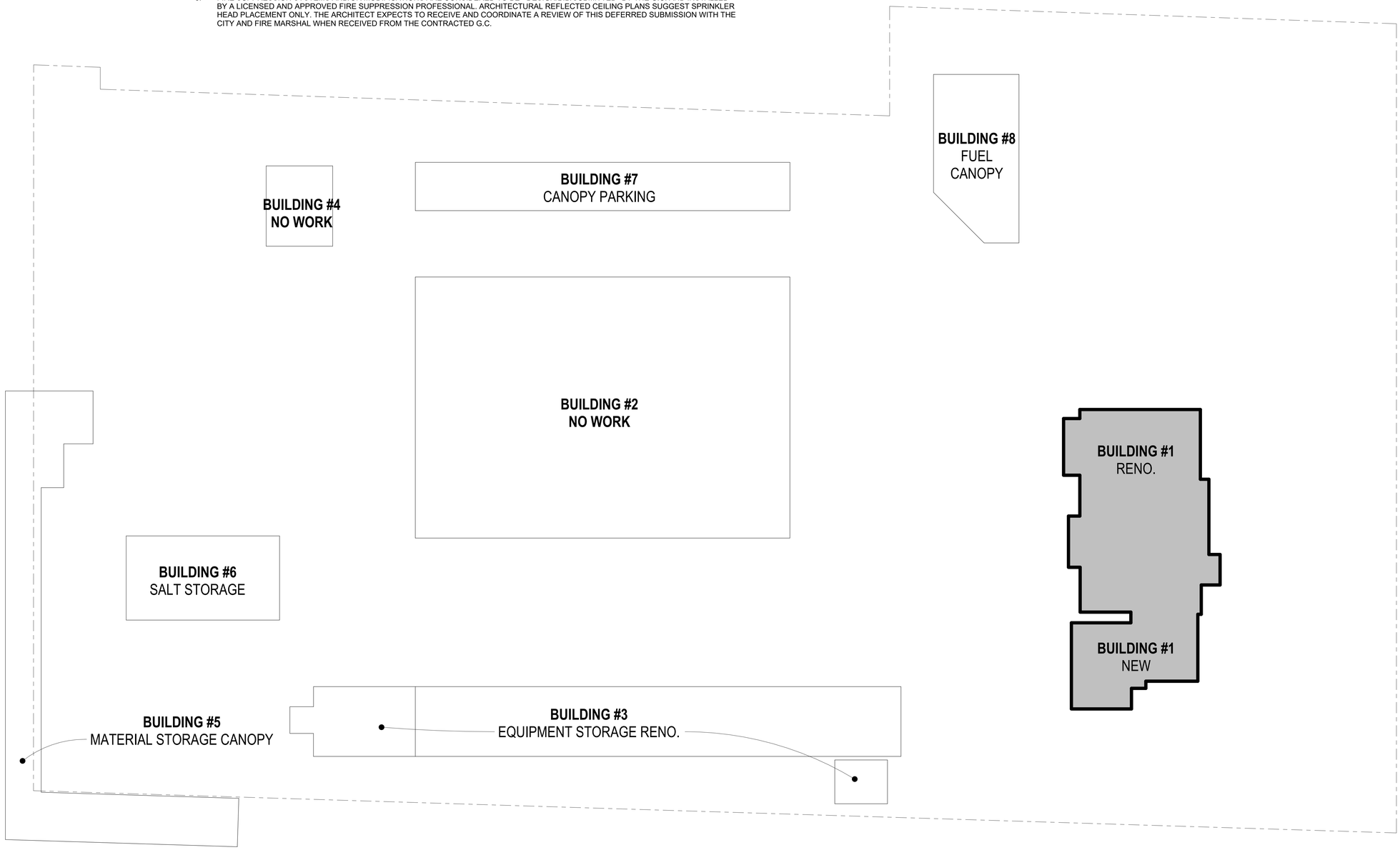
SEATAC MAINTENANCE FACILITY

PERMIT SET

PROJECT SCOPE NOTES:

1. THE DOCUMENTS HAVE BEEN SEPARATED INTO (8) SECTIONS FOR EACH OF THE (8) STRUCTURES. EACH ARCHITECTURAL SECTION AND CORRESPONDING SHEETS DENOTE BUILDING NUMBER(S). PROJECT INFORMATION SHEET(S) T0.1 LISTS THE DRAWINGS FOR SUPPORTING DISCIPLINES. WHILE EACH BUILDING HAS ITS OWN INFORMATION, THE SITE PLAN SCOPE FOR ALL DISCIPLINES REMAINS THE SAME AND IS UN-ALTERED REGARDLESS OF THE REPETITIVE SITE PLAN SHEETS.
2. CIVIL AND LANDSCAPE SCOPE APPEARS ONE TIME PRECEEDING BUILDING SHEETS.
3. BUILDING #1 (RENO + NEW) AND A MINOR PORTION OF BUILDING #3 ARE CONDITIONED SPACES. BUILDING #2 SCOPE IS LIMITED TO MEP WORK ONLY. THERE IS NO WORK FOR BUILDING #4. (IT IS LISTED FOR CLARITY OF SCOPE EXTENTS ONLY.) BUILDING #5, #6, #7 AND #8 ARE UNCONDITIONED SPACES – OPEN – TO – AIR STRUCTURES.
4. ENERGY CODE ANAYSIS DETAILED ON EITHER SHEETS T0.2 OR T0.3 FOCUSES ON OCCUPIED CONDITIONED SPACES. UNOCCUPIED STRUCTURES ARE NOT ANALYZED.
5. FIRE SUPPRESSION SYSTEMS AND/OR MODIFICATIONS ARE CONSIDERED TO BE "DESIGN/BID/SUBMITTED" BY THE G.C. AND INSTALLED BY A LICENSED AND APPROVED FIRE SUPPRESSION PROFESSIONAL. ARCHITECTURAL REFLECTED CEILING PLANS SUGGEST SPRINKLER HEAD PLACEMENT ONLY. THE ARCHITECT EXPECTS TO RECEIVE AND COORDINATE A REVIEW OF THIS DEFERRED SUBMISSION WITH THE CITY AND FIRE MARSHAL WHEN RECEIVED FROM THE CONTRACTED G.C.



a|r|c
architecture resource | collaborative
119 MAIN ST, STE #200
SEATTLE, WA 98104-2579
(206) 322-3322

10135 REGISTERED ARCHITECT
JEFFREY JOSEPH WAINDASIEWICZ
STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY
2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:
COVER SHEET

SCALE: 12" = 1'-0"
DRAWN: Author
CHECKED: Checker
PROJECT NO: 2022026

BUILDING: 1
SHEET: T0.0

SEATAC MAINTENANCE FACILITY

PERMIT SET

VICINITY MAP

SeaTac Maintenance
Tyee High School
Valley Ridge Park
Angle Lake Park
Angle Lake Elementary School
Madrona Elementary School
Bow Lake Elementary School
Bow Lake
Bow Lake Park
Bow Lake Park & Ride
Bow Lake Transit Center
Bow Lake Business Park
Bow Lake Corporate Center
Bow Lake Corporate Park
Bow Lake Corporate Plaza
Bow Lake Corporate Square
Bow Lake Corporate Square II
Bow Lake Corporate Square III
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Bow Lake Corporate Square V
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Bow Lake Corporate Square DCCCI
Bow Lake Corporate Square DCCCII
Bow Lake Corporate Square DCCCIII
Bow Lake Corporate Square DCCCIV
Bow Lake Corporate Square DCCCV
Bow Lake Corporate Square DCCCVI
Bow Lake Corporate Square DCCCVII
Bow Lake Corporate Square DCCCVIII
Bow Lake Corporate Square DCCCIX
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Bow Lake Corporate Square DCCCXXXVIII
Bow Lake Corporate Square DCCCXXXIX
Bow Lake Corporate Square DCCCXL
Bow Lake Corporate Square DCCCXLI
Bow Lake Corporate Square DCCCXLII
Bow Lake Corporate Square DCCCXLIII
Bow Lake Corporate Square DCCCXLIV
Bow Lake Corporate Square DCCCXLV
Bow Lake Corporate Square DCCCXLVI
Bow Lake Corporate Square DCCCXLVII
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Bow Lake Corporate Square DCCCLII
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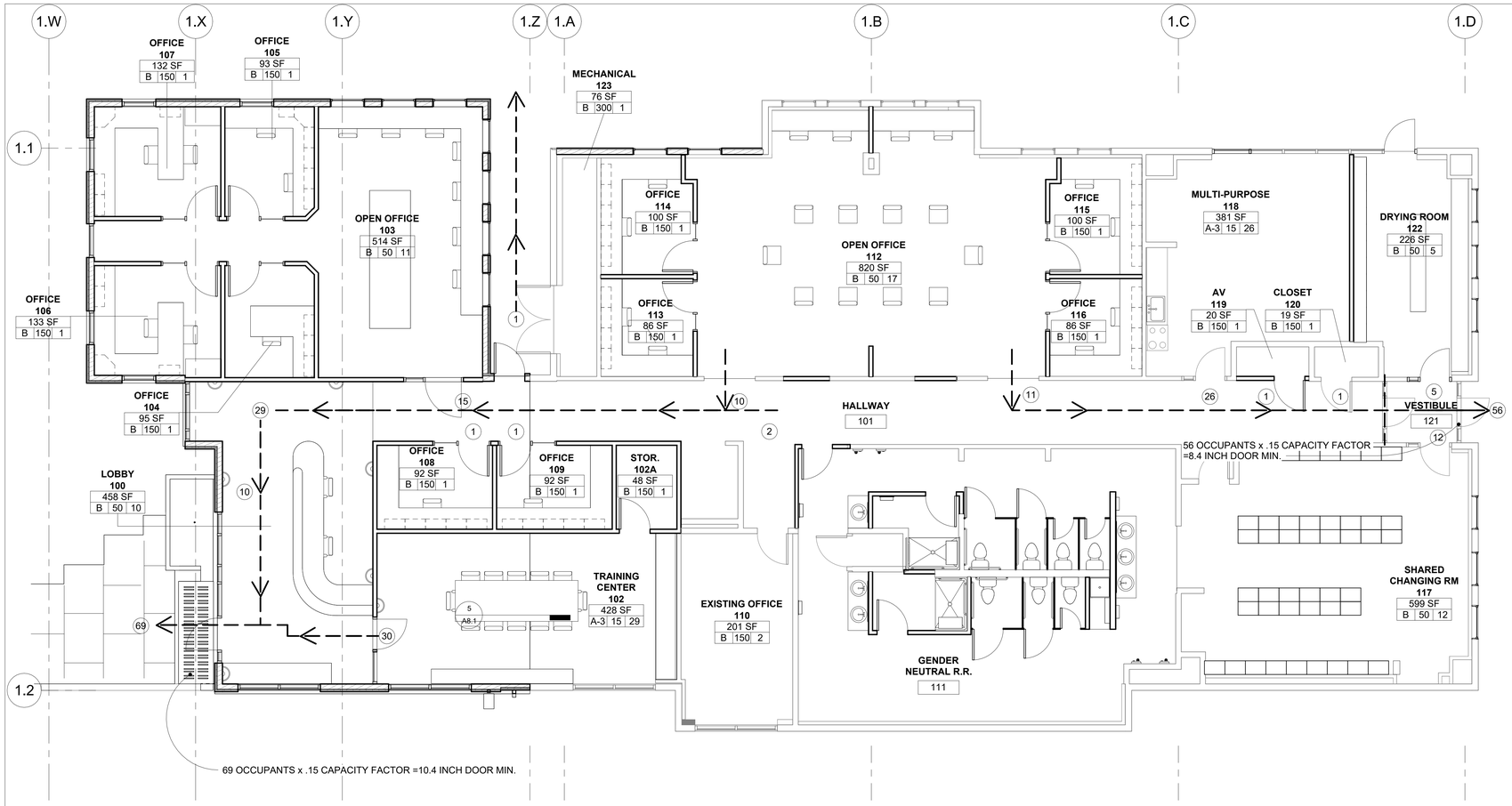


1 BLDG #1 - LEVEL 1 - LIFE SAFETY
3/16" = 1'-0"

CHAPTER 9 - FIRE PROTECTION AND LIFE SAFETY SYSTEMS
Section 903 – Automatic Sprinkler Systems
903.3.1 NFPA 13 Sprinkler systems. Sprinkler systems shall be designed and installed installed throughout in accordance with NFPA 13

Section 906 - Portable Fire Extinguishers
906.1 Where required. Portable fire extinguishers shall be installed in all the following locations:
1. In Group A, B, and S occupancies.

906.3 Fire Extinguishers - maximum travel distance 75 feet

907 Fire Alarm and Detection Systems
907.2.1 Group A. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more, or where the Group A occupant load is more than 100 persons above or below the *lowest level of exit discharge*. Group A occupancies not separated from one another in accordance with Section 707.3.10 shall be considered as a single occupancy for the purposes of applying this section.
Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.
907.2.2 Group B. A manual fire alarm system shall be installed in Group B occupancies where one of the following conditions exists:
1. The combined Group B *occupant load* of all floors is 500 or more.
2. The Group B *occupant load* is more than 100 persons above or below the lowest *level of exit discharge*.
3. The *fire area* contains an ambulatory care facility.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

CHAPTER 10 – MEANS OF EGRESS
Section 1004 – Occupant Load
Table 1004.5 Maximum Floor Area Allowances per Occupant
Locker Rooms: 50 gross
Assembly - Unconcentrated (tables and chairs): 15 net sf
Business areas: 150 gross
Business areas - Concentrated: 50 gross

Section 1005 - Means of Egress Sizing
1005.3.2 Other egress components. The capacity, in inches, of *means of egress* components other than *stairways* shall be calculated by multiplying the *occupant load* served by such component by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant.
Exceptions:
1. For other than Group H and I-2 occupancies, the capacity, in inches, of *means of egress components* other than *stairways* shall be calculated by multiplying the *occupant load* served by such component by a means of egress capacity factor of 0.15 inch (3.8 mm) per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an *emergency voice/ alarm communication* system in accordance with Section 907.5.2.2.

Section 1006 - Number of Exits and Exit Access Doorways
Section 1006.2.1 - Egress based on occupant load and common path of egress travel distance. Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1.
A Maximum occupant load of space = 49 and maximum common path of travel is 75 feet.
B Maximum occupant load of space = 49 and maximum common path of travel is 100 feet.
S Maximum occupant load of space = 29 and maximum common path of travel is 100 feet.

Section 1008 - Means of Egress Illumination
1008.1 Means of egress illumination. Illumination shall be provided at every point in the means of egress in accordance with Section 1008.2. Under emergency power, means of egress illumination shall comply with Section 1008.3.

Section 1009 – Accessible Means of Egress
1009.1 Accessible means of egress required. Accessible spaces shall be provided with not less than one accessible means of egress.

1009.6.4 Separation
Each area of refuge shall be separated from the remainder of the story by a smoke barrier complying with Section 709 or a horizontal exit complying with Section 1026. Each area of refuge shall be designed to minimize the intrusion of smoke.

Section 1010 - Doors, Gates and Turnstiles
1010.1.1 Size of doors. The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear opening width of 32 inches.

1017.2 Limitations
Exit access travel distance shall not exceed the value given in Table 1017.2
Occupancy - A : with Sprinkler System - 250 feet.
Occupancy - B : with Sprinkler System - 300 feet.
Occupancy - S-2 : with Sprinkler System - 400 feet.

1020.1 Table - Corridor Fire Resistance Rating A - 0 hr with fire sprinklers
B - 0 hr with fire sprinklers
S - 0 hr with fire sprinklers

1020.5 Dead Ends
Where more than one exit or exit access doorway is required, the exit access shall be arranged such that dead-end corridors do not exceed 20 feet (6096 mm) in length.
Exceptions:
1. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15 240 mm).

1020.7 Corridor Continuity
Fire-resistance-rated corridors shall be continuous from the point of entry to an exit, and shall not be interrupted by intervening rooms. Where the path of egress travel within a fire-resistance-rated corridor to the exit includes travel along unenclosed exit access stairways or ramps, the fire-resistance rating shall be continuous for the length of the stairway or ramp and for the length of the connecting corridor on the adjacent floor leading to the exit.
Exceptions:
1. Foyers, lobbies or reception rooms constructed as required for corridors shall not be construed as intervening rooms.

Section 1028 - Exit Discharge
1028.1 General. Exits shall discharge directly to the exterior of the building.
Exceptions:
1. Not more than 50 percent of the number and minimum width or required capacity of interior exit stairways and ramps is permitted to egress through areas on the level of discharge provided that all of the following conditions are met:
1.1. Discharge of interior exit stairs and ramps shall be provided with a free and unobstructed path of travel to an exterior exit door and such exit is readily visible and identifiable from the point of termination of the enclosure.
1.2. The entire area of the level of exit discharge is separated from areas below by construction conforming to the fire-resistance rating for the enclosure.

EXIT PLAN NOTES:

1. SEE FLOOR PLANS (A2 SHEETS) FOR MORE INFORMATION.
2. SEE ELEC. PLANS FOR EXIT SIGNAGE LOCATIONS.
3. REFER TO A7.0 ASSEMBLIES FOR MORE INFORMATION ON RATED ASSEMBLIES.

EXIT PLAN LEGEND:

EXIT PATH
1-HR RATED ASSEMBLY
2-HR RATED ASSEMBLY
3-HR RATED ASSEMBLY

TAG LEGEND:

ROOM NAME
ROOM #

AREA		
OCC. CLASS.	AREA PER OCC.	OCC.

a|r|c architecture resource collaborative
119 MAIN ST, STE #200
SEATTLE, WA 98104-2579
(206) 322-3322

10135 REGISTERED ARCHITECT
JEFFREY JOSEPH WAINDASIEWICZ
STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

LIFE SAFETY PLAN

SCALE: **As indicated**
DRAWN: **AW/GD**
CHECKED: **DWP**
PROJECT NO: 2022026

BUILDING: **1**
SHEET: **T0.2**

WA STATE BUILDING CODE NOTES

BUILDING CODE SUMMARY:

BLDG #1 ADMINISTRATIVE BUILDING (ADDITION):
B Occupancy

TOTAL GROSS FIRST FLOOR = 2,052 SF ADDITION (Sprinklered)
TOTAL GROSS FIRST FLOOR REMODEL = 2,836 SF EXISTING (Sprinklered)
TOTAL GROSS ATTIC = 1,390 SF EXISTING (Sprinklered)

BLDG #2 MAINTENANCE BUILDING (EXISTING):
B Occupancy

BLDG #3 MISCELLANEOUS STORAGE (RENOVATION):
S-2 Occupancy

TOTAL GROSS FIRST FLOOR = 1,548 SF EXISTING (NEWLY ENCLOSED AREA) (Sprinklered)

BLDG #4 DECANTING CANOPY (EXISTING):
S-2 Occupancy

BLDG #5 MATERIAL STORAGE CANOPY (NEW CONSTRUCTION):
S-2 Occupancy

TOTAL GROSS FLOOR = 6,095 SF NEW CONSTRUCTION (Non-Sprinklered)

BLDG #6 (NEW CONSTRUCTION):
S-2 Occupancy

TOTAL GROSS FLOOR = 2,420 SF NEW CONSTRUCTION (Sprinklered)

BLDG #7 CANOPY PARKING (NEW CONSTRUCTION):
S-2 Occupancy

TOTAL GROSS FLOOR = 3,760 SF NEW CONSTRUCTION (Non-Sprinklered)

BLDG #8 FUEL CANOPY (NEW CONSTRUCTION):
S-2 Occupancy

TOTAL GROSS FLOOR = 2,739 SF NEW CONSTRUCTION (Non-Sprinklered)

BUILDING CODE SUMMARY:

Chapter 3 – Use and Occupancy

304.1 Business B for office spaces and training spaces
311.2 Moderate-Hazard Storage S-2 for small-equipment storage and salt storage

Chapter 5 – Building Heights and Area
504.2 Mixed Occupancy. In a building containing mixed occupancies in accordance with Section 508, no individual occupancy shall exceed the height and number of story limits specified in this section for the applicable occupancies.

Table 504.3 Allowable Height above grade plane
B = Type VB (sprinklered) = 60 feet
S-2 = Type VB (unsprinklered) = 40 feet

Table 504.4 Allowable Stories above grade plane
B = Type VB = 3 stories
S-2 = Type VB = 3 stories sprinklered, 2 stories unsprinklered

Section 506 Building Area
506.2.4 Mixed-occupancy, multi-story buildings.

Table 506.2
B S1 Type VB = 36,000 SF max area
S-2 S1 Type VB = 54,000 SF max area

Chapter 6 – Types of Construction

Table 601 Type V-B:
Primary structure – 0 hr.
Bearing walls
Exterior – 0 hr.
Interior – 0 hr.
Non-bearing partitions
Exterior – 0 hr.
Interior – 0 hr.
Floor construction and secondary members – 0 hr.
Roof construction and secondary members – 0 hr.

Chapter 7 – Fire and Smoke Protection Features

704.10 Exterior Structural Members
Load-bearing structural members located within the exterior walls or on the outside of a building or structure shall be provided with the highest fire-resistance rating as determined in accordance with the following:
As required by Table 601 for the type of building element based on the type of construction of the building.
As required by Table 601 for exterior bearing walls based on the type of construction.
As required by Table 705.5 for exterior walls based on the fire separation distance.

Chapter 10 – Means of Egress
Section 1004 – Occupant Load – see charts

Section 1007.1.1 - Two exits or exit access doorways. Where two exits, exit access doorways, exit access stairways or ramps, or any combination thereof, are required from any portion of the exit access, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between them. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served.

Section 1009 – Accessible Means of Egress

Chapter 11 – Accessibility
Table 1106.1 Accessible Parking Spaces.
51-75 parking spaces: 3 accessible spaces min.
75 - 100 parking spaces: 4 accessible spaces min.

Include one loading zone space that is Van Accessible.

Chapter 29 – Plumbing Systems
Table 2902.1 Minimum number of required plumbing fixtures
See charts

ROOF DRAINAGE CALCULATIONS ARE SHOWN ON THE ROOF PLAN SHEETS

WA STATE ENERGY CODE NOTES

CLIMATE ZONE: ISLAND COUNTY - 4C

TABLE C402.1.3

Roof - Insulation Above Deck:	MIN R-38ci
Wall Above Grade - Steel Framed:	MIN R-13 + R-10ci
Wall Above Grade - Mass:	MIN R-9.5ci
Wall Below Grade - Mass:	MIN R-9.5ci
Unheated Slabs:	R-10 FOR 24" PERIMETER
Opaque Swinging Doors:	U-0.37

C402.2.4 Slabs-on-grade perimeter insulation. Where the slab-on-grade is in contact with the ground, the minimum thermal resistance (R-value) of the insulation around the perimeter of unheated or heated slab-on-grade floors designed in accordance with the R-value method of Section C402.1.3 shall be as specified in Table C402.1.3. The insulation shall be placed on the outside of the foundation or on the inside of the foundation wall. The insulation shall extend downward from the top of the slab for a minimum distance as shown in the table or to the top of the footing, whichever is less, or downward to at least the Bottom of the slab and then horizontally to the interior or exterior for the total distance shown in the table. Insulation extending away from the building shall be protected by pavement or by a minimum of 10 inches (254 mm) of soil. Insulation complying with Table C402.1.3 shall be provided under the entire area of Heated slabs-on-grade.

C402.4.1 Maximum Glazing is 30% of Gross Above-Grade Wall Area
C402.4.1.1 Vertical fenestration maximum area with high performance alternates. For buildings that comply with Section C402.4.1.1.1 or C402.4.1.1.2, the total building vertical fenestration area is permitted to exceed 30 percent but shall not exceed 40 percent of the gross above grade wall area for the purpose of prescriptive compliance with Section C402.1.4.
PROPOSED VERTICAL FENESTRATION: 36.3% , SEE CALCULATIONS BELOW

C402.4.1.1.2 HIGH-PERFORMANCE FENESTRATION. All of the following requirements shall be met:
1. ALL VERTICAL FENESTRATION IN THE BUILDING SHALL COMPLY WITH THE FOLLOWING U-FACTORS:
1.1 U-VALUE FOR FIXED STOREFRONT AND CURTAINWALL FENESTRATION: 0.31 MAX
1.2 U-VALUE FOR OPERABLE STOREFRONT AND CURTAINWALL FENESTRATION: 0.36 MAX
1.3 U-VALUE FOR ENTRANCE DOORS: 0.6 MAX
1.4 U-VALUE FOR ALL OTHER VERTICAL FENESTRATION FIXED: 0.23 MAX
1.5 U-VALUE FOR ALL OTHER VERTICAL FENESTRATION OPERABLE: 0.23 MAX
2. SHGC FOR ALL VERTICAL FENESTRATION SHALL BE NO MORE THAN 0.9 TIMES MAXIMUM SHGC VALUES LISTED IN TABLE C402.4

GLAZED AREA

- NORTH ELEVATION	280 SQFT
- EAST ELEVATION	332 SQFT
- SOUTH ELEVATION	644 SQFT
- WEST ELEVATION	639 SQFT

ABOVE GRADE WALL AREA

- NORTH ELEVATION	1,037 SQFT
- EAST ELEVATION	1,238 SQFT
- SOUTH ELEVATION	730 SQFT
- WEST ELEVATION	2,198 SQFT
- MISCELLANEOUS WINGS	629 SF

Total Glazed Area.....1,895 sqft
Total Above Grade Wall Area.....5,832 sqft

actual glazing 1,895 sqft / 5,832 sqft = 32.5% < 40% max = CODE COMPLIANT

C402.5
THE THERMAL ENVELOPE SHALL COMPLY WITH SECTIONS C402.5.1 THROUGH C402.5.8.
C402.5.1 CONTINUOUS AIR BARRIER SHALL BE PROVIDE THROUGHOUT THE ENVELOPE
C402.5.3 THE COMPLETED BUILDING SHALL BE TESTED AND THE AIR LEAKAGE RATE OF THE BUILDING ENVELOPE SHALL NOT EXCEED 0.25 CFM/FT2 OF THE BUILDING THERMAL ENVELOPE AREA AT A PRESSURE DIFFERENTIAL OF 0.3 INCHES WATER GAUGE.

C402.5.9
ALL primary BUILDING ENTRANCES SHALL BE PROTECTED WITH AN ENCLOSED VESTIBULE WITH ALL DOORS EQUIPPED WITH SELF-CLOSING DEVISES. DISTANCE BETWEEN THE DOORS SHALL BE NOT LESS THAN 7 FEET. SEE MECHANICAL AND ELECTRICAL FOR ADDITIONAL ENERGY CODE NOTES.

C403 MECHANICAL SYSTEMS
Mechanical systems and equipment serving heating, cooling, ventilating, and other needs shall comply with SECTION 403. SEE MECHANICAL.

C405 ELECTRICAL POWER AND LIGHTING SYSTEMS
LIGHTING SYSTEM CONTROLS, MAXIMUM LIGHTING POWER FOR INTERIOR AND EXTERIOR APPLICATIONS, ELECTRICAL ENERGY CONSUMPTION SHALL COMPLY WITH SECTION C404. SEE ELECTRICAL.

CODE EXCERPTS:

CHAPTER 5 - Existing Buildings

C502.1 Additions - General - Additions to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. Additions shall not create an unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building. This allowance applies to prescriptive compliance in accordance with Section C502.2 or Total Building Performance in accordance with Section C407.

C502.2 Prescriptive Compliance - Additions shall comply with Sections C502.2.3 through C502.2.8

C502.2.3 Building Mechanical Systems - New mechanical systems and equipment serving the building heating, cooling or ventilation needs, that are installed as a part of the addition, shall comply with Sections C403, C408.2, C409.5, and C501.6.

C502.2.6 Electrical Power and Lighting Systems and motors.- New electrical power and lighting systems and motors that are installed as a part of the addition shall comply with Sections C405, C408.4, C409.5, and C501.6.

C502.2.6.1 Interior Lighting Power - The total interior lighting power for the addition shall comply with Section C405.4.2 for the addition alone, or the existing building and the addition shall comply as a single building.

C502.2.6.2 Exterior lighting power. The total exterior lighting power for the addition shall comply with Section C405.5.2 for the addition alone, or the existing building and the addition shall comply as a single building

C502.3 Building envelope. Additions shall comply with Sections C402.1 through C402.5, C502.3.1, and C502.3.2.

C502.3.1 Vertical fenestration. Additions with vertical fenestration shall comply with the following:
1. Where an addition with vertical fenestration area results in a total building vertical fenestration area less than or equal to the maximum allowed by Section C402.4.1, the addition shall comply with Section C402.4.
2. Where an addition with vertical fenestration area results in a total building vertical fenestration area greater than the maximum allowed by Section C402.4.1 (regardless of the ratio prior to the addition), the addition shall comply with one of the following:
2.1. Component performance alternative with target area adjustment per Section C402.1.5 for the addition area of the building only.
2.2. Existing building and addition area are combined to demonstrate compliance with the component performance alternative for the whole building. U-factors applied to existing envelope assemblies in the UA calculation shall comply with Section C501.2.1.
2.3. Total building performance in accordance with Section C407 for the addition area of the building only.
2.4. Total building performance for the whole building.

ENERGY COMPLIANCE CALCULATION *(SEE MECHANICAL FOR SCORING COMPLIANCE)

PLUMBING CALCULATIONS[1]

BLDG 1 - BUSINESS AREAS - B

SUMMARY OF REQ'D TOTAL OCCUPANTS: 125		This summary table tallies the individual fixtures as required by occupancy group(s) above into total required fixtures and compares that to the number of fixtures provided in the documents, see below									
		TOTAL WATER CLOSETS			TOTAL URINALS	TOTAL LAVATORIES			TOTAL BATHTUBS OR SHOWERS	TOTAL DRINKING FOUNTAINS	TOTAL SERVICE SINKS
50 % MALE	50 % FEMALE	UNISEX	MALE	FEMALE	MALE	UNISEX	MALE	FEMALE			
62.5	62.5	0	3	3	0	0	2	2	0	2	1

[1]UNISEX PLUMBING CALCULATIONS

- SECTION 2902 SPECIFIES THAT FIXTURE COUNTS BE DETERMINED BY OCCUPANCY COUNTS DISTRIBUTED BETWEEN MALE AND FEMALE SEX AS OUTLINED BY TABLE 2902.1. THIS PROJECT SEEKS TO PROVIDE EQUAL OPPORTUNITY TO ALL USERS, INCLUSIVE OF GENDER AND REQUESTS AN EXEMPTION TO ALLOW FOR UNISEX WATER CLOSETS TO CONTRIBUTE TOWARD THE TOTAL REQUIRED FIXTURE COUNTS.

PROVIDED	7	0	0	0	6	0	0	2	2	1

2018 SLIA AGREEMENT CODE RESEARCH - (AVC OUTSIDE OF AAA AREA) ZONING

3.5.A SETBACKS

Min. Front Yard Setback: 10'
Min. Side Yard Setback: 5'
Min. Rear Yard Setback: 5'

3.5.B SIGNAGE

3. Wall or Building Mounted Signs - One (1) business identification wall sign may be placed on an exterior building or structure wall in each development. However, in no case shall the total area of all signage exceed ten percent (10%) of the face of the wall on which it is mounted. Only the ename, business title or logo will be allowed.

b. Wall or building mounted signs shall not extend above the highest exterior wall of the building, including the parapet.

c. No sign shall be mounted on top of a marquee, porte-cochere, canopy, roof, or other similar structure.

3.5.C LANDSCAPING

All AVO or AVC zoned properties located outside the boundaries of the AAA shall be governed by the Seattle-Tacoma International Airport (STIA) Landscape Design Standards

3.5.D PARKING

1. Parking Standards Outside the AAA - Non-Primary Use - Projects located in the AVO or AVC zones outside of the AAA where parking is not a primary use shall be governed by the following parking standards:

a. *Parking areas in front of a building* should be limited to customer and visitor parking, be visibly designated by signage, and not intrude on any required landscaping buffers. Employee or tenant parking should be located away from frontage areas when site constraints cannot accommodate this requirement.

b. *Parking Space Dimensions*
90 degree parking
- 8'-6" parking space width
- 18' parking space length
- 24' min. aisle width

c. *Parking Area Lighting*
All parking lot luminaires shallb e cut-off luminaires as defined by the Illuminating Engineering Society of North America (IESNA) Handbook. The maximum mounting height of luminaires shall not exceed twenty-five (25) feet. Parking lot lighting should provide the minimum lighting necessary to ensure adequate vision and comfort in parking area, and avoid glare or direct illumination onto adjacent properties or streets.

d. *Minimum Off-Street Parking Requirements*
Warehouse/Storage Office Areas: 3 per 1000 gross sq ft

4.3 TRANSPORTATION IMPACTS / CONCURRENCY

B. Transportation Concurrency
2. All development on Port-owned properties located outside of the AAA shall be subject to the transportation concrrency requirements of State law (RCW) and the SeaTac Municipal Code

5.3 PERMITTING ROLES AND RESPONSIBILITIES

B. City - The City shall have the following permitting roles and responsibilities on Port-owned property located outside of the AAA boundaries.

1. The City shall administer and enforce the Building and Fire Codes as adopted by the City in *Title 13 of the SeaTac Municipal Code*

2. The City shall administer and enforce the stormwater requirements as described in *Subsection 6.3C*

3. The City shall ensure that developments located on real property owned by the Port and developed by a third party are authorized by the Port before the city issues any permits.

4. The City shall administer and enforce critical area review as further outlined in *Chapter VI, Section 6.2.*

5.4 APPLICABLE PERMITTING CODES AND REQUIREMENTS

A. Adopted Building and Fire Codes
1. The City has adopted the State and Building Fire Codes, with amendments, as identified in *Seatac Municipal Code Title 13.*

a. The City shall consider legislation to include a reference to the Port's Fire Codes identified in the Rules for Airport Construction. The Port's Fire Codes shall be applicable to developments located on all real property owned by the Port.

E. Fire Code Coordination

a. For developments located on real property owned by the Port and located outside the AAA, the City shall provide one (1) copy of submitted drawings and specifications to the Port for review and comment regarding fire code requirements and/or operational needs.

b. The Port may provide comments and/or recommend permit conditions to the City which shall be include dinto the City's review comments and/or permit conditions. The Port's comments and/or conditions must be received by the City within the established permit review timeframe which will not be less than seven (7) working days from receipt of the drawings or plan specifications. It will be the Port's full discretion as to whether or not provide comments and/or recommend permit conditions to the City.

e. The City shall provide the Port with a copy of the approved plans and/or as-built plans for all developments located on real property owned by the Port and located outside the AAA.

5.5 PERMIT PROCESS

A. City Process - The City shall follow approved City processes for all permitting conducted by the City for developments located on real property owned by the Port and located outside the AAA. The City shall provide the Port with pre-submittal consultation for Port projects if the Port requests the City's assistance.

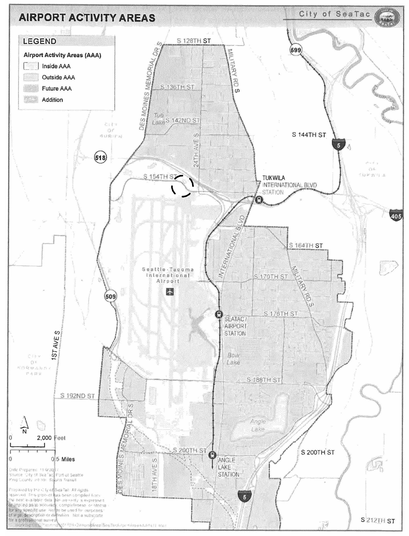
6.1 SEPA

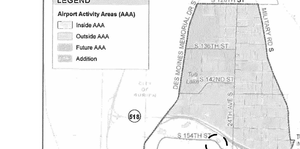
A. ... The development review process shall ensure that the project complies with the State *Environmental Policy Act (SEPA), Chapter 43.21 RCW and 197-11 WAC.*

2. For proposals for private development on Port property located outside the AAA:

a. The City will serve as SEPA Lead Agency, and the Port will be a Consulted Agency per WAC 197-11-724, for those proposals that are *not* associated with Airport Operations.

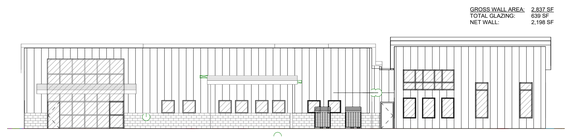
Appendix 3A: Airport Activity Area Map





1 GLAZING DIAGRAM - SOUTH
1/16" = 1'-0"

2 GLAZING DIAGRAM - SOUTH SIDE WALL
1/16" = 1'-0"



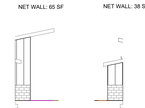
3 GLAZING DIAGRAM - WEST
1/16" = 1'-0"

4 GLAZING DIAGRAM - NORTH ADDITION
1/16" = 1'-0"

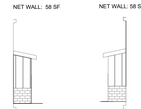
5 GLAZING DIAGRAM - NORTH
1/16" = 1'-0"

6 GLAZING DIAGRAM - EAST
1/16" = 1'-0"

7 GLAZING - SOUTH EXISTING
1/16" = 1'-0"



8 GLAZING - EAST WING WALLS
1/16" = 1'-0"



9 GLAZING - WEST SIDE WALLS
1/16" = 1'-0"

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SEATTLE, WA 98104-2579
(206) 322-3322

10135 REGISTERED ARCHITECT
JEFFREY JOSEPH WAINDASIEWICZ
STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

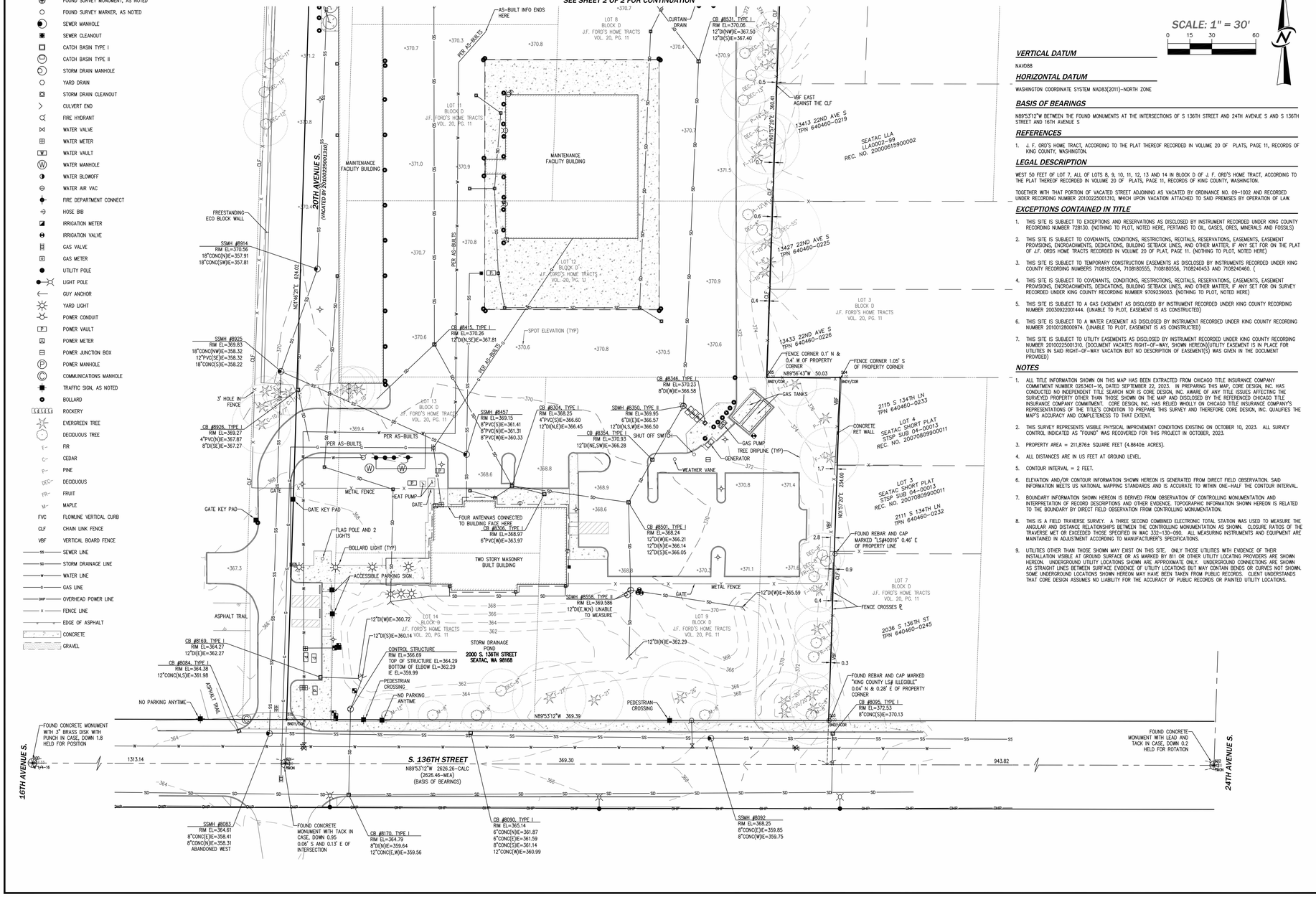
CODE NOTES

SCALE: As indicated
DRAWN: AWGD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: T0.3

NE1/4 OF THE NW1/4, SEC. 16, TWP. 23 N., RGE. 4 E., W.M.

SEE SHEET 2 OF 2 FOR CONTINUATION



LEGEND

- FOUND SURVEY MONUMENT, AS NOTED
- FOUND SURVEY MARKER, AS NOTED
- SEWER MANHOLE
- SEWER CLEANOUT
- CATCH BASIN TYPE I
- CATCH BASIN TYPE II
- STORM DRAIN MANHOLE
- YARD DRAIN
- STORM DRAIN CLEANOUT
- CULVERT END
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- WATER VAULT
- WATER MANHOLE
- WATER BLOWOFF
- WATER AIR VAC
- FIRE DEPARTMENT CONNECT
- HOSE BIB
- IRRIGATION METER
- IRRIGATION VALVE
- GAS VALVE
- GAS METER
- UTILITY POLE
- LIGHT POLE
- GUY ANCHOR
- YARD LIGHT
- POWER CONDUIT
- POWER VAULT
- POWER METER
- POWER JUNCTION BOX
- POWER MANHOLE
- COMMUNICATIONS MANHOLE
- TRAFFIC SIGN, AS NOTED
- BOLLARD
- ROCKERY
- EVERGREEN TREE
- DECIDUOUS TREE
- FIR
- CEDAR
- PINE
- DECIDUOUS
- FRUIT
- MAPLE
- FVC FLOWLINE VERTICAL CURB
- CLF CHAIN LINK FENCE
- VBF VERTICAL BOARD FENCE
- SS SEWER LINE
- SD STORM DRAINAGE LINE
- W WATER LINE
- G GAS LINE
- OHP OVERHEAD POWER LINE
- FENCE LINE
- EDGE OF ASPHALT
- CONCRETE
- GRAVEL

SCALE: 1" = 30'
0 15 30 60

VERTICAL DATUM
NAVD88

HORIZONTAL DATUM
WASHINGTON COORDINATE SYSTEM NAD83(2011)–NORTH ZONE

BASIS OF BEARINGS
N89°53'12"W BETWEEN THE FOUND MONUMENTS AT THE INTERSECTIONS OF S 136TH STREET AND 24TH AVENUE S AND S 136TH STREET AND 16TH AVENUE S

REFERENCES
1. J. F. ORD'S HOME TRACT, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 20 OF PLATS, PAGE 11, RECORDS OF KING COUNTY, WASHINGTON.

LEGAL DESCRIPTION
WEST 50 FEET OF LOT 7, ALL OF LOTS 8, 9, 10, 11, 12, 13 AND 14 IN BLOCK D OF J. F. ORD'S HOME TRACT, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 20 OF PLATS, PAGE 11, RECORDS OF KING COUNTY, WASHINGTON.

TOGETHER WITH THAT PORTION OF VACATED STREET ADJOINING AS VACATED BY ORDINANCE NO. 09–1002 AND RECORDED UNDER RECORDING NUMBER 20100225001310, WHICH UPON VACATION ATTACHED TO SAID PREMISES BY OPERATION OF LAW.

EXCEPTIONS CONTAINED IN TITLE
1. THIS SITE IS SUBJECT TO EXCEPTIONS AND RESERVATIONS AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 728130. (NOTHING TO PLOT, NOTED HERE, PERTAINS TO OIL, GASES, ORES, MINERALS AND FOSSILS)
2. THIS SITE IS SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, ENCROACHMENTS, DEDICATIONS, BUILDING SETBACK LINES, AND OTHER MATTER, IF ANY SET FOR ON THE PLAT OF J.F. ORDS HOME TRACTS RECORDED IN VOLUME 20 OF PLAT, PAGE 11. (NOTHING TO PLOT, NOTED HERE)
3. THIS SITE IS SUBJECT TO TEMPORARY CONSTRUCTION EASEMENTS AS DISCLOSED BY INSTRUMENTS RECORDED UNDER KING COUNTY RECORDING NUMBERS 7108180554, 7108180555, 7108180556, 7108240453 AND 7108240460. (
4. THIS SITE IS SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, ENCROACHMENTS, DEDICATIONS, BUILDING SETBACK LINES, AND OTHER MATTER, IF ANY SET FOR ON SURVEY RECORDED UNDER KING COUNTY RECORDING NUMBER 9709239003. (NOTHING TO PLOT, NOTED HERE)
5. THIS SITE IS SUBJECT TO A GAS EASEMENT AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 20030922001444. (UNABLE TO PLOT, EASEMENT IS AS CONSTRUCTED)
6. THIS SITE IS SUBJECT TO A WATER EASEMENT AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 20100128000974. (UNABLE TO PLOT, EASEMENT IS AS CONSTRUCTED)
7. THIS SITE IS SUBJECT TO UTILITY EASEMENTS AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 20100225001310. (DOCUMENT VACATES RIGHT–OF–WAY, SHOWN HEREON)(UTILITY EASEMENT IS IN PLACE FOR UTILITIES IN SAID RIGHT–OF–WAY VACATION BUT NO DESCRIPTION OF EASEMENT(S) WAS GIVEN IN THE DOCUMENT PROVIDED)

NOTES
1. ALL TITLE INFORMATION SHOWN ON THIS MAP HAS BEEN EXTRACTED FROM CHICAGO TITLE INSURANCE COMPANY COMMITMENT NUMBER 0263401–16, DATED SEPTEMBER 22, 2023. IN PREPARING THIS MAP, CORE DESIGN, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS CORE DESIGN, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY THE REFERENCED CHICAGO TITLE INSURANCE COMPANY COMMITMENT. CORE DESIGN, INC. HAS RELIED WHOLLY ON CHICAGO TITLE INSURANCE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND THEREFORE CORE DESIGN, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
2. THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON OCTOBER 10, 2023. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN OCTOBER, 2023.
3. PROPERTY AREA = 211,876± SQUARE FEET (4.864Ω± ACRES).
4. ALL DISTANCES ARE IN US FEET AT GROUND LEVEL.
5. CONTOUR INTERVAL = 2 FEET.
6. ELEVATION AND/OR CONTOUR INFORMATION SHOWN HEREON IS GENERATED FROM DIRECT FIELD OBSERVATION. SAID INFORMATION MEETS US NATIONAL MAPPING STANDARDS AND IS ACCURATE TO WITHIN ONE–HALF THE CONTOUR INTERVAL.
7. BOUNDARY INFORMATION SHOWN HEREON IS DERIVED FROM OBSERVATION OF CONTROLLING MONUMENTATION AND INTERPRETATION OF RECORD DESCRIPTIONS AND OTHER EVIDENCE. TOPOGRAPHIC INFORMATION SHOWN HEREON IS RELATED TO THE BOUNDARY BY DIRECT FIELD OBSERVATION FROM CONTROLLING MONUMENTATION.
8. THIS IS A FIELD TRAVERSE SURVEY. A THREE SECOND COMBINED ELECTRONIC TOTAL STATION WAS USED TO MEASURE THE ANGULAR AND DISTANCE RELATIONSHIPS BETWEEN THE CONTROLLING MONUMENTATION AS SHOWN. CLOSURE RATIOS OF THE TRAVERSE MET OR EXCEEDED THOSE SPECIFIED IN WAC 332–130–090. ALL MEASURING INSTRUMENTS AND EQUIPMENT ARE MAINTAINED IN ADJUSTMENT ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
9. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE OR AS MARKED BY 811 OR OTHER UTILITY LOCATING PROVIDERS ARE SHOWN HEREON. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. UNDERGROUND CONNECTIONS ARE SHOWN AS STRAIGHT LINES BETWEEN SURFACE EVIDENCE OF UTILITY LOCATIONS BUT MAY CONTAIN BENDS OR CURVES NOT SHOWN. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. CLIENT UNDERSTANDS THAT CORE DESIGN ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS OR PAINTED UTILITY LOCATIONS.

NO.	REVISIONS	DATE

10–17–23

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING

CORE DESIGN
12160 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

BOUNDARY/TOPOGRAPHIC SURVEY
PORT OF SEATTLE MAINTENANCE FACILITY - SEATAC

ARC ARCHITECTS
119 S MAIN STREET, SUITE 200
BELLEVUE, WA 98104

DATE	OCTOBER 16, 2023
DESIGNED	
DRAWN	JEREMY REEFF
APPROVED	ROBERTS WEST, PLS PROJECT MANAGER
SHEET	1
OF	2
PROJECT NUMBER	23256

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SEATTLE, WA 98104-2579
(206) 322-3322

10135 REGISTERED ARCHITECT
JEFFREY JOSEPH WAINDASIEWICZ
STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

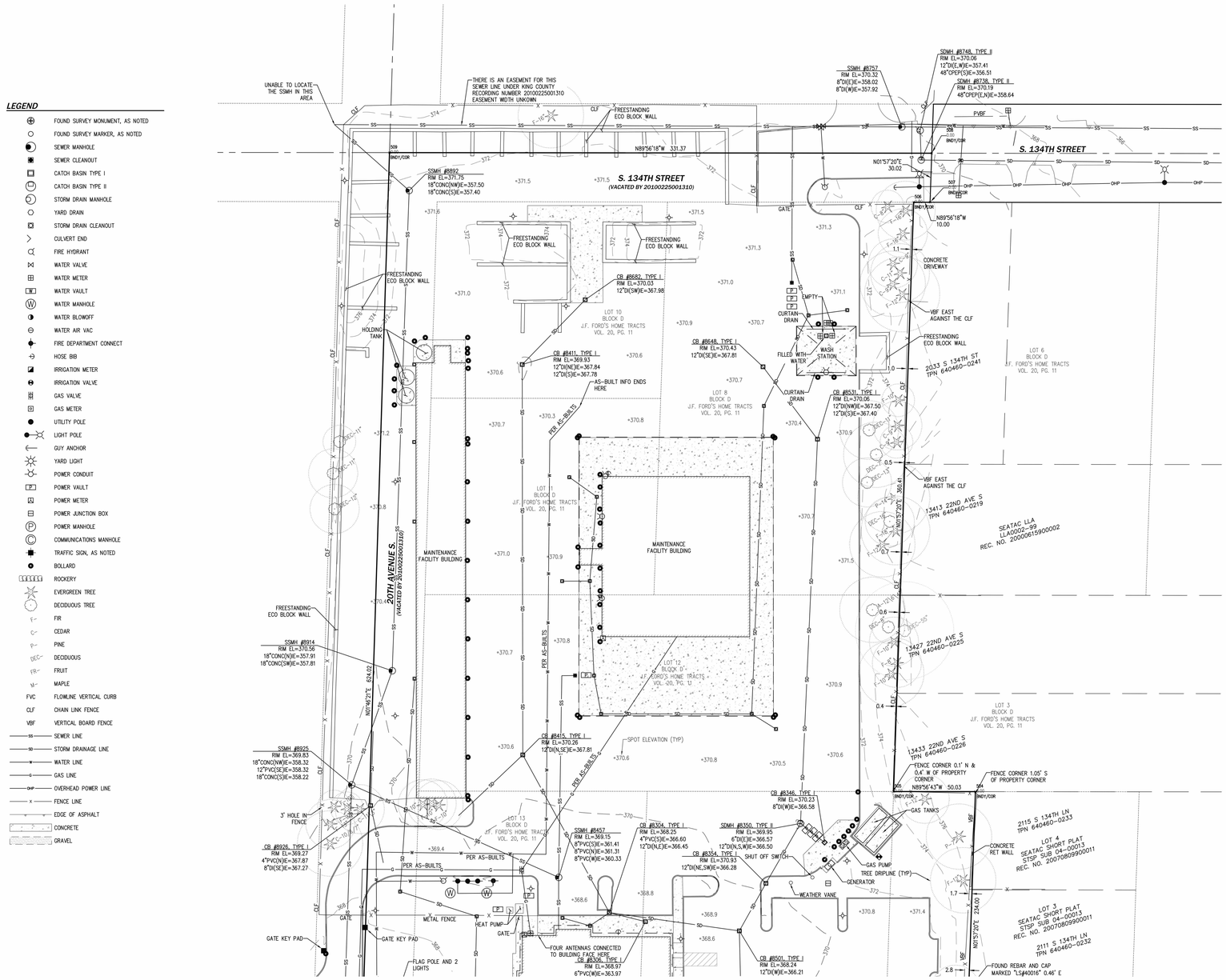
CONTENTS:

SURVEY - BOUNDARY / TOPOGRAPHIC

SCALE:
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: T0.4

NE1/4 OF THE NW1/4, SEC. 16, TWP. 23 N., RGE. 4 E., W.M.



SEE SHEET 1 OF 2 FOR CONTINUATION

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SEATTLE, WA 98104-2579
(206) 322-3322

10135 REGISTERED ARCHITECT
JEFFREY JOSEPH WAINDASIEWICZ
STATE OF WASHINGTON

NO.	REVISIONS	DATE

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING
CORE DESIGN
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

BOUNDARY/TOPOGRAPHIC SURVEY
PORT OF SEATTLE MAINTENANCE FACILITY - SEATAC
ARC ARCHITECTS
119 S MAIN STREET, SUITE 200
BELLEVUE, WA 98104

DATE	DESIGNED	DRAWN	APPROVED
OCTOBER 16, 2023		JEREMY REEFF	ROBERTS WEST, PLS PROJECT MANAGER

SHEET	OF
2	2

PROJECT NUMBER 23256

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

SURVEY - BOUNDARY / TOPOGRAPHIC

SCALE:
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1 SHEET: T0.5

NE1/4 OF THE NW1/4, SEC. 16, T 23 N., R 4 E., W.M.

SEATAC MAINTENANCE FACILITY
PERMIT DOCUMENTS

SEATAC, WA

OWNER / APPLICANT

CITY OF SEATAC
4800 SOUTH 188TH STREET
SEATAC, WA 98188-8605
PHONE: 206.973.4800

CONSULTANTS

SCJ ALLIANCE
8730 TALLON LANE NE, SUITE 200
LACEY, WA 98516
PHONE: 360.352.1465
CONTACT: DAN PHILLIPS, PE

ARCHITECT:
ARC ARCHITECTURE
119 MAIN ST, SUITE 200
SEATTLE, WA 98104-2579
PHONE: 206.322.3322
CONTACT: AARON WARNER, AIA

SURVEYOR:
CORE DESIGN
12100 NE 195TH ST, SUITE 300
BOTHEL, WA 98011
PHONE: 425.885.7877
CONTACT: ROBERT WEST, PLS

GEOTECH:
STUART THIELMANN
STAFF GEOTECHNICAL ENGINEER, PE
GEOENGINEERS, INC.
1101 FAWCETT AVENUE, SUITE 200
PHONE: 253.722.2422
CONTACT: STUART THIELMANN, PE

SITE INFORMATION

PARCEL NUMBERS:
640460-0255, 640460-0250
ACRES: ±4.91
(PER KING COUNTY PARCEL VIEWER)

LEGAL DESCRIPTION:

WEST 50 FEET OF LOT 7, ALL OF LOTS 8, 9, 10, 11, 13 AND 14 IN BLOCK D OF J. F. ORD'S HOME TRACT, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 20 OF PLATS, PAGE 11, RECORDS OF KING COUNTY, WASHINGTON.

TOGETHER WITH THAT PORTION OF VACATED STREET ADJOINING AS VACATED BY ORDINANCE NO. 09-1002 AND RECORDED UNDER RECORDING NUMBER 20100225001310, WHICH UPON VACATION ATTACHED TO SAID PREMISES BY OPERATION OF LAW.

BASIS OF BEARINGS:

N 89°53'12" W BETWEEN THE FOUND MONUMENTS AT THE INTERSECTIONS OF S 136TH STREET AND 24TH AVENUE S AND S 136TH STREET AND 16TH AVENUE S

HORIZONTAL DATUM:

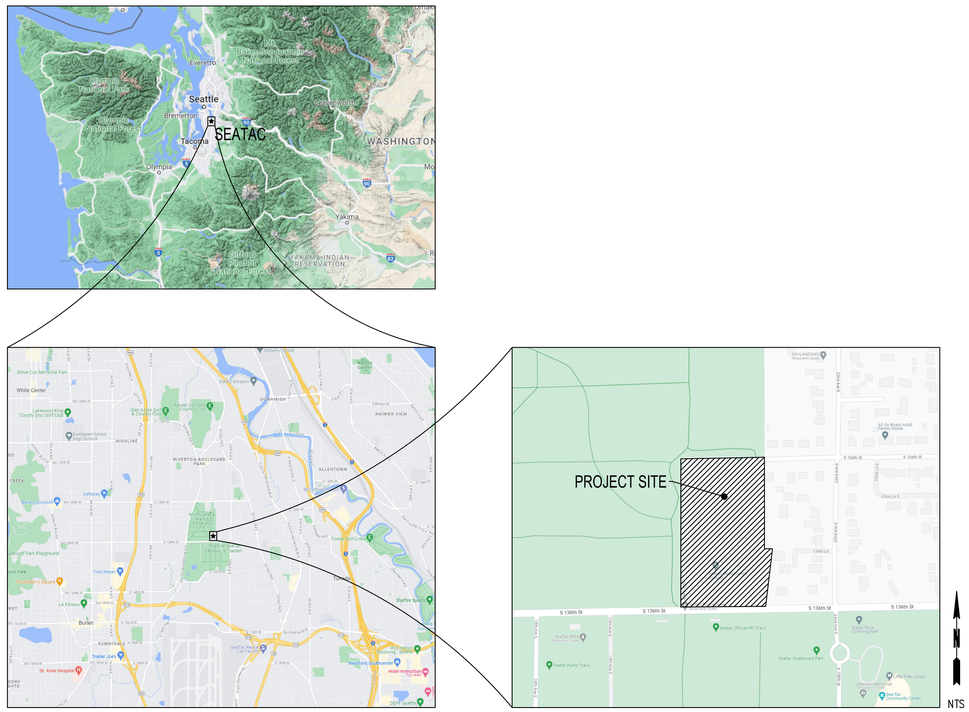
WASHINGTON STATE PLANE COORDINATE SYSTEM, NAD83(2011) NORTH ZONE

VERTICAL DATUM:

NAVD 88

SHEET INDEX

SHEET NO.	SHEET TITLE	SHEET DESCRIPTION
1	CV-01	COVER SHEET
2	GN-01	GENERAL NOTES
3	SV-01	BOUNDARY/TOPO SURVEY
4	SV-02	BOUNDARY/TOPO SURVEY
5	EC-01	EROSION CONTROL AND DEMOLITION PLAN
6	EC-02	EROSION CONTROL AND DEMOLITION DETAILS
7	SP-01	SITE IMPROVEMENT PLAN
8	SP-02	SITE IMPROVEMENT NOTES AND DETAILS
9	CG-01	GRADING PLAN
10	CG-02	GRADING ENLARGEMENT
11	CG-03	GRADING ENLARGEMENT
11	SD-01	STORM DRAINAGE PLAN
12	SD-02	STORM DRAINAGE DETAILS
13	SD-03	STORM DRAINAGE DETAILS
14	UT-01	WATER AND SEWER PLAN
16	UT-02	SEWER PROFILE
17	UT-03	SEWER AND WATER DETAILS
18	UT-04	WATER DETAILS AND NOTES
19	L-1.0	OVERALL LANDSCAPE PLAN
20	L-2.0	LANDSCAPE DETAILS
21	L-3.0	PLANTING PLAN – NORTHEAST
22	L-3.1	PLANTING PLAN – SOUTHEAST
23	L-3.2	PLANTING PLAN – SOUTHWEST
24	L-3.3	PLANT SCHEDULE AND NOTES



NTS

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 OR 1.800.342.1585 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

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SEATTLE, WA 98104-2579
(206) 322-3322

SCJ ALLIANCE
CONSULTING SERVICES
8730 TALLON LANE NE, SUITE 200, LACEY, WA 98516
P: 360.352.1465
SCJALLIANCE.COM

DANIEL PATRICK PHILLIPS — STATE OF WASHINGTON — 21581 — REGISTERED PROFESSIONAL ENGINEER
FOR PERMIT REVIEW ONLY

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:
COVER SHEET

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:
CV-01

May 10, 2024 3:07:51pm — User: dan.phillips
N:\PROJECTS\1941 ARC ARCHITECTS\23-000537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CAD\23-000537 CV-01.DWG

SCJ ALLIANCE
GENERAL CONSTRUCTION NOTES:

1. ALL WORK, WORKMANSHIP AND MATERIALS FOR THIS PROJECT SHALL MEET OR EXCEED THE PROJECT SPECIFICATIONS, CITY OF SEATAC ENGINEERING DESIGN STANDARDS AND MAY INCLUDE REFERENCES TO THE MOST CURRENT VERSION OF THE FOLLOWING MANUALS(S) AND DOCUMENT(S):

   CITY OF SEATAC DESIGN STANDARDS
   HTTPS://WWW.SEATACWA.GOV/GOVERNMENT/CITY-DEPARTMENTS/PUBLIC-WORKS/PW-ENGINEERING/DESIGN-STANDARDS

   WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION
   HTTPS://WWW.WSDOT.WA.GOV/PUBLICATIONS/MANUALS/FULLTEXT/M41-10/SS.PDF

   GEOTECHNICAL ENGINEERING SERVICES REPORT, SEATAC MAINTENANCE FACILITY, PREPARED BY GEOENGINEERS, INC. DATED JANUARY 26, 2024 AND ANY ADDENDUMS THERETO

   IF THERE IS A CONFLICT BETWEEN THE SPECIFICATION TYPES, THE MOST RESTRICTIVE REFERENCE SHALL BE ADHERED TO.

2. ALL GOVERNMENTAL SAFETY REGULATIONS SHALL BE STRICTLY ADHERED TO INCLUDING OSHA, WISHA AND THE WASHINGTON DEPARTMENT OF LABOR AND INDUSTRY.

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DULY NOTIFY THE CITY IN ADVANCE OF THE COMMENCEMENT OF ANY AUTHORIZED WORK AND TO SCHEDULE REQUIRED INSPECTIONS. ALL REQUIRED INSPECTION TESTS WILL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

4. THE CONTRACTOR SHALL PROVIDE A TWO-YEAR WARRANTY ON ALL WORKMANSHIP AND MATERIAL FOLLOWING ACCEPTANCE OF THE PROJECT BY THE OWNER.

5. THE APPROVAL OF THESE PLANS BY THE THE AUTHORITIES HAVING JURISDICTION DOES NOT RELIEVE THE CONTRACTOR OR DEVELOPER OF THE RESPONSIBILITY TO COMPLY WITH THE REQUIREMENTS OF OTHER GOVERNING AGENCIES.

6. CAUTION – NOTICE TO CONTRACTOR
   THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON THE PROJECT SURVEY AND OTHER RECORDS OF UTILITIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL 1-800-424-5555 48 HOURS PRIOR TO PLANNED EXCAVATIONS.

7. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON COMPILED SURVEY DATA. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED WORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNERS REPRESENTATIVE.

8. EXISTING UTILITIES ARE SHOWN FOR REFERENCE ONLY. PRIOR TO CONNECTION TO EXISTING UTILITIES THE CONTRACTOR SHALL VERIFY EXACT LOCATION, DIA, LENGTH, CONDITION, PIPE TYPE, SLOPE AND VERTICAL AND HORIZONTAL ALIGNMENT OF THE EXISTING UTILITY AND PROPOSED POINT OF CONNECTION. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION.

9. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, STATE, AND FEDERAL APPROVALS AND PERMITS.

10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THE APPROVED PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS AT THE CONSTRUCTION SITE AT ALL TIMES.

11. THE CONTRACTOR SHALL PROVIDE SLOPE PROTECTION FOR SLOPES OF 5:1 OR GREATER ACCORDING TO ASSOCIATED GENERAL CONTRACTORS (AGC) STANDARD GUIDELINES AND BEST MANAGEMENT PRACTICES (BMP'S).

12. THE CONTRACTOR SHALL MAINTAIN EROSION CONTROL FACILITIES IN ACCORDANCE WITH THE CITY OF SEATAC, DEPARTMENT OF ECOLOGY STORMWATER MANUAL, THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), AND PER THE EROSION CONTROL PLAN.

13. THE CONTRACTOR SHALL SAFELY MAINTAIN TRAFFIC AND CONTINUOUS ACCESS TO PRIVATE AND/OR PUBLIC PROPERTY.

14. CONSTRUCTION SIGNING AND TRAFFIC CONTROL SHALL BE PER THE CURRENT COPY OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

15. ALL VEHICLES AND EQUIPMENT SHALL BE KEPT WITHIN THE WORK AREAS ESTABLISHED FOR THAT WORK SHIFT UNLESS TRAVELING TO OR FROM THE SITE. UNDER NO CIRCUMSTANCES SHALL VEHICLES OR EQUIPMENT BE PARKED OR STORED OUTSIDE OF THESE AREAS.

16. OTHER CONSTRUCTION PROJECTS MAY OCCUR NEAR THE PROJECT SITE AND MAY BE IN PROGRESS CONCURRENT WITH THE PROJECT. THE CONTRACTOR SHALL COOPERATE AS NECESSARY AND NOT INTERFERE OR HINDER THE PROGRESS OR COMPLETION OF WORK BEING PERFORMED BY OTHER CONTRACTORS.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN ON THESE DRAWINGS AND TO OBTAIN ACCEPTANCE BY THE AUTHORITIES HAVING JURISDICTION AND THE PROJECT OWNER.

18. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL "PRE CONSTRUCTION" STATE OR BETTER.

19. DRIVEWAY ACCESS AND UTILITY SERVICE TO EXISTING HOMES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES.

20. REFER TO THE PROJECT'S GEOTECHNICAL INVESTIGATION REPORT FOR INFORMATION INCLUDING BUT NOT LIMITED TO GROUNDWATER, SOIL, AND SUBSURFACE CONDITIONS.

21. THE REMOVAL, LOADING, AND HAULING OF EXCESS MATERIALS AS A RESULT OF DEMOLITION, TRENCHING, AND EXCAVATION ACTIVITIES SHALL BE DISPOSED OF AT A CONTRACTOR-PROVIDED WASTE SITE PERMITTED TO ACCEPT SUCH WASTE AT NO ADDITIONAL COST TO THE OWNER.

22. THE CONTRACTOR SHALL PREPARE RECORD DRAWINGS SATISFACTORY TO THE AUTHORITIES HAVING JURISDICTION IN PRINTED AND PDF FORMAT. THE CONTRACTOR IS RESPONSIBLE TO COLLECT ALL SURVEY DATA AND PREPARE ALL RECORD DRAWINGS USING A SURVEYOR LICENSED IN THE STATE OF WASHINGTON.

RECOMMENDED CONSTRUCTION SEQUENCE
(INFORMATIONAL ONLY)

1. PRE-CONSTRUCTION MEETING.
2. FLAG OR FENCE CLEARING LIMITS.
3. INSTALL TREE PROTECTION FENCING, PRIOR TO OR IN CONJUNCTION WITH SILT FENCING. (IF NECESSARY)
4. POST SIGN WITH NAME AND PHONE NUMBER OF EROSION & SEDIMENT CONTROL SUPERVISOR.
5. INSTALL CATCH BASIN PROTECTION IF REQUIRED.
6. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.)
7. CONSTRUCT SEDIMENT PONDS AND TRAPS.
8. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
9. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF CENTRALIA AND MANUFACTURER'S RECOMMENDATIONS.
10. RELOCATE SURFACE WATER CONTROLS AND EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY OF CENTRALIA AND SEDIMENT CONTROL STANDARDS.
11. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS SHALL BE STABILIZED AND, IF APPROPRIATE, BEST MANAGEMENT PRACTICES REMOVED.

ABBREVIATIONS

&	AND
∠	ANGLE
±	APPROXIMATELY
@	AT
℄	CENTERLINE
°	DEGREE
=	EQUALS
'	FOOT
>	GREATER THAN
"	INCH
#	NUMBER
%	PERCENT
AC	ASPHALTIC CONCRETE
ADD'L	ADDITIONAL
ADJT	ADJACENT
AFF	ABOVE FINISH FLOOR
AP	ANGLE POINT
APPROX	APPROXIMATE
ARCH	ARCHITECT
ATB	ASPHALT TREATED BASE COURSE
AVE	AVENUE
BCR	BEGIN CURB RETURN
BFV	BUTTERFLY VALVE
BGS	BELOW GROUND SURFACE
BLK	BLOCK(S)
BLDG	BUILDING
BM	BENCHMARK
BVC	BEGIN VERTICAL CURB
BW	BOTTOM OF WALL ELEVATION
C	CONDUIT
CB	CATCH BASIN
CF	CUBIC FEET
CIRC	CIRCUIT, CIRCULA(R, TION)
CIP	CAST-IN-PLACE
CIP MON	CAST-IN-PLACE MONUMENT
CJ	CENTER JOINT
℄	CENTER LINE
CL	CROWNLINE
CLR	CLEAR
CO	CLEANOUT
COMM	COMMUNICATION
COMPT	COMPACTED
CONC	CONCRETE
CONST	CONSTRUCT
CONT	CONTINU(E, ED, OUS, ATION)
COORD	COORDINATE
CPEP	CORRUGATED POLYETHYLENE PIPE
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CULV	CULVERT
CU YD	CUBIC YARD
D/W	DRIVEWAY
DEF	DEFLECTION
DEG	DEGREE
DEMO	DEMOLISH/DEMOLITION
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION(S)
DIP	DUCTILE IRON PIPE
DR	DRIVE
DWG(S)	DRAWING(S)
E	EAST OR ELECTRICAL
EA	EACH
ECR	END CURB RETURN
EHH	ELECTRICAL HANDHOLE
EL, ELEV	ELEVATION
ELEC	ELECTRIC(AL)
ENGR	ENGINEER
EOP	EDGE OF PAVEMENT
EQ	EQUAL(LY)
EQUIP	EQUIPMENT
ESMT	EASEMENT
EVC	END VERTICAL CURVE
EX, EXIST	EXISTING
EXP	EXPANSION
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE ELEVATION
FH	FIRE HYDRANT
FIN	FINISH(ED)
FL	FIRE LINE/FLANGE
FT	FOOT/FEET
FW	FACE OF WALL ELEVATION
G	GAS
GALV	GALVANIZED
GB	GRADE BREAK
GRND	GROUND
GV	GATE VALVE
HH	HANDHOLE
HP	HIGH POINT ELEVATION
HORIZ	HORIZONTAL
HT	HEIGHT
IE	INVERT ELEVATION
IN	INCH
JB, J-BOX	JUNCTION BOX
JT	JOINT TRENCH
KV	KILOVOLTS
KW	KILOWATT
KWH	KILOWATT HOURS
L	LENGTH
LB(S)	POUND(S)
LF	LINEAR FEET
LP	LOW POINT ELEVATION
LT	LEFT
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS
MON	MONUMENT IN CASE
N	NORTH, NORTHING
N/A	NOT APPLICABLE
NE	NORTHEAST
NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
NIC	NOT IN CONTRACT
NO, No	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
OC, oc	ON CENTER
OD	OUTSIDE DIAMETER
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
P	POWER, POWER VAULT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PED	PEDESTAL
PI	POINT OF INTERSECTION
ℙ	PROPERTY LINE
POC	POINT OF CONNECTION
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PROP	PROPERTY
PSE	PUGET SOUND ENERGY
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
PVMT	PAVEMENT
PWR	POWER
QTY	QUANTITY
R	RADIUS
RD	ROAD, ROADWAY
REF	REFERENCE
REINF	REINFORC(E, ED, ING, MENT)
REQ'D	REQUIRED
REV	REVISION
RIM	STRUCTURE RIM ELEVATION
RT	RIGHT
R/W, ROW	RIGHT OF WAY
S	SOUTH OR SLOPE
SCHED	SCHEDULE
SD, SDMH	STORM DRAIN, STORM DRAIN MANHOLE
SE	SOUTHEAST
SECT	SECTION(S)
SHT	SHEET
SP	SPRINKLER
SQ	SQUARE
SQ FT	SQUARE FEET
SQ IN	SQUARE INCH
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
ST	STREET
STA	STATION
STD	STANDARD
STRUCT	STRUCTURE(E, AL)
SW	SOUTHWEST
SYS	SYSTEM
T	TELEPHONE OR TELEPHONE VAULT
TBC	TOP OF BACK OF CURB ELEVATION
TBD	TO BE DETERMINED
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB ELEVATION
TELE	TELEPHONE
TEMP	TEMPORARY
TW	TOP OF WALL ELEVATION
TP, T/P	TOP OF PIPE
TYP	TYPICAL
UDG	UNDERGROUND
VAP	VERTICAL ANGLE POINT
VC	VERTICAL CURVE
VERT	VERTICAL
VOL	VOLUME
W	WEST, WIDTH, WIDE OR WATER
W/	WITH
W/O	WITHOUT
WM	WATER MAIN OR WILLAMETTE MERIDIAN
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WV	WATER VALVE
XFMR	TRANSFORMER

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DANIEL PATRICK PHILLIPS — STATE OF WASH. — 21611 — REGISTERED PROFESSIONAL ENGINEER
FOR PERMIT REVIEW ONLY

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:
GENERAL NOTES

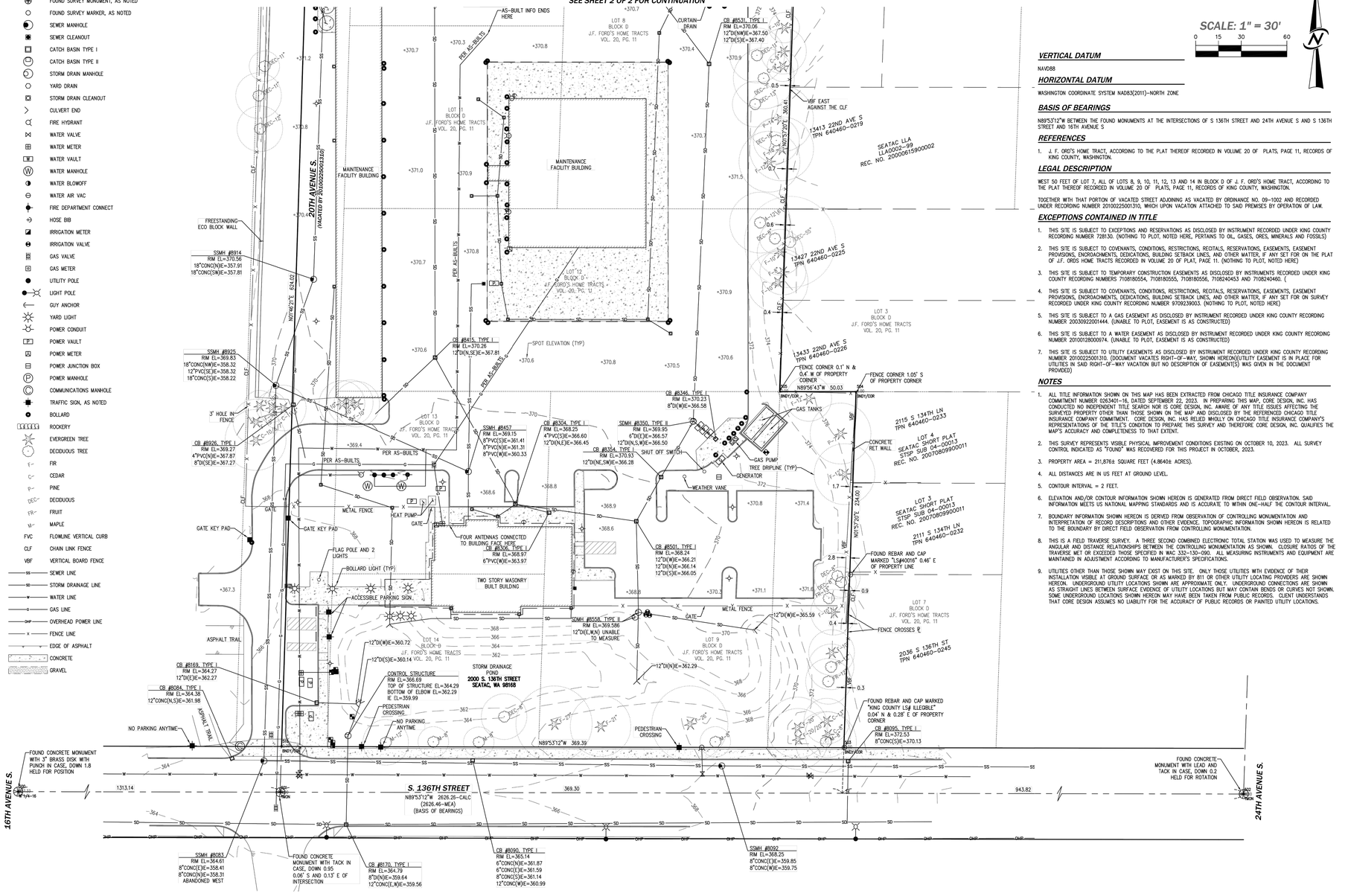
SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:
GN-01

May 10, 2024 3:07:59pm – User: dan.phillips
N:\PROJECTS\1941 ARC ARCHITECTS\23-000537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CADD\23-000537 GN-01.DWG

NE1/4 OF THE NW1/4, SEC. 16, TWP. 23 N., RGE. 4 E., W.M.

SEE SHEET 2 OF 2 FOR CONTINUATION



LEGEND

- FOUND SURVEY MONUMENT, AS NOTED
- FOUND SURVEY MARKER, AS NOTED
- SEWER MANHOLE
- SEWER CLEANOUT
- CATCH BASIN TYPE I
- CATCH BASIN TYPE II
- STORM DRAIN MANHOLE
- YARD DRAIN
- STORM DRAIN CLEANOUT
- CULVERT END
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- WATER VAULT
- WATER MANHOLE
- WATER BLOWOFF
- WATER AIR VAC
- FIRE DEPARTMENT CONNECT
- HOSE BIB
- IRRIGATION METER
- IRRIGATION VALVE
- GAS VALVE
- GAS METER
- UTILITY POLE
- LIGHT POLE
- GUY ANCHOR
- YARD LIGHT
- POWER CONDUIT
- POWER VAULT
- POWER METER
- POWER JUNCTION BOX
- POWER MANHOLE
- COMMUNICATIONS MANHOLE
- TRAFFIC SIGN, AS NOTED
- BOLLARD
- ROCKERY
- EVERGREEN TREE
- DECIDUOUS TREE
- FIR
- CEDAR
- PINE
- DECIDUOUS
- FRUIT
- MAPLE
- FVC FLOWLINE VERTICAL CURB
- CLF CHAIN LINK FENCE
- VBF VERTICAL BOARD FENCE
- SS SEWER LINE
- SD STORM DRAINAGE LINE
- W WATER LINE
- G GAS LINE
- OHP OVERHEAD POWER LINE
- X FENCE LINE
- EDGE OF ASPHALT
- CONCRETE
- GRAVEL

SCALE: 1" = 30'
0 15 30 60

VERTICAL DATUM
NAVD88

HORIZONTAL DATUM
WASHINGTON COORDINATE SYSTEM NAD83(2011)–NORTH ZONE

BASIS OF BEARINGS
N89°53'12"W BETWEEN THE FOUND MONUMENTS AT THE INTERSECTIONS OF S 136TH STREET AND 24TH AVENUE S AND S 136TH STREET AND 16TH AVENUE S

REFERENCES
1. J. F. ORD'S HOME TRACT, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 20 OF PLATS, PAGE 11, RECORDS OF KING COUNTY, WASHINGTON.

LEGAL DESCRIPTION
WEST 50 FEET OF LOT 7, ALL OF LOTS 8, 9, 10, 11, 12, 13 AND 14 IN BLOCK D OF J. F. ORD'S HOME TRACT, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 20 OF PLATS, PAGE 11, RECORDS OF KING COUNTY, WASHINGTON.

TOGETHER WITH THAT PORTION OF VACATED STREET ADJOINING AS VACATED BY ORDINANCE NO. 09–1002 AND RECORDED UNDER RECORDING NUMBER 20100225001310, WHICH UPON VACATION ATTACHED TO SAID PREMISES BY OPERATION OF LAW.

EXCEPTIONS CONTAINED IN TITLE
1. THIS SITE IS SUBJECT TO EXCEPTIONS AND RESERVATIONS AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 728130. (NOTHING TO PLOT, NOTED HERE, PERTAINS TO OIL, GASES, ORES, MINERALS AND FOSSILS)
2. THIS SITE IS SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, ENCROACHMENTS, DEDICATIONS, BUILDING SETBACK LINES, AND OTHER MATTER, IF ANY SET FOR ON THE PLAT OF J.F. ORDS HOME TRACTS RECORDED IN VOLUME 20 OF PLAT, PAGE 11. (NOTHING TO PLOT, NOTED HERE)
3. THIS SITE IS SUBJECT TO TEMPORARY CONSTRUCTION EASEMENTS AS DISCLOSED BY INSTRUMENTS RECORDED UNDER KING COUNTY RECORDING NUMBERS 7108180554, 7108180555, 7108180556, 7108240453 AND 7108240460. (
4. THIS SITE IS SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, ENCROACHMENTS, DEDICATIONS, BUILDING SETBACK LINES, AND OTHER MATTER, IF ANY SET FOR ON SURVEY RECORDED UNDER KING COUNTY RECORDING NUMBER 9709239003. (NOTHING TO PLOT, NOTED HERE)
5. THIS SITE IS SUBJECT TO A GAS EASEMENT AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 20030922001444. (UNABLE TO PLOT, EASEMENT IS AS CONSTRUCTED)
6. THIS SITE IS SUBJECT TO A WATER EASEMENT AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 20100128000974. (UNABLE TO PLOT, EASEMENT IS AS CONSTRUCTED)
7. THIS SITE IS SUBJECT TO UTILITY EASEMENTS AS DISCLOSED BY INSTRUMENT RECORDED UNDER KING COUNTY RECORDING NUMBER 20100225001310. (DOCUMENT VACATES RIGHT–OF–WAY, SHOWN HEREON)(UTILITY EASEMENT IS IN PLACE FOR UTILITIES IN SAID RIGHT–OF–WAY VACATION BUT NO DESCRIPTION OF EASEMENT(S) WAS GIVEN IN THE DOCUMENT PROVIDED)

NOTES
1. ALL TITLE INFORMATION SHOWN ON THIS MAP HAS BEEN EXTRACTED FROM CHICAGO TITLE INSURANCE COMPANY COMMITMENT NUMBER 0263401–16, DATED SEPTEMBER 22, 2023. IN PREPARING THIS MAP, CORE DESIGN, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS CORE DESIGN, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY THE REFERENCED CHICAGO TITLE INSURANCE COMPANY COMMITMENT. CORE DESIGN, INC. HAS RELIED WHOLLY ON CHICAGO TITLE INSURANCE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND THEREFORE CORE DESIGN, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
2. THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON OCTOBER 10, 2023. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN OCTOBER, 2023.
3. PROPERTY AREA = 211,876± SQUARE FEET (4.864± ACRES).
4. ALL DISTANCES ARE IN US FEET AT GROUND LEVEL.
5. CONTOUR INTERVAL = 2 FEET.
6. ELEVATION AND/OR CONTOUR INFORMATION SHOWN HEREON IS GENERATED FROM DIRECT FIELD OBSERVATION. SAID INFORMATION MEETS US NATIONAL MAPPING STANDARDS AND IS ACCURATE TO WITHIN ONE–HALF THE CONTOUR INTERVAL.
7. BOUNDARY INFORMATION SHOWN HEREON IS DERIVED FROM OBSERVATION OF CONTROLLING MONUMENTATION AND INTERPRETATION OF RECORD DESCRIPTIONS AND OTHER EVIDENCE. TOPOGRAPHIC INFORMATION SHOWN HEREON IS RELATED TO THE BOUNDARY BY DIRECT FIELD OBSERVATION FROM CONTROLLING MONUMENTATION.
8. THIS IS A FIELD TRAVERSE SURVEY. A THREE SECOND COMBINED ELECTRONIC TOTAL STATION WAS USED TO MEASURE THE ANGULAR AND DISTANCE RELATIONSHIPS BETWEEN THE CONTROLLING MONUMENTATION AS SHOWN. CLOSURE RATIOS OF THE TRAVERSE MET OR EXCEEDED THOSE SPECIFIED IN WAC 332–130–090. ALL MEASURING INSTRUMENTS AND EQUIPMENT ARE MAINTAINED IN ADJUSTMENT ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
9. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE OR AS MARKED BY 811 OR OTHER UTILITY LOCATING PROVIDERS ARE SHOWN HEREON. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. UNDERGROUND CONNECTIONS ARE SHOWN AS STRAIGHT LINES BETWEEN SURFACE EVIDENCE OF UTILITY LOCATIONS BUT MAY CONTAIN BENDS OR CURVES NOT SHOWN. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. CLIENT UNDERSTANDS THAT CORE DESIGN ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS OR PAINTED UTILITY LOCATIONS.

DATE | REVISIONS | NO.

DANIEL PATRICK DAVIS — STATE OF WASHINGTON — 22344 — REGISTERED PROFESSIONAL ENGINEER — 10-17-23

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING

CORE DESIGN
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

BOUNDARY/TOPOGRAPHIC SURVEY
PORT OF SEATTLE MAINTENANCE FACILITY - SEATAC

ARC ARCHITECTS
119 S MAIN STREET, SUITE 200
BELLEVUE, WA 98104

DATE OCTOBER 16, 2023
DESIGNED
DRAWN JEREMY REEFF
APPROVED ROBERTS WEST, PLS PROJECT MANAGER

SHEET 1 OF 2
PROJECT NUMBER 23256

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DANIEL PATRICK DAVIS — STATE OF WASHINGTON — 22344 — REGISTERED PROFESSIONAL ENGINEER — FOR PERMIT REVIEW ONLY

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

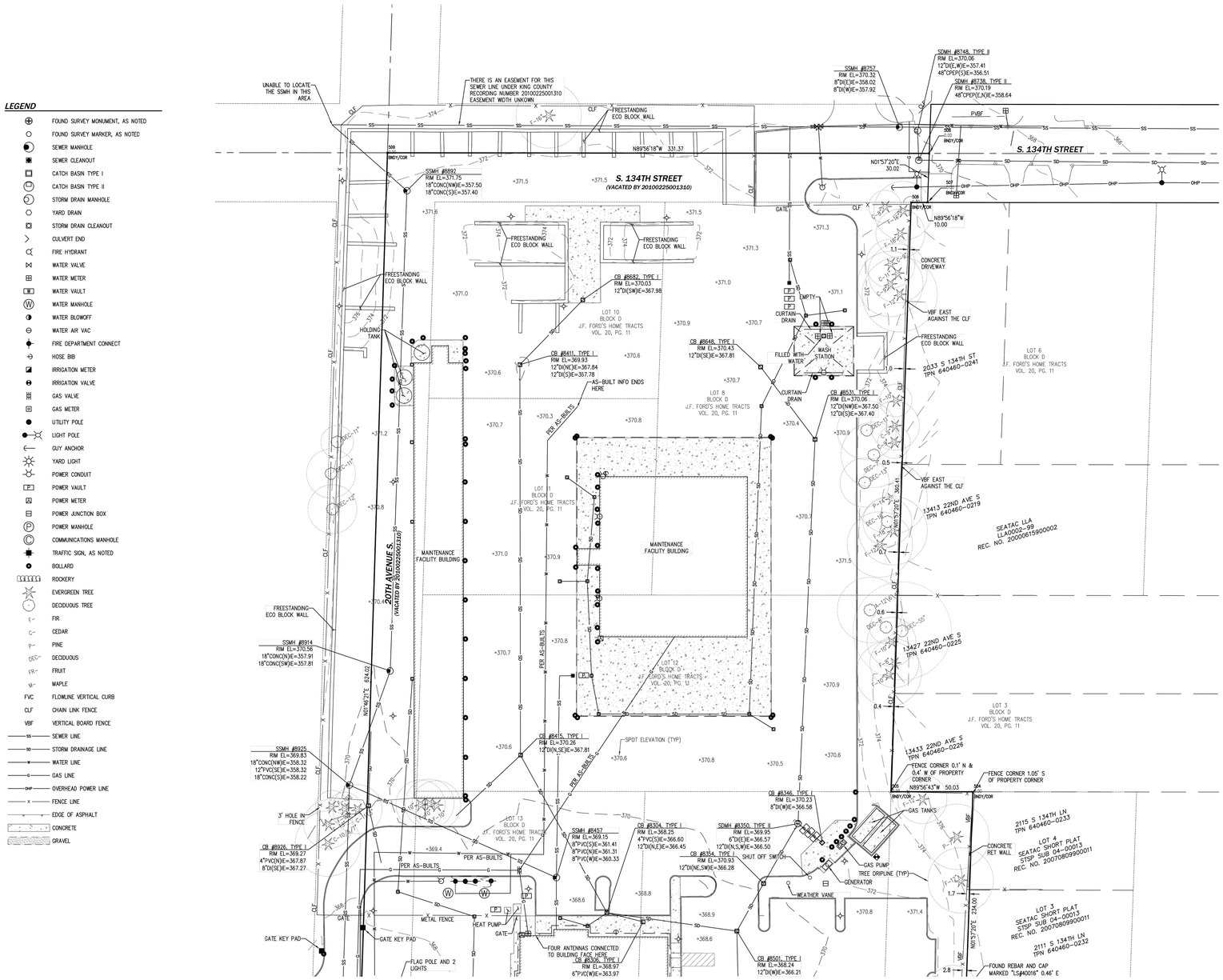
CONTENTS:
BOUNDARY/TOPO SURVEY

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:
SV-01

May 10, 2024 3:08:04pm – User: don.phillips
N:\PROJECTS\1841 ARC ARCHITECTS\23–000537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CAD\23–000537 SV–01.DWG

NE1/4 OF THE NW1/4, SEC. 16, TWP. 23 N., RGE. 4 E., W.M.



LEGEND

- FOUND SURVEY MONUMENT, AS NOTED
- FOUND SURVEY MARKER, AS NOTED
- SEWER MANHOLE
- SEWER CLEANOUT
- CATCH BASIN TYPE I
- CATCH BASIN TYPE II
- STORM DRAIN MANHOLE
- YARD DRAIN
- STORM DRAIN CLEANOUT
- CULVERT END
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- WATER VAULT
- WATER MANHOLE
- WATER BLOWOFF
- WATER AIR VAC
- FIRE DEPARTMENT CONNECT
- HOSE BIB
- IRRIGATION METER
- IRRIGATION VALVE
- GAS VALVE
- GAS METER
- UTILITY POLE
- LIGHT POLE
- GUY ANCHOR
- YARD LIGHT
- POWER CONDUIT
- POWER VAULT
- POWER METER
- POWER JUNCTION BOX
- POWER MANHOLE
- COMMUNICATIONS MANHOLE
- TRAFFIC SIGN, AS NOTED
- BOLLARD
- ROCKERY
- EVERGREEN TREE
- DECIDUOUS TREE
- FIR
- CEDAR
- PINE
- DECIDUOUS
- FRUIT
- MAPLE
- FVC FLOWLINE VERTICAL CURB
- CLF CHAIN LINK FENCE
- VBF VERTICAL BOARD FENCE
- SS SEWER LINE
- SD STORM DRAINAGE LINE
- W WATER LINE
- G GAS LINE
- OHP OVERHEAD POWER LINE
- X FENCE LINE
- EDGE OF ASPHALT
- CONCRETE
- GRAVEL

SEE SHEET 1 OF 2 FOR CONTINUATION

NO.	REVISIONS	DATE

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LANDSCAPE ARCHITECTURE
PLANNING
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CORE DESIGN
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BOUNDARY/TOPOGRAPHIC SURVEY
PORT OF SEATTLE MAINTENANCE FACILITY - SEATAC

ARC ARCHITECTS
119 S MAIN STREET, SUITE 200
BELLEVUE, WA 98104

DATE OCTOBER 16, 2023
DESIGNED
DRAWN JEREMY REEFF
APPROVED
ROBERTS WEST, PLS
PROJECT MANAGER

SHEET 2 OF 2
PROJECT NUMBER 23256

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CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

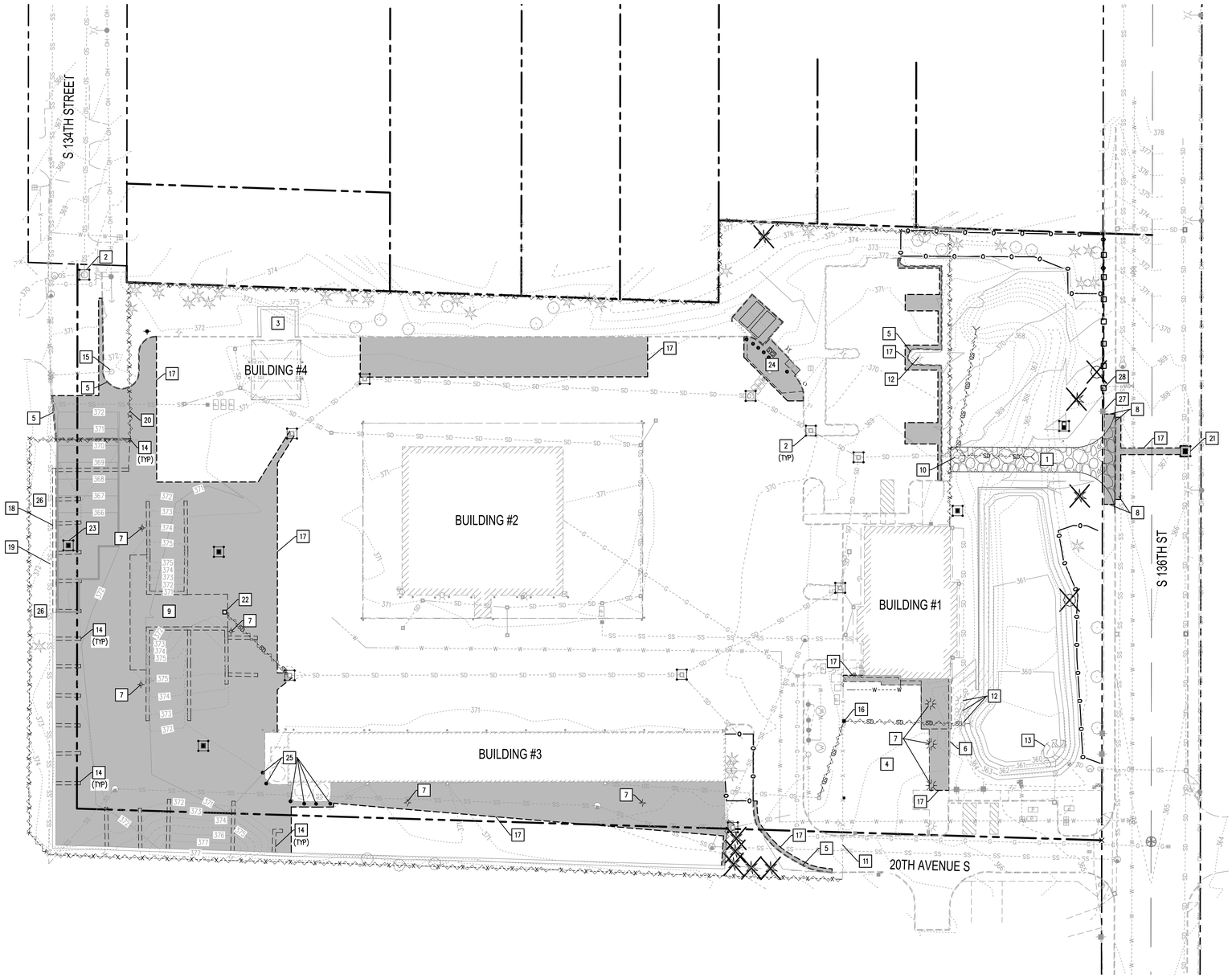
CONTENTS:
BOUNDARY/TOPO SURVEY

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 20200008.100

SHEET:
SV-02

May 10, 2024 - 3:08:15pm - User: dan.phillips
N:\PROJECTS\1841 ARC ARCHITECTS\23-000537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CAD\23-000537 SV-02.DWG

NE1/4 OF THE NW1/4, SEC. 16, T 23 N., R 4 E., W.M.



0 30 60
SCALE IN FEET

LEGEND

- EXISTING CONTOURS (MAJOR/MINOR)
- PROPOSED CONTOURS (MAJOR/MINOR)
- INLET PROTECTION SEE SHEET EC-02
- SILT FENCE, SEE SHEET EC-02
- TREE PROTECTION FENCE, SEE SHEET EC-02
- EXISTING STORM PIPE
- STABILIZED CONSTRUCTION ENTRANCE SEE SHEET EC-02
- EXISTING TREE AND ROOT BALL TO BE REMOVED AND BACKFILLED.
- REMOVE EXISTING FENCE
- REMOVE EXISTING STORM PIPE AND BACKFILL
- SAWCUT
- EXISTING ASPHALT/CONCRETE/CURB/GUTTER AND BASE TO BE REMOVED

GENERAL NOTES:

1. EXISTING UTILITIES MAY EXIST IN THE WORK AREA THAT HAVE NOT BEEN MAPPED. THE CONTRACTOR SHALL TAKE CARE TO LOCATE EXISTING UTILITIES IN THE WORK AREA AND TO PRESERVE AND PROTECT ANY EXISTING UTILITIES THAT ARE NOT TO BE DEMOLISHED.
2. CONTRACTOR SHALL SECURE ALL STORAGE AREAS.
3. CONTRACTOR SHALL PROVIDE ALL EROSION CONTROL MEASURES REQUIRED FOR STORAGE AND STOCKPILE AREAS.
4. ALL MATERIAL STORED ON-SITE SHALL HAVE PROPER ENCLOSURES AND/OR COVERINGS.
5. CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AREA.
6. SEE LANDSCAPE PLANS FOR SEEDING AND PLANTINGS.
7. CONTRACTOR SHALL INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE PRIOR TO COMMENCING ANY SITE DISTURBING ACTIVITIES.
8. THIS PROJECT SHALL BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
9. STAGING/STOCKPILE AREA TO BE RELOCATED AS NECESSARY THROUGHOUT CONSTRUCTION.
10. PROTECT AND REPLACE IN KIND IF DAMAGED ANY ITEM NOT TO BE DEMOLISHED.
11. CONTRACTOR RESPONSIBLE FOR ALL DEMOLITION PERMITS, FEES, HAULING, BACKFILL, AND DISPOSAL.
12. THE CONTRACTOR SHALL PREVENT THE TRANSPORTATION OF SEDIMENT AND DUST FROM THE WORK AREA.
13. EXISTING INFRASTRUCTURE IS SHOWN TO THE EXTENT OF ENGINEER'S KNOWLEDGE. CONTRACTOR SHALL FIELD VERIFY AND CONFIRM SCOPE OF DEMOLITION PRIOR TO BID.
14. AWARDED CONTRACTOR WILL BE PROVIDED AUTOCAD FILE TO LOCATE AND STAKE DEMOLITION LIMITS.
15. COORDINATE ALL DEMOLITION AND SALVAGE WITH OWNER PRIOR TO PROCEEDING.
16. ADDITIONAL DEMOLITION WILL BE REQUIRED FOR INSTALLATION OF POWER, COMMUNICATION, AND CONTROL CONDUITS. REFER TO POWER AND TELECOM PLANS FOR ADDITIONAL INFORMATION. SAWCUTTING AND REMOVAL OF EXISTING SURFACES IS INCIDENTAL TO THIS WORK.

DEMOLITION AND EROSION CONTROL NOTES:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE. SEE EC-02
2. INSTALL STORM DRAINAGE INLET PROTECTION (TYP). SEE EC-02
3. SWEEPER DEBRIS AREA TO BE ABANDONED
4. LOCATE EXISTING UTILITIES IN THIS AREA PRIOR TO COMMENCING WORK. COMMUNICATION, POWER, WATER SERVICE LINES, AND OTHER UNDERGROUND UTILITIES MAY EXIST. NOTIFY ENGINEER OF ANY UNMAPPED UTILITIES ENCOUNTERED.
5. DEMOLISH CURB
6. PRESERVE AND PROTECT EXISTING RETAINING WALL
7. DEMOLISH SITE LIGHT AND BASE. COORDINATE SALVAGE WITH OWNER
8. REMOVE SIDEWALK AND GUTTER TO NEAREST JOINT
9. DEMOLISH RAMPS INCLUDING BUT LIMITED TO RAILING, PAVEMENT, CONCRETE BLOCKS, AND FILL MATERIAL. SAWCUT AND REMOVAL AS REQUIRED IS INCIDENTAL TO THE WORK.
10. DEMOLISH FLOW SPLITTER STRUCTURE
11. PROTECT AND PRESERVE EXISTING FENCE, GATE, AND APPURTENANCES. CONTRACTOR SHALL PROVIDE TEMPORARY SECURITY FENCE AS REQUIRED DURING CONSTRUCTION TO SECURE FACILITY AND REPLACE EXISTING FENCE IN KIND WHERE DISTURBED.
12. PROTECT AND PRESERVE EXISTING LIGHT
13. CHECK DAM: SEE EC-02
14. DEMOLISH EXISTING BUNKER STRUCTURE, COORDINATE SALVAGE WITH OWNER.
15. REMOVE EXISTING HYDRANT. COORDINATE WITH CITY OF SEATAC FIRE OFFICIAL AND KING COUNTY WATER DISTRICT #125 PRIOR TO ANY WORK ASSOCIATED WITH HYDRANT REMOVAL. SALVAGE HYDRANT FOR RELOCATION OR REPLACE IN KIND IF DAMAGED.
16. DEMOLISH AND BACKFILL EXISTING STORM STRUCTURE
17. SAWCUT
18. DEMOLISH EXISTING ECOLOGY BLOCK WALL, COORDINATE LIMITS WITH STRUCTURAL DRAWINGS AND SALVAGE WITH OWNER
19. PRESERVE AND PROTECT EXISTING SANITARY SEWER LINE
20. DEMOLISH EXISTING GATE, COORDINATE SALVAGE WITH OWNER
21. REMOVE AND REPLACE IN KIND CURB AND GUTTER AS NECESSARY
22. DEMOLISH CATCH BASIN. PROTECT INLET FROM SEDIMENTATION UNTIL THE STRUCTURE IS DEMOLISHED
23. PROVIDE INLET PROTECTION IN DUMPSTER PIT CATCH BASIN TO PREVENT SEDIMENTATION OF THE SANITARY SEWER SYSTEM
24. REFER TO FUEL AREA PLANS BY OTHERS FOR EXTENTS OF DEMOLITION OF FUELING EQUIPMENT
25. PROTECT IN PLACE OR REMOVE AND REPLACE AS NECESSARY EXISTING BOLLARDS
26. COORDINATE WITH THE PROJECT'S LANDSCAPE ARCHITECT FOR TREE PRESERVATION PRIOR TO ANY DISTURBANCE BEYOND EXISTING ECOLOGY BLOCK WALL.
27. PROTECT AND PRESERVE EXISTING SIGNAGE (TYP)
28. PROTECT AND PRESERVE EXISTING FIRE HYDRANT

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CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

EROSION CONTROL AND DEMOLITION PLAN

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

EC-01

May 10, 2024 - 3:08:35pm - User: don.phillips
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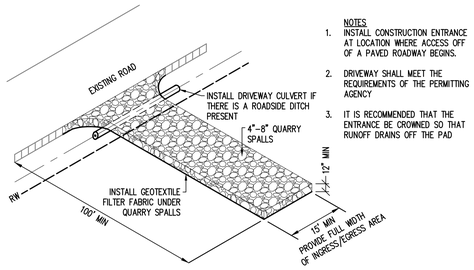
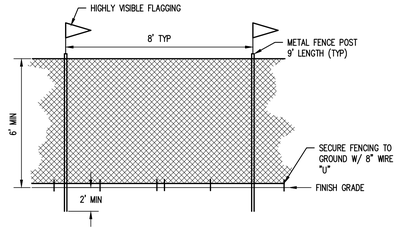


NOTES

1. INSTALL CONSTRUCTION ENTRANCE AT LOCATION WHERE ACCESS OFF OF A PAVED ROADWAY BEGINS.
2. DRIVEWAY SHALL MEET THE REQUIREMENTS OF THE PERMITTING AGENCY
3. IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD

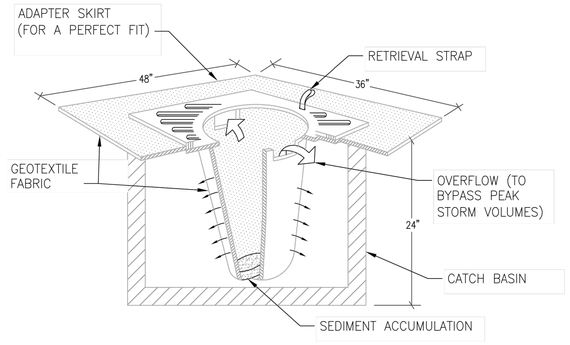
STABILIZED CONSTRUCTION ENTRANCE

NTS



TREE PROTECTION FENCING

NTS



STORM DRAIN INLET PROTECTION

DETAIL 2

NO SCALE

DETAIL FROM CITY OF SEATAC ADDENDUM TO ROAD STANDARDS

NO.	DATE	BY	APPR.	REVISION

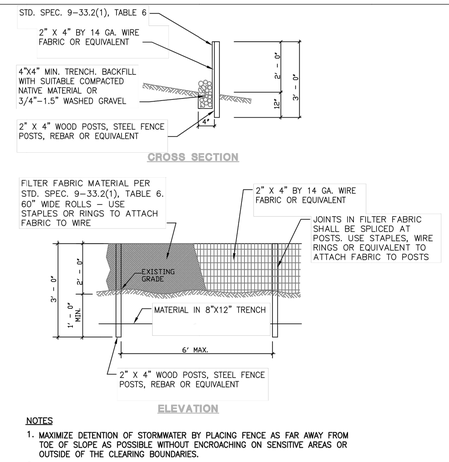
DRN. TK | DSGN. TK | CHKD. EAP

Public Works Department
Tom Gut, P.E., Public Works Director
Susan Sanderson, P.E., City Engineer
4800 South 188th Street, SeaTac, Wa 98188–8605
Telephone: (206) 973–4730, Engineering Division

CITY OF SEATAC
24TH AVENUE SOUTH OVERLAY PROJECT
PARALLEL CURB RAMP
DETAILS

DATE: 03/06/2015 | JOB # ST–884 | SCALE: NTS

SHEET NO: 20 OF 20



CROSS SECTION

ELEVATION

NOTES

1. MAXIMIZE DETENTION OF STORMWATER BY PLACING FENCE AS FAR AWAY FROM TOE OF SLOPE AS POSSIBLE WITHOUT ENCROACHING ON SENSITIVE AREAS OR OUTSIDE OF THE CLEARING BOUNDARIES.
2. INSTALL SILT FENCING ALONG CONTOURS WHENEVER POSSIBLE.
3. INSTALL THE ENDS OF THE SILT FENCE TO POINT SLIGHTLY UP–SLOPE TO PREVENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.
4. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATIONS 8.01.3(9)A AND 8.01.3(15).
5. POST SPACING MAY BE INCREASED TO BE 8' IF WIRE BACKING IS USED.

