SANTAQUIN PAD C

SANTAQUIN, UTAH

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

STATE OF UTAH
KRISTEN IRELAND VOROS
No. 7557079-0301
LICENSED ARCHITECT

RETAIL BLDG CODE ANALYSIS

APPLICABLE CODES			
	Year		Year
International Building Code	2018	National Electrical Code	2017
International Mechanical Code	2018	Uniform Code for	
International Plumbing Code	2018		
International Fire Code	2018	ADA Accessibility	
International Energy		Guildelines	ICC/ANSI A117.1
Conservation Code	2018		

OCCUPANCY TYPE IS NOT FINALIZED. ASSUME M, B, OR A-2. BUILDING WILL BE MIXED OCCUPANCY, NON-SEPARATED USES. PLANS FOR TENANT FINISH WILL BE SUBMITTED SEPARATELY

A. Occupancy and Group: M B A-2

Change in Use: Yes ____ No X Mixed Occupancy: Yes X No ____
Special Use and Occupancy (e.g. High Rise, Covered Mall): ____

B. Seismic Design Category: D Design Wind Speed: 115 mph

C. Type of Construction (circle one):

I A | I B | II A | II B | III A | III B | IV HT | V A | (V B)

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):
North: 0 South: 0 East: 0 West: 0

E. Mixed Occupancies: Yes Nonseparated Uses: Yes

F: Sprinklers:

Required: X Provided: X Type of Sprinkler System: Wet

G: Number of Stories: 1 Building Height: 21'-0"

H: Tabular Area:

MAIN LEVEL	SQ. FT.
FLOOR AREA	8,400 SF

OCCUPANT LOAD UNKNOWN UNTIL TENANT LEASING HAS BEEN FINALIZED. ALL LEASE SPACES WITH OCCUPANT LOADS OF 50 OR GREATER WILL BE PROVIDED WITH AT LEAST 2 EXITS.

I: Area Modifications per IBC 506:

$$a)\ A_a = A_t + \left[NS \times I_f \right] \qquad I_f = \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$$

ALLOWABLE AREA - IBC SECTION 506:

AREA MODIFICATIONS - IBC SECTION 506.2.1: Aa = 15,750 SF
Aa = {At + [NS x If] }
15,750 S.F. = {9,000 S.F. + [9,000 S.F. x 0.75] }

Where:
Aa = Allowable area (square feet).
At = Tabular allowable area factor - Table 506.2 (square feet).
NS = Tabular allowable area factor - Table 506.2 (square feet).
If = Area factor increase due to frontage - Section 506.3.3 (square feet).

AREA INCREASE DUE TO FRONTAGE - IBC SECTION 506.3: If = 0.75
If = [F/P - 0.25] W/30
0.75 = [380'/380' - 0.25] 30/30

Where:
If = Area increase factor due to frontage - Section 506.3 (square feet).
F = Building perimeter that fronts on a public way or open space having 20 feet open minimum width (feet).
P = Perimeter of entire building (feet).
W = Width of public way or open space (feet) in accordance with Section 506.3.

J. Design Occupant Load, Exit Width and Number of Exits:
OCCUPANT LOAD UNKNOWN UNTIL TENANT LEASING HAS BEEN FINALIZED. ALL LEASE SPACES WITH OCCUPANT LOADS OF 50 OR GREATER WILL BE PROVIDED WITH AT LEAST 2 EXITS.

M. Minimum Number of Required Plumbing Facilities:
UNKNOWN UNTIL TENANT LEASING HAS BEEN FINALIZED.

GENERAL NOTES

1. CONTRACTORS AND SUBCONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH ALL PORTIONS OF THE DRAWINGS, SPECIFICATIONS, ADDENDUM AND CHANGE ORDERS THAT PERTAIN TO THEIR WORK. THEY SHALL BE HELD RESPONSIBLE FOR ADHERING TO THOSE REQUIREMENTS AND SHALL NOT PREPARE ANY BID FROM PARTIAL SETS.
2. STUD BOTTOM TRACKS TO BE MECHANICALLY FASTENED TO THE SLAB OR SUB FLOORING AS OCCURS.
3. STUDS TO BE SHEATHED WITH ⅝" TYPE 'X' GYP. BOARD UNLESS OTHERWISE NOTED.
4. PROVIDE SEALANT AROUND ALL PERIMETER WALL PENETRATIONS.
5. ALL NUTS, BOLTS & MISCELLANEOUS METAL EXPOSED TO WEATHER SHALL BE GALVANIZED UNLESS OTHERWISE NOTED.
6. ALL WORK SHALL COMPLY STRICTLY WITH THE 2015 INTERNATIONAL BUILDING CODE, AND ALL LOCAL CODES AND ORDINANCES.
7. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS AND SHALL REPORT ANY INCONSISTENCIES TO THE ARCHITECT.
8. DRAWINGS ARE NOT TO BE SCALED, DIMENSIONAL DISCREPANCIES SHALL BE CLARIFIED WITH THE ARCHITECT.
9. ALL DIMENSIONS ARE TO FACE OF CONCRETE, MASONRY OR GYP. BD. UNLESS OTHERWISE NOTED.
10. PROTECT PORTIONS OF THE BUILDING ADJACENT TO OR AFFECTED BY CONSTRUCTION.
11. DO NOT CLOSE OR OBSTRUCT STREET, WALKS, DRIVES, PARKING OR OTHER OCCUPIED OR USED SPACES OR FACILITIES WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND AUTHORITIES HAVING JURISDICTION.
12. DO NOT INTERRUPT UTILITIES SERVING OCCUPIED OR USED FACILITIES WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND AUTHORITIES HAVING JURISDICTION.
13. CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIALS, FALSE WORK, TEMPORARY STRUCTURES INCLUDING FOUNDATIONS & DEBRIS OF EVERY NATURE RESULTING FROM HIS OPERATIONS, AND PUT THE SITE IN A NEAT, ORDERLY CONDITION.
14. CONTRACTOR SHALL VERIFY THE LOCATION AND SHALL PROVIDE AND PROTECT UTILITIES WITHIN THE WORK AREA, WHETHER OR NOT INDICATED IN THE DRAWINGS. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES IMMEDIATELY SHOULD SERVICES BE INTERRUPTED.
15. GENERAL CONTRACTOR TO FIELD VERIFY ALL CONDITIONS WHERE WORK IS BEING PERFORMED.
16. A SET OF AS-BUILT DRAWING PRINTS WILL REMAIN ON SITE DURING REMODEL.
17. AFTER PROJECT COMPLETION THE G.C. WILL DELIVER TO THE OWNER 30 DAYS AFTER COMPLETION TWO SETS OF NEW AS-BUILTS AND ALL NECESSARY CLOSE OUT DOCUMENTS.
18. FIRE EXTINGUISHERS ARE TO BE MAINTAINED IN ALL AREAS WHERE TORCHES ARE BEING USED.
19. ALL CONTRACTORS ARE TO SUPPLY THEIR OWN SAFETY EQUIP.
20. CONTRACTOR TO PROVIDE AND INSTALL FIRE EXTINGUISHERS PER THE DIRECTION OF THE AUTHORITY HAVING JURISDICTION PRIOR TO SUBSTANTIAL COMPLETION.
21. FLOOR CARPET SHALL BE TESTED IN ACCORDANCE WITH NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 253 AND BE A CLASS I (0.45 WATTS/CM) IN CORRIDORS, EXIT ENCLOSURES AND EXIT PASSAGEWAYS.
22. THERMAL AND SOUND INSULATION AND COVERING WHICH ARE INSTALLED IN CONCEALED AND EXPOSED SPACES AND AS COVERING OVER PIPE AND TUBING SHALL BE TESTED IN ACCORDANCE WITH AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) E 84 AND HAVE A FLAME SPREAD OF 0-25 AND A SMOKE INDEX OF 0-450.
23. THERMAL AND SOUND INSULATION AND COVERING OVER PIPE AND TUBING WHICH ARE INSTALLED IN CONCEALED PLENUM SPACES SHALL BE TESTED IN ACCORDANCE WITH AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) E 84 AND HAVE A FLAME SPREAD OF 0-25 AND A SMOKE INDEX OF 0-50.
24. INTERIOR WALL FINISHES WHICH ARE TEXTILES AND CEILING TILE SHALL BE TESTED IN ACCORDANCE WITH AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) E 84 AND HAVE A FLAME SPREAD OF 0-25 AND A SMOKE INDEX OF 0-450
25. SMOKE DAMPERS SHALL BE LISTED UL555S AND BE CONTROLLED BY AUTOMATIC SMOKE DETECTION EITHER IN THE DUCT OR AREA OF SMOKE SEPARATION.
26. PENETRATIONS OF SMOKE BARRIERS AND PARTITIONS SHALL BE PROVIDED WITH AN APPROVED FIRE/SMOKE STOP SYSTEM OF A MINIMUM OF 1 HOUR FIRE RATED MATERIALS WHICH HAVE BEEN TESTED BY ASTM E 814.
27. FIRE STOPPING MATERIALS FOR NON-FERROUS PIPE, CONDUIT AND OTHER SYNTHETIC MATERIALS SHALL BE COMPATIBLE WITH EACH.
28. ENVIRONMENTAL AIR DUCTS THAT PENETRATE FIRE RATED ASSEMBLIES SHALL BE PROVIDED WITH UL 555 LABELED FIRE DAMPERS THAT HAVE A FIRE RATING OF AT LEAST 75% OF THE ASSEMBLY BEING PENETRATED. ALL SYSTEMS SHALL COMPLY WITH IFC 907.2.13.1.2. AND 907.4.1 AS APPROPRIATE.
29. ALL FIRE RATED ASSEMBLIES SHALL BE TESTED IN ACCORDANCE WITH AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) E 119 OR EQUIVALENT.
30. CONTRACTOR TO ENGINEER ALL STUD CONNECTIONS, TYP.

DEFERRED SUBMITTALS

FIRE ALARM SYSTEM:
THE GENERAL CONTRACTOR IS TO PROVIDE A SET OF FIRE ALARM DRAWINGS PRIOR TO THE INSTALLATION OF ANY FIRE ALARM COMPONENTS.

FIRE SPRINKLER SYSTEM:
THE GENERAL CONTRACTOR IS TO PROVIDE A SET OF FIRE SPRINKLER PLANS INCLUDING THE MAIN SIZE AND PRESSURE, HYDRAULIC CALCULATIONS, ETC. PRIOR TO THE INSTALLATION OF ANY FIRE PROTECTION COMPONENTS.

NOTE:
ADDITIONAL DEFERRED SUBMITTALS SHALL BE SUBMITTED AS INDICATED IN THE CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL AND ELECTRICAL DOCUMENTS.

DRAWING INDEX

GENERAL ABBREVIATIONS

Act.	Accoustic Ceiling Tile	Galv	Galvanized	Q.T.	Quarry Tile
Alt.	Alternate	G.I.	Galvanized Iron	Rad.	Radius
Alum.	Aluminum	Ga.	Gauge	R.B.	Rubber Base
A.B.	Anchor Bolt	Gl.	Glass	R.W.L.	Rain Water Leader
&	And	Gr.	Grade	R.F.F.	Reference Finish Floor
Arch.	Architectural	Gnd.	Ground	Refl.	Reflected
@	At or At The	Gyp.	Gypsum Board	Reinf.	Reinforcing
Bm.	Beam	Bd.	Gypsum Waterproof Board	Req.	Required
Blk.	Block	G.W.P.E.	High Density Polyethylene	Ret.	Retaining
Blkg.	Blocking	H.C.#	Hardware Group #	Rev.	Revised
Bd.	Board	Hdwd.	Hardwood	R.	Riser
Bot.	Bottom	Ht.	Height	R.D.	Roof Drain
Bldg.	Building	H.P.	High Point	Rm.	Room
Cpt.	Carpet	Horiz.	Horizontal	R.O.	Rough Opening
Clkg.	Caulking	H.B.	Hose Bibb	Sched.	Schedule
C.I.	Cast Iron	H.M.	Hollow Metal	Seal.	Sealant
Clg.	Ceiling	Hr.	Hours (Fire Rating)	Sect.	Section
Cem.	Cement	In.	Inch	S.Sk.	Service Sink
Ctr.	Center	I.D.	Inside Diameter	Sht.	Sheet
C.	Center Line	Insul.	Insulation	Sim.	Similar
Cer.	Ceramic	Int.	Interior	Sl./Slp.	Slope
C.T.	Ceramic Tile	I.E.	Invert Elevation	S.C.	Solid Core
Clr.	Clear (ance)	Inv.	Invert Elevation	Spec.	Specifications
Clo.	Closet	Jan.	Janitor	Sq.	Square
Col.	Column	Jt.	Joint	Std.	Standard
Conc.	Concrete	J-Box	Junction Box	Stl.	Steel
CMU	Concrete Masonry Unit	Kit.	Kitchen	Stor.	Storage
CMP	Corrugated Metal Pipe	Lam.	Laminate	Struct	Structural/Structure
Conn.	Connection	Lav.	Lavatory	Sym.	Symmetrical
Constr.	Construction	Lt.	Light	T.B.R.	To be Removed
Cont.	Continue/Continuous	L.P.	Low Point	Tel.	Telephone
Contr.	Contractor	Matl.	Material	Temp.	Temporary/Tempered
C.J.	Control Joint	Mas.	Masonry	Thk.	Thick (ness)
Corr.	Corridor	Maint.	Maintenance	T & G	Tongue and Groove
Cntr.	Counter	Mfr.	Manufacturer	T/Conc	Top of Concrete
Ctsk.	Countersunk	M.H.	Manhole	T/Curb	Top of Curb
Det.	Detail	M.O.	Masonry Opening	T.O. FTG.	Top of Footing
Dept.	Department	Max.	Maximum	T.O.P.	Top of Plate
Dia.	Diameter	Mech.	Mechanical	T/Wall	Top of Wall
Dim.	Dimension	Memb.	Membrane	T.	Tread
Dn.	Down	Men	Men's Toilet	Typ.	Typical
D.S.	Downspout	Mtl./Met.	Metal	Unf.	Unfinished
Dwg.	Drawing	Min.	Minimum	U.N.O.	Unless Noted Otherwise
D.F.	Drinking Fountain	Mir.	Mirror	Var.	Vary or Varies
E.	East	Misc.	Miscellaneous	Vert.	Vertical
Ea.	Each	Mtd.	Mounted	V.T.R.	Vent Through Roof
Elec.	Electric (al)	Mul.	Mullion	VCT	Vinyl Composition Tile
Elev./El.	Elevation	Nom.	Nominal	w/	With
Exist.	Existing	N.	North	W.A.S.	Welded Anchor Stud
Eq.	Equal	N.I.C.	Not In Contract	Wd.	Wood
Equip.	Equipment	N.T.S.	Not To Scale	Wp.	Waterproof
Exist.	Existing	No. or #	Number	Wsct.	Wainscot
Exp.	Expansion	Off.	Office	w/o	Without
Ext.	Exterior	O.C.	On Center	W.P.	Working Point
Fin.	Finish	Opng.	Opening	W.R.	Water Resistant
F.A.	Fire Alarm	Opp.	Opposite	Wi.	Wrought Iron
F.E.	Fire Extinguiser	Opp. H.	Opposite Hand		
F.E.C.	F.E. Cabinet	O.D.	Outside Diameter		
Flr./Fl.	Floor	O.R.D.	Overflow Roof Drain		
F.D.	Floor Drain				
F.O.S.	Face of Stud				
F.O.W.	Face of Wall				
Ftg.	Footing				
Fdn.	Foundation				
F.F.	Finish Floor				

MATERIALS LEGEND

EARTH
SAND
CONCRETE W/ ARCH. FINISH
CMU
BRICK
LIMESTONE
WOOD (BLOCKING)
WOOD FRAMING
STEEL
RIGID INSULATION
PLASTER
COMPRESSIBLE FILLER
METAL LATH
FENCE
GRAVEL
CONCRETE
CAST STONE
MARBLE
GRANITE
STONE
PLYWOOD
WOOD FINISH
ALUMINUM
BATT INSULATION
ACOUSTICAL TILE
BACKER ROD AND FILLER
GYPSUM BOARD
TO REMOVE

PROJECT DIRECTORY

ARCHITECT
Design Sequence
801.596.0691

MECHANICAL ENGINEER
PVE Engineers
801.359.3158

STRUCTURAL ENGINEER
ARW Engineers
801.782.6008

ELECTRICAL ENGINEER
Van Boreum & Frank
801.530.3148

GRAPHIC SYMBOLS

BLDG. ELEV. SYMB. (DTL# / SHT#)
WALL SECT. SYMB. (DTL# / SHT#)
KEYED NOTE SYMB. (#)
ELEVATION SYMB. (T.O. ELEV.)
WALL TYPE SYMB. (E)
RM. NAME / RM. # — RM. NAME/NUMB
DETAIL REF. SYMB. (DTL# / SHT#)
INTR. ELEV. SYMB. (DTL# / SHT#)
DOOR/HDWR. SYMB. (DR. #)
WINDOW SYMB. (#)

RETAIL BUILDING
SANTAQUIN PAD C

SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE: SEPTEMBER 11, 2020
AGENCY PROJECT NO:
DESIGN SEQUENCE PROJECT NO: 2010.01
CAD DWG FILE NO:
DRAWN BY: KV
DESIGNED BY: KV
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET

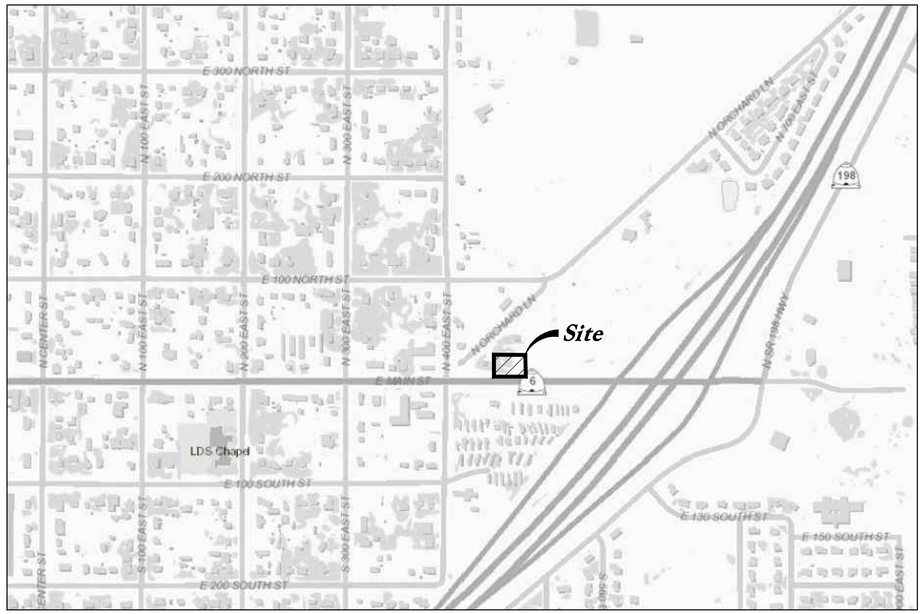
SHEET TITLE

INDEX, CODE ANALYSIS, GENERAL NOTES

A0.0

Ridley's Santaquin - Retail C

400 East Main Street
Santaquin, UT, 84655



Abbreviations

BCR	Begin Curb Return	PT	Point of Tangency
BOL	Bollard	PVC	Polyvinyl Chloride
BRW	Finish Grade – Bottom of Retaining Wall	PVI	Point of Vertical Intersection
CATV	Cable Television Box	RCP	Reinforced Concrete Pipe
CB	Catch Basin	RD	Roof Drain
CMP	Corrugated Metal Pipe	SB	Signal Box
COB	Cleanout Box	SD	Storm Drain
COTG	Cleanout to Grade	SDMH	Storm Drain Manhole
EA	Edge of Asphalt	SMH	Sewer Manhole
EB	Electrical Box	SP	Signal Pole
EC	End of Curve	SS	Sanitary Sewer
ECR	End Curb Return	SVZ	Sight Visibility Zone
GB	Grade Break	SW	Secondary Water
GM	Gas Meter	TA	Top of Asphalt
HB	Hose Bib	TB	Telephone Box
HP	High Point	TBC	Top Back of Curb
I	Irrigation Line	TG	Top of Grade
ICB	Irrigation Control Box	TMH	Telephone Manhole
Lip	Lip of Gutter	TP	Top of Concrete
LP	Light Pole	TRW	Finish Grade – Top of Retaining Wall
MH	Manhole	TW	Top of Walk
Mon	Monument	VC	Vertical Curve
PC	Point of Curvature	VPC	Vertical Point of Curve
PCC	Point of Compound Curvature	VPT	Vertical Point of Tangency
PI	Point of Intersection	WL	Waterline
PM	Power Meter	WP	Working Point
PP	Power Pole	WV	Water Valve

Legend

Proposed Curb & Gutter		Existing Improvements	
Proposed Open Face C & G		Existing Asphalt	
Proposed Asphalt		Existing Concrete	
Proposed Concrete		Existing Inlet Box	
Proposed Truncated Domes		Existing Catch Basin	
Proposed Inlet Box		Existing Manhole	
Proposed Catch Basin		Existing Fire Hydrant	FH
Proposed Manhole		Existing Water Valve	WV
Proposed Transformer	T	Existing Overhead Power Line	OHP
Proposed Meter Box		Existing Water	W
Proposed Water Meter		Existing Secondary Water	SW
Proposed Combo Box	CB	Existing Sewer	S
Proposed Fire Hydrant		Existing Storm Drain	SD
Proposed Water Valve		Existing Gas	G
Proposed Water Line	W	Existing Power	P
Proposed Sanitary Sewer	S	Existing Telephone	T
Proposed Storm Drain		Existing Fence	X
Proposed Conduit Line	C	Flowline	
Proposed Power Line	P	Centerline	
Proposed Gas Line	G	Existing Contour	78
Proposed Fire Line	F	Existing Spot	+(78.00TA)
Proposed Secondary Water Line	SW	Existing Light Pole	
Proposed Roof Drain	RD	Existing Street Light	
Proposed Fence	X	Existing Building	
Ridge line	R	Existing Telephone Box	TB
Grade Break	GB	Existing Power Meter	PM
Proposed Contour	78	Existing Electrical Box	EB
Direction of Drainage		Existing Electrical Cabinet	ECAB
Proposed Spot	• 78.00TA	Existing Gas Meter	GM
ADA Accessible Route		Existing Water Meter	WM
Property Line		Existing Irrig. Control Box	ICB
Sawcut Line		Existing Bollard	BOL
Proposed Light Pole		Existing Hose Bib	HB
Proposed Street Light		Working Point	
Proposed Building		Existing Deciduous Tree	
Existing Power Pole		Existing Coniferous Tree	
Existing Power Pole w/ Guy			
Existing Utility Marker		Detail Number	XX
Existing Post		Sheet Number	XX

Santaquin City Notes

It is important for the developer and the general contractor to understand that it is his/her responsibility to ensure that all improvements installed within this development are constructed in full compliance with all state and Santaquin City codes, ordinances and standards. This fact does not relieve the developer or general contractor from full compliance with all minimum state and Santaquin City standards.

Santaquin City Note to Developers & General Contractors

All recommendations made in the provided geotechnical report/study shall be followed explicitly during construction of building and site improvements.

Civil Sheet Index

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20-112 CV

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 – AWengineering.net

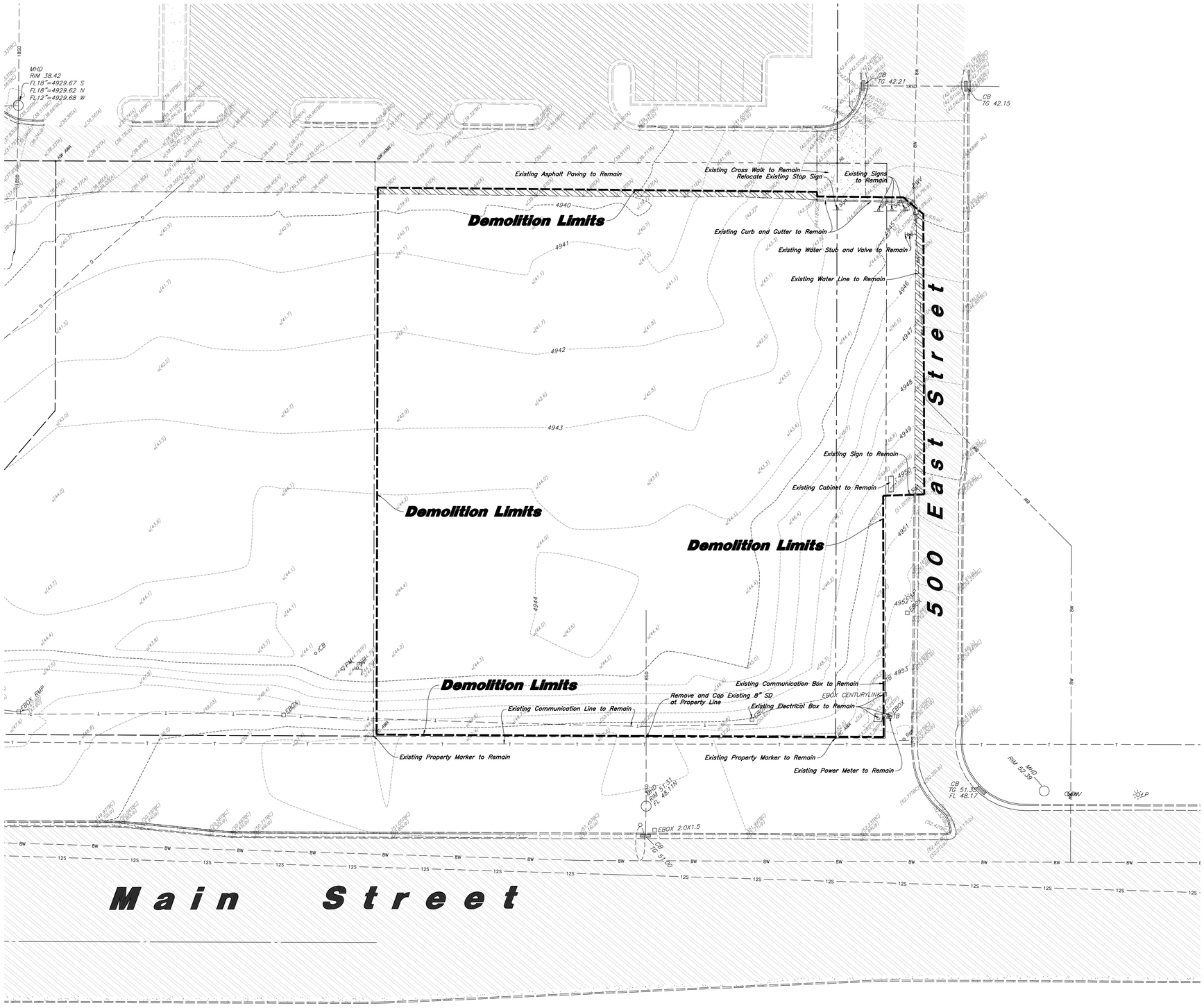
Cover Sheet

Ridley's Santaquin - Retail C
400 East and Main Street
Santaquin, UT

PROFESSIONAL ENGINEER
No. 7819289
SHAUN H YOUNG
9/11/20
STATE OF UTAH

11 Sep, 2020

SHEET NO.
CV



Scale: 1" = 20'

20' 0 20' 40'

General Demolition Notes:

1. Demolition and site clearing for this contract are to include all areas shown within demolition limits or by note.
2. Refer to site improvement plans for more details on limits of removal.
3. All curbs, gutters, walks, slabs, walls, fences, flatwork, asphalt, waterlines and meters, gas lines, sewer lines, light poles, buried cables, storm drain piping and structures to be cleared from site unless otherwise shown.
4. All utilities, sewer, water, gas, telephone and electrical services to be disconnected and capped according to city, county and utility company requirements, unless otherwise shown.
5. Excavated areas to be backfilled with clean granular material compacted to 95% of maximum lab density as determined by ASTM D 1557-78. (Test results to be given to owner) Excavated areas should be backfilled per the geotechnical report prepared for the project.
6. Clear and grub trees, shrubs, and vegetation within construction limits, disposal to be off-site except where noted otherwise.
7. DO NOT interrupt any services or disrupt the operation of any businesses shown outside the demolition limits.
8. Remove debris, rubbish, and other materials resulting from the demolition and site clearing operations from the site and dispose of in a legal manner.
9. The location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied upon as being exact or complete. Contractor shall contact authorities having jurisdiction for field locations. Contractor shall be responsible for protection of in place and relocated utilities during construction.
10. Stockpiles shall be graded to maintain slopes not greater than 3 horizontal to 1 vertical. Provide erosion control as needed to prevent sediment transport to adjacent drainage ways.
11. Contractor shall be responsible for disposal of all waste material. Disposal shall be at an approved site for such material. Burning onsite is not permitted.
12. Contractor shall verify with city any street removal, curb cuts, and any restoration required for utility line removal.
13. Install traffic warning devices as needed in accordance with local standards.
14. Contractor shall obtain all permits necessary for demolition from City, County, State or Federal Agencies as required.
15. If Contractor observes evidence of hazardous materials or contaminated soils he shall immediately contact the project engineer to provide notification and obtain direction before proceeding with disturbance of said materials or contaminated soil.
16. Limits of demolition/disturbed areas shown on the plans may not be an exact depiction. It is the contractor's responsibility to determine the means and methods of how the work will be completed. The contractor shall determine the area of construction impact. The contractor is responsible to restore all impacted areas and all restoration shall be part of the contract bid.

CAUTION :

The location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete.

Know what's below. Call 811 before you dig.
BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC.
www.bluestakes.org
1-800-662-4111

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets
20-112 DM

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWengineering.net

Demolition Plan

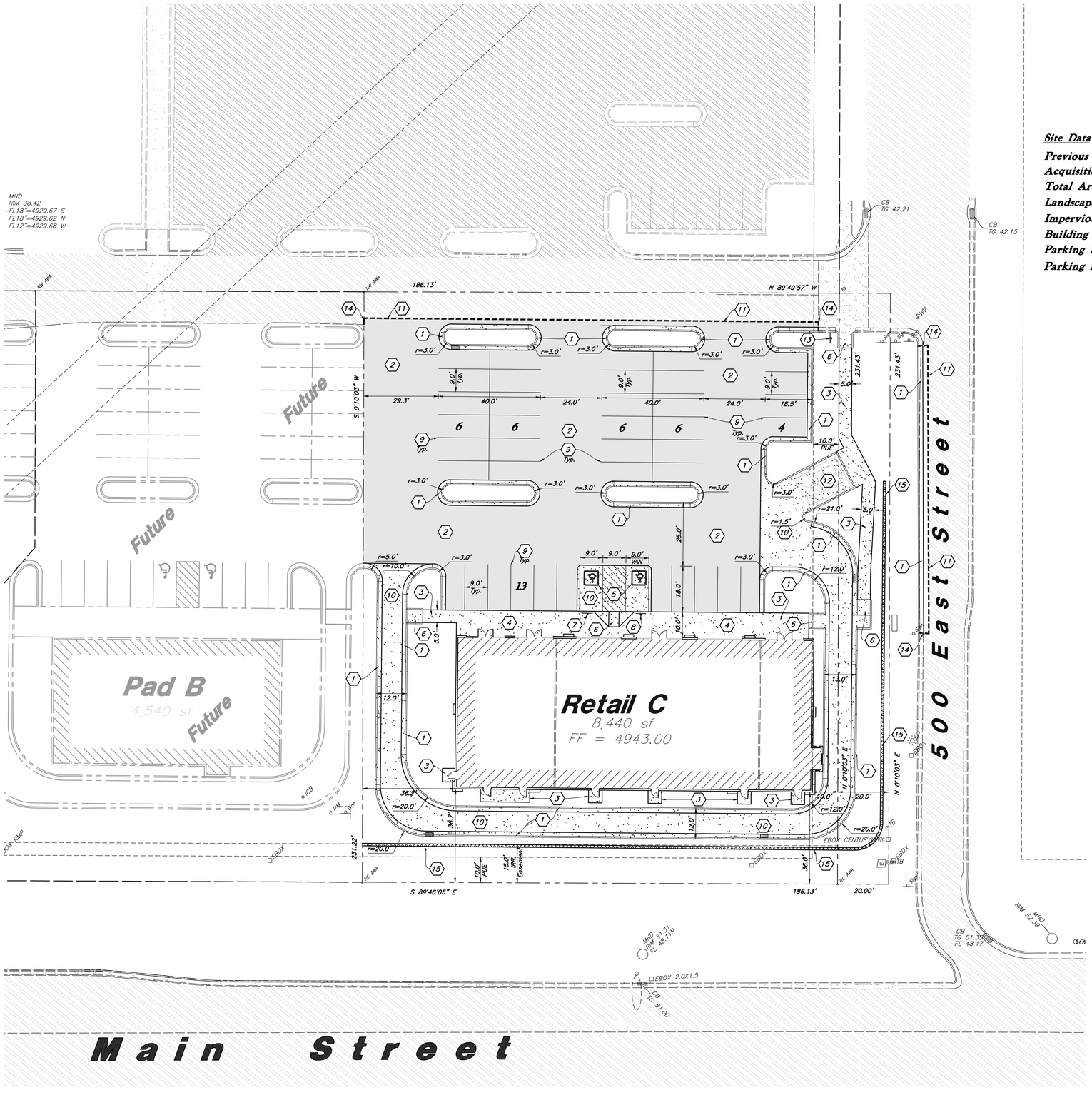
Ridley's Santaquin - Retail C

400 East and Main Street
Santaquin, UT

REGISTERED PROFESSIONAL ENGINEER
No. 7819289
SHAUN H YOUNG
9/11/20
STATE OF UTAH

11 Sep, 2020

SHEET NO.
C0.1



Scale: 1" = 20'

20' 0 20' 40'

Site Data

Previous Property Area = 43,056 s.f.
Acquisition Area = 4,629 s.f.
Total Area = 47,685 s.f. (1.09 ac.)
Landscape Area Provided = 11,234 s.f. (23.6%)
Impervious Area Provided = 28,011 s.f. (58.7%)
Building Area = 8,440 s.f (17.7%)
Parking Required = 1/200 s.f. = 43 stalls
Parking Provided = 41 stalls (4.9/1,000)

Site Construction Notes

1. Const. 24" Curb & Gutter (1 C4.1)
2. Const. Asphalt Paving (2 C4.1)
3. Const. Conc. Sidewalk (3 C4.1)
4. Const. Thickened Edge Sidewalk (4 C4.1)
5. Const. Accessible Striping per MUTCD & ICC/ANSI A117.1 (Latest Edition) (See Accessible Details and Notes) (11 C4.2)
6. Const. Accessible Ramp per ICC/ANSI A117.1 (Latest Edition) (See Accessible Details and Notes)
7. Const. Accessible Sign per MUTCD & ICC/ANSI A117.1 (Latest Edition) (See Accessible Details and Notes) (13 C4.2)
8. Const. Accessible VAN Sign per MUTCD & ICC/ANSI A117.1 (Latest Edition) (See Accessible Details and Notes) (13 C4.2)
9. Const. 4" White Paint Stripe (Typ.) Contractor shall provide 15 mils min. thickness
10. Const. Conc. Paving (5 C4.1)
11. Sawcut; Provide Smooth Clean Edge
12. Dumpster Enclosure (See Arch. Plans)
13. Relocated Stop Sign
14. Conn. & Match Existing Improvements
15. Const. Modular Block Retaining Wall (Wall Design By Others)

General Site Notes:

1. All dimensions are to back of curb unless otherwise noted.
2. Fire lane markings and signs to be installed as directed by the Fire Marshal.
3. Aisle markings, directional arrows and stop bars will be painted at each driveway as shown on the plans.
4. Const. curb transition at all points where curb abuts sidewalk, see detail.
5. Contractor shall place asphalt paving in the direction of vehicle travel where possible.
6. Limits of demolition/disturbed areas shown on the plans may not be an exact depiction. It is the contractor's responsibility to determine the means and methods of how the work will be completed. The contractor shall determine the area of construction impact. The contractor is responsible to restore all impacted areas and all restoration shall be part of the contract bid.

Construction Survey Note:

The Construction Survey Layout for this project will be provided by Anderson Wahlen & Associates. The Layout Proposal and Professional Services Agreement will be provided to the General Contractor(s) for inclusion in base bids. The Survey Layout proposal has been broken out into Building Costs and Site Costs for use in the Site Work Bid Form.

Survey Control Note:

The contractor or surveyor shall be responsible for following the National Society of Professional Surveyors (NSPS) model standards for any surveying or construction layout to be completed using Anderson Wahlen and Associates ALTA Surveys or Anderson Wahlen and Associates construction improvement plans. Prior to proceeding with construction staking, the surveyor shall be responsible for verifying horizontal control from the survey monuments and for verifying any additional control points shown on an ALTA survey, improvement plan, or on electronic data provided by Anderson Wahlen and Associates. The surveyor shall also use the benchmarks as shown on the plan, and verify them against no less than three existing hard improvement elevations included on these plans or on electronic data provided by Anderson Wahlen and Associates. If any discrepancies are encountered, the surveyor shall immediately notify the engineer and resolve the discrepancies before proceeding with any construction staking.

PRIVATE ENGINEER'S NOTICE TO CONTRACTORS

The Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify, and hold the owner and the engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20-112 SP

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 – AWEngineering.net

Site Plan

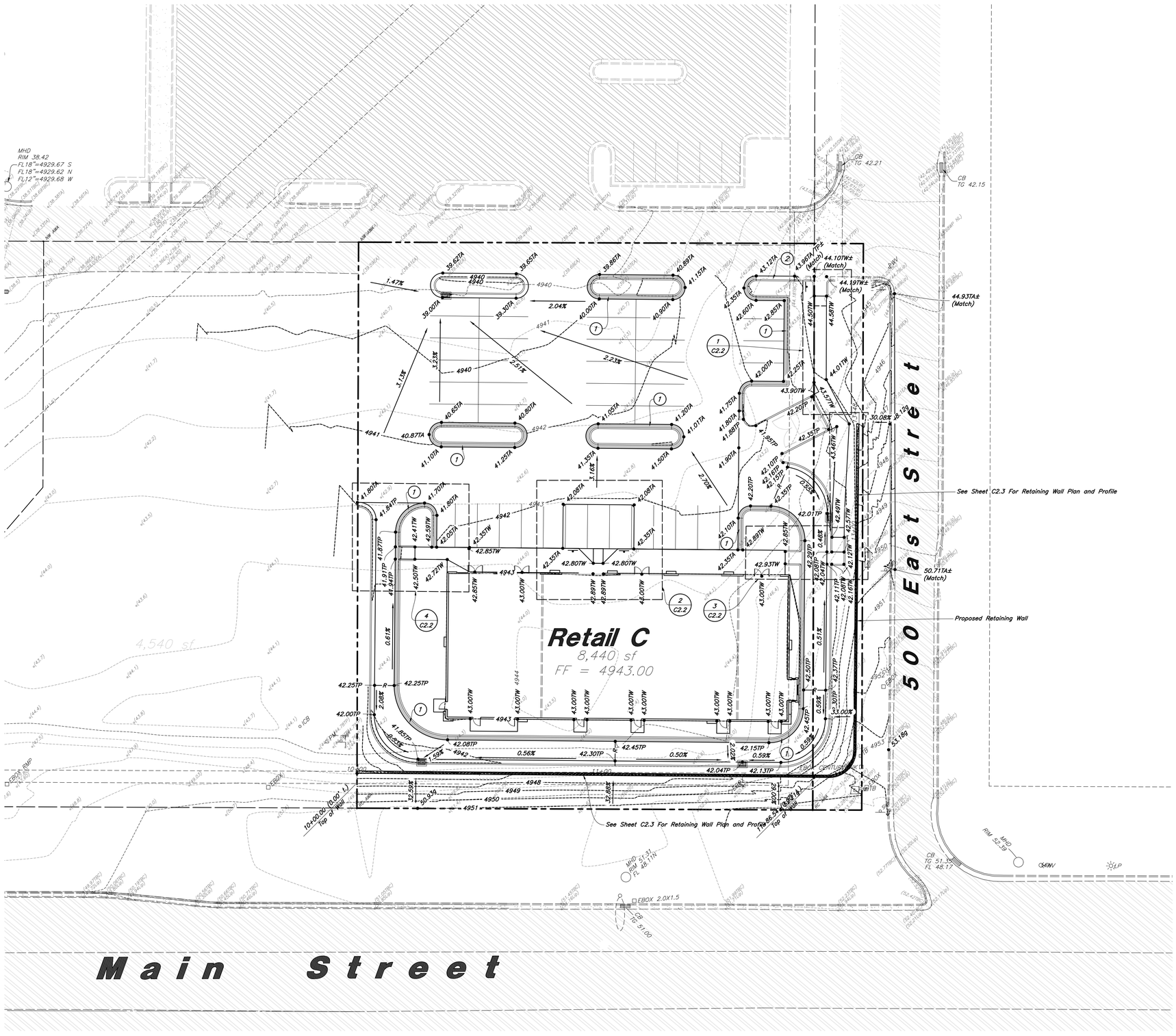
Ridley's Santaquin - Retail C

400 East and Main Street
Santaquin, UT

PROFESSIONAL ENGINEER
No. 7815089
SHAUN H. YOUNG
9/11/20
STATE OF UTAH

11 Sep, 2020

SHEET NO.
C1.1



General Grading Notes:

1. All grading shall be in accordance with the project geotechnical study.
2. Cut slopes shall be no steeper than 3 horizontal to 1 vertical.
3. Fill slopes shall be no steeper than 3 horizontal to 1 vertical.
4. Fills shall be compacted per the recommendations of the geotechnical report prepared for the project and shall be certified by a Geotechnical Engineer.
5. Areas to receive fill shall be properly prepared and approved by a Geotechnical Engineer prior to placing fill.
6. Fills shall be benched into competent material as per specifications and geotechnical report.
7. All trench backfill shall be tested and certified by a Geotechnical Engineer.
8. A geotechnical engineer shall perform periodic inspections and submit a complete report and map upon completion of the rough grading.
9. The final compaction report and certification from a Geotechnical Engineer shall contain the type of field testing performed. Each test shall be identified with the method of obtaining the in-place density, whether sand cone or drive ring and shall be so noted for each test. Sufficient maximum density determinations shall be performed to verify the accuracy of the maximum density curves used by the field technician.
10. Dust shall be controlled by watering.
11. The location and protection of all utilities is the responsibility of the permitee.
12. Approved protective measures and temporary drainage provisions must be used to protect adjoining properties during the grading process.
13. All public roadways must be cleared daily of all dirt, mud and debris deposited on them as a result of the grading operation. Cleaning is to be done to the satisfaction of the City Engineer.
14. The site shall be cleared and grubbed of all vegetation and deleterious matter prior to grading.
15. The contractor shall provide shoring in accordance with OSHA requirements for trench walls.
16. Aggregate base shall be compacted per the geotechnical report prepared for the project.
17. The recommendations in the following Geotechnical Engineering Report by GSH Geotechnical, Inc. are included in the requirements of grading and site Preparation. The Report is titled "Geotechnical Study Proposed Ridley's Family Market Development Northeast Corner of the Intersection of Main Street and 400 East Street Santaquin, Utah"

    Project No.: 2588-001-18
    Dated: April 26, 2018

18. As part of the construction documents, owner has provided contractor with a topographic survey performed by manual or aerial means. Such survey was prepared for project design purposes and is provided to the contractor as a courtesy. It is expressly understood that such survey may not accurately reflect existing topographic conditions.
19. If Contractor observes evidence of hazardous materials or contaminated soils he shall immediately contact the project engineer to provide notification and obtain direction before proceeding with disturbance of said materials or contaminated soil.

Curb and Gutter Construction Notes:

1. Open face gutter shall be constructed where drainage is directed away from curb.
(1) 2. Open face gutter locations are indicated by shading and notes on the grading plan.
3. It is the responsibility of the surveyor to adjust top of asphalt grades to top of curb grades at the time of construction staking.
4. Refer to the typical details for standard and open face curb and gutter dimensions.
(2) 5. Transitions from open face to standard curb and gutter are to be smooth. Hand form these areas if necessary.
6. Spot elevations are shown on this plan with text masking. Coordinate and verify site information with project drawings.

Sidewalk Construction Notes:

1. Concrete sidewalk shall be constructed with a cross slope of 1.5% (2.08% Maximum) unless shown otherwise on plan.
2. Running slope of sidewalks shall be built per grades shown on the plan. where grades are not provided, sidewalks shall be constructed with a maximum running slope of 4.5%
3. Refer to the Site Plan for sidewalk dimensions.

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20-112 GR

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWengineering.net

Grading Plan

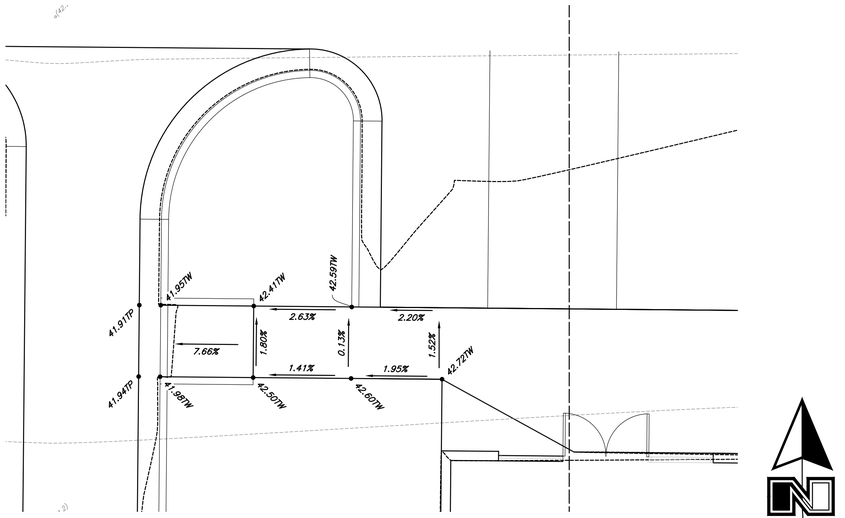
Ridley's Santaquin - Retail C

400 East and Main Street
Santaquin, UT

LICENSED PROFESSIONAL ENGINEER
No. 7819289
SHAUN T. YOUNG
9/11/20
STATE OF UTAH

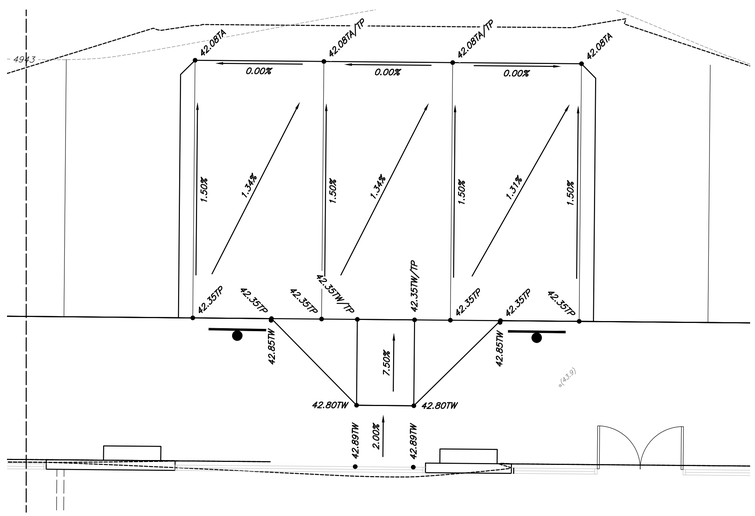
11 Sep, 2020

SHEET NO.
C2.1



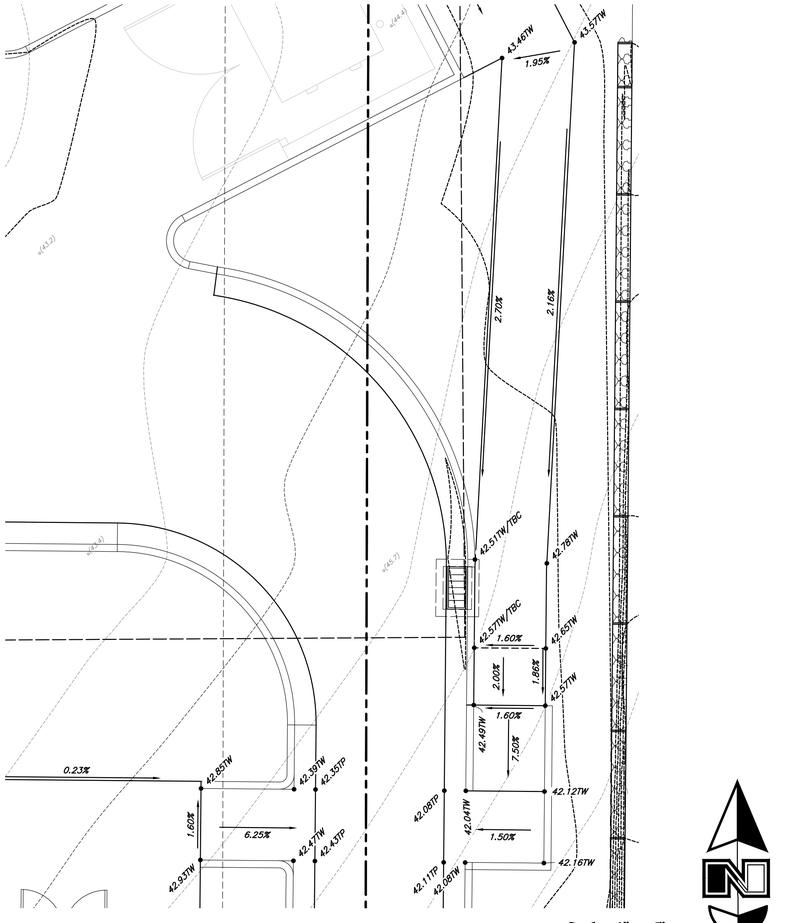
4 **West ADA Ramp**

Scale: 1" = 5'



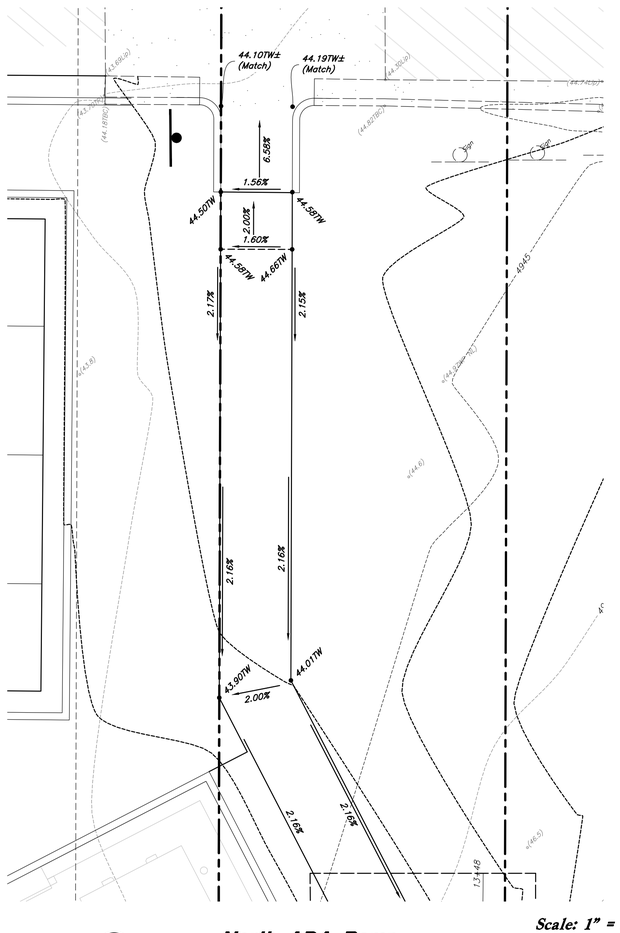
2 **ADA Parking Stalls**

Scale: 1" = 5'



3 **South East ADA Ramp**

Scale: 1" = 5'



1 **North ADA Ramp**

Scale: 1" = 5'

Curb and Gutter Construction Notes:

1. Open face gutter shall be constructed where drainage is directed away from curb.
2. (1) Open face gutter locations are indicated by shading and notes on the grading plan.
3. It is the responsibility of the surveyor to adjust top of asphalt grades to top of curb grades at the time of construction staking.
4. Refer to the typical details for standard and open face curb and gutter dimensions.
5. (2) Transitions from open face to standard curb and gutter are to be smooth. Hand form these areas if necessary.
6. Spot elevations are shown on this plan with text masking. Coordinate and verify site information with project drawings.

Sidewalk Construction Notes:

1. Concrete sidewalk shall be constructed with a cross slope of 1.5% (2.08% Maximum) unless shown otherwise on plan.
2. Running slope of sidewalks shall be built per grades shown on the plan. where grades are not provided, sidewalks shall be constructed with a maximum running slope of 4.5%
3. Refer to the Site Plan for sidewalk dimensions.

Accessibility Note:

Contractor must maintain a running slope on Accessible routes no steeper than 5.0% (1:20). The cross slope for Accessible routes must be no steeper than 2.0% (1:50). All Accessible routes must have a minimum clear width of 36". If Grades on plans do not meet this requirement notify Consultant immediately.

The Client, Contractor and Subcontractor should immediately notify the Consultant of any conditions of the project that they believe do not comply with the current state of Accessible and Usable Buildings and Facilities (ICC/ANSI A117.1–Latest Edition) and/or FHAA.

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20-112 GR

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 – AWengineering.net

Accessible Details

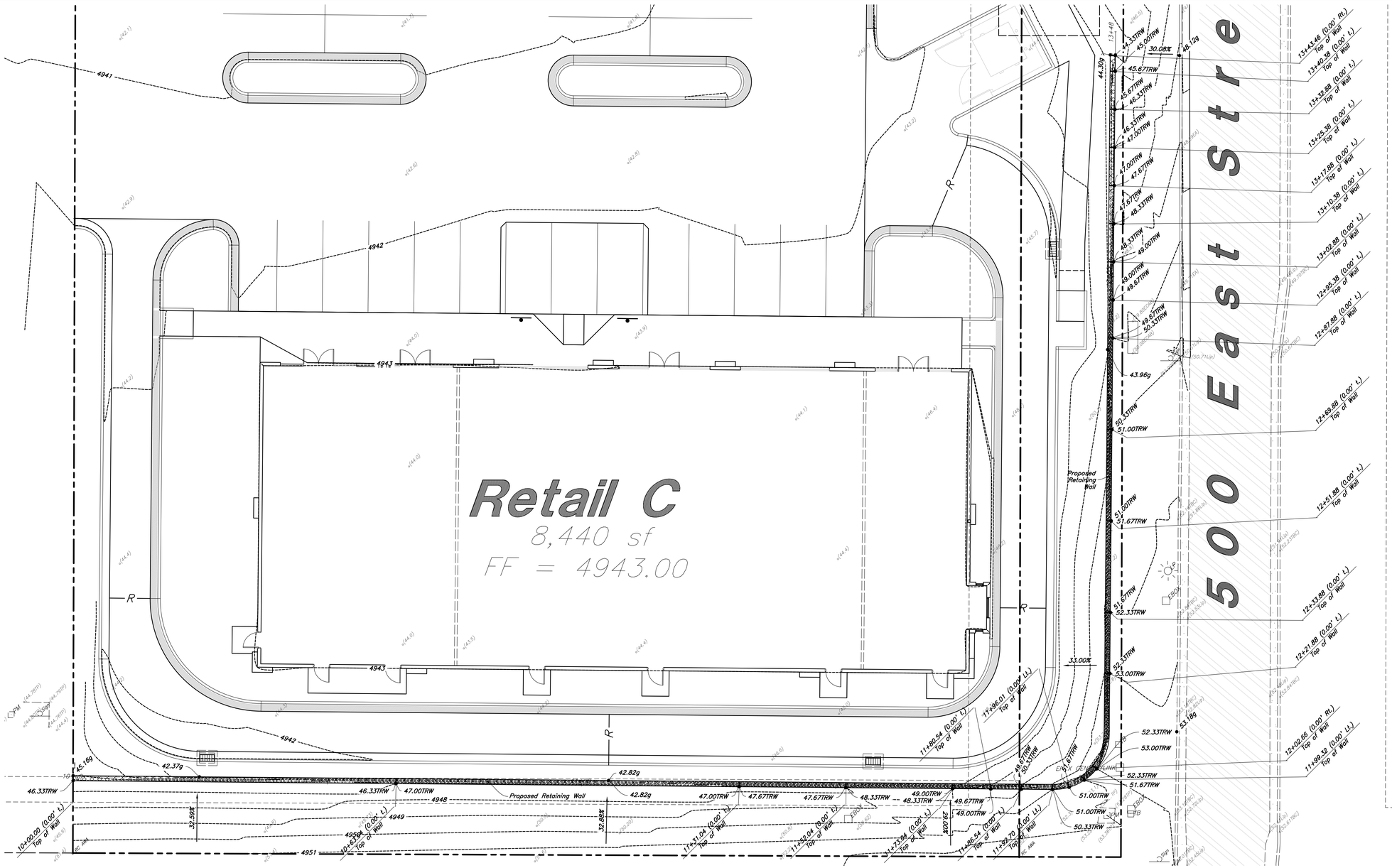
Ridley's Santaquin - Retail C

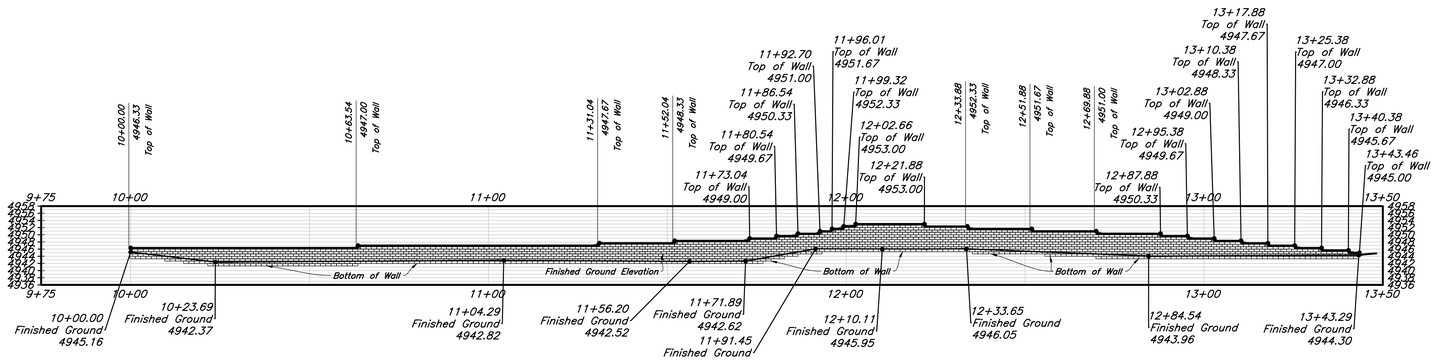
400 East and Main Street
Santaquin, UT

RECIPROCITY PROFESSIONAL ENGINEER
No. 7819289
SHAUN H. YOUNG
9/11/20
STATE OF UTAH

11 Sep, 2020

SHEET NO.
C2.2





REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets
20-112 GR

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 – AWengineering.net

Retaining Wall Plan and Profile

Ridley's Santaquin - Retail C

400 East and Main Street
Santaquin, UT

PROFESSIONAL ENGINEER
REGISTERED
No. 7895289
SHAUN T. YOUNG
9/11/20
STATE OF UTAH

11 Sep, 2020

SHEET NO.
C2.3

General Utility Notes:

1. All sewer and water facilities shall be constructed per local jurisdiction standards and specifications. Contractor is responsible to obtain standards and specifications.
2. Coordinate all utility connections to building with plumbing plans and building contractor.
3. Verify depth and location of all existing utilities prior to constructing any new utility lines. Notify Civil Engineer of any discrepancies or conflicts prior to any connections being made.
4. All catch basin and inlet box grates are to be bicycle proof.
5. Refer to the site electrical plan for details and locations of electrical lines, transformers and light poles.
6. Gas lines, telephone lines, and cable TV lines are not a part of these plans.
7. Water meters are to be installed per city standards and specifications. It will be the contractor's responsibility to install all items required.
8. Water lines, valves, fire hydrants, fittings etc. are to be constructed as shown. Contractor is responsible, at no cost to the owner, to construct any vertical adjustments necessary to clear sewer, storm drain, or other utilities as necessary including valve boxes and hydrant spools to proper grade.
9. Contractor shall install a 12" concrete collar around all manholes, valves, catch basins, cleanouts & any other structures located within the asphalt.

Utility Piping Materials:

All piping materials shall be per local agency standards or the specifications below at a minimum. All utility piping shall be installed per manufacturers recommendations. Refer to project specifications for more detailed information regarding materials, installation, etc.

Culinary Service Laterals

1. Polyethylene (PE) Water Pipe (Up to 3 inches diameter), AWWA C901, PE 3408, SDR 9 (200 psi)
2. Copper Pipe (Up to 3 inches diameter): Type "K."

Water Main Lines and Fire Lines

1. Polyvinyl Chloride (PVC) (4 inches to 12 inches diameter): AWWA C900, Class 200

Sanitary Sewer Lines

1. All sewer piping to be Polyvinyl Chloride (PVC) sewer pipe, ASTM D3034, Type PSM, SDR 35

Storm Drain Lines

1. 12" pipes or smaller – Polyvinyl Chloride (PVC) sewer pipe, ASTM D3034, Type PSM, SDR 35
2. 15" pipes or larger – Reinforced Concrete Pipe, ASTM C76, Class III

CAUTION :

The locations and/or elevations of existing utilities as shown on these plans are based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete.

