEILING PENDANT MOUNTED. AIRCRAFT CABLE WAREHOUSE 20'-0" AFF. MANUFACTURING 27'-0" AFF. | LITHONIA: IBG LED HIGH BAY SERIES | 171 |
| F2 | 2X4 RECESSED FIXTURE | LED 5738 LUMENS, 4000K | CEILING, RECESSED | LITHONIA: 2VTL4 SERIES | 44 |
| F3 | 1X2 RECESSED FIXTURE | LED 3500K, 3838 LUMENS | RECESSED | LITHONIA: 2VTL2 SERIES | 29 |
| F4 | 6" ROUND LED DOWNLIGHT | LED 4000K 1500 LUMENS | CEILING, RECESSED | LITHONIA: LDR6 SERIES | 23 |
| F5 | 4' LONG DIRECT/INDIRECT LED PENDANT MOUNT FIXTURE | 4000K 850 LUMENS PER FOOT LED | PENDANT, 2' FROM BOTTOM OF CEILING | PINNACLE: UNIERO SERIES | 95 |
| F6 | 24" WIDE LED WALL MOUNT. WHITE ACRYLIC DIFFUSER, BRUSHED NICKEL FINISH. | LED 3100 LUMENS, 4000K | SURFACE, WALL | PADWALLER: SLTE LED SERIES | 23 |
| F7 | 4' WALL MOUNTED STAIRWELL FIXTURE, WITH EMERGENCY BATTERY PACK AND INTEGRAL OCCUPANCY SENSOR | LED 4000K, 3253 LUMENS | WALL | LITHONIA: WALA SERIES | 28 |
| F8 | 1'X4' SURFACE MOUNTED UTILITY LIGHT, LED | LED 758 LUMENS, 4500K | CEILING | LITHONIA: FMLWL SERIES | 40 |
| OUTDOOR | | | | | |
| S1 | LED POLE MOUNTED AREA LUMINAIRE, P2 FORWARD OPTICS, TYPE 5V MEDIUM LIGHT DISTRIBUTION, HOUSE SIDE SHIELD | LED 8768 LUMENT, 4000K | 25' SAYLIGHT STEEL POLE DN, 3' BASE | LITHONIA: DSX1 LED SERIES | 70 |
| S2 | LED WALL MOUNTED LUMINAIRE, FULL CUTOFF TO BE DARK SKY COMPLIANT | LED 3700 LUMENS, 4000K | WALL, SEE ARCH ELEVATIONS | LITHONIA: TWR2 LED SERIES | 73 |
| S3 | LED WALL MOUNTED LUMINAIRE, FULL CUTOFF TO BE DARK SKY COMPLIANT | LED 4470 LUMENS, 4000K | WALL, SEE ARCH ELEVATIONS | LITHONIA: TWR1 LED SERIES | 40 |
| EMERGENCY | | | | | |
| X1 | COMBINATION LED EXIT SIGN/EMERGENCY LIGHTING UNIT, WHITE THERMOPLASTIC HOUSING WITH GREEN LETTERING, UNIVERSAL MOUNT, 90-MINUTE BATTERY BACKUP. | LED | WALL/CEILING | LITHONIA: ECC SERIES | 2 |
| X2 | EMERGENCY LIGHTING UNIT W/ 90 MINUTE BATTERY | LED | WALL/CEILING | LITHONIA | 2 |

