WSU INSTALL HEADHOUSE
WSU MOUNT VERNON
RESEARCH & EXTENSION CENTER

PROJECT TEAM

OWNER
WASHINGTON STATE UNIVERSITY
2425 E. GRIMES WAY
PULLMAN, WA 99164-1150.
PHONE: 509-335-7010
FAX: -
EMAIL: carbour@wsu.edu
CONTACTS: CYNTHIA ARBOUR, PROJECT MANAGER

ARCHITECT
CARLETTI ARCHITECTS, P.S.
116 E FIR ST, SUITE A
MOUNT VERNON, WA. 98273
PHONE: (360) 424-0394
FAX: (360) 424-5726
EMAIL: david@carlettiarchitects.com
CONTACTS: DAVID WILSON

CONTRACTOR
TBD
-
-
PHONE: -
EMAIL: -
CONTACT: -

CIVIL ENGINEER/ SURVEYOR
SOUND DEVELOPMENT GROUP
1111 CLEVELAND AVE, SUITE 202
MOUNT VERNON, WA 98273
PHONE: (360) 404-2010
FAX: (360) 404-2013
EMAIL: pat@sdg-llc.com
CONTACT: PAT SEVERIN

STRUCTURAL ENGINEER
DAVIDO CONSULTING GROUP, INC.
2210 RIVERSIDE DRIVE, SUITE 110
MOUNT VERNON, WA 98273
PHONE: (360) 899-1110
CELL: (360) 770-0101
EMAIL: jordan@dcgengr.com
CONTACT: JORDAN JANICKI

MECHANICAL
HARRIS GROUP
20201 CEDAR VALLEY RD, STE 120
LYNNWOOD, WA 98036
PHONE: (425) 774-3829
FAX: (425) 672-2084
EMAIL: randy.hinton@harrisgroup.com
CONTACT: RANDY HINTON

ELECTRICAL
K - ENGINEERS
208 3rd STREET
LYNDEN, WA 98264
PHONE: (360) 354-4757
FAX: (360) 354-6794
EMAIL: billdiephuis@k-engineers.com
CONTACT: BILL DIEPHUIS

ABBREVIATIONS

ABV	ABOVE
AFF	ABOVE FINISH FLOOR
AC TILE	ACOUSTICAL TILE
ACP	ACOUSTICAL CEILING PANEL
ACT	ACTUAL
AL	ALUMINUM
ARCH	ARCHITECTURAL
A TILE	ASPHALT TILE
AVG	AVERAGE
BFF	BOTTOM FINISH FLOOR
BLKG	BLOCKING
BR	BRICK
BOS	BOTTOM OF STRUCTURE
CPT	CARPET
CLG	CEILING
CEM	CEMENT
℄	CENTER LINE
C TO C	CENTER TO CENTER
CT	CERAMIC TILE
CLO	CLOSET
CW	COLD WATER
COL	COLUMN
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
COR	CORRIDOR
CFM	CUBIC FEET PER MINUTE
DTL	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DO	DITTO
DR	DOOR
DN	DOWN
D.S.	DOWNSPOUT
DWG	DRAWING
DF	DRINKING FOUNTAIN
EA	EACH
ELEC	ELECTRICAL
ELEV. EL	ELEVATION
EQ	EQUAL
(E) EXIST	EXISTING
EXT	EXTERIOR
FO	FACE OF, FINISH OPENING
FRP	FIBERGLASS REINF POLYESTER
FIN	FINISH
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FD	FIRE DAMPER
FE	FIRE EXTINGUISHER
FF	FACTORY FINISH
FF	FINISH FLOOR
FRT	FIRE RETARDANT TREATED
FLASH	FLASHING
FLR	FLOOR
F.A.	FLUID-APPLIED
FND	FOUNDATION
FOIC	FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
FOIO	FURNISHED BY OWNER, INSTALLED BY OWNER
FCIC	FURNISHED BY CONTRACTOR, INSTALLED BY CONTRACTOR
GA	GAUGE
GALV	GALVANIZED
GAP	GENERATOR ALARM PANEL
GL	GLASS
GWB	GYPSUM WALLBOARD
HC	HANDICAP
HDWE	HARDWARE
HP	HEAT PUMP
HT	HEIGHT
HM	HOLLOW METAL
HOR	HORIZONTAL
HB	HOSE BIB
HW	HOT WATER
HWT	HOT WATER TANK
HMD	HOLLOW METAL DOOR
HMF	HOLLOW METAL FRAME
ID	INSIDE DIMENSION
INSUL	INSULATION
INT	INTERIOR
JNT	JOINT
LVL	LEVEL
L	LONG, LINE
LAV	LAVATORY
LIN	LINOLEUM
LT	LIGHT
MAR	MARBLE
MO	MASONRY OPENING
MFR	MANUFACTURE
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MIN	MINIMUM
MUL	MULLION
NAT	NATURAL
NOM	NOMINAL
NA	NOT APPLICABLE
NIC	NOT IN THIS CONTRACT
NTS	NOT TO SCALE
NO. #	NUMBER
OC	ON CENTER
OD	OUTSIDE DIMENSION
O/	OVER
OTS	OPEN TO STRUCTURE
OVHD	OVERHEAD
PNT	PAINT
PTD	PAINTED
PL	PLASTER, PLATE
P LAM	PLASTIC LAMINATE
PLYWD	PLYWOOD
PT	POST-TENSIONED CONCRETE PRESSURE-TREATED WOOD
QT	QUARRY TILE
RL	RAIN LEADER
REF	REFRIGERATOR, REFERENCE
REINF	REINFORCING BAR
REV	REVISION
R	RISER, RADIUS
RM. RMS	ROOM, ROOMS
RO	ROUGH OPENING
SCHED	SCHEDULE
SEC	SECTION
SHT	SHEET
SV	SHEET VINYL
SC	SOLID CORE
SPECS	SPECIFICATIONS
SF	SQUARE FEET
S & V	STAIN & VARNISH
SV	SHEET VINYL
STRWY	STAIRWAY
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
THRESH	THRESHOLD
T.O.	TOP OF
T	TREAD, THICKNESS
	TEMPERED
TS	TUBE STEEL
TYP	TYPICAL
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIN	VINYL
VR	VAPOR RETARDER
VTO	VENT TO OUTSIDE
WC	WATER CLOSET
WP	WATERPROOFING
WS	WHEEL STOP
W	WIDTH
WDO	WINDOW
w/	WITH
WD	WOOD
WI	WROUGHT IRON
WRGB	WATER RESISTANT GYPSUM BOARD
ZINC.	ZINCALUME

SYMBOLS

NORTH ARROW

GRID LINE

BUILDING SECTION

WALL SECTION

DETAIL

PROPERTY CORNER INTERSECTION

TOP OF SUBFLOOR
EL. 10'-10 1/2'
ELEVATION MARK

25.00' (NEW)
23.72' (EXIST.)
SPOT ELEVATION

ROOM-NAME
101
ROOM NAME / NUMBER

DOOR MARK

WINDOW MARK

CONC CPT
FLOOR MATERIAL ADJACENCY

ALIGN
ALIGNMENT OF ITEM

REVISION MARK

INTERIOR ELEVATION MARKS

VICINITY MAP

GENERAL NOTES

1. IN GENERAL, PLAN DIMENSIONS SHOWN ARE TO FACE OF STUD OR FACE OF CONCRETE, UNLESS OTHERWISE NOTED. DO NOT SCALE THESE DRAWINGS. USE CALCULATED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS DATUM AND LEVELS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPENCIES.
2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INITIATING THE WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
3. ALL WORK SHALL COMPLY WITH THE 2015 IBC, IFC, IPC, IMC AS AMENDED BY WASH. STATE. PROJECT SHALL ALSO COMPLY WITH THE 2015 NREC AND THE VIACO CODES. PROJECT SHALL ALSO COMPLY W/ JURISDICTIONAL CODE AMENDMENTS BY THE LOCAL AGENCY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS & INSPECTIONS TO COMPLETE THE WORK. CONTRACTOR TO HAVE CURRENT VALID CITY OR COUNTY BUSINESS LICENSE PRIOR TO ISSUANCE OF PERMIT, WHEN REQUIRED BY LAW.
4. ERRORS, OMISSIONS, AND DISCREPANCIES, IF ANY, SHALL BE REFERRED TO THE ARCHITECT IMMEDIATELY FOR DIRECTION OF HOW TO PROCEED.
5. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THE CONTRACT BY OTHERS PROVIDE ALL BLOCK-OUTS, BLOCKING, BACKING AND JACKS REQUIRED FOR DUCTS, PIPES, CONDUITS, EQUIPMENT, FIXTURES, AND CABINETS. VERIFY SIZE AND LOCATION.
6. DO NOT SIGNIFICANTLY VARY OR MODIFY THE WORK SHOWN, EXCEPT UPON WRITTEN INSTRUCTIONS OF THE ARCHITECT.
7. VERIFY LOCATION OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO. SEWER, SEPTIC, WATER, GAS, POWER, AND TELEPHONE. CAP, MARK AND PROTECT.
8. DETAILS ARE INTENDED TO SHOW THE INTENT OF THE DESIGN, MINOR MODIFICATION MAY BE REQUIRED TO SUIT THE FIELD DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK OF THE CONTRACT.
9. PROVIDE CLOSURE, MEETING THE REQUIREMENTS OF ALL GOVERNING AUTHORITIES, AT RATED PARTITIONS, FLOORS, CEILINGS, AND ROOF LOCATIONS. ALL REQUIRED FIRE-RATED PARTITIONS SHALL BE CONTINUOUS FROM FLOOR TO UNDERSIDE OF STRUCTURE ABOVE.
10. THE CONTRACTOR SHALL CONSULT PLANS OF ALL TRADES, INCLUDING DESIGN-BUILD DOCUMENTS REQUIRED BY CONTRACT DOCUMENTS, TO VERIFY SIZE, WEIGHT, POWER, LOCATION AND OTHER REQUIREMENTS AND LOCATION OF THOSE ITEMS TO BE INSTALLED PRIOR TO COMMENCEMENT OF WORK.
11. NO BUILDING OR PORTION OF A BUILDING SHALL BE OCCUPIED OR USED FOR STORAGE PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY. NO EXCEPTIONS.
12. SEPERATE PERMITS ARE REQUIRED FOR PLUMBING, MECH., ELEC., FIRE SPRINKLER, FIRE ALARM SYSTEMS & SIGNAGE.
13. ALL EXPOSED EXTERIOR SHEET METAL SHALL BE GALVANIZED, PRIMED AND PAINTED.
14. ALL WOOD IN CONTACT W/ CONCRETE SHALL BE PRESSURE TREATED. PRESSURE TREATED WOOD SHALL BE USED FOR WOOD MEMBERS WHICH FORM THE STRUCTURAL SUPPORT OF BALCONIES, DECKS, OR PORCHES ETC. WHEN SUCH MEMBERS ARE EXPOSED TO THE WEATHER.
15. SLOPE ALL DECKS, PATIOS, AND WALKWAYS AWAY FROM BUILDING MINIMUM OF 1/8"/FT FOR POSITIVE DRAINAGE.
16. PROVIDE EXPANSION JOINTS IN ALL CONCRETE SLABS AS REQUIRED TO PREVENT CRACKING, SAW CUT ALL SLABS AS REQ'D.
17. PROVIDE FIREBLOCKING, DRAFTSTOPS, AND FIRESTOPS IN ATTICS, FLOORS, AND WALL CAVITIES AS REQUIRED PER THE IBC.
18. ROOF DRAINS, AND OVERFLOW DRAINS SHALL COMPLY W/ THE IPC & IBC. AND WALL CAVITIES AS REQUIRED PER THE IBC.
19. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE ARCHITECT.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.
21. CONTRACTOR SHALL RETAIN ONE SET OF THE PLANS TO NOTE AND DOCUMENT ALL CHANGES DURING CONSTRUCTION. THE SET SHALL BE A PART OF THE CONTRACTOR'S CLOSE-OUT PACKAGE TO THE OWNER. CLOSE-OUT PACKAGE SHALL INCLUDE: (1) SET OF SHOP DRAWINGS, PRODUCT LITERATURE, EQUIPMENT WARRANTEE MANUALS. SEE SPEC. SECTION 07 78 23 FOR ADDTIONAL INFORMATION ABOUT O&M MANUALS.
22. CONTACTOR SHALL PROVIDE SOLID BLOCKING, UNLESS NOTED OTHERWISE AS REQUIRED FOR NAILING OF ALL INTERIOR AND EXTERIOR TRIMS, FINISHES, AND FIXTURES. THE CONTRACTOR SHALL PROVIDE FOR ALL THE NECESSARY FRAMING AND BRACING FOR THE INSTALLATION OF OWNER FURNISHED ITEMS SUCH AS SIGNAGE, MENU BOARDS ETC.
23. WHERE EXISTING WORK IS DAMAGED, CUT, OR DEFACED DUE TO PERFORMANCE OF NEW WORK, THE CONTRACTOR SHALL PATCH AND REPAIR SAME TO MATCH ADJOINING SURFACES. REPAIRED FINISHES SHALL BE EXTENDED TO THE NEAREST VISUAL BREAK LINES SUCH AS CORNERS, CEILING LINES, TOP OF BASE OR SIMILAR.
24. THESE DRAWINGS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT.

ENERGY CODE

BUILDING ENVELOPE

1. SLAB INSULATION. IF ANY SHALL CONFORM TO THE SPECIFICATIONS AND, IF EXPOSED, SHALL BE PROTECTED AGAINST DAMAGE FROM ALL SOURCES.
2. ALL INSULATION SHALL BE OF THE THICKNESS AND DENSITY AS PRESCRIBED IN THE PLANS. INSULATION SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS' RECOMMENDATIONS.
3. DOORS AND GLAZING SHALL BE OF THE TYPE AND SIZE OF THOSE PRESCRIBED IN THE PLAN. U-VALUES SHALL MEET OR BE LESS THAN THOSE SHOWN ON THE PLAN.
4. AIR LEAKAGE IS CONTROLLED BY SEALING OR CAULKING ALL JOINTS AND GAPS IN FRAMING. SEALANTS SHALL BE OF THE NON-HARDENING TYPE.
5. WALL, CEILING AND SLAB INSULATION SHALL BE AS CALLED OUT ON THE APPROVED PLANS AND SHALL CONFORM TO STANDARDS REGARDING DENSITIES AND R-VALUES. AN APPROPRIATE MOISTURE BARRIER SHALL BE INSTALLED ON THE WARM SIDE OF THE EXPOSED WALLS. IT SHALL BE CONTINUOUS AND SEALED.
6. FRAMING ASSEMBLIES SHALL BE SHOWN ON THE APPROVED PLANS.

PROJECT DATA

PROPERTY INFORMATION

PROPERTY ADDRESS	16650 STATE ROUTE 536 MOUNT VERNON, WA 98273
BUILDING CODE	2015 IBC/ 2015 IFC
ENERGY CODE	2015 WASHINGTON STATE NREC
FIRE SPRINKLERS	NO - NOT REQUIRED
FIRE ALARM	NO - NOT REQUIRED

ZONING

ZONING:	AG-NRL AGRICULTURAL NATURAL RESOURCE LAND PERMITTED USE - GREENHOUSE (OK)
SITE SF/ ACRES:	26.90 ACRES OR 1,171,764 SF

PARCEL #/ GEOGRAPHICAL ID

PARCEL: P21925
TAX ID: 340314-1-014-0003

TWN./ RNG./ SEC.

TWN34 RNG03 SEC14

SEPA LAND USE

PL20-0035 MODIFICATION TO PL03-0869

PROJECT DATA - CONT.

LEGAL DESCRIPTIONS

[DR12' DR19] THE WEST 1045 FEET OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER LYING SOUTH OF MEMORIAL HIGHWAY AND SOUTHERLY OF SLOUGH AND ALSO TOGETHER WITH THE NORTH 324.5 FEET OF THE WEST 990 FEET OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER AND ALSO LESS RDS

PARKING CALCULATION

-PARKING REQ'D PROFESSIONAL OFFICE
1 STALLS REQUIRED FOR 300 SF
1,800 SF/ 300 = (6) STALLS REQUIRED
-PARKING REQ'D FOR GREENHOUSE
1 STALLS REQUIRED FOR 2500 SF
4000 SF/ 2500 = (2) STALLS REQUIRED
(8) TOTAL STALLS REQ'D
-USING THE (9) EXISTING STALLS TO THE NW OF THE PROPOSED BUILDING (OK)
SITE CURRENTLY HAS 97 PARKING STALLS
(6) REMOVED IN FUTURE FOR GREENHOUSE - (91) EXISTING (OK)
-STANDARD PARKING STALL SIZES (8'-6"W X 17'-0"D)
-COMPACT PARKING STALL SIZES (8'-0"W X 16'-0"D) - 40% MAXIMUM
-DRIVE AISLE LANES ARE TO BE 24'-0" WIDE (OK)
-CHAPTER 11 IBC TABLE 1106.1 FOR PARKING SPACES BETWEEN
1-25 REQUIRE (1) VAN ADA STALLS (EXISTING) (OK)

BUILDING SETBACKS

FRONT STREET (NORTH). 35'-0" REQUIRED (OK)
SIDE. INTERIOR (EAST). 15'-0" REQUIRED (OK)
SIDE. INTERIOR (WEST). 15'-0" REQUIRED (OK)
REAR. (SOUTH). 35'-0" REQUIRED (OK)

BUILDING HEIGHT

40'-0" MAX ALLOWED - PER DEFINITION FROM AVERAGE GRADE TO THE MID POINT ON THE ROOF STRUCTURE
<40'-0" MAX. HEIGHT PROVIDED PER DEFINITION (OK)

SITE COVERAGE

EXISTING BUILDING REMOVED - 3,010 SF
NEW IMPERVIOUS (HEAD HOUSE BLDG.) 1,800 SF
NEW IMPERVIOUS (SIDEWALKS) 700 SF
TOTAL IMPERVIOUS SURFACE OR (SITE COVERAGE IS REDUCED BY 510 SF (OK)
FUTURE WALKWAY AROUND GREENHOUSE - 1,425 SF
REMOVED PARKING IMPERVIOUS AREA -1,026 SF

BUILDING CODE DATA

OCCUPANCY	(B) - OFFICE
CONSTRUCTION TYPE	V-B (B) ALLOWABLE (1) STORY 9,000 S.F.
FIRST FLOOR (HEATED)	1,800 S.F. < 9,000 SF (OK)
COVERED CANOPY	146 S.F.
TOTAL SF W/ CANOPY	1,946 S.F. < 9,000 SF (OK)

OCCUPANT LOAD/ EXIT REQUIREMENTS

ROOM NAME	AREA	OCC. FACTOR	OCC. LOAD	EXITS REQ'D
OFFICE	985	100	9.85	<49 (1) EXIT REQ'D (1) EXITS PROVIDED (OK)
AGRICULTURAL LAB	700	300	2.50	<49 (1) EXIT REQ'D (1) EXITS PROVIDED (OK)
MECH./ ELEC.	115	300	.38	<49 (1) EXIT REQ'D (1) EXITS PROVIDED (OK)
TOTAL	1,800		13	<49 (1) EXIT REQ'D (2) EXITS PROVIDED (OK)

SEE SHEET A-2.0 FOR EXITING PLAN INCLUDING:
-TRAVEL DISTANCE < 75'-0" @ (B) OCCUPANCY TO COMMON PATH OF TRAVEL 1006.2.1
-OVERALL EXIT ACCESS TRAVEL DISTANCE < 200'-0" FOR (B)
-1/2 THE DIAGONAL DISTANCE 1007.1.1 EXCEPTION #2
-EGRESS WIDTH PER OCCUPANT SERVED 1005.3.2 (OK)
-EXIT LIGHTS PER PLANS AND FIRE MARSHAL APPROVAL

PLUMBING CALCULATIONS

OCCUPANCY	SIZE OCCUP.		OCC. LOAD	MENS LOAD FACTOR	WOMENS LOAD FACTOR	UNISEX WC REQD.	UNISEX LAV REQD.
OFFICE/ AG. LAB	1,800		13	6.5	6.5	1	1

-NOTE: (B) OCCUPANCY < 15 OCCUPANTS (1) UNISEX RESTROOM REQUIRED/ PROVIDED

DRINKING FOUNTAINS

NOT REQUIRED < 30 OCCUPANTS (OK)

FIRE FLOW

EXISTING SITE FIRE FLOW (OK)

RATED WALLS

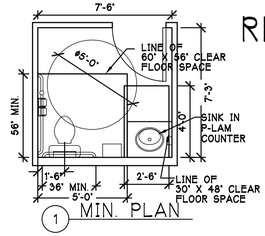
NONE REQUIRED (OK)

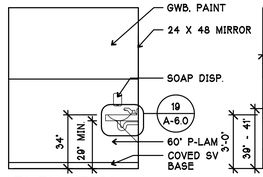
DRAWING INDEX

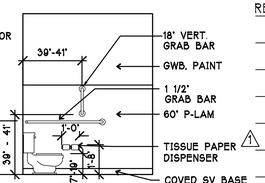
SPECIAL INSPECTIONS REQUIRED

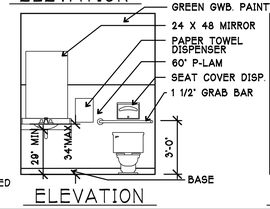
PER IBC CHAPTER 17 PROVIDE THE FOLLOWING SPECIAL INSPECTIONS.
EARTHWORK AND COMPACTION
STEEL CONSTRUCTION AND HIGH STRENGTH BOLTING
EPOXY AND DOWLED ANCHORS AND REBAR
STEEL REINFORCEMENT
CONCRETE
SEE STRUCTURAL DRAWINGS FOR ADDITIONAL NOTES

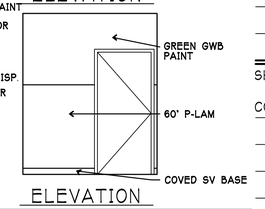
RESTROOM











GENERIC NOTES FOR ONE W.C. TOILET RM.

PER ICC A117.1-2009

1. UNLESS NOTED OTHERWISE ALL DIMENSIONS SHOWN ARE MINIMUM.
2. OVER AND UNDER DIMENSIONS INDICATE ACCEPTABLE LIMITS.
3. DIMENSIONS SHOWN ARE ACCEPTABLE MINIMUM, AND MAY BE USED IN CONJUNCTION WITH OTHERS AS SHOWN.
4. EXPOSED DRAIN PIPES AND ALL WATER PIPES SHALL BE RECESSED, INSULATED OR GUARDED TO PREVENT BURN ACCIDENTS.
5. GRAB BARS SHALL BE 1 1/4" TO 1 1/2" OUTSIDE DIA. AND SHALL BE ABLE TO SUPPORT A 300 LB LIVE LOAD WITHOUT PERMANENT DEFLECTION.
6. PLUMBING FIXTURES AND ACCESSORIES ARE FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO ACTUAL PLANS, INTERIOR ELEVATIONS, SPECIFICATIONS, ECT. FOR SPECIFIC FIXTURES AND ACCESSORIES FOR THIS PROJECT.
7. ALL HANDICAPPED TOILET ROOMS FIXTURES AND ACCESSORIES SHALL COMPLY W/ CHAPTER 11 AMENDED OF THE 2012 IBC, ICC A117.7-2009.
8. ADDITIONAL FIXTURES SHALL BE MOUNTED AS FOLLOWS. T.P. DISP. IF LOCATED ABOVE GRAB BAR SHALL BE LOCATED WITHIN AN AREA 24" MIN. AND 36" MAX. FROM REAR WALL. WHERE DISPENSER IS LOCATED BELOW THE GRAB BAR, THE OUTLET OF THE DISPENSER SHALL BE LOCATED WITHIN AN AN AREA 24" MIN. AND 42" MAX. FROM THE REAR WALL. THE OUTLET OF THE DISPENSER SHALL BE LOCATED 18" MIN. AND 48" MAX. A.F.F. DISPENSER SHALL COMPLY WITH SECTION 609.3. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROL DELIVERY, OR DO NOT ALLOW CONTINUOUS PAPER FLOW. ALLOW MIN. 1-1/2" BETWEEN GB. AND DISP. MNT. SOAP DISPENSER MAX. 40" A.F.F. BTM. EDGE OF MIRROR MAX. 40" A.F.F.
9. PROVIDE ADA SIGNAGE PER IBC 2015 AND ICC A117.1-2009.
10. SEE ACTUAL TOILET ROOM PLANS FOR ACTUAL DIMENSIONS AND LAYOUT.
11. PROVIDE OPEN ENDED TOILET SEATS PER IPC 409.2.3.
12. T.O. W.C. SEAT MIN17" /MAX.19" A.F.F. SEAT SHALL NOT RETURN AUTOMATICALLY.
13. FLUSH CONTROLS HAND OPERATED OR AUTOMATIC.
14. MAX. DEPTH OF LAV. BOWL TO BE 6-1/2" DEEP. HAND OPERATED FAUCETS, SELF-CLOSING SHALL REMAIN ON FOR MIN. 10 SECONDS.
15. FRONT OF LAV. TO BE MAX. 34" A.F.F. MEASURED TO RIM OF SINK.

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT
PETER J. CARLETTI
STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 536
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER. 4031-G-000
WSU PROJECT NUMBER. 9896-2018

18-245
PROJECT NUMBER.

REVISIONS.
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET

SHEET TITLE.
COVER SHEET

PETER J CARLETTI
PROJECT ARCHITECT.

DAVID WILSON
DRAWN BY:

PETER J CARLETTI
CHECKED BY.

AUGUST 7, 2018
DATE

ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

A-0.0

A PORTION OF THE NW 1/4 OF THE NE 1/4 OF SECTION 14, TOWNSHIP 34 NORTH, RANGE 3 EAST, W.M.

BASIS OF BEARING

THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 14 BEARS NORTH 87°22'43" EAST BETWEEN THE FOUND NORTH QUARTER CORNER AND THE NORTHEAST SECTION CORNER

VERTICAL DATUM

NAIL SET IN ASPHALT AS SHOWN HEREON = 22.43' NAVD 88.
BASE FLOOD ELEVATION = 17.3' NGVD 29, 21.08' NAVD 88.
SITE IS ON NAVD 88.
NAVD 88-3.78' = NGVD 29

SITE INFORMATION

SITE PARCEL NUMBER:	P21925
SITE ADDRESS:	16650 STATE ROUTE 536
SITE AREA:	TOTAL PARCEL APPROX. 27 ACRES

HORIZONTAL DATUM

WASHINGTON STATE PLANE NORTH ZONE 4601 (NAD 83/2012) USING W.S.R.N.

FIELD EQUIPMENT

THIS SURVEY WAS ACCOMPLISHED BY FIELD TRAVERSE WITH A "TRIMBLE S6" AND A TRIMBLE R8-2 DUAL FREQUENCY GPS RECEIVER; STANDARD ERROR DISTANCE +/- 2CM (+ 1 PPM), AND MEETS OR EXCEEDS STANDARDS AS SET FORTH IN W.A.C. CH. 332-130.

LEGAL DESCRIPTION

A PORTION OF THE WEST 1045 FEET OF THE NORTHWEST 1/4 NORTHEAST 1/4 OF SECTION 14, TOWNSHIP 34 NORTH, RANGE 3 EAST, W.M.

SITUATED IN THE COUNTY OF SKAGIT, STATE OF WASHINGTON

OWNER

WASHINGTON STATE UNIVERISTY
2425 E. GRIMES WAY
PULLMAN, WA 99164-1150

CONTACTS:
CYNTHIA ARBOUR, PROJECT MANAGER
PHONE: 509-335-7010
EMAIL: carbour@wsu.edu

ENGINEER/SURVEYOR

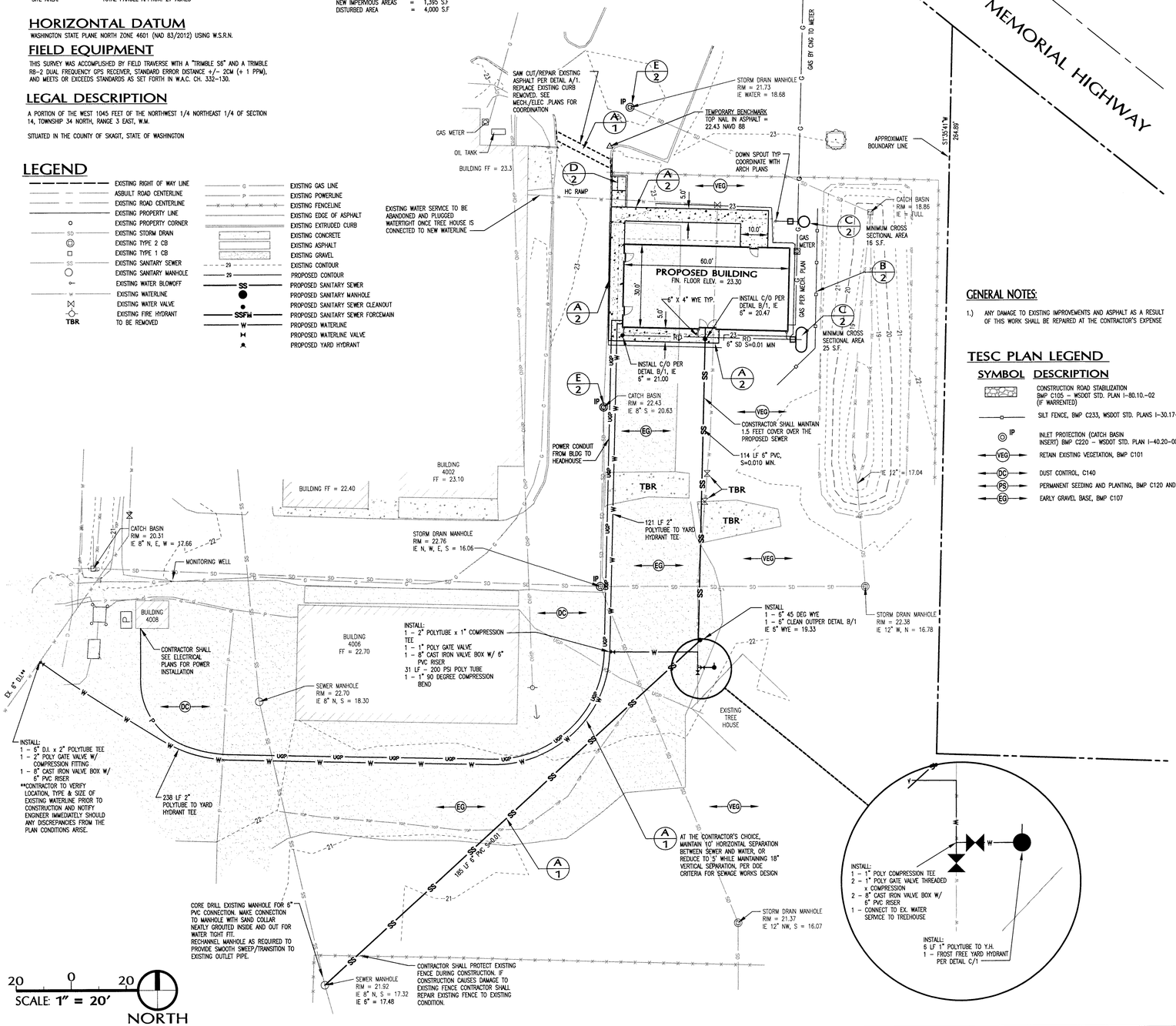
SOUND DEVELOPEMENT GROUP
PAT SEVERIN, P.E./ JAY STANDISH, P.L.S.
1111 CLEVELAND AVE SUITE 201
MOUNT VERNON, WA 98273
OFFICE 360.404.2010
CONTACT:
EMAIL : PAT@SDG-LLC.COM/JAY@SDG-LLC.COM

SITE DATA

REPLACED IMPERVIOUS AREA	=	1,215 S.F.
NEW IMPERVIOUS AREAS	=	1,395 S.F
DISTURBED AREA	=	4,000 S.F

LEGEND

- EXISTING RIGHT OF WAY LINE
- ASBUILT ROAD CENTERLINE
- EXISTING ROAD CENTERLINE
- EXISTING PROPERTY LINE
- EXISTING PROPERTY CORNER
- EXISTING STORM DRAIN
- EXISTING TYPE 2 CB
- EXISTING TYPE 1 CB
- EXISTING SANITARY SEWER
- EXISTING SANITARY MANHOLE
- EXISTING WATER BLOWOFF
- EXISTING WATERLINE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- TBR TO BE REMOVED
- EXISTING GAS LINE
- EXISTING POWERLINE
- EXISTING FENCELINE
- EXISTING EDGE OF ASPHALT
- EXISTING EXTRUDED CURB
- EXISTING CONCRETE
- EXISTING ASPHALT
- EXISTING GRAVEL
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY SEWER CLEANOUT
- PROPOSED SANITARY SEWER FORCEMAIN
- PROPOSED WATERLINE
- PROPOSED WATERLINE VALVE
- PROPOSED YARD HYDRANT



GENERAL NOTES:

NOTE-1 RESTORATION SHALL CONSIST OF REMOVING ALL ROCKS GREATER THAN 1" IN DIAMETER, BLENDING THE TOP OF THE TRENCH WITH THE SURROUNDING GRADE AND REMOVING ALL SPOILS FROM THE SITE.

IF THE EXISTING GRAVEL SHOULDER OR ASPHALT IS DISTURBED, REPAIR ACCORDING TO THE FOLLOWING REQUIREMENTS:

A. IF WITHIN ASPHALT: 4" (1/2") HMA IN, TWO LIFTS, PER SECTION 5-04 OF THE 2018 , TO BE COMPACTED TO MINIMUM 91% RICE DENSITY.

B 6" OF 5/8" MINUS CRUSHED SURFACING TOP COURSE PER SECTION 9-03.9(3), TO BE COMPACTED TO 95% OF MAXIMUM DENSITY.

C 12" GRAVEL BORROW OR MATCH EXISTING DEPTH PER SECTION 4-02 COMPACTED TO 95% OF MAXIMUM DENSITY. PLACE IN LOOSE LIFTS NOT EXCEEDING EIGHT INCHES.

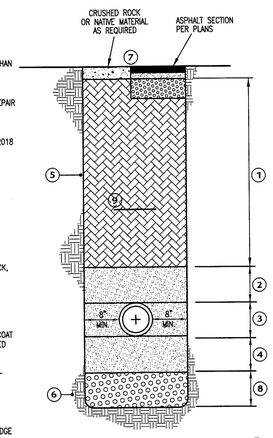
NOTE-2 PIPE BEDDING AND COVER MATERIAL SHALL BE USED IN ALL TRENCHES REGARDLESS OF LOCATION. GRAVEL BORROW TRENCH BACKFILL SHALL BE USED IN ALL TRENCHES UNDER CRUSHED ROCK, CONSTRUCTION TRAFFIC AREAS, AND WITHIN FOUR FEET OF THE ABOVE-MENTIONED CONDITIONS.

NOTE-3 ANY SPECIAL CONDITIONS MUST FIRST BE APPROVED BY THE ENGINEER.

NOTE-4 SAWCUT EXISTING ASPHALT 1' BEYOND EDGE OF TRENCH. TACK COAT FACE OF SAWCUT AND SEAL JOINT WITH CSS-1 AND SAND, APPLIED WITH HEAT.

NOTE-5 ALL DENSITIES FOR GRAVEL SHALL BE PROCTORED USING ASTM D-1557. ASPHALT SHALL BE PROCTORED USING STATE APPROVED METHODS. DENSITIES SHALL BE DETERMINED USING A NUCLEAR DENSOMETER CONFORMING TO ASTM D-2950.

NOTE-6 AT LOCATIONS WITHIN THE EXISTING ASPHALT ROADWAY OR WHERE THE EDGE OF THE UTILITY TRENCH IS LESS THAN 4' FROM THE EDGE OF ASPHALT, THE TRENCH SHALL BE BACKFILLED WITH COMPACTED GRAVEL BORROW.



TRENCH NOTES:

1. GRAVEL BORROW PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN DEPTH AND COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY AT LOCATIONS WHERE REQUIRED AND/OR SPECIFIED. THE PERCENTAGE PASSING THE #200 SIEVE SHALL NOT EXCEED 5% NATIVE MATERIAL, WHERE ACCEPTABLE, MAY BE USED OUTSIDE OF PUBLIC RIGH-OF-WAY. PLACE NATIVE MATERIAL IN LIFTS NOT EXCEEDING 12 INCHES AND COMPACT TO A MINIMUM OF 90% (THE TOP 4" SHALL BE COMPACTED TO A MINIMUM OF 95%).
2. 5" OF SAND, BUCKSHOT OR GRAVEL 100% PASSING THE 1/4" SCREEN TO BE HAND-COMPACTED ABOVE CROWN OF PIPE.
3. HAND-COMPACTED SAND, BUCKSHOT OR GRAVEL 100% PASSING THE 1/4" SCREEN TO BE TAMPED AROUND AND UNDER THE PIPE. THICKNESS EQUALS OUTSIDE DIAMETER OF PIPE.
4. ** 6" OF SAND, BUCKSHOT OR GRAVEL 100% PASSING 1/4" SCREEN, HAND-COMPACTED.
5. TRENCH LINE.
6. UNDISTURBED EARTH.
7. SURFACE RESTORATION SHALL BE IN ACCORDANCE WITH GENERAL NOTE-1.
8. IN TRENCHES WITH SOFT, YIELDING MATERIAL, AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL OVER-EXCAVATE TO 2' BELOW PIPE INVERT AND BACKFILL WITH 2 1/2" MINUS BALLAST AGGREGATE THE BOTTOM OF PIPE BEDDING.
9. PLACE DETECTABLE TRACER TAPE (MIN. 1' ABOVE PIPE) PER SECTION 9-15.18 OF THE 2018 STANDARD SPECIFICATIONS.

** SEWER BEDDING SHALL BE BUCKSHOT OR PEA GRAVEL ONLY.

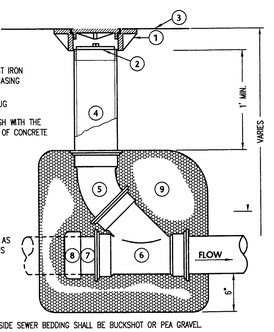
TYPICAL UTILITY TRENCH DETAIL A/1
NOT TO SCALE

GENERAL NOTES:

1.) ANY DAMAGE TO EXISTING IMPROVEMENTS AND ASPHALT AS A RESULT OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE

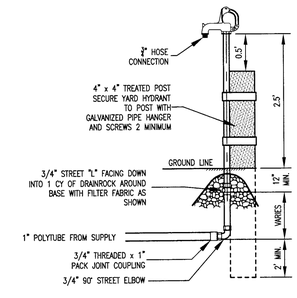
TESC PLAN LEGEND

SYMBOL	DESCRIPTION
	CONSTRUCTION ROAD STABILIZATION BMP C105 - WSDOT STD. PLAN I-80.10.-02 (IF WARRENTED)
	SILT FENCE, BMP C233, WSDOT STD. PLANS I-30.17-00
IP	INLET PROTECTION (CATCH BASIN INSERT) BMP C220 - WSDOT STD. PLAN I-40.20-00
VEG	RETAIN EXISTING VEGETATION, BMP C101
DC	DUST CONTROL, C140
PS	PERMANENT SEEDING AND PLANTING, BMP C120 AND BMP T5.13
EG	EARLY GRAVEL BASE, BMP C107

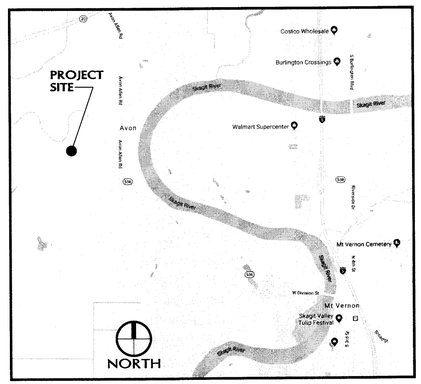


** SIDE SEWER BEDDING SHALL BE BUCKSHOT OR PEA GRAVEL.

CLEANOUT DETAIL WITHIN ASPHALT OR CONCRETE AREAS B/1
NOT TO SCALE



FROST FREE YARD HYDRANT DETAIL C/1
NOT TO SCALE



VICINITY MAP

APPROVED FOR CONSTRUCTION

SKAGIT COUNTY PUBLIC WORKS | DATE

PATRICK J. SEVERIN — STATE OF WASHINGTON — 22226 — REGISTERED PROFESSIONAL ENGINEER

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555

NO.	DATE	REVISIONS	BY	APRVD
1	01.17.20	90% SUBMITTAL SET	PJS	PJS
2	02.21.20	BID SET	PJS	PJS

Sound Development Group
ENGINEERING, SURVEYING & LAND DEVELOPMENT SERVICES
P.O. Box 1705 • 1111 Cleveland Avenue, Suite 202
Mount Vernon, WA 98273
Tel: 360-404-2010 Fax: 360-404-2013

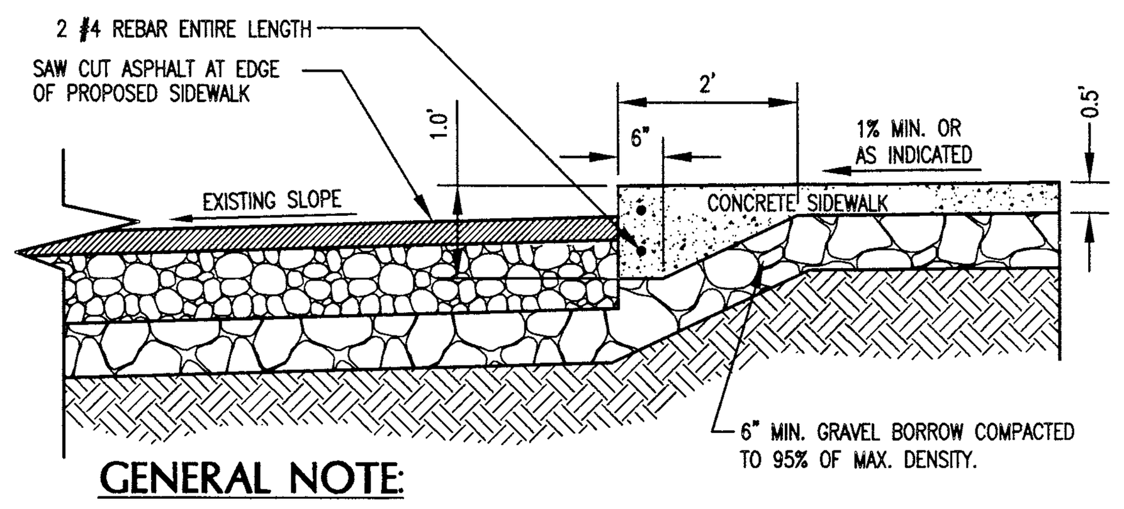
SHEET DESCRIPTION: SITE IMPROVEMENT & TESC PLAN

SCALE:	1" = 20'
DRAWN BY:	P.LAU
DESIGNED BY:	P.SEVERIN
CHECKED BY:	P.SEVERIN
FIELD BOOK/PAGE:	
DATE:	12.05.19

PROJECT
WSU INSTALL HEADHOUSE
FOR
CARLETTI ARCHITECTS
SEC 14-TWP 34N-RNG 3E

JOB NO. 18073
DRAWING NAME 18073ENG.dwg
SHEET C-1.0

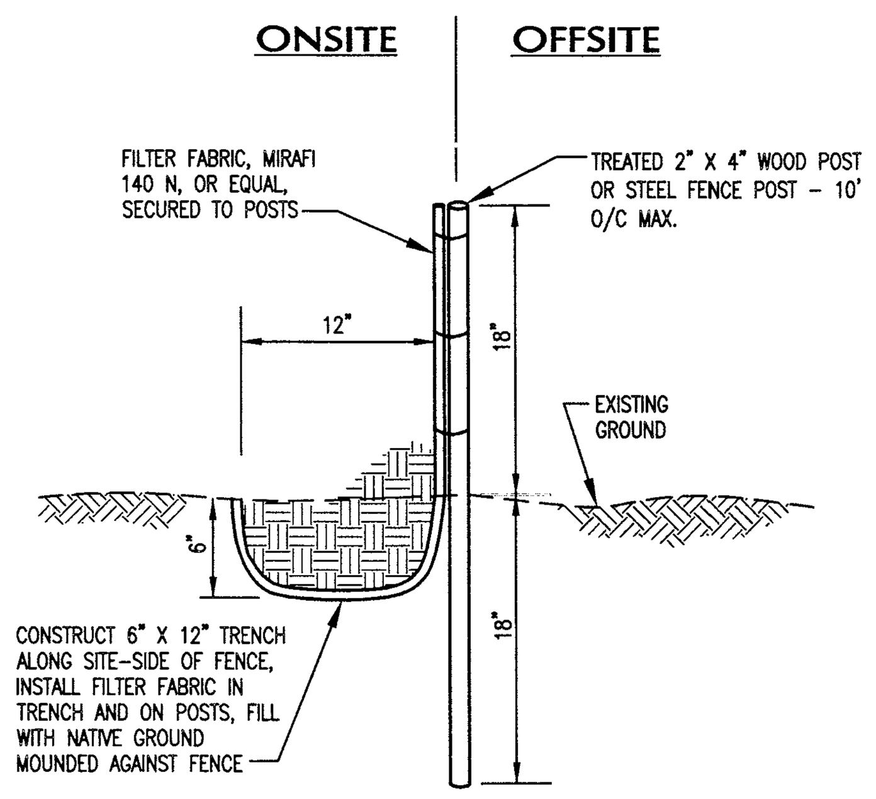
A PORTION OF THE NW 1/4 OF THE NE 1/4 OF SECTION 14, TOWNSHIP 34 NORTH, RANGE 3 EAST, W.M.



GENERAL NOTE:

AREAS NOT ADJACENT TO PROPOSED ASPHALT AS INDICATED ON THE SITE PLAN SHALL NOT HAVE A THICKENED CONCRETE EDGE. AND SHALL BE CONSTRUCTED AS INDICATED. ALL CONCRETE SIDEWALKS SHALL BE CLASS 3000. SIDEWALKS NOT ADJACENT TO PROPOSED ASPHALT SHALL BE 4" CONCRETE OVER 6" GRAVEL BASE WITH THE SUBGRADE PREPARED PER SPECIFICATIONS.

