SPANISH FORK
PRIDE & PROGRESS
EST. 1855

Wednesday, March 22, 2023
Development Review Committee

DEVELOPMENT REVIEW COMMITTEE AGENDA
PUBLIC NOTICE is hereby given that the Development Review Committee of Spanish Fork, Utah, will hold a regular meeting at the Spanish Fork City Council Chamber, 40 South Main Street, Spanish Fork, Utah, commencing at 10:00 a.m. This meeting is not available to attend virtually.

1. Approval of Minutes

A. March 15, 2023

2. Final Plat

A. VISTA VIEW PHASE 5. The proposal involves creating 22 Multi-family units located at approximately 750 South 2350 East.

B. VISTA VIEW PHASE 6. The proposal involves creating 22 Multi-family units located at approximately 750 South 2350 East.

C. VISTA VIEW PHASE 7. The proposal involves creating 22 Multi-family units located at approximately 750 South 2350 East.

3. Site Plan

A. GWC OFF-SITE IMPROVEMENTS. The proposal involves off-site utility improvements property located at approximately 1150 West 3800 North.

B. DON BENNETT COMMERICAL LOT 2. The proposal involves industrial development of property located at 195 West 1600 North

C. 1120 EAST FIBER HUT. The proposal involves construction of a SFCN fiber hut building located at 1120 East Spanish Fork Parkway.

D. 300 WEST FIBER HUT. The proposal involves construction of a SFCN fiber hut building located at 895 North and 300 West.

E. 700 EAST FIBER HUT. The proposal involves construction of a SFCN fiber hut building located at 700 East Center Street.

F. 900 NORTH FIBER HUT. This proposal involves construction of a SFCN fiber hut building located at 900 North Spanish Fork Parkway.

4. Concept Review

A. BRADSHAW CONCEPT.

5. Title 15 Amendments

A. TITLE 15 AMENDMENTS.

6. Discussion

A. PARKING.

7. Adjourn

Draft Minutes
Spanish Fork City Development Review Committee
40 South Main Street
Spanish Fork City
March 15, 2023

Staff Members Present: **Chris Thompson**, Public Works Director; **Seth Perrins**, City Manager; **Dave Anderson**, Community Development Director; **Vaughn Pickell**, City Attorney; **Ana Burgi**, Assistant City Attorney; **John Little**, Chief Building Official; **Michael Clark**, Assistant City Engineer; **Marcie Clark,** Department Development Secretary; **Jered Johnson**, Engineering Division Manager; **Dillon Muirbrook**, Traffic Engineer; **Zach Hendrickson**, Outside Plant Manager; **Jake Theurer**, Power and Light Superintendent; **Tom Cooper**, Power and Light Senior Utility Planner; Supervisor; **Jason Turner,** Fire Marshall; **Kasey Woodard**, Division Secretary.

Citizens Present: Cris Child, Gary Griffiths, Chase Guillard, Sid Allsop, Jon Galbrath, Brandon Dart, Dan Fechner, Joseph Earnest, Craig Gasser, AJ DelPivo.

Chris Thompson called the meeting to order at 10:00 a.m.

MINUTES

February 22, 2023

March 1, 2023

Ana Burgi **moved** to approve the minutes of February 22, 2023 and March 1, 2023.

Seth Perrins **seconded** and the motion **passed** all in favor.

SITE PLAN

DART INDUSTRIAL

Michael Clark gave a brief description of the proposed Site Plan. He stated this is very straight forward approval.

Dave Anderson stated before a Building Permit can be issued, an updated landscaping plan needs to be provided.

Brandon Dart stated he just was unsure who to contact and it was stated he needs to work with Brandon Snyder, Senior Planner.

Dave Anderson **moved** to approve the proposed Dart Industrial Site Plan based on the following finding and conditions:

Finding:

1. That the application conforms to the City’s General Plan Designation and Zoning Map.

Conditions:

1. That the applicant meets the City’s Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Jake Theurer **seconded** and the motion **passed** all in favor.

DESIGNER HOME INTERIORS

Michael Clark gave a brief description of the proposed Site Plan. He stated engineering has no comments.

Jake Theurer stated there are no power comments.

Dave Anderson stated there are a few items that need to be addressed such as the permitted uses. He explained the allowed uses within the C-2 commercial zone and wanted to ensure the applicant understands what is and isn't allowed within the commercial zone.

The applicant stated that warehousing was not their intent.

Dave Anderson **moved** to approve the proposed Designer Home Interiors Site Plan based on the following finding and conditions:

Finding:

1. That the application conforms to the City’s General Plan Designation and Zoning Map.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Seth Perrins **seconded** and the motion **passed** all in favor.

DON BENNETT COMMERCIAL LOT 2

Michael Clark presented the proposal and showed where this Site Plan is located. He stated a potential concern is vehicles parked on the street may limit larger truck traffic's ability to navigate the turns. The autoturn is very tight but it should be easy to adjust and suggested the adjustment could be a condition of approval.

There was discussion on restricting parking to remedy the concern.

Jered Johnson stated the railroad is satisfied with the provided plans.

Dave Anderson wondered if the item should be continued until the applicant can be present. The DRC had questions about the status of the subdivision improvements needed before the Site Plan moves forward.

Seth Perrin **moved** to Continue the proposed Don Bennett Commercial Lot 2 Site Plan.

Dave Anderson **seconded** and the motion to continue **passed** all in favor.

BELTRAN HANGER

Michael Clark gave a brief description of the location and stated there are no engineering comments or concerns. Landscaping is being provided as shown in the staff report.

Chris Thompson stated the airport board gave its approval.

Dave Anderson stated there are no comments from the planning division. He stated this approval is long overdue.

Cris Child stated there is one hangar that is being built with new asphalt. The planned landscaping is minimal.

The power pole and service line were discussed.

Cris Child asked about a hangar being rebuilt to the north sharing the cost for the new asphalt for this Site Plan. Chris Thompson recommended applying for a pioneering agreement. He suggests the applicant read through the laws to ensure it accommodates it.

Cris Child stated Corey Chamberlain has applied for a Building Permit for the hangar rebuild to the north. He stated there is currently gravel in front of that hangar and it does not allow for a plane to get in or out of the hangar easily.

Chris Thompson asked if there will need to be a Site Plan and Dave Anderson stated the city does not require a Site Plan for a rebuild.

John Little stated asphalt does not impact a Building Permit as asphalt isn't a requirement. He suggested it needs to come from the airport board as it may be an airport standard and not a city building code standard.

There was a brief discussion regarding what is required for a Site Plan versus a Building Permit and it was recommended that the Assistant City Attorney Ana Burgi look into the language of the pioneering agreement and if it needs further clarification.

Cris Child gave a brief explanation of the plans for the new hangar and the rebuilding of the hangar to the north.

It was recommended that Corey Chamberlain come in to discuss the requirements and to discuss the new lease.

Chris Thompson stated Cris Child needs to work with Christian Davis the Airport Manager to discuss the cost estimate and the required lease.

Dave Anderson **moved** to approve the proposed Beltran Hangar Site Plan based on the following finding and conditions:

Finding:

1. That the application conforms to the City's General Plan Designation and Zoning Map.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.

2. That the applicant addresses any red-lines.

Seth Perrins **seconded** and the motion **passed** all in favor.

FINAL PLAT

ESCALANTE TOWNHOMES

Michael Clark stated the DRC has seen versions of this plan over the last several years. He stated that there are no engineering comments.

Jake Theurer stated there are no comments from the power department.

There was discussion regarding the placement of the garbage cans and it was stated that they do need to be moveable for fire safety reasons. Michael Clark shared an image from Atlas Engineering regarding potential garbage can placements.

Dave Anderson shared that Brandon Snyder has stated there have been no detailed buildings designs submitted with the final plat or the Preliminary Plat and asked if the applicant is okay with the final plans submitted and it was stated they are happy with the plans that were submitted.

There was a brief discussion regarding the spring and it was stated it was runoff that has accumulated for years. AJ DelPivo stated when the site is developed they will cut off the runoff and reroute it to accommodate for good measure.

Chris Thompson asked if there was still a plan for a ditch and AJ DelPivo stated yes it was still planned.

AJ DelPivo stated these units are not planned to have basements but they are still planning to address potential concerns anyways.

Dave Anderson asked when this is expected to begin construction and it was stated the applicants are waiting for the rainy season to end, so most likely around May.

Dave Anderson **moved** to approve the proposed Escalante Townhomes Final Plat based on the following finding and conditions:

Finding:

1. That the application conforms to the City's General Plan Designation and Zoning Map.
2. That the application is consistent with the approved Preliminary Plat.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Ana Burgi **seconded** and the motion **passed** all in favor.

OAKRIDGE COVE PHASE 2 PLAT A

Michael Clark stated that all three phases are being presented today. He gave a brief description of the overall project and location.

Chris Thompson asked why Phase C appears disconnected from phases A & B. The applicant stated this was how the city requested it to be split up as previously they had all phases connected and this was what was agreed upon to ensure all phases and improvements would be completed.

The applicant stated there is not an anticipated start date as they are still working out the building and infrastructure costs.

Michael Clark stated there are a few redlines that still need to be addressed. He read through the remaining redlines briefly.

The applicant stated they will add the elevations to the plans soon.

Jake Theurer stated there are no power comments.

Dave Anderson stated there are no planning comments.

Chris Thompson asked if there will be curb, gutter and asphalt down along Osprey Way and it was stated yes there will be.

Dave Anderson **moved** to approve the proposed Oakridge Cove Phase 2 Plat A Final Plat based on the following finding and conditions:

Finding:

1. That the application conforms to the City's General Plan Designation and Zoning Map.
2. That the application is consistent with the approved Preliminary Plat.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Seth Perrins **seconded** and the motion **passed** all in favor.

OAKRIDGE COVE PHASE 2 PLAT B

*See plat A discussion.

Dave Anderson **moved** to approve the proposed Oakridge Cove Phase 2 Plat B Final Plat based on the following finding and conditions:

Finding:

1. That the application conforms to the City's General Plan Designation and Zoning Map.
2. That the application is consistent with the approved Preliminary Plat.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Seth Perrins **seconded** and the motion **passed** all in favor.

OAKRIDGE COVE PHASE 2 PLAT C

*See Plat A discussion.

Dave Anderson **moved** to approve the proposed Oakridge Cove Phase 2 Plat C Final Plat based on the following finding and conditions:

Finding:

1. That the application conforms to the City's General Plan Designation and Zoning Map.

2. That the application is consistent with the approved Preliminary Plat.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Jered Johnson **seconded** and the motion **passed** all in favor.

CONCEPT REVIEW

ARBY'S CONCEPT

Craig Gasser gave a brief history of the Arby's location and how long it has been in Spanish Fork. He stated there hasn't been a need for change until now due to the upcoming new Target location that is being built in the old Kmart location. He presented the proposed changes to the drive thru and parking configuration.

Michael Clark brought attention to the rolled curb that is drawn on the design and that it wouldn't be the best option and recommended striping as an alternative as it is not only more cost effective but also so cars won't be backing out of parking stalls over it.

Craig Gasser stated this was designed with rolled curb to help discourage cars from entering the drive thru at that point and stated Arby's did not want to go with a fully raised curb.

There was discussion on the parking needs of Target and it was stated it should not impact the Arby's drive thru line or parking area. There was discussion whether asphalt or concrete would be the best paving option.

Seth Perrins feels there shouldn't be a rolled curb and to do striping as parked cars in the stalls could be blocked in and when backing out and going against the traffic. He stated this is creating a conflict point. He discussed the potential issue and suggested the proposed additional parking stalls should be labeled for employee parking so that cars are not blocked in by the drive thru patrons.

There was further discussion about potentially rebuilding of the park strip and landscaping.

Tom Cooper asked about the grading and draining being presented on the design. He stated Target has done a lot of work on the parking lot to address the drainage concern and he stated the grading by the order board presents a potential issue. The applicant stated they will look into the grading and drainage and submit plans to address it.

Dave Anderson feels this is a reasonable plan and a helpful step in the right direction. He stated Arby's needs to submit a Site Plan and work with their engineer.

The applicant stated they will provide a drainage plan, and change the rolled curb to striping, and he inquired about tire stops and Chris Thompson stated he is not a fan of tire stops as they tend to wear out after a couple years. Chris Thompson still recommends the striping.

ANDERSON TOWNHOMES CONCEPT

Joseph Earnest gave a brief presentation of the proposed townhomes concept. He stated there are 43 units that are for rent, each unit comes with a 2-car garage. He stated the current zone is C-2 and is requesting to rezone the area to R-3 to meet the density proposed. He stated the units will have access to the Ridgeline clubhouse and swimming pool. He presented color elevations to illustrate what is being proposed.

Michael Clark stated the applicant should be wary of placing air conditioning units on the balconies of the units as they tend to be very loud and pump warm up upwards and discourage residents from using the balconies.

There was discussion on use of alleyways versus public streets and appropriate widths for alleys. Many felt the 26 feet of asphalt is not wide enough.

Joseph Earnest discussed the potential of continuing the wrought iron fencing that is currently at Ridgeline.

There was further discussion regarding whether to make the subdivision streets public or consider them alleyways.

Michael Clark pulled up examples of neighboring developments that have public streets connecting to alleyway streets within the subdivision.

Joseph Earnest stated he would rather not use public streets in the development and just widen the alleyway streets.

Concerns were raised in regards to the south public street width.

John Little asked if the applicant has begun the environmental studies and it was stated yes, they have been working with Terracon.

GENERAL PLAN

TRANSPORTATION MASTER PLAN AMENDMENT (23.01 TMP)

Dillon Muirbrook presented the proposed revisions.

He stated they are looking to reduce the classification of Canyon Creek Parkway from a future 7-lane road to a 5-lane road. He stated it is currently 5 lanes and is proposed to be 7 lanes, but they are proposing to keep it at 5 lanes. He stated the studies that were conducted showed that increasing the road to 7 lanes would not have much of a real impact on traffic.

Next, he stated that since the railroad crossing at 3400 East and US-89 is being removed they show a new connecting street. He stated when someone wants to buy the property and wants to develop, they will build the road.

He stated he worked with the parks and recs department for the trail changes. The next change he stated is fixing the trails along Expressway Ln, Spanish Fork Parkway and SR-51. He stated next, they adjusted the trail along Rees Ave connecting to Hidden Springs trail. Next, he stated they are removing the trails located at 2300 East and Spanish Fork Parkway.

Chris Thompson asks whether this should be continued until a staff member from parks and recs can be in attendance to be discussed further.

Dillon Muirbrook stated they adjusted the trail lines along the fairgrounds northeast corner. Next, he stated they are removing the trail between Main St and 320 West along 100 south. He then stated the next change is relocating the trail along 650 West to 1150 West and removing the trail on the northside of Spanish Fork High School with the trail continuing onto 400 North. Finally, he states the last change is adding a trail along the southside of 1900 North.

Jered Johnson **moved** to recommend the approval of the proposed General Plan Amendments to the City Council with the modifications as discussed.

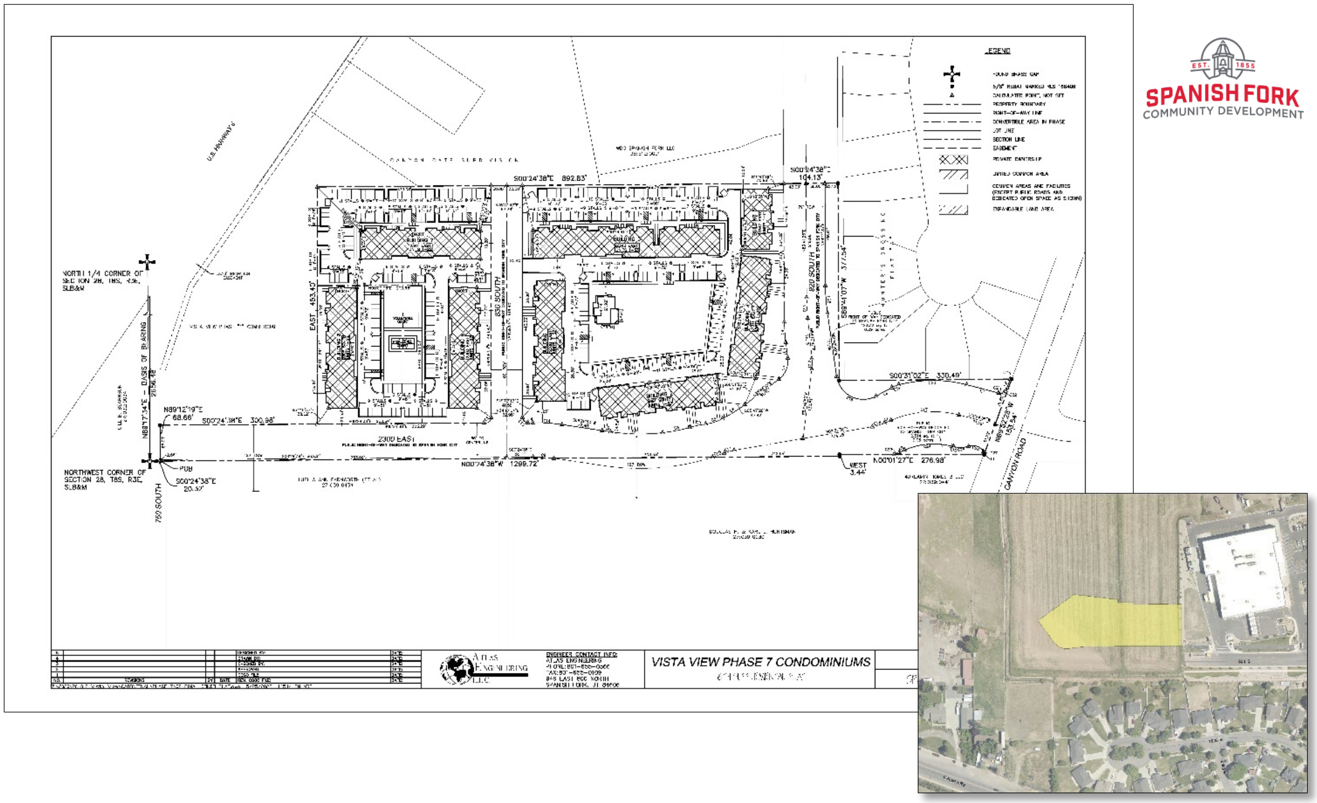
With the condition of changing the road from 3400 East 100 South to a residential collector.

Seth Perrins **seconded** and the motion **passed** all in favor.

Seth Perrins moved to adjourn the meeting at 12:00 p.m.

Adopted:

Kasey Woodard
Community Development Division
Secretary



Vista View Phases 5, 6, and 7 Final Plat Re-Approval Request

March 22, 2023, Development Review Committee Meeting.

Located at 2350 East 750 South.

The subject property is zoned R-4.

The applicant has requested Final Plat re-approval for sixty-six multi-family residential units.

Key Issues

1. Consistency with previously approved Preliminary and Final Plats.

Recommendation

That the proposed Final Plat be re-approved based on the following findings and subject to the following conditions:

Findings

1. That the proposal conforms to the City's General Plan Designation and Zoning Map.
2. That the proposal is consistent with the approved Preliminary Plat.

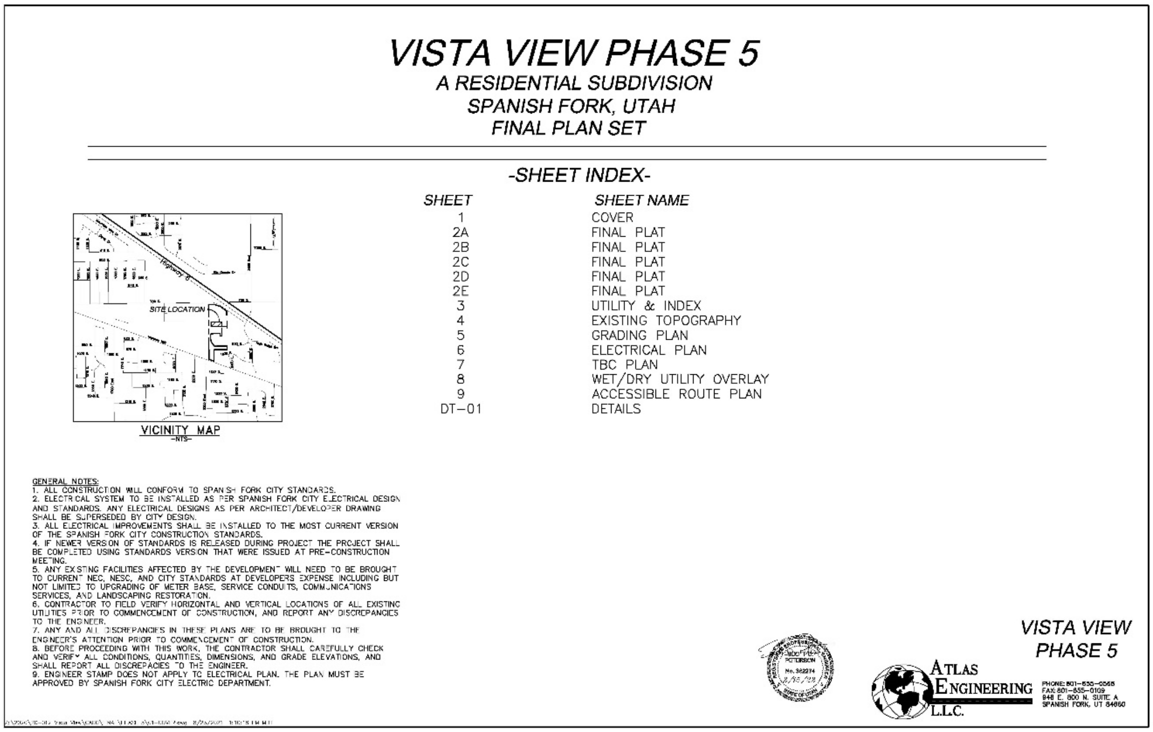
Conditions

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses red-lines.

Exhibits

1. Final Plat Phase 5.
2. Final Plat Phase 6.
3. Final Plat Phase 7.

Exhibit 1



VISTA VIEW PHASE 5

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
DT-01	DETAILS

Highway 6
SITE LOCATION

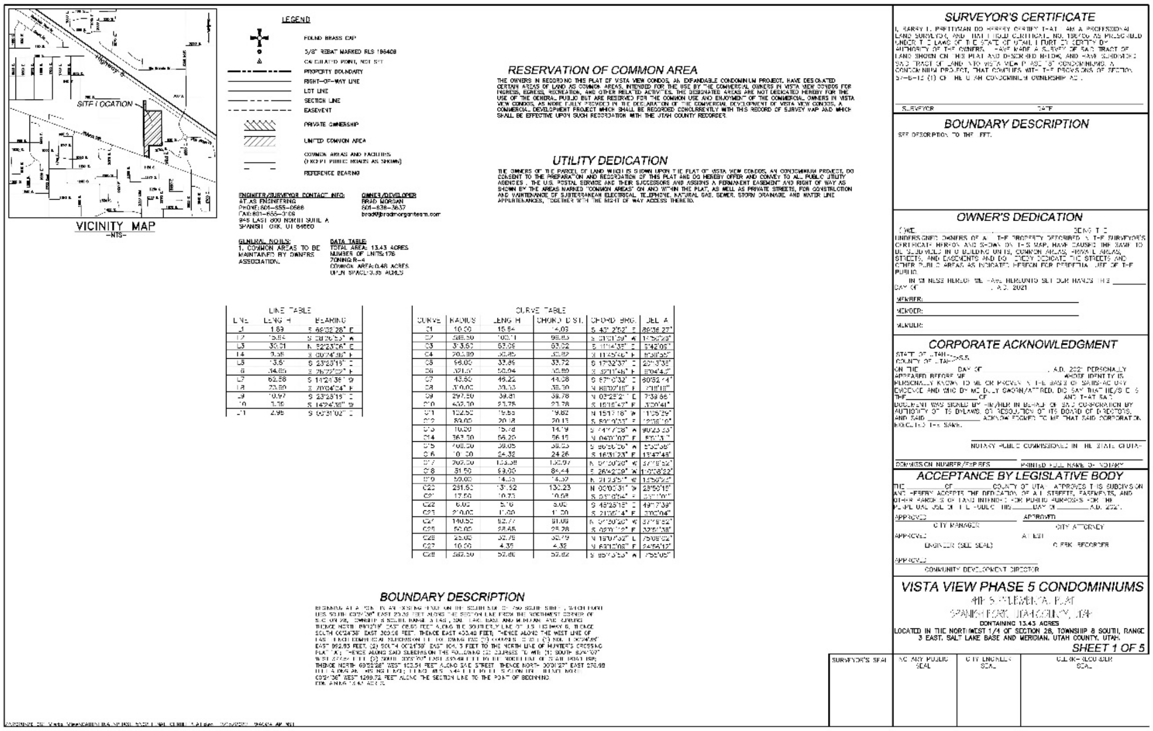
VICINITY MAP
-NTS-

GENERAL NOTES:
1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.

No. 362274

VISTA VIEW
PHASE 5

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
948 E. 800 N. SUITE A
SPANISH FORK, UT 84660



Highway 6
SITE LOCATION

VICINITY MAP
-NTS-

LEGEND
- FOUND BRASS CAP
- 5/8" REBAR MARKED RLS 186408
- CALCULATED POINT, NOT SET
- PROPERTY BOUNDARY
- RIGHT-OF-WAY LINE
- LOT LINE
- SECTION LINE
- EASEMENT
- PRIVATE OWNERSHIP
- LIMITED COMMON AREA
- COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
- REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
948 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-636-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 0.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES, THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

LINE	LENGTH	BEARING
L1	1.69	S 69°32'28" E
L2	15.84	S 08°26'53" W
L3	30.01	N 52°23'06" E
L4	9.59	S 00°24'38" E
L5	13.51	S 23°25'13" E
L6	34.65	S 26°22'02" E
L7	62.58	S 14°24'36" W
L8	23.80	S 70°04'04" E
L9	10.97	S 23°25'13" E
L10	3.39	S 14°24'36" W
L11	2.95	S 00°31'02" E

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	10.00	15.64	14.09	S 45°12'52" E	89°36'27"
C2	388.50	100.11	99.83	S 01°01'59" W	14°50'23"
C3	313.50	63.09	63.02	S 11°14'35" E	11°42'09"
C4	205.89	30.85	30.82	S 11°45'46" E	8°35'55"
C5	96.00	33.89	33.72	S 17°32'37" E	20°13'35"
C6	321.50	50.04	50.00	S 32°11'46" E	8°54'42"
C7	43.50	46.22	44.08	S 67°10'32" E	60°52'41"
C8	310.00	39.53	38.50	N 88°02'18" E	7°18'18"
C9	297.50	39.81	39.78	N 03°25'21" E	7°39'56"
C10	452.50	23.78	23.78	S 16°16'47" E	3°00'41"
C11	102.50	19.85	19.82	N 15°17'18" W	11°05'29"
C12	89.00	20.18	20.13	S 59°10'33" E	12°59'19"
C13	10.00	15.78	14.19	S 44°47'08" W	90°23'33"
C14	363.50	56.20	56.15	N 04°01'07" E	8°51'31"
C15	408.00	39.05	39.03	S 86°56'26" W	5°28'58"
C16	101.00	24.32	24.26	S 16°31'23" E	13°47'45"
C17	202.50	133.38	130.97	N 07°20'20" W	37°48'52"
C18	51.50	99.00	84.44	S 28°42'39" W	110°08'22"
C19	59.00	14.35	14.32	N 21°23'51" W	13°59'24"
C20	261.50	131.52	130.23	N 00°00'31" W	28°50'15"
C21	17.50	10.73	10.56	S 03°10'54" E	35°11'01"
C22	6.00	5.16	5.00	S 45°25'15" E	49°17'39"
C23	210.00	11.00	11.00	S 21°05'14" E	3°00'04"
C24	140.50	92.77	91.09	N 01°20'20" W	37°49'52"
C25	50.00	28.66	28.28	S 02°01'12" E	32°51'38"
C26	25.00	32.79	30.49	N 19°07'32" E	75°08'02"
C27	10.00	4.35	4.32	N 63°10'08" E	24°56'12"
C28	382.50	52.86	52.82	S 85°13'53" W	7°55'05"

BOUNDARY DESCRIPTION

BEGINNING AT A POINT IN AN EXISTING FENCE ON THE SOUTH SIDE OF 750 SOUTH STREET, WHICH POINT LIES SOUTH 00°24'36" EAST 20.32 FEET ALONG THE SECTION LINE FROM THE NORTHWEST CORNER OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE NORTH 89°12'19" EAST 68.65 FEET ALONG THE SOUTHERLY LINE OF U.S. HIGHWAY 6; THENCE SOUTH 00°24'38" EAST 200.06 FEET; THENCE EAST 403.40 FEET; THENCE ALONG THE WEST LINE OF [illegible] COMMERCIAL SUBDIVISION THE FOLLOWING TWO (2) COURSES TO WIT: (1) SOUTH 00°24'38" EAST 992.93 FEET, (2) SOUTH 00°21'38" EAST 104.13 FEET TO THE NORTH LINE OF HUNTER'S CROSSING PLAT "A"; THENCE ALONG SAID SUBDIVISION THE FOLLOWING (2) COURSES TO WIT: (1) SOUTH 89°41'07" WEST [illegible] FEET, (2) SOUTH 00°31'02" EAST 330.48 FEET TO THE NORTH LINE OF STATE ROAD 198; THENCE NORTH 69°32'28" WEST 103.54 FEET ALONG SAID STREET; THENCE NORTH 00°01'27" EAST 276.98 FEET ALONG AN EXISTING FENCE; THENCE WEST [illegible] FEET TO THE SECTION LINE; THENCE NORTH 00°24'36" WEST 1200.72 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.
CONTAINING 13.43 ACRES.

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 186708 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE 1ST CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

I/WE, ____________, ____________ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ________ DAY OF ____________, A.D. 2021

MEMBER: ____________

MEMBER: ____________

MEMBER: ____________

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH S.S.

ON THE ________ DAY OF ____________, A.D. 2021 PERSONALLY APPEARED BEFORE ME ____________ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ____________ OF ____________ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID ____________ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES PRINTED FULL NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

THE ____________ OF ____________ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ________ DAY OF ____________ A.D. 2021.

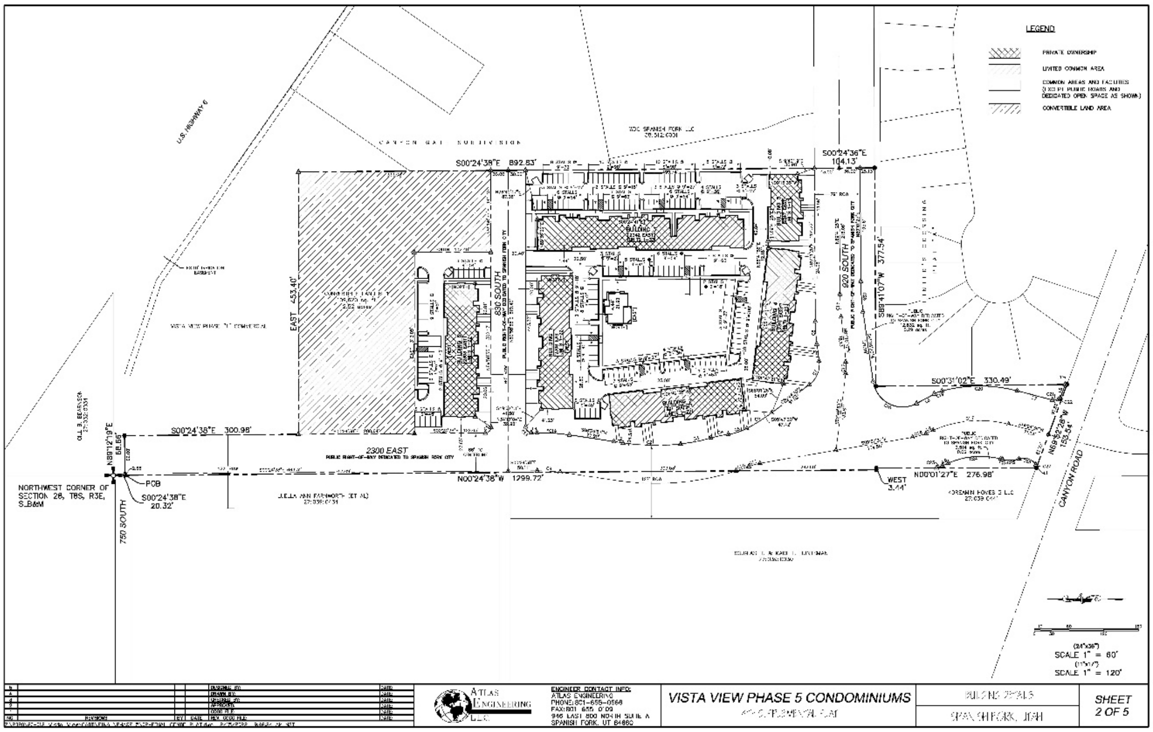
APPROVED ____________ CITY MANAGER
APPROVED ____________ CITY ATTORNEY
APPROVED ____________ ENGINEER (SEE SEAL)
ATTEST ____________ CLERK-RECORDER
APPROVED ____________ COMMUNITY DEVELOPMENT DIRECTOR

VISTA VIEW PHASE 5 CONDOMINIUMS

4TH SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.
SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

Exhibit 1


LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AND DEDICATED OPEN SPACE AS SHOWN)
CONVERTIBLE LAND AREA
U.S. HIGHWAY 6
CANYON GAP SUBDIVISION
S00°24'38"E 892.83'
S00°24'36"E 104.13'
EAST 433.40'
830 SOUTH
S00°31'02"E 330.49'
S00°24'38"E 300.98'
2300 EAST
PUBLIC RIGHT-OF-WAY DEDICATED TO SPANISH FORK CITY
N00°24'38"W 1299.72'
N00°01'27"E 276.98'
WEST 3.44'
N89°12'19"E 58.86'
POB
NORTHWEST CORNER OF SECTION 28, T8S, R3E, SLB&M
S00°24'38"E 20.32'
750 SOUTH
CANYON ROAD
VISTA VIEW PHASE "1" COMMERCIAL
(24"x36") SCALE 1" = 60'
(11"x17") SCALE 1" = 120'
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE:801-655-0566
FAX:801 655 0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
ATLAS ENGINEERING LLC
VISTA VIEW PHASE 5 CONDOMINIUMS
SPANISH FORK, UTAH
SHEET 2 OF 5

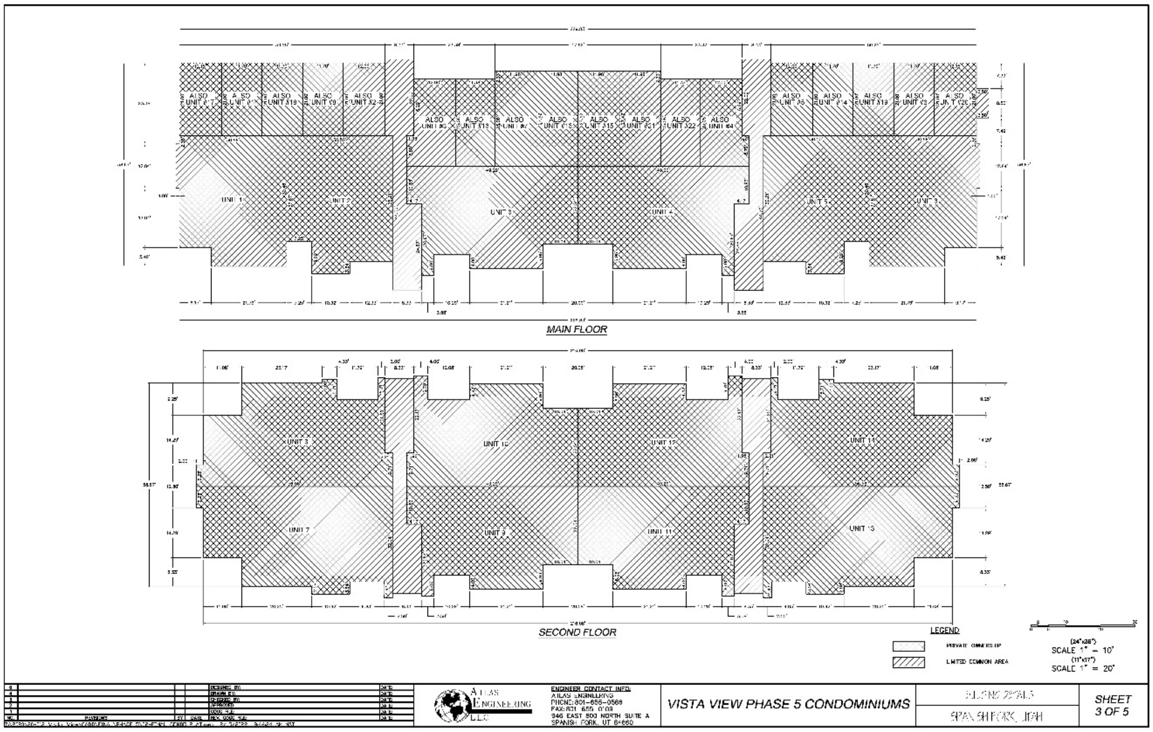
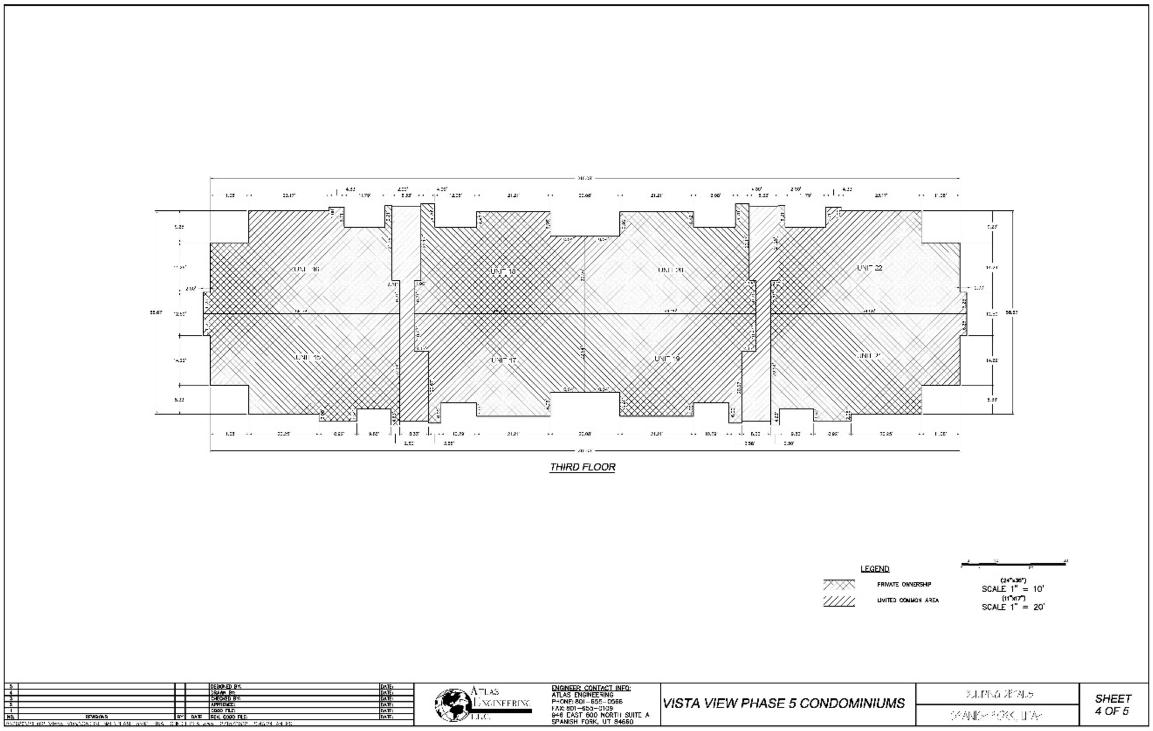

ALSO UNIT
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
MAIN FLOOR
UNIT 7
UNIT 8
UNIT 9
UNIT 10
UNIT 11
UNIT 12
SECOND FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36") SCALE 1" = 10'
(11"x17") SCALE 1" = 20'
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE:801-655-0566
FAX:801 655 0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
ATLAS ENGINEERING LLC
VISTA VIEW PHASE 5 CONDOMINIUMS
SPANISH FORK, UTAH
SHEET 3 OF 5

Exhibit 1


THIRD FLOOR
UNIT 16
UNIT 18
UNIT 20
UNIT 22
UNIT 15
UNIT 17
UNIT 19
UNIT 21
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
C3D0 FILE:
REV. C3D0 FILE:
DATE:
NO.
REVISIONS
BY
DATE
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
VISTA VIEW PHASE 5 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
4 OF 5

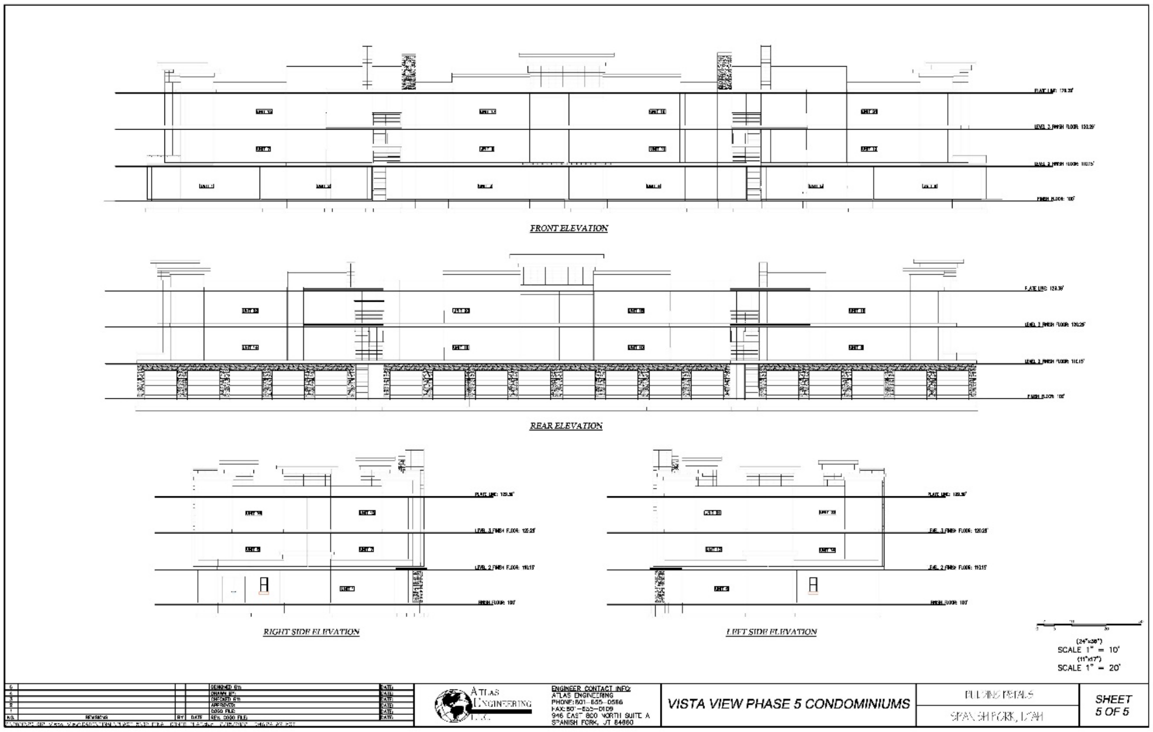
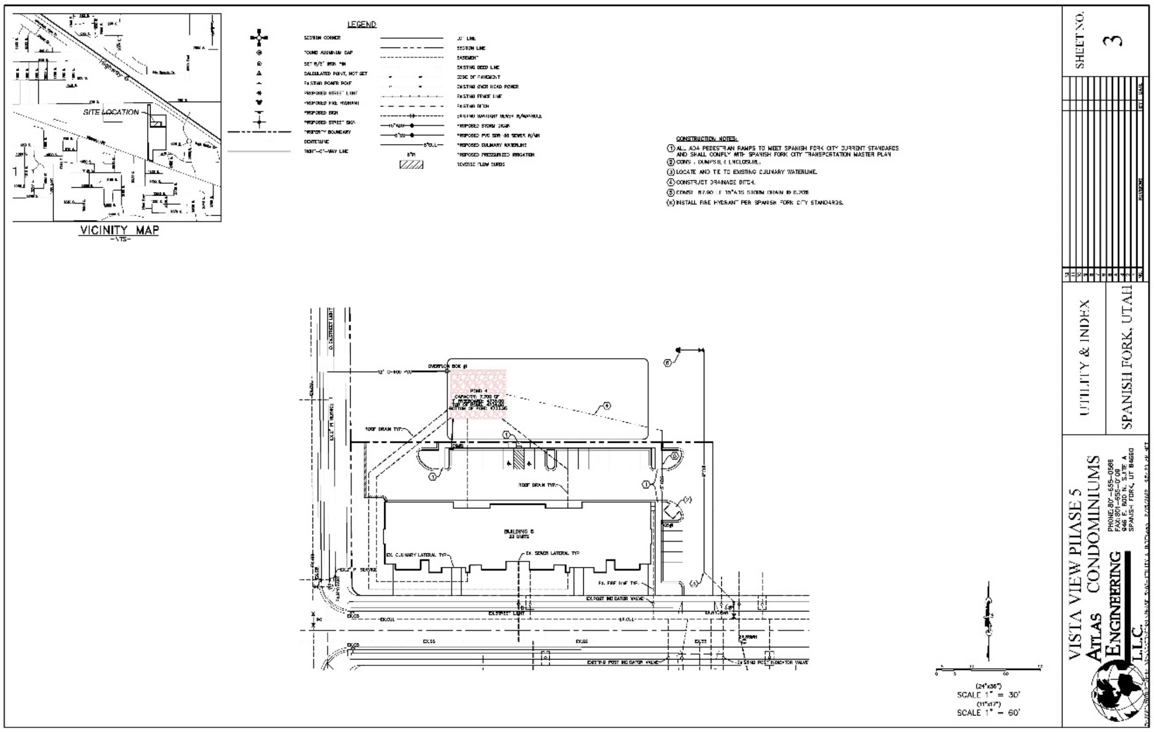


PLATE LINE: 129.38'
LEVEL 3 FINISH FLOOR: 120.25'
LEVEL 2 FINISH FLOOR: 110.15'
FINISH FLOOR: 100'
FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
C3D0 FILE:
REV. C3D0 FILE:
DATE:
NO.
REVISIONS
BY
DATE
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
VISTA VIEW PHASE 5 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
5 OF 5

Exhibit 1


VICINITY MAP
~NTS~
SITE LOCATION
LEGEND
CONSTRUCTION NOTES:
① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. DUMPSTER ENCLOSURE.
③ LOCATE AND TIE TO EXISTING CULINARY WATERLINE.
④ CONSTRUCT DRAINAGE DITCH.
⑤ CONST. 87.90 LF 15"ADS STORM DRAIN @ 0.20%
⑥ INSTALL FIRE HYDRANT PER SPANISH FORK CITY STANDARDS.
BUILDING 6
ROOF DRAIN TYP.
(24"x36")
SCALE 1" = 30'
(11"x17")
SCALE 1" = 60'
VISTA VIEW PHASE 5
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
UTILITY & INDEX
SPANISH FORK, UTAH
SHEET NO.
3

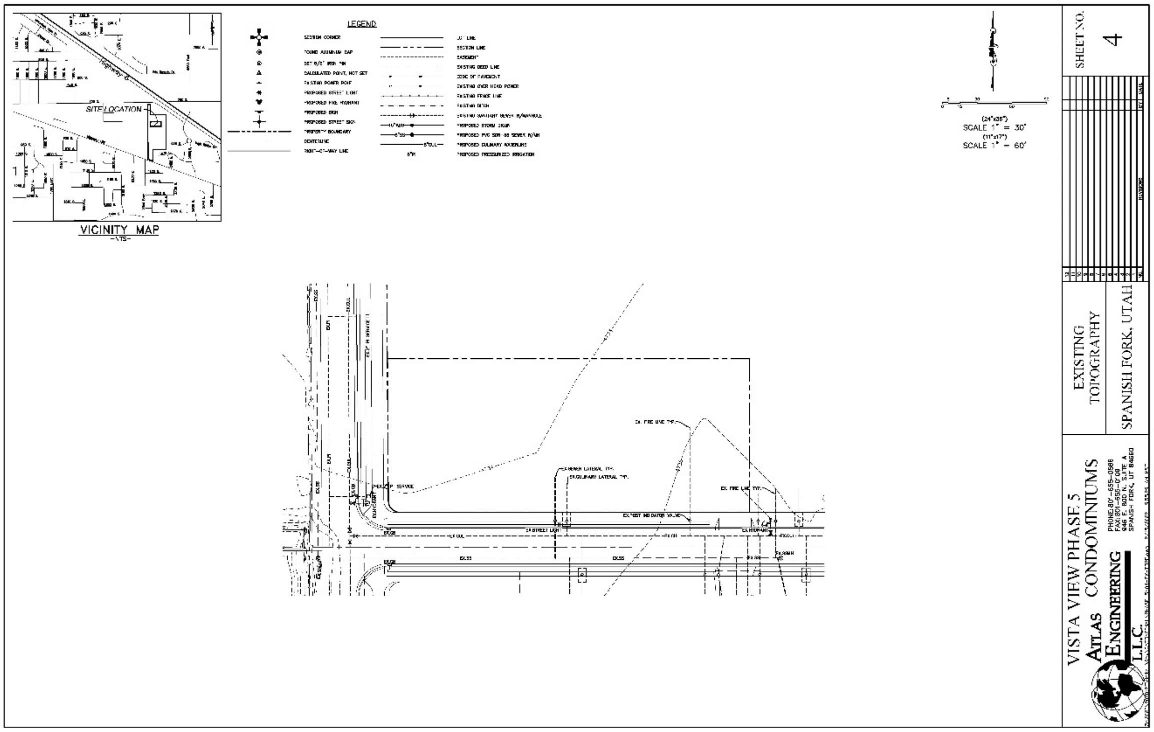
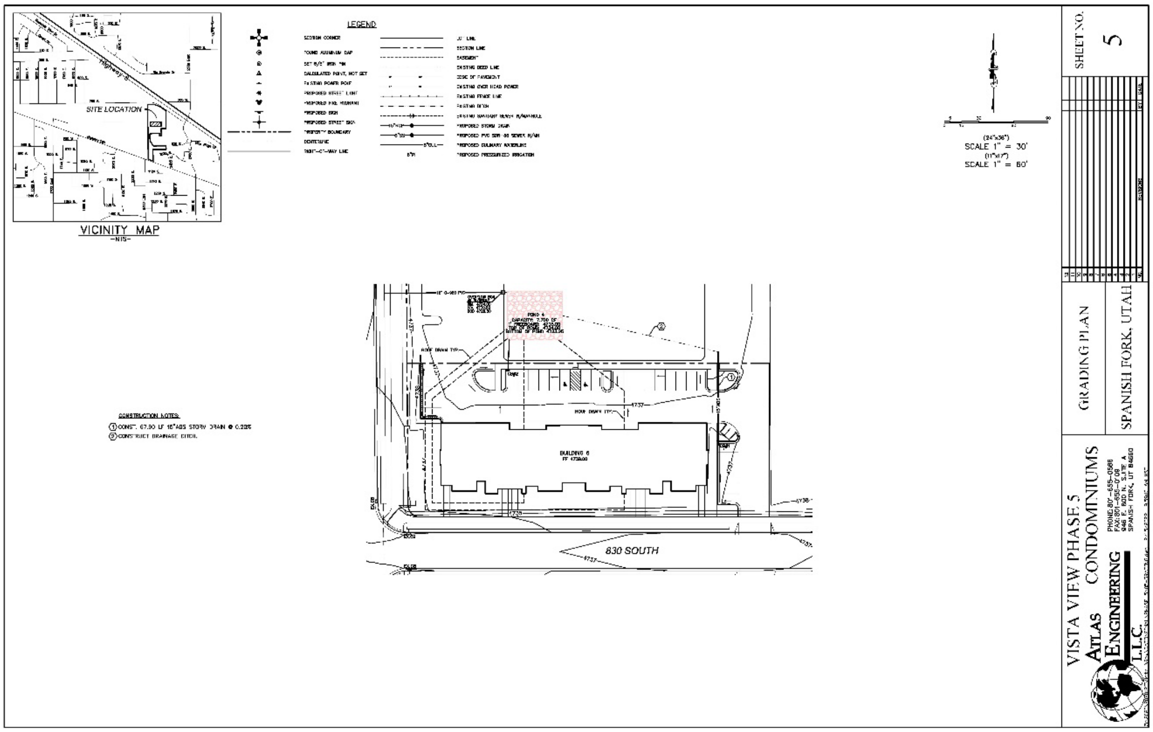
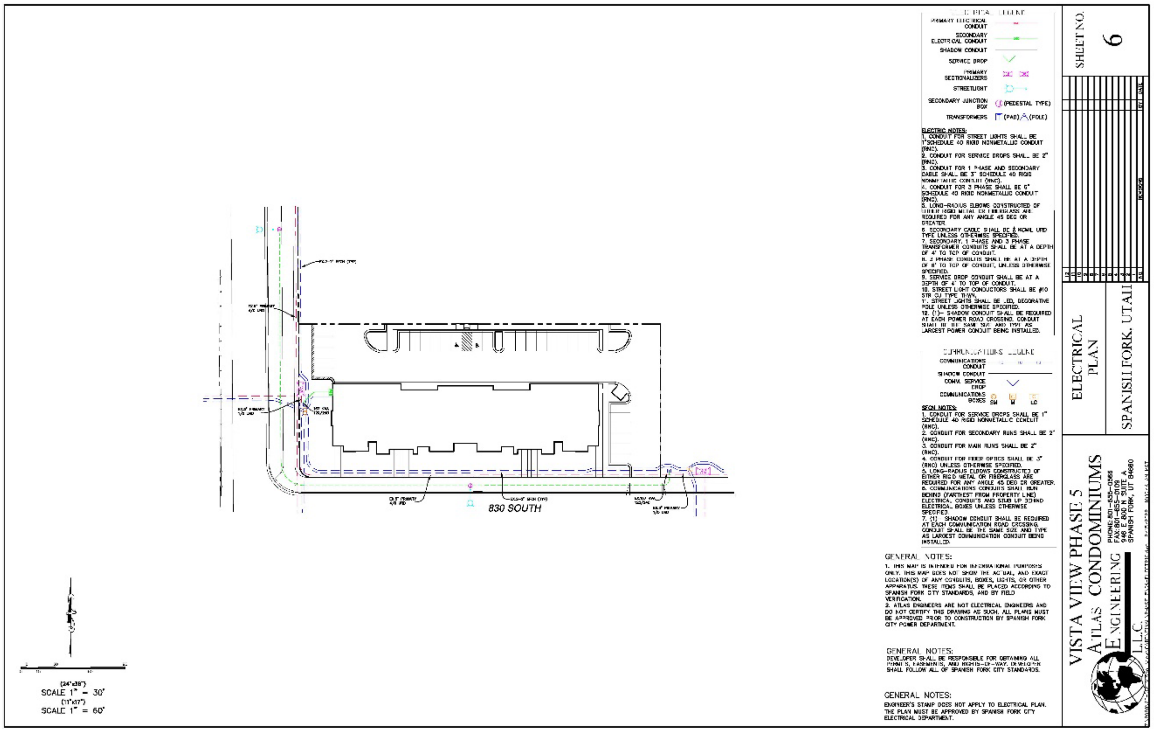

VICINITY MAP
~NTS~
SITE LOCATION
LEGEND
(24"x36")
SCALE 1" = 30'
(11"x17")
SCALE 1" = 60'
VISTA VIEW PHASE 5
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
EXISTING
TOPOGRAPHY
SPANISH FORK, UTAH
SHEET NO.
4

Exhibit 1



CONSTRUCTION NOTES:
① CONST. 67.90 LF 15" ABS STORM DRAIN @ 0.22%
② CONSTRUCT DRAINAGE DITCH.



ELECTRIC NOTES:
1. CONDUIT FOR STREET LIGHTS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE ⅘ KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 6' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 STR CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SFCN NOTES:
1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

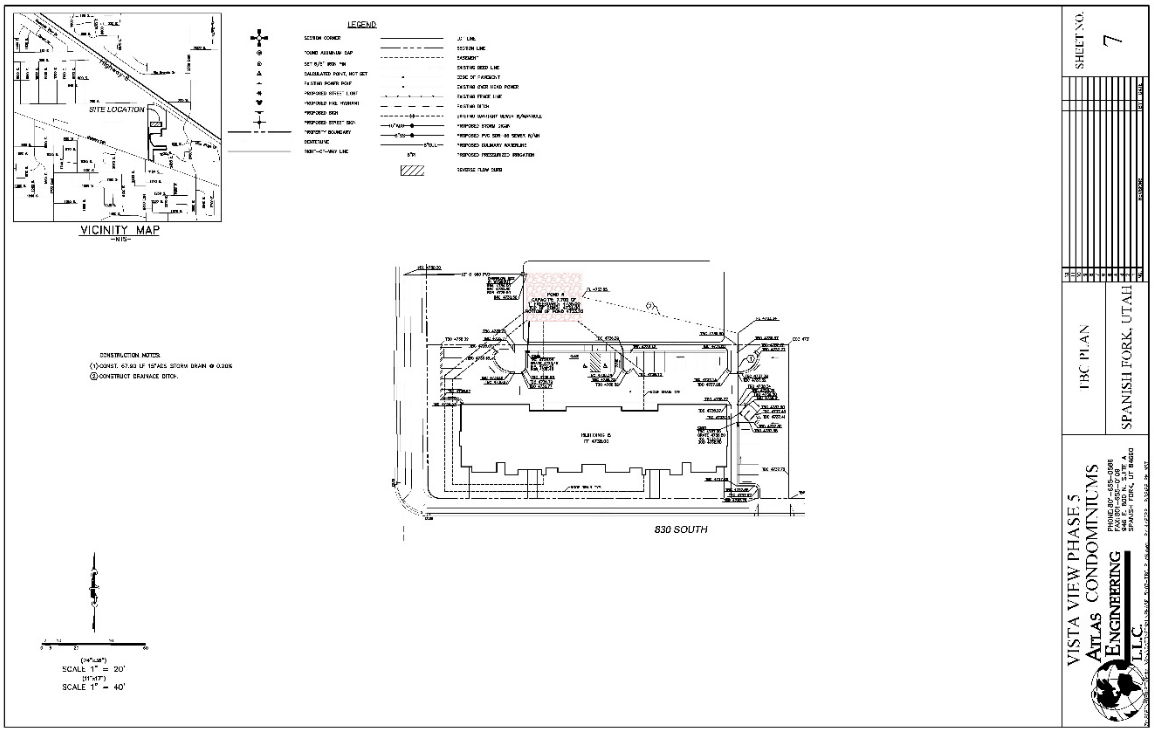
GENERAL NOTES:
1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.

GENERAL NOTES:
DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:
ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

March 22, 2023

Exhibit 1


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
CONSTRUCTION NOTES:
(1) CONST. 67.93 LF 15"ADS STORM DRAIN @ 0.20%
(2) CONSTRUCT DRAINAGE DITCH.
BUILDING 8
830 SOUTH
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
VISTA VIEW PHASE 5 CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
TBC PLAN
SPANISH FORK, UTAH
SHEET NO.
7

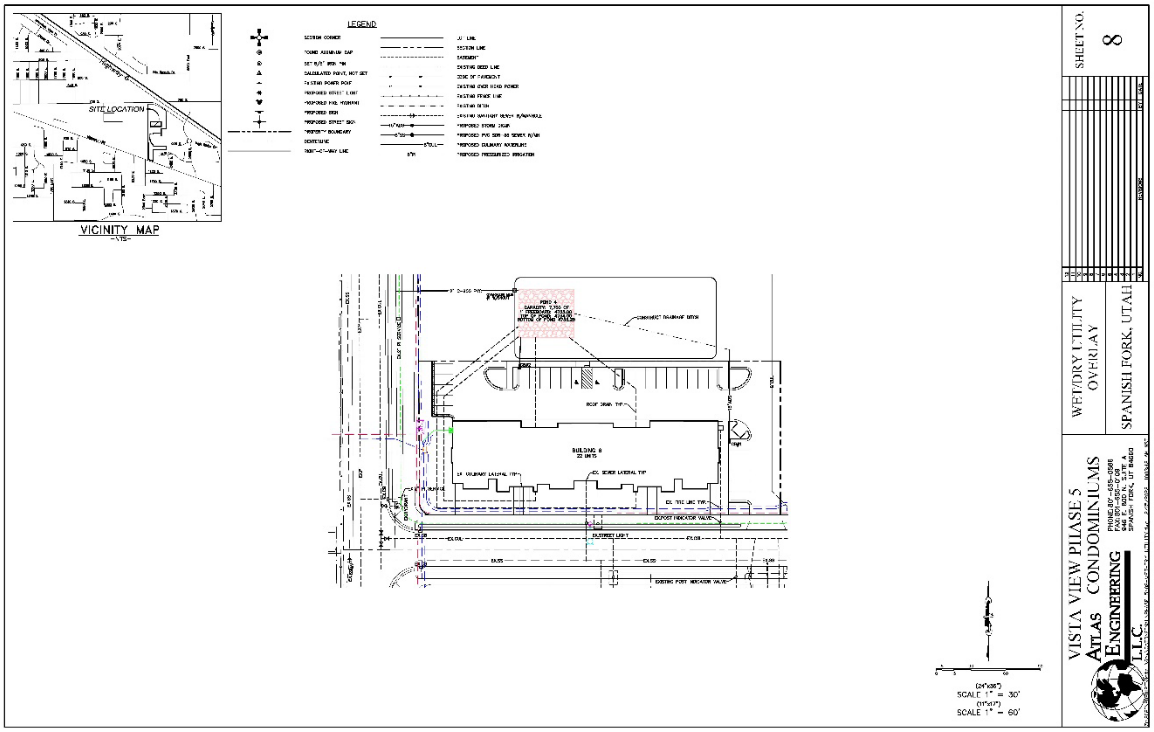
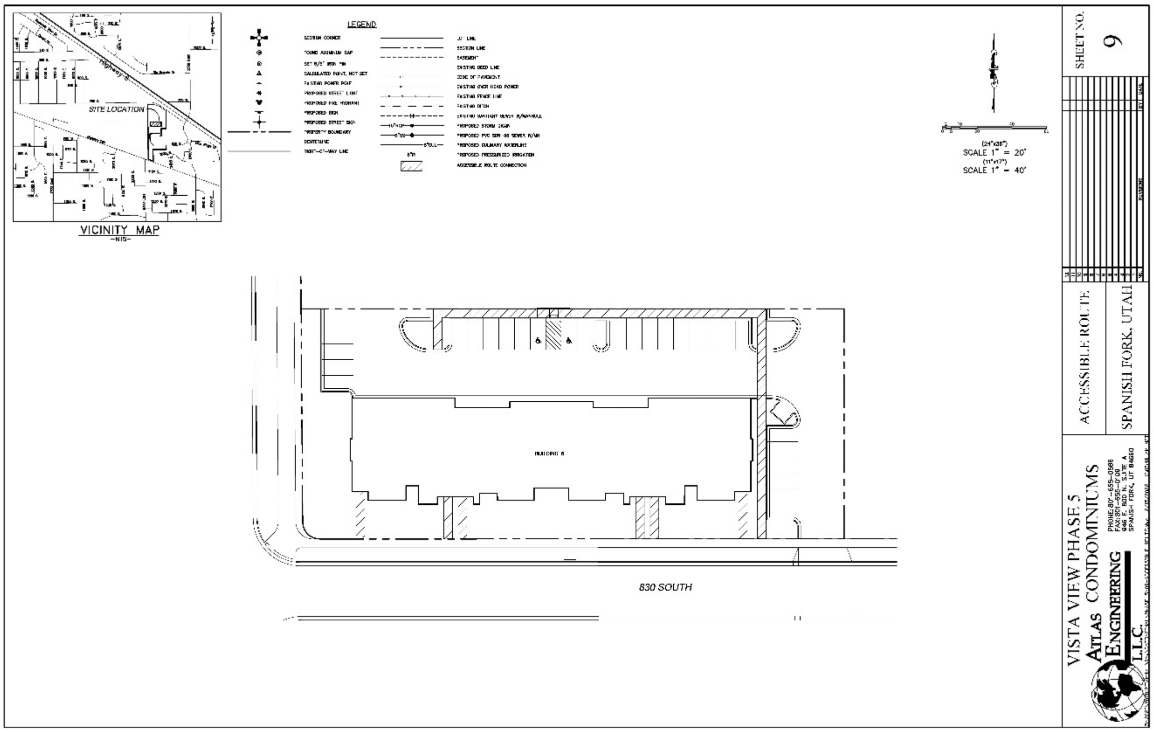
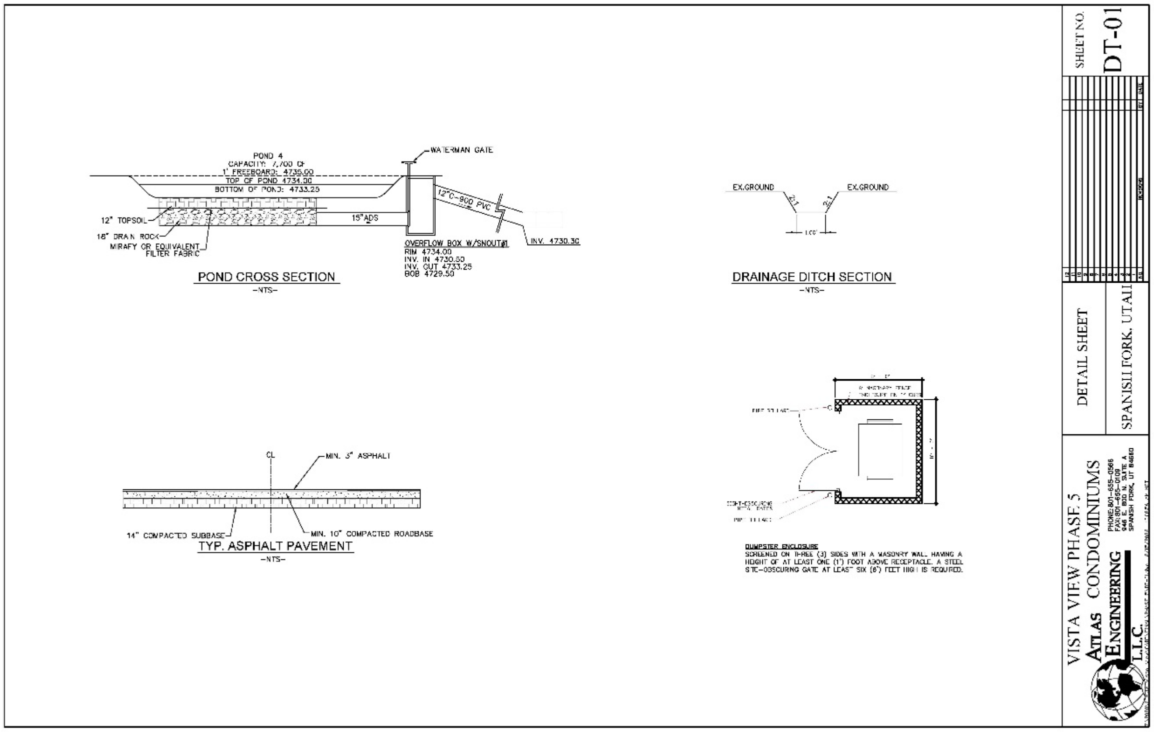

LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
BUILDING 8
22 UNITS
ROOF DRAIN TYP
(24"x36")
SCALE 1" = 30'
(11"x17")
SCALE 1" = 60'
VISTA VIEW PHASE 5 CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
WET/DRY UTILITY OVERLAY
SPANISH FORK, UTAH
SHEET NO.
8

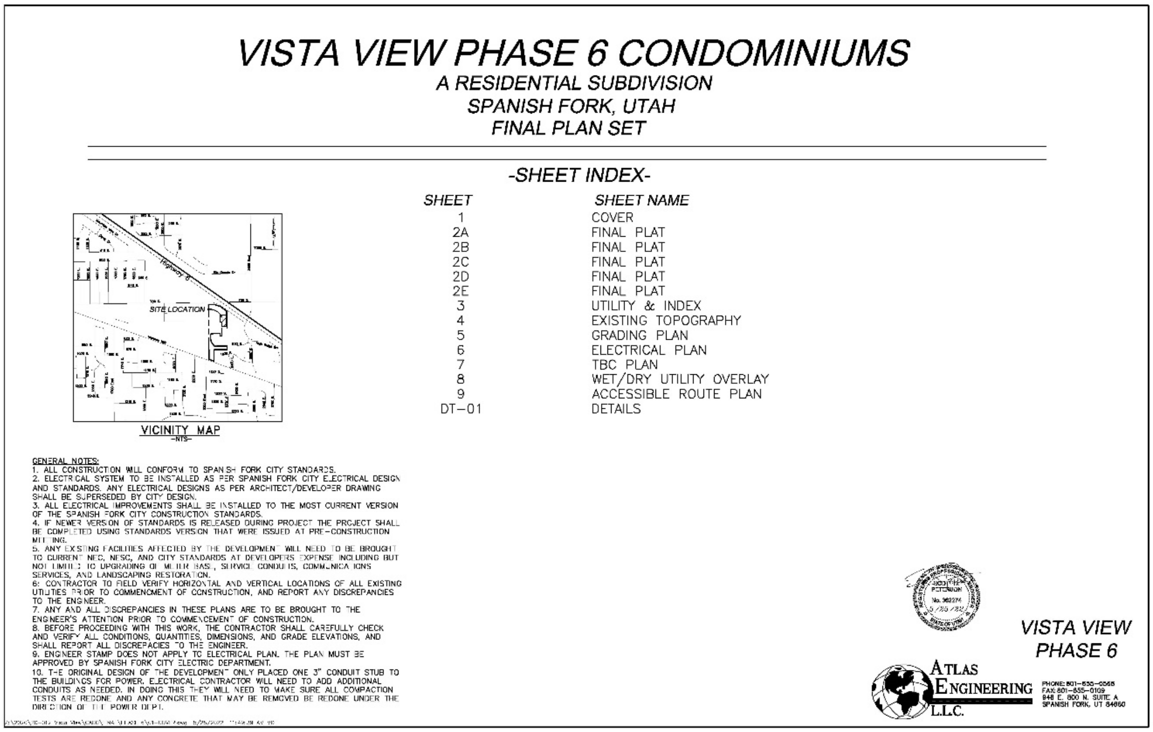
Exhibit 1





DUMPSTER ENCLOSURE
SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.

