REQUIRED MEANS OF EGRESS AND FIRE PROTECTION

SYSTEMS SHALL BE MAINTAINED DURING CONSTRUCTION

AND DEMOLITION, REMODELING OR ALTERATIONS. FIRE

PREVENTION BUREAU STAFF SHALL APPROVE REVIEW OF

ANY EXITING ALTERATIONS. AS PER IFC SECTION 3311.2

CONTRACTOR IS TO ABIDE BY UTAH STATE RULES:

R307-309 FOR DUST CONTROL (http://www.rules.utah.gov/publicat/code/r307/r307-309.htm#T6

R307-801 FOR ABESTOS CONTROL (http://www.rules.utah.gov/publicat/code/r307/r307-801.htm R307-840 FOR LEAD CONTROL (http://www.rules.utah.gov/publicat/code/r307/r307-840.htm

AND/OR TO CONTACT UTAH DIVISION OF AIR QUALITY (801) 536-4000

D1 NOTES TO CONTRACTOR

NOT TO SCALE

CODE ANALYSIS

0 HR RATING

23,000 S.F.

PROJECT NAME:
ADDRESS:
PROPOSED USE:
OWNER/CONTACT PERSON:

CNN Holdings/600 West (Core & Shell)Project 2041 NORTH 600 WEST, LOGAN, UTAH 84321 WAREHOUSE CODIE NELSON KENT MERRILL 435-994-0190

JURISDICTION:

2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL PLUMBING CODE
2021 INTERNATIONAL FIRE CODE
2021 INTERNATIONAL ENERGY CODE COUNCIL
A117.1 AMERICANS NATIONAL STANDARDS INSTITUTE

2021 INTERNATIONAL MECHANICAL CODE
2020 NATIONAL ELECTRICAL CODE
2021 NATIONAL FUEL GAS CODE
AMERICANS W/ DISABILITIES ACT ACCESSIBILITY GUIDELINES
A17.1 AMERICAN SOCIETY OF MECHANICAL ENGINEERS

ABBREVIATIONS

DESCRIPTION

ADJUSTABLE

ALTERNATE

ANCHOR BOLT

ALUMINUM

ASPHALT

BASEMENT

BEARING

BLOCKING

BOTTOM OF

BUILT UP ROOF

CENTER LINE CERAMIC TILE

CHALK BOARD

CLEAN OUT

COLUMN CONCRETE CONNECTION

CONTINUOUS

DIMENSION

ELECTRICAL

ELEVATION

EQUAL EQUIPMENT

EXISTING EXISTING

EXTERIOR

FLOOR DRAIN

GALVANIZED IRON

GYPSUM BOARD HARD WOOD

HOLLOW METAL

INSIDE DIAMETER

MANUFACTURER

MARKER BOARD MAXIMUM

HORIZONTAL

INSULATION

INTERIOR

GALVANIZED

ELECTRIC WATER COOLER

FIRE EXTINGUISHER CABINET

DRAWING

CONTRACTOR

BOARD

BENCH MARK

ACCESSIBLE STATION

ACOUSTIC, ACOUSTICAL

ABBR.

ACC STA

COL CONC CONN CONT CONTR

ELECT EWC ELEV

EQ EQUIP EXIST

GYP BD HDWD **ABBREVIATIONS**

ABBR.

MECH MTL MIN MISC

OF/CI OF/OI PART'N

RD SCHED

STL STOR STRUCT

TS
THRES
TOIL
T.O.
T & B
TYP
VERT
U.N.O.
WC
WM

WDO W/ DESCRIPTION

MECHANICAL METAL MINIMUM

MISCELLANEOUS

NOT IN CONTRACT

OUTSIDE DIAMETER

PLASTIC LAMINATE

PREFABRICATED

OWNER FURNISHED/ CONTRACTOR INSTALLED OWNER FURNISHED/ OWNER INSTALLED

NOT TO SCALE

ON CENTER

OVERHEAD

PARTITION

PLATE PLYWOOD

QUARRY TILE

RADIUS REFRIGERATOR REINFORCED

REVISION

ROUND SCHEDULE SIMILAR

SPECIFICATION

SQUARE STAINLESS STEEL

STANDARD

STRUCTURAL

TACKBOARD

TELEPHONE

TELEVISION

TEMPORARY

TUBE STEEL THRESHOLD TOILET TOP OF

TYPICAL VERTICAL

TOP AND BOTTOM

WATER CLOSET

WELDED WIRE FABRIC

WATER METER

WIDE FLANGE

WINDOW WITH WITHOUT

UNLESS NOTED OTHERWISE

SUSPENDED, SUSPENSION

STEEL STORAGE

OPENING

OPPOSITE

LOGAN UTAH

GLINLINAL.

OCCUPANCY REQUIRED FIRE SEPARATION

FIRE RESISTIVE REQUIREMENTS (TABLE 601):

PROJECT TO COMPLY W/ ICC A117.1-2017

CONSTRUCTION TYPE IIB
STRUCTURAL FRAME 0 HR RATING
BEARING WALLS
EXTERIOR 0 HR RATING
INTERIOR 0 HR RATING
NON BEARING WALLS 0 HR RATING
FLOOR CONSTRUCTION 0 HR RATING

ALLOWABLE HEIGHT (TABLE 504.3):

ROOF CONSTRUCTION

F-2 OCCUPANCY TYPE VB NS 55 FEET ACTUAL HEIGHT = 25'-0"

ALLOWABLE NUMBER OF STORIES (TABLE 504.4):

F-2 OCCUPANCY TYPE IIB NS 3 STORIES
ACTUAL NUMBER OF STORIES = 1

ALLOWABLE AREA (TABLE 506.2):

F-2 OCCUPANCY TYPE IIB ACTUAL AREA = 19,320 S.F.

BUILDING AREA:

PROPOSED BUILDING AREA 19,320 S.F.

FIRE PROTECTION SYSTEMS:

FIRE EXTINGUISHING SYSTEM: STANDPIPE SYSTEM: FIRE ALARM:

OCCUPANT LOAD CALCULATION (TABLE 1004.1.1):

OCCUPANT CLASS

Unit 5 (500 sq.ft. per person)= 2880 SQ. FT. = 6 PEOPLE

TOTAL = 6 PEOPLE

EGRESS WIDTH (TABLE 1005.1):

CORRIDOR DOORS

CORRIDORS OCCUPANT < OR = 30 OCCUPANT > OR = 30

1.5 INCHES PER OCCUPANT

CCN HOLDINGS /600 West (Core & Shell) Building

2041 North 600 West Logan, Utah 84321





SYMBOL LEGEND

<u>SYMBOL</u>

A1/A201

A1 A201

SECOND FLOOR 110' - 0"

201

____1

1 NOTES

ROOM NAME

A201



DESCRIPTION

BUILDING SECTION

SECTION CUT

DETAIL BUBBLE

INTERIOR ELEVATION

EXTERIOR ELEVATION

REVISIONS

ELEVATION

DOOR NUMBER

WINDOW TYPES

WALL TYPE

ROOM TAGS

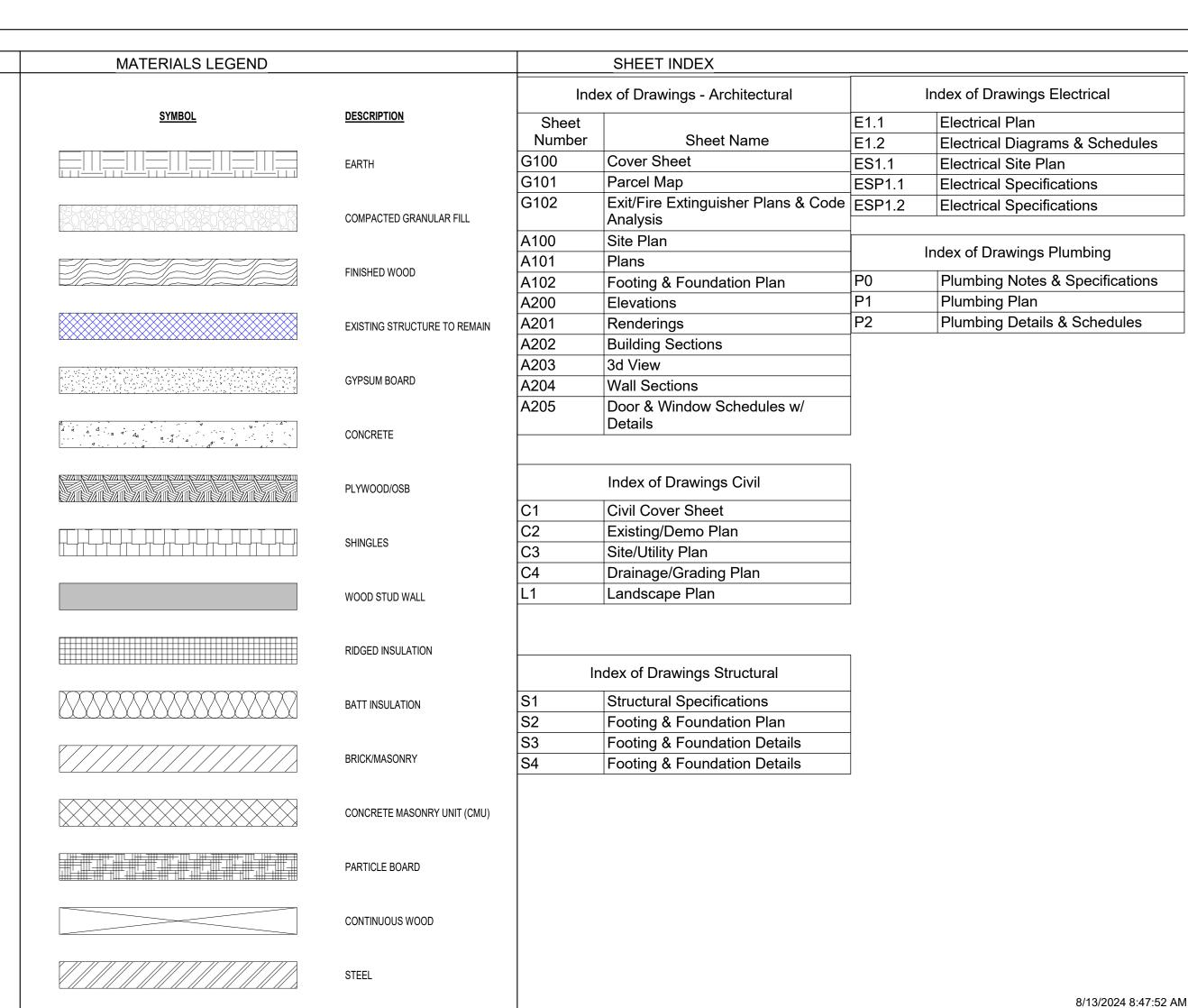
GRID BUBBLE

KEY NOTES

SLOPE







| MANSFIELD ARCHITECTURAL SERVICES | STEVEN R. MANSFIELD | ARCHITECT | 435-563-2320 - FAX:485-563-1414 | mansfist@cc.usu.edu | 40 WEST 3800 NORITH HYDE PARK, UTAH 84318 |

CCN Holdings/600 West (Core & Shell)

OWNERS NAME Kent Merrill/Co

#: DESCRIPTION:

#: DATE:

#: 367

DESIGNED

BY: srm

DRAWN

BY: srm

DRAWN

BY: srm

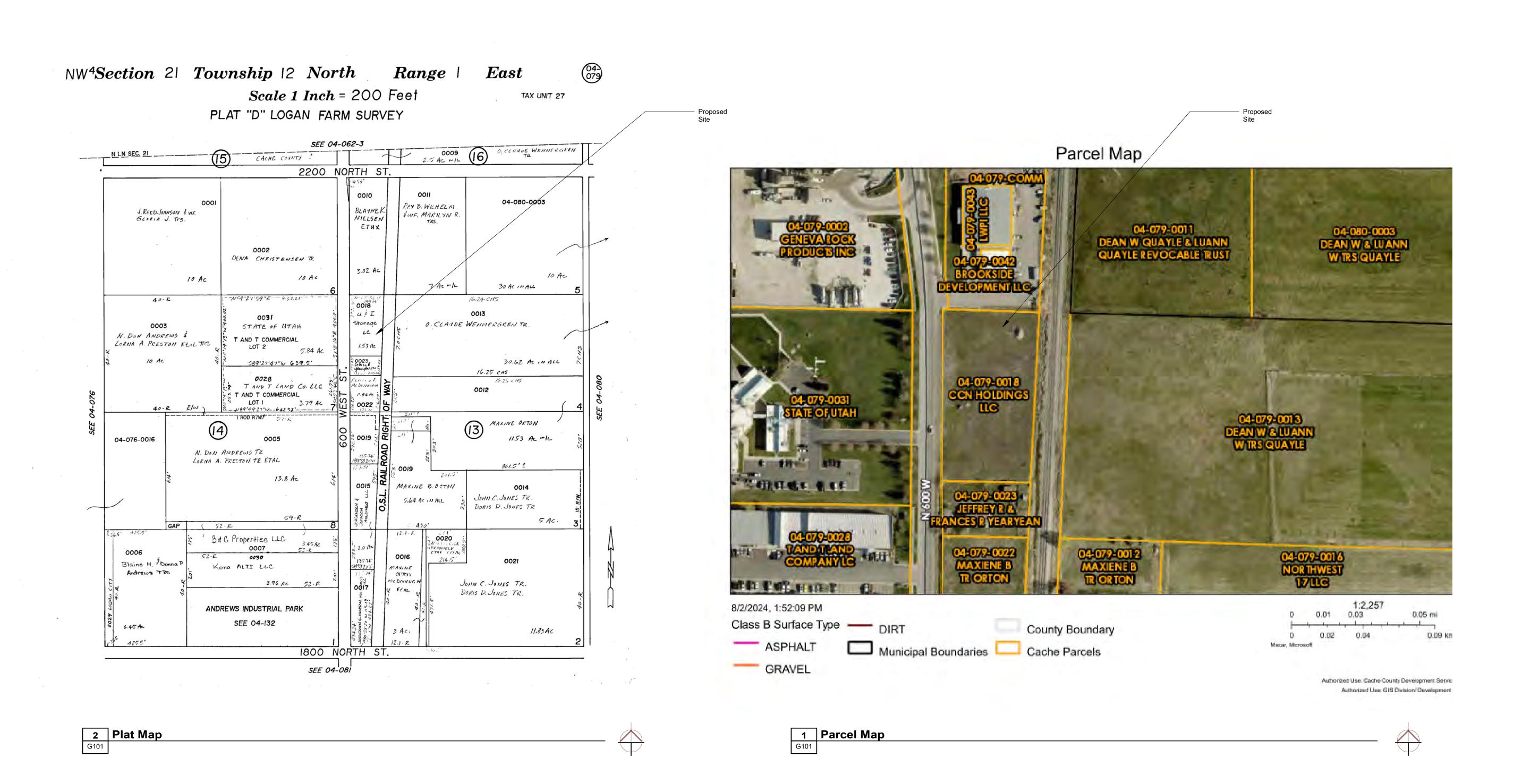
CHECKED BY:srm
ISSUED

: Aug 13 2024

Steven R. Mansfield
134922
8/13/2024

Cover Sheet

G100



Shell) (Core Holdings/600 CCN

DESIGNED BY: DRAWN

CHECKED BY:srm ISSUED

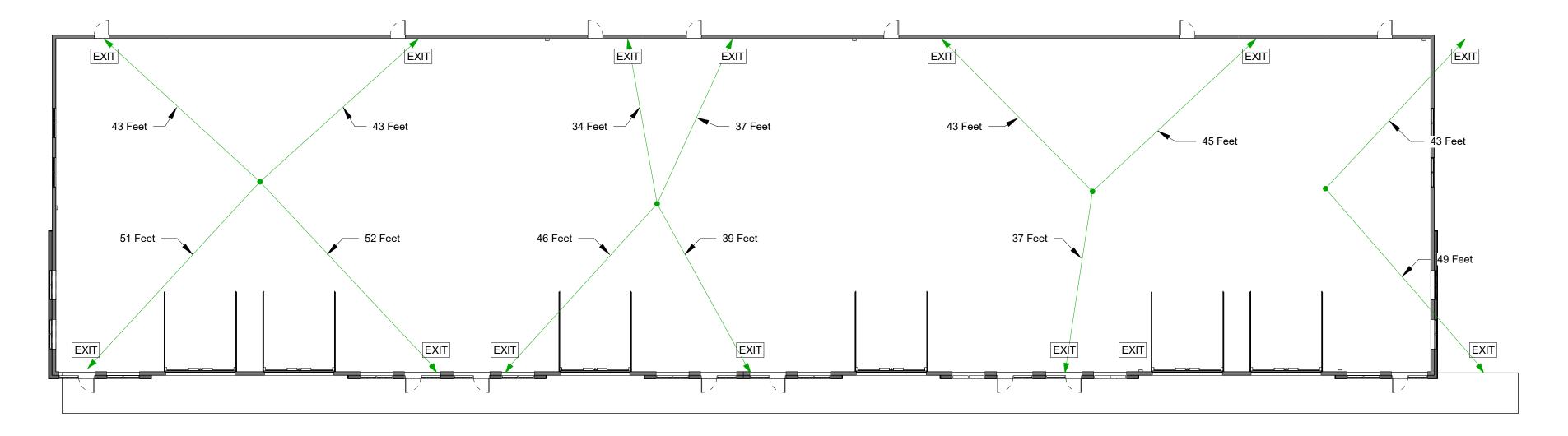
Aug 13 2024

Parcel Map

G101

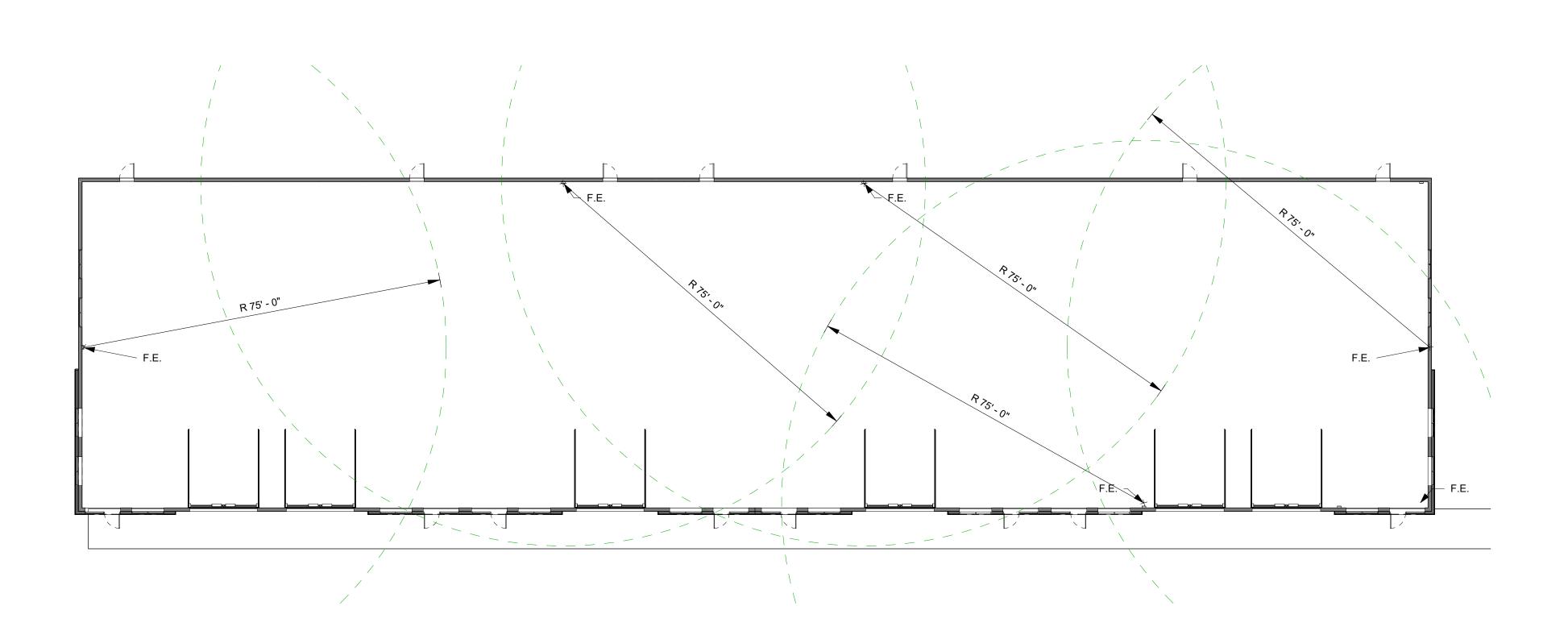
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General Note: For Door & Window Sizes refer to 1/ A202



Exit Sign Locations and
Travel Distance Plan

G102 1/16" = 1'-0"



1 Fire Extinguisher Plan
G102 1/16" = 1'-0"

Shell) Š (Core Holdings/600 West CCN

RCHITECT Insfist@cc.usu.edu

DESIGNED BY: DRAWN

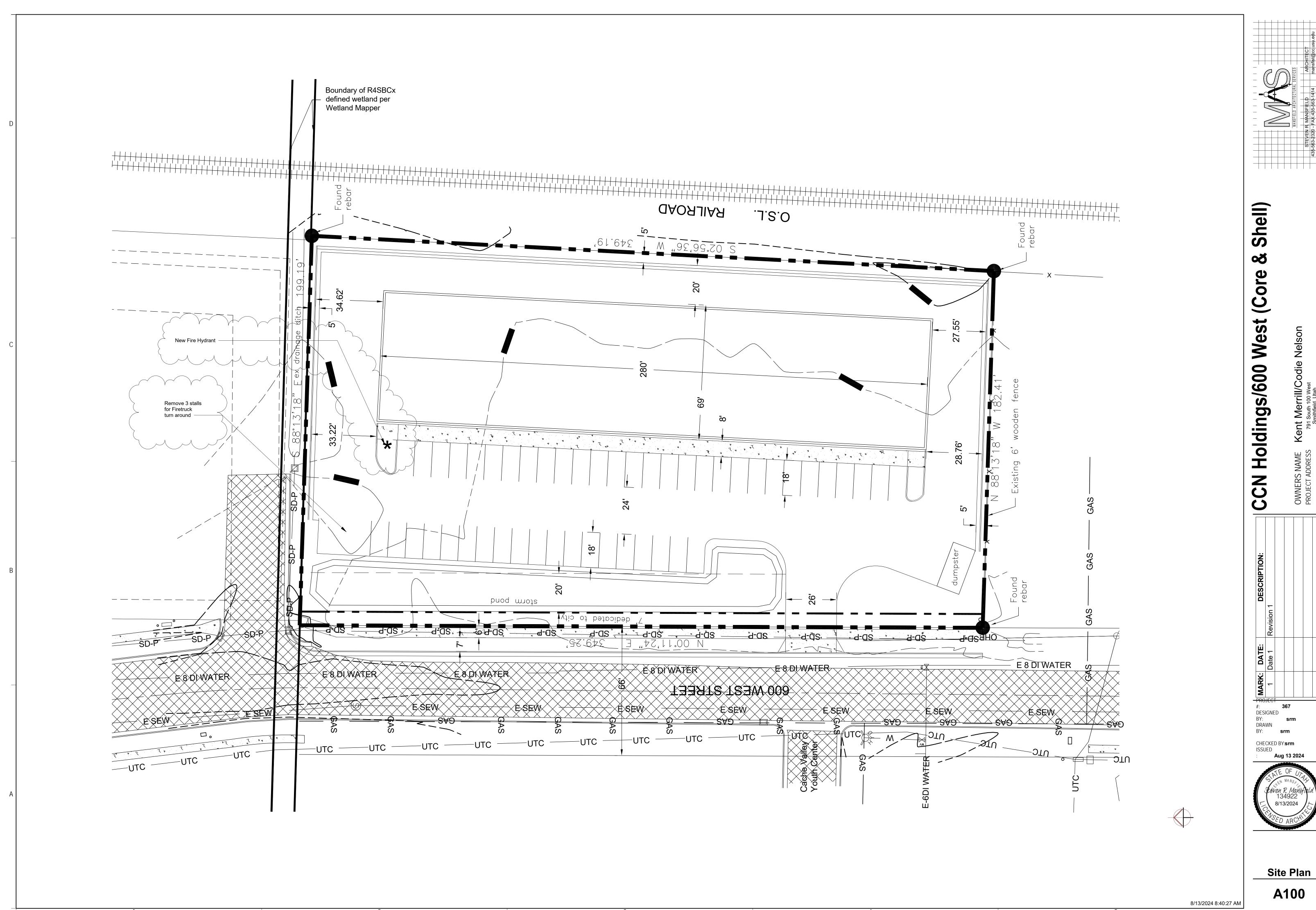
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Exit/Fire
Extinguisher
Plans & Code Analysis