Storm Drain & Sanitary Sewer Note:

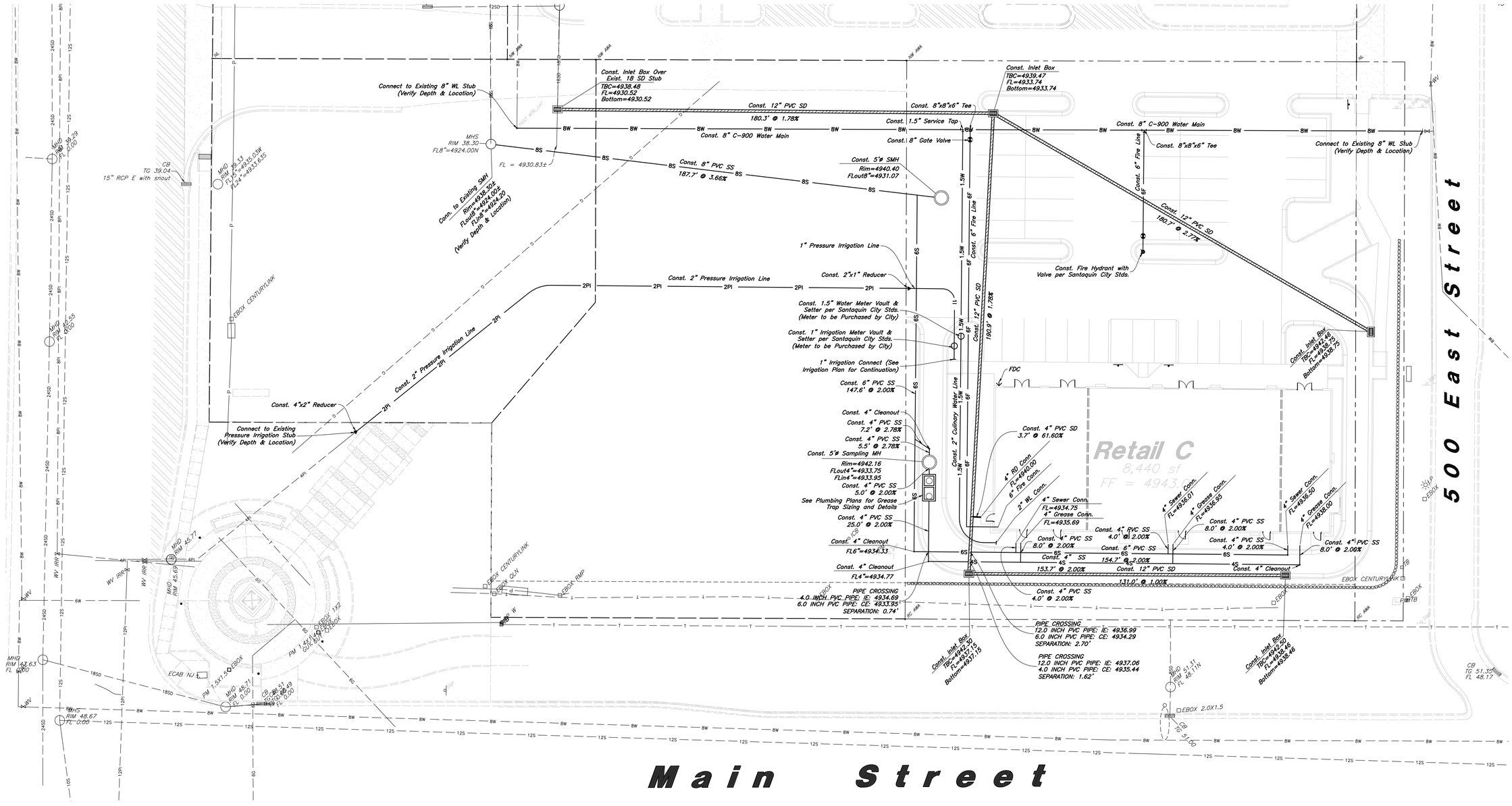
All Storm Drainage & Sanitary Sewer Pipe Lengths and Slopes are from Center of Structure to Center of Structure

Onsite Utility Connection Notes:

1. Contractor shall field verify all utility connection elevations prior to any utility construction has begun.
2. Contractor shall construct utility lines into site prior to any onsite utility construction. Gravity lines are to be constructed starting at the lowest point and be installed prior to any waterline installation
3. Construction of any onsite utilities prior to the offsite connection will be done at the contractors risk.

Scale: 1" = 20'

20' 0 20' 40'



Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20–112 UT

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521–8529 – AWAengineering.net

Utility Plan

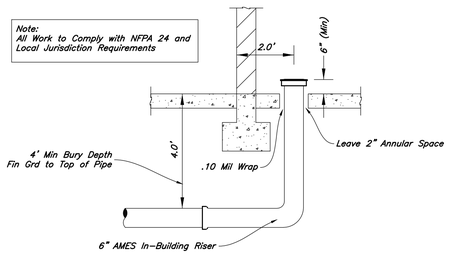
Ridley's Santaquin - Retail C

400 East and Main Street
Santaquin, UT

No. 7879289
SHAUN H YOUNG
9/11/20

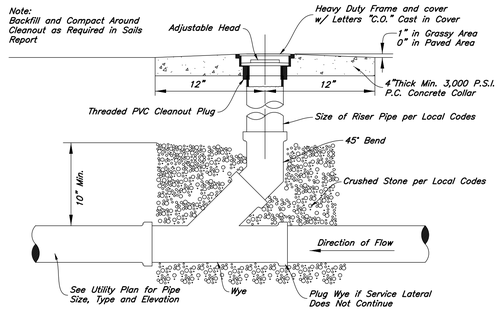
11 Sep, 2020

SHEET NO.
C3.1



8 Fire Riser Stub-In Detail

Not to Scale



6 Typical Cleanout Detail

Not to Scale

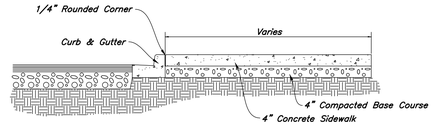
Contraction Joints

A. Spacing = 10' O.C.

Expansion Joints

A. Make expansion joints full depth, see joint deatil
B. Place expansion joint at aa cold joints
C. Expansion joints are required at the start of end of curb radius.

1. See Concrete Joint Detail



3 Typical Sidewalk Detail

Not to Scale

1. REINFORCEMENT: ASTM A 615, grade 60, galvanized or epoxy coated deformed steel rebar or smooth steel dowels with diameter and length as indicated.

   A. Space rebar and dowels at 12 to 15 inches on center.
   B. Grease dowels to provide movement in expansion joints.
   C. Keep tie bars in the vertical center of the concrete slab and perpendicular to the joint during concrete placement.

2. SAWING: Keep at least 3 working power saws on-site when concrete is being placed. Saw crack control joints (contraction joints) before shrinkage cracking takes place. Do not tear or ravel concrete during sawing. In cool weather, the joint sawing may be delayed only for the time required to prevent tearing and raveling the concrete. Cut joints to dimensions recommend by sealant manufacturer and approved by ENGINEER.

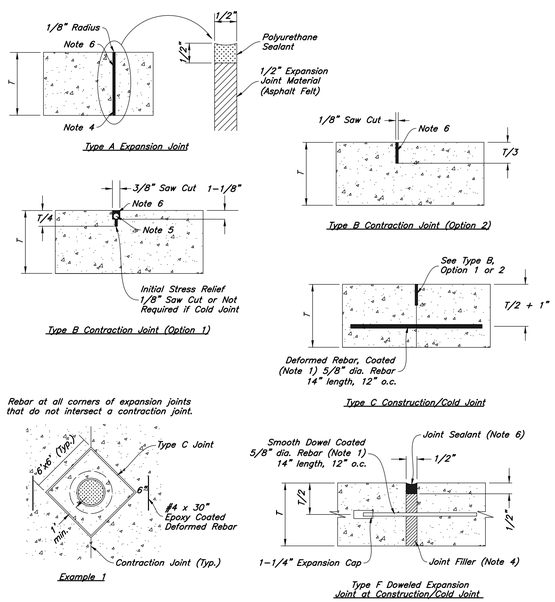
3. JOINTS: Lay out joints to aid construction and control random cracking.

   A. Joint Spacing shall be 12 feet maximum on center in both directions.
   B. Extend transverse contraction joints continuously across the full width of the concrete. Make the joints coincide with curb and gutter joints.
   C. Make adjustments in joint locations to meet inlet or manhole locations.
   D. Expansion Joints shall be placed where concrete abuts a building wall, sidewalk, curb, gutter or any immovable structure.

4. JOINT FILLER: Bituminous (Asphalt or tar) mastic, ASTM D994. Formed and encased between 2 layers of bituminous saturated felt or 2 layers of glass-fiber felt extending to the bottom of the concrete slab.

5. BACKER ROD: Round Rods. It must be oversized approximately 25 percent to fit tightly into each joint and compatible with hot poured sealant.

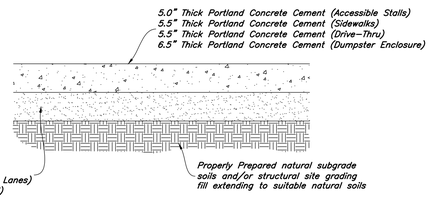
6. JOINT SEALANT: Hot applied, Asphalt base type, ASTM D 3405. Remove dirt, oil, and curing compounds from joint reservoir. Seal joints immediately after cleaning.



7 Concrete Joint Detail

Not to Scale

1. See Geotechnical Report for Project
2. See Concrete Joint Detail



5 Concrete Paving Section

Not to Scale

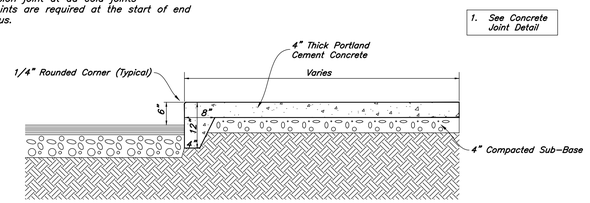
Contraction Joints

A. Spacing = 10' O.C.

Expansion Joints

A. Make expansion joints full depth, see joint deatil
B. Place expansion joint at aa cold joints
C. Expansion joints are required at the start of end of curb radius.

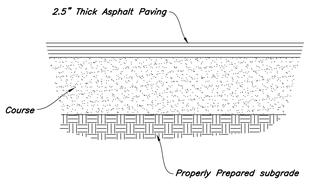
1. See Concrete Joint Detail



4 Thickened Edge Walk

Not to Scale

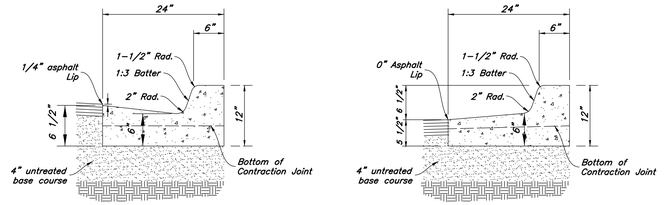
1. See Geotechnical Report for Project



2 Standard Asphalt Section

Not to Scale

1. Contraction Joints
   A. Spacing = 10' o.c., see joint detail
   B. 1/8" wide by 2" deep from top of curb at 15'-0" intervals
2. Expansion Joints
   A. Make expansion joints full depth, see joint detail
   B. Place expansion joint at all cold joints
   C. Expansion joints are required at ends of all radii 0.08.
   D. Required 5'-0" on each side of drainage structures
   E. Required at 90'-0" maximum intervals in straight curb and gutter
   F. Provide #6 x 18" long smooth steel dowel bars with 1" dia. grease
      cap through expansion joints (½" thick bituminous filler material)
3. 2'-6" Long tie bar on 2'-6" centers shall be provided when curb is adjacent to P.C.C. pavement
4. Provide (2) #6 x 2'-6" long tie bars to connect existing and new curb and gutter
5. Remove forms as early as possible. Brush top and face of curbs to remove all imperfections. Typical of all form work.
6. All radii shall be true arcs
7. Medium to light broom finish on all exterior concrete



Note: All Curb and Gutter to be Standard Unless Otherwise Noted

1. See Concrete Joint Detail

1 24" Curb And Gutter

Not to Scale

RDV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20-112 DT

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWengineering.net

Details

Ridley's Santaquin - Retail C

400 East and Main Street
Santaquin, UT

PROFESSIONAL ENGINEER
REGISTERED
No. 7915283
SHAUN K. YOUNG
9/11/20
STATE OF UTAH

11 Sep, 2020

SHEET NO.
C4.1

14 Not Used

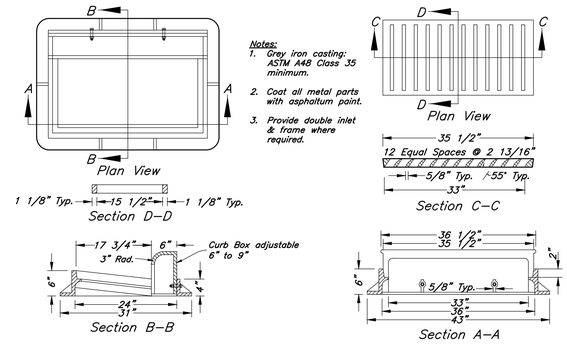
Not to Scale

12 Not Used

Not to Scale

10 Inlet Grate Frame

Not to Scale



13 Accessible Parking Sign

Not to Scale

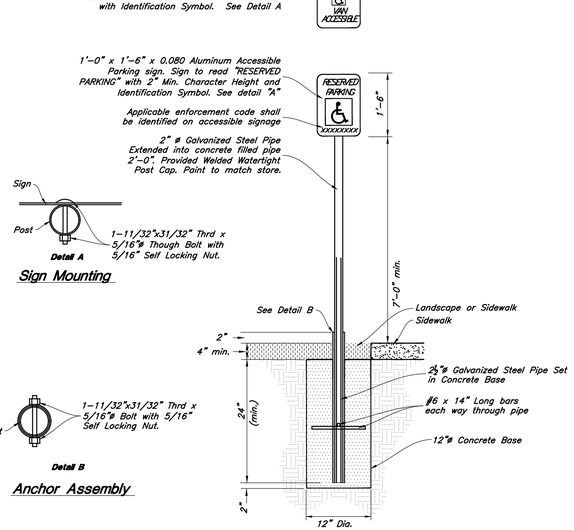
Accessible Van Stall Alternate Sign

This sign shall be used for all Accessible Stalls Identified as "VAN" on Site Plan. 1'–0" x 1'–6" x 0.080 Aluminum Accessible Van Stall Parking sign Sign to read "RESERVED PARKING" and "VAN ACCESSIBLE" with Identification Symbol. See Detail A

1'–0" x 1'–6" x 0.080 Aluminum Accessible Parking sign. Sign to read "RESERVED PARKING" with 2" Min. Character Height and Identification Symbol. See detail "A"

Applicable enforcement code shall be identified on accessible signage

2" ϕ Galvanized Steel Pipe Extended into concrete filled pipe 2'–0". Provided Welded Watertight Post Cap. Paint to match store.

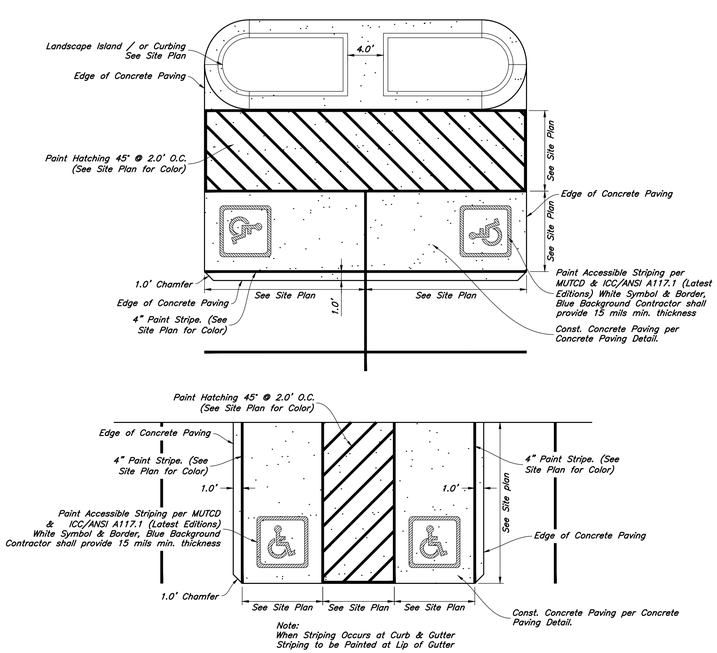


Sign Mounting

Anchor Assembly

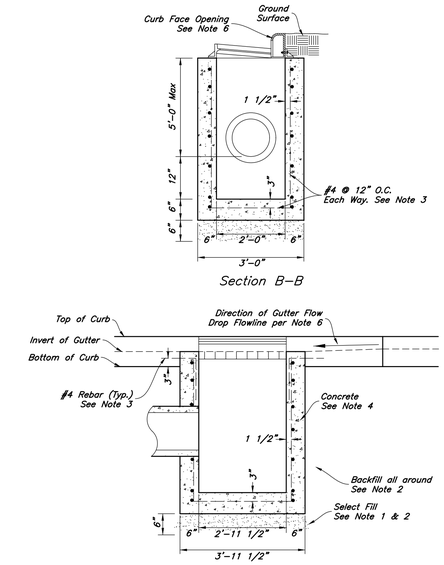
11 Accessible Striping Detail

Not to Scale



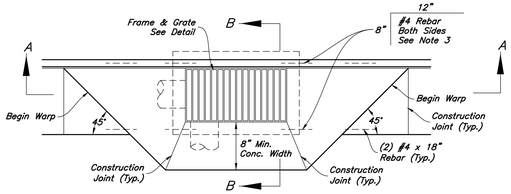
9 Curb Inlet with Single Grate

Not to Scale



Catch Basin Notes:

1. Select Fill: Use untreated base course grade 1 or grade 3/4 per APWA Section 02060. Use of sewer rock or recycled aggregate requires Engineers written approval.
2. Backfill: Install and compact all backfill material or APWA Section 02321.
3. Reinforcement: Use ASTM A 615, grade 60 deformed steel rebar. See APWA Section 03200.
4. Concrete: Class 4,000 per APWA Section 03304. Place per APWA Section 03310. Apply a sealing / curing compound per APWA Section 03390 or use an acceptable alternate curing method.
5. Pipe Laterals: The drawing shows alternate connections to the curb outlet. Refer to construction drawings for connection locations.
6. Curb Face Opening: Make opening 4 inches high. Provide at least a 2 inch drop from the gutter flowline to the invert of the curb face opening.
7. Conc. Apron in front of Inlet Grate to be 8" min. & 12" max.



REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

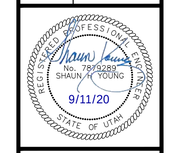
20–112 DT

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521–8529 – AWEngineering.net

Details

Ridley's Santaquin – Retail C

400 East and Main Street
Santaquin, UT

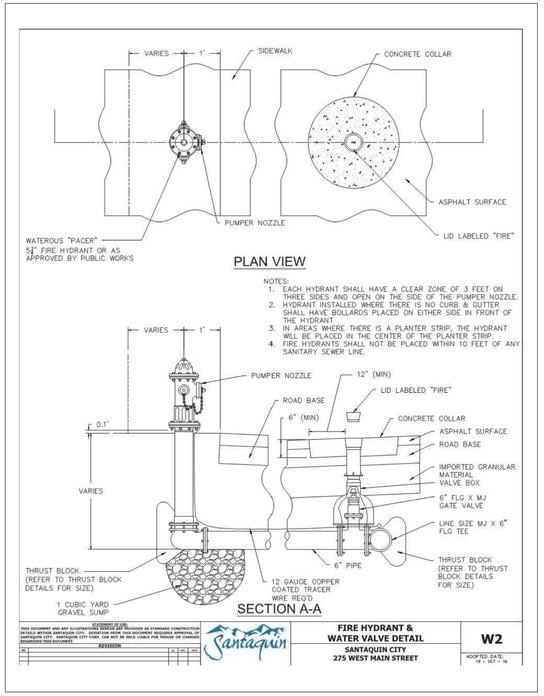


11 Sep, 2020

SHEET NO.
C4.2

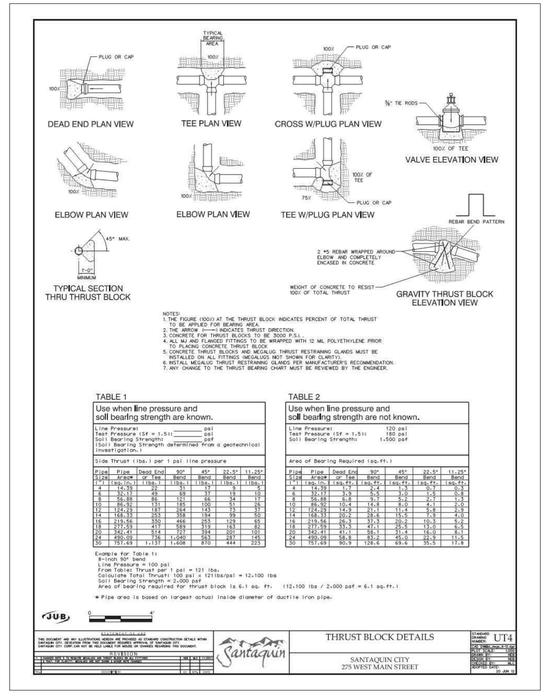
20 **Not Used**

Not to Scale



18 ***Santaquin City Std. Dwg. W2 Fire Hydrant & Water Valve***

Not to Scale

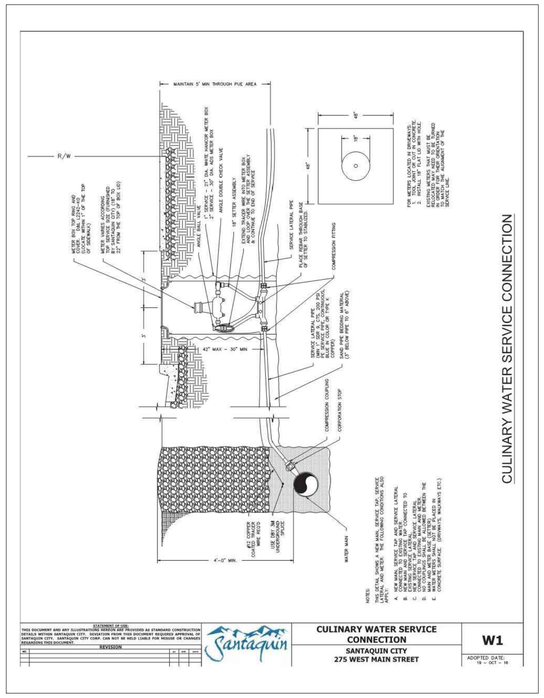


16 ***Santaquin City Std. Dwg. UT4 Thrust Block Details***

Not to Scale

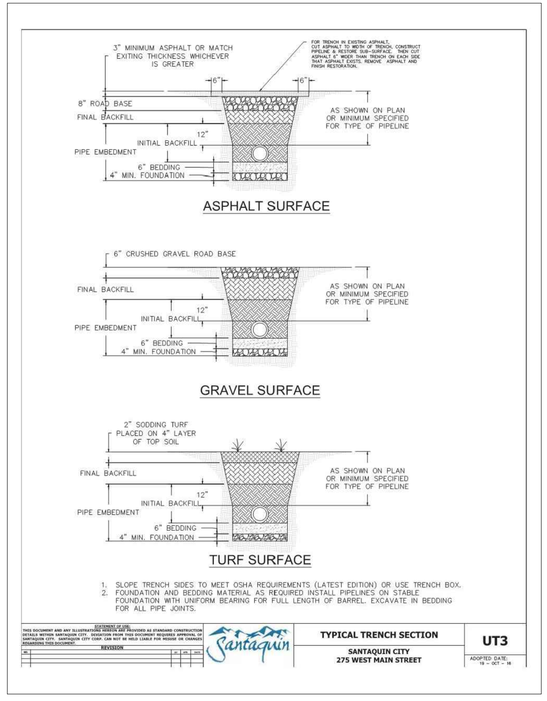
19 **Not Used**

Not to Scale



17 ***Santaquin City Std. Dwg. W1 Culinary Water Service Connection***

Not to Scale



15 ***Santaquin City Std. Dwg. UT3 Typical Trench Section***

Not to Scale

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 – AWengineering.net

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20-112 DT

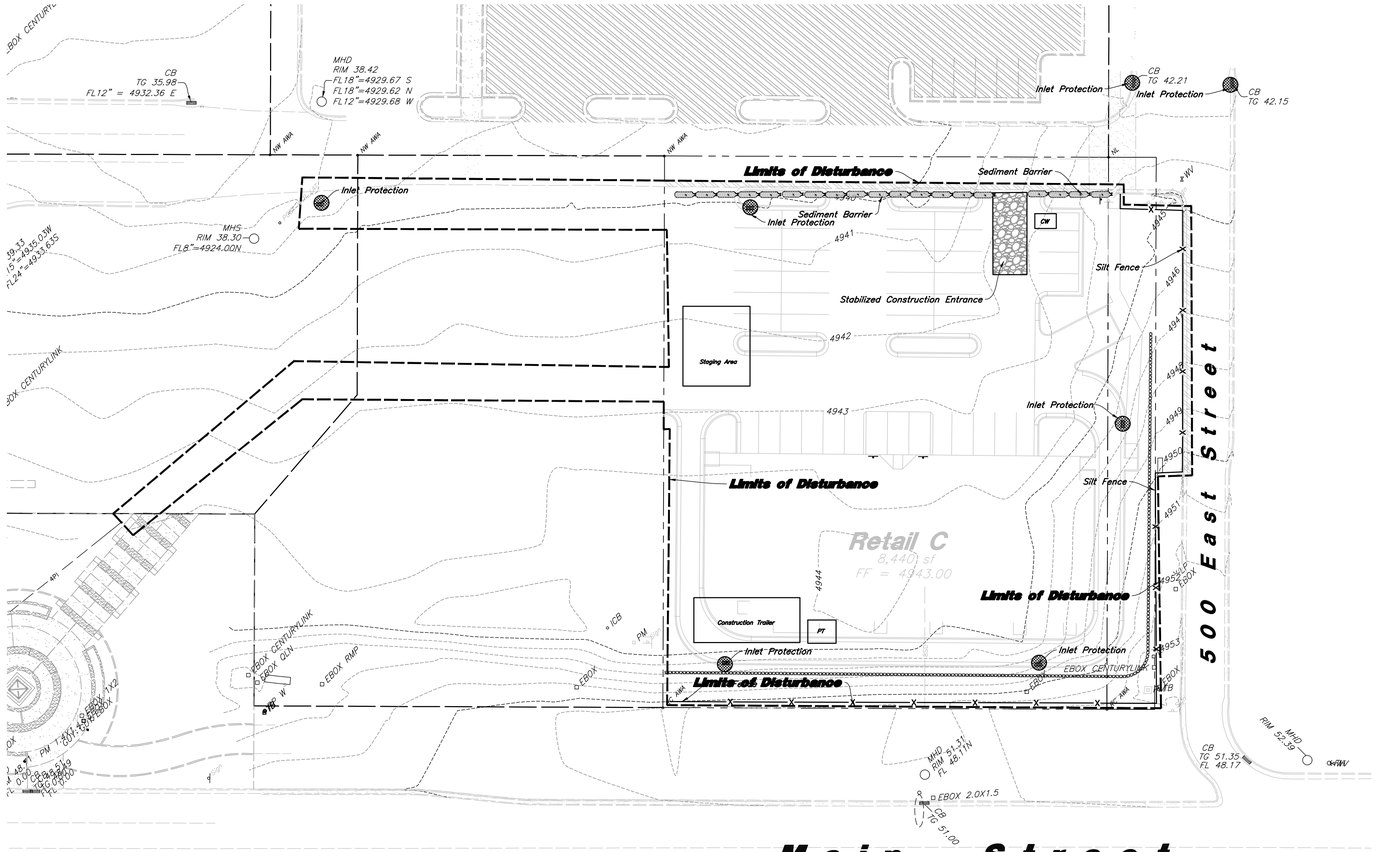
Details

Ridley's Santaquin - Retail C

400 East and Main Street
Santaquin, UT

11 Sep, 2020

SHEET NO.
C4.3



Legend

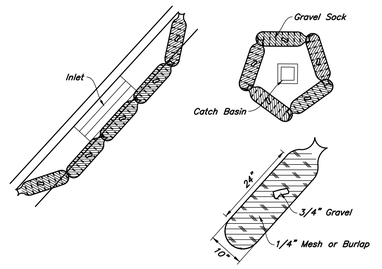
- Place Inlet Protection at all Inlet Locations to prevent boxes from silting.
- Silt Fence
- Limit of Disturbance
- Construction Entrance / Truck Wash (50'x24' Min.)
- Concrete Washout Area (CW)
- Portable Toilet (PT)
- Sediment Barrier
- Existing Contour
- Existing Spot (78.00TA)
- Proposed Contour

Scale: 1" = 30'

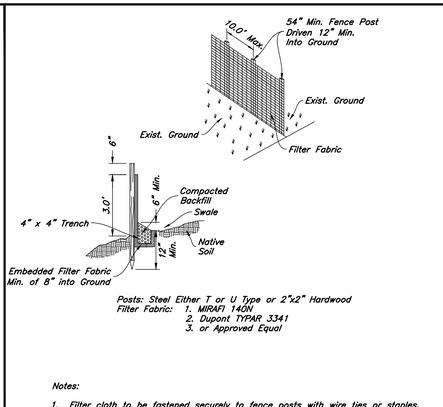
30' 0 30' 60'

Erosion Control Notes

1. Storm water will be discharged into an existing drainage system. Existing Lines shall be inspected prior to Certificate of Occupancy and cleaned if necessary.
2. The Storm Water Prevention Plan shall conform to all State Division of Environmental Protection Regulations.
3. All Construction equipment will enter thru Designated Construction Entrances.
4. Coordinate Entrance locations with the local jurisdiction.
5. Inlet Protection Devices and Barriers shall be Repaired or Replaced if they Show Signs of Undermining or Deterioration.
6. Silt Fences shall be Repaired to their Original Conditions if Damaged, Sediment shall be Removed from Silt Fences when it Reaches one-half the Height of the Silt Fence.
7. The Construction Entrances shall be Maintained in a Condition which will Prevent Tracking or Flow of Mud onto Public Right-of-Way. This may Require Periodic Top Dressing of the Construction Entrances as Conditions Demand.
8. All Materials Spilled, Dropped, Washed or Tracked from Vehicles onto Roadways or into Storm Drains must be Removed Immediately.
9. Due to the Grade Changes During the Development of the Project, the Contractor shall be Responsible for Adjusting the Erosion Control Measures (Silt Fences, Inlet Protection, Etc...) to Prevent Erosion.
10. Contractor shall use Vehicle Tracking Control at all Locations where Vehicles will Enter or Exit the Site. Control Facilities will be Maintained while Construction is in Progress, Moved when Necessary and Removed when the Site is Paved.
11. Inlet Protection Devices shall be Installed Immediately upon Individual Inlets becoming Functional.
12. This Document is Fluid Allowing for Changes, Modifications, Updates and Alternatives. It is the Responsibility of the Contractor to Keep Record of all Alterations made to the Erosion Control Measures Implemented for the Project on this Plan and in the Storm Water Pollution Prevention Plan.
13. Cover Exposed stockpiles of soils, construction and landscaping materials with heavy plastic sheeting.
14. Re-vegetate areas where landscaping has died or not taken hold.
15. Divert storm water runoff around disturbed soils with berms or dirt swales.
16. Contractor to provide permanent stabilization to any areas disturbed by construction by hydroseeding native vegetation (if not otherwise stabilized).
17. Contractor is responsible for obtaining a fugitive dust control permit through the Division of Air Quality. All responsibilities relating to the production of the dust control plan shall be the responsibility of the Contractor.



5 **Sediment Barrier**
Not to Scale

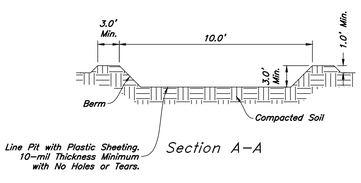


Posts: Steel Either T or U Type or 2"x2" Hardwood
Filter Fabric: 1. MIRAFI 140N
2. Dupont TYPAR 3341
3. or Approved Equal

Notes:

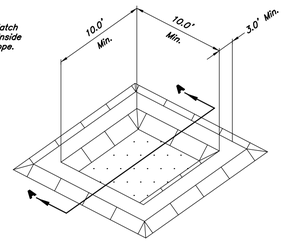
1. Filter cloth to be fastened securely to fence posts with wire ties or staples.
2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
3. Collected material shall be removed when "bulges" develop in the silt fence.

4 **Silt Fence Section**
Not to Scale

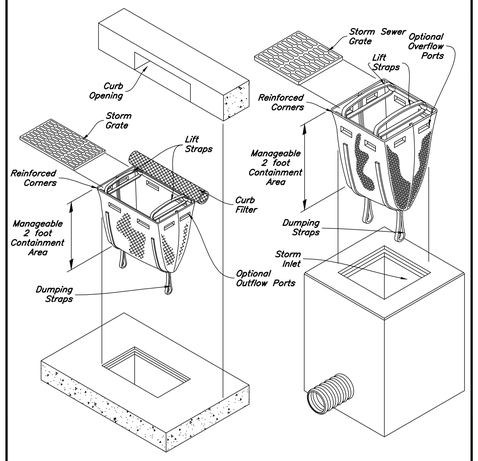


Line Pit with Plastic Sheeting. 10-mil Thickness Minimum with No Holes or Tears.

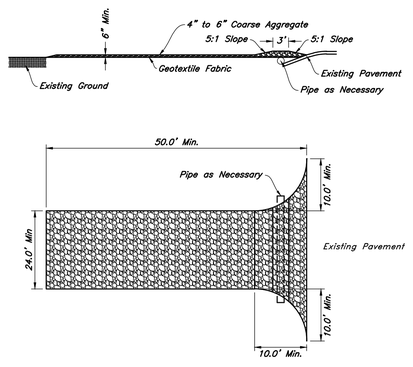
3:1 Slope to Match Grade Typ. to Inside and Outside Slope.



3 **Concrete Washout**
Not to Scale



2 **Dandy Sack Inlet Protection**
Not to Scale



1 **Stabilized Construction Entrance**
Not to Scale

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20-112 EC

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 – AWengineering.net

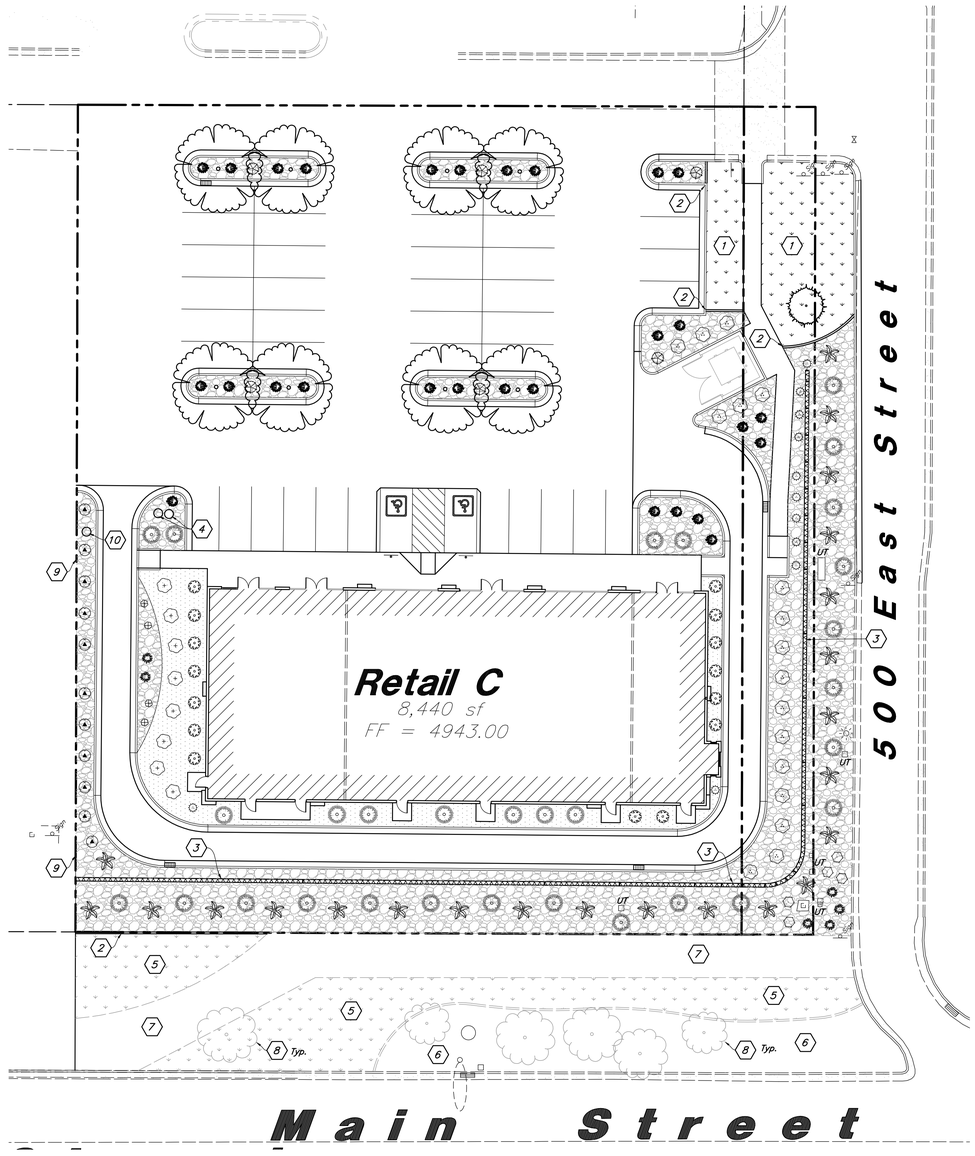
Erosion Control Plan

Ridley's Santaquin - Retail C
400 East and Main Street
Santaquin, UT

PROFESSIONAL ENGINEER
No. 7815289
SHAUN H. YOUNG
9/11/20
STATE OF UTAH

11 Sep, 2020

SHEET NO.
C5.1



PLANT SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	REMARKS
	8	Zelkova serrata 'Musashino' / Musashino Zelkova	2" Cal. / 8–10' Ht.	45' Ht. / 15' Spr.
EVERGREEN TREES	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**	**REMARKS**
	1	Picea pungens 'Hoopsii' / Hoopsi Blue Spruce	6–8' Ht.	12' Ht. / 35' Spr.
ORNAMENTAL GRASSES	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**	**REMARKS**
	11	Calamagrostis x a. 'Karl Foerster' / Feather Grass	1 gal	48" Ht. / 30" Spr.
	4	Helictotrichon sempervirens 'Sapphire' / Blue Oat Grass	5 gal	30" Ht. / 30" Spr.
DECIDUOUS SHRUB	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**	**REMARKS**
	17	Prunus x cistena / Purple Leaf Sand Cherry	5 gal	60" Ht. / 50" Spr.
	8	Rhus aromatica 'Gro–Low' / Gro–Low Fragrant Sumac	5 gal	20" Ht. / 60" Spr.
	23	Rhus typhina 'Tiger Eyes' / Tiger Eyes Sumac	5 gal	60" Ht. / 60" Spr.
	11	Ribes alpinum 'Green Mound' / Green Mound Alpine Currant	5 gal	36" Ht. / 30" Spr.
	6	Rosa Meidiland series 'Red' / Red Meidiland Rose	5 gal	24" Ht. / 36" Spr.
	28	Spiraea x bumalda 'Goldflame' / Goldflame Spirea	5 gal	26" Ht. / 26" Spr.
EVERGREEN SHRUB	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**	**REMARKS**
	15	Buxus microphylla 'Wintergreen' / Wintergreen Boxwood	5 gal	24" Ht. / 24" Spr.
	30	Juniperus horizontalis 'Bar Harbor' / Bar Harbor Creeping Juniper	5 gal	8" Ht. / 48" Spr.
	6	Picea pungens 'Globosa' / Dwarf Globe Blue Spruce	5 gal	30" Ht. / 36" Spr.
	5	Pinus mugo 'Slowmound' / Mugo Pine	5 gal	30" Ht. / 36" Spr.
LAWN	**QTY**	**BOTANICAL / COMMON NAME**	**TYPE**	**REMARKS**
	1,654 sf	Poa pratensis / Kentucky Bluegrass Blend	sod	Detail: 4/L3.1

MATERIAL SCHEDULE

Symbol	Comments	Detail
	Decorative Stone #1 – Install a (3) Three Inch Depth over Dewitt Pro5 Weed Barrier; Stone Shall be Used in Shrub Planters Where Shown on Plan; Stone Shall be Washed Prior to Installation; Stone Shall be 1 1/2" Dia. Crushed, Fractured Talon's Cove (Gray Color) Stone from Utah Landscape Rock (435–250–3851)	Detail: 4/L3.1
	Decorative Stone #2 – Install a (6) Six Inch Depth over Dewitt Pro5 Weed Barrier; Stone Shall be Used in Shrub Planters Where Shown on Plan; Stone Shall be Washed Prior to Installation; Stone Shall be 2–4" Dia. Crushed, Fractured Stone from Staker Parson Capper Canyon Pit (385–239–0804); Stone Shall Match Store Color Stone; Interlock and Secure Stone on Steep Slopes	Detail: 4/L3.1
	4" x 6" Landscape Concrete Curbing – Install Flush to all Concrete Edges between Lawn and Planting Areas; Curbing Shall be Continuous; Adjust Curbing as Needed to Avoid Existing and New Utilities.	Detail: 4/L3.1

Scale: 1" = 20'

20' 0 20' 40'

Landscape Data

Site Area = 47,685 s.f. (1.09 ac.)
Landscape Area Required = 4,769 s.f. (10%)
Landscape Area Provided = 11,234 s.f. s.f. (24%)
Store Parking Provided = 41 stalls
Parking Area = 15,944 s.f.
Landscape Parking Required = 1,594 s.f. (10%)
Landscape Parking Provided = 1,754 s.f. (11%)

Landscape Notes:

1. All Landscape Material Shall be Fully Irrigated by an Automatic Irrigation System. Drip for Shrub Areas and Spray for Lawn Areas. See Irrigation Sheets L2.1 for Layout and Sheet L3.1 for Details.
2. Adjust Landscape Material as Needed to Allow Access to all New and Existing Utilities. Irrigation Components Shall be Spaced Between Plant Material to Allow Easy Access for Maintenance.
3. All Areas Disturbed by Construction Shall be Landscaped and Not Left Undone.
4. No Edging Shall be Used Between Different Stone. Provide a Nice Clean Smooth Flowing Defined Line Between Stone.

Landscape Keynotes

1. Install New Lawn
2. Install Landscape Concrete Curbing
3. New Retaining Wall – See Civil Plans
4. New Water Meters – See Utility Plan
5. Existing Lawn
6. Existing Shrub Planter
7. Existing Gravel Maintenance Road
8. Existing Street Tree
9. Provide Nice Clean Edge Between New Landscape and Undeveloped Lot
10. Irrigation Water Meter and Connection – See Irrigation Plan for More Detail

UT – Existing/New Utility Box or Manhole

General Landscape Notes:

1. Plant material quantities are provided for bidding purposes only. It is the contractors responsibility to verify all quantities listed on the plans and the availability of all plant materials and their specified sizes prior to submitting a bid. The contractor must notify the Landscape Architect prior to submitting a bid if the contractor determines a quantity deficiency or availability problem with specified material. The contractor shall provide sufficient quantities of plants equal to the symbol count or to fill the area shown on the plan using the specified spacing. Plans take precedence over plant schedule quantities.
2. Contractor shall call Blue Stake before excavation for plant material.
3. Prior to construction, the contractor shall be responsible for locating all underground utilities and shall avoid damage to all utilities during the course of the work. It shall be the responsibility of the contractor to protect all utility lines during the construction period, and repair any and all damage to utilities, structures, site appurtenances, etc. which occurs as a result of the landscape construction.
4. The landscape contractor shall examine the site conditions under which the work is to be performed and notify the general contractor in writing of unsatisfactory conditions. Do not proceed until conditions have been corrected.
5. The contractor shall provide all materials, labor and equipment required for the proper completion of all landscape work as specified and shown on the drawings.
6. See civil and architectural drawings for all structures, hardscape, grading, and drainage information.
7. Contractor safety and cleanup must meet OSHA standards at all times. All contractors must have adequate liability, personnel injury and property damage insurance. Clean–up must be performed daily, and all hardscape areas must be washed free of dirt and mud on final cleanup. Construction must occur in a timely manner.
8. All new plant material shall conform to the minimum guidelines established by the American Standard for Nursery Stock Published by the American Association of Nurseryman, Inc. In addition, all new plant material shall be of specimen quality.
9. The Owner/Landscape Architect has the right to reject any and all plant material not conforming to the plans and specifications.
10. Any proposed substitutions of plant species shall be made with plants of equivalent overall form, height, branching habit, flower, leaf, color, fruit and culture only as approved by the Landscape Architect.
11. It is the contractors responsibility to furnish all plant materials free of pests or plant diseases. It is the contractor's obligation to maintain and warranty all plant materials.
12. The contractor shall take all necessary scheduling and other precautions to avoid winter, climatic, wildlife, or other damage to plants. The contractor shall install the appropriate plants at the appropriate time to guarantee life of plants
13. The contractor shall install all landscape material per plan, notes and details.
14. All existing and relocated trees shall be properly protected. Trees damaged during construction shall be replaced at no cost to the owner.
15. Plant names are abbreviated on the drawings, see plant lschedule for symbols, abbreviations, botanical, common names, sizes, estimated quantities and remarks.
16. No grading or soil placement shall be undertaken when soils are wet or frozen.
17. Existing topsoil to be stripped and stockpiled for landscape use. Contractor shall verify existing topsoil amounts and quality with the general contractor. The landscape contractor shall perform a soil test on existing and imported topsoil and amend per soil test recommendations. Soil test to be done by certified soil testing agency. Provide new imported topsoil as needed from a local source. Imported topsoil must be a premium quality dark sandy loam, free of rocks, clods, roots, and plant matter. Topsoil to be installed in all landscaping areas.
18. Prior to placement of topsoil in all landscaping areas, all subgrade areas shall be loosened by scarifying the soil to a depth of 6 inches in order to create a transition layer between existing and new soils.
19. Provide a 12" depth of stockpiled or imported topsoil in parking islands and an 8 inch depth in all other shrub areas.
20. All plant material holes shall be dug twice the diameter of the rootball and 6 inches deeper. Excavated material shall be removed from the site and replaced with plant backfill mixture. The top of the root balls, shall be planted flush with the finish grade.
21. Plant backfill mix shall be composed of 3 parts topsoil to 1 part soil pep, and shall be mixed at the planting hole.Deep water all plant material immediately after planting. Add backfill mixture to depressions as needed.
22. All new plants to be balled and burlapped or container grown, unless otherwise noted on plant schedule. Container grown trees shall have the container cut and removed. Trees in ball and burlap shall have the strings, burlap or plastic cut and pulled away from the trunk exposing 1/3 of the root ball. For trees in wire baskets, cut and remove the wire basket.
23. Upon completion of planting operations, all landscape areas with trees, shrubs, and perennials, shall receive specified stone over Dewitt Pro5 Weed Barrier or equal. Stone shall be evenly spread on a carefully prepared grade free of weeds. The top of stone should be slightly below finish grade and concrete areas.
24. All deciduous trees shall be double staked per tree staking detail. It is the contractors responsibility to remove tree staking in a timely manner once staked trees have taken root. Deciduous tree ties to be V.I.T. Cinche Ties #CT32.
25. Install landscape concrete curbing between lawn and planting areas. Curbing shall be installed level and uniform and shall match top finish grades of concrete walks and curbs. See landscape concrete curbing detail.
26. Provide a 4 inch depth of stockpiled or imported topsoil in all lawn areas.
27. Sod must be premium quality, evenly cut, established, healthy, weed and disease free, and from an approved source.
28. All lawn areas to have uniform grades by float raking. Prior to laying sod, apply a starter fertilizer at a rate recommended by the manufacturer. Sod must be laid with no gaps between places on a carefully prepared topsoil layer. Sod to be slightly below finish grade and concrete walks and curbing. The laid sod must be immediately watered after installation. Any burned areas will require replacement. Adjust sprinkler system to assure healthy green survival of the sod without water waste.
29. The contractor shall comply with all warranties and guarantees set forth by the Owner, and in no case shall that period be less than one year following the date of completion and final acceptance.

Know what's below. Call before you dig.

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20–112 LS

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521–8529 – AWAengineering.net

Landscape Plan

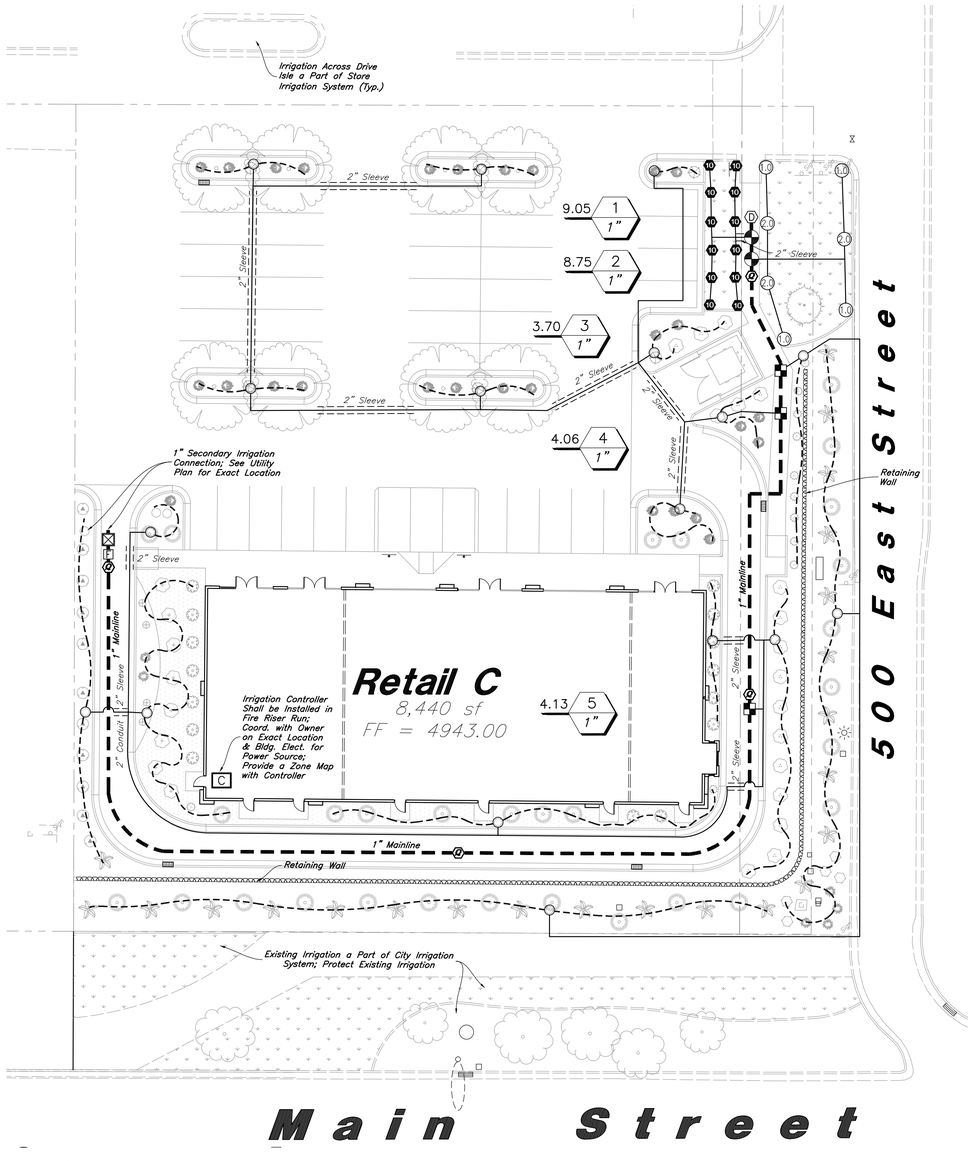
Ridley's Santaquin – Retail C

400 East and Main Street
Santaquin, UT

State of Utah
Jared R. Manscill
Licensed Landscape Architect
No. 6740426–5301
09/11/2020

11 Sep, 2020

SHEET NO.
L1.1



General Irrigation Notes:

1. Prior to construction, the contractor shall be responsible for locating all underground utilities and shall avoid damage to all utilities during the course of the work. It shall be the responsibility of the contractor to protect all utility lines during the construction period, and repair any and all damage to utilities, structures, site appurtenances, etc. which occurs as a result of the landscape construction.
2. The irrigation contractor shall examine the site conditions under which the work is to be performed and notify the general contractor in writing of unsatisfactory conditions. Do not proceed until conditions have been corrected.
3. The contractor shall provide all materials, labor and equipment required for the proper completion of all irrigation work as specified and shown on the drawings.
4. See civil and architectural drawings for all structures, hardscape, grading, and drainage information.
5. Contractor safety and cleanup must meet OSHA standards at all times. All contractors must have adequate liability, personnel injury and property damage insurance. Clean-up must be performed daily, and all hardscape areas must be washed free of dirt and mud on final cleanup. Construction must occur in a timely manner.
6. The Owner/Landscape Architect has the right to reject any and all irrigation material not conforming to the plans and specifications.
7. The contractor shall install all irrigation material per plan, notes and details.
8. Irrigation system components must be premium quality only and installed to manufactures requirements and specifications. The contractor is responsible for checking state and local laws for all specified materials and workmanship. Substitutions must be approved by landscape architect. Provide owner and maintenance personnel with instruction manual and all products data to operate, check, winterize, repair, and adjust system.
9. Irrigation system guarantee for all materials and workmanship shall be one year from the time of store opening or final project acceptance (whichever is longer). Guarantee will include, but is not limited to winterizing, spring activation, repair, trench setting, backfilling depressions, and repairing freeze damage. Contractor must contact Landscape Architect to schedule pre and post guarantee inspection meetings. Failure to do so will mean the official guarantee period has not been activated or de-activated.
10. Irrigation system check must be done before the system is backfilled. Irrigation mainline and each control valve section must be flushed and pressure checked. Assure the complete system has no documented problems and full head to head coverage with adequate pressure for system operation. Adjust system to avoid spray on building, hardscape, and adjacent property. Any problems or plan discrepancies must be reported to the landscape architect.
11. Irrigation laterals must be schedule 40 P.V.C. with schedule 40 fittings, one (1) inch minimum size. Solvent weld all joints as per manufactures specifications for measured static p.s.i. Teflon tape all threaded fittings. The minimum depth of lateral lines shall be twelve (12) inches. Adapt system to manual compression air blowout.
12. Irrigation mainline that are 2" and smaller mainlines shall be schedule 40 PVC pipe with schedule 40 fittings. Solvent weld all joints as per manufactures specifications for measured static pressure. Use teflon tape on all threaded joints. Line depth must be twenty-four (24) inches minimum.
13. Install dielectric fittings whenever dissimilar metals are joined.
14. Design locations are approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain 100(%) percent irrigation coverage of areas indicated.
15. Controller valves to be grouped together wherever possible. Install valve boxes with long side perpendicular to walk, curb, lawn, building or landscape features. Valve boxes to conform with finish grades.
16. Control valve wire shall be #14 single conductor; white for common wire, red for hot wire and blue for the spare wire. Provide (2) two spare wire that runs the length of the mainline and to the controller. All wiring shall be UF-UL rated. All connections shall be made with water tight connectors (DBR/Y or equivalent) and contained in control valve boxes. Provide 36" extra wire length at each remote control valve in valve box. Install control wiring with main service line where possible. Provide slack in control wires at all changes in direction.
17. Control valve size, type, quantity, and location to be approved by landscape architect. install in heavy duty plastic vandal proof box. Size boxes according to valve type and size for ease of maintenance and repair. Install one (1) cubic feet of pea gravel for sump in base of boxes. Boxes to be Carson Brooks or equal.
18. Quick couplers shall be a Rain Bird 44-NP (Non-Potable Cover) with a 1 inch Lasco swing joint assembly. Support with rebar in each retainer lug. Install where shown on the plans.
19. Irrigation system backfill must occur only after system check is completed as specified. Use only rock free clean fill around pipes, valves, drains, or any irrigation system components. Water settle all trenches and excavations.
20. All irrigation pipe running through walls, under sidewalk, asphalt, or other hard surface shall be sleeved prior to paving. It is the irrigation contractors responsibility to coordinate sleeving with concrete and pavement contractors. Sleeves will be schedule 40 P.V.C. The depth for mainline sleeves shall be twenty-eight (28) inches minimum. Depth for lateral sleeves shall be sixteen (16) inches minimum. Sleeves shall be a minimum of two sizes larger than the pipe to be sleeved. All valve wiring shall be contained in separate sleeving.
21. Plans are diagrammatic and approximate due to scale. where possible, all piping is to be installed within the planting areas. No tees, ells, or changes in direction shall occur under hardscape.
22. It is the contractors responsibility to verify all quantities based upon the plan prior to completion of a construction cost estimate.
23. The irrigation contractor shall flush and adjust all sprinkler heads for optimum performance and to prevent possible overspray onto walks, roadways, and/or buildings as much as possible. This shall include selecting the best degree of arc to fit the site and to throttle the flow control of each valve to obtain the optimum operating pressure for each system. All mainlines shall be flushed prior to the installation of irrigation heads.
24. All sprinkler heads shall be set perpendicular to finish grade of the areas to be irrigated and shall be installed 6-8" from buildings walls, or within 4" of pavement, curbs, or header edges.
25. Drip system piping shall consist of a rigid schedule 40 PVC pipe distribution system connecting drip irrigated planter areas. Poly tubing or drip line shall be run off the rigid PVC in each planting area or island with a PVC to poly tubing adapter. No poly tubing shall run under pavement.
26. Electrical power source at the controller location shall be provided by electrical contractor. Contractor shall verify location of controller prior to installation with owner.
27. Provide and install all manufacturer's recommended surge and lighting protection equipment on all controllers.
28. All lines shall slope to manual drains (see details). If field conditions necessitate additional drains, these drains shall be installed for complete drainage of the entire system. Provide a gravel sump under each drain. All drains shall be a minimum of 6" below grade.
29. Upon completion and approval of irrigation system, irrigation contractor to provide the owner with two sets of drawings indicating actual location of piping, valves, sprinkler heads, wiring, and zones.
30. An irrigation zone map shall be provided in a protective jacket and be kept with the main irrigation controller. The map shall show all approved irrigation and include all zone valve locations.
31. It shall be the responsibility of the sprinkler contractor to demonstrate to the Owner the proper winterization and start-up procedures for the entire system prior to final payment.

IRRIGATION SCHEDULE

Sprayheads / Rotors

Symbol	Manufacturer/Model #	Description	Notes	Detail
(B) 08HE-VAN (10) 10HE-VAN (12) 12HE-VAN (15) 15HE-VAN	Rain Bird 1804	4" Pop-Up Sprayhead with Adjustable Nozzle	Adjust Radius Reduction Screws as Needed to Achieve Appropriate Radii Coverages	13/L3.1
(1.0) (2.0)	Rain Bird 3504-PC	4" Pop-Up Rotor with Adjustable Nozzle	Adjust Radius Reduction Screws as Needed to Achieve Appropriate Radii Coverages	13/L3.1

Valves

	Rain Bird 100-PESB	Lawn Remote Control Valve with Scrubber Technology	1 Inch Size; Install in Standard Valve Box with 3" Depth of Gravel over Weed Barrier; Install with Water Proof Wire Connectors	14/L3.1
	Rain Bird XCZ-100-PRB-COM	Drip Remote Control Valve Kit	1 Inch Size; Install in Standard Valve Box with 3" Depth of Gravel over Weed Barrier; Install with Water Proof Wire Connectors	6/L3.1
Q	Rain Bird 44-NP	Quick Coupler with Non-Potable Cover and Swing Joint	1 Inch Size; Install in 10" Round Valve Box with 3" Depth of Gravel over Weed Barrier	7/L3.1
D	Matco-Norca 759	Manual Drain Ball Valve	3/4 Inch Size; Install at End of the Mainline in a 10" Round Valve Box with Weed Barrier and a Gravel Sump	10/L3.1

Drip

	PVC Pipe To Drip Tubing	Provide Connection Fittings	Install 1" Feeder Line To All Drip Areas	11/L3.1
	Rain Bird XBS-075 Rain Bird XD-100 Rain Bird XB-20PC Rain Bird TS025 Rain Bird DBC-025 Rain Bird MDCFCAP	3/4" Distribution Tubing - Pipe shown on Plan is Schematic; Adjust as Needed 1/4" Distribution Tubing - Install one per Emitter Xeri-Bug Emitter (2 Gal/Hr.) - 1 per Perennial, 2 per Shrub/Ornamental Grass, 5 per Tree Tie Down Stake - Tubing to be Staked every 3' Diffuser Bug Cap - Install one per Emitter Removable Flush Cap - Install at the End of Each Line		5&9/L3.1

P.O.C. Components

	Mueller Oriseal Mark II	Stop and Waste Valve	1 Inch Size; Install in 10" Round Valve Box with Weed Barrier and Gravel Sump	16/L3.1
F	Amiad Tagline Canister Filter	Secondary Water Filter	1 Inch Size; Filter with 155 Mesh; Install in Regular Size Box with Weed Barrier and 3" Depth of Clean Gravel; Filter Shall be Installed Underground	15/L3.1

Pipes

	Schedule 40 PVC	Mainline Pipe	1 Inch Size; See Plan for Locations; Schedule 40 Fittings Shall be Used for Mainline Components	8/L3.1
	Schedule 40 PVC	Lateral Line Pipe	See Plan for Pipe Sizes; Pipes Unmarked Shall be 1 Inch; Minimum Pipe Size Shall be 1 Inch for PVC Pipe	8/L3.1

Controller & Accessories

C	Rain Bird ESP4MEI Rain Bird ESPSM3 Rain Bird LNKWIFI	4 Base Station Indoor Controller 3 Station Expansion Module WIFI Module	See Plan for Location of Controller; Coordinate Power Supply With Building Electrical Contractor	12/L3.1

Sleeving

= = =	Schedule 40 PVC	Provide for Irr. Mainlines, Laterals, and Controller Wire Located Under Concrete and Asphalt Paving at Specified Depths	Contractor Shall Coordinate the Installation of Sleeving with the Installation of Concrete Flatwork and Asphalt Paving; All Sleeving Shall be by the Landscape Contractor Unless Otherwise Noted	17/L3.1

Valve Callout: # (Valve Number), # (Valve Flow), #" (Valve Size)

VALVE SCHEDULE

VALVE STATION	VALVE SIZE	IRRIGATION TYPE	FLOW (GPM)	PSI	PSI @ POC	PRECIP. RATE
1	1"	Lawn Area - Turf Spray	9.05	31.95	42.29	1.99 in/h
2	1"	Lawn Area - Turf Rotor	8.75	36.98	46.57	0.85 in/h
3	1"	Shrub Area - Drip Emitters	3.70	33.27	35.06	0.47 in/h
4	1"	Area for Drip Emitters	4.06	33.54	35.62	0.37 in/h
5	1"	Area for Drip Emitters	4.13	33.74	35.37	0.56 in/h

Scale: 1" = 20'

20' 0 20' 40'

General Irrigation Note

Main Service Line & Other Irrigation Components Are Shown In Paved Or Hardscape Surfaced For Clarity Purposes ONLY! Install All Irrigation Components within Landscaped Areas.