Exhibit 2



VISTA VIEW PHASE 6 CONDOMINIUMS

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
DT-01	DETAILS

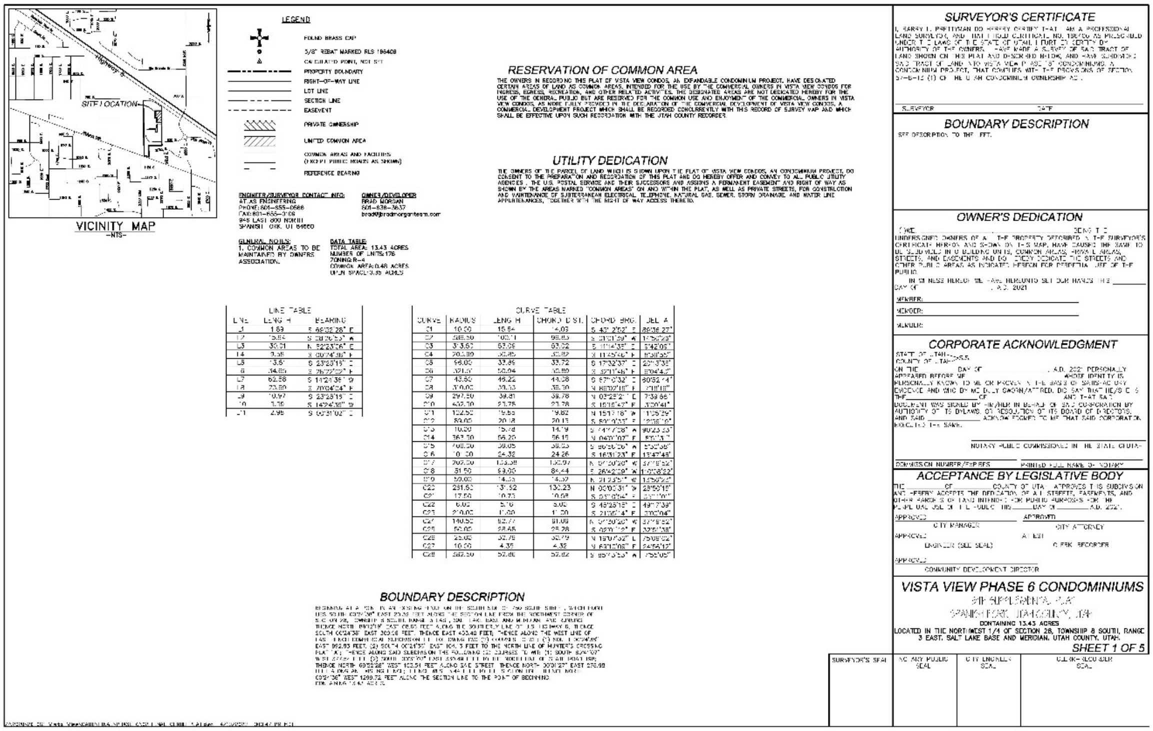
Highway 6
SITE LOCATION

VICINITY MAP
-NTS-

GENERAL NOTES:
1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6: CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.
10. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

VISTA VIEW
PHASE 6

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
948 E. 800 N. SUITE A
SPANISH FORK, UT 84660



Highway 6
SITE LOCATION

VICINITY MAP
-NTS-

LEGEND

✛	FOUND BRASS CAP
●	5/8" REBAT MARKED RLS 186408
△	CALCULATED POINT, NOT SET
— - — - —	PROPERTY BOUNDARY
———	RIGHT-OF-WAY LINE
———	LOT LINE
—— - - ——	SECTION LINE
- - - - - -	EASEMENT
▧	PRIVATE OWNERSHIP
▨	LIMITED COMMON AREA
	COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
— —	REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
948 EAST 800 NORTH
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-636-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 3.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES, THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

LINE	LENGTH	BEARING
L1	1.69	S 69°32'28" E
L2	15.64	S 08°26'55" W
L3	30.01	N 52°23'06" E
L4	9.58	S 00°24'38" E
L5	13.51	S 23°25'19" E
L6	34.65	S 26°22'02" E
L7	62.58	S 14°24'38" W
L8	23.80	S 70°04'04" E
L9	10.97	S 23°25'19" E
L10	3.39	S 14°24'38" W
L11	2.95	S 00°31'02" E

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	10.00	15.64	14.09	S 45°12'52" E	89°36'27"
C2	388.50	100.11	99.85	S 01°01'39" W	14°50'23"
C3	313.50	53.09	53.02	S 11°14'35" E	9°42'08"
C4	203.89	30.85	30.82	S 11°45'46" E	8°39'55"
C5	96.00	33.89	33.72	S 17°32'37" E	20°13'35"
C6	321.50	50.04	50.00	S 32°11'48" E	8°04'43"
C7	43.50	46.22	44.08	S 67°10'32" E	60°52'41"
C8	310.00	39.53	39.50	N 88°02'18" E	7°18'18"
C9	297.50	39.81	39.78	N 03°25'21" E	7°39'56"
C10	402.30	23.78	23.78	S 19°16'47" E	3°20'41"
C11	102.50	19.85	19.82	N 15°17'18" W	11°05'29"
C12	93.00	20.18	20.13	S 59°10'33" E	12°26'19"
C13	10.00	15.78	14.19	S 44°17'28" W	90°23'33"
C14	363.50	56.20	56.15	N 04°01'07" E	8°51'31"
C15	708.00	38.05	38.05	S 86°56'26" W	3°05'39"
C16	101.00	24.32	24.26	S 16°31'23" E	13°47'45"
C17	202.00	133.38	130.97	N 04°20'20" W	37°49'52"
C18	51.50	99.00	84.44	S 26°42'39" W	110°08'22"
C19	59.00	14.05	14.02	N 21°23'51" W	13°59'24"
C20	261.50	131.52	130.23	N 00°00'31" W	28°50'15"
C21	17.50	10.73	10.58	S 03°10'54" E	35°11'01"
C22	6.00	5.16	5.00	S 45°25'15" E	49°17'39"
C23	210.00	11.00	11.00	S 21°05'14" E	3°00'04"
C24	140.50	92.77	91.09	N 04°20'20" W	37°49'52"
C25	50.00	28.66	28.28	S 02°01'12" E	32°51'38"
C26	25.00	32.78	30.49	N 19°07'32" E	75°08'02"
C27	10.00	4.35	4.32	N 63°10'08" E	24°56'12"
C28	382.50	52.86	52.82	S 85°13'53" W	7°55'05"

BOUNDARY DESCRIPTION

BEGINNING AT A POINT IN AN EXISTING FENCE ON THE SOUTH SIDE OF 750 SOUTH STREET, WHICH POINT LIES SOUTH 00°24'38" EAST 20.32 FEET ALONG THE SECTION LINE FROM THE NORTHWEST CORNER OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, AND RUNNING THENCE NORTH 89°12'19" EAST 68.65 FEET ALONG THE SOUTHERLY LINE OF U.S. HIGHWAY 6; THENCE SOUTH 00°24'38" EAST 300.08 FEET; THENCE EAST 403.40 FEET; THENCE ALONG THE WEST LINE OF [illegible] COMMERCIAL SUBDIVISION THE FOLLOWING TWO (2) COURSES TO WIT: (1) SOUTH 00°24'45" EAST 992.03 FEET, (2) SOUTH 00°21'35" EAST 104.13 FEET TO THE NORTH LINE OF HUNTER'S CROSSING PLAT "A"; THENCE ALONG SAID SUBDIVISION THE FOLLOWING (2) COURSES TO WIT: (1) SOUTH 89°41'07" WEST 277.64 FEET, (2) SOUTH 00°31'02" EAST 330.48 FEET TO THE NORTH LINE OF STATE ROAD 198; THENCE NORTH 69°32'28" WEST 103.54 FEET ALONG SAID STREET; THENCE NORTH 00°01'27" EAST 276.98 FEET ALONG AN EXISTING FENCE; THENCE WEST [illegible] FEET TO THE SECTION LINE; THENCE NORTH 00°24'38" WEST 1299.72 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.
CONTAINING 13.43 ACRES

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 186708 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE 1ST CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

I/WE, ________________, ________________ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ________ DAY OF ____________, A.D. 2021

MEMBER: ____________________
MEMBER: ____________________
MEMBER:

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.

ON THE ________ DAY OF ______________, A.D. 2021 PERSONALLY APPEARED BEFORE ME ______________ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ________________ OF ______________ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID ____________ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

____
NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES ____________ PRINTED FULL NAME OF NOTARY ____________

ACCEPTANCE BY LEGISLATIVE BODY

THE __________ OF __________ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ______ DAY OF __________ A.D. 2021.

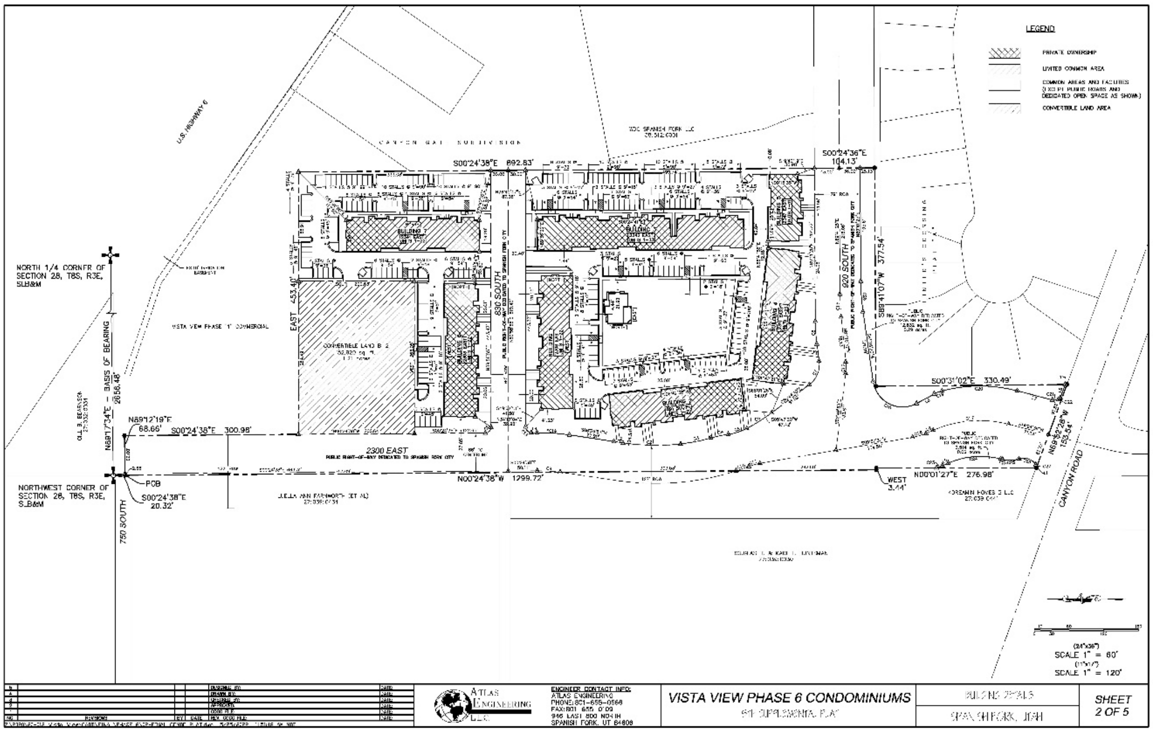
APPROVED ____________ CITY MANAGER
APPROVED ____________ CITY ATTORNEY
APPROVED ____________ ENGINEER (SEE SEAL)
ATTEST ____________ CLERK-RECORDER
APPROVED ____________ COMMUNITY DEVELOPMENT DIRECTOR

VISTA VIEW PHASE 6 CONDOMINIUMS

6TH SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.
SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

Exhibit 2


LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AND DEDICATED OPEN SPACE AS SHOWN)
CONVERTIBLE LAND AREA
U.S. HIGHWAY 6
CANYON GAP SUBDIVISION
S00°24'38"E 892.83'
S00°24'36"E 104.13'
NORTH 1/4 CORNER OF SECTION 28, T8S, R3E, SLB&M
VISTA VIEW PHASE "1" COMMERCIAL
N89°17'34"E - BASIS OF BEARING 2656.48'
N89°12'19"E 68.66'
S00°24'38"E 300.98'
POB
NORTHWEST CORNER OF SECTION 28, T8S, R3E, SLB&M
S00°24'38"E 20.32'
750 SOUTH
EAST 453.40'
CONVERTIBLE LAND B 2
830 SOUTH
2300 EAST
N00°24'38"W 1299.72'
820 SOUTH
S88°41'07"W 377.54'
S00°31'02"E 330.49'
WEST 3.44'
N00°01'27"E 276.98'
CANYON ROAD
(24"x36") SCALE 1" = 60'
(11"x17") SCALE 1" = 120'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801 655 0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
SHEET 2 OF 5

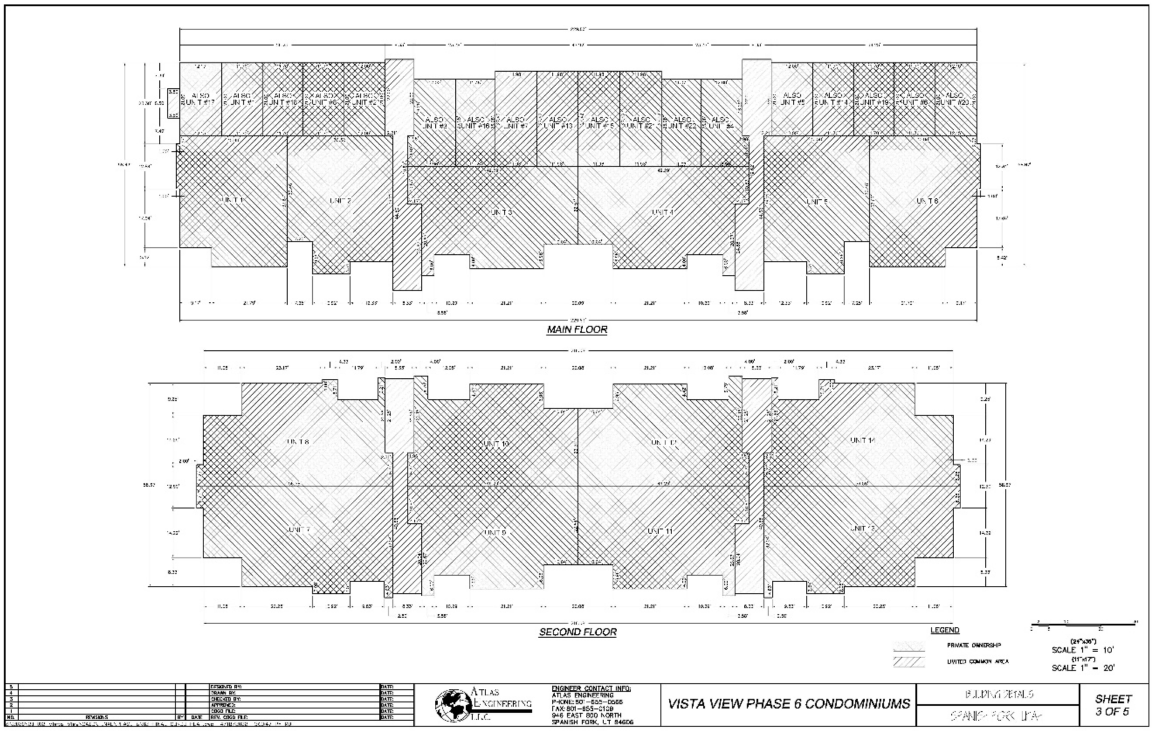
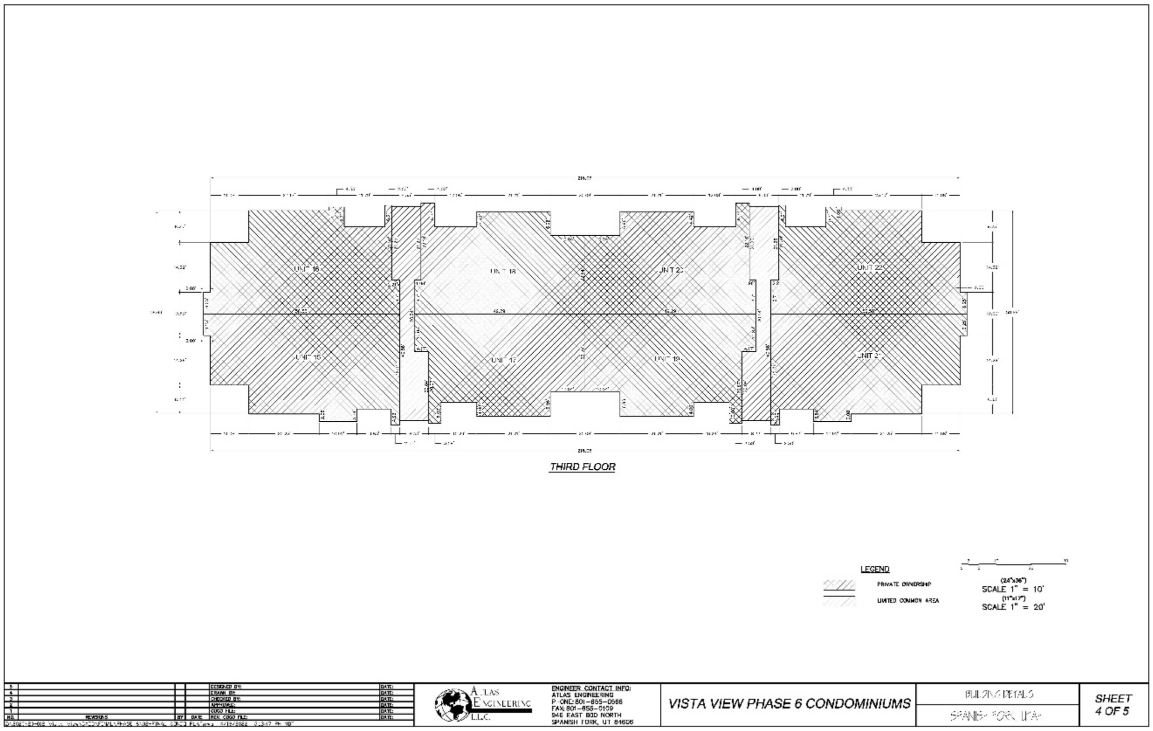

UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
MAIN FLOOR
UNIT 7
UNIT 8
UNIT 9
UNIT 10
UNIT 11
UNIT 12
UNIT 13
UNIT 14
SECOND FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36") SCALE 1" = 10'
(11"x17") SCALE 1" = 20'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0128
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET 3 OF 5

Exhibit 2


UNIT 16
UNIT 18
UNIT 20
UNIT 22
UNIT 15
UNIT 17
UNIT 19
UNIT 21
THIRD FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
4 OF 5

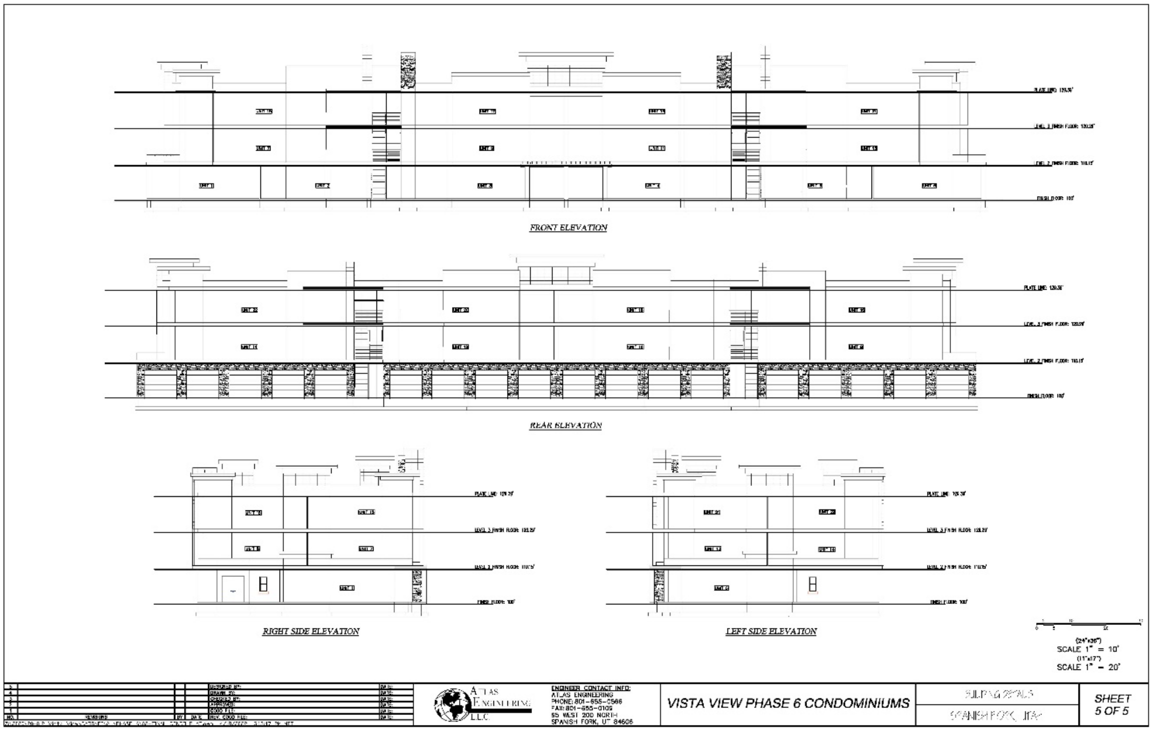
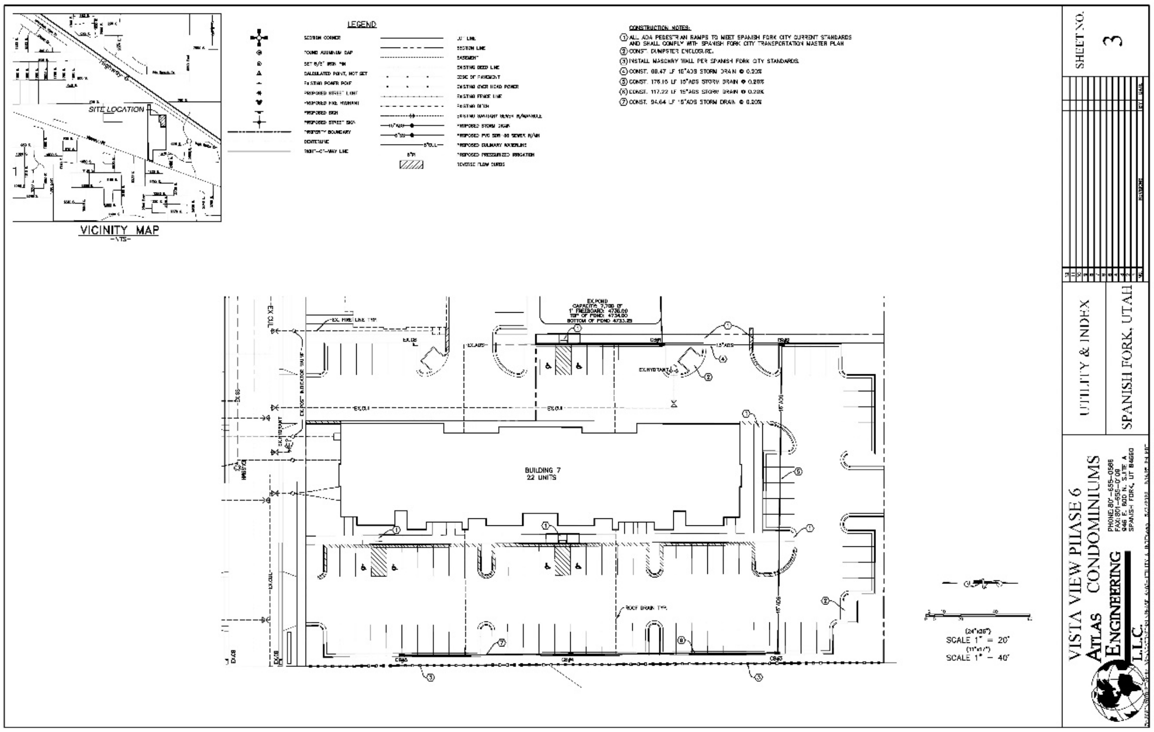

FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
FINISH FLOOR: 100'
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
55 WEST 200 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
5 OF 5

Exhibit 2


VICINITY MAP
N.T.S.
SITE LOCATION
LEGEND
CONSTRUCTION NOTES:
① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. DUMPSTER ENCLOSURE.
③ INSTALL MASONRY WALL PER SPANISH FORK CITY STANDARDS.
④ CONST. 88.47 LF 15"ADS STORM DRAIN @ 0.20%
⑤ CONST. 176.15 LF 15"ADS STORM DRAIN @ 0.20%
⑥ CONST. 117.22 LF 15"ADS STORM DRAIN @ 0.20%
⑦ CONST. 94.64 LF 15"ADS STORM DRAIN @ 0.20%
BUILDING 7
22 UNITS
EX.POND
EX.HYDRANT
ROOF DRAIN TYP.
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
VISTA VIEW PHASE 6
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
UTILITY & INDEX
SPANISH FORK, UTAH
SHEET NO.
3

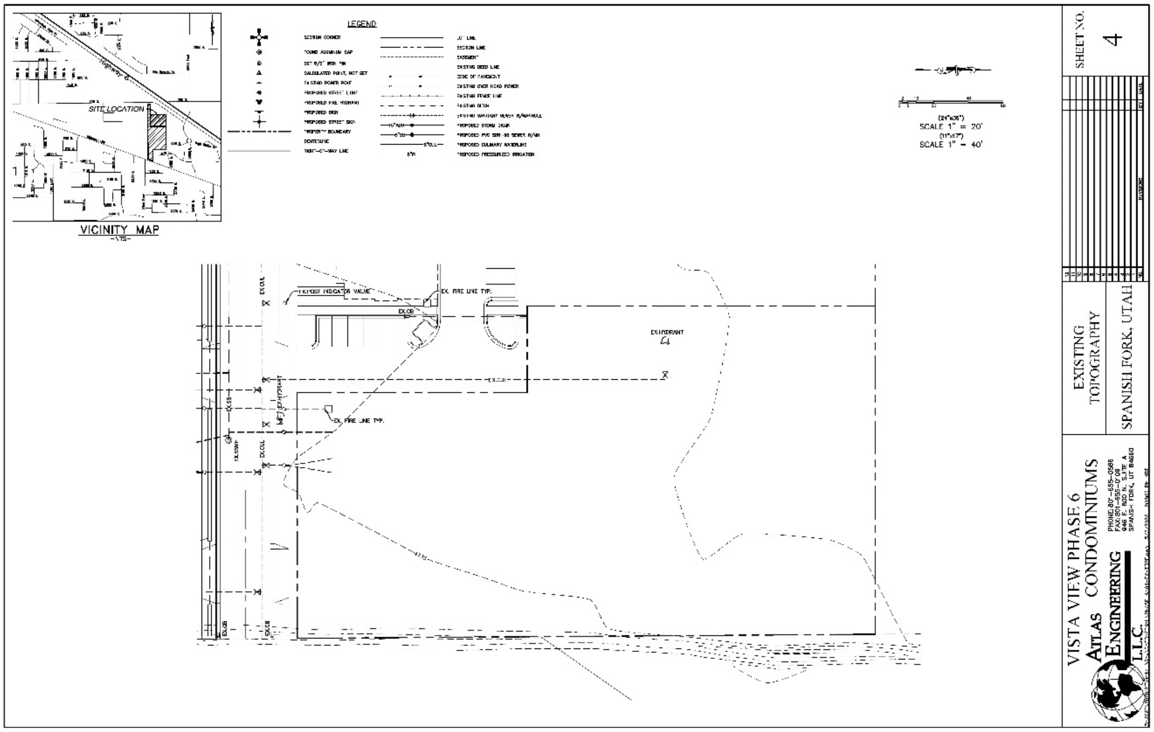
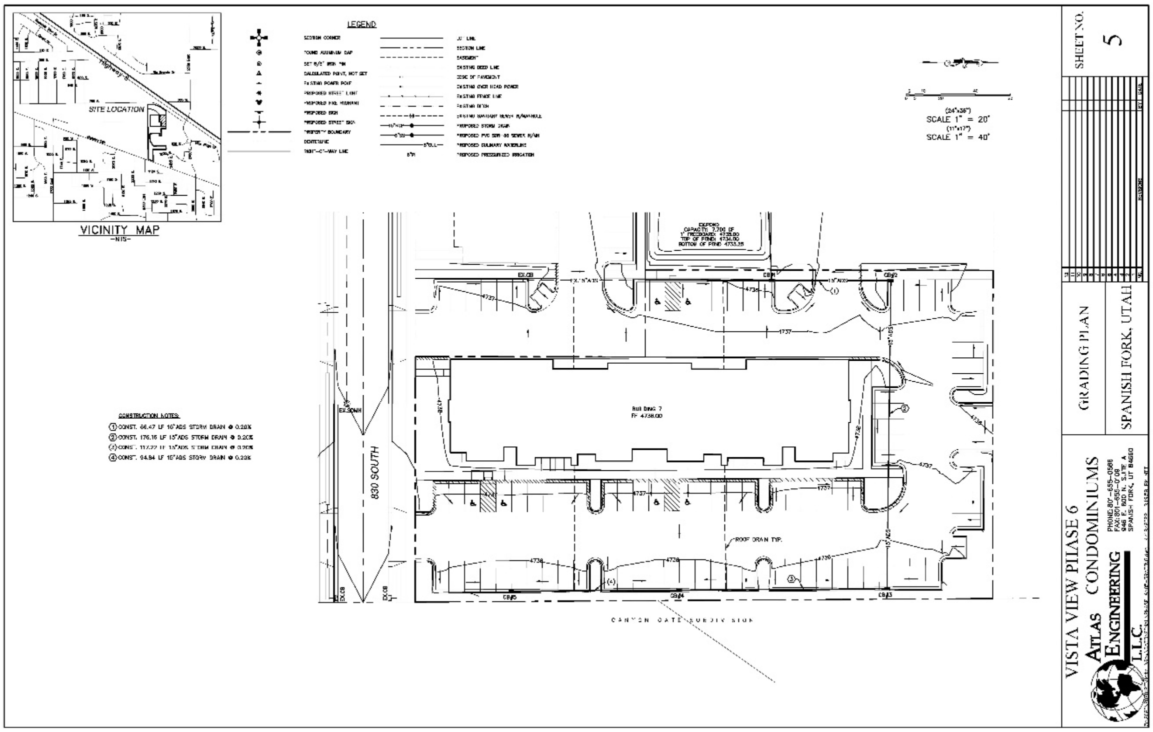
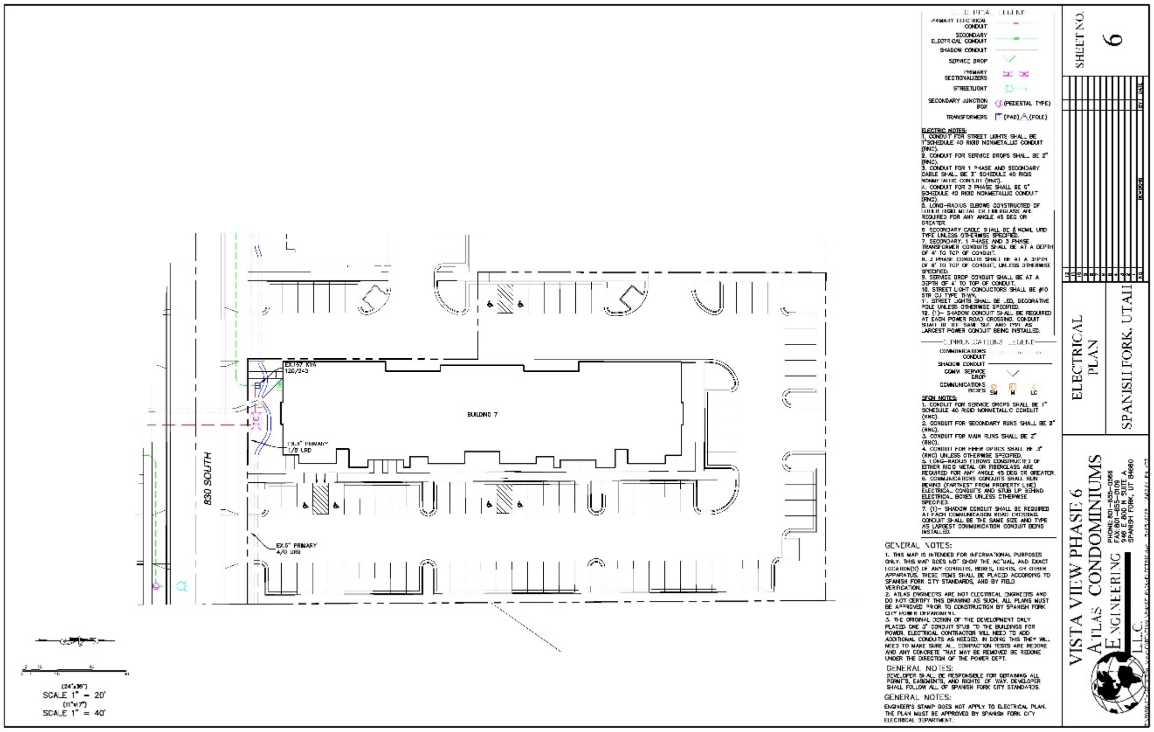

VICINITY MAP
N.T.S.
SITE LOCATION
LEGEND
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
EX.HYDRANT
EX. FIRE LINE TYP.
VISTA VIEW PHASE 6
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
EXISTING TOPOGRAPHY
SPANISH FORK, UTAH
SHEET NO.
4

Exhibit 2



CONSTRUCTION NOTES:

① CONST. 66.47 LF 15"ADS STORM DRAIN @ 0.20%
② CONST. 176.16 LF 15"ADS STORM DRAIN @ 0.20%
③ CONST. 117.22 LF 15"ADS STORM DRAIN @ 0.20%
④ CONST. 94.94 LF 15"ADS STORM DRAIN @ 0.20%



ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE ⅛ KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 6' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 STR CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SFCN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

GENERAL NOTES:

1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL, AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.
3. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

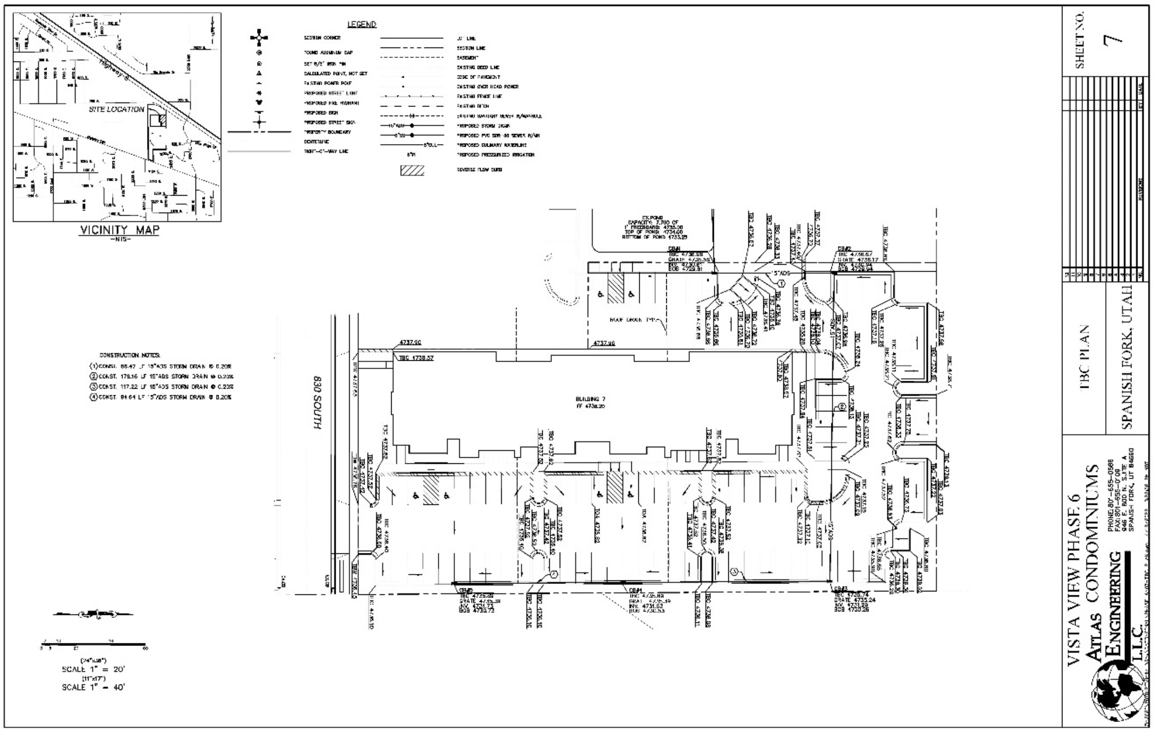
GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

Exhibit 2


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
830 SOUTH
BUILDING 7
FF 4738.20
CONSTRUCTION NOTES:
① CONST. 66.47 LF 15" ADS STORM DRAIN @ 0.20%
② CONST. 176.16 LF 15" ADS STORM DRAIN @ 0.20%
③ CONST. 117.22 LF 18" ADS STORM DRAIN @ 0.20%
④ CONST. 84.64 LF 15" ADS STORM DRAIN @ 0.20%
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
SHEET NO.
7
TBC PLAN
SPANISH FORK, UTAH
VISTA VIEW PHASE 6
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

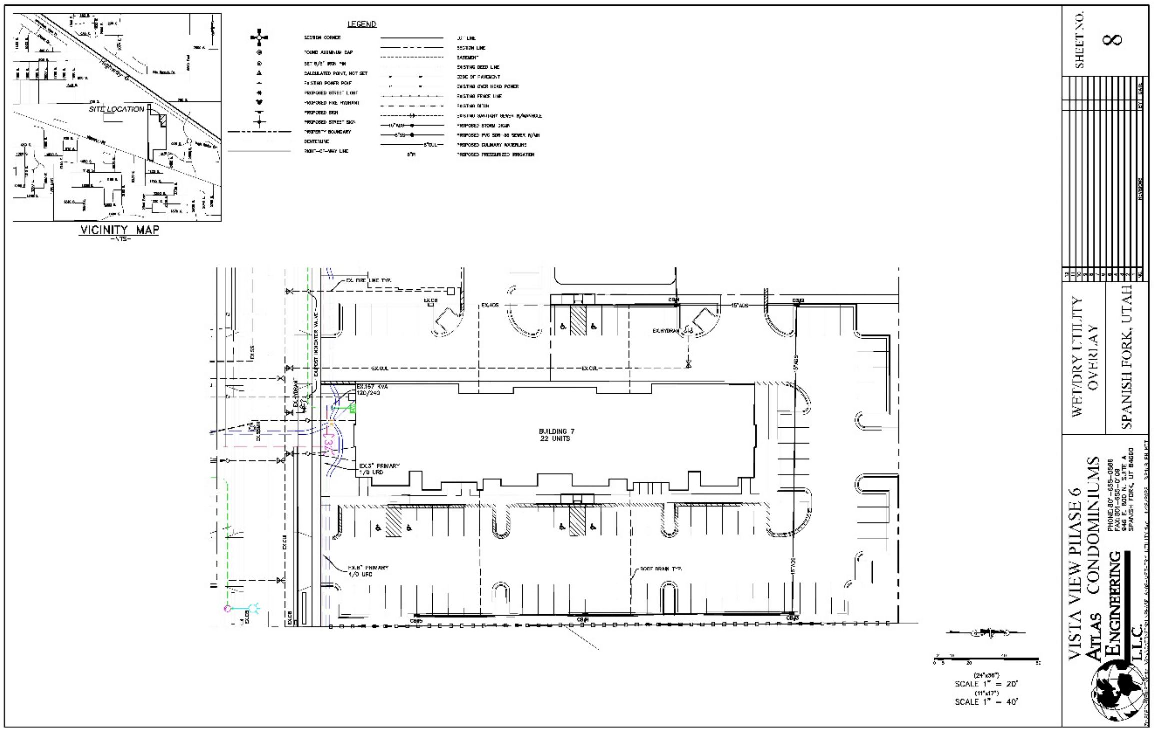
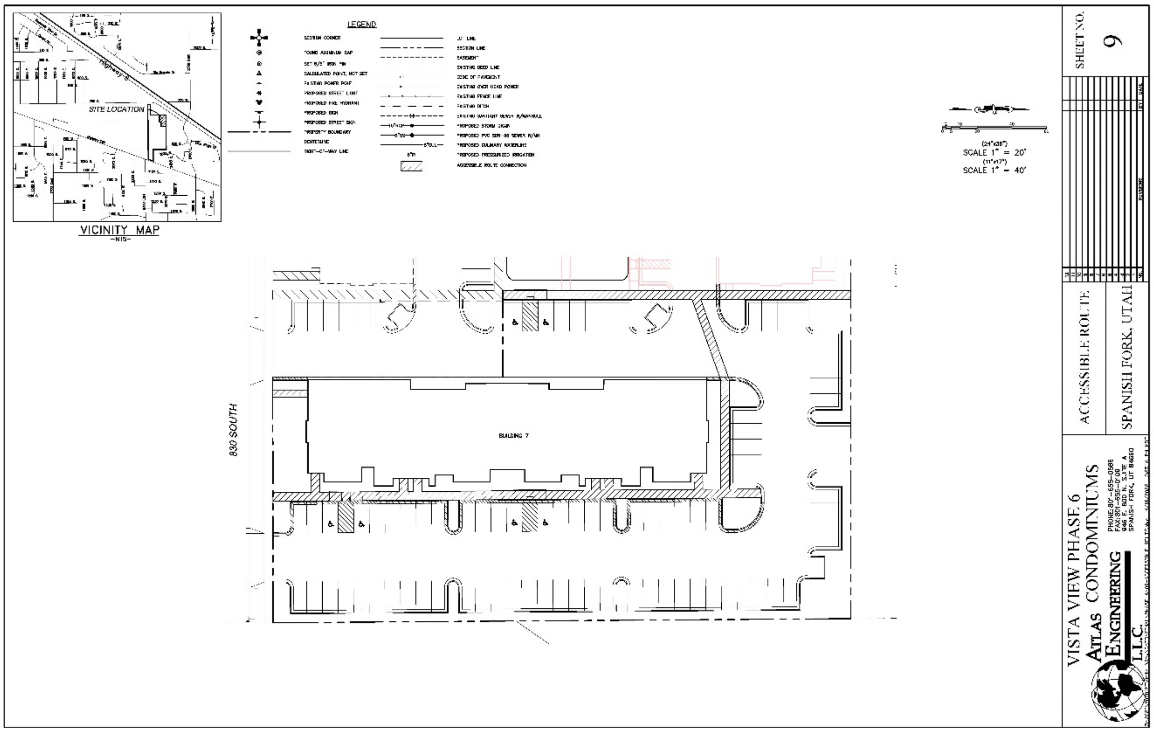
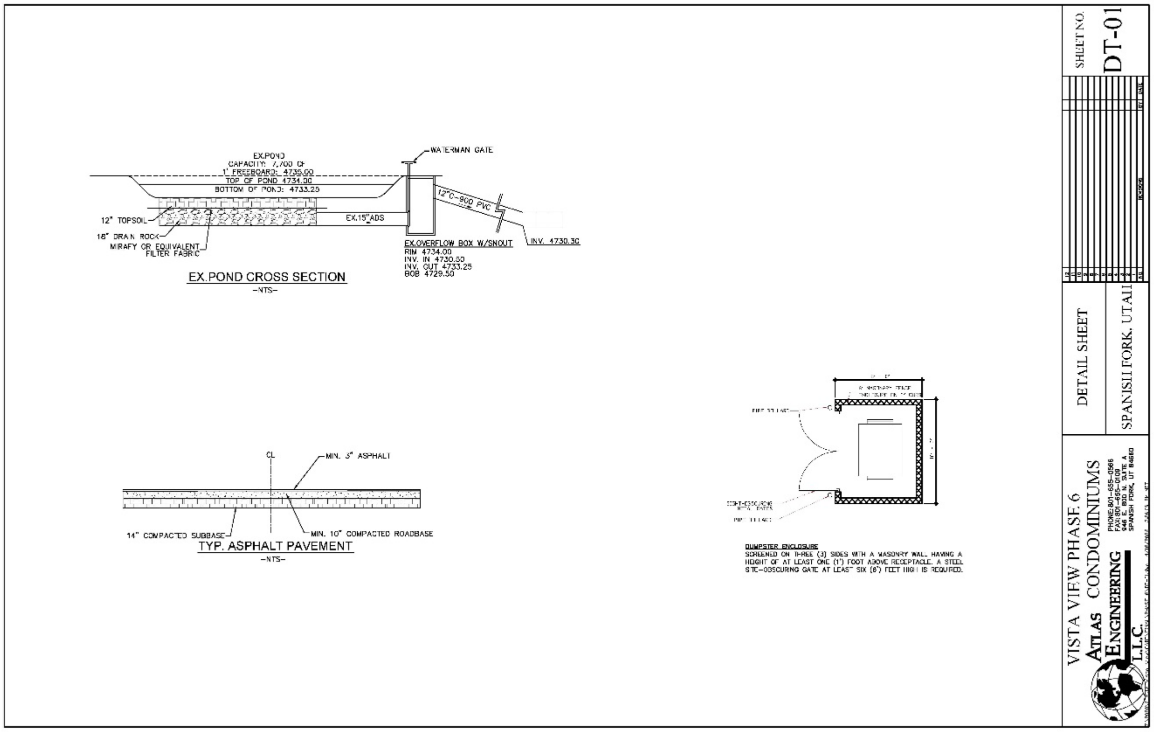

LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
BUILDING 7
22 UNITS
EX. FIRE LINE TYP.
EX. HYDRANT
EX.3" PRIMARY 1/0 URD
ROOF DRAIN TYP.
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
SHEET NO.
8
WET/DRY UTILITY OVERLAY
SPANISH FORK, UTAH
VISTA VIEW PHASE 6
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

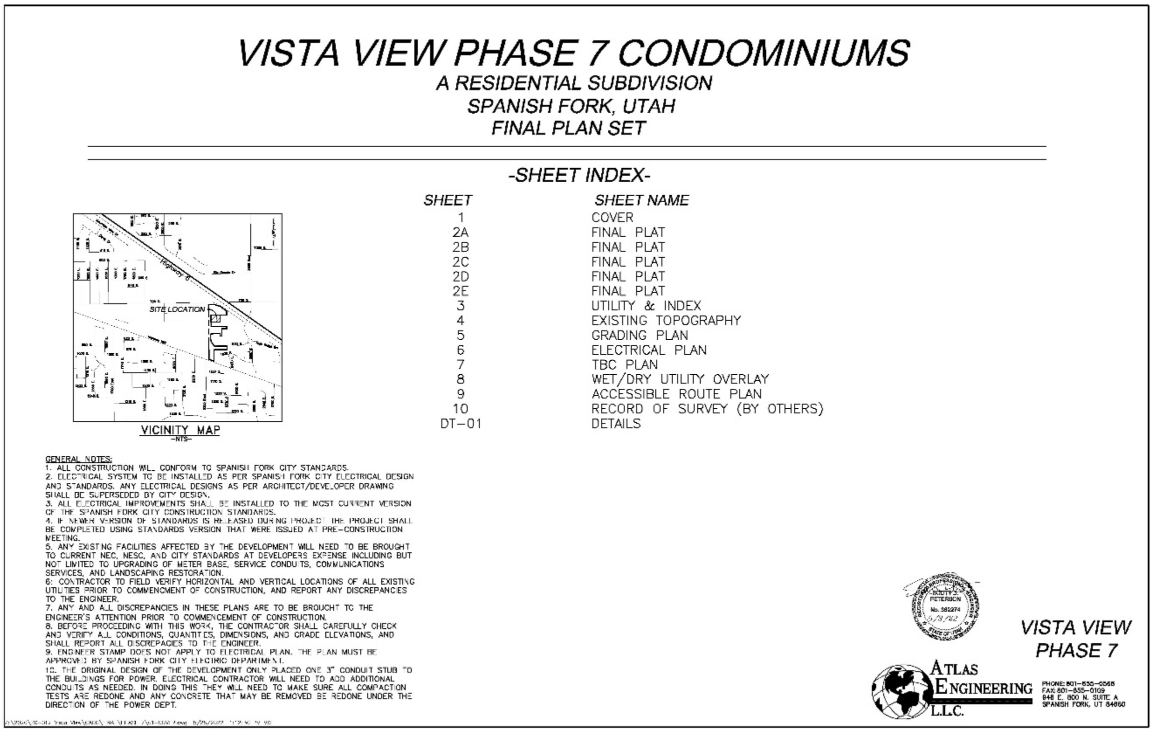
Exhibit 2





SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.

Exhibit 3



VISTA VIEW PHASE 7 CONDOMINIUMS

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
10	RECORD OF SURVEY (BY OTHERS)
DT-01	DETAILS

VICINITY MAP
-NTS-

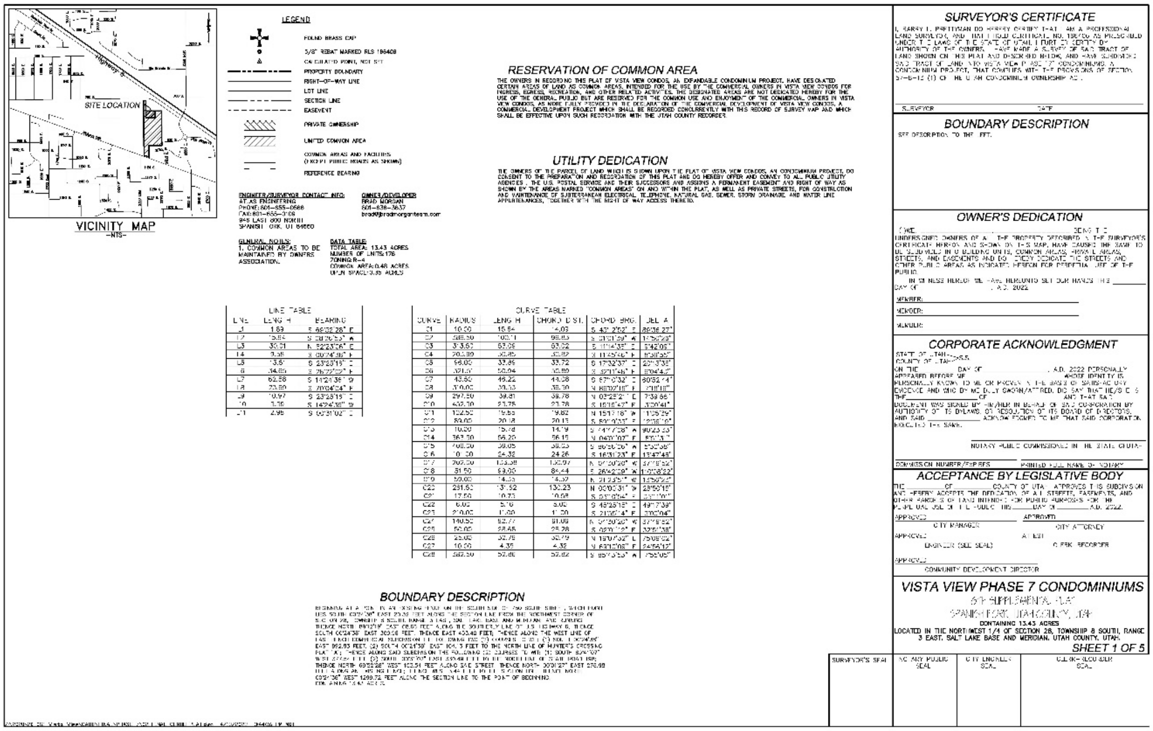
GENERAL NOTES:

1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6: CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.
10. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

SCOTT J. PETERSON
No. 362274
5/3/22

VISTA VIEW
PHASE 7

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
948 E. 800 N. SUITE A
SPANISH FORK, UT 84660



Highway 6
SITE LOCATION

VICINITY MAP
-NTS-

LEGEND

✛	FOUND BRASS CAP
●	5/8" REBAR MARKED RLS 186406
△	CALCULATED POINT, NOT SET
—·—·—	PROPERTY BOUNDARY
——	RIGHT-OF-WAY LINE
——	LOT LINE
— - - —	SECTION LINE
- - - -	EASEMENT
▨	PRIVATE OWNERSHIP
▨	LIMITED COMMON AREA
	COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
— —	REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
948 EAST 800 NORTH
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-836-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 3.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES, THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

LINE	LENGTH	BEARING
L1	1.69	S 69°32'28" E
L2	15.84	S 28°26'53" W
L3	30.01	N 52°23'06" E
L4	9.55	S 00°24'38" E
L5	13.51	S 23°25'13" E
L6	34.65	S 26°22'02" E
L7	62.58	S 14°24'36" W
L8	23.80	S 70°04'04" E
L9	10.97	S 23°25'13" E
L10	3.39	S 14°24'36" W
L11	2.95	S 00°31'02" E

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	10.00	15.64	14.09	S 45°12'52" E	89°36'27"
C2	388.50	100.11	99.83	S 01°01'39" W	14°50'23"
C3	313.50	53.09	53.02	S 11°14'35" E	9°42'09"
C4	203.89	30.85	30.82	S 11°45'46" E	8°58'55"
C5	96.00	33.89	33.72	S 17°32'37" E	20°13'35"
C6	321.50	50.04	50.00	S 32°11'46" E	8°04'42"
C7	43.50	46.22	44.08	S 67°10'32" E	60°52'41"
C8	310.00	39.53	39.50	N 86°02'18" E	7°18'18"
C9	297.50	39.81	39.78	N 03°25'21" E	7°39'56"
C10	452.50	23.75	23.75	S 19°18'47" E	3°00'41"
C11	102.50	19.85	19.82	N 15°17'18" W	11°05'29"
C12	89.00	20.18	20.13	S 59°10'33" E	12°59'10"
C13	10.00	15.78	14.19	S 44°17'08" W	90°23'33"
C14	363.50	56.20	56.15	N 04°01'07" E	8°51'31"
C15	408.00	38.05	38.03	S 86°56'26" W	5°20'38"
C16	101.00	24.32	24.26	S 16°31'23" E	13°47'45"
C17	202.00	133.58	130.97	N 04°20'20" W	37°18'52"
C18	51.50	99.00	84.44	S 26°42'09" W	110°08'22"
C19	50.00	14.55	14.52	N 21°23'51" W	16°50'24"
C20	261.50	131.52	130.23	N 00°00'31" W	28°50'15"
C21	17.50	10.73	10.58	S 03°10'54" E	35°11'01"
C22	6.00	5.16	5.00	S 45°25'15" E	49°17'39"
C23	210.00	11.00	11.00	S 21°05'14" E	3°00'04"
C24	140.50	92.77	91.09	N 04°20'20" W	37°49'52"
C25	50.00	28.66	28.28	S 02°01'12" E	32°51'38"
C26	25.00	32.78	30.49	N 19°07'32" E	75°08'02"
C27	10.00	4.35	4.32	N 63°10'08" E	24°56'12"
C28	382.50	52.88	52.82	S 85°15'55" W	7°55'05"

BOUNDARY DESCRIPTION

BEGINNING AT A POINT IN AN EXISTING FENCE ON THE SOUTH SIDE OF 750 SOUTH STREET, WHICH POINT LIES SOUTH 00°24'36" EAST 20.32 FEET ALONG THE SECTION LINE FROM THE NORTHWEST CORNER OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE NORTH 69°12'19" EAST 68.65 FEET ALONG THE SOUTHERLY LINE OF U.S. HIGHWAY 6; THENCE SOUTH 00°24'38" EAST 300.56 FEET; THENCE EAST 453.40 FEET; THENCE ALONG THE WEST LINE OF EAST [illegible] COMMERCIAL SUBDIVISION THE FOLLOWING TWO (2) COURSES TO WIT: (1) SOUTH 00°24'36" EAST 892.83 FEET, (2) SOUTH 00°21'38" EAST 104.13 FEET TO THE NORTH LINE OF HUNTER'S CROSSING PLAT "A"; THENCE ALONG SAID SUBDIVISION THE FOLLOWING (2) COURSES TO WIT: (1) SOUTH 89°41'07" WEST [illegible] FEET, (2) SOUTH 00°31'00" EAST 330.48 FEET TO THE NORTH LINE OF STATE ROAD 198; THENCE NORTH 69°32'28" WEST 103.54 FEET ALONG SAID STREET; THENCE NORTH 00°01'27" EAST 276.69 FEET ALONG AN EXISTING FENCE; THENCE WEST [illegible] FEET TO THE SECTION LINE; THENCE NORTH 00°24'36" WEST 1299.72 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.
CONTAINING 13.43 ACRES.

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 186406 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE "7" CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

(I)WE, ____________, ____________ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ______ DAY OF ____________, A.D. 2022

MEMBER: ____________

MEMBER: ____________

MEMBER:

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.

ON THE ______ DAY OF ____________, A.D. 2022 PERSONALLY APPEARED BEFORE ME ____________ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ____________ OF ____________ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID ____________ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES PRINTED FULL NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

THE ____________ OF ____________ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ______ DAY OF ____________ A.D. 2022.