## HVAC EQUIPMENT CONNECTION SCHEDULE - SMALL UNIT

| EQUIPMENT | | | | | | | CONNECTION TYPE | | | | | | FEEDER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TAG | VOLTAGE | PH | HP | KW | FLA | MCA | DISC. FRAME | DISC. FUSE | COMBO | RECEPT. (NEMA) | MANUAL | CONN. ONLY | CONDUIT | WIRE (Cu) |
| EF-11 | 120 | 1 | 1/4 | - | - | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| EF-12 | 120 | 1 | 1/4 | - | - | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| EF-13 | 480 | 3 | 7.5 | - | - | - | 30 | 25 | - | - | - | - | 3/4" | 4#12, 1#12 GRID |
| EF-21 | 120 | 1 | - | 0.58 | - | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| EF-22 | 120 | 1 | - | 0.08 | - | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| GUH-1 | 120 | 1 | - | - | 1.9 | - | 30 | 15 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| GUH-2 | 120 | 1 | - | - | 1.9 | - | 30 | 15 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| GUH-3 | 120 | 1 | - | - | 1.9 | - | 30 | 15 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| GUH-4 | 120 | 1 | - | - | 1.9 | - | 30 | 15 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| HRV-11 | 120 | 1 | 0.4 | - | 3.3 | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| HRV-21 | 120 | 1 | 0.4 | - | 3.3 | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| HRV-22 | 120 | 1 | 0.4 | - | 3.3 | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| IAC-1 | 480 | 3 | 125.0 | - | - | 204 | 300 | 200 | - | - | - | - | 1-1/2" | 4#0, 1#6 GRID |
| IAC-2 | 480 | 3 | 125.0 | - | - | 204 | 300 | 200 | - | - | - | - | 1-1/2" | 4#0, 1#6 GRID |
| AD-1 | 460 | 3 | - | 3.42 | - | - | 30 | 15 | - | - | - | - | 3/4" | 4#12, 1#12 GRID |
| AD-2 | 460 | 3 | - | 3.42 | - | - | 30 | 15 | - | - | - | - | 3/4" | 4#12, 1#12 GRID |
| CC-11 | 208 | 1 | - | - | - | 0.34 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-12 | 208 | 1 | - | - | - | 0.09 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-16 | 208 | 1 | - | - | - | 0.27 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-17 | 208 | 1 | - | - | - | 0.32 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CU-11 | 208 | 1 | - | - | - | 19.75 | 30 | 25 | - | - | - | - | 3/4" | 3#10, 1#12 GRID |
| CC-13 | 208 | 1 | - | - | - | 0.09 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-14 | 208 | 1 | - | - | - | 0.09 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-15 | 208 | 1 | - | - | - | 0.03 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CU-12 | 208 | 1 | - | - | - | 19.75 | 30 | 25 | - | - | - | - | 3/4" | 3#10, 1#12 GRID |
| CC-21 | 208 | 1 | - | - | - | 0.11 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-22 | 208 | 1 | - | - | - | 0.11 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-23 | 208 | 1 | - | - | - | 0.32 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-27 | 208 | 1 | - | - | - | 0.11 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CU-21 | 208 | 1 | - | - | - | 23.5 | 30 | 25 | - | - | - | - | 3/4" | 3#10, 1#12 GRID |
| CC-24 | 208 | 1.0 | - | - | - | 0.27 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-25 | 208 | 1.0 | - | - | - | 0.27 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CC-26 | 208 | 1.0 | - | - | - | 0.32 | - | 20 | - | - | X | - | 3/4" | 3#12, 1#12 GRID |
| CU-22 | 208 | 1.0 | - | - | - | 23.5 | 30 | 25 | - | - | - | - | 3/4" | 3#10, 1#12 GRID |
| EWH-1 | 120 | 1.0 | - | 1.50 | - | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| EWH-2 | 120 | 1.0 | - | 1.50 | - | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| EWH-3 | 120 | 1.0 | - | 1.50 | - | - | - | 20 | - | - | X | - | 3/4" | 2#12, 1#12 GRID |
| PH-1 | 120 | 1.0 | - | - | - | 2.9 | 30 | 20 | - | - | - | - | 3/4" | 2#12, 1#12 GRID |
| FP-1 | 480 | 3.0 | 2.0 | - | - | 10 | 30 | 25 | - | - | - | - | 3/4" | 4#12, 1#12 GRID |
| WH-1 | 480 | 3.0 | - | 3.00 | - | - | 30 | 30 | - | - | - | - | 3/4" | 4#12, 1#12 GRID |
| WH-2 | 480 | 3.0 | - | 3.00 | - | - | 30 | 30 | - | - | - | - | 3/4" | 4#12, 1#12 GRID |
| DG-1001 | 208 | 1.0 | - | - | - | 10 | 30 | 15 | - | - | - | - | 3/4" | 3#12, 1#12 GRID |
| HRV-1 | 460 | 3.0 | 1.0 | - | 2.1 | - | 30 | 20 | - | - | - | - | 3/4" | 4#12, 1#12 GRID |
| IAC-3 | 480 | 3.0 | - | - | - | 51 | 110 | 80 | - | - | - | - | 1-1/2" | 4#6, 1#10 GRID |




NOTE:
THE ROOM LIGHTING/PLUG LOAD CONTROLLERS AND DIGITAL SWITCH CONFIGURATION SHALL BE DETERMINED BY THE LIGHTING CONTROLS SUPPLIER TO MEET THE INTENT SHOWN ON THE DRAWINGS, THE LIGHTING CONTROL SEQUENCE, AND AS REQUIRED BY CODE – PRIOR TO BID.

