QUIL CEDA VILLAGE
CAR WASH

11400 QUIL CEDA BLVD.
TULALIP, WASHINGTON 98271
BID SET

CIVIL ENGINEER

BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH
KENT, WASHINGTON 98032
CONTACT: DAN BALMELLI
PHONE: (425) 251-6222
EMAIL: dbalmelli@barghausen.com

LANDSCAPE ARCHITECT

BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH
KENT, WASHINGTON 98032
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EMAIL: jvarley@barghausen.com

STRUCTURAL ENGINEER

PCS STRUCTURAL SOLUTIONS
1250 PACIFIC AVENUE, SUITE 701
TACOMA, WASHINGTON 98402
CONTACT: JEFF KLEIN
PHONE: (253) 383-2797
EMAIL: JKlein@pcs-structural.com

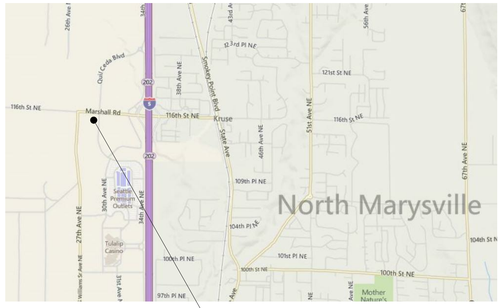
MECHANICAL/PLUMBING ENGINEER

HULTZ/BHU ENGINEERS, INC.
1111 FAWCETT AVE, STE 100
TACOMA, WASHINGTON 98402
CONTACT: BRIAN WHITE
PHONE: (253) 383-3257
EMAIL: brianw@hultzbhu.com

ELECTRICAL ENGINEER

HULTZ/BHU ENGINEERS, INC.
1111 FAWCETT AVE, STE 100
TACOMA, WASHINGTON 98402
CONTACT: JOHN MCINTIRE
PHONE: (253) 383-3257
EMAIL: johnm@hultzbhu.com

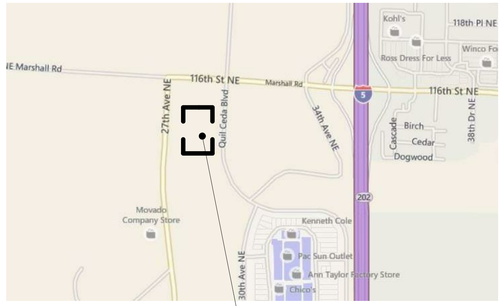
AREA MAP



NORTH

N.T.S.

VICINITY MAP



NORTH

N.T.S.

SYMBOLS

GRID LINE DESIGNATION

C.O.S. = center of structure
F.O.S. = face of structure
(E) = existing

INTERIOR ELEVATION
ELEVATION NUMBER
SHEET NUMBER

EXTERIOR ELEVATION
ELEVATION NUMBER
SHEET NUMBER

BUILDING SECTION
SECTION NUMBER
SHEET NUMBER

WALL SECTION
SECTION LETTER
SHEET NUMBER

DETAIL
DETAIL NUMBER
SHEET NUMBER

REVISION
REVISION

MATCHLINE

NORTH ARROW

NORTH

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO APPLICABLE BUILDING CODES AND ORDINANCES. WHERE MORE THAN ONE CODE OR ORDINANCE CONFLICT WITH EACH OTHER, THE MORE RESTRICTIVE CODE SHALL GOVERN.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AT THE SITE AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY UNCERTAINTIES OR DISCREPANCIES WITH DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES AT THE SITE, PROTECT THEM FROM DAMAGE AND REPORT ANY DISCREPANCIES WITH DRAWINGS.
4. THE CONTRACTOR SHALL INSURE THE HEALTH AND SAFETY OF THE PUBLIC AND ALL WHO ENTER THE BUILDING DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE WORK OF SUBCONTRACTORS AND ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION.
6. DRAWINGS SHALL NOT BE SCALED. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY CONFLICTS.
7. ALL CONSTRUCTION SHALL MEET OR EXCEED LOCAL INDUSTRY STANDARDS. DETAILS ARE PROVIDED TO INDICATE MINIMUM QUALITY AND TO GIVE STANDARDS OF CONSTRUCTION. IF A CONDITION IS NOT SPECIFICALLY DETAILED, SUBMIT A SUGGESTED DETAIL FOR GUIDANCE AND APPROVAL.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION OF MECHANICAL AND ELECTRICAL WORK AS REQUIRED TO ACCOMMODATE CONSTRUCTION AND SHALL PROVIDE ALL NECESSARY SHAFTS, OPENINGS, BASES AND STRUCTURAL SUPPORT FOR DUCTS, PIPES, CONDUITS AND EQUIPMENT.
9. DIMENSIONS ON PLANS ARE TO FACE OF STUD, CENTER OF COLUMN, CENTER OF MULLION, FACE OF CONCRETE, FACE OF MASONRY, FACE OF FRAME OR FACE OF ROUGH OPENING, UNLESS OTHERWISE NOTED.
10. LABORATORY TESTING AND SPECIAL INSPECTION REQUIRED IN ACCORDANCE WITH IBC CHAPTER 17 FOR ALL EARTHWORK COMPACTION, FIELD WELDING, HIGH STRENGTH BOLTING AND ALL STRUCTURAL CONCRETE. OWNER TO HIRE AN INDEPENDENT SPECIAL INSPECTOR AND TESTING LAB FOR ALL CODE REQUIRED TESTING AND SPECIAL INSPECTIONS.
11. REPAIR / REPLACE EXISTING WALL FLOOR AND CEILING FINISHES TO MATCH EXISTING ADJACENT FINISHES WHEN DAMAGED DURING COURSE OF CONSTRUCTION.
12. DEMOLISH ALL EXISTING BUILDING COMPONENTS NECESSARY TO CONSTRUCT WORK CAP ALL EXISTING UTILITIES (PLUMBING, ELECTRICAL AND MECHANICAL) BEHIND WALLS FLOORS, ETC.
13. SUSPENDED CEILINGS TO BE DESIGNED FOR SEISMIC DESIGN CATEGORY D, E, OR F.
14. REFER TO SHEET A600 FOR STANDARD CASEWORK DETAILS AND PLUMBING FIXTURE AND TOILET ACCESSORIES MOUNTING HEIGHTS.

CODE INFORMATION

GOVERNING CODE

2018 INTERNATIONAL BUILDING CODE (IBC) WASHINGTON STATE AMENDMENTS
2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC) WASHINGTON STATE AMENDMENTS
2018 WASHINGTON STATE ENERGY CODE (WSEC)
2018 UNIFORM PLUMBING CODE (UPC)

OCCUPANCY CLASSIFICATION

IBC CHAPTER 3 — B — BUSINESS

CONSTRUCTION TYPE

IBC SECTION 602 — V-B — (NON-FIRE RATED) (COMBUSTIBLE CONSTRUCTION)

MAXIMUM ALLOWABLE BUILDING HEIGHT

IBC TABLE 504.3 — 40 FEET

NS = BUILDING NOT EQUIPPED WITH FIRE SPRINKLER SYSTEM
S= BUILDING EQUIPPED WITH FIRE SPRINKLER SYSTEM

MAXIMUM ALLOWABLE BUILDING STORIES

IBC TABLE 504.4 — 2 STORIES

NS = BUILDING NOT EQUIPPED WITH FIRE SPRINKLER SYSTEM

MAXIMUM ALLOWABLE FLOOR AREA

IBC TABLE 506.2

FIRST FLOOR — 9,000 SQ FT

AUTOMATIC FIRE SPRINKLER SYSTEM

IBC CHAPTER 9 — NON-SPRINKLED.

FIRE ALARM AND DETECTION SYSTEM

IBC CHAPTER 9 — BUILDING SHALL BE EQUIPPED WITH AN AUTOMATIC FIRE ALARM AND DETECTION SYSTEM WITH A MUNICIPAL TRIP CIRCUIT IN ACCORDANCE WITH IBC SECTION 907.

BUILDING ELEMENTS FIRE-RESISTANCE RATING

IBC TABLE 601

STRUCTURAL FRAME	0 HR
BEARING WALLS	
EXTERIOR	0 HR
INTERIOR	0 HR
NON-BEARING WALLS	
EXTERIOR	TABLE 602
INTERIOR	0 HR
FLOOR CONSTRUCTION	0 HR
ROOF CONSTRUCTION	0 HR

PROJECT INFORMATION

SITE AREA

ACRES	1.49 ACRES
SQUARE FOOTAGE	65,235 SQ FT

BUILDING AREA

FIRST FLOOR	6,200 SQ FT (INCLUDES DRIVE UP CANOPY)

OFF-STREET PARKING STALLS

PARKING STALLS PROVIDED

STANDARD STALL	2 STALLS
ADA STANDARD STALL	1 STALLS
VACUUM STALL	12 STALLS
TOTAL	**15 STALLS**

GENERAL PROJECT SCOPE OF WORK

PROJECT SCOPE INCLUDES CONSTRUCTION OF CAR WASHING FACILITY TO INCLUDE CAR WASH TUNNEL, EQUIPMENT ROOM AND INTERIOR SUPPORT SPACES. ASSOCIATED UTILITY WORK SHALL COORDINATE WITH WORK UP THROUGH TO ROOFING, CEILING, WALL ABOVE AND FLOOR.

ADDITIONAL DRAWINGS PRODUCED BY EQUIPMENT MANUFACTURER FOR CAR WASH EQUIPMENT INSTALLATION ARE AVAILABLE FROM OWNER, SPECIFIC TO THIS BUILDING DESIGN AND SITE LOCATION.

SHEET INDEX

Helix design group

AMERICAN INSTITUTE OF ARCHITECTS

5134 REGISTERED ARCHITECT
BRUCE McKEAN
STATE OF WASHINGTON

HELIX DESIGN GROUP, INC

OWNER
QUIL CEDA VILLAGE
8802 27TH AVE NE
TULALIP, WASHINGTON 98271

CONTACT: LUKAS REYES
PHONE: (360) 716-5022
EMAIL: LREYES@TULALIPTRIBES-NSN.GOV

ARCHITECT
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6021 12th STREET EAST SUITE 201
TACOMA, WASHINGTON 98424

CONTACTS:
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BRUCE MCKEAN: PRINCIPAL
PHONE: (253) 922-9037
EMAIL:
TRAVISN@HELIXDESIGNGROUP.NET

COVER SHEET

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

G001

WHITE
DRAWING NO.

PLOTTED: 8/12/2022 1:35:36 PM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3N5.rvt

GENERAL NOTES

NOTE

1. ABBREVIATIONS:

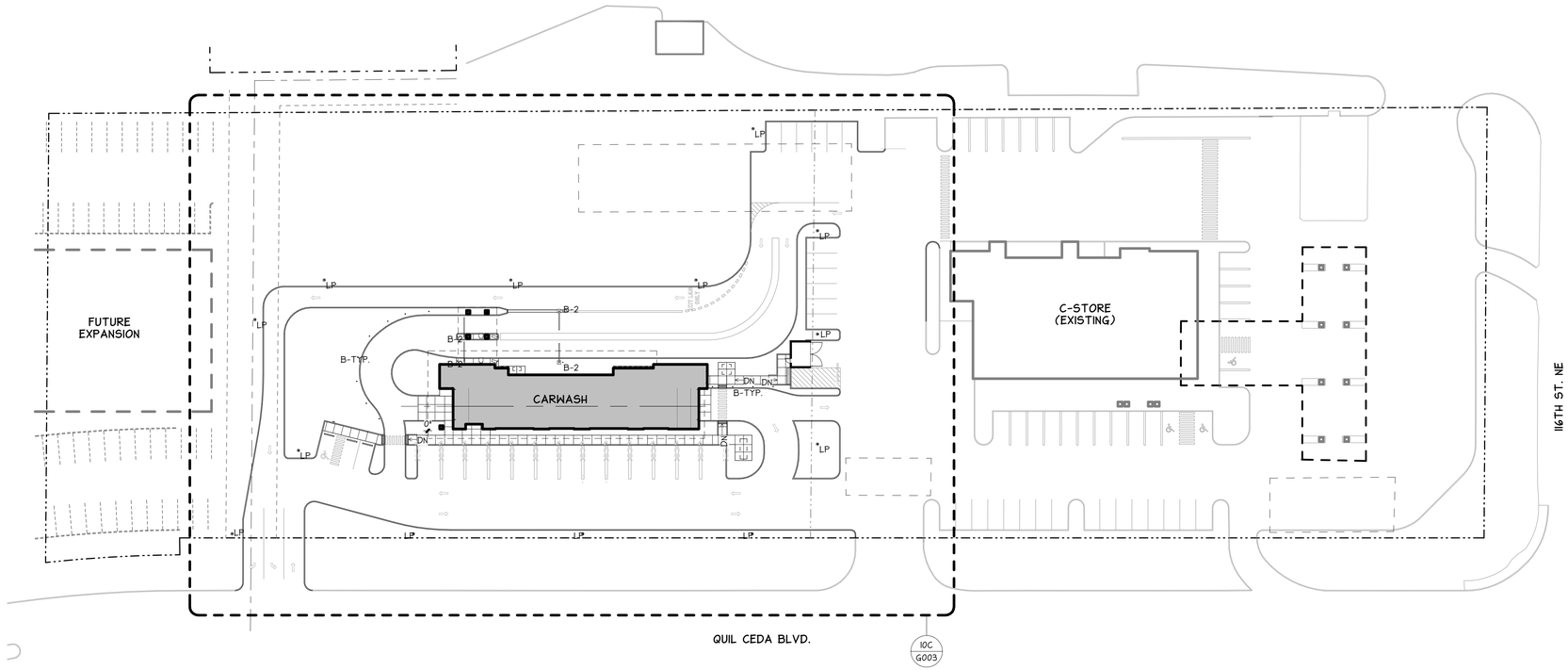
   (D) - DEMOLITION
   (R) - RELOCATE
   (E) - EXISTING TO REMAIN
   (S) - SALVAGE

   REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.

2. PROVIDE PAVEMENT MARKINGS (PAINTED LINES AND GRAPHICS) AT ALL PARKING STALLS AND ADA ACCESS AISLES AS SHOWN ON SITE PLAN.

3. PAINT CONCRETE CURBS AT FIRE LANES AND NO PARKING AREAS AS REQUIRED BY AGENCY.

4. CONNECT ROOF DRAINS TO STORM SYSTEM. INSTALL CLEANOUTS AT EACH ROOF DRAIN CONNECTION.



10C OVERALL SITE PLAN
1" = 40'-0"

NORTH

0' 10' 20' 40' 80'
SCALE: 1" = 40'

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5134 REGISTERED ARCHITECT
BRUCE McKEAN
STATE OF WASHINGTON

HELIX DESIGN GROUP, INC

OVERALL SITE PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

G002

WHITE
DRAWING NO.

PLOTTED: 8/12/2022 1:35:37 PM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3NS.rvt

SITE PLAN LEGEND

DESCRIPTION	SYMBOL AND TEXT
PROPERTY LINE length (ft) angle (survey)	100.00' N 90° 00' 00" W
ADJACENT PROPERTY LINE length (ft) angle (survey)	100.00' N 90° 00' 00" W
FINISH GRADE ELEVATION (E) = existing	EL. 0.00'
WORK POINT building corner, starting building layout reference point	WP
BUILDING outline of building	BUILDING T.O.F. = 100.0'
FENCE height/description	6' CHAINLINK FENCE
PARKING STALL AND LANDSCAPE PLANTER row count, compact stall indicator (C), wheel stops where indicated, concrete curb	R=2' C C 18'-0"
ACCESSIBLE PARKING STALLS row count, accessible stall indicator (H.C.), concrete curb, curb cut, H.C. parking signs, 2% max slope all directions	26'-0"
LIGHT POLE (E) = existing	LP
FIRE HYDRANT (E) = existing	F.H.
CENTERLINE OF STREET street name	STREET NAME
EDGE OF ROAD description	EDGE OF PAVEMENT
BOLLARD fixed 6" diameter steel bollard, concrete apron	B-2
illuminated steel bollard, concrete apron	B
CONCRETE PAVEMENT concrete pavement with troweled joint pattern as shown on site plan	CONCRETE PAVING
CONCRETE CURB TYPES vertical concrete curb	
LANDSCAPE AREA landscape area	LANDSCAPE AREA

GENERAL NOTES

NOTE

1. ABBREVIATIONS:

   (D) - DEMOLITION
   (R) - RELOCATE
   (E) - EXISTING TO REMAIN
   (S) - SALVAGE

   REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.

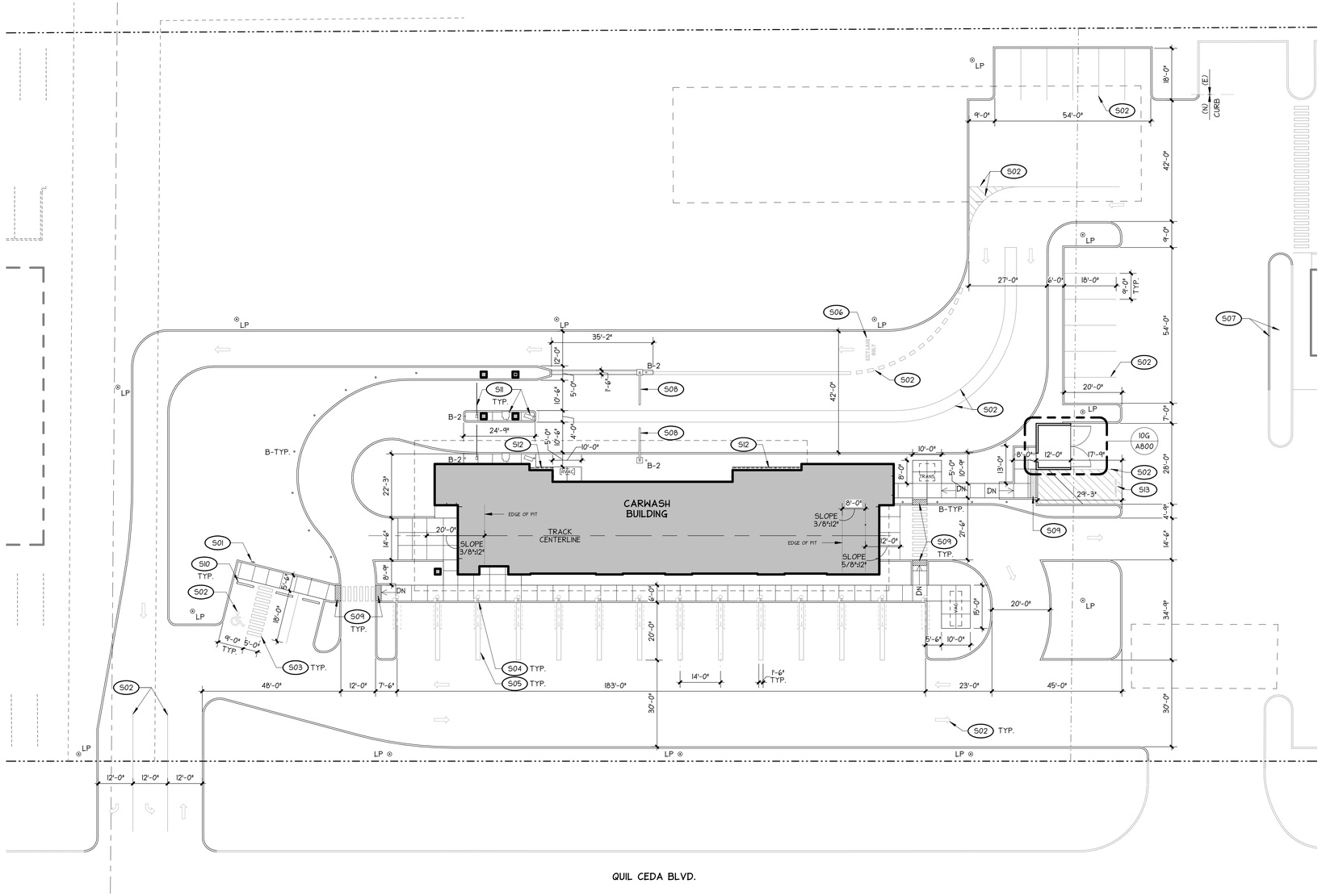
2. PROVIDE PAVEMENT MARKINGS (PAINTED LINES AND GRAPHICS) AT ALL PARKING STALLS AND ADA ACCESS AISLES AS SHOWN ON SITE PLAN.

3. PAINT CONCRETE CURBS AT FIRE LANES AND NO PARKING AREAS AS REQUIRED BY AGENCY.

4. CONNECT ROOF DRAINS TO STORM SYSTEM. INSTALL CLEANOUTS AT EACH ROOF DRAIN CONNECTION.

SITE PLAN NOTES

SYMBOL	NOTE
S01	ADA PARKING SIGNAGE ON POST SET IN CONCRETE FOOTING.
S02	PAINT STRIPING AND/OR GRAPHIC AS INDICATED - TYPICAL.
S03	1'-0" WIDE PAINT STRIPING.
S04	VACUUM STATION EQUIPMENT (UNDERGROUND WASTE RETURN LINE) PROVIDED AND INSTALLED BY CARWASH EQUIPMENT SUPPLIER.
S05	1'-6" WIDE PAINT STRIPING.
S06	14" HIGH SOLID LETTERING (PAINTED) TO READ: EXIT LANE ONLY
S07	INSTALL CONCRETE CURBING TO RECONFIGURE EXISTING CURBING AND LANDSCAPE AREA.
S08	DRIVE-THRU LANE HEIGHT RESTRICTION BAR ASSEMBLY.
S09	2'-0" WIDE STRIP ADA TRUNCATED DOMES TRANSITION AT ALL RAMPS.
S10	CONCRETE WHEEL STOP.
S11	LANE ACCESS PASSAGE BAR ASSEMBLY, MENU BOARD AND PAY KIOSK PROVIDED AND INSTALLED BY CARWASH EQUIPMENT SUPPLIER. COORDINATE AND PROVIDE POWER/DATA CONDUIT FROM EQUIPMENT ROOM TO SITE LOCATED EQUIPMENT.
S12	GROUND MOUNT UPLIGHT WALL WASH STRIP FIXTURE SET ON 4" THICK CONCRETE PAD.
S13	14" HIGH SOLID LETTERING (PAINTED) TO READ: LOADING ZONE



10C ENLARGED SITE PLAN
1" = 20'-0"

NORTH

SCALE: 1" = 20'

PLOTTED: 8/12/2022 1:35:38 PM
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3NS.rvt
PROJECT: a20-112 - QUIL CEDA VILLAGE

Helix design group

AMERICAN INSTITUTE OF ARCHITECTS

5134 REGISTERED ARCHITECT BRUCE McKEAN STATE OF WASHINGTON

HELIX DESIGN GROUP, INC

ENLARGED SITE PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

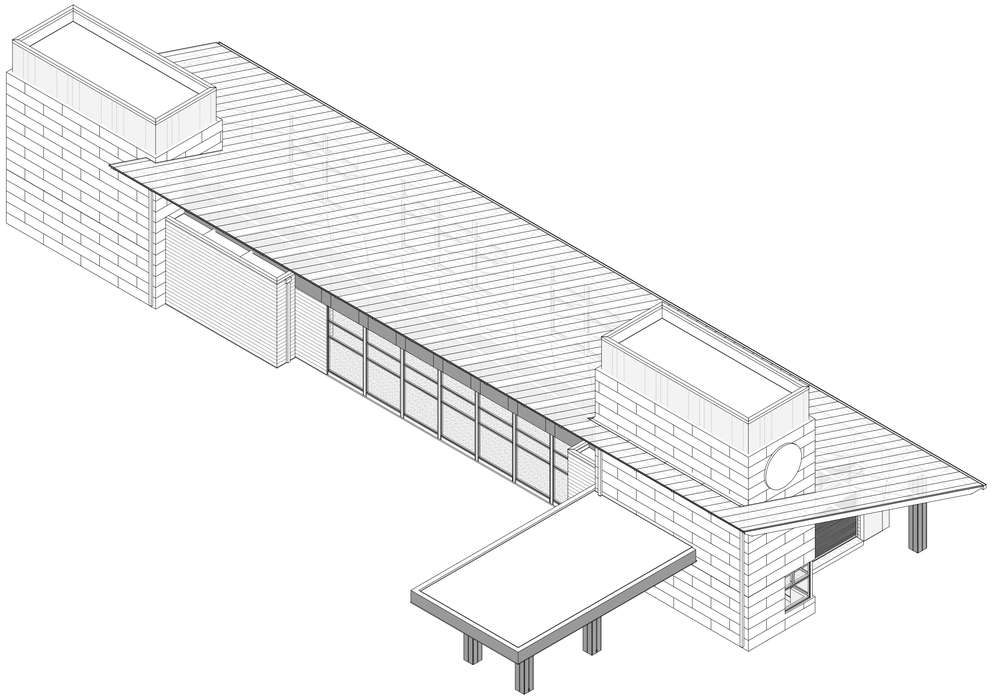
DATE	JOB NO.
08.12.22	a20-112

BID SET

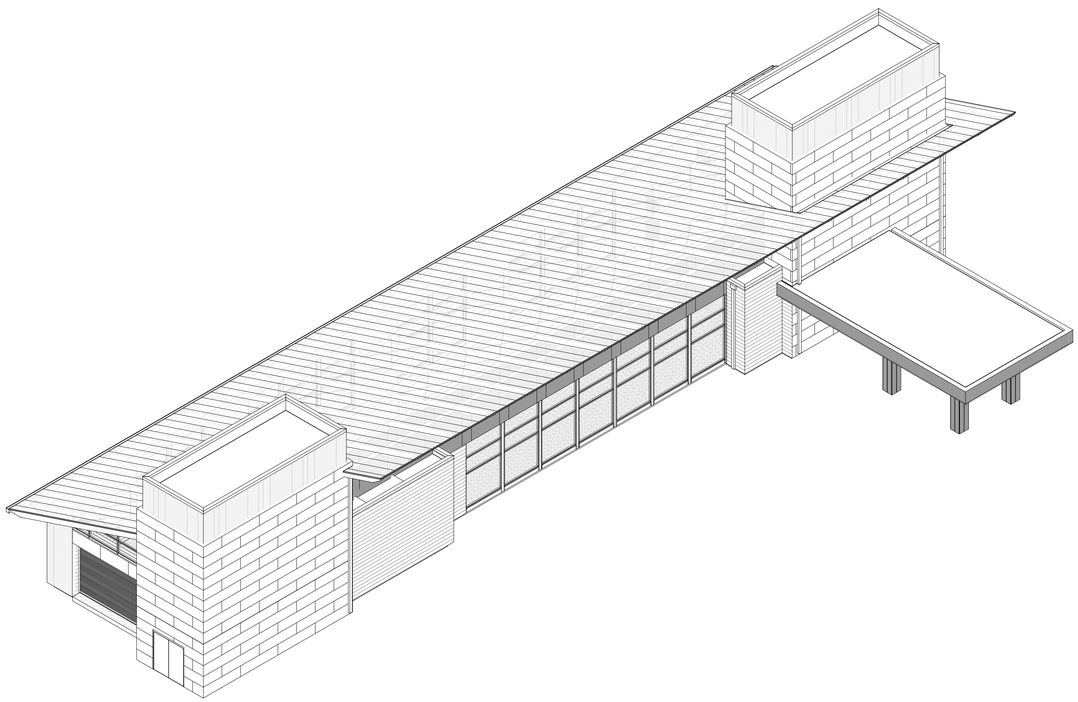
G003

WHITE

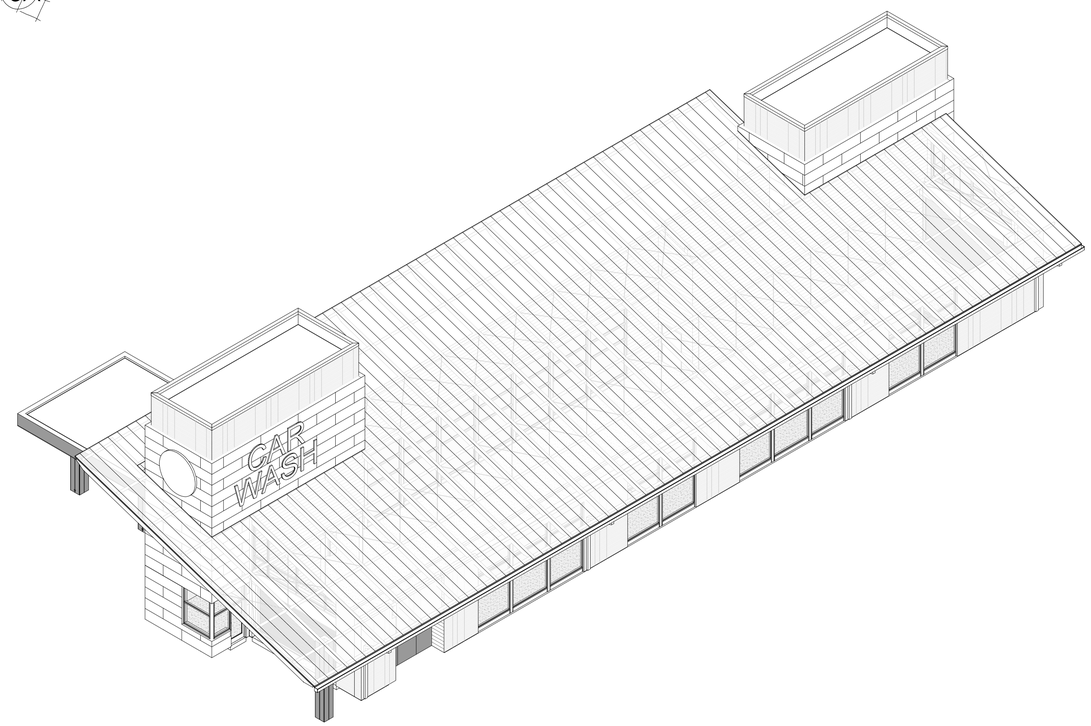
DRAWING NO.



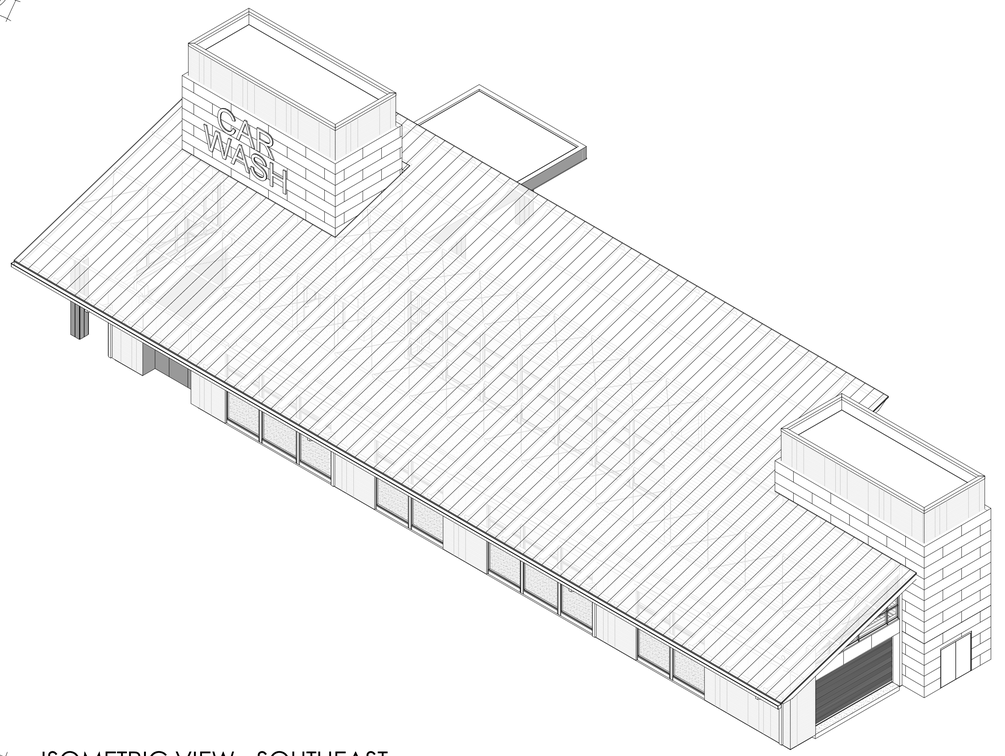
5A ISOMETRIC VIEW - NORTHWEST



5F ISOMETRIC VIEW - NORTHEAST



10A ISOMETRIC VIEW - SOUTHWEST



10F ISOMETRIC VIEW - SOUTHEAST

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BRUCE McKEAN
STATE OF WASHINGTON

HELIX DESIGN GROUP, INC

PICTORIAL VIEWS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

G010

WHITE

DRAWING NO.

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FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3N5.rvt

STANDARD ABBREVIATIONS LIST

(D)	DEMOLISH / DEMOLITION
(E)	EXISTING
(F)	FUTURE
(R)	RELOCATE
(r)	REMOVABLE
(S)	SALVAGE
@	AT
A.B.	ANCHOR BOLT
A.F.F.	ABOVE FINISH FLOOR
ABB	ABBREVIATION
ACM	ALUMINUM COMPOSITE MATERIAL WALL PANEL
ACP	ARCHITECTURAL CONCRETE PAVER
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DIABILITIES ACT
ADD'L	ADDITIONAL
ADJ	ADJUSTABLE
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL
ALUM	ALUMINUM
AP	ACCORDIAN PARTITION
APC	ARCHITECTURAL POLISHED CONCRETE
AS	ASPHALT SHINGLES
ASMB	ASSEMBLY
AWF	ACOUSTICAL WALL FABRIC
AWP	ARCHITECTURAL WALL PANEL
B	BOLLARD
B.O.F.	BOTTOM OF FOOTING
BB	BACKERBOARD
BD	BOARD
BF	BRACED FRAME
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	BIRD NETTING
BOT	BOTTOM
BRG	BEARING
BRK	BRICK MASONRY UNIT
BTWN	BETWEEN
C	COMPACT
C.I.	CONTINUOUS INSULATION
C.J.	CONTROL JOINT
C.O.S.	CENTER OF STRUCTURE
CAB	CABINET
CB	COVE BASE
CBB	CEMENTITIOUS BACKER BOARD
CER	CERAMIC
CG	CORNER GUARD
CHRL	CHAIR RAIL
CLG	CEILING
CLK	CLINKER TILE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CPT	CARPET
CU	CUBIC
CV	COVER
CWS	CURTAIN WALL SYSTEM
D	DEPTH
D.F.	DRINKING FOUNTAIN
D.S.	DOWNSPOUT
DBL	DOUBLE
DFT	DRAFTING
DIA	DIAMETER
DM	DECORATIVE METAL
DML	DECORATIVE METAL LAMINATE
DN	DOWN
DR	DOOR
DTL	DETAIL
DW	DISHWASHER
E.F.	EXHAUST FAN
E.P.	ELECTRICAL PANEL
EA	EACH
EF	EPOXY FLOORING
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EJC	EXPANSION JOINT COVER
EL	ELEVATION
ELECT	ELECTRICAL
ELEV	ELEVATOR
ENV	ENVELOPE
EPS	EXPANDED POLYSTYRENE RIGID INSULATION
EQ	EQUAL
EQUIP	EQUIPMENT
EXP	EXPANSION
EXT	EXTERIOR
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
F.H.	FIRE HYDRANT
F.I.C.	FURNISHED AND INSTALLED BY CONTRACTOR
F.I.O.	FURNISHED AND INSTALLED BY OWNER
F.O.I.C.	FURNISHED BY OWNER INSTALLED BY CONTRACTOR
F.O.S.	FACE OF STRUCTURE
F.P.	FLAG POLE
FDN	FOUNDATION
FF	FACTORY FINISH
FH	FULL HEIGHT
FIG	FIGURE
FIN	FINISH
FLR	FLOOR
FP	FIREPROOFING
FRC	FIBER REINFORCED CEMENTITIOUS PANEL
FRL	FIBER REINFORCED LAMINATE
FRMG	FRAMING
FRP	FIBER REINFORCED PANEL
FRSG	FIRE RATED SAFETY GLASS
FRT	FIRE-RETARDANT TREATED
FT	FOOT / FEET
FTG	FOOTING
G.A.	GYPSUM ASSOCIATION
G.F.C.I.	GOVERNMENT FURNISHED CONTRACTOR INSTALLED
G.F.G.I.	GOVERNMENT FURNISHED GOVERNMENT INSTALLED
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GLB	GLUE LAMINATE BEAM
GSF	GROSS SQUARE FOOTAGE
GT	GROUT
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H.B.	HOSE BIB
H.C.	HANDICAPPED
H.D.	HAND DRYER
HC	HOLLOW CORE
HDR	HEADER
HDW	HARDWARE
HK	HOOK
HLB	HORIZONTAL LOUVER BLINDS
HM	HOLLOW METAL
HMS	HORIZONTAL METAL SIDING
HOR	HORIZONTAL
HR	HOUR
HT	HEIGHT
HWD	HARDWOOD
I.D.	INSIDE DIAMETER
IMP	INSULATED METAL PANEL
INT	INTERIOR
IRGWB	IMPACT RESISTANT GYPSUM WALL BOARD
ISO	POLYISOCYANURATE RIGID INSULATION
JAN	JANITOR
JST	JOIST
JT	JOINT
LAM	LAMINATE
LAV	LAVATORY
LBR	LUMBER
LBS.	POUNDS (WEIGHT)
LG	LAMINATED GLASS
LIN	LINOLEUM
LP	LIGHT POLE
LVP	LUXURY VINYL PLANK FLOORING
LVR	LOUVER
LVT	LUXURY VINYL TILE
M	MORTAR
M-R	MOLD RESISTANT
MAS	MASONRY
MAX	MAXIMUM
MB	MARKERBOARD
MC	MEDICINE CABINET
MCP	METAL CEILING PANELS
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MES	MECHANICAL EQUIPMENT SCREEN
MF	METAL FABRICATIONS
MFR	MANUFACTURER
MFW	MOVEABLE FIRE WALL
MIN	MINIMUM
MIN.	MINUTE
MIR	MIRROR
MISC	MISCELLANEOUS
MMV	MANUFACTURED MASONRY VENEER
MR	MOISTURE RESISTANT
MRP	METAL ROOFING PANEL
MRS	METAL RAILING SYSTEM
MS	MANUFACTURED SIDING
MSP	METAL SOFFIT PANEL
MSS	METAL STAIR SYSTEM
MTL	METAL
MV	MASONRY VENEER
MWP	METAL WALL PANEL
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
N/A	NOT APPLICABLE
NO.	NUMBER
NOM	NOMINAL
NSM	NATURAL STONE MATERIAL
NTS	NOTES
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OH	OVERHEAD
O.R.D.	OVERFLOW ROOF DRAIN
O.R.L.	OVERFLOW ROOF LEADER
O.S.	OVERFLOW SCUPPER
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
OZ	OUNCE
P.A.F.	POWER ACCUATED FASTNER
P.T.	PRESSURE TREATED
PAC	PRECAST ARCHITECTURAL CONCRETE
PCS	PORTLAND CEMENT STUCCO
PCSU	PRECAST CONCRETE SOLID UNIT
PERP	PERPENDICULAR
PLAM	PLASTIC LAMINATE
PLY	PLYWOOD
PP	POWER POLE
PS	PROJECTION SCREEN
PSC	PLASTER SKIM COAT OVER CONCRETE
PSF	POUND PER SQUARE FOOT
PSMU	PRECAST STONE MASONRY UNIT
PT	PAINT
PTD	PAPER TOWEL DISPENSER
PTDWR	PAPER TOWEL DISPENSER WASTE RECEPTACLE
QTY	QUANTITY
R	RADIUS
R.	RISER
R.D.	ROOF DRAIN
R.L.	ROOF LEADER
R.O.	ROUGH OPENING
R.O.W.	RIGHT OF WAY
RB	RUBBER BASE
RCD	ROLLING COUNTER DOOR
REF	REFRIGERATOR
REINF	REINFORCED
REQD	REQUIRED
RF	RUBBER FLOORING
RLT	RELITE
RPM	RESIN PANEL MATERIAL
RSD	ROLLING SERVICE DOOR
RTR	RUBBER TREAD RISER
RTU	ROOF TOP UNIT
S	SOUND
S.D.	SOAP DISPENSER
S.O.G.	SLAB ON GRADE
SAE	SLIDING AUTOMATIC ENTRANCE
SC	SOLID CORE
SCH	SCHEDULE
SCR	SHOWER CURTAIN ROD
SD	SECTIONAL DOORS
SDG	SIDING
SDT	STATIC DISSIPATED TILE
SF	SQUARE FOOT
SFS	STOREFRONT SYSTEM
SG	SAFETY GLASS
SGS	SECURITY GRILLE SYSTEM
SH	SOAP HOLDER
SHC	SHOWER CURTAIN
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SJ	SEISMIC JOINT
SLR	SEALER
SLS	SKYLIGHT SYSTEM
SMU	STONE MASONRY UNIT
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SNTD	SANITARY NAPKIN AND TAMPON DISPENSER
SPEC	SPECIFICATIONS
SPGL	SPANDREL GLASS
SPMR	SINGLE-PLY MEMBRANE ROOFING
SQ	SQUARE
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
SSMR	STANDING SEAM METAL ROOFING
ST	STONE
STD	STANDARD
STL	STEEL
STN	STAIN
SV	SHEET VINYL
T	TREAD
T&G	TONGUE AND GROOVE
T.B.	TOWEL BAR
T.I.	TENANT IMPROVEMENT
T.O.	TOP OF
T.O.B.	TOP OF BEARING
T.O.F.	TOP OF FLOOR
T.O.W.	TOP OF WALL
T.S.C.D.	TOILET SEAT COVER DISPENSER
TB	TACKBOARD
TBB	TILE BACKERBOARD
TC	TOILET COMPARTMENTS
TCP	TILT-UP CONCRETE PANEL
TD	TRAFFIC DOOR
TEMP	TEMPORARY
TFR	TRANSFORMER
THK	THICK
THRML	THERMAL
TL	TILE
TPD	TOILET PAPER DISPENSER
TRTD	TREATED
TRZ	TERRAZZO
TS	TUBE STEEL
TWF	TACKABLE WALL FABRIC
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UNFIN	UNFINISHED
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VMS	VERTICAL METAL SIDING
VP	VENEER PLASTER
W	WIDTH
W.C.	WATER CLOSET
W.W.F.	WELDED WIRE FABRIC
W/	WITH
W/O	WITHOUT
WAIN	WAINSCOT
WB	WHITEBOARD
WC	WALL COVERING
WD	WOOD
WF	WOOD FLOORING
WG	WIRE GLASS
WH	WATER HEATER
WIN	WINDOW
WOM	WALK OFF MAT
WP	WORK POINT
WRB	WEATHER RESISTIVE BARRIER
WRGWB	WATER RESISTANT GYPSUM WALLBOARD
WS	WOOD SIDING
WSEC	WASHINGTON STATE ENERGY CODE
WT	WEIGHT
WWS	WINDOW WALL SYSTEM
XPS	EXTRUDED POLYSTYRENE RIGID INSULATION
Y.D.	YARD DRAIN
℄	CENTERLINE

BUILDING THERMAL ENVELOPE LEGEND

2018 WSEC COMMERCIAL BUILDING ENERGY EFFICIENCY REQUIREMENTS:

NOTE:
BUILDING CONDITIONED ONLY IN OFFICE AND RESTROOM LOCATIONS (2018 WSEC REQUIREMENTS APPLICABLE). EQUIPMENT ROOM TO RECIEVE FREEZE PROTECTION UNIT HEATERS ONLY, NO OTHER CONDITIONING. CARWASH TUNNEL TO RECIEVE NO CONDITIONING.

BUILDING SHALL COMPLY WITH THE WSEC ENERGY CODE BASED ON THE PRESCRIPTIVE METHOD AND SHALL COMPLY WITH THE FOLLOWING SECTIONS:

SECTION C402	BUILDING ENVELOPE	APPLICABLE
SECTION C403	MECHANICAL SYSTEMS	APPLICABLE
SECTION C404	SERVICE WATER HEATING AND PRESSURE-BOOSTER SYSTEMS	APPLICABLE
SECTION C405	ELECTRICAL POWER AND LIGHTING SYSTEMS	APPLICABLE
SECTION C406	EFFICIENCY PACKAGES	APPLICABLE
SECTION C407	TOTAL BUILDING PERFORMANCE	NOT APPLICABLE
SECTION C408	SYSTEM COMMISSIONING	NOT APPLICABLE
SECTION C409	ENERGY METERING AND ENERGY CONSUMPTION MANAGEMENT	NOT APPLICABLE
SECTION C410	REFRIGERATION SYSTEM REQUIREMENTS	NOT APPLICABLE
SECTION C411	SOLAR READINESS	NOT APPLICABLE

SECTION C301 CLIMATE ZONE:

CLIMATE ZONE: 4C PIERCE COUNTY / 4C KING COUNTY

SECTION C402 BUILDING ENVELOPE REQUIREMENTS:

TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT:

	WSEC MINIMUM REQUIRED:	PROVIDED:
WALL ASSEMBLY:		
ABOVE GRADE:		
MASS:	R-9.5 (C.I.)	R-19 [1]
BELOW GRADE:		
MASS:	R-9.5 (C.I.)	TBD [2]
ROOF ASSEMBLY:		
ATTIC AND OTHER:	R-49	TBD [3]
SLAB-ON-GRADE FLOORS:		
UNHEATED SLABS:	R-10 (C.I.) - PERIMETER (24" BELOW)	TBD [5]
OPAQUE DOORS:		
SWINGING:	U-0.37 ASSEMBLY MAXIMUM.	
NON-SWINGING:	R-4.75 ASSEMBLY MINIMUM.	

TABLE C402.4 BUILDING ENVELOPE FENESTRATION MAXIMUM U-FACTOR AND SHGC REQUIREMENTS:

	MAXIMUM ALLOWABLE AREA [7]	
VERTICAL FENESTRATION:		
FIXED:	U-0.38 ASSEMBLY MAXIMUM SHGC-0.38 ASSEMBLY MAXIMUM	[6] [6]
ENTRANCE DOORS:	U-0.60 ASSEMBLY MAXIMUM SHGC-0.38 ASSEMBLY MAXIMUM	[6] [6]
ALL OTHER VERTICAL FENESTRATION:	U-0.30 ASSEMBLY MAXIMUM SHGC-0.38 ASSEMBLY MAXIMUM	[6] [6]
AIR BARRIER:	INSTALL CONTINUOUS AIR BARRIER AT BUILDING THERMAL ENVELOPE. COMPLY WITH WSEC SECTION C402.5.1.1 CONSTRUCTION REQUIREMENTS. [8]	

WSEC SECTION C406 EFFICIENCY PACKAGES:

BUILDING SHALL ACHIEVE A MINIMUM OF SIX CREDITS FROM TABLE C406.1:

BUILDING OCCUPANCY: GROUP B / GROUP M / GROUP x

CODE SECTION	CREDITS
1. MORE EFFICIENT HVAC PERFORMANCE ACCORDANCE WITH SECTION C406.2	3.0 / 1.0 / 2.0
2. REDUCED LIGHTING POWER (OPTION 1) ACCORDANCE WITH SECTION C406.3.1	2.0 / 3.0 / 2.0
3. REDUCED LIGHTING POWER (OPTION 2) ACCORDANCE WITH SECTION C406.3.2	4.0 / 6.0 / 4.0
4. ENHANCED LIGHTING CONTROLS ACCORDANCE WITH SECTION C406.4	1.0
5. ON-SITE SUPPLY OF RENEWABLE ENERGY ACCORDANCE WITH SECTION C406.5	3.0
6. DEDICATED OUTDOOR AIR SYSTEM ACCORDANCE WITH SECTION C406.6	4.0 / NA / 4.0
7. HIGH PERFORMANCE DEDICATED OUTDOOR AIR SYSTEM ACCORDANCE WITH SECTION C406.7	4.0
8. HIGH-EFFICIENCY SERVICE WATER HEATING ACCORDANCE WITH SECTION C406.8.1 AND C406.8.2	NA / NA /4.0
9. HIGH PERFORMANCE SERVICE WATER HEATING ACCORDANCE WITH SECTION C406.9	NA
10. ENHANCED ENVELOPE PERFORMANCE ACCORDANCE WITH SECTION C406.10	3.0 / 3.0 / 4.0
11. REDUCED AIR INFILTRATION ACCORDANCE WITH SECTION C406.11	1.0
12. ENHANCED COMMERCIAL KITCHEN EQUIPMENT ACCORDANCE WITH SECTION C406.12	NA / NA / 5.0 (GROUP A-2)

FOOTNOTES:

[1] WALL ASSEMBLY (ABOVE GRADE):

MASS:

R-VALUE PROVIDED: R-19 (STUD CAVITY)
FIBERGLASS BATT INSULATION

[2] WALL ASSEMBLY (BELOW GRADE):

MASS:

R-VALUE PROVIDED: R-10 (C.I.)
(1) LAYER OF 2" THICK EXTRUDED POLYSTYRENE (XPS) INSULATION BOARD. (C.I.)

[3] ROOF ASSEMBLY (VENTED ATTIC):

R-VALUE PROVIDED: R-49 (THICKNESS = 15.5" WSEC APPENDIX A TABLE A101.4)
FIBERGLASS BLANKET INSULATION
ADVANCED FRAMING (FULL AND EVEN DEPTH OF INSULATION)

[4] NOT USED.

[5] SLAB-ON-GRADE:

UNHEATED SLABS:

R-VALUE PROVIDED: R-10 (C.I.) AT BUILDING PERIMETER.
PROVIDE THERMAL BREAK AT SLAB PERIMETER. EXTEND INSULATION VERTICALLY FROM TOP OF SLAB TO TOP OF FOOTING; EXTEND INSULATION A MINIMUM 24" BELOW SLAB DEPTH.

(1) LAYER OF 2" THICK EXTRUDED POLYSTYRENE (XPS) INSULATION BOARD. (C.I.)

[6] INSULATING GLASS UNIT: DOUBLE PANE SEALED UNIT. REFER TO SPECIFICATIONS.

[7] FENESTRATION MAXIMUM AREA:

MAXIMUM ALLOWABLE VERTICAL FENESTRATION AREA = 30% OF THE TOTAL BUILDING GROSS ABOVE-GRADE WALL AREA.

CALCULATED VERTICAL FENESTRATION AREA = xx.x%

MAXIMUM ALLOWABLE SKYLIGHT FENESTRATION AREA = 5% OF THE TOTAL BUILDING GROSS ROOF AREA.

CALCULATED SKYLIGHT FENESTRATION AREA = xx.x%

[8] AIR LEAKAGE - THERMAL ENVELOPE: COMPLY WITH WSEC SECTION C402.5.

AIR BARRIER: COMPLY WITH WSEC SECTION C402.5.1.

THE AIR BARRIER SHALL BE CONTINUOUS FOR ALL ASSEMBLIES THAT ARE THE THERMAL ENVELOPE OF THE BUILDING AND ACROSS THE JOINTS AND ASSEMBLIES. AIR BARRIER JOINTS, SEAMS AND PENETRATIONS SHALL BE SEALED AND SECURELY INSTALLED SO AS NOT TO DISLODGE, LOOSEN OR OTHERWISE IMPAIR ITS ABILITY TO RESIST POSITIVE AND NEGATIVE PRESSURE FROM WIND, STACK EFFECT AND MECHANICAL VENTILATION.

BUILDING TEST: COMPLY WITH WSEC SECTION C402.5.1.2.

THE COMPLETED BUILDING SHALL BE TESTED AND THE AIR LEAKAGE RATE OF THE BUILDING ENVELOPE SHALL COMPLY WITH WSEC SECTION C402.5.1.2.

GENERAL NOTES

1. ALL INSULATION MATERIALS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS TO ACHIEVE PROPER DENSITIES, MAINTAIN CLEARANCES AND MAINTAIN UNIFORM R-VALUES. INSULATE MISCELLANEOUS GAPS AND VOIDS. COMPLY WITH WSEC SECTION C303.2 INSTALLATION REQUIREMENTS.

2. VAPOR RETARDER SHALL BE INSTALLED ON THE WARM SIDE OF INSULATION. TAPE SEAL BUTT ENDS, LAPPED FLANGES, PENETRATIONS, TEARS OR CUTS IN MEMBRANE. EXTEND VAPOR RETARDER TIGHT TO FULL PERIMETER OF WINDOW FRAMES, DOOR FRAMES, LOUVERS, METAL DECK AND OTHER ITEMS INTERRUPTING THE PLANE OF MEMBRANE. TAPE SEAL ENDS OF VAPOR RETARDER TO FRAMES, METAL DECK AND OTHER ITEMS. VAPOR RETARDERS TO COMPLY WITH IBC SECTION 1404.3.

3. ALL INSULATION R-VALUES INDICATED FOR ASSEMBLY TYPES ARE MINIMUMS.

4. EXTRUDED POLYSTYRENE (XPS) RIGID INSULATION R-VALUE: R-5.0 PER 1" THICKNESS (MAXIMUM CALCULATION).
INSULATION MATERIAL: FLAME SPREAD INDEX = 10. SMOKE-DEVELOPMENT INDEX = 175.

5. POLYISOCYANURATE (ISO) RIGID INSULATION R-VALUE: R-5.7 (LTTR) PER 1" THICKNESS (MAXIMUM CALCULATION).

6. EXPANDED POLYSTYRENE (EPS) RIGID INSULATION R-VALUE: R-3.6 PER 1" THICKNESS (MAXIMUM CALCULATION).

7. MINERAL WOOL INSULATION R-VALUE: R-4.2 PER 1" THICKNESS (MAXIMUM CALCULATION).
INSULATION MATERIAL: FLAME SPREAD INDEX = 0. SMOKE-DEVELOPMENT INDEX = 0.

8. POLYISOCYANURATE FOAM (PIR) INSULATION R-VALUE: R-5.7 (LTTR) PER 1" THICKNESS (MAXIMUM CALCULATION).

9. SPRAY POLYURETHANE FOAM (SPF) INSULATION R-VALUE: R-7.0 (LTTR) PER 1" THICKNESS (MAXIMUM CALCULATION). ASTM C518 (AGED).
INSULATION MATERIAL: FLAME SPREAD INDEX = LESS THAN 25. SMOKE-DEVELOPMENT INDEX = LESS THAN 450.

10. BUILDING ENVELOPE SHALL COMPLY WITH 2018 WASHINGTON STATE ENERGY CODE (WSEC) REQUIREMENTS. CODE COMPLIANCE BASED ON PRESCRIPTIVE BUILDING ENVELOPE METHOD AS DEFINED IN SECTION C402 CLIMATE ZONE 4C (MARINE) AS DEFINED IN TABLE C301.1 COMPLY WITH BUILDING ENVELOPE REQUIREMENTS DEFINED IN CHAPTER 4.

11. ABBREVIATIONS:
(C.I.) = CONTINUOUS INSULATION. INSULATING MATERIAL THAT IS CONTINUOUS ACROSS ALL STRUCTURAL MEMBERS WITHOUT THERMAL BRIDGES OTHER THAN FASTENERS AND SERVICE OPENINGS.
(LS) = LINER SYSTEM. A CONTINUOUS VAPOR BARRIER LINER MEMBRANE THAT IS INSTALLED BELOW THE PURLINS AND THIS IS UNINTERRUPTED BY FRAMING MEMBERS.
(INT) = INTERMEDIATE FRAMING METHOD. REFER TO WSEC APPENDIX A SECTION A103 FOR REQUIREMENTS.

12. PACK MINERAL WOOL INSULATION AROUND DOOR FRAME, WINDOW FRAME AND LOUVER FRAME VOIDS AND GAPS; INSTALL MINERAL WOOL INSULATION AT EXTERIOR BUILDING ASSEMBLY EXPANSION JOINTS, CONTROL JOINTS AND OTHER MISCELLANEOUS JOINTS, VOIDS AND GAPS.

13. BUILDING THERMAL ENVELOPE INSPECTION: COMPLY WITH WSEC SECTION 104 REQUIREMENTS. WORK SHALL NOT BE DONE BEYOND THE POINT INDICATED IN EACH SUCCESSIVE INSPECTION WITHOUT FIRST OBTAINING THE APPROVAL OF THE CODE OFFICIAL AND THE ARCHITECT. ANY PORTIONS OF WORK THAT DO NOT COMPLY SHALL BE CORRECTED AND SUCH PORTION SHALL NOT BE COVERED OR CONCEALED UNTIL AUTHORIZED BY THE CODE OFFICIAL AND APPROVED BY THE ARCHITECT. INSPECTIONS SHALL INCLUDE THE FOLLOWING: (1) WALL INSULATION; TO BE MADE AFTER ALL WALL INSULATION AND VAPOR BARRIER ARE IN PLACE, BUT BEFORE ANY WALL COVERING IS PLACED. (2) GLAZING INSPECTION; TO BE MADE AFTER GLAZING MATERIALS ARE INSTALLED IN THE BUILDING. (3) EXTERIOR ROOFING INSULATION; TO BE MADE AFTER INSTALLATION OF THE ROOFING INSULATION, BUT BEFORE CONCEALMENT. (4) SLAB AND FLOOR INSULATION; TO BE MADE AFTER THE INSTALLATION OF THE SLAB AND FLOOR INSULATION, BUT BEFORE CONCEALMENT.

14. BUILDING THERMAL ENVELOPE INSULATION: AN R-VALUE IDENTIFICATION MARK SHALL BE APPLIED BY THE MANUFACTURER TO EACH PIECE OF BUILDING THERMAL ENVELOPE INSULATION 12 INCHES OR GREATER IN WIDTH. COMPLY WITH WSEC SECTION C303.1.1 BUILDING THERMAL ENVELOPE INSULATION AND WSEC SECTION C303.1.2 INSULATION MARK INSTALLATION REQUIREMENTS.

15. FENESTRATION PRODUCT RATING: U-FACTORS OF FENESTRATION PRODUCTS SHALL BE DETERMINED IN ACCORDANCE WITH NFRC 100. THE SOLAR HEAT GAIN COEFFICIENT (SHGC) AND VISIBLE TRANSMITTANCE (VT) OF GLAZED FENESTRATION PRODUCTS SHALL BE DETERMINED IN ACCORDANCE WITH NFRC 200. COMPLY WITH WSEC SECTION C303.1.3 FENESTRATION PRODUCT RATING REQUIREMENTS.

16. AIR BARRIER (BUILDING TEST): THE COMPLETED BUILDING SHALL BE TESTED AND THE AIR LEAKAGE RATE OF THE BUILDING ENVELOPE SHALL NOT EXCEED THE MAXIMUM AIR LEAKAGE RATE DEFINED IN WSEC SECTION C402.5.1.2. COMPLY WITH WSEC SECTION C402.5.1.2 BUILDING TESTING REQUIREMENTS.

17. INSULATING MATERIALS, INCLUDING FACINGS SUCH AS VAPOR RETARDERS AND VAPOR-PERMEABLE MEMBRANES, SIMILAR COVERINGS AND ALL LAYERS OF SINGLE AND MULTIPLE REFLECTIVE FOIL INSULATION SHALL COMPLY WITH THE REQUIREMENTS OF IBC SECTION 720. WHERE A FLAME SPREAD INDEX OR A SMOKE-DEVELOPMENT INDEX IS SPECIFIED, SUCH INDEX SHALL BE DETERMINED IN ACCORDANCE WITH ASTM E84 OR UL723.

CONCEALED INSTALLATION: INSULATING MATERIALS WHERE CONCEALED AS INSTALLED IN BUILDINGS OF ANY CONSTRUCTION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPMENT INDEX OF NOT MORE THAN 450.

EXPOSED INSTALLATION: INSULATING MATERIALS WHERE EXPOSED AS INSTALLED IN BUILDINGS OF ANY CONSTRUCTION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPMENT INDEX OF NOT MORE THAN 450.

ROOF INSULATION: USE OF COMBUSTIBLE ROOF INSULATION NOT COMPLYING WITH IBC SECTION 720.2 AND 720.3 SHALL BE PERMITTED IN ANY CONSTRUCTION PROVIDED THAT INSULATIONS COVERED WITH APPROVED ROOF COVERINGS DIRECTLY APPLIED THERETO; IN ACCORDANCE TO IBC SECTION 720.5.

18. BUILDING DOCUMENTATION AND CLOSE OUT SUBMITTAL REQUIREMENTS: COMPLY WITH WSEC SECTION C103.6.

19. RECESSED LUMINAIRES INSTALLED IN THE BUILDING THERMAL ENVELOPE TO COMPLY WITH WSEC SECTION C402.5.8.

20. MECHANICAL SYSTEMS: COMPLY WITH WSEC SECTION C403. REFER TO MECHANICAL DRAWINGS.

21. SERVICE WATER HEATING AND PRESSURE-BOOSTER SYSTEMS: COMPLY WITH WSEC SECTION C404. REFER TO MECHANICAL DRAWINGS.

22. ELECTRICAL POWER AND LIGHTING SYSTEMS: COMPLY WITH WSEC SECTION C405. REFER TO ELECTRICAL DRAWINGS.

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5134 REGISTERED ARCHITECT BRUCE McKEAN STATE OF WASHINGTON
HELIX DESIGN GROUP, INC

LEGENDS AND NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

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WHITE

DRAWING NO.

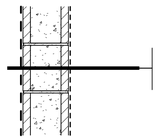
PLOTTED: 8/12/2022 13:56:46 PM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:\Users\travise\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisLF3NS.rvt

BUILDING ASSEMBLY LEGEND

WALLS

W1 — CONCRETE MASONRY UNIT

ASSEMBLY

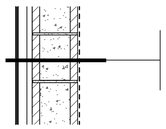


MATERIALS

FINISH PER SCHEDULE
CONCRETE MASONRY UNIT (CMU)
FINISH PER SCHEDULE

W2 — ALUMINUM COMPOSITE MATERIAL (CONCRETE MASONRY UNIT)

ASSEMBLY

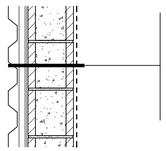


MATERIALS

FINISH PER SCHEDULE
ALUMINUM COMPOSITE MATERIAL (ACM)
ACM METAL FRAMING
CONCRETE MASONRY UNIT (CMU)
FINISH PER SCHEDULE

W3 — METAL WALL PANEL (CONCRETE MASONRY UNIT)

ASSEMBLY



MATERIALS

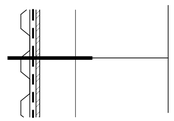
FINISH PER SCHEDULE
METAL WALL PANEL (MWP) '
7/8" METAL FURRING HAT CHANNEL @ 16" O.C. ''
CONCRETE MASONRY UNIT (CMU)
FINISH PER SCHEDULE

' MIX OF MWP-1, MWP-2 AND MWP-3 PANELS, REFER TO SHEET A301 FOR PATTERN.

'' INCLUDES VERTICAL HAT CHANNEL BEHIND ALL VERTICAL PANEL JOINT/PROFILE CHANGE LOCATIONS.

W4 — METAL WALL PANEL (STEEL STUD FRAMING)

ASSEMBLY



MATERIALS

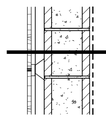
FINISH PER SCHEDULE
METAL WALL PANEL (MWP) '
WEATHER RESISTIVE BARRIER (FLUID-APPLIED) ''
PLYWOOD SHEATHING
METAL STUD FRAMING [1]
FINISH PER SCHEDULE

' MIX OF MWP-1, MWP-2 AND MWP-3 PANELS, REFER TO SHEET A301 FOR PATTERN.

'' VAPOR PERMEABLE AIR BARRIER.

W5 — ARCHITECTURAL WALL PANEL (CONCRETE MASONRY UNIT)

ASSEMBLY

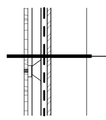


MATERIALS

FINISH PER SCHEDULE
ARCHITECTURAL WALL PANEL (AWP)
1-1/2" METAL FURRING SYSTEM
CONCRETE MASONRY UNIT (CMU)
FINISH PER SCHEDULE

W6 — ARCHITECTURAL WALL PANEL (STEEL STUD FRAMING)

ASSEMBLY



MATERIALS

FINISH PER SCHEDULE
ARCHITECTURAL WALL PANEL (AWP)
CLIP SYSTEM (DRAINAGE CAVITY) '
1-1/2" METAL FURRING SYSTEM
WEATHER RESISTIVE BARRIER (FLUID-APPLIED) '' '''
PLYWOOD SHEATHING '''
METAL STUD FRAMING [1]

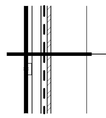
' ARCHITECTURAL WALL PANEL CLIP SYSTEM INCLUDING ACCESSORIES, HARDWARE, SPAECERS AND COMPONENETS FOR DRAINAGE CAVITY SYSTEM.

'' VAPOR PERMEABLE AIR BARRIER.

''' NOT REQUIRED AT 'SIM.' CONDITION.

W7 — ALUMINUM COMPOSITE MATERIAL (STEEL STUD FRAMING)

ASSEMBLY



MATERIALS

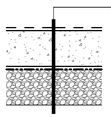
FINISH PER SCHEDULE
ALUMINUM COMPOSITE MATERIAL (ACM)
ACM METAL FRAMING
WEATHER RESISTIVE BARRIER (FLUID-APPLIED) ''
PLYWOOD SHEATHING
METAL STUD FRAMING [1]

'' VAPOR PERMEABLE AIR BARRIER.

FLOORS

F1 — CAST-IN-PLACE CONCRETE (INTERIOR SLAB)

ASSEMBLY



MATERIALS

MATERIAL AND FINISH PER SCHEDULE
CAST-IN-PLACE CONCRETE SLAB ON GRADE [1]
VAPOR BARRIER
CAPILLARY BREAK LAYER (6 INCH MINIMUM) '

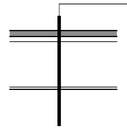
' REFER TO GEO-TECHNICAL REPORT.

BUILDING ASSEMBLY LEGEND

ROOFS

R1 — TRANSLUCENT ROOF PANEL

ASSEMBLY



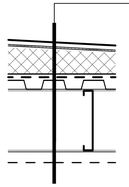
MATERIALS

FINISH PER SCHEDULE
TRANSLUCENT ROOF PANEL (TRP)
ROOF PANEL METAL ATTACHMENT FRAMING
STRUCTURAL STEEL MEMBERS '

' REFER TO STRUCTURAL DRAWINGS FOR SIZE AND SPACING OF BEAMS AND PURLINS.

R2 — SINGLE-PLY MEMBRANE ROOFING (STRUCTURAL STEEL MEMBERS)

ASSEMBLY



MATERIALS

FINISH PER SCHEDULE
SINGLE-PLY MEMBRANE ROOFING (SPMR) SYSTEM '
1/4" COVER BOARD '
RIGID INSULATION (C.I.) '
AIR BARRIER
METAL DECK '''
STRUCTURAL STEEL MEMBERS ''
MATERIAL AND FINISH PER SCHEDULE

' MANUFACTURER / INSTALLER TO PROVIDE ALL COMPONENTS REQUIRED TO MEET UL CLASS A RATED ASSEMBLY.

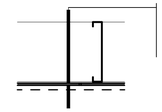
'' REFER TO STRUCTURAL DRAWINGS FOR SIZE AND SPACING.

''' AT SIM. CONDITION, PLYWOOD SHEATHING, REFER TO STRUCTURAL DRAWINGS.

SOFFITS

S1 — METAL SOFFIT PANEL (METAL FRAMING)

ASSEMBLY



MATERIALS

METAL JOIST ROOF FRAMING (ROOF ASSEMBLY ABOVE)
7/8" METAL HAT CHANNELS
ARCHITECTURAL WALL PANEL (AWP)
FINISH PER SCHEDULE

BUILDING ASSEMBLY NOTES

1. WALL TYPES: REFER TO FLOOR PLAN FOR WALL TYPE LEGEND.
2. REFER TO EXTERIOR ELEVATIONS FOR EXTENT OF EXTERIOR WALL ASSEMBLY.
3. REFER TO ROOF PLAN FOR ROOF ASSEMBLY LOCATIONS.
4. INTERIOR MATERIALS AND FINISHES: REFER TO ROOM FINISH SCHEDULE.
5. EXTERIOR FINISHES: REFER TO EXTERIOR FINISH SCHEDULE.
6. REFER TO PROJECT MANUAL, SECTION 07 25 00, 'WEATHER RESISTIVE BARRIER' FOR WALL OPENING MEMBRANE FLASHING REQUIREMENTS. REFER TO BUILDING OPENING PROTECTION DETAILS.
7. REFER TO CODE INFORMATION FOR FIRE RESISTANT RATING REQUIREMENTS OF ASSEMBLIES.
8. REFER TO BUILDING THERMAL ENVELOPE LEGEND FOR INSULATION VALUES AND INSTALLATION REQUIREMENTS.

FOOTNOTES

[1] REFER TO STRUCTURAL DRAWINGS FOR REQUIREMENTS.

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BRUCE McKEAN
STATE OF WASHINGTON

HELIX DESIGN GROUP, INC

BUILDING ASSEMBLIES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

G030

WHITE
DRAWING NO.

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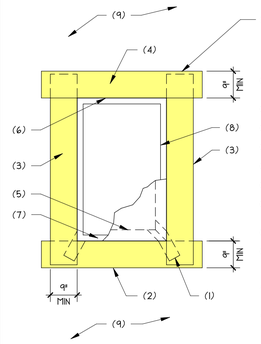
BUILDING EXTERIOR OPENING PROTECTION LEGEND

WEATHER RESISTIVE BARRIER AND MEMBRANE FLASHING INSTALLATION:



SELF-ADHERING MEMBRANE FLASHING [1]

INSTALLATION SEQUENCE:

(1) INSTALL DIAGONAL MEMBRANE FLASHING STRIP AT EACH CORNER OF SILL *

(2) INSTALL MEMBRANE FLASHING AT SILL **

(3) INSTALL MEMBRANE FLASHING AT JAMBS **

(4) INSTALL MEMBRANE FLASHING AT HEAD [3] **

(5) INSTALL METAL FLASHING AT SILL

(6) INSTALL METAL FLASHING AT HEAD

(7) INSTALL WINDOW OR LOUVER FRAME SUB-SILL WITH MANUFACTURER'S END DAMS.

(8) INSTALL WINDOW, DOOR OR LOUVER ***

(9) INSTALL WEATHER RESISTIVE BARRIER (SPRAY-APPLIED), EXTEND OVER MEMBRANE FLASHINGS; MINIMUM 6 INCH LAP. [2]

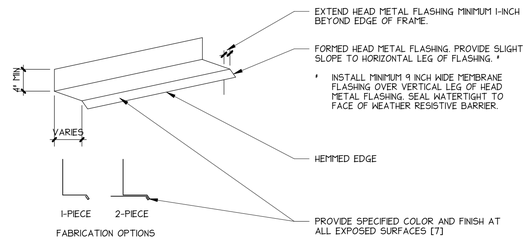
* INSTALL SLOPED SUB-SILL PLATE PRIOR TO INSTALLATION OF MEMBRANE FLASHING.

** EXTEND MEMBRANE FLASHING TO EDGE OF STUDS (INTERIOR SIDE) AT HEAD, JAMBS AND SILL OF ROUGH OPENING.

*** INSTALL HEAD AND SILL METAL FLASHINGS PRIOR TO FRAME INSTALLATION.

SHEET METAL FLASHING INSTALLATION:

HEAD METAL FLASHING [4]



FABRICATION OPTIONS

EXTEND HEAD METAL FLASHING MINIMUM 1-INCH BEYOND EDGE OF FRAME.

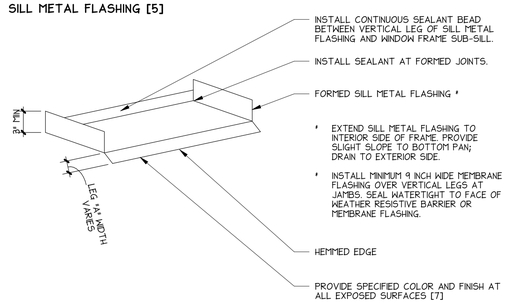
FORMED HEAD METAL FLASHING. PROVIDE SLIGHT SLOPE TO HORIZONTAL LEG OF FLASHING. *

* INSTALL MINIMUM 9 INCH WIDE MEMBRANE FLASHING OVER VERTICAL LEG OF HEAD METAL FLASHING. SEAL WATERTIGHT TO FACE OF WEATHER RESISTIVE BARRIER.

HEMMED EDGE

PROVIDE SPECIFIED COLOR AND FINISH AT ALL EXPOSED SURFACES [7]

SILL METAL FLASHING [5]



INSTALL CONTINUOUS SEALANT BEAD BETWEEN VERTICAL LEG OF SILL METAL FLASHING AND WINDOW FRAME SUB-SILL.

INSTALL SEALANT AT FORMED JOINTS.

FORMED SILL METAL FLASHING *

* EXTEND SILL METAL FLASHING TO INTERIOR SIDE OF FRAME. PROVIDE SLIGHT SLOPE TO BOTTOM PAN; DRAIN TO EXTERIOR SIDE.

* INSTALL MINIMUM 9 INCH WIDE MEMBRANE FLASHING OVER VERTICAL LEGS AT JAMBS. SEAL WATERTIGHT TO FACE OF WEATHER RESISTIVE BARRIER OR MEMBRANE FLASHING.

HEMMED EDGE

PROVIDE SPECIFIED COLOR AND FINISH AT ALL EXPOSED SURFACES [7]

GENERAL NOTES:

1. CONTRACT DOCUMENT INSTALLATION REQUIREMENTS MAY EXCEED WEATHER RESISTIVE BARRIER AND MEMBRANE FLASHING MANUFACTURER'S ROUGH OPENING PROTECTION INSTALLATION REQUIREMENTS BASED ON INSTALLATION SEQUENCE; MORE STRINGENT METHOD SHALL BE FOLLOWED; COMPLYING WITH WARRANTY REQUIREMENTS.

2. SUBMIT SHOP DRAWINGS ILLUSTRATING INSTALLATION SEQUENCE AND MEMBRANE FLASHING INSTALLATION AT ROUGH OPENINGS.

3. PREINSTALLATION MEETING IS REQUIRED FOR WEATHER RESISTIVE BARRIER AND MEMBRANE FLASHINGS. REVIEW INSTALLATION METHOD AND DETAILS DURING PREINSTALLATION MEETING.

4. MOCK-UP: A FIELD MOCK-UP ILLUSTRATING WEATHER RESISTIVE BARRIER AND MEMBRANE FLASHING INSTALLATION IS REQUIRED. MOCK-UP SHALL INCLUDE SILL METAL FLASHING INSTALLATION.

4. WEATHER RESISTIVE BARRIER, MEMBRANE FLASHING AND METAL FLASHING INSPECTIONS: WORK SHALL NOT BE DONE BEYOND THE POINT INDICATED IN EACH SUCCESSIVE INSPECTION WITHOUT FIRST OBTAINING THE APPROVAL OF THE ARCHITECT AND/OR THE BUILDING ENVELOPE CONSULTANT. ANY PORTIONS OF WORK THAT DO NOT COMPLY SHALL BE CORRECTED AND SUCH PORTION SHALL NOT BE COVERED OR CONCEALED UNTIL APPROVED BY THE ARCHITECT AND/OR THE BUILDING ENVELOPE CONSULTANT. INSPECTIONS SHALL INCLUDE THE FOLLOWING:

   (1) WEATHER RESISTIVE BARRIER AND MEMBRANE FLASHING INSPECTION; TO BE MADE AFTER ALL WEATHER RESISTIVE BARRIER AND MEMBRANE FLASHINGS ARE IN PLACE, BUT BEFORE INSTALLATION OF ROUGH OPENING METAL FLASHINGS AND WINDOW, DOOR OR LOUVERS ARE PLACED.

   (2) SILL METAL FLASHING AND FRAME SUB-SILL INSPECTION; TO BE MADE AFTER SILL METAL FLASHING AND FRAME SUB-SILL ARE IN PLACE, BUT WINDOW DOOR AND LOUVERS ARE PLACED.

   (3) HEAD METAL FLASHINGS; TO BE MADE AFTER INSTALLATION OF HEAD METAL FLASHINGS, BUT BEFORE CONCEALMENT.

FOOTNOTES:

[1] CONTRACTOR SHALL INSTALL MEMBRANE FLASHING AT EXTERIOR WALL ROUGH OPENINGS EXTENDING FROM INSIDE FACE OF WALL ROUGH OPENING OVER FACE OF EXTERIOR SHEATHING WITH A MINIMUM COVERAGE OF 9 INCHES COMPLYING WITH ASTM E2112-01. INSTALL MEMBRANE FLASHING WITH WATERTIGHT LAPS AND WITHOUT FISH MOUTHS. FISH MOUTHS MUST BE SLIT, PRESSED FLAT, AND COVERED WITH PATCH OF MEMBRANE THAT EXTENDS BEYOND DAMAGED AREA A MINIMUM OF 6 INCHES.

[2] WEATHER RESISTIVE BARRIER MAY BE INSTALLED PRIOR TO INSTALLATION OF MEMBRANE FLASHINGS. CONFIRM COMPATIBILITY AND ADHESION OF MEMBRANE FLASHING TO WEATHER RESISTIVE BARRIER PRIOR TO INSTALLATION. COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS, SPECIFICATIONS AND STANDARD DETAILS FOR INSTALLATION REQUIREMENTS.

[3] COORDINATE INSTALLATION SEQUENCE OF METAL FLASHING AT HEAD WITH INSTALLATION OF WINDOW, DOOR OR LOUVER FRAME; BASED ON FRAME TYPE, WALL ASSEMBLY CONSTRUCTION, MATERIALS AND FINISHES. INSTALL IN ACCORDANCE WITH CONTRACT DOCUMENT DETAILS AND APPROVED SHOP DRAWINGS.

[4] INSTALL HEAD METAL FLASHING AT ALL EXTERIOR WINDOWS, DOORS AND LOUVERS. METAL FLASHING PROFILE / SHAPE AND DIMENSIONS MAY VARY DEPENDING ON EXTERIOR WALL ASSEMBLY (THICKNESS, MATERIALS AND FINISHES) AND FRAME POSITION WITHIN WALL OPENING. INSTALL IN ACCORDANCE WITH CONTRACT DOCUMENT DETAILS AND APPROVED SHOP DRAWINGS.

[5] INSTALL SILL METAL FLASHING AT ALL EXTERIOR WINDOWS AND LOUVERS (EXCEPT NAIL-ON FLANGE TYPE). METAL FLASHING PROFILE / SHAPE AND DIMENSIONS MAY VARY DEPENDING ON EXTERIOR WALL ASSEMBLY (THICKNESS, MATERIALS AND FINISHES) AND FRAME POSITION WITHIN WALL OPENING. INSTALL IN ACCORDANCE WITH CONTRACT DOCUMENT DETAILS AND APPROVED SHOP DRAWINGS.

SHEET METAL FLASHING THICKNESS GAUGE:

GALVANIZED STEEL:	MINIMUM 20 GAUGE (0.0359"). MINIMUM 18 GAUGE (0.0478").	LEG 'A' IS LESS THAN 2-INCHES. LEG 'A' IS 2-INCHES TO 4-INCHES MAX.
ALUMINUM:	MINIMUM 18 GAUGE (0.0403"). MINIMUM 16 GAUGE (0.0508").	LEG 'A' IS LESS THAN 2-INCHES. LEG 'A' IS 2-INCHES TO 4-INCHES MAX.

INSTALL SLOPED SUB-SILL PLATE; A CONTINUOUS SHAPED PRESSURE TREATED WOOD PLATE OR FORMED GALVANIZED SHEET STEEL BREAK SHAPE; SLOPE TOP PLANE OF PLATE TO EXTERIOR SIDE OF ROUGH OPENING. INSTALL SLOPED SUB-SILL PLATE AT SILLS PRIOR TO INSTALLATION OF MEMBRANE FLASHINGS AND SILL METAL FLASHING.

INSTALL GENEROUS BED OF SEALANT AT FASTENER LOCATIONS PENETRATING THROUGH SILL METAL FLASHING SLOPED PAN. SEAL WATERTIGHT.

INSTALL CLEAR PLASTIC ROUND WEEP TUBES AT 3'-0" MAXIMUM SPACING AND WITHIN 6-INCHES OF JAMBS LOCATE WEEP TUBES BETWEEN SILL METAL FLASHING AND WINDOW FRAME SUB-SILL.

[6] INSTALL METAL FLASHING AT EXTERIOR DOOR OPENINGS ACCESSING UPPER STORY EXTERIOR DECKS AND PLAZA AREAS.

[7] HEAD METAL FLASHING: ALL VISIBLY EXPOSED SURFACES OF HEAD METAL FLASHING SHALL BE OF COLOR AND FINISH SPECIFIED. CONTRACTOR OPTION TO PROVIDE SINGLE PIECE OR MULTIPLE PIECE HEAD METAL FLASHING BASED ON WALL OPENING INSTALLATION CONDITION AND REQUIREMENTS.

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5134 REGISTERED ARCHITECT BRUCE McKEAN STATE OF WASHINGTON

HELIX DESIGN GROUP, INC

LEGENDS AND NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

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DRAWING NO.