Irrigation Notes

1. See Sheet L1.1 for Plant Layout and Sheet L3.1 for Planting and Irrigation Details.
2. The City Reported a Static Pressure Range of 80-90 psi in the Area. Static Pressure of 80 psi. was Used. Irrigation System was Designed for a Minimum of 47 psi.

Know what's below. Call before you dig.

REV | DATE | DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name: Ridley's Family Markets
20-112 IR

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWAengineering.net

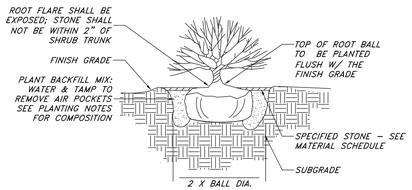
Irrigation Plan

Ridley's Santaquin - Retail C
400 East and Main Street
Santaquin, UT

State of Utah
Jared R. Monsrud
No. 7740426-5301
Licensed Landscape Architect
09/11/2020

11 Sep, 2020

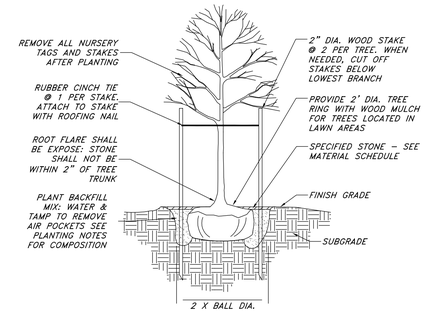
SHEET NO.
L2.1



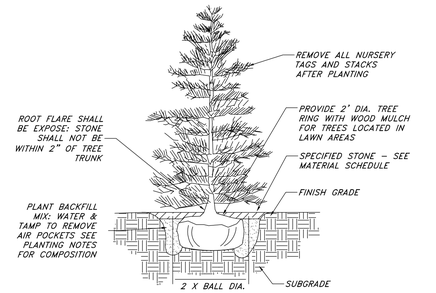
NOTE:

1. CUT AND REMOVE WIRE FROM TOP AND SIDES OF ROOTBALL. PEEL BACK BURLAP TO EXPOSE TOP 1/3 OF ROOTBALL.
2. REMOVE ALL NURSERY TAGS AND STACKS AFTER PLANTING.

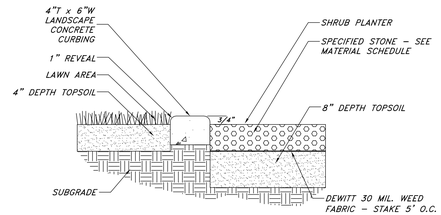
1 SHRUB PLANTING
Not to Scale



2 DECIDUOUS TREE PLANTING
Not to Scale



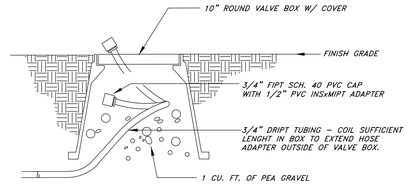
3 EVERGREEEN TREE PLANTING
Not to Scale



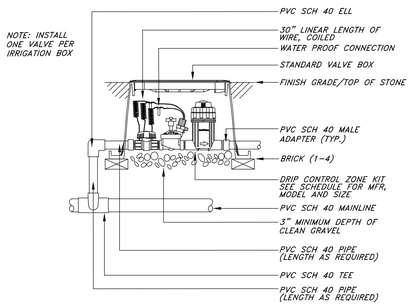
NOTE:

1. SMOOTH GRADE ENTIRE AREA PRIOR TO PLACEMENT OF CURBING AND SPECIFIED MULCH.
2. CONTROL JOINTS SHALL BE PLACED AT 4' O.C.

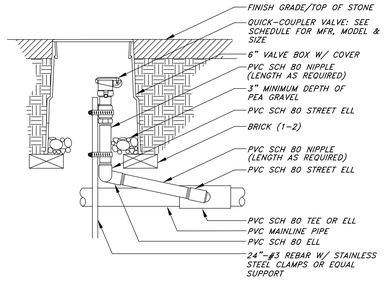
4 LANDSCAPE CONCRETE CURBING
Not to Scale



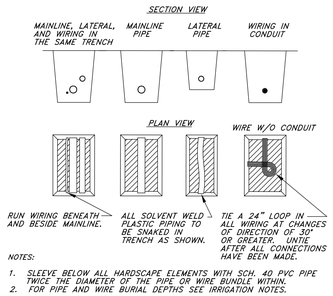
5 COMPRESSION FLUSH CAP
NOT TO SCALE



6 DRIP CONTROL VALVE
NOT TO SCALE



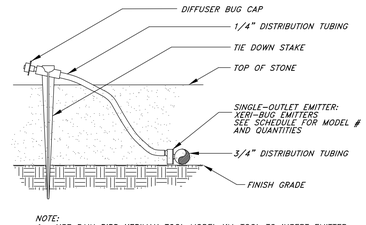
7 QUICK COUPLING VALVE
NOT TO SCALE



NOTES:

1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH SCH. 40 PVC PIPE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
2. FOR PIPE AND WIRE BURIAL DEPTHS SEE IRRIGATION NOTES.

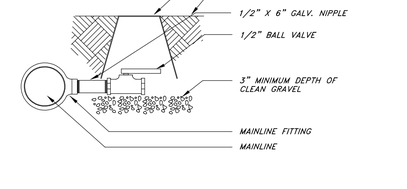
8 PIPE & WIRE TRENCHING
NOT TO SCALE



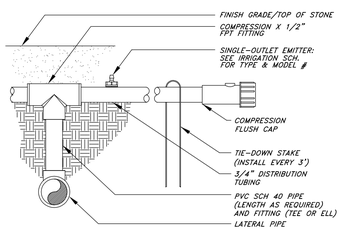
NOTE:

1. USE RAIN BIRD XERIMAN TOOL MODEL XM-TOOL TO INSERT EMITTER DIRECTLY INTO 3/4" DISTRIBUTION TUBING.
2. INSTALL EMITTERS ON OPPOSING SIDES OF ROOTBALL. EMITTERS ARE TO BE INSTALLED TO CLEAR SURFACE BY A MIN. OF 1" AND AND A MAX. OF 2". FLUSH ALL INES THOROUGHLY, INCLUDING 1/4" DISTRIBUTION TUBING PRIOR TO EMITTER INSTALLATION. IF PLANTING IN A 4:1 SLOPE OR GREATER, INSTALL BOTH EMITTERS ON UPHILL SIDE OF ROOTBALL.

9 EMITTER INTO DISTRIBUTION TUBE
NOT TO SCALE



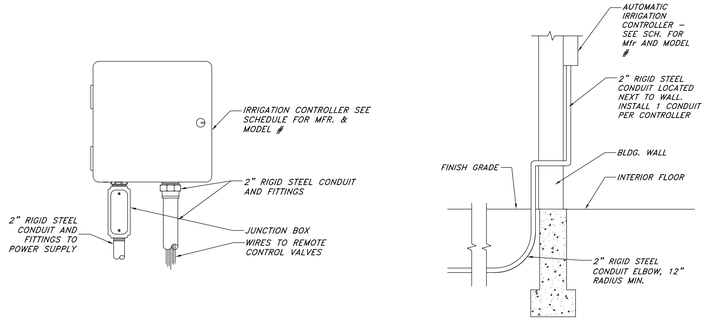
10 MANUAL DRAIN VALVE
NOT TO SCALE



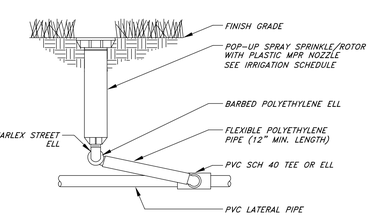
NOTE:

1. USE RAIN BIRD XERIMAN TOOL MODEL XM-TOOL TO INSERT EMITTER DIRECTLY INTO 3/4" DISTRIBUTION TUBING.

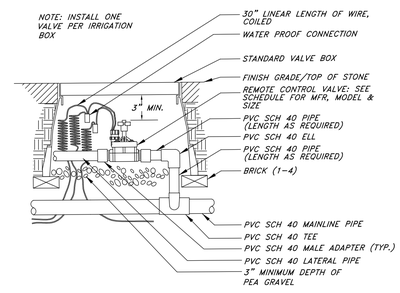
11 PVC TO POLY PIPE CONNECTION
NOT TO SCALE



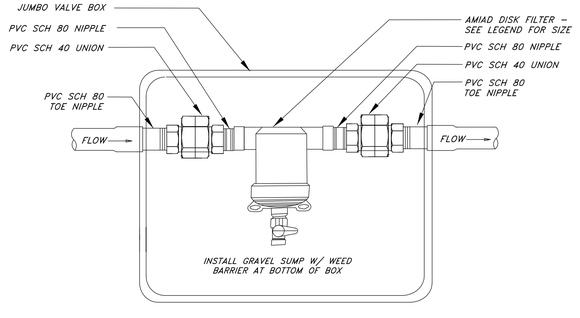
12 IRR. CONTROLLER - INDOOR WALL MOUNT
Not to Scale



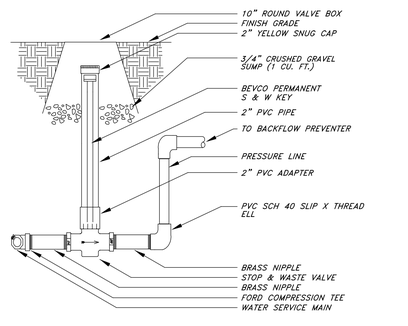
13 POP-UP SPRAY HEAD & ROTOR
NOT TO SCALE



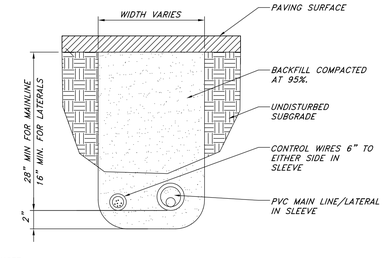
14 REMOTE CONTROL VALVE
NOT TO SCALE



15 AMIAD SECONDARY WATER FILTER
Not to Scale



16 STOP & WASTE VALVE
NOT TO SCALE



NOTE:

1. ALL IRRIGATION SLEEVES TO BE SCH. 40 PVC PIPE.
2. ALL SLEEVES SHALL BE TWICE THE NOMINAL SIZE OF THE PIPE WITHIN.
3. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
4. SLEEVE TO BE RUN UNDER PAVEMENT AND EXTEND A MIN. OF 18" PAST EDGE OF PAVEMENT. END OF SLEEVE TO BE CAPPED AND MARKED.

17 PIPE SLEEVING
Not to Scale

Know what's below. Call before you dig.

REV	DATE	DESCRIPTION

Designed by: SY
Drafted by: JD
Client Name:
Ridley's Family Markets

20-112 IR

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWAengineering.net

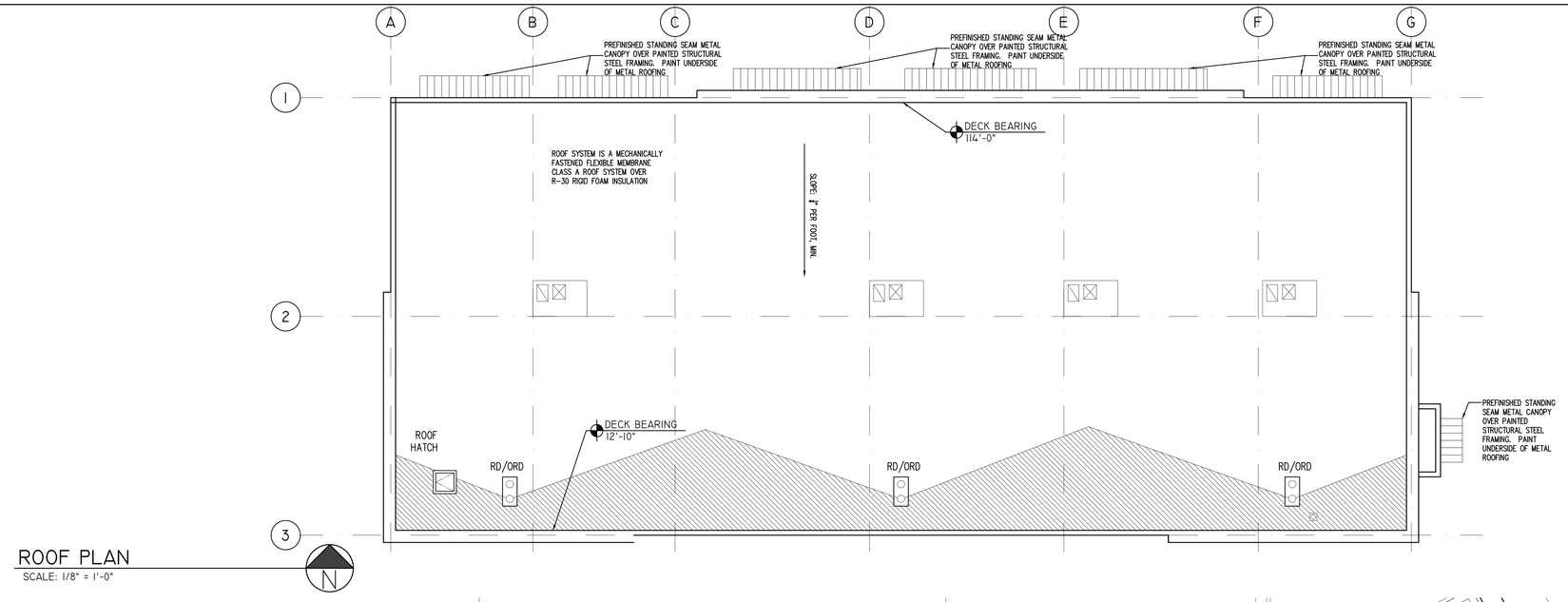
Landscape & Irrigation Details

Ridley's Santaquin - Retail C
400 East and Main Street
Santaquin, UT

State of Utah
Jared R. Monsalli
No. 7740426-5301
Licensed Landscape Architect
09/11/2020

11 Sep, 2020

SHEET NO.
L3.1



ROOF PLAN

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

ROOF LEGEND

NOTE:

1. CONTRACTOR RESPONSIBLE TO PATCH, REPAIR, SEAL AND FLASH ALL ROOF PENETRATIONS, INCLUDING BUT NOT LIMITED TO ELECTRICAL, PLUMBING, MECHANICAL, REFRIGERATION STRUCTURAL AND SIGNAGE PENETRATIONS.
2. ALL ROOF TOP EQUIPMENT TO BE A MINIMUM OF 10'-0" FROM ANY ROOF EDGE.
3. REFER TO DETAILS 7, 14, 15 AND 16 ON SHEET A0.2 FOR TYPICAL FLASHING DETAILS.
4. MAINTAIN 1/4" PER FOOT MINIMUM SLOPE AT FLEXIBLE MEMBRANE ROOF.

- RD/ORD: ROOF DRAIN AND SECONDARY ROOF DRAIN. RE: 13/A0.2
- CRICKET OF TAPERED RIGID INSULATION CONSTRUCT W/ MIN. POSITIVE SLOPE OF 1/2" PER FT. AND TO DIMENSIONS INDICATED, AT SMALLER CRICKETS WHERE DIMENSIONS ARE NOT INDICATED MAKE WIDTH EQUAL TO LENGTH. PROVIDE ON UPSIDE SLOPE OF ALL EQUIPMENT CURBS.
- RTU: ROOF TOP UNIT, SEE DETAILS 16/A0.2 FOR SITE BUILT PLATFORMS. REFER TO MECHANICAL DRAWINGS FOR PREFABRICATED CURBS. PROVIDE STEEL FRAME Ø OPENINGS AND UNDER CURBS, SEE STRUCTURAL DRAWINGS.
- FLUE PENETRATION SEE DET. 15/A0.2
- EF: EXHAUST FAN SEE DET. 16/A0.2. PROVIDE CURB FOR EQUIPMENT AT ALL EXHAUST FAN LOCATIONS.
- 30" X 36" ROOF HATCH. BILCO OR APPROVED EQUAL

SCOPE OF WORK NOTES

1. ALL GYP. IS TYPE "X" U.N.O.
2. PROVIDE ACOUSTICAL JOINT SEALANTS AT WALL TO WALL INTERSECTIONS, WALL TO FLOOR INTERSECTIONS AND ALL PENETRATIONS IN WALL TYPES SHOWN WITH ACOUSTICAL BATT INSULATION.
3. PROVIDE SEPARATION BARRIER BETWEEN ALL DISSIMILAR METALS, TYP.
4. REFER TO EXTERIOR ELEVATIONS FOR EXTERIOR FINISH MATERIAL SPECIFICATIONS. REFER TO INTERIOR ELEVATIONS AND INTERIOR FINISH SCHEDULE FOR INTERIOR FINISH MATERIAL SPECIFICATIONS.
5. PROVIDE METAL STUD DEFLECTION TRACK AT ALL NON-LOAD BEARING WALLS THAT EXTEND TO B.O. OF ROOF STRUCTURE OR ROOF DECK, RE: STRUCTURAL AND 6/A7.2.
6. PROVIDE 4" CONCRETE SLAB OVER 4" GRANULAR DRAINAGE FILL OVER 10 MIL. VAPOR BARRIER. RE: STRUCTURAL. REFER TO FLOOR PLAN FOR AREAS WHERE NO CONCRETE OCCURS, PROVIDE GRANULAR FILL AND 10 MIL. VAPOR BARRIER IN THESE LOCATIONS.
7. PROVIDE CONCRETE CONTROL JOINTS PER THE SPECS.

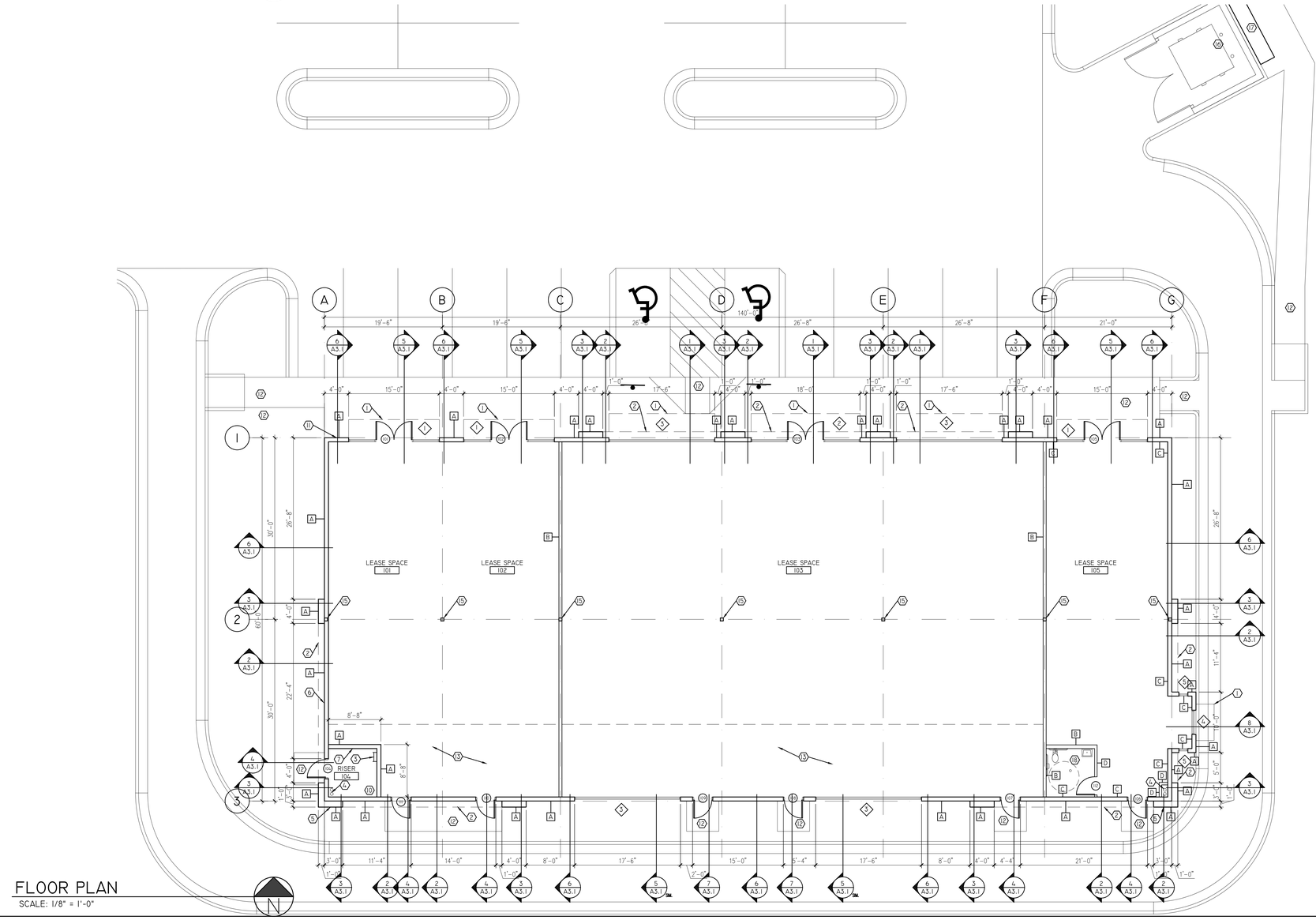
KEYED NOTES

1. LINE OF CANOPY ABOVE
2. LINE OF SOFFIT ABOVE
3. ROOF ACCESS LADDER, RE: 8/A0.2
4. ROOF DRAIN AND OVERFLOW ROOF DRAIN PIPES, RE: PLUMBING
5. DOWNSPOUT NOZZLE, RE: PLUMBING AND EXTERIOR ELEVATIONS
6. GAS METER, RE: PLUMBING AND CIVIL
7. ELECTRICAL PANEL, RE: ELECTRICAL
8. ELECTRICAL TRANSFORMER PAD, RE: 2/A0.3 AND ELECTRICAL
9. ELECTRICAL EQUIPMENT, RE: ELECTRICAL
10. FIRE RISER, RE: SPECS.
11. FIRE DEPARTMENT CONNECTION
12. 6" CONCRETE WALK, RE: CIVIL
13. NO CONCRETE SLAB IN THIS AREA
14. FUTURE DEMISING WALL, NIC
15. COLUMN, RE: STRUCTURAL
16. DUMPSTER ENCLOSURE, RE: 12/A5.1
17. ELEC EQUIP, RE: ELEC.
18. RESTROOM, RE:15/A5.2

WALL TYPE SCHEDULE

NOTE: REFER TO A2.1 FOR EXTERIOR FINISH AND A6.1 FOR INTERIOR FINISH

- A: 6" WOOD STUDS @ 16" O.C. WITH ½" EXTERIOR PLYWOOD SHEATHING, RE: STRUCTURAL. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISH MATERIALS. PROVIDE FULL BATT INSULATION WITH VAPOR BARRIER.
- B: 6" WOOD STUDS @ 16" O.C. WITH 5/8" TYPE-X GYP. BOARD ON BOTH SIDES. EXTEND STUDS AND GYP. BOARD TO B.O. ROOF DECK ABOVE. PROVIDE FULL SOUND BATT INSULATION.
- C: 5/8" TYPE-X GYP. BOARD
- D: 4" WOOD STUDS @ 16" O.C. WITH 5/8" TYPE-X GYP. BOARD ON BOTH SIDES. EXTEND



FLOOR PLAN

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

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

STATE OF UTAH
KRISTEN IRELAND VOROS
No. 7557079-0301
LICENSED ARCHITECT

RETAIL BUILDING SANTAQUIN PAD C

SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE: SEPTEMBER 11, 2020
AGENCY PROJECT NO:
DESIGN SEQUENCE PROJECT NO: 2010.01
CAD DWG FILE NO:
DRAWN BY: KV
DESIGNED BY: KV
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET

SHEET TITLE

FLOOR PLAN & ROOF PLAN

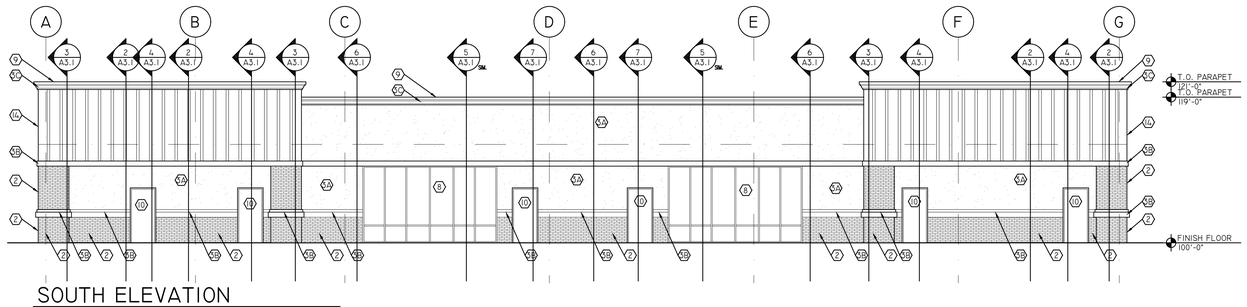
A1.1

MATERIAL SCHEDULE

MARK	MATERIAL	FINISH/COLOR
2	THIN BRICK	INTERSTATE – MONTEREY
4A	EIFS	COLOR 1 – ACCESSIBLE BEIGE SW7036
4B	EIFS	COLOR 2 – TONY TAUPE SW7038
4C	EIFS	COLOR 3 – VAN DYKE BROWN SW7041
4	PRECAST CONCRETE SILL	NATURAL
5	ARCHITECTURAL FINISH CONCRETE FOUNDATION	NATURAL
6	PREFINISHED STRUCTURAL STANDING SEAM METAL ROOFING.	DARK BRONZE
7	PAINTED STEEL	MATCH DARK BRONZE, VERIFY COLOR
8	GLASS AND ALUMINUM STOREFRONT, RE: WINDOW AND DOOR SCHEDULE	DARK BRONZE STOREFRONT WITH CLEAR GLAZING
9	PREFINISHED METAL COPING	DARK BRONZE
10	PAINTED HM DOOR AND FRAME	MATCH DARK BRONZE, VERIFY COLOR
11	COWS TONGUE DOWNSPOUT NOZZLE, INSTALL AT 24" ABOVE FINISH GRADE, RE: PLUMBING	–
12	LIGHT FIXTURE, RE: ELECTRICAL	
13	SIGNAGE PROVIDED AND INSTALLED BY OWNER. G.C. TO PROVIDE ELECTRICAL CONNECTIONS, RE: ELECTRICAL. G.C. TO PROVIDE ANCHORAGE FOR SIGNAGE. G.C. TO PROVIDE CORE DRILLED HOLES THROUGH MASONRY FOR CONDUIT FROM J BOXES MOUNTED AT THE INTERIOR OF THE BUILDING. COORDINATE NUMBER AND LOCATION WITH SIGNAGE SUPPLIER.	
14	BOARD AND BATTEN CEMENT BOARD SIDING	HARDIE BOARD – TIMBER BARK

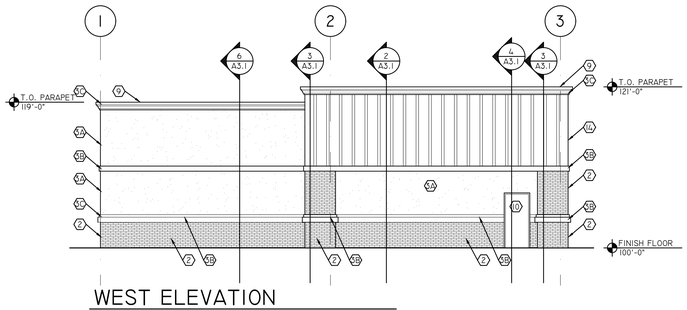
EXTERIOR ELEVATION NOTES:

1. ALL COLOR SELECTIONS ARE PRELIMINARY. G.C. TO VERIFY FINAL COLOR SELECTIONS WITH ARCHITECT AND OWNER PRIOR TO ORDERING.
2. ALL EXPOSED STEEL TO BE PAINTED AS DESCRIBED IN SPEC., VERIFY COLOR WITH ARCHITECT AND OWNER.
3. UNDERSIDE OF PREFINISHED METAL STANDING SEAM ROOFING TO BE PAINTED. VERIFY COLOR WITH ARCHITECT AND OWNER.
4. PROVIDE MASONRY CONTROL JOINTS AS SHOWN, RE: 7/A5.2.
5. PROVIDE COLORED MORTAR AT CMU AND BRICK. COLOR TO BE SELECTED BY THE ARCHITECT FROM THE MANUFACTURERS FULL LINE OF COLORS.



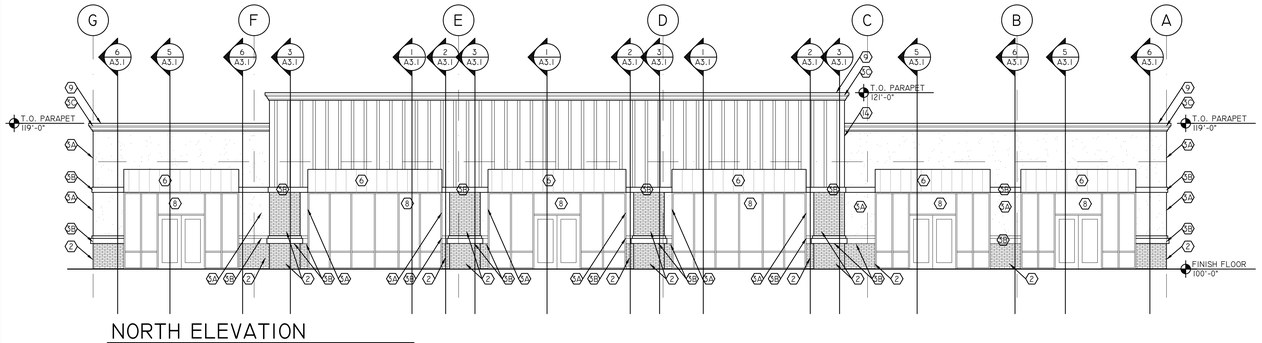
SOUTH ELEVATION

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



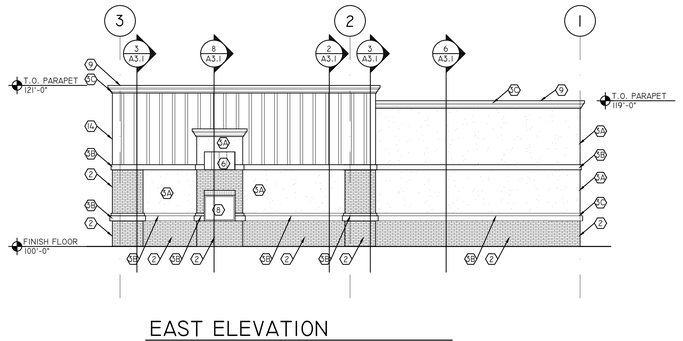
WEST ELEVATION

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



NORTH ELEVATION

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



EAST ELEVATION

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

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

STATE OF UTAH
KRISTEN IRELAND VOROS
No. 7557079-0301
LICENSED ARCHITECT

RETAIL BUILDING SANTAQUIN PAD C

SANTAQUIN, UTAH

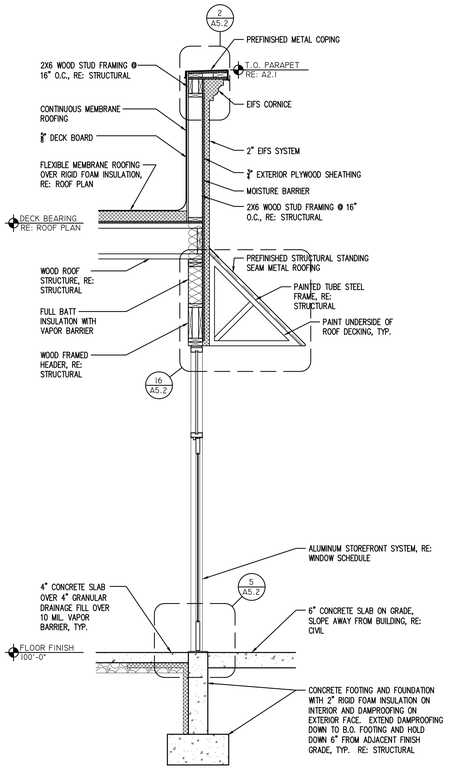
MARK	DATE	DESCRIPTION

DATE:	SEPTEMBER 11, 2020
AGENCY PROJECT NO:	
DESIGN SEQUENCE PROJECT NO:	2010.01
CAD DWG FILE NO:	
DRAWN BY:	KV
DESIGNED BY:	KV
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

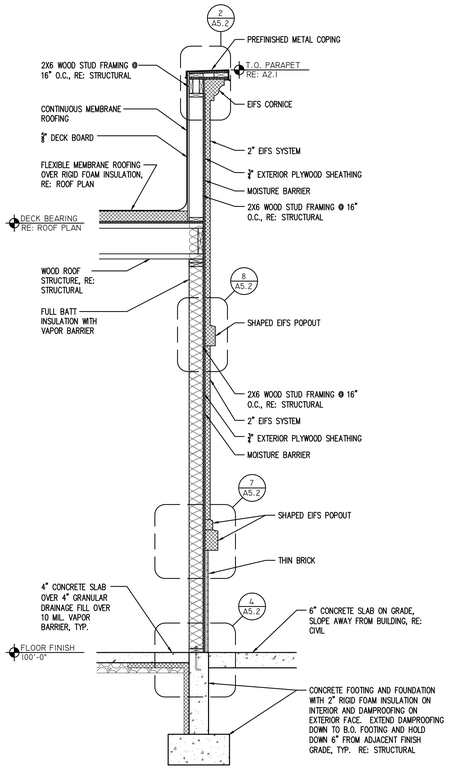
SHEET TITLE

EXTERIOR ELEVATIONS

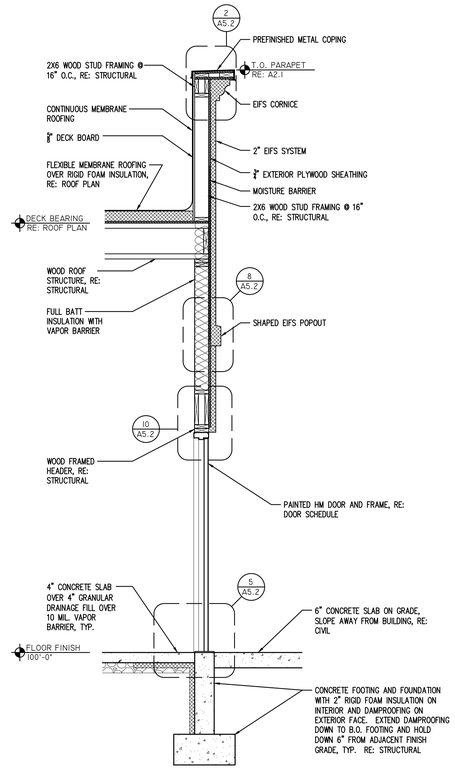
A2.1



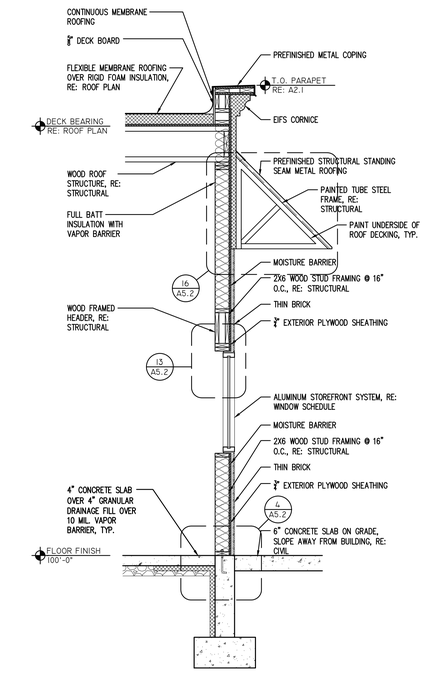
5 WALL SECTION
SCALE: 1/2" = 1'-0"



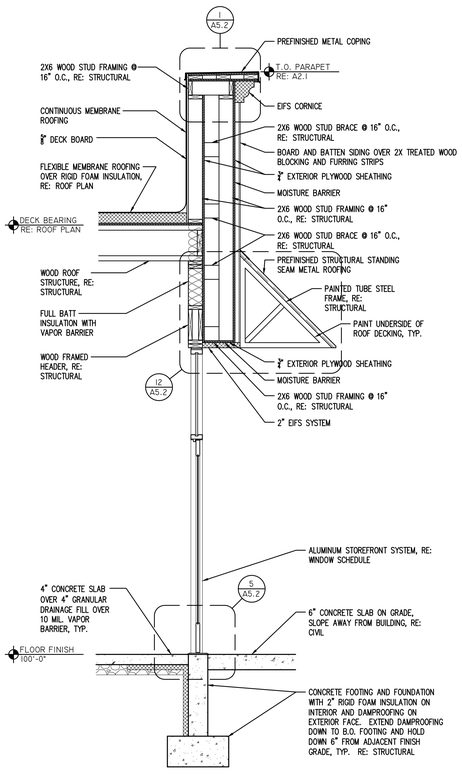
6 WALL SECTION
SCALE: 1/2" = 1'-0"



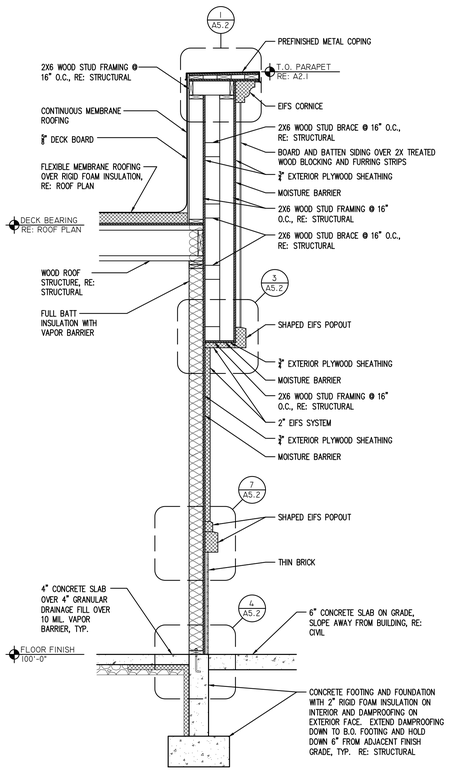
7 WALL SECTION
SCALE: 1/2" = 1'-0"



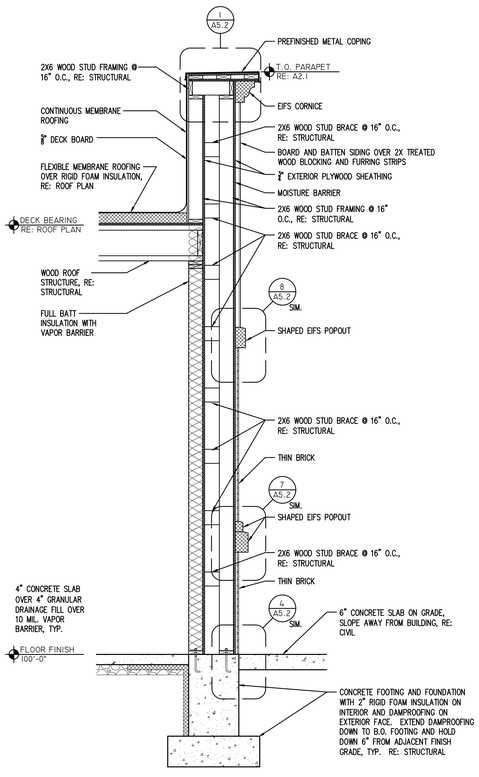
8 WALL SECTION
SCALE: 1/2" = 1'-0"



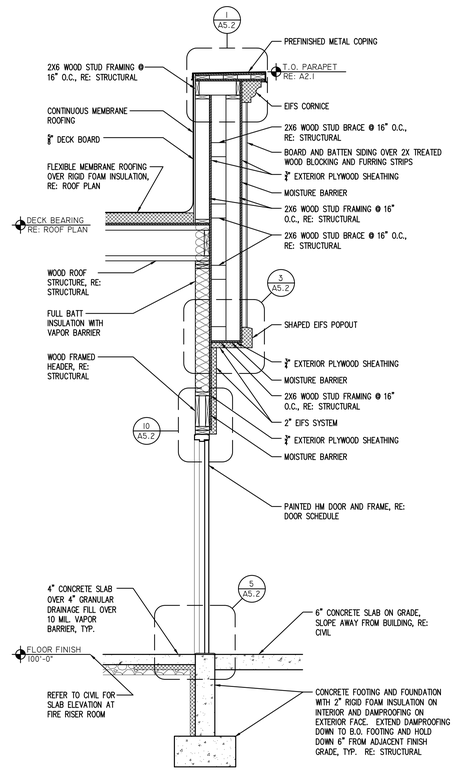
1 WALL SECTION
SCALE: 1/2" = 1'-0"



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



3 WALL SECTION
SCALE: 1/2" = 1'-0"



4 WALL SECTION
SCALE: 1/2" = 1'-0"

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

STATE OF UTAH
KRISTEN IRELAND VOROS
No. 7557079-0301
LICENSED ARCHITECT

RETAIL BUILDING
SANTAQUIN PAD C

SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

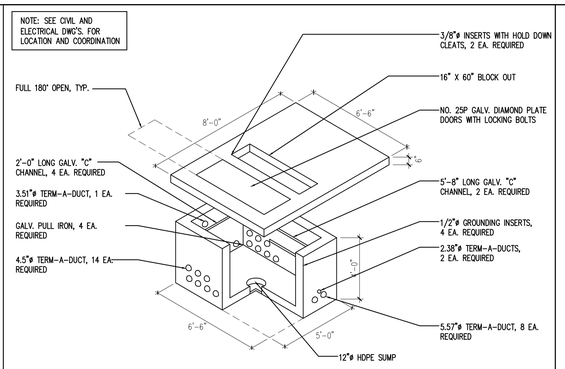
DATE: SEPTEMBER 11, 2020
AGENCY PROJECT NO:
DESIGN SEQUENCE PROJECT NO: 2010.01
CAD DWG FILE NO:

DRAWN BY: KV
DESIGNED BY: KV
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET

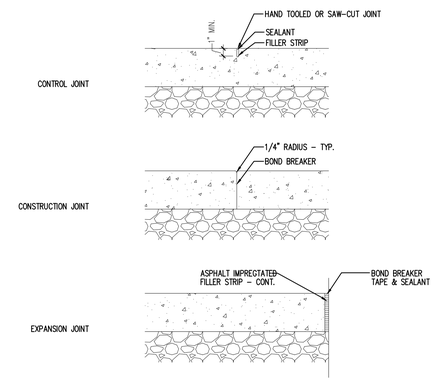
SHEET TITLE

WALL SECTIONS

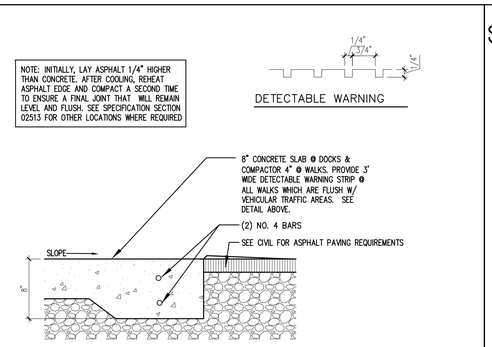
A3.1



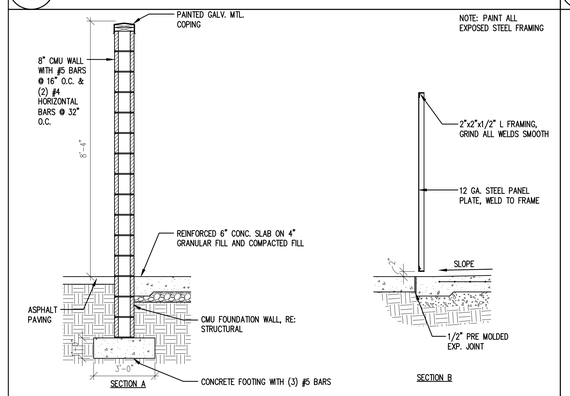
2 3-PHASE TRANSFORMER PAD VAULT
SCALE: NTS



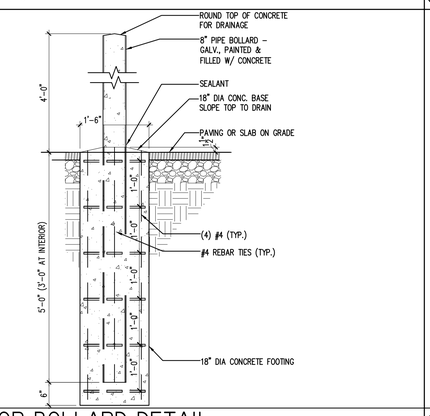
3 CONCRETE JOINT DETAIL
SCALE: 1-1/2" = 1'-0"



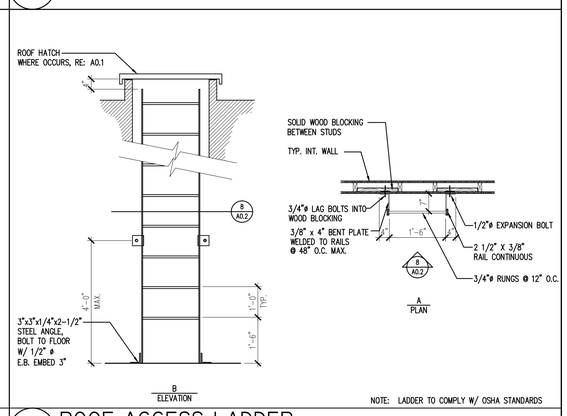
4 PAVING DETAIL
SCALE: 1" = 1'-0"



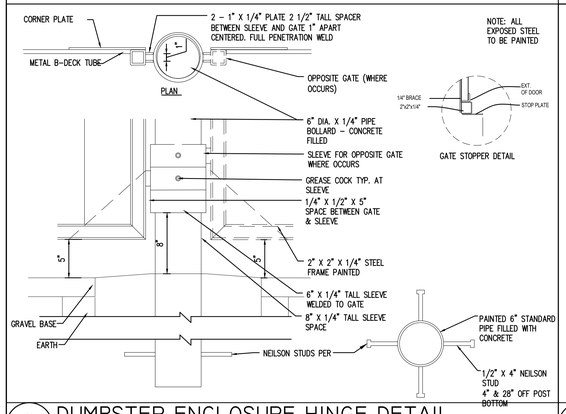
10 DUMPSTER ENCLOSURE SECTION
SCALE: 1/2" = 1'-0"



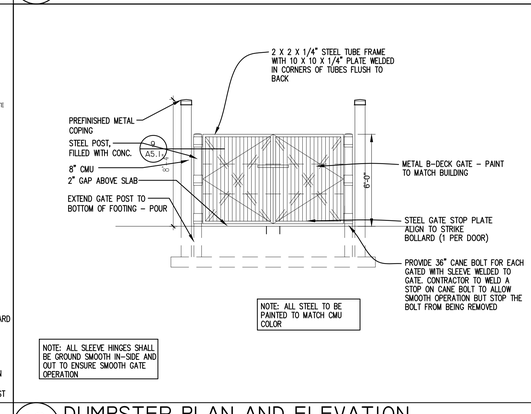
7 EXTERIOR BOLLARD DETAIL
SCALE: 3/4" = 1'-0"



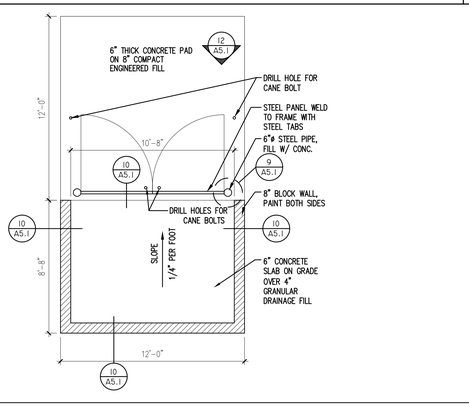
8 ROOF ACCESS LADDER
SCALE: 1/2" = 1'-0"

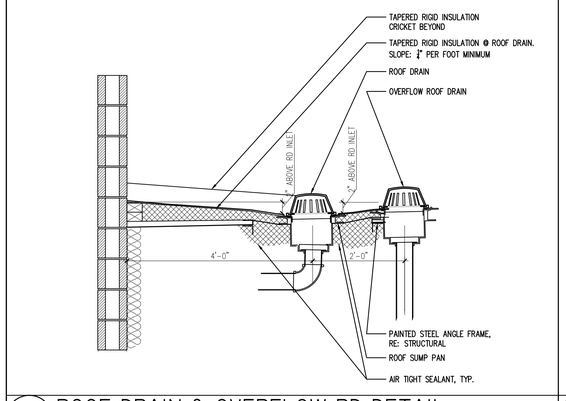


9 DUMPSTER ENCLOSURE HINGE DETAIL
SCALE: 1-1/2" = 1'-0"

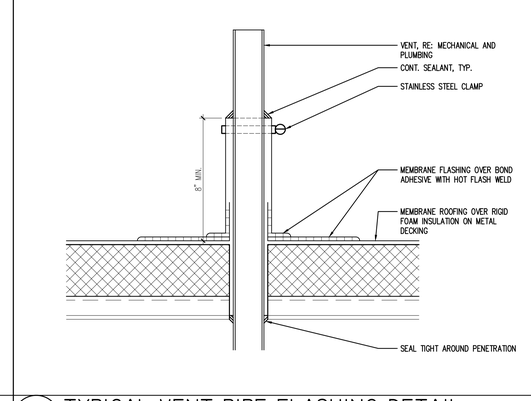


12 DUMPSTER PLAN AND ELEVATION
SCALE: 1/4" = 1'-0"

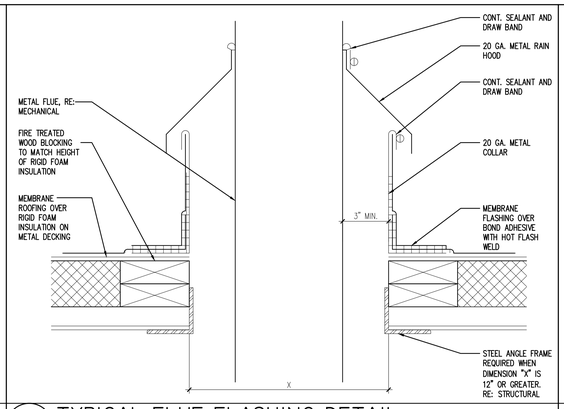




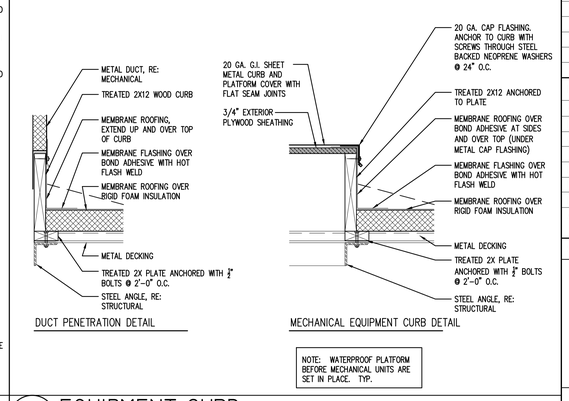
13 ROOF DRAIN & OVERFLOW RD DETAIL
SCALE: 3/4" = 1'-0"



14 TYPICAL VENT PIPE FLASHING DETAIL
SCALE: 3" = 1'-0"



15 TYPICAL FLUE FLASHING DETAIL
SCALE: 3" = 1'-0"



16 EQUIPMENT CURB
SCALE: 1-1/2" = 1'-0"

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

STATE OF UTAH
KRISTEN IRELAND VOROS
No. 7557079-0301
LICENSED ARCHITECT

RETAIL BUILDING SANTAQUIN PAD C

SANTAQUIN, UTAH

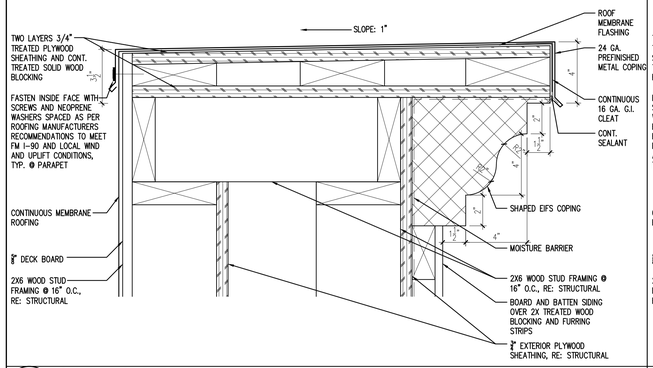
MARK	DATE	DESCRIPTION

DATE: SEPTEMBER 11, 2020
AGENCY PROJECT NO:
DESIGN SEQUENCE PROJECT NO: 2010.01
CAD DWG FILE NO:
DRAWN BY: KV
DESIGNED BY: KV
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET

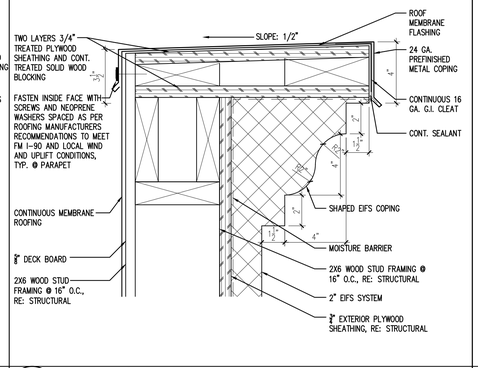
SHEET TITLE

DETAILS

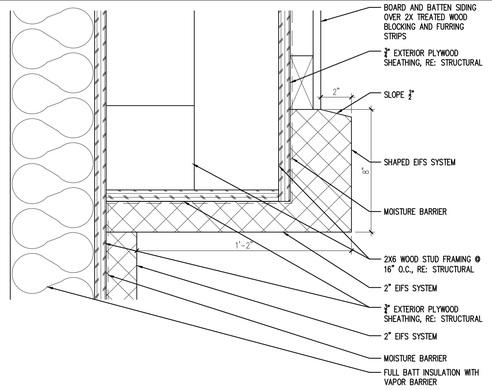
A5.1



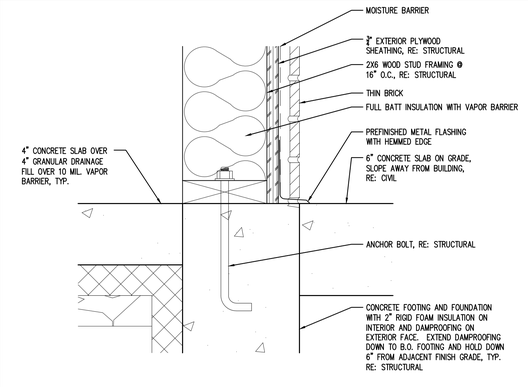
1 COPING DETAIL
SCALE: 3" = 1'-0"



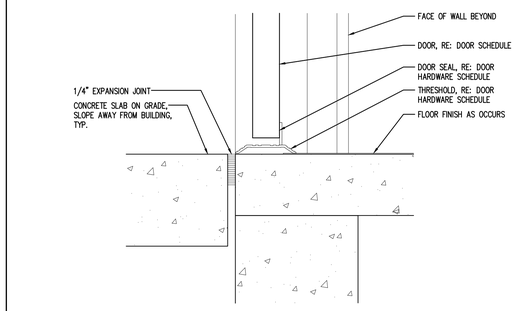
2 COPING DETAIL
SCALE: 3" = 1'-0"



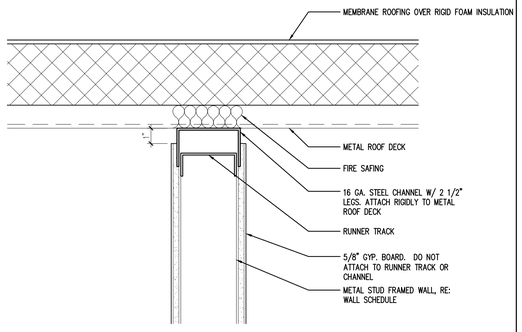
3 SECTION DETAIL
SCALE: 3" = 1'-0"



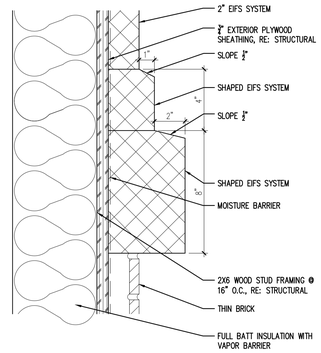
4 SECTION DETAIL
SCALE: 3" = 1'-0"



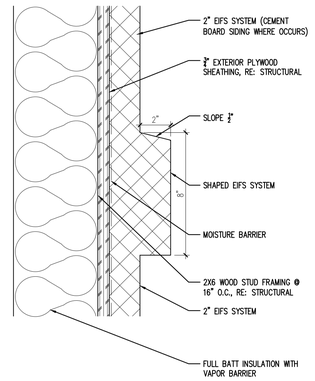
5 THRESHOLD DETAIL
SCALE: 3" = 1'-0"



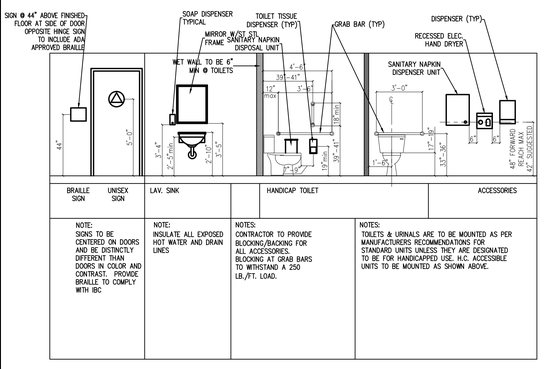
6 SLIP TRACK DETAIL
SCALE: 3" = 1'-0"



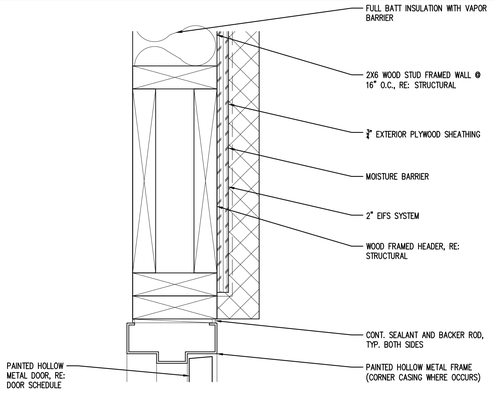
7 SECTION DETAIL
SCALE: 3" = 1'-0"



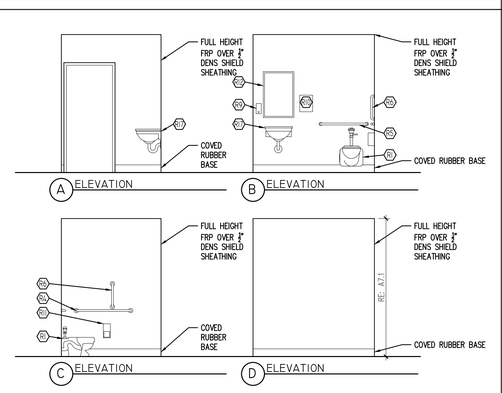
8 SECTION DETAIL
SCALE: 3" = 1'-0"

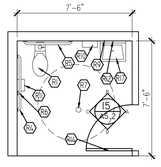


9 MOUNTING STANDARDS
SCALE: NTS



10 HM HEAD DETAIL
SCALE: 3" = 1'-0"



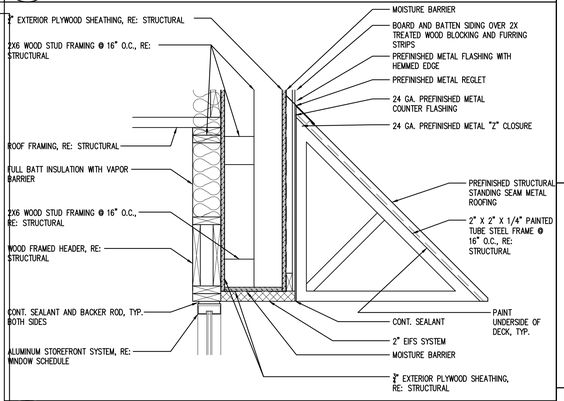


RESTROOM KEYED NOTES

- W1 WATER CLOSET
- W2 –
- W3 –
- W4 42" GRAB BAR
- W5 36" GRAB BAR
- W6 18" GRAB BAR
- W7 FLOOR DRAIN, SLOPE FLOOR AS INDICATED ON FLOOR FINISH PLAN, RE: PLUMBING
- W8 –
- W9 SOAP DISPENSER, BY OWNER
- W10 PAPER TOWEL DISPENSER, BY OWNER
- W11 TOILET PAPER DISPENSER, BY OWNER
- W12 1/4" PLATE GLASS MIRROR WITH STAINLESS STEEL FRAME
- W13 –
- W14 COAT HOOK
- W15 –
- W16 –
- W17 WALL MOUNT LAVATORY

NOTES:
1. REFER TO DETAIL 9/A5.2 FOR MOUNTING STANDARDS
2. PROVIDE DENSSHIELD SHEATHING BEHIND WALL FINISH.