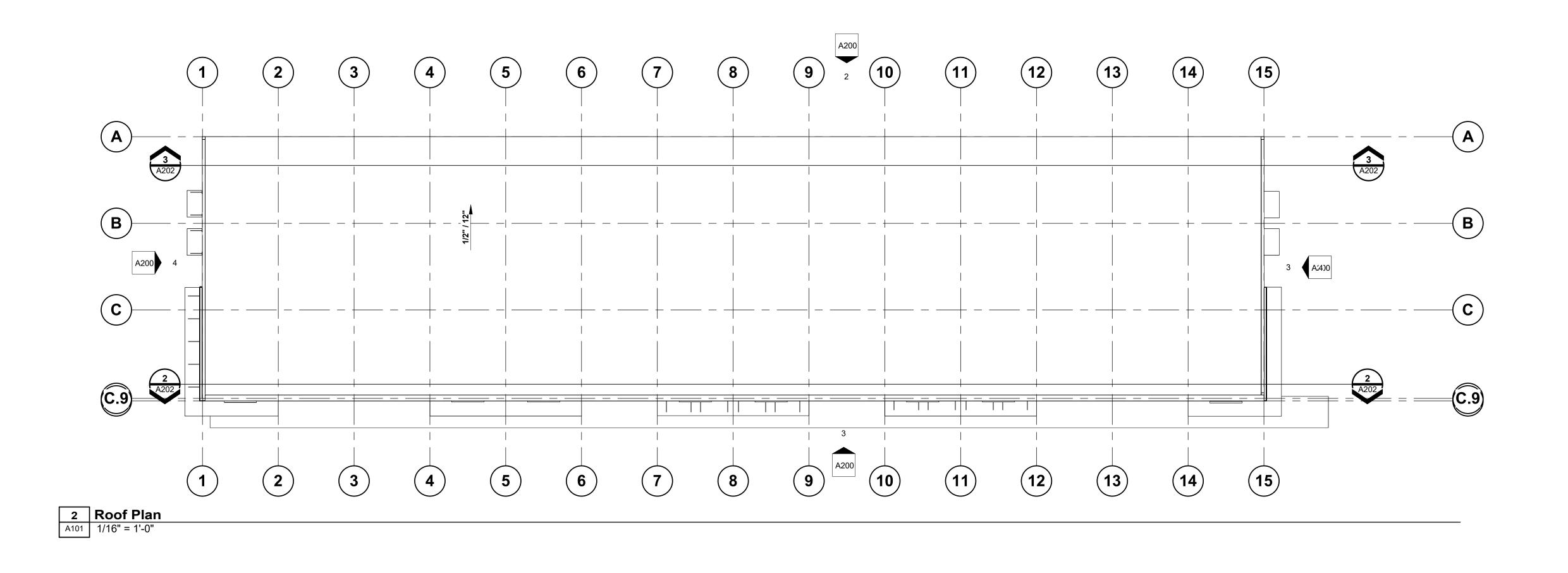
G102

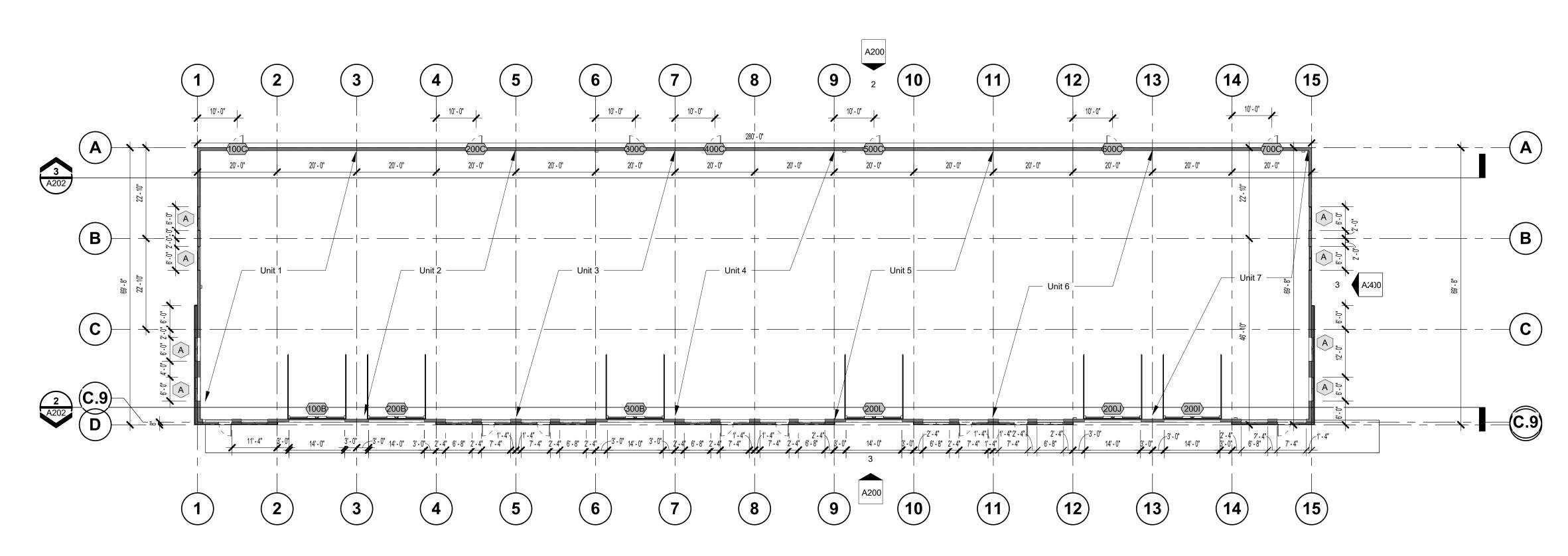
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Site Plan







1 First Floor Plan
A101 1/16" = 1'-0"

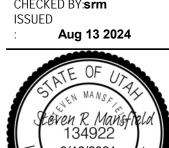
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A101

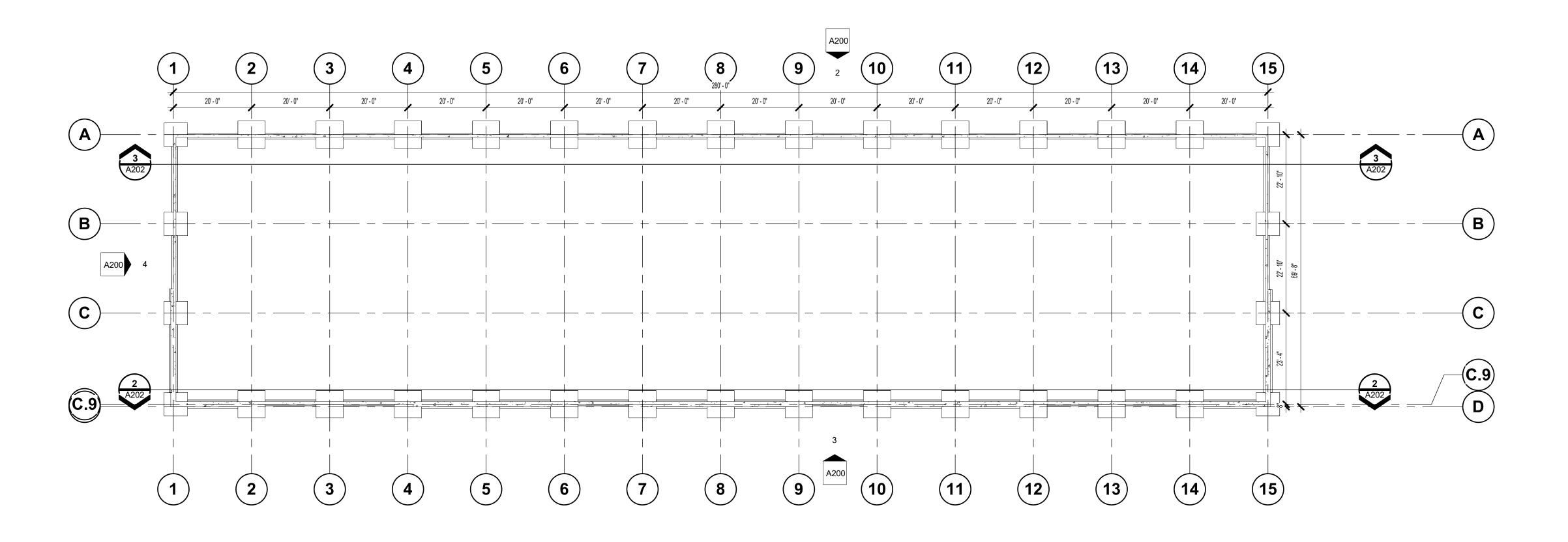
Shell) **∞**ŏ | Holdings/600 West (Core CCN

DESIGNED BY: DRAWN

CHECKED BY:**srm** ISSUED



Plans



Footing & Foundation

1 Plan

A102 1/16" = 1'-0"

Shell) | Holdings/600 West (Core CCN

DESIGNED BY: DRAWN

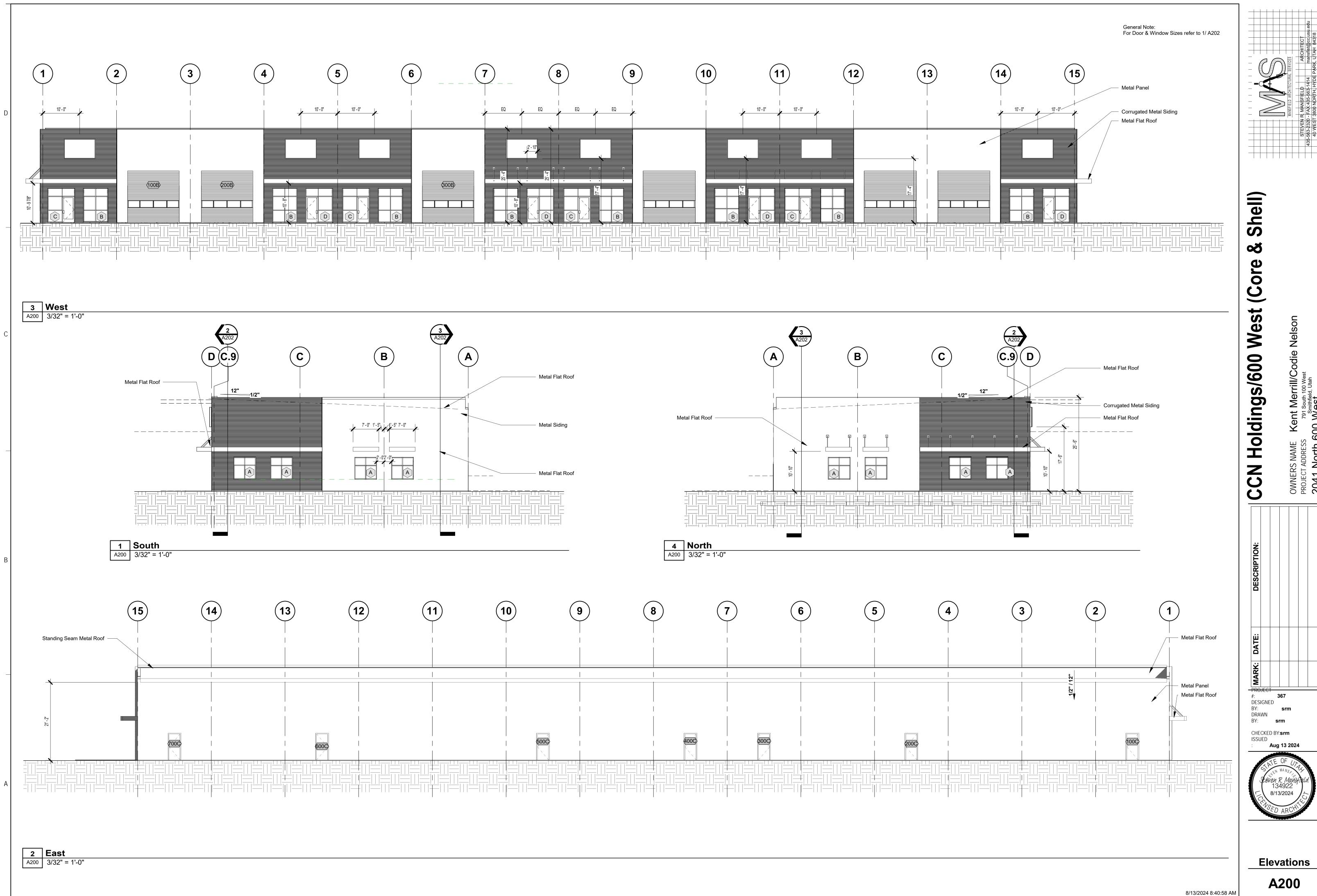
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Footing & Foundation Plan

A102

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Aug 13 2024



Elevations



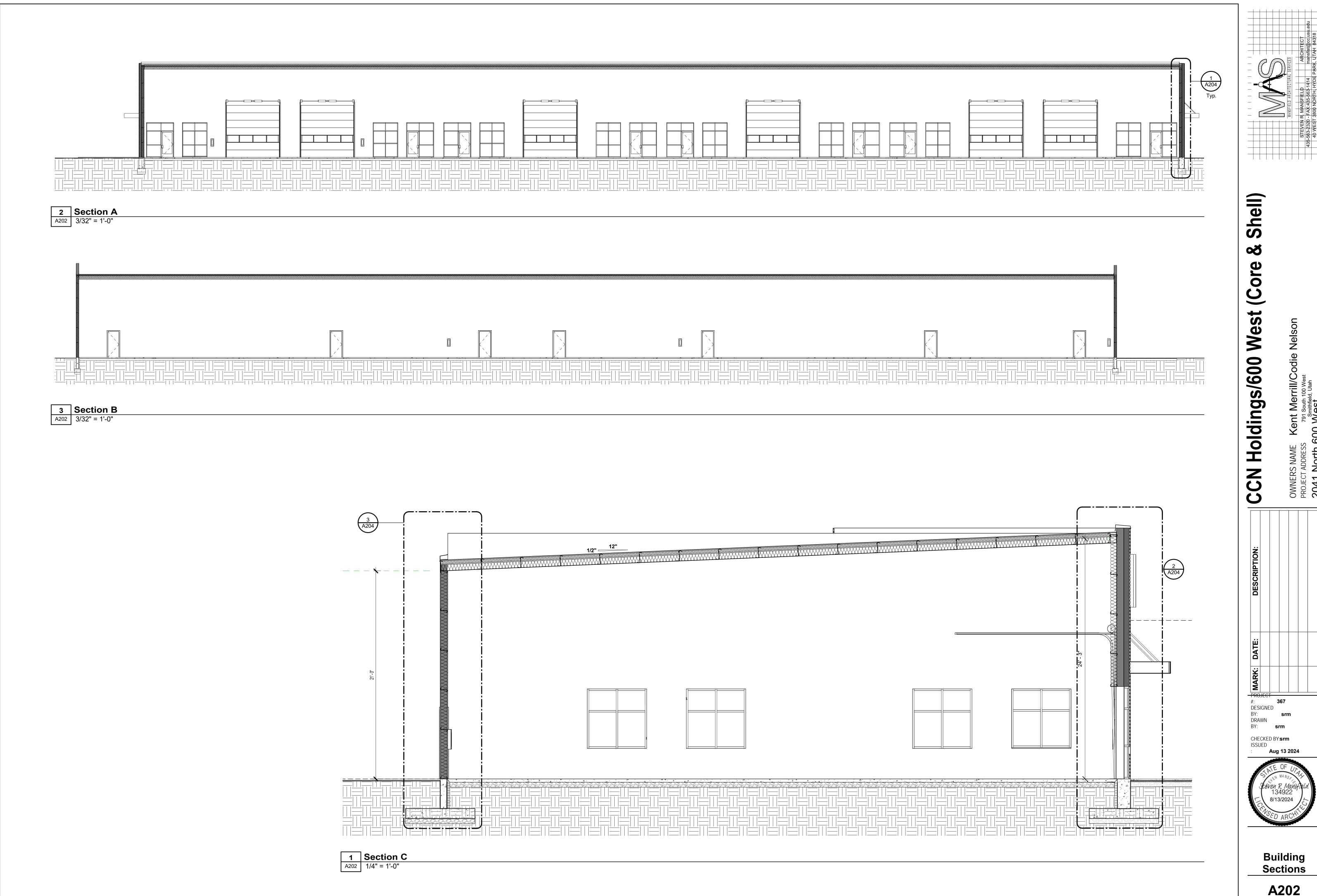


Shell) I Holdings/600 West (Core &

CCN



Renderings



Shell) **∞** (Core West Holdings/600 CCN

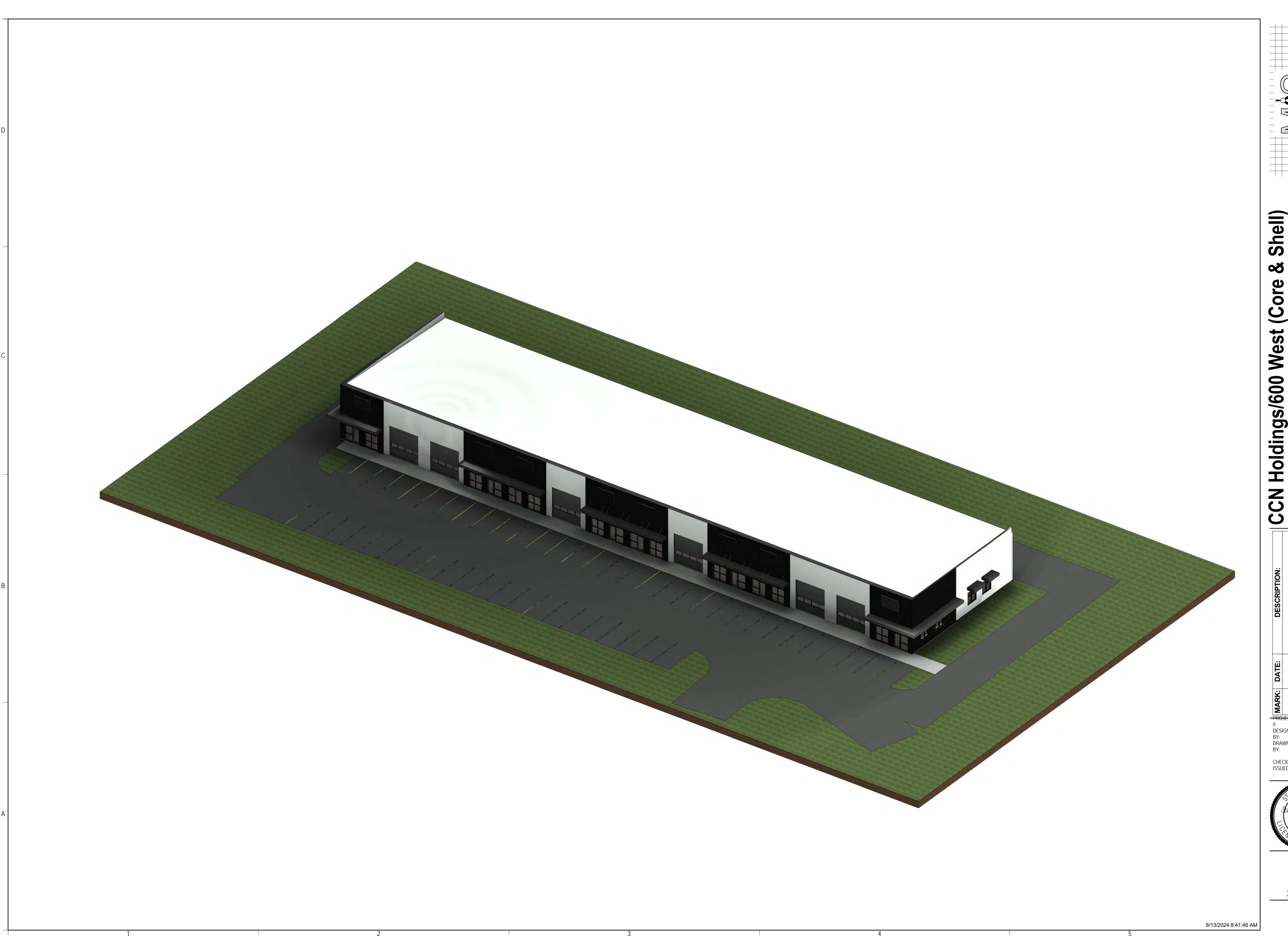
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Aug 13 2024

Building Sections

A202

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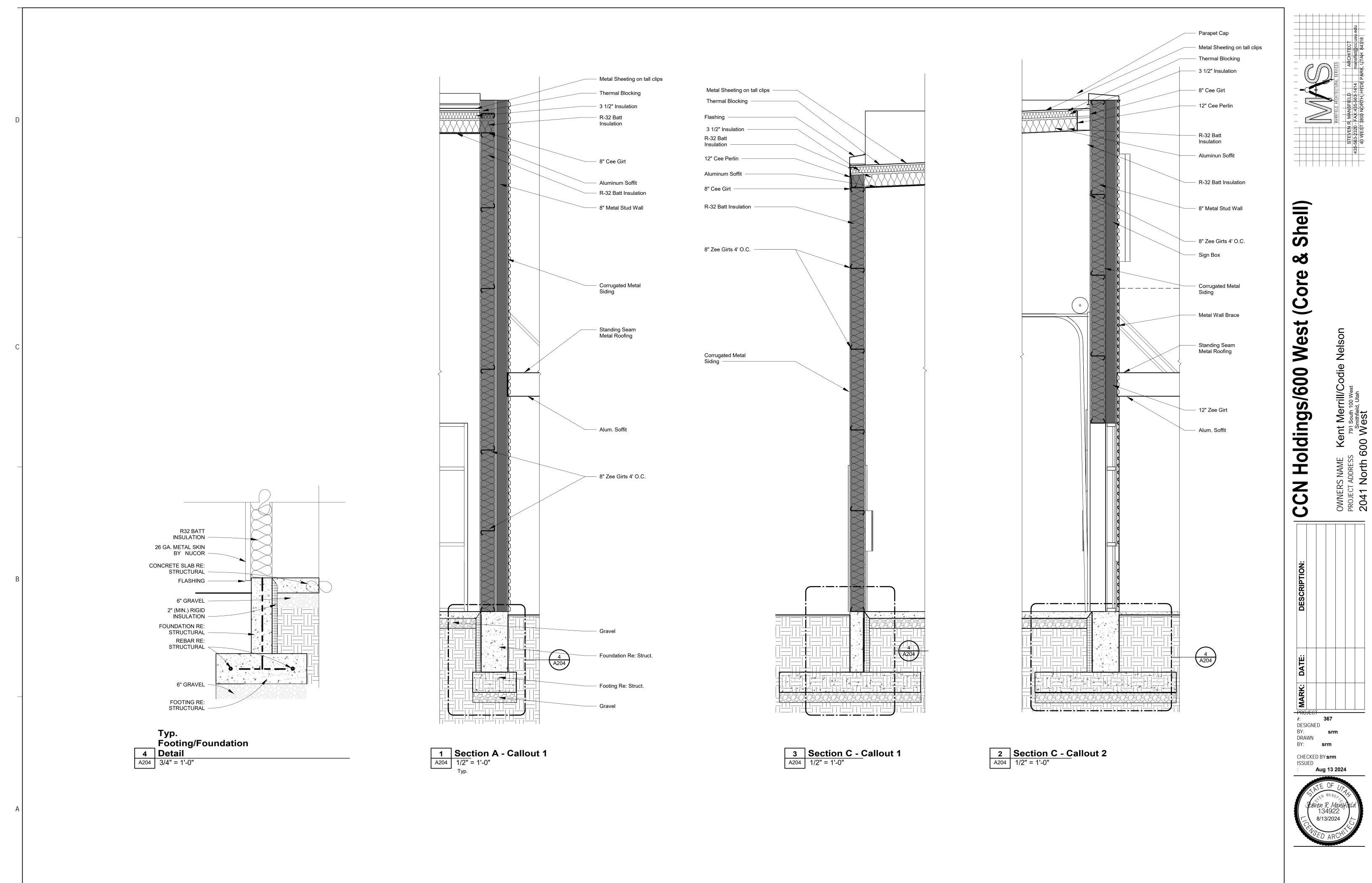
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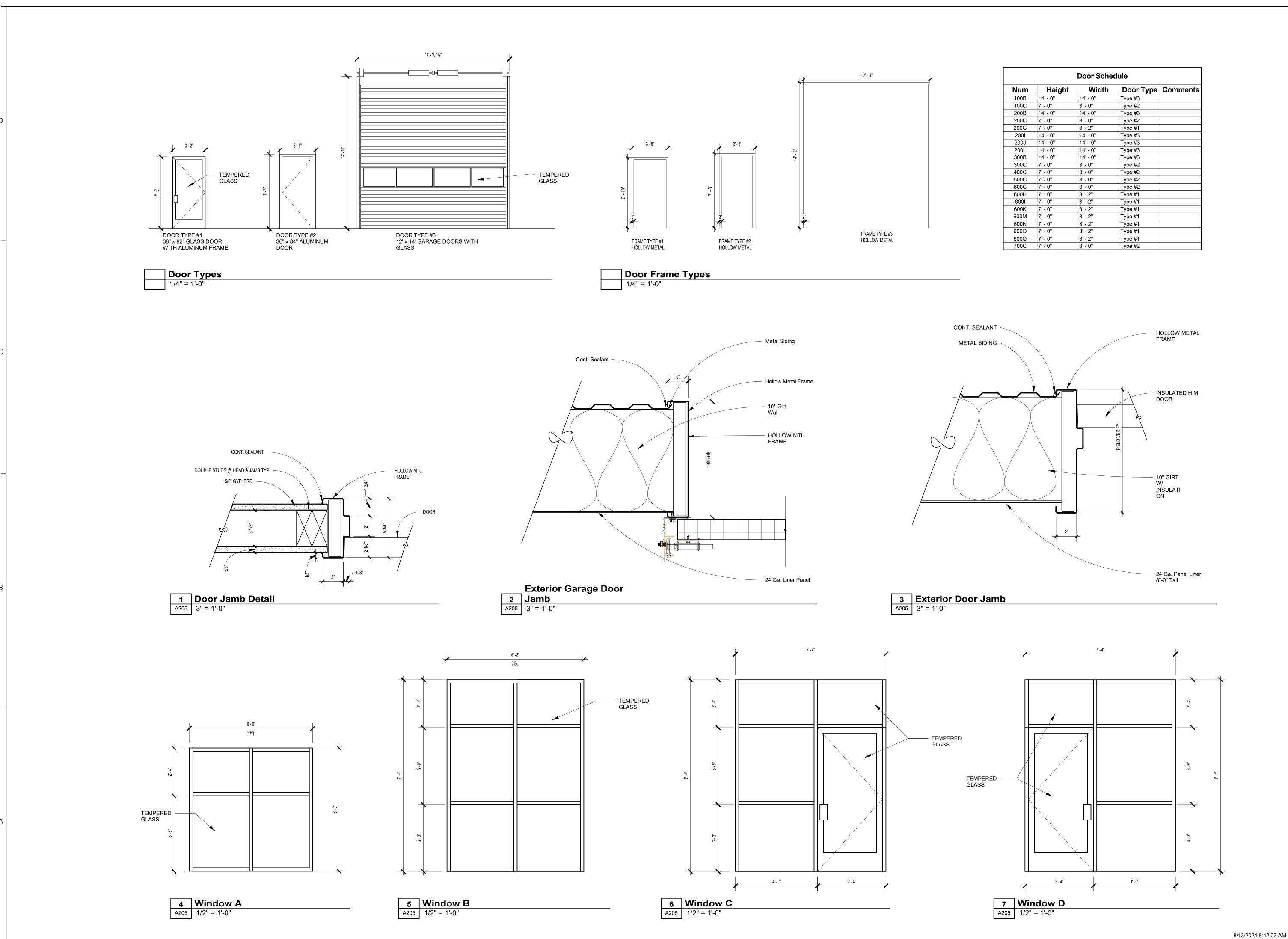
3d View



Wall Sections

8/13/2024 8:41:55 AM

367



Shell) 8 (Core West

RCHITECT ansfist@cc.usu.edu

Holdings/600

CCN

DESIGNED BY: DRAWN

CHECKED BY:**srm** ISSUED Aug 13 2024



Door & Window Schedules w/ Details

MERRILL/NELSON COMMERCIAL

PART OF THE NORTHWEST QUARTER OF SECTION 21,
TOWNSHIP 12 NORTH, RANGE 1 EAST,
2041 NORTH, 600 WEST, LOGAN
CACHE COUNTY, UTAH, SLB&M

INDEX SHEET





CITY OF LOGAN

OWNER/DEVELOPER KENT MERRILL

CIVIL ENGINEER
ALLIANCE CONSULTING
ENGINEERS, INC.
150 EAST 200 NORTH SUITE P
LOGAN, UTAH 84321
435-755-5121

(SHEET INDEX
SHEET NO.	SHEET DESCRIPTION
1	INDEX SHEET
2	EXIST/DEMO PLAN
3	SITE/UTILITY PLAN
4	DRAINAGE/GRADING PLAN



1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, CITY OF LOGAN STANDARDS, STATE OF UTAH AND ANY OTHER APPLICABLE STANDARDS ISSUED BY THE CONTROLLING AGENCY.