APPROVED ____________ CITY MANAGER
APPROVED ____________ CITY ATTORNEY
APPROVED ____________ ENGINEER (SEE SEAL)
ATTEST ____________ CLERK-RECORDER
APPROVED ____________ COMMUNITY DEVELOPMENT DIRECTOR

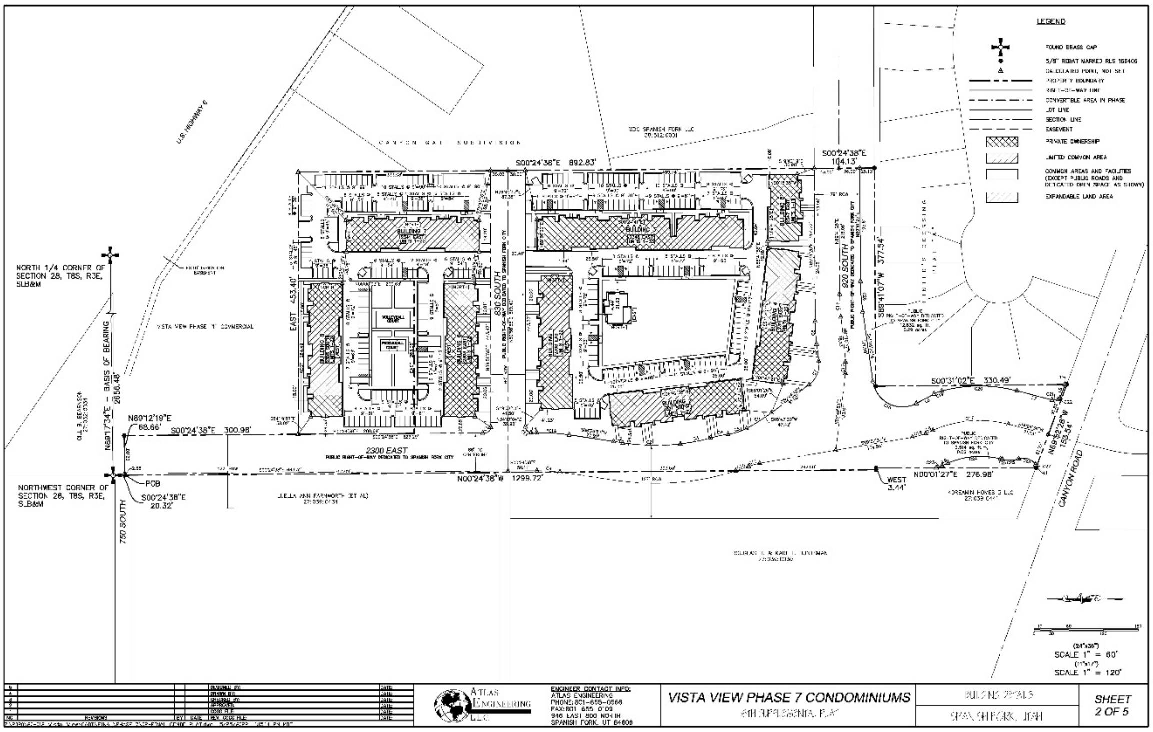
VISTA VIEW PHASE 7 CONDOMINIUMS

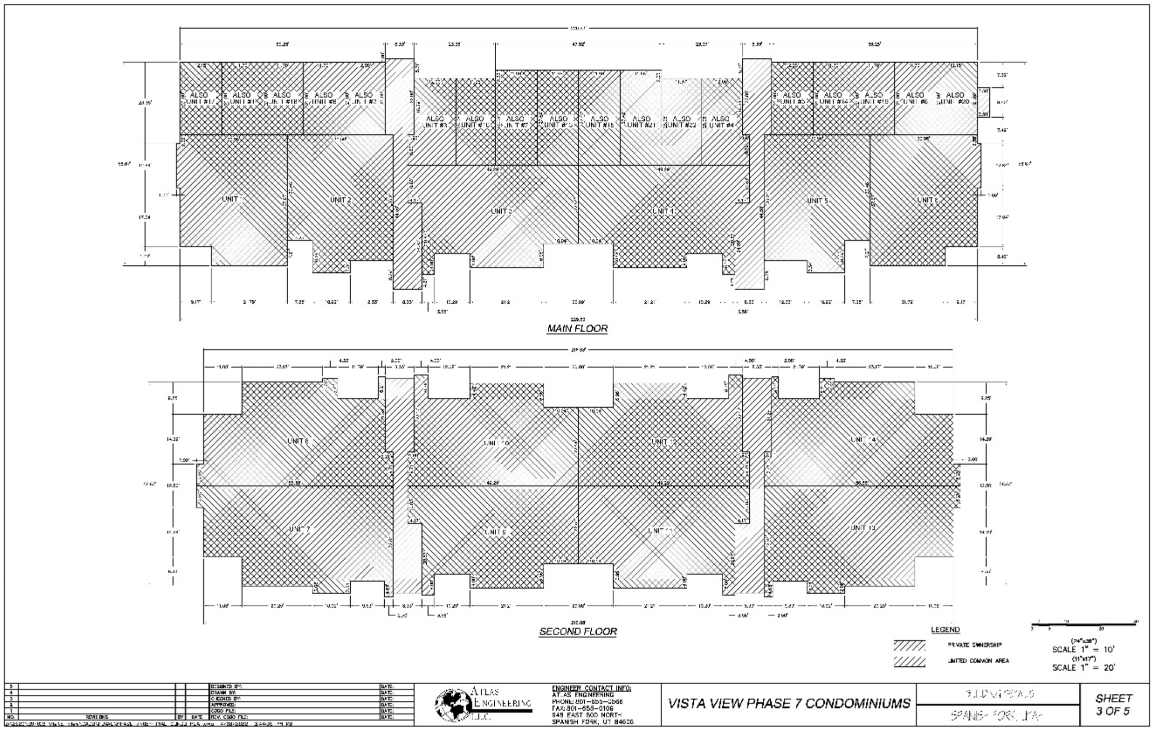
6TH SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.

SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

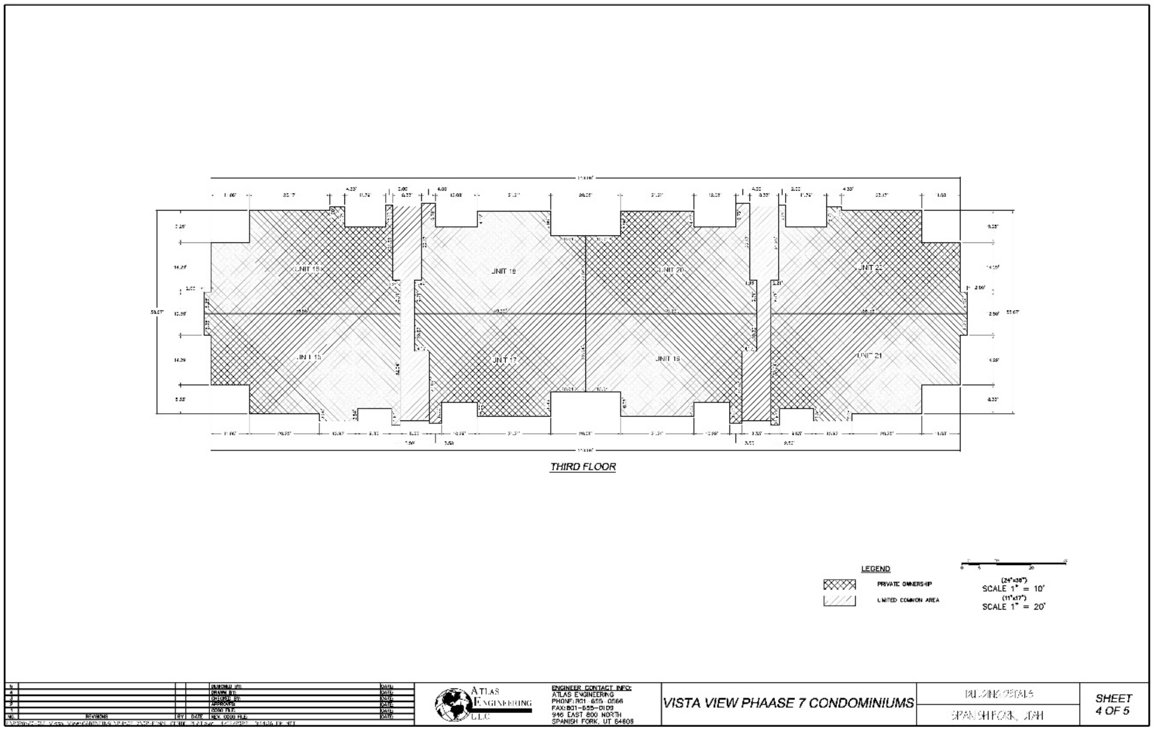
Exhibit 3





March 22, 2023

Exhibit 3


UNIT 15
UNIT 19
UNIT 20
UNIT 22
UNIT 16
UNIT 17
UNIT 18
UNIT 21
THIRD FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
REVISIONS
BY
DATE
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
COGO FILE:
REV. COGO FILE:
DATE:
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHAASE 7 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET 4 OF 5

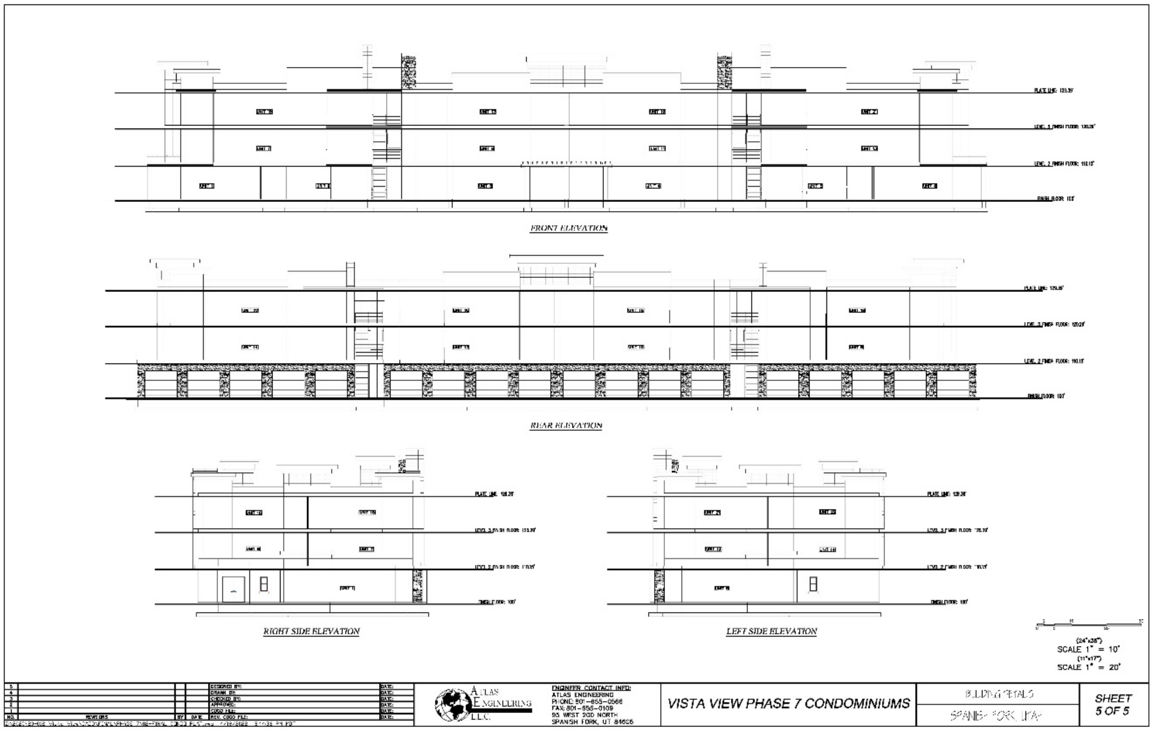
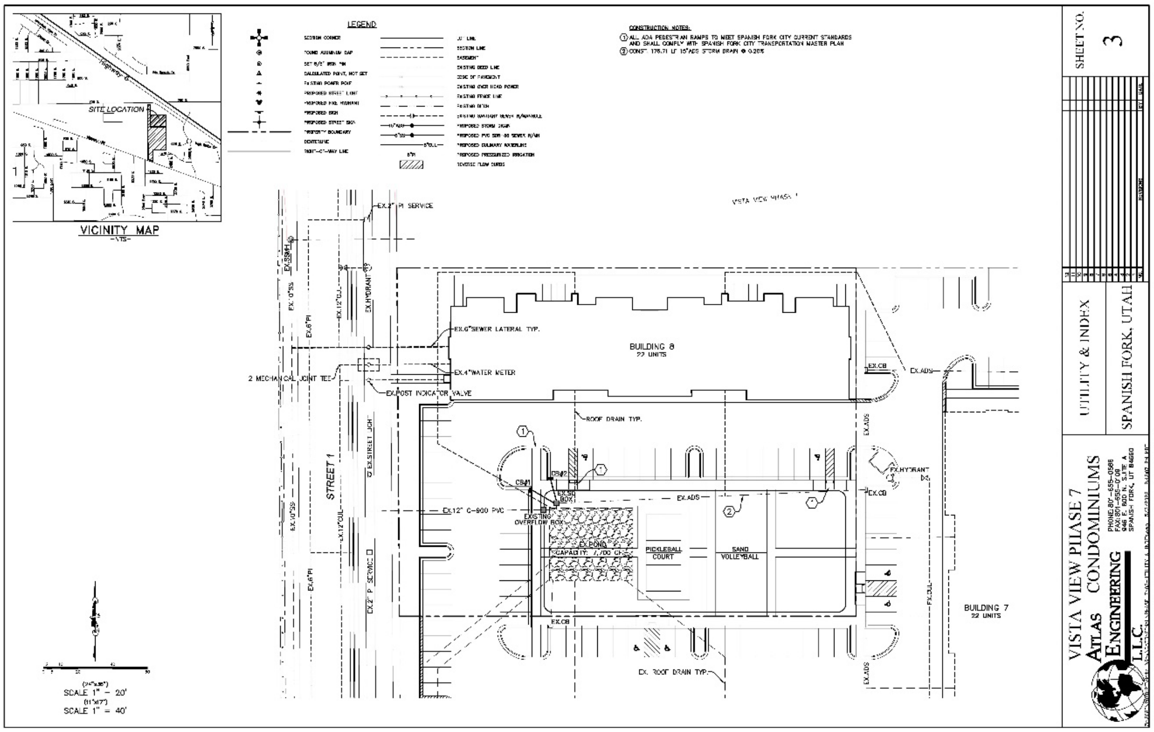

FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
REVISIONS
BY
DATE
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
COGO FILE:
REV. COGO FILE:
DATE:
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
95 WEST 200 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 7 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET 5 OF 5

Exhibit 3


VICINITY MAP
SITE LOCATION
LEGEND
CONSTRUCTION NOTES:
① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. 176.71 LF 15"ADS STORM DRAIN @ 0.20%
VISTA VIEW PHASE 1
EX.2" PI SERVICE
EX.6"SEWER LATERAL TYP.
EX.4"WATER METER
2 MECHANICAL JOINT TEE
EX.POST INDICATOR VALVE
BUILDING 8
22 UNITS
ROOF DRAIN TYP.
STREET 1
EX.STREET LIGHT
EX.12" C-900 PVC
EXISTING OVERFLOW BOX
EX.POND
CAPACITY: 7,700 CF
PICKLEBALL COURT
SAND VOLLEYBALL
EX.ADS
EX.CB
EX.HYDRANT
BUILDING 7
22 UNITS
EX. ROOF DRAIN TYP.
SCALE 1" = 20'
SCALE 1" = 40'
VISTA VIEW PHASE 7 CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
UTILITY & INDEX
SPANISH FORK, UTAH
SHEET NO.
3

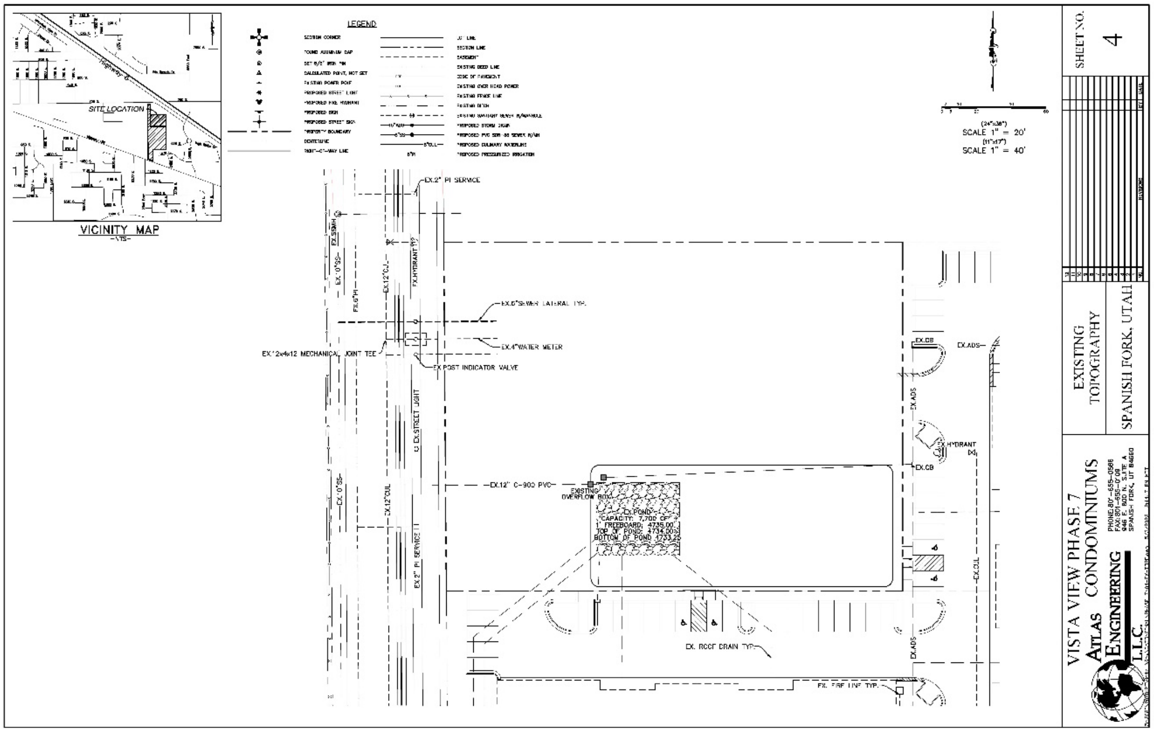
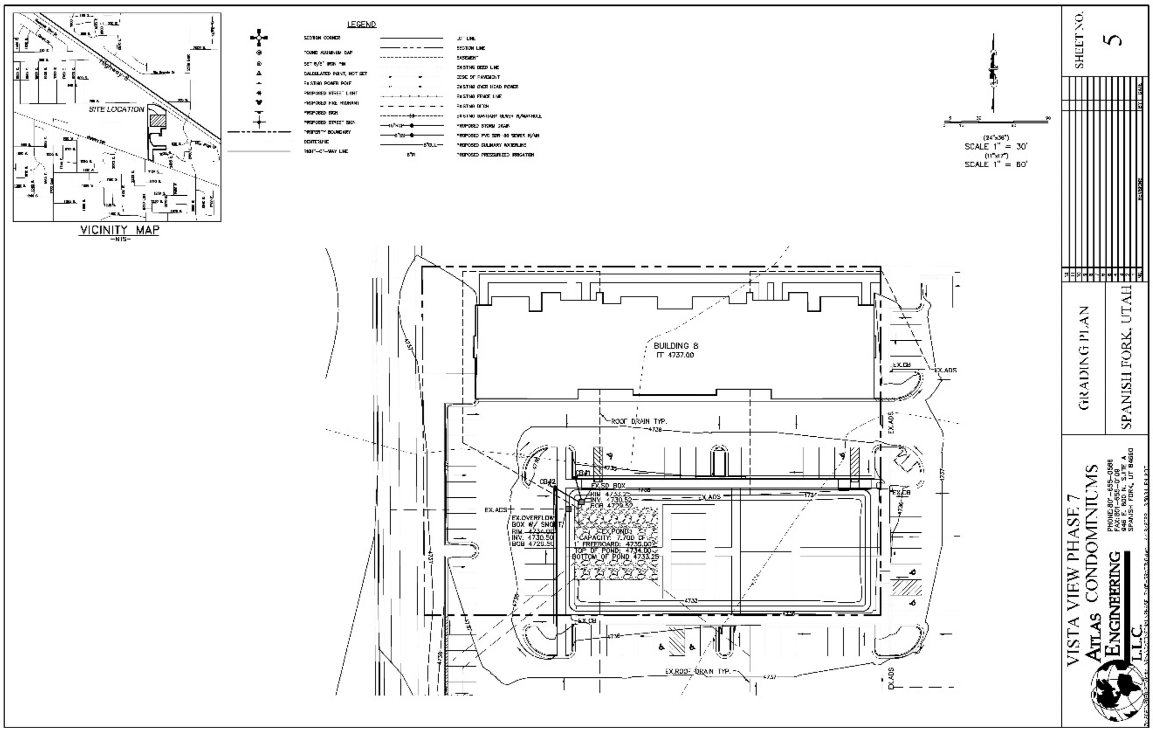
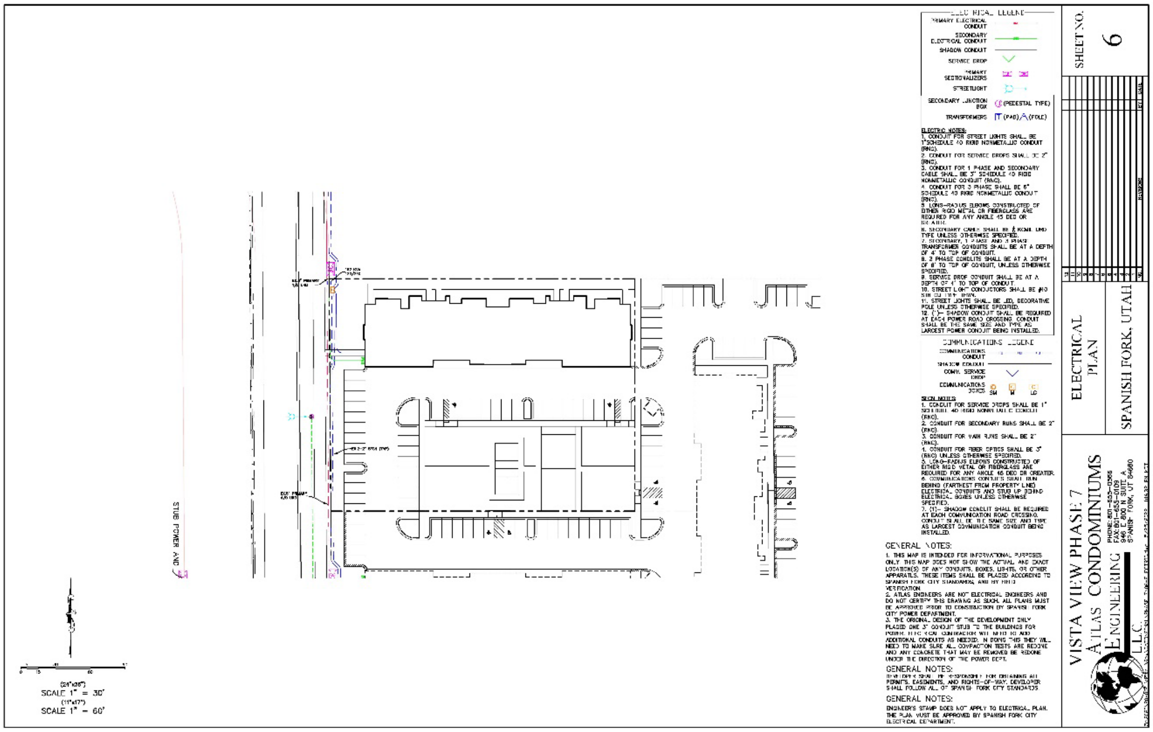

VICINITY MAP
SITE LOCATION
LEGEND
SCALE 1" = 20'
SCALE 1" = 40'
EX.2" PI SERVICE
EX.6"SEWER LATERAL TYP.
EX.4"WATER METER
EX.12x6x12 MECHANICAL JOINT TEE
EX.POST INDICATOR VALVE
EX.STREET LIGHT
EX.12" C-900 PVC
EXISTING OVERFLOW BOX
EX.POND
CAPACITY: 7,700 CF
1' FREEBOARD: 4735.00
TOP OF POND: 4734.00
BOTTOM OF POND 4733.25
EX.CB
EX.ADS
EX.HYDRANT
EX. ROOF DRAIN TYP.
EX. FIRE LINE TYP.
VISTA VIEW PHASE 7 CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
EXISTING TOPOGRAPHY
SPANISH FORK, UTAH
SHEET NO.
4

Exhibit 3





ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE [illegible] TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 6' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 [illegible] TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SIGN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

GENERAL NOTES:

1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.
3. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

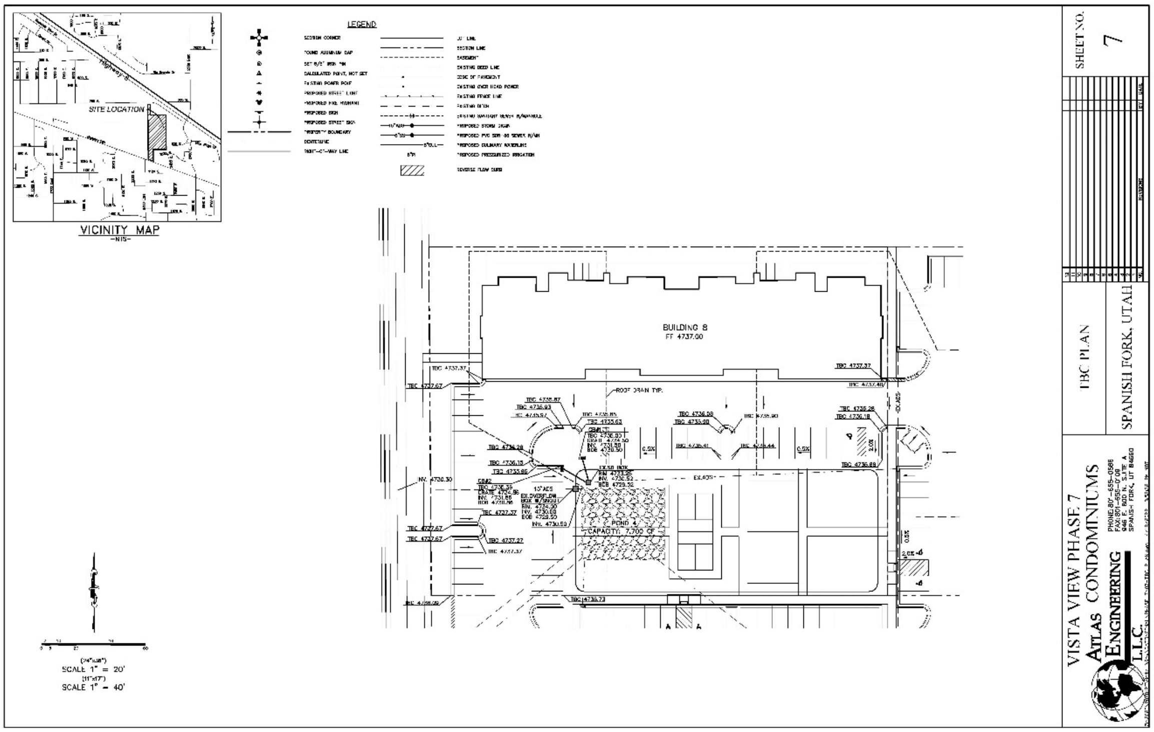
GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

Exhibit 3


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
BUILDING 8
FF 4737.00
ROOF DRAIN TYP.
POND 4
CAPACITY: 7,700 CF
SCALE 1" = 20'
SCALE 1" = 40'
SHEET NO.
7
TBC PLAN
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

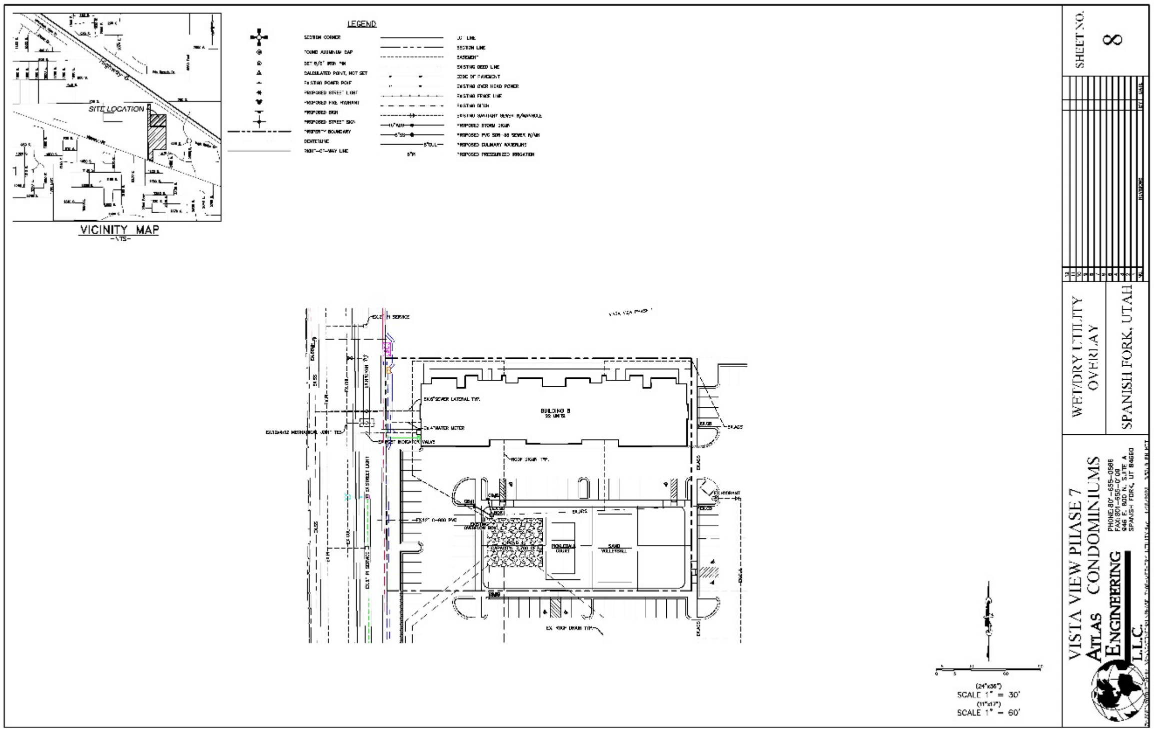
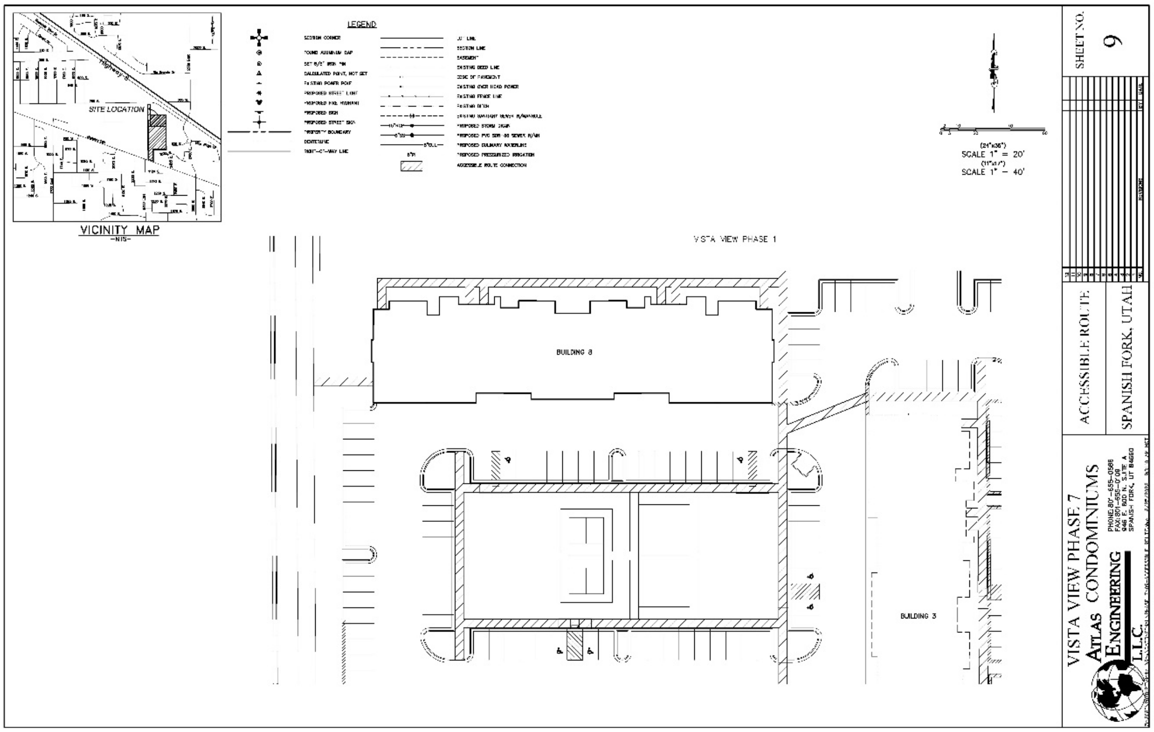

LEGEND
VICINITY MAP
SITE LOCATION
Highway 6
BUILDING 8
ROOF DRAIN TYP.
SCALE 1" = 30'
SCALE 1" = 60'
SHEET NO.
8
WET/DRY UTILITY OVERLAY
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

Exhibit 3


VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
LEGEND
VISTA VIEW PHASE 1
BUILDING 8
BUILDING 3
SCALE 1" = 20'
SCALE 1" = 40'
VISTA VIEW PHASE 7
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
ACCESSIBLE ROUTE
SPANISH FORK, UTAH
SHEET NO.
9

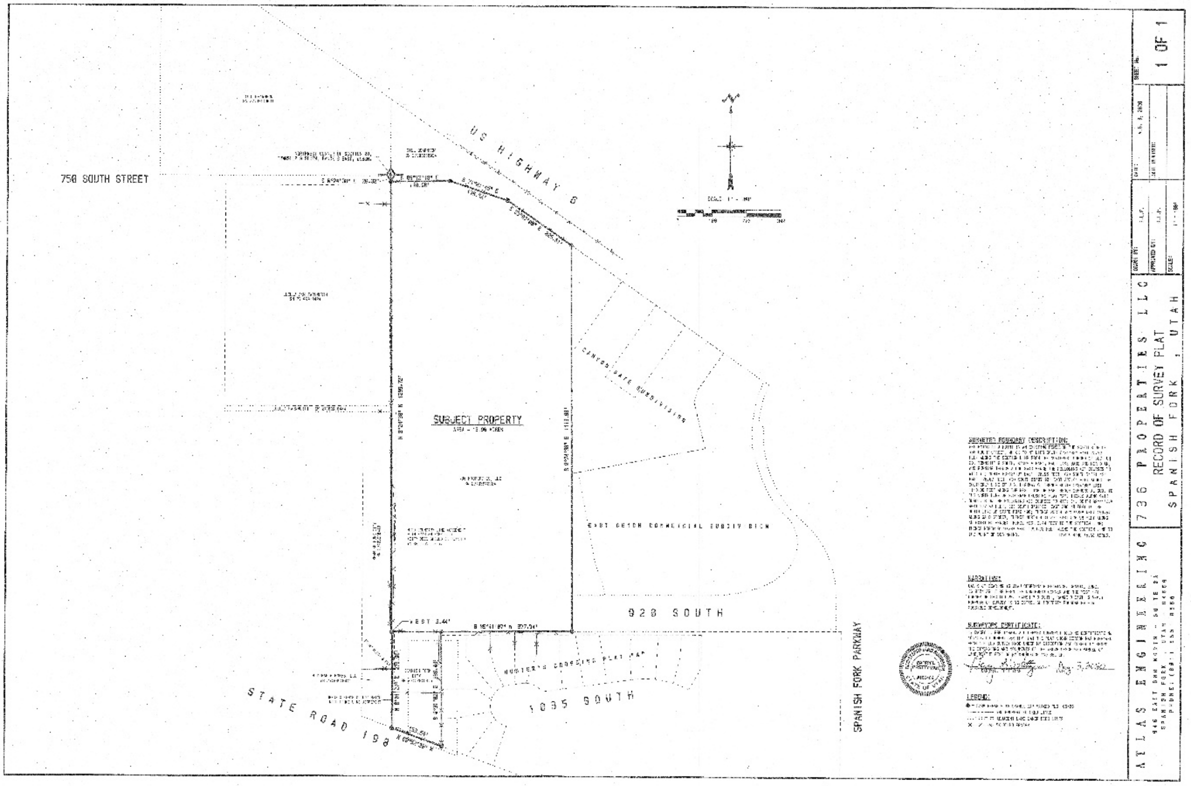
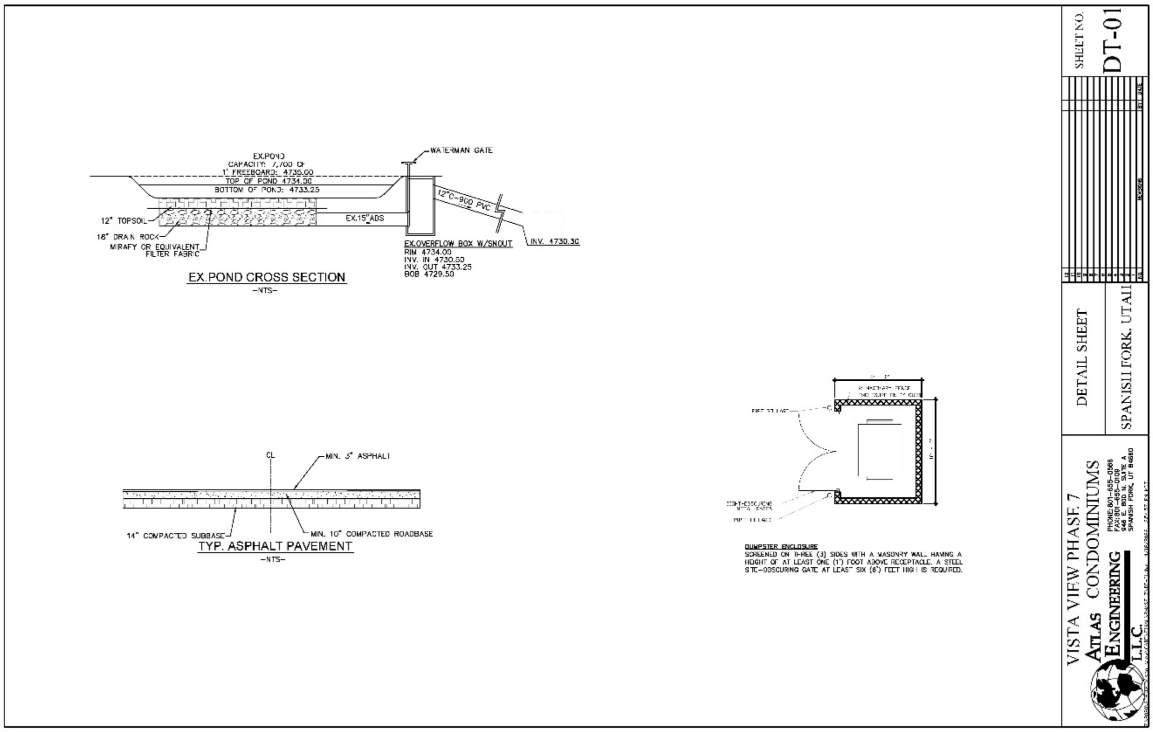

US HIGHWAY 6
750 SOUTH STREET
SUBJECT PROPERTY
CANYON GATE SUBDIVISION
EAST UNION COMMERCIAL SUBDIVISION
920 SOUTH
1095 SOUTH
STATE ROAD 198
SPANISH FORK PARKWAY
ATLAS ENGINEERING
946 EAST 800 NORTH - SUITE A
SPANISH FORK, UTAH 84660
736 PROPERTIES LLC
RECORD OF SURVEY PLAT
SPANISH FORK, UTAH
SHEET NO.
1 OF 1

Exhibit 3



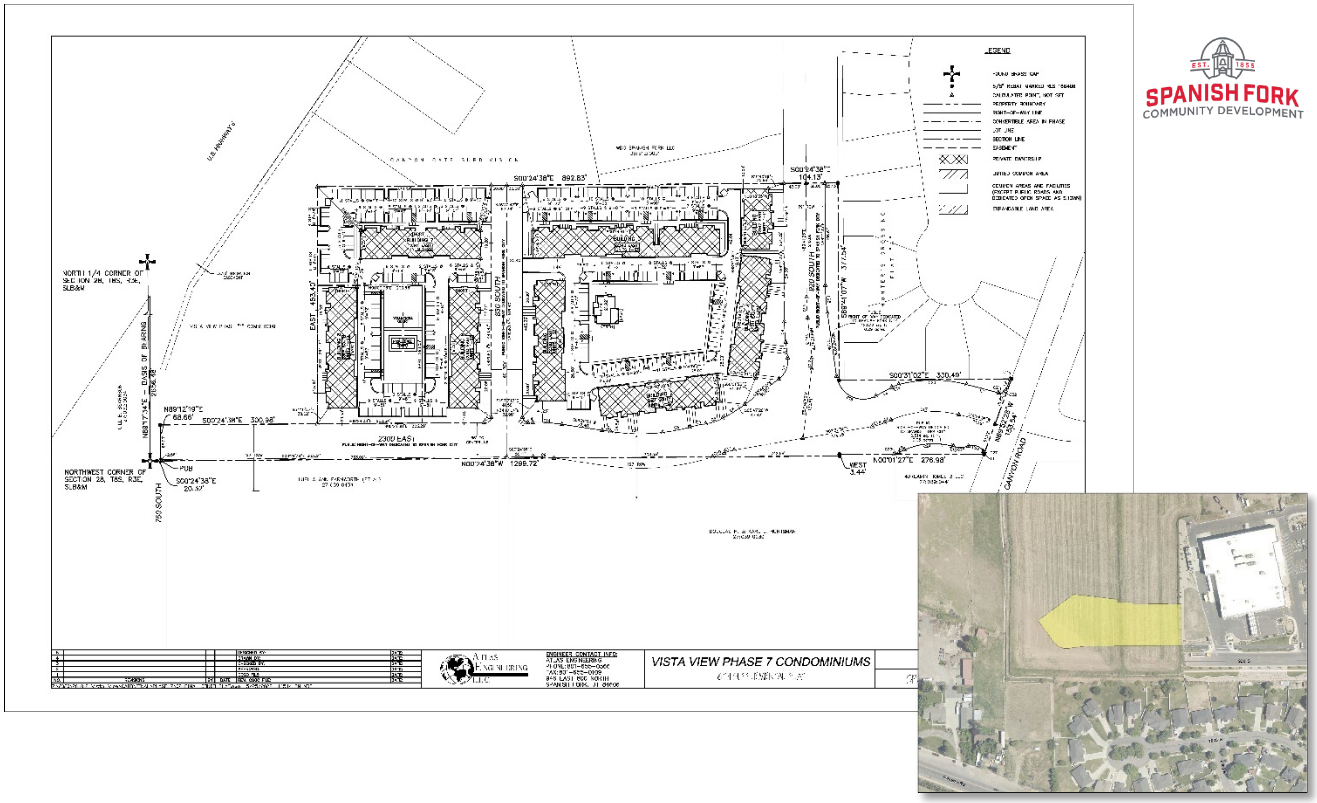
EX.POND CROSS SECTION

-NTS-

TYP. ASPHALT PAVEMENT

-NTS-

DUMPSTER ENCLOSURE
SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.



Vista View Phases 5, 6, and 7 Final Plat Re-Approval Request

March 22, 2023, Development Review Committee Meeting.

Located at 2350 East 750 South.

The subject property is zoned R-4.

The applicant has requested Final Plat re-approval for sixty-six multi-family residential units.

Key Issues

1. Consistency with previously approved Preliminary and Final Plats.

Recommendation

That the proposed Final Plat be re-approved based on the following findings and subject to the following conditions:

Findings

1. That the proposal conforms to the City's General Plan Designation and Zoning Map.
2. That the proposal is consistent with the approved Preliminary Plat.

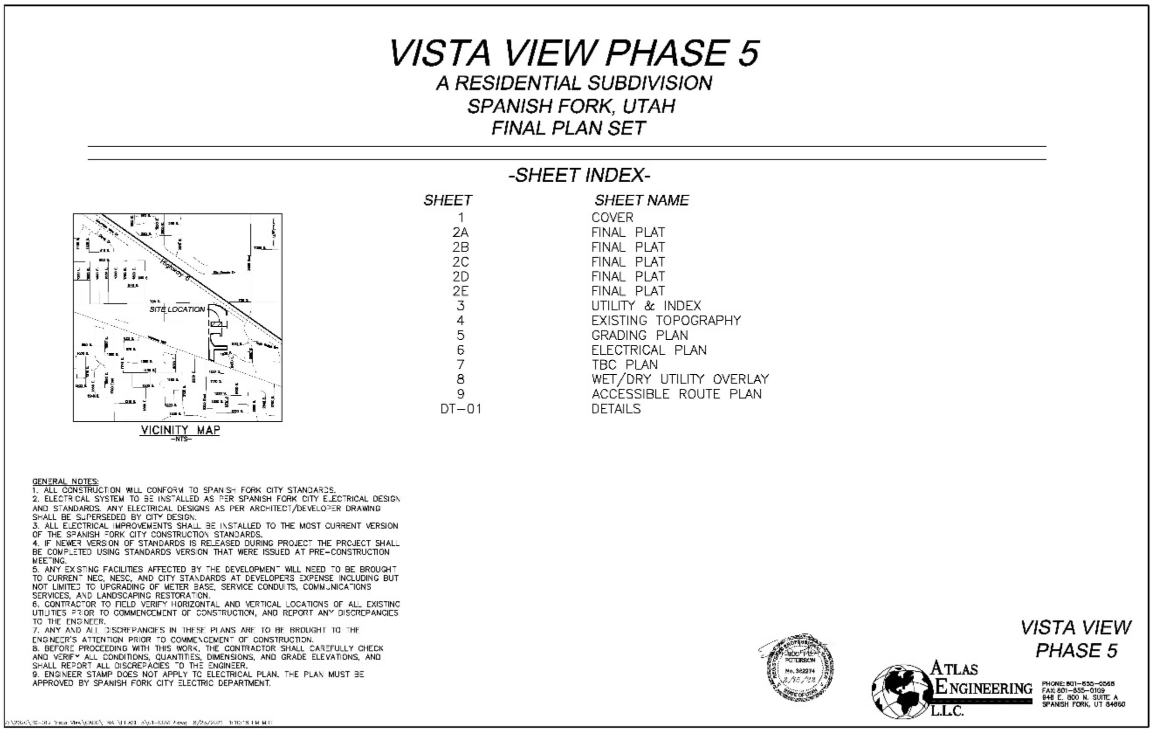
Conditions

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses red-lines.

Exhibits

1. Final Plat Phase 5.
2. Final Plat Phase 6.
3. Final Plat Phase 7.

Exhibit 1



VISTA VIEW PHASE 5

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
DT-01	DETAILS

SITE LOCATION
Highway 6

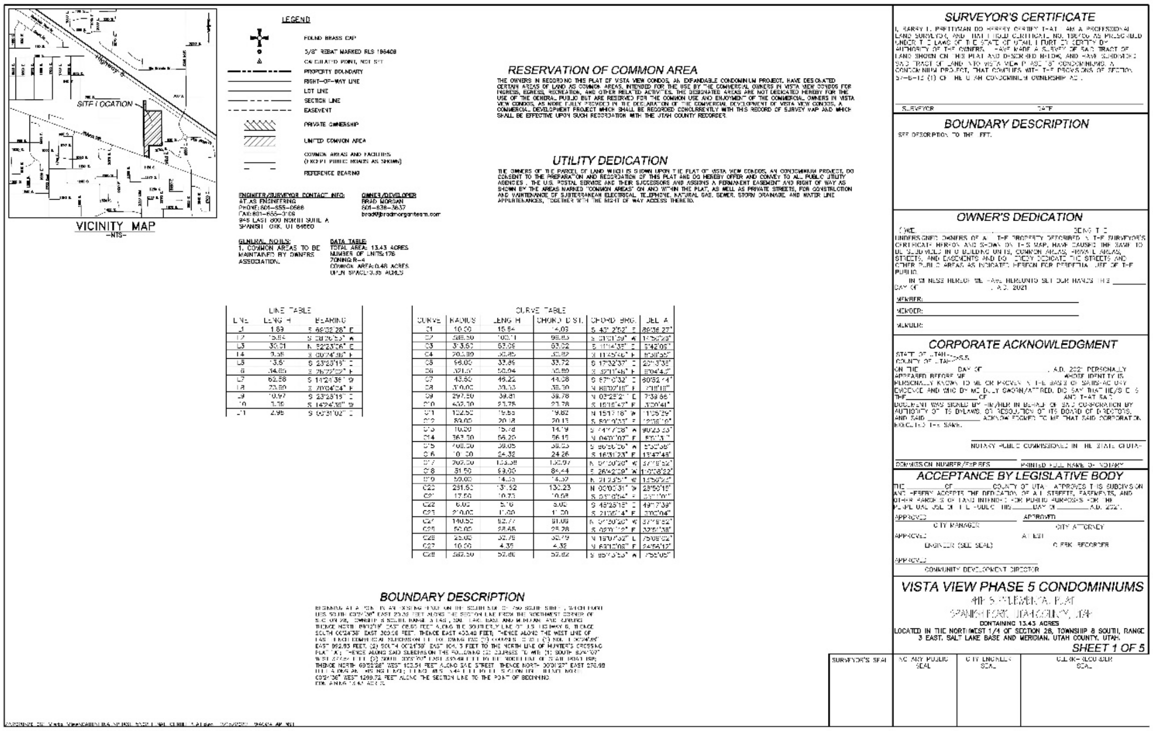
VICINITY MAP
-NTS-

GENERAL NOTES:
1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.

No. 362274

VISTA VIEW
PHASE 5

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660



SITE LOCATION
Highway 6

VICINITY MAP
-NTS-

LEGEND
- FOUND BRASS CAP
- 5/8" REBAR MARKED RLS 186408
- CALCULATED POINT, NOT SET
- PROPERTY BOUNDARY
- RIGHT-OF-WAY LINE
- LOT LINE
- SECTION LINE
- EASEMENT
- PRIVATE OWNERSHIP
- LIMITED COMMON AREA
- COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
- REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-3109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-836-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 3.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES, THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

CURVE TABLE

BOUNDARY DESCRIPTION

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 186408 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE 5 CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

(I)WE, ________, ________ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____ DAY OF _____, A.D. 2021

MEMBER: ________
MEMBER: ________
MEMBER:

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.

ON THE _____ DAY OF _____, A.D. 2021 PERSONALLY APPEARED BEFORE ME _____ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE _____ OF _____ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID _____ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES
PRINTED FULL NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

THE _____ OF _____ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____ A.D. 2021.

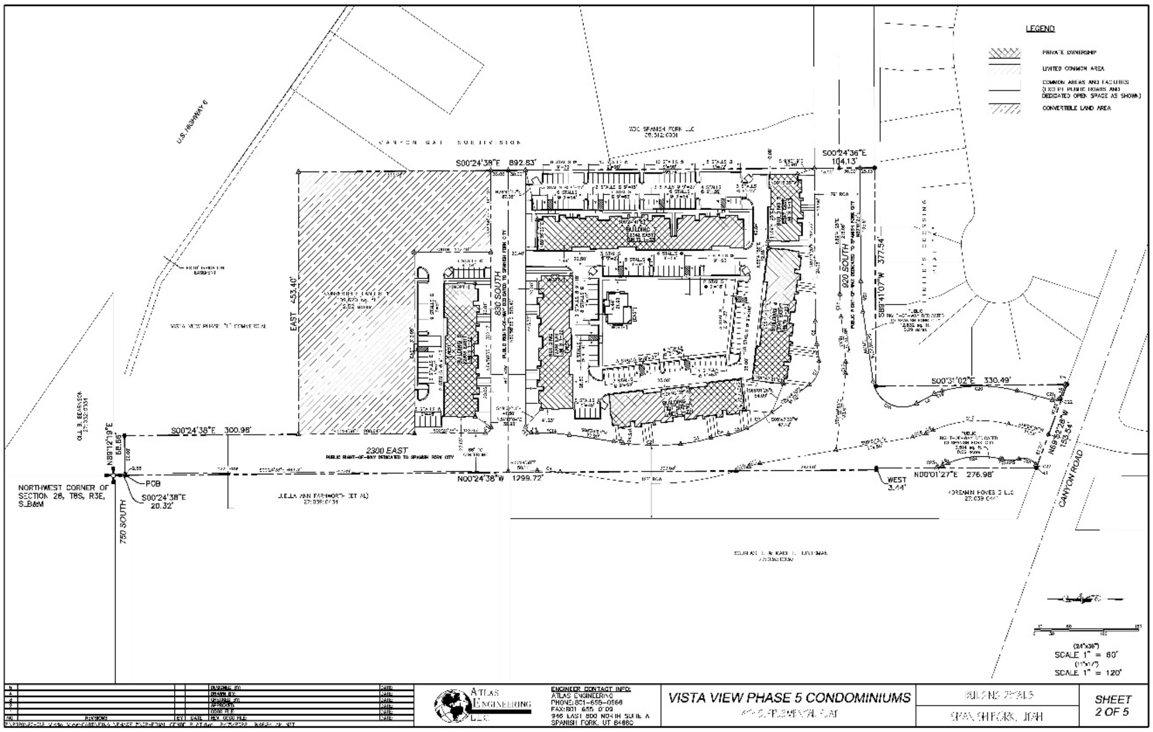
APPROVED _____ CITY MANAGER
APPROVED _____ CITY ATTORNEY
APPROVED _____ ENGINEER (SEE SEAL)
ATTEST _____ CLERK-RECORDER
APPROVED _____ COMMUNITY DEVELOPMENT DIRECTOR

VISTA VIEW PHASE 5 CONDOMINIUMS

4TH SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.
SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

Exhibit 1


LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AND DEDICATED OPEN SPACE AS SHOWN)
CONVERTIBLE LAND AREA
U.S. HIGHWAY 6
S00°24'38"E 892.83'
S00°24'36"E 104.13'
EAST 453.40'
830 SOUTH
920 SOUTH
S88°41'07"W 377.54'
S00°31'02"E 330.49'
N89°12'19"E 58.86'
S00°24'38"E 300.98'
2300 EAST
N00°24'38"W 1299.72'
POB
NORTHWEST CORNER OF SECTION 28, T8S, R3E, SLB&M
S00°24'38"E 20.32'
750 SOUTH
WEST 3.44'
N00°01'27"E 276.98'
CANYON ROAD
SCALE 1" = 60'
SCALE 1" = 120'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE:801-655-0566
FAX:801 655 0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
VISTA VIEW PHASE 5 CONDOMINIUMS
SPANISH FORK, UTAH
SHEET 2 OF 5

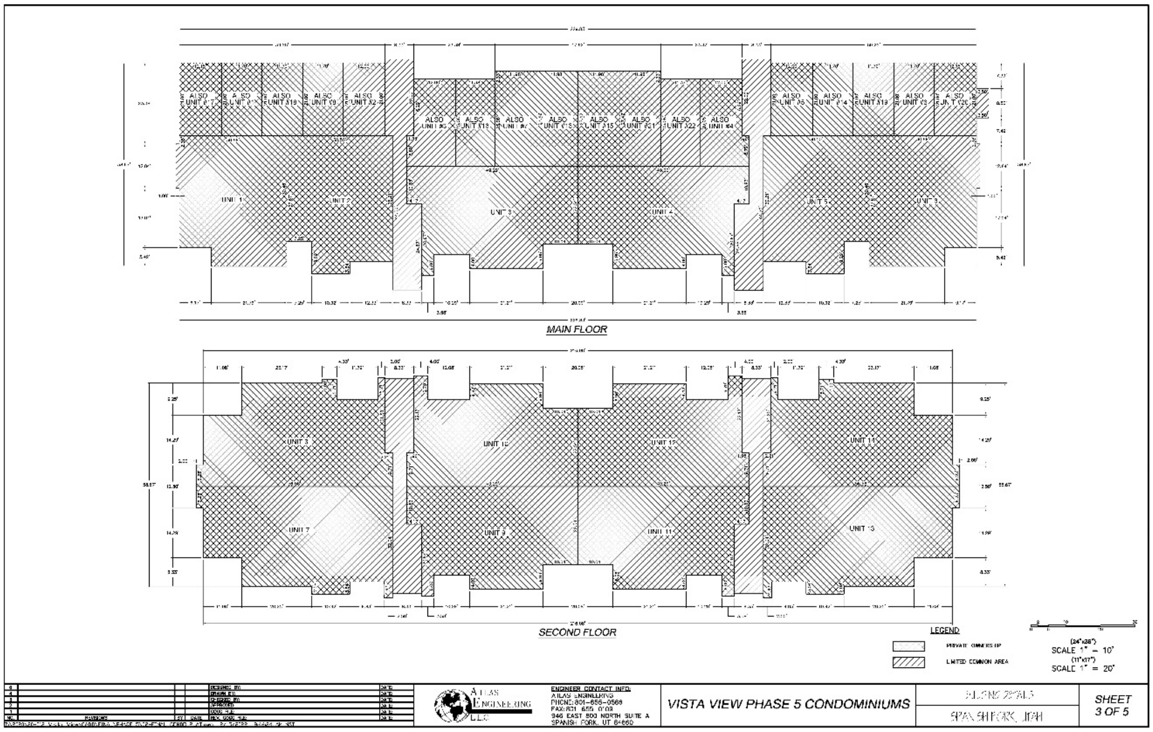
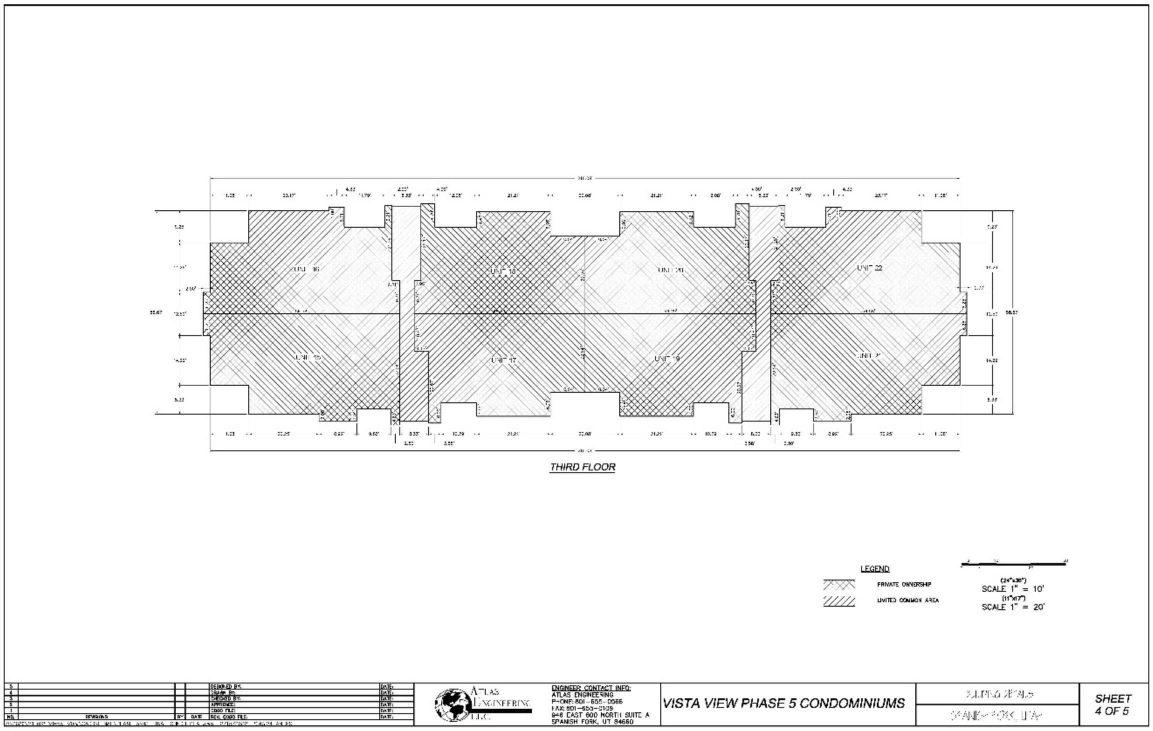

UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
MAIN FLOOR
UNIT 7
UNIT 8
UNIT 9
UNIT 10
UNIT 11
UNIT 12
UNIT 13
UNIT 14
SECOND FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
SCALE 1" = 10'
SCALE 1" = 20'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE:801-655-0566
FAX:801 655 0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
VISTA VIEW PHASE 5 CONDOMINIUMS
SPANISH FORK, UTAH
SHEET 3 OF 5

Exhibit 1


UNIT 16
UNIT 18
UNIT 20
UNIT 22
UNIT 15
UNIT 17
UNIT 19
UNIT 21
THIRD FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
CADD FILE:
REV. CADD FILE:
DATE:
NO.
REVISIONS
BY
DATE
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
VISTA VIEW PHASE 5 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
4 OF 5

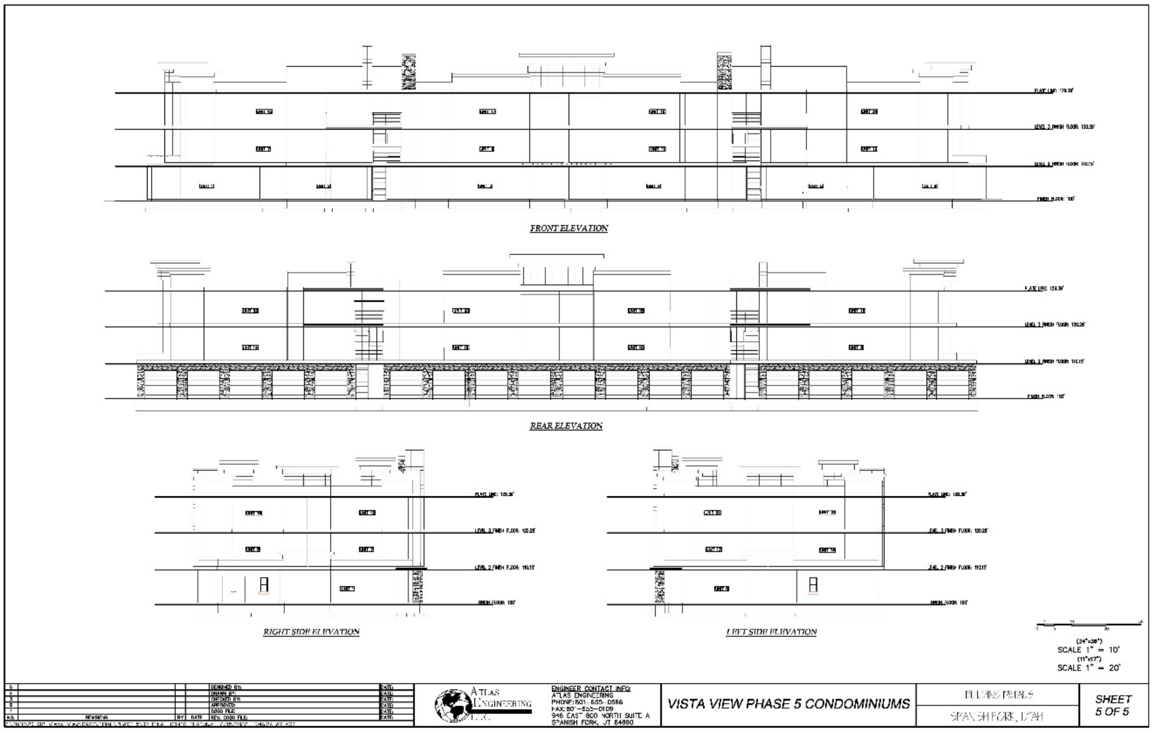
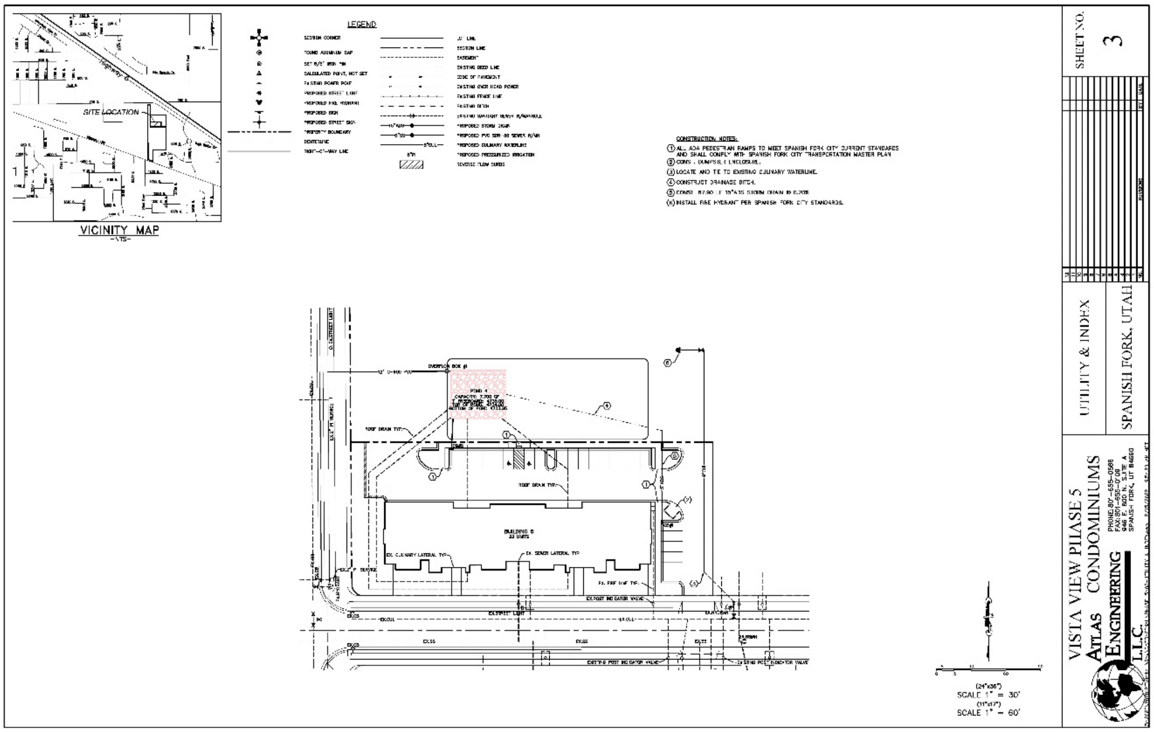


PLATE LINE: 129.39'
LEVEL 3 FINISH FLOOR: 120.29'
LEVEL 2 FINISH FLOOR: 110.15'
FINISH FLOOR: 100'
FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
CADD FILE:
REV. CADD FILE:
DATE:
NO.
REVISIONS
BY
DATE
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
VISTA VIEW PHASE 5 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
5 OF 5

Exhibit 1


VICINITY MAP
SITE LOCATION
LEGEND
CONSTRUCTION NOTES:
① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. DUMPSTER ENCLOSURE.
③ LOCATE AND TIE TO EXISTING CULINARY WATERLINE.
④ CONSTRUCT DRAINAGE DITCH.
⑤ CONST. 87.90 LF 15"ADS STORM DRAIN @ 0.20%
⑥ INSTALL FIRE HYDRANT PER SPANISH FORK CITY STANDARDS.
BUILDING 6
ROOF DRAIN TYP.
(24"x36") SCALE 1" = 30'
(11"x17") SCALE 1" = 60'
VISTA VIEW PHASE 5 CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
UTILITY & INDEX
SPANISH FORK, UTAH
SHEET NO. 3

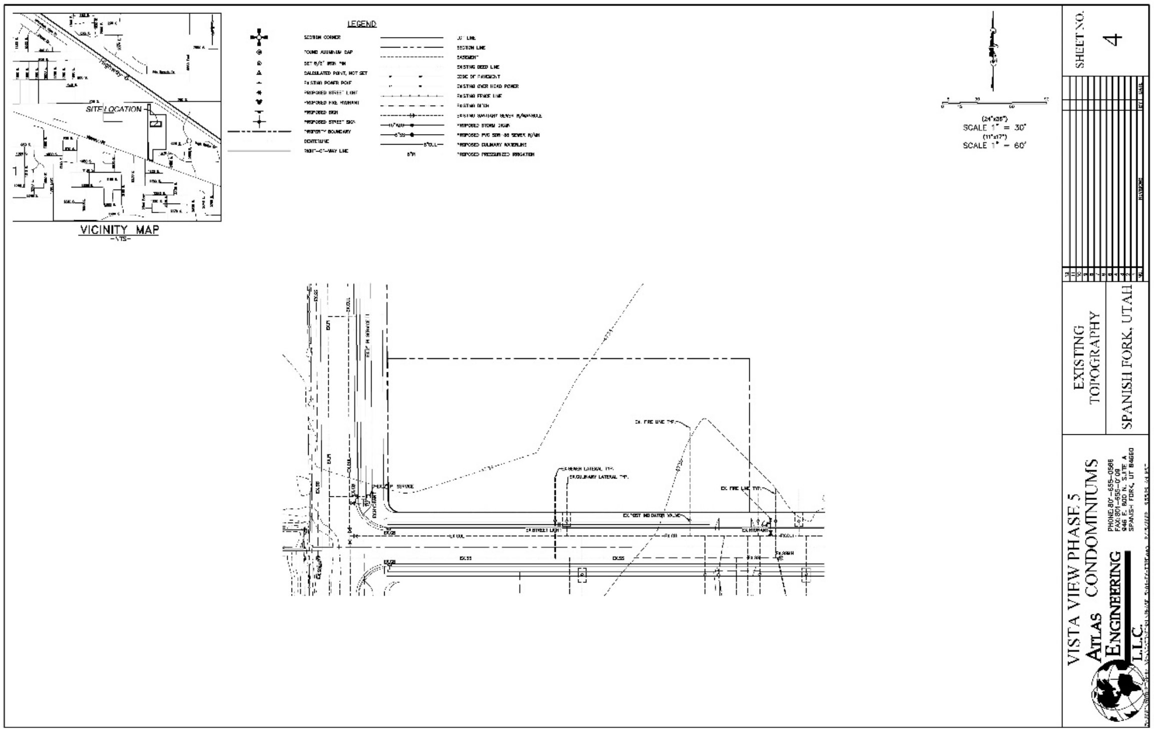
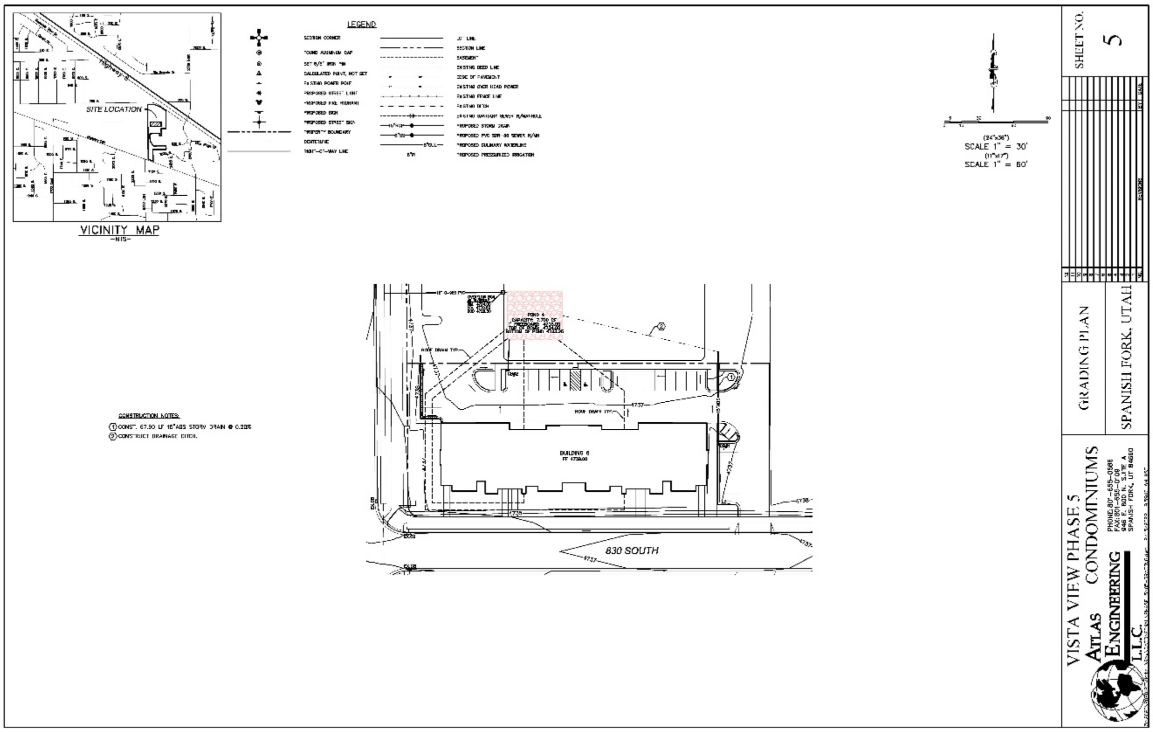

VICINITY MAP
SITE LOCATION
LEGEND
(24"x36") SCALE 1" = 30'
(11"x17") SCALE 1" = 60'
VISTA VIEW PHASE 5 CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
EXISTING TOPOGRAPHY
SPANISH FORK, UTAH
SHEET NO. 4

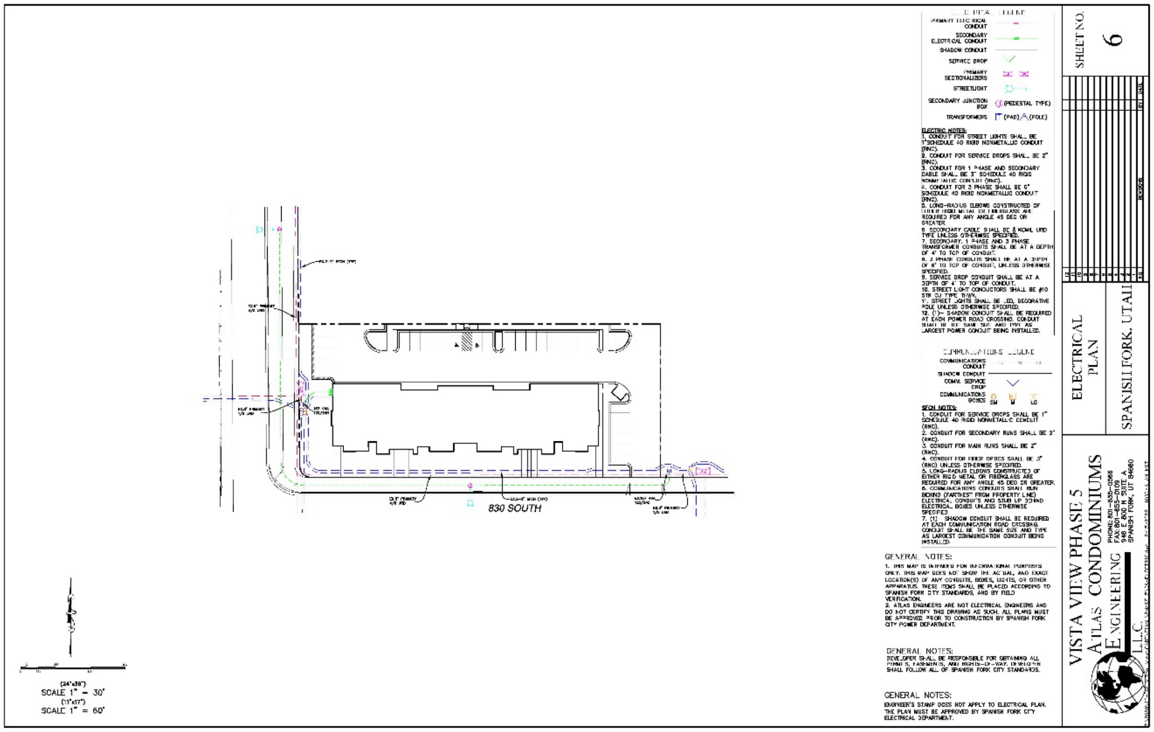
Exhibit 1



CONSTRUCTION NOTES:

① CONST. 67.90 LF 15"ABS STORM DRAIN @ 0.20%

② CONSTRUCT DRAINAGE DITCH.



ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1"SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE 4 KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 8' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 STR CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SFCN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

GENERAL NOTES:

1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.

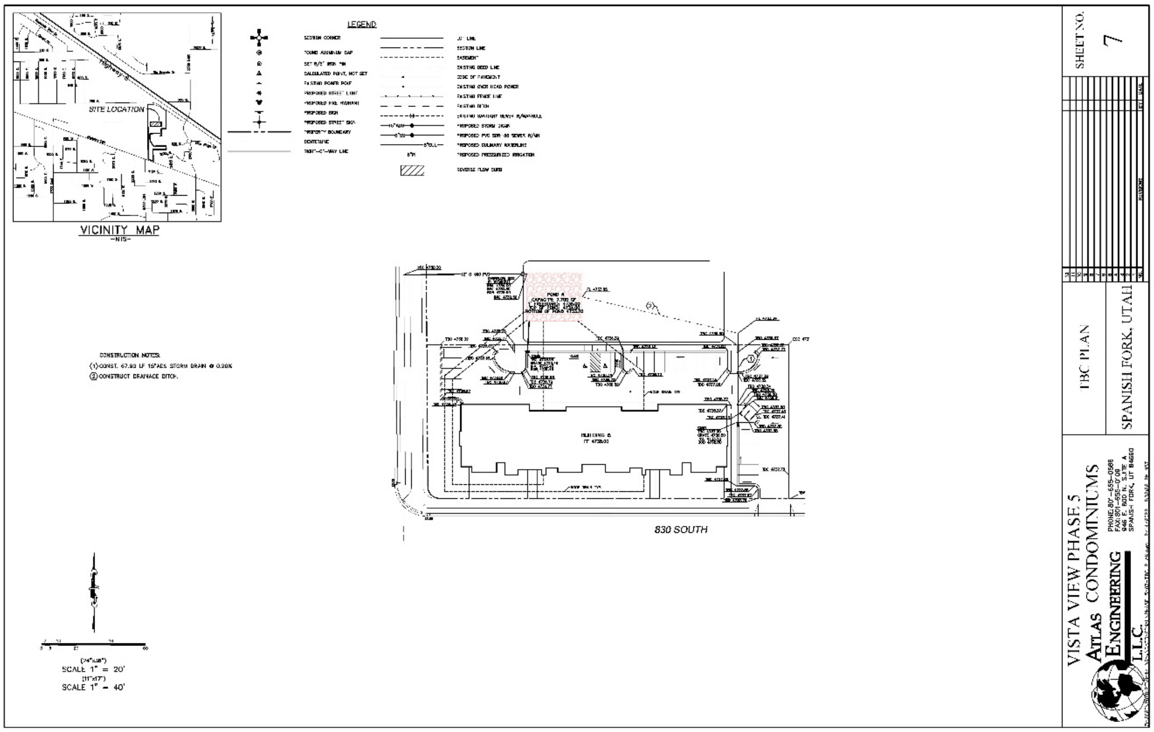
GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

Exhibit 1


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
CONSTRUCTION NOTES:
① CONST. 67.93 LF 15"ADS STORM DRAIN @ 0.20%
② CONSTRUCT DRAINAGE DITCH.
BUILDING B
830 SOUTH
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
VISTA VIEW PHASE 5
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
TBC PLAN
SPANISH FORK, UTAH
SHEET NO.
7

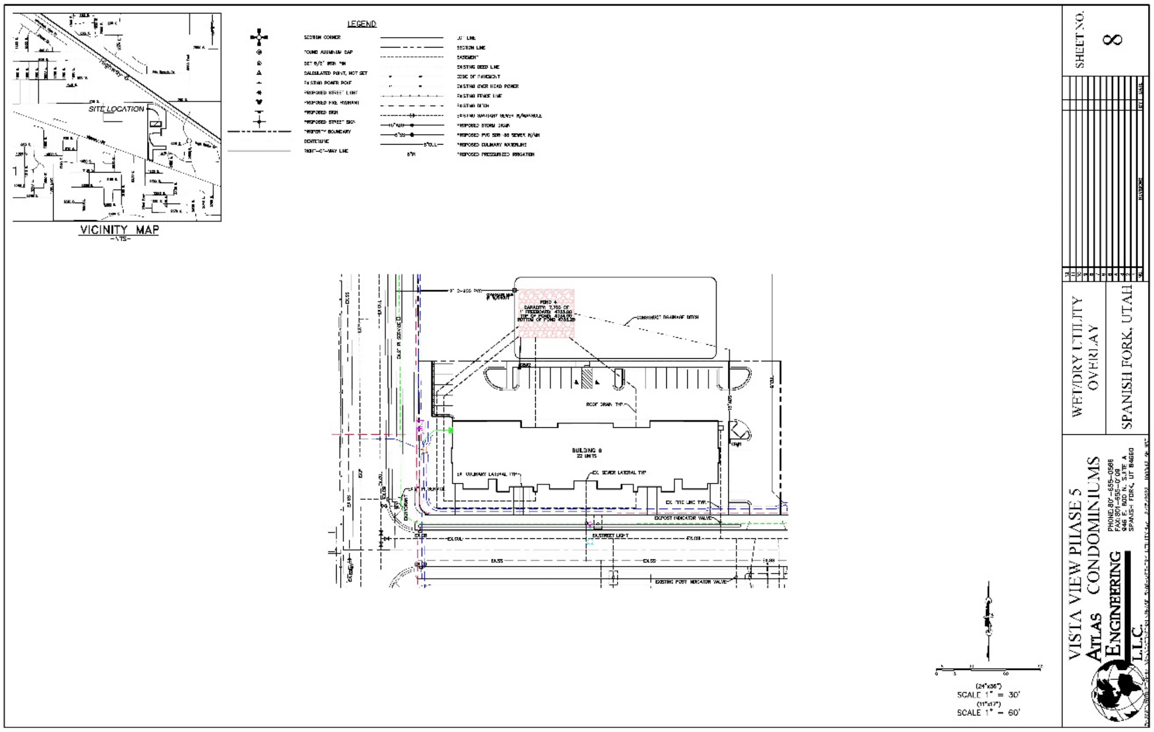
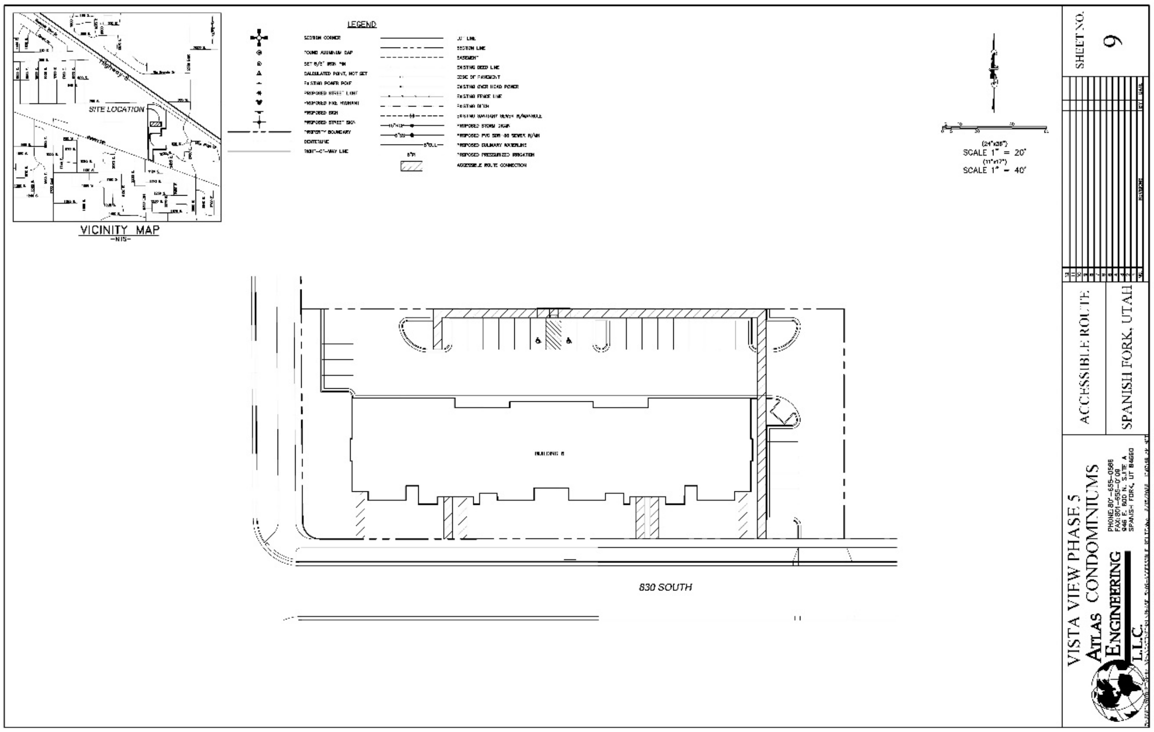

LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
BUILDING B
22 UNITS
(24"x36")
SCALE 1" = 30'
(11"x17")
SCALE 1" = 60'
VISTA VIEW PHASE 5
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
WET/DRY UTILITY
OVERLAY
SPANISH FORK, UTAH
SHEET NO.
8

Exhibit 1


VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
LEGEND
BUILDING 8
830 SOUTH
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
SHEET NO.
9
ACCESSIBLE ROUTE
SPANISH FORK, UTAH
VISTA VIEW PHASE 5
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

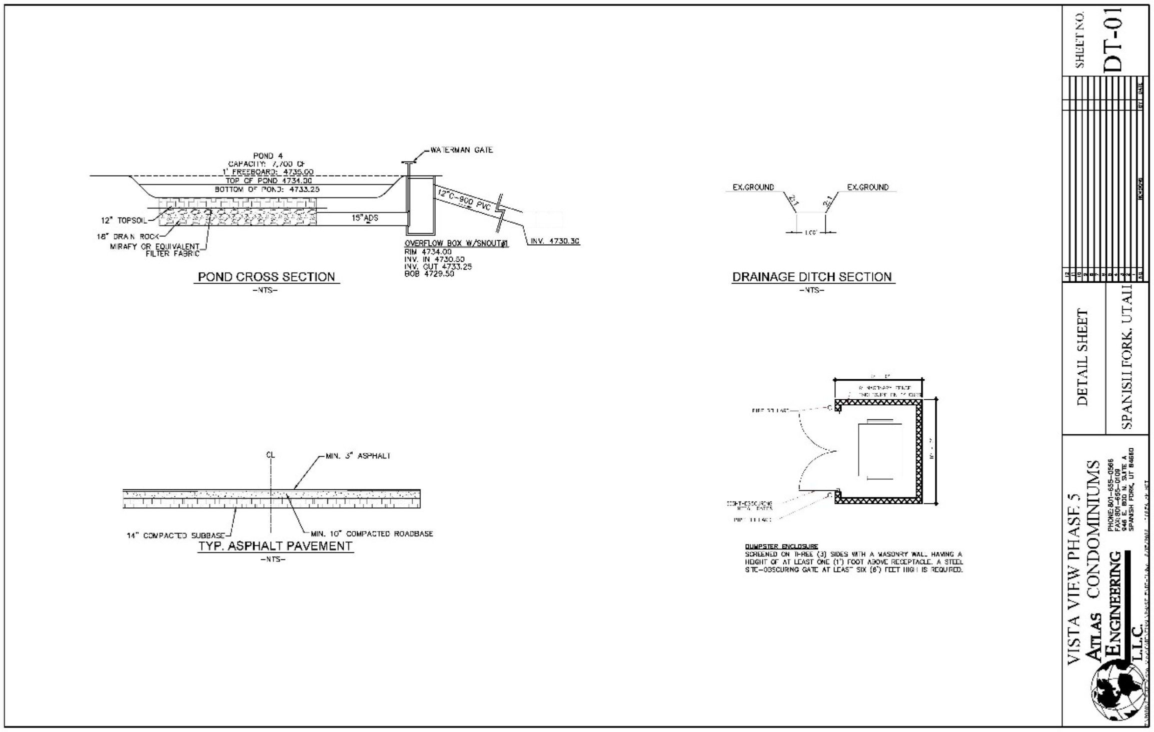
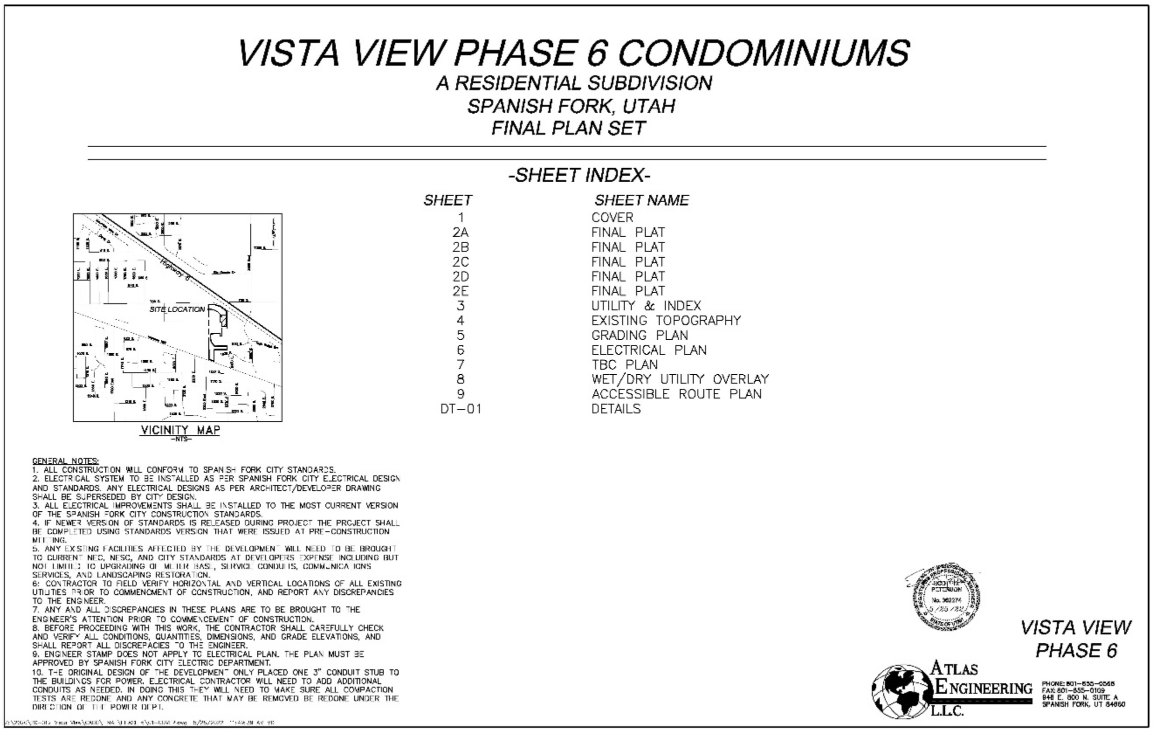

POND 4
CAPACITY: 7,700 CF
1' FREEBOARD: 4735.00
TOP OF POND 4734.00
BOTTOM OF POND: 4733.25
12" TOPSOIL
18" DRAIN ROCK
MIRAFY OR EQUIVALENT FILTER FABRIC
15" ADS
WATERMAN GATE
12"C-900 PVC
OVERFLOW BOX W/SNOUT#1
RIM 4734.00
INV. IN 4730.50
INV. OUT 4733.25
BOB 4729.50
INV. 4730.30
POND CROSS SECTION
-NTS-
EX.GROUND
EX.GROUND
2:1
2:1
DRAINAGE DITCH SECTION
-NTS-
CL
MIN. 3" ASPHALT
MIN. 10" COMPACTED ROADBASE
14" COMPACTED SUBBASE
TYP. ASPHALT PAVEMENT
-NTS-
DUMPSTER ENCLOSURE
SCREENED ON THREE (3) SIDES WITH A MASONRY WALL, HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.
SHEET NO.
DT-01
DETAIL SHEET
SPANISH FORK, UTAH
VISTA VIEW PHASE 5
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

Exhibit 2



VISTA VIEW PHASE 6 CONDOMINIUMS

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
DT-01	DETAILS

VICINITY MAP
-NTS-

GENERAL NOTES:
1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
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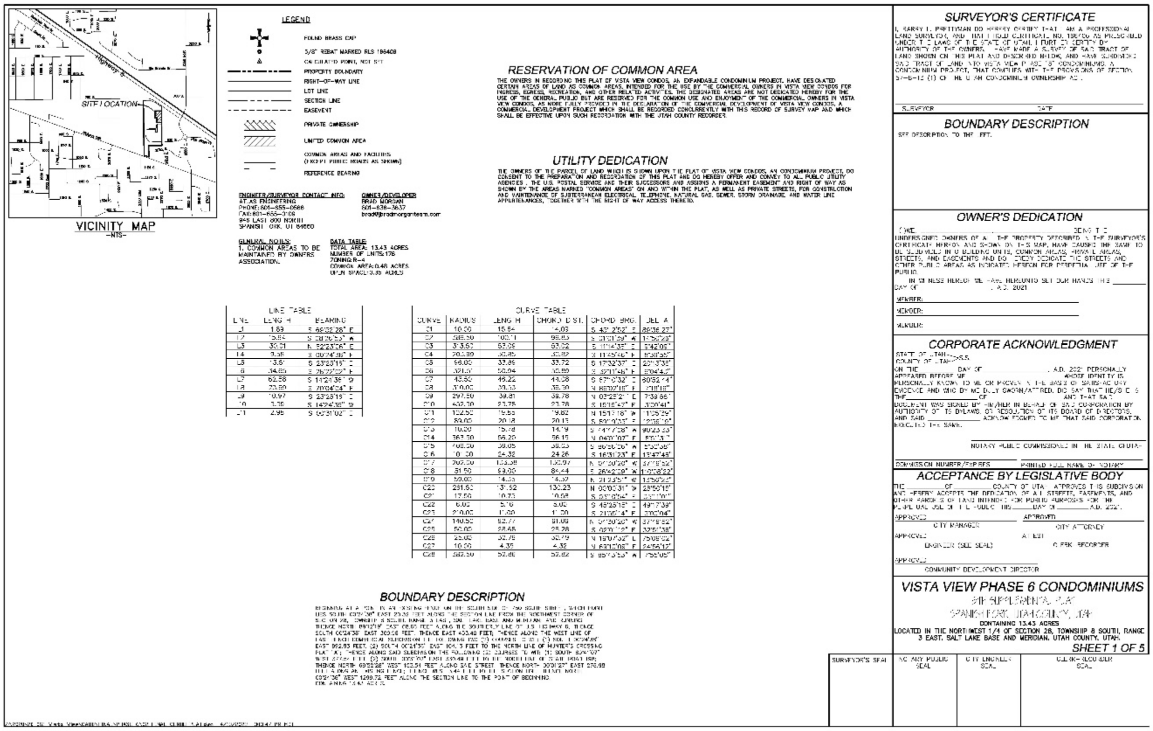
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.
10. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

[illegible] PETERSON
No. 362274
5/25/22

VISTA VIEW
PHASE 6

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
948 E. 800 N. SUITE A
SPANISH FORK, UT 84660



VICINITY MAP
-NTS-

LEGEND

⌖	FOUND BRASS CAP
●	5/8" REBAR MARKED RLS 186408
△	CALCULATED POINT, NOT SET
—·—·—	PROPERTY BOUNDARY
———	RIGHT-OF-WAY LINE
———	LOT LINE
— - - —	SECTION LINE
- - - -	EASEMENT
▧	PRIVATE OWNERSHIP
▨	LIMITED COMMON AREA
	COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
— —	REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
948 EAST 800 NORTH
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-636-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 0.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES , THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

LINE	LENGTH	BEARING
L1	1.69	S 69°32'28" E
L2	15.84	S 08°26'53" W
L3	30.01	N 52°23'06" E
L4	9.55	S 00°24'36" E
L5	13.51	S 23°25'19" E
L6	34.65	S 26°22'02" E
L7	62.58	S 14°21'36" W
L8	23.80	S 70°04'04" E
L9	10.97	S 23°25'19" E
L10	3.39	S 14°24'36" W
L11	2.95	S 00°31'02" E

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	10.00	15.64	14.09	S 45°12'52" E	89°36'27"
C2	388.50	100.11	99.83	S 01°01'39" W	14°50'23"
C3	313.50	53.09	53.02	S 11°14'35" E	9°42'09"
C4	203.39	30.85	30.82	S 11°45'46" E	8°38'55"
C5	96.00	33.89	33.72	S 17°32'37" E	20°13'35"
C6	321.50	50.04	50.00	S 32°11'46" E	8°04'4[illegible]"
C7	43.50	46.22	44.08	S 67°10'32" E	60°52'41"
C8	310.00	39.53	38.50	N 88°02'18" E	7°18'18"
C9	297.50	39.81	39.78	N 03°25'21" E	7°39'56"
C10	452.50	23.75	23.78	S 15°15'47" E	3°00'41"
C11	102.50	19.85	19.82	N 15°17'18" W	11°05'29"
C12	93.00	20.18	20.13	S 80°10'33" E	12°38'10"
C13	10.00	15.78	14.19	S 44°17'28" W	90°23'33"
C14	363.50	56.20	56.15	N 04°01'07" E	8°51'31"
C15	408.50	38.05	38.03	S 86°56'26" W	5°20'38"
C16	101.00	24.32	24.26	S 16°31'23" E	13°47'45"
C17	202.00	133.38	130.97	N 04°30'20" W	37°49'52"
C18	51.50	99.00	84.44	S 26°42'09" W	110°08'22"
C19	59.00	14.35	14.32	N 21°23'51" W	13°56'22"
C20	261.50	131.52	130.23	N 00°00'31" W	28°50'15"
C21	17.50	10.73	10.56	S 03°10'54" E	35°11'01"
C22	6.00	5.16	5.00	S 45°25'15" E	49°17'39"
C23	210.00	11.00	11.00	S 21°05'14" E	3°00'04"
C24	140.50	92.77	91.09	N 04°30'20" W	37°49'52"
C25	50.00	28.66	25.28	S 02°01'12" E	32°51'36"
C26	25.00	32.76	30.49	N 19°07'32" E	75°06'02"
C27	10.00	4.35	4.32	N 68°10'08" E	24°56'17"
C28	382.50	52.86	52.82	S 85°13'53" W	7°55'05"

BOUNDARY DESCRIPTION

BEGINNING AT A POINT IN AN EXISTING FENCE ON THE SOUTH SIDE OF 750 SOUTH STREET, WHICH POINT LIES SOUTH 00°24'36" EAST 20.32 FEET ALONG THE SECTION LINE FROM THE NORTHWEST CORNER OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, AND RUNNING THENCE NORTH 89°12'19" EAST 68.65 FEET ALONG THE SOUTHERLY LINE OF U.S. HIGHWAY 6; THENCE SOUTH 00°24'36" EAST 200.06 FEET; THENCE EAST 403.40 FEET; THENCE ALONG THE WEST LINE OF EAST [illegible] COMMERCIAL SUBDIVISION THE FOLLOWING TWO (2) COURSES TO WIT: (1) SOUTH 00°24'36" EAST 992.93 FEET, (2) SOUTH 00°21'35" EAST 104.13 FEET TO THE NORTH LINE OF HUNTER'S CROSSING PLAT "A"; THENCE ALONG SAID SUBDIVISION THE FOLLOWING (2) COURSES TO WIT: (1) SOUTH 89°41'07" WEST [illegible] FEET, (2) SOUTH 00°31'02" EAST 330.48 FEET TO THE NORTH LINE OF STATE ROAD 198; THENCE NORTH 69°32'28" WEST 103.51 FEET ALONG SAID STREET; THENCE NORTH 00°01'27" EAST 276.99 FEET ALONG AN EXISTING FENCE; THENCE WEST [illegible] FEET TO THE SECTION LINE; THENCE NORTH 00°24'36" WEST 1209.72 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.
CONTAINING 13.43 ACRES.

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 186408 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE 1ST CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

(I)WE, ____________, ____________ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ________ DAY OF ____________, A.D. 2021

MEMBER: ____________

MEMBER: ____________

MEMBER:

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH }
COUNTY OF UTAH } S.S.

ON THE ________ DAY OF ____________, A.D. 2021 PERSONALLY APPEARED BEFORE ME ____________ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ____________ OF ____________ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID ____________ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

____
NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES PRINTED FULL NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

THE ________ OF ________ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ______ DAY OF ________ A.D. 2021.

APPROVED ____________ CITY MANAGER
APPROVED ____________ CITY ATTORNEY
APPROVED ____________ ENGINEER (SEE SEAL)
ATTEST ____________ CLERK-RECORDER
APPROVED ____________ COMMUNITY DEVELOPMENT DIRECTOR

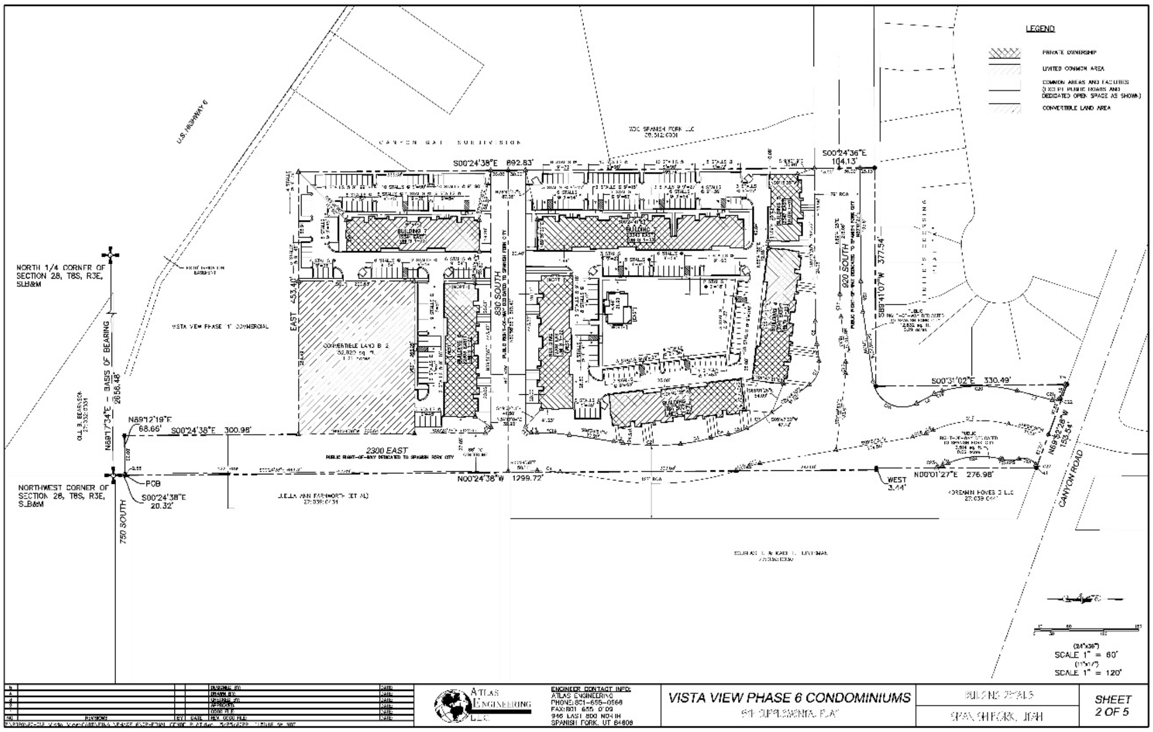
VISTA VIEW PHASE 6 CONDOMINIUMS

[illegible] SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.

SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

Exhibit 2


LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
CONVERTIBLE LAND AREA
U.S. HIGHWAY 6
CANYON GAP SUBDIVISION
S00°24'38"E 892.83'
S00°24'36"E 104.13'
NORTH 1/4 CORNER OF SECTION 28, T8S, R3E, SLB&M
N89°17'34"E - BASIS OF BEARING 2656.48'
EAST 453.40'
830 SOUTH
900 SOUTH
S88°41'07"W 377.54'
VISTA VIEW PHASE 1 COMMERCIAL
CONVERTIBLE LAND B 2
N89°12'19"E 68.66'
S00°24'38"E 300.98'
2300 EAST
S00°31'02"E 330.49'
N89°32'26"W 153.34'
CANYON ROAD
POB
NORTHWEST CORNER OF SECTION 28, T8S, R3E, SLB&M
S00°24'38"E 20.32'
750 SOUTH
N00°24'38"W 1299.72'
WEST 3.44'
N00°01'27"E 276.98'
(24"x36") SCALE 1" = 60'
(11"x17") SCALE 1" = 120'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801 655 0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
SHEET 2 OF 5
SPANISH FORK, UTAH

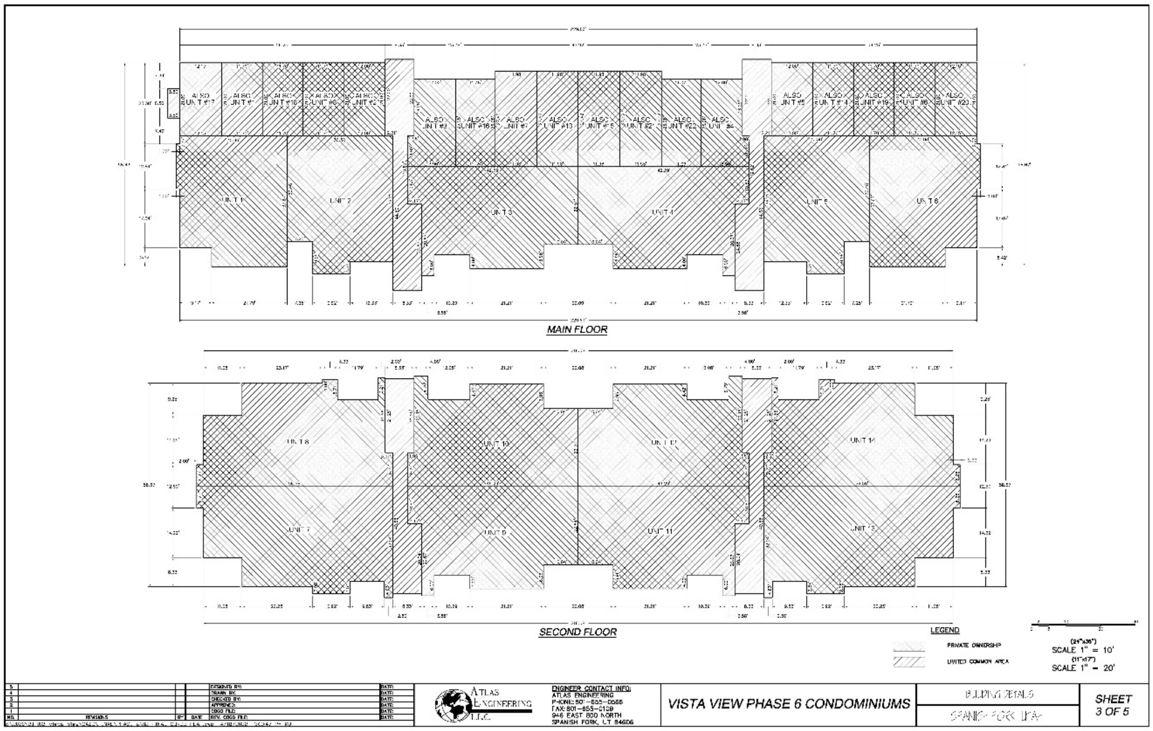
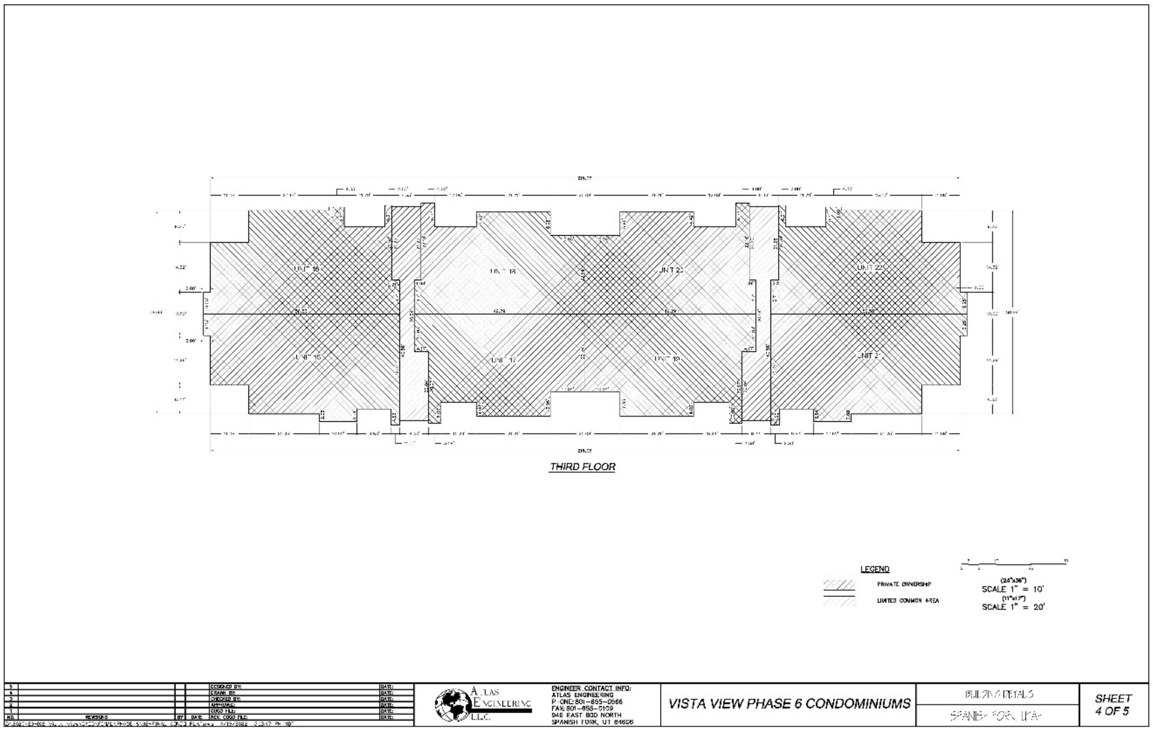

UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
MAIN FLOOR
UNIT 7
UNIT 8
UNIT 9
UNIT 10
UNIT 11
UNIT 12
UNIT 13
UNIT 14
SECOND FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36") SCALE 1" = 10'
(11"x17") SCALE 1" = 20'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET 3 OF 5

Exhibit 2


THIRD FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE:801-655-0566
FAX:801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
4 OF 5

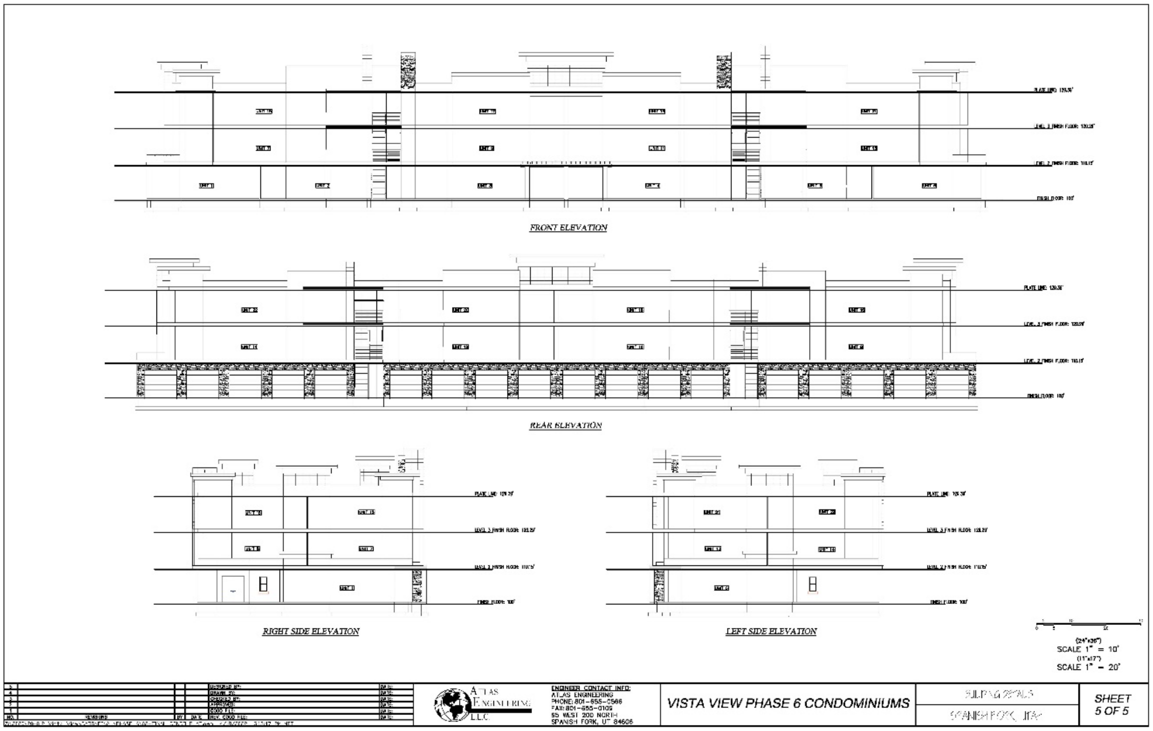
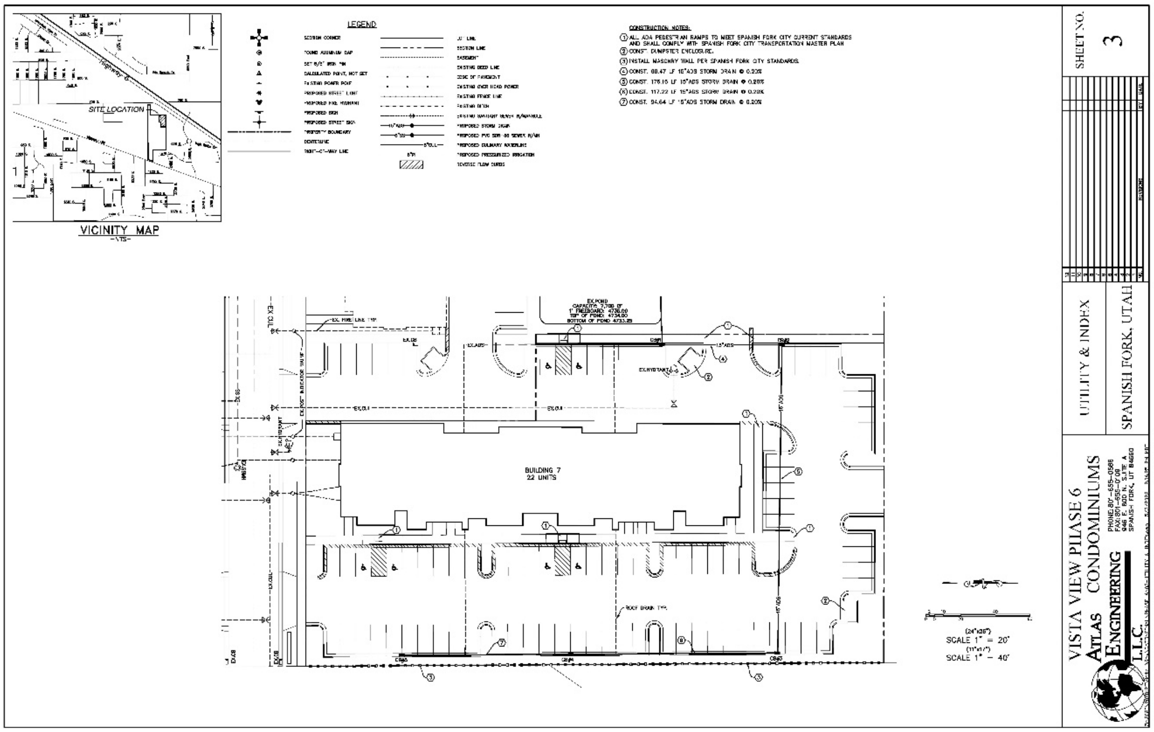

FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE:801-655-0566
FAX:801-655-0109
55 WEST 200 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
5 OF 5

Exhibit 2


VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
LEGEND
SECTION CORNER
FOUND ALUMINUM CAP
SET 5/8" IRON PIN
CALCULATED POINT, NOT SET
EXISTING POWER POLE
PROPOSED STREET LIGHT
PROPOSED FIRE HYDRANT
PROPOSED SIGN
PROPOSED STREET SIGN
PROPERTY BOUNDARY
CENTERLINE
RIGHT-OF-WAY LINE
LOT LINE
SECTION LINE
EASEMENT
EXISTING DEED LINE
EDGE OF PAVEMENT
EXISTING OVER HEAD POWER
EXISTING FENCE LINE
EXISTING DITCH
EXISTING SANITARY SEWER W/MANHOLE
PROPOSED STORM DRAIN
PROPOSED PVC SDR-35 SEWER W/MH
PROPOSED CULINARY WATERLINE
PROPOSED PRESSURIZED IRRIGATION
REVERSE FLOW CURBS
CONSTRUCTION NOTES:
① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. DUMPSTER ENCLOSURE.
③ INSTALL MASONRY WALL PER SPANISH FORK CITY STANDARDS.
④ CONST. 68.47 LF 15"ADS STORM DRAIN @ 0.20%
⑤ CONST. 176.15 LF 15"ADS STORM DRAIN @ 0.20%
⑥ CONST. 117.22 LF 15"ADS STORM DRAIN @ 0.20%
⑦ CONST. 94.64 LF 15"ADS STORM DRAIN @ 0.20%
EX.POND
BUILDING 7
22 UNITS
EX.HYDRANT
EX. FIRE LINE TYP.
ROOF DRAIN TYP.
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
VISTA VIEW PHASE 6
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
UTILITY & INDEX
SPANISH FORK, UTAH
SHEET NO.
3

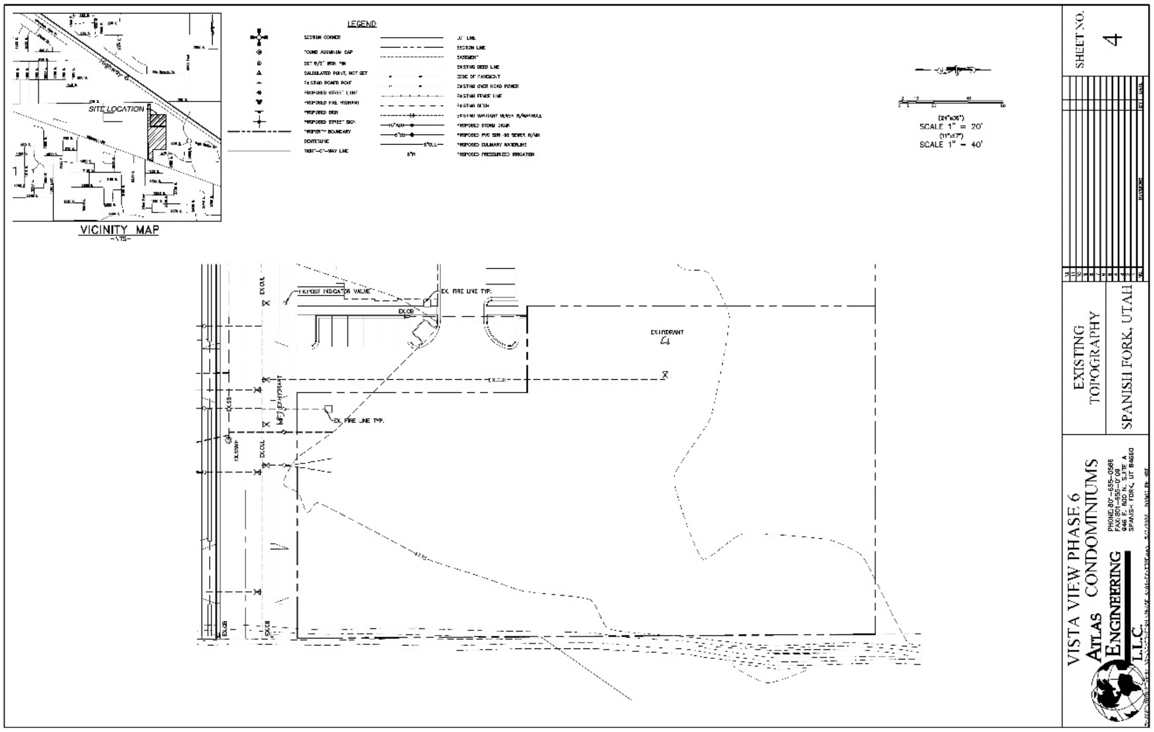
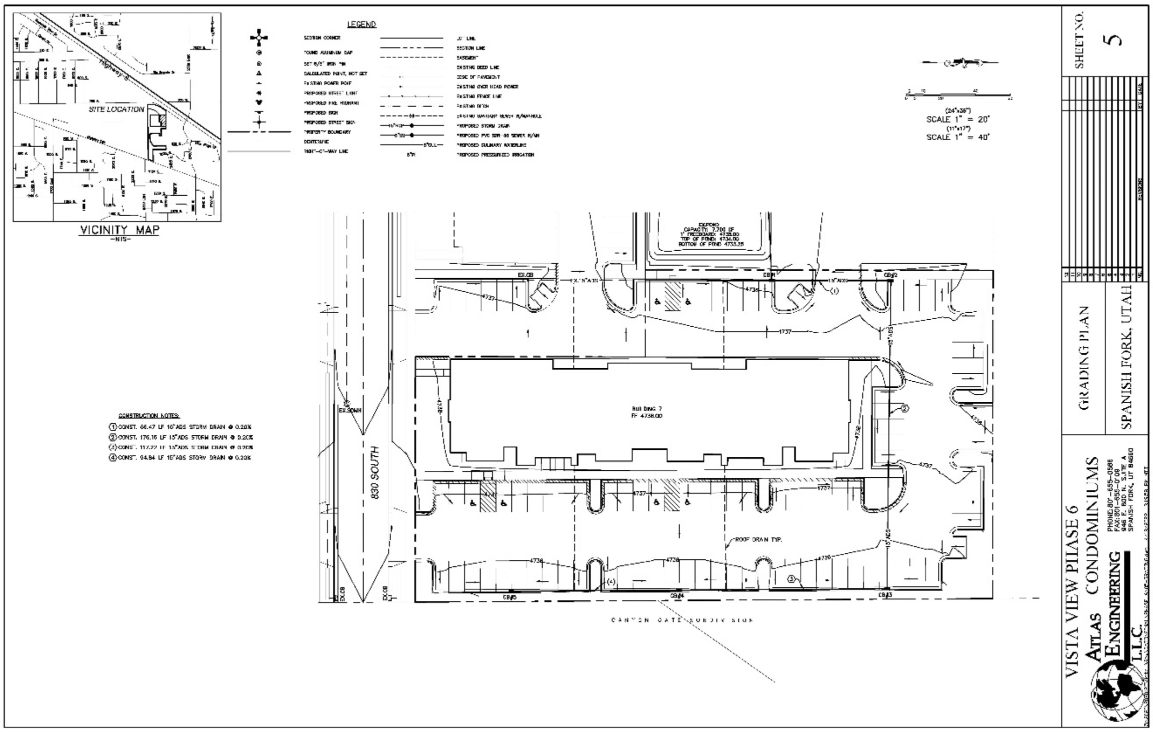
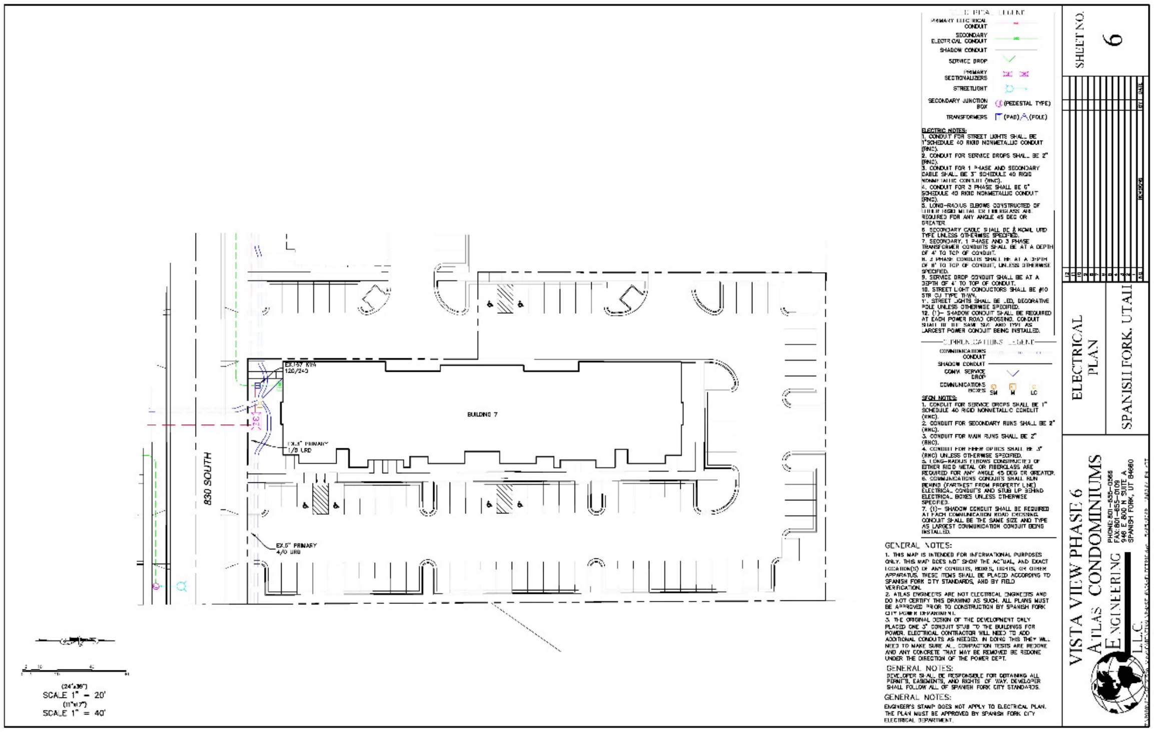

VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
LEGEND
SECTION CORNER
FOUND ALUMINUM CAP
SET 5/8" IRON PIN
CALCULATED POINT, NOT SET
EXISTING POWER POLE
PROPOSED STREET LIGHT
PROPOSED FIRE HYDRANT
PROPOSED SIGN
PROPOSED STREET SIGN
PROPERTY BOUNDARY
CENTERLINE
RIGHT-OF-WAY LINE
LOT LINE
SECTION LINE
EASEMENT
EXISTING DEED LINE
EDGE OF PAVEMENT
EXISTING OVER HEAD POWER
EXISTING FENCE LINE
EXISTING DITCH
EXISTING SANITARY SEWER W/MANHOLE
PROPOSED STORM DRAIN
PROPOSED PVC SDR-35 SEWER W/MH
PROPOSED CULINARY WATERLINE
PROPOSED PRESSURIZED IRRIGATION
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
EX.HYDRANT
EX. FIRE LINE TYP.
EX.POST INDICATOR VALVE
EX.CULI
VISTA VIEW PHASE 6
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
EXISTING TOPOGRAPHY
SPANISH FORK, UTAH
SHEET NO.
4

Exhibit 2



CONSTRUCTION NOTES:

① CONST. 66.47 LF 10"ADS STORM DRAIN @ 0.28%
② CONST. 176.16 LF 15"ADS STORM DRAIN @ 0.20%
③ CONST. 117.22 LF 15"ADS STORM DRAIN @ 0.20%
④ CONST. 94.84 LF 10"ADS STORM DRAIN @ 0.20%



ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE ⅞ KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 8' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 STR CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SFCN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

GENERAL NOTES:

1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL, AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.
3. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

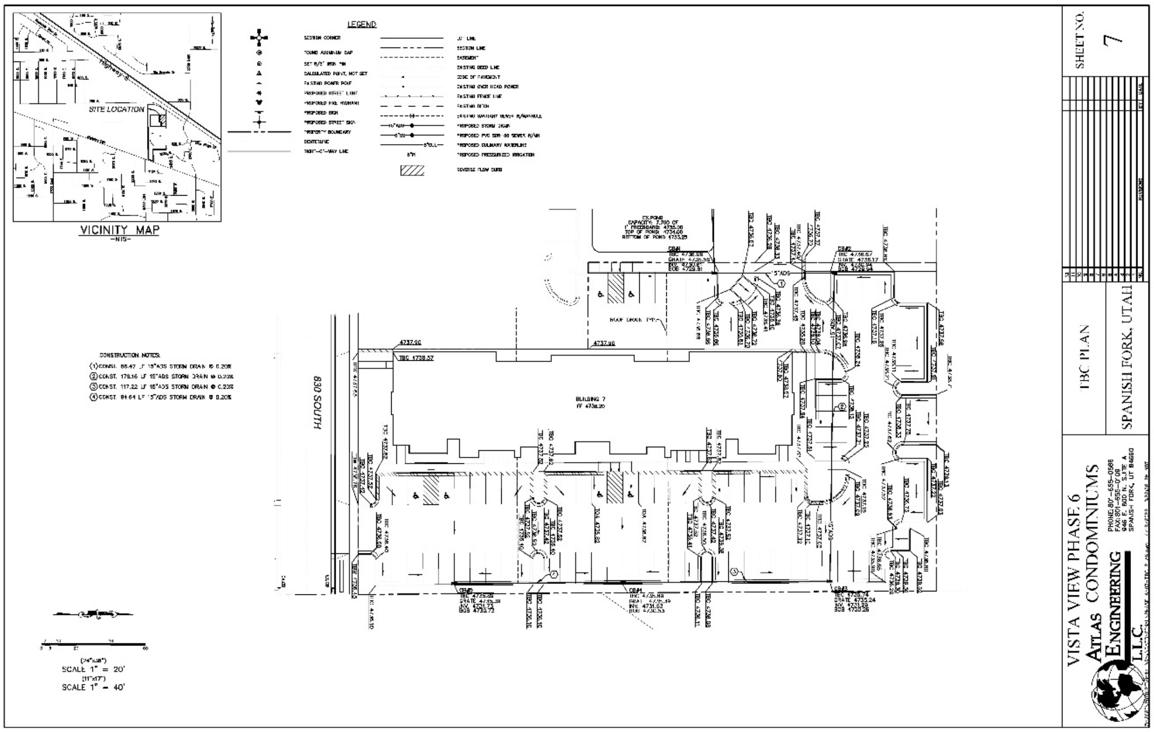
GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS OF WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

Exhibit 2


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
CONSTRUCTION NOTES:
(1) CONST. 86.47 LF 15"ADS STORM DRAIN @ 0.20%
(2) CONST. 178.16 LF 15"ADS STORM DRAIN @ 0.20%
(3) CONST. 117.22 LF 15"ADS STORM DRAIN @ 0.20%
(4) CONST. 84.64 LF 15"ADS STORM DRAIN @ 0.20%
830 SOUTH
BUILDING 7
FF 4738.20
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
SHEET NO.
7
TBC PLAN
SPANISH FORK, UTAH
VISTA VIEW PHASE 6
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

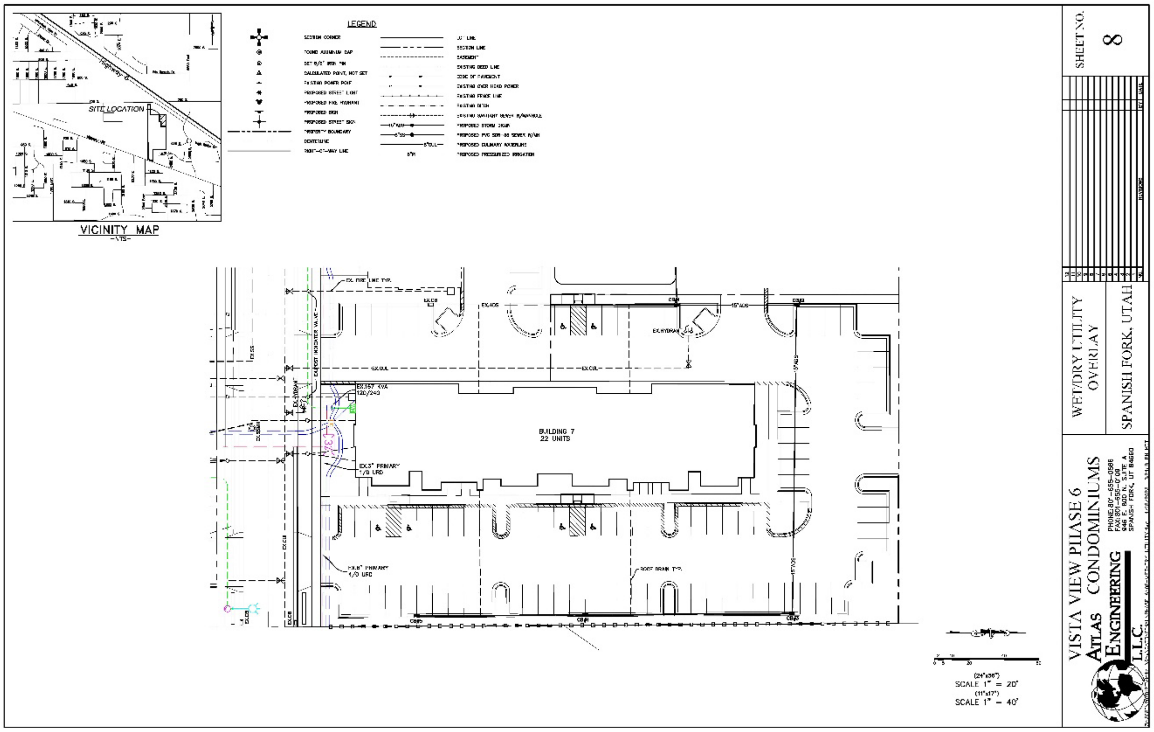
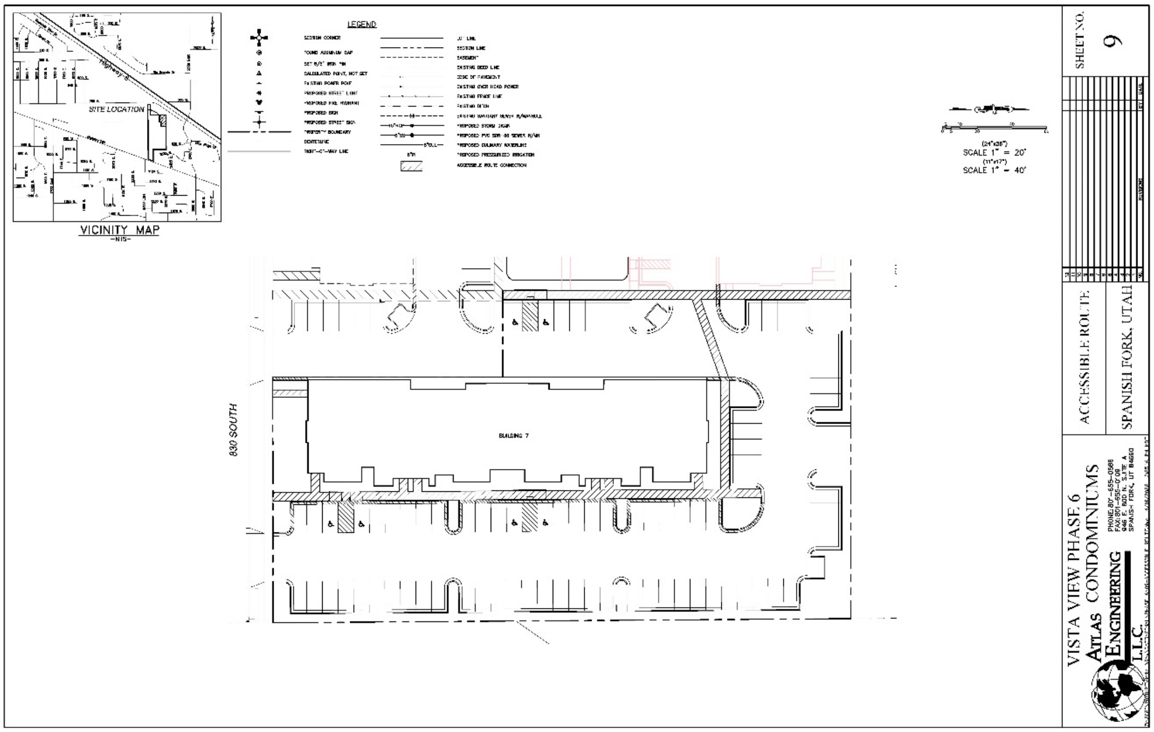
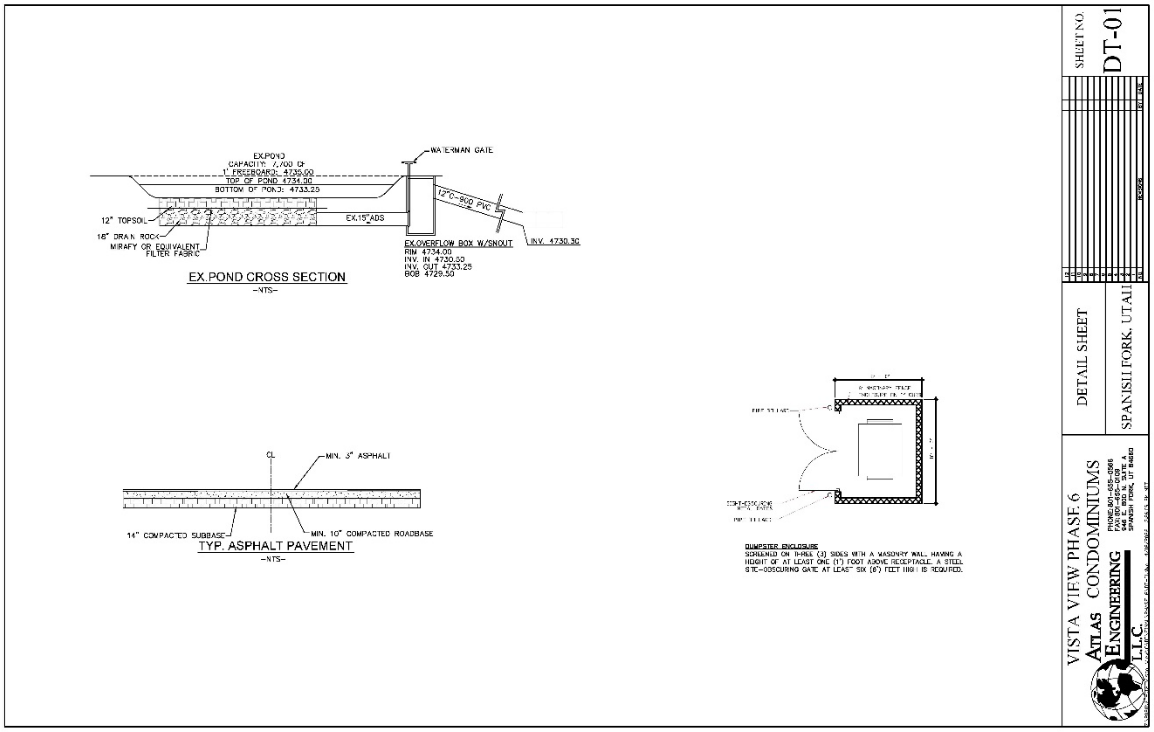

LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
BUILDING 7
22 UNITS
EX.FIRE LINE TYP.
EX.3" PRIMARY 1/0 URD
ROOF DRAIN TYP.
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
SHEET NO.
8
WET/DRY UTILITY OVERLAY
SPANISH FORK, UTAH
VISTA VIEW PHASE 6
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

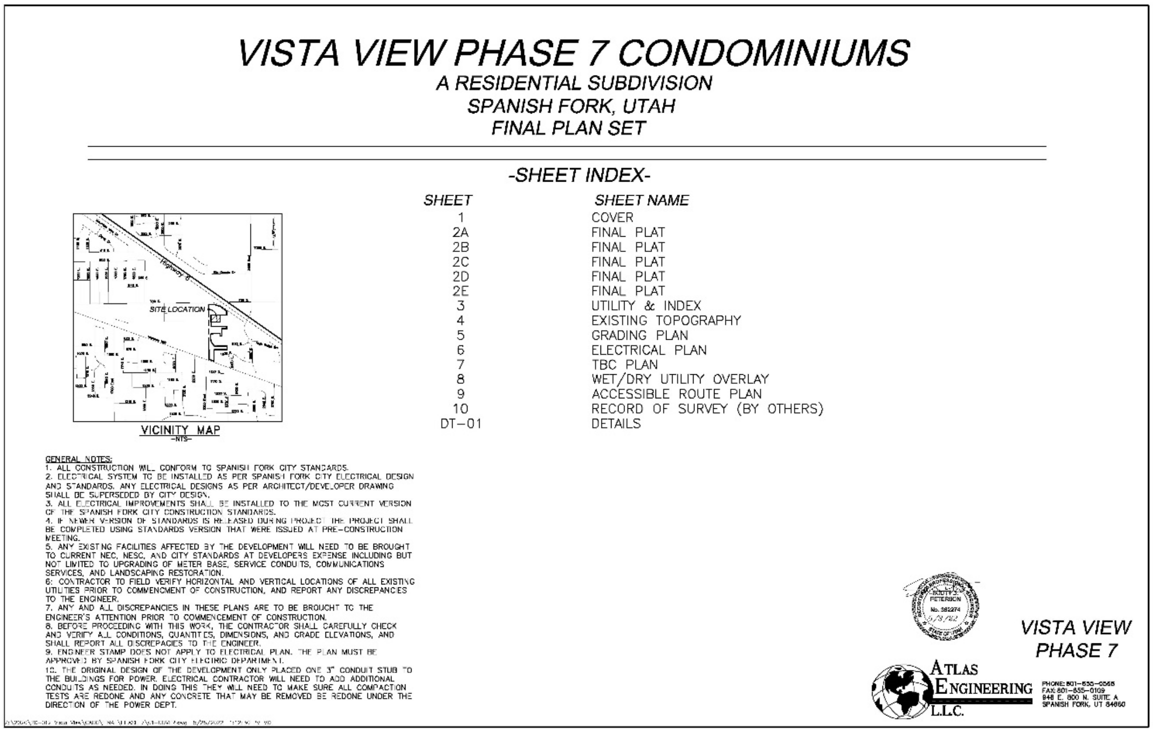
Exhibit 2





DUMPSTER ENCLOSURE
SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.