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



12 STANDING SEAM CANOPY
SCALE: 1" = 1'-0"

13 WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"

14 HM JAMB DETAIL
SCALE: 3" = 1'-0"

16 STANDING SEAM CANOPY
SCALE: 1" = 1'-0"

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

STATE OF UTAH
KRISTEN IRELAND VOROS
No. 7557079-0301
LICENSED ARCHITECT

RETAIL BUILDING SANTAQUIN PAD C

SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

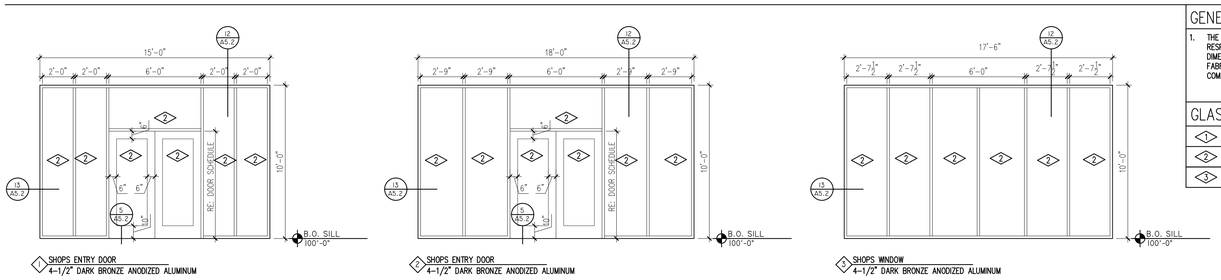
DATE:	SEPTEMBER 11, 2020
AGENCY PROJECT NO:	
DESIGN SEQUENCE PROJECT NO:	2010.01
CAD DWG FILE NO:	
DRAWN BY:	KV
DESIGNED BY:	KV
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

SHEET TITLE

DETAILS

A5.2

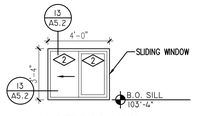
WINDOW TYPES



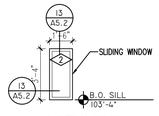
1 SHOPS ENTRY DOOR
4-1/2" DARK BRONZE ANODIZED ALUMINUM

2 SHOPS ENTRY DOOR
4-1/2" DARK BRONZE ANODIZED ALUMINUM

3 SHOPS WINDOW
4-1/2" DARK BRONZE ANODIZED ALUMINUM



4 EXTERIOR SLIDING WINDOW
4-1/2" DARK BRONZE ANODIZED ALUMINUM



5 EXTERIOR WINDOW
4-1/2" DARK BRONZE ANODIZED ALUMINUM

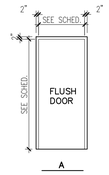
GENERAL NOTES

1. THE GLAZING CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS PRIOR TO PURCHASING OR FABRICATING ANY GLAZING SYSTEM COMPONENTS.

GLASS TYPES

1	CLEAR 1" INSULATED
2	CLEAR 1" INSULATED TEMPERED
3	CLEAR 1" INSULATED SPANDREL TEMPERED

DOOR TYPES



Hardware Schedule

Hardware Group 1 – Front Entry Double Door
2 ea Cont. hinge 780-112HD Roton
2 ea Exit device 9848NL x 697NL 26D Von Duprin
2 ea Stabilizer Von Duprin
2 ea Closers 4040XP LCN
2 ea Weatherstriping
2 ea Door Bottom Pemko 434 ANBL
1 Ea Threshold
1 Sign "This door to remain unlocked during business hours." per IBC

Hardware Group 2 – Rear Door
3 Each Hinges Hager AB700 4-1/2" x 4-1/2" 26D
1 Each Panic Von Duprin CD 98 EO US26D
1 Each Lockset Best 93K 7 D 14D S3 626
1 Each Closer LCN 4040XP Alum
1 Each Threshold Pemco 170 A
1 Each Door BottomPemco 368 CN
1 Each Weatherstrip Pemco 303 A
1 Each Peephole
3 Each Silencers

Hardware Group 3 – Fire Riser Door
3 Each Hinges Hager AB750 5" x 5" 26D
1 Each Lockset Best 93K 7 D 14D S3 626
1 Each Closer LCN 4040XP Alum
1 Each Threshold Pemko 170 A
1 Each Door BottomPemko 368 CN
1 Each Weatherstrip Pemko 303 A
3 Each Silencers

Hardware Group 4 – Singe Use Restroom Door
3 Each Hinges Hager AB700 4-1/2" x 4-1/2" 26D
1 Each Lockset Best 93K 7 L 14D S3 626
1 Each Closer LCN 4040XP Alum
1 Each Stop Rockwood 440
2 Each Kickplate Rockwood 12" 32D
3 Each Silencers

DOOR SCHEDULE

DOOR NUMBER	DOOR TYPE	DOOR MATERIAL	SIZE W	SIZE H	SIZE T	FRAME MATERIAL	FRAME FIRE RATING	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS THRES.	HARDWARE GROUP	NOTES
101	SEE WINDOW SCHEDULE	ALUM	3'-0"	7'-0"		ALUM		12/A5.2	13/A5.2	5/A5.2	1	
102	SEE WINDOW SCHEDULE	ALUM	3'-0"	7'-0"		ALUM		12/A5.2	13/A5.2	5/A5.2	1	
103	SEE WINDOW SCHEDULE	ALUM	3'-0"	7'-0"		ALUM		12/A5.2	13/A5.2	5/A5.2	1	
104	A	HM	4'-0"	7'-0"	1-3/4"	HM	20 MIN.	10/A5.2	14/A5.2	5/A5.2	3	
105	SEE WINDOW SCHEDULE	ALUM	3'-0"	7'-0"	1-3/4"	ALUM		12/A5.2	13/A5.2	5/A5.2	1	
106	A	HM	3'-0"	7'-0"	1-3/4"	HM		10/A5.2	14/A5.2	5/A5.2	2	
107	A	HM	3'-0"	7'-0"	1-3/4"	HM		10/A5.2	14/A5.2	5/A5.2	2	
108	A	HM	3'-0"	7'-0"	1-3/4"	HM		10/A5.2	14/A5.2	5/A5.2	2	
109	A	HM	3'-0"	7'-0"	1-3/4"	HM		10/A5.2	14/A5.2	5/A5.2	2	
110	A	HM	3'-0"	7'-0"	1-3/4"	HM		10/A5.2	14/A5.2	5/A5.2	2	
111	A	HM	3'-0"	7'-0"	1-3/4"	HM		10/A5.2	14/A5.2	5/A5.2	2	
112	A	HM	3'-0"	7'-0"	1-3/4"	HM		10/A5.2 SIM.	14/A5.2 SIM.		4	

FINISH SCHEDULE

ROOM NUMBER AND NAME	BASE N	BASE E	BASE S	BASE W	WALL N	WALL E	WALL S	WALL W	NOTES
101 – LEASE SPACE	B-2	B-2	B-2	B-2	W-9	W-9	W-9	W-9	
102 – LEASE SPACE	B-2	B-2	B-2	B-2	W-9	W-9	W-9	W-9	
103 – LEASE SPACE	B-2	B-2	B-2	B-2	W-9	W-9	W-9	W-9	
104 – RISER ROOM	B-2	B-2	B-2	B-2	W-8	W-8	W-8	W-8	1-HOUR RATED, SEAL ALL PENETRATIONS
105 – LEASE SPACE	B-1	B-1	B-1	B-1	W-1	W-1	W-1	W-1	

MATERIAL NUMBER	MATERIAL DESCRIPTION
B-1	6" RUBBER COVED
B-2	NO BASE
B-3	6" HIGH SEALED CONCRETE CURB
B-4	CART BUMPER, OFCI
B-5	COVED TILE BASE
W-1	PAINTED GYP. BOARD
W-2	TILE/FRP/STAINLESS STEEL OVER 1/2" DENS SHIELD BACKER BOARD, RE: WALL FINISH PLAN
W-3	10'-0" X 3/4" PLYWOOD WAINSCOT WITH GYP. BOARD ABOVE (TAPE & SAND ONLY, 1-COAT FINISH)
W-4	UNPAINTED MASONRY
W-5	PAINTED MASONRY
W-6	METAL WALK-IN BOX, BY MANUFACTURER
W-7	FRP TO 10'-0" AFF WITH GYP. BOARD ABOVE (TAPE & SAND ONLY, 1-COAT FINISH)
W-8	TAPE AND SAND ONLY, 1-COAT FINISH
W-9	EXPOSED STUDS

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

STATE OF UTAH
KRISTEN IRELAND VOROS
No. 7557079-0301
LICENSED ARCHITECT

RETAIL BUILDING
SANTAQUIN PAD C

SANTAQUIN, UTAH

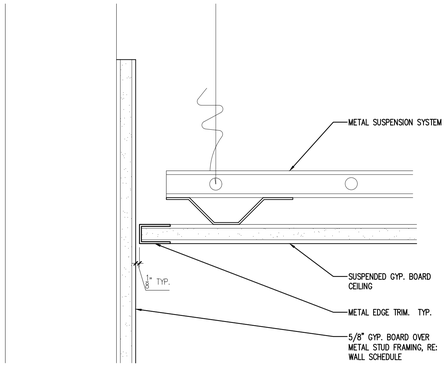
MARK	DATE	DESCRIPTION

DATE: SEPTEMBER 11, 2020
AGENCY PROJECT NO:
DESIGN SEQUENCE PROJECT NO: 2010.01
CAD DWG FILE NO:
DRAWN BY: KV
DESIGNED BY: KV
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET

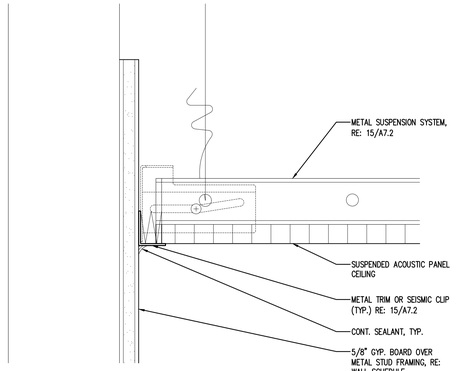
SHEET TITLE

SCHEDULES

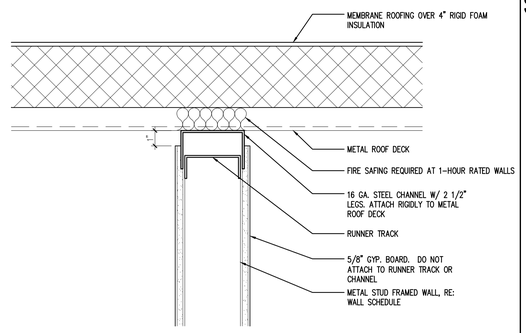
A6.1



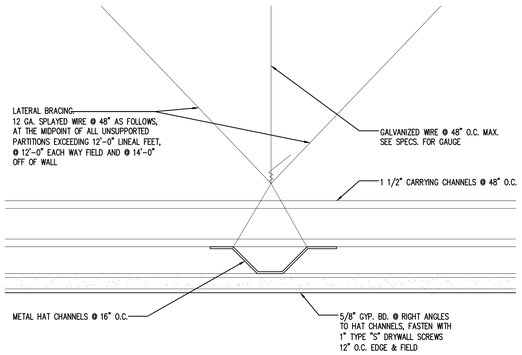
3 GYP. BOARD CEILING EDGE DETAIL
SCALE: 6" = 1'-0"



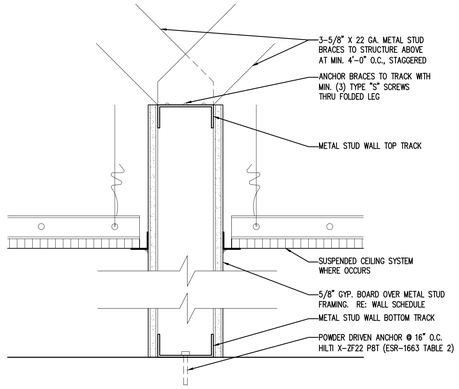
4 ACOUSTIC CEILING SEISMIC CLIP EDGE DETAIL
SCALE: 6" = 1'-0"



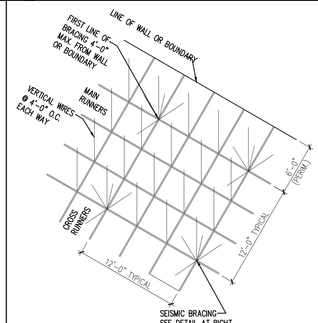
6 SLIP TRACK DETAIL
SCALE: 3" = 1'-0"

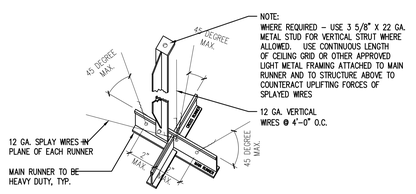


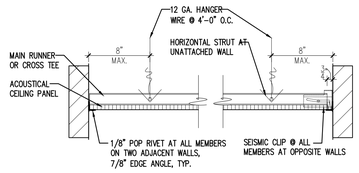
7 GYP. BOARD CEILING DETAIL
SCALE: 6" = 1'-0"



10 WALL BRACING DETAIL
SCALE: 3" = 1'-0"







NOTES:
1. ALL SPLAY WIRES TO BE IN LINE WITH ATTACHED COMPONENT.

2. ALL SPLAY WIRES TO BE TAUT AND TIED BOTH ENDS WITH MINIMUM OF 3 TURNS IN 1" OF RUN.

3. AREAS SMALLER THAN 1000 SQ. FT. WITH WALLS ON 4 SIDES EXTENDING TO STRUCTURE NEED NOT BE BRACED.

4. COMPRESSIVE STRUTS REQUIRED @ 12'-0" O.C.

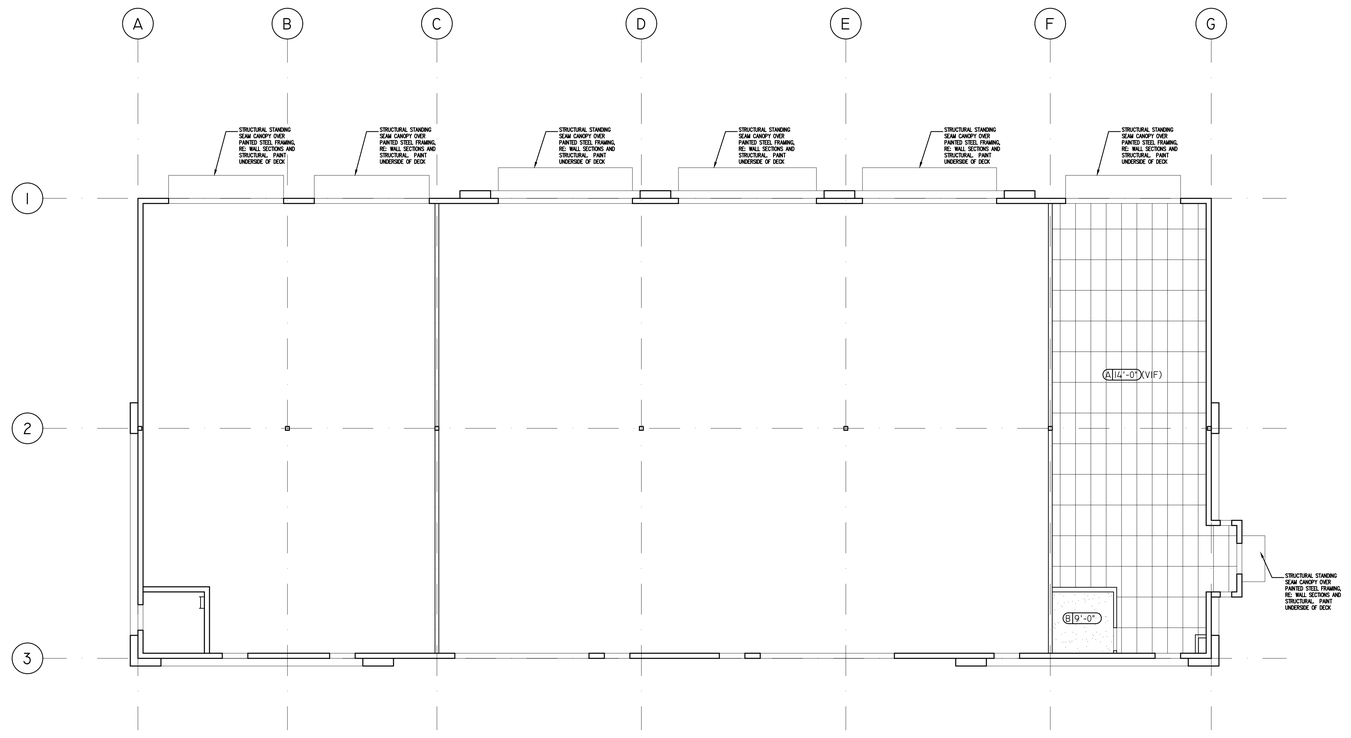
5. ALL CEILING MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO SUSPENDED CEILING GRID, IN ADDITION 12 GA. HANGER WIRES SHALL BE ATTACHED TO THE GRID WITHIN 3" OF EACH CORNER OF THE LIGHT HOUSING AND TO THE STRUCTURE ABOVE (THESE WIRES MAY BE SLACK).

6. WIRES SHALL NOT ATTACH TO OR BEND AROUND INTERFERING MATERIAL OR EQUIPMENT NOR SHALL THEY BE CLOSER THAN 6" FROM ANY UNBRACED HORIZONTAL PIPING OR DUCTWORK, A TRAPEZE OR SIMILAR DEVICE SHALL BE USED WHERE OBSTRUCTIONS OCCUR.

7. ALL INFORMATION INDICATED HEREIN SHALL BE REQUIRED TO CONFORM TO CISCA SEISMIC STANDARDS AND GUIDELINES, LATEST EDITION. VERIFY ALL DISCREPANCIES WITH ARCHITECT PRIOR TO PURCHASE AND FABRICATION.

8. CEILING TO BE SUSPENDED FROM STRUCTURAL MEMBERS OR FRAMING RUN BETWEEN STRUCTURAL MEMBERS DO NOT SUSPEND CEILINGS FROM METAL ROOF DECK.

15 TYP. SUSPENDED CEILING BRACING DETAILS
NTS



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

RCP SCOPE OF WORK NOTES

1. PROVIDE VINYL FACED CEILING TILES IN THE FOOD PREP AREAS, TYP.

RCP KEYED NOTES

① -

RCP LEGEND

CEILING FINISH — A | 10'-0" — CEILING ELEVATION

A. ARMSTRONG ULTIMA HEALTH ZONE SUSPENDED 2X2 LAY-IN ACOUSTIC CEILING TILE AND GRID. SEE DETAILS 4 & 15 ON SHEET A7.2. USE VINYL FACED TILES IN FOOD PREP AREAS.

B. PAINTED SUSPENDED GYP. BOARD CEILING. SEE DETAILS 3 & 7 ON SHEET A7.2

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

STATE OF UTAH
KRISTEN IRELAND VOROS
No. 7557079-0301
LICENSED ARCHITECT

RETAIL BUILDING
SANTAQUIN PAD C

SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE:	SEPTEMBER 11, 2020
AGENCY PROJECT NO:	
DESIGN SEQUENCE PROJECT NO:	2010.01
CAD DWG FILE NO:	
DRAWN BY:	KV
DESIGNED BY:	KV
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

SHEET TITLE

RC PLAN & DETAILS

A7.2

STRUCTURAL NOTES :

A. GENERAL

1. THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
2. THESE DRAWINGS (AND, WHERE APPLICABLE, ACCOMPANYING WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED TO, DIMENSIONS, SIZES, ETC).
3. THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
4. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.
5. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
6. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
7. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR SUBSTITUTIONS.
8. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
9. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS.
10. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED “TYPICAL” OR “SIMILAR” IN THE PLANS AND DOCUMENTS.
11. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALED FORM; HOWEVER CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER.
13. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
14. NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS, ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE, FOR ONE USE ONLY. REPRODUCTION AND DISTRIBUTION OF THESE DRAWINGS IS ONLY ALLOWED AS REQUIRED FOR REGULATORY AGENCIES AND FOR CONVEYANCE OF INFORMATION TO PARTIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT. THESE DOCUMENTS SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS.
15. WHERE THE WORD "SHALL" OCCURS IN THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS, IT IS CONSIDERED A MANDATORY OBLIGATION AND SYNONYMOUS WITH THE PHRASE "HAS DUTY TO".

B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS

1. THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED ON THESE DOCUMENTS WITH A CIRCLE “L”. ALL OTHER ITEMS REQUIRING SPECIAL INSPECTION ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET ***X.XX***.
2. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.
3. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
4. STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION.
5. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR’S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER. THE STATEMENT SHALL BE SUBMITTED PRIOR TO THE CONSTRUCTION OF ANY SEISMIC/WIND-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC/WIND SYSTEM, OR COMPONENT IDENTIFIED IN THESE DOCUMENTS WITH A CIRCLE “L”.

C. BASIS OF DESIGN

1. GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2015
   RISK CATEGORY : II
2. ROOF LOADS
   - a. FLAT-ROOF SNOW LOAD, P_f: 27 PSF
     1. GROUND SNOW LOAD, P_g: 39 PSF
     2. SNOW EXPOSURE FACTOR, C_e: 1.0
     3. SNOW LOAD IMPORTANCE FACTOR, I_s: 1.0
     4. THERMAL FACTOR, C_t: 1.0
     5. SLOPE FACTOR, C_S: 1.0
     6. SNOW DRIFT: SHOWN ON PLANS WHERE APPLICABLE.
   - b. LIVE LOAD = 20 PSF
   - c. DEAD LOAD = 20 PSF
   - d. RAIN INTENSITY, i = 1.5 IN/HR
3. WIND DESIGN
   - a. BASIC WIND SPEED (3 SECOND GUST) : 102 MPH
   - b. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD}: 80 MPH
   - c. WIND EXPOSURE : C
   - d. INTERNAL PRESSURE COEFFICIENT, G_{CPI}: 0.18
   - e. COMPONENT AND CLADDING DESIGN WIND PRESSURE SHALL BE AS REQUIRED PER ASCE 7-10.
4. SEISMIC DESIGN :
   - a. SEISMIC IMPORTANCE FACTOR, I_E: 1.0
   - b. SITE CLASS : D
   - c. MAPPED SPECTRAL RESPONSE ACCELERATIONS : $S_S = 1.717$, $S_1 = 0.637$
   - d. SPECTRAL RESPONSE COEFFICIENTS : $S_{DS} = 1.374$, $S_{D1} = 0.722$
   - e. SEISMIC DESIGN CATEGORY : D-DEFAULT
   - f. BASIC SEISMIC-FORCE-RESISTING SYSTEM : OCBF
   - g. DESIGN BASE SHEAR : $V_{N-S} = 0.184$ WT , $V_{E-W} = 0.184$ WT
   - h. SEISMIC RESPONSE COEFFICIENT, C_S: 0.154
   - i. RESPONSE MODIFICATION FACTOR, R : 6 1/2
   - j. ANALYSIS PROCEDURE : ELF

D. FOUNDATION

1. GENERAL
   - a. DESIGN SOIL PRESSURE : 1500 PSF
   - b. ALL FOOTINGS SHALL BE PLACED ON MECHANICALLY COMPACTED FILL COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).
   - c. UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON EARTH SHALL BEAR ON STRUCTURAL FILL COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).
   - d. TOP OF FOOTING ELEVATIONS SHOWN ON THE FOOTING AND FOUNDATION PLAN ARE BASED ON PRELIMINARY GRADING INFORMATION AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION. STEPS WHERE SHOWN ARE AT APPROXIMATE LOCATIONS. ACTUAL STEP LOCATIONS SHALL BE AT THE CONTRACTOR’S DISCRETION BASED UPON FIELD CONDITIONS. ALL EXTERIOR FOUNDATIONS SHALL BEAR A MINIMUM OF 32" BELOW LOWEST ADJACENT FINAL GRADE.
   - e. ALL WALLS (EXCEPT CANTILEVERED RETAINING WALLS) SHALL BE ADEQUATELY BRACED AGAINST LATERAL MOVEMENT PRIOR TO BACKFILLING. DESIGN AND ERECTION OF BRACING/SHORING SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.
   - f. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS SHALL BE CENTERED BELOW COLUMNS.
   - g. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.). WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED SOIL “FORMS” PROVIDED THAT THE DIMENSIONS ARE INCREASED 3” ON ALL SIDE.

E. CONCRETE

1. ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS LISTED BELOW :
   - a. FOOTINGS, GRADE BEAMS, FOUNDATION WALLS :
     1. WHERE THE TOP OF THE ELEMENT IS EXPOSED AND IS LOCATED WITHIN 32" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F2) :
        - a. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
        - b. MAXIMUM W/C RATIO : 0.45
        - c. MAXIMUM AGGREGATE SIZE : 1"
        - d. DESIGN AIR CONTENT : 6.0%
        - e. FIELD TOLLERANCE AIR CONTENT OF +/- 1.5%
     2. WHERE THE TOP OF THE ELEMENT IS NOT EXPOSED (EXPOSURE CATEGORY F0) :
        - a. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
   - b. INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0) :
     1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
   - c. INTERIOR SUSPENDED SLABS (EXPOSURE CATEGORY F0) :
     1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
2. WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602.
3. NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE PLACEMENT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.
5. WHERE NEW CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE JOINT SHALL BE CLEAN AND FREE OF LAITANCE. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE PREWETTED AND STANDING WATER REMOVED.

F. ANCHOR BOLTS/EMBEDDED BOLTS

1. ALL ANCHOR BOLTS SHALL HAVE ASTM A-563 HEAVY HEX NUT AND ASTM F-436 WASHERS AT STANDARD OR OVERSIZED HOLES PER AISC SPECIFICATION TABLE J3.3. WHERE HOLE SIZES DO NOT COMPLY WITH THE LIMITATIONS FOR OVERSIZED HOLES THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO DETERMINE STEEL PLATE WASHER REQUIREMENTS. ANCHOR BOLTS SHALL COMPLY WITH THE FOLLOWING :
   - a. AT BRACED FRAMES & MOMENT RESISTING FRAMES - ASTM F1554 GRADE 105 HEADED BOLTS.(ASTM A449 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)
   - b. AT WOOD STUD WALLS - ASTM A-307 GRADE HEADED BOLTS. ANCHOR BOLTS IN TREATED LUMBER SHALL BE GALVANIZED OR STAINLESS STEEL. SEE TIMBER NOTES FOR MORE INFORMATION.
   - c. AT ALL OTHER ANCHOR BOLTS (UNLESS NOTED OTHERWISE) - ASTM F1554 GRADE 36 HEADED BOLTS. (ASTM A36 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)
2. EMBEDDED BOLTS IN MASONRY SHALL BE (UNLESS NOTED OTHERWISE) ASTM A-307 GRADE HEADED BOLTS.
3. SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC.
4. FURNISH TEMPLATES AND OTHER DEVICES AS NECESSARY FOR PRESETTING ALL BOLTS PRIOR TO PLACING CONCRETE AND/OR GROUT.
5. IF THREADED RODS ARE USED AS PERMITTED ABOVE, THEY SHALL BE CLEAR OF SOIL AND DIRT.
6. WHERE REQUIRED FOR ERECTION, HOLES LARGER THAN OVERSIZED MAY BE PERMITTED WITH THE USE OF STEEL PLATE WASHERS AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

G. ADHESIVE/MECHANICAL ANCHORS

1. WITHOUT WRITTEN APPROVAL OF THE ENGINEER, CONTRACTOR SHALL NOT SUBSTITUTE POST-INSTALLED ANCHORS WHERE CAST-IN-PLACE ANCHORS ARE SPECIFIED IN THE DRAWINGS.
2. WHERE STRUCTURAL DETAILS SPECIFY SPECIFIC BRANDS AND/OR TYPES OF ADHESIVES OR ANCHORS, SUBSTITUTIONS OF OTHER BRANDS AND/OR TYPES IS NOT ALLOWED, WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
3. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC ESR OR IAPMO REPORT AND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN INTENT.
4. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED, INCLUDING HOLE DRILLING AND PREPARATION, IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER’S PRINTED INSTALLATION INSTRUCTIONS (MPII).
5. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. ADHESIVE ANCHORS SHALL NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.
6. UNLESS APPROVED BY THE ENGINEER OF RECORD, CONCRETE AND DRILLED ANCHOR HOLES SHALL BE DRY AND FREE OF WATER FOR 24 HOURS PRIOR TO ADHESIVE INSTALLATION. CONTACT THE ENGINEER OF RECORD FOR GUIDANCE IF THE CONTRACTOR CHOOSES TO INSTALL IN WET OR DAMP HOLES.
7. CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE MONITORED BY THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) RELATIVE TO SUBSTRATE TEMPERATURE.
8. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 318-11 D.9.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR THESE ANCHORS.
9. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE:
   - a. HILTI HIT-RE 500V3 (ESR-3814), OR HILTI HIT-HY 200-A (ESR-3187).
   - b. SIMPSON SET-3G (ESR-4057), OR AT-XP (ER-0263).
   - c. DEWALT PURE 110+ (ESR-3298), OR AC200+ GOLD (ESR-4027-COLD WEATHER).
10. UNLESS NOTED OTHER WISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE:
    - a. HILTI KWIK BOLT TZ (ESR-1917).
    - b. SIMPSON STRONG-BOLT 2 (ESR-3037).
11. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE:
    - a. SIMPSON TITEN HD (ESR-2713).
    - b. DEWALT SCREWBOLT+ (ESR-2526).
    - c. HILTI KWIK HUS-EZ (ESR-3027).
12. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF RECORD OR THE SPECIAL INSPECTOR.
13. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 1 INCH, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCEMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
14. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.

H. REINFORCING STEEL

1. REINFORCING BAR STRENGTH REQUIREMENTS:
   - a. ALL REINFORCING BARS SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.
2. HEADED SHEAR STUD ASSEMBLIES SHALL CONFORM TO ASTM A1044.
3. STEEL DISCONTINUOUS FIBER REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 50 AND NOT GREATER THAN 100.
4. HEADED DEFORMED BARS SHALL CONFORM TO ASTM A970. OBSTRUCTIONS OR INTERRUPTIONS OF THE BAR DEFORMATIONS, IF ANY, SHALL NOT EXTEND MORE THAN 2 BAR DIAMETERS FROM THE BEARING FACE OF THE HEAD.
5. ALL REINFORCING STEEL SHALL BE TIED IN PLACE AND ADEQUATELY SUPPORTED PRIOR TO PLACING CONCRETE. WET STABBING OF ANY REINFORCING STEEL IS NOT PERMITTED, UNLESS SPECIFICALLY DETAILED OTHERWISE OR APPROVED BY THE ENGINEER.
6. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3.
7. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE :
   - a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ….. 3”
   - b. EXPOSED TO EARTH OR WEATHER :
     1. #6 & LARGER ….. 2”
     2. #5 & SMALLER …..1-1/2”
   - c. NOT EXPOSED TO WEATHER OR EARTH :
     1. SLABS, WALLS, JOISTS, #11 & SMALLER ….. 3/4”
     2. BEAMS, COLUMNS: MAIN REINFORCING OR TIES ….. 1-1/2”
   - d. SLAB ON GRADE :
     1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
8. EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE.
9. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.
10. ALL VERTICAL REINFORCING IN STRUCTURAL ELEMENTS ABOVE SHALL BE SPLICED WITH MATCHING DOWELS EMBEDDED WITHIN THE FOOTINGS OR STRUCTURE BELOW. SPLICE LENGTHS SHALL COMPLY WITH REBAR LAP SCHEDULE. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4” OF THE BOTTOM OF THE FOOTING, BUT NEED NOT EXTEND MORE THAN 20” INTO FOOTING.
11. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE ASTM A-706 REINFORCING.
12. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES.
13. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER.
14. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

I. STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING:
   - a. ANSI/AISC 360-16 “SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS”, WITH “COMMENTARY” AND “SUPPLEMENTS” AS REQUIRED BY BUILDING CODE.
   - b. AISC 303-16 “CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES” EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, AND 4.4.2.
   - c. AISI “SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS”.
   - d. AISC “SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS”.
   - e. AWS D1.1 AND 1.3, “STRUCTURAL WELDING CODE” (EXCEPT SPECIFIC ITEMS DO NOT APPLY IF THEY CONFLICT WITH AISC).
   - f. ANSI/AISC 341-16 “SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS”.
   - g. AWS D1.8, "STRUCTURAL WELDING CODE - SEISMIC".
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING:
   - a. WIDE FLANGE SHAPES AND WT SHAPES - ASTM A992
   - b. OTHER SHAPES AND PLATES - ASTM A-36 (UNO)
   - c. HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A-500, GRADE C FOR SQUARE, RECTANGULAR AND ROUND SHAPES (FY = 50 KSI FOR SQUARE AND RECTANGULAR SHAPES AND 46 KSI FOR ROUND SHAPES)
   - d. STAINLESS STEEL SHAPES, PLATES, AND FASTENERS – ASTM 304
   - e. DEFORMED BAR ANCHORS (DBA) - ASTM A-496, WELDED IN ACCORDANCE WITH AWS D1.1
   - f. HEADED STUD ANCHORS (HSA) - ASTM A-108, GRADE 1015 STEEL AND WELDED IN ACCORDANCE WITH AWS D1.1 FOR TYPE “B”. USE 3/4” DIAMETER STUDS, UNLESS NOTED OTHERWISE.
   - g. THREADED ROD - ASTM A-449.
   - h. NON-SHRINK GROUT - ASTM C110. NON-SHRINK GROUT SHALL BE PRE-PACKAGED, NON-METALLIC, WITH A 28-DAY COMPRESSIVE STRENGTH OF 6,000 PSI.
3. CONNECTIONS SHALL COMPLY WITH THE STRUCTURAL DRAWINGS UNLESS WRITTEN APPROVAL TO CHANGE IS GIVEN BY THE STRUCTURAL ENGINEER.
4. ALL SHOP FABRICATIONS SHALL BE PERFORMED BY AN APPROVED FABRICATOR IN ACCORDANCE WITH SECTIONS 1702 AND 1704 OF THE IBC OR WITH SHOP INSPECTION BY AN INDEPENDENT AGENCY IN ACCORDANCE WITH SECTION 1704.2.5 OF THE IBC.
5. WELDING
   - a. ALL WELDING AND CUTTING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN ACCORDANCE WITH ANSI/AWS D1.1 (LATEST EDITION).
   - b. USE E-70XX ELECTRODES UNLESS NOTED OTHERWISE. E-60XX MAY BE USED FOR WELDING STEEL DECKS.
   - c. ALL INTERSECTING STEEL SHAPES WHICH ARE NOT CONNECTED WITH BOLTS SHALL BE WELDED TOGETHER WITH A FILLET WELD ALL AROUND UNLESS NOTED OTHERWISE. WHERE WELD SIZES ARE NOT SHOWN, USE THE FOLLOWING:
     1. WHERE THE THICKNESS OF THE CONNECTED PARTS IS EQUAL TO OR THICKER THAN 1/4”, WELD SIZE SHALL BE 1/16” LESS THAN THE THICKNESS OF THE THINNEST PART.
     2. WHERE ANY OF THE CONNECTED PARTS IS LESS THAN 1/4” THICK, WELD SIZE SHALL BE THE SAME AS THE THICKNESS OF THE THINNEST PART.
   - d. WELDING OF HSA’S (HEADED STUD ANCHORS) AND DBA’S (DEFORMED BAR ANCHORS) SHALL CONFORM TO THE MANUFACTURER’S SPECIFICATIONS AND AWS D1.1 REINFORCING BARS SHALL NOT BE SUBSTITUTED FOR HSA'S OR DBA'S.
   - e. WHEREVER POSSIBLE, WELDS SHALL BE SHOP WELDS. SPECIAL CONSIDERATIONS, SUCH AS ITEMS WHICH MAY NEED ADJUSTMENT AT THE SITE, REQUIRE THAT SOME WELDS BE FIELD WELDS. WHERE QUESTIONS OR DISCREPANCIES OCCUR THE CONTRACTOR SHALL COORDINATE THE WORK BETWEEN THE SHOP FABRICATOR AND THE STEEL ERECTOR.
   - f. SPECIAL PROVISIONS FOR SFRS (SEISMIC FORCE RESISTING SYSTEM):
     1. ALL WELDS DESIGNATED AS DEMAND CRITICAL WELDS SHALL BE MADE WITH FILLER METALS MEETING THE REQUIREMENTS SPECIFIED IN CLAUSES 6.1, 6.2, AND 6.3 OF AWS D1.8.
     2. ALL OTHER WELDS THAT ARE PART OF THE SFRS SHALL BE MADE WITH FILLER METALS MEETING THE REQUIREMENTS SPECIFIED IN CLAUSE 6.1 OF AWS D1.8.
     3. BUTT WELDS IN MEMBERS WITH DIFFERENT THICKNESSES, SUCH AS COLUMN SPLICES, SHALL BE TAPERED AND MADE IN SUCH A MANNER THAT THE TRANSITION DOES NOT EXCEED 1 IN 2-1/2 INCHES. THE TRANSITION SHALL BE ACCOMPLISHED BY CHAMFERING THE THICKER PART, TAPERING THE WIDER PART, SLOPING THE WELD METAL OR BY A COMBINATION OF THESE
6. BOLTING
   - a. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL TO STEEL CONNECTIONS SHALL USE HIGH STRENGTH BOLTS CONFORMING TO ASTM F3125 GR. A325.
   - b. UNLESS NOTED OTHERWISE, ALL BOLTING IS CLASSIFIED AS NON-SLIP CRITICAL BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS TO A SNUG TIGHT CONDITION, WITH ALL PLIES OF THE JOINT IN FIRM CONTACT.
   - c. WHERE OVERSIZED OR SLOTTED HOLES OCCUR IN THE OUTER PLY, AN ASTM F436 WASHER OR 5/16” THICK COMMON PLATE WASHER SHALL BE USED AS REQUIRED TO COMPLETELY COVER THE HOLE.
   - d. BOLTS SHALL BE CENTERED IN SLOTTED HOLES, UNLESS NOTED OTHERWISE.
   - e. WHERE A STEEL BEAM TO BEAM CONNECTION IS NOT SHOWN, PROVIDE AN AISC STANDARD FRAMED CONNECTION SIZED FOR 1/2 OF THE TOTAL LOAD CAPACITY OF THE BEAM FOR THE SPAN AND STEEL SPECIFIED.
7. METAL DECKING
   - a. UNLESS NOTED OTHERWISE, METAL FLOOR DECK SHALL BE 20 GAUGE TYPE B COMPOSITE, GALVANIZED, UNVENTED STEEL DECK. UNLESS NOTED OTHERWISE, ATTACH TO SUPPORTING STRUCTURE WITH 3/4” DIAMETER WELDS AT 12“ MAXIMUM SPACING. ATTACH SIDE SEAMS WITH BUTTON PUNCH OR SIDE SEAM SCREWS AT 12“ MAXIMUM SPACING. AN HSA FIELD-WELDED THROUGH THE DECK MAY SUBSTITUTE FOR A PUDDLE WELD.
   - b. ALL DECK SHALL BE CONTINUOUS OVER 3-SPANS. WHERE NOT POSSIBLE, THE DECK SUPPLIER/CONTRACTOR SHALL PROVIDE HEAVIER GAUGE DECK AS NEEDED TO PROVIDE THE EQUIVALENT PERFORMANCE OF THE SPECIFIED DECK WITH 3-SPAN CONTINUITY.
   - c. SEE TYPICAL DETAILS FOR SUPPORT OF DECK AT OPENINGS.
   - d. PROVIDE L2”x2”x3/16” FOR DECK SUPPORT AT LOCATIONS WHERE COLUMNS EXTEND THROUGH DECK.
   - e. PAINTED STEEL DECK SHALL CONFORM TO ASTM A1008 AND GALVANIZED STEEL DECK SHALL CONFORM TO A653 GRADE G60.
   - f. BUILDING ELEMENTS MAY BE SUPPORTED BY HANGING DIRECTLY FROM METAL DECKING, PROVIDED THAT THE TOTAL WEIGHT PER CONNECTION IS LESS THAN 50 LBS AND THAT THE ATTACHMENT TO THE DECKING IS DISTRIBUTED ACROSS AT LEAST TWO RIBS AND SPACED AT LEAST 6 FEET APART IN ANY DIRECTION.
8. PROVIDE FULL DEPTH WEB STIFFENER PLATES AT EACH SIDE OF STEEL BEAMS AT ALL BEARING (EXCEPT SECONDARY FRAMING) POINTS. STIFFENER PLATES SHALL BE THICKNESS SHOWN UNLESS NOTED OTHERWISE AND SHALL BE WELDED BOTH SIDES WITH FILLET WELDS ALL AROUND.

FLANGE WIDTH	STIFFENER THICKNESS	WELD THICKNESS
< 8 1/4”	1/4”	3/16”
8 1/4” < BF < 12 1/2”	3/8”	1/4”
12 1/2” < BF < 18”	1/2”	5/16”

9. FABRICATORS AND SUPPLIERS SHALL COORDINATE PAINT/FINISHES WITH REQUIREMENTS FOR DIRECT APPLIED INSULATION, FIREPROOFING, ETC. AS NOTED IN THE PROJECT SPECIFICATIONS.
10. WHEN DETERMINING THE FIRE RESISTANCE OF ASSEMBLIES, USE THE FOLLOWING: STEEL ROOF MEMBERS ARE CONSIDERED UN-RESTRAINED AND STEEL FLOOR FRAMING MEMBERS ARE CONSIDERED RESTRAINED.
11. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE ERECTED WITH THE NATURAL CROWN UP.
12. UNLESS OTHERWISE SHOWN OR DETAILED IN THE PLANS, ALL STEEL COLUMNS, BEAMS, BRACES, STRUTS, ETC. SHALL BE CONTINUOUS BETWEEN CONNECTIONS OR SUPPORTS. SPLICES IN MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER OF RECORD.

J. STRUCTURAL DELEGATED DESIGNS AND DEFERRED SUBMITTALS

1. STRUCTURAL DELEGATED DESIGNS AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ELEMENTS, PARTS, OR PORTIONS OF THE OVERALL STRUCTURAL SYSTEM THAT ARE INDICATED OR REFERRED TO ON THESE DRAWINGS AND THAT ARE CRITICAL TO THE PERFORMANCE OF THE OVERALL STRUCTURAL SYSTEM. DESIGN CRITERIA HAS BEEN PROVIDED FOR THESE ITEMS IN THE STRUCTURAL NOTES, PLANS, AND DETAILS.
2. STRUCTURAL DEFERRED SUBMITTALS ARE COMPLETE PACKAGES TO BE SUBMITTED FOR REVIEW THAT INCLUDE DRAWINGS AND CALCULATIONS FOR ALL DELEGATED DESIGN ITEMS AND THEIR CONNECTIONS. DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN.
3. ARW ENGINEERS WILL REVIEW STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. STRUCTURAL DELEGATED DESIGN COMPONENTS SHALL NOT BE INSTALLED UNTIL APPROVED BY THE BUILDING OFFICIAL.
5. STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO :
   - a. PRE-MANUFACTURED WOOD TRUSSES, BLOCKING, BRIDGING, BRIDGING CONNECTIONS, TRUSS HANGERS, AND RELATED COMPONENTS.

K. NON-STRUCTURAL DELEGATED DESIGNS AND DEFERRED SUBMITTALS

1. NON-STRUCTURAL DELEGATED DESIGNS AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ITEMS NOT INCLUDED IN THE STRUCTURAL DELEGATED DESIGN SECTION. THESE ARE ITEMS THAT ARE NOT CRITICAL TO THE OVERALL PERFORMANCE OF THE STRUCTURAL SYSTEM BUT THAT IMPART LOADS AND FORCES TO THE STRUCTURAL SYSTEM.
2. NON-STRUCTURAL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
3. ARW ENGINEERS WILL REVIEW NON-STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. IF THE STRUCTURAL DRAWINGS INCLUDE LOADS TO ACCOMMODATE NON-STRUCTURAL ELEMENTS, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION INDICATING THAT THE NON-STRUCTURAL ELEMENTS COMPLY WITH THE LOADING CRITERIA PROVIDED HEREIN. SUCH DOCUMENTATION SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
5. IF THE NON-STRUCTURAL DEFERRED SUBMITTAL INDICATES THAT THE ELEMENT WILL IMPART FORCES IN EXCESS OF THOSE INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL SUBMIT A DETAILED GRAPHICAL REPRESENTATION OF THOSE DESIGN LOADS, INCLUDING MAGNITUDE, AND LOCATION. THE GRAPHIC SHALL BE ACCOMPANIED BY DOCUMENTATION INDICATING THAT THE NON-STRUCTURAL ELEMENT DESIGN COMPLIES WITH THE LOADING CRITERIA PROVIDED HEREIN. THE LETTER SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
6. NON-STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO :
   - a. COLD FORMED STEEL STUDS / JOISTS / HEADERS / JAMBS / TRUSSES.
   - b. SEISMIC BRACING OF ALL ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS WHERE REQUIRED BY THE MOST RECENT VERSION OF ASCE 7 AND THE PROJECT CONTRACT DOCUMENTS.

Structural Sheet Index

SHEET NUMBER	SHEET NAME
S001	STRUCTURAL NOTES
S002	SCHEDULES
S003	SCHEDULES
S101	STRUCTURAL PLANS
S201	DETAILS
S202	DETAILS
S203	DETAILS

LEGEND OF SYMBOLS AND ABBREVIATIONS

AB = ANCHOR BOLT
ABV = ABOVE
ARCH = ARCHITECT
BLW = BELOW
BN = BOUNDARY NAILING
CJP = COMPLETE JOINT PENETRATION
CL = CENTERLINE
COL = COLUMN
CONC = CONCRETE
CP = CONCRETE PIER
DC = DEMAND CRITICAL
DIA / Ø = DIAMETER
DBA = DEFORMED BAR ANCHOR
DBE = DECK BEARING ELEVATION
ELEV = ELEVATION
EN = EDGE NAILING
EOD = EDGE OF DECK
FDN = FOUNDATION
FTG = FOOTING
FFE = FINISHED FLOOR ELEVATION
HSA = HEADED STUD ANCHOR
KB = KICKER BRACE
MAX = MAXIMUM
MECH = MECHANICAL
MEZZ = MEZZANINE
MIN = MINIMUM
NS, FS = NEAR SIDE, FAR SIDE
OAE = OR APPROVED EQUAL
OPP = OPPOSITE
PAF = POWDER ACTUATED FASTENER
PL = PLATE
REINF = REINFORCING
REQ'D = REQUIRED
SIM = SIMILAR
TOB = TOP OF BEAM ELEVATION
TOC = TOP OF CONCRETE SLAB
TOF = TOP OF FOOTING
TOS = TOP OF STEEL ELEVATION
TYP = TYPICAL
UNO = UNLESS NOTED OTHERWISE

L. TIMBER

1. WOOD GRADES (UNLESS NOTED OTHERWISE)
   - a. ALL FRAMING LUMBER SHALL BE DOUGLAS FIR/LARCH CLEARLY MARKED WITH A STAMP BY WWPA APPROVED AGENCY AND SHALL BE GRADED AS FOLLOWS:
     1. HORIZONTAL MEMBERS: JOISTS & RAFTERS: NO. 2, BEAMS & STRINGERS: NO. 2.
     2. VERTICAL MEMBERS: POST & TRIMMERS: NO. 1, STUDS: NO. 2.
   - b. ALL FRAMING IN CONTACT WITH FOOTINGS, FOUNDATIONS OR SLABS ON GRADE SHALL BE PRESSURE TREATED OR TIMBERSTRAND LSL TREATED LUMBER WITH EQUIVALENT STRESS GRADES TO TYPICAL FRAMING MEMBERS.
   - c. UNLESS NOTED OTHERWISE, ALL ENGINEERED LUMBER SHALL BE FURNISHED BY TRUS-JOIST CORPORATION OR APPROVED EQUAL AND SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES :

	MODULUS OF ELASTICITY	FLEXURAL STRESS RATING
LVL :	2,000,000 PSI	2,600 PSI
PSL :	2,000,000 PSI	2,900 PSI
LSL :	1,550,000 PSI	2,325 PSI

2. SHEATHING SHALL BE APA RATED SHEATHING, EXPOSURE I, EXTERIOR GLUE AND PANEL INDEX RATING AS NOTED BELOW UNLESS NOTED OTHERWISE :

LOCATION	THICKNESS	PANEL INDEX
WALLS :	7/16”	24/0
ROOFS :	19/32”	32/16

3. INDIVIDUAL PIECES OF SHEATHING AT ROOF, FLOOR, AND SHEAR WALLS SHALL NOT BE SMALLER THAN 24” IN EITHER DIRECTION AND SHALL SPAN A MINIMUM OF TWO FRAMING SPACES, UNO.
4. ALL 23/32” FLOOR SHEATHING SHALL BE TONGUE AND GROOVE UNLESS NOTED OTHERWISE.
5. CONNECTIONS, FASTENERS, AND ADHESIVE
   - a. ALL BOLTS THRU WOOD SHALL BE ASTM A307 AND SHALL HAVE HARDENED WASHERS UNDER ASTM A563 HEAVY HEX NUT AND BOLT HEADS.
   - b. UNLESS NOTED OTHERWISE, 10d COMMON (0.148) NAILS SHALL BE USED TO FASTEN ALL PLYWOOD ROOF SHEATHING TO SUPPORTING TRUSSES, JOISTS, LEDGERS OR BLOCKING AS FOLLOWS:
     1. BOUNDARY NAILING “BN”: 6”O.C. AT ALL BEARING WALLS, SHEAR WALLS, BLOCKING, AND WHERE OTHERWISE INDICATED IN THE STRUCTURAL DRAWINGS.
     2. PANEL EDGE NAILING “EN”: 6”O.C. AT ALL OTHER PLYWOOD PANEL EDGES.
     3. PANEL FIELD NAILING “FN”: 12”O.C. AT INTERIOR SUPPORTS IN FIELD OF PANEL.
   - c. UNLESS NOTED OTHERWISE IN THE WOOD SHEAR WALL SCHEDULE ON SHEET XX/XXX, 8d COMMON (0.131) NAILS SHALL BE USED TO FASTEN ALL PLYWOOD SHEAR WALL SHEATHING TO STUDS AND BLOCKING AS FOLLOWS:
     1. PANEL EDGE NAILING “EN”: 6”O.C.
     2. PANEL FIELD NAILING “FN”: 12”O.C. AT INTERIOR SUPPORTS IN FIELD OF PANEL.
     3. NAILS SHALL BE GALVANIZED OR STAINLESS STEEL AT EXPOSED LOCATIONS OR IN TREATED WOOD (SEE NOTE BELOW FOR FASTENERS CONNECTED TO OR IN CONTACT WITH TREATED WOOD). THE HEAD OF ALL NAILS SHALL BE DRIVEN FLUSH WITH THE SURFACE OF THE SHEATHING.
   - d. EXCEPT WHERE NOTED OTHERWISE, THE NUMBER AND SIZE OF NAILS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THAT SET FORTH IN IBC TABLE 2304.10.1. CONNECTIONS FOR MULTIPLE PIECES OF ENGINEERED LUMBER PIECES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
   - e. UNLESS NOTED OTHERWISE, ALL NAILS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES :

COMMON NAIL SIZE	SHANK DIAMETER	HEAD DIAMETER	LENGTH	MIN. PENETRATION INTO SUPPORT MEMBER
6d	0.113”	0.266”	2”	1.25”
8d	0.131”	0.281”	2-1/2”	1.375”
10d	0.148”	0.312”	3”	1.50”
12d	0.148”	0.312”	3-1/4”	1.50”
16d	0.162”	0.344”	3-1/2”	1.62”

   - f. A CONTINUOUS BEAD OF PERMANENT BOND TIMBER/WOOD ADHESIVE COMPOUND SHALL BE USED TO FASTEN ALL PLYWOOD FLOOR SHEATHING TO FLOOR JOISTS IN ACCORDANCE WITH MANUFACTURERS’ SPECIFICATIONS.
   - g. ALL FRAMING ANCHORS, POST CAPS, HOLD DOWNS, COLUMN BASES ETC. TO BE PROVIDED BY SIMPSON OR APPROVED EQUAL AND SHALL BE ATTACHED IN ACCORDANCE WITH MANUFACTURER’S PUBLISHED DATA, UNLESS NOTED OTHERWISE.
   - h. UNLESS NOTED OTHERWISE, ALL WALL BOTTOM PLATES TO BE ANCHORED TO FOUNDATIONS OR FOOTINGS WITH 3/4” DIAMETER ANCHOR BOLTS AT 32”O.C. WITH 8” MINIMUM EMBEDMENT. THERE SHALL BE A MINIMUM OF (2) ANCHOR BOLTS PER PLATE WITH ONE BOLT LOCATED NOT MORE THAN 12” AND NOT LESS THAN 4” FROM EACH END OF EACH PIECE.
   - i. WALL BOTTOM PLATES AT SHEAR WALLS SHALL INCLUDE 1/4” x 3” x 3” STEEL PLATE WASHERS BETWEEN THE SILL PLATE AND NUT OF THE ANCHOR BOLT. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH UP TO 3/16” LARGER THAN THE BOLT DIAMETER AND SLOT LENGTH NOT TO EXCEED 1-3/4”, PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN ½” OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE.
   - j. FASTENERS CONNECTED TO OR IN CONTACT WITH PRESERVATIVE-TREATED AND/OR FIRE-RETARDANT-TREATED WOOD (EXCEPT FOR TIMBERSTRAND LSL TREATED LUMBER AND BORATE BASED TREATMENTS) SHALL BE OF G-185 HOT-DIP GALVANIZED STEEL OR 304 OR 316 STAINLESS STEEL. STAINLESS STEEL AND GALVANIZED STEEL SHALL NEVER BE USED IN CONTACT WITH EACH OTHER.
6. ALL WOOD TRUSSED RAFTERS SHALL BE FABRICATED IN COMPLIANCE WITH THE RESEARCH COMMITTEE RECOMMENDATIONS OF THE ICC FOR THE CONNECTOR PLATES USED. SUBMIT DESIGN CALCULATIONS WITH ENGINEERS SEAL FOR REVIEW WITH SHOP DRAWINGS. PROVIDE CALCULATIONS AND DETAILS FOR ALL TRUSS TO TRUSS CONNECTIONS INCLUDING CONNECTION HARDWARE. ALL NECESSARY TRUSS BRIDGING AND CONNECTION DESIGN OF TRUSS BRIDGING SHALL BE PROVIDED BY THE TRUSS DESIGNER AND SHALL BE INCLUDED IN THE DESIGN CALCULATIONS FOR REVIEW.
7. INSTALLATION OF ALL METAL-PLATE-CONNECTED WOOD TRUSSES SHALL COMPLY WITH THE FOLLOWING STANDARDS :
   - a. ANSI/TPI 1 “NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSSES”.
   - b. TPI HIB “COMMENTARY AND RECOMMENDATIONS FOR HANDLING INSTALLING & BRACING METAL-PLATE-CONNECTED WOOD TRUSSES”.
   - c. TPI DSB “RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL-PLATE-CONNECTED WOOD TRUSSES”.
8. UNLESS NOTED OTHERWISE, ALL ROOF SHEATHING AND WALL SHEATHING AT SHEAR WALLS SHALL HAVE SOLID BLOCKING AT ALL PANEL EDGES.
9. PROVIDE DOUBLE JOIST UNDER PARALLEL NONBEARING WALLS AND SOLID BLOCKING UNDER PERPENDICULAR NONBEARING WALLS.
10. AT ALL OVERBUILD LOCATIONS, ROOF SHEATHING SHALL BE COMPLETE BELOW OVERBUILDS PRIOR TO OVERBUILD CONSTRUCTION.
11. PROVIDE SOLID 2” (NOMINAL) FULL DEPTH BLOCKING AT ENDS AND SUPPORT LOCATIONS FOR ALL JOISTS AND RAFTERS. BLOCKING SHALL BE ATTACHED TO SUPPORT FRAMING WITH A MINIMUM OF (1) SIMPSON A35 FRAMING ANCHOR BETWEEN JOISTS UNLESS NOTED OTHERWISE.
12. UNLESS NOTED OTHERWISE, ALL BEARING WALLS SHALL BE 2x6 SPACED AT 16“O.C. BLOCK ALL NON-SHEATHED BEARING WALLS AT 4’-0”O.C.
13. VERIFY THE STUD SPACING WITH THE ANCHOR BOLT LAY-OUT. WHERE STUDS INTERFERE WITH ANCHOR BOLTS, PROVIDE AN ADDITIONAL FULL-HEIGHT STUD TO ENSURE THAT THE FULL CROSS-SECTIONAL AREA OF THE STUD IS IN CONTACT WITH THE SILL PLATE.
14. UNLESS NOTED OTHERWISE, ALL EXTERIOR WALLS AND SHEAR WALLS SHALL HAVE DOUBLE 2X TOP PLATES THAT ARE SPLICED TOGETHER WITH A MINIMUM OF 48” OF OVERLAP AND SHALL BE CONNECTED TOGETHER WITH A MINIMUM OF (50) 10d COMMON NAILS EACH SIDE OF THE SPLICE. OUTSIDE OF THESE SPLICE LOCATIONS, TOP PLATES SHALL BE NAILED TOGETHER WITH 10d NAILS AT 12” O.C.
15. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE INSTALLED WITH THE NATURAL CROWN UP.

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

A R W 50 Years
ENGINEERS
structural consultants
1594 W. Park Cir. Ogden, Utah 84404
ph. 801.782.6008 fx. 801.782.4656

SANTAQUIN SHOPS

Enter address here

MARK	DATE	DESCRIPTION

DATE: 06/23/20
ARW PROJECT NO: 20207
DESIGN SEQUENCE PROJECT NO: 1904.01
CAD DWG FILE NO:
DRAWN BY: Z. Thorner
DESIGNED BY: A. Higgs
DWG TYPE:
PROJECT PHASE: NOT FOR CONSTRUCTION

SHEET TITLE

STRUCTURAL NOTES

S001

TABLE OF EQUIVALENT FASTENERS

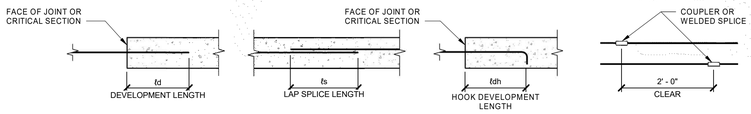
STAPLES, NAILS AND T-NAILS (VALID FOR LATERAL LOADS ONLY)

COMMON NAIL SPACING		EQUIVALENT SPACING OF APPROVED FASTENERS				
		STAPLES			NAILS & T-NAILS	
GAUGE		16	15	14	.113	.131
PENETRATION		1"	1"	1"	1 1/4"	1 1/2"
6d AT:	4"	3 1/2"	4"	5"	4"	5"
	6"	5"	6"	7"	6"	7 1/2"
	8"	6 1/2"	8"	9 1/2"	8"	10"
	10"	8 1/2"	10"	12"	10"	12"
	12"	10"	12"	14 1/2"	12"	14 1/2"
8d AT:	4"	2 1/2"	3 1/2"	4"	3 1/2"	4"
	6"	4"	5"	6"	5"	6"
	8"	5 1/2"	6 1/2"	8"	6 1/2"	8"
	10"	6 1/2"	8"	10"	8"	10"
	12"	8"	10"	12"	9 1/2"	12"
10d AT:	4"	2"	2 1/2"	3"	2 1/2"	3 1/2"
	6"	3 1/2"	4"	5"	4"	5"
	8"	4 1/2"	5 1/2"	6 1/2"	5 1/2"	7"
	10"	5 1/2"	7"	8"	6 1/2"	8 1/2"
	12"	6 1/2"	8"	9 1/2"	8"	10"

NOTES:
PENETRATION IS THE DEPTH OF EMBEDMENT OF THE STAPLE OR NAIL INTO THE MAIN MEMBER REQUIRED TO ATTAIN ITS FULL CAPACITY (SHEAR VALUE) FOR LATERAL LOADING.