2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION. ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND FIELD CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE OWNER. ANY WORK COMPLETED WITHOUT DOING SUCH IS DONE SO AT THE CONTRACTORS EXPENSE.

3. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY AREAS AND/OR MATERIALS DAMAGED DURING CONSTRUCTION.

4. CONTRACTOR SHALL MAINTAIN ALL ADJACENT PROPERTY (PUBLIC & PRIVATE) FROM ALL CONSTRUCTION DEBRIS.

5. CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION FROM ALL NEW CONSTRUCTION TO EXISTING CONDITIONS.

6. CONTRACTOR SHALL PROVIDE ALL NECESSARY AUTOMOBILE AND PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES.

7. CONTRACTOR SHALL REPLACE SURVEY MONUMENTS DAMAGED DURING CONSTRUCTION. SURVEY MONUMENTS TO BE REPLACED BY A REGISTERED, LICENSED LAND SURVEYOR.

8. CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, INCLUDING FIBER OPTIC. ANY DAMAGES TO EXISTING UTILITIES WILL BE REPAIRED AT CONTRACTORS EXPENSE.

9. DIMENSIONS SHOWN ARE TO THE CENTER OF THE PIPELINE UNLESS OTHERWISE

10. DISTANCES SHOWN ALONG PIPELINES ARE HORIZONTAL DISTANCES AND NOT ACTUAL PIPE LENGTHS. MORE PIPE MAY BE REQUIRED TO COMPLETE CONSTRUCTION THAN IS DIMENSIONED IN THE PLANS.

11. JOINT RESTRAINTS SHALL BE USED TO PROVIDE RESTRAINT TO ALL WATER LINE FITTINGS. IN ADDITION, A THRUST BLOCK WITH 1.5—2.0 SQUARE FEET OF SOIL BEARING SHALL BE PROVIDED AT ALL FITTINGS.

12. CONTRACTOR IS REQUIRED TO HAVE A SET OF PLANS ON THE SITE AT ALL TIMES. ANY WORK COMPLETED WITHOUT A SET PRESENT IS DONE SO AT THE CONTRACTORS RISK AND EXPENSE IF ERRORS OCCUR

13. CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER NECESSARY FOR DUST ABATEMENT, COMPACTION, ETC.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING SOURCES FOR GRANULAR MATERIALS, WATER, WASTE SITES, AND ANY OTHER MATERIALS SOURCES AS REQUIRED FOR PROJECT COMPLETION.

15. ANY WORK DONE WITHIN A PUBLIC RIGHT—OF—WAY SHALL BE COORDINATED WITH THE APPROPRIATE TRANSPORTATION AGENCY AND SHALL MEET THE REQUIREMENTS OF THAT AGENCY AND THE REQUIREMENTS OF ANY RIGHT—OF—WAY OR SPECIAL USE

16. THE CONTRACTOR SHALL COORDINATE ALL LIVE TAPS AND ANY OTHER WORK OR MANIPULATION OF THE EXISTING WATER SYSTEM WITH THE CITY.

17. ON SLOPING AREAS THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MITIGATE ANY POSSIBLE EROSION PROBLEMS IN THE TRENCHES DUE TO STORM WATER THAT MIGHT OCCUR DURING OR AFTER CONSTRUCTION AS DIRECTED OR APPROVED BY ENGINEER.

18. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL MEASURES AS DETAILED IN THE PROJECT PLANS UNTIL FINAL ACCEPTANCE OF THIS PROJECT.

19. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONS NECESSARY TO INSURE THAT NO STORM WATER/SEDIMENT AND/OR CONSTRUCTION DEBRIS ARE RELEASED FROM THE SITE. ANY RELEASES SHALL BE CLEANED AND MITIGATED AT THE CONTRACTOR'S EXPENSE.

20. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACCESS AND RELATED TRAFFIC CONTROL WITH THE COUNTY, CITY, AND STATE ROADWAY DEPARTMENTS. THE ENGINEER SHALL REVIEW ALL TRAFFIC CONTROL PLANS.

22. ALL GATE VALVES SHALL BE LOCATED NEAR TO TEES OR CROSSES AND THEIR ASSOCIATED REDUCERS AS SHOWN ON THE PROJECT PLANS.

23. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS, HARDWARE, LABOR, ETC. TO CONSTRUCT VERTICAL AND HORIZONTAL BENDS IN PIPE AS NEEDED TO MEET THE REQUIRED GRADES, ALIGNMENTS AND COVER REQUIREMENTS.

24. ALL AIR RELEASE VALVES SHALL BE INSTALLED AT THE CREST OF THE VERTICAL CURVATURE OF THE WATER LINE. CONTRACTOR SHALL RECORD ACTUAL LOCATION OF VALVES ON FIELD RECORD DRAWINGS.

25. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF LOGAN FOR ALL UTILITY INSPECTIONS PRIOR TO BACKFILLING.

26. ALL WATER SYSTEM COMPONENTS SHALL BE INSTALLED, PRESSURE TESTED, AND CHLORINATED PRIOR TO COMPLETING ANY ROADWAY CONSTRUCTION.



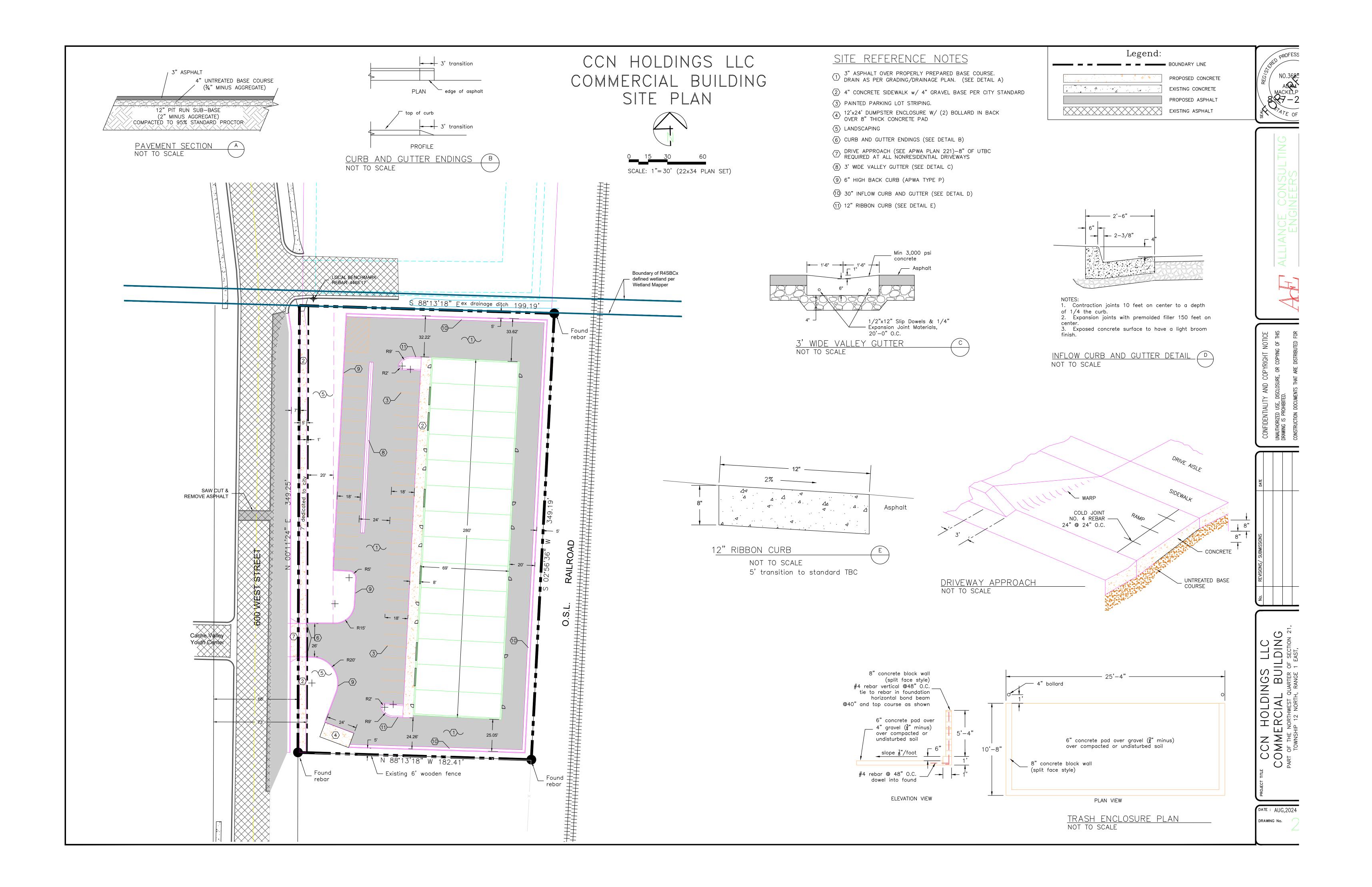
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UNAUTHORIZED USE, DISCLOSURE, OR COPYING OF 1

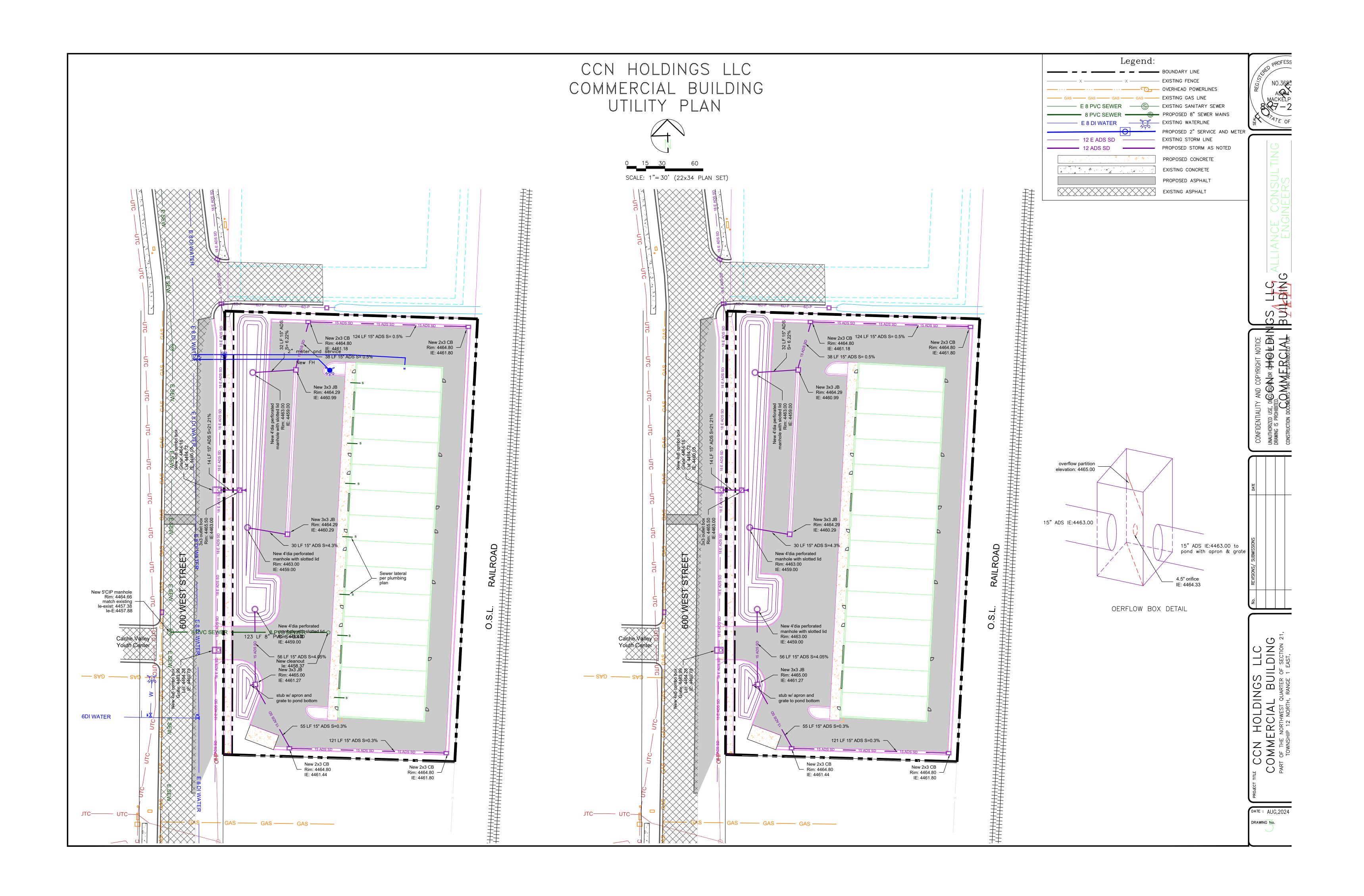
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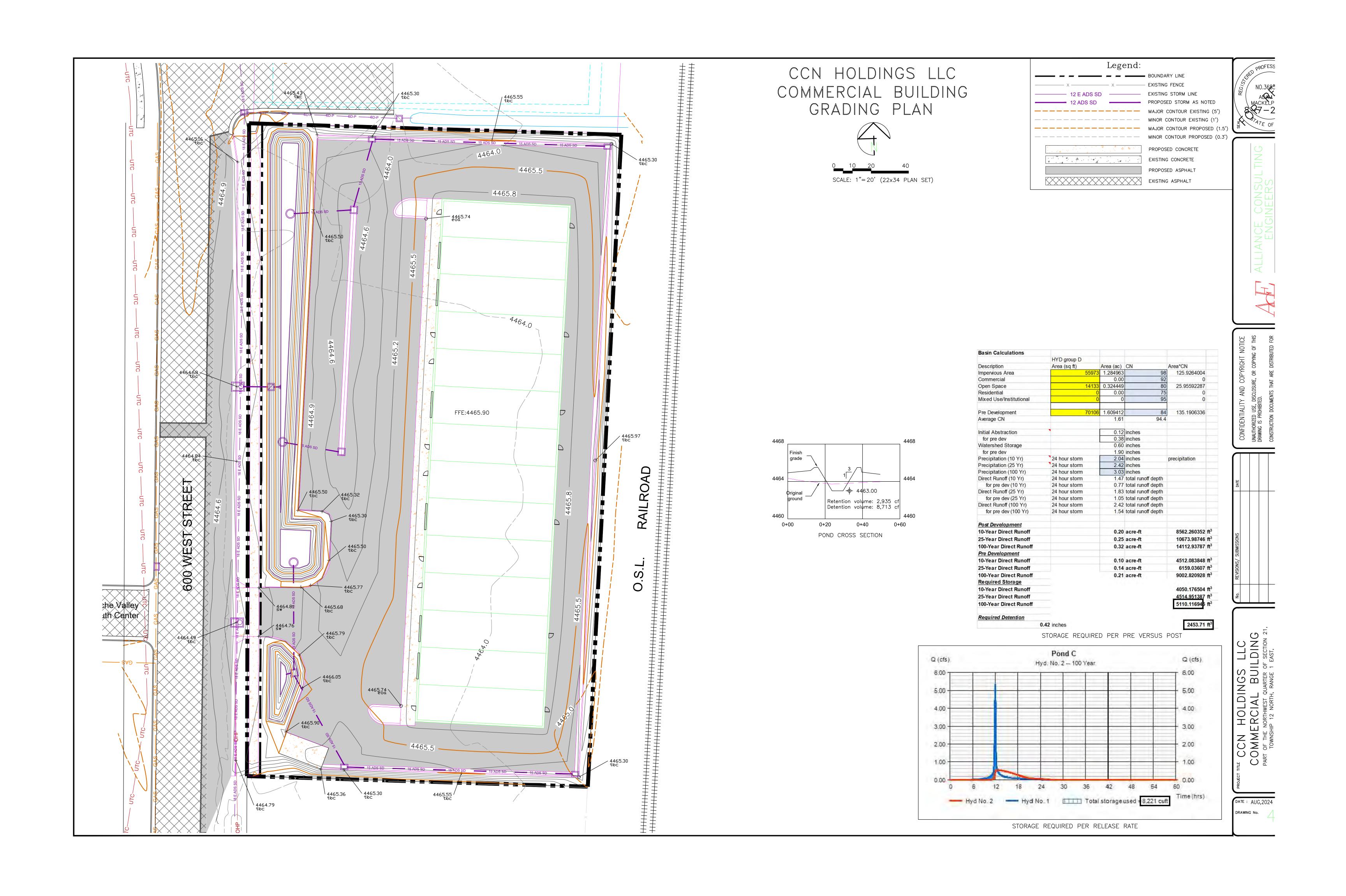
CONSTRUCTION DOCUMENTS THAT ARE DISTRIBUTED F

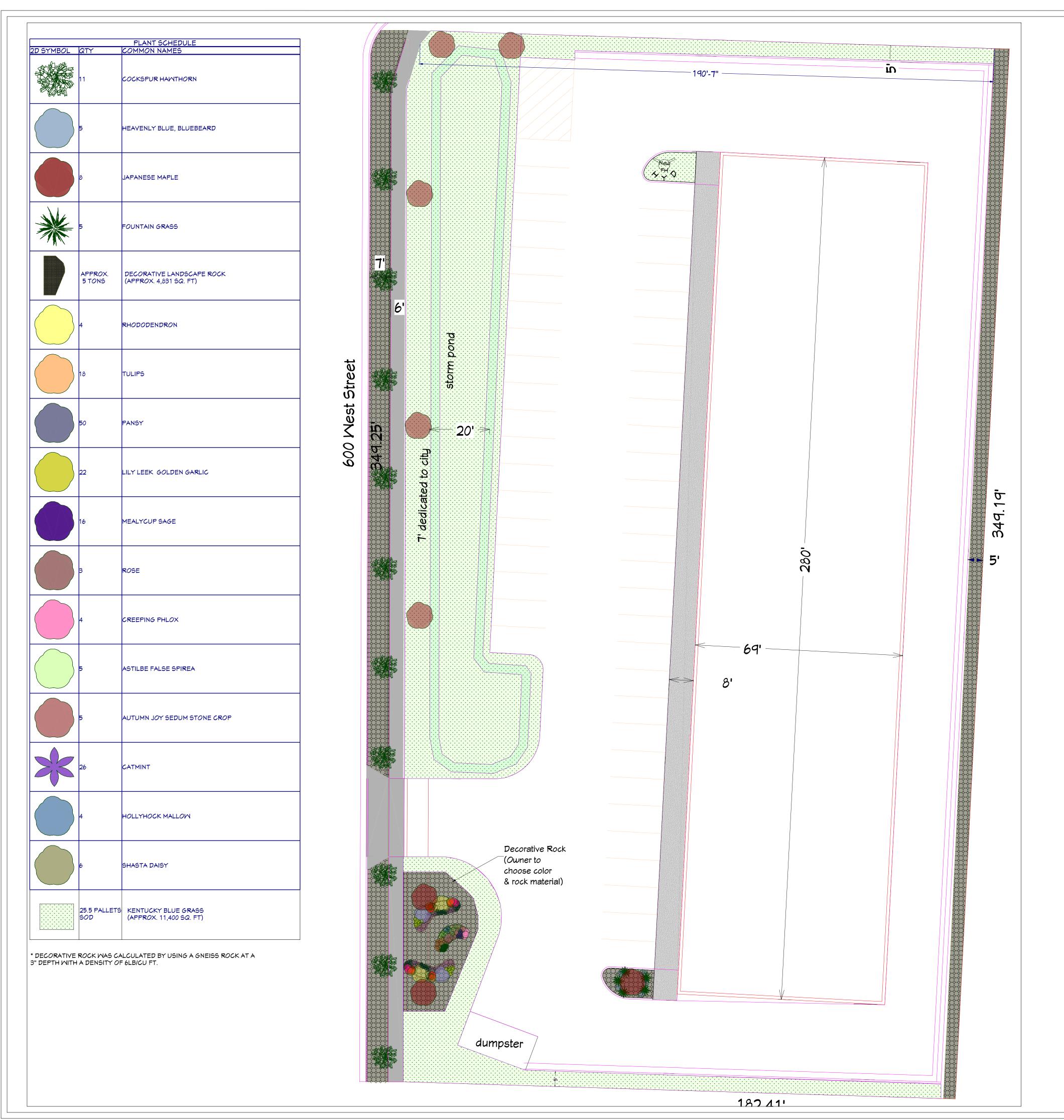
MERRILL/NELSON COMMERCIAL
PART OF THE NORTHWEST QUARTER OF SECTION 21,
TOWNSHIP 12 NORTH, RANGE 1 EAST,

DATE: AUG,2024
DRAWING No.









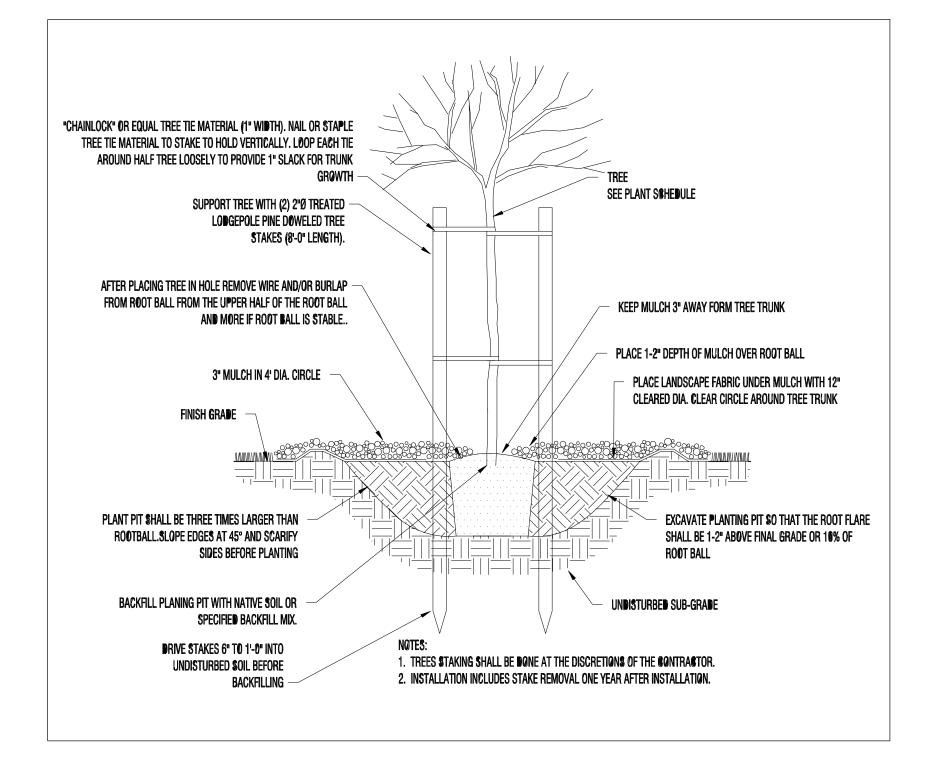
TREES





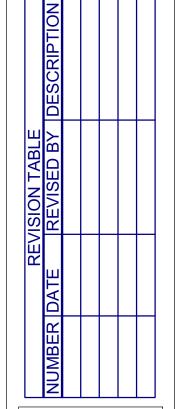
HAMTHORN

MAPLE



PLANTS





LANDSCAPE PLAN



DATE:

8/6/2024

SCALE: 1/2" = 8'

SHEET:

P_1

STRUCTURAL SPECIFICATIONS

BASIS OF DESIGN

- 1. GOVERNING BUILDING CODE: 2021 IBC
- 2. GRAVITY LOADING
 A. GENERAL ROOF... 40 PSF SNOW LOAD (ROOF)
- B. FLOOR.... 50 PSF LIVE LOAD (OFFICE)
 125 PSF LIVE LOAD (LIGHT

MANUFACTURING)

- 3. EARTHQUAKE
- SEE STEEL BUILDING PLANS
- 4. WIND SEE STEEL BUILDING PLANS
- 5. FOOTING AND FOUNDATION
- A. ALLOWABLE SOIL BEARING PRESSURE. 1500 PSF (OVER AT LEAST 6" OF PIT RUN OVER WOVEN FABRIC PER GEOTECH REPORT).
- B. FROST DEPTH =30"
 C. SEE SOIL AND FOUNDATION REPORT FOR NEW
 COMMERCIAL BUILDING 2060 N 600 W, LOGAN UTAH BY
 CACHE LANDMARK DATED NOVEMBER 25, 2019.