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COLORS AND MATERIALS SCHEDULE

SYMBOL	MATERIAL	MANUFACTURER	COLOR / PATTERN / TYPE	LOCATION
DIVISION 3 - CONCRETE				
CONC-1	ARCHITECTURAL CONCRETE	-	FINISH: SMOOTH COLOR: PT-2	EXPOSED VERTICAL SURFACES
CONC-2	ARCHITECTURAL CONCRETE	-	FINISH: BROOM FINISH	EXPOSED HORIZONTAL SURFACES
DIVISION 4 - MASONRY				
CMU-1	CONCRETE MASONRY UNIT	MUTUAL MATERIALS	COLOR: NATURAL TEXTURE: GROUND FACE	EXPOSED CMU BLOCK
CMU-2	CONCRETE MASONRY UNIT	MUTUAL MATERIALS	COLOR: NATURAL TEXTURE: SMOOTH	BEHIND FINISH SURFACES
M-1	MORTAR	-	COLOR: MATCH CMU-1	REFER TO EXTERIOR ELEVATIONS
DIVISION 5 - METALS				
MF-1	METAL FABRICATIONS	-	COLOR: PT-1	
STL-1	STRUCTURAL STEEL FRAMING	-	COLOR: PT-1	
DIVISION 7 - THERMAL AND MOISTURE PROTECTION				
ACM-1	ALUMINUM COMPOSITE MATERIAL WALL PANEL	ALPOLIC / ALUCOBOND / REYNOBOND	COLOR: TSZ SILVER METALLIC	
ALUM-1	ALUMINUM FLASHING AND TRIM	CRL US ALUMINUM	COLOR: CLEAR ANODIZED	
AWP-1	ARCHITECTURAL WALL PANEL	GEM	COLOR: 759 BAMBOO	
MTL-1	METAL FLASHING AND TRIM	AEP SPAN	COLOR: MATCH ADJACENT SURFACE	DOWSPOUTS, CAP FLASHING, ETC.
MWP-1	METAL WALL PANEL	AEP SPAN	COLOR: COOL SAGE GREEN PROFILE: PC-10	REFER TO EXTERIOR ELEVATIONS
MWP-2	METAL WALL PANEL	AEP SPAN	COLOR: COOL LEAF GREEN PROFILE: PC-20	REFER TO EXTERIOR ELEVATIONS
MWP-3	METAL WALL PANEL	AEP SPAN	COLOR: COOL FOREST GREEN PROFILE: PC-40	REFER TO EXTERIOR ELEVATIONS
SPMR-1	SINGLE-PLY MEMBRANE ROOFING	CARLISLE	COLOR: WHITE	
TRP-1	TRANSLUCENT ROOFING PANEL	GALLINA	COLOR: 626 GREEN	
DIVISION 8 -OPENINGS				
GL-1	INSULATED GLASS	-	COLOR: CLEAR	
HDW-1	HARDWARE	-	COLOR: 626 SATIN CHROME	DOOR HARDWARE
HM-1	HOLLOW METAL DOOR AND FRAME	-	COLOR: PT-1	
RSD-1	ROLLING SERVICE DOOR	OVERHEAD DOOR COMPANY	FINISH: STAINLESS STEEL	
SFS-1	STOREFRONT SYSTEM	CRL US ALUMINUM	COLOR: CLEAR ANODIZED	
DIVISION 9 - FINISHES				
ACT-1	ACOUSTICAL CEILING TILE	ARMSTRONG	COLOR: WHITE	REFER TO REFLECTED CEILING PLAN
EF-1	EPOXY FLOORING	STONGARD MD	COLOR: GLACIER	
FRP-1	FIBER REINFORCED PANEL	MARLITE	COLOR: WHITE	RESTROOM WALLS
PT-1	PAINT	SHERWIN WILLIAMS	COLOR: TBD	EXPOSED STEEL FRAMING
PT-2	PAINT	SHERWIN WILLIAMS	COLOR: TBD	EXPOSED VERTICAL CONCRETE
PT-3	PAINT	SHERWIN WILLIAMS	COLOR: WHITE	OFFICE/RESTROOM
RB-1	RUBBER BASE	ROPPE	COLOR: BLACK	
DIVISION 10 - SPECIALTIES				
PTDWR-1	PAPER TOWEL DISPENSER WASTE RECEPTACLE	BOBRICK	FINISH: NO.4 SATIN FINISH	
SD-1	SOAP DISPENSER	BOBRICK	FINISH: NO.4 SATIN FINISH	
SNR-1	SANITARY NAPKIN RECEPTACLE	BOBRICK	FINISH: NO.4 SATIN FINISH	
TPD-1	TOILET PAPER DISPENSER	BOBRICK	FINISH: NO.4 SATIN FINISH	
TSCD-1	TOILET SEAT COVER DISPENSER	BOBRICK	FINISH: NO.4 SATIN FINISH	
DIVISION 12 - FURNISHINGS				
HLB-1	HORIZONTAL LOUVER BLINDS	-	COLOR: GRAY	
PLAM-1	PLASTIC LAMINATE	WILSONART	COLOR: LANDMARK WOOD 7981K-12	REFER TO INTERIOR ELEVATIONS
SSM-1	SOLID SURFACE MATERIAL	CORIAN	COLOR: SANDSTONE	REFER TO INTERIOR ELEVATIONS

COLORS AND MATERIALS SCHEDULE

NOTES

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HELIX DESIGN GROUP, INC

COLORS AND MATERIALS SCHEDULE

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

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COVER SHEET

FOR

TULALIP TRIBES

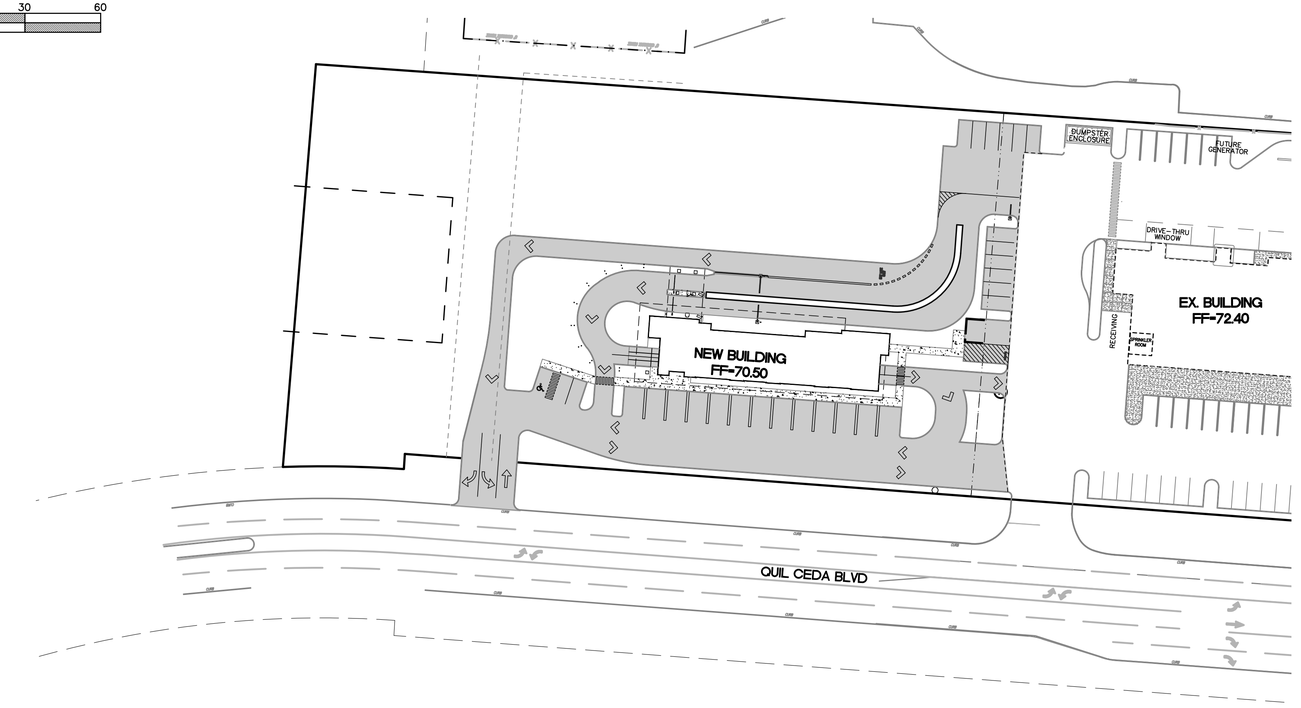
CONVENIENCE STORE CAR WASH

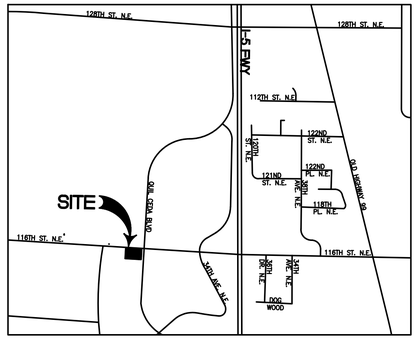
A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON

1"=50'

0 15 30 60





VICINITY MAP

GENERAL SITE DEVELOPMENT NOTES:

1. THE CONTRACTOR SHALL OBTAIN AND HAVE AVAILABLE COPIES OF THE APPLICABLE GOVERNING AGENCY STANDARDS AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS.
2. CONTRACTOR SHALL ASSURE THAT ALL NECESSARY PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE OR SHOWN ON RECORD DRAWING PROVIDED BY OTHERS ARE SHOWN HEREON. EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND ARE SUBJECT TO A DEGREE OF UNKNOWN VARIATION. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. BARGHAUSEN CONSULTING ENGINEERS, INC. ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS OR RECORDS OF OTHERS. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC., TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE APPROPRIATE UTILITIES INVOLVED PRIOR TO CONSTRUCTION.
6. INSPECTION OF SITE WORK WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE GOVERNING JURISDICTION. INSPECTION OF PRIVATE FACILITIES WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE INSPECTOR 24 HOURS IN ADVANCE OF BACKFILLING ALL CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY THE CONTRACTOR SHALL CONTACT THE AGENCY AND/OR UTILITY INSPECTION PERSONNEL AND ARRANGE ANY REQUIRED PRE-CONSTRUCTION MEETING(S). CONTRACTOR SHALL PROVIDE 72 HRS MIN. ADVANCE NOTIFICATION TO OWNER, FIELD ENGINEER AND ENGINEER OF PRE-CONSTRUCTION MEETINGS.
8. THE CONTRACTOR IS RESPONSIBLE FOR WORKER AND SITE SAFETY AND SHALL COMPLY WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED.
10. PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL ADJACENT PUBLIC AND PRIVATE PROPERTIES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITY SERVICES THAT ARE TO REMAIN OPERATIONAL WITHIN THE CONSTRUCTION AREA WHETHER SHOWN OR NOT SHOWN ON THE PLANS.
11. TWO (2) COPIES OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS. ONE (1) SET WITH RECORDS OF AS-BUILT INFORMATION SHALL BE SUBMITTED TO BARGHAUSEN CONSULTING ENGINEERS, INC. AT COMPLETION OF PROJECT.
12. CONTRACTOR SHALL OBTAIN SERVICES OF A LICENSED LAND SURVEYOR TO STAKE HORIZONTAL CONTROL FOR ALL NEW IMPROVEMENTS. STAKING CONTROL SHALL BE TAKEN FROM ELECTRONIC PLAN FILES PROVIDED BY BCE.

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN ON THESE DRAWINGS AND TO OBTAIN ACCEPTANCE BY THE PROJECT OWNER.
2. THE LOCATION OF EXISTING UTILITIES SHOWN HEREON IS BASED ON INFORMATION OBTAINED FROM OTHERS AND HAS NOT BEEN FIELD VERIFIED BY BCE. BCE ASSUMES NO RESPONSIBILITY FOR EXACT LOCATION OF EXISTING UTILITIES SHOWN OR NOT SHOWN HEREON. CONTRACTOR IS ADVISED TO VERIFY THE EXACT SIZE, DEPTH, AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ADJACENT PROPERTY OWNERS. DRIVEWAYS TO REMAIN ACCESSIBLE AT ALL TIMES.
3. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL "PRE-CONSTRUCTION" STATE OR BETTER.

EX. TOPOGRAPHY AND SITE IMPROVEMENT INFORMATION NOTES

BARGHAUSEN CONSULTING ENGINEERS, INC. DOES NOT WARRANT THAT THE BUILDINGS, SITE IMPROVEMENTS, BOUNDARIES AND TOPOGRAPHY SHOWN ON THESE DRAWINGS IS REPRESENTATIVE OF WHAT IS CONSTRUCTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER TO HAVE ALL IMPROVEMENTS FIELD VERIFIED PRIOR TO CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF BARGHAUSEN CONSULTING ENGINEERS, INC. PRIOR TO WORK. UTILITIES AND UTILITY EASEMENTS FOR THIS SITE HAVE NOT BEEN RESEARCHED OR CONFIRMED.

LEGEND

EXISTING		PROPOSED	
CURB		STORM DRAIN	
SANITARY SEWER		CURB	
WATER	W	LIGHT DUTY ASPHALT	
CATCH BASIN (CB)		CONCRETE	
STORM DRAIN (SD)		BUILDING	
CONCRETE		SPOT ELEVATIONS	285.0
BUILDING		CATCH BASIN	
SPOT ELEVATIONS	+285.0		
CONDUIT			

LEGAL DESCRIPTION

A PORTION OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 30 NORTH, RANGE 5 EAST, W.M., DESCRIBED AS FOLLOWS:

COMMENCING AT THE MONUMENTED CENTER OF SAID SECTION 8 AS SHOWN ON THE RECORD OF SURVEY RECORDED UNDER AUDITOR'S FILE NUMBER 200809235002; THENCE ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER SOUTH 85°18'07" EAST A DISTANCE OF 734.80 FEET; THENCE SOUTH 04°17'16" WEST A DISTANCE OF 70.00 FEET TO THE POINT OF BEGINNING, SAID POINT BEING THE INTERSECTION OF THE SOUTH LINE OF 116TH STREET NE AND THE WEST LINE OF 29TH AVENUE NE AS SHOWN ON SAID RECORD OF SURVEY; THENCE ALONG THE WEST LINE OF SAID 29TH AVENUE NE SOUTH 04°17'16" WEST A DISTANCE OF 774.77 FEET; THENCE SOUTH 86°33'20" EAST A DISTANCE OF 9.98 FEET; THENCE ALONG A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS POINT WHICH BEARS SOUTH 86°08'31" EAST FROM THE LAST DESCRIBED POINT, AN 800.00 FOOT RADIUS, A DELTA OF 5°43'28" AND AN ARC LENGTH OF 79.93 FEET; THENCE NORTH 85°18'07" WEST A DISTANCE OF 266.62 FEET; THENCE NORTH 04°02'34" EAST A DISTANCE OF 854.32 FEET TO THE SAID SOUTH LINE OF 116TH STREET NE; THENCE ALONG SAID SOUTH LINE SOUTH 85°18'07" EAST A DISTANCE OF 255.70 FEET TO THE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

BASIS OF MERIDIAN

N86°53'53"W – NORTH LINE OF THE SE 1/4
WASHINGTON STATE PLANE NORTH COORDINATES NAD 83/91.

REFERENCE MATERIALS

RECORD OF SURVEY RECORDED UNDER
AUDITOR'S FILE NUMBER 200809235002

BENCH MARK

DATUM; NGVD 29 WSDOT
MONUMENT GP31005-26, ELEVATION: 85.91' NGVD 29 LOCATED ON THE 116TH STREET NE-INTERSTATE 5 OVERPASS.

INDEX TO SHEETS:

UTILITY NOTE:
CONTRACTOR TO COORDINATE WITH TULALIP TRIBE UTILITY TO LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION

UTILITY CONFLICT NOTE:
CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-5555 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH

No.	Date	By	Chkd.	Appr.	Revision
10	8/12/22	MB	AS	AS	BID SET

Title: GRADING AND STORM DRAINAGE PLAN FOR TULALIP TRIBES

For: Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR — STATE OF WASHINGTON — 24661 — REGISTERED PROFESSIONAL ENGINEER
08/12/22

Scale:	Horizontal	1"=50'	Vertical	N/A
Designed	AS	Checked	AS	
Drawn	MB	Approved	AS	
		Date	05/19/21	

18215 72ND AVENUE SOUTH
KENT, WA 98032
(425) 251-6222
(425) 251-8782 FAX
CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES
BARGHAUSEN CONSULTING ENGINEERS, INC.

Job Number 21970 | Sheet C1 of 13

File:P:\21000s\21970\engineering\21970-c1.dwg Date/Time:8/9/2022 7:56 PM Scale:1" = 1" MBOUKAL Xref: ----

DEMOLITION AND TEMP. EROSION SEDIMENTATION CONTROL PLAN

FOR

TULALIP TRIBES

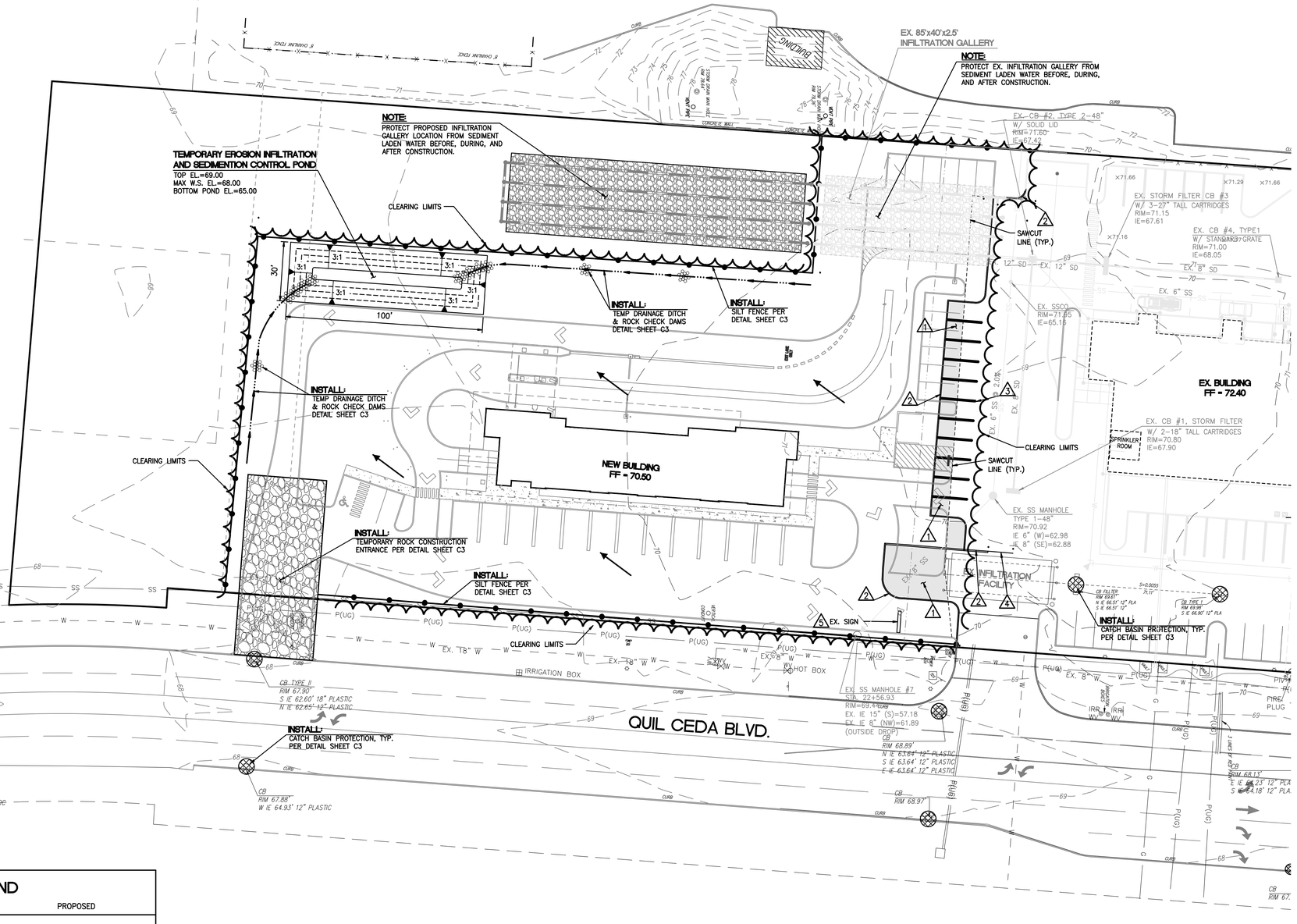
CONVENIENCE STORE CAR WASH

A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON

1"=30'

0 15 30 60



T.E.S.C. LEGEND

DESCRIPTION	PROPOSED
LIMITS OF CLEARING	
FILTER FABRIC FENCE	
TEMPORARY CONSTRUCTION ENTRANCE	
FLOW ARROW	
TEMPORARY DRAINAGE DITCH	
ROCK CHECK DAM	
CATCH BASIN PROTECTION	

DEMOLITION NOTES:

1. EXISTING ASPHALT TO BE REMOVED.
2. EXISTING CURBING TO BE REMOVED.
3. EXISTING STRIPING TO BE REMOVED, TYP.
4. EXISTING FENCING TO BE REMOVED.
5. EXISTING SIGN TO BE REMOVED.

No.	Date	By	Chkd.	Appr.	Revision
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For: Tulalip Tribes of Washington
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ALI SADR — STATE OF WASHINGTON — 24661 — REGISTERED PROFESSIONAL ENGINEER
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Scale: Horizontal 1"=30' Vertical N/A

Designed AS Drawn MB Checked AS Approved AS Date 05/19/21

MBOUKAL Xref: ----

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Job Number 21970

Sheet C2 of 13

Date/Time:8/9/2022 7:48 PM Scale:1" = 1'

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DEMOLITION AND TEMP. EROSION SEDIMENTATION CONTROL DETAILS

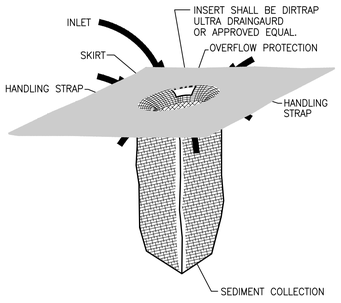
FOR

TULALIP TRIBES

CONVENIENCE STORE CAR WASH

A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON



MATERIALS OF CONSTRUCTION

FABRIC:	NEEDLE PUNCHED NON-WOVEN GEOTEXTILE MATERIAL. FABRIC IS IS RESISTANT TO ULTRAVIOLET AND BIOLOGICAL DEGREDATION AND A BROAD RANGE OF CHEMICALS.
APPARENT OPENING SIZE (AOS):	80 US STANDARD SIEVE (0.180 MM)
GRAB TENSILE STRENGTH:	200 LBS
PUNCTURE STRENGTH:	130 LBS
MULLEN BURST:	400 PSI
TRAPEZIODAL TEAR:	85 LBS
WATER FLOW RATE:	110 GPM/FT2
PREMEABILITY:	0.38 CM/SECOND

DIMENSIONS:

SKIRT:	24"x36"
SOCK FILTER/SEPARATOR:	10" D x 24" L

DISPOSAL REQUIREMENTS:

CONSULT FEDERAL, STATE, AND LOCAL REGULATIONS FOR DISPOSAL OF INSERTS

CATCH BASIN INSERT

NOT TO SCALE

TEMPORARY CONSTRUCTION ENTRANCE NOTES

INSTALLATION: THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS IN THE PLAN. IF WASH RACKS ARE USED, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

AGGREGATE: 4" TO 6" CRUSHED BALLAST ROCK.

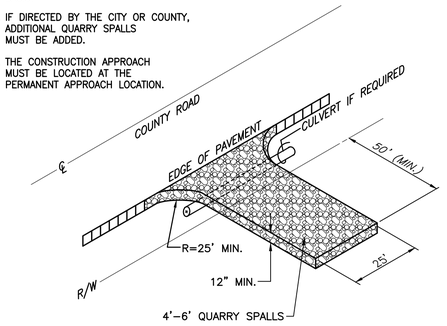
ENTRANCE DIMENSIONS: THE AGGREGATE LAYER MUST BE AT LEAST 6" THICK. IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA. THE LENGTH OF THE ENTRANCE MUST BE AT LEAST 50'.

WASHING: IF CONDITIONS OF THE SITE ARE SUCH THAT MOST OF THE MUD IS NOT REMOVED FROM VEHICLE TIRES BY CONTACT WITH THE GRAVEL, THEN THE TIRES MUST BE WASHED BEFORE VEHICLES ENTER A PUBLIC ROAD. WASH WATER MUST BE CARRIED AWAY FROM THE ENTRANCE TO A SETTLING AREA TO REMOVE SEDIMENT. A WASH RACK MAY ALSO BE USED TO MAKE WASHING MORE CONVENIENT AND EFFECTIVE.

MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD TO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAY OR INTO STORM DRAINS MUSH BE REMOVED IMMEDIATELY.

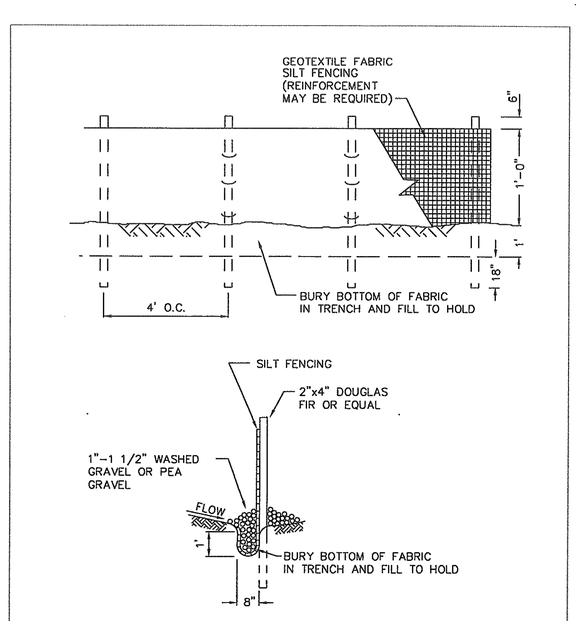
NOTES:

1. CONTRACTOR'S RESPONSIBILITY FOR MAINTAINING AND CLEANING THE APPROACH ON A REGULAR BASIS.
2. IF DIRECTED BY THE CITY OR COUNTY, ADDITIONAL QUARRY SPALLS MUST BE ADDED.
3. THE CONSTRUCTION APPROACH MUST BE LOCATED AT THE PERMANENT APPROACH LOCATION.



TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTE:

1. SEE SECTION 4-080F FOR FABRIC SPECIFICATIONS

APPROVED BY

MARYSVILLE CITY ENGINEER DATE

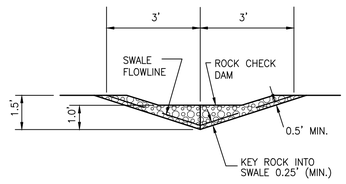
SILT FENCE DETAIL

City of Marysville INCORPORATED 1891

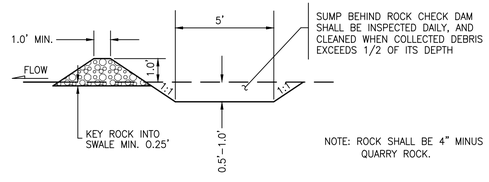
STANDARD PLAN 4-040-008

LAST REVISED 10/23/01

SWALE SLOPE	CHECK DAM SPACING
0% - 5%	150'
5% - 10%	100'
> 10%	50'



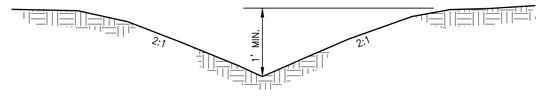
SWALE X-SECTION AT ROCK CHECK DAM



ROCK DAM X-SECTION

ROCK CHECK DAM DETAILS

NOT TO SCALE



TEMPORARY "V" DITCH

NOT TO SCALE

No.	Date	By	Chkd.	Appr.	Revision
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Title: DEMOLITION AND TEMPORARY EROSION AND SEDIMENTATION CONTROL DETAILS FOR TULALIP TRIBES

For: Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR — STATE OF WASHINGTON — 24661 — REGISTERED PROFESSIONAL ENGINEER

08/12/22

Scale:	Horizontal 1"=30' Vertical N/A
Designed	AS
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Date	05/19/21

BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH
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(425) 251-6222
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CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES

TULALIP TRIBES

Job Number	Sheet
21970	C3 of 13

File:P:\21000s\21970\engineering\21970-dmed1.dwg Date/Time:8/9/2022 7:48 PM Scale:1" = 1' MBOUKAL Xref: ----

GRADING AND STORM DRAINAGE PLAN

FOR

TULALIP TRIBES

CONVENIENCE STORE CAR WASH

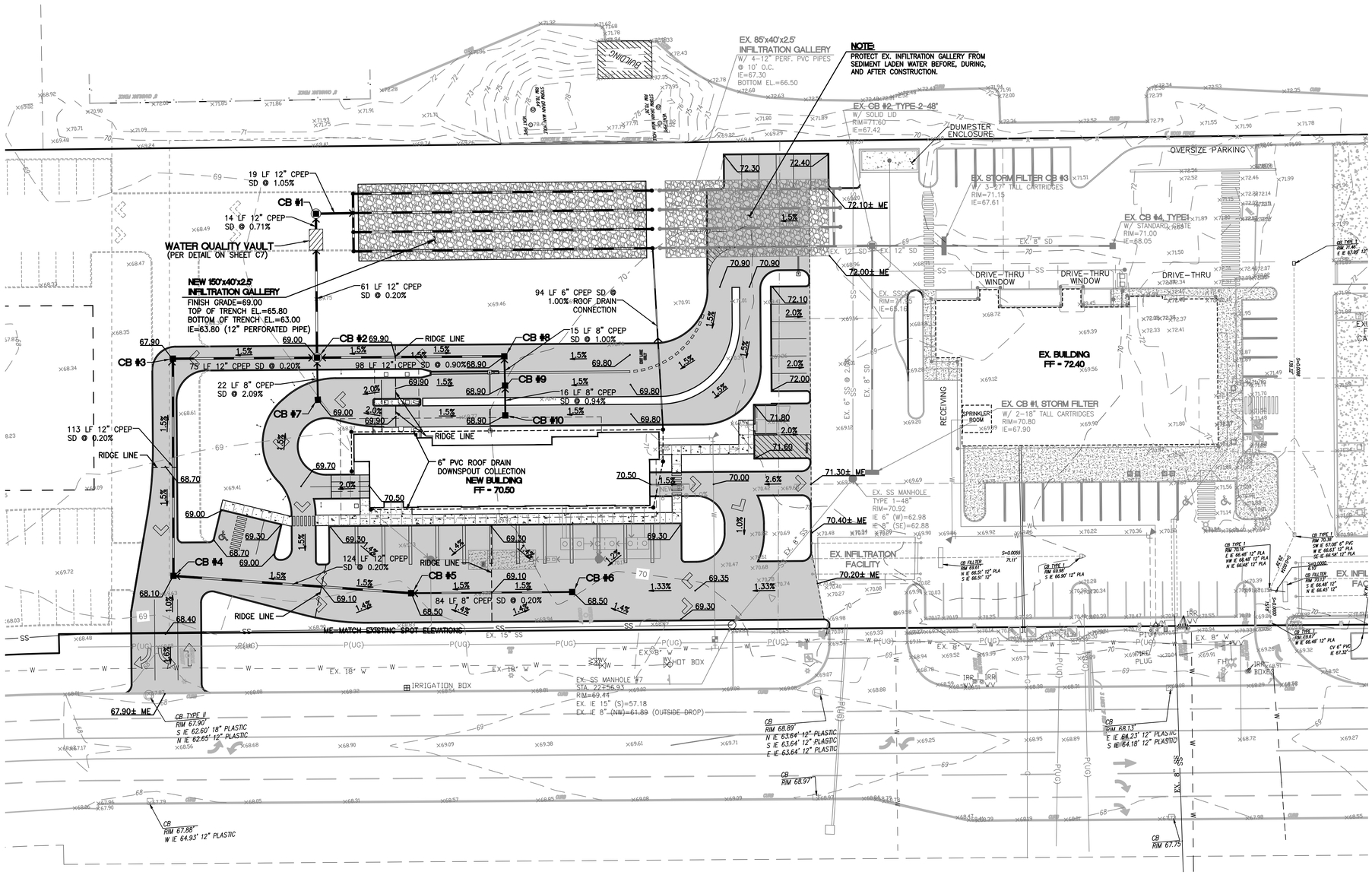
A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON

1"=30'

0 15 30 60

811 Know what's **below.** **Call** before you dig.



CATCH BASIN TABLE

CB #1, TYPE 2-48" W/SOLID LOCKING LID
RIM=69.20
IE=64.00 (12" E)
IE=64.00 (12" N)

CB #2, TYPE 2-48" W/SOLID LOCKING LID
RIM=68.98
IE=65.72 (12" S)
IE=65.72 (8" E)
IE=65.72 (12" N)
IE=65.72 (12" W)

CB #3, TYPE 1, W/STANDARD GRATE
RIM=67.90
IE=65.85 (12" E)
IE=65.87 (12" N)

CB #4, TYPE 1, W/STANDARD GRATE
RIM=68.10
IE=66.08 (12" N)
IE=66.08 (12" W)

CB #5, TYPE 1, W/STANDARD GRATE
RIM=68.50
IE=66.33 (8" N)
IE=66.33 (12" S)

CB #6, TYPE 1, W/STANDARD GRATE
RIM=68.50
IE=66.50 (8" S)

CB #7, TYPE 1, W/STANDARD GRATE
RIM=69.00
IE=66.18 (8" W)

CB #8, TYPE 1, W/STANDARD GRATE
RIM=68.90
IE=66.60 (8" E)
IE=66.60 (12" S)

CB #9, TYPE 1, W/STANDARD GRATE
RIM=68.90
IE=66.75 (8" E)
IE=66.75 (8" W)

CB #10, TYPE 1, W/STANDARD GRATE
RIM=68.90
IE=66.90 (8" W)

WATER QUALITY VAULT,
RIM=69.50
IE=65.60 (12" E)
IE=64.10 (12" W)

PAVEMENT LEGEND

PROPOSED ASPHALT PAVEMENT

PROPOSED CONCRETE PAVEMENT

SPOT SHOT LEGEND

DESCRIPTION	PROPOSED
ME=MATCH EXISTING SPOT ELEVATIONS	69.44± ME
PROPOSED SPOT ELEVATIONS	69.44

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WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES
PUBLIC LAND SURVEY OFFICE
1111 WASHINGTON STREET S.E.
P.O. BOX 47060
OLYMPIA, WASHINGTON 98504-7060

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UTILITY CONFLICT NOTE:

CAUTION:

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No.	Date	By	Appr.	Revision
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Title: GRADING AND STORM DRAINAGE PLAN FOR TULALIP TRIBES

For: Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR 24661 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON 08/12/22

Scale: Horizontal 1"=30' Vertical N/A

Designed AS Drawn MB Checked AS Approved AS Date 05/19/21

BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH
KENT, WA 98032
(425) 251-6222
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CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES

Job Number 21970

Sheet C4 of 13

Scale:1" = 1' MBDUKAL Xref: ~~~~

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INFILTRATION GALLERY PLAN, PROFILE, AND SECTION

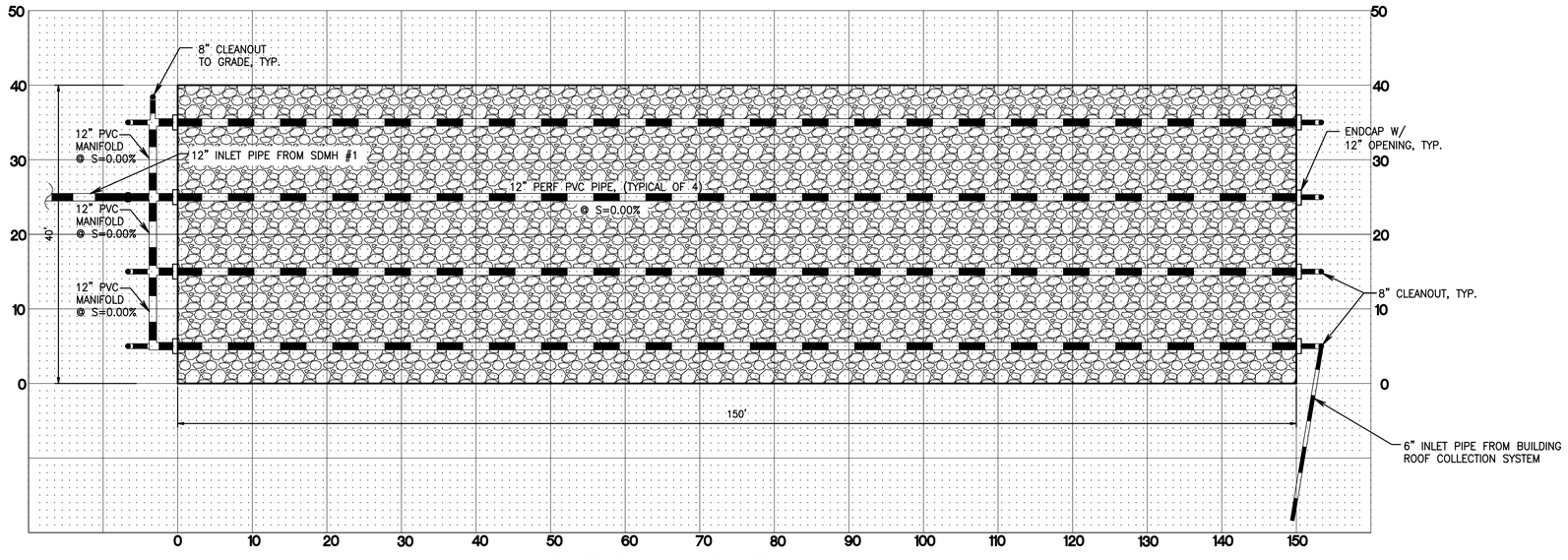
FOR

TULALIP TRIBES

CONVENIENCE STORE CAR WASH

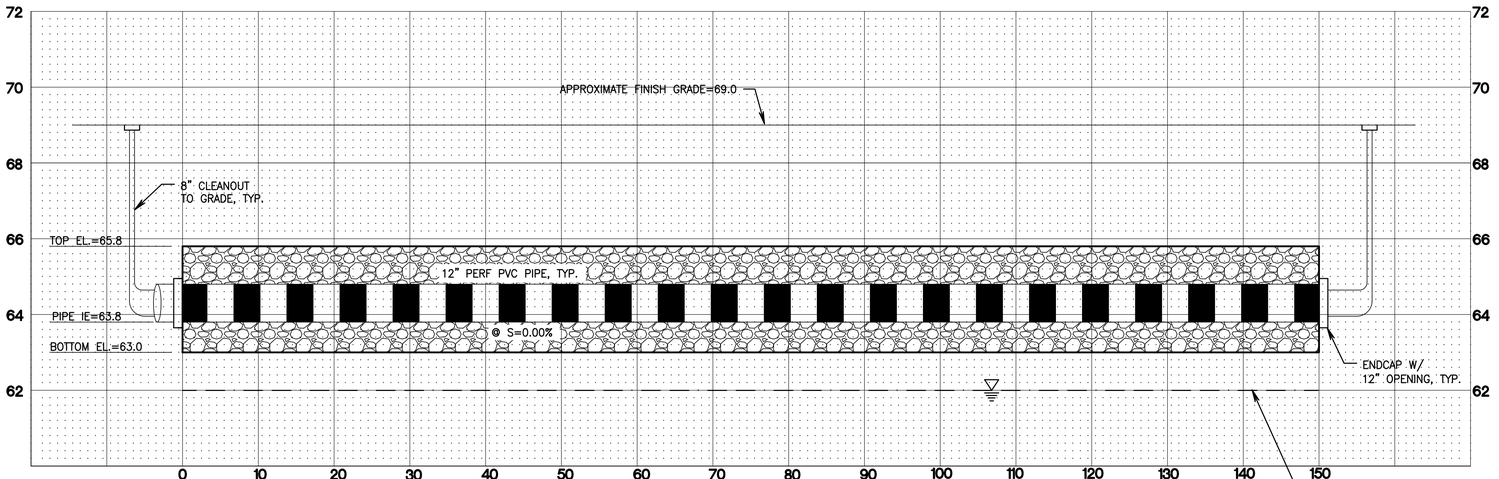
A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON



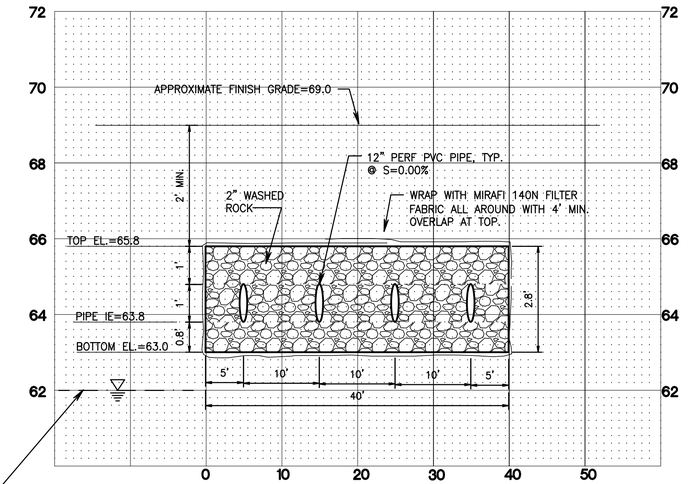
INFILTRATION GALLERY-PLAN

SCALE: HORIZONTAL 1"=10', VERTICAL N/A



INFILTRATION GALLERY-PROFILE

SCALE: HORIZONTAL 1"=10', VERTICAL 1"=2'



INFILTRATION GALLERY-SECTION

SCALE: HORIZONTAL 1"=10', VERTICAL 1"=2'

No.	Date	By	Chkd.	Appr.	Revision
10	8/12/22	MB	AS	AS	BID SET

Title: INFILTRATION GALLERY PLAN, PROFILE, AND SECTION FOR TULALIP TRIBES

For: Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR — STATE OF WASHINGTON — 24661 — REGISTERED PROFESSIONAL ENGINEER
08/12/22

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Job Number 21970

Sheet C5 of 13

File:P:\21000s\21970\engineering\21970-d2.dwg Date/Time:8/9/2022 7:48 PM Scale:1" = 1' MBOUKAL Xref: ----

SANITARY SEWER AND WATER PLAN

FOR

TULALIP TRIBES

CONVENIENCE STORE CAR WASH

A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON

1"=30'

0 15 30 60

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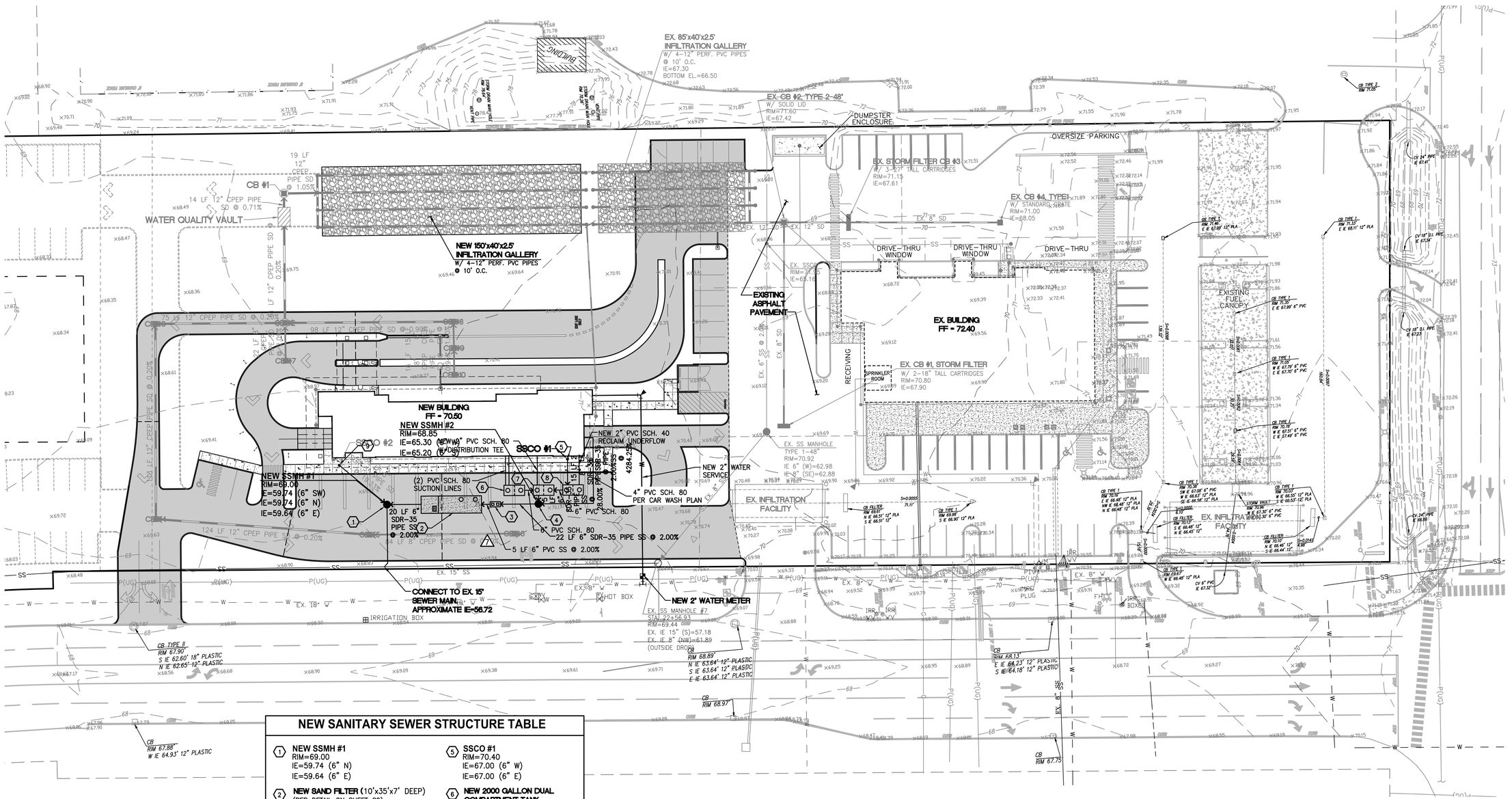

NEW SANITARY SEWER STRUCTURE TABLE

① **NEW SSMH #1**
RIM=69.00
IE=59.74 (6" N)
IE=59.64 (6" E)

② **NEW SAND FILTER** (10'x35'x7' DEEP)
(PER DETAIL ON SHEET C9)
RIM=69.00
IE=64.66 (6" IN)
IE=60.14 (6" OUT)

③ **NEW COALASING OIL/ WATER SEPARATOR**
(OLD CASTLE MODEL #253-CPS
(PER DETAIL ON SHEET C9)
RIM=69.00
IE=64.76 (6" IN)
IE=64.76 (6" OUT)

④ **NEW SSMH #2**
RIM=68.85
IE=65.30 (6" W)
IE=65.20 (6" S)

⑤ **SSCO #1**
RIM=70.40
IE=67.00 (6" W)
IE=67.00 (6" E)

⑥ **NEW 2000 GALLON DUAL COMPARTMENT TANK**
(PER DETAIL ON SHEET C10-13)
RIM=69.00±
IE=66.70

⑦ **NEW 2000 GALLON DUAL COMPARTMENT TANK**
(PER DETAIL ON SHEET C10-13)
RIM=69.20±
IE=66.70

⑧ **NEW 2000 GALLON DUAL COMPARTMENT TANK**
(PER DETAIL ON SHEET C10-13)
RIM=69.30±
IE=66.70

⑨ **SSCO #2**
RIM=70.40
IE=63.90 (6" W)

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TULALIP TRIBES

No.	Date	By	Ckd.	Appr.	Revision
10	8/12/22	MB	AS	AS	BID SET

Title:
SANITARY SEWER
AND WATER PLAN
FOR
TULALIP TRIBES

For:
Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR
24661
08/12/22

Scale:
Horizontal 1"=30'
Vertical N/A

Designed AS
Drawn MB
Checked AS
Approved AS
Date 05/19/21

BARGHAUSEN CONSULTING ENGINEERS, INC.

18215 72ND AVENUE SOUTH
KENT, WA 98032
(425) 251-6222
(425) 251-8782 FAX

CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES

Job Number
21970

Sheet
C6 of 13

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CONSTRUCTION NOTES AND DETAILS

FOR

TULALIP TRIBES

CONVENIENCE STORE CAR WASH

A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON

STORMFILTER STEEL CATCHBASIN DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. 3 CARTRIDGE CATCHBASIN HAS A MAXIMUM OF THREE CARTRIDGES. SYSTEM IS SHOWN WITH A 27" CARTRIDGE, AND IS ALSO AVAILABLE WITH AN 18" CARTRIDGE. STORMFILTER CATCHBASIN CONFIGURATIONS ARE AVAILABLE WITH A DRY INLET BAY FOR VECTOR CONTROL.

PEAK HYDRAULIC CAPACITY PER TABLE BELOW. IF THE SITE CONDITIONS EXCEED PEAK HYDRAULIC CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

CARTRIDGE HEIGHT	27"			18"			18" DEEP		
RECOMMENDED HYDRAULIC DROP (H)	3.05'			2.3'			3.3'		
SPECIFIC FLOW RATE (gpm/sf)	2 gpm/sf	1.67* gpm/sf	1 gpm/sf	2 gpm/sf	1.67* gpm/sf	1 gpm/sf	2 gpm/sf	1.67* gpm/sf	1 gpm/sf
CARTRIDGE FLOW RATE (gpm)	22.5	18.79	11.25	15	12.53	7.5	15	12.53	7.5
PEAK HYDRAULIC CAPACITY	1.0			1.0			1.8		
INLET PERMANENT POOL LEVEL (A)	1'-0"			1'-0"			2'-0"		
OVERALL STRUCTURE HEIGHT (B)	4'-9"			3'-9"			4'-9"		

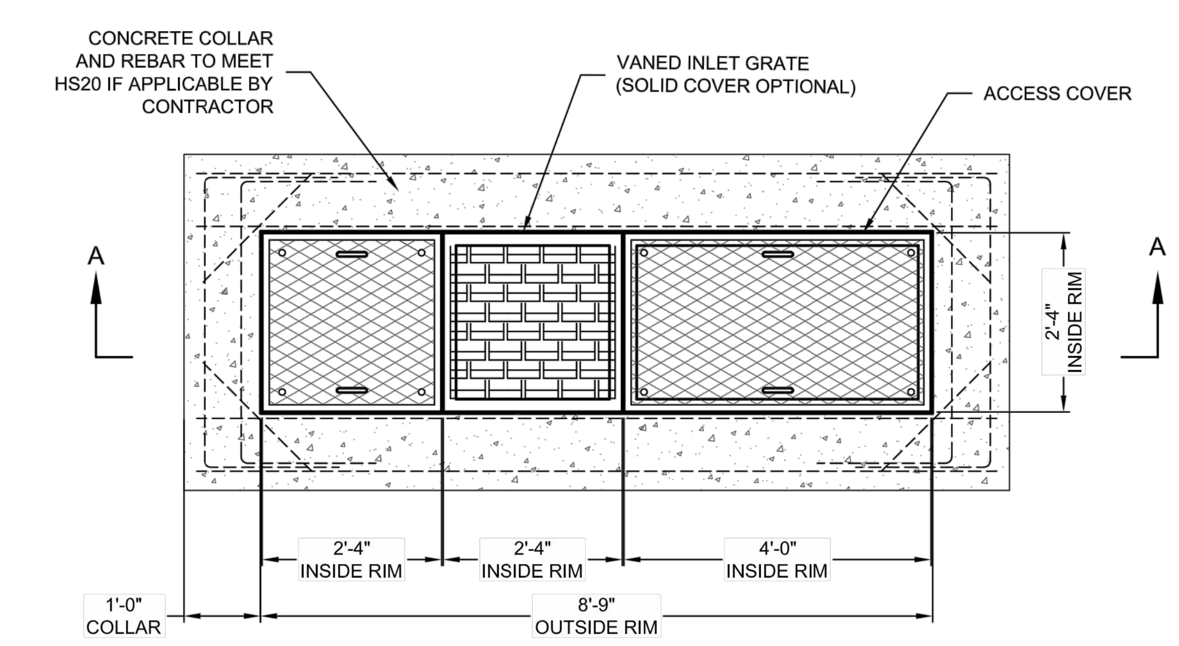
* 1.67 gpm/sf SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

GENERAL NOTES

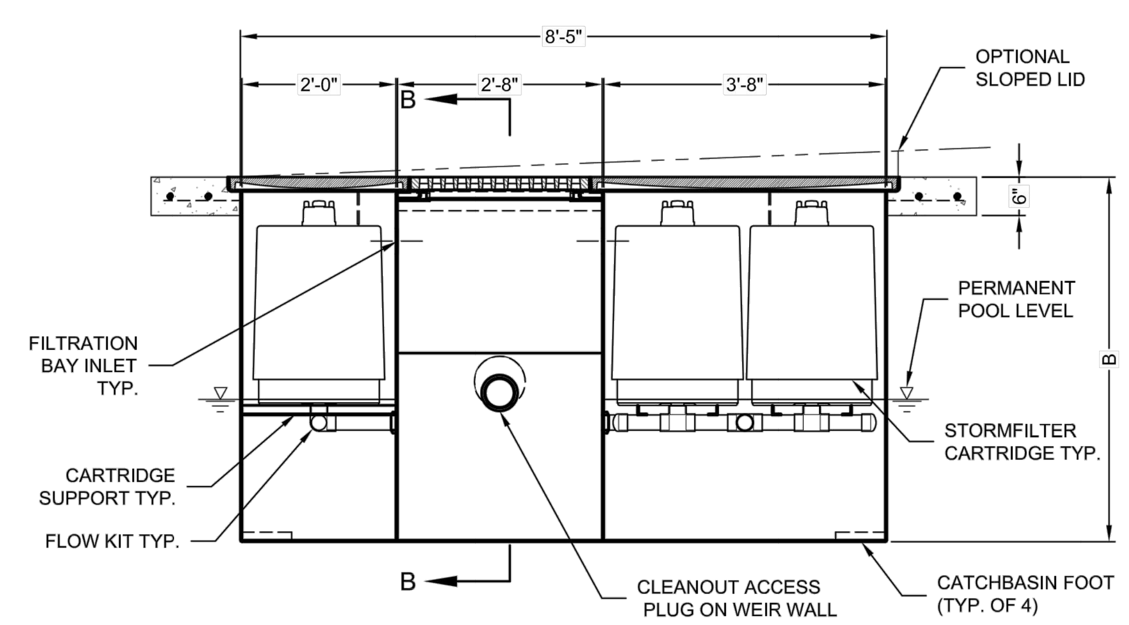
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STORMFILTER CATCHBASIN STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ANGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
3. STORMFILTER CATCHBASIN WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
4. INLET SHOULD NOT BE LOWER THAN OUTLET. INLET (IF APPLICABLE) AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR.
5. MANUFACTURER TO APPLY A SURFACE BEAD WELD IN THE SHAPE OF THE LETTER "O" ABOVE THE OUTLET PIPE STUB ON THE EXTERIOR SURFACE OF THE STEEL SFCB.
6. STORMFILTER CATCHBASIN EQUIPPED WITH 4 INCH (APPROXIMATE) LONG STUBS FOR INLET (IF APPLICABLE) AND OUTLET PIPING. STANDARD OUTLET STUB IS 8 INCHES IN DIAMETER. MAXIMUM OUTLET STUB IS 15 INCHES IN DIAMETER. CONNECTION TO COLLECTION PIPING CAN BE MADE USING FLEXIBLE COUPLING BY CONTRACTOR.
7. STEEL STRUCTURE TO BE MANUFACTURED OF 1/4 INCH STEEL PLATE. CASTINGS SHALL MEET AASHTO M306 LOAD RATING. TO MEET HS20 LOAD RATING ON STRUCTURE, A CONCRETE COLLAR IS REQUIRED. WHEN REQUIRED, CONCRETE COLLAR WITH #4 REINFORCING BARS TO BE PROVIDED BY CONTRACTOR.
8. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
9. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

INSTALLATION NOTES

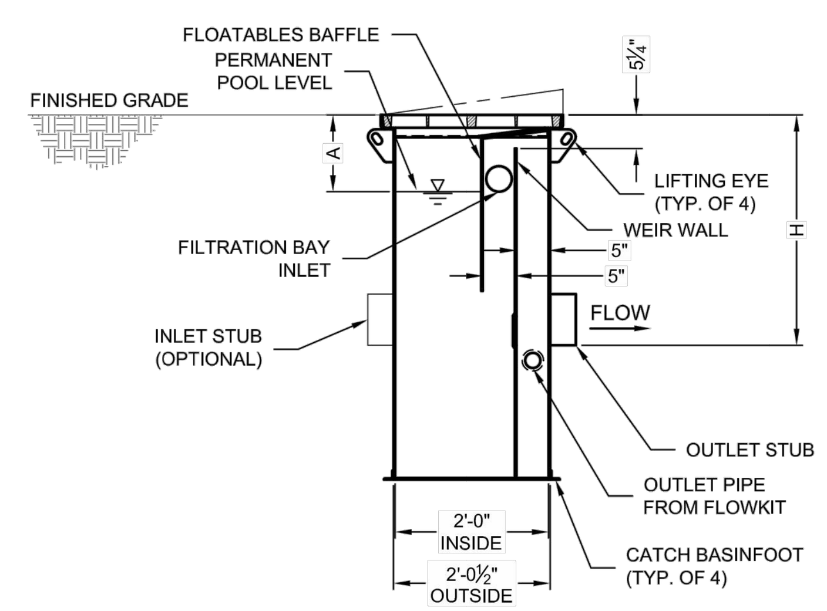
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CATCHBASIN (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.



PLAN VIEW



SECTION A-A



SECTION B-B

3-CARTRIDGE CATCHBASIN STORMFILTER DATA

STRUCTURE ID		W.Q.V.
WATER QUALITY FLOW RATE (cfs)		0.107
PEAK FLOW RATE (<1 cfs)		0.925
RETURN PERIOD OF PEAK FLOW (yrs)		100
CARTRIDGE FLOW RATE (gpm)		XX
MEDIA TYPE (PERLITE, ZPG, PSORB)		XXXXX
RIM ELEVATION		69.20
PIPE DATA:	I.E.	DIAMETER
INLET STUB	65.60	12"
OUTLET STUB	64.95	12"

CONFIGURATION: OUTLET / INLET; OUTLET / INLET

SLOPED LID	YES\NO
SOLID COVER	YES\NO
NOTES/SPECIAL REQUIREMENTS:	

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-526-3999 513-645-7000 513-645-7993 FAX

3 CARTRIDGE CATCHBASIN STORMFILTER STANDARD DETAIL

CONTECH ENGINEERED SOLUTIONS

Size and Cost Estimate

Prepared by Jelena Vandenhaak on May 31, 2022

Tulalip Tribes Carwash
Tulalip, WA

Information provided:

- Presiding agency = Tulalip Tribes (sized per Ecology)

Structure ID	SFCB 1
Water Quality Flow Rate (cfs)	0.107
Peak Flow Rate (cfs)	.925
Number of cartridges	4
Cartridge flow rate (gpm)	18.79
Media type	PSorb
Structure size	Steel Catch Basin
Approximate Price	$26,500

Assumptions:

- Media = PSorb cartridges
- Cartridge flow rate = 18.79 gpm
- Drop required from rim to outlet = 3.05' minimum
- Maximum rim to outlet= 4.25'

Size and cost estimates:

The StormFilter is a flow-based system and is therefore sized by calculating the peak water quality flow rate associated with the design storm. The water quality flow rates were calculated by the consulting engineer using WWHM and were provided to Contech Engineered Solutions LLC for the purposes of developing this estimate.

The StormFilters for this site were sized based on the above water quality flow rates. To accommodate these flow rates, Contech Engineered Solutions recommends using Catchbasin StormFilter (see attached detail). The estimated cost of the system is shown in the above table; and it includes a complete system delivered to the job site. The contractor is responsible for setting the catch basin StormFilter and all external plumbing.

The SFCB needs 3.05' drop from rim to outlet but no drop is required between the inlet and outlet pipe inverts. The maximum depth on the SFCB is 4.25' and please note that it does have a permanent pool 1' below the rim.

Typically the catch basin StormFilters have internal bypass capacities of 1.0 cfs. Since the peak discharge in the basins is not expected to exceed this rate, a high-flow bypass upstream of the StormFilter systems is not required.

11835 NE Glenn Widing Dr., Portland OR 97220
Toll-free: 800.548.4667 Fax: 800.561.1271
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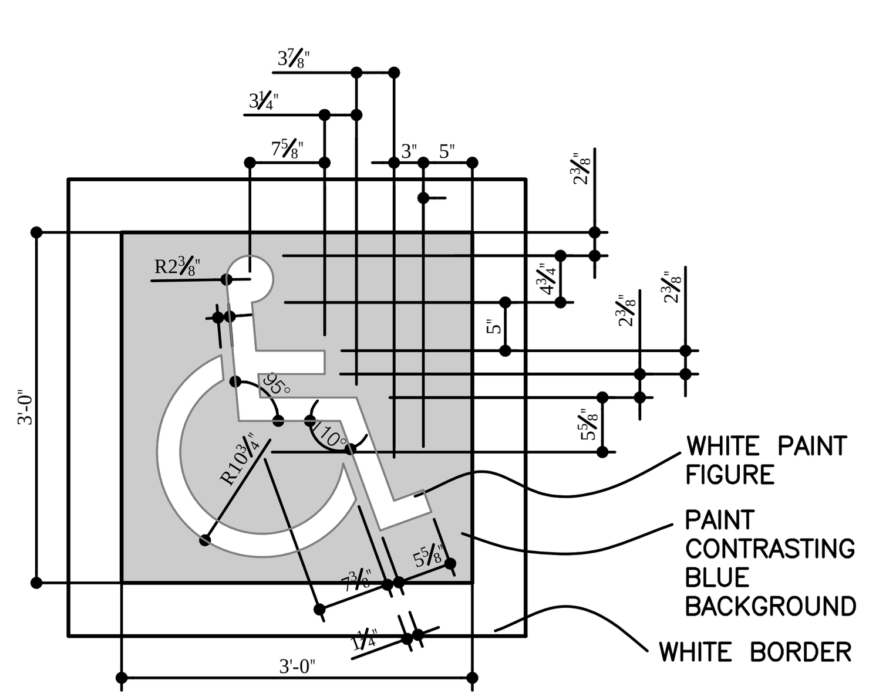
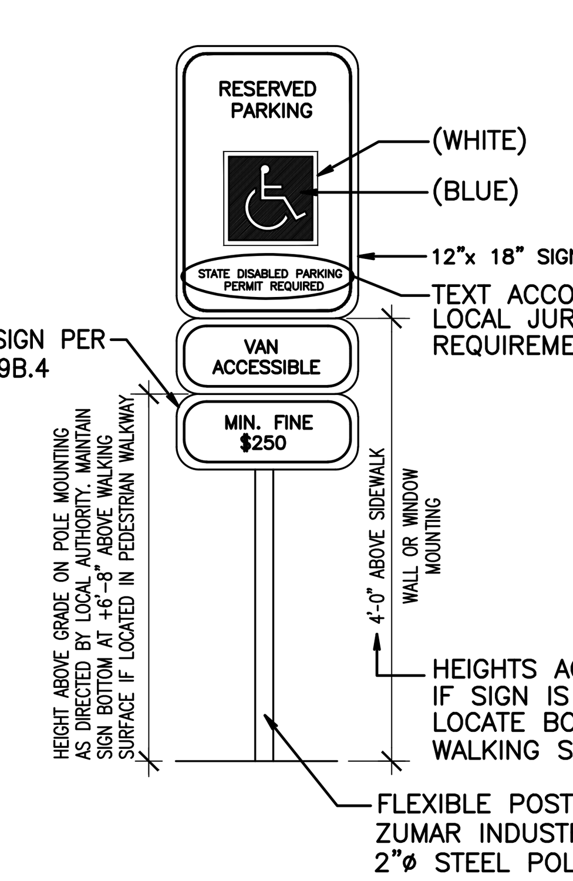
TS-P027

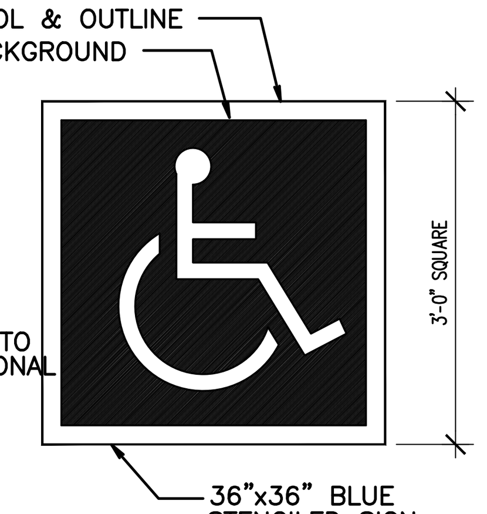


PAVEMENT INTERNATIONAL SYMBOL OF ACCESSIBILITY NOTES:

A. SYMBOL TO BE CENTERED ON WIDTH OF PARKING STALL.
B. BOTTOM OF SYMBOL TO BE LOCATED FLUSH WITH ACCESS DRIVE,CENTERED ON PARKING SPACE.
C. SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND.



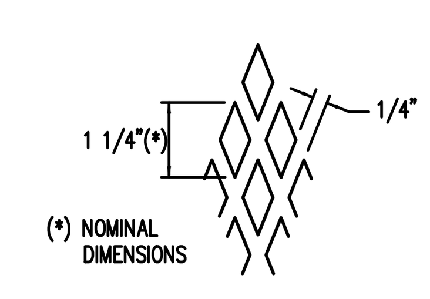
Parking Sign



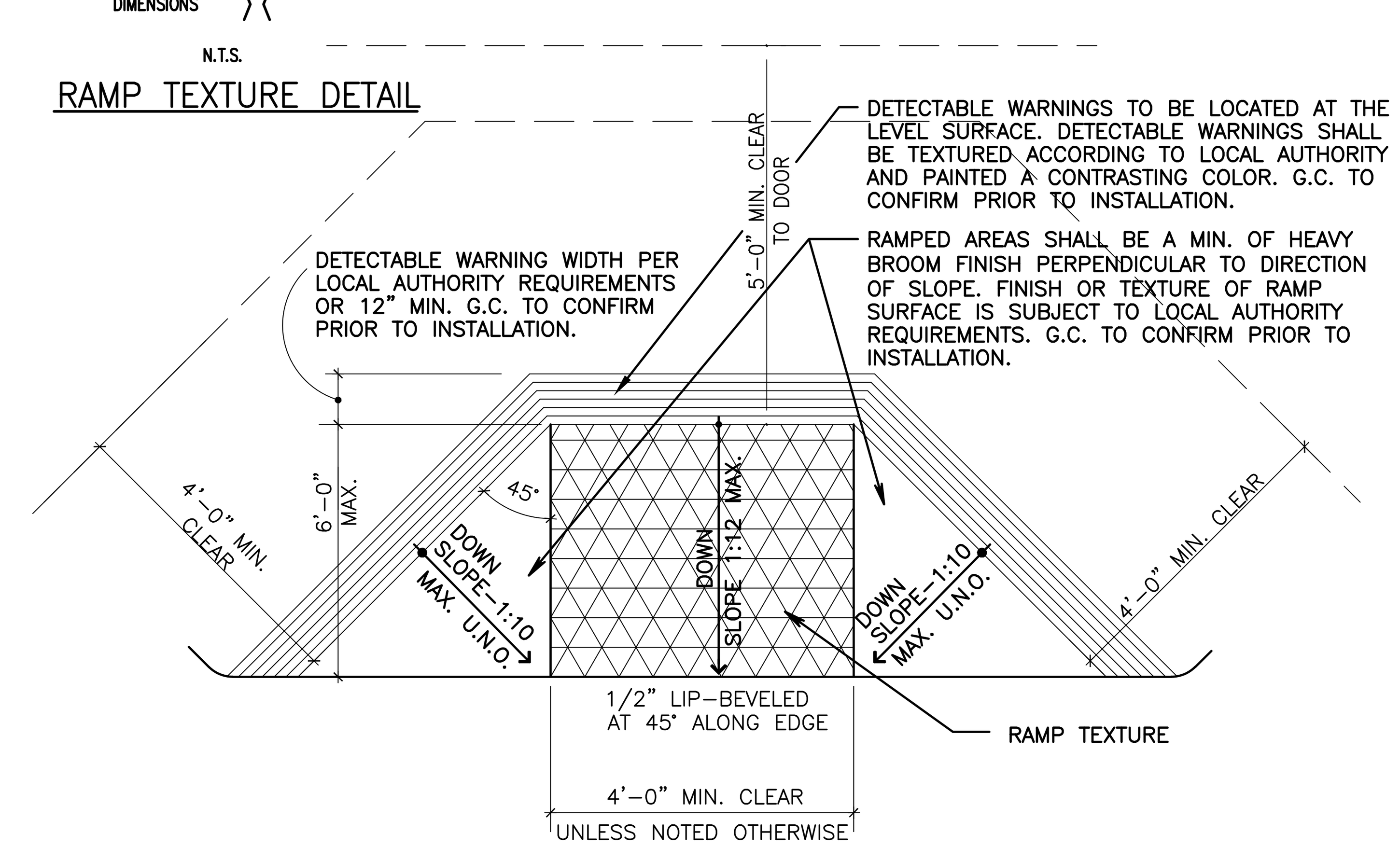
Parking Stall Stencil

MARKING DETAIL (Accessible Parking)

NTS

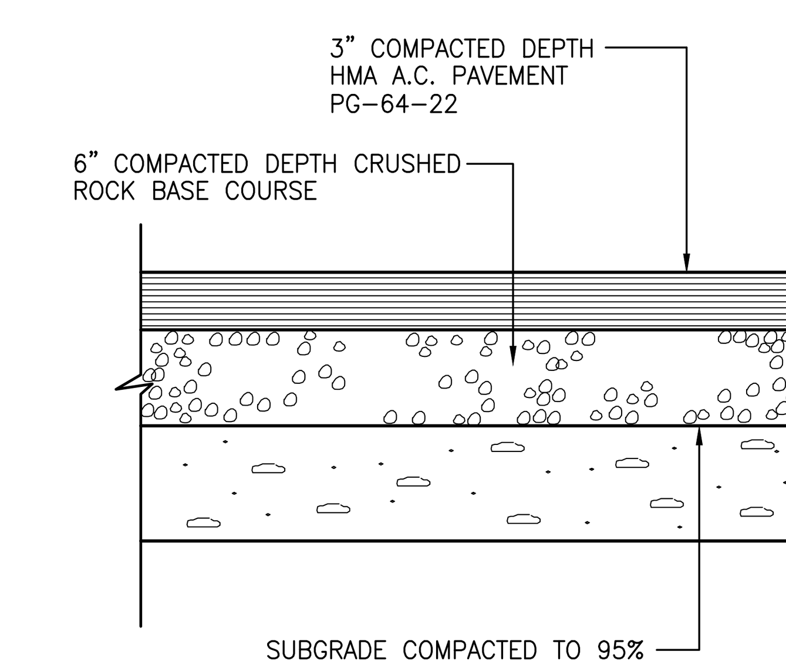


RAMP TEXTURE DETAIL



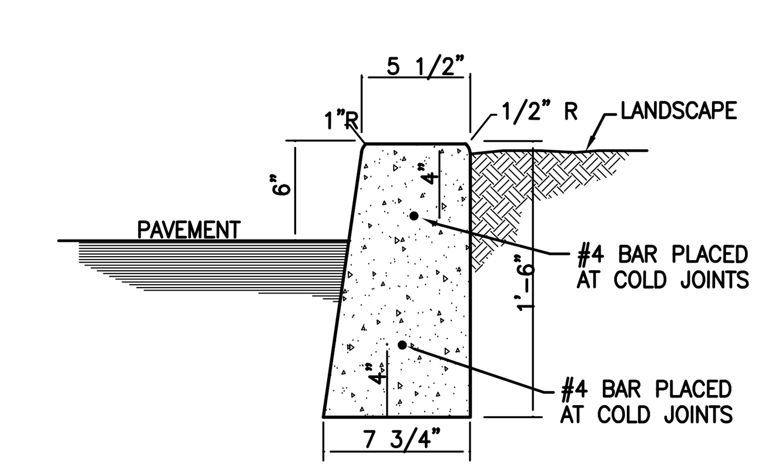
ACCESSIBLE CURB RAMP

NOT TO SCALE



TYPICAL PAVING SECTION

NOT TO SCALE



BARRIER CURB

ON-SITE BARRIER CURB DETAIL

NOT TO SCALE

No.	Date	By	Ckd.	Appr.	Revision
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CONSTRUCTION NOTES AND DETAILS

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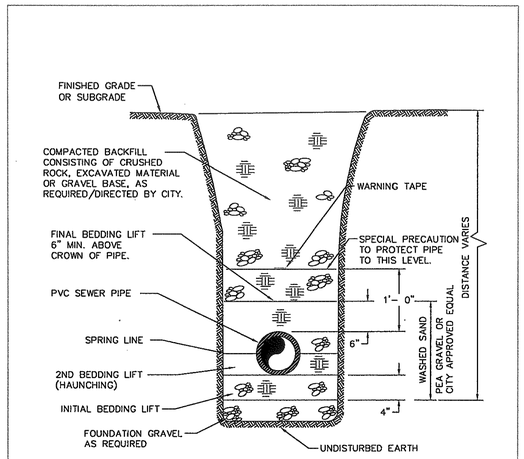
SNOHOMISH COUNTY, WASHINGTON



NOTE:
BACKFILL MATERIAL AND COMPACTION SHALL BE IN CONFORMANCE WITH CITY STANDARDS AND/OR THE STATE OR COUNTY PERMIT REQUIREMENTS (AS MAY BE APPLICABLE).

LAST REVISED 10/23/01

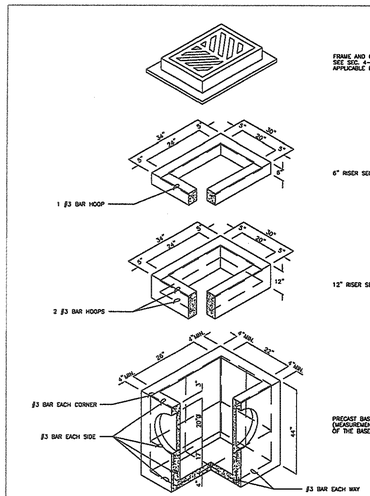
APPROVED BY

MARYSVILLE CITY ENGINEER DATE

TRENCH (FLEXIBLE PIPE)

City of Marysville INCORPORATED 1891

STANDARD PLAN 5-175-001



NOTES:

1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M 199) & C899 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS.
6. ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES, WITH MAX. DIAM. OF 20". KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPE.
7. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
8. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2"/FT.
9. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
10. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
11. FOR CATCH BASINS IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG. B1-b.
12. EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2" FROM VERTICAL EDGE OF CATCH BASIN WALL.
13. MINIMUM 4" ADJUSTMENT SECTION BETWEEN BOTTOM OF GRATE AND TOP OF BASE SECTION.

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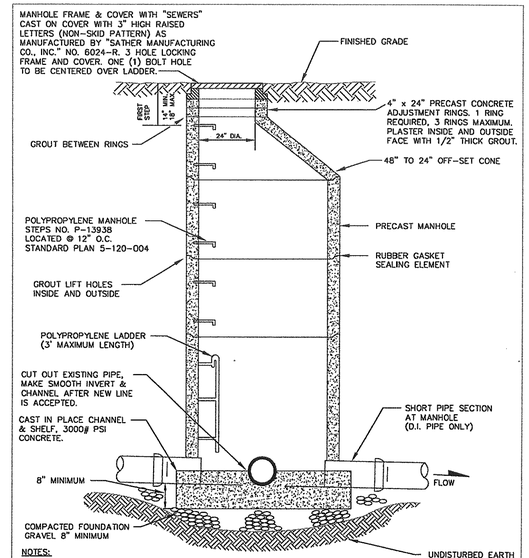
MARYSVILLE CITY ENGINEER DATE

CATCH BASIN TYPE 1 (18" MAX. DIA.)

City of Marysville INCORPORATED 1891

STANDARD PLAN 4-080-007



NOTES:

1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS: PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL. D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL. PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL. KOR-N-SEAL BOOT OR EQUAL.
2. DROP OF GRADE THRU MANHOLE SHALL BE 0.10', UNLESS OTHERWISE APPLICABLE.

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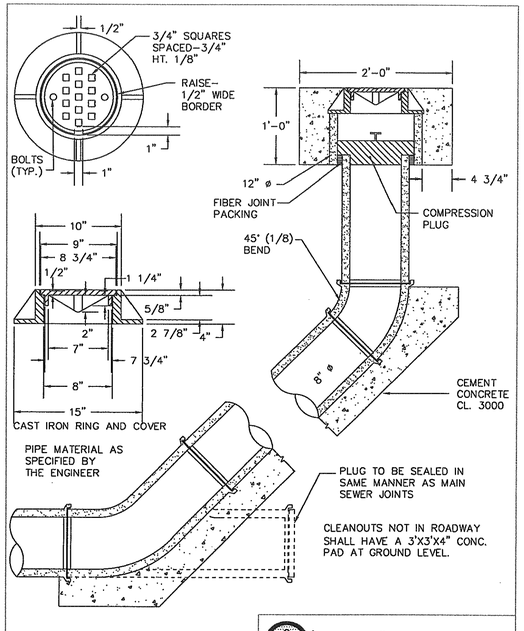
TYPE 1 MANHOLE DETAIL

City of Marysville INCORPORATED 1891

STANDARD PLAN 5-120-002



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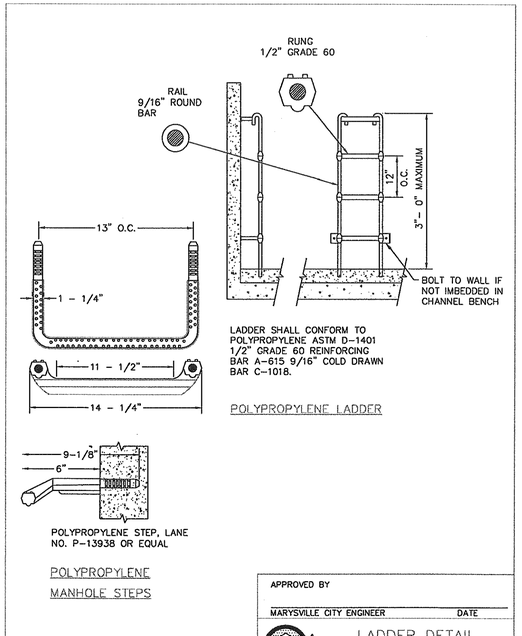
8" CLEAN OUT

City of Marysville INCORPORATED 1891

STANDARD PLAN 5-145-001



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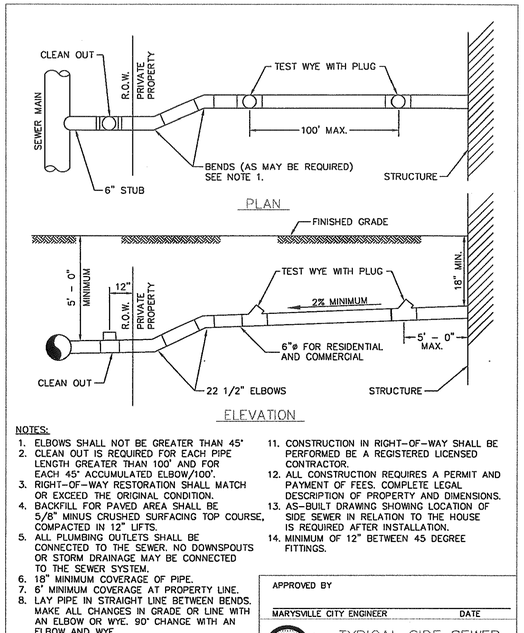
LADDER DETAIL

City of Marysville INCORPORATED 1891

STANDARD PLAN 5-120-004



NOTES:

1. ELBOWS SHALL NOT BE GREATER THAN 45°
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 45° ACCUMULATED ELBOW/100'.
3. RIGHT-OF-WAY RESTORATION SHALL MATCH OR EXCEED THE ORIGINAL CONDITION.
4. BACKFILL FOR PAVED AREA SHALL BE 5/8" MINUS CRUSHED SURFACING TOP COURSE, COMPACTED IN 12" LIFTS.
5. ALL PLUMBING OUTLETS SHALL BE CONNECTED TO THE SEWER. NO DOWNSPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
6. 18" MINIMUM COVERAGE OF PIPE.
7. 6' MINIMUM COVERAGE AT PROPERTY LINE.
8. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH AN ELBOW OR WYE. 90° CHANGE WITH AN ELBOW AND WYE.
9. 6" SEWER PIPE MINIMUM SIZE IN R.O.W. 2% MINIMUM GRADE, 45% MAXIMUM.
10. 4" SEWER PIPE MINIMUM SIZE ON PRIVATE RESIDENTIAL PROPERTY. 6" SEWER PIPE MIN. SIZE ON COMMERCIAL PROPERTIES. 2% MIN GRADE, 45° MAXIMUM.
11. CONSTRUCTION IN RIGHT-OF-WAY SHALL BE PERFORMED BE A REGISTERED LICENSED CONTRACTOR.
12. ALL CONSTRUCTION REQUIRES A PERMIT AND PAYMENT OF FEES. COMPLETE LEGAL DESCRIPTION OF PROPERTY AND DIMENSIONS.
13. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER IN RELATION TO THE HOUSE IS REQUIRED AFTER INSTALLATION.
14. MINIMUM OF 12" BETWEEN 45 DEGREE FITTINGS.