SILT FENCE

DETAIL 1

NO SCALE

DETAIL FROM CITY OF SEATAC ADDENDUM TO ROAD STANDARDS

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SEATTLE, WA 98104-2579
(206) 322-3322

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DANIEL PATRICK STIFF ST. WASH. 23015 REGISTERED PROFESSIONAL ENGINEER
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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

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PROJECT NO: 2020008.100

SHEET:

EC-02

May 10, 2024 3:08:41pm – User: dan.phillips
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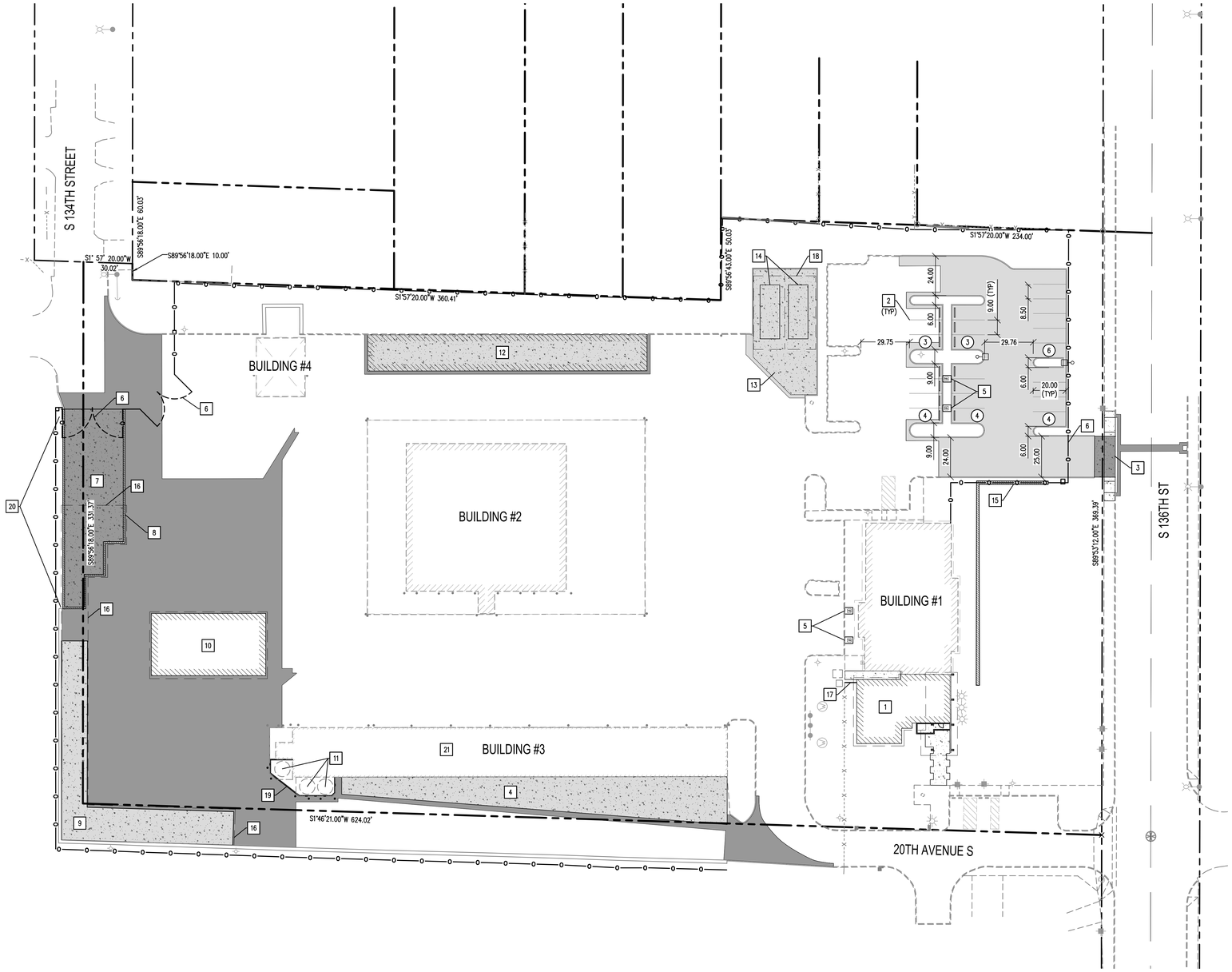

0 30 60
SCALE IN FEET

LEGEND

- RIGHT-OF-WAY
- PROPERTY LINE
- SECTION LINE
- PROPOSED BUILDING
- (XX) STALL COUNT
- CEMENT CONCRETE CURB: SEE SP-02
- CEMENT CONCRETE VERTICAL CURB AND GUTTER PER KING COUNTY FIG. 3-002, MATCH EXISTING GUTTER WIDTH:SEE SP-02
- CEMENT CONCRETE SIDEWALK: SEE SP-02
- LIGHT DUTY ASPHALT PAVING: SEE SP-02
- HEAVY DUTY ASPHALT PAVING: SEE SP-02
- HEAVY DUTY PORTLAND CEMENT CONCRETE PAVING: SEE SP-02
- PORTLAND CEMENT CONCRETE PAVING AS NOTED
- PERIMETER SECURITY FENCE SEE LANDSCAPE PLANS
- CEMENT CONCRETE WHEEL STOP: SEE SP-02
- LIGHTPOLE: SEE ELECTRICAL PLANS
- P PROPOSED DUAL HEAD EV CHARGER

GENERAL NOTE:

1. ADDITIONAL PAVEMENT REPAIR WILL BE REQUIRED FOR INSTALLATION OF POWER, COMMUNICATION, AND CONTROL CONDUITS. REFER TO POWER AND TELECOM PLANS FOR ADDITIONAL INFORMATION. ASPHALT AND CONCRETE PAVING, GRAVEL BASES, AND COMPACTION ARE INCIDENTAL TO THIS WORK.

CONSTRUCTION NOTES:

1. BUILDING RENOVATION AND ADDITION: SEE ARCHITECTURAL PLANS
2. PARKING LOT STRIPING: SEE SP-02
3. COMMERCIAL/INDUSTRIAL DRIVEWAY APPROACH WITH PARALLEL SIDEWALK PER KING COUNTY FIG. 3-007: SEE SP-02
4. SLAB FOR STEEL OUTDOOR OVERHEAD STORAGE RACKS: SEE ARCHITECTURAL PLANS
5. (4) ELECTRIC VEHICLE CHARGING SPACES: COORDINATE INSTALLATION WITH ELECTRICAL PLANS
6. SECURITY GATE: SEE LANDSCAPE PLANS
7. DUMPSTER PIT
8. CAST IN PLACE CONCRETE RETAINING WALL: SEE STRUCTURAL PLANS
9. RELOCATED SWEEPER DEBRIS AREA WITH ECOLOGY BLOCK WALL: SEE ARCHITECTURAL PLANS
10. BUILDING #6 – SALT STORAGE BUILDING: SEE ARCHITECTURAL PLANS
11. SALT BRINE/MIXING AREA
12. BUILDING #7 – CANOPY PARKING: SEE ARCHITECTURAL PLANS
13. FUEL TANK SLAB: SEE ARCHITECTURAL PLANS
14. ABOVE GROUND FUEL TANKS
15. SEGMENTAL BLOCK RETAINING WALL
16. BUILDING #5 – MATERIAL STORAGE CANOPY: SEE ARCHITECTURAL PLANS
17. PERIMETER SECURITY FENCE: SEE LANDSCAPE PLANS
18. BUILDING #8 – FUEL CANOPY: SEE ARCHITECTURAL PLANS
19. CONCRETE BRINE CONTAINMENT WALLS: SEE ARCHITECTURAL PLANS
20. CONTRACTOR SHALL COORDINATE WITH PROJECT'S LANDSCAPE ARCHITECT FOR TREE PRESERVATION NORTH OF PROPOSED RETAINING WALL. EMPLOYEE EXCAVATIONS MEANS AND METHODS TO LIMIT DISTURBANCE BEYOND PROPOSED RETAINING WALL TO 10' HORIZONTALLY BEYOND BACK OF WALL.
21. BUILDING #3 – EQUIPMENT STORAGE AND RENOVATION: SEE ARCHITECTURAL PLANS

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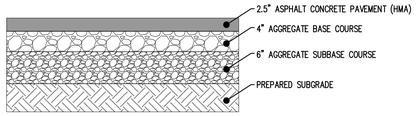
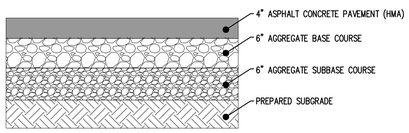


ASPHALT PAVING NOTES

MATERIALS AND CONSTRUCTION OF PAVEMENTS FOR PROJECT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE GEOTECHNICAL ENGINEERING SERVICES REPORT BY GEOENGINEERS DATED JANUARY 26, 2024 AND ANY ADDENDUMS THERETO, WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (CURRENT EDITION), AND THE PROJECT SPECIFICATIONS.

1. HOT-MIX ASPHALT CONCRETE PAVEMENT (HMA) SHALL CONSIST OF CLASS 1/2-INCH (MAXIMUM AGGREGATE SIZE) WITH PG 58S-22 ASPHALT BINDER. HMA SHALL CONFORM TO APPLICABLE SECTIONS OF 5-04, 9-02 AND 9-03 OF THE WSDOT STANDARD SPECIFICATIONS.
2. AGGREGATE BASE COURSE SHALL BE CRUSHED SURFACING BASE COURSE (CSBC) AND CRUSHED SURFACING TOP COURSE (CSTC) CONFORMING TO APPLICABLE SECTIONS OF 4-04 AND 9-03.9(3) OF THE WSDOT STANDARD SPECIFICATIONS. THE TOP APPROXIMATE 2 INCHES OF CSBC MAY BE REPLACED WITH CSTC AS A LEVELING LAYER. THE AGGREGATE BASE COURSE SHALL BE PREPARED AND COMPACTED AS RECOMMENDED IN THE PROJECT'S GEOTECHNCIAL ENGINEERING SERVICES REPORT.
3. AGGREGATE SUBBASE COURSE SHALL CONFORM TO APPLICABLE SECTIONS OF 4-02 'GRAVEL BASE' AND 9-03.10 'AGGREGATE GRAVEL FOR BASE' OF THE WSDOT STANDARD SPECIFICATIONS. THE AGGREGATE SUBBASE COURSE SHALL BE PREPARED AND COMPACTED AS RECOMMENDED IN THE PROJECT'S GEOTECHNICAL ENGINEERING SERVICES REPORT.
4. SUBGRADE SHALL BE PREPARED AND COMPACTED AS RECOMMENDED IN THE PROJECT'S GEOTECHNCIAL ENGINEERING SERVICES REPORT.

LIGHT DUTY ASPHALT PAVING
NTS



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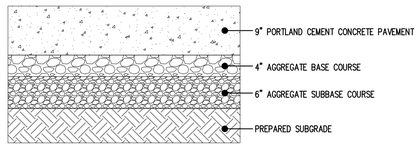
HEAVY DUTY ASPHALT PAVING
NTS



CONCRETE PAVING NOTES

MATERIALS AND CONSTRUCTION OF PAVEMENTS FOR PROJECT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE GEOTECHNICAL ENGINEERING SERVICES REPORT BY GEOENGINEERS DATED JANUARY 26, 2024 AND ANY ADDENDUMS THERETO, WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (CURRENT EDITION), AND THE PROJECT SPECIFICATIONS.

1. PORTLAND CEMENT CONCRETE (PCC) MIX DESIGN SHALL CONFORM WITH A MINIMUM 14-DAY FLEXURAL STRENGTH OF 650 POUNDS PER SQUARE INCH (PSI). THE PCC SECTION ASSUMES CONCRETE PAVEMENTS IN VEHICULAR AREAS WILL BE JOINTED AND THAT DOWEL BARS WILL BE INCLUDED AT EXPANSION JOINTS TO ASSIST IN LOAD TRANSFER. DOWELS SHOULD NOT BE INCLUDED BETWEEN EXTERIOR PAVEMENT SLABS AND INTERIOR PAVEMENT SLABS TO REDUCE THE RISK OF CRACKING DUE TO DIFFERENTIAL SETTLEMENTS.
2. AGGREGATE BASE COURSE SHALL BE CRUSHED SURFACING BASE COURSE (CSBC) AND CRUSHED SURFACING TOP COURSE (CSTC) CONFORMING TO APPLICABLE SECTIONS OF 4-04 AND 9-03.9(3) OF THE WSDOT STANDARD SPECIFICATIONS. THE TOP APPROXIMATE 2 INCHES OF CSBC MAY BE REPLACED WITH CSTC AS A LEVELING LAYER. THE AGGREGATE BASE COURSE SHALL BE PREPARED AND COMPACTED AS RECOMMENDED IN THE PROJECT'S GEOTECHNICAL ENGINEERING SERVICES REPORT.
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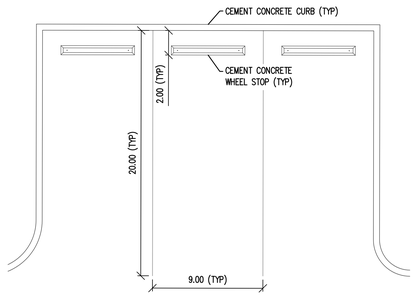
4. SUBGRADE SHALL BE PREPARED AND COMPACTED AS RECOMMENDED IN THE PROJECT'S GEOTECHNCIAL ENGINEERING SERVICES REPORT.

HEAVY DUTY PORTLAND CEMENT CONCRETE PAVING
NTS



PARKING LOT STRIPING
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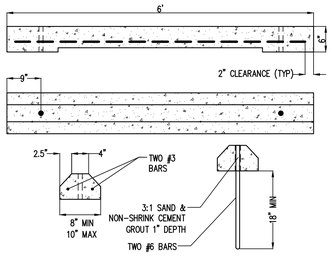
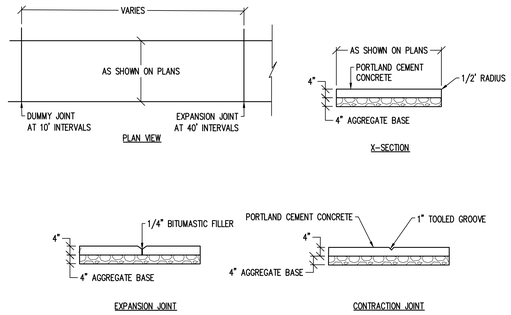


CEMENT CONCRETE WHEEL STOP
NTS

NOTE:

EXTEND AGGREGATE BASE BELOW CURB

CEMENT CONCRETE CURB
NTS



CEMENT CONCRETE SIDEWALK NOTES

1. PORTLAND CEMENT CONCRETE (PCC) MIX DESIGN SHALL CONFORM WITH A MINIMUM 14-DAY FLEXURAL STRENGTH OF 650 POUNDS PER SQUARE INCH (PSI). THE PCC SECTION ASSUMES CONCRETE PAVEMENTS IN VEHICULAR AREAS WILL BE JOINTED AND THAT DOWEL BARS WILL BE INCLUDED AT EXPANSION JOINTS TO ASSIST IN LOAD TRANSFER. DOWELS SHOULD NOT BE INCLUDED BETWEEN EXTERIOR PAVEMENT SLABS AND INTERIOR PAVEMENT SLABS TO REDUCE THE RISK OF CRACKING DUE TO DIFFERENTIAL SETTLEMENTS.
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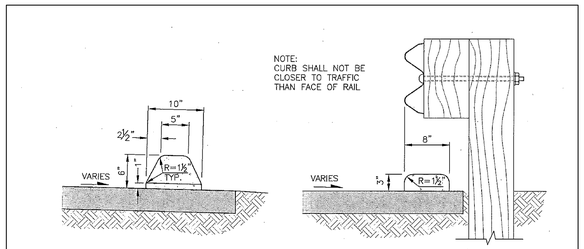
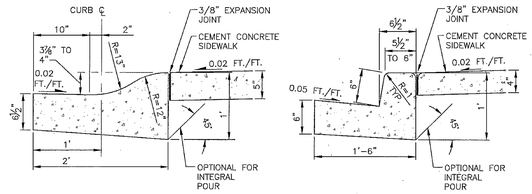
3. SUBGRADE SHALL BE PREPARED AND COMPACTED AS RECOMMENDED IN THE PROJECT'S GEOTECHNICAL ENGINEERING SERVICES REPORT.
4. TOOLING AND JOINTING SHALL BE PER THE PROJECT'S GEOTECHNICAL ENGINEERING REPORT AND STANDARD INDUSTRY PRACTICE

CEMENT CONCRETE SIDEWALK
NTS



EXTRUDED ASPHALT OR CEMENT CONCRETE CURB (3)(5)

EXTRUDED CONCRETE CURB UNDER GUARDRAIL (4)



CEMENT CONCRETE ROLLED CURB

CEMENT CONCRETE VERTICAL CURB & GUTTER

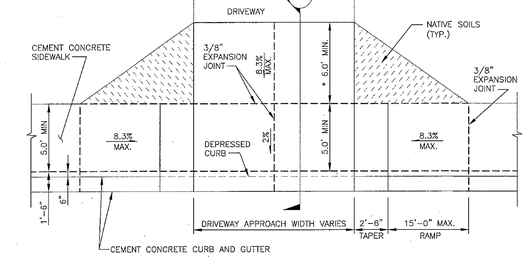
NOTES:

1. SEE SEC. 3.04 K.C.R.S. FOR JOINT REQUIREMENTS.
2. ROLL AND VERTICAL GUTTER TO MATCH POSITIVE SUPERELEVATION.
3. SEE FIG. NO. 2-005 FOR CONFIGURATION OF FILL AND WALKWAY BEHIND CURB IF REQUIRED.
4. THIS IS A CURB LOCATION DETAIL, NOT A GUARDRAIL DETAIL.
5. SEE SEC. 3.03 FOR EXTRUDED CURB ANCHORAGE.

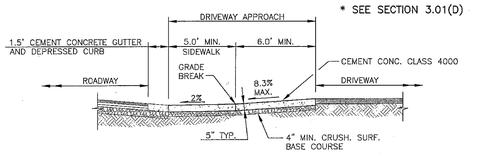
King County Department of Transportation Road Services Division 2016 Design and Construction Standards

CURB DETAILS FIG. 3-002

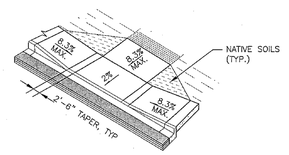
3-13



* SEE SECTION 3.01(D)



SECTION A



VIEW

King County Department of Transportation Road Services Division 2016 Design and Construction Standards

COMMERCIAL/INDUSTRIAL DRIVEWAY APPROACH PARALLEL SIDEWALK FIG. 3-007

3-18

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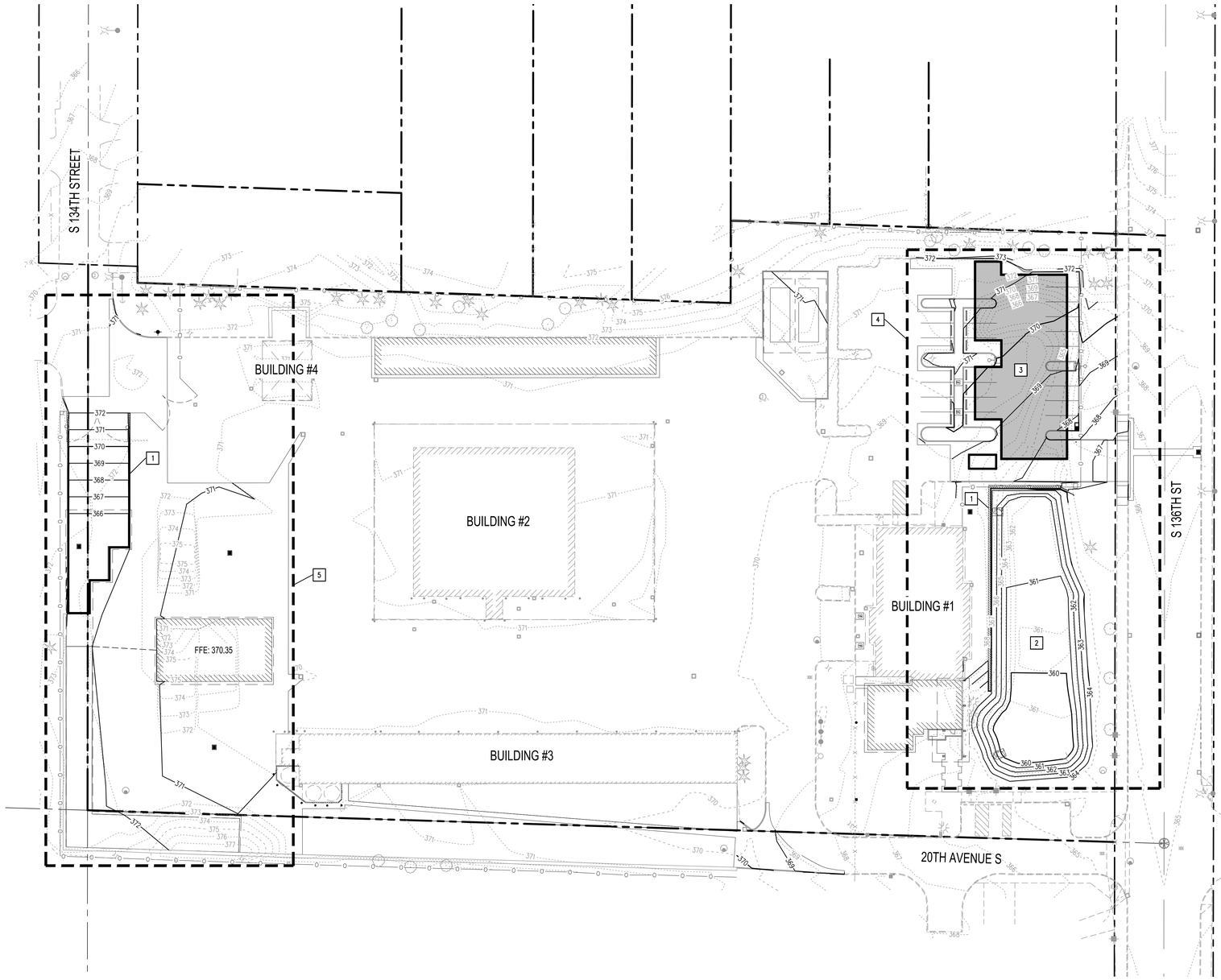

0 30 60
SCALE IN FEET

LEGEND

- PROPERTY LINE
- XX EXISTING CONTOURS (MAJOR/MINOR)
- XX PROPOSED CONTOURS (MAJOR/MINOR)
- GRADE BREAK

GRADING NOTES:

1. SEE "SD" SHEETS FOR STORM WATER INLET, PIPE, AND DETENTION SYSTEM DETAILS.
2. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE AWAY FROM BUILDING AT ALL TIMES.
3. EXISTING CONTOURS ARE BASED ON TOPOGRAPHIC SURVEY BY CORE DESIGN.
4. SPOT ELEVATIONS REPRESENT FINISHED GRADE AT TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
5. ALL LANDSCAPE AREAS SHALL BE STABILIZED.

CONSTRUCTION NOTES:

1. SEGMENTAL BLOCK RETAINING WALL
2. EXISTING STORMWATER DETENTION FACILITY. DREDGE AND EXCAVATE POND. SEE LANDSCAPE PLANS FOR STABILIZATION.
3. UNDERGROUND STORMWATER DETENTION FACILITY: SEE SD-01
4. GRADING ENLARGEMENT 1: SEE CG-02
5. GRADING ENLARGEMENT 2: SEE CG-03

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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:
GRADING PLAN

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:
CG-01

May 10, 2024 3:09:18pm — User: dan.phillips
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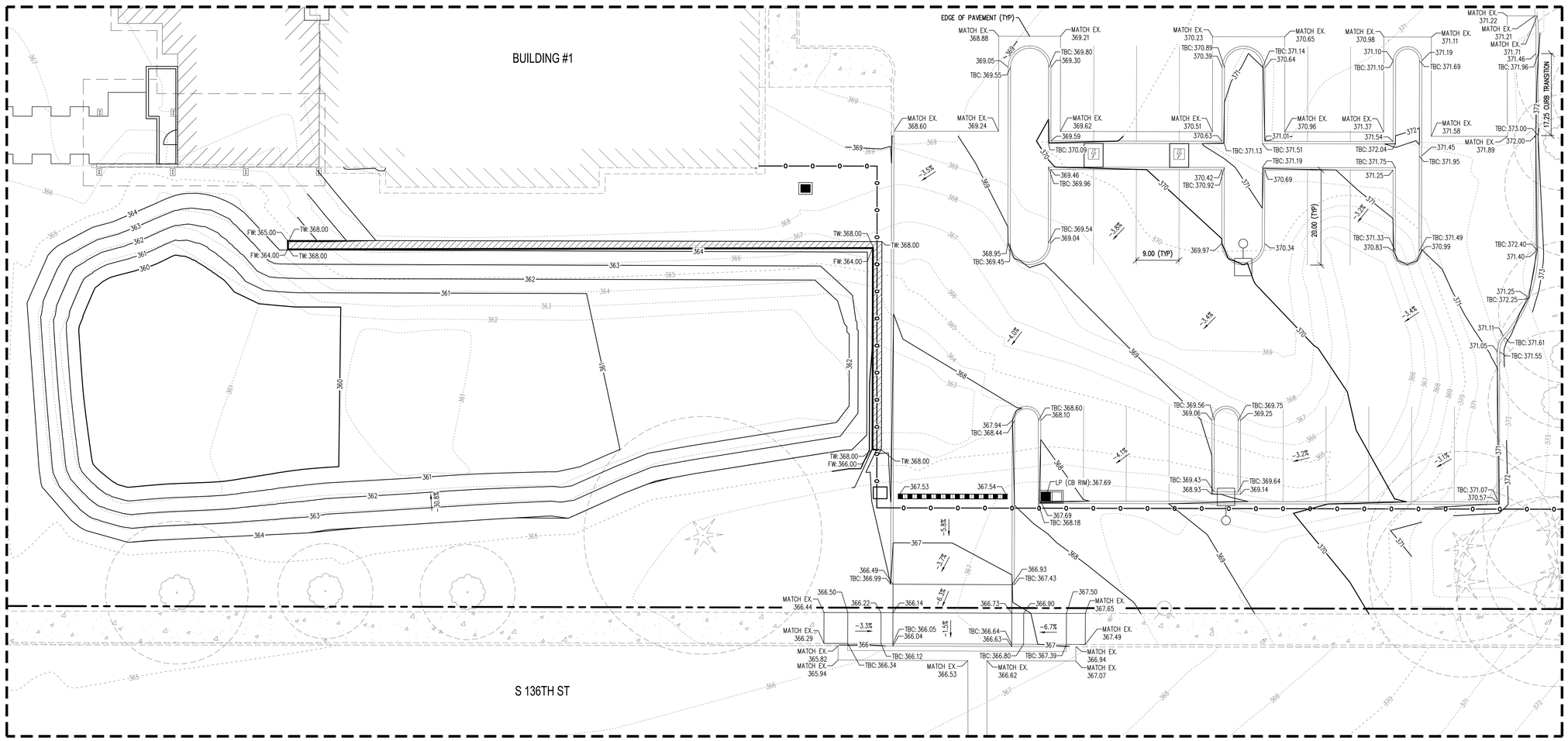

GRADING ENLARGEMENT 1
1" = 10'

0 10 20
SCALE IN FEET

LEGEND

- PROPERTY LINE
- EXISTING CONTOURS (MAJOR/MINOR)
- PROPOSED CONTOURS (MAJOR/MINOR)
- TRENCH DRAIN
- PERIMETER SECURITY FENCE SEE LANDSCAPE PLANS
- XXX.XX — SPOT ELEVATION
- TBC: XXX.XX — TOP BACK OF CURB
- TW: XXX.XX — TOP OF WALL
- FW: XXX.XX — FACE OF WALL
- XX% — SLOPE LABEL

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REVISION	DATE	DESCRIPTION

CONTENTS:

GRADING ENLARGEMENT

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

CG-02

May 10, 2024 3:09:37pm – User: don.phillips
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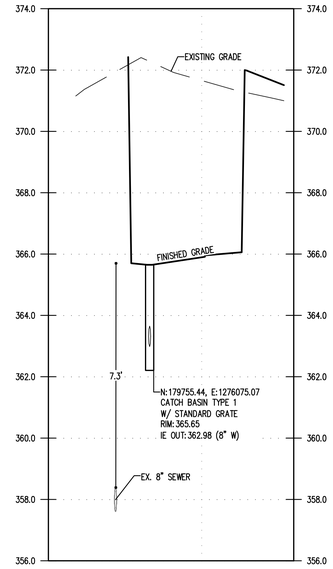
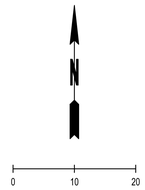
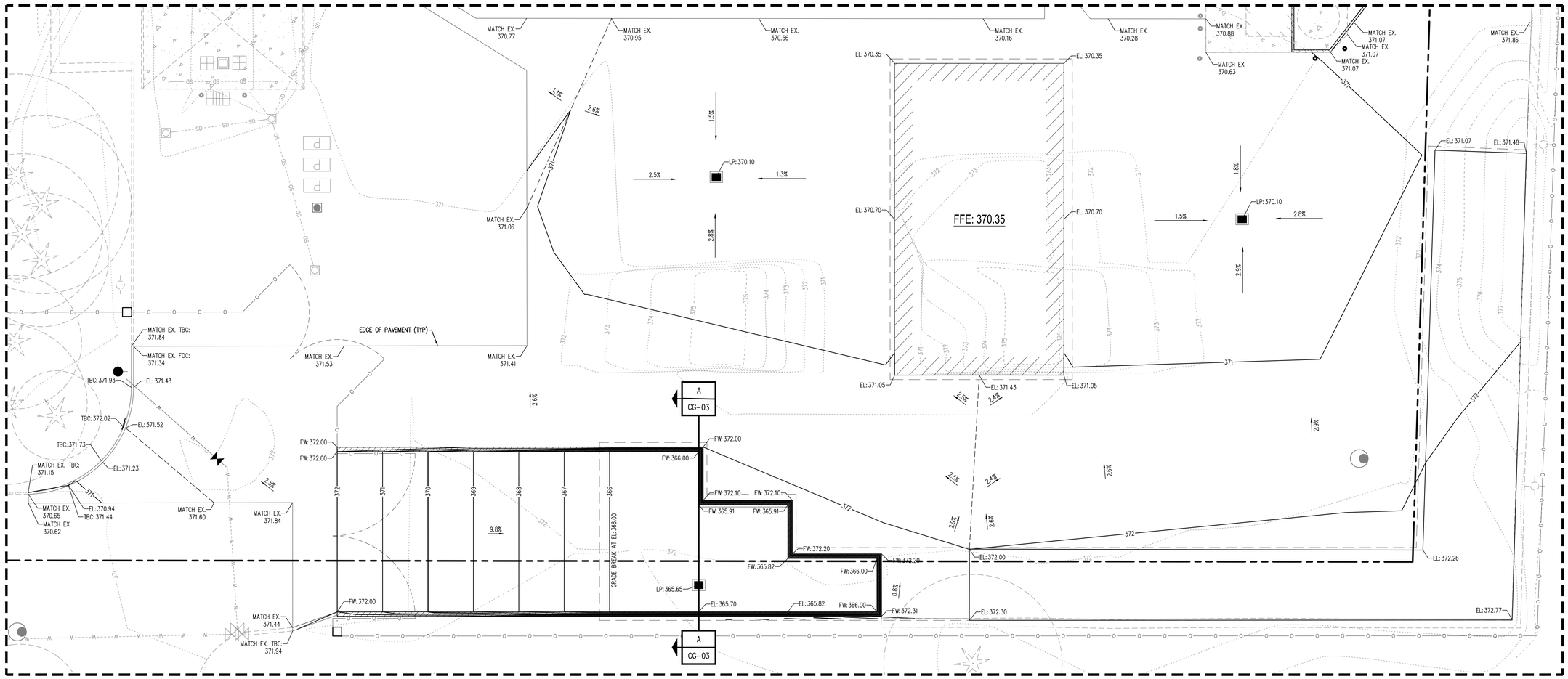


SECTION A-A



LEGEND

	PROPERTY LINE
XX	EXISTING CONTOURS (MAJOR/MINOR)
XX	PROPOSED CONTOURS (MAJOR/MINOR)
	GRADE BREAK
XXX.XX	SPOT ELEVATION
TBC: XXX.XX	TOP BACK OF CURB
TW: XXX.XX	TOP OF WALL
FW: XXX.XX	FACE OF WALL
X%	SLOPE LABEL



GRADING ENLARGEMENT 2
1" = 10'

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CITY OF SEATAC EST. 1990

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ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

GRADING ENLARGEMENT

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

CG-03

May 10, 2024 3:09:59pm – User: don.phillips
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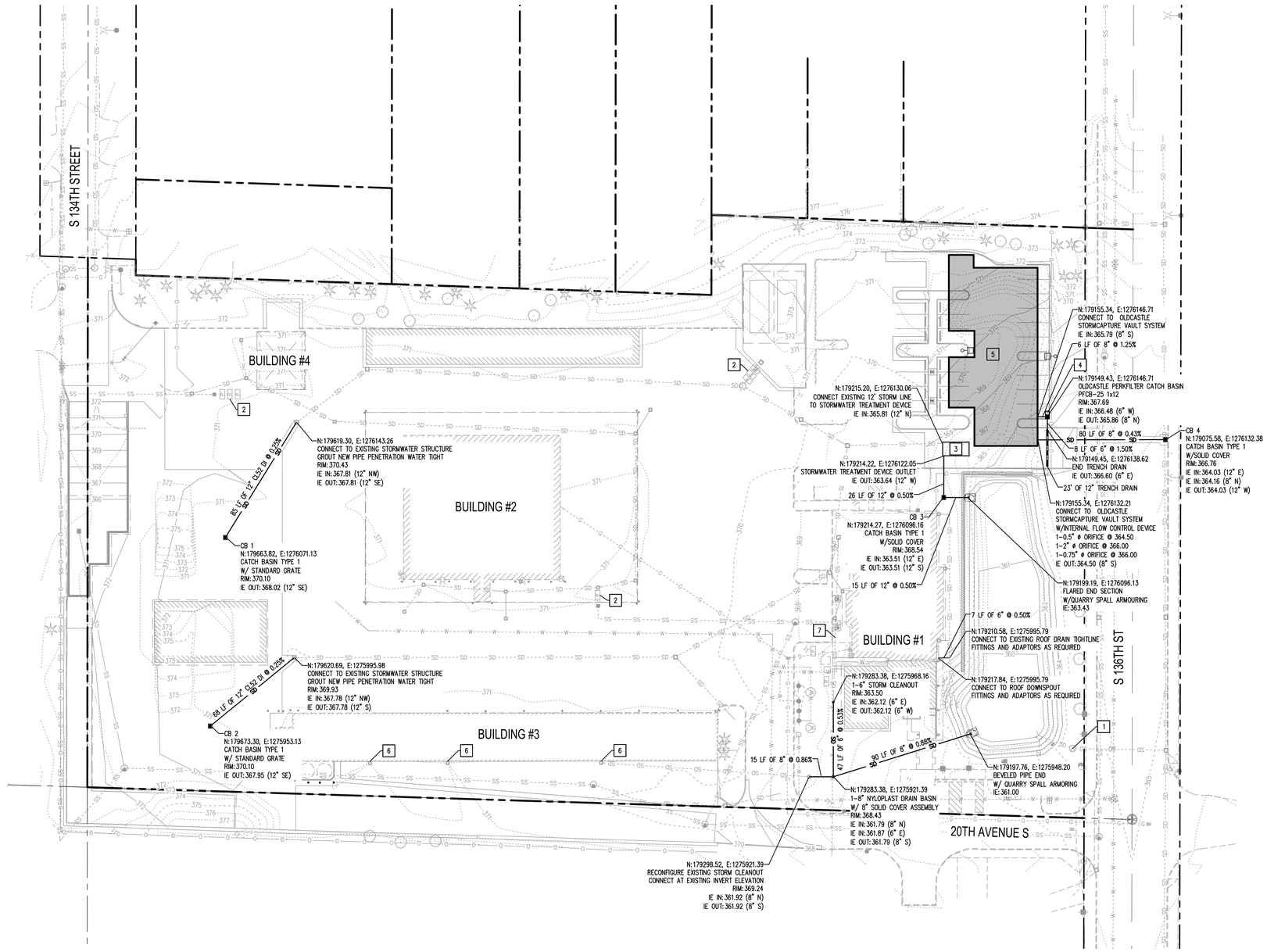
NE1/4 OF THE NW1/4, SEC. 16, T 23 N., R 4 E., W.M.



0 30 60
SCALE IN FEET

LEGEND

- EXISTING CONTOURS (MAJOR/MINOR)
- PROPOSED CONTOURS (MAJOR/MINOR)
- EX STORM PIPE
- STORM PIPE 12" AND LARGER: CPEP W/WATER TIGHT JOINTS LESS THAN 12": ASTM D3034 SDR 35 PVC UNLESS NOTED OTHERWISE
- TRENCH DRAIN
- TYPE 1 CATCH BASIN PER KING COUNTY FIG. 7-003, COVER AS NOTED: SEE SD-02
- NYLOPLAST DRAIN BASIN: SEE SD-03
- QUARRY SPALL ARMORING: SEE SD-02
- EXISTING DRAINAGE STRUCTURE
- EXISTING STORM DRAIN CLEANOUT

STORMWATER GENERAL NOTES:

1. ALL CATCH BASINS ARE STATIONED TO CENTER OF STRUCTURE.
2. SEE ARCHITECTURAL PLANS FOR CONTINUATION OF FOOTING DRAIN CONNECTION LINE.
3. PIPE LENGTHS ARE CALLED OUT FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS AND ADAPTERS TO CONNECT ROOF DOWNSPOUTS TO THE ROOF DRAIN LINE. COORDINATE CONNECTION POINTS WITH ARCHITECTURAL PLANS.
5. CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT FROM STORM STRUCTURES AND PIPES AFTER SITE HAS BEEN STABILIZED AND PRIOR TO FINAL ACCEPTANCE OF THE FACILITIES.

CONSTRUCTION NOTES:

1. EXISTING FLOW CONTROL STRUCTURE
2. PROTECT EXISTING OIL/WATER SEPARATOR
3. OLDCASTLE BPU-8161B BIOPOD BIOFILTER STORMWATER TREATMENT DEVICE FOR EXISTING YARD: SEE SD-03
4. OLDCASTLE PFCB-25-1'x12' PERKFILTER CATCH BASIN STORMWATER TREATMENT DEVICE FOR PARKING ADDITION: SEE SD-03
5. OLDCASTLE STORMCAPTURE STORMWATER DETENTION FACILITY, 45-7'x15'x2' INSIDE DIMENSION MODULES
6. PROTECT EXISTING STORM DRAIN CLEANOUT. ADJUST FRAME AND COVER TO TOP OF NEW SLAB ELEVATION
7. EXISTING ROOF DRAIN LINE. VERIFY LOCATION AND ELEVATION AT CONNECTION POINT.

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REVISION	DATE	DESCRIPTION

CONTENTS:

STORM DRAINAGE PLAN

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

SD-01

May 10, 2024 3:10:17pm — User: dan.phillips
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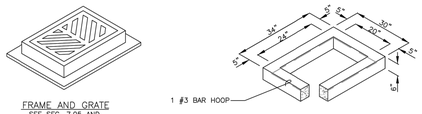
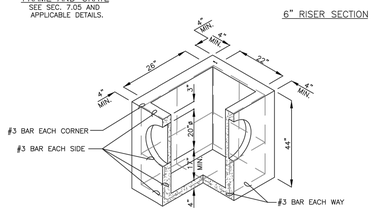
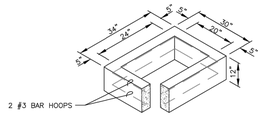


FRAME AND GRATE
SEE SEC. 7.05 AND APPLICABLE DETAILS.

6" RISER SECTION



PRECAST BASE SECTION
(MEASUREMENT AT THE TOP OF THE BASE)



12" RISER SECTION

NOTES:

1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQ. IN. PER FT. MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2 IN. MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS.
6. ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES, WITH MAX. DIAM. OF 20 IN. KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPE.
7. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5 FT.
8. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2" PER FT.
9. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621E. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
10. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
11. FOR CATCH BASINS IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG. B-5.60-01.
12. EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2 IN. FROM VERTICAL EDGE OF CATCH BASIN WALL.
13. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SECTION 9-05.15 FOR METAL CASTINGS REQUIREMENTS.

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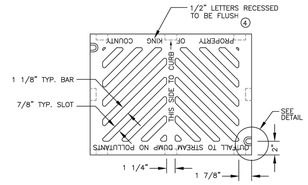
Road Services Division
2016 Design and Construction Standards

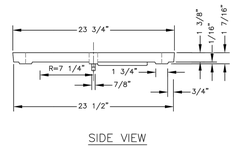
CATCH BASIN TYPE 1

FIG. 7-003

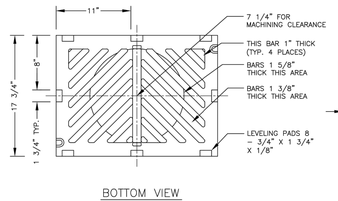
7-8



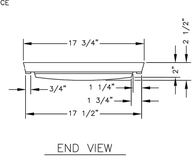
TOP VIEW



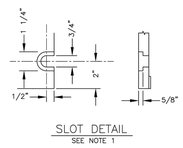
SIDE VIEW



BOTTOM VIEW



END VIEW



SLOT DETAIL
SEE NOTE 1

NOTES:

1. SLOT FORMED AND RECESSED FOR 5/8 IN.-11 NC X 2 IN. SOCKET HEAD (ALLEN HEAD) CAP SCREW.
2. GRATE SHALL BE CAST IRON PER ASTM A48 CLASS 30 UNLESS OTHERWISE SPECIFIED.
3. SEE SEC. 7.05.
④ THE WORDS "PROPERTY OF KING COUNTY" SHALL BE OMITTED IF GRATE IS ON PRIVATE SYSTEM.
5. GRATES SHALL BE MIN .32 IN. CLEAR OF WHERE WHEELCHAIR RAMPS ARE FLUSH WITH PAVEMENT.
6. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SECTION 9-05.15 FOR METAL CASTINGS REQUIREMENTS.

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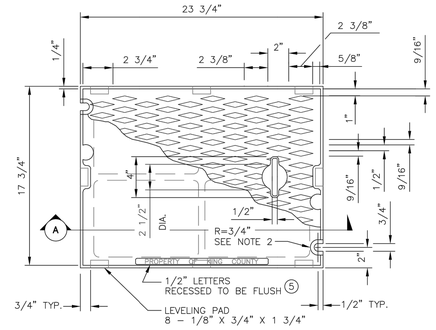
Road Services Division
2016 Design and Construction Standards

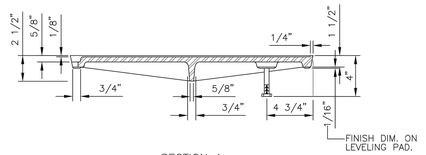
STANDARD GRATE

FIG. 7-013

7-18



PLAN COVER



SECTION A

NOTES:

1. USE WITH FRAME (FIG. 7-014) DRILLED AND TAPPED FOR LOCKING BOLTS.
2. USE WITH TWO LOCKING BOLTS 5/8 IN.-11 NC STAINLESS STEEL TYPE 304 STEEL SOCKET HEAD (ALLEN HEAD) CAP SCREWS, MIN. 2 IN. LONG.
3. MATERIAL IS CAST IRON PER ASTM A48 CLASS 30.
4. SEE SEC. 7.05.
⑤ THE WORDS "PROPERTY OF KING COUNTY" SHALL BE OMITTED IF COVER IS ON A PRIVATE SYSTEM.
6. SEE WSDOT/APWA STANDARD SPECIFICATIONS SECTION 9-05.15 FOR METAL CASTINGS REQUIREMENTS.

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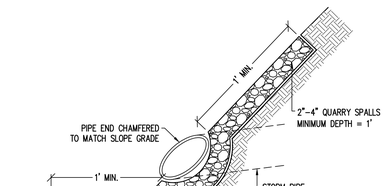
Road Services Division
2016 Design and Construction Standards

SOLID COVER

FIG. 7-015

7-20



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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

STORM DRAINAGE DETAILS

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

SD-02

May 10, 2024 3:10:27pm - User: dan.phillips
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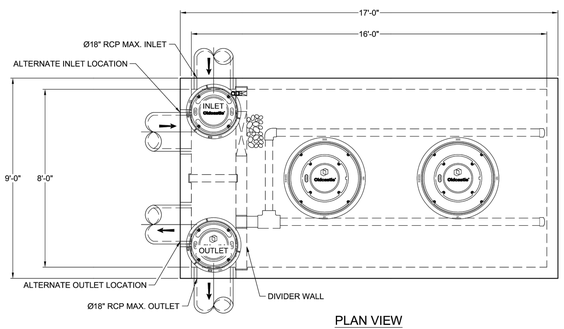
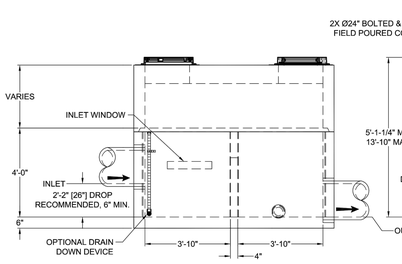
SITE SPECIFIC DATA				
Structure ID				ID
Treatment Flow Rate (cfs)				0.284
Peak Flow Rate (cfs)				2
Rim Elevation				0.284
Top of Vault Elevation				368.74
Pipe Data	**Pipe Location**	**Pipe Size**	**Pipe Type**	**Invert Elevation**
Inlet	-	12"	N-12 ADS	365.81
Outlet	-	12"	N-12 ADS	363.64
Notes:				

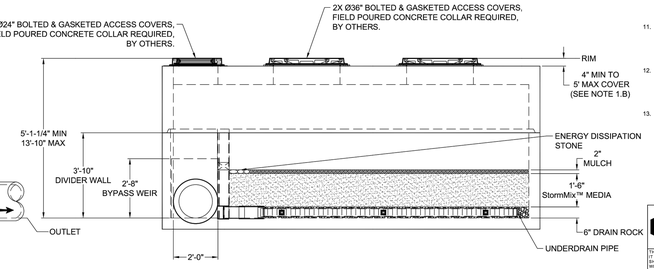
PERFORMANCE SPECIFICATIONS	
Treatment Flow Capacities:*	
NJDEP 80% Removal, 75 micron	0.432 cfs
WA Ecology GULD - Basic, Enhanced & Phosphorus Bypass Capacity	0.384 cfs
	6.5 cfs
*Contact Oldcastle for alternative treatment flow capacities.	



PLAN VIEW



LEFT END VIEW



ELEVATION VIEW

NOTES:

1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 (WITH IMPACT)
   B. DESIGN SOIL COVER: 5'-0" MAXIMUM
   C. ASSUMED WATER TABLE: BELOW BASE OF PRECAST (ENGINEER-OF-RECORD TO CONFIRM SITE WATER TABLE ELEVATION)
   D. LATERAL EARTH PRESSURE: 45 PCF (DRAINED)
   E. LATERAL LIVE LOAD SURCHARGE: 80 PSF (APPLIED TO 8'-0" BELOW GRADE)
   F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
2. CONCRETE 28-DAY MINIMUM COMPRESSIVE STRENGTH: 5,000 PSI MINIMUM.
3. REINFORCING: REBAR, ASTM A615/A706, GRADE 60
4. CEMENT: ASTM C150
5. REQUIRED ALLOWABLE SOIL BEARING CAPACITY: 2,500 PSF
6. REFERENCE STANDARD:
   A. ASTM C890
   B. ASTM C913
   C. ACI 318-14
7. THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. ENGINEER-OF-RECORD SHALL VERIFY FY THAT NOTED PARAMETERS MEET OR EXCEED PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE INFRASTRUCTURE UPON REVIEW.
8. INLET AND OUTLET HOLES WILL BE FACTORY CORED/CAST PER PLANS AND CUSTOMER REQUIREMENTS. INLET AND OUTLET LOCATIONS CAN BE MIRRORED.
9. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS, AND ELEVATIONS OF OPENINGS.
10. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
11. SECTION HEIGHTS, SLAB/WALL THICKNESSES, AND KEYWAYS ARE SUBJECT TO CHANGE AS REQUIRED FOR SITE REQUIREMENTS AND/OR DUE TO PRODUCT AVAILABILITY AND PRODUCTION FACILITY CONSTRAINTS.
12. MAXIMUM PICK WEIGHTS*:
    A. TOP: XX,XXX LBS
    B. BASE: XX,XXX LBS*
    * COMBINED WEIGHT OF BASE INCLUDES BYPASS WEIR, DIVIDER WALL, ROCK & MEDIA)
13. INTERNALS SHALL CONSIST OF UNDERDRAIN PIPE, ROCK, STORMMIX™ MEDIA, MULCH, DIVIDER WALL, BYPASS WEIR AND OPTIONAL DRAIN DOWN.

Oldcastle Infrastructure
A CRH COMPANY
Ph: 800.579.8818 | www.oldcastleinfrastructure.com/stormwater

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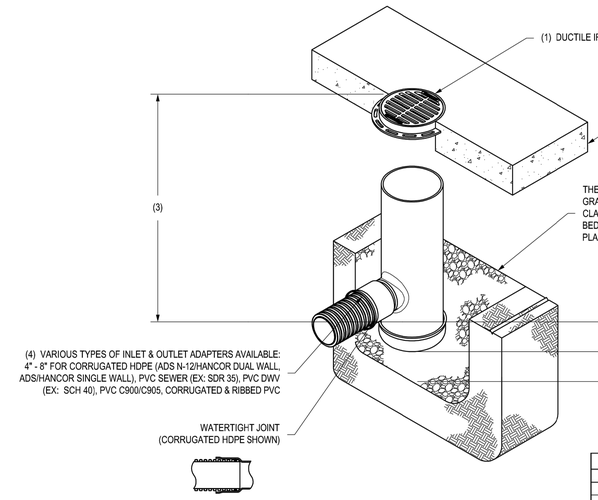
BioPod™ Biofilter System (STANDARD)
Underground Vault with Internal Bypass

CUSTOMER: -
PROJECT NAME: -

SHEET NAME	REVISION	SHEET
Specifier Drawing BPU-816IB	REV DATE -	1 OF 1

Bioretention/ Biofiltration

NYLOPLAST 8" DRAIN BASIN: 2808AG _ _ X



GRATE OPTIONS	LOAD RATING	PART #
STANDARD	LIGHT DUTY	0899CGSF
SOLID COVER	LIGHT DUTY	0899CGCF
BRONZE	N/A	0899CGBF
DOME	N/A	0899CGDF
DROP IN GRATE	LIGHT DUTY	0801DI

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - CUSTOM DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
3 - STANDARD DRAIN BASIN HAS FIXED ADAPTER LOCATIONS OF 0° & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL) & PVC SEWER (4" - 24").

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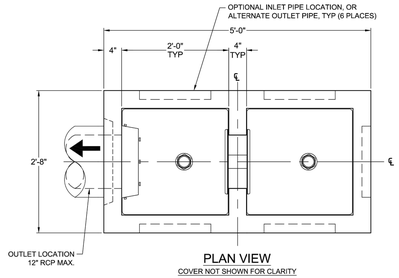
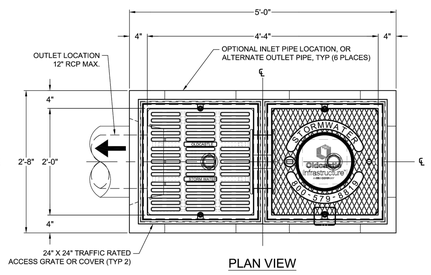
DRAWN BY NMH	MATERIAL	ADS Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 6-22-18			
APPD BY NMH	PROJECT NO./NAME	TITLE 8 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL	
DATE 6-25-18			
DWG SIZE A	SCALE 1:12 SHEET 1 OF 1	DWG NO. 7001-110-272	REV F

SITE SPECIFIC DATA				
Structure ID				ID
Treatment Flow Rate (cfs)				0.028
Peak Flow Rate (cfs)				1.3 cfs
Rim Elevation				367.69
Pipe Data	**Pipe Location**	**Pipe Size**	**Pipe Type**	**Invert Elevation**
Outlet		8"	SDR35 PVC	365.86
Inlet		6"	SDR35 PVC	366.48
Notes: -				

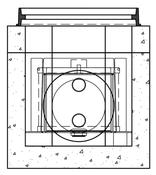
PERFORMANCE SPECIFICATIONS	
Treatment Flow Capacities:*	
NJDEP 80% Removal, 75 micron	0.054 cfs
WA Ecology GULD - Basic & Phosphorus	0.030 cfs
*Contact Oldcastle for alternative treatment flow capacities.	



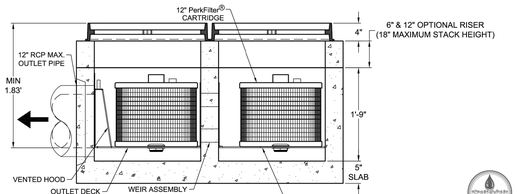
PLAN VIEW
COVER NOT SHOWN FOR CLARITY



PLAN VIEW



LEFT END VIEW
(OPTIONAL WITH 6" OR 12" RISER)



ELEVATION VIEW
(OPTIONAL WITH 6" OR 12" RISER)

- PRELIMINARY -
NOT FOR CONSTRUCTION

Oldcastle Infrastructure
A CRH COMPANY
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PerkFilter® Concrete Catch Basin
12" Cartridge

CUSTOMER: -
PROJECT NAME: -

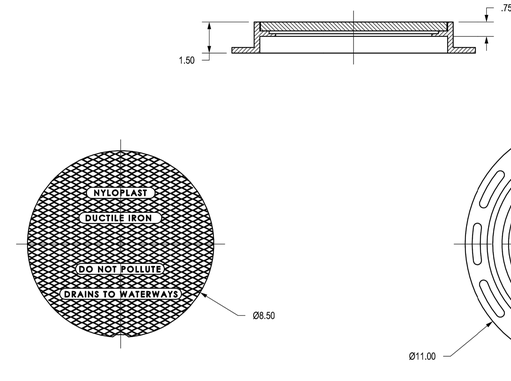
DATE	MFG	DRAWN	ENGINEER	CHECKED	SALES ORDER
-/-/22	-	-	-	-	-

SHEET NAME	REVISION	SHEET
Specifier Drawing PFCB-25-1x12	REV DATE -	1 OF 1

Media Filtration

0899CGCF

APPROX. WEIGHT WITH FRAME = 8.52 LBS



DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
GRATE HAS LIGHT DUTY RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

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DATE 6-22-18			
APPD BY NMH	PROJECT NO./NAME	TITLE 8 IN SOLID COVER ASSEMBLY - TYPE B	
DATE 6-22-18			
DWG SIZE A	SCALE 1:4 SHEET 1 OF 1	DWG NO. 7001-110-538	REV A

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DANIEL PATRICK STEFFY — STATE OF WASHINGTON — 21810 — REGISTERED PROFESSIONAL ENGINEER
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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

STORM DRAINAGE DETAILS

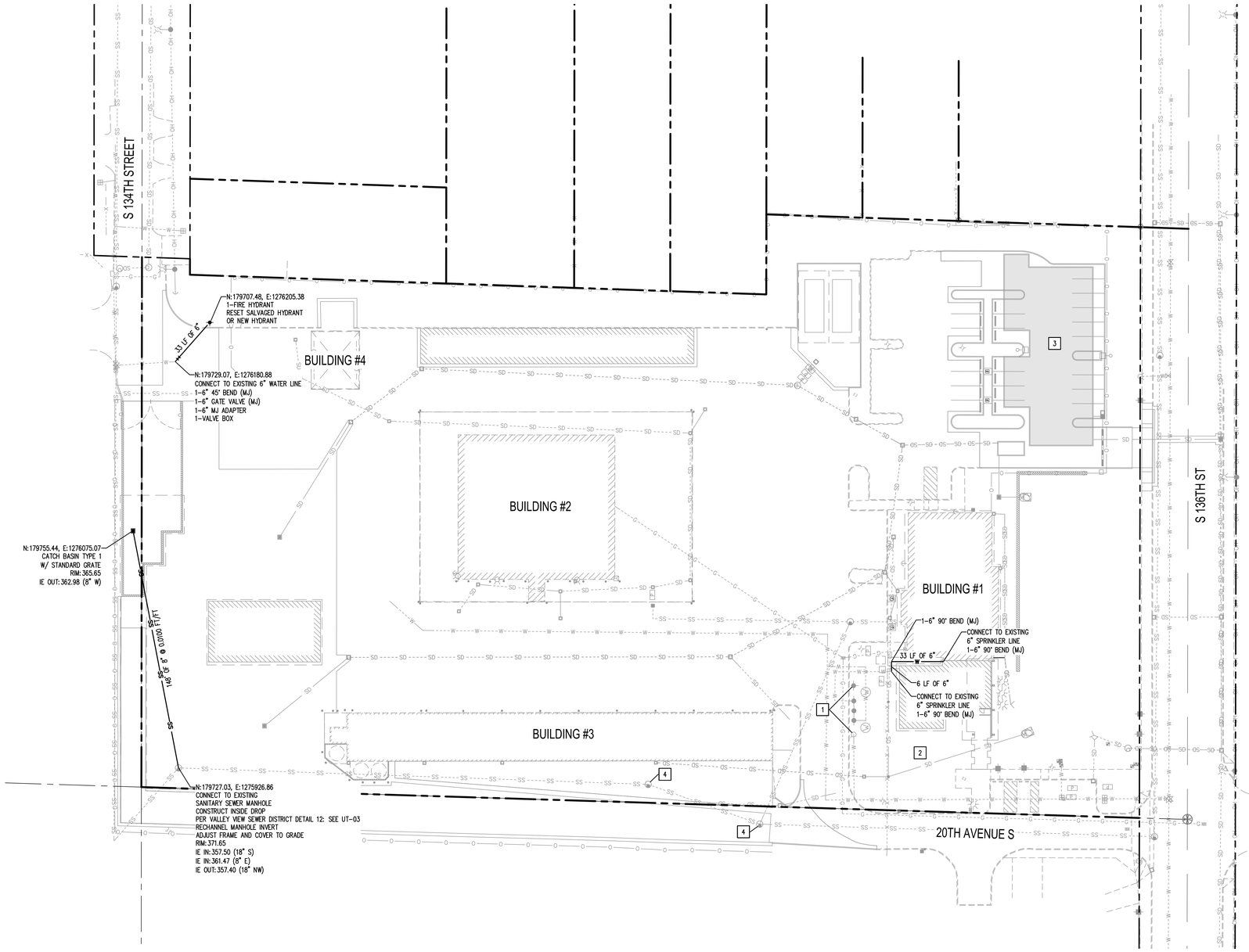
SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

SD-03

May 10, 2024 3:10:39pm – User: don.phillips
N:\PROJECTS\1941 ARC ARCHITECTS\123-000537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CAD\123-000537 SD-03.DWG

NE1/4 OF THE NW1/4, SEC. 16, T 23 N., R 4 E., W.M.



0 30 60

SCALE IN FEET

LEGEND

EXISTING	PROPOSED	
SD	SD	STORM LINE
		TRENCH DRAIN
SS	SS	SANITARY SEWER LINE ASTM D3034 SDR 35 PVC PIPE
	■	TYPE 1 CATCH BASIN PER KING COUNTY FIG. 7-003, COVER AS NOTED: SEE SD-02
W	W	WATER LINE CL52 DUCTILE IRON PIPE
	⋈	WATER VALVE
	●	FIRE HYDRANT PER KING COUNTY WATER DISTRICT #125 STD. DETAIL NO. 5: SEE UT-03

[#] CONSTRUCTION NOTES:

1. PROTECT EXISTING FIRE APPURTENANCES
2. LOCATE EXISTING UTILITIES IN THIS AREA PRIOR TO COMMENCING WORK. COMMUNICATION, POWER, WATER SERVICE LINES, AND OTHER UNDERGROUND UTILITIES MAY EXIST. NOTIFY ENGINEER OF ANY UNMAPPED UTILITIES ENCOUNTERED.
3. STORMWATER DETENTION FACILITY
4. PROTECT EXISTING SANITARY SEWER MANHOLE. ADJUST FRAME AND COVER TO FINISHED GRADE.

GENERAL SANITARY SEWER NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE CITY OF SEATAC, VALLEY VIEW SEWER DISTRICT, AND WASHINGTON STATE DEPARTMENT OF ECOLOGY STANDARDS.
2. THE CONTRACTOR SHALL POTHOLE SANITARY SEWER CONNECTION LOCATION. EXISTING WATER LINE, POWER LINE AND TELEPHONE LINE CROSSINGS TO VERIFY NO CONFLICTS EXIST PRIOR TO INSTALLING SANITARY SEWER.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS NECESSARY TO COMPLETE THIS WORK.
4. WATER AND SEWER SEPARATION AND WATER AND SEWER CROSSINGS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE CITY OF SEATAC, VALLEY VIEW SEWER DISTRICT, KING COUNTY WATER DISTRICT #125, AND WASHINGTON STATE DEPARTMENT OF ECOLOGY STANDARDS.
5. MAINTAIN 10' MINIMUM HORIZONTAL AND 1.5' MINIMUM VERTICAL SEPARATION FROM WATER MAINS.
6. PIPE LENGTHS CALLED OUT FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
7. INSTALLATION AND TESTING OF THE SANITARY SEWER SYSTEM SHALL BE PER THE PROJECT SPECIFICATIONS AND THE CITY OF SEATAC, VALLEY VIEW SEWER DISTRICT, AND WASHINGTON STATE DEPARTMENT OF ECOLOGY STANDARDS.
8. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF SEATAC AND VALLEY VIEW SEWER DISTRICT PRIOR TO ANY WORK ASSOCIATED WITH THE EXISTING SEWER MAIN. THIS WORK INCLUDES BUT IS NOT LIMITED TO POTHOLING, CORING, CONNECTION, AND TESTING AT THE POINT OF CONNECTION.
9. ALL WORK AND OPEN PIPE AND MANHOLES SHALL BE SEALED AT THE END OF EACH DAY.
10. SEWER TRENCH SECTION SHALL BE PER VALLEY VIEW SEWER DISTRICT DETAIL 3A ON UT-03 AND THE PIPE AND FITTING MANUFACTURER'S REQUIREMENTS.
11. SEWER LINES SHALL BE DEFLECTION AND LEAKAGE/INFILTRATION TESTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE CITY OF SEATAC, VALLEY VIEW SEWER DISTRICT, AND WASHINGTON STATE DEPARTMENT OF ECOLOGY STANDARDS.

GENERAL WATER NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE CITY OF SEATAC AND KING COUNTY WATER DISTRICT #125 CONSTRUCTION STANDARDS.
2. THE CONTRACTOR SHALL VERIFY NO CONFLICTS EXIST PRIOR TO INSTALLING WATER LINES.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK.
4. WATER AND SEWER SEPARATION AND WATER AND SEWER CROSSINGS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE CITY OF SEATAC, KING COUNTY WATER DISTRICT #125, VALLEY VIEW SEWER DISTRICT, AND WASHINGTON STATE DEPARTMENT OF ECOLOGY STANDARDS.
5. MAINTAIN 10' MINIMUM HORIZONTAL AND 1.5' MINIMUM VERTICAL SEPARATION FROM SEWER MAINS.
6. BACKFLOW PREVENTION DEVICES SHALL BE LOCATED INSIDE BUILDING, SEE MEP PLANS.
7. BACKFLOW PREVENTION DEVICES SHALL BE CURRENTLY ON THE APPROVED BACKFLOW PREVENTION ASSEMBLY LIST PUBLISHED BY THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH AND SHALL BE APPROVED BY THE THE CITY OF SEATAC AND KING COUNTY WATER DISTRICT #125 PRIOR TO ORDERING.
8. THE CONTRACTOR SHALL BE AWARE THAT WATERLINE DEFLECTION MAY BE REQUIRED TO AVOID PROPOSED AND EXISTING UTILITIES. DEFLECTIONS SHALL NOT EXCEED THE MANUFACTURERS SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY EXISTING UTILITY DEPTH, LOCATION, AND SHALL CALCULATE WATER LINE DEFLECTIONS ACCORDINGLY. WATER LINE PROFILE AS SHOWN ON THE PLANS ARE INFORMATIONAL AND DO NOT REPRESENT THE ACTUAL DEFLECTION TRANSITION LENGTHS.
9. MEGALUG RESTRAINED JOINTS (OR EQUAL) SHALL BE USED AT ALL WATER LINE FITTINGS, BENDS, TEES, ETC. THE CONTRACTOR SHALL COORDINATE WITH THE JOINT RESTRAINT MANUFACTURER AND SUPPLIER TO DETERMINE NUMBER OF JOINTS REQUIRED TO BE RESTRAINED AT EACH FITTING.
10. MAINTAIN 3.5-FEET OF COVER OVER ALL WATER LINES (TYP)
11. ALL LINES SHALL BE FILLED, PRESSURE AND LEAKAGE TESTED, FLUSHED, AND DISINFECTED IN CONFORMANCE WITH REQUIREMENTS OF THE CITY OF SEATAC AND KING COUNTY WATER DISTRICT #125 AND THE SPECIFICATIONS PRIOR TO USE.
12. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF SEATAC AND KING COUNTY WATER DISTRICT #125 PRIOR TO ANY WORK ASSOCIATED WITH THE EXISTING WATER MAIN. THIS WORK INCLUDES BUT IS NOT LIMITED TO DEMOLITION, POTHOLING, FLUSHING, DISINFECTING, TESTING, AND OPERATING EXISTING OR NEWLY CONSTRUCTED VALVES AT THE POINT OF CONNECTION.
13. ALL WORK AND OPEN PIPE AND FITTINGS SHALL BE SEALED AT THE END OF EACH DAY.
14. WATER MAIN TRENCH SECTION SHALL BE PER KING COUNTY WATER DISTRICT #125 DETAIL NO.18C ON UT-04 AND THE PIPE AND FITTING MANUFACTURER'S REQUIREMENTS.
15. FURNISH AND INSTALL LOCATING WIRE ON ALL WATER LINES AS REQUIRED BY CITY OF SEATAC AND KING COUNTY WATER DISTRICT #125.

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CITY OF SEATAC EST 1990

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ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

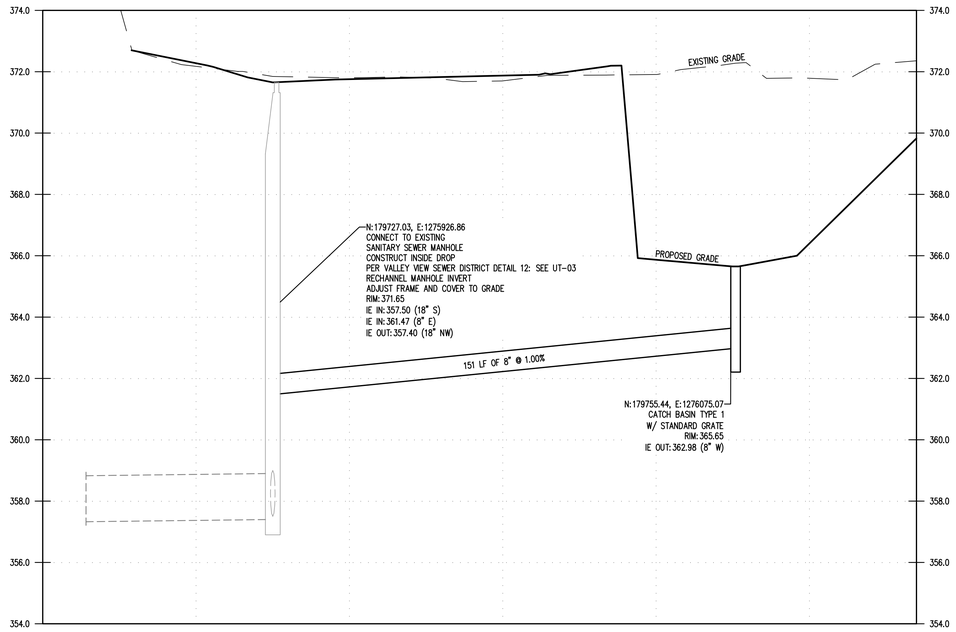
WATER AND SEWER PLAN

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

UT-01

May 10, 2024 - 3:11:00pm -- User: dan.phillips
N:\PROJECTS\1941 ARC ARCHITECTS\23-000537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CADD\23-000537 UT-01.DWG



SEWER PROFILE

H 0 20 40 SCALE IN FEET

V 0 2 4 SCALE IN FEET

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ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

SEWER PROFILE

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

UT-02

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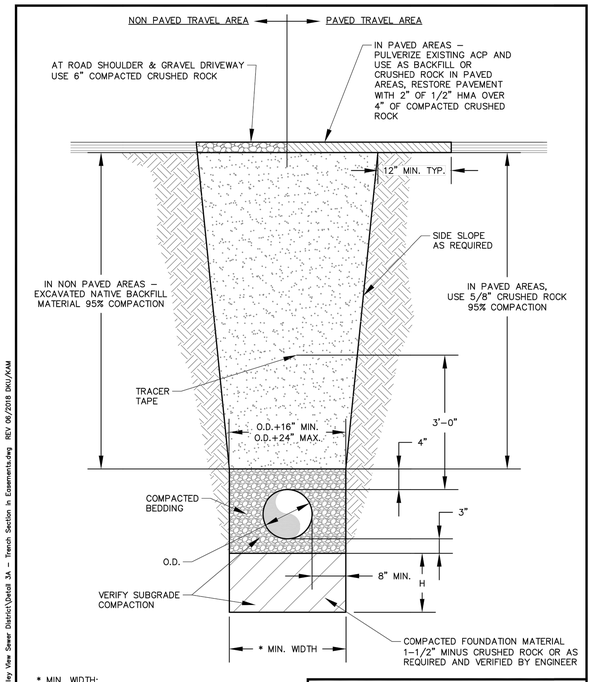


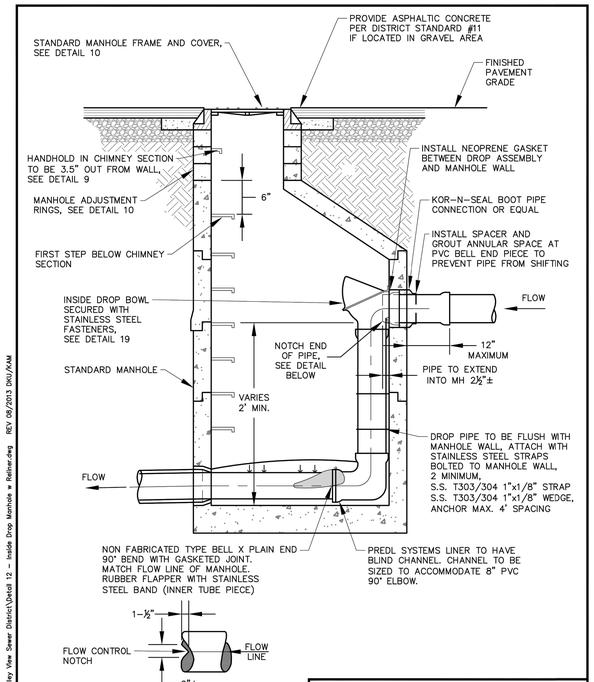
* MIN. WIDTH:
WHEN H IS LESS THAN 1'=O.D. + 24"
WHEN H IS GREATER THAN 1'=H + O.D. + 24"

VALLEY VIEW SEWER DISTRICT DETAIL 3A

TRENCH CROSS SECTION FOR PVC PIPE IN EASEMENTS

NOT TO SCALE

L:\CAD\DETAILS\Districts\Valley View Sewer District\Detail 3A – Trench Section in Easements.dwg REV 09/2018 DKU/KAM



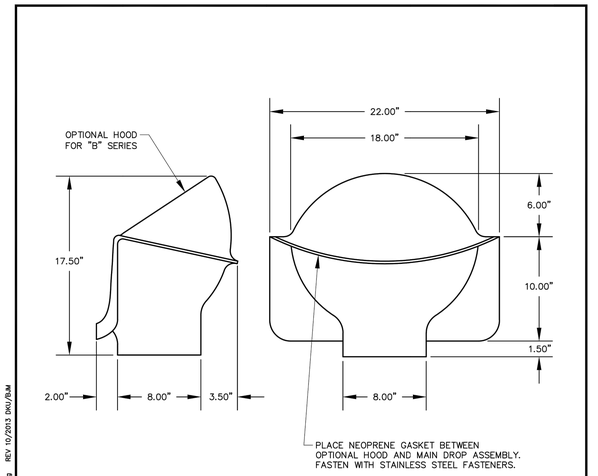
FLOW CONTROL NOTCH DETAIL

VALLEY VIEW SEWER DISTRICT DETAIL 12

INSIDE DROP MANHOLE WITH RELINER

NOT TO SCALE

L:\CAD\DETAILS\Districts\Valley View Sewer District\Detail 12 – Inside Drop Manhole w Reliner.dwg REV 05/2013 DKU/AAM



NOTES:

USE "B-8" BOWL FOR INLETS UP TO AND INCLUDING 10" INLETS.

USE "B-10" BOWL FOR 12" INLETS.

USE "B-10" BOWL WITH 15" & 16" INLET WITH MODERATE FLOWS.

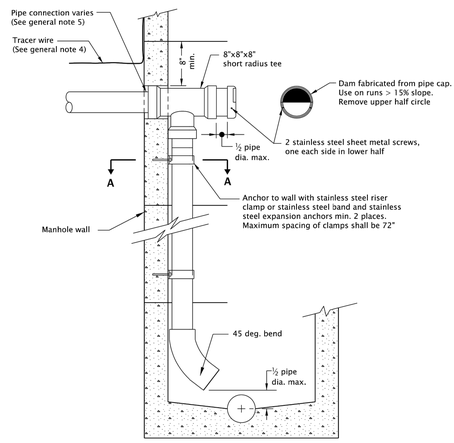
ALL SIZES ARE FOR RETROFIT OR NEW CONSTRUCTION. FABRICATED IN MARINE GRADE FIBERGLASS AND FINISHED IN BRIGHT WHITE GEL COAT, MADE BY RELINER/DURAN INC.

VALLEY VIEW SEWER DISTRICT DETAIL 19

INSIDE DROP "B-8 BOWL"

NOT TO SCALE

L:\CAD\DETAILS\Districts\Valley View Sewer District\Detail 19 – Inside Drop B-8 Bowl.dwg REV 10/2013 DKU/BJM



rd350.dgn 20-JUL-2020

SECTION A-A

CLAMP DETAIL

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Only one inside drop per manhole.
2. PVC shall be ASTM D3034 SDR35.
3. See Std. Dwg. RD336 for manhole steps details.
4. See Std. Dwg. RD336 for tracer wire details.
5. See Std. Dwg. RD345 for pipe to manhole connections,
6. See appropriate manhole standard drawings for details not shown.
7. Max. incoming pipe diameter 8". Drop pipe and fittings shall match incoming pipe.
8. Location, elevation, diameter, and slope of incoming pipe varies, see project plans.

CALC. BOOK NO. N/A

SDR DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

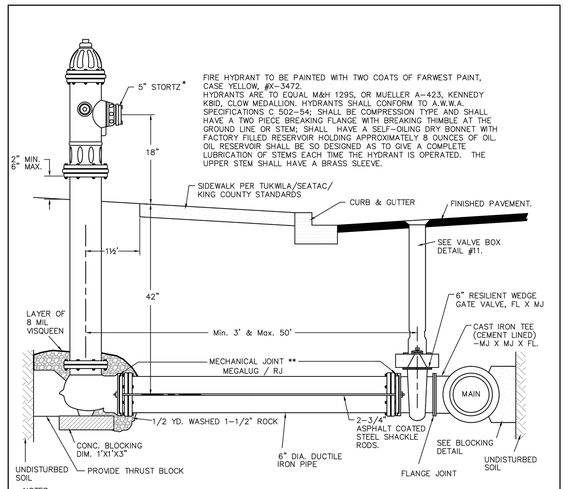
SANITARY SEWER PIPED INSIDE DROP CONNECTION FOR MANHOLES

2021

DATE	REVISION DESCRIPTION

Effective Date: December 1, 2022 - May 31, 2023

RD350



NOTES:

A. HYDRANTS SHALL BE EQUIPPED WITH TWO 2 1/2" N.S.T. HOSE PORTS AND ONE 5" STORTZ PUMPER DISCHARGE PORT, AND SHALL HAVE A 1 1/4" PENTAGON OPEN-LIFT OPERATING NUT. HYDRANTS SHALL HAVE A 6" M.J. BOTTOM CONNECTION AND 5 1/4" MAIN VALVE OPENING, AND SHALL HAVE 18" ABOVE GRADE LEVEL TO THE CENTER OF THE PUMPER DISCHARGE PORT.

B. WHERE NO CURB & GUTTER IS INSTALLED, FIRE HYDRANT SHALL BE LOCATED (IN RELATION TO STREET CENTER LINE) CLOSE TO PROPERTY LINE.

C. HYDRANT INSTALLATIONS TO BE PER THIS STANDARD PLAN AND REQUIREMENTS OF TUKWILA MUNICIPAL CODE 14.24 AND CITY ORDINANCE OR CITY OF SEATAC REQUIREMENTS.

* 4½" NST CITIES OF SEATAC AND TUKWILA
4½" SST KING COUNTY

** MUST HAVE 2 FORMS OF RESTRAINT: MEGALUG & BLOCK. SHACKLE RODS IF ADEQUATE BLOCKING CANNOT BE INSTALLED. ALSO, PROVIDE SHACKLE RODS OR MEGALUGS PER LOCAL JURISDICTION.

STD. DETAIL No. 5

FIRE HYDRANT ASSEMBLY DETAIL

PLOT DATE	DRAWN	DESIGN	CHECKED	DISTRICT APPROVED
AUG 2019	AMJ	BS	DBH	
PLOT SCALE	FILE NAME			DATE APPROVED
NTS	L:\CAD\DETAILS\DISTRICTS\WD 125\STD DET 5			

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ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

SEWER AND WATER DETAILS

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

UT-03

May 10, 2024 3:11:23pm - User: dan.phillips
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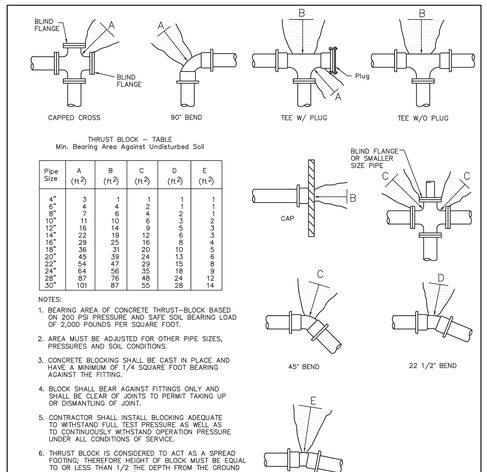

THRUST BLOCK – TABLE
Min. Bearing Area Against Undisturbed Soil

Pipe Size	A (ft²)	B (ft²)	C (ft²)	D (ft²)	E (ft²)
4"	3	1	1	1	1
6"	4	4	2	1	1
8"	7	6	4	2	1
10"	11	10	6	3	2
12"	16	14	9	5	3
14"	22	19	12	6	3
16"	29	25	16	8	4
18"	36	31	20	10	5
20"	45	39	24	13	6
22"	54	47	29	15	8
24"	64	56	35	18	9
28"	87	76	48	24	12
30"	101	87	55	28	14

NOTES:
1. BEARING AREA OF CONCRETE THRUST-BLOCK BASED ON 200 PSI PRESSURE AND SAFE SOIL BEARING LOAD OF 2,000 POUNDS PER SQUARE FOOT.
2. AREA MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES AND SOIL CONDITIONS.
3. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.
4. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING OF JOINT.
5. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATION PRESSURE UNDER ALL CONDITIONS OF SERVICE.
6. THRUST BLOCK IS CONSIDERED TO ACT AS A SPREAD FOOTING; THEREFORE HEIGHT OF BLOCK MUST BE EQUAL TO OR LESS THAN 1/2 THE DEPTH FROM THE GROUND SURFACE TO THE BLOCK'S BASE.
7. THE QUANTITY OF CONCRETE DEPENDS UPON THE DISTANCE BETWEEN THE PIPE AND THE UNDISTURBED SOIL.
8. PROVIDE RESTRAINED JOINT BENDS AND PIPE IN LIEU OF BLOCKS IF THERE ARE SPACE CONFLICTS OR BEARING AREA HAS BEEN DISTURBED. PROVIDE SHACKLE RODS TO PROVIDE TWO MEANS OF THRUST RESTRAINT. (THE ABOVE REQUIRES SUPERINTENDENT OR ENGINEER APPROVAL)

STD. DETAIL No. 7

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HORIZONTAL THRUST BLOCKING DETAIL & TABLE

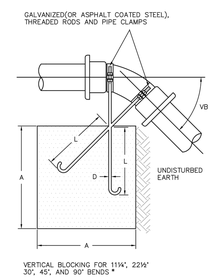
PLOT DATE	DRAWN	DESIGN	CHECKED	DISTRICT APPROVED
AUG 2019	AMJ	PGL	DBH/RDS	
PLOT SCALE	FILE NAME			DATE APPROVED
NTS	L:\CAD\DETAILS\DISTRICTS\WD 125\STD DET 7			

Water District #125

VERTICAL BLOCKING
FOR 11¼° – 22½° – 30° BENDS

PIPE SIZE (inches)	V. B. (degrees)	CU. FT.	A (feet)	ROD ø D (inches)	L (feet)
4	11¼ 22½ 30	8 11 17	2.0 2.2 2.6	¾	1.5 2.0
6	11¼ 22½ 30	11 25 41	2.2 2.9 3.5	¾	2.0
8	11¼ 22½ 30	16 47 70	2.5 3.6 4.1	¾ ¾	2.0 2.5
10–12	11¼ 22½ 30	32 88 132	3.2 4.5 5.1	¾ ⅞	2.0 3.0
16	11¼ 22½ 30	70 184 275	4.1 5.7 6.5	⅞ 1⅛ 1¼	3.0 4.0
18–20	11¼ 22½ 30	91 225 330	4.5 6.1 6.9	⅞ 1¼ 1⅜	3.0 4.0 4.5
24	11¼ 22½ 30	128 320 480	5.0 6.8 7.9	1 1⅜ 1⅜	3.5 4.5 5.5
VERTICAL BLOCKING FOR 45° BENDS					
4 6 8 12 16 20 24	45	30 68 123 232 478 560 820	3.1 4.1 5.0 6.1 7.8 8.2 9.4	¾ ¾ 1⅛ 1¼ 1⅜	2.0 2.5 4.0 4.5

NOTE:
CONCRETE BLOCKING BASED ON 200 PSI PRESSURE AND 2500 PSI CONCRETE, AND 2000 PSF MIN. SOIL BEARING CAPACITY.



VERTICAL BLOCKING FOR 11¼°, 22½° 30°, 45°, AND 90° BENDS *

* 90° VERTICAL BENDS NOT ALLOWED ON PIPE LARGER THAN 8 INCHES DIA.

STD. DETAIL No. 8

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VERTICAL THRUST BLOCKING DETAIL & TABLE

PLOT DATE	DRAWN	DESIGN	CHECKED	DISTRICT APPROVED
AUG 2019	AMJ	PGL	DBH/RDS	
PLOT SCALE	FILE NAME			DATE APPROVED
NTS	L:\CAD\DETAILS\DISTRICTS\WD 125\STD DET 8			

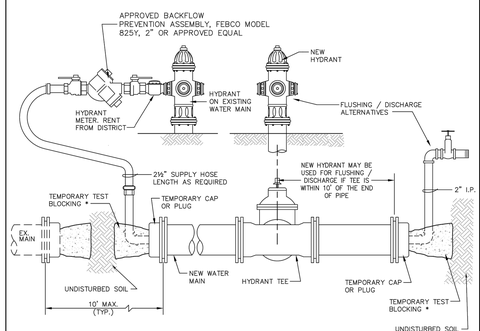
Water District #125

NOTES:

NEW SECTIONS OF WATER MAIN THAT ARE INSTALLED WHEN EXPANDING A DISTRIBUTION SYSTEM MUST BE SEPARATED FROM THE EXISTING SYSTEM. UNTIL SATISFACTORY FLUSHING, DISINFECTION AND BACTERIOLOGICAL SAMPLING HAS BEEN COMPLETED, THE NEW WATER MAIN MUST BE CONSIDERED CONTAMINATED. IN ADDITION, THE CHLORINE CONCENTRATION USED FOR DISINFECTION PROCEDURES (MINIMUM 25 mg/l) MAKES WATER NON-POTABLE.

AN APPROVED BACKFLOW PREVENTION ASSEMBLY MUST BE USED ON THE SUPPLYING WATER LINE WHEN FILLING THE NEW WATER MAIN DURING DISINFECTION AND FLUSHING. THE BACKFLOW PREVENTION ASSEMBLY AND SUPPLY PIPING MUST BE REMOVED DURING HYDROSTATIC PRESSURE TESTING OF THE NEW WATER MAIN.

AFTER SATISFACTORY BACTERIOLOGICAL SAMPLE RESULTS ARE OBTAINED FROM THE NEW WATER MAIN, SECTIONS OF CONNECTING PIPE MUST BE INSTALLED BETWEEN IT AND THE EXISTING SYSTEM. BEFORE INSTALLATION, THE INTERIORS OF ALL PIPE AND FITTINGS USED TO MAKE THE CONNECTION MUST BE SWABBED OR SPRAYED WITH A 1% AVAILABLE CHLORINE SOLUTION.



* REFER TO STD. DETAIL #7 AND #8 FOR THRUST BLOCK SIZING & OTHER BLOCKING REQUIREMENTS.

STD. DETAIL No. 9

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WATER MAIN FILLING DETAIL

PLOT DATE	DRAWN	DESIGN	CHECKED	DISTRICT APPROVED
AUG 2019	AMJ	PGL	DBH/RDS	
PLOT SCALE	FILE NAME			DATE APPROVED
NTS	L:\CAD\DETAILS\DISTRICTS\WD 125\STD DET 9			

Water District #125

HYDROSTATIC PRESSURE TEST PROCEDURES

HYDROSTATIC PRESSURE TESTS SHALL BE PERFORMED ON ALL VALVED SECTIONS UPON COMPLETION OF WATER MAIN INSTALLATION AND AFTER BACKFILLING THE WATER MAIN TRENCH WITH SUFFICIENT MATERIAL TO PREVENT MOVEMENT OF THE PIPELINE AND ALLOWING SUFFICIENT TIME FOR THE CONCRETE BLOCKING TO SET. LARGE SECTIONS OF UNTESTED MAIN WILL NOT BE PERMITTED TO ACCUMULATE. THE TEST SHALL BE LOCATED AT THE LOW POINT OF THE SECTION AND SHALL INCLUDE TESTING OF THE SERVICES TO THE ANGLE STOP.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT AND SHALL PERFORM ALL WORK CONNECTED WITH TESTS. THE EQUIPMENT MAY INCLUDE, BUT NOT LIMITED TO, PUMPS, VALVES, METER GAUGES, PIPING, 2"BLOW-OFFS, AND HOSES. ALL LABOR IS ALSO TO BE PROVIDED BY THE CONTRACTOR.

THE PIPELINE SHALL BE FILLED WITH WATER SLOWLY AND AIR EXPELLED FROM THE PIPELINE PRIOR TO STARTING THE TEST. ALL PIPELINES SHALL BE TESTED AT A HYDROSTATIC PRESSURE OF 250 PSI AT HIGH POINT FOR PIPES LESS THAN 12 INCHES IN DIAMETER AND 200 PSI FOR PIPE 12 INCHES AND LARGER.

THE PRESSURE TESTS SHALL BE PERFORMED IN THE FOLLOWING MANNER: WATER SHALL BE PUMPED INTO THE MAIN, BRINGING THE PRESSURE IN THE MAIN UP TO THE REQUIRED TEST PRESSURE. FOR APPROVAL, THE PRESSURE SHALL NOT DROP MORE THAN 5 PSI IN 15 MINUTES.

ANY DEFECTIVE JOINTS, PIPE, OR FITTINGS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE AND THE TEST REPEATED UNTIL SATISFACTORY.

STD. DETAIL No. 10

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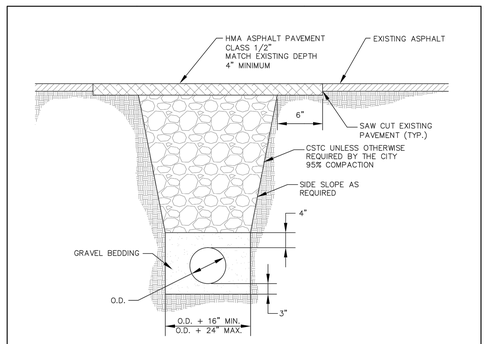
HYDROSTATIC PRESSURE TEST

PLOT DATE	DRAWN	DESIGN	CHECKED	DISTRICT APPROVED
AUG 2019	AMJ	PGL	DBH/RDS	
PLOT SCALE	FILE NAME			DATE APPROVED
NTS	L:\CAD\DETAILS\DISTRICTS\WD 125\STD DET 10			

Water District #125



NOTES:
1. ALL WORK TO CONFORM TO THE CURRENT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.
2. A MINIMUM OF A TWO YEAR GUARANTEE IS REQUIRED ON ALL PAVEMENT PATCHING AND OVERLAYS.
3. A CONTROLLED DENSITY FILL IN PLACE OF CRUSHED ROCK MATERIAL MAY BE REQUIRED IN CASES OF RECENT PAVEMENT OVERLAY, OR AS DIRECTED BY CITY ENGINEER.
4. OUTSIDE PAVED OR ROCKED AREAS NATIVE BACKFILL MAY BE USED IF APPROVED BY DISTRICT. 90% COMPACTION REQUIRED.

STD. DETAIL No. 18C

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TRENCH CROSS SECTION - CITY OF SEATAC

SHEET 3 OF 4

PLOT DATE	DRAWN	DESIGN	CHECKED	DISTRICT APPROVED
AUG 2019	AMJ	BS	DBH/RDS	
PLOT SCALE	FILE NAME			DATE APPROVED
NTS	L:\CAD\DETAILS\DISTRICTS\WD 125\STD DET 18			

Water District #125

WATER DISTRICT NO. 125 STANDARD NOTES:

1. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF LOCATIONS SHOWN AND FOR DISCOVERY OF POSSIBLE ADDITIONAL UTILITIES NOT SHOWN SO AS TO AVOID DAMAGE OR DISTURBANCE. THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION CENTER (1-800-424-5555) PRIOR TO CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE CONTACTED IF A UTILITY CONFLICT EXISTS.
2. CONTRACTOR SHALL NOTIFY THE DISTRICT ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE OF ALL REQUESTS FOR STAKING, TESTING OR INSPECTION.
3. CONTRACTOR IS RESPONSIBLE FOR CONTROL AT THE TIME OF STAKING.
4. CONTRACTOR SHALL FURNISH SHOP DRAWINGS FOR APPROVAL WHERE REQUIRED BY THE DETAIL SPECIFICATIONS AND FOR VARIATION FROM THE ENGINEER'S DESIGN.
5. CONTRACTOR SHALL INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, WD #125 SPECIFICATIONS, AND (CITY OF TUKWILA / CITY OF SEATAC / KING COUNTY) STANDARDS.
6. CONTRACTOR SHALL FURNISH ALL MATERIALS.
7. ALL WATERMAIN PIPE SHALL BE DUCTILE IRON CLASS 52, PUSH-ON JOINT OR MECHANICAL JOINT, CEMENT LINED (ANSI A21.4), EXTERIOR COATED WITH COAL TAR VARNISH. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL FITTINGS SHALL BE CAST IRON OR DUCTILE IRON AND SHALL CONFORM TO APPLICABLE PORTIONS OF ANSI STANDARD A21.10, A21.11, B16.2, B16.4 AND A21.53, WITH A MINIMUM PRESSURE RATING OF 150 PSI AND WILL BE CEMENT LINED.
8. NSF-CERTIFIED MATERIALS MUST BE USED FOR ANYTHING THAT IS IN CONTACT WITH POTABLE WATER.
9. ALL GATE VALVES TO BE CLOW, KENNEDY, M&H OR MUELLER AND MEET AWWA C515. ALL HYDRANTS ARE TO BE CLOW, KENNEDY, M&H OR MUELLER AND IN CONFORMANCE WITH AWWA STANDARD SPEC. C-502. GATE VALVES SHALL BE DUCTILE IRON BODY VALVES WITH RESILIENT WEDGE CONFORMING TO THE LATEST REVISION OF AWWA STANDARD C515 AND SHALL BE NSF 61 APPROVED.
10. CUT-INS AND LIVE TAPS TO BE MADE BY CONTRACTOR. WD #125 SUPERINTENDENT, ENGINEER AND (CITY OF TUKWILA / CITY OF SEATAC / KING COUNTY) INSPECTOR MUST BE NOTIFIED 48 HOURS IN ADVANCE.
11. DUCTILE IRON MECHANICAL JOINT SLEEVES REQUIRED.
12. TAPPING SLEEVES SHALL BE MUELLER CAST IRON, JCM EPOXY COATED STEEL, OR ROMAC SST WITH STAINLESS STEEL FLANGE. SIZE ON SIZE TAPS ARE TO BE MUELLER CAST IRON.
13. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING PIPE TYPES AND SIZES FOR COUPLINGS, CONNECTIONS, CUT-INS, AND LIVE TAPS.
14. 3½- FOOT MINIMUM COVER OVER ALL WATERMAINS.
15. DEVELOPER TO PAY FOR STATE, COUNTY AND CITY INSPECTION FEES AND PERMITS.
16. ALL METER LOCATIONS TO BE COORDINATED WITH WATER DISTRICT NO. 125 SUPERINTENDENT.
17. ALL EXISTING FIRE HYDRANTS AND MAINS TO BE OPERATIONAL PRIOR TO COMMENCEMENT OF CONSTRUCTION.
18. NO CHANGES ARE TO BE MADE WITHOUT WRITTEN APPROVAL BY THE WD #125 SUPERINTENDENT OR DISTRICT ENGINEER AND THE CITY OF TUKWILA / SEATAC / KING COUNTY PUBLIC WORKS ENGINEER.
19. REFER TO WD #125 CONDITIONS AND STANDARDS, AND TO THE (CITY OF TUKWILA / CITY OF SEATAC / KING COUNTY) STANDARD SPECIFICATIONS FOR ALL REMAINING NOTES AND DETAILS.
20. PROVIDE 3/4" SERVICE LINE (1" IN THE CITY OF TUKWILA) AND TAP CONNECTIONS FOR EACH EXISTING WATER METER.

21. MAXIMUM ALLOWABLE OPEN TRENCH SHALL BE 80'.
22. STOCKPILES SHALL BE COVERED DURING ALL PERIODS OF PRECIPITATION.
23. MODIFIED PROCTOR COMPACTION AND MOISTURE CONTROL TESTS REQUIRED AND COPIES OF TEST REPORTS SUBMITTED TO THE DISTRICT ENGINEER. ALL COMPACTION UNDER PAVED AND TRAFFIC AREAS SHALL BE 95% MAXIMUM DENSITY MODIFIED PROCTOR PER ASTM D-1557. ALL OTHER AREAS TO BE 90% MAXIMUM DENSITY MODIFIED PROCTOR.
24. ALL VALVES, FIRE HYDRANTS AND SERVICES TO THE METER STOP TO BE INCLUDED AS PART OF ALL PRESSURE AND PURITY TESTS. NO EXCEPTIONS.
25. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH (CITY OF TUKWILA / CITY OF SEATAC / KING COUNTY) REQUIREMENTS.
26. ALL PIPE AND APPURTENANCES TO BE TESTED WITHIN 10 FEET OF ANY CONNECTION POINTS UNLESS OTHERWISE APPROVED BY ENGINEER.
27. CONCRETE THRUST BLOCKING SHALL BE PROVIDED AT ALL BENDS, TEES, OR OTHER APPURTENANCES WHERE INTERNAL FORCES REQUIRE RESTRAINT. BLOCKING SHALL BE IN ACCORDANCE WITH WATER DISTRICT NO. 125 STANDARDS. RESTRAINED JOINT PIPE AND BENDS SHALL BE USED IN LIEU OF BLOCKS WHERE THERE ARE UTILITY PROXIMITY CONFLICTS OR WHERE BEARING SOIL HAS BEEN DISTURBED IF APPROVED BY SUPERINTENDENT OR ENGINEER.
28. ALL BENDS INSTALLED AS PART OF CONNECTIONS TO EXISTING MAINS SHALL BE RESTRAINED WITH 350 PSI EBBA MEGALUG, STARGRIP SERIES 3000, OR ROMAC ROMAGRIP RETAINER GLANDS AND PROVIDED WITH THRUST BLOCKS.
29. THE TESTING AND DISINFECTION OF THE WATER SYSTEM SHALL BE WITNESSED BY WATER DISTRICT NO. 125.
30. RESIDENTIAL DOMESTIC WATER SERVICE CONNECTIONS: DOMESTIC WATER SERVICE CONNECTIONS TO SINGLE-FAMILY RESIDENTIAL PROPERTIES SHALL HAVE BACKFLOW PROTECTION WITHIN EIGHTEEN INCHES (18") OF THE WATER METER TAIL COMMENSURATE WITH THE DEGREE OF HAZARD WHEN ANY OF THE FOLLOWING ITEMS ARE FED BY OR CONNECTED TO THE DOMESTIC WATER SYSTEM ON THE PROPERTY:
    - A) LAWN OR GARDEN SPRINKLER IRRIGATION SYSTEMS
    - B) FIRE SUPPRESSION SYSTEMS
    - C) POOLS, HOT TUBS OR SPAS (ABOVE OR BELOW GROUND)
    - D) GREENHOUSES
    - E) FISH AND/OR AESTHETIC PONDS
    - F) BOILER
    - G) ANY OTHER USE DECLARED TO BE A HEALTH HAZARD OR CONCERN BY THE GENERAL MANAGER OF THE KING COUNTY WATER DISTRICT 125.
31. COMMERCIAL DOMESTIC WATER SERVICE CONNECTIONS: FOR ALL CONNECTIONS TO THE WATER MAINS OF THE KING COUNTY WATER DISTRICT 125 NOT LISTED ABOVE, THE FOLLOWING REQUIREMENTS APPLY TO ALL THE CONSUMERS:
    - A) ALL COMMERCIAL DOMESTIC WATER SERVICE CONNECTIONS SHALL HAVE A BACKFLOW ASSEMBLY INSTALLED WITHIN EIGHTEEN INCHES (18") OF THE WATER METER TAIL (CUSTOMER'S SIDE OF THE METER) COMMENSURATE WITH THE HIGHEST DEGREE OF HAZARD OF THE OCCUPANT(S) AS DETERMINED BY THE GENERAL MANAGER OR A CROSS CONNECTION CONTROL SPECIALIST APPOINTED BY THE DISTRICT.
    - B) NO COMMERCIAL WATER SERVICE SHALL HAVE LESS THAN A DOUBLE CHECK VALVE ASSEMBLY (DCVA) FOR BACKFLOW PREVENTION.
    - C) REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) SHALL BE INSTALLED ON ALL WATER SERVICES FOR OCCUPANTS WITH POTENTIAL POLLUTION OR CONTAMINATION HAZARDS AS LISTED IN WAC 246-290-490 TABLE 9 OR SIMILAR OCCUPANTS.
    - D) REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) SHALL BE INSTALLED ON ALL WATER SERVICES FOR COMMERCIAL STRUCTURES THAT OCCUPY MORE THAN ONE TENANT.
    - E) ALL COMMERCIAL IRRIGATION SYSTEMS SHALL HAVE A BACKFLOW ASSEMBLY INSTALLED WITHIN EIGHTEEN INCHES (18") OF THE WATER METER TAIL (CUSTOMER'S SIDE OF THE METER) OR WITHIN TWELVE INCHES (12") DOWNSTREAM OF THE VALVED CONNECTION TO THE POTABLE WATER SUPPLY.
    - F) ALL IRRIGATION SYSTEMS WITH EXISTING OR POTENTIAL CHEMICAL ADDITION, INCLUDING ANTIFREEZE, SHALL HAVE A REDUCED PRESSURE BACKFLOW ASSEMBLY.
    - G) NO IRRIGATION SYSTEM SHALL HAVE LESS THAN A DOUBLE CHECK VALVE ASSEMBLY (DCVA) FOR BACKFLOW PROTECTION.

COMMERCIAL FIRE SPRINKLER SERVICE CONNECTIONS:

- H) ALL FIRE SPRINKLER SERVICE CONNECTIONS SHALL HAVE BACKFLOW PREVENTION ASSEMBLIES WITH A DETECTING (METERED) BYPASS.
- I) BACKFLOW ASSEMBLIES SHALL BE EITHER:
    - A. LOCATED IN A VAULT ON PRIVATE PROPERTY ADJACENT TO THE PUBLIC RIGHT-OF-WAY SUCH THAT THE DISTANCE BETWEEN THE SUPPLYING WATER MAIN AND THE BACKFLOW ASSEMBLY IS THE SHORTEST REASONABLE DISTANCE NOT TO EXCEED 50 FEET. WHEN THE SUPPLYING WATER MAIN IS ON PRIVATE PROPERTY, THE BACKFLOW ASSEMBLY SHALL BE LOCATED AS CLOSE TO THE WATER MAIN TAP AS REASONABLY POSSIBLE.
    - B. WITHIN THE BUILDING'S MECHANICAL ROOM. WITH AN INTERIOR OR INSTALLATION, A REMOTE METER REGISTER SHALL BE SUPPLIED WITH BACKFLOW DEVICE AND MOUNTED ON THE EXTERIOR OF THE BUILDING IN LOCATION ACCESSIBLE AT ALL TIME TO DISTRICT PERSONNEL.
- J) ALL FIRE SYSTEMS WITHOUT ANTIFREEZE, CHEMICAL ADDITION, OR FIRE DEPARTMENT CONNECTIONS (FDC) SHALL HAVE A MINIMUM OF A DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) AS THE BACKFLOW PREVENTER.
- K) FIRE SYSTEMS WITH ANTIFREEZE, CHEMICAL ADDITION, OR FIRE DEPARTMENT CONNECTIONS (FDC) SHALL HAVE A REDUCED PRESSURE PRINCIPLE DETECTOR ASSEMBLY (RPDA).