THICKENED EDGE CONCRETE SIDEWALK DETAIL (A/2)
NOT TO SCALE



SILT FENCE DETAIL (B/2)
NOT TO SCALE

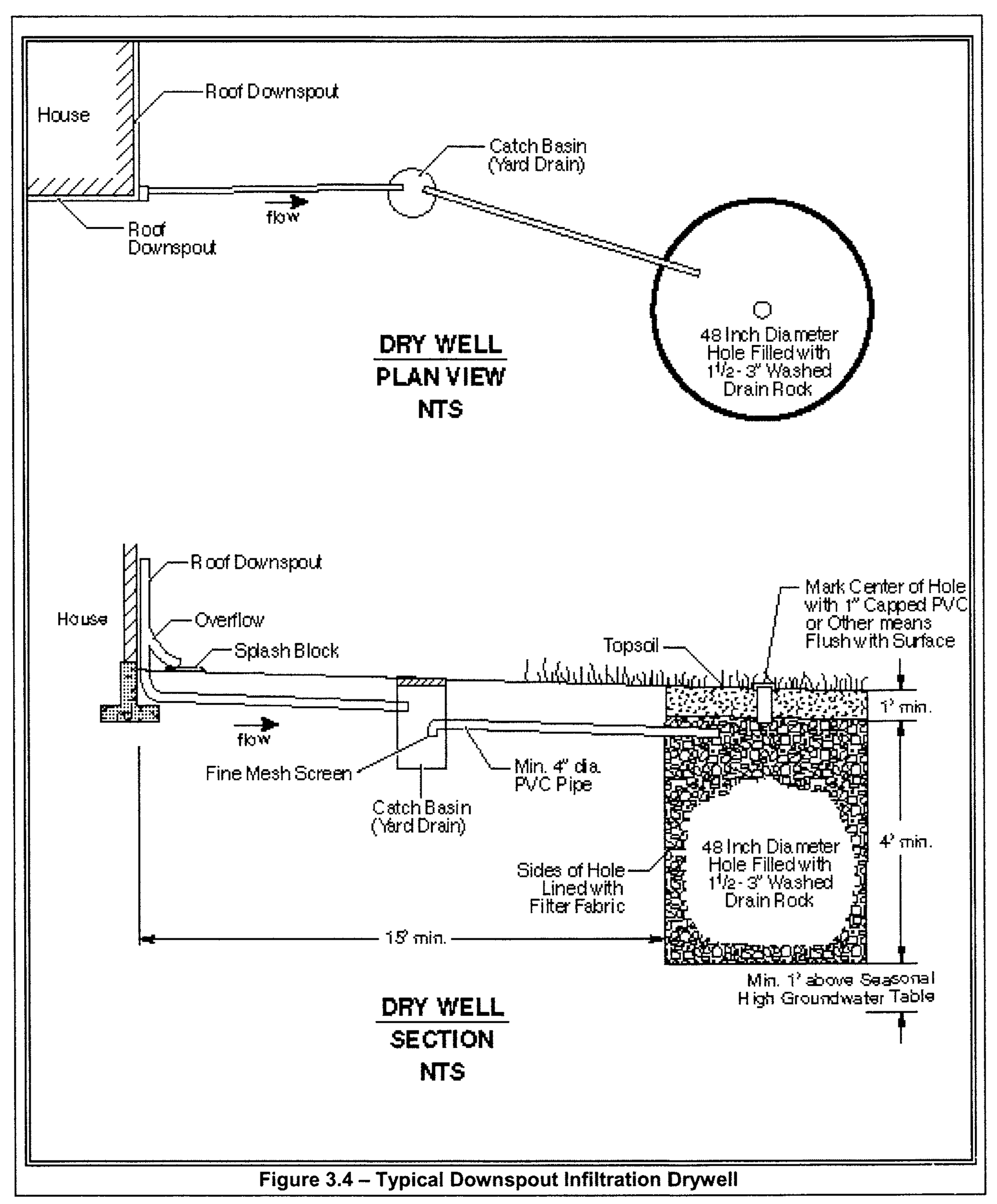
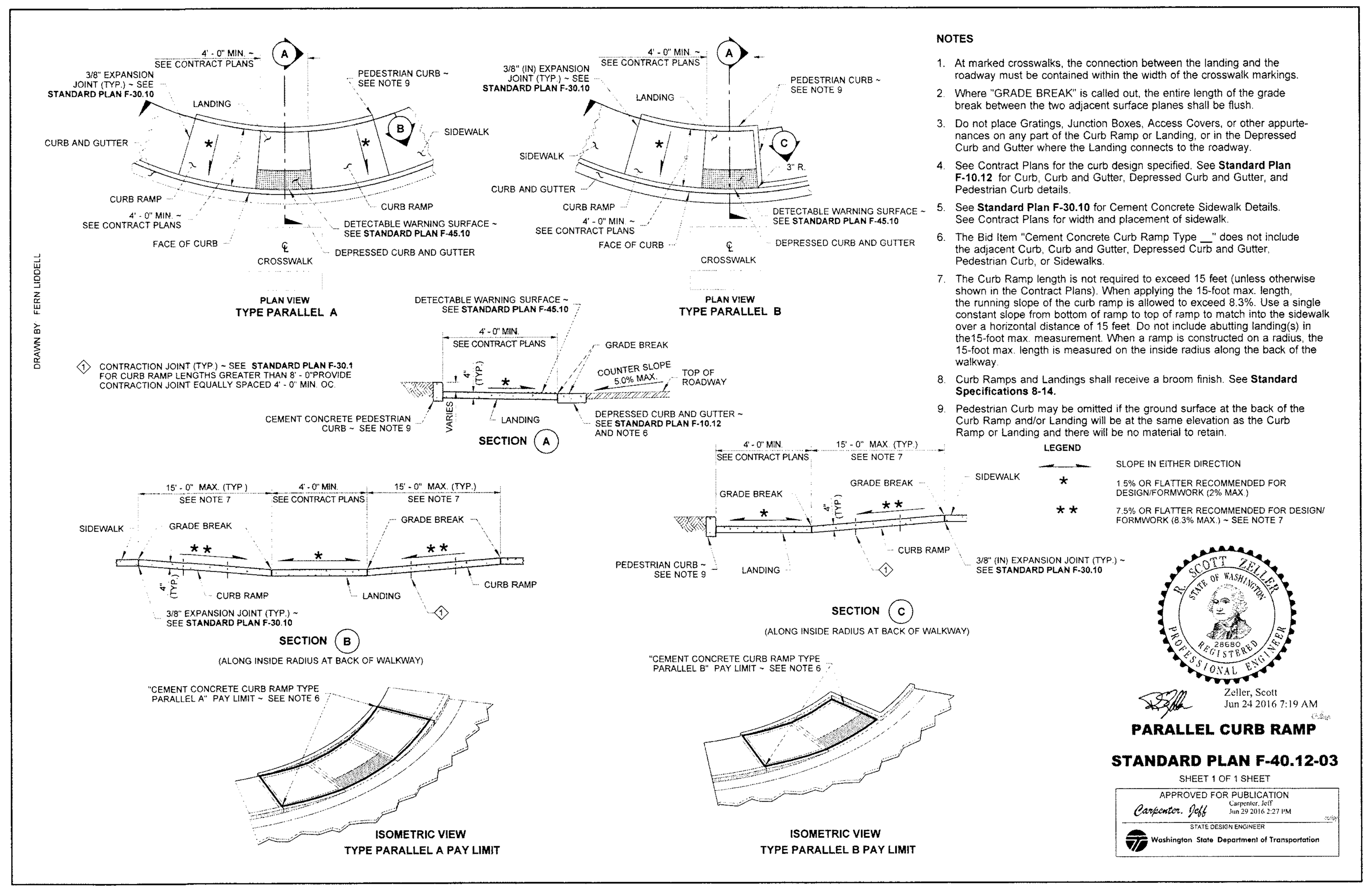
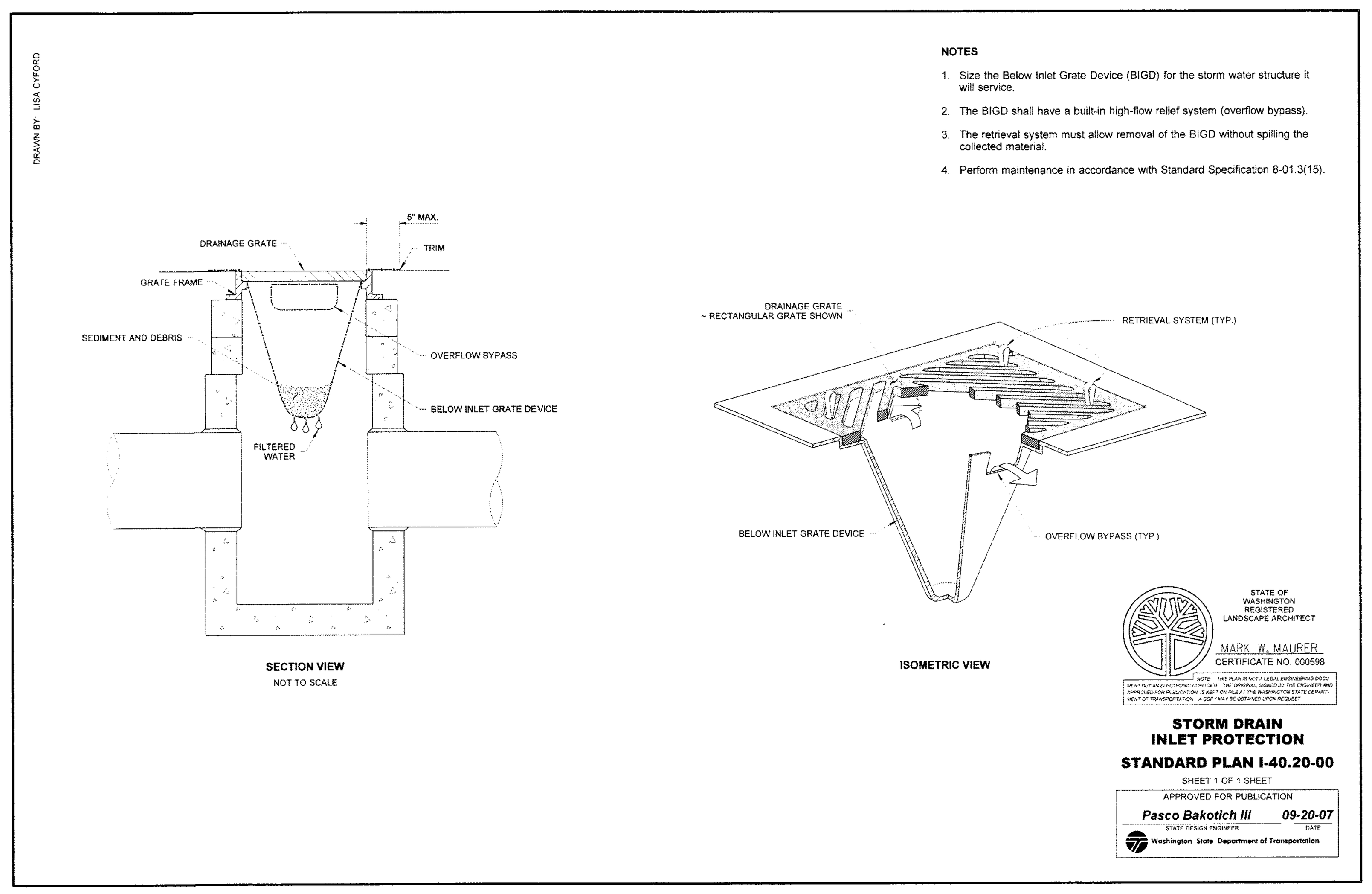


Figure 3.4 – Typical Downspout Infiltration Drywell

DOWNSPOUT INFILTRATION DETAIL (C/2)
NOT TO SCALE



PARALLEL CURB RAMP DETAIL (D/2)
NOT TO SCALE



STORM DRAIN INLET PROTECTION DETAIL (E/2)
NOT TO SCALE

APPROVED FOR CONSTRUCTION

SKAGIT COUNTY PUBLIC WORKS | DATE

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555

NO.	DATE	REVISIONS	BY	APRVD
1	01.17.20	90% SUBMITTAL SET	PLS	PLS
2	02.21.20	BID SET	PRL	PLS

Sound Development Group
ENGINEERING, SURVEYING & LAND DEVELOPMENT SERVICES
P.O. Box 1705 • 1111 Cleveland Avenue, Suite 202
Mount Vernon, WA 98273
Tel: 360-404-2010 Fax: 360-404-2013

SHEET DESCRIPTION: **DETAILS**

SCALE	AS NOTED
DRAWN BY:	PLAU
DESIGNED BY:	P.SEVERIN
CHECKED BY:	P.SEVERIN
FIELD BOOK/PAGE	
DATE	12.05.19

PROJECT
WSU INSTALL HEADHOUSE FOR CARLETTI ARCHITECTS
SEC 14-TWP 34N-RNG 3E

JOB NO. 18073
DRAWING NAME 18073ENG.dwg
SHEET C-2.0

A PORTION OF THE NW 1/4 OF THE NE 1/4 OF SECTION 14, TOWNSHIP 34 NORTH, RANGE 3 EAST, W.M.

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE 2018 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PREPARED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION (WSDOT/APWA), HEREIN REFERRED TO AS THE "STANDARD SPECIFICATIONS". REFERENCES WILL BE MADE TO THE STANDARD SPECIFICATIONS MANUAL AND THE STANDARD PLANS BOOK.

2. EXISTING UTILITIES HAVE BEEN TAKEN FROM AVAILABLE FIELD AND OFFICE RECORDS. THE CONTRACTOR IS RESPONSIBLE FOR UTILIZING THE ONE-CALL UTILITY LOCATE SERVICE, 1-800-424-5555, A MINIMUM OF TWO WORKING DAYS PRIOR TO ANY CONSTRUCTION. DAMAGES TO THE EXISTING UTILITIES RESULTING FROM THIS CONSTRUCTION SHALL BE REPAIRED BY AND AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL VERIFY ANY POTENTIAL UTILITY CONFLICTS PRIOR TO CONSTRUCTION.

3. THE CONTRACTOR SHALL MAKE DAILY EFFORTS TO KEEP THE SITE IN A NEAT AND ORDERLY CONDITION TO THE SATISFACTION OF THE OWNER, ENGINEER, AND SKAGIT COUNTY ENGINEERING DEPARTMENT. IF CONSTRUCTION OCCURS DURING RAINY WEATHER CONDITIONS, THEREBY CAUSING DEBRIS TO BE TRACKED ONTO THE EXISTING ASPHALT, THE CONTRACTOR SHALL CONSTRUCT A QUARRY SPALL ROADWAY 20-FEET WIDE BY 100-FEET LONG MINIMUM. THE CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO EXISTING IMPROVEMENTS RESULTING FROM THIS CONSTRUCTION.

4. DURING ALL PHASES OF CONSTRUCTION, THE CONTRACTOR SHALL SWEEP AND REMOVE ALL DEBRIS TRACKED ONTO THE EXISTING ROADS. FAILURE TO KEEP ROAD FREE FROM DEBRIS OFF EXISTING ROADWAY MAY CAUSE WORK STOPPAGE. THE CONTRACTOR SHALL ALSO WATER THE SITE (IF REQUIRED) TO REDUCE CONSTRUCTION DUST.

5. AT ALL TIMES, TRAFFIC LANES SHALL BE MAINTAINED ON EXISTING ROADS. TEMPORARY AND PARTIAL ROAD CLOSURE SHALL BE APPROVED OWNER, BY SKAGIT COUNTY ENGINEERING, FIRE, AND POLICE DEPARTMENTS PRIOR TO CONSTRUCTION. DURING CONSTRUCTION WITHIN THE RIGHT-OF-WAYS, THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT FOR TRAFFIC CONTROL AND CONSTRUCTION WARNING/CONTROL SIGNS.

6. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS CONCERNING DISPOSAL OF MATERIALS. ALL ASPHALT, CONCRETE, BRICK, AND STRUCTURES REMOVED FROM THIS SITE SHALL BE DISPOSED OF IN AN APPROVED SITE OBTAINED BY THE CONTRACTOR.

7. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND APPLYING FOR ALL PERMITS ASSOCIATED WITH THIS CONSTRUCTION, NOT OBTAINED BY THE OWNER AND/OR ENGINEER.

8. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED PRIOR TO CONSTRUCTION IF ANY DISCREPANCY IN PLANS AND EXISTING CONDITIONS IS DISCOVERED.

9. THE CONTRACTOR SHALL STOCKPILE CLEAN, NATIVE TOPSOIL MATERIALS, FREE OF SOD AND DEBRIS LARGER THAN TWO INCHES, TO BE USED AS FILL IN THE PROPOSED LANDSCAPE AREAS. THE CONTRACTOR SHALL STOCKPILE EXCESS NATIVE MATERIAL ON THE SITE AS DIRECTED BY THE OWNER. EXCESS AND UNSUITABLE NATIVE MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED DUMPSITE RETAINED BY THE CONTRACTOR. DEBRIS AND STRUCTURES SHALL BE REMOVED FROM SITE AND DISPOSED AT AN APPROVED DISPOSAL SITE RETAINED BY THE CONTRACTOR.

10. ORGANIC MATERIAL AND NON SUITABLE NATIVE MATERIAL DISCOVERED DURING SUBGRADE EXCAVATION AND SITE PREPARATION SHALL BE ENTIRELY REMOVED AND DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

11. DURING PERIODS OF RAINFALL, THE CONTRACTOR SHALL PREVENT WATER FROM STANDING ON THE SUBGRADE OR ON THE PREPARED GRAVEL SUBGRADE. THE CONTRACTOR IS RESPONSIBLE FOR SUBGRADE PROTECTION, REPAIR AND REPLACEMENT OF SUBGRADE MATERIALS SHALL BE PAID FOR BY AND AT THE CONTRACTOR'S EXPENSE. STORM RUNOFF SHALL BE DISCHARGED TO THE STORM SYSTEM OR ON SITE LOCATION THAT WILL NOT IMPACT THE NEIGHBORING PROPERTIES, THIS PROJECT, DOWNSTREAM CONVEYANCE SYSTEM. THE CONTRACTOR IS REQUIRED TO PROVIDE TEMPORARY DITCHING AND PUMPS TO REMOVE ALL STANDING WATER FROM THE WORK AREA.

12. AGGREGATE FOR GRAVEL BORROW SHALL COMPLY WITH SECTION 9-03.14 OF THE 2018 STANDARD SPECIFICATIONS. GRAVEL BORROW SHALL CONSIST OF WELL GRADED SAND AND GRAVEL CONFORMING TO THE REQUIRED SPECIFICATIONS. THE PERCENT PASSING THE US NO. 200 SIEVE SHALL NOT EXCEED 5%. ALL GRAVEL BORROW IMPORTED TO THE SITE SHALL HAVE A CONSISTENT GRADATION. PRIOR TO IMPORTING ANY GRAVEL BORROW MATERIAL. THE CONTRACTOR SHALL PROVIDE GRADATION AND TEST RESULTS TO THE ENGINEER FOR APPROVAL. GRADATION AND PROCTOR TEST RESULTS SHALL BE SUPPLIED BY THE CONTRACTOR PER 2000 TONS OF IMPORTED MATERIAL. THE CONTRACTOR SHALL RETAIN LICENSED PERSONNEL TO PERFORM COMPACTION TESTS FOR THE FOLLOWING:
    - A. TOP OF PREPARED GRAVEL BORROW WITHIN THE PARKING LOT AND ROAD SECTION ON A 50-FOOT GRID/INTERVAL FOR GRAVEL FILLS GREATER THAN TWO FEET.
    - B. ONE TEST ADJACENT TO ALL STRUCTURES WITHIN THE ASPHALT.
    - C. TRENCHES WITH THREE FEET OR LESS OF GRAVEL TRENCH BACKFILL: TOP CENTER OF UTILITY TRENCH AT 50-FEET INTERVALS.
    - D. TRENCHES WITH MORE THAN THREE FEET OF GRAVEL TRENCH BACKFILL: TOP CENTER OF UTILITY TRENCH AND MID-DEPTH OF TRENCH, BOTH AT 50- FEET INTERVALS. ALL TEST RESULTS SHALL MEET OR EXCEED THE SPECIFICATIONS. ALL AREAS THAT DO NOT MEET THE REQUIRED SPECIFICATIONS SHALL BE RE-COMPACTED AND RETESTED AT NO ADDITIONAL COST TO THE OWNER.

14. CRUSHED SURFACING TOP COURSE SHALL CONFORM TO SECTION 9-03.9(3) OF THE 2018 STANDARD SPECIFICATIONS. EACH LIFT SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY AS DETERMINED BY ASTM D- 1557 TESTING PROCEDURE. PLACEMENT AND GRADING OF COMPACTED CRUSHED TOP COURSE MATERIAL WITHIN THE ASPHALT AREAS SHALL HAVE A TOLERANCE OF PLUS OR MINUS ONE-HALF INCH FROM THE DESIGNATED TOP OF CRUSHED SURFACING TOP COURSE, THE CONTRACTOR SHALL PROVIDE GRADATION AND DEGRADATION TEST RESULTS TO THE ENGINEER FOR APPROVAL OF SITE MATERIAL.

16. HOT MIX ASPHALT SHALL BE PLACED AT THE LOCATIONS AND DEPTHS INDICATED ON THE PLANS, HOT MIX ASPHALT SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 91% OF THE RICE DENSITY. COMPACTION SHALL OCCUR BETWEEN THE TEMPERATURES OF 180 DEGREES FAHRENHEIT AND 300 DEGREES FAHRENHEIT. DURING COLD WEATHER CONDITIONS, AS DETERMINED BY THE ENGINEER, ALL TRUCKLOADS OF ASPHALT SHALL BE COVERED SO AS TO RETAIN HEAT. THE CONTRACTOR SHALL RETAIN LICENSED MATERIALS-TESTING PERSONNEL TO PROVIDE COMPACTION TESTS AT 50- FOOT GRID/INTERVAL THROUGHOUT THE PARKING LOT AND ROAD SECTION. IF COMPACTION TEST RESULTS OF HOT MIX ASPHALT INDICATE LESS THAN 91% THE CONTRACTOR MAY, AT HIS EXPENSE, HAVE CORE SAMPLES TAKEN AND ANALYZED TO SUBSTANTIATE DENSITY. HOT MIX ASPHALT THAT DOES NOT MEET THE REQUIRED COMPACTION, SHALL EITHER BE REMOVED BY THE CONTRACTOR AT HIS EXPENSE OR SHALL HAVE EQUAL THE INTENDED DESIGN. ADDITIONAL TESTING AND ASPHALT TO COMPENSATE FOR UNACCEPTABLE COMPACTION TEST RESULTS SHALL BE THE EXPENSE OF THE CONTRACTOR. NO ASPHALT PAVING OR ROLLING COMPACTION OF ASPHALT IS ALLOWED AFTER DARK. ALL ROLLING SHALL BE COMPLETED BY SUNSET TIME.

UTILITY TRENCHES

1. ALL TRENCHES SHALL BE EXCAVATED TO PROVIDE A MINIMUM WIDTH OF EIGHT INCHES ON EITHER SIDE OF THE PROPOSED UTILITY AS INDICATED ON THE UTILITY TRENCH DETAIL WITHIN THE CIVIL DRAWINGS. ALL STORM AND SEWER PIPES SHALL BE BEDDED WITH PEA GRAVEL OR BUCKSHOT WITH 100% OF THE MATERIAL PASSING THE 1/4-INCH SCREEN. BEDDING MATERIAL SHALL ALSO BE USED TO COVER THE PIPE TO A MINIMUM OF FOUR INCHES ABOVE THE TOP OF THE PIPE. THE CONTRACTOR SHALL CAREFULLY TAMP AND HAND COMPACT BEDDING AND COVER MATERIAL TO ASSURE ADEQUATE SUPPORT UNDER THE BARREL OF THE PIPE.

2. TRENCH BACKFILL MATERIAL SHALL CONSIST OF COMPACTED GRAVEL BORROW PLACED IN LOOSE LIFTS NOT EXCEEDING EIGHT INCHES AND COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY AS DETERMINED AS ASTM D 1557 TESTING PROCEDURE. THE INITIAL LIFT OF GRAVEL TRENCH BACKFILL OVER THE PIPE SHALL NOT EXCEED 18 INCHES IN ORDER TO PROTECT THE PIPE. STRUCTURAL FILL SHALL BE USED AS TRENCH BACKFILL IN ALL TRENCHES UNDER PROPOSED ASPHALT, CONCRETE, CONSTRUCTION TRAFFIC AREAS, AND WITHIN FIVE FEET BEYOND IMPERVIOUS SURFACES. NATIVE MATERIAL SHALL NOT BE USED AS TRENCH BACKFILL.

3. NATIVE SOIL MATERIALS MAY BE USED AS TRENCH BACKFILL ONLY AT LOCATIONS BEYOND THOSE REQUIRING GRAVEL STRUCTURAL FILL. THE USE OF NATIVE SOIL MATERIALS AS TRENCH BACKFILL, WITHIN THOSE AREAS REQUIRING GRAVEL, MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER, SKAGIT COUNTY AND OWNER PRIOR TO THE WORK BEING PERFORMED. THE USE OF NATIVE SOILS WITHIN TRENCHES REQUIRING GRAVEL WILL ONLY BE ACCEPTED WITH THE APPROVAL OF THE GEOTECHNICAL ENGINEER, AND THE NATIVE SOILS MUST BE COMPACTED TO A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY. THE USE OF NATIVE SOILS AS TRENCH BACKFILL SHALL NOT PRECLUDE THE MINIMUM ASPHALT SECTION REQUIREMENTS AS IDENTIFIED ON THE CIVIL PLANS.

4. AT LOCATIONS WHERE NATIVE SOILS ARE USED, RESULTING IN A PUMPING, UNSTABLE TRENCH CONDITIONS, OR THE SOILS USED CONTAIN UNSUITABLE PRODUCTS, THE CONTRACTOR SHALL REMOVE ALL UNSUITABLE MATERIALS AND REPLACE WITH APPROPRIATE NATIVE MATERIAL OR IMPORTED GRAVEL STRUCTURAL FILL MATERIAL, AT THE CONTRACTOR'S EXPENSE.

5. THE BOTTOM OF UTILITY TRENCHES SHALL HAVE A STABLE, NON-YIELDING, SOIL CONDITION SUITABLE FOR SUPPORTING THE DESIGN LOADS. WHERE THE BOTTOM OF TRENCH CONDITIONS EXHIBIT PUMPY, YIELDING CONDITIONS, THE BOTTOM OF TRENCH SHALL BE OVER EXCAVATED TO EXPOSE FIRM, STABLE MATERIAL, AND BACKFILL WITH TWO INCH TO FOUR INCH SHOT ROCK MATERIAL. WHERE OVER EXCAVATING EXPOSES SIMILAR UNSTABLE CONDITIONS, TRENCH OVER EXCAVATION SHALL BE DONE TO TWO FEET BELOW THE PIPE BEDDING MATERIAL AND BACKFILLED WITH TWO INCH TO FOUR INCH SHOT ROCK MATERIAL.

6. THE CONTRACTOR SHALL PROVIDE AND COORDINATE WITH PUGET SOUND ENERGY, VERIZON NORTHWEST, COMCAST CABLE SERVICES AND CASCADE NATURAL GAS FOR THE UNDERGROUND INSTALLATION OF POWER, TELEPHONE, UTILITIES AND VAULT TRENCHING AND BACKFILLING AS REQUIRED AND DELINEATED ON SAID UTILITY PLANS TO PROVIDE SERVICE TO LOTS SHOWN HEREIN, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE ON THE PLANS. ALL NONMETALLIC UTILITY CONDUITS SHALL HAVE DETECTABLE MARKING TAPE CONFORMING TO WSDOT SECTION 9-15.18 INSTALLED DURING CONDUIT PLACEMENT.

7. PEA GRAVEL SHALL NOT BE USED WITHIN ANY PORTION OF THE WATER SYSTEM.

8. THE CONTRACTOR SHALL RETAIN LICENSED AND QUALIFIED PERSONNEL TO PROVIDE COMPACTION TESTING FOR THE FOLLOWING:
    - A. TRENCHES WITH THREE FEET OR LESS OF GRAVEL TRENCH BACKFILL: TOP CENTER OF UTILITY TRENCH AT 50-FEET INTERVALS.
    - B. TRENCHES WITH MORE THAN THREE FEET OF GRAVEL TRENCH BACKFILL: TOP CENTER OF UTILITY TRENCH AND MID-DEPTH OF TRENCH, BOTH AT 50-FEET INTERVALS. ALL TEST RESULTS SHALL MEET OR EXCEED THE SPECIFICATIONS. ALL AREAS THAT DO NO MEET THE REQUIRED SPECIFICATIONS SHALL BE RECOMPACTED AND RETESTED AT NO ADDITIONAL COST TO THE OWNER.
    - C. ANY AREAS THAT YIELD, DEFLECT OR PUMP UNDERNEATH NORMAL CONSTRUCTION TRAFFIC AS DIRECTED BY THE ENGINEER SHALL BE RECOMPACTED AND RETESTED AT NO ADDITIONAL COST TO THE OWNER.

48. AS COMPACTION TESTS ARE PERFORMED, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL COMPACTION TESTING RECORDS TO THE OWNER, ENGINEER, AND SKAGIT COUNTY ENGINEERING DEPARTMENT.

49. ALL TRENCH EXCAVATION OVER A DEPTH OF 4 FEET SHALL BE SHORED AND CRIBBED IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT, CHAPTER 49.17 RCW, AND IN ACCORDANCE WITH SECTION 2.09 OF THE STANDARD SPECIFICATIONS.

50. IF GROUND WATER IS ENCOUNTERED, TRENCH DRAINS SHALL BE INSTALLED IN TRENCHES WITH GROUND WATER CONDITIONS. SAID DRAINS SHALL GRAVITY DRAIN TO DAYLIGHT OR THE NEAREST CATCH BASIN. PERFORATED PIPE OPENINGS SHALL BE SIZED TO NOT ALLOW BEDDING MATERIAL INTO SAID DRAIN PIPE.

SANITARY SEWER

1. THE LOCATION OF THE SANITARY SEWER SERVICE IS INDICATED ON THE PLANS. SEWER SERVICE SHALL BE INSTALLED AT THE SLOPE AND LOCATION AS INDICATED ON THE CIVIL PLANS.

2. SEWER PIPE SHALL BE PVC CONFORMING TO ASTM D 3034, SDR 35 AND SECTION 9-05.12 OF THE 2018 STANDARD SPECIFICATIONS. JOINTS SHALL BE BELL AND SPIGOT WITH A RUBBER GASKET. MATERIALS AND CONSTRUCTION SHALL CONFORM TO SECTION 7-17 WSDOT/APWA.

3. CLEANOUTS SHALL BE INSTALLED TO MATCH FINISH GRADE WITHIN CONCRETE AND ASPHALT AREAS.

4. AIR PRESSURE TESTING SHALL BE PERFORMED BY THE CONTRACTOR ON ALL PROPOSED SEWER LINES. THE PRESSURE TEST SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER OR THE AUTHORIZED OWNERS REPRESENTATIVE, AT FIVE PSI FOR TEN MINUTES WITH NO SIGNIFICANT GAUGE DROP. ADEQUATE TIME (TWO MINUTES MIN) SHALL ELAPSE BEFORE THE PRESSURE TEST IS PERFORMED TO ALLOW THE PRESSURE TO STABILIZE.

APPROVED FOR CONSTRUCTION

SKAGIT COUNTY PUBLIC WORKS | DATE

ESC-1 STANDARD ESC NOTES

APPROVAL OF THIS EROSION AND SEDIMENT CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).

1. AS DIRECTED BY PUBLIC WORKS DIRECTOR PRIOR TO COMMENCING CONSTRUCTION, ALL CRITICAL AREAS, INCLUDING WETLAND BUFFERS, STREAM CORRIDOR, LANDFILL AREAS, AND STEEP SLOPES SHALL BE CONTINUOUSLY DEMARCATED IN THE FIELD USING FLAGGING TAPE OR FENCING.

2. EROSION CONTROL METHODS AND MATERIALS SHALL MEET REQUIREMENTS OF SECTION 8-01 OF THE APWA/WASHINGTON STATE DEPARTMENT OF TRANSPORTATION 2018 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, AND REQUIREMENTS SET FORTH IN VOLUME II OF THE "STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN (THE TECHNICAL MANUAL)", BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY, CURRENT EDITION. THE CONTRACTOR SHALL FOLLOW RECOMMENDATIONS MADE BY SUPPLIERS AND MANUFACTURERS OF MATERIALS AND EQUIPMENT USED.

3. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS, AND MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.

4. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONALLY, MORE ESC FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL. THEREFORE, DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.

5. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANK, DETENTION VAULT, OR SYSTEM, WHICH BACKS UNDER OR INTO A POND, SHALL BE USED AS A TEMPORARY SETTLING BASIN.

6. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (EXAMPLE: ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).

7. WHERE STRAW MULCH IS REQUIRED FOR TEMPORARY EROSION CONTROL, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO (2) INCHES.

8. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH SKAGIT COUNTY STANDARDS AND SPECIFICATIONS.

9. THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY SKAGIT COUNTY PUBLIC WORKS DIRECTOR AND SKAGIT COUNTY INSPECTOR.

10. A COPY OF THE APPROVED EROSION CONTROL PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

11. ALL LOTS ADJOINING OR HAVING ANY NATIVE GROWTH PROTECTION EASEMENTS (NGPE) SHALL HAVE A FOUR (4) FOOT HIGH TEMPORARY CONSTRUCTION FENCE (CYCLONE OR PLASTIC MESH) SEPARATING THE LOT (OR BUILDABLE PORTIONS OF THE LOT) FROM THE AREA RESTRICTED BY THE NGPE AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR CLEARING AND REMAIN IN PLACE UNTIL A DWELLING IS CONSTRUCTED AND OWNERSHIP TRANSFERRED TO THE FIRST OWNER/OCCUPANT.

12. A CLEARING CONTROL FENCE SHALL BE INSTALLED AT THE DRIP LINE OF TREES TO BE SAVED WHEREVER THE TREE CANOPIES EXTEND INTO THE AREA TO BE CLEARED. ON-SITE SUPERVISION SHALL BE PROVIDED WHENEVER EQUIPMENT MUST OPERATE UNDER TREE CANOPIES, AND FENCING SHALL BE REPLACED WHEN NECCESARY. THE CLEARING CONTROL FENCE SHALL CONSIST OF A SINGLE STRAND OF WIRE ATTACHED ABOUT THREE (3) FEET HIGH TO WOOD LATH AT A TWELVE (12) FOOT MAXIMUM SPACING AND FLAGGED WITH SURVEY RIBBON AT FOUR (4) FOOT INTERVALS.

13. OFF-SITE STREETS MUST BE KEPT CLEAN AT ALL TIMES. IF DIRT IS DEPOSITED ON THE PUBLIC STREET SYSTEM, THE STREET SHALL BE IMMEDIATELY CLEANED WITH POWER SWEEPER OR OTHER EQUIPMENT. ALL VEHICLES SHALL LEAVE THE SITE BY WAY OF THE CONSTRUCTION ENTRANCE AND SHALL BE CLEANED OF ALL DIRT THAT WOULD BE DEPOSITED ON THE PUBLIC STREETS.

14. ANY CATCH BASINS COLLECTING RUNOFF FROM THE SITE, WHETHER THEY ARE ON OR OFF THE SITE, SHALL HAVE THEIR GRATES COVERED WITH FILTER FABRIC DURING CONSTRUCTION.

15. THE WASHED GRAVEL BACKFILL ADJACENT TO THE FILTER FABRIC FENCE SHALL BE REPLACED AND THE FILTER FABRIC CLEANED IF IT IS NONFUNCTIONAL BY EXCESSIVE SILT ACCUMULATION AS DETERMINED BY SKAGIT COUNTY. ALSO, ALL INTERCEPTOR SWALES SHALL BE CLEANED IF SILT ACCUMULATION EXCEEDS ONE-QUARTER DEPTH.

16. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO DEPTH OF ONE (1) FOOT AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4" - 8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; AND 1"-2" ROCK/10%-20% PASSING.

17. IF ANY PART (S) OF THE CLEARING LIMIT; BOUNDARY OR TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN IS/ARE DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY.

18. ALL PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND RUNOFF.DO NOT FLUSH CONCRETE BY-PRODUCTS OR TRUCKS NEAR OR INTO THE STORM DRAINAGE SYSTEM. IF EXPOSED AGGREGATE IS FLUSHED INTO THE STORM SYSTEM, IT COULD MEAN RECLEANING THE ENTIRE DOWNSTREAM STORM SYSTEM, OR POSSIBLY RELAYING THE STORM LINE.

19. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.

20. THE ESC SUPERVISORS NAME IS: ______________________________,
24 HR. CONTACT NUMBER IS: ______________________________.

21. THE APPLICANT'S NAME IS: ______________________________,
24 HR. CONTACT NUMBER IS: ______________________________.

22. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY A CONTINUOUS LENGTH OF SURVEY TAPE (OR FENCING, IF REQUIRED) PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.

23. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES DURING THE WET SEASON (OCT. 1 TO APRIL 30) AND OF THE MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPT. 30).

24. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).

25. ANY AREA NEEDING ESC MEASURES NOT REQUIRING IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.

26. THE ESC FACILITIES ON ACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN FORTY-EIGHT (48) HOURS FOLLOWING A STORM EVENT.

27. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT -LADEN WATER INTO THE DOWNSTREAM SYSTEM.

28. OFFSITE STORMWATER AND/OR GROUNDWATER TO BE DIVERTED AWAY FROM SLOPES & DISTURBED AREAS WITH INTERCEPTOR DIKES, PIPES, OR SWALES. OFFSITE STORMWATER SHALL BE MANAGED DIFFERENTLY FROM STORMWATER GENERATED ONSITE.

29. EXCAVATED MATERIAL TO BE PLACED ON UPHILL SIDE OF TRENCH.

30. STABILIZED CONSTRUCTION ENTRANCES AND ROADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

31. ANY PERMANENT FLOW CONTROL FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION AS ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.

32. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE COUNTY INSPECTOR. THE COUNTY INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.

ESC-2 WET SEASON SPECIAL PROVISIONS

(OCTOBER 1 - APRIL 30)

1. THE ALLOWED TIME THAT A DISTURBED AREA CAN REMAIN UNWORKED WITHOUT COVER MEASURES IS REDUCED TO TWO DAYS, RATHER THEN SEVEN.

2. STOCKPILES AND STEEP CUT AND FILL SLOPES ARE TO BE PROTECTED IF UNWORKED FOR MORE THAN 12 HOURS.

3. COVER MATERIALS SUFFICIENT TO COVER ALL DISTURBED AREAS SHALL BE STOCKPILED ON SITE.

4. ALL AREAS THAT ARE TO BE UNWORKED DURING THE WET SEASON SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.

5. MULCH IS REQUIRED TO PROTECT ALL SEEDED AREAS.

6. FIFTY LINEAR FEET OF SILT FENCE (AND THE NECESSARY STAKES) PER ACRE OF DISTURBANCE MUST BE STOCKPILED ON SITE.

7. CONSTRUCTION ROAD AND PARKING LOT STABILIZATION ARE REQUIRED FOR ALL SITES UNLESS THE SITE IS UNDERLAIN BY COARSE-GRAINED SOIL.

8. SEDIMENT RETENTION IS REQUIRED UNLESS NO OFFSITE DISCHARGE IS ANTICIPATED FOR THE SPECIFIC DESIGN FLOW.

9. SURFACE WATER CONTROLS ARE REQUIRED UNLESS NO OFFSITE DISCHARGE IS ANTICIPATED FOR THE SPECIFIED DESIGN FLOW.

10. PHASING AND MORE CONSERVATIVE BMP'S MUST BE EVALUATED FOR CONSTRUCTION ACTIVITY NEAR SURFACE WATERS.

11. ANY RUNOFF GENERATED BY DEWATERING SHALL BE TREATED THROUGH CONSTRUCTION OF A SEDIMENT TRAP WHEN THERE IS SUFFICIENT SPACE OR BY RELEASING THE WATER TO A WELL-VEGETATED, GENTLY SLOPING AREA. SINCE PUMPS ARE USED FOR DEWATERING, IT MAY BE POSSIBLE TO PUMP THE SEDIMENT-LADEN WATER WELL AWAY FROM THE SURFACE WATER SO THAT VEGETATION CAN BE MORE EFFECTIVELY UTILIZED FOR TREATMENT. A STRAW BALE FILTER SHALL BE PLACED AROUND THE DISCHARGE FROM THE DEWATERING PUMP. IF THERE IS NOT SPACE FOR A SEDIMENT TRAP OR 25 FEET OF SUITABLE VEGETATION, OTHER FILTRATION METHODS SHALL BE REQUIRED.

12. THE FREQUENCY OF MAINTENANCE REVIEW INCREASES FROM MONTHLY TO WEEKLY.

13. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT, BEFORE A HOLIDAY OR WEEKEND IF NEEDED, BASED ON THE WEATHER FORECAST.

ESC-3 SENSITIVE AREAS SPECIAL PROVISIONS

1. WHENEVER POSSIBLE, PHASE ALL OR PART OF THE PROJECT SO THAT IT OCCURS DURING THE DRY SEASON. IF THIS IS IMPOSSIBLE, NOVEMBER THROUGH FEBRUARY SHALL BE AVOIDED SINCE THIS IS THE MOST LIKELY PERIOD FOR LARGE, HIGH-INTENSITY STORMS.

2. ALL PROJECTS SHALL BE COMPLETED AND STABILIZED AS QUICKLY AS POSSIBLE. LIMITING THE SIZE AND DURATION OF A PROJECT IS PROBABLY THE MOST EFFECTIVE FORM OF EROSION CONTROL.

3. WHERE APPROPRIATE, SANDBAGS OR AN EQUIVALENT BARRIER SHALL BE CONSTRUCTED BETWEEN THE PROJECT AREA AND THE SURFACE WATER IN ORDER TO ISOLATE THE CONSTRUCTION AREA FROM HIGH WATER THAT MIGHT RESULT DUE TO PRECIPITATION.

4. ADDITIONAL PERIMETER PROTECTION SHALL BE CONSIDERED TO REDUCE THE LIKELIHOOD OF SEDIMENT ENTERING THE SURFACE WATERS. SUCH PROTECTION MIGHT INCLUDE MULTIPLE SILT FENCES, SILT FENCES WITH A HIGHER AOS, CONSTRUCTION OF A BERM, OR A THICK LAYER OF ORGANIC MULCH UPSLOPE OF A SILT FENCE.

5. IF WORK IS TO OCCUR WITHIN THE ORDINARY HIGH WATER MARK OF A STREAM, MOST PROJECTS MUST ISOLATE THE WORK AREA FROM THE STREAM BY DIVERTING THE STREAM OR CONSTRUCTING A COFFERDAM. CERTAIN SMALL PROJECTS THAT PROPOSE ONLY A SMALL AMOUNT OF GRADING MAY NOT REQUIRE ISOLATION SINCE DIVERSIONS TYPICALLY RESULT IN DISTURBANCE AND THE RELEASE OF SOME SEDIMENT TO THE STREAM. FOR SUCH SMALL PROJECTS THE POTENTIAL IMPACTS FROM CONSTRUCTION WITH AND WITHOUT A DIVERSION MUST BE WEIGHTED.

6. IF A STREAM MUST BE CROSSED, A TEMPORARY BRIDGE SHALL BE CONSIDERED RATHER THAN ALLOWING EQUIPMENT TO UTILIZE THE STREAMBED FOR A CROSSING.

7. ANY RUNOFF GENERATED BY DEWATERING SHALL BE TREATED THROUGH CONSTRUCTION OF A SEDIMENT TRAP WHEN THERE IS SUFFICIENT SPACE OR BY RELEASING THE WATER TO A WELL-VEGETATED, GENTLY SLOPING AREA. SINCE PUMPS ARE USED FOR DEWATERING, IT MAY BE POSSIBLE TO PUMP THE SEDIMENT-LADEN WATER WELL AWAY FROM THE SURFACE WATER SO THAT VEGETATION CAN BE MORE EFFECTIVELY UTILIZED FOR TREATMENT. A STRAW BALE FILTER SHALL BE PLACED AROUND THE DISCHARGE FROM THE DEWATERING PUMP. IF THERE IS NOT SPACE FOR A SEDIMENT TRAP OR 25 FEET OF SUITABLE VEGETATION, OTHER FILTRATION METHODS SHALL BE REQUIRED.

ESC-4 FINAL SITE STABILIZATION NOTES

TO OBTAIN FINAL CONSTRUCTION APPROVAL, THE FOLLOWING CONDITIONS MUST BE MET:

1. ALL DISTURBED AREAS OF THE SITE SHALL BE VEGETATED OR OTHERWISE PERMANENTLY STABILIZED. AT A MINIMUM, DISTURBED AREAS SHALL BE SEEDED AND MULCHED WITH A HIGH LIKELY HOOD THAT SUFFICIENT COVER WILL DEVELOP SHORTLY AFTER FINAL APPROVAL. MULCH WITHOUT SEEDING IS NOT ADEQUATE TO ALLOW FINAL APPROVAL OF THE PERMIT, EXCEPT FOR SMALL AREAS OF MULCH USED FOR LANDSCAPING. THE ONLY EXCEPTIONS TO THESE REQUIREMENTS ARE LOTS WITHIN A PLAT THAT ARE TO BE DEVELOPED UNDER AN APPROVED RESIDENTIAL PERMIT IMMEDIATELY FOLLOWING PLAT APPROVAL. IN THESE CASES, MULCH AND/OR TEMPORARY SEEDING ARE ADEQUATE FOR COVER.

2. STRUCTURAL MEASURES SUCH AS, BUT NOT LIMITED TO, SILT FENCES, PIPE SLOPES DRAINS, CONSTRUCTION ENTRANCES, STORM DRAIN INLET PROTECTION, AND SEDIMENT TRAPS AND PONDS SHALL BE REMOVED FROM THE SITE. MEASURES THAT WILL QUICKLY DECOMPOSE, SUCH AS BRUSH BARRIERS AND ORGANIC MULCHES, MAY BE LEFT IN PLACE. IN THE CASE OF SILT FENCES, IT MAY BE BEST TO REMOVE FENCES IN CONJUNCTION WITH THE SEEDING, SINCE IT MAY BE NECESSARY TO BRING MACHINERY BACK IN TO REMOVE THEM. THIS WILL RESULT IN DISTURBED SOILS THAT WILL AGAIN REQUIRE PROTECTION. THE DDES INSPECTOR MUST APPROVE AN APPLICANT'S PROPOSAL TO REMOVE FENCING PRIOR TO THE ESTABLISHMENT OF VEGETATION. IN SOME CASES, SUCH AS RESIDENTIAL BUILDING FOLLOWING PLAT DEVELOPMENT, IT MAY BE APPROPRIATE TO LEAVE SOME OR ALL ESC MEASURES FOR USE DURING SUBSEQUENT DEVELOPMENT. THIS SHALL BE DETERMINED ON A SITE-SPECIFIC BASIS.

3. ALL PERMANENT SURFACE WATER FACILITIES, INCLUDING CATCH BASINS, MANHOLES, PIPES, DITCHES, CHANNELS, R/D FACILITIES, AND WATER QUALITY FACILITIES, SHALL BE CLEANED. ANY OFFSITE CATCH BASIN THAT REQUIRED PROTECTION DURING CONSTRUCTION SHALL ALSO BE CLEANED.

4. IF ONLY THE INFRASTRUCTURE OF THE SITE HAS BEEN DEVELOPED (E.G. SUBDIVISIONS AND SHORT PLATS) WITH BUILDING CONSTRUCTION TO OCCUR UNDER A DIFFERENT PERMIT, THEN THE SENSITIVE AREA BUFFERS, SENSITIVE AREA TRACTS, OR SENSITIVE AREA SETBACK AREA SHALL BE CLEARLY MARKED AS DESCRIBED IN SECTION D.4.1 IN ORDER TO ALERT FUTURE BUYERS AND BUILDERS.

ESC-5 ROAD AND UTILITIES E.S.C. NOTES

1. PHASING THE PROJECT SO THAT THE SITE IS WORKED PROGRESSIVELY FROM END TO END, RATHER THAN CLEARING AND GRUBBING THE ENTIRE LENGTH OF THE PROJECT. THIS RESULTS IN SMALLER EXPOSED AREAS FOR SHORTER DURATION'S, THUS REDUCING THE EROSION RISK.

2. MULCHING AND VEGETATING CUT AND FILL SLOPES AS SOON AS THEY ARE GRADED. FREQUENTLY, THIS IS DONE AT THE END OF CONSTRUCTION WHEN PAVING OR UTILITY INSTALLATION IS COMPLETE. VEGETATING THESE AREAS AT THE START OF THE PROJECT STABILIZES THOSE AREAS MOST SUSCEPTIBLE TO EROSION.

3. PROTECTING ALL CATCH BASIN INLETS WITH CATCH BASIN INSERTS WHEN THESE DO NOT DRAIN TO PONDS OR TRAPS. THIS WILL NOT PROVIDE THE SAME LEVEL OF PROTECTION AS A SEDIMENT POND OR TRAP, BUT CAN REMOVE MOST OF THE SAND- SIZED MATERIAL ENTRAINED IN THE RUNOFF.

4. PHASING THE PROJECT SO THAT ALL CLEARING AND GRADING IN SENSITIVE AREA BUFFERS OCCURS IN THE DRY SEASON. THIS SUBSTANTIALLY REDUCES THE CHANCE OF EROSION AND ALLOWS FOR RAPID REVEGETATION IN THE LATE SUMMER AND EARLY FALL.

5. USING FLOCCULENT TO REDUCE THE TURBIDITY OF WATER RELEASED FROM SEDIMENT PONDS, WHEN APPROVED BY THE DEPARTMENT OF ECOLOGY.

6. HIRING A PRIVATE CONSULTANT WITH EXPERTISE IN ESC TO REVIEW AND MONITOR THE SITE.

ESC-6 CONSTRUCTION SEQUENCE

1. ATTEND PRE-CONSTRUCTION MEETING.
2. FLAG OR FENCE CLEARING LIMITS.
3. POST SIGN WITH NAME AND PHONE NUMBER OF ESC SUPERVISOR.
4. INSTALL CATCH BASIN PROTECTION IF REQUIRED.
5. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
6. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
7. CONSTRUCT SEDIMENT PONDS AND TRAPS.
8. GRADE AND STABILIZE CONSTRUCTION ROADS.
9. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
10. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH KING COUNTY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
11. 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 KING COUNTY EROSION AND SEDIMENT CONTROL STANDARDS.
12. COVER ALL AREAS THAT WILL BE UNWORKED FOR MORE THAN SEVEN DAYS OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING OR EQUIVALENT.
13. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN SEVEN DAYS.
14. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
15. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BMP'S REMOVED IF APPROPRIATE.

MULCHING

MULCH MATERIAL	QUALITY STANDARDS	APPLICATION RATES
STRAW	AIR-DRIED: FREE FROM UNDESIRABLE SEED AND COARSE MATERIAL	2"-3" THICK; 2-3 BALES 2-3 BALES PER 1000 SQ. FT. OR 2-3 TONS PER ACRE.
WOOD FIBER CELLULOSE	NO GROWTH INHIBITING FACTORS	APPROX. 25-30 LBS. PER 1000 SQ. FT. OR 1000-1500 LBS PER ACRE
COMPOST	NO VISIBLE WATER OR DUST DURING HANDLING. MUST BE PURCHASED FROM SUPPLIER WITH A SOLID WASTE HANDLING PERMIT.	2" THICK MIN.; APPROX. 100 TONS PER ACRE (APPROX. 800 LBS PER YARD)
CHIPPED SITE VEGETATION	AVERAGE SIZE SHALL BE SEVERAL INCHES.	2" MINIMUM THICKNESS

NOTE: MULCHING TO BE UTILIZED AS REQUIRED TO PREVENT EROSION AS DIRECTED BY THE ENGINEER.

MULCHNG MAINTENANCE STANDARDS

1. THE THICKNESS OF THE COVER MUST BE MAINTAINED.
2. ANY AREAS THAT EXPERIENCE EROSION SHALL BE REMULCHED AND/OR PROTECTED WITH A NET OR BLANKET. IF THE EROSION PROBLEM IS DRAINAGE RELATED, THEN THE PROBLEM SHALL BE FIXED AND THE ERODED AREA REMULCHED.

SEEDING

SEED MIXES: THE SEED MIXES LISTED BELOW INCLUDE RECOMMENDED MIXES FOR TEMPORARY SEEDING. THESE MIXES, WITH THE EXCEPTION OF THE WETLAND MIX, SHALL BE APPLIED AT A RATE OF 120 LBS/ACRE. THIS RATE CAN BE REDUCED IF SOIL AMENDMENTS OR SLOW-RELEASE FERTILIZERS ARE USED.

TEMPORARY EROSION CONTROL SEED MIX	% WEIGHT	% PURITY	% GERMINATION
CHESINGS OR RED FESQUE FESTUCA RUBRA VAR. COMMUTATA OR FESTUCA RUBRA	40	98	90
ANNUAL OR PERENNIAL RYE LOLIUM MULTIFLORUM OR LOLIUM PERENN	40	98	90
REDTOP OR COLONIAL BENTGRASS AGROSTIS ALBA OR AGROSTIS TENUIS	10	92	85
WHITE DUTCH CLOVER TRIFOLIUM REPENS	10	98	90

BIOSWALE SEED MIX (MODIFIED BRIARGREEN, INC., HYDROSEEDING GUIDE WETLANDS SEED MIX)

	% WEIGHT	% PURITY	% GERMINATION
TALL OR MEADOW FESCUE FESTUCA ARUNDINACEA OR FESTUCA ELATIOR	68	98	90
SEASIDE/CREEPING BENTGRASS AGROSTIS PALUSTRIS	10	98	85
MEADOW FOXTAIL ALEPOCURUS PRATENSIS	10	90	80
ALSIKE CLOVER TRIFOLIUM HYBRIDUM	6	98	90
REDTOP AGROSTIS ALBA	6	92	85

WETLANDS SEED MIX	% WEIGHT	% PURITY	% GERMINATION
RED FESCUE FESTUCA RUBRA	35	90	90
REDTOP AGROSTIS ALBA	35	92	85
MEADOW FOXTAIL ALEPOCURUS PRATENSIS	30	90	80

SEEDING MAINTENANCE STANDARDS

1. ANY SEEDED AREAS THAT FAIL TO ESTABLISH AT LEAST 80 PERCENT COVER WITHIN ONE MONTH SHALL BE RESEEDED. IF RESEEDING IS INEFFECTIVE, AN ALTERNATE METHOD, SUCH AS SODDING OR NETS/BLANKETS, SHALL BE USED. IF WINTER WEATHER PREVENTS ADEQUATE GRASS GROWTH, THIS TIME LIMIT MAY BE RELAXED.
2. AFTER ADEQUATE COVER IS ACHIEVED, ANY AREAS THAT EXPERIENCE EROSION SHALL BE RESEEDED AND PROTECTED BY MULCH.
3. SEEDED AREAS SHALL BE SUPPLIED WITH ADEQUATE MOISTURE, BUT NOT WATERED TO THE EXTENT THAT IT CAUSES RUNOFF.