MISCELLANEOUS

- 1. ELEVATIONS REFERENCE MAIN FLOOR ELEVATION 100'-0 = (SEE SITE PLAN) ABOVE SEA LEVEL.
- 2. COORDINATE OPENINGS AND EMBEDDED ITEMS NOTED ON ALL CONSTRUCTION DOCUMENTS WITH APPROPRIATE TRADES.
 3. BEFORE FABRICATION, HAVE SHOP DRAWINGS REVIEWED BY ARCHITECT AND/OR ENGINEER.
- 4. TEMPORARILY BRACE THE STRUCTURE TO RESIST ALL LOADS OR COMBINATIONS OF LOADS UNTIL ALL PERMANENT ELEMENTS ARE IN PLACE AND ALL CONNECTIONS ARE COMPLETE.
- H. ABBREVIATIONS LIST THIS IS A STANDARD LIST. SOME OF THE LISTED ABBREVIATIONS MAY NOT APPEAR IN THE DRAWINGS FOR THIS PROJECT.

```
ADH ADHESIVE
                         SPA SPACE/SPACES
    ANC ANCHOR
                         STD STANDARD
ARCH ARCHITECTURE
                        STIFF STIFFENER
                         T&G TONGUE AND GROOVE
    ALT ALTERNATE
BLDG BUILDING
                         TOC TOP OF CONCRETE
BM BEAM
                         TOS TOP OF STEEL BEAM
BOT BOTTOM
                         TRANS TRANSVERSE
BRG BEARING
                         VERT VERTICAL
BTWN BETWEEN
                         W/ WITHR
CL CENTERLINE
                         W/O WITHOUT
CLR CLEAR
CMU CONCRETE MASONRY UNIT
COL COLUMN
CONC CONCRETE
CONN CONNECTION/CONNECTOR
CONSTR JT CONSTRUCTION JOINT
CONT CONTINUE/CONTINUOUS
CONTR JT CONTRACTION JOINT
DBA DEFORMED BAR ANCHOR
DBL DOUBLE
```

EXIST EXISTING
EXP EXPANSION
FDN FOUNDATION
FTG FOOTING
GLB GLULAM BEAM

EA EACH

ELE ELEVATION

EW EACH WAY

- HCA HEADED CONCRETE ANCHOR
 HDR HEADER
 HORZ HORIZONTAL
 ISOL JT ISOLATION JOINT
- ISOL JT ISOLATION JOINT
 LONG LONGITUDINAL
 LSL LAMINATED STRAND LUMBER
 LVL LAMINATED VENEER LUMBER
- NFS NON-FROST SUSCEPTIBLE
 NIC NOT IN CONTRACT
- OC ON CENTER
 OSB ORIENTED STRAND BOARD
 PAR PARALLEL
- PERP PERPENDICULAR PSL PARALLEL STRAND LUMBER
- PT PRESSURE TREATED
- REINF REINFORCEMENT/REINFORCING REQ REQUIRED
- SPA SPACE/SPACES

CONCRETE AND REINFORCING

- 1. ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRESS AS FOLLOWS:

 A. FOOTING AND FOUNDATIONS... 3000 PSI

 B. INTERIOR AND EXTERIOR SLABS... 4000 PSI
- 2. CONCRETE SHALL CONTAIN ENTRAINED AIR (6% \pm /- 1.5%) FOR EXTERIOR SLABS AND FOOTINGS.
- 3. PROTECT CONCRETE IN HOT WEATHER AS PER ACI 306 AND COLD WEATHER AS PER ACI 305.
- 4. SLABS: LARGE AREAS OF SLAB ON GRADE SHALL BE PLACED IN CHECKERBOARD FASHION AND SIZE SHALL NOT EXCEED 30 FEET IN ANY DIRECTION. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE IN SUCH A WAY THAT THE APPEARANCE AND STRENGTH OF THE SLAB IS NOT IMPAIRED. JOINTS IN THE SLABS MAY BE TOOL—MADE, SAW—CUT, OR ZIP—STRIP TYPES. JOINTS SHALL BE EVENLY SPACED, NOT FURTHER APART THAN 12 FEET FOR 4" SLABS. AND 15 FEET FOR 5 AND 6" SLABS.
- 5. SLABS ON GRADE: REINFORCING STEEL SHALL BE ADEQUATELY SUPPORTED ON PRECAST CONCRETE UNITS, TO KEEP THE REINFORCING THE MINIMUM HEIGHT SPECIFIED ABOVE THE GRADE. LIFTING THE REINFORCING OFF THE GRADE DURING PLACEMENT OF THE CONCRETE WILL NOT BE PERMITTED. CRACK CONTROL BARS (2#4 X 5' LONG, TYPICALLY) SHALL BE PLACED IN THE SLAB AT ANY INTRUSION OR OPENING WHICH MAY ENCOURAGE CRACKING. 6 MIL VAPOR BARRIER IS DESIRABLE UNDER THE INTERIOR FLOOR SLABS.
- 6. ALL SLEEVES NOT SPECIFICALLY SHOWN ON THE DRAWING SHALL BE LOCATED BY THE TRADES INVOLVED AND SHALL BE APPROVED BY THE ARCHITECT.
- 7. ALL CONCRETE SHALL BE PROPERLY VIBRATED IN PLACE.
- 8. FORMS: FORMS OR SHORING SHALL NOT BE REMOVED UNTIL CONCRETE HAS ACQUIRED SUFFICIENT STRENGTH TO SUPPORT SAFELY ITS OWN WEIGHT AND ANY LOAD TO WHICH IT MAY BE SUBJECTED BUT IN NO CASE SHALL THEY BE REMOVED SOONER THAN 24 HOURS AFTER THE CONCRETE IS PLACED.
- 9. REINFORCING SHALL HAVE A MINIMUM CONCRETE COVERAGE AS FOLLOWS:
 - A. CAST AGAINST AND PERMANENTLY EXPOSED TO THE EARTH... 3"
 B. EXPOSED TO EARTH OR WEATHER
 - 6# AND LARGER... 2" 5# AND SMALLER... 1-1/2"
 - C. NÖT EXPOSED TO EARTH OR WEATHER
 SLABS, JOISTS, WALLS, #11 AND SMALLER... 3/4"
 - COLUMNS, BEAMS: MAIN REINFORCING OR TIES... 1-1/2"
 D. SLABS ON GRADE
- PLACE REINFORCING AT THE CENTER OF SLAB.
- 10. UNLESS OTHERWISE NOTED ON THE DRAWINGS, WALL REINFORCING SHALL BE AS FOLLOWS:
- WALL THICKNESS HORIZONTAL REINF VERTICAL REINF.
- SEE CONCRETE WALL SCHEDULE
- REINFORCING SHALL BE PLACED AT THE CENTER OF THE WALLS. (EXCEPT FOR WALLS THICKER THAN 10" AND WHERE SHOWN OTHERWISE.) WALLS THICKER THAN 10" SHALL HAVE TWO CURTAINS OF REINFORCING PLACED NEAR EACH FACE OF THE WALL.
- 11. ALL REINFORCING STEEL SHALL BE OF NEW STOCK DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60 UNLESS OTHERWISE NOTED.
- 12. PLACEMENT OF REINFORCING SHALL BE IN ACCORDANCE WITH ACI 315 AND ACI
- 13. UNLESS OTHERWISE NOTED ALL REINFORCING SHOWN CONTINUOUS SHALL BE LAPPED 48 BAR DIAMETERS. ALL REBAR SPLICES SHALL BE MADE AWAY FROM LOCATIONS OF MAXIMUM STRESS.
- 14. ALL VERTICAL REINFORCING SHALL BE DOWELED TO FOOTINGS OR TO THE STRUCTURE BELOW. DOWELS SHALL BE THE SAME SIZE AND AT THE SAME SPACING AS THE VERTICAL SPACING AS THE VERTICAL REINFORCING SCHEDULED FOR THE ELEMENT ABOVE. LAP SPLICE LENGTHS SHALL BE AS NOTED ABOVE OR AS SHOWN ON THE DRAWINGS. DOWELS ENDING INTO THE FOOTINGS SHALL TERMINATE WITH A STANDARD 90 DEGREE ACI HOOK AND SHALL EXTEND TO WITHIN 4" OF THE BOTTOM OF THE FOOTING.
- 15. FIELD BENDING: REINFORCING STEEL SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER WHICH WILL BE INJURIOUS TO THE CONCRETE OR REINFORCING STEEL.
- 16. DO NOT WELD REINFORCING UNLESS NOTED ON THE PLANS. WHERE WELDING REINFORCING IS CALLED OUT ON THE PLAN, USE ASTM A-706 REINFORCING BARS OR REFER TO UBC STANDARD 19-2.
- 17. ALL DOWELS FROM FOOTINGS SHALL HAVE AT LEAST 48 BAR DIAMETER EMBEDMENT INTO THE WALL IT IS SUPPORTING.
- 18. PROVIDE CORNER BARS AT ALL INTERSECTING CORNERS. USE SAME SIZE BAR AND SPACING AS HORIZONTAL WALL REINFORCING.
- 19. ADD 2 #5 BARS AROUND ALL OPENINGS (UNLESS OTHERWISE NOTED) AND EXTEND 24" BEYOND CORNER OF OPENINGS.
- 20. PROVIDE 2 #5 X 4'-0" DIAGONAL BARS AT THE CORNER OF ALL OPENINGS. DIAGONAL BARS SHALL BE CENTERED ON THE CORNER OF THE OPENING.
- 21. GROUT UNDER STEEL BASE PLATES SHALL BE NON-SHRINK NON METALLIC WITH A COMPRESSIVE STRENGTH (f'c) OF 4000 PSI AT 28 DAYS. GROUT SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.

SPECIAL INSPECTIONS AS REQUIRED BY IBC SECTION 1704

- 1. Special inspections and structural testing shall be provided by an independent agency employed by the Owner for the items identified in this section and in other areas of the approved construction plans and specifications, unless waived by the Building Official (see IBC Chapter 17).

 2. The names and credentials of the Special Inspectors to be used shall be submitted to the Building Official for approval.
- 3.Duties of the Special Inspector:

 a. The Special Inspector shall review all work listed below for conformance with the approved construction plans and specifications and the 2021 IBC.
 - b. The Special Inspector shall furnish special inspection reports to the EOR, Contractor, Owner and Building Official on a weekly basis, or more frequently as required by the Building Official. All items not in compliance shall be brought to the immediate attention of the Contractor for correction, and if uncorrected, to the EOR and the Building Official.
- c.Once corrections have been made by the Contractor, the Special Inspector shall submit a final signed report to the Building Official stating that the work requiring special inspection was, to the best of the Special Inspector's knowledge, in conformance with the approved construction plans
- and specifications as well as the applicable workmanship provisions of the 2021 IBC.
 4.Duties and responsibilities of the Contractor:
 a.The Contractor shall submit a written statement of responsibility to the Owner and the Building Official prior to the commencement of work. In
- accordance with IBC 1704.4, the statement of responsibility shall contain acknowledgement of the special inspection requirements contained within this "Statement of Special Inspections".
- b. The Contractor shall notify the responsible Special Inspector that work is ready for inspection at least one working day (24 hours minimum) before such inspection is required.
- c. All work requiring special inspection shall remain accessible and exposed until it has been observed by the Special Inspection.

 5. Please see the "Special Inspection Schedule" for the types, extents and frequency of specific items requiring special inspections and structural tests as part of this project.

SPECIAL INSPECTION SCHEDULE

SPECIAL INSPECTION SCHEDULE									
ITEMS REQUIRING SPECIAL INSPECTION	CONTINUOUS	PERIODIC	COMMENTS						
FABRICATORS (IBC 1704.2.5)	•								
	X		If fabricator is approved, on—site inspection is not required but a certificate of completion must be provided to the B.O. (IBC 1704.2.5.2)						
SOILS (IBC 1705.6)									
Verify adequate materials below footings		X	Prior to placement of concrete.						
Excavation extend to proper depth and materials		X	Prior to placement of compacted fill or concrete.						
Classification and testing of fill materials		X	Check classification and gradations at each lift, but not less than once for each 10,000ft² of surface area.						
Verify proper fill materials, lift thicknesses and in—place densities	X								
Verify properly prepared site and subgrade		X	Prior to placement of concrete.						
CONCRETE CONSTRUCTION (IBC 1705.3)	•	'							
Reinforcing steel placement		X	Verify size, clearances, splices and proper ties.						
Embedded bolts or plates	×								
Verify required design mix		X	Verify mix design meets strength and exposure requirements listed on approved plans.						
Concrete placement/sampling	X		Includes sampling for air, slump, strength and temperature techniques						
Inspect formwork		X	Verify shape, location and member dimensions.						
Post-installed anchors	X		In accordance with approved ICC—ES Report. Periodic inspections allowed if stated in ES Report						

TRIICTIIRAI SPECIFICAT

JECT TITLE

CCN HOLDINGS/600 WEST BUILDING LOGAN, UTAH

DRAWING TITLE



ALLIANCE CONSULTING ENGINEERS 150 east 200 north suite p logan, utah 84321

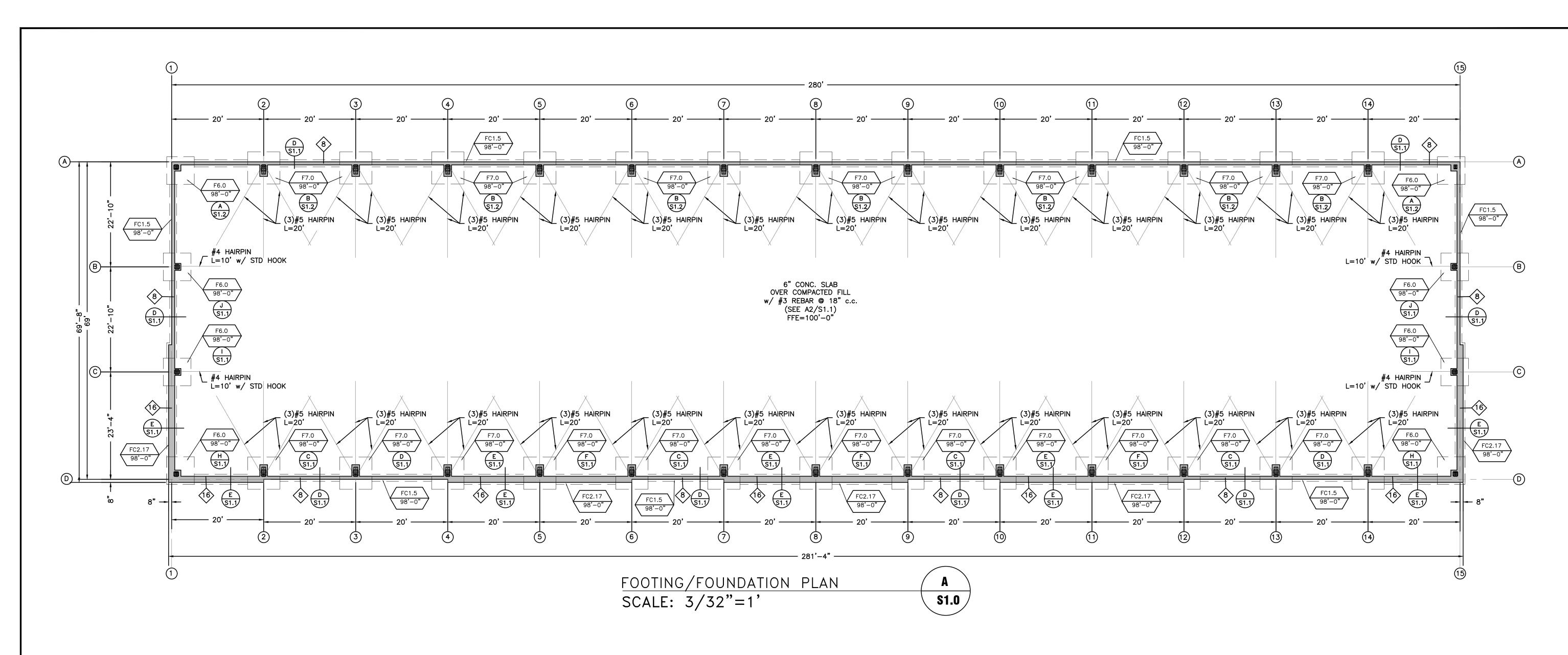
alliancelogan@yahoo.com

(435)755-5121

NO. 275617
BRIAN G.
LYON
8/13/24

DATE : AUG,2024
DRAWING No.

SO.



	CONCRETE WALL SCHEDULE									
MARK	THICK	SPECIAL INSPECTION								
			VERTICAL	HORIZONTAL						
8	8"	CONCRETE	#4 @ 16" c.c.	#4 @ 10" c.c.	NO					
16	16"	CONCRETE	#4 @ 16" c.c. (2 LAYERS)	#4 @ 10" c.c. (2 LAYERS)	NO					

MARK	DIME	NSION		CRO	SS-WI	SE REINF	ORCING	LEN	GTH-W	ISE REIN	FORCING	COMMENTS
	WIDTH	LENGTH	THICK	NO.	SIZE	LENGTH	SPACE	NO.	SIZE	LENGTH	SPACE	
FC1.5	18"	CONT	12"	-	_	_	_	2	#4	CONT	EQUAL	
FC2.17	26"	CONT	12"	-	_	-	_	3	#4	CONT	EQUAL	
F6.0	72"	72"	12"	6	#5	66"	EQUAL	6	#5	66"	EQUAL	
F7.0	84"	84"	12"	6	#5	78"	EQUAL	6	#5	78"	EQUAL	

LAP SPLICE SCHEDULE											
#3	#4	#5	#6	# 7	#8						
_	18"	22"	27"								
_	18"	22"	27"								
_	14"	_	_								
			_								
	22"	27"	32"								
		#3 #4 - 18" - 14"	#3 #4 #5 - 18" 22" - 18" 22" - 14" -	#3 #4 #5 #6 - 18" 22" 27" - 18" 22" 27" - 14"	#3 #4 #5 #6 #7 - 18" 22" 27" - 18" 22" 27" - 14"						

FOOTING/FOUNDATION PLAN NOTES

1. FOOTINGS ARE TO BE CENTERED UNDER WALLS & COLUMNS UNLESS NOTED OTHERWISE. 2. FOOTING AND FOUNDATIONS ARE TO BE PLACED ON NATIVE UNDISTURED SOILS OR COMPACTED FILL. 3. EXTERIOR FOOTINGS ARE TO BE PLACED 30" MIN. BELOW FINISHED GRADE FOR FROST PROTECTION. 4. SEE STEEL BUILDING ANCHOR BOLT PLAN FOR BOLT PLACEMENT, NUMBER AND DIAMETER. 5. ALL STEEL BUILDING COLUMNS SHALL HAVE ANCHOR BOLTS WITH A MIN. EMBEDMENT OF 12" c.c. AND A F1554 GRADE 55 J-BOLT UNLESS NOTED OTHERWISE. 6. THE SLAB ON GRADE IS DESIGNED AS A STRUCTURAL DIAPHRAGM. SPECIAL INSPECTION IS REQUIRED ON THE SLAB ON GRADE. 7. ALL FOOTINGS SHOULD BEAR ON AT LEAST 6" OF PIT RUN OVER WOVEN FABRIC. (SEE GEOTECHNICAL

8. <u>FOOTINGS WERE DESIGNED FROM PRELIMINARY</u>
<u>REACTIONS FROM THE STEEL BUILDING MANUFACTURER.</u> CONTRACTOR TO SUPPLY STRUCTURAL ENGINEER WITH FINAL STEEL BUILDING PLANS AND REACTIONS PRIOR TO CONSTRUCTION FOR ANY REVISIONS REQUIRED.

CCN HOLDINGS/600 WEST BUILDÍNG LOGAN, UTAH

DRAWING TITLE

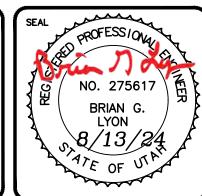
FOOTING/FOUNDATION PLAN



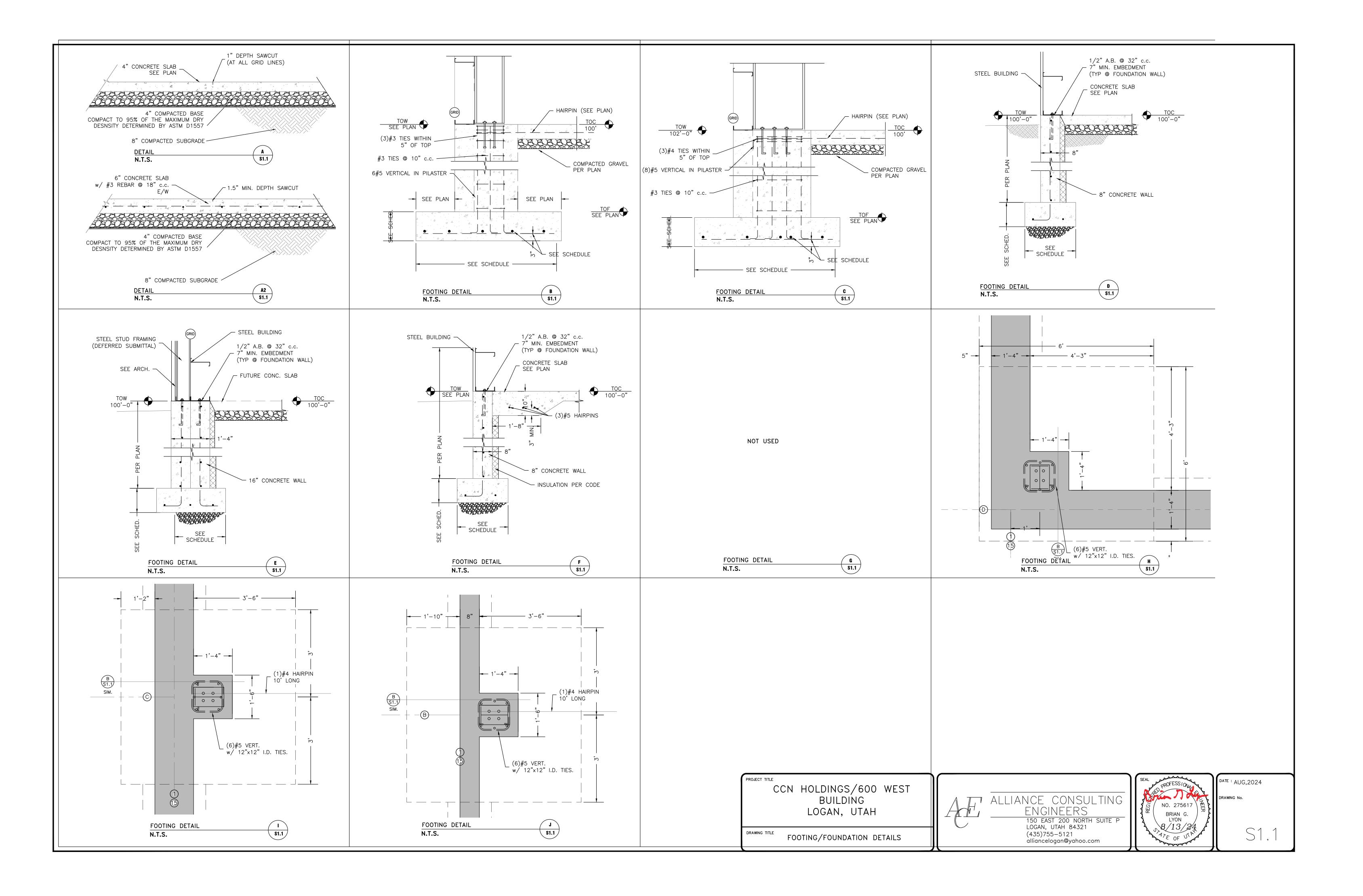
ALLIANCE CONSULTING
ENGINEERS

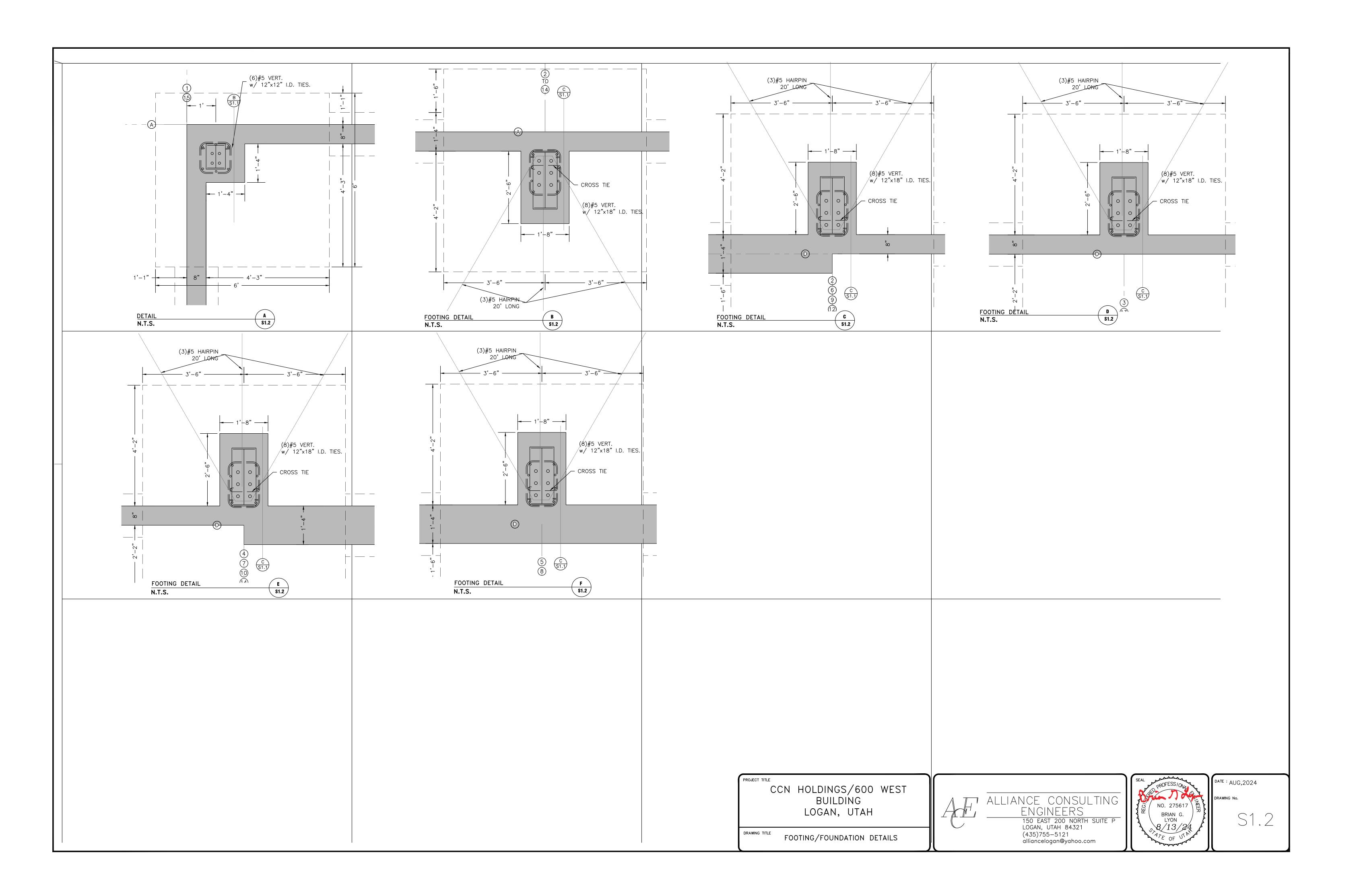
150 EAST 200 NORTH SUITE P LOGAN, UTAH 84321 (435)755-5121

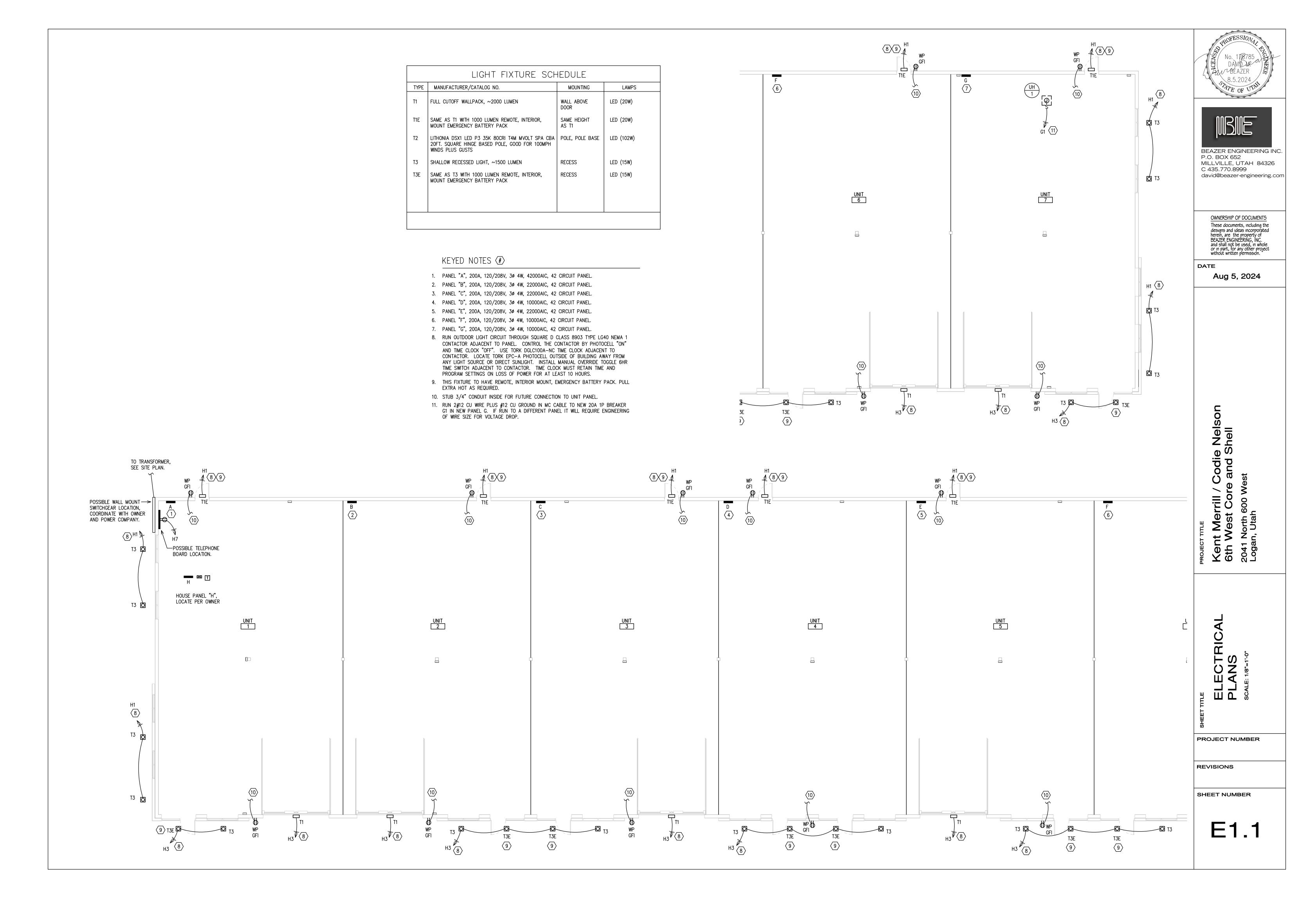
alliancelogan@yahoo.com



DATE: AUG, 2024 DRAWING No.