## TYPICAL LIGHTING/PLUG-LOAD CONTROL

SCALE: NOT TO SCALE


KING ARCHITECTURE

PACIFIC FERN BUSINESS PARK

GRANDE WEST

Electrical Consultants, Inc.
19015 36th Avenue West, Suite E
Lynnwood, Washington 98036
Phone (425) 775-1799 FAX (425) 774-9870


DESIGN DEVELOPMENT

25 May 21

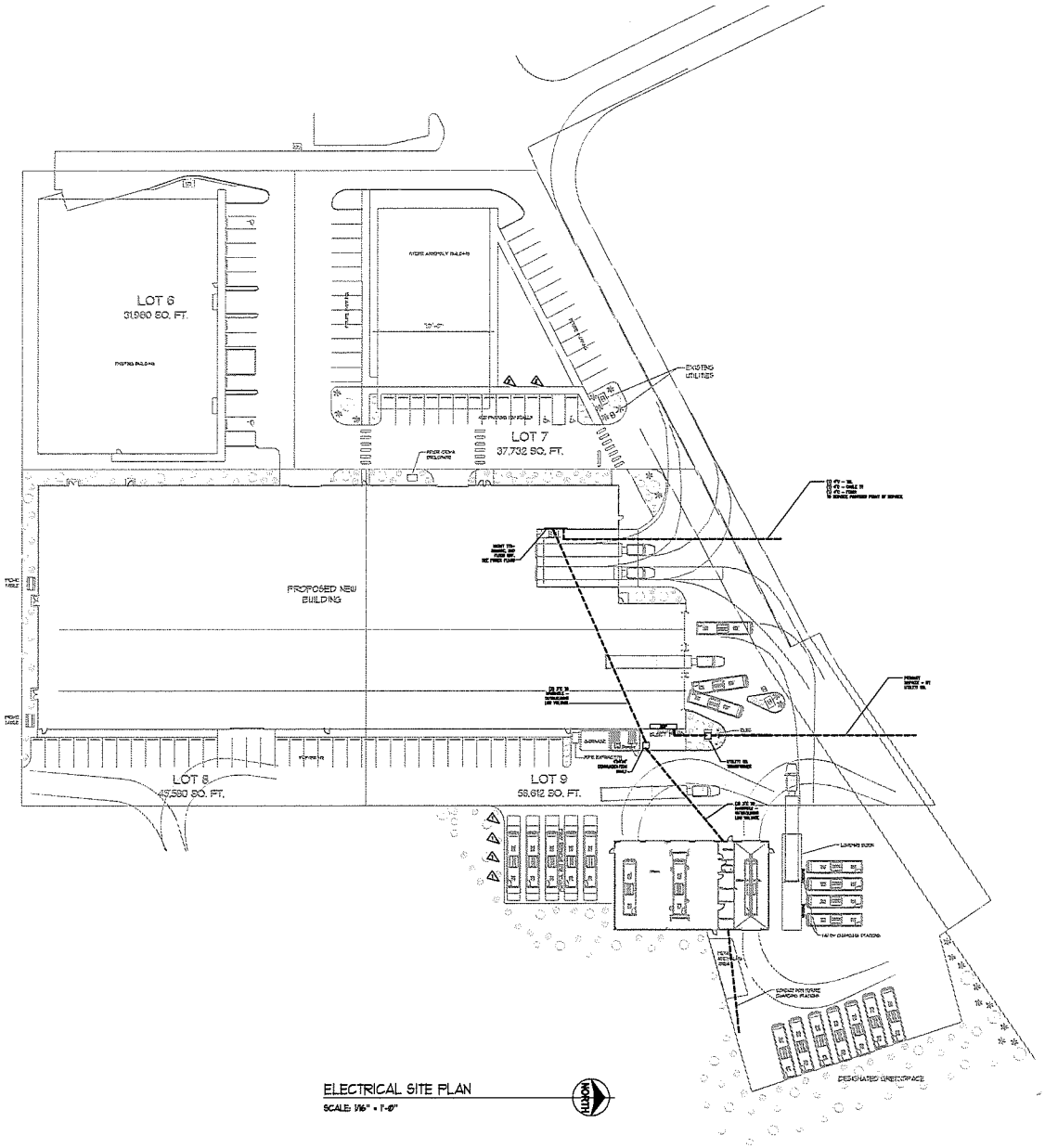
ISSUE:
DATE ISSUED:

| REVISIONS | | |
|---|---|---|
| NO | DATE | ISSUE |

# ELECTRICAL COVER SHEET

PERMIT SET, 6/18/21

# E0.0




ELECTRICAL SITE PLAN

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

NORTH

## DETAIL NOTES

1. HIGH SPEED 480V, 3PH ELECTRIC VEHICLE CHARGING STATION (EVSE)
2. TYPE 2, 208V, 1PH ELECTRIC VEHICLE CHARGING STATION (EVSE)

KING ARCHITECTURE

KING ARCHITECTURE, LLC
[illegible]
[illegible]
[illegible]

King Architecture LLC is not responsible for safety programs, methods and procedures of construction, or the construction of the design shown on these drawings. These drawings are for use on this project only and are not intended for re-use without written approval. Drawings are not to be used in any manner that might damage a personnel or facility identity or authority to King Architecture.

© COPYRIGHT 2021

If the drawings known to be less than 12 x 18 inches in size, it has been reduced and may be not drawn accurately. Contractor must verify and be responsible for all dimensions and conditions on the job. King Architecture is to be notified of any variations from the dimensions and conditions shown on these drawings, or discrepancies found between the drawings, specifications, etc. are to be reported to King Architecture for review prior to fabrication and/or installation.

PACIFIC FERN BUSINESS PARK

GRANDE WEST

AWA

Electrical Consultants, Inc.
19013 36th Avenue West, Suite E
Lynnwood, Washington 98036
Phone (425) 775-1799 FAX (425) 774-9870