PATRICK L. SEVERIN
32226
2/4/20

CALL 48 HOURS
BEFORE YOU DIG
1-800-424-5555

NO.	DATE	REVISIONS	BY	APRVD
1	01.17.20	90% SUBMITTAL SET	PLS	PLS
2	02.21.20	BID SET	PRL	PLS

Sound Development Group
ENGINEERING, SURVEYING & LAND DEVELOPMENT SERVICES
P.O. Box 1705 • 1111 Cleveland Avenue, Suite 202
Mount Vernon, WA 98273
Tel: 360-404-2010 Fax: 360-404-2013

SHEET DESCRIPTION
SPECIFICATIONS & TESC NOTES

SCALE: AS NOTED
DRAWN BY: P.LAU
DESIGNED BY: P.SEVERIN
CHECKED BY: P.SEVERIN
FIELD BOOK/PAGE:
DATE: 12.05.19

PROJECT
WSU INSTALL HEADHOUSE
FOR
CARLETTI ARCHITECTS
SEC 14-TWP 34N-RNG 3E

JOB NO. 18073
DRAWING NAME 18073ENG.dwg
SHEET C-3.0

SITE PLAN NOTES:

1. CONNECT ALL DOWNSPOUTS TO PVC TIGHTLINES AND CONNECT TO STORM DRAINAGE SYSTEM PER CIVIL DRAWINGS.
2. SEE CIVIL DWGS FOR GRADING, DRAINAGE, AND UTILITY PLANS
3. VERIFY LOCATIONS OF EXISTING POWER, COMMUNICATION, SEWER, STORM, GAS AND WATER LINES PRIOR TO CONSTRUCTION
4. CONTRACTOR TO VERIFY ALL EXISTING GRADES AND PROPERTY LINES
5. PROVIDE AND INSTALL CONDUIT AND POWER FROM POWER POLE AND TELEPHONE/ DATA SERVICE TO BUILDING TYP.
6. STRIPE ALL STALLS AS SHOWN. DO NOT NUMBER STALLS
7. PROVIDE AND INSTALL GAS PIPING TO BUILDING AS REQ'D FOR SERVICE.
8. REFER TO CIVIL DRAWINGS FOR ALL SITE DIMENSIONS AND BUILDING LOCATIONS TYPICAL.
9. REFER TO LANDSCAPE DRAWINGS FOR ALL LANDSCAPE REQUIREMENTS, LOCATIONS, AND QUANITIES.
10. ELECTRICAL CONTRACTOR TO PROVIDE SHOEBOX TYPE LUMINAIRE, POLE MOUNTED, SUITABLE FOR WET LOCATIONS,

PROPERTY ADDRESS: 16650 STATE ROUTE 536
MOUNT VERNON, WA 98273

ASSESSORS #: P21925

LEGAL DESCRIPTION:

(DK12 DR19) THE WEST 1045 FEET OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER LYING SOUTH OF MEMORIAL HIGHWAY AND SOUTHERLY OF SLOUGH AND ALSO TOGETHER WITH THE NORTH 324.5 FEET OF THE WEST 990 FEET OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER AND ALSO LESS RDS

PERMITTED USE:

YES

SITE SQUARE FOOTAGE

26.90 ACRES OR 1,171,764 SF

ZONING

AG-NRL AGRICULTURAL NATURAL RESOURCE LAND

SETBACKS

FRONT STREET (NORTH): 35'-0" REQUIRED (OK)
SIDE, INTERIOR (EAST): 15'-0" REQUIRED (OK)
SIDE, INTERIOR (WEST): 15'-0" REQUIRED (OK)
REAR: (SOUTH): 35'-0" REQUIRED (OK)

BUILDING HEIGHT

40'-0" MAX ALLOWED - PER DEFINITION FROM AVERAGE GRADE TO THE MID POINT ON THE ROOF STRUCTURE
<40'-0" MAX. HEIGHT PROVIDED PER DEFINITION (OK)

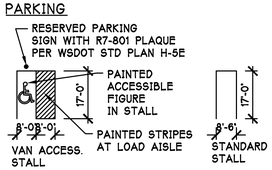
SITE COVERAGE

EXISTING BUILDING REMOVED (PREVIOUS GREENHOUSE REMOVED 2004)	-3,010 SF
NEW IMPERVIOUS (HEAD HOUSE BLDG.)	1,800 SF
NEW IMPERVIOUS (SIDEWALKS)	700 SF
TOTAL IMPERVIOUS SURFACE OR (SITE COVERAGE IS REDUCED BY 510 SF (OK)	
REMOVED PARKING IMPERVIOUS AREA	-1,026 SF

BUILDING SQUARE FOOTAGE

HEAD HOUSE BUILDING 1,800 SF

PARKING



PARKING REQ'D PER SKAGIT COUNTY MUNICIPAL CODE:

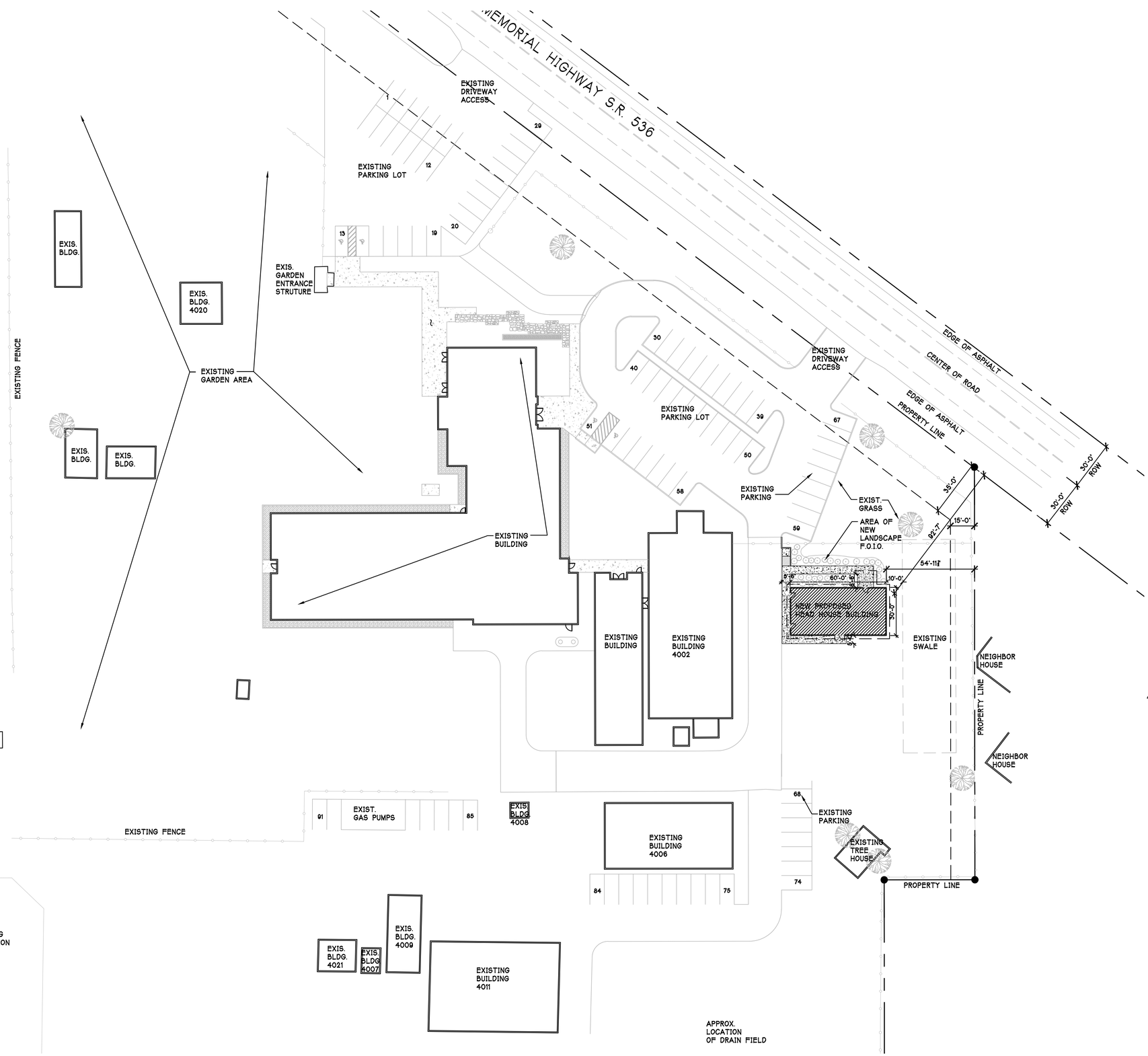
-PARKING REQ'D PROFESSIONAL OFFICE
1 STALLS REQUIRED FOR 300 SF
1,800 SF/ 300 = (6) STALLS REQUIRED
-PARKING REQ'D FOR GREENHOUSE
1 STALLS REQUIRED FOR 2500 SF
4000 SF/ 2500 = (2) STALLS REQUIRED
(8) TOTAL STALLS REQ'D
-USING THE (9) EXISTING STALLS TO THE NW OF THE PROPOSED BUILDING. (OK)
SITE CURRENTLY HAS 97 PARKING STALLS
(6) REMOVED IN FUTURE FOR GREENHOUSE - (91) EXISTING (OK)
-STANDARD PARKING STALL SIZES (8'-6"W X 17'-0"D)
-COMPACT PARKING STALL SIZES (8'-0"W X 16'-0"D) - 40% MAXIMUM
-DRIVE AISLE LANES ARE TO BE 24'-0" WIDE (OK)
-CHAPTER 11 IBC TABLE 1106.1 FOR PARKING SPACES BETWEEN 1-25 REQUIRE (1) VAN ADA STALLS (EXISTING) (OK)

BICYCLE PARKING

NOT REQUIRED

LANDSCAPING REQUIREMENTS

1) PER SKAGIT COUNTY MUNICIPAL CODE/ LANDSCAPE ARCHITECT.



PROPOSED SITE PLAN

SCALE: 1"=30'-0"

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT
PETER J. CARLETTI STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010.

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
1

SHEET TITLE:
SITE PLAN

PETER J CARLETTI
PROJECT ARCHITECT:

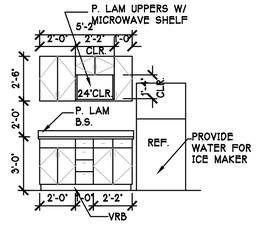
DAVID WILSON
DRAWN BY:

PETER J CARLETTI
CHECKED BY:

AUGUST 7, 2018
DATE

ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

A-1.0



1 CASEWORK ELEVATION

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

FLOOR PLAN NOTES:

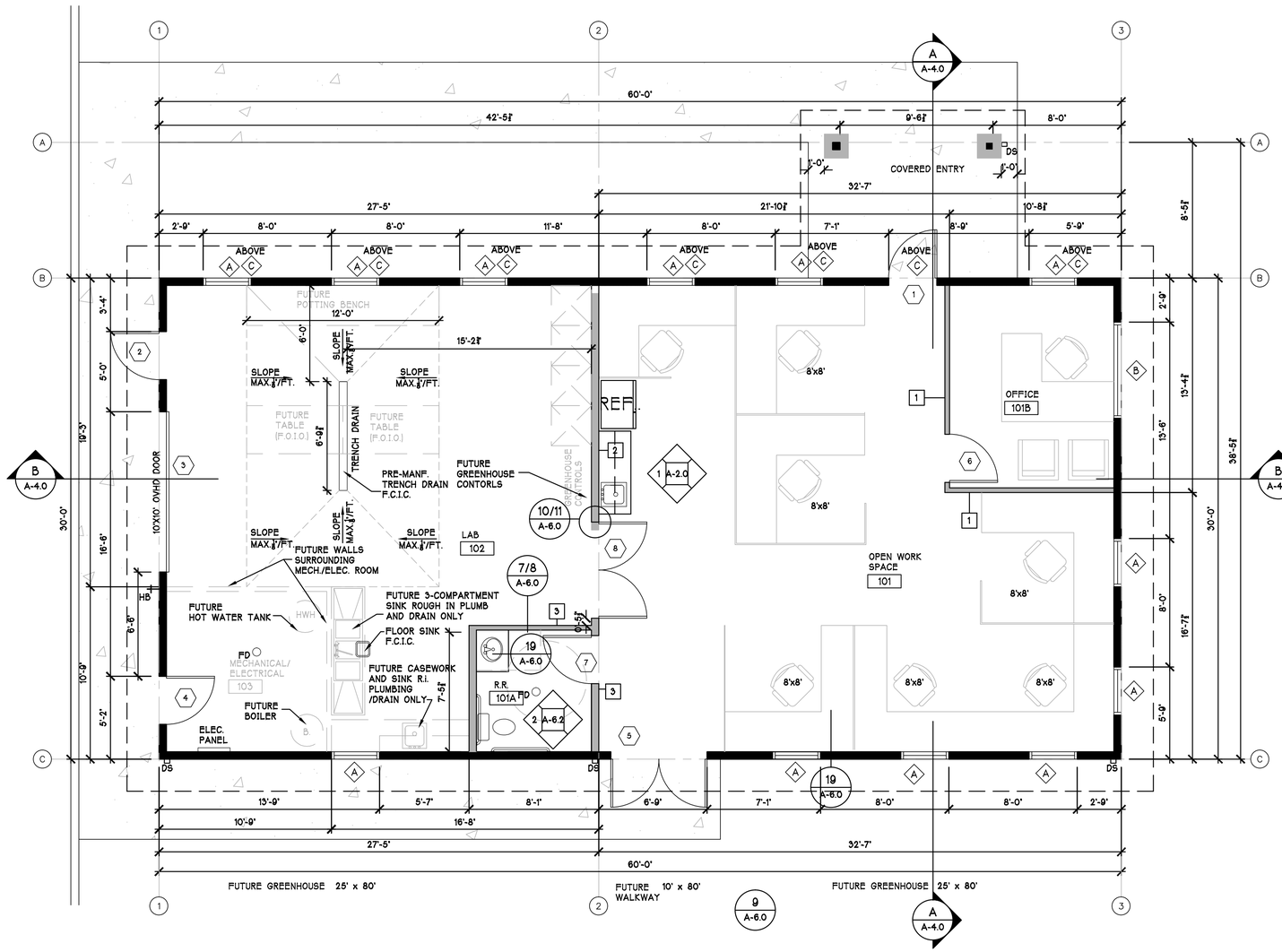
1. PROVIDE BARRIER FREE SIGNAGE AT ALL ADA RESTROOMS
2. CONFIRM ALL ROUGH OPENINGS FOR DOORS AND WINDOWS PRIOR TO FRAMING AND ORDERING.
3. CONFIRM ALL FINISHES W/ OWNER AND CONTRACTOR PRIOR TO ORDERING.
4. CONTRACTOR TO COORDINATE BUILDING ALARM/ SECURITY SYSTEM W/ OWNER PRIOR TO DRYWALL INSTALLATION.
5. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL CASEWORK FOR APPROVAL BY ARCHITECT/ OWNER PRIOR TO CONSTRUCTION.
6. SOUND INSULATE ALL WALLS TYP. THROUGH-OUT.
7. SEE WALL TYPE DETAILS ON SHEET A-6.0 DETAILS 12-14
8. ALL RESTROOMS TO HAVE GREEN GWB TYPICAL ALL WALLS AND CEILING.
9. ALL WINDOWS ARE TO RECEIVE WD SILL/ APRON W/ CLR. LAQ. FINISH TYP. THROUGHOUT W/ GWB JAMB AND HEAD. (ALL WOOD TO BE MAPLE CLR. LAQ. TYP.)

EXIT PLAN NOTES:

1. TRAVEL DISTANCE TO COMMON PATH OF TRAVEL < 75'-0" PER TABLE 1006.2.1 (OK)
2. OVERALL EXIT TRAVEL DISTANCE < 200'-0" FOR (B) OCC. WITHOUT SPRINKLERS) PER IBC TABLE 1017.2 (OK)
3. WHERE 2 EXITS ARE REQUIRED WE HAVE MET THE REQUIREMENT THAT THE EXITS DOORS ARE GREATER THAN 1/2 THE DIAGONAL DISTANCE APART OF THE OCCUPANT AREA SERVED PER IBC 1007.1.1 (OK)
4. EGRESS WIDTH PROVIDED PER OCCUPANT SERVED EXISTING (OK)
5. INSTALL EXIT LIGHTS & FIRE EXTINGUISHERS SHOWN ON PLAN AND AS DIRECTED BY THE FIRE MARSHALL

FLOOR PLAN LEGEND

- EXIT — DIRECTIONAL EMERGENCY EXIT SIGN HARDWIRE W/ BATTERY BACKUP
- EXIT — COMBINATION EXIT SIGN/EMERGENCY LIGHTING WITH BATTERY BACKUP HARDWARE
- EMERGENCY LIGHTING W/ BATTERY BACKUP HARDWARE
- FE — 2A 10BC SEMI-RECESSED FIRE EXTINGUISHER SEE SHEET A2.0 FOR LOCATIONS
- (X) — DOOR NUMBER SEE SHEET A-2.3 FOR SCHEDULE
- (X) — WINDOW NUMBER SEE SHEET A-2.3 FOR SCHEDULE
- XXX — ROOM FINISH TAG SEE SHEET A-2.3 FOR SCHEDULE
- EXTERIOR WALL - NEW 2 X 6 WD FRAMED EXTERIOR WALLS @ 16" O.C. W/ EXTERIOR SIDING PER ELEVATIONS, O/ TYVEK B.P. O/ 1/2" EXT. SHEATHING PER STRUCT. W/ R-21 BATT INSULATION W/ INTERIOR V.B. W/ INTERIOR 5/8" TYPE 'X' GWB TAPED, MUDDED, AND SANDED, OP TEXTURE, PNT.
- INTERIOR WALLS TO BE 2 X _ WD FRAMING @ 16" O.C. W/ 5/8" GWB BOTH SIDES, PAINT BOTH SIDES, REFER TO PLANS FOR HEIGHT TO FRAME WALL. BRACE W/ KICKER BRACES @ 5'-0" O.C. TO STRUCTURE ABOVE, SEE WALL TYPES FRAMING SIZE/NOTES
- (F) — NEW FANS, VENT TO OUTSIDE AS REQUIRED PER MECHANICAL
- SEE WALL TYPES DETAILS ON SHEET A-6.0
- DS — BUILDING DOWN SPOUT LOCATIONS
- FD — 6" ø FLOOR DRAIN, SLOPE FLOOR TO DRAIN, PER MECHANICAL
- HB — FREEZE PROOF HOSE BIB, PER MECHANICAL
- WDO BLINDS (F.C.I.C.) TYP. THROUGHOUT AT ALL WINDOWS TYP.



PROPOSED FLOOR PLAN

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT
PETER J. CARLETTI
STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
1

SHEET TITLE:
FLOOR PLAN

PETER J. CARLETTI
PROJECT ARCHITECT:

DAVID WILSON
DRAWN BY:

PETER J CARLETTI
CHECKED BY:

AUGUST 7, 2018
DATE

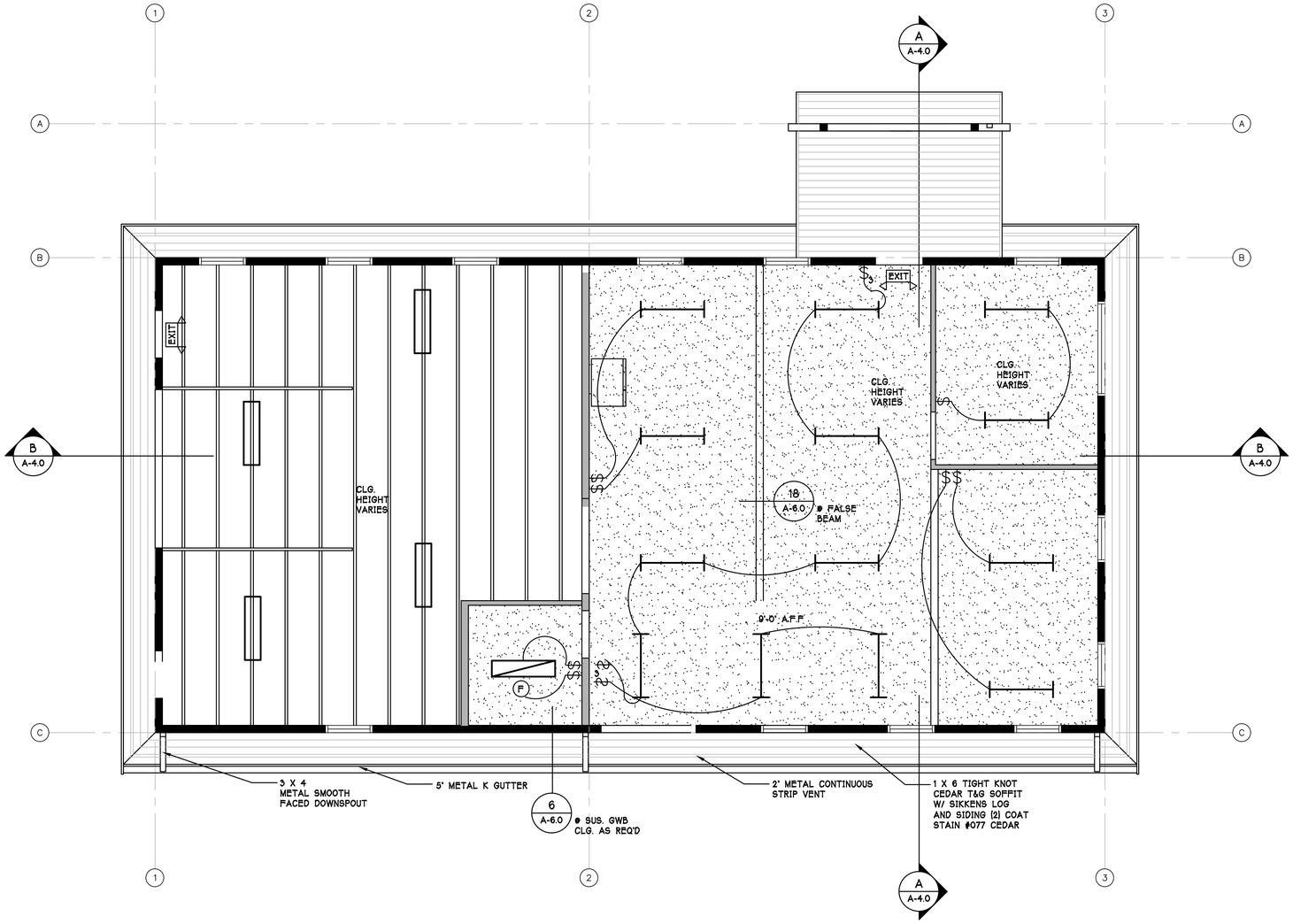
ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

A-2.0

LEGEND

- 1'-0" X 4'-0" SURFACE MOUNTED LED ACRYLIC WRAP LENS
- 1'-0" X 4'-0" CHAIN MOUNTED LED FIXTURE
- 6" LED RECESSED DOWN LIGHT CLEAR ALZAC LENS - PER ELECTRICAL
- EXTERIOR RATED WALL MOUNTED LED UP/ DOWN LIGHTS BLACK PER ELECTRICAL
- DIRECTIONAL EMERGENCY EXIT SIGN HARDWIRE W/ BATTERY BACKUP
- COMBINATION EXIT SIGN/EMERGENCY LIGHTING WITH BATTERY BACKUP HARDWARE
- EMERGENCY LIGHTING W/ BATTERY BACKUP HARDWARE
- $ SINGLE POLE SWITCH
- $3 3-WAY SWITCH. PER ELECTRICAL
- (T) THERMOSTAT HEATING SYSTEMS

NOTES.
1. LOCATE LIGHTS SO AS NOT TO INTERFERE W/ MECH. SYSTEMS



PROPOSED REFLECTED CEILING PLAN

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT
PETER J. CARLETTI
STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
- 10-1-18 PRELIM SET
- 1/16/20 90% SET
- 1/28/20 PERMIT SET
- 2/24/20 BID SET
- 1

SHEET TITLE:

REFLECTED CEILING PLAN

PETER J. CARLETTI
PROJECT ARCHITECT:

DAVID WILSON
DRAWN BY:

PETER J CARLETTI
CHECKED BY:

AUGUST 7, 2018
DATE

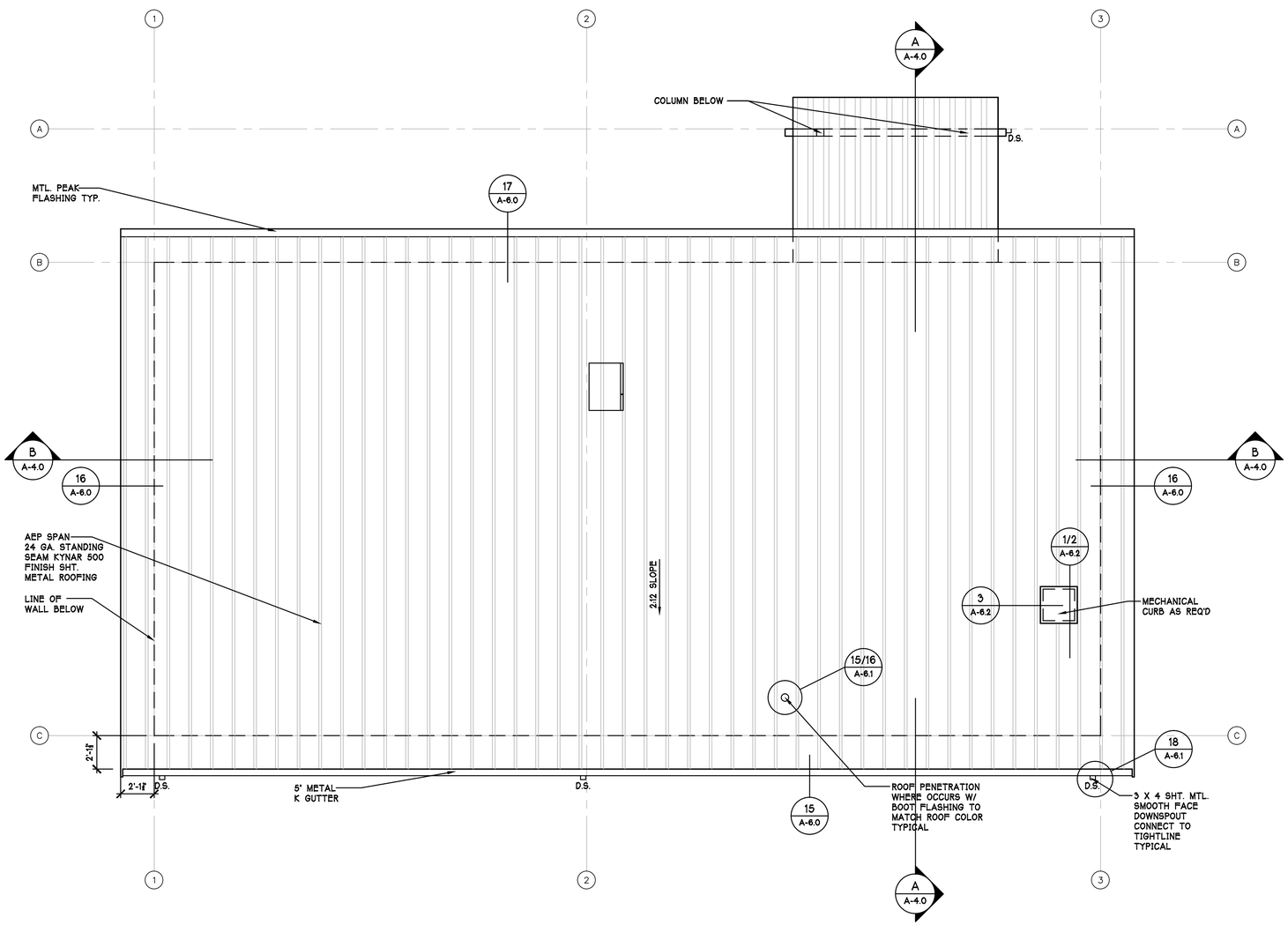
ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

A-2.1

ROOF NOTES:

□ INDICATES 3 X 4 RECTANGULAR SMOOTH FACED DOWNSPOUT TIGHTLINE AS REQUIRED.

1. ALL ROOFS SLOPES ARE AS NOTED.
2. ALL ROOF OVERHANGS ARE AS NOTED.
3. CONNECT ALL DOWNSPOUTS TO TIGHTLINES AS REQUIRED. COORDINATE ALL DOWNSPOUT LOCATIONS WITH CIVIL.
4. LOCATE ALL DOWNSPOUTS SO AS NOT TO INTERFERE W/ WINDOWS OR DOORWAYS.
3. PROVIDE AND INSTALL STEP FLASHING AS REQ'D.
4. SIZE OF GUTTERS & DOWNSPOUTS TO BE OVERSIZED WHERE NECESSARY TO HANDLE RAINWATER FROM VALLEYS AND ROOF SURFACES.
5. PLUMBING/ELEC./MECH. SUBCONTRACTORS TO PROVIDE/ INSTALL FLASHING BOOTS AT ALL ROOF PENETRATIONS TYP.
6. ALL RAKE, EAVE, AND PEAK FLASHING TO BE SHEET METAL TYPICAL.
7. PROVIDE AND INSTALL SHEET METAL AND PARAPET CAP FLASHING AS REQUIRED.
8. ALL ROOF VALLEY'S TO BE MTL FLASH TYP. AS REQ'D



PROPOSED ROOF PLAN

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT
PETER J. CARLETTI
STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
1

SHEET TITLE:
ROOF PLAN

PETER J. CARLETTI
PROJECT ARCHITECT:

DAVID WILSON
DRAWN BY:

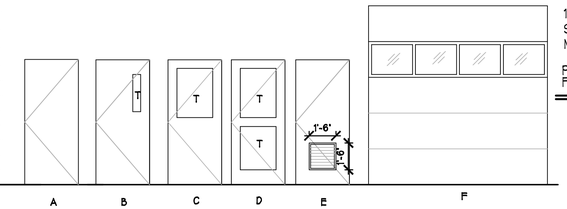
PETER J CARLETTI
CHECKED BY:

AUGUST 7, 2018
DATE

ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

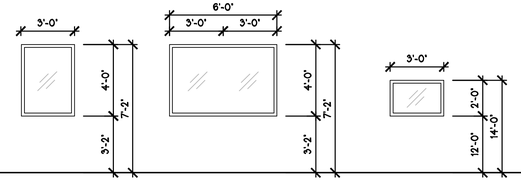
A-2.2

DOOR SCHEDULE												
NO.	SIZE	DOOR LEAF			FRAME		HARDWARE			RATING	NOTES
		TYPE	MAT'L.	FIN.	MAT'L.	FIN.	CLSR.	PANIC	GRP.		
1	3'-0" X 7'-0"	D	ALUM. STOR.	CLR. ANOD.	ALUM. STOR.	CLR. ANOD.	YES	-	-	-	STOREFRONT DOOR W/ TUBULAR PUSH-PULL/CONTINUOUS HINGE/WEATHERSTRIP/ THRESHOLD/ SWEEP/ DEADBOLT/ SOLARBAN 60 LOW E GLASS, U VALUE .65
2	3'-0" X 7'-0"	C	HMD	PNT.	HMF	PNT.	YES	-	-	-	INSULATED/KEYED LOCKEST WITH MORTISED INTEGRAL DEADBOLT/ WEATHERSTRIP/ THRESHOLD/ SWEEP/ SOLARBAN 60 LOW E GLASS
3	10'-0" X 10'-0"	F	ALUM.	F.F.	HMF	FF	YES	-	-	-	591 SERIES OVHD DOOR CO. OR APPROVED EQUIVALENT SECTIONAL OVHD DOOR 2" TRACK W/ SIDE MOUNT TROLLEY POWER OPERATOR DOOR, CHAIN HOIST, WEATHERSTRIP, STANDARD LIFT TRACK, U VALUE 0.067 OR BETTER
4	3'-0" X 7'-0"	E	HMD	PNT.	HMF	PNT.	YES	-	-	-	INSULATED LEVER HANDLE W/ KEYED STORAGE LOCK/ MORTISED INTEGRAL DEADBOLT, OVHD STOP W/ WEATHERSTRIP/ THRESHOLD, SWEEP
5	(2) 3'-0" X 7'-0"	C	HMD	PNT.	HMF	PNT.	YES	-	-	-	STOREFRONT DOOR W/ TUBULAR PUSH-PULL/CONTINUOUS HINGE/WEATHERSTRIP/ THRESHOLD/ SWEEP/ DEADBOLT/ SOLARBAN 60 LOW E GLASS
6	3'-0" X 7'-0"	C	WD	CLR. LAQ.	HMF	PNT.	-	-	-	-	LEVER HANDLE, KEYED OFFICE LOCK SET, WALL STOP
7	3'-0" X 7'-0"	A	WD	CLR. LAQ.	HMF	PNT.	-	-	-	-	LEVER HANDLE, PRIVACY LOCK SET, SS KICKPLATES BOTH SIDES, WALL STOP
8	(2) 3'-0" X 7'-0"	B	HMD	PNT	HMF	PNT.	YES	-	-	-	LEVER HANDLE, KEYED LOCK SET, W/ SS KICKPLATES BOTH SIDES, HOLD OPEN FOR BOTH DOORS FLOOR MOUNT W/ STOP, SYNCRONIZED CLOSERS SO THEY CLOSE AT THE SAME TIME, WEATHERSTRIP, THRESHOLD



DOOR NOTES:
1. ALL DOORS TO BE 1 3/4" THICK. ALL HM DOORS TO BE INSULATED W/ SHOP PRIME, PNT. TYP.
2. VERIFY ALL R.O. AND JAMB DEPTHS PRIOR TO ORDERING.
3. ALL DOORS TO HAVE BARRIER FREE HARDWARE AS REQUIRED.
4. EXIT DOORS 1/2 SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
5. ALL GLAZING WITHIN A 24 INCH ARC OF EITHER EDGE OF DOORS AND WITHIN 18 INCHES OF FLOORS SHALL BE SAFTEY GLAZING AS REQUIRED BY IBC SECTION 2406. ALL SUCH GLAZING SHALL HAVE PERMANENT IDENTIFICATION SAFETY GLAZING STAMP.
6. DOORS SHALL HAVE LEVER HARDWARE WHICH WILL PERMIT OPERATION BY WRIST OR ARM PRESSURE.
7. ALL DOORS W/ DEADBOLTS MUST HAVE SINGLE ACTION OPERATION BY HANDLE INSIDE AND KEY ON THE EXTERIOR
8. FOR DOOR DETAILS SEE SHEETS A-6.1
9. U VALUE OF ALL EXTERIOR HMD TO BE .37 OR BETTER
10. ALL EXTERIOR DOORS ARE TO BE FULLY WEATHERSTRIPPED AND HAVE ADA COMPLYING THRESHOLDS AND CONCRETE LANDINGS (OR SIDEWALK). EXTERIOR DOORS OPENING ON TO TRAFFIC AREAS ARE TO BE PROTECTED BY PIPE BOLLARDS.

WINDOW SCHEDULE							
NO.	QTY.	SIZE	TYPE	FRAME		U-VALUE	NOTES
				MAT'L.	FIN.		
A	12	3'-0" X 4'-0"	FIXED	STOREFRONT	CLEAR ANOD.	.34	EXTERIOR (SOLARBAN 60 PPG CLEAR LOW E)
B	1	6'-0" X 4'-0"	FIXED	STOREFRONT	CLEAR ANOD.	.34	EXTERIOR (SOLARBAN 60 PPG CLEAR LOW E)
C	7	3'-0" X 2'-0"	FIXED	STOREFRONT	CLEAR ANOD.	.34	EXTERIOR (SOLARBAN 60 PPG CLEAR LOW E)



A STOREFRONT WINDOW (12) B STOREFRONT WINDOW (1) C STOREFRONT WINDOW (7)

WINDOW NOTES:
1. ALL GLAZING IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24" ARC OR EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE SHALL BE TEMPERED. (GLAZING SUBCONTRACTOR TO VERIFY LOCATION(S) OF ALL SAFTEY GLAZING.)
2. GLAZING SHALL BE TEMPERED IN AN INDIVIDUAL FIXED OR OPERABLE PANEL, OTHER THAN THOSE LOCATIONS DESCRIBED IN ITEM 1. ABOVE, THAT MEETS ALL THE FOLLOWING CRITERIA.
   A) EXPOSED AREA OF INDIVIDUAL PANE GREATER THAN 9 SQUARE FEET.
   B) EXPOSED BOTTOM EDGE GREATER THAN 36" ABOVE THE FLOOR.
   C) EXPOSED TOP EDGE GREATER THAN 36" ABOVE THE FLOOR.
   D) ONE OR MORE WALKING SURFACES WITHIN 26" ABOVE THE FLOOR.
3. REFER TO THE DOOR SCHEDULE FOR SIZE OF ALL DOORS WITH GLAZING.
4. SEE BUILDING ELEVATIONS FOR MUTTON AND DOOR PLACEMENTS & OPERABLE WINDOWS.
5. ALL WINDOW SIZES ARE ROUGH OPENINGS AND SHALL BE FIELD MEASURED PRIOR TO FABRICATION.
6. U-VALUE OF ALL WINDOWS TO BE .34 OR BETTER, LOW E & THERMALLY BROKEN U-VALUE OF ALL STOREFRONT DOORS TO BE .65 OR BETTER, LOW E (SHADING COEFFICIENT TO BE .40 OR BETTER.)
7. CONTRACTOR TO VERIFY ALL WINDOW QUANTITIES.
8. CONTRACTOR TO VERIFY ALL WINDOW SIZES
9. SEE SHEETS A-6.1 FOR WINDOW DETAILS
10. T = TEMPERED GLASS

FINISH SCHEDULE																								
ROOM	ROOM	FLOOR			BASE			NORTH WALL			SOUTH WALL			EAST WALL			WEST WALL			CEILING			NOTES:
NO.	NAME	MAT'L	FIN.	NO.	MAT'L	FIN.	NO.	MAT'L	FIN.	NO.	MAT'L	FIN.	NO.	MAT'L	FIN.	NO.	MAT'L	FIN.	NO.	MAT'L	FIN.	HGT.	
101	OPEN WORK SPACE	LVT	FF	LVT-1	VRB	FF	VRB-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PNT - 2	VARIES	
101B	OFFICE	LVT	FF	LVT-1	VRB	FF	VRB-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PNT - 2	VARIES	
101A	RESTROOM	LVT	FF	LVT-1	SV	FF	SV-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PNT - 2	9'-0"	P-LAM WALL FINISH ALL (4) WALLS TO 60" A.F.F. TYP. AT RESTROOM
102	LAB	CONC.	SEAL	S-1	VRB	FF	VRB-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PNT - 2	VARIES	FRP FINISH ALL (4) WALLS TO 96" A.F.F. TYP. AT LAB
103	MECHANICAL/ELECTRICAL FUTURE	CONC.	SEAL	S-1	VRB	FF	VRB-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PAINT	PNT-1	GWB	PNT - 2	9'-0"	

CONTRACTOR TO PROVIDE ALL MATERIAL SAMPLES TO ARCHITECT/OWNER FOR APPROVAL PRIOR TO ORDERING.

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT PETER J. CARLETTI STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services PH 509-335-5571
2425 E. Grimes Way FAX 509-335-9304
Pullman, Wa. 99164-1150

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
1

SHEET TITLE:
SCHEDULES

PETER J. CARLETTI
PROJECT ARCHITECT:

DAVID WILSON
DRAWN BY:

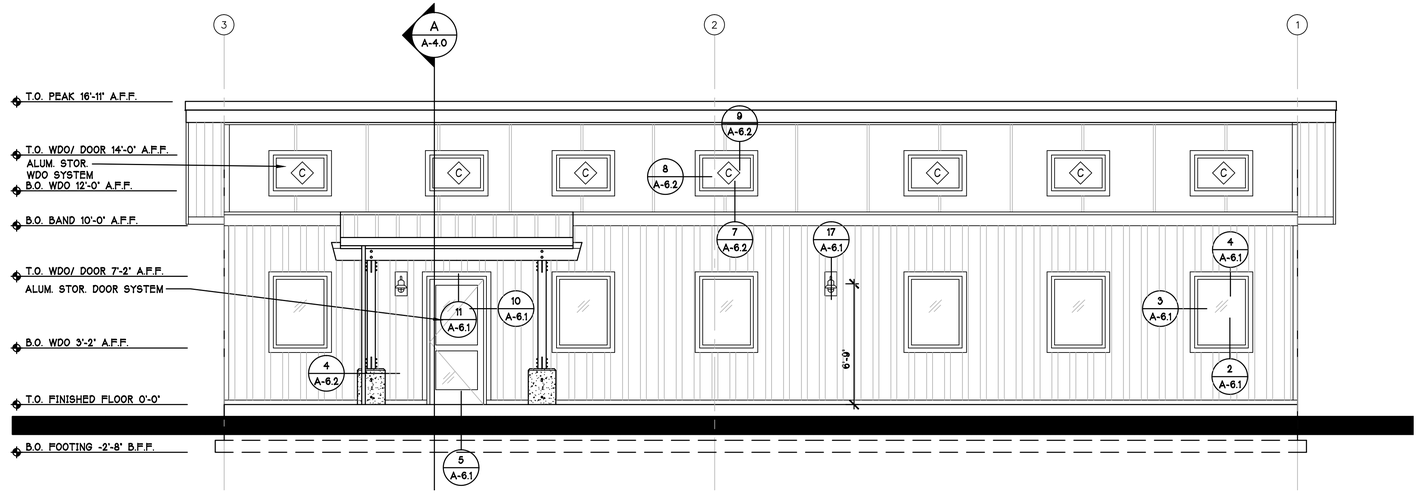
PETER J CARLETTI
CHECKED BY:

AUGUST 7, 2018
DATE

ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

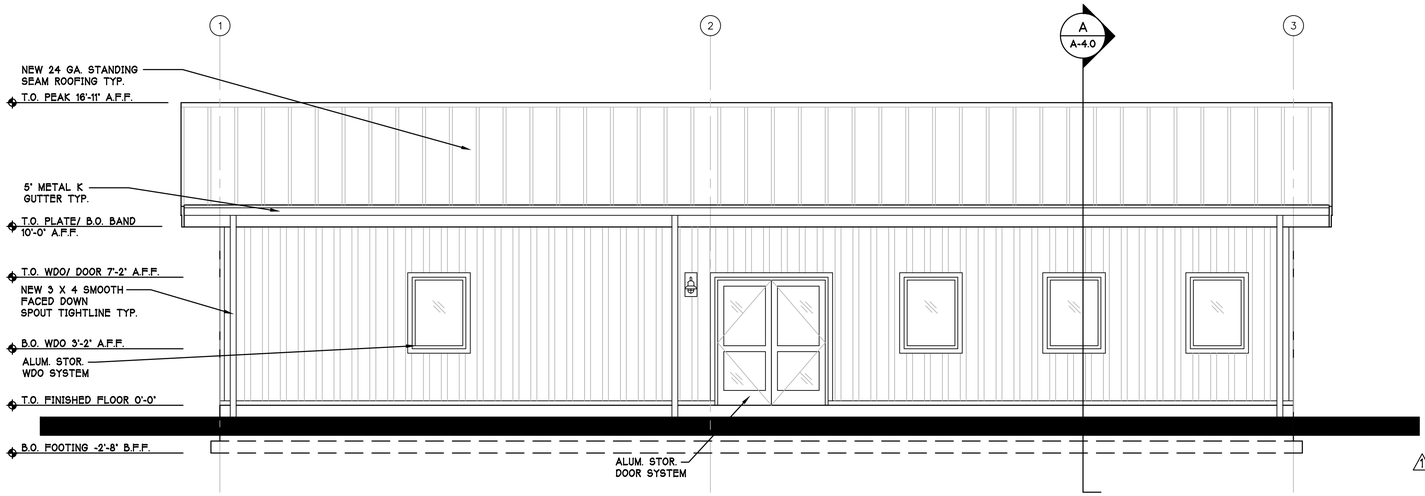
A-2.3

MATERIAL SCHEDULE		
MATERIAL:	MANUFACTURER:	COLOR:
HMF/ HMD EXTERIOR PAINT COLORS		
PAINT #1	SHERWIN WILLIAMS	CHARCOAL GREY TO MATCH ROOFING
METAL STANDING SEAM ROOFING/ GUTTER/ DOWNSPOUT		
METAL #1	AEP SPAN	ZACTIQUE II
METAL MINI V RIB SIDING		
METAL #2	AEP SPAN	SILVER METALLIC
CEDAR FASCIA/ CEDAR BAND/ T&G TIGHTKNOT CEDAR SOFFIT		
STAIN #1	SIKKENS	CEDAR '077' LOG AND SIDING 2 COAT SYSTEM
ALUMINUM STOREFRONT WINDOW SYSTEMS (INSULATED-THERMALLY BROKEN)		
ANODIZED	ARCADIA	CLEAR ANODIZED
GLAZING (1 INCH) ANNEALED GLASS)		
CLEAR + CLEAR	PPG	SOLARBAN 60 CLEAR LOW E AS REQ'D TO MEET .34 UV AND .40 SC
T1-11 SMOOTH FACED PANELS W/ BATTENS 4'-0" O.C.		
PNT. #1	SHERWIN WILLIAMS	CHARCOAL GREY



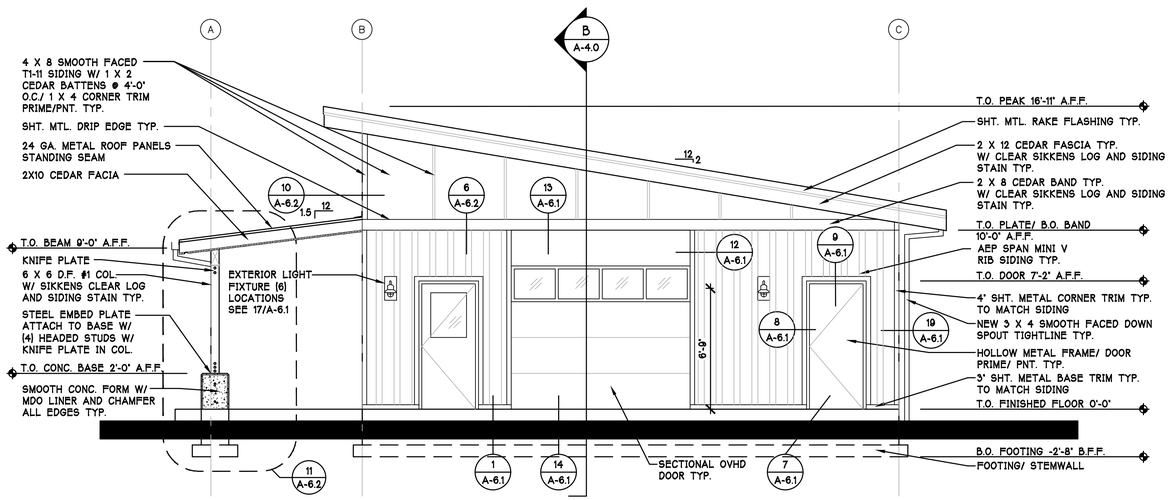
NORTH ELEVATION

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



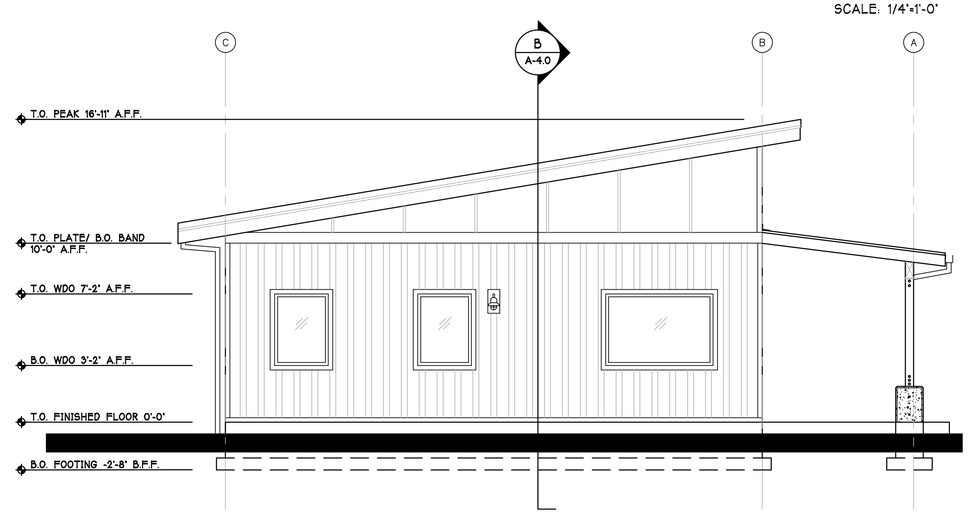
SOUTH ELEVATION

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



WEST ELEVATION

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



EAST ELEVATION

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT
PETER J. CARLETTI
STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH: 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
1

SHEET TITLE:
ELEVATIONS

PETER J. CARLETTI
PROJECT ARCHITECT:

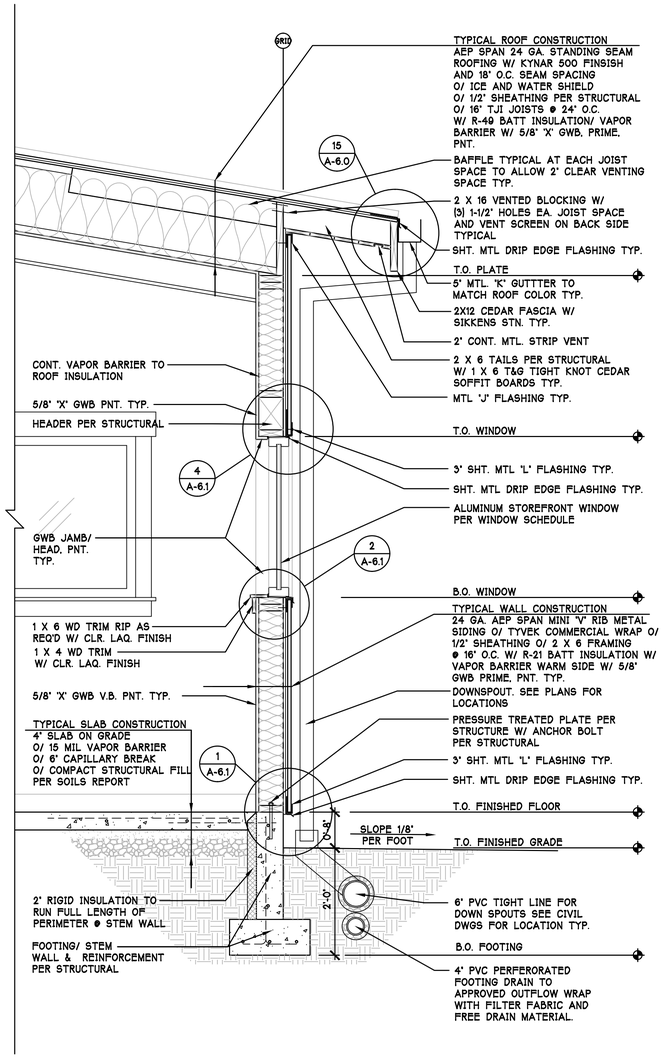
DAVID WILSON
DRAWN BY:

PETER J CARLETTI
CHECKED BY:

AUGUST 7, 2018
DATE

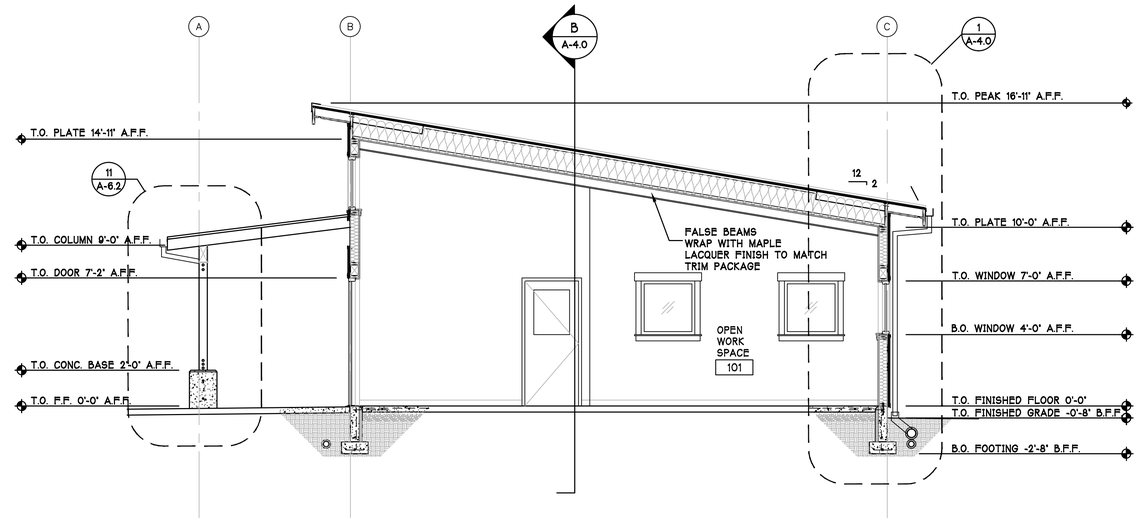
ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