TEMPORARY CONNECTIONS:

- L) ALL TEMPORARY CONNECTIONS WILL BE REQUIRED TO HAVE CROSS CONNECTION PROTECTION. THE TYPE OF PROTECTION REQUIRED WILL BE DETERMINED ON A CASE-BY-CASE BASIS BY THE DISTRICT GENERAL MANAGER OR CROSS CONNECTION CONTROL SPECIALIST.

ADD THE FOLLOWING NOTES WHEN WORKING IN THE CITY OF SEATAC:

32. CONTRACTOR IS TO OBTAIN CITY CONSTRUCTION PERMIT PRIOR TO STARTING ANY WORK WITHIN THE RIGHT-OF-WAY IN THE CITY OF TUKWILA OR SEATAC AND SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL TERMS AND CONDITIONS OF RIGHT-OF-WAY PERMIT.
33. CONTRACTOR WORKING IN THE CITY OF TUKWILA OR SEATAC IS TO NOTIFY PUBLIC WORKS INSPECTOR A MINIMUM 48-HOURS PRIOR TO CONSTRUCTION STARTUP AND IS TO SCHEDULE ALL INSPECTION. INSPECTOR SHALL BE PRESENT DURING BACKFILL AND COMPACTION OPERATIONS.
34. ALL FIRE HYDRANTS AND/OR GUARD POSTS TO BE PLACED SO AS TO PROVIDE A MINIMUM OF 10' CLEARANCE TO FUTURE ROADWAY LIMITS.
35. NEW WATERLINE CONSTRUCTION TO MAINTAIN 4' MINIMUM SEPARATION TO PROPOSED STORM DRAIN LOCATION; OR CONSTRUCTION SHALL BE SCHEDULED TO FOLLOW STORM DRAIN INSTALLATION.

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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

WATER DETAILS AND NOTES

SCALE:
DRAWN: N.ALTHAUSER
CHECKED: D.PHILLIPS
PROJECT NO: 2020008.100

SHEET:

UT-04

May 10, 2024 3:11:39pm – User: don.phillips
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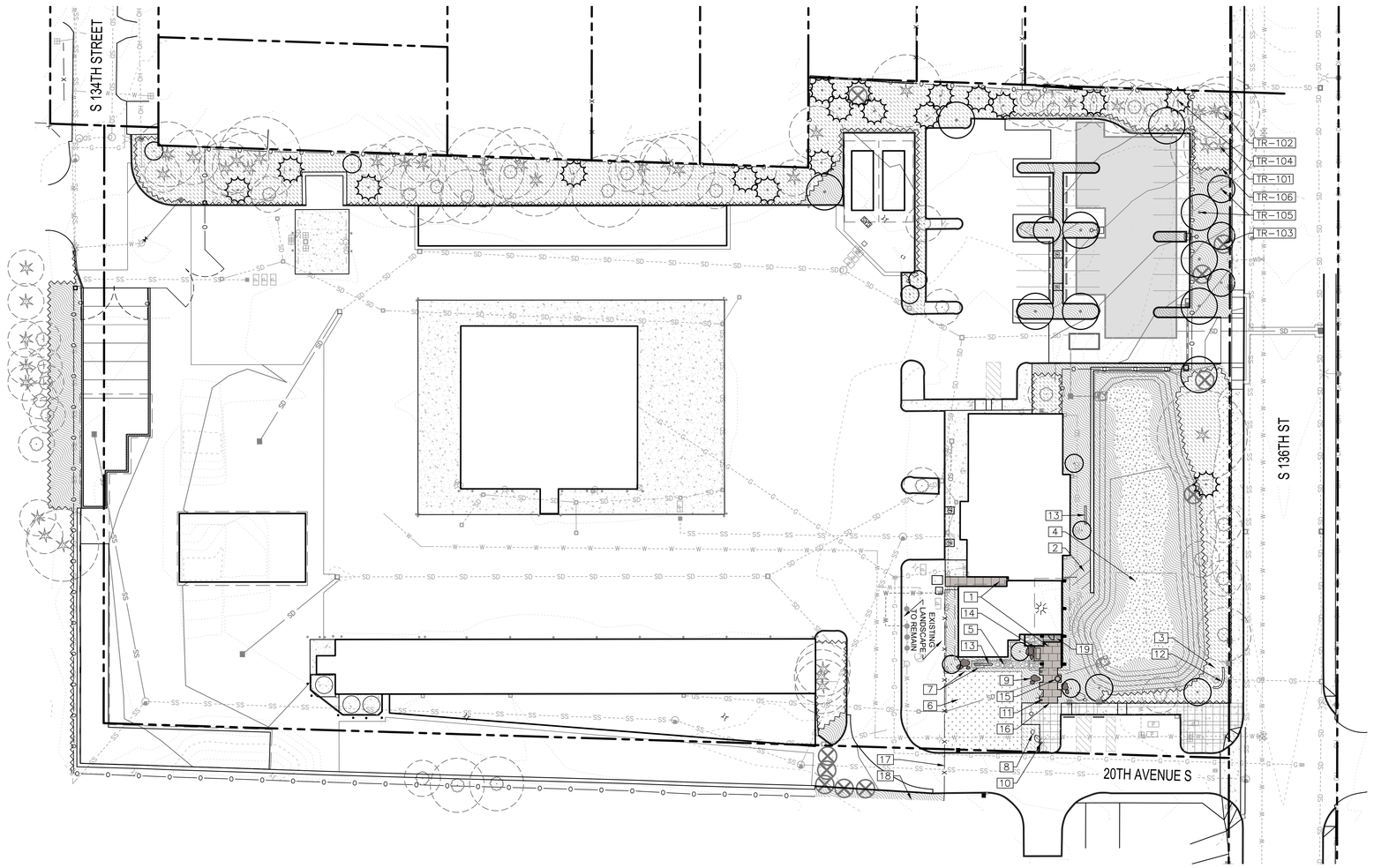


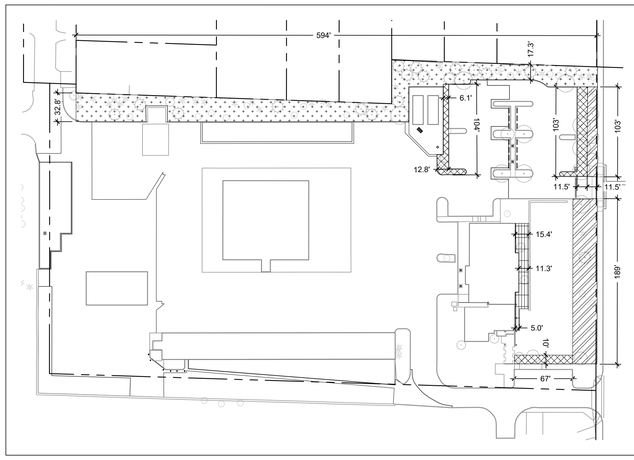
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	QTY	DETAIL
1	NEW CONCRETE PAVING | SCORING PER PLAN	554 SF	
2	NEW PLANTING BED | 24" DEPTH PLANTING SOIL, 3" DEPTH COMPOST, 4" DEPTH ARBORIST WOOD CHIPS PER SEA REQUIREMENTS	16,344 SF	1/L-2.0
3	ADD PLANTS TO EXISTING PLANTING AREAS TO MEET CURRENT BUFFER STANDARDS | SEE SHEET L-3.0	18,995 SF	
4	2-4" RIVER ROCK | 6" DEPTH	3,952 SF	
5	1-2" DECORATIVE COBBLE | 4" DEPTH	213 SF	
6	EXISTING LAWN TO REMAIN | RE-SOD DISTURBED AREAS	2,879 SF	
7	STEEL EDGING | 6" X 14 GAUGE MILD STEEL	153 LF	1/L-2.0
8	EXISTING BOULDER TO REMAIN IN PLACE | EXISTING BOULDERS NOT SHOW IN UNDISTURBED AREAS TO REMAIN IN PLACE UNLESS OTHERWISE NOTED		
9	RELOCATED EXISTING BOULDER | BURY BOTTOM 1/3 OF BOULDER FOR NATURAL APPEARANCE		2/L-2.0
10	EXISTING BOLLARD LIGHT TO REMAIN IN PLACE		
11	RELOCATED EXISTING BOLLARD LIGHT		
12	EXISTING SCULPTURE TO REMAIN IN PLACE		
13	RELOCATED EXISTING SCULPTURE		
14	NEW BENCH | TBD		
15	RELOCATED PLANTER POT		
16	SAW CUT EXISTING CONCRETE		
17	EXISTING GATE TO REMAIN		
18	NEW SECURITY FENCING AROUND THE ENTIRE PERIMETER | STEEL PICKET FENCE, POWDER-COATED BLACK		
19	STEEL GRATE | RE: ARCH.		

SYMBOL	TREE RETENTION DESCRIPTION	QTY	DETAIL
TR-101	EXISTING EVERGREEN TREE TO REMAIN		
TR-102	EXISTING DECIDUOUS TREE TO REMAIN		
TR-103	EXISTING TREE TO BE REMOVED		
TR-104	PROPOSED EVERGREEN TREE		
TR-105	PROPOSED DECIDUOUS TREE		
TR-106	TREE AND VEGETATION PROTECTION FENCING		

0 30 60 90 feet
1" = 30'

STIA LANDSCAPE BUFFER MAP:



TYPE 1: 1 TREE PER 25 LF
12 TREES REQUIRED
EXISTING TREES: 6
PROPOSED TREES: 6

TYPE 2: 1 TREE PER 10 LF
59 TREES REQUIRED
EXISTING TREES: 36
PROPOSED TREES: 23

TYPE 4: 1 TREE PER 25 LF
11 TREES REQUIRED
EXISTING TREES: 4
PROPOSED TREES: 7

TYPE 6B: 50% SCREEN

REQUIREMENTS PER 2022 SEA LANDSCAPE DESIGN GUIDELINES & STANDARDS

GENERAL LANDSCAPE NOTES:

1. THE LANDSCAPE ARCHITECTURAL PLANS ARE TO BE USED IN CONJUNCTION WITH THE CIVIL, IRRIGATION, MECHANICAL, ELECTRICAL, AND ARCHITECTURAL SITE PLANS TO FORM COMPLETE INFORMATION REGARDING THE SITE.
2. LANDSCAPE CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES AND SPECIFICATIONS.
3. ALL MATERIAL AND WORKMANSHIP SHALL BE MAINTAINED AND GUARANTEED FOR A PERIOD OF 12 MONTHS FOLLOWING THE SUBSTANTIAL COMPLETION DATE.
4. LANDSCAPE CONTRACTOR SHALL EXAMINE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, NOTIFY THE GENERAL CONTRACTOR IN WRITING OF UNSATISFACTORY CONDITIONS. DO NOT PROCEED UNTIL CONDITIONS HAVE BEEN CORRECTED.
5. BEFORE COMMENCING WORK, LANDSCAPE CONTRACTOR SHALL CONTACT APPROPRIATE UTILITY COMPANIES FOR UTILITY LOCATIONS, AND COORDINATE WITH GENERAL CONTRACTOR IN REGARD TO LOCATION OF PROPOSED UTILITIES, IRRIGATION SLEEVES, CONDUITS, ETC. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
6. VERIFY THAT SUBGRADE PREPARATION HAS BEEN COMPLETED TO ACCEPTABLE TOLERANCES PRIOR TO BEGINNING ANY WORK.
7. ALL LANDSCAPE AREAS TO BE WATERED BY AN AUTOMATIC IRRIGATION SYSTEM TO BE DESIGNED BY THE LANDSCAPE CONTRACTOR. PROVIDE OWNER WITH TRAINING ON THE USE OF THE CONTROLLER, AND ALL PRODUCT MANUALS RELEVANT TO THE OPERATION OF THE IRRIGATION SYSTEM.
8. VERIFY IRRIGATION CONTROLLER LOCATION WITH OWNER AND GENERAL CONTRACTOR PRIOR TO INSTALLATION.
9. PRIOR TO FINAL ACCEPTANCE, TEST THE IRRIGATION SYSTEM UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT AND OWNER.
10. FOR OUTDOOR LOW-VOLTAGE LANDSCAPE LIGHTING, INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND PROVIDE OWNER WITH TRAINING ON THE USE OF THE CONTROLLER AND ALL RELATED LIGHTING PRODUCT MANUALS RELEVANT TO THE OPERATION OF THE LIGHTING SYSTEM.
11. VERIFY LIGHTING CONTROLLER LOCATION WITH OWNER AND GENERAL CONTRACTOR PRIOR TO INSTALLATION.

TREE PROTECTION NOTES:

1. PLACING MATERIALS NEAR TREES: NO PERSON MAY CONDUCT ACTIVITY WITHIN THE DRIPLINE OF ANY EXISTING TREE, INCLUDING BUT NOT LIMITED TO PARKING EQUIPMENT, PLACING SOLVENTS, STORING BUILDING MATERIAL AND SOIL DEPOSITS, DUMPING CONCRETE WASH OUT AND LOCATING BURN HOLES.
2. CONTRACTOR SHALL NOT CUT ANY ROOT OVER 2" IN DIAMETER.
3. ATTACHMENTS TO TREES: DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY OBJECT TO ANY EXISTING TREE.
4. PROTECTIVE BARRIER. BEFORE DEVELOPMENT, LAND CLEARING, FILLING OR ANY LAND ALTERATION, THE CONTRACTOR:
   a. SHALL COVER WITH MULCH TO A DEPTH OF AT LEAST SIX (6) INCHES OR WITH PLYWOOD OR SIMILAR MATERIAL THE AREAS ADJOINING THE CRITICAL ROOT ZONE (DRIP LINE) OF A TREE IN ORDER TO PROTECT ROOTS FROM DAMAGE CAUSED BY HEAVY EQUIPMENT.
   b. SHALL PROHIBIT EXCAVATION OR COMPACTION OF EARTH OR OTHER POTENTIALLY DAMAGING ACTIVITIES WITH IN THE DRIP LINES OF EXISTING TREES. SHALL ENSURE THAT ANY LANDSCAPING DONE WITHIN THE DRIP LINE SHALL BE ACCOMPLISHED WITH LIGHT MACHINERY OR HAND LABOR.
5. RETURN ALL AREAS TO THERE PRE-CONSTRUCTION STATE AFTER INSTALLATION IS COMPLETE.

PRICING NOTES:

1. THIS DRAWING IS A PRICING SET AND IS NOT A FINAL CONSTRUCTION DRAWING. IT SHALL NOT BE USED FOR CONSTRUCTION.
2. THIS SET SHALL BE USED TO PROVIDE THE PROJECT'S DESIGN INTENT AND GENERAL LAYOUT FOR PRICING PURPOSES.
3. SPECIFIC CONSTRUCTION DETAILS, MATERIALS, FINISHES, AND PRODUCTS MAY BE DESIGNED, DRAFTED, CHOSEN, OR ALTERED IN SUBSEQUENT DRAWING SETS AT THE DISCRETION OF THE OWNER AND LANDSCAPE ARCHITECT.

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STATE OF WASH. JOHN McNAM. EXP. 06/19/2025 PE ARCHITECT
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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

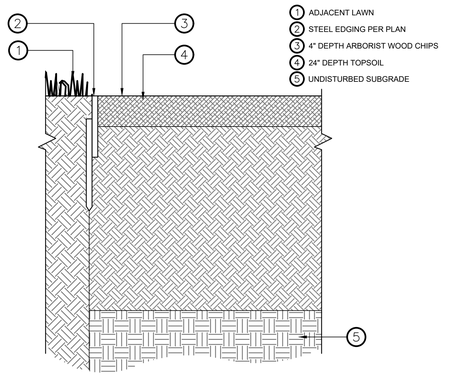
CONTENTS:

OVERALL LANDSCAPE PLAN

SCALE:
DRAWN: J. BIONDOLILO
CHECKED: J. McNAMARA
PROJECT NO: 2020008.100

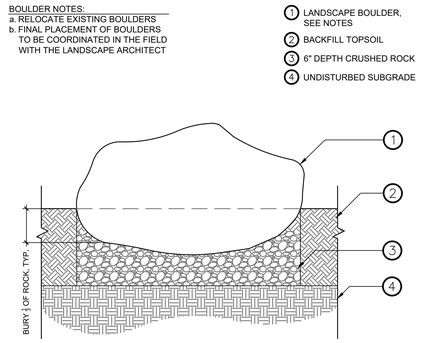
SHEET:
L-1.0

May 14, 2024 - 8:33:45pm - jbiondolillo
N:\PROJECTS\1841 ARC ARCHITECTS\23-000537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CAD\23-000537 L-1.0.DWG



1 LANDSCAPE BED & METAL EDGING
1 1/2" = 1'-0" P-PU-SEA-05

BOULDER NOTES:
a. RELOCATE EXISTING BOULDERS
b. FINAL PLACEMENT OF BOULDERS TO BE COORDINATED IN THE FIELD WITH THE LANDSCAPE ARCHITECT



2 BOULDER DETAIL
1" = 1'-0" P-PU-SEA-03

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REVISION	DATE	DESCRIPTION

CONTENTS:

LANDSCAPE DETAILS

SCALE:
DRAWN: J. BIONDOLILO
CHECKED: J. McNAMARA
PROJECT NO.: 2020008.100

SHEET:
L-2.0

May 14, 2024 - 8:33:51pm - User: jmcnamara
N:\PROJECTS\1841 ARC ARCHITECTS\23-020537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CAD\123-020537 L-1.0.DWG

NE1/4 OF THE NW1/4, SEC. 16, T 23 N., R 4 E., W.M.

MATCHLINE (RE: L-3.1)

PLANT LEGEND NORTHEAST

SYMBOL	QTY	BOTANICAL / COMMON NAME
TREES		
	2	ACER CIRCINATUM VINE MAPLE
	1	PSEUDOTSUGA MENZIESII DOUGLAS FIR
	3	THUJA PLICATA WESTERN RED CEDAR
SHRUBS		
	24	OSMANTHUS DELAVAYI DELAVAYI OSMANTHUS
	30	POLYSTICHUM MUNITUM WESTERN SWORD FERN
GROUND COVERS		
	41	EUONYMUS FORTUNEI 'COLORATUS' PURPLE-LEAF WINTERCREEPER
	233	MAHONIA REPENS CREEPING MAHONIA

0 10 20 30 feet

1" = 10'

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CITY OF SEATAC EST. 1990

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CONTENTS:

PLANTING PLAN - NORTHEAST

SCALE:
DRAWN: J. BIONDOLILO
CHECKED: J. McNAMARA
PROJECT NO: 2020008.100

SHEET:
L-3.0

Mon 14, 2024 8:33:19pm — User: jmcnamara
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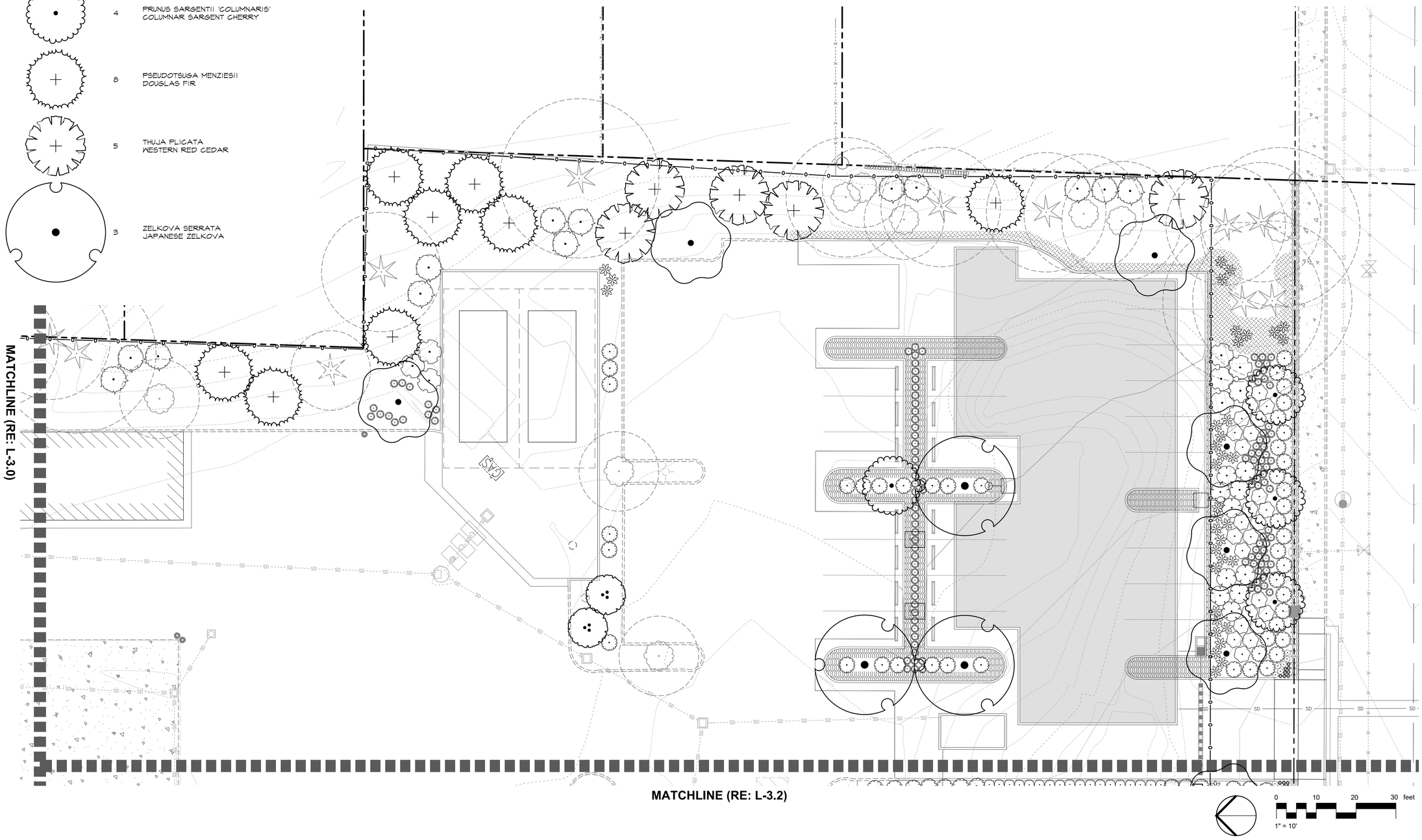
NE1/4 OF THE NW1/4, SEC. 16, T 23 N., R 4 E., W.M.

PLANT LEGEND SOUTHEAST

SYMBOL	QTY	BOTANICAL / COMMON NAME
TREES		
	2	ACER CIRCINATUM VINE MAPLE
	6	FRAXINUS OXYCARPA 'RAYWOOD' RAYWOOD ASH
	4	PRUNUS SARGENTII 'COLUMNARIS' COLUMNAR SARGENT CHERRY
	8	PSEUDOTSUGA MENZIESII DOUGLAS FIR
	5	THUJA PLICATA WESTERN RED CEDAR
	3	ZELKOVA SERRATA JAPANESE ZELKOVA
SHRUBS		
	45	CISTUS CORBARIENSIS WHITE ROCKROSE
	10	ESCALLONIA X LANGLEYENSIS 'APPLE BLOSSOM' APPLE BLOSSOM ESCALLONIA
	13	OSMANTHUS DELAVAYI DELAVAYI OSMANTHUS
	36	POLYSTICHUM MUNITUM WESTERN SWORD FERN
	8	RIBES SANGUINEUM RED FLOWERING CURRANT
	24	SPIRAEA THUNBERGII THUNBERG SPIREA
GRASSES		
	117	DESCHAMPSIA CESPITOSA TUFTED HAIR GRASS
PERENNIALS		
	6	GAURA LINDHEIMERI 'SISKIYOU PINK' SISKIYOU PINK GAURA
	8	HEMEROCALLIS X 'STELLA DE ORO' STELLA DE ORO DAYLILY
GROUND COVERS		
	265	EUONYMUS FORTUNEI 'COLORATUS' PURPLE-LEAF WINTERCREEPER
	359	GERANIUM MACRORRHIZUM 'INGWERSEN'S VARIETY' INGWERSEN'S BIGROOT GERANIUM



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CONTENTS:

PLANTING PLAN - SOUTHEAST

SCALE:
DRAWN: J. BIONDOLILLO
CHECKED: J. McNAMARA
PROJECT NO: 2020008.100

SHEET:
L-3.1

May 14, 2024 - 8:32:34pm - User: jamesbiondolillo
N:\Projects\2020\2020008.100 - SEATAC MAINTENANCE FACILITY\CIVIL DESIGN\CAD\V23-000537 L-3.0.DWG

NE1/4 OF THE NW1/4, SEC. 16, T 23 N., R 4 E., W.M.

MATCHLINE (RE: L-3.1)

MATCHLINE (RE: L-3.0)

S 136TH ST

20TH AVENUE S

PLANT LEGEND SOUTHWEST

SYMBOL	QTY	BOTANICAL / COMMON NAME
TREES		
	5	ACER CIRCINATUM VINE MAPLE
	1	FRAXINUS OXYCARPA 'RAYWOOD' RAYWOOD ASH
	2	PRUNUS SARGENTII 'COLUMNARIS' COLUMNAR SARGENT CHERRY
	1	PSEUDOTSUGA MENZIESII DOUGLAS FIR
SHRUBS		
	51	CISTUS CORBARIENSIS WHITE ROCKROSE
	86	ESCALLONIA X LANGLEYENSIS 'APPLE BLOSSOM' APPLE BLOSSOM ESCALLONIA
	71	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN' SNOW QUEEN OAKLEAF HYDRANGEA
	61	POLYSTICHUM MUNITUM WESTERN SWORD FERN
	24	RIBES SANGUINEUM RED FLOWERING CURRANT
	82	SPIRAEA THUNBERGII THUNBERG SPIREA
	60	VIBURNUM OPULUS 'NANUM' DWARF EUROPEAN CRANBERRYBUSH
GRASSES		
	123	DESCHAMPSIA CESPITOSA TUFTED HAIR GRASS
PERENNIALS		
	38	GAURA LINDHEIMERI 'SISKIYOU PINK' SISKIYOU PINK GAURA
	33	HEMEROCALLIS X 'STELLA DE ORO' STELLA DE ORO DAYLILY
SHRUB AREAS		
	390	CAREX OBNUPTA SLOUGH SEDGE
	375	JUNCUS EFFUSUS SOFT RUSH
	163	PENSTEMON SERRULATUS COAST PENSTEMON
GROUND COVERS		
	96	CEANOTHUS GLORIOSUS POINT REYES CEANOTHUS
	164	EUONYMUS FORTUNEI 'COLORATUS' PURPLE-LEAF WINTERCREEPER
	150	GERANIUM MACRORRHIZUM 'INGWERSEN'S VARIETY' INGWERSEN'S BIGROOT GERANIUM

0 10 20 30 feet

1" = 10'

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ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

PLANTING PLAN - SOUTHWEST

SCALE:
DRAWN: J. BIONDOLILO
CHECKED: J. McNAMARA
PROJECT NO: 2020008.100

SHEET:

L-3.2

May 14, 2024 8:33:29pm — User: jmcbandolilo
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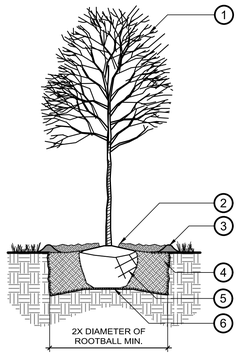
NE1/4 OF THE NW1/4, SEC. 16, T 23 N., R 4 E., W.M.

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CAL
TREES				
	AC	9	ACER CIRCINATUM VINE MAPLE	6' HT. MIN. MULTI-STEM
	FO	7	FRAXINUS OXYCARPA 'RAYNOOD' RAYNOOD ASH	2" CAL
	PC	6	PRUNUS SARGENTII 'COLUMNARIS' COLUMNAR SARGENT CHERRY	2" CAL
	PD	10	PSEUDOTSUGA MENZIESII DOUGLAS FIR	4' HT. MIN.
	TP	8	THUJA PLICATA WESTERN RED CEDAR	4' HT. MIN.
	ZS	3	ZELKOVA SERRATA JAPANESE ZELKOVA	2" CAL

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
SHRUBS				
	CC	117	CISTUS CORBARIENSIS WHITE ROCKROSE	5 GAL
	EA	96	ESCALLONIA X LANGLEYENSIS 'APPLE BLOSSOM' APPLE BLOSSOM ESCALLONIA	5 GAL
	HO	71	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN' SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL
	OD	19	OSMANTHUS DELAVAYI DELAVAYI OSMANTHUS	5 GAL
	PM	119	POLYSTICHUM MUNITUM WESTERN SWORD FERN	2 GAL
	RS	41	RIBES SANGUINEUM RED FLOWERING CURRANT	5 GAL
	ST	106	SPIRAEA THUNBERGII THUNBERG SPIREA	5 GAL
	VN	65	VIBURNUM OPULUS 'NANUM' DWARF EUROPEAN CRANBERRYBUSH	5 GAL
GRASSES				
	DT	255	DESCHAMPSIA CESPITOSA TUFTED HAIR GRASS	1 GAL
PERENNIALS				
	GS	44	GAURA LINDHEIMERI 'SISKIYOU PINK' SISKIYOU PINK GAURA	1 GAL
	HO2	41	HEMEROCALLIS X 'STELLA DE ORO' STELLA DE ORO DAYLILY	1 GAL

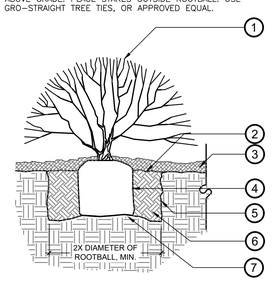
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
SHRUB AREAS					
	CO	390	CAREX OBNUPTA SLOUGH SEDGE	1 GAL	24" o.c.
	JE	375	JUNCUS EFFUSUS SOFT RUSH	1 GAL	24" o.c.
	PS2	163	PENSTEMON SERRULATUS COAST PENSTEMON	1 GAL	15" o.c.
GROUND COVERS					
	CG	96	CEANOTHUS GLORIOSUS POINT REYES CEANOTHUS	4"POT	24" o.c.
	EC	470	EUONYMUS FORTUNEI 'COLORATUS' PURPLE-LEAF WINTERCREEPER	4"POT	18" o.c.
	GI	509	GERANIUM MACRORRHIZUM 'INGWERSEN'S VARIETY' INGWERSEN'S BIGROOT GERANIUM	1 GAL	24" o.c.



1. PRUNE DAMAGED OR DEAD WOOD. DO NOT CUT CENTER LEADER.
2. 3" DARK FINE MULCH. HOLD BACK 4" FROM TRUNK OF TREE
3. 4" HEIGHT WATER SAUCER
4. BACKFILL SOIL MIX
5. REMOVE ALL BURLAP, WIRE, TAPE, AND WOODEN BOXES BEFORE PLANTING
6. SET ROOTBALL ON UNDISTURBED SUBGRADE–DO NOT OVER– EXCAVATE

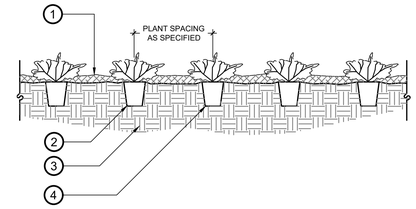
1 TREE PLANTING DETAIL
NTS P–PU–SEA1–04

NOTE:
1. ANY BROKEN OR CRUMBLING ROOTBALL WILL BE REJECTED.
2. HOLD GRADE 1" BELOW EDGE OF WALK OR CURB.
3. PLACE TREES AND SHRUBS ON UNDISTURBED SUBGRADE. DO NOT OVER–EXCAVATE.
4. STAKE TREES WITH TWO 2" DIA WOOD POLES, 5'–0" HEIGHT ABOVE GRADE. PLACE STAKES OUTSIDE ROOTBALL. USE GRO–STRAIGHT TREE TIES, OR APPROVED EQUAL.



1. PRUNE ALL DAMAGED OR DEAD WOOD IMMEDIATELY PRIOR TO PLANTING.
2. DIG PLANT PIT TWICE AS WIDE AS THE CONTAINER OR MORE
3. APPLY 3" MULCH DEPTH AS SPECIFIED ON PLANS, HOLD BACK FROM STEMS
4. REMOVE CONTAINER
5. ROUGHEN SIDES OF PLANT PIT. SCORE SIDES OF ROOTBALL OF ROOTBOUND PLANTS ONLY.
6. FILL PLANT PIT WITH SPECIFIED PREPARED BACKFILL SOIL MIX
7. SET ROOTBALL ON UNDISTURBED SUBGRADE–DO NOT OVER– EXCAVATE

2 SHRUB PLANTING DETAIL
NTS P–PU–SEA1–02



1. APPLY 1 1/2" – 3" DEPTH MULCH AS SPECIFIED ON PLANS.NOTE: MULCH DEPTH AROUND PLANT BASE MAY BE THINNER. DO NOT BURY PLANT WITH MULCH.
2. PLANTING PIT TO BE 2X DIAMETER OF ROOTBALL
3. TOPSOIL AS SPECIFIED ON PLANS
4. REMOVED PLASTIC CONTAINER PRIOR TO PLANTING

3 GROUNDCOVER PLANTING DETAIL
NTS P–PU–SEA1–03

PLANTING NOTES:

1. ALL TREE LOCATIONS ARE TO BE STAKED ON SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITHOUT PRIOR APPROVAL OF LANDSCAPE ARCHITECT/OWNER.
3. ALL PLANTS SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.
4. DO NOT PRUNE PLANTS UNLESS DIRECTED TO DO SO BY THE LANDSCAPE ARCHITECT.
5. CONTAINER STOCK IS PREFERRED FOR ALL PLANTS. IF CONTAINER STOCK IS NOT AVAILABLE FOR TREES, THEN ALL B&B PLANT MATERIAL SHALL HAVE ALL WIRE, TWINE, OR OTHER CONTAINMENT MATERIAL, EXCEPT FOR 100% HEMP BURLAP, REMOVED FROM THE TRUNK AND ROOT BALL OF THE PLANT PRIOR TO PLANTING. REMOVE THE TOP 2/3 OF THE HEMP BURLAP AFTER PLACING PLANT IN THE PIT.
6. PLANTING SOIL FOR ALL PLANTING AREAS:
   a. DO NOT STORE BULK MATERIALS NEAR STRUCTURES, OVER EXISTING PLANTING, OVER UTILITIES, WALKWAYS AND PAVEMENTS.
   b. PROVIDE EROSION CONTROL MEASURES TO PREVENT DISPLACEMENT OF BULK MATERIALS, DISCHARGE INTO WATERWAYS OR SEWERS, AND AIRBORNE DUST.
   c. PREPARING PLANTING AREAS, AND SPREADING SOIL SHALL BE COMPLETED BY THE LANDSCAPE CONTRACTOR AND SUPERVISED BY THE GENERAL CONTRACTOR SO THAT GRADES ARE MET AS NOTED ON THE GRADING PLANS.
   d. ALL IMPORTED PLANTING AREA SOIL SHALL BE 2-WAY (60% SAND, 40% COMPOST) TOPSOIL FROM AN APPROVED SOURCE. PROVIDE A 1-QUART SAMPLE FOR APPROVAL PRIOR TO IMPORTING ANY SOIL. TOPSOIL NOT MEETING INDUSTRY STANDARDS FOR COMPOSITION AND NUTRIENTS SHALL BE REJECTED.
   e. QUANTITY OF IMPORTED SOIL SHALL BE EQUAL TO A MINIMUM OF SIX (6) INCHES DEPTH IN ALL LANDSCAPE BEDS. THE SOIL INSTALLATION PROCESS OUTLINED BELOW SHALL COMBINE THIS QUANTITY OF IMPORTED SOIL WITH SUBSOIL TO RESULT IN AN EIGHT (8) INCH DEPTH OF PLANTING SOIL
   f. SOIL INSTALLATION: APPLY TWO (2) INCHES OF APPROVED IMPORTED SOIL OVER PREPARED SUBGRADE. TILL IMPORTED SOIL INTO TOP TWO (2) INCHES OF SUBSOIL TO CREATE AMENDED SOIL. APPLY AN ADDITIONAL FOUR (4) INCHES OF IMPORTED SOIL OVER AMENDED SOIL, TO CREATE AN EIGHT (8) INCH LAYER OF PLANTING SOIL. ROLL AND RAKE SMOOTH. ENSURE NO ROCKS OR OTHER DEBRIS EXCEEDING 3 INCHES IN DIAMETER REMAIN.
   g. IF PREPARED SOIL OR PREPARED SUBGRADE IS RE-COMPACTED, RESTORE AS DIRECTED BY THE LANDSCAPE ARCHITECT.
7. MULCH ENTIRE LANDSCAPE AREA TO A DEPTH OF 2 INCHES WITH DARK FINE MULCH. PROVIDE A 1-QUART SAMPLE FOR APPROVAL PRIOR TO IMPORTING ANY MULCH.
8. MULCH SHALL NOT BE ABOVE OR MORE THAN 1/2 INCH BELOW ADJOINING SURFACE. MULCH SHALL BE HELD BACK 2-3 INCHES FROM THE STEMS AND TRUNKS OF PLANTS.
9. ROOT BARRIER SHALL BE INSTALLED ON ALL TREES WITHIN 6' OF A CURB OR SIDEWALK.
10. DURING PLANTING OPERATIONS, KEEP ADJACENT PAVING AREAS CLEAN AND PROTECTED FROM DAMAGE. WORK AREA SHALL BE KEPT CLEAN AND ORDERLY.
11. DO NOT REMOVE NURSERY TAGS, STAKES, AND TIES UNTIL DIRECTED TO DO SO BY THE LANDSCAPE ARCHITECT.
12. WARRANTY: INSTALLER AGREES TO WARRANTY PLANTING THAT FAILS IN MATERIALS, WORKMANSHIP OR GROWTH WITHIN A WARRANTY PERIOD OF 12 MONTHS FROM THE DATE OF PLANTING COMPLETION.
13. PLANT SYMBOLS SHALL DICTATE PLANT COUNT.
14. ALL LANDSCAPING SHALL BE PLANTED AND MAINTAINED IN A LIVING CONDITION BY THE CONTRACTOR UNTIL FINAL OWNER ACCEPTANCE.

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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

PLANT SCHEDULE & NOTES

SCALE:
DRAWN: J. BIONDOLILO
CHECKED: J. McNAMARA
PROJECT NO: 2020008.100

SHEET: **L-3.3**

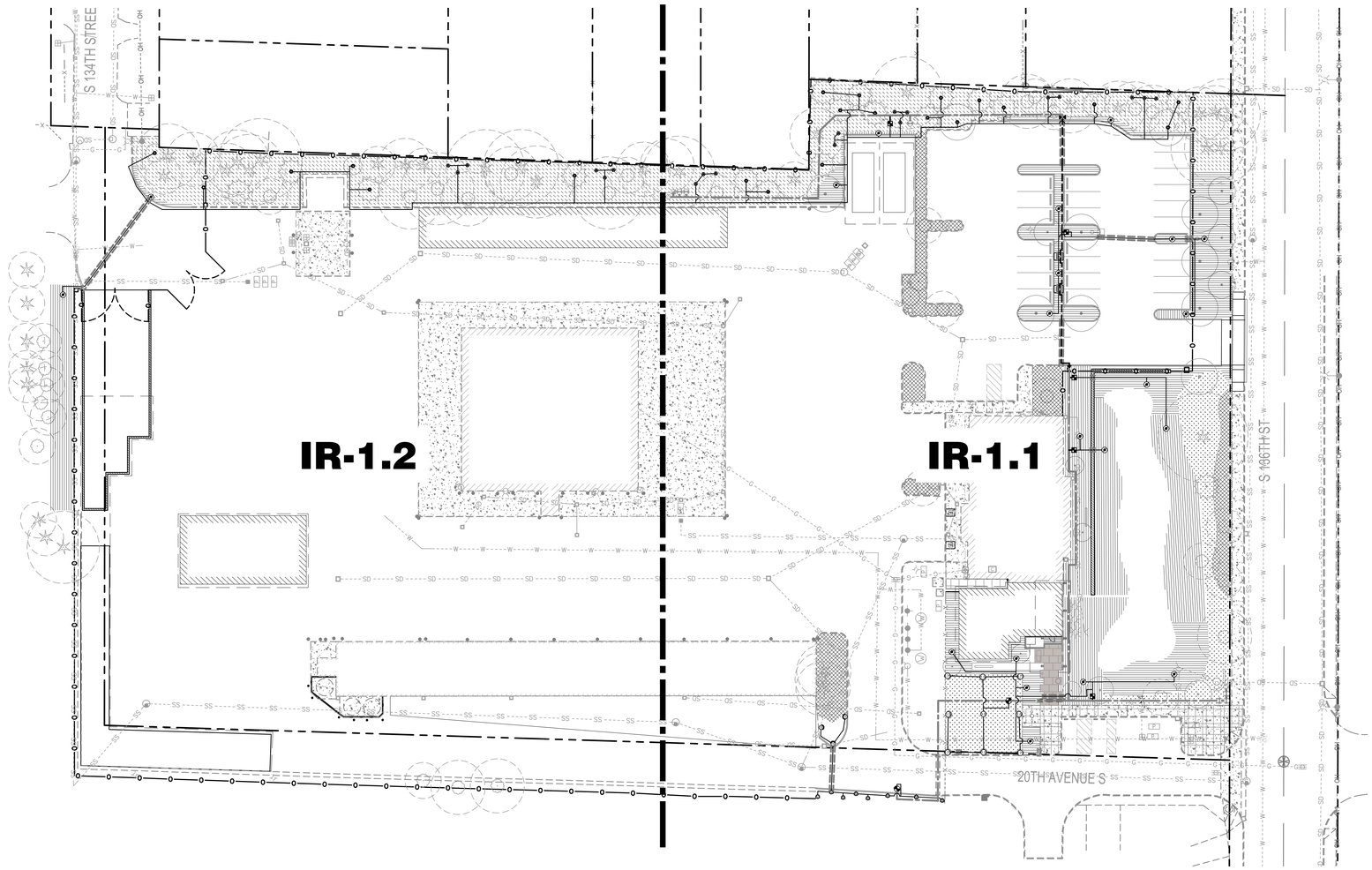
May 14, 2024 - 8:33:32pm - User: jbiondolillo
N:\PROJECTS\1841 ARC ARCHITECTS\23-000537 SEATAC MAINTENANCE FACILITY CIVIL DESIGN\CADD\23-000537 L-3.0.DWG

IRRIGATION SCHEDULE (ALL SHEETS)

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI		DETAIL
EST LCS RCS CST SST	RAIN BIRD 1812-PRS 15 STRIP SERIES SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH PRESSURE REGULATING DEVICE.	30		6/IR-1.3
Q T H TQ F	RAIN BIRD 1812-PRS 15 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH PRESSURE REGULATING DEVICE.	30		6/IR-1.3
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION		RADIUS	DETAIL
0.75	HUNTER I-20-04-SR 0.75 TURF ROTOR, 4IN. POP-UP. ADJUSTABLE AND FULL CIRCLE. PLASTIC RISER. DRAIN CHECK VALVE. SHORT RADIUS NOZZLE.		23'	7/IR-1.3
1.5	HUNTER I-20-04-SR 1.5 TURF ROTOR, 4IN. POP-UP. ADJUSTABLE AND FULL CIRCLE. PLASTIC RISER. DRAIN CHECK VALVE. SHORT RADIUS NOZZLE.		23'	7/IR-1.3
3.0	HUNTER I-20-04-SR 3.0 TURF ROTOR, 4IN. POP-UP. ADJUSTABLE AND FULL CIRCLE. PLASTIC RISER. DRAIN CHECK VALVE. SHORT RADIUS NOZZLE.		23'	7/IR-1.3
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION			DETAIL
	HUNTER ICZ-101-40 DRIP CONTROL ZONE KIT. 1IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 40PSI. FLOW RANGE: 2 GPM TO 20 GPM. 150 MESH STAINLESS STEEL SCREEN.			8/IR-1.3
	PIPE TRANSITION POINT PIPE TRANSITION POINT FROM PVC LATERAL TO DRIP TUBING WITH RISER TO INSTALLATION AT 2-4" DEPTH BELOW FINISH SOIL GRADE..			9/IR-1.3
	HUNTER HDL-06-18-CV DRIP RING FOR SHRUBS			12/IR-1.3
	HUNTER HDL-06-18-CV DRIP RING FOR TREES			12/IR-1.3
	AREA TO RECEIVE DRIPLINE HUNTER HDL-06-18-CV HDL-06-18-CV: HUNTER DRIPLINE W/ 0.6 GPH EMITTERS AT 18" O.C. CHECK VALVE, DARK BROWN TUBING WITH GRAY STRIPING. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. INSTALL WITH HUNTER PLD BARBED OR PLD-LOC FITTINGS.			11/IR-1.3
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION			DETAIL
	EXISTING VALVE EXISTING RAINBIRD PEB VALVE. CONTRACTOR TO FIELD VERIFY LOCATION AND FUNCTIONALITY.			4/IR-1.3
	RAIN BIRD PEB 1IN. PLASTIC INDUSTRIAL REMOTE CONTROL VALVE. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.			4/IR-1.3
	EXISTING QUICK COUPLER EXISTING QUICK COUPLER TO REMAIN. CONTRACTOR TO FIELD VERIFY LOCATION AND FUNCTIONALITY.			3/IR-1.3
	MATCO-NORCA 759 BRASS SHUT OFF BALL VALVE, 1/2" TO 4". TWO PIECE BODY, BLOW-OUT PROOF STEM, CHROME PLATED SOLID BRASS BALL, THREADED, WITH PTFE SEATS. SAME SIZE AS MAINLINE PIPE.			1/IR-1.3
D	DRAIN VALVE CHAMPION 1" MANUAL DRAIN VALVE			2/IR-1.3
C	CONTROLLER EXISTING IRRIGATION CONTROLLER INSTALLED INSIDE EQUIPMENT ROOM, FIELD VERIFY LOCATION AND OPERATION.			
POC 1"	POINT OF CONNECTION 2 1/2" EXISTING POINT OF CONNECTION AT TEE OFF OF EXISTING 2-1/2" IRRIGATION MAINLINE, DOWNSTREAM FROM EXISTING 1-1/2" DEDUCT METER AND DOUBLE CHECK VALVE. INFORMATION ABOUT POINT OF CONNECTION IS ACCORDING TO IRRIGATION PLANS BY OTHERS, FIELD VERIFY.			
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21			
	IRRIGATION MAINLINE: PVC SCHEDULE 40			
	IRRIGATION MAINLINE: EXISTING PVC SCHEDULE 40			
	PIPE SLEEVE: PVC CLASS 200 SDR 21			

VALVE SCHEDULE (ALL SHEETS)

NUMBER	MODEL	SIZE	TYPE	GPM	PSI @ POC
1	HUNTER ICZ-101-40	1"	AREA FOR DRIPLINE	15.5	
2	HUNTER ICZ-101-40	1"	AREA FOR DRIPLINE	14.58	
3	HUNTER ICZ-101-40	1"	AREA FOR DRIPLINE	14.14	
4	HUNTER ICZ-101-40	1"	AREA FOR DRIPLINE	14.49	
5	HUNTER ICZ-101-40	1"	AREA FOR DRIPLINE	16.96	
6	RAIN BIRD PEB	1"	TURF ROTOR	14.98	
7	RAIN BIRD PEB	1"	SHRUB SPRAY	12.55	
Unknown	EXISTING VALVE	1"			
Unknown	EXISTING VALVE	1"			
Unknown	EXISTING VALVE	1"			
Unknown	EXISTING VALVE	1"			
Unknown	EXISTING VALVE	1"			
Unknown	EXISTING VALVE	1"			



IRRIGATION SHEET NOTES (ALL SHEETS)

1. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. EXISTING IRRIGATION EQUIPMENT IS BY OTHERS. CONTRACTOR SHALL FIELD VERIFY THE LOCATION, SIZES, CONDITION, AND FUNCTIONALITY OF EXISTING EQUIPMENT.
3. PLAN IS DIAGRAMMATIC. ALL PIPING, LATERALS, AND WIRE TO BE LOCATED IN BED OR LAWN AREAS WHERE APPROPRIATE.
4. WHILE INSTALLING NEW MAINLINE AND LATERAL LINES, CONTRACTOR SHALL MAINTAIN AS MUCH DISTANCE AS POSSIBLE FROM PROPOSED AND EXISTING TREES.
5. PIPE SIZES ARE TO REMAIN CONSTANT BETWEEN PIPE SIZE CALL-OUTS. PIPES ARE LABELED TO SMALLEST PIPE SIZE ONLY (¾").
6. ALL IRRIGATION HEADS LOCATED IN LAWN AREAS SHALL BE 4" POP-UPS AND HEADS IN SHRUB AREAS SHALL BE 12" POP-UPS.
7. ALL DRIP TUBING SHALL BE INSTALLED BELOW THE FINISH SOIL GRADE UNLESS NOTED OTHERWISE. INSTALL TUBING AT A CONSISTENT DEPTH OF 2" BELOW TOP OF TOPSOIL.
8. ALL PIPES AND SLEEVES UNDER PAVED AREAS SHALL BE 24" DEEP. ALL MAINLINE SHALL BE 18" DEEP IN ALL UNPAVED AREAS, 24" IN PAVED ARES. ALL LATERALS SHALL BE 12" DEEP IN ALL UNPAVED AREAS AND 24" DEEP IN PAVED AREAS.
9. LOCATE ALL MAINLINES WITHIN THE PROJECT LIMITS. INSTALL #14-AWG DIRECT BURIAL LOW VOLTAGE WIRE ALONG MAINLINE; TAPE AND BUNDLE WIRE EVER 20' FT. PROVIDE RED COLOR WIRE FOR SIGNAL AND WHITE COLOR WIRE FOR COMMON. PROVIDE A MINIMUM OF ONE SPARE WIRE FOR EVERY 10 VALVES FOR A MAXIMUM OF FIVE SPARE WIRES.
10. ALL WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT/OWNER.

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STATE OF WASHINGTON — JENNIFER ANN MCFARLAND — EXP. 09/29/2025 — LICENSED LANDSCAPE ARCHITECT
FOR PERMIT REVIEW ONLY

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

OVERALL IRRIGATION PLAN

SCALE:
DRAWN: J. MCFARLAND & C. OWEN
CHECKED: J. MCNAMARA
PROJECT NO.: 2020008.100

SHEET:
IR-1.0

May 14, 2024 8:34:02pm – User: jenschmidt
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IRRIGATION SCHEDULE IR-1.1

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI		DETAIL
EST LCS RCS CST SST	RAIN BIRD 1812-PRS 15 STRIP SERIES SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH PRESSURE REGULATING DEVICE.	30		6/IR-1.3
Q T H TQ F	RAIN BIRD 1812-PRS 15 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH PRESSURE REGULATING DEVICE.	30		6/IR-1.3
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION		RADIUS	DETAIL
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1.5	HUNTER I-20-04-SR 1.5 TURF ROTOR, 4IN. POP-UP. ADJUSTABLE AND FULL CIRCLE. PLASTIC RISER. DRAIN CHECK VALVE. SHORT RADIUS NOZZLE.		23'	7/IR-1.3
3.0	HUNTER I-20-04-SR 3.0 TURF ROTOR, 4IN. POP-UP. ADJUSTABLE AND FULL CIRCLE. PLASTIC RISER. DRAIN CHECK VALVE. SHORT RADIUS NOZZLE.		23'	7/IR-1.3
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION			DETAIL
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	PIPE TRANSITION POINT PIPE TRANSITION POINT FROM PVC LATERAL TO DRIP TUBING WITH RISER TO INSTALLATION AT 2-4" DEPTH BELOW FINISH SOIL GRADE..			9/IR-1.3
	HUNTER HDL-06-18-CV DRIP RING FOR SHRUBS			12/IR-1.3
	HUNTER HDL-06-18-CV DRIP RING FOR TREES			12/IR-1.3
	AREA TO RECEIVE DRIPLINE HUNTER HDL-06-18-CV HDL-06-18-CV: HUNTER DRIPLINE W/ 0.6 GPH EMITTERS AT 18" O.C. CHECK VALVE, DARK BROWN TUBING WITH GRAY STRIPING. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. INSTALL WITH HUNTER PLD BARBED OR PLD-LOC FITTINGS.			11/IR-1.3
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION			DETAIL
	EXISTING VALVE EXISTING RAINBIRD PEB VALVE. CONTRACTOR TO FIELD VERIFY LOCATION AND FUNCTIONALITY.			4/IR-1.3
	RAIN BIRD PEB 1IN. PLASTIC INDUSTRIAL REMOTE CONTROL VALVE. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.			4/IR-1.3
	EXISTING QUICK COUPLER EXISTING QUICK COUPLER TO REMAIN. CONTRACTOR TO FIELD VERIFY LOCATION AND FUNCTIONALITY.			3/IR-1.3
	MATCO-NORCA 759 BRASS SHUT OFF BALL VALVE, 1/2" TO 4". TWO PIECE BODY, BLOW-OUT PROOF STEM, CHROME PLATED SOLID BRASS BALL, THREADED, WITH PTFE SEATS. SAME SIZE AS MAINLINE PIPE.			1/IR-1.3
D	DRAIN VALVE CHAMPION 1" MANUAL DRAIN VALVE			2/IR-1.3
C	CONTROLLER EXISTING IRRIGATION CONTROLLER INSTALLED INSIDE EQUIPMENT ROOM, FIELD VERIFY LOCATION AND OPERATION.			
POC 1"	POINT OF CONNECTION 2 1/2" EXISTING POINT OF CONNECTION AT TEE OFF OF EXISTING 2-1/2" IRRIGATION MAINLINE, DOWNSTREAM FROM EXISTING 1-1/2" DEDUCT METER AND DOUBLE CHECK VALVE. INFORMATION ABOUT POINT OF CONNECTION IS ACCORDING TO IRRIGATION PLANS BY OTHERS, FIELD VERIFY.			
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21			
	IRRIGATION MAINLINE: PVC SCHEDULE 40			
	IRRIGATION MAINLINE: EXISTING PVC SCHEDULE 40			
	PIPE SLEEVE: PVC CLASS 200 SDR 21			

Valve Callout

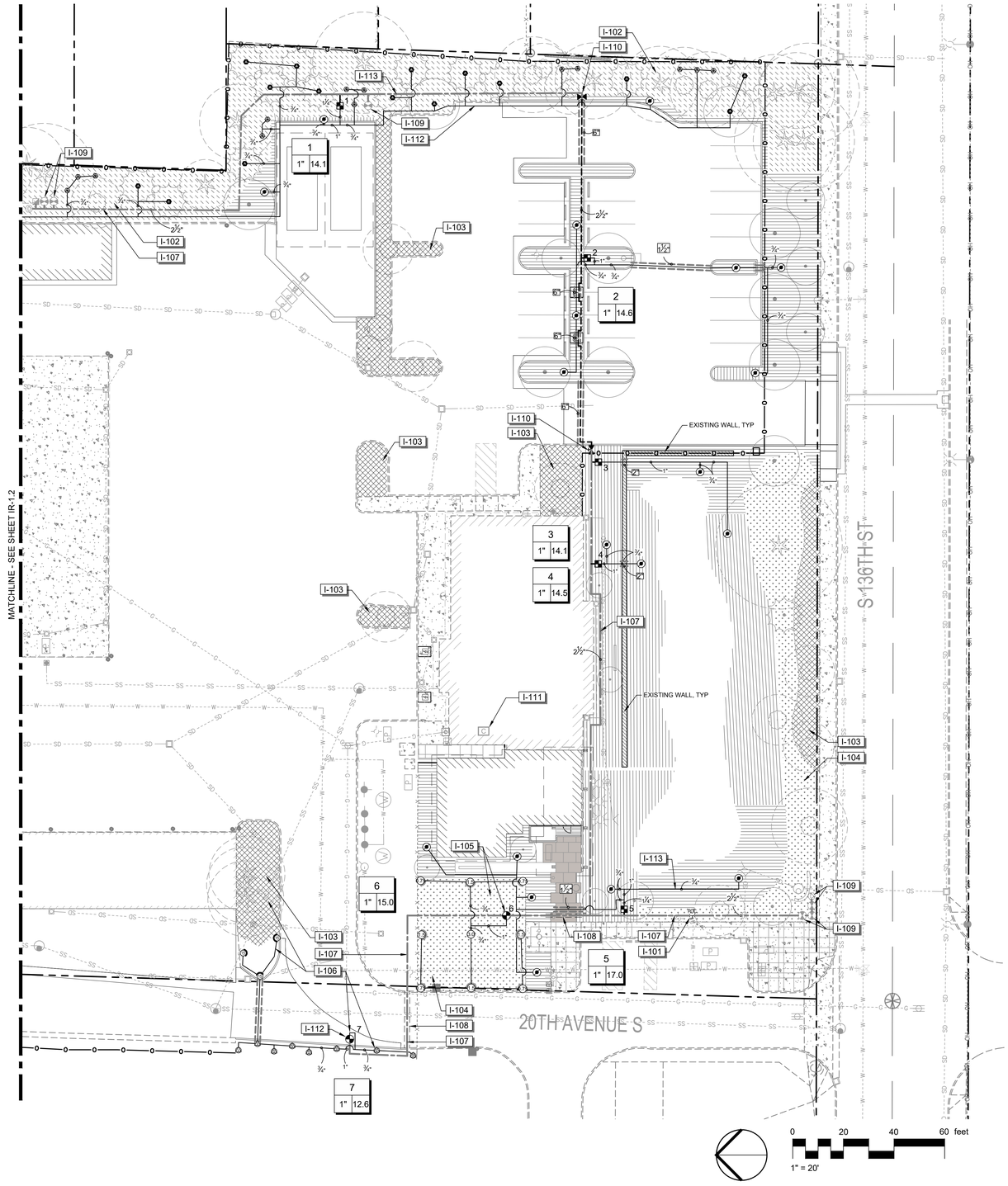
Valve Number
#" Valve Flow
Valve Size

S1 IRRIGATION SLEEVE & CALL OUT

REFERENCE NOTES SCHEDULE IR-1.1

SYMBOL	IRRIGATION DESCRIPTION
I-101	IRRIGATION POINT OF CONNECTION AT STUB OFF EXISTING 2-1/2" IRRIGATION MAINLINE. DOWNSTREAM FROM EXISTING METER AND DOUBLE CHECK ASSEMBLY. SYSTEM DESIGNED TO OPERATE AT 80 PSI STATIC PRESSURE AT THE EXISTING METER.

SYMBOL	IRRIGATION DESCRIPTION
I-102	NO NEW IRRIGATION (EXCEPT AS SHOWN) IN THE EXISTING LANDSCAPE AREA TO REMAIN. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING TREES AND VEGETATION AND RESTORE THE FINISH GRADE AS REQUIRED. FOR PROPOSED PLANT LOCATIONS, SEE LANDSCAPE PLANS.
I-103	RAINBIRD 1800 SPRAY IRRIGATION ZONE. PRESERVE EXISTING SYSTEM AND COMPONENTS. REPLACE ANY DAMAGED HEADS AND LATERALS TO PRESERVE FUNCTIONALITY AND WHERE NEEDED TO FIT REVISED LANDSCAPE AREA.
I-104	HUNTER I-20 ROTARY IRRIGATION ZONE. PRESERVE EXISTING SYSTEM AND COMPONENTS. REPLACE ANY DAMAGED HEADS AND LATERALS TO PRESERVE FUNCTIONALITY AND WHERE NEEDED TO FIT REVISED LANDSCAPE AREA.
I-105	REPLACE EXISTING IRRIGATION CONTROL VALVE THIS LOCATION. ADD, REPLACE AND/OR ADJUST IRRIGATION HEADS TO PROVIDE IRRIGATION TO THE ENTIRE LAWN ROTOR AREA.
I-106	REPLACE EXISTING IRRIGATION CONTROL VALVE AT THIS LOCATION AND ADD, ADJUST OR REPLACE SPRAY HEADS TO PROVIDE IRRIGATION FOR THIS ENTIRE EXISTING SHRUB SPRAY ZONE.
I-107	EXISTING MAINLINE TO REMAIN, TYP. REPAIR OR REPLACE IF DAMAGED.
I-108	EXISTING SLEEVE TO REMAIN, TYP. REPAIR OR REPLACE IF DAMAGED
I-109	EXISTING EQUIPMENT TO REMAIN, TYP.
I-110	CUT EXISTING IRRIGATION MAINLINE IN APPROXIMATE LOCATION AND INSTALL NEW ISOLATION VALVE.
I-111	EXISTING IRRIGATION CONTROLLER INSTALLED INSIDE EQUIPMENT ROOM, FIELD VERIFY LOCATION AND OPERATION.
I-112	IRRIGATION PLAN IS DIAGRAMMATIC. INSTALL ALL LINES, VALVES AND OTHER IRRIGATION EQUIPMENT IN LANDSCAPE BEDS WHERE POSSIBLE.
I-113	WHILE INSTALLING NEW MAINLINE AND LATERAL LINES, CONTRACTOR SHALL MAINTAIN AS MUCH DISTANCE AS POSSIBLE FROM PROPOSED AND EXISTING TREES, TYP.



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STATE OF WASHINGTON JAMES A. MCNAMARA REGISTERED LANDSCAPE ARCHITECT EXP. 09/19/2025
FOR PERMIT REVIEW ONLY

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

SOUTH IRRIGATION PLAN

SCALE:
DRAWN: J. MCFARLAND & C. OWEN
CHECKED: J. MCNAMARA
PROJECT NO: 2020008.100

SHEET:
IR-1.1

May 14, 2024 - 8:34:07pm - User: jmcfarland
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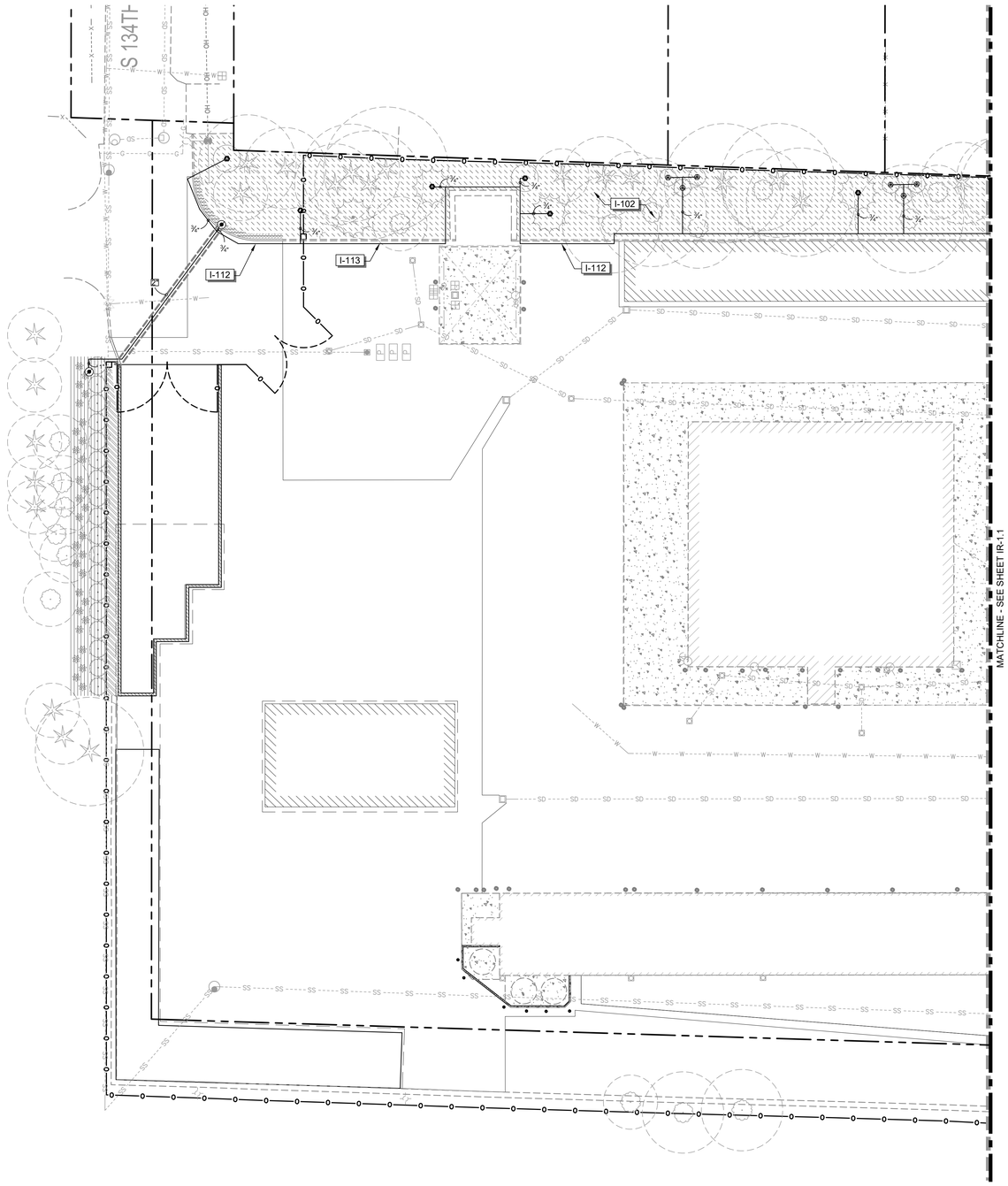
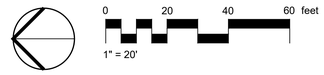
IRRIGATION SCHEDULE IR-1.2

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DETAIL
⊛	PIPE TRANSITION POINT PIPE TRANSITION POINT FROM PVC LATERAL TO DRIP TUBING WITH RISER TO INSTALLATION AT 2-4" DEPTH BELOW FINISH SOIL GRADE..	9/IR-1.3
⊛	HUNTER HDL-06-18-CV DRIP RING FOR SHRUBS	12/IR-1.3
✪	HUNTER HDL-06-18-CV DRIP RING FOR TREES	12/IR-1.3
	AREA TO RECEIVE DRIPLINE HUNTER HDL-06-18-CV HDL-06-18-CV: HUNTER DRIPLINE W/ 0.6 GPH EMITTERS AT 18" O.C. CHECK VALVE, DARK BROWN TUBING WITH GRAY STRIPING. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. INSTALL WITH HUNTER PLD BARBED OR PLD-LOC FITTINGS.	11/IR-1.3
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DETAIL
———	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	
- - - - - -	PIPE SLEEVE: PVC CLASS 200 SDR 21	

REFERENCE NOTES SCHEDULE IR1.2

SYMBOL		IRRIGATION DESCRIPTION
	I-102	NO NEW IRRIGATION (EXCEPT AS SHOWN) IN THE EXISTING LANDSCAPE AREA TO REMAIN. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING TREES AND VEGETATION AND RESTORE THE FINISH GRADE AS REQUIRED. FOR PROPOSED PLANT LOCATIONS, SEE LANDSCAPE PLANS.
	I-112	IRRIGATION PLAN IS DIAGRAMMATIC. INSTALL ALL LINES, VALVES AND OTHER IRRIGATION EQUIPMENT IN LANDSCAPE BEDS WHERE POSSIBLE.
	I-113	WHILE INSTALLING NEW MAINLINE AND LATERAL LINES, CONTRACTOR SHALL MAINTAIN AS MUCH DISTANCE AS POSSIBLE FROM PROPOSED AND EXISTING TREES, TYP.





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STATE OF WASHINGTON JAMES MCNAMARA EXP. 09/19/2025 LICENSED LANDSCAPE ARCHITECT
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CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 5/14/2024

REVISION:	DATE:	DESCRIPTION:

CONTENTS:

NORTH IRRIGATION PLAN

SCALE:
DRAWN: J. MCFARLAND & C. OWEN
CHECKED: J. MCNAMARA
PROJECT NO: 2020008.100

SHEET:

IR-1.2

May 14, 2024 @ 3:41pm - User: jmcfarland
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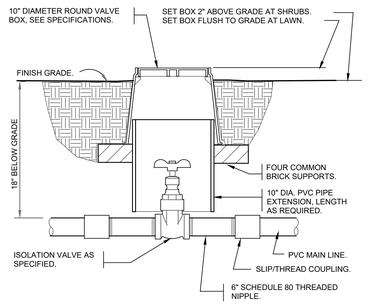
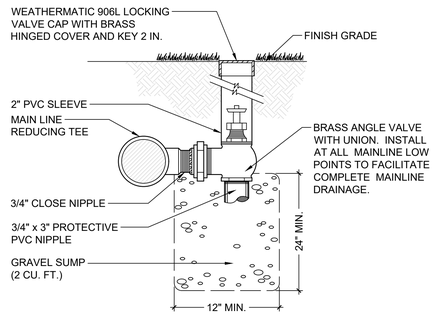


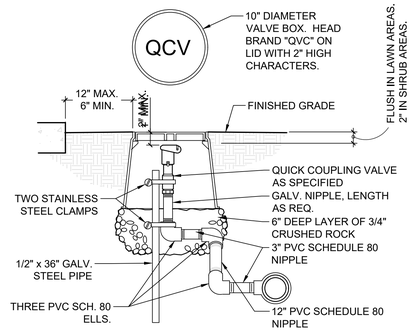
1 BRASS ISOLATION VALVE

1 1/2" = 1'-0" P-CO-NIS-31



2 MANUAL DRAIN VALVE DETAIL

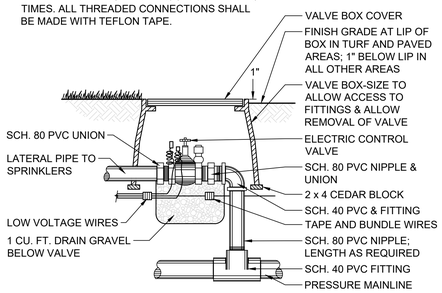
N.T.S. P-PU-SEA1-01



3 QUICK COUPLING VALVE IN BOX

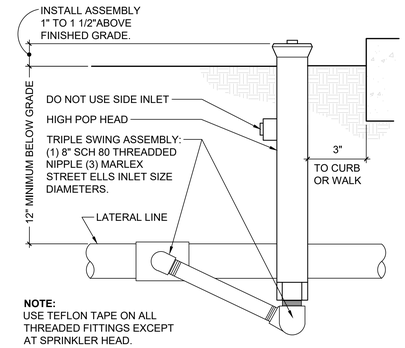
1 1/2" = 1'-0" P-PU-SEA1-05

NOTE: ALL WIRES TO BE INSTALLED AS PER LOCAL CODES. NO "IN-LINE" WIRE SPLICES ALLOWED. TAPE AND BUNDLE WIRES EVERY 20 FEET. PROVIDE EXPANSION COILS AT EACH VALVE - WRAPPING WIRE AROUND 1/2" PIPE 15 TIMES. ALL THREADED CONNECTIONS SHALL BE MADE WITH TEFLON TAPE.



4 ELECTRONIC CONTROL VALVE

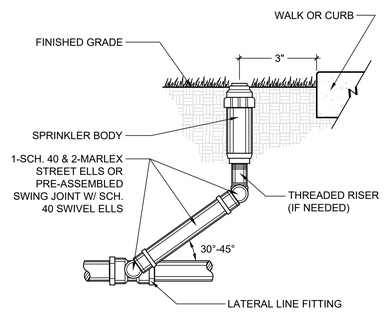
1" = 1" P-PU-SEA1-11



NOTE:
USE TEFLON TAPE ON ALL THREADED FITTINGS EXCEPT AT SPRINKLER HEAD.

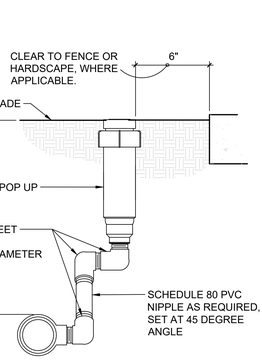
5 SHRUB SPRAY HIGHPOP MARLEX ASSEMBLY

3" = 1'-0" P-PU-SEA1-07



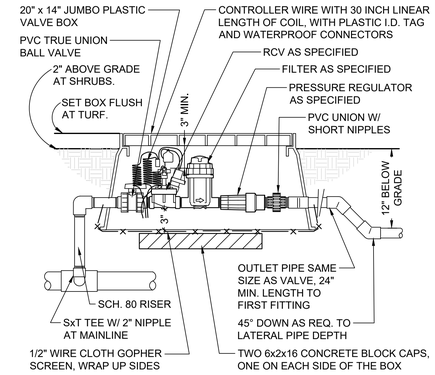
6 POP-UP SPRINKLER HEAD

N.T.S. P-PU-SEA1-06



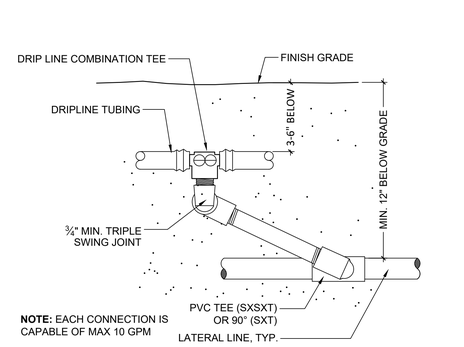
7 TURF ROTOR MARLEX ASSEMBLY

3" = 1'-0" P-PU-SEA1-09



8 1" DRIP VALVE W/BASKET FILTER

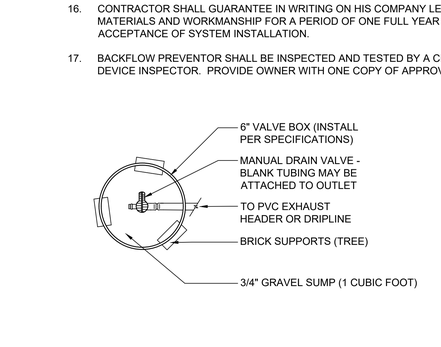
1 1/2" = 1'-0" P-PU-SEA1-08



NOTE: EACH CONNECTION IS CAPABLE OF MAX 10 GPM

9 DRIPLINE START CONNECTION (SWING JOINT RISER)

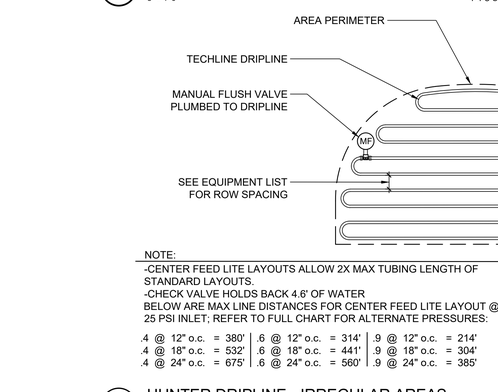
N.T.S. P-PU-SEA1-32



10 MANUAL DRAIN FOR DRIP ZONE

3" = 1'-0" P-PU-SEA1-12

NOTES:
INSTALL FIRST 18-INCHES FROM CENTER OF TREE TRUNK. INSTALL EACH ADDITIONAL LOOP PER MANUFACTURER'S INSTALLATION GUIDELINES. INSTALL DRIPLINE AT 2- TO 4-INCHES BELOW TOPSOIL GRADE, STAPLE IN PLACE PER MANUFACTURER'S RECOMMENDATIONS, BACKFILL AND SPREAD TOP DRESS MULCH AS SPECIFIED.



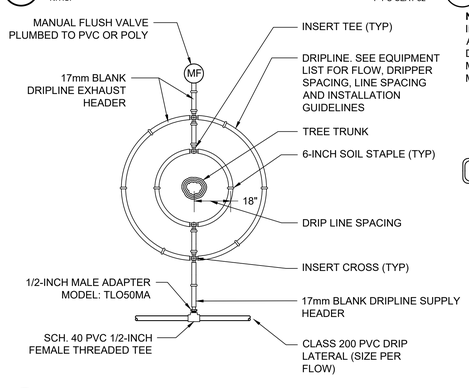
NOTE:
-CENTER FEED LITE LAYOUTS ALLOW 2X MAX TUBING LENGTH OF STANDARD LAYOUTS.
-CHECK VALVE HOLDS BACK 4.6' OF WATER

BELOW ARE MAX LINE DISTANCES FOR CENTER FEED LITE LAYOUT @ 25 PSI INLET; REFER TO FULL CHART FOR ALTERNATE PRESSURES:

.4 @ 12" o.c. = 380'	.6 @ 12" o.c. = 314'	.9 @ 12" o.c. = 214'
.4 @ 18" o.c. = 532'	.6 @ 18" o.c. = 441'	.9 @ 18" o.c. = 304'
.4 @ 24" o.c. = 675'	.6 @ 24" o.c. = 560'	.9 @ 24" o.c. = 385'

11 HUNTER DRIPLINE - IRREGULAR AREAS

N.T.S. P-PU-SEA1-23



12 DRIPLINE LAYOUT FOR TREES & SHRUBS

N.T.S. P-PU-SEA1-13

IRRIGATION SPECIFICATIONS

1. THIS PLAN IS DIAGRAMMATIC; ALL PIPING, VALVES, ETC. SHALL BE INSTALLED IN SHRUB BEDS WHERE POSSIBLE AND SHALL FOLLOW THE PLAN AS CLOSE AS IS PRACTICAL.
2. LOCATE ALL MAINLINES WITHIN THE PROJECT LIMITS.
3. PIPE SIZES ARE CONSTANT BETWEEN PIPE SIZE CALL-OUTS. ALL LATERIAL PIPES SHALL BE INSTALLED AT 12" DEPTH AND 24" DEPTH UNDER PAVED AREAS. MAIINLINE PIPE SHALL BE INSTALLED AT 18" BELOW GRADE AND 24" BELOW PAVED AREAS.
4. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
5. ALL PIPING AND WIRING UNDER PAVED AREAS SHALL BE HOUSED IN CLASS 200 PVC SLEEVES INSTALLED AT A 24" DEPTH. SIZE SLEEVES AS NEEDED TO ACCOMMODATE PIPE AND WIRES, UNLESS OTHERWISE SPECIFIED ON DRAWING.
6. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED TO OBTAIN FULL COVERAGE. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE NOZZLE CHANGES AS NEEDED AT NO ADDITIONAL COST. ADJUST HEAD POSITIONS AND ADD OR DELETE HEADS AS NEEDED DEPENDING ON ACTUAL FIELD CONDITIONS.
7. ALL MANUAL, GATE AND ELECTRICAL VALVES AND OTHER UNDERGROUND EQUIPMENT SHALL BE HOUSED IN NELSON, AMETEK OR EQUAL RECTANGULAR VALVE BOXES.
8. NO IN-LINE WIRE SPLICES ALLOWED. SUPPLY VALVE BOXES AT ALL ELECTRICAL JUNCTIONS. TAPE AND BUNDLE WIRES EVERY 25 LINEAR FEET.
9. CONTRACTOR IS RESPONSIBLE FOR COMPLETE SYSTEM DRAINAGE. INSTALL KING BROS. 1/2" AUTOMATIC DRAIN VALVES AT LATERAL LINE LOW POINT(S). INSTALL MANUAL DRAINS AT ALL MAINLINE LOW POINT(S) AND WHERE INDICATED ON PLAN. CONTRACTOR SHALL PROVIDE ADJUSTABLE CHECK VALVES ON ANY IRRIGATION HEAD THAT EXPERIENCES LOW HEAD DRAINAGE.
10. ALL THREADED PIPE CONNECTIONS SHALL BE MADE USING TEFLON TAPE WRAPPED AT LEAST THREE TIMES AROUND PIPE THREADS.
11. ALL GATE AND ELECTRIC VALVES SHALL BE INSTALLED WITH UNIONS ON THE DOWNSTREAM END OF THE VALVE (REFER TO DETAILS).
12. ALL PIPE SHALL HAVE A FIRM UNIFORM BEARING FOR THE ENTIRE LENGTH OF EACH LINE, FREE OF ROCKS OR DEBRIS. ALL TRENCHES CONTAINING PIPE AND/OR WIRES SHALL BE BACKFILLED WITH CLEAN TOPSOIL, FREE OF ALL LUMBER, RUBBISH AND ROCKS OVER 1" IN SIZE, OR CLEAN SAND IF CLEAN TOPSOIL IS NOT AVAILABLE.
13. CONTRACTOR SHALL PROVIDE OWNER WITH ONE SET OF AS-BUILT RECORD DRAWINGS SHOWING EXACT ACTUAL LOCATIONS OF ALL SPRINKLER EQUIPMENT. CONTRACTOR SHALL ORIENT OWNER WITH COMPLETE SYSTEM AND CONTROLLER OPERATIONS, AND WINTERIZATION PROCEDURES.
14. CONTRACTOR SHALL SUPPLY AND INSTALL ALL EQUIPMENT SHOWN ON THE PLANS AND INDICATED IN THE SPECIFICATIONS TO ACHIEVE PROPER OPERATION OF SAID EQUIPMENT. ALL EQUIPMENT INSTALLATIONS, ELECTRICAL AND PLUMBING CONNECTIONS SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AND ORDINANCES, THESE SPECIFICATIONS, AND THE MANUFACTURERS RECOMMENDATIONS WHETHER INDICATED ON THE DRAWINGS OR NOT.
15. CONTRACTOR SHALL INCLUDE IN HIS BID ONE FALL WINTERIZATION AND ONE SPRING ACTIVATION OF IRRIGATION SYSTEM. THESE ACTIVITIES SHALL BE INCLUDED AS PART OF OWNER ORIENTATION PROCEDURES. ANY DAMAGE TO THE IRRIGATION SYSTEM OR THE LANDSCAPE AS A RESULT OF FAILURE TO COMPLY WITH THESE REQUIREMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
16. CONTRACTOR SHALL GUARANTEE IN WRITING ON HIS COMPANY LETTERHEAD ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE FULL YEAR FOLLOWING ACCEPTANCE OF SYSTEM INSTALLATION.
17. BACKFLOW PREVENTOR SHALL BE INSPECTED AND TESTED BY A CERTIFIED BACKFLOW DEVICE INSPECTOR. PROVIDE OWNER WITH ONE COPY OF APPROVAL CERTIFICATE.

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CONSULTING SERVICES
8730 TALLON LANE NE, SUITE 200, LACEY, WA 98516
P: 360.352.1465
SCJALLIANCE.COM

STATE OF WASHINGTON — JAMES A. MCFARLAND — 21013 — REGISTERED LANDSCAPE ARCHITECT — EXP. 09/29/2025 — FOR PERMIT REVIEW ONLY

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC Est. 1990

PERMIT SET

ISSUE DATE:	5/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

IRRIGATION NOTES & DETAILS

SCALE:	
DRAWN:	J. MCFARLAND & C. OWEN
CHECKED:	J. MCNAMARA
PROJECT NO:	2020008.100

SHEET:

IR-1.3

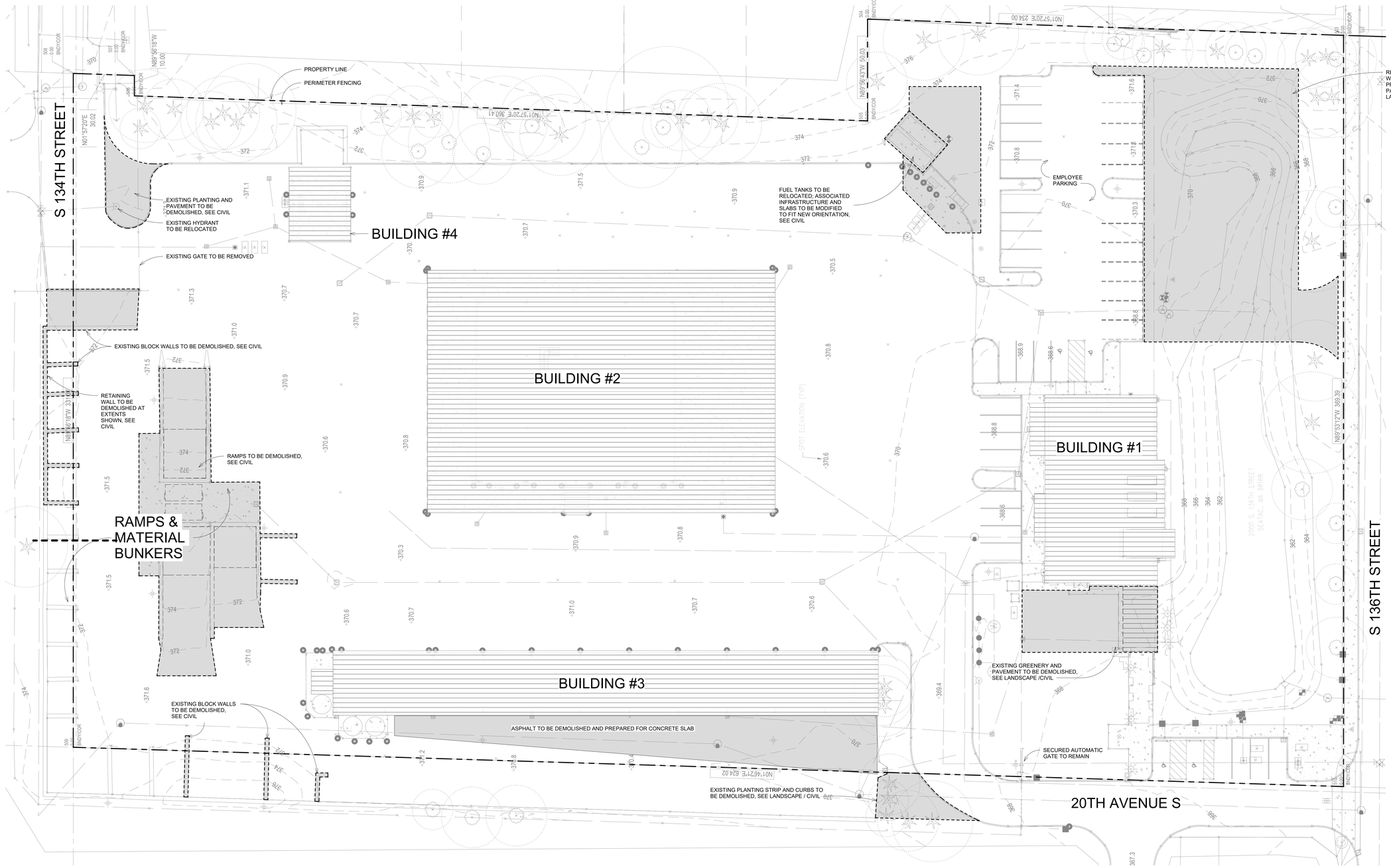
May 14, 2024 - 8:34:16pm - User: jmcfarland
N:\PROJECTS\1841 ARC ARCHITECTS\23-000537 SEATAC MAINTENANCE FACILITY\ CIVIL DESIGN\CADD_23-000537 X-IRDWG

TYPICAL DEMO SITE PLAN NOTES:

1. REFER TO T0.0 FOR GENERAL NOTES.
2. SEE CIVIL & LANDSCAPE DRAWINGS FOR EXISTING TREES AND PLANTING TO BE REMOVED OR PROTECTED IN PLACE.
3. SEE CIVIL & LANDSCAPE DRAWINGS FOR EXTENT OF DEMOLITION OF EXISTING SIDEWALKS, ASPHALT, AND OTHER HARDSCAPE.

LEGEND

SITE ELEMENTS TO BE DEMOLISHED; SEE CIVIL AND LANDSCAPE



1 EXISTING SITE & DEMO
1" = 20'-0"

*REFER TO SURVEY, CIVIL, AND LANDSCAPE DRAWINGS

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10135 REGISTERED ARCHITECT
JEFFREY JOSEPH WAINDASIEWICZ
STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

EXISTING SITE PLAN

SCALE: As indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A0.1

SITE / YARD ELEMENTS:

[A] EXPANDED EMPLOYEE PARKING, INCLUDING (2) ADDITIONAL ACCESSIBLE STALLS USING PERMEABLE PAVING, SEE CIVIL. NEW SITE LIGHTING, SEE ELECTRICAL.

[B] STEEL CANOPY (FLEET VEHICLES).

[C] PROVIDE / RECONFIGURE SITE FOR "LONGBOY" TRAILER PARKING.

[D] NEW SECURITY GATE/ENTRANCE FROM 134TH ST. SEECIVIL FOR COMPLETE DEMO.

[E] NOT USED

[F] CREATE NEW ASPHALTIC PAVEMENT FOR WEST SITE ACCESS DIRECTLY FROM MAIN ENTRANCE GATE. REMOVE TREES AND PLANTING AS NECESSARY.

[G] REPLACE EXISTING FENCE WITH 10'-0" SECURITY FENCING THROUGHOUT, SEE LANDSCAPE.

[H] DEMOLISH MEDIAN FOR NEW EXPANDED REAR SECURE ENTRY, SEE CIVIL FOR FULL DEMO NEEDS.

[I] REMOVEABLE GUARD RAILS

[J] TOTAL PARKING STALLS =55*

*DOES NOT INCLUDE STALLS UNDER NEW PARKING CANOPY (BLDG #7) STALLS AT BLDG #2

BUILDING ELEMENTS:

[1.1] UTILIZE EXISTING SITE CAPACITY FOR BUILDING ADDITION/REMODEL. EXPAND EXISTING BMP FOR STORMWATER FLOW CONTROL. RE-ROUTE EXISTING WATER, STORM, AND GAS UTILITIES. EVALUATE EXISTING DOMESTIC AND FIRE SERVICE DEMANDS AND PROVIDE ADDITIONAL LINES AS NEEDED.

[2.1] UTILIZE EXISTING BUILDING'S OVERHANGS MORE APPROPRIATELY FOR VEHICLE COVER: STRIPE FOR 8-9 LARGE VEHICLE PARKING.

[2.2] STRIPE FOR 13 VAN/PICKUP PARKING. PROVIDE (2) CORNER ISLANDS.

[2.3] STRIPE FOR 5 TRAILER PARKING.

[3] NEW ADDITIONAL EMPLOYEE PARKING, SEE CIVIL SP-01 FOR EXTENTS

[3.1] NEW CONCRETE PAD. NEW METAL STORAGE CANOPY

[4] NEW CURB CUT (STAFF ENTRANCE/EXIT)

[5] NEW STEEL SUPPORTED METAL ROOF SHELTER OVER MATERIAL STORAGE ECO-BINS.

[6] DEMO EXISTING RAMPS. PROVIDE CONC. MASONRY PERIMETER WALLS AND STEEL SUPPORTED METAL ROOF SHELTER FOR RELOCATED SALT STORAGE.

[7] NOT USED

[8] CREATE NEW CAST-IN-PLACE SLAB ON GRADE PAD FOR (EXISTING) FUEL TANKS AND STEEL SUPPORTED METAL ROOF FUEL SHELTER. REMOVE TANKS AND RE-INSTALL AFTER NEW C.I.P SLAB ON GRADE AND NEW METAL SUPPORTED FUEL STRUCTURE.

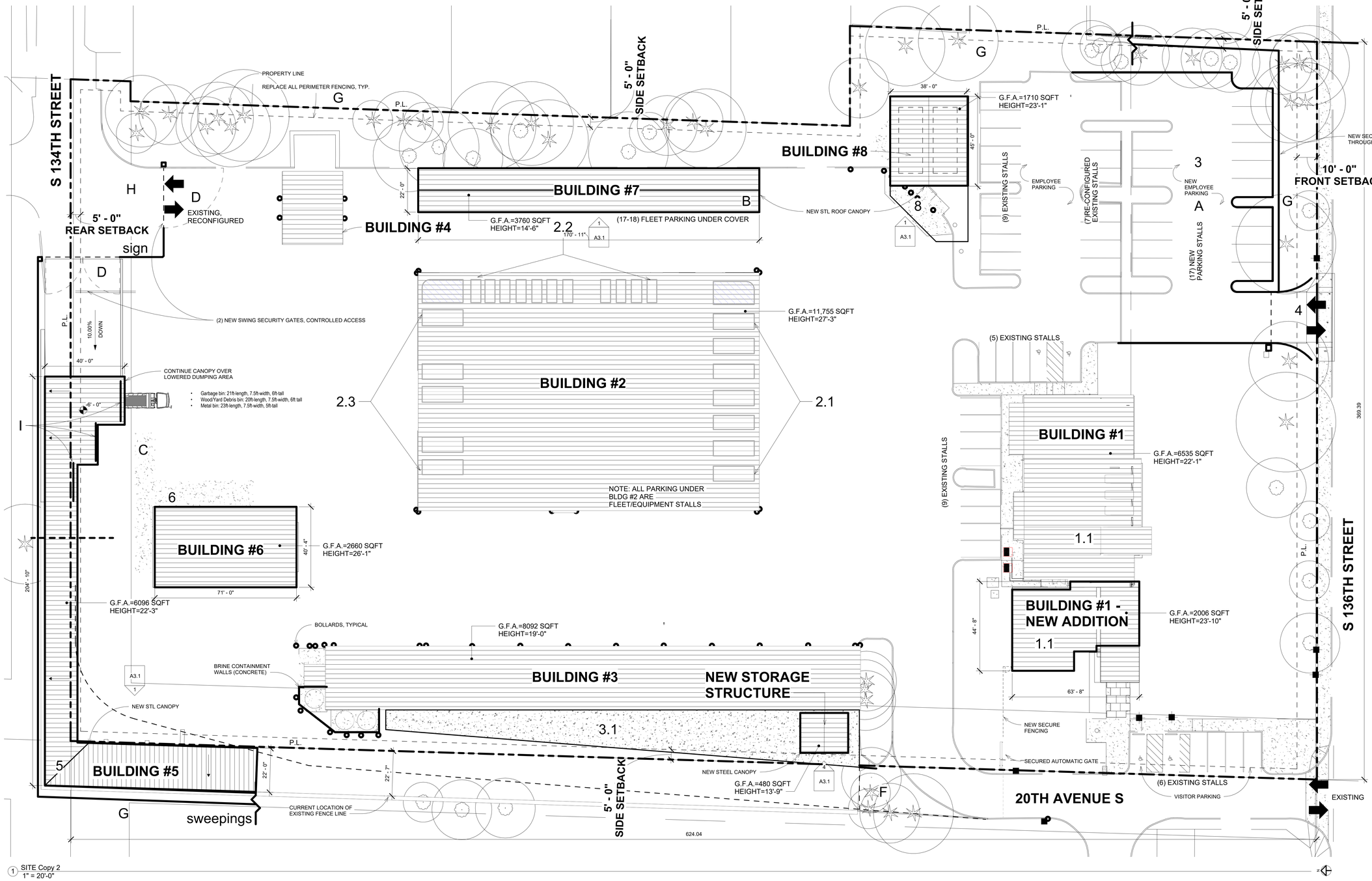
LEGAL DESCRIPTION:

APN/PARCEL ID'S: 6404600255, 6404600250

ADJACENT PARCEL ID'S, OWNED BY PORT: 0094000215, 6404600190, 6652000005

WEST 50 FEET OF LOT 7, ALL OF LOTS 8, 9, 10, 11, 12, 13 AND 14 IN BLOCKD OF J. F. ORD'S HOME TRACT, ACCORDING TO THE PLAT THEREOFRECORDED IN VOLUME 20 OF PLATS, PAGE 11 OF KING COUNTY, WASHINGTON.

TOGETHER WITH THAT PORTION OF VACATED STREET ADJOINING AS VACATED BY ORDINACE NO. 09-1002 AND RECORDED UNDER RECORDING NUMBER 20100225001310, WHICH UPON VACATION ATTACHED TO SAID PREMISES BY OPERATION OF LAW.



1 SITE Copy 2
1" = 20'-0"

*FOR REFERENCE OF INTENT ONLY - REFER TO CIVIL/LANDSCAPE DRAWINGS AND PROFESSIONAL SURVEY

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STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION
1	08/15/24	Permit Comment Response

CONTENTS:

SITE PLAN

SCALE: 1" = 20'-0"
DRAWN: AWGD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A0.2

GENERAL DEMO PLAN NOTES:

1. CONTRACTOR TO SUBMIT DEMOLITION WORK PLANS AND SCHEDULE A PRECONSTRUCTION MEETING WITH OWNER AND ARCHITECT PRIOR TO COMMENCING WORK.

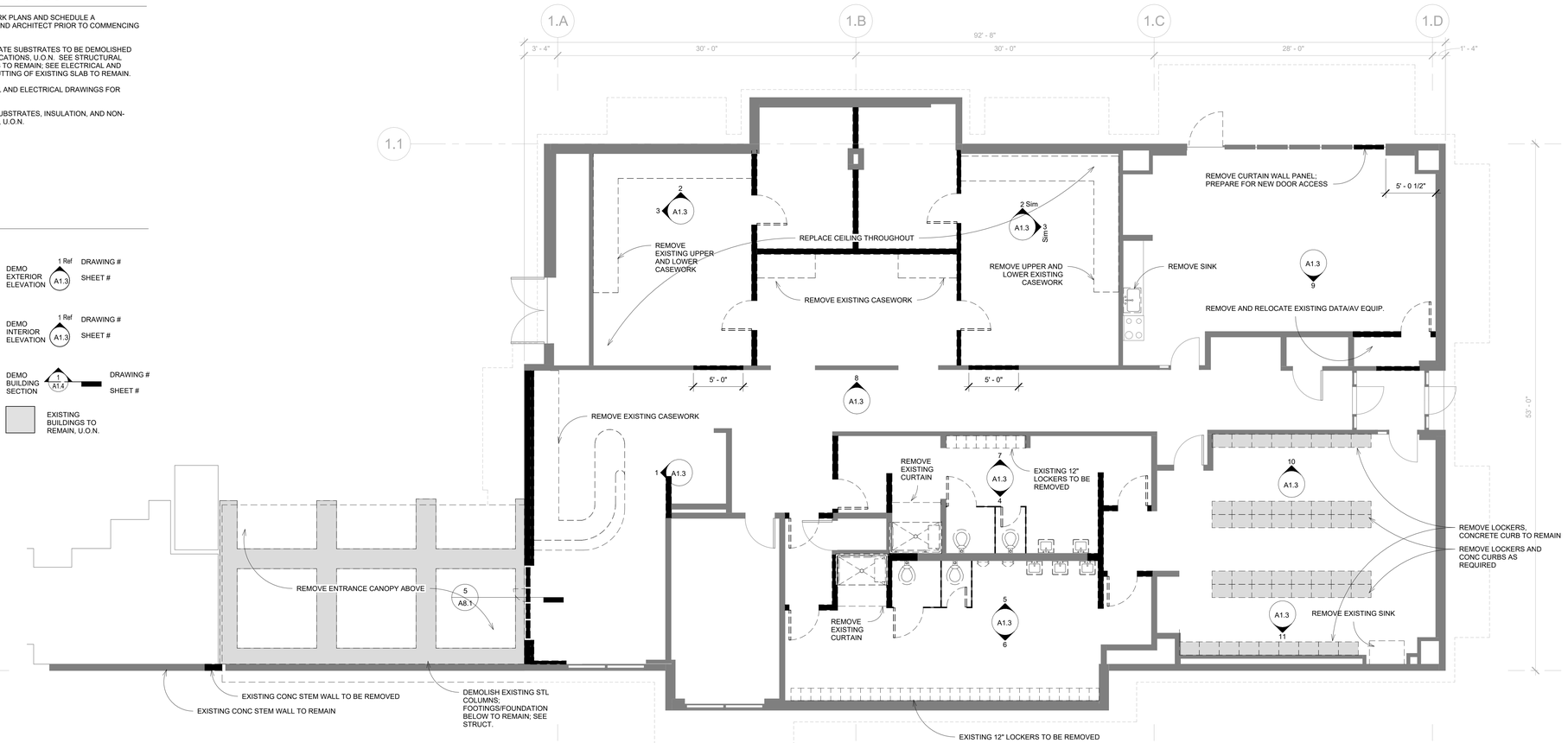
2. EXISTING FLOOR FINISHES AND INTERMEDIATE SUBSTRATES TO BE DEMOLISHED UP TO CONCRETE SLAB ON GRADE AT ALL LOCATIONS, U.O.N. SEE STRUCTURAL DRAWINGS FOR EXTENTS TO EXISTING SLABS TO REMAIN; SEE ELECTRICAL AND PLUMBING DRAWINGS FOR REQUIRED SAWCUTTING OF EXISTING SLAB TO REMAIN.

3. SEE MECHANICAL, PLUMBING, STRUCTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMO REQUIREMENTS.

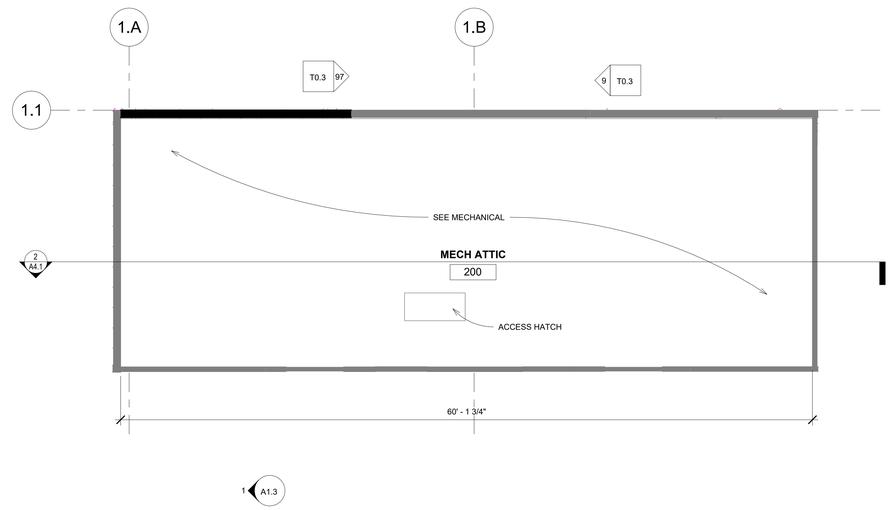
4. EXISTING CEILING FINISH, INTERMEDIATE SUBSTRATES, INSULATION, AND NON-STRUCTURAL SUPPORTS TO BE DEMOLISHED, U.O.N.

LEGEND

- EXISTING WALLS TO REMAIN, DEPTH VARIES
- EXISTING WALLS TO BE DEMOLISHED, DEPTH VARIES
- EXISTING ELEMENT TO BE DEMOLISHED
- MASONRY WALLS
- DEMO EXTERIOR ELEVATION (1 Ref / A1.3) — DRAWING # / SHEET #
- DEMO INTERIOR ELEVATION (1 Ref / A1.3) — DRAWING # / SHEET #
- DEMO BUILDING SECTION (1 / A1.4) — DRAWING # / SHEET #
- EXISTING BUILDINGS TO REMAIN, U.O.N.



3 BLDG #1 - LEVEL 1 - DEMOLITION PLAN
3/16" = 1'-0"



2 BLDG #1 - MECH ATTIC EXISTING
3/16" = 1'-0"

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CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

EXISTING & DEMO PLANS - BLDG #1

SCALE: As indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A1.1

GENERAL DEMO PLAN NOTES:

1. CONTRACTOR TO SUBMIT DEMOLITION WORK PLANS AND SCHEDULE A PRECONSTRUCTION MEETING WITH OWNER AND ARCHITECT PRIOR TO COMMENCING WORK.

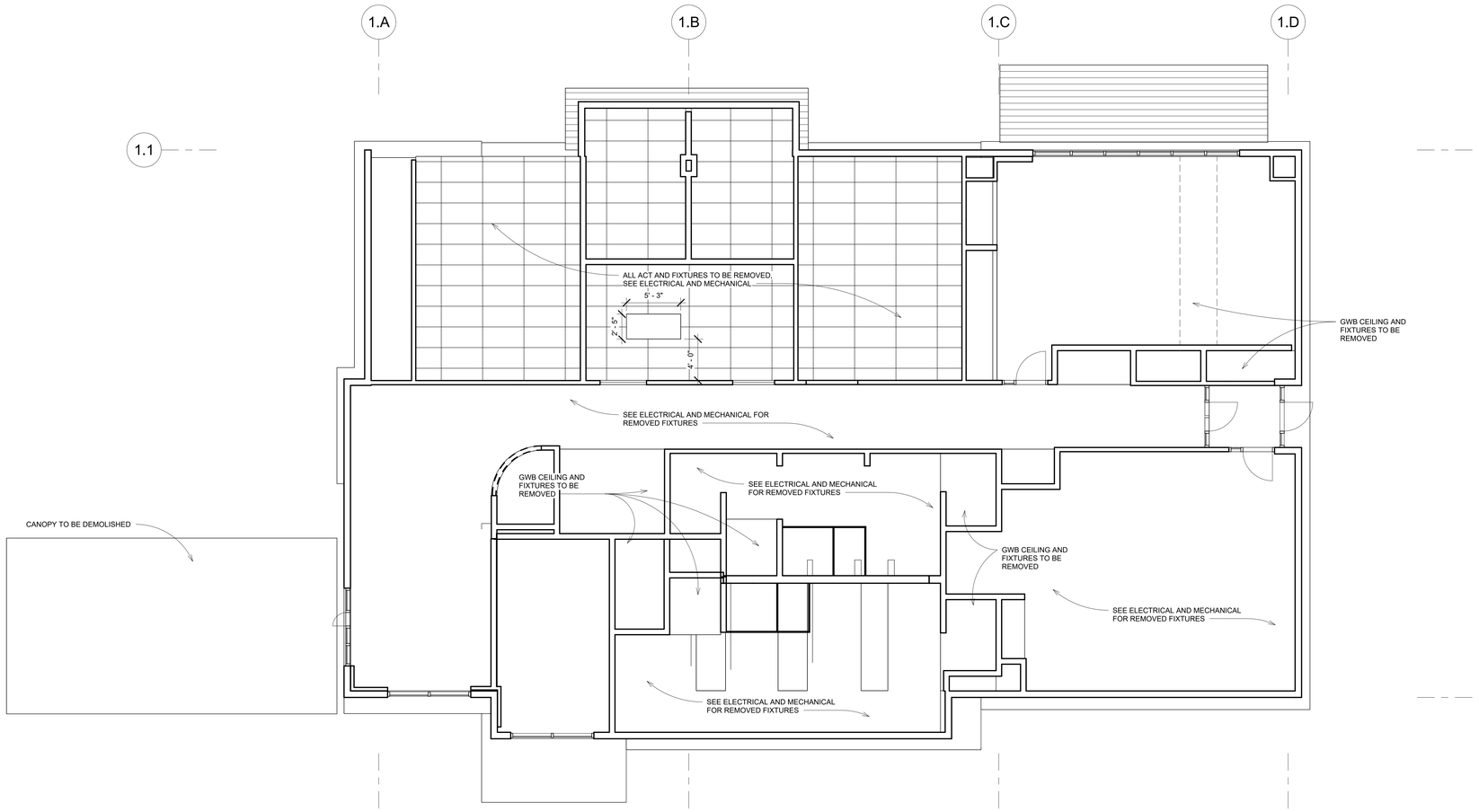
2. EXISTING FLOOR FINISHES AND INTERMEDIATE SUBSTRATES TO BE DEMOLISHED UP TO CONCRETE SLAB ON GRADE AT ALL LOCATIONS, U.O.N. SEE STRUCTURAL DRAWINGS FOR EXTENTS TO EXISTING SLABS TO REMAIN; SEE ELECTRICAL AND PLUMBING DRAWINGS FOR REQUIRED SAWCUTTING OF EXISTING SLAB TO REMAIN.