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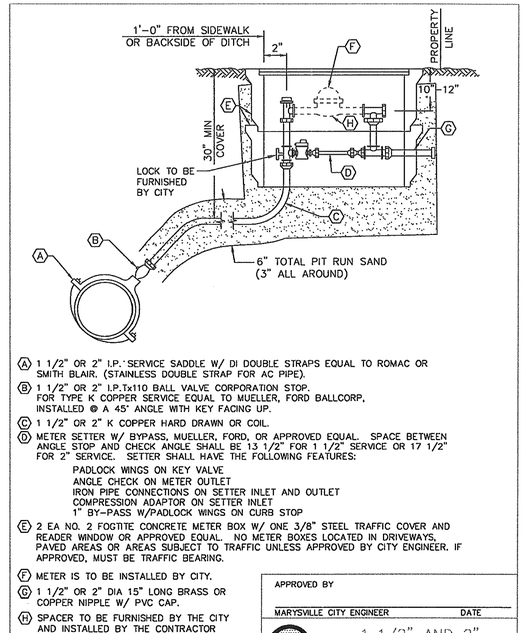
TYPICAL SIDE SEWER

City of Marysville INCORPORATED 1891

STANDARD PLAN 5-150-001



Ⓐ 1 1/2" OR 2" I.P. SERVICE SADDLE W/ DI DOUBLE STRAPS EQUAL TO ROMAC OR SMITH BLAIR. (STAINLESS DOUBLE STRAP FOR AC PIPE).

Ⓑ 1 1/2" OR 2" I.P.Tx110 BALL VALVE CORPORATION STOP. FOR TYPE K COPPER SERVICE EQUAL TO MUELLER, FORD BALLCORP, INSTALLED @ A 45° ANGLE WITH KEY FACING UP.

Ⓒ 1 1/2" OR 2" K COPPER HARD DRAWN OR COIL.

Ⓓ METER SETTER W/ BYPASS, MUELLER, FORD, OR APPROVED EQUAL. SPACE BETWEEN ANGLE STOP AND CHECK ANGLE SHALL BE 13 1/2" FOR 1 1/2" SERVICE OR 17 1/2" FOR 2" SERVICE. SETTER SHALL HAVE THE FOLLOWING FEATURES:
- PADLOCK WINGS ON KEY VALVE
- ANGLE CHECK ON METER OUTLET
- IRON PIPE CONNECTIONS ON SETTER INLET AND OUTLET
- COMPRESSION ADAPTOR ON SETTER INLET
- 1" BY-PASS W/PADLOCK WINGS ON CURB STOP

Ⓔ 2 EA NO. 2 FOGTITE CONCRETE METER BOX W/ ONE 3/8" STEEL TRAFFIC COVER AND READER WINDOW OR APPROVED EQUAL. NO METER BOXES LOCATED IN DRIVEWAYS, PAVED AREAS OR AREAS SUBJECT TO TRAFFIC UNLESS APPROVED BY CITY ENGINEER. IF APPROVED, MUST BE TRAFFIC BEARING.

Ⓕ METER IS TO BE INSTALLED BY CITY.

Ⓖ 1 1/2" OR 2" DIA 15" LONG BRASS OR COPPER NIPPLE W/ PVC CAP.

Ⓗ SPACER TO BE FURNISHED BY THE CITY AND INSTALLED BY THE CONTRACTOR

SIZE METER	LENGTH
1 1/2"	13 1/4"
2"	17 1/4"

NO GASKETS TO BE INSTALLED WITH SPACERS

LAST REVISED 8/10/01

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MARYSVILLE CITY ENGINEER DATE

1 1/2" AND 2" SINGLE SERVICES

City of Marysville INCORPORATED 1891

STANDARD PLAN 2-090-002

No.	Date	By	Chkd.	Appr.	Revision
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For: Tulalip Tribes of Washington
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Tulalip Washington 88271-9694

ALI SADR — STATE OF WASHINGTON — 24661 — REGISTERED PROFESSIONAL ENGINEER

08/12/22

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		Approved	AS
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TULALIP TRIBES

Job Number 21970

Sheet C8 of 13

File:P:\21000s\21970\engineering\21970-d1.dwg Date/Time:8/9/2022 7:49 PM Scale:1" = 1" MBOUKAL Xref: ----

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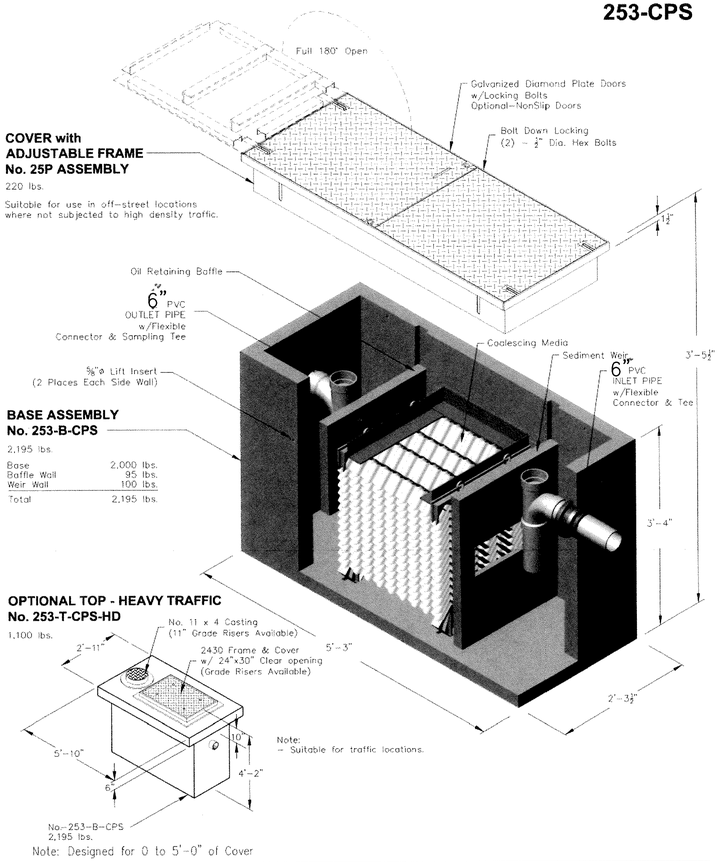
A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.
SNOHOMISH COUNTY, WASHINGTON

253-CPS



Oldcastle Precast®	253-CPS	253-CPS OIL / WATER SEPARATOR COALESCING - 27 GPM
PO Box 323, Wilsonville, Oregon 97070-0323	File Name: 020-253CPS	
Tel: (503) 682-2844 Fax: (503) 682-2657	Issue Date: 2018	
	oldcastleprecast.com/wilsonville	

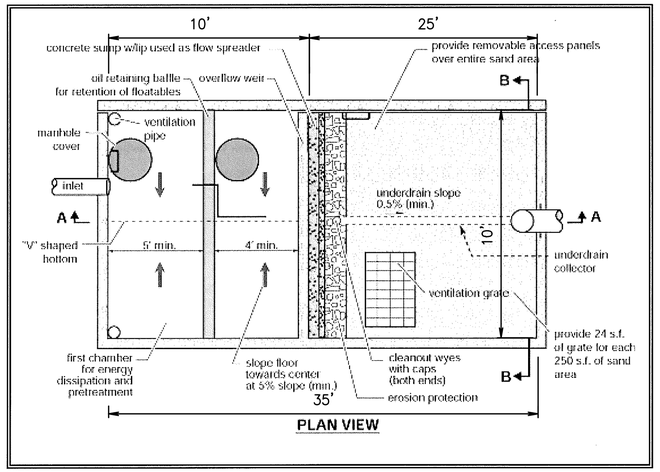


Figure 8.5.6a – Sand Filter Vault

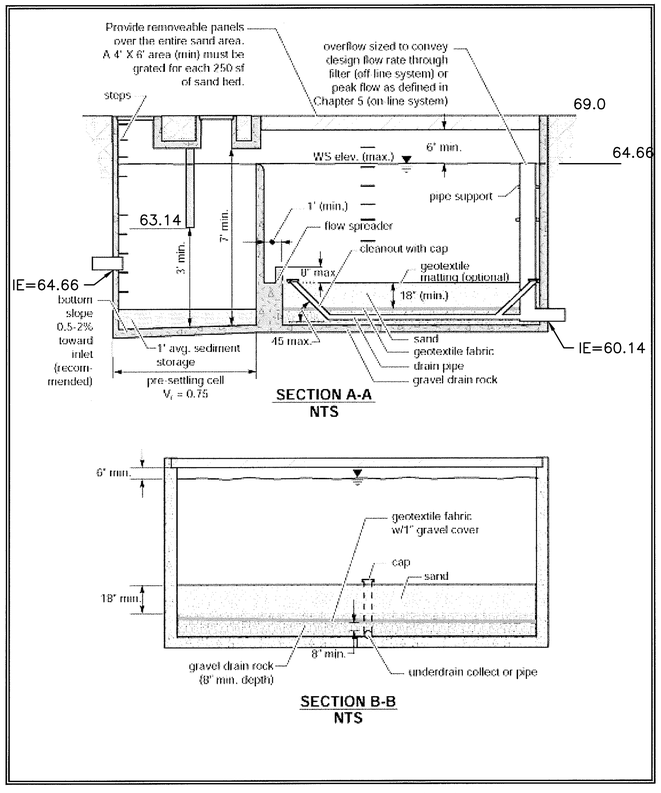


Figure 8.5.6b – Sand Filter Vault (cont)

No.	Date	By	Chkd.	Appr.	Revision
10	8/12/22	MB	AS	AS	BID SET

Title: CONSTRUCTION NOTES AND DETAILS

FOR
TULALIP TRIBES

For:
Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR
STATE OF WASHINGTON
24661
REGISTERED
PROFESSIONAL ENGINEER
08/12/22

Scale: Horizontal AS NOTED Vertical AS NOTED

Designed AS Drawn MB Checked AS Approved AS Date 05/19/21

MBO/AKL Xref: ----

18215 72ND AVENUE SOUTH
KENT, WA 98032
(425) 251-6222
(425) 251-8782 FAX
CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES
BARGHAUSEN CONSULTING ENGINEERS, INC.

Job Number 21970

Sheet C9 of 13

File:P:\21000s\21970\engineering\21970-d1.dwg Date/Time:8/9/2022 7:49 PM Scale:1" = 1"

CONSTRUCTION NOTES AND DETAILS

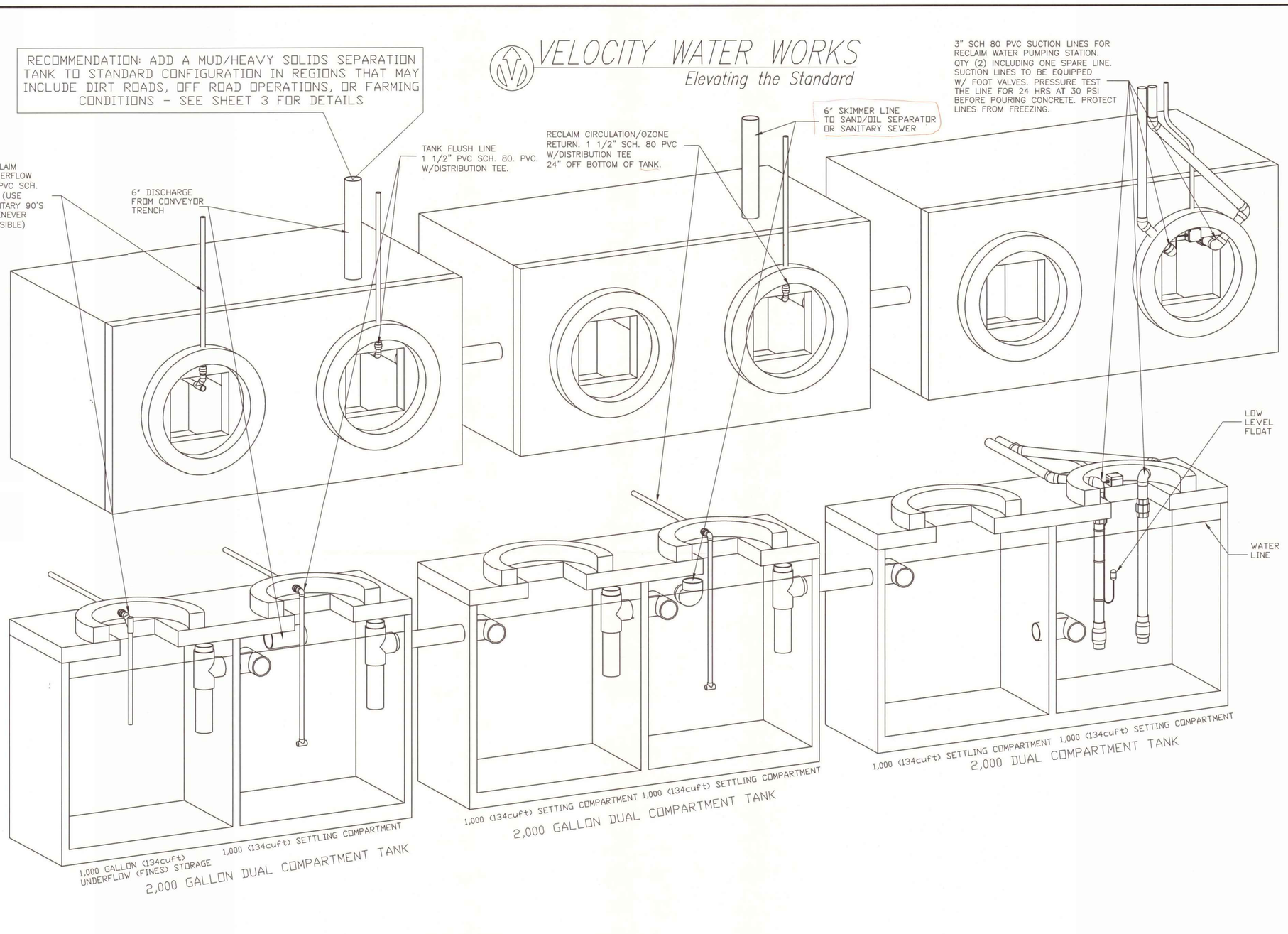
FOR

TULALIP TRIBES

CONVENIENCE STORE CAR WASH

A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON



VELOCITY WATER WORKS
520 RANDOLPH DR, APPLETON, WI 54913

6,000 GALLON WATER STORAGE
100 GPM WATER CIRCULATION CAPACITY
VELOCITY RECLAIM TANKING

DRAWN: J.DAYAK DATE: 10/16/20
CHECKED: DATE: _/_/_
APPROVED: DATE: _/_/_
SCALE: NTS PAPER: 24"X36"

No.	DATE	ENGR. APP.	DESCRIPTION
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PROJECT #: VRC100-TANKING

SHEET #: VRC100-TANK-01

No.	Date	By	Chkd.	Appr.	Revision
10	8/12/22	MB	AS	AS	BID SET

Title: CONSTRUCTION NOTES AND DETAILS

FOR TULALIP TRIBES

For: Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR — STATE OF WASHINGTON — 24661 — REGISTERED PROFESSIONAL ENGINEER
08/12/22

Designed	AS	Scale:	
Drawn	MB	Horizontal	AS NOTED
Checked	AS	Vertical	AS NOTED
Approved	AS		
Date	05/19/21		

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TULALIP TRIBES

Job Number 21970

Sheet C10 of 13

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CONSTRUCTION NOTES AND DETAILS

FOR

TULALIP TRIBES

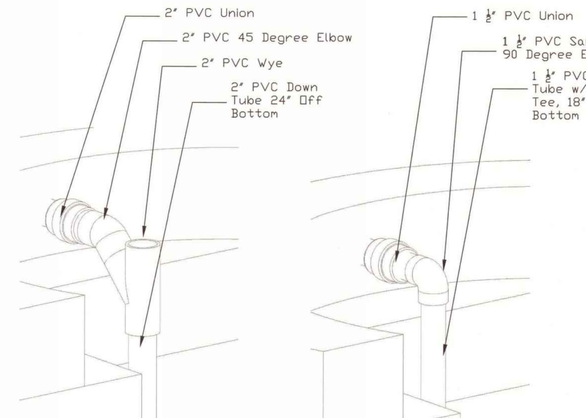
CONVENIENCE STORE CAR WASH

A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON

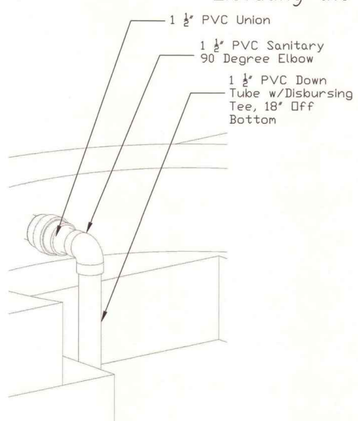
VELOCITY WATER WORKS

Elevating the Standard

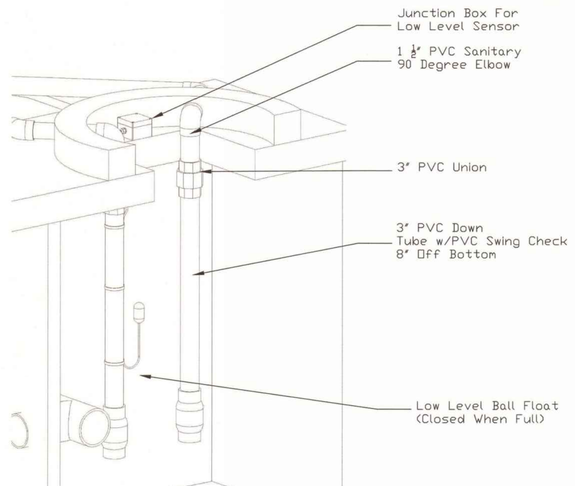


UNDER-FLOW LINE
FROM RECLAIM SYSTEM

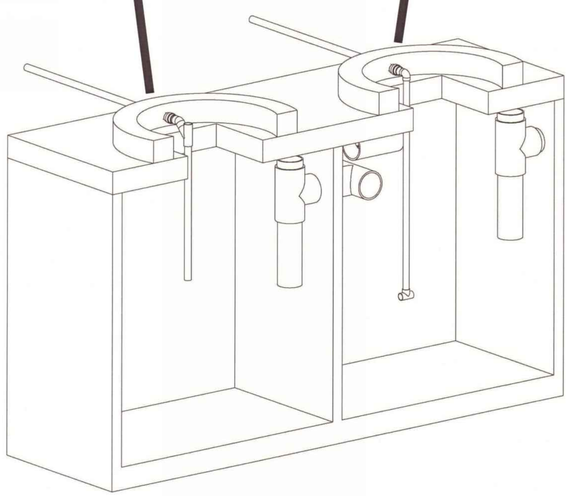
TANK FLUSH LINE
FROM RECLAIM SYSTEM



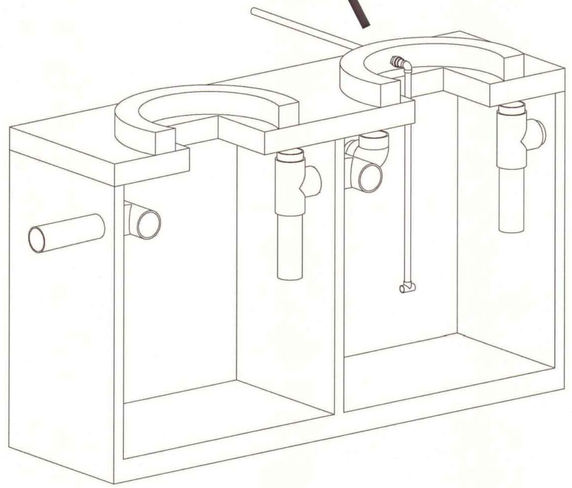
RE-CIRCULATION LINE
FROM RECLAIM SYSTEM



SUCTION LINE
TO RECLAIM SYSTEM



TANK #1
2,000 DUAL COMPARTMENT



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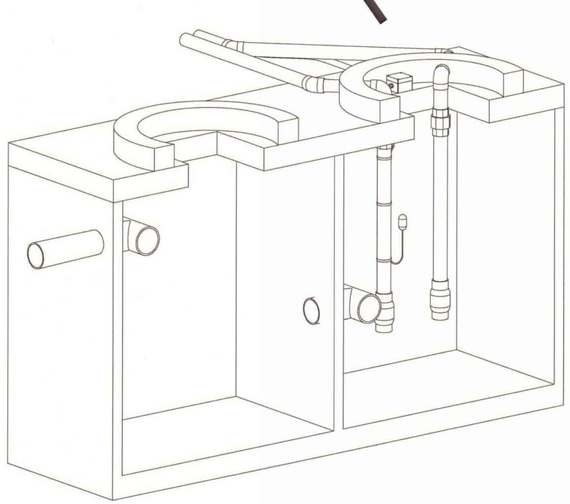
2,000 DUAL COMPARTMENT



TANK #3
2,000 DUAL COMPARTMENT

VELOCITY WATER WORKS
520 RANDOLPH DR, APPLETON, WI 54913

6,000 GALLON WATER STORAGE
100 GPM WATER CIRCULATION CAPACITY
VELOCITY RECLAIM TANKING

DRAWN: J.DAYAK DATE: 10/16/20
CHECKED: DATE: _/_/_
APPROVED: DATE: _/_/_
SCALE: NTS PAPER: 24"X36"

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PROJECT #: VRC100-TANKING

SHEET #: VRC100-TANK-02

No.	Date	By	Chkd.	Appr.	Revision
10	8/12/22	MB	AS	AS	BID SET

Title: CONSTRUCTION NOTES AND DETAILS

FOR
TULALIP TRIBES

For:
Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR
STATE OF WASHINGTON
24661
REGISTERED
PROFESSIONAL ENGINEER
08/12/22

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Designed AS Drawn MB Checked AS Approved AS Date 05/19/21

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KENT, WA 98032
(425) 251-6222
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Job Number 21970

Sheet C11 of 13

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CONSTRUCTION NOTES AND DETAILS

FOR

TULALIP TRIBES

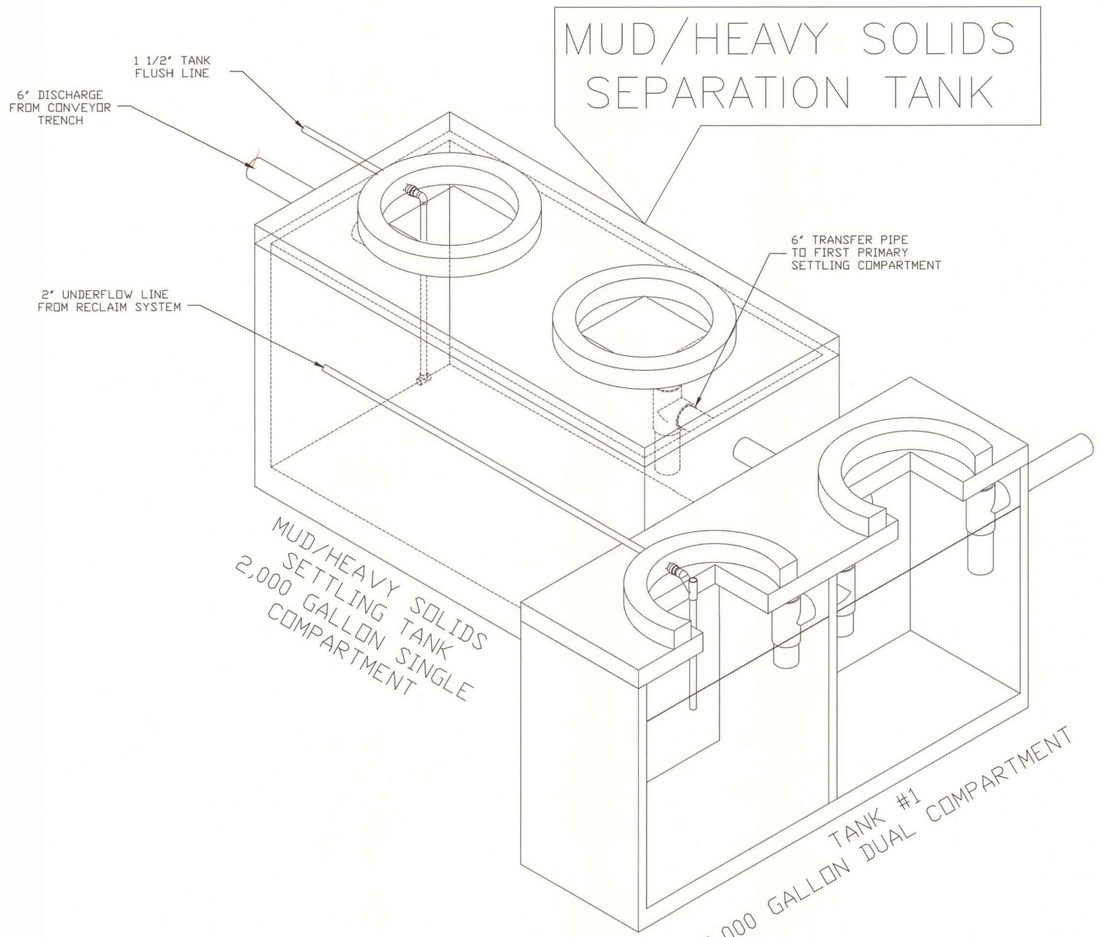
CONVENIENCE STORE CAR WASH

A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.

SNOHOMISH COUNTY, WASHINGTON

VELOCITY WATER WORKS

Elevating the Standard



RECOMMENDATION: ADD A MUD/HEAVY SOLIDS SEPARATION TANK TO STANDARD CONFIGURATION IN REGIONS THAT MAY INCLUDE DIRT ROADS, OFF ROAD OPERATIONS, OR FARMING CONDITIONS

VELOCITY WATER WORKS
520 RANDOLPH DR. APPLETON, WI 54913

6,000 GALLON WATER STORAGE

100 GPM WATER CIRCULATION CAPACITY

VELOCITY RECLAIM TANKING

DRAWN: J.DAYAK DATE: 10/16/20
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APPROVED: DATE: -/-/-
SCALE: NTS PAPER: 24"X36"

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PROJECT #: VRC100-TANKING

SHEET #: VRC100-TANK-03

No.	Date	By	Ckd.	Appr.	Revision
10	8/12/22	MB	AS	AS	BID SET

Title: CONSTRUCTION NOTES AND DETAILS

FOR TULALIP TRIBES

For: Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR — STATE OF WASHINGTON — 24661 — REGISTERED PROFESSIONAL ENGINEER — 08/12/22

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Job Number 21970

Sheet C12 of 13

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CONSTRUCTION NOTES AND DETAILS

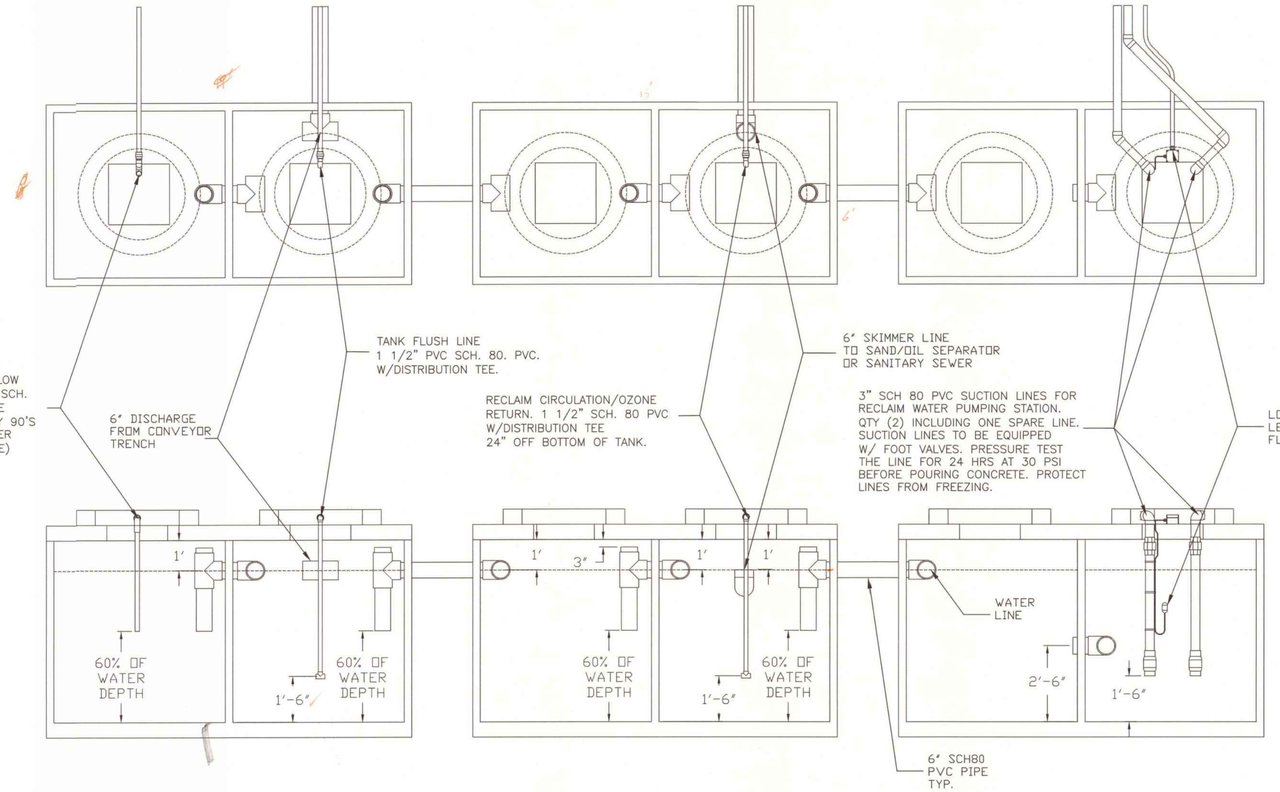
FOR
TULALIP TRIBES

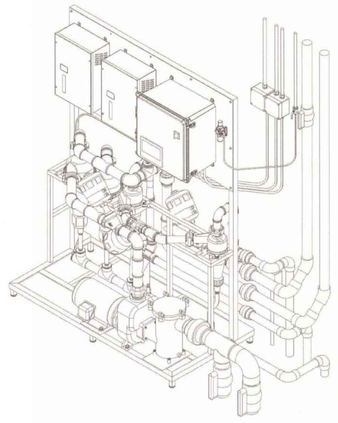
CONVENIENCE STORE CAR WASH

A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.
SNOHOMISH COUNTY, WASHINGTON

RECOMMENDATION: ADD A MUD/HEAVY SOLIDS SEPARATION TANK TO STANDARD CONFIGURATION IN REGIONS THAT MAY INCLUDE DIRT ROADS, OFF ROAD OPERATIONS, OR FARMING CONDITIONS - SEE SHEET 3 FOR DETAILS

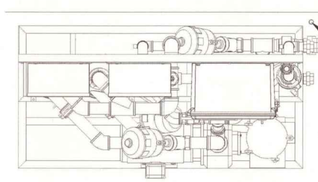
VELOCITY WATER WORKS
Elevating the Standard





NOTES

1. POSITION TANKS SO THAT PLUMBING IS BELOW FROST LINES IN AREAS WHERE FREEZING MAY OCCUR.
2. PLUMBING LINES MUST BE RUN BELOW FREEZE LINE. LINES MAY BE RUN INTO SHOULD THE TOP OF THE TANK BE TOO CLOSE TO FREEZE LINE.
3. DRAWINGS ARE FOR REFERENCE ONLY. CONSULT WITH TANK MANUFACTURE TO IDENTIFY STANDARD CONFIGURATIONS FOR APPROVED APPLICATIONS.
4. SEAL ALL PENETRATIONS TO PREVENT LEAKAGE INTO THE SOIL.
5. IT IS RECOMMENDED THAT A BACK FLOW PREVENTOR BE INSTALLED IN APPLICATIONS THAT ARE AT RISK OF HAVING SEWAGE BACKING UP INTO THE RECLAIM SYSTEM.
6. APPROX. TANK VOLUME IS 2,000 GALLONS EACH. THE FIRST 2000 GALLONS IS FOR THE SEPARATION OF HEAVY SOLIDS WITH THE REMAINING 3,000 BEING RESERVED FOR SETTING OF FINER CONTAMINANTS.
7. AN ADDITIONAL SAND/OIL SEPARATOR TO BE ADDED TO TANKING CONFIGURATION PER CITY/STATE REQUIREMENTS



100 GPM WATER RECLAIM SYSTEM

- (1) 1 1/2" SCH 80 PVC - TRENCH FLUSH
- (1) 1 1/2" SCH 80 PVC - TANK FLUSH
- (1) 1 1/2" SCH 80 PVC - AIR/OZONE RETURN
- (1) 2" SCH 80 PVC - UNDERFLOW
- (1) 3" SCH 80 PVC - SAND/OIL SEPARATOR OR SEWER CONNECTION
- (1) 3/4" PVC CONDUIT - LOW LEVEL SENSOR
- (2) 3" SCH 80 WATER SUCTION LINES

6,000 GALLON WATER STORAGE
100 GPM WATER CIRCULATION CAPACITY
VELOCITY RECLAIM TANKING\

VELOCITY WATER WORKS
520 RANDOLPH DR, APPLETON, WI 54913

DRAWN: J.DAYAK DATE: 10/16/20
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PROJECT #: VRC100-TANKING

SHEET #: VRC100-TANK-04

No.	Date	By	Chkd.	Appr.	Revision
10	8/12/22	MB	AS	AS	BID SET

Title: CONSTRUCTION NOTES AND DETAILS

FOR
TULALIP TRIBES

For:
Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 88271-9694

ALI SADR — STATE OF WASHINGTON — 24661 — REGISTERED PROFESSIONAL ENGINEER
08/12/22

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Designed AS Drawn MB Checked AS Approved AS Date 05/19/21

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CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES

TULALIP TRIBES

Job Number 21970

Sheet C13 of 13

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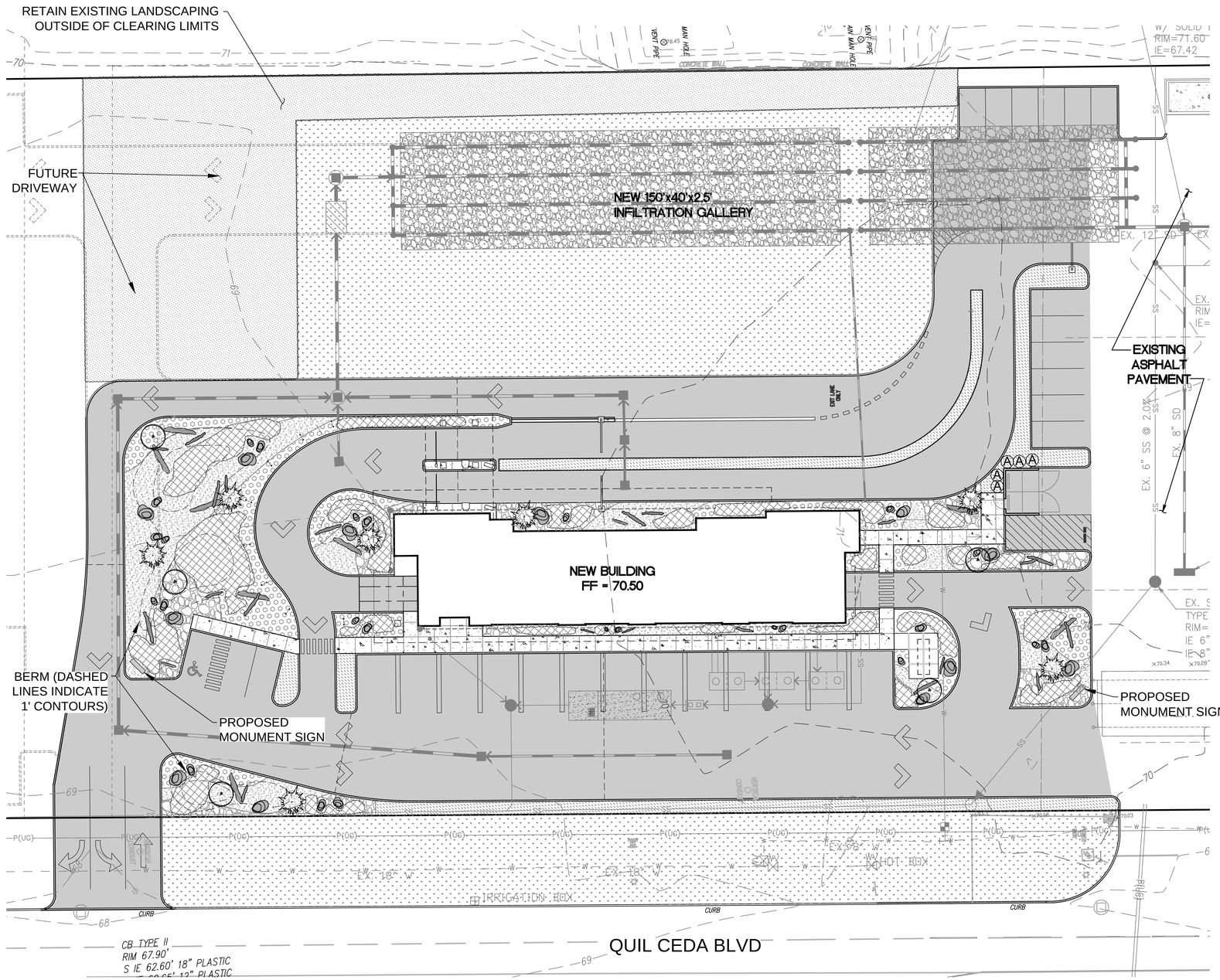
LANDSCAPE PLAN
FOR
TULALIP TRIBES
QUIL CEDA VILLAGE CAR WASH
A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.
SNOHOMISH COUNTY, WASHINGTON

1"=20'
0 10 20 40

811 Know what's **below.** **Call** before you dig.



LANDSCAPE LEGEND

EXISTING LANDSCAPING TO REMAIN

PLANT AND MATERIALS SCHEDULE

SYMBOL	BOTANICAL / COMMON NAMES	SIZE CONDITION	SPACING	QUANTITY	REMARKS
	TREES:				
	RHUS TYPHINA 'TIGER EYES' / STAGHORN SUMAC	1.5" CAL B & B	AS SHOWN	5	STAKE & GUY ONE GROWING SEASON; MULTI-STEM
	CHAMAECYPARIS LAWSONIANA 'WISSEL'S SAGUARO' / CONTORTED LAWSON CYPRESS	4'-6' HT. B & B	AS SHOWN	7	STAKE & GUY ONE GROWING SEASON; FULL FOLIAGE ALL SIDES
	BEACH-THEMED PLANTING AREAS:				
	ANEMANTHELE LESSONIANA / NEW ZEALAND WIND GRASS				
	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / FEATHER REED GRASS				
	CAREX TESTACEA 'PRAIRIE FIRE'/ NEW ZEALAND SEDGE				
	FESTUCA IDAHOENSIS 'SISKIYOU BLUE' / IDAHO FESCUE				
	HELICTOTRICHON SEMP. 'SAPPHIRE' / BLUE OAT GRASS				
	IRIS TENAX / OREGON IRIS				
	FRAGARIA CHILOENSIS / BEACH STRAWBERRY				
	SHRUBS:				
A	THUJA OCCIDENTALIS 'SMARAGD' / 'EMERALD GREEN' ARBORVITAE	4'-5' HT.	AS SHOWN	5	FULL AND BUSHY
	GROUNDCOVERS:				
	ARCTOSTAPHYLLOS UVA-URSI / KINNIKINNIK	1 GALLON	36" O.C.	AS REQ'D	HOLD 12" FROM BORDERS, SHRUBS, AND TREES; NATIVE
	LAWN, SEED OR SOD				
	NO WEED BARRIER FABRIC IN GROUND COVER OR LAWN AREAS				
	3"-4" DEPTH 6"-12" DIA. 'MONTANA RUSTIC' COBBLES OVER WEED BARRIER FABRIC				
	3"-4" DEPTH 1"-3" DIA. 'MONTANA RUSTIC' COBBLES OVER WEED BARRIER FABRIC				
	4"-6" DEPTH BUILDERS' SAND OVER WEED BARRIER FABRIC				
	1-2 MAN 'MONTANA GLACIER' LANDSCAPE BOULDERS				
	DRIFTWOOD LOGS, 4'-12' L.				
	BIDDER-DESIGN IRRIGATION SYSTEM BY LANDSCAPE CONTRACTOR				

No.	Date	By	Chkd.	Appr.	Revision
2	8/12/22	JMV	JMV	JMV	BID SET
1	4/11/22	JMV	JMV	JMV	PERMIT SET

Title: PRELIMINARY LANDSCAPE PLAN
FOR
TULALIP TRIBES

For: Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 98271-9694

STATE OF WASHINGTON
JEFF M. VARLEY
LICENSE NO. 774 EXP. 12-23
LICENSED LANDSCAPE ARCHITECT

Scale: Horizontal 1"=20' Vertical N/A
Designed TCR
Drawn TCR
Checked JMV
Approved JMV
Date 09/28/21

BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH
KENT, WA 98032
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CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES

TULALIP TRIBES

Job Number 21760
Sheet L1 of 2

LANDSCAPE PLAN
FOR
TULALIP TRIBES
QUIL CEDA VILLAGE CAR WASH
A PORTION OF THE SE 1/4 OF SEC. 8, TWP. 30N., R. 5E. W.M.
SNOHOMISH COUNTY, WASHINGTON

811 Know what's **below.** **Call** before you dig.

LANDSCAPE PLANTING NOTES AND MATERIALS

SCOPE OF WORK

FURNISH ALL MATERIALS, LABOR, EQUIPMENT AND RELATED ITEMS NECESSARY TO ACCOMPLISH TOPSOIL, TREATMENT AND PREPARATION OF SOIL, FINISH GRADING, PLACEMENT OF SPECIFIED PLANT MATERIALS, FERTILIZER, STAKING, MULCH, CLEAN-UP, DEBRIS REMOVAL, AND 30-DAY MAINTENANCE.

QUALIFICATIONS:
LANDSCAPE CONTRACTOR TO BE SKILLED AND KNOWLEDGEABLE IN THE FIELD OF WORK AND HAVE A MINIMUM OF FIVE (5) YEAR'S EXPERIENCE INSTALLING SIMILAR WORK. CONTRACTOR TO BE LICENSED TO PERFORM THE WORK SPECIFIED WITHIN THE PRESIDING JURISDICTION.

JOB CONDITIONS:
IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE SITE AND REPORT ANY DISCREPANCIES TO THE OWNER OR THE OWNER'S REPRESENTATIVES. ALL PLANT MATERIAL AND FINISH GRADES ARE SUBJECT TO APPROVAL BY THE OWNER.

PROTECTION:
SAVE AND PROTECT ALL EXISTING PLANTINGS SHOWN TO REMAIN. DO NOT PLANT UNTIL OTHER CONSTRUCTION OPERATIONS WHICH CONFLICT HAVE BEEN COMPLETED. IF AN IRRIGATION SYSTEM IS TO BE INSTALLED DO NOT PLANT UNTIL THE SYSTEM HAS BEEN INSTALLED, TESTED, AND APPROVED BY THE OWNER. HANDLE PLANTS WITH CARE – DO NOT DAMAGE OR BREAK ROOT SYSTEM, BARK, OR BRANCHES. REPAIR AND/OR REPLACE ITEMS DAMAGED AS A RESULT OF WORK, OR WORK NOT IN COMPLIANCE WITH PLANS AND SPECIFICATIONS, AS DIRECTED BY OWNER AT NO ADDITIONAL COST TO THE OWNER.

REPAIR OF EXISTING PLANTINGS:
DURING THE COURSE OF WORK, REPAIR ALL EXISTING PLANTING AREAS BY PRUNING DEAD GROWTH, RE-ESTABLISHING FINISH GRADE AND RE-MULCHING TO SPECIFIED DEPTH.

IRRIGATION SYSTEM:
LANDSCAPE CONTRACTOR TO VERIFY AVAILABLE WATER PRESSURE PRIOR TO BEGINNING ANY WORK ON THE PROPOSED IRRIGATION SYSTEM. PROVIDE WRITTEN RESULTS OF WATER PRESSURE TO LANDSCAPE ARCHITECT

REPAIR OF IRRIGATION SYSTEM:
DURING THE COURSE OF WORK, REPAIR ANY DAMAGE TO THE IRRIGATION SYSTEM TO MATCH CONDITIONS PRIOR TO THE DAMAGE.

GUARANTEE:
GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE JOB BY OWNER.

30-DAY MAINTENANCE:
CONTRACTOR TO PROVIDE OWNER WITH A SCOPE OF WORK AT TIME OF INITIAL PROJECT BID TO PROVIDE LANDSCAPE AND IRRIGATION MAINTENANCE FOR 30 DAYS FOLLOWING STORE OPENING. WORK TO INCLUDE MAINTENANCE AS DESCRIBED BELOW, IN PLANTING AND IRRIGATION MAINTENANCE.

MATERIALS:

PLANT MATERIALS:
PLANT MATERIALS TO BE GRADE NO. 1, SIZED IN ACCORDANCE WITH (AAN) AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1-2004). PRUNE PLANTS RECEIVED FROM THE NURSERY ONLY UPON AUTHORIZATION BY THE LANDSCAPE ARCHITECT. "B & B" INDICATES BALLED AND BURLAPPED; "CONT." INDICATES CONTAINER; "BR" INDICATES BARE ROOT; "GAL" INDICATES GALLON.

A) SPECIFIED PLANT CANOPY SIZE OR CALIPER IS THE MINIMUM ACCEPTABLE CONTAINER OR BALL SIZE AND ESTABLISHES MINIMUM PLANT CONDITION TO BE PROVIDED.

B) QUALITY:
PLANT MATERIAL TO COMPLY WITH STATE AND FEDERAL LAWS FOR DISEASE INSPECTION, PLANTS TO BE FULLY LIVE, VIGOROUS, WELL FORMED, WITH WELL DEVELOPED FIBROUS ROOT SYSTEMS. ROOT BALLS OF PLANTS TO BE SOLID AND FIRMLY HELD TOGETHER, SECURELY CONTAINED AND PROTECTED FROM INJURY AND DESICCATION. PLANTS DETERMINED BY LANDSCAPE ARCHITECT TO HAVE BEEN DAMAGED; HAVE DEFORMITIES OF STEM, BRANCHES, OR ROOTS; LACK SYMMETRY, HAVE MULTIPLE LEADERS OR "Y" CROTCHES LESS THAN 30 DEGREES IN TREES, OR DO NOT MEET SIZE OR ANSI STANDARDS WILL BE REJECTED. PLANT MATERIAL TO BE FROM A SINGLE NURSERY SOURCE FOR EACH SPECIFIED SPECIES/HYBRID. NURSERY SOURCES TO BE THOSE LOCATED IN THE SAME REGION AS THE JOB SITE.

C) SUBSTITUTION:
NO SUBSTITUTION OF PLANT MATERIAL, SPECIES OR VARIETY, WILL BE PERMITTED UNLESS WRITTEN EVIDENCE IS SUBMITTED TO THE OWNER FROM TWO QUALIFIED PLANT BROKERAGE OFFICES. SUBSTITUTIONS WHICH ARE PERMITTED TO BE IN WRITING FROM THE OWNER AND LANDSCAPE ARCHITECT. THE SPECIFIED SIZE, SPECIES AND NEAREST VARIETY, AS APPROVED, TO BE FURNISHED. SUBSTITUTIONS MAY REQUIRE SUBMITTAL TO REVISED LANDSCAPE PLAN TO CITY FOR APPROVAL.

D) LABEL AT LEAST ONE (1) TREE, SHRUB, AND GROUNDCOVER OF EACH VARIETY WITH A SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAMES.

E) DELIVER PLANT MATERIAL AFTER PREPARATION OF PLANTING AREAS HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX (6) HOURS AFTER DELIVERY, SET MATERIAL IN SHADE, PROTECT FOR WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOT BALLS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

SOIL PREPARATION:
TOPSOIL, AMENDMENT, AND BACKFILL, ARE GENERAL REQUIREMENTS FOR ALL LANDSCAPE AREAS, UNLESS NOTED OTHERWISE ON THE PLANS. SOIL AMENDMENTS AND FERTILIZER NOTED BELOW ARE TO BE USED FOR BID PRICE BASIS ONLY. SPECIFIC AMENDMENTS AND FERTILIZERS WILL BE MADE AFTER SOIL SAMPLES ARE LABORATORY TESTED BY THE CONTRACTOR. PROVIDE CHANGE ORDER FOR ADDITIONAL OR REDUCTION OF MATERIALS REQUIRED OR NOT REQUIRED BY THE SOILS REPORT.

SOIL FERTILITY AND AGRICULTURAL SUITABILITY ANALYSIS:
AFTER ROUGH GRADING AND PRIOR TO SOIL PREPARATION, CONTRACTOR TO OBTAIN TWO REPRESENTATIVE SOIL SAMPLES, FROM LOCATIONS AS DIRECTED BY THE LANDSCAPE ARCHITECT, TO A TESTING LABORATORY. SUBMIT RESULTS TO LANDSCAPE ARCHITECT FOR REVIEW. TESTS TO INCLUDE FERTILITY AND SUITABILITY ANALYSIS WITH WRITTEN RECOMMENDATIONS FOR SOIL AMENDMENT, FERTILIZER, CONDITIONERS, APPLICATION RATES, AND POST-CONSTRUCTION MAINTENANCE PROGRAM. TESTS TO BE CONTRACTED WITH AND PAID FOR BY THE CONTRACTOR.

A) TOPSOIL:
CONTRACTOR IS RESPONSIBLE FOR SUPPLYING ALL TOPSOIL AND FOR DETERMINING THE VOLUME OF TOPSOIL REQUIRED PER THE INFORMATION ON PLANS AND NOTED HERE-IN. CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY WEED CONTROL RESULTING FROM CONTAMINATED OFF SITE SOURCES.

B) TOPSOIL TO CONSIST OF 1/3 BY VOLUME SANDY LOAM, 1/3 BY VOLUME COMPOSTED GARDEN MULCH, AND 1/3 BY VOLUME COARSE WASHED SAND OR EQUIVALENT.

C) TOPSOIL PREPARATION AND INSTALLATION:
1. VERIFY SUBGRADES TO –4 INCHES IN LAWN AREAS, –7 INCHES IN LANDSCAPE AREAS BELOW FINISH ELEVATION, OR AS INDICATED ON PLANS. THIS ACCOMMODATES, TOPSOIL, AMENDMENTS, AND MULCH.
2. ERADICATE ANY SURFACE VEGETATION ROOTED IN THE SUB-GRADE PRIOR TO SUB-GRADE PREPARATION.
3. THOROUGHLY SCARIFY AND RIP ALL LANDSCAPE SUB-GRADES WHICH HAVE BECOME COMPACTED TO A DEPTH OF 12 INCHES WITH MULTIPLE PASSES, 90 DEGREES TO EACH OTHER. SCARIFY AREAS INACCESSIBLE TO MECHANIZED EQUIPMENT AND AROUND EXISTING PLANTINGS NOTED TO REMAIN WITH HAND TOOLS.
4. REMOVE SOIL LUMPS, ROCK, VEGETATION AND/OR DEBRIS LARGER THAN 2 INCHES FROM ALL SUB-GRADE PRIOR TO PLACEMENT OF SPECIFIED TOPSOIL.
5. REMOVE ANY ASPHALT EXTENDING BEYOND 6 INCHES FROM CURBS INTO ADJACENT LANDSCAPE AREAS.

D) TOPSOIL PLACEMENT:
1. PROVIDE A TOTAL FINISH COURSE OF 4 INCHES OF TOPSOIL FOR LAWN AND LANDSCAPE AREAS.
2. IN ALL LANDSCAPE AREAS, PLACE 2 INCHES OF TOPSOIL MIX WITH AMENDMENTS OVER THE PREPARED SUB-GRADE AND THOROUGHLY ROTOTILL WITH MULTIPLE PASSES INTO THE TOP 6 INCHES OF SUB-GRADE FOR A TOTAL DEPTH OF 8 INCHES IN LANDSCAPE AREAS. PLACE AN ADDITIONAL 2 INCH LIFT OF TOPSOIL, IN ALL LANDSCAPE AREAS FOR THE FINAL TOPSOIL DEPTH OF 4 INCHES IN LANDSCAPE AREAS.
3. PLACE ADDITIONAL TOPSOIL AND SOIL MIX AS REQUIRED TO MEET FINISH ELEVATIONS.

ORGANIC MULCH (TOPDRESSING):
ONE-HALF-INCH (1/2") SIZE, TO ONE-QUARTER (1/4"), HEMLOCK/FIR BARK. FINE TEXTURED AND DARK BROWN IN COLOR.

STAKES:
2-INCH DIAMETER BY 8-FOOT MINIMUM LODGEPOLE PINE STAKES.

GUY MATERIAL:
1-INCH WIDE POLYETHYLENE CHAIN LOCK TYPE TIES; OR, 3/8" DIAMETER RUBBER. NO WIRE.

EXECUTION:

CONTAMINANTS:
VERIFY THAT ALL SOIL CONTAMINANTS (E.G., PAINT, SEALANTS, SOLVENTS, OILS, GREASES, CONCRETE/ASPHALT SPOILS, ETC.) HAVE BEEN SATISFACTORY REMOVED FROM ALL PLANTING AREAS. DO NOT BEGIN WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

FINISH GRADES:
FINE GRADE AND REMOVE ROCKS, DEBRIS, AND FOREIGN OBJECTS OVER 2 INCHES DIAMETER FROM TOP SURFACE OF PREPARED LANDSCAPE AREAS. FINISH ELEVATIONS TO BE DEFINED AS 3 INCHES BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL PLANTING BED AREAS AND 1-INCH BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL LAWN AREAS. FINISH GRADE REFER TO GRADES PRIOR TO INSTALLATION OF MULCH OR LAWN. ALL FINISH GRADES TO BE SMOOTH EVEN GRADES, LIGHTLY COMPACTED, AS SHOWN ON THE PLAN AND DETAILED. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND STRUCTURES. SITE CIVIL DRAWINGS IDENTIFY FINAL ELEVATIONS. MOISTEN PREPARED AREAS BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.

TREES AND SHRUBS:
ARRANGE TREES AND SHRUBS ON SITE IN PROPOSED LOCATIONS PER DRAWINGS. EXCAVATE PIT, PLANT AND STAKE OR GUY, AS CALLED OUT AND DETAILED. ALL TREES, SHRUBS, AND SUPPORTS TO STAND VERTICAL. BACKFILL SHALL BE PIT SPOILS. SETTLE BACKFILL USING WATER ONLY. NO MECHANICAL COMPACTION.

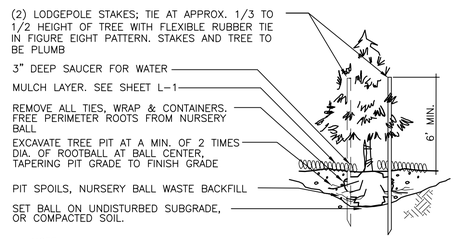
GROUNDCOVERS:
EXCAVATE PITS TO A MINIMUM OF 3 INCHES BELOW, AND TWICE THE ROOT BALL DIAMETER. WATER THOROUGHLY AND TAKE CARE TO ENSURE THAT ROOT CROWN IS AT PROPER GRADE, AS DETAILED.

MULCH:
MULCH ALL LANDSCAPE AREAS NOT COVERED BY LAWN AND/OR SEED. APPLY SUFFICIENT QUANTITY TO PROVIDE A 2-INCH DEPTH.

UTILITY CLEARANCES:
FIELD ADJUST PLANT LOCATIONS FOR 8-FOOT SEPARATION OF TREES/SHRUBS AND 2-FOOT SEPARATION FOR GROUNDCOVER FROM FIRE HYDRANTS AND UTILITY VAULTS.

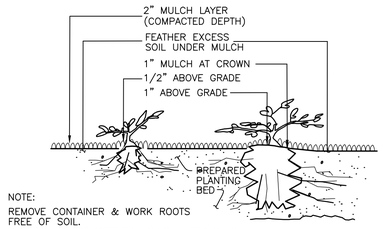
CLEANUP AND PROTECTION:
DURING LANDSCAPE WORK, KEEP ALL PAVEMENT CLEAN AND WORK AREAS IN AN ORDERLY CONDITION. PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIOD. TREAT, REPAIR, OR REPLACE DAMAGE LANDSCAPE WORK AS DIRECTED BY THE OWNER.

PLANTING MAINTENANCE:
PROVIDE FULL MAINTENANCE BY SKILLED EMPLOYEES OF LANDSCAPE INSTALLERS. CONTRACTOR TO MAINTAIN PLANTINGS THROUGH COMPLETED INSTALLATION, AND UNTIL ACCEPTANCE OF LANDSCAPE INSTALLATION. PLANTING MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATING, TIGHTENING AND REPAIRING OF TREE GUYS, RESETTING PLANTS TO PROPER GRADES OR POSITION, RE-ESTABLISHING SETTLED GRADES; AND MOWING LAWNS WEEKLY AFTER LAWN ESTABLISHMENT. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION. INCLUDED IS REPLACEMENT OF DEAD PLANTS AND PLANTS SHOWING LOSS OF 40 PERCENT OR MORE OF CANOPY.



NOTE:
LIGHT FERTILIZER OVER PLANTING BED AFTER BACKFILL ONLY; NO FERTILIZER IN PLANTING PIT.
WORK PERIMETER ROOTS FREE OF NURSERY BALL.
BALL & PIT TO BE COURSELY SCARIFIED.

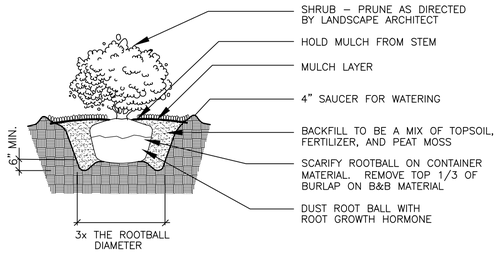
EVERGREEN TREE PLANTING/STAKING DETAIL
NOT TO SCALE



NOTE:
REMOVE CONTAINER & WORK ROOTS FREE OF SOIL.
BACKFILL TO BE SETTLED USING WATER ONLY
SEE PLANT LIST FOR PLANT SPACING

LESS THAN 1 GAL. (PLANTED BEFORE MULCH)
1 GAL. CONTAINER and LARGER (PLANTED BEFORE MULCH)

GROUNDCOVER PLANTING DETAIL
NOT TO SCALE

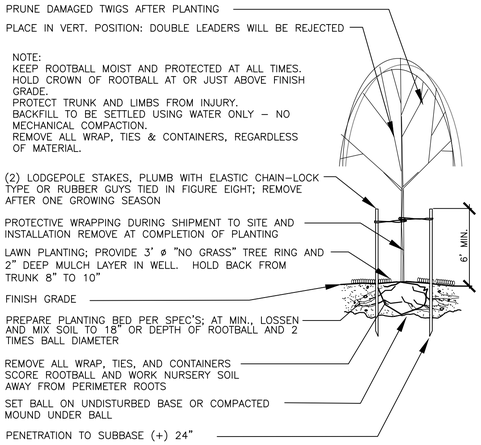


NOTE:
APPLY ADDITIONAL 4 OZ. 8-32-16 FERTILIZER INTO TOP 2" OF PLANTING MIX.

PLANT SHRUB HIGH ENOUGH TO ALLOW POSITIVE DRAINAGE AWAY FROM ROOTBALL. ROUGHEN ALL SURFACES OF PIT.

CUT AND REMOVE BURLAP FROM ROOT BALL

SHRUB PLANTING DETAIL
NOT TO SCALE



DECIDUOUS TREE PLANTING/STAKING DETAIL
NOT TO SCALE

No.	Date	By	Chkd.	Appr.	Revision
2	8/12/22	JMV	JMV	JMV	BID SET
1	4/11/22	JMV	JMV	JMV	PERMIT SET

Title: LANDSCAPE NOTES AND DETAILS FOR TULALIP TRIBES

For: Tulalip Tribes of Washington
8802 27th Avenue N.E.
Tulalip Washington 98271-9694

STATE OF WASHINGTON · JEFF M. VARLEY · LICENSED NO. 774 EXP: 12/23 · LICENSED LANDSCAPE ARCHITECT

Scale: Horizontal N/A Vertical N/A

Designed TCR Drawn TCR Checked JMV Approved JMV Date 09/28/21

18215 72ND AVENUE SOUTH
KENT, WA 98032
(425) 251-6222
(425) 251-8782 FAX
CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES
BARGHAUSEN CONSULTING ENGINEERS, INC.

TULALIP TRIBES

Job Number 21760

Sheet L2 of 2

FLOOR PLAN LEGEND

DESCRIPTION	SYMBOL AND TEXT
ROOM IDENTIFICATION room name room number	ROOM NAME 100
SWINGING DOOR door number, minimum door strike side clearance distances	11'-6" MIN., 101, 1'-0", 6"
WORK POINT building corner, starting building layout reference point	WP
FLOOR DRAIN sloped floor level floor	F.D. F.D.
STRUCTURAL COLUMN centered on grid line, centered in wall	
FIRE EXTINGUISHER AND CABINET fire extinguisher and semi-recess cabinet, fire rated cabinet at fire rated walls	F.E.
HOSE BIB refer to plan for locations	H.B.
JANITORS SINK square corner janitor floor sink	
DOWNSPOUT 3" x 6" metal, refer to plan locations	D.S.

GENERAL NOTES

NOTE

1. ABBREVIATIONS:

   (D) - DEMOLITION
   (R) - RELOCATE
   (E) - EXISTING TO REMAIN
   (S) - SALVAGE

   REFER TO SHEET *G020* FOR STANDARD ABBREVIATIONS LIST.

2. INSTALL SOUND BATT INSULATION AT ALL INTERIOR (STUD) WALLS.

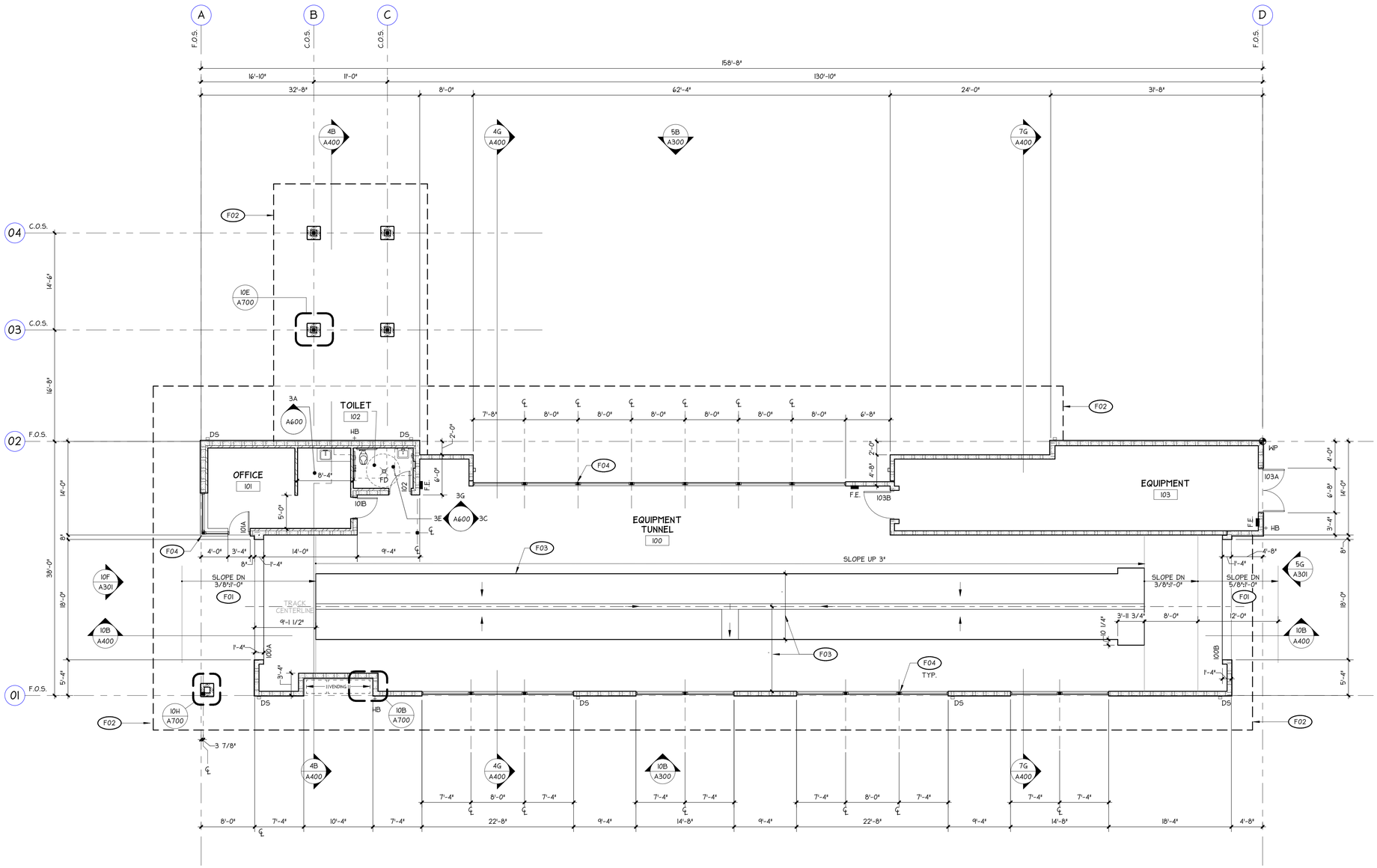
3. PROVIDE PLAM FACED SILL AND APRON AT WINDOW SILLS (OFFICE ONLY).

WALL TYPES

DESCRIPTION	SYMBOL AND TEXT
WALL TYPE 1 3 5/8" METAL STUDS @ 16" O.C.	
WALL TYPE 2 6" METAL STUDS @ 16 O.C.	
WALL TYPE 3 8" CMU	

FLOOR PLAN NOTES

SYMBOL	NOTE
F01	SLOPING FLOOR SLAB, COORDINATE WITH CIVIL DRAWINGS FOR ENTRANCE/EXIT ELEVATION POINTS.
F02	ROOF OUTLINE ABOVE.
F03	CARWASH RECESSED CONCRETE PIT. REFER TO CARWASH EQUIPMENT SUPPLIER DRAWINGS FOR SPECIFIC DIMENSIONS, CONFIGURATION, AND ADDITIONAL REQUIREMENTS.
F04	ALUMINUM BREAK SHAPE FLASHING TO MATCH ALUMINUM STOREFRONT AT ALL COLUMN LOCATIONS (INTERIOR AND EXTERIOR) BETWEEN ALUMINUM STOREFRONT SYSTEM.



10B FLOOR PLAN

1/8" = 1'-0"

NORTH

0' 2' 4' 8' 16'

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

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5134 REGISTERED ARCHITECT
BRUCE McKEAN
STATE OF WASHINGTON

HELIX DESIGN GROUP, INC

7 FLOOR PLAN

8 QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

10 A100

WHITE

DRAWING NO.

PLOTTED: 8/02/2022 1:35:19 PM
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3MS.rvt
PROJECT: a20-112 - QUIL CEDA VILLAGE

ROOF PLAN LEGEND

DESCRIPTION	SYMBOL AND TEXT
ROOFING IDENTIFICATION material type	SINGLE-PLY MEMBRANE ROOFING
ROOF CRICKET sloped (cricket) roof plane	
SLOPE IDENTIFICATION direction indicator, rise/run	SLOPE 1/2:12
PARAPET WALL parapet wall	

GENERAL NOTES

NOTE

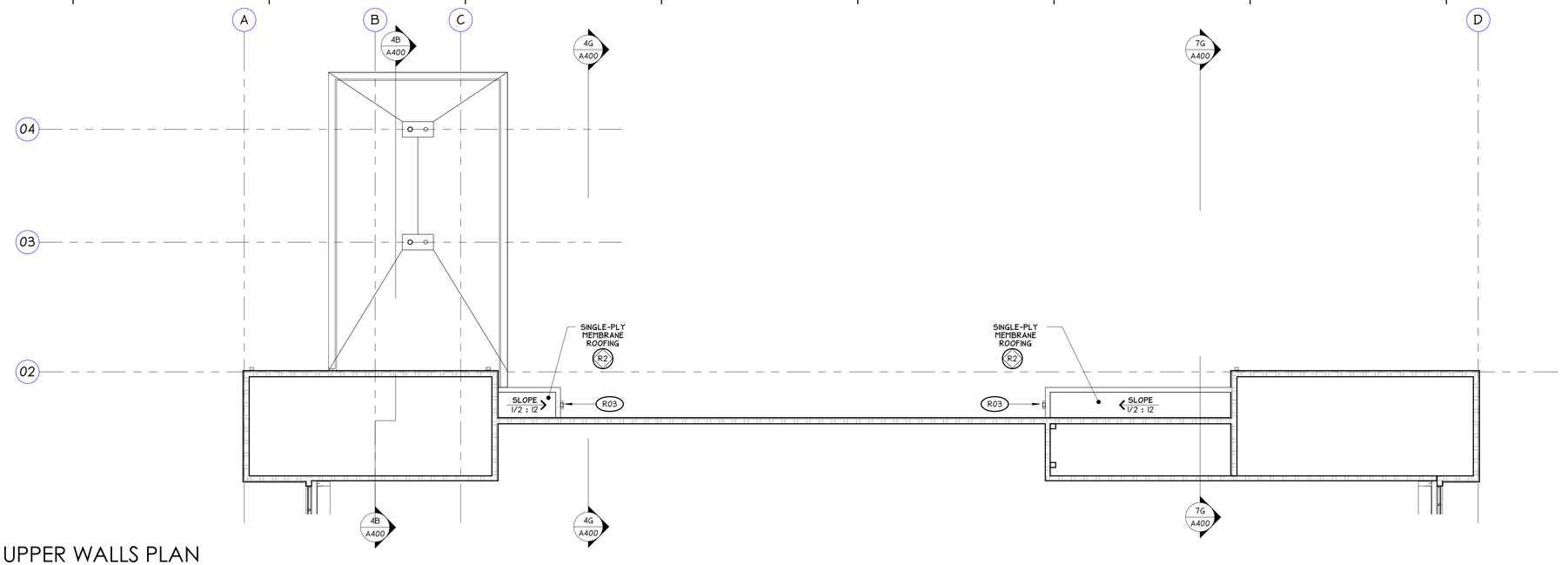
1. ABBREVIATIONS:

   (D) - DEMOLITION
   (R) - RELOCATE
   (E) - EXISTING TO REMAIN
   (S) - SALVAGE

   REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.

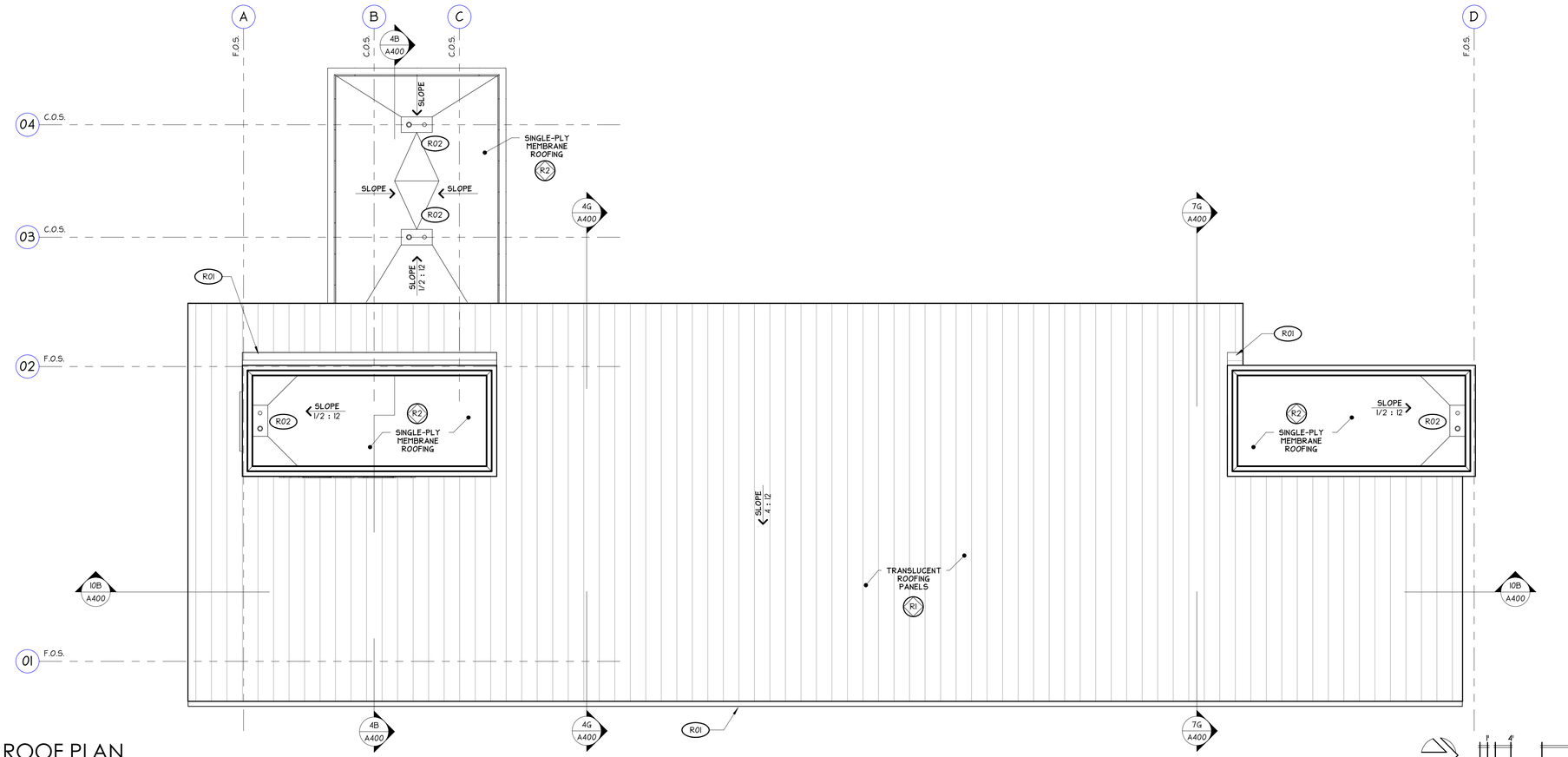
ROOF PLAN NOTES

SYMBOL	NOTE
R01	METAL GUTTER WITH DOWNSPOUTS BELOW.
R02	INTERNAL ROOF DRAIN AND OVERFLOW DRAIN ASSEMBLY.
R03	METAL THROUGH WALL SCUPPER, COLLECTOR HEAD AND DOWNSPOUT.



5B UPPER WALLS PLAN

1/8" = 1'-0"



10B ROOF PLAN

1/8" = 1'-0"

NORTH

0' 1' 2' 4' 8' 16'

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

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HELIX DESIGN GROUP, INC

ROOF PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

A110

WHITE

DRAWING NO.

PLOTTED: 8/12/2022 1:35:20 PM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3NS.rvt

CEILING LEGEND

DESCRIPTION	SYMBOL AND TEXT
CEILING IDENTIFICATION room number material ceiling height	101 ACT-1 8'-0"
SOFFIT material description height	GWB SOFFIT 8'-0"
SUSPENDED ACOUSTICAL CEILING SYSTEM 2'x2' tiles, refer to plan for grid starting point, otherwise center layout in space	
GWB CEILING SYSTEM gwb ceiling	
ARCHITECTURAL WALL PANEL SOFFIT exposed fastener ceiling system	
FULL HEIGHT WALLS bearing walls extend to top of bearing elevation or height indicated on wall sections	
non-bearing partitions extend to underside of floor/roof deck	
INTERIOR PARTITIONS interior (non-bearing) partitions extend 6 inches above ceilings and soffits	
SLOPED CEILING IDENTIFICATION direction indicator, rise/run, refer to plan for ceiling heights and starting point	SLOPED CLG 1:12

CEILING PLAN NOTES

SYMBOL	NOTE
C01	EXPOSED TO STRUCTURE ABOVE.

GENERAL NOTES

NOTE

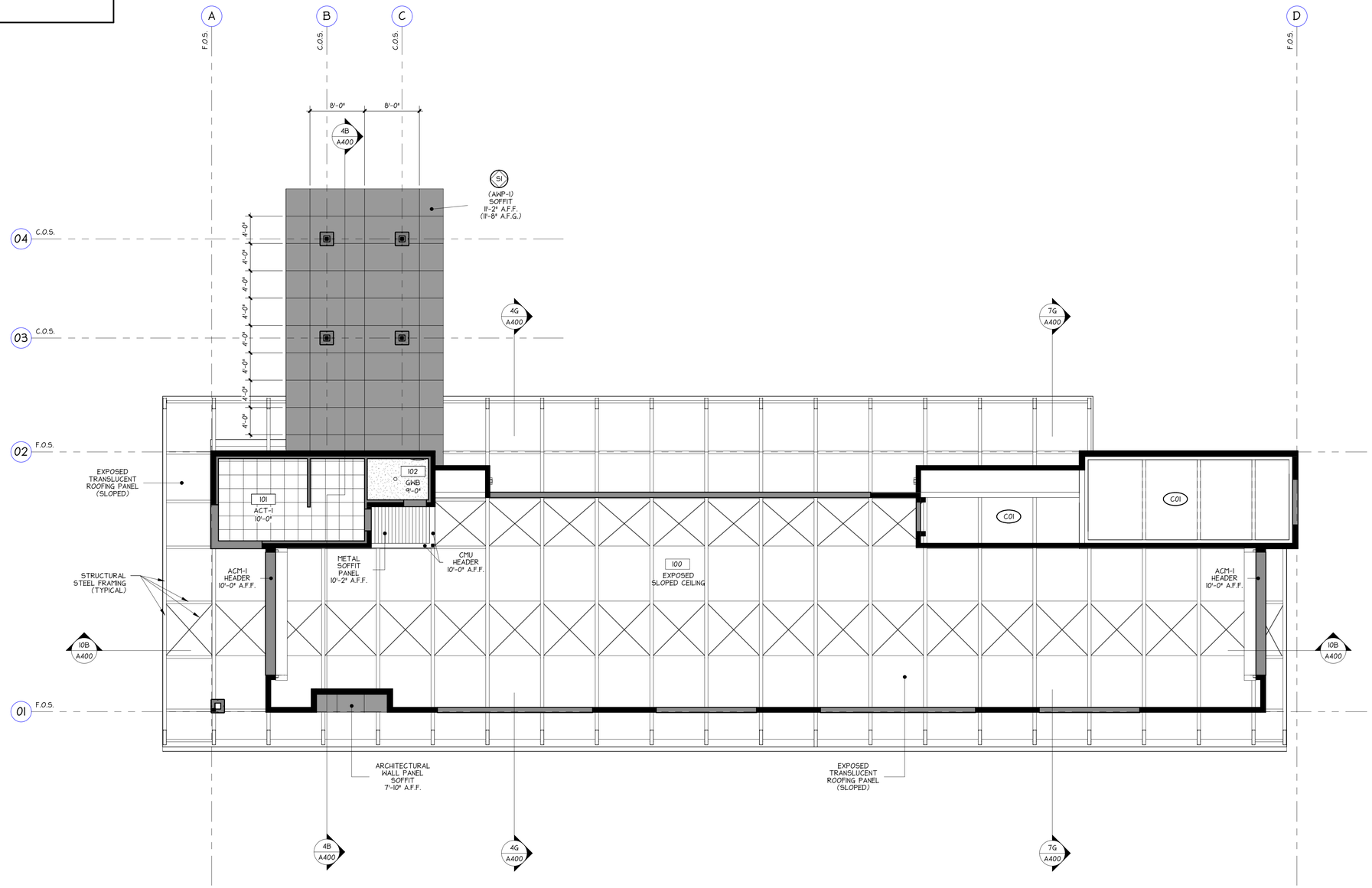
1. ABBREVIATIONS:

   (D) - DEMOLITION
   (R) - RELOCATE
   (E) - EXISTING TO REMAIN
   (S) - SALVAGE

   REFER TO SHEET *G020* FOR STANDARD ABBREVIATIONS LIST.