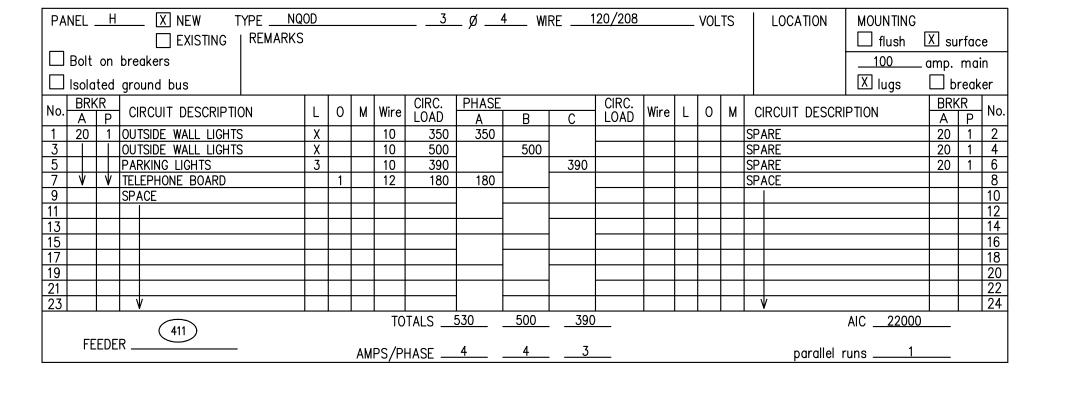


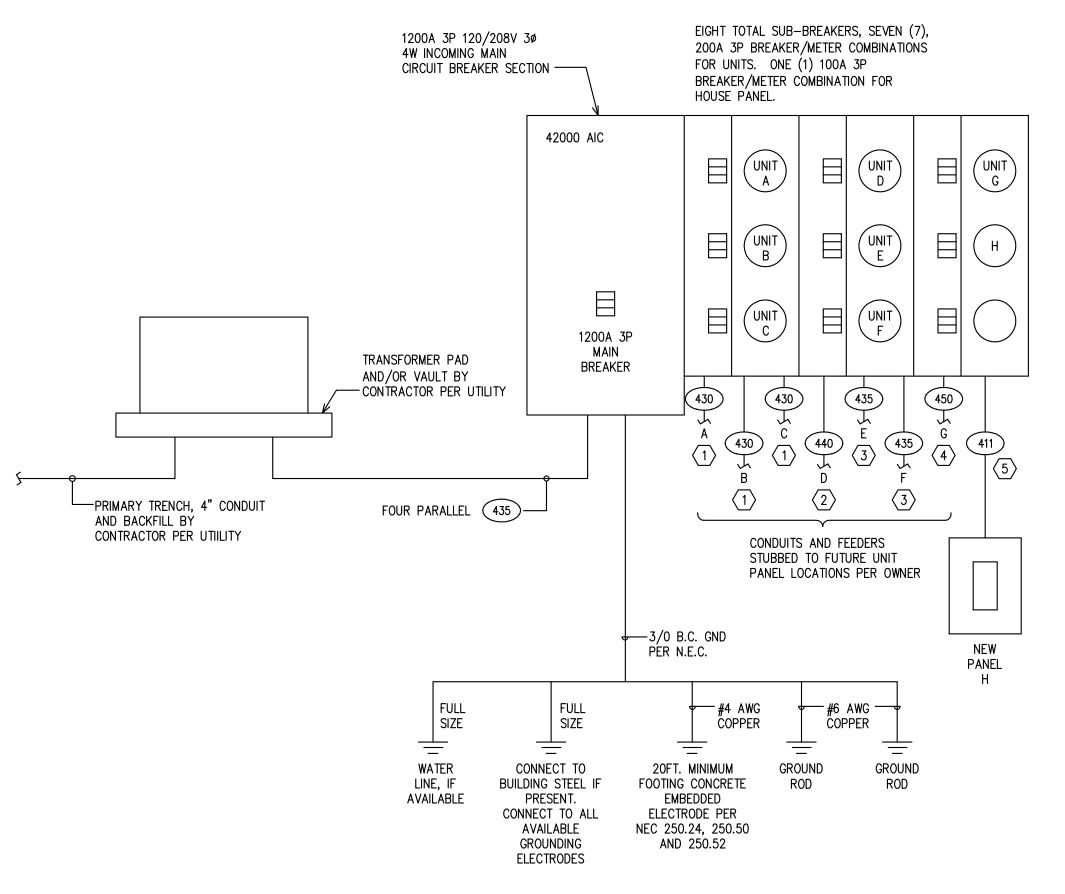


TYPE		JCTOR	CONDU COND	AMP	INSUL-
	QUAN.	SIZE	SIZE	/ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ATION
20	2	10	3/4	30	THHN,
30	3				THWN, XHHW
40	4				
28	2	8		40	
38	3		1		
48	4	V			
26	2	6		55	
36	3				
46	4	V	1 1/4		
34	3	4		70	
44	4	V			
33	3	3		85	
43	4	V			
311	3	1	1 1/2	110	
411	4	V	2		
310	3	1/0		150	
410	4	V		>	
320	3	2/0		175	
420	4	\bigvee			
330	3	3/0		200	
430	4	V	2 1/2		
340	3	4/0		230	
440	4	V			
325	3	250		255	
425	4	\downarrow	3]
335	3	350		310]
435	4	\bigvee]
350	3	500	3 1/2	380]
450	4	\bigvee		\bigvee	
ACCORD TABLES, CONDUIT	ING TO S DEPEND T TO INC	SERVICE ING ON I LUDED FI	CONDUITS OR EQUIPN USE. EAC JLL SIZE (RE FOR C	MENT GRO H PARAL GROUND.	UNDING

KEYED NOTES (#)

- 1. #6 CU GROUND PER NEC.
- #4 CU UPSIZED GROUND PER NEC 250.122B.
 #2 CU UPSIZED GROUND PER NEC 250.122B.
- 4. #1 CU UPSIZED GROUND PER NEC 250.122B.
- 5. #8 CU GROUND PER NEC.





ONE LINE DIAGRAM

	MECHANICAL EQUIPMENT SCHEDULE										
SYM	DESCRIPTION	LOAD	VOLTS	PHASE	FIRE ALARM SHUTDOWN	CONTROL CIRCUIT BY	* STARTER BY	SAFETY DISCONNECT BY	REMARKS		
UH/1	UNIT HEATER	0.5HP	120	1	NA	MECH	MECH	ELECT			
	FINAL BREAKER O				WO SPEED STAR	TERS WITH ME	CHANICAL DRA	AWINGS.			



BEAZER ENGINEERING INC. P.O. BOX 652 MILLVILLE, UTAH 84326 C 435.770.8999 david@beazer-engineering.com

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DATE

Aug 5, 2024

Kent Merrill / Codie Nelson 6th West Core and Shell 2041 North 600 West Logan, Utah

DIAGRAMS AND SCALE: NA

H H H H H

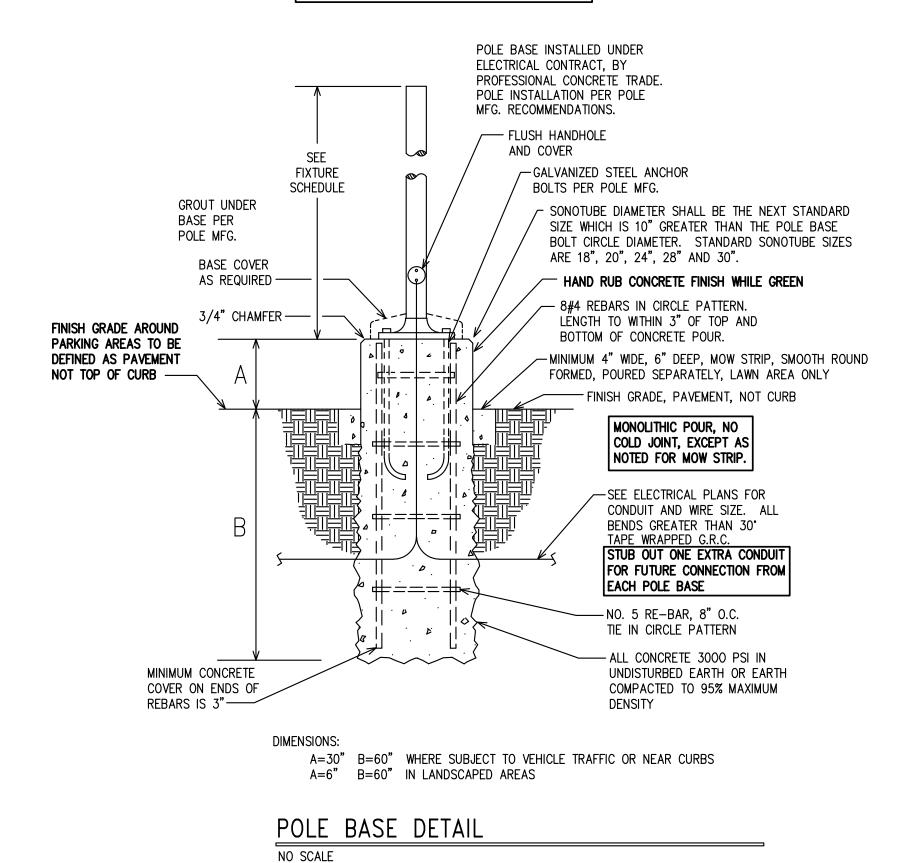
PROJECT NUMBER

REVISIONS

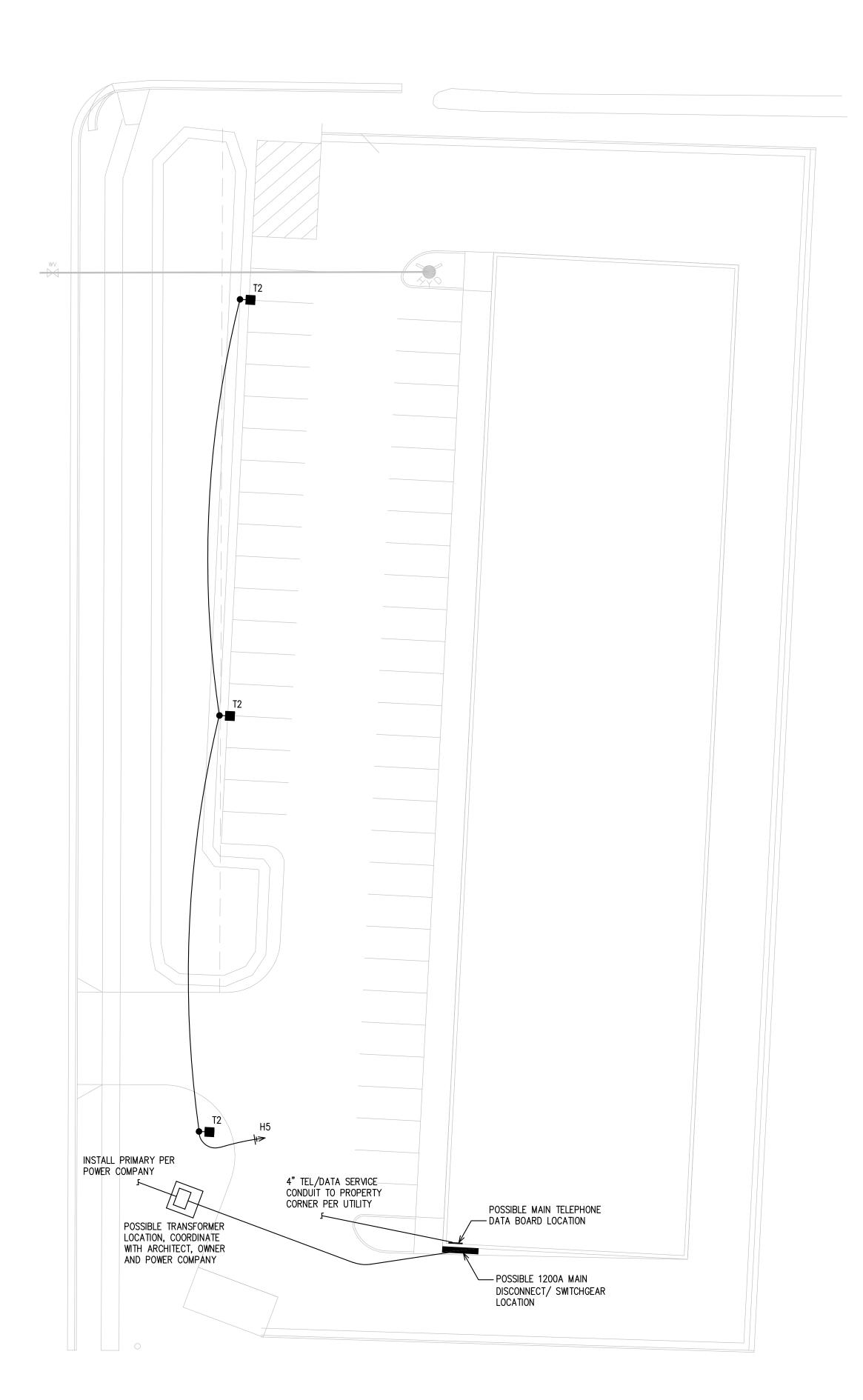
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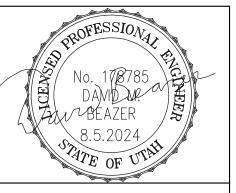
E1.2

USE PLASTIC SEAMLESS SONOTUBE FOR ALL BASES WITH DIMENSION "A" GREATER THAN 12"



Cache Valley Youth Center







BEAZER ENGINEERING INC. P.O. BOX 652 MILLVILLE, UTAH 84326 C 435.770.8999 david@beazer-engineering.com

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DATE

Aug 5, 2024

Kent Merrill / Coc 6th West Core and 2041 North 600 West Logan, Utah

PROJECT NUMBER

REVISIONS

SHEET NUMBER

ES1.1

PART 1 — GENERAL 1.1 RELATED DOCUMENTS

- A The general provisions of the Contract, including the Conditions of The Contract (General, Supplementary and other conditions) and Division One apply to the work specified in this Section.
- B. This Section 260001 is a part of all other Sections of this Division 26. C. It is understood that Division 26 shall govern and be the direct responsibility of the Electrical Contractor, who shall comply with the specifications and the accompanying drawings to describe and provide for the furnishings, delivering, installing, testing and placing in satisfactory and successful operation all equipment, materials, devices, and necessary appurtenances to provide a complete electrical system for lighting, power and auxiliaries; together with such other equipment and devices
- furnished and installed under other contracts which shall be wired and connected under this contract. D. If a discrepancy occurs between the equipment supplied and the intent or function of the equipment, catalog numbers, discontinued products, drawings, specifications, etc., the Contractor shall bring this to the attention of the Architect or Engineer in writing prior to bidding. Failure to report any conflict does not relieve the Contractor from meeting the intent of the contract documents nor shall it change the contract cost. It shall further be understood that if the contractor is unable to interpret any part of the plans and specifications, or should he find discrepancies therein, he shall call attention of the fact to the Architect prior to bid date. The Architect will issue additional instructions to Bidders before the project
- E. State Licensed Contractor All contractors shall have a current state contracting license for the trade engaged in.
- 1.2 DESCRIPTION OF WORK
- The work covered by these specifications consists of furnishing all labor, materials, equipment, supervision and service necessary for the proper completion of all electrical work shown on the drawings and hereinafter specified. Items shown or described in either the drawings or specifications and/or all items necessary to make the electrical system complete and workable shall be understood to form a part of the work.
- G. The main items of work are enumerated below. The work shall include but is not necessarily limited to the following items: Lighting, convenience and power outlets
- Light fixtures, lamps and associated equipment.
- Power service and distribution.
- 4. Connection of motors, appliances and owner-furnished equipment.
- 5. Connections to equipment not supplied in this contract.
- H. Work and materials not included under this Division: 6. Supply of heating and ventilation control equipment unless noted on the electrical drawings. See mechanical drawings
- for division 26 requirements. 1.3 VISITING SITE
- I. Visit the site during the bidding period to determine existing conditions that will affect the electrical and other work as it pertains to the construction of this structure. All costs arising from site conditions and/or preparation shall be included in the base bid. No additional charges will be allowed due to inadequate site inspection. 1.4 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS
- J. At the time of bidding, contractor shall familiarize himself with the drawings and specifications of this project. Any questions, misunderstandings, conflicts, deletions, etc, shall be submitted to the Architect in writing for clarifications prior to issuance of the final addendum and bidding of the project. After signing the contract, the contractor shall meet the intent, purpose, and function of the contract documents; and any costs of materials, labor, and equipment arising therefrom, to make each system complete and operable, shall be paid by the contractor, which shall not result in any
- change in contract cost. K. At the time of bidding, the electrical contractor shall be responsible to coordinate with the general contractor regarding any references to other divisions or trades on the electrical drawings or specifications.
- 1.5 DRAWING INTERPRETATION L. The electrical contractor shall refer to the architectural and/or mechanical drawings for exact placement of all electrical equipment. The electrical drawings unless specifically dimensioned are to be considered diagrammatic and are not to be
- scaled for placement of equipment
- 1.6 CODES-REGULATIONS AND PERMITS M. In the installation of this work, comply in every way with the requirements of the laws, ordinances and rules of the State
- and National Board of Fire Underwriters, The National Electrical Code, and the rules and regulations of local ordinances. N. If a conflict occurs between these rules and this specification, the rules are to govern. Accept this condition upon submitting bid, and no extra charge will be allowed after the electrical contract is awarded. This shall not be construed as relieving the Contractor from complying with any requirements of the plans or specifications which may be in excess of requirements of the hereinbefore mentioned rules and not contrary to same. All materials and equipment installed, including
- lighting fixtures, shall have been tested and approved by Underwriter's Laboratory and shall be so labeled. O. All fees shall be included in the contract price. The Contractor shall furnish a certificate of approval to the Architect from the Inspection Authority at completion of the work.
- 1.7 SUPERVISION
- Workmanship shall be neat, have a good mechanical appearance and conform to the best electrical construction practices. A competent superintendent shall be in charge of the work at all times. Any person employed and found incompetent shall be removed at once and replaced by someone satisfactory when requested by the Architect. All work shall be carried out under the direction of the Architect to fulfill the true intent and meaning of the drawings and specifications. Only licensed master or journeyman craftsmen may be engaged in this project, except apprentice electricians may be used on not more than a 1:1 ratio with the total number of master or journeyman electricians.
- 1.8 FIELD DESIGN CHANGES
- Q. No field changes, additions, or locations shall be made without written approval. R. Current red line drawinas must be on site at all times.
- 1.9 SHOP DRAWINGS
- S. It is understood that, before the manufacture or installation of any equipment under this contract is carried forward, shop drawings of such work shall be submitted for review. It is the responsibility of the electrical contractor to check the shop drawings for detailed compliance with the contract documents. Prior to submitting the drawings for review, verify that all dimensions, contract document requirements, ballast voltages, and correlation at job site have been checked. The electrical contractor shall indicate any corrections to the shop drawings or any exceptions to the contract document requirements, by notation on the shop drawings and by cover letter. IF THIS IS NOT DONE THE DRAWINGS WILL BE RETURNED. At least eight (8) catalog sheets or shop drawings shall be submitted in ample time, no work being executed until each review has been completed.
- V. Verification of Contract Document Requirements. The Electrical Contractor shall be required to furnish shop drawings with the contract document requirements high-lighted to verify they have been checked. Items to be high-lighted include, but are not limited to:
- 18. Electrical Panels
- a. Panel number or designation
- b. Panel type c. Phase
- d. Voltage e. Flush or surface
- f. Main lug amps
- g. Main breaker amps
- h. Fault current capacity Branch circuit breakers
- 19. Lighting fixtures: items on the shop drawings that correlate to all items shown on the fixture schedule: All items in catalog number
- k. Fixture mounting I. Lamp type
- W. The review of shop drawings by the engineer is only to determine if they are in general compliance with the information given in the contract documents, and serves to determine the contractors understanding of the design concept. If some errors are detected but others are overlooked during the review this does not grant the contractor permission to proceed in error. Regardless of any information contained in the shop drawings, the requirements of the contract documents must be followed and are not waived or superseded in any way by the shop drawing review.
- X. The following shop drawings are required within 20 days after signing of the contract.
- 20. Panelboards 21. Disconnects
- 22. Lighting fixtures (coordinate with ceiling contractor) 23. Wiring Devices
- Y. One month after the contract is signed, bind and numerically index four (4) complete sets of all shop drawings and submit to the mechanical contractor for inclusion in the operation and maintenance manual. Each unit type shall have its own individual catalog sheet giving characteristics, data, dimensions, catalog numbers and parts lists. (Example: If two items of equipment A & D appear on the same sheet, an individual sheet shall be provided for each unit specified.) The manual shall be numerically indexed with an index sheet explaining the contents of each section.
- Z. The entire electrical system installed under this contract shall be left in proper working order and be in compliance with the drawings, specifications and/or authorized changes to the satisfaction of the Owner's Representative. Without additional charge, replace any work or materials which develop defects, except from ordinary wear and tear, within one year from the date of final acceptance. Exception: Incandescent and fluorescent lamps which shall be quaranteed for a period of two months from acceptance of the installation by the Owner or his agent. A written guarantee covering the above provisions shall be signed and delivered to the Architect after the project has find acceptance by the Inspecting Authority.
- PART 2 PRODUCTS 2.1 SPECIFIED PRODUCTS
- AA. The contractors under this division shall thoroughly familiarize themselves with all specified products and their application relating to their work. Any objections to the use of any specified product shall be submitted to the architect in writing prior to bidding.
- 2.2 MATERIALS AND WORKMANSHIF
- AB. All materials and equipment furnished and installed shall be of high quality, new, and meet the standards of NEMA, IPCA, LS, UL, NFPA, IBC, UOSHA, NEC, and shall bear their label wherever standards have been established and label service is available. Where materials and equipment are specified by manufacturer's name, the type and quality required is thereby denoted. The Architect shall be afforded every facility, deemed necessary to inspect and examine the materials and apparatus being installed to prove their quality, skill and competency of workmanship.
- AC. The equipment specified carries brand names and catalog numbers and shall be interpreted as establishing a standard of quality unless otherwise noted. Substitutions will be considered if a duplicate written application (2 copies) is at the offices of the Architect and Engineer at least four (4) working days prior to issue of the final addendum. The application shall