DESIGN DEVELOPMENT

26 May 21

ISSUE
DATE ISSUED

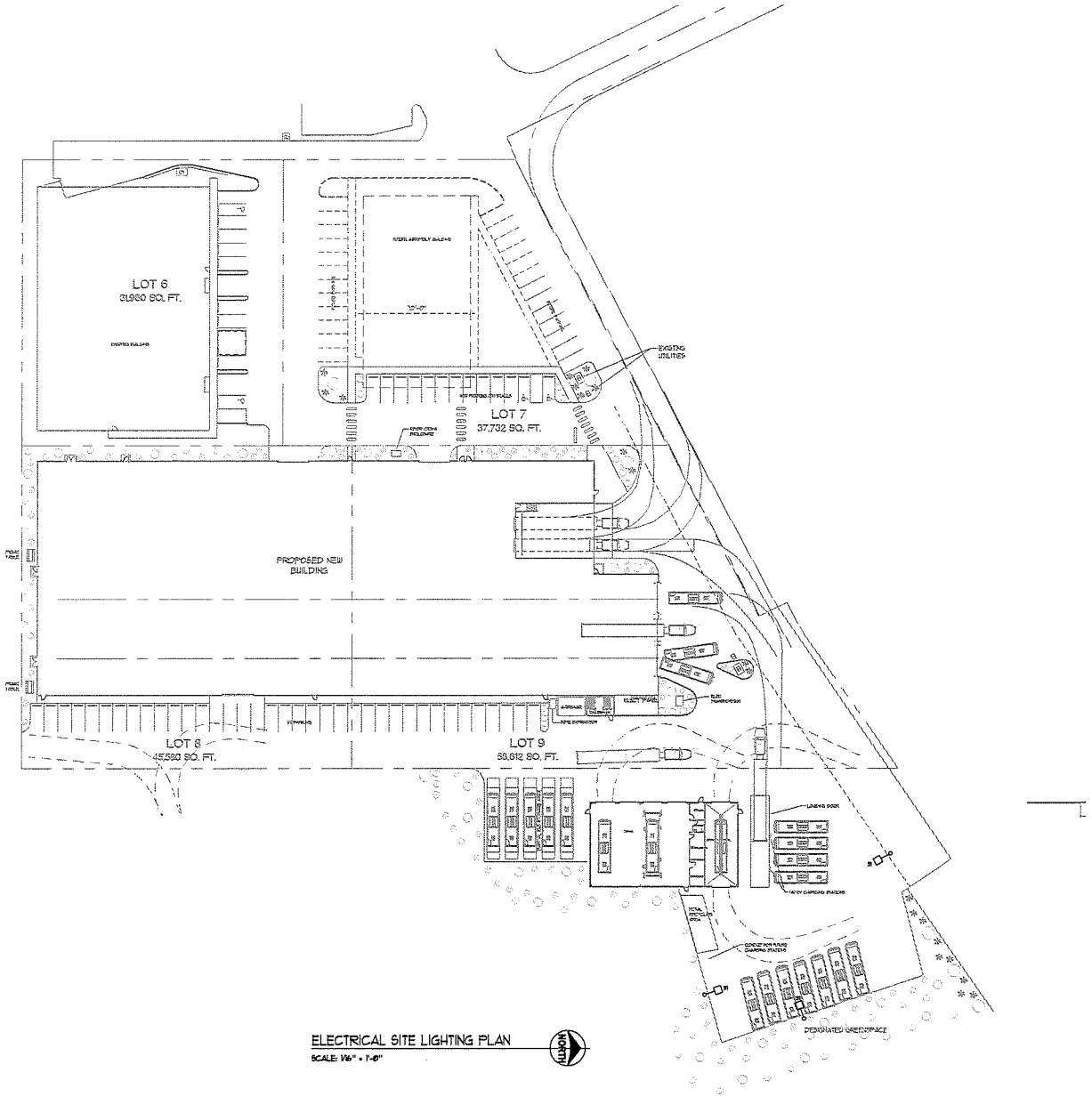
| REVISIONS | | |
|---|---|---|
| NO | DATE | ISSUE |
| | | |
| | | |
| | | |
| | | |
| | | |

# ELECTRICAL SITE PLAN

PERMIT SET, 6/18/21

PROJECT NO.
SCALE
DRAWN BY
DATE

E1.0




ELECTRICAL SITE LIGHTING PLAN

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

NORTH

PERMIT SET, 6/18/21

KING ARCHITECTURE

KING ARCHITECTURE LLC
651 NORTH AVENUE, SUITE 100
BELLINGHAM, WA 98225
T 360.671.8844
E info@kingarchitecture.com

King Architecture LLC is not responsible for safety precautions, methods and procedures of operations, or the construction of the design shown on these drawings. Drawings are for use on this project only and may not be changed for work without written approval. Drawings are not to be used in any manner that might constitute a detriment to King Architecture.

© COPYRIGHT 2021

If the drawing image is less than 22" x 34" (ARCH D), it has been reduced from full size. Contractor shall verify and be responsible for all dimensions and conditions on the job. King Architecture is to be notified of any variations from the dimensions and conditions shown on the drawings. Specifications, schedules, shop drawings, etc. are to be submitted to King Architecture for review prior to fabrication and/or installation.

PACIFIC FERN BUSINESS PARK

GRANDE WEST

AWA

Electrical Consultants, Inc.
19015 36th Avenue West, Suite E
Lynnwood, Washington 98036
Phone (425) 775-1799 FAX (425) 774-9830

DESIGN DEVELOPMENT

26 July 21

ISSUE
DATE ISSUED

| REVISIONS | | |
|---|---|---|
| NO | DATE | ISSUE |
| | | |
| | | |
| | | |
| | | |
| | | |

# ELECTRICAL SITE LIGHTING PLAN

PROJECT NO
SCALE
DRAWN BY
FILE

E1.1

## LIGHTING COMPLIANCE SUMMARY

2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

Administered by: ©2021 NELA. All rights reserved

| | | | |
|---|---|---|---|
| Project & Applicant Information | Project Title | Pacific Fern Business Park Grande West - 2018 WSEC | For Building Department Use: Date: Jun 15, 2021 |
| | Project Address | 5455 Pacific Fern Dr Ferndale, WA 98248 | |
| | Applicant Name | Lance Dorne | |
| | Applicant Phone | 425.775.1790 | |
| | Applicant Email | lance@ewnlla.com | |