A-3.0



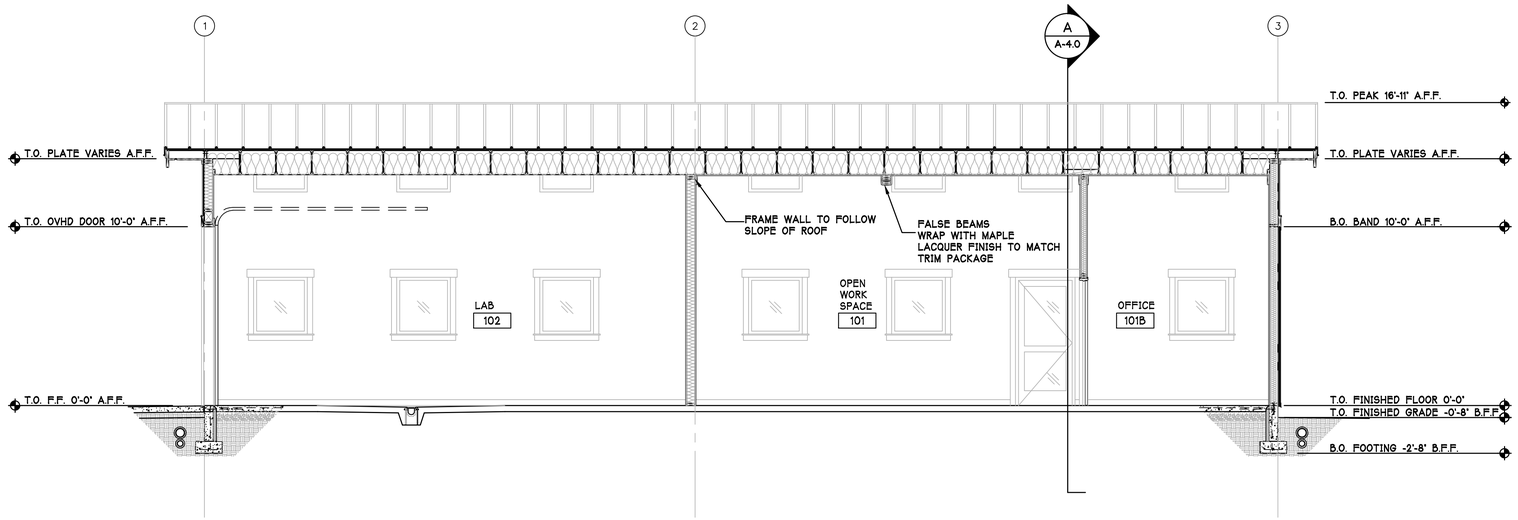
1 TYPICAL WALL SECTION

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



A BUILDING SECTION 'A'

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



B BUILDING SECTION 'B'

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT
PETER J. CARLETTI
STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services PH 509-335-5571
2425 E. Grimes Way FAX 509-335-9304
Pullman, Wa. 99164-1150
WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9806-2018

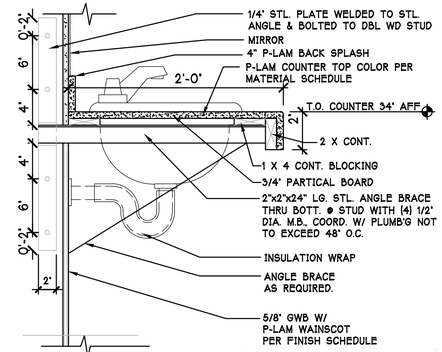
18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
1

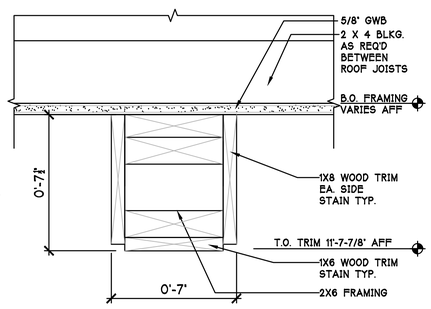
SHEET TITLE:
SECTIONS
TYP. WALL SECTION

PETER J. CARLETTI
PROJECT ARCHITECT:
DAVID WILSON
DRAWN BY:
PETER J CARLETTI
CHECKED BY:
AUGUST 7, 2018
DATE
ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

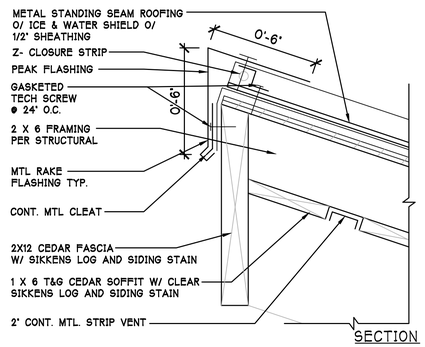
A-4.0



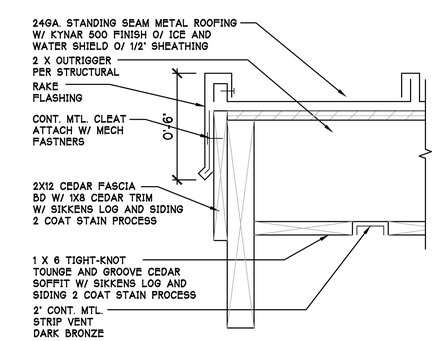
19 LAVATORY DETAIL
SCALE: 1-1/2"=1'-0"



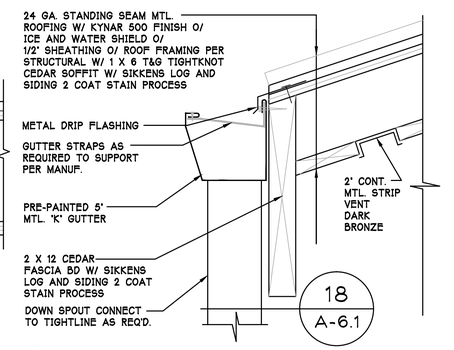
18 FALSE BEAM TYP.
SCALE: 3'=1'-0"



17 TYP. PEAK
SCALE: 3'=1'-0"



16 TYPICAL RAKE
SCALE: 3'=1'-0"



15 TYPICAL GUTTER
SCALE: 3'=1'-0"

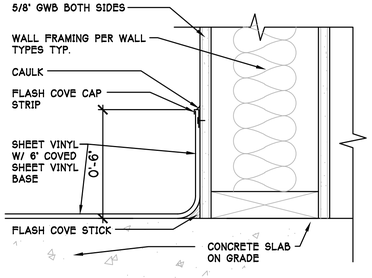
14 WALL TYPE
SCALE: 3'=1'-0"

13 WALL TYPE
SCALE: 3'=1'-0"

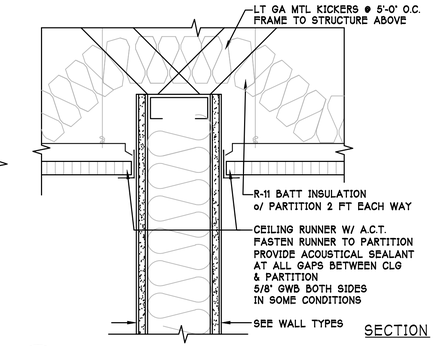
12 WALL TYPE - INFILL @ WDO
SCALE: 3'=1'-0"

11 INT. HMD HEAD
SCALE: 3'=1'-0"

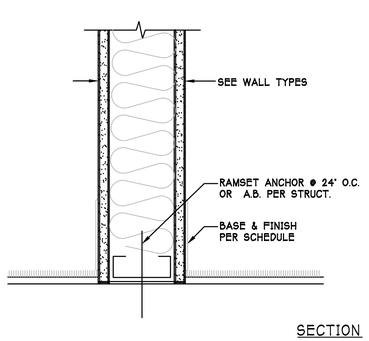
10 INT. HMD JAMB
SCALE: 3'=1'-0"



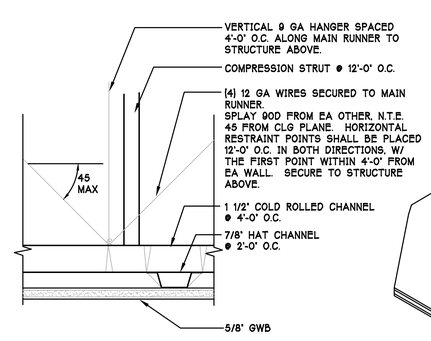
9 COVED BASE DETAIL
SCALE: 3'=1'-0"



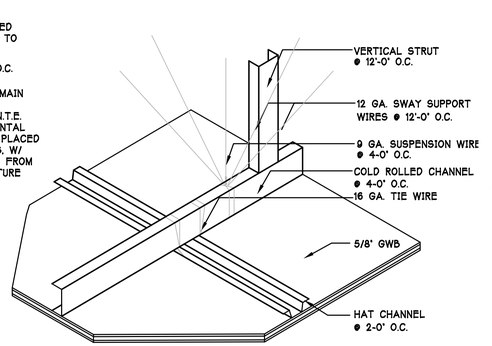
8 PARTITION HEAD AS REQ'D
SCALE: 3'=1'-0"



7 PARTITION BASE
SCALE: 3'=1'-0"



6 SUSPENDED GWB AS REQ'D
N.T.S



CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT PETER J. CARLETTI STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

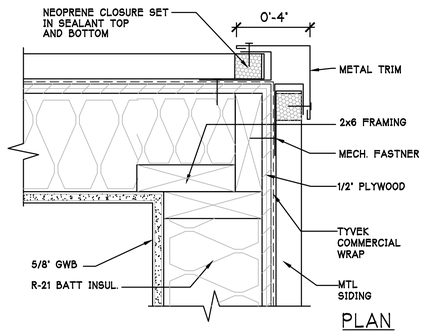
18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
1

SHEET TITLE:
DETAILS

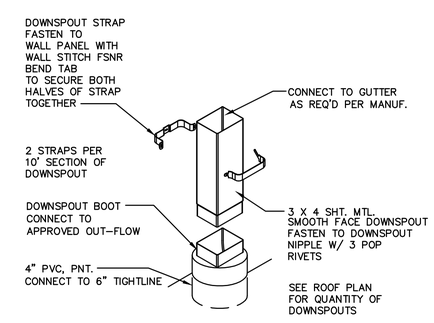
PETER J. CARLETTI
PROJECT ARCHITECT:
DAVID WILSON
DRAWN BY:
PETER J CARLETTI
CHECKED BY:
AUGUST 7, 2018
DATE
ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

A-6.0



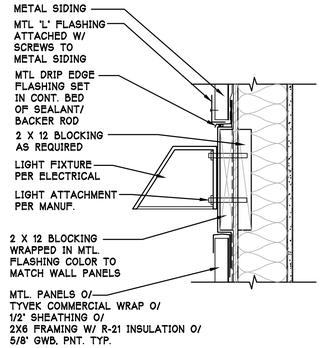
19 EXT. MTL. CORNER

SCALE: 3"=1'-0"



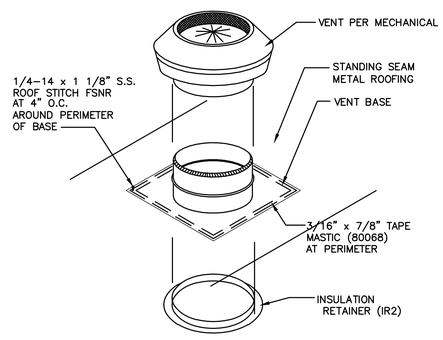
18 TYP. DOWN SPOUT

SCALE: N.T.S.



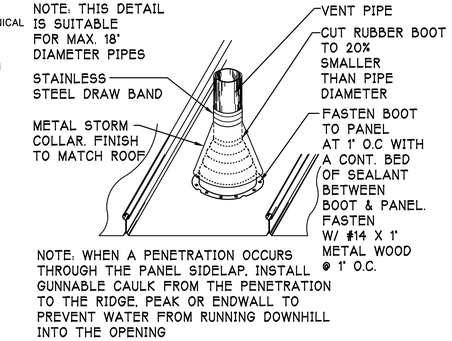
17 LIGHT FIXTURE @ MTL. PANELS

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



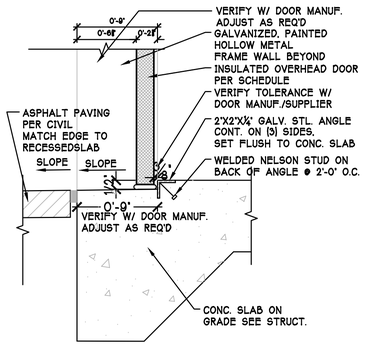
16 TYP. ROOF PENETRATION

SCALE: N.T.S.



15 TYP. ROOF PENETRATION

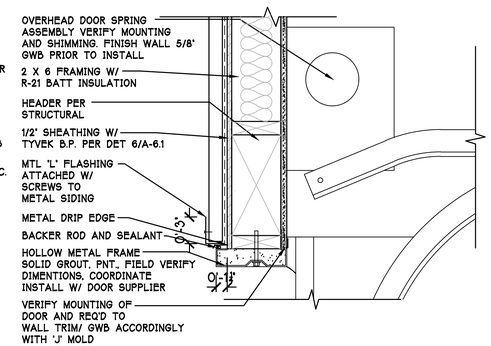
SCALE: NTS



14 OVHD. DOOR SILL

SEE 6/A-6.1

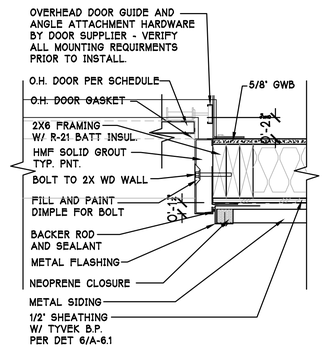
SCALE: 1-1/2"=1'-0"



13 OVHD. DOOR HEAD @ MTL.

SEE 6/A-6.1

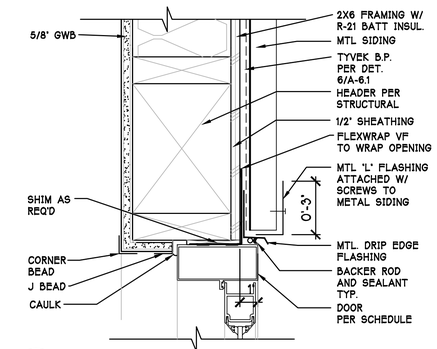
SCALE: 1-1/2"=1'-0"



12 OVHD. DOOR JAMB @ MTL.

SEE 6/A-6.1

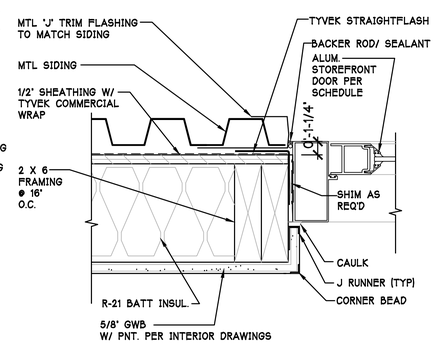
SCALE: 1-1/2"=1'-0"



11 STOR. DOOR HEAD @ MTL. SIDING

SEE 6/A-6.1

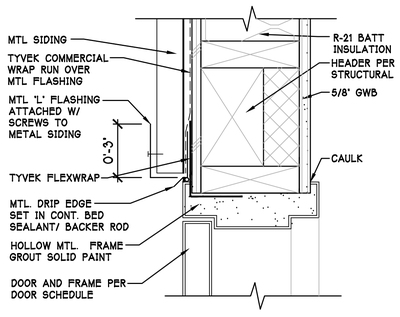
SCALE: 3"=1'-0"



10 STOR. DOOR JAMB @ MTL. SIDING

SEE 6/A-6.1

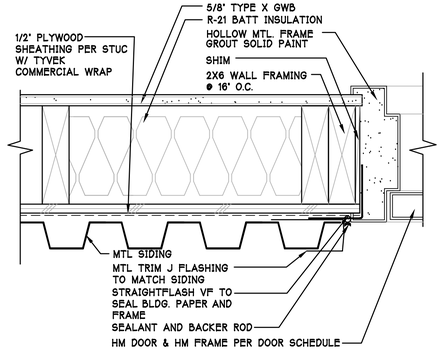
SCALE: 3"=1'-0"



9 H.M.D. HEAD @ MTL. SIDING

SEE 6/A-6.1

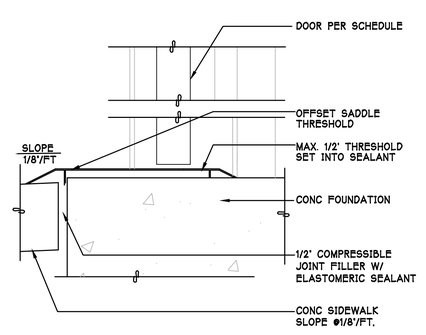
SCALE: 3"=1'-0"



8 H.M.D. JAMB @ MTL. SIDING

SEE 6/A-6.1

SCALE: 3"=1'-0"



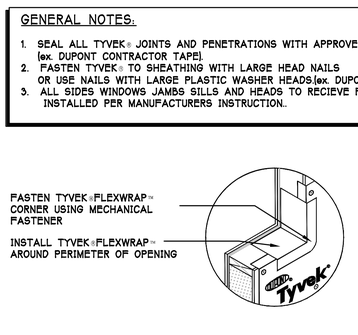
7 EXT. H.M.D. THRESHOLD

SEE 6/A-6.1

SCALE: 3"=1'-0"

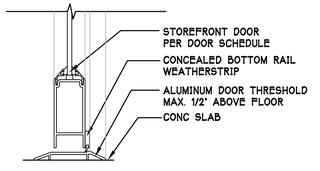
GENERAL NOTES:

1. SEAL ALL TYVEK® JOINTS AND PENETRATIONS WITH APPROVED TAPE. (ex. DUPONT CONTRACTOR TAPE).
2. FASTEN TYVEK® TO SHEATHING WITH LARGE HEAD NAILS OR USE NAILS WITH LARGE PLASTIC WASHER HEADS.(ex. DUPONT WRAPCAPS)
3. ALL SIDES WINDOWS JAMBS SILLS AND HEADS TO RECIEVE FLEXWRAP INSTALLED PER MANUFACTURERS INSTRUCTION..



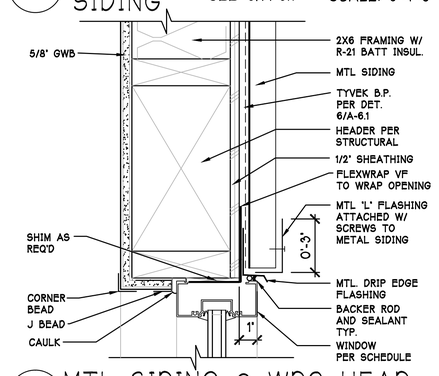
6 WINDOW DOOR WALL WRAP DETAIL

SCALE: N.T.S.



5 STOREFRONT SILL

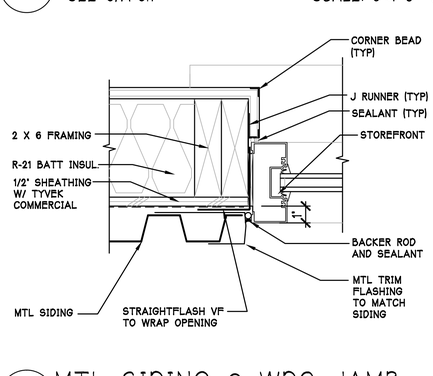
SCALE: 3"=1'-0"



4 MTL SIDING @ WDO HEAD

SEE 6/A-6.1

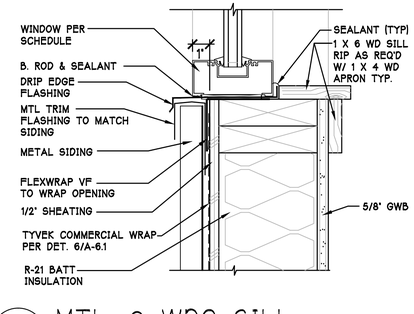
SCALE: 3"=1'-0"



3 MTL SIDING @ WDO JAMB

SEE 6/A-6.1

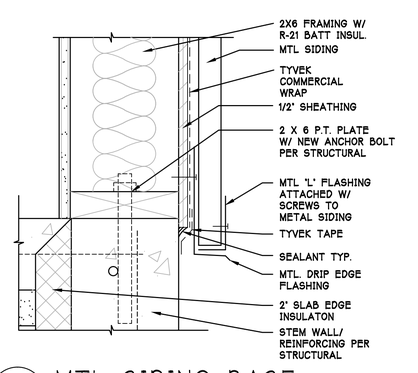
SCALE: 3"=1'-0"



2 MTL. @ WDO SILL

SEE 6/A-6.1

SCALE: 3"=1'-0"



1 MTL SIDING BASE

SEE 6/A-6.1

SCALE: 3"=1'-0"

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429
REGISTERED ARCHITECT
PETER J. CARLETTI
STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services PH 509-335-5571
2425 E. Grimes Way FAX 509-335-9304
Pullman, Wa. 99164-1150

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

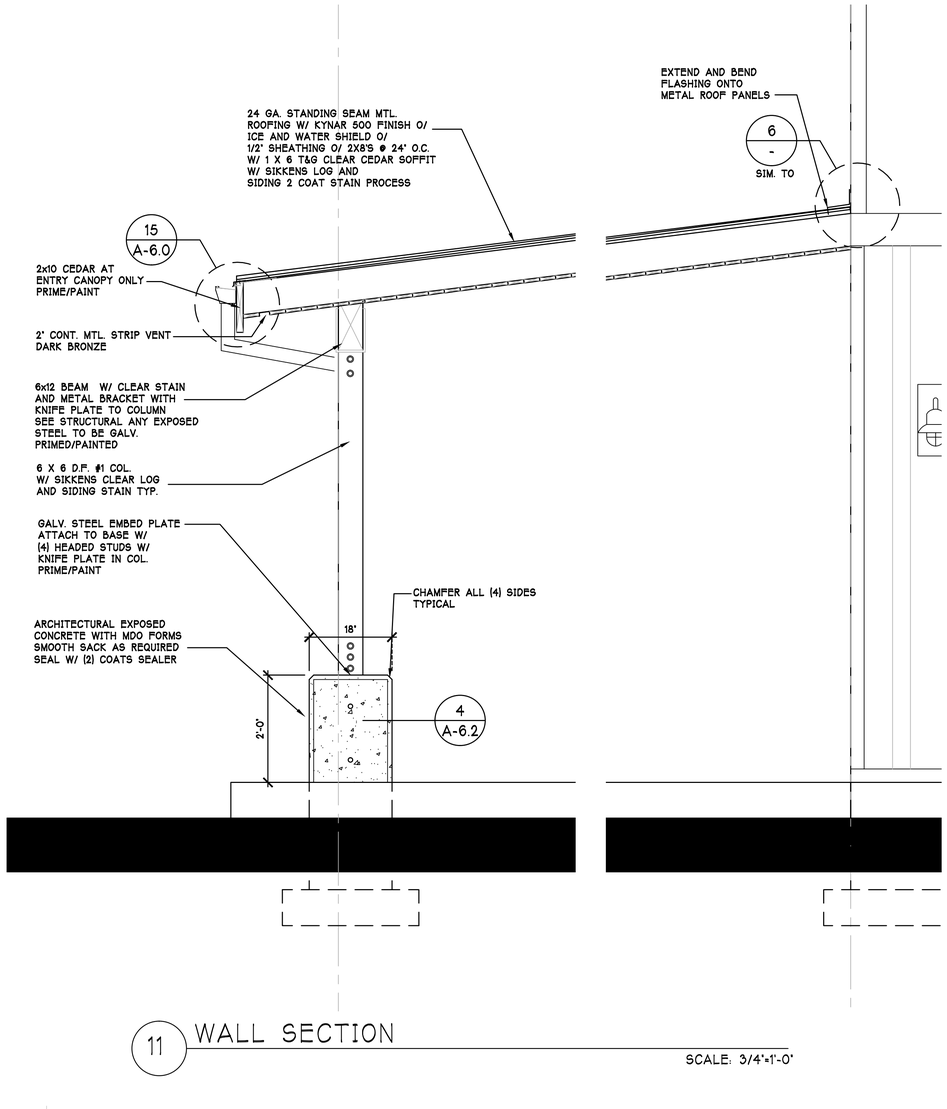
18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
1

SHEET TITLE:
DETAILS

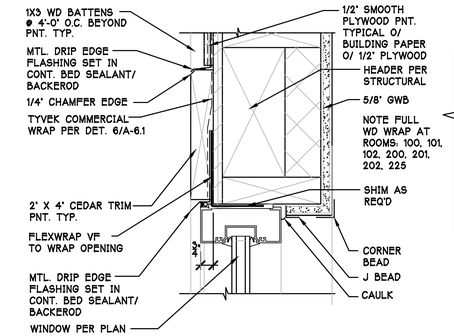
PETER J. CARLETTI
PROJECT ARCHITECT:
DAVID WILSON
DRAWN BY:
PETER J CARLETTI
CHECKED BY:
AUGUST 7, 2018
DATE
ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

A-6.1



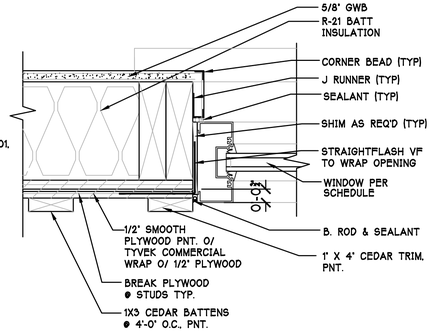
11 WALL SECTION

SCALE: 3/4"=1'-0"



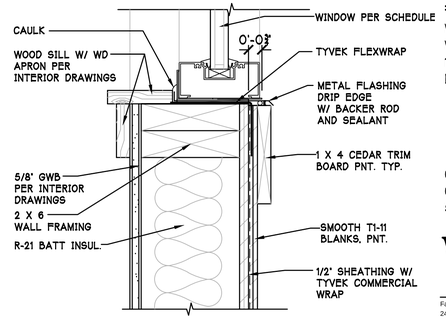
9 BOARD & BATT WDO HEAD

SEE 6/A-6.1 SCALE: 3"=1'-0"



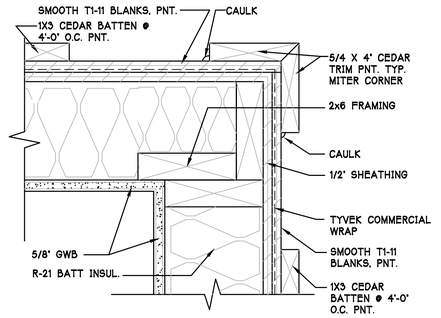
8 BOARD & BATT WDO JAMB

SEE 6/A-6.1 SCALE: 3"=1'-0"



7 BOARD & BATT WDO SILL

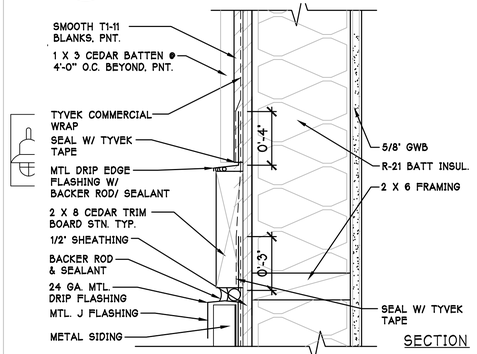
SEE 6/A-6.1 SCALE: 3"=1'-0"



PLAN

10 B&B OUTSIDE CORNER

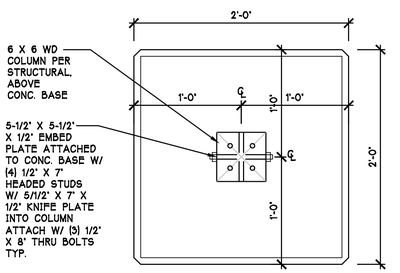
SEE 6/A-6.1 SCALE: 3"=1'-0"



SECTION

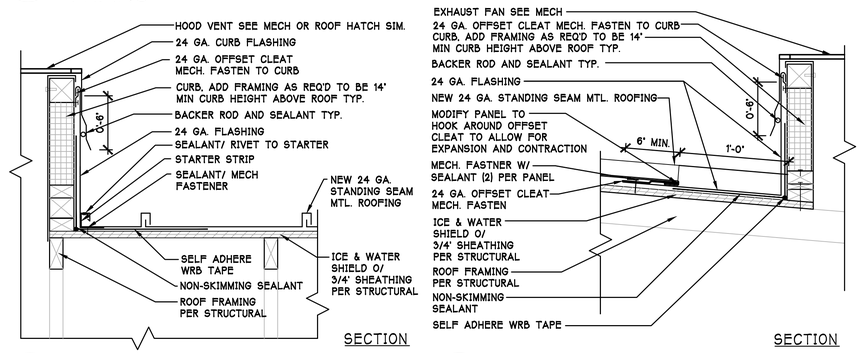
6 B&B TO MTL. SIDING TRANS

SEE 6/A-6.1 SCALE: 3"=1'-0"



4 CONCRETE BASE @ (2) WD 6 X 6 COL.

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



SECTION

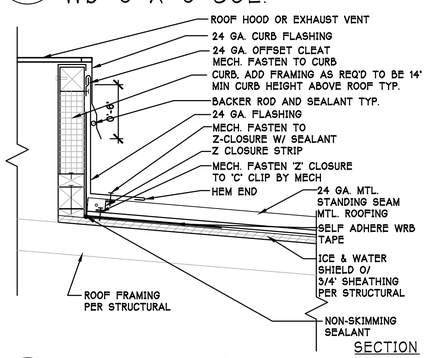
3 MECH. CURB

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

SECTION

2 MECH. CURB

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



SECTION

1 MECH. CURB

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

6429 REGISTERED ARCHITECT
PETER J. CARLETTI
STATE OF WASHINGTON

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services PH 509-335-5571
2425 E. Grimes Way FAX 509-335-9304
Pullman, Wa. 99164-1150

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
1/16/20 90% SET
1/28/20 PERMIT SET
2/24/20 BID SET
⚠

SHEET TITLE:
DETAILS

PETER J. CARLETTI
PROJECT ARCHITECT:

DAVID WILSON
DRAWN BY:

PETER J CARLETTI
CHECKED BY:

AUGUST 7, 2018
DATE

ARCH/18/DWGS/18-245.DWG
COMPUTER FILE NAME

A-6.2

DESIGN CRITERIA

CODE: INTERNATIONAL BUILDING CODE – 2015 EDITION	
ROOF:	25 PSF
FLOORS:	
OFFICES	50 PSF
CORRIDORS/EXITS	100 PSF
LIGHT MANUFACTURING	125 PSF
WIND:	
BASIC WIND SPEED	110 MPH
EXPOSURE	C
TOPOGRAPHICAL FACTOR, Kzt	1.0
SEISMIC:	
SPECTRAL RESPONSE ACCELERATION, Ss	1.090
SPECTRAL RESPONSE ACCELERATION, S1	0.424
SPECTRAL RESPONSE ACCELERATION, Sds	0.773
SPECTRAL RESPONSE ACCELERATION, Sd1	0.446
SOIL SITE CLASS. Fa	1.064
SOIL SITE CLASS, Fv	1.576
SEISMIC DESIGN CATEGORY	D
SEISMIC DESIGN (WOOD LEVELS):	
RESPONSE MODIFICATION FACTOR, R	6.5 (BRG WALL/SHEATHED WALLS)
REDUNDANCY FACTOR	1.3

GENERAL CONDITIONS

1. THE CONTRACTOR SHALL VERIFY AND REVIEW ALL ITEMS WITHIN THE DRAWINGS PRIOR TO PROCEEDING WITH THE WORK. NOTIFY THE ENGINEER/ARCHITECT IMMEDIATELY WITH ANY DISCREPANCIES.
2. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.
3. DIMENSIONS ARE NOT TO BE SCALED FROM THE PLANS, SECTIONS, OR DETAILS WITHIN THE DRAWINGS.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE, AND PROCEDURES.
5. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE REFERENCED BUILDING AND ALL OTHER REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK.
6. SPECIFIC NOTES AND DETAILS IN THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND SPECIFICATIONS.
7. NOTIFY THE ENGINEER OF ALL CHANGES MADE IN THE FIELD PRIOR TO INSTALLATION.

FOUNDATION

1. FOUNDATION DESIGN PARAMETERS ASSUMED BY OWNER:
   - A. IBC SOIL SITE CLASSIFICATION..... D
   - B. FOOTING BEARING PRESSURE.....1,500 PSF
   - C. LATERAL EARTH PRESSURE:
     - ACTIVE.....35 PCF
     - PASSIVE.....250 PCF
     - COEFFICIENT OF FRICTION.....0.35
2. ALL FOUNDATIONS ARE TO BEAR ON COMPETENT NATIVE SOILS OR COMPACTED STRUCTURAL FILL. STRUCTURAL FILL IS TO BE COMPACTED TO 95% DENSITY PER ASTM D-1557.

CONCRETE

1. REFERENCE STANDARDS: ACI-301 AND ACI-318.
2. MINIMUM CONCRETE STRENGTH AT 28 DAYS: 2,500 PSI (5½ SACK MIX)
3. THE WATER/CEMENT RATIO SHALL NOT EXCEED: 0.5 (BY WEIGHT)
4. AGGREGATE GRADING SHALL COMPLY WITH AASHTO #57 GRADATION OR BETTER. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II.
5. COMPLY WITH ACI-301 FOR MIXING. DO NOT EXCEED THE AMOUNT OF WATER SPECIFIED IN THE APPROVED MIX. PROPORTIONS OF AGGREGATE TO CEMENT SHALL BE SUCH AS TO PRODUCE A DENSE WORKABLE MIX WHICH CAN BE PLACED WITHOUT SEGREGATION OR EXCESSIVE FREE SURFACE WATER.
6. COMPLY WITH ACI-301 FOR PLACEMENT. PROVIDE A ¾ INCH CHAMFER AT ALL EXPOSED CONCRETE EDGES, UNLESS INDICATED OTHERWISE IN THE DRAWINGS.
7. MAXIMUM SLUMP TO BE 4" ± 1", TYPICAL. DO NOT ADD WATER TO THE MIX TO INCREASE SLUMP. GREATER SLUMP, ACCELERATED SET OR HIGH EARLY STRENGTH MAY BE ACHIEVED BY USING APPROVED ADMIXTURES.
8. COMPLY WITH ACI-305R FOR PLACEMENT IN HOT WEATHER AND ACI-306R FOR PLACEMENT IN COLD WEATHER.
9. REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE FINISH. ALL EXPOSED CONCRETE IS TO HAVE A CLASS A FINISH.
10. PROVIDE AIR ENTRAINMENT OF 5% ± 1.5% FOR ALL CONCRETE EXPOSED TO WEATHER.

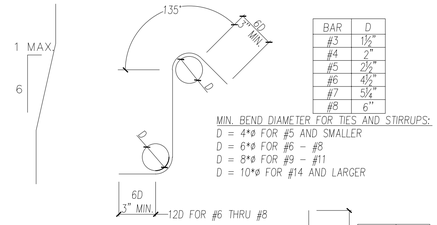
REINFORCING STEEL

1. REFERENCE STANDARDS: ACI "DETAIL MANUAL" AND CRSI MANUAL OF STANDARD PRACTICE.
2. MATERIALS:
   - A. REINFORCING STEEL: ASTM A615, GRADE 40 FOR #4 AND SMALLER; ASTM A615, GRADE 60 FOR #5 AND LARGER
   - B. WELDED WIRE REINFORCING: ASTM A82 AND A185, Fy = 75 KSI
3. LAP CONTINUOUS REINFORCING BARS PER REQUIREMENTS LISTED BELOW, UNLESS NOTED OTHERWISE. PROVIDE CORNER BARS OR HOOKS BARS (90 OR 180 DEGREE) AT THE END OF ALL HORIZONTAL REINFORCEMENT IN WALLS. REFER TO NOTE 6 FOR BEND REQUIREMENTS.

BAR SIZE	MIN. LAP LENGTH
#4	2'-6"
#5	3'-0"
#6	4'-6"

4. REINFORCEMENT COVER:
   - FOOTINGS: 3 INCHES TO EARTH; 2 INCHES TO FORMED SURFACE
   - SLABS: 2 INCHES TO EARTH
   - FORMED SURFACE:
     - EXTERIOR FACE: 1½ INCHES, #5 BAR AND SMALLER; 2 INCHES, #6 BAR AND LARGER
     - INTERIOR FACE: ¾ INCHES FOR SLABS AND WALLS; 1½ INCHES FOR BEAMS AND COLUMNS
5. REINFORCING STEEL A615 MAY NOT BE WELDED TO OTHER STEEL ELEMENTS. (ACI 318-14 26.6.4.1)
6. REINFORCING STEEL BENDS AND HOOKS TO MEET ACI REQUIREMENTS (PER 25.3.2).

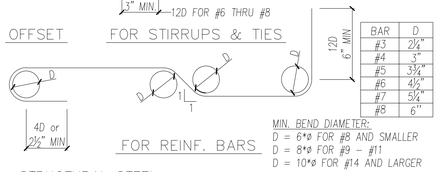
ϕ_b = BAR DIAMETER



BAR	D
#3	1½"
#4	2"
#5	2½"
#6	4½"
#7	5¼"
#8	6"

MIN. BEND DIAMETER FOR TIES AND STIRRUPS:
D = 4*ø FOR #5 AND SMALLER
D = 6*ø FOR #6 – #8
D = 8*ø FOR #9 – #11
D = 10*ø FOR #14 AND LARGER

OFFSET FOR STIRRUPS & TIES



FOR REINF. BARS

BAR	D
#3	2¼"
#4	3"
#5	3¾"
#6	4½"
#7	5¼"
#8	6"

MIN. BEND DIAMETER:
D = 6*ø FOR #8 AND SMALLER
D = 8*ø FOR #9 – #11
D = 10*ø FOR #14 AND LARGER

STRUCTURAL STEEL

1. REFERENCE STANDARDS: LATEST EDITION OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
2. MATERIALS:
   - BOLTS:
     - STEEL TO WOOD – ASTM A307
     - STEEL TO STEEL – ASTM A325
     - STEEL TO CONCRETE – HEAVY HEX HEAD ASTM F1554 GR. 36
     - WOOD TO CONCRETE – ASTM F1554 GR. 36
   - W SHAPES: ASTM A992 (Fy = 50,000 PSI)
   - TUBE STEEL: SQ/RECT – ASTM A500-10, GRADE B (Fy = 46,000 PSI MIN); ROUND – ASTM A500-10, GRADE B (Fy = 42,000 PSI MIN)
   - ALL OTHER STEEL: ASTM A36 (Fy = 36,000 PSI)

STRUCTURAL STEEL WELDING

1. CONFORM TO THE AWS CODES D1.1 AND D1.3. USE ONLY STATE CERTIFIED WELDERS.
2. USE DRY E70 ELECTRODES.
3. WELDS ARE TO BE ¼ INCH CONTINUOUS FILLET WELDS UNLESS NOTED OTHERWISE IN THE DRAWINGS.

CONCRETE OR MASONRY ANCHORS

1. MECHANICAL ANCHORS ARE TO BE EITHER SIMPSON STRONG-BOLT 2 OR SIMPSON TITEN HD ANCHORS. ANCHOR SIZE AND EMBEDMENT IS AS SPECIFIED ON THE DRAWINGS OR IN THE FIELD.
2. EPOXY FOR THREADED RODS OR REBAR INTO CONCRETE IS TO BE SIMPSON SET-3G. EPOXY FOR THREADED RODS OR REBAR INTO SOLID MASONRY IS TO BE SIMPSON SET. ROD OR REBAR SIZE AND EMBEDMENT IS AS SPECIFIED ON THE DRAWINGS OR IN THE FIELD.

DIMENSIONAL LUMBER

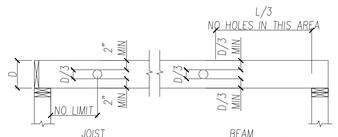
1. MEET THE REQUIREMENTS OF PS 20-70 AND NATIONAL GRADING RULES FOR SOFTWOOD DIMENSIONAL LUMBER. ALL MEMBERS ARE TO BEAR THE STAMP OF THE WWPA. MOISTURE CONTENT AT THE TIME OF FRAMING IS TO BE 19% OR LESS.
2. MINIMUM DIMENSIONAL LUMBER GRADES ARE TO BE:
   - WALL STUDS: 2x DF STUD GRADE
   - WALL PLATES: 2x DF STANDARD GRADE; 2x PT DF STANDARD GRADE PER PLAN AT CONCRETE
   - JOISTS: 2x DF #2
   - HEADERS/BEAMS: 4x, 6x DF #2
   - POSTS: 4x, 6x DF #2
3. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED LUMBER. NAILS AND PLATE WASHERS IN CONTACT WITH TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED. ANCHOR BOLTS AND LAG SCREWS IN TREATED LUMBER SHALL BE HDG OR ZINC COATED. PLAIN CARBON STEEL FASTENERS MAY BE USED WITH ZINC-BORATE TREATED LUMBER.
4. FOUNDATION SILL PLATES ARE TO BE BOLTED TO THE CONCRETE FOUNDATION WITH ⅝"ø ANCHOR BOLTS EMBED A MINIMUM 7" OR ⅝"ø MECHANICAL ANCHORS EMBED AS SPECIFIED ON DRAWINGS. PROVIDE A MINIMUM OF TWO BOLTS PER PLATE SECTION A MAXIMUM OF 9" FROM THE PLATE END. MAXIMUM SPACING OF ANCHORS IS TO BE 4'-0". PROVIDE 0.229"x3" SQ. WASHERS AT ALL ANCHOR BOLTS. WASHER EDGES MUST BE WITHIN ½" OF WALL SHEATHING.
5. SHOT PIN ATTACHMENTS FOR SILL PLATES ARE TO BE SIMPSON FASTENERS OR APPROVED ALTERNATE. SHOT PIN SIZES ARE AS FOLLOWS:

PLATE THICKNESS	EMBED MATERIAL	SHOT PIN
2x	CONC	PDPWL-250MG
2x	STEEL	PDPAW-200

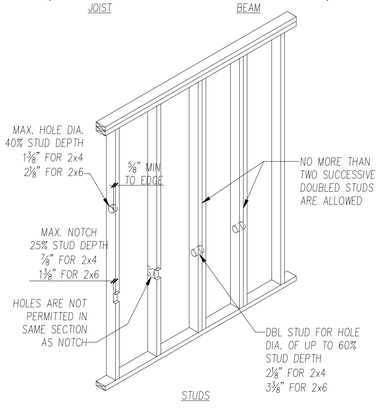
6. BOLTS IN WOOD BEAMS SHALL NOT BE LESS THAN 7 DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE MEMBER EDGE. PROVIDE STANDARD WASHERS FOR ALL NUTS BEARING AGAINST WOOD.
7. FASTEN ALL MEMBERS IN ACCORDANCE WITH IBC TABLE 2304.10.1, UNLESS NOTED OTHERWISE. PROVIDE MINIMUM 1½" EMBED FOR ALL NAILS. NAIL SIZES ARE AS FOLLOWS:

NAIL	MIN. SHANK DIA.
8d	0.131"
10d	0.148"
16d	0.162"

8. HOLES AND NOTCHES IN WOOD MEMBERS ARE TO BE LIMITED AS FOLLOWS:



JOIST BEAM



STUDS

GLU-LAMINATED MEMBERS

1. SINGLE-SPAN GLU-LAMINATED WOOD MEMBERS ARE TO BE DOUGLAS FIR, KILN DRIED AND AITC SPECIFICATION 24F-V4, UNLESS NOTED OTHERWISE. MULTI-SPAN OR CANTILEVERED GLU-LAMINATED WOOD MEMBERS TO BE AITC SPECIFICATION 24F-V8, UNLESS OTHERWISE NOTED. BEAMS ARE HAVE A 2,000 FT RADIUS CAMBER, UNLESS NOTED OTHERWISE.
2. MATERIALS MUST BE OBTAINED FROM AN AITC APPROVED FABRICATOR AND BEAR THE AITC STAMP.
3. THE GLUE IS TO BE A "WET-USE" ADHESIVE.

WOOD TRUSSES

1. SUBMIT SHOP DRAWINGS AND CALCULATIONS STAMPED, SIGNED, AND DATED BY A LICENSED ENGINEER IN THE STATE OF THE PROJECT TO THE ENGINEER OF RECORD FOR REVIEW.
2. TRUSS PLATES ARE TO BE ICBO APPROVED. TOP CHORDS ARE TO BE DOUGLAS FIR #2 OR BETTER.
3. INSTALL BRIDGING, WEB, AND CHORD BRACING AS REQUIRED BY THE TRUSS FABRICATOR.
4. TEMPORARY SHORING AND BRACING OF THE TRUSSES DURING ERECTION IS THE RESPONSIBILITY OF THE CONTRACTOR.

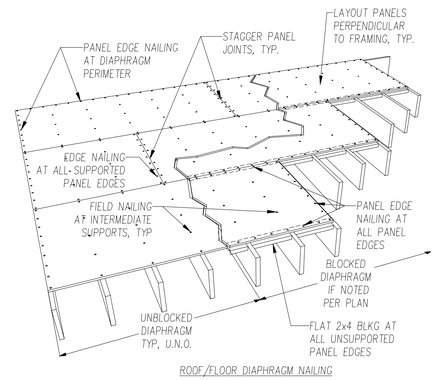
MANUFACTURED LUMBER

1. PARALLEL STRAND LUMBER (PSL) IS TO BE 2.0E PARALLAM MANUFACTURED BY TRUSJOIST BY WEYERHAUESER OR ENGINEER APPROVED EQUAL.
2. LAMINATED VENEER LUMBER (LVL) IS TO BE 2.0E MICROLLAM MANUFACTURED BY TRUSJOIST BY WEYERHAUESER OR ENGINEER APPROVED EQUAL.
3. LAMINATED STRAND LUMBER (LSL) IS TO BE:
   - 1½" WIDE LSL 1.3E OR BETTER
   - 3½" WIDE LSL 1.55E OR BETTER

   MANUFACTURED BY TRUSJOIST BY WEYERHAUESER OR ENGINEER APPROVED EQUAL.
4. MANUFACTURED I-JOISTS ARE TO BE TJI SERIES MEMBERS AND SPECIFIED IN THE DRAWINGS MANUFACTURED BY TRUSJOIST BY WEYERHAUESER OR ENGINEER APPROVED EQUAL.

WOOD SHEATHING

1. ROOF SHEATHING. MINIMUM THICKNESS PER PLAN. APA RATED, EXP-1 RATING, EDGE SEALED PANELS CONFORMING TO INDENTIFICATION INDEX 32/16 FOR SLOPES GREATER THAN 3/12 AND 40/20 FOR SLOPES 3/12 AND LESS. PROVIDE MINIMUM 1/8" CLEAR BETWEEN PANELS TO ALLOW FOR EXPANSION. NAIL 6 INCHES ON CENTER ALONG EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE. USE 8d COMMON NAILS.
2. FLOOR SHEATHING. MINIMUM THICKNESS PER PLAN. APA RATED STURD-I-FLOOR, EXP-1 RATING, TONGUE AND GROOVE EDGES CONFORMING TO IDENTIFICATION INDEX 48/24. PROVIDE MINIMUM 1/8" CLEAR BETWEEN PANELS TO ALLOW FOR EXPANSION. NAIL AND GLUE TO SUPPORTS. GLUE ADHESIVE IS TO CONFORM TO APA SPECIFICATION AFG-01. NAIL 6 INCHES ON CENTER ALONG EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE. USE 10d COMMON NAILS.



ROOF/FLOOR DIAPHRAGM NAILING

3. WOOD SHEARWALL SHEATHING. MINIMUM THICKNESS PER PLAN. PLYWOOD OR OSB APA RATED, EXP-1 RATING. NAILING PER DRAWINGS.
4. SIDING SHEATHING. 19/32" THICKNESS MINIMUM. APA RATED PS-1 303 TYPE C-C OR C-D, EXTERIOR RATING UNLESS NOTED OTHERWISE. NAILING PER DRAWINGS

MECHANICAL HARDWARE CONNECTORS

1. ALL MECHANICAL HARDWARE USED FOR CONNECTIONS ARE TO BE MANUFACTURED BY SIMPSON STRONG TIE OR EQUIVALENT HAVING A CAPACITY GREATER THAN OR EQUAL.
2. ALL MECHANICAL CONNECTORS USED WITH PRESSURE TREATED WOOD ARE TO HAVE A ZINC FINISH UNLESS NOTED OTHERWISE ON THE PLANS.
3. FASTENERS ARE TO MATCH MANUFACTURER'S SPECIFICATION, ALWAYS USE HIGHEST CAPACITY REQUIREMENTS. FASTENERS USED WITH ZINC COAT FINISH CONNECTORS ARE TO BE HOT-DIPPED GALVANIZED CONFORMING TO ASTM A153. FILL ALL HOLES WITH FASTENERS AND DO NOT OVER DRIVE.
4. THROUGH BOLT FASTENERS ARE TO BE MACHINE BOLTS CONFORMING TO ASTM STANDARD A307, GRADE A. NUTS USED WITH THROUGH BOLTS, THREADED RODS AND ANCHOR BOLTS SHALL BE AT LEAST FLUSH WITH THE TOP OF NUT.
5. JOISTS AND BEAMS SHALL BEAR FULLY ON THE CONNECTOR SEAT AND THE GAP BETWEEN MEMBERS SHALL NOT EXCEED 1/8".

ABBREVIATIONS:

A. BOLT	ANCHOR BOLT
ADD'L	ADDITIONAL
A.F.F	ABOVE FINISH FLOOR
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BLKG	BLOCKING
BM	BEAM
B.O.O.	BOTTOM OF OPENING
BTM	BOTTOM
BRG	BEARING
BTW	BETWEEN
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
COND	CONDITION
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
DBL	DOUBLE
DIA	DIAMETER
DIM	DIMENSION
DL	DEAD LOAD
EA	EACH
EF	EACH FACE
ELEV	ELEVATION
EN	EDGE NAILING
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EXIST	EXISTING
EXT	EXTERIOR
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISH FLOOR
FG	FINISH GRADE
FLFR	FLUSH FRAMED
FLR	FLOOR
FT	FEET
FTG	FOOTING
FRT	FIRE RETARDANT TREATED
FS	FAR SIDE
GA	GAUGE
GALV	GALVANIZED
GLB	GLUE LAMINATED BEAM
HDR	HEADER
HGR	HANGER
HORIZ	HORIZONTAL
HT	HEIGHT
I.F.	INSIDE FACE
IN	INCH
LL	LIVE LOAD
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NS	NEAR SIDE
NTS	NOT TO SCALE
O.C.	ON CENTER
PARA	PARALLEL
PERP	PERPENDICULAR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
RAP	RAMMED AGGREGATE PIER
REINF	REINFORCING
REQ'D	REQUIRED
SCHD	SCHEDULE
SEC	SECTION
SF	SQUARE FEET
SIM	SIMILAR
SPEC	SPECIFICATIONS
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SW	SHEARWALL
THRU	THROUGH
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
T.O.O.	TOP OF OPENING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	TUBE STEEL
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
WF	WIDE FLANGE
WHS	WELDED HEADED STUD
WTS	WELDED THREADED STUD
WT	WEIGHT
WWR	WELDED WIRE REINFORCING

SHEET INDEX:

D|C|G civil structural
2124 Riverside Drive
Suite 211
Mount Vernon, WA 98273
P: 360.899.1110
F: 360.331.5131
www.dcgengr.com

JORDAN M. JANICKI – STATE OF WASHINGTON – Digitally signed by Jordan Janicki, PE, SE Date: 2020.02.25 14:37:49Z07'00' – 46132 – STRUCTURAL ENGINEER – PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-8304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
10-16-20 90% SET
2-21-20 FINAL BID SET

SHEET TITLE:
GENERAL NOTES

SAMUEL G TORSET
PROJECT ENGINEER:
JOEL HARKNESS
DRAWN BY:
JORDAN M JANICKI
CHECKED BY:
AUGUST 7, 2018
DATE
____
COMPUTER FILE NAME

S1

SHOP DRAWINGS AND SUBMITTALS

1. SUBMIT LAYOUT DRAWINGS IN PDF FORMAT FOR REVIEW OF:
   A. REINFORCING STEEL
   B. STRUCTURAL STEEL
   C. SLAB SAW-CUT PLAN

2. SUBMIT SPECIFICATIONS IN PDF FORMAT FOR REVIEW OF:
   A. CONCRETE DESIGN MIX
   B. CONCRETE INSERTS

SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS ARE TO BE PERFORMED BY INDEPENDENT, JURISDICTIONALLY APPROVED AGENCY IN ACCORDANCE WITH IBC SECTION 1703 AND PROVIDE THE DUTIES AND RESPONSIBILITIES AS INDICATED IN SECTION 1704.