Exhibit 3


Highway 6
SITE LOCATION

VISTA VIEW PHASE 7 CONDOMINIUMS

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
10	RECORD OF SURVEY (BY OTHERS)
DT-01	DETAILS

VICINITY MAP
-NTS-

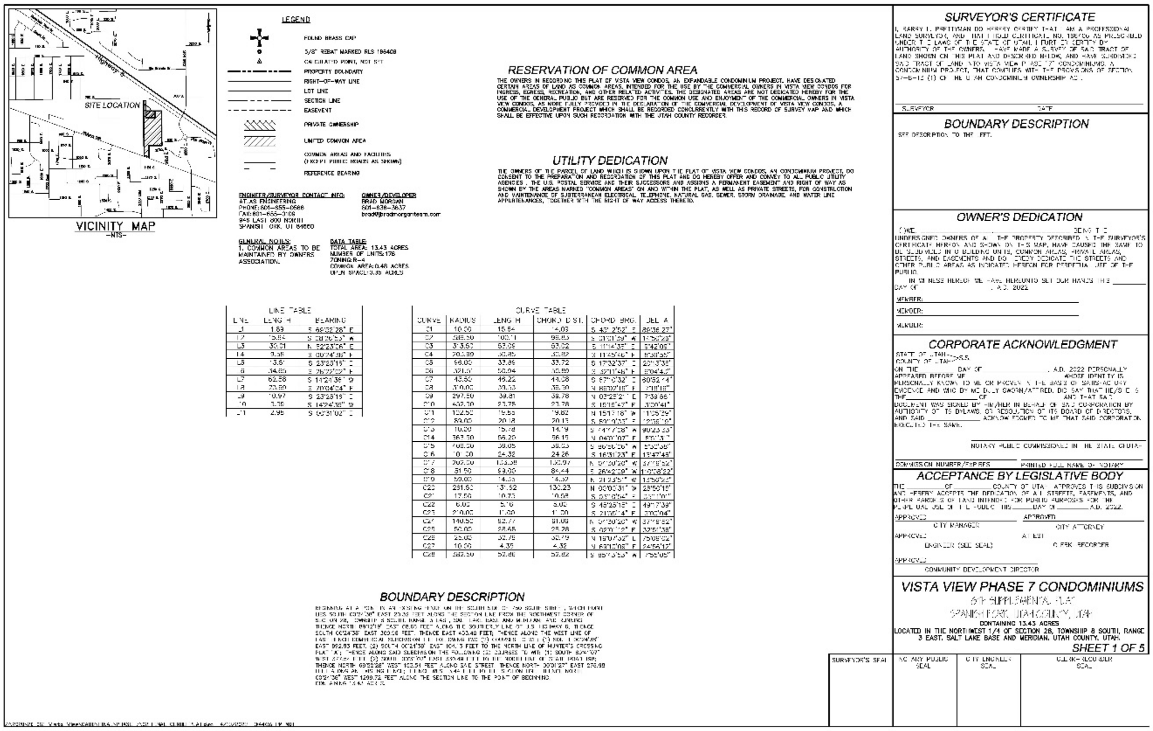
GENERAL NOTES:

1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.
10. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

SCOTT J. PETERSON
No. 382274
5/3/22

VISTA VIEW
PHASE 7

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
948 E. 800 N. SUITE A
SPANISH FORK, UT 84660


Highway 6
SITE LOCATION

VICINITY MAP
-NTS-

LEGEND

- FOUND BRASS CAP
- 5/8" REBAR MARKED RLS 186408
- CALCULATED POINT, NOT SET
- PROPERTY BOUNDARY
- RIGHT-OF-WAY LINE
- LOT LINE
- SECTION LINE
- EASEMENT
- PRIVATE OWNERSHIP
- LIMITED COMMON AREA
- COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
- REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
948 EAST 800 NORTH
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-836-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 3.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES , THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

LINE	LENGTH	BEARING
L1	1.69	S 69°32'28" E
L2	15.64	S 08°26'53" W
L3	30.01	N 52°23'06" E
L4	9.58	S 00°24'38" E
L5	13.51	S 23°25'19" E
L6	34.65	S 26°22'02" E
L7	62.58	S 14°24'36" W
L8	23.80	S 70°04'04" E
L9	10.97	S 23°25'19" E
L10	3.39	S 14°24'36" W
L11	2.95	S 00°31'02" E

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	10.00	15.64	14.09	S 43°12'52" E	89°36'27"
C2	388.50	100.11	99.85	S 01°01'39" W	14°50'23"
C3	313.50	53.09	53.02	S 11°14'35" E	9°42'08"
C4	203.89	30.85	30.82	S 11°45'46" E	8°39'55"
C5	96.00	32.89	33.72	S 17°32'37" E	20°13'35"
C6	321.50	50.04	50.00	S 32°11'46" E	8°04'43"
C7	43.50	46.22	44.08	S 67°10'32" E	60°52'44"
C8	310.00	39.53	38.50	N 88°02'18" E	7°18'18"
C9	297.50	39.81	39.78	N 03°25'21" E	7°39'56"
C10	402.30	23.75	23.78	S 15°15'47" E	3°20'41"
C11	102.50	19.85	19.82	N 15°17'18" W	11°05'29"
C12	89.00	20.18	20.13	S 80°10'33" E	12°58'19"
C13	10.00	15.78	14.19	S 74°17'28" W	90°23'33"
C14	363.50	56.20	56.15	N 04°01'07" E	8°51'31"
C15	408.00	38.05	38.03	S 86°56'26" W	5°20'36"
C16	101.00	24.32	24.26	S 16°31'23" E	13°47'45"
C17	202.00	133.58	130.97	N 01°20'20" W	37°18'52"
C18	51.50	99.00	84.44	S 26°42'09" W	110°08'22"
C19	59.00	14.35	14.32	N 21°23'51" W	13°56'22"
C20	281.50	131.52	130.23	N 00°00'31" W	26°50'15"
C21	17.50	10.73	10.58	S 03°10'54" E	35°11'01"
C22	6.00	5.16	5.00	S 45°25'15" E	49°17'39"
C23	210.00	11.00	11.00	S 21°05'14" E	3°00'04"
C24	140.50	92.77	91.09	N 01°20'20" W	37°49'52"
C25	50.00	28.65	25.28	S 02°01'12" E	32°51'35"
C26	25.00	32.79	30.79	N 19°07'32" E	75°08'02"
C27	10.00	4.35	4.32	N 63°10'08" E	24°56'12"
C28	382.50	52.86	52.82	S 85°13'53" W	7°55'05"

BOUNDARY DESCRIPTION

BEGINNING AT A POINT IN AN EXISTING FENCE ON THE SOUTH SIDE OF 750 SOUTH STREET, WHICH POINT LIES SOUTH 00°24'36" EAST 25.32 FEET ALONG THE SECTION LINE FROM THE NORTHWEST CORNER OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE NORTH 89°12'19" EAST 68.65 FEET ALONG THE SOUTHERLY LINE OF U.S. HIGHWAY 6; THENCE SOUTH 00°24'38" EAST 300.06 FEET; THENCE EAST 403.48 FEET; THENCE ALONG THE WEST LINE OF EAST [illegible] COMMERCIAL SUBDIVISION THE FOLLOWING TWO (2) COURSES TO WIT: (1) SOUTH 00°24'35" EAST 992.03 FEET; (2) SOUTH 00°21'38" EAST 104.13 FEET TO THE NORTH LINE OF HUNTER'S CROSSING PLAT "A"; THENCE ALONG SAID SUBDIVISION THE FOLLOWING (2) COURSES TO WIT: (1) SOUTH 89°41'07" WEST [illegible] FEET; (2) SOUTH 00°31'00" EAST 330.48 FEET TO THE NORTH LINE OF STATE ROAD 156; THENCE NORTH 69°32'28" WEST 103.54 FEET ALONG SAID STREET; THENCE NORTH 20°01'27" EAST 276.98 FEET ALONG AN EXISTING FENCE; THENCE WEST [illegible] FEET TO THE SECTION LINE; THENCE NORTH 00°24'36" WEST 1299.72 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.
CONTAINING 13.43 ACRES

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 186408 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE "7" CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

I/WE, ______, ______ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ______ DAY OF ______, A.D. 2022

MEMBER: ______

MEMBER: ______

MEMBER:

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.

ON THE ______ DAY OF ______, A.D. 2022 PERSONALLY APPEARED BEFORE ME ______ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ______ OF ______ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID ______ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES PRINTED FULL NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

THE ______ OF ______ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ______ DAY OF ______ A.D. 2022.

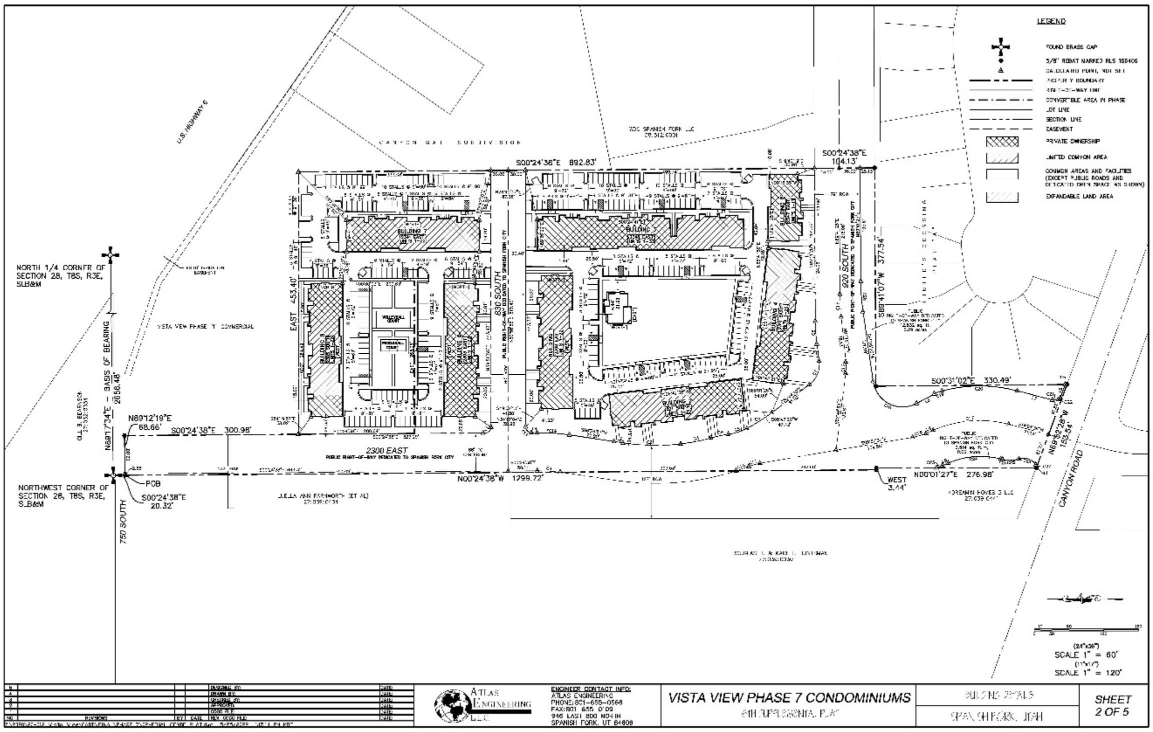
APPROVED ______ CITY MANAGER
APPROVED ______ CITY ATTORNEY
APPROVED ______ ENGINEER (SEE SEAL)
ATTEST ______ CLERK-RECORDER
APPROVED ______ COMMUNITY DEVELOPMENT DIRECTOR

VISTA VIEW PHASE 7 CONDOMINIUMS

6TH SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.
SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

Exhibit 3


LEGEND
FOUND BRASS CAP
5/8" REBAR MARKED RLS 166406
CALCULATED POINT, NOT SET
PROPERTY BOUNDARY
RIGHT-OF-WAY LINE
CONVERTIBLE AREA IN PHASE
LOT LINE
SECTION LINE
EASEMENT
PRIVATE OWNERSHIP
LIMITED COMMON AREA
COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AND DEDICATED OPEN SPACE AS SHOWN)
EXPANDABLE LAND AREA
U.S. HIGHWAY 6
CANYON GAP SUBDIVISION
S00°24'38"E 892.83'
S00°24'38"E 104.13'
NORTH 1/4 CORNER OF SECTION 28, T8S, R3E, SLB&M
VISTA VIEW PHASE 11 COMMERCIAL
N89°17'34"E - BASIS OF BEARING 2656.48'
EAST 453.40'
830 SOUTH
N89°12'19"E 88.66'
S00°24'38"E 300.98'
2300 EAST
NORTHWEST CORNER OF SECTION 28, T8S, R3E, SLB&M
POB
S00°24'38"E 20.32'
750 SOUTH
N00°24'38"W 1299.72'
WEST 3.44'
N00°01'27"E 276.98'
S00°31'02"E 330.49'
S89°41'07"W 377.54'
CANYON ROAD
(24"x36") SCALE 1" = 60'
(11"x17") SCALE 1" = 120'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 7 CONDOMINIUMS
6TH SUPPLEMENTAL PLAT
BUILDING PLANS
SPANISH FORK, UTAH
SHEET 2 OF 5

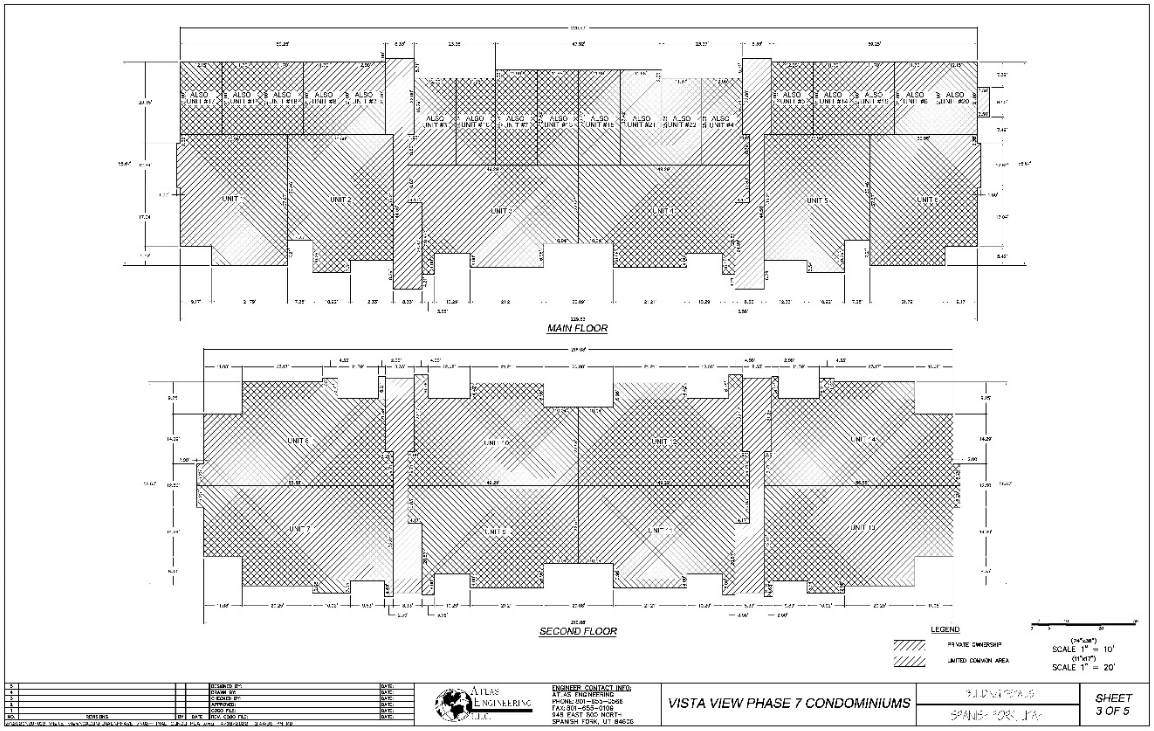
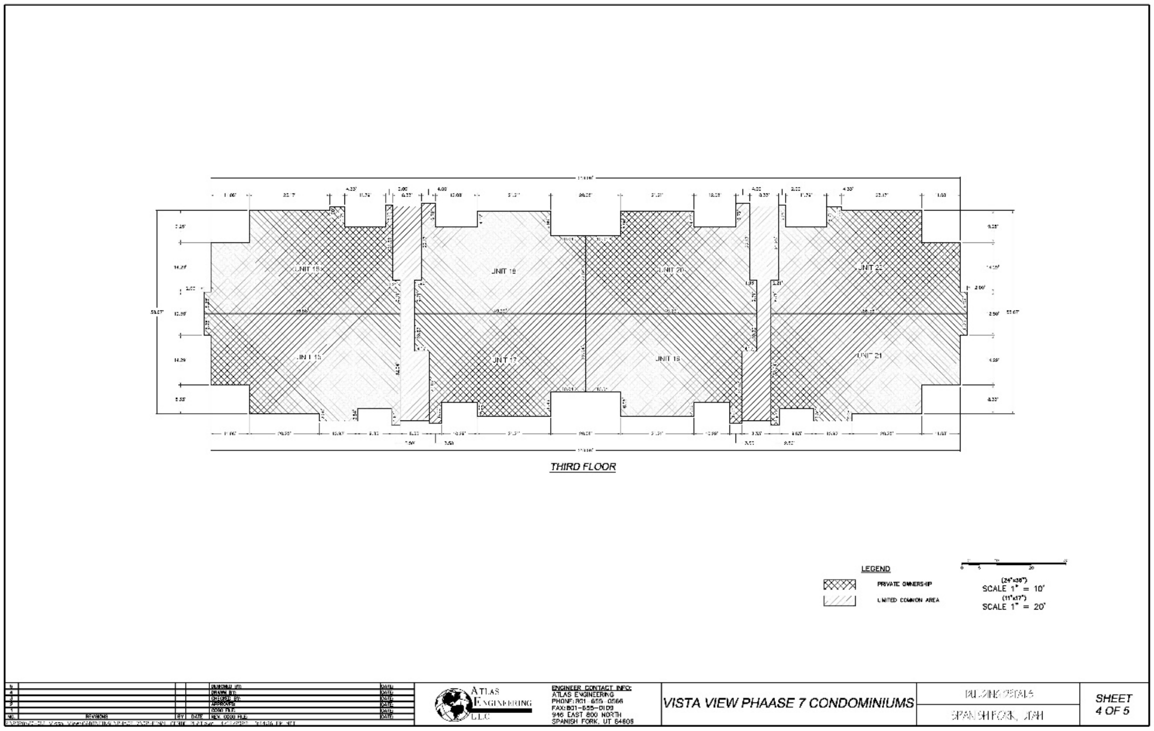

ALSO UNIT
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
MAIN FLOOR
UNIT 7
UNIT 8
UNIT 10
UNIT 12
UNIT 13
UNIT 14
SECOND FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36") SCALE 1" = 10'
(11"x17") SCALE 1" = 20'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 7 CONDOMINIUMS
BUILDING PLANS
SPANISH FORK, UTAH
SHEET 3 OF 5

Exhibit 3


UNIT 15
UNIT 19
UNIT 20
UNIT 22
UNIT 16
UNIT 17
UNIT 18
UNIT 21
THIRD FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
COGO FILE:
REV. COGO FILE:
DATE:
NO.
REVISIONS
BY
DATE
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHAASE 7 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
4 OF 5

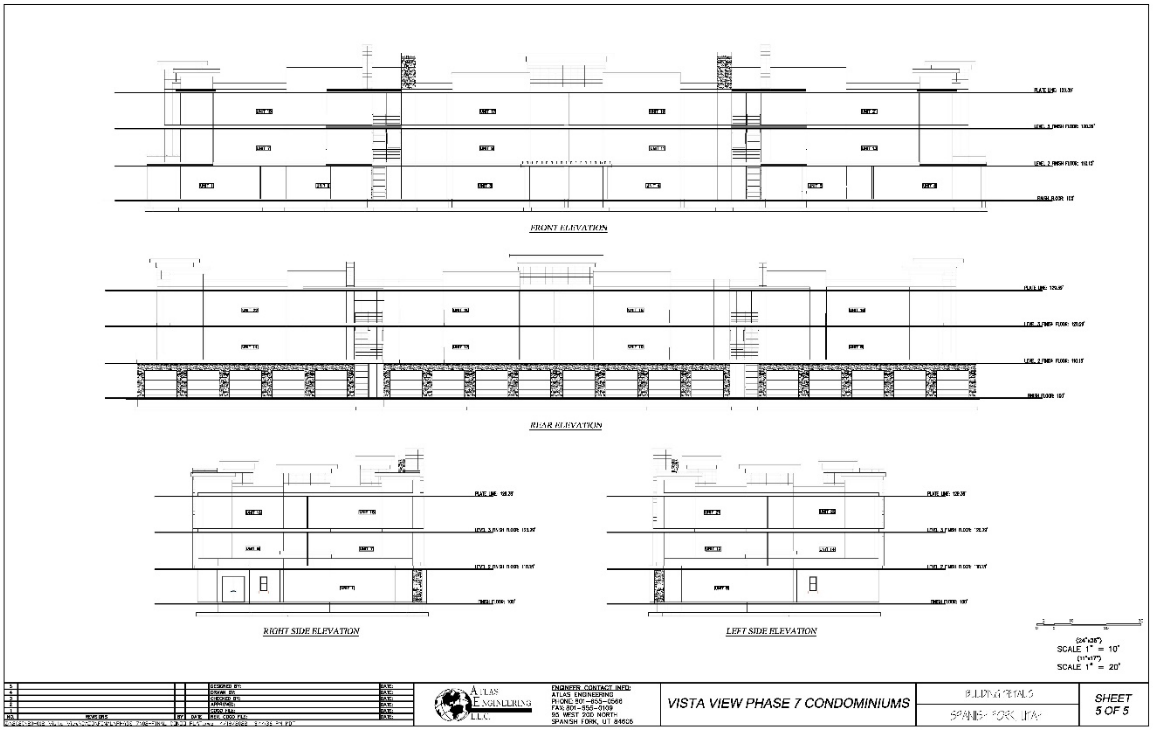
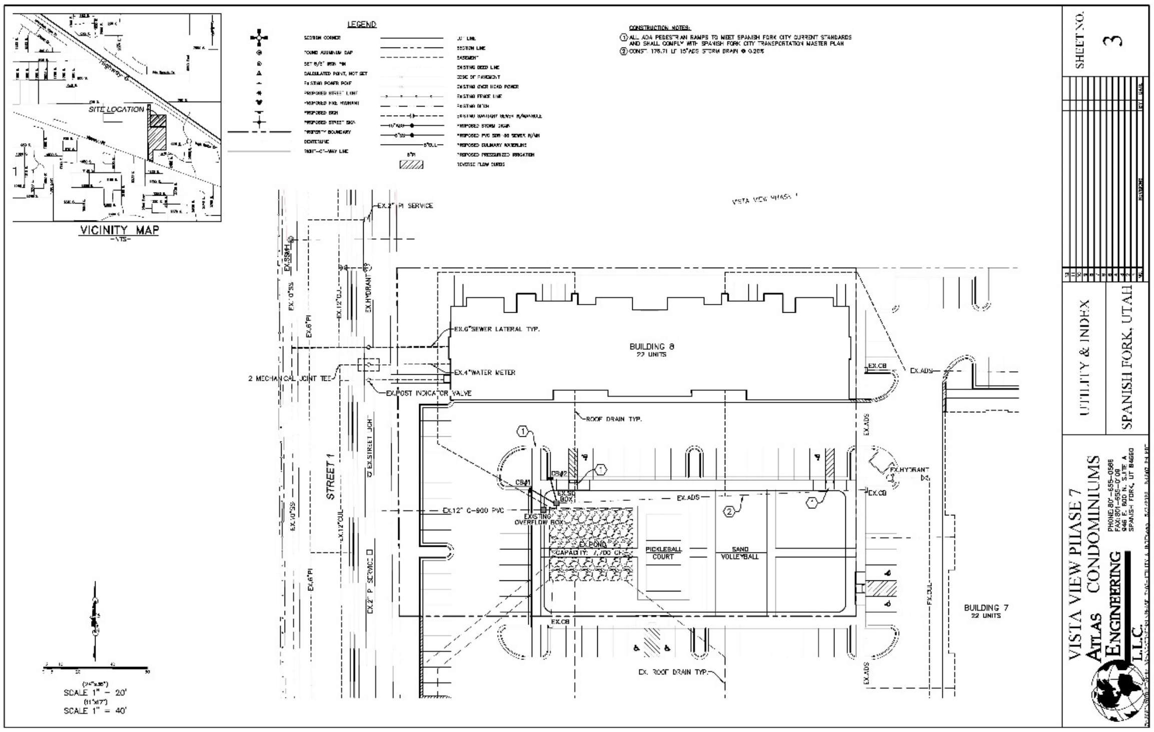

FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
COGO FILE:
REV. COGO FILE:
DATE:
NO.
REVISIONS
BY
DATE
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
95 WEST 200 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 7 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
5 OF 5

Exhibit 3


LEGEND
CONSTRUCTION NOTES:
① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. 176.71 LF 15"ADS STORM DRAIN @ 0.20%
VICINITY MAP
SITE LOCATION
VISTA VIEW PHASE 1
STREET 1
BUILDING 8
22 UNITS
BUILDING 7
22 UNITS
EX.2" PI SERVICE
EX.6"SEWER LATERAL TYP.
EX.4"WATER METER
2 MECHANICAL JOINT TEE
EX.POST INDICATOR VALVE
ROOF DRAIN TYP.
EX.STREET LIGHT
EX.12" C-900 PVC
EXISTING OVERFLOW BOX
EX.POND
CAPACITY: 7,700 CF
PICKLEBALL COURT
SAND VOLLEYBALL
EX.ADS
EX.CB
EX.HYDRANT
EX.ROOF DRAIN TYP.
SCALE 1" = 20'
SCALE 1" = 40'
SHEET NO. 3
UTILITY & INDEX
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

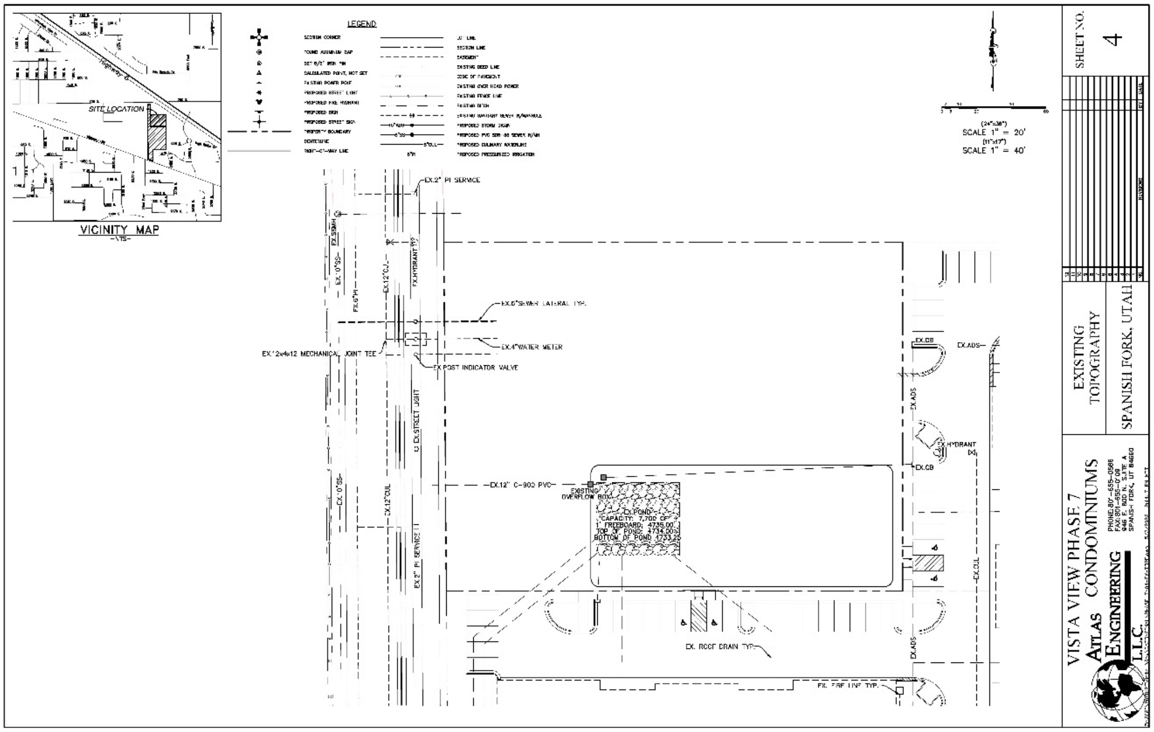
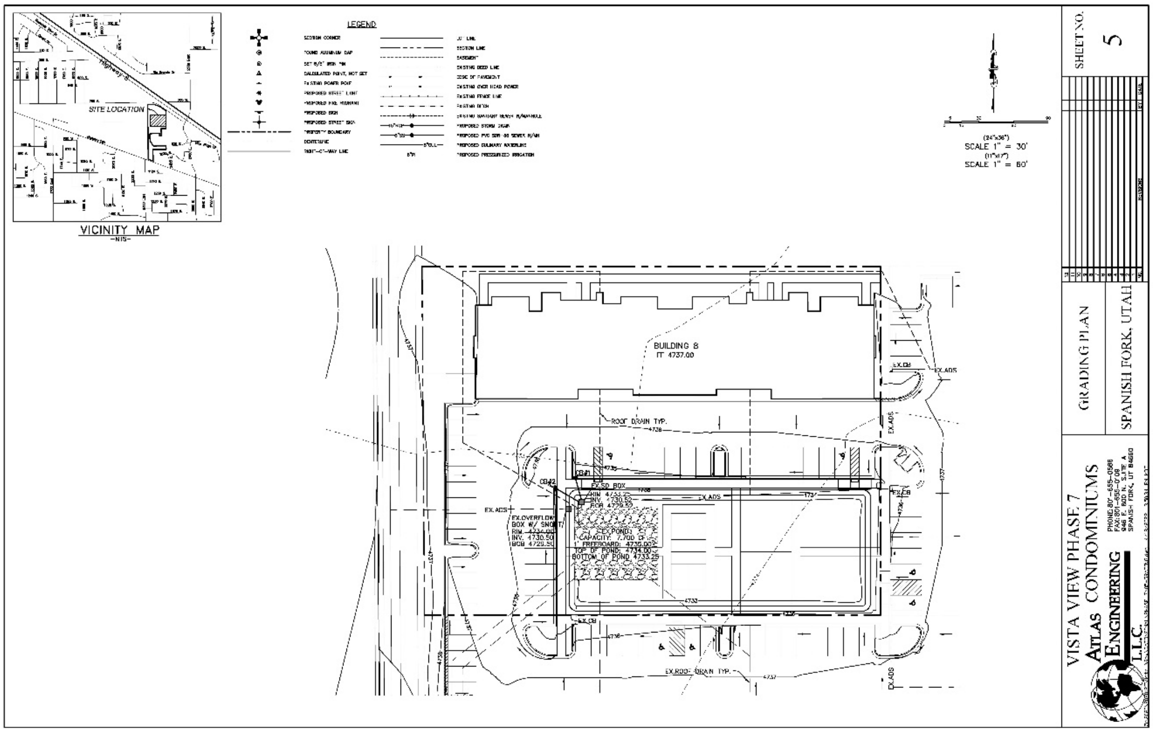
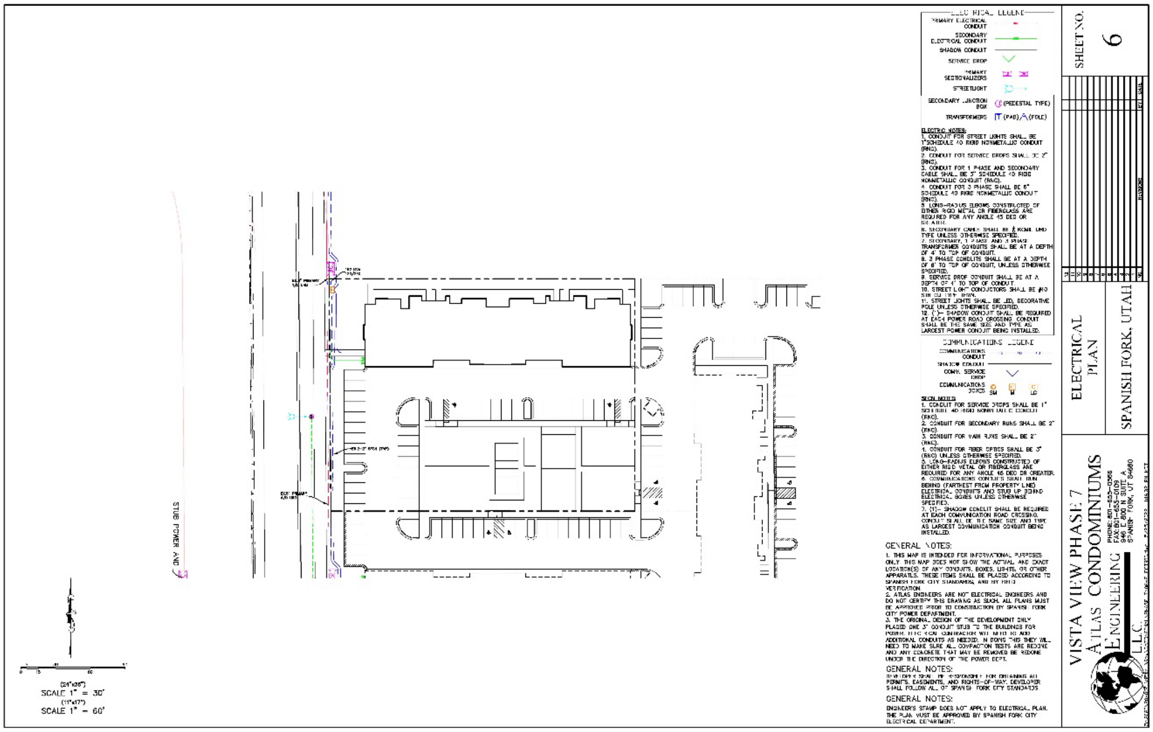

LEGEND
VICINITY MAP
SITE LOCATION
SCALE 1" = 20'
SCALE 1" = 40'
EX.2" PI SERVICE
EX.6"SEWER LATERAL TYP.
EX.4"WATER METER
EX.12x12 MECHANICAL JOINT TEE
EX.POST INDICATOR VALVE
EX.STREET LIGHT
EX.12" C-900 PVC
EXISTING OVERFLOW BOX
EX.POND
CAPACITY: 7,700 CF
EX.CB
EX.ADS
EX.HYDRANT
EX.ROOF DRAIN TYP.
EX.FIRE LINE TYP.
SHEET NO. 4
EXISTING TOPOGRAPHY
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

Exhibit 3





ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE [illegible] KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 6' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 SOLID CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SIGN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

GENERAL NOTES:

1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.
3. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

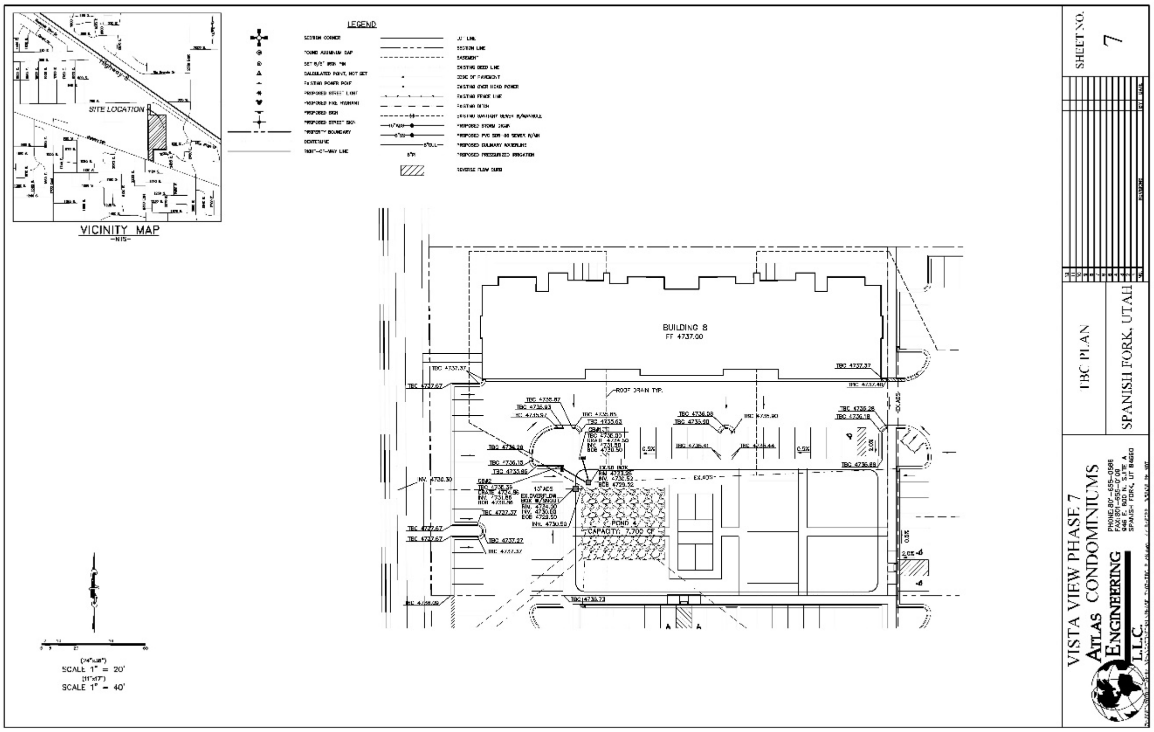
GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

Exhibit 3


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
BUILDING 8
FF 4737.00
ROOF DRAIN TYP.
POND 4
CAPACITY: 7,700 CF
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
SHEET NO.
7
TBC PLAN
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
SPANISH FORK, UT 84660

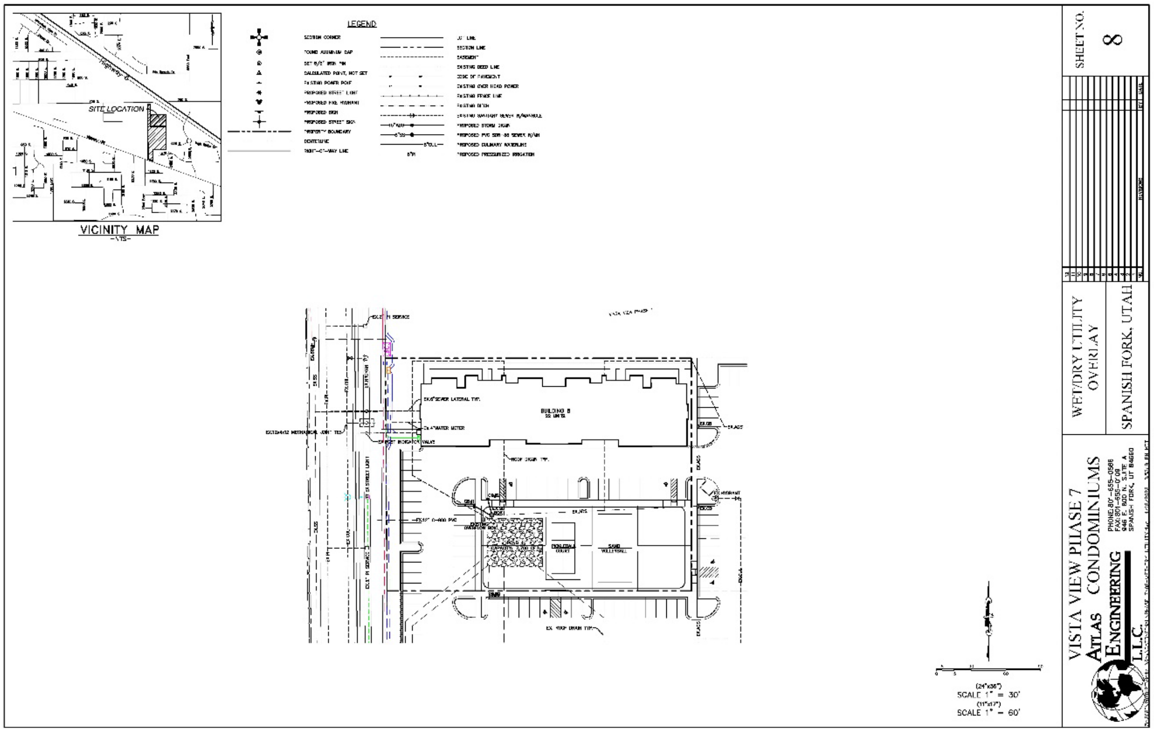
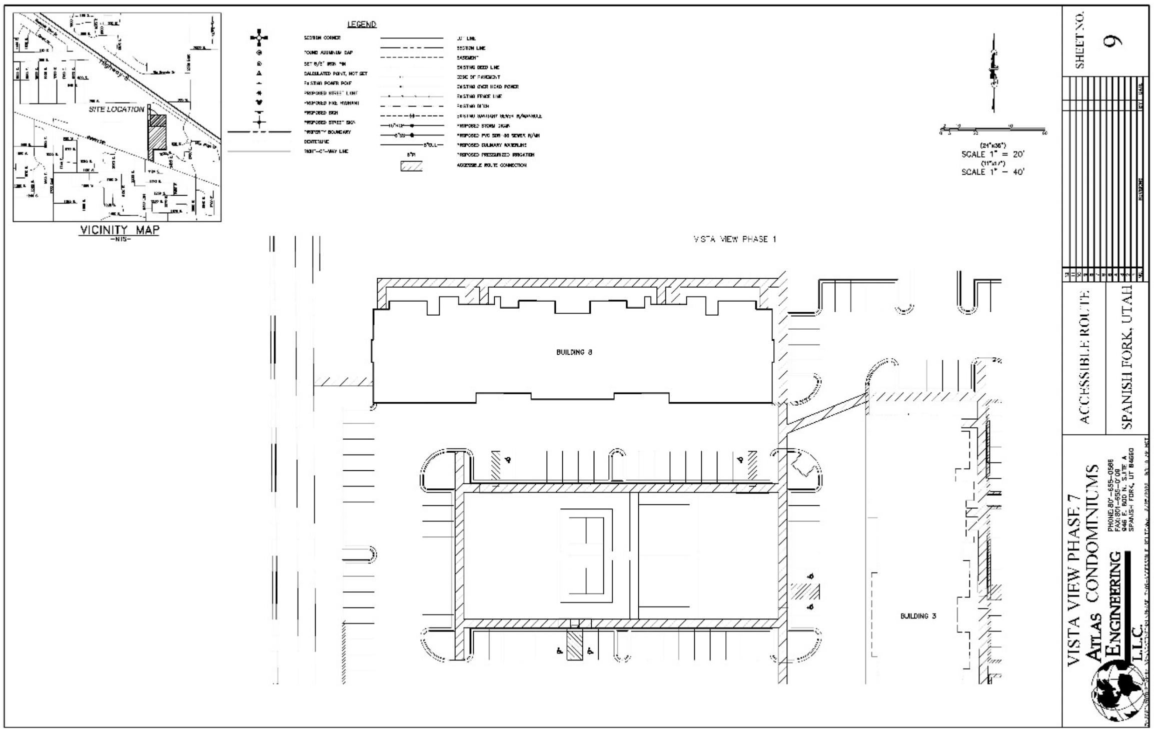

LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
BUILDING 8
ROOF DRAIN TYP.
(24"x36")
SCALE 1" = 30'
(11"x17")
SCALE 1" = 60'
SHEET NO.
8
WET/DRY UTILITY OVERLAY
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
SPANISH FORK, UT 84660

Exhibit 3


VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
LEGEND
VISTA VIEW PHASE 1
BUILDING 8
BUILDING 3
SCALE 1" = 20'
SCALE 1" = 40'
VISTA VIEW PHASE 7
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
ACCESSIBLE ROUTE
SPANISH FORK, UTAH
SHEET NO.
9

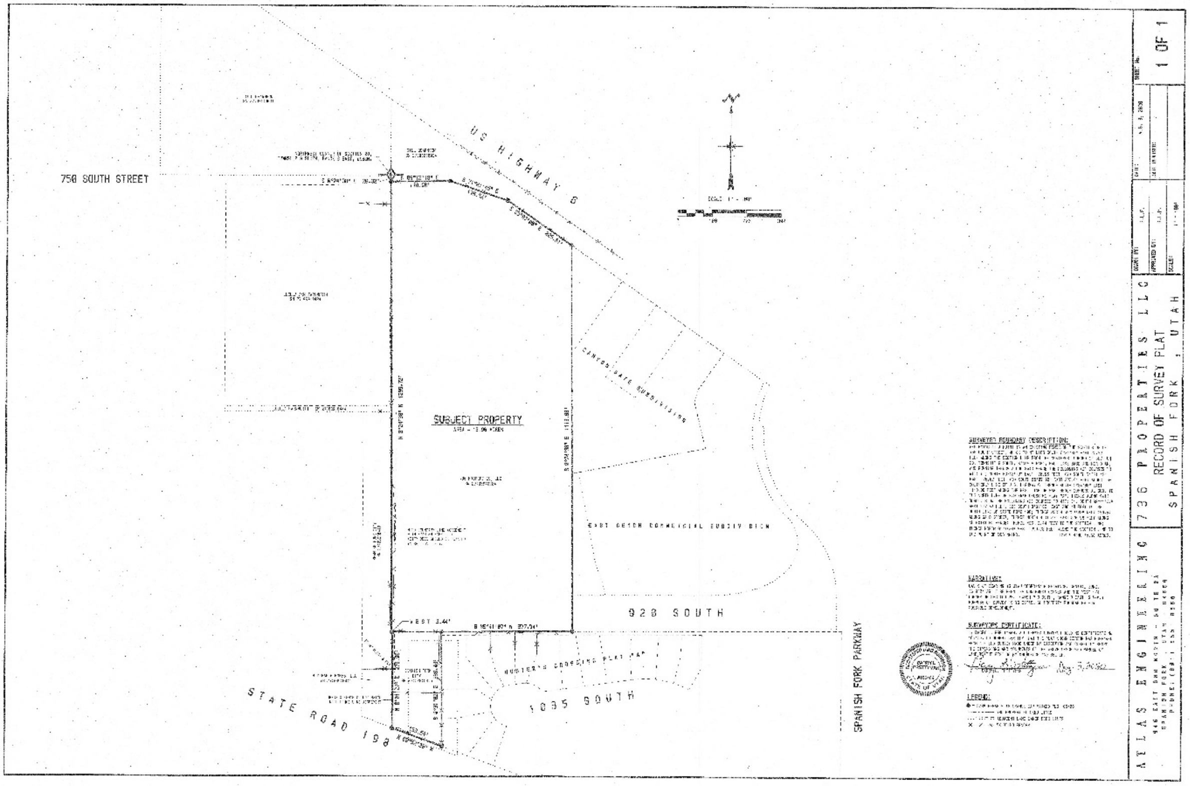
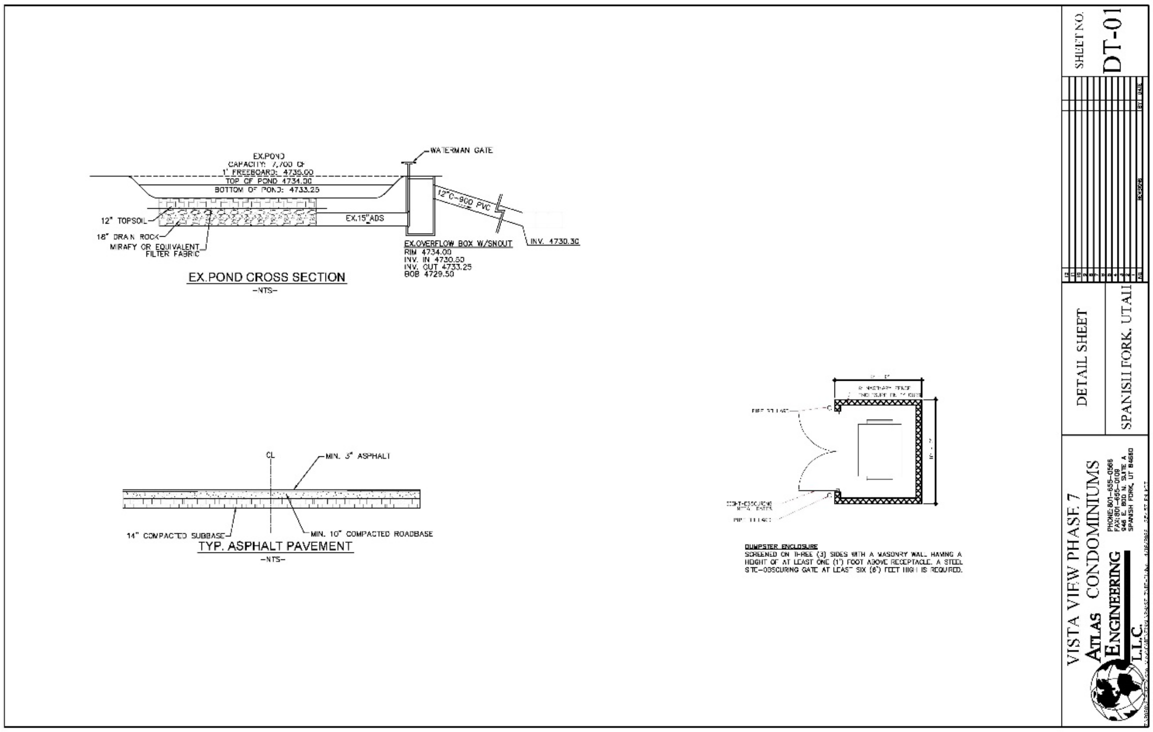

US HIGHWAY 6
750 SOUTH STREET
SUBJECT PROPERTY
CANYON GATE SUBDIVISION
EAST GOSEN COMMERCIAL EQUITY DITCH
920 SOUTH
1095 SOUTH
STATE ROAD 198
SPANISH FORK PARKWAY
ATLAS ENGINEERING
946 EAST 800 NORTH - SUITE A
SPANISH FORK, UTAH 84660
736 PROPERTIES LLC
RECORD OF SURVEY PLAT
SPANISH FORK, UTAH
SHEET NO.
1 OF 1

Exhibit 3



EX.POND CROSS SECTION

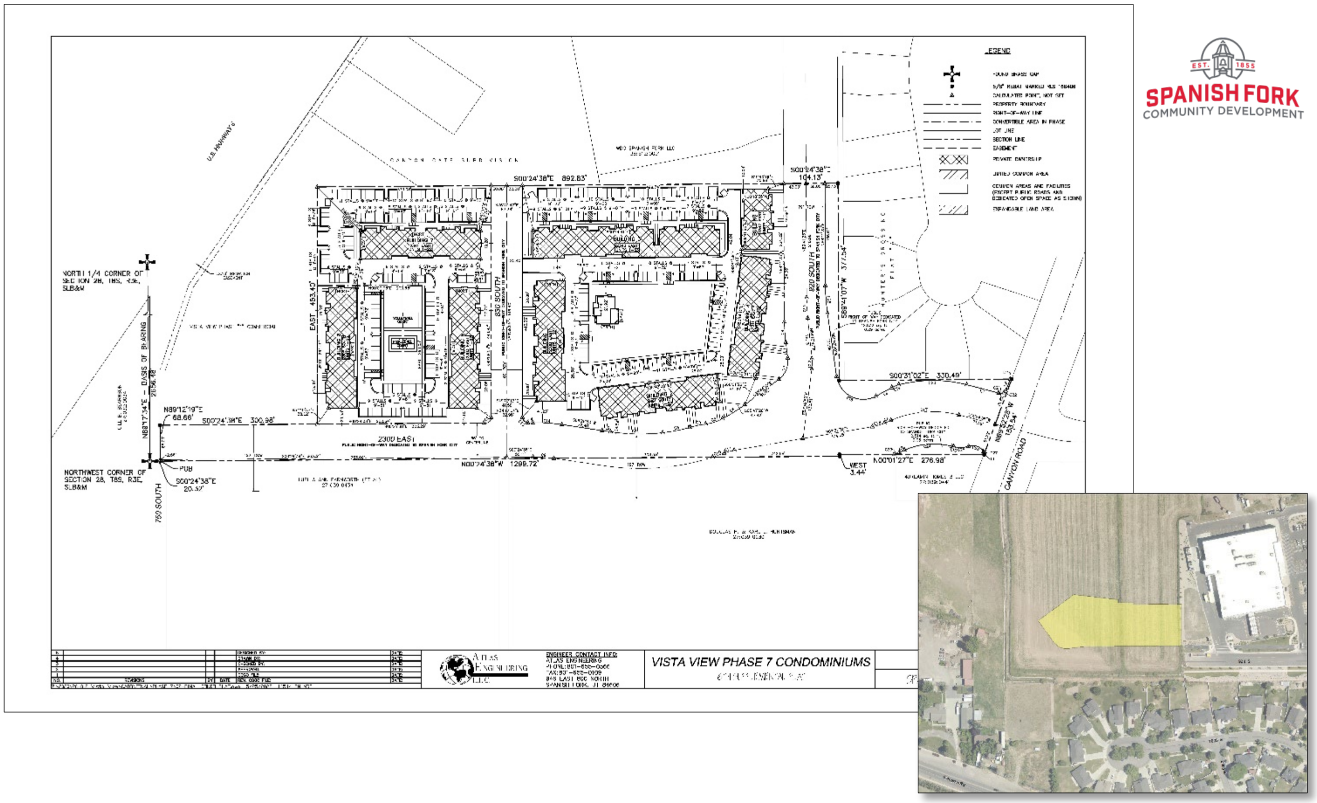
-NTS-

TYP. ASPHALT PAVEMENT

-NTS-

DUMPSTER ENCLOSURE

SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.



Vista View Phases 5, 6, and 7 Final Plat Re-Approval Request

March 22, 2023, Development Review Committee Meeting.

Located at 2350 East 750 South.

The subject property is zoned R-4.

The applicant has requested Final Plat re-approval for sixty-six multi-family residential units.

Key Issues

1. Consistency with previously approved Preliminary and Final Plats.

Recommendation

That the proposed Final Plat be re-approved based on the following findings and subject to the following conditions:

Findings

1. That the proposal conforms to the City's General Plan Designation and Zoning Map.
2. That the proposal is consistent with the approved Preliminary Plat.