2. REFER TO DETAIL ON SHEET A720 FOR BRACING REQUIREMENTS OF SUSPENDED CEILINGS.

3. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING LOCATION AND TYPES.



10B REFLECTED CEILING PLAN

1/8" = 1'-0"

NORTH

0' 2' 4' 8' 16'

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

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REFLECTED CEILING PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

A120

WHITE

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FURNITURE LEGEND

DESCRIPTION	SYMBOL AND TEXT

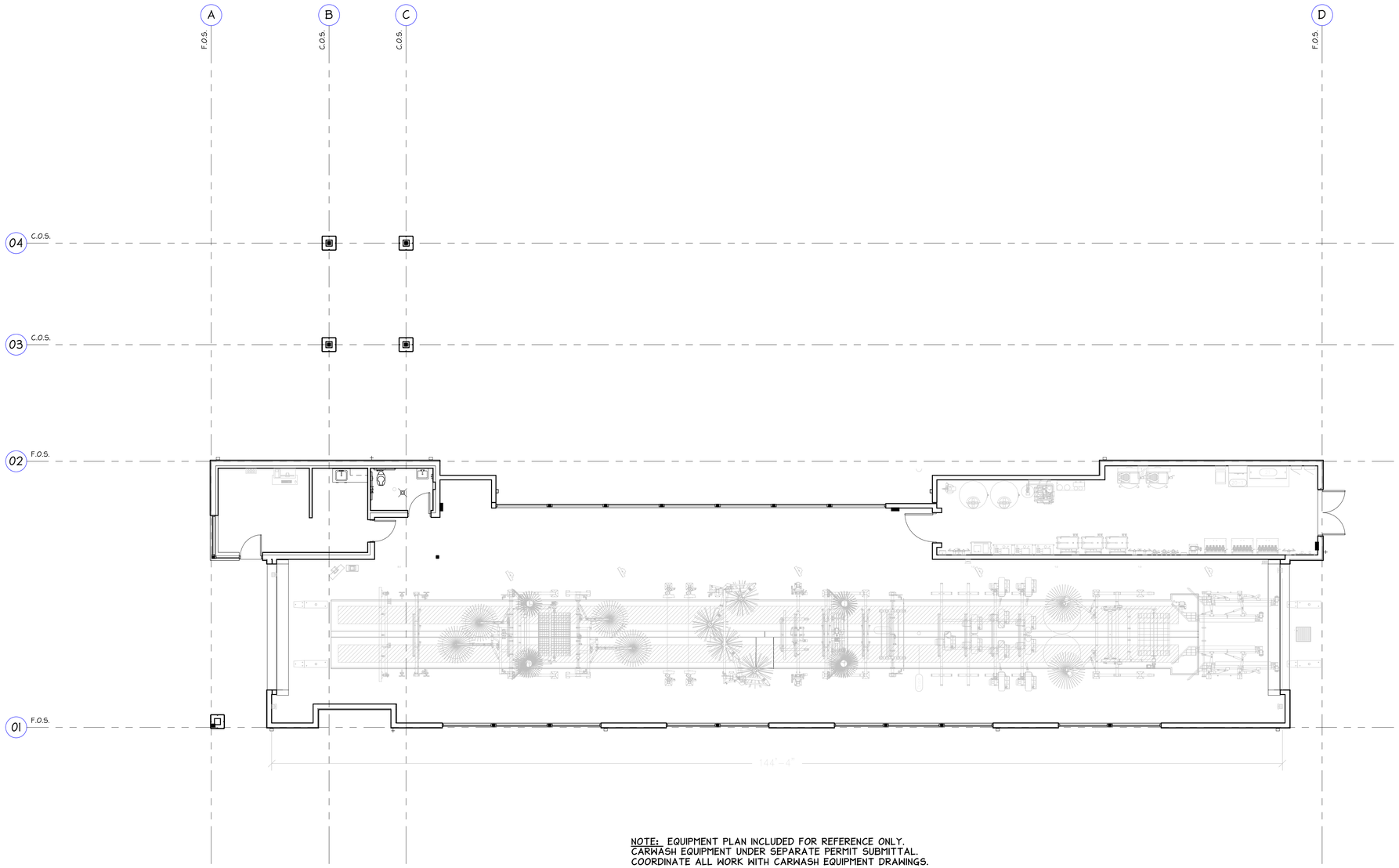
ROOM IDENTIFICATION
room name
room number

ROOM NAME
100

MOVEABLE FURNISHINGS
MF = moveable furnishing
X = item # designation

FIXED FURNISHINGS
FF = fixed furnishing
X = item # designation

KITCHEN EQUIPMENT
KE = kitchen equipment
X = item # designation



NOTE: EQUIPMENT PLAN INCLUDED FOR REFERENCE ONLY.
CARWASH EQUIPMENT UNDER SEPARATE PERMIT SUBMITTAL.
COORDINATE ALL WORK WITH CARWASH EQUIPMENT DRAWINGS.

10B EQUIPMENT PLAN
1/8" = 1'-0"

NORTH

0' 1' 2' 4' 8' 16'
SCALE: 1/8" = 1'-0"

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EQUIPMENT PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

A180

WHITE
DRAWING NO.

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DOOR SCHEDULE

NO	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	DOOR GLAZING	RATING	HARDWARE GROUP	FRAME MATERIAL	FRAME FINISH	FRAME TYPE	FRAME GLAZING	NOTES
FP-01													
100A	18'-0"	10'-0"	D4	SS	FF	-	-	HDW-3	STL	FF	F1	-	[1] [4]
100B	18'-0"	10'-0"	D4	SS	FF	-	-	HDW-3	STL	FF	F1	-	
101A	3'-0"	7'-0"	D3	ALUM	FF	SG	-	HDW-2	ALUM	FF	[3]	SG	[1]
101B	3'-0"	7'-0"	D2	HM	PT	SG	-	HDW-4	HM	PT	F3	SG	[2]
102	3'-0"	7'-0"	D1	HM	PT	-	-	HDW-4	HM	PT	F3	-	[2]
103A	3'-2"	7'-0"	D1	HM	PT	-	-	HDW-4	HM	PT	F3	-	
103B	4'-0"	7'-0"	D1	HM	PT	-		HDW-4	HM	PT	F3	-	

SCHEDULE NOTES

[1] BALANCE OF HARDWARE PER ALUMINUM STOREFRONT MANUFACTURER.

[2] INSULATED DOOR LEAF.

[3] ALSO REFER TO EXTERIOR ELEVATIONS FOR DOOR FRAME/WINDOW CONFIGURATION.

GENERAL NOTES

1. REFER TO PROJECT MANUAL, SECTION 08 71 00, "DOOR HARDWARE" FOR HARDWARE GROUPS.
2. REFER TO COLORS AND MATERIALS SCHEDULE FOR COLORS AND FINISHES.
3. REFER TO PROJECT MANUAL, SECTION 08 81 00, "GLAZING" FOR GLAZING TYPES. INSULATING GLASS UNITS SHALL BE LABELED AND NFRC CERTIFIED.
4. REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.
5. "PAINT" (PT) IS A GENERIC TERM USED IN DOCUMENTS. REFER TO PROJECT MANUAL, SECTION 09 91 00, "PAINTING" FOR SPECIFIC TYPE OF APPLIED FINISH. THE TERM "PAINT" REFERS TO PAINTS, STAINS, SEALERS AND OTHER APPLIED COATINGS.
6. REFER TO PROJECT MANUAL, SECTION 07 25 00, "WEATHER RESISTIVE BARRIER" FOR EXTERIOR WALL OPENING FLASHING REQUIREMENTS.
7. REFER TO BUILDING EXTERIOR OPENING PROTECTION LEGEND FOR FLASHING REQUIREMENTS OF EXTERIOR WALL OPENINGS.

DOOR HARDWARE GROUPS

HDW-1: PASSAGE HARDWARE.

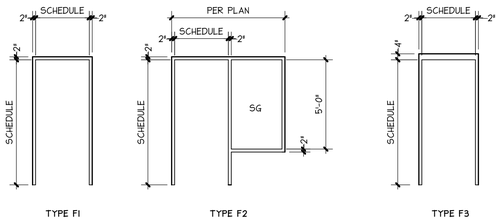
HDW-2: ALUMINUM STOREFRONT HARDWARE (LOCKING WITH CLOSER).

HDW-3: LOCKING HARDWARE.

HDW-4: LOCKING HARDWARE WITH CLOSER.

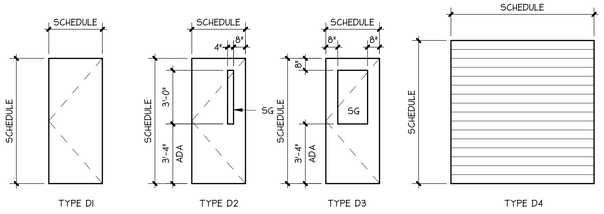
GENERAL NOTES

1. SUPPLIER: FINISH HARDWARE SHALL BE SUPPLIED BY A FACTORY AUTHORIZED BUILDER'S HARDWARE DISTRIBUTOR FOR PRODUCTS AS SPECIFIED, OR APPROVED AND WHO HAS BEEN FURNISHING HARDWARE IN THE SAME AREA AS THE PROJECT FOR A PERIOD OF NOT LESS THAN TWO (2) YEARS. THE SUPPLIER'S ORGANIZATION SHALL INCLUDE A MEMBER OF THE AMERICAN SOCIETY OF ARCHITECTURAL HARDWARE CONSULTANTS WHO IS AVAILABLE AT ALL REASONABLE TIMES DURING THE COURSE OF WORK TO MEET WITH THE OWNER, ARCHITECT AND GENERAL CONTRACTOR FOR PROJECT HARDWARE CONSULTATION.
2. PROVIDE HARDWARE THAT MEETS OR EXCEEDS HANDICAP ACCESSIBILITY PER LOCAL BUILDING CODES. CONFORM TO THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES.
3. ALL FINISH HARDWARE SHALL COMPLY WITH APPLICABLE LOCAL AND CURRENT BUILDING CODES.
4. ITEMS NOT SPECIFICALLY MENTIONED BUT NECESSARY TO COMPLETE THE WORK SHALL BE FURNISHED, MATCHING THE ITEMS SPECIFIED IN QUALITY AND FINISH.
5. ALL HARDWARE IS TO BE ANSI/BHMA GRADE 1, UNLESS SPECIFIED OTHERWISE.
6. EXPOSED SURFACES OF ALL HARDWARE SHALL BE 626 BRUSHED SATIN CHROME (US26D) UNLESS OTHERWISE STATED IN COLORS AND MATERIALS SCHEDULE.



FRAME TYPES

1/4" = 1'-0"



DOOR TYPES

1/4" = 1'-0"

ROOM FINISH SCHEDULE

ch	ROOM NAME	FLOOR MATERIAL	FLOOR FINISH	BASE	CEILING MATERIAL	CEILING FINISH	WALL MATERIAL	WALL FINISH	NOTES
FP-01									
100	EQUIPMENT TUNNEL	CONC.	EPOXY	EPOXY	[2]	[2]	CMU	SEALER	[1] [4]
101	OFFICE	CONC.	EPOXY	EPOXY	ACT	FF	GWB/FRP	PT/FF	
102	TOILET	CONC.	EPOXY	EPOXY	GWB	PT	GWB	PT/FRP	
103	EQUIPMENT	CONC.	EPOXY	EPOXY	[3]	[3]	CMU	SEALER	[1]

SCHEDULE NOTES

[1] EPOXY BASE TO EXTEND UP TO BOTOM OF CMU (APPROXIMATELY 8').

[2] EXPOSED STRUCTURE AND TRANSLUCENT ROOFING PANEL SYSTEM. PAINT ALL STRUCTURAL ELEMENTS AND EXPOSED MECHANICAL/ELECTRICAL COMPONENTS.

[3] EXPOSED STRUCTURE. PAINT ALL STRUCTURAL ELEMENTS AND EXPOSED MECHANICAL/ELECTRICAL COMPONENTS.

[4] EQUIPMENT SUPPLIER LINER PANELS INSTALLED ON FACE OF METAL STUD WALLS WHERE OCCURS IN TUNNEL.

GENERAL NOTES

1. REFER TO COLORS AND MATERIALS SCHEDULE FOR COLORS AND FINISHES.
2. "PAINT" (PT) IS A GENERIC TERM USED IN DOCUMENTS. REFER TO PROJECT MANUAL, SECTION 09 91 00, "PAINTING" FOR SPECIFIC TYPE OF APPLIED FINISH. THE TERM "PAINT" REFERS TO PAINTS, STAINS, SEALERS AND OTHER APPLIED COATINGS.
3. PAINT ALL EXPOSED CONDUITS AND PIPES; MATCH COLOR OF ADJACENT MATERIAL.
4. PAINT ALL EXPOSED SHEET METAL (GALVANIZED STEEL) HVAC DUCTS AND/OR OTHER MECHANICAL COMPONENTS. REFER TO COLORS AND MATERIALS SCHEDULE FOR PAINT COLOR.

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BRUCE McKEAN
STATE OF WASHINGTON

HELIX DESIGN GROUP, INC

SCHEDULES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22

JOB NO. a20-112

BID SET

A200

WHITE

DRAWING NO.

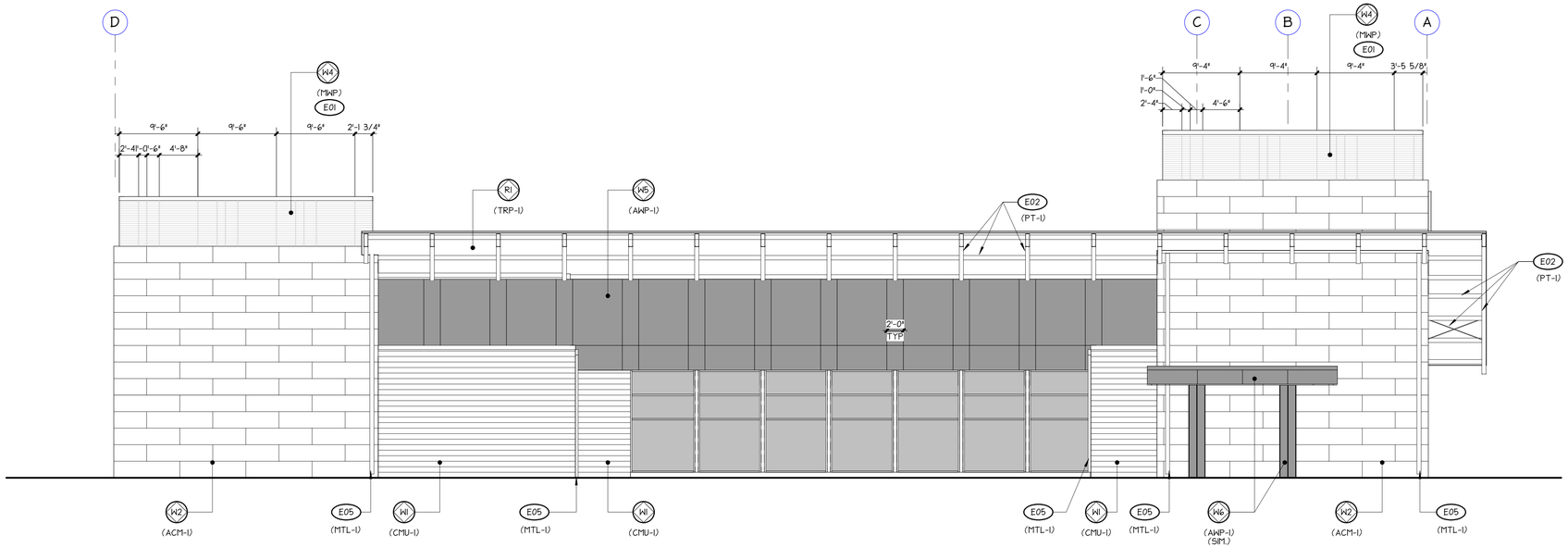
PLOTTED: 8/02/2022 1:35:24 PM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3KS.rvt

ELEVATION LEGEND

DESCRIPTION	SYMBOL AND TEXT
WINDOW window type designation, refer to window schedule	W1
ASSEMBLY TYPES W = wall type R = roof type S = soffit type F = floor type	W1
ELEVATION surface type designation T.O.F. = top of floor T.O.B. = top of bearing T.O.W. = top of wall (E) = existing	T.O.F.

ELEVATION NOTES

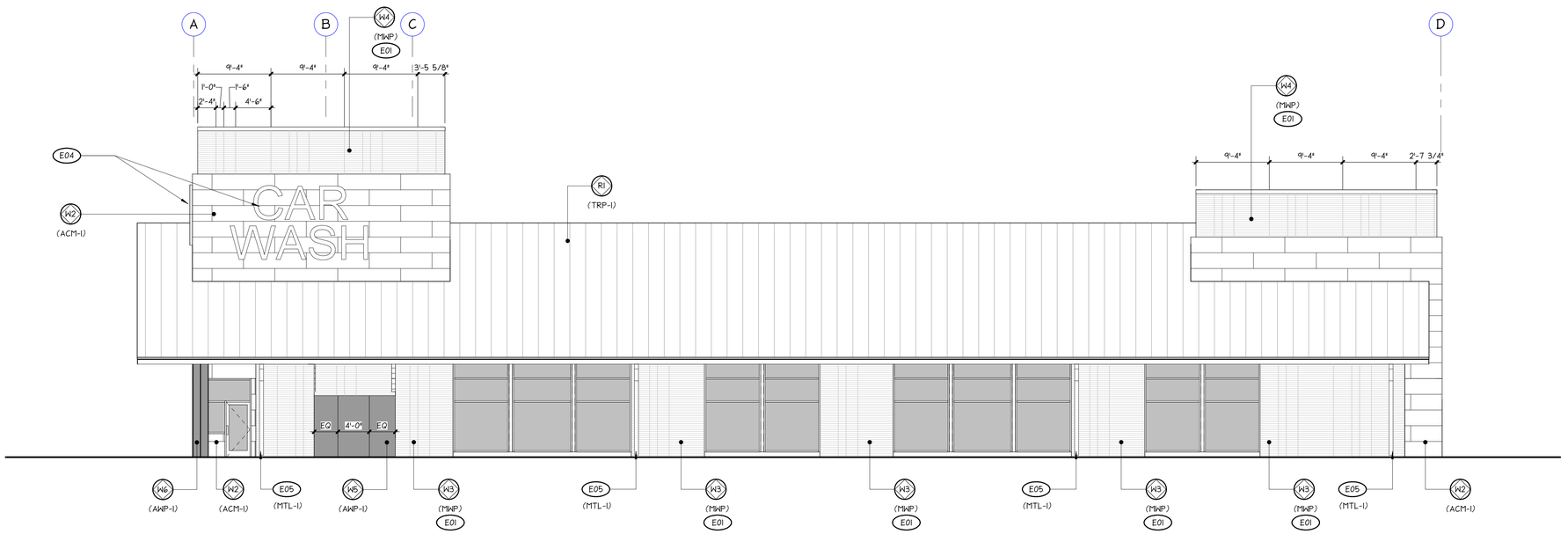
SYMBOL	NOTE
E01	REFER TO SHEET A301 FOR (MWP) PATTERN LAYOUT AND PANEL TYPE INDICATION.
E02	EXPOSED STEEL FRAMING (PAINT).
E03	ROOF OVERFLOW SPOUT.
E04	SIGNAGE (F.I.O.) PROVIDE POWER TO SIGNAGE LOCATIONS.
E05	METAL DOWNSPOUT.



5B WEST ELEVATION

1/8" = 1'-0"

NOTE: REFER TO SHEET A301 FOR COMMON LEGENDS



10B EAST ELEVATION

1/8" = 1'-0"

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HELIX DESIGN GROUP, INC

EXTERIOR ELEVATIONS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

A300

WHITE

DRAWING NO.

PLOTTED: 8/12/2022 1:35:25 PM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3NS.rvt

ELEVATION LEGEND

DESCRIPTION	SYMBOL AND TEXT
WINDOW window type designation, refer to window schedule	W1
ASSEMBLY TYPES W = wall type R = roof type S = soffit type F = floor type	W1
ELEVATION surface type designation T.O.F. = top of floor T.O.B. = top of bearing T.O.W. = top of wall (E) = existing	T.O.F.

GENERAL NOTES

NOTE

1. REFER TO BUILDING ASSEMBLY LEGEND ON SHEET G030 FOR ASSEMBLY TYPES.
2. ABBREVIATIONS:
   (D) - DEMOLITION
   (R) - RELOCATE
   (E) - EXISTING TO REMAIN
   (S) - SALVAGE
3. REFER TO SHEET *G020* FOR STANDARD ABBREVIATIONS LIST.
4. PAINT ALL EXPOSED CONDUITS AND PIPES; MATCH COLOR OF ADJACENT MATERIAL.

ELEVATION NOTES

SYMBOL	NOTE
E01	REFER TO SHEET A301 FOR (MWP) PATTERN LAYOUT AND PANEL TYPE INDICATION.
E02	EXPOSED STEEL FRAMING (PAINT).
E03	ROOF OVERFLOW SPOUT.
E04	SIGNAGE (F.I.O.) PROVIDE POWER TO SIGNAGE LOCATIONS.
E05	METAL DOWNSPOUT.

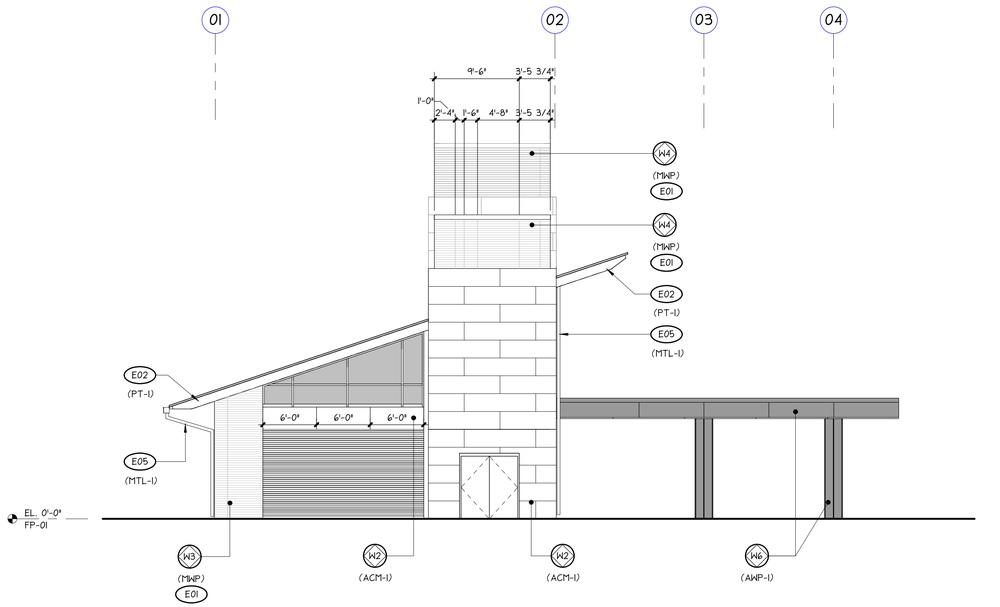
MATERIALS LEGEND

MATERIAL	PATTERN
ALUMINUM COMPOSITE MATERIAL WALL PANEL (ACM) refer schedule for color and finish, reveal pattern per elevations	
METAL WALL PANEL (MWP) refer to schedule for color and finish	
CONCRETE MASONRY UNIT (CMU) refer to schedule for finish, cmu pattern per elevations	
ARCHITECTURAL WALL PANELS (AWP) refer to schedule for color and finish, reveal pattern per elevations	
GLAZING refer to schedule for type and color SG = safety glass	

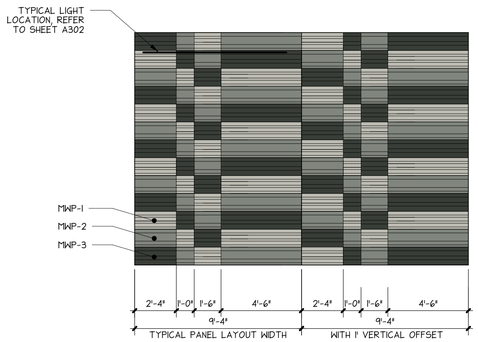
EXTERIOR FINISH SCHEDULE

ARCHITECTURAL CONCRETE (VERTICAL)	CLEAR SEALER
ARCHITECTURAL CONCRETE (HORIZONTAL)	CLEAR SEALER
CONCRETE MASONRY UNIT (CMU)	CLEAR SEALER
STRUCTURAL STEEL FRAMING	PAINT
METAL FABRICATIONS	PAINT
ARCHITECTURAL WALL PANELS (AWP)	FACTORY FINISH
METAL WALL PANEL (MWP)	FACTORY FINISH
SINGLE-PLY MEMBRANE ROOFING (SPMR)	FACTORY FINISH
METAL FLASHING AND TRIM	FACTORY FINISH
METAL GUTTERS AND DOWNSPOUTS	FACTORY FINISH
STOREFRONT SYSTEM AND ENTRANCE DOORS	FACTORY FINISH
HOLLOW METAL DOORS AND FRAMES	PAINT
ALUMINUM COMPOSITE MATERIAL WALL PANEL (ACM)	FACTORY FINISH
STEEL BOLLARDS	PAINT

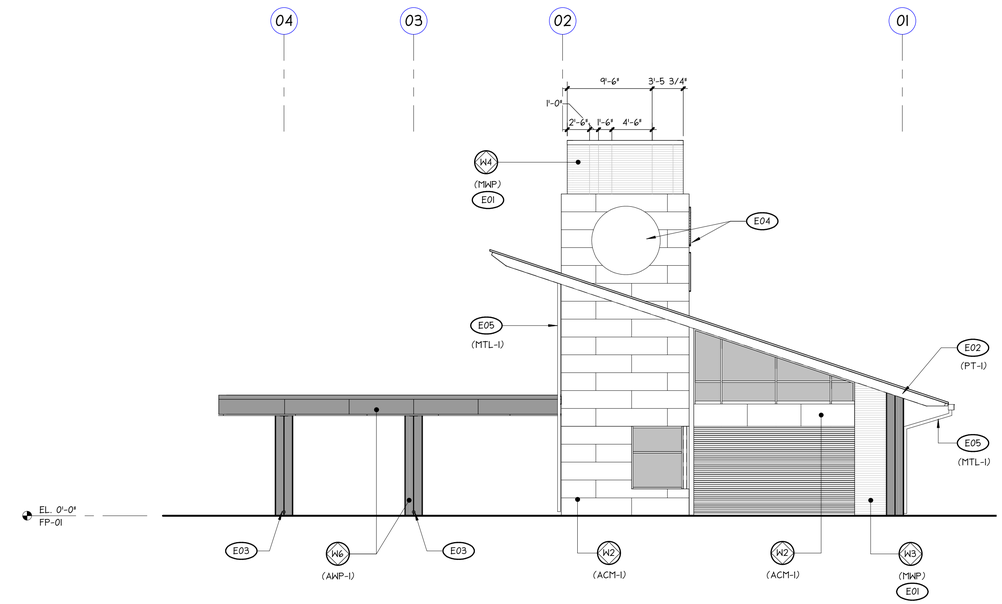
1. REFER TO EXTERIOR COLORS AND MATERIALS SCHEDULE FOR COLORS AND FINISHES.
2. ABBREVIATIONS:
   (E) = EXISTING TO REMAIN
3. FOOTNOTES:
   -
4. GENERAL NOTES:
   (1) PAINT ALL EXPOSED CONDUITS, MECHANICAL/ELECTRICAL ITEMS AND PIPES; MATCH COLOR OF ADJACENT MATERIAL.



5G NORTH ELEVATION
1/8" = 1'-0"



10C TYP MWP LAYOUT
1/4" = 1'-0"



10F SOUTH ELEVATION
1/8" = 1'-0"

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EXTERIOR ELEVATIONS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

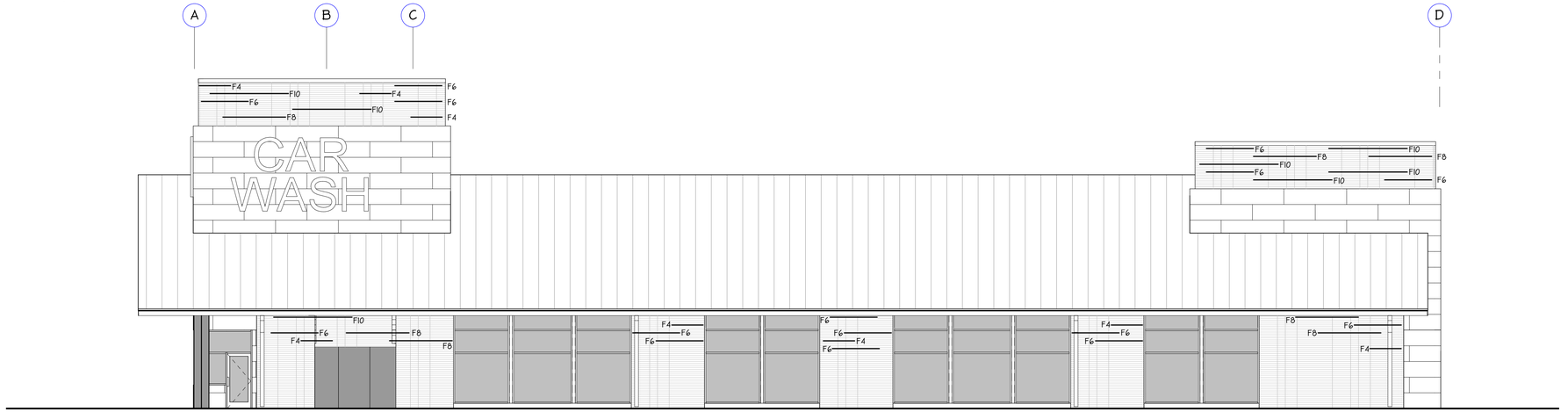
BID SET

A301

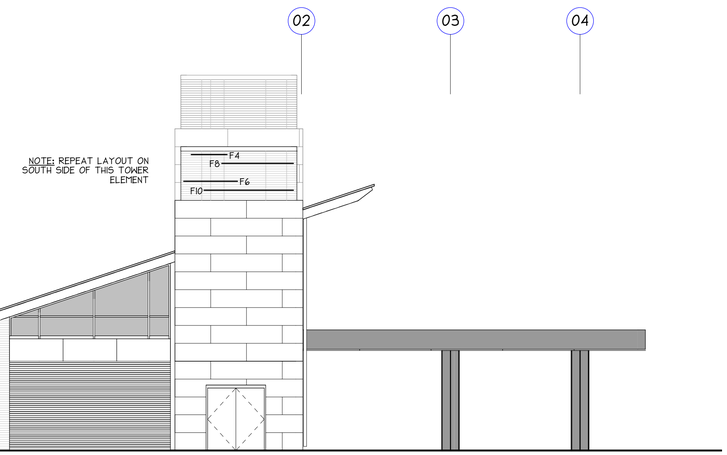
WHITE

DRAWING NO.

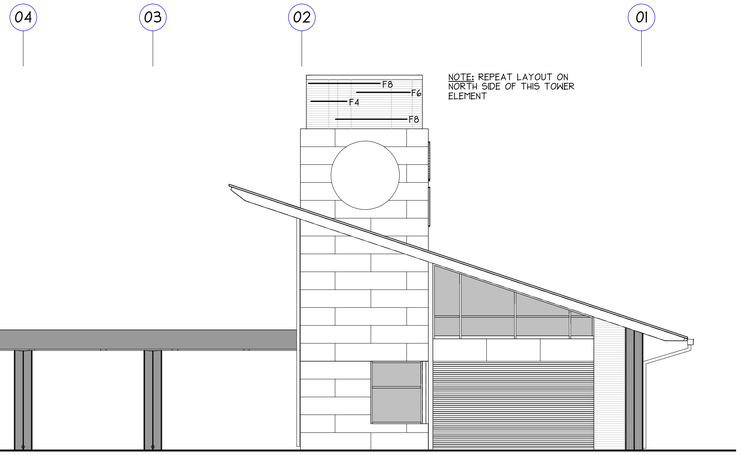
PLOTTED: 8/12/2022 1:35:26 PM
PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3NS.rvt



3C EAST ELEVATION
1/8" = 1'-0"



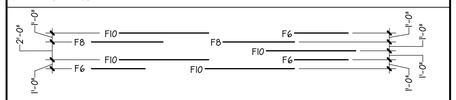
10F NORTH ELEVATION
1/8" = 1'-0"



7F SOUTH ELEVATION
1/8" = 1'-0"

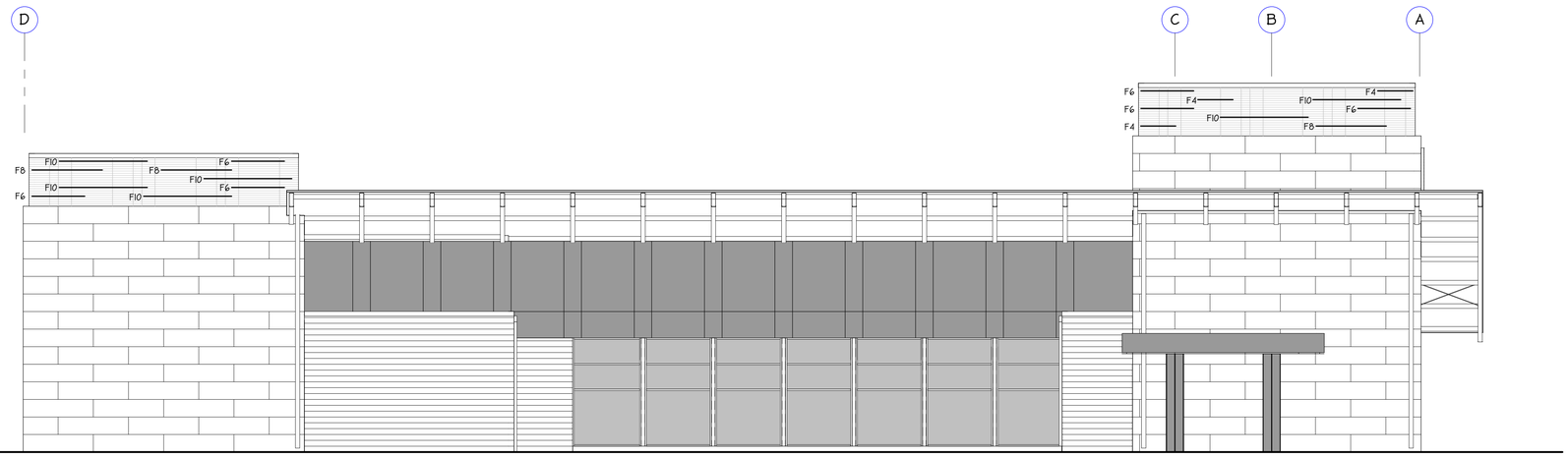
LIGHTING LAYOUT LEGEND

LAYOUT EXAMPLE:



GENERAL NOTES:

1. REFER TO ELECTRICAL DRAWINGS FOR FIXTURE PRODUCT INFORMATION.
2. FIXTURE LENGTH IN DESIGNATION NAME, I.E., "F10" = 10'-0" LONG FIXTURE.
3. ALL FIXTURES TO BE MOUNTED IN THE HIGHEST INSET REVEAL (ALL HIGHEST INSET REVEALS ALIGN HORIZONTALLY BETWEEN METAL PANELS MWP-1, MWP-2 AND MWP-3) TYPICAL. REFER TO SHEET A301 FOR TYPICAL METAL WALL PANEL LAYOUT CLARIFICATION.
4. ALL FIXTURES SHOULD BE MOUNTED IN INCREMENTS OF 1'-0" FEET VERTICALLY (EITHER 1'-0" OR 2'-0" APART, REFER TO ELEVATIONS AND LAYOUT EXAMPLE ABOVE).
5. FIXTURES SHALL EXTEND THROUGH VERTICAL "T" METAL FLASHING BETWEEN MWP PANELS.



10C WEST ELEVATION
1/8" = 1'-0"

PLOTTED: 8/12/2022 1:35:28 PM
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3NS.rvt
PROJECT: a20-112 - QUIL CEDA VILLAGE

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STATE OF WASHINGTON
HELIX DESIGN GROUP, INC

EXTERIOR ELEVATION LIGHTS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22
JOB NO. a20-112

BID SET

A302

WHITE
DRAWING NO.

SECTION LEGEND

DESCRIPTION	SYMBOL AND TEXT

ASSEMBLY TYPES
W = wall type
R = roof type
S = soffit type
F = floor type

ELEVATION
surface type designation
T.O.F. = top of floor
T.O.B. = top of bearing
T.O.W. = top of wall

(E) = existing

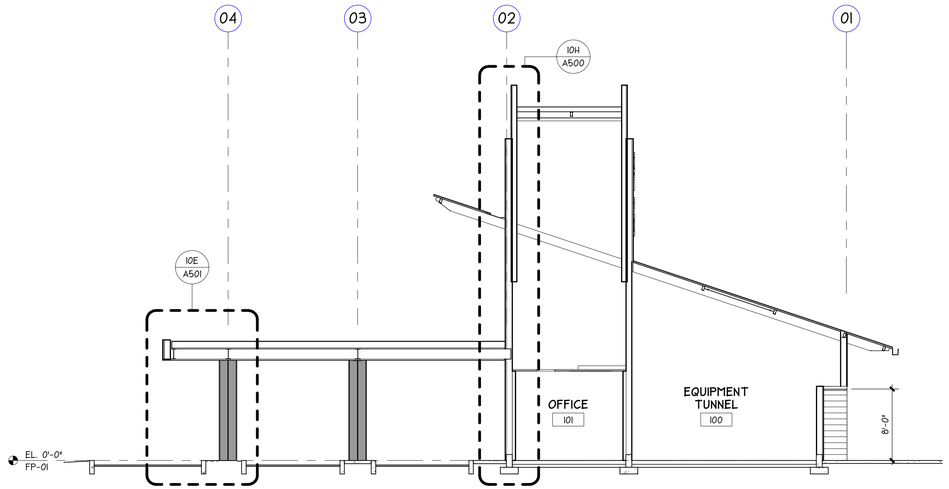
SECTION NOTES

SYMBOL	NOTE
BS01	+ + +

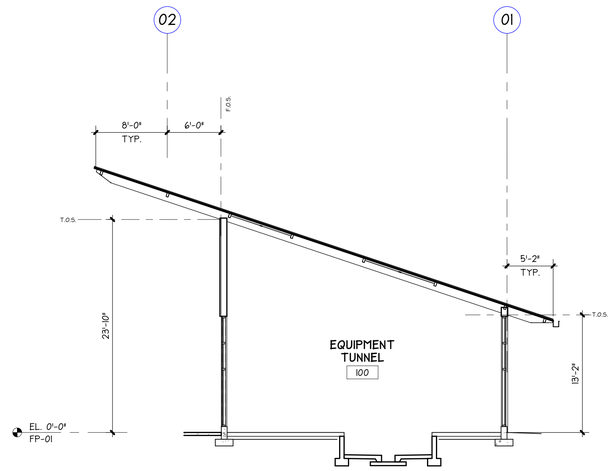
GENERAL NOTES

NOTE

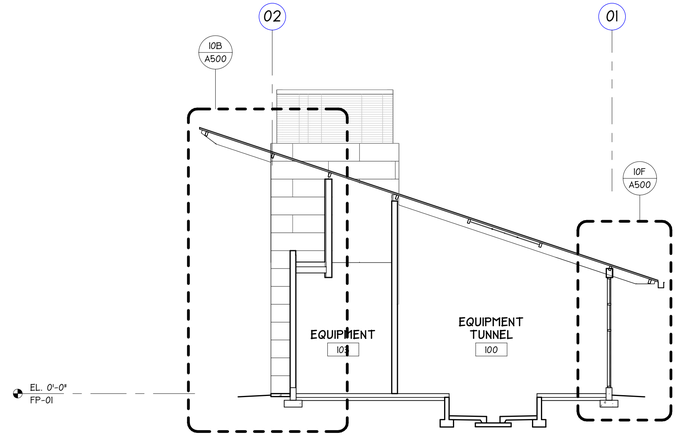
1. REFER TO BUILDING ASSEMBLY LEGEND FOR ASSEMBLY TYPES.
2. ABBREVIATIONS:
   (D) - DEMOLITION
   (R) - RELOCATE
   (E) - EXISTING TO REMAIN
   (S) - SALVAGE
3. REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.



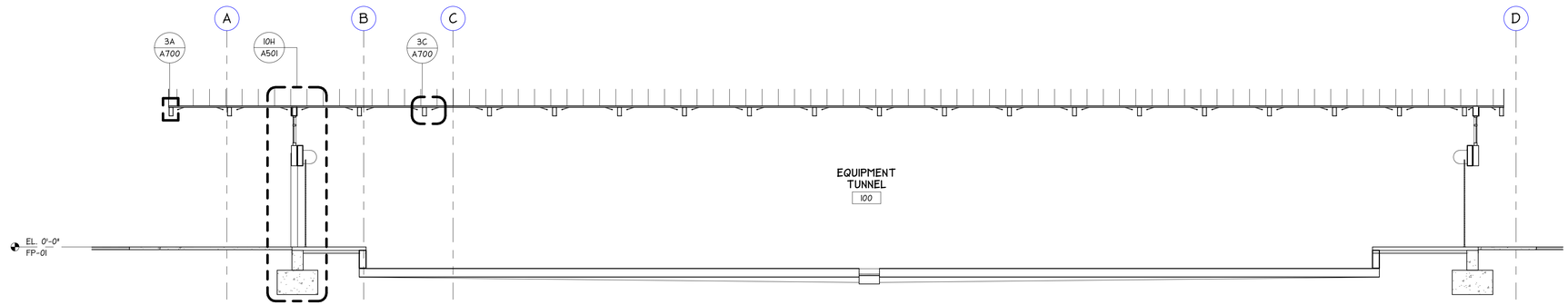
4B BUILDING SECTION
1/8" = 1'-0"



4G BUILDING SECTION
1/8" = 1'-0"



7G BUILDING SECTION
1/8" = 1'-0"



10B BUILDING SECTION
1/8" = 1'-0"

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BUILDING SECTIONS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

A400

WHITE
DRAWING NO.

PLOTTED: 8/12/2022 1:35:30 PM
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3NS.rvt
PROJECT: a20-112 - QUIL CEDA VILLAGE

SECTION LEGEND

DESCRIPTION	SYMBOL AND TEXT

ASSEMBLY TYPES

W = wall type
R = roof type
S = soffit type
F = floor type

ELEVATION

surface type designation
T.O.F. = top of floor
T.O.B. = top of bearing
T.O.W. = top of wall

(E) = existing

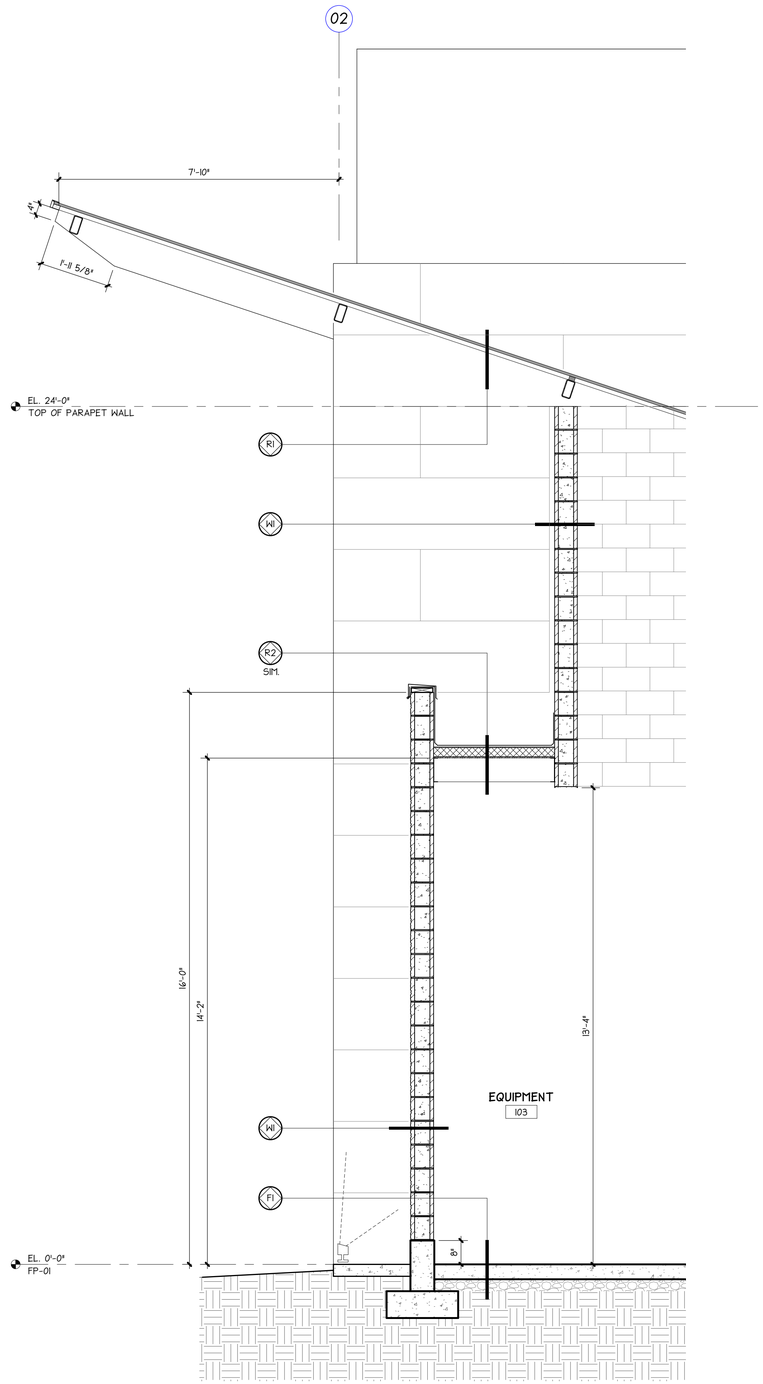
SECTION NOTES

SYMBOL	NOTE
BS01	* * *

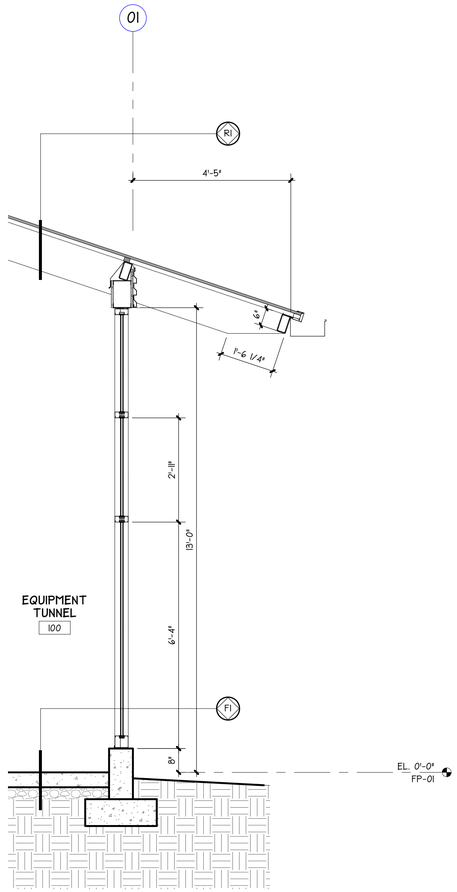
GENERAL NOTES

NOTE

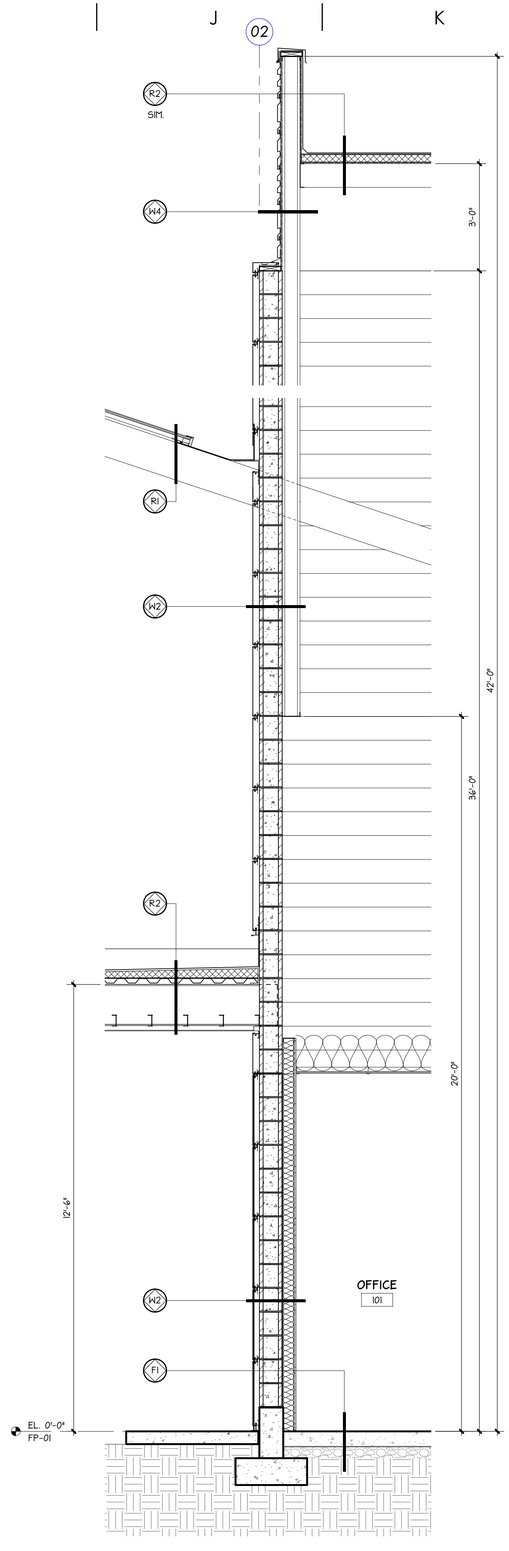
1. REFER TO BUILDING ASSEMBLY LEGEND FOR ASSEMBLY TYPES.
2. ABBREVIATIONS:
   (D) - DEMOLITION
   (R) - RELOCATE
   (E) - EXISTING TO REMAIN
   (S) - SALVAGE
3. REFER TO SHEET G020 FOR STANDARD ABBREVIATIONS LIST.



10B WALL SECTION
1/2" = 1'-0"



10F WALL SECTION
1/2" = 1'-0"



10H WALL SECTION
1/2" = 1'-0"

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WALL SECTIONS

QUIL CEDA
VILLAGE
CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

A500

WHITE

DRAWING NO.

PLOTTED: 8/12/2022 1:35:31 PM
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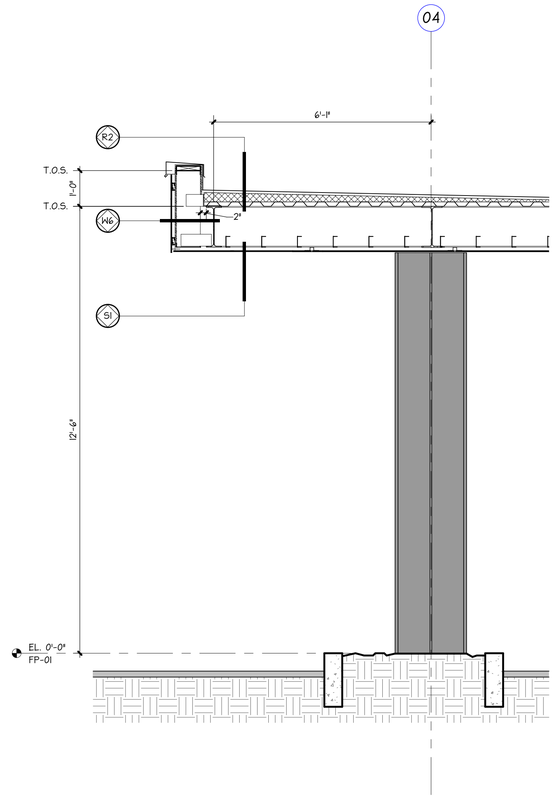
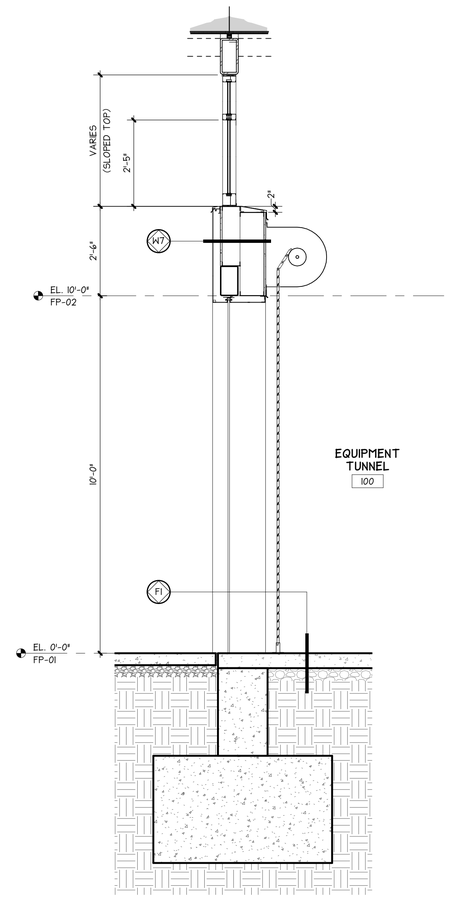


10E WALL SECTION
1/2" = 1'-0"



10H WALL SECTION
1/2" = 1'-0"

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STATE OF WASHINGTON

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WALL SECTIONS

QUIL CEDA
VILLAGE
CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

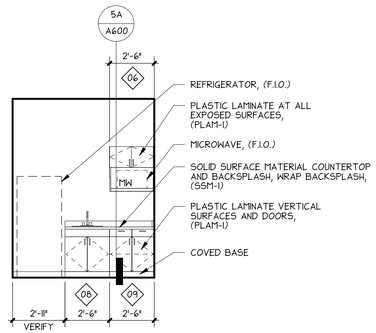
DATE	JOB NO.
08.12.22	a20-112

BID SET

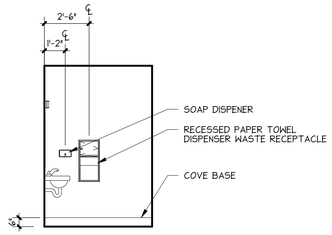
A501

WHITE
DRAWING NO.

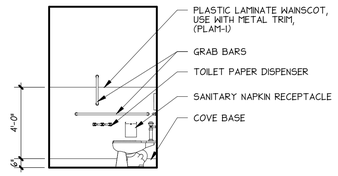
PLOTTED: 8/12/2022 11:35:32 PM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:\Users\travisn\Desktop\Revit 2020 Projects\a20-112 QCV Car Wash-A_r20_travisnLF3NS.rvt



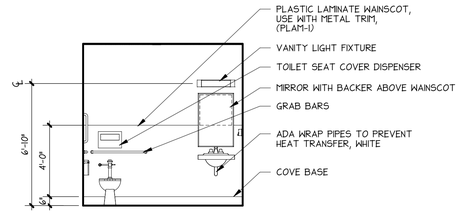
3A OFFICE - 101
1/4" = 1'-0"



3C TOILET - 102
1/4" = 1'-0"

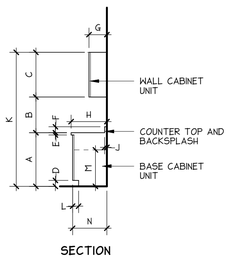


3E TOILET - 102
1/4" = 1'-0"



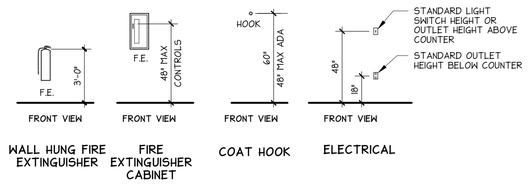
3G TOILET - 102
1/4" = 1'-0"

A. STANDUP: 34"
B. 24"
C. 30"
D. 4"
E. 1 1/2"
F. 4"
G. 12"
H. STANDARD: 24"
J. 1 1/2"
K. 88"
L. 4"
M. KNEE SPACE: 24 1/2"
N. STANDARD: 23"

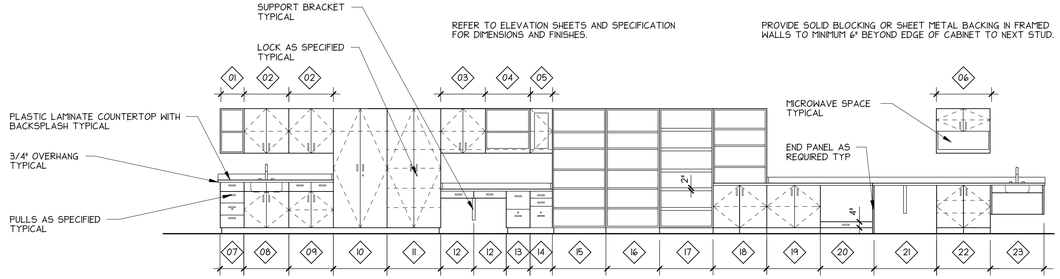


SECTION

5A STANDARD CABINETS
1/4" = 1'-0"



5C MISCELLANEOUS ITEMS
1/4" = 1'-0"



FRONT VIEW

TYPICAL CABINET LEGEND NOTES

01 OPEN WALL CABINET WITH ADJUSTABLE SHELVING.
02 WALL CABINET WITH DOORS AND ADJUSTABLE SHELVING.
03 WALL CABINET WITH DOORS ADJUSTABLE SHELVING AND INTEGRAL LIGHT VALANCE.
04 OPEN WALL CABINET WITH ADJUSTABLE SHELVING AND INTEGRAL LIGHT VALANCE.
05 WALL CABINET WITH GLASS PANEL DOORS, ADJUSTABLE SHELVING AND INTEGRAL LIGHT VALANCE.
06 WALL CABINET WITH DOORS AND ADJUSTABLE SHELVING ABOVE. OPEN WALL CABINET FOR MICROWAVE. 16" DEEP MICROWAVE SHELF. VERIFY OPENING DIMENSIONS WITH OWNER PROVIDED EQUIPMENT.
07 BASE CABINET WITH DRAWERS. LOCKING HARDWARE AS SPECIFIED.
08 BASE CABINET WITH SINK, APRON AND DOORS.
09 BASE CABINET WITH DRAWERS. ADJUSTABLE SHELVING AND DOORS.
10 FULL HEIGHT WARDROBE CABINET WITH ROD, SHELF AND DOORS. HARDWARE AS SPECIFIED.
11 FULL HEIGHT STORAGE CABINET WITH DOORS AND ADJUSTABLE SHELVING. LOCKING HARDWARE AS SPECIFIED.
12 PENCIL DRAWER SUSPENDED BELOW COUNTERTOP.
13 BASE CABINET WITH FILE DRAWERS. LOCKING HARDWARE AS SPECIFIED.
14 BASE CABINET (2) DRAWER AND FILE. LOCKING HARDWARE AS SPECIFIED.
15 FULL HEIGHT CABINET, OPEN WITH ADJUSTABLE SHELVES.
16 FULL HEIGHT CABINET, OPEN WITH FIXED SHELVES.
17 FULL HEIGHT CABINET OPEN WITH FIXED SHELVING AND LIGHT VALANCE AT EACH SHELF FRONT EDGE.
18 FULL HEIGHT CABINET OPEN WITH ADJUSTABLE GLASS SHELVING ABOVE. BASE CABINET WITH DOORS AND ADJUSTABLE SHELF.
19 BASE CABINET WITH ADJUSTABLE SHELVING AND DOORS.
20 OPEN BASE CABINET WITH EXTENDING ROLL OUT PRINTER SHELF.
21 COUNTERTOP AND BACKSPLASH WITH SUPPORT BRACKETS. OPEN BELOW. PROVIDE CONTINUOUS SUPPORT LEDGER BELOW COUNTERTOP ALONG WALLS.
22 BASE CABINET WITH ADJUSTABLE SHELVING (DOUBLE SHELVES) AND DOORS.
23 ACCESSIBLE VANITY WITH SINK.

8A STANDARD CABINET LEGEND
1/4" = 1'-0"

TYPICAL PLUMBING FIXTURE AND TOILET ROOM ACCESSORIES NOTES

PROVIDE SOLID BLOCKING OR SHEET METAL BACKING IN FRAMED WALLS TO MINIMUM 6" BEYOND EDGE OF ITEM TO THE NEXT STUD.

A. KNEE CLEARANCE: 27"

* NON-ADA RIM 14"-15"

FLUSH CONTROL ON WIDE SIDE OF STALL FOR CONCEALED VALVE.

TOP OF COUNTER SURFACE OR RIM

A. MIRROR WIDTH (U.N.O. ON INTERIOR ELEVATION) INDIVIDUAL LAVATORY: 24" CONTINUOUS COUNTER FULL WIDTH OF COUNTER

* 35" MAX IF NOT OVER COUNTER OR LAVATORY

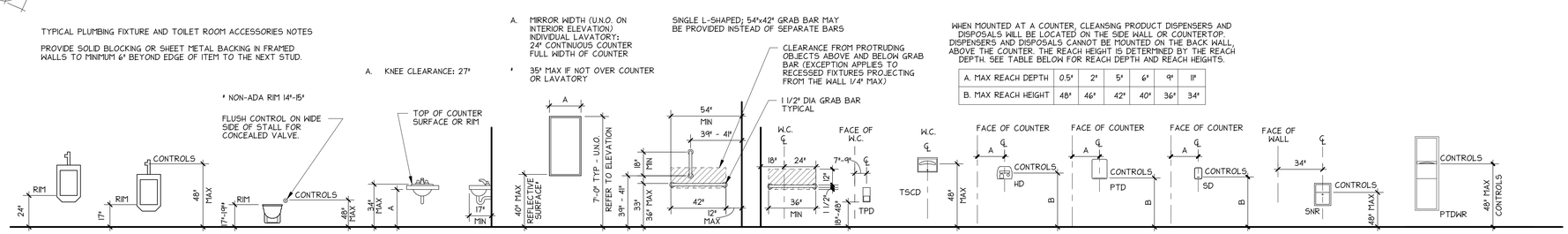
SINGLE L-SHAPED; 54"x42" GRAB BAR MAY BE PROVIDED INSTEAD OF SEPARATE BARS

CLEARANCE FROM PROTRUDING OBJECTS ABOVE AND BELOW GRAB BAR (EXCEPTION APPLIES TO RECESSED FIXTURES PROJECTING FROM THE WALL 1/4" MAX)

1 1/2" DIA GRAB BAR TYPICAL

WHEN MOUNTED AT A COUNTER, CLEANSING PRODUCT DISPENSERS AND DISPOSALS WILL BE LOCATED ON THE SIDE WALL OR COUNTERTOP. DISPENSERS AND DISPOSALS CANNOT BE MOUNTED ON THE BACK WALL, ABOVE THE COUNTER. THE REACH HEIGHT IS DETERMINED BY THE REACH DEPTH. SEE TABLE BELOW FOR REACH DEPTH AND REACH HEIGHTS.

A. MAX REACH DEPTH	0.5"	2"	5"	6"	9"	11"
B. MAX REACH HEIGHT	48"	46"	42"	40"	36"	34"



10A PLUMBING FIXTURE AND TOILET ACCESSORIES
1/4" = 1'-0"

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PROJECT: a20-112 - QUIL CEDA VILLAGE

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AMERICAN INSTITUTE OF ARCHITECTS
5134 REGISTERED ARCHITECT
BRUCE McKEAN
STATE OF WASHINGTON
HELIX DESIGN GROUP, INC

STANDARD CASEWORK AND FIXTURES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

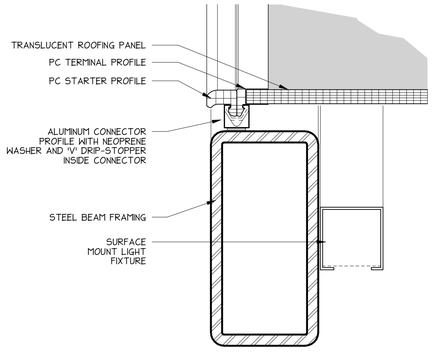
DATE 08.12.22
JOB NO. a20-112

BID SET

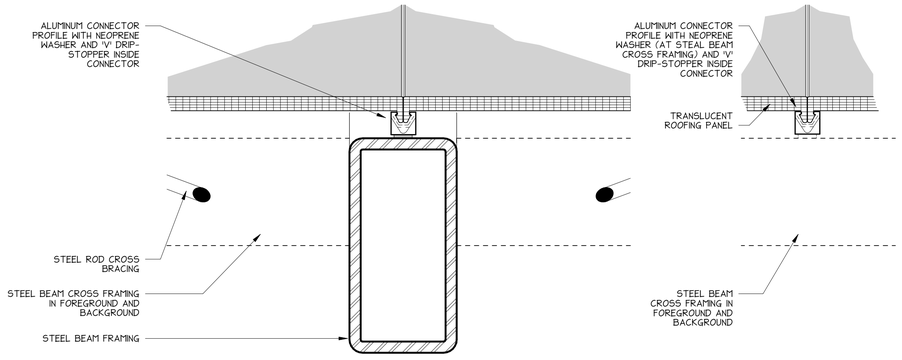
A600

WHITE

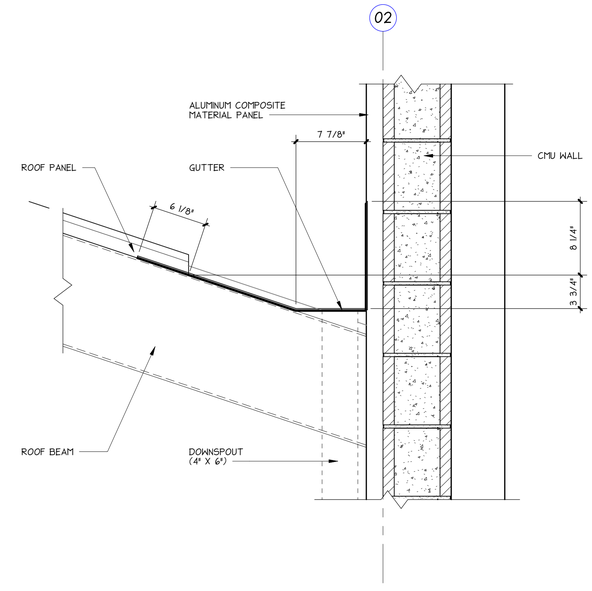
DRAWING NO.



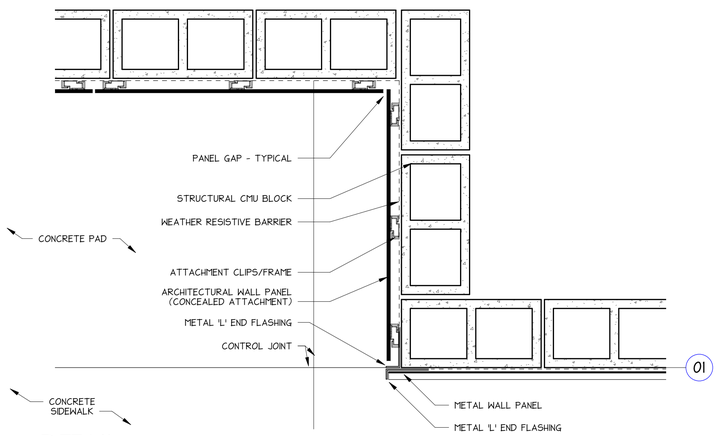
3A DETAIL
3" = 1'-0"



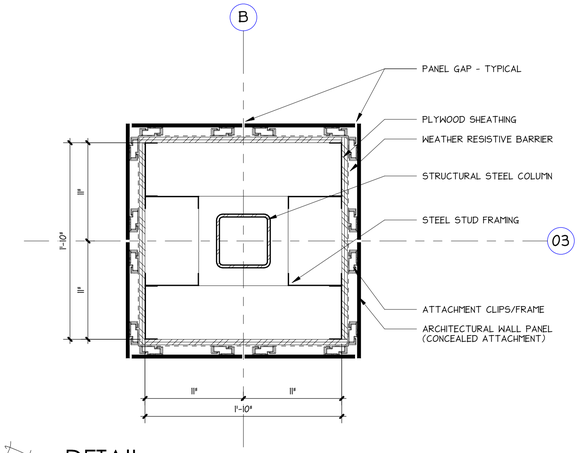
3C DETAIL
3" = 1'-0"



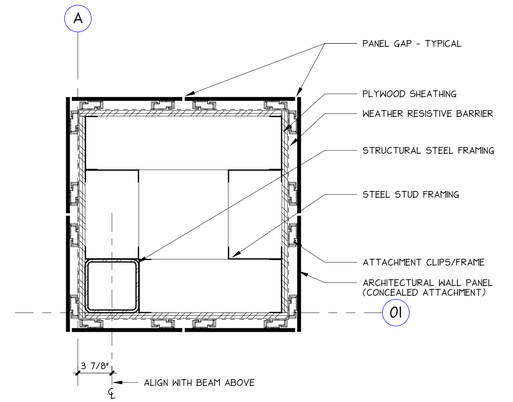
4G DETAIL
1 1/2" = 1'-0"



10B DETAIL
1 1/2" = 1'-0"



10E DETAIL
1 1/2" = 1'-0"



10H DETAIL
1 1/2" = 1'-0"

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EXTERIOR DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

A700

WHITE

DRAWING NO.

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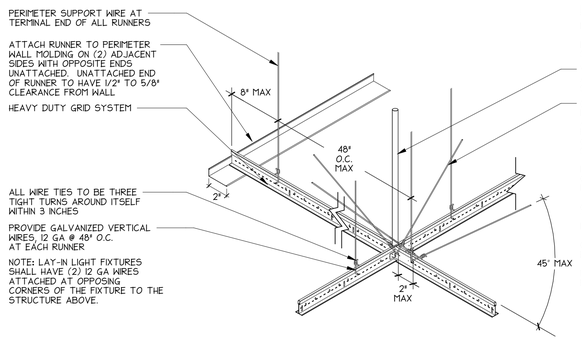

LATERAL FORCE BRACING

NOT REQUIRED FOR CEILINGS 1000SF OR LESS

LATERAL FORCE BRACING IS THE USE OF SPLAY WIRES AND VERTICAL STRUTS

VERTICAL STRUTS MUST BE POSITIVELY ATTACHED TO SUSPENSION SYSTEM AND STRUCTURE ABOVE.

(4) 12 GAUGE SPLAY WIRES ATTACHED TO THE MAIN BEAM 90° FROM EACH OTHER AND AT AN ANGEL NOT EXCEEDING 45° FROM THE CEILING PLANE. INSTALLED WITHIN 2" OF THE CONNECTION OF THE VERTICAL STRUT TO THE SUSPENDED CEILING.

LATERAL FORCE BRACING SHALL BE 12' ON CENTER (MAX) AND BEGIN NO FARTHER THAN 6 FEET FROM WALLS

CEILINGS WITH PLENUMS LESS THAN 12 INCHES TO STRUCTURE ARE NOT REQUIRED TO HAVE LATERAL FORCE BRACING

CHANGES IN CEILING PLANES REQUIRE POSITIVE BRACING

REFER TO NORTHWEST WALL AND CEILING BUREAU TECHNICAL DOCUMENT 401 FOR DETAILS

3A DETAIL

1 1/2" = 1'-0"

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INTERIOR DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

A720

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DRAWING NO.

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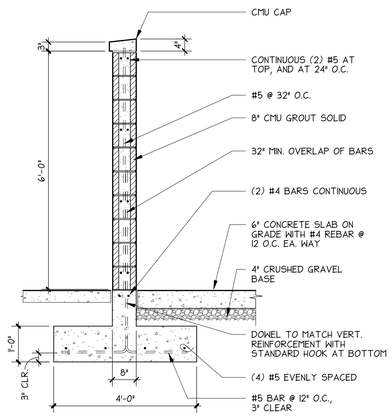
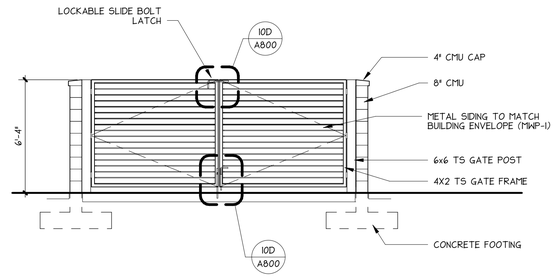
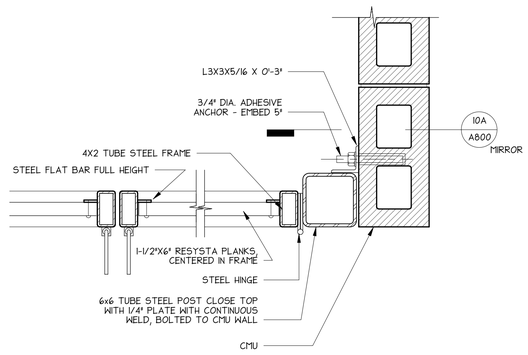


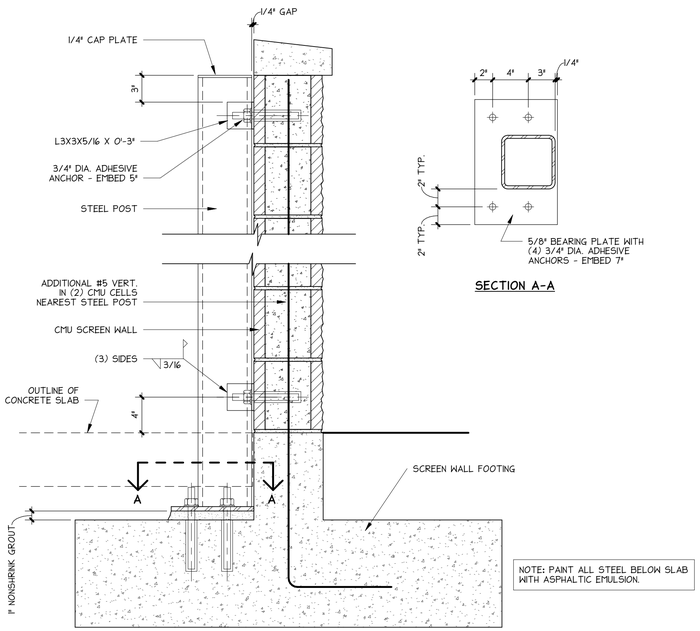
4D DETAIL
1/2" = 1'-0"



4G FRONT ELEVATION
1/4" = 1'-0"

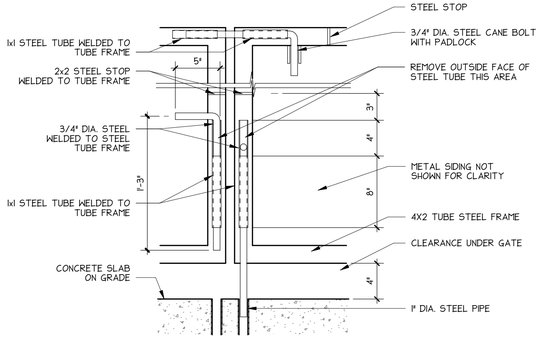


7D DETAIL
1 1/2" = 1'-0"

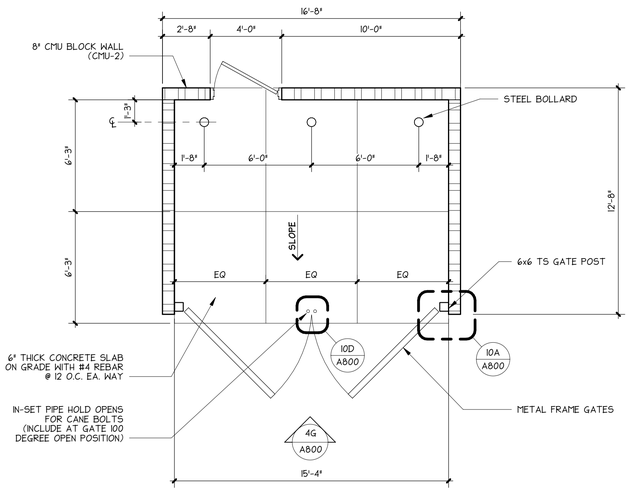


SECTION A-A

10A SECTION - TYPICAL
1 1/2" = 1'-0"



10D DETAIL
1 1/2" = 1'-0"



10G TRASH ENCLOSURE PLAN
1/4" = 1'-0"

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7 SITE DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22
JOB NO. a20-112
BID SET

A800

WHITE
DRAWING NO.

GENERAL NOTES

THESE GENERAL NOTES ARE TO BE USED AS A SUPPLEMENT TO THE SPECIFICATIONS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATIONS, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK. THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION. THE STRUCTURE HAS BEEN DESIGNED TO RESIST CODE SPECIFIED VERTICAL AND LATERAL FORCES AFTER THE CONSTRUCTION OF ALL STRUCTURAL ELEMENTS HAS BEEN COMPLETED. STABILITY OF THE STRUCTURE PRIOR TO COMPLETION IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THIS RESPONSIBILITY INCLUDES BUT IS NOT LIMITED TO JOB SITE SAFETY; ERECTION MEANS, METHODS, AND SEQUENCES; TEMPORARY SHORING, FORMWORK, BRACING; USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES. PROVIDE ADEQUATE RESISTANCE TO LOADS ON THE STRUCTURES DURING CONSTRUCTION PER SEI/ASCE STANDARD NO. 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION."

CONSTRUCTION OBSERVATION BY THE STRUCTURAL ENGINEER IS FOR GENERAL CONFORMANCE WITH DESIGN ASPECTS ONLY AND IS NOT INTENDED IN ANY WAY TO REVIEW THE CONTRACTOR'S CONSTRUCTION PROCEDURES.

STANDARDS
ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED AND ADOPTED BY THE LOCAL BUILDING OFFICIAL OR APPLICABLE JURISDICTION.

CONTRACT DRAWINGS / DIMENSIONS

ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. CONSULTANT DRAWINGS BY OTHER DISCIPLINES ARE SUPPLEMENTARY TO ARCHITECTURAL DRAWINGS. REPORT DIMENSIONAL OMISSIONS OR DISCREPANCIES BETWEEN ARCHITECTURAL DRAWINGS AND STRUCTURAL, MECHANICAL, ELECTRICAL OR CIVIL DRAWINGS TO ARCHITECT PRIOR TO PROCEEDING WITH WORK.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS. PRIMARY STRUCTURAL ELEMENTS ARE DIMENSIONED ON STRUCTURAL PLANS AND DETAILS AND OVERALL LAYOUT OF STRUCTURAL PORTION OF WORK. SOME SECONDARY ELEMENTS ARE NOT DIMENSIONED, SUCH AS WALL CONFIGURATIONS, INCLUDING EXACT DOOR AND WINDOW LOCATIONS, ALCOVES, SLAB SLOPES AND DEPRESSIONS, CURBS, ETC. VERTICAL DIMENSIONAL CONTROL IS DEFINED BY ARCHITECTURAL WALL SECTIONS AND BUILDING SECTIONS. STRUCTURAL DETAILS SHOW DIMENSIONAL RELATIONSHIPS TO CONTROL DIMENSIONS DEFINED BY ARCHITECTURAL DRAWINGS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN **BOTH** ARCHITECTURAL AND STRUCTURAL DRAWINGS.

DESIGN CRITERIA

VERTICAL LOADS

AREA	DESIGN DEAD LOAD	LIVE LOAD	PARTITION LOAD	CONCENTRATED LOADS
ROOF	10 PSF	25 PSF		300#

SNOW: (MINIMUM ROOF SNOW LOAD = 25 PSF)

LATERAL FORCES

LATERAL FORCES ARE TRANSMITTED BY DIAPHRAGM ACTION OF ROOF TO SHEAR WALLS. LOADS ARE THEN TRANSFERRED TO FOUNDATION BY SHEAR WALL ACTION WHERE ULTIMATE DISPLACEMENT IS RESISTED BY PASSIVE PRESSURE OF EARTH AND/OR SLIDING FRICTION. OVERTURNING IS RESISTED BY DEAD LOAD OF THE STRUCTURE.

LATERAL FORCE RESISTING SYSTEM: ALL MEMBERS AND CONNECTIONS REFERRED TO AS LATERAL FORCE RESISTING SYSTEM (LFRS) SHALL COMPLY WITH REQUIREMENTS OF THE SEISMIC FORCE RESISTING SYSTEMM AND THE WIND FORCE RESISTING SYSTEM SET FORTH IN THE SPECIAL INSPECTION REQUIREMENTS OF IBC SECTION 1704 AND 1705, AND AS NOTED IN THE STATEMENT OF SPECIAL INSPECTIONS.

WIND:

THE BUILDING MEETS THE CRITERIA TO USE THE "ENCLOSED, PARTIALLY ENCLOSED, AND OPEN BUILDING OF ALL HEIGHTS PROCEDURE" PER ASCE 7-16.