2018 IBC CONCRETE REBAR LAP SPLICE SCHEDULE

FOR CONCRETE APPLICATIONS (ACI 318 - 14)



BAR LOCATION	CONCRETE TYPE	CONCRETE STRENGTH	CONCRETE REINFORCING & SPLICE LENGTHS (IN) BAR SIZE #3 ld	ls	ldh	#4 ld	ls	ldh	#5 ld	ls	ldh	#6 ld	ls	ldh	#7 ld	ls	ldh	#8 ld	ls	ldh	#9 ld	ls	ldh	#10 ld	ls	ldh	#11 ld	ls	ldh	COMMENTS
VERT. WALL BARS, FILL ON METAL DECK	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	81	17	69	90	19	76	99	30	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	81	17	69	90	19	76	99	30	
BEAM BOTTOM BARS, COLUMN BARS	NWC	3000 PSI	17	22	8	22	29	11	28	36	14	33	43	16	48	62	19	55	72	22	62	81	25	69	90	27	76	99	30	
FOOTING BOTTOM BARS	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	29	38	13	33	43	15	37	48	17	42	55	19	46	60	30	
BEAM TOP BARS	NWC	3000 PSI	22	29	8	29	38	11	36	47	14	43	56	16	63	82	19	72	94	22	81	105	25	90	117	27	98	127	30	
SLAB ON GRADE	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	32	42	13	42	55	15	53	69	17	69	90	19	76	99	30	

BAR LOCATION	CONCRETE TYPE	CONCRETE STRENGTH	CONCRETE REINFORCING & SPLICE LENGTHS (IN) BAR SIZE #3 ld	ls	ldh	#4 ld	ls	ldh	#5 ld	ls	ldh	#6 ld	ls	ldh	#7 ld	ls	ldh	#8 ld	ls	ldh	#9 ld	ls	ldh	#10 ld	ls	ldh	#11 ld	ls	ldh	COMMENTS
VERT. WALL BARS, FILL ON METAL DECK	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	66	14	56	73	16	62	81	25	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	66	14	56	73	16	62	81	25	
BEAM BOTTOM BARS, COLUMN BARS	NWC	4500 PSI	14	18	7	18	23	9	23	30	11	27	35	13	40	52	16	45	59	18	51	66	20	56	73	22	62	81	25	
FOOTING BOTTOM BARS	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	24	31	11	27	35	13	31	40	14	34	44	16	37	48	25	
BEAM TOP BARS	NWC	4500 PSI	18	23	7	24	31	9	30	39	11	35	46	13	51	66	16	59	77	18	66	86	20	73	95	22	80	104	25	
SLAB ON GRADE	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	27	35	11	34	44	13	44	57	14	56	73	16	62	81	25	

NOTES :
1. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPLICES A MINIMUM OF 24" AS INDICATED ABOVE.
2. DEVELOPMENT LENGTHS SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.
3. WHEN SPLICING BARS OF DIFFERENT SIZES, USE LAP SPLICE LENGTH OF LARGER BARS UNO.
4. SPLICE BARS LARGER THAN #11 USING MECHANICAL COUPLERS.

SPECIAL INSPECTION SCHEDULE [1, 2]

ESTABLISHED PER 2018 IBC SECTION 110 AND CHAPTER 17

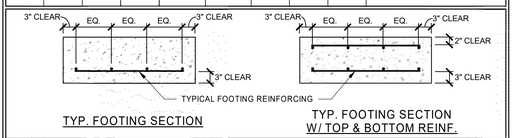
ITEM	CONTINUOUS[3]	PERIODIC[3]	REFERENCE	COMMENTS
PRE-FAB CONSTRUCTION (IBC 1704.2)			REFERENCE NOTES P1 & P2	P1. SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION, PROVIDED THE FABRICATOR COMPLIES WITH IBC. P2. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. SPECIAL INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE. (SEE NOTE 2).
CONCRETE CONSTRUCTION (IBC 1705.3)			SEE IBC TABLE 1705.3 - REF. NOTE C1	
REINFORCING STEEL PLACEMENT		●		C1. SPECIAL INSPECTION IS NOT REQUIRED FOR CONC. ISOLATED SPREAD FOOTINGS, CONTINUOUS FOOTINGS, NON-STRUCTURAL SLABS, FOUNDATION WALLS, PATIOS, DRIVEWAYS, AND SIDEWALKS PROVIDED THE REQUIREMENTS OF IBC 1705.3 ARE MET. C2. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINUOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE. C3. PERFORM AIR, SLUMP AND TEMP. TESTS WHEN CONCRETE SAMPLES ARE CAST. C4. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR VERIFICATION OF IN-SITU CONCRETE STRENGTH FOR POST-TENSIONED CONCRETE PRIOR TO TENSIONING TENDONS OR REMOVING SHORING OR FORMS. C5. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT, AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
WELDING OF REINFORCING STEEL	●	●	REFERENCE NOTE C2	
EMBEDDED BOLTS & PLATES	●			
VERIFYING REQUIRED DESIGN MIX		●		
CONCRETE PLACEMENT / SAMPLING	●		REFERENCE NOTE C3	
CURING TEMPERATURE / TECHNIQUES		●		
PRESTRESSED CONCRETE				
APPLICATION OF PRESTRESSING FORCES	●			
GROUTING BONDED TENDONS	●		IN SEISMIC-FORCE-RESISTING SYSTEM	
ERECTION OF PRECAST MEMBERS		●		
VERIFICATION OF IN-SITU STRENGTH		●	REFERENCE NOTE C4	
EPOXY / EXPANSION ANCHOR PLACEMENT	●	●	REFERENCE NOTE C5	
WOOD (IBC 1705.5 & 1705.11.1 & 1705.12.2)				W1. WOOD STRUCTURAL PANEL SHEATHING SHALL BE INSPECTED TO ASCERTAIN THAT GRADE AND THICKNESS ARE IN COMPLIANCE WITH APPROVED BUILDING PLANS. NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAIL OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES, AND SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS SHALL ALSO BE INSPECTED AND VERIFIED FOR COMPLIANCE WITH APPROVED BUILDING PLANS. W2. SPECIAL INSPECTION IS NOT REQUIRED FOR WOOD SHEAR WALLS, WOOD DIAPHRAGMS, INCLUDING NAILING, & BOLTING, AND OTHER FASTENING TO OTHER COMPONENTS WHERE THE SPACING OF THE SHEATHING FASTENERS IS GREATER THAN 4"o.c. W3. SPECIAL INSPECTION SHALL BE PERFORMED TO VERIFY THAT THE INSTALLATION OF TEMPORARY AND PERMANENT RESTRAINT/BRACING IS INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.
HIGH LOAD DIAPHRAGMS (ROOF / FLOOR)		●	REFERENCE NOTE W1	
SITE-BUILT ASSEMBLIES		●		
SHEAR WALL & DIAPHRAGM NAILING		●	REFERENCE NOTE W2	
DRAG STRUTS		●		
BRACES & SHEAR PANELS		●		
HOLDOWNS		●		
GLUING OPERATIONS	●			
METAL-PLATE-CONNECTED WOOD TRUSSES WITH HEIGHTS GREATER THAN OR EQUAL TO 60"		●	REFERENCE NOTE W2	
METAL-PLATE-CONNECTED WOOD TRUSSES WITH SPANS GREATER THAN OR EQUAL TO 60 FEET		●	REFERENCE NOTE W3	
SOILS (IBC 1705.6)			REFERENCE NOTE F1	F1. SPECIAL INSPECTION OF SOILS SHALL REFERENCE THE APPROVED SOILS REPORT TO DETERMINE COMPLIANCE. F2. WHERE SOILS REPORT IS NOT PROVIDED SPECIAL INSPECTIONS ARE REQUIRED TO VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D 1557.
VERIFY ADEQUATE MATERIALS BELOW FOOTINGS		●	REFERENCE NOTE F1	
EXCAVATIONS EXTEND TO PROPER DEPTH AND REACH PROPER MATERIAL		●	REFERENCE NOTE F2	
CLASSIFY & TEST CONTROLLED FILL MATERIALS		●	REFERENCE NOTE F2	
PERFORM MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	●		REFERENCE NOTE F1	
PROPERLY PREPARED SITE AND SUB-GRADE PRIOR TO FILL.		●	REFERENCE NOTE F1	

GENERAL SPECIAL INSPECTION NOTES :

1. THE ITEMS MARKED WITH A "●" IN THE SPECIAL INSPECTION SCHEDULE SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS, AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY ITEMS WHICH FAIL TO COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, ARCHITECT, AND ENGINEER PRIOR TO COMPLETION OF THAT PHASE OF WORK. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
2. ANY CONSTRUCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT.
3. CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK. (IBC SECTION 202)

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK	LENGTHWISE REINF. NO.	LENGTHWISE REINF. SIZE	CROSSWISE REINF. NO.	CROSSWISE REINF. SIZE	CROSSWISE REINF. SPA.	REMARKS
FC2	2'-0"	CONT.	12"	(2)	#5	--	--	--	
F4	4'-0"	4'-0"	12"	(4)	#5	(4)	#5	--	
F5.5	5'-6"	5'-6"	12"	(6)	#5	(6)	#5	--	



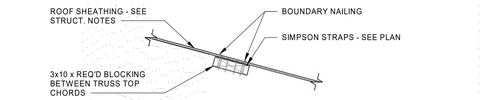
TYP. FOOTING SECTION

TYP. FOOTING SECTION W/ TOP & BOTTOM REINF.

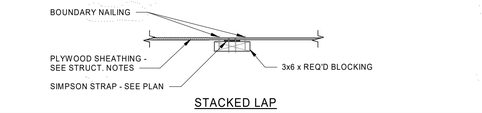
COIL STRAP LAP SPLICE SCHEDULE

ITEM #	LAP SPLICE MIN. # FASTENER PER SPLICE	MIN. LAP SPLICE LENGTH STACKED	MIN. LAP SPLICE LENGTH SIDE-BY-SIDE	COMMENTS
CMST 12	25-16d	22"	33"	
	30-10d	27"	39"	
CMST 14	18-16d	16"	26"	
	21-10d	19"	30"	
CMSTC 16	13-16d	11"	20"	
	15-10d	12"	20"	
CS 14	26-10d	--	15"	
	30-8d	--	16"	
CS 16	20-10d	--	11"	
	22-8d	--	13"	
CS 18	16-10d	--	9"	
	18-8d	--	11"	
CS 20	12-10d	--	6"	
	14-8d	--	9"	
CS 22	10-10d	--	7"	
	12-8d	--	6"	

NOTES:
1. NO STRAP MODIFICATION IS ALLOWED.
2. SPLICE MUST MEET BOTH THE MINIMUM NUMBER OF FASTENERS AND THE MINIMUM SPLICE LENGTH.
3. ALL NAIL SIZES LISTED ARE COMMON NAILS.
4. 10d COMMON MAY BE REPLACED BY 16d SINKERS. NO OTHER NAIL SUBSTITUTION IS ALLOWED FOR LAP SPLICES.
5. IF WOOD SPLITTING OCCURS, USE EVERY OTHER NAIL HOLE AND LENGTHEN SPLICE TO ACCOMMODATE THE REQUIRED NUMBER OF NAILS.
6. ALL STRAPS TO BE INSTALLED UNDER SHEATHING.
7. TWO OPTIONS EXIST FOR COIL STRAP LAPPING.
   a. LAP ONE STRAP STACKED ON TOP OF THE OTHER STRAP.
   b. INSTALL STRAPS SIDE BY SIDE - TO DO THIS A LARGER BLOCK MUST BE USED. THE BLOCK MUST BE ON SOLID PIECE.
8. STRAP TO BE INSTALLED TIGHT.

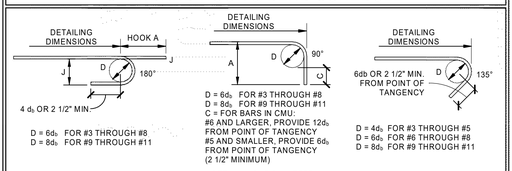


SIDE-BY-SIDE LAP



STACKED LAP

STANDARD HOOK & BEND SCHEDULE



NOTE: d_s = BAR DIAMETER

BAR SIZE	DIMENSION OF STANDARD 180° HOOKS, ALL GRADES A	J	DIMENSION OF STANDARD 90° HOOKS, ALL GRADES A
#3	5"	3"	6"
#4	6"	4"	8"
#5	7"	5"	10"
#6	8"	6"	1'-0"
#7	10"	7"	1'-2"
#8	11"	8"	1'-4"
#9	1'-3"	11 3/4"	1'-7"
#10	1'-5"	1'-1 1/4"	1'-10"
#11	1'-7"	1'-2 3/4"	2'-0"

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

A R W 50 Years
ENGINEERS
structural consultants
1594 W. Park Cir. Ogden, Utah 84404
ph. 801.782.6008 fx. 801.782.4656

SANTAQUIN SHOPS

ENTER ADDRESS HERE

MARK	DATE	DESCRIPTION

DATE: 06/23/20
ARW PROJECT NO: 20207
DESIGN SEQUENCE PROJECT NO: 1904.01
CAD DWG FILE NO:
DRAWN BY: Z. Thorner
DESIGNED BY: A. Higgs
DWG TYPE:
PROJECT PHASE: NOT FOR CONSTRUCTION

SHEET TITLE

SCHEDULES

S002

STRUCTURAL STEEL SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2018 IBC SECTION 1705.2.1

INSPECTION TASKS PRIOR TO WELDING (TABLE N5.4-1)	FABRICATOR QUALITY CONTROL		SPECIAL INSPECTOR QUALITY ASSURANCE	
	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	●			●
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	●		●	
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	●		●	
MATERIAL IDENTIFICATION (TYPE / GRADE)		●		●
WELDER IDENTIFICATION SYSTEM[1]		●		●
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)				
* JOINT PREPARATION				
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)		●		●
* CLEANLINESS (CONDITION OF STEEL SURFACES)				
* TACKING (TACK WELD QUALITY AND LOCATION)				
* BACKING TYPE AND FIT (IF APPLICABLE)				
FIT-UP OF CJP GROOVE WELDS OFHSS T-, Y-, AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)				
* JOINT PREPARATIONS				
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	●			●
* CLEANLINESS (CONDITION OF STEEL SURFACES)				
* TACKING (TACK WELD QUALITY AND LOCATION)				
CONFIGURATION AND FINISH OF ACCESS HOLES		●		●
FIT-UP OF FILLET WELDS				
* DIMENSIONS (ALIGNMENT, GAPS AT ROOT)		●		●
* CLEANLINESS (CONDITION OF STEEL SURFACES)				
* TACKING (TACK WELD QUALITY AND LOCATION)				
CHECK WELDING EQUIPMENT		●		

[1]THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.

INSPECTION TASKS DURING WELDING (TABLE N5.4-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
CONTROL AND HANDLING OF WELDING CONSUMABLES				
* PACKAGING		●		●
* EXPOSURE CONTROL				
NO WELDING OVER CRACKED TACK WELDS		●		●
ENVIRONMENTAL CONDITIONS				
* WIND SPEED WITHIN LIMITS		●		●
* PRECIPITATION AND TEMPERATURE				
WPS FOLLOWED				
* SETTINGS ON WELDING EQUIPMENT				
* TRAVEL SPEED				
* SELECTED WELDING MATERIALS		●		●
* SHIELDING GAS TYPE / FLOW RATE				
* PREHEAT APPLIED				
* INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX)				
* PROPER POSITION (F, V, H, OH)				
WELDING TECHNIQUES				
* INTERPASS AND FINAL CLEANING				
* EACH PASS WITHIN PROFILE LIMITATIONS		●		●
* EACH PASS MEETS QUALITY REQUIREMENTS				
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	●		●	

INSPECTION TASKS AFTER WELDING (TABLE N5.4-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
WELDS CLEANED		●		●
SIZE, LENGTH AND LOCATION OF WELDS	●		●	
WELDS MEET VISUAL ACCEPTANCE CRITERIA				
* CRACK PROHIBITION				
* WELD / BASE-METAL FUSION				
* CRATER CROSS SECTION	●		●	
* WELD PROFILES				
* WELD SIZE				
* UNDERCUT				
* POROSITY				
ARC STRIKES	●		●	
K-AREA[1]	●		●	
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES[2]	●		●	
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	●		●	
REPAIR ACTIVITIES	●		●	
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	●		●	
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR		●		●

[1]WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75mm) OF THE WELD)
[2]AFTER ROLLED HEAVY SHAPES (SEE SECTION A3.1c) AND BUILT-UP HEAVY SHAPES (SEE SECTION A3.1d) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.

NOTES

1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. CONTINUOUS - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N6.
5. QC AND QA INSPECTORS SHALL BE QUALIFIED IN ACCORDANCE WITH AISC 360-16 CHAPTER N4.
6. NONDESTRUCTIVE TESTING PERSONNEL SHALL BE QUALIFIED IN ACCORDANCE WITH AISC 360-16 CHAPTER N4.3.
7. NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL COMPLY WITH AISC 360-16 CHAPTER N5.5a AND b.
8. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND COMPLETED WELDS SHALL BE THE PRIMARY METHOD TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. FOR STRUCTURAL STEEL, ALL PROVISIONS OF AWS D1.1 / D1.1M STRUCTURAL WELDING CODE - STEEL FOR STATICALLY LOADED STRUCTURES SHALL APPLY.
9. THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED BY QA USING MT OR PT, WHEN THE FLANGE THICKNESS EXCEEDS 2 IN. (50mm) FOR ROLLED SHAPES, OR WHEN THE BUILT-UP THICKNESS EXCEEDS 2 IN. (50mm) FOR BUILT-UP SHAPES. ANY CRACK SHALL BE DEEMED UNACCEPTABLE REGARDLESS OF SIZE OR LOCATION.
10. WHEN REQUIRED BY APPENDIX 3, TABLE A-3.1, WELDED JOINTS REQUIRING WELD SOUNDNESS TO BE ESTABLISHED BY RADIOGRAPHICS OR ULTRASONIC INSPECTION SHALL BE TESTED BY QA AS PRESCRIBED. REDUCTION IN THE RATE OF UT IS PROHIBITED.
11. REDUCTION OF RATE OF ULTRASONIC TESTING - THE RATE OF UT IS ONLY PERMITTED TO BE REDUCED IF APPROVED BY THE EOR AND THE AHJ PER AISC 360-16 CHAPTER N5.5e.
12. FOR STRUCTURES IN RISK CATEGORY II, WHERE THE INITIAL RATE FOR UT IS 10%, THE NDT RATE FOR AN INDIVIDUAL WELDER OR WELDING OPERATOR SHALL BE INCREASED TO 100% SHOULD THE REJECT RATE, THE NUMBER OF WELDS CONTAINING UNACCEPTABLE DEFECTS DIVIDED BY THE NUMBER OF WELDS COMPLETED, EXCEEDS 5% OF THE WELDS TESTED FOR THE WELDER OR WELDING OPERATOR. A SAMPLING OF AT LEAST 20 COMPLETED WELDS FOR A JOB SHALL BE MADE PRIOR TO IMPLEMENTING SUCH AN INCREASE. WHEN THE REJECT RATE FOR THE WELDER OR WELDING OPERATOR, AFTER A SAMPLING OF AT LEAST 40 COMPLETED WELDS, HAS FALLEN TO 5% OR LESS, THE RATE OF UT SHALL BE RETURNED TO 10%. FOR EVALUATING THE REJECT RATE FOR CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS 1 IN. (25mm) OR LESS, EACH 12 IN. (300mm) INCREMENT OR FRACTION THEREOF SHALL BE CONSIDERED AS ONE WELD. FOR EVALUATING THE REJECT RATE ON CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS GREATER THAN 1 IN. (25mm), EACH 6 IN. (150mm) OF LENGTH OR FRACTION THEREOF SHALL BE CONSIDERED ON WELD.
13. ALL NDT PERFORMED SHALL BE DOCUMENTED. FOR SHOP FABRICATION, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY PIECE MARK AND LOCATION IN THE PIECE. FOR FIELD WORK, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY LOCATION IN THE STRUCTURE, PIECE MARK, AND LOCATION IN THE PIECE. WHEN A WELD IS REJECTED ON THE BASIS OF NDT, THE NDT RECORD SHALL INDICATE THE LOCATION OF THE DEFECT AND THE BASIS OF REJECTION
14. DEMAND CRITICAL WELDS SHALL MEET THE PROVISION FOUND IN AISC 341-16 AND WELDING METHODS, PROCEDURES AND QUALITY CONTROL SHALL COMPLY WITH AWS D1.1 AND THE FOLLOWING:
    a. ARC STRIKES, GOUGES AND OTHER IMPERFECTIONS WITHIN OR ADJACENT TO THE JOINT, SHALL BE REPAIRED OR REMOVED.
    b. PREHEAT AND INTER-PASS REQUIREMENTS AS OUTLINED IN SECTION 3.5.
    c. UNREPAIRED CRACKS, GOUGES, AND NOTCHES WILL NOT BE PERMITTED IN THE JOINT AREA.
    d. USE ELECTRODES WITH CHARPY V-NOTCH ABSORBED ENERGY EQUAL TO OR GREATER THAN 20 FT-LBS AT 20 DEGREES FAHRENHEIT UNDER AWS A5 CLASSIFICATION TEST METHODS, AND 40 FT-LBS AT 70 DEGREES FAHRENHEIT USING TEST PROCEDURES PRESCRIBED IN APPENDIX X OF AISC 358. ACCEPTABLE ELECTRODES INCLUDE E70TG-K2, E71 T-1.

INSPECTION TASKS PRIOR TO BOLTING (TABLE N5.6-1)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		●	●	
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		●		●
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		●		●
PROPER BOLTING PROCEDURES SELECTED FOR JOINT DETAIL		●		●
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		●		●
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	●			●
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		●		●

INSPECTION TASKS DURING BOLTING (TABLE N5.6-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
FASTENER ASSEMBLIES, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		●		●
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		●		●
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		●		●
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		●		●

INSPECTION TASKS AFTER BOLTING (TABLE N5.6-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	●		●	

NOTES

1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. CONTINUOUS - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
5. FOR SNUG-TIGHT JOINTS, PRE-INSTALLATION VERIFICATION TESTING AS SPECIFIED IN TABLE N5.6-1 AND MONITORING OF THE INSTALLATION PROCEDURES AS SPECIFIED IN TABLE N5.6-2 ARE NOT APPLICABLE. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS IN SNUG-TIGHT JOINTS.
6. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE TURN-OF-NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT-TENSION-INDICATOR METHOD, OR THE TWIST-OFF-TYPE TENSION CONTROL BOLT METHOD, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
7. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE CALIBRATED WRENCH METHOD OR THE TURN-OF-NUT METHOD WITHOUT MATCHMARKING, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI SHALL BE ENGAGED IN THEIR ASSIGNED INSPECTION DUTIES DURING INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
8. OBSERVATION OF BOLTING OPERATIONS SHALL BE THE PRIMARY METHOD USED TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP INCORPORATED IN CONSTRUCTION ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE PROVISIONS OF THE RCSC SPECIFICATION.

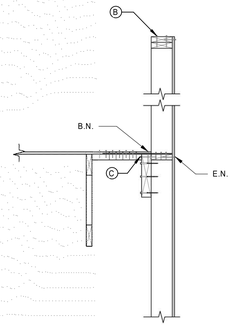
GENERAL STEEL SPECIAL INSPECTION NOTES :

1. QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT THE FABRICATOR'S PLANT. THE QUALITY ASSURANCE INSPECTOR (QAI) SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE FABRICATOR.
2. QA INSPECTION OF THE ERECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT SITE. THE QAI SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE ERECTOR.
3. WHERE A TASK IS NOTED TO BE PERFORMED BY BOTH QC AND QA, IT IS PERMITTED TO COORDINATE THE INSPECTION FUNCTION BETWEEN THE QCI AND QAI SO THAT THE INSPECTION FUNCTIONS ARE PERFORMED BY ONLY ONE PARTY. WHERE QA RELIES UPON INSPECTION FUNCTIONS PERFORMED BY QC, THE APPROVAL OF THE ENGINEER OF RECORD AND THE AUTHORITY HAVING JURISDICTION IS REQUIRED.
4. THE FABRICATOR'S QCI SHALL INSPECT THE FABRICATED STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE SHOP DRAWINGS, SUCH AS PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. THE ERECTOR'S QCI SHALL INSPECT THE ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE ERECTION DRAWINGS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
5. THE QAI SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF THE CONCRETE.
6. THE QAI SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
7. QUALITY ASSURANCE (QA) INSPECTIONS, EXCEPT NONDESTRUCTIVE TESTING (NDT), MAY BE WAIVED WHEN THE WORK IS PERFORMED IN A FABRICATING SHOP OR BY AN ERECTOR APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ) TO PERFORM THE WORK WITHOUT QA. NDT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP MAY BE PERFORMED BY THAT FABRICATOR WHEN APPROVED BY THE AHJ. WHEN THE FABRICATOR PERFORMS THE NDT, THE QA AGENCY SHALL REVIEW THE FABRICATOR'S NDT REPORTS.
8. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE FABRICATOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. AT COMPLETION OF ERECTION, THE APPROVED ERECTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE ERECTOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
9. IDENTIFICATION AND REJECTION OF MATERIAL OR WORKMANSHIP THAT IS NOT IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS, SHALL BE PERMITTED AT ANY TIME DURING THE PROGRESS OF THE WORK. HOWEVER, THIS PROVISION SHALL NOT RELIEVE THE OWNER OR THE INSPECTOR OF THE OBLIGATION FOR TIMELY, IN-SEQUENCE INSPECTIONS. NONCONFORMING MATERIAL AND WORKMANSHIP SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE FABRICATOR OR ERECTOR, AS APPLICABLE.
10. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT INTO CONFORMANCE, OR MADE SUITABLE FOR ITS INTENDED PURPOSE AS DETERMINED BY THE ENGINEER OF RECORD.
11. CONCURRENT WITH THE SUBMITTAL OF SUCH REPORTS TO THE AHJ, EOR OR OWNER, THE QA AGENCY SHALL SUBMIT TO THE FABRICATOR AND ERECTOR:
    (1) NONCONFORMANCE REPORTS
    (2) REPORTS OF REPAIR, REPLACEMENT OR ACCEPTANCE OF NONCONFORMING ITEMS.

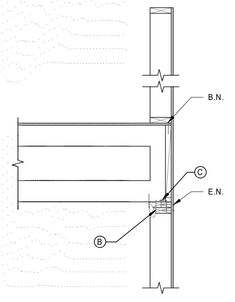
WOOD SHEAR WALL SCHEDULE

WALL MARK	LEVEL	(NOTE 8) PLYWOOD SHEATHING (CDX U.N.O.)	EDGE NAILING (E.N.) (SEE NOTES 2 & 3)	NOMINAL BOTTOM PLATE SIZE	(NOTE 5) NOM. STUD SIZE (MIN.)	CONNECTION NAILING			(NOTE 7) TYP. SILL PLATE ANCHOR BOLTS		COMMENTS
						NAILING TOP PL. TOGETHER Ⓑ	BLKG. TO TOP PL. Ⓒ	TOP PL. SPLICE	DIA.	SPA.	
SW-1	1ST TO ROOF	7/16"	6"o.c.	2x	2x	(40) 10d	A35 AT 24"o.c / 10d AT 6"o.c.	10d @ 6"o.c.	5/8" DIA.	32"o.c.	
SW-2	1ST TO ROOF	7/16"	4"o.c.	2x	2x	(40) 10d	A35 AT 18"o.c / 10d AT 4"o.c.	10d @ 6"o.c.	5/8" DIA.	32"o.c.	
SW-3	1ST TO ROOF	7/16"	3"o.c.	2x	2x	(40) 10d	A35 AT 12"o.c / 10d AT 3"o.c.	10d @ 6"o.c.	5/8" DIA.	24"o.c.	

NOTES:
1. ALL SHEATHING PANEL EDGES TO BE BLOCKED. USE 3x BLOCKING WHERE 3x STUDS ARE REQUIRED.
2. ALL NAILS TO BE COMMON OR GALVANIZED BOX.
3. FIELD NAILING TO BE SAME NAILS @ 12"o.c.
4. STAGGER E.N. AT DOUBLE TOP PLATES.
5. 3x NOMINAL FRAMING MEMBERS TO OCCUR AT ABUTTING PANEL EDGES. 2x NOMINAL FRAMING MEMBERS MAY BE USED AT INTERIOR OF PANEL, UNLESS NOTED OTHERWISE IN FLOOR FRAMING NOTES. (2) 2x NAILED TOGETHER W/ (2) 16d NAILS @ 16"o.c. OR 4x NOMINAL FRAMING MEMBERS OF THE SAME DEPTH AND LUMBER GRADE MAY BE USED IN LIEU OF 3x MEMBERS AT CONTRACTOR OPTION.
6. SHEATHING SHALL BE STAMPED W/ APA STAMP. O.S.B. OF EQUIVALENT THICKNESS, GRADE, AND RATING MAY BE USED IN LIEU OF PLYWOOD.
7. ALL SILL PLATE ANCHOR BOLTS TO HAVE MINIMUM 8" EMBEDMENT INTO CONCRETE AS PER DETAIL 8/S201. SEE DETAIL 5/S202 FOR HOLDOWN ANCHORAGE REQUIREMENTS.
8. SEE THIS SHEET FOR TYPICAL SHEAR TRANSFER DETAILS.
9. TOP PLATE SPLICE NAILING SHALL APPLY TO EACH SIDE OF THE SPLICE. THE LENGTH OF THE OVERLAP SHALL BE SUFFICIENT TO PREVENT SPLITTING (48" MIN.)



EXTERIOR NON-BEARING WALL SHEAR TRANSFER



EXTERIOR BEARING WALL SHEAR TRANSFER

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

ARW 50 Years
ENGINEERS
structural consultants
1594 W. Park Cir. Ogden, Utah 84404
ph. 801.782.6008 fx. 801.782.4656

SANTAQUIN SHOPS

ENTER ADDRESS HERE

MARK	DATE	DESCRIPTION

DATE: 06/23/20
ARW PROJECT NO: 20207
DESIGN SEQUENCE PROJECT NO: 1904.01
CAD DWG FILE NO:
DRAWN BY: Z. Thorner
DESIGNED BY: A. Higgs
DWG TYPE:
PROJECT PHASE: NOT FOR CONSTRUCTION

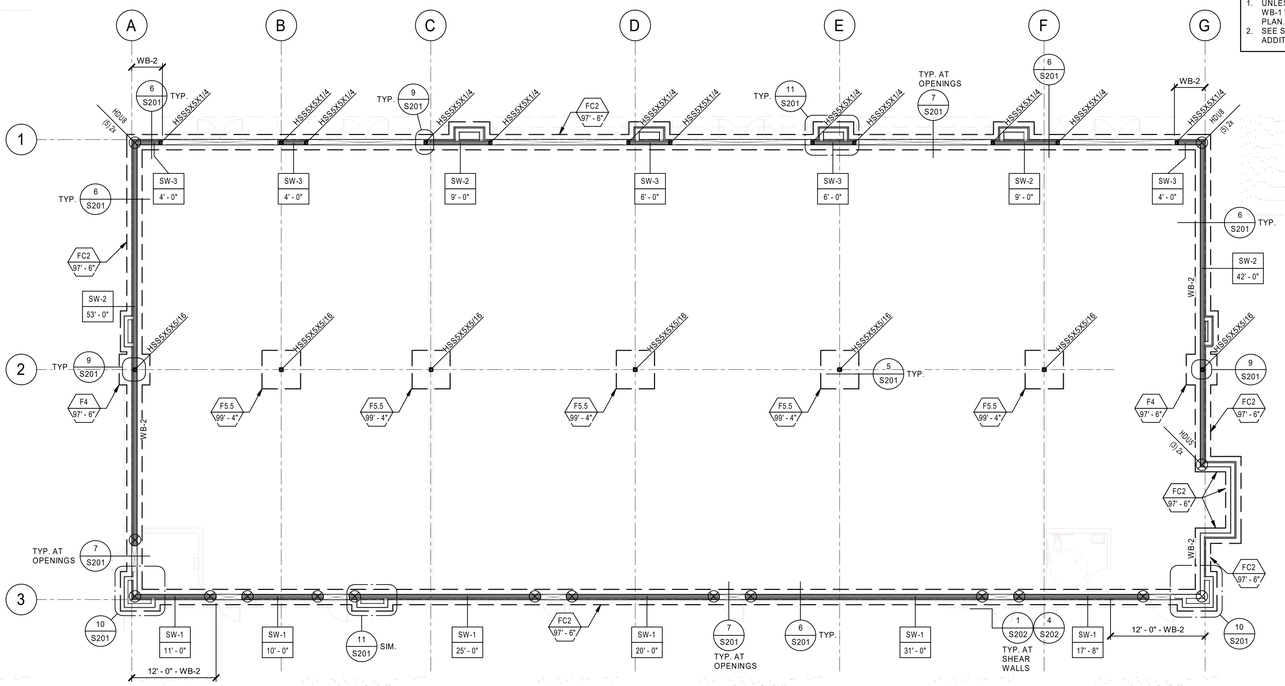
SHEET TITLE

SCHEDULES

S003

WOOD BEARING WALL SCHEDULE		
CALLOUT	STUD SIZE	SPACING
WB-1	2x6 DF-#2	16"
WB-2	1 3/4" x 5 1/2" LSL	16"

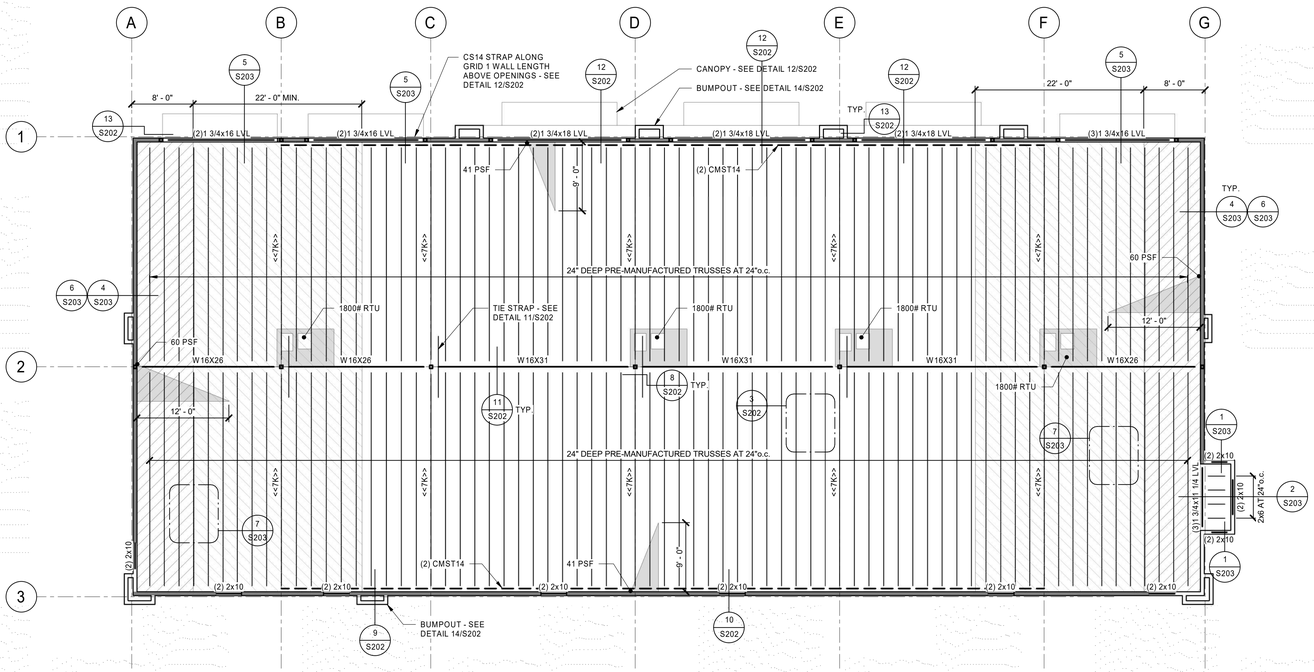
NOTES:
1. UNLESS NOTED OTHERWISE, USE WB-1 WHERE NOT CALLED OUT ON PLAN.
2. SEE STRUCTURAL NOTES L.1.c FOR ADDITIONAL MATERIAL PROPERTIES.



FOOTING AND FOUNDATION PLAN

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

A S101



ROOF FRAMING PLAN

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

B S101

FOOTING & FOUNDATION NOTES :

1. SEE SHEET S001 FOR GENERAL STRUCTURAL NOTES.
2. ALL FOOTINGS SHALL BE PLACED ON SOIL WHICH HAS BEEN PREPARED FOR THE BEARING PRESSURE SHOWN IN THE STRUCTURAL NOTES.
3. VERIFY ALL DIMENSIONS WITH DRAWINGS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOUND.
4. SEE SHEET S002 FOR FOOTING SCHEDULE.
5. PROVIDE DOWELS IN FOOTINGS / FOUNDATIONS TO MATCH VERTICAL WALL REINFORCING U.N.O.
6. SEE SHEET S201 FOR TYPICAL FOOTING AND FOUNDATION DETAILS.
7. ALL EXTERIOR WALL FOOTINGS TO BEAR A MINIMUM DIMENSION BELOW EXTERIOR GRADE AS NOTED IN GENERAL STRUCTURAL NOTES.
8. FOUNDATION WALLS ARE DESIGNED AND DETAILED FOR THE COMPLETED CONDITION. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. BACKFILLED WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION AND BACKFILLING TO PRODUCE PLUMB AND TRUE FINISHED WALLS.
9. ALL ANCHORS, HOLD-DOWNS, ANCHOR BOLTS, DOWELS, EMBEDDED ITEMS, ETC. SHALL BE HELD IN PLACE PRIOR TO AND DURING CONCRETE AND/OR GROUT PLACEMENT.
10. COORDINATE ALL FOOTING DEPTHS (INTERIOR AND EXTERIOR) WITH DRAINS, CONDUITS, ETC. THAT MAY INTERFERE WITH FOOTINGS.
11. FOUNDATION WALLS SHALL BE 10" THICK U.N.O.
12. ⊗ INDICATES HDU2 HOLDOWN WITH (2) 2x STUDS. SEE DETAIL 4 AND 5/S202 FOR MORE INFORMATION.

CONCRETE SLAB NOTES :

1. SLAB ON GRADE SHALL BE 4" THICK CONCRETE U.N.O. SLAB SHALL BE UNDERLAIN BY FREE DRAINING MATERIAL.
2. SEE DETAIL 1/S201 FOR CONTROL AND CONSTRUCTION JOINT INFORMATION.

WOOD ROOF FRAMING NOTES :

1. FOR ROOF SHEATHING AND NAILING REQUIREMENTS, SEE STRUCTURAL NOTES SHEET S001.
2. SHEAR WALLS ARE INDICATED ON A/S101. SEE THE SHEAR WALL SCHEDULE ON SHEET S003.
3. SEE WOOD FRAMING NOTES ON SHEET S001 FOR WALL TOP PLATE CONFIGURATION AND SPLICE REQUIREMENTS.
4. SEE PREMANUFACTURED TRUSS NOTES FOR ADDITIONAL INFORMATION.
5. INDICATES BOUNDARY AND EDGE NAILING OF 4"o.c. WITH BLOCKING AT PANEL EDGES. SEE DETAIL 7/S203.
6. INDICATES BOUNDARY AND EDGE NAILING OF 6"o.c. WITH BLOCKING AT PANEL EDGES. SEE DETAIL 7/S203.
7. WHERE STRAPS ARE SHOWN ON ROOF AND REQUIRE A SPLICE, FOLLOW SCHEDULE ON SHEET S002.
8. SEE DETAIL 2/S202 FOR TYPICAL WALL OPENING FRAMING.

PRE-MANUFACTURED TRUSS NOTES :

1. PRE-MANUFACTURED TRUSSES SHALL BE DESIGNED PER ALL APPLICABLE LOAD COMBINATIONS AND LOAD CONFIGURATIONS AS REQUIRED BY THE GOVERNING CODE AND THE GENERAL STRUCTURAL NOTES :

   THE FOLLOWING CRITERIA SHALL BE USED IN DESIGN.

SNOW LOAD	=	PER GENERAL STRUCTURAL NOTES
LIVE LOAD	=	PER GENERAL STRUCTURAL NOTES
DEAD LOAD	=	15 PSF TOP CHORD 5 PSF BOTTOM CHORD
WIND LOAD	=	PER GENERAL STRUCTURAL NOTES
SNOW DRIFT	=	AS DETERMINED BY THE TRUSS MANUFACTURER OR SHOWN ON PLANS. CONSIDER BALANCED, UNBALANCED AND DRIFT LOCATIONS

2. ALL TRUSSES SHALL BE DESIGNED FOR A 150 POUND POINT LOAD APPLIED AT ANY LOCATION ALONG THE BOTTOM CHORD. DESIGN ALL TRUSSES FOR WIND UPLIFT PER THE GOVERNING CODE WITH A 15 PSF DEAD LOAD.
3. ALL TRUSS TO TRUSS CONNECTIONS PROVIDED BY TRUSS MANUFACTURER.
4. TRUSS MANUFACTURER SHALL COORDINATE AND INCLUDE ALL ADD LOADS AS INDICATED ON THE FRAMING PLAN.
5. COORDINATE DUCT RUNS AND TRUSS WEB CONFIGURATIONS WITH MECHANICAL & ARCH. DRAWINGS. DO NOT FIELD MODIFY TRUSSES TO ACCOMMODATE DUCTING AND OTHER MISCELLANEOUS EQUIPMENT WITHOUT WRITTEN DIRECTION FROM THE TRUSS MANUFACTURER OR STRUCTURAL ENGINEER.
6. COORDINATE ALLOWABLE TRUSS DEFLECTIONS WITH ARCHITECT FOR DETAILING OF NON-BEARING STUD WALLS BELOW.
7. DESIGN DRAG TRUSSES FOR ASD LEVEL DRAG LOADS SHOWN ON THE PLANS.
8. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR REVIEW AS REQUIRED BY THE DEFERRED SUBMITTAL SECTION OF THE GENERAL STRUCTURAL NOTES.
9. <<##>> INDICATES ASD TOP CHORD AXIAL LOAD AS WORST CASE OF WIND OR SEISMIC LOADS.
10. RTU LOADS ARE IN ADDITION TO TYPICAL LOADS AND SNOW DRIFT SHOWN.
11. SEE DETAILS 10 AND 12/S202 AND 6/S203 FOR ASD WIND PARAPET LOADS ON TRUSSES.
12. TRUSSES SHALL ALIGN ON GRIDS AND EQUALLY SPACED BETWEEN.

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

ARW 50 Years
ENGINEERS
structural consultants
1594 W. Park Cir. Ogden, Utah 84404
ph. 801.782.6008 fx. 801.782.4656

SANTAQUIN SHOPS

ENTER ADDRESS HERE

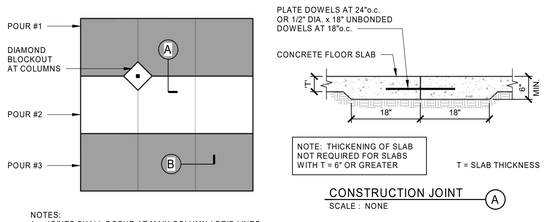
MARK	DATE	DESCRIPTION

DATE:	06/23/20
ARW PROJECT NO:	20207
DESIGN SEQUENCE PROJECT NO:	1904.01
CAD DWG FILE NO:	
DRAWN BY:	Z. Thorner
DESIGNED BY:	A. Higgs
DWG TYPE:	
PROJECT PHASE:	NOT FOR CONSTRUCTION

SHEET TITLE

STRUCTURAL PLANS

S101



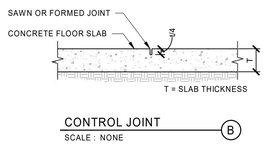
NOTES:
1. JOINTS SHALL OCCUR AT MAIN COLUMN / GRID LINES W/ 10'-0" MAX. SPACING BETWEEN JOINTS AT 4" SLABS; 12'-0" MAX. AT 5" SLABS, AND 15'-0" MAX. AT 6" SLABS.
2. SEE PLAN FOR SLAB THICKNESS 'T' AND REINFORCING SIZE AND SPACING.

TYPICAL CONCRETE SLAB JOINTS
SCALE : NONE — 1 / S201

NOTE: THICKENING OF SLAB NOT REQUIRED FOR SLABS WITH T = 6" OR GREATER

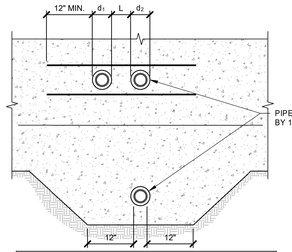
T = SLAB THICKNESS

CONSTRUCTION JOINT
SCALE : NONE — A



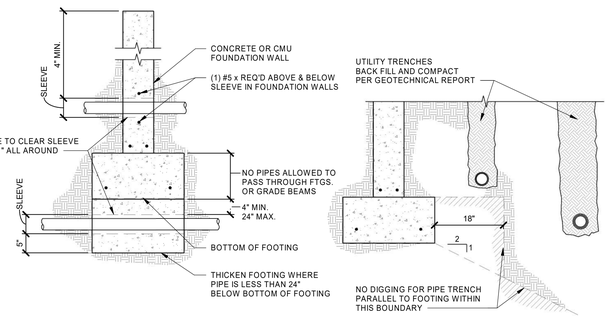
T = SLAB THICKNESS

CONTROL JOINT
SCALE : NONE — B



NOTES :
1. TYP. FOUNDATION WALL REINFORCING NOT SHOWN FOR CLARITY.
2. FOR OPENINGS LARGER THAN 12" IN ANY DIRECTION. SEE STRUCTURAL NOTE E-7.
3. DETAIL IS SIMILAR AT MASONRY FOUNDATION WALLS.
4. DISTANCE 'L' SHALL BE THE GREATER OF (d_1 +d_2)/2 OR 4".

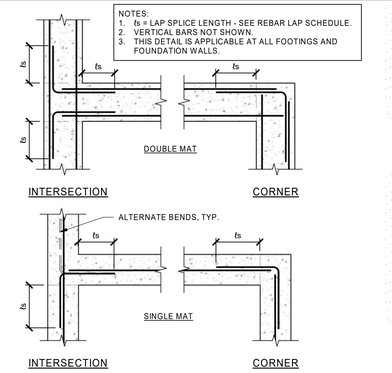
PIPE CROSSING FOOTING / FOUNDATION WALL



PIPE PARALLEL TO FOOTING

ALLOWABLE PIPING LOCATIONS @ FOOTING DETAIL
SCALE : NONE — 2 / S201

NOTES:
1. f_s = LAP SPLICE LENGTH - SEE REBAR LAP SCHEDULE.
2. VERTICAL BARS NOT SHOWN.
3. THIS DETAIL IS APPLICABLE AT ALL FOOTINGS AND FOUNDATION WALLS.



TYP. REINF. @ INTERSECTIONS IN CONC. DETAIL
SCALE : NONE — 3 / S201

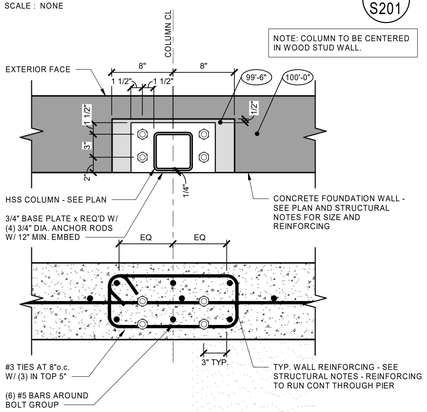
TYPICAL ANCHOR BOLT EMBEDMENT DETAIL
SCALE : NONE — 4 / S201

COLUMN TO SPOT FOOTING
SCALE : NONE — 5 / S201

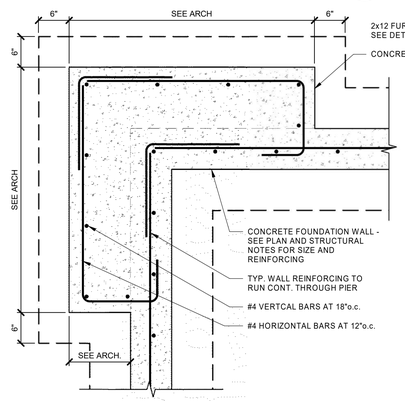
SECTION @ EXTERIOR TIMBER WALL
SCALE : NONE — 6 / S201

CONCRETE FOUNDATION @ OPENING
SCALE : NONE — 7 / S201

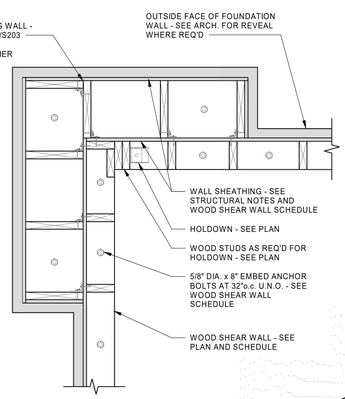
DETAIL
SCALE : NONE — 8 / S201



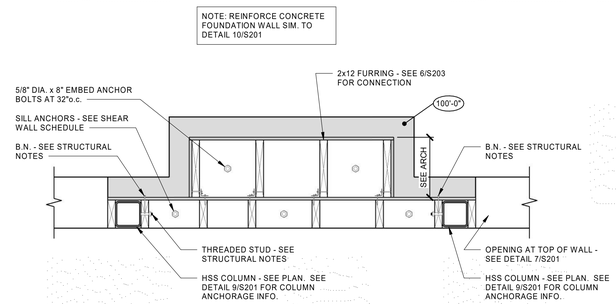
DETAIL
SCALE : NONE — 9 / S201



DETAIL
SCALE : NONE — 10 / S201



NOTE: REINFORCE CONCRETE FOUNDATION WALL SIM. TO DETAIL 10/S201



DETAIL
SCALE : NONE — 11 / S201

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

ARW 50 Years
ENGINEERS
structural consultants
1594 W. Park Cir. Ogden, Utah 84404
ph. 801.782.6008 fx. 801.782.4656

SANTAQUIN SHOPS

ENTER ADDRESS HERE

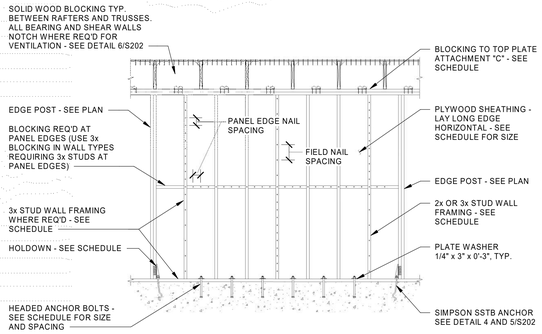
MARK	DATE	DESCRIPTION

DATE:	06/23/20
ARW PROJECT NO:	20207
DESIGN SEQUENCE PROJECT NO:	1904.01
CAD DWG FILE NO:	
DRAWN BY:	Z. Thorner
DESIGNED BY:	A. Higgs
DWG TYPE:	
PROJECT PHASE:	NOT FOR CONSTRUCTION

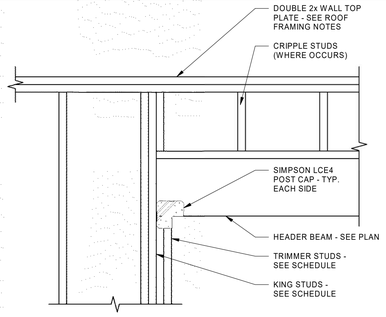
SHEET TITLE

DETAILS

S201

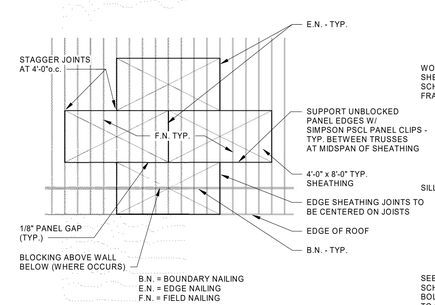


DETAIL 1/S202
SCALE : NONE



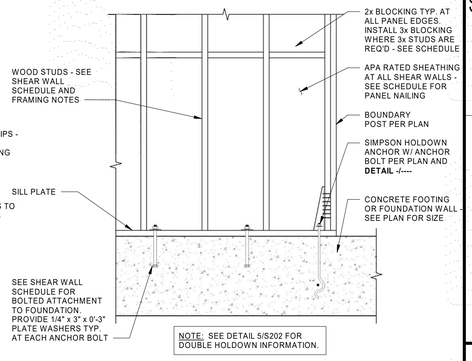
OPENING SIZE	KING STUDS	TRIMMER STUDS
UP TO 4'-6"	(2) 2x6	(2) 2x6

DETAIL 2/S202
SCALE : NONE

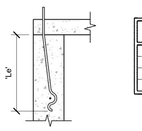


AT ROOF

TYP. SHEATHING LAYOUT (UNBLOCKED DIAPHRAGM)
SCALE : NONE

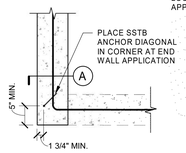


TYP. HOLD DOWN DETAIL
SCALE : NONE

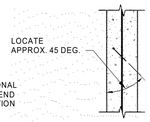


SECTION A

HOLDOWN SIZE	ANCHOR SIZE	MIN. EMBEDMENT DEPTH "Le"
HDU2	SSTB16	12-5/8"
HDU4	SSTB20	16-5/8"
HDU5	SSTB24	20-5/8"
HDU8	SSTB28	24-7/8"



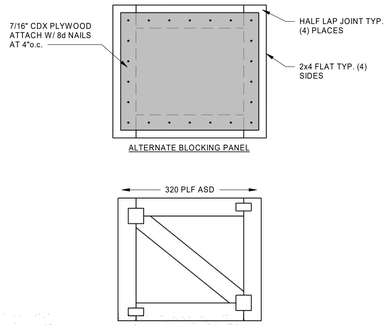
CORNER / END WALL INSTALLATION



CONTINUOUS WALL INSTALLATION

NOTE:
AT INTERIOR HOLDOWNS ON CONCRETE SLAB ON METAL DECK, WELD AN ASTM-A36 THREADED ROD OF EQUIVALENT SIZE TO TOP OF W BEAM. AT INTERIOR HOLDOWNS ON THICKENED SLAB FOOTINGS, THICKEN SLAB AS REQ'D TO INSTALL SSTB.