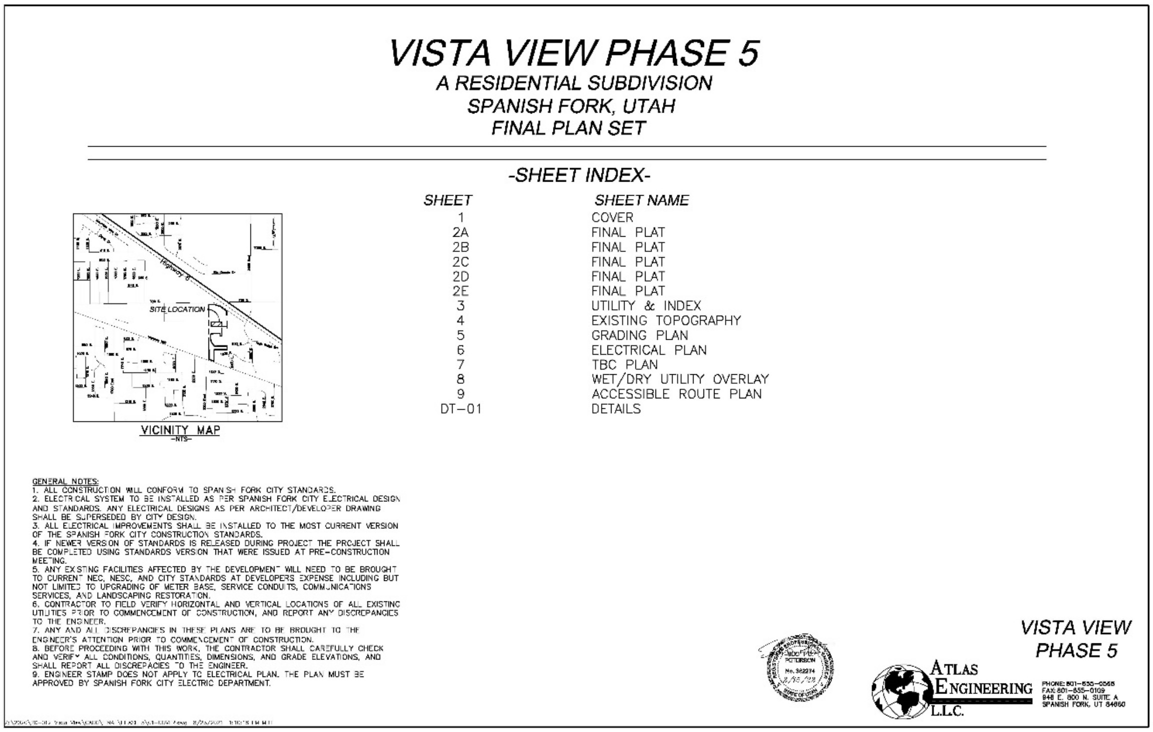
Conditions

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses red-lines.

Exhibits

1. Final Plat Phase 5.
2. Final Plat Phase 6.
3. Final Plat Phase 7.

Exhibit 1



VISTA VIEW PHASE 5

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
DT-01	DETAILS

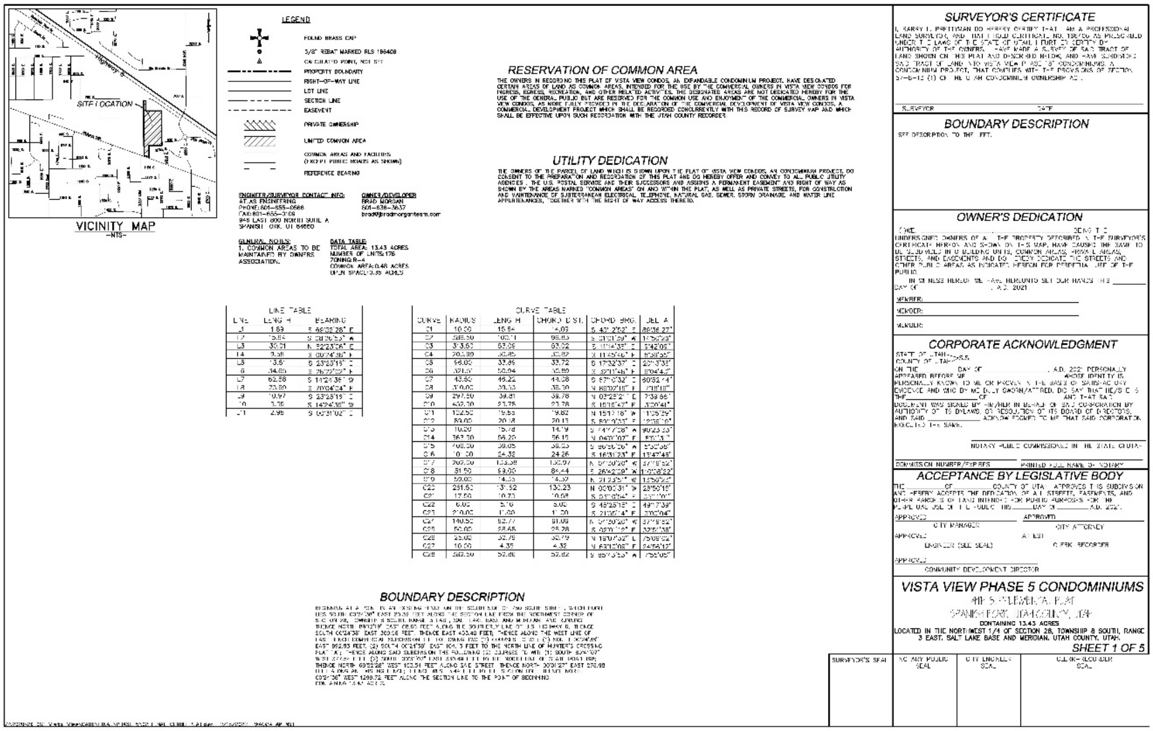
VICINITY MAP
-NTS-

GENERAL NOTES:
1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.

No. 362274

VISTA VIEW
PHASE 5

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
948 E. 800 N. SUITE A
SPANISH FORK, UT 84660



VICINITY MAP
-NTS-

LEGEND

⌖	FOUND BRASS CAP
●	5/8" REBAR MARKED RLS 186408
△	CALCULATED POINT, NOT SET
— · · —	PROPERTY BOUNDARY
——	RIGHT-OF-WAY LINE
——	LOT LINE
— - - —	SECTION LINE
- - - -	EASEMENT
▨	PRIVATE OWNERSHIP
▨	LIMITED COMMON AREA
	COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
— —	REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
948 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-636-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 3.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES , THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

LINE	LENGTH	BEARING
L1	1.69	S 89°32'28" E
L2	15.84	S 08°26'53" W
L3	30.01	N 52°23'06" E
L4	9.58	S 00°24'38" E
L5	13.51	S 23°25'13" E
L6	34.65	S 26°22'02" E
L7	62.58	S 14°24'36" W
L8	23.80	S 70°04'04" E
L9	10.97	S 23°25'13" E
L10	3.38	S 14°24'36" W
L11	2.95	S 00°31'02" E

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	10.00	15.64	14.09	S 45°12'52" E	89°36'27"
C2	388.50	100.11	99.83	S 01°01'39" W	14°50'23"
C3	313.50	53.09	53.02	S 11°14'35" E	9°42'08"
C4	203.89	30.85	30.82	S 11°45'46" E	8°39'55"
C5	96.00	33.89	33.72	S 17°32'37" E	20°13'35"
C6	321.07	50.04	50.00	S 32°11'46" E	8°04'42"
C7	43.50	46.22	44.08	S 67°10'32" E	60°52'41"
C8	310.00	39.53	39.50	N 88°02'16" E	7°18'18"
C9	297.50	38.81	38.78	N 03°25'21" E	7°39'56"
C10	452.30	23.75	23.78	S 15°16'47" E	3°00'41"
C11	102.50	19.85	19.82	N 15°17'16" W	11°05'39"
C12	89.00	20.18	20.13	S 80°10'33" E	12°59'19"
C13	10.00	15.78	14.19	S 44°17'28" W	90°23'33"
C14	363.50	56.20	56.15	N 04°01'07" E	8°51'31"
C15	708.50	39.05	39.05	S 86°56'26" W	3°09'29"
C16	101.00	24.32	24.26	S 16°31'23" E	13°47'45"
C17	202.00	133.38	130.97	N 04°20'20" W	37°49'52"
C18	51.50	99.00	84.44	S 26°42'09" W	110°08'22"
C19	59.00	14.35	14.32	N 21°23'51" W	13°56'22"
C20	261.50	131.52	130.23	N 00°00'31" W	28°50'15"
C21	17.50	10.73	10.58	S 03°10'54" E	35°11'01"
C22	6.00	5.16	5.00	S 45°25'15" E	49°17'39"
C23	210.00	11.00	11.00	S 21°05'14" E	3°00'04"
C24	140.50	92.77	91.09	N 04°20'20" W	37°49'52"
C25	50.00	28.66	28.28	S 02°01'12" E	32°51'38"
C26	25.00	32.78	30.49	N 19°07'32" E	75°09'02"
C27	10.00	4.35	4.32	N 63°12'08" E	24°56'12"
C28	382.50	52.86	52.82	S 85°13'53" W	7°55'05"

BOUNDARY DESCRIPTION

BEGINNING AT A POINT IN AN EXISTING FENCE ON THE SOUTH SIDE OF 750 SOUTH STREET, WHICH POINT LIES SOUTH 00°24'38" EAST 25.32 FEET ALONG THE SECTION LINE FROM THE NORTHWEST CORNER OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE NORTH 89°12'19" EAST 68.65 FEET ALONG THE SOUTHERLY LINE OF U.S. HIGHWAY 6; THENCE SOUTH 00°24'38" EAST 300.98 FEET; THENCE EAST 453.48 FEET; THENCE ALONG THE WEST LINE OF [illegible] COMMERCIAL SUBDIVISION THE FOLLOWING TWO (2) COURSES TO WIT: (1) SOUTH 00°24'38" EAST 892.93 FEET, (2) SOUTH 00°21'38" EAST 104.13 FEET TO THE NORTH LINE OF HUNTER'S CROSSING PLAT "A"; THENCE ALONG SAID SUBDIVISION THE FOLLOWING (2) COURSES TO WIT: (1) SOUTH 89°41'07" WEST [illegible] FEET, (2) SOUTH 00°31'02" EAST 330.48 FEET TO THE NORTH LINE OF STATE ROAD 198; THENCE NORTH 69°32'28" WEST 103.51 FEET ALONG SAID STREET; THENCE NORTH 00°01'27" EAST 276.98 FEET ALONG AN EXISTING FENCE; THENCE WEST [illegible] FEET TO THE SECTION LINE; THENCE NORTH 00°24'38" WEST 1299.72 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.
CONTAINING 13.43 ACRES.

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 186406 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE 1ST CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

I/WE, ____________, ____________ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ______ DAY OF ______, A.D. 2021

MEMBER: ____________

MEMBER: ____________

MEMBER:

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.

ON THE ______ DAY OF ______, A.D. 2021 PERSONALLY APPEARED BEFORE ME ______ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ______ OF ______ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID ______ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES
PRINTED FULL NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

THE ______ OF ______ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ______ DAY OF ______ A.D. 2021.

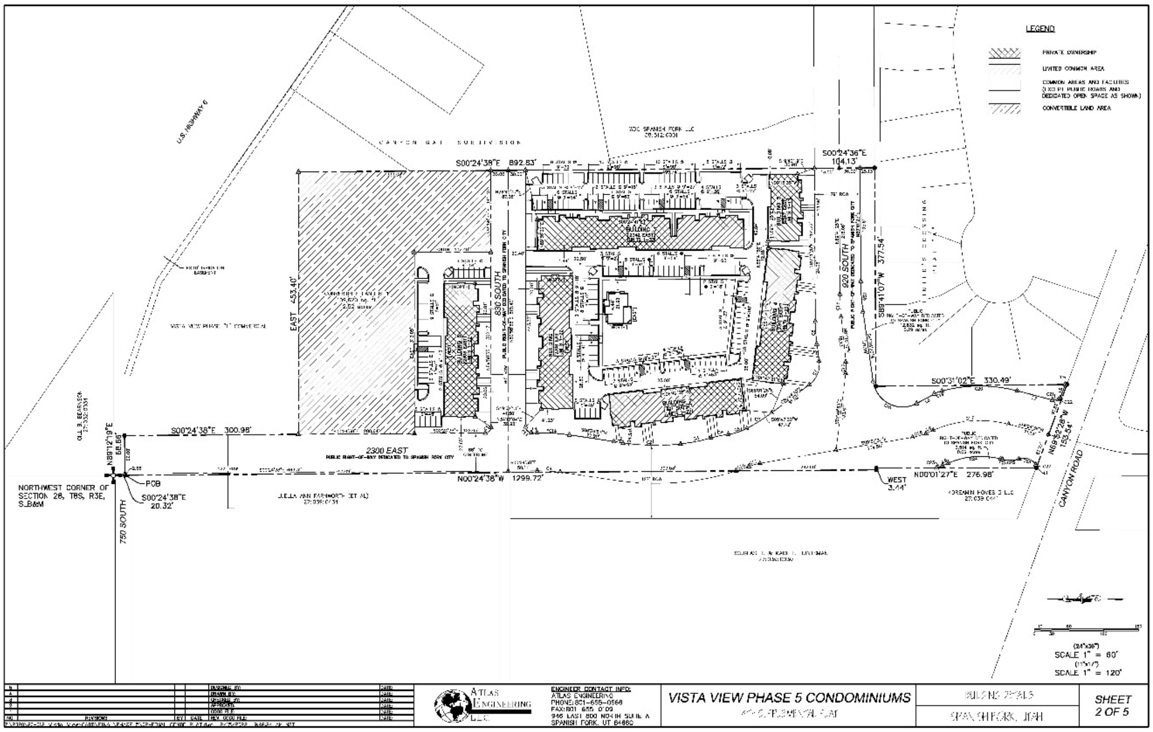
APPROVED ______ CITY MANAGER
APPROVED ______ CITY ATTORNEY
APPROVED ______ ENGINEER (SEE SEAL)
ATTEST ______ CLERK-RECORDER
APPROVED ______ COMMUNITY DEVELOPMENT DIRECTOR

VISTA VIEW PHASE 5 CONDOMINIUMS

4TH SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.
SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

Exhibit 1


LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AND DEDICATED OPEN SPACE AS SHOWN)
CONVERTIBLE LAND AREA
U.S. HIGHWAY 6
S00°24'38"E 892.83'
S00°24'36"E 104.13'
EAST 433.40'
830 SOUTH
S89°41'07"W 377.54'
S00°31'02"E 330.49'
N89°52'26"W 153.34'
CANYON ROAD
N89°12'19"E 58.86'
S00°24'38"E 300.98'
2300 EAST
N00°24'38"W 1299.72'
N00°01'27"E 276.98'
WEST 3.44'
NORTHWEST CORNER OF SECTION 28, T8S, R3E, S.L.B&M
POB
S00°24'38"E 20.32'
750 SOUTH
(24"x36") SCALE 1" = 60'
(11"x17") SCALE 1" = 120'
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801 655 0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
ATLAS ENGINEERING LLC
VISTA VIEW PHASE 5 CONDOMINIUMS
SUPPLEMENTAL PLAT
SPANISH FORK, UTAH
SHEET 2 OF 5

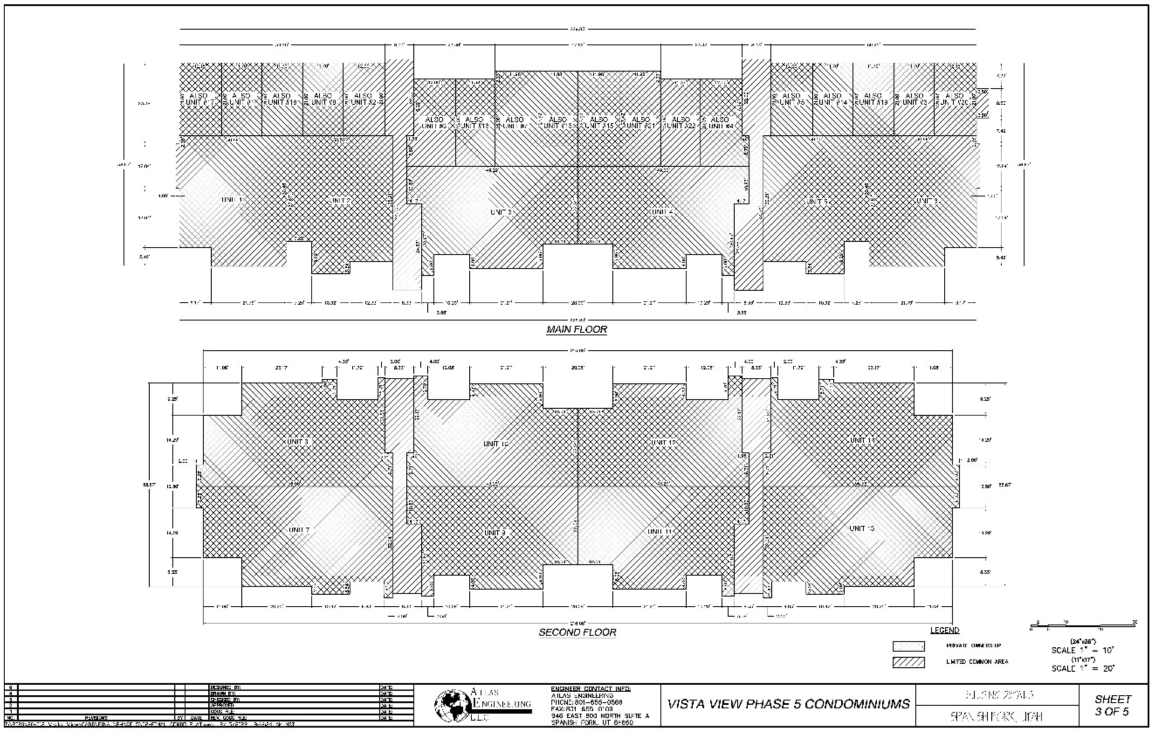
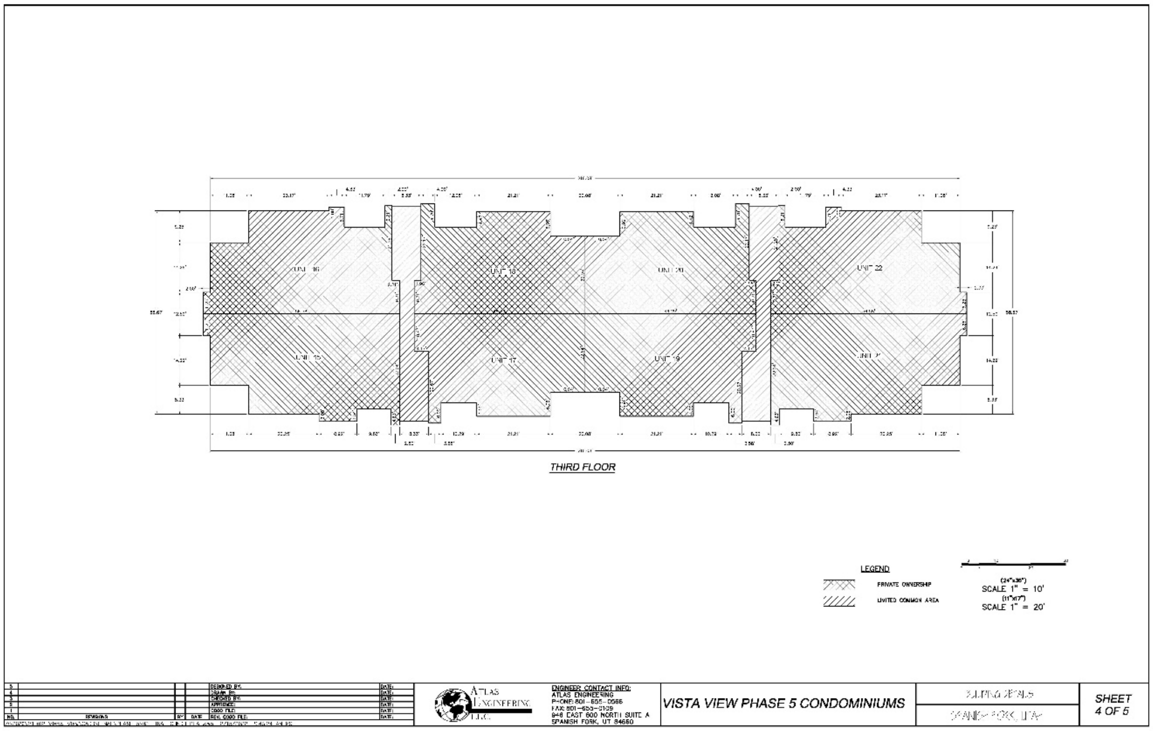

MAIN FLOOR
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
SECOND FLOOR
UNIT 7
UNIT 10
UNIT 11
UNIT 13
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36") SCALE 1" = 10'
(11"x17") SCALE 1" = 20'
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801 655 0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
ATLAS ENGINEERING LLC
VISTA VIEW PHASE 5 CONDOMINIUMS
SPANISH FORK, UTAH
SHEET 3 OF 5

Exhibit 1


UNIT 16
UNIT 18
UNIT 20
UNIT 22
UNIT 15
UNIT 17
UNIT 19
UNIT 21
THIRD FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
CADD FILE:
REV. CADD FILE:
DATE:
NO.
REVISIONS
BY
DATE
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
VISTA VIEW PHASE 5 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
4 OF 5

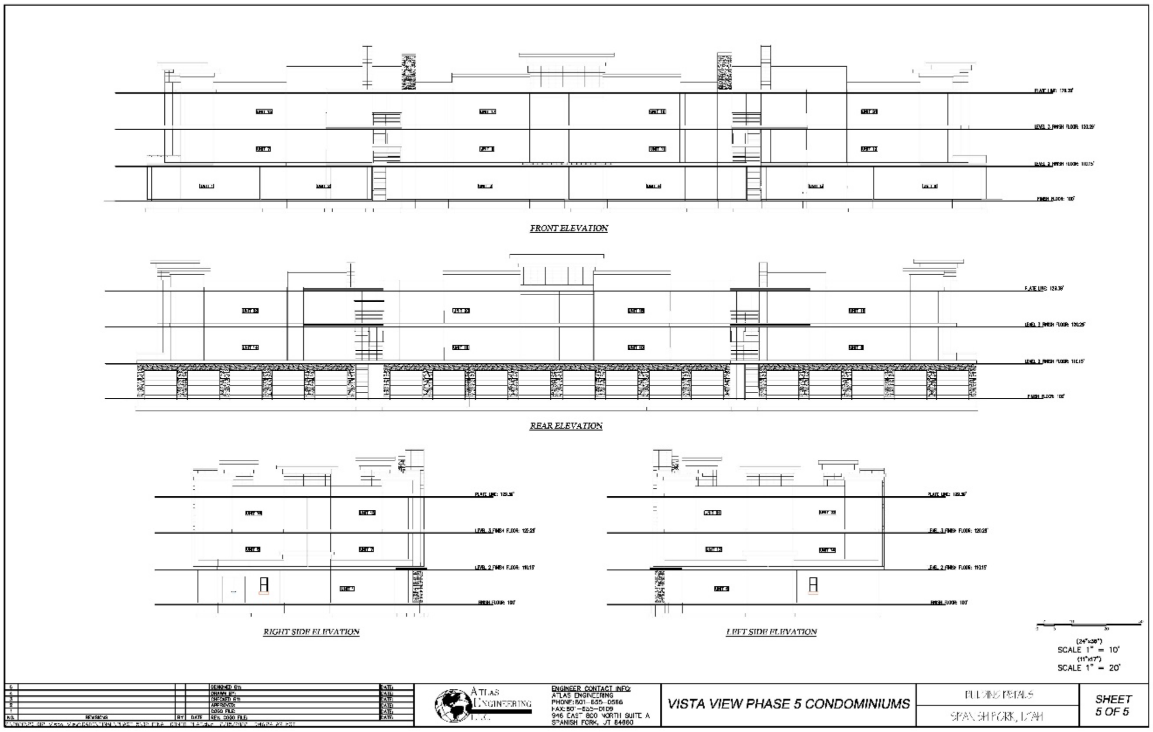
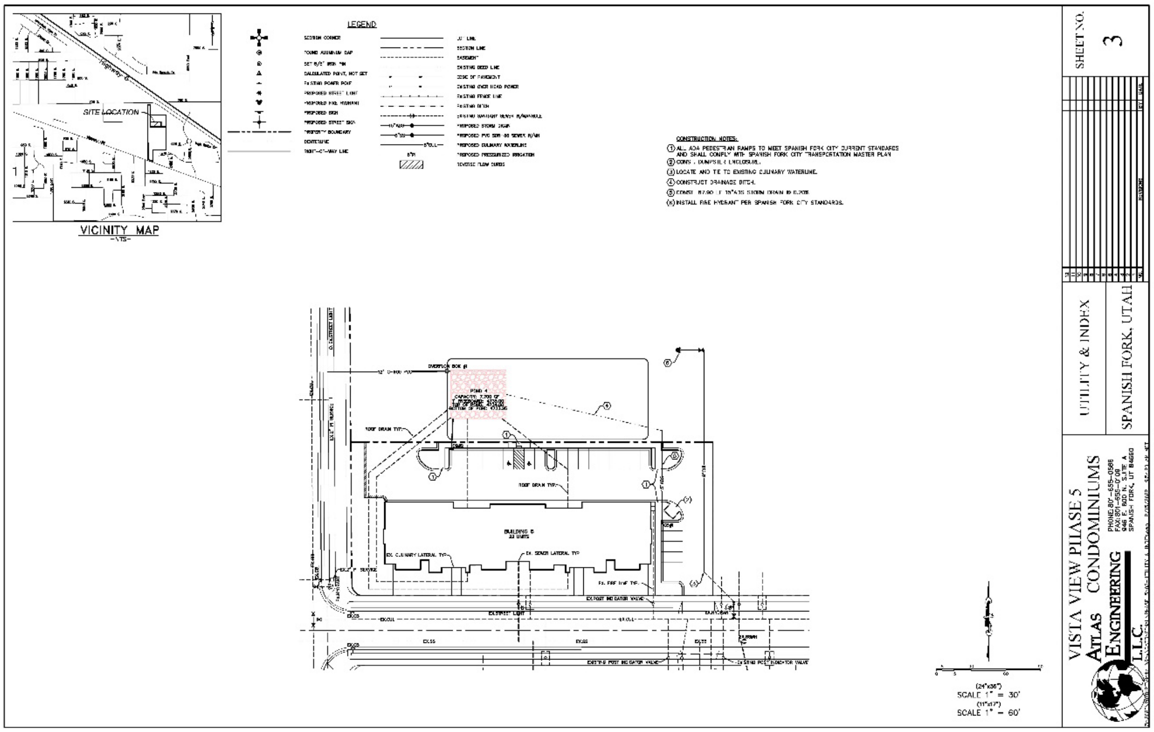

FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
FINISH FLOOR: 100'
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
CADD FILE:
REV. CADD FILE:
DATE:
NO.
REVISIONS
BY
DATE
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH SUITE A
SPANISH FORK, UT 84660
VISTA VIEW PHASE 5 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
5 OF 5

Exhibit 1


VICINITY MAP
SITE LOCATION
LEGEND
CONSTRUCTION NOTES:
① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. DUMPSTER ENCLOSURE.
③ LOCATE AND TIE TO EXISTING CULINARY WATERLINE.
④ CONSTRUCT DRAINAGE DITCH.
⑤ CONST. 87.90 LF 15" ADS STORM DRAIN @ 0.20%
⑥ INSTALL FIRE HYDRANT PER SPANISH FORK CITY STANDARDS.
OVERFLOW BOX
POND 1
ROOF DRAIN TYP.
BUILDING 6
EX. CULINARY LATERAL TYP.
EX. SEWER LATERAL TYP.
EX. FIRE LINE TYP.
(24"x36") SCALE 1" = 30'
(11"x17") SCALE 1" = 60'
VISTA VIEW PHASE 5 CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
UTILITY & INDEX
SPANISH FORK, UTAH
SHEET NO.
3

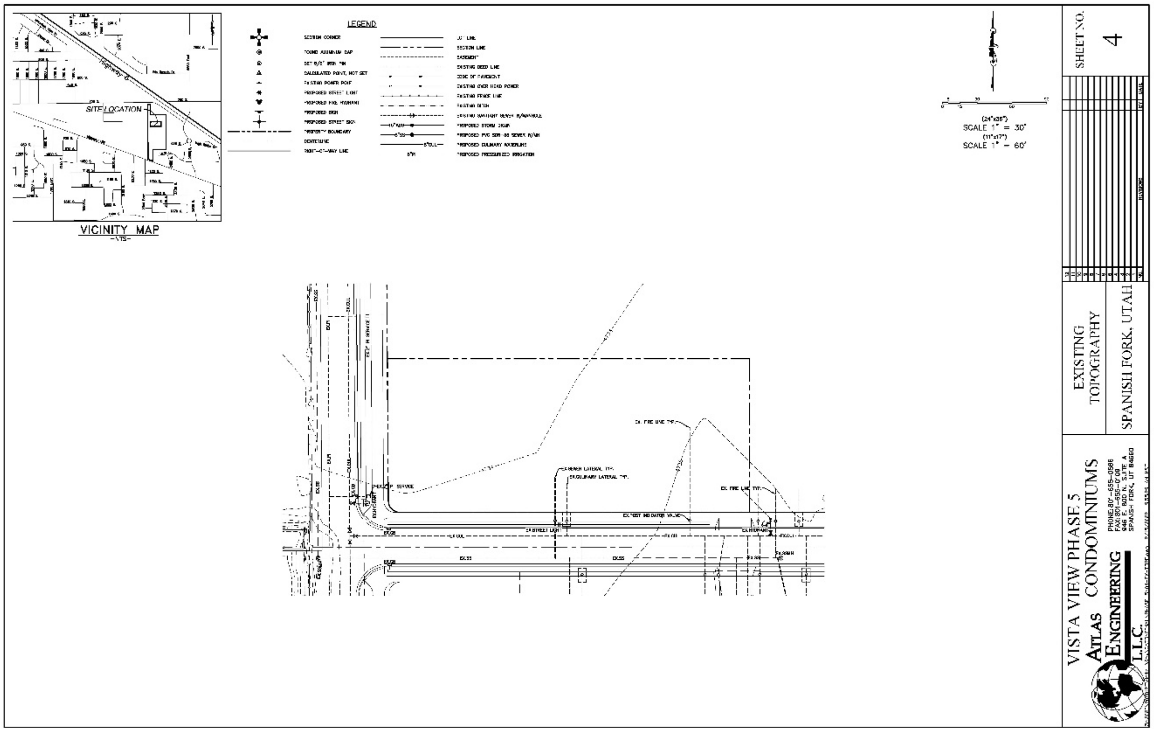
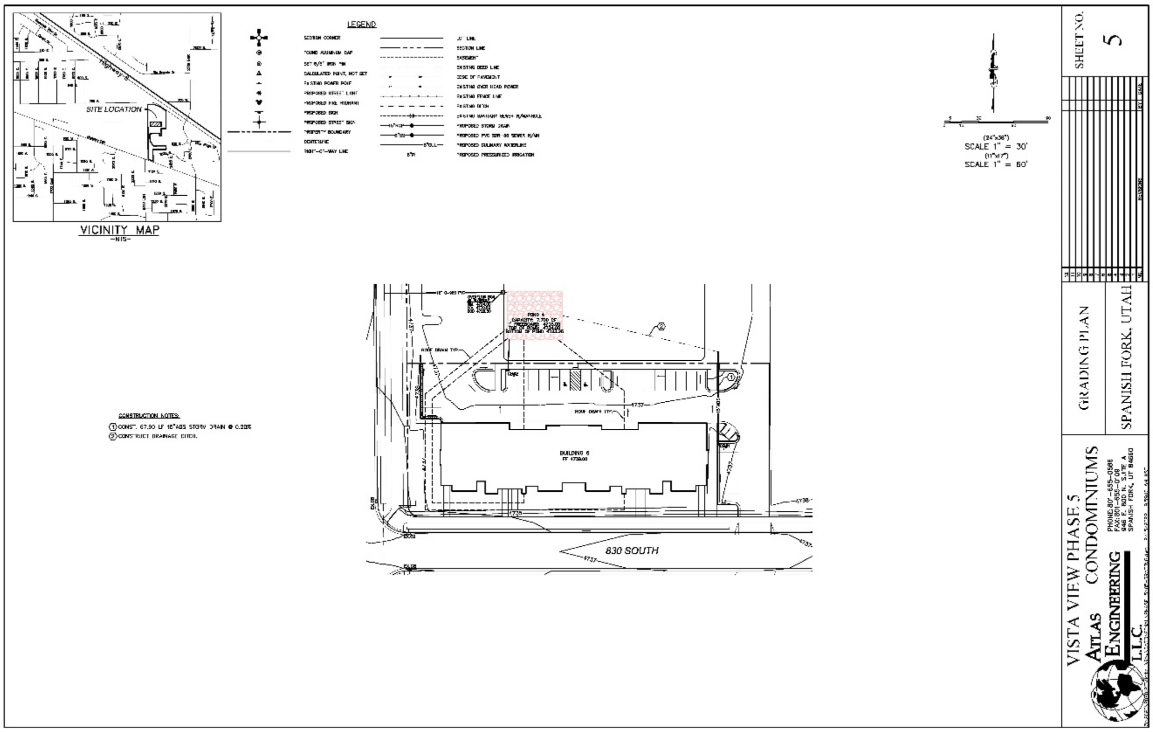
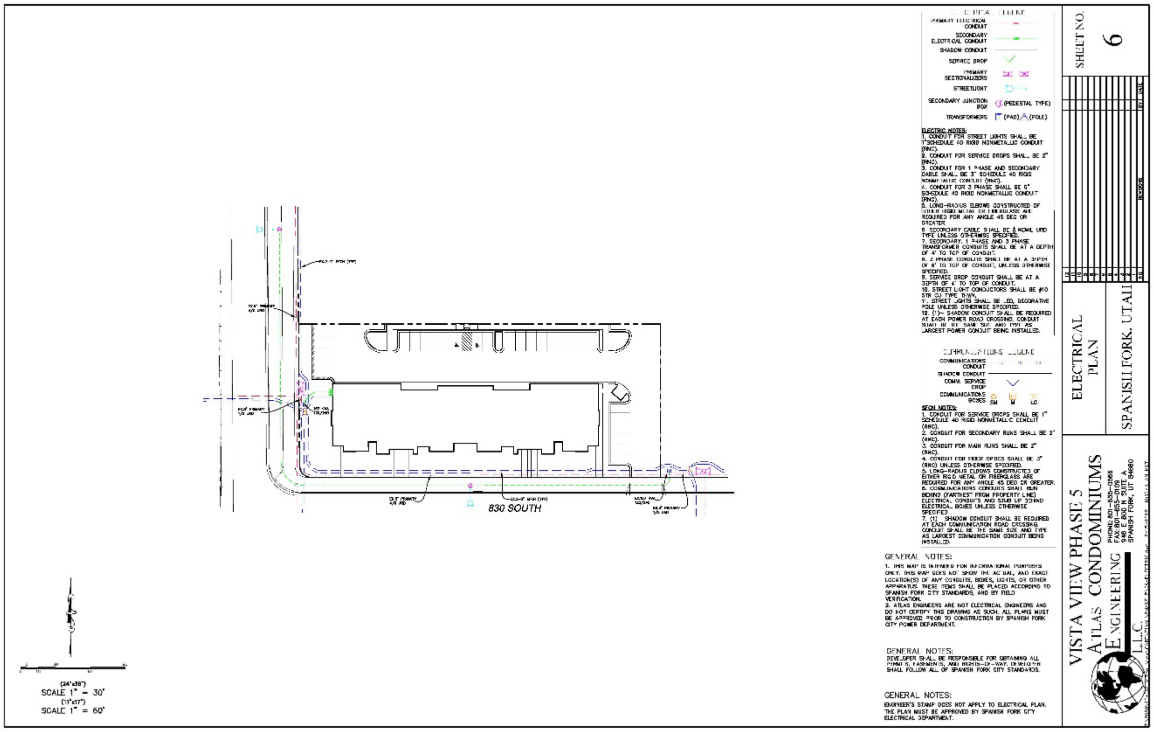

VICINITY MAP
SITE LOCATION
LEGEND
(24"x36") SCALE 1" = 30'
(11"x17") SCALE 1" = 60'
EX. FIRE LINE TYP.
EX. SEWER LATERAL TYP.
EX. CULINARY LATERAL TYP.
VISTA VIEW PHASE 5 CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
EXISTING TOPOGRAPHY
SPANISH FORK, UTAH
SHEET NO.
4

Exhibit 1



CONSTRUCTION NOTES:

① CONST. 67.90 LF 18"ADS STORM DRAIN @ 0.20%
② CONSTRUCT DRAINAGE DITCH.



ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1"SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE 4 KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 8' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 STR CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)– SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SFCN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)– SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

GENERAL NOTES:

1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.

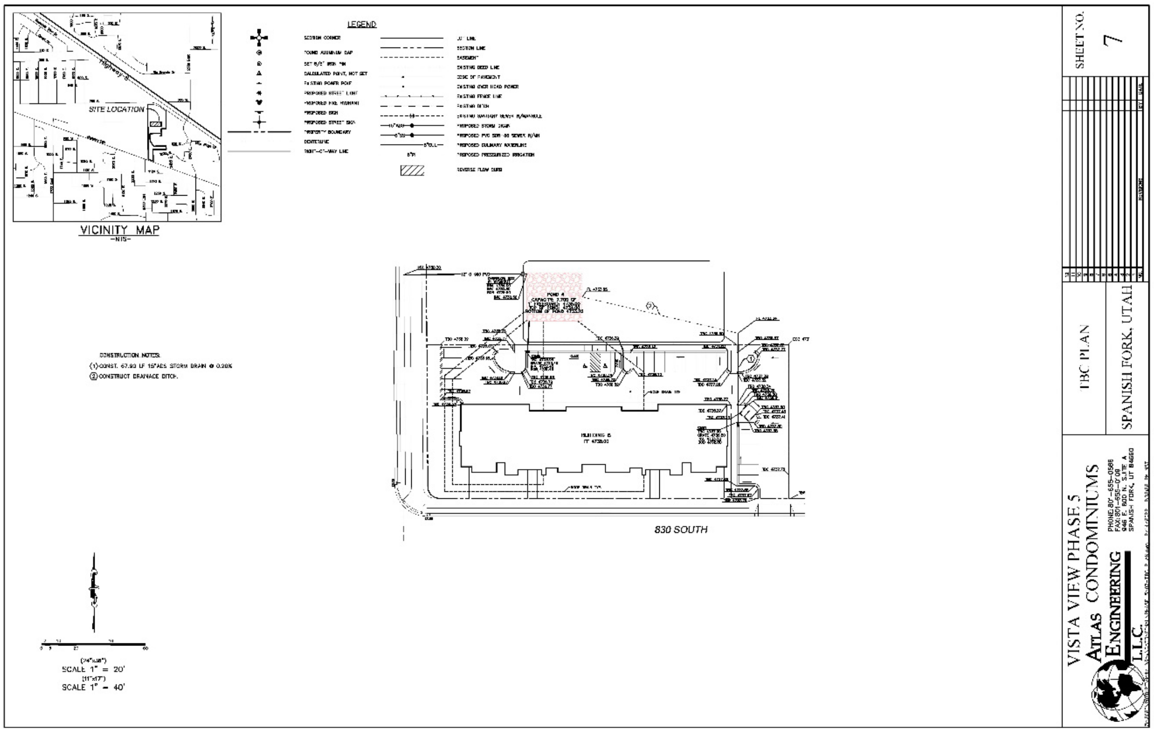
GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

Exhibit 1


VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
LEGEND
SECTION CORNER
FOUND ALUMINUM CAP
SET 5/8" IRON PIN
CALCULATED POINT, NOT SET
EXISTING POWER POLE
PROPOSED STREET LIGHT
PROPOSED FIRE HYDRANT
PROPOSED SIGN
PROPOSED STREET SIGN
PROPERTY BOUNDARY
CENTERLINE
RIGHT-OF-WAY LINE
LOT LINE
SECTION LINE
EASEMENT
EXISTING DEED LINE
EDGE OF PAVEMENT
EXISTING OVER HEAD POWER
EXISTING FENCE LINE
EXISTING DITCH
EXISTING SANITARY SEWER W/MANHOLE
PROPOSED STORM DRAIN
PROPOSED PVC SDR-35 SEWER W/MH
PROPOSED CULINARY WATERLINE
PROPOSED PRESSURIZED IRRIGATION
REVERSE FLOW CURB
CONSTRUCTION NOTES:
(1) CONST. 67.93 LF 15"ADS STORM DRAIN @ 0.20%
② CONSTRUCT DRAINAGE DITCH.
BUILDING 5
830 SOUTH
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
VISTA VIEW PHASE 5
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
TBC PLAN
SPANISH FORK, UTAH
SHEET NO.
7

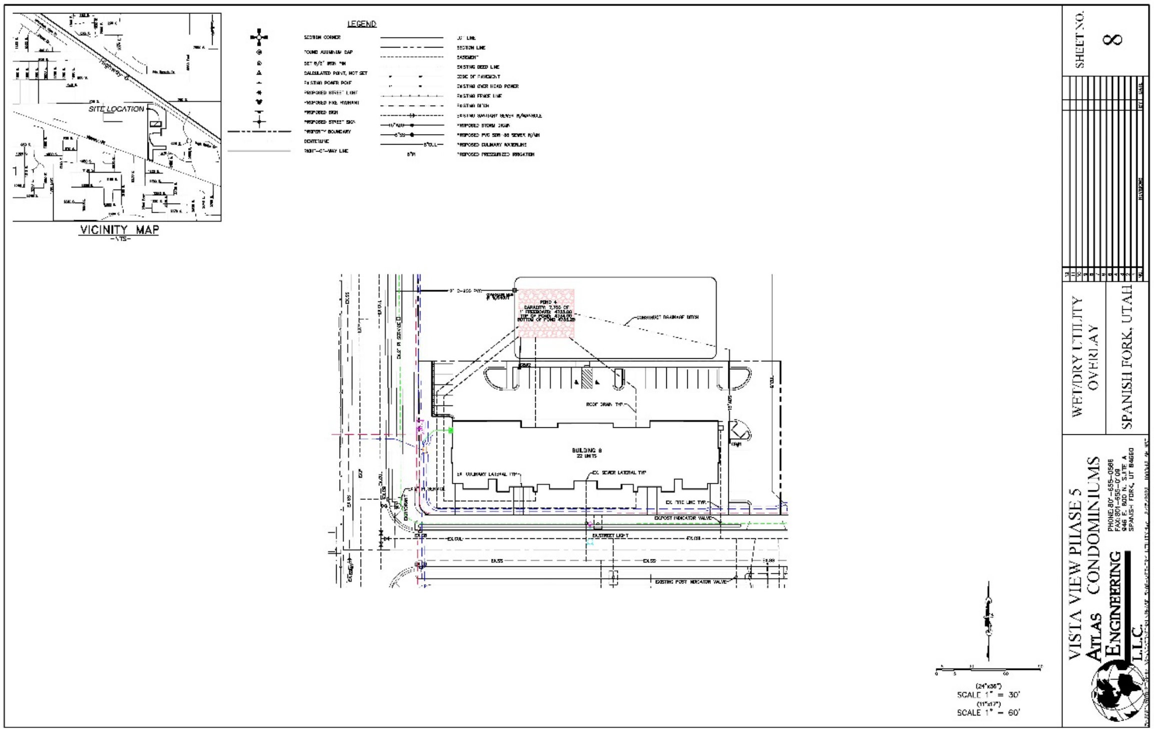
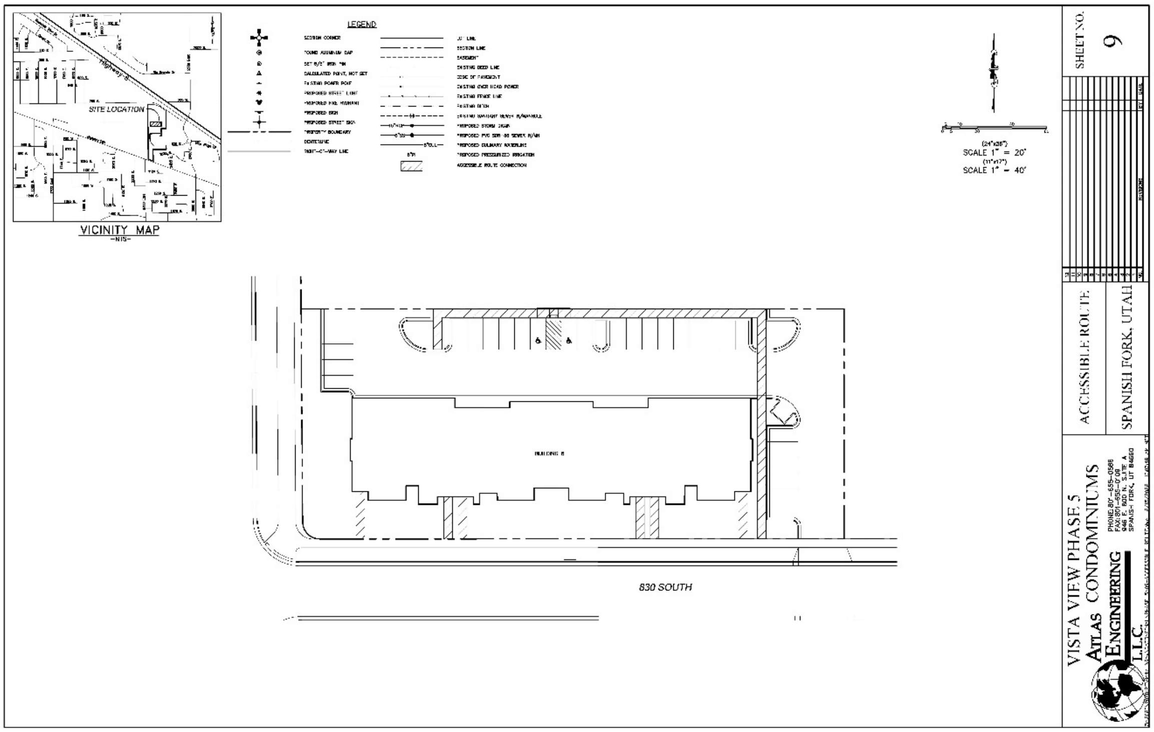

VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
LEGEND
BUILDING 5
22 UNITS
ROOF DRAIN TYP.
CONSTRUCT DRAINAGE DITCH
EXISTING POST INDICATOR VALVE
(24"x36")
SCALE 1" = 30'
(11"x17")
SCALE 1" = 60'
VISTA VIEW PHASE 5
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660
WET/DRY UTILITY OVERLAY
SPANISH FORK, UTAH
SHEET NO.
8

Exhibit 1


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
BUILDING 6
830 SOUTH
SHEET NO.
9
ACCESSIBLE ROUTE
SPANISH FORK, UTAH
VISTA VIEW PHASE 5
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

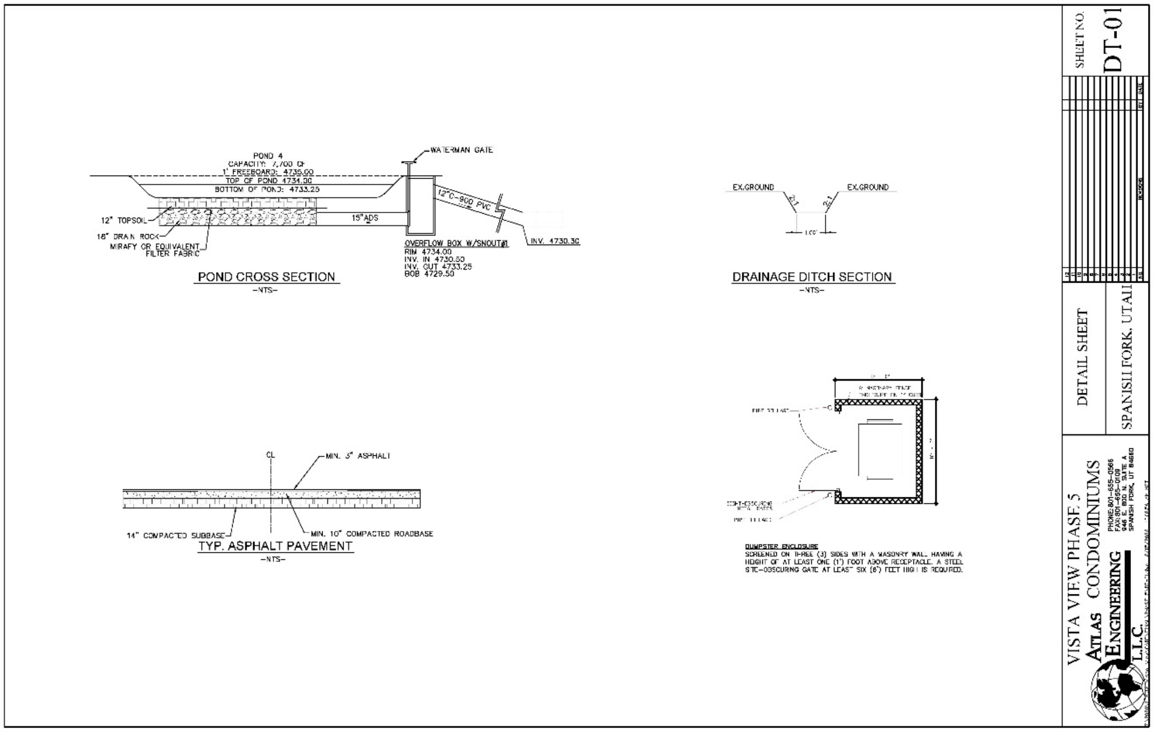
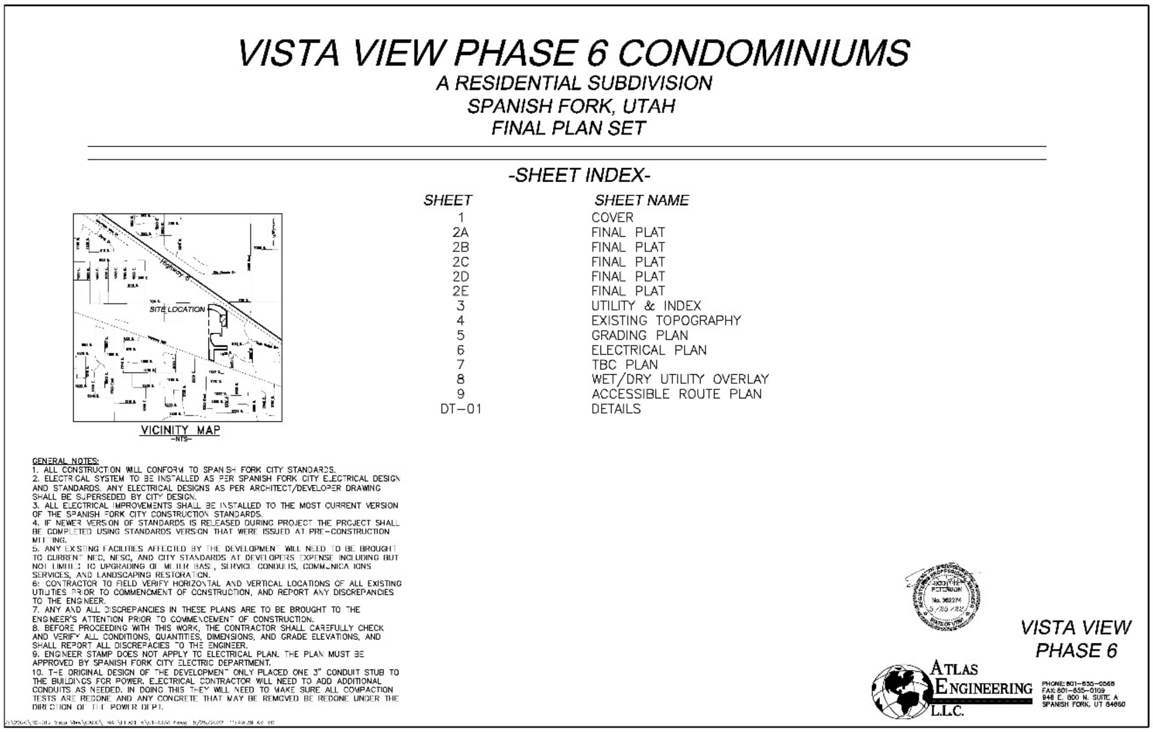

POND 4
CAPACITY: 7,700 CF
1' FREEBOARD: 4735.00
TOP OF POND 4734.00
BOTTOM OF POND: 4733.25
WATERMAN GATE
12"C-900 PVC
15"ADS
12" TOPSOIL
18" DRAIN ROCK
MIRAFY OR EQUIVALENT FILTER FABRIC
OVERFLOW BOX W/SNOUT#1
RIM 4734.00
INV. IN 4730.50
INV. OUT 4733.25
BOB 4729.50
INV. 4730.30
POND CROSS SECTION
-NTS-
EX.GROUND
EX.GROUND
2:1
2:1
DRAINAGE DITCH SECTION
-NTS-
CL
MIN. 3" ASPHALT
MIN. 10" COMPACTED ROADBASE
14" COMPACTED SUBBASE
TYP. ASPHALT PAVEMENT
-NTS-
SIGHT-OBSCURING METAL GATES
DUMPSTER ENCLOSURE
SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.
SHEET NO.
DT-01
DETAIL SHEET
SPANISH FORK, UTAH
VISTA VIEW PHASE 5
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

Exhibit 2



VISTA VIEW PHASE 6 CONDOMINIUMS

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
DT-01	DETAILS

Highway 6
SITE LOCATION

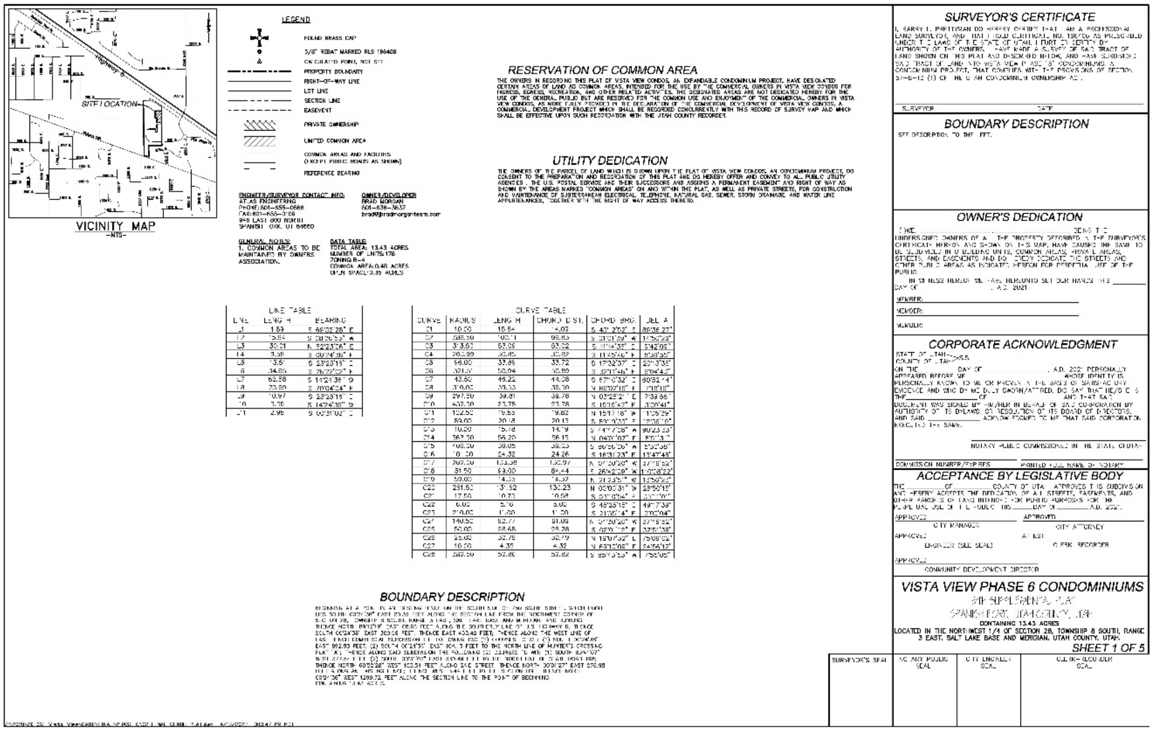
VICINITY MAP
-NTS-

GENERAL NOTES:
1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6: CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.
10. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

SCOTT H. PETERSON
No. 362274
5/25/22

VISTA VIEW
PHASE 6

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
848 E. 800 N. SUITE A
SPANISH FORK, UT 84660



Highway 6
SITE LOCATION

VICINITY MAP
-NTS-

LEGEND

✚	FOUND BRASS CAP
●	5/8" REBAR MARKED RLS 166409
△	CALCULATED POINT, NOT SET
— - —	PROPERTY BOUNDARY
——	RIGHT-OF-WAY LINE
——	LOT LINE
— - - —	SECTION LINE
- - - -	EASEMENT
▨	PRIVATE OWNERSHIP
▨	LIMITED COMMON AREA
	COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
— —	REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
848 EAST 800 NORTH
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-636-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 0.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES, THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

LINE	LENGTH	BEARING
L1	1.69	S 69°32'28" E
L2	15.84	S 08°26'53" W
L3	30.01	N 52°23'06" E
L4	9.58	S 00°24'38" E
L5	13.51	S 23°25'13" E
L6	34.85	S 26°22'02" E
L7	62.58	S 14°24'36" W
L8	23.80	S 70°04'04" E
L9	10.97	S 23°25'13" E
L10	3.39	S 14°24'36" W
L11	2.95	S 00°31'02" E

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	10.00	15.64	14.09	S 45°12'52" E	89°36'27"
C2	388.50	100.11	98.83	S 01°01'39" W	14°50'23"
C3	313.50	53.09	53.02	S 11°14'35" E	9°42'09"
C4	203.89	30.85	30.82	S 11°45'46" E	8°38'55"
C5	96.00	33.89	33.72	S 17°32'37" E	20°13'35"
C6	321.50	50.94	50.89	S 32°11'46" E	9°04'40"
C7	43.50	46.22	44.08	S 67°10'32" E	60°52'44"
C8	310.00	39.53	38.30	N 88°02'18" E	7°18'18"
C9	297.50	39.81	39.78	N 03°25'21" E	7°39'56"
C10	452.30	23.75	23.78	S 15°15'47" E	3°00'41"
C11	102.50	19.85	19.82	N 15°17'18" W	11°05'29"
C12	89.00	20.18	20.13	S 59°10'33" E	12°58'10"
C13	10.00	15.78	14.19	S 44°17'28" W	90°25'33"
C14	363.50	56.20	56.15	N 04°01'07" E	8°51'31"
C15	408.00	39.05	39.03	S 86°56'26" W	5°30'58"
C16	101.00	24.32	24.26	S 16°31'23" E	13°47'45"
C17	202.00	133.58	130.97	N 04°20'20" W	37°18'52"
C18	51.50	99.00	84.44	S 26°42'09" W	110°08'22"
C19	59.00	14.35	14.32	N 21°23'51" W	13°50'22"
C20	261.50	131.52	130.23	N 00°00'31" W	28°50'15"
C21	17.50	10.73	10.58	S 03°10'54" E	35°11'01"
C22	6.00	5.16	5.00	S 45°25'15" E	49°17'39"
C23	210.00	11.00	11.00	S 21°05'14" E	3°00'04"
C24	140.50	92.77	91.08	N 04°20'20" W	37°49'52"
C25	50.00	28.66	25.28	S 02°01'12" E	32°51'38"
C26	25.00	32.78	30.49	N 19°07'32" E	75°08'02"
C27	10.00	4.35	4.32	N 63°10'08" E	24°56'12"
C28	382.50	52.88	52.82	S 85°13'53" W	7°55'05"

BOUNDARY DESCRIPTION

BEGINNING AT A POINT IN AN EXISTING FENCE ON THE SOUTH SIDE OF 750 SOUTH STREET, WHICH POINT LIES SOUTH 00°24'38" EAST 20.32 FEET ALONG THE SECTION LINE FROM THE NORTHWEST CORNER OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE NORTH 69°12'19" EAST 68.65 FEET ALONG THE SOUTHERLY LINE OF U.S. HIGHWAY 6; THENCE SOUTH 00°24'38" EAST 209.56 FEET; THENCE EAST 453.40 FEET; THENCE ALONG THE WEST LINE OF EAST BENCH COMMERCIAL SUBDIVISION THE FOLLOWING TWO (2) COURSES TO WIT: (1) SOUTH 00°24'38" EAST 992.93 FEET, (2) SOUTH 00°21'35" EAST 104.13 FEET TO THE NORTH LINE OF HUNTER'S CROSSING PLAT "A"; THENCE ALONG SAID SUBDIVISION THE FOLLOWING (2) COURSES TO WIT: (1) SOUTH 89°41'07" WEST [illegible] FEET, (2) SOUTH 00°31'02" EAST 330.48 FEET TO THE NORTH LINE OF STATE ROAD 198; THENCE NORTH 69°32'28" WEST 103.51 FEET ALONG SAID STREET; THENCE NORTH 00°01'27" EAST 276.99 FEET ALONG AN EXISTING FENCE; THENCE WEST [illegible] FEET TO THE SECTION LINE; THENCE NORTH 00°24'38" WEST 1209.72 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.
CONTAINING 13.43 ACRES.

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 166409 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE 1ST CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

(I)WE, ________, ________ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ________ DAY OF ________, A.D. 2021

MEMBER: ________
MEMBER: ________
MEMBER: ________

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.

ON THE ________ DAY OF ________, A.D. 2021 PERSONALLY APPEARED BEFORE ME ________ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ________ OF ________ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID ________ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES
PRINTED FULL NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

THE ________ OF ________ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ________ DAY OF ________ A.D. 2021.