For questions about this report, contact WSEC Commercial Technical Support at 360.956.2185 or via email at com.techsupport@energycode.com

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| General Occupancy | All Commercial | General Building Use Type | | Manufacturing Facility | Building Cond. Floor Area | 45,707 |
| General Project Type | New Building / Addition / Lighting Scope | Interior Lighting / Exterior Lighting | Alteration Lighting Scope | | Project Cond. Floor Area | 62,275 |
| | | | | | Floors Above Grade | 3 |
| | | | | | Compliance Method | Compliance Method 1 - General |
| Lighting Project Description | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Lighting Compliance Scope and Method | Project Type | Interior / Exterior (interior includes both interior & parking) | Luminaire Replacement Scope | Compliance Method | LPA Calculation Adjustment | Compliance Verification |
| | New Building | Interior Lighting | | Building area | Reduced lighting power density option | COMPLIES |
| | New Building | Exterior Lighting | | | Not applicable to exterior | COMPLIES |
| Additional Efficiency Options Included | Reduced lighting power density credit | | | | | |

| Project Title | Pacific Fern Business Park Grande West - 2018 WSEC | Date | Jun 15, 2021 |
|---|---|---|---|
| Lighting Power Calculation | NEW BUILDING - INTERIOR LIGHTING | Compliance Verification | COMPLIES |
| Compliance Method | Building area | LPA Calculation Adjustment | LPA x 0.8 |

Interior Lighting Power Allowance - Building Area

| Building Area | Gross Interior Area (ft2) | LPA (Watts/ft2) | Total Watts Allowed (W = LPA x GA) | Total Proposed Watts By Building Area | Compliance Status by Building Area |
|---|---|---|---|---|---|
| Manufacturing facility | 30,871 | 0.87 | 26,955 | 22,500 | COMPLIES |
| Office | 9,186 | 0.64 | 5,882 | 2,295 | COMPLIES |
| Warehouse | 12,440 | 0.40 | 4,981 | 4,930 | COMPLIES |
| Workshop | 1,454 | 0.91 | 1,324 | 865 | COMPLIES |

Proposed Lighting Power Details

| Fixture Type/Application | Fixture ID | Building Area | New or Existing-to-Remain | Quantity of Fixtures, CLIs or Luminaires (#) | Watts per Fixture, CLIs or Luminaire (W/pc) | Total Linear Feet (LF) | Watts per Linear Foot (W/pc/LF) | Total Watts Proposed (#F x W/pc) or (LF x W/pc/LF) |
|---|---|---|---|---|---|---|---|---|
| Individual Fixtures | | | | | | | | |
| Recessed downlight | F2 | Office | New | 23 | 44 | | | 1,012 |
| Recessed downlight | F4 | Office | New | 24 | 21 | | | 504 |
| Recessed downlight | F3 | Office | New | 6 | 29 | | | 174 |
| Suspended | F1 | Manufacturing facility | New | 150 | 150 | | | 22,500 |
| Suspended | F1 | Warehouse | New | 29 | 170 | | | 4,930 |
| Suspended | F5 | Office | New | 7 | 95 | | | 665 |
| Suspended | F5 | Workshop | New | 7 | 95 | | | 665 |
| Wall-mounted | F6 | Office | New | 8 | 25 | | | 150 |
| Wall-mounted | F7 | Office | New | 2 | 38 | | | 76 |

| Project Title | Pacific Fern Business Park Grande West - 2018 WSEC | Date | Jun 15, 2021 |
|---|---|---|---|