2. A CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE BUILDING OFFICIAL UPON COMPLETION OF PROJECT.

3. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A JURISDICTIONAL INSPECTOR.

4. THE SPECIAL INSPECTIONS REQUIRED FOR THIS PROJECT ARE AS NOTED IN THE SUMMARY OF SPECIAL INSPECTION.

STRUCTURAL OBSERVATION

ONE STRUCTURAL OBSERVATION BY THE ENGINEER OF RECORD ARE REQUIRED FOR THIS PROJECT. OBSERVATION IS TO OCCUR:

1. AFTER ROOF SHEATHING IS IN PLACE, PRIOR TO DRYWALL INSTALLATION.

THE OWNER SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS. DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER AND THE BUILDING OFFICIAL. AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

JOB SITE SAFETY

THE ENGINEER HAS NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATED TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR THE CONTRACTOR TO PERFORM THE WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ENGINEER SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF THE WORK BY THE CONTRACTOR, SUB-CONTRACTOR OR ANY PERSON ON THE SITE.

SUMMARY OF SPECIAL INSPECTION

ITEM	INSPECTION REQUIRED	REMARK
GRADING AND EXCAVATION	VERIFY MATERIAL BELOW FOOTING FOR DESIGN BEARING CAPACITY; PERIODIC INSPECTION	ASSUMED BY OWNER
	VERIFY EXCAVATION TO PROPER DEPTH; PERIODIC INSPECTION	
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF FILL; CONTINUOUS INSPECTION	
CONCRETE	VERIFY MIX DESIGN SUPPLIED MEETS APPROVED MIX DESIGN; PERIODIC INSPECTION	REFER TO STAMPED MIX DESIGN BY DCG
	PLACEMENT OF CONCRETE, INCLUDES VERIFYING SLUMP AND AIR CONTENT TESTS; CONTINUOUS INSPECTION	REFER TO DRAWINGS; NOT REQUIRED FOR SITE-WORK CONCRETE
	VERIFY ANCHOR BOLTS ARE PLACED AND TIED PROPERLY; CONTINUOUS INSPECTION	REFER TO DRAWINGS
REINFORCING STEEL	VERIFY PLACEMENT, COVER AND BAR SIZE; PERIODIC INSPECTION	REFER TO DRAWINGS
	VERIFY GRADE; PERIODIC INSPECTION	ASTM A615, GRADE 60
STRUCTURAL STEEL	VERIFY MEMBER SIZES AND PLACEMENT, AND BOLTED CONNECTIONS ARE SNUG-TIGHT; PERIODIC INSPECTION	REFER TO DRAWINGS
	PRE-TENSIONED BOLTS IN MOMENT FRAME DIRECT TENSION WASHER OR TWIST OFF BOLTS; PERIODIC INSPECTION	REFER TO DRAWINGS
	ON-SITE WELDING	PERIODIC INSPECTION OF FILLET WELDS 5/16" AND LESS
EPOXY OR MECHANICAL ANCHORS	VERIFY INSTALLATION SIZE AND DEPTH; CONTINUOUS INSPECTION	REFER TO DRAWINGS OR FIELD DIRECTIVES
WOOD FLOOR/WALL DIAPHRAGMS	VERIFY NAIL SIZE, SPACING, SHEATHING TYPE AND BLOCKING FOR ALL WALLS; PERIODIC INSPECTION	REFER TO DRAWINGS
	VERIFY NAIL SIZE, SPACING, SHEATHING TYPE AND BLOCKING FOR ALL FLOOR/ROOF DIAHRAGMS; PERIODIC INSPECTION	REFER TO DRAWINGS
	VERIFY INSTALLATION OF HOLDOWNS; PERIODIC INSPECTION	REFER TO DRAWINGS

D|C|G civil structural

2124 Riverside Drive
Suite 211
Mount Vernon, WA 98273

P: 360.899.1110
F: 360.331.5131
www.dcgengr.com

JORDAN M. JANICKI
STATE OF WASHINGTON
46132
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER
Digitally signed by Jordan Janicki, PE, SE
Date: 2020.02.25 16:35:56 -08'00'

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-8304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
10-16-20 90% SET
2-21-20 FINAL BID SET

SHEET TITLE:
GENERAL NOTES

SAMUEL G TORSET
PROJECT ENGINEER:

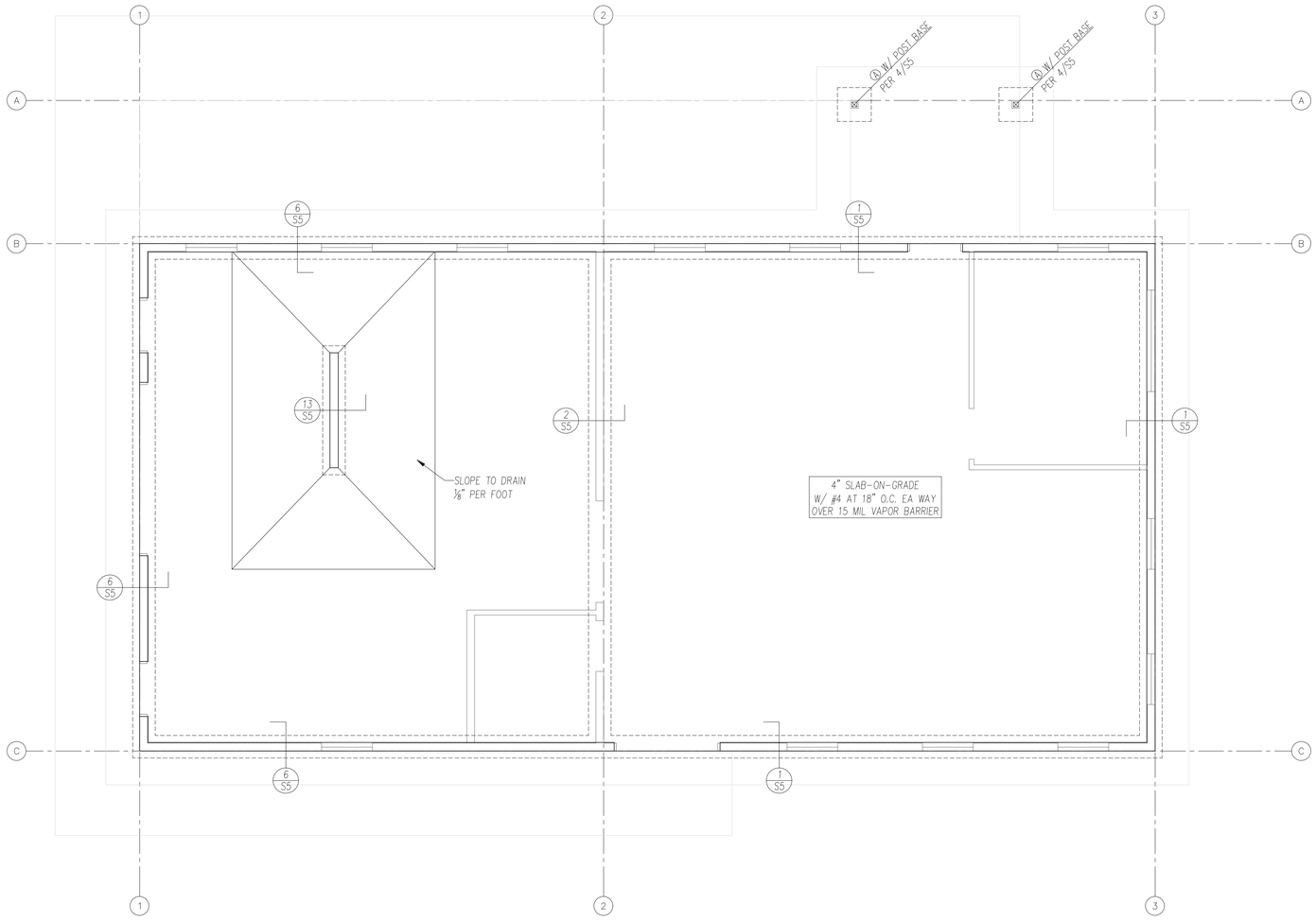
JOEL HARKNESS
DRAWN BY:

JORDAN M JANICKI
CHECKED BY:

AUGUST 7, 2018
DATE

____
COMPUTER FILE NAME

S1.1



FOUNDATION NOTES:

1. REFER TO SHEET S4 FOR SHEARWALL REQUIREMENTS AND HOLDOWN LOCATIONS.
2. PROVIDE FOOTING DRAIN AROUND PERIMETER OF BUILDINGS.
3. FOOTINGS ARE TO BEAR ON COMPETENT NATIVE SOIL OR STRUCTURAL FILL CAPABLE OF SUPPORTING THE ALLOWABLE BEARING PRESSURE OF 1,500 PSF.
4. PROVIDE #4 CORNER FTG BAR FOR EACH HORIZONTAL BAR. LAP 2'-0" MIN.
5. PROVIDE SAWCUT JOINTS PER DETAIL 14/S5 AT WALLS AND AT 15'-0" O.C. MAX. SLAB SAWCUT PANELS TO BE NO MORE THAN 1:1.5 ASPECT RATIO. CONTRACTOR TO PROVIDE SAWCUT PLAN FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.

1/S2 FOUNDATION PLAN

SCALE 1/4" = 1'-0"

POST SCHEDULE

MARK	SIZE
A	6x6 DF#1
B	4x4 DF#2

D|C|G civil structural

2124 Riverside Drive
Suite 211
Mount Vernon, WA 98273

P: 360.899.1110
F: 360.331.5131
www.dcgengr.com

JORDAN M. JANICKI
STATE OF WASHINGTON
Digitally signed by Jordan Janicki, PE, SE
Date: 2020.02.25 15:16:49 PST
48132
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150

PH 509-335-5571
FAX 509-335-8304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
10-16-20 90% SET
2-21-20 FINAL BID SET

SHEET TITLE:
FOUNDATION PLAN

SAMUEL G TORSET
PROJECT ENGINEER:

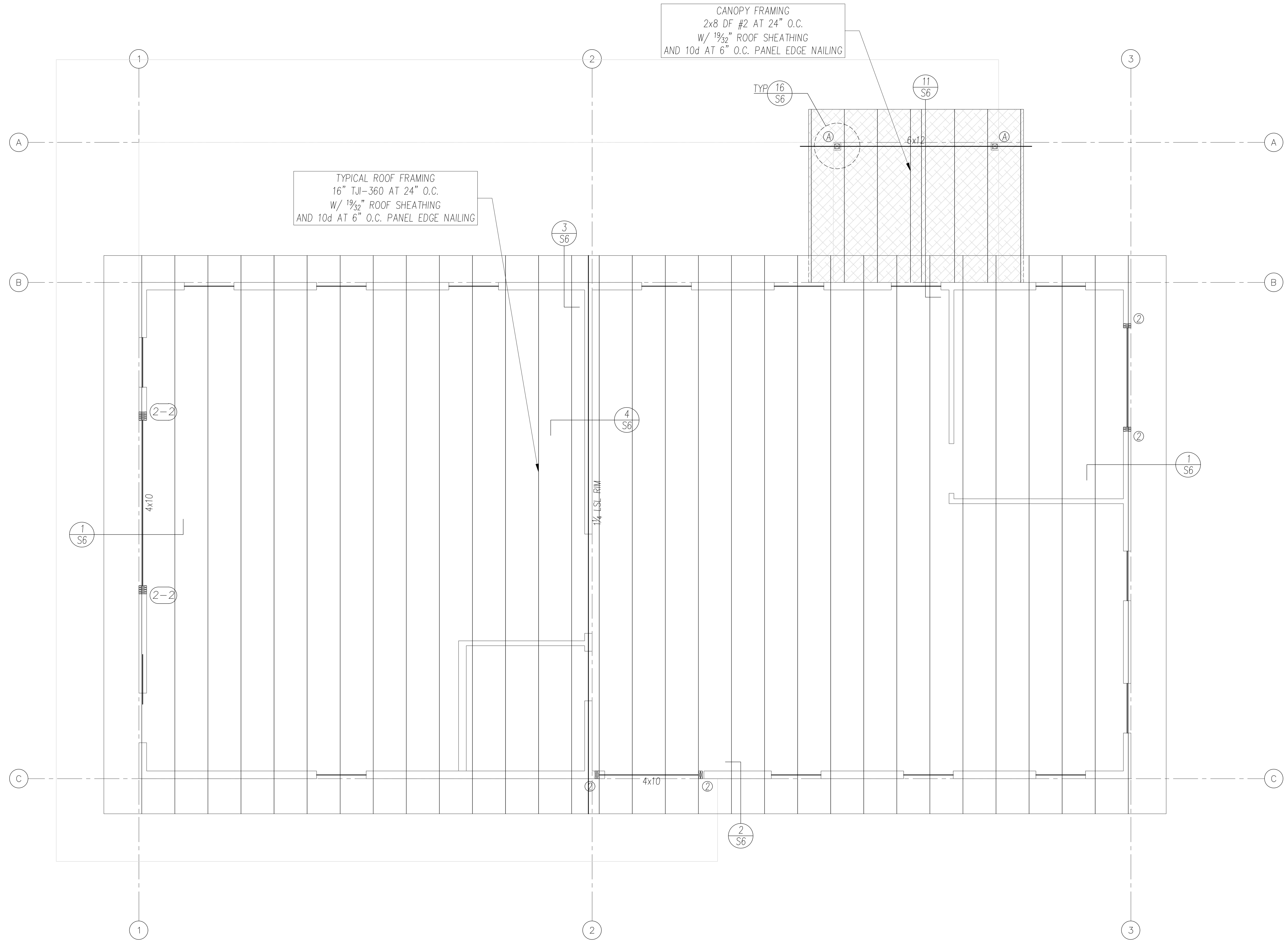
JOEL HARKNESS
DRAWN BY:

JORDAN M JANICKI
CHECKED BY:

AUGUST 7, 2018
DATE

COMPUTER FILE NAME

S2



1 S3 ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"

ROOF FRAMING NOTES:

1. REFER TO SHEET S4 FOR SHEARWALL AND HOLDOWN LOCATIONS.
2. STUD SPACING IS 16" O.C. FOR ALL WALLS.
3. EXTERIOR STUDS OVER 10'-0" TO BE LSL
4. REFER TO DETAIL 19/S6 FOR TYPICAL HEADER FRAMING.
5. ALL HEADERS ARE 4x6 UNLESS NOTED OTHERWISE.
6. (3) INDICATES NUMBER OF 2x BEARING STUDS
7. (X-Y) INDICATES X NUMBER OF KING STUDS AND Y NUMBER OF TRIMMER STUDS.

POST SCHEDULE

MARK	SIZE
A	6x6 DF #1
B	4x4 DF #2

DCG civil structural
2124 Riverside Drive
Suite 211
Mount Vernon, WA 98273
P: 360.899.1110
F: 360.331.5131
www.dcgengr.com

JORDAN M. JANICKI STATE OF WASHINGTON REGISTERED STRUCTURAL ENGINEER PROFESSIONAL ENGINEER 46132

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304
WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

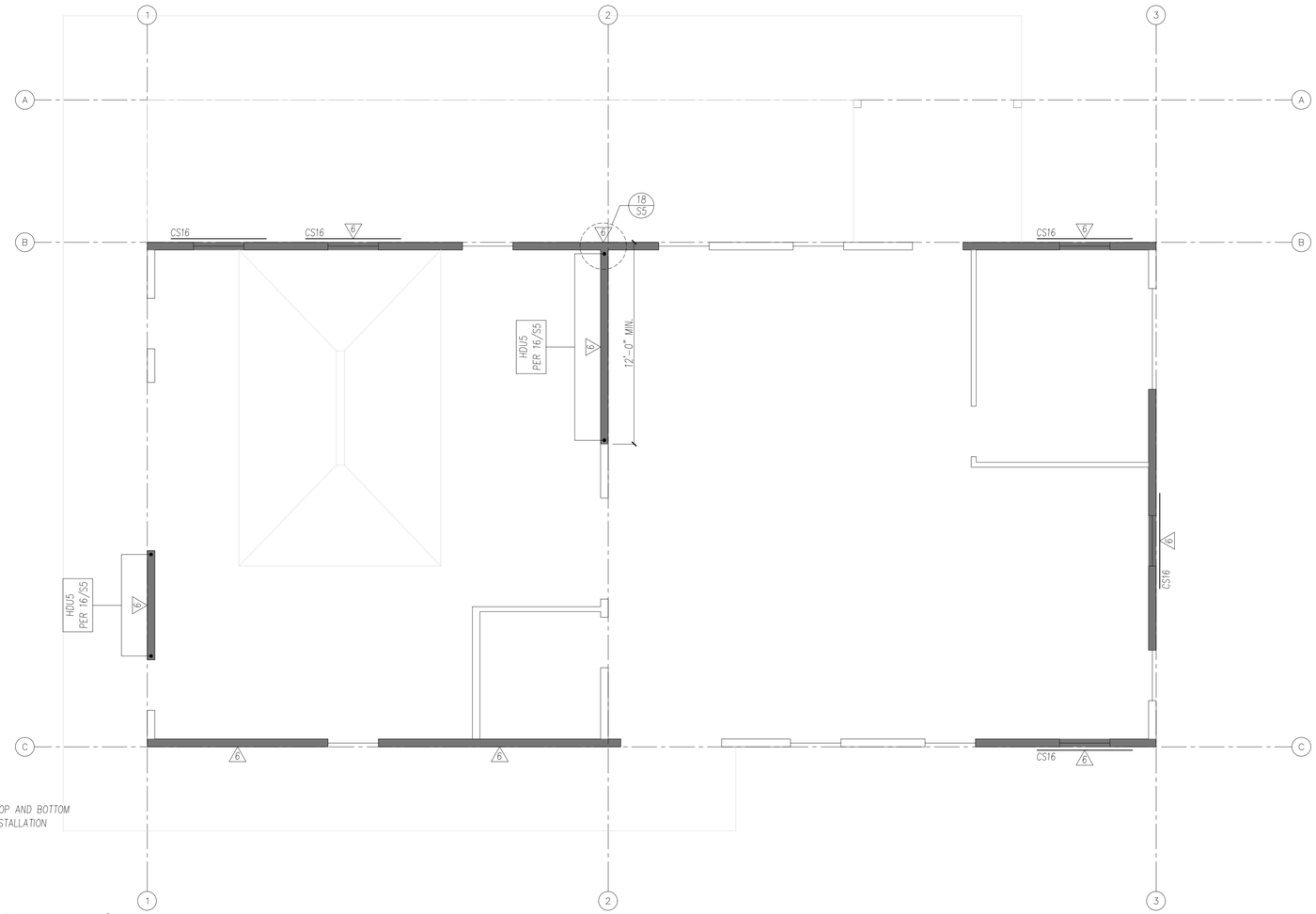
REVISIONS:
10-1-18 PRELIM SET
10-16-20 90% SET
2-21-20 FINAL BID SET

SHEET TITLE:
ROOF FRAMING PLAN

SAMUEL G TORSET
PROJECT ENGINEER:
JOEL HARKNESS
DRAWN BY:
JORDAN M JANICKI
CHECKED BY:
AUGUST 7, 2018
DATE

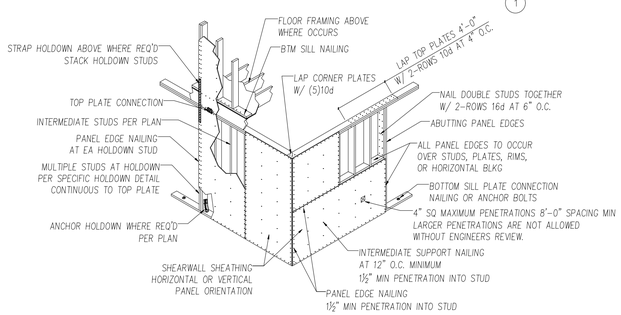
COMPUTER FILE NAME

S3



SHEARWALL NOTES:

1. ▽ 6 — INDICATES SHEARWALL ON SPECIFIED FLOOR. REFER TO SCHEDULE ON THIS SHEET FOR REQUIREMENTS.
2. CS16 — INDICATES STRAP AND TYPE OF STRAP AT TOP AND BOTTOM OF WINDOW. REFER TO DETAIL 19/S5 FOR INSTALLATION REQUIREMENTS.



2 / S4 TYPICAL WOOD SHEARWALL FRAMING

SCALE: N.T.S.

1 / S4 ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"

SHEARWALL SCHEDULE

MARK	WOOD STRUCTURAL PANELS	PANEL EDGE NAILING	PANEL EDGE STUDS	PLATE CONNECTION		
				CONCRETE/SILL PLATE CONNECTION ⅝"ø A. BOLT	TOP PLATE	WOOD FLOOR BTM SILL PLATE
6	15/32" SHEATHING ONE SIDE	10d AT 6" O.C.	2x	48" O.C. IN 2x PLATE	LTP4 AT 24" O.C.	16d AT 6" O.C.

D|C|G civil structural

2124 Riverside Drive
Suite 211
Mount Vernon, WA 98273

P: 360.899.1110
F: 360.331.5131
www.dcgengr.com

JORDAN M. JANICKI — STATE OF WASHINGTON — 46132 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER
Digitally signed by Jordan M. Janicki, PE, SE
2020.02.25

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150

PH 509-335-5571
FAX 509-335-8304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10-1-18 PRELIM SET
10-16-20 90% SET
2-21-20 FINAL BID SET

SHEET TITLE:
SHEARWALL PLAN

SAMUEL G TORSET
PROJECT ENGINEER:

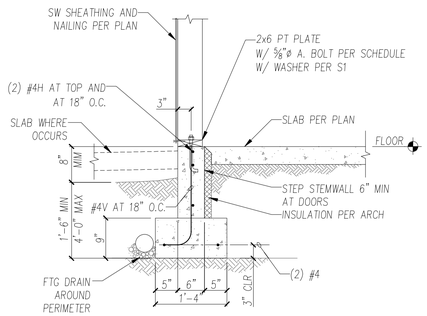
JOEL HARKNESS
DRAWN BY:

JORDAN M JANICKI
CHECKED BY:

AUGUST 7, 2018
DATE

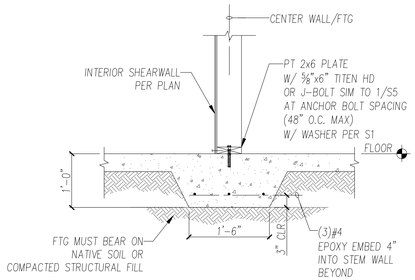
COMPUTER FILE NAME

S4



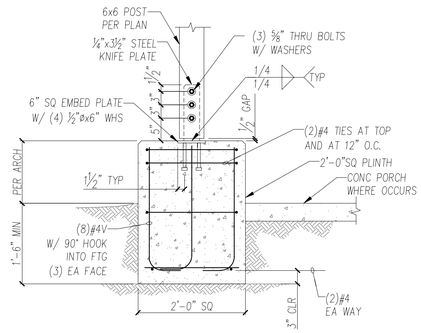
1 S5 FOUNDATION DETAIL

SCALE 3/4" = 1'-0"



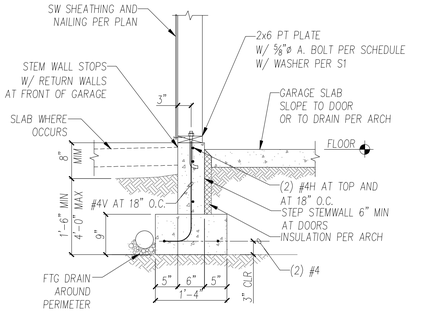
2 S5 FOUNDATION DETAIL

SCALE 3/4" = 1'-0"



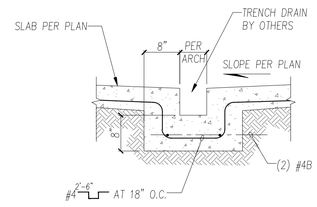
4 S5 FOUNDATION DETAIL

SCALE 3/4" = 1'-0"



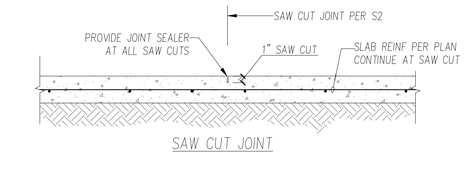
6 S5 FOUNDATION DETAIL

SCALE 3/4" = 1'-0"



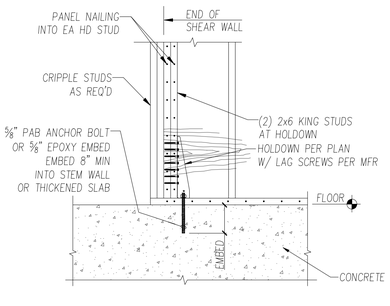
13 S5 SLAB SECTION

SCALE 3/4" = 1'-0"



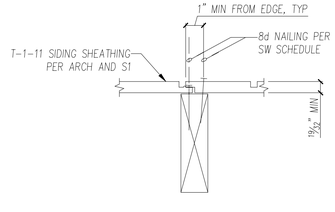
14 S5 SAWCUT JOINT DETAIL

SCALE 3/4" = 1'-0"



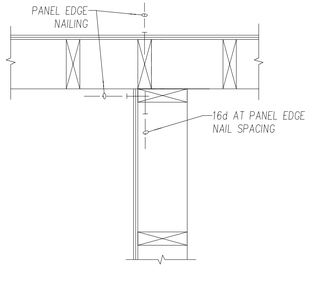
16 S5 TYPICAL HOLDOWN DETAIL

SCALE 3/4" = 1'-0"



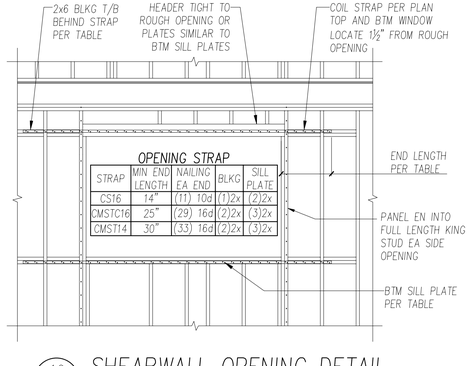
17 S5 SIDING SHEATHING DETAIL

SCALE 3" = 1'-0"



18 S5 SHEARWALL CORNER DETAIL

SCALE 1 1/2" = 1'-0"



STRAP	MIN END LENGTH	NAILING EA END	BLKG	SILL PLATE
CS16	14"	(11) 10d	(1)2x	(2)2x
CMSTC16	25"	(29) 16d	(2)2x	(3)2x
CMST14	30"	(33) 16d	(2)2x	(3)2x

19 S5 SHEARWALL OPENING DETAIL

SCALE 3/4" = 1'-0"

D|C|G civil structural

2124 Riverside Drive
Suite 211
Mount Vernon, WA 98273

P: 360.899.1110
F: 360.331.5131
www.dcgengr.com

JORDAN M. JANICKI STATE OF WASHINGTON 46132 REGISTERED STRUCTURAL PROFESSIONAL ENGINEER
Digitally signed by Jordan Janicki, PE, SE
Date: 2020.02.25 07:07:07 -08'00'

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-8304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

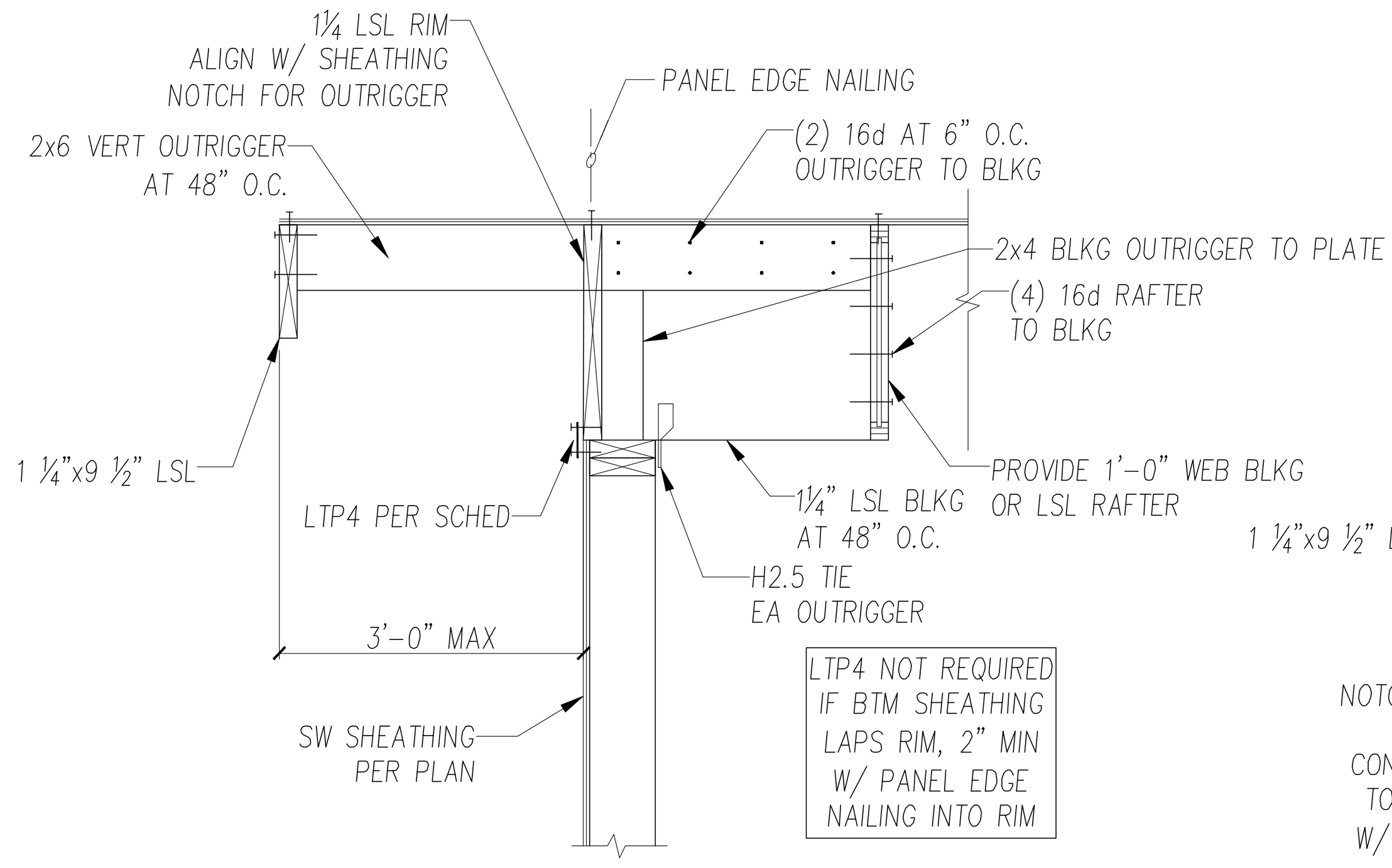
REVISIONS:
10-1-18 PRELIM SET
10-16-20 90% SET
2-21-20 FINAL BID SET

SHEET TITLE:
FOUNDATION & SHEARWALL DETAILS

SAMUEL G TORSET
PROJECT ENGINEER:
JOEL HARKNESS
DRAWN BY:
JORDAN M JANICKI
CHECKED BY:
AUGUST 7, 2018
DATE

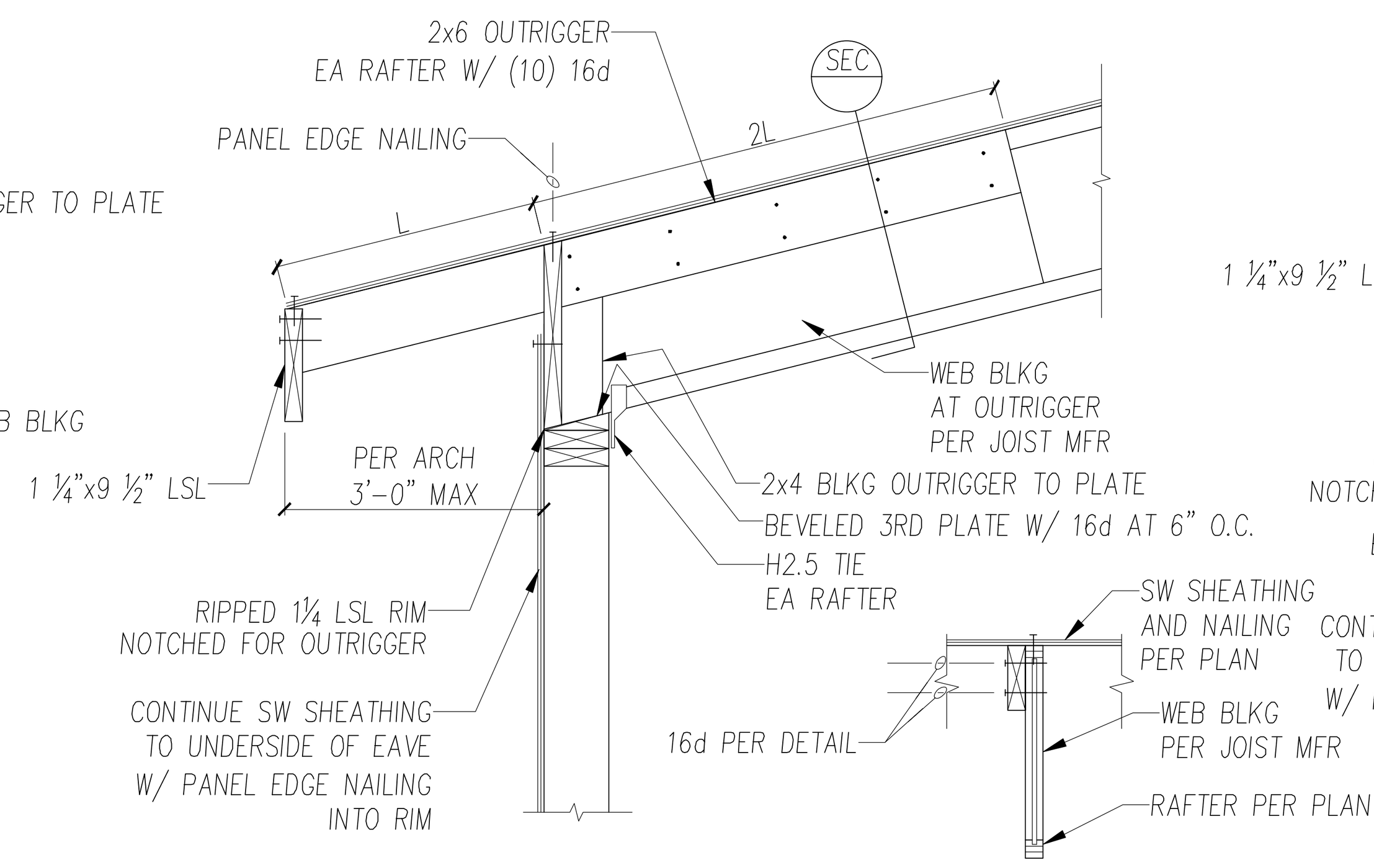
COMPUTER FILE NAME

S5



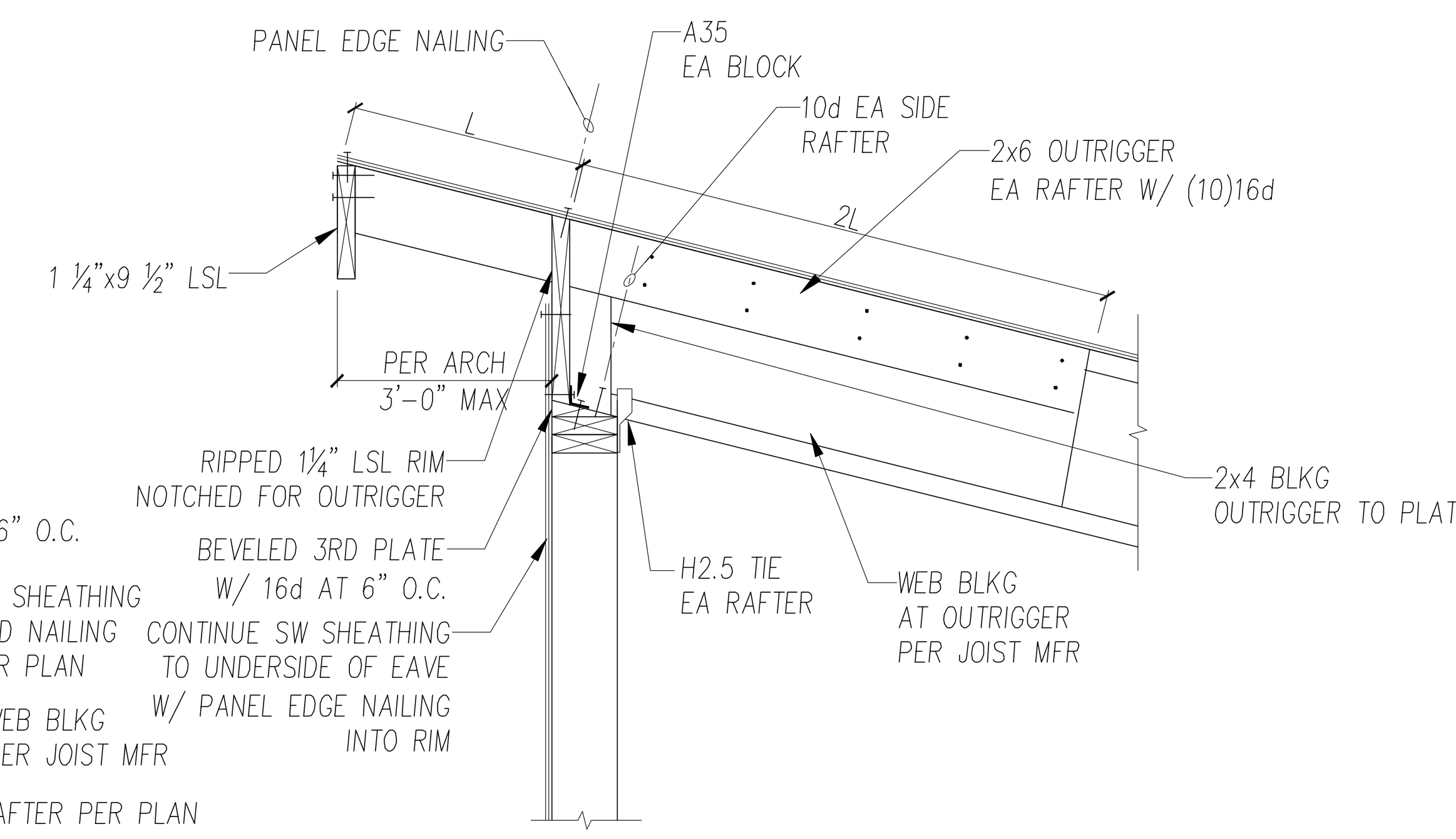
1 / S6 ROOF SECTION

SCALE 3/4" = 1'-0"



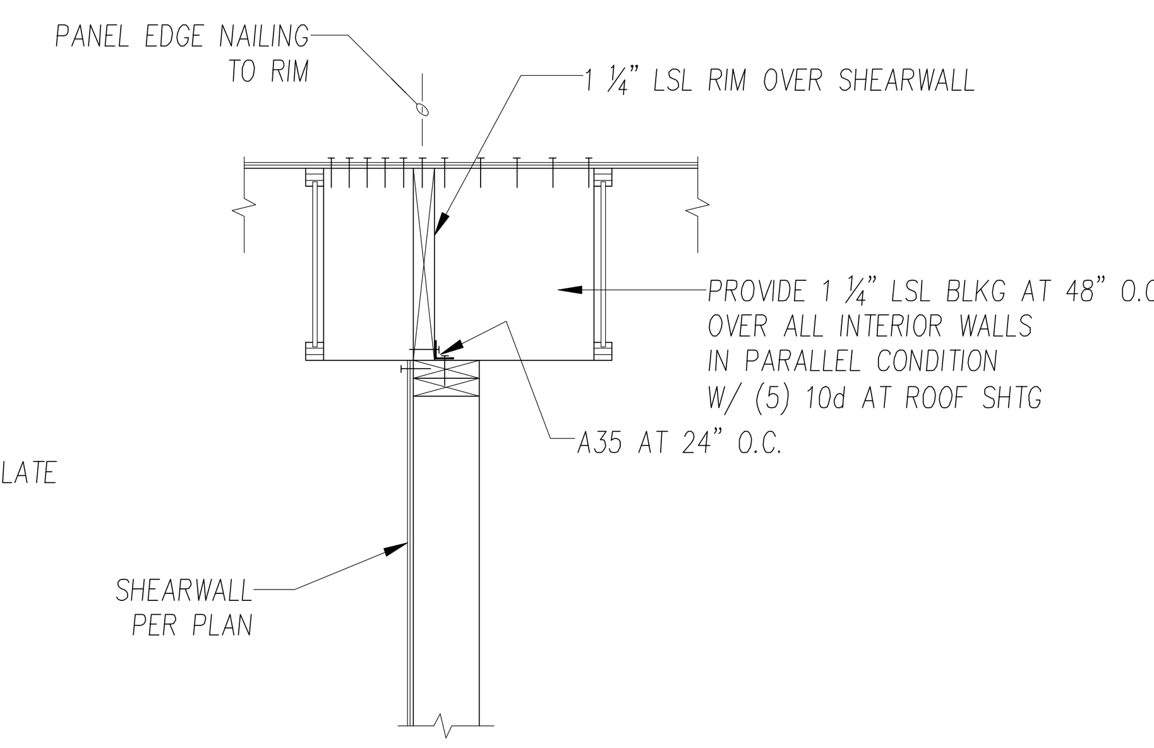
2 / S6 ROOF SECTION

SCALE 3/4" = 1'-0"



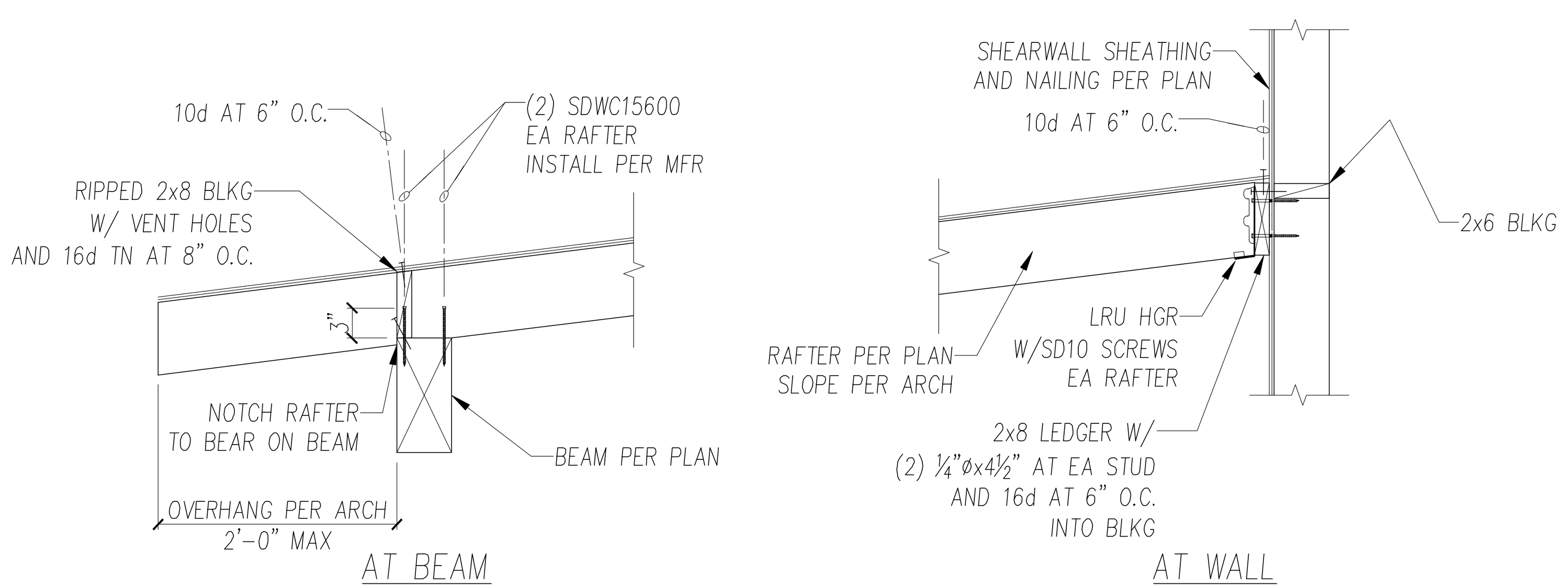
3 / S6 ROOF SECTION

SCALE 3/4" = 1'-0"



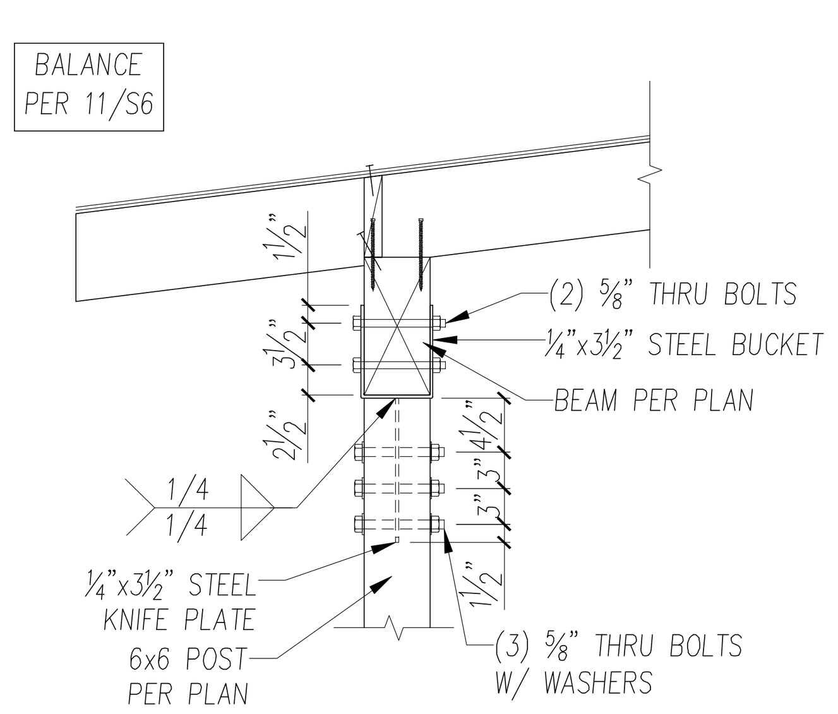
4 / S6 ROOF SECTION

SCALE 3/4" = 1'-0"



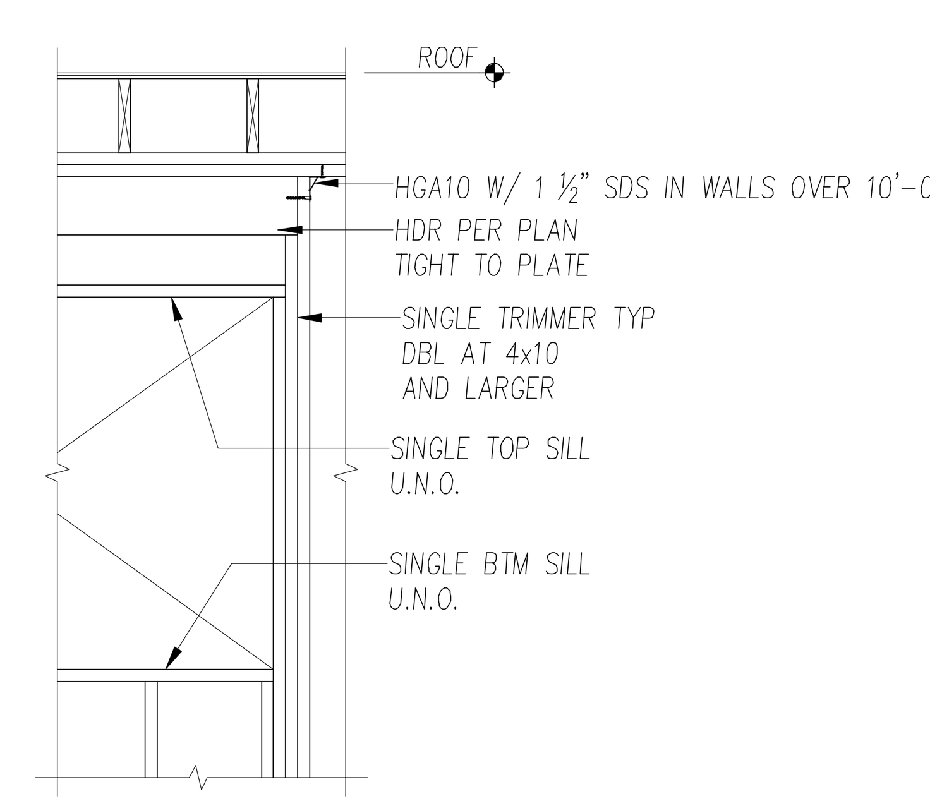
11 / S6 ROOF SECTION

SCALE 3/4" = 1'-0"



16 / S6 ROOF SECTION

SCALE 3/4" = 1'-0"

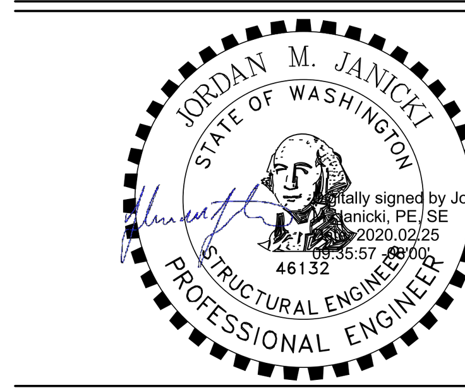


19 / S6 TYPICAL HEADER DETAIL

SCALE 1/2" = 1'-0"

DCG civil structural
2124 Riverside Drive
Suite 211
Mount Vernon, WA 98273

P: 360.899.1110
F: 360.331.5131
www.dcgengr.com



WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services PH 509-335-5571
2425 E. Grimes Way FAX 509-335-9304
Pullman, Wa. 99164-1150

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

PROJECT NUMBER: 18-245

REVISIONS:
10-1-18 PRELIM SET
10-16-20 90% SET
2-21-20 FINAL BID SET

SHEET TITLE:
FRAMING DETAILS

PROJECT ENGINEER: SAMUEL G TORSET
DRAWN BY: JOEL HARKNESS
CHECKED BY: JORDAN M JANICKI
DATE: AUGUST 7, 2018
COMPUTER FILE NAME: ----

S6

SYMBOL LIST

SYMBOL	ABBV.	DESCRIPTION
		BALL VALVE
		GATE VALVE
		CHECK VALVE
		GLOBE VALVE
		GAS COCK
		SOLENOID / MODULATING VALVE
		THREE-WAY VALVE
		RELIEF VALVE
		BALANCING VALVE
		FLOW CONTROL VALVE (SET FOR 1 GPM)
		AUTO-FLOW CONTROL VALVE
	PRV	PRESSURE REDUCING VALVE
		UNION
		THERMOMETER
		PRESSURE GAUGE
		VIBRATION ISOLATOR
		WATER HAMMER ARRESTOR
		STRAINER
	RPBP	BACKFLOW PREVENTION DEVICE
		END CAP
		HOSE BIBB
	VTR	VENT THROUGH ROOF
	CO	CLEANOUT
	W	WASTE
	V	VENT
	CW	COLD WATER
	HW	HOT WATER
	HWC	HOT WATER RECIRCULATION
	HWC	HOT WATER RECIRCULATION WITH HEAT TRACE TAPE
G	G	GAS
HWS	HWS	HOT WATER SUPPLY
HWR	HWR	HOT WATER RETURN
C	C, COND	CONDENSATE
TPL	TPL	TRAP PRIMER LINE
		DUCT SECTION - SUPPLY
		DUCT SECTION - RETURN
		DUCT SECTION - EXHAUST
12x8		RECTANGULAR DUCT (INSIDE DIMENSION)
12"ø		ROUND DUCT
12x8	SL	SOUND LINED DUCT (INSIDE DIMENSION)
		FLEXIBLE DUCT
		SPIRAL DUCT
		TURNING VANE
	VD	VOLUME DAMPER
M	MD	MOTORIZED DAMPER
	BDD	BACKDRAFT DAMPER
	SFD	COMBINATION SMOKE/FIRE DAMPER
	FD	FIRE DAMPER
	RAD	CEILING RADIATION DAMPER
SD	SD	DUCT SMOKE DETECTOR
		SUPPLY DIFFUSER
		RETURN GRILLE
		EXHAUST GRILLE

SYMBOL	ABBV.	DESCRIPTION
T HP-1	T'STAT	THERMOSTAT
S HP-1	S	SENSOR
CO	CO	CARBON MONOXIDE SENSOR
NO_2	NO_2	NITROGEN DIOXIDE
	AFF	ABOVE FINISHED FLOOR
	ARCH.	ARCHITECT/ARCHITECTURAL
	BFF	BELOW FINISHED FLOOR
	CDS	CEILING DIFFUSER-SURFACE MOUNTED
	CDL	CEILING DIFFUSER-LAY IN
	CGS	CEILING GRILLE-SURFACE MOUNTED
	CGL	CEILING GRILLE-LAY IN
	COP	COEFFICIENT OF PERFORMANCE
	DEMO	DEMOLISH
	DWG	DRAWING
	(E), EXIST.	EXISTING ITEMS
	ELECT.	ELECTRICAL
	EC	ELECTRICAL CONTRACTOR
	EER	ENERGY EFFICIENCY RATING
	EFF	EFFICIENCY/EFFICIENT
	FR	FLOOR REGISTER
	GC	GENERAL CONTRACTOR
	GPM	GALLONS PER MINUTE
	HSPF	HEATING SEASONAL PERFORMANCE FACTOR
	HWR	HIGH WALL REGISTER
	HWG	HIGH WALL GRILLE
	I.E.	INVERT ELEVATION
	IPLV	INTEGRATED PART LOAD VALUE
	LWR	LOW WALL REGISTER
	LWG	LOW WALL GRILLE
	MC	MECHANICAL CONTRACTOR
	MECH.	MECHANICAL
	(N)	NEW
	NTS	NOT TO SCALE
	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
	POC	POINT OF CONNECTION
	TYP.	TYPICAL
	U.O.N.	UNLESS OTHERWISE NOTED
WC1		PLUMBING FIXTURE TAG
EF 1		EQUIPMENT TAG
1		FLAG NOTE
		CONNECTION (NECK) SIZE
10"ø CDL 300 CFM		TYPE (CEILING DIFF. LAY-IN)
		FLOW RATE (CUBIC FEET PER MINUTE)
3" (125)		FIXTURE UNITS or BTUH
		PIPE SIZE
		DETAIL NUMBER
1 M1.0		SHEET ON WHICH DETAIL IS DRAWN
		SECTION INDICATOR
1 M1.0		SHEET ON WHICH SECTION IS DRAWN
1		REVISION TAG
1		WASTE RISER TAG
A		WATER RISER TAG

GENERAL NOTES

PROTECT ALL DUCT OPENINGS OF FIRE RATED ASSEMBLIES PER I.B.C. 716.