3. SEE MECHANICAL, PLUMBING, STRUCTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMO REQUIREMENTS.

4. EXISTING CEILING FINISH, INTERMEDIATE SUBSTRATES, INSULATION, AND NON-STRUCTURAL SUPPORTS TO BE DEMOLISHED, U.O.N.

LEGEND

- EXISTING WALLS TO REMAIN, DEPTH VARIES
- EXISTING WALLS TO BE DEMOLISHED, DEPTH VARIES
- EXISTING ELEMENT TO BE DEMOLISHED
- MASONRY WALLS
- DEMO EXTERIOR ELEVATION (1 Ref / A1.3) — DRAWING # / SHEET #
- DEMO INTERIOR ELEVATION (1 Ref / A1.3) — DRAWING # / SHEET #
- DEMO BUILDING SECTION (1 / A1.4) — DRAWING # / SHEET #
- EXISTING BUILDINGS TO REMAIN, U.O.N.



1 BLDG #1 - DEMO RCP
3/16" = 1'-0"

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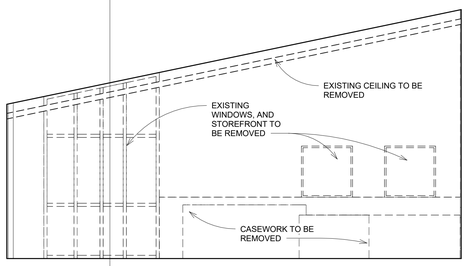
CONTENTS:

EXISTING & DEMO CEILING PLANS - BLDG #1

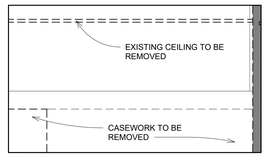
SCALE: As indicated
DRAWN: AWGD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A1.2

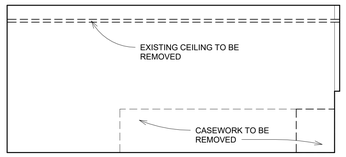
5
A8.1



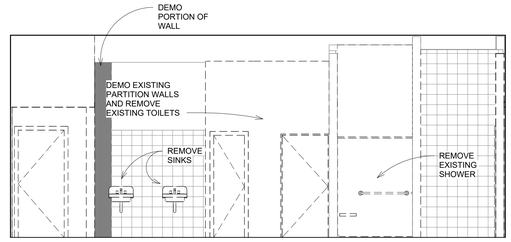
1 LOBBY - DEMO WEST
1/4" = 1'-0"



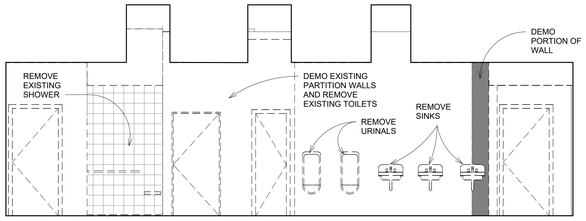
2 EXISTING OFFICE - DEMO NORTH
1/4" = 1'-0"



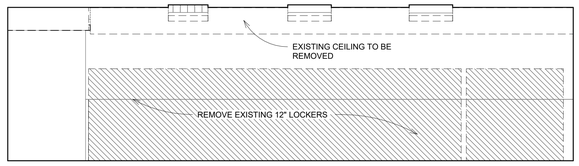
3 EXISTING OFFICE - DEMO WEST
1/4" = 1'-0"



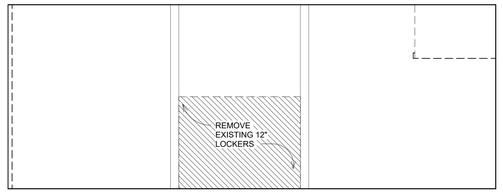
4 WOMEN'S BATHROOM - DEMO SOUTH
1/4" = 1'-0"



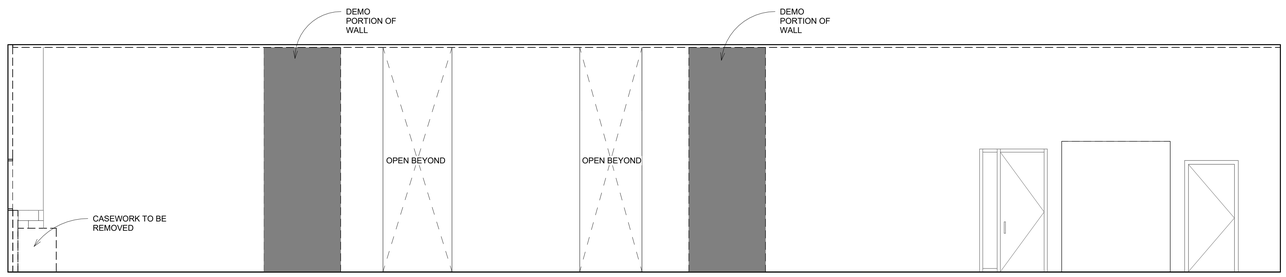
5 MEN'S BATHROOM - DEMO NORTH
1/4" = 1'-0"



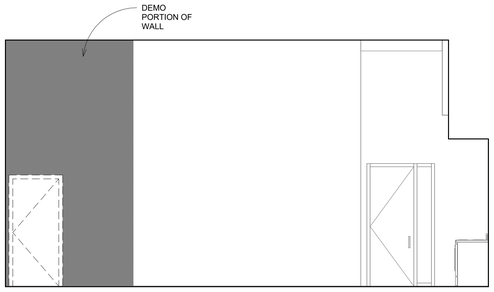
6 MEN'S BATHROOM - DEMO SOUTH
1/4" = 1'-0"



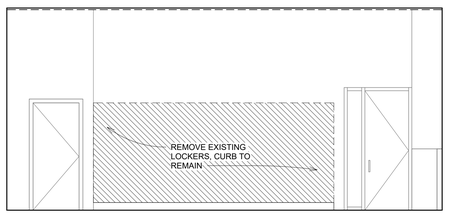
7 WOMEN'S BATHROOM - DEMO NORTH
1/4" = 1'-0"



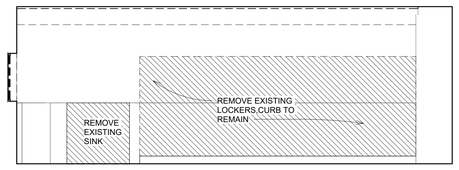
8 HALLWAY - DEMO NORTH
1/4" = 1'-0"



9 MULTIPURPOSE - DEMO SOUTH
1/4" = 1'-0"



10 LOCKER ROOM - DEMO NORTH
1/4" = 1'-0"



11 LOCKER ROOM - DEMO SOUTH
1/4" = 1'-0"

GENERAL DEMO ELEV NOTES:

1. CONTRACTOR TO SUBMIT DEMOLITION WORK PLANS AND SCHEDULE A PRECONSTRUCTION MEETING WITH OWNER AND ARCHITECT PRIOR TO COMMENCING WORK.

2. EXISTING INTERIOR AND EXTERIOR WALL ASSEMBLIES IDENTIFIED TO REMAIN ARE TO BE DEMOLISHED DOWN TO THE STUD/SHEATHING, U.O.N.

3. SEE MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL FOR ADDITIONAL DEMO REQUIREMENTS.

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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

PERMIT SET

ISSUE DATE: 05/14/2024

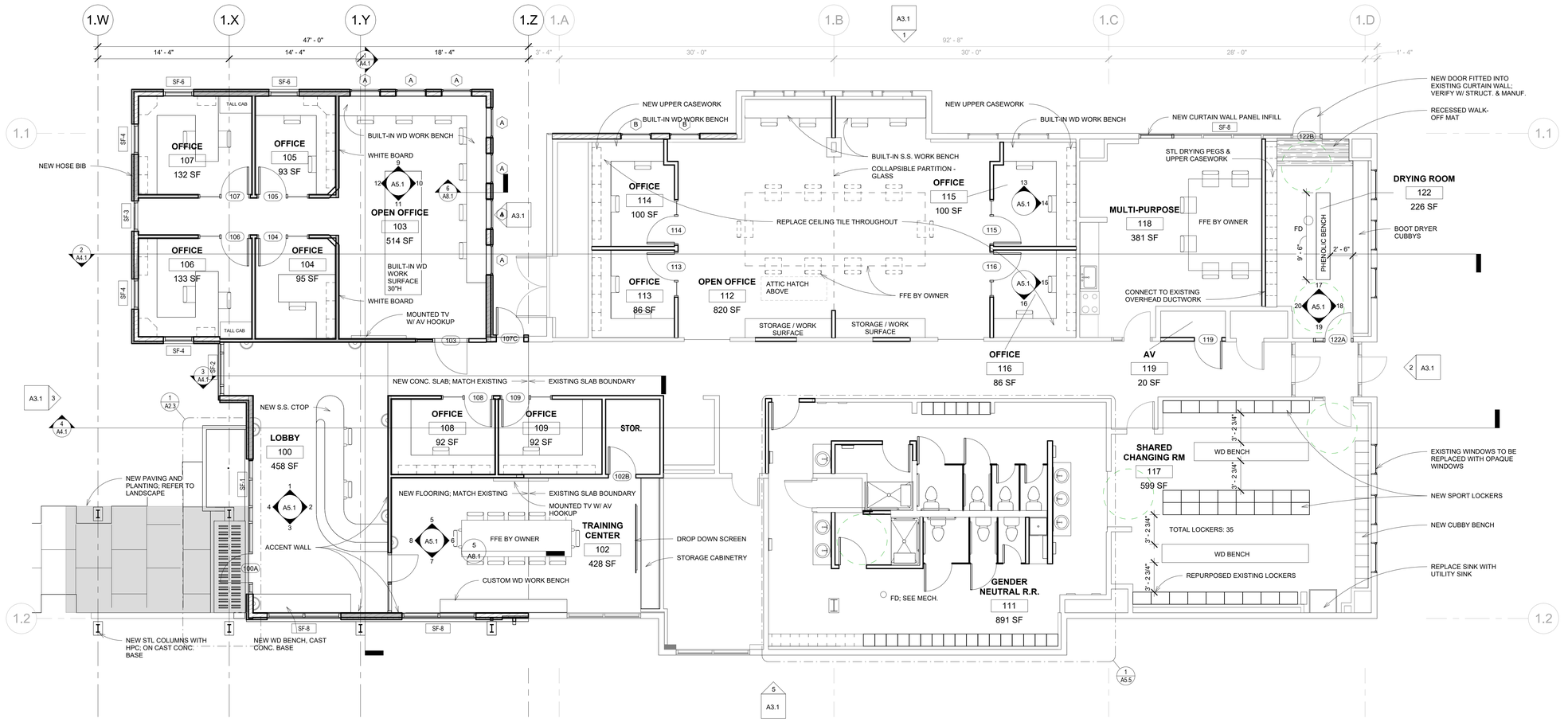
REVISION	DATE	DESCRIPTION

CONTENTS:

EXISTING & DEMO INTERIOR ELEVATIONS

SCALE: As indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A1.3



1 BLDG #1 - LEVEL 1 - NEW
3/16" = 1'-0"

PLAN NOTES:

1. REFER TO T0.0 FOR GENERAL NOTES.
2. SEE CIVIL & LANDSCAPE DRAWINGS FOR CONDITIONS BEYOND THE BUILDING PERIMETER.
3. SEE SCHEDULES & BUILDING SECTIONS FOR TYPICAL WALL, FLOOR, AND SLAB BUILDING ASSEMBLIES, U.O.N.
4. SEE BUILDING ELEVATIONS FOR EXTERIOR MATERIALS & DETAILS
5. REFER TO SCHEDULE SHEETS FOR ADDITIONAL INFORMATION.
6. ALL INTERIOR PARTITIONS ARE TYPE (B2), U.N.O.
7. SEE FINISH PLANS FOR CONTROL JOINT AND EXPANSION JOINT LOCATIONS AT EXPOSED TO VIEW CONCRETE FLOORS.
8. SEE MEP DOCUMENTS FOR FIXTURE RELATED NOTES.

LEGEND

ROOM NAME / 101 — ROOM NAME, ROOM NUMBER
DIMENSION POINT OR ELEVATION
1i — INTERIOR PARTITION TYPE - SEE A7.1
101 — DOOR NUMBER, SEE A7.2
EXISTING WALLS TO REMAIN
NEW WALLS

EXTERIOR ELEVATION (1 Ref, A1.3) — DRAWING #, SHEET #
INTERIOR ELEVATION (1 Ref, A1.3) — DRAWING #, SHEET #
BUILDING SECTION (1 / A1.1) — DRAWING #, SHEET #
WALL SECTION (1 / A1.1) — DRAWING #, SHEET #
DETAILS (1 / A1.1) — DETAIL #, SHEET #
ALIGN — ADD DRYWALL TO ALIGN F.O.F. BETWEEN ASSEMBLIES

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STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

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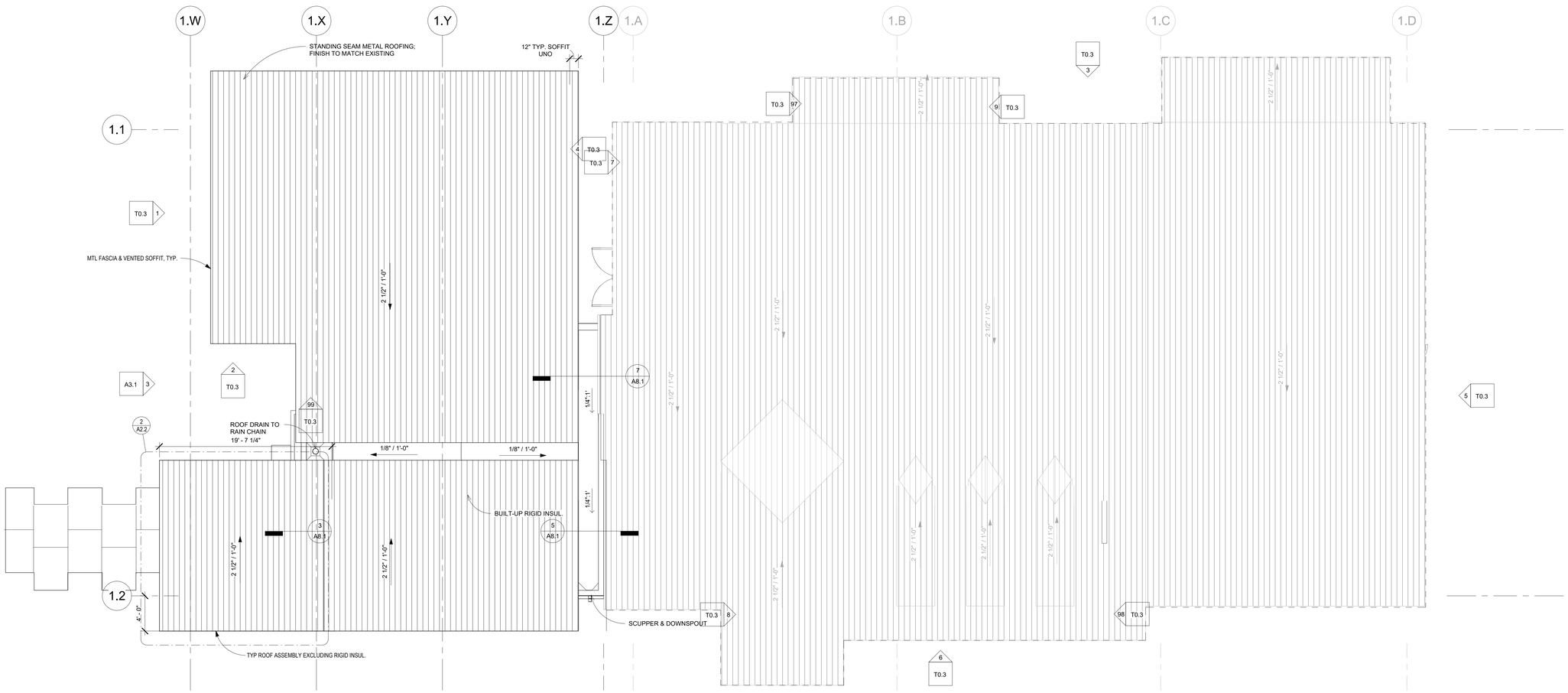
CONTENTS:

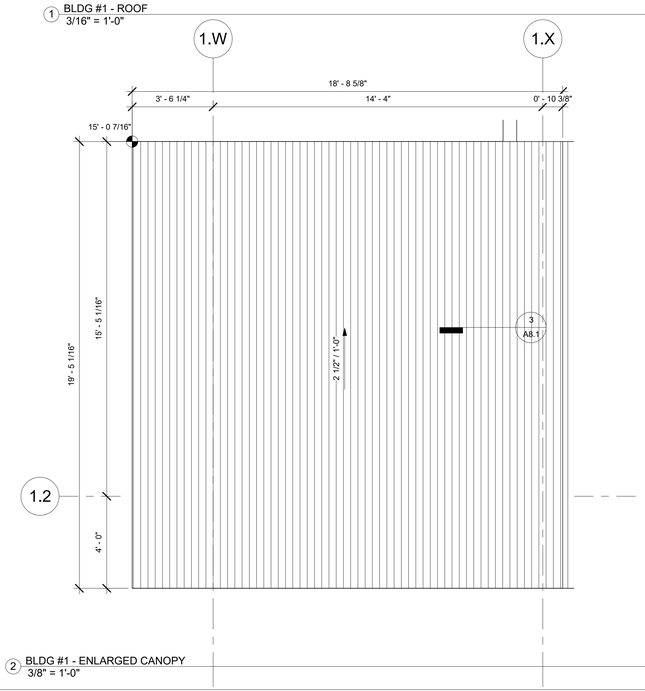
FLOOR PLAN - BLDG #1

SCALE: As indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO. 2022026

BUILDING: 1
SHEET: A2.1



1 BLDG #1 - ROOF
3/16" = 1'-0"



2 BLDG #1 - ENLARGED CANOPY
3/8" = 1'-0"

ROOF PLAN NOTES:

1. FOR ROOF TYPE ASSEMBLIES - SEE SCHEDULE SHEET A7.1
2. SEE EXTERIOR ELEVATIONS FOR DOWNSPOUT LOCATIONS AT GRADE.
3. SEE EXTERIOR ELEVATIONS AND SECTIONS FOR PLATE AND ROOF PEAK HEIGHTS.
4. ROOF PIPING AND VENT PENETRATION LOCATIONS ARE SHOWN FOR CONTRACTOR COORDINATION AND FOR DESIGN INTENT. FOR ACTUAL PENETRATION QUANTITIES AND LOCATIONS REQUIRED, SEE MECH SHEETS.
5. EXISTING ROOF STRUCTURE TO REMAIN TO BE SUPPORTED BY TEMPORARY SHORING, U.O.N.

LEGEND

- AREA OF STANDING SEAM METAL ROOF ASSEMBLY
- AREA OF EXISTING ROOF STRUCTURE TO REMAIN, SEE STRUCTURAL FOR EXTENTS. SEE DEMO PLAN FOR ADDTIONAL REQUIREMENTS [5]
- D.S. / H — DOWNSPOUT

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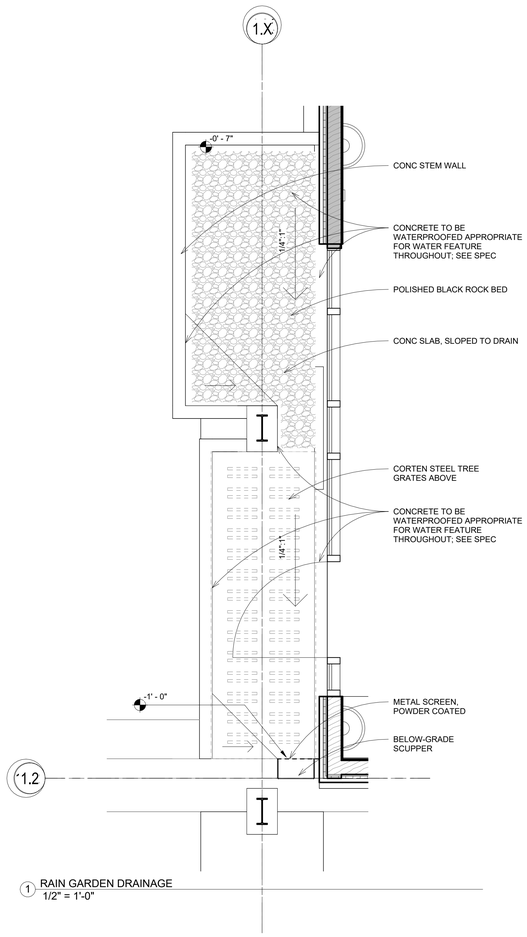
ROOF PLAN - BLDG #1

SCALE: As Indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A2.2



1 RAIN GARDEN DRAINAGE
1/2" = 1'-0"

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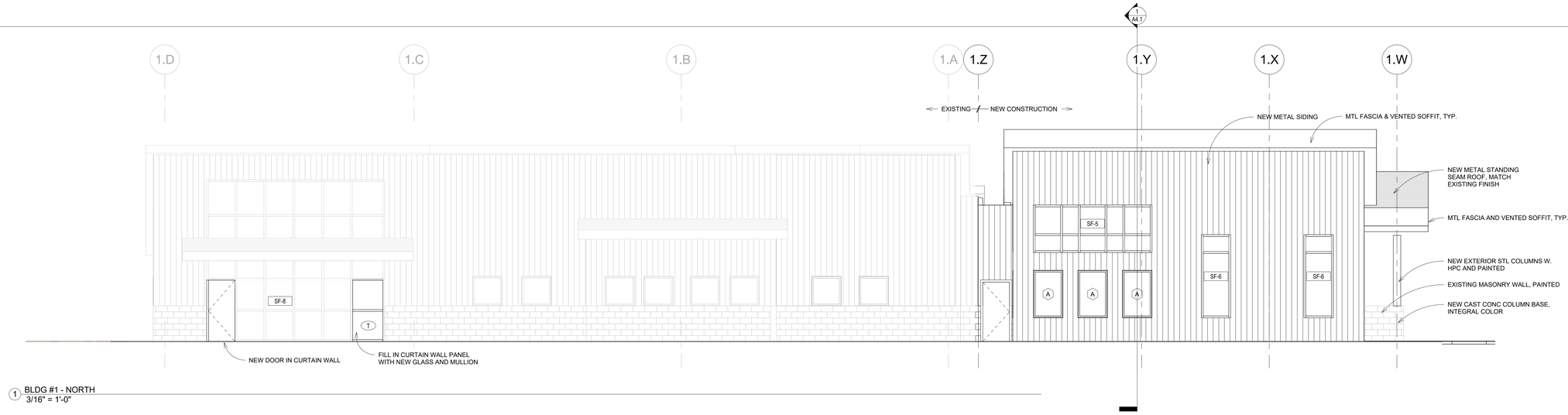
CONTENTS:

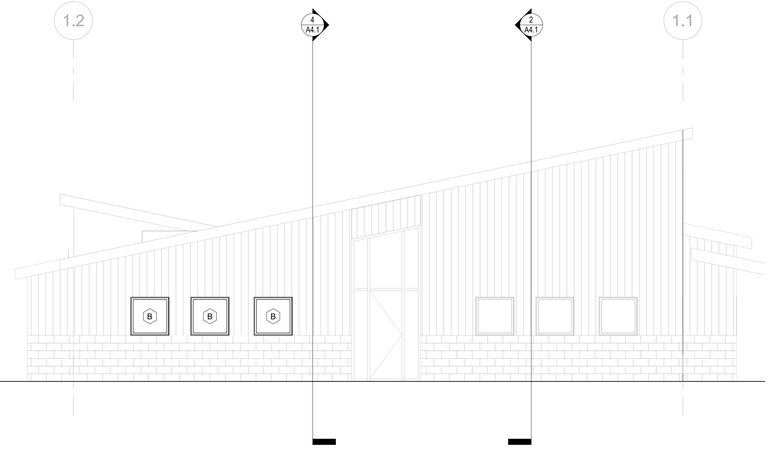
ENLARGED PLANS

SCALE: 1/2" = 1'-0"
DRAWN: AWGD
CHECKED: DWP
PROJECT NO: 2022026

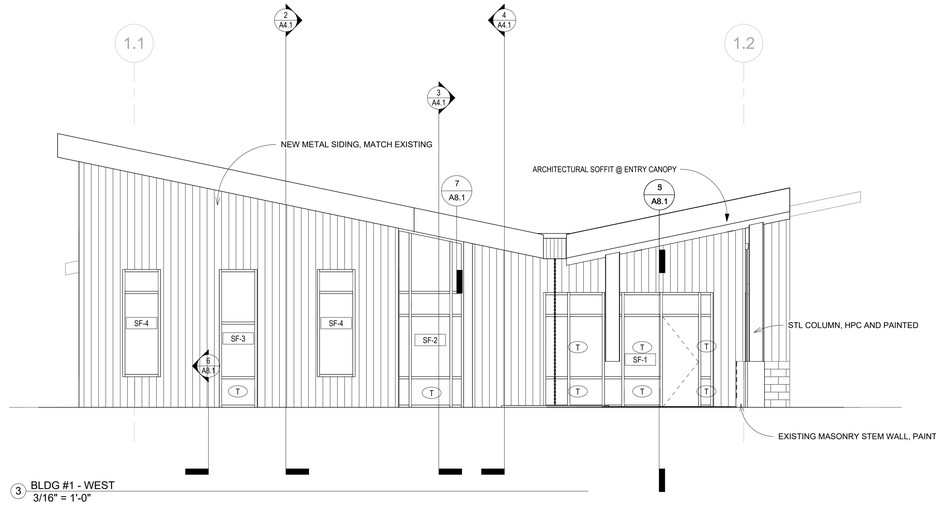
BUILDING: 1
SHEET: A2.3



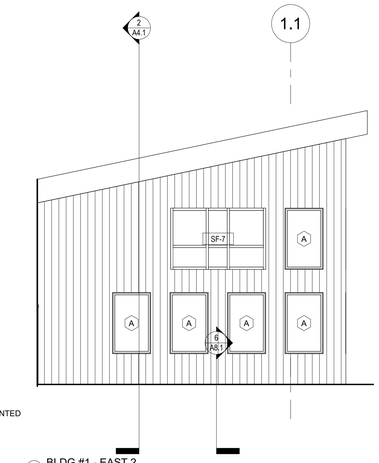
1 BLDG #1 - NORTH
3/16" = 1'-0"



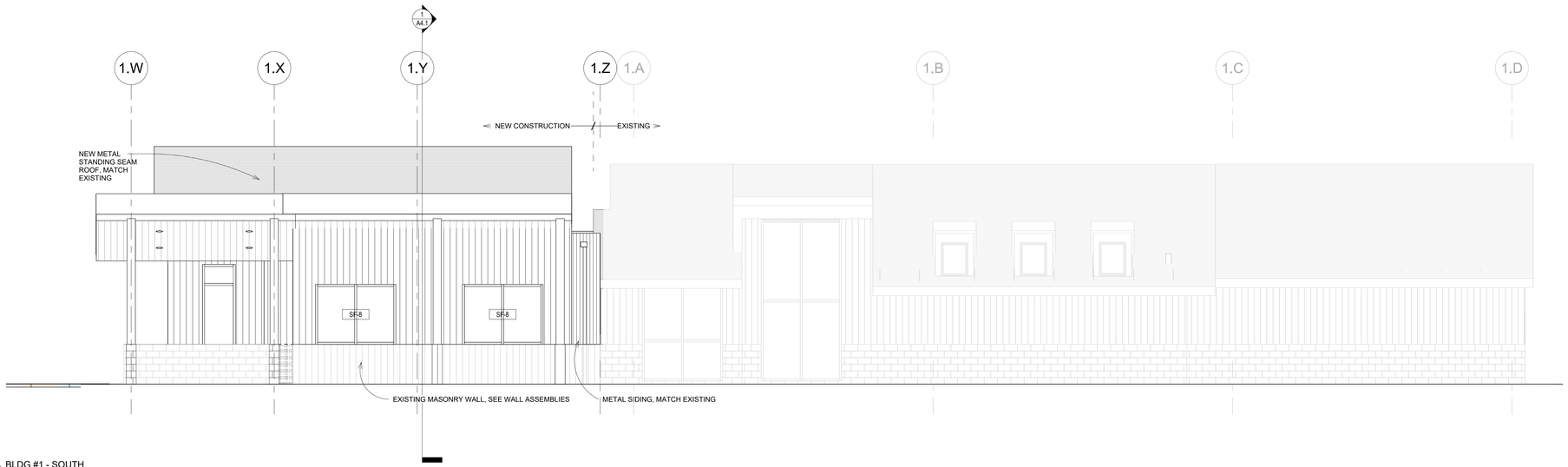
2 BLDG #1 - EAST
3/16" = 1'-0"



3 BLDG #1 - WEST
3/16" = 1'-0"



4 BLDG #1 - EAST 2
3/16" = 1'-0"



5 BLDG #1 - SOUTH
3/16" = 1'-0"

ELEVATION LEGEND:

- CLEAR, UN-TEMPERED GLASS
- T — TEMPERED GLASS
- L — LAMINATED GLASS
- EXHAUST VENT CAP, GANG OF 3 W/ 3' CLEARANCE, PAINT TO MATCH ADJACENT
- INTAKE VENT CAP PAINT TO MATCH ADJACENT
- SF# — STOREFRONT TAG - REFER TO SHEET A7.2
- FIBER-CEMENT LAP SIDING ON 12" FURRING
- MASONRY SIDING
- CAST-IN-PLACE FORMLINER CONRETE OR PRECAST CONCRETE PANELS, PER PLANS

ELEVATION NOTES:

1. REFER TO T1.0 FOR PROJECT GENERAL NOTES.
2. REFER TO A8.0 FOR SEALING OF TYPICAL WALL OPENINGS & PENETRATIONS
3. SEE A7.0 ASSEMBLIES FOR WALL, FLOOR AND ROOF ASSEMBLIES.
4. REFER TO ROOF PLANS FOR ROOF DETAIL CALLOUTS AND DESCRIPTIONS
5. NOT ALL LOUVERS OR VENT WALL CAPS ARE SHOWN. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING SHEETS FOR ADDITIONAL INFORMATION.

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BUILDING ELEVATIONS - BLDG #1

SCALE: As Indicated
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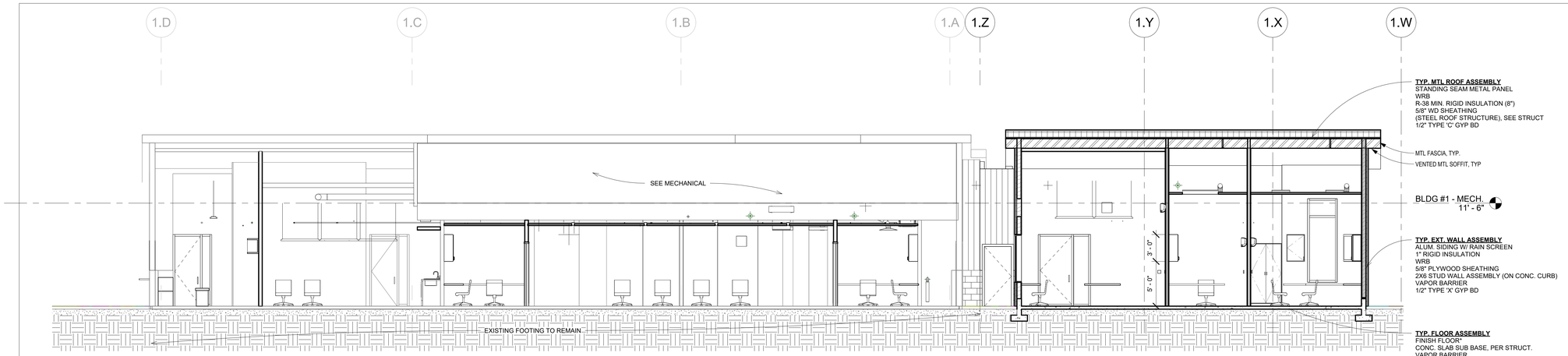
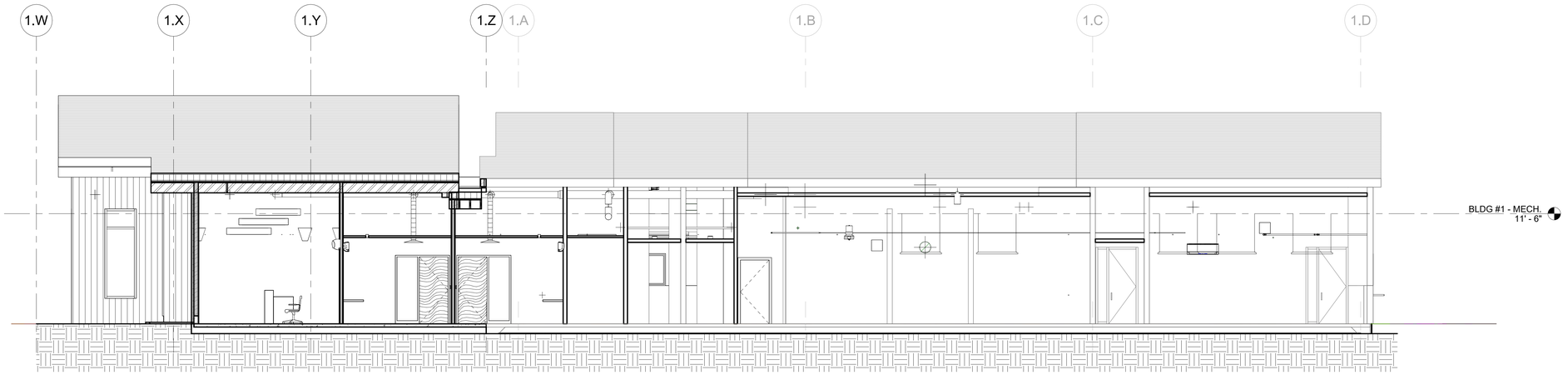
PROJECT NO: 2022026

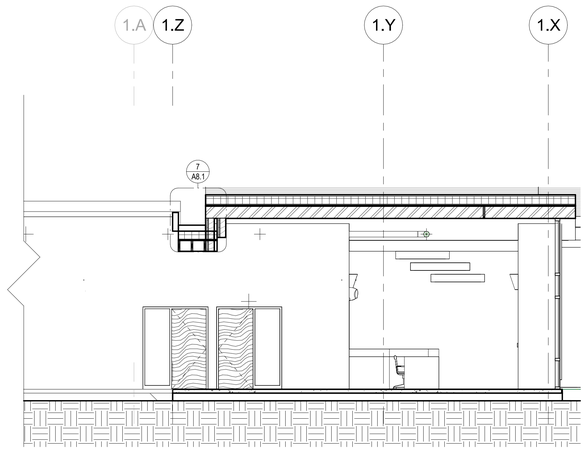
BUILDING: 1
SHEET: A3.1



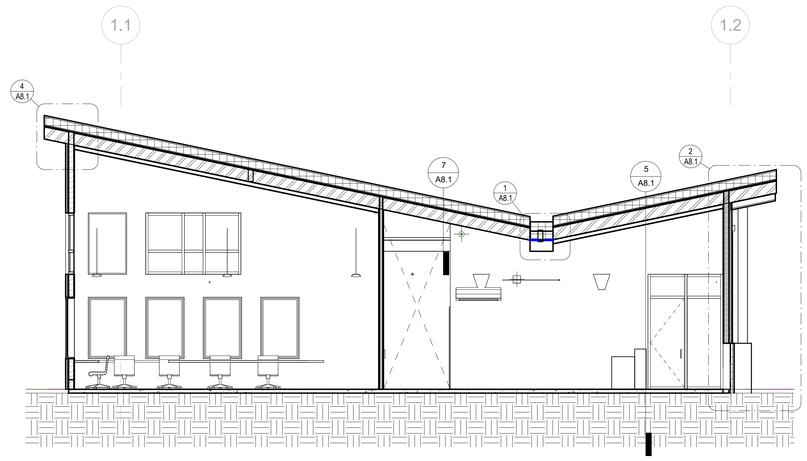
2 BLDG #1 - LONG SECTION - 1
3/16" = 1'-0"



4 BLDG #1 - LONG SECTION - 2
3/16" = 1'-0"



3 BLDG #1 - SHORT SECTION - 1
3/16" = 1'-0"



1 BLDG #1 - SHORT SECTION - 2
3/16" = 1'-0"

SECTION NOTES:

1. REFER TO A7 SCHEDULES FOR EXTERIOR WALL, ROOF, AND FLOOR ASSEMBLIES.
2. REFER TO A7 SCHEDULES FOR INTERIOR WALL, CEILING, AND FLOOR ASSEMBLIES.

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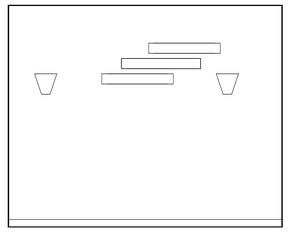
CONTENTS:

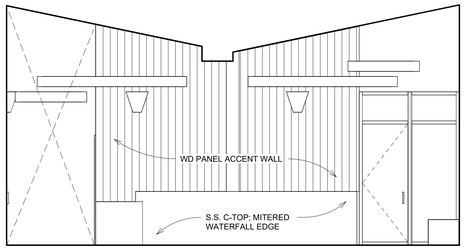
BUILDING SECTIONS - BLDG #1

SCALE: As indicated
DRAWN: AWGD
CHECKED: DWP
PROJECT NO: 2022026

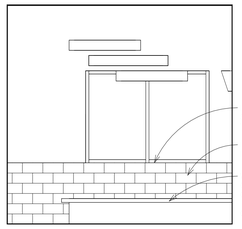
BUILDING: 1
SHEET: A4.1



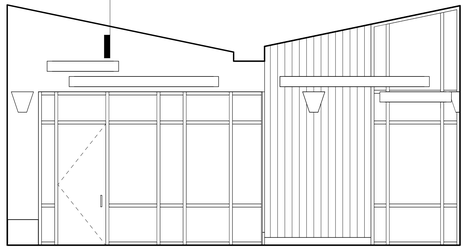
1 LOBBY 100 - NORTH
1/4" = 1'-0"



2 LOBBY 100 - EAST
1/4" = 1'-0"

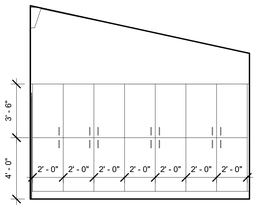


3 LOBBY 100 - SOUTH
1/4" = 1'-0"

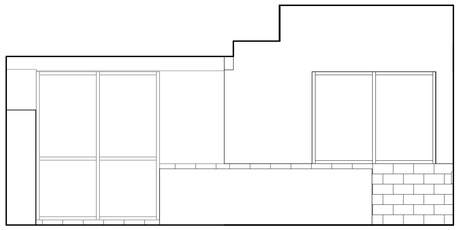


4 LOBBY 100 - WEST
1/4" = 1'-0"

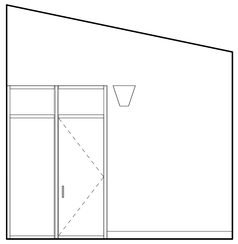
5 TRAINING CENTER 102 - NORTH
1/4" = 1'-0"



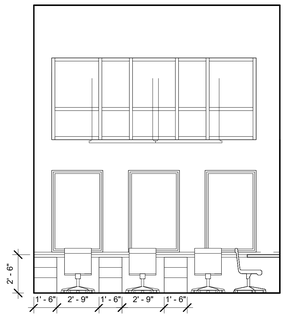
6 TRAINING CENTER 102 - EAST
1/4" = 1'-0"



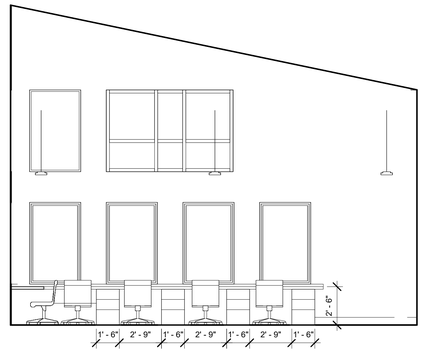
7 TRAINING CENTER 102 - SOUTH
1/4" = 1'-0"



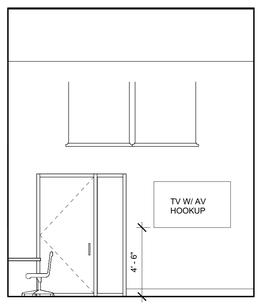
8 TRAINING CENTER 102 - WEST
1/4" = 1'-0"



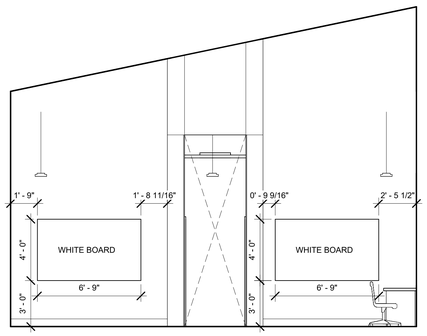
9 OPEN OFFICE 103 - NORTH
1/4" = 1'-0"



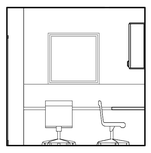
10 OPEN OFFICE 103 - EAST
1/4" = 1'-0"



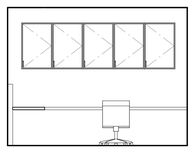
11 OPEN OFFICE 103 - SOUTH
1/4" = 1'-0"



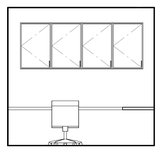
12 OPEN OFFICE 103 - WEST
1/4" = 1'-0"



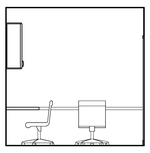
13 OFFICE 114/115 - NORTH
1/4" = 1'-0"



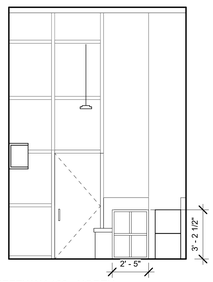
14 OFFICE 114/115 - EAST
1/4" = 1'-0"



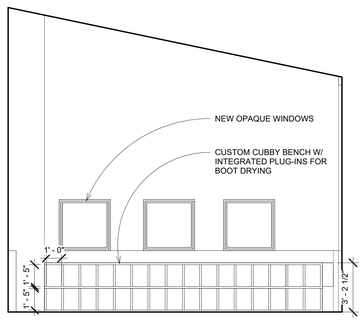
15 OFFICE 113/116 - EAST
1/4" = 1'-0"



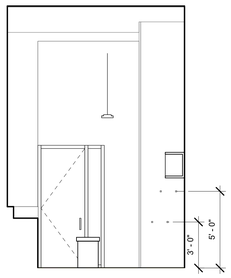
16 OFFICE 113/116 - SOUTH
1/4" = 1'-0"



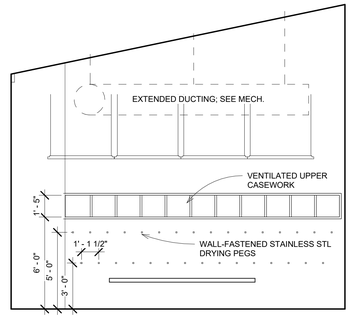
17 BREEZEWAY 122 - NORTH
1/4" = 1'-0"



18 BREEZEWAY 122 - EAST
1/4" = 1'-0"



19 BREEZEWAY 122 - SOUTH
1/4" = 1'-0"



20 BREEZEWAY 122 - WEST
1/4" = 1'-0"

INTERIOR ELEVATION NOTES:

1. SEE EXTERIOR ELEVATIONS FOR EXTERIOR GLAZING INFORMATION, DETAIL CALLOUTS, AND ADDITIONAL INFORMATION.
2. SEE REFLECTED CEILING PLANS FOR DETAIL CALLOUTS AND ADDITIONAL INFORMATION.
3. SEE FINISH PLANS FOR ACCENT PAINT DESIGNATIONS, FINISH FLOORING MATERIALS AND TRANSITIONS, AND ADDITIONAL INFORMATION

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CONTENTS:

INTERIOR ELEVATIONS

SCALE: As indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A5.1

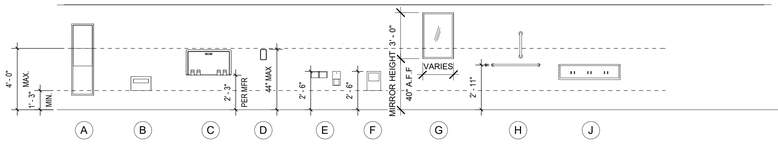
LEGEND

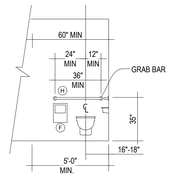
(A) COMBINATION TOWEL DISPENSER / WASTE RECEPTACLE, RECESSED	(D) AUTOMATIC SOAP DISPENSER	(G) MIRROR	
(B) TOILET SEAT COVER DISPENSER	(E) TOILET PAPER DISPENSER W/ STORAGE FOR EXTRA ROLL	(H) GRAB BAR	
(C) DIAPER CHANGING STATION	(F) RECESSED SANITARY NAPKIN DISPOSAL UNIT	(J) UTILITY SHELF W/ MOP/BROOM HOLDERS AND RAG HOOKS	

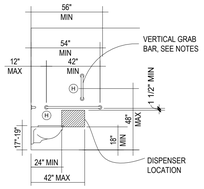
NOTES

* 1. MAX AND MIN DIMENSIONS ARE FOR UNOBSTRUCTED FORWARD AND SIDE REACH RANGES PER SECTION 308 OF THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
2. DIMENSIONS ARE TAKEN FROM FINISH FLOOR TO THE OPERABLE PART OF RECEPTACLE, U.O.N
3. DRINKING FOUNTAINS - DIMENSION TO SPOUT OUTLETS
4. LAVATORIES - DIMENSION TO TOP OF RIM OR COUNTER SURFACE, WHICHEVER IS HIGHER.
5. MIRROR ABOVE LAVATORIES - DIMENSION TO BOTTOM OF REFLECTING SURFACE.
6. GRAB BARS - DIMENSION TO TOP OF GRIPPING SURFACE.
7. PROVIDE BLOCKING AS REQUIRED FOR ATTACHMENT OF ALL ACCESSORIES.
8. VERTICAL GRAB BAR AT ACCESSIBLE TOILET - PER ICC A117.1-2009, PROVIDE AN 18" VERTICAL GRAB BAR AS SHOWN, WITH THE BOTTOM OF THE BAR LOCATED 39-41 INCHES ABOVE THE FLOOR AND WITH THE CENTERLINE OF THE BAR LOCATED 39-41 INCHES FROM THE REAR WALL.
9. VERTICAL GRAB BAR AT ACCESSIBLE SHOWER - PER ICC A117.1-2009, PROVIDE AN 18" VERTICAL GRAB BAR AS SHOWN, 3-6 INCHES ABOVE THE HORIZONTAL GRAB BAR, AND 4 INCHES MAX INWARD FROM THE FRONT EDGE OF THE SHOWER.

DRINKING FOUNTAINS



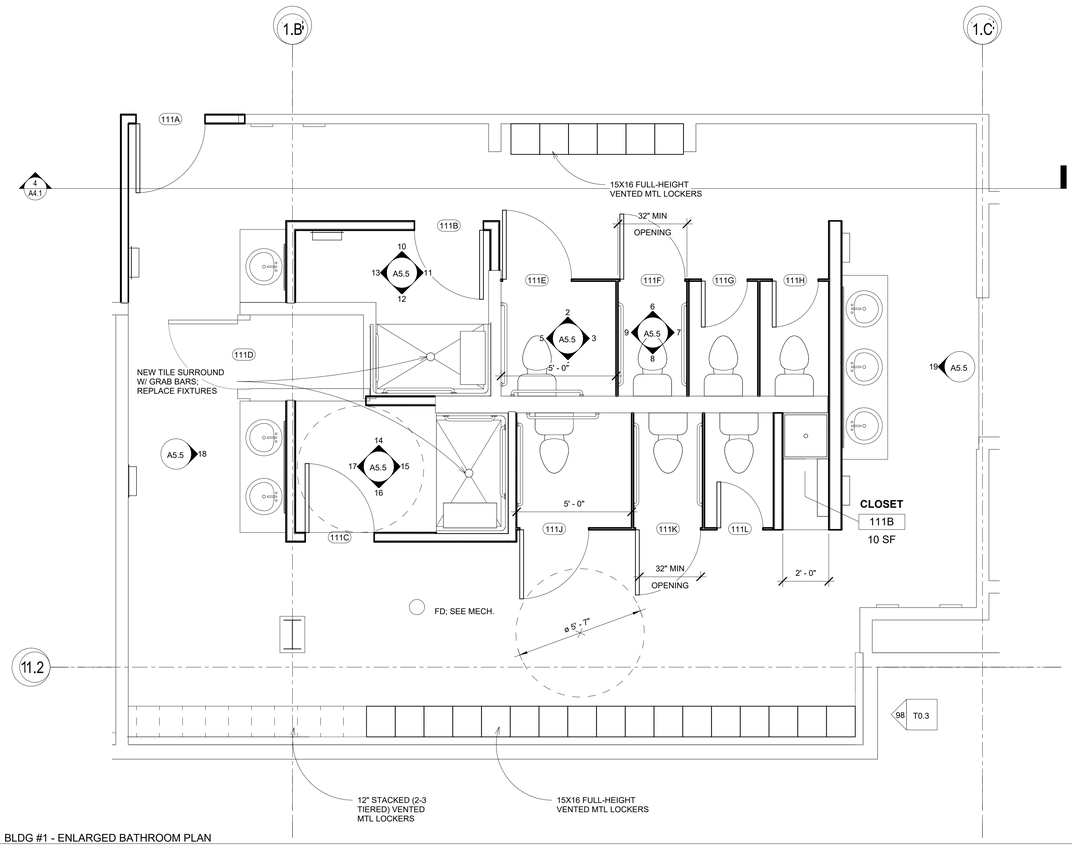




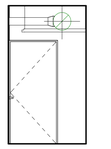
ACCESSIBLE TOILET COMPARTMENT

TYPICAL RESTROOM ACCESSORIES

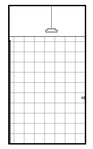
SCALE: 1/4" = 1'-0"



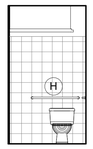
1 BLDG #1 - ENLARGED BATHROOM PLAN
3/8" = 1'-0"



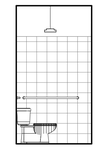
2 ADA RESTROOM TYP. - NORTH
1/4" = 1'-0"



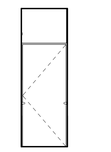
3 ADA RESTROOM TYP. - EAST
1/4" = 1'-0"



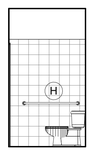
4 ADA RESTROOM TYP. - SOUTH
1/4" = 1'-0"



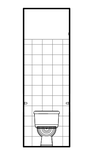
5 ADA RESTROOM TYP. - WEST
1/4" = 1'-0"



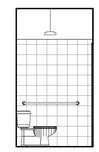
6 RESTROOM TYP. - NORTH
1/4" = 1'-0"



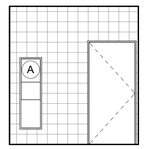
7 RESTROOM TYP. - EAST
1/4" = 1'-0"



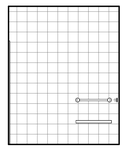
8 RESTROOM TYP. - SOUTH
1/4" = 1'-0"



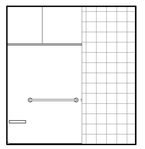
9 RESTROOM TYP. - WEST
1/4" = 1'-0"



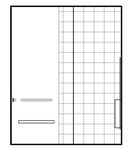
10 SHOWER 1 - NORTH
1/4" = 1'-0"



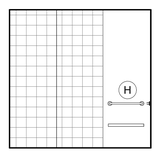
11 SHOWER 1 - EAST
1/4" = 1'-0"



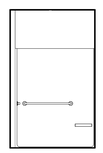
12 SHOWER 1 - SOUTH
1/4" = 1'-0"



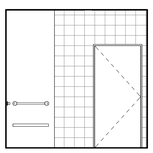
13 SHOWER 1 - WEST
1/4" = 1'-0"



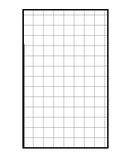
14 SHOWER 2 - NORTH
1/4" = 1'-0"



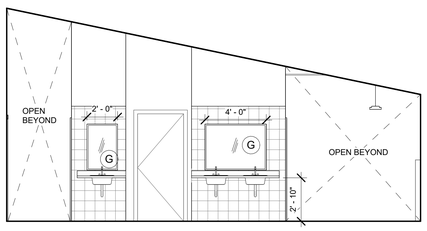
15 SHOWER 2 - EAST
1/4" = 1'-0"



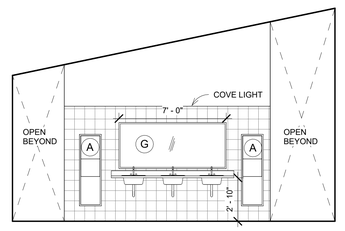
16 SHOWER 2 - SOUTH
1/4" = 1'-0"



17 SHOWER 2 - WEST
1/4" = 1'-0"



18 RESTROOM SINKS - EAST
1/4" = 1'-0"



19 RESTROOM SINKS - WEST
1/4" = 1'-0"

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SEATTLE, WA 98104-2579
(206) 322-3322

10135 REGISTERED ARCHITECT
JEFFREY JOSEPH WAINDASIEWICZ
STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 05/14/2024

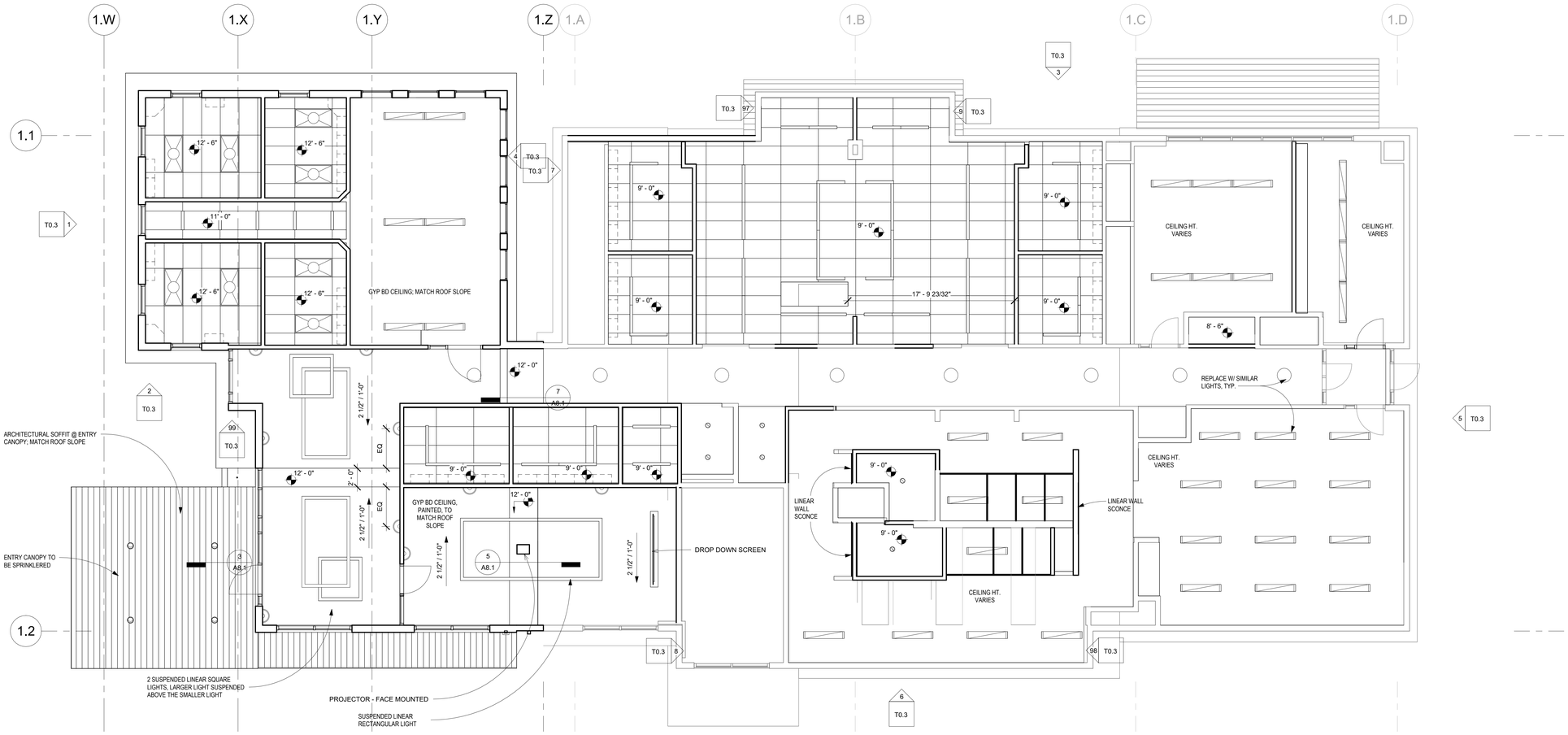
REVISION	DATE	DESCRIPTION

CONTENTS:

RESTROOM PLANS AND INTERIOR ELEVATIONS

SCALE: As indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A5.5



1 BLDG #1 - RCP
3/16" = 1'-0"

CEILING PLAN NOTES:

1. REFER TO T0.0 FOR GENERAL NOTES.
2. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION, INCLUDING DEVICES NOT SHOWN ON THESE DRAWINGS.
3. GWB CEILINGS ARE DRYWALL SUSPENSION SYSTEMS, SOFFITS ARE FRAMED FROM ROOF DECKING ABOVE WITH NON-STRUCTURAL FRAMING.
4. CEILING FINISHES:
   - PT-1 FOR ALL GWB CEILING TYP., U.O.N.
   - PT-5 FOR ALL EXPOSED DUCTWORK TYP., U.O.N.
5. EXPOSED MECHANICAL EQUIPMENT SHOWN IS FOR COORDINATION PURPOSES ONLY. ACTUAL MECHANICAL DESIGN SHALL BE BY MECHANICAL.
6. CEILING MOUNTED LIGHT FIXTURES TO BE CENTERED ON ROOM, U.O.N.

LEGEND

- 24"x24" ACT CEILING
- GWB, PAINT P-1, U.O.N.
- AREA OPEN TO STRUCTURE ABOVE
- EXIT SIGN - SEE ELEC.
- MECHANICAL DIFFUSERS, VARIES, PER MECHANICAL.
- 'MIN. ##SF' MECHANICAL ACCESS PANEL WITH MINIMUM SIZING, PT. TO MATCH CEILING
- EXTERIOR ELEVATION (1 Ref, A1.3): DRAWING # / SHEET #
- INTERIOR ELEVATION (1 Ref, A1.3): DRAWING # / SHEET #
- BUILDING SECTION (1, A1.1): DRAWING # / SHEET #
- DETAILS (1, A1.1): DETAIL # / SHEET #
- LIGHTING, PER ELECTRICAL; PLACEMENT AND MOUNTING HEIGHTS PER ARCHITECTURAL DRAWINGS, U.O.N.[5]

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10135 REGISTERED ARCHITECT
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2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1996

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

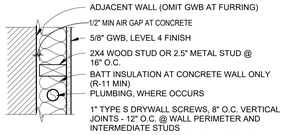
REFLECTED CEILING PLANS

SCALE: As Indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

BUILDING: 1
SHEET: A6.1

WALL TYPES

A1 — FURRING WALL (NON-RATED)

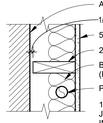


- ADJACENT WALL (OMIT GWB AT FURRING)
- 1/2" MIN AIR GAP AT CONCRETE
- 5/8" GWB, LEVEL 4 FINISH
- 2X4 WOOD STUD OR 2.5" METAL STUD @ 16" O.C.
- BATT INSULATION AT CONCRETE WALL ONLY (R-11 MIN)
- PLUMBING, WHERE OCCURS

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

JOINTS STAGGERED 32" EACH LAYER AND SIDE

B1 — FURRING WALL (NON-STRUCTURAL)

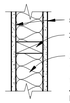


- ADJACENT WALL
- 1/2" MIN AIR GAP AT CONCRETE
- 5/8" GWB - EACH SIDE
- 2X6 WOOD STUD @ 16" O.C.
- BATT INSULATION AT CONCRETE WALL ONLY (R-11 MIN)
- PLUMBING, WHERE OCCURS

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

JOINTS STAGGERED 32" EACH LAYER AND SIDE

A2 — INTERIOR PARTITION W/ ACOUSTIC INSULATION (NON-RATED)

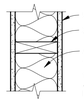


- 5/8" GWB, LEVEL 4 FINISH
- 2X4 WOOD STUD @ 16" O.C.
- ACOUSTIC BATT INSULATION - SEE ACOUSTIC NOTES

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

JOINTS STAGGERED 32" EACH LAYER AND SIDE

B2 — INTERIOR PARTITION (NON-RATED)

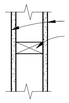


- 5/8" GWB - EACH SIDE
- 2X6 WOOD STUD @ 16" O.C.
- ACOUSTIC BATT INSULATION - SEE ACOUSTIC NOTES

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

JOINTS STAGGERED 32" EACH LAYER AND SIDE

A3 — INTERIOR PARTITION W/O INSULATION (NON-RATED)

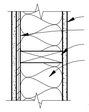


- 5/8" GWB , LEVEL 4 FINISH
- 2X4 WOOD STUD @ 16" O.C.

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

JOINTS STAGGERED 32" EACH LAYER AND SIDE

B3 — INTERIOR PARTITION (NON-RATED)

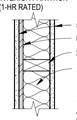


- 5/8" GWB - EACH SIDE
- PLYWOOD SHEATHING, PER STRUCT
- 2X6 WOOD STUD @ 16" O.C.
- ACOUSTIC BATT INSULATION - SEE ACOUSTIC NOTES

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

JOINTS STAGGERED 32" EACH LAYER AND SIDE

A4 — INTERIOR PARTITION (1-HR RATED) — STC RATING = 45-49

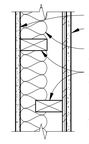


- 5/8" TYPE-X GWB, LEVEL 4 FINISH
- PLYWOOD SHEATHING, PER STRUCT
- 2X4 WOOD STUD @ 16" O.C.
- ACOUSTIC BATT INSULATION - SEE ACOUSTIC NOTES

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

JOINTS STAGGERED 32" EACH LAYER AND SIDE

B4 — INTERIOR PARTITION, OFFICE-CORRIDOR (1-HR RATED) — STC RATING = 45-49

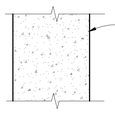


- 5/8" GWB AT APARTMENT SIDE
- 5/8" GWB O/ PLYWOOD (PER STRUCT) AT CORRIDOR SIDE
- 3-1/2" ACOUSTIC BATT INSULATION - SEE ACOUSTIC NOTES
- 2x4 STUDS @ 16" O.C., STAGGERED 8" ON 2x6 TOP/BOTTOM PLATE

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

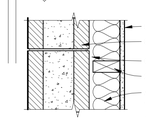
JOINTS STAGGERED 32" EACH LAYER AND SIDE

C1 — EXTERIOR CONCRETE WALL (3-HR RATED)



- CONCRETE, PER STRUCT, MIN 12"

M1 — TYP. EXISTING MASONRY WALL



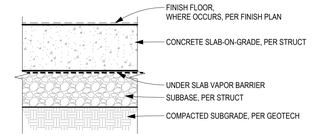
- 5/8" TYPE-X GWB, LEVEL 4 FINISH
- 8" STACK BOND CMU
- OPEN AIR SPACE, MIN 1/2"
- 2X4 WOOD STUD @ 16" O.C.
- ACOUSTIC BATT INSULATION - SEE ACOUSTIC NOTES

1" TYPE S DRYWALL SCREWS, 8" O.C. VERTICAL JOINTS - 12" O.C. @ WALL PERIMETER AND INTERMEDIATE STUDS

JOINTS STAGGERED 32" EACH LAYER AND SIDE

FLOOR TYPES

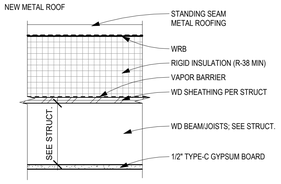
F1 — CONCRETE SLAB-ON-GRADE (AT LEVEL 1)



- FINISH FLOOR, WHERE OCCURS, PER FINISH PLAN
- CONCRETE SLAB-ON-GRADE, PER STRUCT
- UNDER SLAB VAPOR BARRIER
- SUBBASE, PER STRUCT
- COMPACTED SUBGRADE, PER GEOTECH

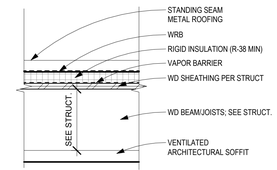
ROOF TYPES

R1 — NEW METAL ROOF



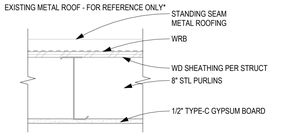
- STANDING SEAM METAL ROOFING
- WRB
- RIGID INSULATION (R-38 MIN)
- VAPOR BARRIER
- WD SHEATHING PER STRUCT
- WD BEAM/JOISTS; SEE STRUCT.
- 1/2" TYPE-C GYPSUM BOARD

R2 — ENTRANCE CANOPY



- STANDING SEAM METAL ROOFING
- WRB
- RIGID INSULATION (R-38 MIN)
- VAPOR BARRIER
- WD SHEATHING PER STRUCT
- WD BEAM/JOISTS; SEE STRUCT.
- VENTILATED ARCHITECTURAL SOFFIT

EXISTING METAL ROOF - FOR REFERENCE ONLY*



- STANDING SEAM METAL ROOFING
- WRB
- WD SHEATHING PER STRUCT
- 8" STL PURLINS
- 1/2" TYPE-C GYPSUM BOARD

R3 — SITE CANOPIES

ASSEMBLY SCHEDULE NOTES:

1. PLAN INDICATORS AND PARTITION TYPES ARE N.T.S.

2. SEE STRUCTURAL FOR LOAD BEARING AND SHEAR WALL LOCATIONS. SHEATHING IS NOT SHOWN ON ARCHITECTURAL DRAWINGS - PROVIDE SHEATHING PER STRUCTURAL.

3. COORDINATE SHEARWALL LOCATIONS WITH PARTITION TYPES INDICATED.

4. ACOUSTIC PARTITIONS:
FILL WITH BATT INSULATION FOR "SOUND CONTROL". U.O.N. THE THICKNESS SHALL BE FULL WIDTH OF STUDS. SECURE INSULATION TO PREVENT SAGGING AND SEAL PERIMETER PER GYPSUM ASSOCIATION DESIGN MANUAL - SEE SPECIFICATION FOR JOINT SEALANTS. STAGGER AND SEAL ALL ELECTRICAL OUTLETS. EXTEND GWB TO UNDERSIDE OF DECK - TYP. WHERE PARTITIONS SEAL TO A ROUGH OR CORRUGATED SURFACE, CLOSURE STRIPS ARE REQUIRED.

5. ALL WALLS EXTEND TO STRUCTURE OR BOTTOM OF DECK, U.O.N. - SEE INTERIOR ELEVATIONS. GLASS-MAT BOARD MAY BE SUBSTITUTED FOR GWB AT ABOVE-CEILING LOCATIONS, EXCEPT WHERE CEILING IS A FLOATING "CLOUD" (DOES NOT EXTEND TO WALL).

6. AT NON-BEARING WALLS THAT EXTEND TO STRUCTURE OR DECK ABOVE, FURNISH SLIP CONNECTION AT TOP OF WALL THAT ALLOWS 1-1/2" MIN. DIFFERENTIAL DEFLECTION OF STRUCTURE ABOVE, U.N.O.

7. WHERE TWO OR MORE LAYERS OF GWB ARE USED, DO NOT CEMENT GWB TO THE INITIAL LAYER. USE NAILS OR SCREWS. STAGGER LAYERED BOARD JOINTS.

8. PARTITION SCHEDULE REFERS TO INTERIOR WALL AND FURRED CONDITIONS ONLY. REFER TO SECTIONS AND DETAILS FOR EXTERIOR WALL CONSTRUCTION.

9. FIRE RATED WALL CONSTRUCTION IS REQUIRED WHERE NOTED ON FLOOR PLANS AND BUILDING SECTIONS.

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10135 REGISTERED ARCHITECT
JEFFREY JOSEPH WAINDASIEWICZ
STATE OF WASHINGTON

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

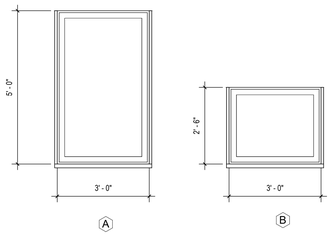
ASSEMBLY TYPES

SCALE: As indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

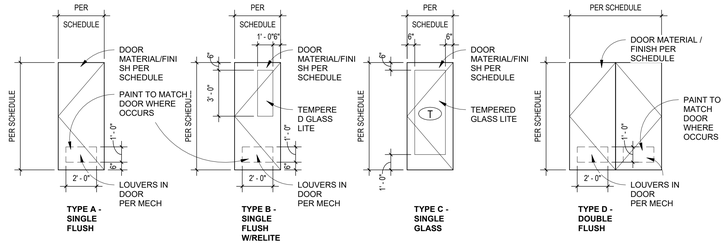
BUILDING: 1
SHEET: A7.1

DOOR SCHEDULE1									
DOOR						FRAME			
NUMBER	TYPE	OPENING WIDTH	HEIGHT	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	COMMENTS
		2' - 11 7/16"	7' - 8 1/4"						
3		14' - 0"	14' - 0"						
100A		14' - 0"	14' - 0"						
100A		3' - 1 1/2"	7' - 10 3/4"						
100B		14' - 0"	14' - 0"						
101		14' - 0"	14' - 0"						
102		6' - 0"	7' - 0"						
102B		3' - 0"	6' - 8"						
102E		2' - 9 1/2"	7' - 8 1/4"						
102F		2' - 9 1/2"	7' - 8 1/4"						
103		3' - 0"	7' - 0"						
103		3' - 6 1/4"	7' - 7"						
103A		3' - 0"	7' - 0"						
103B		8' - 0"	8' - 0"						
104		3' - 0"	7' - 0"						
104		3' - 0"	7' - 0"						
105		3' - 0"	7' - 0"						
106		3' - 0"	7' - 0"						
106		3' - 0"	7' - 0"						
107		3' - 0"	7' - 0"						
107		3' - 0"	7' - 0"						
107C		3' - 0"	6' - 8"						
108		3' - 0"	7' - 0"						
108		3' - 0"	7' - 0"						
108B		8' - 0"	10' - 0"						
108C		8' - 0"	10' - 0"						
108E		3' - 0"	7' - 0"						
109		8' - 0"	8' - 0"						
109		3' - 0"	7' - 0"						
110		6' - 0"	7' - 0"						
111A		3' - 0"	7' - 0"						
111A		2' - 10 1/4"	7' - 9 1/2"						
111A		3' - 0"	6' - 8"						
111B		8' - 0"	8' - 0"						
111B		3' - 0"	6' - 8"						
111C		3' - 0"	6' - 8"						
111D		3' - 0"	7' - 0"						
111E		3' - 0"	6' - 8"						
111F		2' - 10"	6' - 8"						
111G		2' - 0"	6' - 8"						
111H		2' - 0"	6' - 8"						
111J		3' - 0"	6' - 8"						
111K		2' - 10"	6' - 8"						
111L		2' - 0"	6' - 8"						
112		6' - 0"	7' - 0"						
112A		3' - 0"	7' - 0"						
112B		2' - 10 1/4"	7' - 9 1/2"						
113		3' - 0"	7' - 0"						
114		6' - 8"	7' - 0"						
114		3' - 0"	7' - 0"						
115		3' - 0"	7' - 0"						
115		3' - 0"	7' - 0"						
115		3' - 0"	7' - 0"						
116		3' - 0"	7' - 0"						
119		3' - 0"	7' - 0"						
122A		2' - 10 1/4"	7' - 9 1/2"						
122B		2' - 11 3/4"	6' - 10 3/4"						
200A		14' - 0"	10' - 0"						
200B		3' - 0"	6' - 8"						
200C		14' - 0"	10' - 0"						
300E		24' - 0"	20' - 0"						

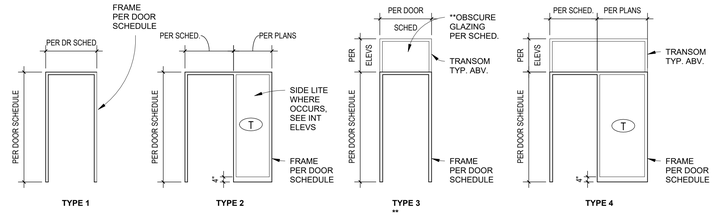
WINDOW LEGEND



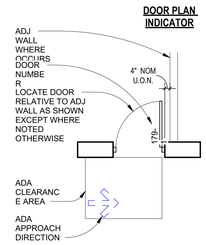
DOOR TYPE SCHEDULE



FRAME TYPE SCHEDULE



DOOR PLAN INFO



DOOR TYPES

DOOR & FRAME MATERIAL:
HM = HOLLOW METAL
AL = ALUMINUM
GL = GLASS
WD/SC = WOOD, SOLID CORE
WD/HC = WOOD, HOLLOW CORE
SF = STOREFRONT, SEE ELEVATIONS

DOOR & FRAME FINISH:
FP = METAL, FIELD PAINTED
SM = SANDED MATTE
FF = FACTORY FINISHED
ST = STAIN
CL = CLEAR FINISH
CF = CONCEALED FRAME

GLAZING:
SEE INTERIOR AND EXTERIOR ELEVATIONS FOR LOCATIONS OF TEMPERED, LAMINATED AND COLORED LAMINATED GLAZING

COMMENTS: AS INDICATED
NA = NOT APPLICABLE
PH = PANIC HARDWARE/EXIT DOOR
VIF= VERIFY OPENING WIDTH IN FIELD
CR = CARD READER

GENERAL NOTES

1. ALSO SEE INTERIOR AND EXTERIOR ELEVATIONS FOR DOOR AND RELITE FRAME DETAIL CALLOUTS. PROVIDE TEMPERED GLAZING WHERE INDICATED.

2. TO DETERMINE FRAME DEPTH, SEE PARTITION SCHEDULE FOR WALL CONSTRUCTION AND STRUCTURAL DRAWINGS FOR PLYWOOD SHEATHING THICKNESS AND LOCATIONS.

3. FIRE DOORS SHALL BE EQUIPPED W/ APPROVED LATCHES AND SELF-CLOSING DEVICES; REFER TO FINISH HARDWARE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

4. THE OPENING AND CLOSING FORCE OF ALL INTERIOR SWINGING OR SLIDING DOORS WITH OR WITHOUT CLOSERS SHALL REQUIRE NO GREATER THAN 5 POUNDS OF FORCE TO MEET ACCESSIBILITY REQUIREMENTS DESCRIBED IN ANSI A117.1-1998.

5. REFER TO EXTERIOR ELEVATIONS FOR LOUVERS LOCATED IN HM OR ALUMINUM FRAMES.

6. REFER TO ELECTRICAL DRAWINGS FOR CARD READER, BADGE READER, SECURITY ALARMS, AND SIMILAR SECURITY DEVICES AT DOORS.

7. EXIT DOORS IN CURTAINWALL SYSTEMS HAVE A THICKENED HEAD MULLION FOR EXIT LIGHT SIGNAGE MOUNTING. SEE INTERIOR ELEVATIONS FOR EXACT QUANTITY AND LOCATIONS.

8. AT CURTAINWALL FRAME TYPES, SEE ELEVATIONS FOR FRAME CONFIGURATION (NOT FRAME TYPE SCHEDULE ABOVE)

*9. PER T2.1 WSEC ENERGY CODE REQUIREMENTS, OPAQUE DOORS SHALL BE MIN. 0.37 U-FACTOR WHERE GLAZING IS LESS THAN 50%

10. FOR ALL FENESTRATION, REFER T2.1 FOR MIN. U-FACTORS, SHGC, VT VAULES AND LABELING REQUIREMENTS

11. PROVIDE MANUAL ROLLER SHADES AT FIRST LEVEL PUNCHED OPENINGS UNDER 10' HEAD HEIGHT, TYP.

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ISSUE DATE: 05/14/2024

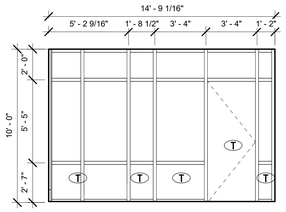
REVISION	DATE	DESCRIPTION

CONTENTS:

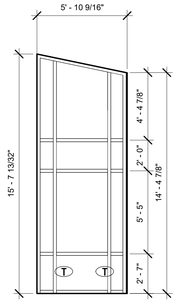
DOOR AND WINDOW SCHEDULES

SCALE: As Indicated
DRAWN: AW/GD
CHECKED: DWP
PROJECT NO: 2022026

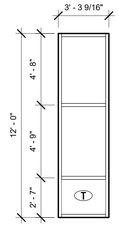
BUILDING: 1
SHEET: A7.2



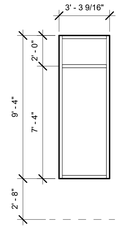
1 STOREFRONT 1
1/4" = 1'-0"



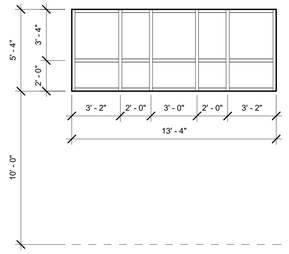
2 STOREFRONT 2
1/4" = 1'-0"



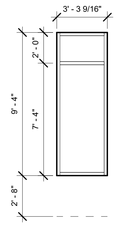
3 STOREFRONT 3
1/4" = 1'-0"



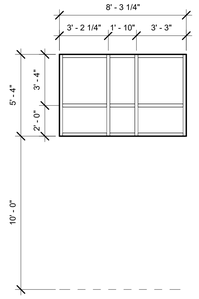
4 STOREFRONT 4
1/4" = 1'-0"



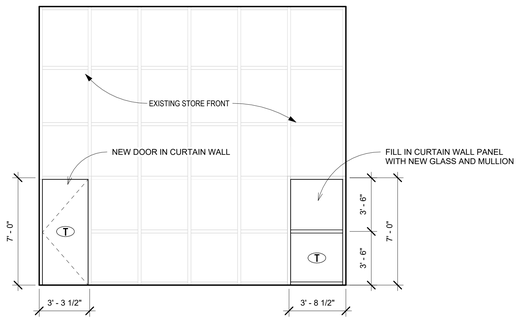
5 STOREFRONT 5
1/4" = 1'-0"



6 STOREFRONT 6
1/4" = 1'-0"



7 STOREFRONT 7
1/4" = 1'-0"



8 STOREFRONT 8
1/4" = 1'-0"

MATERIAL LEGEND

OBSCURE GLAZING

T TEMPERED GLAZING

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REVISION	DATE	DESCRIPTION

CONTENTS:

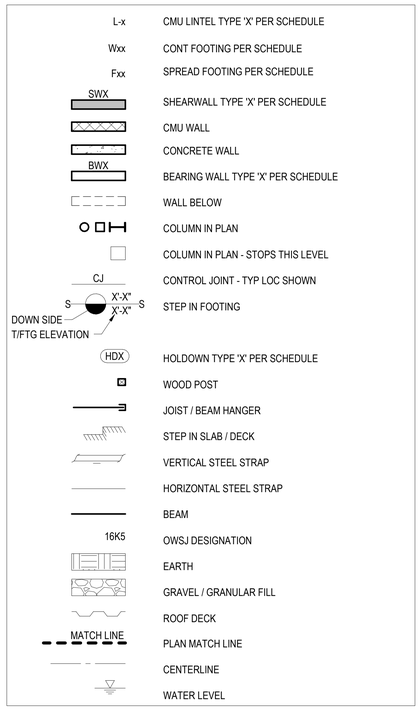
STOREFRONT SCHEDULE

SCALE: **As indicated**
DRAWN: **AW/GD**
CHECKED: **DWP**
PROJECT NO: 2022026

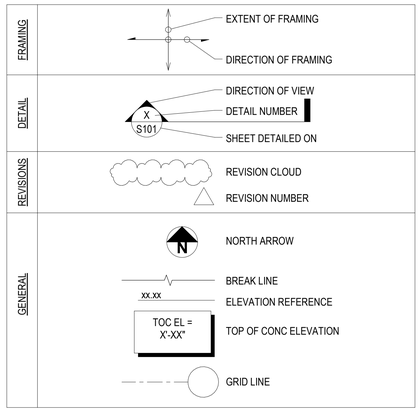
BUILDING: **1**
SHEET: **A7.3**

AB	ANCHOR BOLTS
ADDL	ADDITIONAL
ADJ	ADJACENT
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AGGR	AGGREGATE
ALT	ALTERNATE
&	AND
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
@	AT
B	BOTTOM
BAL	BALANCE
BD	BOARD
BF	BRACED FRAME
BOD	BOTTOM OF DECK
BRKT	BRACKET
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAILING
B/___	BOTTOM OF ____
BOC	BOTTOM OF CONCRETE
B/CONC	BOTTOM OF CONCRETE
BOS	BOTTOM OF STEEL
B/STL	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
BU	BUILT UP
c	CAMBER
C	STEEL CHANNEL
CANT	CANTILEVER
CDF	CONTROLLED DENSITY FILL
CF	COLD FORMED
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CJP	COMPLETE JT PENETRATION
CL	CENTERLINE
CLR	CLEARANCE; CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CS	COURSE(S)
CTRD	CENTERED
CU FT; CUBIC FT3	CUBIC FOOT
CU IN; IN3	CUBIC INCH
CY; YD3	CUBIC YARD
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DCW	DEMAND CRITICAL WELD
DEG; °	DEGREE
DEMO	DEMOLISH
Ø; DIA	DIAMETER
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DICA	DRILLED-IN CONC ANCHOR
DIM	DIMENSION
DIST	DISTANCE
DN	DOWN
DP	DEEP
DO	DITTO
DET	DETAIL
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL; ELEV	ELEVATION; ELEVATOR
ELEV	ELEVATION (VIEW)
ELEC	ELECTRICAL
EMBED	EMBEDMENT
EN	EDGE NAILING
ENGR	ENGINEER
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE
EW	EACH WAY
(E)	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FB	FLAT BAR
FF	FAR FACE
FIN	FINISH
FN	FIELD NAILING
1ST	FIRST
FLG	FLANGE
FLR	FLOOR
FDN	FOUNDATION
FS	FAR SIDE
FT	FOOT; FEET
FTG	FOOTING
FV	FIELD VERIFY
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GENL	GENERAL
GEOTECH	GEOTECHNICAL ENGINEER
GL	GLUED LAMINATED
GLB	GLUED-LAMINATED BEAM
GR	GRADE
GRAN	GRANULAR
GRND	GROUND
GYP BD	GYPSUM BOARD
HDR	HEADER
H; HORIZ	HORIZONTAL
HP	STEEL HP SHAPE
HSS	HOLLOW STRUCT SECTION
ID	INSIDE DIAMETER
IF	INSIDE FACE
IJ	ISOLATION JOINT
IN	INCH; INCHES
INCL	INCLUDE
INFO	INFORMATION
INT	INTERIOR
JST	JOIST
JT	JOINT
K; KIP	1,000 POUNDS
KLF	KIPS PER LINEAR FOOT
KSF	KIPS PER SQ FOOT
KSI	KIPS PER SQ INCH
L	STEEL ANGLE
L	LENGTH
LAB	LABORATORY
LB; #	POUND
LF	LINEAL FOOT
LL	DOUBLE STEEL ANGLE
LB	LOAD BEARING
LIN	LINEAR
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LS	LEFT SIDE
LSL	LAMINATED STRAND LUMBER/ LONG SLOTTED HOLE
LT GA	LIGHT GAUGE
LT WT	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
MATL	MATERIAL
MAX	MAXIMUM
MC	MISC STEEL CHANNEL
MECH	MECHANICAL
MFR/ MANU	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MT	STEEL TEE
MTL	METAL
N	NORTH
N/A	NOT APPLICABLE
NF	NEAR FACE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO; #	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
OPP HD	OPPOSITE HAND
OSB	ORIENTED STRAND BOARD
OWSJ	OPEN WEB STEEL JOIST
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
PERP	PERPENDICULAR
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
P-T	POST-TENSIONED
QTY	QUANTITY
R	RADIUS
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
REV	REVISION
RO	ROUGH OPENING
RS	RIGHT SIDE
S	SLOPE
SCHED	SCHEDULE
SDS	SELF-DRILLING SCREW
2ND	SECOND
SECT	SECTION
SER	STRUCT ENGR OF RECORD
SF	SQUARE FEET
SFRS	SEISMIC FORCE RESISTING SYSTEM
SGN	STRUCT GENERAL NOTES
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SOG	SLAB ON GRADE
SPCS	SPACES
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSL	SHORT SLOTTED HOLE
STD	STANDARD PIPE
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SW	SHEARWALL
SYM	SYMMETRICAL
T	TOP; THICKNESS
T&B	TOP AND BOTTOM
T&G	TONGUE-AND-GROOVE
TBD	TO BE DETERMINED
TEMP	TEMPERATURE, TEMPORARY
3RD	THIRD
THRU	THROUGH
TO	TOP OF
T/___	TOP OF
TOC	TOP OF CONCRETE
T/CONC	TOP OF CONCRETE
TOF	TOP OF FOOTING
T/FTG	TOP OF FOOTING
TOS	TOP OF STEEL; TOP OF SLAB
TOW	TOP OF WALL
T/STL	TOP OF STEEL
TRANS	TRANSVERSE
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UT	ULTRA-SONIC TEST
VR	VAPOR RETARDER
VERT; V	VERTICAL
VIF	VERIFY IN FIELD
W; WF	WIDE FLANGE (STL); WIDTH
W/	WITH
W/O	WITHOUT
WHS	WELDED HEADED STUD
WP	WORK POINT
WS	WATERSTOP
WT	STEEL TEE, WEIGHT
WTS	WELDED THREADED STUD
WWF	WELDED WIRE FABRIC
XS	EXTRA STRONG PIPE
XXS	DBL EXTRA STRONG PIPE

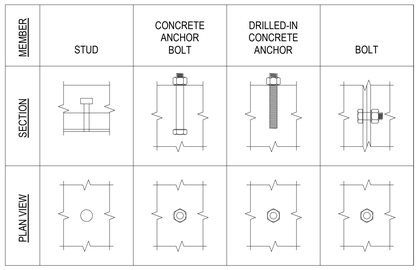
ABBREVIATIONS



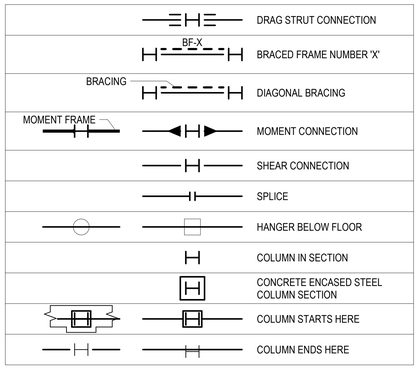
SYMBOLS LEGEND



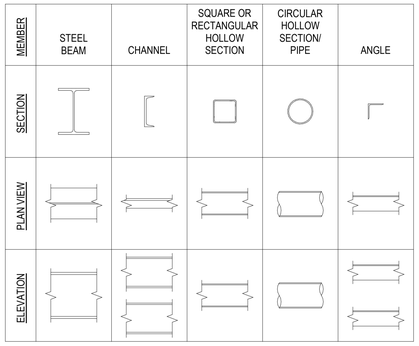
DETAIL REFERENCE SYMBOLS



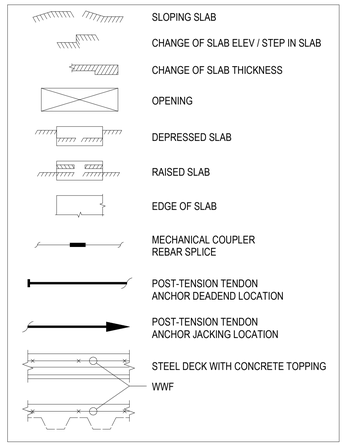
CONNECTORS



STEEL SYMBOLS



STEEL MEMBERS



CONCRETE SYMBOLS

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5-9-2024

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CITY OF SEATAC Est. 1990

PERMIT SET

ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:

ABBREVIATIONS, SYMBOLS & SHEET LIST

SCALE: 12" = 1'-0"
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:

S0.00

STRUCTURAL GENERAL NOTES

TYPICAL DETAILS AND THESE NOTES SHALL APPLY UNLESS NOTED OTHERWISE ON THE DRAWINGS.

USE OF DRAWINGS

USE OF DRAWINGS AND COORDINATION: USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, MECHANICAL AND OTHER DRAWINGS FOR BIDDING AND CONSTRUCTION. COORDINATE WORK AND VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY BETWEEN TRADES. NOTIFY OWNER'S REPRESENTATIVE OF DISCREPANCIES PRIOR TO CONSTRUCTION.

DRAWING SCALE: NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS - DO NOT SCALE DRAWINGS.

DIMENSION VERIFICATION: DIMENSIONS NOTED PLUS OR MINUS (+/-) INDICATE UN-VERIFIED DIMENSIONS THAT REQUIRE CONFIRMATION OR DETERMINATION BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF CONFLICTS OR VARIATIONS FROM INDICATED DIMENSIONS.

NOTE CONFLICTS: IF ANY STRUCTURAL NOTES ARE IN CONFLICT WITH EACH OTHER ARCHITECTURAL AND OTHER DRAWINGS, OR THE SPECIFICATIONS, USE THE MOST STRINGENT REQUIREMENT FOR BIDDING AND CONSTRUCTING THE WORK.

EXISTING CONDITIONS: INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS IN THE FIELD PRIOR TO COMMENCING ANY WORK. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.

DESIGN AND CONSTRUCTION CRITERIA

EXISTING BUILDING: THE EXISTING BUILDING WILL BE MODIFIED AS PART OF THE PROJECT. THE PROJECT IS NOT INTENDED TO BE A FULL SEISMIC RENOVATION OF THE BUILDING.

GOVERNING BUILDING CODE: DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC), 2021 EDITION, AS AMENDED BY THE CITY OF SEATAC. THE PUBLICATIONS LISTED BELOW ARE THE GOVERNING CODES AND STANDARDS REFERENCED BY THE BUILDING CODE. IN CASE OF CONFLICTING REQUIREMENTS, THE BUILDING CODE SHALL GOVERN.

PRIMARY REFERENCE STANDARDS:

ASCE MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-16

ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS

ICC INTERNATIONAL CODE COUNCIL

DESIGN LOADS:

RISK CATEGORY - II

IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS WERE USED FOR DESIGN:

LIVE LOADS:

ROOF	20 PSF
OFFICES	50 PSF
PARTITIONS	20 PSF
CORRIDORS, STAIRS, EXIT FACILITIES	100 PSF
HANDRAILS/ GUARDS	50 PLF OR 200 LBS

SNOW LOAD:
ROOF SNOW LOAD - 25 PSF, PER BUILDING OFFICIAL
SNOW DRIFT LOADS PER ASCE 7, SECTION 7.7.
IMPORTANCE FACOTR, I - 1.0

WIND LOADS FOR THE MAIN WIND FORCE-RESISTING SYSTEMS:
DIRECTIONAL PROCEDURE - ALL HEIGHTS METHOD
DESIGN WIND SPEED, Vult - 97 MPH
EXPOSURE CATEGORY – B, ALL FACES UON
WIND DIRECTIONALITY FACTOR, Kd – 0.85
TOPOGRAPHIC FACTOR, Kzt – 1.00
ENCLOSURE CATEGORY – ENCLOSED
INTERNAL PRESSURE COEFFICIENT, ± 0.18
COMPONENTS & CLADDING WIND PRESSURES, SEE DIAGRAMS

SEISMIC LOAD:
EQUIVALENT LATERAL FORCE PROCEDURE
MAPPED SPECTRAL RESPONSE ACCELERATION, Ss – 1.523
MAPPED SPECTRAL RESPONSE ACCELERATION, S1 – 0.519
LONG PERIOD TRANSITION, TL – 6
SITE CLASS – C
RISK CATEGORY – II
SEISMIC LOAD RESISTING SYSTEM – LIGHT-FRAME WOOD SHEAR WALLS
RESPONSE MODIFICATION COEFFICIENT, R – 6 1/2
SEISMIC IMPORTANCE FACTOR, Ie – 1.0
DIAPHRAGM TYPE – FLEXIBLE
DESIGN SPECTRAL RESPONSE ACCELERATION, Sds – 1.218
DESIGN SPECTRAL RESPONSE ACCELERATION, Sd1 – 0.512
SEISMIC DESIGN CATEGORY – D
SEISMIC RESPONSE COEFFICIENT, Cs – 0.187

DESIGN AND CONSTRUCTION CRITERIA (CONT)

DESIGN DEFLECTIONS AND BUILDING MOVEMENT: CONTRACTOR SHALL ALLOW TOLERANCE FOR BUILDING MOVEMENT AND DEFLECTIONS WHEN INSTALLING NON-STRUCTURAL WALLS, EQUIPMENT, AND DISTRIBUTION SYSTEMS PER THE FOLLOWING DESIGN LIMITS:

BEAM AND JOISTS HAVE BEEN DESIGNED FOR THE FOLLOWING MAXIMUM VERTICAL DEFLECTIONS, WHERE "L" IS THE SPAN OF THE BEAM OR JOIST:
LIVE LOAD: L/240
DEAD LOAD + LIVE LOAD: L/180
1/2" VERTICAL MINIMUM

STORY DRIFT:

THE PRIMARY STRUCTURE WILL EXPERIENCE LATERAL MOVEMENTS BETWEEN ADJACENT FLOORS. THE STORY DRIFTS PERPENDICULAR / PARALLEL TO THE PRIMARY STRUCTURE ARE AS FOLLOWS:

SEISMIC DRIFT

	SERVICE LEVEL STORY DRIFT		DESIGN STORY DRIFT	
LEVELS	NORTH-SOUTH	EAST-WEST	NORTH-SOUTH	EAST-WEST
ROOF	0.5%	0.5%	2.0%	2.0%

WIND DRIFT

	SERVICE LEVEL	DESIGN
LEVELS	STORY DRIFT	STORY DRIFT
ROOF	0.5%	1.0%

BUILDING ELEMENTS INCLUDING EXTERIOR CLADDING; STAIRS, ELEVATORS, AND MISCELLANEOUS METALS; MECHANICAL/ELECTRICAL/PLUMBING SYSTEM SUPPORTS; INTERIOR PARTION FRAMING; AND ANY OTHER ELEMENTS AS REQUIRED BY THE BUILDING CODE SHALL BE DESIGNED TO ACCOMMODATE THE PRIMARY STRUCTURE STORY DRIFTS WITH ANY APPLICABLE ELEMENT-SPECIFIC MODIFICATIONS PER CHAPTER 13 OF ASCE 7.

SEISMIC JOINTS: DIFFERENTIAL BUILDING DRIFT DURING A SEISMIC EVENT TO BE ACCOMODATED BY COMPONENETS CROSSING THE SEISMIC JOINTS BETWEEN THE SEPARATE BUILDINGS.

MEANS AND METHODS

MEANS AND METHODS: THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS AND THE METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED FOR SAFELY CONSTRUCTING ALL WORK.

JOBSITE SAFETY: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK AND FOR MEETING THE REQUIREMENTS OF ALL APPLICABLE JURISDICTIONS. EXECUTE WORK IN A MANNER THAT PROVIDES FOR THE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST INJURY AND DAMAGE DUE TO FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH CONSTRUCTING THE WORK.

STABILITY: THE ROOF DIAPHRAGMS CARRY LATERAL FORCES DUE TO WIND, EARTHQUAKE OR SOIL TO THE SHEAR WALLS. CERTAIN ELEMENTS SHOWN ON THE STRUCTURAL DRAWINGS (SUCH AS STEEL FRAMES AND ROOF DECK) ARE REQUIRED FOR OVERALL OR LOCAL STABILITY OF OTHER ELEMENTS (SUCH AS BEAMS, COLUMNS, AND WALLS). THE CONTRACTOR SHALL RETAIN A QUALIFIED LICENSED STRUCTURAL ENGINEER WHO SHALL DETERMINE WHERE TEMPORARY SHORING/BRACING IS REQUIRED AND PROVIDE ITS DESIGN. PROVIDE THE TEMPORARY BRACING AS REQUIRED TO STABILIZE THE STRUCTURE AND ITS COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED ACCORDING TO THE CONSTRUCTION DOCUMENTS.

CONSTRUCTION LOADING: THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE STRUCTURE DURING CONSTRUCTION. WHERE CONSTRUCTION SEQUENCING AND STAGING ARE LIKELY TO CREATE OVERLOADING, THE CONTRACTOR SHALL RETAIN A QUALIFIED STRUCTURAL ENGINEER TO DETERMINE HOW TO TEMPORARILY SHORE AND SUPPORT THE OVERLOADED ELEMENTS IN A MANNER THAT DOES NOT EXCEED THE STRESS LIMITS OF THE ELEMENTS AND THE SUPPORTING FOUNDATION AS DEFINED BY THE APPLICABLE BUILDING CODES.

SUBMITTALS

SHOP DRAWINGS: SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE OWNER'S REPRESENTATIVE AND ENGINEER-OF-RECORD PRIOR TO ANY FABRICATION OR CONSTRUCTION. DIMENSION AND QUANTITY VERIFICATION ARE THE CONTRACTOR'S RESPONSIBILITIES AND ARE NOT REVIEWED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY THE ENGINEER OF RECORD. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED, EITHER PRIOR TO OR AFTER THE ENGINEER PROCESSES THE SHOP DRAWING SUBMITTALS, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

REQUIRED SUBMITTALS:

REQUIRED SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- BIDDER-DESIGNED SUBMITTALS
- CONCRETE MIX DESIGNS
- CONCRETE REINFORCEMENT
- MASONRY GROUT, BLOCK AND REINFORCEMENT
- STEEL EMBEDMENTS IN CONCRETE
- STRUCTURAL STEEL
- METAL DECKING

SUBMITTAL ACCEPTANCE: FOLLOWING ACCEPTANCE BY THE ARCHITECT AND ENGINEER AND PRIOR TO FABRICATION, ADDITIONAL TIME FOR REVIEW AND ACCEPTANCE OF SUBMITTAL BY THE BUILDING OFFICIAL IS REQUIRED AND SHALL BE IDENTIFIED AND ALLOWED FOR IN THE CONTRACTOR'S SCHEDULE.

SUBSTITUTIONS: SUBMIT SUBSTITUTION REQUESTS PER THE PROCEDURES IN THE SPECIFICATIONS WITH APPLICABLE ICC REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO DETAILING, FABRICATION AND ERECTION. ADDITIONAL ENGINEERING CALCULATIONS AND DETAILS, PROVIDED BY A STRUCTURAL ENGINEER LICENSED IN THE PROJECT SITE STATE, MAY BE REQUIRED OF THE CONTRACTOR FOR SUBSTITUTIONS THAT ARE NOT SIMILAR TO THE SPECIFIED PRODUCTS AND CONFIGURATION.

CONTRACTOR COORDINATION

OPENING COORDINATION: COORDINATE THE LOCATIONS OF ROOF, FLOOR AND WALL OPENINGS WITH THE STRUCTURAL FRAMING TRADES REQUIRING THEM. OPENINGS LARGER THAN 24" X 24" SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER TO DETERMINE POTENTIAL IMPACTS ON THE FRAMING. ANY EQUIPMENT WEIGHING MORE THAN 300 LBS SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER TO DETERMINE POTENTIAL IMPACTS ON THE FRAMING.

SPECIAL INSPECTION

SPECIAL INSPECTION REQUIREMENTS: SPECIAL INSPECTION IS REQUIRED IN ACCORDANCE WITH IBC SECTION 1704, THE DRAWINGS AND THE PROJECT SPECIFICATIONS. THESE INSPECTIONS SHALL BE PERFORMED BY A TESTING AGENCY, DESIGNATED BY THE OWNER'S REPRESENTATIVE, QUALIFIED TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED. THE ARCHITECT AND STRUCTURAL ENGINEER SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION REPORTS AND TEST RESULTS, AS WELL AS A FINAL SIGNED REPORT FOR THE INSPECTED ITEMS.

INSPECTION COORDINATION: COORDINATE THE INSPECTIONS BY PROVIDING ADEQUATE NOTICE TO THE INSPECTION AGENCY AND OWNER'S CONSTRUCTION REPRESENTATIVE OF DATES WHEN WORK IS READY FOR INSPECTION, AND BY PROVIDING ALLOWANCE IN THE SCHEDULE FOR THE SPECIFIED INSPECTIONS TO OCCUR.

STRUCTURAL OBSERVATION: THE STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY THE REGISTERED DESIGN PROFESSIONAL IN CHARGE FOR STRUCTURAL DESIGN. THE STRUCTURAL OBSERVER SHALL BE REGISTERED/ LICENSED TO PRACTICE IN THE PROJECT STATE. THE STRUCTURAL OBSERVER SHALL SUBMIT TO INSPECTION SERVICES A WRITTEN STATEMENT THAT SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES THAT TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE HAVE NOT BEEN RESOLVED. THE STRUCTURE WILL NOT BE IN COMPLIANCE UNTIL THE REGISTERED DESIGN PROFESSIONAL HAS NOTIFIED INSPECTION SERVICES THAT ALL DEFICIENCIES ARE RESOLVED. STRUCTURAL OBSERVATIONS WILL BE PERFORMED AT SIGNIFICANT PROJECT MILESTONES.

GEOTECHNICAL

REPORT INFO: THE FOUNDATIONS WERE DESIGNED TO THE REQUIREMENTS PROVIDED IN THE PROJECT GEOTECHNICAL REPORT NUMBER 4637-010-00 PREPARED BY GEOENGINEERS, INC., DATED JANUARY 26, 2024.

SUBGRADE PREP: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS SHALL CONFORM STRICTLY TO THE CONTRACT DOCUMENTS, THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT, AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

UTILITIES: DETERMINE THE LOCATION OF UNDERGROUND UTILITIES IN AND ADJACENT TO THE AREA OF WORK PRIOR TO COMMENCING EXCAVATION.

BACKFILL: BACKFILL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE GEOTECHNICAL REPORT. DO NOT BACKFILL BEHIND WALLS BEFORE ADJACENT SUPPORTING ELEMENTS ARE COMPLETE AND CURED. ALTERNATIVELY, PROVIDE DESIGN AND CONSTRUCTION OF TEMPORARY BRACING THAT PROTECTS THE WALL AGAINST OVERSTRESS OR MOVEMENT.

FOOTINGS: FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST FROST DEPTH BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS AND DETAILS ARE MINIMUM AND FOR GUIDANCE ONLY. ESTABLISH THE ACTUAL BOTTOM-OF-FOOTING ELEVATIONS IN THE FIELD, BASED UPON THE GEOTECHNICAL ENGINEER'S ON-SITE OBSERVATIONS AND ADDITIONAL TESTING, IF REQUIRED, THAT WILL ACHIEVE THE ALLOWABLE DESIGN BEARING PRESSURE.