Proposed Fixtures Details — NEW BUILDING - INTERIOR LIGHTING

| Fixture Type/Application | Fixture ID | Luminaire in Documents | Lamp Type | Building Area | New or Existing-to-Remain |
|---|---|---|---|---|---|
| Individual Fixtures | | | | | |
| Recessed downlight | F2 | F2 0 THRU 1 1 1 | LED | Office | New |
| | Fixture Description: 2'x4' RECESSED DOWNLIGHT | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |
| Recessed downlight | F4 | 3 2 F 0 THRU 2 2 1 | LED | Office | New |
| | Fixture Description: 4" RECESSED DOWNLIGHT | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |
| Recessed downlight | F3 | 8 2 F 0 THRU 2 2 1 | LED | Office | New |
| | Fixture Description: 2'x2' RECESSED DOWNLIGHT | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |
| Suspended | F1 | 8 2 F 0 THRU 1 3 1 | LED | Manufacturing facility | New |
| | Fixture Description: 2'x4' THRU DIAS | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |
| Suspended | F1 | 8 2 F 0 THRU 2 | LED | Warehouse | New |
| | Fixture Description: 2'x4' THRU DIAS | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |
| Suspended | F5 | 8 2 F 0 THRU 2 2 1 | LED | Office | New |
| | Fixture Description: 4' DIRECT INDIRECT PENDANT | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |
| Suspended | F5 | 8 2 F 0 THRU 2 2 1 | LED | Workshop | New |
| | Fixture Description: 4' DIRECT INDIRECT PENDANT | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |
| Wall-mounted | F6 | 8 2 F 0 THRU 2 2 1 | LED | Office | New |
| | Fixture Description: 24" WALL MOUNTED VANITY LIGHT | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |
| Wall-mounted | F7 | 8 2 F 0 THRU 2 2 1 | LED | Office | New |
| | Fixture Description: 48" WALL MOUNTED STAIRWELL LIGHT | | | Are these fixtures located within a daylight zone? No | |
| | On these fixtures require specific application lighting controls? None required | | | | |

| Project Title | Pacific Fern Business Park Grande West - 2018 WSEC | Date | Jun 15, 2021 |
|---|---|---|---|
| Lighting Power Calculation | NEW BUILDING - EXTERIOR LIGHTING | Compliance Verification | COMPLIES |
| Exterior Lighting Zone | ZONE 3 | Base Site Allowance | 500 |

Exterior Tradable Lighting Power Allowance

| Tradable Surface | Tradable Surface Sub-Type | Surface Area (ft2) | LPA (Watts/ft2) | Linear Feet (LF) | LPA (Watts/LF) | Total Watts Allowed (LPA x SF) or (LPA x LF) | Total Tradable Proposed Watts | Tradable Compliance Status |
|---|---|---|---|---|---|---|---|---|
| Building entrances and exits | Loading dock | 330 | 0.15 | | | 49.50 | | |
| Building entrances and exits | Projection entrances & exits | | | 828 | 21 | 17,388 | | |
| Building entrances and exits | Vehicular entrances & exits | | | 3,776 | 21 | 79,296 | | |
| Unroofed parking areas and drives | | 87,732 | 0.06 | | | 5,264 | | |
| | | | | | Base Site Allowance | 500 | | |
| | | | | | Totals | 99,600 | 2,002 | COMPLIES |

Proposed Tradable Lighting Power Density

| Fixture Type | Fixture ID | Tradable Surface Type | Quantity of Fixtures (#) | Watts or Wattage Limit per Fixture (W/pc) | Total Linear Feet (LF) | Watts per Linear Foot (W/pc/LF) | Total Watts Proposed (#F x W/pc) or (LF x W/pc/LF) |
|---|---|---|---|---|---|---|---|
| Individual Fixtures | | | | | | | |
| Pole-mounted | A1 | Unroofed parking areas and drives | 6 | 70 | | | 360 |
| Wall-mounted | A2 | Building entrances and exits - Pedestrian entrances & exits | 16 | 11 | | | 176 |
| Wall-mounted | A2 | Building entrances and exits - Vehicular entrances & exits | 9 | 17 | | | 153 |
| Wall-mounted | A2 | Building entrances and exits - Loading dock | 2 | 75 | | | 150 |
| | | | | | | Tradable Proposed Total | 2002 |

WASHINGTON STATE ENERGY CODE

SCALE: NONE

KING ARCHITECTURE

KING ARCHITECTURE LLC
401 NORTH AVENUE, SUITE 100
BELLINGHAM, WA 98225
V 360.647.8484 x19
E lee@kingarchitecture.com