- include the following: 1) A statement declaring the equipment proposed is equal to that specified by having the same physical characteristics and dimensions and meet the drawings layout and structural conditions as well as load requirements; 2) The specified and submittal catalog numbers of the equipment under consideration; 3) A pictorial and specification
- AD. Any conflict arising from the use of substituted equipment shall be the responsibility of the contractor, who shall bear all
- costs required to make the equipment comply with the intent of the plans and specifications. AE. At the option of the Architect, samples may be required for non-standard or substituted items before installation during
- AF. No materials or apparatus shall be substituted after the bid opening except where the equipment manufacturer has been discontinued or delivery becomes a problem, then written approval of the Architect is required.
- AG. Bidding only equipment specified in the contract documents and/or approved by an addendum will be used in the base
- PART 3 EXECUTION
- 3.1 PROGRESS AND COORDINATION OF WORK
- AH. The electrical work shall be laid out in advance of construction to eliminate unnecessary cutting, drilling, channeling, etc. Where such cutting and drilling, or channeling becomes necessary for proper installation; perform with care, use skilled mechanics of the trades involved, repair damage to building and equipment at no additional cost to the Owner. Cutting work of other trades shall be done only with the consent of the General Contractor. Cutting of structural members shall be done only with the approval of the Architect.
- Al. Cooperate with other trades to coordinate locations of electrical outlets and apparatus. AJ. Before any electrical panels, disconnects & motor starters or their associated feeders are installed, the electrical contractor shall be responsible to inform all other trades on the job of the requirements of N.E.C. 110-26. If any conflicts are noted he shall notify the architect immediately, along with notification in writing. No additional cost, to the job under the electrical contract, will be allowed for relocating electrical panels after installation.
- AK. Perform for other trades the electrical wiring and connections for all devices or apparatus where not specified herein or indicated on the drawings. Consult the Architectural and Mechanical drawings to avoid the location of switches, outlets and other equipment from being hidden behind doors, cabinets, counters, heating equipment, etc. Buried electrical devices and/or connections shall be relocated as directed, at no additional cost to the Owner.
- AL. Where conduit, outlets or apparatus is to be cast in concrete or encased, it must be located and secured by a journeyman or foreman present at the point of installation. He shall check the locations of the electrical items before and after the concrete and masonry installation and shall relocate displaced items.
- AM. No changes shall be made in the design or location of apparatus unless specifically approved in writing. 3.2 DRAWINGS
- AN. Architectural and Mechanical drawings are a part of the electrical work insofar as they apply, as if referred to in full. AO. Since the drawings of floor and ceiling installation are made at small scale, outlets, devices, equipment, etc., are indicated only in their approximate location, unless dimensioned. Locate outlets and apparatus symmetrically on floors, walls and ceilings where not dimensioned, and coordinate such locations with work of other trades to prevent interferences. All dimensions on the job shall be verified. Do not scale the electrical drawings, but refer to the architectural and mechanical
- AP. The standard industry symbols together with the special symbols, noted and instructions indicated on the drawings describe the work, materials, apparatus and outlets required and all are to be included as a part of this specification.
- EQUIPMENT CONNECTIONS AQ. Provide the materials and make the electrical connections to all equipment having electrical requirements as indicated in the Architectural and/or Mechanical section of the specifications and drawings. This includes Owner furnished equipment.
- 3.4 CLEAN-UP AR. Clean up all equipment, conduit, fittings, packing cartons and other debris that is a direct result of the installation of the equipment under this contract.
- 3.5 STORAGE AND PROTECTION OF MATERIALS AS. Provide storage space for storage of materials and apparatus and assume complete responsibility for all losses due to any cause whatsoever. In no case shall storage interfere with traffic conditions in any public thoroughfare or constitute a
- hazard to persons in the vicinity. Protect completed work, work underway, and apparatus against loss or damage. 3.6 EXCAVATION AND BACKFILLING AT. Do all excavating and backfilling required for installation of any and all parts of the work. Work shall be done according to
- other applicable Divisions of this specification. AU. Perform excavation in a manner to protect walls, footings and other structural members from being disturbed or damaged
- AV. All backfill shall be mechanically compacted in 6 inch layers to 95% of maximum soil density per ASTM D-1557.
- AW. All surplus earth not needed for backfilling must be removed from the premises. AX. Scope:
- 25. Trench for electrical service entrance.
- 26. Trench for telephone service entrance.
- 27. Trench for parking light installation. 28. Backfilling and compacting.
- 3.7 DEMOLITION AY. This Contractor shall be responsible for block-outs or demolition work pertaining to the installation of the electrical system. AZ Seal around all electrical equipment penetrating outside walls, roofs, unheated spaces, air plenums, etc., with Dow Corning
- BA. Seal around all electrical equipment penetrating fire walls with a noncombustible sealer approved for the purpose.
- BB. See drawings for demolition notes of existing electrical systems. 3.8 COMPLETION OF WORK AND TESTS BC. Before any underground service entrance circuits or feeder circuits are energized, make megger ground tests on the
- conductors. Record the readings along with ambient temperature and moisture conditions and submit to the Architect. BD. Submit with a letter of guarantee a record of all voltage reading and amp meter reading on all feeders and motors. If there are any abnormal conditions, they shall be brought to the attention of the Architect in writing as a part of this
- END OF SECTION 26 0001

SECTION 26 0050 - BASIC MATERIALS AND METHODS

- PART 1 GENERAL 1.1 GENERAL
- BE. All wiring shall be run concealed, except at surface mounted panels and apparatus See raceways for type of materials and additional information. All wiring shall be run in conduit unless specifically noted otherwise.
- BF. All branch circuit splices, taps, fixture connections, etc., shall be made with an approved pressure connector or wire nuts such as Ideal Spring type. Pigtails at each outlet or device box shall be 6 inches long.
- BG. Labeling: Engraved black formica w/white core labels, 1/16" thick shall be bolted on the interior and the exterior of branch panels (panel name and voltage) and the exterior of disconnect switches, motor controls, major J-boxes (power and auxiliary), push buttons, thermal switches, time switches and similar equipment. The labels shall be 1/4" high engraved letters, such as 1–1/2 HP FAN, F–1, PANEL – A BH. The phase of each feeder conductor shall be color coded at each end in panels and junction boxes.
- Bl. The Contractor is responsible for all demolition, patching and repair of all finished interior surfaces pertaining to the installation of this particular phase of work. All surfaces shall be finished (Painted, Etc.) to match the adjacent materials, finishes and color. Work shall be done by professional tradesmen on the job.
- BJ. Hard surfaces: Whenever demolition or excavation is required for installation of the electrical system, it shall be the
- responsibility of this contractor to make repairs and/or replacements of hard finish surfaces such as concrete, asphalt, etc.
- BK. The method of patching and repair should follow good construction practices and all finished surfaces shall match materials and finish wherein the demolition occurred. Coordinate with other Divisions for patching requirements. END OF SECTION 26 0050
- SECTION 26 0070 ELECTRICAL CONNECTIONS FOR EQUIPMENT
- PART 1 GENERAL

PART 3 - EXECUTION

- 1.1 RELATED DOCUMENTS
- BL. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division—1 Specification sections, apply to work of this section.
- BM. This section is a Division-26 Basic Materials and Methods section, and is part of each Division-26 section making reference to electrical connections. 1.2 DESCRIPTION OF WORK
- BN. Extent of electrical connection for equipment includes final electrical connection of all equipment having electrical requirements. Make final connections for all owner furnished equipment. See other applicable portions of specification for building temperature control wiring requirements.
- BO. Refer to Division-23 sections for motor starters and controls furnished integrally with equipment; not work of this section. BP. Refer to Division-23 section for control system wiring; not work of this section. BQ. Refer to sections of other Divisions for specific individual equipment power requirements.
- 1.3 QUALITY ASSURANCE BR. NEC Compliance: Comply with applicable portions of NEC as to type products used and installation of electrical power connections.
- BS. UL-Labels: Provide electrical connection products and materials which have been UL-listed and labeled. PART 2 - PRODUCTS 2.1 GENERAL
- BT. For each electrical connection indicated, provide complete assembly of materials, including but not necessarily limited to, raceways, conductors, cords, cord caps, wiring devices, pressure connectors, terminal (lugs), electrical insulating tape, heat-shrinkable insulating tubing, cable ties, solderless wire nuts, and other items and accessories as needed to complete splices, terminations, and connections as required. See Section 260110, Conduit Raceways; Section 260140 Wiring Devices; and Section 260120 Wire and Cables for additional requirements. Provide final connections for equipment consistent with the
- 30. Permanently installed fixed equipment flexible seal-tite conduit from branch circuit terminal equipment, or raceway, to equipment, control cabinet, terminal junction box or wiring terminals. Totally enclose all wiring in raceway. 31. Movable and/or portable equipment — wiring device, cord cap, and multi-conductor cord suitable for the equipment and

in accordance with NEC requirements (Article 400). Provide 5 foot cords for washers, dryers, ranges and disposals.

- 32. Other methods as required by the National Electrical Code and/or as required by special equipment of field conditions. BU. All electrical equipment for power connections, required for operation of mechanical equipment not furnished as an integral part of that equipment shall be furnished and installed under Division 26.
- 3.1 INSTALLATION OF ELECTRICAL CONNECTIONS BV. Make electrical connections in accordance with connector manufacturer's written instructions and with recognized industry

- practices, and complying with requirements of NEC and NECA's "Standard of Installation" to ensure that products fulfill
- BW. Connect electrical power supply conductors to equipment conductors in accordance with equipment manufacturer's written
- instructions and wiring diagrams. BX. Coordinate installation of electrical connections for equipment with equipment installation work.
- BY. Verify all electrical loads (voltage, phase, full load amperes, number and point of connections, minimum circuit ampacity, etc.) for equipment furnished under other Divisions of this specification, by reviewing respective shop drawings furnished under each division. Meet with each subcontractor furnishing equipment requiring electrical service and review equipment electrical characteristics. Report any variances from electrical characteristics noted on the electrical drawings to Architect before proceeding with rough—in work.
- BZ. Obtain and review the equipment shop drawings to determine particular final connection requirements before rough—in begins for each equipment item CA. Location of disconnect switches as shown on the drawings is approximate. Electrical contractor is responsible for proper
- location for required code clearances.
- CB. Electrical contractor to verify motor sizes with mechanical before ordering overload heaters for starters. CC. Refer to Section 260120, Conductors, for identification of electrical power supply conductor terminations.
- SECTION 26 0110 CONDUIT RACEWAYS
- PART 1 GENERAL 1.1 RELATED DOCUMENTS

END OF SECTION 26 0070

- A Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.
- B. This section is a Division—26 Basic Materials and Methods section, and is part of each Division—26 section making reference to electrical raceways and specified herein.
- 1.2 DESCRIPTION OF WORK C. Extent of raceways is indicated by drawings and schedules.
- D. Types of raceways in this section include the following: Electrical Metallic Tubing
- 2. Flexible Steel Conduit
- 3. Liquid—tight Flexible Steel Conduit
- 4. Rigid Metal Conduit 5. Plastic Rigid Conduit
- 1.3 QUALITY ASSURANCE E. Manufacturers: Firms regularly engaged in manufacture of raceway systems of types and sizes required, whose products
- have been in satisfactory use in similar service for not less than three (3) years. F. Standards: Comply with applicable portions of NEMA standards pertaining to raceways. Comply with applicable portions of UL safety standards pertaining to electrical raceway systems; and provide products and components which have been UL—listed and labeled. Comply with NEC requirements as applicable to construction and installation of raceway systems.
- G. Submittals: Not required. PART 2 - PRODUCTS H. Provide and install raceways for the electrical system as shown on the plans, or as required by N.E.C. The raceways shall
- be concealed except at surface mounted panels and/or apparatus and open truss ceilings. Minimum conduit size is 3/4". I. Acceptable raceways (metallic conduit to be galvanized):
- 6. Calvanized Rigid Conduit (GRC) may be used in all locations. When installed in earth, cover with one layer of scotch 7. Electrical Metallic Tubing (EMT) — may be used in indoor, dry locations not subject to damage, not in contact with
- earth, and not embedded in the concrete floor slab (slab on earth grade only). EMT shall not be used outdoors. 8. Plastic Rigid Conduit (PVC) — PVC schedule 40 may be used underground, or below concrete. (See ground conductors). All bends greater than 30 degrees shall be GRC. (This includes rising up through the floor). All connections to concrete or structure shall be a minimum of 10' of GRC at the end of the PVC run. All conduits passing horizontally through concrete shall be GRC for 5' before and after passing through the concrete (not applicable to stub up through
- floor slab). All underfloor conduits shall be run below the concrete slab. 9. Flexible Steel Conduit: 1/2" minimum used for indoor final connections to equipment.
- 10. Liquid Tight Flexible Steel Conduit: 1/2" minimum used for outdoor final connections to equipment.
- J. All exposed conduit shall be installed parallel with or at right angles to the building structure lines. Raceways above ceilings in accessible attics shall be considered as exposed installations. K. All branch circuit conduit runs shall be installed concealed in walls and ceilings. Conduit installation in existing walls that
- requires cutting and patching shall have patch and finish work done under the Division 26 contract. All work shall be done by the professional finish subcontractor on the job and shall subcontract the work under the Division 26 subcontractor. L. When installing conduit, all cuts shall be smooth and square with the run and inside and outside burrs removed. Conduit
- joints in concrete or in the earth shall be made water tight with compound seal. M. Install accessible junction boxes or condulets in conduit runs as required by NEC, and at 100 ft. intervals on long runs. Each junction box shall be supported independent of the conduit. Support vertical conductor runs per NEC 300-19.
- N. The open ends of conduit shall be capped to keep out debris until the project is complete. O. All mechanical exterior equipment shall be connected with vinyl covered flexible conduit with accompanying grounding
- P. Pull a mandril and swab through all conduit before installing conductors. Q. All empty conduit shall be left with a 200-lb. nylon pull cord installed.
- R. 3/8" steel flex may be used for single connections to recessed light fixtures. END OF SECTION 26 0110
- SECTION 26 0120 CONDUCTORS AND CABLES
- PART 1 GENERAL
- 1.1 RELATED DOCUMENTS S. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division—1 Specification
- sections, apply to work of this section. T. This section is a Division-26 Basic Materials and Methods section, and is part of each Division-26 section making reference to conductors and cables specified herein.
- 1.2 DESCRIPTION OF WORK U. Extent of electrical conductor and electrical cable work is indicated by drawings and schedules.
- V. Types of conductors and cables in this section include the following: 11. Copper conductors (600V)
- W. Applications for conductors and cables required for project include:
- 12. Power Service and Distribution
- 14. Branch Circuits 1.3 QUALITY ASSURANCE X. Comply with NEC as applicable to construction and installation of electrical conductors and cable. Comply with UL standards
- and provide electrical conductors and cables which have been UL-listed and labeled. Y. Comply with applicable portions of NEMA/Insulated Cable Engineers Association standards pertaining to materials, construction
- and testing of conductors and cable Z. Comply with applicable portions of ANSI/ASTM and IEEE standards pertaining to construction of conductors and cable.
- 1.4 SUBMITTALS AA. Product Data: Submit manufacturer's data on electrical wire, cable and connectors.
- PART 2 PRODUCTS AB. COPPER CONDUCTORS (600V): insulation types THHN, THWN, XHHW as required by application. AC. Provide factory-fabricated conductors of sizes, ratings, materials, and types indicated for each service. Where not indicated
- provide proper selection to comply with project's installation requirements and NEC standards. AD. Provide color and coding of conductors as follows: 15. Wire sizes of #8 and smaller shall be factory colored throughout. Larger conductors shall be identified with a minimum
 - of 6" of color wrapped tape at junction boxes and termination. <u>120/208V</u> A-Phase - Black B-Phase - Red C-Phase - Blue Neutral - White
- Ground Green 16. Switch legs and travellers shall be colors other than those listed above. AE. Unless more stringent requirements are noted on the drawings,_provide #10 conductors for branch circuits for which the distance from panelboard to furthest outlet is more than 75' for 120 volt, or more than 140' for 277 volt circuits.
- PART 3 EXECUTION 3.1 INSTALLATION AF. Ceneral: Install electrical conductors and cables as indicated, in compliance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standards of Installation", and in accordance with recognized industry practices.

AG. Coordinate installation work with electrical raceway and equipment installation work, as necessary for proper interface.

Al. Keep conductor splices to minimum. AJ. Install splices and tapes which have mechanical strength and insulation rating equivalent—or—better than conductor. AK. Use splice and tap connectors which are compatible with conductor material.

AH. Use pulling compound or lubricant, where necessary, compounds must not deteriorate conductor or insulation.

- AL. Prior to energization, test cable and wire for continuity of circuitry, and also for short circuits. Correct malfunctions when AM. Subsequent to wire and cable connections, energize circuitry and demonstrate functioning in accordance with requirements. AN. Provide a full sized ground wire in all paralleled conduits per NEC 250-122.
- SECTION 26 0135 ELECTRICAL BOXES AND FITTINGS
- PART 1 GENERAL 1.1 RELATED DOCUMENTS

END OF SECTION 26 0120

3.2 FIELD QUALITY CONTROL

AO. Drawings and general provisions of Contract, including general and Supplementary Conditions and Division—1 Specifications sections, apply to work of this section.

- AP. This section is a Division—26 Basic Materials and Methods section, and is a part of each Division—26 section making
- reference to electrical wiring boxes and fittings specified herein. See Section 260110, Raceways, for additional requirements.
- AQ. Extent of electrical box and electrical fitting work is indicated by drawings and schedules.
- AR. Types of electrical boxes and fittings in this section include the following: 19. Outlet boxes
- 20. Junction boxes 21. Pull boxes
- 22. Conduit bodies
- 23. Bushings 24. Locknuts 25. Knockout dosures
- 26. Miscellaneous boxes and fittings 1.3 QUALITY ASSURANCE
- AS. Comply with NEC as applicable to construction and installation of electrical boxes and fittings. Comply with ANSI C 134.1 (NEMA Standards Pub No. OS 1) as applicable to sheet-steel outlet boxes, device boxes, covers and box supports. Provide electrical boxes and fittings which have been UL—listed and labeled.
- 1.4 SUBMITTALS
- AT. None required. PART 2 - PRODUCTS
- 2.1 FABRICATED MATERIALS AU. Fittings: Compression or set screw type (screws must have a full set) connectors and couplings used on EMT shall be
- steel. INDENTER TYPE OR DIE CAST FITTINGS ARE NOT ACCEPTABLE. AV. Clamp type malleable iron fittings shall be used for standard steel flex conduit. AW. Interior Outlet Boxes: Provide one piece, galvanized flat rolled sheet steel interior outlet wiring boxes, of types, shapes and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts in back and
- sides, and with threaded screw holes with corrosion-resistant screws for securing box covers and wiring devices; minimum depth 2-1/8". Boxes shall be sized as required to meet N.E.C. requirements for number of conductors in boxes. AX. Interior Outlet Box Accessories: Provide outlet box accessories as required for each installation, including mounting brackets,
- hangers, extension rings, fixture studs, cable clamps and metal straps for supporting outlet boxes, which are compatible with outlet boxes being used and fulfilling requirements of individual wiring applications. AY. Weatherproof Outlet Boxes: Provide corrosion—resistant cast—metal weatherproof outlet wiring boxes, of types, shapes and
- sizes (including depth) required, with threaded conduit ends, cast aluminum weatherproof in—use covers compatible with GFO receptades. Provide weather resistant aaskets and stainless steel screws. AZ. Junction and Pull Boxes: Provide code-gage sheet steel junction and pull boxes, with screw-on covers; of types, shapes
- and sizes to suit each respective location and installation; with welded seams and equipped with stainless steel nuts, bolts,
- BA. Conduit Bodies: Provide galvanized cast—metal conduit bodies, of types, shapes and sizes to suit respective locations and installation, construct with threaded-conduit-entrance ends, removable covers, and corrosion-resistant screws. BB. Bushings, Knockout Closures and Locknuts: Provide corrosion-resistant punched-steel box knockout closures, conduit locknuts and malleable iron conduit bushings and offset connectors, of types and sizes to suit respective uses and
- installation. PART 3 - EXECUTION

BE. All connectors shall have insulated throats.

- 3.1 INSTALLATION OF ELECTRICAL BOXES AND FITTINGS BC. General: Install electrical boxes and fittings where indicated, complying with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in compliance with recognized industry practices to ensure
- that products fulfill requirements. BD. Raceway expansion fittings shall be installed on all runs that cross a building expansion joint. This shall include provisions for the safe movement of contained conductors.
- BF. Switch, Telephone, Sound, Television and Receptade Outlet Boxes: Shall be a minimum of 4" Square, 2 1/8" deep, with deep adapting plaster rings set flush with the finished surfaces. A gang box (nonsectional) shall be used where more than two switches or devices are located at one point. Care and good coordination will be required to install boxes flush with the wall surface.
- BG. Coordinate depth of all outlet boxes with architectural finish schedule so outlet box is flush with finish surface. BH. Outlet boxes shall be mounted at convenience outlet height unless otherwise indicated on the drawings or required by
- Bl. Standard switch box height shall be 48" to top of box and convenience outlet height 16" to bottom of box unless otherwise indicated on drawings or required by millwork or architectural details. BJ. Coordinate installation of electrical boxes and fittings with wire/cable and raceway installation work.
- BK. Provide cover plates for all boxes. See Section 260140, Wiring Devices. BL. Provide weatherproof outlets for interior and exterior locations exposed to weather or moisture. Use cast metal in-use
- BM. Provide knockout closures to cap unused knockout holes where blanks have been removed. BN. Install boxes and conduit bodies to ensure ready accessibility of electrical wiring. Install recessed boxes with face of box or ring flush with adjacent surface. BO. Fasten boxes rigidly to substrates or structural surfaces to which attached, or solidly embed electrical boxes in concrete or masonry. USE BAR HANCERS FOR STUD CONSTRUCTION. Use of nails for securing boxes is prohibited. Set boxes on
- opposite sides of common wall with minimum 10" of conduit between them. BP. Provide electrical connections for installed boxes.
- END OF SECTION 26 0135

PART 2 - PRODUCTS

PART 3 - EXECUTION

for equipment mounted on vibration isolators.

devices with other work.

- SECTION 26 0136 SUPPORTING DEVICES
- PART 1 GENERAL 1.1 RELATED DOCUMENTS BQ. Drawings and general provisions of Contract including Ceneral and Supplementary Conditions and Division—1 Specification
- BR. This section is a Division—26 Basic Materials and Methods section, and is a part of each Division—26 section making reference to supports, anchors, sleeves, and seals specified herein.
- 1.2 DESCRIPTION OF WORK BS. Extent of supports, anchors and sleeves is indicated by drawings and schedules and/or specified in other Division—26 sections. See Section 260110, Raceways, for additional requirements.
- BT. Work of this section includes, supports, anchors, sleeves and seals required for a complete raceway support system, including but not limited to: clevis hangers, riser clamps, C-clamps, beam clamps, one and two hole conduit straps, offset conduit damps, expansion anchors, toggle bolts, threaded rods, U-channel strut systems, all associated accessories, and seismic bracing for electrical equipment. Nail drive straps for supporting conduit are prohibited. 1.3 QUALITY ASSURANCE
- BU. Comply with NEC as applicable to construction and installation of electrical supporting devices. Comply with applicable requirements of ANS/NEMA Std Pub No. FB 1, "Fittings and Supports for Conduit and Cable Assemblies". Provide electrical components which are UL-listed and labeled. Comply with the latest edition of the Uniform Building Code for seismic
- 2.1 MANUFACTURED SUPPORTING DEVICES BV. General: Provide supporting devices; complying with manufacturer's standard materials, design and construction in accordance with published product information, and as required for a complete installation; and as herein specified. See drawings for additional requirements.
- 3.1 SEISMIC RESTRAINTS BW. Anchor and brace all electrical equipment for UBC seismic zone 3. Provide supports designed to withstand lateral and vertical "q" loadings equal to or greater than UBC requirements for equipment that is secured to the building or structure. Provide seismic restraints capable of resisting horizontal and vertical "g" loadings equal to or greater than UBC requirements
- BX. Install seismic supports on all T-Bar type fixtures consisting of galvanized 10 ga. wires connected from two corners of the fixture to structure. 3.2 INSTALLATION OF SUPPORTING DEVICES BY. Install hangers, anchors, sleeves, and seals as required, in accordance with manufacturer's written instructions and with
- recognized industry practices to insure supporting devices comply with requirements. Comply with requirements of NECA, NEC and ANSI/NEMA for installation of supporting devices. BZ. Coordinate with other electrical work, including raceway and wiring work, as necessary to interface installation of supporting
- CA. Install hangers, supports, clamps and attachments to support piping properly from building structures. Arrange for grouping of parallel runs of horizontal conduits to be supported together on trapeze type hangers where possible. CB. Raceways: Support raceways which are rigidly attached to structure at intervals not to exceed 5 feet on center and within 12" of each horizontal bend and vertical 90N bend, junction box, outlet or fitting. Support raceway (as it is installed) in accordance with the following: NUMBER OF RUNS 1-1/2" & LARGER

Hanger

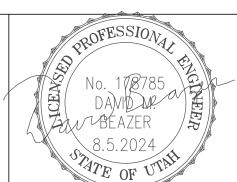
Full straps, damps

or hangers.

- Full straps, clamps Mounting Channel or hanaers. Mounting Channel 3 or more Mounting Channel CC. Support suspended raceways on trapeze hanger systems; or individually by means of threaded rod and straps, clamps, or hangers suitable for the application. Do not use "tie wire" as a portion of any raceway support system; do not support
- raceway from ceiling support wires. CD. All equipment mounted against a wall shall be anchored to the wall, by approved methods, at not more than 24" intervals with at least 4 anchors per piece of equipment.
- SECTION 26 0140 WIRING DEVICES
- PART 1 GENERAL 1.1 RELATED DOCUMENTS

END OF SECTION 26 0136

CE. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division—1 Specification sections, apply to work of this section.



BEAZER ENGINEERING INC. P.O. BOX 652 MILLVILLE, UTAH 84326 C 435.770.8999 david@beazer-engineering.com

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SHEET NUMBER

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1.4 SUBMITTALS OL Product Data: Submit manufacturer's data on electrical wiring devices. PART 2 - PRODUCTS

2.1 FABRICATED WIRING DEVICES

CM. General: Provide factory-fabricated wiring devices, in types, and electrical ratings for applications indicated and complying with NEMA Stds Pub No. WD 1. ON. Provide wiring devices (of proper voltage rating) as follows:

34. Convenience Outlets: (Provide Decora equal if required by Owner) Provide tamper resistant where required. Snap, BR, OR and DR series not allowed.

Isolated Ground Surge Mfgr. <u>Standard</u> <u>Resistant</u> <u>Protected</u> <u>Surge Protected</u> 8300TR Hubbell HBL5352 5352 IS IG 5352 IS P & S 5362 TR5352 5362-SGX Leviton 5362 <u>Substitute</u> <u>Substitute</u> 5352 TR6352 Cooper 35. Switches: (Provide Decora equal if required by Owner) <u>Mfgr.</u> Hubbell <u>3 way</u> HBL1223 <u> 1 pole</u> HBL1221 HBL1221-PL HBL1224 P & S Leviton 1221 1223 1224 1221-PL 1223 1224 Cooper 1221

CO. Other device manufacturers will be considered only if one convenience outlet sample is submitted to the engineer to verify eaudity with those specified prior to issuance of the final addendum.

CP. Provide devices in colors to match wall surfaces, brown, ivory, white, or gray per architects direction. Provide isolated ground outlets in ivory, orange, or gray per architect's direction.