INSTALL SEISMIC BRACING FOR ALL DUCTWORK, EQUIPMENT AND PIPING PER I.B.C. REQUIREMENTS. PROVIDE ENGINEERED AND STAMPED DESIGN DRAWINGS IF REQUIRED BY IBC. CONTRACTOR TO CONTACT OR HIRE A STRUCTURAL ENGINEER TO DETERMINE BUILDING AND SYSTEM IMPORTANCE FACTORS. UTILIZE ISAT OR OTHER SEISMIC BRACING COMPANY.

INSTALL ALL PIPING ON ROOM SIDE OF BUILDING INSULATION.

MECHANICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND DO NOT NECESSARILY REFLECT EVERY REQUIRED OFF-SET, FITTING OR ACCESSORY.

COORDINATE INSTALLATION OF MECHANICAL SYSTEMS WITH BUILDING STRUCTURE AND ALL OTHER TRADES.

THE MECHANICAL CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BEGINNING WORK IN ORDER TO OBSERVE EXISTING CONDITIONS. VERIFY EXACT SIZE, LOCATION AND CONDITION OF ALL EXISTING SYSTEMS, DUCTS, PIPES, UTILITIES AND BUILDING STRUCTURE.

LOCATE ALL PLUMBING FIXTURES PER ARCHITECTURAL DRAWINGS.

VERIFY VOLTAGES AT THE SITE PRIOR TO ORDERING ANY EQUIPMENT.

CONTRACTOR SHALL PROVIDE WASTE, VENT, WATER AND GAS PIPING, INCLUDING TRAPS, FITTINGS AND STOPS TO COMPLETE EACH EQUIPMENT HOOK-UP TO THE POINT OF FINAL CONNECTION. CONNECTION BETWEEN VARIOUS PIECES OF EQUIPMENT SHALL BE MADE BY THE PLUMBING CONTRACTOR AT THE TIME EQUIPMENT IS BEING INSTALLED.

KITCHEN: CONTRACTOR SHALL PROVIDE WASTE, VENT, WATER AND GAS PIPING, INCLUDING TRAPS, FITTINGS AND STOPS. CONNECTION BETWEEN VARIOUS PIECES OF EQUIPMENT SHALL BE MADE BY PLUMBING CONTRACTOR AT THE TIME EQUIPMENT IS BEING INSTALLED BY THE KITCHEN CONTRACTOR. MECHANICAL CONTRACTOR SHALL INSTALL ALL FITTINGS, VALVES AND CONTROLS FURNISHED WITH KITCHEN EQUIPMENT AS LOOSE ITEMS, AND SHALL PROVIDE ALL INTER-CONNECTING PIPING REQUIRED TO COMPLETE EACH EQUIPMENT HOOK-UP TO THE POINT OF FINAL CONNECTION FOR WATER, WASTE, GAS AND VENT.

PROVIDE WATER HAMMER ARRESTOR ON FAST ACTION VALVES.

ALL MECHANICAL EQUIPMENT LOCATED IN CEILING CAVITIES THAT REQUIRE ELECTRICAL CONNECTION SHALL HAVE AN 8-1/2"x11" LAMINATED SIGN PERMANENTLY MOUNTED ON THE ELECTRICAL ENCLOSURES THAT INDICATES: "THIS EQUIPMENT MUST HAVE A MINIMUM ACCESS OF 36" (LESS THAN 460V) AND 42" (460V AND ABOVE)". NO TRADE SHALL BLOCK THIS SPACE EVEN IF SHOWN ON THE DRAWINGS. INSTALL SIGN PRIOR TO INSTALLATION OF EQUIPMENT.

ALL MECHANICAL EQUIPMENT THAT REQUIRES ACCESS FOR COIL PULL, FILTER CHANGE, MOTOR CHANGE, COMPRESSOR CHANGE, LUBRICATION, SHEAVE AND BELT CHANGE, FAN CHANGE OUT, ETC. SHALL HAVE AN 8-1/2"x11" LAMINATED SIGN PERMANENTLY MOUNTED ON THE EQUIPMENT ACCESS PANELS THAT INDICATES "THIS EQUIPMENT MUST HAVE A MINIMUM ACCESS OF 36". NO TRADE SHALL BLOCK THIS SPACE.

MAJOR APPLICABLE CODES:

2015 INTERNATIONAL BUILDING CODE WITH WASHINGTON STATE AMENDMENTS
2015 INTERNATIONAL MECHANICAL CODE WITH WASHINGTON STATE AMENDMENTS
2015 UNIFORM PLUMBING CODE WITH WASHINGTON STATE AMENDMENTS
2015 INTERNATIONAL FIRE CODE WITH WASHINGTON STATE AMENDMENTS
2015 INTERNATIONAL FUEL GAS CODE WITH WASHINGTON STATE AMENDMENTS
2015 WASHINGTON STATE ENERGY CODE
1999 NFPA 99

DRAWING INDEX

MECHANICAL / ELECTRICAL COORD.

UNLESS OTHERWISE INDICATED, ALL MECHANICAL EQUIPMENT MOTORS AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED IN ACCORDANCE WITH DIVISION 23 OR 26 PER THE FOLLOWING SCHEDULE.

ITEM	FURNISHED BY	SET BY	POWER WIRING	CONTROL WIRING
EQUIPMENT MOTORS	MECH	MECH	ELEC	MECH
HEAT TRACE TAPE	MECH	MECH	ELEC	MECH
MOTOR STARTER AND OVERLOAD HEATERS	ELEC	ELEC	ELEC	MECH
FUSED AND UN-FUSED DISCONNECT SWITCHES THERMAL OVERLOAD AND HEATERS	ELEC	ELEC	ELEC	--
LOW VOLTAGE MANUAL OPERATING AND SPEED SWITCHES	MECH	MECH	MECH	MECH
CONTROL RELAYS AND TRANSFORMERS	MECH	MECH	MECH	MECH
LINE VOLTAGE T'STATS AND SWITCHES	MECH	MECH	MECH	--
LOW VOLTAGE T'STATS	MECH	MECH	MECH	MECH
TEMPERATURE CONTROL PANELS	MECH	MECH	MECH	MECH
MOTOR AND SOLENOID VALVES, MOTORIZED DAMPERS	MECH	MECH	MECH	MECH
BOILER CONTROLS INCL. GAS TRAIN	MECH	MECH	MECH	MECH
LINE VOLTAGE PUSH BUTTON STATIONS AND PILOT LIGHTS	MECH	MECH	MECH	--
TEMPORARY HEATING CONNECTION	MECH	MECH	ELEC	MECH
REFRIGERATION CYCLE CONTROLS	MECH	MECH	MECH	MECH
SMOKE FIRE DAMPERS	MECH	MECH	ELEC	ELEC
DUCT MOUNTED SMOKE DETECTORS	ELEC	MECH	ELEC	MECH OR ELEC
TAMPER AND FLOW SWITCHES	MECH	MECH	MECH	--
MAGNETIC MOTOR STARTERS:				
a. AUTOMATICALLY CONTROLLED WITH HOA SWITCHES (1/2HP AND ABOVE)	ELEC	ELEC	ELEC	MECH
b. MANUALLY CONTROLLED	ELEC	MECH	ELEC	MECH
c. FURNISHED WITH MECHANICAL EQUIPMENT.	MECH	MECH	ELEC	MECH
FURNACE SHUT DOWN CONTROL	MECH	MECH	MECH	MECH
ELECTRIC HEATING AND BASEBOARD	MECH OR ELEC	MECH OR ELEC	ELEC	MECH
ELECTRIC DUCT HEATER	MECH	MECH	ELEC	MECH

* MOTOR INTERLOCK BY MC ; FIRE ALARM CONNECTION BY EC.

HARRIS GROUP
Big Capabilities × Dedicated People
harrisgroup.com

20201 CEDAR VALLEY RD.
SUITE 120
LYNNWOOD, WA. 98036

Phone: (425) 774-3829
Fax: (206) 494-9500

CHARLES T. LONGINO
STATE OF WASHINGTON
19110510
REGISTERED
PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010,

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-C-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10/1/18 PRELIM SET
1/16/20 90% SET
2/21/20 PERMIT SET
2/24/20 BID SET

HARDLY EVE
REQUIRED W
MUST CHOOS

SHEET TITLE:
COVER SHEET

CARL POTSWALD
PROJECT ENGINEER:

CARL POTSWALD
DRAWN BY:

ANDY LONGINO
CHECKED BY:

FEBRUARY 21, 2020
DATE

COMPUTER FILE NAME

M0.0

PLUMBING VALVE SCHEDULE

SERVICE	SIZE	PIPE	FUNCTION	TYPE	CLASS	MFG	MODEL NO.
DOMESTIC COLD WATER DOMESTIC HOT WATER DOMESTIC HOT WATER CIRCULATION	1/2" - 3"	COPPER	SHUT-OFF	BALL VALVE: 2-PIECE FULL-PORT, BRONZE CONSTRUCTION	600	APOLLO	77CLF-200
	1/2" - 3"	COPPER	CHECK	SWING CHECK VALVE	200	APOLLO	161S-LF
	1/2" - 3"	COPPER	THROTTLE	BALL VALVE: 2-PIECE FULL-PORT, BRONZE CONSTRUCTION	600	APOLLO	70LF-200
	1/2" - 3"	COPPER	BALANCE	CIRCUIT SETTER BALANCING VALVE	400	B & G	CB-__LF
NATURAL GAS	1/2" - 3"	STEEL	SHUT-OFF	GAS BALL VALVE	600	APOLLO	GB15

ACCEPTABLE ALTERNATE MANUFACTURERS: HAMMOND, MILWAUKEE

TABLE 313.3 HANGER AND SUPPORTS

NOTE: ALL SYSTEMS AND INSULATION TYPES MAY NOT BE USED ON EACH PROJECT

MATERIALS	TYPES OF JOINTS	HORIZONTAL	VERTICAL
CAST-IRON HUBLESS	SHIELDED COUPLING	EVERY OTHER JOIN, UNLESS OVER 4 FEET THEN SUPPORT EACH JOINT[1,2,3]	BASE AND EACH FLOOR, NOT TO EXCEED 15 FEET
COPPER AND COPPER ALLOYS	SOLDERED, BRAZED, THREADED, OR MECHANICAL	1-1/2" INCHES AND SMALLER, 6 FEET; 2 INCHES AND LARGER, 10 FEET	EACH FLOOR NOT TO EXCEED 10 FEET[4]
STEEL PIPE FOR GAS	THREADED OR WELDED	1/2" INCHES, 6 FEET; 3/4 INCH AND 1 INCH, 8 FEET; 1-1/4 INCHES AND LARGER, 10 FEET	1/2" INCH, 6 FEET; 3/4 INCH AND 1 INCH, 8 FEET; 1-1/4 INCHES EVERY FLOOR
SCHEDULE 40 PVC AND ABS DWV	SOLVENT CEMENTED	ALL SIZES, 4 FEET; ALLOW FOR EXPANSION EVERY 30 FEET[3]	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES; PROVIDE FOR EXPANSION EVERY 30 FEET
STEEL	MECHANICAL	IN ACCORDANCE WITH STANDARDS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION	
PEX	COLD EXPANSION, INSERT, AND COMPRESSION	1 INCH AND SMALLER, 32 INCHES; 1-1/4 INCHES AND LARGER, 4 FEET	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES
PEX-AL-PEX	METAL INSERT AND METAL COMPRESSION	1 INCH - 3/4 INCH 1 INCH - ALL SIZES 98 INCHES	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES
PE-AL-PE	METAL INSERT AND METAL COMPRESSION	1 INCH - 3/4 INCH 1 INCH - ALL SIZES 98 INCHES	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES

FOR SI UNIT: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM

NOTES:
1. SUPPORT ADJACENT TO JOIN, NOT TO EXCEED 18 INCHES (457 MM).
2. BRACE NOT TO EXCEED 40 FOOT (12,192 MM) INTERVALS TO PREVENT HORIZONTAL MOVEMENT.
3. SUPPORT AT EACH HORIZONTAL BRANCH CONNECTION.
4. HANGERS SHALL NOT BE PLACED ON THE COUPLING.
5. VERTICAL WATER LINES SHALL BE PERMITTED TO BE SUPPORTED IN ACCORDANCE W2ITH RECOGNIZED ENGINEERING PRINCIPLES WITH REGARD TO EXPANSION AND CONTRACTION, WHERE FIRST APPROVED BY THE AUTHORITY HAVING JURISDICTION.

PLUMBING PIPING SCHEDULE

SERVICE	LOCATION	SIZE	PIPE	PIPE MATERIAL STANDARD	FITTINGS	JOINTS	WORKING PRESSURE	TEST PRESSURE	NOTES
DOMESTIC COLD WATER DOMESTIC HOT WATER DOMESTIC HOT WATER CIRCULATION	ABOVE GRADE	1/2" - 3"	COPPER TYPE L HARD DRAWN	ASTM B88	WROUGHT COPPER	WATER SAFE SOLDER BCUP	70 PSIG	100 PSIG	
		1/2" - 2"	PEX-A	ASTM F876 ASTM F877	ENGINNERED POLYMER	UPONOR PRO-PEX	70 PSIG	100 PSIG	
	BELOW GRADE	1/2" - 4"	COPPER TYPE K HARD DRAWN	ASTM B88	WROUGHT COPPER	WATER SAFE SOLDER BCUP	70 PSIG	100 PSIG	
SANITARY WASTE	ABOVE GRADE	1-1/4" - 6"	NO-HUB CAST IRON	CISPS 301	NO-HUB CAST IRON	NO-HUB	AMBIENT	5 PSIG	STANDARD DUTY COUPLINGS
		1-1/4" - 6"	PVC - SCHEDULE 40 SOLID CORE	ASTM D2665	PVC SCHEDULE 40 (SOLID CORE)	SOLVENT WELD	AMBIENT	5 PSIG	
	BELOW GRADE	1-1/4" - 6"	PVC - SCHEDULE 40 SOLID CORE	ASTM D2665	PVC SCHEDULE 40 (SOLID CORE)	SOLVENT WELD	AMBIENT	5 PSIG	
SANITARY VENT	ABOVE GRADE BELOW GRADE	1-1/4" - 4"	PVC - SCHEDULE 40 SOLID CORE	ASTM D2665	PVC SCHEDULE 40 (SOLID CORE)	SOLVENT WELD	AMBIENT	5 PSIG	
CONDENSATE DRAINAGE	ABOVE GRADE	1/2" - 2"	COPPER TYPE L HARD DRAWN	ASTM B88	WROUGHT COPPER	WATER SAFE SOLDER BCUP	70 PSIG	100 PSIG	
TRAP PRIMER	ABOVE GRADE BELOW GRADE	3/8" - 1/2"	COPPER TYPE ANNEALED	ASTM B88	WROUGHT COPPER	WATER SAFE SOLDER BCUP	70 PSIG	100 PSIG	
		3/8" - 1/2"	PEX-A	ASTM F876 ASTM F877	LEAD FREE BRASS	UPONOR PRO-PEX	70 PSIG	100 PSIG	

PLUMBING FIXTURE UNIT WORKSHEET

JOB NAME: WSU CSANR HEADHOUSE — DATE: 11/14/2019
FILE NAME: — DESIGNER: CMP
2015 UPC & Wash.Amend. — FORM:FIXUNITA 2.1

FIXTURE TYPE	QUA.	DRAINAGE UNITS EACH	DRAINAGE UNITS TOTAL	CW UNITS EACH	CW UNITS TOTAL	HW UNITS EACH	HW UNITS TOTAL
1.6 Water Closet - Grav.Flush(Pub)	1	4	4	2.5	2.5		0
			0		0		0
Single Lavatory - Pub.or Priv.	1	1	1	1	1	0.75	0.75
Floor Sink	1	2	4	1	1	0.75	0.75
Service Sink or Janitor Sink - Pub.	1	3	3	3	3	2.25	2.25
Sink Pub.	3	2	6	1.5	4.5	1.5	4.5
2" Floor Drain	2	2	4		0		
12" Trough Drain	1	2	2		0		
Total Fixture Units			24		12		8.25

2015 WSEC TABLE C403.2.9
MINIMUM PIPE INSULATON THICKNESS (THICKNESS IN INCHES)[a]

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (inches)				
	Conductivity Btu · in./(h · ft2 · °F)[b]	Mean Rating Temperature, °F	<1	1 TO < 1-1/2	1-1/2" TO <4	4 TO <8	≥ 8
>350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251-350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201-250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141-200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105-140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
<40	0.20 - 0.26	75	0.5	1.0	1.0	1.0	1.5

A. FOR PIPING SMALLER THAN 1-1/2 INCH (38 MM) AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1 INCH (25 MM) SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B) BUT NOT TO A THICKNESS LESS THAN 1 INCH (25 MM).
B. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS: T = R{(1 + T/R)K/K - 1} WHERE: T = MINIMUM INSULATION THICKNESS, R = ACTUAL OUTSIDE RADIUS OF PIPE, T = INSULATION THICKNESS LISTED IN THE TABLE FOR APPLICABLE FLUID TEMPERATURE AND PIPE SIZE, K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE (BTU x INIH x FT2 x °F) AND K = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE.
C. FOR DIRECT-BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1-1/2" INCHES SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B BUT NOT TO THICKNESSES LESS THAN 1 INCH.

PLUMBING EQUIPMENT SCHEDULE

NO	ITEM	DESCRIPTION
WH-1	ELECTRIC (INSTANT) WATER HEATER	CHRONOMITE INSTANT -FLOW SR-20L/208, 208V, 20 AMPS, 4160 WATTS, 71 DEGREE TEMPERATURE RISE AT 0.4 GPM, SET OUTLET TO MAX 120° F,
WH-2	ELECTRIC (INSTANT) WATER HEATER	CHRONOMITE INSTANT -TEMP E-80L/208, 208V, 38 AMPS, 8000 WATTS, 55 DEGREE TEMPERATURE RISE AT 1.0 GPM, SET OUTLET TO MAX 105° F,
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR	WILKINS MODEL 975XL2TCU WITH AIR GAP, SIZES 3/4" THRU 2"
TP	TRAP PRIMER VALVE	PRECISION PLUMBING PRODUCTS MODEL CPO-500

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	LOCAL CONNECTIONS W	V	HW	CW
CB1	CATCH BASIN - ZURN Z887-24, 23.25X24X24, HDPE BODY, DUCTILE IRON SLOTTED GRATE (CLASS C WEIGHT LOADING), PROVIDE INLET ADAPTER TO Z886 TRENCH DRAIN, 3" END OUTLET, PROVIDE P-TRAP AND VENT, PROVIDE SEDIMENT BUCKET.	3"	2"	--	--
FD1	FLOOR DRAIN (SLAB ON GRADE) - ZURN 415B, DURA-COATED CAST IRON BODY, NICKEL BRONZE STRAINER	2"	2"	--	--
FS1	FLOOR SINK - ZURN Z1900, 12X12X6 DEEP, CI BODY, WHITE ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, ABS BOTTOM DOME STRAINER, 1/2 GRATE	4"	2"	--	--
HB1	HOSE BIBB - ZURN Z1320 ENCASED ECOLOTROL ANTI-SIPHON, AUTOMATIC DRAINING WALL HYDRANT. INTEGRAL BACKFLOW PREVENTER, 1/2 TURN CERAMIC DISK CARTRIDGE. STAINLESS STEEL BOX AND HINGED COVER.	--	--	--	3/4"
L1	LAVATORY (ADA) - ZURN Z5111, 20" X 17" - 4" CENTERSET COUNTERTOP LAVATORY; SINGLE HOLE LAVATORY FAUCET Z6918-XL, 0.5 GPM FLOW RATE, BATTERY OPERATED SENSOR, 4" COVER PLATE; GRID DRAIN; 1-1/4" X 1-1/2" CAST BRASS P-TRAP LESS CLEANOUT; STANDARD STOP LAVATORY SUPPLY KIT (CONNECTIONS 1/2" IPS X 3/8" OD); ADA COMBINATION TRAP AND SUPPLY WRAP PROTECTOR KIT. ENSURE LAVATORY HAS AN ASSE 1070 CERTIFIED MIXING VALVE INSTALLED PER PLUMBING CODE REQUIREMENT.	1-1/2"	1-1/2"	1/2"	1/2"
S1	ONE COMPARTMENT SINK - ROUGH IN ONLY, PROVIDE WASTE/VENT IN WALL, PROVIDE HW AND CW STOPS.	2"	1-1/2"	1/2"	1/2"
S2	SINK - ONE COMPARTMENT (STAINLESS STEEL COUNTER MOUNT) JUST SL-ADA-1921-A-GR 19X21", 6-1/2" DEPTH JUST J-35 CP SINK STRAINER CHICAGO 201-AGN8E3-317VAB, 8" CENTERS, 8" GOOSENECK SPOUT W/ CERAMIC DISK CARTRIDGES, 4" WRIST BLADE HANDLES, LAMINAR FLOW SPOUT, SCREWDRIVER STOPS & SUPPLIES, 17 GA CHROME PLATED P-TRAP. PLUMBEREX HANDY-SHIELD MAXX SERIES P-TRAP/H&C WATER COVERS.	2"	1-1/2"	1/2"	1/2"
TD1	TRENCH DRAIN - ZURN Z-886 COMPOSITE TRENCH DRAINAGE SYSTEM, 6" WIDE, 6'8" LENGTH, 0.75% SLOPE, DUCTILE IRON, SLOTTED GRATE FOR HEAVY DUTY TRAFFIC, PROVIDE AND INSTALL END CAP ON HIGH END AND CONNECT TO CATCH BASIN ON LOW END.	--	--	--	--
WB1	REFRIGERATOR - O.F.C.I., ROUGH IN AND CONNECT CW, GUY GRAY BIM875 WALL BOX, PROVIDE SHOCK ARRESTOR AND RECESSED WALL BOX.	--	--	--	1/2"
WC1	WATER CLOSET - (FLOOR MOUNT FLUSH TANK / GRAVITY FLUSH) AMERICAN STANDARD H2OPTION, DUAL FLUSH ELONGATED TOILET, 2886.216, ADA COMPLIANT, 1.6/1.0 GPF, VITREOUS CHINA, OPEN FRONT SEAT, SCREWDRIVER STOP & SUPPLY, NO-SEEP WAX RING W/SLEEVE, CLOSET BOLTS, NUTS & WASHERS, LOCATE FLUSH HANDLE AT WIDE SIDE OF APPROACH.	3"	2"	--	1/2"

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

20201 CEDAR VALLEY RD.
SUITE 120
LYNNWOOD, WA. 98036

Phone: (425) 774-3829
Fax: (206) 494-9500

CHARLES LONGINO — STATE OF WASHINGTON — 19110510 — REGISTERED PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010,

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-C-000
WSU PROJECT NUMBER: 9696-2018

18-245
PROJECT NUMBER:

REVISIONS:
10/1/18 PRELIM SET
1/16/20 90% SET
2/21/20 PERMIT SET
2/24/20 BID SET

SHEET TITLE:
SCHEDULES – PLUMBING

CARL POTSWALD
PROJECT ENGINEER:

CARL POTSWALD
DRAWN BY:

ANDY LONGINO
CHECKED BY:

FEBRUARY 21, 2020
DATE

COMPUTER FILE NAME

M1.0

2015 WASHINGTON STATE ENERGY CODE NOTES

NOTE: ITEMS IN (PARENTHESIS) REFERENCE CODE SECTIONS FROM THE 2015 WASHINGTON STATE ENERGY CODE.

(C403.2 PROVISIONS APPLICABLE TO ALL MECHANICAL SYSTEMS) CONTRACTOR SHALL PROVIDE ALL MECHANICAL SYSTEMS AND EQUIPMENT, SERVING THE BUILDING HEATING, COOLING OR VENTILATING NEEDS, WHICH COMPLY WITH SECTIONS C403.2.1 THROUGH C403.2.13.

(C403.2.4 HVAC SYSTEM CONTROLS) CONTRACTOR SHALL PROVIDE EACH HEATING AND COOLING SYSTEM WITH THERMOSTATIC CONTROLS AS SPECIFIED IN SECTION C403.2.4.1, C403.2.4.2, C403.2.4.3, C403.2.4.4, C403.4.1, C403.4.2, C403.4.3, C403.4.4, C403.4.5, C403.4.6, C403.4.7, C403.4.8, C403.4.9, OR C403.4.10.

(C403.2.4.1 THERMOSTATIC CONTROLS) CONTRACTOR SHALL PROVIDE INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN EACH ZONE WHERE THE SUPPLY OF HEATING AND COOLING ENERGY IS PROVIDED. AT A MINIMUM, EACH FLOOR OF A BUILDING SHALL BE CONSIDERED AS A SEPARATE ZONE. CONTROLS ON SYSTEMS REQUIRED TO HAVE ECONOMIZERS AND SERVING SINGLE ZONES SHALL HAVE MULTIPLE COOLING STAGE CAPABILITY AND ACTIVATE THE ECONOMIZER WHEN APPROPRIATE AS THE FIRST STAGE OF COOLING. SEE SECTION C403.3.1 OR C403.4.1 FOR FURTHER ECONOMIZER REQUIREMENTS. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, AT LEAST ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

(C403.2.4.1.1 HEAT PUMP SUPPLEMENTARY HEAT) CONTRACTOR SHALL PROVIDE ALL UNITARY AIR COOLED HEAT PUMPS WITH MICROPROCESSOR CONTROLS WHICH MINIMIZE SUPPLEMENTAL HEAT USAGE DURING START-UP, SET-UP, AND DEFROST CONDITIONS. THESE CONTROLS SHALL ANTICIPATE NEED FOR HEAT AND USE COMPRESSION HEATING AS THE FIRST STAGE OF HEAT. CONTROLS SHALL INDICATE WHEN SUPPLEMENTAL HEATING IS BEING USED THROUGH VISUAL MEANS (E.G., LED INDICATORS). HEAT PUMPS EQUIPPED WITH SUPPLEMENTARY HEATERS SHALL BE INSTALLED WITH CONTROLS THAT PREVENT SUPPLEMENTAL HEATER OPERATION ABOVE 40°F.

(C403.2.4.1.2 DEADBAND) CONTRACTOR SHALL PROVIDE A TEMPERATURE RANGE OR DEADBAND OF AT LEAST 5°F (2.8°C), WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS CAPABLE OF BEING SHUT OFF OR REDUCED TO A MINIMUM, WHERE ZONE THERMOSTATIC CONTROLS ARE USED TO CONTROL BOTH HEATING AND COOLING.

(C403.2.4.2 OFF-HOUR CONTROLS) CONTRACTOR SHALL PROVIDE THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM FOR ALL OCCUPANCIES OTHER THAN GROUP R.

(C403.2.4.2.1 THERMOSTATIC SETBACK CAPABILITIES) THERMOSTATIC SETBACK CONTROLS SHALL HAVE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

(C403.2.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN CAPABILITIES) AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CAPABLE OF BEING ADJUSTED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

(C403.2.4.2.3 AUTOMATIC START CAPABILITIES) AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CAPABLE OF AUTOMATICALLY ADJUSTING THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.

(C403.2.4.3 SHUTOFF DAMPER CONTROLS) CONTRACTOR SHALL PROVIDE OUTDOOR AIR SUPPLY, EXHAUST OPENINGS, RELIEF OUTLETS AND STAIRWAY AND SHAFT VENTS WITH CLASS I MOTORIZED DAMPERS THAT WILL AUTOMATICALLY SHUT WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE OR DURING BUILDING WARM-UP, COOLDOWN, AND SETBACK.

(C403.2.6 VENTILATION) CONTRACTOR SHALL PROVIDE VENTILATION, EITHER NATURAL OR MECHANICAL, IN ACCORDANCE WITH CHAPTER 4 OF THE INTERNATIONAL MECHANICAL CODE. WHERE MECHANICAL VENTILATION IS PROVIDED, THE SYSTEM SHALL BE CONFIGURED TO PROVIDE NO GREATER THAN 150 PERCENT OF THE MINIMUM OUTDOOR AIR REQUIRED BY CHAPTER 4 OF THE INTERNATIONAL MECHANICAL CODE OR OTHER APPLICABLE CODE OR STANDARD, WHICHEVER IS GREATER.

(C403.2.6.3 OCCUPANCY SENSORS) CONTRACTOR SHALL PROVIDE OCCUPANCY SENSORS FOR CLASSROOMS, GYMS, AUDITORIUMS AND CONFERENCE ROOMS LARGER THAN 500 SQUARE FEET OF FLOOR AREA THAT WILL EITHER CLOSE OUTSIDE AIR DAMPERS OR TURN OFF SERVING EQUIPMENT WHEN THE SPACE IS UNOCCUPIED EXCEPT WHERE EQUIPPED WITH ANOTHER MEANS TO AUTOMATICALLY REDUCE OUTSIDE AIR INTAKE BELOW DESIGN RATES WHEN SPACES ARE PARTIALLY OCCUPIED.

(C403.2.8.1) CONTRACTOR SHALL PROVIDE DUCTS, SHAFTS AND PLENUMS CONVEYING OUTSIDE AIR FROM THE EXTERIOR OF THE BUILDING TO THE MECHANICAL SYSTEM WHICH MEET ALL AIR LEAKAGE AND BUILDING ENVELOPE INSULATION REQUIREMENTS OF SECTION C402, PLUS BUILDING ENVELOPE VAPOR CONTROL REQUIREMENTS FROM THE INTERNATIONAL BUILDING CODE, EXTENDING CONTINUOUSLY FROM THE BUILDING EXTERIOR TO AN AUTOMATIC SHUTOFF DAMPER OR HEATING OR COOLING EQUIPMENT. FOR THE PURPOSES OF BUILDING ENVELOPE INSULATION REQUIREMENTS, DUCT SURFACES SHALL MEET THE REQUIREMENTS FOR METAL FRAMED WALLS PER TABLE C402.1.2.

C403.2.8.2 CONTRACTOR SHALL PROVIDE ALL OTHER SUPPLY AND RETURN AIR DUCTS AND PLENUMS WITH A MINIMUM OF R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND A MINIMUM OF R-8 INSULATION WHERE LOCATED OUTSIDE THE BUILDING. WHERE LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY MINIMUM INSULATION VALUE AS REQUIRED FOR EXTERIOR WALLS BY SECTION C402.2.3.

SUPPLY DUCTS WHICH CONVEY SUPPLY AIR AT TEMPERATURES LESS THAN 55°F OR GREATER THAN 105°F SHALL BE INSULATED WITH A MINIMUM OF R-3.3 INSULATION WHERE LOCATED WITHIN CONDITIONED SPACE.
ALL DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH SECTION 603.9 OF THE INTERNATIONAL MECHANICAL CODE.

(C403.2.8.3.1 LOW-PRESSURE DUCT SYSTEMS) CONTRACTOR SHALL PROVIDE ALL LONGITUDINAL AND TRANSVERSE JOINTS, SEAMS AND CONNECTIONS OF SUPPLY AND RETURN DUCTS OPERATING AT A STATIC PRESSURE LESS THAN OR EQUAL TO 2 INCHES WATER GAUGE (W.G.) (500 PA) WITH SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS EMBEDDED-FABRIC SYSTEMS OR TAPES INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PRESSURE CLASSIFICATIONS SPECIFIC TO THE DUCT SYSTEM SHALL BE CLEARLY INDICATED ON THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE.

(C403.2.9 PIPING INSULATION) CONTRACTOR SHALL PROVIDE ALL PIPING SERVING AS PART OF A HEATING OR COOLING SYSTEM WITH THERMAL INSULATION IN ACCORDANCE WITH TABLE C403.2.9.

(C403.2.9.1 PROTECTION OF PIPING INSULATION) CONTRACTOR SHALL PROTECT ALL PIPING INSULATION EXPOSED TO WEATHER FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVES TAPE SHALL NOT BE PERMITTED.

(C403.2.10 MECHANICAL SYSTEMS COMMISSIONING AND COMPLETION REQUIREMENTS) MECHANICAL SYSTEMS SHALL BE COMMISSIONED AND COMPLETED IN ACCORDANCE WITH SECTION C408.

(C403.2.11.3 FAN EFFICIENCY) CONTRACTOR SHALL PROVIDE FANS WITH A FAN EFFICIENCY GRADE (FEG) OF 67 OR HIGHER PER AMCA 205. THE TOTAL EFFICIENCY AT DESIGN CONDITIONS SHALL BE WITHIN 15 PERCENT OF THE MAXIMUM TOTAL EFFICIENCY.

(C403.2.11.5 FAN AIRFLOW CONTROL) CONTRACTOR SHALL PROVIDE EACH COOLING SYSTEM LISTED IN TABLE C403.2.4.11.5 WITH CONTROL TO VARY THE INDOOR FAN AIRFLOW AS A FUNCTION OF LOAD AND ADDITIONAL REQUIREMENTS LISTED IN THIS SECTION.

(C403.2.14 ELECTRIC MOTOR EFFICIENCY) CONTRACTOR SHALL PROVIDE ALL ELECTRIC MOTORS, INCLUDING FRACTIONAL HP MOTORS WITH C405.8.

(C403.6 DEDICATED OUTDOOR AIR SYSTEMS (DOAS) CONTRACTOR SHALL PROVIDE A DEDICATED OUTDOOR AIR SYSTEM (DOAS) WHICH DELIVERS 100 PERCENT OUTDOOR AIR WITHOUT REQUIRING OPERATION OF THE HEATING AND COOLING SYSTEM FANS FOR VENTIALTION AIR DELIVERY FOR OFFICE, RETAIL, EDUCATION, LIBRARIES AND FIRE STATIONS.

(C406 ADDITIONAL EFFICIENCY PACKAGE OPTIONS) BUILDING SHALL COMPLY WITH NO LESS THAN TWO OF THE FOLLOWING:

1. MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH SECTION C406.2
2. REDUCED LIGHTING POWER IN ACCORDANCE WITH SECTION C406.3
3. ENHANCED LIGHTING CONTROLS IN ACCORDANCE WITH SECTION C406.4
4. ON-SITE SUPPLY OF RENEWABLE ENERGY IN ACCORDANCE WITH SECTION C406.5
5. PROVISION OF A DEDICATED OUTDOOR AIR SYSTEM FOR CERTAIN HVAC EQUIPMENT IN ACCORDANCE WITH SECTION C406.6
6. HIGH-EFFICIENCY SERVICE WATER HEATING IN ACCORDANCE WITH SECTION C406.7
7. ENHANCED ENVELOPE PERFORMANCE IN ACCORDANCE WITH SECTION C406.8
8. REDUCED AIR INFILTRATION IN ACCORDANCE WITH SECTION C406.9

C403.3 ECONOMIZERS (*PRESCRIPTIVE*). AIR ECONOMIZERS SHALL BE PROVIDED ON ALL NEW SYSTEMS INCLUDING THOSE SERVING COM- PUTER SERVER ROOMS, ELECTRONIC EQUIPMENT, RADIO EQUIPMENT, AND TELEPHONE SWITCHGEAR. ECONOMIZERS SHALL COMPLY WITH SECTIONS C403.3.1 THROUGH C403.3. 4.

EXCEPTION: ECONOMIZERS ARE NOT REQUIRED FOR THE SYSTEMS LISTED BELOW:

1. SYSTEMS COMPLYING WITH SECTION C403.6 DEDICATED OUTDOOR AIR SYSTEMS (DOAS) WITH YEAR- ROUND COOLING LOADS FROM LIGHTS AND EQUIPMENT OF LESS THAN 5 WATTS PER SQUARE FOOT.
2. UNITARY OR PACKAGED SYSTEMS SERVING ONE ZONE WITH DEHUMIDIFICATION WHERE AN ECONOMIZER WOULD INCREASE THE OVERALL BUILDING ENERGY CONSUMPTION. NEW HUMIDIFICATION EQUIPMENT SHALL COMPLY WITH SECTION C403.2.3.4
3. UNITARY OR PACKAGED SYSTEMS SERVING ONE ZONE WHERE THE COOLING EFFICIENCY MEETS OR EXCEEDS THE EFFICIENCY REQUIREMENTS IN TABLE C403.3(3).
4. WATER-COOLED REFRIGERATION EQUIPMENT SERVING CHILLED BEAMS AND CHILLED CEILING SPACE COOLING SYSTEMS ONLY WHICH ARE PROVIDED WITH A WATER ECONOMIZER MEETING THE REQUIREMENTS OF SECTION C403.3.4.
5. SYSTEMS COMPLYING WITH ALL OF THE FOLLOWING CRITE-RIA:

5.1. CONSIST OF MULTIPLE WATER SOURCE HEAT PUMPS CONNECTED TO A COMMON WATER LOOP.
5.2. HAVE A MINIMUM OF 60 PERCENT AIR ECONOMIZER.
5.3. HAVE WATER SOURCE HEAT PUMPS WITH AN EER AT LEAST 15 PERCENT HIGHER FOR COOLING AND A COP OF AT LEAST 15 PERCENT HIGHER FOR HEATING THAN THAT SPECIFIED IN SECTION C403.2.3.
5.4. WHERE PROVIDED WITH A DEDICATED BOILER OR FURNACE FOR THAT BUILDING, HAVE A CENTRAL BOILER OR FURNACE EFFICIENCY OF 90 PERCENT MINIMUM FOR UNITS UP TO 199,000 BTU/H.
5.5. PROVIDE HEAT RECOVERY WITH A MINIMUM 50 PERCENT HEAT RECOVERY EFFECTIVENESS AS DEFINED IN SECTION C403.5 TO PREHEAT THE OUTSIDE AIR SUPPLY.

6. FOR GROUP R OCCUPANCIES, COOLING UNITS INSTALLED OUTDOORS OR IN A MECHANICAL ROOM ADJACENT TO OUT- DOORS WITH A TOTAL COOLING CAPACITY LESS THAN 20,000 BTU/H AND OTHER COOLING UNITS WITH A TOTAL COOLING CAPACITY LESS THAN 54,000 BTU/H PROVIDED THAT THESE ARE HIGH-EFFICIENCY COOLING EQUIPMENT WITH JEER, SEER, AND EER VALUES MORE THAN 15 PERCENT HIGHER THAN MINIMUM EFFICIENCIES LISTED IN TABLES C403.2.3 (1) THROUGH (3), IN THE APPROPRIATE SIZE CATEGORY, USING THE SAME TEST PROCEDURES. PTAC AND PTHP UNITS WITH CAPACITIES NO GREATER THAN 8,300 BTU/H ARE PERMITTED FOR THE PURPOSES OF THIS EXCEPTION IF THEY HAVE EER VALUES A MINIMUM OF 4 PERCENT HIGHER THE MINIMUM EFFICIENCIES LISTED IN TABLE C403.2.3(3), IN THE APPROPRIATE SIZE CATEGORY, USING THE SAME TEST PROCEDURES. EQUIPMENT SHALL BE LISTED IN THE APPROPRIATE CERTIFICATION PROGRAM TO QUALIFY FOR THIS EXCEPTION. FOR SPLIT SYSTEMS, COMPLIANCE IS BASED ON THE COOLING CAPACITY OF INDIVIDUAL FAN COIL UNITS.
7. VARIABLE REFRIGERANT FLOW (VRF) SYSTEMS, MULTIPLE-ZONE SPLIT-SYSTEM HEAT PUMPS, CONSISTING OF MULTIPLE, INDIVIDUALLY METERED INDOOR UNITS WITH MULTI-SPEED FAN MOTORS, SERVED ON A SINGLE COMMON REFRIGERATION CIRCUIT WITH AN EXTERIOR REVERSE- CYCLE HEAT PUMP WITH VARIABLE SPEED COMPRESSOR(S) AND VARIABLE SPEED CONDENSER FAN(S). THESE SYSTEMS SHALL ALSO BE CAPABLE OF PROVIDING SIMULTANEOUS HEATING AND COOLING OPERATION, WHERE IN ALL ROOMS WITH VRF UNITS RECOVERED ENERGY FROM THE INDOOR UNITS OPERATING IN ONE MODE CAN BE TRANSFERRED TO ONE OR MORE PERIMETER ZONES (AS DETERMINED BY *CONDITIONED FLOOR AREA*) AND THE OUTDOOR UNIT SHALL BE AT LEAST 65,000 BTU/H IN TOTAL CAPACITY. SYSTEMS UTILIZING THIS EXCEPTION SHALL HAVE 50 PERCENT HEAT RECOVERY EFFECTIVENESS AS DEFINED BY SECTION C403.5 ON THE OUTSIDE AIR. FOR THE PURPOSES OF THIS EXCEPTION, DEDICATED SERVER ROOMS, ELECTRONIC EQUIPMENT ROOMS OR TELECOM SWITCH ROOMS ARE NOT CONSIDERED PERIMETER ZONES AND SHALL NOT EXCEED 20 PERCENT OF THE FLOOR AREA SERVED BY THE VRF SYSTEM.
8. EQUIPMENT USED TO COOL *CONTROLLED PLANT GROWTH ENVIRONMENTS* PROVIDED THESE ARE HIGH-EFFICIENCY COOLING EQUIPMENT WITH SEER, EER AND *IEER* VALUES A MINIMUM OF 20 PERCENT GREATER THAN THE VALUES LISTED IN TABLES C403.2.3(1), (3) AND (7).
9. EQUIPMENT USED TO COOL ANY SPACES WITH YEAR- ROUND COOLING LOADS FROM LIGHTS AND EQUIPMENT OF GREATER THAN 5 WATTS PER SQUARE FOOT, WHERE IT CAN BE DEMONSTRATED THROUGH CALCULATIONS, TO THE SATISFACTION OF THE CODE OFFICIAL, THAT THE HEAT REJECTION LOAD OF THE EQUIPMENT WILL BE RECOVERED AND USED FOR ON-SITE SPACE HEATING OR SERVICE WATER HEATING DEMANDS SUCH THAT THE ENERGY USE OF THE BUILDING IS DECREASED IN COMPARISON TO A BASELINE OF THE SAME EQUIPMENT PROVIDED WITH AN AIR ECONOMIZER COM- PLYING WITH SECTION C403.3.
10. EQUIPMENT USED TO COOL ANY DEDICATED SERVER ROOM, ELECTRONIC EQUIPMENT ROOM, ELEVATOR MACHINE ROOM OR TELECOM SWITCH ROOM PROVIDED THE SYSTEM COM- PLIES WITH OPTION A, B, C, D OR E IN TABLE C403.3(10) BELOW. THE TOTAL CAPACITY OF ALL SYSTEMS QUALIFYING UNDER THIS EXCEPTION WITHOUT ECONOMIZERS SHALL NOT EXCEED 240,000 BTU/H PER BUILDING OR 10 PERCENT OF ITS AIR ECONOMIZER CAPACITY, WHICHEVER IS GREATER. THIS EXCEPTION SHALL NOT BE USED FOR TOTAL BUILDING PERFORMANCE.
11. MEDICAL AND LABORATORY EQUIPMENT THAT IS DIRECTLY WATER-COOLED AND IS NOT DEPENDENT UPON SPACE AIR TEMPERATURE.

ELECTRIC HEATER SCHEDULE

EQUIP. TAG	LOCATION	MFG/MODEL #	WATTS	ORIENTATION	CONTROL OPTION	ELECTRICAL V/PH	AMPS	WEIGHT (LBS)	REMARKS
EH-1	RESTROOM	KING/PAW2022-U	500	WALL MOUNTED	T-STAT	208/1	2.4-10.8	9.5	1, 2, 3

NOTES:

1. COORDINATE LOCATION OF UNIT WITH ARCHITECTURAL FEATURES AND ALL OTHER TRADES.
2. PROVIDE KBB-2 WALL/CEILING BRACKET.
3. PROVIDE WITH 7-DAY PROGRAMMABLE T-STAT (K302PE)

HEAT RECOVERY VENTILATOR SCHEDULE

EQUIP. TAG	MANUFACTURER/MODEL	LOCATION	CONFIGURATION	EXHAUST CFM	MAX SUPPLY CFM	MIN. SUPPLY CFM	E.S.P. INCHES W.G.	MOTOR (HP)	SUMMER SA OUTLET (F°)	SUMMER RECOVERY EFF.	WINTER SA OUTLET (F°)	WINTER RECOVERY EFF.	ELECTRICAL VOLTS	ELECTRICAL PH.	ELECTRICAL MCA	WEIGHT	NOTES
HRV-1	RENEWAIRE / EV130	ATTIC	HORIZONTAL	100	125	100	0.50	0.1	80	50%	56	66%	120	1	2	48 LBS	1, 2, 3, 4, 5

NOTES:
1. PROVIDE WITH MERV 8 FILTERS, NOTE FITERS SHALL BE CHANGED AT TIME OF BUILDING OCCUPANCY.
2. PROVIDE FUSED DISCONNECT.
3. PROVIDE OPTIONAL WALL MOUNT TIME CLOCK CONTROL, OPERATES DURING OCCUPIED HOURS.
4. PROVIDE OPTIONAL RH SERIES SUPPLY AIR DUCT HEATER WIRED SEPERATLY. SEE DUCT HEATER SCHEDULE.
5. PROVIDE EBTRON GTC116-P+FLOW SENSOR WITH ALARM SET TO MINIMUM OSA CFM

DUCTLESS SPLIT SYSTEM HEAT PUMP

OUTDOOR HEAT PUMP

EQUIP. TAG	AREA SERVED	MFG' / MODEL NUMBER	NOMINAL TON	COOL CAP. MBH TOTAL	COOL CAP. MBH SENS.	HEATING CAP. (MBH)	HEATING COP (HSPF)	WEIGHT LBS	NOISE DBA	SEER	ELEC. REQ. MCA	ELEC. REQ. MOCP	ELEC. REQ. VOLTS	ELEC. REQ. PH.
HP 1	101A, 101B, 101	ITSUBISHI / PUMY-P36NKMU	3.0	36000	28800	42000	11.6	267	53	20	29.0	44.0	208	1

INDOOR FAN OOR FAN COIL

EQUIP. TAG	AREA SERVED	MFG' / MODEL NUMBER	AIRFLOW CFM	ESP IN W.G.	ELEC. REQ. MCA	ELEC. REQ. MOCP	ELEC. REQ. VOLTS	ELEC. REQ. PH.	WEIGHT LBS	REMARKS
FC-1	101B	ITSUBISHI / PKFY-P06NBMU-E2R	200	-	0.19	15	208	1	22	1, 2, 3, 4, 6, 7
FC-2	101 NORTH	MITSUBISHI / PKFY-P12NHMU-E2	400	-	0.38	15	208	1	29	1, 2, 3, 4, 6, 7
FC-3	101 SOUTH	MITSUBISHI / PEFY-P12NHMU-E2	400	-	0.38	15	208	1	29	1, 2, 3, 4, 5, 6, 7
FC-4	101 ENTRANCE	ITSUBISHI / PKFY-P06NBMU-E2R	200	-	0.19	15	208	1	22	1, 2, 3, 4, 6, 7

NOTES:
1. PROVIDE PAR-33MAA-J THERMOSTAT
2. INSTALL UNIT 96" AFF
3. PROVIDE OPTIONAL AIR OUTLET GUIDES
4. INDOOR UNIT POWER WIRING FROM OUTDOOR UNIT.
5. PROVIDE GOBI II CONDENSATE PUMP. ROUTE DRAIN TO NEAREST SINK TAIL PIECE (REFER TO SHEET M3.0).
6. NO ECONOMIZER PROVIDED PER the 2015 WSEC C403.3 EXCEPTION 3
7. PROVIDE WITH CMY-Y62-G-E Y BRANCH PER SYSTEM SCHEMATIC.