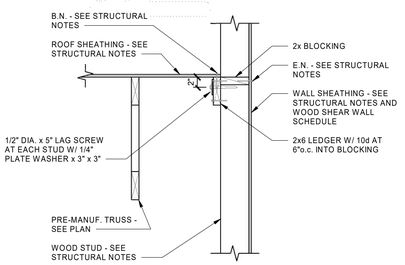
HOLDOWN EMBED SCHEDULE
SCALE : NONE



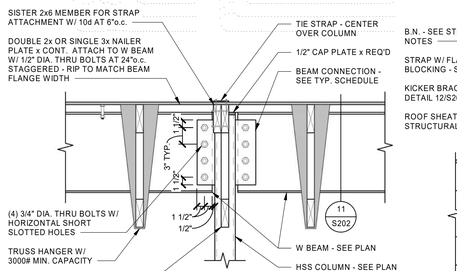
ALTERNATE BLOCKING PANEL

PREMANUFACTURED TRUSS BLOCKING PANEL

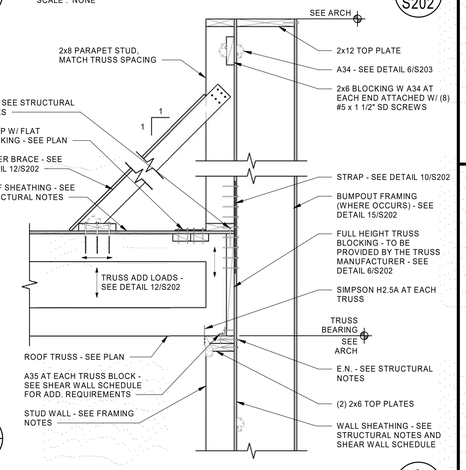
TRUSS BLOCKING PANELS
SCALE : NONE



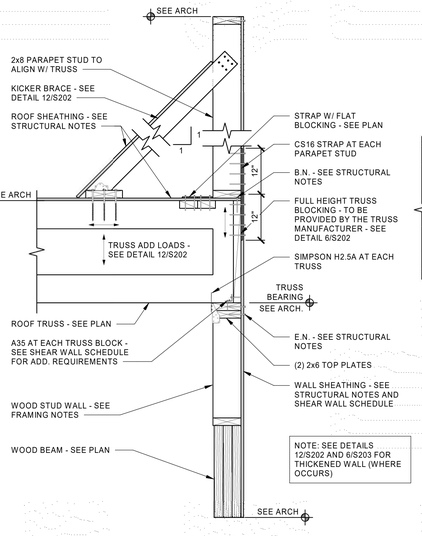
DETAIL
SCALE : NONE



BEAMS INTO HSS COLUMN
SCALE : NONE

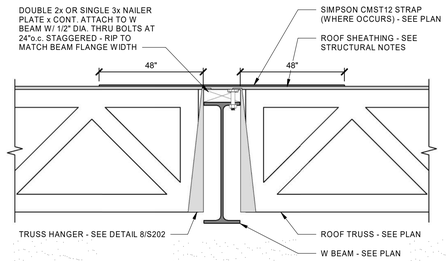


DETAIL
SCALE : NONE

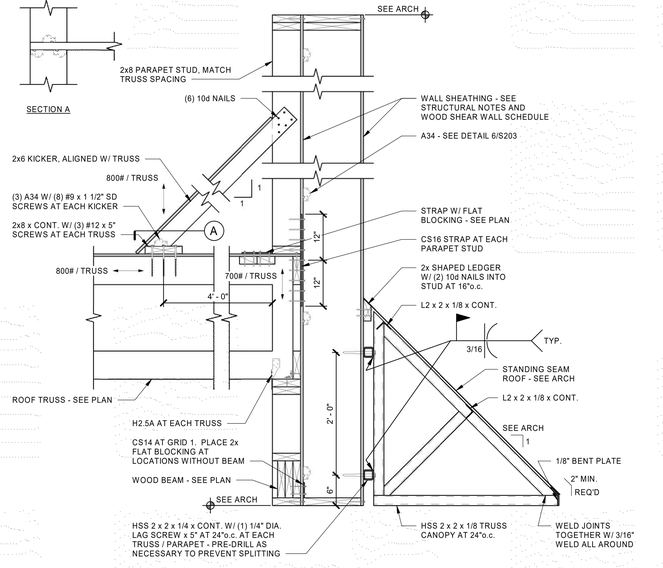


NOTE: SEE DETAILS 12/S202 AND 6/S203 FOR THICKENED WALL (WHERE OCCURS)

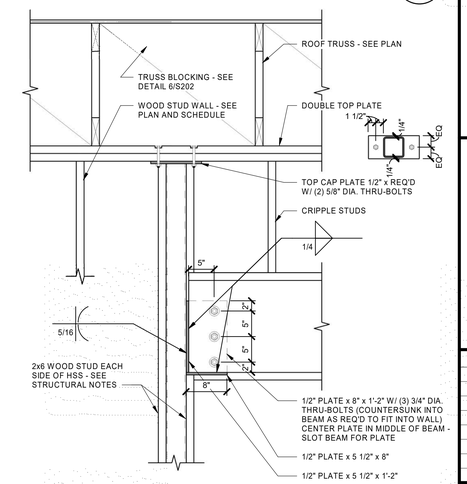
DETAIL
SCALE : NONE



JOIST TO W BEAM
SCALE : NONE



DETAIL
SCALE : NONE



DETAIL
SCALE : NONE

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

ARW 50 Years
ENGINEERS
structural consultants
1594 W. Park Cir. Ogden, Utah 84404
ph. 801.782.6008 fx. 801.782.4656

SANTAQUIN SHOPS

ENTER ADDRESS HERE

MARK	DATE	DESCRIPTION

DATE:	06/23/20
ARW PROJECT NO:	20207
DESIGN SEQUENCE PROJECT NO:	1904.01
CAD DWG FILE NO:	
DRAWN BY:	Z. Thorner
DESIGNED BY:	A. Higgs
DWG TYPE:	
PROJECT PHASE:	NOT FOR CONSTRUCTION

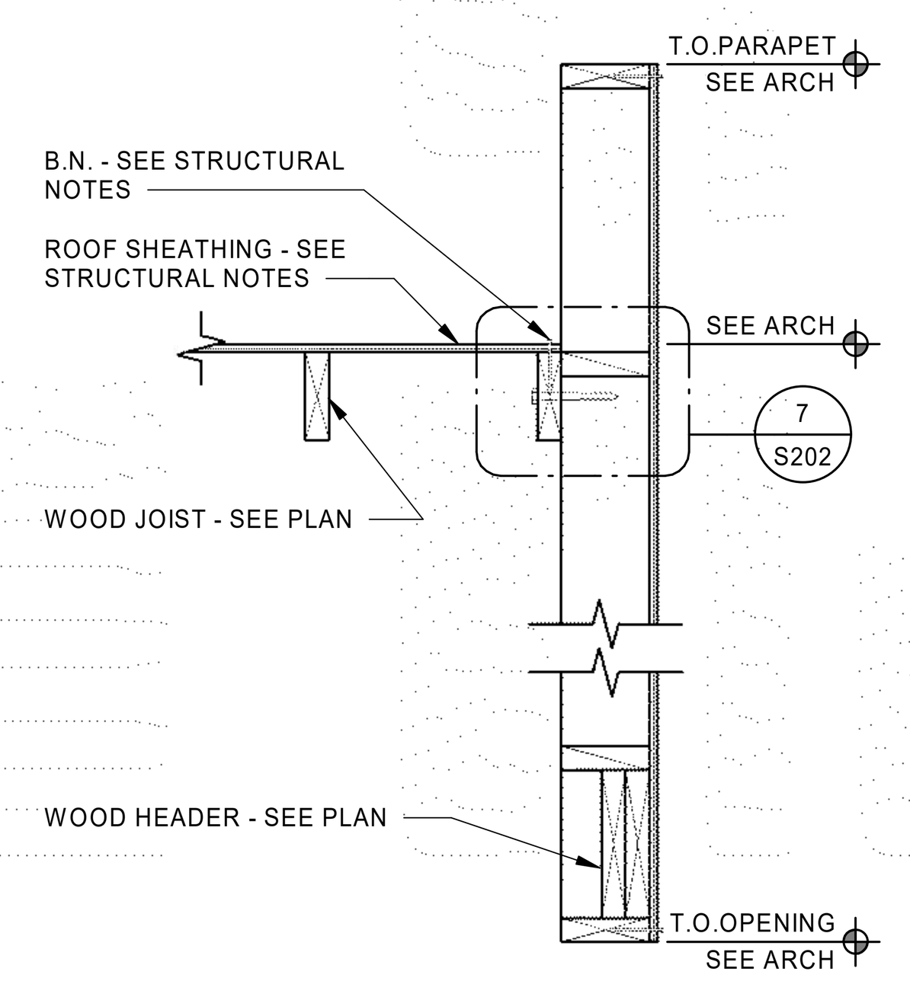
SHEET TITLE

DETAILS

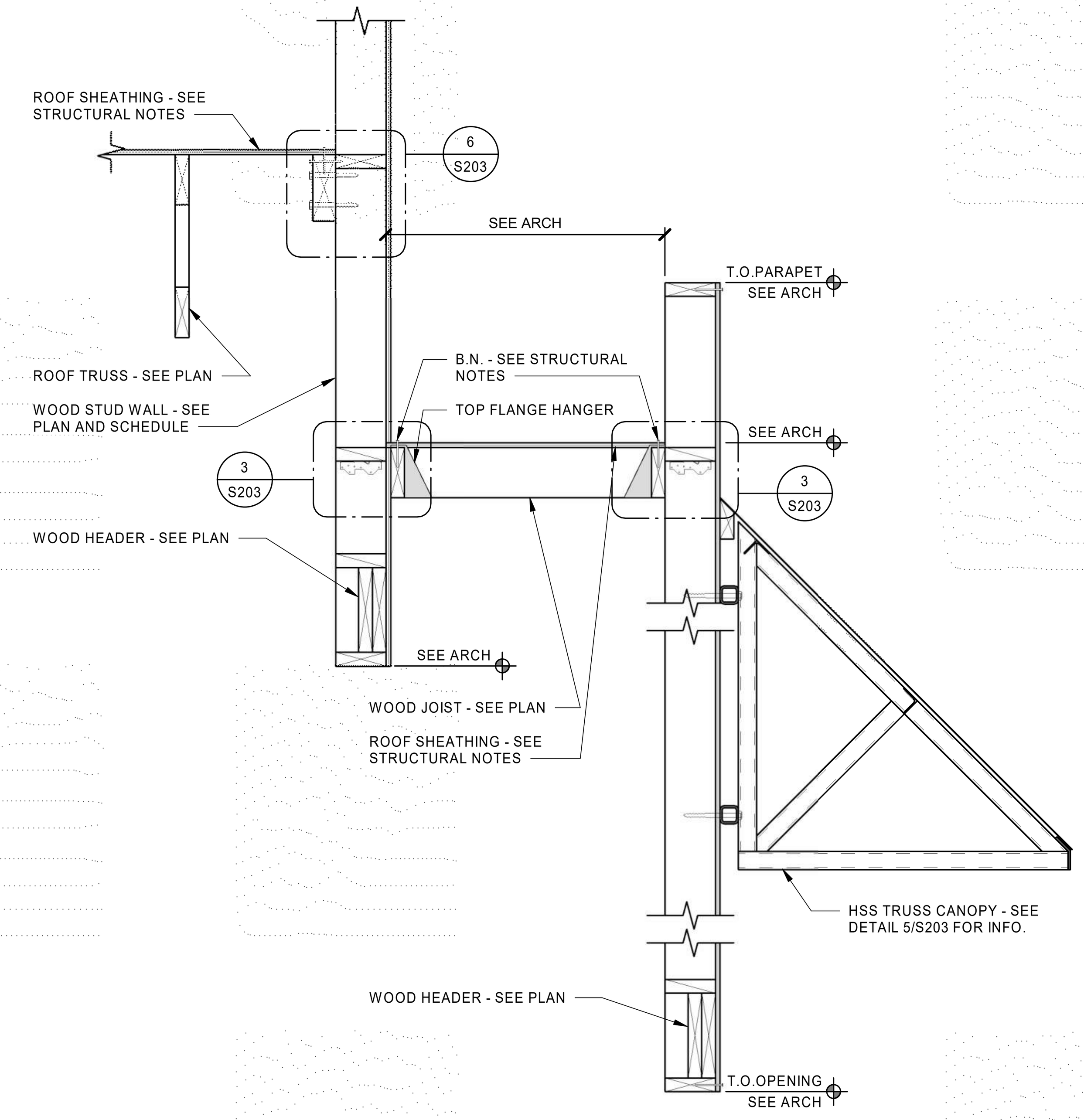
S202

8/24/2020 1:28:45 PM

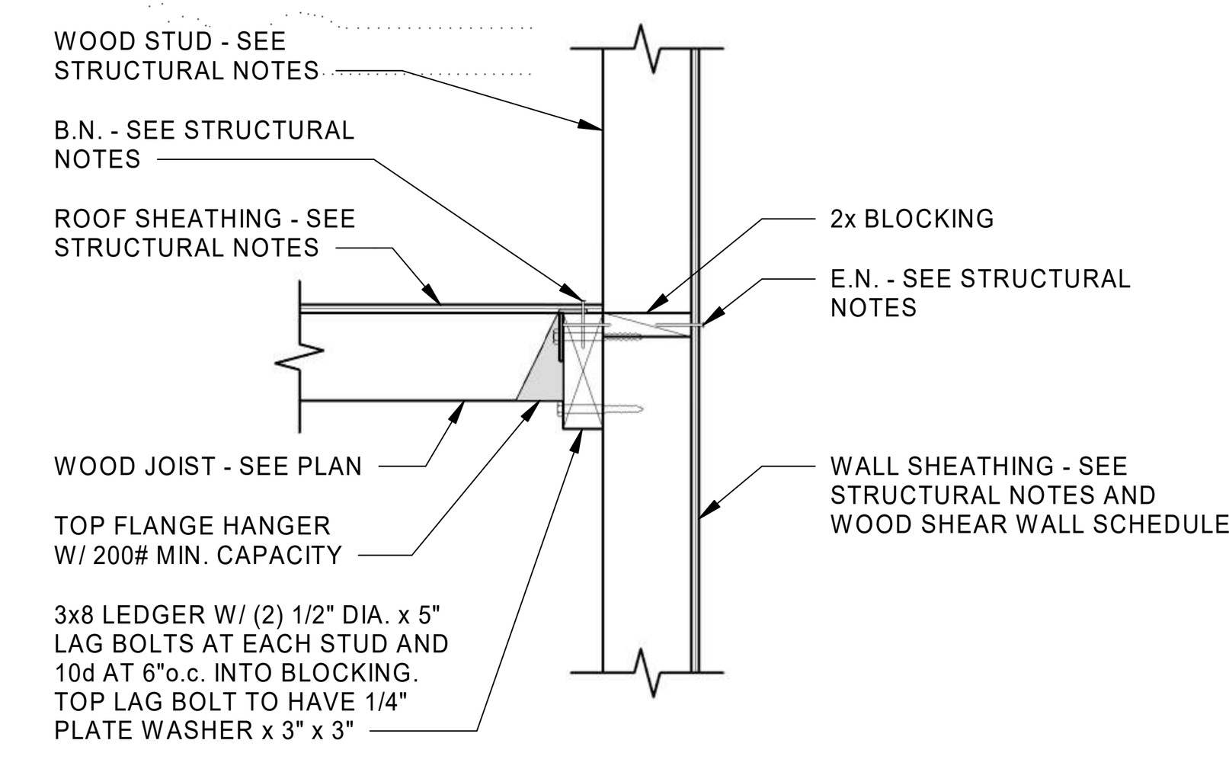
X:\DRAWINGS 2020\20207 - Santaquin Retail Square\S-20207 - Santaquin Retail Square - v20.rvt



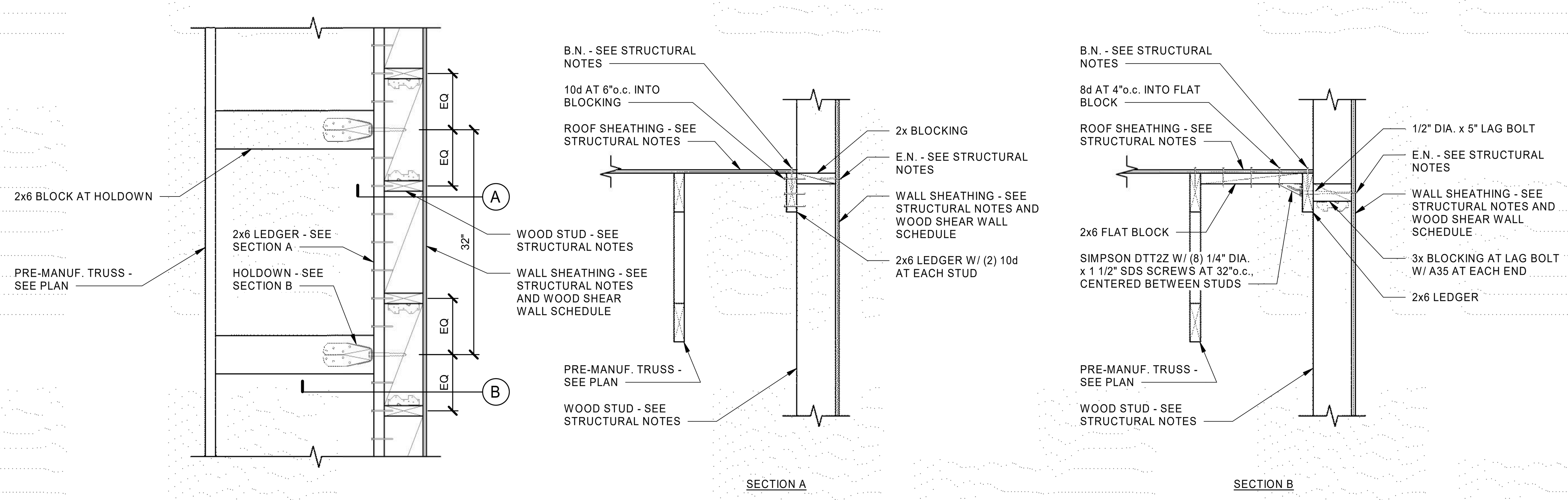
DETAIL
SCALE : NONE
1
S203



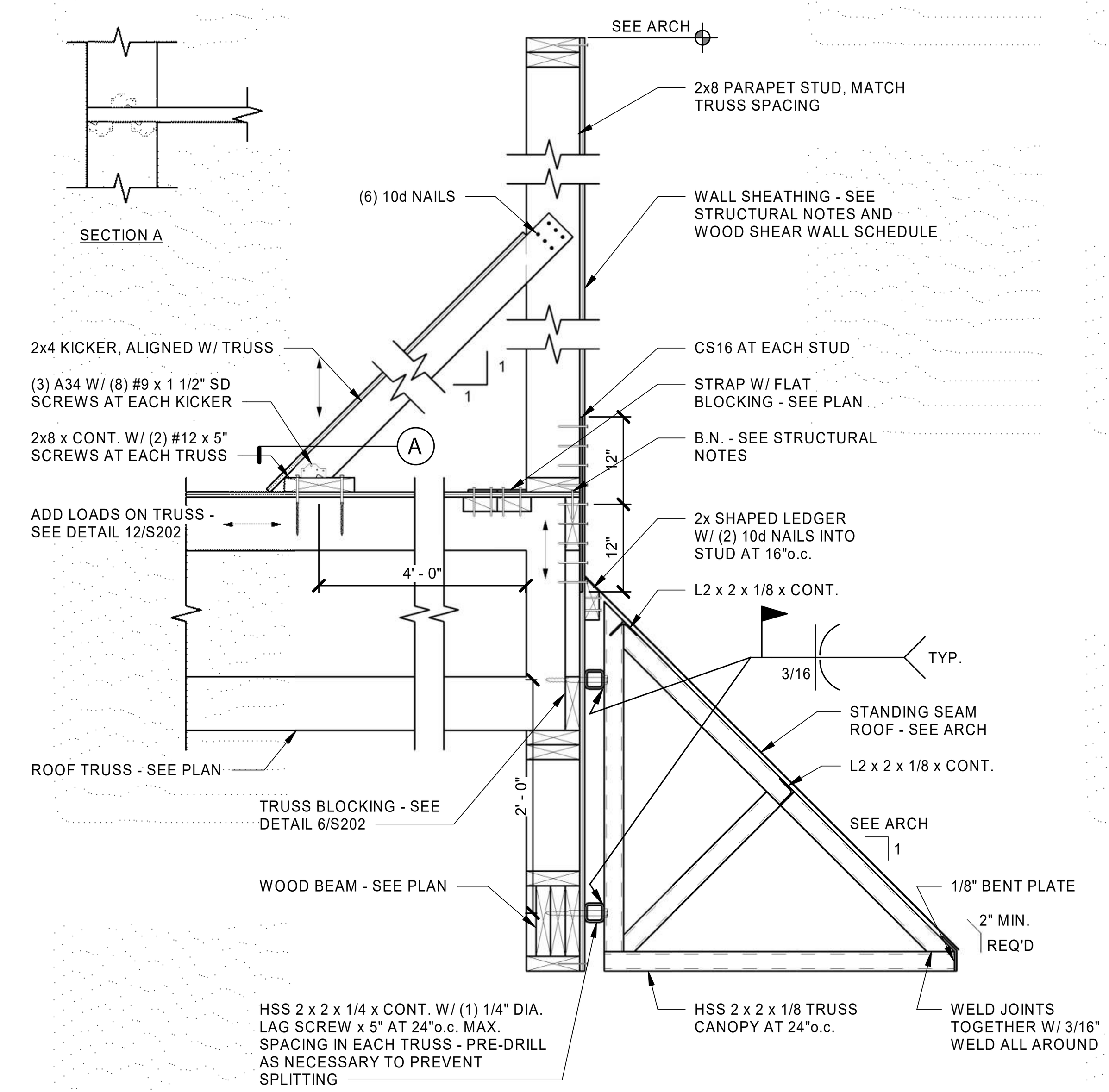
DETAIL
SCALE : NONE
2
S203



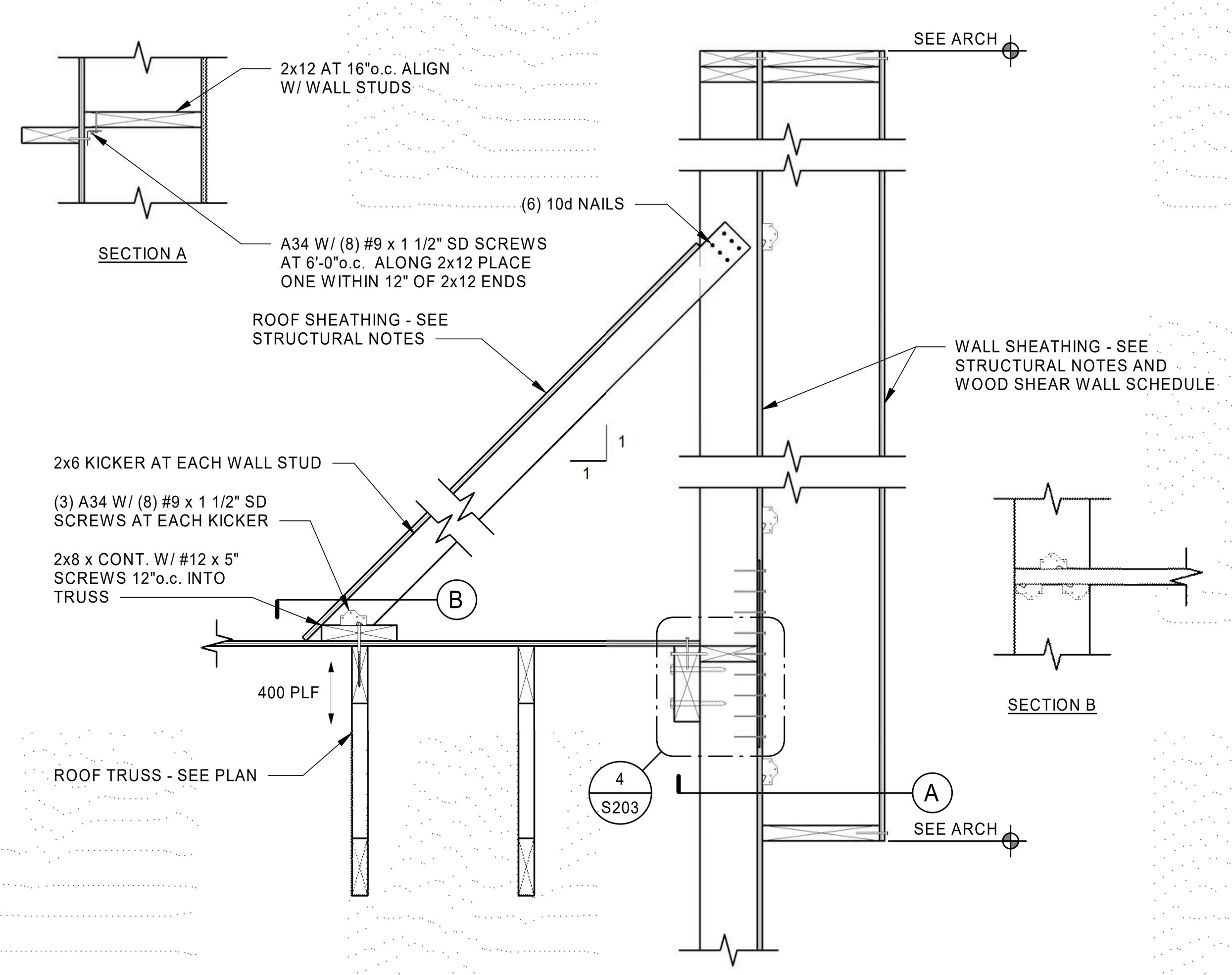
DETAIL
SCALE : NONE
3
S203



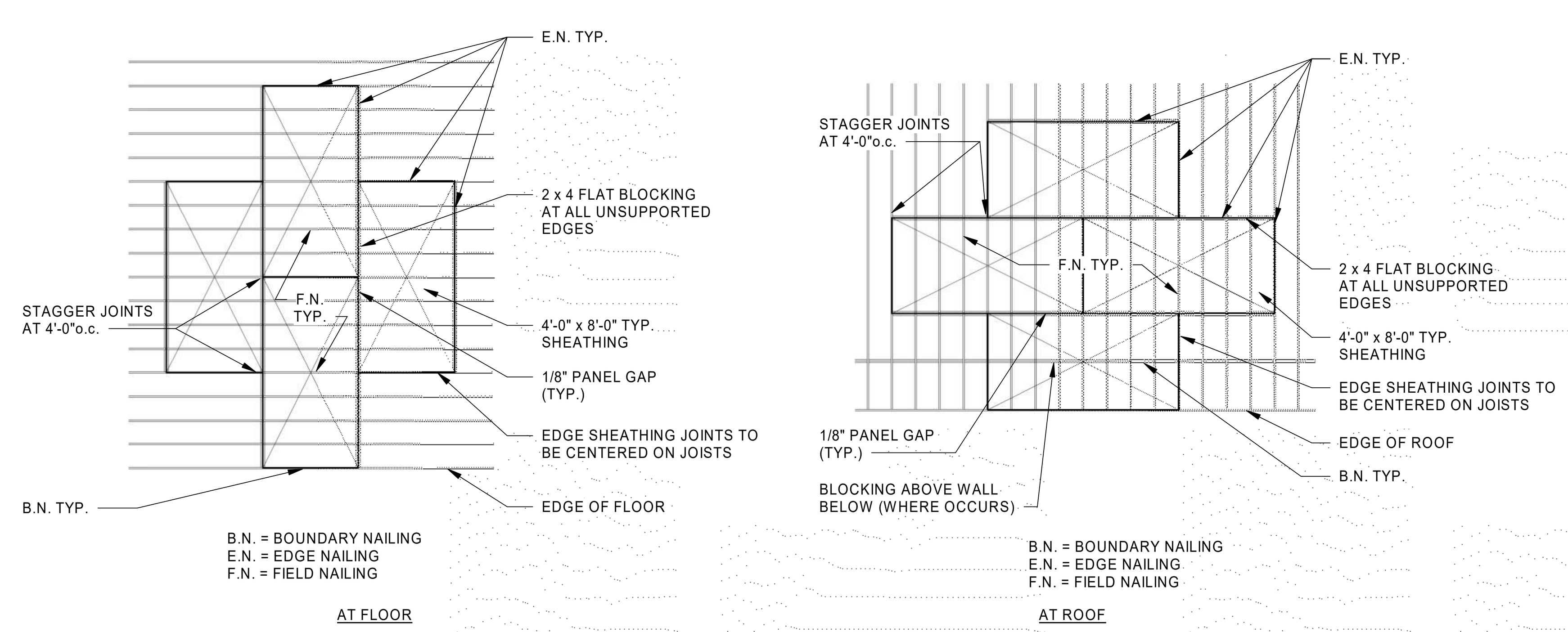
BALLOON FRAMED WALL W/ PARAPET
SCALE : NONE
4
S203



DETAIL
SCALE : NONE
5
S203



DETAIL
SCALE : NONE
6
S203



TYP. SHEATHING LAYOUT
SCALE : NONE
7
S203

design SEQUENCE
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

ARW ENGINEERS 50 Years
structural consultants
1594 W. Park Cir. Ogden, Utah 84404
ph. 801.782.6008 fx. 801.782.4656

SANTAQUIN SHOPS

Enter address here

MARK	DATE	DESCRIPTION

DATE:	06/23/20
ARW PROJECT NO:	20207
DESIGN SEQUENCE PROJECT NO:	1904.01
CAD DWG FILE NO:	
DRAWN BY:	Z. Thorner
DESIGNED BY:	A. Higgs
DWG TYPE:	
PROJECT PHASE:	NOT FOR CONSTRUCTION

SHEET TITLE

DETAILS

S203

MECHANICAL LEGEND

- EXHAUST DUCT UP
- RETURN DUCT DOWN
- SUPPLY AIR DUCT DOWN
- ACCESS (ARCH)
- THERMOSTAT OR TEMP SENSOR
- DETAIL TAG — DETAIL NO. / DRAWING NO.
- KEYED NOTE — NOTE NO.
- DUCT-MOUNTED SMOKE DETECTOR — DSD

PIPING LEGEND

- BALL VALVE
- CHECK VALVE (SWING OR LIFT AS REQ'D)
- PRESSURE REDUCING VALVE
- STRAINER
- PRESSURE GAUGE W/GAUGE COCK
- HOSE BIBB OR SILLCOCK
- REDUCED PRESSURE BACKFLOW PREVENTER — RPBP
- DIRECTION OF FLOW
- ELBOW DOWN
- ELBOW UP
- PIPE CAP
- TEE DOWN
- UNION
- FLOOR DRAIN
- HUB DRAIN
- ROOF DRAIN
- WATER METER
- WALL CLEANOUT
- FLOOR OR GRADE CLEANOUT
- GRADE CLEANOUT W/ CONCRETE PAD
- DOMESTIC COLD WATER (DCW) — — —
- DOMESTIC HOT WATER (DHW) — — —
- NATURAL GAS — NG —
- SANITARY (PLBG) VENT — V —
- SANITARY SEWER BELOW GRADE — SS —
- GREASE WASTE — GW —
- ROOF DRAIN PIPING — RD —
- OVERFLOW DRAIN PIPING — OD —

GENERAL NOTES:

1. ALL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH:
2018 NTL. BUILDING CODE
2018 NTL. FUEL GAS CODE
2018 NTL. MECHANICAL CODE
2018 NTL. ENERGY CODE — DRAWING NO.
2018 NTL. PLUMBING CODES.

2. DUCTWORK SHALL BE INSULATED AS FOLLOWS: LINED OR WRAPPED — R-VALUE

RTU RECTANGULAR DUCTWORK:	LINED	R-6
ROUND DUCTWORK:	WRAPPED	R-6

#ALL INSULATION TO MEET NFPA 90 PER UL 181-CLASS 1. NO DUCT BOARD ALLOUED.

3. ALL DUCTWORK SHALL BE CONSTRUCTED OF 2" W.G. SEAL CLASS "A".

4. ALL DUCTWORK IS TO BE INSTALLED AS HIGH AS POSSIBLE. ALL DUCTWORK MUST BE INSTALLED NO LOWER THAN 12" FROM WHERE IT IS BEING SUPPORTED OR SEISMIC BRACING WILL BE REQUIRED. IF DUCTWORK IS INSTALLED BELOW 12" FROM WHERE IT IS SUPPORTED, IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO HAVE SEISMIC SUPPORTS ENGINEERED FOR THE JOB BY A LICENSED ENGINEER.

5. CONTRACTORS SHALL PROVIDE SUBMITTALS ON ITEMS LISTED IN EQUIPMENT SCHEDULES TO THE ARCHITECT FOR REVIEW PRIOR TO THE ORDER, PURCHASE OR INSTALLATION.

6. EACH TRADE IS RESPONSIBLE FOR THEIR OWN FIRE CAULKING. SEE ARCH. PLANS.

7. M.C. TO SUBMIT TO ENGINEER ALL AS-BUILDS OF BUILDINGS MECHANICAL SYSTEMS WITHIN 90 DAYS OF SYSTEM ACCEPTANCE.

8. ALL MECHANICAL EQUIPMENT SHALL BE LISTED, LABELED, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PER IMC 301.7.

9. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEET METAL UNTIL THE FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION EQUIPMENT. FACTORY START-UP OF RTU'S REQUIRED.

10. CONTRACTORS SHALL PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILS OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES / WARRANTIES FOR EACH NEW SYSTEM.

11. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

12. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION ADDITIONS OR AREAS OF ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION USE MERV 8 RETURN AIR FILTERS BASED ON ASHRAE 52.2 1999, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1 1999.

13. PIPE ROUTING AS SHOWN ON DRAWINGS IS DIAGRAMMATIC AND IS NOT TO BE SCALED. WHERE ALTERNATE ROUTING, OFFSETS AND TRANSITIONS ARE REQUIRED FOR COORDINATION OF WORK, THIS CONTRACTOR SHALL MAKE CHANGES WITHOUT ADDITIONAL COSTS.

14. ALL WATER FLOW, PRESSURE, AND TEMPERATURE RATES MUST BE BALANCED TO THE VALUES INDICATED ON THE FLOOR PLANS. PROVIDE A FINAL REPORT FOR THE TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO THE FINAL APPROVAL BY THE FIELD INSPECTOR. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES. T.A.B. CONTRACTOR BY OWNER.

15. INSULATE PIPING WITH FIBERGLASS PIPE COVERING WITH ALL SERVICE JACKET AND SELF-CAP SEAL. FITTINGS SHALL BE MITERED PIPING COVERING OF GLASS FIBER MOLDED FITTINGS FOR USE IN A RETURN AIR PLENUM. SEE PIPING INSULATION TABLE.

16. EACH TRADE IS RESPONSIBLE THEIR OWN FIRE CAULKING.

17. ALL INVERT ELEVATIONS SHOWN ON PLANS ARE BASED OFF OF FINISHED FLOOR ELEVATION AT 100.0'. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL AND CIVIL DRAWINGS FOR EXACT INVERT ELEVATIONS OF ALL LEVELS.

18. FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE SYSTEM AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS. SEE TG-1.

19. PUBLIC LAVATORIES SHALL HAVE CONTROLS TO LIMIT THE WATER TEMPERATURE TO 110°. SEE TV-1.

20. WATER PIPE AND FITTINGS WITH A LEAD CONTENT WHICH EXCEEDS 0.25% SHALL BE PROHIBITED IN SYSTEMS CONVEYING POTABLE WATER.

21. EACH PLUMBING VENT SHALL TERMINATE NOT LESS THAN 10 FEET FROM OR AT LEAST 3 FEET ABOVE ANY WINDOW, DOOR, OPENING, OR AIR INTAKE.

22. ALL ABANDONED EQUIPMENT, PIPING, COMPONENTS, AND ACCESSORIES SHALL BE REMOVED FROM PROJECT.

23. WATER HAMMER ARRESTORS: SIOUX CHIEF 660 SERIES. ADHERE TO PDI-WH 201 REQUIREMENTS FOR SIZING / LOCATIONS:
TYPE A: 1-11 FIXTURE UNITS
TYPE B: 12-32 FIXTURE UNITS
TYPE C: 33-60 FIXTURE UNITS
TYPE D: 61-113 FIXTURE UNITS

24. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE PATCHING / REPAIRING OF ANY WALLS, FLOORS, CEILINGS AND ROOFS NEEDED AS A RESULT OF WORK BEING PERFORMED.

25. PIPE ENDS SHALL BE CAPPED WHEN WORK IS NOT BEING PERFORMED.

26. ALL EXPOSED NG PIPING IS TO BE PAINTED. APPLY ONE COAT OF DEVGUARD EXTERIOR, MULTI-PURPOSE PRIMER AND ONE COAT OF GRAY, UNIGRIP, WATER-BASED AQUACRYLIC SEMI-GLOSS PAINT.

27. IPC 606.7: LABELING OF WATER DISTRIBUTION:
THE IDENTIFICATION SHALL INDICATE PIPE CONTENTS AND THE DIRECTION OF FLOW IN THE PIPE. THE INTERVAL OF THE IDENTIFICATION MARKINGS NO THE PIPE SHALL NOT EXCEED 25'. THERE SHALL BE NOT LESS THAN ONE IDENTIFICATION LABEL ON EACH PIPE IN EACH ROOM, EACH SPACE. P.C. SHALL IDENTIFY THE FOLLOWING PIPING:

28. DOMESTIC COLD WATER, SANITARY SEWER (WHERE EXPOSED), VENT PIPING, NATURAL GAS (SEE ADDITIONAL REQUIREMENTS IN NOTE ABOVE).

RTU NOTES:

- PROVIDE WITH DRY BULB ECONOMIZER WITH BAROMETRIC RELIEF
- PROVIDE WITH DISCONNECT
- PROVIDE WITH UN-POWERED 115V CONVENIENCE OUTLET
- PROVIDE WITH 18" INSULATED CURB.
- FACTORY SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS. CONNECTIONS BY MC. ELECTRICAL CONNECTIONS BY DIVISION 28. UNIT IS TO SHUT DOWN UPON SMOKE DETECTOR ACTIVATION.
- PROVIDE 7 DAY PROGRAMMABLE DIGITAL THERMOSTAT WITH AUTO CHANGEOVER, 5 ° DEAD-BAND, SETBACKS (55° / 85°),2 HOUR OCCUPANT OVERRIDE, 10 HOUR BACK-UP.
- PROVIDE WITH 2" FILTER BANK AND 2" REPLACEABLE MERV 8 FILTERS.
- PROVIDE CONDENSATE DRAIN WITH MINIMUM 3" DEEP TRAP
- MC SHALL ENGAGE A FACTORY-PROVIDED SERVICE REPRESENTATIVE TO INSPECT, TEST, AND ADJUST RTUS AND COMPONENTS TO ENSURE PROPER INSTALLATION.
- MANUFACTURER-PROVIDED SERVICE REPRESENTATIVE SHALL BE REQUIRED TO INSPECT EACH RTU AS IT IS POWERED W/ THE UNDERSTANDING THAT EACH RTU MAY BE POWERED AT DIFFERENT TIMES REQUIRING MULTIPLE SITE VISITS FOR EQUIPMENT INSPECTIONS.
- MANUFACTURER-PROVIDED SERVICE REPRESENTATIVE SHALL PROVIDE THE OWNER / G.C. WITH WRITTEN DOCUMENTATION THAT ALL INSTALLATIONS ARE COMPLETE AND ACCURATE PER MANUF. STANDARDS.

POTABLE WATER DISINFECTION:

2018 IPC 610:

NEW / REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE. THE PIPING SYSTEM SHALL BE FLUSHED WITH CLEAN, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR. THE SYSTEM SHALL BE FILLED WITH WATER / CHLORINE SOLUTION CONTAINING NO LESS THAN 200 P.P.M. OF CHLORINE, AND THE SYSTEM SHALL BE VALVED OFF AND ALLOWED TO STAND FOR 3 HOURS. FOLLOWING STAND TIME, THE SYSTEM SHALL BE FLUSHED WITH CLEAN, POTABLE WATER UNTIL CHLORINE IS FLUSHED FROM THE SYSTEM. THIS PROCEDURE SHALL BE REPEATED UNTIL SYSTEM IS CLEAR AS INDICATED BY BACTERIOLOGICAL EXAMINATION. PROVIDE TEST / FLUSH DOCUMENTATION TO ENGINEER PRIOR TO PROJECT COMPLETION W/ BALANCE REPORT TO ENGINEER / ARCHITECT. P.C. TO COORDINATE TESTING PROCEDURE WITH PROJECT MANAGER.

York® Sun™ Pro 3-12.5 Ton Package — Page: 2

Single Package R-410A Air Conditioner

Project Name: **Santaquin Pad C** — Unit Model #: **ZJ090S18P2B5RAA4E2**

RTU: 1,2,3 — System: **ZJ090S18P2B5RAA4E2**

Cooling Performance	
Total gross capacity	90.9 MBH
Sensible gross capacity	57.1 MBH
Total net capacity	89.8 MBH
Sensible net capacity	53.0 MBH
Efficiency (at ARI)	12.00 EER
Integrated eff. (at ARI)	14.60 IEER
Ambient DB temp.	95.0 °F
Entering DB temp.	79.2 °F
Entering WB temp.	65.9 °F
Leaving DB temp.	56.9 °F
Leaving WB temp.	55.0 °F
Power input (w/o blower)	6.11 kW
Sound power	90 dB(A)

Refrigerant	
Refrigerant type	R-410A
Sys1	7 lbs 12 oz
Sys2	7 lbs 5 oz

Gas Heating Performance	
Entering DB temp.	60 °F
Heating output capacity (Max)	115.3 MBH
Supply air	2850 CFM
Heating input capacity (Max)	144.1 MBH
Leaving DB temp.	105.0 °F
Air temp. rise	45.0 °F
SSE	80.0 %
Stages	2

Supply Air Blower Performance	
Supply air	2850 CFM
Ext. static pressure	0.6 IWG
Addl. Unit Losses (Options/Accessories)	0.04 IWG
Blower speed	902 RPM
Max BHP of Motor (including service factor)	1.73 HP
Duct location	Bottom
Motor rating	1.50 HP
Actual required BHP	1.29 HP
Power input	1.20 kW
Elevation	4984 ft.
Drive type	BELT

Outside/Mixed Air	
Outside Air DB temp.	95 °F
Outside Air WB temp.	78 °F
Outside Air RH	47.3 %
Return Air CFM	2250 CFM
Return Air DB temp.	75 °F
Return Air WB temp.	62 °F
Return Air RH	48.1 %

Electrical Data		
Power supply	208-3-60	230-3-60
Unit min circuit ampacity	41.9 Amps	41.9 Amps
Unit max over-current protection	50 Amps	50 Amps

Dimensions & Weight					
Hgt	51 in.	Len	89 in.	Wth	59 in.
Weight with factory installed options					1245 lbs.

Clearances					
Right	12 in.	Front	36 in.	Rear	36 in.
Top	72 in.	Bottom	0 in.	Left	36 in.

Note: Please refer to the tech guide for listed maximum static pressures

7.5 Ton
- York Sun Pro units are manufactured at an ISO 9001 registered facility and each rooftop is completely computer-run tested prior to shipment.

Unit Features
- Two Stage Cooling
- 180 MBH Input Stainless Steel, Two Stage Gas Heat
- Full perimeter base rails with built in rigging capabilities
- Unit Cabinet Constructed of Powder Painted Steel, Certified At 750 Hours Salt Spray Test (ASTM B-117 Standards)
- Scroll Compressor[s]
- Dry Bulb Low Leak Economizer w/Barometric Relief and Hoods (Bottom or Horizontal End Return Only) with Economizer Fault Detection & Diagnostic (Meets ASHRAE 90.1-2013, IECC 2015, California Title 24, AMCA 511).
- 1.5 HP Standard Static Belt Drive Blower
- Solid Core Liquid Line Filter Driers
- Unit Ships with 2" Throwaway Filters
- Replacement Filters: 4 - (24" x 20"). Unit accepts 2" or 4" wide filters.
- Non-Powered Convenience Outlet
- HACR Circuit Breaker/Disconnect
- Through-the-Curb and Through-the-Base Utility Connections
- Short Circuit Current: 5kA RMS Symmetrical
- Single Point Power Connection
- Dirty Filter Switch
- Return & Supply Air Smoke Detectors
- Phase Monitor
- Micro-Channel "all-aluminum" condenser coil, Copper tube/aluminum fin evaporator coil
- Stainless Steel Drain Pan - Front Connection
- Tool-free maintenance with features like hinged doors for all-access panels, slide-out blower and blower motor tray
- Coil Guard

BAS Controller
- IntelliSpeed control of the VFD based on stages of cooling. Provides Single Zone VAV Fan Operation as defined by ASHRAE 90.1 section 6.4.3.10.
- Smart Equipment Controller including Discharge Air, Return Air, and Outdoor Air Temperature Sensors.

Standard Unit Controller: Smart Equipment Control Board
- Safety Monitoring - Monitors the High and Low-Pressure Switches, the Freezestats, the Gas Valve, if Applicable, and the Temperature Limit Switch on Gas and Electric Heat Units. The Unit Control Board will Alarm on Ignition Failures, Safety Lockouts and Repeated Limit Switch Trips.

Warranty
- One (1) Year Limited Warranty on the Complete Unit
- Five (5) Year Warranty - Compressors and Electric Heater Elements
- Fifteen (15) Year Limited Warranty - Stainless Steel Heat Exchanger

Information is subject to change without notice. Check local codes. — Printed 07/06/2020

York® Sun™ Pro 3-12.5 Ton Package — Page: 1

Single Package R-410A Air Conditioner

Project Name: **Santaquin Pad C** — Unit Model #: **ZJ049S06B2B5NAA1A2**

Quantity: **1** Tag #: **RTU-4** — System: **ZJ049S06B2B5NAA1A2**

Cooling Performance	
Total gross capacity	50.5 MBH
Sensible gross capacity	30.6 MBH
Total net capacity	48.5 MBH
Sensible net capacity	28.6 MBH
Seasonal Efficiency (at ARI)	15.00 SEER
Efficiency (at ARI)	12.20 EER
Ambient DB temp.	95.0 °F
Entering DB temp.	77.5 °F
Entering WB temp.	64.3 °F
Leaving DB temp.	56.6 °F
Leaving WB temp.	53.1 °F
Power input (w/o blower)	3.14 kW
Sound power	80 dB(A)

Refrigerant	
Refrigerant type	R-410A
Sys1	8 lbs 6 oz

Gas Heating Performance	
Entering DB temp.	60 °F
Heating output capacity (Max)	40.2 MBH
Supply air	1600 CFM
Heating input capacity (Max)	49.2 MBH
Leaving DB temp.	87.4 °F
Air temp. rise	27.4 °F
SSE	81.5 %
Stages	2

Supply Air Blower Performance	
Supply air	1600 CFM
Ext. static pressure	0.6 IWG
Addl. Unit Losses (Options/Accessories)	0.12 IWG
Blower speed	901 RPM
Max BHP of Motor (including service factor)	1.73 HP
Duct location	Bottom
Motor rating	1.50 HP
Actual required BHP	.63 HP
Power input	0.58 kW
Elevation	4500 ft.
Drive type	BELT

Outside/Mixed Air	
Outside Air CFm	200 CFM
Outside Air DB temp.	95 °F
Outside Air WB temp.	78 °F
Outside Air RH	47.3 %
Return Air CFM	1400 CFM
Return Air DB temp.	75 °F
Return Air WB temp.	62 °F
Return Air RH	48.1 %

Electrical Data	
Power supply	208-3-60
Unit min circuit ampacity	24.6 Amps
Unit max over-current protection	35 Amps

Dimensions & Weight					
Hgt	42 in.	Len	89 in.	Wth	59 in.
Weight with factory installed options					960 lbs.

Clearances					
Right	12 in.	Front	36 in.	Rear	36 in.
Top	72 in.	Bottom	0 in.	Left	36 in.

Note: Please refer to the tech guide for listed maximum static pressures

4 Ton
- York Sun Pro units are manufactured at an ISO 9001 registered facility and each rooftop is completely computer-run tested prior to shipment.

Unit Features
- Single Stage Cooling
- 60 MBH Input Stainless Steel, Two Stage Gas Heat
- Unit Cabinet Constructed of Powder Painted Steel, Certified At 750 Hours Salt Spray Test (ASTM B-117 Standards)
- Full perimeter base rails with built in rigging capabilities
- Scroll Compressor[s]
- Dry Bulb Low Leak Economizer w/Barometric Relief and Hoods (Bottom or Horizontal End Return Only) with Economizer Fault Detection & Diagnostic (Meets ASHRAE 90.1-2013, IECC 2015, California Title 24, AMCA 511).
- Slide-Out Blower/1.5 HP Belt Drive Motor Assembly
- Solid Core Liquid Line Filter Driers
- Unit Ships with 2" Throwaway Filters
- Replacement Filters: 4 - (24" x 16"). Unit accepts 2" or 4" wide filters.
- Non-Powered Convenience Outlet
- HACR Circuit Breaker/Disconnect
- Short Circuit Current: 5kA RMS Symmetrical
- Single Point Power Connection
- Through-the-Curb and Through-the-Base Utility Connections
- Dirty Filter Switch
- Return Air Smoke Detector
- Micro-Channel "all-aluminum" condenser coil, Copper tube/aluminum fin evaporator coil
- Composite Drain Pan - Front Connection
- Tool-free maintenance with features like hinged doors for all-access panels, slide-out blower and blower motor tray

Standard Unit Controller: Smart Equipment Control Board
- Safety Monitoring - Monitors the High and Low-Pressure Switches, the Freezestats, the Gas Valve, if Applicable, and the Temperature Limit Switch on Gas and Electric Heat Units. The Unit Control Board will Alarm on Ignition Failures, Safety Lockouts and Repeated Limit Switch Trips.

BAS Controller
- Smart Equipment Controller including Discharge Air, Return Air, and Outdoor Air Temperature Sensors.

Warranty
- One (1) Year Limited Warranty on the Complete Unit
- Five (5) Year Warranty - Compressors and Electric Heater Elements
- Fifteen (15) Year Limited Warranty - Stainless Steel Heat Exchanger

Information is subject to change without notice. Check local codes. — Printed 09/17/2020

PIPING MATERIAL SCHEDULE - IPC 2018

SERVICE	PIPE MATERIAL	FITTINGS	JOINTS
DOMESTIC WATER - ABOVE GRADE	TYPE "L" COPPER - ASTM B75, ASTM B88, ASTM B 251, ASTM B447	ASSE 1061, ASME B16.15, ASME B16.18, ASME B16.22, ASME B16.23, ASME B16.26, ASME B16.29	BRAZED: AWS A5.8. SOLDERED: ASTM B 828, ASTM B 32 W/ ASTM B 813 FLUX. THREADED: ASME B1.20.1
DRAIN, WASTE , AND VENT - ABOVE GRADE	CAST IRON - ASTM A74, ASTM A888, CISPI 301	ASME B16.4, ASME B16.12, ASTM A74, ASTM A888, CISPI 301	COMPRESSION: ASTM C564, ASTM C1563. HUBLESS: CISPI 310, ASTM C 1277 OR ASTM C1540, ASTM C564 OR CSA B602
DRAIN, WASTE , AND VENT - BELOW GRADE	ABS, SCHED. 40, SOLID CELLULAR CORE,ASTM D 2661, ASTM F 628, ASTM F	ASTM D 2661, ASTM F 628, CSA B181.1	ASTM D 2235, CSA B181.1
DRAIN, WASTE , AND VENT - BELOW GRADE	PVC, SCHED. 40, SOLID CELLULAR CORE, ASTM D 2665, ASTM F 891, ASTM F	ASTM D 2665, ASTM F 1866	ASTM D 3212
NATURAL GAS	SCHED. 40 STEEL - ASTM A53/A53M OR ASME B36.10/10M OR ASME A106	THREADED: IFGC TABLE 403.9.2	

PLUMBING FIXTURE CONNECTION SCHEDULE - PAD C

FIXTURE TAG	DESCRIPTION	COLD	HOT	WASTE	VENT	SPECIFICATIONS
DSN-3	DOWN SPOUT NOZZLE	N/A	N/A	4"	N/A	JR SMITH 1770-BS. NICKEL BRONZE. COORDINATE HEAT TRACE W/ E.C. TERMINATE 18" A.F.G.
DSN-4	DOWN SPOUT NOZZLE	N/A	N/A	3"	N/A	JR SMITH 1770-BS. NICKEL BRONZE. COORDINATE HEAT TRACE W/ E.C. TERMINATE 18" A.F.G.
FD-1	SQUARE FLOOR DRAIN	N/A	N/A	2"	2"	SIOUX CHIEF 832 SERIES. SQUARE TOP. NICKEL BRONZE. HINGED STRAINER. PROVIDE W/ TG-1.
GCO-1	GRADE CLEAN OUT	N/A	N/A	4"	N/A	JR SMITH: 4237 ADJUSTABLE TOP, NON-TILT TRACTOR COVER. VANDAL PROOF SECURING SCREW. GALVANIZED CAST IRON TOP.
HB-C	HOSE BIB - COLD	3/4"	N/A	N/A	N/A	WOODFORD 24P-3/4. INTEGRAL VACUUM BREAKER. CHROME
PRV-1	PRESSURE REDUCING VALVE	1.5"	N/A	N/A	N/A	WATTS LF223S
PRV-2	PRESSURE REDUCING VALVE	3/4"	N/A	N/A	N/A	WATTS LF223S
RD-3	ROOF DRAIN	N/A	N/A	4"	N/A	JR SMITH: 1010Y-C-R-CI DOME. PROVIDE W/ EXTENSION RING FOR OD. INSTALL INSULATION ON DRAIN BOWLS AND ALL HORIZONTALLY INSTALLED PIPING ABOVE GRADE.
RD-4	ROOF DRAIN	N/A	N/A	3"	N/A	JR SMITH: 1010Y-C-R-CI DOME. PROVIDE W/ EXTENSION RING FOR OD. INSTALL INSULATION ON DRAIN BOWLS AND ALL HORIZONTALLY INSTALLED PIPING ABOVE GRADE.
RPBP-1	REDUCED PRESSURE BACKFLOW PREVENTER	2"	N/A	3/4"	N/A	WATTS 009. LEAD FREE. 1/4 TURN VALVES. BRONZE STRAINER. STAINLESS HANDLES. UNION CONNECTIONS.
RH-1	ROOF HYDRANT	3/4"	N/A	N/A	N/A	WOODFORD: SRH:MS W/ INTEGRAL DUAL CHECK BACKFLOW, AIR VENT, AND FACTORY MOUNTING SYSTEM. ASSE 1057/ 1052
L-1	WALL-HUNG LAVATORY	1/2"	1/2"	2"	1.5"	AMERICAN STANDARD: LUCERNE SNGLE HOLE. FAUCET: AMERICAN STANDARD SELECTRONIC 605S.10S. 0.5 GPM. VANDAL RESISTANT LAMINAR FLOW. PROVIDE W/ GRID STRAINER, TV-1, ADA INSULATION, P-TRAP W/ CLEANOUT. SET TV-1 TO 110 DEGREES (MAX)
SC-1	SILLCOCK	3/4"	N/A	N/A	N/A	WOODFORD MODEL 865. INTEGRAL VACUUM BREAKER. CHROME LOCK BOX.
SV-1.S	NG SEISMIC VALVE	N/A	N/A	N/A	N/A	CALIFORNIA (KOSO) MODEL 302 FOR HORIZONTAL INSTALLATION. (1.5" W/ UNIONS)
SV-2	NG SEISMIC VALVE	N/A	N/A	N/A	N/A	CALIFORNIA (KOSO) MODEL 302 FOR HORIZONTAL INSTALLATION. 2" W/ UNIONS)
TG-1	TRAP GUARD	N/A	N/A	PER FIXTURE	N/A	RECTORSEAL: SURE SEAL. PROVIDE FOR INDIRECT WASTE RECPTORS WHICH DO NOT RECEIVE CONDENSATE.
TV-1	TEMPERING VALVE	1/2"	1/2"	N/A	N/A	SYMMONS: S-210-CK-MAXLINE. SET TO 110 DEGREES. ASSE 1017/1070
WC-1	WATER CLOSET - ADA (FLUSH VALVE - FLOOR MOUNT)	1"	N/A	4"	3"	AMERICAN STANDARD: MADERA. FLOOR MOUNT. W/ BENEKE OPEN FRONT SEAT. SLOAN VALVE: ROAYL 111DFSM 1.6 / 1.1. BATTERY OPERATED.
WHA-1	WATER HAMMER ARRESTOR (DOMESTIC)	SEE PLANS	SEE PLANS	N/A	N/A	SIOUX CHIEF: 660 SERIES. ADHERE TO PDI-WH201 REQUIREMENTS FOR SIZING / LOCATIONS. COORDINATE ACCESS PANELS W/ PM / OWNER.
WCO-1	WALL CLEAN OUT	N/A	N/A	SEE PLANS	SEE PLANS	SIOUX CHIEF 873 SERIES W/ STAINLESS STEEL COVER.

ELECTRIC WATER HEATER SCHEDULE EWH-

PLAN CODE	AREA SERVED	CAP (GPM)	INPUT (KW)	TEMP RISE (°F)	DIMENSIONS WIDTH (IN.)	DIMENSIONS HEIGHT (IN.)	DIMENSIONS DEPTH (IN.)	OPERATING WEIGHT	POWER	MANUFACTURER & MODEL NO.	REMARKS
EWH-1	ADA RESTROOM	(0.5)	4.1	56°	5 ¼"	10 ¾"	2 ⅞"	3.0 LBS	208 / 1 (19.7 AMPS)	BRADFORD WHITE ES-4100-2-5-10	⅜" COMPRESSION CONNECTIONS

MINIMUM PIPE INSULATION THICKNESS - 2018 IECC C403.2.10

FLUID OPERATING TEMP. RANGE (°F)	INSULATION CONDUCTIVITY: CONDUCTIVITY BTU X IN. / (H X FT² X °F)	INSULATION CONDUCTIVITY: MEAN RATING TEMP.	NOMINAL PIPE SIZE: <1"	NOMINAL PIPE SIZE: 1" to < 1.5"	NOMINAL PIPE SIZE: 1.5" to < 4"
105 - 140	0.21 - 0.28	100	1	1	1.5
40-60	0.21 - 0.27	75	0.5	0.50	1
<40	0.20 - 0.29	50	0.5	1	1

NATURAL GAS CALCULATIONS - SANTAQUIN PAD C

DESCRIPTION	IDENTIFICATION	SERVES	PROVIDED BY	INPUT MBH	CFH
RTU-1	ROOF TOP UNIT	WEST	M.C.	144.1	170
RTU-2	ROOF TOP UNIT	CENTER	M.C.	144.1	170
RTU-3	ROOF TOP UNIT	CENTER	M.C.	144.1	170
RTU-4	ROOF TOP UNIT	EAST	M.C.	96.1	113
				528.4	623
BASIS OF DESIGN: 2018 IFGC TABLE 402.4 (5)					
BTU / CUBIC FOOT				849	
REQUIRED PRESSURE DELIVERY (psig)				2	
MAXIMUM LENGTH OF RUN FROM METER TO EQUIPMENT				200'	

REQUIREMENTS:
1. P.C. TO PROVIDE / INSTALL ISOLATION VALVE AT EACH PIECE OF EQUIPMENT
2. PRESSURE REGULATORS SHALL BE INSTALLED PER MANUF. REQUIREMENTS.
3. PRESSURE REGULATORS SHALL BE MAXITROL, PIETRO FIORENTINI, OR EQUIVALENT
4. VALVES: BRASS BODY, FULL-PORT, PTFE SEAT, LEVER HANDLE, 150 PSIG, F.I.P.
5. EARTHQUAKE VALVES: CAST ALUMINUM BODY, SWING CHECK-VALVE, ACCELERATION-SENSITIVE , MECHANISM, SPRING ASSIST, OPEN / CLOSE INDICATOR, F.I.P, ASCE 25 COMPLIANT

SUPPLY AIR DEVICE SCHEDULE

PLAN CODE	SIZE	NECK	DUTY	INSTALL TYPE	MAX CFM	MAX N.C.	150-100-50	MANUFACTURER	MODEL	COMMENTS
1	12" X 12"	8"Ø	SQUARE SUPPLY	GYP.	314	30	6'-9'-14"	PRICE	SPD	R6 INSULATED BACKPAN. RISE SUPPLY DUCT INTO JOIST SPACE FOR FINAL CONNECTIONS BY TENANT. RADIAL DAMPER ACCESSIBLE FROM REMOVABLE FACE.

EXHAUST FAN SCHEDULE

PLAN CODE	AREA SERVED	TYPE	CFM	ESP (W.C.")	RPM	HP	VOLTAGE / PHASE	SONES @ 5'-00"	DAMPER	DUCT	WEIGHT (LBS)	METHOD OF CONTROL	MANUFACTURER / MODEL	COMMENTS
EF-1	ADA RESTROOM	CEILING	150	0.25"	602	0.06	120 / 1	3	GRAVITY	6"Ø	11	INTERLOCK W/ TIME CLOCK: INTERMATIC T101. 120 V @ NTE 40A / POLE.	CAPTIVE AIRE CFA-D150-CA	FACTORY ROOF CAP. VIBRATION HANGERS (4). 3 AMP SPEED CONTROLLER.

ELECTRIC UNIT HEATER

CODE	MFR	MODEL NO.	STYLE	CONTROL	ELECTRICAL DATA VOLTS	PH	WATTS	WIDTH	DEPTH	HEIGHT	WEIGHT (LBS)	CFM	REMARKS
EH-1	BERKO / MARLEY	FRC-4820	RECESSED CABINET	INTEGRAL TSTAT	208	1	4800	15.75"	3 7/8"	19 5/16"	25	100	SET TO 40 DEGREES.

PVE Inc. Consulting Mechanical Electrical Engineers
1040 North 2200 West, Suite 100
Salt Lake City, UT 84116
Phone: (801) 359-3158
Fax: (801) 521-4114

design Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

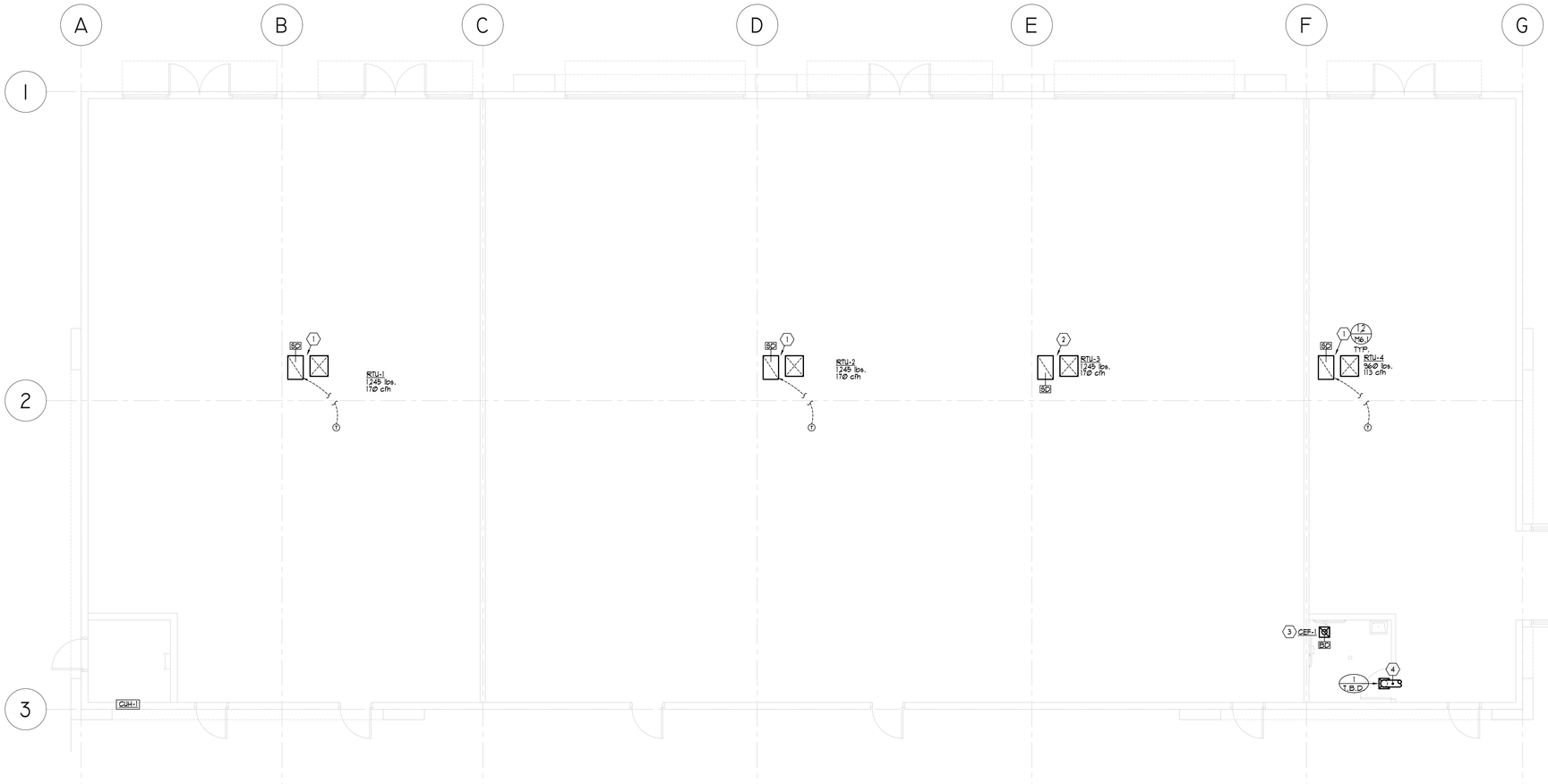
SANTAQUIN
RETAIL PAD C

MARK	DATE	DESCRIPTION

DATE: 8.21.20
PVE PROJECT NO: 20074.00
DESIGN SEQUENCE PROJECT NO:
CAD DWG FILE NO:
DRAWN BY: TE
DESIGNED BY: BNS
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET
SHEET TITLE

MECHANICAL & PLUMBING SCHEDULES

M0.1



MECHANICAL FLOOR PLAN

M1.1 SCALE: 3/16" = 1'-0" 3' 0 2' 4' 8' 10"

design
Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

KEYED NOTES:

1. EXTEND DUCT WORK FULL-SIZED TO BOTTOM OF JOISTS. DROP TEMP. STAT (BY M.C.) TO 8'-0\" A.F.F. AND SET HEATING TO 40°.
2. EXTEND DUCT WORK FULL-SIZED TO BOTTOM OF JOISTS / COVER OPENINGS.
3. 6"ø EXHAUST THROUGH ROOF. TERMINATE W/ WEATHERPROOF CAP.
4. PROVIDE / INSTALL PLAQUE DIFFUSER W/ 2-WAY BLOCK-OFFS. RISE DUCT INTO JOIST SPACE FOR FINAL CONNECTIONS BY OTHERS.

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT ALL VENTS AND EXHAUSTS ARE A MINIMUM OF 10'-0\" FROM ANY FRESH AIR INTAKE. ANY REQUIRED OFF-SETS SHALL OCCUR BELOW THE ROOF STRUCTURE.