CQ. Ground-fault Interrupter: Provide where required by code, general-duty, duplex receptacle, ground-fault circuit interrupters; grounding type UL-rated Class A, Group A, 20-amperes rating; 120-volts, 60 Hz; with solid-state ground-fault sensing and signaling; with 5 milliamperes ground-fault trip level; color as selected by Architect. Provide units of one of the following: 36. Hubbell

37. Square D 2.2 WIRING DEVICE ACCESSORIES

CT. Wall Plates: Provide coverplates for wiring devices; plate color to match wiring devices to which attached. Provide nylon coverplates in all finished areas. Provide galvanized steel plates in unfinished area. Engrave all receptade plates other than those serving 120 volt, single phase devices. State voltage and amperage characteristics. Example: "208V, 30A". PART 3 - EXECUTION

CU. Install wiring devices as indicated, in compliance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation" and in accordance with recognized industry practices to fulfill project requirements.

CV. Coordinate with other work, including painting, electrical box and wiring work, as necessary to interface installation of wiring devices with other work. Install devices in boxes such that front of device is flush and square with coverplate. Drawings are small scale and, unless dimensioned, indicate approximate locations only of outlets, devices, equipment, etc. Locate outlets and apparatus symmetrically on floors, walls and ceilings where not dimensioned and coordinate with other work. Verify all dimensioned items on job site. Consult architectural cabinet, millwork, and equipment shop drawings before beginning rough—in of electrical work. Adjust locations of all electrical outlets as required to accommodate work in area, and to avoid conflicts with wainscot, back splash, tackboards, and other items.

CW. Install blank plates on all boxes without devices. CX. Delay installation of wiring devices until wiring work is completed. Delay installation of wall plates until after painting work is completed. Provide separate neutral conductor for each circuit that serves GFI receptacles.

CY. Where dedicated equipment is connected by cord and plug, provide a single receptacle as required by code. CZ. Protection of wall plates and receptacles: At time of substantial completion, replace those items which have been

damaged, including those stained, burned and scored. DA Grounding: Provide electrically continuous, tight grounding connections for wiring devices, unless otherwise indicated.

DB. Testing: Prior to energizing circuitry, check wiring devices for electrical continuity and proper polarity connections. After energizing circuitry, test wiring devices to demonstrate compliance with requirements END OF SECTION 26 0140

SECTION 26 0160 - PANELBOARDS

PART 1 — GENERAL 1.1 RELATED DOCUMENTS

A Drawings and general provisions of Contract, including General and Supplementary Conditions and Division—1 Specification sections, apply to work of this section.

B. This section is a Division—26 Basic Materials and Methods section, and is part of each Division—26 section making reference to panelboards specified herein. 1.2 DESCRIPTION OF WORK

C. Extent of panelboard and enclosure work, is indicated by drawings and schedules.

D. Types of panelboards and enclosures in this section include lighting and appliance panelboards, and power distribution panelboards. 1.3 QUALITY ASSURANCE

E. Provide units which have been UL listed and labeled. Comply with NEC as applicable to installation of panelboards, cabinets, and cutout boxes. Comply with NEC pertaining to installation of wiring and equipment in hazardous locations. Comply with NEMA stds. Pub No. 250, "Enclosures for Electrical Equipment (1000 volt maximum)". Pub No. 1, "Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less".

1.4 SUBMITTALS

F. Product Data: Submit manufacturer data including specifications, installation instructions and general recommendations, for each type of panelboard required. G. Shop Drawings: Submit dimensioned drawings of panelboards and enclosures showing accurately scaled layouts of enclosures and required individual panelboard devices, including but not necessarily limited to, circuit breakers, fusible switches, fuses, ground—fault circuit interrupters, and accessories. Panel dimensions shown on the drawings are one manufacturer's

dimensions. Panel dimensions submitted by other manufacturers shall not exceed the panel dimensions shown on the

PART 2 - PRODUCTS

H. Acceptable Manufacturers: Subject to compliance with requirements, provide one of the following:

General Electric Company

Square D Company

6. Cutler Hammer I. Panel sizes shown on drawings are for Square D panels. If other panels are substituted, the contractor shall verify proper

dearances per N.E.C. Unless otherwise noted, main and distribution panels shall be a minimum 36" wide. J. Prior to submittals of shop drawings the panel board manufacturers representative shall make a field visit to verify that existing panels have available space for the new breakers called for on the drawings and that the proper frame breakers will be supplied.

sizes, and ratings indicated. Equip with number of unit panelboard devices as required for complete installation. Fully equip "spaces" with hardware to receive breaker or switch of size indicated. L. Power Distribution Panelboards: Provide dead-front safety type power distribution panelboards as indicated, with switching

K. Panelboards: General: Except as otherwise indicated, provide panelboards, enclosures and ancillary components, of types,

and protective devices in quantities, ratings, types and with arrangement shown. Equip with copper bus bars, neutral bus and ground bus. Provide fusible or circuit breaker branch and main devices as indicated. M. Lighting and Appliance Panelboards: Provide dead-front safety type lighting and appliance panelboards as indicated, with

switching and protective devices in quantities, ratings, types, and arrangement shown. Provide bolt—on thermal magnetic type branch breakers. Where multiple breakers are indicated provide with common trip handle. Equip with copper bus bars, neutral bus, and ground bus. N. All breakers in the main distribution panels shall have sufficient interrupting capacity to safely interrupt the available short

circuit current from the transformer bank, as noted on the drawings. Panels and breakers are to be fully rated unless O. Manufacturer: All distribution and branch panels, breakers, and associated equipment shall be of the same manufacturer.

P. Buss bracing shall be as required to handle fault current as shown on the drawings.

Q. "Space" denotes a space fully equipped to receive a breaker of the type noted. R. Panelboard Enclosures: Provide galvanized sheet steel cabinet type enclosures, in sizes and NEMA types as indicated, code-gage minimum 16-gage thickness. Provide fronts with adjustable indicating trim clamps, and doors with flush locks and keys, all panelboard enclosures keyed dike, with concealed door hinges and door swings as indicated. Equip with interior circuit—directory frame, and card with clear plastic covering. Provide baked gray enamel finish over a rust inhibitor. Provide enclosures fabricated by same manufacturer as overcurrent devices contained therein. Bolt engraved Formica labels

indicating panel name and voltage on the interior and exterior of panelboards. S. Finish: Coat interior and exterior of surface with manufacturer's standard color; baked on enamel finish.

T. Identification: Provide 1/16" thick black Formica labels with 1/4" high white lettering on the interior of each panelboard; include panelboard name and voltage. Provide red Formica labels on emergency system panels.

PART 3 - EXECUTION

3.1 INSTALLATION OF PANELBOARDS V. General: Install panelboards and enclosure where indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", in compliance with recognized industry practices to ensure products fulfill requirements.

W. Panelboard Makeup: In making up a panel, the conductors shall be neatly formed therein. Wires shall be protected from sharp metal edges or corners. X. Coordinate installation of panelboards and endosures with cable and raceway installation work. Anchor endosures firmly to

walls and structural surfaces, ensuring they are permanently and mechanically secure. Arrange conductors neatly within

enclosure, and secure with suitable nylon ties.

Y. Branch panels shall generally be installed with the top of the panel at 6 ft. above floor.

Z. Fill out panelboard's circuit directory card upon completion of installation work. Utilize actual final building room numbers, not architectural numbers used on drawings. Identify individual lighting circuits and individual receptacle circuits by room served. Include room number with equipment circuit designations. All directories to be typewritten. AA. Provide stand off wall brackets for surface wall mounted panels and/or gutters as required to bring front edges flush with

each other as required by NEC 110-16A.

AB. Provide identification of disconnecting means as required by NEC 225-37 or 230-2.

AC. All subpanels shall be labeled to identify the main panel that supplies the feeder circuit. AD. All feeder circuit breakers shall be labeled to identify the location of the subpanel or equipment supplied.

AE. Where more than one voltage system is used in a building identify color coding at each panel per NEC 210—4D. Fasten engraved plastic identification label, with black background and white lettering, to panel cover.

AF. Electrical Contractor shall verify the fit and required N.E.C. dearances of the equipment in the main electrical room(s) with shop drawings before the installation of service and feeder conduits.

SECTION 26 0420 - SERVICE ENTRANCE

PART 1 - GENERAL 1.1 RELATED DOCUMENTS

END OF SECTION 26 0160

AG. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification

sections, apply to work of this section. AH. Division—26 Basic Materials and Methods sections apply to work specified in this section.

1.2 DESCRIPTION OF WORK

Al. Extent of service-entrance work is indicated by drawings and schedules.

AJ. Switchboards, panels, disconnects, transformers, etc., used for service-entrance equipment are specified in applicable Division-26 sections, and are included as work of this section.

AK. Consult local utility relative to all costs for line extensions, connections, etc., and include all costs for bringing service to

the facility in base bid. Confirm location of point of service before bidding. AL. Provide labor and materials as required to accomplish power company metering in accordance with power company standards

AM. Provide concrete pads or vaults of size and type required for service transformers including any utility required primary conduit stub outs. Verify location, size, openings, reinforcing requirements with local utility before beginning work. Comply with local utility dearance requirements. Location of pads shown on the drawings are approximate only.

AN. Comply with NEC and NEMA standards as applicable to construction and installation of service—entrance equipment and accessories. Provide service-entrance equipment and accessories which are UL-listed and labeled, and equipment marked, "Suitable for use as Service Equipment".

AO. Product Data: Submit manufacturer's data on service—entrance equipment and accessories.

AP. Shop Drawings: Submit dimensioned layouts of service-entrance equipment and spatial relationships to proximate equipment. AQ. Maintenance Stock, Fuses: For types and ratings required, furnish additional fuse, amounting to one unit for every 2 installed units, but not less than one unit of each.

PART 2 - PRODUCTS 2.1 SERVICE - ENTRANCE EQUIPMENT

1.4 SUBMITTALS

AR. General: Provide service-entrance equipment and accessories of types, sizes, ratings and electrical characteristics indicated, which comply with manufacturer's standard materials, design and construction in accordance with published product information, and as required for complete installation, and as herein specified. Each service disconnect shall be marked to identify it as a service disconnecting means. Where more than one service disconnect is used, all disconnects shall be labeled as required by NEC. 2.2 OVERCURRENT PROTECTIVE DEVICES

AS. General: Provide overcurrent protective devices as indicated on drawings.

AT. Meter Sockets and Current Transformer cabinets: Provide meter sockets and current transformer cabinets which comply with requirements of local utility company supplying electrical power to service-entrance equipment of building project. 2.3 RACEWAYS AND CONDUCTORS

AU. General: Provide raceways and conductors complying with applicable Division—26 Basic Materials and Methods sections. AV. Wall and Floor Seals: Provide wall and floor seals complying with Division—26 Basic Materials and Methods section "Raceways".

PART 3 - EXECUTION 3.1 INSTALLATION

AW. Provide and install an electric service to the facility as shown on the drawings and specified herein. The electrical contractor shall be responsible for any cost assessed by the serving utility to provide an electric service as shown on the

plans and/or specified herein. AX. The service metering shall be as per the local power company or as specified herein.

AY. Construction Lighting and Power shall be arranged for as specified under the General Conditions. AZ. Before purchase of any service entrance equipment the contractor shall review with the power company the proposed service

as shown on the drawings and the probable date when the service connection from the power company will be needed. BA. Transformer Pad: The electrical contractor shall be responsible to confirm the transformer pad & specifications, and degrance from other equipment and structures with the serving power company before beginning installation.

BB. Installation of Service-entrance Equipment: Install service-entrance equipment as indicated, in accordance with equipment manufacturer's written instructions, and with recognized industry practices, to ensure that service-entrance equipment fulfills requirements. Comply with applicable installation requirements of NEC and NEMA standards.

BC. Coordinate with other work, including utility company wiring, as necessary to interface installation of service-entrance equipment work with other work. BD. Install all floor standing service equipment on 4" high concrete curb and bolt equipment to curb with 5/8" anchors at each

corner and at intervals not to exceed 48" along perimeter. Install wiring trench under floor standing equipment; 12" deep, and 4" smaller in length and width than equipment base. Install grounding bushings on conduits penetrating trench. BE. Grounding: Provide system and equipment grounding and bonding connections for service—entrance equipment and

conductors, as required.

BF. Adjust and clean: Adjust operating mechanisms for free mechanical movement. BG. Touch-up scratched or marred enclosure surfaces to match original finishes.

BH. Provide a neutral from the service transformer to all main service disconnects including 3 phase service disconnects for motor circuits whether or not they are shown on the drawings.

Bl. Provide bonding bushings on all conduits. BJ. Field Quality Control: Upon completion of installation of service-entrance equipment and electrical circuitry, energize circuitry and demonstrate capability and compliance with requirements. Where possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units, and proceed with retesting.

SECTION 26 0452 - GROUNDING PART 1 - GENERAL

END OF SECTION 26 0420

1.1 RELATED DOCUMENTS BK. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division—1 Specification sections, apply to work of this section. BL. Division—26 Basic Materials and Methods sections apply to work specified in this section.

1.2 DESCRIPTION OF WORK BM. Provide grounding as specified herein, and as indicated on drawings.

BN. Types of grounding in this section include the following:

15. Underground metal water piping 16. Metal building frames

to all available electrodes per N.E.C. 250-50.

17. Grounding electrodes 18. Grounding rods 19. Service equipment

20. Endosures 21. Systems 22. Equipment

23. Other items indicated on drawings CH. Requirements of this section apply to electrical grounding work specified elsewhere in these specifications.

1.3 QUALITY ASSURANCE

a. Comply with NEC as applicable to electrical grounding and ground fault protection systems. Comply with applicable ANSI and IEEE requirements. Provide products which have been UL listed and labeled. 1.4 SUBMITTALS

CJ. None required. PART 2 - PRODUCTS

CK. Materials and Components: General: Except as otherwise indicated, provide each electrical grounding system as specified herein, and as shown on drawings, including but not necessarily limited to, cables/wires, connectors, terminals (solderless lugs), grounding rods/electrodes and plate electrodes, bonding jumper braid, and other items and accessories needed for complete installation.

CL. Where Materials or Components are not otherwise indicated, comply with NEC, NEMA and established industry standards for applications indicated. CM. Electrical Grounding Conductors: Unless otherwise indicated, provide electrical grounding conductors for grounding connections

matching power supply wiring materials and sized according to NEC. CN. Ground Rods: Steel with copper welded exterior, 3/4" dia. x 10'. CO. Footing Ground: Install 20 ft. of #4 bare copper wire in footings and connect to footing rebar.

PART 3 - EXECUTION 3.1 GENERAL CP. The electrical service entrance and conduit system throughout the project shall be grounded as required by N.E.C. Connect CQ. All rotating equipment shall be grounded in compliance with the N.E.C.

CR. All plastic conduit runs shall include a grounding conductor as per N.E.C. requirements. Conduit sizes shown are for steel conduit. If plastic conduit is used the contractor shall verify conduit size to accommodate the required grounding

CS. Provide full size ground in each conduit of parallel conduit systems per N.E.C. 250–122.

CT. Separate neutrals shall be installed on all GFI breakers.

3.2 INSTALLATION OF GROUNDING SYSTEMS

CU. Install electrical grounding systems in accordance with manufacturer's written instructions and with recognized industry practices to ensure grounding devices comply with requirements.

CV. Install braided type bonding jumpers with ground damps on water meter piping to electrically bypass water meter. CW. Install clamp—on connectors only on thoroughly cleaned and metal contact surfaces, to ensure electrical conductivity and

CX. Provide grounding for the entire raceway, enclosure, equipment and device system in accordance with NEC. All non-metallic raceways shall include copper grounding conductor sized in accordance with NEC. CY. Provide service entrance grounding by means of ground rods (quantity of two, driven exterior to building), by means of bonding to water main, by means of bonding to building structural steel, and by means of footing ground. Drive ground

rods a minimum of 15 ft. apart. CZ. Install bonding bushings on all main service and feeder conduit terminations where metallic conduit connects to panels,

wireways, etc. DA Grounding electrode conductors shall be bonded to the exterior of the service equipment cabinet and interior through the grounding buss bonding strap. If metallic protection conduit is used over the grounding electrode conductor it shall be bonded to the grounding electrode at the point of entrance with a UL approved fitting. The conduit shall be continuous from the point of conductor entry to the service equipment cabinet where the conduit shall penetrate the cabinet and be secured with double lock nuts. The secondary conductor raceway between the transformers and the service equipment shall not be bonded to the transformer primary and secondary grounding system at the transformer and shall be electrically isolated from the transformer enclosures and ground system.

DB. See drawings for additional grounding requirements. END OF SECTION 26 0452

SECTION 26 0510 - INTERIOR AND EXTERIOR BUILDING LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS A Drawings and general provisions of Contract, including General and Supplementary Conditions and Division—1 Specification

sections, apply to work of this section. B. Division—26 Basic Materials and Methods sections apply to work specified in this section.

1.2 DESCRIPTION OF WORK Extent of interior and exterior lighting fixture work is indicated by drawings and schedules.

D. Types of lighting fixtures in this section include the following:

1.3 QUALITY ASSURANCE E. Comply with NEC, NEMA and ANSI 132.1 as applicable to installation and construction of lighting fixtures. Comply with NEC 410-64C for all recessed incandescent light fixtures. Provide lighting fixtures which have been UL-listed and labeled.

F. CBM Labels: Provide fluorescent—lamp ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label.

1.4 SUBMITTALS

G. Product Data: Submit manufacturer's data on interior and exterior building lighting fixtures. H. Shop Drawings: Submit dimensioned drawings of lighting fixtures. Submit fixture shop drawings in booklet form with separate sheet for each fixture, assembled in luminaire "type" numerical order, with proposed fixture and accessories clearly indicated on each sheet. PART 2 - PRODUCTS

2.2 INTERIOR AND EXTERIOR LIGHTING FIXTURES

I. General: Provide lighting fixtures, of sizes, types and ratings indicated complete with, but not necessarily limited to, housings, lamps, lamps holders, reflectors, ballasts, starters, and wiring. Label each fixture with manufacturer's name and catalog number. Provide all enclosed fixtures with positive latch mechanisms; spring tension dips not acceptable. Provide all exterior fixtures with damp or wet location label as required by application.

J. Outdoor light fixtures: Recessed soffit lights and entrance lights shall be provided as noted on the plans and in compliance with the conditions heretofore covered. Emergency light battery packs shall be connected to the same circuit that the serves the light fixture it is in, and connected so as to be able to operate in the test mode when the normal switch leg is turned onl. K. Where the light fixture schedule indicates "Color per Architect" this shall be interpreted as requiring a non-standard color.

L. Support Requirements: Provide all pendant and stem hung fixtures with flexible ball joint hangers rated for seismic zone 3 at all points of support. Equip hooks used to hang fixtures with safety latches. Provide all detachable fixture parts, luminous ceiling accessories, louvers, diffusers, lenses, and reflectors with locking catches, screws, safety chain, or safety

M. Diffusers: Where plastic diffusers are specified, provide 100 percent virgin acrylic compound; minimum thickness, .125 inches. Provide a spare set of diffusers (acrylic and/or glass only) for each fixture type and one for each additional 10 fixtures of each type; not to exceed 10 spares for any single fixture type.

3.1 INSTALLATION OF LIGHTING FIXTURES:

PART 3 — EXECUTION

V. Install lighting fixtures at locations and heights as indicated, in accordance with fixture manufacturer's written instructions, applicable requirements of NEC, NECA's "Standard of Installation", NEMA standards, and with recognized industry practices to ensure that lighting fixtures fulfill requirements.

W. Seismic bracing: Provide galvanized chain braces on all chain pendant hung light fixtures (pendant length greater than 12") to prevent swaying in any direction. On continuous row installations provide "4 direction" bracing every 16 feet.

X. All recessed light fixtures mounted in fire rated ceiling (See architectural drawings) shall have a fire rated cover installed over them per the ceiling manufacturers recommendation, and shall have ballasts approved for installation under such covers. Y. Coordinate with other work as appropriate to properly interface installation of lighting fixtures with other work. Consult architectural reflected ceiling plan for exact location of all lighting fixtures.

Z. Provide all necessary supports, brackets, and miscellaneous equipment for mounting of fixtures. Support all ceiling mounted fixtures from the building structure; independent of the ceiling system, unless noted. Support each recessed T-bar mount fixture (fluorescent incandescent, and/or HID) from the building structure with #10 ga. steel wire attached to each corner (in addition to supports normally provided for attachment to the ceiling system). Provide backing supports above (or behind) sheetrock, plaster and similar ceiling and wall materials. Support surface mounted ceiling fixtures from channel. Support ceiling mounted outlet boxes independent of the raceway system, and capable of supporting 200 pounds. See plans

for additional details.

AA. Fixture support by toggle bolts through sheetrook is not acceptable. AB. Coordination Meetings: Meet with the General Contractor and the ceiling installer before submittal of shop drawings to coordinate each light fixture mounting condition with ceiling type and thickness. Coordinate fixture layout in each area.

Adjust fixture mount as required by thickness of ceiling for proper fixture trim installation AC. Meet with Mechanical: Meet with the mechanical installer prior to fabrication and installation of duct work. Coordinate depth and location of all recessed fixtures and duct work in all areas.

AD. Adjust and Clean: The contractor shall take care to keep all light fixtures and lenses clean during construction. The engineer will require all dusty or dirty fixtures and lenses to be cleaned for final construction review. AE. Protect installed fixtures from damage during remainder of construction period. Repair all nicks and scratches to

appearance of original finish. 3.2 FIELD QUALITY CONTROL AF. Upon completion of installation of lighting fixtures, and after building circuitry has been energized, apply electrical energy to demonstrate capability and compliance with requirements. Where possible, correct malfunctioning units at site, then retest

AG. At the time of Substantial Completion, replace lamps in interior lighting fixtures which are observed to be noticeably

dimmed after the Contractor's use and testing, as judged by Architect/Engineer. In addition, furnish stock or replacement lamps amounting to 15 percent (but not less than one lamp) of each type and size used. Deliver replacement stock as directed to Owner's storage space. AH. Grounding: Provide tight equipment grounding connections for each lighting fixture.

Al. Meet with the General Contractor before the submittal of shop drawings to coordinate each light fixture mounting condition

to demonstrate compliance; otherwise remove and replace with new units, and proceed with retesting.

with ceiling type and thickness. Adjust fixture type or mount as required by ceiling type or thickness for proper installation. END OF SECTION 26 0510

SECTION 26 0740 - TELEPHONE AND COMPUTER (RACEWAYS)

PART 1 — GENERAL 1.1 RELATED DOCUMENTS AJ. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division—1 Specification

sections, apply to work of this section. AK. Division-26 Basic Materials and Methods sections apply to work specified in this section.

1.2 DESCRIPTION OF WORK AL. Extent of telephone and computer system work is indicated by drawings and is hereby defined to include, but not be limited to raceway, j-boxes, outlets, device plates, backboards, cabinets, grounding and miscellaneous items required for

AM. Refer to other Division—26 sections for requirements for raceways, trays, boxes and fittings, wiring devices (plates), and supporting devices, and other sections, as applicable. 1.3 QUALITY ASSURANCE

AN. Comply with applicable portions of NEC as to type products used and installation of components. Provide products and materials which have been UL-listed and labeled. PART 2 - PRODUCTS

AO. General: Provide complete raceway system for telephone and computer including but not limited to, raceway, j-boxes, outlets, device plates, backboards, cabinets, grounding and miscellaneous items as required. AP. Provide plywood terminal backboards, $4' \times 8' \times 3/4"$ unless noted otherwise.

PART 3 - EXECUTION

3.1 INSTALLATION OF TELEPHONE AND COMPUTER RACEWAY SYSTEM AQ. General: Install raceway system as indicated to comply with NEC and recognized industry practices. Run 3/4" conduit from each outlet to terminal backboard, tray, or terminal cabinet or as otherwise noted. Provide nylon pull cord in all

END OF SECTION 26 0740

installed raceways. Install cover plates.





BEAZER ENGINEERING INC. P.O. BOX 652 MILLVILLE, UTAH 84326 C 435.770.8999 david@beazer-engineering.com

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DATE

Aug 5, 2024

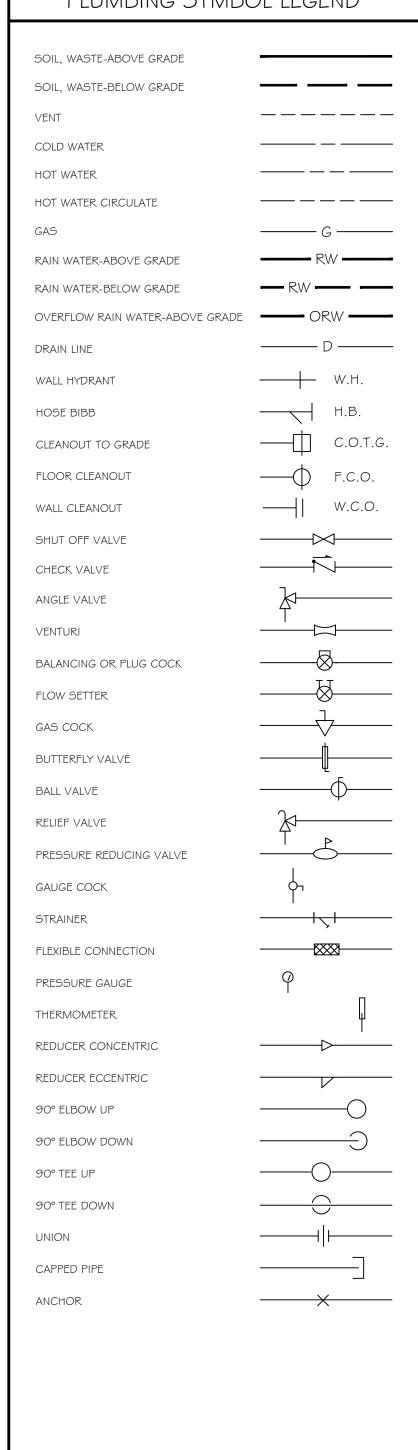
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PROJECT NUMBER

REVISIONS

SHEET NUMBER

ESP1.2



PLUMBING ABREVIATIONS

NO NUMBER

OUNCE

PSIG PSI GAUGE

PRESS PRESSURE

PSIA PSI ABSOLUTE

PD PRESSURE DROP

SCW SOFT COLD WATER

SF SAFETY FACTOR

SEA LEVEL

SPEC SPECIFICATION(S)

RECIRCRECIRCULATE

RW RAIN WATER

SQ SQUARE

SPLY SUPPLY TEMP TEMPERATURE

STD STANDARD

TIME

VENT VENT, VENTILATION

VAC VACUUM

VERT VERTICAL

VOL VOLUME WTR WATER

WT WEIGHT

YR YEAR

PSI POUNDS PER SQUARE INCH

RPM REVOLUTIONS PER MINUTE

TEMP. DROP OR DIFF.