- EXPOSURE CATEGORY = C
- BASIC WIND SPEED, (3 SEC. GUST), V_{ULT} = 100 MPH
- RISK CATEGORY PER IBC TABLE 1604.5 = II
- TOPOGRAPHIC FACTOR K_{ZT} = 1.0
- INTERNAL PRESSURE COEFFICIENT (ENCLOSED) = ± 0.18
- COMPONENTS AND CLADDING LOADS, SEE THE FOLLOWING TABLES:

ROOF SURFACES [1]				
EFFECTIVE WIND AREA	POSITIVE PRESSURES (PSF)	NEGATIVE PRESSURES (PSF)		
		ZONE [3]		
	ALL ZONES	1	2	3
10 SF	16.0	-29.0	-34.9	-60.3
20 SF	16.0	-27.4	-32.9	-54.4
50 SF	16.0	-26.6	-28.6	-47.8
100 SF	16.0	-25.1	-27.0	-42.7

WALL SURFACES AND ROOF OVERHANGS [1]				
EFFECTIVE WIND AREA	POSITIVE PRESSURE (PSF)		NEGATIVE PRESSURE (PSF)	
	ZONE [2]			
	4	5	4	5
10 SF	23.1	23.1	-25.1	-30.9
20 SF	22.1	22.1	-24.0	-28.9
50 SF	20.7	20.7	-22.7	-26.1
100 SF	19.7	19.7	-21.6	-24.0
500 SF	17.2	17.2	-19.2	-19.2

ROOF OVERHANGS [1]			
EFFECTIVE WIND AREA	NEGATIVE PRESSURE (PSF)		
	ZONE [3]		
	1	2	3
10 SF	-45.0	-50.9	-76.4
20 SF	-42.4	-47.9	-69.5
50 SF	-40.3	-42.2	-61.4
100 SF	-37.7	-39.6	-55.3
500 SF	-35.3	-37.2	-52.9

1. VALUES SHOWN IN TABLE ARE GROSS ULTIMATE WIND PRESSURES.
2. WALL ZONES ARE AS DEFINED BY FIGURE 30.3-1 FOR ASCE 7-16 IN LOW RISE BUILDINGS.
3. ROOF ZONES ARE AS DEFINED BY FIGURES 30.3-2 THROUGH 30.3-7 IN ASCE 7-16 FOR LOW RISE BUILDINGS.

SEISMIC: (ASCE 7-16) V = CsW

WHERE $C_S = \frac{S_{DS}}{(\frac{R}{I_E})}$; WITH

Cs MINIMUM = $0.044\, S_{DS}\, I_E \geq 0.01$

OR

Cs MINIMUM = $\frac{0.5S_1}{\frac{R}{I_E}}$ FOR $S_1 > 0.6g$

Cs MAXIMUM = $\frac{S_{D1}}{T(\frac{R}{I_E})}$ FOR $T \leq T_L$

OR

Cs MAXIMUM = $\frac{S_{D1}T_L}{T^2(\frac{R}{I_E})}$ FOR $T > T_L$

SEISMIC IMPORTANCE FACTOR, Ie = 1.0
RISK CATEGORY OF BUILDING PER IBC TABLE 1604.5 = II
SPECTRAL RESPONSE ACCELERATIONS Ss = 1.099 & S_1 = 0.392
SITE CLASS PER TABLE 20.3-1 = E
DESIGN SPECTRAL RESPONSE ACCELERATIONS S_{DS} = 0.879 & S_{D1} = 0.627
SEISMIC DESIGN CATEGORY = D
W = EFFECTIVE SEISMIC WEIGHT OF BUILDING = 420K
ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE PROCEDURE
RESPONSE MODIFICATION FACTOR PER TABLE 12.2-1, R = 5
Cs = 0.176
DESIGN BASE SHEAR V = 74K

PIPES, DUCTS AND MECHANICAL EQUIPMENT SUPPORTED OR BRACED FROM STRUCTURE. CONFORM TO SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, INC. PUBLICATION "SEISMIC RESTRAINT MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS". SPRINKLER LINE ATTACHMENTS SHALL CONFORM TO NFPA PAMPHLET 13.

FOUNDATION DESIGN CRITERIA

REFERENCE GEOTECHNICAL REPORT BY MATERIALS TESTING AND CONSULTING, INC. DATED APRIL 22, 2009.

SOIL BEARING PRESSURE: 2500 PSF*

ACTIVE PRESSURE - RESTRAINED: 50 PCF +14H SEISMIC SURCHARGE (ASSUMED)
ACTIVE PRESSURE - UNRESTRAINED: 35 PCF +6H SEISMIC SURCHARGE (ASSUMED)
PASSIVE RESISTANCE: 300 PCF (INCLUDES F.O.S. ≥ 1.5)
COEFFICIENT OF FRICTION: .35 (INCLUDES F.O.S. ≥ 1.5)
*1/3 INCREASE ALLOWED FOR SEISMIC OR WIND LOADING

ALL FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH OR "STRUCTURAL BACKFILL". NATIVE EARTH BEARING SHALL BE SURFACE COMPACTED. AREAS OVER-EXCAVATED SHALL BE BACKFILLED WITH LEAN CONCRETE (f'c= 2000 PSI) OR "STRUCTURAL BACKFILL". AREAS DESIGNATED "STRUCTURAL BACKFILL" SHALL BE FILLED WITH APPROVED WELL-GRADED BANKRUN MATERIAL. MAXIMUM SIZE OF ROCK 4". FROZEN SOIL, ORGANIC MATERIAL AND DELETERIOUS MATTER NOT ALLOWED. COMPACT TO AT LEAST 95% OF ITS MAXIMUM DENSITY AS DETERMINED BY ASTM D1557. CONTRACTOR SHALL EXERCISE EXTREME CARE DURING EXCAVATION TO AVOID DAMAGE TO BURIED LINES, TANKS, AND OTHER CONCEALED ITEMS. UPON DISCOVERY, DO NOT PROCEED WITH WORK UNTIL RECEIVING WRITTEN INSTRUCTIONS FROM ARCHITECT. A COMPETENT REPRESENTATIVE OF THE OWNER SHALL INSPECT ALL FOOTING EXCAVATIONS FOR SUITABILITY OF BEARING SURFACES PRIOR TO PLACEMENT OF REINFORCING STEEL. PROVIDE DRAINAGE AND DEWATERING AROUND ALL WORK TO AVOID WATER-SOFTENED FOOTINGS.

FREE DRAINING BACKFILL MATERIAL FOR RETAINING & BASEMENT WALLS

A CLEAN, FREE DRAINING, WELL GRADED GRANULAR MATERIAL CONFORMING TO ASTM D2487 GW OR SW WHOSE MAXIMUM PARTICLE SIZE DOES NOT EXCEED 3/4" AND WHOSE FINES CONTENT (MATERIAL PASSING THE NO. 200 SIEVE) DOES NOT EXCEED 5%,

WITH A MAXIMUM DUST RATIO $\frac{\%\text{ PASSING U.S. NO. 200 SIEVE}}{\%\text{ PASSING U.S. NO. 40 SIEVE}}$ = 2/3 MAX.

CONCRETE

CAST-IN-PLACE CONCRETE

MIX DESIGNS: THE CONTRACTOR SHALL DESIGN CONCRETE MIXES THAT MEET OR EXCEED THE REQUIREMENTS OF THE CONCRETE MIX TABLE. THE MIX DESIGNS SHALL FACILITATE ANTICIPATED PLACEMENT METHODS, WEATHER, REBAR CONGESTION, ARCHITECTURAL FINISHES, CONSTRUCTION SEQUENCING, STRUCTURAL DETAILS, AND ALL OTHER FACTORS REQUIRED TO PROVIDE A STRUCTURALLY SOUND, AESTHETICALLY ACCEPTABLE FINISHED PRODUCT. WATER REDUCING ADMIXTURES WILL LIKELY BE REQUIRED TO MEET THESE REQUIREMENTS. CONCRETE MIX DESIGNS SHALL CLEARLY INDICATE THE TARGET SLUMP. SLUMP TOLERANCE SHALL BE ± 1-1/2 INCHES.

AGGREGATE: COARSE AND FINE AGGREGATE SHALL CONFORM TO ASTM C33

CEMENT: CEMENT SHALL CONFORM TO ASTM C150, TYPE II PORTLAND CEMENT, UNLESS NOTED OTHERWISE.

FLYASH: SHALL CONFORM TO ASTM C618 CLASS C OR F, MAXIMUM LOSS OF IGNITION SHALL BE 1.0%.

SLAG: GROUND GRANULATED BLAST-FURNACE (GGBF) SLAG SHALL CONFORM TO ASTM C989 GRADE 100 OR 120.

ALTERNATE MIX DESIGNS: VARIATIONS TO THE MIX DESIGN PROPORTIONS MAY BE ACCEPTED IF SUBSTANTIATED IN ACCORDANCE WITH ACI 318, CHAPTER 19. PROVIDE SUBMITTALS A MINIMUM OF TWO WEEKS PRIOR TO BID FOR DETERMINATION OF ACCEPTABILITY.

ADMIXTURES: ADMIXTURES SHALL BE BY MASTER BUILDERS, W.R. GRACE, OR PRE-APPROVED EQUAL. ALL MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.

WATER: SHALL BE CLEAN AND POTABLE.

MAXIMUM CHLORIDE CONTENT: THE MAXIMUM WATER SOLUBLE CHLORIDE CONTENT SHALL NOT EXCEED 0.15% BY WEIGHT OF CEMENTITIOUS MATERIAL UNLESS NOTED OTHERWISE.

CONCRETE EXPOSED TO WEATHER: PROVIDE 5.0% TOTAL AIR CONTENT FOR ALL CONCRETE EXPOSED TO WEATHER. TOTAL AIR CONTENT IS THE SUM OF ENTRAINED AIR PROVIDED BY ADMIXTURES AND NATURALLY OCCURRING ENTRAPPED AIR. AIR CONTENT SHALL BE TESTED PRIOR TO BEING PLACED IN THE PUMP HOPPER OR BUCKET; IT IS NOT REQUIRED TO BE TESTED AT THE DISCHARGE END OF THE PUMP HOSE. THE TOLERANCE ON ENTRAPPED AIR SHALL BE +2.0% AND -1.5% WITH THE AVERAGE OF ALL TESTS NOT LESS THAN THE SPECIFIED AMOUNT.

TOTAL CEMENTITIOUS MATERIAL: THE SUM OF ALL CEMENT PLUS FLYASH AND SLAG. AT THE CONTRACTORS OPTION FLYASH OR SLAG MAY BE SUBSTITUTED FOR CEMENT BUT SHALL NOT EXCEED 25% BY WEIGHT OF TOTAL CEMENTITIOUS MATERIAL. IN NO CASE SHALL THE AMOUNT OF FLYASH OR SLAG BE LESS THAN REQUIRED BY THE CONCRETE MIX DESIGN TABLE. FOOTING MIXES SHALL CONTAIN NOT LESS THAN **5 SACKS** OF CEMENTITIOUS MATERIAL PER CUBIC YARD, ALL OTHER MIXES SHALL CONTAIN NOT LESS THAN **5-1/2 SACKS** OF CEMENTITIOUS MATERIAL PER CUBIC YARD, UNLESS NOTED OTHERWISE.

ITEM	DESIGN f'c (PSI) (AT 28 DAYS U.N.O.)	MAX. W/C RATIO	MIN. FLYASH OR SLAG (PCY)	AGGREGATE GRADING ASTM AASHTO	NOTES
SLABS ON GRADE - UNO	4000	0.45	100	57 OR 67	
FOUNDATIONS - UNO	3000	0.50	--		
STEM WALLS AND OTHER WALLS EXPOSED TO EARTH OR WEATHER	4500	0.45	100	57 OR 67	
ALL OTHER CONCRETE	4000	0.50	--	57 OR 67	

CONCRETE PLACEMENT

PLACE CONCRETE FOLLOWING ALL APPLICABLE ACI RECOMMENDATIONS. CONCRETE SHALL BE PROPERLY CONSOLIDATED PER ACI 309 USING INTERIOR MECHANICAL VIBRATORS, DO NOT OVER-VIBRATE. CONCRETE SHALL BE POURED MONOLITHICALLY BETWEEN CONSTRUCTION OR EXPANSION JOINTS. IF CONCRETE IS PLACED BY THE PUMP METHOD, HORSES SHALL BE PROVIDED TO SUPPORT THE HOSE, THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE REINFORCING. WEATHER FORECASTS SHALL BE MONITORED AND ACI RECOMMENDATIONS FOR HOT AND COLD WEATHER CONCRETING SHALL BE FOLLOWED AS REQUIRED. CONCRETE SHALL NOT FREE FALL MORE THAN 5 FEET DURING PLACEMENT WITHOUT WRITTEN APPROVAL OF STRUCTURAL ENGINEER.

FLOATING & FINISHING OPERATIONS

WATER SHALL NOT BE ADDED TO THE CONCRETE SURFACE DURING FLOATING & FINISHING OPERATIONS. PRE-APPROVED EVAPORATION RETARDER SPECIFICALLY DESIGNED FOR FLOATING & FINISHING OPERATIONS ARE ACCEPTABLE.

FORMED SURFACES:

FORMWORK CLASS OF SURFACE PER ACI 347 TABLE 3.1	
ITEM	CLASS OF FINISH
ALL SURFACES EXPOSED TO PUBLIC VIEW, U.N.O.	A
ALL SURFACES RECEIVING A COURSE TEXTURED COATING SUCH AS PLASTER OR STUCCO, UNLESS NOTED OTHERWISE	B
ALL OTHER SURFACES, UNLESS NOTED OTHERWISE	C

COLD WEATHER PLACEMENT:

1. COLD WEATHER IS DEFINED BY ACI 306 AS "A PERIOD WHEN FOR MORE THAN 3 SUCCESSIVE DAYS THE MEAN DAILY TEMPERATURE DROPS BELOW 40° F."
2. NO CONCRETE SHALL BE PLACED ON FROZEN OR PARTIALLY FROZEN GROUND. THAWING THE GROUND WITH HEATERS IS PERMISSIBLE.
3. CONCRETE MIX TEMPERATURES SHALL BE AS SHOWN BELOW. HEATING OF WATER AND/OR AGGREGATES MAY BE REQUIRED TO ATTAIN THESE TEMPERATURES.
4. THE CONCRETE MAY REQUIRE PROTECTION FOR 4-7 DAYS AFTER POURING. IF TEMPERATURES REMAIN BELOW FREEZING, INSULATING BLANKET COVERAGE IS REQUIRED. IF TEMPERATURES ARE SLIGHTLY BELOW FREEZING (30° F MIN.) AT NIGHT AND ABOVE FREEZING DURING THE DAY, KRAFT PAPER WITH COMPLETE COVERAGE MAY BE USED IN LIEU OF INSULATED BLANKETS.
5. NO ADDITIVES CONTAINING CHLORIDES SHALL BE USED. USE "POZZUTEC 20+" BY MASTER BUILDERS OR "POLARSET" BY W.R. GRACE OR PRE-APPROVED EQUAL.

CONDITION OF PLACEMENT AND CURING		WALLS & SLABS	FOOTINGS
MIN. TEMP. FRESH CONCRETE AS MIXED FOR WEATHER INDICATED, DEGREES F.	ABOVE 30° F. 0° TO 30° F. BELOW 0° F.	60° 65° 70°	55° 60° 65°
MIN. TEMP. FRESH CONCRETE AS PLACED AND MAINTAINED, DEGREES F.		55°	50°
MAX. ALLOWABLE GRADUAL DROP IN TEMP. THROUGHOUT FIRST 24 HOURS AFTER END OF PROTECTION, DEGREES F.		50°	40°

HOT OR WINDY WEATHER PLACEMENT

HOT WEATHER IS DEFINED BY ACI 305 AS "ANY COMBINATION OF HIGH AIR TEMPERATURE, LOW RELATIVE HUMIDITY, AND WIND VELOCITY, TENDING TO IMPAIR THE QUALITY OF FRESH HARDENED CONCRETE. ACI 305 FIGURE 2.1.5 SHALL BE USED BY THE CONTRACTOR TO ESTIMATE THE RATE OF EVAPORATION. WHEN THE ESTIMATED RATE OF EVAPORATION IS GREATER THAN O.2 PSF/HOUR THE PLACEMENT SHALL BE CONSIDERED A HOT WEATHER PLACEMENT. PRECAUTIONS AGAINST PLASTIC SHRINKAGE CRACKING ARE NECESSARY. PRECAUTIONS TAKEN BY THE CONTRACTOR VARY DEPENDING UPON THE FACTORS ASSOCIATED WITH WATER EVAPORATION AND INCLUDE BUT ARE NOT LIMITED TO:

1. LIMITING CONCRETE TEMPERATURE TO 100°F AT TIME OF PLACEMENT.
2. APPLICATION OF AN EVAPORATION RETARDER.
3. USE OF FOG SPRAY.
4. REDUCTION OF POUR SIZE.
5. PLACING CONCRETE AT NIGHT.

STRUCTURAL DRAWING INDEX

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GENERAL NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22 JOB NO. a20-112

BID SET

S100

DRAWING NO.

PLOTTED: 8/10/2022 8:49:55 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash H#A20-112.02 v2020 (Central)_dhome@pcs-structural.com.rvt

CONTROL AND CONSTRUCTION JOINTS

CONSTRUCTION JOINTS SHALL MEET THE REQUIREMENTS OF ACI 301 SECTIONS 2.2.2.5 AND 5.3.2.6. SPECIAL BONDING METHODS PER SECTION 5.3.2.6 SHALL BE SATISFIED BY ITEM 5 BELOW UNLESS OTHERWISE DETAILED ON THE STRUCTURAL DRAWINGS. WHERE CONSTRUCTION JOINTS ARE NOT SHOWN ON PLAN OR ADDITIONAL CONSTRUCTION JOINTS ARE REQUIRED SUBMIT PROPOSED JOINTING FOR STRUCTURAL ENGINEERS APPROVAL. PROVIDE CONSTRUCTION JOINTS AS INDICATED BELOW UNLESS NOTED OTHERWISE ON THE PLANS:

1. SLABS ON GRADE: PROVIDE CONSTRUCTION AND/OR CONTROL JOINTS AT 16 FEET O.C. MAXIMUM FOR UNEXPOSED SLABS ON GRADE AND 12 FEET O.C. FOR EXPOSED SLABS ON GRADE. COORDINATE JOINTS WITH ARCHITECTURAL DRAWINGS.

2. WALLS: COORDINATE CONSTRUCTION JOINTS WITH ARCHITECTURAL REVEALS.

EMBEDDED ITEMS

1. NO ALUMINUM ITEMS SHALL BE EMBEDDED IN ANY CONCRETE.

2. ALL EMBED PLATES SHALL BE SECURELY FASTENED IN PLACE.

3. ALL EMBEDDED STEEL ITEMS EXPOSED TO EARTH SHALL BE GALVANIZED.

4. ALL EMBEDDED STEEL ITEMS EXPOSED TO WEATHER SHALL BE PAINTED UNLESS NOTED AS GALVANIZED. SEE DRAWINGS AND SPECIFICATIONS FOR PAINT, PRIMER, AND GALVANIZING REQUIREMENTS.

CONCRETE CURING AND SEALING

CURING PROCEDURES SHALL COMMENCE IMMEDIATELY AFTER FINISHING CONCRETE TO MAINTAIN CONCRETE IN A MOIST CONDITION. VERIFY CURING AND/OR SEALING PRODUCTS ARE COMPATIBLE WITH FLOOR COVERINGS SHOWN ON THE ARCHITECTURAL DRAWINGS. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS. SLABS ARE DEFINED AS SLABS ON GRADE, CONCRETE ON METAL DECK, ELEVATED POST-TENSIONED OR MILD REINFORCED DECKS, AND TOPPING SLABS.

ITEM	CONCRETE CURING NOTES
SLABS EXPOSED TO EARTH OR WEATHER OR VEHICLE OR FORKLIFT TRAFFIC INCLUDING LOADING DOCKS	1, (3 OR 4 OR 5), 6
ALL OTHER SLABS	1, (3 OR 4 OR 5)
FORMED SURFACES EXCLUDING FOUNDATIONS	2
SHOTCRETE WALLS	4
ALL OTHER CONCRETE	NONE

CONCRETE CURING NOTES:

1. WHEN THE ESTIMATED EVAPORATION RATE IS GREATER THAN 0.2 PSF/HOUR PROVIDE A SPRAY APPLIED EVAPORATION RETARDER IMMEDIATELY AFTER CONCRETE PLACEMENT. THE EVAPORATION RATE MAY BE CALCULATED PER ACI 305 FIGURE 2.1.5.

2. APPLY A LIQUID MEMBRANE FORMING CURING COMPOUND, CONFORMING TO ASTM C309 TYPE 1 CLASS B SPECIFICATIONS, PER MANUFACTURER'S RECOMMENDATIONS TO ALL FORMED SURFACES IMMEDIATELY AFTER FINAL FORM REMOVAL. NOT REQUIRED IF FORMWORK REMAINS IN PLACE FOR MORE THAN 7 DAYS.

3. PROVIDE PRE-APPROVED CONTINUOUS WET CURE METHOD FOR A MINIMUM OF 14 DAYS.

4. APPLY A LIQUID MEMBRANE FORMING CURING COMPOUND, CONFORMING TO ASTM C309 TYPE 1 CLASS B SPECIFICATIONS OR ASTM C1315 TYPE 1 CLASS A SPECIFICATIONS, PER MANUFACTURER'S RECOMMENDATIONS IMMEDIATELY AFTER FINAL FINISHING. CURING COMPOUND SHALL BE COMPATIBLE WITH ARCHITECTURAL FLOOR COVERINGS AND SEALERS.

5. PROVIDE 'ULTRACURE MAX' MOISTURE RETAINING COVER BY MCTECH GROUP, OR APPROVED EQUAL, FOR A MINIMUM OF 14 DAYS.

6. APPLY A SILANE SEALER WITH MINIMUM SOLIDS CONTENT OF 40% PER MANUFACTURER'S RECOMMENDATIONS.

GROUT

NON-SHRINK GROUT: MASTER BUILDERS "MASTERFLOW 928" OR PRE-APPROVED EQUAL. GROUT SHALL CONFORM TO CRD-C621 AND ASTM C1107 WHEN TESTED AT A FLUID CONSISTENCY PER CRD-C611-85 FOR 30 MINUTES. GROUT MAY BE PLACED FROM A 25 SECOND FLOW TO A STIFF PACKING CONSISTENCY. FILL OR PACK ENTIRE SPACE UNDER PLATES OR SHAPES. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PREPARATION, INSTALLATION, AND CURING.

REINFORCING STEEL

REINFORCING STEEL SHALL CONFORM TO:

ASTM A615, GRADE 60 TYPICAL UNLESS NOTED OTHERWISE.

DETAIL FABRICATE AND PLACE PER ACI 315 AND ACI 318.

WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A185. LAP ONE FULL MESH ON SIDES AND ENDS BUT NOT LESS THAN 8 INCHES. WELDED WIRE REINFORCING SHALL BE SUPPORTED TO WITHSTAND CONCRETE PLACEMENT. PULLING OF MESH INTO PLACE AFTER PLACEMENT IS NOT ALLOWED.

REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE, Fy=60 KSI (UNLESS NOTED OTHERWISE)

BAR SIZE	MINIMUM LAP SPLICE LENGTHS ("Ls")		MINIMUM DEVELOPMENT LENGTHS ("Ld")		MINIMUM EMBEDMENT LENGTH FOR STANDARD END HOOKS ("Ldh")
	TOP BARS (1)	OTHER BARS	TOP BARS (1)	OTHER BARS	
#3	2'-0"	1'-6"	1'-6"	1'-3"	0'-7"
#4	2'-8"	2'-0"	2'-0"	1'-7"	0'-9"
#5	3'-4"	2'-7"	2'-7"	2'-0"	1'-0"
#6	4'-0"	3'-1"	3'-1"	2'-4"	1'-2"
#7	5'-10"	4'-6"	4'-6"	3'-6"	1'-5"
#8	6'-8"	5'-2"	5'-2"	3'-11"	1'-7"

SPLICE TABLE NOTES:

1. "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.

MECHANICAL COUPLERS: "LENTON" BY ERICO, "CADWELD" BY ERICO, "BAR-LOCK" BY DAYTON SUPERIOR L-SERIES, OR PRE-APPROVED EQUAL. COUPLERS SHALL BE TYPE 2 PER ACI 318 SECTION 18.2.7.1.

REINFORCING STEEL COVER

PROVIDE CONCRETE COVER OVER REINFORCEMENT AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH ---------- 3"
EXPOSED TO WEATHER OR EARTH ---------- 2"
WALLS AND SLABS NOT EXPOSED TO WEATHER---- 3/4"

CONCRETE INSERTS: THREADED DOWEL BAR SUBSTITUTIONS SHALL BE MANUFACTURED BY RICHMOND SCREW ANCHOR CO., INC., OR PRE-APPROVED EQUAL AND SHALL BE CAPABLE OF DEVELOPING THE FULL TENSILE CAPACITY OF THE BAR.

POST-INSTALLED ANCHORS

POST-INSTALLED ANCHORS: SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH REBAR. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. INSTALLER SHALL BE QUALIFIED AND TRAINED BY THE MANUFACTURER. HOLES SHALL BE HAMMER DRILLED ONLY (ROTARY DRILLED ONLY AT UNREINFORCED MASONRY - NO HAMMER TOOLS).

SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED FOR APPROVAL A MINIMUM OF 2 WEEKS PRIOR TO BID, ALONG WITH CALCULATIONS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (LICENSED IN THE STATE OF THE PROJECT) DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE.

CONCRETE ANCHORS:
- ADHESIVE ANCHORS: HILTI HIT-HY 200 (ICC-ESR-3187), HILTI HIT-RE 500 V3 (ICC-ESR-3814), DEWALT PURE 110+ (ICC-ESR-3298), OR SIMPSON SET-3G (ICC-ESR-4057), OR PRE-APPROVED EQUAL.
  - *CONCRETE SHALL BE A MINIMUM OF 21 DAYS OLD AT TIME OF INSTALLATION.
  - *CONCRETE SHALL BE IN THE TEMPERATURE RANGE AS REQUIRED BY THE CONCRETE MANUFACTURER.
  - *HOLE SHALL BY HAMMER-DRILLED ONLY.
  - *DO NOT INSTALL IN WATER-FILLED HOLES.
  - *INSTALLER OF HORIZONTAL OR UPWARDLY INCLINED (ANY POSITION EXCEPT DIRECTLY DOWNWARD) ANCHORS SHALL ALSO BE CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.
- EXPANSION ANCHORS: KWIKBOLT TZ (ICC ESR-1917) BY HILTI, INC. OR PRE-APPROVED EQUAL.
- SCREW ANCHORS: KWIK HUS-EZ (ICC ESR-3027) BY HILTI, INC. OR PRE-APPROVED EQUAL.

MASONRY ANCHORS (SOLID GROUTED MASONRY):
- ADHESIVE ANCHORS: HILTI HIT-HY 270 (ICC-ESR-4143) OR PRE-APPROVED EQUAL.
- EXPANSION ANCHORS: KWIKBOLT III (ICC ESR-1385) BY HILTI, INC., OR PRE-APPROVED EQUAL.
- SCREW ANCHORS: KWIK HUS-EZ (ICC ESR-3056) BY HILTI, INC., OR PRE-APPROVED EQUAL.

MASONRY

MASONRY ASSEMBLIES: SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE REQUIREMENTS OF CHAPTER 21 OF THE IBC, AND SHALL BE TESTED PER SECTION 2105.1 OF THE IBC FOR COMPLIANCE WITH f'm. MINIMUM SPECIFIED COMPRESSIVE STRENGTH, f'm, SHALL BE 2000 PSI FOR CONCRETE MASONRY ASSEMBLIES AND 2500 PSI FOR HOLLOW CLAY MASONRY ASSEMBLIES.

HOLLOW CONCRETE MASONRY UNITS (CMU): SHALL CONFORM TO ASTM C90. MINIMUM FACE SHELL THICKNESS AS DEFINED BY ASTM C90, SECTION 5.3.1. PROVIDE GRADE N, MEDIUM WEIGHT BLOCK WITH MINIMUM SPECIFIED COMPRESSIVE STRENGTH AS NOTED ABOVE. CMU CONSTRUCTION SHALL BE SOLID GROUTED UNLESS NOTED OTHERWISE.

MASONRY VENEER SYSTEM: MASONRY MATERIALS AND MORTAR SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 14 OF THE IBC AND THE PROJECT SPECIFICATIONS.

MORTAR IN STRUCTURAL WALLS: SHALL BE TYPE S PER IBC. CONFORM TO ASTM C270. MINIMUM COMPRESSIVE STRENGTH = 1800 PSI.

GROUT: GROUT FOR POURING SHALL BE A FLUID CONSISTENCY. CONFORM TO ASTM C476 AND TMS 402. f'g=2500 PSI MINIMUM AT 28 DAYS.

GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACEMENT AND BEFORE LOSS OF PLASTICITY IN A MANNER TO FILL THE GROUT SPACE. GROUT POURS GREATER THAN 12 INCHES SHALL BE RECONSOLIDATED BY MECHANICAL VIBRATION 15 TO 20 MINUTES AFTER PLACEMENT TO MINIMIZE VOIDS DUE TO WATER LOSS. GROUT POURS 12 INCHES OR LESS IN HEIGHT SHALL BE MECHANICALLY VIBRATED, OR PUDDLED. COVER AND KEEP DRY ALL MASONRY WORK DURING CONSTRUCTION AND PREVENT MOISTURE ABSORPTION INTO MASONRY UNTIL THE ROOFING IS COMPLETE.

REQUIREMENTS FOR ALL-WEATHER MASONRY CONSTRUCTION: HOT AND COLD WEATHER CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH TMS 602 "SPECIFICATION FOR MASONRY STRUCTURES", ARTICLES 1.8C AND 1.8D.

REINFORCING STEEL (MASONRY): REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60 (GRADE A706 FOR WELDED BARS UNLESS NOTED OTHERWISE). DETAIL, FABRICATE AND PLACE PER ACI 315 AND ACI 318. SPLICES SHALL BE AS NOTED BELOW.

MINIMUM LAP SPLICE LENGTHS "L_d " FOR TYPICAL CONDITIONS (1)					
BAR SIZE	CORNER BARS	FOUNDATION DOWELS (2)	VERTICAL WALL REINFORCING	HORIZONTAL WALL REINFORCING	LONG. LINTEL REINFORCING
#3	12"	12"	12"	12"	12"
#4	20"	20"	20"	20"	20"
#5	30"	30"	30"	30"	30"
#6	40"	40"	54"	40"	60"

(1) FOR SPECIAL SPLICE CONDITIONS, REFER TO STRUCTURAL DRAWINGS FOR LAP LENGTH REQUIREMENTS.
(2) FOR LAP SPLICES OF FOUNDATION DOWELS IN CANTILEVERED WALLS, USE LAP SPLICE LENGTHS FOR VERTICAL WALL REINFORCING.

VERTICAL BAR POSITIONERS: VERTICAL REINFORCING SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY "FIGURE 8" VERTICAL BAR POSITIONERS FOR SINGLY AND DOUBLY REINFORCED CELLS BY WIRE-BOND OR PRE-APPROVED EQUAL.

MASONRY WALL REINFORCING DRAWINGS: SHOP DRAWINGS FOR MASONRY REINFORCEMENT SHALL BE AN "OVERLAY" OF THE MASONRY WALL COORDINATION DRAWINGS. DETAIL, FABRICATE AND PLACE PER ACI 315. REINFORCING SHOP DRAWING ELEVATIONS SHALL SHOW ALL VERTICAL AND HORIZONTAL REINFORCING LAYOUTS; SPECIAL REINFORCEMENT AT LINTELS AND JAMBS AT DOORS, WINDOWS, MECHANICAL OPENINGS, AND AS CALLED OUT ON THE STRUCTURAL DRAWINGS.

ANCHORED VENEER (MASONRY AND STONE UNITS): ALL VENEER ANCHORAGE ATTACHMENTS SHALL CONFORM TO IBC SECTION 1404.6 AND TMS 402 SECTIONS 12.1 AND 12.2 FOR THE APPLICABLE SEISMIC DESIGN CATEGORY.

ANCHOR TIES AND JOINT REINFORCEMENT SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153, CLASS B-2 AND SHALL BE MANUFACTURED BY WIRE-BOND OR HOHMANN & BARNARD OR PRE-APPROVED EQUAL. ANCHOR TIES SHALL BE SPACED 16"O.C. EACH WAY MAXIMUM, AND SHALL HAVE A LIP OR HOOK ON THE EXTENDED LEG THAT WILL ENGAGE OR ENCLOSE A HORIZONTAL JOINT REINFORCEMENT WIRE OF NO. 9 GAUGE OR EQUIVALENT. THE JOINT REINFORCEMENT SHALL BE CONTINUOUS WITH BUTT SPLICES BETWEEN TIES PERMITTED.

ANCHORAGE OF VENEER TO BACKING SHALL BE AS FOLLOWS:

BACKING	VENEER TIE	ATTACHMENT TO BACKING
METAL STUDS	WIRE-BOND RJ-711, HOHMANN & BARNARD HB-213 S.I.S. OR HOHMANN & BARNARD 2-SEAL THERMAL WING NUT	ZINC PLATED SCREWS BY MANUFACTURER
MASONRY	WIRE-BOND SERIES 800 LEVEL EYE LADDER W/ WIRE-BOND CLIP, HOHMANN & BARNARD HB-270 S.I.S. OR HOHMANN & BARNARD 2-SEAL THERMAL WING NUT	INTEGRAL WIRE LADDER REINFORCEMENT
CONCRETE	WIRE-BOND RJ-711, HOHMANN & BARNARD HB-213 S.I.S. OR HOHMANN & BARNARD 2-SEAL THERMAL WING NUT	1/4" HILTI KWIK-CON II + SCREW W/ 1-3/4" EMBEDMENT
STRUCTURAL STEEL	WIRE-BOND TYPE I WELD ON ANCHOR W/ TRIANGULAR TIE & WIRE-BOND CLIP OR HOHMANN & BARNARD HB-359 WELD ON ANCHOR W/ VEE BYNA-TIE	WELD ON CLIP

STRUCTURAL STEEL

DETAILING, FABRICATION AND ERECTION

ALL WORKMANSHIP SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION, 15TH EDITION, THE AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS JULY 7, 2016, THE AISC CODE OF STANDARD PRACTICE, JUNE 15, 2016 AND THE AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, JULY 12, 2016.

STEEL MEMBERS ARE EQUALLY SPACED BETWEEN COLUMNS AND/OR DIMENSION POINTS UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDES AND JOINT PREPARATIONS THAT INCLUDE BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES, AND OTHER AIDES, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, WELD EXTENSION TABS, COPES, SURFACE ROUGHNESS VALUES AND TAPERS OF UNEQUAL PARTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLIANCE WITH ALL CURRENT OSHA REQUIREMENTS.

HOLES, COPES OR OTHER CUTS OR MODIFICATIONS OF THE STRUCTURAL STEEL MEMBERS SHALL NOT BE MADE IN THE FIELD WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

STEEL FABRICATORS

ALL STEEL FABRICATION SHALL BE PERFORMED BY A FABRICATOR CERTIFIED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. THE FABRICATOR SHALL BE DESIGNATED AN AISC CERTIFIED PLANT, CATEGORY BU AT THE TIME OF BID AND SHALL MAINTAIN THIS CERTIFICATION FOR THE DURATION OF THE PROJECT.

NON-AISC CERTIFIED STEEL FABRICATORS SHALL HAVE FIVE YEARS MINIMUM EXPERIENCE ON SIMILAR PROJECTS OF EQUAL OR LARGER COMPLEXITY AND SCOPE. QUALIFICATIONS SHALL BE SUBMITTED TWO WEEKS PRIOR TO [BID / SHOP DRAWING PRODUCTION].

STEEL ERECTORS

ALL STEEL ERECTION SHALL BE PERFORMED BY AN ERECTOR CERTIFIED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. THE ERECTOR SHALL BE DESIGNATED AN AISC CERTIFIED ERECTOR, CATEGORY CSE AT THE TIME OF BID AND SHALL MAINTAIN THIS CERTIFICATION FOR THE DURATION OF THE PROJECT.

NON-AISC CERTIFIED STEEL ERECTORS SHALL HAVE FIVE YEARS MINIMUM EXPERIENCE ON SIMILAR PROJECTS OF EQUAL OR LARGER COMPLEXITY AND SCOPE. QUALIFICATIONS SHALL BE SUBMITTED TWO WEEKS PRIOR TO [BID / SHOP DRAWING PRODUCTION].

STEEL DETAILERS

ALL STEEL DETAILING SHALL BE PERFORMED BY A DETAILER WITH FIVE YEARS MINIMUM EXPERIENCE ON SIMILAR PROJECTS OF EQUAL OR LARGER COMPLEXITY AND SCOPE. QUALIFICATIONS SHALL BE SUBMITTED TWO WEEKS PRIOR TO [BID / SHOP DRAWING PRODUCTION].

MATERIAL PROPERTIES

WIDE FLANGE SECTIONS: ASTM A992 (Fy = 50 KSI)

OTHER SHAPES AND PLATES: ASTM A36 (Fy = 36 KSI) TYP. U.N.O.; ASTM A572 (Fy = 50 KSI) WHERE INDICATED

HOLLOW STRUCTURAL SECTIONS: RECTANGULAR & SQUARE - ASTM A500 GRADE C (Fy = 50 KSI) ROUND - ASTM A500 GRADE C (Fy = 46 KSI)

MACHINE BOLTS (M.B.): ASTM A307, GRADE A

HIGH-STRENGTH BOLTS: ASTM F3125, GRADE F1852, UNLESS NOTED OTHERWISE, ASTM F3125, GRADE F2280 WHERE INDICATED

ANCHOR BOLTS (A.B.): ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE, ASTM F1554, GRADE 105 WHERE INDICATED.

WELDING

STRUCTURAL STEEL: WELD IN ACCORDANCE WITH "STRUCTURAL WELDING CODE" AWS D1.1.

LATERAL FORCE-RESISTING SYSTEM: WELD IN ACCORDANCE WITH "STRUCTURAL WELDING CODE SEISMIC SUPPLEMENT" AWS D1.8.

REINFORCING STEEL: WELD IN ACCORDANCE WITH "REINFORCING STEEL WELDING CODE" AWS D1.4. WELD ONLY WITH SPECIFIC APPROVAL OF THE STRUCTURAL ENGINEER. IN NO CASE SHALL A WELD BE MADE WITHIN 6 BAR DIAMETERS OF A "COLD BEND".

CERTIFICATION: ALL WELDING SHALL BE PERFORMED BY WABO/AWS CERTIFIED WELDERS. WELDERS SHALL BE PREQUALIFIED FOR EACH POSITION AND WELD TYPE WHICH THE WELDER WILL BE PERFORMING.

WELD TABS (ALSO KNOWN AS WELD "EXTENSION" TABS OR "RUN OFF" TABS) SHALL BE USED. AFTER THE WELD HAS BEEN COMPLETED THE WELD TABS SHALL BE REMOVED AND THE WELD END GROUND TO A SMOOTH CONTOUR. WELD "DAMS" OR "END DAMS" SHALL NOT BE USED.

THE PROCESS CONSUMABLES FOR ALL WELD FILLER METAL INCLUDING TACK WELDS, ROOT PASS AND SUBSEQUENT PASSES DEPOSITED IN A JOINT SHALL BE COMPATIBLE.

ALL WELD FILLER METAL AND WELD PROCESS SHALL PROVIDE THE TENSILE STRENGTH AND CHARPY V-NOTCH RATINGS AS FOLLOWS:

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38554
PROFESSIONAL ENGINEER

GENERAL NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22
JOB NO. a20-112

BID SET

S102

DRAWING NO.

PLOTTED: 8/10/2022 8:49:59 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash H#A20-112.02.v2020 (Central)_dhome@pcs-structural.com.rvt

GRAVITY FRAME

WELD TYPE	FILLER METAL TENSILE STRENGTH	CHARPY V-NOTCH (CVN) RATING
FILLET	70 KSI	-----
PARTIAL PENETRATION	70 KSI	-----
COMPLETE PENETRATION	70 KSI	20 FT-LBS @ 40 DEG F

LATERAL FORCE-RESISTING SYSTEM:

WELD TYPE	FILLER METAL TENSILE STRENGTH	CHARPY V-NOTCH (CVN) RATING
FILLET	70 KSI	20 FT-LBS @ 0 DEG F

WELDED CONNECTIONS INSPECTION:

1. ALL WELDING SHALL BE CHECKED BY VISUAL MEANS AND BY OTHER METHODS DEEMED NECESSARY BY THE WELDING INSPECTOR.
2. ALL FULL PENETRATION WELDS TO MEMBERS WHICH FORM A PORTION OF THE LATERAL FORCE-RESISTING SYSTEM SHALL BE CHECKED 100 PERCENT BY ULTRASONIC TESTING.
3. THE CONTRACTOR SHALL SUBMIT A WRITTEN WELDING PROCEDURE SPECIFICATION FOR SHOP AND FIELD WELDING OF ALL LATERAL FORCE-RESISTING SYSTEM CONNECTIONS FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION.

THE STANDARDS OF ACCEPTANCE FOR WELDS TESTED BY ULTRASONIC METHODS SHALL CONFORM TO AWS D1.1.

ALL WELDS FOUND TO BE DEFECTIVE SHALL BE REPAIRED AND REINSPECTED BY THE SAME METHODS ORIGINALLY USED, AND THIS REPAIR AND REINSPECTION SHALL BE PAID FOR BY THE CONTRACTOR

GENERAL REQUIREMENTS

HIGH-STRENGTH BOLTS: ALL A325 HIGH-STRENGTH BOLTS (HSB) SHALL BE ASTM F3125, GRADE F1852, UNLESS OTHERWISE DESIGNATED AS A490. ALL HSB DESIGNATED AS A490 SHALL BE ASTM F3125, GRADE F2280. ALL HSB SHALL BE BY "LEJEUNE BOLT COMPANY" OR PRE-APPROVED EQUAL AND SHALL BE INSTALLED PER SECTION 8.2 OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS", AUGUST 2014 BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC SPECIFICATION). ALL BOLT HOLES SHALL BE STANDARD ROUND HOLES UNLESS NOTED OTHERWISE. THE FAYING SURFACES OF ALL PLIES WITHIN THE GRIP OF SLIP-CRITICAL BOLTS (A325SC OR A490SC) SHALL MEET THE REQUIREMENTS FOR A CLASS A SURFACE PER SECTION 3.2 OF THE RCSC SPECIFICATION.

BOLTED CONNECTIONS INSPECTION: CONNECTIONS MADE WITH BEARING TYPE BOLTS SHALL BE INSPECTED PER SECTION 9.1 AND CONNECTIONS MADE WITH SLIP-CRITICAL TYPE BOLTS (A325SC OR A490SC) SHALL BE INSPECTED PER SECTION 9.3 OF RCSC SPECIFICATION.

ADHESIVE ANCHOR RODS: ASTM F1554, GRADE 36 UNLESS NOTED OTHERWISE.

FINISH: STRUCTURAL STEEL SHALL BE PRIMER PAINTED, UNLESS NOTED OTHERWISE, AND SHALL BE CLEAN OF LOOSE RUST, LOOSE MILL SCALE, OIL, GREASE AND OTHER FOREIGN SUBSTANCES AND SHALL MEET THE REQUIREMENTS OF SSPC-SP1. WHERE STRUCTURAL STEEL IS NOTED TO BE PAINTED, ALL AREAS COMPRISING THE FAYING SURFACES OF BOLTED CONNECTIONS MADE WITH SLIP-CRITICAL TYPE BOLTS (A325SC OR A490SC) SHALL COMPLY WITH THE REQUIREMENTS OF THE RCSC SPECIFICATION. WHERE STRUCTURAL STEEL IS NOTED TO BE GALVANIZED, IT SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123, A384, AND A385. ALL SURFACES WITHIN TWO INCHES OF ANY FIELD WELD LOCATION SHALL BE FREE OF MATERIALS THAT WOULD PREVENT PROPER WELDING OR PRODUCE OBJECTIONABLE FUMES. FIELD TOUCH-UP OF PRIMED, PAINTED, AND GALVANIZED SURFACES SHALL BE PERFORMED TO REPAIR COATING ABRASIONS, AS WELL AS TO PROTECT ALL AREAS AT CONNECTIONS.

METAL ROOF DECK: SHALL CONTAIN THE MINIMUM PROPERTIES SHOWN ON THE STRUCTURAL DRAWINGS AND SHALL BE MANUFACTURED BY VERCO MANUFACTURING CO., ASC STEEL DECK, EPIC METALS, OR PRE-APPROVED EQUAL. THE ROOF DECK SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A611 OR A653, AND SHALL BE GALVANIZED PER ASTM A924. THE ROOF DECK SHALL BE PLACED ON THE SUPPORTING FRAMEWORK WITH A MINIMUM END LAP OF TWO INCHES. SUBMIT SHOP DRAWINGS SHOWING LAYOUT AND FASTENING PATTERN. ALL ACCESSORIES SHALL BE PROVIDED TO COMPLETE THE ERECTION OF THE STEEL DECK.

COLD-FORMED STEEL FRAMING CONSTRUCTION:

THE DESIGN, INSTALLATION AND CONSTRUCTION OF COLD-FORMED CARBON OR LOW-ALLOY STEEL, STRUCTURAL AND NON-STRUCTURAL STEEL FRAMING, SHALL BE IN ACCORDANCE WITH IBC SECTION 2211 AND AMERICAN IRON AND STEEL INSTITUTE (AISI) STANDARD S100-16 AND S240-15 AND SHALL BE MANUFACTURED BY A MEMBER OF THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA), CERTIFIED STEEL STUD ASSOCIATION (CSSA), STEEL FRAMING INDUSTRY ASSOCIATION (SFIA), OR PRE-APPROVED EQUAL, IN ACCORDANCE WITH CURRENT ICC EVALUATION SERVICE REPORT, AISI S202-15 AND S240-15. ALL 54 MIL AND HEAVIER GALVANIZED MEMBERS SHALL BE FORMED FROM STEEL THAT MEETS THE REQUIREMENTS OF ASTM A653, QUALITY SQ, GRADE 50, CLASS 1, FY=50 KSI. ALL 43 MIL AND LIGHTER GALVANIZED MEMBERS SHALL BE FORMED FROM STEEL THAT MEETS THE REQUIREMENTS OF ASTM A653, QUALITY SQ, GRADE 33, FY=33 KSI. BRIDGING PER MANUFACTURER'S REQUIREMENTS AND AS SHOWN IN THE STRUCTURAL DRAWINGS SHALL BE IN PLACE PRIOR TO PLACING OF ANY CONSTRUCTION LOADS. ALL RUNS SHALL BE RIGIDLY ANCHORED TO END WALLS.

EXTERIOR WALL AND BEARING WALL COLD-FORMED STEEL FRAMING: COLD-FORMED STEEL FRAMING MEMBERS SHALL MEET THE TYPE, SIZE AND THICKNESS AS INDICATED ON THE STRUCTURAL PLANS AND SPECIFICATIONS.

POWDER ACTUATED FASTENERS: SHALL BE X-U UNIVERSAL KNURLED SHANK FASTENER BY HILTI OR PRE-APPROVED EQUAL. INSTALL PER ALL MANUFACTURER'S PUBLISHED RECOMMENDATIONS. COLD-FORMED STEEL TO STRUCTURAL STEEL: UNLESS NOTED OTHERWISE, PROVIDE 0.157" SHANK DIAMETER X-U LOW-VELOCITY FASTENER - FASTENER TIP SHALL PENETRATE STRUCTURAL STEEL. COLD-FORMED STEEL TO CONCRETE: UNLESS NOTED OTHERWISE, PROVIDE 0.157" SHANK DIAMETER X-U LOW-VELOCITY FASTENER - EMBED 1-1/2" MINIMUM INTO CONCRETE, UNLESS NOTED OTHERWISE.

SLIP CONNECTIONS: THE STEEL NETWORK "VERTICLIP" OR PRE-APPROVED EQUAL. MATCH CLIP WITH STUD SIZE AND THICKNESS. ATTACH PER MANUFACTURER'S REQUIREMENTS.

MISCELLANEOUS:

PRE-APPROVED SUBSTITUTIONS: SUBSTITUTIONS MAY BE ALLOWED ONLY IF THEY MEET THE REQUIREMENTS OF THESE GENERAL NOTES AND THE SPECIFICATIONS, AND IF COMPLETE WRITTEN ENGINEERING DATA FOR EACH CONDITION REQUIRED FOR THIS PROJECT IS PROVIDED TO THE STRUCTURAL ENGINEER TWO WEEKS PRIOR TO BID DATE AND APPROVED IN WRITTEN ADDENDA BY THE ARCHITECT. DATA IS TO INDICATE CODE BASIS BY YEAR, AUTHORITY FOR STRESSES AND STRESS INCREASES, IF ANY, AND AMOUNT OF EXPECTED DEFLECTION FOR FLEXURAL MEMBERS UNDER (1) TOTAL LOAD AND (2) LIVE LOAD ONLY. ALL INCREASED COSTS IN MECHANICAL, SPRINKLER, ELECTRICAL OR GENERAL INSTALLATION AND ANY ARCHITECTURAL OR STRUCTURAL REDESIGN RESULTING FROM SUBSTITUTION SHALL BE BORNE BY THE GENERAL CONTRACTOR.

SHOP DRAWINGS/SUBMITTALS

THE FOLLOWING SHOP DRAWINGS/SUBMITTALS SHALL BE PROVIDED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR DELIVERY.

		STRUCTURAL ENGR.	BLDG. DEPT.
1.	CONCRETE MIX DESIGNS	X	X
2.	REINFORCING STEEL SHOP DRAWINGS	X	
3.	MASONRY WALL REINFORCING DRAWINGS	X	X
4.	VENEER ANCHORAGE SYSTEMS	X	X
5.	STRUCTURAL STEEL	X	X
6.	METAL DECK	X	X
7.	COLD-FORMED STEEL FRAMING	X	X
8.	CONTRACTOR'S STATEMENT OF RESPONSIBILITY	X	X

SPECIAL INSPECTION: SPECIAL INSPECTION SHALL BE PROVIDED BY AN INDEPENDENT TESTING LABORATORY PER THE REQUIREMENTS OF IBC CHAPTER 17 AND THE LOCAL BUILDING OFFICIAL OR APPLICABLE JURISDICTION AND THE CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS AND A FINAL SIGNED REPORT TO THE BUILDING OFFICIAL FOR THE ITEMS LISTED IN THE QUALITY ASSURANCE/SPECIAL INSPECTION SECTION:

STATEMENT OF SPECIAL INSPECTIONS:

SPECIAL INSPECTION: SPECIAL INSPECTION SHALL BE PROVIDED PER THE REQUIREMENTS OF IBC SECTION 1704 AND 1705 AND AS NOTED HEREIN.

STRUCTURAL SYSTEM	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	COMMENTS	REFERENCES
SOILS	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		IBC 1705.6
	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		
	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X		
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X			
	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X		
STEEL CONSTRUCTION	MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS		X		AISC 360 CHAPTER N5
	HIGH-STRENGTH BOLTING A. SNUG-TIGHT JOINTS B. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST OFF BOLTS OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION		 X X		AISC 360 CHAPTER N5 AISC 341 CHAPTER J7
	MATERIAL VERIFICATION OF STRUCTURAL STEEL A. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360 B. MANUFACTURER'S CERTIFIED MILL TEST REPORTS		 X X	MANUFACTURER TO PROVIDE CERTIFIED MILL TEST REPORTS	AISC 360 CHAPTER N5 AISC 341 CHAPTER J6
	MATERIAL VERIFICATION OF WELD FILLER MATERIALS A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATIONS LISTED IN GENERAL NOTES B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE		 X X	MANUFACTURER TO PROVIDE CERTIFICATE OF COMPLIANCE	AISC 360 CHAPTER N5
	INSPECTION OF WELDING A. COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS B. MULTI-PASS FILLET WELDS C. SINGLE-PASS FILLET WELDS > 5/16" D. PLUG AND SLOT WELDS E. SINGLE-PASS FILLET WELDS ≤ 5/16" F. FIELD-INSTALLED WELDED STUDS	 X X X 	 X X X	SPECIAL INSPECTIONS IN THIS SECTION ARE WAIVED WHERE FABRICATION IS PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED IN ACCORDANCE WITH IBC SECTION 1704.2.5	AISC 360 CHAPTER N5 AISC 341 CHAPTER J6 AWS D1.1

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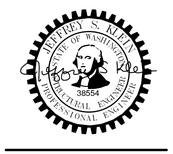

GENERAL NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

S103

DRAWING NO.

PLOTTED: 8/10/2022 8:50:02 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash H#A20-112.02 v2020 (Central)_dhorne@pcs-structural.com.rvt

STRUCTURAL SYSTEM	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	COMMENTS	REFERENCES
STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL	MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK: A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS B. MANUFACTURER'S CERTIFIED TEST REPORTS		X X		APPLICABLE ASTM MATERIAL STANDARDS & IBC 2210.1.1
	INSPECTION OF WELDING A. COLD-FORM STEEL DECK WELDS B. REINFORCING STEEL: 1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706 2. REINFORCING STEEL IN MOMENT FRAMES AND BOUNDARY ELEMENTS 3. SHEAR REINFORCEMENT 4. OTHER REINFORCING STEEL	 X X X	 X X		AWS D1.3 AWS D1.4 ACI 318:26.6.4
CONCRETE	REINFORCING STEEL AND PLACEMENT		X	SPECIAL INSPECTIONS NOT REQUIRED FOR THE FOLLOWING CONDITIONS: NON-STRUCTURAL SLAB ON GRADE	ACI 318: CH 20, 25.2, 25.3, 26.6-1 TO 26.6-3, IBC 1908.4
	ANCHORS CAST IN CONCRETE-PRIOR TO AND DURING PLACEMENT OF CONCRETE		X		ACI 318: 17.8.2 AISC 360 SECTION N7
	ANCHORS POST-INSTALLED IN HARDENED CONCRETE (MECHANICAL ANCHORS INSTALLED IN ANY DIRECTION AND ADHESIVE ANCHORS INSTALLED DOWNWARD)		X	PERIODIC INSPECTION TO INCLUDE A QUANTITY OF 10% WITH A MINIMUM OF (5) ANCHORS INSPECTED PER INSTALLER ON A DAILY BASIS.	ACI 318: 17.8.2 MFR EVAL REPORT MFR PUBLISHED INSTALLATION INSTRUCTIONS
	ANCHORS POST-INSTALLED IN HARDENED CONCRETE (ADHESIVE ANCHORS INSTALLED HORIZONTAL OR UPWARDLY INCLINED)	X			ACI 318: 17.8.2 MFR EVAL REPORT MFR PUBLISHED INSTALLATION INSTRUCTIONS
	VERIFY USE OF REQUIRED DESIGN MIX		X		ACI 318, CH 19
	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X			ASTM C172, C31 ACI 318: 26.4, 26.12 IBC 1908.10
	CONCRETE PLACEMENT FOR PROPER APPLICATION	X			ACI 318: 26.5 IBC 1908.6, 1908.7, 1908.8
	MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X		ACI 318: 26.5.3 TO 26.5.5 IBC 1908.9
	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X		ACI 318: 26.11.1.2(b)
	MATERIAL VERIFICATION OF REINFORCEMENT STEEL FOR ASTM A615 REINFORCING		X	MANUFACTURER SHALL PROVIDE MILL TEST REPORTS. CONTINUOUS INSPECTION FOR ALL WELDS GREATER THAN 5/16" FILLET. PERIODIC INSPECTION FOR FILLET WELD 5/16" AND SMALLER	ACI 318: 26.6.4 AWS D1.4 IBC 1705.3.1
	TESTING OF MATERIALS		X		IBC 1705.3.2
MASONRY	PROPORTION OF SITE-PREPARED MORTAR		X		TMS 602, ART 2.1, 2.6A & 2.6C
	GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS AND ANCHOR BOLTS		X		TMS 602, ART 2.4B, & 2.4H
	SAMPLE PANEL CONSTRUCTION	X		PERIODIC INSPECTION PERMITTED FOR RISK CATEGORY I, II, AND III STRUCTURES	TMS 602: ART 1.6D
	GROUT SPACE	X		PERIODIC INSPECTION PERMITTED FOR RISK CATEGORY I, II, AND III STRUCTURES	TMS 602: ART 3.2D & 3.2F
	PLACEMENT OF REINFORCEMENT, CONNECTORS AND ANCHOR BOLTS	X		PERIODIC INSPECTION PERMITTED FOR RISK CATEGORY I, II, AND III STRUCTURES	TMS 402: SECT. 6.1, 6.3.1, 6.3.6 & 6.3.7, TMS 602: ART 3.2E & 3.4
	PROPORTIONS OF SITE-PREPARED GROUT	X	X		TMS 602: ART 2.6B & 2.4G.1.b
	MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS		X		TMS 602: ART 1.5
	PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION		X		TMS 602: ART 3.3B
	SIZE, TYPE AND LOCATION OF STRUCTURAL MEMBERS	X			TMS 602: ART 3.3F
	TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	X		PERIODIC INSPECTION PERMITTED FOR RISK CATEGORY I, II, AND III STRUCTURES	TMS 402: SECT. 1.2.1(e), 6.2.1 & 6.3.1
	WELDING OF REINFORCEMENT	X			TMS 402: SECT. 6.1.6.1.2
	PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40° F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)		X		TMS 602: ART 1.8C & 1.8D
	PLACEMENT OF GROUT	X			TMS 602: ART 3.5 & 3.6C
	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS	X			TMS 602: ART 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3 & 1.4B.4
	POST INSTALLED ANCHORS INTO MASONRY	X			MFR EVAL REPORT
COLD-FORMED STEEL FRAMING	SCREW ATTACHMENT, WELDING, BOLTING, ANCHORING AND FASTENING OF ELEMENTS OF SEISMIC RESISTING SYSTEM INCLUDING SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS (DRAG STRUTS) AND HOLDOWNS		X	NOT REQUIRED WHERE SHEATHING IS GYPSUM BOARD OR FIBERBOARD OR WHEN THE SHEATHING IS WOOD STRUCTURAL PANEL OR STEEL SHEETS ON (1) SIDE AND WITH SCREWS SPACED GREATER THAN 4" O.C.	IBC 1705.12.3, 1705.11.2 AWS D1.3
	EXTERIOR WALLS		X		IBC 1705.11.3, 1705.12.5
ANCHORED VENEER	INSPECTION PROGRAM SHALL VERIFY: 1. SIZE, TYPE OF VENEER ANCHORS 2. SIZE, GRADE OF JOINT REINF. 3. PROPORTIONS OF MORTAR 4. CONSTRUCTION OF MORTAR JOINTS 5. INSTALLATION OF TIES		X X X X X	VERIFICATION AT BEGINNING OF CONSTRUCTION	IBC 1705.12.5, 1705.4 TMS 402 / ACI 530 / ASCE 5

ABBREVIATION LIST			
@	AT	HDR	HEADER
A.B.	ANCHOR BOLT	HGR	HANGER
ADD'L	ADDITIONAL	HORIZ.	HORIZONTAL
A.F.F.	ABOVE FINISH FLOOR	HSS	HOLLOW STRUCTURAL SECTION
ALT.	ALTERNATE	HT	HEIGHT
ARCH.	ARCHITECTURAL	INT.	INTERIOR
BLD'G	BUILDING	JST	JOIST
BLK'G	BLOCKING	JT	JOINT
BM	BEAM	L	ANGLE
B.O.F.	BOTTOM OF FOOTING	L.F.R.S.	LATERAL FORCE-RESISTING SYSTEM
BOT.	BOTTOM	L.L.	LIVE LOAD
BRB	BUCKLING RESTRAINED BRACE	LLH	LONG LEG HORIZONTAL
BRG	BEARING	LLV	LONG LEG VERTICAL
BTWN	BETWEEN	LOC.	LOCATION
B.U.	BUILT UP	LSL	LAMINATED STRAND LUMBER
(C=)	CAMBER	LVL	LAMINATED VENEER LUMBER
CANT.	CANTILEVER	MAX.	MAXIMUM
CFS	COLD-FORMED STEEL	M.B.	MACHINE BOLT
C.J.	CONTROL/CONSTRUCTION JOINT	MECH.	MECHANICAL
℄	CENTERLINE	MEZZ.	MEZZANINE
CLR.	CLEARANCE	MFR	MANUFACTURER
CMU	CONCRETE MASONRY UNIT	MIN.	MINIMUM
COL.	COLUMN	MISC.	MISCELLANEOUS
CONC.	CONCRETE	MTL	METAL
CONN.	CONNECTION	N.F.	NEAR FACE
CONST.	CONSTRUCTION	N.S.	NEAR SIDE
CONT.	CONTINUOUS	NTS	NOT TO SCALE
CONTR.	CONTRACTOR	O.C.	ON CENTER
COORD.	COORDINATE	OPN'G	OPENING
C.P.	COMPLETE PENETRATION	OPP.	OPPOSITE
CTR'D	CENTERED	P.A.F.	POWDER ACTUATED FASTENER
C.Y.	CUBIC YARD	PERP.	PERPENDICULAR
DBL.	DOUBLE	PL	PLATE
DCW	DEMAND CRITICAL WELD	P.P.	PARTIAL PENETRATION
D.F.	DOUGLAS FIR	P.P.T.	PRESERVATIVE PRESSURE TREATED
DIA. OR ⌀	DIAMETER	P.S.F.	POUNDS PER SQUARE FOOT
DIAG.	DIAGONAL	PSL	PARALLAM
DIM.	DIMENSION	P.T.	POST TENSION
D.L.	DEAD LOAD	PW.	PLYWOOD
DWG	DRAWING	REINF.	REINFORCEMENT
DWL	DOWEL	REQ'D	REQUIRED
(E)	EXISTING	SCHED.	SCHEDULE
EA.	EACH	SCL	STRUCTURAL COMPOSITE LUMBER
E.F.	EACH FACE	SHT'G	SHEATHING
EL.	ELEVATION	SIM.	SIMILAR
ELEV.	ELEVATOR	S.O.G.	SLAB ON GRADE
ENGR	ENGINEER	SQ.	SQUARE
EQ.	EQUAL	STD	STANDARD
E.W.	EACH WAY	STIFF.	STIFFENER
EXP.	EXPANSION	STL	STEEL
EXT.	EXTERIOR	STRUCT.	STRUCTURAL
FDN	FOUNDATION	T&B	TOP & BOTTOM
F.F.	FAR FACE	T&G	TONGUE AND GROOVE
FLR	FLOOR	THR'D	THREADED
F.O.M.	FACE OF MASONRY	T.O.F.	TOP OF FOOTING
F.O.S.	FACE OF STUD	T.O.S.	TOP OF STEEL
FRM'G	FRAMING	TRT'D	TREATED
F.R.T.	FIRE RETARDANT TREATED	TYP.	TYPICAL
F.S.	FAR SIDE	U.N.O.	UNLESS NOTED OTHERWISE
FTG	FOOTING	U.T.	ULTRASONIC TESTED
GA.	GAGE/GAUGE	VERT.	VERTICAL
GALV.	GALVANIZED	W/	WITH
GL.	GLULAM	W.P.	WORK POINT
GR.	GRADE	WT	WEIGHT
GWB	GYPSUM WALL BOARD	W.W.R.	WELDED WIRE REINFORCING

TESTING AND SPECIAL INSPECTION REPORTS SHALL BE PREPARED FOR EACH INSPECTION ITEM ON A DAILY BASIS WHENEVER WORK IS PERFORMED ON THAT ITEM. REPORTS SHALL BE DISTRIBUTED TO OWNER, CONTRACTOR, BUILDING OFFICIAL, ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.

STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD OR DESIGNATED REPRESENTATIVE IN ACCORDANCE WITH IBC 1704.6. STRUCTURAL OBSERVATION SHALL BE PERFORMED AS FOLLOWS:

- PERIODIC VISUAL OBSERVATION OF STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES.
- REVIEW OF TESTING AND INSPECTION REPORTS.
- REPORTS SHALL BE PREPARED FOR EACH SITE VISIT AND SHALL BE DISTRIBUTED TO ARCHITECT.

GENERAL CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL INCLUDE ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTION.

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JEFFREY S. KIRK
STATE OF WASHINGTON
38554
REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

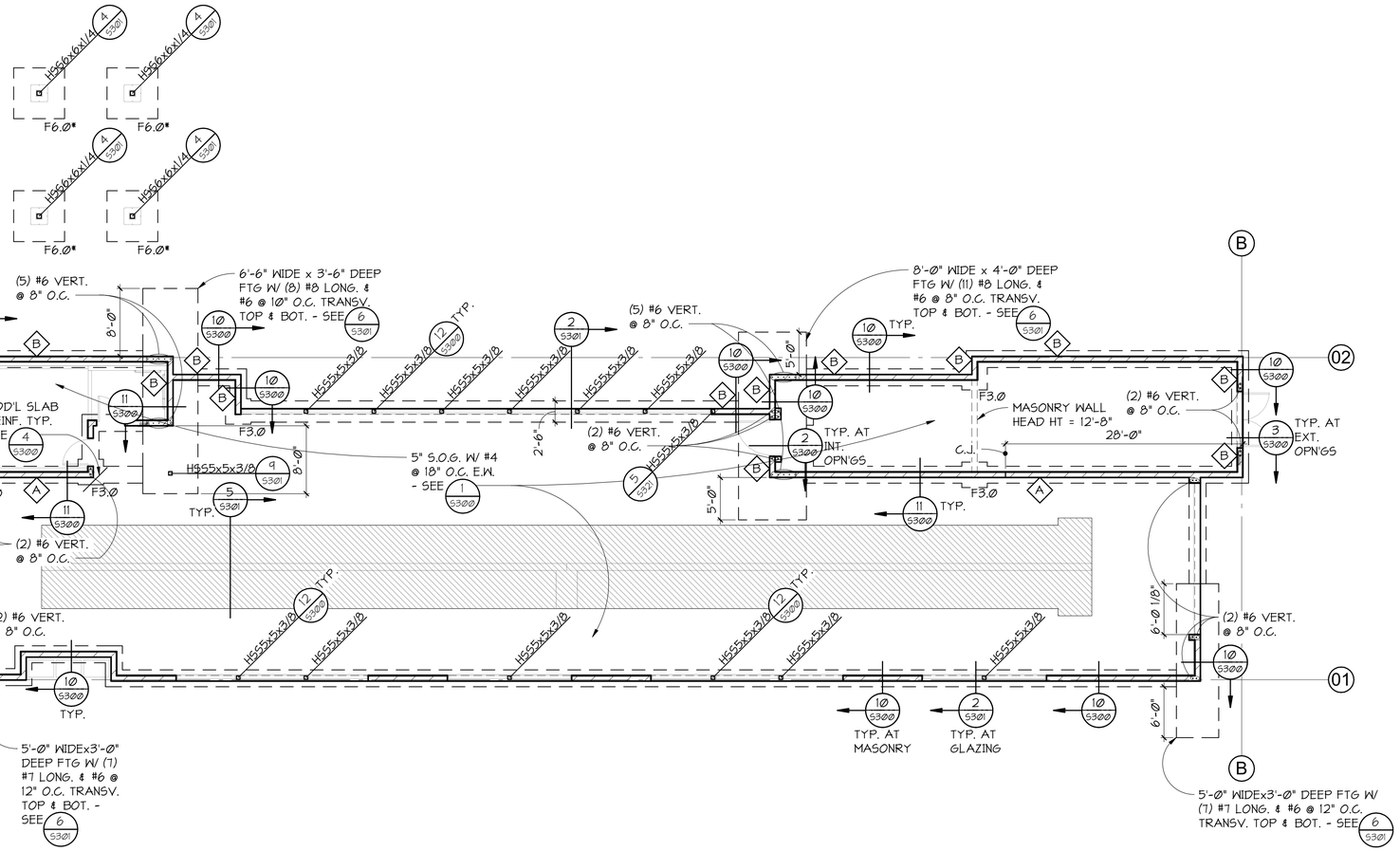
S104

DRAWING NO.

PLOTTED: 8/10/2022 8:50:05 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash H#A20-112.02 v2020 (Central)_dhome@pcs-structural.com.rvt

FOUNDATION NOTES

1. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. FINISH FLOOR = 0'-0" A.F.F. UNLESS NOTED OTHERWISE.
2. TOP OF FOOTING ELEVATIONS = -1'-4" UNLESS NOTED OTHERWISE ON PLANS AND DETAILS. FOR TRENCH ELEVATIONS, SEE ARCHITECTURAL.
3. INDICATES 8" CMU WALL UNLESS NOTED OTHERWISE. FOR TYPICAL MASONRY DETAILS SEE 5310.
4. INDICATES 2'-0" WIDE CONCRETE FOOTING U.N.O. SEE 5300 AND 5301 FOR TYPICAL FOOTING DETAILS.
5. INDICATES COLD-FORMED STEEL WALL UNLESS NOTED OTHERWISE. FOR TYPICAL FRAMING SEE 1/5340.
6. C.J. INDICATES CONTROL JOINT IN CMU WALL. SEE 4/5310.
7. INDICATES DEPRESSED OR SLOPED SLABS. FOR SLOPE AND EXACT LOCATION SEE ARCHITECTURAL DRAWINGS.
8. FOR TYPICAL CONCRETE SLAB-ON-GRADE DETAILS SEE 5300.
9. FOR TYPICAL PLACEMENT OF STEM WALL REINFORCEMENT, AND FOUNDATION CONSTRUCTION JOINTS SEE DETAILS 7/5300 & 8/5300.
10. FOR TYPICAL EXCAVATION LIMITATIONS IN THE PROXIMITY OF FOUNDATIONS SEE DETAIL 6/5300.
11. FOR TRENCH LAYOUT AND DIMENSIONS SEE ARCHITECTURAL.
12. FOR MISC. EMBEDDED STEEL AT TRENCHES SEE 3/5301.
13. SEE ARCH. FOR CONTROL JOINT LAYOUT IN SLAB ON GRADE.
14. INTERIOR NON-BEARING WALL WITH COLD-FORMED STEEL FRAMING NOT SHOWN OR SCREENED. FOR TYPICAL FRAMING SEE 1/5340.
15. FOR TYPICAL CONNECTION OF COLD-FORMED STEEL FRAMING AT WALL OPENING SEE 1/5341.
16. HSS INDICATES HOLLOW STRUCTURAL SECTION COLUMNS ORIGINATING AT FOUNDATION LEVEL. ALL COLUMNS ARE CONTINUOUS TO ROOF UNLESS NOTED OTHERWISE.
17. INDICATES SPECIAL REINFORCED 8" CMU WALL SEE 2/5310.



1 S110 FOUNDATION PLAN
1/8" = 1'-0"

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FOUNDATION PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22
JOB NO. a20-112

BID SET

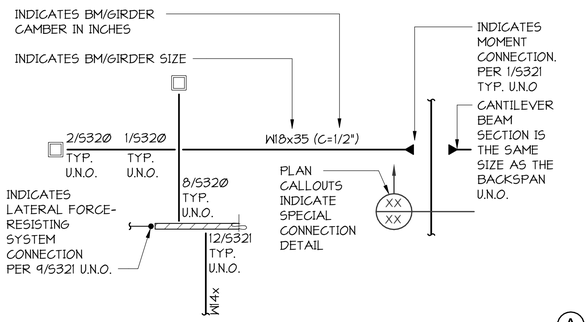
S110

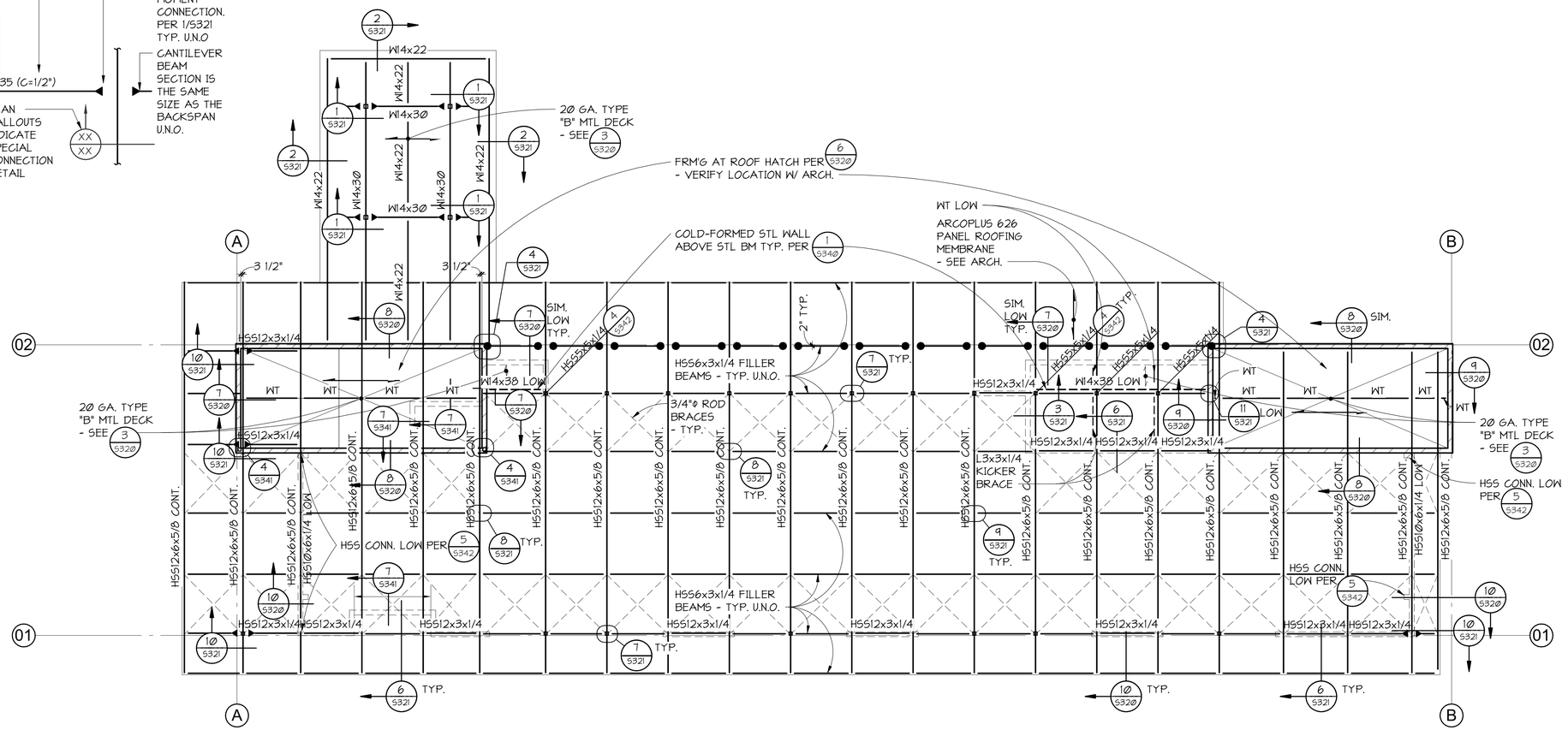
DRAWING NO.

PLOTTED: 8/10/2022 8:50:09 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash H#A20-112.02 v2020 (Central)_dhorne@pcs-structural.com.rvt

ROOF FRAMING NOTES

1. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. INDICATES MASONRY WALL EXTENDING ABOVE THE ROOF TO FORM A PARAPET.
3. INDICATES COLD-FORMED STEEL WALL EXTENDING ABOVE ROOF TO FORM A PARAPET.
4. INDICATES MASONRY VENEER. FOR ATTACHMENT OF VENEER TO BACKING SEE GENERAL NOTES.
5. INDICATES WALL BELOW EXTENDING TO ROOF STRUCTURE.
6. INDICATES DIRECTION OF SPAN FOR METAL DECK. FOR TYPICAL METAL DECK SEE S320.
7. INDICATES PENETRATION IN ROOF. FOR ADDITIONAL MISCELLANEOUS OPENINGS IN ROOF FOR MECHANICAL PENETRATIONS SEE MECHANICAL DRAWINGS. SEE 4/S320 & 6/S320 FOR TYPICAL SUPPORT AROUND OPENINGS.
8. FOR TYPICAL STEEL CONNECTION DETAILS SEE SHEET S320.
9. INDICATES STEEL COLUMN DISCONTINUING AT ROOF LEVEL.
10. HSS — INDICATES STEEL COLUMN EXTENDING ABOVE ROOF LEVEL.
11. "WT" INDICATES STRUCTURAL WT SECTION IN ROOF PLANE. SEE APPLICABLE DETAIL ON PLANS FOR SIZE AND ORIENTATION.
12. A1 INDICATES SPECIAL CFS FRAMING SHEAR WALL WITH RATED SHEATHING & STUD SIZE/SPACING - SEE 3/S342.
13. ALL EXPOSED STRUCTURAL STEEL IS TO BE GALVANIZED.





1/S111 ROOF FRAMING PLAN
1/8" = 1'-0"

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ROOF FRAMING PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22 JOB NO. a20-112

BID SET

S111

DRAWING NO.

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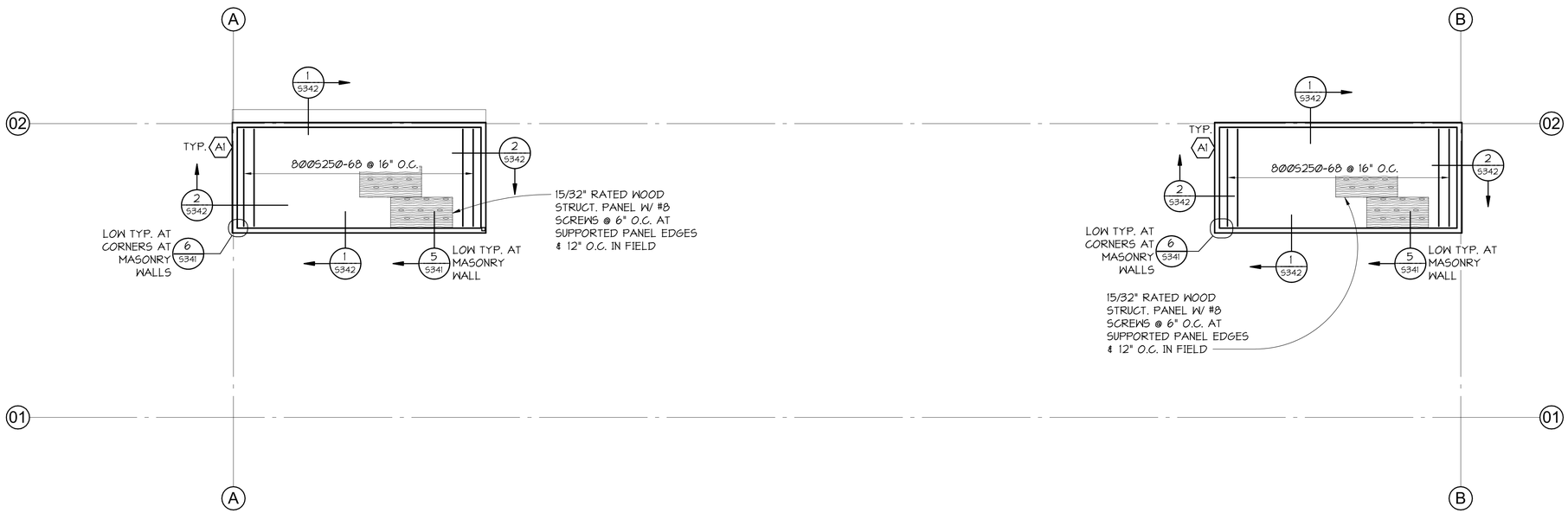

FOR ROOF FRAMING NOTES SEE SHEET S111

1 S112 HIGH ROOF FRAMING PLAN

1/8" = 1'-0"

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HIGH ROOF FRAMING PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

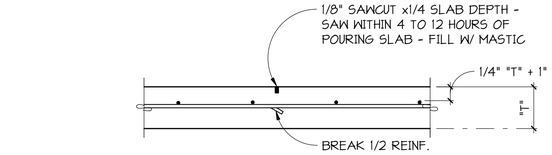
REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

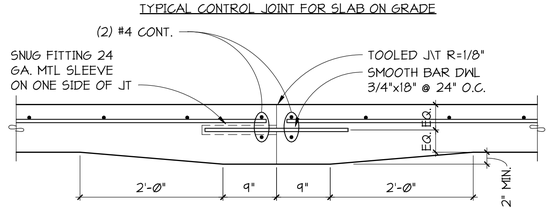
BID SET

S112

DRAWING NO.