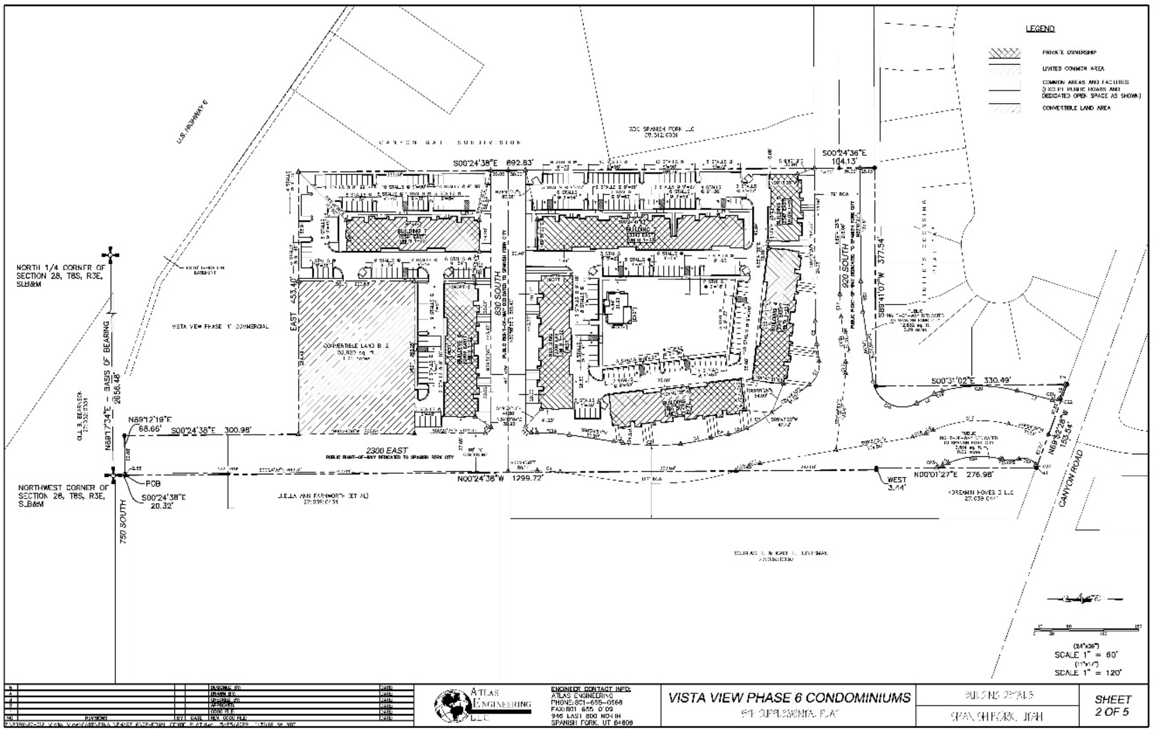
APPROVED ________ CITY MANAGER
APPROVED ________ CITY ATTORNEY
APPROVED ________ ENGINEER (SEE SEAL)
ATTEST ________ CLERK-RECORDER
APPROVED ________ COMMUNITY DEVELOPMENT DIRECTOR

VISTA VIEW PHASE 6 CONDOMINIUMS

6TH SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.
SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

Exhibit 2


LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AND DEDICATED OPEN SPACE AS SHOWN)
CONVERTIBLE LAND AREA
U.S. HIGHWAY 6
CANYON GAP SUBDIVISION
S00°24'38"E 892.83'
S00°24'36"E 104.13'
NORTH 1/4 CORNER OF SECTION 28, T8S, R3E, SLB&M
N89°17'34"E - BASIS OF BEARING 2656.48'
VISTA VIEW PHASE 1 COMMERCIAL
EAST 453.40'
CONVERTIBLE LAND B 2
830 SOUTH
920 SOUTH
S88°41'07"W 377.54'
S00°31'02"E 330.49'
N89°12'19"E 68.66'
S00°24'38"E 300.98'
2300 EAST
POB
N00°24'38"W 1299.72'
WEST 3.44'
N00°01'27"E 276.98'
NORTHWEST CORNER OF SECTION 28, T8S, R3E, SLB&M
S00°24'38"E 20.32'
750 SOUTH
CANYON ROAD
(24"x36") SCALE 1" = 60'
(11"x17") SCALE 1" = 120'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801 655 0108
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
SPANISH FORK, UTAH
SHEET 2 OF 5

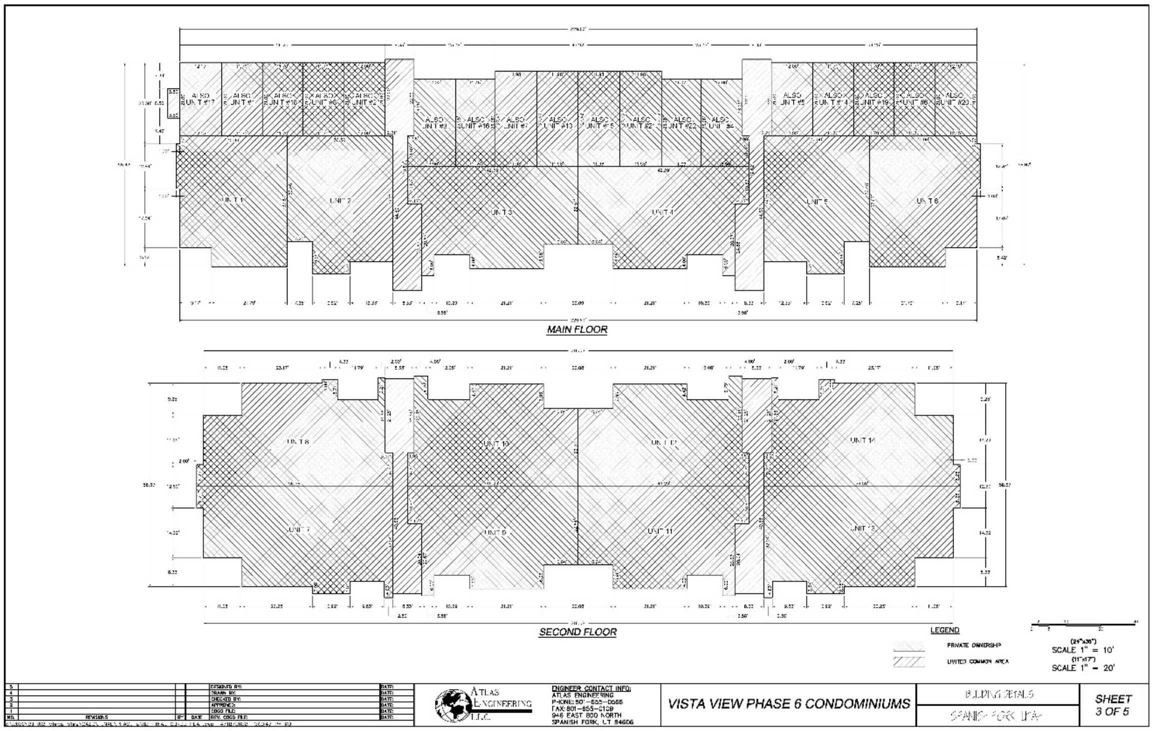
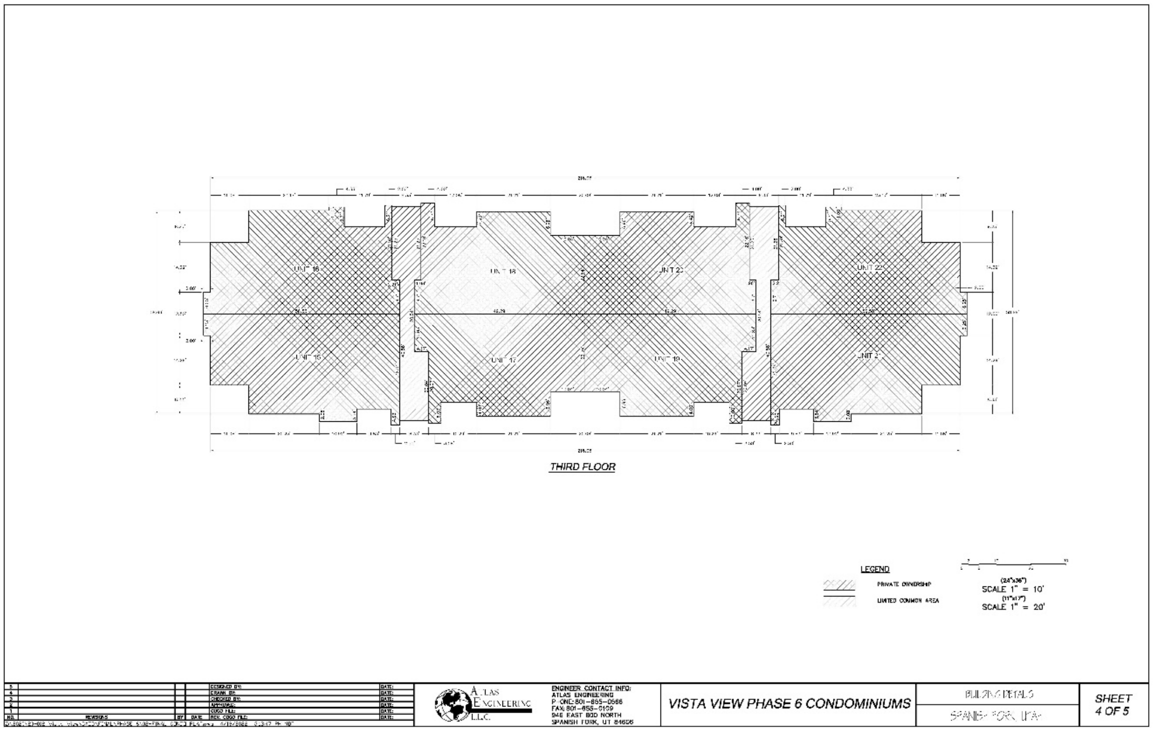

ALSO UNIT #17
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
MAIN FLOOR
UNIT 7
UNIT 8
UNIT 9
UNIT 10
UNIT 11
UNIT 12
UNIT 13
UNIT 14
SECOND FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36") SCALE 1" = 10'
(11"x17") SCALE 1" = 20'
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED:
COGO FILE:
REVISIONS
BY
DATE
REV. COGO FILE:
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0108
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET 3 OF 5

Exhibit 2


THIRD FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE:801-655-0566
FAX:801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
4 OF 5

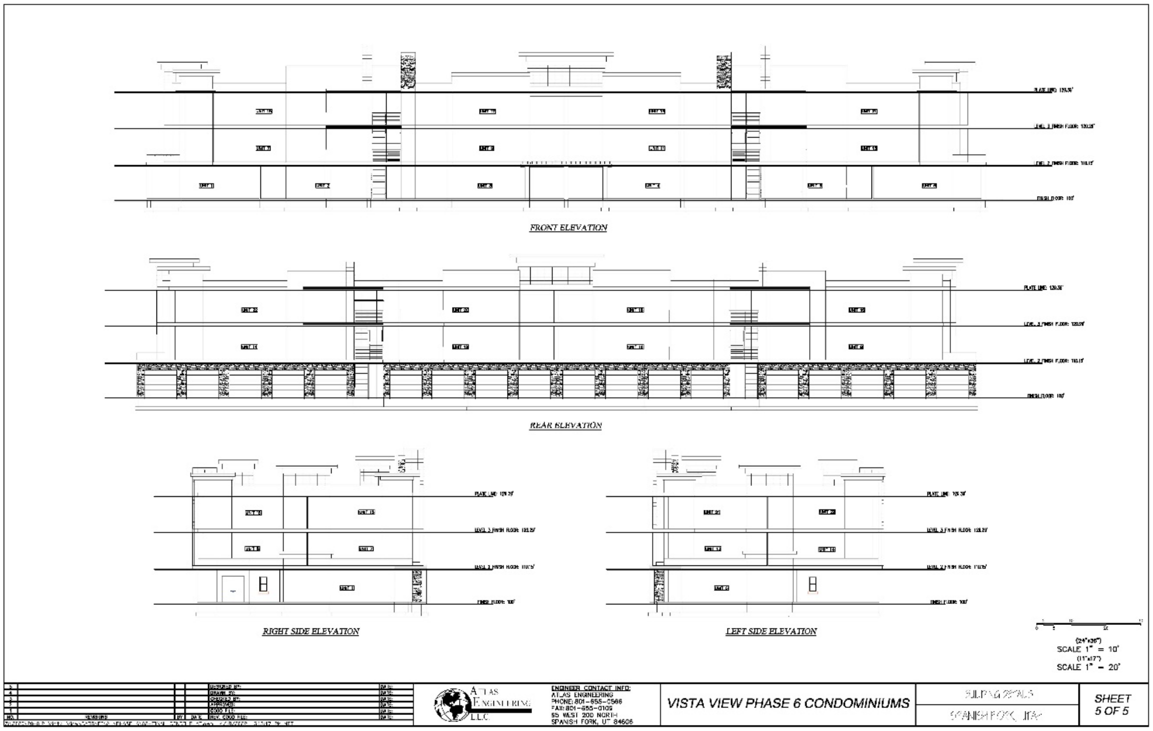
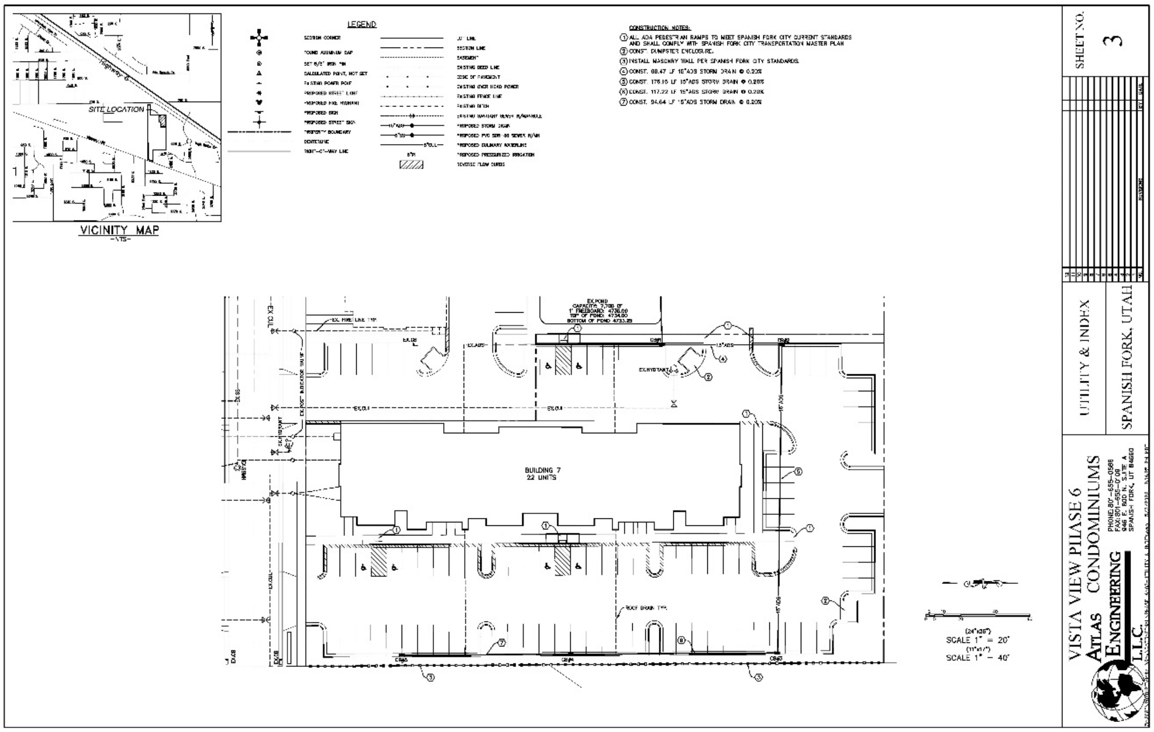

FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'
ATLAS ENGINEERING L.L.C.
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE:801-655-0566
FAX:801-655-0109
55 WEST 200 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 6 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET
5 OF 5

Exhibit 2


CONSTRUCTION NOTES:

① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. DUMPSTER ENCLOSURE.
③ INSTALL MASONRY WALL PER SPANISH FORK CITY STANDARDS.
④ CONST. 68.47 LF 15"ADS STORM DRAIN @ 0.20%
⑤ CONST. 176.15 LF 15"ADS STORM DRAIN @ 0.20%
⑥ CONST. 117.22 LF 15"ADS STORM DRAIN @ 0.20%
⑦ CONST. 94.64 LF 15"ADS STORM DRAIN @ 0.20%

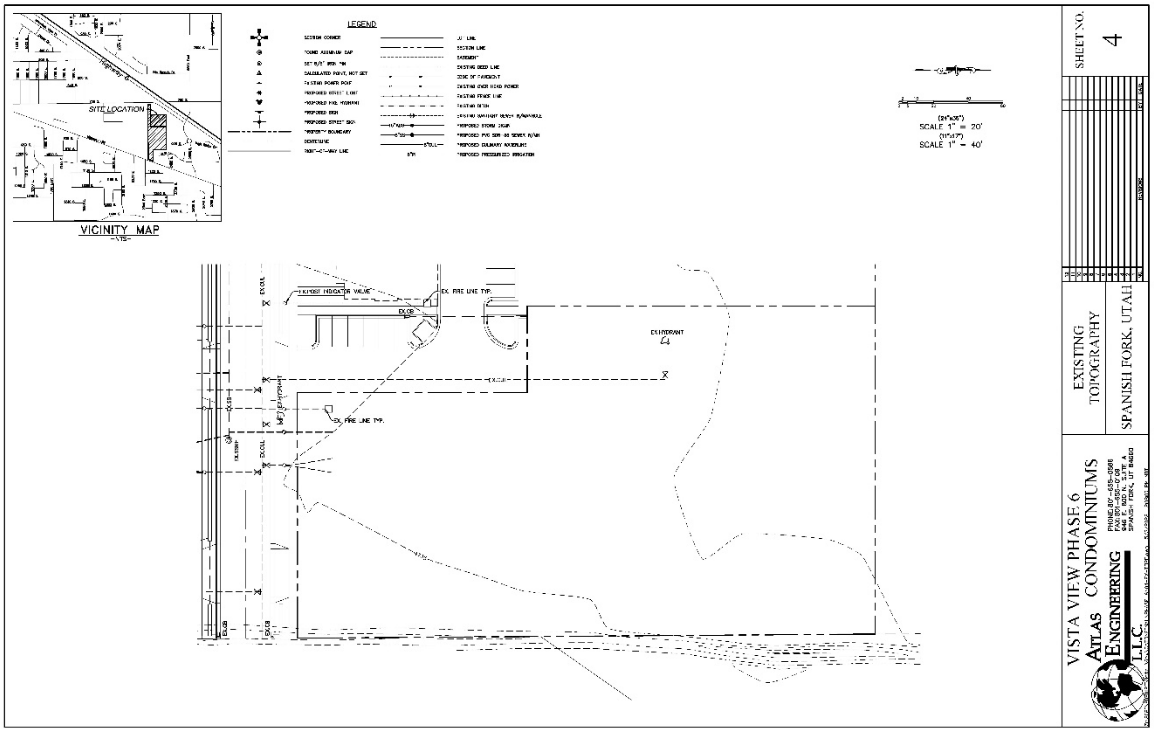
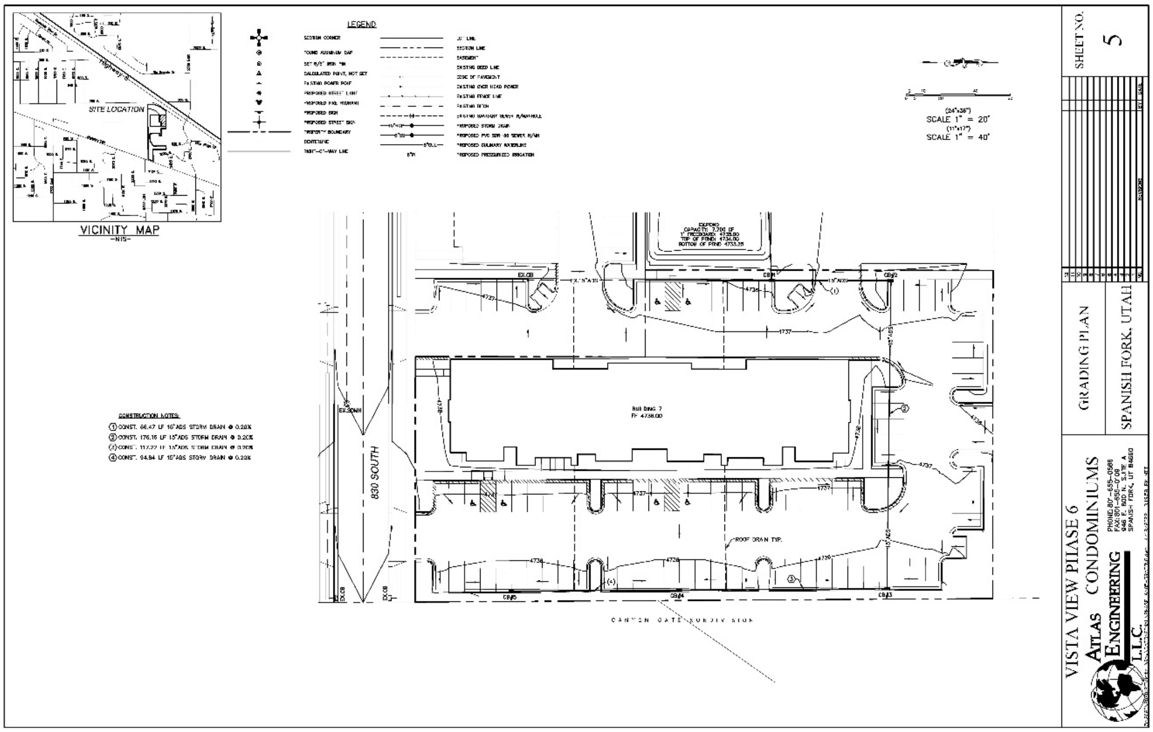
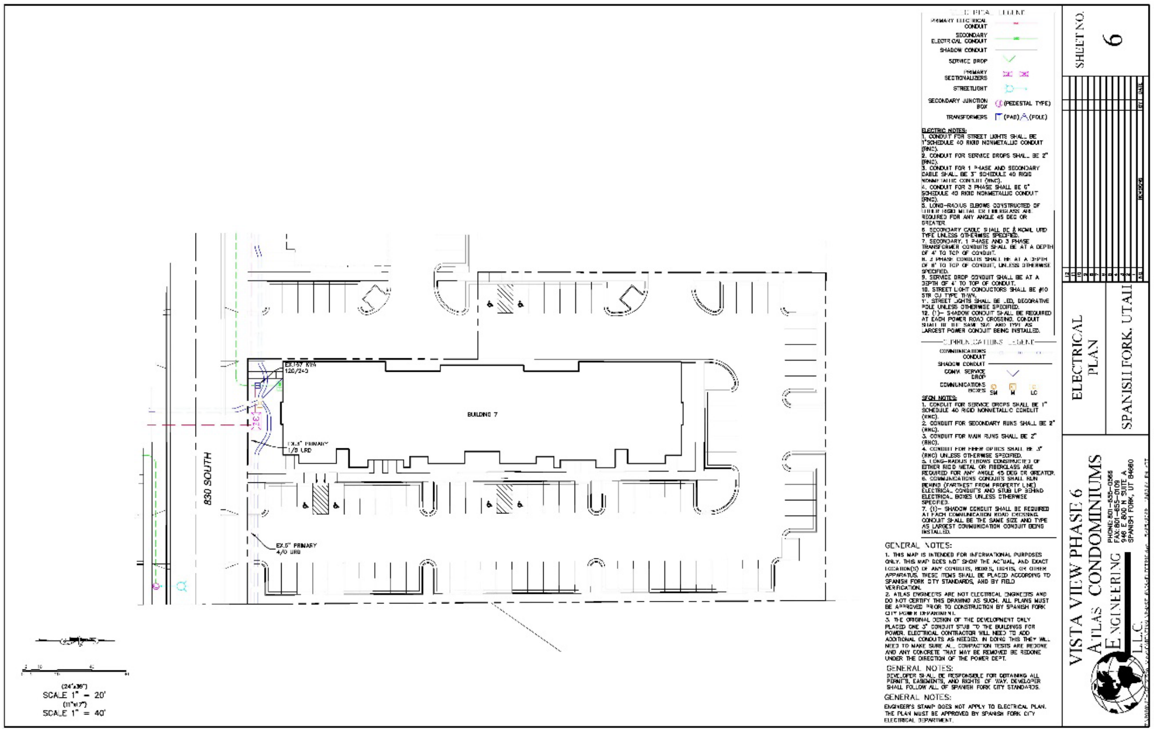


Exhibit 2



CONSTRUCTION NOTES:

① CONST. 66.47 LF 15"ADS STORM DRAIN @ 0.20%
② CONST. 176.16 LF 15"ADS STORM DRAIN @ 0.20%
③ CONST. 117.22 LF 15"ADS STORM DRAIN @ 0.20%
④ CONST. 94.84 LF 15"ADS STORM DRAIN @ 0.20%



ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1"SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE 4 KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 8' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 STR CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SFCN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

GENERAL NOTES:

1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL, AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.
3. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

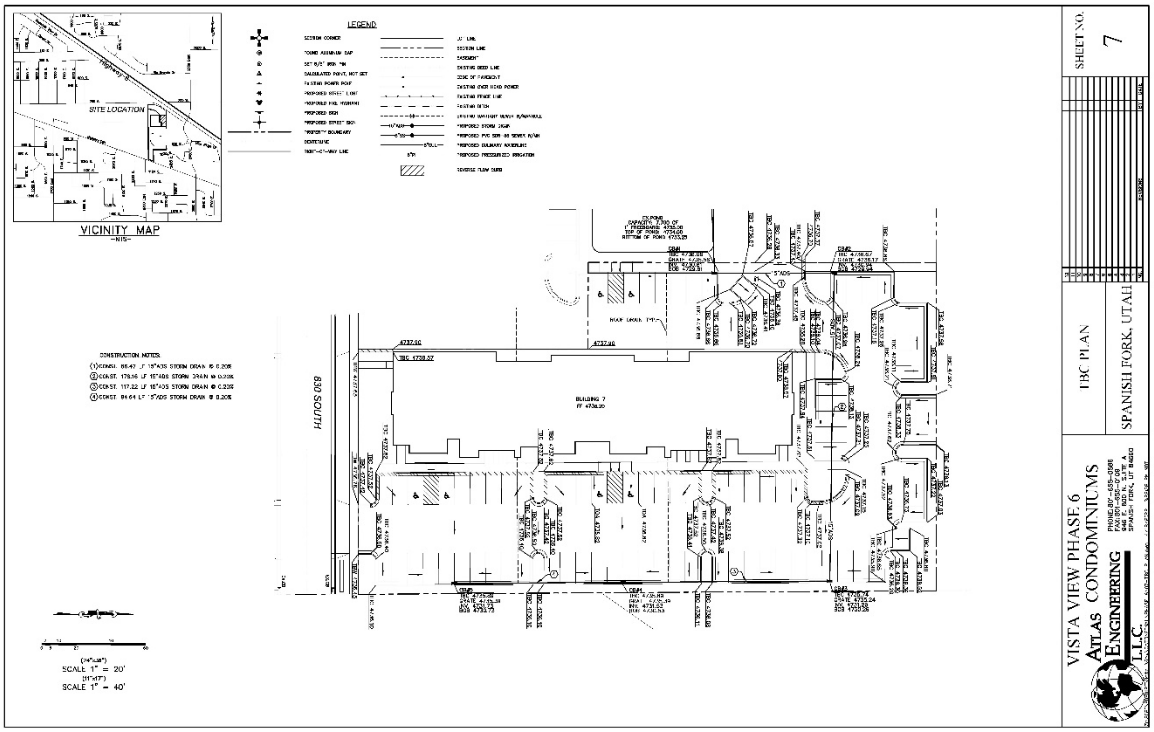
GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

Exhibit 2


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
CONSTRUCTION NOTES:
(1) CONST. 86.47 LF 15"ADS STORM DRAIN @ 0.20%
(2) CONST. 179.16 LF 15"ADS STORM DRAIN @ 0.20%
(3) CONST. 117.22 LF 18"ADS STORM DRAIN @ 0.20%
(4) CONST. 84.64 LF 15"ADS STORM DRAIN @ 0.20%
830 SOUTH
BUILDING 7
FF 4738.20
TBC 4738.57
4737.90
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
VISTA VIEW PHASE 6
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
SPANISH FORK, UT 84660
TBC PLAN
SPANISH FORK, UTAH
SHEET NO.
7

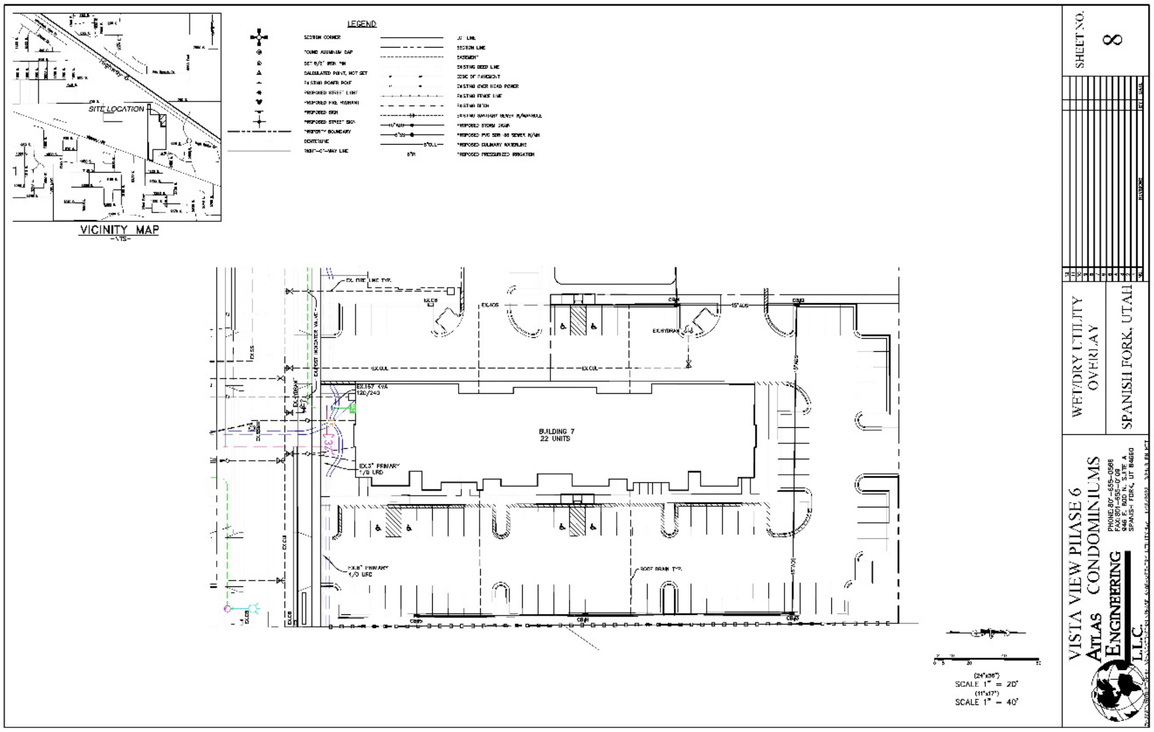
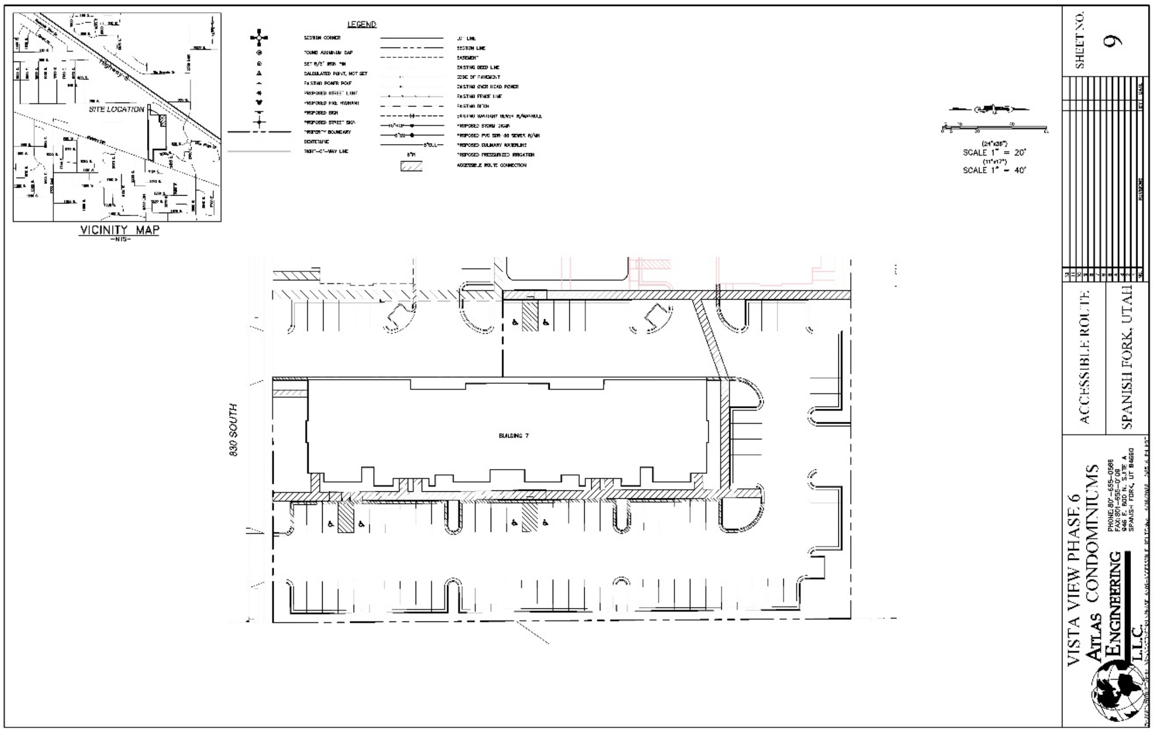
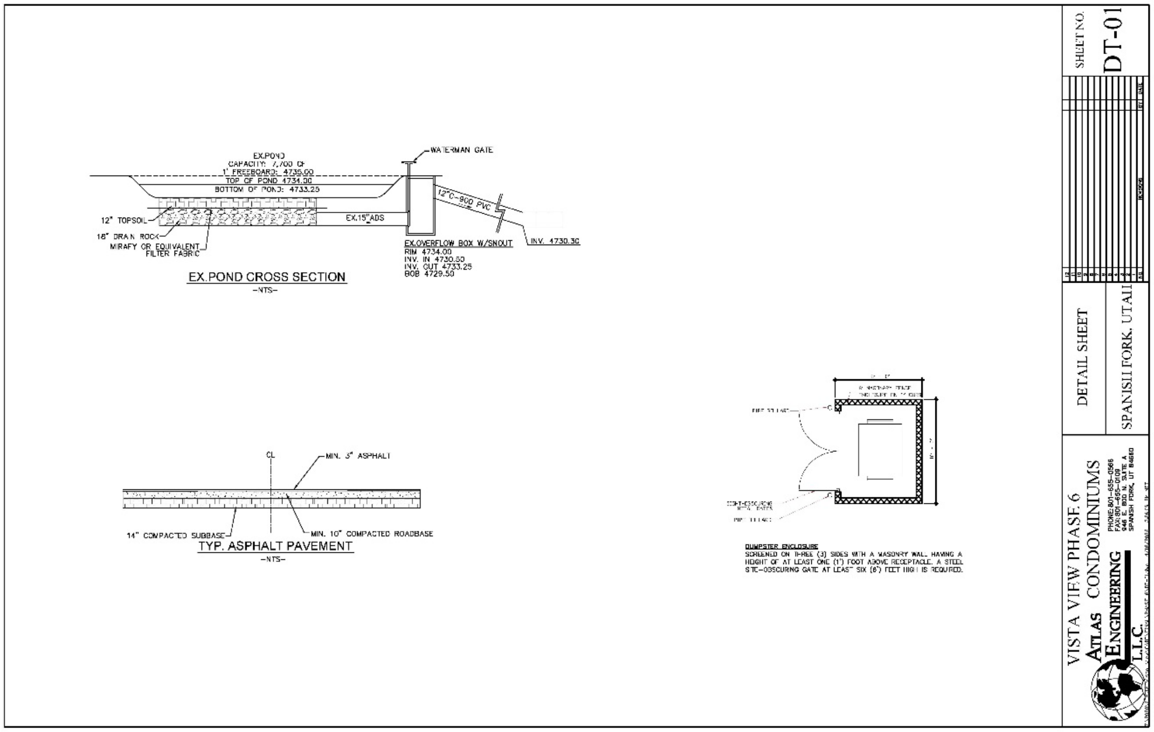
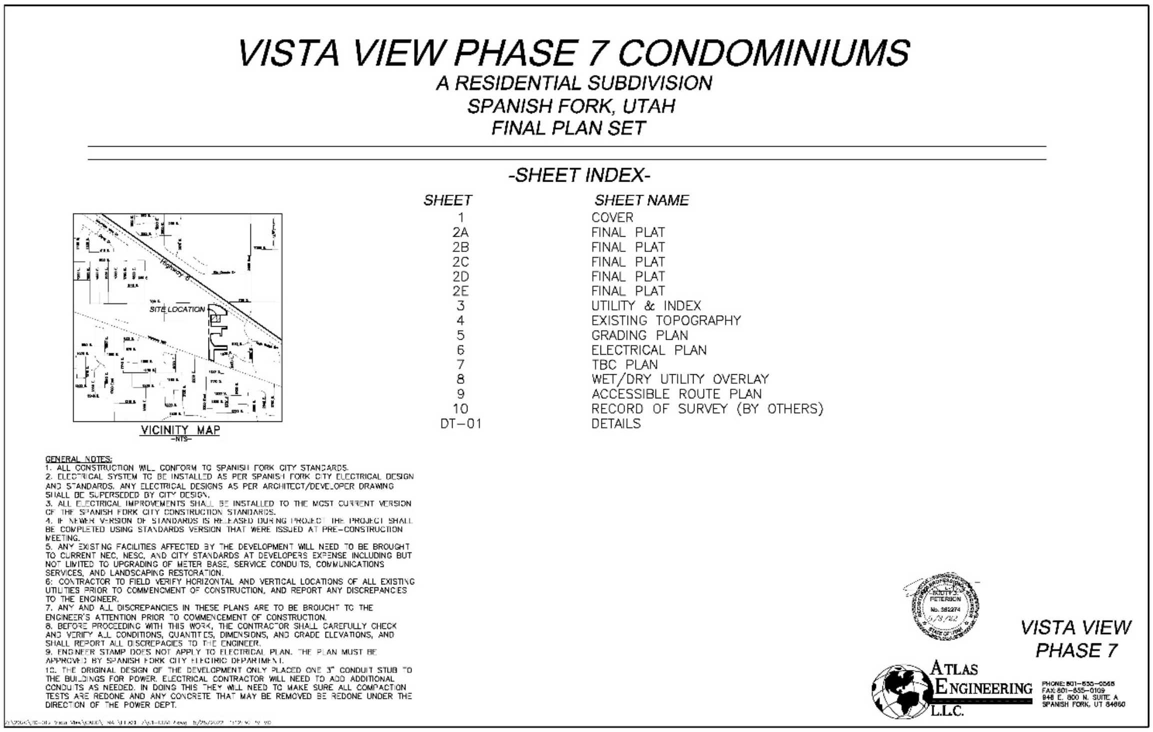

LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
BUILDING 7
22 UNITS
EX. FIRE LINE TYP.
EX. HYDRANT
EX.3" PRIMARY
1/0 URD
ROOF DRAIN TYP.
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
VISTA VIEW PHASE 6
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
SPANISH FORK, UT 84660
WET/DRY UTILITY OVERLAY
SPANISH FORK, UTAH
SHEET NO.
8

Exhibit 2





DUMPSTER ENCLOSURE
SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.



VISTA VIEW PHASE 7 CONDOMINIUMS

A RESIDENTIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2A	FINAL PLAT
2B	FINAL PLAT
2C	FINAL PLAT
2D	FINAL PLAT
2E	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
5	GRADING PLAN
6	ELECTRICAL PLAN
7	TBC PLAN
8	WET/DRY UTILITY OVERLAY
9	ACCESSIBLE ROUTE PLAN
10	RECORD OF SURVEY (BY OTHERS)
DT-01	DETAILS

VICINITY MAP
-NTS-

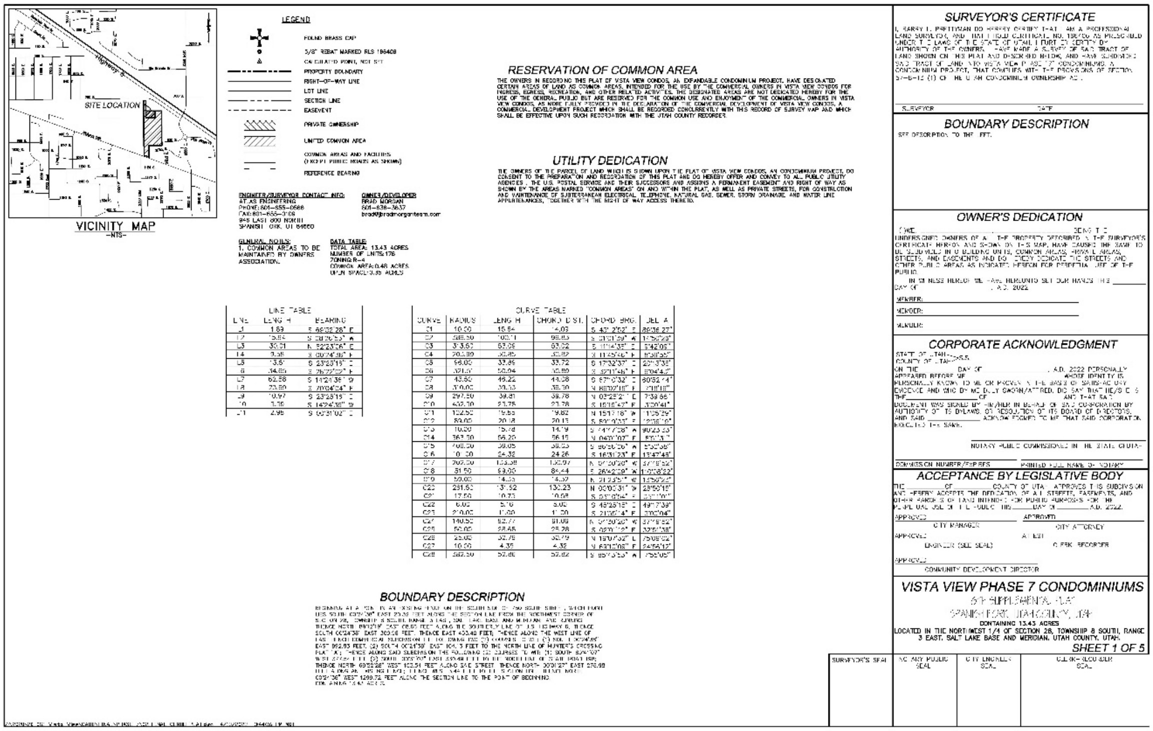
GENERAL NOTES:

1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.
6: CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPACIES TO THE ENGINEER.
9. ENGINEER STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRIC DEPARTMENT.
10. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

No. 352274
PETERSON

VISTA VIEW PHASE 7

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
948 E. 800 N. SUITE A
SPANISH FORK, UT 84660



VICINITY MAP
-NTS-

LEGEND

- FOUND BRASS CAP
- 5/8" REBAT MARKED RLS 186408
- CALCULATED POINT, NOT SET
- PROPERTY BOUNDARY
- RIGHT-OF-WAY LINE
- LOT LINE
- SECTION LINE
- EASEMENT
- PRIVATE OWNERSHIP
- LIMITED COMMON AREA
- COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AS SHOWN)
- REFERENCE BEARING

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
948 EAST 800 NORTH
SPANISH FORK, UT 84660

OWNER/DEVELOPER
BRAD MORGAN
801-836-3637
brad@bradmorganteam.com

GENERAL NOTES:
1. COMMON AREAS TO BE MAINTAINED BY OWNERS ASSOCIATION.

DATA TABLE:
TOTAL AREA: 13.43 ACRES
NUMBER OF UNITS: 176
ZONING: R-4
COMMON AREA: 0.48 ACRES
OPEN SPACE: 0.35 ACRES

RESERVATION OF COMMON AREA

THE OWNERS IN RECORDING THIS PLAT OF VISTA VIEW CONDOS, AN EXPANDABLE CONDOMINIUM PROJECT, HAVE DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREAS, INTENDED FOR THE USE BY THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS FOR INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES. THE DESIGNATED AREAS ARE NOT DEDICATED HEREBY FOR THE USE OF THE GENERAL PUBLIC BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE COMMERCIAL OWNERS IN VISTA VIEW CONDOS, AS MORE FULLY PROVIDED IN THE DECLARATION OF THE COMMERCIAL DEVELOPMENT OF VISTA VIEW CONDOS, A COMMERCIAL DEVELOPMENT PROJECT WHICH SHALL BE RECORDED CONCURRENTLY WITH THIS RECORD OF SURVEY MAP AND WHICH SHALL BE EFFECTIVE UPON SUCH RECORDATION WITH THE UTAH COUNTY RECORDER.

UTILITY DEDICATION

THE OWNERS OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF VISTA VIEW CONDOS, AN CONDOMINIUM PROJECT, DO CONSENT TO THE PREPARATION AND RECORDATION OF THIS PLAT AND DO HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES, THE U.S. POSTAL SERVICE AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT OF WAY AS SHOWN BY THE AREAS MARKED "COMMON AREAS" ON AND WITHIN THE PLAT, AS WELL AS PRIVATE STREETS, FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER, STORM DRAINAGE, AND WATER LINE APPURTENANCES, TOGETHER WITH THE RIGHT OF WAY ACCESS THERETO.

LINE TABLE

LINE	LENGTH	BEARING
L1	1.69	S 69°32'28" E
L2	15.84	S 08°26'53" W
L3	30.01	N 52°23'06" E
L4	9.58	S 00°24'38" E
L5	13.51	S 23°25'13" E
L6	34.85	S 26°22'02" E
L7	62.58	S 14°24'36" W
L8	23.80	S 70°04'04" E
L9	10.97	S 23°25'13" E
L10	3.39	S 14°24'36" W
L11	2.95	S 00°31'02" E

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	10.00	15.64	14.09	S 45°12'52" E	89°36'27"
C2	388.50	100.11	98.83	S 07°01'59" W	14°50'28"
C3	313.50	53.09	53.02	S 11°14'35" E	9°42'08"
C4	203.89	30.85	30.82	S 11°45'46" E	8°39'55"
C5	96.00	33.89	33.72	S 17°32'37" E	20°13'35"
C6	321.50	50.94	50.89	S 32°11'46" E	9°04'42"
C7	43.50	46.22	44.08	S 67°10'32" E	60°52'41"
C8	310.00	39.33	39.30	N 88°02'18" E	7°16'18"
C9	297.50	39.81	39.78	N 03°25'21" E	7°39'56"
C10	402.50	23.78	23.78	S 15°15'47" E	3°20'41"
C11	102.50	19.85	19.82	N 15°17'18" W	11°05'29"
C12	89.00	20.18	20.13	S 59°10'33" E	12°58'19"
C13	10.00	15.78	14.19	S 44°17'28" W	90°23'33"
C14	363.50	56.20	56.15	N 04°01'07" E	8°51'31"
C15	406.50	39.05	39.03	S 86°56'26" W	5°30'59"
C16	101.00	24.32	24.26	S 16°31'23" E	13°47'45"
C17	202.00	133.38	130.97	N 04°20'20" W	37°49'52"
C18	51.50	99.00	84.44	S 26°42'09" W	110°08'22"
C19	59.00	14.35	14.32	N 21°23'51" W	13°56'22"
C20	261.50	131.52	130.23	N 00°00'31" W	28°50'15"
C21	17.50	10.73	10.58	S 03°10'54" E	35°11'01"
C22	6.00	5.16	5.00	S 45°25'15" E	49°17'39"
C23	210.00	11.00	11.00	S 21°05'14" E	3°00'04"
C24	140.50	92.77	91.08	N 04°20'20" W	37°49'52"
C25	50.00	28.66	28.28	S 02°01'12" E	32°51'38"
C26	25.00	32.78	30.49	N 19°07'32" E	75°08'02"
C27	10.00	4.35	4.32	N 63°10'08" E	24°56'12"
C28	382.50	52.86	52.82	S 85°13'53" W	7°55'05"

BOUNDARY DESCRIPTION

BEGINNING AT A POINT IN AN EXISTING FENCE ON THE SOUTH SIDE OF 750 SOUTH STREET, WHICH POINT LIES SOUTH 00°24'36" EAST 20.32 FEET ALONG THE SECTION LINE FROM THE NORTHWEST CORNER OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, AND RUNNING THENCE NORTH 89°12'19" EAST 68.65 FEET ALONG THE SOUTHERLY LINE OF U.S. HIGHWAY 6; THENCE SOUTH 00°24'38" EAST 309.06 FEET; THENCE EAST 453.48 FEET; THENCE ALONG THE WEST LINE OF EAST [illegible] COMMERCIAL SUBDIVISION THE FOLLOWING TWO (2) COURSES TO WIT: (1) SOUTH 00°24'38" EAST 992.93 FEET, (2) SOUTH 00°21'38" EAST 104.13 FEET TO THE NORTH LINE OF HUNTER'S CROSSING PLAT "A"; THENCE ALONG SAID SUBDIVISION THE FOLLOWING (2) COURSES TO WIT: (1) SOUTH 89°41'07" WEST [illegible] FEET, (2) NORTH [illegible] EAST [illegible] FEET TO THE NORTH LINE OF STATE ROAD 198; THENCE NORTH 69°32'28" WEST 103.54 FEET ALONG SAID STREET; THENCE NORTH 20°01'27" EAST 276.98 FEET ALONG AN EXISTING FENCE; THENCE WEST [illegible] FEET TO THE SECTION LINE; THENCE NORTH 00°24'36" WEST 1299.72 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.
CONTAINING 13.43 ACRES

SURVEYOR'S CERTIFICATE

I, BARRY L. PRETTYMAN DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 186406 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO VISTA VIEW PHASE "7" CONDOMINIUMS, A CONDOMINIUM PROJECT, THAT COMPLIES WITH THE PROVISIONS OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

SEE DESCRIPTION TO THE LEFT.

OWNER'S DEDICATION

I/WE, ______________, ______________ BEING THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO BUILDING UNITS, COMMON AREAS, PRIVATE AREAS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ______ DAY OF ______, A.D. 2022

MEMBER: ______________

MEMBER: ______________

MEMBER: ______________

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH }
COUNTY OF UTAH } S.S.

ON THE ______ DAY OF ______, A.D. 2022 PERSONALLY APPEARED BEFORE ME ______ WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ______ OF ______ AND THAT SAID DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS, AND SAID ______ ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER/EXPIRES PRINTED FULL NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

THE ______ OF ______ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ______ DAY OF ______ A.D. 2022.

APPROVED ______ CITY MANAGER
APPROVED ______ CITY ATTORNEY
APPROVED ______ ENGINEER (SEE SEAL)
ATTEST ______ CLERK-RECORDER
APPROVED ______ COMMUNITY DEVELOPMENT DIRECTOR

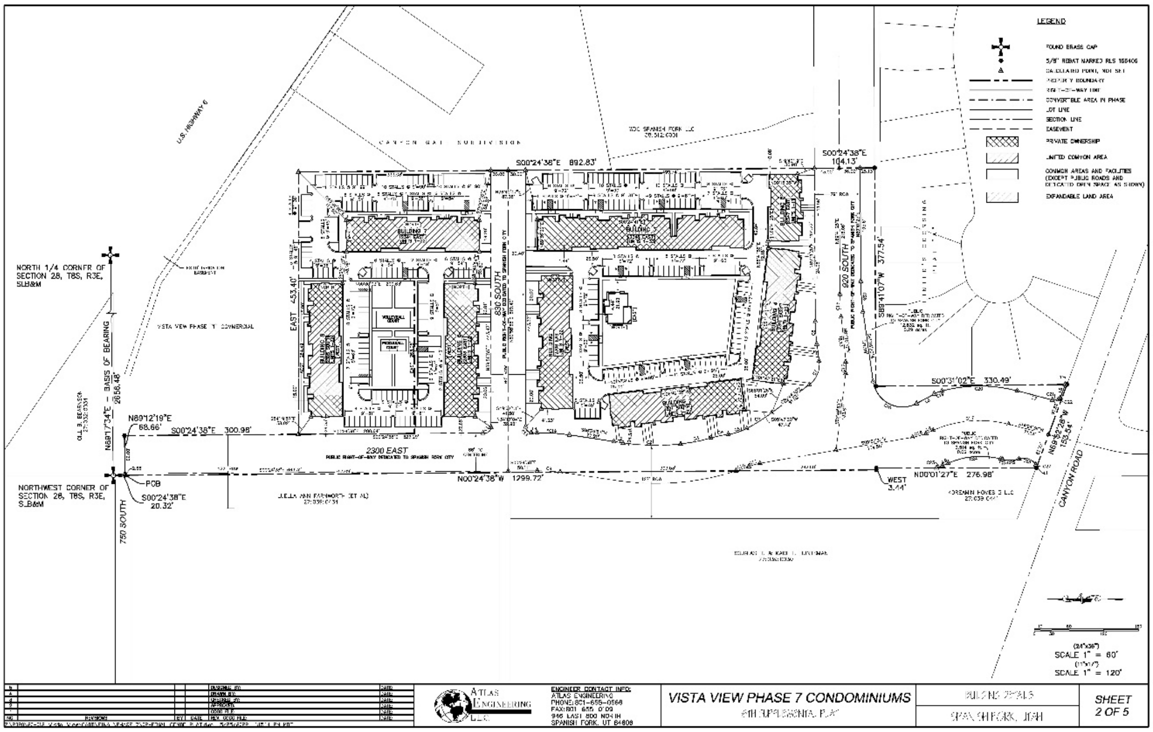
VISTA VIEW PHASE 7 CONDOMINIUMS

6TH SUPPLEMENTAL PLAT
SPANISH FORK, UTAH COUNTY, UTAH
CONTAINING 13.43 ACRES
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 3 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.

SHEET 1 OF 5

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL

Exhibit 3


LEGEND
FOUND BRASS CAP
5/8" REBAR MARKED RLS 166406
CALCULATED POINT, NOT SET
PROPERTY BOUNDARY
RIGHT-OF-WAY LINE
CONVERTIBLE AREA IN PHASE
LOT LINE
SECTION LINE
EASEMENT
PRIVATE OWNERSHIP
LIMITED COMMON AREA
COMMON AREAS AND FACILITIES (EXCEPT PUBLIC ROADS AND DEDICATED OPEN SPACE AS SHOWN)
EXPANDABLE LAND AREA
U.S. HIGHWAY 6
CANYON GAP SUBDIVISION
S00°24'38"E 892.83'
S00°24'38"E 104.13'
NORTH 1/4 CORNER OF SECTION 28, T8S, R3E, SLB&M
VISTA VIEW PHASE 1 COMMERCIAL
N89°17'34"E - BASIS OF BEARING 2656.48'
EAST 453.40'
830 SOUTH
2300 EAST
N89°12'19"E 88.66'
S00°24'38"E 300.98'
NORTHWEST CORNER OF SECTION 28, T8S, R3E, SLB&M
POB
S00°24'38"E 20.32'
750 SOUTH
N00°24'38"W 1299.72'
WEST 3.44'
N00°01'27"E 276.98'
S00°31'02"E 330.49'
S88°41'07"W 377.54'
CANYON ROAD
(24"x36") SCALE 1" = 60'
(11"x17") SCALE 1" = 120'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 7 CONDOMINIUMS
6TH SUPPLEMENTAL PLAT
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET 2 OF 5

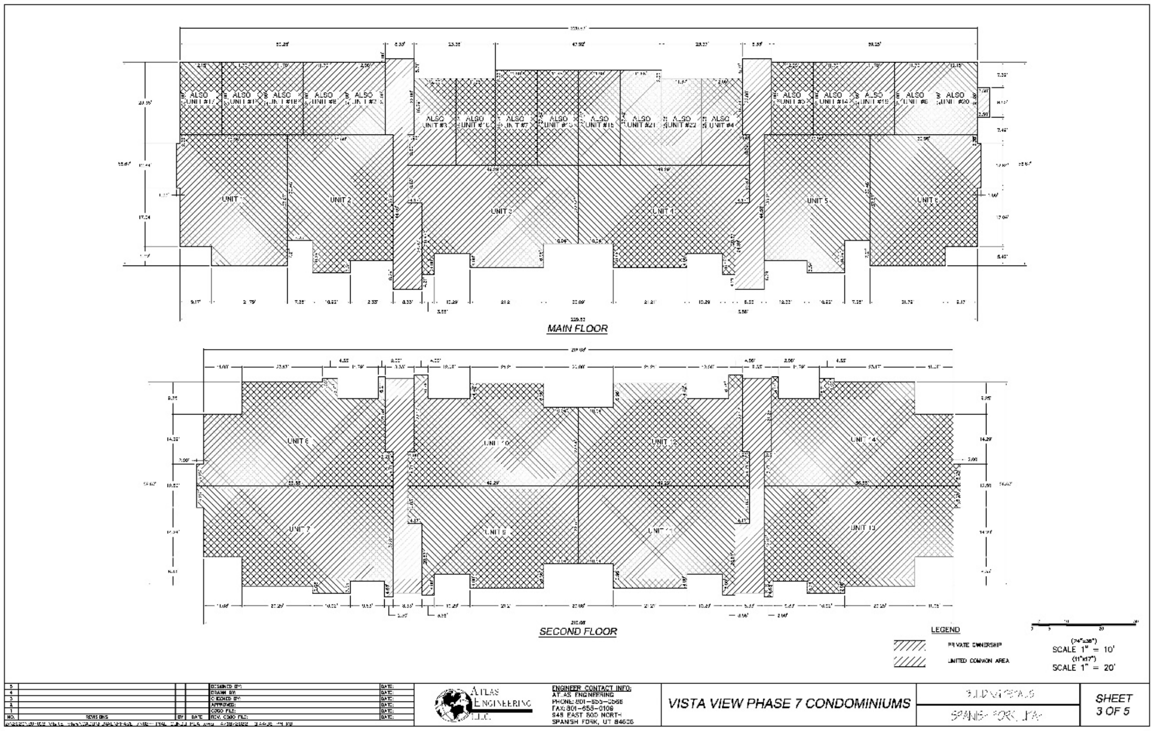
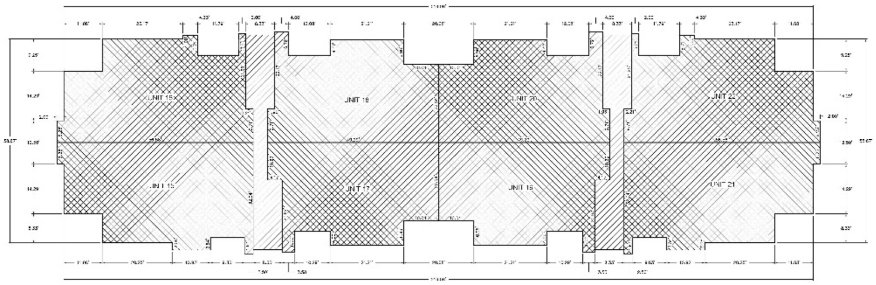

ALSO UNIT #1
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
MAIN FLOOR
UNIT 7
UNIT 8
UNIT 9
UNIT 10
UNIT 11
UNIT 12
UNIT 13
UNIT 14
SECOND FLOOR
LEGEND
PRIVATE OWNERSHIP
LIMITED COMMON AREA
(24"x36") SCALE 1" = 10'
(11"x17") SCALE 1" = 20'
ATLAS ENGINEERING LLC
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606
VISTA VIEW PHASE 7 CONDOMINIUMS
BUILDING DETAILS
SPANISH FORK, UTAH
SHEET 3 OF 5

Exhibit 3



THIRD FLOOR

LEGEND

▨ PRIVATE OWNERSHIP

▧ LIMITED COMMON AREA

(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'

5				DESIGNED BY:	DATE:
4				DRAWN BY:	DATE:
3				CHECKED BY:	DATE:
2				APPROVED:	DATE:
1				CDSO FILE:	DATE:
NO.	REVISIONS	BY	DATE	REV. CDSO FILE:	DATE:

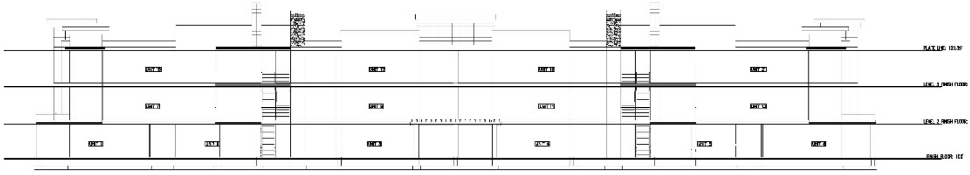
ATLAS ENGINEERING L.L.C.

ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
946 EAST 800 NORTH
SPANISH FORK, UT 84606

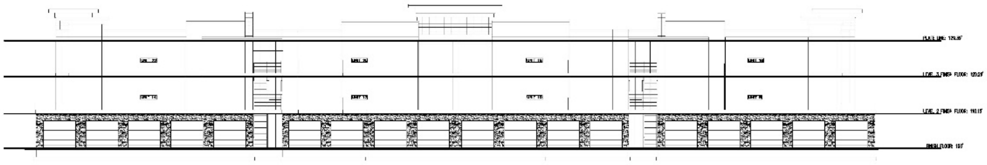
VISTA VIEW PHAASE 7 CONDOMINIUMS

BUILDING DETAILS
SPANISH FORK, UTAH

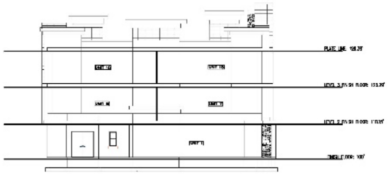
SHEET
4 OF 5



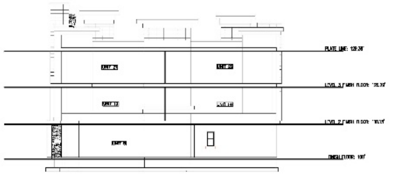
FRONT ELEVATION



REAR ELEVATION



RIGHT SIDE ELEVATION



LEFT SIDE ELEVATION

(24"x36")
SCALE 1" = 10'
(11"x17")
SCALE 1" = 20'

5				DESIGNED BY:	DATE:
4				DRAWN BY:	DATE:
3				CHECKED BY:	DATE:
2				APPROVED:	DATE:
1				CDSO FILE:	DATE:
NO.	REVISIONS	BY	DATE	REV. CDSO FILE:	DATE:

ATLAS ENGINEERING L.L.C.

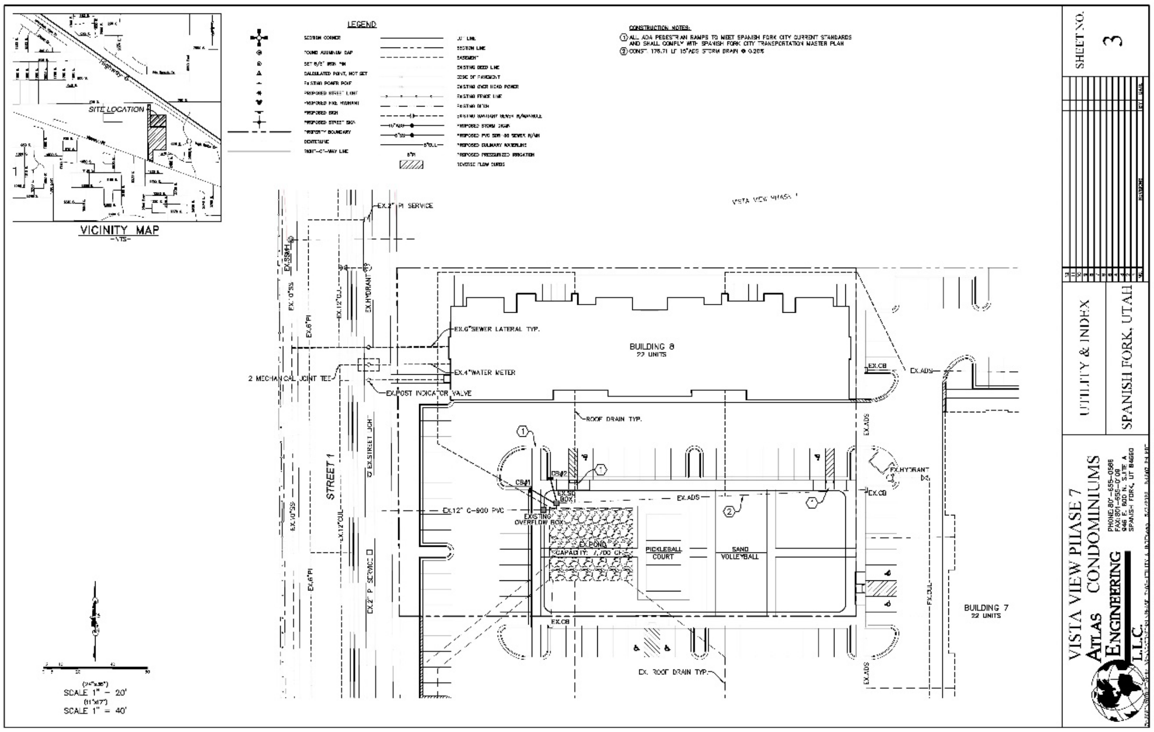
ENGINEER CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
FAX: 801-655-0109
95 WEST 200 NORTH
SPANISH FORK, UT 84606

VISTA VIEW PHASE 7 CONDOMINIUMS

BUILDING DETAILS
SPANISH FORK, UTAH

SHEET
5 OF 5

Exhibit 3


LEGEND
CONSTRUCTION NOTES:
① ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN
② CONST. 176.71 LF 15"ADS STORM DRAIN @ 0.20%
SITE LOCATION
VICINITY MAP
VISTA VIEW PHASE 1
EX.2" PI SERVICE
EX.SSMH
EX.HYDRANT
EX.6"SEWER LATERAL TYP.
BUILDING 8
22 UNITS
EX.4"WATER METER
2 MECHANICAL JOINT TEE
EX.POST INDICATOR VALVE
ROOF DRAIN TYP.
STREET 1
EX.STREET LIGHT
EX.12" C-900 PVC
EXISTING OVERFLOW BOX
EX.POND
CAPACITY: 7,700 CF
PICKLEBALL COURT
SAND VOLLEYBALL
EX.ADS
EX.CB
EX.HYDRANT
BUILDING 7
22 UNITS
EX. ROOF DRAIN TYP.
SCALE 1" = 20'
SCALE 1" = 40'
SHEET NO.
3
UTILITY & INDEX
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

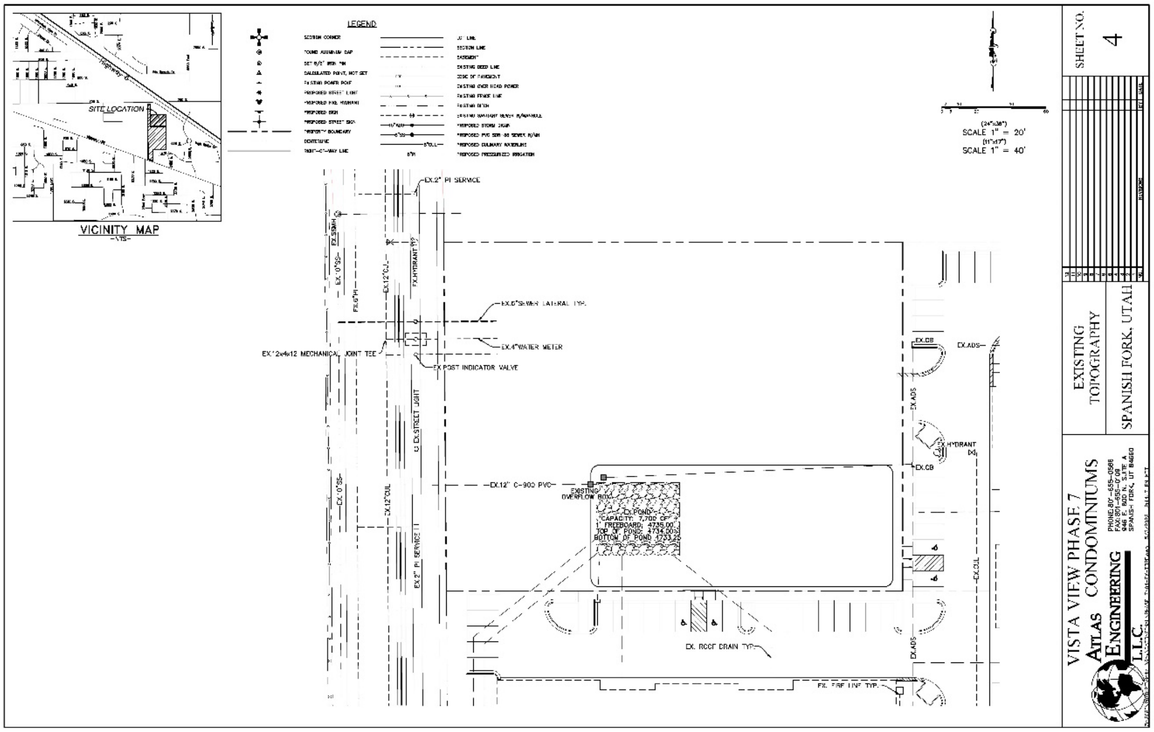
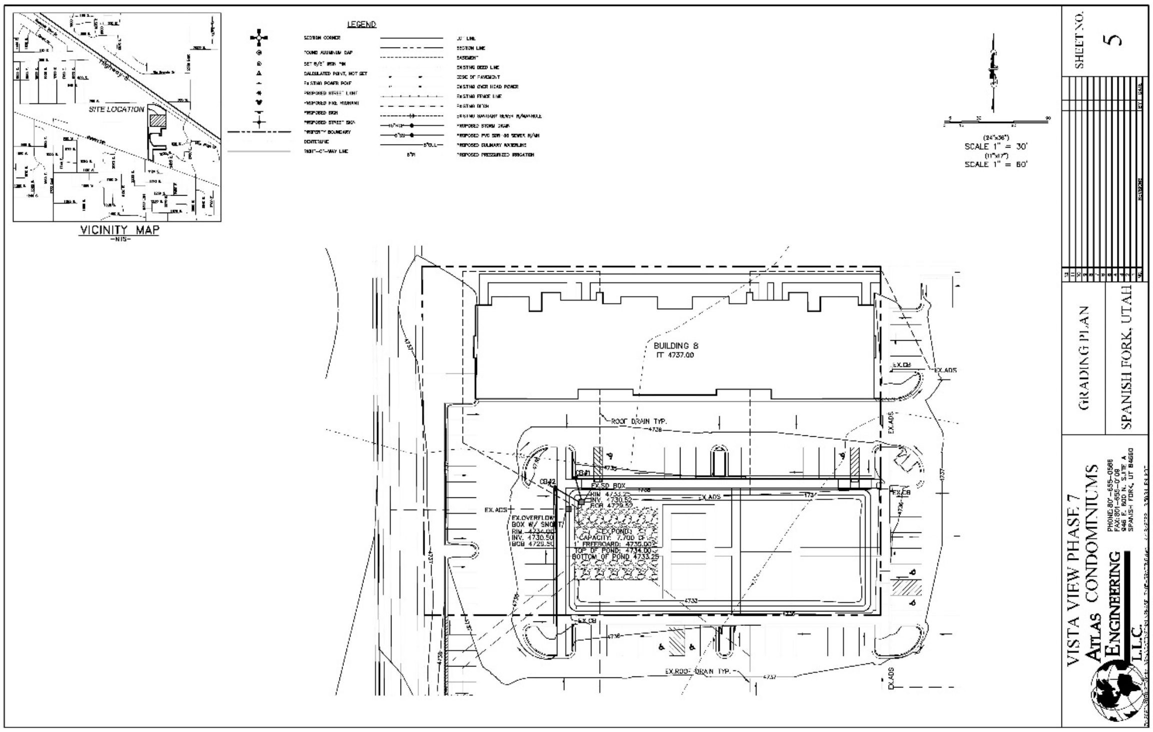
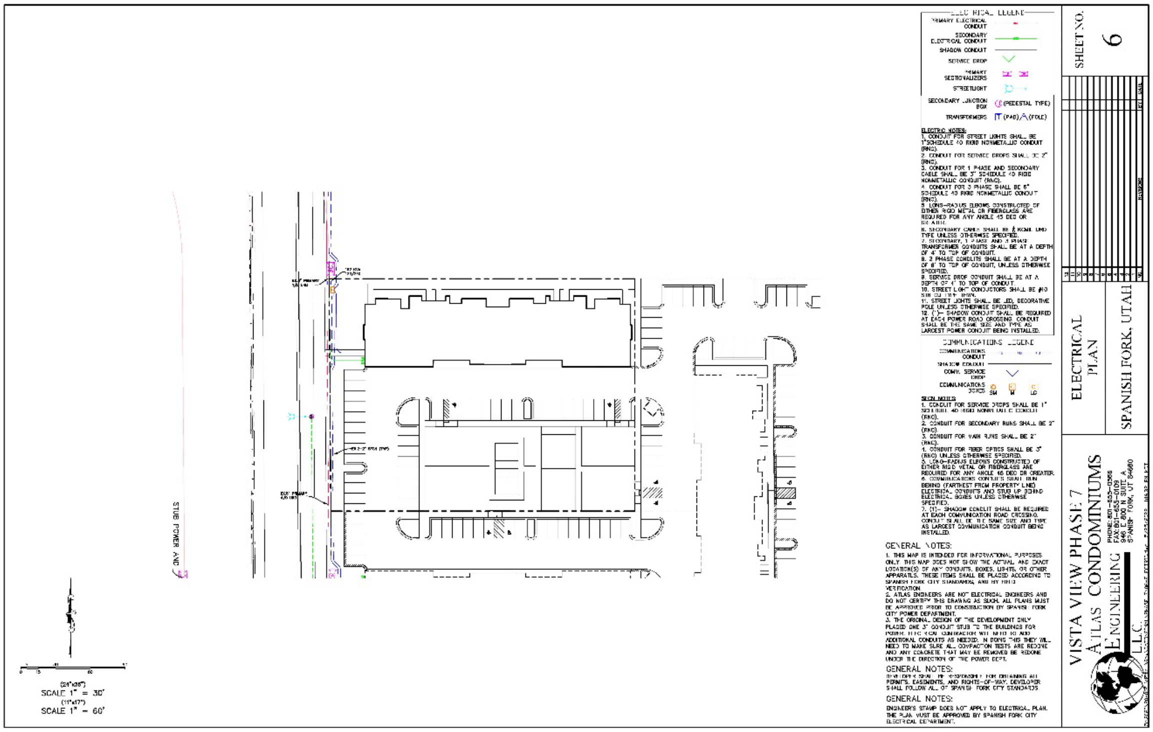

LEGEND
SITE LOCATION
VICINITY MAP
SCALE 1" = 20'
SCALE 1" = 40'
EX.2" PI SERVICE
EX.SSMH
EX.HYDRANT
EX.6"SEWER LATERAL TYP.
EX.4"WATER METER
EX.12x12 MECHANICAL JOINT TEE
EX.POST INDICATOR VALVE
EX.STREET LIGHT
EX.CB
EX.ADS
EX.HYDRANT
EX.12" C-900 PVC
EXISTING OVERFLOW BOX
EX.POND
CAPACITY: 7,700 CF
EX. ROOF DRAIN TYP.
EX. FIRE LINE TYP.
SHEET NO.
4
EXISTING TOPOGRAPHY
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
CONDOMINIUMS
ATLAS ENGINEERING L.L.C.