System Checksums
By Harris Group

HP-1

Variable Refrigerant Flow

COOLING COIL PEAK
Peaked at Time: Mo/Hr: 8 / 14
Outside Air: OADB/WB/HR: 78 / 64 / 67

CLG SPACE PEAK
Mo/Hr: 9 / 14
OADB: 75

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads						
Skylite Solar	0	0	0	0	0	0
Skylite Cond	0	0	0	0	0	0
Roof Cond	147	6	153	1	2	0
Glass Solar	7,847	0	7,847	31	10,148	47
Glass/Door Cond	454	0	454	2	218	1
Wall Cond	1,359	962	2,320	9	1,326	6
Partition/Door	0		0	0	0	0
Floor	0		0	0	0	0
Adjacent Floor	0	0	0	0	0	0
Infiltration	964		964	4	254	1
Sub Total ==>	10,771	968	11,739	46	11,948	55
Internal Loads						
Lights	3,639	37	3,676	14	3,639	17
People	3,955	0	3,955	15	2,000	9
Misc	3,919	0	3,919	15	3,919	18
Sub Total ==>	11,513	37	11,550	45	9,558	44
Ceiling Load	440	-440	0	0	285	1
Ventilation Load	0	0	2,417	9	0	0
Adj Air Trans Heat	0		0	0	0	0
Dehumid. Ov Sizing			0	0		
Ov/Undr Sizing	0		0	0	0	0
Exhaust Heat		0	0	0		
Sup. Fan Heat			0	0		
Ret. Fan Heat		0	0	0		
Duct Heat Pkup		0	0	0		
Underflr Sup Ht Pkup			0	0		
Supply Air Leakage		0	0	0		
Grand Total ==>	22,724	565	25,706	100.00	21,791	100.00

HEATING COIL PEAK
Mo/Hr: Heating Design
OADB: 26

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	-624	-712	4.72
Glass Solar	0	0	0.00
Glass/Door Cond	-2,804	-2,804	18.61
Wall Cond	-1,813	-1,966	13.05
Partition/Door	0	0	0.00
Floor	-2,173	-2,173	14.42
Adjacent Floor	0	0	0
Infiltration	-2,108	-2,108	13.99
Sub Total ==>	-9,523	-9,764	64.79
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-882	0	0.00
Ventilation Load	0	-5,305	35.21
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-10,405	-15,069	100.00

TEMPERATURES

	Cooling	Heating
SADB	50.5	74.3
Ra Plenum	77.5	49.9
Return	70.0	65.0
Ret/OA	70.9	60.3
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	1,017	1,017
Terminal	1,017	1,017
Main Fan	1,017	1,017
Sec Fan	0	0
Nom Vent	124	124
AHU Vent	124	124
Infil	49	49
MinStop/Rh	125	125
Return	1,066	1,066
Exhaust	173	173
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	12.2	12.2
cfm/ft²	1.03	1.03
cfm/ton	474.75	
ft²/ton	459.35	
Btu/hr·ft²	26.12	-15.97
No. People	8	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F	Enter DB/WB/HR °F	Enter DB/WB/HR gr/lb	Leave DB/WB/HR °F	Leave DB/WB/HR °F	Leave DB/WB/HR gr/lb
Main Clg	2.1	25.7	21.8	1,017	70.9	58.1	52.8	50.5	48.6	48.5
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.1	25.7								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	984		
Part	0		
Int Door	0		
ExFlr	103		
Roof	984	0	0
Wall	1,386	206	15
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-15.7	1,017	60.3	74.3
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-15.7			

Project Name: WSU CSANR MT VERNON
Dataset Name: WSU HEAD HOUSE.trc

TRACE® 700 v6.3.3 calculated at 09:39 AM on 01/10/2020
Alternative - 1 System Checksums Report Page 1 of 1

NATURAL VENTILATION PER IMC 402.2

ROOM	AREA SQ FT	OPENING	OPENING SQ FT	OPERABLE DOORS/WINDOWS REQUIRED (4% OF FLOOR AREA)
LAB (103)	665	10'X10' OVHD ROLL-UP DOOR	100	26.6
		TOTAL OPENING (SQFT)	100	

VENTILATION SCHEDULE DOAS SYSTEM

SYSTEM	ROOM NUMBER NAME	AREA SQ FT	NO. PEOPLE	CFM/ PERSON	CFM/SQ FT	MIN. CFM (AREA)	MIN OSA REQ. Ez = 1.0 100% EFF	OSA CFM PROVIDED	EXHAUST CFM
HRV-1	100 OPEN WORK SPACE	800	7	5	0.06	48	83	100	
	101 OFFICE	130	1	5	0.06	8	13	20	
	102 RESTROOM	54	0	5	0.06	3	3	5	100
	103 LAB	(F) 665	NOT REQUIRED PER NATURAL VENTILATION					-	-
	TOTALS	984	8					125	100

VENTILATION MEETS THE REQUIRMENTS OF THE 2010 ASHRAE 62.1 AND THE 2015 IMC
VENTILATION REQUIREMENTS AND OCCUPANT LOADS ARE TAKEN FROM ASHRAE 2010 62.1 TABLE 6-2
ZONE AIR EFFECTIVNESS (EZ) = 1.0, 100% EFFECTIVE
THIS IS A 100% OSA SYSTEM, IT OPPERATES INDEPENDITLY OF ALL OTHER HVAC SYSTEMS

NV	104 MECH. / ELEC. ROOM	100	VENTILATION NOT REQUIRED BY 2010 ASHREA 62.1 (NON OCCUPIED SPACE)
	TOTALS	100	
		1,084	TOTAL BUILDING FLOOR AREA (CURRENT SCOPE)

ELECTRIC DUCT HEATER SCHEDULE

TAG	LOCATION	MFG / MODEL	KW	SIZE	ELECTRICAL V	ELECTRICAL PH	REMARKS
DH-1	HRV 1 OSA SUPPLY DUCT	RENEWAIRE / RH-D SERIES	3	8"	208	1	1, 2, 3

NOTES:
1. PROVIDE SCR POWER CONTROLLER.
2. PROVIDE WITH BUILT-IN DISCONNECT SWITCHES.
3. PROVIDE WITH TEMPERATURE SENSOR CONTROL IN SUPPLY DUCT- SET TO 65 DEG F DISCHARGE AIR TEMP

AIR TERMINAL UNIT SCHEDULE

ITEM	MARK	MANUFACTURER	MODEL	MATERIAL	MOUNTING	FINISH	REMARKS
CIRCLE DIFFUSER	CD	TITUS	TMR	STEEL	OPEN	ENAMLED	
WALL REGISTER	HWR	TITUS	300RLHD	STEEL	SURFACE	ENAMLED	DBL. DEFL. / VERT FRONT

NOTE: NECK CONNECTION SIZE AND TERMINAL SIZE AS NOTED ON MECHANICAL FLOOR PLAN

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

20201 CEDAR VALLEY RD.
SUITE 120
LYNNWOOD, WA. 98036

Phone: (425) 774-3829
Fax: (206) 494-9500

CHARLES LONGINO
19110510

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010,

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10/1/18 PRELIM SET
1/16/20 90% SET
2/21/20 PERMIT SET
2/24/20 BID SET

SHEET TITLE:
SCHEDULES - HVAC

CARL POTSWALD
PROJECT ENGINEER:

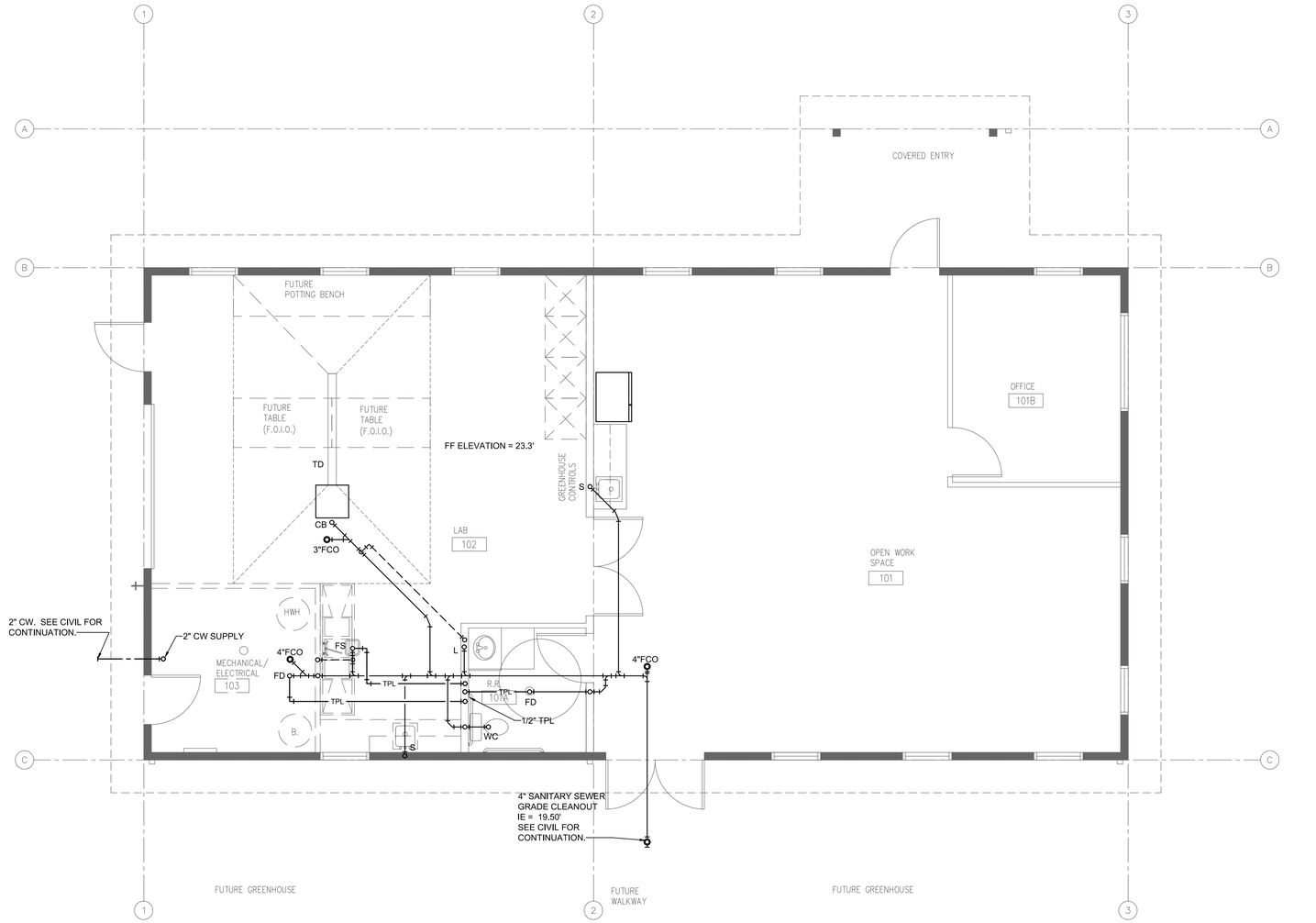
CARL POTSWALD
DRAWN BY:

ANDY LONGINO
CHECKED BY:

FEBRUARY 21, 2020
DATE

COMPUTER FILE NAME

M1.1



1 BELOW SLAB - PLUMBING

0 2' 4' 8'

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

PLAN NORTH

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

20201 CEDAR VALLEY RD.
SUITE 120
LYNNWOOD, WA. 98036

Phone: (425) 774-3829
Fax: (206) 494-9500

CHARLES L. LONGINO
STATE OF WASHINGTON
19110510
REGISTERED
PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010,

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150

PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-C-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:

10/1/18 PRELIM SET
1/16/20 90% SET
2/21/20 PERMIT SET
2/24/20 BID SET

SHEET TITLE:
BELOW SLAB – PLUMBING

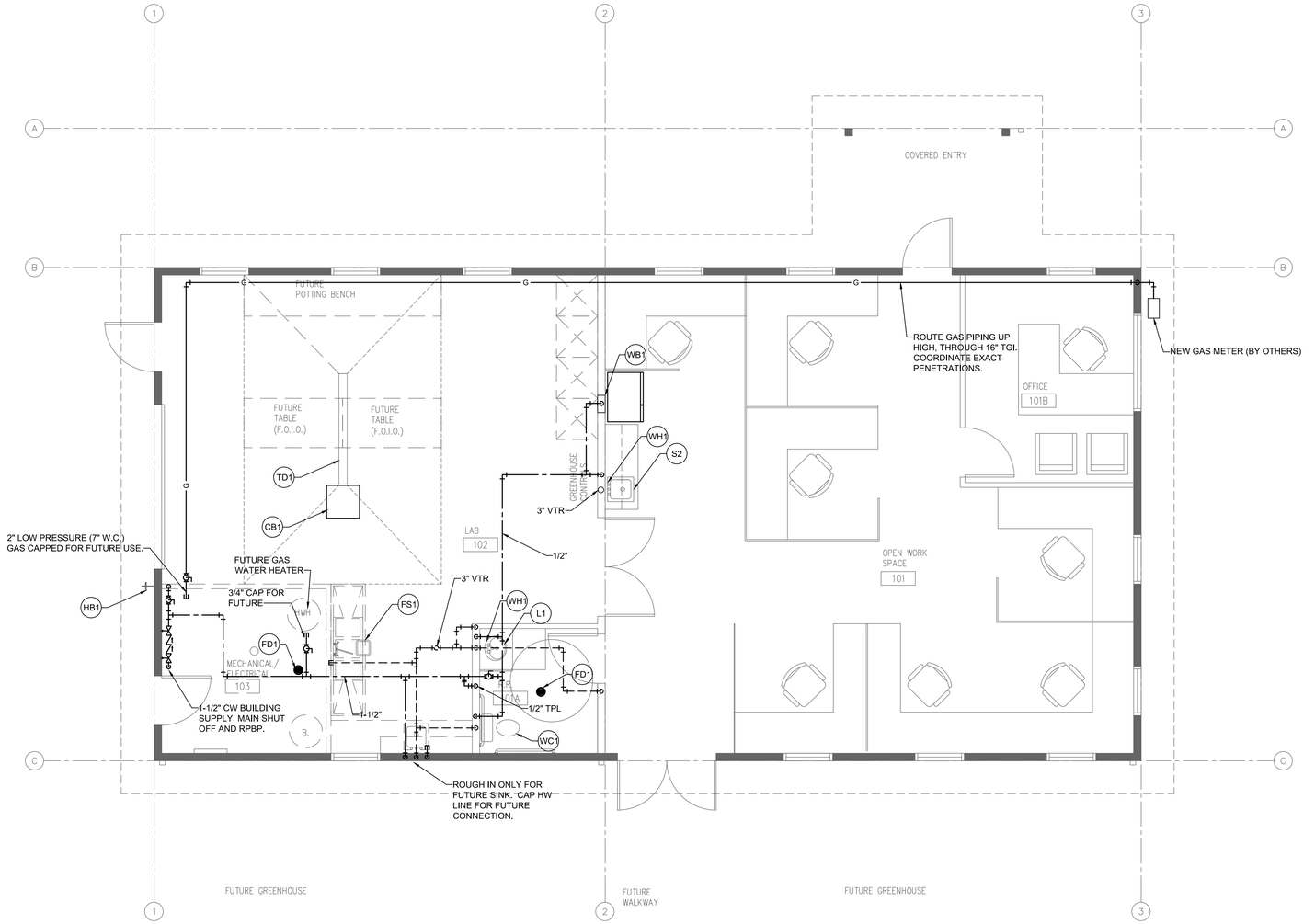
CARL POTSWALD
PROJECT ENGINEER:

CARL POTSWALD
DRAWN BY:

ANDY LONGINO
CHECKED BY:

FEBRUARY 21, 2020
DATE

COMPUTER FILE NAME
M2.0



1 1ST FLOOR - PLUMBING

0 2' 4' 8'

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

PLAN NORTH

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

20201 CEDAR VALLEY RD.
SUITE 120
LYNNWOOD, WA. 98036

Phone: (425) 774-3829
Fax: (206) 494-9500

CHARLES L. LONGINO — STATE OF WASHINGTON — 19110510 — REGISTERED PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010,

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150

PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:

10/1/18 PRELIM SET
1/16/20 90% SET
2/21/20 PERMIT SET
2/24/20 BID SET

SHEET TITLE:

1ST FLOOR – PLUMBING

CARL POTSWALD
PROJECT ENGINEER:

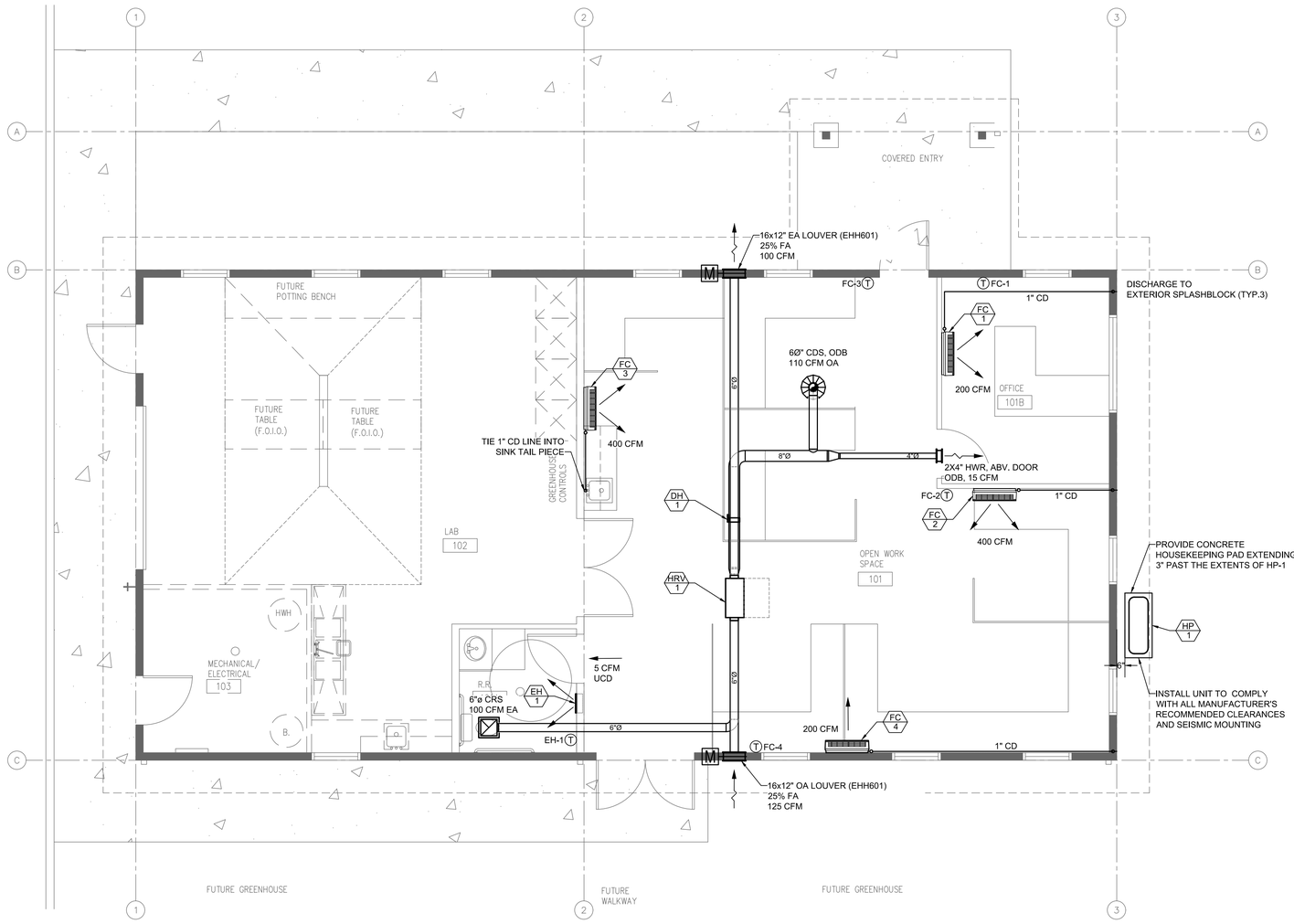
CARL POTSWALD
DRAWN BY:

ANDY LONGINO
CHECKED BY:

FEBRUARY 21, 2020
DATE

COMPUTER FILE NAME

M2.1



1 1ST FLOOR - HVAC

0 2' 4' 8'

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

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

20201 CEDAR VALLEY RD.
SUITE 120
LYNNWOOD, WA. 98036

Phone: (425) 774-3829
Fax: (206) 494-9500

CHARLES L. LONGINO
STATE OF WASHINGTON
19110510
REGISTERED
PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010,

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150

PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:

10/1/18 PRELIM SET
1/16/20 90% SET
2/21/20 PERMIT SET
2/24/20 BID SET

SHEET TITLE:

1ST FLOOR – HVAC

CARL POTSWALD
PROJECT ENGINEER:

CARL POTSWALD
DRAWN BY:

ANDY LONGINO
CHECKED BY:

FEBRUARY 21, 2020
DATE

COMPUTER FILE NAME

M3.0

CITY MULTI

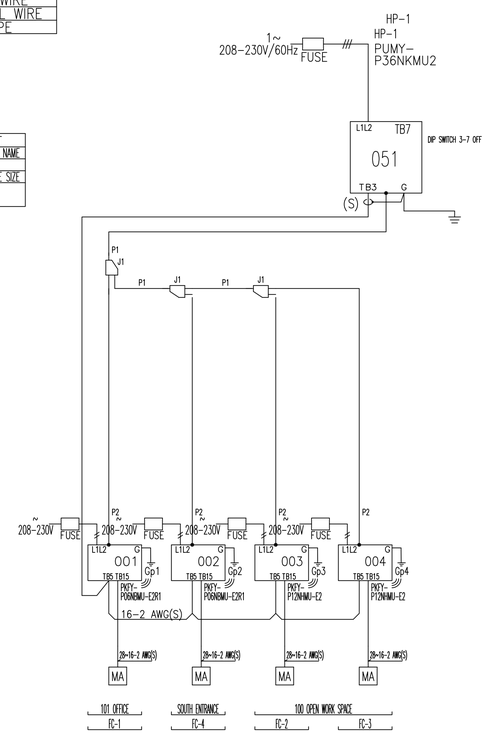
SYSTEM SCHEMATIC DWG.

DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
—///—	POWER WIRE
———	CONTROL WIRE
———	REF. PIPE

CONT.No		PAGE	

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

PIPING LIST		
SYMBOL	BRANCH PIPE MODEL NAME	
U1	CMY-Y62-G-E	
SYMBOL	LIQUID PIPE/GAS PIPE SIZE	
P1	3/8	5/8
P2	1/4	1/2



3.3.0.27
Mitsubishi Electric
Diamond System Builder
1/7/2020
8:23 AM

REMARKS
Comments:

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

20201 CEDAR VALLEY RD.
SUITE 120
LYNNWOOD, WA. 98036

Phone: (425) 774-3829
Fax: (206) 494-9500

CHARLES LONGINO
STATE OF WASHINGTON
19110510
REGISTERED
PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010,

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10/1/18 PRELIM SET
1/16/20 90% SET
2/21/20 PERMIT SET
2/24/20 BID SET

SHEET TITLE:
SYSTEM SCHEMATIC

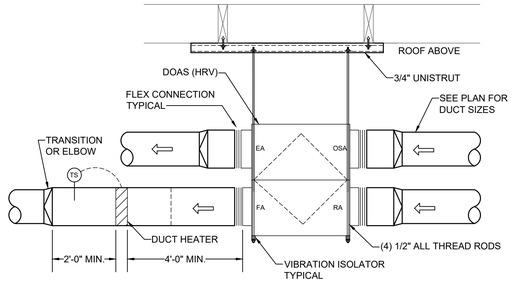
CARL POTSWALD
PROJECT ENGINEER:

CARL POTSWALD
DRAWN BY:

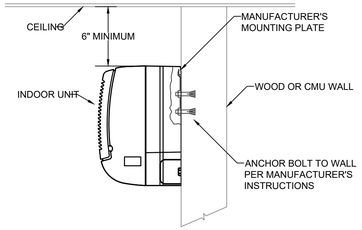
ANDY LONGINO
CHECKED BY:

FEBRUARY 21, 2020
DATE

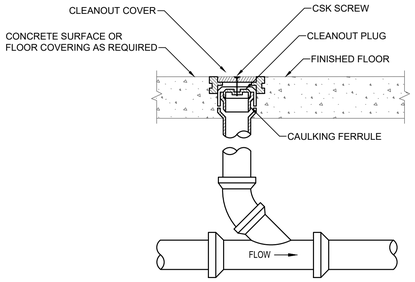
COMPUTER FILE NAME
M4.0



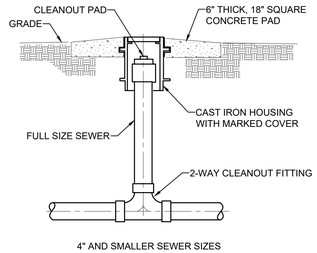
2 M5.1 DOAS (HRV) DETAIL
NTS



1 M5.1 FAN COIL DETAIL
SCALE: NTS

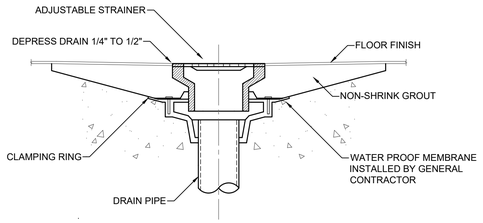


6 M5.1 FLOOR CLEANOUT - FINISHED ROOMS
SCALE: NTS

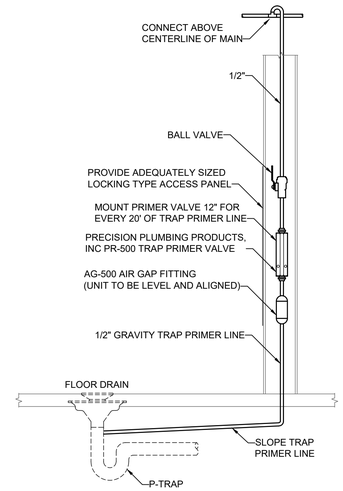


4" AND SMALLER SEWER SIZES

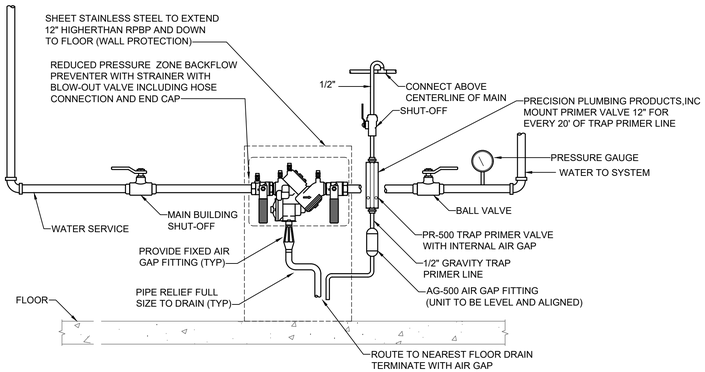
5 M5.1 EXTERIOR CLEANOUT DETAIL
SCALE: NTS



4 M5.1 FLOOR DRAIN DETAIL
SCALE: NTS



3 M5.1 TRAP PRIMER DETAIL
SCALE: NTS



7 M4.0 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
SCALE: NTS

HARRIS GROUP
Big Capabilities • Dedicated People
harrisgroup.com

20201 CEDAR VALLEY RD.
SUITE 120
LYNNWOOD, WA. 98036

Phone: (425) 774-3829
Fax: (206) 494-9500

CHARLES L. LONGINO
STATE OF WASHINGTON
19105TO
REGISTERED
PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010,

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

18-245
PROJECT NUMBER:

REVISIONS:
10/1/18 PRELIM SET
1/16/20 90% SET
2/21/20 PERMIT SET
2/24/20 BID SET

SHEET TITLE:
DETAILS

CARL POTSWALD
PROJECT ENGINEER:

CARL POTSWALD
DRAWN BY:

ANDY LONGINO
CHECKED BY:

FEBRUARY 21, 2020
DATE

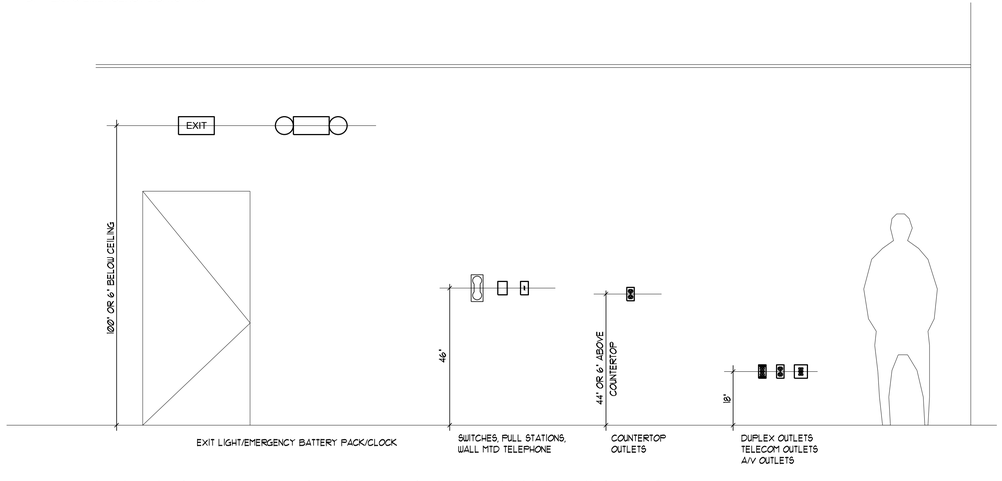
COMPUTER FILE NAME
M5.1

NOTES (APPLICABLE TO ALL ELECTRICAL DRAWINGS):

1. ALL SYSTEMS, EQUIPMENT, DEVICES, RACEWAYS, CABLES, ETC. INDICATED ARE NEW UNLESS SPECIFICALLY NOTED AS EXISTING.
2. THE ELECTRICAL WORK SHALL INCLUDE ALL WORK SHOWN ON THE DRAWINGS, DETAILS, DIAGRAMS, SCHEDULES, ETC., AND AS DESCRIBED IN THE SPECIFICATIONS.
3. OBTAIN APPROVAL FROM ARCHITECT & ENGINEER PRIOR TO PROCEEDING WITH ALTERNATE CONDUIT ROUTES.
4. DETAIL DRAWINGS SHALL BE CONSIDERED APPLICABLE TO ALL PLAN DRAWINGS AND SIMILAR CONDITIONS EVEN IF THE DETAILS ARE NOT SPECIFICALLY REFERENCED
5. RACEWAYS AND CABLES THROUGHOUT THE FACILITY SHALL BE RUN CONCEALED IN THE WALLS, ABOVE THE CEILING OR BELOW THE FLOOR WHERE POSSIBLE, EXCEPT, EXPOSED WITHIN UTILITY & OTHER NON-PUBLIC SPACES. WITHIN PUBLIC SPACES, WHERE DUE TO THE BUILDINGS CONSTRUCTION, IT IS NOT POSSIBLE TO ROUTE RACEWAYS & CABLES CONCEALED, RACEWAYS MAY BE RUN EXPOSED. (EXPOSED CABLES ARE NOT ALLOWED EXCEPT IN TELECOMMUNICATIONS ROOMS.) EXPOSED RACEWAYS SHALL BE RUN AS NEATLY & UNOBTRUSIVELY AS POSSIBLE, SUPPORTED AS REQUIRED, PARALLEL OR AT RIGHT ANGLES TO CEILINGS, WALLS & STRUCTURAL MEMBERS.
6. RACEWAYS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
   - A. INTERIOR ACCESSIBLE CONCEALED SPACES - ELECTRICAL METALLIC TUBING (EMT) WITH FLEXIBLE METAL CONDUIT (FLEX) FOR FINAL CONNECTIONS TO VIBRATING EQUIPMENT.
   - B. INTERIOR NON-ACCESSIBLE CONCEALED SPACES - FLEXIBLE METAL CONDUIT (FLEX) MAY BE "FISHED" FROM ONE POINT OF CONNECTION TO ANOTHER.
   - C. INTERIOR, EXPOSED IN TELECOM ROOMS, UTILITY ROOMS & OTHER NON-PUBLIC SPACES - ELECTRICAL METALLIC TUBING (EMT).
   - D. INTERIOR, EXPOSED IN ROOMS, CORRIDORS & THE LIKE WHERE READILY VISIBLE TO BUILDING OCCUPANTS - SURFACE METAL RACEWAY (SMR).
   - E. EXTERIOR ABOVE GRADE - GALVANIZED RIGID STEEL CONDUIT (GRS).
   - F. EXTERIOR BELOW GRADE - POLYVINYL CHLORIDE CONDUIT (PVC), EXCEPT CONDUIT ELBOWS FOR SIZE 2 INCH AND LARGER SHALL BE TYPE RTRC (FIBERGLASS).
   - G. METAL CLAD (MC) CABLE SHALL NOT BE PERMITTED, EXCEPT FOR FIXTURE WHIPS CONCEALED IN ACCESSIBLE CEILING SPACES.
7. RACEWAYS SHALL BE SIZED SO THAT THE CABLE FILL DOES NOT EXCEED 40%, EXCEPT, MINIMUM CONDUIT SIZES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
   - A. 3/4" - BRANCH CIRCUITS AND SYSTEM RACEWAYS, EXCEPT AS NOTED BELOW.
   - B. 1/2" - RUNS WITH #12 AWG OR SMALLER CIRCUIT CABLE TERMINATING IN A SINGLE DEVICE.
   - C. 1" - UNDERGROUND CONDUITS.
   - D. 1" - TELECOMMUNICATIONS RACEWAYS TERMINATING IN A SINGLE DEVICE.
   - E. 1 1/4" - TELECOMMUNICATIONS RACEWAYS SERVING TWO DEVICE LOCATIONS
8. DEVICE BOX SIZES SHALL BE SIZED IN ACCORDANCE WITH NEC FOR BOX FILL, EXCEPT MINIMUM SHALL BE AS FOLLOWS, UNLESS SPECIFICALLY NOTED OTHERWISE:
   - A. POWER & LIGHTING - 4" x 4" x 1 1/2"
   - B. TELECOMMUNICATIONS - 4 11/16" x 4 11/16" x 2 1/8"
9. DEVICE MOUNTING HEIGHTS SHALL BE AS FOLLOWS, UNLESS SPECIFICALLY NOTED OTHERWISE. MOUNTING HEIGHTS SHOWN ON THE DRAWINGS ARE TO THE CENTER OF THE BACK BOX FROM THE INTERIOR FINISHED FLOOR.
   - A. POWER, TELECOMMUNICATIONS, AUDIO/VIDEO, ETC. RECEPTACLES - 18"
   - B. LIGHTING SWITCHES, CONTROL STATIONS, ETC. - 46"
   - C. DEVICES ABOVE COUNTERS - 4" ABOVE BACKSPLASH.
   - D. EXIT & EMERGENCY LIGHTS - 100"

NOTES (CONTINUED):

10. TELECOMMUNICATIONS CONDUITS SHALL BE PROVIDED WITH PULL ROPES BELOW GRADE AND PULL STRINGS ABOVE GRADE. EXISTING CONDUITS TO BE USED SHALL BE FISHED AND CLEANED PRIOR TO INSTALLATION OF CABLES.
11. BELOW GRADE SERVICE & FEEDER CABLE SHALL BE 1/C COPPER (UNLESS SPECIFICALLY NOTED OTHERWISE) WITH 600V TYPE USE/RHH/RHW INSULATION, EXCEPT TYPE XHHW MAY BE USED FOR BELOW GRADE FEEDER CABLES WHERE THE CABLE IS ROUTED BELOW THE BUILDING FLOOR SLAB FOR ITS ENTIRE LENGTH.
12. BRANCH CIRCUIT CABLES, EQUIPMENT GROUND CABLES AND ABOVE GRADE FEEDER CABLES SHALL BE 1/C COPPER, #12 AWG UNLESS NOTED OTHERWISE, WITH 600V TYPE XHHW OR THHN/THWN INSULATION.
13. IN ADDITION TO THE CIRCUIT CONDUCTORS INDICATED, CONTRACTOR SHALL PROVIDE AN EQUIPMENT GROUND CABLE (SIZED THE SAME AS THE LARGEST CIRCUIT CONDUCTOR UNLESS SPECIFICALLY NOTED OTHERWISE) WITHIN EACH RACEWAY WITH THE CIRCUIT CONDUCTORS.
14. SEE ELECTRICAL SPECIFICATION FOR SYSTEMS CABLE TYPES.
15. ALL WIRING SHALL BE ENCLOSED WITHIN THE RACEWAY SYSTEM, EXCEPT, TELECOMMUNICATIONS, AND CLASS 2 LOW VOLTAGE CABLING MAY BE BUNDLED TOGETHER AND SUPPORTED OPEN IN ACCESSIBLE CEILING SPACES. EACH SYSTEMS CABLES SHALL BE BUNDLED AND MANAGED SEPARATELY FROM OTHER SYSTEMS CABLES.
16. FLOOR, WALL AND CEILING PENETRATIONS BY OPEN CABLES WILL NOT BE ALLOWED. PROVIDE CONDUIT SLEEVES WHERE OPEN CABLES PASS THROUGH WALLS, DRAFTSTOPS, CEILINGS, FLOORS, ETC.
17. PROTECT "OPEN" CABLE WIRING FROM ROUGH AND/OR SHARP EDGES ON SUPPORTS, STRUCTURAL MEMBERS, ETC. AS REQUIRED DURING INSTALLATION.
18. VERIFY ALL EQUIPMENT, DEVICE, ETC. LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN. SEE MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT, ARCHITECTURAL DRAWINGS FOR SPECIALTY EQUIPMENT, CASEWORK, ETC. THE OWNER RESERVES THE RIGHT TO RELOCATE OUTLETS, ETC. WITHIN 10' OF THE LOCATION INDICATED, PRIOR TO INSTALLATION, WITHOUT INCREASE IN COST.
19. CONTRACTOR SHALL VERIFY WITH THE ARCHITECT THE MOUNTING HEIGHT FOR ALL WALL MOUNTED AND PENDANT MOUNTED LIGHTING FIXTURES PRIOR TO ROUGH-IN.
20. SEE ARCHITECTURAL SPEC. SECTIONS (E.G. DOOR HARDWARE, APPLIANCES, DOORS, ETC.), ENTIRE DIVISION 11 - EQUIPMENT, & ENTIRE DIVISION 22 - PLUMBING, DIVISION 23 - HVAC FOR ADDITIONAL REQUIREMENTS, FURTHER CLARIFICATIONS, ETC. OF EQUIPMENT ELECTRICAL REQUIREMENTS.
21. CONTRACTOR SHALL VERIFY WITH THE ARCHITECT THE FIRE RESISTIVE RATINGS FOR WALLS, PARTITIONS AND OTHER BUILDING STRUCTURES. INSTALLATION OF SYSTEM COMPONENTS AND RACEWAYS MUST MAINTAIN THE FIRE RESISTIVE RATING OF THE BUILDING.
22. POWER, FIRE ALARM, SECURITY & TELECOMMUNICATIONS SYSTEMS INTERRUPTIONS (WHETHER TO THE ENTIRE SYSTEM OR TO INDIVIDUAL PANELS, EQUIPMENT, ROOMS, DEVICES, ETC.) SHALL BE KEPT TO AN ABSOLUTE MINIMUM, AND SHALL NOT BE DONE WITHOUT PRIOR APPROVAL & SCHEDULING WITH THE ARCHITECT A MINIMUM OF 14 DAYS IN ADVANCE AND CONFIRMED 48 HOURS IN ADVANCE.
23. LABELING & NAMEPLATES:
   - A. OUTLETS SHALL BE LABELED WITH THE PANEL AND CIRCUIT NUMBER FROM WHICH ITS FED. LABELS SHALL BE HEAVY DUTY ADHESIVE TYPE, CLEAR TAPE WITH BLACK LETTERING, MADE WITH A LABEL PRINTING DEVICE.
   - B. JUNCTION BOXES SHALL BE LABELED WITH THE PANEL AND CIRCUIT NUMBER CONTAINED WITHIN. MARKING SHALL BE LEGIBLY HAND-WRITTEN WITH BLACK INDELIBLE MARKER.
   - C. REFER TO SPECIFICATIONS FOR PANELS, DISCONNECT SWITCHES, STARTERS, ETC. NAMEPLATES AND LABELING.



ELECTRICAL - TYPICAL DEVICE MOUNTING HEIGHTS

ELECTRICAL LEGEND

LIGHTING

- LUMINAIRE, SURFACE MTD.
- RECESSED DOWNLIGHT
- LUMINAIRE, WALL MTD
- POLE MTD. LUMINAIRE
- EMERGENCY LIGHTING UNIT, 2 HEAD, WALL MTD
- LIGHTED EXIT SIGN
- LIGHTED EXIT SIGN (ARROWS SHOW DIRECTIONAL INDICATION WHERE REQUIRED)
- COMBINATION LIGHTED EXIST SIGN & EMERGENCY LIGHTING UNIT, 2 HEAD

SWITCHING

- $ — SINGLE-POLE SWITCH
- $_{PHS}$ — MOTION SENSOR SWITCH (SEE SPECIFICATIONS FOR TYPE)
- $_{WP}$ — WEATHERPROOF SWITCH
- $ — LOW VOLTAGE SWITCH
- $_{D}$ — LOW VOLTAGE DIMMER SWITCH
- (P) — PHOTO SENSOR
- (M) — LIGHTING MOTION DETECTOR, CEILING MTD.
- MCM — LIGHTING MOTION DETECTOR CONTROLLER
- R — MOTION SENSOR CONTROLLED RECEPTACLE RELAY

OUTLETS

- DUPLEX OUTLET
- DOUBLE DUPLEX OUTLET
- MOTION CONTROLLED SWITCHED OUTLET
- GFI — DUPLEX OUTLET, GROUND FAULT INTERRUPTING
- WP — DUPLEX OUTLET, WEATHERPROOF
- +45° — DUPLEX OUTLET, ELEVATION ABOVE FLOOR TO CENTERLINE OF DEVICE INDICATED
- FLOOR BOX OUTLET
- FLOOR BOX TELECOMMUNICATIONS OUTLET
- WIRELESS ACCESS POINT OUTLET
- SPECIAL PURPOSE OUTLET
- SPECIAL PURPOSE CONNECTION
- 2C WAP — TELECOMMUNICATIONS OUTLET, FLUSH MOUNTED (2C = 2 CABLES, TYPICAL) (WAP = WIRELESS ACCESS POINT OUTLET)

MISCELLANEOUS

- BRANCH CIRCUIT, ABOVE GRADE, CONCEALED (OR SIMILAR, SLASHES = NO. OF CIRCUIT CONDUCTORS WHERE APPLICABLE)
- BRANCH CIRCUIT, ABOVE GRADE, EXPOSED (OR SIMILAR, SLASHES = NO. OF CIRCUIT CONDUCTORS WHERE APPLICABLE)
- HOMERUN TO LOCATION INDICATED, CONCEALED (TYPICAL)
- HOMERUN TO LOCATION INDICATED, EXPOSED (TYPICAL)
- BRANCH CIRCUIT, CONDUIT BODY
- CONDUIT STUB-UP INTO CEILING SPACE OR ONTO CABLE TRAY
- BELOW FLOOR/GRADE CONDUIT
- GROUND CABLE
- CABLE RUN 'OPEN' IN ACCESSIBLE CEILING SPACE (SLASHES = No. 4 TYPE OF CABLES WHERE APPLICABLE)
- JUNCTION BOX
- SITE LIGHTING HANDHOLE
- DISCONNECT SWITCH
- PANELBOARD
- EXHAUST FAN
- WP — WEATHER PROOF
- FUT — FUTURE
- AVAILABLE FAULT CURRENT TAG
- EF 1 — MECHANICAL EQUIPMENT TAG

DRAWING INDEX

CABLE CODES

CODE	FUNCTION	DESCRIPTION	COLOR	NEC TYPE	CABLE ROUTING
DB12/12	COMPUTER/DATA BACKBONE CABLE	12 STRAND SM, 12 STRAND MM FIBER OPTIC CABLE	BLACK JACKET	OFNR	INDOOR/OUTDOOR
VB25	VOICE (TELEPHONE) BACKBONE CABLE	25 PAIR #24 AWG, OUTDOOR RATED ALPETH	BLACK JACKET	NONE	OPEN OR COMBINATION OPEN & RACEWAY
CM	VOICE/DATA SYSTEM HORIZONTAL CABLE	CAT6A FOILED/UNSHIELDED TWISTED PAIRS (F/UTP)	BLUE JACKET	CMR	OPEN & IN RACEWAY (SEE PLANS)
CMW	VOICE/DATA SYSTEM HORIZONTAL CABLE - WET LOCATION	CAT6A FOILED/UNSHIELDED TWISTED PAIRS (F/UTP)	BLACK JACKET	NONE	OPEN & IN RACEWAY (SEE PLANS)
L	LIGHTING CONTROL DEVICE CIRCUIT	3 CONDUCTOR # 18 AWG	WHITE JACKET	CMR	OPEN & IN RACEWAY (SEE PLANS)
LD	LIGHTING CONTROL 0-10V DIMMING CIRCUIT	2 CONDUCTOR # 18 AWG	WHITE JACKET	CMR	OPEN & IN RACEWAY (SEE PLANS)

NOTES:
1. ALL CABLING SHALL BE IN RACEWAYS, EXCEPT CABLES LISTED FOR THE PURPOSE MAY BE RUN OPEN IN ACCESSIBLE CEILING SPACES.
2. CONFIRM CABLES WITH FIRE ALARM, SECURITY, AUDIO/VISUAL AND LIGHTING CONTROL SYSTEM PROVIDERS PRIOR TO INSTALLATION.

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

WILLIAM R. DIRCKLIN — STATE OF WASHINGTON — 44794 — REGISTERED PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

2010
PROJECT NUMBER:

REVISIONS:
2-26-20 BID SET

SHEET TITLE:
ELECTRICAL - DEVICE
MOUNTING DETAILS, LEGEND,
CABLE CODES & INDEX

PETER J. CARLETTI
PROJECT ARCHITECT.