ALLOWABLE SOIL BEARING PRESSURE – 2,000 PSF
FROST DEPTH – 18 INCHES

RETAINING WALLS		
UNRESTRAINED	35 PCF	(EQUIVALENT FLUID PRESSURE)
RESTRAINED	55 PCF	(EQUIVALENT FLUID PRESSURE)

SEISMIC: UNIFORM LATERAL PRESSURE SURCHARGE OF 14xH PSF

COEFFICIENT OF FRICTION – 0.40 (FACTOR OF SAFETY= 1.5)

GEOTECH APPROVAL: THE GEOTECHNICAL ENGINEER SHALL OBSERVE AND APPROVE PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF REINFORCING STEEL AND CASTING OF FOOTINGS. THE GEOTECHNICAL ENGINEER OR AN APPROVED TESTING LAB SHALL OBSERVE SOIL COMPACTION WORK.

EXCAVATION: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION. COMPLY WITH ALL APPLICABLE OSHA AND WISHA REGULATIONS.

COMPACTION: MECHANICALLY COMPACT EXCAVATION BACKFILL IN LAYERS. PROVIDE THE FOLLOWING MINIMUM COMPACTION IN ACCORDANCE WITH THE ASTM D1557 TEST METHOD UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT:

MAXIMUM DRY DENSITY	LOCATIONS
90%	TRENCH AND WALL BACKFILL
95%	FILL BENEATH SLAB ON GRADE
95%	FILL BENEATH FOOTINGS

ADJACENT STRUCTURE: NOTIFY THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY EXCAVATIONS OR OTHER SITE WORK, IF THE EXCAVATION WILL CUT BELOW AN ADJACENT STRUCTURE'S BOTTOM OF FOOTING ELEVATION OR IF AN ADJACENT STRUCTURE IS UPSLOPE FROM THE PLANNED SITE WORK.

FOUNDATION

EXCAVATION: CONTRACTOR SHALL CONFIRM THE ASBUILT LOCATION OF ANY POTENTIAL NEW OR EXISTING UTILITIES, STRUCTURES OR OBJECTS WITHIN THE ZONE OF EXCAVATION INCLUDING WORK PERFORMED AS A PORTION OF THIS PROJECT BEFORE EXCAVATING OR INSTALLING FOUNDATION ELEMENTS.

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5-7-2024

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

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PERMIT SET

ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:

GENERAL STRUCTURAL NOTES

SCALE: NO SCALE
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:
S0.10

CONCRETE

REFERENCE STANDARDS:

ACI AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-14

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

MIX DESIGNS: MIX DESIGNS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE AND STRUCTURAL ENGINEER FOR ACCEPTANCE TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE MAXIMUM WATER-CEMENT RATIO AND SLUMP SHALL BE AS SHOWN IN TABLE I FOR VARIOUS CONCRETE STRENGTHS (f'c) BASED ON STANDARD 28-DAY CYLINDER TESTS.

TABLE 1: CONCRETE MIX DESIGN

AREA	MIN F'c (PSI) 28 DAYS	MAX W/C	ENTRAINED AIR	FLY ASH	MAXIMUM AGGREGATE	EXPOSURE CLASS
FOOTINGS	4,500	0.45	-	15-20%	1"	F0
ALL CONCRETE, UON (INTERIOR)	4,500	0.45	-	15-20%	3/4"	W0
ALL CONCRETE, UON (EXTERIOR)	4,500	0.45	6%	15-20%	3/4"	F2

ADMIXTURES: WATER-REDUCING ADMIXTURES CONFORMING TO ASTM C494 MAY BE INCORPORATED IN THE CONCRETE MIX DESIGNS AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CALCIUM CHLORIDE OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

AIR CONTENT: AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260 SHALL BE USED IN ALL CONCRETE MIXES FOR WORK THAT IS EXPOSED TO WEATHER. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE END OF THE PLACING HOSE. ENTRAINED AIR SHALL BE AS NOTED +/- 1.5% BY VOLUME.

SLEEVES: SLEEVES FOR PIPING OR DUCTS, EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS, SHALL NOT BE PLACED IN WALLS UNLESS APPROVED BY THE ENGINEER.

REINFORCING STEEL MATERIALS:

DEFORMED BARS — ASTM A615, GRADE 60
SMOOTH WELDED WIRE FABRIC (WWF) — ASTM A185 (Fy = 65,000 PSI)

REINFORCING STEEL DETAILING: REINFORCING STEEL SHALL BE SUPPORTED AS SPECIFIED BY THE PROJECT SPECIFICATIONS AND THE CRSI MANUAL OF STANDARD PRACTICE. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 – DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.

REBAR SPLICES: LAP REINFORCING BARS AS NOTED ON THE DRAWINGS. WHERE SPLICE LENGTH IS NOT SHOWN, USE TYPE 'Ls' SPLICE PER DEVELOPMENT AND SPLICE LENGTH SCHEDULE. MECHANICAL OR WELDED BUTT SPLICES SHALL BE SUBJECT TO STRUCTURAL ENGINEER'S APPROVAL. MECHANICAL SPLICES, WHERE ALLOWED ON THE PLANS, SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE SPLICED BARS IN BOTH TENSION AND COMPRESSION.

FIELD BENDING: NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY DETAILED AS SUCH OR APPROVED BY THE STRUCTURAL ENGINEER.

WELDING: REINFORCING BARS SHALL NOT BE WELDED OR TACK WELDED TO OTHER BARS OR TO PLATES, ANGLES, ETC. UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.4. WELDING SHALL BE DONE BY AWS/WABO CERTIFIED WELDERS QUALIFIED FOR WELDS USING APPROVED ELECTRODES.

CONCRETE PROTECTION: COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE — 3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER
#6 BARS OR LARGER — 2"
#5 BARS OR SMALLER — 1-1/2"
SLABS AND WALLS (INTERIOR FACE) — 3/4"

NON-SHRINK GROUT: NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE MINIMUM 28-DAY GROUT COMPRESSIVE STRENGTH SHALL BE 6000 PSI, UNLESS NOTED OTHERWISE.

EPOXY LEVELING GROUT: COMPLY WITH ASTM C881 WITH 12,000 PSI MINIMUM COMPRESSIVE STRENGTH.

EXPANSION ANCHORS: EXPANSION ANCHORS INSTALLED INTO CONCRETE SHALL BE HILTI KWIK BOLT TZ, OR APPROVED EQUIVALENT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-1917.

STAINLESS STEEL EXPANSION ANCHORS, WHERE CALLED OUT, INSTALLED INTO CONCRETE SHALL BE HILTI KWIK BOLT TZ, TYPE 316 STAINLESS STEEEL, OR APPROVED EQUIVALENT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-1917.

ADHESIVE ANCHORS AND EPOXIED REINFORCING BARS: PLACEMENT AND CURING SHALL BE CONDUCTED WITH CONCRETE AND AIR TEMPERATURES ABOVE 50 DEGREES. APPLY EPOXY ONLY TO CLEAN, DRY CONCRETE. PROVIDE POSITIVE PROTECTION SO DOWELS ARE NOT DISTURBED DURING THE CURING PERIOD.

ADHESIVE ANCHORS AND REINFORCING BARS SHALL BE EPOXIED INTO CONCRETE WITH HILTI HY-200 ADHESIVE, OR APPROVED EQUIVALENT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-3187. ADHESIVE ANCHOR RODS SHALL BE HILTI HIT-Z THREADED RODS, OR APPROVED EQUIVALENT, UNLESS NOTED OTHERWISE.

STAINLESS STEEL ADHESIVE ANCHORS AND REINFORCING BARS, WHERE CALLED OUT, SHALL BE EPOXIED INTO CONCRETE WITH HILTI HY-200 ADHESIVE, OR APPROVED EQUIVALENT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-3187. ADHESIVE ANCHOR RODS SHALL BE ASTM F593 TYPE 316 STAINLESS STEEL THREADED RODS, OR APPROVED EQUIVALENT.

SCREW ANCHORS: CONCRETE HEAVY DUTY SCREW ANCHORS SHALL BE SIMPSON TITEN HD, OR APPROVED EQUIVALENT. THE ANCHOR SHALL BE MECHANICALLY GALVANIZED PER ASTM B695, CLASS 55. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR 2713.

POST-INSTALLED DRILLING: HOLES FOR INSTALLING REINFORCING BARS, BOLTS, THREADED RODS AND INSERTS INTO CONCRETE SHALL BE DRILLED BY THE ICC APPROVED DRILLING METHOD FOR THE ANCHOR. CHIP AWAY A SUFFICIENT QUANTITY OF CONCRETE COVER TO LOCATE EXISTING REINFORCING PRIOR TO DRILLING. DO NOT CUT EXISTING REINFORCING.

SLAB CONTROL JOINTS: PROVIDE CONTROL JOINTS THAT DIVIDE THE SLAB-ON-GRADE INTO RECTANGULAR AREAS OF 225 SF OR LESS WITH LENGTH TO WIDTH RATIOS OF 1.5 OR LESS. SUBMIT JOINT LOCATIONS TO OWNER'S REPRESENTATIVE FOR APPROVAL.

MASONRY

REFERENCE STANDARDS: (USE VERSION REFERENCED BY GOVERNING CODE. IF NOT REFERENCED BY GOVERNING CODE, USE LATEST EDITION)

TMS THE MASONRY SOCIETY, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, TMS 402-16

TMS THE MASONRY SOCIETY, SPECIFICATION FOR MASONRY STRUCTURES, TMS 602-16

TYPICAL UNITS: CONCRETE MASONRY UNITS SHALL BE ASTM C90, GRADE N, TYPE I, MOISTURE CONTROLLED UNITS. ASSEMBLIES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF f'm = 1,700 PSI. CONCRETE MASONRY WALLS SHALL BE REINFORCED PER THE CONSTRUCTION DOCUMENTS. WHERE DETAILS ARE NOT PROVIDED, REINFORCE ACCORDING TO THESE NOTES. STRUCTURAL DESIGN IS IN ACCORDANCE WITH IBC SECTION 2107 "ALLOWABLE STRESS DESIGN". CONSTRUCT WALLS WITH RUNNING BOND, UNLESS OTHERWISE NOTED.

MORTAR: MORTAR FOR CONCRETE MASONRY UNITS SHALL BE TYPE S. MORTAR FOR BRICK MASONRY SHALL BE TYPE N. ALL MORTARS SHALL CONFORM TO IBC SECTION 2103.9 AND ASTM C270 TABLE 1 – PROPORTION SPECIFICATIONS OR TABLE 2 – PROPERTY SPECIFICATIONS.

GROUT: MASONRY GROUT SHALL CONFORM TO IBC SECTION 2103.13 AND TO THE PROPORTION SPECIFICATIONS OF ASTM C476 TABLE 1. GROUT STRENGTH SHALL BE 2,000 PSI UON. ALL CORES CONTAINING VERTICAL BARS AND ALL BOND BEAMS SHALL BE FILLED WITH GROUT.

REINFORCEMENT: DEFORMED REINFORCING BARS SHALL CONFORM TO IBC SECTION 2103.14 AND BE ASTM A615 GRADE 60. CENTER VERTICAL REINFORCEMENT IN WALLS UNLESS OTHERWISE NOTED.

SPLICE LENGTH: LAP REINFORCING BARS AS NOTED ON THE DRAWINGS. WHERE SPLICE LENGTH IS NOT SHOWN, LAP 48 BAR DIAMETERS. WHERE MULTIPLE BARS ARE INSTALLED IN A SINGLE CELL OR COURSE, STAGGER BAR LAPS A MINIMUM OF 2'-0".

THE MINIMUM CONCRETE MASONRY WALL REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

WALL THICKNESS	VERTICAL BARS	HORIZONTAL BARS
4" WALLS	#4 @ 48" OC	#4 @ 48" OC
6" WALLS	#5 @ 48" OC	#5 @ 48" OC
8 " WALLS	#5 @ 48" OC	(2) #5 @ 48" OC
10" WALLS	#6 @ 48" OC	(2) #5 @ 48" OC
12" WALLS	#6 @ 48" OC	(2) #6 @ 48" OC

BOND BEAMS: BOND BEAMS WITH HORIZONTAL REINFORCING SHALL BE PROVIDED AT ALL FLOOR AND ROOF LINES AND AT THE TOP OF WALLS. PROVIDE A BOND BEAM WITH TWO HORIZONTAL BARS OF SAME SIZE AS TYPICAL HORIZONTAL BARS AT THE TOP AND BOTTOM OF ALL OPENINGS, AND EXTEND THESE BARS 40 BAR DIAMETERS (2'-0" MINIMUM) PAST THE OPENING AT EACH SIDE, OR AS FAR AS POSSIBLE AND HOOK. PROVIDE TWO VERTICAL BARS OF SAME SIZE AS TYPICAL VERTICAL BARS FOR THE FULL HEIGHT OF THE WALL AT EACH SIDE OF OPENINGS, WALL ENDS AND INTERSECTIONS. DOWELS TO MASONRY WALLS SHALL BE EMBEDDED A MINIMUM OF 1'-6" OR HOOKED INTO THE SUPPORTING STRUCTURE, AND BE OF THE SAME SIZE AND SPACING AS WALL REINFORCING. PROVIDE CORNER BARS TO MATCH THE HORIZONTAL WALL REINFORCING AT WALL INTERSECTIONS. LAP BARS 40 DIAMETERS (2'-0" MINIMUM).

LOW-LIFT GROUTING: LAY UNITS A MAXIMUM OF 4 FEET HIGH BEFORE GROUTING. PLACE GROUT IN A CONTINUOUS PLACEMENT IN GROUT LIFTS NOT EXCEEDING 4 FEET. COMPLETELY GROUT THE FULL HEIGHT OF THE WALL SECTION IN ONE DAY WITH NO INTERRUPTIONS GREATER THAN ONE HOUR.

SHOP DRAWINGS: PROVIDE SHOP DRAWINGS OF MASONRY REINFORCING ON WALL ELEVATION VIEWS AND INCLUDE ALL OPENINGS ALONG WITH TRIM REINFORCING. COORDINATE MASONRY OPENINGS WITH OTHER TRADES AS REQUIRED.

WEATHER: CONFORM TO ACI 530.1 REQUIREMENTS FOR HOT WEATHER AND COLD WEATHER CONSTRUCTION AND PROTECTION OF NEWLY CONSTRUCTED MASONRY.

SPECIAL INSPECTION LEVEL 2: LEVEL 2 SPECIAL INSPECTION OF MASONRY IS REQUIRED IN ACCORDANCE WITH TMS 402 SECTION 3.1, TMS 602 TABLE 4 AND THE PROJECT SPECIFICATIONS. SEE THE QUALITY ASSURANCE PLAN DRAWINGS FOR REQUIRED TESTING. PRISM TESTS OF THE MASONRY WALL ARE REQUIRED PRIOR TO AND DURING CONSTRUCTION TO CONFIRM THAT THE STRENGTH OF MASONRY ASSEMBLIES ARE AS SPECIFIED IN THE DESIGN.

GROUT SHEAR KEY: BETWEEN GROUT POURS, A HORIZONTAL CONSTRUCTION JOINT SHALL BE FORMED BY STOPPING ALL WYTHES AT THE SAME ELEVATION AND WITH THE GROUT STOPPING A MINIMUM OF 1½ INCHES BELOW A MORTAR JOINT, EXCEPT AT THE TOP OF THE WALL.

EXPANSION ANCHORS: EXPANSION ANCHORS INSTALLED INTO SOLID-GROUTED CMU SHALL BE HILTI KWIK BOLT 3, OR APPROVED EQUIVALENT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-1385.

STAINLESS STEEL EXPANSION ANCHORS, WHERE CALLED OUT, INSTALLED INTO SOLID-GROUTED CMU SHALL BE HILTI KWIK BOLT 3, TYPE 316 STAINLESS STEEL, OR APPROVED EQUIVALENT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-1385.

ADHESIVE ANCHORS AND EPOXIED REINFORCING BARS: PLACEMENT AND CURING SHALL BE CONDUCTED WITH MASONRY AND AIR TEMPERATURES ABOVE 50 DEGREES. APPLY EPOXY ONLY TO CLEAN, DRY MASONRY. PROVIDE POSITIVE PROTECTION SO DOWELS ARE NOT DISTURBED DURING THE CURING PERIOD.

ADHESIVE ANCHORS AND REINFORCING BARS INTO SOLID-GROUTED CMU SHALL BE EPOXIED WITH HILTI HY-270 ADHESIVE, OR APPROVED EQUIVALENT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-4143. ADHESIVE ANCHOR RODS SHALL BE GALVANIZED ASTM F1554, GR 36 THREADED RODS, OR APPROVED EQUIVALENT, UNLESS NOTED OTHERWISE.

STAINLESS STEEL ADHESIVE ANCHOR RODS, WHERE CALLED OUT, SHALL BE ASTM F593 TYPE 316 STAINLESS STEEL THREADED RODS, OR APPROVED EQUIVALENT.

ADHESIVE ANCHORS AND REINFORCING BARS INTO HOLLOW OR UNREINFORCED MASONRY SHALL BE EPOXIED WITH HILTI HIT-HY 270 ADHESIVE, OR APPROVED EQUIVALENT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-4143. ADHESIVE ANCHOR RODS SHALL BE GALVANIZED ASTM F1554, GR 36 THREADED RODS, OR APPROVED EQUIVALENT, UNLESS NOTED OTHERWISE.

SCREW ANCHORS: MASONRY HEAVY DUTY SCREW ANCHORS SHALL BE SIMPSON TITEN HD, OR APPROVED EQUIVALENT. THE ANCHOR SHALL BE MECHANICALLY GALVANIZED PER ASTM B695, CLASS 55. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ICC REPORT ESR-1056. INSTALL ONLY IN SOLID-GROUTED CELLS.

POST-INSTALLED DRILLING: HOLES FOR INSTALLING REINFORCING BARS, BOLTS, THREADED RODS AND INSERTS INTO MASONRY SHALL BE DRILLED BY THE ICC APPROVED DRILLING METHOD FOR THE ANCHOR. CHIP AWAY A SUFFICIENT QUANTITY OF MASONRY COVER TO LOCATE EXISTING REINFORCING OR LOCATE BARS USING NON-DESTRUCTIVE TESTING PRIOR TO DRILLING. DO NOT CUT EXISTING REINFORCEMENT.

STEEL

REFERENCE STANDARDS:

AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 360

AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION, SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, AISC 341

AWS AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE – SEISMIC SUPPLEMENT, AWS D1.8

AWS AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE – STEEL, AWS D1.1 AND STRUCTURAL WELDING CODE – SHEET STEEL, AWS D1.3

RCSC RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS, SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS

SDI STEEL DECK INSTITUTE, STANDARD FOR NON-COMPOSITE STEEL FLOOR DECK, STANDARD FOR STEEL ROOF DECK, AND CODE OF STANDARD PRACTICE

STRUCTURAL STEEL MATERIALS:

WIDE FLANGE SHAPES	ASTM A992, Fy = 50 KSI
HOLLOW STRUCTURAL SECTIONS (HSS)	
TUBES	ASTM A500, GRADE B, Fy = 46 KSI
STEEL PIPE	ASTM A53, GRADE B, Fy = 35 KSI
OTHER STEEL SHAPES	ASTM A36, Fy = 36 KSI
STRUCTURAL BOLTS	ASTM F3125 GRADE A325 OR A490, TYPE 1 OR 3
ANCHOR BOLTS	ASTM F1554, GRADE 36
WOOD CONNECTION BOLTS	ASTM A307
THREADED RODS	ASTM A36
WELDING ELECTRODES	E70XX

MISC STEEL: STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE REQUIREMENTS OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES AND OTHER AIDS. WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND TAPERS OF UNEQUAL PARTS.

GALVANIZING: STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A123. GALVANIZE BOLTS AND SIMILAR THREADED FASTENERS EXPOSED TO WEATHER IN ACCORDANCE WITH ASTM A153, CLASS C AND D, AS APPLICABLE. ALL FIELD WELDS EXPOSED TO WEATHER SHALL BE COATED WITH BRUSH APPLIED ZINC-RICH PAINT COMPLYING WITH ASTM A780 (GALVACON OR EQUIVALENT).

PAINTING: STRUCTURAL STEEL SHALL BE PRIMED AND PAINTED. IF NOTED ON THE ARCHITECTURAL DRAWINGS OR SPECIFICATIONS. PRIMER SHALL BE THE FABRICATOR'S STANDARD LEAD AND CHROMATE FREE, NON-ASPHALTIC, RUST-INHIBITING PRIMER. STEEL ANCHORS AND TIES AND OTHER MEMBERS EMBEDDED IN CONCRETE OR MASONRY SHALL BE LEFT UNPAINTED.

HIGH-STRENGTH BOLTS: HIGH-STRENGTH BOLTS SHALL BE INSTALLED, TIGHTENED AND INSPECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS. THE CRITERIA FOR SLIP-CRITICAL CLASS A FAYING SURFACE CONNECTIONS SHALL APPLY TO CONNECTIONS UNLESS SPECIFICALLY NOTED AS SNUG TIGHT. SLIP-CRITICAL CONNECTIONS SHALL USE LOAD INDICATOR WASHERS OR TENSION CONTROL BOLTS. BOLT HOLES SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE.

MINIMUM CONNECTIONS: MINIMUM CONNECTIONS SHALL BE A TWO-BOLT CONNECTION USING 7/8-INCH DIAMETER GRADE A325 BOLTS IN SINGLE SHEAR.

ANCHOR RODS: ANCHOR RODS SHALL BE HEADED BOLTS EMBEDDED INTO CONCRETE AS SHOWN IN THE DETAILS.

A307 BOLTS: PROVIDE WITH LOCK WASHERS UNDER NUTS OR SELF-LOCKING NUTS. BOLT HOLES SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE.

ARCHITECTURALLY EXPOSED STEEL: ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, SECTION 10.

WELDING: WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY AWS/WABO CERTIFIED WELDERS, WHO ARE QUALIFIED FOR THE WELD TYPE THEY PERFORM, USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. WELDS SHOWN ON THE DRAWINGS ARE THE MINIMUM SIZE. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON PLATE THICKNESS. MINIMUM WELDING SHALL BE 3/16 INCH. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS.

DEMAND CRITICAL WELDS: ALL WELDS USED IN MEMBERS AND CONNECTIONS IN THE BRACED FRAMES SHALL BE MADE WITH A FILLER MATERIAL THAT CAN PRODUCE WELDS THAT HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT 0° F. WELDS DESIGNATED ON THE DRAWINGS AS BEING DEMAND CRITICAL SHALL BE MADE WITH A FILLER MATERIAL THAT CAN PRODUCE WELDS THAT HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT -20° F AND AT 70°F. THE DEMAND CRITICAL WELDS WILL BE DESIGNATED "DC" BY THE WELD SYMBOL TAIL. SEE AWS SPECIFICATIONS FOR FILLER MATERIAL REQUIREMENTS.

ROOF DECK: METAL ROOF DECK SHALL BE TYPE B (WIDE RIB) ROOF DECK OF THE SIZE AND GAUGE SHOWN ON THE PLANS AND DETAILS. DECK FASTENING SHALL BE AS SHOWN ON THE PLANS. THE DECK SHALL CONFORM TO ASTM A1008, GRADE C, D OR E OR ASTM A653, STRUCTURAL QUALITY. ROOF DECK SHALL BE GALVANIZED TO ASTM A924 G90 WHERE DECK IS LEFT PERMANENTLY EXPOSED. IN OTHER AREAS, GALVANIZED COATING SHALL BE GALVANIZED TO ASTM A924 G60.THE MINIMUM END LAP AND BEARING LENGTH SHALL BE 2 INCHES.

DECK GAGE AND SPAN: MINIMUM DECK GAGES SHOWN ARE BASED ON A 3 SPAN CONDITION WITH UNSHORED CONSTRUCTION. THE DECK SUPPLIER SHALL INCREASE DECK GAGES BASED ON ACTUAL DECK LAYOUT AND SPAN CONDITIONS TO PROVIDE THE LOAD CAPACITY SHOWN ON THE DRAWINGS.

MISC CLOSURE PLATES: PROVIDE RIDGE AND VALLEY PLATES, FILLER SHEETS, COLUMN CLOSURE PLATES, CELL CLOSURE PLATES, POUR STOPS AND MISCELLANEOUS LIGHT GAGE METAL SHAPES NECESSARY TO COMPLETE THE WORK. PROVIDE RUBBER CLOSURE IF SHOWN IN THE ARCHITECTURAL DRAWINGS. COORDINATE ALL CLOSURES WITH ELEVATOR, STAIR, ESCALATOR AND OTHER ARCHITECTURAL DETAILS.

DECK WELDING: DECK WELDING SHALL BE IN ACCORDANCE WITH STRUCTURAL WELDING CODE – SHEET STEEL, AWS D1.3. WELDERS SHALL BE QUALIFIED BY WABO LIGHT GAUGE CERTIFICATION.

ROOF DECK FASTENING: ROOF DECK FASTENING SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE. PROVIDE 5/8" DIAMETER PUDDLE WELDS AT 18" OC ALONG ALL LONGITUDINAL, TRANSVERSE AND PERIMETER SUPPORTS. PROVIDE 1" SIDE SEAM WELDS OR BUTTON PUNCHING AT 36" OC ALONG ALL SIDE LAP CONNECTIONS. PROVIDE WELDING WASHERS FOR DECK THICKNESSES LESS THAN 0.028".

DECK PENETRATIONS: COORDINATE ROOF DECK PENETRATIONS WITH THE TRADES THAT REQUIRE THEM. HOLES OR COMBINATIONS OF HOLES SHALL BE LAID OUT SO THAT ONLY ONE DECK RIB IS CUT IN ANY 24" WIDTH OF DECK THROUGHOUT THE SPAN. LARGER PENETRATIONS OR GROUPS OF PENETRATIONS REQUIRE SUPPLEMENTAL REINFORCING. SEE PLANS FOR DETAILS.

HANGING ELEMENTS: SUSPENDED CEILINGS, LIGHT FIXTURES, PIPES, DUCTS, MECHANICAL OR ELECTRICAL EQUIPMENT OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL DECK.

ATTACHMENT TO WOOD: STEEL COLUMNS AND POSTS LOCATED WITHIN WOOD STUD WALLS SHALL BE FASTENED TO THE WALL(S) WITH 5/8" DIAMETER WELDED THREADED STUDS SPACED AT 18" OC ON THE COLUMN OR POST.

PROJECT WELDERS: PROJECT WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO) FOR ALL OF THE WELDING POSITIONS NECESSARY TO COMPLETE THE WORK.

PROTECTED ZONES: WHERE INDICATED ON DRAWINGS, AREAS NOTED AS "PROTECTED ZONES" SHALL COMPLY WITH REQUIREMENTS OF THE AISC SEISMIC DESIGN MANUAL SECTION 7.4. THESE REQUIREMENTS INCLUDE THE FOLLOWING: 1) WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS SHALL BE REPAIRED AS REQUIRED BY THE ENGINEER OF RECORD 2) WELDED SHEAR STUDS AND DECKING ATTACHMENTS THAT PENETRATE THE BEAM FLANGE SHALL NOT BE PLACED ON BEAM FLANGES WITHIN THE PROTECTED ZONE. DECKING ARC SPOT WELDS AS REQUIRED TO SECURE DECKING SHALL BE PERMITTED. 3) WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS FOR PERIMETER EDGE ANGLES, EXTERIOR FAÇADES, PARTITIONS, PIPING OR OTHER CONSTRUCTION SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE.

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5-7-2024

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:

GENERAL STRUCTURAL NOTES

SCALE: NO SCALE
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:

S0.11

WOOD

REFERENCE STANDARDS: (USE VERSION REFERENCED BY GOVERNING CODE. IF NOT REFERENCED BY GOVERNING CODE, USE LATEST EDITION)

AF&PA AMERICAN FOREST AND PAPER ASSOCIATION, NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH 2018 SUPPLEMENT, NDS-2018

AF&PA AMERICAN FOREST AND PAPER ASSOCIATION, SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC, SDPWS-2015

MATERIAL PROPERTIES: SAWN LUMBER SHALL BE KILN-DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD GRADING RULES FOR WEST COAST LUMBER NO 17, LATEST EDITION. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

WALL STUDS AND PLATES	DF-LARCH NO 2	Fb = 900 PSI
JOISTS (2x,4x MEMBERS)	DF-LARCH NO 2	Fb = 900 PSI
BEAMS AND STRINGERS	DF-LARCH NO 1	Fb = 1350 PSI
POSTS AND TIMBERS	DF-LARCH NO 1	Fb = 1200 PSI Fc = 1000 PSI
OTHER	DF-LARCH	STANDARD GRADE

GLULAMS: GLUED-LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ANSI/AITC A190.1, ASTM D-3737, AITC 117 AND AITC 119. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2400 PSI, Fv = 165 PSI. CANTILEVERED AND MULTIPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 165 PSI. CAMBER ALL GLULAM BEAMS LESS THAN 3,500 FT RADIUS, UNLESS NOTED OTHERWISE. SPECIFIC CAMBER REQUIREMENTS FOR INDIVIDUAL GLULAM BEAMS ARE NOTED ON THE PLANS. COLUMNS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 165 PSI, Fc = 1650 PSI. GLULAM MEMBERS EXPOSED TO EXTERIOR CONDITIONS SHALL BE PRESSURE TREATED WITH THE MANUFACTURER'S STANDARD PRESSURE TREATMENT UNLESS OTHERWISE NOTED BY THE ARCH. SEAL ALL CUT ENDS.

STRUCTURAL COMPOSITE LUMBER: STRUCTURAL COMPOSITE LUMBER (PSL, LVL, AND LSL) SHALL BE MANUFACTURED IN A PLANT UNDER A PROCESS APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. PARALLEL STRAND LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH NER-481 GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER.

SCL TYPE	Fb (psi)	Fv (psi)	E (ksi)
PSL	2900	290	2000
LVL	2900	285	1800
LSL	2250	400	1500

MANUFACTURER: STRUCTURAL COMPOSITE LUMBER, WOOD I JOISTS AND PREFABRICATED TRUSS/JOIST MEMBERS SHOWN IN THE CONSTRUCTION DOCUMENTS ARE BASED ON PRODUCTS MANUFACTURED BY THE BOISE-CASCADE CORPORATION OR THE REDBUILT COMPANY.

ANCHOR & FASTENERS IN CONTACT WITH PRESSURE TREATMENT: ANCHOR BOLTS, PLATE WASHERS, THRU BOLTS, EXPANSION ANCHORS, EPOXY ANCHOR RODS, AND CONCRETE OR MASONRY HEAVY DUTY SCREW ANCHORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIP (ASTM A153). NAILS AND OTHER FASTENERS IN CONCTACT WITH PRESSURE TREATED LUMBER SHALL BE STAINLESS STEEL U.O.N.

PRESSURE TREATMENT: ALL PRESSURE TREATED WOOD MEMBERS SHALL BE IN ACCORDANCE WITH AWPA STANDARD U1, COMMODITY SPECIFICATION A.

MEMBER TYPE	AWPA U1 USE CATEGORY
WOOD MEMBER IN CONTACT WITH GROUND OR CONCRETE, OR LESS THAN 6" ABOVE GROUND	UC4B

LIGHT GAUGE CONNECTORS: LIGHT GAUGE STEEL CONNECTOR CALLOUTS REFER TO PRODUCTS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. INSTALL CONNECTORS TO ACHIEVE MAX RATED CAPACITY AND ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND THE DRAWINGS. LIGHT GAUGE STEEL CONNECTORS SHALL HAVE A G90 GALVANIZED FINISH U.O.N. LIGHT GAUGE STEEL CONNECTORS AND THEIR NAILS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL HAVE A G185 GALVANIZED FINISH (ZMAX). ALL FASTENERS FOR THESE CONNECTORS SHALL BE HOT-DIP GALVANIZED. FASTENERS FOR THE CONNECTORS SHALL BE THE SAME MATERIAL TYPE AND FINISH AS THE CONNECTOR. PROVIDE GRACE VYCOR DECK PROTECTOR AS A BARRIER BETWEEN GALVANIZED CONNECTORS AND PRESSURE TREATED WOOD.

CONTRACTOR'S OPTION: USE STAINLESS STEEL CONNECTORS AND FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD. DO NOT USE STAINLESS STEEL WITH GRACE VYCOR DECK PROTECTOR.

ANCHORS & FASTENERS IN CONTACT WITH PRESSURE TREATMENT: ANCHOR BOLTS, PLATE WASHERS, THRU BOLTS, EXPANSION ANCHORS, EPOXY ANCHOR RODS, AND CONCRETE OR MASONRY HEAVY DUTY SCREW ANCHORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIP (ASTM A153) OR MECHANICALLY GALVANIZED (ASTM B695 CLASS 55). NAILS AND OTHER FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIP GALVANIZED (ASTM A153 CLASS D) U.O.N.

PRESSURE TREATMENT:
DOUG FIR AND DOUG FIR LARCH MEMBERS EXPOSED TO MOISTURE OR IN UNCONDITIONED SPACES SHALL BE PRESSURE TREATED WITH ALKALINE COPPER QUAT (ACQ-C), U.O.N.

ALL TREATED WOOD MEMBERS SUCH AS SILL PLATES AND LEDGERS IN CONTACT WITH CONCRETE OR OTHER CEMENTITIOUS MATERIALS SHALL BE PRESSURE TREATED WITH DOT SODIUM BORATE.

CONTRACTOR'S OPTION WHERE WOOD IS IN CONTACT WITH CONCRETE AND IN CONDITIONED SPACE: PROVIDE TWO LAYERS OF 40# ASPHALT IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC. AND CONCRETE OR MASONRY SURFACE.

MOISTURE CONTENT: PROTECT WOOD FROM WEATHER SUCH THAT MOISTURE CONTENT AT THE TIME GYPSUM WALLBOARD IS APPLIED DOES NOT EXCEED 19%.

WOOD (CONT)

SHEATHING: WOOD STRUCTURAL PANELS AND SHEATHING SHALL CONFORM TO DOC PS-1. PANELS AND SHEATHING SHALL BE PLYWOOD UNLESS THE SUBSTITUTION MEETS ALL OF THE PROJECT REQUIREMENTS, INCLUDING APPROVAL BY THE ARCHITECT. PANELS PERMANENTLY EXPOSED TO WEATHER SHALL BE EXTERIOR TYPE. PANELS APPLIED TO EXTERIOR WALLS OR ROOFS SHALL BE MANUFACTURED WITH EXPOSURE 1 OR EXTERIOR RATED GLUE. PROTECT SHEATHING FROM WATER DAMAGE WHILE STORED AT JOB SITE. SHEATHING SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

ROOF SHEATHING SHALL BE 19/32" WITH PANEL SPAN RATING 40/20.

WALL SHEATHING SHALL BE 15/32" WITH PANEL SPAN RATING 32/16.

DEFERRED SUBMITTALS: ENGINEERED WOOD PRODUCTS ARE A DEFERRED SUBMITTAL. PRODUCTS SHALL BE DESIGNED BY THE MANUFACTURER FOR THE SPANS AND CONDITIONS SHOWN IN THE CONSTRUCTION DOCUMENTS AND SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S PUBLISHED SPECIFICATIONS. BRIDGING, BLOCKING, PRE-NOTCHED PLATES, ETC., SHALL BE DETERMINED, DETAILED AND FURNISHED BY THE MANUFACTURER. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS (COMPLETE WITH STRESS DIAGRAMS) TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. DESIGN SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER IN THE PROJECT STATE. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S SPECIFICATIONS.

TYPICAL FRAMING DETAILS: WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING SHALL CONFORM TO FASTENING SCHEDULE, IBC TABLE 2304.9.1. ALL NAILS SHALL BE COMMON UNLESS NOTED OTHERWISE. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. NAILS USED ON THE EXTERIOR OR SUBJECT TO MOISTURE SHALL BE GALVANIZED OR STAINLESS STEEL AS REQUIRED.

TABLE I
COMMON NAIL SIZE TABLE

SIZE	DIAMETER	LENGTH
6d	0.113	2"
8d	0.131	2-1/2"
10d	0.148	3"
12d	0.148	3-1/4"
16d	0.161	3-1/2"
20d	0.192	4"
30d	0.207	4-1/2"
40d	0.225	5"

THE TABLE LISTS THE NAILS USED TO ENGINEER THE WOOD FRAMING FOR THE PROJECT. ALL NAILS USED SHALL COMPLY WITH THE DIAMETERS AND LENGTHS NOTED. SPECIAL NAILS WILL BE NOTED IN THE CONSTRUCTION DOCUMENTS.

BOLTS: WOOD CONNECTION BOLTS SHALL CONFORM TO ASTM A307. BOLTS SHALL BE PROVIDED WITH LOCK WASHERS UNDER NUTS OR SELF-LOCKING NUTS. BOLT HOLES SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE.

OPENINGS: DETERMINE THE SIZE AND LOCATION OF OPENINGS, INCLUDING THOSE NOT SHOWN ON THE CONTRACT DRAWINGS, REQUIRED BY ALL TRADES. CONFIRM THAT THE TYPICAL AND SPECIAL FRAMING DETAILS SHOWN IN THE CONTRACT DRAWINGS COVER ALL OF THE CONDITIONS DETERMINED. REPORT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

GENERAL FRAMING:

WALLS: PROVIDE 2x6 STUDS AT 16" OC AT EXTERIOR WALLS 18 FT OR LESS IN HEIGHT, PROVIDE 2x6 STUDS AT 12" OC AT EXTERIOR WALLS GREATER THAN 18 FT IN HEIGHT, AND 2x4 STUDS AT 16" OC AT INTERIOR WALLS. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. PROVIDE ONE KING STUD AND ONE TRIMMER STUD EACH SIDE OF OPENINGS. HEADERS SHALL BE TWO-2x8 MINIMUM UNLESS NOTED OTHERWISE. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 8'-0" IN HEIGHT. STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS WITH 8" EMBEDMENT AT 4'-0" OC UNLESS INDICATED OTHERWISE. MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TOGETHER PER THE TYPICAL DETAILS.

SHEATHING LAYOUT: LAY ROOF AND FLOOR SHEATHING WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED WITH 8d NAILS AT 6" OC TO FRAMED PANEL EDGES AND OVER STUD WALLS AS SHOWN ON PLANS AND AT 12" OC TO INTERMEDIATE SUPPORTS. SEE THE DRAWINGS FOR THE LOCATION OF BLOCKED DIAPHRAGMS, IF ANY. PROVIDE APPROVED EDGE CLIPS CENTERED BETWEEN FRAMING MEMBERS AT UNBLOCKED ROOF SHEATHING EDGES WHEN SHEATHING IS LESS THAN 19/32" THICK. FLOOR SHEATHING AND ROOF SHEATHING 19/32" AND THICKER SHALL HAVE APPROVED TONGUE-AND-GROOVE EDGES JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. GLUE FLOOR SHEATHING TO FRAMING AT PANEL EDGES AND INTERMEDIATE SUPPORTS. PROVIDE FLAT 2x BLOCKING AT UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED AT BLOCKED FLOOR AND ROOF DIAPHRAGMS. TOENAIL BLOCKING TO SUPPORTS WITH 16d AT 12" OC.

HURRICANE CLIPS: PROVIDE SIMPSON HI OR H3 HURRICANE CLIPS FROM ROOF TRUSSES, RAFTERS AND CANTILEVERED RAFTERS TO THE WALL TOP PLATES OR SUPPORTING BEAMS UNLESS ANOTHER HURRICANE CLIP IS NOTED. PROVIDE WEB BLOCKING AT WOOD I JOISTS RECEIVING HURRICANE CLIPS.

VENTING: THE STRUCTURAL DRAWINGS DO NOT SHOW VENTING DETAILS AT ROOFS AND OTHER ENCLOSED SPACES. SEE ARCH FOR VENTING REQUIREMENTS, IF ANY.

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CITY OF SEATAC EST 1990

PERMIT SET

ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:

GENERAL STRUCTURAL NOTES

SCALE: NO SCALE
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:
S0.12

STATEMENT OF SPECIAL INSPECTION NOTES:

1. SPECIAL INSPECTIONS SHALL CONFORM TO SECTION 1705 OF THE 2021 IBC, CONTRACT DOCUMENTS AND APPROVED SUBMITTALS. REFER TO SPECIAL INSPECTION AND TESTING TABLES FOR PROJECT REQUIREMENTS.
2. SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE STRUCTURAL ENGINEER ARCHITECT A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE APPROVED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1(1) OF AWS D1.1.
3. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS.
4. THE SPECIAL INSPECTOR AND GEOTECHNICAL ENGINEER SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, STRUCTURAL ENGINEER, ARCHITECT, CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.
5. QUALITY ASSURANCE (QA) IS REQURIED FOR STRUCTURAL STEEL ITEMS PER AISC 360 AND 341 UNLESS SPECIFICALLY NOTED OTHERWISE. QUALITY CONTROL (QC) TO BE PROVIDED BY THE FABRICATOR, ERECTOR OR OTHER RESPONSIBLE CONTRACTOR AS APPLICABLE. CONTRACTOR AND SPECIAL INSPECTOR TO DOCUMENT QUALITY CONTROL AS REQUIRED IN AISC 360 SECTION N3 AND AISC 341 SECTION J2.
6. **INSPECTION TYPES:**
   CONTINUOUS : THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.
   PERIODIC : THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.
   OBSERVE : OBSERVE THESE FUNCTIONS ON A RANDOM, DAILY BASIS. OPERATIONS NEED NOT BE DELAYED PENDING OBSERVATIONS.
   PERFORM : INSPECTIONS SHALL BE PERFORMED PRIOR TO THE FINAL ACCEPTANCE OF THE ITEM.
7. PERFORM INSPECTION PRIOR TO FINAL ACCEPTANCE OF THE ITEM FOR TEN WELDS TO BE MADE BY A GIVEN WELDER, WITH THE WELDER DEMONSTRATING UNDERSTANDING OF REQUIREMENTS AND POSSESSION OF SKILLS AND TOOLS TO VERIFY THESE ITEMS, THE PERFORM DESIGNATION OF THIS TASK SHALL BE REDUCED TO OBSERVE, AND THE WELDER SHALL PERFORM THIS TASK. SHOULD THE INSPECTOR DETERMINE THAT THE WELDER HAS DISCONTINUED PERFORMANCE OF THIS TASK, THE TASK SHALL BE RETURNED TO PERFORM UNTIL SUCH TIME AS THE INSPECTOR HAS RE-ESTABLISHED ADEQUATE ASSURANCE THAT THE WELDER WILL PERFORM THE INSPECTION TASKS LISTED.
8. SPECIAL INSPECTION OF MECHANICAL POST INSTALLED ANCHORS SHALL BE IN STRICT CONFORMANCE WITH THE ICC REPORT AND MANUFACTURER'S INSTALLATION REQUIREMENTS. ANCHOR INSTALLERS SHALL BE QUALIFIED AS REQUIRED BY JURISDICTION REQUIREMENTS.
   - INSPECTION REPORTS SHALL IDENTIFY NAMES OF INSTALLERS.
   - SPECIAL INSPECTOR SHALL PROVIDE DOCUMENTATION AT THE END OF ANCHOR INSTALLATIONS STATING THAT THE ANCHORS WERE INSPECTED PER APPROVED ANCHOR EVALUATION REPORT.
9. **TESTING ABBREVIATIONS:**
   NDT - NON-DESTRUCTIVE TESTING
   C.J.P. - COMPLETE JOINT PENETRATION
   MT - MAGNETIC PARTICLE TESTING
   RBS - REDUCED BEAM SECTION
10. DOCUMENT (D): INDICATES CONTRACTOR AND SPECIAL INSPECTOR TO PROVIDE DOCUMENTATION IN ACCORDANCE WITH AISC 341.

CONTRACTOR RESPONSIBILITY:

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE MAIN WIND-OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND-OR SEISMIC-RESISTING COMPONENT LISTED THE TABLES SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:

ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

1. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.
2. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND DISTRIBUTION OF THE REPORTS.
3. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

TESTING NOTES:

1. CASTELLATED BEAM POST TESTING REQUIREMENTS:

   (A.) PROVIDE ULTRASONIC TESTING ON THE GREATER OF 20% OF ALL WELDS OR FOUR WEB POST WELDS AT EACH CASTELLATED BEAM. THIS SHALL INCLUDE THE FIRST WEB POST AT EACH END OF THE BEAM AS WELL AS A MINIMUM OF TWO ADDITIONAL WEB POST WELDS SELECTED AT RANDOM FROM THE INTERIOR OF EACH BEAM SPAN. ULTRASONIC TESTING SHALL BE DONE IN ACCORDANCE WITH AWS D1.1 CRITERIA AND SHALL BE EVALUATED AGAINST ACCEPTANCE CRITERIA FOR STATICALLY LOADED STRUCTURES.

   (B.) FREQUENCY OF ULTRASONIC TESTING MAY BE REDUCED TO TWO MINIMUM WEB POSTS AT EACH BEAM ONCE A MINIMUM OF TEN BEAMS HAVE BEEN TESTED WITH OUT REJECTABLE FLAWS. TESTS SHALL INCLUDE ONE OF THE END WEB POSTS AND ONE POST SELECTED AT RANDOM ON EACH SUBSEQUENT BEAM.

   (C.) WHERE REJECTABLE FLAWS ARE ENCOUNTERED, THEY SHALL BE EVALUATED BY THE CELLULAR BEAM DESIGNER FOR DETERMINATION OF ANY NECESSARY REPAIRS, SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER OF RECORD.

   (D.) WHERE REJECTABLE FLAWS ARE DETECTED AND REPAIRS ARE REQUIRED PER ITEM (C.) ABOVE, 100% OF ALL WEB POST WELDS FOR THAT PARTICULAR BEAM SHALL BE TESTED. AND SAMPLING FREQUENCY FOR SUBSEQUENT BEAMS SHALL REVERT TO THE REQUIREMENTS STATED IN ITEM (A.) UNTIL AN ACCEPTABLE PASS RATE CAN AGAIN BE ESTABLISHED AS NOTED IN ITEM (B.)

SOILS/GEOTECHNICAL - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
SOILS					
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	1705.6	GEOTECHNICAL REPORT		X	BY THE GEOTECHNICAL ENGINEER OR QUALIFIED SPECIAL INSPECTOR
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL				X	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS				X	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL			X		
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY				X	

SOILS/GEOTECHNICAL - TESTING

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6	VARIES; GEOTECHNICAL REPORT OR MINIMUM PER IBC APPENDIX J107.5, WHICHEVER IS GREATER		X	BY THE GEOTECHNICAL ENGINEER OR QUALIFIED SPECIAL INSPECTOR
MATERIAL VERIFICATION		VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X	BY THE GEOTECHNICAL ENGINEER OR QUALIFIED SPECIAL INSPECTOR

GENERAL - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
FABRICATORS	1705.10 1704.2.5				SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS SHALL BE PERFORMED DURING FABRICATION. PERFORMING SPECIAL INSPECTIONS IS NOT REQUIRED, WHERE FABRICATOR HAS BEEN APPROVED AS AN APPROVED FABRICATOR, PER SECTION 1704.2.5.1.
DEFERRED SUBMITTALS				X	SPECIAL INSPECTION REQUIREMENTS FOR DEFERRED SUBMITTAL ITEMS, INCLUDING REQUIREMENTS FOR DESIGNATED SEISMIC SYSTEMS IN ACCORDANCE WITH IBC SECTION 1705.12.4 IF APPLICABLE, TO BE SPECIFIED BY THE SYSTEM ENGINEER AND INCLUDED WITH DEFERRED SUBMITAL DOCUMENTS.
SUBMITTALS TO THE BUILDING OFFICIAL	1704.5			X	CERTIFICATES OF COMPLIANCE, REPORTS OF PRE-CONSTRUCTION TESTS, OR REPORTS OF MATERIAL PROPERTIES SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.
POST INSTALLED ADHESIVE ANCHORS WITH SUSTAINED TENSION LOADS INSTALLED HORIZONTALLY OR AT AN UPWARD INCLINE IN HARDENED CONCRETE AND COMPLETED MASONRY			X		
POST INSTALLED MECHANICAL ANCHORS AND ADHESIVE ANCHORS (EXCLUDING CONDITIONS NOTED ABOVE) IN HARDENED CONCRETE AND COMPLETED MASONRY				X	
WIND RESISTING COMPONENTS - SPECIAL INSPECTIONS					
ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS	1705.11.3			X	
EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING	1705.11.3			X	

REQUIRED SPECIAL INSPECTIONS for SEISMIC RESISTANCE

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
ARCHITECTURAL COMPONENTS					
ERECTION AND FASTENING OF EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS AND INTERIOR AND EXTERIOR VENEER	1705.12.5			X	REFERENCE CODE EXCEPTIONS
ERECTION AND FASTENING OF EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS AND INTERIOR AND EXTERIOR VENEER 30 FT AND GREATER IN HEIGHT ABOVE GRADE OR WALKING...	1705.12.5			X	REFERENCE CODE EXCEPTIONS
ERECTION AND FASTENING OF EXTERIOR CLADDING AND INTERIOR AND EXTERIOR VENEER WEIGHING 15 PSF AND GREATER.	1705.12.5			X	REFERENCE CODE EXCEPTIONS
ERECTION AND FASTENING OF INTERIOR NONBEARING WALLS WEIGHING 15 PSF OR GREATER.	1705.12.5			X	REFERENCE CODE EXCEPTIONS
INSTALLATION OF ANCHORAGE OF STORAGE RACKS 8 FEET OR GREATER IN HEIGHT IN STRUCTURES	1705.12.7	ASCE 7-16 Section 15.5.3		X	
ANCHORAGE OF SUSPENDED CEILING SYSTEMS		ASCE 7-16 SECTION 13.5.6		X	REQUIRED PER STATE OF OREGON BUILDING CODES DIVISION INTERPRETATIONS
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1705.12.5			X	
ELECTRICAL COMPONENTS					
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1705.12.6			X	
INSTALLATION OF ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT	1705.12.6			X	
INSTALLATION OF VIBRATION ISOLATION SYSTEMS WHERE THE CONSTRUCTION DOCUMENTS REQUIRE A NOMINAL CLEARANCE OF 0.25 INCHES OR LESS BETWEEN THE EQUIPMENT SUPPORT FRAME AND RESTRAINT	1705.12.6			X	
INSTALLATION OF ELECTRICAL EQUIPMENT WHERE AUTOMATIC FIRE SPRINKLER SYSTEMS ARE INSTALLED	1705.12.6			X	ASCE 1705.12.6.1 MINIMUM CLEARANCES PROVIDED PER ASCE 13.2.3, ASCE 1705.12.6.2, OTHER CLEARANCES BETWEEN BUILDING SPRINKLER SYSTEM AND BUILDING STRUCTURE.
PLUMBING MECHANICAL COMPONENTS					
INSTALLATION OF PIPING SYSTEM MEANT TO CARRY HAZARDOUS MATERIALS AND THEIR ASSOCIATED MECHANICAL UNITS	1705.12.6			X	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.12.6			X	
INSTALLATION OF MECHANICAL EQUIPMENT, INCLUDING DUCT WORK, PIPING AND THEIR STRUCTURAL SUPPORTS WHERE AUTOMATIC FIRE SPRINKLER SYSTEMS ARE INSTALLED	1705.12.6			X	ASCE 1705.12.6.2 CHECKING FOR MINIMUM CLEARANCES. FLEXIBLE SPRINKLER HOSE FITTINGS ARE EXEMPT FROM THIS REQUIREMENT.
BUILDING MECHANICAL COMPONENTS					
INSTALLATION OF HVAC DUCTWORK THAT WILL CONTAIN HAZARDOUS MATERIALS	1705.12.6			X	
DESIGNATED SEISMIC SYSTEM VERIFICATION					
DESIGNATED SEISMIC SYSTEM VERIFICATION	1705.12.4			X	VERIFY THAT THE LABEL, ANCHORAGE OR MOUNTING CONFORMS TO THE CERTIFICATE OF COMPLIANCE. DESIGNATED SEISMIC SYSTEMS SHALL BE QUALIFIED IN ACCORDANCE WITH ASCE 7-16 13.2.2

REQUIRED TESTING for SEISMIC RESISTANCE

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
NONSTRUCTURAL COMPONENTS					
PROJECT-SPECIFIC COMPONENT TESTING OF NONSTRUCTURAL COMPONENTS SUPPORTS OR ATTACHMENTS MOUNTING SYSTEMS OR ANCHORAGE	1705.13.2	ASCE 7 - SECTION 13.2.1		X	CERTIFICATES OF COMPLIANCE FOR THE SEISMIC QUALIFICATION PREPARED BY OR REVIEWED AND ACCEPTED BY A REGISTERED DESIGN PROFESSIONAL OVERSEEING WORK SHALL ACCOMPANY ALL PROJECT SPECIFIC TESTS AND EXPERIENCE DATA.
DESIGNATED SEISMIC SYSTEMS					
PROJECT-SPECIFIC COMPONENT TESTING OF MECHANICAL, ELECTRICAL OR PLUMBING COMPONENTS INCLUDING MOUNTING SYSTEMS OR ANCHORAGE	1705.13.3	ASCE 7 - SECTION 13.2.1, 13.2.2		X	CERTIFICATES OF COMPLIANCE FOR THE SEISMIC QUALIFICATION PREPARED BY OR REVIEWED AND ACCEPTED BY A REGISTERED DESIGN PROFESSIONAL OVERSEEING WORK SHALL ACCOMPANY ALL PROJECT SPECIFIC TESTS AND EXPERIENCE DATA.

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5-9-2024

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CITY OF SEATAC Est. 1990

PERMIT SET

ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:

SPECIAL INSPECTION TABLES

SCALE:
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:

S0.20

STRUCTURAL OBSERVATION

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
AS REQUIRED BY THE DESIGN PROFESSIONAL	1704.6.1				
AS REQUIRED BY BUILDING OFFICIAL	1704.6.1				
SEISMIC RESISTANCE FOR RISK CATEGORY I AND II	1704.6.2			X	SEE COMMENTARY

CONCRETE - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
GENERAL	1705.3 1901.6	ACI 318: 26.13			SPECIAL INSPECTIONS OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1705.3 OF THE IBC AND SECTION 26.13 OF ACI 318.
REINFORCING STEEL PLACEMENT	1901.5.2 1908.4	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3, 26.13.3.3		X	REINFORCING TO COMPLY WITH ALL CODE PROTECTION, SPACING AND TOLERANCE LIMITS.
WELDING REINFORCING STEEL	1705.3.1 1705.3.2 1903.1 1903.2	AWS D1.4 ACI 318: 26.6.4			
1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706				X	
2. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16" FILLET				X	
3. ALL OTHER REINFORCING STEEL WELDING			X		
INSPECT ANCHORS/BOLTS CAST IN CONCRETE	-	ACI 318: 17.8.2	X	X	ALL CAST-IN-PLACE ANCHORS/BOLTS SHALL BE VISUALLY INSPECTED. REFERENCE STEEL INSPECTIONS FOR ADDITIONAL INSTALLATION, MATERIAL AND WELDING INSPECTIONS OF STEEL ITEMS EMBEDDED IN CONCRETE (HEADED STUDS, DBA's, ETC.)
VERIFYING USE OF REQUIRED MIX DESIGN(S)	1904.1 1904.2 1908.2 1908.3	ACI 318: CH. 19, 26.4.3, 26.4.4		X	
CONCRETE SPECIMENS FOR TESTING	1908.10	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	X		PRIOR TO CONCRETE PLACEMENT, FABRICATE CONCRETE SPECIMENS FOR TESTING. SEE THE CONCRETE TESTING TABLE FOR ADDITIONAL INFORMATION.
CONCRETE PLACEMENT, NON-SHRINK GROUT	1908.6, 1908.7, 1908.8	ACI 318: 26.5, 26.13.3.2(a)	X		
CONCRETE CURING	1908.9	ACI 318: 26.5.3 - 26.5.5, 26.13.3.3		X	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES
VERIFICATION OF FORMWORK		ACI 318: 26.11.1.2(b), 26.13.3.3		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
EMBEDDED ITEMS IN CONCRETE				X	ALL NON-STRUCTURAL EMBEDDED ITEMS, SUCH AS CONDUITS, PIPES AND SLEEVES, SHALL BE REVIEWED FOR CONFORMANCE WITH STRUCTURAL DOCUMENTS FOR SIZE, SPACING, LOCATION, EDGE DISTANCE AND TRIM REINFORCING.

CONCRETE - TESTING

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)	REMARKS
CONCRETE STRENGTH	1705.3 ASTM C172 ASTM C 31 ACI 318 26.12,...	ASTM C39	EACH 150 CY NOR LESS THAN EACH 5000 SF OF SLAB OR WALL PLACED EACH SHIFT	FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED
CONCRETE SLUMP		ASTM C143		
CONCRETE AIR CONTENT		ASTM C231		
CONCRETE TEMPERATURE		ASTM C1064		

LIGHT GAUGE AND OTHER STEEL - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
LIGHT GAUGE WELDING					
MATERIAL VERIFICATION OF WELD FILLER METALS		AWS D1.3		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S				X	RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS				X	RETAIN A RECORD OF QUALIFICATION CARDS
COLD FORMED ROOF AND FLOOR DECKS - WELDING, MATERIALS TEST REPORTS AND CERTIFICATIONS	1705.2.2	SDI QA/QC, AWS D1.3		X	WELDING INSPECTION AND INSPECTOR QUALIFICATION
GENERAL					
IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	1705.2.2 1705.2.3 1705.2.4 TABLE 1705.2-4	APPLICABLE ASTM STANDARDS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION: REQUIRED SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE					
WELDING OF ELEMENTS OF THE SEISMIC FORCE RESISTING SYSTEMS	1705.12.3	AWS D1.3		X	ALL WELDS VISUALLY INSPECTED PER AWS D1.3 7.1
SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE SEISMIC-FORCE-RESISTING SYSTEM, INCLUDING SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS (DRAG STRUTS) AND HOLD-DOWNS	1705.12.3	AWS D1.3		X	EXCEPTION: NOT REQUIRED FOR SHEAR WALLS, BRACES, DIAPHRAGMS, DRAG STRUT AND HOLD-DOWNS. IF SHEATHING IS GYP OR FIBERBOARD OR IF SHEATHING IS WOOD STRUCTURAL PANEL/STEEL SHEET ONE SIDE ONLY AND FASTENER SPACING IS GREATER THAN 4" ON CENTER
COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION: REQUIRED SPECIAL INSPECTIONS FOR WIND RESISTANCE					
WELDING OF ELEMENTS OF THE MAIN WINDFORCE-RESISTING SYSTEM, INCLUDING SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS, DRAG STRUTS AND HOLDDOWNS	1705.11.2	AWS D1.3		X	ALL WELDS VISUALLY INSPECTED PER AWS D1.3 7.1
SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING OF MAIN WINDFORCE-RESISTING SYSTEM ELEMENTS INCLUDING SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS, DRAG STRUTS AND HOLDDOWNS				X	NOT REQUIRED IF SHEATHING IS GYP OR FIBERBOARD. ADDITIONALLY IS NOT REQUIRED IF SHEATHING IS WOOD STRUCTURAL PANEL OR STEEL SHEETS ON ONLY ONE SIDE OF THE SHEAR WALL, SHEAR PANEL OR DIAPHRAGM ASSEMBLY AND THE FASTENER SPACING OF THE SHEATHING IS 4 INCHES...

MASONRY MINIMUM VERIFICATION REQUIREMENTS

MINIMUM VERIFICATION	REQUIRED FOR QUALITY ASSURANCE LEVEL			CODE REFERENCE	REMARKS
	QUALITY ASSURANCE LEVEL 1	QUALITY ASSURANCE LEVEL 2	QUALITY ASSURANCE LEVEL 3	TMS 602-16 Table 3 (S-25)	
PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS.	R	R	R	ART. 1.5	
PRIOR TO CONSTRUCTION VERIFICATION OF f'm AND f'AAC, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.	NR	R	R	ART. 1.4 B	
DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE.	NR	R	R	ART. 1.5 & 1.6.3	
DURING CONSTRUCTION, VERIFICATION OF f'm AND f'AAC FOR EVERY 5,000 SQ. FT.	NR	NR	R	ART 1.4 B	
DURING CONSTRUCTION, VERIFICATION OF PROPORTIONS OF MATERIALS AS DELIVERED TO THE PROJECT SITE FOR PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT, AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT.	NR	NR	R	ART 1.4 B	

NOTE: R=REQUIRED, NR=NOT REQUIRED (SEE NOTE 6)

MASONRY MINIMUM SPECIAL INSPECTION REQUIREMENTS

INSPECTION TASK	FREQUENCY			CODE REFERENCE		REMARKS
	QUALITY ASSURANCE LEVEL 1	QUALITY ASSURANCE LEVEL 2	QUALITY ASSURANCE LEVEL 3	TMS 402-16	TMS 602-16 Table 4 (S-26)	
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
A. PROPORTIONS OF SITE-PREPARED MORTAR	NR	P	P		ART. 2.1, 2.6 A, & 2.6 C	
B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS	NR	P	P		ART 3.4 & 3.6 A	
C. SAMPLE PANEL CONSTRUCTION	NR	P	C		ART. 1.6 D	
2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
A. GROUT SPACE	NR	P	C		ART. 3.2 D & 3....	
B. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	NR	P	C	SEC. 6.1, 6.3.1, 6.3.6 &6.3.7	ART. 3.2 E & 3.4	REFERENCE THE GENERAL TABLE FOR SPECIAL INSPECTION REQUIRE...
C. PROPORTIONS OF SITE-PREPARED GROUT	NR	P	P		ART. 2.6 B & 2.4 G.1.b	
3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:						
A. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	NR	P	P		ART. 1.5	
B. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	NR	P	P		ART. 3.3 B	
C. SIZE AND LOCATION OF STRUCTURAL MEMBERS	NR	P	P		ART. 3.3 F	
D. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	NR	P	C	SEC. 1.2.1 (e), 6.2.1 & 6.3.1		
E. WELDING OF REINFORCEMENT	NR	C	C	SEC. 6.1.6.1.2		
F. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 F) OR HOT WEATHER (TEMPERATURE ABOVE 90 F)	NR	P	P		ART. 1.8 C & 1.8 D	
4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/ OR PRISMS	NR	P	C		ART. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3 & 1.4 B.4	

NOTE: R=REQUIRED, NR=NOT REQUIRED, P=PERIODIC, C=CONTINUOUS (NOTE 6)

MASONRY- REQUIRED TESTING

SYSTEM OR MATERIAL	IBC CODE REFERENCE OR REFERENCED STANDARD	REMARKS
UNIT STRENGTH METHOD-MASONRY UNIT	IBC 1705.4 , TMS 602 1.4.B, TMS 602.2.3, TMS 602 2.3 E, ASTM REFERENCES PER REMARKS	CONCRETE MASONRY (ASTM C90) CONCRETE MASONRY UNIT MATERIALS TO CONFORM TO ASTM C55, C73, C90, C129, C744, OR C1634 AS SPECIFIED. CLAY MASONRY (ASTM C62, ASTM C216, OR ASTM C652), CLAY OR SHALE MASONRY UNITS TO CONFORM TO ASTM C34, C56, C62, C126, C212, C216, C652, C1088, OR C1405 OR TO ANSI A 137.1 AS SPECIFIED. AAC MASONRY UNITS TO CONFORM TO ASTM C1691 AND ASTM C1693.
UNIT STRENGTH METHOD-COMPRESSIVE STRENGTH OF MORTAR	IBC 1705.4, TMS 602 2.1 , ASTM C270	MORTAR SHALL COMPLY WITH ASTM C270 . FOR AAC (ASTM C1660)
UNIT STRENGTH METHOD-COMPRESSIVE STRENGTH OF GROUT	IBC 1705.4, TMS 602 2.2, ASTM C476	GROUT SHALL COMPLY WITH ASTM C476. WHEN f'm EXCEEDS 2,000 PSI PROVIDE COMPRESSIVE STRENGTH THAT EQUALS OR EXCEEDS f'm. DETERMINE COMPRESSIVE STRENGTH OF GROUT IN ACCORDANCE WITH ASTM C1019. DO NOT USE ADMIXTURES UNLESS ACCEPTABLE. FIELD ADDITION OF ADMIXTURES IS NOT PERMITTED IN SELF-CONSOLIDATING GROUT.
PRISM TEST METHOD	IBC 1705.4, TMS 602 1.4 B.2.3, 1.4 B.4, ASTM C1314	FOR BOTH CLAY AND CONCRETE MASONRY,TEST IN ACCORDANCE WITH ASTM C1314. DETERMINE LENGTH, WIDTH AND HEIGHT DIMENSIONS OF THE PRISM AND TEST PRISMS WHEN AT LEAST 28 DAYS OLD IN ACCORDANCE WITH ASTM...
TESTING PRISMS FROM CONSTRUCTED MASONRY	IBC 1705.4, TMS 602 1.4 B.4.a, 1.4 B.4.b, 1.4 B.4.c, ASTM C1532	PRISM SAMPLING AND REMOVAL- FOR EACH 5000 SQUARE FEET OF WALL AREA IN QUESTION, SAW-CUT A MINIMUM OF THREE PRISMS FROM COMPLETED MASONRY. SELECT, REMOVE, AND TRANSPORT PRISMS PER ASTM C1532/C1532M.

General Notes:
1.4 B.1 or 1.4 B.2 Either the Unit Strength Method or the Prism Test Method may be chosen to satisfy special inspections compressive strength for each wythe.

WOOD - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
WOOD - REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
FABRICATION OF PREFABRICATED STRUCTURAL ELEMENTS	1705.5			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
WOOD - REQUIRED SEISMIC RESISTANCE INSPECTIONS					
CONNECTIONS FOR DIAPHRAGM CHORDS, COLLECTORS, BRACING, AND SHEAR WALL ANCHORAGE AND HOLDOWNS	1705.12.2			X	ALL FASTENERS/CONNECTIONS VISUALLY INSPECTED

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STEEL - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	INSPECTION (NOTES 5 AND 6)		REMARKS
			CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	
CONTRACTOR QUALITY CONTROL REQUIREMENTS		AISC 360 CHAPTER N	X	X	CONTRACTOR TO PROVIDE QUALITY CONTROL FOR ALL ITEMS INDICATED TO BE OBSERVED AND/OR PERFORMED IN TABLE BELOW
STEEL FABRICATION					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.1	AISC 360		X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STRUCTURAL STEEL COMPONENTS	1505.2.1 2203.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N3.2		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS, AND WASHERS	1705.2.1.2 AISC 360 N5 TABLE 1705.2-2	AISC 360 A3.3 AISC 360 N3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS RCSC 2.1		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS		AISC 360 A3.4 AISC 360 N3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	1705.2.1.1 TABLE 1705.2-5	AISC 360 A3.5 AISC 360 N3.2 APPLICABLE AWS A5...		X	MANUFACTURER'S CERTIFIED TEST REPORTS
STRUCTURAL STEEL WELDING					
VERIFYING USE OF PROPER WPS'S	1705.2.1 AWS D1.1	AISC 360 N3.2			RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS		AWS D1.1		X	RETAIN A RECORD OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	TABLE 1705.2-6	AWS D1.1 CLAUSE 6	X		
MULTIPASS FILLET WELDS			X		
SINGLE PASS FILLET WELDS GREATER THAN 5/16"			X		ALL WELDS VISUALLY INSPECTED PER AWS D1.16.9
PLUG AND SLOT WELDS			X		
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"				X	
WELDING STAIR AND RAILING SYSTEMS	1705.2(2.5)	AWS D1.1 CLAUSE 6		X	ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
VERIFICATION OF JOINT & CONNECTION DETAILS INCLUDING MEMBER AND COMPONENT LOCATIONS, BRACING, AND STIFFENERS	TABLE 1705.2-7	AWS D1.1		X	
STEEL ELEMENTS OF COMPOSITE CONSTRUCTION					
INSTALLATION OF STEEL DECKING IN COMPOSITE SLABS	1705.1.1	ICC EVALUATION REPORT AWS D1.1 ASCE 9...		X	SPECIAL INSPECTIONS APPLY TO DECKING TYPE, DEPTH, GAUGE, FASTENING
PLACEMENT AND INSTALLATION OF STEEL HEADED STUDS IN COMPOSITE SLABS INSTALLED WITH AN AUTOMATIC TIMED STUD WELDING MACHINE	1705.2 (3)	AWS D1.1 CLAUSE 7		X	SIZE, SPACING AND WELDS OF HEADED STUDS ON GRAVITY BEAMS
PLACEMENT AND INSTALLATION OF STEEL HEADED STUDS IN COMPOSITE SLABS HAND WELDED	1705.2 (2.3)	AWS D1.1 CLAUSE 7	X		SIZE, SPACING AND WELDS OF HEADED STUDS ON GRAVITY BEAMS
INSTALLATION OF ROOF DECKING	1705.1.1	ICC EVALUATION REPORT		X	SPECIAL INSPECTIONS APPLY TO DECKING TYPE, DEPTH AND GAUGE, POWER ACTUATED FASTENERS, SCREWS, PROPRIETARY SIDE SEAM ATTACHMENTS, AND BUTTON PUNCHES AND SHEAR CONNECTORS
FLOOR AND ROOF DECK WELDS	1705.2.1 TABLE 1705.2-6	AWS D1.3		X	ALL WELDS INSPECTED PER AWS D1.3 CLAUSE 8
FIELD INSTALLED DBA'S IN DIAPHRAGMS		AWS D1.1 CLAUSE 7		X	SEE STEEL-LATERAL TABLE FOR DBA'S PART OF THE LFRS. NO REQUIREMENTS FOR SHOP INSTALLED...
WELDED REBAR ANCHORS IN DIAPHRAGMS		AWS D1.4		X	SEE STEEL-LATERAL TABLE FOR WELDED ANCHORS PART OF THE LFRS. PER GSN #6 AND LARGER BARS ARE TO BE WELDED.
REINFORCING STEEL WELDING/SPLICING		AWS D1.5		X	
HIGH-STRENGTH BOLTING					
SNUG-TIGHT BOLT INSTALLATION	1705.2.1 TABLE 1705.2-2 AISC 360 M2-5 AISC 360 N5-6	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9 AISC 360 SECTION M2.5		X	ALL CONNECTIONS VISUALLY INSPECTED AND VERIFIED SNUG
PRETENSIONED BOLT INSTALLATION USING TURN-OF-THE-NUT METHOD WITH MATCH MARKING, DIRECT TENSION INDICATOR METHOD, OR TWIST-OFF TYPE TENSION CONTROL BOLT METHOD				X	ALL CONNECTIONS VISUALLY INSPECTED. CONNECTIONS USING DIRECT TENSION INDICATORS, ALL BOLTS SHALL BE INSPECTED AFTER SNUGGING AND AFTER PRETENSIONING
PRETENSIONED BOLT INSTALLATION USING TURN-OF-THE-NUT METHOD WITHOUT MATCH MARKING OR CALIBRATED WRENCH METHOD			X		ALL CONNECTIONS VISUALLY INSPECTED

STEEL - SPECIAL INSPECTIONS (CONT)

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	INSPECTION (NOTES 5 AND 6)		REMARKS
			CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	
INSPECTION TASKS PRIOR TO BOLTING					
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-1 AISC 360 M2.5	X		
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS				X	
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH, IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)				X	
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL				X	
CONNECTING ELEMENTS< INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS				X	
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED				X	
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS				X	
INSPECTION TASKS DURING BOLTING					
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-2 AISC M2.5 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9		X	
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION				X	
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING				X	
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES				X	
INSPECTION TASKS AFTER BOLTING					
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-3	X		

STEEL - TESTING

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)	REMARKS
STEEL				
ULTRASONIC (UT) TESTING OF WELDS	**1705.2.1**	AWS D1.1 6.13 & 6.14.3		ALL C.J.P. WELDS 5/16" AND THICKER REQUIRE UT TESTING.
MAGNETIC PARTICLE (MT) TESTING OF WELDS	**1705.2.1**	AWS D1.1 6.14.4 AISC360 N5.5c		REQUIRED AT THERMALLY CUT ACCESS HOLES WHERE FLANGE THICKNESS EXCEEDS 2" FOR ROLLED SHAPES OR WHEN THE WEB THICKNESS EXCEEDS 2" FOR BUILT-UP SHAPES. REQUIRED WHERE SPECIFICALLY NOTED ON DRAWINGS
PRE-CONSTRUCTION TESTING OF WELDING STUDS, WELDED REINFORCING BARS AND DBA'S	**1705.2.1**	AWS D1.1 7.7.1	EACH SIZE AND TYPE OF STUD/BAR EACH SHIFT	THIS TESTING PERFORMED BY CONTRACTOR AND CONFIRMED BY SPECIAL INSPECTOR
STUD/DBA APPLICATION QUALIFICATION	**1705.2.1**	AWS D1.1 7.6	NON-PREQUALIFIED APPLICATIONS	THIS TESTING PERFORMED BY CONTRACTOR AND CONFIRMED BY SPECIAL INSPECTOR
PRE-INSTALLATION VERIFICATION OF PRETENSIONED HIGH STRENGTH BOLTS	**1705.2.1**	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 7	EACH COMBINATION OF DIAMETER, LENGTH, GRADE, AND LOT TO BE USED IN THE WORK	
CASTELLATED AND CELLULAR BEAMS				SEE TESTING NOTE 1
STAINLESS STEEL				
ULTRASONIC (UT) TESTING OF WELDS		AWS D1.6 6.13 AWS D1.6.7		REQUIRED WHERE SPECIFICALLY NOTED ON DRAWINGS

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STEEL LATERAL SYSTEM - SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	QA/QC TASKS (NOTES 5,6,10)		REMARKS
			OBSERVE	PERFORM	
VISUAL INSPECTION TASKS PRIOR TO WELDING					
MATERIAL IDENTIFICATION (TYPE/GRADE)	1705.12.1	AISC 341 TABLE J6.1 AWS D1.8/D1.8M	X		
WELDER IDENTIFICATION SYSTEM			X		
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)					
JOINT PREPARATION			X		NOTE 7
DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)			X		
CLEANLINESS (CONDITION OF STEEL SURFACES)			X		
TACKING (TACK WELD QUALITY AND LOCATION)			X		
BACKING TYPE AND FIT (IF APPLICABLE)			X		
CONFIGURATION AND FINISH OF ACCESS HOLES			X		
FIT-UP OF FILLET WELDS					
DIMENSIONS (ALIGNMENT, GAPS AT ROOT)			X		
CLEANLINESS(CONDITION OF STEEL SURFACES)			X		NOTE 7
TACKING (TACK WELD QUALITY AND LOCATION)			X		
VISUAL INSPECTION TASKS DURING WELDING					
WPS FOLLOWED	1705.12.1	AISC 341 TABLE J6.2 AWS D1.8/D1.8M			
SETTINGS ON WELDING EQUIPMENT			X		
TRAVEL SPEED			X		
SELECTED WELDING MATERIALS			X		
SHIELDING GAS TYPE/FLOW RATE			X		
PREHEAT APPLIED			X		
INTERPASS TEMPERATURE MAINTAINED (MIN/MAX.)			X		
PROPER POSITION (F, V, H, OH)			X		
INTERMIX OF FILLER METALS AVOIDED UNLESS APPROVED			X		
USE OF QUALIFIED WELDERS			X		
CONTROL AND HANDLING OF WELDING...					
PACKAGING			X		
EXPOSURE CONTROL			X		
ENVIRONMENTAL CONDITIONS					
WIND SPEED WITHIN LIMITS			X		
PRECIPITATION AND TEMPERATURE			X		
WELDING TECHNIQUES					
INTERPASS AND FINAL CLEANING			X		
EACH PASS WITHIN PROFILE LIMITATIONS			X		
EACH PASS MEETS QUALITY REQUIREMENTS			X		
NO WELDING OVER CRACKED TACKS			X		
FIELD INSTALLED DBA'S IN DIAPHRAGMS		AWS D1.1 CLAUSE 7		X	
WELDED REBAR ANCHORS IN DIAPHRAGMS		AWS D1.4		X	#6 AND LARGER BARS ARE TO BE WELDED
VISUAL INSPECTION TASKS AFTER WELDING					
WELDS CLEANED	1705.12.1	AISC 341 TABLE J6.3 AWS D1.8/D1.8M	X		
SIZE, LENGTH, AND LOCATION OF WELDS				X	
WELDS MEET VISUAL ACCEPTANCE CRITERIA					(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. * WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 INCHES OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING
CRACK PROHIBITION				X(D)	
WELD/BASE-METAL FUSION				X(D)	
CRATER CROSS SECTION				X(D)	
WELD PROFILE AND SIZE				X(D)	
UNDERCUT				X(D)	
POROSITY				X(D)	
K-AREA *				X(D)	
PLACEMENT OF REINFORCING OR CONTOURING FILLET WELDS (IF REQUIRED)					
BACKING REMOVED, WELD TABS REMOVED AND FINISHED, AND FILLET WELDS ADDED (IF REQUIRED)				X(D)	
REPAIR ACTIVITIES				X(D)	
INSPECTION TASKS PRIOR TO BOLTING					
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL	1705.12.1	AISC 341 TABLE J7.1 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS	X		
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL			X		
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS			X		
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED FOR FASTENER ASSEMBLIES AND METHODS USED			X (D)		(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS			X		

STEEL LATERAL SYSTEM - SPECIAL INSPECTIONS (CONT)

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	QA/QC TASKS (NOTES 5,6,10)		REMARKS
			OBSERVE	PERFORM	
INSPECTION TASKS DURING BOLTING					
FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.12.1	AISC 341 TABLE J7.2 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS	X		
JOINT BROUGHT TO THE SNUG TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION			X		
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING			X		
BOLTS ARE PRETENSIONED PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES			X		
INSPECTION TASKS AFTER BOLTING					
DOCUMENT ACCEPTED AND REJECTED CONNECTION	1705.12.1	AISC 341 TABLE J7.3		X(D)	(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
OTHER INSPECTION TASKS					
RBS REQUIREMENTS, IF APPLICABLE	1705.12.1	AISC 341 TABLE J8.1 AISC 358 5.7			(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
CONTOUR AND FINISH				X(D)	
DIMENSIONAL TOLERANCES				X(D)	
PROTECTED ZONE - NO HOLES AND UNAPPROVED ATTACHMENTS MADE BY FABRICATOR OR ERECTOR, AS APPLICABLE		AISC 341 TABLE J8.1 AISC 341 D1.3 AISC 341 I2.1		X(D)	(D)DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

STEEL LATERAL SYSTEM - TESTING

SYSTEM OR MATERIAL	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	DESCRIPTION/FREQUENCY	REMARKS
2a) CJP GROOVE WELD NDT	1705.13.1	AISC 341 SECTION J6	UT SHALL BE PERFORMED ON 5/16" THICKNESS AND GREATER. MT SHALL BE PERFORMED ON 25% OF ALL BEAM-TO-COLUMN CJP GROOVE WELDS.	WELD DISCONTINUITIES SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF CRITERIA OF AWS D1.1/D1.1M TABLE 6.2. UT TESTING NOT REQUIRED ON THICKNESS LESS THAN 5/16"
2b) COLUMN SPLICE AND COLUMN TO BASE PL PJP GROOVE WELD NDT			UT SHALL BE PERFORMED ON PJP GROOVE WELDS IN COLUMN SPLICES AND COLUMN TO BASE PL WELDS	
2c) BASE METAL NDT FOR LAMELLAR TEARING AND LAMINATIONS			FOR BASE METAL THICKNESS (t) OF 1 1/2" AND GREATER AND CONNECTED MATERIAL THICKNESS OF 3/4" AND GREATER, UT FOR DISCONTINUITIES BEHIND AND ADJACENT TO THE FUSION LINE.	ANY BASE METAL DISCONTINUITIES FOUND WITHIN t/4 OF THE STEEL SURFACE SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF THE CRITERIA OF AWS D1.1/D1.1M TABLE 6.2. t IS THE THICKNESS OF THE PART SUBJECTED TO THE THROUGH-THICKNESS STRAIN
2d) BEAM COPE AND ACCESS HOLE NDT			MT OR PENETRANT TESTING OF WELD SPLICES AND CONNECTIONS, THERMALLY CUT SURFACES OF BEAM COPES AND ACCESS HOLES WHERE FLANGE THICKNESS EXCEEDS 1 1/2" FOR ROLLED SHAPES OR WHEN THE WEB THICKNESS EXCEEDS 1 1/2" FOR BUILT-UP SHAPES	
2e) REDUCED BEAM SECTION REPAIR NDT			MT SHALL BE PERFORMED ON ANY WELD AND ADJACENT AREA OF THE RBS CUT SURFACE THAT HAS BEEN REPAIRED BY WELDING OR ON THE BASE METAL OF THE RBS CUT SURFACE IF A SHARP NOTCH HAS BEEN REMOVED BY GRINDING	
2f) WELD TAB REMOVAL SITES			AT THE END OF WELDS WHERE WELD TABS HAVE BEEN REMOVED, MT SHALL BE PERFORMED ON THE SAME BEAM-TO-COLUMN JOINTS RECEIVING UT AS REQUIRED UNDER ITEM 2a	MT OF CONTINUITY PLATE WELD TABS REMOVAL SITES IS NOT REQUIRED.

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SPECIAL INSPECTION TABLES

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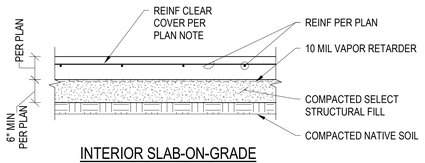
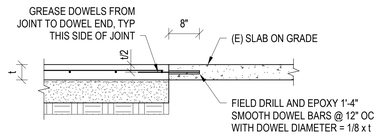
CHECKED: AE
PROJECT NO: 2023.102

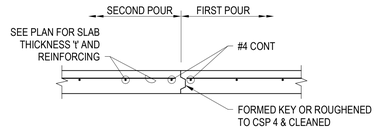
SHEET:
S0.23



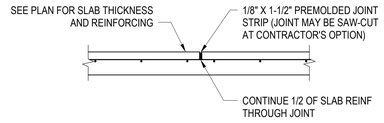
INTERIOR SLAB-ON-GRADE



NEW TO EXISTING SLAB-ON-GRADE (WHERE OCCURS)

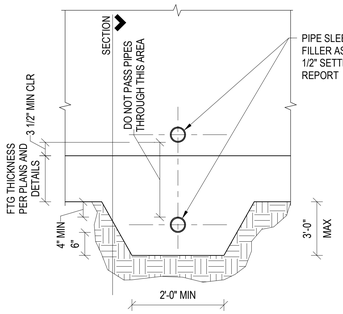


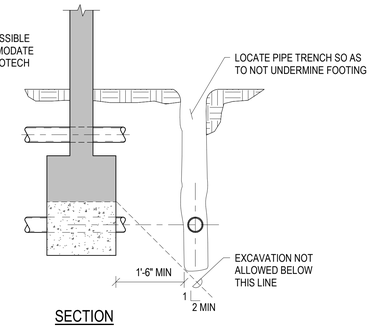
CONSTRUCTION JOINT



CONTROL JOINT

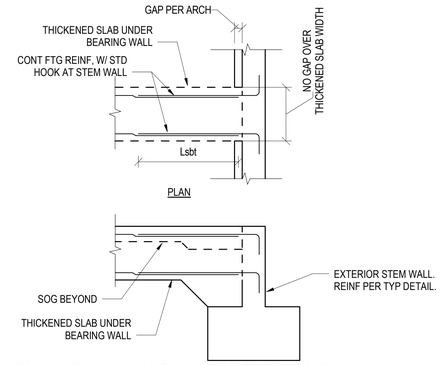
1 TYPICAL SLAB-ON-GRADE DETAILS
SCALE: NTS



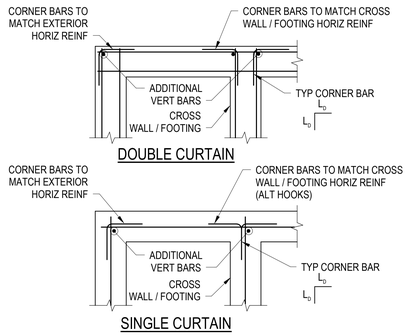


SECTION

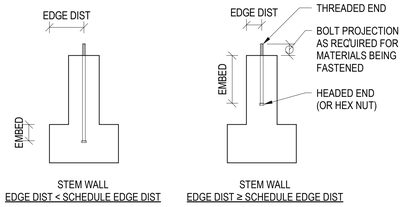
3 TYP PIPE AND TRENCH LOCATIONS AT FTGS / WALLS
SCALE: NTS



5 TYPICAL THICKENED SLAB INTERSECTION
SCALE: NTS



6 TYPICAL CONCRETE WALL AND FOOTING CORNER BARS
SCALE: NTS



7 TYPICAL CAST-IN-PLACE ANCHOR BOLT EMBEDMENT
SCALE: NTS

f'c = 4500 PSI — SPLICE AND DEVELOPMENT LENGTHS BASED ON ACI 318-14

BAR SIZE	TENSION LAP LENGTH, L_s		TENSION DEV LENGTH, L_d		COMP LAP LENGTH L_{CS}	COMP DEV LENGTH L_{CD}	STANDARD HOOK	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS			LENGTH	HOOK
CLASS	B	B						
#3	24	19	18	14	12	8	7	5
#4	32	24	24	18	15	9	9	6
#5	39	30	30	23	19	12	12	8
#6	46	36	35	27	23	14	14	9
#7	67	52	51	40	27	16	16	11
#8	77	59	59	45	30	18	18	12
#9	88	67	66	51	34	21	21	14
#10	97	75	74	57	39	23	23	16
#11	107	84	82	64	43	26	26	17

NOTES:
1. USE THE LENGTHS IN THESE SCHEDULES, UNLESS OTHERWISE NOTED.
2. f'C = PER GENERAL NOTES
   Fy = 60,000 PSI
3. LAP SPLICES SHALL BE 'CLASS B', UNLESS OTHERWISE NOTED ON PLANS.
4. A TOP BAR IS A HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW IT.
5. MIN CENTER-TO-CENTER SPACING IS 3x BAR DIAMETER.

8 CONCRETE DEVELOPMENT AND SPLICE LENGTH
SCALE: NTS

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TYPICAL CONCRETE DETAILS

SCALE: SCALE: NTS
DRAWN: AB
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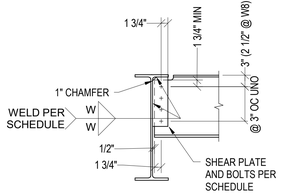
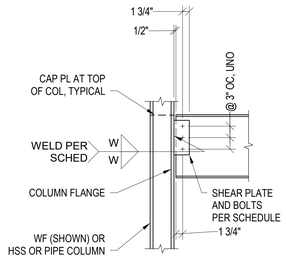
PROJECT NO: 2023.102

SHEET:

S1.10



BEAM TO BEAM



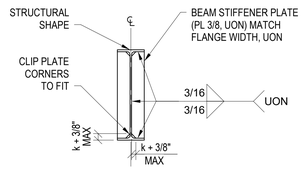
BEAM TO COLUMN FLANGE

TYPICAL SHEAR CONNECTION SCHEDULE

BEAM SIZE	SHEAR PLATES		BOLTS
	THICK	WELD (W)	
W8, C8	1/4"	1/4"	(2) 7/8" Ø
W10, C10	1/4"	1/4"	(2) 7/8" Ø @ 4" GA
W12, C12	1/4"	1/4"	(3) 7/8" Ø
W14	1/4"	1/4"	(3) 7/8" Ø
W16	5/16"	1/4"	(4) 7/8" Ø
W18	5/16"	1/4"	(5) 7/8" Ø
W21	5/16"	1/4"	(6) 7/8" Ø
W24	3/8"	5/16"	(7) 7/8" Ø
W27, W30	3/8"	5/16"	(7) 7/8" Ø
W40	3/8"	5/16"	(8) 7/8" Ø

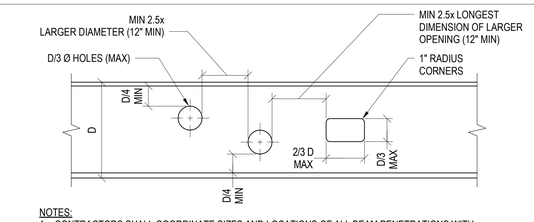
CONNECTION NOTES:
1. TIGHTEN BOLTS TO AISC "SNUG TIGHT" CONDITION, UON.
2. CONNECTION PLATES TO HAVE AISC STANDARD ROUND HOLES EXCEPTAS NOTED OTHERWISE.
3. ALL CONNECTION PLATE MATERIAL TO BE A36 UON.

1 TYPICAL BEAM SHEAR CONNECTION DETAIL
SCALE: NTS



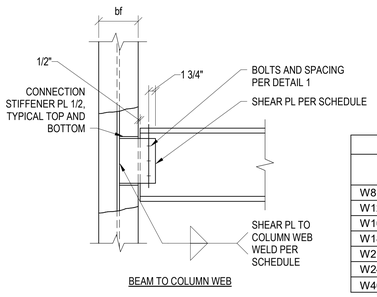
BEAM STIFFENER PLATES

3 TYPICAL STIFFENER PLATE DETAIL
SCALE: NTS

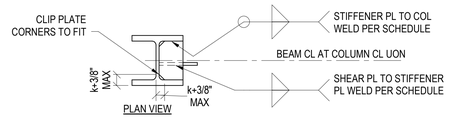


NOTES:
1. CONTRACTORS SHALL COORDINATE SIZES AND LOCATIONS OF ALL BEAM PENETRATIONS WITH MECHANICAL DRAWINGS. ALL PENETRATIONS LARGER THAN 2" Ø SHALL BE SHOWN ON SHOP DRAWINGS OR SKETCHES AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FIELD CUTTING NOT PERMITTED WITHOUT APPROVAL.
2. OPENINGS MAY OCCUR IN MIDDLE HALF OF BEAM LENGTH ONLY, WITHOUT APPROVAL.
3. NO CUTTING MAY OCCUR IN TOP OR BOTTOM QUARTER OF BEAM DEPTH.
4. ADJACENT OPENINGS MAY BE SPACED NO CLOSER THAN THE LESSER OF 12" OR 2.5x LARGER OPENING SIZE, EDGE TO EDGE.
5. MAXIMUM SIZES OF OPENINGS SHALL BE D/3 Ø OR D/3 x 2D/3 AS SHOWN.
6. NO OPENINGS SHALL OCCUR WITHIN 12" OF AN ADJACENT BEAM CONNECTION.
7. REQUIRED OPENINGS NOT MEETING ABOVE CRITERIA SHALL BE SUBMITTED TO ENGINEER FOR REINFORCING DESIGN.

4 TYPICAL BEAM PENETRATION DETAIL
SCALE: NTS



BEAM TO COLUMN WEB

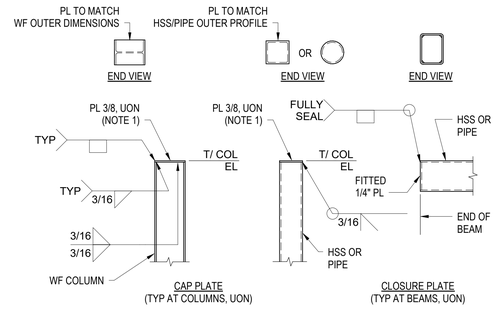


PLAN VIEW

SHEAR AND STIFFENER PLATE SCHEDULE

BEAM SIZE	SHEAR PLATE THICKNESS	SHEAR PLATE TO COLUMN WEB WELD	SHEAR PLATE TO STIFFENER WELD	STIFFENER TO COLUMN WELD
W8, W10	1/2"	1/4"	1/4"	3/16"
W12, W14	1/2"	1/4"	5/16"	3/16"
W16	1/2"	1/4"	3/8"	3/16"
W18	1/2"	1/4"	3/8"	1/4"
W21	1/2"	5/16"	3/8"	1/4"
W24, W27, W30	1/2"	5/16"	3/8"	1/4"
W40	1/2"	5/16"	3/8"	1/4"

5 TYPICAL BEAM TO COLUMN WEB SHEAR CONNECTION DETAIL
SCALE: NTS



CAP PLATE (TYP AT COLUMNS, UON)

CLOSURE PLATE (TYP AT BEAMS, UON)

NOTES:
1. WHERE SLOPING BEAMS FRAME INTO TOP OF COLUMNS, SLOPE COLUMN CAP PLATES TO MATCH TOP OF BEAM, UON.
2. FLUSH FINISH REQUIREMENTS SHOWN ON WELDS MAY BE WAIVED, SUBJECT TO PROJECT REPRESENTATIVE APPROVAL.

7 TYPICAL COLUMN/BEAM CAP AND CLOSURE PLATES
SCALE: NTS

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5-9-2024

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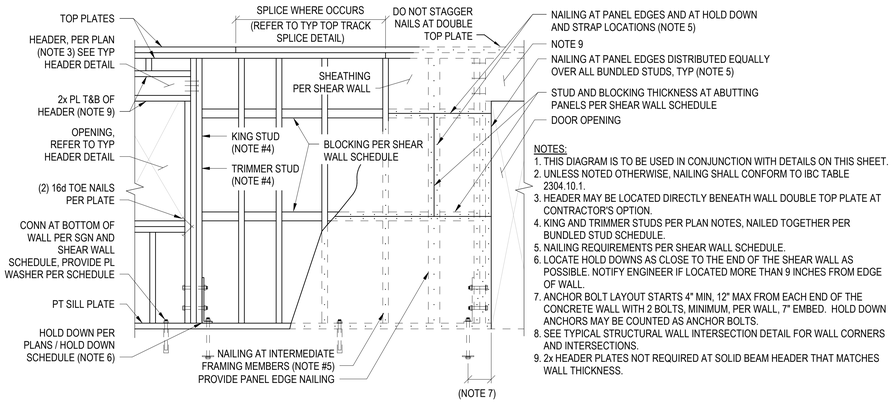
TYPICAL STRUCTURAL STEEL DETAILS

SCALE: 3/4" = 1'-0"
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:
S1.20

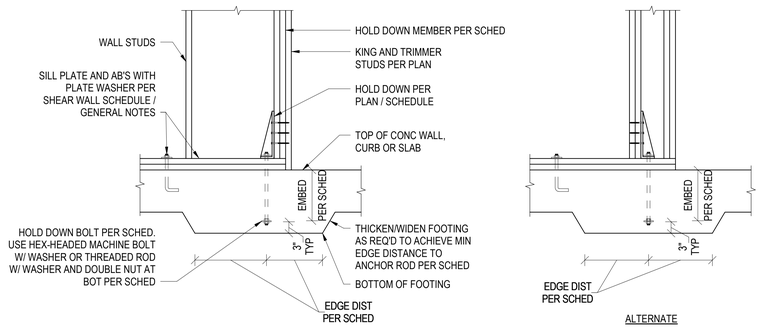


NOTES:
1. THIS DIAGRAM IS TO BE USED IN CONJUNCTION WITH DETAILS ON THIS SHEET.
2. UNLESS NOTED OTHERWISE, NAILING SHALL CONFORM TO IBC TABLE 2304.10.1.
3. HEADER MAY BE LOCATED DIRECTLY BENEATH WALL DOUBLE TOP PLATE AT CONTRACTOR'S OPTION.
4. KING AND TRIMMER STUDS PER PLAN NOTES, NAILED TOGETHER PER BUNDLED STUD SCHEDULE.
5. NAILING REQUIREMENTS PER SHEAR WALL SCHEDULE.
6. LOCATE HOLD DOWNS AS CLOSE TO THE END OF THE SHEAR WALL AS POSSIBLE. NOTIFY ENGINEER IF LOCATED MORE THAN 9 INCHES FROM EDGE OF WALL.
7. ANCHOR BOLT LAYOUT STARTS 4" MIN, 12" MAX FROM EACH END OF THE CONCRETE WALL WITH 2 BOLTS, MINIMUM, PER WALL, 7" EMBED. HOLD DOWN ANCHORS MAY BE COUNTED AS ANCHOR BOLTS.
8. SEE TYPICAL STRUCTURAL WALL INTERSECTION DETAIL FOR WALL CORNERS AND INTERSECTIONS.
9. 2x HEADER PLATES NOT REQUIRED AT SOLID BEAM HEADER THAT MATCHES WALL THICKNESS.

1 TYPICAL STRUCTURAL WALL FRAMING
SCALE: 3/4" = 1'-0"

VALID FOR DIMENSIONAL LUMBER PROJECT	DOUG FIR STUD SHEAR WALL SCHEDULE							
	FRAMING REQUIREMENTS		NAILING REQUIREMENTS (NOTE 3)		CONNECTION TO SILL PLATE		CONN TO TOP PLATE	
WALL SYMBOL	SHEATHING (NOTE 4)	FDN SILL PLATES PLUS STUDS AND BLOCKING OCCURRING AT ABUTTING PANELS	PANEL EDGES AND AT STUDS W/ HOLD DOWNS	INTERMEDIATE	TYPE [1] AT FRAMING OR BLOCKING (NOTE 9, 10, 11, 12)	TYPE [2] AT THE FOUNDATION (NOTE 7)	TYPE [3] AT FRAMING OR BLOCKING (NOTE 8)	CAPACITY (PLF)
SW6	15/32" STRUCTURAL 1 1 SIDE	2x	8d @ 6" OC	8d @ 12" OC	(2) 16d @ 18" OC	5/8" Ø x 7" EMBED AB @ 48" OC WITH 3"x3"x1/4" PL WASHERS	LTP4 @ 30" OC AT RIM BOARD	280
SW4	15/32" STRUCTURAL 1 1 SIDE	2x	8d @ 4" OC	8d @ 12" OC	(2) 16d @ 12" OC	5/8" Ø x 7" EMBED AB @ 36" OC WITH 3"x3"x1/4" PL WASHERS	LTP4 @ 18" OC AT RIM BOARD	430

NOTES:
1. REFER TO TYPICAL STRUCTURAL WALL FRAMING DETAIL FOR ADDITIONAL/COMPLEMENTARY INFORMATION.
2. NOT USED.
3. NAIL VALUES BASED ON COMMON NAILS OR .131 P-NAILS (8d), .148 P-NAILS (10d, 12d), .162 P-NAILS (16d), .207 P-NAILS (30d) AND .225 P-NAILS (40d). SUBMIT REQUEST FOR NAIL ALTERNATES TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
4. SHEATHING MAY BE APPLIED VERTICALLY OR HORIZONTALLY. SHEATHING SHALL BE RATED AS "STRUCTUAL I" AND SHALL BE 4-PLY OR GREATER IF DOC-PS1.
5. INSTALL BLOCKING AT PANEL EDGES NOT OCCURRING AT STUDS OR PLATES. (2) 16d NAILS PER BLOCK, MINIMUM, EACH END.
6. PANEL JOINTS ON OPPOSITE SIDES OF THE WALL SHALL NOT OCCUR AT THE SAME FRAMING MEMBER UNLESS THAT FRAMING MEMBER IS A 3x MIN AND NAILS ON EACH SIDE ARE STAGGERED, OR UNLESS PANEL EDGE NAIL SPACING IS 6" ON BOTH SIDES.
7. USE CAST-IN ANCHOR BOLTS AT NEW CONCRETE, EPOXY ANCHORS AT EXISTING CONCRETE.
8. AT RIM BOARD, ALIGN OUTSIDE FACE OF RIM BOARD WITH OUTSIDE FACE OF WALL STUDS, MIN RIM BOARD WIDTH = 1-1/2". USE 8d COMMON NAILS (2 1/2" LONG MIN WHEN APPLIED OVER SHEATHING). ORIENT LTP4 WITH LONG DIMENSION HORIZONTAL.
9. AT CONTRACTOR'S OPTION, LAP SHEATHING OVER RIM BOARD AND ATTACH WITH PANEL EDGE NAILING IN LIEU OF TYPE 1 AND 3 CONNECTORS AT FLOOR LEVELS.
10. AT CONTRACTOR'S OPTION, TYPE 3 CONNECTORS MAY BE USED IN LIEU OF TYPE 1 CONNECTORS AT FLOOR LEVELS WHERE FRAMING CONFIGURATION ALLOWS.
11. PROVIDE DOUBLE BLOCKING AT CONNECTION TYPE 1. NAIL TOGETHER WITH (2) ROWS OF 10d AT 4" OC.
12. CONTRACTOR MAY SUBSTITUTE #12x5" WOOD SCREW FOR 30d NAIL AT 0.8xSPACING, OR #14x5" WOOD SCREW FOR 40d NAIL AT 0.8xSPACING.

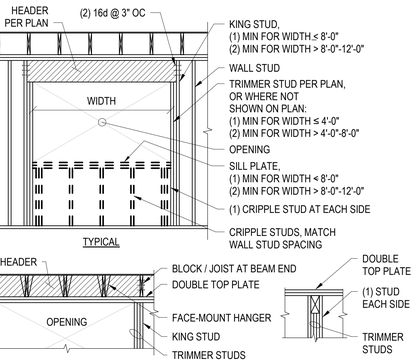


5 HOLD DOWN TO CONCRETE
SCALE: 3/4" = 1'-0"

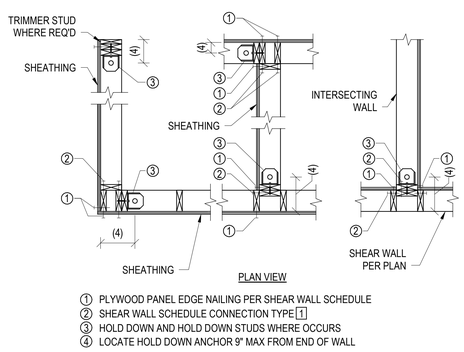
HOLD DOWN SCHEDULE, ANCHOR BOLT TYPES AND INSTALLATION CRITERIA - DF/SP (ALL LOADS ARE IN ASD)									
		WOOD POST AND CONNECTION		HOLD DOWN DESIGN FORCE	REQUIRED ANCHOR SIZE	F1554 GR-36 ANCHOR ROD		CAST-IN SIMPSON ANCHOR	
TYPE MARK	HOLD DOWN TYPE	HOLD DOWN MEMBER	WOOD FASTENERS (EA END AT STRAPS)	D-F (LB)	DIAMETER (IN)	EMBEDMENT (IN)	EDGE DISTANCE (IN)	TYPE	EMBEDMENT (IN)
HDU2	HDU2-SDS2.5	(2) 2x	6-SDS 1/4x2.5 SCREW	3,075	5/8	5	6-1/4	SSTB20	16-5/8
HDU4	HDU4-SDS2.5	(2) 2x	10-SDS 1/4x2.5 SCREW	4,565	5/8	5-1/2	8-1/4	SB5/8x24	18
HDU5	HDU5-SDS2.5	(2) 2x	14-SDS 1/4x2.5 SCREW	5,645	5/8	6	9-1/2	SB5/8x24	18

NOTES
1. INSTALL HOLD DOWNS AND STRAPS PER MANUFACTURER'S SPECIFICATIONS AND ICC REPORTS. INFORMATION TAKEN FROM THE SIMPSON C-2021 CATALOG.
2. THE CONTRACTOR SHALL MATCH THE WIDTH OF THE STUD WALLS SHOWN ON THE ARCH DRAWINGS. MULTIPLE STUDS SHALL BE NAILED TOGETHER PER TYPICAL BUNDLED STUD SCHEDULE.
3. IF THE MINIMUM EDGE DISTANCE CANNOT BE ACHIEVED IN THE THICKNESS OF THE STEM WALL, THE ANCHOR SHALL BE EMBEDDED IN THE FOOTING.
4. SEE SHEAR WALL FRAMING DETAIL, NOTE 5, FOR SHEATHING EDGE NAILING REQUIREMENTS AT HOLD DOWN STUDS.
5. THE CONTRACTOR MAY SELECT THE TYPE OF ANCHOR BOLT, CAST-IN OR POST-POUR INSTALLED AT HIS OPTION USING THIS SCHEDULE.
6. THIS SCHEDULE ASSUMES 2,500 PSI CRACKED CONCRETE OR BETTER.
7. STRAP CAPACITY ASSUMES CLEAR SPAN AT FLOOR LEVEL OF 16".
8. PROVIDE ASTM F436 SQUARE WASHERS AT EMBEDDED HEADS OF F1554 ANCHOR RODS.

7 HOLD DOWN SCHEDULE
SCALE: 3/4" = 1'-0"

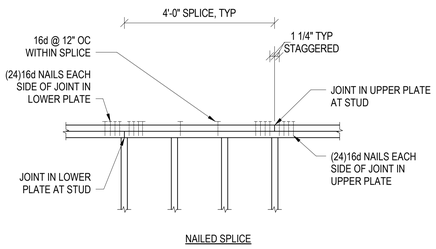


9 TYPICAL HEADER DETAIL
SCALE: 3/8" = 1'-0"



① PLYWOOD PANEL EDGE NAILING PER SHEAR WALL SCHEDULE
② SHEAR WALL SCHEDULE CONNECTION TYPE [1]
③ HOLD DOWN AND HOLD DOWN STUDS WHERE OCCURS
④ LOCATE HOLD DOWN ANCHOR 9" MAX FROM END OF WALL

10 TYPICAL STRUCTURAL WALL INTERSECTION
SCALE: 3/4" = 1'-0"



NOTES:
1. PROVIDE CONT TOP PLATES (NO JOINTS) WHERE WALLS ARE 12'-0" OR LESS IN LENGTH.