THERMAL RESITANCE

BHP BRAKE HORSE POWER NTS NOT TO SCALE

BTU BRITISH THERMAL UNIT

CLG COOLING

(E) EXISTING

EFF EFFICIENCY

ELEV ELEVATION

(F) FUTURE

F FARENHEIT

GAL GALLON(S)

HD HEAD

HT HEIGHT

HTG HEATING

LG LENGTH

MAX MAXIMUM

MIN MINIMUM NO NORMALLY OPEN

HP HORSE POWER

NC NORMALLY CLOSED

N/A NOT APPLICABLE

NIC NOT IN CONTRACT

HW HOT WATER

CW COLD WATER

DP DEPTH OR DEEP

D INSIDE DIAMTER

OD OUTSIDE DIAMTER

FC FLEXIBLE CONNECTION

GPH GALLONS PER HOUR

GPM GALLONS PER MINUTE

PLUMBING SYMBOL LEGEND

PLUMBING SPECIFICATIONS

FIRE SPRINKLER SYSTEM

A. NOT INCLUDED IN THIS CONTRACT.

- . PROVIDE AND INSTALL WATER PRESSURE REGULATING VALVE RATED FOR INITIAL WORKING PRESSURE OF 150 PSIG WITH INLET AND OUTLET SHUTOFF VALVES, PRESSURE GAUGE, AND DRAIN VALVE. PROVIDE BACKFLOW PREVENTION DEVICE. REFER TO WATER STATION MAIN DETAIL FOR REQUIREMENTS.
- . PROVIDE AND INSTALL CLEANOUTS AND COVER PLATES WHERE INDICATED ON THE DRAWINGS. INSTALL A CLEANOUT AT EACH PLUMBING FIXTURE. CLEANOUT FLOOR COVER PLATES SHALL BE MOUNTED FLUSH WITH THE FLOOR. COORDINATE CLEANOUT COVER PLATES WITH WALL OR FLOOR SURFACE FINISH.

- . PROVIDE A WATER HEATER AS SHOWN ON THE DRAWINGS THAT COMPLIES WITH ASME BOILER AND PRESSURE VESSEL CODE, UL LISTING, AGA STANDARDS, AND ASHRAE ENERGY STANDARDS.
- SUBMIT MANUFACTURERS CUTSHEET FOR REVIEW AND APPROVAL INCLUDING MANUFACTURER, TYPE, MODEL NUMBER, CAPACITY, ELECTRICAL REQUIREMENTS, AND OPTIONS.
- INSTALL WATER HEATER LEVEL AND PLUMB ON CONCRETE EQUIPMENT PAD UNLESS OTHERWISE NOTED. INSTALL WATER HEATER ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ANCHOR WATER HEATER TO EQUIPMENT PAD. INSTALL EARTHQUAKE BRACING SECURE TO STRUCTURAL MEMBERS.
- D. INSTALL WATER HEATER WITH RELIEF VALVE, SHUTOFF VALVES, UNIONS, THERMOMETERS, DRAIN LINE, GAS CONNECTION, VENT AND RECIRCULATION SYSTEM AS INDICATED ON THE DRAWINGS.

PLUMBING SPECIFICATIONS

<u>VALVES</u>

- . PROVIDE AND INSTALL BALL SHUTOFF VALVES WHERE SHOWN ON PLANS FOR LINES 3" AND SMALLER. BALL VALVES SHALL BE MSS SP-110, CLASS 150 BRONZE BODY AND BONNET AND VINYL-COVERED STEEL HANDLE.
- . PROVIDE AND INSTALL BUTTERFLY VALVES WHERE SHOWN ON PLANS FOR LINES 4" AND LARGER. BUTTERFLY VALVES SHALL BE MSS SP-67, ASTM A 126 CAST-IRON BODY AND BONNET WITH EPDM

- . COORDINATE INSTALLATION OF GAS YARD LINE AND GAS METER WITH THE GAS COMPANY. WORK TO BE PERFORMED BY THE GAS COMPANY PAID BY THE CONTRACTOR.
- B. COMPLY WITH NFPA 54 "NATIONAL FUEL GAS CODE", LOCAL GAS COMPANY REQUIREMENTS, AND ALL OTHER APPLICABLE CODES FOR GAS PIPING MATERIALS, COMPONENTTS, INSTALLATIONS, INSPECTIONS, TESTING, AND PURGING.
- . GAS PIPING SHALL BE SEAMLESS, GRADE B, SCHEDULE 40 BLACK STEEL WITH THREADED FITTINGS.
- . INSTALL SHUTOFF VALVE DOWNSTREAM OF THE GAS METER OUTSIDE OF THE BUILDING.
- INSTALL 2 PSIG TO 4 OZ. GAS PRESSURE REGULATOR WHERE SHOWN ON THE DRAWINGS. INSTALL AND VENT AS REQUIRED BY MANUFACTURERS INSTRUCTIONS.
- . INSTALL GAS SHUTOFF VALVE AT ALL GAS APPLIANCES. CONNECT TO APPLIANCE WITH APPROVED FLEXIBLE CONNECTION. INSTALL TEE FITTING SEDIMENT TRAPS WITHIN 6' OF EACH APPLIANCE.

- A. WATER DISTRIBUTION PIPING BELOW GROUND (150 PSIG): 3-1/2" AND SMALLER - USE TYPE K SOFT OR HARD COPPER TUBE WITH CAST COPPER ALLOY BRAZED JOINT PRESSURE FITTINGS.
- B. WATER DISTRIBUTION PIPING ABOVE GROUND (125 PSIG): 3-1/2" AND SMALLER - USE TYPE L HARD COPPER TUBE WITH CAST COPPER ALLOY BRAZED JOINT PRESSURE FITTINGS. (PEX PIPING ALTERNATE BID)
- . WASTE AND VENT PIPING BELOW GROUND (10-FOOT HEAD OF
- 2" TO 6" USE ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PLASTIC PIPE WITH ABS SOCKET-TYPE DRAIN, WASTE, AND VENT PIPE PATTERN FITTINGS WITH SOLVENT CEMENTED JOINTS.
- . WASTE AND VENT PIPING ABOVE GROUND (10-FOOT HEAD OF
 - 2" TO 8" USE HUB-AND-SPIGOT CAST-IRON SOIL PIPE WITH CAST IRON SOIL PIPE FITTINGS, NEOPRENE RUBBER GASKETS, AND COMPRESSION JOINTS.
- STORM DRAINAGE PIPING ABOVE GROUND (10-FOOT HEAD OF
 - 2" TO 8" USE HUBLESS CAST-IRON SOIL PIPE WITH CAST IRON SOIL PIPE FITTINGS, HEAVY-DUTY, SHEILDED, STAIN-
- LESS-STEEL COUPLINGS. INSTALL HANGERS FOR HORIZONTAL COPPER AND CAST IRON PIPING

WITH THE FOLLOWING MAX	KIMUM SPACING	AND MINIMUM ROD SIZES:
NOM. PIPE SIZE	MAX. SPAN	MIN. ROD DIA.
3/4"	6'	3/8"
Ι"	6'	3/8"
1-1/2"	6'	3/8"
2"	12'	3/8"
2-1/2"	12'	1/2"
3"	12'	1/2"
3-1/2"	12'	1/2"
4"	12'	5/8"
5"	12'	5/8"

- SUPPORT VERTICAL PIPE AND TUBING AT EACH FLOOR. 5. SUPPORT HORIZONTAL ABS AND PVC PIPING WITH PIPE HANGERS
- LOCATED AT 4' MAXIMUM SPAN. I. CLEAN, FLUSH, AND TEST ALL WATER DISTRIBUTION PIPING TO 1-1/2 TIMES THE OPERATING PRESSURE FOR A TIME PERIOD OF 4 HOURS. PURGE AND DISINFECT POTABLE WATER SYSTEMS WITH A

WATER/CHLORINE SOLUTION IN ACCORDANCE WITH THE LOCAL

HEALTH CODE REQUIREMENTS. TEST AND SUBMIT SATISFACTORY

CLEAN, FLUSH, AND TEST THE WASTE AND VENT PIPING SYSTEM TO 10 FEET HEAD OF WATER.

REPORT PRIOR TO BUILDING OCCUPANCY.

PLUMBING FIXTURES

- . PROVIDE AND INSTALL PLUMBING FIXTURES WHERE INDICATED ON THE DRAWINGS FOR A COMPLETE PLUMBING SYSTEM. PROVIDE ALL REQUIRED CARRIERS, SUPPORTS, EQUIPMENT, HANGERS, FITTINGS TRIM, STOPS, AND ACCESSORIES ASSOCIATED WITH THE PLUMBING FIXTURES. COORDINATE THE COLOR STYLE, COLOR, AND ACCESSORIES OF EACH FIXTURE WITH THE BUILDING OWNER. ALL FIXTURES NOTED AS ACCESSIBLE SHALL COMPLY WITH A.D.A. REQUIREMENTS. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL SUB-CONTRACTOR. INSTALL ALL PLUMBING FIXTURES PLUMB, LEVEL, AND ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO THE PLUMBING FIXTURE SCHEDULE.
- PROVIDE PLUMBING FIXTURES FROM THE FOLLOWING MANUFACTURERS WATER CLOSETS AND URINALS:
 - AMERICAN STANDARD, BRIGGS, CRANE, ELJER, KOHLER LAVATORIES: ACORN, AMERICAN STANDARD, BRIGGS, CRANE, ELJER, ELKAY, KOHLER
 - SINKS AND SERVICE SINKS: AMERICAN STANDARD, BRIGGS, CRANE, ELJER, ELKAY,
 - DRINKING FOUNTAINS AND WATER COOLERS: ELKAY, HALSEY TAYLOR, HAWS, OASIS, SUNROC FLUSHOMETERS:
 - SLOAN, ZURN FAUCETS: AMERICAN STANDARD, BRIGGS, CHICAGO, CRANE, DELTA, ELJER, ELKAY, GERBER, KOHLER, MOEN,

PRICE PFISTER, SYMMONS, T \$ 5 BRASS

. SUBMIT MANUFACTURERS CUTSHEET FOR REVIEW AND APPROVAL FOR EACH PLUMBING FIXTURE INCLUDING MANUFACTURER, MODEL, STYLE, OPTIONS, AND ACCESSORIES.

PLUMBING SPECIFICATIONS

ASIC PLUMBING REQUIREMENTS

- . COMPLY WITH THE REQUIREMENTS OF THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC). INTERNATIONAL PLUMBING CODE (IPC). INTERNATIONAL FUEL GAS CODE (IFGC), AND INTERNATIONAL ENERGY CONSERVATION CODE (IECC), AND THE CURRENT NATIONAL ELECTRIC CODE (NEC) INCLUDING ALL STATE AMENDMENTS. COMPLY WITH THE AUTHORITY HAVING JURISDICTION AND ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT AT THE BID DATE.
- PREPARE AND SUBMIT SHOP DRAWINGS FOR ALL PLUMBING FIXTURES, EQUIPMENT, VALVES, AND ACCESSORIES INCLUDING MANUFACTURER'S NAME, CATALOG NUMBER, DESCRIPTION, SIZE, CAPACITY, ELECTRICAL REQUIREMENTS, OPERATION, AND MAINTENANCE INFORMATION. SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE PLUMBING AND GENERAL CONTRACTOR PRIOR TO ENGINEER'S REVIEW. FIXTURES, EQUIPMENT ETC. SHALL NOT BE ORDERED UNTIL APPROVED SHOP DRAWINGS HAVE BEEN RECEIVED.
- PREPARE COORDINATION DRAWINGS DETAILING ALL MAJOR EQUIPMENT AND SYSTEMS. INCLUDE EQUIPMENT CONNECTIONS, CLEARANCES, FIRE-RATED WALL OR FLOOR PENETRATIONS, CONCRETE PADS. AND SUPPORT DETAILS IN COORDINATION DRAWINGS. COORDINATION DRAWINGS SHALL BE IN CONJUNCTION WITH THE MECHANICAL, FIRE SPRINKLER (WHERE REQUIRED), ELECTRICAL, REFLECTED CEILINGS, AND ALL OTHER APPLICABLE
- PREPARE RECORD "AS BUILT" DOCUMENTS INCLUDING ALL CHANGES FROM THE ORIGINAL BID DOCUMENTS. SUBMIT COMPLETE "AS BUILT" DOCUMENTS AT THE COMPLETION OF THE PROJECT.
- PROVIDE 2 SETS OF OPERATION AND MAINTENANCE (O \$ M) MANUALS CONTAINING INFORMATION FOR ALL MECHANICAL AND PLUMBING SYSTEMS. THE MANUALS SHALL CONTAIN A LIST OF ALL SUB-CONTRACTORS AND SUPPLIERS, EQUIPMENT CUT SHEETS, START-UP INFORMATION. BALANCING REPORTS, AND MAINTENANCE REQUIREMENTS. THE MANUALS SHALL BE HARD BACKED 3-RING BINDERS WITH THE PROJECT LABELED ON THE COVER AND SPLINE.
- INSTALL ALL PLUMBING EQUIPMENT AND MATERIALS IN COORDINATION WITH ALL OTHER TRADES. VERIFY ALL ELECTRICAL CONNECTIONS WITH THE ELECTRICAL CONTRACTOR PRIOR TO
- PROVIDE AND INSTALL ACCESS DOORS WHERE EQUIPMENT OR VALVES ARE CONCEALED BEHIND FINISHED SURFACES.
- . PROVIDE FACTORY-AUTHORIZED EQUIPMENT START-UP, COMMISSIONING, AND TRAINING OF ALL PLUMBING EQUIPMENT.
- INSTALL ALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS. INSTALL ALL PIPING FREE FROM SAGS AND BENDS AND AT THE SLOPE INDICATED (WHERE REQUIRED). INSTALL PIPING AND EQUIPMENT TO PROVIDE THE MAXIMUM POSSIBLE HEADROOM
- ALL WORK SHALL BE PERFORMED BY CERTIFIED AND SKILLED WORKERS WITH PRIOR EXPERIENCE IN THEIR PARTICULAR TRADE.
- THE PLUMBING SUB-CONTRACTOR SHALL PROVIDE WARRANTY THE ENTIRE PLUMBING SYSTEM FOR A PERIOD OF ONE YEAR. INCLUDE THE WARRANTY AND ALL OTHER GUARANTEES AND WARRANTIES IN THE OPERATION AND MAINTENANCE MANUAL.
- THE CONTRACTOR SHALL REPAIR OR REPLACE ALL DAMAGED PIPING, EQUIPMENT, OR OTHER DAMAGE DURING CONSTRUCTION.
- . PROVIDE AND INSTALL ALL PLUMBING EQUIPMENT, PIPING, FIXTURE, AND ACCESSORIES IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE ALL FITTINGS, VALVES, TRANSITIONS, AND OTHER DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL PLUMBING SYSTEM.

- . ALL PIPE AND PIPE FITTINGS SHALL BE NEW AND SHALL BE AMERICAN MADE WITH APPROVED LABELS. DELIVER, STORE, AND PROTECT PIPING DURING CONSTRUCTION FROM DAMAGE, DIRT, AND
- . PROVIDE AND INSTALL DIELECTRIC FITTINGS AND FLEXIBLE CONNECTORS WERE REQUIRED FOR PROPER SYSTEM FLUID, PRESSURE, AND TEMPERATURE.
- PROVIDE PIPE ESCUTCHEONS FOR ALL EXPOSED WALL AND CEILING PENETRATIONS. PROVIDE COVER PLATES FOR ALL FLOOR AND WALL
- . SEAL ALL PIPE PENETRATIONS THROUGH WALLS AND FLOORS AIR TIGHT. CAULK ALL FIRE RATED PIPE PENETRATIONS WITH APPROVED FIRE-STOPPING MATERIAL.
- CUT, CHANNEL, CHASE, AND DRILL FLOORS, WALLS, PARTITIONS, CEILINGS, AND OTHER SURFACES NECESSARY FOR PROPER INSTALLATION. REPAIR AS REQUIRED TO MATCH ADJACENT

ANGERS AND SUPPORTS

- . PROVIDE AND INSTALL PIPE SUPPORTS AND HANGERS AS REQUIRED FOR ALL PIPING AND EQUIPMENT ACCORDING TO MANUFACUTERS STANDARDIZATION SOCIETY (MSS) STANDARDS.
- IBRATION ISOLATION AND SEISMIC CONTROLS
- . PROVIDE AND INSTALL VIBRATION ISOLATORS, FLEXIBLE CONNECTIONS, ISOLATION PADS, AND OTHER EQUIPMENT TO PREVENT NOISE AND VIBRATION TRANSMISSION.

IPING AND EQUIPMENT IDENTIFICATION

. PROVIDE EQUIPMENT PIPE AND EQUIPMENT TAGS, LABELS, AND IDENTIFICATION INDICATING FLOW DIRECTION, AREA SERVED, SYSTEM TYPE AND OTHER IDENDIFYING INFORMATION. COMPLY WITH ASME PIPING AND EQUIPMENT IDENTIFICATION STANDARDS.

- . PROVIDE AND INSTALL GLASS FIBER PREFORMED PIPE INSULATION WITH VAPOR PROOF COATING ACCORDING TO THE FOLLOWING
- DOMESTIC COLD WATER PIPING: 1/2" TO 2" PIPE SIZE - 3/4" INSULATION 2" AND ABOVE - I " INSULATION

1/2" TO 2" PIPE SIZE - 3/4" INSULATION

2" AND ABOVE - I " INSULATION

- DOMESTIC HOT WATER AND RECIRCULATED HOT WATER PIPING: 1/2" TO 2" PIPE SIZE - 1" INSULATION 2" AND ABOVE - I-I/2" INSULATION RAIN WATER PIPING AND PLUMBING VENTS (WITHIN 6' OF ROOF):
- 6. GLASS FIBER INSULATION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS.
- . SEAL ALL ENDS AND JOINTS TO PROVIDE A COMPLETELY SEALED INSULATION SYSTEM. PROVIDE COVER HANGER INSERTS AND SHIELDS WITH JACKET MATERIAL MATCHING ADJACENT PIPE
- PROVIDE SNAP ON INSULATION KIT ON ALL ADA COMPLIANT LAVATORIES AND SINKS.

PLUMBING GENERAL NOTES

- PROVIDE ALL EQUIPMENT, PIPING, MATERIALS, LABOR, PERMITS, AND FEES TO CONSTUCT A COMPLETE AND OPERATIONAL PLUMBING SYSTEM FOR THE ENTIRE PROJECT AS SHOWN ON THE DRAWINGS.
- COORDINATE THE EXACT LOCATION OF ALL PLUMBING FIXTURES AND DRAINS WITH THE ARCHITECTURAL DRAWINGS AND THE
- COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR, MECHANICAL SUB-CONTRACTOR, ELECTRICAL

SUB-CONTRACTOR, AND ALL OTHER TRADES IN THE PROJECT.

- DRAWINGS. COORDINATE ALL PLUMBING WORK WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, CIVIL, AND ELECTRICAL DRAWINGS.
- DO NOT RUN PIPING ABOVE ELECTRICAL PANELS. PROVIDE 4'-0" DEEP X 6'G" HIGH CLEAR ACCESS SPACE IN FRONT OF PANELS.
- INSTALL ALL PIPING SHOWN IN EXTERIOR WALLS ON THE WARM
- 8. INSTALL WATER, GAS, AND VENT PIPING AS HIGH AS POSSIBLE
- 9. INSTALL WASTE PIPING BELOW THE FLOOR UNLESS NOTED
- 10. PROVIDE AND INSTALL 2" MINIMUM WASTE PIPE SIZE BELOW
- II. INSTALL EXTERIOR PIPING 48" MINIMUM BELOW GRADE.
- 12. INSTALL PLUMBING VENTS A MINIMUM OF 3 FEET ABOVE OR 10 FEET AWAY FROM OUTSIDE AIR INTAKES. COORDINATE WITH
- 13. PAINT ALL ROOFTOP PLUMBING VENTS, CONCENTRIC VENTS,
- 14. WATER CLOSET FLUSH VALVE CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE FIXTURE.

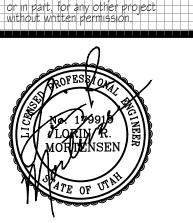
- GENERAL CONTRACTOR.
- 4. ALL PLUMBING INFORMATION IS NOT SHOWN ON THE PLUMBING
- PLUMBING PLANS ARE SCHEMATIC IN NATURE AND THEREFORE DO NOT SHOW ALL DROPS, RISERS, AND OFFSETS. THE CONTRACTOR SHALL MAKE ALL REQUIRED MODIFICATIONS TO PROVIDE A COMPLETE AND OPERATIONAL PLUMBING SYSTEM. MAJOR MODIFICATIONS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.
- DO NOT RUN PIPING IN ELECTRICAL ROOMS.
- (ROOM) SIDE OF THE BUILDING INSULATION.
- ABOVE THE CEILING UNLESS NOTED OTHERWISE.

- THE MECHANICAL SUB-CONTRACTOR.
- AND FLUES TO MATCH THE ROOF COLOR.

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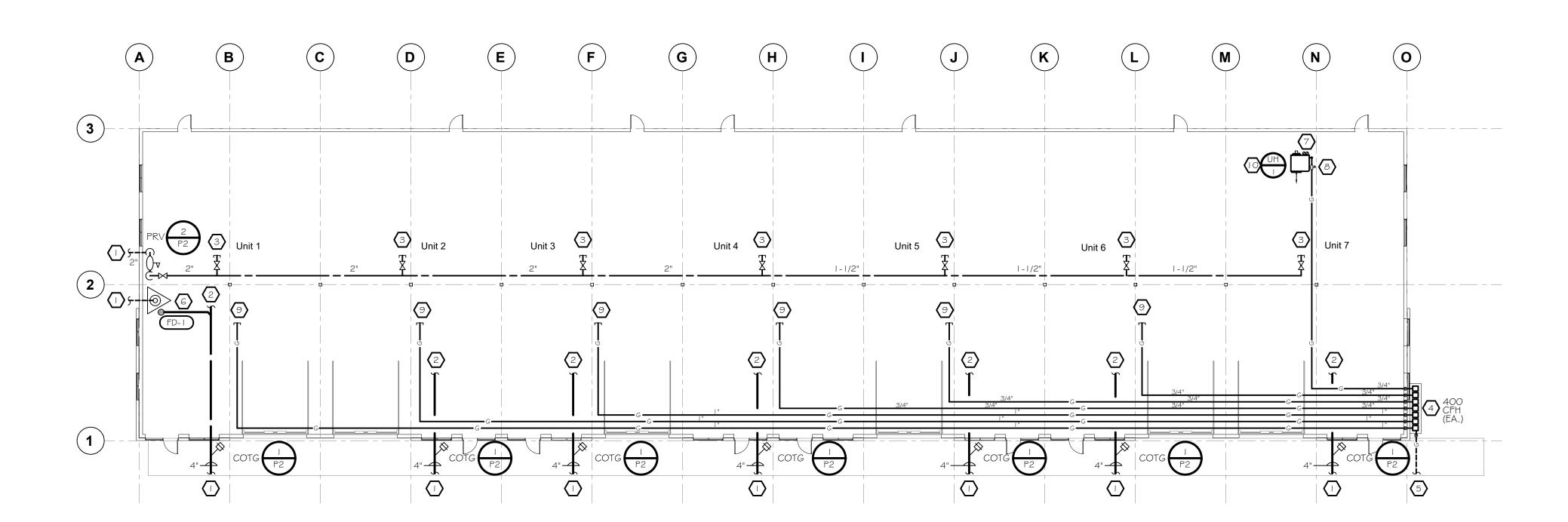
REFERENCE NOTES

- SEE SITE UTILITIES PLAN FOR CONTINUATION.
- 2 EXTEND WASTE LINE FOR FUTURE CONNECTION.
- (3) CAP WATER LINE FOR FUTURE CONNECTION.
- 2 PSI GAS METERS BY GAS COMPANY.
- GS GAS YARD LINE BY GAS COMPANY.

 GFIRE SPRINKLER RISER BY OTHERS.
- VENT UNIT HEATER AS PER MGFR'S. INSTRUCTIONS.
- 8 2 PSI TO 4 OZ. GAS PRESSURE REGULATOR.
- 2 F31 10 4 02. GAS FRESSURE REGULATOR.CAP GAS LINE FOR FUTURE CONNECTION.
- INSTALL GAS-FIRED UNIT HEATER IN SPACES TO BE UNOCCUPIED DURING WINTER MONTHS. COORDINATE WITH OWNER.

GENERAL NOTE:

VERIFY ALL UTILITY CONNECTIONS WITH SITE UTILITY PLAN





Trensen Engineering, Inc.

25 | South 830 East

Smithfield, Utah 84335

(435) 770-5534

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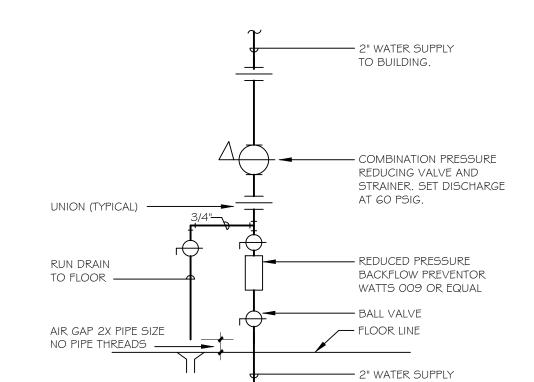
PLUMBING PLAN

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P1



VERTICAL WATER PRESSURE REDUCING STATION DETAIL	$\overline{2}$
NOT TO SCALE	P2

		j	PLUMBING FIXTURE SCHEDULE	= -				
FIX. NO.	FIXTURE	TYPE	DESCRIPTION	WASTE	TRAP	VENT	HW	CW
FD-I	FLOOR DRAIN	CUSTODIAL MECHANICAL	SMITH FIGURE 2010-AP CAST IRON BODY AND FLASHING COLLAR WITH PROTECTIVE CAP AND ROUND NICKEL BRONZE ADJUSTABLE STRAINER HEAD WITH SECURED SQUARE HOLE GRATE. DEEP SEAL TRAP.	3"	3"	1 1/2"	-	-

	UNIT HEATER SCHEDULE (GAS-FIRED)												
SYMBOL	MANUFACTURER # MODEL	FUEL	INPUT BTU/HR.	(3) OUTPUT BTU/HR.	FLUE SIZE	AIR DELIVERY	MOTOR H.P.	VOLTS/ PHASE/ CYCLES	COMMENTS				
UH	REZNOR UDAP 300	NAT. GAS	300,000	249,000 207,000	6"	3483	1/2	115/1/60	(1)(2)				

(1) CONDITIONS AT 4600 FT. ELEVATION.(2) COMPLETE WITH THERMOSTAT AND ALL CONTROLS.(3) SEA LEVEL/DERATED OUTPUT BTUH

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PLUMBING DETAIL & SCHEDULES

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P2