SANTAQUIN
RETAIL PAD C

MARK	DATE	DESCRIPTION

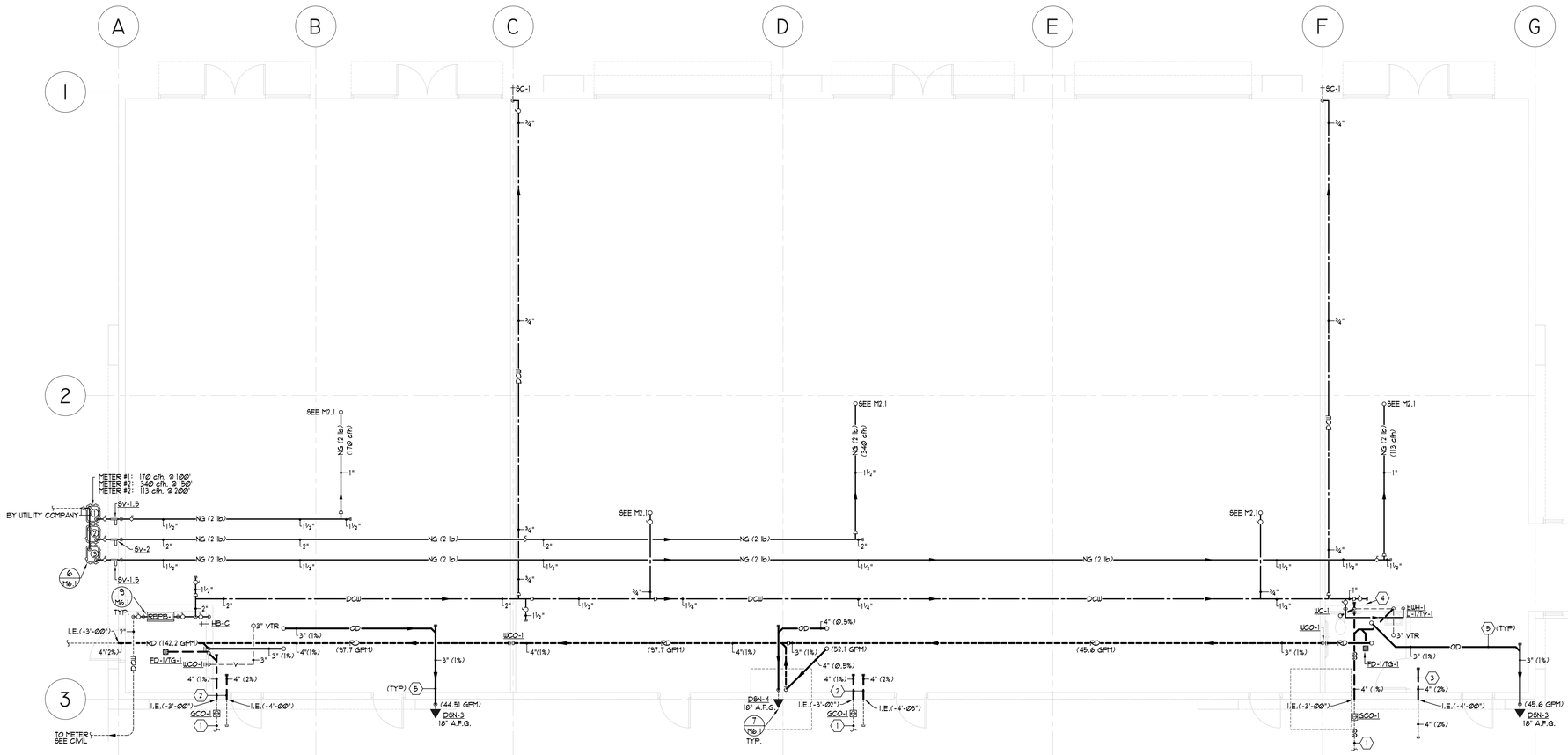
DATE:	8.21.20
PVE PROJECT NO:	20074.00
DESIGN SEQUENCE PROJECT NO:	
CAD DWG FILE NO:	
DRAWN BY:	TE
DESIGNED BY:	BNS
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

SHEET TITLE

MECHANICAL FLOOR PLAN

PVE Inc. Consulting Mechanical Electrical Engineers
1040 North 2200 West, Suite 100
Salt Lake City, UT 84116
Phone: (801) 359-3158
Fax: (801) 521-4114

M1.1



1 P1.1 **PLUMBING FLOOR PLAN**

SCALE: 3/16" = 1' - 0" 3' 0 2' 4' 8' 16'

KEYED NOTES:

1. EXTEND UTILITIES 5' BEYOND BUILDING'S EDGE FOR CONNECTIONS BY CIVIL.
2. CAP SANITARY / FUTURE GREASE LINE AT FINISH FLOOR ELEVATION FOR CONNECTIONS BY FUTURE TENANT.
3. CAP FUTURE GREASE LINE AT FINISH FLOOR ELEVATION / FINISH GRADE OUTSIDE BUILDING EDGE FOR CONNECTIONS BY FUTURE TENANT.
4. CAP FUTURE SANITARY LINE AT FINISH FLOOR ELEVATION FOR CONNECTIONS BY FUTURE TENANT.
5. INSULATE ROOF DRAIN BOWLS AND ALL HORIZONTALLY INSTALLED ROOF / OVERFLOW DRAIN PIPING.

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT ALL VENTS ARE A MINIMUM OF 10'-00" FROM ANY FRESH AIR INTAKE. ANY REQUIRED OFF-SETS SHALL OCCUR BELOW THE ROOF STRUCTURE.

design
Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

SANTAQUIN RETAIL PAD C

MARK	DATE	DESCRIPTION

DATE:	8.21.20
PVE PROJECT NO:	20074.00
DESIGN SEQUENCE PROJECT NO:	
CAD DWG FILE NO:	
DRAWN BY:	TE
DESIGNED BY:	BNS
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

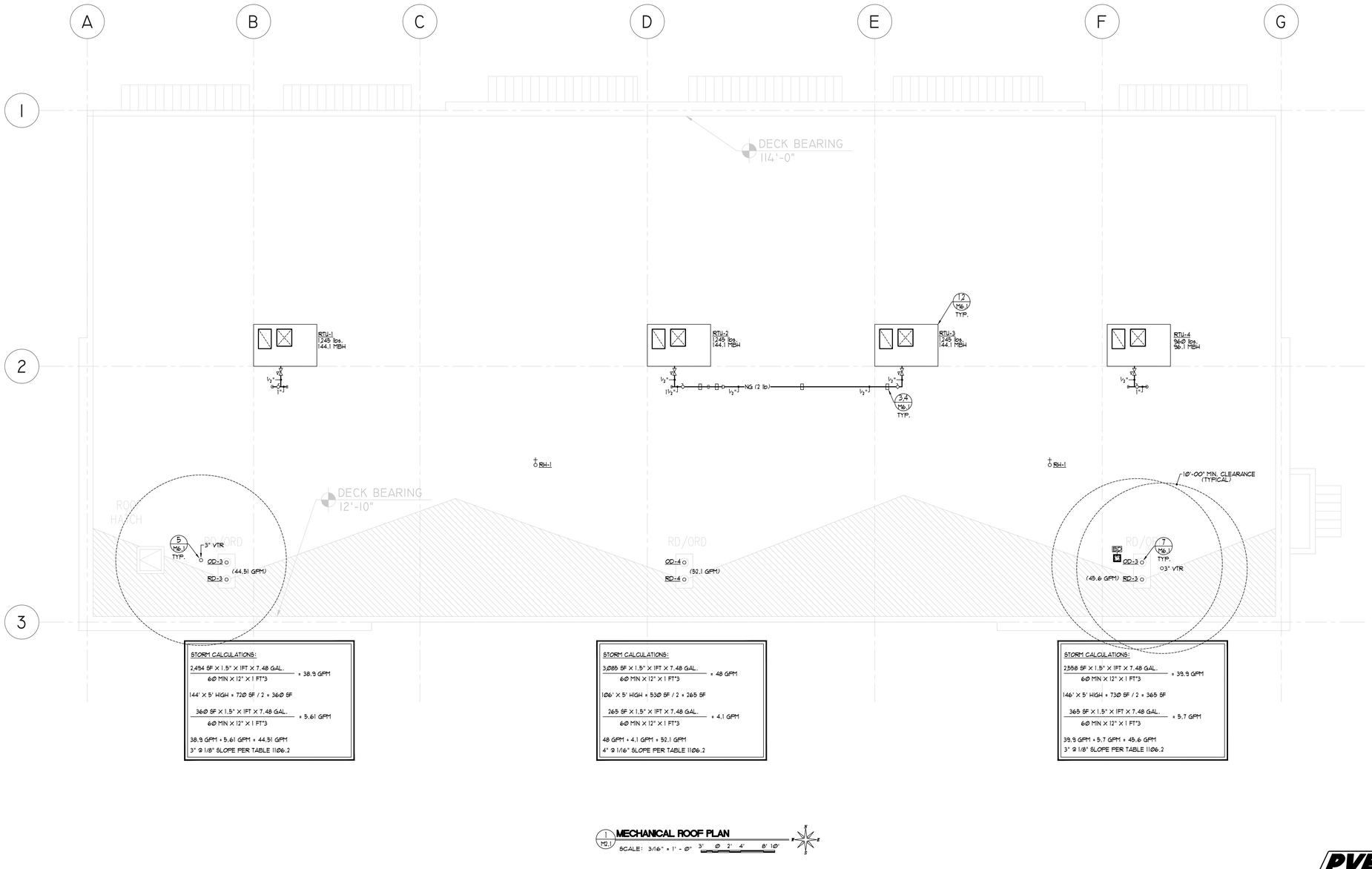
SHEET TITLE

PLUMBING FLOOR PLAN

PVE Inc. Consulting Mechanical Electrical Engineers
1040 North 2200 West, Suite 100
Salt Lake City, UT 84116
Phone: (801) 359-3158
Fax: (801) 521-4114

P1.1

design
Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DESIGNUTAH.COM



STORM CALCULATIONS:

2,494 SF X 1.5" X 1FT X 7.48 GAL. / 60 MIN X 12" X 1 FT^3 = 38.9 GPM

144' X 5' HIGH = 720 SF / 2 = 360 SF

360 SF X 1.5" X 1FT X 7.48 GAL. / 60 MIN X 12" X 1 FT^3 = 5.61 GPM

38.9 GPM + 5.61 GPM = 44.51 GPM

3" @ 1/8" SLOPE PER TABLE 1106.2

STORM CALCULATIONS:

3,085 SF X 1.5" X 1FT X 7.48 GAL. / 60 MIN X 12" X 1 FT^3 = 48 GPM

106' X 5' HIGH = 530 SF / 2 = 265 SF

265 SF X 1.5" X 1FT X 7.48 GAL. / 60 MIN X 12" X 1 FT^3 = 4.1 GPM

48 GPM + 4.1 GPM = 52.1 GPM

4" @ 1/16" SLOPE PER TABLE 1106.2

STORM CALCULATIONS:

2358 SF X 1.5" X 1FT X 7.48 GAL. / 60 MIN X 12" X 1 FT^3 = 39.9 GPM

146' X 5' HIGH = 730 SF / 2 = 365 SF

365 SF X 1.5" X 1FT X 7.48 GAL. / 60 MIN X 12" X 1 FT^3 = 5.7 GPM

39.9 GPM + 5.7 GPM = 45.6 GPM

3" @ 1/8" SLOPE PER TABLE 1106.2

1 M2.1 **MECHANICAL ROOF PLAN**

SCALE: 3/16" = 1' - 0" 3' 0 2' 4' 8' 16'

PVE Inc.
Consulting Mechanical Electrical Engineers
1040 North 2200 West, Suite 100
Salt Lake City, UT 84116
Phone: (801) 359-3158
Fax: (801) 521-4114

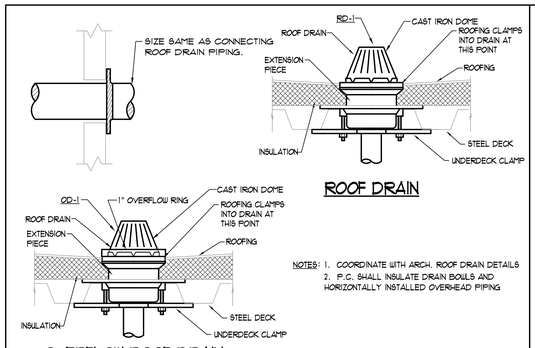
SANTAQUIN
RETAIL PAD C

MARK	DATE	DESCRIPTION

DATE: 8.21.20
PVE PROJECT NO: 20074.00
DESIGN SEQUENCE PROJECT NO:
CAD DWG FILE NO:
DRAWN BY: TE
DESIGNED BY: BNS
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET
SHEET TITLE

MECHANICAL ROOF PLAN

M2.1



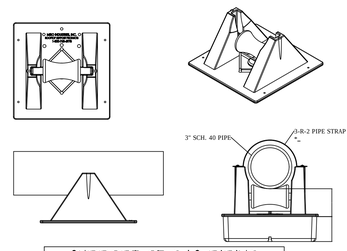
ROOF DRAIN

OVERFLOW ROOF DRAIN

NOTES: 1. COORDINATE WITH ARCH. ROOF DRAIN DETAILS
2. P.C. SHALL INSULATE DRAIN BOWLS AND HORIZONTALLY INSTALLED OVERHEAD PIPING

7 M6.1 ROOF DRAIN & OVERFLOW ROOF DRAIN DETAIL

SCALE: NOT TO SCALE

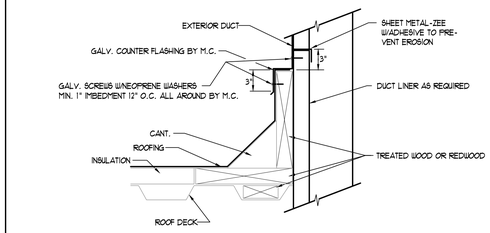


SUPPORT OF GAS PIPING

SIZE OF PIPE (in.)	DISTANCE OF SUPPORTS (ft.)
1/2	6
1/4 or larger	8
1-1/4 or larger	10

4 M6.1 GAS PIPING SUPPORT DETAIL - MIRO BLOCK

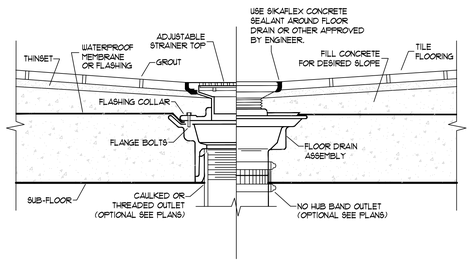
SCALE: NOT TO SCALE



1 M6.1 DUCT PENETRATION OF ROOF DETAIL

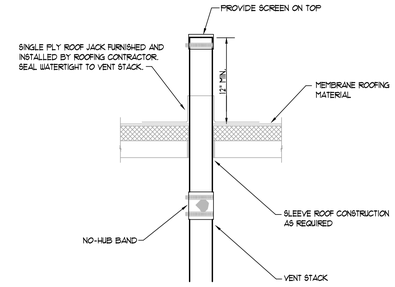
SCALE: NOT TO SCALE

NOTE: THIS IS A TYPICAL FLOOR DRAIN INSTALLATION. FOR DIFFERENT TYPES OF FLOORING THE TOP FINISH (SHOWN AS THINSET AND TILE) MAY DIFFER FROM WHAT'S SHOWN. SEE ARCHITECTURAL PLANS FOR FLOORING TYPES.



8 M6.1 TYPICAL FLOOR DRAIN DETAIL

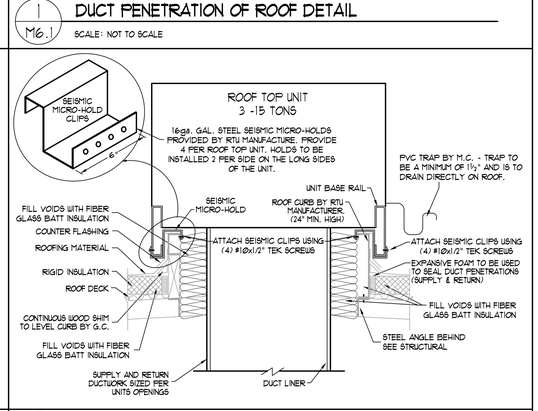
SCALE: NOT TO SCALE



5 M6.1 VENT THROUGH ROOF DETAIL

SCALE: NOT TO SCALE

PVED-VENT



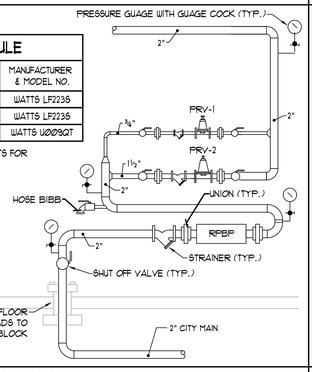
2 M6.1 ROOF TOP UNIT CURB DETAIL

SCALE: NOT TO SCALE

PRV STATION SCHEDULE

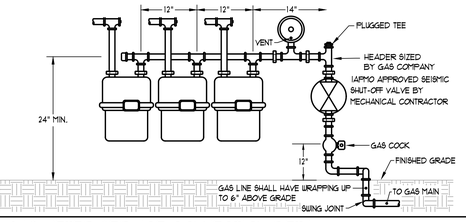
PLAN CODE	SIZE	GPM	PRES. FALL-OFF (PSIG)	PRES. SETTING (PSIG)	MANUFACTURER & MODEL NO.
PRV-1	¾"	10	5	NTE 80	WATTS LF2235
PRV-2	1½"	20	10	NTE 80	WATTS LF2235
RPBP	2"	40	10	--	WATTS U009QT

*SEE MP#0.1 FOR DISINFECTION REQUIREMENTS FOR POTABLE WATER SYSTEMS.



9 M6.1 DOMESTIC WATER PRV STATION DETAIL

SCALE: NOT TO SCALE

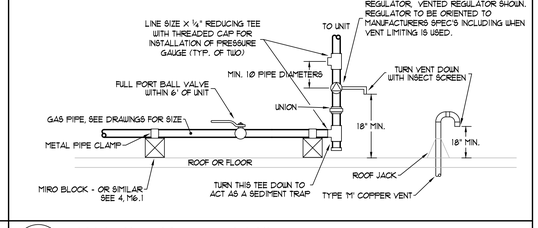


6 M6.1 GAS METER SERVICE CONNECTION DETAIL

SCALE: NOT TO SCALE

VENT LINE SIZING

FUEL LINE SIZE (NOMINAL INCHES)	VENT LINE SIZE (NOMINAL INCHES)
UP TO 1½	¾
2	1
2½	1¼
3	1¼
4	2
5	2
6	2½
8	3



3 M6.1 NATURAL GAS PRV DETAIL

SCALE: NOT TO SCALE

design
Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

SANTAQUIN
RETAIL PAD C

MARK	DATE	DESCRIPTION

DATE:	8.21.20
PVE PROJECT NO:	20074.00
DESIGN SEQUENCE PROJECT NO:	
CAD DWG FILE NO:	
DRAWN BY:	TE
DESIGNED BY:	BNS
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

SHEET TITLE

DETAILS

M6.1

PVE Inc.
Consulting Mechanical Electrical Engineers
1040 North 2200 West, Suite 100
Salt Lake City, UT 84116
Phone: (801) 359-3158
Fax: (801) 521-4114

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DEVICE/FIXTURE DESCRIPTION	MOUNTING	COMMENTS
	MECHANICAL/PLUMBING EQUIPMENT CALLOUT		
XC	KITCHEN EQUIP. CALLOUT, OR AS NOTED BY ARCH.		
X	KITCHEN EQUIP. CALLOUT, OR AS NOTED BY ARCH.		
X	LUMINAIRE TYPE		
	DIAGRAM/DETAIL CALLOUT		
	CONDUIT RUN CONCEALED IN WALL OR CEILING		
--UG--	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	SURFACE RACEWAY/WIREMOLD		
	LOW VOLTAGE CONDUIT RUN		
	DEMOLITION		
	EXISTING		
	HOME RUN TO PANEL		
	CONDUIT STUB		
	CONDUIT BREAK/CONTINUATION		
	CONDUIT STUB DOWN		
	CONDUIT STUB UP		
	FUSE		
	GROUND/GROUND ROD		
	CIRCUIT BREAKER		
	TELEPHONE OUTLET, SINGLE PORT	18"	
	TELEPHONE OUTLET, CUSTOM HEIGHT		(6)
	DATA OUTLET, DUAL PORT	18"	
	DATA OUTLET, CUSTOM HEIGHT		(6)
	DUAL DATA AND SINGLE TELEPHONE PORT	18"	
	DUAL DATA AND SINGLE TELEPHONE PORT, CUSTOM HEIGHT		(6)
#	DATA OUTLET, ATTRIBUTE SIGNIFIES PORT QUANTITY	18"	
	TELEPHONE OUTLET, SINGLE PORT, FLOOR MOUNTED	FLOOR	
	DATA OUTLET, DUAL PORT, FLOOR MOUNTED	FLOOR	
	TELEVISION OUTLET	AS NOTED	(6) (11)
	NURSE CALL STATION, SINGLE BED	4'-11"	(11)
	NURSE CALL STATION, DOUBLE BED	4'-11"	(11)
	NURSE CALL STATION, EMERGENCY	4'-11"	(11)
	NURSE CALL STATION, CODE BLUE	4'-11"	(11)
	NURSE CALL STATION, MICROPHONE/SPEAKER UNIT	4'-11"	(11)
	NURSE CALL PULL CHAIN	AS NOTED	
	NURSE CALL DOME LIGHT	CEILING	(11)
	NURSE CALL DOME LIGHT, WALL	WALL	(11)
	SPEAKER	CEILING	
	SPEAKER, WALL	AS NOTED	(11)
V	VOLUME CONTROL, WALL	4'-0"	(11)
M	MICROPHONE, WALL	AS NOTED	(11)
M	MICROPHONE, FLOOR	FLOOR	
	BELL, WALL	AS NOTED	
	CHIME, WALL	AS NOTED	
	SECURITY CAMERA, FIXED	CEILING	
	SECURITY CAMERA, PTZ	CEILING	
	SECURITY CAMERA, FIXED, WALL	AS NOTED	(11)
	SECURITY CAMERA, PTZ, WALL	AS NOTED	(11)
CR	CARD READER	4'-0"	(11)
	DOOR CONTACT	4'-0"	(11)
	REQUEST TO EXIT	4'-0"	(11)
	KEYPAD	4'-0"	(11)
	ELECTRIC HINGE	4'-0"	(11)
	ELECTRIC LATCH	4'-0"	(11)
	ELECTRIC STRIKE	4'-0"	(11)
	BIOMETRIC READER	4'-0"	(11)
MDF	MAIN DISTRIBUTION FRAME	6'-6" TO TOP	
IDF	INTERMEDIATE DISTRIBUTION FRAME	6'-6" TO TOP	

ABBREVIATIONS

A	AMPS	ENT	ELEC. NON-METAL. TUBING	NL	NIGHT LIGHT, BYPASS
AFC	AVAILABLE FAULT CURRENT	ER	EXISTING TO BE RELOCATED		LOCAL SWITCHING
AFF	ABOVE FINISHED FLOOR	EX.	EXISTING TO REMAIN	PC	PLUMBING CONTRACTOR
AFG	ABOVE FINISHED GRADE	FMC	FLEXIBLE METAL CONDUIT	POC	POINT OF CONNECTION
AIC	AMPS INTERR. CAPACITY	GC	GENERAL CONTRACTOR	POS	POINT OF SALE
AWG	AMERICAN WIRE GAUGE	GEC	GRND. ELEC. COND. AT SES	R	RELOCATED
BC	BARE COPPER	GFCI	GRND. FLT. CURR. INTERR.	RM	ROOF MOUNTED
BFC	BELOW FINISHED CEILING	GND	GROUND	RMC	RIGID METALLIC CONDUIT
BFG	BELOW FINISHED GRADE	IMC	INTER. METAL CONDUIT	RNC	RIGID NON-METALLIC COND.
C	CONDUIT	IG	ISOLATED GROUND	SBJ	SYSTEM BONDING JUMPER
CND	CONDUIT	KCMIL	1000 CIRCULAR MILS (MCM)	SCA	SHORT CIRCUIT AMPERES
CO	CONDUIT ONLY	LFMC	LIQUID-TIGHT FLEX.	T	TRANSMITTER
CT	CURRENT TRANSDUCER		METAL. COND.	TC	TEMP. CONTROL CONTR.
CU	COPPER MATERIAL	LFNC	LIQUID-TIGHT FLEX.	UG	UNDERGROUND
DED	DEDICATED		NON-METAL. COND.	UNO	UNLESS NOTED OTHERWISE
DFA	DROP FROM ABOVE	MC	MECHANICAL CONTRACTOR	VA	VOLT/AMPS
EC	ELECTRICAL CONTRACTOR	MCA	MINIMUM CIRCUIT AMPS	VIF	VERIFY IN FIELD
EF	EXHAUST FAN	N1	NEMA 1	WP	WEATHERPROOF/NEMA 3R
EM	EMER./EGRESS BATTERY	N3R	NEMA 3R	XP	EXPLOSION PROOF
EMT	ELEC. METALLIC TUBING	N	NEW	XR	EXISTING TO BE REMOVED

NOTES

(1) SEE LUMINAIRE SCHEDULE FOR FIXTURE TYPES AND DETAILS.
(2) SEE LUMINAIRE SCHEDULE FOR MOUNTING REQUIREMENTS.
(3) WIRE LIGHT FIXTURE FROM ADJACENT J-BOX
(4) CONNECT NEAREST UN-SWITCHED HOT CONDUCTOR TO EMERGENCY BALLAST
(5) DIRECTIONAL ARROWS INDICATE REQUIRED CHEVRONS.
(6) COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL INTERIOR ELEVATIONS
(7) USE WITH POWER PACK.
(8) "X" IN SYMBOL IS INCHES BETWEEN RECEPTACLE ALONG WIREWAY. SEE DRAWINGS.
(9) PROVIDE UL LISTED DEVICE COMPATIBLE WITH THE FIRE ALARM PANEL/SYSTEM.
(10) MATCH THE VOLTAGE OF THE RELAY WITH THAT OF THE CONTROLLING CIRCUIT.
(11) USE A 4" X 4" BOX WITH A MUD RING TO MATCH THE DEVICE AND INSTALLATION.
(12) PROVIDE MUD RING AND/OR BOX COVER APPROPRIATE FOR DEVICE/FIXTURE SERVED.
(13) USE HEAVY DUTY DEVICE FOR 480 VOLT.
(14) SIZE TO THE EQUIPMENT BEING CONTROLLED
(15) FIRE ALARM PANELS: FACP: FIRE ALARM CONTROL PANEL, NAC: NOTIFICATION APPLIANCE CIRCUIT PANEL, ANNUN: GRAPHIC ANNUNCIATOR PANEL, AND SES: SMOKE EVACUATION SYSTEM PANEL.
(16) LIGHT FIXTURES ARE SCALED WITHIN THE DRAWINGS BASED ON ACTUAL DIMENSIONS.

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DEVICE/FIXTURE DESCRIPTION	MOUNTING	COMMENTS
	MAIN TELEPHONE BOARD	6'-6" TO TOP	
	SECURITY PANEL, SURFACE	AS NOTED	
	SECURITY PANEL, RECESSED	AS NOTED	
	SMOKE DETECTOR	CEILING	(9) (11)
	SMOKE DETECTOR, SOUNDER BASE	CEILING	(9)
	SMOKE DETECTOR, SOUNDER BASE, WALL	7'-6"	(9) (11)
	SMOKE DETECTOR, SOUNDER BASE, VISUAL IND.	CEILING	(9)
	SMOKE DETECTOR, SOUNDER BASE, VISUAL IND., WALL	7'-6"	(9) (11)
	DUCT SMOKE DETECTOR	SEE MECH.	(9)
FSD	FIRE/SMOKE DAMPER	SEE MECH.	
	HEAT DETECTOR	CEILING	(9) (11)
	BEAM DETECTOR, RECEIVER		(9)
	BEAM DETECTOR, TRANSMITTER		(9)
	BEAM DETECTOR, RECEIVER/TRANSMITTER		(9)
	BEAM DETECTOR, REFLECTOR		(9)
	FLAME DETECTOR		(9)
	FIRE FIGHTER TELEPHONE OUTLET		(9) (11)
F	FIRE ALARM MANUAL PULL STATION	4'-0"	(9) (11)
#	FIRE ALARM STROBE, ATTRIBUTE SIGNIFIES CANDELA RATING	7'-6"	(9) (11)
	FIRE ALARM HORN	7'-6"	(9) (11)
#	FIRE ALARM HORN STROBE, ATTRIBUTE SIGNIFIES CANDELA RATING	7'-6"	(9) (11)
	FIRE ALARM SPEAKER	7'-6"	(9) (11) (18)
#	FIRE ALARM SPEAKER STROBE, ATTRIBUTE SIGNIFIES CANDELA RATING	7'-6"	(9) (11) (18)
F	FIRE SPRINKLER FLOW BELL	7'-6" AFF	(9)
F	FIRE ALARM CHIME	AS NOTED	(9)
	ELECTRO MAGNETIC DOOR HOLDER	AS NOTED	
RM	RELAY MODULE		(9)
MM	MONITOR MODULE		(9)
CM	CONTROL MODULE		(9)
PS	PRESSURE SWITCH		(9)
TS	TAMPER SWITCH		(9)
FS	FLOW SWITCH		(9)
IM	LOOP ISOLATION MODULE		(9)
XM	FIRE EXTINGUISHER MONITOR		(9)
	FIRE RISER	SEE PLANS	
	FIRE ALARM PANEL, SURFACE	AS NOTED	(15)
	FIRE ALARM PANEL, RECESSED	AS NOTED	(15)
(S) (D) (Q)	(S) SIMPLEX (D) DUPLEX (Q) QUADPLEX OR DOUBLE DUPLEX		
	STANDARD CONVENIENCE OUTLET	18"	
	CONVENIENCE OUTLET, GFCI	18"	
	STANDARD CONVENIENCE OUTLET, EMERGENCY	18"	
	STANDARD CONVENIENCE OUTLET, SWITCHED	18"	
	STANDARD CONVENIENCE OUTLET, CUSTOM HEIGHT		
	CONVENIENCE OUTLET, GFCI, CUSTOM HEIGHT		
	CONVENIENCE OUTLET, ISOLATED GROUND	18"	
	CONVENIENCE OUTLET, FLOOR	FLOOR	
	CONVENIENCE OUTLET, CEILING	CEILING	
	2 CIRCUITS TO EACH DEVICE	18"	
	COMBINATION POWER AND COMMUNICATION FLOOR BOX	FLOOR	
	SPECIAL PURPOSE OUTLET		
	DIRECT CONNECTION TO EQUIPMENT		
	CORD DROP OUTLET	SUSPENDED	
	POWER/VOICE-DATA SERVICE POLE	AS NOTED	
DJB	DISTRIBUTION JUNCTION UNIT		
VFR	VARIABLE FREQUENCY DRIVE		
TVS	TRANSIENT VOLTAGE SURGE SUPPRESSION		
	JUNCTION BOX	AS NOTED	(12)
	JUNCTION BOX, WALL	AS NOTED	(12)
	JUNCTION BOX, FLOOR	FLOOR	(12)
	CLOCK OUTLET		(*)
^{M}	MANUAL MOTOR CONTROLLER SWITCH WITHOUT TERMINAL OVERLOAD PROTECTION		
^{P}	SWITCH WITH PILOT LIGHT		
TH	MANUAL SWITCH WITH THERMAL OVERLOAD		
^{X}	SINGLE POLE DOOR SWITCH		
	PUSH BUTTON SWITCH, SINGLE	AS NOTED	
	PUSH BUTTON SWITCH, DOUBLE	AS NOTED	
	BUSH BUTTON SWITCH, TRIPLE	AS NOTED	
	EMERGENCY POWER OFF (EPO) SWITCH		
	NON-FUSED DISCONNECT SWITCH		(13) (14)
	FUSED DISCONNECT SWITCH		(13) (14)
	MAGNETIC STARTER		(13) (14)
	MAGNETIC STARTER WITH FUSED DISCONNECT		(13) (14)
	MAGNETIC STARTER WITH BREAKER DISCONNECT		(13) (14)
	POWER RELAY		(13) (14)

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DEVICE/FIXTURE DESCRIPTION	MOUNTING	COMMENTS
	MOTOR OUTLET		
	MOTOR OUTLET, ROOF MOUNTED	ROOF	
	LIGHTNING PROTECTION AIR TERMINAL	ROOF	
	LIGHTNING PROTECTION BOND PLATE		
	LIGHTNING PROTECTION GROUND ROD	GROUND	
	POKETHRU		
	UTILITY POWER POLE	SEE PLANS	
H	TRANSFORMER	SEE PLANS	
XT	TRANSFORMER	SEE PLANS	
G	EMERGENCY GENERATOR	SEE PLANS	
	CABLE TRAY		
	MAIN DISTRIBUTION POWER PANEL		
	PANEL BOARD, SURFACE	6'-6" TO TOP	(15)
	PANEL BOARD, RECESSED	6'-6" TO TOP	(15)
	2x4 LINEAR LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	2x4 LINEAR EMERGENCY LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	2x2 LINEAR LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	2x2 LINEAR EMERGENCY LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	RECESSED LIGHT FIXTURE	CEILING	(1) (3)
	RECESSED EMERGENCY LIGHT FIXTURE	CEILING	(1) (3)
	RECESSED WALL WASH LIGHT FIXTURE	CEILING	(1) (3)
	CEILING LIGHT FIXTURE	CEILING	(1) (2)
	PENDANT/CHANDELIER LIGHT FIXTURE	SUSPENDED	(1) (2) (3)
	WALL LIGHT FIXTURE, SURFACE	AS NOTED	(1) (2)
	WALL LIGHT FIXTURE, RECESSED	AS NOTED	(1) (2)
	TRACK LIGHT FIXTURE WITH TRACK	CEILING	(1) (2) (3)
	CEILING FAN	SUSPENDED	
	FLOOD/LANDSCAPE/MONUMENT LIGHT FIXTURE	GROUND	(1) (2) (3)
	AREA LIGHT FIXTURE	POLE	(1) (2)
	EXIT SIGN, WALL	7'-6"	(1) (2) (4) (5)
	EXIT SIGN	CEILING	(1) (4) (5)
	EMERGENCY LIGHT FIXTURE, WALL	7'-6"	(1) (2)
P	PHOTO-ELECTRIC CELL	AS NOTED	
PP	POWER PACK	CEILING	
SP	SLAVE PACK	CEILING	
MP	MINI POWER PACK	CEILING	
EMS	EMERGENCY CONTROL UNIT	CEILING	
	DUAL TECHNOLOGY VACANCY SENSOR	CEILING	(7)
	DUAL TECHNOLOGY VAC. SENSOR, WALL	AS NOTED	(7)
	DUAL TECHNOLOGY VAC. SENSOR SWITCH, 1-BUTTON	4'-0"	(7)
	DUAL TECHNOLOGY VAC. SENSOR SWITCH, 2-BUTTON	4'-0"	(7)
	DAYLIGHT SENSOR	CEILING	
	MOTION SENSOR	AS NOTED	
	PASSIVE INFRARED SENSOR	CEILING	
$	SINGLE POLE SWITCH	4'-0"	
$^{2}	DOUBLE POLE, SINGLE THROW SWITCH	4'-0"	
$^{3}	THREE WAY SWITCH	4'-0"	
$^{3}_{a}	THREE WAY SWITCH ATTRIBUTE SIGNIFIES FIXTURE SWITCHING	4'-0"	
$^{4}	FOUR WAY SWITCH	4'-0"	
$$	DUAL LEVEL SWITCH BANK	4'-0"	
$	DIMMER SWITCH	4'-0"	
$	LOW VOLTAGE SWITCH	4'-0"	
$^{K}	KEYED SWITCH, SINGLE POLE	4'-0"	(15)
$^{T}	7-DAY TIMER SWITCH, SINGLE POLE	4'-0"	(15)
TC	TIME CLOCK	AS NOTED	
	LIGHTING CONTROL PANEL, SURFACE	6'-6" TO TOP	
	LIGHTING CONTROL PANEL, RECESSED	6'-6" TO TOP	

GENERAL NOTES

1. THE ELECTRICAL SYSTEMS DEFINED BY THESE PLANS AND SPECIFICATIONS ARE TO BE CONSTRUCTED AS COMPLETE AND OPERABLE SYSTEMS AND SHALL BE BID WITH THIS INTENT. THE CONTRACTOR SHALL VISIT THE SITE, READ ALL THE RELEVANT DOCUMENTS AND BECOME FAMILIAR WITH THE TYPE OF CONSTRUCTION AND WORK TO BE ACCOMPLISHED. SHOULD ANY ERROR, OMISSION OR CONFLICT EXIST IN EITHER THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING BEFORE SUBMITTING HIS BID PRICE SO A CHANGE CAN BE ISSUED IN A PRE-BID ADDENDUM. OTHERWISE, THE CONTRACTOR AND/OR EQUIPMENT SUPPLIER SHALL SUPPLY THE PROPER MATERIALS AND LABOR TO INSTALL COMPLETE AND OPERABLE SYSTEMS AT THEIR OWN EXPENSE. WHEN EACH ELECTRICAL SYSTEM IS COMPLETE, THE CONTRACTOR SHALL TEST AND CONFIRM IT'S PROPER OPERATION. ANY INCOMPLETE SYSTEM SHALL BE MADE COMPLETE AND OPERABLE.
2. THE ARCHITECTURAL AND MECHANICAL PLANS ARE CONSIDERED A PART OF THE ELECTRICAL DOCUMENTS SO FAR AS ANY ELECTRICAL ITEMS THEY MAY CONTAIN. THE ELECTRICAL CONTRACTOR SHALL REFER TO AND COORDINATE WITH THEM. NO EXTRA COST SHALL BE ALLOWED FOR FAILURE TO COORDINATE THE CONTRACT DOCUMENTS WITH OTHER TRADES AND/OR IF EQUIPMENT DIMENSIONS ARE GREATER THAN SPECIFIED AND/OR DIMENSIONED ON THE PLANS.
3. NO ADDITIONS TO THE CONTRACTOR BID WILL BE ALLOWED FOR CHANGES MADE NECESSARY BY INTERFERENCE WITH OTHER WORK.
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE EQUIPMENT, MATERIALS AND LABOR FOR THE CONNECTIONS OF ALL EQUIPMENT SHOWN ON THE PLANS - ARCHITECTURAL, MECHANICAL, ETC.
5. THIS PROJECT IS TO BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL AND STATE CODES AND THE NEC. IF AT ANY TIME DURING CONSTRUCTION, OR AFTER, SOMETHING IS FOUND TO BE INSTALLED IN VIOLATION OF THE CODES LISTED ABOVE, IT SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.
6. ALL EQUIPMENT PROVIDED BY THE ELECTRICAL CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, AND BE PROPERLY INSTALLED FOR THE CONDITIONS AND SPACE THAT EQUIPMENT IS BEING INSTALLED WITHIN.
7. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND CONFIRM THE EXACT LOCATION OF THE POWER PANELS FROM WHICH NEW CIRCUITS ARE BEING FED FROM. VERIFY EXISTING BRANCH CIRCUIT BREAKERS AND PROVIDE NEW BREAKERS AS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
8. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND CONFIRM THE EXACT LOCATION OF THE TELE/DATA ROOM FROM WHICH NEW TELE/DATA OUTLETS WILL BE FED FROM. VERIFY EXISTING PATCH PANEL SPACES AND PROVIDE NEW PATCH PANELS AS NECESSARY TO LAND ALL NEW TELE/DATA CABLING.
9. THE ELECTRICAL CONTRACTOR SHALL INSTALL A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT RUN. CONDUIT SHALL NOT BE USED AS AN EQUIPMENT GROUNDING CONDUCTOR. THE ELECTRICAL CONTRACTOR SHALL GROUND THE ELECTRICAL SYSTEM IN ACCORDANCE WITH LOCAL AND NATIONAL CODES.
10. THE ELECTRICAL CONTRACTOR SHALL CONFIRM MINIMUM CODE (NEC) WORKING CLEARANCE BEFORE INSTALLING ANY ELECTRICAL PANELS, CABINETS, DISCONNECT, TRANSFORMERS, ETC. AND SHALL MOVE THE PANELS/EQUIPMENT AT HIS EXPENSE IF REJECTED BY AN INSPECTOR. IF CLEARANCE IS NOT POSSIBLE, THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY IN WRITING.
11. CONDUIT LAYOUTS SHOWN ON THE PLANS ARE DIAGRAMATIC, NOT INDICATING THE ROUTING REQUIRED. THE EC SHALL ROUTE THE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION AND SHALL COORDINATE WITH DUCTWORK, PIPING, EQUIPMENT, BUILDING STRUCTURE AND OTHER POTENTIAL OBSTRUCTIONS.
12. THE CONTRACTOR SHALL ALLOW THE MOVEMENT, BEFORE ROUGH-IN, OF ANY ELECTRICAL PANEL, DEVICE, LUMINAIRE, ETC. A DISTANCE OF 10 FEET WITHOUT REQUIRING ADDITIONAL COST TO THE PROJECT.
13. THE ELECTRICAL CONTRACTOR SHALL SECURE ALL CONDUIT TO THE STRUCTURE AS IT IS SET IN PLACE USING INDUSTRY STANDARD METHODS AND PRACTICES.
14. MINIMUM SIZE CONDUIT SHALL BE 3/4". ABOVE GROUND CONDUIT SHALL BE EMT WITH STEEL SET SCREW FITTINGS. UNDERGROUND CONDUIT SHALL BE PVC (SCH40) WITH GRC ELBOWS AND RISERS WRAPPED IN CORROSION RESISTANT MATERIALS WHERE IN DIRECT CONTACT WITH THE SOIL.
15. FLEXIBLE CONDUIT SHALL BE LIMITED TO CONNECTIONS TO LIGHT FIXTURES AND FINAL CONNECTIONS TO MOTORS OR OTHER EQUIPMENT SUBJECT TO VIBRATION. LENGTHS OF FLEXIBLE OR SEALTITE CONDUIT SHALL NOT BE GREATER THAN 72" INCHES.
16. WIRING DEVICES SHALL MATCH EXISTING COLOR AND FACEPLATE TYPE.
17. TO ASSURE ALL DEVICES ARE RIGIDLY SET, THE ELECTRICAL CONTRACTOR SHALL SECURE ALL DEVICE BOXES WITH BRACKETS, HANGERS, ETC. DESIGNED FOR THE APPLICATION. ANY DEVICE BOXES NOT SECURED WILL BE MADE SECURE AT THE CONTRACTORS EXPENSE.
18. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL EMPTY CONDUITS WITH 200LB RATED NYLON PULL CORD.
19. BEFORE ANY ELECTRICAL CONDUIT, BOXES, ETC. ARE COVERED (FLOOR, CEILINGS, WALLS, ETC.), THEY SHALL BE APPROVED BY THE INSPECTING OFFICER (INSPECTOR). THE UNCOVERING AND REPLACEMENT OF ELECTRICAL WORK FOR THE INSPECTION PURPOSES WILL BE AT THE COST OF THE ELECTRICAL CONTRACTOR.
20. ALL BATTERY POWERED OR CONTINUOUS BURN LUMINAIRES SHOWN ON THE PLANS, SUCH AS EXIT LIGHTS, NIGHT LIGHTS, OR EMERGENCY LIGHTS, SHALL BE CONNECTED TO THE UN-SWITCHED LEG OF THE LIGHTING CIRCUIT FEEDING THAT AREA.
21. LUMINAIRES INSTALLED IN THE MECHANICAL ROOM SHALL BE PLACED SO THAT ALL EQUIPMENT IS ADEQUATELY ILLUMINATED AFTER THE MECHANICAL EQUIPMENT IS IN PLACE.
22. ALL LUMINAIRES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AND NOT SOLELY FROM THE CEILING GRID OR OTHER NONSTRUCTURAL MEMBER.
23. TO MAINTAIN CONSISTENT LIGHT QUALITY, FOR ANY ONE LAMP TYPE SUPPLIED, LAMPS SHALL BE OF THE SAME MANUFACTURE, SURFACE TEMPERATURE, COLOR RENDERING INDEX, LAMP EFFICACY, LUMEN OUTPUT AND STARTING CHARACTERISTICS FOR ALL INSTALLED.
24. WHERE WIRE SIZE IS NOT SHOWN ON THE DRAWINGS FOR 20A, 120 OR 277VAC BRANCH CIRCUITS, THE CIRCUIT SHALL CONSIST OF 2#12(CU,THHN)+1#12(CU,THHN)GND IN 3/4" EMT CONDUIT. THIS WIRE SIZE SHALL BE INCREASED TO #10(CU,THHN) FOR 120VAC BRANCH CIRCUITS WITH OVERALL LENGTHS EXCEEDING 125' TO ACCOMMODATE FOR VOLTAGE DROP. REFER TO EQUIPMENT SCHEDULES, FEEDER SCHEDULES AND NOTES ON DRAWINGS FOR ALL OTHER BRANCH CIRCUIT AND FEEDER WIRE/CONDUIT SIZING.
25. CONDUCTORS SHALL BE COPPER, 600VAC RATED, TYPE THHN/THWN-2 UNLESS OTHERWISE NOTED. CONDUCTORS SIZES UP TO #10AWG SHALL BE SOLID AND #8AWG AND LARGER SHALL BE STRANDED.
26. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIERS ON THE EXACT LOCATIONS OF ALL EQUIPMENT AND ELECTRICAL CONNECTIONS PRIOR TO ROUGH-IN. THE ELECTRICAL CONTRACTOR SHALL MAKE THE FINAL CONNECTION TO ALL EQUIPMENT UNLESS OTHERWISE DIRECTED BY THE EQUIPMENT SUPPLIER.
27. THE ELECTRICAL CONTRACTOR SHALL CLEAN THE ENTIRE ELECTRICAL SYSTEM AFTER COMPLETION OF THE INSTALLATION. REMOVE ALL FINGER PRINTS, FOREIGN MATTER, PAINT, DIRT, GREASE, UN-NEEDED LABELS OR STICKERS FROM FIXTURES AND EQUIPMENT. REMOVE ALL RUBBISH AND DEBRIS ACCUMULATED DURING INSTALLATION FROM THE PREMISIS.
28. OBTAIN FROM SUPPLIERS ALL WIRING DIAGRAMS FOR EQUIPMENT PRIOR TO ANY ROUGH-IN. TO ASSURE THAT PROPER CHARACTERISTICS ARE PROVIDED. ANY INCORRECT WIRING OR DEVICES INSTALLED BY THE ELECTRICAL CONTRACTOR WITHOUT THE WIRING DIAGRAM SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. PROVIDE COPIES OF WIRING DIAGRAMS WITHIN EACH PIECE OF EQUIPMENT AND ADDITIONAL COPIES WITH THE OPERATION AND MAINTENANCE MANUALS.
29. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR TO PROVIDE CONDUIT AND DEVICE MOUNTING BOXES FOR THERMOSTATS AND OTHER MECHANICAL CONTROLS.
30. IT IS THE INTENT OF THE CONSTRUCTION DOCUMENTS FOR ALL DEVICES TO BE FLUSH MOUNTED AND CONDUIT/CABLING INSTALLED CONCEALED WITHIN WALLS/CEILINGS. IN AREAS WHERE CONDUIT MUST BE INSTALLED EXPOSED IT SHALL BE COORDINATED WITH THE ARCHITECT AND/OR ENGINEER. ALL EFFORTS SHALL BE MADE TO CONCEAL WIRING METHODS.
31. PROVIDE AN UPDATED, TYPED PANEL CIRCUIT DIRECTORY FOR ALL PANELS WHERE CIRCUITS HAVE BEEN MODIFIED, ADDED, OR REMOVED BY THE SCOPE OF THIS PROJECT. CIRCUIT DESCRIPTIONS ON THE DIRECTORY SHALL BE UNIQUE AND INDICATE THE ROOM AND EQUIPMENT/DEVICE IT IS FEEDING.

Sheet List Table

design Sequence
350 SOUTH 200 EAST, #106
SALT LAKE CITY, UTAH 84111
P: 801.596.0691
DESIGNUTAH.COM

LICENSED PROFESSIONAL ENGINEER
No. 7877350-2202
RYAN C. VAN VOAST
09/10/20
STATE OF UTAH

VBFA
WWW.VBFA.COM
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

SANTAQUIN CITY PAD 'C'

400 EAST
MAIN STREET
SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE: 09/10/2020
AGENCY PROJECT NO: 20294
DESIGN SEQUENCE PROJECT NO: 1708.01
CAD DWG FILE NO:

DRAWN BY: AMC
DESIGNED BY: KMC
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET

SHEET TITLE
ELECTRICAL NOTES & SYMBOLS

EG001

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

A. DESCRIPTION
1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND TRANSPORTATION AS REQUIRED TO PROPERLY INSTALL A COMPLETE AND OPERABLE ELECTRICAL SYSTEM.

B. RULES AND REGULATIONS
1. ALL WORK AND MATERIALS SHALL BE INSTALLED AS SHOWN AND HEREIN SPECIFIED.
2. THE LATEST EDITIONS OF THE FOLLOWING SPECIFICATIONS, STANDARDS, AND AMENDMENTS, AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION, SHALL FORM A PART OF THIS SPECIFICATION THE SAME AS IF HEREIN WRITTEN OUT IN FULL (ALL MATERIALS AND INSTALLATIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS THEREOF):
   a. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION), PUBLICATION NUMBER 70, "NATIONAL, ELECTRICAL CODE"; PUB. NO. 72E, "AUTOMATIC FIRE DETECTORS".
   b. UL (UNDERWRITERS LABORATORIES, INC.).
   c. NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION).
   d. UBC (UNIFORM BUILDING CODE) AND STANDARD BUILDING CODE.
   e. IBC (INTERNATIONAL BUILDING CODE)
   f. IFC (INTERNATIONAL FIRE CODE)
   g. IECC (INTERNATIONAL ENERGY CONSERVATION CODE)
   h. IEC (INTERNATIONAL ELECTRICAL CODE) STATE AND
   i. LOCAL BUILDING AUTHORITY AND CODES
3. NO REQUIREMENT TO THESE DRAWINGS AND SPECIFICATIONS SHALL BE CONSTRUCTED TO VOID ANY OF THE PROVISIONS OF THE ABOVE SPECIFICATIONS AND STANDARDS.

C. PERMITS AND INSPECTIONS UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL APPLY, PAY FOR AND SCHEDULE ALL APPLICABLE PERMITS, FEES AND INSPECTIONS REQUIRED BY ANY AND ALL PUBLIC AUTHORITIES HAVING JURISDICTION AND REQUIRING INSPECTION.
1. EC SHALL INCLUDE ALL UTILITY COMPANY CHARGES IN THE BASE BID.

D. WORKMANSHIP AND MATERIALS
1. WORKMANSHIP SHALL BE OF THE BEST QUALITY AND NONE BUT COMPETENT PERSONNEL SKILLED IN THEIR TRADE SHALL BE EMPLOYED. THE CONTRACTOR SHALL FURNISH THE SERVICES OF AN EXPERIENCED SUPERINTENDENT, WHO WILL BE IN CHARGE OF THE EXECUTION OF WORK, UNTIL COMPLETED AND ACCEPTED.
2. UNLESS OTHERWISE HEREIN AFTER SPECIFIED, ALL MATERIALS AND EQUIPMENT UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL BE NEW, OF BEST GRADE AND AS LISTED IN PRINTED CATALOGS OF THE MANUFACTURER. EACH ARTICLE OF IT'S KIND SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER.
3. THE OWNER'S REPRESENTATIVE SHALL HAVE THE RIGHT TO ACCEPT OR REJECT MATERIAL EQUIPMENT AND/OR WORKMANSHIP AND DETERMINE WHEN THEY HAVE COMPLIED WITH THE REQUIREMENTS HEREIN SPECIFIED.
4. ALL MANUFACTURED MATERIALS SHALL BE CLEARLY MARKED OR STAMPED WITH THE MANUFACTURER'S NAME AND RATING.
5. REFERENCE TO STANDARDS ARE INTENDED TO BE THE LATEST REVISION OF THE STANDARD SPECIFIED, OR THAT ACCEPTED BY THE AUTHORITY HAVING JURISDICTION.

E. MANUFACTURER'S RECOMMENDATIONS
1. EQUIPMENT INSTALLED UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR HEREIN SPECIFIED.

F. GUARANTEE ALL MATERIALS AND EQUIPMENT PROVIDED AND INSTALLED UNDER THIS SECTION SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR. SHOULD ANY TROUBLE OR MALFUNCTIONS DEVELOP DURING THIS PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR WILL BE HELD LIABLE AND SHALL FURNISH LABOR, MATERIALS AND EQUIPMENT NECESSARY TO CORRECT THE TROUBLE OR MALFUNCTION WITHOUT ADDITIONAL COST TO THE OWNER. ALL DEFECTIVE MATERIAL OR INFERIOR WORKMANSHIP NOTICED DURING THE TIME OF INSTALLATION SHALL BE CORRECTED IMMEDIATELY TO THE ENTIRE SATISFACTION OF THE ARCHITECT, ENGINEER AND OWNER, AT NO ADDITIONAL COST.

G. DEFINITIONS
1. "PROVIDE" - MEANS FURNISH, INSTALL, AND CONNECT, UNLESS OTHERWISE INDICATED.
2. "FURNISH" - MEANS PURCHASE NEW AND DELIVER IN OPERATING ORDER TO PROJECT SITE.
3. "INSTALL" - MEANS TO PHYSICALLY INSTALL THE ITEMS IN-PLACE.
4. "CONNECT" - MEANS MAKE FINAL ELECTRICAL CONNECTIONS FOR A COMPLETE OPERATING PIECE OF EQUIPMENT. THIS INCLUDES PROVIDING CONDUIT, WIRE, TERMINATIONS, ETC. AS APPLICABLE.
5. "OR EQUIVALENT" - MEANS TO PROVIDE EQUIVALENT EQUIPMENT. SUCH EQUIPMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO BIDDING.

H. SUBMITTALS
1. PROVIDE SHOP DRAWINGS AND MANUFACTURER'S LITERATURE OF MATERIALS AND EQUIPMENT AS REQUIRED IN THE GENERAL CONDITIONS, AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND AS LISTED BELOW:
2. CATALOG CUTS
   a. CIRCUIT BREAKERS (EACH SIZE AND TYPE)
   b. SAFETY SWITCHES
   c. MOTOR STARTERS
   d. THERMAL SWITCHES
   e. LIGHT FIXTURES

THE ABOVE IS A STANDARD SUBMITTAL REQUIREMENT LIST. ELECTRICAL CONTRACTOR SHALL SUBMIT ALL APPLICABLE ITEMS FOR REVIEW. MATERIAL NOT SUBMITTED AND APPROVED BY THE ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS COST IF DIRECTED BY THE ARCHITECT, ENGINEER OR THE OWNER'S REPRESENTATIVE.

PART 2 - MATERIALS

A. GENERAL
1. MATERIALS AND EQUIPMENT SHALL BE STANDARD CATALOGED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE MANUFACTURE OF THE PRODUCT. UL LISTED, AND SHALL BE THE LATEST STANDARD DESIGN THAT CONFORMS TO SPECIFIED MATERIALS AND EQUIPMENT.

B. RACEWAY
1. ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED IN INTERIOR DRY LOCATIONS.
2. GALVANIZED FLEXIBLE STEEL (FMC) OR LIQUID TIGHT STEEL (LFMC) CONDUIT SHALL BE USED FOR CONNECTIONS TO MECHANICAL EQUIPMENT, LUMINAIRES AND TRANSFORMERS AND AS INDICATED. LIQUID TIGHT CONDUIT SHALL BE USED IN EXTERIOR OR DAMP LOCATIONS.
3. SCHEDULE 40 PVC (WITH PVC COATED OR VINYL TAPE DOUBLE WRAPPED RIGID STEEL ELBOWS AND RISES) SHALL BE USED FOR RUNS THAT ARE IN CONTACT WITH THE EARTH.
4. 3/4" CONDUIT SHALL BE THE MINIMUM SIZE CONDUIT.
5. OUTDOOR AND WET OR DAMP LOCATIONS: PROVIDE RIGID STEEL CONDUIT.

C. FITTINGS
1. ALL FITTINGS SHALL BE STEEL/MALLEABLE IRON WITH INSULATING BUSHINGS.

D. OUTLET AND JUNCTION BOXES
1. BOXES IN INTERIOR DRY LOCATIONS SHALL BE GALVANIZED ONE-PIECE PRESSED STEEL, KNOCKOUT TYPE, NOT LESS THAN 4 INCHES SQUARE AND 2 1/8" DEEP; APPLETON, RACO, OR EQUAL.
2. BOXES SHALL BE EQUIPPED WITH PLASTER RINGS, EXTENSION RINGS, AND FIXTURE STUDS AS REQUIRED.
3. BOXES FOR FLOOR OUTLETS SHALL BE OF THE CAST-METAL THREADED-CONDUIT-ENTRANCE, WATERPROOF TYPE WITH MEANS FOR ADJUSTING COVER PLATE TO FINISHED FLOOR LEVEL. BOXES SHALL BE SUCH AS HUBBELL B2503 OR EQUAL. THE COVER SHALL BE HUBBELL S3925, S3082 OR EQUAL TO MATCH THE FLOOR TYPE OR AS SHOWN ON THE PLANS.
4. PROVIDE FLUSH MOUNTING OUTLET BOX IN FINISHED AREAS.
5. BOXES FOR STRUCTURED CABLING (DATA & PHONE) IN INTERIOR DRY LOCATIONS SHALL BE GALVANIZED ONE-PIECE PRESSED STEEL, KNOCKOUT TYPE 4 11/16" x 2 1/8"; APPLETON, RAYCO OR EQUAL.
6. ALL BOXES IN FINISHED SPACES SHALL BE PROVIDED WITH MUD RINGS AS REQUIRED FOR THE DEVICE AND WALL MATERIAL.
7. OUTDOOR AND WET OR DAMP LOCATIONS: PROVIDE CAST METAL OR PVC OUTLET, JUNCTION, AND PULL BOXES.

E. CONDUCTORS
1. ALL CONDUCTORS SHALL BE SOFT DRAWN, ANNEALED COPPER IN RACEWAY SIZED AS SHOWN ON THE PLANS. ALL CONDUCTORS TO BE MINIMUM #12 AWG UNLESS NOTED OTHERWISE #8 AWG AND LARGER SHALL BE STRANDED.
2. CONDUCTORS SHALL BE COPPER, THHN OR THWN-2 COLOR CODED IN ACCORDANCE WITH PART 3, SECTION C. 1. OF THESE SPECIFICATIONS OR AS INDICATED ON THE DRAWINGS.

F. WIRING CONNECTIONS
1. MAKE ALL ELECTRICAL CONNECTIONS.
2. MAKE CONNECTION TO DEVICES USING "PIG-TAILS". DO NOT USE A DEVICE AS A CONNECTION OR A SPLICE UNIT.
3. DO NOT PLACE STRANDED CONDUCTORS DIRECTLY UNDER SCREWS. INSTALL CRIMP-ON, INSULATED, FORK TERMINALS FOR CONDUCTOR TERMINATIONS, OR INSTALL SOLID CONDUCTORS.

G. NAMEPLATES
1. PROVIDE EACH PANEL BOARD, DISCONNECT SWITCH, AND BREAKER IN SWITCHBOARD WITH A MICARTA PLASTIC NAMEPLATE MADE OF WHITE-FACED BLACKCORE PLASTIC LAMINATE. NAMEPLATE SHALL BE MINIMUM 3" WIDE BY 3/4" HIGH FOR PANEL BOARD IDENTIFICATION INCLUDE DESIGNATION, PHASE, VOLTAGE, AND CIRCUIT NUMBER. FASTEN WITH EPOXY GLUE. DOUBLE STICK TAPE IS NOT ACCEPTABLE.

J. FRACTIONAL HORSEPOWER MANUAL STARTER
1. PROVIDE FRACTIONAL HORSEPOWER MANUAL STARTER WITH THE FOLLOWING FEATURES.
   a. MELTING ALLOY TYPE THERMAL OVERLOAD RELAY
   b. RED NEON PILOT LIGHT
   c. THERMAL ELEMENT SIZED FOR MOTOR LOAD
2. PROVIDE A NAMEPLATE ON EACH COMPONENT OF MOTOR CONTROL EQUIPMENT AS SPECIFIED IN "NAMEPLATES".

K. SAFETY SWITCHES
1. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL SAFETY SWITCHES AS INDICATED ON THE DRAWINGS OR AS REQUIRED. ALL SAFETY SWITCHES SHALL BE UL LISTED. THE SWITCHES SHALL BE FUSED SAFETY SWITCHES OR NON-FUSED SAFETY SWITCHES AS SHOWN ON THE DRAWINGS OR REQUIRED BY CODE AND SHALL BE MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS OR CUTLER HAMMER.
2. SWITCHES SHALL HAVE A QUICK-MAKE AND QUICK-BREAK OPERATING HANDLE AND MECHANISM WHICH SHALL BE AN INTEGRAL PART OF THE BOX. PADLOCKING PROVISIONS SHALL BE PROVIDED FOR PADLOCKING IN THE OFF POSITION WITH AT LEAST THREE PADLOCKS. SWITCHES SHALL BE HORSEPOWER RATED FOR 250 VOLTS AC OR DC OR 600 VOLTS AC AS REQUIRED. LUGS SHALL BE UL LISTED FOR COPPER AND ALUMINUM CABLE AND SHALL HAVE A TEMPERATURE RATING OF AT LEAST 75 DEGREES C.
3. SWITCHES SHALL BE FURNISHED IN NEMA 1 HEAVY DUTY ENCLOSURES WITH KNOCKOUTS UNLESS OTHERWISE NOTED OR REQUIRED. SWITCHES LOCATED ON THE EXTERIOR OF THE BUILDING OR IN "WET" LOCATIONS SHALL HAVE NEMA 3R ENCLOSURES (WP).
4. THE SAFETY SWITCHES SHALL BE SECURELY MOUNTED IN ACCORDANCE WITH THE NEC. THE CONTRACTOR SHALL PROVIDE ALL MOUNTING MATERIALS AND INSTALL FUSES IN THE FUSED SAFETY SWITCHES. THE FUSES SHALL BE DUAL ELEMENT ON MOTOR CIRCUITS.
5. PROVIDE FUSES AS SPECIFIED BELOW. FUSES SHALL BE INSTALLED SO THAT THE RATING IS CLEARLY VISIBLE WITHOUT REMOVING FUSE. PROVIDE A SPARE FUSE FOR EACH FUSE INSTALLED.
6. PROVIDE A NAMEPLATE ON EACH DISCONNECT SWITCH AS SPECIFIED IN "NAMEPLATES".