11 TOP PLATE SPLICE
SCALE: 3/4" = 1'-0"

BUNDLED STUD SCHEDULE		
NAILED SPLICES		
NO STUDS	STUD SIZE	FACE NAILING FOR BUNDLED STUDS
2	2x	10d @ 6" OC STAGGERED ALT FACE
3	2x	20d @ 8" OC STAGGERED ALT FACE
4	2x	20d @ 8" OC STAGGERED ALT FACE

NOTES:
1. AS ALTERNATE TO BUNDLED STUD NAILING FOR BUNDLES OF 3 OR MORE, STUDS MAY BE BUNDLED PER 2 STUDS WITH 10d @ 6" OC STAGGERED FOR EACH ADDITIONAL STUD.

12 BUNDLED STUD SCHEDULE
SCALE: 3/4" = 1'-0"

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SEATAC PUBLIC WORKS MAINTENANCE FACILITY
2000 S 136TH ST, SEATAC, WA 98168

PERMIT SET

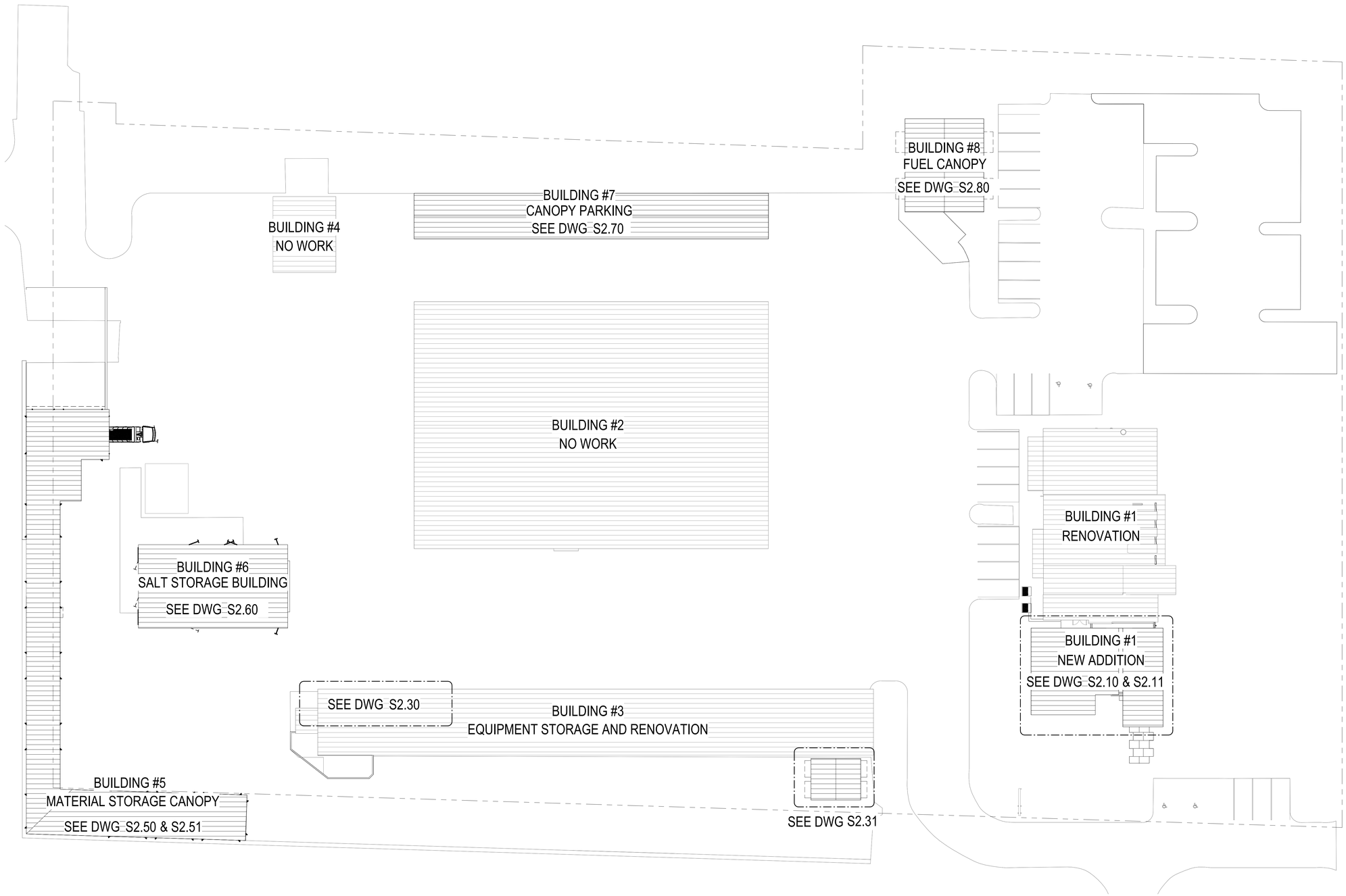
ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:
TYPICAL WOOD DETAILS

SCALE: As indicated
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:
S1.30



1 SITE PLAN - FOR REFERENCE ONLY
SCALE: 1" = 20'-0"

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5-7-2024

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CITY OF SEATAC Est. 1990

PERMIT SET

ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

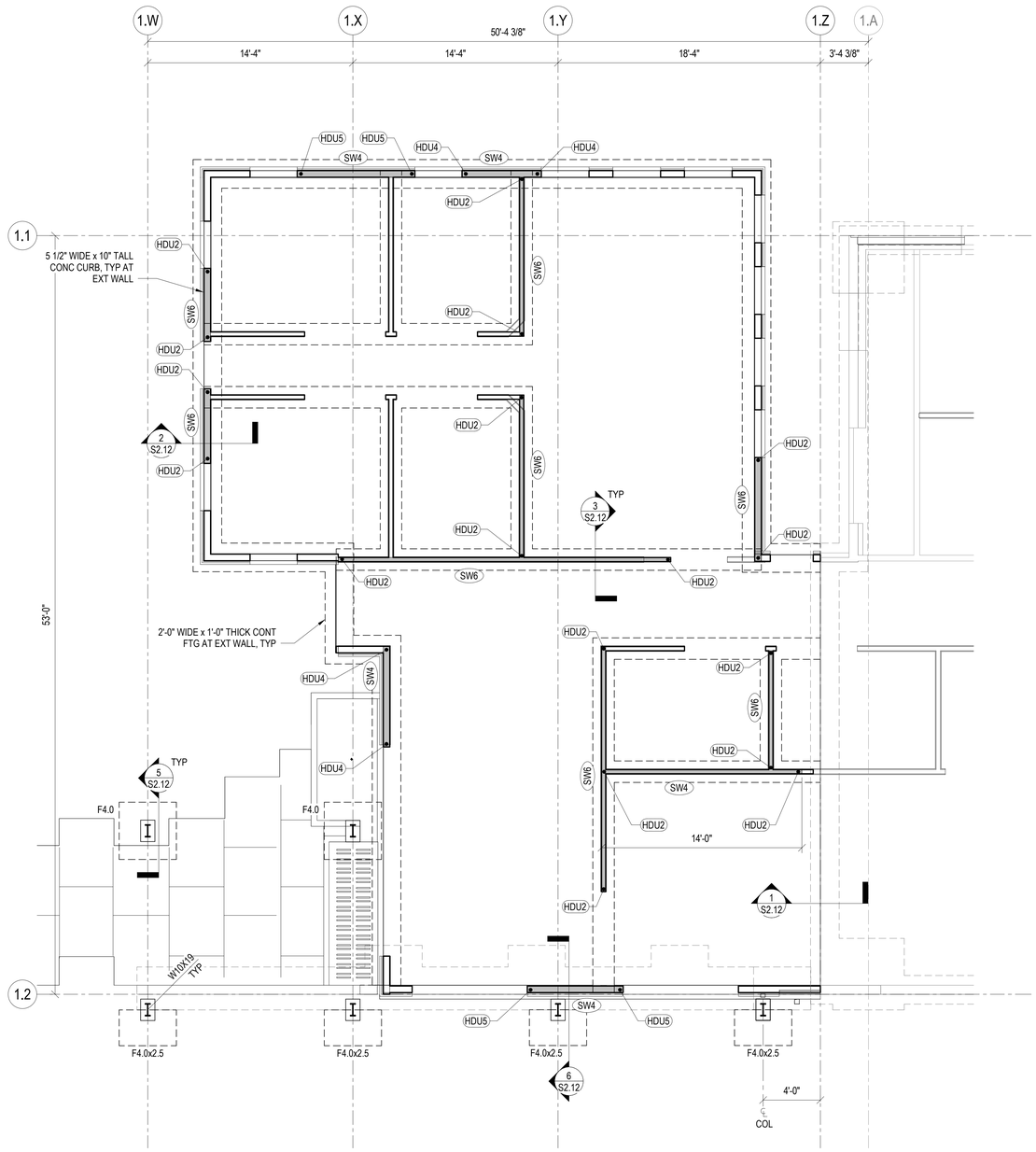
CONTENTS:

PROPOSED SITE PLAN

SCALE: 1" = 20'-0"
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:

S2.00



1 BUILDING #1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES:
1. COORDINATE SLAB AND FOOTING ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
2. REFERENCE FLOOR ELEVATION OF 0'-0" = NOMINAL FINISHED FLOOR PER ARCH. TOP OF SLAB ON GRADE IS AT REFERENCE ELEVATION UNLESS NOTED OTHERWISE.
3. 5" SLAB ON GRADE, REINFORCE WITH #4 @ 16" OC EACH WAY AT 2" CLEAR BELOW TOP OF SLAB. VAPOR BARRIER REQUIRED UNDER SLAB. COORDINATE LOCATION OF ALL CONTROL JOINTS WITH THE ARCHITECT PRIOR TO INSTALLATION.
4. CONSTRUCT EXTERIOR WALLS AS TYPE SW6 SHEAR WALLS, UNO. REFER TO STRUCTURAL GENERAL NOTES AND TYPICAL DETAILS FOR STUD SPACING, ETC.
5. SUPPORT GLB ENDS AT BEARING WALLS WTH MIN 6x6 FRAMED INTO WALL UNLESS OTHERWISE NOTED.

LEGEND
- (SWX) — SHEARWALL TYPE 'X' PER SCHEDULE.
- BEARING WALL ABOVE.
- (XXX) — HOLD DOWN AND STRAP TIE PER SCHEDULE.

BLDG #1 FOOTING SCHEDULE

FTG MARK	WIDTH	LENGTH	THK	REINFORCEMENT	COMMENTS
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 EW	T/FTG = -1'-0"
F4.0x2.5	4'-0"	2'-6"	1'-0"	(5) #5 TRANSVERSE, (3) #5 LONG	MATCH ADJACENT (E) WALL FTG

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CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 05/14/24

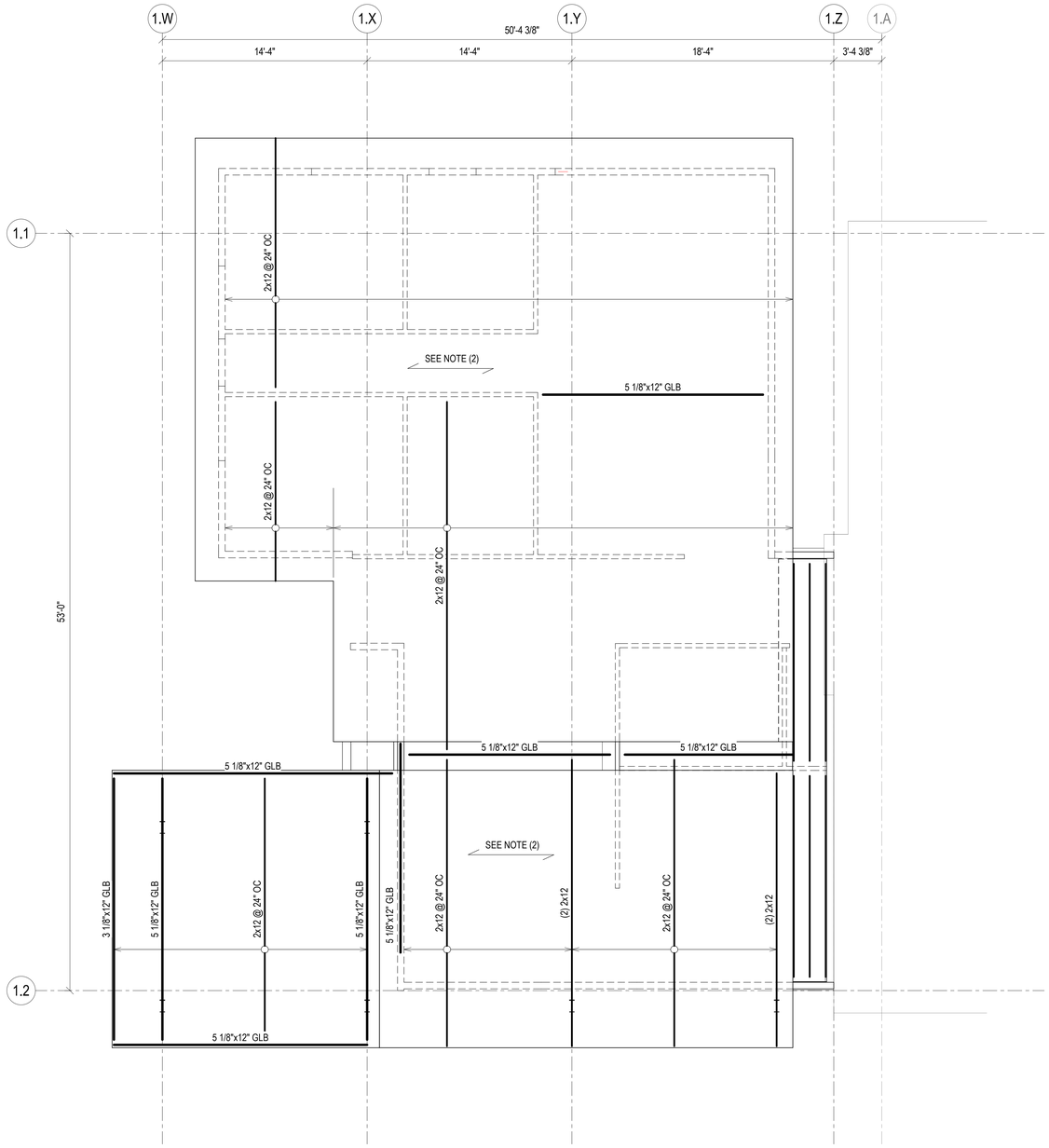
REVISION	DATE	DESCRIPTION

CONTENTS:

BUILDING #1 FOUNDATION PLAN

SCALE: As indicated
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:
S2.10



1 BUILDING #1 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES:
1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
2. PLYWOOD ROOF SHEATHING PER STRUCTURAL GENERAL NOTES SPANNING IN DIRECTION INDICATED.
3. SUPPORT GLB ENDS AT BEARING WALLS WITH MIN 6x6 FRAMED INTO WALL UNLESS OTHERWISE NOTED.

LEGEND

BEARING WALL BELOW.

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CITY OF SEATAC Est. 1990

PERMIT SET

ISSUE DATE: 05/14/24

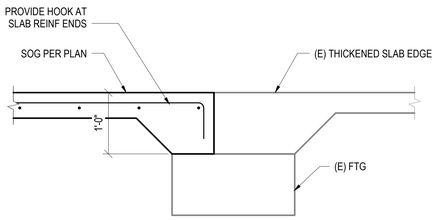
REVISION	DATE	DESCRIPTION

CONTENTS:

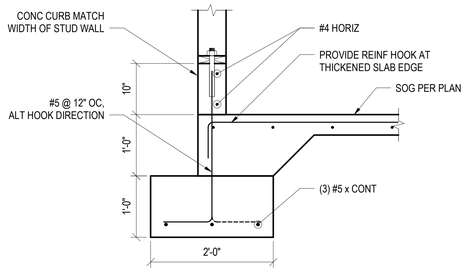
BUILDING #1 ROOF FRAMING PLAN

SCALE: As indicated
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

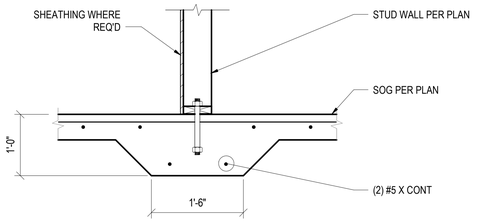
SHEET:
S2.11



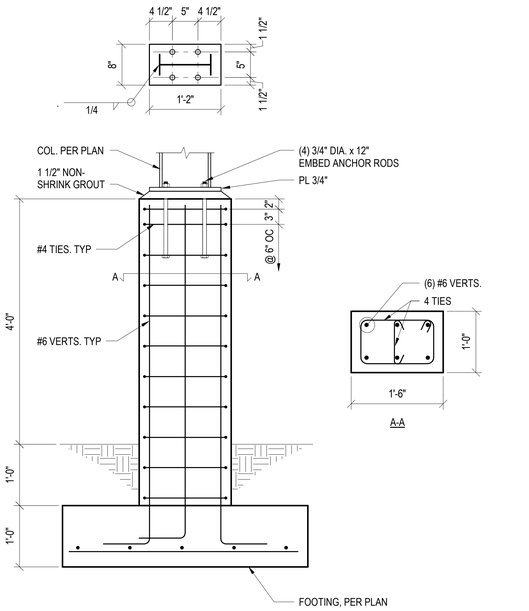
1 DETAIL
SCALE: 1" = 1'-0"



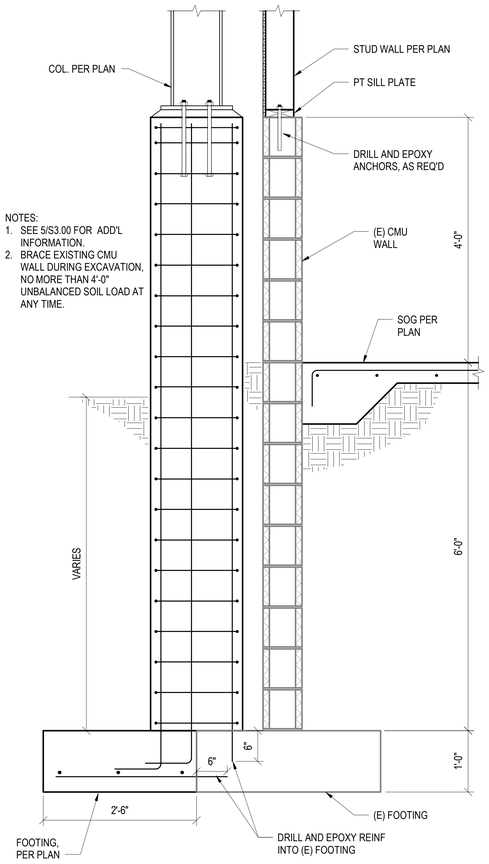
2 DETAIL
SCALE: 1" = 1'-0"



3 DETAIL
SCALE: 1" = 1'-0"



5 DETAIL
SCALE: 1" = 1'-0"



6 DETAIL
SCALE: 1" = 1'-0"

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CITY OF SEATAC EST 1990

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CONTENTS:

BUILDING #1 DETAILS

SCALE: 1" = 1'-0"
DRAWN: AB
CHECKED: AE
PROJECT NO: 2023.102

SHEET:
S2.12

GENERAL ABBREVIATIONS

ADDN	ADDITION, ADDITIONAL
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APPROX	APPROXIMATELY
ARCH	ARCHITECT
AUX	AUXILIARY
BAL	BALANCING
BLDG	BUILDING
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CL	CENTERLINE
COND	CONDENSATE
COL	COLUMN
CONN	CONNECT; CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS; CONTINUATION
COORD	COORDINATE
DEG	DEGREE
DIA	DIAMETER
DIFF	DIFFERENTIAL
DIM	DIMENSION
DISCH	DISCHARGE
DIV	DIVISION
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DR	DRAIN
DWG	DRAWING
EA	EACH
EFF	EFFICIENCY
ELEC	ELECTRICAL ENGINEER
ELEV	ELEVATION; ELEVATOR
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ENT	ENTERING
EQ	EQUAL
EQUIP	EQUIPMENT
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
EX, (E)	EXISTING
EXP	EXPOSED
EXPL	EXPLOSION
F	FAHRENHEIT
FIO	FURNISHED & INSTALLED BY OWNER
FLEX	FLEXIBLE
FLR	FLOOR
FOIC	FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
FP	FIRE PROTECTION; FREEZE PROTECTION
FT	FEET; FOOT; FEET OF WATER(PRESS)
GA	GAGE; GAUGE
GAL	GALLON
GC	GENERAL CONTRACTOR
GEN	GENERAL
GPM	GALLONS PER MINUTE
GWB	GYPSUM WALLBOARD
H	HEIGHT; HIGH
HOA	HAND OFF AUTOMATIC
HOR	HORIZONTAL
HP	HORSE POWER
HR	HOUR
HZ	HERTZ
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IFC	INTERNATIONAL FIRE CODE
IMC	INTERNATIONAL MECHANICAL CODE
IN	INCH
INFO	INFORMATION
INSUL	INSULATE; INSULATION
KW	KILOWATT
KWH	KILOWATT HOUR
L	LENGTH; LONG (DIM)
LAB	LABORATORY
LAV	LAVATORY
LB	POUND
LBS/HR	POUNDS PER HOUR
LF	LINEAL FEET
LO	LOW
LTG	LIGHTING
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MAT	MATERIAL
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MECH	MECHANICAL; MECHANICAL CONTRACTOR
MED	MEDIUM
MFG	MANUFACTURING
MFR	MANUFACTURER
MIN	MINIMUM; MINUTE
MISC	MISCELLANEOUS
MTD	MOUNTED
N	NORTH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN; NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER; OVERALL DIMENSION
OPP	OPPOSITE
PD	PRESSURE DROP
PERF	PERFORATED
PERP	PERPENDICULAR
PH	PHASE
POC	POINT OF CONNECTION
PRELIM	PRELIMINARY
PRESS	PRESSURE
PROP	PROPERTY; PROPOSAL
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAGE
PT	PRESSURE/TEMPERATURE TAP
QTY	QUANTITY
RAD	RADIATOR
REF	REFERENCE
REFR	REFRIGERATION
REQD	REQUIRED
RET	RETURN
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
S	SOUTH
SCHED	SCHEDULE
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SOL	SOLENOID
SPEC	SPECIFICATION
SPECD	SPECIFIED
SQ	SQUARE
STD	STANDARD
STRUCT	STRUCTURAL ENGINEER
TBD	TO BE DETERMINED
TD	TEMPERATURE DIFFERENTIAL
TEMP	TEMPERATURE
TH	TOTAL HEAD
THRU	THROUGH
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITER'S LABORATORY
UTIL	UTILITY
V	VOLT
VAR	VARIABLE
VEL	VELOCITY
VERT	VERTICAL
VOL	VOLUME
W	WATER; WIDE(DIM); WATT
W/	WITH
W/O	WITHOUT
WT	WEIGHT
YD	YARD
YR	YEAR

HVAC ABBREVIATIONS

AL	ACOUSTIC LINED; ALUMINUM
AC	AIR CONDITIONING
AD	AUTOMATIC DAMPER
AF	AIR FOIL
AHU	AIR HANDLING UNIT
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BOD	BOTTOM OF DUCT
C	CONDENSATE; COMMON
CC	COOLING COIL
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CLG	COOLING
CLWR	COOLING WATER RETURN
CLWS	COOLING WATER SUPPLY
COND	CONDENSATE
CT	COOLING TOWER
CV	CONSTANT VOLUME
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
DDC	DIRECT DIGITAL CONTROLS
DMPR	DAMPER
DB	DRY BULB TEMPERATURE(°F)
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EXH	EXHAUST
FA	FACE AREA
FC	FAN COIL; FORWARD CURVED
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FF	FINAL FILTER
FPM	FEET PER MINUTE
FS	FLOW SWITCH
FV	FACE VELOCITY
GALV	GALVANIZED
GR	GRILLE
H	HUMIDIFIER, HUMIDISTAT
HC	HEATING COIL
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HTG	HEATING
HV	HEAT AND VENT UNIT
HHWR	HEATING WATER RETURN
HHWS	HEATING WATER SUPPLY
HX	HEAT EXCHANGER
IMC	INTERNATIONAL MECHANICAL CODE
LAT	LEAVING AIR TEMPERATURE
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
MA	MIXED AIR
MPC	MEDIUM PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM
NPSH	NET POSITIVE SUCTION HEAD
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
ODP	OPEN DRIPPROOF
OSA	OUTSIDE AIR
OV	OUTLET VELOCITY
PF	PREFILTER
PHC	PREHEAT COIL
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION (GAS)
RHC	REHEAT COIL
RH	RELATIVE HUMIDITY
RA	RETURN AIR
RF	RETURN FAN
RG	RETURN GRILLE
S	SUPPLY
SFD	SMOKE/FIRE DAMPER
SP	STATIC PRESSURE
SD	SMOKE DAMPER; SUPPLY DIFFUSER
SA	SUPPLY AIR; SOUND ATTENUATOR
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SR	SUPPLY REGISTER
STM	STEAM
T, TSTAT	THERMOSTAT
TEFC	TOTALLY ENCLOSED, FAN COOLED
TG	TRANSFER GRILLE
UMC	UNIFORM MECHANICAL CODE
UH	UNIT HEATER
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME
VSD	VARIABLE SPEED DRIVE
VENT	VENTILATE; VENTILATION
VD	VOLUME DAMPER
WG	WALL GRILLE; WATER GAGE
WSEC	WASHINGTON STATE ENERGY CODE
WSNEC	WASHINGTON STATE NON-RESIDENTIAL ENERGY CODE
WB	WET BULB TEMPERATURE(°F)

GENERAL LEGEND

- NORTH ARROW
- DETAIL / DRAWING REFERENCE (1 / M101)
- SECTION REFERENCE (A / M101)
- CONSTRUCTION NOTE (1)
- REVISION SYMBOL (1)
- BOLD LINE WEIGHT INDICATES NEW WORK
- LIGHT LINE WEIGHT INDICATES EXISTING WORK
- SLASHED LINE INDICATES EXISTING WORK TO BE DEMOLISHED

HVAC DUCTWORK LEGEND

- SUPPLY OR EXHAUST TAKEOFF
- SUPPLY DUCT TURNING TOWARD
- SUPPLY DUCT TURNING AWAY
- EXHAUST DUCT TURNING TOWARD
- EXHAUST DUCT TURNING AWAY
- ROUND DUCT TURNING TOWARD
- ROUND DUCT TURNING AWAY
- TRANSITION
- SD — SMOKE DAMPER
- MD — MOTORIZED DAMPER
- VD — VOLUME DAMPER
- BDD — BACKDRAFT DAMPER
- FD — FIRE DAMPER
- FLEXIBLE CONNECTION
- TURNING VANES
- FLEXIBLE DUCT
- SUPPLY DIFFUSER
- RETURN GRILLE
- EXHAUST GRILLE
- T — THERMOSTAT
- AHU 1f — EQUIPMENT TAG
- DP — DIFFERENTIAL PRESSURE SENSOR
- CO — CARBON MONOXIDE SENSOR
- CO2 — CARBON DIOXIDE SENSOR

HVAC PIPING LEGEND

- XX — PIPING IDENTIFIER, SEE ABBREVIATIONS
- ELBOW DOWN
- ELBOW UP
- TEE
- TEE DN
- TEE UP
- ISOLATION OR SHUT-OFF VALVE (NO), TYPE AS SPECIFIED
- ISOLATION OR SHUT-OFF VALVE (NC), TYPE AS SPECIFIED
- CHECK VALVE
- ISOLATION OR SHUT-OFF VALVE (NO), TYPE AS SPECIFIED
- ISOLATION OR SHUT-OFF VALVE (NC), TYPE AS SPECIFIED
- 3-VALVE CONTROL VALVE
- PRESSURE REDUCING VALVE
- CAP
- REDUCER

GENERAL CONSTRUCTION NOTES

1. PLANS ARE DIAGRAMMATIC AND DO NOT SHOW ALL BRANCHES, VALVES, SPECIALTIES AND EQUIPMENT.
2. ALL PIPING, VALVES AND EQUIPMENT ARE TO BE REMOVED IN DEMOLITION AREAS.
3. VALVES INDICATED FOR SHUT-OFF ISOLATION ARE SHOWN IN APPROXIMATE LOCATIONS. REFER TO REFERENCED BLDG. DRAWINGS FOR DETAILED SYSTEMS.
4. FIELD VERIFY EXACT LOCATIONS VALVES, EQUIPMENT AND PIPING.
5. CONTRACTOR TO VERIFY SYSTEM SHUT DOWN PRIOR TO ANY REMOVAL WORK.
6. CONTRACTOR TO RE-OPEN VALVES AFTER COMPLETION OF REMOVAL, CAP, & CUT TO RESTORE SYSTEM OPERATION WHERE REQUIRED.
7. SYSTEM SHUT DOWN REMOVAL, CUT & CAP SHALL ONLY BEGIN AFTER NEW, RE-ROUTED SYSTEM IS IN PLACE FOR SERVICE CONTINUITY WHERE REQUIRED.
8. ALL SYSTEMS SHALL BE DRAINED AND DISPOSAL OF FLUIDS HANDLED AS REQUIRED PER OWNER'S STANDARDS.
9. MECHANICAL DRAWINGS SHOW DISCONNECT AND RECONNECT POINTS AT THE PROJECT'S BOUNDARIES. AN ATTEMPT WAS MADE TO SHOW MAJOR MECHANICAL UTILITY WORK WITHIN THE PROJECT'S BOUNDARIES. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL/DISPOSAL OF ALL MECHANICAL WORK WITHIN THE PROJECT'S BOUNDARY.

WASHINGTON ENERGY CODE NOTES

1. PROVIDE POST CONSTRUCTION COMMISSIONING AND COMPLETION REQUIREMENTS IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE 2021 EDITION, SECTION C408 AND ACCORDING TO THE CONTRACT DOCUMENTS. SEE SPECIFICATION SECTIONS 23 05 00, 23 08 00 AND ALL OTHER APPLICABLE SPECIFICATION SECTIONS.
2. BALANCE ALL HVAC SYSTEMS IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE 2021 EDITION, GENERALLY ACCEPTED ENGINEERING STANDARDS AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. SEE SPECIFICATION SECTION 23 05 93 AND ALL OTHER APPLICABLE SPECIFICATION SECTIONS.
3. PROVIDE CONTROLS IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE 2021 EDITION, INCLUDING SECTION C403.2.4 FOR HVAC CONTROL, C403.2.5 FOR VENTILATION, C403.2.6 FOR ENERGY RECOVERY AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, SEE TEMPERATURE CONTROL SPECIFICATION SECTIONS AND ALL OTHER APPLICABLE SPECIFICATION SECTIONS.
4. ALL MECHANICAL EQUIPMENT SHALL BE LISTED AND APPROVED BY A TESTING AGENCY.
5. ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED PER IMC, C402 LEAKAGE REQUIREMENTS AND IBC VAPOR RETARDER REQUIREMENTS. SEE SPECIFICATIONS FOR MORE INFORMATION.
6. ALL DOMESTIC HOT WATER PIPING TO FIXTURES SHALL BE DONE IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE 2021 EDITION PROVISIONS INCLUDING SECTION C404. 3.
7. PER TABLE C406.1 THE GROUP B PROJECT ADDITION REQUIRES 21 ENERGY MEASURE CREDITS. THE PROJECT IS USING THE IMPROVED HVAC TSPR MEASURE TO ACCOMPLISH THE 21 REQUIRED CREDITS PRORATED BASED ON THE TSPR EXCEEDING 5% UPTO 20%. SEE PAGE M0.1.

HVAC SHEET INDEX

SHEET NUMBER	SHEET NAME
M0.0	HVAC LEGEND, ABBREVIATIONS & GENERAL NOTES
M0.1	HVAC ENERGY CODE FORMS
M2.1	HVAC BUILDING #1 DEMOLITION FLOOR PLAN
M3.1	HVAC BUILDING #1 PLAN
M3.3	HVAC BUILDING #3 & #4 PLAN
M4.0	HVAC SECTIONS
M5.0	HVAC DETAILS
M6.0	HVAC SCHEDULES
M6.1	HVAC SCHEDULES

MECHANICAL COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R1, R2, and Group R3 & R4 over 3 stories — Administered by: ©2021 NEEA, All rights reserved

Project & Applicant Information	Project Title	SeaTac Public Works Maintenance Facility - 2021 WSEC	For Building Department Use:	Date: Apr 3, 2024
	Project Address	2000 S 136th ST, SeaTac, WA 98168 SeaTac, WA 98168		
	Applicant Name	Maika Nguyen		
	Applicant Phone	206-849-2076		
	Applicant Email	maikan@fsi-engineers.com		

Mechanical Compliance Summary Scope - Compliance verification provided in this report is limited to code minimum efficiency requirements for mechanical equipment types defined in Tables C403.3.2(1) through C403.3.2(16) of the 2021 WSEC-C. This includes efficiency multipliers for economizer exceptions. Performance criteria for additional energy efficiency and load management measures ARE NOT included in this report. Additional documentation is required to demonstrate compliance with all other provisions of the energy code, including better than code efficiency criteria for Section C406. For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com.

General Occupancy	All Commercial		General Building Use Type(s)	Office, Other	Building Cond. Floor Area	6,756
General Project Types	Building Addition	New Building or Addition	Multiple Zone Systems & Equipment	Alteration	Project Cond. Floor Area	6,756
		Mechanical Scope		Mechanical Scope	Floors Above Grade	1
					Overall Compliance Path	General Prescriptive
Mechanical Project Description						

Mechanical Compliance Scope and Method	Project Type	Mechanical Scope	Economizer Exception(s) Applied?	DOAS Ventilation Provided?	Equipment Efficiency Compliance Verification
	Building Addition	Multiple Zone Systems & Equipment	Yes	Yes	COMPLIES
Additional Energy Efficiency Measures (AEM)	HVAC cooling equipment - 5-20% better than code efficiency & improved fan efficiency HVAC heating equipment - 5-20% better than code efficiency High performance dedicated outside air systems (DOAS)		Load Management Measures (LDM)	No mechanical load management measures included in project	
Does building include occupancy classifications requiring DOAS?		Yes	Does project include DOAS equipment?		Yes
Based on project scope do TSPR requirements apply?		Yes	Do all systems comply with Appendix D standard reference design or qualify for an exception to TSPR?		Yes

Scope & Space Conditioning	BUILDING ADDITION - MULTIPLE ZONE SYSTEMS & EQUIPMENT	Compliance Verification	COMPLIES

Multiple Zone Air Systems Category - Dedicated outside air system (DOAS)

Air Systems Summary Information

System ID	Paired with other Systems/Equip	Ventilation Airflow Control	Ventilation Standard	Ventilation CFM	Ventilation energy recovery	Energy Recovery Efficiency (%)
ERV-1	Paired with multiple zone system(s)	Constant volume	ASHRAE Standard 62.1	880	Yes per C403.5 Energy Recovery	86

Air Systems & Equipment - Heating

System /Equip ID	Heating System/Equip Type	Specific Type	Heating Output Capacity (Btu/h)	Heat Pump Heating Capacity (Btu/h)	Cooling Capacity (Btu/h) (Identical to Cooling Table)	Required Heat Pump Heating Efficiency	Proposed Heat Pump Heating Efficiency	HPH Units	Efficiency Compliance Verification
ERV-1	DOAS	Energy recovery ventilator (ERV)	0	0	0				COMPLIES

Air Systems & Equipment Details

System/Equip ID	Discrete Area(s) Served	Location In Project Documents - Plan/Detail #	System/Equip Compliance Path

Multiple Zone Air Systems Category - Heat pump, split & single package

Air Systems Summary Information

System/Equip ID	Supply Airflow Control	Ventilation Standard	Ventilation CFM	Ventilation Air Source	Paired with DOAS	Ventilation energy recovery	Energy Recovery Efficiency (%)
CU-1	Constant volume	ASHRAE Standard 62.1		Separate DOAS	ERV-1	Yes per C403.5 Energy Recovery	86
CU-2	Constant volume	ASHRAE Standard 62.1		Separate DOAS	ERV-1	Yes per C403.5 Energy Recovery	86

Air Systems & Equipment - Cooling

System/ Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity (Btu/h)	Econo Exception Multipliers (Full/IPLV)		Required Cooling Efficiency (Code Min + Econo)	Required Part Load Efficiency (Code Min + Econo)	Proposed Cooling Efficiency	CE Units	Proposed Part Load Efficiency	PL Units	Efficiency Compliance Verification
CU-2	Heat pump, air cooled	Single package	96,000	0	0	11.0	14.1	11.9	EER	20.1	IEER	COMPLIES
CU-1	Heat pump, air cooled	Single package	144,000	0	0	10.6	13.5	11	EER	18.2	IEER	COMPLIES

Air Systems & Equipment - Heating

System /Equip ID	Heating System/Equip Type	Specific Type	Heat Pump Heating Capacity (Btu/h)	Cooling Capacity (Btu/h) (Identical to Cooling Table)	Required Heat Pump Heating Efficiency	Required Low OSA Temp Efficiency	Proposed Heat Pump Heating Efficiency	HPH Units	Proposed Low OSA Temp Efficiency	LTH Units	Efficiency Compliance Verification
CU-2	Heat pump, air cooled, heating	Single package	108,000	96,000	3.4	2.25	3.52	COP	2.48	COP	COMPLIES
CU-1	Heat pump, air cooled, heating	Single package	152,000	144,000	3.3	2.05	3.66	COP	2.73	COP	COMPLIES

Air Terminal Equipment

System ID	Air Terminal Type	Specific Type	Quantity	Addl Cooling Capacity (Btu/h) (Total For All Air Terminals)	Addl Heating Capacity (Btu/h) (Total For All Air Terminals)	Reheat Type
CU-2	Air terminal units		10	110,100	119,800	Electric
CU-1	Air terminal units		12	144,300	108,800	Electric

Air Systems & Equipment Details

System/Equip ID	Discrete Area(s) Served	Location In Project Documents - Plan/Detail #	System/Equip Compliance Path
CU-1	3156	Outdoor	General Prescriptive
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Economizer not required
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Air-Cooled Heat Pumps		
	WSEC Equip Efficiency Reference Table - Heating: Refer to Cooling Reference Table		
CU-2	3600	Outdoor	General Prescriptive
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Air-Cooled Heat Pumps		
	Economizer Compliance Method: Economizer not required		Heating Section/Auxiliary Heating Type: Electric resistance (or None)
	WSEC Equip Efficiency Reference Table - Heating: Refer to Cooling Reference Table		

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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:

HVAC LEGEND, ABBREVIATIONS & GENERAL NOTES

SCALE: 12" = 1'-0"
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET: **M0.0**

BUILDING ENERGY TOTAL SYSTEM PERFORMANCE RATIO — U.S. DEPARTMENT OF ENERGY

Washington State TSPR Analysis

Total System Performance Ratio for HVAC

1

BUILDING INFORMATION

SeaTac Public Works Maintenance Facility
2000 S 136th ST
SeaTac, WA 98168

Building Type:	**Office**	Analysis Date:	**04/03/2024**
Gross Floor Area:	**6,832 ft²**	Building ID #:	**26292**
Year of Construction:	**N/A (New)**	Software Release:	2023.1.0.344

Whole Building Total System Performance Ratio

Proposed Building TSPR:	17
Baseline Building TSPR:	11

✓ The Total System Performance Ratio complies with the 2021 Washington State Energy Code.

Total System Performance Ratio (TSPR) is the ratio of the sum of a building's annual heating and cooling load in thousands of BTUs to the sum of the annual carbon emissions in pounds from energy consumption of the building HVAC systems.

SUBMITTED BY

Name	Maika Nguyen
Organization	FSi Engineers
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Phone Number	(206) 849-2076

ANALYSIS PARAMETERS

Energy Code	2021 Washington State Energy Code
ASHRAE Climate Zone	4C, Mixed - Marine
Weather Station	Seattle Seattle Tacoma Intl A WA USA TMY3 WMO#=727930

The Total System Performance Ratio Analysis has been performed in accordance with the 2021 Washington State Energy Code.

BUILDING ENERGY TOTAL SYSTEM PERFORMANCE RATIO — U.S. DEPARTMENT OF ENERGY

Washington State TSPR Analysis

Building Envelope Information

2

Building ID #: **26292** — Gross Floor Area - **Building: 6,833 ft²**

BUILDING ENVELOPE INFORMATION

Total Gross Above Grade Wall Area [1]	5066.0 ft²
Total Window Area [2]	1010.0 ft²
Building Window to Wall Ratio	20%
Total Below Grade Wall Area	0.0 ft²
Total Gross Roof Area [3]	6833.0 ft²
Total Skylight Area	0.0 ft²

Areas by Orientation

NORTH	
Gross Wall Area	1668.0 ft²
Window Area	490.4 ft²
SOUTH	
Gross Wall Area	1668.0 ft²
Window Area	292.6 ft²
EAST	
Gross Wall Area	865.0 ft²
Window Area	126.5 ft²
WEST	
Gross Wall Area	865.0 ft²
Window Area	100.9 ft²

Notes:
[1] 'Total Gross Wall Area' includes both opaque and glazed wall area.
[2] Window includes all vertical fenestration, including curtainwall and storefront.
[3] 'Total Gross Roof Area' includes both opaque and glazed roof area.

BUILDING ENERGY TOTAL SYSTEM PERFORMANCE RATIO — U.S. DEPARTMENT OF ENERGY

Washington State TSPR Analysis

Whole Building HVAC Energy Use Summary

3

Building ID #: **26292** — Gross Floor Area - **Building: 6,833 ft²**

Whole Building Annual HVAC Site Energy Use by End-Use

	Proposed Building		Baseline Building	
End Use	Electricity (kWh)	Gas (Therm)	Electricity (kWh)	Gas (Therm)
Heating	2,108	0	1,548	0
Cooling	3,208		4,872	
Fans	1,214		3,683	
Pumps	0		0	
Heat Rejection	0		0	
Heat Recovery	0		0	
Total HVAC Energy Use	**6,530**	**0**	**10,104**	**0**
Total HVAC Energy Use (kBtu)	**22,280**		**34,477**	
Total HVAC Carbon Emissions (lbs)	**4,567**		**7,068**	

Whole Building Annual HVAC Heating and Cooling Loads

	Proposed and Baseline System
End Use	(kBtu)
Heating	36,025
Cooling	41,660
Total	**77,685**

COOLING LOAD, HEATING LOAD, AND VENTILATION CALCULATION

Zone	Room type	Floor area	Sensible Cooling design load with oversizing	Total Cooling design load with oversizing	Heating design load with oversizing	Design occupancy	Required minimum ventilation airflow					Exhaust rate
		(ft²)	(kBtu/h)	(kBtu/h)	(kBtu/h)	(People)	(cfm)	(cfm/person)	(cfm/ft²)	(ACH)	Total OA provided (CFM)	CFM
EXISTING OFFICE 110	Office - Enclosed	231.2	10.86	11.05	3.84	1.2	19.6	16.9	0.08	0.34	20	
OFFICE 105	Office - Enclosed	115.1	2.29	2.37	1.57	0.6	9.8	16.9	0.08	0.26	15	
OFFICE 107	Office - Enclosed	135.6	4.82	4.92	2.48	0.7	11.5	16.9	0.08	0.26	20	
OPEN OFFICE 103	Office - Open plan	530.7	12.36	12.76	8.00	2.7	45.1	17.0	0.08	0.28	50	
OFFICE 106	Office - Enclosed	134.9	4.52	4.62	1.79	0.7	11.5	17.1	0.08	0.30	20	
OFFICE 104	Office - Enclosed	114.5	2.18	2.27	0.83	0.6	9.7	17.1	0.08	0.30	15	
TRAINING CENTER 102	Conference/ Meeting/ Multipurp	445.7	20.95	25.96	4.14	22.3	138.2	6.2	0.31	1.58	140	
OFFICE 108	Office - Enclosed	103.7	1.69	1.78	0.58	0.5	8.8	16.9	0.08	0.37	15	
OFFICE 109	Office - Enclosed	103.0	1.40	1.49	0.50	0.5	8.8	16.8	0.08	0.37	15	
MECHANICAL 123	Electrical/ Mechanical	99.5	2.05	2.05	2.01							
OFFICE 114	Office - Enclosed	111.8	1.75	1.83	1.23	0.6	9.5	17.0	0.08	0.27	15	
OFFICE 113	Office - Enclosed	95.9	1.23	1.31	0.62	0.5	8.2	17.0	0.08	0.31	15	
OFFICE 115	Office - Enclosed	113.2	1.90	1.98	1.30	0.6	9.6	16.9	0.08	0.27	15	
OFFICE 116	Office - Enclosed	97.2	1.34	1.42	0.66	0.5	8.3	16.9	0.08	0.31	15	
MULTI PURPOSE 118	Conference/ Meeting/ Multipurp	407.2	14.17	18.68	6.66	20.4	126.2	6.2	0.31	1.04	130	
BREZZWAY 122	Corridor/ Transition	256.1	4.25	4.25	4.09	0.0	15.4	0.0	0.06	0.20	20	
SHARED CHANGING ROOM 117	Locker room	658.2	11.85	19.92	4.98	6.6	171.1	26.0	0.26	1.25	180	180
LOBBY 100	Lobby	470.3	23.04	23.44	7.05	2.3	40.0	17.0	0.08	0.39	40	
OPEN OFFICE 112	Office - Open plan	856.6	11.66	12.30	7.49	4.3	72.5	17.0	0.08	0.28	80	
VEST 121	Corridor/ Transition	48.4	1.77	1.77	0.85	0.0	2.9	0.0	0.06	0.24	15	
HALLWAY 101	Corridor/ Transition	746.3	5.76	5.76	4.75	0.0	44.8	0.0	0.06	0.24	50	
GENDER NEUTRAL RESTROOM	Restrooms	1,024.0	9.04	9.04	5.70							610
AV 119	Electrical/ Mechanical	26.2	1.17	1.17	0.25							
STORAGE	Storage	54.6	0.43	0.43	0.29	0.0	6.6	0.0	0.12	0.52	10	
CLOSET 120	Storage	23.4	0.35	0.35	0.22							

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SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

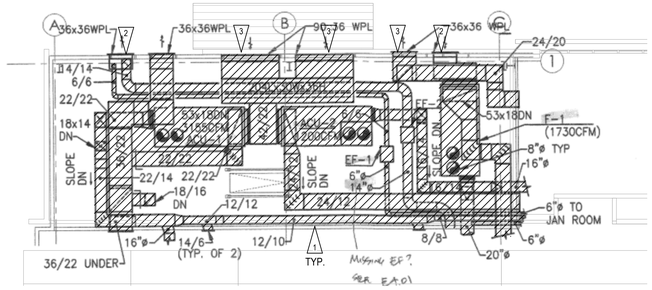
CONTENTS:
HVAC ENERGY CODE FORMS

SCALE:
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

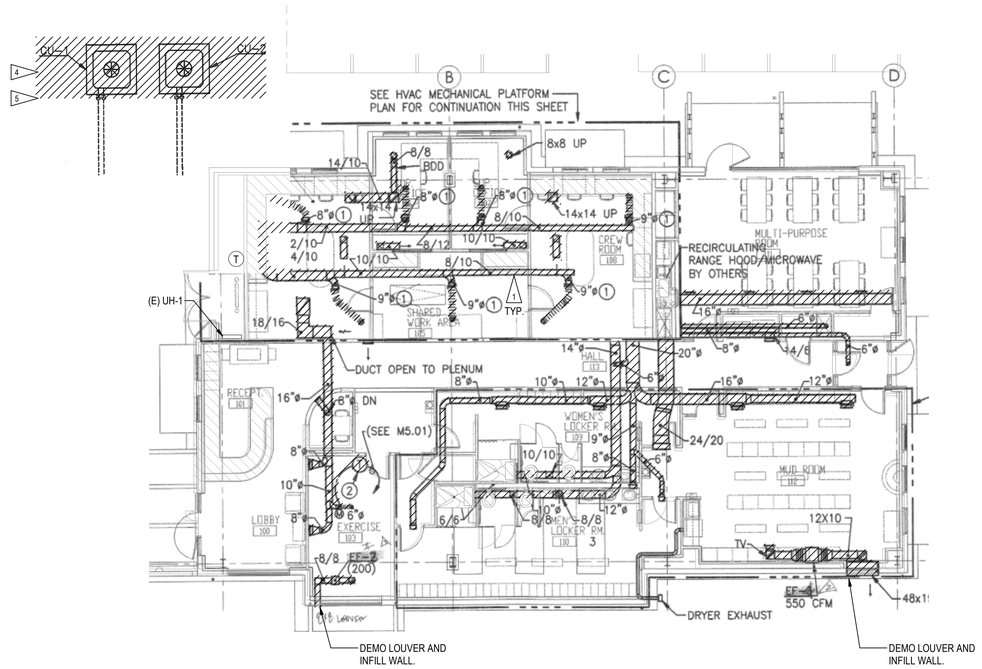
SHEET:
M0.1

DEMOLITION NOTES:

1. DEMOLISH EQUIPMENT, DUCTWORK, THERMOSTATS, AND ASSOCIATED RGDs.
2. MAINTAIN PLENUM BOX AND LOUVER.
3. BLANK OFF AT LOUVER.
4. REUSE EXISTING EQUIPMENT PAD.
5. DEMOLISH EXISTING CONDENSING UNITS



2 HVAC BUILDING #1 DEMOLITION PLAN MECH PLATFORM
1/8" = 1'-0"



1 HVAC BUILDING #1 DEMOLITION PLAN
1/8" = 1'-0"

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CITY OF SEATAC EST. 1990

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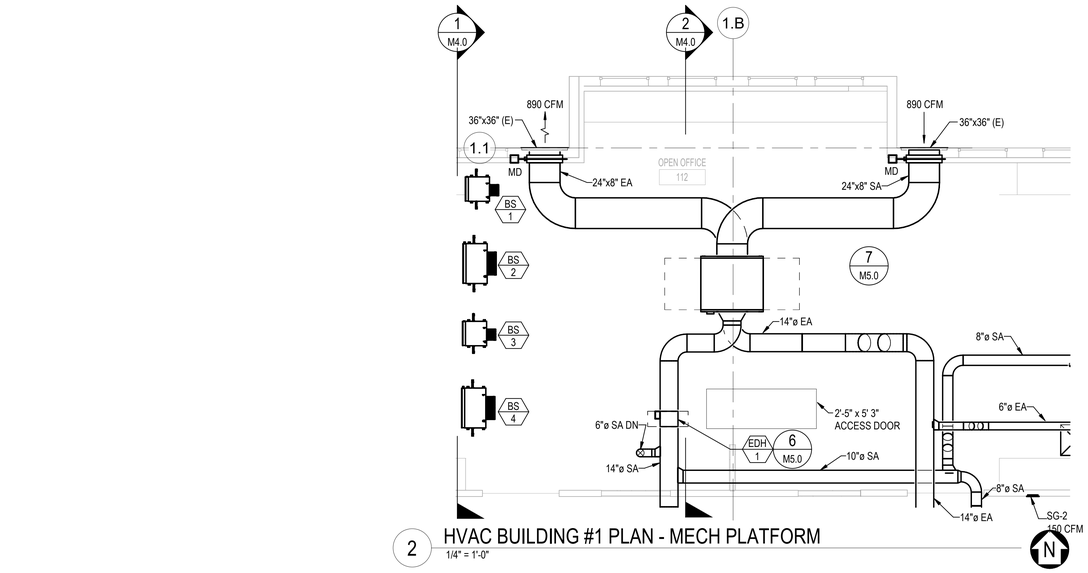
CONTENTS:

HVAC BUILDING #1 DEMOLITION FLOOR PLAN

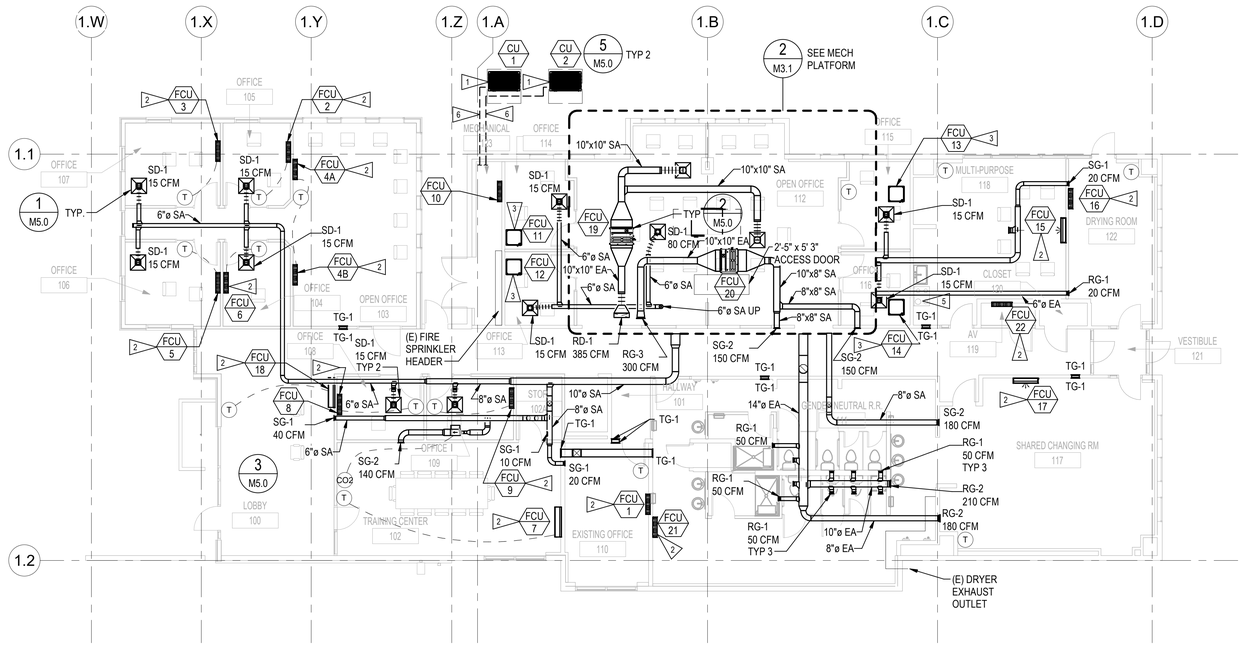
SCALE: 1/8" = 1'-0"
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET:

M2.1



2 HVAC BUILDING #1 PLAN - MECH PLATFORM
1/4" = 1'-0"



1 HVAC BUILDING #1 PLAN
1/8" = 1'-0"

CONSTRUCTION NOTES:

1. LOCATE CONDENSER UNITS ON EXISTING PADS.
2. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES. MOUNT WALL MOUNTED FCUs MINIMUM OF 7' AFF.
3. MOUNT CASSETTE FCUs IN DROP CEILING GRID.
4. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES. SEE 2/M5.0 FOR SUPPORTS.
5. EXISTING RANGE HOOD AND EXHAUST DUCTWORK TO REMAIN.
6. ROUTE REFRIGERANT PIPING UNDERGROUND TO MECHANICAL ROOM. CONNECT TO BRANCH SELECTORS IN MEZZENINE.

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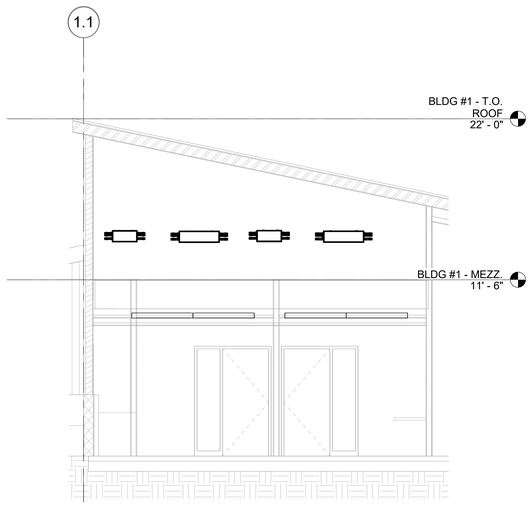
CONTENTS:

HVAC BUILDING #1 PLAN

SCALE: As Indicated
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET:

M3.1



1 SECTION A
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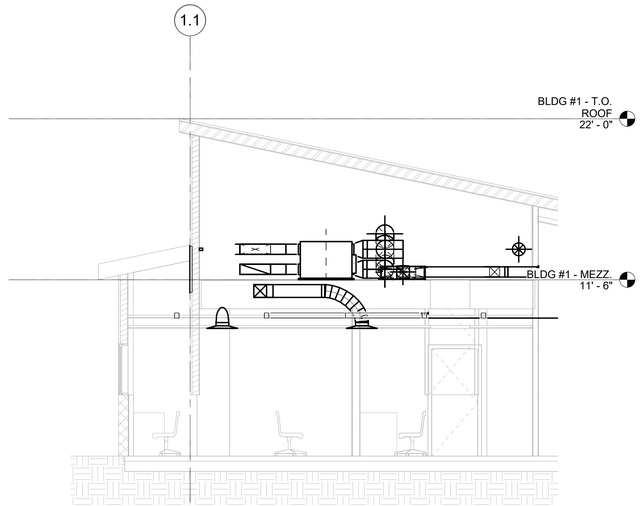

2 SECTION B
1/4" = 1'-0"

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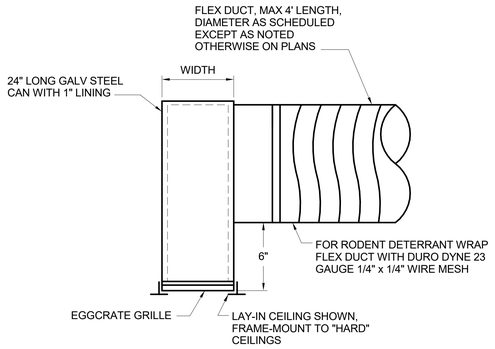
CONTENTS:

HVAC SECTIONS

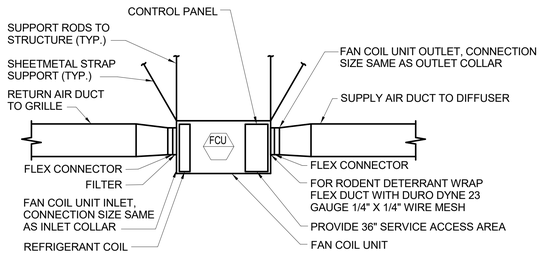
SCALE: **1/4" = 1'-0"**
DRAWN: **Author**
CHECKED: **Checker**
PROJECT NO: 2020008.100

SHEET:

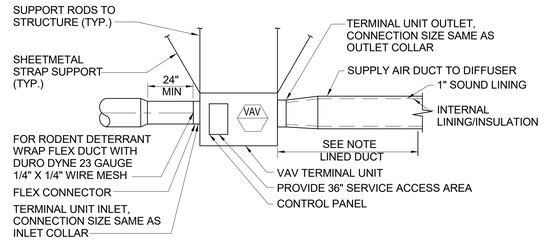
M4.0



1 DUCTED RETURN AIR GRILLE DETAIL
NTS

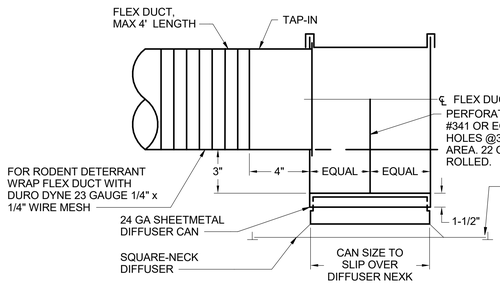


2 FCU DETAIL
NTS

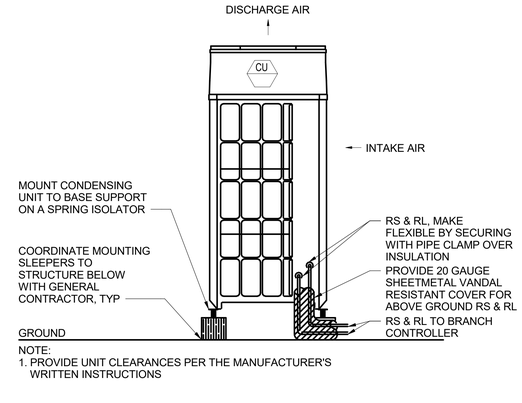


NOTE:
PROVIDE A MINIMUM OF 5' ACOUSTICAL LINING FROM VAV OUTLET OR TO FIRST DUCT TAKE OFF OR ELBOW, WHICHEVER IS GREATER.

3 VAV DETAIL
NTS

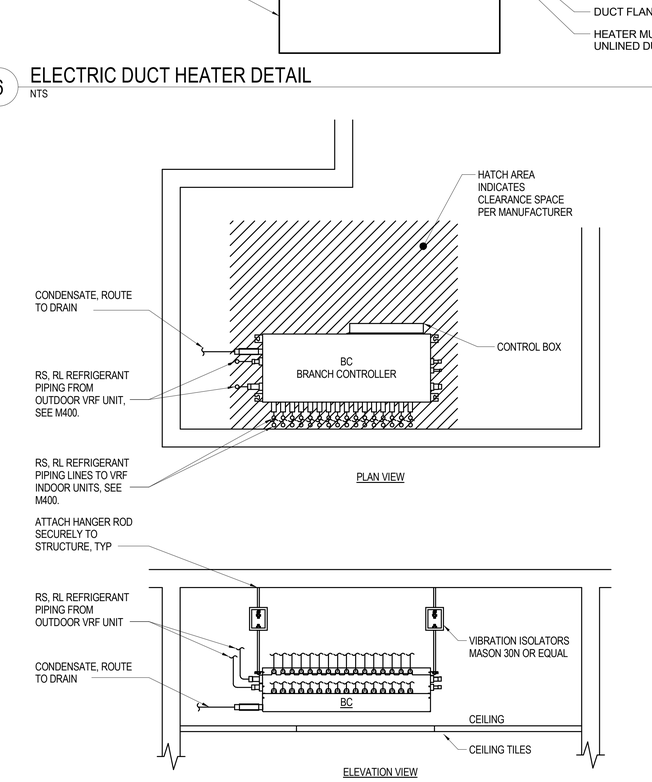


4 SQUARE NECK SUPPLY DIFFUSER DETAIL
NTS

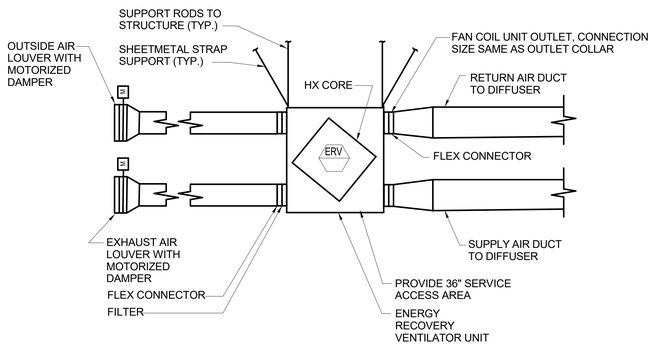


NOTE:
1. PROVIDE UNIT CLEARANCES PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS

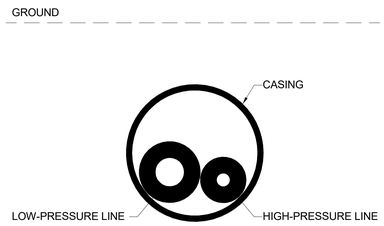
5 VRF OUTDOOR HEAT PUMP MOUNTING DETAIL
NTS



6 ELECTRIC DUCT HEATER DETAIL
NTS



7 ERV DETAIL
NTS



NOTES:
1. REFRIGERANT LINES MUST BE INSULATED SEPARATELY.
2. A MINIMUM OF 1/2" THICK INSULATION IS RECOMMENDED.
3. IF POSSIBLE, INSTALL CASING AS ONE CONTINUOUS PIECE.
4. IF CASING INCLUDES JOINTS, CONTACT THE CASING MANUFACTURER OR SUPPLIER FOR INSTRUCTIONS ON HOW TO SEAL THE JOINTS TO MAKE THEM WATERTIGHT.

8 CROSS SECTION OF UNDERGROUND REFRIGERANT PIPING
NTS

NOTES:

1. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

9 BRANCH CONTROLLER DETAIL
NTS

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ANDREW W. LAWSON — STATE OF WASHINGTON — 24019 — REGISTERED PROFESSIONAL ENGINEER
05/14/24
SIGNED

SEATAC PUBLIC WORKS MAINTENANCE FACILITY

2000 S 136TH ST, SEATAC, WA 98168

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SCALE:	NTS
DRAWN:	JAK
CHECKED:	MSS
PROJECT NO:	2020008.100

SHEET:

M5.0

ENERGY RECOVERY VENTILATOR SCHEDULE

CALLOUT									SUPPLY FAN		EXHAUST FAN				ELECTRICAL					TEMPERATURE INLET/OUTLET				ENTHALPY EFFICIENCY			BASIS OF DESIGN		
TYPE	MARK	LOCATION	SERVICE	NOMINAL AIRFLOW (CFM)	SUPPLY AIR FLOWRATE (CFM)	EXHAUST AIR FLOWRATE (CFM)	SUPPLY EXT. STATIC PRESSURE (IN WG)	EXHAUST EXT. STATIC PRESSURE (IN WG)	QTY	TOTAL HP	QTY	TOTAL HP	FILTER (QTY)	FILTER RATING	V	HZ	PH	MOP	MCA	COOLING INLET TEMP DB/WB (DEG F)	COOLING OUTLET TEMP DB/WB (DEG F)	HEATING INLET TEMP DB/WB (DEG F)	HEATING OUTLET TEMP DB/WB (DEG F)	HEATING EFF (%)	COOLING EFF (%)	WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
ERV	1	MEZZANINE	BUILDING#1	1925	880	880	0.75	0.75	1	1.34	1	1.34	3	MERV 8	208	60	1	15	12.6	86.1/65.6	77.7/63.4	24/24	58.7/50.3	71.9	86	245	ALDES	E-1800L-Fi-EC	

VARIABLE REFRIGERANT FLOW HEAT PUMP SCHEDULE

CALLOUT					COOLING				HEATING					COMPRESSOR			ELECTRICAL [7]									BASIS OF DESIGN		
TYPE	MARK	LOCATION	SERVICE	REFRIGERANT	NOMINAL CAPACITY (TONS) [1]	EER [2]	IEER [2]	SEER2	NOMINAL CAPACITY (BTU/HR) [1]	COP 47 [3]	COP 17 [3]	HSPF2	SCHE [4]	TYPE	QUANTITY [5]	NO. OF STAGES [6]	V	HZ	PH	MOCP	MCA	SCCR (kA)	NUMBER OF MODULES	MAX SOUND PRESSURE (DBA)	OPERATING WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
CU	1	OUTDOOR	BUILDING#1	R410A	12	11.0	18.2	-	152,000	3.52	2.48	-	23.31	HSS DC SCROLL	2	-	460	60	1	35	28.3	65	1	60	639	LG	ARUM144DTE5	
CU	2	OUTDOOR	BUILDING#1	R410A	8	11.9	20.1	-	108,000	3.66	2.73	-	24.30	HSS DC SCROLL	1	-	460	60	1	25	16.4	65	1	58	507	LG	ARUM96DTE5	

SCHEDULE NOTES:
[1] NOMINAL TONNAGE INCLUDED FOR REFERENCE ONLY - DO NOT USE FOR FINAL SIZING OF EQUIPMENT.
[2] RATED EFFICIENCY PER AHRI 1230. SYSTEM IS COMPLIANT WITH TABLE C403.2.3(1) OF THE WASHINGTON STATE ENERGY CODE, COMMERCIAL PROVISIONS; IEER = INTEGRATED ENERGY EFFICIENCY RATIO; EER = ENERGY EFFICIENCY RATIO.
[3] RATED EFFICIENCY PER AHRI 1230. SYSTEM IS COMPLIANT WITH TABLE C403.2.3(1) OF THE WASHINGTON STATE ENERGY CODE, COMMERCIAL PROVISIONS; COP 47 = COEFFICIENT OF PERFORMANCE AT 47 DEG F DB. COP 17 = COEFFICIENT OF PERFORMANCE AT 17 DEG F DB.
[4] SCHE AT NOMINAL CONDITIONS; SCHE = SIMULTANEOUS COOLING AND HEATING EFFICIENCY.
[5] QUANTITY OF COMPRESSORS AND DEDICATED, SEPARATE REFRIGERANT CIRCUITS.
[6] STAGES/MODULATION PER COMPRESSOR.
[7] SINGLE POINT CONNECTION PER MODULE. DISCONNECT BY OTHERS.

VARIABLE REFRIGERANT FLOW BRANCH SELECTOR BOX SCHEDULE

CALLOUT					ELECTRICAL [1]					OPERATING WEIGHT (LBS)	BASIS OF DESIGN		
TYPE	MARK	LOCATION	SERVICE	REFRIGERANT	V	HZ	PH	MCA	MOP		MANUFACTURER	MODEL	NOTES
BS	1	MECHANICAL 123	CU-1	R410A	208-230	60	1	0.17	15	40	LG	PRHR043A	[2]
BS	2	MECHANICAL 123	CU-1	R410A	208-230	60	1	0.27	15	68	LG	PRHR083A	[2]
BS	3	MECHANICAL 123	CU-2	R410A	208-230	60	1	0.17	15	40	LG	PRHR043A	[2]
BS	4	MECHANICAL 123	CU-2	R410A	208-230	60	1	0.27	15	68	LG	PRHR083A	[2]

SCHEDULE NOTES:
[1] SINGLE POINT CONNECTION. DISCONNECT BY OTHERS.
[2] PROVIDE BRANCH CONTROLLER WITH BALL VALVES ON ALL PORTS.

VARIABLE REFRIGERANT FLOW FAN COIL UNIT SCHEDULE

CALLOUT							COOLING [1][2]			HEATING			FAN	ELECTRICAL				NET WEIGHT (LBS)	BASIS OF DESIGN		
TYPE	MARK	SERVICE	OUTDOOR UNIT	TYPE	SUPPLY AIRFLOW (CFM)	ESP (IN WC) [3]	NOMINAL COOLING (BTH)	TOTAL COOLING (BTH)	SENSIBLE COOLING (BTH)	NOMINAL HEATING (BTH)	TOTAL HEATING (BTH)	REFRIGERANT	HP	POWER SUPPLY (V)	HZ	PH	MCA/MOP		MANUFACTURER	MODEL	NOTES
FCU	1	EXISTING OFFICE 110	CU-1	WALL MOUNTED	371	-	15,400	15,400	10,900	17,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU153SJS4	
FCU	2	OFFICE 105	CU-1	WALL MOUNTED	240	-	5,500	5,500	4,900	6,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU053SJS4	
FCU	3	OFFICE 107	CU-1	WALL MOUNTED	240	-	5,500	5,500	4,900	6,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU053SJS4	
FCU	4A	OPEN OFFICE 103	CU-1	WALL MOUNTED	255	-	7,500	7,500	6,700	8,500	8,500	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU073SJS4	
FCU	4B	OPEN OFFICE 103	CU-1	WALL MOUNTED	255	-	7,500	7,500	6,700	8,500	8,500	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU073SJS4	
FCU	5	OFFICE 106	CU-1	WALL MOUNTED	240	-	5,500	5,500	4,900	6,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU053SJS4	
FCU	6	OFFICE 104	CU-1	WALL MOUNTED	240	-	5,500	5,500	4,900	6,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU053SJS4	
FCU	7	TRAINING CENTER 102	CU-1	WALL MOUNTED	815	-	30,000	30,000	21,600	32,000	32,000	R410A	-	208-230	60	1	0.64/15	37	LG	ARNU303SVA4	
FCU	8	OFFICE 108	CU-1	WALL MOUNTED	240	-	5,500	5,500	4,900	6,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU053SJS4	
FCU	9	OFFICE 109	CU-1	WALL MOUNTED	240	-	5,500	5,500	4,900	6,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU053SJS4	
FCU	10	MECHANICAL 123	CU-1	WALL MOUNTED	240	-	5,500	5,500	4,900	6,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU053JS4	
FCU	11	OFFICE 114	CU-2	CEILING CASSETTE	265	-	5,500	5,500	3,900	6,100	6,100	R410A	-	208-230	60	1	0.25/15	29	LG	ARNU053TRD4	
FCU	12	OFFICE 113	CU-2	CEILING CASSETTE	265	-	5,500	5,500	3,900	6,100	6,100	R410A	-	208-230	60	1	0.25/15	29	LG	ARNU053TRD4	
FCU	13	OFFICE 115	CU-2	CEILING CASSETTE	265	-	5,500	5,500	3,900	6,100	6,100	R410A	-	208-230	60	1	0.25/15	29	LG	ARNU053TRD4	
FCU	14	OFFICE 116	CU-2	CEILING CASSETTE	265	-	5,500	5,500	3,900	6,100	6,100	R410A	-	208-230	60	1	0.25/15	29	LG	ARNU053TRD4	
FCU	15	MULTI PURPOSE 118	CU-2	WALL MOUNTED	540	-	24,200	24,200	17,200	25,600	25,600	R410A	-	208-230	60	1	0.65/15	28.7	LG	ARNU243SKS4	
FCU	16	BREZZWAY 122	CU-2	WALL MOUNTED	240	-	5,500	5,500	4,900	6,100	6,100	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU053JS4	
FCU	17	SHARED CHANGING ROOM	CU-2	WALL MOUNTED	540	-	24,200	24,200	17,200	25,600	25,600	R410A	-	208-230	60	1	0.65/15	28.7	LG	ARNU243SKS4	
FCU	18	LOBBY 100	CU-1	WALL MOUNTED	815	-	30,000	30,000	21,600	32,000	32,000	R410A	-	208-230	60	1	0.64/15	37	LG	ARNU303SVA4	
FCU	19	OPEN OFFICE 112	CU-1	CONCEALED DUCTED	595	0.1	15,400	15,400	12,000	17,100	17,100	R410A	-	208-230	60	1	2/15	56	LG	ARNU153M1A4	
FCU	20	HALL WAY 101 & VEST 121	CU-2	CONCEALED DUCTED	385	0.1	9,600	9,600	7,600	10,900	10,900	R410A	-	208-230	60	1	2/15	56	LG	ARNU093M1A4	
FCU	21	GENDER NEUTRAL RESTROOM	CU-2	WALL MOUNTED	300	-	12,300	12,300	9,400	13,600	13,600	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU123SJS4	
FCU	22	AV 119	CU-2	WALL MOUNTED	300	-	12,300	12,300	9,400	13,600	13,600	R410A	-	208-230	60	1	0.31/15	19.6	LG	ARNU123SJS4	

SCHEDULE NOTES:
[1] WITH UNIT AT MAXIMUM CONDITIONS.
[2] NOMINAL CAPACITY FOR REFERENCE ONLY - DO NOT USE FOR FINAL SIZING OF EQUIPMENT.
[3] STATIC PRESSURE EXTERNAL TO UNIT.
[4] PROVIDE WITH REFCO MODEL GOBI II CONDENSATE PUMP OR APPROVED EQUAL.
[5] INCLUDES ALLOWANCE FOR FILTER LOADING.
[6] SINGLE POINT CONNECTION AND UNIT PROVIDED WITH INTEGRAL DISCONNECT.
[7] PROVIDE WITH MANUFACTURER BASE RAIL, DISCONNECT SWITCH WITH 24A MAIN FUSE, S.S DRAIN PAN.
[8] SEE FLOOR PLAN FOR UNIT ARRANGEMENT AND ACCESS SIDE. CONTROL ENCLOSURE LOCATION TO BE COORDINATED BASED ON UNIT ACCESS SHOWN ON PLAN .

DUCT HEATER SCHEDULE

CALLOUT									ELECTRICAL					BASIS OF DESIGN		
TYPE	MARK	LOCATION	SERVICE	CFM	CAPACITY (KW)	NO. STEPS OF CONTROLS	EAT (°F)	LAT (°F)	V	HZ	PH	MCA	FLA	MANUFACTURER	MODEL	NOTES
EDH	1	MEZZANINE	ERV-1	880	3	SCR	58.7	65	460	60	3	9.41	7.53	INDEECO	ZUB	

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CITY OF SEATAC — EST. 1990

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

CONTENTS:
HVAC SCHEDULES

SCALE:
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET:
M6.0

VAV BOX SCHEDULE

CALLOUT											BASIS OF DESIGN		
TYPE	MARK	LOCATION	SERVICE	CFM MAX	CFM MIN	RATED CFM	PRESSURE DROP (IN WC)	MAX DISCHARGE NC	MAX RADIATED NC	WEIGHT (LBS)	MANUFACTURER	MODEL	UNIT SIZE
VAV	1	OFFICE 108	TRAINING CENTER 102	85	85	85	0.25	18	18	20	ETI	SDR	4

SCHEDULE NOTES:
[1] PROVIDE WITH MANUFACTURER'S DISSIPATIVE SILENCER

UNIT HEATER SCHEDULE

CALLOUT						ELECTRICAL			OPERATING WEIGHT (LBS)	BASIS OF DESIGN		NOTES
TYPE	MARK	LOCATION	SERVICE	CFM	CAPACITY (KW)	V	HZ	PH		MANUFACTURER	MODEL	
UH	1	BUILDING #3	STORAGE 216	50	1.125	208	60	1	5.6	QMARK	CZ1548T	

SCHEDULE NOTES:
[1] ELECTRIC RESISTANCE HEATERS PROVIDE LESS THAN 5% OF THE TOTAL BUILDING HVAC SYSTEM HEATING CAPACITY (EXCEPTION 11 OF SECTION C403.1.4 OF THE 2018 SEC)

AIR TERMINAL SCHEDULE

CALLOUT	AIR TERMINAL DESCRIPTION	AIRFLOW CAPACITY LIMITS (CFM)		NOMINAL SIZE		NECK			MAX NC	MAX TSP DROP (IN. W.G.)	MATERIAL	OBD	FINISH	BASIS OF DESIGN		NOTES
							FOR RECTANGULAR									
		MAXIMUM	MINIMUM	LENGTH	WIDTH	FOR ROUND	LENGTH	WIDTH						MANUFACTURER	MODEL	
SD-1	CEILING MOUNTED SUPPLY DIFFUSER	125	0	24"	24"	-	6"	6"	<10	0.030	STEEL	YES	#26 WHITE	TITUS	MCD	
SD-2	CEILING MOUNTED SUPPLY DIFFUSER	420	0	12"	12|"	-	10"	10"	21	0.065	STEEL	YES	#26 WHITE	TITUS	MCD	
SG-1	SIDEWALL MOUNTED SUPPLY GRILLE	60	0	8"	8"	-	6"	6"	<10	0.028	ALUMINUM	YES	#26 WHITE	TITUS	300FL	
SG-2	SIDEWALL MOUNTED SUPPLY GRILLE	185	0	10"	10"	-	8"	8"	13	0.077	ALUMINUM	YES	#26 WHITE	TITUS	300FL	
RG-1	SIDEWALL MOUNTED EXHAUST GRILLE	55	0	8"	8"	-	6"	6"	12	0.028	STEEL	YES	#26 WHITE	TITUS	4FFS	
RG-2	SIDEWALL MOUNTED EXHAUST GRILLE	240	0	12"	12"	-	10"	10"	24	0.05	STEEL	YES	#26 WHITE	TITUS	4FFS	
RD-1	CEILING MOUNTED RETURN DIFFUSER	420	0	12"	12|"	-	10"	10"	29	0.087	STEEL	YES	#26 WHITE	TITUS	PMR	
TG-1	SIDEWALL MOUNTED TRANSFER GRILLE GRILLE	355	0	14"	14"	-	12"	12"	<10	0.023	ALUMINUM	YES	#26 WHITE	TITUS	56FL	

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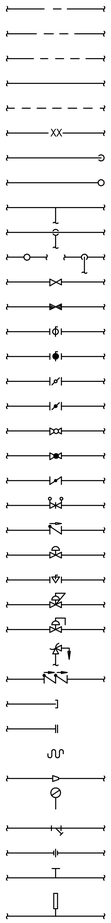
PLUMBING LEGEND



DOMESTIC COLD WATER (CW)
DOMESTIC HOT WATER (HW)
DOMESTIC HOT WATER CIRCULATING (HWC)
SOIL, WASTE (S,W)
VENT (V)
PIPING IDENTIFIER, SEE ABBREVIATIONS
ELBOW DOWN
ELBOW UP
TEE
TEE DN
TEE UP
ISOLATION OR SHUT-OFF VALVE (NO), TYP AS SPECIFIED
ISOLATION OR SHUT-OFF VALVE (NC), TYP AS SPECIFIED
BALL VALVE (NO)
BALL VALVE (NC)
BUTTERFLY VALVE (NO)
BUTTERFLY VALVE (NC)
GLOBE VALVE (NO)
GLOBE VALVE (NC)
THROTTLING VALVE, TYP AS SPECIFIED
METERING BALANCING VALVE
CHECK VALVE
CONTROL VALVE
PLUG VALVE
PRESSURE REGULATING VALVE
PRESSURE REDUCING VALVE
PRESSURE RELIEF VALVE
BACKFLOW PREVENTER
CAP
BLIND FLANGE
EXPANSION JOINT
REDUCER
PRESSURE GAUGE
STRAINER
UNION
PRESSURE/TEMPERATURE TAP
TEMPERATURE GAUGE

PLUMBING ABBREVIATIONS

A	AIR, COMPRESSED AIR
AW	ACID WASTE
BOP	BOTTOM OF PIPE
C	CONDENSATE
CA	COMPRESSED IAR
CI	CAST IRON
CF	CHEMICAL FEED
CIRC	CIRCULATING
CW	CITY WATER; DOMESTIC COLD WATER
CO	CLEAN OUT
CA	COMPRESSED AIR
DI	DEIONIZED WATER
DW	DISTILLED WATER
DOM	DOMESTIC
DR	DOOR; DRAIN
DF	DRINKING FOUNTAIN
ES	EMERGENCY SHOWER
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FPHB	FREEZE PROOF HOSE BIBB
GPH	GALLONS PER HOUR
HB	HOSE BIBB
HW	DOMESTIC HOT WATER
HWC	DOMESTIC HOT WATER CIRCULATING
IPC	INTERNATIONAL PLUMBING CODE
IW	INDIRECT WASTE
JAN	JANITOR
L	LAVATORY
MV	MEDICAL VACUUM
N	NITROGEN
NG	NATURAL GAS
NO	NITROUS OXIDE; NUMBER
NPW	NON-POTABLE WATER
O	OXYGEN
PC	PUMPED CONDENSATE
PLBG	PLUMBING
PNEU	PNEUMATIC
PRV	PRESSURE REDUCING VALVE
RWL	RAIN WATER LEADER
RECIRC	RECIRCULATING
RD	ROOF DRAIN
S	SOIL
SS	SANITARY SEWER; SERVICE SINK; STAINLESS STEEL
SD	STORM DRAIN
UPC	UNIFORM PLUMBING CODE
V	VENT
VA	VALVE
VAC	VACUUM
VB	VACUUM BREAKER
VTR	VENT THRU ROOF
W	WASTE; WATER; WIDE(DIM)
WC	WATER CLOSET
WFS	WATER FLOW SWITCH
Y	WYE

PLUMBING GENERAL NOTES

1. PROVIDE COMPLETE SUPPORTS, SEISMIC AND RESTRAINTS FOR ALL PIPES AND EQUIPMENT PER SPECIFICATIONS, AS REQUIRED, AND AS SHOWN ON THE DRAWINGS.
2. PROVIDE ALL REQUIRED MISCELLANEOUS STRUCTURAL STEEL, SUPPORTS, ATTACHMENTS, AND ANCHORAGES.
3. PROVIDE ANCHOR BOLTS OF SIZE, TYPE, AND LENGTH AS REQUIRED TO SATISFY THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS, THE SPECIFICATIONS, AND AS INDICATED ON DRAWINGS.
4. PROVIDE ADDITIONAL MISCELLANEOUS STRUCTURAL MEMBERS BETWEEN STRUCTURAL ELEMENTS AS REQUIRED TO RESIST FORCES AND MEET DEFLECTION REQUIREMENTS. ALL MISCELLANEOUS STRUCTURAL MEMBERS AND ANCHORAGES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON. NO WELDING, BOLTING, OR OTHER MEANS OF ATTACHMENT FOR SUPPORT OR RESTRAINT SHALL BE MADE ON PORTIONS OF STRUCTURAL MEMBERS AT OR NEAR CONNECTIONS BETWEEN STRUCTURAL MEMBERS OR ON ELEMENTS DESIGNATED IN THE SEISMIC LOAD RESISTING SYSTEM UNLESS APPROVED BY THE CONTRACTING OFFICER.
5. PROVIDE MISCELLANEOUS STRUCTURAL STEEL SHOP DRAWINGS AND CALCULATIONS FOR REVIEW BY THE CONTRACTING OFFICER. ALL REQUIRED MISCELLANEOUS STRUCTURAL MEMBERS, BOLTS, AND WELDS SHALL BE DESIGNED AND MEET REQUIREMENTS OF THE SPECIFICATIONS.

PLUMBING SHEET INDEX

SHEET NUMBER	SHEET NAME
P0.0	PLUMBING LEGEND, ABBREVIATIONS AND GENERAL NOTES
P1.1	PLUMBING BUILDING #1 DEMOLITION FOUNDATION PLAN
P2.1	PLUMBING BUILDING #1 DEMOLITION FLOOR PLAN
P2.4	PLUMBING AREA 8 DEMOLITION
P3.1	PLUMBING BUILDING #1 FOUNDATION PLAN
P4.1	PLUMBING BUILDING #1 PLAN
P4.4	PLUMBING AREA 8
P5.0	PLUMBING DETAILS
P6.0	PLUMBING SCHEDULES

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CONTENTS:

PLUMBING LEGEND, ABBREVIATIONS AND GENERAL NOTES

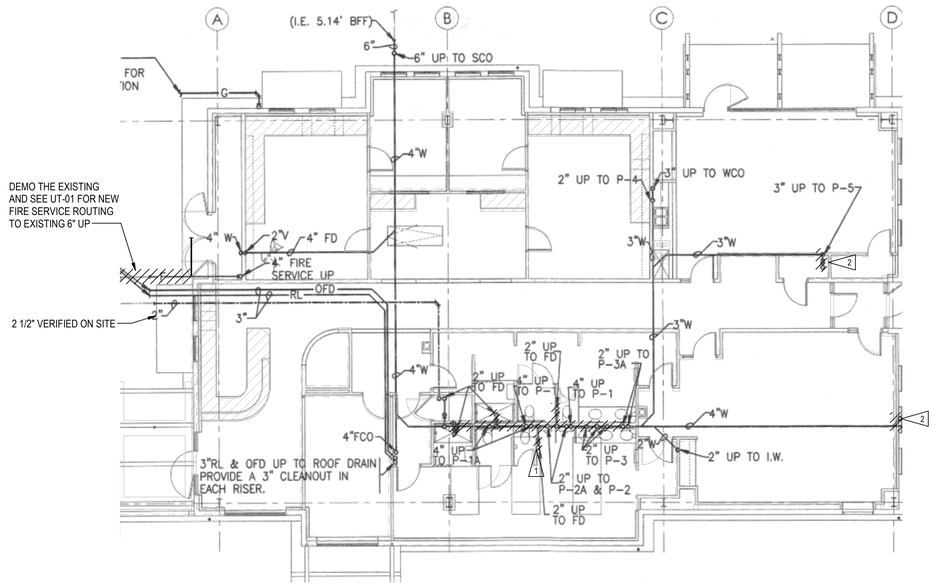
SCALE: 12" = 1'-0"
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET:

P0.0

DEMOLITION NOTES:

1. DEMOLISH WASTE PIPE AND ASSOCIATED VENT PIPE BACK TO MAIN & CAP.
2. CUT AND CAP WASTE PIPE AT FLOOR.



1 PLUMBING BUILDING #1 DEMOLITION FOUNDATION PLAN
1/8" = 1'-0"

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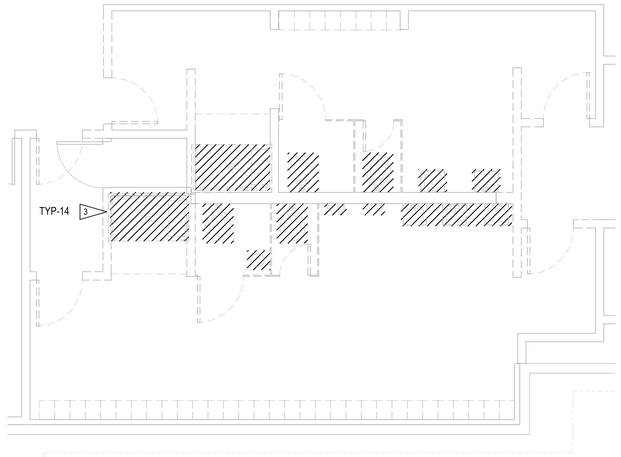
SCALE: 1/8" = 1'-0"
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

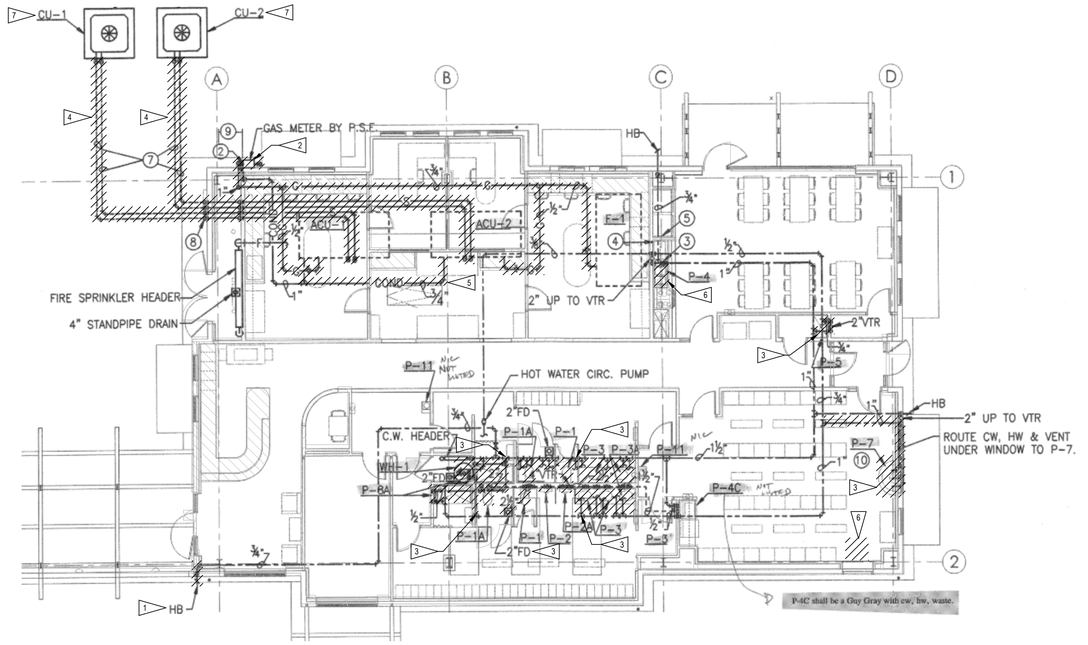
SHEET:
P1.1



2 ENLARGED PLUMBING DEMOLITION PLAN
1/4" = 1'-0"

DEMOLITION NOTES:

1. RETAIN & CLEAN (E) HB. SEE P4.1 FOR NEW LOCATION. CAP CW BRANCH.
2. DEMOLISH ALL GAS PIPE AND METER. CAP MAIN OUTSIDE BUILDING.
3. DEMOLISH WC, LAV, FD, WH, UR, SHOWERS, HW, HWC, AND CW BACK TO MAIN AND CAP.
4. DEMOLISH REFRIGERANT PIPING. MAINTAIN TRENCH FOR NEW WORK.
5. DEMOLISH CONDENSATE PIPE BACK TO 1" MAIN.
6. DEMOLISH EXISTING SINK.
7. SEE MECHANICAL FOR CU DEMOLITION.



1 PLUMBING BUILDING #1 DEMOLITION FLOOR PLAN
1/8" = 1'-0"

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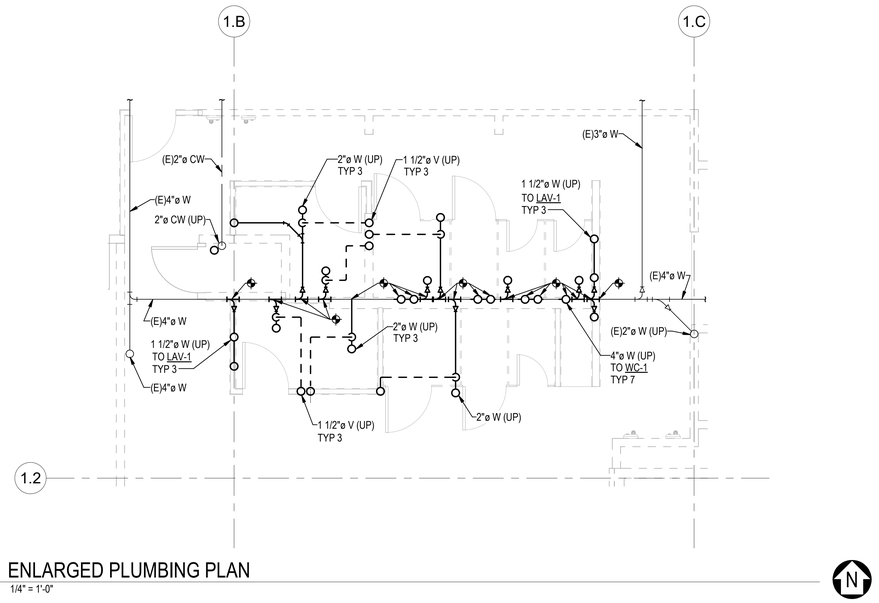
PLUMBING BUILDING #1 DEMOLITION FLOOR PLAN

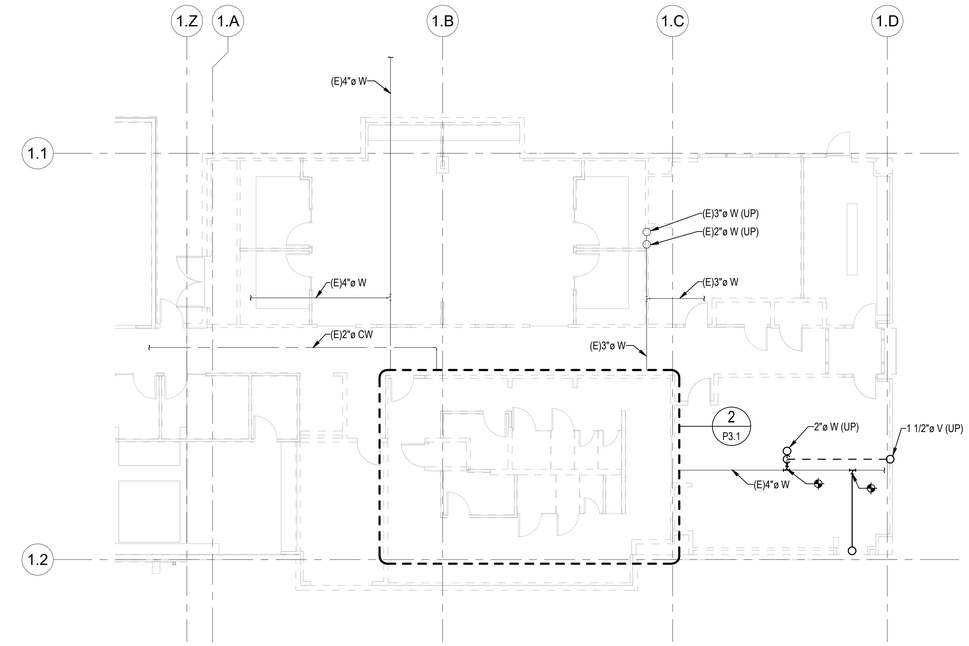
SCALE: As indicated
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET:

P2.1



2 ENLARGED PLUMBING PLAN
1/4" = 1'-0"



1 PLUMBING BUILDING #1 FOUNDATION PLAN
1/8" = 1'-0"

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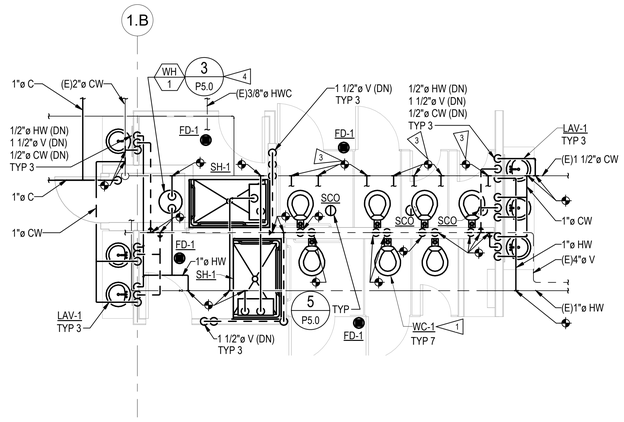
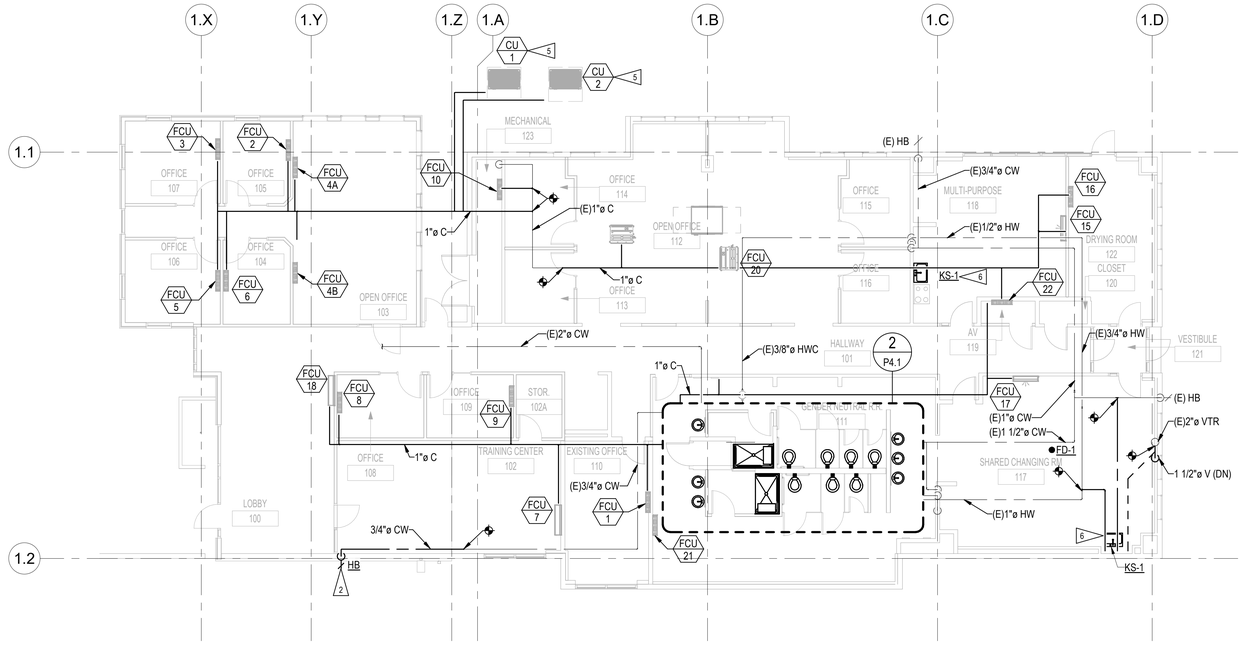
DRAWN: **JAK**
CHECKED: **MSS**
PROJECT NO: 2020008.100

SHEET:
P3.1



2 ENLARGED PLUMBING PLAN

1/4" = 1'-0"



1 PLUMBING BUILDING #1 PLAN

1/8" = 1'-0"

CONSTRUCTION NOTES:

1. CONNECT 2"ø V TO 4"ø W FOR EACH WC-1. WC-1 ARE TO BE WALL HUNG.
2. ATTACH SALVAGED (E) HOSE BIBB.
3. ROUTE CW CONNECTION TO WC-1.
4. CONNECT WH-1 TO EXISTING HW, CW PIPING.
5. SEE DETAIL 1 & 2 P5.0 FOR REFRIGERENT PIPE ROUTING. WILL BE UPDATED ON DRAWINGS FOR 50% CD.
6. CONNECT SK-1 TO EXISTING UTILITY HOOK UPS.

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05/14/24
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2000 S 136TH ST, SEATAC, WA 98168

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 05/14/2024

REVISION	DATE	DESCRIPTION

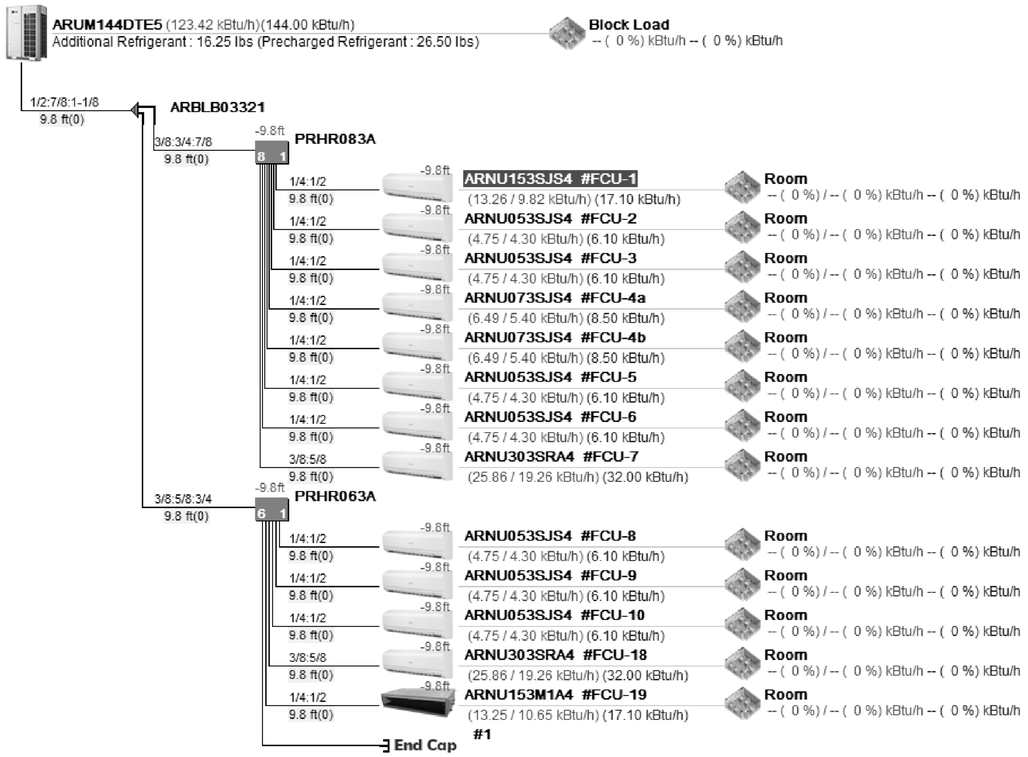
CONTENTS:

PLUMBING BUILDING #1 PLAN

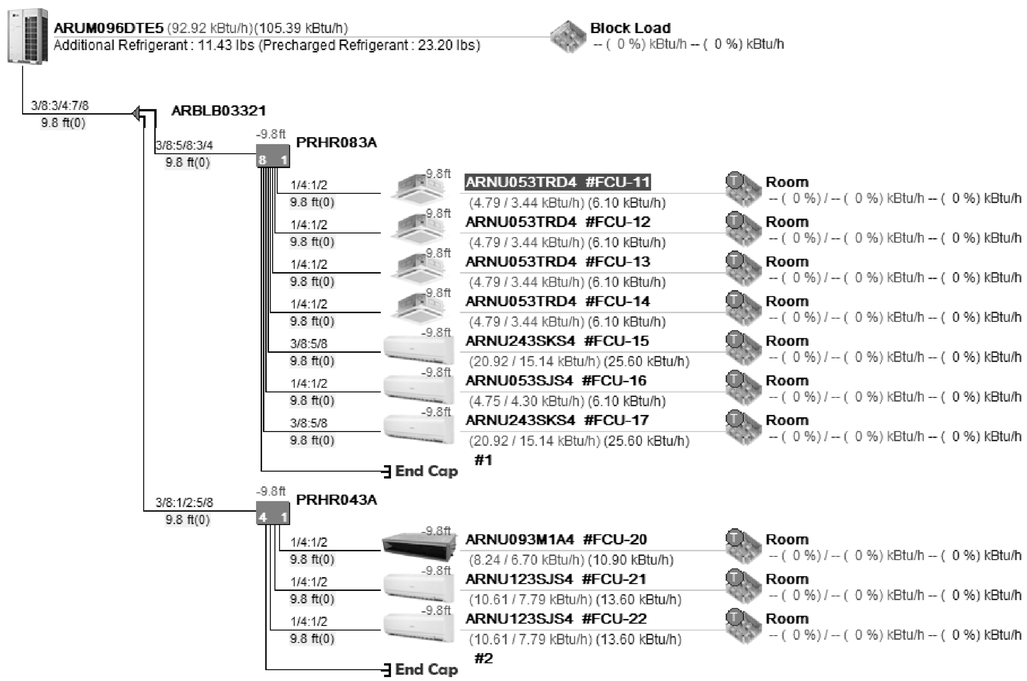
SCALE: **As indicated**
DRAWN: **JAK**
CHECKED: **MSS**
PROJECT NO: 2020008.100

SHEET:

P4.1

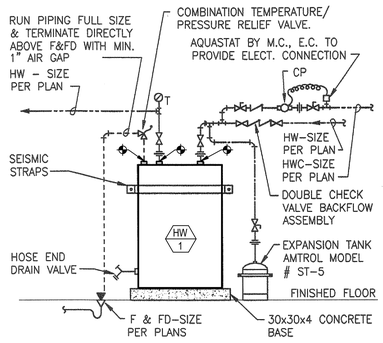


1 CU-1 DIAGRAM
NTS

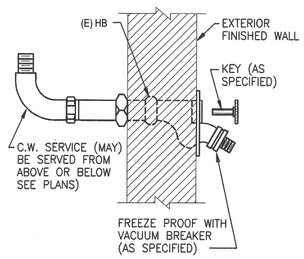


2 CU-2 DIAGRAM
NTS

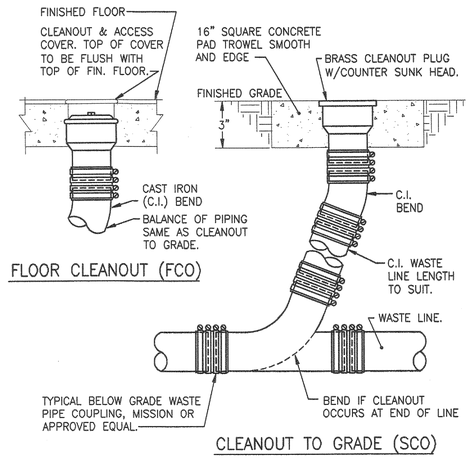
NOTE:
RSTA AND IB BUILDING DO NOT HAVE CIRCULATION PUMPS.