King Architecture LLC is not responsible for safety programs, methods and procedures of workmen, or the construction of the design shown on these drawings. Drawings are for use in this project only and not intended for other work without written consent. Drawings are not to be used in any manner that would constitute a detriment or liability directly or indirectly to King Architecture
© COPYRIGHT 2020
If this drawing image is less than 22 1/2" x 34 1/2", it has been reduced and must be scaled accordingly. King Architecture is not responsible for all dimensions and conditions on the job. King Architecture is to be notified of any variations from the dimensions and conditions shown on this drawings, or discrepancies in the drawings, specifications, shop drawings, etc. prior to the submittal to King Architecture for review and/or notification.

PACIFIC FERN BUSINESS PARK

GRANDE WEST

Electrical Consultants, Inc.
19015 26th Avenue West, Suite E
Lynnwood, Washington 98036
Phone (425) 775-1790 FAX (425) 774-9670

DESIGN DEVELOPMENT

25 May 21

ISSUE:
DATE ISSUED:

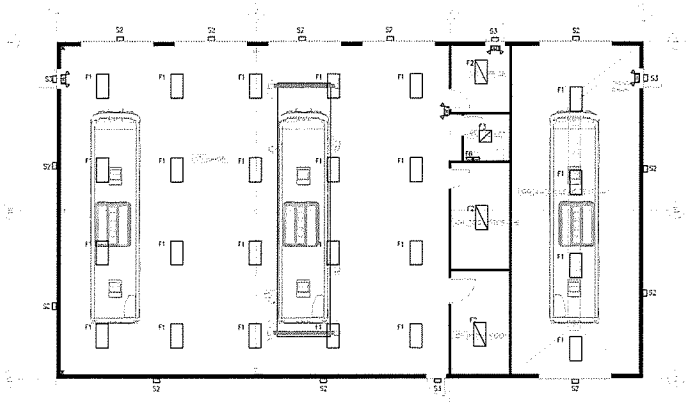
| REVISIONS | | |
|---|---|---|
| NO | DATE | ISSUE |
| | | |
| | | |
| | | |
| | | |
| | | |

# WASHINGTON STATE ENERGY CODE

PERMIT SET, 6/18/21

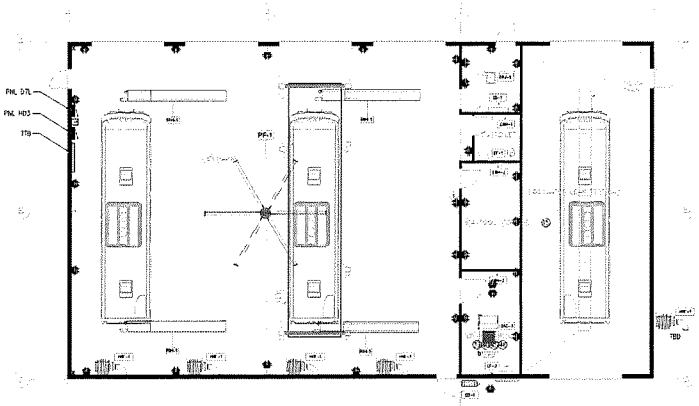
PROJECT NO:
SCALE:
DRAWN BY:
FILE:

E1.2



LIGHTING PLAN - OUTBUILDING

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




POWER PLAN - OUTBUILDING

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

KING ARCHITECTURE

KING ARCHITECTURE, LLC.

PACIFIC FERN BUSINESS PARK

GRANDE WEST

Electrical Consultants, Inc.
19015 36th Avenue West, Suite E
Lynnwood, Washington 98036
Phone (425) 775-1799 FAX (425) 774-9870

DESIGN DEVELOPMENT

25 May 21

ISSUED:
DATE ISSUED:

| REVISIONS | | |
|---|---|---|
| NO | DATE | ISSUE |
| | | |
| | | |
| | | |
| | | |
| | | |

# ELECTRICAL PLAN - OUT BUILDING

PERMIT SET, 6/18/21

PROJECT NO
SCALE
DRAWN BY
FILE

# E4.1