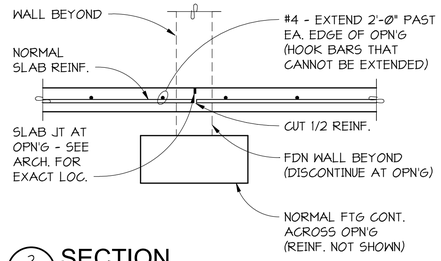


TYPICAL CONTROL JOINT FOR SLAB ON GRADE

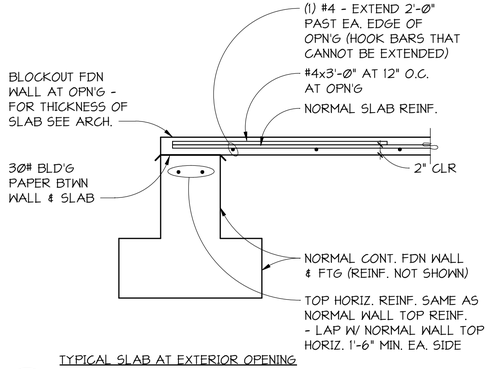


TYPICAL CONSTRUCTION JOINT FOR SLAB ON GRADE

1 / 5300 SECTION
NO SCALE

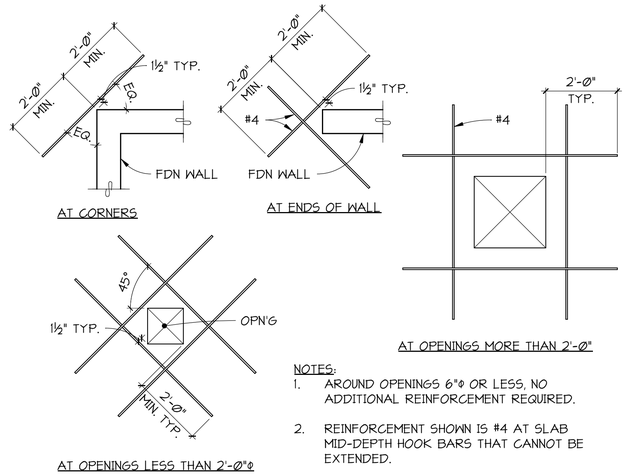


2 / 5300 SECTION
NO SCALE



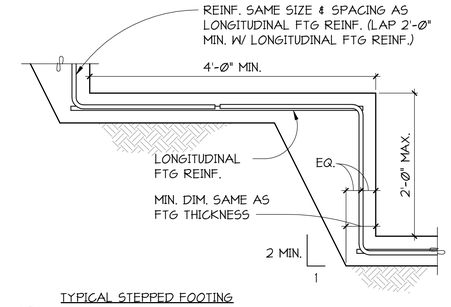
TYPICAL SLAB AT EXTERIOR OPENING

3 / 5300 SECTION
NO SCALE



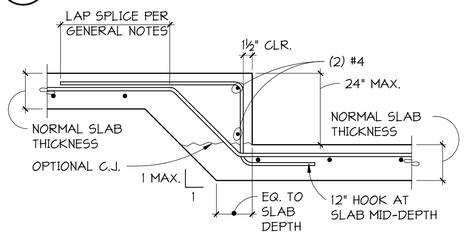
TYPICAL SLAB ON GRADE DISCONTINUITY REINFORCEMENT

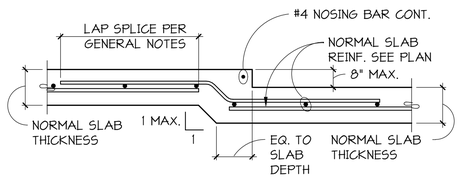
4 / 5300 PLAN DETAILS
NO SCALE



TYPICAL STEPPED FOOTING

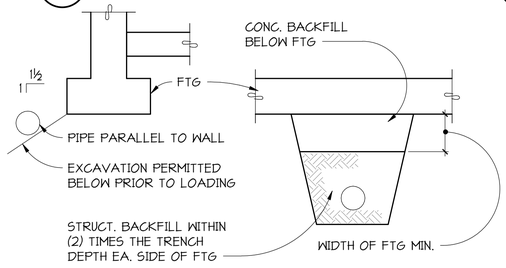
5 / 5300 DETAIL
NO SCALE





TYPICAL SLAB STEPS OR DEPRESSIONS

9 / 5300 DETAIL
NO SCALE

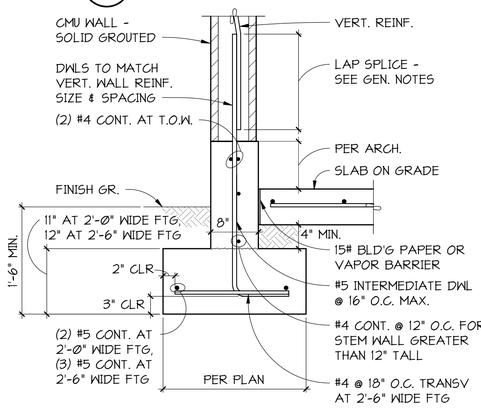


TYPICAL FOR PARALLEL PIPES ADJACENT TO FOOTINGS

TYPICAL FOR PERPENDICULAR PIPES UNDER FOOTINGS

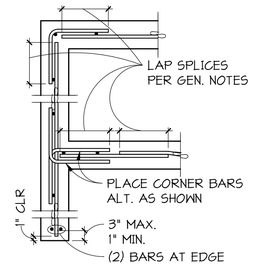
NOTES:
1. FOUNDATIONS SHALL NOT BE LOADED PRIOR TO COMPLETING STRUCTURAL BACKFILL UNDER & NEAR FOOTINGS.
2. CONCRETE BACKFILL SHALL BE USED UNDER FOOTINGS WHERE 95% COMPACTION CANNOT BE ACCOMPLISHED.
3. ALL STRUCTURAL BACKFILL NOTED SHALL BE COMPACTED TO 95% OF MAX. DENSITY PER ASTM.
4. A PIPE SLEEVE SHALL BE PROVIDED FOR SHALLOW PIPES CAST IN CONCRETE.
5. PIPES SHALL NOT BE PLACED IN THE FOOTING WITHOUT SPECIFIC APPROVAL FROM THE ENGINEER.
6. FOR VARIATIONS CONTACT ENGINEER.

6 / 5300 SECTION
NO SCALE



TYPICAL FOUNDATION AT EXTERIOR MASONRY WALL

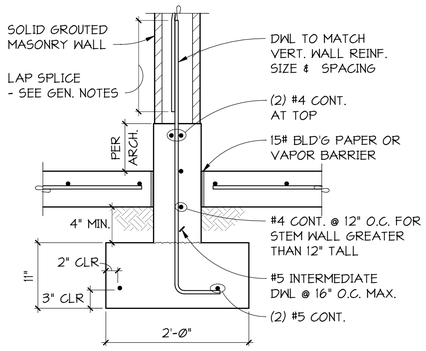
10 / 5300 SECTION
NO SCALE



NOTES:
1. VERTICAL REINFORCEMENT SHOWN IS ADDITIONAL IF NORMAL STEM WALL REINFORCEMENT IS NOT IN PROPER LOCATION.
2. CORNER BARS ARE SAME SIZE AND SPACING AS HORIZONTAL REINFORCEMENT.
3. 90° STANDARD HOOK MAY BE SUBSTITUTED FOR CORNER BARS. SEE NOTE #5.
4. REINFORCEMENT AT ALL CORNERS, ENDS, AND INTERSECTIONS OF WALLS SHALL BE PLACED IN ACCORDANCE WITH APPROPRIATE DETAIL SHOWN.
5. USE 90° STANDARD HOOK FOR EMBEDMENT LESS THAN 24" PAST FACE OF WALL.
6. FOR OPENINGS THROUGH STEM WALLS, SEE 1/S3.Ø1.

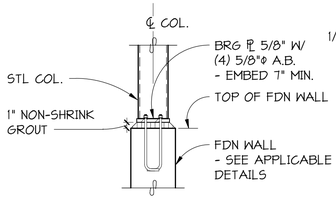
TYPICAL REINFORCING PLACEMENT PLAN FOR CONCRETE STEM WALLS

7 / 5300 SECTION
NO SCALE



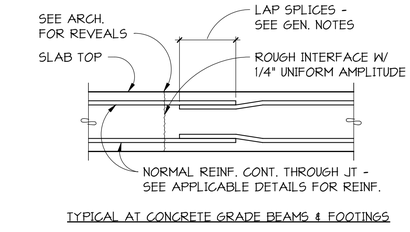
TYPICAL FOUNDATION AT INTERIOR MASONRY WALL

11 / 5300 SECTION
NO SCALE



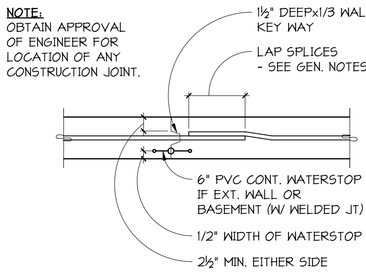
TYPICAL STEEL COLUMN BASE AT CONTINUOUS FOUNDATION WALL

12 / 5300 SECTION
NO SCALE



TYPICAL AT CONCRETE GRADE BEAMS & FOOTINGS

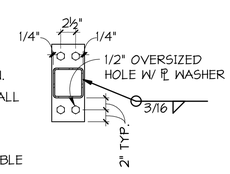
NOTE:
OBTAIN APPROVAL OF ENGINEER FOR LOCATION OF ANY CONSTRUCTION JOINT.



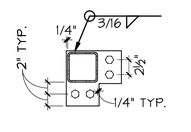
TYPICAL AT VERTICAL WALL JOINTS

TYP. FOR CAST IN PLACE CONC. WALLS, GR. BMS. & FTGS

8 / 5300 CONSTRUCTION JOINTS
NO SCALE



TYPICAL BEARING PLATE



BEARING PLATE AT CORNER

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QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22 | JOB NO. a20-112

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DRAWING NO. S300

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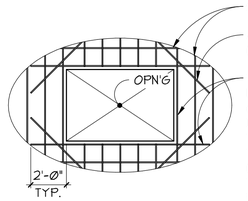
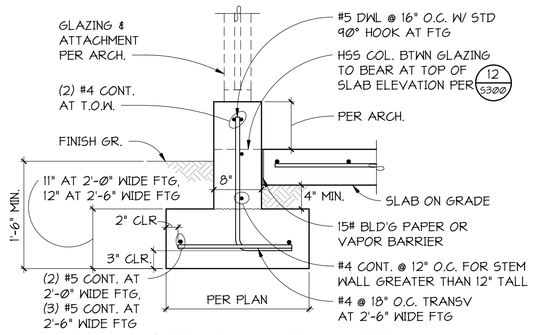


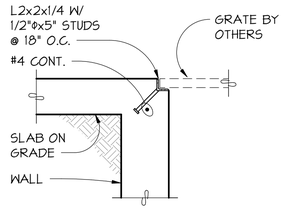
TYPICAL AT OPENINGS IN CAST IN PLACE CONCRETE WALLS

1 / S301 **SECTION**
NO SCALE



TYPICAL FOUNDATION AT EXTERIOR STOREFRONT

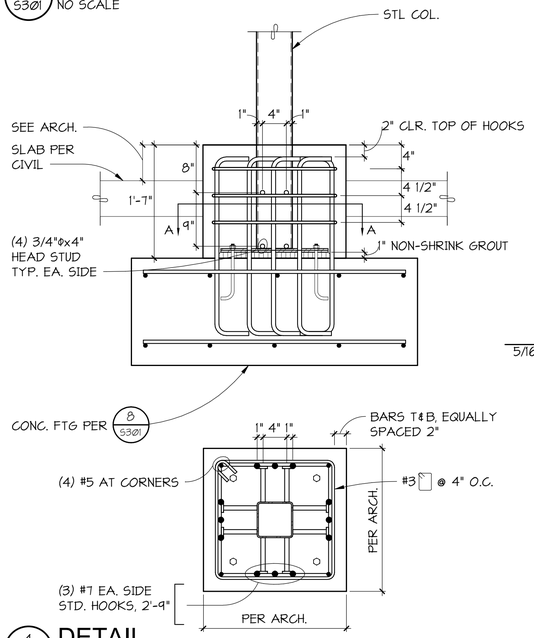
2 / S301 **SECTION**
NO SCALE



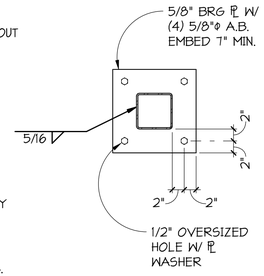
NOTES:
1. COORDINATE TYPE AND LOCATION OF EMBEDS WITH EQUIPMENT SUPPLIER AND "T" DRAWINGS
2. ALL EMBEDS SHALL BE STAINLESS.

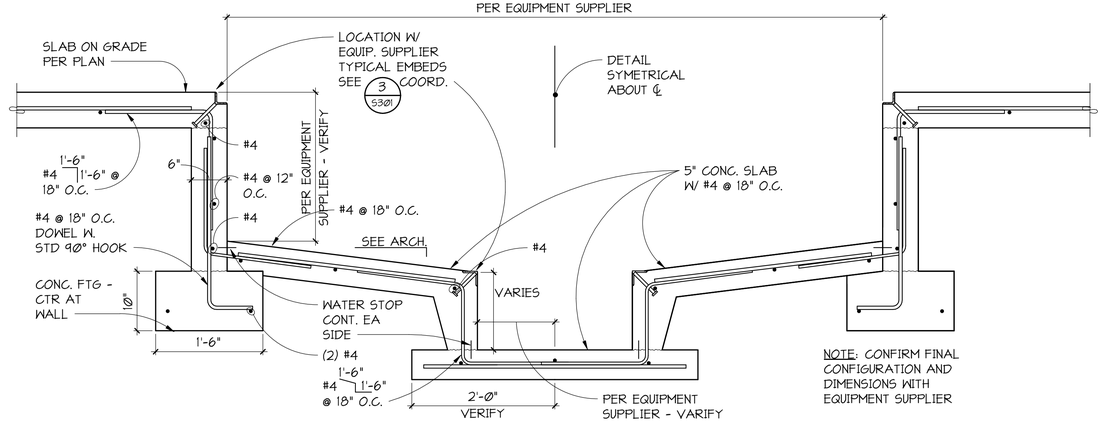
TYPICAL TRENCH EMBEDS

3 / S301 **SECTION**
NO SCALE



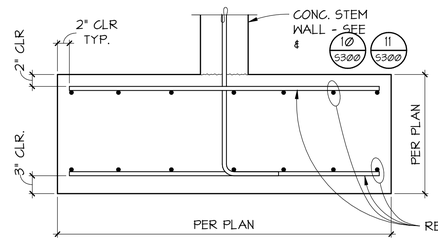
4 / S301 **DETAIL**
NO SCALE





TYPICAL TRENCH

5 / S301 **SECTION**
NO SCALE



6 / S301 **DETAIL**
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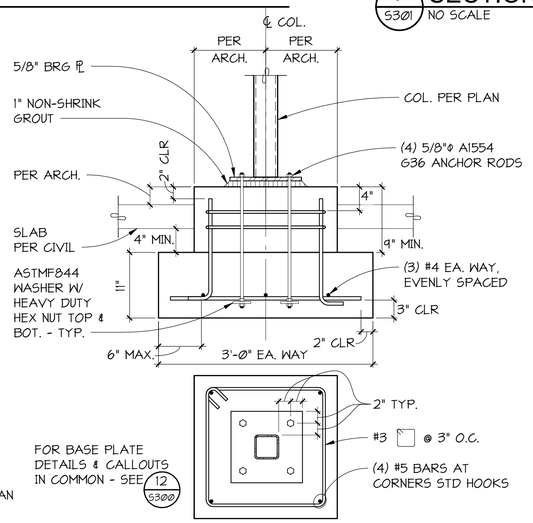
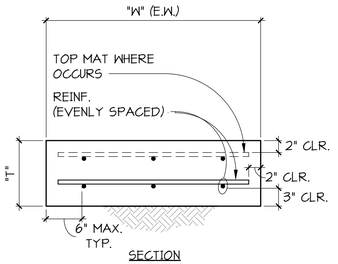


7 / S301 **DETAIL**
NO SCALE

MARK	DIMENSIONS		REINFORCEMENT EACH WAY
	"W"	"T"	
F3.Ø	3'-Ø"	11"	(4) #4
F4.Ø	4'-Ø"	11"	(4) #5
F6.Ø*	6'-Ø"	14"	(6) #6 TOP & BOT.

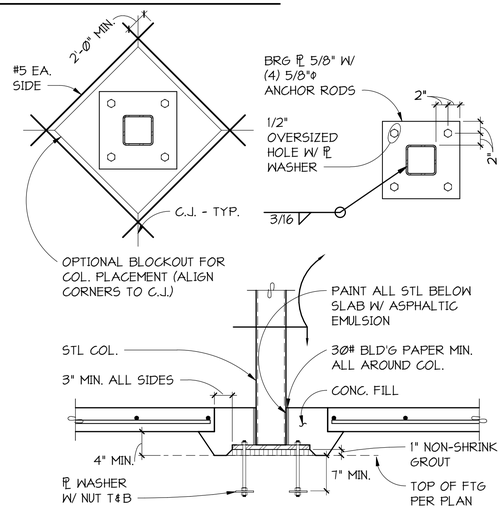


SECTION

NOTES:
1. CENTER ALL FOOTINGS ON COLUMN ABOVE EXCEPT AS SHOWN OTHERWISE.
2. FOOTINGS SHALL BEAR ON UNDISTURBED OR COMPACTED MATERIAL PER GENERAL NOTES. DESIGN BEARING PRESSURE IS 2500 POUNDS PER SQUARE FOOT.

TYPICAL CONCRETE SPREAD FOOTING

8 / S301 **SECTION**
1" = 1'-Ø"



9 / S301 **SECTION**
1" = 1'-Ø"

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DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

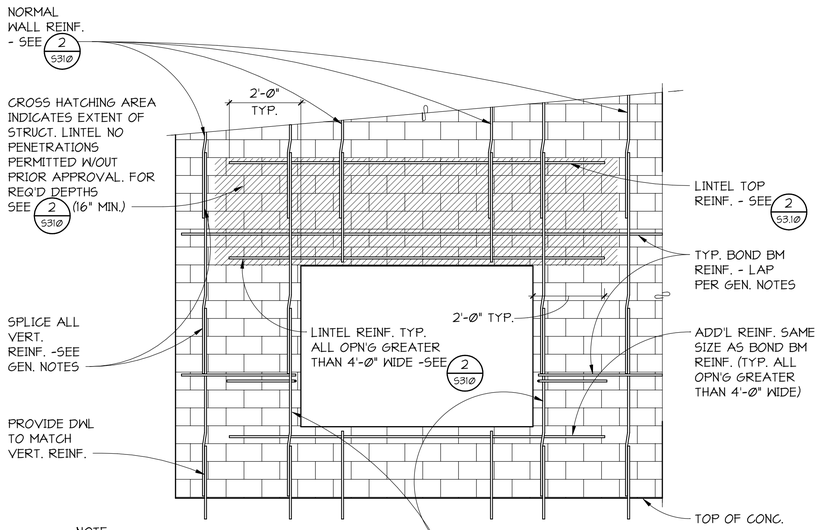
REVISION	DATE

DATE 08.12.22 JOB NO. a20-112

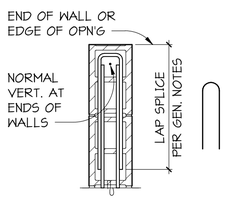
BID SET

S301

DRAWING NO.



NOTE:
1. SOLID GROUT ALL CELLS. LAY UP BLOCK IN RUNNING BOND PATTERN.
2. FOR TYPICAL WALL REINFORCEMENT SIZE AND LOCATION SEE 2/S31Ø.
3. HOOK ALL REINFORCING THAT CANNOT BE EXTENDED.
4. TYPICAL REINFORCEMENT SHOWN. PROVIDE ADDITIONAL REINFORCEMENT WHERE NOTED ON PLANS OR DETAILS.
5. PROVIDE (1) #4 MIN. AROUND OPENINGS GREATER THAN 2'-Ø" BUT LESS THAN 4'-Ø" IN EITHER DIRECTION. EXTEND 2'-Ø" BEYOND FACE OF OPENINGS.
6. NO CONDUIT ALLOWED IN CELLS WITH REINFORCEMENT.
7. PROVIDE BAR POSITIONERS FOR VERTICAL REINFORCEMENT AT FIRST COURSE ABOVE AND BELOW BOND BEAMS. SEE GENERAL NOTES FOR POSITIONER TYPE.



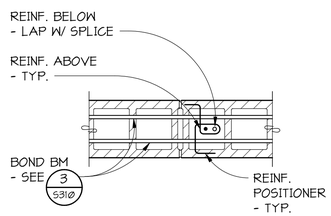
TYPICAL WALL REINFORCING AT END OF WALL

HOLLOW UNIT MASONRY WALL REINFORCING SCHEDULE

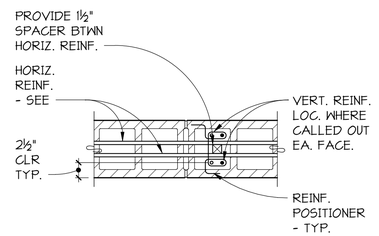
*SEE PLANS & APPLICABLE DETAILS FOR WALL THICKNESS & ANY SPECIAL REINF.

	WALL SIZE	MIMIMUM REINFORCEMENT * VERT. REINF.	MIMIMUM REINFORCEMENT * HORZ. REINF.	LINTELS (SAME REINF. AS BOND BEAM) MAX. SPAN OF LINTEL	MIM. DEPTH 15.5	23.5	31.5	39.5	47.5
TYP. REINF.	8" CMU	#5 @ 48" O.C.	(2) #5 @ 48" O.C.	-	3'-6"	7'-6"	10'-Ø"	12'-Ø"	

SPECIAL REINF.	WALL CALLOUT	WALL SIZE	TYP.	REINFORCEMENT VERT. REINF.	REINFORCEMENT HORZ. REINF.	REMARKS
	A	8"	I	#5 @ 16" O.C.	(2) #5 @ 48" O.C.	
	B	8"	I	#5 @ 8" O.C.	(2) #5 @ 48" O.C.	



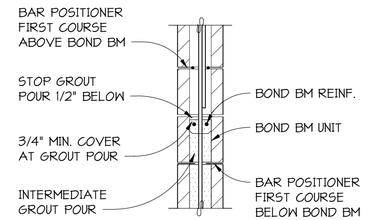
TYPE I - VERTICAL REINFORCEMENT AT CENTER LINE



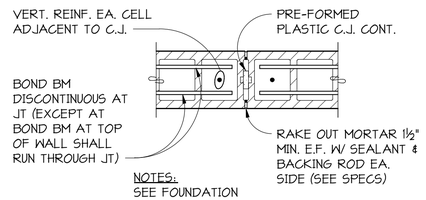
TYPE II - VERTICAL REINFORCEMENT AT EACH FACE

NOTES:
1. WALLS NOT SPECIFICALLY CALLED OUT ON THE PLANS WITH ◇ SHALL HAVE REINFORCEMENT AS SHOWN ON TYPICAL REINFORCEMENT.
2. PROVIDE BOND BEAM WITH MINIMUM HORIZONTAL REINFORCEMENT SHOWN AT TOP OF ALL WALLS, UNLESS NOTED ON PLANS OR DETAILS.
3. PROVIDE REINFORCEMENT POSITIONERS AT FIRST COURSE ABOVE AND BELOW BOND BEAM LOCATIONS AT ALL VERTICAL REINFORCEMENT. SEE GENERAL NOTES FOR POSITIONER TYPE.

2/S31Ø DETAIL
NO SCALE

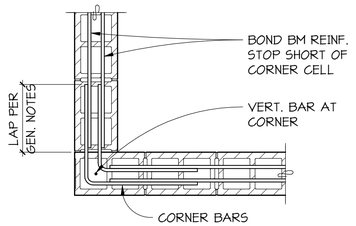


TYPICAL CMU WALL BOND BEAM
3/S31Ø DETAIL
NO SCALE

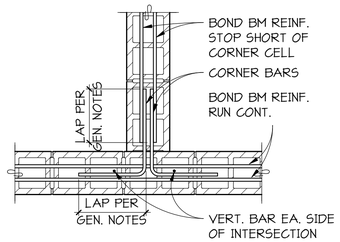


NOTES:
SEE FOUNDATION PLAN FOR LOCATION OF CONTROL JOINTS.

TYPICAL CMU WALL CONTROL JOINT
4/S31Ø PLAN DETAIL
NO SCALE



TYPICAL WALL REINFORCING AT CORNER



TYPICAL WALL REINFORCING AT INTERSECTION

1/S31Ø TYPICAL HOLLOW UNIT MASONY WALL
NO SCALE

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JEFFREY S. REED STATE OF WASHINGTON 38554 PROFESSIONAL ENGINEER

DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

S310
DRAWING NO.

PLOTTED: 8/10/2022 8:50:27 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\2107 QCV Car Wash H#A20-112.02-v2020 (Central)_dhome@pcs-structural.com.rvt

A | B | C | D | E | F | G | H | J | K

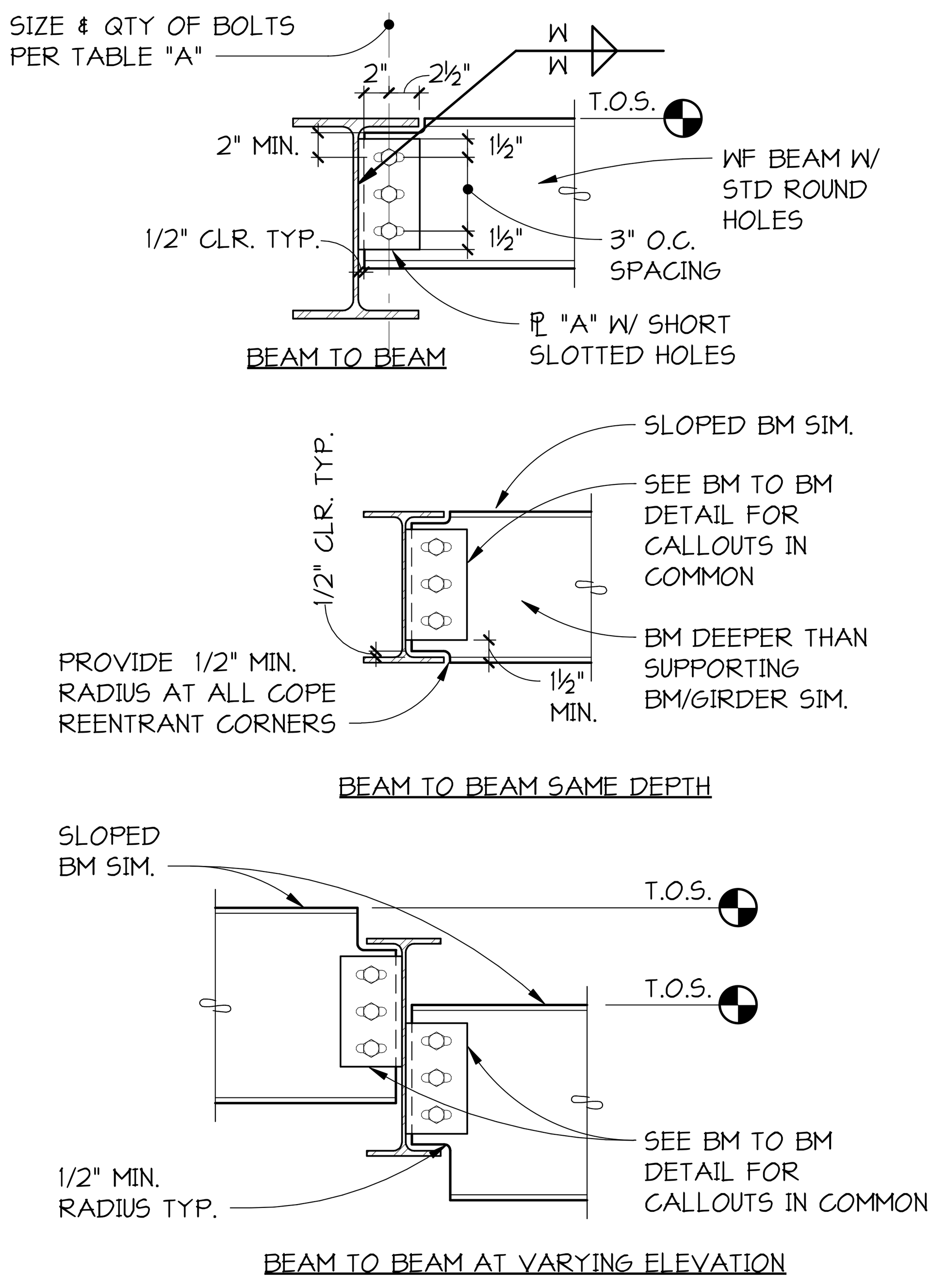
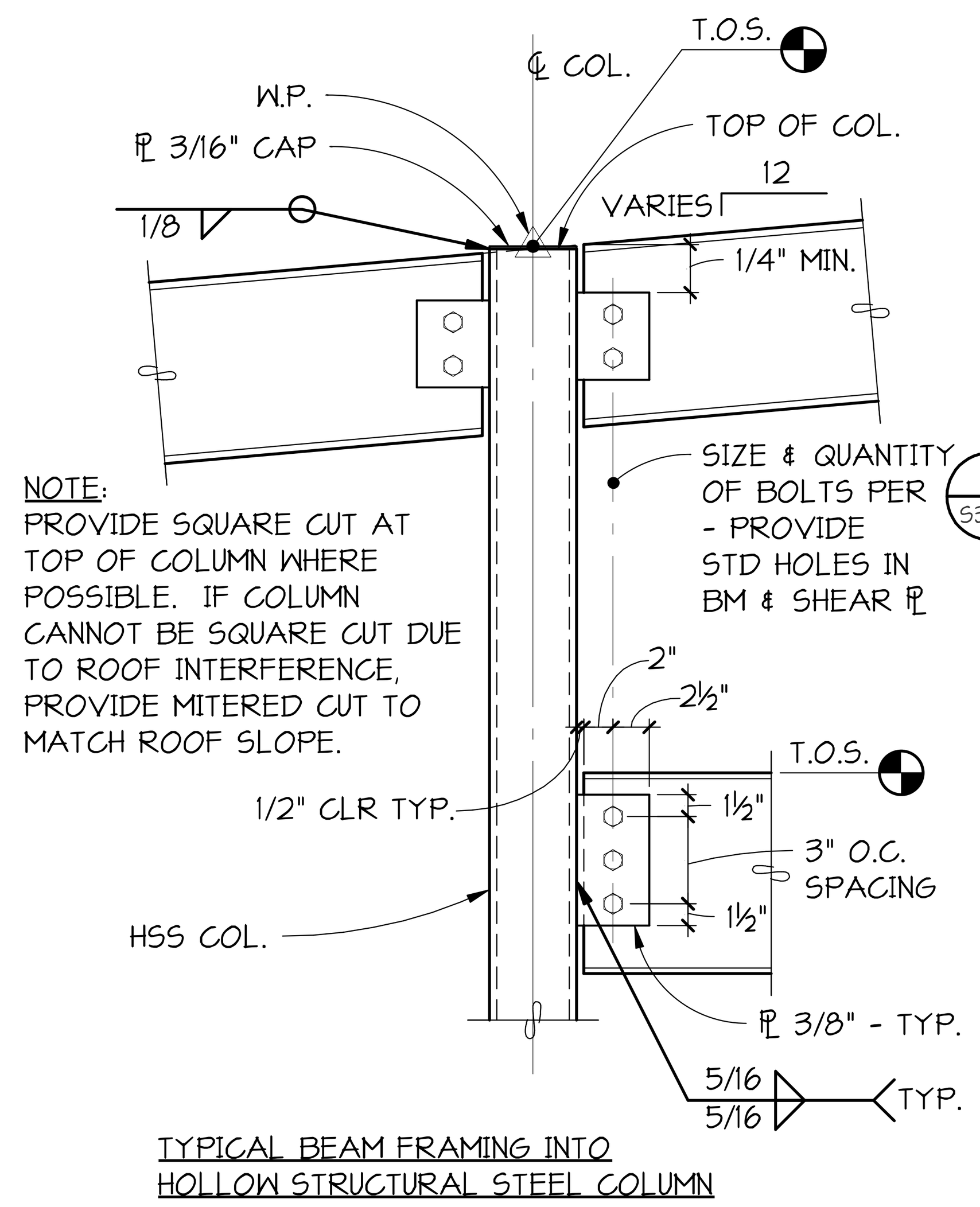


TABLE A			
SUPPORTED BM SIZE	# OF 7/8"⌀ A325N BOLTS	SHEAR ℞ THICKNESS "A"	WELD "W" NOTE 1.
W14	3	3/8"	5/16"

NOTE:
1. WELD SIZE SHOWN IS FOR BEAM/GIRDERS FRAMING PERPENDICULAR INTO SUPPORTS.

TYPICAL STEEL DETAIL

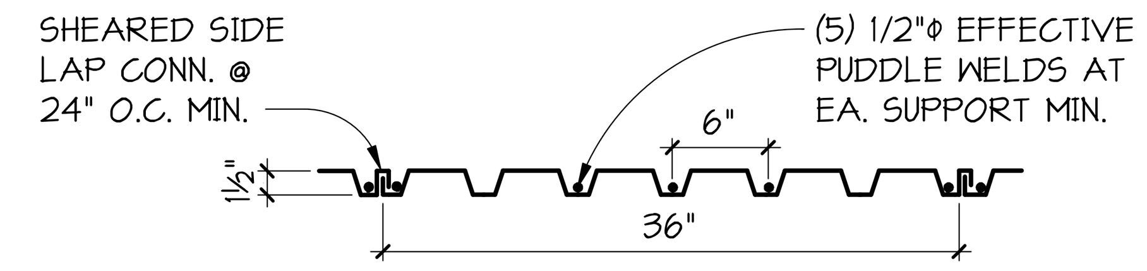
1 / S320 DETAIL
NO SCALE



NOTE:
PROVIDE SQUARE CUT AT TOP OF COLUMN WHERE POSSIBLE. IF COLUMN CANNOT BE SQUARE CUT DUE TO ROOF INTERFERENCE, PROVIDE MITERED CUT TO MATCH ROOF SLOPE.

TYPICAL BEAM FRAMING INTO HOLLOW STRUCTURAL STEEL COLUMN

2 / S320 DETAIL
NO SCALE



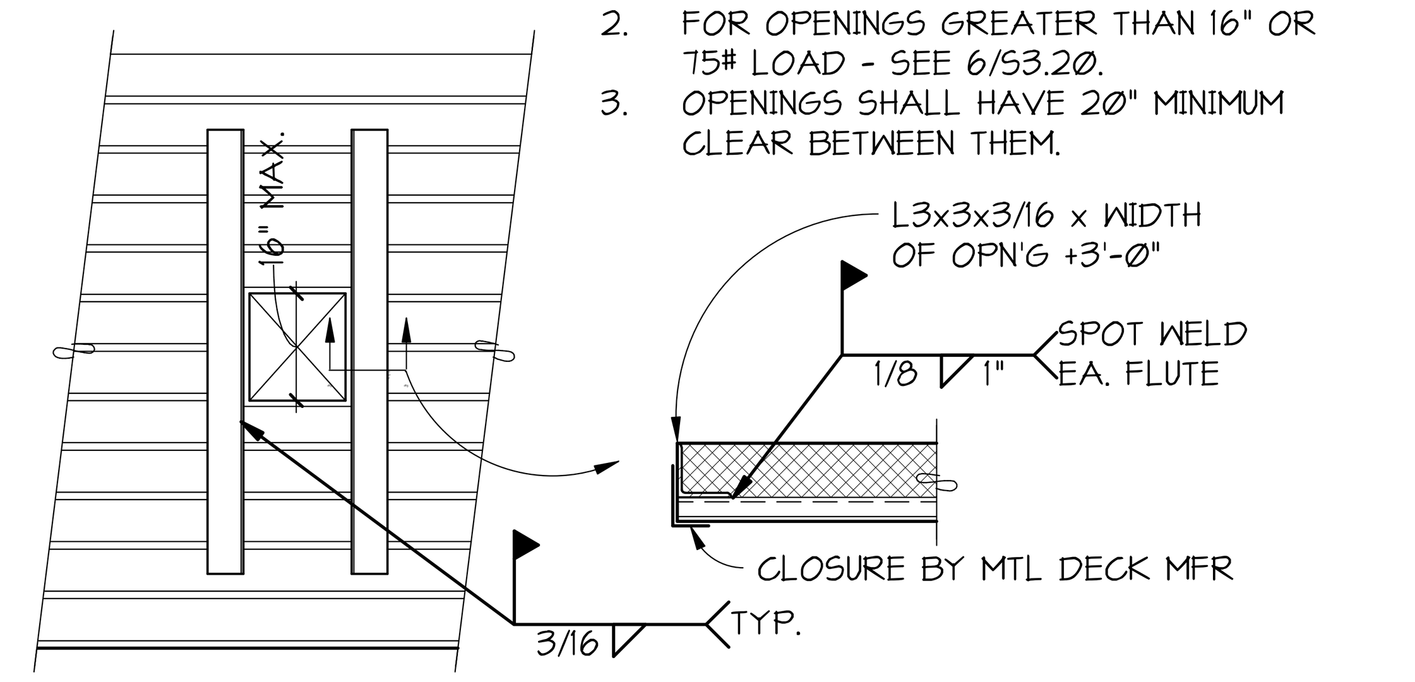
TYPE "B" MIN. DECK PROPERTIES		
GAUGE	I = (in.⁴/ft.)	+S/-S = (in.³/ft)
20	.216	.235/.248

NOTES:
1. (2) SPAN MINIMUM, (3) PREFERRED.
2. AT SUPPORTS PARALLEL TO CORRUGATIONS, PROVIDE PUDDLE WELDS AT 24" O.C. MAXIMUM.
3. "SHEARED SIDE LAP" CONNECTION REFERS TO "PUNCHLOK" BY VERCO DECKING, INC. OR "DELTAGRIP" BY ASC STEEL DECK, OR PREAPPROVED EQUAL.

TYPICAL ROOF METAL DECK

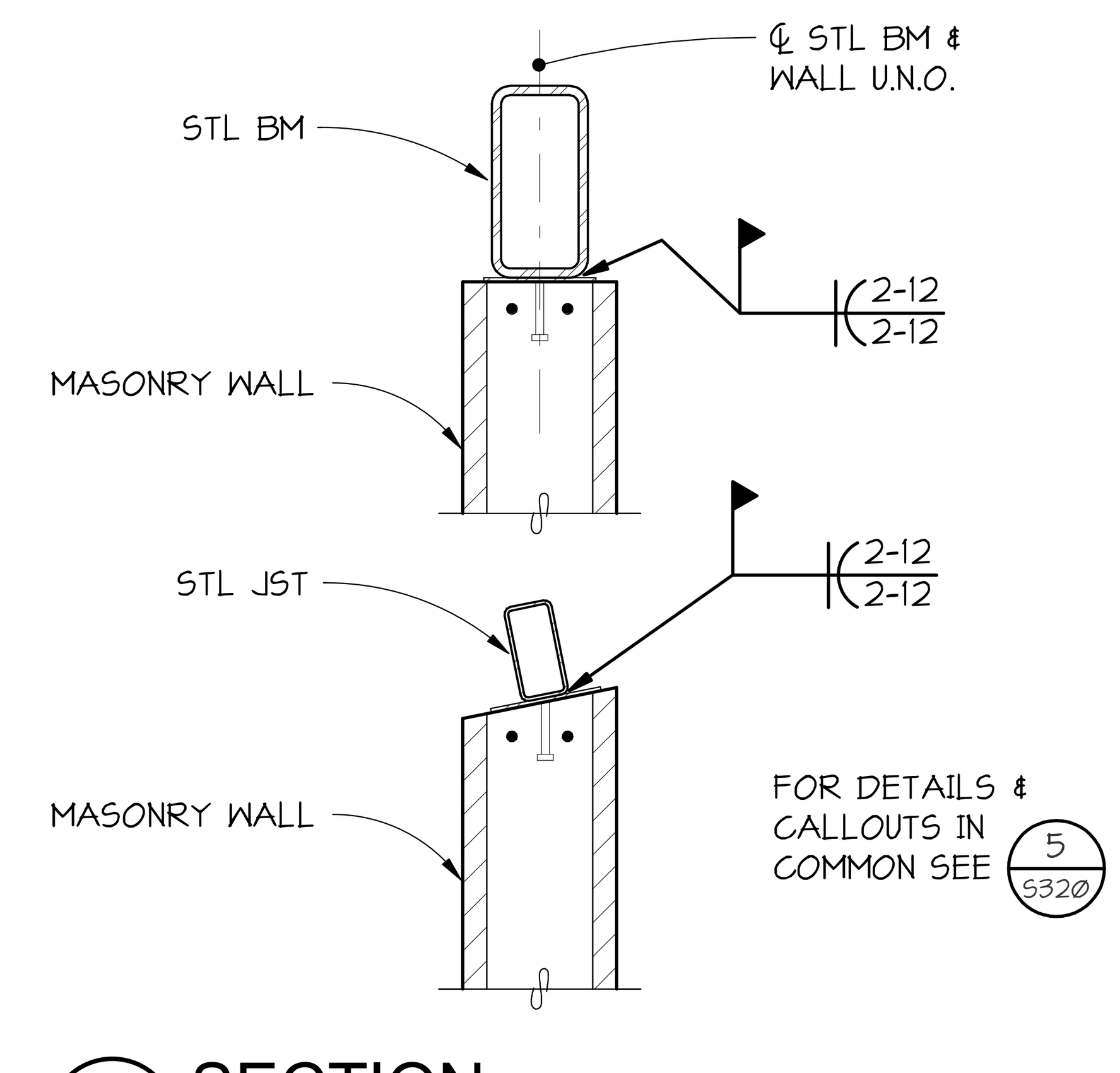
3 / S320 DETAIL
NO SCALE

NOTES:
1. OPENINGS LESS THAN 6"x6" REQUIRE NO FRAMING.
2. FOR OPENINGS GREATER THAN 16" OR 75# LOAD - SEE 6/S3.20.
3. OPENINGS SHALL HAVE 20" MINIMUM CLEAR BETWEEN THEM.

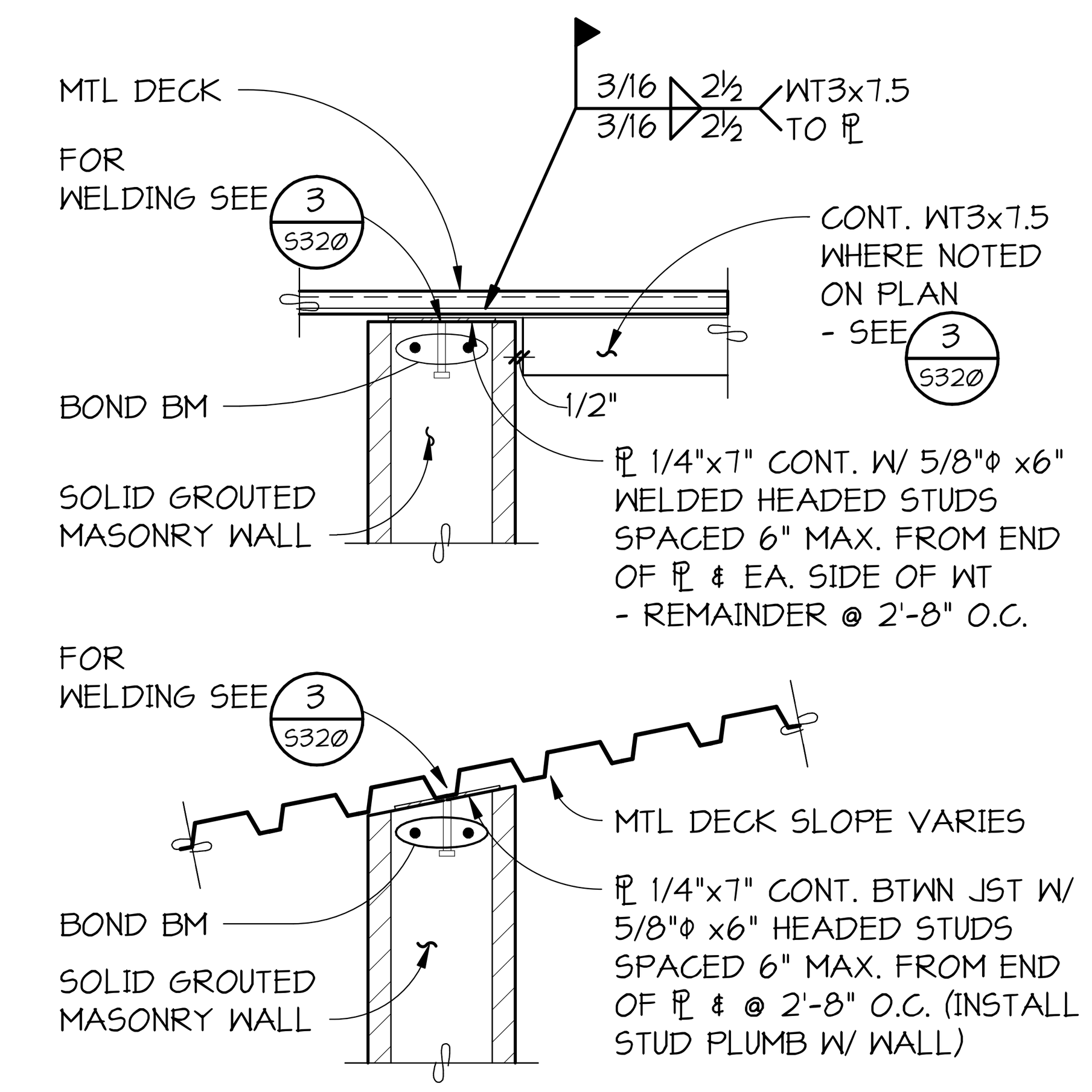


TYP. AT ISOLATED OPN'GS IN NON-COMPOSITE MTL DECK LESS THAN 16" SQ.

4 / S320 DETAIL
NO SCALE

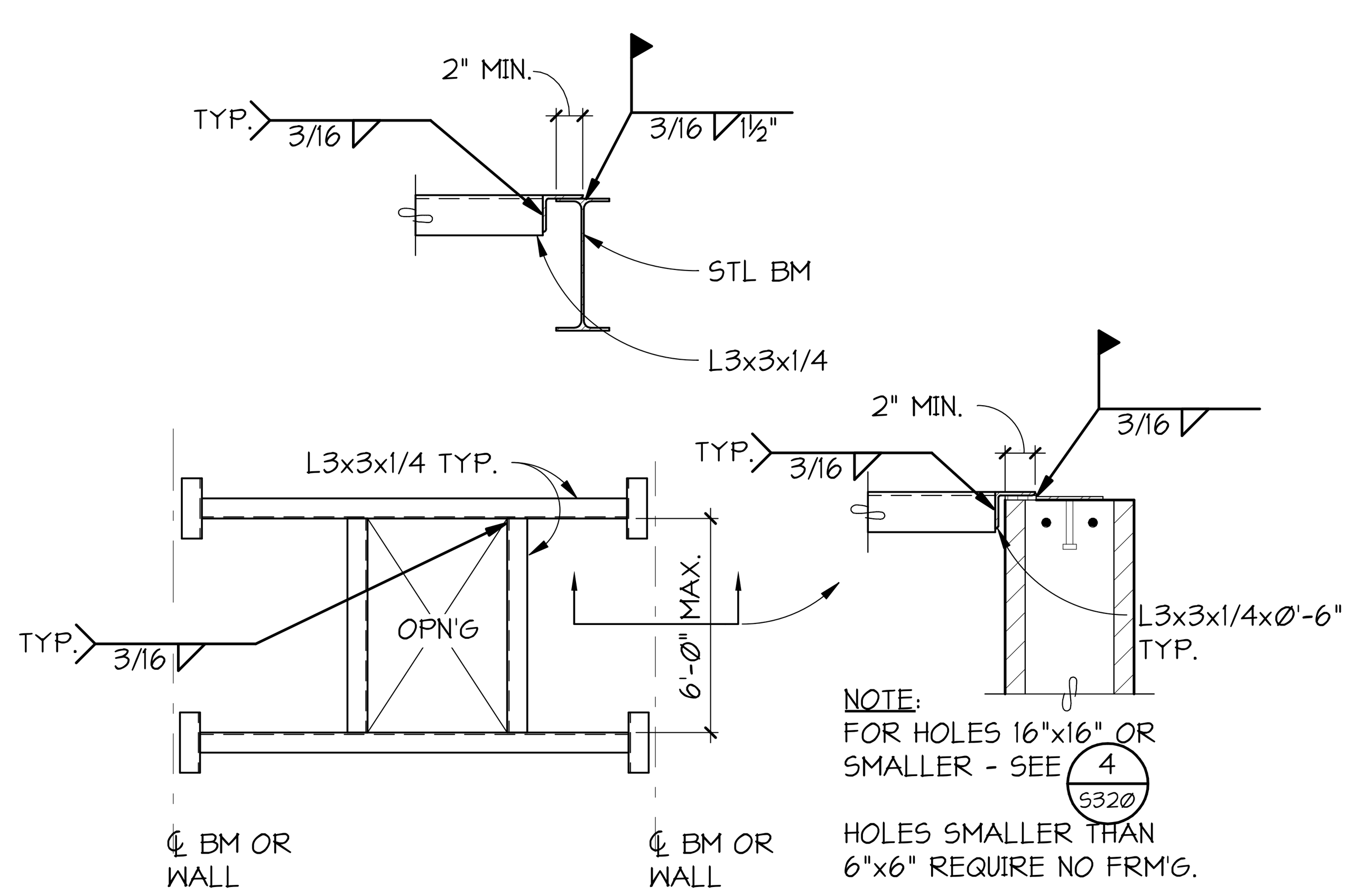


10 / S320 SECTION
NO SCALE



TYP. CONN. OF MTL DECK TO TOP OF MASONRY WALL

5 / S320 SECTION
NO SCALE

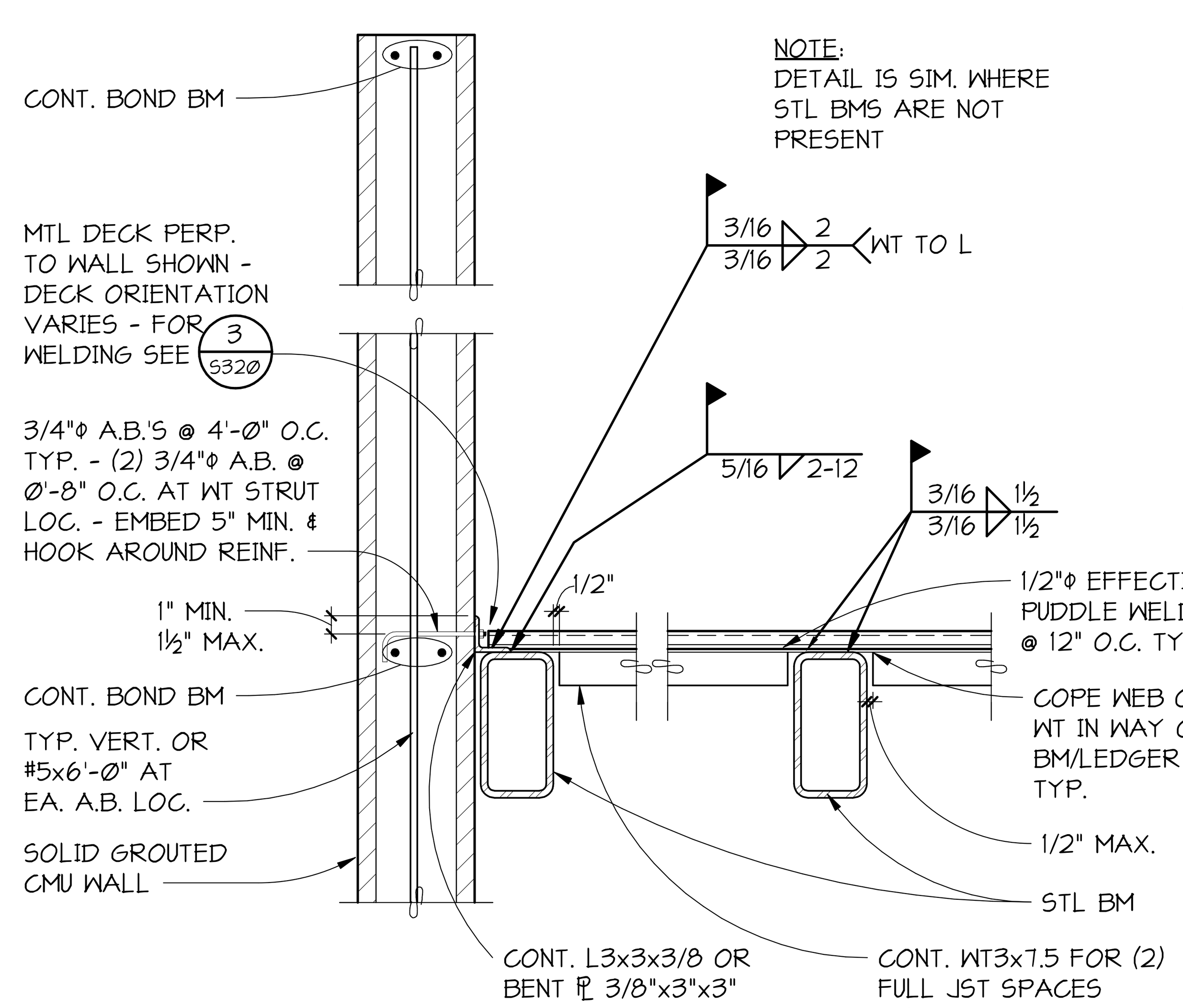


NOTE:
FOR HOLES 16"x16" OR SMALLER - SEE 4/S320

HOLES SMALLER THAN 6"x6" REQUIRE NO FRM'G.

TYPICAL FRAMING AT OPENINGS IN METAL ROOF DECK (MAX. LOAD = 600#)

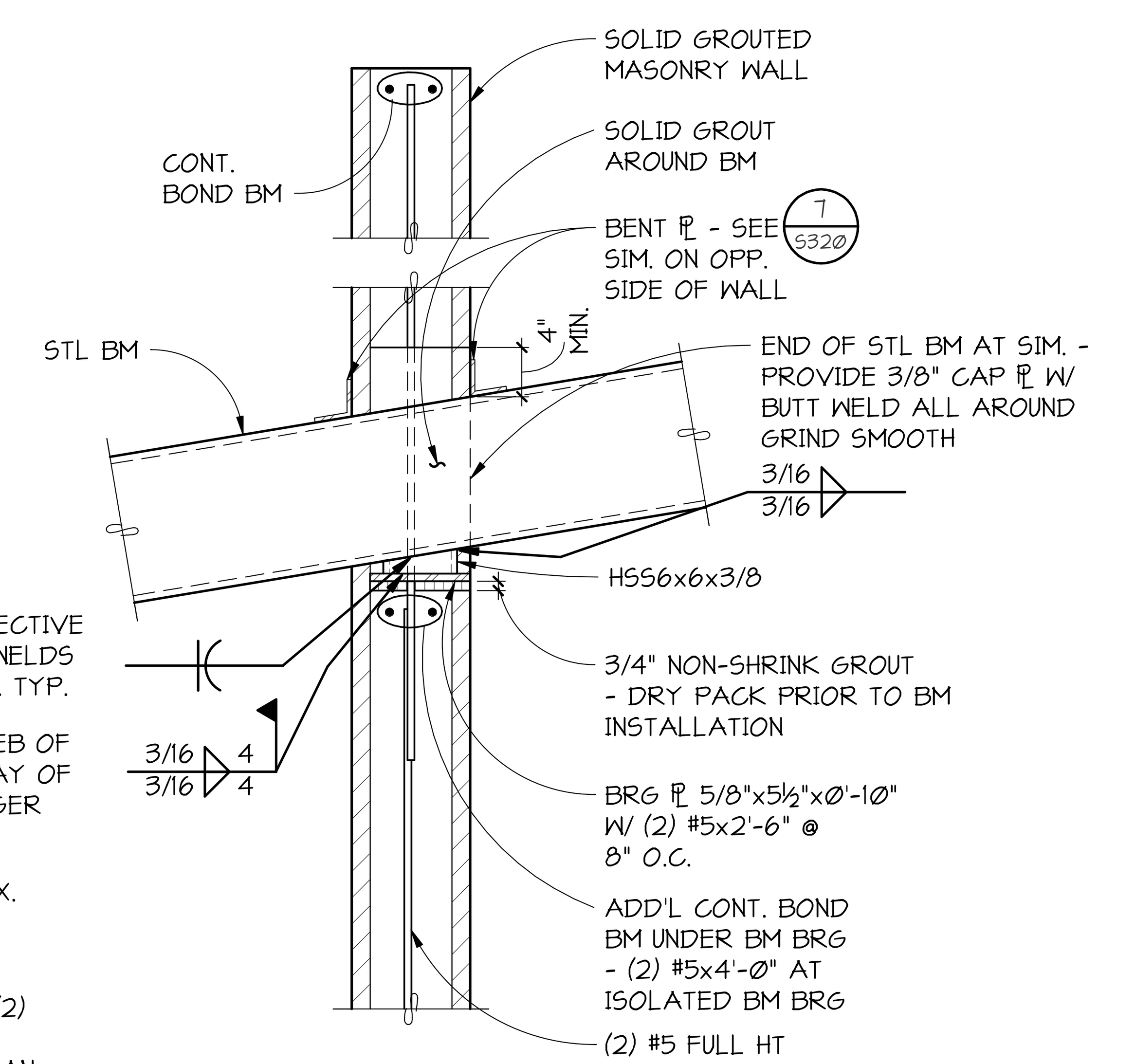
6 / S320 DETAIL
NO SCALE



NOTE:
DETAIL IS SIM. WHERE STL BMS ARE NOT PRESENT

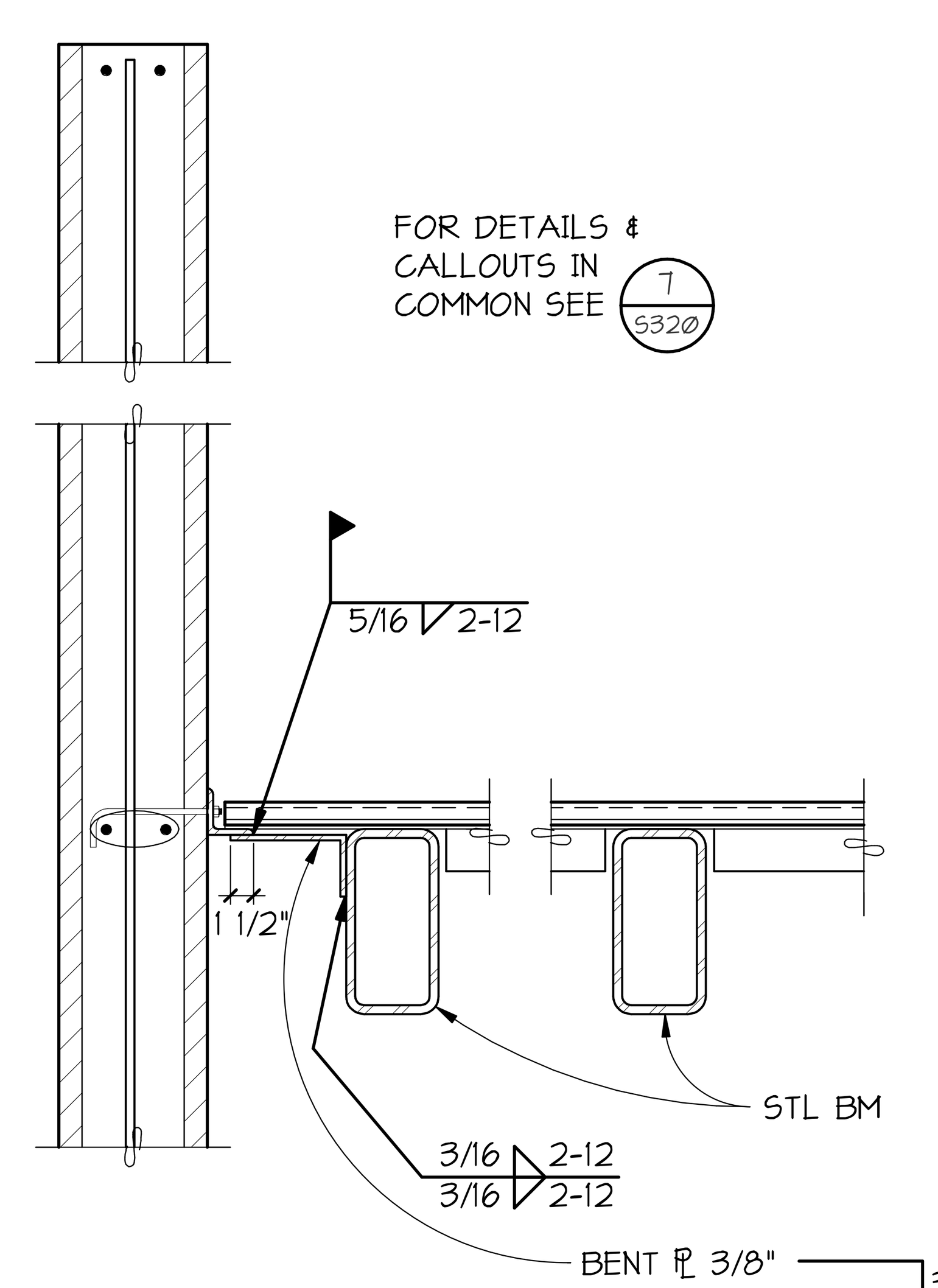
TYPICAL METAL DECK CONNECTION AT CMU WALL

7 / S320 SECTION
NO SCALE



TYPICAL BEAM PERPENDICULAR TO CMU WALL

8 / S320 SECTION
NO SCALE



TYPICAL METAL DECK CONNECTION AT CMU WALL

9 / S320 SECTION
NO SCALE

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DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

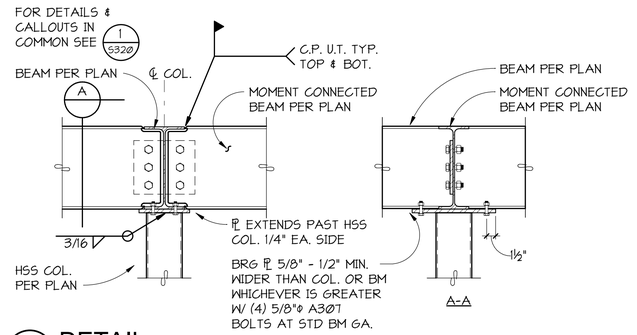
DATE 08.12.22
JOB NO. a20-112

BID SET

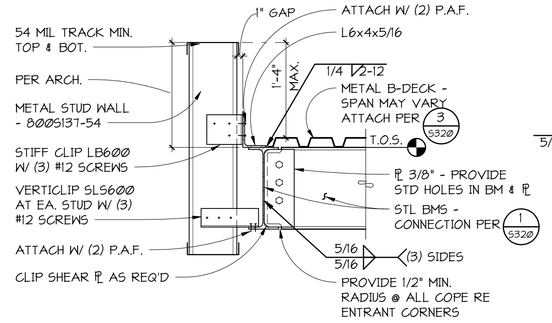
S320

DRAWING NO.

PLOTTED: 8/10/2022 8:50:31 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash HIIA20-112.02 v2020 (Central)_dhorne@pcs-structural.com.rvt



1 S321 **DETAIL** NO SCALE



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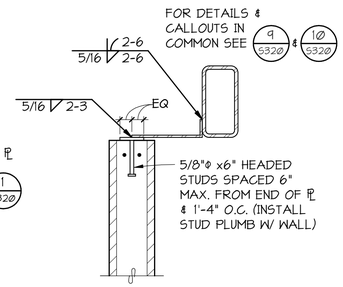
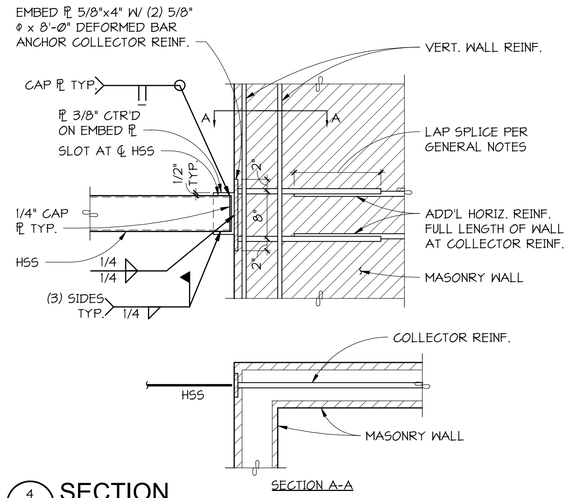
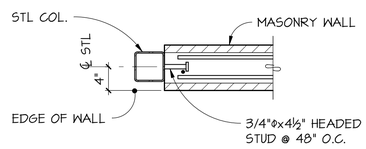


3 S321 **DETAIL** NO SCALE



4 S321 **SECTION** 1" = 1'-0"



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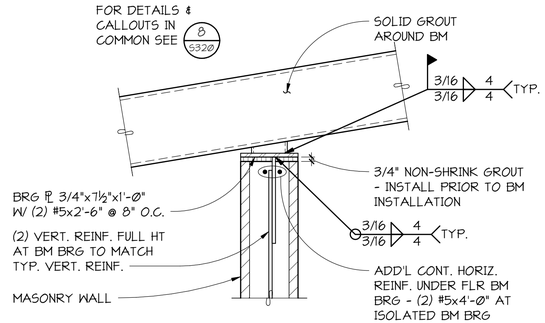
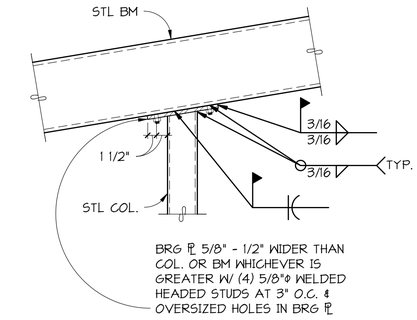
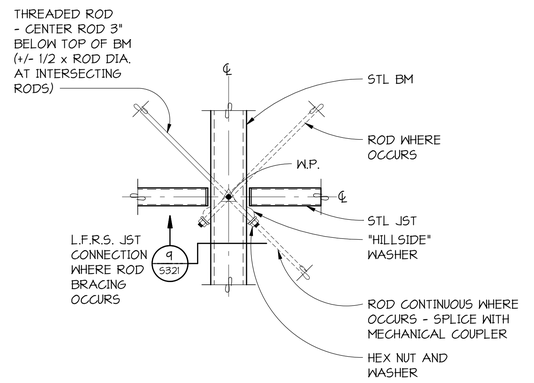


TYPICAL BEAM PERPENDICULAR TO MASONRY WALL

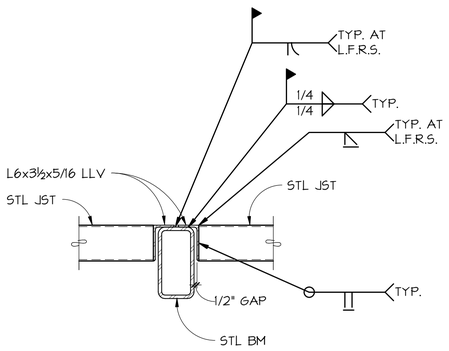
6 S321 **SECTION** NO SCALE



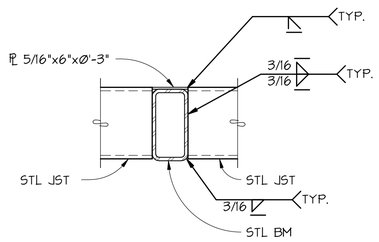
7 S321 **SECTION** NO SCALE



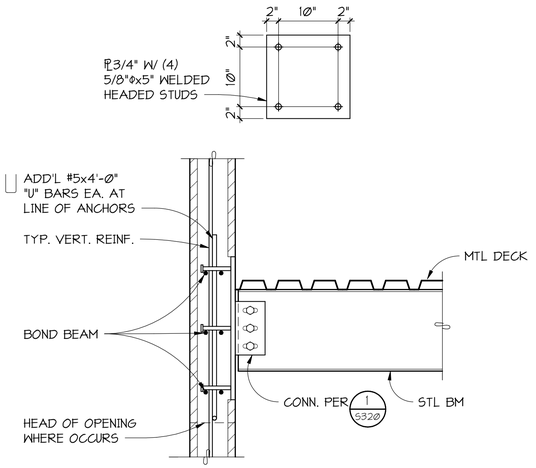
8 S321 **SECTION** NO SCALE



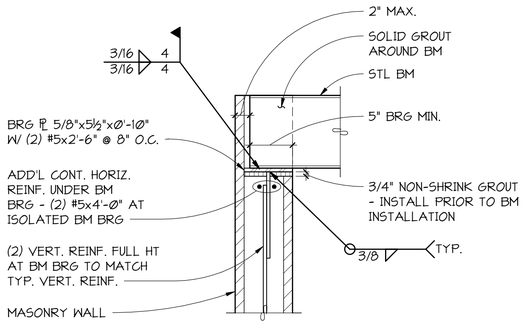
9 S321 **SECTION** 1" = 1'-0"



10 S321 **SECTION** 1" = 1'-0"



11 S321 **SECTION** NO SCALE



TYPICAL BEAM PERPENDICULAR TO MASONRY WALL

12 S321 **SECTION** NO SCALE

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DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

BID SET

S321

DRAWING NO.

PLOTTED: 8/10/2022 8:50:34 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
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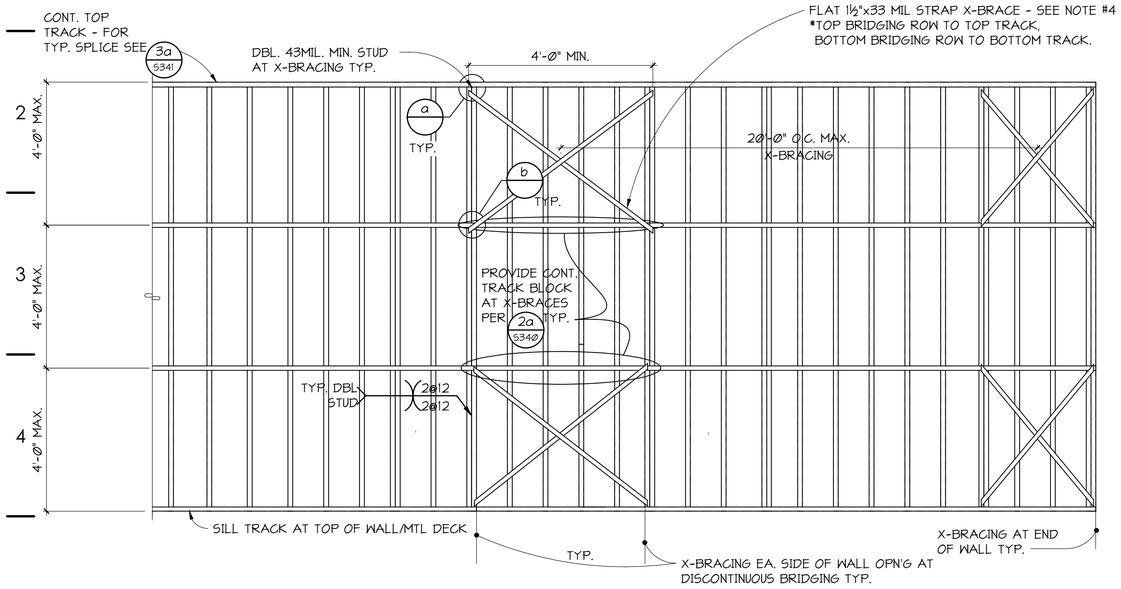


CFS STUD WALL FRAMING NOTES:

1. FOR WALL TYPE AND PROPER LOCATION SEE ARCHITECTURAL DRAWINGS.
2. PROVIDE BRIDGING AT ALL BEARING WALLS PER 2/S340.
3. PROVIDE FLAT STRAP X-BRACING AS SHOWN AT ALL BEARING WALLS. ALL BRIDGING SHALL BE SUPPORTED BY X-BRACING. PROVIDE MULTI-HEIGHT X-BRACING AS REQUIRED. X-BRACING SHALL OCCUR ON SAME SIDE OF WALL. INSTALL X-BRACING & BRIDGING PRIOR TO INSATLLATION OF SUPPORTED FRAMING. X-BRACING SHALL OCCUR AT WALL ENDS. X-BRACING SHALL OCCUR AT ALL BRIDGING DISCONTINUITIES. - PROVIDE CONTINUOUS TRACK BLOCK AT X-BRACING FOR DETAIL SEE 2a/S340.
4. ALL WELDS SHALL BE 1/8" FILLET MAXIMUM. FOR MATERIALS THINNER THAN Ø.15", EFFECTIVE THROAT SHALL NOT BE LESS THAN THINNEST MATERIAL. WELD IN ACCORDANCE WITH "STRUCTURAL WELDING CODE -- SHEET METAL" AWS D1.3.
5. STUD PUNCH OUTS SHALL NOT BE SPACED LESS THAN 24" O.C. NOR WITHIN 10" CLEAR OF MEMBER END AT STUDS, HEADERS, BEAMS, JOISTS, ETC. FOR TYPICAL ALLOWABLE PUNCHOUT DETAIL SEE 2/S341.
6. SCREWS SHALL BE THREAD-FORMING OR THREAD-CUTTING, WITH OR WITHOUT A SELF DRILLING POINT. SCREWS SHALL BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MINIMUM SPACING IS THREE SCREW DIAMETERS. A MINIMUM OF (3) THREADS SHALL BE ENGAGED.
7. FOR TYPICAL CFS WALL CORNER REQUIREMENTS SEE 3b/S341.
8. FOR SHEAR WALL REQUIREMENTS AND SPECIAL STUD SIZE/SPACING AT BEARING WALL REQUIREMENTS SEE 3/S342.
9. FOR P.A.F. REQUIREMENTS SEE GENERAL NOTES.

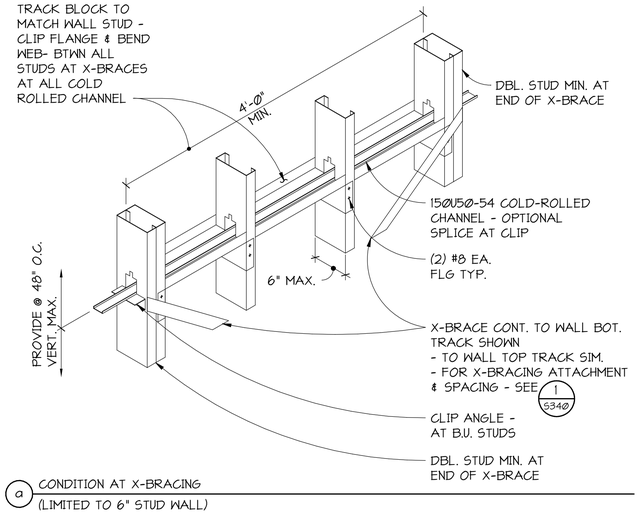
MILS/GAUGE SCHEDULE		
MILS	MIN. THICKNESS	GAUGE
18	.0188	25
30	.0312	20
33	.0346	20
43	.0451	18
54	.0566	16
68	.0713	14
97	.1017	12

a TYPICAL DETAIL

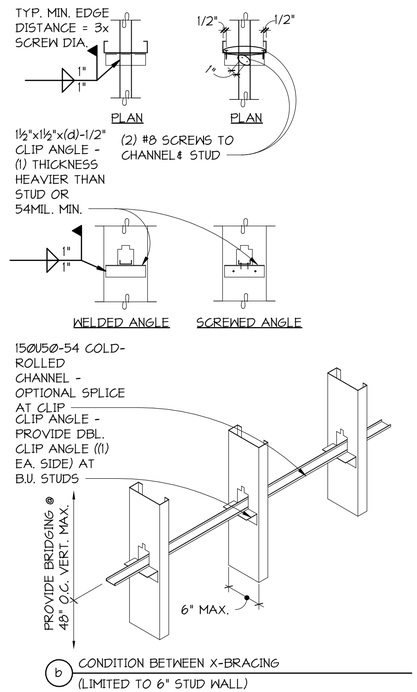
b TYPICAL DETAIL

TYPICAL BEARING CFS STUD WALL FRAMING

1/S340 ELEVATION
1/2" = 1'-Ø"

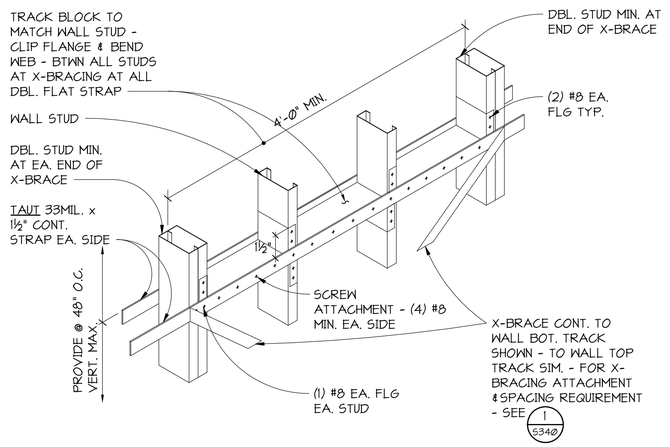


a CONDITION AT X-BRACING (LIMITED TO 6" STUD WALL)

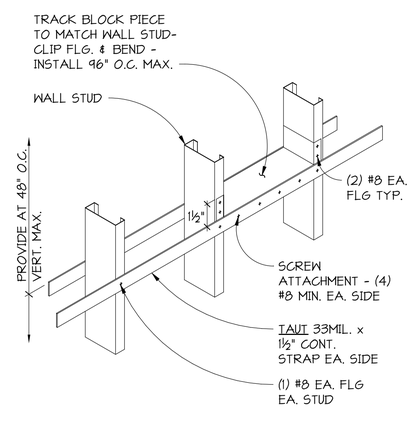


b CONDITION BETWEEN X-BRACING (LIMITED TO 6" STUD WALL)

TYPICAL BRIDGING WITH COLD-ROLLED CHANNEL AT BEARING WALL (LIMITED TO 6" MAX STUD WALL)



a CONDITION AT X-BRACING



b CONDITION BETWEEN X-BRACING

TYPICAL BRIDGING WITH DOUBLE FLAT STRAP AT BEARING WALL

2/S340 DETAIL
1" = 1'-Ø"

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JEFFREY S. KERN 38554 STATE OF WASHINGTON PROFESSIONAL ENGINEER

DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

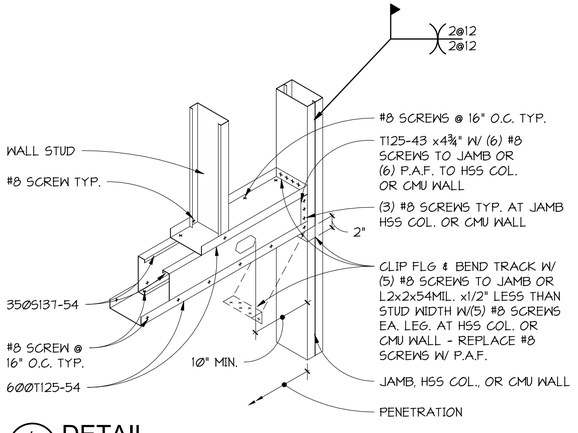
REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

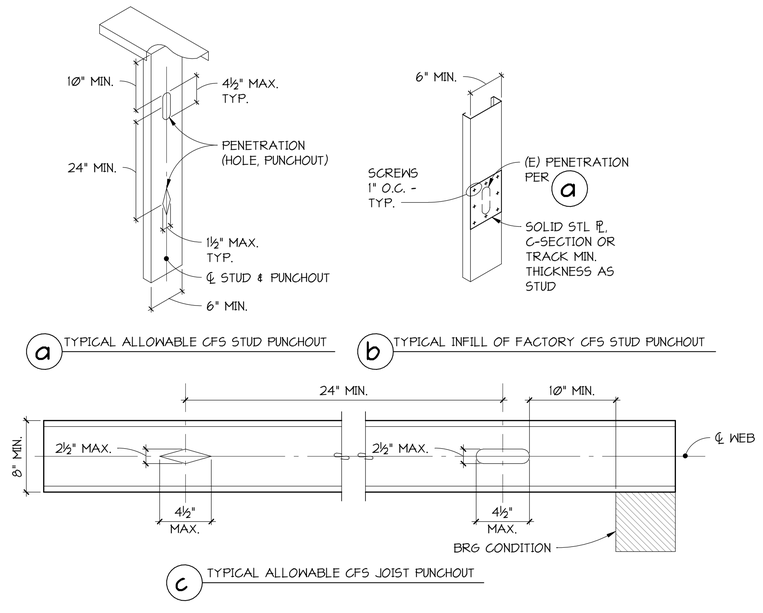
BID SET

DRAWING NO. S340

PLOTTED: 8/10/2022 8:50:38 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash H#A20-112.02.v2020 (Central)_dhorne@pcs-structural.com.rvt



1 S341 **DETAIL**
NO SCALE



2 S341 **DETAIL**
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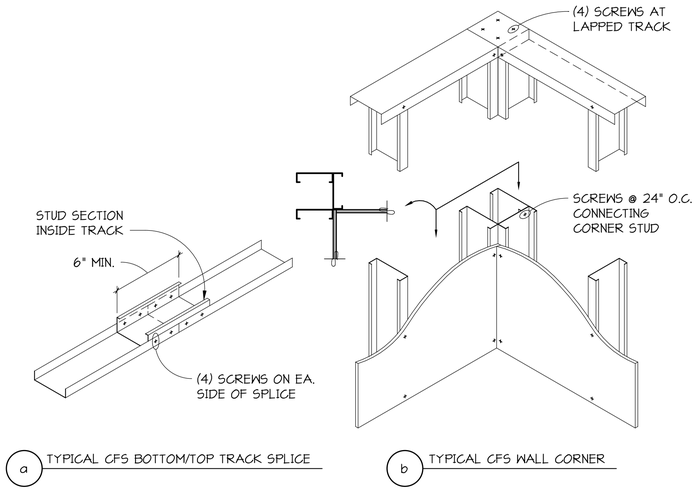

3 S341 **DETAIL**
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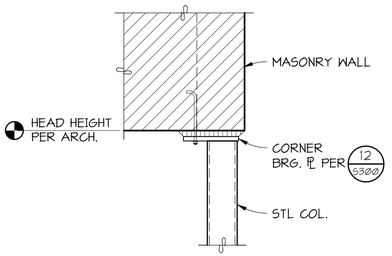

4 S341 **DETAIL**
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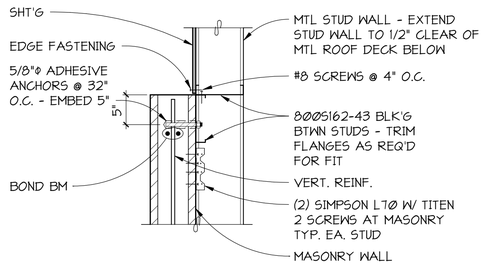

5 S341 **DETAIL**
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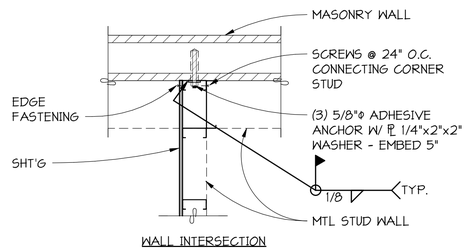
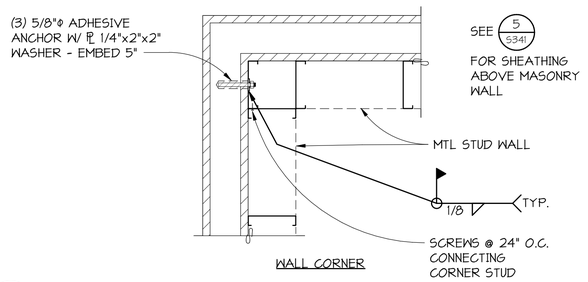
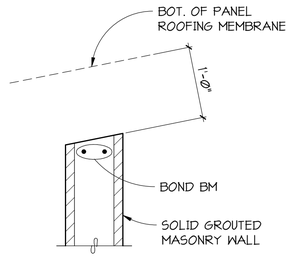




6 S341 **PLAN DETAIL**
1" = 1'-Ø"



7 S341 **SECTION**
NO SCALE

PLOTTED: 8/10/2022 8:50:41 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash H#A20-112.02 v2020 (Central)_dhorne@pcs-structural.com.rvt

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JEFFREY S. KIRK — STATE OF WASHINGTON — 38554 — REGISTERED PROFESSIONAL ENGINEER

DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

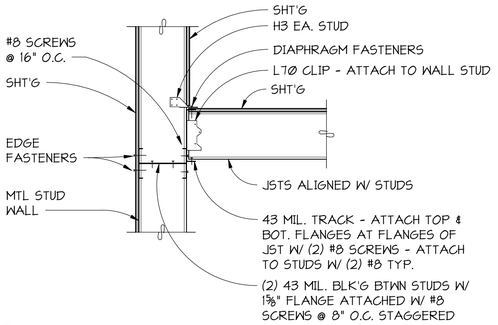
REVISION	DATE

DATE 08.12.22 — JOB NO. a20-112

BID SET

S341

DRAWING NO.