L. FUSES
1. FUSES SHALL BE CLASS "RK-1" REJECTION TYPE. FUSES SERVING MOTOR LOADS SHALL BE DUAL ELEMENT WITH A MINIMUM TIME DELAY OF 10 SECONDS AT 500% RATING. FUSES SHALL BE CURRENT LIMITING TIME DELAY TYPE WITH INTERRUPTING CAPACITY OF 200,000 AMP RMS SYMMETRICAL.
2. FUSES SERVING SWITCH OR CIRCUIT BREAKER DISTRIBUTION PANELS, LIGHTING PANEL BOARDS AND OTHER NON - MOTOR LOADS NEED NOT BE TIME DELAY TYPE, BUT SHALL BE CURRENT LIMITING WITH THE INTERRUPTING CAPACITY OF 200,000AMP RMS SYMMETRICAL MINIMUM. FUSES SHALL BE BUSSMAN, GOULD OR LITTELFUSE.
3. PROVIDE FUSES SIZED TO THE MAXIMUM SIZE RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT OR AS SHOWN ON THE DRAWINGS IF THE MANUFACTURER DOES NOT HAVE A RECOMMENDED SIZE.

PART 3 - EXECUTION

A. GENERAL
1. ALL MATERIALS SHALL BE INSTALLED IN A PROFESSIONAL MANNER INDICATIVE OF THE TRADE.
2. ALL PENETRATIONS OF THE OUTSIDE WALLS OR ROOF SHALL BE SEALED WITH APPROPRIATE SEALANT OR CAULK FOR THE PARTICULAR SURFACE INVOLVED.
3. PROVIDE CLEAR, TYPED, P-TOUCH LABEL FOR ALL RECEPTACLES COVERPLATES IDENTIFYING THE CIRCUIT NUMBER THAT THE RECEPTACLE IS CIRCUITED TO.
4. PROVIDE UPDATED TYPED PANEL SCHEDULE INDEX FOR ALL PANELS WHERE CIRCUITS HAVE BEEN MODIFIED OR CHANGED.

B. RACEWAYS
1. RACEWAYS SHALL RUN CONCEALED UNLESS OTHERWISE INDICATED. EXPOSED RACEWAY RUNS SHALL BE PARALLEL WITH SUPPORTING WALLS, BEAMS, AND CEILINGS AND WITH EACH OTHER CLOSER THAN 6 INCHES TO ANY WATER PIPE OR HEATER BE INSTALLED AND SHALL NOT FLUME.
2. RACEWAY ENDS SHALL BE REAMED AFTER THREADING AND AFTER CUTTING AND BE MADE TO BUTT IN THE CENTER OF THE COUPLING. THE USE OF RUNNING THREADS IS PROHIBITED.
3. RACEWAYS SHALL BE INSTALLED AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTINGS, AND SHALL BE MECHANICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY FROM ONE TO ANOTHER IS OBTAINED. CONDUITS SHALL BE SUPPORTED WITH ONE OR TWO HOLE STAMPED STEEL OR MALLEABLE IRON STRAPS (SUCH AS MANUFACTURED BY RACO) DESIGNED FOR SUPPORTING CONDUIT. THE SIZE OF STRAP SHALL MATCH THE SIZE OF THE CONDUIT. NAILS, PERFORATED STRAP, OR PLUMBERS TAPE SHALL NOT BE USED FOR SUPPORT OF RACEWAY.
4. PROVIDE 1/8" POLY PULL CORD IN RACEWAYS WITHOUT CONDUCTORS.
5. FOUR 90 DEGREE BENDS MAXIMUM BETWEEN TERMINATIONS OR BOXES.

C. CONDUCTORS
1. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT AND COLOR CODED AS FOLLOWS:

PHASE	208/120	480/277
PHASE A	BLACK	BROWN
PHASE B	RED	ORANGE
PHASE C	BLUE	YELLOW
NEUTRAL	WHITE	GREEN
GROUND	GREEN	GRAY

2. MAKE JOINTS, SPLICES, TAPS AND CONNECTIONS IN CONDUCTORS WITH SOLDERLESS CONNECTORS.

D. JUNCTION AND PULL BOXES
1. PULL BOXES SHALL BE PROVIDED WHERE INDICATED AND WHERE NECESSARY TO FACILITATE THE PULLING OF CONDUCTORS. TELEPHONE RACEWAYS SHALL HAVE A MAXIMUM OF TWO 90 DEGREE BENDS BETWEEN TERMINATIONS OR BOXES.

E. GROUNDING
1. INSTALL A CODE SIZED GROUNDING CONDUCTOR IN ALL RACEWAYS. DO NOT USE THE RACEWAY FOR GROUNDING. MAKE GOOD CONTACT AT ALL PANEL BOARDS, OUTLET BOXES, AND JUNCTION OR PULL BOXES TO THE RACEWAY SYSTEM. USE APPROVED BONDING MATERIALS.

G. BONDING
1. BOND ALL PIPING (GAS WATER, ETC) AS REQUIRED BY THE NEC. CONFIRM SYSTEMS TO BE USED WITH MC.

H. SEISMIC REQUIREMENTS
1. IF REQUIRED, RECESSED TYPE LIGHTING FIXTURES, IN ADDITION TO THE STANDARD SEISMIC CLIPS AND SUPPORT ON T-BAR GRID SYSTEM, SHALL HAVE 2#12 STEEL SAFETY WIRES PER FIXTURE. ONE END OF EACH SAFETY WIRE SHALL BE SECURELY FASTENED TO THE BUILDING STRUCTURE. THE OTHER END (6 INCHES LONGER THAN THE T-BAR GRID SUPPORT WIRES) SHALL BE FASTENED TO DIAGONAL CORNERS OF EACH LIGHTING FIXTURE.

I. CUTTING AND PATCHING
1. PERFORM DRILLING, CUTTING, AND PATCHING OF THE GENERAL CONSTRUCTION WORK WHETHER EXISTING OR NEW, AS REQUIRED FOR THE INSTALLATION OF ELECTRICAL WORK. PATCH WITH THE SAME MATERIALS, WORKMANSHIP, AND FINISH AS THE ORIGINAL WORK AND ACCURATELY MATCH ALL SURROUNDING WORK. SUCH WORK WILL BE DONE BY A CRAFTSMAN ACCREDITED IN THE APPLICABLE TRADE UNDER THE CONTRACTOR'S SUPERVISION AND BE ACCEPTABLE TO THE OWNER'S REPRESENTATIVE. COORDINATE WITH OTHER TRADES AND GENERAL CONTRACTOR PRIOR TO CUTTING, DRILLING, OR CORING.

K. TESTING
1. DEMONSTRATE THAT ALL COMPONENTS OF THE WORK OF THIS DIVISION HAVE BEEN PROVIDED AND THAT THEY OPERATE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. TEST WIRING AND CONNECTORS FOR CONTINUITY, SHORT CIRCUITS AND IMPROPER GROUNDS. TEST EACH LIGHTING AND APPLIANCE PANEL WITH MAINS DISCONNECTED FROM FEEDERS, BRANCHES CONNECTED, WALL SWITCHES CLOSED AND FIXTURES PERMANENTLY CONNECTED AND COMPLETE WITH LAMPS. TEST EACH INDIVIDUAL POWER CIRCUIT WITH THE POWER EQUIPMENT CONNECTED FOR PROPER OPERATION.
3. PROVIDE DETAILED DOCUMENTATION OF EACH TEST PERFORMED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, WITH THE NAMES AND THE SIGNATURES OF QUALIFIED INDIVIDUALS WHO CONDUCTED AND WITNESSED EACH TEST.

design Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

LICENSED PROFESSIONAL ENGINEER
No. 7877350-2202
RYAN C. VAN VOAST
09/10/20
STATE OF UTAH

VBFA
WWW.VBFA.COM
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

SANTAQUIN CITY
PAD 'C'

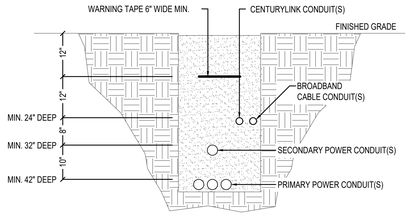
400 EAST
MAIN STREET
SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE: 09/10/2020
AGENCY PROJECT NO: 20294
DESIGN SEQUENCE PROJECT NO: 1708.01
CAD DWG FILE NO:
DRAWN BY: AMC
DESIGNED BY: KMC
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET
SHEET TITLE

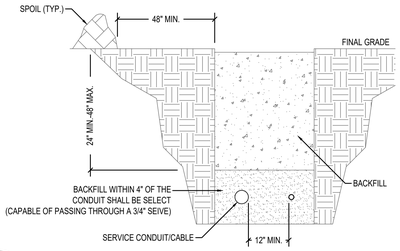
ELECTRICAL SPECIFICATIONS

EG501



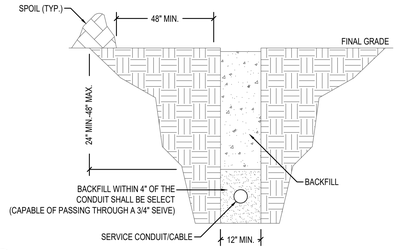
1 EG502 **JOINT UTILITY TRENCH DETAIL**

NO SCALE



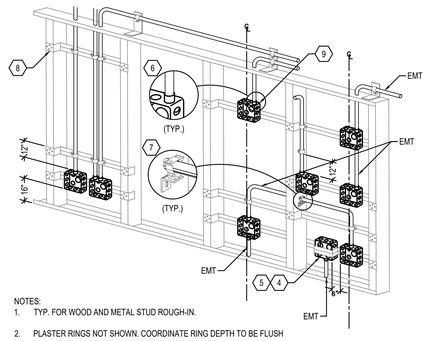
2 EG502 **JOINT USE SERVICE TRENCH**

NO SCALE



3 EG502 **SERVICE TRENCH (POWER ONLY)**

NO SCALE

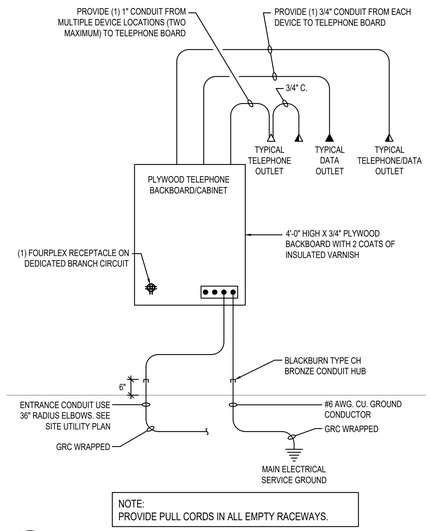


NOTES:

1. TYP. FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN. COORDINATE RING DEPTH TO BE FLUSH WITH FINISHED SURFACE, UNLESS NOTED OTHERWISE.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCH. AND MECH. DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 6" HORIZONTAL DISTANCE.
5. ELECTRICAL BOXES INSTALLED IN FIRE RESISTANT WALLS OR PARTITIONS SHALL COMPLY WITH IBC 714.3.2.
6. INSULATED THROAT EMT CONNECTOR.
7. CADDY FASTENER, THROUGH STUD CABLE/CONDUIT SUPPORT 'FB12P'.
8. ADJUSTABLE BAR HANGER.
9. TYPICAL DEVICE JUNCTION BOX.

4 EG502 **TYPICAL ROUGH-IN DETAIL**

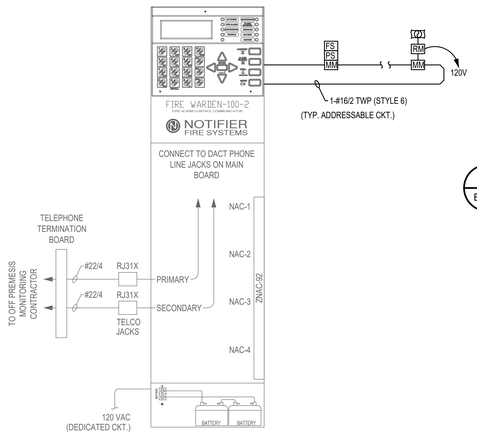
NO SCALE



NOTE:
PROVIDE PULL CORDS IN ALL EMPTY RACEWAYS.

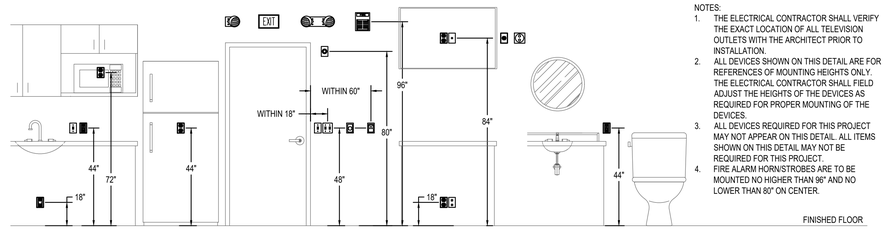
5 EG502 **TELEPHONE RACEWAY DIAGRAM**

NO SCALE



8 EG502 **FIRE ALARM RISER DIAGRAM**

NO SCALE – SCHEMATIC

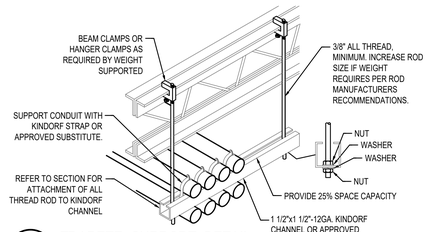


NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL TELEVISION OUTLETS WITH THE ARCHITECT PRIOR TO INSTALLATION.
2. ALL DEVICES SHOWN ON THIS DETAIL ARE FOR REFERENCES OF MOUNTING HEIGHTS ONLY. THE ELECTRICAL CONTRACTOR SHALL FIELD ADJUST THE HEIGHTS OF THE DEVICES AS REQUIRED FOR PROPER MOUNTING OF THE DEVICES.
3. ALL DEVICES REQUIRED FOR THIS PROJECT MAY NOT APPEAR ON THIS DETAIL. ALL ITEMS SHOWN ON THIS DETAIL MAY NOT BE REQUIRED FOR THIS PROJECT.
4. FIRE ALARM HORN/STROBES ARE TO BE MOUNTED NO HIGHER THAN 96" AND NO LOWER THAN 80" ON CENTER.

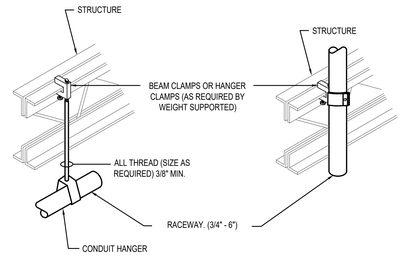
6 EG502 **MOUNTING HEIGHTS DETAIL**

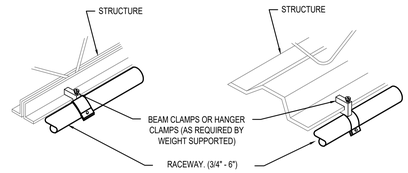
NO SCALE



7 EG502 **TRAPEZE SUPPORT DETAIL**

NO SCALE





NOTES:

1. WIRE SHALL NOT BE USED AS A COMPONENT OF ANY RACEWAY HANGER SYSTEM.
2. DO NOT SUPPORT ANY RACEWAY LARGER THAN 1" FROM BOTTOM CORD OF STEEL TRUSSES.

9 EG502 **RACEWAY SUPPORT METHODS DIAGRAM**

NO SCALE

design Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

VBFA
WWW.VBFA.COM
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

SANTAQUIN CITY
PAD 'C'

400 EAST
MAIN STREET
SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE:	09/10/2020
AGENCY PROJECT NO:	20294
DESIGN SEQUENCE PROJECT NO:	1708.01
CAD DWG FILE NO:	
DRAWN BY:	AMC
DESIGNED BY:	KMC
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

SHEET TITLE

ELECTRICAL DETAILS

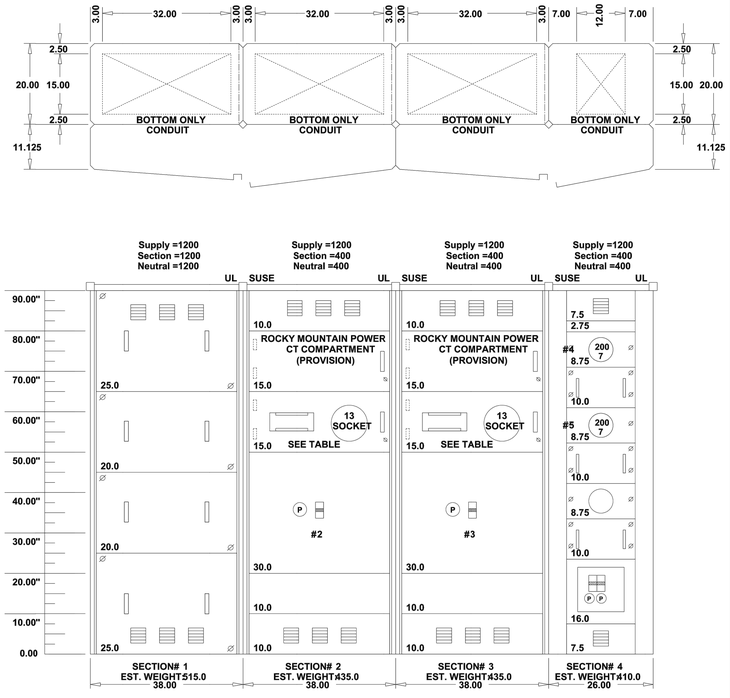
EG502

LUMINAIRE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTS	LAMPS QTY	LAMPS TYPE	MOUNTING	DIMMING	VA
D1	DOWNLIGHT 6" DIA. LED DOWNLIGHT, SELF FLANGED 45 DEG. CUTOFF, 16GA GALVANIZED STEEL CONSTRUCTION, WIDE DISTRIBUTION PROVIDE EM BATTERY WHERE SHOWN	GOTHAM PRESCOLITE COOPER EATON	EVO40/10-6AR-WD-LSS-MVOLT-EZ10 PD610DD10B PDMB6840 61VH	MVOLT	1	LED 1000 LUMENS 4000K 85CRI	RECESSED	0-10V	12
P1	PENDANT LED VOLUMETRIC LINEAT FIXTURE PROVIDE EM BATTERY WHERE SHOWN	LITHONIA METALUX	STL4 40L EZ1 LP840 4CWPLD4040C	MVOLT	1	LED 4000K 3979 LUMENS 90CRI	PENDANT/CHAIN	NA	35
V1	WALL 2' SQUARE VANITY LED	LITHONIA	FMVTSL 24IN MVOLT 40K 90CRI	MVOLT	1	LED 4000K 1300 LUMENS	WALL	NA	26
R1	LINEAR RECESSED 2X4 LINEAR RECESSED LED VOLUMETRIC FIXTURE PROVIDE EM BATTERY WHERE SHOWN	LITHONIA COLUMBIA HE WILLIAMS METALUX	2RTL-30L-EZ1-LP840 24CZ-LD5-30SE-UNV-L840-CD1-U	MVOLT	1	LED 3000 LUMENS 4000K 82CRI	RECESSED	0-10V	30
W1	WALL WALL SCONCE BARN LIGHT LED FIXTURE WITH GOOSENECK WALL MOUNTING ARM AND DECORATIVE BACK PLATE AND INTEGRATED LED LAMPING. FLAT CLEAT GLASS.	BASELITE	W512/41-FLE12-B1/41-LWTM/41-LED12W/4K/MVOLT NO EXCEPTIONS	MVOLT	1	LED 4000K 600 LUMENS	WALL	NA	10
W2	WALL EXTERIOR LED WALL PACK	LITHONIA LUMARK	ASW1 LED 42C 530 40K SR4 MVOLT XTOR6BRL-WT	MVOLT	1	LED 4000K	WALL	NA	75
ST1	AREA LIGHT PARKING LOT LIGHT 2 HEADED POLE TYPE II & TYPE IV 60 LED HEAD DIE-CAST HOUSING WITH INTEGRAL HEAT SINK. POWDER COAT FINISH. TYPE II HEAD FACES NORTH, TYPE IV HEAD FACES SOUTH. 30FT SQUARE POLE	LITHONIA	DSX1 LED P3 40K T2M MVOLT SPA PER7 DBLXD DSX1 LED P3 40K T4M MVOLT SPA PER7 DBLXD OR APPROVED EQUAL	MVOLT	1	LED 4000K 70CRI TYPE II & TYPE IV OPTICS LUMENS 12,613	POLE W/ ARM	NA	204
ST2	AREA LIGHT PARKING LOT LIGHT SINGLE HEAD POLE 60 LED HEAD DIE-CAST HOUSING WITH INTEGRAL HEAT SINK. POWDER COAT FINISH. 30FT SQUARE POLE	LITHONIA	DSX1 LED P3 40K T2M MVOLT SPA PER7 DBLXD OR APPROVED EQUAL	MVOLT	1	LED 4000K 70CRI TYPE II OPTICS LUMENS 12,613	POLE W/ ARM	NA	102
XL1	EXIT DEVICE LED EXIT SIGN EDGE LIT SINGLE FACED WITH ARROWS AS SHOWN PROVIDE CEILING OR WALL MOUNT AS NECESSARY	LITHONIA DUAL-LITE SURE LITES EXITRONIX LSI	EDG APX7G	MVOLT	1	LED GREEN	SEE PLAN	NA	5

Luminaire Schedule General Notes:

1. Refer to Luminaire description for fixture requirements. Manufactures model numbers may not be specific or complete. The contractor is responsible to provide complete fixtures as described on this schedule with all mounting hardware and equipment for a complete installation.
2. Refer to the architectural reflected ceiling drawings for exact fixture locations and ceiling types. Verify exact ceiling types and bring to the attention of the architect and electrical engineer any discrepancies prior to bid. Fixtures shall match architectural ceiling types.
3. Provide all fixture support and seismic bracing to secure fixture to structure, walls and ceiling systems. Refer to mounting details for additional requirements. Provide all pole bases as shown on the details.
4. Prior approval shall be required for all manufactures who are not listed on this schedule. The prior approvals shall be submitted to the electrical engineer (7) working days prior to the bid. Prior approvals received after this time cut-off shall not be reviewed or approved.
5. Submittals for prior approval shall be equivalent to the specified fixtures and reviewed and signed by the principle of the organization that is submitting for approval. Provide complete fixture submittals as listed in the specification. All information that does not apply to the fixture being submitted shall be crossed out. The electrical engineer shall be the final determination if the fixture is equivalent or not.
6. Fixtures that have been reviewed and approved as equivalent to the specified fixtures shall be listed in and addendum prior to bid. Light fixtures without prior approval are rejected and contractor shall base their bid on the approved listed fixtures. A verbal approval will not be given or approved by VBFA at any time.
7. Any additional time required to verify if submitted fixture meets all photometric requirements shall be paid by the agency requesting approval. Photometric point-by-point plans may be required from the agency submitting for approval indicating equivalency.
8. Color temperature for all lamping shall be 4000K unless noted otherwise in the schedule.
9. Verify exact fixture finishes with the architect prior to submittal.
10. Provide minimum 5 year warranty on all light fixtures.
11. LED light fixtures shall meet LM79 and LM80 standards with +50,000 hour L70 lamp life
12. Luminaire shall be listed per NEC 410.6.
13. Lumens specified for fixtures with integral LEDs are total delivered fixture lumens
14. Fixtures identified as emergency on the plans shall be provided with an emergency battery pack or remote inverter with a 1400 lumen output minimum for each emergency fixture.



1 EG601 GEAR ELEVATION & TOP VIEW
SCALE: NO SCALE

EQUIPMENT SCHEDULE

TYPE	DESCRIPTION	ELECTRICAL V/PH	LOAD	FLA	WIRE SETS	WIRE QTY	WIRE SIZE	WIRE GND	WIRE COND SIZE	OVER CURRENT PROTECTION OCPD/ MOCP	TYPE	DISC SIZE/PL	FUSE SIZE	STR NEMA SIZE	REMARKS
EF-1	EXHAUST FAN	120/1	1/10 HP	2.9	1	2	12	12	3/4"	20	C1	-	-	-	4A
EH-1	ELECTRIC HEATER	208/1	4.8 KW	23.1	1	2	10	10	3/4"	30	C1	30/2	30	-	1A
EWH-1	ELECTRIC WATER HEATER	208/1	4.1 KW	19.7	1	2	10	10	3/4"	25	C1	30/2	25	-	1A
RTU-1	ROOF-TOP UNIT	208/3	50 MCA	40.0	1	3	6	10	1"	60	C1	60/3	60	-	9B,15B
RTU-2	ROOF-TOP UNIT	208/3	50 MCA	40.0	1	3	6	10	1"	60	C1	60/3	60	-	9B,15B
RTU-3	ROOF-TOP UNIT	208/3	50 MCA	40.0	1	3	6	10	1"	60	C1	60/3	60	-	9B,15B
RTU-4	ROOF-TOP UNIT	208/3	35 MCA	28.0	1	3	8	10	3/4"	45	C1	60/3	45	-	9B,15B

ABBREVIATIONS:

V/PH = VOLTAGE/PHASE
KW = KILOWATTS
W = WATTS
HP = HORSEPOWER
KVA = KILOVOLT AMPERES
VA = VOLT AMPERES
MCA = MINIMUM CIRCUIT AMPACITY
FLA = FULL LOAD AMPERES
GND = GROUND
DISC = DISCONNECT
STR = STARTER
MOCP = MAXIMUM OCPD (LISTED BY THE MANUFACTURER)
COND = CONDUIT
OCPD = OVERCURRENT PROTECTIVE DEVICE
PL = POLE

REMARKS:

1. NEMA 1 FUSED DISCONNECT SWITCH
2. NEMA 1 NON-FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER WITH THERMAL OVERLOAD
5. MANUAL MOTOR CONTROLLER W/OUT THERMAL OVERLOAD
6. MAGNETIC STARTER
7. MAGNETIC STR/NON-FUSED DISCONNECT COMBINATION
8. MAGNETIC STR/FUSED DISCONNECT COMBINATION
9. NEMA 3R FUSED DISCONNECT SWITCH
10. NEMA 3R NON-FUSED DISCONNECT SWITCH
11. VARIABLE FREQUENCY DRIVE
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. DIRECT CONNECTION
14. DUCT DETECTOR IN RETURN AIR DUCT
15. GFCI CONVENIENCE OUTLET IN WP ENCLOSURE
16. LM-EB DISCONNECT W/CNTRL WIRING TO VFD

REMARKS:

A. FURNISHED, INSTALLED AND CONNECTED UNDER DIVISION 26.
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIV 26.
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIV 26.
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.
E. FURNISHED AND INSTALLED UNDER DIV 26 REQUIRING CONNECTION UNDER ANOTHER DIVISION.

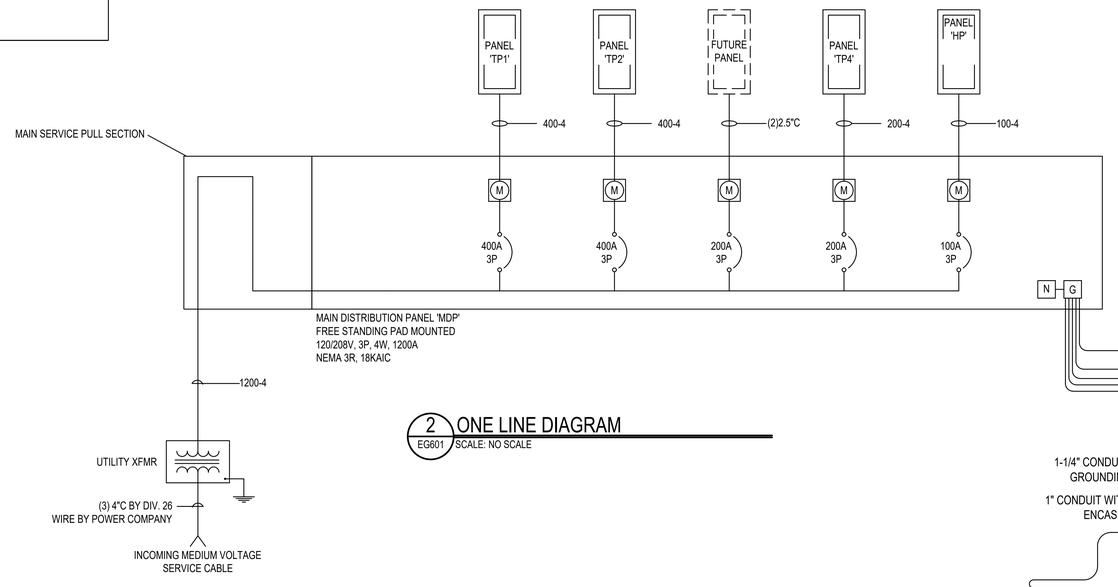
OCPD TYPES:

C1 = THERMAL MAGNETIC CIRCUIT BREAKER
C2 = MAGNETIC ONLY CIRCUIT BREAKER
F1 = INDUCTIVE FUSE (CLASS RK5)
F2 = NON-INDUCTIVE FUSE (CLASS RK1)

NOTES:

- THE DIVISION 26 CONTRACTOR MAY INCREASE THE CONDUIT SIZE BY ONE INCREMENTAL SIZE TO FACILITATE INSTALLATION OR TO HELP WITH MATERIAL AVAILABILITY/COST.

GENERAL NOTE: THE EC SHALL COORDINATE ALL REQUIREMENTS (IE: MOCP SIZE, UNIT THERMAL PROTECTION, ETC) WITH APPROVED MECHANICAL SHOP DRAWINGS/ SUBMITTALS AND BRING UP ANY DISCREPANCIES WITH THE ELECTRICAL ENGINEER OF RECORD IN WRITING PRIOR TO ROUGH-IN.



2 EG601 ONE LINE DIAGRAM
SCALE: NO SCALE

CONDUCTOR & CONDUIT SCHEDULE - COPPER

TYPE	CONDUCTOR AMP	SETS	QTY	SIZE	EQ GND	CONDUIT SIZE	KEYED NOTES
100-4	95	1	4	2	8	1-1/4"	1
200-4	200	1	4	#3/0	6	2"	1
400-4	400	2	4	#3/0	3	2-1/2"	1
1200-4	1240	4	4	350	#3/0	3"	1

GENERAL NOTES:

- THHN/THWN/THWN-2 FOR 400 KCMIL AND BELOW, XHHW/XHHW-2 FOR 500 KCMIL AND ABOVE.
- GROUND CONDUCTOR SHALL BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
-

KEYED NOTES:

1. REFER TO LATEST ADOPTED VERSION OF THE NEC ARTICLE 310.15 FOR 75°C RATED COPPER AND 110.14(°C)(1)(a) FOR 60°C.
2. 200% NEUTRAL (OR 2 NEUTRAL CONDUCTORS).
3. AMPACITY DERATED BY 80% DUE TO (4-6) CURRENT CARRYING CONDUCTORS

design Sequence
350 SOUTH 200 EAST, #106
SALT LAKE CITY, UTAH 84111
P: 801.596.0691
DESIGNUTAH.COM

REGISTERED PROFESSIONAL ENGINEER
No. 7877350-2202
RYAN C. VAN VOAST
09/10/20
STATE OF UTAH

VBFA
WWW.VBFA.COM
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

SANTAQUIN CITY
PAD 'C'

400 EAST
MAIN STREET
SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE:	09/10/2020
AGENCY PROJECT NO:	20294
DESIGN SEQUENCE PROJECT NO:	1708.01
CAD DWG FILE NO:	
DRAWN BY:	AMC
DESIGNED BY:	KMC
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

SHEET TITLE
ELECTRICAL SCHEDULES & ONE LINE

EG601

design
Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

NAME: TP1 | **TYPE:** NQ | **LOCATION:** TENANT SPACE 1

VOLTAGE: 208 / 120 | PH 3 | WIRES 4 | AIC 14K AMPS | MOUNTING: FLUSH | FEED: BOTTOM | MAINS: BREAKER | 400 AMPS | DIMS. 20 " W, 5.75 " D, 68 " H | 42 SPACES

SPECIAL EQUIPMENT: X GROUND BUS; ___ SUB-FEED BREAKER; ___ SUB-FEED LUGS; ___ NEMA 3R; ___ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	BRKR P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
	1	EWH-1 WATER HEATER		2	25	10	2049	5409			3360	12	20	3		RTU-4	2	M
	3		-	-	-		2049		5409		3360	-	-	-	-		4	M
	5	LIGHTS		1	20	12	140			3500	3360	-	-	-	-		6	M
	7	SPARE		1	20			0					20	1		SPARE	8	
	9	SPARE		1	20				0				20	1		SPARE	10	
	11	SPARE		1	20					0			20	1		SPARE	12	
	13	SPARE		1	20			0					20	1		SPARE	14	
	15	SPARE		1	20				0				20	1		SPARE	16	
	17	SPARE		1	20					0			20	1		SPARE	18	
	19	SPARE		1	20			0					20	1		SPARE	20	
	21	SPARE		1	20				0				20	1		SPARE	22	
	23	SPARE		1	20					0			20	1		SPARE	24	
	25	SPARE		1	20			0					20	1		SPARE	26	
	27	SPARE		1	20				0				20	1		SPARE	28	
	29	SPARE		1	20					0			20	1		SPARE	30	
	31	SPARE		1	20			0					20	1		SPARE	32	
	33	SPARE		1	20				0				20	1		SPARE	34	
	35	SPARE		1	20					0			20	1		SPARE	36	
	37	SPARE		1	20			0					20	1		SPARE	38	
	39	SPARE		1	20				0				20	1		SPARE	40	
	41	SPARE		1	20					0			20	1		SPARE	42	
						CONNECTED VA		5409	5409	3500	14.3 KVA							
						CONNECTED AMPS		45	45	29	39.743 A							
						DIVERSIFIED VA					10 KVA							
						DIVERSIFIED AMPS					27.979 A							

DIVERSITY FACTORS (DF): C=CONTINUOUS; N=NON-CONTINUOUS; R=RECEPTACLES; K=KITCHEN EQUIPMENT; M=MOTOR; L=LARGEST MOTOR; O=OTHER

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; S = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75° C

NOTES:

NAME: HP | **TYPE:** NQ | **LOCATION:** FIRE RISER ROOM

VOLTAGE: 208 / 120 | PH 3 | WIRES 4 | AIC 14K AMPS | MOUNTING: FLUSH | FEED: BOTTOM | MAINS: LUGS ONLY | 100 AMPS | DIMS. 20 " W, 5.75 " D, 68 " H | 42 SPACES

SPECIAL EQUIPMENT: X GROUND BUS; ___ SUB-FEED BREAKER; ___ SUB-FEED LUGS; ___ NEMA 3R; ___ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	BRKR P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
	1	SPARE		1	0				516		516	12	20	1		EXTERIOR LIGHTS	2	C
C	3	PARKING LOT LIGHTING		1	20	8	306		806		500	12	20	1	3	HEAT TRACE	4	C
R	5	TTB RECEPTACLE		1	20	12	360			860	500	12	20	1	3	HEAT TRACE	6	C
	7	SPARE		1	20			0					0	1		SPARE	8	
	9	SPARE		1	20				360		360	12	20	1		DATA RECEPTACLE	10	R
	11	SPARE		1	20					200	200	12	20	1		PHOTOCELL	12	R
R	13	RR RECEPTACLE		1	20	12	180	720			540	12	20	1		ROOFTOP RECEPTACLE	14	R
C	15	RR LIGHTS		1	20	12	20		20				20	1		SPARE	16	M
	17	SPARE		1	20					0			20	1		SPARE	18	M
	19	SPARE		1	20			0					20	1		SPARE	20	M
	21	SPARE		1	20				2400		2400	12	20	2		EH-1 HEATER	22	C
N	23	FIRE ALARM FLOW BELL		1	20	12	100			100							24	C
	25	SPARE		1	20			100			100	12	20	1		FACP	26	C
	27	SPARE		1	20				100		100	12	20	1		DUCT DETECTOR RELAY	28	C
	29	SPARE		1	20					0			20	1		SPARE	30	
	31	SPARE		1	20			0					20	1		SPARE	32	
	33	SPARE		1	20				0				20	1		SPARE	34	
	35	SPARE		1	20					0			20	1		SPARE	36	
	37	SPARE		1	20			0					20	1		SPARE	38	
	39	SPARE		1	20				0				20	1		SPARE	40	
	41	SPARE		1	20					0			20	1		SPARE	42	
						CONNECTED VA		1336	3686	1160	6.2 KVA							
						CONNECTED AMPS		11	31	10	17.16 A							
						DIVERSIFIED VA					7 KVA							
						DIVERSIFIED AMPS					20.242 A							

DIVERSITY FACTORS (DF): C=CONTINUOUS; N=NON-CONTINUOUS; R=RECEPTACLES; K=KITCHEN EQUIPMENT; M=MOTOR; L=LARGEST MOTOR; O=OTHER

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; S = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75° C

NOTES:

NAME: TP2 | **TYPE:** NQ | **LOCATION:** TENANT SPACE 2

VOLTAGE: 208 / 120 | PH 3 | WIRES 4 | AIC 14K AMPS | MOUNTING: FLUSH | FEED: BOTTOM | MAINS: BREAKER | 400 AMPS | DIMS. 20 " W, 5.75 " D, 68 " H | 42 SPACES

SPECIAL EQUIPMENT: X GROUND BUS; ___ SUB-FEED BREAKER; ___ SUB-FEED LUGS; ___ NEMA 3R; ___ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	BRKR P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
M	1	RTU-2		3	50	8	4800	5140			340	12	20	1		LIGHTS	2	C
M	3		-	-	-	-	4800		4800				20	1		SPARE	4	
M	5		-	-	-	-	4800			4800			20	1		SPARE	6	
M	7	RTU-3		3	50	8	4800	4800					20	1		SPARE	8	
M	9		-	-	-	-	4800		4800				20	1		SPARE	10	
M	11		-	-	-	-	4800			4800			20	1		SPARE	12	
	13	SPARE		1	20			0					20	1		SPARE	14	
	15	SPARE		1	20				0				20	1		SPARE	16	
	17	SPARE		1	20					0			20	1		SPARE	18	
	19	SPARE		1	20			0					20	1		SPARE	20	
	21	SPARE		1	20				0				20	1		SPARE	22	
	23	SPARE		1	20					0			20	1		SPARE	24	
	25	SPARE		1	20			0					20	1		SPARE	26	
	27	SPARE		1	20				0				20	1		SPARE	28	
	29	SPARE		1	20					0			20	1		SPARE	30	
	31	SPARE		1	20			0					20	1		SPARE	32	
	33	SPARE		1	20				0				20	1		SPARE	34	
	35	SPARE		1	20					0			20	1		SPARE	36	
	37	SPARE		1	20			0					20	1		SPARE	38	
	39	SPARE		1	20				0				20	1		SPARE	40	
	41	SPARE		1	20					0			20	1		SPARE	42	
						CONNECTED VA		9940	9600	9600	29.1 KVA							
						CONNECTED AMPS		83	80	80	80.885 A							
						DIVERSIFIED VA					29 KVA							
						DIVERSIFIED AMPS					81.12 A							

DIVERSITY FACTORS (DF): C=CONTINUOUS; N=NON-CONTINUOUS; R=RECEPTACLES; K=KITCHEN EQUIPMENT; M=MOTOR; L=LARGEST MOTOR; O=OTHER

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; S = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75° C

NOTES:

NAME: TP4 | **TYPE:** NQ | **LOCATION:** TENANT SPACE 3

VOLTAGE: 208 / 120 | PH 3 | WIRES 4 | AIC 14K AMPS | MOUNTING: FLUSH | FEED: BOTTOM | MAINS: BREAKER | 200 AMPS | DIMS. 20 " W, 5.75 " D, 68 " H | 42 SPACES

SPECIAL EQUIPMENT: X GROUND BUS; ___ SUB-FEED BREAKER; ___ SUB-FEED LUGS; ___ NEMA 3R; ___ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	BRKR P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
M	1	RTU-1		3	50	8	4800	5004			204	12	20	1		LIGHTING	2	C
M	3		-	-	-	-	4800		4800				20	1		SPARE	4	
M	5		-	-	-	-	4800			4800			20	1		SPARE	6	
	7	SPARE		1	20			0					20	1		SPARE	8	
	9	SPARE		1	20				0				20	1		SPARE	10	
	11	SPARE		1	20					0			20	1		SPARE	12	
	13	SPARE		1	20			0					20	1		SPARE	14	
	15	SPARE		1	20				0				20	1		SPARE	16	
	17	SPARE		1	20					0			20	1		SPARE	18	
	19	SPARE		1	20			0					20	1		SPARE	20	
	21	SPARE		1	20				0				20	1		SPARE	22	
	23	SPARE		1	20					0			20	1		SPARE	24	
	25	SPARE		1	20			0					20	1		SPARE	26	
	27	SPARE		1	20				0				20	1		SPARE	28	
	29	SPARE		1	20					0			20	1		SPARE	30	
	31	SPARE		1	20			0					20	1		SPARE	32	
	33	SPARE		1	20				0				20	1		SPARE	34	
	35	SPARE		1	20					0			20	1		SPARE	36	
	37	SPARE		1	20			0					20	1		SPARE	38	
	39	SPARE		1	20				0				20	1		SPARE	40	
	41	SPARE		1	20					0			20	1		SPARE	42	
						CONNECTED VA		5004	4800	4800	14.6 KVA							
						CONNECTED AMPS		42	40	40	40.537 A							
						DIVERSIFIED VA					15 KVA							
						DIVERSIFIED AMPS					40.675 A							

DIVERSITY FACTORS (DF): C=CONTINUOUS; N=NON-CONTINUOUS; R=RECEPTACLES; K=KITCHEN EQUIPMENT; M=MOTOR; L=LARGEST MOTOR; O=OTHER

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; S = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75° C

NOTES:

VBFA
WWW.VBFA.COM
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

SANTAQUIN CITY
PAD 'C'

400 EAST
MAIN STREET
SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

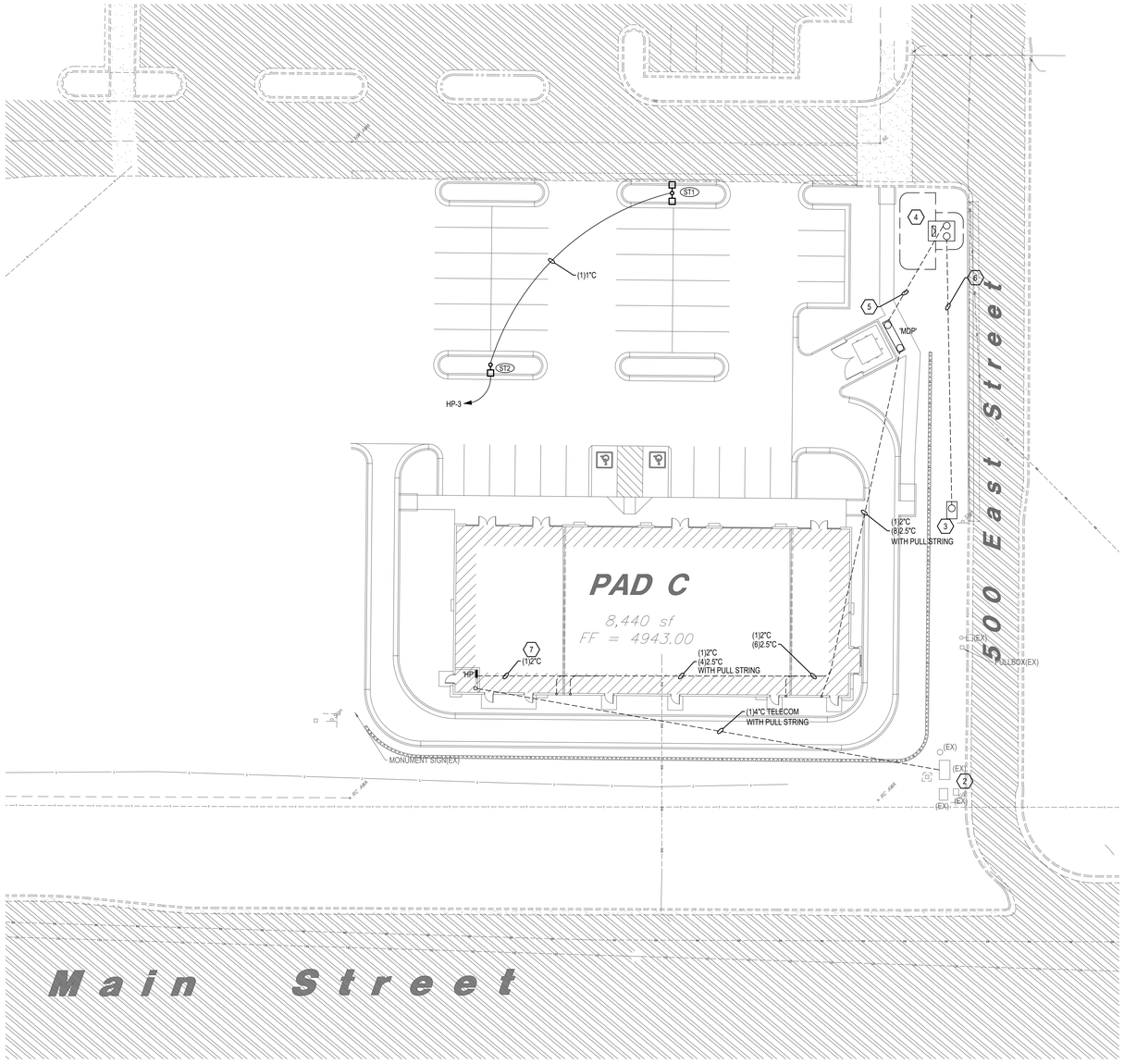
DATE: 09/10/2020
AGENCY PROJECT NO: 20294
DESIGN SEQUENCE PROJECT NO: 1708.01
CAD DWG FILE NO:
DRAWN BY: AMC
DESIGNED BY: KMC
DWG TYPE:
ARCHITECTURAL PHASE: PERMIT SET

SHEET TITLE
ELECTRICAL PANEL SCHEDULES

EG602

KEYED NOTES

1. PROPOSED LOCATION OF CONCRETE PAD MOUNTED MAIN SERVICE DISCONNECT AND DISTRIBUTION BOARD 'MDP' WITH INTEGRAL METERS FOR EACH SPACE.
2. LOCATION OF EXISTING CENTURY LINK IN-GRADE PULLBOX.
3. APPROXIMATE LOCATION OF EXISTING SECTIONALIZING CABINET.
4. PROPOSED LOCATION OF NEW PAD MOUNT TRANSFORMER. COORDINATE WITH POWER COMPANY PRIOR TO ROUGH-IN TRANSFORMER BY LOCAL POWER COMPANY. CONCRETE PAD BY ELECTRICAL CONTRACTOR. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
5. SEE ONE-LINE DIAGRAM SHEET EG601 FOR CONDUIT SIZE AND QUANTITY. EC SHALL BE RESPONSIBLE FOR ALL TRENCHING, INSTALLATION OF CONDUIT AND WIRE AND BACKFILL.
6. EC SHALL TRENCH, PROVIDE AND INSTALL (3)4"C WITH PULL STRING AND BACKFILL. CONDUCTORS BY POWER COMPANY.



N

1 ES101 ELECTRICAL SITE PLAN
SCALE: 1'-0" = 20'-0"

design Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

REGISTERED PROFESSIONAL ENGINEER
No. 7877350-2202
RYAN C. VAN VOAST
09/10/20
STATE OF UTAH

VBFA
WWW.VBFA.COM
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

SANTAQUIN CITY
PAD 'C'

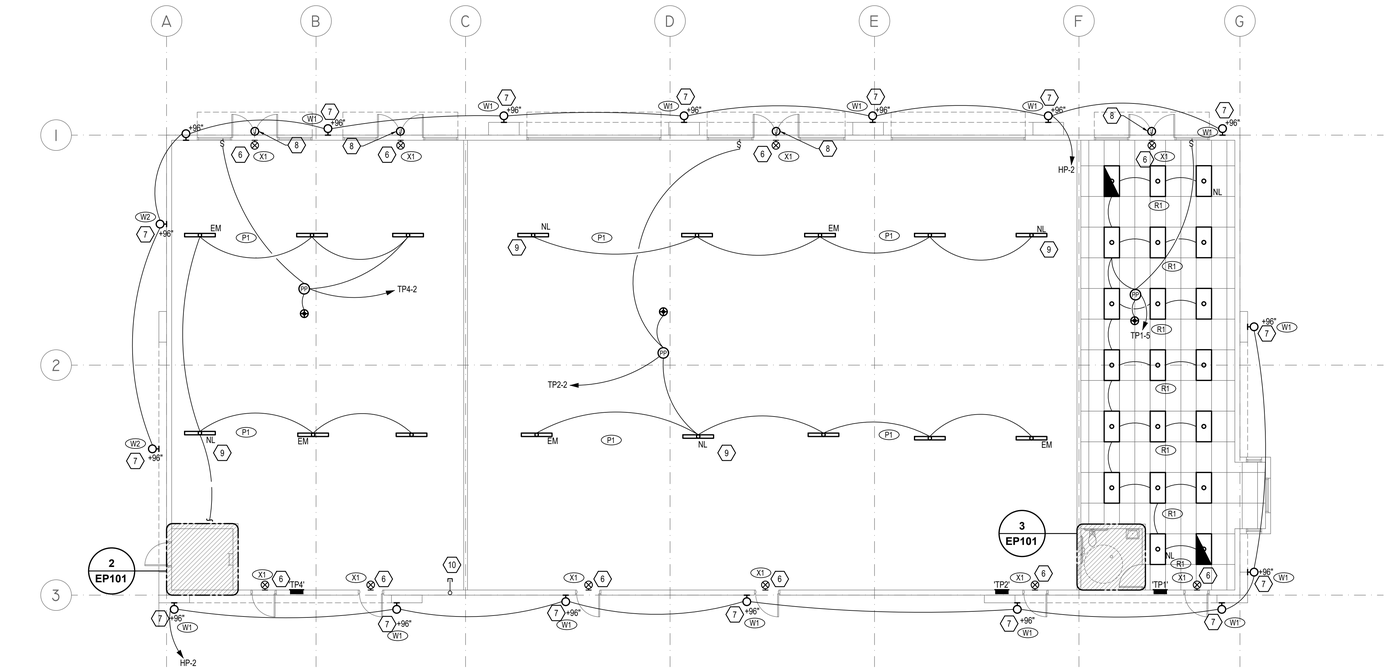
400 EAST
MAIN STREET
SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE:	09/10/2020
AGENCY PROJECT NO:	20294
DESIGN SEQUENCE PROJECT NO:	1708.01
CAD DWG FILE NO:	
DRAWN BY:	AMC
DESIGNED BY:	KMC
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET
SHEET TITLE	

ELECTRICAL SITE PLAN

ES101

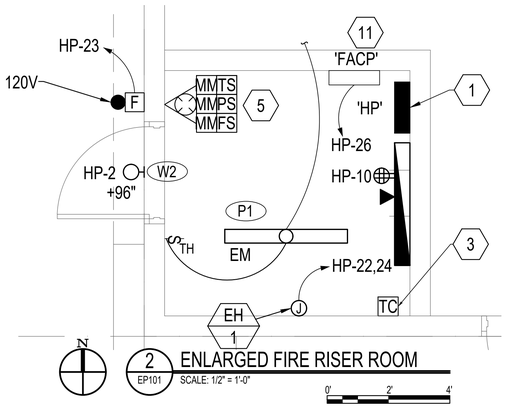


N

1 EP101 OVERALL ELECTRICAL PLAN

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

0' 8' 16'

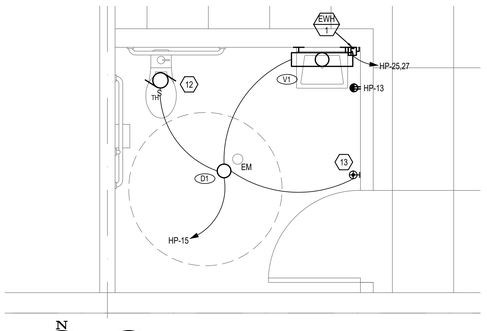


N

2 EP101 ENLARGED FIRE RISER ROOM

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

0' 2' 4'



N

3 EP101 ENLARGED RESTROOM

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

0' 2' 4'

KEYED NOTES

1. PROPOSED LOCATION OF HOUSE PANEL.
2. EC SHALL STUB CONDUIT FROM INDIVIDUAL METER AND BREAKER SECTION INTO EACH SPACE AS SHOWN FOR FUTURE TENANT IMPROVEMENT BUILD-OUT.
3. PROVIDE AND INSTALL A 7-DAY PROGRAMMABLE TIME CLOCK TO CONTROL THE EXTERIOR LIGHTING THROUGH THE PHOTOCELL ON THE ROOF.
4. PROVIDE AND INSTALL A FIRE ALARM FLOW BELL ON EXTERIOR OF BUILDING.
5. EC SHALL COORDINATE WITH MECHANICAL AND FIRE SPRINKLER CONTRACTOR FOR EXACT LOCATION OF FIRE RISER. PROVIDE ALL REQUIRED MONITOR MODULES, FLOW, TAMPER, AND PRESSURE SWITCHES REQUIRED.
6. PROVIDE AN UNSWITCHED HOT CONDUCTOR TO EXIT SIGN.
7. COORDINATE EXACT HEIGHT OF ALL EXTERIOR LIGHTING WITH ARCHITECT PRIOR TO ROUGH IN.
8. PROVIDE AND INSTALL A J-BOX ON EXTERIOR OF BUILDING FOR FUTURE SIGNAGE WITH (1)3/4"C STUBBED INTO SPACE.
9. THIS LIGHT SHALL BE WIRED AS NIGHT LIGHT FOR CONSTANT ON.
10. STUB (1)2"C INTO SPACE FROM METER LOCATION FOR FUTURE ELECTRICAL SERVICE TO SPACE. CONDUIT SHALL BE STUBBED IN WALL AND EXTEND TO ABOVE CEILING SPACE. STUB CONDUIT OUT 2FT FROM WALL ABOVE CEILING. LABEL FOR USE.
11. PROVIDE A BASIC FIRE ALARM CONTROL PANEL TO MONITOR THE FLOW, TAMPER SWITCHES AND DUCT DETECTORS REQUIRED ON PROJECT.
12. RESTROOM EXHAUST FAN. EC SHALL TIE INTO LIGHTING CIRCUIT AND CONTROL.
13. FURNISH AND INSTALL A DUAL ZONE DUAL TECHNOLOGY WALL BOX OCCUPANCY SENSOR TO CONTROL THE LIGHTS AND EXHAUST FAN IN THE ROOM SEPARATELY. ZONE FOR EXHAUST FAN SHALL HAVE AN ADJUSTABLE 30 MINUTE MAXIMUM TIME DELAY AFTER LIGHTS TURN OFF. SET INITIAL TIME DELAY FOR LIGHTS TO BE 15 MINUTE MINIMUM. SET TIME DELAYS PER OWNER'S REQUIREMENTS.

design Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

VBFA
WWW.VBFA.COM
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

SANTAQUIN CITY
PAD 'C'

400 EAST
MAIN STREET
SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

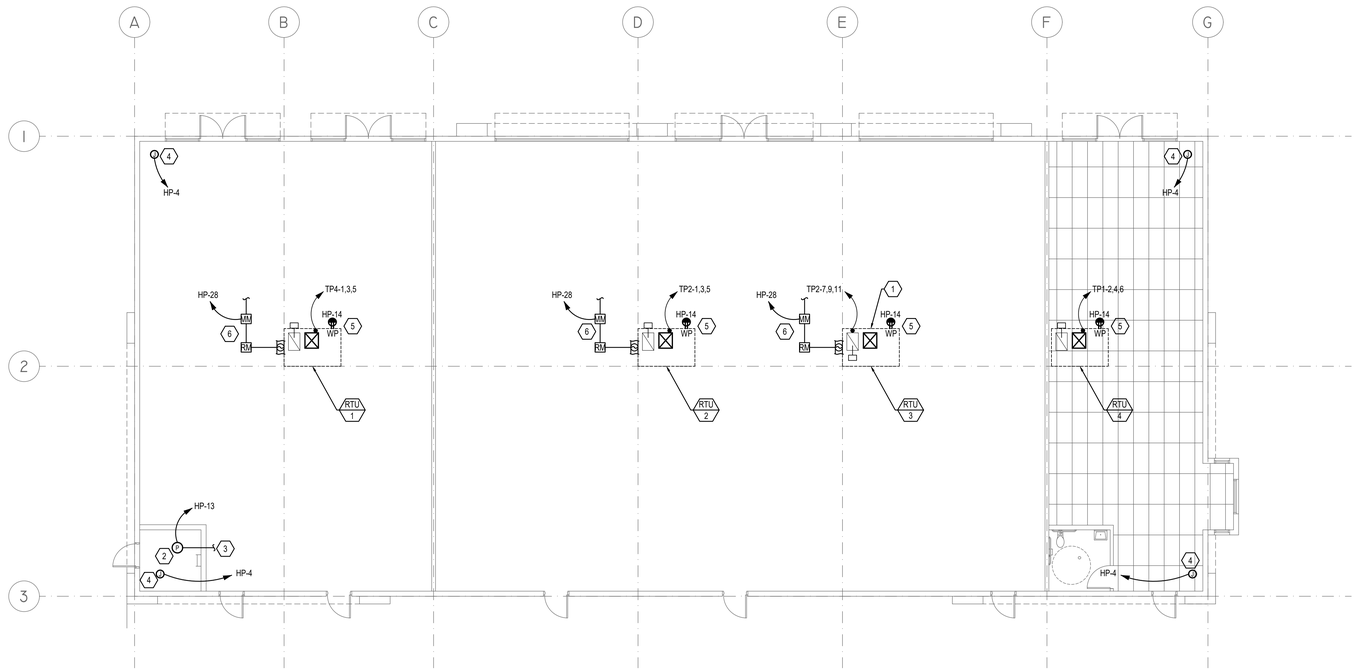
DATE:	09/10/2020
AGENCY PROJECT NO:	20294
DESIGN SEQUENCE PROJECT NO:	1708.01
CAD DWG FILE NO:	
DRAWN BY:	AMC
DESIGNED BY:	KMC
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET
SHEET TITLE	

OVERALL ELECTRICAL PLAN

EP101

KEYED NOTES

1. ROOF TOP UNIT FOR FUTURE TENANT. THIS UNIT WILL BE PROVIDED WITH POWER WHEN THE TENANT IMPROVEMENT IN DESIGNED. EC SHALL PROVIDE (1)3/4"C FROM RTU FACTORY DISCONNECT AND STUB DOWN INTO SPACE FOR FUTURE WIRING.
2. PROVIDE AND INSTALL A PHOTOCELL ON THE ROOF FOR AUTO ON/OFF OF THE EXTERIOR LIGHTING.
3. TIE INTO TIME CLOCK.
4. PROVIDE AND INSTALL SELF REGULATED HEAT TAPE FOR EACH ROOF DRAIN. RUN TAPE ALL THE WAY TO BOTTOM OF DRAIN AND LOOP BACK UP AT BOTTOM. PROVIDE ALL REQUIRED CONTROL AND SENSORS FOR HEAT TRACE TO TURN ON/OFF BASED ON AMBIENT AIR TEMPERATURE AND/OR MOISTURE DETECTION.
5. GFCI RECEPTACLE PROVIDED WITH RTU UNIT BY MANUFACTURER. EC SHALL CIRCUIT TO HOUSE PANEL CIRCUIT AS INDICATED.
6. DUCT DETECTOR PROVIDED AND INSTALLED BY RTU MANUFACTURER. EC SHALL CONNECT AND PROVIDE RELAY AND MONITOR MODULES AS REQUIRED. PROVIDE CONDUIT AND WIRE TO CONNECT TO FIRE ALARM CONTROL PANEL.



N

1 EP102 ELECTRICAL ROOF PLAN

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

0' 4' 8'

design Sequence
350 South 200 East, #106
Salt Lake City, Utah 84111
P: 801.596.0691
DesignUtah.com

LICENSED PROFESSIONAL ENGINEER
No. 7877350-2202
RYAN C. VAN VOAST
09/10/20
STATE OF UTAH

VBFA
WWW.VBFA.COM
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

SANTAQUIN CITY
PAD 'C'

400 EAST
MAIN STREET
SANTAQUIN, UTAH

MARK	DATE	DESCRIPTION

DATE:	09/10/2020
AGENCY PROJECT NO:	20294
DESIGN SEQUENCE PROJECT NO:	1708.01
CAD DWG FILE NO:	
DRAWN BY:	AMC
DESIGNED BY:	KMC
DWG TYPE:	
ARCHITECTURAL PHASE:	PERMIT SET

SHEET TITLE

ELECTRICAL ROOF PLAN

EP102