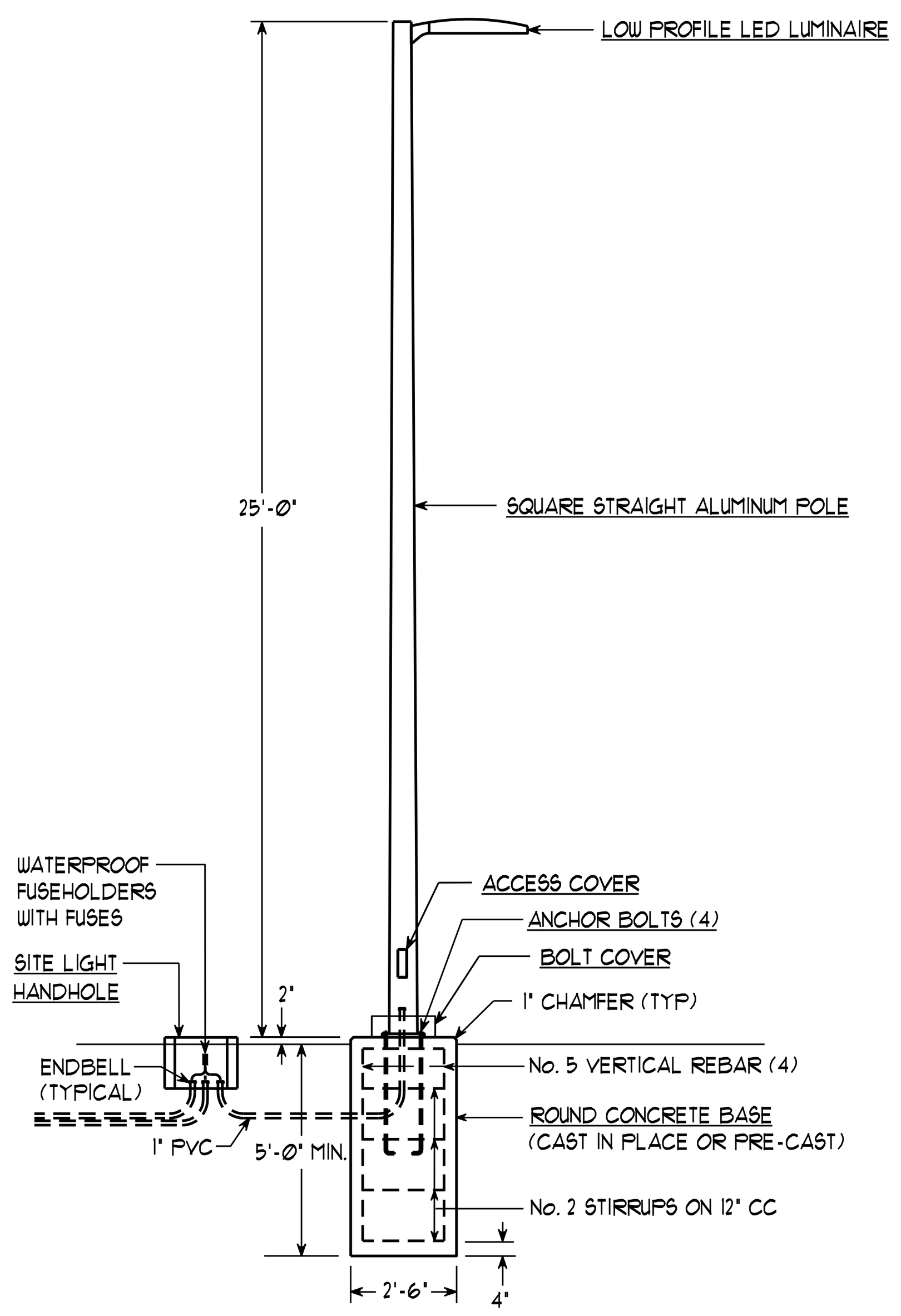
KL
DRAWN BY:

BD
CHECKED BY:

FEBRUARY 26, 2020
DATE

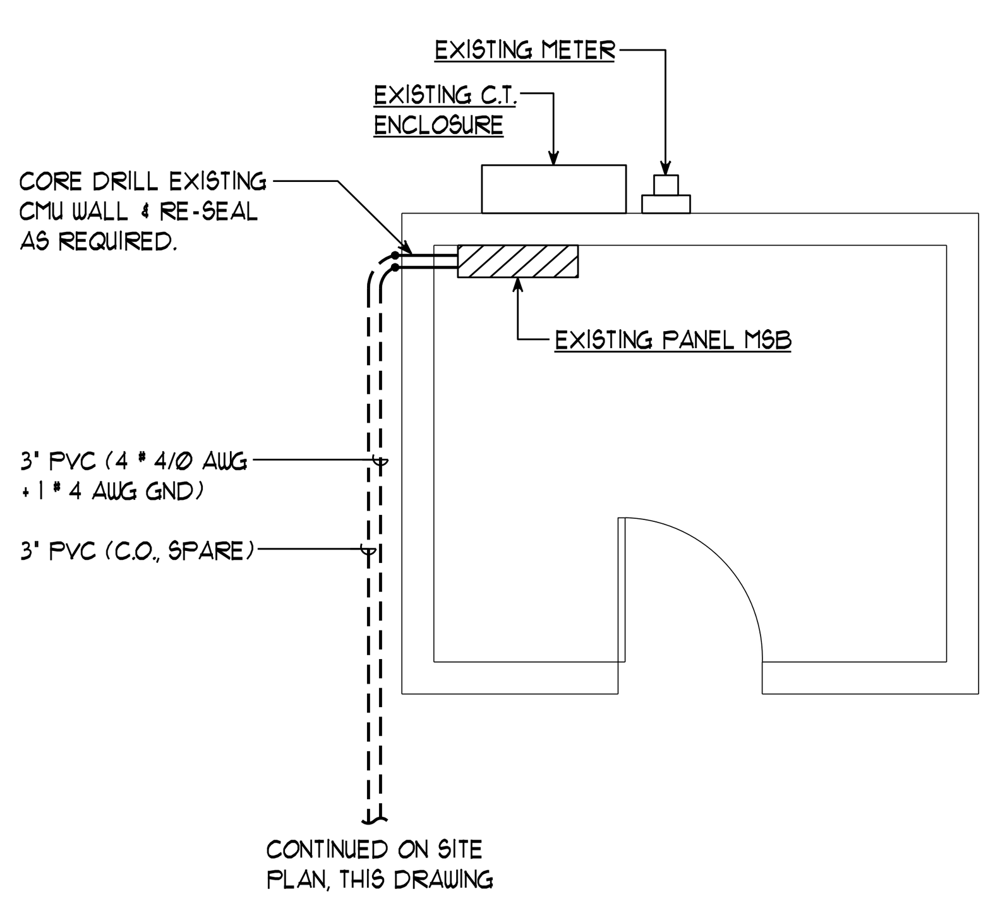
COMPUTER FILE NAME

E-0.1



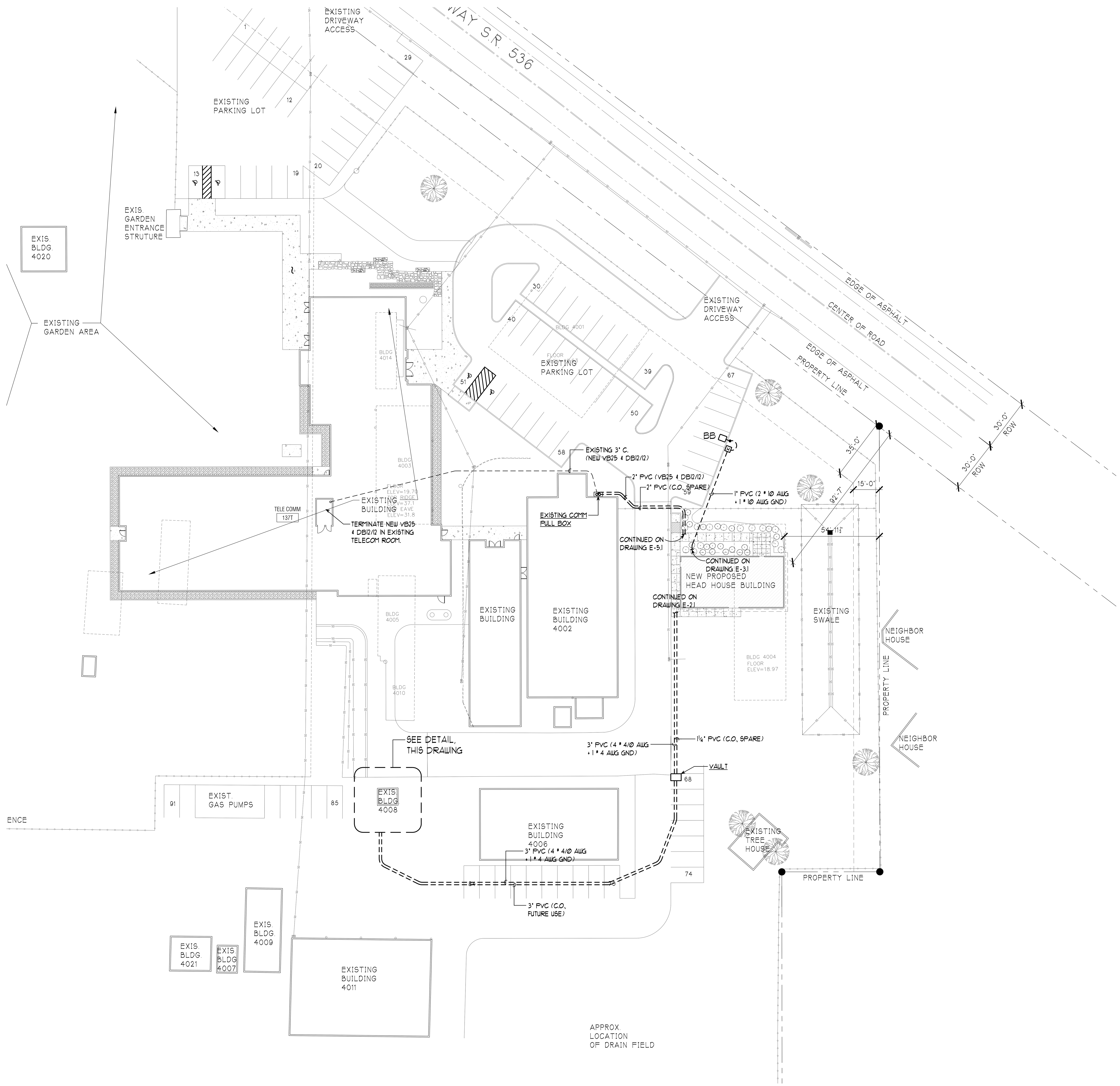
DETAIL - PARKING LOT POLE, BASE & LUMINAIRE

SCALE: ½" = 1'-0"



ELECTRICAL - BUILDING 4008 PLAN

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



ELECTRICAL - SITE PLAN

SCALE: 1"=30'-0"

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

WILLIAM R. DIEPHUIS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 44794

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

2010
PROJECT NUMBER:

REVISIONS:
2-26-20 BID SET

SHEET TITLE:
ELECTRICAL -
SITE PLAN

PETER J. CARLETTI
PROJECT ARCHITECT:
KL
DRAWN BY:
BD
CHECKED BY:
FEBRUARY 26, 2020
DATE

COMPUTER FILE NAME

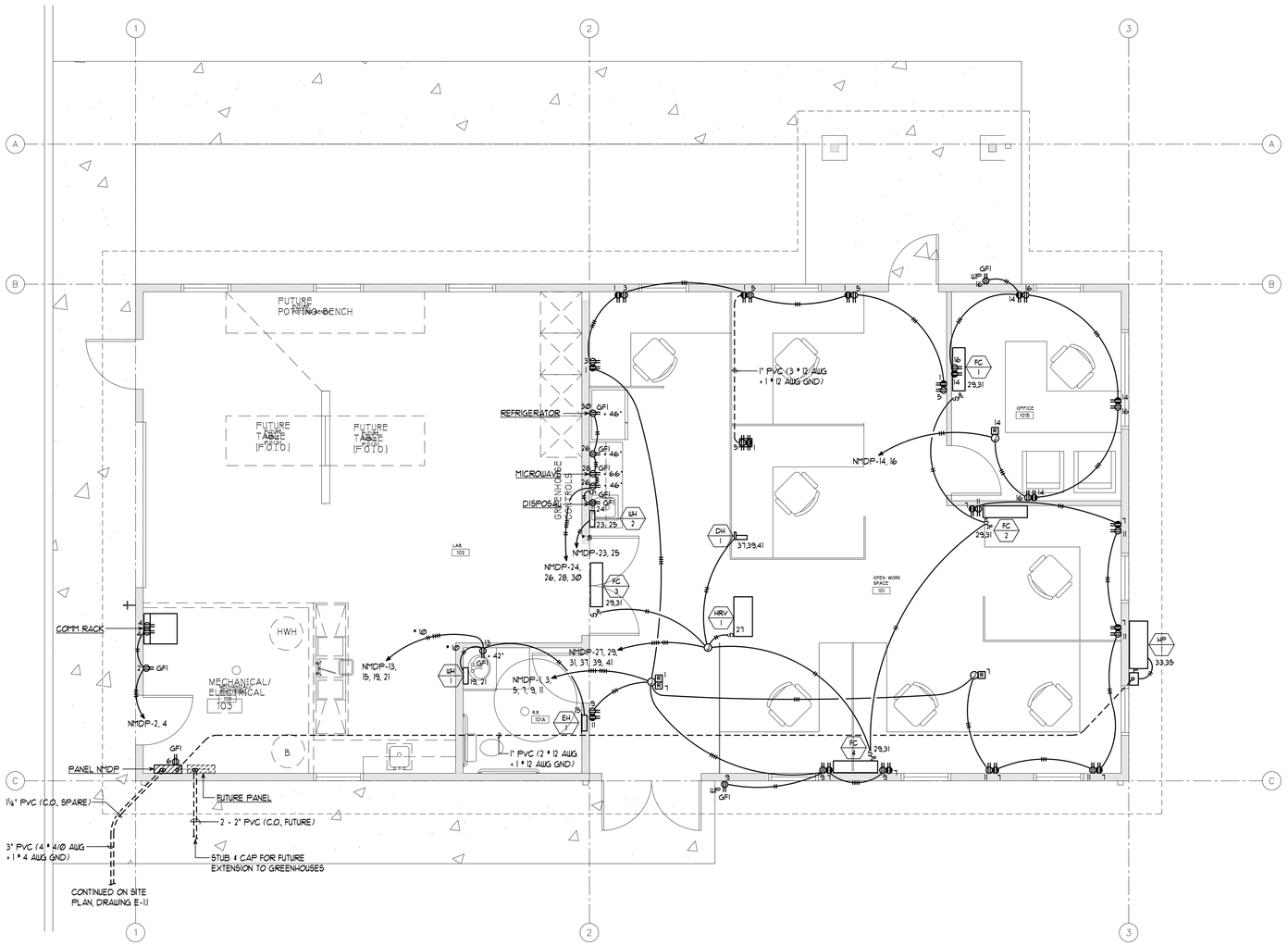
E-1.1

MECHANICAL EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	VOLTS	PH.	HP	UNIT FLA	UNIT KW	MOTOR STARTER	DISCONNECTING MEANS	CONTROL	CONNECTION	PANEL - CIRCUIT NO.	NOTES
WH-1	ELECTRIC WATER HEATER	208	1			4.16	NONE	CIRCUIT BREAKER IN PANEL	INTEGRAL	HARD WIRED	NMDP - 19, 21	
WH-2	ELECTRIC WATER HEATER	208	1			8.00	NONE	CIRCUIT BREAKER IN PANEL	INTEGRAL	HARD WIRED	NMDP - 23, 25	
DH-1	ELECTRIC DUCT HEATER	208	3			4.0	NONE	DISCONNECT SWITCH INTEGRAL TO UNIT	BY MC	HARD WIRED	NMDP - 37, 39, 41	
HRV-1	HEAT RECOVERY VENTILATOR	120	1		2.0		INTEGRAL	TOGGLE SWITCH (240V, 1P, 20A)	BY MC	HARD WIRED	NMDP - 27	
HP-1	OUTDOOR CONDENSING UNIT	208	1		35.0		BUILT-IN	DISCONNECT SWITCH (240V, 1P, 2W, 60A, NEMA 3R, FUSIBLE)	BY MC	HARD WIRED	NMDP - 33, 35	
FC-1	FAN COIL UNIT	208	1		1.0		NONE	TOGGLE SWITCH (240V, 2P, 20A)	BY MC	HARD WIRED	NMDP - 29, 31	
	CONDENSATE PUMP	208	1		0.8		NONE	TOGGLE SWITCH (240V, 2P, 20A)	INTEGRAL	HARD WIRED	NMDP - 29, 31	
FC-2	FAN COIL UNIT	208	1		1.0		NONE	TOGGLE SWITCH (240V, 2P, 20A)	BY MC	HARD WIRED	NMDP - 29, 31	
	CONDENSATE PUMP	208	1		0.8		NONE	TOGGLE SWITCH (240V, 2P, 20A)	INTEGRAL	HARD WIRED	NMDP - 29, 31	
FC-3	FAN COIL UNIT	208	1		1.0		NONE	TOGGLE SWITCH (240V, 2P, 20A)	BY MC	HARD WIRED	NMDP - 29, 31	
	CONDENSATE PUMP	208	1		0.8		NONE	TOGGLE SWITCH (240V, 2P, 20A)	INTEGRAL	HARD WIRED	NMDP - 29, 31	
FC-4	FAN COIL UNIT	208	1		1.0		NONE	TOGGLE SWITCH (240V, 2P, 20A)	BY MC	HARD WIRED	NMDP - 29, 31	
	CONDENSATE PUMP	208	1		0.8		NONE	TOGGLE SWITCH (240V, 2P, 20A)	INTEGRAL	HARD WIRED	NMDP - 29, 31	
EH-1	ELECTRIC HEATER	120	1			0.5	NONE	CIRCUIT BREAKER IN PANEL	INTEGRAL	HARD WIRED	NMDP - 15	

NOTES

(1) MC = MECHANICAL CONTRACTOR, EC = ELECTRICAL CONTRACTOR



ELECTRICAL - POWER PLAN

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

2010
PROJECT NUMBER:

REVISIONS:
2-26-20 BID SET

SHEET TITLE:
ELECTRICAL -
POWER PLAN

PETER J. CARLETTI
PROJECT ARCHITECT.

KL
DRAWN BY.

BD
CHECKED BY.

FEBRUARY 26, 2020
DATE

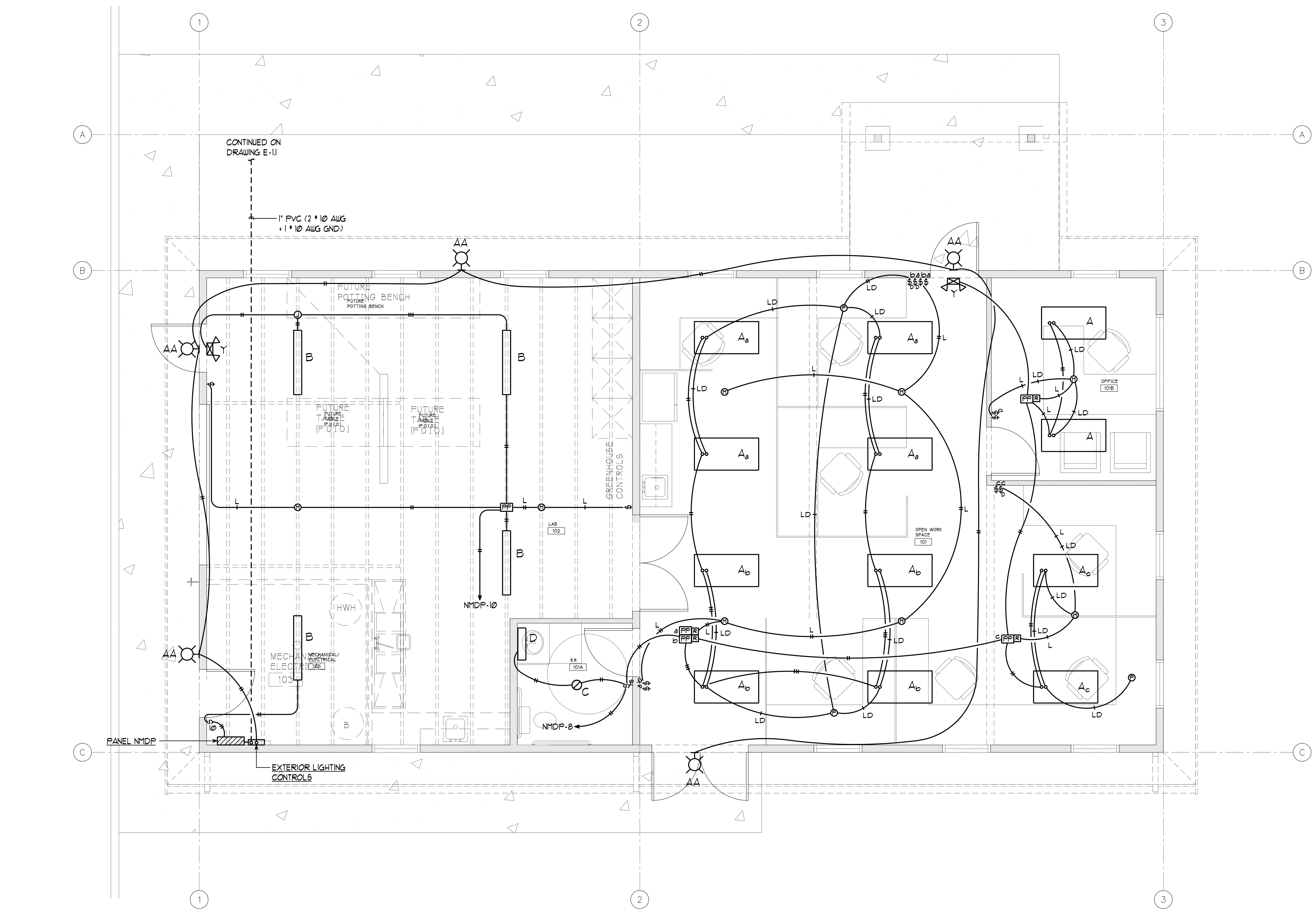
COMPUTER FILE NAME

E-2.1

LIGHTING FIXTURE SCHEDULE										
TYPE	DESCRIPTION	DIMENSION	MOUNTING	COLOR TEMP.	LUMENS	VOLTS	DIMMING	MANUFACTURER & CAT. NO. (OR APPROVED EQUAL)	LOADS	
									WATT	VA
A	LED EDGE LIT FLAT PANEL, WHITE PAINTED ALUMINUM FRAME, WITH ACRYLIC LENS.	2' x 4' x 2"	SURFACE	3500K	6000	120	0-10V 10%	DAYBRITE 2FXP-60L-835-4-DS-DIM-FSK24 LITHONIA EPANL-24-60L-35K-2X4SMKSH METALUX 24FPSL2SCT3-FPXSURF24 WILLIAMS LP-24-L62-835-LP24SMK	52	55
B	LED LENSED STRIP LIGHT, DAMP LOCATION, WIDE DISTRIBUTION, WHITE PAINTED STEEL HOUSING AND ACRYLIC LENS.	4' LONG	SURFACE	3500K	3100	UNIV	NONE	DAYBRITE FSS-4-30L-835 LITHONIA ZL1D-L48-3000LM-FST-35K-80CRI-WH METALUX 4SNLED-LD5-30SL-LW-L835-CD WILLIAMS 75R-4-L30-835-DRV	25	26
C	LED RECESSED DOWNLIGHT, MEDIUM THROW DISTIBUTION, THERMALLY PROTECTED, WITH DIECAST ALUMINUM HEAT SINK, SEMI-SPECULAR ALUMINUM REFLECTOR &	6" ROUND 9" HIGH	RECESSED	3500K	1000	120	0-10V 10%	GOTHAM EVO-35/10-6AR-MD-LSS-EZ10-TRW PORTFOLIO LD6B10D010/EU6B10208035/6LBM1H WILLIAMS 6DR-TL-L10/835-DIM-OM-OF-CS-MWT	9	9
D	LED BATHROOM BRACKET, DAMP LOCATION, WHITE PAINTED STEEL HOUSING WITH ACRYLIC LENS.	2' x 4.5" x 4.5"	WALL	3500K	2200	120	NONE	LITHONIA WL2-22L-EZ1-LP835 LUMENWERX QUAWW-HLO-LED-80-2200-35-2-D-1-DRM-W METALUX 2BCLED-LD4-20SL-CD-1 WILLIAMS SLF-2-L26/835-HIA-UNV	21	22
F	NOT USED									
Y	LED COMBINATION LIGHTED EXIT SIGN & EMERGENCY LIGHTING UNIT, SINGLE FACE, UNIVERSAL MOUNT, WHITE WITH GREEN LETTERS, POLYCARBONATE OR THERMOPLASTIC HOUSING, SELF CONTAINED NI-CAD BATTERIES &	10" x 12"	UNIVERSAL	N/A	N/A	120	NONE	DUAL-LITE LTUGW-I EXITRONIX GVEX-U-BP-WH-EL90-G2 LIGHTOLIER LLC2-U-GW-SD LITHONIA LHQM-SW-3-G-SD SURELIGHT CCX-7-1-70-G-WH-SD-DH	5	8
AA	EXTERIOR TRAPEZOIDAL MINI SCONCE, WET LOCATION, INTEGRAL ALUMINUM HEAT SINK, BRONZE PAINTED DIECAST ALUMINUM HOUSING, CLEAR IMPACT RESISTANT GLASS LENS, WITH TYPE 3	12" x 5.5" x 7"	WALL	4000K	1800	120	NONE	GARDCO 111L-16L-350-NW-G2-3-BZ	18	19
BB	LED POLE MTD. LUMINAIRE, WET LOCATION, ALUMINUM MOUNTING ARM, ALUMINUM HOUSING, BRONZE COLOR, TYPE 1 DISTRIBUTION AND TEMPERED GLASS LENS. POLE SHALL BE SQUARE STRAIGHT ALUMINUM, BRONZE FINISH WITH BASE COVER & ANCHOR BOLTS.	16" x 22" x 7" 25'	DECORATIVE ARM BASE	4000K N/A	8,000 N/A	120 N/A	NONE N/A	LUMINAIRE: VISIONAIRE VSX-1-T1-10L-4K-AM-BZ LITHONIA DSX1LED-P2-40K-T2M-BLC-DDBXD POLE: LITHONIA SSA 25 5G FBC DDBXD	70	74

NOTES:

1. CABLES IN FIXTURE WHIPS FURNISHED BY THE MANUFACTURER WITH THE FIXTURES SHALL NOT BE SMALLER THAN #14 AWG, AND SHALL INCLUDE A SEPARATE GROUND CONDUCTOR SIZED THE SAME AS THE CIRCUIT CONDUCTORS.
2. CONTRACTOR & LIGHTING FIXTURE SUPPLIER SHALL VERIFY DESCRIPTION, MOUNTING REQUIREMENTS, CATALOG NUMBERS, ETC. MATCH. ADVISE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES DURING BIDDING.
3. ALL LED 0-10V DIMMING DRIVERS SHALL BE COMPATIBLE WITH MOTION CONTROLLERS, PHOTO-CONTROLLERS, DIMMER SWITCHES, ETC.



ELECTRICAL - LIGHTING PLAN

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018
COPYRIGHT: WASHINGTON STATE UNIVERSITY

2010
PROJECT NUMBER:

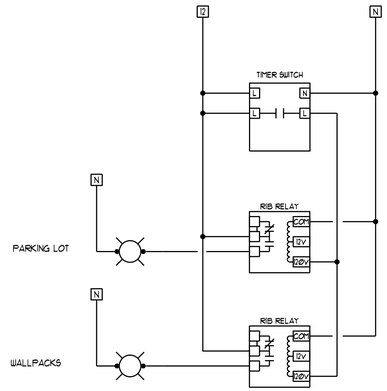
REVISIONS:
2-26-20 BID SET

SHEET TITLE:
ELECTRICAL - LIGHTING PLAN

PETER J. CARLETTI
PROJECT ARCHITECT:
KL
DRAWN BY:
BD
CHECKED BY:
FEBRUARY 26, 2020
DATE

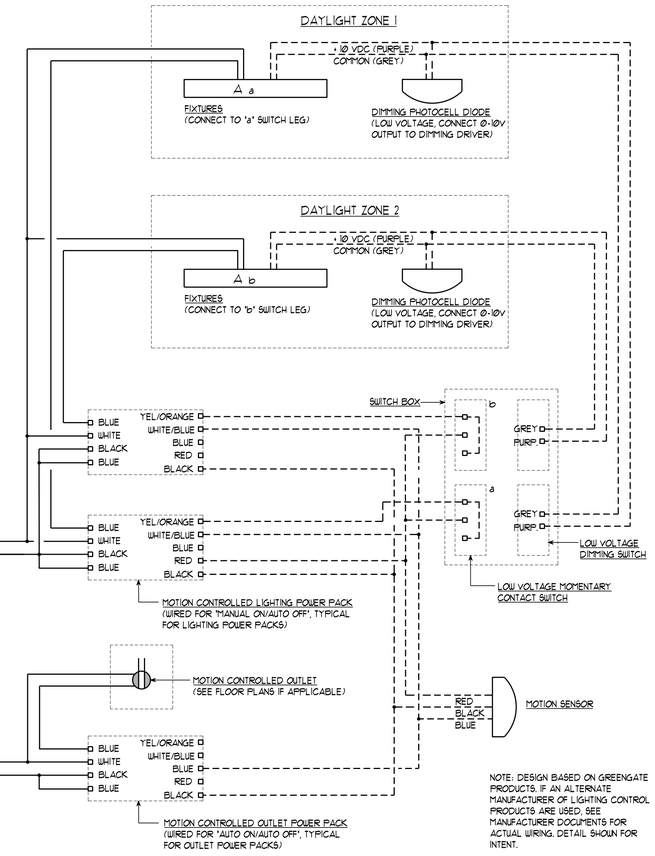
COMPUTER FILE NAME

E-3.1



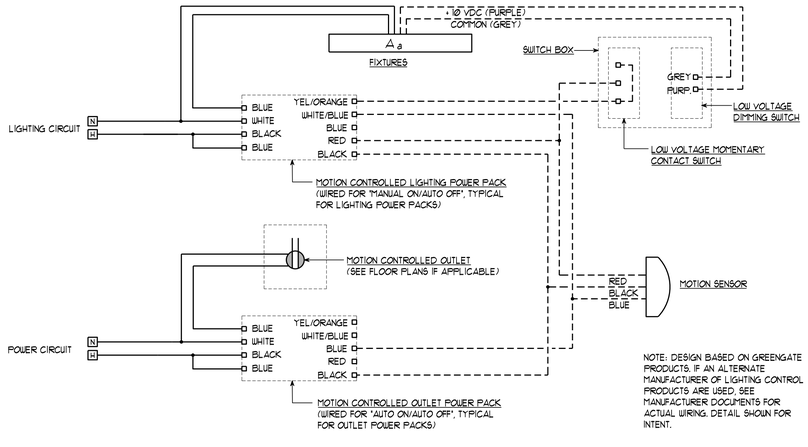
LIGHTING CONTROL DIAGRAM - EXTERIOR LIGHTING

NO SCALE



LIGHTING CONTROL DIAGRAM - TYPICAL ROOMS WITH POWERPACKS & PHOTOCELLS

NO SCALE



LIGHTING CONTROL DIAGRAM - TYPICAL ROOMS WITH POWER PACKS

NO SCALE

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

WILLIAM R. DIRCKINK
STATE OF WASHINGTON
44794
REGISTERED
PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

2010
PROJECT NUMBER:

REVISIONS:
2-26-20 BID SET

SHEET TITLE:

ELECTRICAL -
LIGHTING DETAILS

PETER J. CARLETTI
PROJECT ARCHITECT:

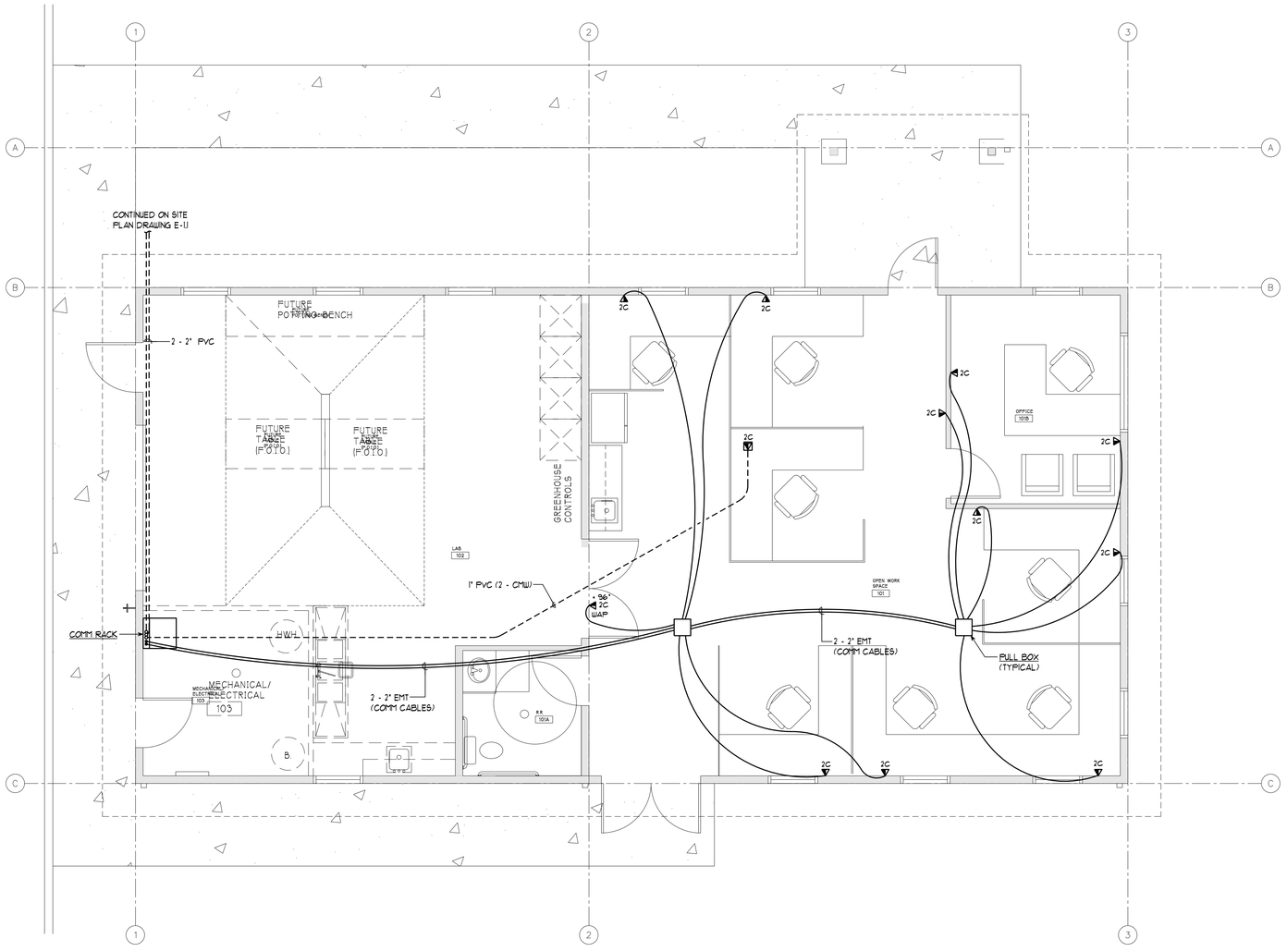
KL
DRAWN BY:

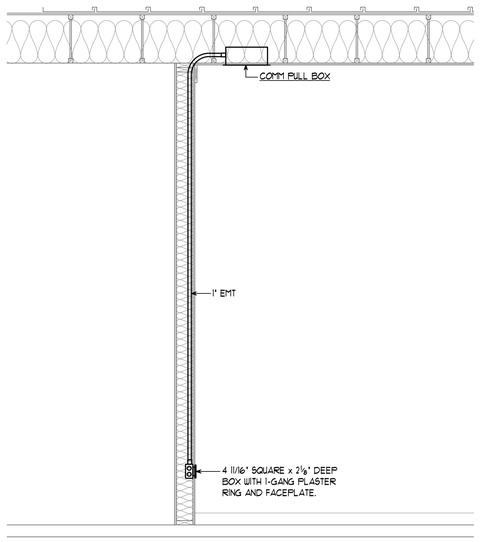
BD
CHECKED BY:

FEBRUARY 26, 2020
DATE

COMPUTER FILE NAME

E-3.2





SECTION - TYPICAL WALL STUB

SCALE: ½" = 1' - 0"

ELECTRICAL - ANCILLARIES PLAN

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

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273

Phone: (360) 424-0394
Fax: (360) 424-5726

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

WILLIAM R. DIRKSEN — STATE OF WASHINGTON — 44794 — REGISTERED PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY

Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

2010
PROJECT NUMBER:

REVISIONS:
2-26-20 BID SET

SHEET TITLE:
ELECTRICAL - ANCILLARIES PLAN

PETER J. CARLETTI
PROJECT ARCHITECT.

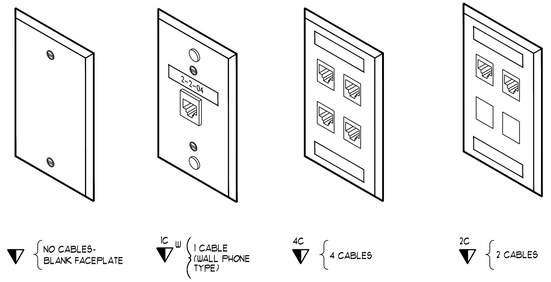
KL
DRAWN BY.

BD
CHECKED BY.

FEBRUARY 26, 2020
DATE

COMPUTER FILE NAME

E-4.1

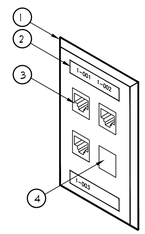


TYPICAL COMMUNICATIONS OUTLET FACEPLATE CONFIGURATIONS

NO SCALE

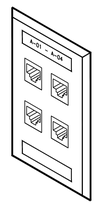
NOTES:

1. TERMINATE ALL CONDUCTORS OF ALL CABLES ON RECEPTACLES (JACK INSERTS).
2. CABLES FROM EACH VOICE & DATA RECEPTACLE (JACK INSERT) IN EACH OUTLET SHALL BE HOMERUN TO THE TELECOM ROOM INDICATED ON THE PLANS, WITHOUT SPLICES OR TAPS. CABLE LENGTH SHALL NOT EXCEED 300'. RE-ROUTE &/OR PROVIDE ADDITIONAL RACEWAYS AS REQUIRED IF 300' LIMITATION IS EXCEEDED.
3. OTHER OUTLET FACEPLATE CONFIGURATIONS SHALL BE SIMILAR WITH SIMILAR CABLING REQUIREMENTS.



1. 4-PORT FACEPLATE, SINGLE GANG, WHITE COLOR
2. OUTLET LABEL, PAPER, NON-ADHESIVE, PRINTED TEXT AS APPROVED BY OWNER.
3. 8-POSITION, 8-CONDUCTOR JACK INSERT (RJ-45) CAT6A APPLICATIONS, T568A, NON-KEYED, CAST METAL.
4. BLANK INSERT, WHITE COLOR (TYPICAL)

COMMUNICATIONS OUTLET COMPONENT LEGEND



FORMAT: PNL#-JK#

PNL#--- PATCH PANEL NUMBER

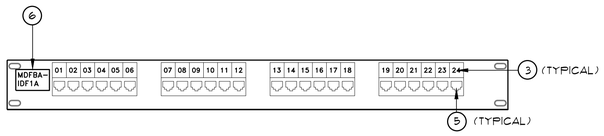
JK#--- SEQUENTIAL JACK NUMBER PER PANEL

(EXAMPLE: A-01 = CABLE # 1 ON PATCH PANEL A.

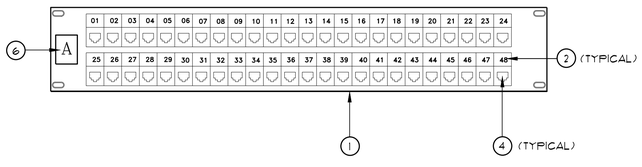
COMMUNICATIONS OUTLET LABELING CONVENTION

NOTES:

1. LABELING OF TERMINATION HARDWARE
   - A. TERMINATION OF HORIZONTAL UTP CABLE IN THE TELECOMM. ROOM SHALL BE ON 110 TO MODULAR PATCH PANELS, 48 PORT CAPACITY.
   - B. ALL HORIZONTAL UTP CABLES SHALL BE LABELED WITH CABLE ID NUMBERS ON A BLUE LABEL INSERT INSERTED IN A TRANSPARENT LABEL COVER AT THE PATCH PANEL MODULAR JACK.
   - C. LABELS FOR TERMINATION HARDWARE SHALL BE TYPE-WRITTEN.
   - D. ALL HORIZONTAL 4 PAIR CABLES SHALL BE LABELED IN ACCORDANCE WITH THE TIA/EIA-606-A LABELING STANDARD. SEE DETAIL, THIS DRAWING.
   - E. ALL JACKS SHALL BE LABELED AT THE OUTLET FACEPLATE AND THE PATCH PANEL.
3. CROSS CONNECT WIRE & WIRE TROUGHS
   - A. CABLE MANAGEMENT SECTIONS SHALL BE LOCATED HORIZONTALLY BETWEEN PATCH PANELS. CABLE MANAGEMENT SECTIONS SHALL BE 2U HIGH.



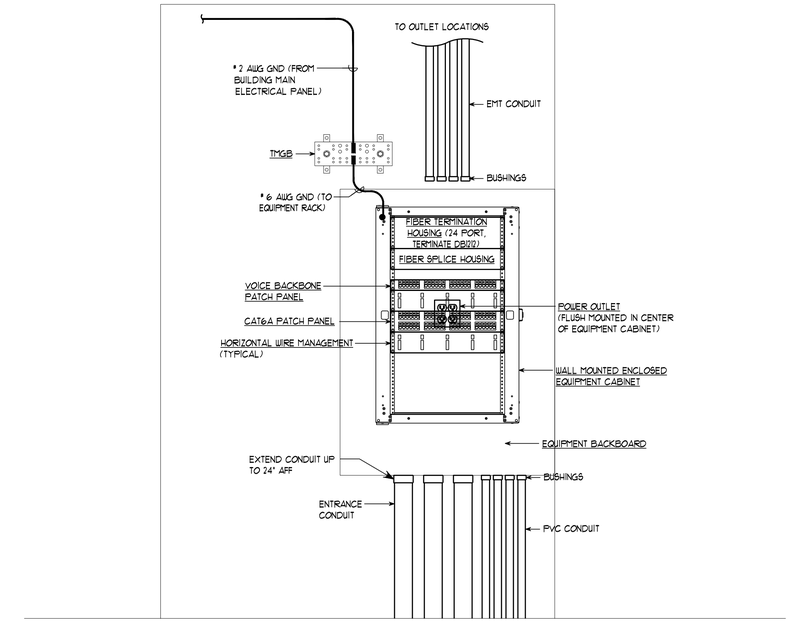
VOICE BACKBONE CABLE PATCH PANELS



DATA CABLE PATCH PANELS

1. STEEL BACK PLATE, 2U HIGH, BLACK COLOR
2. LABEL, PAPER, NON-ADHESIVE, BLUE COLOR, PRINTED TEXT AS APPROVED BY OWNER. INSERTED INTO TRANSPARENT LABEL HOLDER.
3. LABEL, PAPER, NON-ADHESIVE, WHITE COLOR, PRINTED TEXT AS APPROVED BY OWNER. INSERTED INTO TRANSPARENT LABEL HOLDER.
4. 8-POSITION, 8 CONDUCTOR JACK (RJ-45), CAT6A APPLICATIONS, T568B, NON KEYED.
5. 8-POSITION, 2 CONDUCTOR JACK (RJ-11), VOICE APPLICATIONS.
6. LABEL, PHENOLIC PLASTIC, ADHESIVE, BLACK TEXT ON WHITE LABEL.

MODULAR PATCH PANEL COMPONENT LEGEND



ELEVATION - TELECOM RACK MDF 1A

SCALE: 1" = 1' - 0"

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

WILLIAM R. DI PIAZZA
STATE OF WASHINGTON
44794
REGISTERED
PROFESSIONAL ENGINEER

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services PH 509-335-5571
2425 E. Grimes Way FAX 509-335-9304
Pullman, Wa. 99164-1150

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

2010
PROJECT NUMBER:

REVISIONS:
2-26-20 BID SET

SHEET TITLE:

ELECTRICAL -
ANCILLARIES DETAILS

PETER J. CARLETTI
PROJECT ARCHITECT:

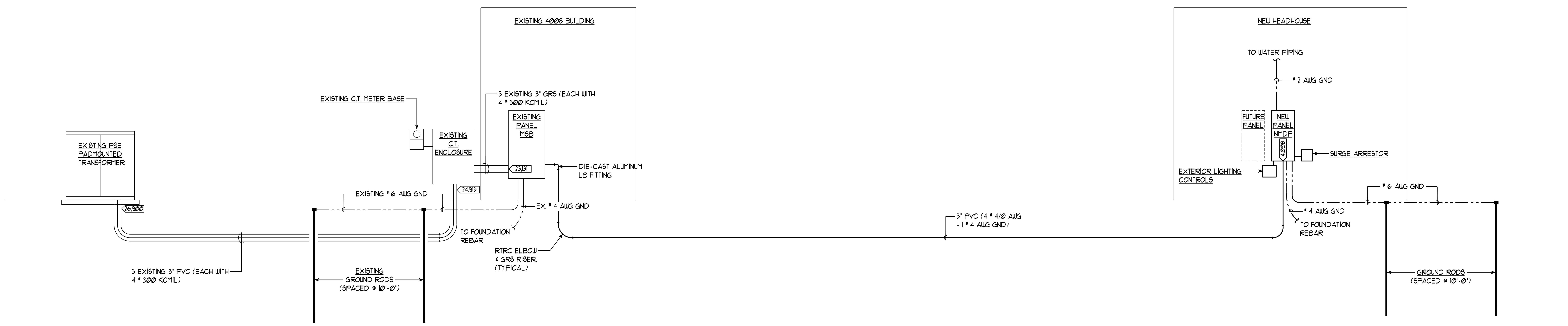
KL
DRAWN BY:

BD
CHECKED BY:

FEBRUARY 26, 2020
DATE

COMPUTER FILE NAME

E-4.2



ELECTRICAL - PARTIAL POWER SYSTEM RISER DIAGRAM

SCALE: NONE

EXISTING MAIN PANEL MSB — BUILDING 4008

VOLTAGE:	208Y/120V, 3 PH, 4 W
TYPE:	CUTLER-HAMMER PRL4 PANELBOARD
ENCLOSURE:	NEMA 1
MOUNTING:	SURFACE/FLOOR
BUSSING:	MANUFACTURER'S STANDARD; CONTINUOUS RATING: 1000 A; FULL AIC RATING: 50,000 A; SERIES AIC RATING: NONE
MAIN:	CIRCUIT BREAKER; CONTINUOUS RATING: 800 A; FULL AIC RATING: 50,000 A

FEEDER/BRANCH CIRCUIT DEVICES:
BOLT-ON CIRCUIT BREAKERS
FULL AIC RATING: 35,000 A
SERIES AIC RATING: 35,000 A

SPECIAL PROVISIONS:
MASTER NAMEPLATE
GROUND BAR
SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT

ELECTRICAL LOAD CALCULATION	CONN. LOAD (VA) EXIST.	NEW	TOTAL	DEMAND FACTOR	DEMAND LOAD (VA)
Lighting		930.0	930.0	1.25	1162.5
Gen. Purpose Outlets (First 10 KVA)		4500.0	4500.0	1.00	4500.0
Gen. Purpose Outlets (Remainder)		0.0	0.0	0.50	0.0
Special Purpose Outlets		3780.0	3780.0	1.00	3780.0
Mechanical Equipment		24490.0	24490.0	1.00	24490.0
Kitchen Equipment & Appliances		3450.0	3450.0	0.65	2242.5
Miscellaneous		0.0	0.0	1.00	0.0
25% Largest Motor					1750.0
Existing Peak Demand Load: (Per PSE Demand Meter History)	33777.8		33777.8	1.25	42222.2
TOTAL LOAD	33777.8	37150.0	70927.8		80147.2
TOTAL AMPS	93.8	103.1	196.9		222.5

CONN. LOAD (VA)	FEEDER/BRANCH CIRCUIT DESCRIPTION	NOTE	BKR AMP/P	CKT NO	BUS (PHASE)	CKT NO	BKR AMP/P	FEEDER/BRANCH CIRCUIT DESCRIPTION	NOTE	CONN. LOAD (VA)
					A		400/3	PANEL SMDP		0.0
					B		|			0.0
					C		|			0.0
12515.3	PANEL NMDP - HEADHOUSE	(1)	200/3	1	A	2	100/3	NORTH PANEL MODULAR BUILDING		0.0
11591.3			|	3	B	4	|			0.0
13043.3			|	5	C	6	|			0.0
0.0			20/1	7	A	8	SPACE			0.0
0.0			20/1	9	B	10	20/1			0.0
0.0	OUTLET -		20/1	11	C	12	SPACE			0.0
0.0			30/1	13	A	14	SPACE			0.0
0.0			100/2	15	B	16	100/2			0.0
0.0			|	17	C	18	|			0.0
0.0			SPACE	19	A	20	SPACE			0.0
0.0			SPACE	21	B	22	SPACE			0.0
0.0			SPACE	23	C	24	SPACE			0.0
			MAIN CIRCUIT BREAKER							

NOTES:
(1) NEW FEEDER CONNECTED TO EXISTING SPARE CIRCUIT BREAKER.
(2) ALL OTHER CIRCUITS ARE EXISTING TO REMAIN.

PANEL NMDP — HEADHOUSE

VOLTAGE:	208Y/120V, 3 PH, 4 W
TYPE:	PANELBOARD
ENCLOSURE:	NEMA 1
MOUNTING:	SURFACE
BUSSING:	MANUFACTURER'S STANDARD; CONTINUOUS RATING: 225 A; FULL AIC RATING: 22,000 A; SERIES AIC RATING: NONE
MAIN:	CIRCUIT BREAKER; CONTINUOUS RATING: 200 A; FULL AIC RATING: 22,000 A; SERIES AIC RATING: NONE; LOCATION: BOTTOM

FEEDER/BRANCH CIRCUIT DEVICES:
BOLT-ON CIRCUIT BREAKERS
FULL AIC RATING: 10,000 A
SERIES AIC RATING: 22,000 A

SPECIAL PROVISIONS:
MASTER NAMEPLATE
GROUND BAR
SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT
SUB-FEED LUGS

ELECTRICAL LOAD CALCULATION	CONN. LOAD (VA) EXIST.	NEW	TOTAL	DEMAND FACTOR	DEMAND LOAD (VA)
Lighting	0.0	930.0	930.0	1.25	1162.5
Gen. Purpose Outlets (First 10 KVA)	0.0	4500.0	4500.0	1.00	4500.0
Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
Special Purpose Outlets	0.0	3780.0	3780.0	1.00	3780.0
Mechanical Equipment	0.0	24490.0	24490.0	1.00	24490.0
Kitchen Equipment & Appliances	0.0	3450.0	3450.0	1.00	3450.0
Miscellaneous	0.0	0.0	0.0	1.00	0.0
25% Largest Motor					1750.0
TOTAL LOAD	0.0	37150.0	37150.0		39132.5
TOTAL AMPS	0.0	103.1	103.1		108.6

CONN. LOAD (VA)	FEEDER/BRANCH CIRCUIT DESCRIPTION	NOTE	BKR AMP/P	CKT NO	BUS (PHASE)	CKT NO	BKR AMP/P	FEEDER/BRANCH CIRCUIT DESCRIPTION	NOTE	CONN. LOAD (VA)
			SUB-FEED LUGS					FUTURE PANEL		0.0
										0.0
										0.0
1260.0	OUTLETS - OPEN OFFICE CONTROLLED		20/1	1	A	2	20/1	OUTLETS - ELECTRICAL ROOM		180.0
540.0	OUTLETS - OPEN OFFICE NORTHWEST		20/1	3	B	4	20/1	OUTLETS - COMM RACK		360.0
720.0	OUTLETS - OPEN OFFICE NORTH		20/1	5	C	6	20/1	OUTLET - BELOW PANEL		180.0
1440.0	OUTLETS - OPEN OFFICE CONTROLLED		20/1	7	A	8	20/1	LTG - OPEN OFFICE, RESTROOM, OFFICE		662.0
540.0	OUTLETS - OPEN OFFICE SOUTH		20/1	9	B	10	20/1	LTG - ELECTRICAL & LAB		108.0
900.0	OUTLETS - OPEN OFFICE EAST		20/1	11	C	12	20/1	LTG - EXTERIOR		160.0
180.0	OUTLET - RESTROOM		20/1	13	A	14	20/1	OUTLETS - OFFICE CONTROLLED		720.0
500.0	WALL HEATER EH-I - RESTROOM	(1)	20/1	15	B	16	20/1	OUTLETS - OFFICE		900.0
0.0	SPARE		20/1	17	C	18	20/1	SPARE		0.0
2080.0	WATER HEATER WH-1 - RESTROOM	(1)	30/2	19	A	20	20/1	SPARE		0.0
2080.0			|	21	B	22	20/1	SPARE		0.0
4000.0	WATER HEATER WH-2 - KITCHENETTE	(1)	50/2	23	C	24	20/1	DISPOSAL - KITCHENETTE		750.0
4000.0			|	25	A	26	20/1	OUTLETS - KITCHENETTE		360.0
230.0	VENTILATOR HRV-1 - OFFICE		20/1	27	B	28	20/1	MICROWAVE - KITCHENETTE		1500.0
300.0	FAN COIL UNITS FCU-1, 2, 3, 4		15/2	29	C	30	20/1	REFERIGERATOR - KITCHENETTE		1200.0
300.0			|	31	A	32	20/1	SPARE		0.0
3500.0	HEAT PUMP HP-1		50/2	33	B	34	20/1	SPARE		0.0
3500.0			|	35	C	36	20/1	SPARE		0.0
1333.3	DUCT HEATER DH-1		20/3	37	A	38	30/3	SURGE ARRESTOR		0.0
1333.3			|	39	B	40	|			0.0
1333.3			|	41	C	42	|			0.0
			MAIN CIRCUIT BREAKER							

NOTES:
(1) PROVIDE LOCKOUT PROVISIONS.

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
SUITE A
MOUNT VERNON, WA. 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

WILLIAM R. DIEPHUIS — STATE OF WASHINGTON — 44794 — REGISTERED PROFESSIONAL ENGINEER — 2/26/20

WSU INSTALL HEADHOUSE
WSU MOUNT VERNON REC
16650 STATE ROUTE 36
MOUNT VERNON, WA 98273

CONTACT:
CYNTHIA ARBOUR, PROJECT MGR.
509-335-7010

WASHINGTON STATE UNIVERSITY
Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150
PH 509-335-5571
FAX 509-335-9304

WSU FILE NUMBER: 4031-G-000
WSU PROJECT NUMBER: 9896-2018

2010
PROJECT NUMBER:

REVISIONS:
2-26-20 BID SET

SHEET TITLE:
ELECTRICAL -
POWER SYSTEM RISER DIAGRAM

PETER J. CARLETTI
PROJECT ARCHITECT:
KL
DRAWN BY:
BD
CHECKED BY:
FEBRUARY 26, 2020
DATE

COMPUTER FILE NAME

E-6.1