1 / S342 DETAIL
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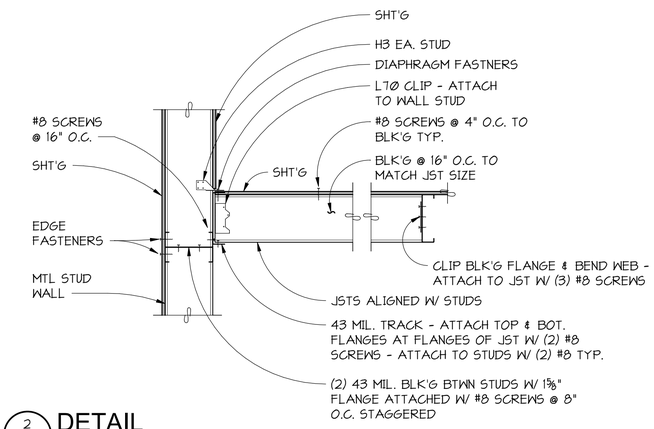


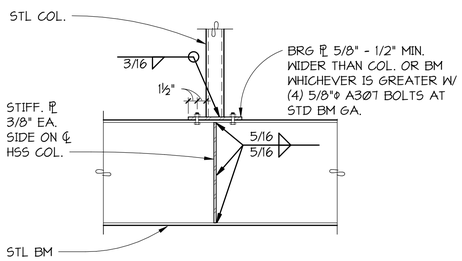
2 / S342 DETAIL
NO SCALE

SPECIAL CFS FRAMING SHEAR WALL W/ RATED SHEATHING				
SHEAR WALL REQUIREMENTS				
MARK	STRUCTURAL PANEL REQUIREMENTS	EDGE 2.5 SCREW	FIELD 5 SCREW	BOTTOM TRACK ANCHOR
A	7/16" STRUCTURAL SHEATHING (1) SIDE	#8 @ 4" O.C.	#8 @ 12" O.C.	5/8"ø ANCHOR BOLT OR THREADED STUD @ 32" O.C. - EMBED 5"

SPECIAL CFS STUD SIZE/SPACING REQUIREMENTS		
MARK	STUD SIZE & SPACING	# STUDS REQ'D BELOW JOIST/STUD ABOVE
1	800S162-54 @ 16" O.C.	(1)

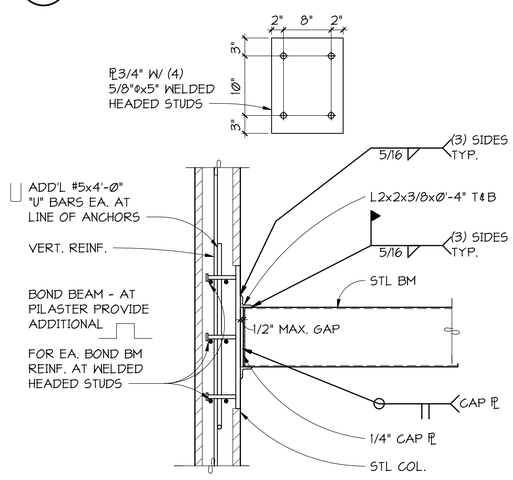
NOTES:
1. ⬡ INDICATES STRUCTURAL WALL MARK. STUDS SHALL ALIGN WITH JOISTS AND STUDS ABOVE. FOR # OF STUDS REQUIRED BELOW JOIST/STUD ABOVE SEE SCHEDULE. FOR TYPICAL WALL STUD BRIDGING DETAIL AND ADDITIONAL WALL FRAMING REQUIREMENTS SEE 2/S340 AND 1/S340.
2. ALL EXTERIOR WALL DESIGNATED AS SHEAR WALL SHALL BE BLOCKED AT ALL UNSUPPORTED PANEL EDGES. EDGE SCREW APPLIES TO TOP AND BOTTOM TRACK, PANEL VERTICAL AND HORIZONTAL JOINTS, WALL CORNERS, HOLDOWN ANCHOR STUDS, AND WALL END STUDS. SHEAR WALL STUD FLANGE WIDTH SHALL BE 5162 MINIMUM. BLK'G SHALL MATCH GAUGE OF WALL STUD x 1½" WIDE MIN.
3. SHEATHING PANELS MAY BE INSTALLED PARALLEL OR PERPENDICULAR TO FRAMING.
4. SCREW SHALL BE SELF-DRILLING, SELF-TAPPING FLAT HEAD SCREW WITH MINIMUM Ø.292" HEAD DIAMETER.
5. PROVIDE 3"x3"x1/4" PL WASHER AT EACH EPOXY GROUTED ANCHOR - WELD TO TRACK WITH FILLET ALL AROUND. DISTANCE FROM ANCHOR TO END OF TRACK TO BE 6" MAXIMUM, 3" MINIMUM.

3 / S342 DETAIL
NO SCALE



TYPICAL STEEL BEAM CONNECTION TO COLUMN ABOVE

4 / S342 DETAIL
NO SCALE



5 / S342 SECTION
1" = 1'-Ø"

PLOTTED: 8/10/2022 8:50:45 AM PROJECT: a20-112 - QUIL CEDA VILLAGE
FILE PATH: C:_Revit Models\21071 QCV Car Wash H#A20-112.02 v2020 (Central)_dhorne@pcs-structural.com.rvt

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DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22 JOB NO. a20-112

BID SET

S342

DRAWING NO.

MECHANICAL GENERAL NOTES

1. MECHANICAL WORK IS NOT LIMITED TO MECHANICAL DRAWINGS AND DIVISIONS 20, 22, AND 23 SPECIFICATIONS. THERE IS ADDITIONAL MECHANICAL WORK TO BE INCLUDED IN THE BID INDICATED ON OTHER DRAWINGS AND IN OTHER SPECIFICATION DIVISIONS. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL MECHANICAL WORK.
2. MECHANICAL EQUIPMENT 1/2 HP AND LESS SHALL HAVE ANY REQUIRED STARTER/STARTING RELAY PROVIDED BY DIVISION 23 (EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED OTHERWISE).
3. DRAWINGS SCALES APPLY TO FULL SIZE SHEET ONLY; FULL SIZE SHEETS ARE 24"x36". USE CAUTION IN OBTAINING DIMENSIONS AND QUANTITIES FROM DRAWINGS THAT ARE NOT THIS FULL SIZE; USE DIMENSIONS CALCULATED FROM DIMENSIONS ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS OVER OTHER METHODS OF OBTAINING DIMENSIONS.
4. SEISMICALLY ANCHOR ALL UNITS & EQUIPMENT TO BUILDING, (UNO). CONTRACTOR IS RESPONSIBLE TO SELECT AND PROVIDE ALL SEISMIC ANCHORING DEVICES FOR ALL MECHANICAL EQUIPMENT, ALL PIPING AND ALL DUCTWORK. CONTRACTOR SHALL SUBMIT DETAILS AND PLANS TO BUILDING INSPECTOR FOR REVIEW AND COMMENT PRIOR TO INSTALLATION.
5. FIXTURE LOCATIONS: VERIFY LOCATION OF PLUMBING FIXTURES WITH ARCHITECTURAL DRAWINGS BEFORE BEGINNING WORK. ARCHITECTURAL DRAWINGS GOVERN. PLUMBING FIXTURE HEIGHTS SHALL BE AS SHOWN ON ARCHITECTURAL DRAWINGS.
6. TRAP PRIMERS: ALL FLOOR DRAINS, FUNNEL DRAINS, AND FLOOR RECEPTORS SHALL HAVE TRAP PRIMERS. SOME DRAINS HAVE THE TRAP PRIMER LINE AND ASSOCIATED TRAP PRIMER VALVE SHOWN ON THE PLANS SOME LOCATIONS DO NOT. LOCATIONS WHERE THIS TRAP PRIMER PIPING AND VALVE ARE NOT SHOWN STILL REQUIRE A TRAP PRIMER, BUT THE LOCATION MAY BE SELECTED BY THE CONTRACTOR. SEE DETAIL 1 SHEET M302.
7. CLEANOUTS: PROVIDE CLEANOUTS AS REQUIRED BY CODE; USE FLOOR CLEANOUTS WHERE POSSIBLE. SEE DETAIL 2 ON SHEET M302.
8. PIPE ROUTING: ALL PIPING SHOWN IS SCHEMATIC, CONTRACTOR SHALL PROVIDE ALL OFFSETS/ELBOWS AS REQ'D TO ALLOW ROUTING AROUND STRUCTURE, ELECTRICAL, & OTHER INTERFERENCES. ALL PIPING SHALL BE RUN CONCEALED, UNO.
9. PIPE SIZES: UNSIZED PLUMBING PIPING SHALL MATCH THE SIZE OF THE LARGEST ADJACENT CONNECTING PIPE SIZE SHOWN, WHERE THE ADJACENT PIPE IS NOT SHOWN (OR NOT CLEAR), THE PIPE SIZE SHALL BE BASED ON THE GPM FLOWING IN THE PIPE (USE FIXTURE UNITS AND CORRESPONDING GPM PER THE UPC FOR DOMESTIC WATER SYSTEMS, USE WASTE FIXTURE UNITS & UPC TABLES FOR WASTE/VENT SYSTEM), AND A VELOCITY NO GREATER THAN 4 FEET PER SECOND. USE UPC CURVES FOR GPM/VELOCITY FOR APPROPRIATE PIPING MATERIAL INVOLVED.
10. ALL PLUMBING VENTS THRU ROOF SHALL BE MINIMUM 2' FROM ROOF CRICKET PEAK OR ROOF VALLEY. ADJUST PIPING AS NECESSARY.
11. CONDENSATE DRAINS: PROVIDE PRIMARY CONDENSATE DRAINS FOR UNITS GENERATING CONDENSATE IN ACCORDANCE WITH CODE REQUIREMENTS & AS SHOWN ON DRAWINGS. SEE DETAIL 3, SHEET M305.
12. FOR TRANSFER DUCT DETAIL SEE DETAIL 2 SHEET M402. ALL TRANSFER DUCTS SHALL BE INTERNALLY LINED.
13. ALL DUCT PENETRATIONS THRU WALLS AND FLOORS SHALL BE PROVIDED WITH CLOSURE COLLARS (BOTH SIDES OF PENETRATION) AND BE TIGHTLY SEALED TO PREVENT THE TRANSMISSION OF NOISE.
14. CONTRACTOR SHALL CAREFULLY COORDINATE WORK W/ ALL OTHER TRADES, ESPECIALLY IN CEILING SPACES WHERE SPACE IS TIGHT. SHEET METAL CONTRACTOR SHALL HAVE PRIORITY OVER OTHER MECHANICAL TRADES IN CEILING SPACE WHERE CONFLICTS OCCUR.
15. ALL DUCTWORK SHOWN IS SCHEMATIC, CONTRACTOR SHALL PROVIDE ALL OFFSETS/ELBOWS AS REQUIRED TO ALLOW ROUTING AROUND STRUCTURE, ELECTRICAL, & OTHER INTERFERENCES.
16. FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 8 FEET, AND MAY ONLY BE USED WHERE SPECIFICALLY SHOWN ON THE PLANS.
17. UNSIZED DUCTS SHALL MATCH THE SIZE OF THE LARGEST ADJACENT DUCT THAT IS SIZED. WHERE THE ADJACENT DUCT SIZE IS NOT SHOWN, PROVIDE THE FOLLOWING SIZED DUCTS (OR EQUIVALENT RECTANGULAR).

CFM	DUCTS TO AIR INLETS/OUTLETS	OTHER DUCT
0 - 100	6" Ø	6" Ø
101 - 150	8" Ø	8" Ø
151 - 250	10" Ø	8" Ø
251 - 400	12" Ø	10" Ø
401 - 500	14" Ø	12" Ø
501 - 700	16" Ø	12" Ø
701 - 900	18" Ø	14" Ø
901 - 1200	20" Ø	16" Ø
1201 - 1500	----	18" Ø
1501 - 2000	----	20" Ø
2001 - 2400	----	22" Ø
>2401	SIZE BASED ON 500 FPM	SIZE BASED ON 0.08"/100' P.D.

18. VERIFY LOCATIONS OF ITEMS INSTALLED IN CEILINGS WITH ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO BEGINNING WORK. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES.
19. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE & SELECT FINAL LOCATIONS OF ALL AIR INLETS/OUTLETS. SHIFT AIR INLETS/ OUTLETS FROM LOCATIONS SHOWN AS REQ'D TO AVOID CONFLICTS W/ STRUCTURE, LIGHTS, & OTHER ITEMS. SUCH SHIFTS SHALL MAINTAIN SYMMETRY OF AIR TERMINALS & SHALL HAVE PRIOR APPROVAL OF ARCHITECT/ENGINEER.
20. LOCATE MOTORIZED DAMPERS TO BE ACCESSIBLE.
21. HP UNIT LOCATIONS FOR ALL AREAS ARE PRELIMINARY. CONTRACTOR SHALL INCLUDE IN HIS BID ADDED PIPING, CONTROL CONNECTIONS, AND ALL OTHER WORK TO ALLOW RELOCATION OF UNITS TO ANY WALL IN THE ROOMS SERVED. LOCATION TO BE CONFIRMED AT TIME OF SUBMITTALS.
22. FOR HVAC DUCT FITTINGS/CONNECTIONS OF ELBOWS/TRANSITIONS SEE DETAILS ON SHEET M402.
23. BALANCING NOTES: PROVIDE AIR BALANCING OF HVAC SYSTEM. SEE SECTION 20 05 93 FOR COMPLETE REQUIREMENTS.
24. SUPPORT IN-LINE EXHAUST FANS & TERMINAL UNITS FROM ROOF/CEILING VIA SPRING ISOLATORS. SEE DETAIL 3 SHEET M402.
25. CEILING SPACE IS TIGHT IN A NUMBER OF AREAS. IN SUCH AREAS, CEILING AIR INLET/OUTLET CONN'S REQUIRE SIDE INLET PLENUM, SEE DETAIL 1 SHEET M402. PROVIDE WHERE REQ'D DUE TO SPACE LIMITATIONS TO PREVENT KINKS IN FLEX DUCT AND ALLOW PROPER CONN.
26. ALL DUCTWORK SHALL BE RUN CONCEALED, UNO.
27. PROVIDE DUCT ACCESS DOORS AT ALL DAMPERS & BDD'S.
28. WHERE RETURN GRILLE CFM'S ARE NOT INDICATED, BALANCER SHALL CALCULATE & SUBMIT FOR ENGINEER REVIEW. UNIT RA=SA-OA.
29. PROVIDE FLEX CONNECTORS IN DUCT CONNECTIONS TO ALL EQUIPMENT.
30. CFM'S SHOWN REPRESENT AIRFLOWS WITH SYSTEM IN "OCCUPIED" MODE.
31. RESTROOM EXHAUST & TRANSFER GRILLES SHALL BE INSTALLED TO BE INLINE W/ EACH OTHER.
32. VERIFY MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK & WALL GRILLES/WALL CAPS W/ ARCHITECT PRIOR TO BEGINNING WORK.
33. PROVIDE TRANSITIONS FROM DUCT SIZES INDICATED TO CONNECTION SIZES AT EQUIPMENT TO MATCH UNIT CONNECTIONS. WHERE THE CONNECTING DUCT IS LINED, THE TRANSITION SHALL BE LINED.
34. REFRIGERANT PIPING OUTDOORS SHALL BE COVERED WITH METAL JACKET OR SHROUD.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	WASTE OR SOIL (W)
	VENT (V)
C	COLD WATER (CW)
	HOT WATER (HW)
C	CONDENSATE LINE (C)
RG/RL	REFRIGERANT PIPING
RL	RAIN LEADER (RL)
ORL	OVERFLOW RAIN LEADER (ORL)
	PIPE UP
	PIPE DOWN
	ISOLATION VALVE
	CHECK VALVE
	STRAINER (W/ BLOW OFF VALVE)
	UNION
	FLOOR CLEANOUT
	WALL CLEANOUT
	RELIEF VALVE OR SAFETY VALVE
	HOSE BIBB
	PRESSURE GAUGE
20/12	DUCT (FIRST FIGURE, SIDE SHOWN)
20/12L*	LINED DUCT (DIM. FOR NET FREE AREA) EOL= END OF LINING L= LINED L*= 2" THICK LINING
R (D)	RISE (R) OR DROP (D) ARROW IN DIRECTION OF FLOW
M	MOTORIZED DAMPER
	FLEXIBLE CONNECTION
	RETURN, EXHAUST, OUTSIDE AIR DUCT DOWN
	SUPPLY AIR DUCT DOWN
	RETURN, EXHAUST, OUTSIDE AIR DUCT UP
	SUPPLY AIR DUCT UP
	ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
SIZE SYMBOL CFM	CEILING OUTLET (WHERE 2 CFM'S SHOWN, LARGER = HIGH SPEED CFM SMALLER = LOW SPEED CFM)
SIZE SYMBOL CFM	CEILING INLET
	WALL AIR INLET
T	THERMOSTAT
S	SWITCH
2 / M2	DETAIL IDENTIFICATION NUMBER / SHEET ON WHICH DETAIL IS SHOWN

ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATELY
ARCH	ARCHITECTURAL
BDD	BACKDRAFT DAMPER
BLDG	BUILDING
B.O.D.	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT/HOUR
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEANOUT
COMP	COMPRESSOR
CONN	CONNECTION
CONT	CONTINUE, CONTINUATION
COP	COEFFICIENT OF PERFORMANCE
CW	COLD WATER
dB	DECIBEL
DB	DRY BULB
DEG F, F	DEGREE FAHRENHEIT
DIA, Ø	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EACH
ECM	ELECTRONICALLY COMMUTATED MOTOR
ELEC	ELECTRICAL, ELECTRIC
EER	ENERGY EFFICIENCY RATIO
EAT	ENTERING AIR TEMPERATURE
EWB	ENTERING WET BULB
EDB	ENTERING DRY BULB
EOL	END OF LINING
EXH	EXHAUST
ESP	EXTERNAL STATIC PRESSURE
FV	FLAT ON TOP
FPM	FEET PER MINUTE
FLEX	FLEXIBLE
FL	FLOOR
FCO	FLOOR CLEAN OUT
FLA	FULL LOAD AMPS
GAL	GALLON
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
GPM	GALLON PER MINUTE
HP	HORSE POWER
HW	HOT WATER
IN	INCH
I.E.	INVERT ELEVATION
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LDB	LEAVING DRY BULB
LWB	LEAVING WET BULB
MAX	MAXIMUM
MBH	THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MFR	MANUFACTURER
MFS	MAXIMUM FUSE SIZE
MIN	MINIMUM
NTS	NOT TO SCALE
OA	OUTSIDE AIR
ORL	OVERFLOW RAIN LEADER
PD	PRESSURE DROP
PH	PHASE
RA	RETURN AIR
REF	REFERENCE
REQ'D	REQUIRED
RG	REFRIGERANT GAS
RL	REFRIGERANT LIQUID, RAIN LEADER
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RM	ROOM
SA	SUPPLY AIR
SHT	SHEET
S.O.	SCREENED OPENING
S.S.	STAINLESS STEEL
TEMP	TEMPERATURE
TD	TRANSFER DUCT
TG	TRANSFER GRILLE
TSP	TOTAL STATIC PRESSURE
T'TSAT	THERMOSTAT
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLTS, VOLTAGE - VENT
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
W	WATT
W/	WITH
WB	WET BULB
WCO	WALL CLEAN OUT - WASTE

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RICHARD A. HULTZ STATE OF WASHINGTON 19978 REGISTERED PROFESSIONAL ENGINEER
SIGNED
08-12-2022

LEGEND, ABBREVIATIONS & NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22
JOB NO. a20-112

M001

DRAWING NO.

BID SET

PLOTTED BY:
PLOTTED:
FILE PATH:

ENERGY CODE NOTES

NOTE: ENERGY CODE NOTES APPLY TO OFFICE 101, TOILET 102, AND EQUIPMENT 103 ONLY. ALL OTHER SPACES ARE UN-CONDITIONED.

1. LOAD CALCULATIONS: LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH WSEC C403.1.2.
2. EQUIPMENT AND SYSTEM SIZING, C403.3.1: OUTPUT CAPACITIES OF HEATING AND COOLING EQUIPMENT AND SYSTEMS ARE NO GREATER THAN THE SMALLEST AVAILABLE EQUIPMENT SIZE THAT EXCEEDS THE CALCULATED LOADS.
3. HVAC EQUIPMENT PERFORMANCE, C403.3.2: EQUIPMENT SCHEDULES ARE INCLUDED WITH THESE PLANS.
4. ELECTRIC MOTOR EFFICIENCY, C405.8: ALL ELECTRIC MOTORS SHALL MEET THE MINIMUM EFFICIENCY OF TABLES C405.8(1). FRACTION HP FAN MOTORS 1/12HP OR GREATER UP TO 1HP SHALL BE ECM TYPE OR SHALL HAVE A MINIMUM EFFICIENCY OF 70% OR GREATER.
5. MOTOR NAMEPLATE HP, C403.8.2: FOR EACH FAN, THE MOTOR SHALL BE NO LARGER THAN THE FIRST AVAILABLE MOTOR SIZE GREATER THAN THE BHP.
6. PACKAGED ELECTRIC EQUIPMENT, C403.3.2.4: ALL PACKAGED ELECTRIC HEATING AND COOLING EQUIPMENT WITH TOTAL COOLING CAPACITY GREATER THAN 6,000 BTU/H SHALL BE A HEAT PUMP CONTROLLED BY OCCUPANCY DEVICE OR TIME SCHEDULE.
7. OUTDOOR AIR, EXHAUST & RELIEF DAMPERS, C403.7.8.1: PROVIDE ALL OUTSIDE AIR, EXHAUST AIR, AND RELIEF AIR OPENINGS WITH CLASS 1 (MAX LEAKAGE OF 4 CFM/SF AT 1.0" W.C.) MOTORIZED DAMPERS.
8. RETURN AIR DAMPERS, C403.7.8.2: PROVIDE RETURN AIR OPENINGS WITH CLASS 1 MOTORIZED DAMPER WHERE USED FOR AIRSIDE ECONOMIZER. WHERE INSTALLED IN UNITARY PACKAGED EQUIPMENT DAMPER, PROVIDE DAMPERS WITH LOWEST LEAKAGE RATE AVAILABLE FROM THE EQUIPMENT MANUFACTURER.
9. HVAC SYSTEM SELECTION, C403.2.4.3/C406.2.1: AT LEAST 90 PERCENT OF THE TOTAL HVAC CAPACITY SERVING THE BUILDING SHALL BE PROVIDED BY EQUIPMENT LISTED IN TABLES C403.2.3(1) THROUGH C403.2.3(2).
10. MINIMUM EQUIPMENT EFFICIENCY, C406.2.2: ALL LISTED HEATING AND COOLING EQUIPMENT SHALL HAVE A RATED EFFICIENCY THAT EXCEEDS WSEC LISTED EFFICIENCY BY AT LEAST 15%.
11. MINIMUM FAN EFFICIENCY, C406.2.3: STAND ALONE FANS, LARGER THAN 1 HP, SHALL HAVE A FAN EFFICACY GRADE (feg) OF 71 OR BETTER. TOTAL EFFICIENCY AT THE DESIGN POINT OF OPERATION SHALL BE WITHIN 10% OF EITHER THE MAX TOTAL EFFICIENCY OF THE FAN OR THE STATIC EFFICIENCY OF THE FAN.
12. EXHAUST, C403.2.2.2: EXHAUST SYSTEMS ARE CONFIGURED TO PROVIDE NO MORE THAN 150% OF CODE MINIMUM.
13. TRANSFER AIR, C403.7.7.3:CONDITIONED SUPPLY AIR DELIVERED TO A SPACE THAT IS MECHANICALLY EXHAUSTED SHALL NOT EXCEED THE GREATER OF (1) THE SUPPLY AIRFLOW REQUIRED TO MEET SPACE HEATING/COOLING, (2) CODE OR AHJ REQUIRED VENTILATION, OR (3) THE REQUIRED EXHAUST AIRFLOW MINUS THE AVAILABLE CONDITIONED TRANSFER AIR.
14. DEADBAND, C403.4.1.2: THERMOSTATIC CONTROLS SHALL BE CONFIGURED WITH 5°F MINIMUM DEADBAND FOR SYSTEMS THAT CONTROL BOTH HEATING AND COOLING.
15. AUTOMATIC SETBACK AND SHUTDOWN, C403.4.2: HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES, AND SHALL HAVE MANUAL OVERRIDE CONFIGURED TO OPERATE THE SYSTEM FOR 2 HOURS.
16. AUTOMATIC START, C403.4.2.3: AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM, AND BE CAPABLE OF AUTOMATICALLY ADJUSTING DAILY START TIME IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.
17. OUTDOOR AIR DAMPERS, C403.7.8.4: OUTSIDE AIR INTAKE DAMPERS SHALL AUTOMATICALLY CLOSE WHEN SYSTEM OR SPACES SERVED ARE NOT IN USE OR DURING WARM-UP AND SET BACK.
18. VENTILATION, C403.2.2.1: MECHANICAL VENTILATION AIR SYSTEMS SHALL BE CONFIGURED TO PROVIDE NOT MORE THAN 150%, BUT AT LEAST THE MINIMUM REQUIRED VOLUME OF OUTDOOR AIR TO EACH ZONE PER IMC. SEE MECHANICAL EQUIPMENT SCHEDULES FOR MINIMUM OUTSIDE AIR VALUES.
19. DUCT CONSTRUCTION, C403.10.2: DUCTWORK SHALL BE CONSTRUCTED AND SEALED PER IMC.
20. DUCT PRESSURE CLASS, C403.10.2.1: ALL DUCTWORK SHOWN IS LOW PRESSURE DUCT, OPERATING AT STATIC PRESSURE LESS THAN OR EQUAL TO 3 INCHES WATER GAUGE (W.G.).
21. DUCT INSULATION, C403.10.1: MINIMUM DUCT INSULATION PER WSEC IS AS FOLLOWS:

SERVICE	INSULATION LEVEL
OUTSIDE AIR DUCTS AND PLENUMS	PROVIDE INSULATION EQUIVALENT TO ENVELOPE REQUIREMENT FOR METAL FRAMED WALLS (TABLE C402.1.3)
OUTSIDE AIR DUCT SERVING INDIVIDUAL SUPPLY UNIT WITH LESS THAN 2,800 CFM OF SUPPLY AIR	R-7
SUPPLY & RETURN DUCTS IN UNCONDITIONED SPACES	R-6
SUPPLY DUCTS WITHIN CONDITIONED SPACE WHERESUPPLY AIR IS < 55 DEG F. OR > 105 DEG F.	R-3.3
EXPOSED DUCTWORK WITHIN A ZONE THAT SERVES THAT ZONE	NO INSULATION REQUIRED

22. PIPING INSULATION, C403.10.3: MINIMUM PIPE INSULATION PER WSEC IS AS FOLLOWS:

FLUID OPERATING TEMPERATURE	INSULATION THICKNESS (NOMINAL PIPE SIZE) <1	1 TO <1-1/2	1-1/2 TO < 4	4 TO < 8	OVER 8
>350	4.5	5.0	5.0	5.0	5.0
251-350	3.0	4.0	4.5	4.5	4.5
201-250	2.5	2.5	2.5	3.0	3.0
141-200	1.5	1.5	2.0	2.0	2.0
105-140	1.0	1.0	1.5	1.5	1.5
40-60	0.5	0.5	1.0	1.0	1.0
<40	0.5	1.0	1.0	1.0	1.5

23. PIPE INSULATION EXPOSED TO WEATHER, C403.10.3.1: PROVIDE METAL JACKETING ON ALL PIPE INSULATION EXPOSED TO WEATHER AND SEAL ALL SEAMS WATER TIGHT.
24. DEDICATED OUTDOOR AIR SYSTEMS, C403.3.5: FOR BUILDINGS WITH OCCUPANCIES SHOWN IN TABLE 403.3.5, OUTDOOR AIR SHALL BE PROVIDED TO EACH OCCUPIED SPACE BY A DEDICATED OUTDOOR AIR SYSTEM (DOAS).
25. ENERGY RECOVERY VENTILATION WITH DOAS, C403.3.5.1: ALL DOAS UNITS SHALL BE PROVIDED WITH EXHAUST HEAT RECOVERY WITH RATED EFFECTIVENESS TO INCREASE OSA ENTHALPY BY 50% OR MORE BASED ON THE DELTA BETWEEN THE RETURN AIR AND THE OUTSIDE AIR ENTHALPIES AT DESIGN CONDITIONS.
26. HEATING/COOLING SYSTEM CONTROLS WITH DOAS, C403.3.5.2: EQUIPMENT THAT PROVIDES ZONE LEVEL HEATING AND COOLING SHALL BE CONFIGURED WITH FANS AND/OR PUMPS THAT CYCLE OFF AND PRIMARY COOLING AIR SHALL SHUT OFF WHEN THERE IS NO CALL FOR HEATING OR COOLING IN THE ZONES THEY SERVE.
27. SCOPE OF MECHANICAL SYSTEMS COMMISSIONING, C408.1: ALL MECHANICAL SYSTEMS, EQUIPMENT AND CONTROLS ARE REQUIRED TO BE COMMISSIONED.
28. COMMISSIONING REQUIREMENTS IN CONSTRUCTION DOCUMENTS, C408.1.1: COMMISSIONING PLAN SHALL BE DEVELOPED BY A COMMISSIONING PROFESSIONAL AND CONSIST OF A NARRATIVE DESCRIPTION OF ACTIVITIES, ROLES & RESPONSIBILITIES OF THE COMMISSIONING TEAM, SCHEDULE OF ACTIVITIES INCLUDING TAB, FUNCTIONAL PERFORMANCE TESTING AND VERIFICATION OF PROJECT CLOSE OUT DOCUMENTATION PER C103.6, AND SUBMIT COMPLIANCE CHECKLIST TO THE BUILDING OFFICIAL UPON SUBSTANTIAL COMPLETION. A PRELIMINARY COMMISSIONING REPORT AND/OR COMMISSIONING COMPLIANCE CHECKLIST SHALL BE AVAILABLE FOR AHJ REVIEW PRIOR TO THE FINAL MECHANICAL INSPECTION.
29. AIR SYSTEM & HYDRONIC SYSTEM BALANCING, C408.2.2: HVAC AIR AND WATER SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH THE SPECIFICATIONS AND THESE WSEC NOTES. SEE SPECIFICATIONS FOR FLOW RATE TOLERANCES.
30. AIR SYSTEM BALANCING DEVICES, C408.2.2.1: PROVIDE ALL SUPPLY AIR OUTLETS AND TERMINAL DEVICES WITH MEANS OF BALANCING AIRFLOW. BALANCE TO FIRST MINIMIZE THROTTLING LOSSES, THEN ADJUST TO MEET DESIGN AIR FLOWS.
31. FUNCTIONAL PERFORMANCE TESTING CRITERIA, C408.4.1: FUNCTIONAL PERFORMANCE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH WSEC C408.4.1.
32. SWH (SERVICE WATER HEATING) EQUIPMENT TYPE & EFFICIENCY, C404.2: EQUIPMENT SCHEDULES ARE INCLUDED WITH THESE PLANS.
33. DOCUMENTATION SUBMITTAL REQUIREMENTS, C103.6: SUBMIT ALL CLOSEOUT DOCUMENTATION INCLUDING AS-BUILTS AND O&M'S TO OWNER WITHIN 180 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.
34. THESE "ENERGY CODE NOTES" ARE LISTED TO SATISFY THE BUILDING DEPARTMENT'S REQUIREMENT THAT CERTAIN INFORMATION BE PLACED ON THE PLANS, BUT DO NOT DIMINISH THE FULL PROJECT REQUIREMENTS. PROVIDE ITEMS IN EXCESS OF CODE WHERE NOTED ON DRAWINGS AND IN SPECIFICATIONS. FOR OTHER ADDED REQUIREMENTS, SEE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

ITEM	SECTION#
AS-BUILT DOCUMENTS	20 05 00
O&M MANUALS	20 05 00
PIPING & DUCT INSULATION	20 07 00
DUCTWORK SEALING & TESTING	23 31 00
CONTROLS	DIVISION 23 09 33 & 23 09 93

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RICHARD A. HULTZ STATE OF WASHINGTON 19976 REGISTERED PROFESSIONAL ENGINEER

SIGNED
08-12-2022

ENERGY CODE NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

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M002

DRAWING NO.

BID SET

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PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	W	V	CW	HW	REMARKS
P-1A	WATER CLOSET	4"	2"	1"	-	FLOOR MOUNT, ADA ACCESSIBLE - SENSOR OPERATED
P-3A	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	WALL MOUNT, ADA ACCESSIBLE, ELECTRONIC HANDS FREE
P-5A	SINK - ADA	2"	1-1/2"	1/2"	1/2"	S.S. SINGLE BOWL ADA ACCESSIBLE
P-10A	WALL HYDRANT	-	-	3/4"	-	FREEZE PROOF
P-11A	FLOOR DRAIN	SIZES AS NOTED ON PLANS				W/ TRAP PRIMER
P-11C	FLOOR RECEPTOR	SIZES AS NOTED ON PLANS				W/ TRAP PRIMER

AIR INLET & OUTLET SCHEDULE

SYMBOL	TYPE	MANUFACTURER AND SERIES NUMBER	REMARKS
CD	CEILING DIFFUSER	TITUS MCD	MODULAR CORE, ADJUSTABLE DISCHARGE, SQUARE NECK
CEG	CEILING EXHAUST GRILLE	KRUEGER SERIES EGC-5	1/2"x1/2"x1/2" CUBE CORE
TG	TRANSFER GRILLE	KRUEGER SERIES EGC-5	1/2"x1/2"x1/2" CUBE CORE
WEG	WALL EXHAUST GRILLE	KRUEGER SERIES S580H	HORIZ. FACE BARS 3/4" O.C., 35° DEFLECTION

NOTES:

1. CEILING DIFFUSERS (CD) SHALL HAVE NO. & DIRECTION OF THROWS AS INDICATED ON PLANS. (E.G. CD-3 = 3 WAY THROW)
2. ALL AIR TERMINALS SHALL HAVE FACTORY FINISH, COLOR AS SELECTED BY ARCHITECT.
3. SEE LEGEND FOR TERMINOLOGY USED IN AIR TERMINAL CALL-OUTS ON DRAWINGS.
4. SEE ARCH. FINISH SCHEDULE FOR CEILING TYPES, PROVIDE AIR TERMINALS TO MATCH CEILING CONSTRUCTION INSTALLED IN.
5. SEE SECTION 22 37 00 FOR SPECIFICATIONS.

HEAT PUMP - SPLIT SYSTEM TYPE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	COOLING CAP. *			HEATING CAP. **		A - INDOOR - UNIT ***		B - OUTDOOR - UNIT ***				TOTAL ELECTRICAL****		MAX. OUTDOOR UNIT WEIGHT	MAX. INDOOR UNIT WEIGHT	REMARKS
			TOTAL MBH	SENSIBLE MBH	SEER	TOTAL MBH	HSPF	FAN		COMPRESSOR		FAN						
								CFM	FLA	QTY	RLA (EA)	QTY	FLA	MCA	VOLT/PH			
HP-1	MITSUBISHI SLZ/SUZ-015	OFFICE	14.1	10.6	19.8	18.0	11.2	405	0.32	1	7.4	1	0.5	10.0	208/1	150	50	W/ WIRED REMOTE THERMOSTAT

* COOLING CAPACITY IS AHRI RATING: AT 80° F DB; 67° F WB INDOOR COIL EAT AND 95° F OUTDOOR COIL EAT.

** HEATING CAPACITY IS AHRI RATING: AT 70° F DB INDOOR EAT AND 47° F DB; 43° F WB OUTDOOR COIL EAT.

*** ON PLANS "A" DESIGNATES INDOOR UNIT, "B" DESIGNATES OUTDOOR UNIT. (e.g. AC-1B IS AC-1 OUTDOOR UNIT)

**** INDOOR UNIT IS POWERED OFF OUTDOOR UNIT DISCONNECT.

DEDICATED OUTSIDE AIR UNIT

SYMBOL	ITEM DESCRIPTION	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	SUPPLY FAN				EXHAUST FAN				UNIT ELECTRICAL			ENERGY RECOVERY SENSIBLE EFFICIENCY	FILTERS	MAX UNIT WEIGHT (LBS)	REMARKS
				TYPE	CFM	ESP	DRIVE	TYPE	CFM	ESP	DRIVE	WATTS	FLA	VOLTS/PH				
DOA-1	ENERGY RECOVERY VENTILATOR	RENEWAIRE EV-130	OFFICE	PLENUM	125	0.4"	DIRECT	PLENUM	125	0.4"	DIRECT	102	1.3	115/1	75%	2" MERV 8	50	

FAN SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	AREA SERVED	CFM	ESP	MAX RPM	ELECTRICAL		DRIVE	CONTROL	MAX WEIGHT (LBS)	REMARKS
							HP	VOLTS / PH				
EF-1	COOK 120 SQN-DEC	INLINE	EQUIPMENT ROOM	750	0.5"	1200	1/2	115/1	DIRECT	(T)	175	ECM, UNIT MOUNTED SPEED CONTROLLER

1. PROVIDE ALL FANS CONFIGURED TO MEET ENERGY CODE, I.E. PROVIDE WITH PROPER MOTOR EFFICIENCY OR PROVIDE WITH EC MOTOR. MOTOR HP SIZE SCHEDULED IS PRELIMINARY; FINAL EQUIPMENT AND MOTOR SIZE SHALL VARY TO MEET ENERGY CODE REQUIREMENTS.
2. PROVIDE ALL FANS WITH UNIT MOUNTED DISCONNECT.

WATER HEATER SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	AREA SERVED	HEATING CAPACITY	STORAGE (GAL)	DOMESTIC HW			ELEC	REMARKS
						GPM	EWT	LWT	VOLTS/ PH	
WH-1	CHRONOMITE CM-20L	INSTANTANEOUS	DOMESTIC HW - P-3A	4.16 KW	-	0.35	30	121	208/1	
WH-2	CHRONOMITE CM-40L	INSTANTANEOUS	DOMESTIC HW - P-5A	8.32 KW	-	1.00	40	97	208/1	

ELECTRIC HEATER SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	AREA / UNIT SERVED	CFM	NOMINAL SIZE	ELECTRICAL		REMARKS
						WATTS	VOLTS/PH	
UH-1	BERKO HUH SERIES	UNIT HEATER	EQUIPMENT ROOM	100	14"x18"	5000	208/3	W/ CONTACTS FOR CONNECTION TO PROGRAMMABLE THERMOSTAT
UH-2	BERKO HUH SERIES	UNIT HEATER	EQUIPMENT ROOM	100	14"x18"	5000	208/3	W/ CONTACTS FOR CONNECTION TO PROGRAMMABLE THERMOSTAT
DH-1	RENEWAIRE RH SERIES	DUCT HEATER	DOA-1	125	10"x12"	2000	208/1	W/ INTEGRAL THERMOSTAT, SCR MODULATING HEAT, DUCT MOUNTED TEMPERATURE SENSOR

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RICHARD A. HULTZ STATE OF WASHINGTON 19978 REGISTERED PROFESSIONAL ENGINEER

SIGNED
08-12-2022

MECHANICAL NOTES & SCHEDULES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22 JOB NO. a20-112

M003

DRAWING NO.

BID SET

PLOTTED BY:

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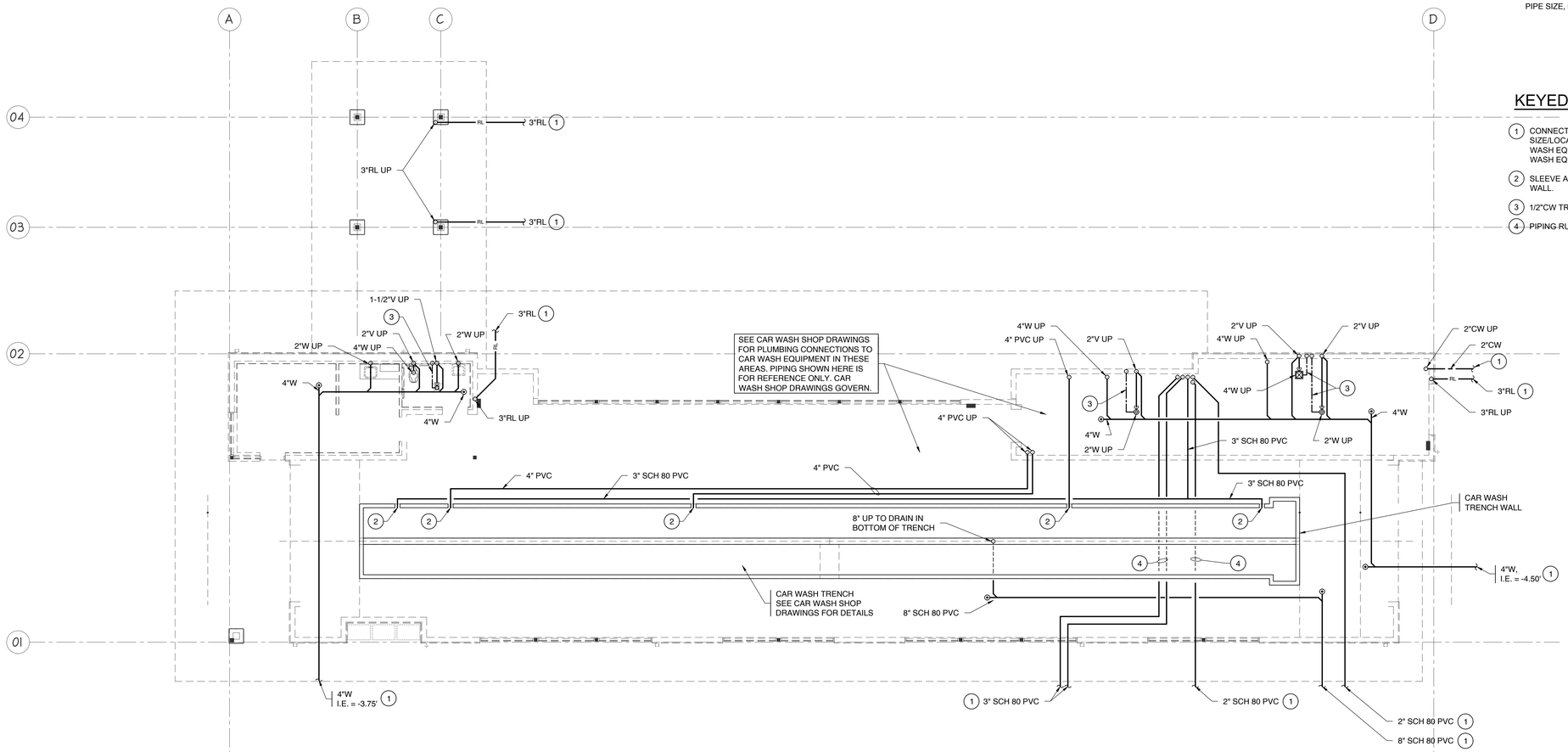
GENERAL NOTES:

1. SEE GENERAL NOTES SHEET M001.
2. SEE CAR WASH SUPPLIER SHOP DRAWINGS FOR PIPE LOCATIONS AND CONFIGURATIONS.
3. SEE STRUCTURAL DRAWINGS FOR LOCATIONS OF FOUNDATION COMPONENTS. ITEMS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. OFFSET ITEMS AS NEEDED TO CLEAR FOOTINGS & OTHER UNDER GROUND ITEMS.
4. FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M-004.
5. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL VERIFY DEPTH OF SITE PIPING AT PROPOSED CONNECTION LOCATIONS AND DEPTH OF CAR WASH TRENCH. CONFIRM PIPING SLOPES IN ORDER TO PROVIDE PROPER WORKING DRAINAGE SYSTEM.
6. REVIEW ALL DRAWINGS & SUBMITTALS AND VERIFY FIXTURE LOCATIONS PRIOR TO BEGINNING WORK.
7. INVERT ELEVATION BASED ON FINISHED FLOOR ELEVATION OF 0.00'.
8. CLEANOUT SIZES SHALL MATCH THE CONNECTING PIPE SIZE, MINIMUM 4".

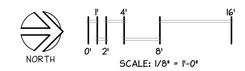
KEYED NOTES:

1. CONNECT TO SITE PIPING. COORDINATE & VERIFY SIZE/LOCATION W/ SITE CONTRACTOR AND CAR WASH EQUIPMENT PROVIDER. REFERENCE CAR WASH EQUIPMENT PLANS AND CIVIL DRAWINGS.
2. SLEEVE AND SEAL PIPING THROUGH TRENCH WALL.
3. 1/2"CW TRAP PRIMER LINE TO FLOOR DRAIN.
4. PIPING RUN BELOW TRENCH.



2 FOUNDATION PLAN

1/8" = 1'-0"



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08-12-2022

FOUNDATION PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22
JOB NO. a20-112

M201

DRAWING NO.

BID SET

GENERAL NOTES:

1. SEE GENERAL NOTES SHEET M001.
2. FOR PIPING SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE" SHEET M003.
3. ALL ISOLATION VALVES SHALL BE ACCESSIBLE. COORDINATE WORK WITH OTHER TRADES TO ENSURE ACCESSIBILITY. PROVIDE BUILDING ACCESS DOORS AS NECESSARY.
4. OFFSET PLUMBING PIPING AND VTR'S TO AVOID DUCTWORK AND OTHER OBSTRUCTIONS. TERMINATE VTR'S A MINIMUM OF 15 FEET FROM ANY OUTSIDE AIR INTAKES.
5. SEE DETAIL 3, SHEET M302 FOR FLOOR DRAIN INSTALLATION.
6. SEE SPECIFICATIONS FOR ROOF DRAIN (RD) AND OVERFLOW ROOF DRAIN (ORD) REQUIREMENTS.

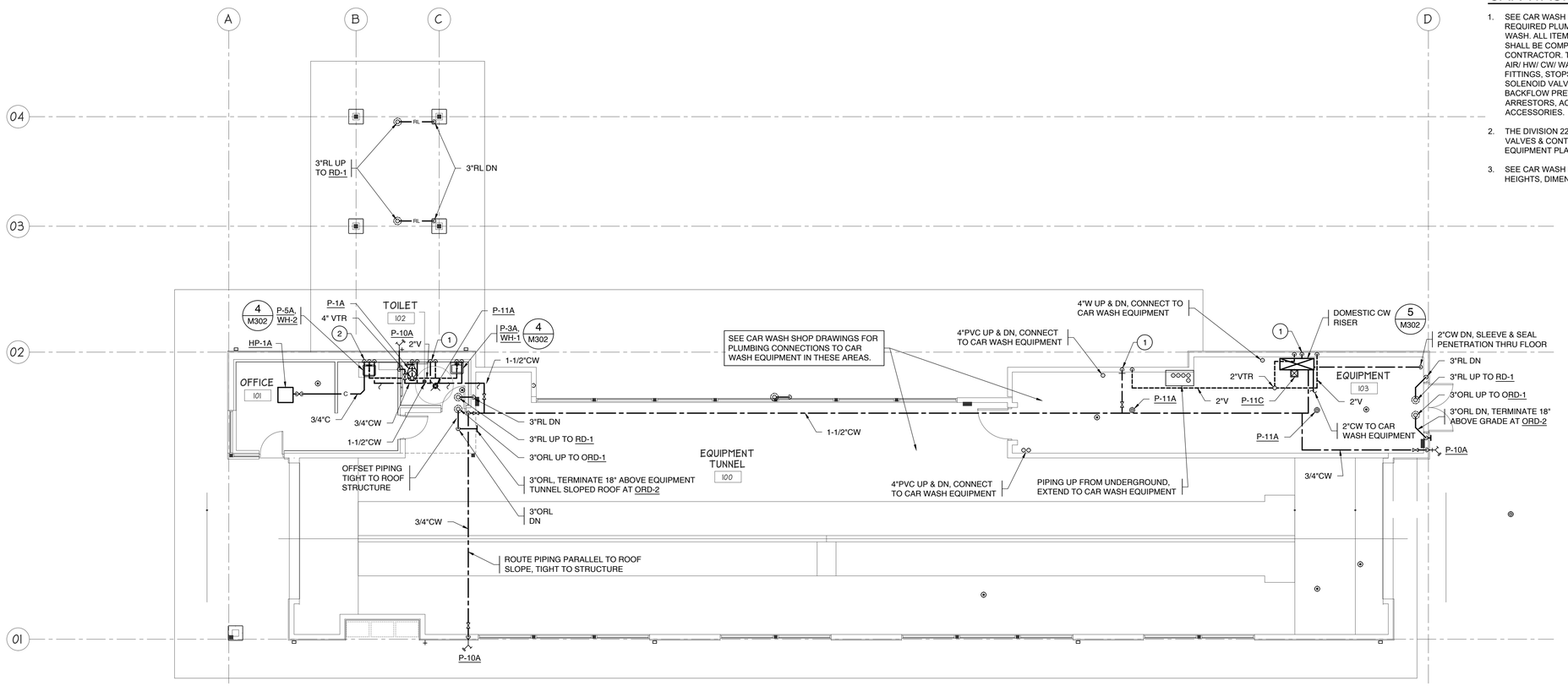
KEYED NOTES:

(1) 1/2"CW DOWN THROUGH WALL TO TRAP PRIMER, PROVIDE WITH ISOLATION VALVE AND ACCESS DOOR.

(2) EXTEND 3/4"C DOWN WALL, TERMINATE AT SINK TAILPIECE WITH AIR GAP FITTING.

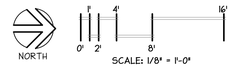
CAR WASH GENERAL NOTES:

1. SEE CAR WASH SHOP DRAWINGS & SPECIFICATIONS FOR REQUIRED PLUMBING CONNECTIONS TO ITEMS IN THE CAR WASH. ALL ITEMS REQUIRING PLUMBING CONNECTIONS SHALL BE COMPLETELY CONNECTED BY THE DIVISION 22 CONTRACTOR. THIS INCLUDES PROVIDING ALL COMPRESSED AIR/ HW/ CW/ WASTE/ VENT/ MISC DRAIN PIPING, TRAPS, FITTINGS, STOPS (IN ALL WATER PIPING TO ITEMS), VALVES, SOLENOID VALVES, GASKETS, UNIONS, VACUUM BREAKERS, BACKFLOW PREVENTERS, ESCUTCHEONS, WATER HAMMER ARRESTORS, ACCESS DOORS PIPE SHROUDS, AND ALL ACCESSORIES.
2. THE DIVISION 22 CONTRACTOR SHALL INSTALL ALL FITTINGS, VALVES & CONTROLS, FURNISHED WITH THE CAR WASH EQUIPMENT PLANS & SPECIFICATIONS.
3. SEE CAR WASH SHOP DRAWINGS FOR ALL ROUGH IN HEIGHTS, DIMENSIONS & ADDITIONAL REQUIREMENTS.



2 PLUMBING FLOOR PLAN

1/8" = 1'-0"



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PLUMBING FLOOR PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

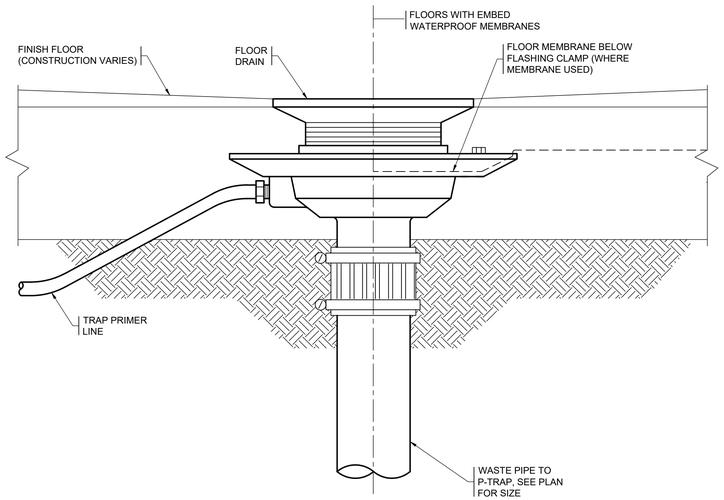
REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

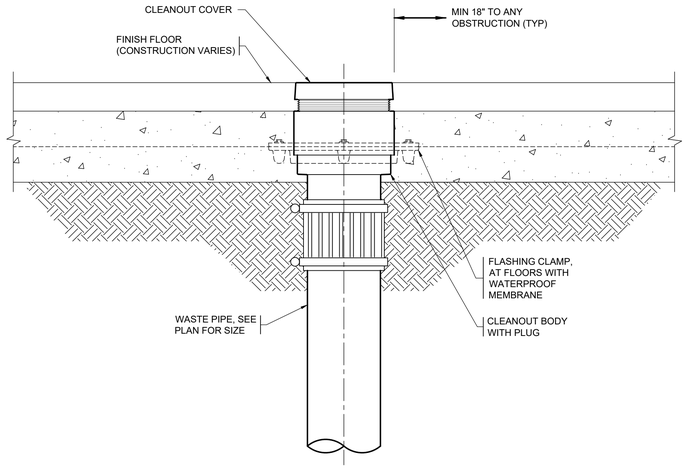
M301

DRAWING NO.

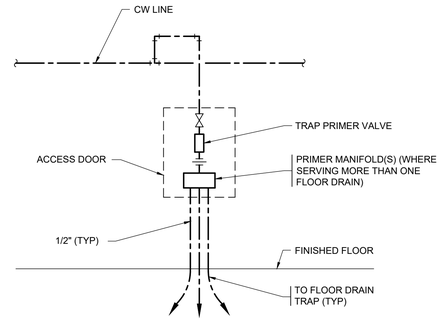
BID SET



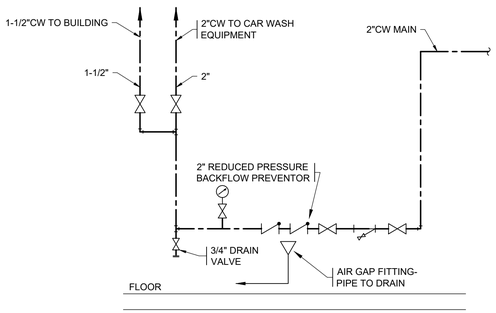
FLOOR DRAIN DETAIL 3
NTS — M302



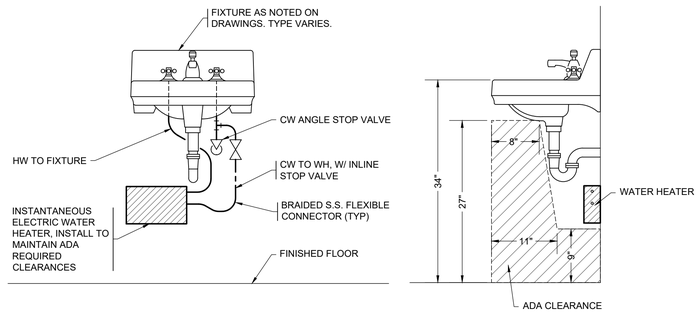
FLOOR CLEANOUT DETAIL 2
NTS — M302



TRAP PRIMER DETAIL 1
NTS — M302



CW RISER 5
NTS — M302



INSTANTANEOUS WATER HEATER 4
NTS — M302

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08-12-2022

PLUMBING DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

M302

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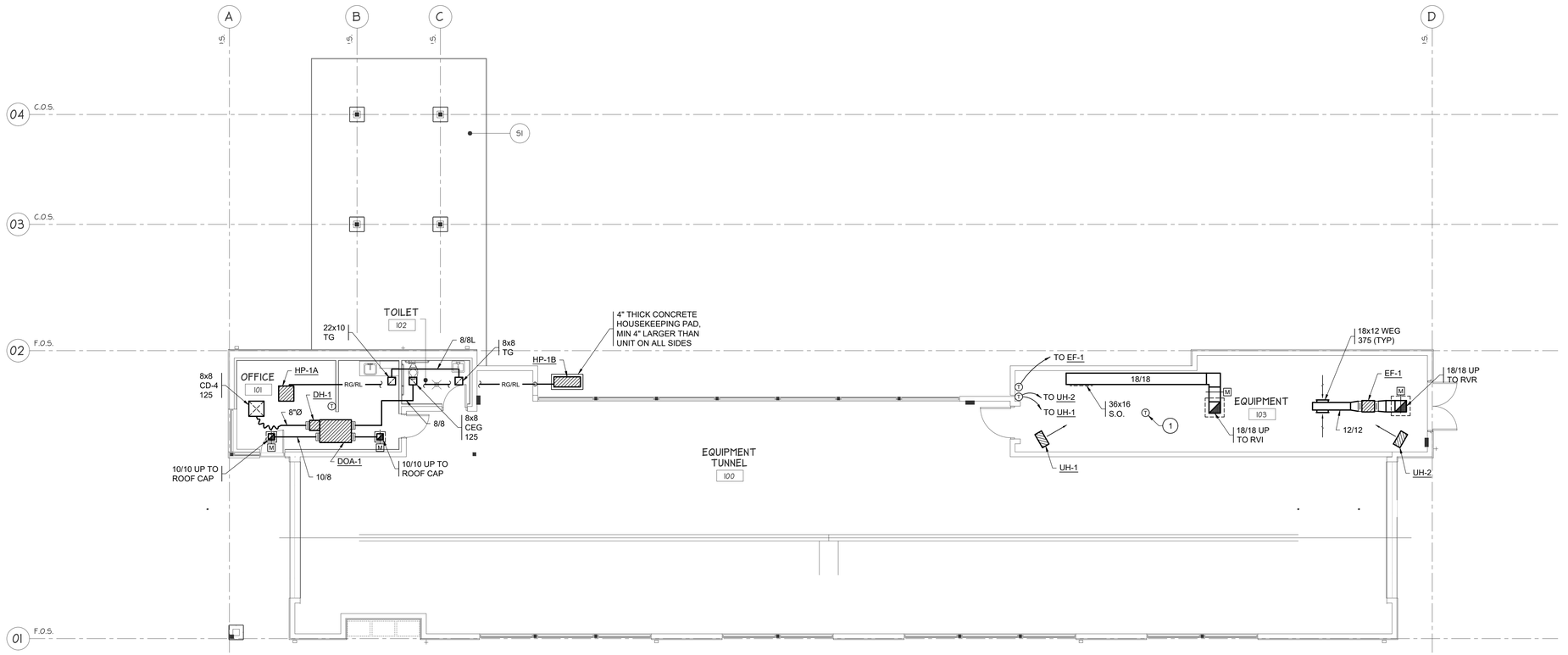
GENERAL NOTES:

1. SEE GENERAL NOTES SHEET M001.

KEYED NOTES:

(1) TEMPERATURE SENSOR MOUNTED TIGHT TO ROOF STRUCTURE. INTERLOCK WITH UNIT HEATERS SUCH THAT WHEN TEMPERATURE IS ABOVE SETPOINT (INITIALLY 85°, ADJUSTABLE) UNIT HEATERS ARE DISABLED.



HVAC FLOOR PLAN

1/8" = 1'-0"

NORTH

0' 2' 4' 8' 16'

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

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HVAC FLOOR PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE	JOB NO.
08.12.22	a20-112

M401

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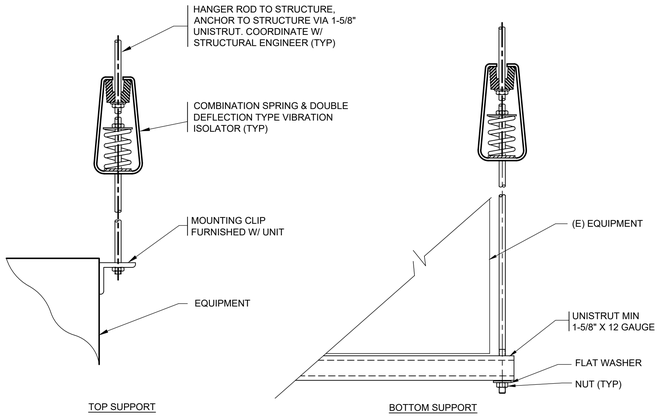


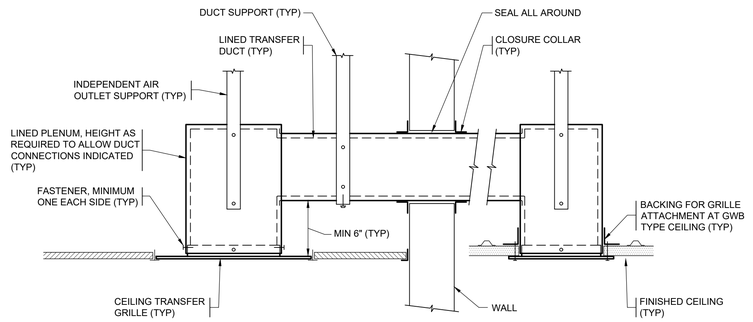
NOTES:

1. ALL SUSPENDED HVAC EQUIPMENT W/ ROTATING COMPONENTS SHALL HAVE VIBRATION ISOLATORS AS SHOWN.
2. VIBRATION ISOLATORS SHALL BE SELECTED FOR 1" DEFLECTION (UNO).
3. SEE STRUCTURAL FOR ATTACHMENT TO STRUCTURE & OTHER ANCHORING REQUIREMENTS.
4. DIRECT DRIVE EQUIPMENT MAY USE RUBBER-IN-SHEAR TYPE ISOLATORS.
5. PROVIDE SEISMIC RESTRAINTS PER SPECIFICATIONS PER CODE.

SUSPENDED EQUIP. SUPPORT

NTS

3 / M402



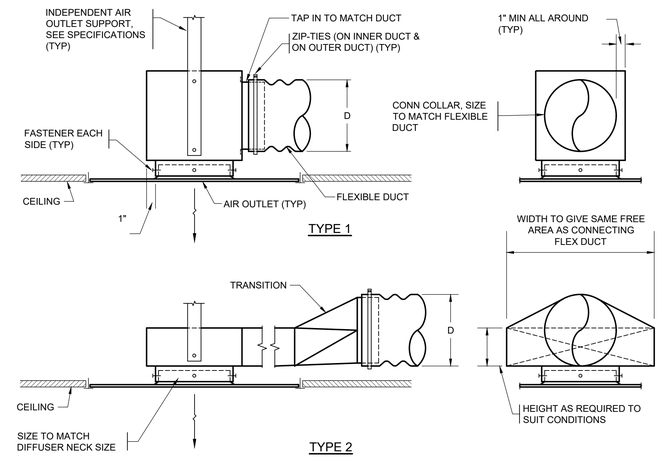
NOTES:

1. CEILING TYPE & AIR INLET FRAME STYLES MAY VARY FROM THAT DEPICTED.
2. SEE PLAN FOR SIZE & QUANTITY OF DUCT CONNECTIONS AND TRANSFER GRILLES.
3. PROVIDE ADDED ELBOWS & FIRE/SMOKE DAMPERS AS SHOWN ON PLANS.

TRANSFER DUCT DETAIL

NTS

2 / M402



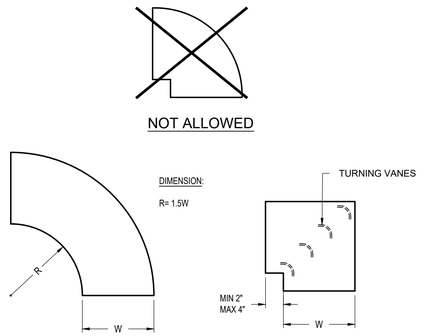
NOTES:

1. PROVIDE TYPE 1 UNLESS BUILDING CONDITIONS REQUIRE LOWER PROFILE - THEN USE TYPE 2.
2. CONSTRUCT PLENUM BOXES OF MIN. 26 GA. GALV. STEEL.
3. NOT ALLOWED AT TRANSFER DUCTS.
4. LINE PLENUM & DUCT TO AIR OUTLET WHERE SO NOTED ON PLANS OR IN SPECIFICATIONS.
5. CEILING TYPE & AIR OUTLET FRAME STYLE MAY VARY FROM THAT DEPICTED.
6. NOT ALL SUPPORTS ARE SHOWN FOR CLARITY.
7. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

TIGHT CONDITION - FLEX DUCT AIR OUTLET CONNECTION

NTS

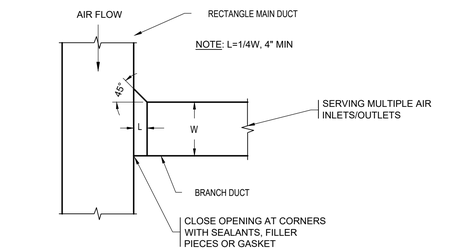
1 / M402



ELBOWS - RECTANGULAR

NTS

5 / M402



RECT-TO-RECT BRANCH DUCT CONNECTION

NTS

4 / M402

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SIGNED
08-12-2022

HVAC DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE 08.12.22
JOB NO. a20-112

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ABBREVIATIONS

(SOME ABBREVIATIONS MAY NOT BE USED ON DRAWINGS)

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
A or AMP	AMPERES	MCM, KCM	THOUSAND CIRCULAR MILS
AC	ALTERNATING CURRENT	MDF	MAIN DISTRIBUTION FRAME
A/C	AIR CONDITIONING	MECH	MECHANICAL
AIC	AMPERE INTERRUPTING CAPACITY	MIN	MINIMUM
AL	ALUMINUM	MLO	MAIN LUGS ONLY
ARCH	ARCHITECTURAL	MOP, MOCP	MAXIMUM OVERCURRENT PROTECTION
ATS	AUTOMATIC TRANSFER SWITCH	NIC	NOT IN CONTRACT
AWG	AMERICAN WIRE GAUGE	NTS	NOT TO SCALE
BKR	BREAKER	OC	ON CENTER
BLDG	BUILDING	PA	PUBLIC ADDRESS
C	CONDUIT	PB	PULLBOX
C.O.	CONDUIT ONLY	Ø or PH	PHASE
CB	CIRCUIT BREAKER	PNL	PANEL
CCTV	CLOSED CIRCUIT TELEVISION	PR	PAIR
CFM	CUBIC FEET PER MINUTE	PRI	PRIMARY
CKT	CIRCUIT	PVC	POLYVINYL CHLORIDE
CLG	CEILING	RECPT	RECEPTACLE
CONC	CONCRETE	REQ	REQUIRED
CT	CURRENT TRANSFORMER	RM	ROOM
CU	COPPER	SHT	SHEET
CW	COLD WATER	SP	SINGLE POLE
DC	DIRECT CURRENT	SPD	SURGE PROTECTIVE DEVICE
DIA	DIAMETER	SPDT	SINGLE POLE, DOUBLE THROW
DIV	DIVISION	SPST	SINGLE POLE, SINGLE THROW
DPDT	DOUBLE POLE, DOUBLE THROW	SW	SWITCH
DPST	DOUBLE POLE, SINGLE THROW	SWBD	SWITCHBOARD
DWG	DRAWING	TEL	TELEPHONE
EGC	EQUIPMENT GROUND CONDUCTOR	TV	TELEVISION
ELEC	ELECTRIC	TTB	TELECOMMUNICATIONS TERMINAL BOARD
EMT	ELECTRICAL METALLIC TUBING	TYP	TYPICAL
EXST, (E)	EXISTING	UL	UNDERWRITERS LABORATORY
EV	ELECTRIC VEHICLE	UF	UNDERFLOOR
FA	FIRE ALARM	UG	UNDERGROUND
FC	FOOTCANDLE	V	VOLTS
FLA	FULL LOAD AMPS	VA	VOLT AMPERES
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	VAC	VOLTS ALTERNATING CURRENT
GND	GROUND	VAR	REACTIVE VOLT AMPERES
HP	HORSEPOWER	W	WATTS
IDF	INTERMEDIATE DISTRIBUTION FRAME	WP	WEATHERPROOF
J-BOX	JUNCTION BOX	/W	WITH
KV	KILOVOLTS	W/O	WITHOUT
KVA	KILOVOLT AMPERES	XFER	TRANSFER
KW	KILOWATTS	XFMR	TRANSFORMER
LT	LIGHT		
LTG	LIGHTING		
MAX	MAXIMUM		
MCA	MINIMUM CIRCUIT AMPS		
MCB	MAIN CIRCUIT BREAKER		
MCC	MOTOR CONTROL CENTER		

OUTLET MOUNTING HEIGHTS

(MEASURE TO CENTER OF BOX, UNLESS OTHERWISE INDICATED)

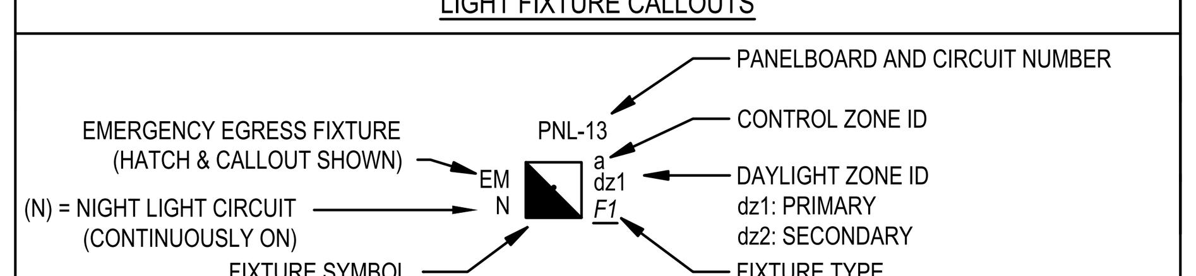
COUNTER HEIGHT (*)	+3 INCHES ABOVE SPLASH	FIRE ALARM	
CASEWORK OUTLETS	AS DIRECTED	MANUAL STATIONS	48 INCHES TO TOP
SWITCHES AND DIMMERS	48 INCHES	SIGNALING DEVICES	80 INCHES TO BOTTOM
RECEPTACLES	18 INCHES	REMOTE ALARM LIGHTS	80 INCHES TO BOTTOM
THERMOSTATS	48 INCHES	REMOTE ANNUNCIATOR	60 INCHES TO BOTTOM
OCCUPANCY SENSORS	12 FEET MAXIMUM	GRAPHIC PLAQUES	60 INCHES TO BOTTOM
DATA (COMPUTER)	18 INCHES	SECURITY	
WALL PHONE	48 INCHES	KEY PAD	48 INCHES TO TOP
TV (TELEVISION)	18 INCHES	CARD READER	48 INCHES
TV WALL MOUNTED	CENTER OF TV BRACKET	CCTV	WITHIN 6 INCHES OF CAMERA MOUNT
SPEAKERS	90 INCHES		
CLOCKS	90 INCHES	CCTV POLE MOUNTED	16 FEET
CLOCK/SPEAKER	90 INCHES, GYM OR COMMONS - 120"		
PROJECTOR	ABOVE WHITEBOARD, TO BE COORDINATED		

ELECTRICAL LEGEND

(SOME SYMBOLS MAY NOT BE USED ON DRAWINGS)

SYMBOL	DESCRIPTION
	DISTRIBUTION
	PANELBOARD - SURFACE
	PANELBOARD - EXISTING (SURFACE PANEL SHOWN)
	SWITCHBOARD OR MCC (DRAWN TO SCALE)
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MAGNETIC MOTOR STARTER OR OTHER MOTOR CONTROL DEVICE AS SCHEDULED
	DRY TYPE TRANSFORMER
	WIRING CONCEALED IN CEILING OR WALL
	WIRING CONCEALED UNDERGROUND OR BELOW FLOOR
	WIRING EXPOSED
	WIRING HOMERUN
	CONDUIT UP, DOWN
	FLEXIBLE WIRING CONNECTION
	GENERAL
#	BUBBLE NOTE TAG SYMBOL: # - IDENTIFYING NUMBER
	SCHEDULED EQUIPMENT CONNECTION (INCLUDE ALL WIRING, DISCONNECTING MEANS, CONTROL AND OTHER REQUIREMENTS SCHEDULED)
# / A	DETAIL SYMBOL: # - IDENTIFYING NUMBER, A - SHEET WHERE DETAIL SHOWN
#	REVISION CALLOUT
#	FLAG NOTE
#	SCHEDULED CONDUIT CALLOUT
	LIGHTING
	LUMINAIRE (TO SCALE ON DRAWINGS)
	EMERGENCY FIXTURE - TWIN HEAD
	COMBINATION EXIT SIGN AND TWIN HEAD EMERGENCY LIGHTING UNIT
	EXIT FIXTURE - CEILING
	EXIT FIXTURE - WALL
	EXIT FIXTURE WITH DIRECTION ARROWS
N	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT PROVIDE UNSWITCHED HOT CONDUCTOR
a,b	INDICATES CONTROL ZONE
	POLE MOUNTED LIGHT
XX	INDICATES LUMINAIRE TYPE

LIGHT FIXTURE CALLOUTS



SYMBOL	DESCRIPTION
	LIGHTING CONTROL
	PHOTOCELL, EXTERIOR
S	SINGLE POLE TOGGLE SWITCH
$	DIGITAL SWITCH STATION
$_{WP}$, S_3	SWITCH SUBSCRIPTS: 2 DOUBLE POLE; 3 THREE WAY; 4 FOUR WAY; D DIMMER; EP EXPLOSION PROOF; K KEY OPERATED; LV LOW VOLTAGE; LVM LOW VOLTAGE MASTER; M MANUAL MOTOR STARTER W/OVERLOADS; MC MOMENTARY CONTACT; P SWITCH W/PILOT LIGHT; T TIMER; WP WEATHERPROOF; a, b, c MULTIGANG SWITCH STATION
	DAYLIGHT SENSOR - DUAL ZONE
OS	OCCUPANCY SENSOR
ER	UL924 EMERGENCY TRANSFER RELAY

SYMBOL	DESCRIPTION
	POWER
	ALL RECEPTACLES ARE TAMPER RESISTANT
	DUPLEX RECEPTACLE (NEMA 5-20R) SUBSCRIPT: IG ISOLATED GROUND; WC CHILLED WATER FOUNTAIN; REF REFRIGERATOR; COP COPIER; P PEDESTAL; WP WEATHERPROOF; C CEILING; DW DISHWASHER; P WALL MOUNT PROJECTOR; TV VIDEO DISPLAY OUTLET. REFER TO ARCHITECTURAL DETAILS FOR MOUNTING HEIGHT
	FOURPLEX RECEPTACLE (NEMA 5-20R)
	DUPLEX RECEPTACLE, 1/2 CONTROLLED BY OCCUPANCY SENSOR OR TIME SWITCH
	GFCI DUPLEX RECEPTACLE (NEMA 5-20R)
*	ASTERISK INDICATES COUNTER HEIGHT OUTLET (DUPLEX RECEPTACLE SHOWN)
	SPECIAL PURPOSE OUTLET (AS NOTED)
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
J	JUNCTION BOX
	MOTOR CONNECTION
	EQUIPMENT CONNECTION SUBSCRIPT: WH WATER HEATER; HD HAND DRYER; WC WATER COOLER
	SINGLE RECEPTACLE (NEMA 5-20R)
	COMMUNICATIONS
	CAT 6 OUTLET WITH 1.25"C TO ACCESSIBLE SPACE AND (2) CAT 6 CABLES TO DISTRIBUTION FRAME
3	QTY OF CAT 6 OUTLETS INDICATED W/ CAT 6 CABLE FOR EACH IF MORE THAN 2 OUTLET TO DISTRIBUTION FRAME, MIN 1.25"C TO ACCESSIBLE SPACE
AP	WIRELESS ACCESS POINT STATION WITH (1) CAT 6A CABLE TERMINATED IN A BISCUIT STYLE ENCLOSURE WITH (1) CAT 6A OUTLET, INSTALL WAP FURNISHED BY OWNER
	LINE TYPES
	EXISTING WORK
	NEW WORK

GENERAL ELECTRICAL NOTES:

1. SEE ARCHITECTURAL PLANS FOR LOCATION OF FIRE RATED CONSTRUCTION.
2. BRANCH CIRCUIT NOTES:
   A. VERIFY BRANCH CIRCUIT WIRE COUNT BEFORE PULLING CONDUCTORS. PROVIDE REQUIRED CONDUCTORS TO EACH OUTLET AND DEVICE FOR PHASE, NEUTRAL AND EQUIPMENT GROUND BASED ON CIRCUIT DESIGNATIONS SHOWN AND AS OTHERWISE INDICATED ON PLANS OR NOTE BELOW.
   B. FOR SWITCHED OUTLETS, PROVIDE ADDITIONAL CONDUCTOR COUNT REQUIRED FOR SWITCH LEGS TO ACCOMMODATE SWITCH CONTROL INDICATED. MAINTAIN UNSWITCHED LEG IN LIGHTING BRANCH CIRCUITS TO EXIT, EMERGENCY, AND NIGHT LIGHTING SHOWN.
   C. MINIMUM BRANCH CIRCUIT CONDUCTOR SIZE FOR OUTDOOR AND EXTERIOR BUILDING LIGHTING SHALL BE #10 AWG.
   D. PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR BRANCH CIRCUITS SERVING RECEPTACLE OUTLETS UNLESS OTHERWISE INDICATED.
3. MINIMUM CONDUIT SIZE FOR HOMERUNS AND FOR CONDUIT INSTALLED BELOW GRADE OUTDOORS SHALL BE 3/4 INCH.
4. REFER TO ARCHITECTURAL PLANS FOR LIGHT FIXTURE LOCATIONS AND FOR MOUNTING HEIGHT OF SUSPENDED AND WALL MOUNTED LIGHT FIXTURES. REFER TO REFLECTED CEILING PLANS, INTERIOR ELEVATIONS, EXTERIOR ELEVATIONS, ROOM SECTIONS, AND DETAILS SHOWN ON ARCHITECTURAL CONTRACT DOCUMENTS PRIOR TO ROUGH-IN. REPORT CONFLICTS TO ARCHITECT/ENGINEER FOR RESOLUTION.
5. REFER TO ARCHITECTURAL ELEVATIONS FOR LOCATION AND MOUNTING HEIGHT OF WIRING DEVICES. REPORT CONFLICTS TO ARCHITECT/ENGINEER FOR RESOLUTION.
6. VERIFY EXACT LOCATION OF FLOOR BOXES AND OUTLETS LOCATED IN KNEE SPACES AND CASEWORK. OBTAIN ARCHITECT APPROVAL PRIOR TO ROUGH-IN.
7. VERIFY BACK BOX REQUIREMENTS OF EQUIPMENT FURNISHED UNDER OTHER THAN DIVISION 26, 27 OR 28 SECTIONS AND EQUIPMENT FURNISHED BY OWNER.
8. SEE MECHANICAL PLANS FOR QUANTITY AND LOCATION OF FIRE / SMOKE DAMPERS. PROVIDE 120 VOLT CONNECTION TO EACH DAMPER.