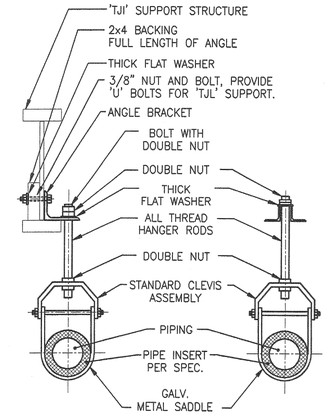
3 HOT WATER TANK PIPING DIAGRAM
NTS



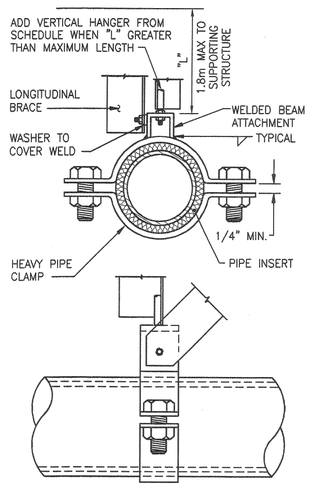
4 WALL HYDRANT INSTALLATION DETAIL
NTS



5 CLEANOUT DETAILS
NTS

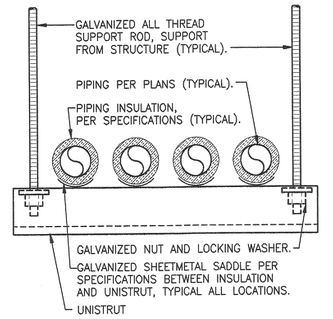


6 PIPE HANGER DETAIL
NTS



7 LONGITUDINAL BRACING FOR PIPES
NTS

NOTE:
P.O.L. PIPING INSTALLED SIMILAR, EXCEPT WITHOUT INSULATION.



8 HORIZONTAL PIPE SUPPORT DETAIL
NTS

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CONTENTS:
PLUMBING DETAILS

SCALE: NTS
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET:
P5.0

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE DESCRIPTION	BRANCH PIPE SIZE - INCHES DIA.				ADDITIONAL COMPONENTS	BASIS OF DESIGN		REMARKS
		COLD WATER	HOT WATER	WASTE	VENT		MANUFACTURER	MODEL	
LAV-1	COUNTERTOP-MOUNTED LAVATORY	1/2"	1/2"	1 1/2"	1 1/4"	FAUCET: CHICAGO #116.606.AB.1 (SENSOR-BATTERY)	KOHLER	#K-2196-4	
WC-1	WALL-HUNG WATER CLOSET (FLUSH VALVE)	1"	-	4"	2"	CARRIER: JAY R. SMITH (SELECT SERIES TO SUIT APPLICATION) FLUSH VALVE: KOHLER K-13517 (MANUAL-1.28 GPF) SEAT: OLSONITE #95	KOHLER	#K-4325	ADA, OBC, CSA B651 COMPLIANT WHEN INSTALLED TO THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS.
SH-1	INDIVIDUAL SHOWER STALL (ADA COMPLIANT)	1/2"	1/2"	2"	1 1/2"	SHOWER ASSEMBLY: CHICAGO #SH-TP1-00-024V ADJUSTABLE HEAD SHOWER CONTROL VALVE: CHICAGO #1762-VOCCP	KOHLER	#K-12100	PROVIDE DRAIN #K-9132, DOME LIGHT K-1570, AND SHOWER CURTAIN AND ROD
FD-1	FLOOR DRAIN	`	-	2"	1 1/2"	ROUND NICKEL-BRONZE STRAINER, NO-HUB OUTLET AND TRAP PRIMER CONNECTION	JAY R. SMITH	2005Y	
KS-1	SINGLE COMPARTMENT KITCHEN SINK	1/2"	1/2"	2"	1 1/2"	FAUCET: CHICAGO 23000-8E34ABCP DRAIN: ELKAY #LK-99 (WITH REMOVABLE STRAINER BASKET)	ELKAY	#LR-2522	

WATER HEATER SCHEDULE

CALLOUT					SERVICE CONDITIONS		RECOVERY CONDITIONS		ELECTRICAL		ELECTRICAL				RATED WATER HEATER EFFICIENCY % [2] [3]	BASIS OF DESIGN		NOTES
TYPE	MARK	LOCATION	TYPE [1]	CAPACITY (GAL)	EWT (DEG F)	LWT (DEG F)	CAPACITY (GPH)	WATER TEMP RISE (DEG F)	INPUT KW	NO. OF STEPS	V	HZ	PH	FLA		MANUFACTURER	MODEL	
WH	1	JANITOR CLOSET	ST	52	50	140	56	90	12	3	208	60	1	59	98	AO SMITH	DVE-52-12	

SCHEDULE NOTES:
[1] ST = STORAGE; INS = INSTANTANEOUS
[2] RATED WATER HEATER EFFICIENCY PER DOE 10 CFR PART 430 "OR" SECTION G1 "AND/OR" G.2 OF ANSI Z21.10.3. WATER HEATER IS COMPLIANT WITH TABLE C404.2 OF THE 2015 WASHINGTON STATE
[3] EF=ENERGY FACTOR "OR" ET=THERMAL EFFICIENCY "AND/OR" SL=STANDBY LOSS

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PLUMBING SCHEDULES

SCALE: 12" = 1'-0"
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET:
P6.0

FIRE PROTECTION ABBREVIATIONS

AS	AUTOMATIC SPRINKLER
FDC	FIRE DEPARTMENT CONNECTION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
SPR	SPRINKLER
UFC	UNIFORM FIRE CODE

FIRE PROTECTION LEGEND

OS & Y VALVE

VALVE IN RISER

PIPING IDENTIFIER, SEE ABBREVIATIONS

FIRE DEPARTMENT CONNECTION

FLOW SWITCH

DRY PIPE VALVE

GAUGE, AIR OR WATER AS NOTED ON DRAWINGS

FIRE PROTECTION SHEET INDEX

SHEET NUMBER	SHEET NAME
FP0.0	FIRE PROTECTION LEGEND, ABBREV. & GENERAL NOTES
FP2.2	FIRE PROTECTION SALT STORAGE BUILDING PLAN
FP3.1	FIRE PROTECTION BUILDING #1 PLAN

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CONTENTS:

FIRE PROTECTION LEGEND, ABBREV. & GENERAL NOTES

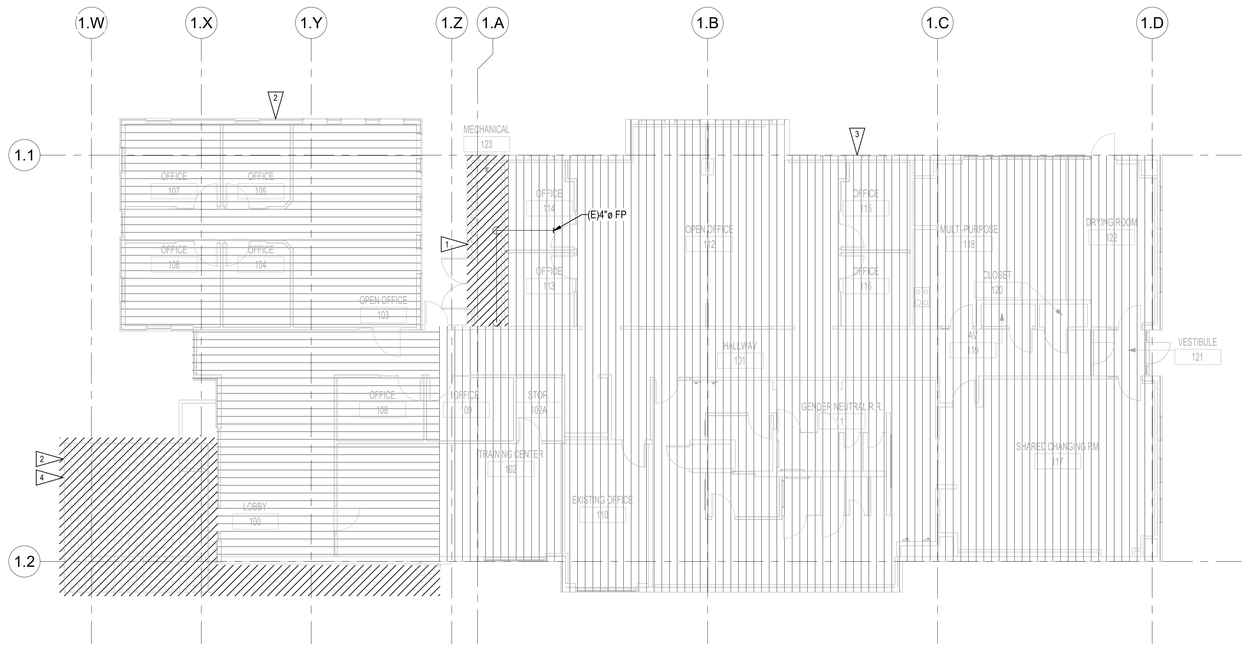
SCALE: 12" = 1'-0"
DRAWN: JAK
CHECKED: MSS
PROJECT NO: 2020008.100

SHEET:

FP0.0

CONSTRUCTION NOTES:

1. PROVIDE WET SPRINKLER COVERAGE FOR ORDINARY HAZARD GROUP 1 OCCUPANCY, 0.15 GPM OVER 1500 SQFT.
2. PROVIDE WET SPRINKLER COVERAGE FOR LIGHT HAZARD OCCUPANCY, 0.10 GPM OVER 1500 SQFT.
3. ARRANGE EXISTING WET SPRINKLER SYSTEM TO COMPLY WITH COVERAGE FOR LIGHT HAZARD OCCUPANCY, 0.10 GPM OVER 1500 SQFT.
4. PROVIDE SIDEWALL DRY BARREL SPRINKLER HEAD COVERAGE FOR 15' DEEP ENTRY CANOPY.



2 FIRE PROTECTION BUILDING #1 PLAN
1/8" = 1'-0"

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FIRE PROTECTION BUILDING #1 PLAN

SCALE: **1/8" = 1'-0"**
DRAWN: **JAK**
CHECKED: **MSS**
PROJECT NO: 2020008.100

SHEET:

FP3.1

FIRE ALARM

- FIRE SERVICE PHONE STATION OUTLET
- FLAME DETECTOR
- GAS DETECTOR, CARBON MONOXIDE
- HORN AND STROBE LIGHT, CEILING MOUNTED
- HORN AND STROBE LIGHT, WALL MOUNTED
- REMOTE INDICATOR, CEILING MOUNTED
- REMOTE INDICATOR, WALL MOUNTED
- SPEAKER AND STROBE LIGHT, CEILING MOUNTED
- SPEAKER AND STROBE LIGHT, WALL MOUNTED
- STROBE LIGHT, CEILING MOUNTED
- STROBE LIGHT, WALL MOUNTED
- ADDRESSABLE INPUT MODULE
- AREA OF REFUGE COMMUNICATION MASTER UNIT
- AREA OF REFUGE COMMUNICATION REMOTE UNIT
- ADDRESSABLE OUTPUT MODULE
- ELECTRICALLY OPERATED SMOKE OR FIRE/SMOKE DAMPER CONNECTION
- DOOR CLOSER
- DOOR HOLDER
- CHIME, WALL MOUNTED
- HORN, CEILING MOUNTED
- HORN, WALL MOUNTED
- PULL STATION
- FIRE ALARM ANNUNCIATOR
- FIRE ALARM CONTROL PANEL
- FIRE ALARM TRANSMITTER
- FIRE ALARM TERMINAL CABINET
- GRAPHIC ANNUNCIATOR PANEL
- HEAT DETECTOR
- FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT PANEL
- PRESSURE DETECTOR/SWITCH
- INTERFACE RELAY
- SMOKE DETECTOR, CEILING MOUNTED
- SMOKE DETECTOR, WALL MOUNTED
- SMOKE DETECTOR, SINGLE STATION
- SMOKE/HEAT DETECTOR
- SMOKE/HEAT/CARBON MONOXIDE DETECTOR
- SPEAKER, CEILING MOUNTED
- SPEAKER, WALL MOUNTED
- VALVE SUPERVISORY TAMPER SWITCH
- FLOW DETECTOR/SWITCH

HEAT/SMOKE DETECTOR TYPES

- C#/F# FIXED TEMPERATURE, # INDICATES °C OR °F
- R RATE OF RISE
- RC#/F# COMBINED RATE OF RISE/FIXED TEMPERATURE
- AS AIR SAMPLING
- BR BEAM DETECTOR RECEIVER
- BT BEAM DETECTOR TRANSMITTER
- E ELEVATOR RECALL
- I IONIZATION
- ID IN DUCT
- P PHOTOELECTRIC

LIGHTING CONTROLS

- SINGLE POLE SWITCH
- INDICATES WIRELESS CONTROL
- INDICATES BATTERY POWER
- LOWER-CASE LETTER(S) NEAR SWITCH DENOTE SWITCH LEG(S)
- a
- 2 DOUBLE POLE SWITCH
- 3 THREE-WAY SWITCH
- 4 FOUR-WAY SWITCH
- D DIMMER SWITCH
- K KEY OPERATED SWITCH
- LV MOMENTARY CONTACT LOW VOLTAGE SWITCH
- O OCCUPANCY SENSOR SWITCH
- P SWITCH WITH PILOT LIGHT
- PC PHOTOCELL SWITCH
- T TIMER SWITCH
  - COMBINATIONS OF THE ABOVE DESIGNATIONS MAY BE USED
- CS# LOW VOLTAGE CONTROL STATION, # INDICATES STATION IDENTIFICATION
- DSC DIMMING SYSTEM CONTROL PANEL
- ECLU EMERGENCY LIGHTING CONTROL UNIT
- LCP LIGHTING CONTROL PANEL
- OPR COMBINATION OCCUPANCY/PHOTO SENSOR SWITCH, CEILING MOUNTED
- OS OCCUPANCY SENSOR SWITCH, CEILING MOUNTED
- PC PARTITION SENSOR CONTROL
- PS PHOTO SENSOR CONTROL
- PS PHOTO SENSOR CONTROL, CEILING MOUNTED
- R RELAY
- T LOW VOLTAGE TRANSFORMER

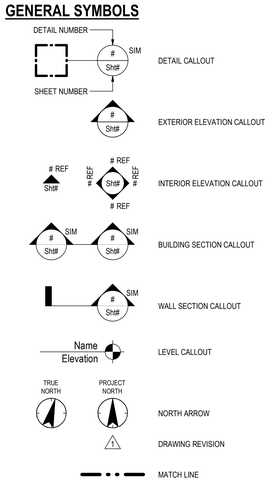
LUMINAIRES

	CIRCUITS EMERGENCY	CIRCUITS NORMAL
LUMINAIRE IDENTIFICATION, SEE LUMINAIRES SCHEDULE	N/A	L01
LOWER-CASE LETTER(S) NEAR LUMINAIRE DENOTE SWITCH LEG(S)	N/A	a
RECESSED RECTANGULAR LUMINAIRE, DRAWN TO SCALE		
SURFACE MOUNTED RECTANGULAR LUMINAIRE, DRAWN TO SCALE		
RECESSED VOLUMETRIC LUMINAIRE, DRAWN TO SCALE		
STRIP LUMINAIRE, LENGTH TO SCALE		
WALL MOUNTED RECTANGULAR LUMINAIRE, LENGTH TO SCALE (NUMBER OF MOUNTING POINTS WILL VARY WITH THE LUMINAIRE LENGTH AND ARE NOT INDICATED.)		
RECESSED DOWNLIGHT LUMINAIRE		
SURFACE MOUNTED CEILING LUMINAIRE		
PENDANT MOUNTED LUMINAIRE		
LINEAR PENDANT MOUNTED LUMINAIRE, LENGTH TO SCALE (NUMBER OF MOUNTING POINTS WILL VARY WITH THE LUMINAIRE LENGTH AND ARE NOT INDICATED.)		
WALL MOUNTED LUMINAIRE		
MULTI-SERVICE CEILING BOX (RECEPTACLES AS INDICATED)	N/A	
MULTI-SERVICE FLOOR BOX (RECEPTACLES AS INDICATED)	N/A	
MULTI-SERVICE FURNITURE BOX (RECEPTACLES AS INDICATED)	N/A	
MULTI-SERVICE POKE THRU (RECEPTACLES AS INDICATED)	N/A	
MULTI-SERVICE POWER POLE (RECEPTACLES AS INDICATED)	N/A	
MULTI-SERVICE WALL BOX (RECEPTACLES AS INDICATED)	N/A	
WALL MOUNTED EXIT SIGN WITH EMERGENCY BATTERY PACK		
EMERGENCY BATTERY PACK, NUMBER OF LAMPS NOT INDICATED	N/A	
WALL MOUNTED EMERGENCY BATTERY PACK, NUMBER OF LAMPS NOT INDICATED		
EMERGENCY WITH REMOTE BATTERY PACK, NUMBER OF LAMPS NOT INDICATED		
WALL MOUNTED EMERGENCY WITH REMOTE BATTERY PACK, NUMBER OF LAMPS NOT INDICATED		
RECESSED LINEAR WALL WASH LUMINAIRE, LENGTH TO SCALE		
LINEAR PENDANT MOUNTED WALL WASH LUMINAIRE, LENGTH TO SCALE		
RECESSED WALL WASH LUMINAIRE		
SURFACE MOUNTED WALL WASH LUMINAIRE		
PENDANT MOUNTED WALL WASH LUMINAIRE		
RECESSED ACCENT LUMINAIRE		
SURFACE MOUNTED ACCENT LUMINAIRE		
PENDANT MOUNTED ACCENT LUMINAIRE		
MONOPOINT LUMINAIRE		
TRACK LIGHTING	N/A	
CONTINUOUS SOURCE LUMINAIRE, PATH AS INDICATED	N/A	
MULTI-LAMP ACCENT LUMINAIRE, NUMBER OF LAMPS NOT INDICATED		
WALL MOUNTED MULTI-LAMP ACCENT LUMINAIRE, NUMBER OF LAMPS NOT INDICATED		
OVERCOUNTER TASK LUMINAIRE		
UNDERCABINET TASK LUMINAIRE		
FIBER OPTIC REMOTE SOURCE		
STEP LUMINAIRE		
ILLUMINATED SIGN		
WALL MOUNTED ILLUMINATED SIGN		
NIGHT LIGHT		
WALL MOUNTED STROBE LIGHT		

SITE/LANDSCAPE/GARAGE LUMINAIRES

	CIRCUITS EMERGENCY	CIRCUITS NORMAL
LIGHTING STANDARD: LUMINAIRE, POLE, AND BASE		
POST TOP LUMINAIRE		
ILLUMINATED BOLLARD		
IN-GROUND LUMINAIRE		
ADJUSTABLE IN-GROUND LUMINAIRE		
PENDANT MOUNTED GARAGE LUMINAIRE		
PENDANT MOUNTED SHIELDED GARAGE LUMINAIRE, LINES INDICATE NUMBER AND POSITION OF SHIELD(S)		
SURFACE MOUNTED GARAGE LUMINAIRE		
SURFACE MOUNTED SHIELDED GARAGE LUMINAIRE, LINES INDICATE NUMBER AND POSITION OF SHIELD(S)		
WALL PACK		

GENERAL SYMBOLS



DRAWING INDEX

NO.	DRAWING NAME
E0.0	ELECTRICAL LEGEND AND ABBREVIATIONS
E1.1	DEMOLITION ELECTRICAL SITE PLAN
E1.2	ELECTRICAL SITE PLAN
E2.1	DEMOLITION POWER PLAN – BLDG #1
E2.2	DEMOLITION LIGHTING PLAN – BLDG #1
E2.3	DEMOLITION FIRE ALARM PLAN – BLDG #1
E2.4	DEMOLITION POWER PLAN – BLDG #2
E3.1	POWER PLAN – BLDG #1
E3.2	POWER PLAN – BLDG #2
E3.3	POWER PLAN – BLDG #3
E3.4	POWER PLAN – BLDG #6 SALT STORAGE
E4.1	LIGHTING PLAN – BLDG #1
E4.2	LIGHTING PLAN – BLDG #6 SALT STORAGE
E5.1	FIRE ALARM – BLDG #1
E5.2	FIRE ALARM PLAN – BLDG #6 SALT STORAGE
E6.1	ELECTRICAL RISER DIAGRAM
E7.1	LIGHTING FIXTURE SCHEDULE
E8.1	ENERGY CODE FORMS - BLDG #1
E8.2	ENERGY CODE FORMS - BLDG #1
E8.3	ENERGY CODE FORMS - BLDG #1
E8.4	ENERGY CODE FORMS - BLDG #6 SALT STORAGE
E8.5	ENERGY CODE FORMS - BLDG #6 SALT STORAGE
E8.6	ENERGY CODE FORMS - BLDG #6 SALT STORAGE

RECEPTACLES

	CIRCUITS EMERGENCY	CIRCUITS NORMAL
SINGLE RECEPTACLE, 120V		
SINGLE RECEPTACLE, 120V, CEILING MOUNTED		
DUPLEX RECEPTACLE, 120V		
DUPLEX RECEPTACLE, 120V, CEILING MOUNTED		
DOUBLE DUPLEX RECEPTACLE, 120V		
DOUBLE DUPLEX RECEPTACLE, 120V, CEILING MOUNTED		
SPLIT WIRED RECEPTACLE, 120V, TOP CONTROLLED, BOTTOM CONSTANTLY ENERGIZED		
RECEPTACLE, NEMA #, CEILING MOUNTED		
COMBINATION RECEPTACLE, NEMA # AND 120V		
INTEGRAL FURNITURE SYSTEMS RECEPTACLE, 120V		
INDICATES FULLY CONTROLLED	N/A	
INDICATES 15A	N/A	
INDICATES TWIST LOCK	N/A	
INDICATES MOUNTED ABOVE COUNTER BACKSPLASH	N/A	
MULTI-SERVICE ASSEMBLY (RECEPTACLES AS INDICATED)	N/A	

RECEPTACLE TYPES

- A ARC FAULT CIRCUIT INTERRUPTER
- AT ARC FAULT CIRCUIT INTERRUPTER AND TAMPER RESISTANT
- D DEDICATED CIRCUIT
- G GROUND FAULT CIRCUIT INTERRUPTER
- GT GROUND FAULT CIRCUIT INTERRUPTER AND TAMPER RESISTANT
- IG ISOLATED GROUND
- S SURGE PROTECTOR
- T TAMPER RESISTANT
- U INTEGRAL USB PORT(S)
- WP WEATHER RESISTANT COVER

CONTROLS

- NON-FUSED SAFETY SWITCH
- FUSED SAFETY SWITCH, FUSE RATING INDICATED
- COMBINATION MOTOR STARTER AND FUSED SAFETY SWITCH, FUSE RATING INDICATED
- MOTOR STARTER
- MANUAL MOTOR STARTER
- AUTOMATIC DOOR PUSHPLATE
- DEAD FRONT GFCI
- EMERGENCY SHUTDOWN
- ENCLOSED CIRCUIT BREAKER
- ENCLOSED CONTACTOR
- PUSH BUTTON CONTROL STATION
- TOGGLE SWITCH, MOTOR RATED
- TOUCHLESS AUTOMATIC DOOR OPENER
- DDC DIRECT DIGITAL CONTROL PANEL
- R RELAY
- THERMOSTAT
- TC TIME CLOCK
- VFD VARIABLE FREQUENCY DRIVE

WORK DEFINITION

- NEW WORK
- EXISTING
- REMOVE EXISTING
- REMOVE EXISTING ELECTRICAL EQUIPMENT
- FUTURE
- TEMPORARY, AS NOTED
- KEY NOTE
- ??? EQUIPMENT IDENTIFICATION

RACEWAYS

- RACEWAY CONCEALED IN CEILING OR WALL. EXPOSED RACEWAY IS ALLOWED ONLY WHERE NOTED.
- RACEWAY BELOW SLAB OR UNDERGROUND
- RACEWAY UP
- RACEWAY DOWN
- RACEWAY CONTINUATION
- RACEWAY STUB-OUT WITH BUSHING
- SURFACE RACEWAY (HORIZONTAL/VERTICAL)
- J JUNCTION BOX, CEILING OR ABOVE CEILING MOUNTED
- J JUNCTION BOX, WALL MOUNTED
- J JUNCTION BOX, IN-GROUND
- PB PULL BOX

ELECTRICAL EQUIPMENT

- 208V OR 240V POWER PANELBOARD
- 480V OR 600V POWER PANELBOARD
- EQUIPMENT CABINET OR PANEL
- EQUIPMENT CONNECTION, FILL INDICATES EMERGENCY CIRCUIT
- GROUND BAR
- MOTOR CONNECTION, 1Ø
- MOTOR CONNECTION, 3Ø
- BUS DUCT
- ATS AUTOMATIC TRANSFER SWITCH
- BUS DUCT PLUG
- SPD SURGE PROTECTIVE DEVICE
- T TRANSFORMER, NOT TO SCALE
- TRANSFORMER, DRAWN TO SCALE

SITE UTILITIES

- HH HANDHOLE
- M SITE METER
- MH MANHOLE
- PMH PRIMARY MANHOLE
- SMH SECONDARY MANHOLE
- TMH TELECOMMUNICATIONS MANHOLE

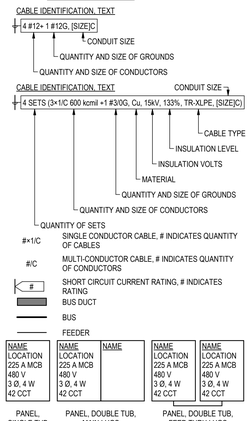
SITE UTILITY POLES

- CATV CATV ONLY
- COMBINED SERVICES
- POWER ONLY
- TELECOM ONLY
- STEPDOWN TRANSFORMER, POLE MOUNTED

LIGHTNING PROTECTION

- CONDUCTOR
- GROUND ROD
- AIR TERMINAL
- DOWN CONDUCTOR

SCHEMATICS



SCHEMATICS

- CIRCUIT BREAKER, LOW VOLTAGE, FIXED
- CIRCUIT BREAKER, LOW VOLTAGE, WITH LIMITER
- CONNECTION, CONNECTED
- CONNECTION, FEED FROM/TO
- CONNECTION, SPLICE
- CONTACT
- CURRENT TRANSFORMER
- FUSE
- FUSED CUTOUT
- GROUND
- GROUND STUD
- NOT CONNECTED
- POTENTIAL TRANSFORMER
- TRANSFER SWITCH
- TRANSFORMER
- DMS DIGITAL METERING SYSTEM
- G GENERATOR
- K KEY OPERATED SWITCH
- LSIG RELAY, TRIP UNIT
- M INLINE SOCKET METER
- METER METER
- SPACE SPACE, FIXED BREAKER
- SPD SURGE PROTECTION DEVICE

ABBREVIATIONS

NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFE	OWNER FURNISHED EQUIPMENT
OH	OVERHEAD
OL	OVERLOAD
OS	OCCUPANCY SENSOR, OPTIONAL STANDBY
OSP	OUTSIDE PLANT
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX
PD	PUNCHDOWN
PDZ	PRIMARY DAYLIGHT ZONE
PF	POWER FACTOR
PNL	PANEL
POE	POINT OF ENTRANCE
POS	POINT OF SERVICE
PR	PAIR
PT	POTENTIAL TRANSFORMERS
PTS	PNEUMATIC TUBE STATION
PTZ	PAN/TILT/ZOOM
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
PWR	POWER
RA	RETURN AIR
REC	RECESSED
RECP	RECEPTACLE
REQD	REQUIRED
REX	REQUEST TO EXIT
RM	ROOM
RNC	RIGID NON-METALLIC CONDUIT
RO	RACEWAY ONLY
RPC	REVERSE PHASE CUT
RSC, RGS	RIGID STEEL CONDUIT
SCCR	SHORT CIRCUIT CURRENT RATING
SDZ	SECONDARY DAYLIGHT ZONE
SEC	SECURITY
SECT	SECTION
SIM	SIMILAR
SM	SINGLE MODE FIBER OPTIC STRAND
SMR	SURFACE MOUNTED RACEWAY
SPD	SURGE PROTECTED DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPECS	SPECIFICATIONS
SPST	SINGLE POLE SINGLE THROW
SS	STAINLESS STEEL
ST	SHUNT TRIP
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYS	SYSTEM
TBB	TELECOMMUNICATIONS BACKBONE
TC	TEMPERATURE CONTROL OR TERMINAL CABINET
TE	TELECOMMUNICATIONS ENCLOSURE
TELE	TELEPHONE
TELECOM	TELECOMMUNICATIONS
TEMP	TEMPERATURE
TERM	TERMINAL
TGB	TELECOMMUNICATIONS GROUND BAR
TMGB	TELECOMMUNICATIONS MAIN GROUND BAR
TOF	TOP OF FIXTURE
TP	TAMPER RESISTANT
TR	TELECOMMUNICATIONS ROOM
TSP	TWISTED SHIELDED PAIR
TSTAT	THERMOSTAT
TTB	TELECOM TERMINAL BOARD
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UNV	UNIVERSAL VOLTAGE
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
UTP	UNSHIELDED TWISTED PAIR
UV	UNIT VENTILATOR
V	VOLTS
VA	VOLT-AMPS
VAV	VARIABLE AIR VOLUME
VC	VOLUME CONTROL
VDT	VISUAL DISPLAY TERMINAL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIF	VERIFY IN FIELD
VOL	VOLUME
VT	VAPOR TIGHT
W	WIRE, WATT
WAP	WIRELESS ACCESS POINT
WG	WIREGUARD
WL	WET LOCATION
WP	WEATHERPROOF
WT	WATERTIGHT
XFMR	TRANSFORMER
Ø, PH	PHASE

ABBREVIATIONS

ETD	EMERGENCY TRANSFER DEVICE
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXP	EXPLOSION PROOF
EXTER	EXTERIOR
F&I	FURNISHED AND INSTALLED
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FB	FLOOR BOX
FCU	FAN COIL UNIT
FLR	FLOOR
FLUOR	FLUORESCENT
FO	FIBER (FIBRE) OPTIC
FOH	FRONT OF HOUSE
FP	FIRE PROTECTION
FPC	FORWARD PHASE CONTROL
FS	FUSIBLE SWITCH
FSCS	FIRE FIGHTER SMOKE CONTROL STATION
FU	FUSE
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
G, GND	GROUND
G/Y	GREEN YELLOW
GA	GAUGE
GAL	GALLONS
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI, GFCI	GROUND FAULT (CIRCUIT) INTERRUPTER
H	HOT CONDUCTOR
HC	HORIZONTAL CROSS CONNECT
HD	HAND DRYER
HFF	HANDS FREE FIXTURE
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HK	HOUSE KEEPING PAD
HM	HORIZONTALLY MOUNTED
HOA	HAND-OFF-AUTO
HOR	HORIZONTAL
HP	HORSEPOWER
HT	HEIGHT
HTG	HEATING
HV	HIGH VOLTAGE
HVCB	HIGH VOLTAGE CIRCUIT BREAKER
HW	HOT WATER
HZ	HERTZ
IC	INTERMEDIATE CROSS CONNECT
ID	INSIDE DIAMETER
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INST	INSTANTANEOUS
IP	INTERNET PROTOCOL
JB	JUNCTION BOX
K	KIRK KEY INTERLOCK
KAIC	KILO-AMPS INTERRUPTING CAPACITY
KV	KILOVOLT
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LED	LIGHT EMITTING DIODE
LR	LEGALLY REQUIRED
LS	LIFE SAFETY BRANCH
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND FAULT
LTG	LIGHTING
LV	LOW VOLTAGE
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MC	METAL CLAD CABLE
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCP	MOTOR CIRCUIT PROTECTOR
MCT	MAIN CROSS CONNECT
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MET	MAIN EARTHING TERMINAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MM	MULTIMODE FIBER (FIBRE) OPTIC STRAND
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTG	MOUNTING
MTS	MAIN TERMINAL SPACE
MV	MEDIUM VOLTAGE
MVCB	MEDIUM VOLTAGE CIRCUIT BREAKER
MW	MICROWAVE OVEN
N	NEUTRAL
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

ABBREVIATIONS

#/C	MULTI-CONDUCTOR, # INDICATES QUANTITY
(D)	DEMOLISH
(E)	EXISTING
(N)	NEW
(R)	EXISTING TO BE RELOCATED
1/C	SINGLE CONDUCTOR
A	AMPS
A/C	AIR CONDITIONING UNIT
AC	ALTERNATING CURRENT
ACH	ABOVE COUNTER HEIGHT
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AF	AMP FRAME
AFC	ABOVE FINISHED CEILING
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ALD	ASSISTED LISTENING DEVICE
ALT	ALTERNATE
ARCH	ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AV	AUDIO VISUAL
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
BC	BONDING CONDUCTOR
BCU	BARE COPPER
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BKR	BREAKER
BLDG	BUILDING
BOF	BOTTOM OF FIXTURE
BOH	BACK OF HOUSE
BTM	BOTTOM
C	CONDUIT
CW	COMPLETE WITH
CAP	CAPACITY
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CEC	CANADIAN ELECTRIC CODE
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
CIRC	CIRCULATING
CKT	CIRCUIT
CL	CENTERLINE
CLG	CEILING
CM	CEILING MOUNTED
CMU	CONCRETE MASONRY UNIT
CO	CONDUIT ONLY
COMM	COMMUNICATIONS
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CPT	CONTROL POWER TRANSFORMER
CPU	CENTRAL PROCESSING UNIT
CR	CRITICAL BRANCH
CT	CURRENT TRANSFORMERS
CTR	CENTER
CU	COPPER
CUH	CABINET UNIT HEATER
D	DEDICATED
DALI	DIGITAL ADDRESSABLE LIGHTING INTERFACE
DC	DIRECT CURRENT
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DISC	DISCONNECT
DIV	DIVISION
DL	DAMP LOCATION
DMX	DIGITAL MULTIPLEX
DMX-RDM	DIGITAL MULTIPLEX REMOTE DEVICE MANAGEMENT
DN	DOWN
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE, DOUBLE THROW
DPR	DAMPER
DPST	DOUBLE POLE, SINGLE THROW
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ELEC	ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EM GEN	EMERGENCY GENERATOR
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EP	ELECTRO-PNEUMATIC
EPO	EMERGENCY POWER OFF
EQ	EQUIPMENT BRANCH
EQUIP	EQUIPMENT

PROJECT NOTES

1. THE ELECTRICAL CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM AUTHORITIES HAVING JURISDICTION AND PAY ALL ASSOCIATED FEES.
2. LOCATE JUNCTION AND PULL BOXES AS REQUIRED TO ALLOW ACCESS AFTER EQUIPMENT AND APPURTENANCES ARE INSTALLED. COORDINATE EXACT LOCATIONS WITH THE OTHER TRADES. COORDINATE LOCATIONS AND ELEVATIONS OF ELECTRICAL DEVICES WITH DRAWINGS AND OTHER TRADES PRIOR TO INSTALLATION.
3. PROTECT PERMANENT BUILDING FINISHES FROM DAMAGE DURING CONSTRUCTION PERIOD. PROVIDE PLYWOOD OR SIMILAR MATERIAL UNDER EQUIPMENT OR MATERIALS STORED ON FLOORS, AND IN AREAS WHERE CONSTRUCTION MAY DAMAGE FINISHES. SURFACES OR FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE COST OF THE CONTRACTOR AT FAULT.
4. CONTRACTORS SHALL COORDINATE LOCATIONS OF FIXTURES AND ELECTRICAL DEVICES INSTALLED IN OR ON THE CEILING WITH ARCHITECTURAL REFLECTED CEILING PLAN. CEILING MOUNTED ELECTRICAL DEVICES SHALL BE MOUNTED IN THE CENTER OF THE CEILING TILES, UNLESS OTHERWISE NOTED.
5. WHERE DIRECTED TO USE OR RETAIN EXISTING CIRCUITS, AND THE CIRCUIT NUMBERS DIFFER FROM THE DRAWING, UPDATE DIRECTORIES AND RECORD DRAWINGS.
6. PROPERLY SUPPORT PER CODE LOW VOLTAGE CABLING NOT IN CONDUIT. IN AREAS SUCH AS CORRIDORS DESIGNATED FOR NEW CEILINGS AND FINISHES, SUPPORT EXISTING ELECTRICAL DEVICES AND EQUIPMENT IN AND ABOVE THE CEILING, INCLUDING CONDUIT AND CABLING. PROVIDE PROPER, PERMANENT SUPPORT AS NEEDED TO COMPLY WITH CODE AND TAKE WEIGHT OFF CEILING SUPPORTS. REMOVE AND REINSTALL ELECTRICAL DEVICES AND EQUIPMENT AS NEEDED FOR PAINTING, WALL COVERINGS, CEILINGS, AND FINISH WORK. REFER TO ARCHITECTURAL DRAWINGS. LOW VOLTAGE CABLING LOCATED IN EXPOSED STRUCTURE (CEILING) AREAS SHALL BE INSTALLED IN CONDUIT (OR CABLE TRAY, IF APPLICABLE) AND ROUTED TIGHT TO DECK. INSTALLATIONS NOT IN COMPLIANCE WITH THIS REQUIREMENT SHALL BE REMOVED AND REINSTALLED AT CONTRACTOR'S EXPENSE.
7. WHERE PROJECT PHASING IS INDICATED IN ANY PART OF THE WORKING DOCUMENT PACKAGE, ELECTRICAL CONTRACTOR IS TO PLAN WORK SO AS TO FACILITATE SUCH PHASING.
8. FOR BRANCH CIRCUITS OVER 75' (25 METERS) IN LENGTH (TOTAL ONE WAY) FROM THE PANEL, THE ELECTRICAL CONTRACTOR SHALL CALCULATE THE VOLTAGE DROP AND PROVIDE AN APPROPRIATE CONDUCTOR SIZE TO ACHIEVE NO MORE THAN 3% MAXIMUM ALLOWABLE VOLTAGE DROP.
9. DO NOT SCALE THE DRAWINGS. BECAUSE OF THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS OR OTHER SIMILAR ITEMS WHICH MAY BE REQUIRED TO MAKE A COMPLETE OPERATING SYSTEM. CAREFULLY INVESTIGATE CONDITIONS AFFECTING WORK AND INSTALL WORK IN SUCH MANNER THAT INTERFERENCES BETWEEN PIPES, CONDUITS, DUCTS, EQUIPMENT, ARCHITECTURAL AND STRUCTURAL FEATURES SHALL BE AVOIDED.

PROJECT DEMOLITION NOTES

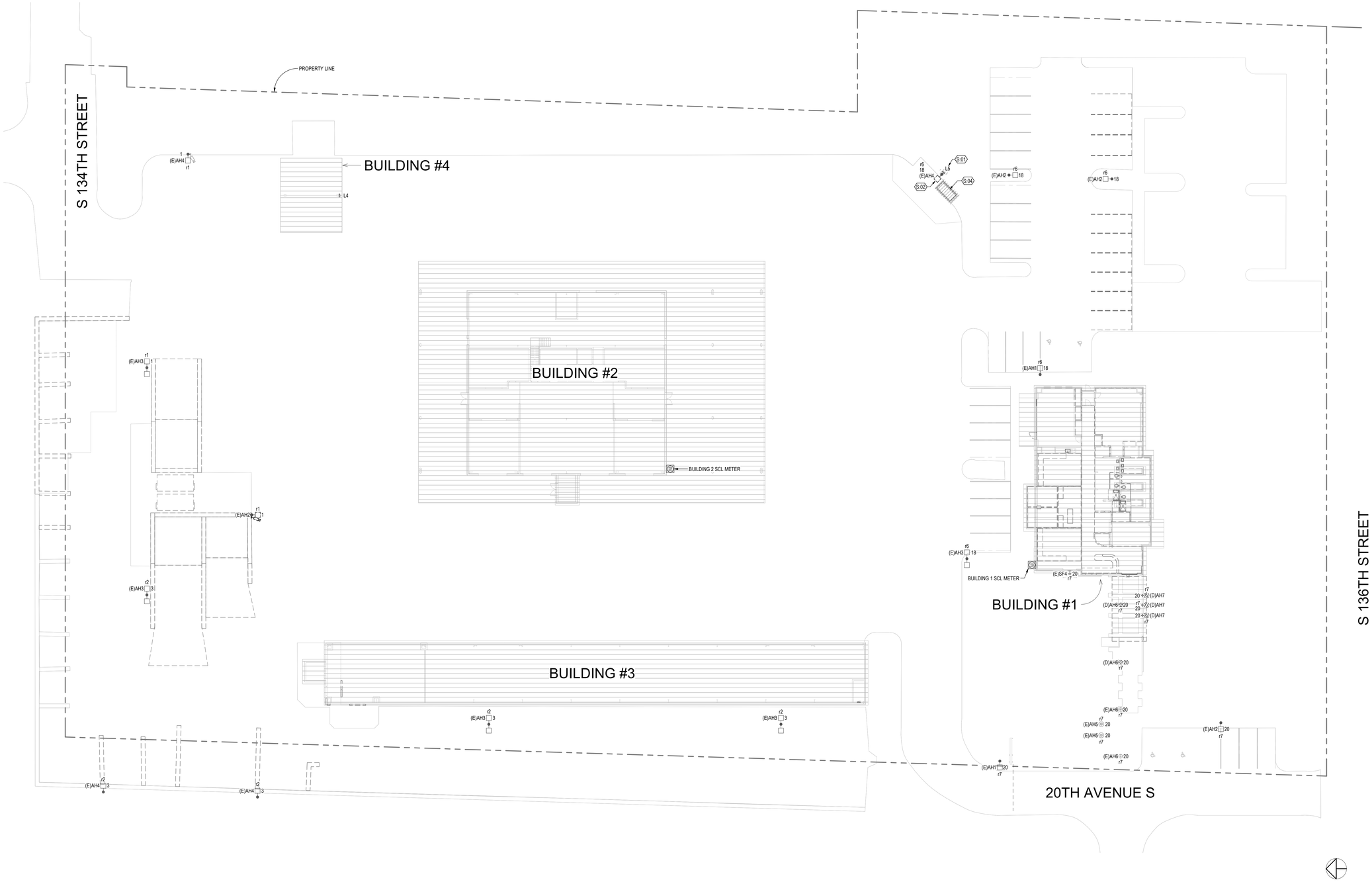
1. ANY EXISTING WIRING SERVING DEVICES TO REMAIN IN SERVICE, AND WHICH IS INTERRUPTED BY WORK PERFORMED UNDER THIS CONTRACT, SHALL BE REROUTED TO MAINTAIN CIRCUIT CONTINUITY. CONTRACTOR SHALL ASSUME THE RISK OF MAINTAINING EXISTING SYSTEMS EXCEPT RELOCATION OF WIRING OF #2 AWG AND ABOVE SHALL BE CONSIDERED AN ADDITIONAL COST IF NOT SHOWN TO BE RELOCATED. IF SUCH WIRING IS FOUND THE CONTRACTOR SHALL NOTIFY THE OWNER OF WIRING LOCATION, REASON IT MUST BE REMOVED AND COST OF RELOCATION AND RECEIVE THE OWNER'S APPROVAL BEFORE PROCEEDING WITH THE WORK.
   PRIOR TO COMMENCING WITH DEMOLITION, IDENTIFY ALL POWER, LIGHTING, COMMUNICATION, AND SIGNAL CIRCUITS PASSING THROUGH THE DEMOLITION AREA OR EXTENDING BEYOND THE DEMOLITION AREA. COORDINATE WITH DEMOLITION WORK OF OTHER TRADES.
2. THE EXISTING BUILDING MUST BE KEPT IN OPERATION AT ALL TIMES. MAINTAIN ELECTRICAL SERVICES AND SYSTEMS AT ALL TIMES TO AREAS BEYOND THE CONSTRUCTION AREA AND MAINTAIN CONTINUITY OF FIRE ALARM, LIFE SAFETY AND SECURITY SYSTEMS TO ALL OCCUPIED AREAS OF THE BUILDING THROUGHOUT THE CONSTRUCTION PERIOD. PROVIDE TEMPORARY WIRING AND BRANCH CIRCUITING AS NECESSARY TO MAINTAIN OPERATION OF EXISTING CIRCUITS AND SYSTEMS EXTENDING BEYOND REMODEL AREA. ASSUME FULL RESPONSIBILITY FOR ANY DISRUPTION TO EXISTING SERVICES. RECONNECT ANY SERVICES WHICH ARE TO REMAIN, AND WHICH HAVE BEEN DISCONNECTED DURING DEMOLITION OR CONSTRUCTION. ARRANGE WORK IN SUCH A MANNER

GENERAL NOTES

1. ALL EXISTING SITE LIGHTING IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

KEY NOTES

S.01	EXISTING PANEL L5 TO BE RELOCATED, SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION.
S.02	DEMOLISH EXISTING POLE MOUNTED LIGHT FIXTURE AND ASSOCIATED POLE BASE.
S.04	DEMOLISH EXISTING GENERATOR AND ASSOCIATED CONCRETE PAD.



1 E1.1 **ELECTRICAL EXISTING SITE DEMOLITION PLAN**
1" = 20'-0"

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ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:

DEMOLITION ELECTRICAL SITE PLAN

SCALE: As indicated
DRAWN: Author
CHECKED: Checker
PROJECT NO: 2020008.100

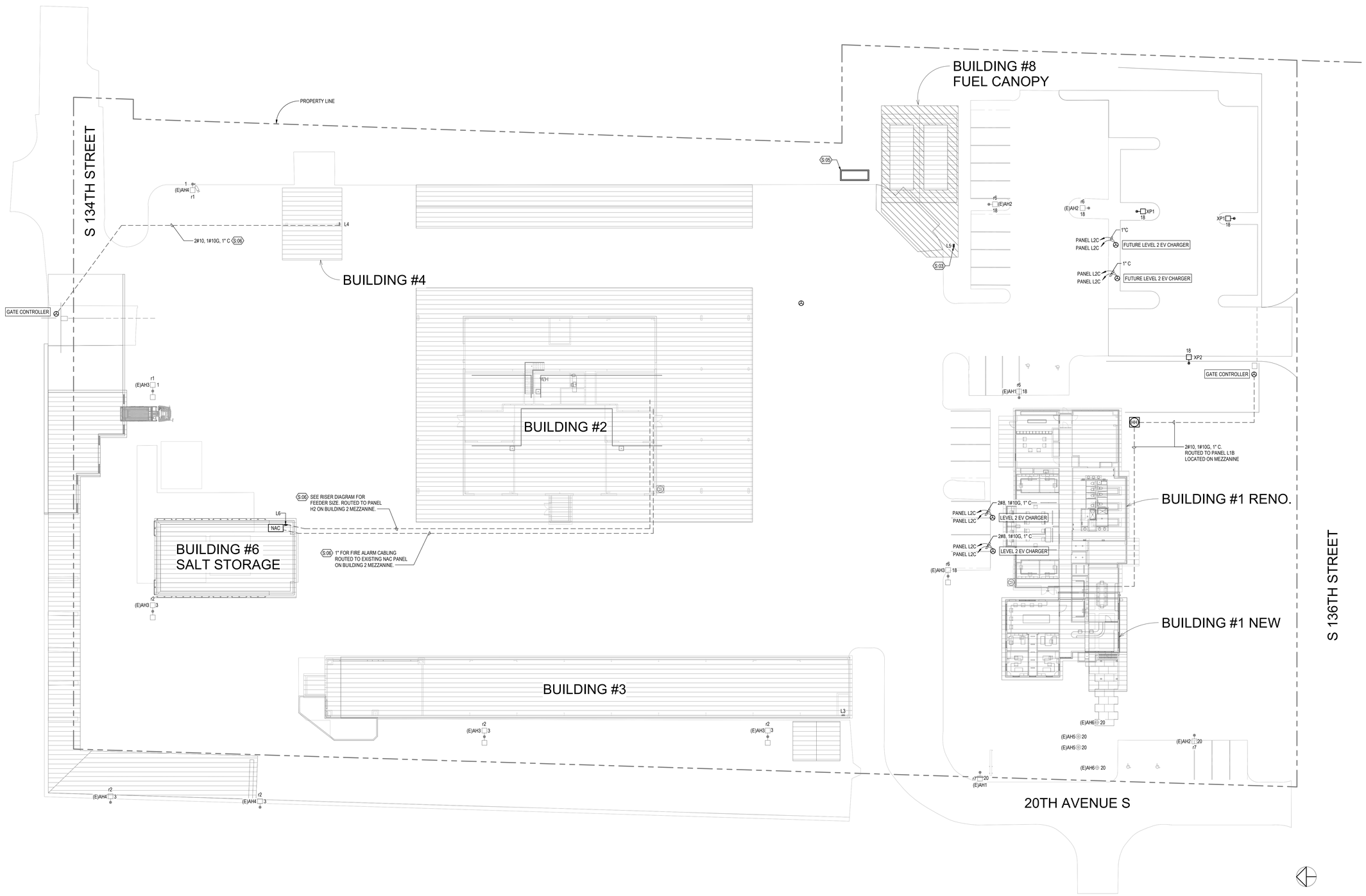
SHEET: **E1.1**

GENERAL NOTES

1. REFER TO SHEET E7.1 FOR LIGHTING CONTROL INTENT MATRIX.

KEY NOTES

- S:03 RELOCATED EXISTING PANEL L5. INTERCEPT EXISTING CONDUIT AND WIRE AND RELOCATE TO LOCATION SHOWN.
- S:05 NEW GENERATOR LOCATION. SEE RISER DIAGRAM ON SHEET E6.1 FOR ADDITIONAL INFORMATION. FINAL LOCATION TO BE COORDINATED. GENERATOR SHALL BE LOCATED OUTSIDE OF HAZARDOUS CLASSIFIED ZONE ASSOCIATED WITH THE FUEL TANKS.
- S:06 SAW CUT AND PATCH EXISTING ASPHALT AS REQUIRED TO ACCOMMODATE CONDUIT INSTALLATION.



1 ELECTRICAL SITE PLAN

E1.2 1" = 20'-0"

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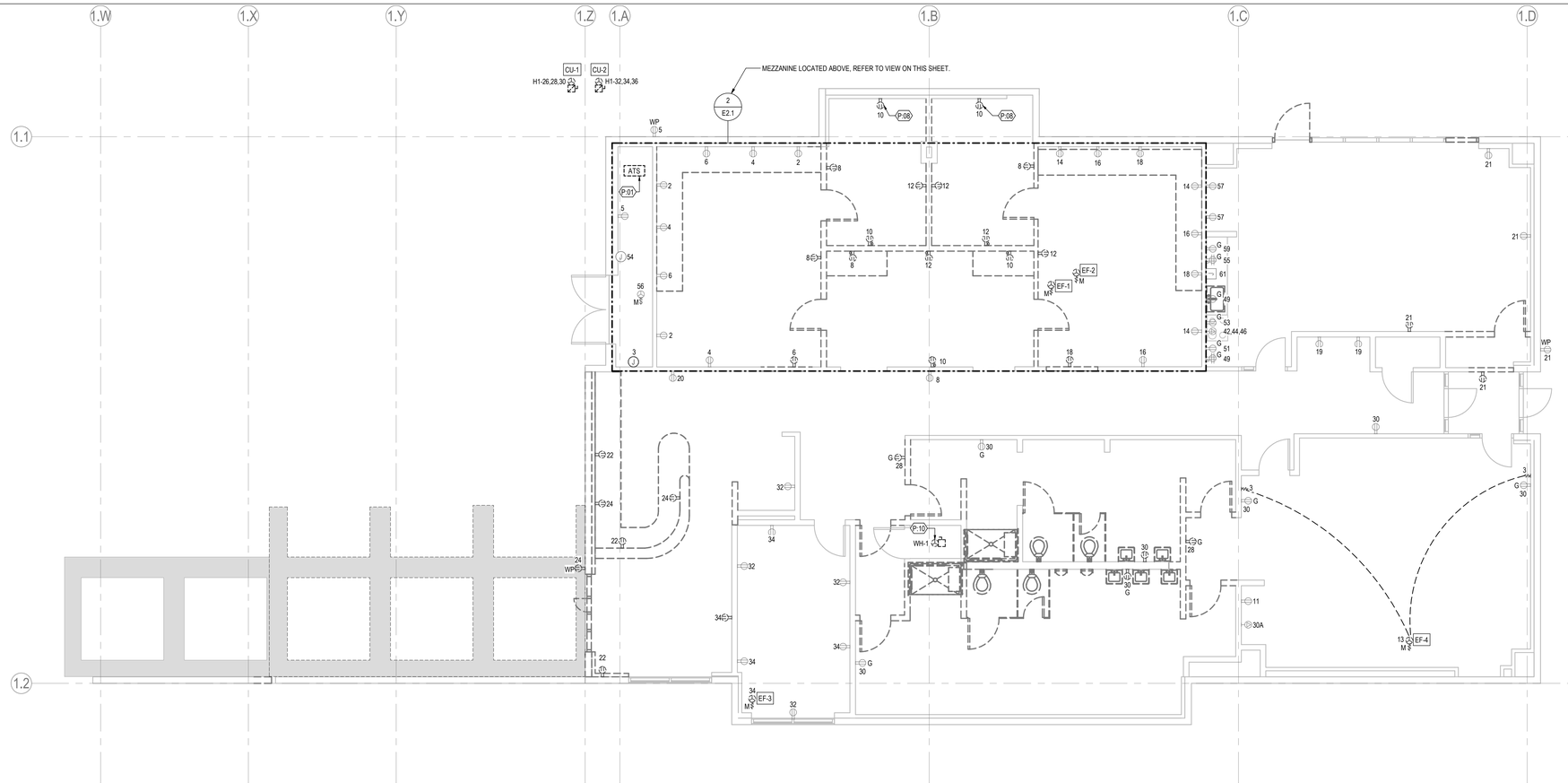
ELECTRICAL SITE PLAN

SCALE: As Indicated
DRAWN: Author
CHECKED: Checker
PROJECT NO: 2020008.100

SHEET:

E1.2



GENERAL NOTES

1. ALL CIRCUITS INDICATED FED FROM PANEL L1 UNLESS OTHERWISE NOTED.

KEY NOTES

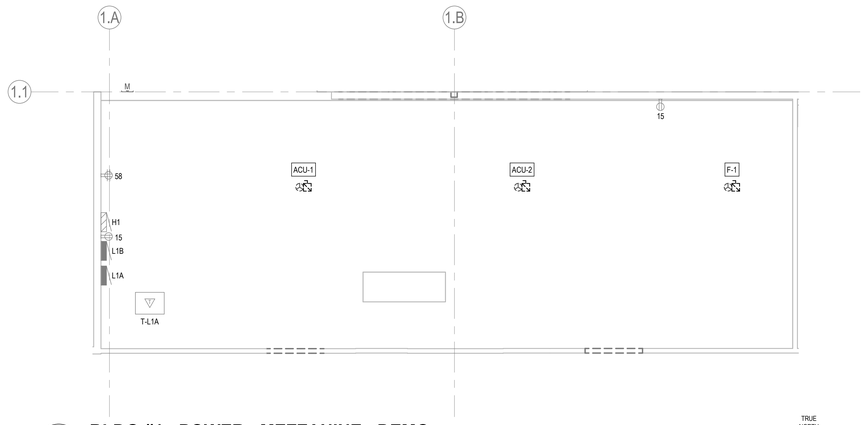
P:01 EXISTING SERVICE ENTRANCE RATED TRANSFER SWITCH TO BE DEMOLISHED AND REPLACED IN KIND.

P:08 CIRCUIT TO REMAIN.

P:10 CONDUIT TO REMAIN.

1 E2.1 BLDG #1 - POWER PLAN - LEVEL 1 - DEMO

3/16" = 1'-0"



2 E2.1 BLDG #1 - POWER - MEZZANINE - DEMO

3/16" = 1'-0"

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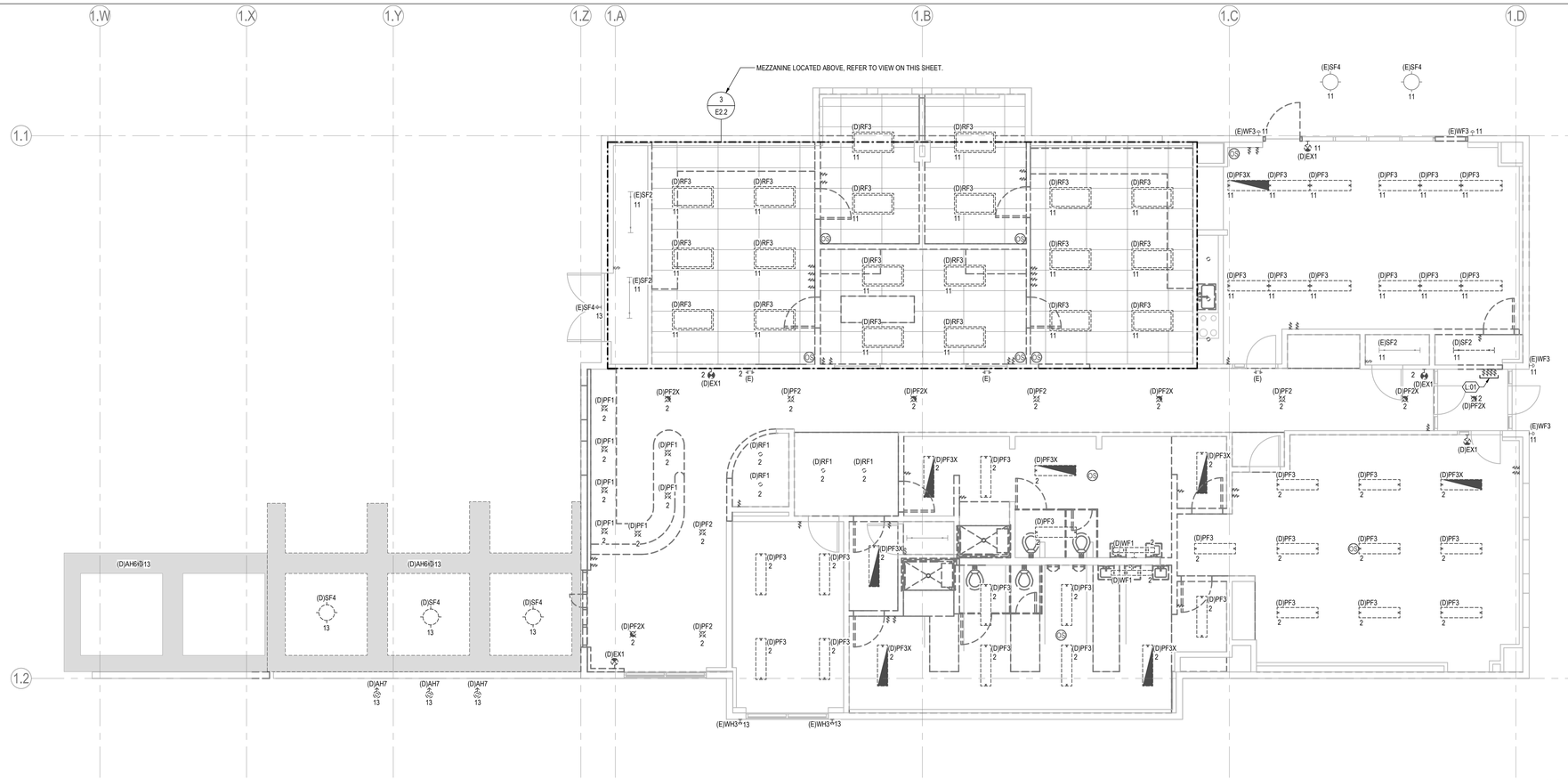
DEMOLITION POWER PLAN – BLDG #1

SCALE: **As Indicated**
DRAWN: **Author**
CHECKED: **Checker**
PROJECT NO: 2020008.100

SHEET:

E2.1

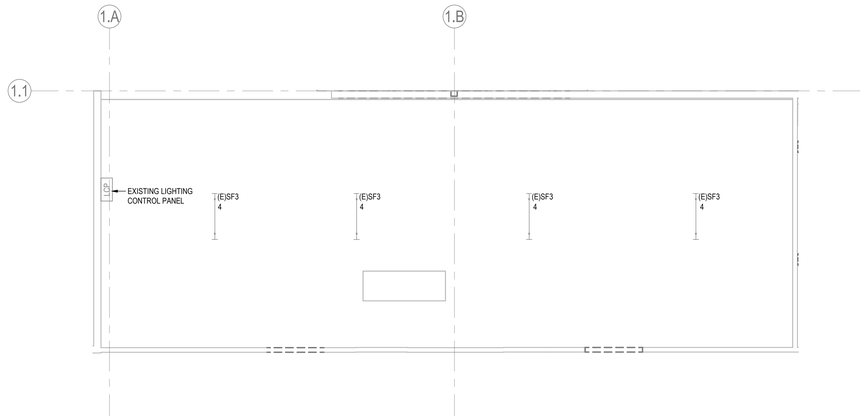


KEY NOTES

L01 (4) EXISTING SWITCHES FOR EXTERIOR LIGHTING TO BE RELOCATED. SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION.

1 E2.2 **BLDG #1 - LIGHTING PLAN - LEVEL 1 - DEMO**
3/16" = 1'-0"

TRUE NORTH



3 E2.2 **BLDG #1 - LIGHTING - MEZZANINE - DEMO**
3/16" = 1'-0"

TRUE NORTH

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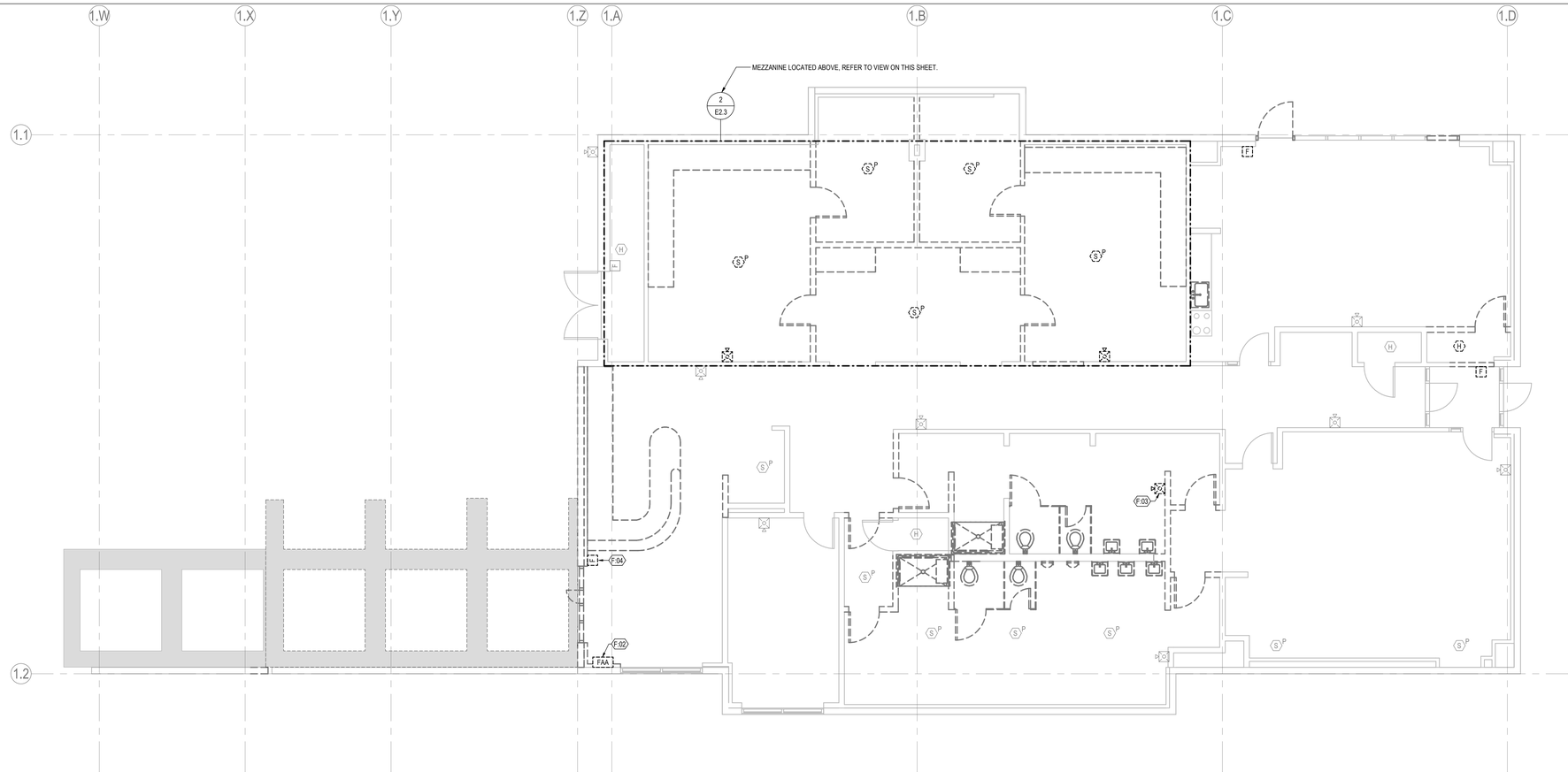
DEMOLITION LIGHTING PLAN – BLDG #1

SCALE: **3/16" = 1'-0"**
DRAWN: **Author**
CHECKED: **Checker**
PROJECT NO: 2020008.100

SHEET:
E2.2



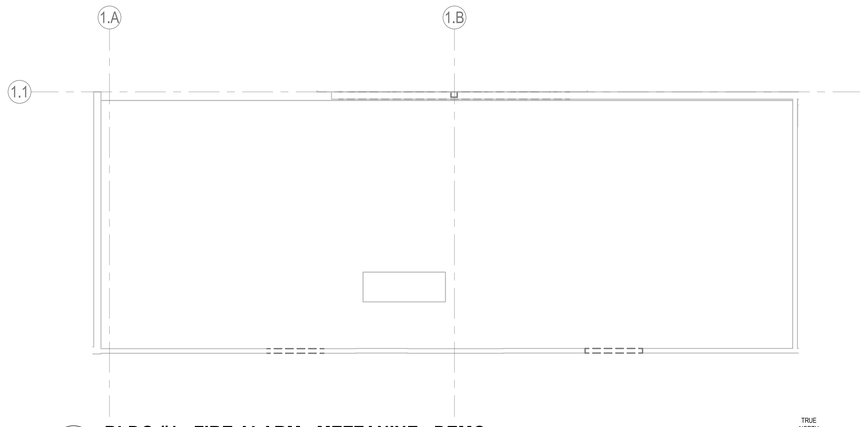
KEY NOTES

F.02 EXISTING FIRE ALARM ANNUNCIATOR PANEL TO BE RELOCATED, SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION.

F.03 EXISTING FIRE ALARM NOTIFICATION DEVICE TO BE RELOCATED, SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION.

F.04 EXISTING MANUAL PULL STATION TO BE RELOCATED, SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION.

1 E2.3 BLDG #1 - FIRE ALARM PLAN - LEVEL 1 - DEMO
3/16" = 1'-0"



2 E2.3 BLDG #1 - FIRE ALARM - MEZZANINE - DEMO
3/16" = 1'-0"

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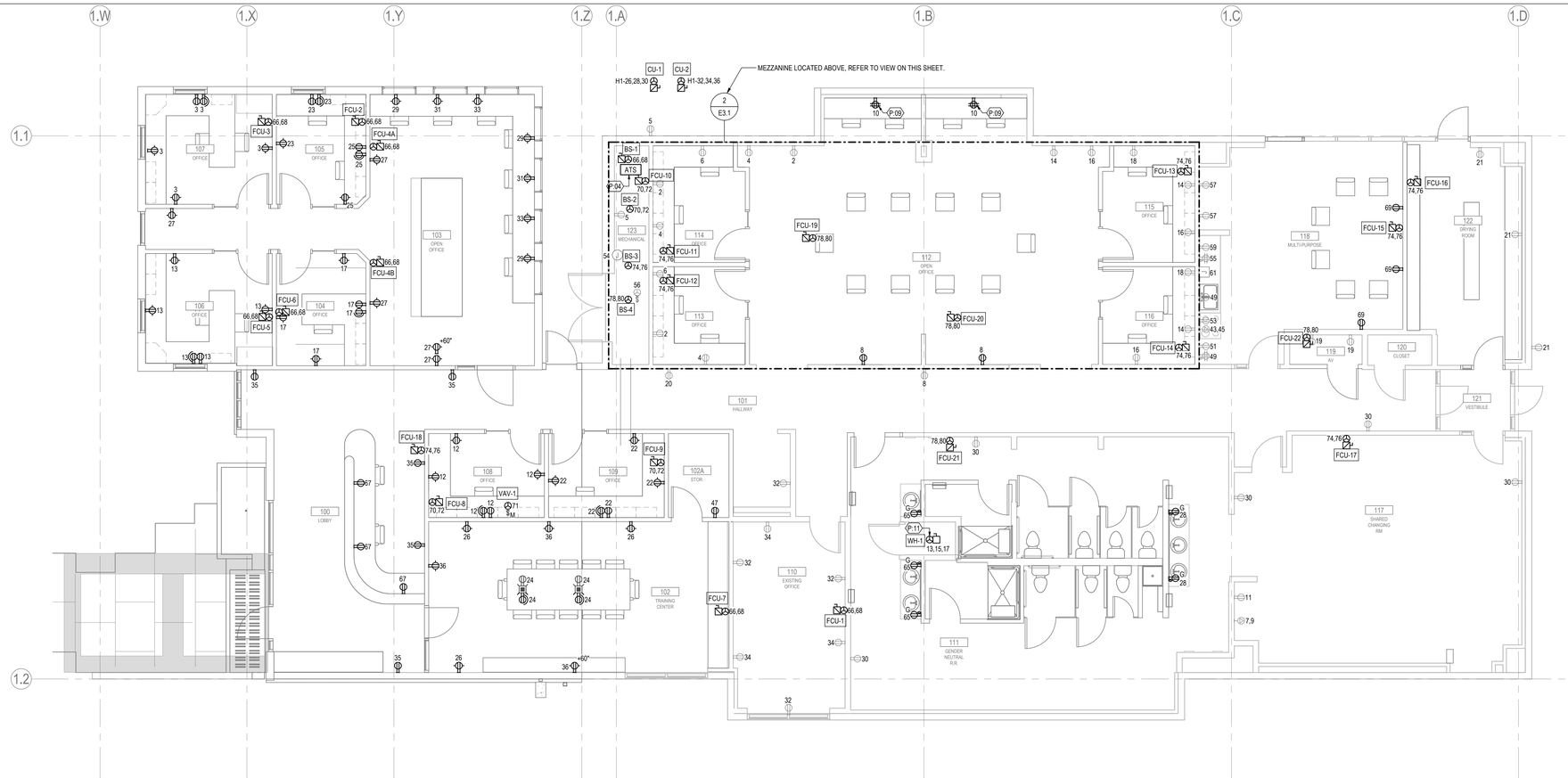
REVISION	DATE	DESCRIPTION

CONTENTS:

DEMOLITION FIRE ALARM PLAN – BLDG #1

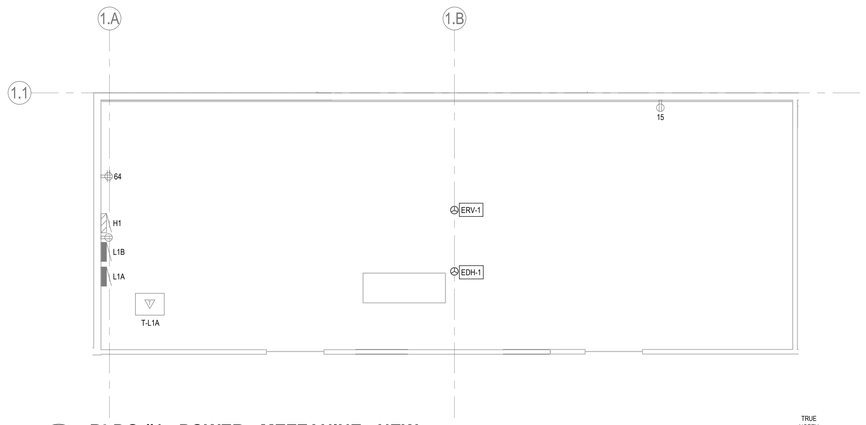
SCALE: 3/16" = 1'-0"
DRAWN: Author
CHECKED: Checker
PROJECT NO: 2020008.100

SHEET:
E2.3



1 BLDG #1 - POWER PLAN - LEVEL 1 - NEW

E3.1 — 3/16" = 1'-0"



2 BLDG #1 - POWER - MEZZANINE - NEW

E3.1 — 3/16" = 1'-0"

GENERAL NOTES

1. CIRCUITS NOTED REFER TO PANEL L1A, UNLESS OTHERWISE NOTED.
2. CONTROLLED RECEPTACLES SHALL BE CONTROLLED VIA THE LIGHTING CONTROL OCCUPANCY SENSOR WITHIN THE AREA SERVED.

(#) KEY NOTES

P:04 PROVIDE NEW SERVICE ENTRANCE RATED TRANSFER SWITCH.
P:09 CONNECT TO EXISTING CIRCUIT.
P:11 CONNECT TO EXISTING CONDUIT

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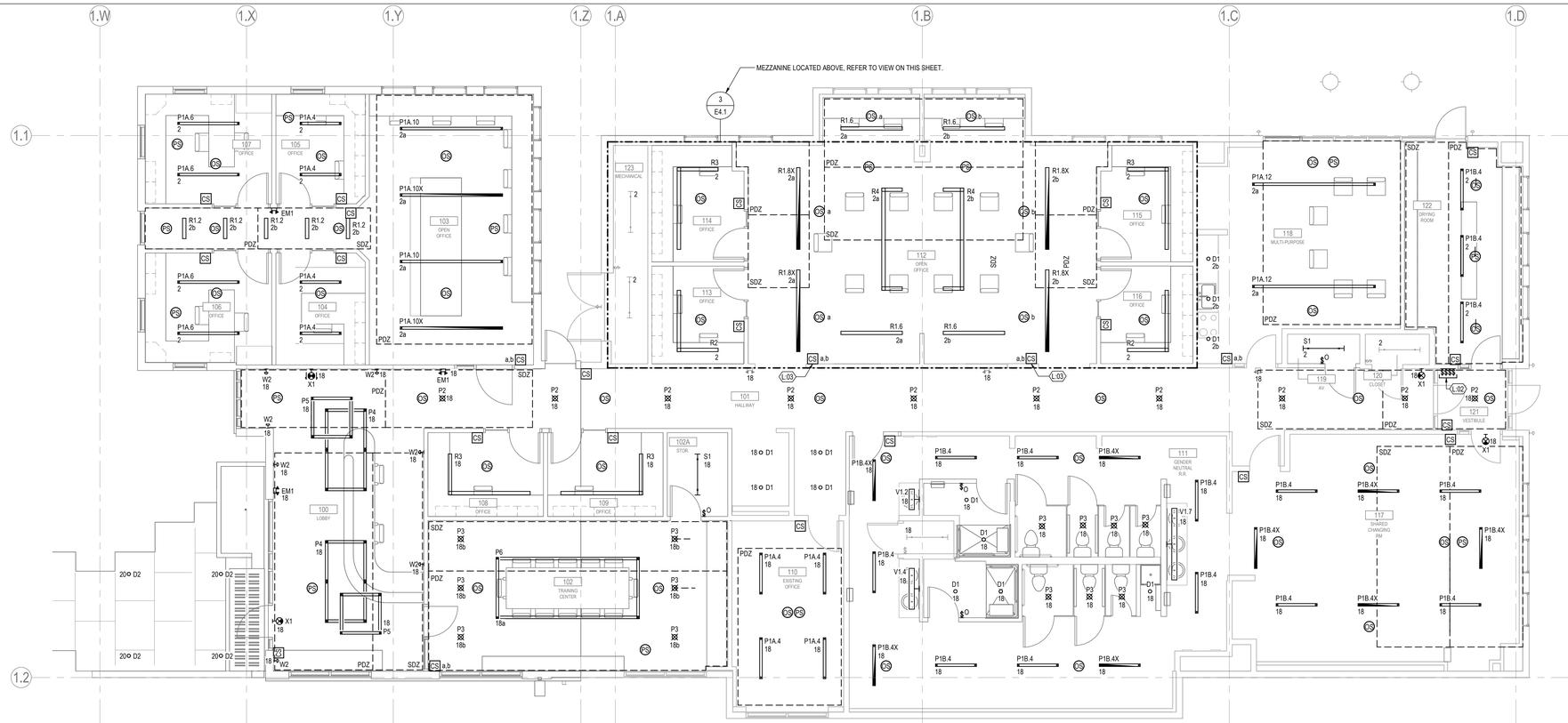
CONTENTS:

POWER PLAN – BLDG #1

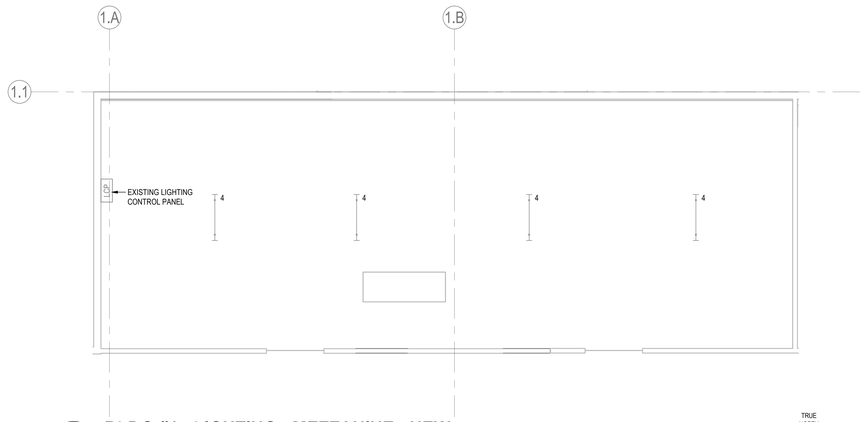
SCALE: As Indicated
DRAWN: Author
CHECKED: Checker
PROJECT NO: 2020008.100

SHEET: **E3.1**



1 E4.1 **BLDG #1 - LIGHTING PLAN - LEVEL 1 - NEW**
3/16" = 1'-0"

TRUE NORTH



3 E4.1 **BLDG #1 - LIGHTING - MEZZANINE - NEW**
3/16" = 1'-0"

TRUE NORTH

GENERAL NOTES

1. REFER TO SHEET E7.1 FOR LIGHTING CONTROL INTENT MATRIX.

KEY NOTES

L.02 RELOCATED (4) EXISTING SWITCHES FOR EXTERIOR LIGHTING. EXTEND EXISTING WIRE AND CONDUIT AS NECESSARY.

L.03 CONTROLS LIGHT FIXTURES IN EACH RESPECTIVE DAYLIGHT ZONES A AND B

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LIGHTING PLAN – BLDG #1

SCALE: **As Indicated**
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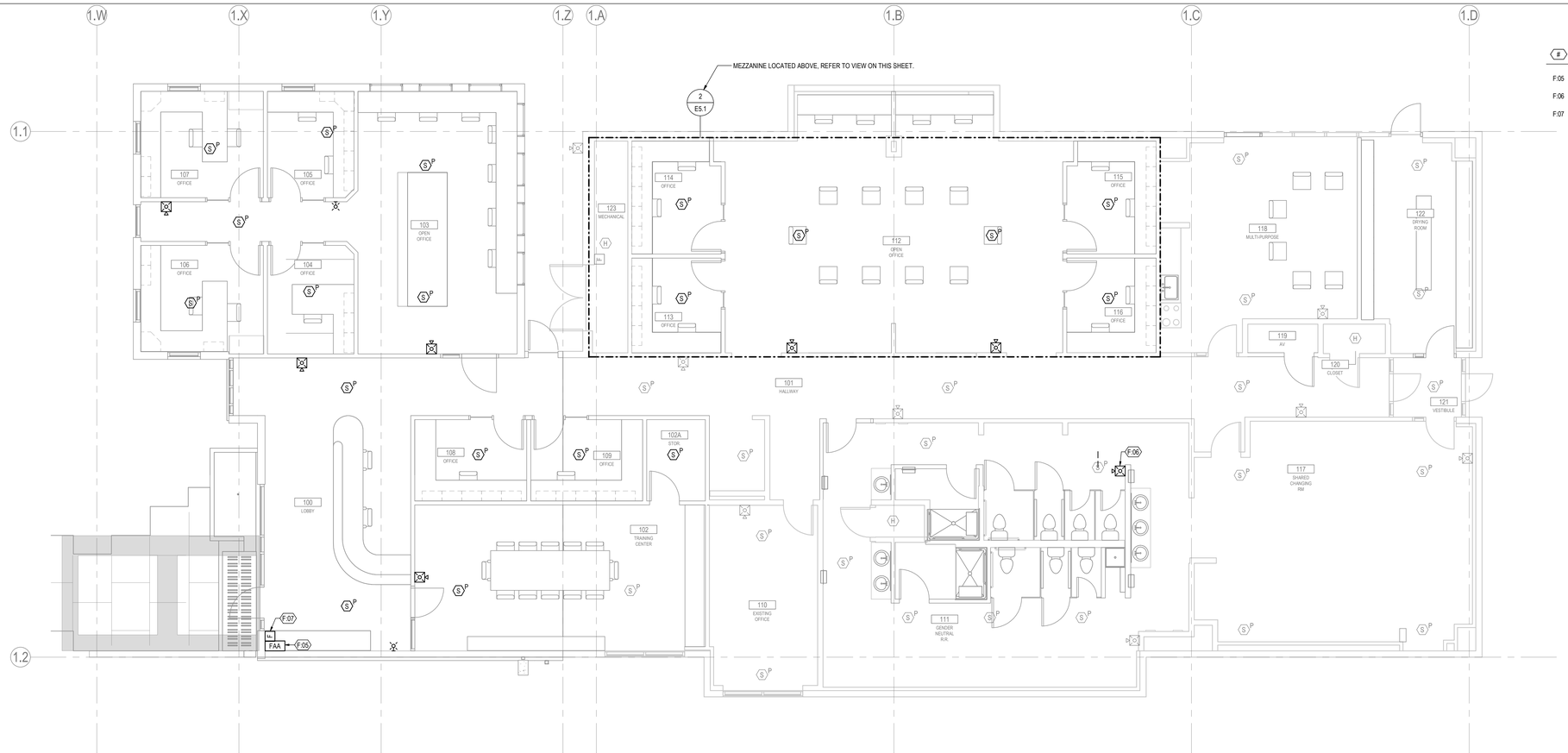
PROJECT NO: 2020008.100

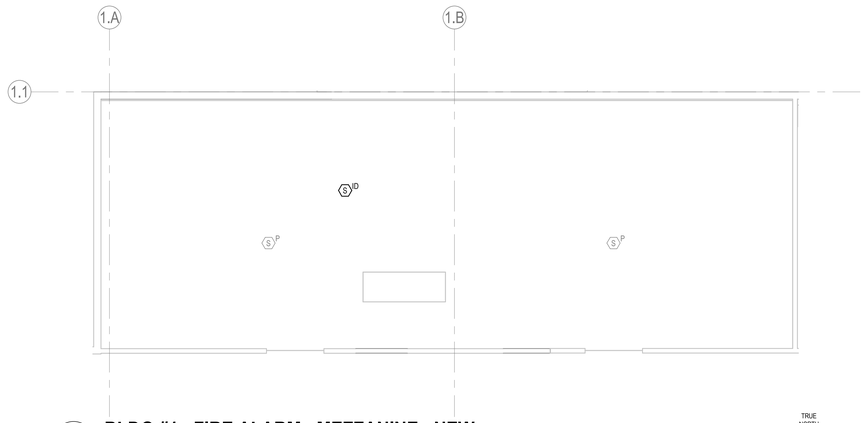
SHEET:

E4.1



1 E5.1 **BLDG #1 - FIRE ALARM PLAN - LEVEL 1 - NEW**
3/16" = 1'-0"

TRUE NORTH



2 E5.1 **BLDG #1 - FIRE ALARM - MEZZANINE - NEW**
3/16" = 1'-0"

TRUE NORTH

KEY NOTES

F.05	RELOCATED EXISTING FIRE ALARM ANNUNCIATOR PANEL. EXTEND EXISTING WIRE AND CONDUIT AS NECESSARY.
F.06	RELOCATED EXISTING FIRE ALARM NOTIFICATION DEVICE. EXTEND EXISTING WIRE AND CONDUIT AS NECESSARY.
F.07	RELOCATED EXISTING MANUAL PULL STATION. EXTEND EXISTING WIRE AND CONDUIT AS NECESSARY.

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CONTENTS:

FIRE ALARM – BLDG #1

SCALE: **3/16" = 1'-0"**
DRAWN: **Author**
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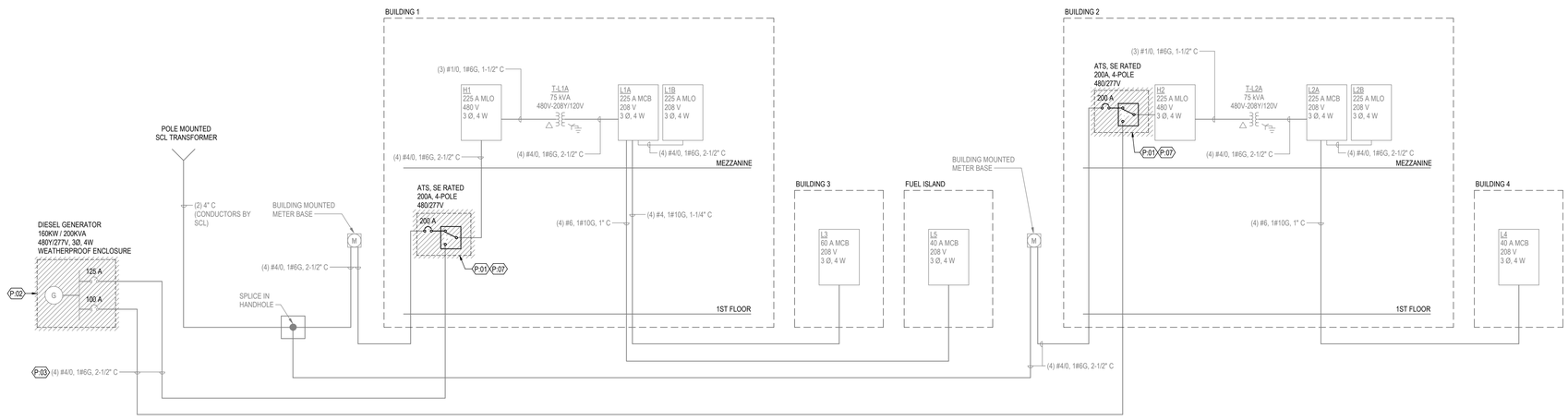
PROJECT NO: 2020008.100

SHEET:

E5.1

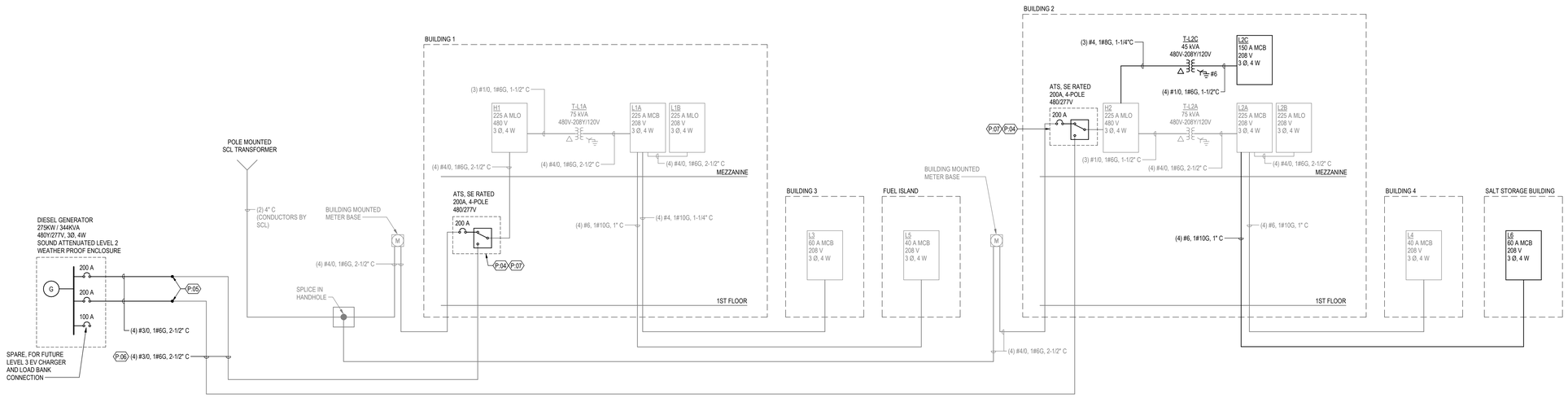
KEY NOTES

P-01	EXISTING SERVICE ENTRANCE RATED TRANSFER SWITCH TO BE DEMOLISHED AND REPLACED IN KIND.
P-02	DEMOLISH EXISTING GENERATOR.
P-03	EXISTING CONDUCTORS TO BE REMOVED BACK TO SOURCE. CONDUITS TO REMAIN FOR EXTENSION TO NEW GENERATOR LOCATION.
P-04	PROVIDE NEW SERVICE ENTRANCE RATED TRANSFER SWITCH.
P-05	INTERCEPT EXISTING CONDUITS AND EXTEND TO NEW GENERATOR LOCATION.
P-06	PROVIDE NEW CONDUCTORS IN EXISTING CONDUIT.
P-07	CONTRACTOR SHALL COORDINATE WITH UTILITY (SCL) FOR SERVICE DISCONNECTION AND SHALL NOTIFY OWNER/ARCHITECT NO LATER THAN 10 DAYS PRIOR TO SHUTDOWN.



1 E6.1 **ELECTRICAL RISER DIAGRAM - DEMO**

N.T.S.



2 E6.1 **ELECTRICAL RISER DIAGRAM - NEW**

N.T.S.