ENERGY CODE COMPLIANCE NOTES

1. MANUAL LIGHTING CONTROL: PROVIDE EACH ROOM WITH MANUAL LIGHTING CONTROL AS INDICATED. REMOTE LIGHTING CONTROLS SHALL IDENTIFY WHERE LIGHTS ARE CONTROLLED AND ON/OFF STATUS. MANUAL CONTROLS FOR SPACES NOT COVERED IN C405.2.1.2 LISTED EXCEPTIONS SHALL INCLUDE PROVISION FOR 50% LIGHT REDUCTION.
2. AUTOMATIC TIME SWITCH CONTROL: PROVIDE PROGRAMMABLE TIME SWITCH WITH MANUAL OVERRIDE FOR AUTOMATIC CONTROL OF LIGHTING IN ALL AREAS OF THE BUILDING NOT CONTROLLED BY OCCUPANCY SENSORS. TIME SWITCH AND OVERRIDE CONTROL SHALL COMPLY WITH MINIMUM REQUIREMENTS OF C405.2.2.1.
3. OCCUPANCY SENSORS: PROVIDE OCCUPANCY SENSORS IN ALL CLASSROOMS, CONFERENCE/MEETING ROOMS, LUNCH AND BREAK ROOMS, PRIVATE OFFICES, RESTROOMS, WAREHOUSE AND STORAGE SPACES, JANITORIAL CLOSETS, AND OTHER SPACES 300 SQUARE FEET OR LESS.
4. DAYLIGHT ZONES: PROVIDE AUTOMATIC CONTROL OF PRIMARY (DZ1) AND SECONDARY (DZ2) DAYLIGHT ZONES INDICATED ON PLANS INDEPENDENT OF MANUAL LIGHTING CONTROL ZONES INDICATED.
5. DAYLIGHT ZONE CONTROL: PROVIDE AUTOMATIC CONTINUOUS DIMMING CONTROL OF LIGHTS LOCATED WITHIN PRIMARY AND SECONDARY DAYLIGHT ZONES.
6. SPECIFIC APPLICATION CONTROLS: PROVIDE DEDICATED CONTROL INDEPENDENT OF OTHER LIGHTING FOR THE FOLLOWING:
   A. MEANS OF EGRESS: PROVIDE AUTOMATIC CONTROL OF EGRESS LIGHTING BY MEANS OF OCCUPANCY SENSORS OR TIME CLOCK AS INDICATED. EMERGENCY LIGHTS TO HAVE UL924 RELAYS TO OVERRIDE CONTROL STATE UPON LOSS OF POWER.
   B. DISPLAY AND ACCENT LIGHTS: PROVIDE MANUAL CONTROL AS INDICATED.
   C. FIXED MOUNTED TASK LIGHTING: PROVIDE LIGHTS WITH INTEGRAL ON/OFF CONTROL AND CONTROL BY OCCUPANCY SENSOR IN SPACE.
7. EXTERIOR LIGHTING CONTROL: PROVIDE AUTOMATIC CONTROL OF EXTERIOR LIGHTING USING COMBINATION OF PHOTOCELL AND ENERGY MANAGEMENT SYSTEM, SEE SERVICE PLAN FOR ADDITIONAL INFORMATION.
8. TRANSFORMERS: DRY TYPE DISTRIBUTION TRANSFORMERS RATED 600 VOLTS OR LESS SHALL COMPLY WITH MINIMUM EFFICIENCY REQUIREMENTS OF NEMA TP-1, TABLE 4-2.
9. MOTORS SHALL COMPLY WITH EFFICIENCY REQUIREMENTS OF C405.8, SEE MECHANICAL DOCUMENTS FOR MOTOR EFFICIENCY DATA.
10. COMMISSIONING: PROVIDE PROGRAMMING, CALIBRATION, AND FUNCTIONAL PERFORMANCE TESTING OF AUTOMATIC LIGHTING CONTROL SYSTEMS TO INCLUDE OCCUPANCY SENSORS, DAYLIGHT CONTROLS, AND TIME SWITCHES PER APPROVED COMMISSIONING PLAN. SUBMIT COMPLETED COMMISSIONING COMPLIANCE CHECKLIST (C408.1.4) FOR SIGNATURE PRIOR TO FINAL INSPECTIONS BY MECHANICAL AND ELECTRICAL INSPECTION AUTHORITIES.

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SIGNED 4-11-2022

ABBREVIATIONS, LEGEND & GENERAL NOTES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION DATE

DATE JOB NO. a20-112

E001

BID SET

DRAWING NO.

GENERAL NOTES:

1. SEE ELECTRICAL NOTES ON SHEET E001.
2. SEE SONNY'S CAR WASH DRAWINGS & SPECIFICATIONS FOR REQUIRED ELECTRICAL CONNECTIONS TO EQUIPMENT IN CAR WASH. ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS SHALL BE COMPLETELY CONNECTED BY THE CONTRACTOR. THIS INCLUDES PROVIDING ALL WIRING, CABLING, CONDUIT, COUPLERS, ELBOWS, HANGERS, SUPPORTS, AND ALL OTHER ELECTRICAL COMPONENTS REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM. SEE SONNY'S SHOP DRAWINGS FOR ALL ROUGH-IN CONDUIT & WIRE SIZING AND ANY ADDITIONAL REQUIREMENTS.

PLAN NOTES:

(1) PROVIDE 1" CONDUIT FOR LIGHT POLE POWER. USE #8 AWG WIRE MINIMUM FOR HOME RUNS AND BETWEEN POLES. SEE DETAIL 2 SHEET E701 FOR POLE LIGHT HAND HOLE DETAIL AND DETAIL 6 SHEET E701 FOR POLE BASE DETAILS.

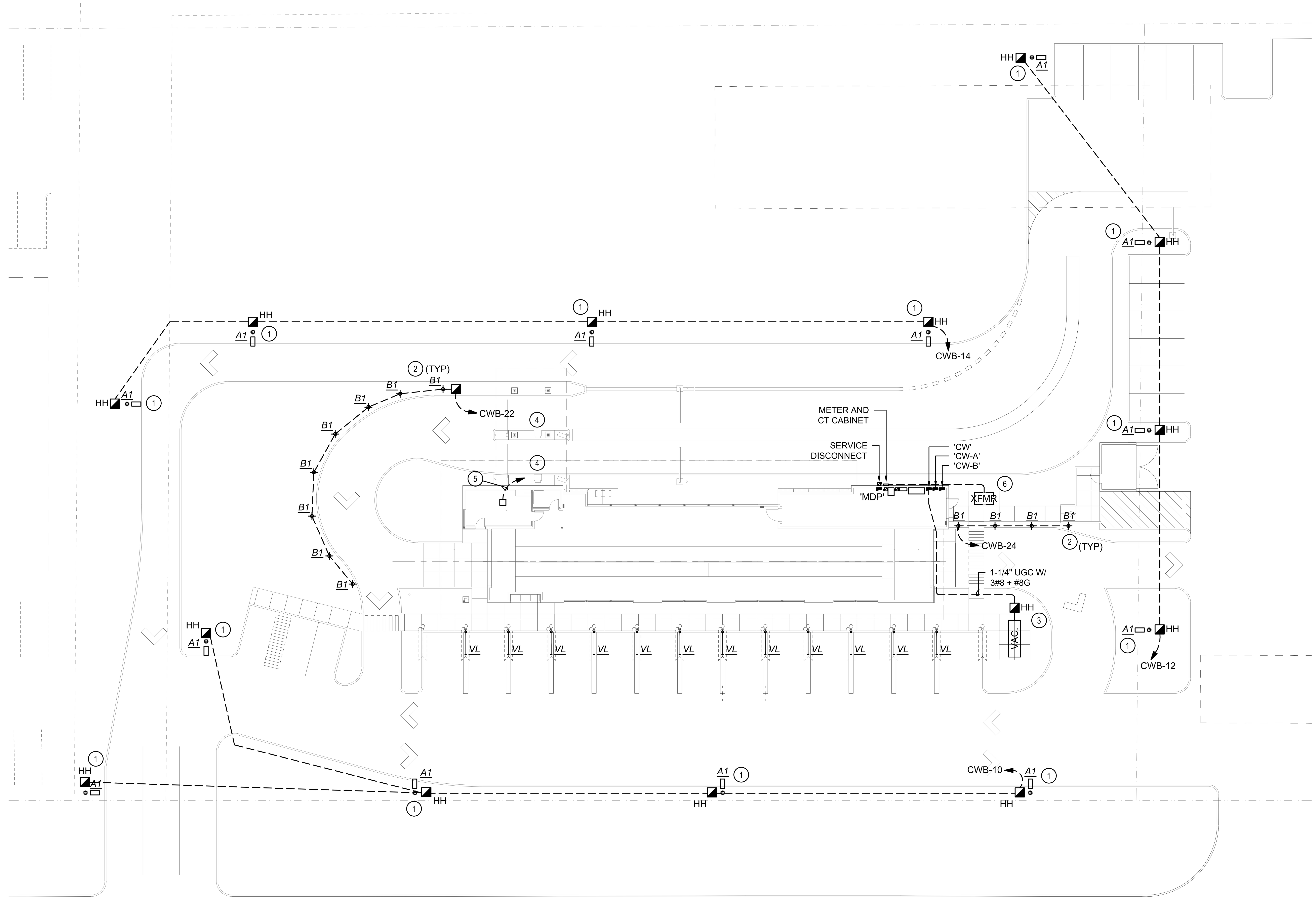
(2) PROVIDE 1" CONDUIT FOR LIGHTED BOLLARD POWER. USE #10 AWG WIRE MINIMUM FOR HOME RUNS AND BETWEEN BOLLARDS.

(3) VACUUM STATION PUMP - SEE DETAIL 1 SHEET E701 FOR ELECTRIC HAND HOLE DETAIL. SEE SONNY'S CAR WASH EQUIPMENT DRAWINGS FOR CONNECTION DETAILS.

(4) PROVIDE CONDUIT AND WIRING FOR PAY STATION, GATE, AND OTHER EQUIPMENT. SEE SONNY'S CAR WASH DRAWINGS FOR CONNECTION DETAILS.

(5) PROVIDE (2) 2" CONDUITS TO ADJACENT C-STORE IT ROOM. COORDINATE WITH OWNER FOR EXACT ROUTING AND SIZING PRIOR TO ROUGH IN.

(6) ELECTRIC UTILITY TRANSFORMER. COORDINATE WITH CIVIL AND ELECTRIC UTILITY FOR PRIMARY SERVICE REQUIREMENTS. SEE ONE-LINE DIAGRAM FOR BUILDING SERVICE DETAILS.



1 ELECTRICAL SITE PLAN
1" = 20'-0"

0' 5' 10' 20' 40'
NORTH

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4-11-2022

ELECTRICAL SITE PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE

JOB NO. a20-112

E101

DRAWING NO.

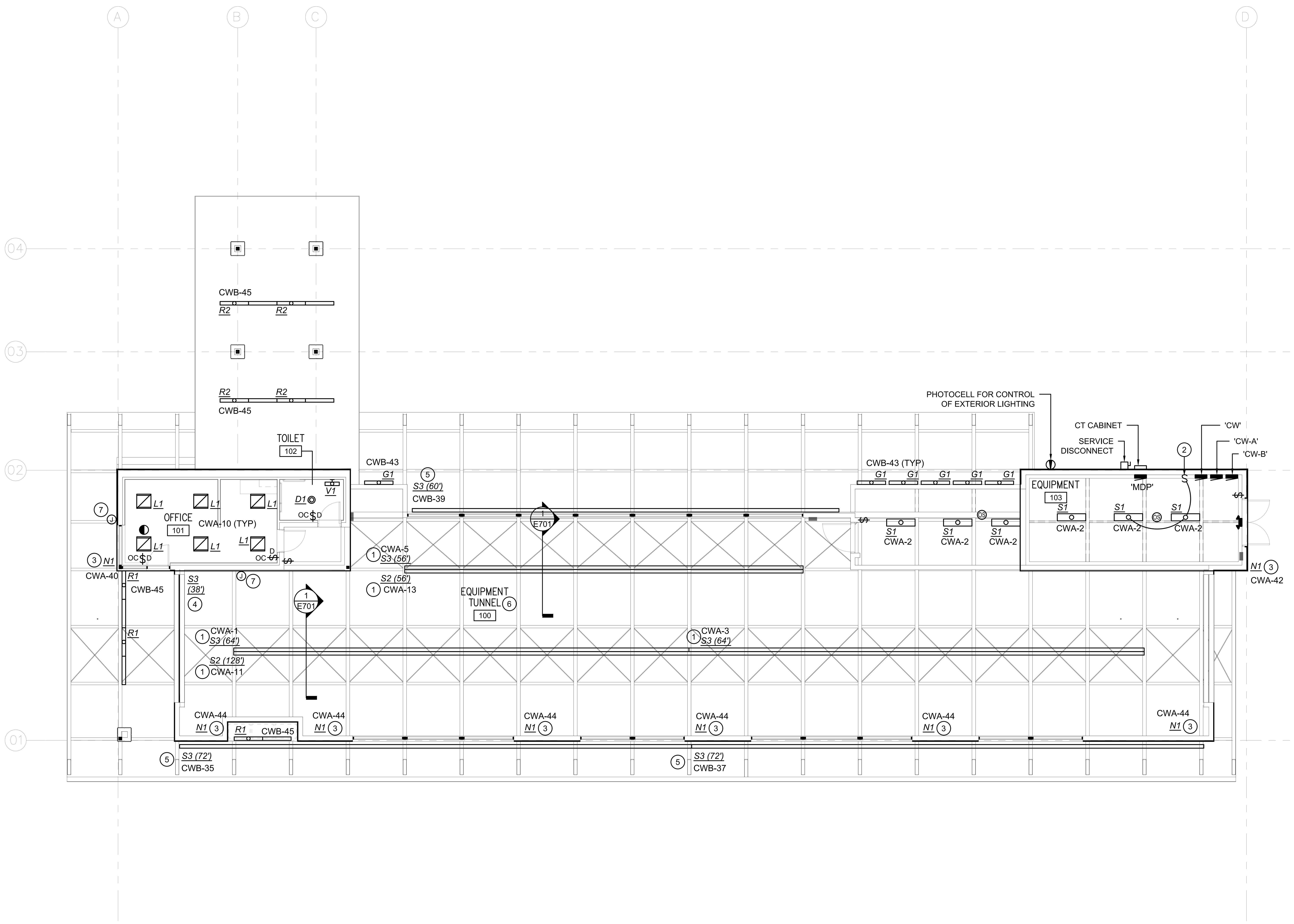
BID SET

GENERAL NOTES:

1. SEE ELECTRICAL NOTES ON SHEET E001.
2. SEE SHEET E601 FOR LIGHTING FIXTURE SCHEDULE AND LIGHTING CONTROL SCHEDULE.
3. SEE SONNY'S CAR WASH DRAWINGS & SPECIFICATIONS FOR REQUIRED ELECTRICAL CONNECTIONS TO EQUIPMENT IN CAR WASH. ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS SHALL BE COMPLETELY CONNECTED BY THE CONTRACTOR. THIS INCLUDES PROVIDING ALL WIRING, CABLING, CONDUIT, COUPLERS, ELBOWS, HANGERS, SUPPORTS, AND ALL OTHER ELECTRICAL COMPONENTS REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM. SEE SONNY'S SHOP DRAWINGS FOR ALL ROUGH-IN CONDUIT & WIRE SIZING AND ANY ADDITIONAL REQUIREMENTS.

PLAN NOTES:

1. FIXTURE TYPE S2 (DOWNLIGHT) AND FIXTURE TYPE S3 (UPLIGHT) MOUNTED TO UNI-STRUT. SEE DETAIL 1, SHEET E701 FOR SECTION VIEW OF LIGHT FIXTURES.
2. PROVIDE LINE VOLTAGE SWITCH FOR INDEPENDENT CONTROL OF LIGHT FIXTURES ABOVE ELECTRICAL PANELS PER NEC 110.26(D).
3. SEE ARCHITECTURAL EXTERIOR ELEVATIONS ON SHEET A302 FOR LENGTHS AND NUMBER OF FIXTURES. PROVIDE POWER SUPPLY AS REQUIRED.
4. MOUNT FIXTURE TO DOOR JAMBS AND HEADER.
5. MOUNT FIXTURE UNDER BUILDING EAVE POINTING UPWARDS AND AWAY FROM BUILDING.
6. FIXTURES IN THIS AREA TO BE CONTROLLED VIA TIME CLOCK AND MANUAL SWITCHES
7. SIGN CONNECTION. HOMERUN THRU LIGHTING CONTROL PANEL, VERIFY EXACT CONNECTION LOCATION & NUMBER OF FEED POINTS WITH SIGN INSTALLER PRIOR TO ROUGH-IN.



1 ELECTRICAL LIGHTING PLAN

1/8" = 1'-0"

0' 2' 4' 8' 16'

NORTH

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SIGNED 4-11-2022

LIGHTING PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

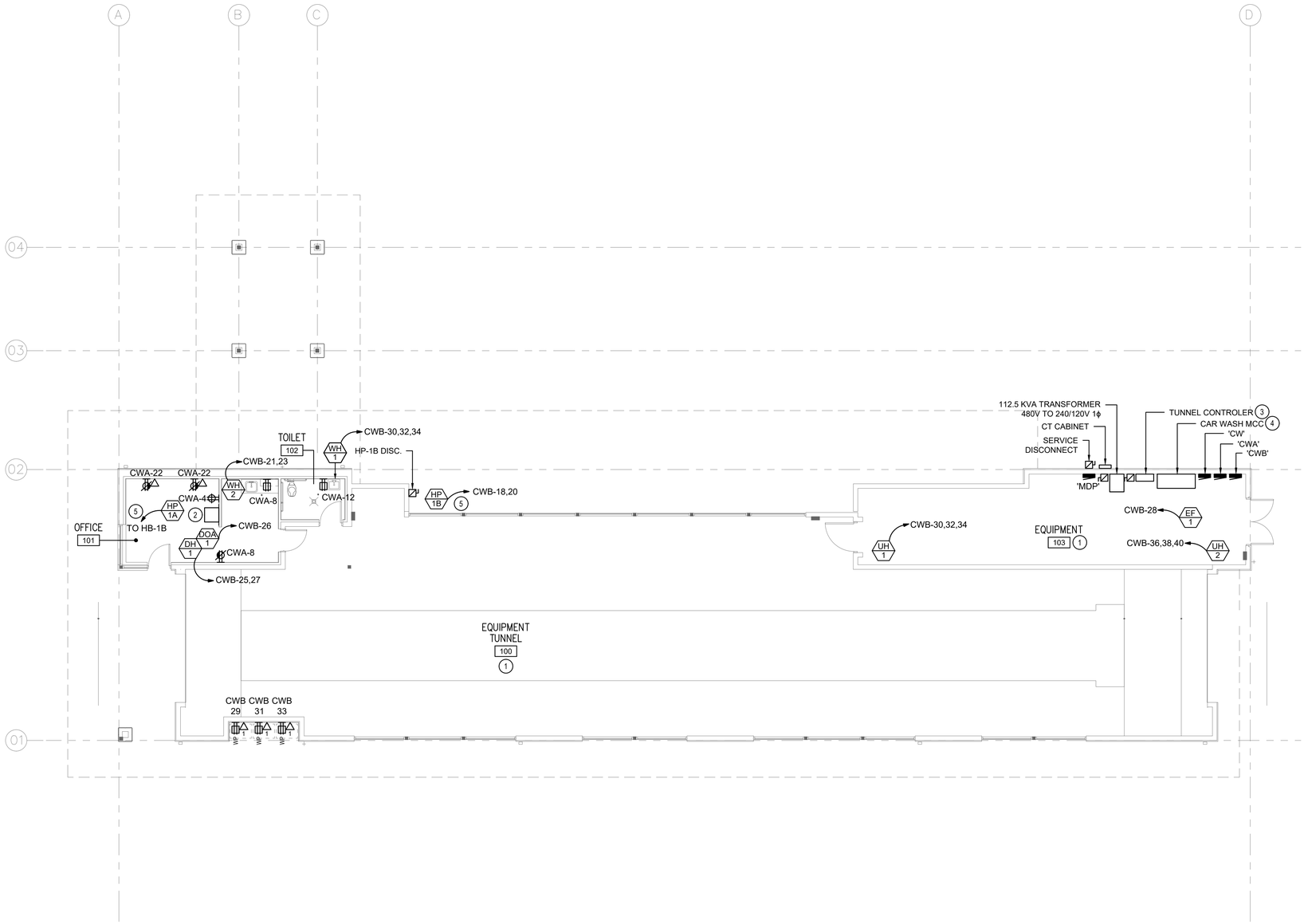
DATE

JOB NO. a20-112

E201

BID SET

DRAWING NO.



1 ELECTRICAL POWER & SIGNAL PLAN

1/8" = 1'-0"

GENERAL NOTES:

1. SEE ELECTRICAL NOTES ON SHEET E001.
2. SEE SHEET E601 FOR MECHANICAL EQUIPMENT SCHEDULE.
3. SEE SONNY'S CAR WASH DRAWINGS & SPECIFICATIONS FOR REQUIRED ELECTRICAL CONNECTIONS TO EQUIPMENT IN CAR WASH. ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS SHALL BE COMPLETELY CONNECTED BY THE CONTRACTOR. THIS INCLUDES PROVIDING ALL WIRING, CABLING, CONDUIT, COUPLERS, ELBOWS, HANGERS, SUPPORTS, AND ALL OTHER ELECTRICAL COMPONENTS REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM. SEE SONNY'S SHOP DRAWINGS FOR ALL ROUGH-IN CONDUIT & WIRE SIZING AND ANY ADDITIONAL REQUIREMENTS.

PLAN NOTES:

1. SEE SONNY'S CAR WASH DRAWINGS DRAWINGS FOR CARWASH EQUIPMENT ELECTRICAL CONNECTIONS IN THIS AREA.
2. TELECOMMUNICATIONS RACK - FIBER PATCH PANEL, (2) 24-PORT STATION PATCH PANEL, UPS.
3. TUNNEL CONTROLLER FURNISHED BY SONNY'S, INSTALLED BY CAR WASH INSTALLER. CONTRACTOR TO PROVIDE CONDUIT AND WIRING FOR CONNECTION FOR CONNECTION OF CAR WASH EQUIPMENT TO TUNNEL CONTROLLER. SEE SONNY'S CAR WASH DRAWINGS FOR WIRING DETAILS.
4. CAR WASH MCC FURNISHED BY SONNY'S, INSTALLED BY CONTRACTOR. CONTRACTOR TO PROVIDE CONDUIT AND WIRING FOR CONNECTION OF CAR WASH EQUIPMENT TO MCC. SEE SONNY'S CAR WASH DRAWINGS FOR WIRING DETAILS.
5. SEE DETAIL 7 ON SHEET E701 FOR CONNECTION DETAILS.

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THOMAS URQUHART — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

SIGNED
4-11-2022

POWER & SIGNAL PLAN

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE JOB NO. a20-112

E301

BID SET

DRAWING NO.

PLOTTED: Thursday, August 11, 2022 12:08:34 PM PLOTTED BY: JOHNW
FILE PATH: L:\2020 JOBS\20-174\ACAD\ELEC\20-174_E301 - PWR.DWG

FEEDER SCHEDULE
(BASED ON CU CONDUCTORS)

CALLOUT X-Y-Z

X = NOMINAL CIRCUIT AMPACITY
EG. 225 = 225 AMPERES

Y = CONFIGURATION CODE
1N = 1W + NEUT
1 = 1PH 2W
2 = 1PH 3W
3 = 3PH 3W
4 = 3PH 4W

Z = INDICATES IF GROUND CONDUCTOR(S) ARE INCLUDED
G = EQUIPMENT GROUND
IG = ISOLATED GROUND
GT = SEPARATELY DERIVED GOUND

CALLOUT	DESCRIPTION	REMARKS
100-4-G	1-1/2"C - 4#1 + #6G	-
150-3-G	1-1/2"C - 3#1/0 + #6G	-
150-4-G	2"C - 4#1/0 + #6G	-
300-4-G	3"C - 4#350KCM + #4G	-
600-4-G	(2)3"C - 4#350KCM + #1/0G IN PARALLEL	-
800-4	(3)3"C - 4#300KCM IN PARALLEL	-
800-4-G	(3)3"C - 4#300KCM + #1/0G IN PARALLEL	-

PLAN NOTES:

1. TRANSITION FROM UNDERGROUND PVC TO GRS CONDUIT MOUNTED TO FACE OF BUILDING.
2. COORDINATE WITH CIVIL AND ELECTRIC UTILITY FOR PRIMARY SERVICE REQUIREMENTS.
3. SEE SONNY'S CAR WASH DRAWINGS FOR CAR WASH MCC ONE-LINE CONNECTIONS DETAILS.

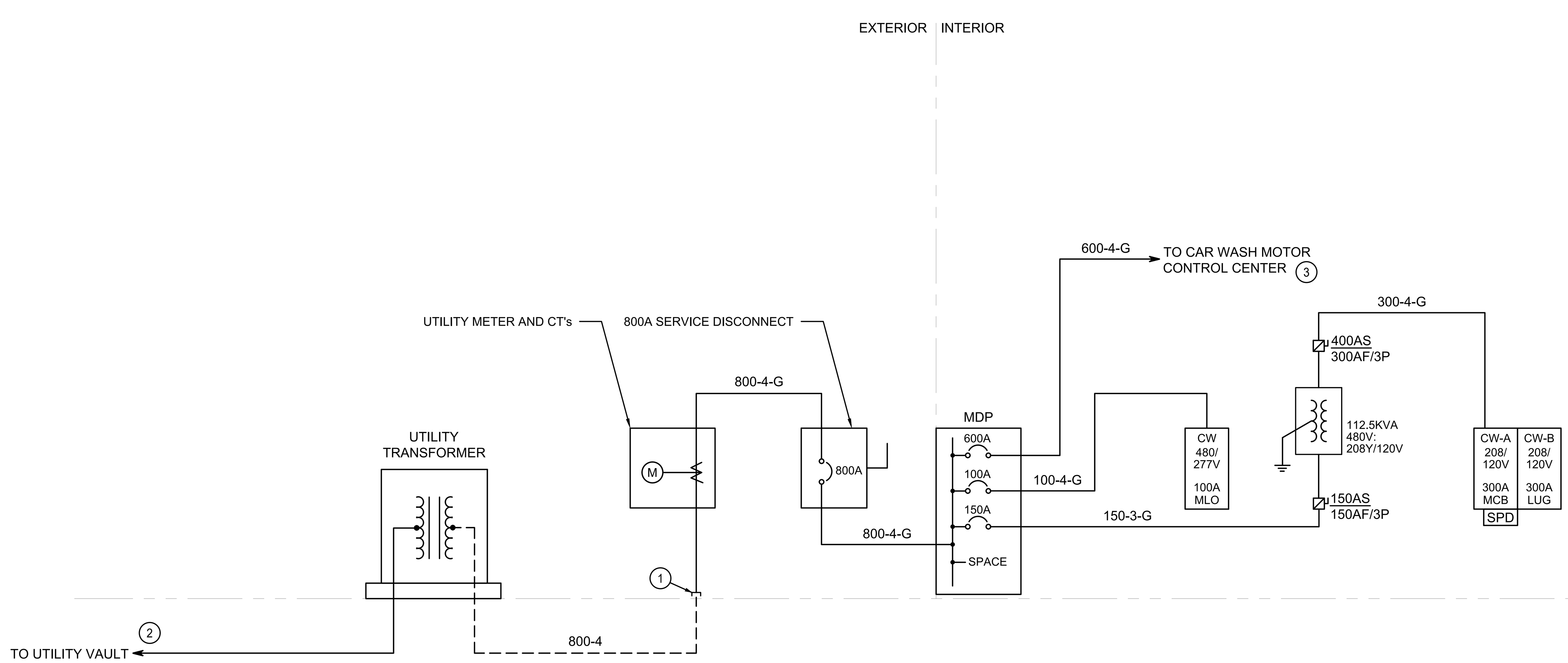
LOAD SUMMARY

DESCRIPTION	CONNECTED KVA	CONNECTED AMPS	CALCULATED KVA	CALCULATED AMPS
480/277V 800A 3ø SERVICE				
MDP				
PNL CW	23.3	28.0	23.3	28.0
CAR WASH MCC	394.2	474.2	394.2	474.1
208/120 XFRM	83.4	100.3	88.0	105.8
TOTAL	500.9	602.5	505.4	607.9

NOTES:
1. SEE PANEL SCHEDULES

FAULT CURRENT CALCULATION SUMMARY

DESCRIPTION	AVAILABLE SCA
480/277 VOLT	
PANEL MDP	42983
PANEL CW	31319
CAR WASH MCC	39960
112.5KVA TRANSFORMER - 480V PRIMARY	31319
112.5KVA TRANSFORMER - 208/120V SECONDARY	9638
PANEL CWA/B	9206



1 ONE-LINE DIAGRAM

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SIGNED
4-11-2022

ONE-LINE DIAGRAM

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE

JOB NO. a20-112

BID SET

E501

DRAWING NO.

NEW — THREE PHASE PANEL SCHEDULE

CWA

VOLTAGE: 208/120 4W RATING: 300 A MAIN: BREAKER

2, C.5
SECTION 1 OF1
LOCATION: ELEC/MEC ROOM

ENCLOSURE	ACCESSORIES	AIC ASSEMBLY
FLUSH	ISOLATED GROUND	SERVICE RATED
X SURFACE	X SPD	SERIES RATED
X NEMA TYPE 1	200% NEUTRAL	X 10K
NEMA TYPE 3R	X FEED THRU LUGS	25K
NEMA TYPE 12	DOUBLE LUGS	42K

DESCRIPTION	*	VA	BKR	CKT	A	B	C	CKT	BKR	VA	*	DESCRIPTION
TUNNEL RGBW LIGHTING		1280	20/1	1	1532			2	20/1	252		E. ROOM LIGHTING
TUNNEL RGBW LIGHTING		1280	20/1	3		2000		4	20/1	720		IT RECEPTACLE
TUNNEL RGBW LIGHTING		1120	20/1	5			2080	6	20/1	960		VACUUM LIGHTING
29-3 LED EQ. LIGHT		150	20/1	7	510			8	20/1	360		OFFICE RECPTACLES
29-3 LED EQ. LIGHT		150	20/1	9		370		10	20/1	220		OFFICE/BATHROOM LIGHTING
TUNNEL W DOWNLIGHT		713	20/1	11			893	12	20/1	180		BATHROOM RECEPTACLE
TUNNEL W DOWNLIGHT		713	20/1	13	1713			14	20/1	1000		40-G MONSTER ARCH
1-A CONTROL_120V		1000	15/1	15		2000		16	20/1	1000		30-C WAIT & GO
SPARE			20/1	17			343	18	20/1	343		EXTERIOR LINEAR DOWN LIGHT
1-A RECLAIM UNIT		2100	35/3	19	2316			20	20/1	216		EXTERIOR GAZER LIGHT
		2100		21		3100		22	20/1	1000		MASTER COMP.
		2100		23			3100	24	20/1	1000		20 DIGITAL QUE
SPARE			20/1	25	1000			26	20/1	1000		20-1 RELAY BOX
1-DE CONTROL_120V		1000	15/1	27		1720		28	20/1	720		20-C POS GFCI
SPARE			20/1	29			720	30	20/1	720		20-C POS GFCI
1-D RO UNIT		1320	15/3	31	2320			32	20/1	1000		20-D GATE
		1320		33		2320		34	20/1	1000		20-D GATE
		1320		35			2320	36	20/1	1000		30-i MENU SIGN
1-E RO REPRESSURIZER		576	15/3	37	1576			38	20/1	1000		30-i MENU SIGN
		576		39		1076		40	20/1	500		LED ACCENT STRIP LIGHTING
		576		41			1076	42	20/1	500		LED ACCENT STRIP LIGHTING
SPARE			20/1	43	500			44	20/1	500		LED ACCENT STRIP LIGHTING
SPARE			20/1	45		0		46	20/1			SPARE
SPARE			20/1	47			0	48	20/1			SPARE
SPARE			20/1	49	0			50	30/3			SPD
SPARE			20/1	51		0		52				
SPARE			20/1	53			0	54				

BREAKER CODE:	A	B	C	
A=AFCI, G=GFCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP	11467	12586	10532	VA CWA
K=KEYED, P=PADLOCK ATTACHMENT	15615	15530	17657	VA CW-B
				VA
	27082	28116	28189	VA SUB-TOTAL
	225.7	234.3	234.9	AMPS PHASE L-N

	KVA			KVA
LIGHTING	18.3	X	125%	22.8
RECEPTACLES	5.7	X	100%	5.7
RECEPTACLES OVER 10K		X	50%	
MOTORS	23.5	X	100%	23.5
LARGEST MOTOR		X	125%	
KITCHEN		X	100%	
NONCOINCIDENT		X	0%	
REMAINDER	35.9	X	100%	35.9
EV CHARGER		X	125%	

TOTAL LOAD	**KVA**	**AMPS**
CONNECTED	**83.4**	**231.5**
CALCULATED	**88.0**	**244.1**

* REMARKS

LIGHT LINE WEIGHT EQUALS EXISTING
HEAVY LINE WEIGHT EQUALS NEW

NEW — THREE PHASE PANEL SCHEDULE

CWB

VOLTAGE: 208/120 4W RATING: 300 A MAIN: LUG

2, C.5
SECTION 1 OF1
LOCATION: ELEC/MEC ROOM

ENCLOSURE	ACCESSORIES	AIC ASSEMBLY
FLUSH	ISOLATED GROUND	SERVICE RATED
X SURFACE	SPD	SERIES RATED
X NEMA TYPE 1	200% NEUTRAL	X 10K
NEMA TYPE 3R	FEED THRU LUGS	25K
NEMA TYPE 12	DOUBLE LUGS	42K

DESCRIPTION	*	VA	BKR	CKT	A	B	C	CKT	BKR	VA	*	DESCRIPTION
1-X CONTROL_120V		1000	15/1	1	1696			2	15/1	696		10-L AIR DRYER
SPARE			20/1	3		0		4	20/1			
1-X RO REJECT PUMP		1320	15/3	5			2280	6	10/1	960		27-C CONTROL BOX
		1320		7	1320			8	20/1			SPARE
		1320		9		2070		10	20/1	750		SITE LIGHTING
SPARE			20/1	11			625	12	20/1	625		SITE LIGHTING
1-Z CONCIERGE PUMP		1350	30/2	13	1975			14	20/1	625		SITE LIGHTING
		1350		15		1350		16	20/1			SPARE
WH-1		2080	25/2	17			3478	18	15/2	1398		HP-1B
		2080		19	3478			20		1398		
WH-2		4160	50/2	21		4400		22	20/1	240		LIGHTED BOLLARDS
		4160		23			4280	24	20/1	120		LIGHTED BOLLARDS
DH-1		1000	15/2	25	1156			26	15/1	156		DOA-1
		1000		27		2176		28	15/1	1176		EF-1
VENDING MACHINE 1		1000	20/1	29			2667	30	20/3	1667		UH-1
VENDING MACHINE 2		1000	20/1	31	2667			32		1667		
VENDING MACHINE 3		1000	20/1	33		2667		34		1667		
EXTERIOR RGBW LIGHTING		1440	20/1	35			3107	36	20/3	1667		UH-2
EXTERIOR RGBW LIGHTING		1440	20/1	37	3107			38		1667		
EXTERIOR RGBW LIGHTING		1200	20/1	39		2867		40		1667		
CAR WASH ENTRY RGBW LIGHTING		720	20/1	41			1220	42	20/1	500		EXTERIOR SIGNAGE
EXTERIOR RGBW GAZER		216	20/1	43	216			44	20/1			SPARE
EXTERIOR DOWNLIGHTS			20/1	45		0		46	20/1			SPARE
SPARE			20/1	47			0	48	20/1			SPARE
SPARE			20/1	49	0			50	20/1			SPARE
SPARE			20/1	51		0		52	20/1			SPARE
SPARE			20/1	53			0	54	20/1			SPARE

BREAKER CODE:	A	B	C	
A=AFCI, G=GFCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP	15615	15530	17657	VA CWB
K=KEYED, P=PADLOCK ATTACHMENT				VA
				VA
	15615	15530	17657	VA SUB-TOTAL
	130.1	129.4	147.1	AMPS PHASE L-N

	KVA			KVA
LIGHTING	7.4	X	125%	9.2
RECEPTACLES	3.0	X	100%	3.0
RECEPTACLES OVER 10K		X	50%	
MOTORS	11.5	X	100%	11.5
LARGEST MOTOR		X	125%	
KITCHEN		X	100%	
NONCOINCIDENT		X	0%	
REMAINDER	26.9	X	100%	26.9
EV CHARGER		X	125%	

TOTAL LOAD	**KVA**	**AMPS**
CONNECTED	**48.8**	**135.5**
CALCULATED	**50.6**	**140.6**

* REMARKS

LIGHT LINE WEIGHT EQUALS EXISTING
HEAVY LINE WEIGHT EQUALS NEW

NEW — THREE PHASE PANEL SCHEDULE

MDP

VOLTAGE: 480/277 4W RATING: 800 A MAIN: LUG

2, C.5
SECTION 1 OF1
LOCATION: ELEC/MEC ROOM

ENCLOSURE	ACCESSORIES	AIC ASSEMBLY
FLUSH	ISOLATED GROUND	SERVICE RATED
X SURFACE	SPD	SERIES RATED
X NEMA TYPE 1	200% NEUTRAL	14K
NEMA TYPE 3R	FEED THRU LUGS	35K
NEMA TYPE 12	DOUBLE LUGS	X 65K

DESCRIPTION	*	VA	BKR	CKT	A	B	C	CKT	BKR	VA	*	DESCRIPTION
CAR WASH MCC		131414	600/3	1	139170			2	100/3	7756		PNL CW
		131414		3		139170		4		7756		
		131414		5			139170	6		7756		
SPACE				7	27082			8	150/3	27082		TRANSFORMER
SPACE				9		28116		10		28116		
SPACE				11			28189	12		28189		
SPACE				13	0			14				SPACE
SPACE				15		0		16				SPACE
SPACE				17			0	18				SPACE
SPACE				19	0			20				SPACE
SPACE				21		0		22				SPACE
SPACE				23			0	24				SPACE

BREAKER CODE:	A	B	C	
A=AFCI, G=GFCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP	166252	167286	167359	VA MDP
K=KEYED, P=PADLOCK ATTACHMENT				VA
				VA
	166252	167286	167359	VA SUB-TOTAL
	1385.4	1394.1	1394.7	AMPS PHASE L-N

	KVA			KVA
LIGHTING	18.3	X	125%	22.8
RECEPTACLES	5.7	X	100%	5.7
RECEPTACLES OVER 10K		X	50%	
MOTORS	441.0	X	100%	441.0
LARGEST MOTOR		X	125%	
KITCHEN		X	100%	
NONCOINCIDENT		X	0%	
REMAINDER	35.9	X	100%	35.9
EV CHARGER		X	125%	

TOTAL LOAD	**KVA**	**AMPS**
CONNECTED	**500.9**	**602.5**
CALCULATED	**505.5**	**608.0**

* REMARKS

LIGHT LINE WEIGHT EQUALS EXISTING
HEAVY LINE WEIGHT EQUALS NEW

NEW — THREE PHASE PANEL SCHEDULE

CW

VOLTAGE: 480/277 4W RATING: 100 A MAIN: LUG

2, C.5
SECTION 1 OF1
LOCATION: ELEC/MEC ROOM

ENCLOSURE	ACCESSORIES	AIC ASSEMBLY
FLUSH	ISOLATED GROUND	SERVICE RATED
X SURFACE	SPD	SERIES RATED
X NEMA TYPE 1	200% NEUTRAL	14K
NEMA TYPE 3R	FEED THRU LUGS	X 35K
NEMA TYPE 12	DOUBLE LUGS	65K

DESCRIPTION	*	VA	BKR	CKT	A	B	C	CKT	BKR	VA	*	DESCRIPTION
10-A COMPRESSOR, 10 HP		3878	25/3	1	7756			2	25/3	3878		10-A COMPRESSOR, 10 HP
		3878		3		7756		4		3878		
		3878		5			7756	6		3878		
SPACE				7	0			8				SPACE
SPACE				9		0		10				SPACE
SPACE				11			0	12				SPACE
SPACE				13	0			14				SPACE
SPACE				15		0		16				SPACE
SPACE				17			0	18				SPACE
SPACE				19	0			20				SPACE
SPACE				21		0		22				SPACE
SPACE				23			0	24				SPACE

BREAKER CODE:	A	B	C	
A=AFCI, G=GFCI, N=SWITCHED NEUTRAL, S=SHUNT TRIP	7756	7756	7756	VA CW
K=KEYED, P=PADLOCK ATTACHMENT				VA
				VA
	7756	7756	7756	VA SUB-TOTAL
	28.0	28.0	28.0	AMPS PHASE L-N

	KVA			KVA
LIGHTING		X	125%	
RECEPTACLES		X	100%	
RECEPTACLES OVER 10K		X	50%	
MOTORS	23.3	X	100%	23.3
LARGEST MOTOR		X	125%	
KITCHEN		X	100%	
NONCOINCIDENT		X	0%	
REMAINDER		X	100%	
EV CHARGER		X	125%	

TOTAL LOAD	**KVA**	**AMPS**
CONNECTED	**23.3**	**28.0**
CALCULATED	**23.3**	**28.0**

* REMARKS

LIGHT LINE WEIGHT EQUALS EXISTING
HEAVY LINE WEIGHT EQUALS NEW

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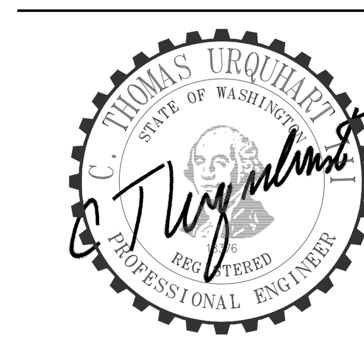

SIGNED
4-11-2022

PANEL SCHEDULES

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE JOB NO. a20-112

BID SET

E502

DRAWING NO.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

NAME	DESCRIPTION	LOCATION	MAXIMUM RATINGS HP	KVA	FLA	MCA	MOCP	VOLT/PH	(CU) FEEDER #12 EACH PHASE, NEUTRAL, PLUS GROUND	CIRCUIT#	DISCONNECT BY	DISCONNECT DESCRIPTION	REMARKS
HP-1A	HEAT PUMP INDOOR	OFFICE		0.07	0.32	0.4	15	208 1			●		POWERED FROM HP-1B
HP-1B	HEAT PUMP OUTDOOR	OUTSIDE		2.24	10.76	13.5	15	208 1		CW-B - 18,20	●	30AS/15AF/2P	
DOA-1	OUTSIDE AIR	OFFICE		0.16	1.30	1.6	15	120 1		CW-B - 26	●	MOTOR RATED SWITCH	
EF-1	EXHAUST FAN	EQUIPMENT ROOM	1/2	1.18	9.80	12.3	15	120 1		CW-B - 28	●	MOTOR RATED SWITCH	
WH-1	WATER HEATER	RESTROOM		4.16	20.00	25.0	25	208 1	3/4"C - 3#10+1#10G	CW-B - 17,19	●	30AS/25AF/2P	
WH-2	WATER HEATER	OFFICE/BREAK		8.32	40.00	50.0	50	208 1	1"C - 3#6+1#8G	CW-B - 21,23	●	60AS/50AF/2P	
UH-1	UNIT HEATER	EQUIPMENT ROOM		5.00	13.88	17.4	20	208 3		CW-B - 30,32,34	●	30AS/20AF/3P	
UH-2	UNIT HEATER	EQUIPMENT ROOM		5.00	13.88	17.4	20	208 3		CW-B - 36,38,40	●	30AS/20AF/3P	
DH-1	DUCT HEATER	OFFICE		2.00	9.62	12.0	15	208 1		CW-B - 25,27	●	MOTOR RATED SWITCH	
				28.12									

GENERAL EQUIPMENT CONNECTION SCHEDULE NOTES:

1. VERIFY VOLTAGE, PHASE, FLA/MCA OF EACH CONNECTION WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. NOTIFY ARCHITECT/ENGINEER WHEN SCHEDULED SUPPLY WILL NOT MEET NEC REQUIREMENTS.

2. OUTLETS, DISCONNECTS, CONTROLLERS, AND EQUIPMENT CONNECTIONS FOR ROOF TOP AND OTHER OUTDOOR EQUIPMENT SHALL BE WEATHER PROOF.

3. LOCATION OF OUTLETS, DISCONNECTS, CONTROL DEVICES, AND EQUIPMENT CONNECTIONS ARE DIAGRAMMATIC AND TO BE LOCATED IN FIELD BY THE CONTRACTOR AS APPROVED BY THE ENGINEER. UNLESS OTHERWISE INDICATED ON PLANS, INSTALL SCHEDULED DISCONNECTS AND CONTROL DEVICES IN SIGHT OF EQUIPMENT. ARRANGE WIRING AND EQUIPMENT TO AVOID INTERFERENCE WITH OTHER WORK AND TO MAXIMIZE ACCESSIBILITY FOR MAINTENANCE AND REPAIRS.

4. COORDINATE WITH THE OTHER INSTALLING CONTRACTORS TO ENSURE NEC REQUIRED ACCESS TO DISCONNECTS IS PROVIDED FOR EACH PIECE OF EQUIPMENT.

5. PROVIDE SMOKE DUCT DETECTORS IN HEATING AND COOLING SYSTEMS PER INTERNATIONAL MECHANICAL CODE. SEE DIVISION 25 EQUIPMENT SCHEDULES FOR ADDITIONAL UNITS RATED OVER 2000 CFM AND PROVIDE DUCT DETECTOR AS REQUIRED.

6. WIRING BETWEEN EQUIPMENT DISCONNECT AND POINT OF CONNECTION SHALL COMPLY WITH NEC BASED ON EQUIPMENT NAMEPLATE RATING EXCEPT MINIMUM BRANCH CIRCUIT RATING SHALL BE 20 AMPERES.

7. SIZE OF DISCONNECT SWITCH AND MOTOR STARTER SHALL BE SIZED TO COMPLY WITH NEC REQUIREMENTS. WHERE INDICATED MOTOR CONTROL IS NOT LOCATED IN SIGHT OF MOTOR AS DEFINED BY NEC, PROVIDE ADDITIONAL DISCONNECTING MEANS TO COMPLY WITH NEC 430.102.

8. WIRING SIZES ARE BASED ON 60 DEGREE C. FOR AMPACITIES 100 AMPERES AND LESS. FOR FEEDERS LESS THAN 100 FEET IN LENGTH, CONDUCTOR SIZES MAY BE SELECTED BASED ON 75 DEGREE C. WHERE EQUIPMENT INSTALLED IS LABELED FOR 75 DEGREE C. WIRING.

9. SCHEDULE LEGEND: ● = FURNISH AND INSTALL NEW UNDER DIVISION 26
O = INSTALL UNDER DIVISION 26; FURNISHED WITH EQUIPMENT OR BY OTHERS.
X = FURNISH AND INSTALL BY OTHERS (NOT DIVISION 26)
* = EXISTING, RELOCATED EQUIPMENT

INTERIOR LIGHTING AND RECEPTACLE CONTROL SCHEDULE

RM #	ROOM NAME	MANUAL CONTROL: LINE VOLTAGE SW	LOW VOLTAGE SW	DIMMING	SCENE SW	50% TIME SW REDUCTION	AUTOMATIC CONTROL: MANUAL ON	AUTO ON	WALL SW SENSOR	CEILING SENSOR	LT FIXTURE SENSOR	RELAY CONTROL PNL	WALL BOX TIME SWITCH	DAYLIGHT SENSOR	50% RECPT LOAD CNTRL	UL 924 RELAY	REMARKS
	OFFICE		X	X			X		X					X	X		
	RESTROOM		X	X				X	X								
	EQUIPMENT ROOM		X				X			X							
	CAR WASH TUNNEL		X	X			X										TIME CLOCK CONTROLED
	HALLWAY		X					X		X							
	EXTERIOR	X						X									PHOTOCELL CONTROLED

CONTROL SCHEDULE NOTES:

1 PROVIDE AUTOMATIC ON CONTROL UNDER WSEC C405.2.1.1 EXCEPTION (NO WINDOWS).
2 SEE LOW VOLTAGE RELAY SCHEDULE AND RISER DIAGRAM FOR TIME SWITCH OCCUPANCY CONTROL
3 PROVIDE MANUAL REDUCTION LIGHTING CONTROL IN LIEU OF AUTOMATIC CONTROL UNDER C405.2.2 EX 3 FOR OOCUPANT SAFETY OR SECURITY
4 PROVIDE MANUAL REDUCTION LIGHTING CONTROL IN LIEU OF AUTOMATIC CONTROL UNDER C405.2.2 EX [ ]
5 OCCUPANCY SENSORS SHALL PROVIDE 50% REDUCTION IN AISLE WAYS OF OPEN ARESA OF WAREHOUSE.
6 LIGHT REDUCTION CONTROL PROVIDED BY DIMMING.

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	LAMP	VOLTAGE	INPUT WATTS	BALLAST/ DRIVER	REMARKS
A1	AREA LIGHT, P4 FORWARD OPTICS, TYPE II MEDIUM DISTRIBUTION, ROUND POLE MOUNTING WITH SPUN ALUMINUM COLLAR, FINISH TO MATCH EXISTING AT C-STORE	LITHONIA LIGHTING D-SERIES SIZE 1	LED 3000K 70CRI 13490 LUMENS	120-277V	125W	0-10V	TO MATCH EXISTING AT C-STORE
B1	42" LIGHTED BOLLARD, MATTE SILVER FINISH	LUMINIS CL323 SERIES	LED 80 CRI 3500K 1640 LUMENS	120V	20W	0-10V	
D1	6" DOWNLIGHT, WHITE TRIM	LITELINE SLM6	LED 4000K 1150 LUMENS	120V	16W	0-10V	
G1	48" WALL GAZER, MEDIUM OUTPUT, FULL SPECTRUM, 10°X 60°, GROUND MOUNT, BLACK FINISH, WITH VISOR OPTION	INSIGHT LIGHTING MEDLEY EXTERIOR REMOTE	LED 1323 LUMENS	120V	36W	0-10V	PROVIDE CONTRA POWER SUPPLY AS REQUIRED
L1	2X2 LED FLAT PANEL	LITELINE FORUM LEDP-22 METALUX 22FP	LED 4000K 3750 LUMENS	120V	30W	0-10V	
N1	LED STRIP ACCENT, BLUE EXTERIOR MOUNT, WITH C CHANNEL SUPPORT AND POWER SUPPLY	NOVAFLEX MINI NEON SERIES	LED	120V	1.4W/FT	NON-DIMMING	WITH C CHANNEL SUPPORT AND POWER SUPPLY AS REQUIRED
R1	8' LINEAR FIXTURE, POLYCARBONATED LENS, HIGH EFFICIENCY LAMBERTIAN OPTIC, SURFACE MOUNT, CUSTOM BLACK FINISH	LUMENWERX VIA SPLASH LED	LED 80 CRI 3500K 6000 LUMENS	120V	91W	0-10V	WET LOCATION RATED
R2	SAME AS R1, EXCEPT RECESSED MOUNT	LUMENWERX VIA SPLASH LED	LED 80 CRI 3500K 6000 LUMENS	120V	91W	0-10V	WET LOCATION RATED
S1	LENSED LED STRIPLIGHT, 48 INCH, CHAIN MOUNT AT 14'	COLUMBIA LCL	LED 3500K 5329 LUMENS	120V	42W	0-10V	
S2	8' LINEAR ROPE FIXTURE, HIGH OUTPUT, WITH UV BLOCKING COAT	G&G LIGHTING GPX SERIES	LED 4000K 8000 LUMENS	120V	62W	0-10V	PROVIDE MOUNTING CLIPS
S3	4' LINEAR RGBW FIXTURE, 10X60 OPTICS, ALUMINUM HOUSING	ACCLAIM LIGHTING LINEAR ONE DMX	LED RGBW(4000K) 2344 LUMENS	120V	80W	DMX	
V1	24" LED VANITY LIGHT	INDESSA LIGHTING 444 SERIES	LED 3500K 2380 LM	120V	24W	0-10V	
VL	4' LINEAR RGBW FIXTURE, 10X60 OPTICS, ALUMINUM HOUSING	ACCLAIM LIGHTING LINEAR ONE DMX	LED RGBW(4000K) 2344 LUMENS	120V	80W	DMX	

LUMINAIRE SCHEDULE NOTES:

1. LED LUMENS ARE BASED ON TOTAL ILLUMINATION OUTPUT OF THE LUMINAIRE UNLESS OTHERWISE INDICATED.
2. VERIFY STEM, CHAIN, OR CABLE LENGTH WITH FIXTURE VENDOR AS REQUIRED TO ACCOMMODATE THE INDICATED MOUNTING HEIGHT MEASURED TO BOTTOM OF FIXTURE.
3. LED DRIVERS FOR LOW VOLTAGE DIMMING SHALL BE 0-10 VOLTS [DIGITAL SIGNAL DIMMING INTERFACE TYPE] UNLESS OTHERWIS INDICATED.
4. LOW VOLTAGE DIMMING DRIVERS FOR LUMINAIRES THAT HAVE DAYLIGHT RESPONSIVE CONTROL SHALL DIM TO COMPLETELY OFF.

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C. THOMAS URQUHART III, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER
SIGNED
4-11-2022

SCHEDULES

QUIL CEDA VILLAGE CAR WASH

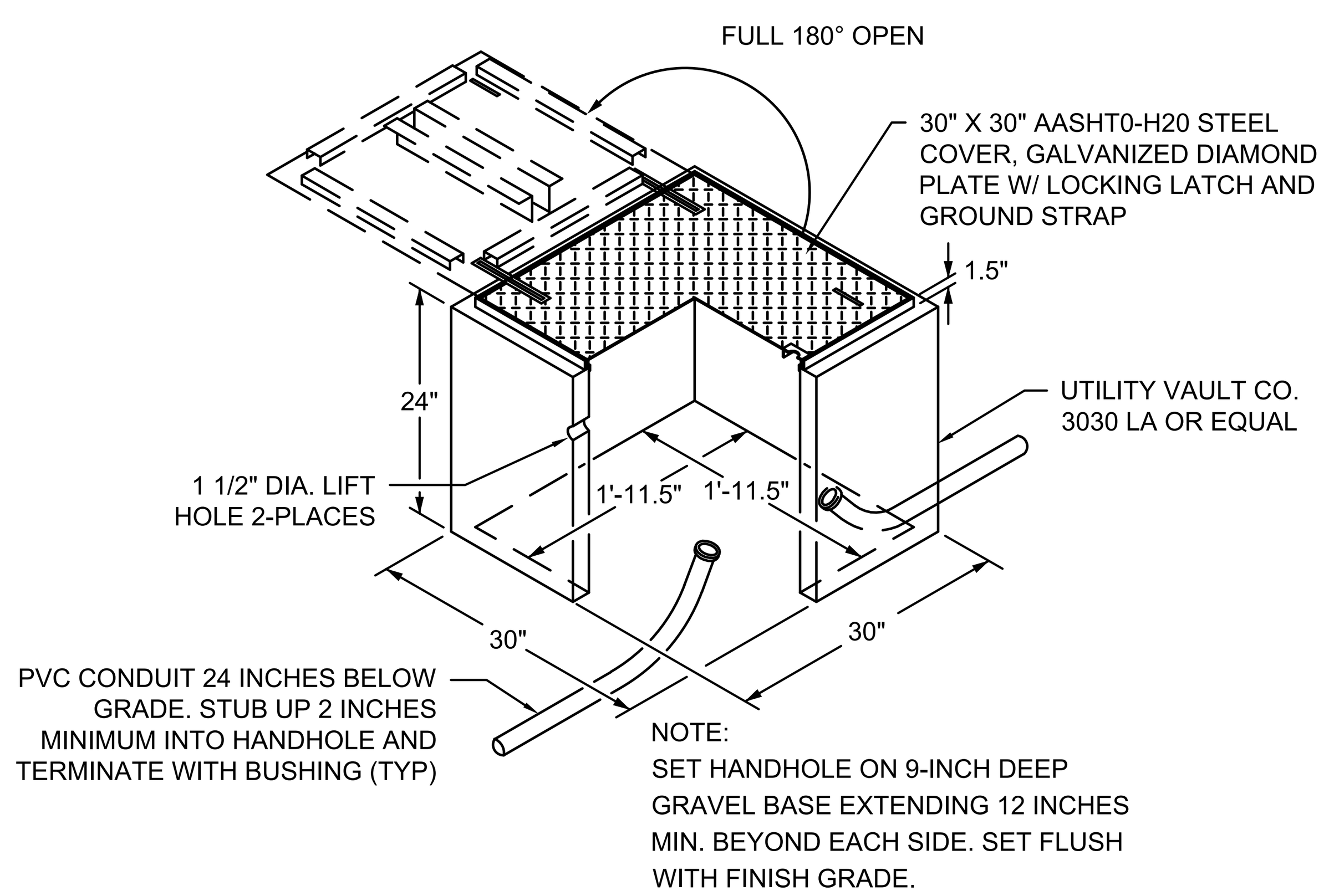
TULALIP, WASHINGTON

REVISION	DATE

DATE JOB NO. a20-112

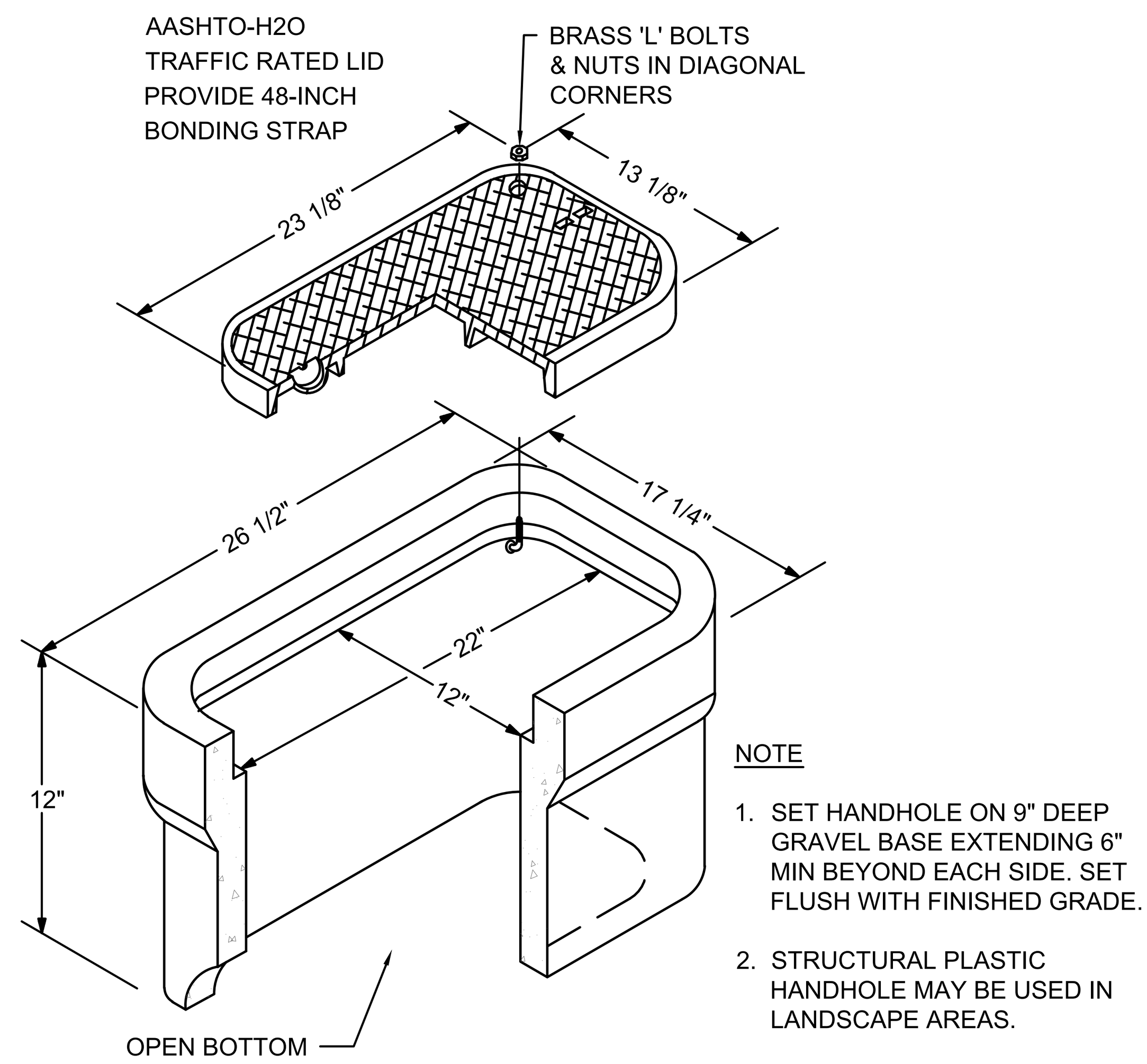
BID SET

DRAWING NO.
E601



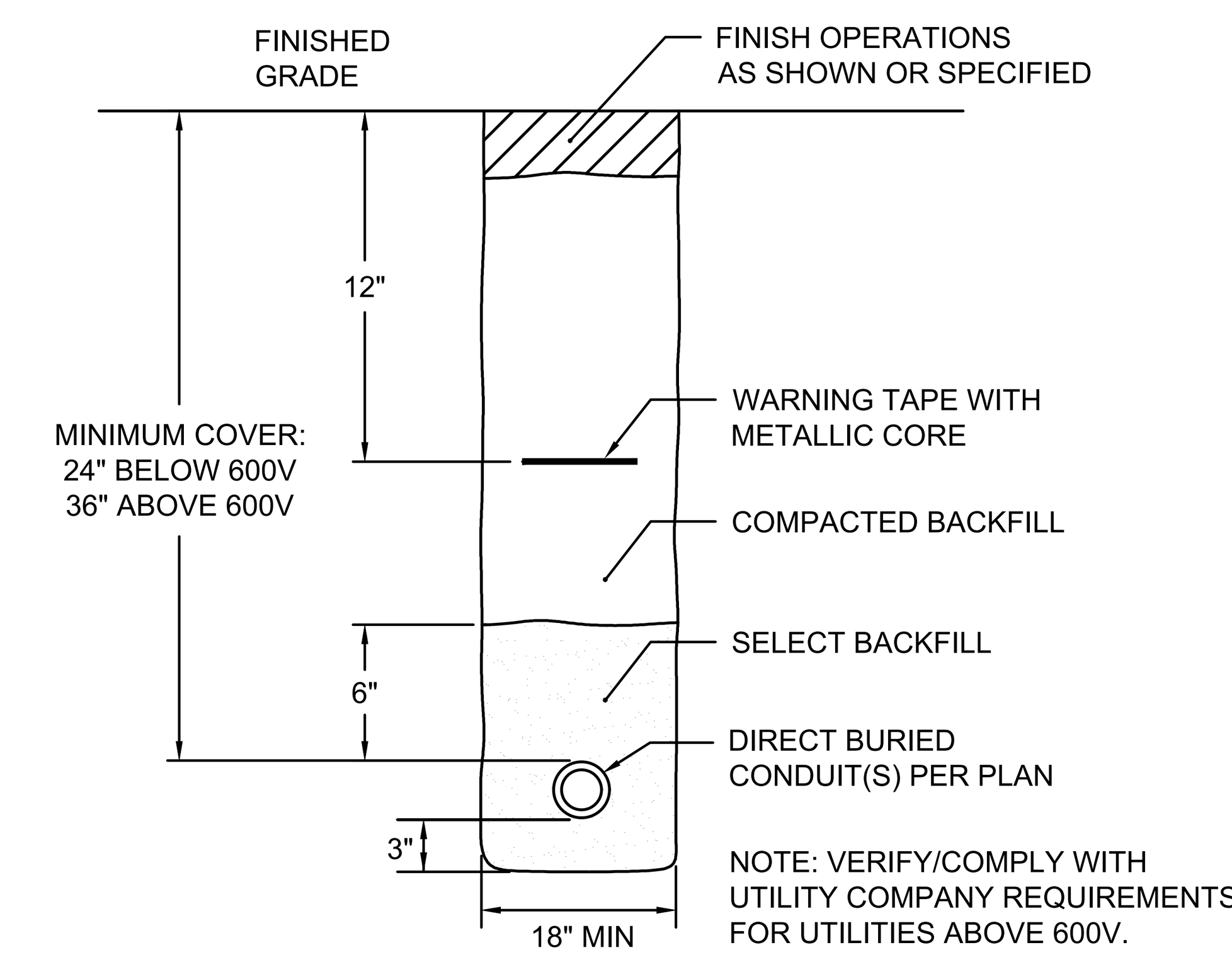
1 ELECTRIC HANDHOLE DETAIL

SCALE: N.T.S.



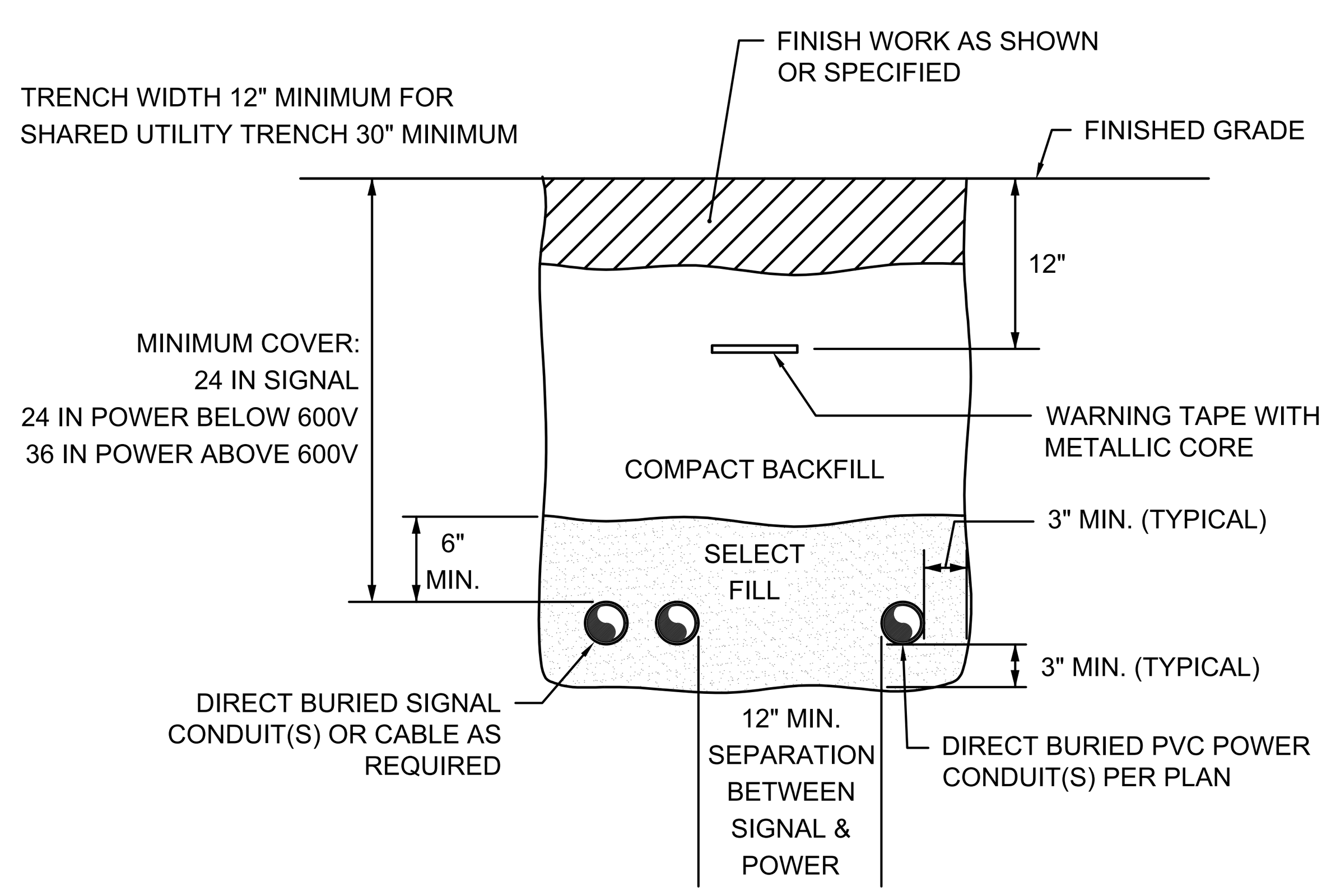
2 SITE LIGHTING HANDHOLE DETAIL

SCALE: N.T.S.



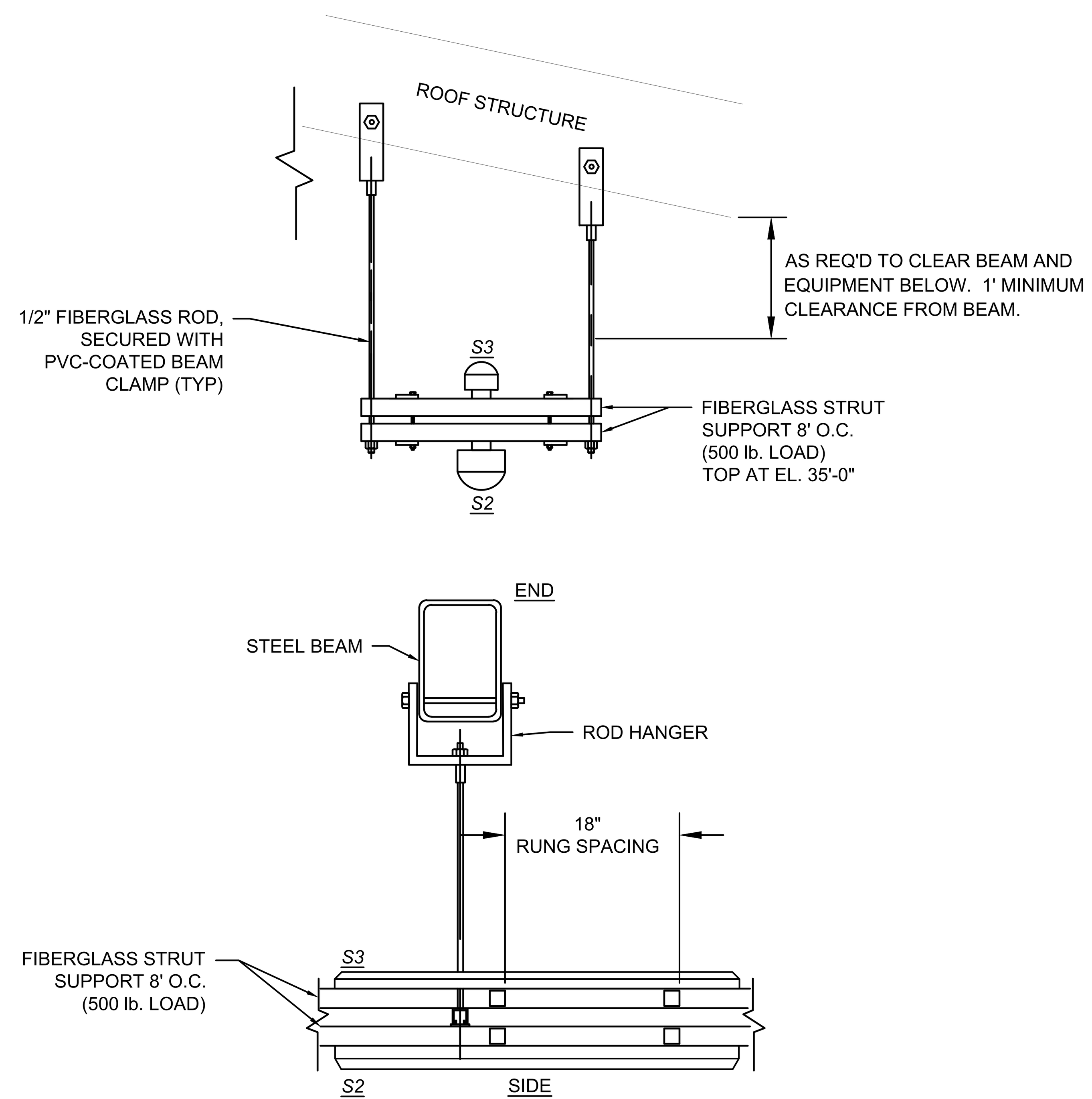
3 ELECTRIC UTILITY TRENCH SECTION

SCALE: N.T.S.



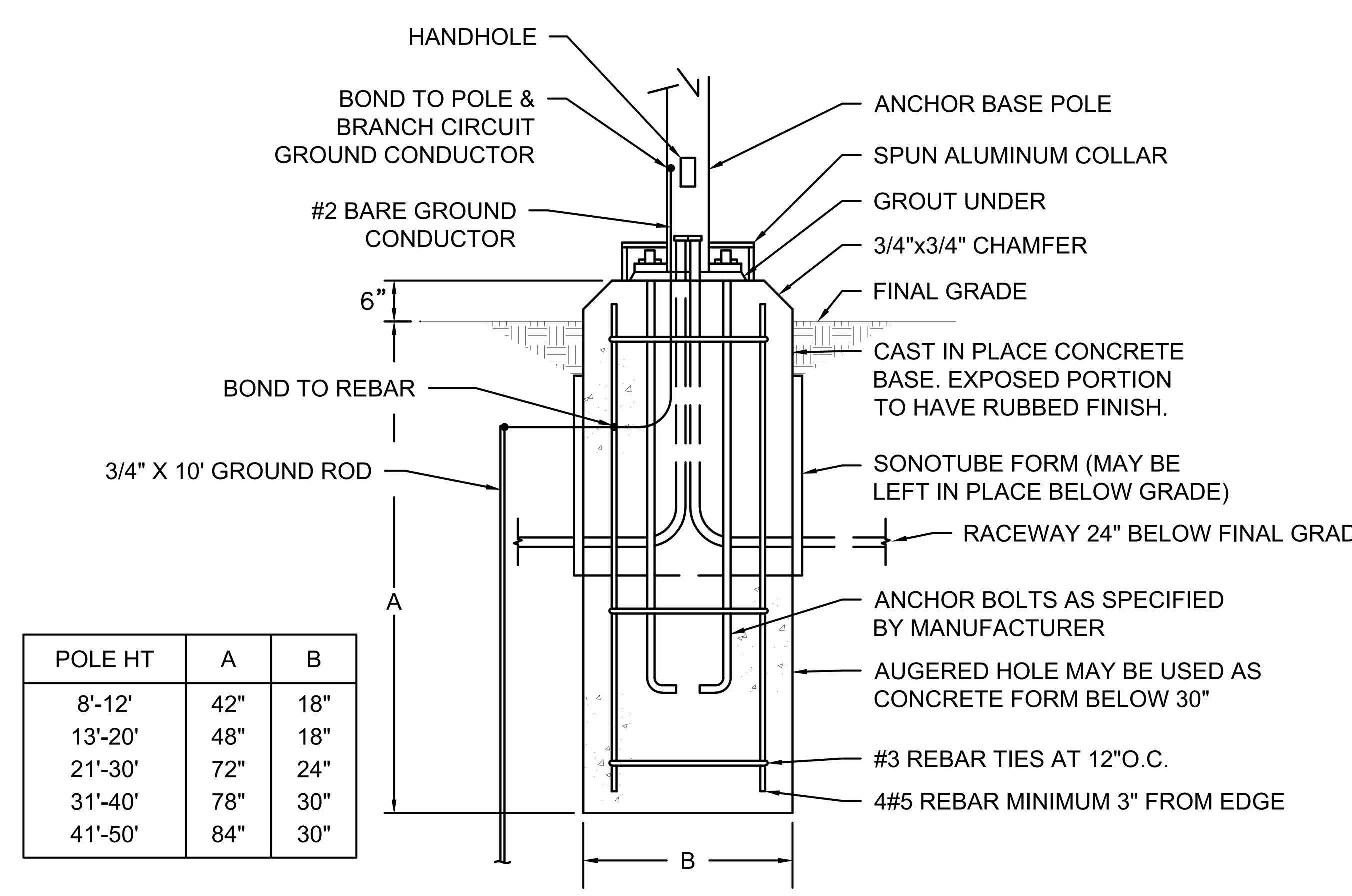
4 ELECTRIC UTILITY JOINT TRENCH SECTION

SCALE: N.T.S.



5 TYPICAL TRAPEZE ASSEMBLY

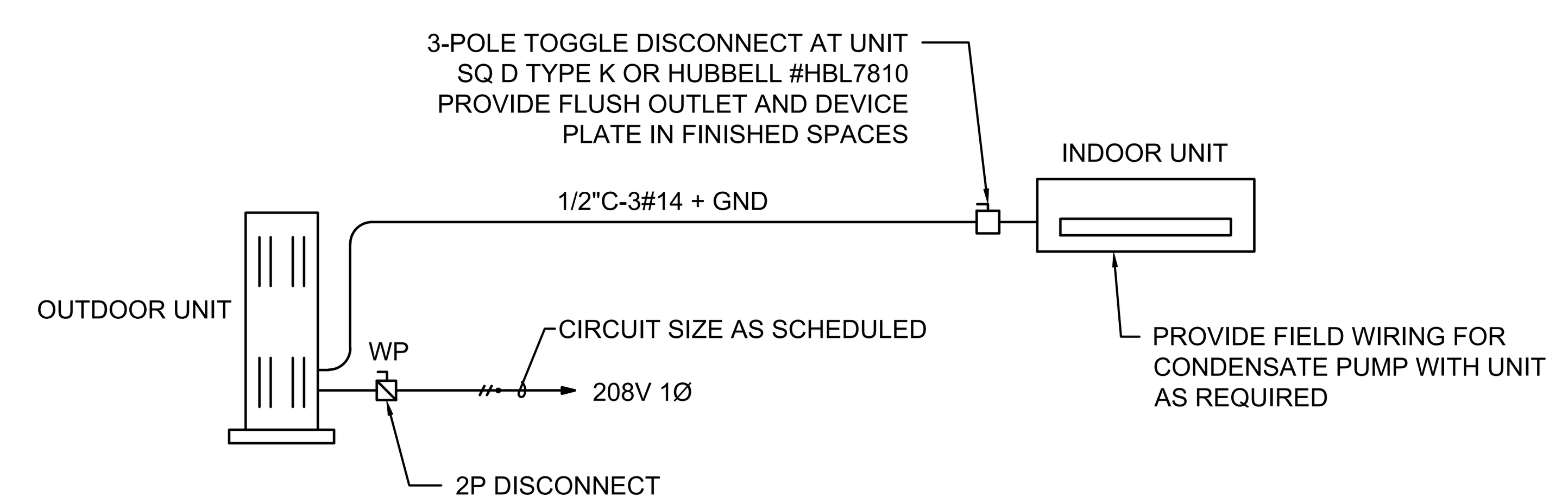
SCALE: N.T.S.



POLE HT	A	B
8'-12'	42"	18"
13'-20'	48"	18"
21'-30'	72"	24"
31'-40'	78"	30"
41'-50'	84"	30"

6 POLE BASE DETAIL

SCALE: N.T.S.



7 MITSUBISHI SPLIT SYSTEM HVAC CONNECTION DIAGRAM

BID SET

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SIGNED 4-11-2022

ELECTRICAL DETAILS

QUIL CEDA VILLAGE CAR WASH

TULALIP, WASHINGTON

REVISION	DATE

DATE

JOB NO. a20-112

E701

DRAWING NO.