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ELECTRICAL RISER DIAGRAM

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SHEET:

E6.1

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG/SERIES #	ALTERNATE MANUFACTURERS	LAMP				INPUT		CONTROLS		COMMENTS/NOTES
					TYPE	LUMENS	CCT	CRI (MIN)	WATTS	VOLTAGE	TYPE	RANGE	
D1	3.5" LED DOWNLIGHT, 700 LUMENS, 50-DEGREE CUTOFF, CLEAR DIFFUSE TRIM, WIDE FLOOD DISTRIBUTION	FOCAL POINT	ID+ 3.5" DOWNLIGHT #FLC3D-RO-SW-700L-UNV-L1D-T-BH + LC3-RO-SW-700L-35K-DNT-WFL-CD	OR APPROVED EQUAL	LED	700 lm	3500 K	80	8 W	277 V	0-10V	10%	
D2	4.5" LED DOWNLIGHT, 1000 LUMENS, 50-DEGREE CUTOFF, CLEAR DIFFUSE TRIM, WIDE FLOOD DISTRIBUTION, OUTDOOR RATED	FOCAL POINT	ID+ 4.5" DOWNLIGHT #FLC4D-RO-SW-1000L-UNV-LD1-OD + LC4-RO-1000L-35K-DN-WFL-CD-NP	OR APPROVED EQUAL	LED	1000 lm	3500 K	80	11 W	277 V	0-10V	10%	
EM1	DUAL HEAD LED EMERGENCY EXIT LIGHT, 1100 LUMENS	LITHONIA	QUANTUM #ELM6L	OR APPROVED EQUAL	LED	1100 lm	3500 K	80	4 W	277 V	(none)	(none)	
HB1	LED HIGH BAY FIXTURE, FROSTED GLASS LENS, PENDANT MOUNTED, 12,000 LUMENS	LITHONIA	JEBL HIGH BAY #JEBL-12000LM-FRGL-MVOLT-40K-80CRI-PM-DWHXD	OR APPROVED EQUAL	LED	12000 lm	4000 K	80	95 W	120 V	(none)	(none)	
P1A.4	SUSPENDED LINEAR DIRECT/INDIRECT PENDANT, 2.5" WIDE, 4' RUN LENGTH, 625 LUMENS PER FOOT DOWN, 375 LUMENS PER FOOT UP	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-625DN-375UP-35K-1C-UNV-LD1-C(LENGTH)-(FINISH)-4'	OR APPROVED EQUAL	LED	4000 lm	3500 K	80	36 W	277 V	0-10V	10%	
P1A.6	SAME AS TYPE P1A.4, EXCEPT 6' RUN LENGTH	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-625DN-375UP-35K-1C-UNV-LD1-C(LENGTH)-(FINISH)-6'	OR APPROVED EQUAL	LED	6000 lm	3500 K	80	54 W	277 V	0-10V	10%	
P1A.10	SAME AS TYPE P1A.4, EXCEPT 10' RUN LENGTH	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-625DN-375UP-35K-1C-UNV-LD1-C(LENGTH)-(FINISH)-10'	OR APPROVED EQUAL	LED	10000 lm	3500 K	80	90 W	277 V	0-10V	10%	
P1A.10X	SAME AS TYPE P1A.10, EXCEPT WITH EM BATTERY BACKUP	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-625DN-375UP-35K-1C-UNV-LD1-C(LENGTH)-4'EM-(FINISH)-10'	OR APPROVED EQUAL	LED	10000 lm	3500 K	80	90 W	277 V	0-10V	10%	
P1A.12	SAME AS TYPE P1A.4, EXCEPT 12' RUN LENGTH	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-625DN-375UP-35K-1C-UNV-LD1-C(LENGTH)-(FINISH)-12'	OR APPROVED EQUAL	LED	12000 lm	3500 K	80	108 W	277 V	0-10V	10%	
P1B.4	SAME AS TYPE P1A.4, EXCEPT 375 LUMENS PER FOOT DOWN, 250 LUMENS PER FOOT UP	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-375DN-250UP-35K-1C-UNV-LD1-C(LENGTH)-(FINISH)-4'	OR APPROVED EQUAL	LED	2500 lm	3500 K	80	26 W	277 V	0-10V	10%	
P1B.4X	SAME AS TYPE P1B.4, EXCEPT WITH EM BATTERY BACKUP	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-375DN-250UP-35K-1C-UNV-LD1-C(LENGTH)-4'EM-(FINISH)-4'	OR APPROVED EQUAL	LED	2500 lm	3500 K	80	26 W	277 V	0-10V	10%	
P2	SUSPENDED CYLINDER DIRECT/INDIRECT PENDANT, 4.5" DIAMETER, 12.2" TALL, 2000 LUMENS DOWN, 1000 LUMENS UP, 80 DEGREE REFLECTOR	ALW	CORE 4 #CRT4-20903580NN-10903580NN-RV01-1C-(FINISH)-(COLOR)	OR APPROVED EQUAL	LED	3000 lm	3500 K	80	27 W	277 V	0-10V	10%	
P3	SUSPENDED CYLINDER PENDANT, 3.5' WIDE BODY, 4' HOUSING HEIGHT, 700 LUMENS, WIDE FLOOR DISTRIBUTION	FOCAL POINT	ID+ 3.5" PURE CYLINDER #FLCY3N-RD-4H-700DN-35K-1C-UNV-MPC-(COLOR)-LZ1-B(LENGTH)-(COLOR)-DNS-WFL-CD-(FINISH)	OR APPROVED EQUAL	LED	1900 lm	3500 K	80	8 W	277 V	0-10V	10%	
P4	SUSPENDED LINEAR DIRECT/INDIRECT PENDANT, 2.5" WIDE, 4' RUN LENGTH, 250 LUMENS PER FOOT DOWN, 250 LUMENS PER FOOT UP, 8' x 4' RECTANGLE SHAPE	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-250DN-250UP-35K-1C-UNV-LD1-C(LENGTH)-(FINISH)-8'x4'R	OR APPROVED EQUAL	LED	4000 lm	3500 K	80	108 W	277 V	0-10V	10%	
P5	SUSPENDED LINEAR DIRECT/INDIRECT PENDANT, 2.5" WIDE, 4' RUN LENGTH, 250 LUMENS PER FOOT DOWN, 250 LUMENS PER FOOT UP, 4' x 4' SQUARE SHAPE	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-250DN-250UP-35K-1C-UNV-LD1-C(LENGTH)-(FINISH)-4'x4'R	OR APPROVED EQUAL	LED	4000 lm	3500 K	80	72 W	277 V	0-10V	10%	
P6	SUSPENDED LINEAR DIRECT/INDIRECT PENDANT, 2.5" WIDE, 4' RUN LENGTH, 375 LUMENS PER FOOT DOWN, 250 LUMENS PER FOOT UP, 10' x 14' SQUARE SHAPE	FOCAL POINT	SEEM 2 #FSM2BS-8WBW-DCBW-375DN-250UP-35K-1C-UNV-LD1-C(LENGTH)-(FINISH)-10'x14'R	OR APPROVED EQUAL	LED	6000 lm	3500 K	80	360 W	277 V	0-10V	10%	
R1.2	2.5" APERTURE RECESSED LINEAR, 2' RUN LENGTH, 625 LUMENS PER FOOT, BATWING DISTRIBUTION	FOCAL POINT	SEEM 2 GRID #FSM2L-BW-625LF-35K-1C-UNV-LD1-(CEILING)-(FINISH)-2FT	OR APPROVED EQUAL	LED	1250 lm	3500 K	80	12 W	277 V	0-10V	10%	
R1.6	SAME AS TYPE R1.2, EXCEPT 6' RUN LENGTH	FOCAL POINT	SEEM 2 GRID #FSM2L-BW-625LF-35K-1C-UNV-LD1-(CEILING)-(FINISH)-6FT	OR APPROVED EQUAL	LED	1380 lm	3200 K	90	36 W	277 V	0-10V	10%	
R1.8X	SAME AS TYPE R1.2, EXCEPT 8' RUN LENGTH AND WITH EM BATTERY	FOCAL POINT	SEEM 2 GRID #FSM2L-BW-625LF-35K-1C-UNV-LD1-(CEILING)-(FINISH)-EM-8FT	OR APPROVED EQUAL	LED	1380 lm	3200 K	90	36 W	277 V	0-10V	10%	
R2	2.5" APERTURE RECESSED LINEAR, 2' RUN LENGTH, 625 LUMENS PER FOOT, BATWING DISTRIBUTION, 4'X6' L-SHAPE	FOCAL POINT	SEEM 2 GRID #FSM2L-BW-625LF-35K-1C-UNV-LD1-(CEILING)-(FINISH)-4'X6'	OR APPROVED EQUAL	LED	1380 lm	3200 K	90	59 W	277 V	0-10V	10%	
R3	2.5" APERTURE RECESSED LINEAR, 2' RUN LENGTH, 625 LUMENS PER FOOT, BATWING DISTRIBUTION, 4'X8' L-SHAPE	FOCAL POINT	SEEM 2 GRID #FSM2L-BW-625LF-35K-1C-UNV-LD1-(CEILING)-(FINISH)-4'X8'	OR APPROVED EQUAL	LED	1380 lm	3200 K	90	71 W	277 V	0-10V	10%	
R4	2.5" APERTURE RECESSED LINEAR, 2' RUN LENGTH, 625 LUMENS PER FOOT, BATWING DISTRIBUTION, 2'X10'X2' U-SHAPE	FOCAL POINT	SEEM 2 GRID #FSM2L-BW-625LF-35K-1C-UNV-LD1-(CEILING)-(FINISH)-2'X10'X2'	OR APPROVED EQUAL	LED	1380 lm	3200 K	90	83 W	277 V	0-10V	10%	
S1	LENSED STRIP LIGHT, 4' LENGTH, 3000 LUMENS	LITHONIA	Z SERIES #ZL1D-L48-3000LM-FST-MVOLT-35K-80CRI-WH	OR APPROVED EQUAL	LED	3000 lm	3500 K	80	30 W	277 V	0-10V	10%	
V1.2	WALL MOUNTED LINEAR VANITY LIGHT, 2.5" WIDE, 2' RUN LENGTH, 750 LUMENS/FT	LUMENWERX	QUAD NARROW #QUANW-HLO-SW-80-750-35-2FT-UNV-D1-1-DRM-(FINISH)-NA	OR APPROVED EQUAL	LED	1500 lm	3500 K	80	12 W	277 V	0-10V	10%	
V1.4	WALL MOUNTED LINEAR VANITY LIGHT, 2.5" WIDE, 4' RUN LENGTH, 750 LUMENS/FT	LUMENWERX	QUAD NARROW #QUANW-HLO-SW-80-750-35-4FT-UNV-D1-1-DRM-(FINISH)-NA	OR APPROVED EQUAL	LED	3000 lm	3500 K	80	24 W	277 V	0-10V	10%	
V1.7	WALL MOUNTED LINEAR VANITY LIGHT, 2.5" WIDE, 7' RUN LENGTH, 750 LUMENS/FT	LUMENWERX	QUAD NARROW #QUANW-HLO-SW-80-750-35-7FT-UNV-D1-1-DRM-(FINISH)-NA	OR APPROVED EQUAL	LED	5250 lm	3500 K	80	43 W	277 V	0-10V	10%	
W1	WALL PACK, DIE-CAST ALUMINUM BODY, OUTDOOR RATED, FULL CUTOFF, 9200 LUMENS	LITHONIA	WPX WALLPACK #WPX3LED-40K-MVOLT-(FINISH)	OR APPROVED EQUAL	LED	9200 lm	4000 K	70	69 W	120 V	(none)	(none)	
W2	DECORATIVE WALL SCONCE, TO BE SELECTED BY ARCHITECT, 20 WATTS MAXIMUM	TBD	TBD	OR APPROVED EQUAL	LED	1000 lm	3500 K	80	20 W	277 V	0-10V	10%	
X1	DIECAST ALUMINUM EXIT SIGN, WHITE FINISH, UNIVERSAL MOUNTING, GREEN LED, BATTERY BACKUP	LITHONIA	QUANTUM #LQC	OR APPROVED EQUAL	LED	100 lm	3500 K	80	1 W	277 V	(none)	(none)	
XP1	POLE MOUNTED AREA LIGHT, TYPE 3 DISTRIBUTION, 9200 LUMENS, INTEGRAL MOTION SENSOR FOR DIMMING, 6' ARM FOR SQUARE POLE, 25' SQUARE STRAIGHT STEEL POLE	COOPER	VISION SITE LED #VXM-E03-LED-E1-T3-(COLOR)-MS/DIM-L40W-MA1050-XX	OR APPROVED EQUAL	LED	0 lm	4000 K	70	75 W	277 V	0-10V	10%	
XP2	POLE MOUNTED AREA LIGHT, TYPE 2 DISTRIBUTION, 9200 LUMENS, INTEGRAL MOTION SENSOR FOR DIMMING, 6' ARM FOR SQUARE POLE, 25' SQUARE STRAIGHT STEEL POLE	COOPER	VISION SITE LED #VXM-E03-LED-E1-T2-(COLOR)-MS/DIM-L40W-MA1050-XX	OR APPROVED EQUAL	LED	0 lm	4000 K	70	75 W	277 V	0-10V	10%	

LIGHTING CONTROL INTENT MATRIX

CODE SPACE TYPE	ROOM NAME AND NUMBER	LINE VOLTAGE ON/OFF SWITCH	LINE VOLTAGE OCCUPANCY SENSOR WALL SWITCH	ON / OFF CONTROL STATION	ON / OFF / RAISE / LOWER CONTROL STATION	MANUAL ON	AUTOMATIC ON TO % INDICATED VIA OCCUPANCY SENSOR	AUTOMATIC OFF TO % INDICATED VIA OCCUPANCY SENSOR	TIME CLOCK SCHEDULED SHUTOFF	DAYLIGHT RESPONSIVE CONTROL	NETWORK LIGHTING CONTROL	N: NORMAL E: NEC 700 EMERGENCY	NOTES
OFFICE	OFFICE 104				•	•		0%		•		N	
	OFFICE 105				•	•		0%		•		N	
	OFFICE 106				•	•		0%		•		N	
	OFFICE 107				•	•		0%		•		N	
	OFFICE 108				•	•		0%		•		N	
	OFFICE 109				•	•		0%		•		N	
	EXISTING OFFICE 110				•	•		0%		•		N	
	OFFICE 113				•	•		0%				N	
	OFFICE 114				•	•		0%		•		N	
	OFFICE 115				•	•		0%		•		N	
	OFFICE 116				•	•		0%				N	
	OPEN OFFICE 103				•	•	100,20%	20%		•		N,E	
	OPEN OFFICE 112				•	•	100,20%	20%		•		N,E	LIGHTING SHALL BE CONTROLLED IN CONTROLS ZONES NOT GREATER THAN 600 SQ. FT. LIGHTING IN EACH CONTROL ZONE SHALL TURN ON TO 100% UPON OCCUPANCY WITHIN THE CONTROL ZONE AND LIGHTING IN OTHER UNOCCUPIED ZONES SHALL TURN ON TO 20%. LIGHTING IN EACH CONTROL ZONE SHALL DIM TO 20% 20 MINUTES AFTER OCCUPANTS HAVE LEFT THE CONTROL ZONE. ALL LIGHTING SHALL AUTOMATICALLY TURN OFF 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE OPEN OFFICE.
LOBBY	LOBBY 100				•	•			•	•	•	N,E	
CORRIDOR	HALLWAY			•				50%	•		•	N,E	OCCUPANCY SENSORS SHALL DIM LIGHTS TO 50% 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE SPACE.
LOCKER ROOM	SHARED CHANGING RM 117			•		•	50%	0%		•		N,E	
	DRYING ROOM 122			•		•	50%	0%		•		N,E	
RESTROOM	GENDER NEUTRAL R.R. 111			•		•	100%	0%		•		N,E	
	SHOWER 1		•			•	100%	0%		•		N	
	SHOWER 2		•			•	100%	0%		•		N	
STORAGE ROOM	STOR.		•			•		0%				N	
	AV 119		•			•		0%				N	
	STOR. 2		•			•		0%				N	
	CLOSET 111B		•			•		0%				N	
	SALT STORAGE 300			•		•	50%	0%				N	
MEETING/MULTIPURPOSE ROOM	TRAINING CENTER 102				•	•	50%	0%		•		N	
	MULTI- PURPOSE 118				•	•	50%	0%		•		N	
EXTERIOR	PARKING LOT						100%	50%	•			N	NEW POLE MOUNTED LIGHTS TO BE PROVIDED WITH INTEGRAL OCCUPANCY SENSORS. OCCUPANCY SENSORS SHALL DIM LIGHTS TO 50% DURING ANY TIME WHERE ACTIVITY HAS NOT BEEN DETECTED FOR 15 MINUTES. NEW POLE LIGHTS ADDITIONALLY TO BE CONTROLLED VIA TIMECLOCK THROUGH THE EXISTING BUILDING LIGHTING RELAY PANEL.
	BUILDING 1 EXTERIOR								•				
	SALT STORAGE EXTERIOR								•				

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LIGHTING FIXTURE SCHEDULE

SCALE:
DRAWN: Author
CHECKED: Checker
PROJECT NO: 2020008.100

SHEET:

E7.1

LIGHTING COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1 Administered by: ©2024 NEEA, All rights reserved

Project & Applicant Information	**Project Title**	SeaTac Public Works Maintenance Facility - 2021 WSEC	For Building Department Use: **Date: Apr 04, 2024**
	Project Address	2000 S 136th St SeaTac, WA 98168	
	Applicant Name	Sam Young	
	Applicant Phone	336-430-8138	
	Applicant Email	sam.young@stantec.com	

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

General Occupancy	All Commercial	**General Building Use Type**		Office, Government/Municipal	**Building Cond. Floor Area**	8,566
General Project Types	Building Addition Alteration	**New Building or Addition** **Lighting Scope**	Interior Lighting Exterior Lighting	**Alteration** **Lighting Scope**	Interior Lighting	**Project Cond. Floor Area** **Floors Above Grade** **Compliance Method**	8,566 1 General Prescriptive
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**
	Alteration	Interior Lighting	20% or more replaced	Space by space	No Calculation Adjustments allowed	**COMPLIES**
	Building Addition	Interior Lighting		Space by space	No Calculation Adjustments selected	**COMPLIES**
	Building Addition	Exterior Lighting			Not applicable to exterior	**COMPLIES**
Additional Energy Efficiency (AEC) Measures Included	No lighting or electrical additional energy efficiency measures included in project		**Load Management (LDM) Measures Included**		No lighting or electrical load management measures included in project	

Project Title	SeaTac Public Works Maintenance Facility - 2021 WSEC	**Date**	Apr 04, 2024
Lighting Power Calculation	**ALTERATION - INTERIOR LIGHTING (20% or more replaced)**	**Compliance Verification**	**COMPLIES**
Compliance Method	**Space by space**	**LPA Calculation Adjustment**	**none**

Interior Lighting Power Allowance - Space by Space

General Space Type	Specific Space Type	Gross Interior Area (SF)	LPA (Watts/SF)	Total Watts Allowed (SF x LPA x 1)	Total Proposed Watts (LPD = Display LPD)	Compliance Status
Conference/meeting/multipurpose		381	0.97	370		
Corridors	General	703	0.41	288		
Corridors	General	41	0.41	17		
Locker room		226	0.52	118		
Locker room		599	0.52	312		
Office	Enclosed ≤ 250 sf	100	0.74	74		
Office	Enclosed ≤ 250 sf	86	0.74	64		
Office	Enclosed ≤ 250 sf	100	0.74	74		
Office	Enclosed ≤ 250 sf	86	0.74	64		
Office	Enclosed ≤ 250 sf	201	0.74	149		
Office	Open plan	820	0.61	500		
Restroom	General	891	0.63	561		
Storage room	Less than 50 sf	48	0.51	25		
Storage room	Less than 50 sf	20	0.51	10		
			Proposed Total LPD		2,255	
	Totals			2,624	2,255	COMPLIES

Proposed Lighting Power Density

Fixture Type	Fixture ID	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (Wpf)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x Wpf) or (LF x WpLF)
Individual Fixtures						
Direct / indirect pendant	P2	10	27			270
Direct / indirect pendant	P3	8	8			64
Recessed downlight	R3	2	71			142
Recessed downlight	R2	2	59			118
Recessed downlight	R1.8	4	48			192
Recessed downlight	R1.6	4	36			144
Recessed downlight	R4	2	83			166
Recessed downlight	D1	11	8			88
Suspended	P1A.4	4	36			144
Suspended	S1	2	30			60
Suspended	P1A.12	2	108			216
Suspended	P1B.4/P1B.4X	22	26			572
Wall-mounted	V1.2	1	12			12
Wall-mounted	V1.4	1	24			24
Wall-mounted	V1.7	1	43			43
					Proposed Total LPD	2,255

Project Title	SeaTac Public Works Maintenance Facility - 2021 WSEC	**Date**	Apr 04, 2024
Proposed Fixtures Details	**ALTERATION - INTERIOR LIGHTING (20% or more replaced)**		

Fixture Type/Application	Fixture ID	Location in Documents	Lamp Type	New or Existing-to-Remain
Individual Fixtures				
Direct / indirect pendant	P2	Sheet E4.1	LED	New
	Fixture Description: P2			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Direct / indirect pendant	P3	Sheet E4.1	LED	New
	Fixture Description: P3			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Recessed downlight	R3	Sheet E4.1	LED	New
	Fixture Description: R3			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Recessed downlight	R2	Sheet E4.1	LED	New
	Fixture Description: R2			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Recessed downlight	R1.8	Sheet E4.1	LED	New
	Fixture Description: R1.8			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Recessed downlight	R1.6	Sheet E4.1	LED	New
	Fixture Description: R1.6			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Recessed downlight	R4	Sheet E4.1	LED	New
	Fixture Description: R4			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Recessed downlight	D1	Sheet E4.1	LED	New
	Fixture Description: D1			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Suspended	P1A.4	Sheet E4.1	LED	New
	Fixture Description: P1A.4			Are these fixtures located within a daylight zone?: Yes, controls provided

	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Suspended	S1	Sheet E4.1	LED	New
	Fixture Description: S1			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Suspended	P1A.12	Sheet E4.1	LED	New
	Fixture Description: P1A.12			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Suspended	P1B.4/P1B.4X	Sheet E4.1	LED	New
	Fixture Description: P1B.4/P1B.4X			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Wall-mounted	V1.2	Sheet E4.1	LED	New
	Fixture Description: V1.2			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Wall-mounted	V1.4	Sheet E4.1	LED	New
	Fixture Description: V1.4			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Wall-mounted	V1.7	Sheet E4.1	LED	New
	Fixture Description: V1.7			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			

Project Title	SeaTac Public Works Maintenance Facility - 2021 WSEC	**Date**	Apr 04, 2024
Lighting Power Calculation	**BUILDING ADDITION - INTERIOR LIGHTING**	**Compliance Verification**	**COMPLIES**
Compliance Method	**Space by space**	**LPA Calculation Adjustment**	**none**

Interior Lighting Power Allowance - Space by Space

General Space Type	Specific Space Type	Gross Interior Area (SF)	LPA (Watts/SF)	Total Watts Allowed (SF x LPA x 1)	Total Proposed Watts (LPD = Display LPD)	Compliance Status
Conference/meeting/multipurpose		428	0.97	415		
Lobby	General	458	0.84	385		
Office	Enclosed ≤ 250 sf	92	0.74	68		
Office	Enclosed ≤ 250 sf	132	0.74	98		
Office	Enclosed ≤ 250 sf	92	0.74	68		
Office	Enclosed ≤ 250 sf	133	0.74	98		
Office	Enclosed ≤ 250 sf	93	0.74	69		
Office	Enclosed ≤ 250 sf	95	0.74	70		
Office	Open plan	514	0.61	314		
			Proposed Total LPD		1,550	
	Totals			1,585	1,550	COMPLIES

Proposed Lighting Power Density

Fixture Type	Fixture ID	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (Wpf)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x Wpf) or (LF x WpLF)
Individual Fixtures						
Direct / indirect pendant	P3	6	8			48
Recessed downlight	R1.2	5	12			60
Recessed downlight	R3	2	71			142
Suspended	P1A.6	4	54			216
Suspended	P1A.4	4	36			144
Suspended	P1A.10/P1A.10X	4	90			360
Suspended	P4	2	108			216

Suspended	P5	2	72	144
Suspended	P6	1	220	220
				Proposed Total LPD **1,550**

Project Title	SeaTac Public Works Maintenance Facility - 2021 WSEC	**Date**	Apr 04, 2024
Proposed Fixtures Details	**BUILDING ADDITION - INTERIOR LIGHTING**		

Fixture Type/Application	Fixture ID	Location in Documents	Lamp Type	New or Existing-to-Remain
Individual Fixtures				
Direct / indirect pendant	P3	Sheet E4.1	LED	New
	Fixture Description: P3			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Recessed downlight	R1.2	Sheet E4.1	LED	New
	Fixture Description: R1.2			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Recessed downlight	R3	Sheet E4.1	LED	New
	Fixture Description: R3			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Suspended	P1A.6	Sheet E4.1	LED	New
	Fixture Description: P1A.6			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Suspended	P1A.4	Sheet E4.1	LED	New
	Fixture Description: P1A.4			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Suspended	P1A.10/P1A.10X	Sheet E4.1	LED	New
	Fixture Description: P1A.10/P1A.10X			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Suspended	P4	Sheet E4.1	LED	New
	Fixture Description: P4			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Suspended	P5	Sheet E4.1	LED	New
	Fixture Description: P5			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required
Suspended	P6	Sheet E4.1	LED	New
	Fixture Description: P6			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required

Project Title	SeaTac Public Works Maintenance Facility - 2021 WSEC	**Date**	Apr 04, 2024
Lighting Power Calculation	**BUILDING ADDITION - EXTERIOR LIGHTING**	**Compliance Verification**	**COMPLIES**
Exterior Lighting Zone	**ZONE 2**	**Base Site Allowance**	**280**

Exterior Lighting Power Allowance

Exterior Surface	Surface Sub-Type	Surface Area (SF)	LPA (Watts/SF)	Linear Feet (LF)	LPA (Watts/LF)	Total Watts Allowed (LPA x SF) or (LPA x LF)	Total Proposed Watts	Compliance Status
Building entrances and exits	Entry canopies	230	0.126			29		
Uncovered parking areas and drives		10,806	0.026			281		
					Base Site Allowance	280		
					Totals	590	269	COMPLIES

Proposed Exterior Lighting Power Density

Fixture Type	Fixture ID	Exterior Surface Type	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (Wpf)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x Wpf) or (LF x WpLF)
Individual Fixtures							
Pole-mounted	XP1	Uncovered parking areas and drives -	2	75			150
Pole-mounted	XP2	Uncovered parking areas and drives -	1	75			75
Other fixture type	D2	Building entrances and exits - Entry canopies	4	11			44
						Proposed Total LPD	**269**

Lighting, Motor and Electrical Requirements List, pg 1 of 13

2021 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 — Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a permit application for compliance with the lighting systems, motors and electrical system requirements in the Washington State Energy Code, Commercial Provisions.
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Project:
SeaTac Public Works Maintenance Facility - 2021 WSEC
2000 S 136th St
SeaTac, WA 98168

Date: 2024-04-04

Applies	Code Section	Component	Compliance Information Required In Permit Documentation	Location in Documents	Building Department Notes
LIGHTING SCOPE					
NA	C103.1	Construction documents - General	For a shell & core or tenant space (first build-out) project, indicate if there is no lighting scope included in the project.		
NA	C103.1	Construction documents - General	For an alteration project, indicate if there is no lighting scope included in the project.		
NA	C405.1	Lighting in sleeping units	Indicate general compliance path for permanently installed luminaires in sleeping units - vacancy controls & luminaire efficacy; or lighting power allowance.		
INTERIOR LIGHTING CONTROLS					
YES	C405.2	Interior lighting controls, general	For all interior lighting systems, indicate lighting control method (general lighting controls requirements or luminaire level lighting controls) on plans for all spaces and lighting zone(s) served; indicate exceptions applied to eligible spaces and light	Sheets E4.1, E7.1	
YES	C405.2.3	Manual controls	Indicate on plans the method of manual lighting control, location of manual control device and the area or specific application it serves.	Sheets E4.1, E7.1	
NA	C405.2.4 C405.2.4.1	Manual interior light reduction controls	For general lighting not controlled by occupancy sensors, indicate on plans which method of manual 50% lighting load reduction is provided, or indicate applicable exception.		
YES	C405.2.1 C405.2.2	Method of automatic shut-off control	Indicate on plans the method of automatic shut-off control during unoccupied periods (occupancy sensor or time switch) for all lighting zones.	Sheets E4.1, E7.1	
YES	C405.2.1	Occupant sensor controls	Indicate on plans all luminaires that are controlled by occupant sensor controls; indicate controls are configured to turn luminaires 100% off when the space is unoccupied	Sheets E4.1, E7.1	
YES	C405.2.1 C405.2.1.1	Occupant sensor controls	Indicate if occupant sensor controls are configured to be manual on or automatic on to not more than 50% power; indicate spaces eligible for exception that allows automatic on to 100% power.	Sheets E4.1, E7.1	
NA	C405.2.1.2	Occupant sensor controls - warehouse storage areas & library stacks	Indicate each aisleway within a warehouse or library stack space designated as a separate zone that is independently controlled		

Lighting, Motor and Electrical Requirements List, pg 2 of 13

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NA			Indicate occupant sensors are configured to automatically reduce lighting power by ≥ 50% when the zone is unoccupied for over 20 minutes; indicate controls are configured to automatically restore lighting to full power when the zone or space is occupie		
NA	C405.2.1.2	Occupant sensor controls - warehouse storage areas & library stacks	Indicate method of automatic 100% shut-off (occupancy sensor or time switch)		
YES	C405.2.1.3	Occupant sensor controls - open plan office areas	For open plan office areas larger than 300 sf, indicate all general lighting control zones are ≤ 600 sf	Sheets E4.1, E7.1	
YES	C405.2.1.3	Occupant sensor controls - open plan office areas	Indicate all general lighting control zones are provided with vacancy controls that are configured to reduce lighting power by not less than 80% when the zone is unoccupied and turn luminaires 100% off when the control zone is unoccupied; indicate unoccup	Sheets E4.1, E7.1	
NA	C405.2.1.4	Occupant sensor controls - enclosed fire-rated stairwells	Indicate stairway lighting is provided with occupancy sensor controls that reduce lighting power by not less than 50% when the stairway in unoccupied and restore lighting to 100% when it is occupied.		
YES	C405.2.1.5	Occupant sensor controls - corridors	Indicate corridor lighting is provided with occupancy sensor controls that reduce lighting power by not less than 50% when the corridor is unoccupied.	Sheets E4.1, E7.1	
YES	C405.2.2.1	Automatic time switch controls	Indicate spaces on plans where time switch controls are configured to turn luminaires 100% off during unoccupied hours	Sheets E4.1, E7.1	
YES			Indicate spaces on plans where time switch controls are configured to turn on lighting to full power versus 50% power	Sheets E4.1, E7.1	
YES			Indicate locations of override switches on plans and the lighting zone(s) served; indicate that the area(s) served by each override switch does not exceed 5,000 sf.	Sheets E4.1, E7.1	
YES	C405.2.5.2 C405.2.5.4	Daylight zones - Sidelit zones	Indicate primary and secondary sidelit daylight zone floor areas on plans	Sheets E4.1, E7.1	
YES			For small vertical fenestration assemblies (rough opening less than 10% of primary daylight zone floor area) where daylight responsive controls are not required, provide fenestration area to daylight zone floor area calculation(s).	Sheets E4.1, E7.1	
NA			Indicate toplit daylight zone floor areas on plans.		
YES	C405.2.5 C405.2.5.1	Daylight responsive controls	Indicate on plans all lighting zone(s) served by daylight responsive controls; indicate that the area served by each control device does not exceed 2,500 SF	Sheets E4.1, E7.1	

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Stantec
720 3rd Avenue Suite 1500
Seattle Washington 98104-1878
(206) 447-2555

SeaTac Maintenance Facility

CITY OF SEATAC EST. 1990

PERMIT SET

ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:

ENERGY CODE FORMS - BLDG #1

SCALE:
DRAWN: Author
CHECKED: Checker
PROJECT NO: 2020008.100

SHEET:
E8.1

Lighting, Motor and Electrical Requirements List, pg 3 of 13

2021 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2024 NEEA, All rights reserved
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YES			Identify sidelit and toplit daylight zones that are not provided with daylight responsive controls and the exception(s) that apply	Sheets E4.1, E7.1	
YES	C405.2.5.1	Daylight responsive controls	Indicate on plans that all daylight responsive controls provide continuous dimming to ≤15% full light output	Sheets E4.1, E7.1	
YES	C405.2.5.1	Daylight responsive controls	Indicate that daylight responsive controls are configured to completely shut off all controlled lighting fixtures within the lighting zone.	Sheets E4.1, E7.1	
NA	C405.2.6	Additional controls - Specific application lighting controls	Identify spaces and lighting fixtures on plans that require specific application lighting controls per this section.		
NA	C405.2.6, Items 1.1 thru 1.6	Additional lighting controls for display, accent & supplemental task lighting	Indicate on plans that all display, accent and supplemental task lighting fixtures are controlled independently from general area lighting		
NA	C405.2.6, Items 1.1 and 1.2	Display and accent lighting	For display and accent lighting fixtures, including lighting fixtures added per the C405.2.2.1 additional interior lighting power allowance, indicate on plans the separate manual controls for these fixtures and the type of automatic off controls (occupanc		
NA			For display case lighting fixtures, indicate on plans the separate manual controls for these fixtures and the type of automatic off controls (occupancy sensor or time-switch)		
NA	C405.2.6, Item 1.4	Supplemental task lighting	For supplemental task lighting fixtures including under-shelf or under-cabinet lighting, indicate on plans the separate manual controls for these fixtures and the type of automatic off controls (occupancy sensor or time-switch)		
NA	C405.2.6, Item 1.5	Lighting equipment for sale or demonstration	For lighting equipment for sale or demonstration, indicate on plans the separate manual controls for these fixtures and the type of automatic off controls (occupancy sensor or time-switch)		
NA			For exhibit lighting fixtures in galleries, museums and monuments, indicate on plans the separate manual controls for these fixtures and the type of automatic off controls (occupancy sensor or time-switch).		
NA	C405.2.6, Item 2	Permanently installed lighting in sleeping units	Indicate method of automatic off control of all installed luminaires in sleeping units (vacancy or captive key card control); also refer to Receptacles.		

Lighting, Motor and Electrical Requirements List, pg 4 of 13

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NA	C405.2.6, Item 3	Lighting for non-visual applications	For lighting serving non-visual applications (food warming and lighting for life support of nonhuman life forms), indicate on plans that lighting fixtures are controlled independently from both general area lighting and other lighting applications within		
NA			Indicate on plans separate manual controls for non-visual lighting application fixtures and applicable automatic lighting controls; indicate that the area served by each control device does not exceed 4,000 sf.		
NA			For task lighting that serves medical & dental purposes, indicate on plans that lighting fixtures are provided with manual control that is independent from general area lighting.		
YES	C405.2.6, Item 5	Means of egress lighting	Identify all means of egress lighting fixtures on plans including fixtures that function as both normal and emergency illumination	Sheets E4.1, E7.1	
YES			Provide calculation for total lighting power density (LPD) of all means of egress lighting fixtures; if total LPD is ≥ 0.01 WattsSF, indicate on plans the method of automatic shut-off control during unoccupied periods (emergency relay & occupancy sens	Sheets E4.1, E7.1	
NA	C405.2.8	Advanced lighting controls in open office areas	For open office areas ≥ 5,000 sf., indicate which advanced lighting control system is provided (luminaire level lighting controls or networked lighting controls).		
NA	C405.2.8.1	Luminaire level lighting controls (LLLC)	Where LLLC are provided to comply with C405.2.8, or provided as the alternate lighting controls compliance method per C405.2, or to comply with C406.2.4.2 Enhanced digital interior lighting controls; provide sequence of operations that describes required		
NA	C405.2.8.1 C405.2.8.3	Luminaire level lighting controls (LLLC)	Indicate on plans that each LLLC luminaire is configured with occupancy sensing control functions (including C405.2.1.3 requirements for open office areas) and continuous full range dimming controls to brighten or dim lights based on occupancy and availab		
NA	C405.2.8.2	Networked lighting control (NLC)	Where NLC are provided to comply with C405.2.8, or to comply with C406.2.4.2 Enhanced digital interior lighting controls; provide sequence of operations that describes required NLC capabilities and performance parameters		
NA	C405.2.8.2 C405.2.8.3	Networked lighting control (NLC)	Indicate on plans that each NLC luminaire is individually addressable or document exception applied; Indicate on plans that each NLC luminaire is configured with occupancy sensing control functions (including C405.2.1.3 requirements for open office areas)		

Lighting, Motor and Electrical Requirements List, pg 5 of 13

2021 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2024 NEEA, All rights reserved
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NA	C405.8.3	High end trim	Where high end trim is required, luminaires shall be initially configured to limit maximum lumen output or lighting power to 85% or to the target design lighting power.		
INTERIOR LIGHTING CONTROLS - ADDITIONAL ENERGY EFFICIENCY MEASURE					
NA	C406.2.4.2	Enhanced digital interior lighting controls	To comply with the enhanced interior lighting controls measure, provide calculations that demonstrate that lighting in ≥ 50% of the project floor area is provided with LLLC (C405.2.8.1) or NLC (C405.2.8.2) controls with high end trim (C405.2.8.3)		
NA			Where LLLC is provided, indicate on plans that each LLLC controlled luminaire is configured with integral sensors; where NLC is provided, indicate on plans that each NLC controlled luminaire is configured to be independently addressable; provide sequence		
NA	C406.2.4.1	Enhanced lighting controls in Group R-2	In Group R-2 occupancies, indicate on plans a master control at the main entrance to each dwelling or sleeping unit that switches off all lights and switched receptacles (may be two controls, one for lights and the other for receptacles); indicate on plan		
INTERIOR LIGHTING CONTROLS - LIGHTING LOAD MANAGEMENT MEASURE					
NA	C406.3.1	Interior lighting DDC controls & real-time demand response	To comply with the interior lighting load management measure, indicate automatic lighting controls are connected to a central DDC system capable of activation by an external utility signal; where utility real-time demand or pricing program exists, indicat		
NA	C406.3.1	Interior lighting power reduction controls	Indicate lighting controls are configured to gradually reduce by continuous dimming the interior general area lighting power by ? 20% in response to a peak demand signal; calculate the percentage of total building floor area served by load management ligh		
NA	C406.3.1	Warehouse & retail storage interior lighting power reduction controls	For warehouse & retail storage areas, indicate method of interior general area lighting power reduction (continuous dimming by ? 20%; switching off ? 25% of lighting power).		
EXTERIOR LIGHTING CONTROLS					
YES	C405.2.9 C405.2.9.1 C405.2.9	Exterior lighting controls	For all exterior lighting, indicate on plans automatic controls (either daylight sensing or astronomic time clock) configured to turn lighting off when daylight is present; or indicate exception applied.	Sheets E4.1, E7.1	
NA			For exterior building facade & landscape lighting, indicate that controls are configured to turn this lighting off when daylight is present for a minimum of 6 hours per night, or from 1 hour after closing to 1 hour before opening per the occupancy schedul		

Lighting, Motor and Electrical Requirements List, pg 6 of 13

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YES			For outdoor parking area (not parking garage) luminaires that are mounted ≤ 24 feet high and are rated at ≥ 40 watts, indicate that controls are configured to turn this lighting off when daylight is present; in addition, indicate controls are config	Sheets E1.2, E4.1, E7.1	
YES			For exterior lighting other than building facade, landscape and outdoor parking area lighting, indicate controls are configured to reduce lighting power by at least 50% from 12am-6am, or 1 hour after closing to 1 hour before opening, or when no activity i	Sheets E1.2, E4.1, E7.1	
NA	C405.2.10	Parking garage lighting control	Indicate all interior parking garage lighting fixtures are provided with time switch controls (per C405.2.2.1) or occupancy sensor controls (per C405.2.1.1); indicate controls are configured to reduce lighting power by at least 30% when no activity is det		
NA	C405.2.10	Parking garage lighting control - Perimeter lighting zones	For parking garage lighting fixtures located within 20 feet of perimeter wall openings, indicate on plans that daylight sensing controls are configured to reduce lighting power by at least 50%, or exception applied		
NA	C405.2.10	Parking garage lighting control - Eye adaptation lighting	For lighting fixtures at vehicle entrances & exits, indicate on plans that daylight sensing controls are configured to reduce lighting power by at least 50% from sunrise to sunset.		
NA	C405.3	Lighting for plant growth and maintenance	For permanently installed lighting fixtures used specifically for plant growth and maintenance, indicate that the photosynthetic photon efficacy measured at the lamp or luminaire is ≥ 1.7 ţ½mol/J in greenhouses and ≥ 1.9 ţ½mol/J in all other indoo		
NA	C405.5.4	Exterior gas-fired lighting appliances	Indicate ignition system is a method other then continuously burning pilot light.		
INTERIOR & EXTERIOR LIGHTING CONTROL CIRCUITS					
NA	C405.2.7	Area controls - Master control switches	Indicate location(s) of lighting master control switch(es) intended to control multiple independent switches; a circuit breaker may not be used as a lighting master control switch		
YES			Verify the maximum power controlled by any single lighting control switch or automatic control device is no more than a 20 amp circuit loaded to ? 80%.	Sheets E4.1, E7.1	
INTERIOR LIGHTING POWER & EFFICACY					
YES	C405.4.1	Total connected interior lighting power	Include all luminaires in interior lighting fixture schedule; indicate fixture types, lamps, ballasts and rated watts per fixture; include rated wattage of lamps for luminaires with lamps connected directly to building power; include wattage limit of tran	Sheets E8.1, E8.2, E8.3	

Lighting, Motor and Electrical Requirements List, pg 7 of 13

2021 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2024 NEEA, All rights reserved
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YES			Identify spaces eligible for lighting power exemption on plans and in WSEC interior lighting compliance reports; indicate the exception applied	Sheets E8.1, E8.2, E8.3	
YES			Identify lighting equipment eligible for lighting power exemption in fixture schedule and in WSEC interior lighting compliance reports; indicate the exception applied.	Sheets E8.1, E8.2, E8.3	
NA	C405.1.1	Lighting in dwelling units	Include all permanently installed luminaires in dwelling units in interior lighting fixture schedule; include luminaire lighting power and efficacy (lumens)		
NA			Include all permanently installed luminaires in sleeping units in interior lighting fixture schedule; include luminaire lighting power or efficacy (lumens) depending on compliance path taken per C405.1		
NA			For all permenantly installed luminaires, indicate in interior lighting fixture schedule that rated lamp efficacy is ≥ 65 lumens/watt or luminaire efficacy is ≥ 45 lumens/watt.		
YES	C405.4.2	Interior lighting power allowance (LPA)	Indicate which interior LPA method is applied to the entire building (Building Area Method or Space-by-Space Method); indicate LPA applied is Space-by-Space Method for partial building projects and for buildings with unfinished spaces.	Sheets E8.1, E8.2, E8.3	
INTERIOR LIGHTING POWER CALCULATION - INDICATE COMPLIANCE PATH TAKEN					
NA	C405.4.2.1	Building Area Method	Demonstrate that total proposed interior lighting wattage per building does not exceed the sum of the maximum allowed wattages for all building area types; identify locations of building areas on plans; provide WSEC interior lighting compliance reports.		
YES	C405.4.2.2	Space-By-Space Method	Demonstrate that total proposed interior lighting wattage does not exceed the maximum allowed wattage; identify locations of space types on plans, including additional allowance retail display areas and areas with display, highlight and decorative lightin	Sheets E8.1, E8.2, E8.3	
INTERIOR LIGHTING POWER & EFFICACY - ADDITIONAL ENERGY EFFICIENCY MEASURES					
NA	C406.2.3.1 C406.2.3.2	Reduced interior lighting power density (LPD)	To comply with the reduced interior LPD additional energy efficiency measure, demonstrate that total proposed interior LPD wattage is 10% or 20% lower than the total interior LPA wattage for the area the reduced lighting power measure is being applied to		

Lighting, Motor and Electrical Requirements List, pg 8 of 13

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NA	C406.2.3.3	Reduced interior LPD - Dwelling & sleeping unit lamp efficacy	To comply with reduced interior LPD additional energy efficiency measure for a building with dwelling units or sleeping units, indicate in interior lighting fixture schedule that all permenantly installed luminaires have a rated lamp efficacy ≥ 90 lume		
EXTERIOR LIGHTING POWER & EFFICACY					
YES	C405.5.2	Total connected exterior lighting power	Include all luminaires in exterior lighting fixture schedule; indicate fixture types, lamps, ballasts and rated watts per fixture; include rated wattage of lamps for luminaires with lamps connected directly to building power; include wattage limit of tran	Sheets E8.1, E8.2, E8.3	
YES			Identify exterior lighting applications eligible for lighting power exemption on plans and in WSEC exterior lighting compliance reports; indicate the exception applied.	Sheets E8.1, E8.2, E8.3	
YES	TABLE C405.5.3(1)	Exterior lighting zone	Indicate the building exterior lighting zone as specified by the AHJ.	Sheets E8.1, E8.2, E8.3	
YES	C405.5.1	Exterior building grounds lighting	For building grounds lighting fixtures rated at greater than 25 watts, indicate in exterior lighting fixture schedule that fixtures have a rated lamp efficacy ≥ 100 lumens/watt or indicate the exception applied.	Sheets E8.1, E8.2, E8.3	
EXTERIOR LIGHTING POWER CALCULATION					
YES	C405.5.3	Exterior lighting power allowance (LPA)	Demonstrate that total proposed exterior surface lighting wattage does not exceed the maximum allowed wattage (including base site allowance); identify locations of exterior surfaces on plans; provide WSEC exterior lighting compliance reports	Sheets E8.1, E8.2, E8.3	
NA			Demonstrate that total proposed wattage for each additional allowance exterior surface type does not exceed the LPA for the surface type (includes base site allowance remaining after C405.5.3 LPA calculation); identify locations of additional allowance ex		
LIGHTING SYSTEMS ALTERATIONS					
YES	C503.7.1	New lighting systems and controls	Where new interior or exterior lighting systems are installed within an existing building site, indicate new lighting controls comply with C405.2; indicate commissioning of lighting controls (C408.4) and lighting system energy end-use metering (C409.3) wi	Sheets E8.1, E8.2, E8.3	
NA	C503.7.2	Interior lighting & parking garage lighting alteration	Include all new luminaires in interior lighting fixture schedule in plans, provide same lighting fixture information as for new construction per C405.4.1 and C405.4.2		

Lighting, Motor and Electrical Requirements List, pg 9 of 13

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YES			For alterations that add or replace ≥ 20% of luminaires within an interior space or parking garage, indicate which interior lighting power allowance (LPA) method is applied to the alteration project area (Space-by-Space Method for partial building alte	Sheets E8.1, E8.2, E8.3	
YES			Demonstrate that total proposed interior lighting wattage (including existing-to-remain lighting wattage) within the alteration project area does not exceed the maximum allowed wattage (Space-by-Space Method) or the sum of the maximum allowed wattages for	Sheets E8.1, E8.2, E8.3	
NA	C503.7.2	Interior lighting alterations (LPA) - Add/replace	For alterations that add or replace < 20% of luminaires in an interior space or parking garage, calculate total existing interior lighting wattage within the project area prior to the alteration		
NA	C503.7.2	Interior lighting alterations (LPD) - Add/replace	Demonstrate that total proposed interior lighting wattage (including existing-to-remain lighting wattage) within the alteration project area does not exceed the total existing interior lighting wattage prior to the alteration; provide WSEC interior lighti		
NA			Include all new luminaires in exterior lighting fixture schedule in plans, provide same lighting fixture information as for new construction per C405.5.2		
NA	C503.7.2	Exterior lighting alterations (LPA) - Add/replace &ge 20%	For alterations that add or replace ≥ 20% of exterior lighting wattage, indicate exterior lighting power allowance (LPA) calculated in the same manner as for new construction		
NA	C503.7.2	Exterior lighting alterations (LPD) - Add/replace &ge 20%	Demonstrate that total proposed exterior lighting wattage (including existing-to-remain lighting wattage) does not exceed the maximum allowed wattage; identify locations of surface types on plans, including additional allowance surfaces; provide WSEC exte		
NA	C503.7.2	Exterior lighting alterations (LPA) - Add/replace	For alterations that add or replace < 20% of exterior lighting wattage, calculate total existing exterior lighting wattage prior to the alteration		
NA	C503.7.2	Exterior lighting alterations (LPD) - Add/replace	Demonstrate that total proposed exterior lighting wattage (including existing-to-remain lighting wattage) does not exceed the total existing exterior lighting wattage prior to the alteration; identify locations of surface types on plans, including additio		
NA	C503.7.3	Interior lighting wiring & circuiting alterations	Where new wiring is installed to serve new interior luminaires and /or luminaires are relocated to a new circuit; indicate manual and automatic lighting controls are provided (as applicable) - manual & light reduction (C405.		

Lighting, Motor and Electrical Requirements List, pg 10 of 13

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NA			Where new wiring is installed to serve new exterior luminaires and /or luminaires are relocated to a new circuit; indicate circuit power area controls (C405.2.7) are provided; indicate commissioning of exterior lighting controls (C408.4) will be provided.		
NO	C503.7.4	Lighting panel alterations	Where a new interior and/or exterior lighting panel is installed or an existing panel is moved (including all new raceway and conductor wiring), indicate all of the same interior lighting controls requirements as for wiring & circuiting alterations apply,		
NA	C503.7.5	Newly-created rooms	Where interior space(s) are reconfigured (permanently installed walls or ceiling-height partitions) to create new enclosed spaces, indicate the following manual and automatic lighting controls are provided (as applicable) - manual & light reduction (C405.		
NA	C504.2	Lighting repairs	Identify existing luminaires being upgraded with balb and / or ballast replacement; indicate fixture alteration does not increase existing fixture wattage		
NA	C505.1	Change of interior space use	Identify spaces on plans where the building area type or space use type is being changed from one type to another per Tables C405.4.2(1) or (2) including additional allowance retail display areas and areas with display, highlight and decorative lighting		
NA			Demonstrate that total proposed interior lighting wattage (including existing-to-remain lighting wattage) within the alteration project area does not exceed the maximum allowed wattage (Space-by-Space Method) or the sum of maximum allowed wattage per each		
RECEPTACLES					
NA	C405.10	Automatic receptacle control	Provide schedule on electrical plans that lists the number of controlled and uncontrolled receptacles in each space where controlled receptacles are required - classrooms, enclosed offices, conference rooms, copy/print rooms, break rooms and individual wo		
NA			Identify all controlled and uncontrolled receptacles on electrical plans; indicate that ≥ 50% of all receptacles are provided with automatic controls in each space where they are required; include receptacle configuration such as spacing between contro		
NA			Indicate on plans the method of automatic control for each controlled receptacle zone (occupant sensor or programmable time-of-day control); indicate that the area served by each control device does not exceed 5,000 sf.		

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SeaTac Maintenance Facility

CITY OF SEATAC Est. 1990

PERMIT SET

ISSUE DATE: 05/14/24

REVISION	DATE	DESCRIPTION

CONTENTS:

ENERGY CODE FORMS - BLDG #1

SCALE:
DRAWN: Author
CHECKED: Checker
PROJECT NO: 2020008.100

SHEET:
E8.2

Lighting, Motor and Electrical Requirements List, pg 11 of 13

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NA	C405.2.6, Item 2	Switched receptacles in sleeping units	Indicate method of automatic off control of all switched receptacles in sleeping units (vacancy or key card control).	
NA	C405.7.1	Electric receptacles at dwelling unit gas appliances	In all designated appliance locations within dwelling units (kitchen cooking appliances, laundry and domestic water heating), indicate electric receptacles or junction box & circuit within 12 inches of the appliance location with sufficient capacity to se	
NA	C503.7.7	Electrical receptacle alerations	For alteration project areas ≥ 5,000 sf where electric receptacles are added or replaced, indicate receptacles are provided with automatic controls per C405.10, or exception applied.	
ELECTRIC MOTORS				
NA	C405.8	Electric motor efficiency	Include all motors, including fractional hp motors, in electric motor schedule on electrical plans; indicate motor type, horsepower, rpm, rated efficiency, or exception applied.	
ELEVATORS, ESCALATORS & MOVING WALKS				
NA	C405.9.1	Elevator cabs	For luminaires in each elevator cab, provide calculations that demonstrate average efficacy is not less than 35 lumens per watt	
NA			For elevators that do not have an integral air conditioning system, indicate rated watts per cfm for elevator cab ventilation fans do not exceed 0.33 watts per cfm	
NA			Indicate automatic controls that de-energize lighting and ventilation fans when elevator is stopped and unoccupied for a period of 15 minutes or more.	
NA	C405.9.2	Escalators and moving walks	Indicate escalators and moving walks comply with ASME A17.1/CSA B44 and are provided with automatic controls that are configured to reduce operational speed to the minimum permitted when not in use, or exception applied.	
NA	C405.9.3	Escalator energy recovery	Indicate escalators are designed to recover electrical energy when resisting overspeed in the down direction.	
RENEWABLE ENERGY				
NA	C411	Renewable Energy	For new construction, including additions, change of use, and change of occupancy, with floor area ≥ 10000sf; provide documentation of on-site renewable energy capacity; provide calculations supporting applicable exceptions; if qualifying by exception provide an accounting for the additional Additional Energy Efficiency Credits that will be required	

Lighting, Motor and Electrical Requirements List, pg 12 of 13

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RENEWABLE ENERGY - ADDITIONAL ENERGY EFFICIENCY MEASURE				
NA	C406.2.5	On-site and off-site renewable energy	To comply with the renewable energy measure, provide an accounting of on-site and any contracted off-site renewable energy capacity; for all off-site sources, indicate the C411.2 renewable energy source type, energy factor, and the rated capacity and calculated code credited kW; indicate on-site renewables used to comply with C411 or for a code exception elsewhere in the code; with the remaining renewable energy provide Equation 4-17 calculations showing the achieved credits and that the achieved credits are ? the base credits for the measure	
NA	C406.2.5	On-site and off-site renewable energy	Provide documentation that all off-site renewable energy systems comply with Sections C411.2.2 and C411.2.3 including all contracts, and the ownership and location of off-site generation	
ELECTRIC ENERGY STORAGE - LOAD MANAGMENT MEASURE				
NA	C406.3.4	Electric energy storage	To comply with the electrical energy storage load managment measure, indicate automatic controls shall store electricity in electric storage devices during nonpeak periods and use stored energy during peak periods; Document the total electric storage device capacity; indicate it is ? 5 Wh/sf (58 Wh/sm) of gross building area; for proration provide the proration calculations supporting the claimed credit	
GENERAL ELECTRICAL SYSTEMS				
NA	C405.6	Electrical transformers	Include electrical transformer schedule on electrical plans; indicate transformer type, size (kVA), efficiency, or exception applied.	
NA	C405.7	Dwelling unit electrical energy consumption	Indicate on electrical plans that each dwelling unit in a Group R-2 building has a separate electrical energy meter, or exception applied.	
NA	C405.11	Voltage drop	Indicate wire conductors are sized so that the maximum voltage drop from customer service conductors to branch circuit conductors is &le 5%.	
NA	C405.12	Alternating current-output uninterruptible power supplies (AC-output UPS)	Indicate in plans that AC-output UPS systems serving computer rooms meet or exceed the calculation and testing requirements identified in ENERGY STAR Program Requirements for Uninterruptible Power Supplies (UPS) ? Eligibility Criteria Version 2.0.	
COMMISSIONING (CX)				

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NA	C408.4	Scope of electrical power & lighting systems commissioning	Indicate that all electrical systems (receptacles, transformers, motors, vertical & horizontal transportation) for which the WSEC requires control functions and/or configuration to perform specific functions are required to be commissioned; include docume		
NA			Where total building lighting load is ≥ 10 kW or the total lighting load of luminaires requiring daylight sensing and/or occupancy control is ≥ 5 kW, indicate that all automatic lighting control systems are required to be commissioned; or provide ca		
NA	C408.1.1	Commissioning requirements in construction documents	Indicate Cx requirements in plans and specifications for all applicable electrical and lighting control systems		
NA	C408.1.2 C103.6.3	Commissioning requirements in construction documents	General summary of Cx plan shall include the following: 1) Narrative description of activities; 2) Responsibilities of the Cx team; 3) Schedule of activities including verification of project close out documentation (C103.6); 4) Conflict of interest plan		
NA	C408.1.3 C408.1.4	Commissioning requirements in construction documents	Include in general summary that a Cx project report and Cx Compliance Checklist (Figure C408.1.4.1) shall be completed by the Certified Cx Professional and provided to the owner prior to the final electrical inspection.		
NA	C408.4.1	Functional performance testing criteria	Identify in plans and specifications the intended operation of all electrical equipment and controls during all modes of operation, including interfacing between new and existing-to-remain systems.		
PROJECT CLOSE OUT					
YES	C103.6.3	Documentation requirements	Indicate in plans that project close out documentation is required; indicate information shall include WSEC lighting compliance reports that document all interior lighting areas and space types, exterior lighting surface types, interior/exterior lighting	Specifications	

If "no" is selected for any question, provide explanation.

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E8.3

ELECTRONIC SECURITY

- CCTV CAMERA
- CCTV CAMERA, CEILING MOUNTED
- CCTV CAMERA, PENDANT MOUNTED
- CCTV CAMERA, POLE MOUNTED
- 360 CCTV CAMERA, 360° FIELD OF VIEW
- CCTV CAMERA, PAN/TILT/ZOOM
- DOOR HARDWARE MARK
- GLASS BREAKAGE SENSOR
- GLASS BREAKAGE SENSOR, CEILING MOUNTED
- MOTION SENSOR, CEILING MOUNTED
- WIRELESS RECEIVER
- LOCAL ALARM
- ACP ACCESS CONTROL PANEL
- BR BIOMETRIC READER
- CC CCTV MONITOR
- CK CARD READER/KEYPAD COMBINATION
- CR CARD READER
- DA DURESS ALARM BUTTON
- DA VOICE DURESS ALARM
- DA VOICE DURESS ALARM WITH STROBE
- DA VOICE DURESS ALARM WITH STROBE, PEDESTAL MOUNTED
- DS DOOR CONTACT SWITCH
- EL ELECTRIC LOCK
- ES ELECTRIC STRIKE
- EX ELECTRIC LATCH RETRACTION
- IAD INTRUSION ARM/DISARM
- IDP INTRUSION DETECTION PANEL
- IM PRIMARY INTERCOM STATION, AUDIO ONLY
- PRIMARY INTERCOM STATION, AUDIO/VIDEO
- PRIMARY INTERCOM STATION, AUDIO ONLY, DOOR RELEASE
- PRIMARY INTERCOM STATION, AUDIO/VIDEO, DOOR RELEASE
- IS SECONDARY INTERCOM STATION, AUDIO ONLY
- SECONDARY INTERCOM STATION, AUDIO/VIDEO
- SECONDARY INTERCOM STATION, AUDIO ONLY, DOOR RELEASE
- SECONDARY INTERCOM STATION, AUDIO/VIDEO, DOOR RELEASE
- KP KEYPAD
- MOTION DETECTOR
- M MOTION DETECTOR, CEILING MOUNTED
- PSP POWER SUPPLY PANEL
- RE REQUEST TO EXIT DETECTOR

WORK DEFINITION

- NEW WORK
- EXISTING
- REMOVE EXISTING
- REMOVE EXISTING ELECTRICAL EQUIPMENT
- FUTURE
- TEMPORARY, AS NOTED
- ? KEY NOTE
- ??? EQUIPMENT IDENTIFICATION

RACEWAYS

RACEWAY CONCEALED IN CEILING OR WALL. EXPOSED RACEWAY IS ALLOWED ONLY WHERE NOTED.
RACEWAY BELOW SLAB OR UNDERGROUND

- RACEWAY UP
- RACEWAY DOWN
- RACEWAY CONTINUATION
- RACEWAY STUB-OUT WITH BUSHING
- SURFACE RACEWAY (HORIZONTAL/VERTICAL)
- J JUNCTION BOX, CEILING OR ABOVE CEILING MOUNTED
- J JUNCTION BOX, WALL MOUNTED
- J JUNCTION BOX, IN-GROUND
- PB PULL BOX

TELECOM OUTLETS

- OUTLET
- OUTLET, CEILING MOUNTED
- OUTLET, MOUNTED IN MULTI-SERVICE CEILING BOX
- OUTLET, MOUNTED IN MULTI-SERVICE FLOOR BOX
- OUTLET, MOUNTED IN MULTI-SERVICE FURNITURE BOX
- OUTLET, MOUNTED IN MULTI-SERVICE POKE THRU
- OUTLET, MOUNTED IN MULTI-SERVICE POWER POLE
- OUTLET, MOUNTED IN MULTI-SERVICE WALL BOX
- FURNITURE SYSTEMS OUTLET
- MOUNTED ABOVE COUNTER BACKSPLASH

TELECOM OUTLET TYPES

# INDICATES QUANTITY OF DATA JACKS, PULLSTRING ALWAYS PROVIDED. REFER TO TELECOM CABLE OUTLET SCHEDULE FOR TELECOM OUTLET TYPES.

- # WALL MOUNTED TELEPHONE HANDSET OUTLET

TELECOM MISC.

- CABLE TRAY WITH FLANGE SIDE RAILS AND LADDER RUNGS
- CABLE TRAY
- GROUND BAR, LENGTH TO SCALE
- RAISED FLOOR GROMMET
- WAP WIRELESS ACCESS POINT
- WAP WIRELESS ACCESS POINT, CEILING MOUNTED

SITE UTILITIES

- HH HANDHOLE
- MH SITE METER
- MH MANHOLE
- CMH PRIMARY MANHOLE
- SMH SECONDARY MANHOLE
- TMH TELECOMMUNICATIONS MANHOLE

SITE UTILITY POLES

- CATV ONLY
- COMBINED SERVICES
- POWER ONLY
- TELECOM ONLY
- STEPDOWN TRANSFORMER, POLE MOUNTED

RADIO FREQUENCY

- ANTENNA, DIRECTIONAL, WALL MOUNTED
- ANTENNA, DONOR, POLE MOUNTED
- ANTENNA, DONOR, WALL MOUNTED
- ANTENNA, OMNIDIRECTIONAL, CEILING MOUNTED
- ANTENNA, OMNIDIRECTIONAL, PENDANT MOUNTED
- ANTENNA, OMNIDIRECTIONAL, POLE MOUNTED
- ANTENNA, OMNIDIRECTIONAL, WALL MOUNTED
- BIDIRECTIONAL AMPLIFIER
- CONVERTOR, FIBER OPTIC TO RF
- CONVERTOR, RF TO FIBER OPTIC
- DIRECTIONAL COUPLER
- EXCITER, CEILING MOUNTED
- EXCITER, WALL MOUNTED
- SPLITTER, 2-WAY
- SPLITTER, 3-WAY
- SPLITTER, 4-WAY
- TERMINATION LOAD

CLOCK SYSTEMS

- CLOCK, 12 HOUR DIAL
- 24 CLOCK, 24 HOUR DIAL
- D CLOCK, DIGITAL
- ELAPSED TIME CLOCK
- ETC ELAPSED TIME CONTROLLER

DOOR BUZZERS

- PUSH BUTTON
- 03 BUZZER HORN
- 03 BUZZER HORN AND VISUAL INDICATOR

SYMBOL CALLOUTS

SYMBOL TAG
AV1 SEE ROUGH IN SCHEDULE FOR DEVICE DETAILS
AL SYMBOL

ABBREVIATIONS

(D)	DEMOLISH
(E)	EXISTING
(F)	FUTURE
(N)	NEW
(R)	EXISTING TO BE RELOCATED
ABV	ABOVE
AC	ACCESS CONTROL
ACH	ABOVE COUNTER HEIGHT
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ALD	ASSISTED LISTENING DEVICE
ALT	ALTERNATE
ANT	ANTENNA
ARCH	ARCHITECTURAL
AUTO	AUTOMATIC
AV	AUDIO VISUAL
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BBC	BACKBONE BONDING CONDUCTOR
BBU	BATTERY BACKUP UNIT
BCT	BONDING CONDUCTOR FOR TELECOMMUNICATIONS
BDA	BI-DIRECTIONAL AMPLIFIER
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
BTM	BOTTOM
C	CONDUIT
C/W	COMPLETE WITH
CAP	CAPACITY
CATV	COMMUNITY ANTENNA TELEVISION
CBN	COMMON BONDING NETWORK
CCTV	CLOSED CIRCUIT TELEVISION
CDAS	CELLULAR DAS
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
CL	CENTERLINE
CLG	CEILING
CM	CEILING MOUNTED
CMP	COMMUNICATIONS MEDIA PLENUM
CMR	COMMUNICATIONS MEDIA RISER
CMU	CONCRETE MASONRY UNIT
CO	CONDUIT ONLY
COMM	COMMUNICATIONS
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CTR	CENTER
CU	COPPER
D	DATA
DAS	DISTRIBUTED ANTENNA SYSTEM
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DL	DAMP LOCATION
DN	DOWN
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	ENTRANCE FACILITY
ELEC	ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
ER	EQUIPMENT ROOM/EMERGENCY ROOM
ERRCS	EMERGENCY RESPONDER RADIO COMMUNICATIONS SYSTEM
EXTER	EXTERIOR
F&I	FURNISHED AND INSTALLED
FA	FIRE ALARM
FB	FLOOR BOX
FDU	FIBER OPTIC DISTRIBUTION UNIT
FLR	FLOOR
FO	FIBER OPTIC(AL)
FTP	FOIL TWISTED PAIR
G, GND	GROUND
GC	GENERAL CONTRACTOR
GC/CM	GENERAL CONTRACTOR/CONSTRUCTION MANAGER
GE	GROUNDING EQUALIZER
HH	HANDHOLE
HK	HOUSE KEEPING PAD
HM	HORIZONTALLY MOUNTED
HOR	HORIZONTAL
HT	HEIGHT
ID	INSIDE DIAMETER, OR IDENTIFICATION
IDF	INTERMEDIATE DISTRIBUTION FRAME
IDP	INTRUSION DETECTION PANEL
IR	INFRARED
ISP	INSIDE PLANT
IT	INFORMATION TECHNOLOGY
JB	JUNCTION BOX
LED	LIGHT EMITTING DIODE
LR	LEGALLY REQUIRED
LTG	LIGHTING

ABBREVIATIONS

LV	LOW VOLTAGE
MAG	MAGNETIC
MAX	MAXIMUM
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
mesh-BN	MESH BONDING NETWORK
mesh-IBN	MESH ISOLATED BONDING NETWORK
MFR	MANUFACTURER
MH	MANHOLE
MHZ	MEGAHERTZ
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MULTIMODE FIBER OPTIC STRAND
MPOE	MAIN POINT OF ENTRY
MTD	MOUNTED
MTG	MOUNTING
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFE	OWNER FURNISHED EQUIPMENT
OFOI	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
OPER	OPERABLE/OPERATOR
OSP	OUTSIDE PLANT
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX
PBB	PRIMARY BONDING BUSBAR
PDU	POWER DISTRIBUTION UNIT
POE	POWER OVER ETHERNET
POS	POINT OF SERVICE
PP	PATCH PANEL
PR	PAIR
PT	PORT
PTS	PNEUMATIC TUBE STATION
PTZ	PAN/TILT/ZOOM
PVC	POLYVINYL CHLORIDE
PWR	POWER
R	RACEWAY
RBB	RACK BONDING BUSBAR
RBC	RACK BONDING CONDUCTOR
REC	RECESSED
REQD	REQUIRED
REX	REQUEST TO EXIT
RF	RADIO FREQUENCY
RM	ROOM
RO	RACEWAY ONLY
RU	RACK UNIT
RX	RECEIVE
SBB	SECONDARY BONDING BUSBAR
SBG	SUPPLEMENTARY BONDING GRID
SCTP	SCREENED TWISTED PAIR
SEC	SECURITY
SECT	SECTION
SIM	SIMILAR
SLV	SLEEVE
SM	SINGLE MODE FIBER OPTIC STRAND
SMR	SURFACE MOUNTED RACEWAY
SPECS	SPECIFICATIONS
SPFPP	SERVICE PROVIDER FIBER PATCH PANEL
SPT	SPLITTER
STD	STANDARD
STP	SHIELDED TWISTED PAIR
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TBC	TELECOMMUNICATIONS BONDING CONDUCTOR
TC	TELECOMMUNICATIONS CONTRACTOR
TE	TELECOMMUNICATIONS ENCLOSURE
TEBC	TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR
TELE	TELEPHONE
TELECOM	TELECOMMUNICATIONS
TR	TELECOMMUNICATIONS ROOM
TTB	TELECOM TERMINAL BOARD
TV	TELEVISION
TX	TRANSMIT
TYP	TYPICAL
UBC	UNIT BONDING CONDUCTOR
UG	UNDERGROUND
UHF	ULTRA HIGH FREQUENCIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
UTP	UNSHIELDED TWISTED PAIR
V	VOICE
VC	VOLUME CONTROL
VDT	VISUAL DISPLAY TERMINAL
VEL	VERIFY EXACT LOCATION
VERT	VERTICAL
VIF	VERIFY IN FIELD
VOL	VOLUME
VP	VIDEO PROJECTOR
VPP	VOICE PATCH PANEL
VR	VOICE RISER
VS	VOICE STATION
VSS	VIDEO SURVEILLANCE SYSTEM
W	WALL TELEPHONE
WAP	WIRELESS ACCESS POINT
WP	WEATHERPROOF
WT	WATERTIGHT

TELECOMMUNICATIONS DEMOLITION NOTES

1. CONTRACTOR TO SURVEY EXISTING SPACE AND CREATE EXISTING AS-BUILT DRAWINGS.
2. CONTRACTOR TO COORDINATE WITH THE OWNER PRIOR TO ANY REMOVAL OF PATCH CORDS.
3. PRIOR TO DEMOLITION OF ANY EXISTING CABLES, CONTRACTOR SHALL VERIFY CABLE LABELS MATCH AT EACH END. IF LABEL IS NOT INSTALLED, OR LEGIBLE, BRING IT TO GC/CM ATTENTION.
4. CONTRACTOR SHALL START DEMOLITION OF CABLES ON THE FACEPLATE/JACK SIDE AND WORK THEIR WAY TO THE TELECOMMUNICATIONS MDF ROOM SIDE. ALL PRECAUTION SHALL BE TAKEN NOT TO DAMAGE ANY OTHER SERVICE CABLES IN THE PROCESS.
5. INFORMATION SHOWN ON THE FLOOR PLANS ARE FOR CONTRACTOR'S REFERENCE ONLY AND MAY NOT REFLECT EXACT FIELD CONDITIONS AND ALL COMMUNICATIONS EQUIPMENT TO BE DEMOLISHED. COMMUNICATIONS CONTRACTOR AND ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO SURVEY EXISTING CONDITIONS OF BUILDING AND REVIEW ARCHITECTURAL DRAWINGS FOR EXTENT OF DEMOLITION PRIOR TO START OF DEMOLITION WORK. ALL FINISHES REMOVED FOR INSTALLATION OF COMMUNICATIONS WORK SHALL BE REPLACED TO MATCH EXISTING.
6. DISCONNECT, REMOVE, OR RELOCATE COMMUNICATIONS MATERIALS, EQUIPMENT, AND OTHER WORK INDICATED OR REQUIRED BY THE ALTERATIONS OR CHANGES IN EXISTING CONSTRUCTION, OR AS INDICATED ON THE DRAWINGS.
7. COMMUNICATIONS ITEMS TO BE REMOVED SHALL INCLUDE THE REMOVAL OF ASSOCIATED WIRING, FACEPLATE, AND JACKS BACK TO SOURCE TERMINATION HARDWARE IN THE TELECOMMUNICATIONS MDF ROOM.
8. MAINTAIN CONTINUITY OF VOICE, DATA, AND OTHER COMMUNICATIONS CABLING, OUTLETS, DEVICES, AND EQUIPMENT IN EXISTING AREAS TO REMAIN. CONTRACTOR SHALL INSTALL NECESSARY WIRING AND CONDUIT TO INSURE CONTINUITY IN THESE AREAS.
9. EXISTING COMMUNICATIONS CIRCUITS PASSING THROUGH THE DEMOLITION AREA AND SERVING EQUIPMENT IN SPACES TO REMAIN (WHETHER INDICATED ON THESE DRAWINGS OR NOT) SHALL NOT BE REMOVED. CONTRACTOR SHALL CLEARLY MARK CIRCUITS WITH TAGS, PAINT OR OTHER MEANS OF IDENTIFICATION TO PROTECT CIRCUITS FROM POSSIBLE DAMAGE BY OTHER TRADES.
10. PROVIDE TEMPORARY SHUTDOWN OF EXISTING SERVICES ONLY WITH WRITTEN CONSENT OF THE OWNER.
11. ALL CABLING TO BE REUSED SHALL BE COILED AND PROTECTED AT THE NEW OUTLET LOCATION FOR REUSE.

TELECOM SCOPE FOR SECURITY SYSTEM

1. CONTRACTOR SHALL PROVIDE ONE (1) UTP CABLE TO THE IDF ON THE FLOOR FOR EACH SECURITY CAMERA LOCATION.
2. ALL UTP HOMERUNS FOR SECURITY CAMERAS SHALL BE PATCHED INTO THE PATCH PANELS INDICATED ON THE TELECOM BACKBOARD.
3. CONTRACTOR SHALL OBTAIN ARCHITECTURAL AND SECURITY DRAWINGS TO COORDINATE LOCATIONS FOR ALL SECURITY CAMERA LOCATIONS. SUBMIT BID ACCORDINGLY.

TELECOM CABLING PLAN AND LABELING SUBMISSION REQUIREMENTS

1. STATION CABLING: CONTRACTOR SHALL SUBMIT COMPLETE LABELING FLOOR PLAN FOR REVIEW AND APPROVAL BY ENGINEER, ARCHITECT AND OWNER ITS PRIOR TO INSTALLATION OF ANY STATION CABLING.
2. PATCHING SCHEDULE: CONTRACTOR SHALL SUBMIT FULL PATCHING SCHEDULE FOR REVIEW AND APPROVAL BY ENGINEER, ARCHITECT AND OWNER ITS PRIOR TO PATCHING FROM PATCH PANELS TO OWNER-FURNISHED SWITCHES.
3. COMPLETION DOCUMENTS: CONTRACTOR SHALL PROVIDE ELECTRONIC AND HARD COPIES OF AS-BUILT FLOOR PLANS AND AN EXCEL DOCUMENT INDICATING EVERY STATION CABLE TERMINATION POINT ON THE FLOOR. SUBMIT EACH FLOOR AS SEPARATE PACKAGE.
4. CONTRACTOR SHALL LABEL ALL CLOSETS, RACKS, CABINETS, CABLES, CABLE SUPPORTS, ETC. IN ACCORDANCE WITH ANSI/TIA. LABELING SHALL BE MACHINE LETTERED, PERMANENT CABLE TAGS AT BOTH ENDS SHOWING THE FLOOR NUMBER, DEVICE TYPE, AND A UNIQUE ID NUMBER FOR EACH CABLE. THESE ID NUMBERS MUST ALSO BE SHOWN ON ALL FLOOR PLANS AND EQUIPMENT CONNECTIVITY DIAGRAMS PROVIDED AS PART OF THE SHOP DRAWINGS AND AS-BUILT DRAWINGS.
5. CABLE ADMINISTRATION:
   A. PROPERLY TAG ALL CABLES, OUTLETS, CONNECTION BLOCKS AND PATCH PANELS.
   B. REPORT ANY CABLE THAT EXCEEDS 250'-0" TO THE DESIGN TEAM. THE EXACT CABLE LENGTH SHALL BE NOTED IN THE REQUIRED AS-BUILT LABELING REPORT.
   C. PRIOR TO SYSTEM ACCEPTANCE, THE CONTRACTOR SHALL SUBMIT AS-BUILT LABELING REPORT INCLUDING THE ROOM NUMBERS AND CABLE LENGTHS FOR EACH OF THE INSTALLED CABLES.
6. LABEL REQUIREMENTS:
   A. PROVIDE WHITE LABEL WITH TYPEWRITTEN LEGIBLE CHARACTERS. PRINTED WITH NON-SMEAR TYPE INK. HANDWRITTEN LABELS ARE NOT PERMITTED.
   B. PROVIDE LABELS WITH A SELF ADHESIVE BACKING.
   C. PROVIDE LABELS FOR CABLES WITH PROTECTIVE WRAP-AROUND PLASTIC TRANSPARENT COVER WHICH WILL SERVE TO PROTECT THE INK FROM SMEARING AND SECURE THE LABEL TO THE CABLE.
   D. PROVIDE LABELS FOR CABLES WIDE ENOUGH FOR 23 CHARACTERS IN A SINGLE ROW.
7. RISER TIE CABLES AND CONDUITS SHALL BE LABELED AS PER OWNER STANDARDS EVERY 5 FEET ALONG CABLE/CONDUIT RUN.

TELECOMMUNICATIONS CABLING NOTES

1. HOME RUN ALL TELECOMMUNICATIONS CABLES FROM TELECOMMUNICATIONS OUTLETS TO TELECOM ROOM AS INDICATED ON THE DRAWINGS. COORDINATE ALL ELECTRICAL POWER, CONDUIT, JUNCTION BOX REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
2. PROVIDE IDENTIFICATION LABELS FOR ALL TELECOMMUNICATIONS CABLES AT BOTH ENDS.
3. PROVIDE DESIGNATION LABELS FOR ALL RACKS, TERMINATION BLOCKS, PATCH PANELS, AND WORKSTATION OUTLET FACEPLATES.
4. COORDINATE WALL BOX LOCATIONS AND DIMENSIONS WITH ARCHITECTURAL AND ELECTRICAL PLANS.
5. COORDINATE WITH ELECTRICAL DRAWINGS FOR LOCATION OF ALL TELECOMMUNICATIONS OUTLETS.
6. INSTALL CONDUIT AND LADDER RACK FOR TELECOMMUNICATIONS WIRING TO MAINTAIN A MINIMUM OF 5" SEPARATION/ CLEARANCE FROM FLUORESCENT LIGHTING.
7. ALL TELECOMMUNICATIONS CABLES SUPPORTED BY J-HOOKS SHALL BE ROUTED A MINIMUM OF 12 INCHES FROM LIGHT FIXTURES AND A MINIMUM OF 24 INCHES FROM TRANSFORMER OR MOTORS. TELECOMMUNICATIONS CABLES SHALL CROSS OTHER TRADES IN 90 DEGREES WITH PROPER CLEARANCE FROM ALL ELECTRICAL MAGNETIC SOURCE PER ANSI / TIA STANDARDS.
8. PROVIDE COMMUNICATIONS RATED J-HOOKS AND CABLE STRAPS NO GREATER THAN 4 FEET APART TO SUPPORT CABLES WHERE NO CABLE TRAYS OR CONDUITS ARE PROVIDED.
9. INSTALL EACH CABLE SET INDICATED BY THE SYMBOLS LIST FROM THE OUTLET LOCATION BACK TO THE RESPECTIVE SERVING IDF.
10. IF CONFLICTS ARE FOUND BETWEEN THE TELECOMMUNICATIONS DRAWINGS AND ANY OTHER DRAWINGS ASSOCIATED WITH THE PROJECT, NOTIFY THE ARCHITECT AT ONCE AND HAVE LOCATION VERIFIED BEFORE OUTLETS ARE INSTALLED. ANY REASONABLE CHANGE IN LOCATION OF OUTLETS PRIOR TO ROUGH-IN SHALL NOT INVOLVE ADDITIONAL EXPENSE TO THE OWNER. THE TERM "REASONABLE" SHALL BE INTERPRETED AS MOVING OUTLET LOCATIONS A MAXIMUM OF 10 FEET IN ANY DIRECTION FROM THE LOCATION INDICATED ON THE DRAWINGS.
11. ALL TELECOMMUNICATIONS CABLES SHALL BE PROPERLY SUPPORTED WITH APPROVED PATHWAY SYSTEM (J-HOOKS, CONDUITS, CABLE TRAYS) PER MANUFACTURER RECOMMENDATION OR ANSI / TIA STANDARDS.
12. PROVIDE AND COIL A MINIMUM OF 10 FEET CABLE SERVICE LOOP INSIDE THE TELECOMMUNICATION ROOM PRIOR TO TERMINATION. CABLE SERVICE LOOP SHALL BE NEATLY COILED ONTO THE CABLE RUNWAY. PROVIDE AND NEATLY COIL A MINIMUM OF 12 INCHES OF CABLE SERVICE LOOP INSIDE THE TELECOMMUNICATIONS WORKSTATION OUTLET PRIOR TO TERMINATION.

TYPICAL PULL BOX AND CONDUIT SIZES

PULL BOX SIZING REQUIREMENT				
MAXIMUM CONDUIT SIZE	BOX SIZE WIDTH	BOX SIZE LENGTH	BOX SIZE DEPTH	ADD TO BOX SIZE FOR EACH ADDITIONAL CONDUIT
1	4"	16"	3"	2"
1-1/2"	8"	27"	4"	4"
2"	8"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	8"	8"

CONDUIT REQUIREMENT CABLE FILL FOR CAT 6 CABLE (OD SIZE 0.220) *1				
CONDUIT TRADE SIZE	CONDUIT ID (in)	40% FILL # OF CABLES	50% FILL # OF CABLES	60% FILL # OF CABLES
3/4"	0.824	5	7	8
1"	1.02	8	10	12
1-1/4"	1.275	13	16	20
2"	2.04	34	42	51
3"	3	74	92	111
4"	4	132	165	198

CONDUIT REQUIREMENT CABLE FILL FOR CAT 6A CABLE (OD SIZE 0.28) *1				
CONDUIT TRADE SIZE	CONDUIT ID (in)	40% FILL # OF CABLES	50% FILL # OF CABLES	60% FILL # OF CABLES
3/4"	0.824	3	4	5
1"	1.02	5	6	7
1-1/4"	1.275	8	10	12
2"	2.04	21	26	31
3"	3	45	57	68
4"	4	81	102	122

1. *1 ASSUMES INDUSTRY STANDARD AND NEC CODE IS TO DESIGN FOR A MAXIMUM OF 40% FILL.
2. PULL BOXS, CONDUITS, AND JUNCTION BOXES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
3. NOTES AND CHARTS ARE FOR REFERENCE ONLY.
4. ALL CABLES THROUGH CONDUITS MUST BE PULLED AT THE SAME TIME TO ACHIEVE THE GREATER FILL LEVELS.
5. CONDUITS SHALL ENTER AND EXIT PULL BOXES IN A CONTINUOUS DIRECTION. PULL BOXES ARE NOT TO BE USED FOR 90 DEGREE BENDS. DO NOT INSTALL PULL BOXES IN LIEU OF A BEND.
6. PULL BOX SHALL BE USED IF ANY OF THE FOLLOWING ARE MET:
   A. ANY CONDUIT RUN THAT EXCEED 100 FEET.
   B. ANY CONDUIT RUN THAT REQUIRE MORE THAN (2) 90 DEGREE BENDS.
   C. PULLBOX MUST BE LOCATED TO PROVIDE FREE AND EASY ACCESS.
   D. IN STRAIGHT SECTIONS OF CONDUIT ONLY (PULLBOXES SHOULD NEVER BE USED FOR RIGHT ANGEL BEND) AND MUST BE INSTALLED TO ALLOW CABLE TO PASS THROUGH FROM ONE CONDUIT TO ANOTHER IN DIRECT LINE.
   E. PULLBOXES MUST HAVE A LENGTH 8 TIMES THE TRADE-SIZE DIAMETER OF LARGEST CONDUIT PULLBOX SIZING.
7. MAINTAIN MINIMUM BEND RADIUS OF 10X O.D. FOR CONDUITS GREATER THAN 2" DIAMETER. MAINTAIN MINIMUM BEND RADIUS OF 6X O.D. FOR CONDUITS EQUAL TO OR LESS THAN 2" DIAMETER.
8. THE CABLING CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE ROUTING OF CABLES WITH THE ELECTRICAL, MECHANICAL, AND GENERAL CONTRACTOR PRIOR TO INSTALLATION. THE SHORTEST AND MOST DIRECT ROUTING SHALL BE UTILIZED. COORDINATE INSTALLATION OF CONDUITS AND CABLE TRAYS WITH OTHER COMPONENTS INSTALLED WITHIN CEILING. PREPARE SHOP DRAWINGS TO DEMONSTRATE AND ENSURE PROPER INSTALLATION OF ALL COMPONENTS.
9. REAM AND BUSH THE ENDS OF ALL CONDUITS.
10. PROVIDE AND LEAVE IN PLACE A PULL STRING IN EACH CONDUIT.
11. STUB UP CONDUIT SLEEVES THROUGH SLABS 6 INCHES ABOVE FINISHED FLOORS.
12. PROVIDE HANGERS, ANCHORS, MOUNTING HARDWARE, GROUND LUGS AND STRAPS AS REQUIRED TO ENSURE PROPER INSTALLATION OF PATHWAY COMPONENTS. INSTALL ALL COMPONENTS AS PER MANUFACTURERS RECOMMENDATIONS AND PER ALL APPLICABLE CODES.
13. GROUND ALL CONDUITS AND LADDER RACK AS PER MANUFACTURERS' RECOMMENDATIONS AND PER ALL APPLICABLE CODES.
14. PROVIDE AT ALL LADDER RACK AND CABLE TRAY LOCATIONS: RUNWAY DROPOFFS, SPLICE HARDWARE, GROUND STRAPS, THERMAL EXPANSION PLATES, TERMINATION KITS, END SUPPORT KITS AND CEILING SUPPORT HARDWARE.
15. PROVIDE FOR ALL BASKET TYPE CABLE TRAY LOCATIONS; CONNECTION HARDWARE, GROUND STRAPS, THERMAL EXPANSION PLATES, SUPPORT BRACKETS AND CEILING SUPPORT HARDWARE.
16. REFER TO PLANS FOR REQUIREMENTS FOR JUNCTION BOX AND CONDUITS TO SUPPORT WORKSTATION OUTLETS.
17. WHERE CABLE IS RUN ABOVE NON-ACCESSIBLE (I.E. GYPSUM BOARD) CEILING CONSTRUCTION, CONDUIT AND PULLBOXES MUST BE INSTALLED TO AN ACCESSIBLE CEILING OR CONDUIT AND PULLBOXES WITH ACCESS PANELS MUST BE INSTALLED TO A NON-ACCESSIBLE CEILING (I.E. GYPSUM BOARD)TO PROPERLY ROUTE CABLE.
18. PROVIDE J-HOOKS AND CABLE STRAPS TO SUPPORT CABLE ABOVE ACCESSIBLE CEILING CONSTRUCTION, EXCEPT IN AREAS WHERE CABLE TRAY OR CONDUIT IS INDICATED.
19. PROVIDE FIRE STOPPING FOR ALL CONDUIT AND CABLE TRAY PENETRATIONS THROUGH RATED PARTITIONS OR FLOORS IN ACCORDANCE WITH THE CODE AND SPECIFICATIONS.
20. TELECOMMUNICATIONS CABLE TRAY PATHWAY SYSTEM SHOWN ON DRAWINGS REPRESENT THE DESIGN INTENT AND APPROXIMATE ROUTING OF CABLE IN CEILING TO DROP OFF POINT.
21. COMPLY WITH NATIONAL ELECTRICAL CODE.

TELECOMMUNICATIONS GENERAL NOTES

1. PRIOR TO CONSTRUCTION, CONTRACTOR MUST COORDINATE WITH OWNER IT FOR SECURITY ACCESS TO THE MDF ROOM.
2. CONTRACTOR SHALL COORDINATE WITH OWNER IT FOR KEEPING THE MDF/IDF BACKBOARD AREAS DUST FREE DURING CONSTRUCTION.
3. ALL CABLES SHALL BE ROUTED IN SPACE ABOVE THE HUNG CEILING FROM THE COMMUNICATIONS BACKBOARD AS INDICATED ON THE DRAWINGS.
4. CABLES FOR FURNITURE SYSTEM WORKSTATIONS SHALL BE ROUTED THROUGH THE FURNITURE SYSTEM FROM THE CLOSEST IN-FEED LOCATION.
5. COORDINATE THE INSTALLATION OF THE FURNITURE SYSTEM VOICE/DATA OUTLET WITH THE FURNITURE SYSTEM INSTALLATION SCHEDULE.
6. CONDUIT SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. CABLING CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE ROUTING OF CABLES WITH THE ELECTRICAL MECHANICAL AND GENERAL CONTRACTOR, PRIOR TO INSTALLATION.
7. CABLING CONTRACTOR TO VERIFY CEILING HEIGHTS FOR ALL AREAS PRIOR TO INSTALLING ANY CABLE. CABLING CONTRACTOR TO COORDINATE THE INSTALLATION OF ANY COMPONENTS IN THE CEILING WITH ALL OTHER TRADES, EQUIPMENT AND FIELD CONDITIONS.
8. ALL TELECOMMUNICATIONS CABLES SHALL BE PLENUM RATED.
9. CABLES SHALL BE PLACED AT A MINIMUM OF 24 INCHES AWAY FROM MAGNETIC FIELD INDUCING EQUIPMENT.
10. PROVIDE ALL PENETRATIONS, CONDUIT SLEEVES AND RATED PARTITION FIRE STOPPING EVERY TIME A RATED PARTITION IS TRAVERSED. PROVIDE FIRE RATED RE-ENTERABLE EZ-PATH SLEEVES AT ALL FIRE RATED PARTITION (BY IT CONTRACTOR) AND SLAB PENETRATIONS (BY EC) AS REQUIRED TO MAINTAIN FIRE RATING OF SLAB OR PARTITION, OR EZ-PATH SMOKE AND ACOUSTIC SLEEVE AT ALL NON-FIRE RATED PARTITION (BY IT CONTRACTOR ADD/ALTERNATE). REVIEW ARCHITECTS PLANS FOR PARTITION TYPES. SLEEVE QUANTITIES AND SIZES SHALL BE SIZED TO ACCOMMODATE ALL CABLES PENETRATING WITHOUT CONDUIT.
11. CONTRACTOR SHALL REFER DETAILS AND/OR COORDINATE WITH OWNER FOR JACK/ICON COLORS.
12. THE CABLE PATHS SHOWN ON DRAWINGS REPRESENT DESIGN INTENT AND APPROXIMATE ROUTING OF CABLE IN HUNG CEILING TO DROP OFF POINT.
13. QUANTITY OF CABLE IS NOT REPRESENTED. CONTRACTOR SHALL TABULATE QUANTITY BASED UPON COMMUNICATION OUTLET SYMBOLS SHOWN (TYPICAL). CONTRACTOR TO VERIFY IN FIELD AND MAKE ADJUSTMENTS AS REQUIRED.
14. FOR EXACT LOCATIONS OF OUTLETS AND IN-FEED FURNITURE LOCATIONS REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS AND SKETCHES. CABLING CONTRACTOR TO MAKE AN ALLOWANCE TO COVER ANY LOCATION IN A ROOM OR WORKSTATION.
15. PROVIDE AND COIL A MINIMUM OF 6 FEET SLACK AT STATION & PATCH PANEL AFTER TERMINATION AT ALL LOCATIONS. NEATLY COIL AND CONCEAL SLACK ABOVE HUNG CEILING OR UNDER THE SLAB AND PROTECT FROM DAMAGE BY WORKERS PRIOR TO EXTENDING CABLE AND INSTALLING TO DATA/VOICE OUTLET

CABLING & ROUGH-IN SCHEDULE

DEVICE	DESIGNATION	TYPE	LOCATION			CONDUIT REQUIREMENTS	CABLE TYPE	CABLE QTY	JACKET COLOR	BACKBOX REQUIREMENTS	MUDRING REQUIREMENTS	MOUNTING HEIGHT, UNO	COMBINATION DEVICE	REFERENCE DETAIL	FACEPLATE PORT COUNT	NOTES
			FLOOR	WALL	CEILING											
	FB	FLOOR BOX	X	-	-	(1) 1-1/4"C	CAT 6	AS NOTED	WHITE	PER DIVISION 26	FLOOR BOX	FLOOR	COMM / ELEC / AV	-	4-PORT	3
	PT	POKE-THROUGH	X	-	-	(1) 2"C	CAT 6	AS NOTED	WHITE	PER DIVISION 26	POKETHRU	FLOOR	COMM / ELEC / AV	-	4-PORT	3
	1	STANDARD OUTLET - 1-PORT	-	X	-	(1) 1"C	CAT 6	1	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	18"AFF, FLUSH	-	3/T6.1	1-PORT	
	2	STANDARD OUTLET - 2-PORT	-	X	-	(1) 1"C	CAT 6	2	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	18"AFF, FLUSH	-	3/T6.1	2-PORT	
	3	STANDARD OUTLET - 3-PORT	-	X	-	(1) 1"C	CAT 6	3	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	18"AFF, FLUSH	-	3/T6.1	3-PORT	
	4	STANDARD OUTLET - 4-PORT	-	X	-	(1) 1"C	CAT 6	4	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	18"AFF, FLUSH	-	3/T6.1	4-PORT	
	B	BLANK	-	-	-	(1) 1"C	CAT 6	-	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	18"AFF, FLUSH	-	3/T6.1	NONE	CONDUIT AND BACKBOX W/BLANK FACEPLATE
	D	DISPLAY	-	X	-	(1) 1"C	CAT 6	1	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	60"AFF, FLUSH	-	3/T6.1	2-PORT	
	DC	DIRECT CONNECTION TO EQUIP.	-	-	-	(1) 1"C	CAT 6	1	WHITE	SURFACE MOUNT BOX	-	COORD. WITH EQUIP.	-	3/T6.1	2-PORT SURF. MT. BOX	
	F	FURNITURE OUTLET	-	-	-	(1) 1-1/4"C	CAT 6	-	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	WALL	-	3/T6.1	2-PORT SURF. MT. BOX	
	FA	FIRE ALARM CONTROL PANEL	-	-	-	(1) 1"C	CAT 6	1	WHITE	SURFACE MOUNT BOX	-	COORD. WITH EQUIP.	-	3/T6.1	2-PORT	
	W	WALL PHONE	-	X	-	(1) 1"C	CAT 6	1	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	43"AFF, FLUSH	-	3/T6.1	1-PORT	
TV	NONE	TELEVISION	-	X	-	(1) 1"C	RG-6	1	BLACK	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	66"AFF, FLUSH	-	-	1-PORT	
WAP	NONE	WIRELESS ACCESS POINT, WALL	-	X	-	(1) 1"C	CAT 6A	2	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	84"AFF, FLUSH	-	-	2-PORT SURF. MT. BOX	1
WAP	NONE	WIRELESS ACCESS POINT, CLG	-	-	X	(1) 1"C	CAT 6A	2	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	CEILING, FLUSH	-	-	2-PORT SURF. MT. BOX	1
J	NONE	JUNCTION BOX, WALL FEED	-	X	-	(1) 2"C	-	-	-	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	84"AFF, FLUSH	-	-	NONE	
	NONE	IP CAMERA, WALL MOUNTED	-	X	-	(1) 1"C	CAT 6	1	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	SEE CAMERA SCHED.	-	-	2-PORT SURF. MT. BOX	1
	NONE	IP CAMERA, CEILING MOUNTED	-	-	X	(1) 1"C	CAT 6	1	WHITE	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	SEE CAMERA SCHED.	-	-	2-PORT SURF. MT. BOX	1
CR	NONE	CARD READER	-	X	-	(1) 1/2"C	-	-	-	4-11/16"SQ. x 2-1/8"D	SINGLE-GANG	42"AFF, FLUSH	-	-	NONE	2

NOTES:
1. INFRASTRUCTURE AND CABLING, HARDWARE BY OTHERS.
2. INFRASTRUCTURE ONLY, CABLING AND HARDWARE BY OTHERS.
3. FLOORBOX / POKE-THRU DEVICE SHOWN FOR REFERENCE ONLY, FLOORBOX / POKE-THRU SPECIFIED BY DIVISION 26.

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CONTENTS:

CABLING ROUGH-IN SCHEDULE

SCALE: **12" = 1'-0"**
DRAWN: **CDM**
CHECKED: **JP**
PROJECT NO: 2020008.100

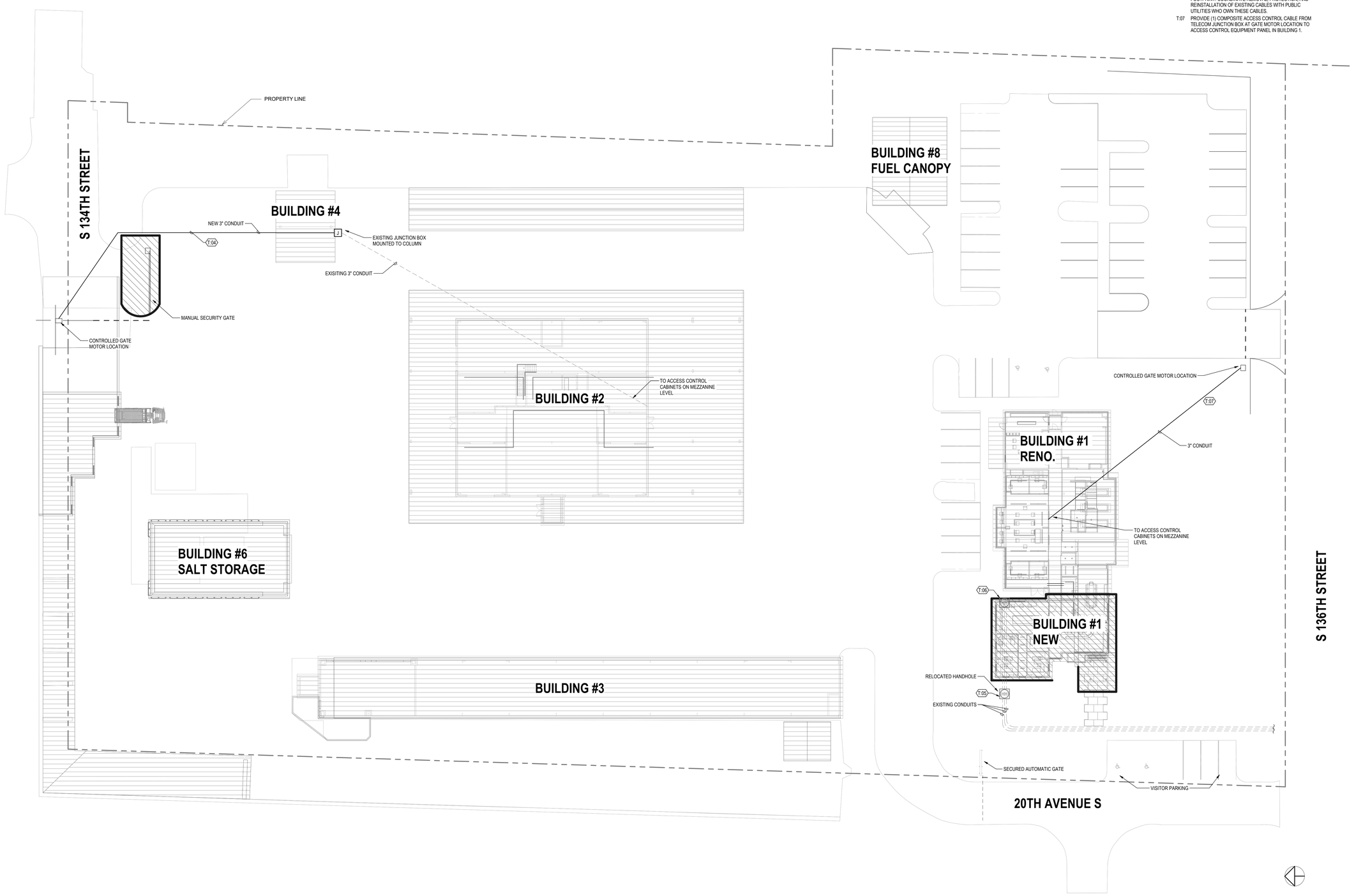
SHEET:
T0.1

SHEET NOTES

1. EXISTING CONDUIT RUNS ARE DEPICTED AS SHOWN ON AS-BUILT DRAWINGS FROM YEAR 2003. FIELD VERIFY ALL EXISTING CONDUIT RUNS.

KEY NOTES

- T:04 PROVIDE (1) COMPOSITE ACCESS CONTROL CABLE FROM TELECOM JUNCTION BOX AT GATE MOTOR LOCATION TO ACCESS CONTROL EQUIPMENT PANEL IN BUILDING 2.
- T:05 COORDINATE RELOCATION OF HAND HOLE WITH TELECOMMUNICATION SERVICE PROVIDERS WITH UNDERGROUND CABLES PASSING THROUGH THIS HAND HOLE.
- T:06 RELOCATE EXISTING HANDHOLE OUTSIDE OF NEW ADDITION FOOTPRINT. COORDINATE REMOVAL, PROTECTION, AND REINSTALLATION OF EXISTING CABLES WITH PUBLIC UTILITIES WHO OWN THESE CABLES.
- T:07 PROVIDE (1) COMPOSITE ACCESS CONTROL CABLE FROM TELECOM JUNCTION BOX AT GATE MOTOR LOCATION TO ACCESS CONTROL EQUIPMENT PANEL IN BUILDING 1.



1 T1.1 **TELECOM SITE PLAN**
1" = 20'-0"

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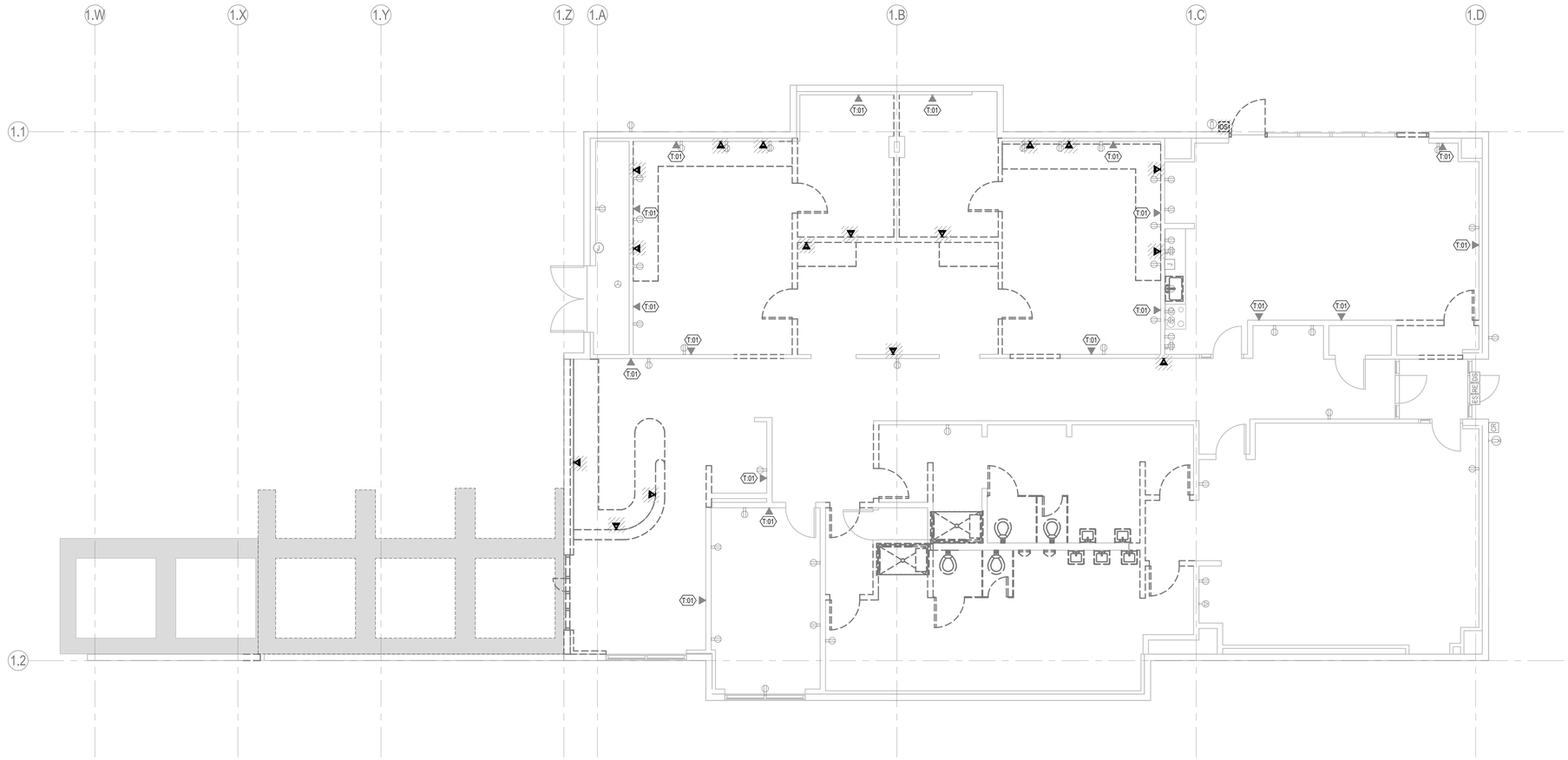
TELECOM SITE PLAN

SCALE: **As indicated**
DRAWN: **CDM**
CHECKED: **JP**
PROJECT NO: 2020008.100

SHEET:
T1.1



KEY NOTES

T.01 EXISTING DATA OUTLET AND CABLING AT THIS LOCATION TO REMAIN.

1 / T2.1 **BLDG #1 - TELECOM PLAN - LEVEL 1 - DEMO**

3/16" = 1'-0"

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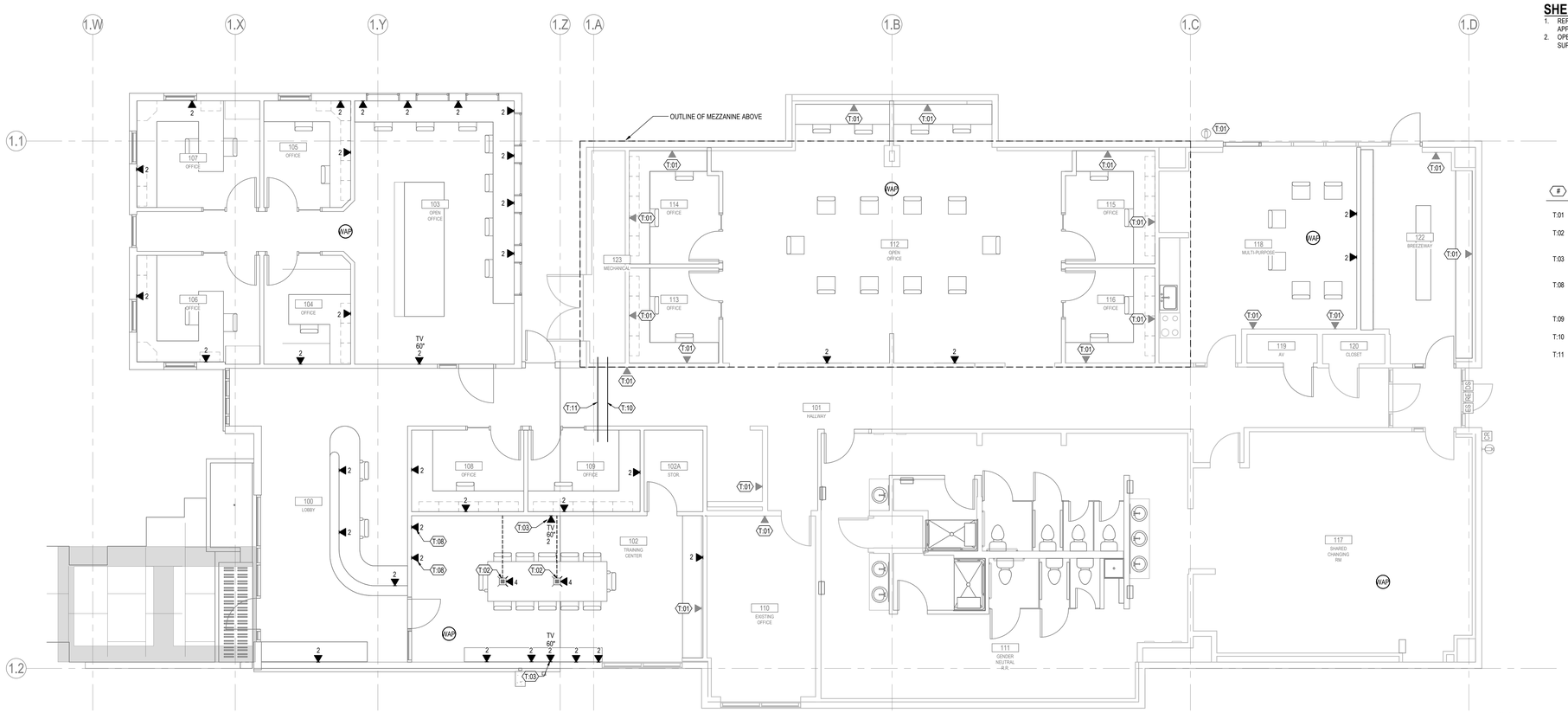
DEMOLITION TELECOM PLAN – BLDG #1

SCALE: **3/16" = 1'-0"**
DRAWN: **CDM**
CHECKED: **JP**
PROJECT NO: 2020008.100

SHEET:

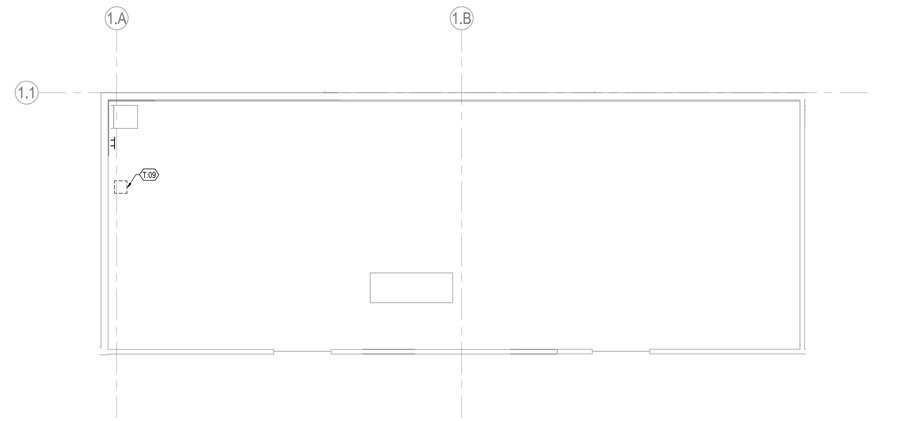
T2.1



1 T2.2 **BLDG #1 - TELECOM PLAN - LEVEL 1 - NEW**

3/16" = 1'-0"

TRUE NORTH



2 T2.2 **BLDG #1 - TELECOM - MEZZANINE - NEW**

3/16" = 1'-0"

TRUE NORTH

SHEET NOTES

1. REFER TO GENERAL NOTES ON SHEET T0.0 AND INCORPORATE AS APPLICABLE.
2. OPEN-CABLING METHODS SHALL BE USED FOR CABLING DISTRIBUTION SUPPORT (J-HOOKS) WITHIN MEZZANINE.

KEY NOTES

T:01	EXISTING DATA OUTLET AND CABLING AT THIS LOCATION TO REMAIN.
T:02	PROVIDE (1) 1-1/4" CONDUIT FROM FLOORBOX TO NEAREST WALL CLOSEST TO THE CABLE TRAY OR MAIN CABLE ROUTES AND UP INTO ACCESSIBLE CEILING SPACE.
T:03	PROVIDE (1) 2" CONDUIT FROM FLOORBOX TO WALL BEHIND TV FOR OWNER FURNISHED, OWNER INSTALLED HDMI CABLE.
T:08	EACH AREA REQUIRES: (2) CAT6 PORTS (1) AMATEUR RADIO ANTENNA COAX (1) DEDICATED DUPLEX POWER OUTLET
T:09	ROUTE (4) COAX CABLES FOR PSERN RADIO SYSTEM TO LOCATIONS ALONG THE NORTH EDGE OF ROOF.
T:10	(1) 3" CONDUIT FOR AMATEUR RADIO COAX. PROVIDE MINIMUM 12" SEPARATION FROM CAT6 CABLING PATHWAYS.
T:11	(1) 3" CONDUIT FOR CAT6 CABLING.

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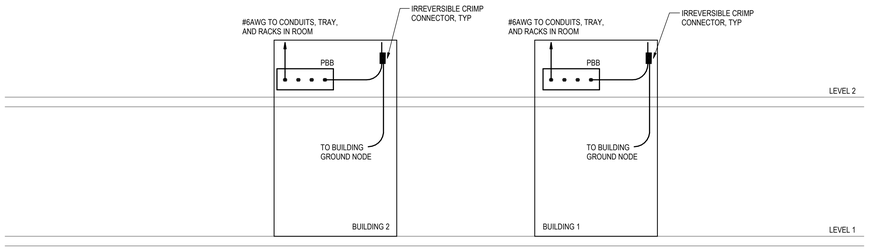
CONTENTS:

TELECOM FLOOR PLAN – BLDG #1

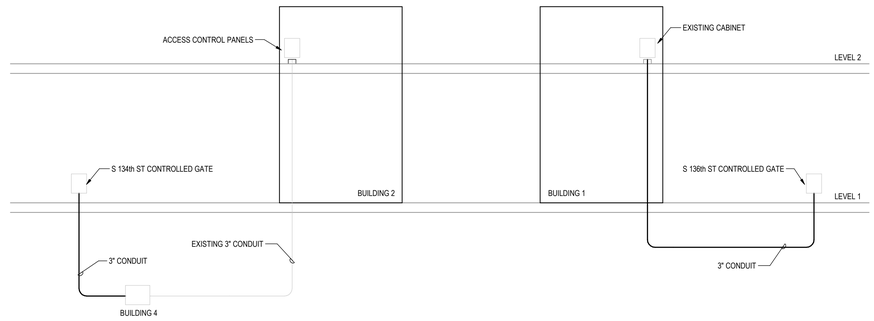
SCALE: **As indicated**
DRAWN: **CDM**
CHECKED: **JP**
PROJECT NO: 2020008.100

SHEET:

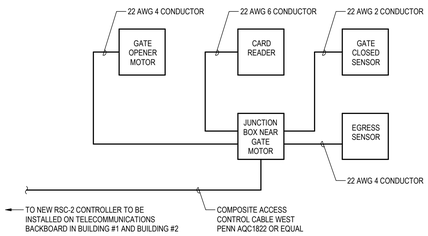
T2.2



1 GROUNDING RISER DIAGRAM - TECHNOLOGY
T5.1 NO SCALE



2 PATHWAY RISER DIAGRAM - TECHNOLOGY
T5.1 NO SCALE



3 ACCESS CONTROL RISER DIAGRAM
T5.1 NO SCALE

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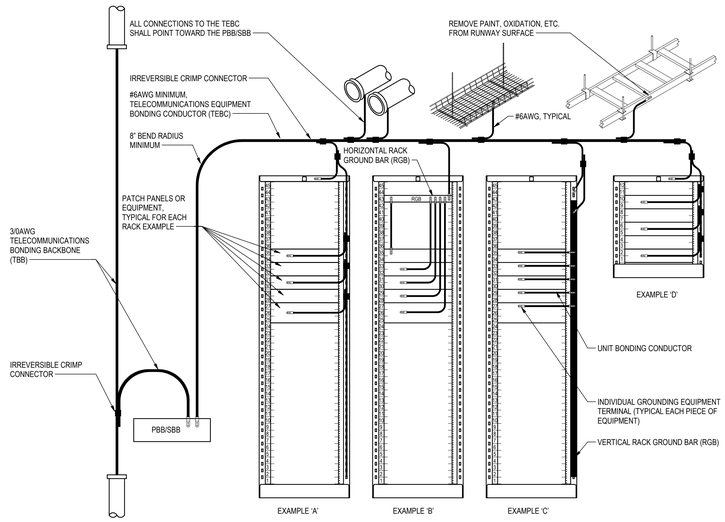
CONTENTS:

TELECOM RISER DIAGRAMS

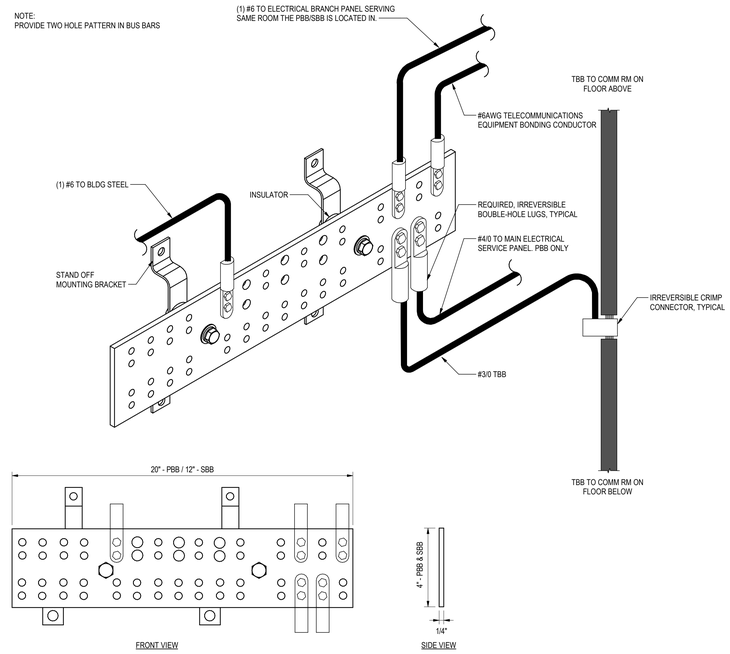
SCALE: **NO SCALE**
DRAWN: **CDM**
CHECKED: **JP**
PROJECT NO: 2020008.100

SHEET:
T5.1



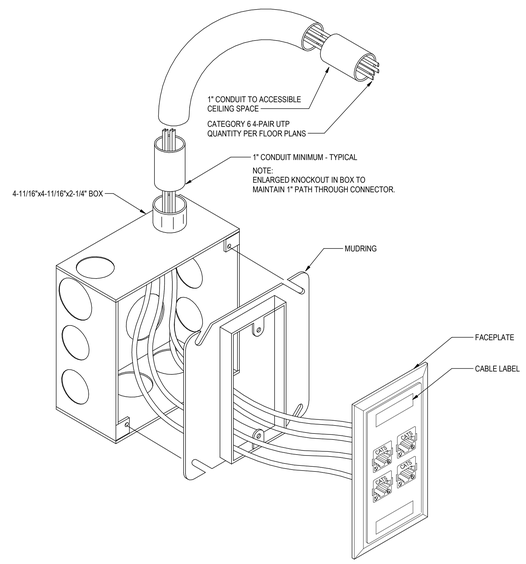
1 TELECOMMUNICATIONS SYSTEM GROUNDING REQUIREMENTS

T6.1 NOT TO SCALE



2 TYPICAL (PBB) AND (SBB) COMMUNICATIONS GROUND BUS BAR

T6.1 NOT TO SCALE



3 TELECOMMUNICATIONS OUTLET

T6.1 NOT TO SCALE

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SHEET:

T6.1