Exhibit 3





ELECTRIC NOTES:

1. CONDUIT FOR STREET LIGHTS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SERVICE DROPS SHALL BE 2" (RNC).
3. CONDUIT FOR 1 PHASE AND SECONDARY CABLE SHALL BE 3" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
4. CONDUIT FOR 3 PHASE SHALL BE 6" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. SECONDARY CABLE SHALL BE 4/0 KCMIL URD TYPE UNLESS OTHERWISE SPECIFIED.
7. SECONDARY, 1 PHASE AND 3 PHASE TRANSFORMER CONDUITS SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
8. 3 PHASE CONDUITS SHALL BE AT A DEPTH OF 6' TO TOP OF CONDUIT, UNLESS OTHERWISE SPECIFIED.
9. SERVICE DROP CONDUIT SHALL BE AT A DEPTH OF 4' TO TOP OF CONDUIT.
10. STREET LIGHT CONDUCTORS SHALL BE #10 SIN CU TYPE THWN.
11. STREET LIGHTS SHALL BE LED, DECORATIVE POLE UNLESS OTHERWISE SPECIFIED.
12. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH POWER ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST POWER CONDUIT BEING INSTALLED.

SIGN NOTES:

1. CONDUIT FOR SERVICE DROPS SHALL BE 1" SCHEDULE 40 RIGID NONMETALLIC CONDUIT (RNC).
2. CONDUIT FOR SECONDARY RUNS SHALL BE 2" (RNC).
3. CONDUIT FOR MAIN RUNS SHALL BE 2" (RNC).
4. CONDUIT FOR FIBER OPTICS SHALL BE 3" (RNC) UNLESS OTHERWISE SPECIFIED.
5. LONG-RADIUS ELBOWS CONSTRUCTED OF EITHER RIGID METAL OR FIBERGLASS ARE REQUIRED FOR ANY ANGLE 45 DEG OR GREATER.
6. COMMUNICATIONS CONDUITS SHALL RUN BEHIND (FARTHEST FROM PROPERTY LINE) ELECTRICAL CONDUITS AND STUB UP BEHIND ELECTRICAL BOXES UNLESS OTHERWISE SPECIFIED.
7. (1)- SHADOW CONDUIT SHALL BE REQUIRED AT EACH COMMUNICATION ROAD CROSSING. CONDUIT SHALL BE THE SAME SIZE AND TYPE AS LARGEST COMMUNICATION CONDUIT BEING INSTALLED.

GENERAL NOTES:

1. THIS MAP IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. THIS MAP DOES NOT SHOW THE ACTUAL AND EXACT LOCATION(S) OF ANY CONDUITS, BOXES, LIGHTS, OR OTHER APPARATUS. THESE ITEMS SHALL BE PLACED ACCORDING TO SPANISH FORK CITY STANDARDS, AND BY FIELD VERIFICATION.
2. ATLAS ENGINEERS ARE NOT ELECTRICAL ENGINEERS AND DO NOT CERTIFY THIS DRAWING AS SUCH. ALL PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION BY SPANISH FORK CITY POWER DEPARTMENT.
3. THE ORIGINAL DESIGN OF THE DEVELOPMENT ONLY PLACED ONE 3" CONDUIT STUB TO THE BUILDINGS FOR POWER. ELECTRICAL CONTRACTOR WILL NEED TO ADD ADDITIONAL CONDUITS AS NEEDED. IN DOING THIS THEY WILL NEED TO MAKE SURE ALL COMPACTION TESTS ARE REDONE AND ANY CONCRETE THAT MAY BE REMOVED BE REDONE UNDER THE DIRECTION OF THE POWER DEPT.

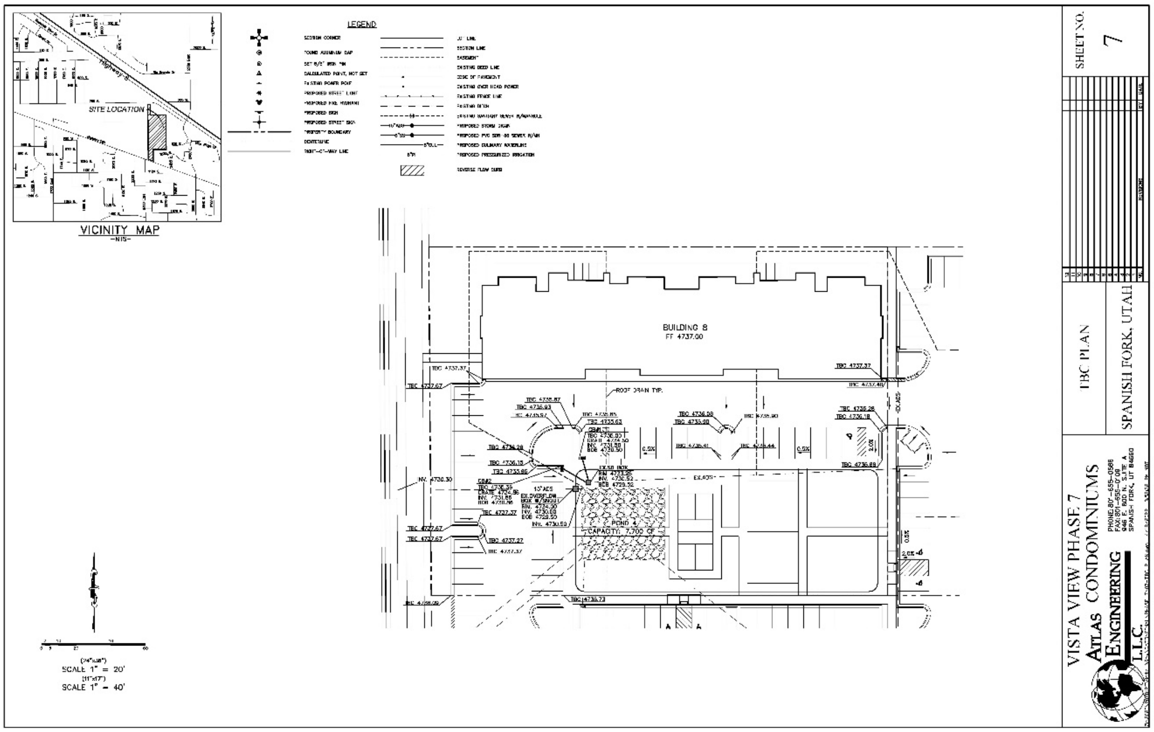
GENERAL NOTES:

DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, EASEMENTS, AND RIGHTS-OF-WAY. DEVELOPER SHALL FOLLOW ALL OF SPANISH FORK CITY STANDARDS.

GENERAL NOTES:

ENGINEER'S STAMP DOES NOT APPLY TO ELECTRICAL PLAN. THE PLAN MUST BE APPROVED BY SPANISH FORK CITY ELECTRICAL DEPARTMENT.

Exhibit 3


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
BUILDING 8
FF 4737.00
ROOF DRAIN TYP.
POND 4
CAPACITY: 7,700 CF
(24"x36")
SCALE 1" = 20'
(11"x17")
SCALE 1" = 40'
SHEET NO.
7
TBC PLAN
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

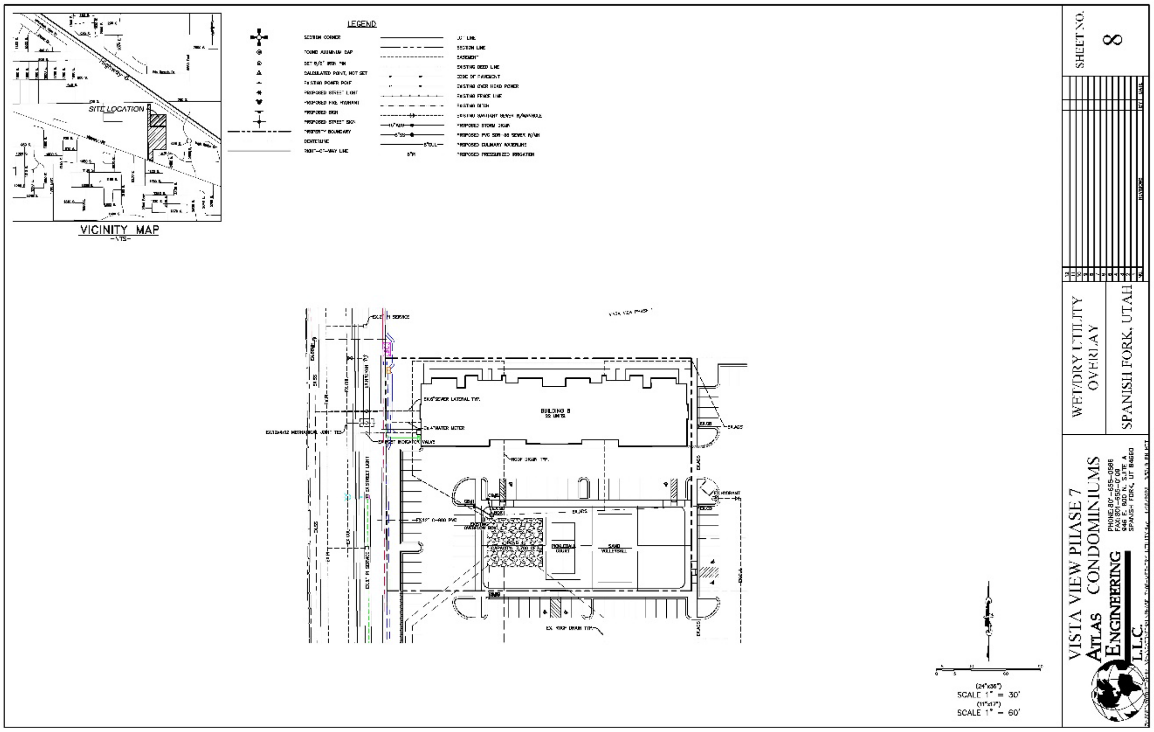
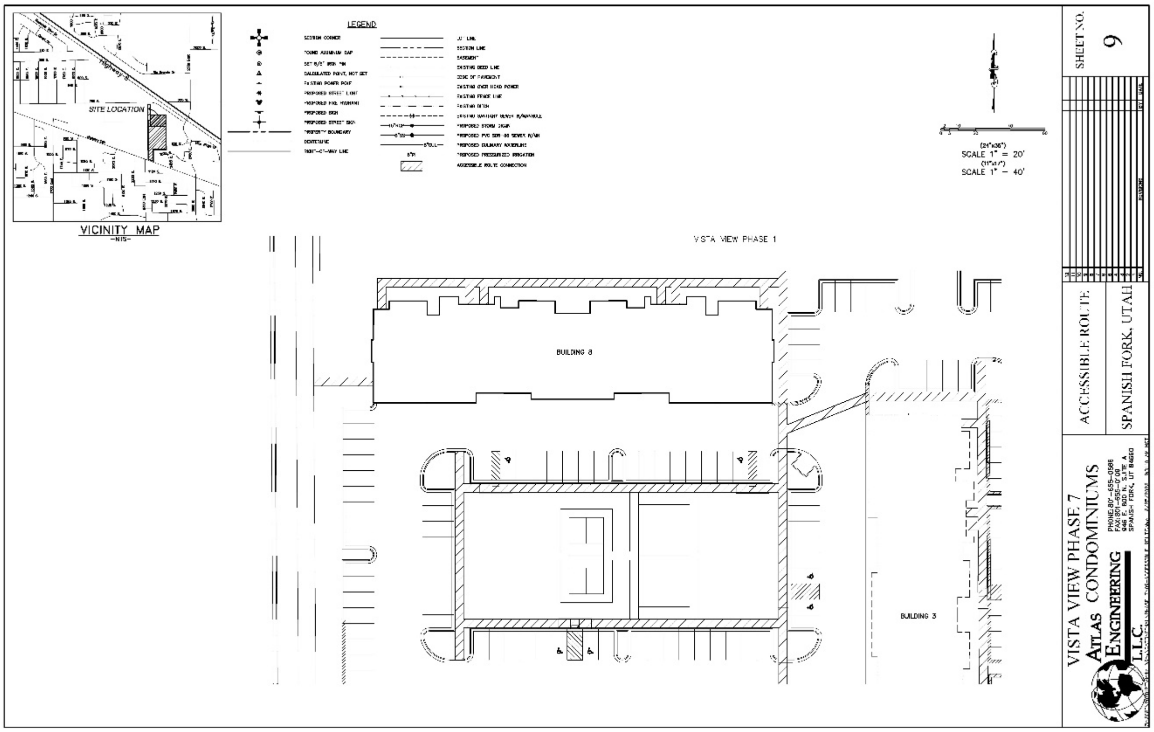

LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
BUILDING 8
ROOF DRAIN TYP.
(24"x36")
SCALE 1" = 30'
(11"x17")
SCALE 1" = 60'
SHEET NO.
8
WET/DRY UTILITY OVERLAY
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

Exhibit 3


LEGEND
VICINITY MAP
-NTS-
SITE LOCATION
Highway 6
SCALE 1" = 20'
SCALE 1" = 40'
VISTA VIEW PHASE 1
BUILDING 8
BUILDING 3
SHEET NO.
9
ACCESSIBLE ROUTE
SPANISH FORK, UTAH
VISTA VIEW PHASE 7
ATLAS CONDOMINIUMS
ATLAS ENGINEERING L.L.C.
PHONE:801-655-0566
FAX:801-655-0108
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

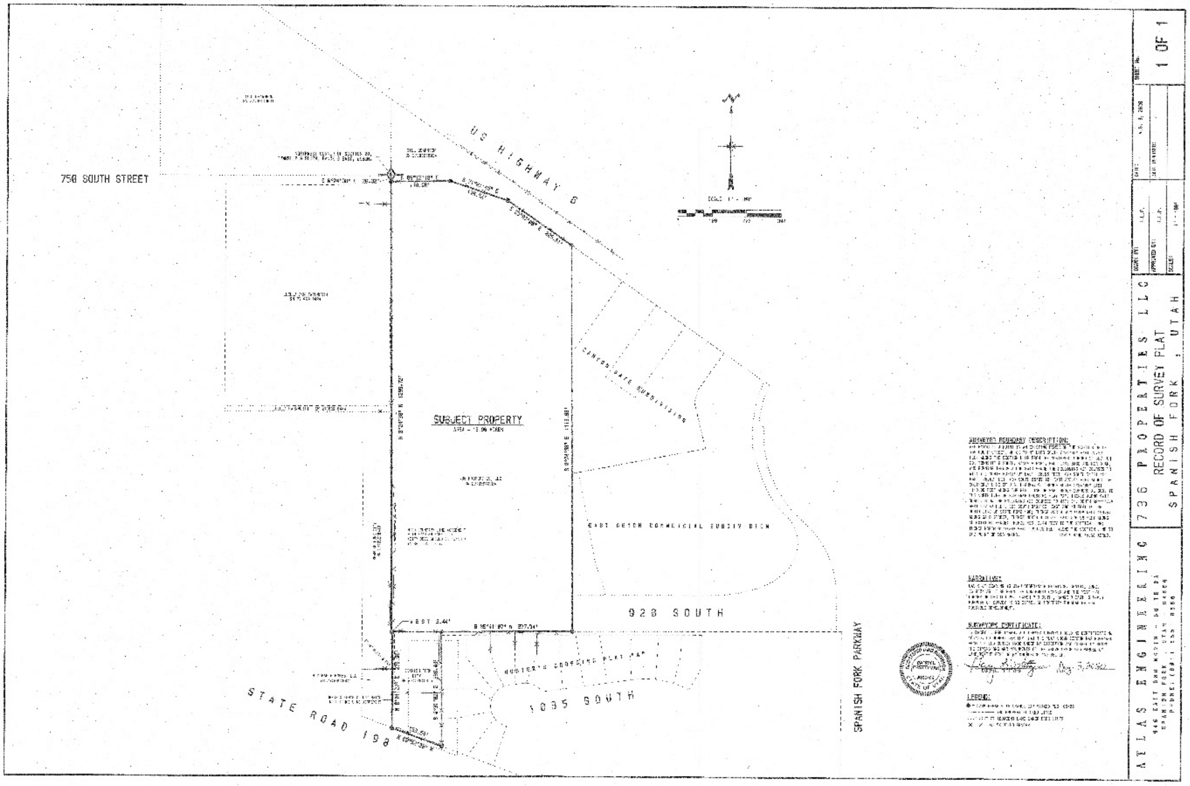
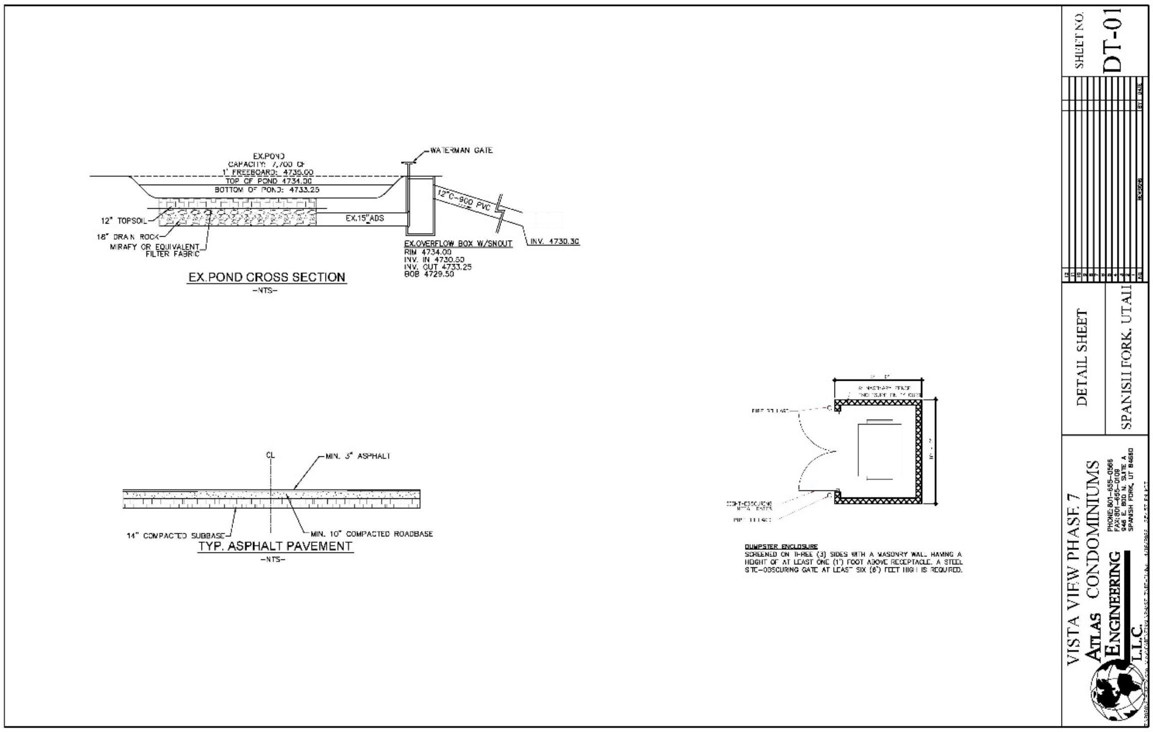
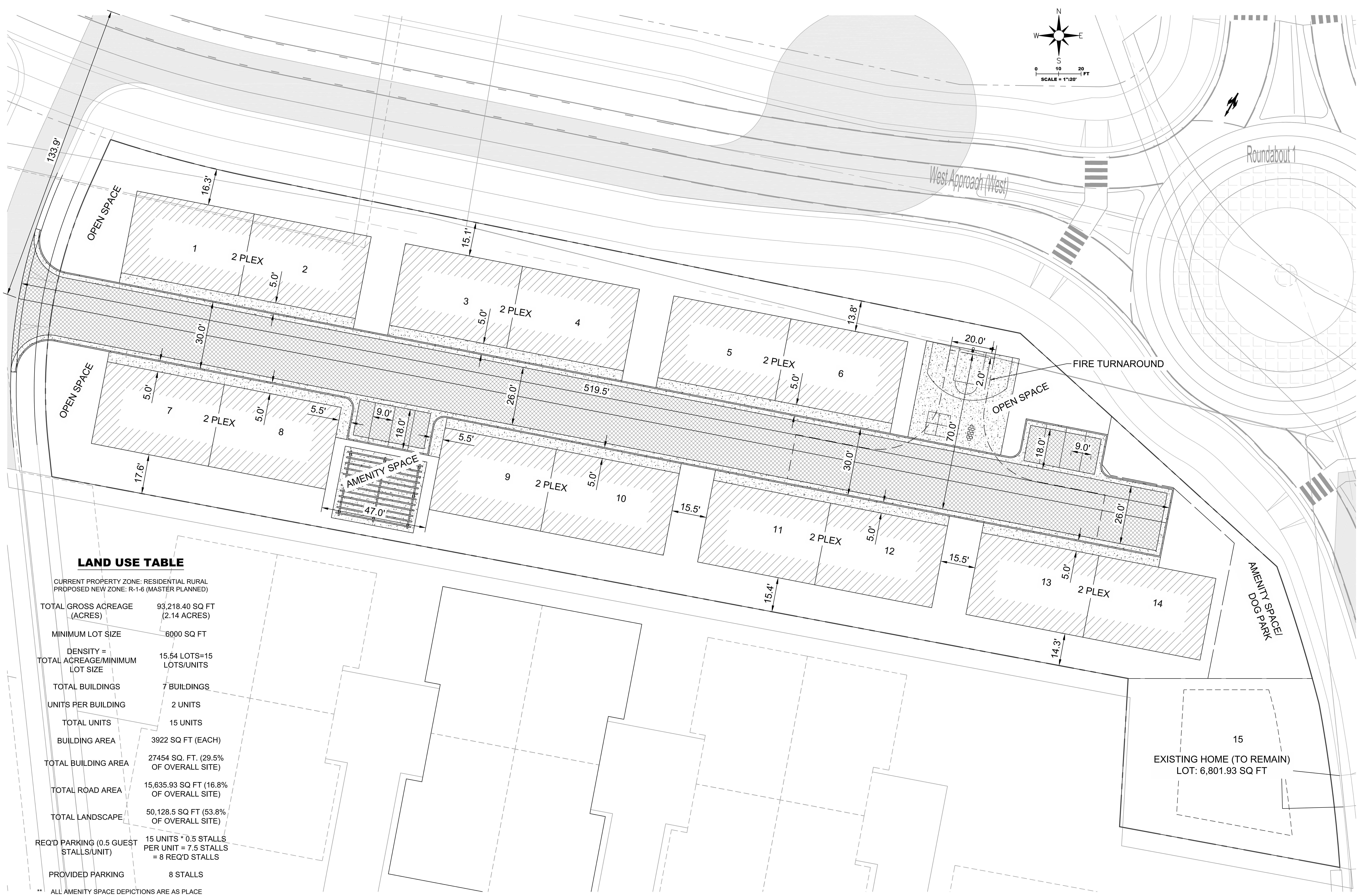

US HIGHWAY 6
750 SOUTH STREET
SUBJECT PROPERTY
CANYON GATE SUBDIVISION
EAST SOUTH COMMERCIAL ZONING DESK
920 SOUTH
1095 SOUTH
STATE ROAD 198
SPANISH FORK PARKWAY
SHEET No.
1 OF 1
736 PROPERTIES LLC
RECORD OF SURVEY PLAT
SPANISH FORK, UTAH
ATLAS ENGINEERING
946 EAST 800 NORTH - SUITE A
SPANISH FORK, UTAH 84660

Exhibit 3



DUMPSTER ENCLOSURE
SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED.



LAND USE TABLE

CURRENT PROPERTY ZONE: RESIDENTIAL RURAL
PROPOSED NEW ZONE: R-1-6 (MASTER PLANNED)

TOTAL GROSS ACREAGE (ACRES)	93,218.40 SQ FT (2.14 ACRES)
MINIMUM LOT SIZE	6000 SQ FT
DENSITY = TOTAL ACREAGE/MINIMUM LOT SIZE	15.54 LOTS=15 LOTS/UNITS
TOTAL BUILDINGS	7 BUILDINGS
UNITS PER BUILDING	2 UNITS
TOTAL UNITS	15 UNITS
BUILDING AREA	3922 SQ FT (EACH)
TOTAL BUILDING AREA	27454 SQ. FT. (29.5% OF OVERALL SITE)
TOTAL ROAD AREA	15,635.93 SQ FT (16.8% OF OVERALL SITE)
TOTAL LANDSCAPE	50,128.5 SQ FT (53.8% OF OVERALL SITE)
REQ'D PARKING (0.5 GUEST STALLS/UNIT)	15 UNITS * 0.5 STALLS PER UNIT = 7.5 STALLS = 8 REQ'D STALLS
PROVIDED PARKING	8 STALLS

** ALL AMENITY SPACE DEPICTIONS ARE AS PLACE HOLDERS AND ARE SUBJECT TO CHANGE PURPOSE

** LOW PROFILE CURB AND GUTTER TO BE USED THROUGHOUT SITE

** A HOME OWNERS ASSOCIATION IS TO BE CREATED FOR MAINTENANCE OF LANDSCAPE AND AMMENITIES

File Path:G:\Shared drives\Marketing\Proposals\2022\22-052 Bradshaw Subdivision\Concept Fiels\TEMP\SITE FINAL_1_19512_c7835519.DWG Mar 08, 2023 - 9:03am

REVISIONS

NO.	REMARKS	BY	DATE

BRADSHAW SUBDIVISION
420 EAST 1158 SOUTH
SPANISH FORK, UTAH

SCALE:	DATE:	DESIGNED BY:	CHECKED BY:
1:20	3/9/2022	IJR	IJR

WALL CONSULTANT GROUP
2139 SOUTH 1260 WEST
SALT LAKE CITY, UT 84119
PHONE: 801-449-1173

WALL CONSULTANT GROUP

APPROVED
PROFESSIONAL ENGINEER

PROJECT	BRADSHAW SUBDIVISION 420 EAST 1158 SOUTH
PROJECT NUMBER	TBD
	CONCEPT PLAN

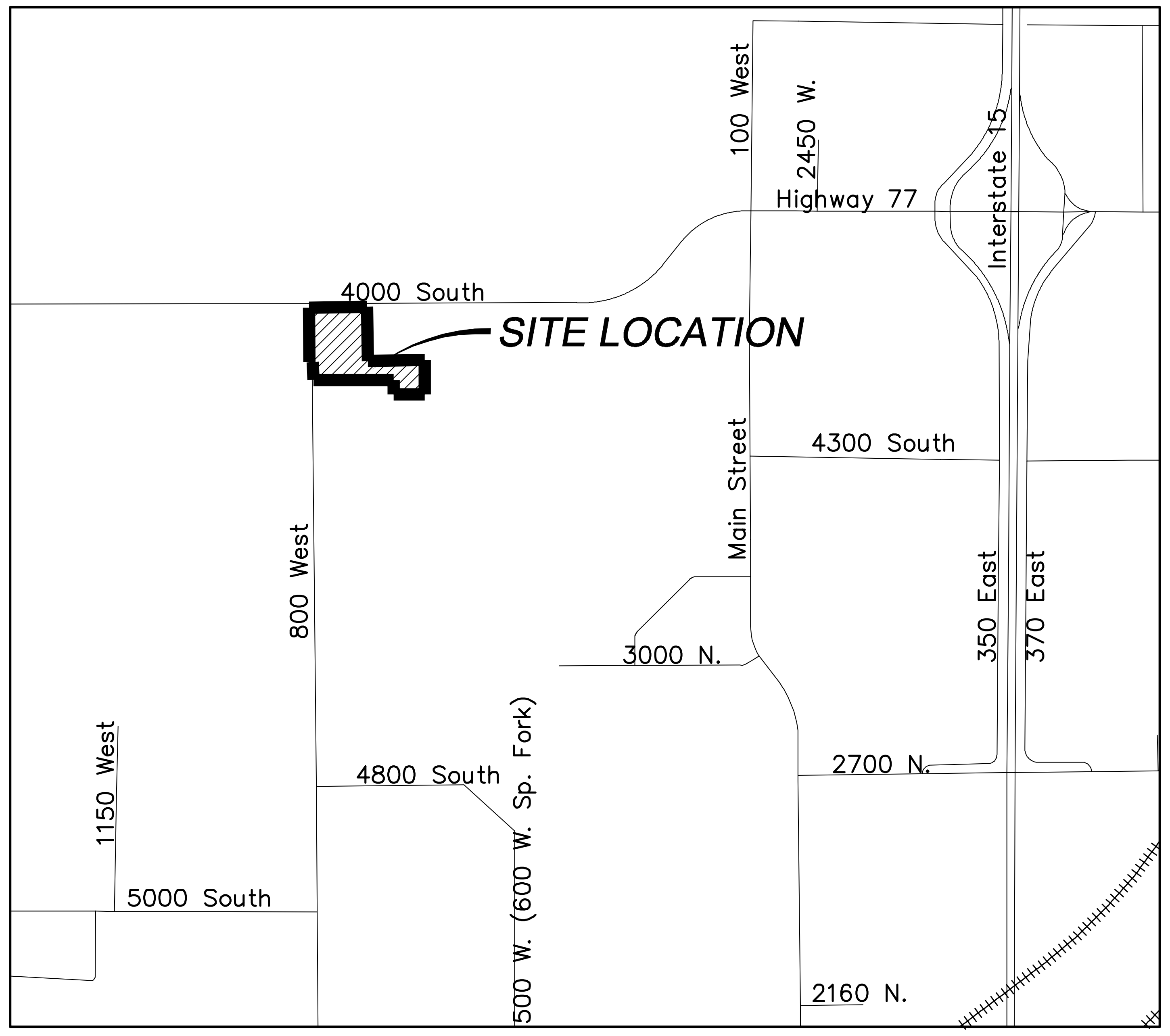
SHEET NO. C000

NIELSEN PROPERTY

AN INDUSTRIAL SUBDIVISION
SPANISH FORK, UTAH
FINAL PLAN SET

-SHEET INDEX-

SHEET	SHEET NAME
1	COVER
2	FINAL PLAT
3	UTILITY & INDEX
4	EXISTING TOPOGRAPHY
PP-01	PLAN & PROFILE - 1150 WEST - STA. 17+00 TO STA. 22+00
PP-02	PLAN & PROFILE - 1150 WEST - STA. 22+00 TO STA. 26+21.67
DT-01	DETAIL SHEET
ROS	RECORD OF SURVEY



VICINITY MAP
-NTS-

LEGEND

✦	SECTION CORNER
◉	FOUND ALUMINUM CAP
⊙	SET 5/8" IRON PIN
△	CALCULATED POINT, NOT SET
-•-	EXISTING POWER POLE
✸	PROPOSED STREET LIGHT
●	PROPOSED FIRE HYDRANT
•	PROPOSED SIGN
✛	PROPOSED STREET SIGN
━━━	PROPERTY BOUNDARY
───	CENTERLINE
───	RIGHT-OF-WAY LINE
───	LOT LINE
── - - - ──	SECTION LINE
───	EASEMENT
───	EXISTING DEED LINE
───	EDGE OF PAVEMENT
───	EXISTING OVER HEAD POWER
───	EXISTING FENCE LINE
───	EXISTING DITCH
──◎──	EXISTING SANITARY SEWER W/MANHOLE
━15"RCP━●━	PROPOSED STORM DRAIN
━8"SS━●━	PROPOSED PVC SDR-35 SEWER W/MH
───8"CUL─	PROPOSED CULINARY WATERLINE
──6"PI──	PROPOSED PRESSURIZED IRRIGATION

GENERAL NOTES:

1. ALL CONSTRUCTION WILL CONFORM TO SPANISH FORK CITY STANDARDS.
2. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWING SHALL BE SUPERSEDED BY CITY DESIGN.
3. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
4. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WERE ISSUED AT PRE-CONSTRUCTION MEETING.
5. ANY EXISTING FACILITIES AFFECTED BY THE DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPERS EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.

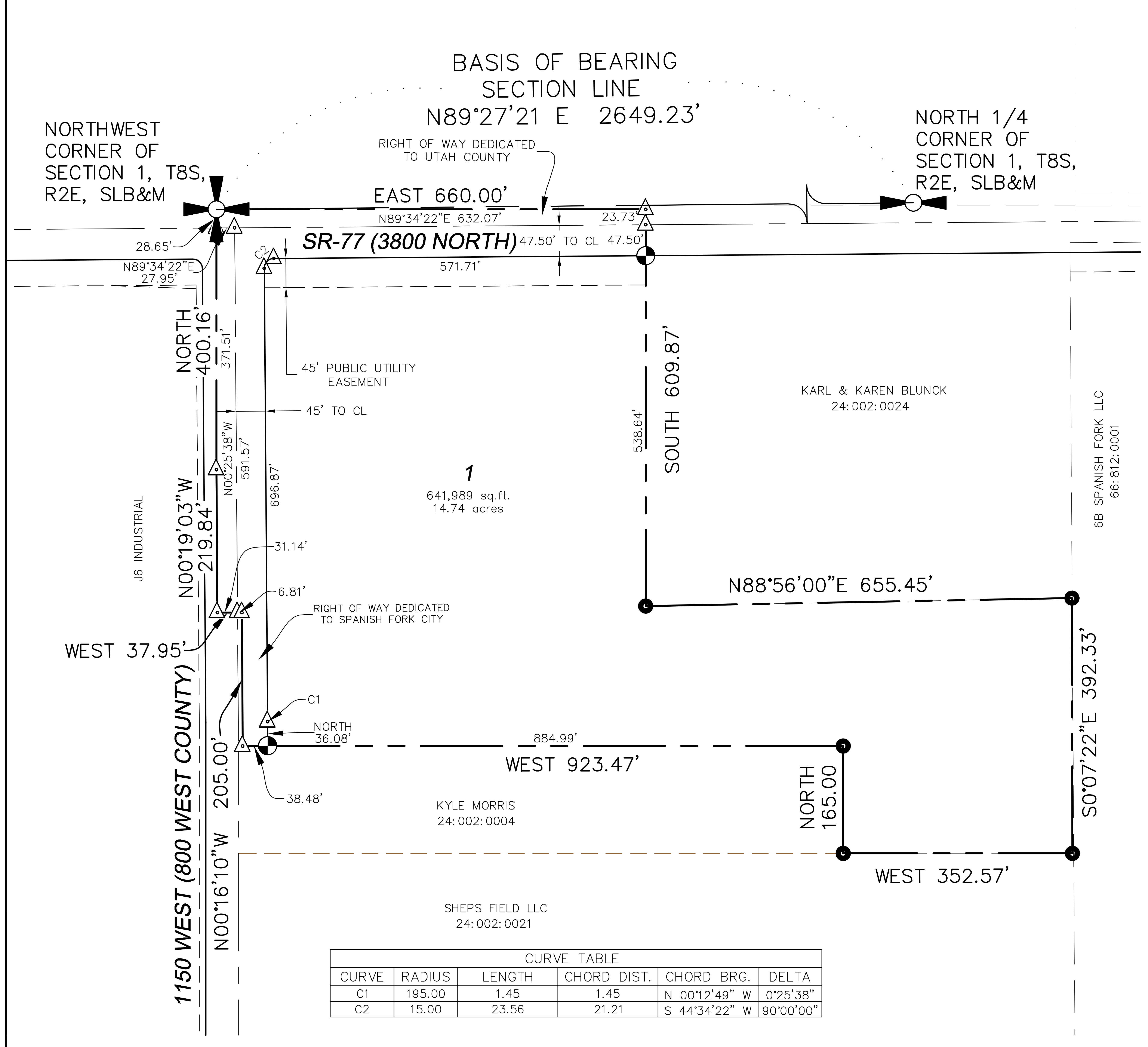
REGISTERED PROFESSIONAL ENGINEER
ANDREW
J. DELPIVO
No. 8845722
01/18/2023
STATE OF UTAH

OWNER/DEVELOPER
GWC CAPITAL
JARED MORGAN
801-712-1553
JAMORGAN@GWCCAP.COM

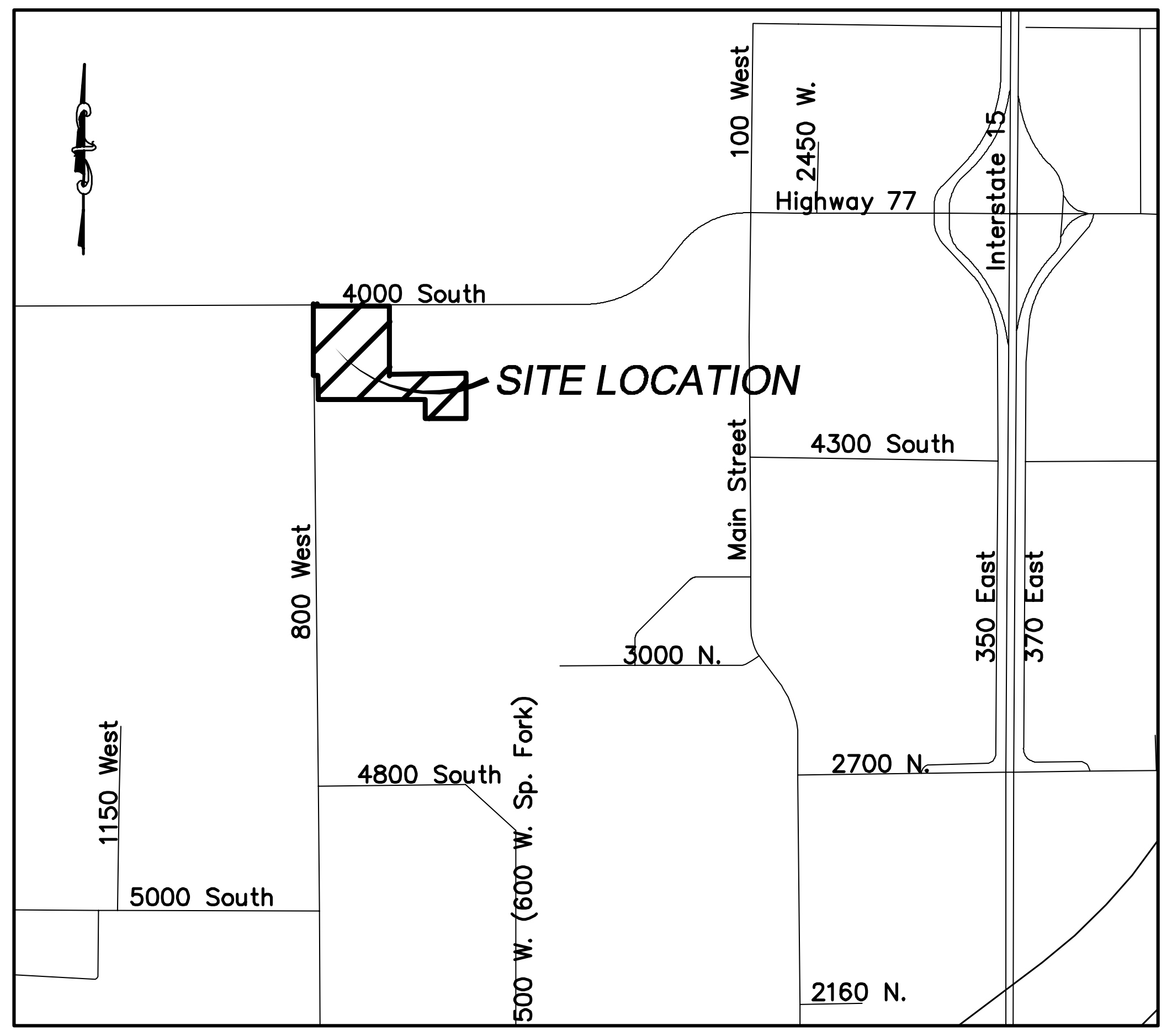
NIELSEN PROPERTY

ATLAS
ENGINEERING
L.L.C.

PHONE: 801-655-0566
FAX: 801-655-0109
946 E 800 N SUITE A
SPANISH FORK, UT 84660



CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD DIST.	CHORD BRG.	DELTA
C1	195.00	1.45	1.45	N 00°12'49" W	0°25'38"
C2	15.00	23.56	21.21	S 44°34'22" W	90°00'00"



VICINITY MAP
–NTS–

LEGEND

✛	FOUND BRASS CAP
●	SET 5/8" IRON PIN
⊕	SET CURB PIN
△	CALCULATED POINT, NOT SET
— — —	PROPERTY BOUNDARY
———	RIGHT-OF-WAY LINE
———	LOT LINE
—— - - - ——	SECTION LINE
— — —	EASEMENT

OWNER/DEVELOPER
GWC CAPITAL
JARED MORGAN
801-712-1553
JAMORGAN@GWCCAP.COM

ENGINEER/SURVEYOR CONTACT INFO:
ATLAS ENGINEERING
PHONE: 801-655-0566
946 EAST 800 NORTH
SPANISH FORK, UT 84660

DATA TABLE
TOTAL ACREAGE=16.98
TOTAL # OF LOTS=1
ACREAGE OF LOTS=14.74
ACREAGE IN ROADS=2.24 ACRES
ACREAGE 30%+ SLOPE=0 ACRES
TOTAL ACREAGE OF OPEN SPACE/PONDS=0.00
% OF OPEN SPACE=0%
ZONING=I-1

NOTES
1. ZONE I-1.
2. VERTICAL DATA BASED ON NAVD 29.
3. COORDINATE SYSTEM = NAD83.
4. ALL PUBLIC UTILITY EASEMENTS PLATTED HEREON ARE IN PERPETUITY FOR INSTALLATION, MAINTENANCE, REPAIR, AND REPLACEMENT OF PUBLIC UTILITIES, PUBLIC WALLS, FENCES, SIDEWALKS, TRAILS, AND APPURTENANT PARTS THEREOF AND THE RIGHT TO REASONABLE ACCESS TO GRANTOR'S EASEMENT SHALL RUN WITH THE REAL PROPERTY AND SHALL BE BINDING UPON THE GRANTOR AND THE GRANTORS SUCCESSORS, HEIRS AND ASSIGNS.
5. SITE IS IN AREA WITH AIRPORT RELATED REQUIREMENTS AND HEIGHT RESTRICTIONS. SEE ATTACHED AIRSPACE SHEET.
6. ALL CULINARY WATER AND PRESSURIZED IRRIGATION LINES UP TO AND INCLUDING THE METER, ALL SANITARY SEWER MAINS, ALL ELECTRIC METERS, AND ALL ELECTRIC AND SFCN COMMUNICATION SERVICE LINES UP TO TEH MAST ON OVERHEAD INSTALLATIONS AND TO THE TOP OF THE METER BASE FOR UNDERGROUND INSTALLATIONS ARE DEDICATED TO SPANISH FORK CITY.

SURVEYOR'S CERTIFICATE

I, DAVID F. HUNT DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 5243543 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS, AND EASEMENTS AND THAT THE SAME HAS BEEN CORRECTLY SURVEYED AND STAKED ON THE GROUND AS SHOWN ON THIS PLAT AND THAT THIS IS TRUE AND CORRECT.

SURVEYOR DATE

BOUNDARY DESCRIPTION

BEGINNING AT THE NORTHWEST CORNER OF SECTION 1, TOWNSHIP 8 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE EAST 660.00 FEET; THENCE SOUTH 609.87 FEET; THENCE N88°56'00"E 655.45 FEET ALONG AN EXISTING QUIET TITLE LINE (ENTRY NO. 37655: 2016); THENCE S00°07'22"E 392.33 FEET; THENCE WEST 352.57 FEET; THENCE NORTH 165.00 FEET; THENCE WEST 923.47 FEET; THENCE N00°16'10"W 205.00 FEET; THENCE WEST 37.95 FEET TO THE J6 INDUSTRIAL SUBDIVISION BOUNDARY LINE; THENCE ALONG J6 INDUSTRIAL SUBDIVISION BOUNDARY LINE N00°19'03"W 219.84 FEET; THENCE NORTH 400.16 FEET TO THE POINT OF BEGINNING.
CONTAINING 16.98 ACRES.

OWNER'S DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT WE, ALL OF THE UNDERSIGNED OWNER(S) OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS, EASEMENTS AND OTHER PUBLIC AREAS AS INDICATED HEREON TO SPANISH FORK CITY FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HAND(S) THIS______ DAY OF ____________________. A.D. 2022.

BY:

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH > S.S.

ON THIS ____ DAY OF____________ , A.D. 2022, PERSONALLY APPEARED BEFORE ME ______________________, WHOSE IDENTITY IS PERSONALLY KNOWN TO ME AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT HE/SHE IS THE ______________________OF____________________ AND THAT SAID THIS DOCUMENT WAS SIGNED BY HIM/HER IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BYLAWS, OR RESOLUTION OF ITS BOARD OF DIRECTORS AND SAID ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

WITNESS MY HAND AND OFFICIAL SEAL.

A NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION# EXPIRES PRINTED NAME

ACCEPTANCE BY LEGISLATIVE BODY

THE __________OF__________ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS_____DAY OF________A.D. 2022.

APPROVED ____________________
CITY MANAGER

APPROVED ____________________
CITY ATTORNEY

APPROVED ____________________
ENGINEER (SEE SEAL)

ATTEST ____________________
CLERK-RECORDER

APPROVED ____________________
COMMUNITY DEVELOPMENT DIRECTOR

NIELSEN PROPERTY

SPANISH FORK CITY, UTAH COUNTY, UTAH
CONTAINING 1 LOT AND 16.98 ACRES
LOCATED IN NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 8 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.

SURVEYOR'S SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL	UTAH COUNTY RECORDER

25 100 300
0 50 200

(24"x36")
SCALE 1" = 100'
(11"x17")
SCALE 1" = 200'

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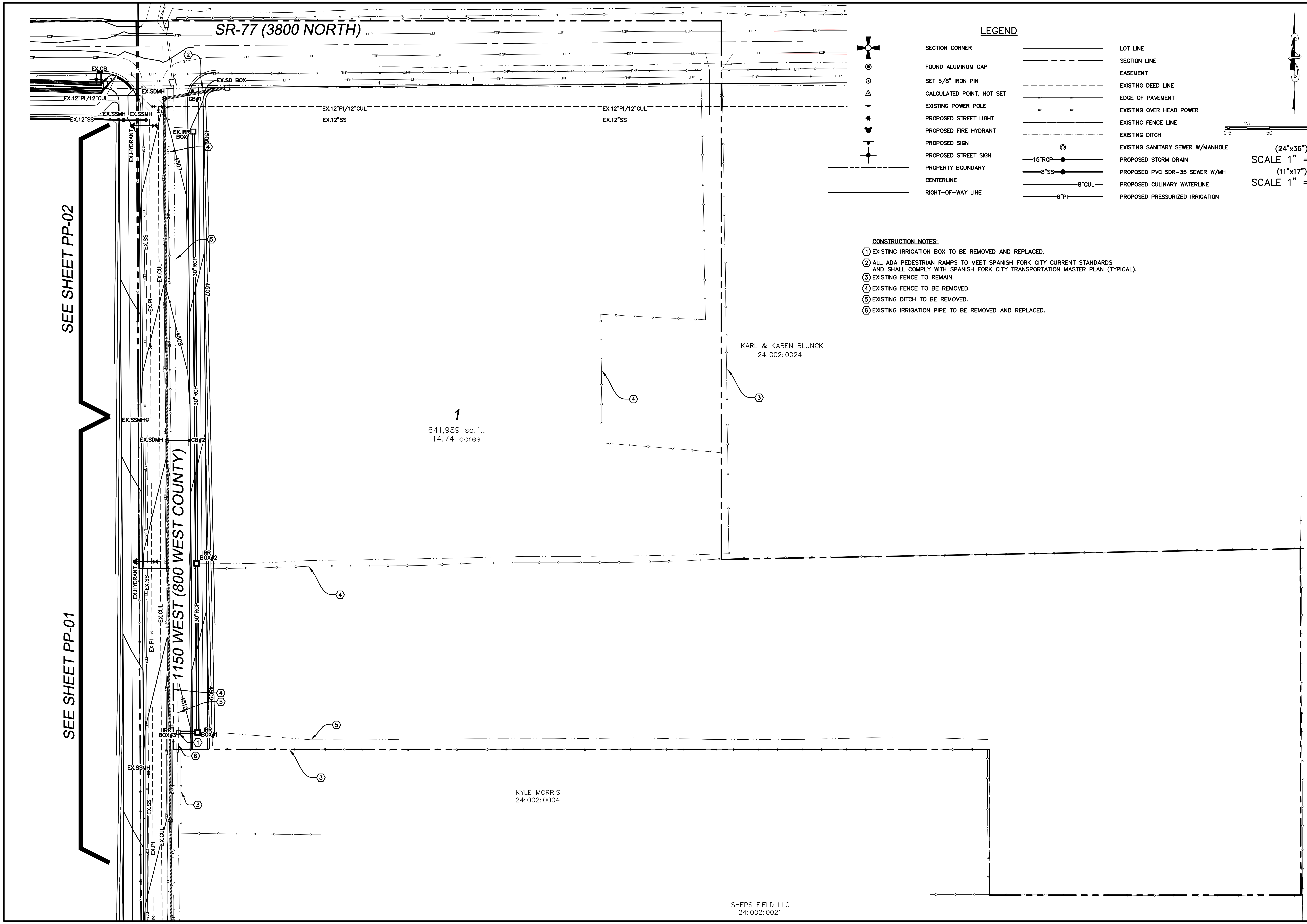

LEGEND

SECTION CORNER
FOUND ALUMINUM CAP
SET 5/8" IRON PIN
CALCULATED POINT, NOT SET
EXISTING POWER POLE
PROPOSED STREET LIGHT
PROPOSED FIRE HYDRANT
PROPOSED SIGN
PROPOSED STREET SIGN
PROPERTY BOUNDARY
CENTERLINE
RIGHT-OF-WAY LINE

LOT LINE
SECTION LINE
EASEMENT
EXISTING DEED LINE
EDGE OF PAVEMENT
EXISTING OVER HEAD POWER
EXISTING FENCE LINE
EXISTING DITCH
EXISTING SANITARY SEWER W/MANHOLE
15"RCP PROPOSED STORM DRAIN
8"SS PROPOSED PVC SDR-35 SEWER W/MH
8"CUL PROPOSED CULINARY WATERLINE
6"PI PROPOSED PRESSURIZED IRRIGATION

(24"x36")
SCALE 1" = 50'
(11"x17")
SCALE 1" = 100'

CONSTRUCTION NOTES:

① EXISTING IRRIGATION BOX TO BE REMOVED AND REPLACED.
② ALL ADA PEDESTRIAN RAMPS TO MEET SPANISH FORK CITY CURRENT STANDARDS AND SHALL COMPLY WITH SPANISH FORK CITY TRANSPORTATION MASTER PLAN (TYPICAL).
③ EXISTING FENCE TO REMAIN.
④ EXISTING FENCE TO BE REMOVED.
⑤ EXISTING DITCH TO BE REMOVED.
⑥ EXISTING IRRIGATION PIPE TO BE REMOVED AND REPLACED.

SHEET NO.
3

NO.	REVISIONS	BY	DATE
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UTILITY & INDEX
SPANISH FORK, UTAH

NIELSEN PROPERTY

ATLAS ENGINEERING L.L.C.
PHONE: 801-655-0566
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

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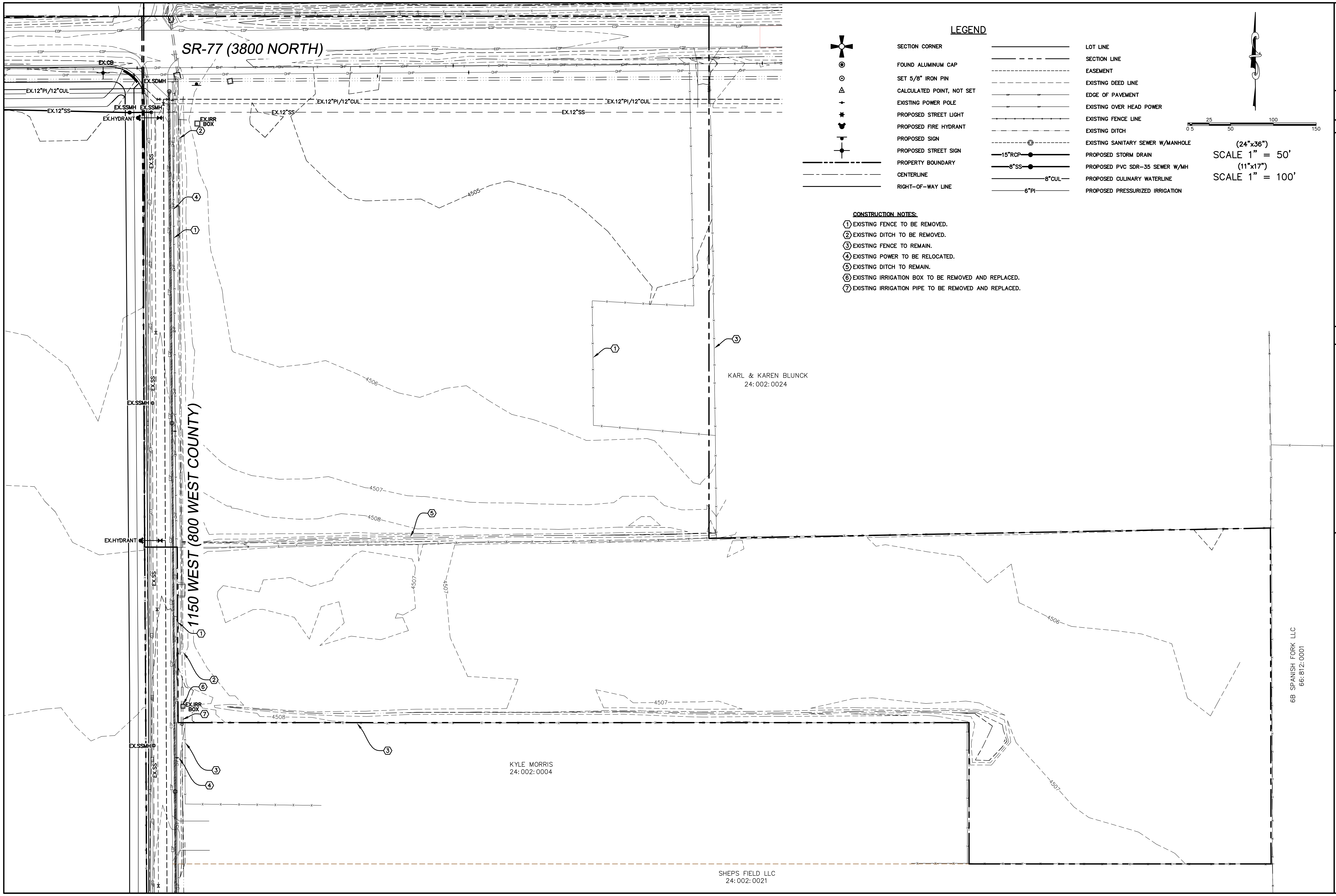

LEGEND

SECTION CORNER
FOUND ALUMINUM CAP
SET 5/8" IRON PIN
CALCULATED POINT, NOT SET
EXISTING POWER POLE
PROPOSED STREET LIGHT
PROPOSED FIRE HYDRANT
PROPOSED SIGN
PROPOSED STREET SIGN
PROPERTY BOUNDARY
CENTERLINE
RIGHT-OF-WAY LINE

LOT LINE
SECTION LINE
EASEMENT
EXISTING DEED LINE
EDGE OF PAVEMENT
EXISTING OVER HEAD POWER
EXISTING FENCE LINE
EXISTING DITCH
EXISTING SANITARY SEWER W/MANHOLE
15"RCP PROPOSED STORM DRAIN
8"SS PROPOSED PVC SDR-35 SEWER W/MH
8"CUL PROPOSED CULINARY WATERLINE
6"PI PROPOSED PRESSURIZED IRRIGATION

(24"x36")
SCALE 1" = 50'
(11"x17")
SCALE 1" = 100'

CONSTRUCTION NOTES:

1. EXISTING FENCE TO BE REMOVED.
2. EXISTING DITCH TO BE REMOVED.
3. EXISTING FENCE TO REMAIN.
4. EXISTING POWER TO BE RELOCATED.
5. EXISTING DITCH TO REMAIN.
6. EXISTING IRRIGATION BOX TO BE REMOVED AND REPLACED.
7. EXISTING IRRIGATION PIPE TO BE REMOVED AND REPLACED.

ATLAS
ENGINEERING
L.L.C.

NIELSEN PROPERTY

PHONE: 801-655-0566
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

EXISTING
TOPOGRAPHY

SPANISH FORK, UTAH

NO.	REVISIONS	BY	DATE
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SHEET NO.
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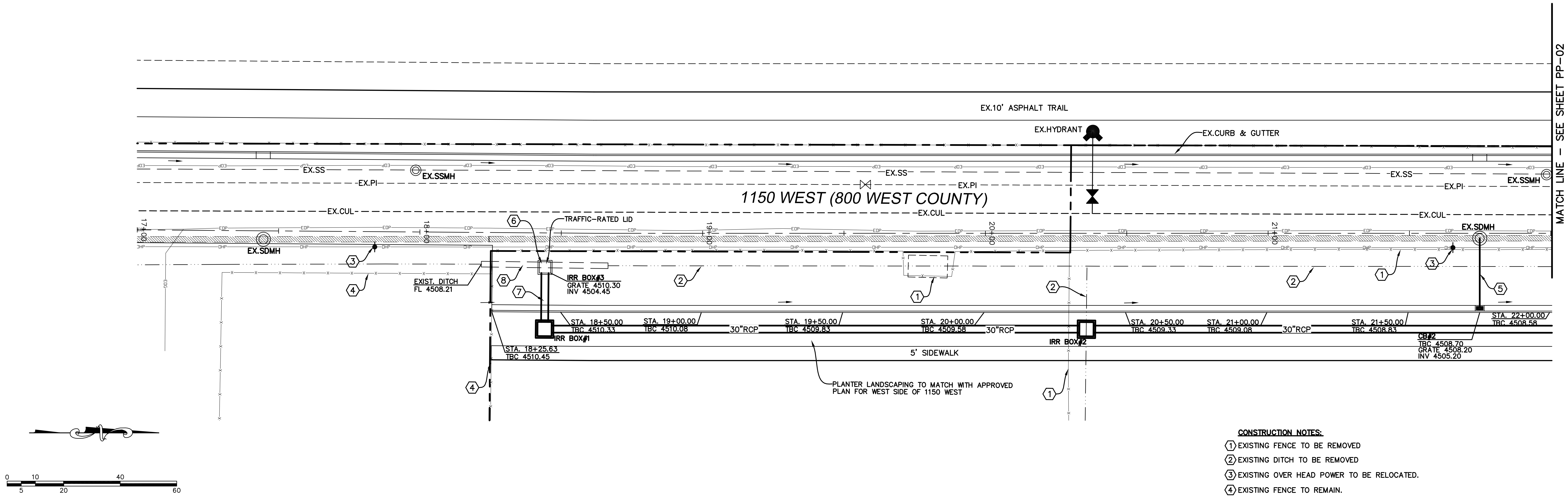
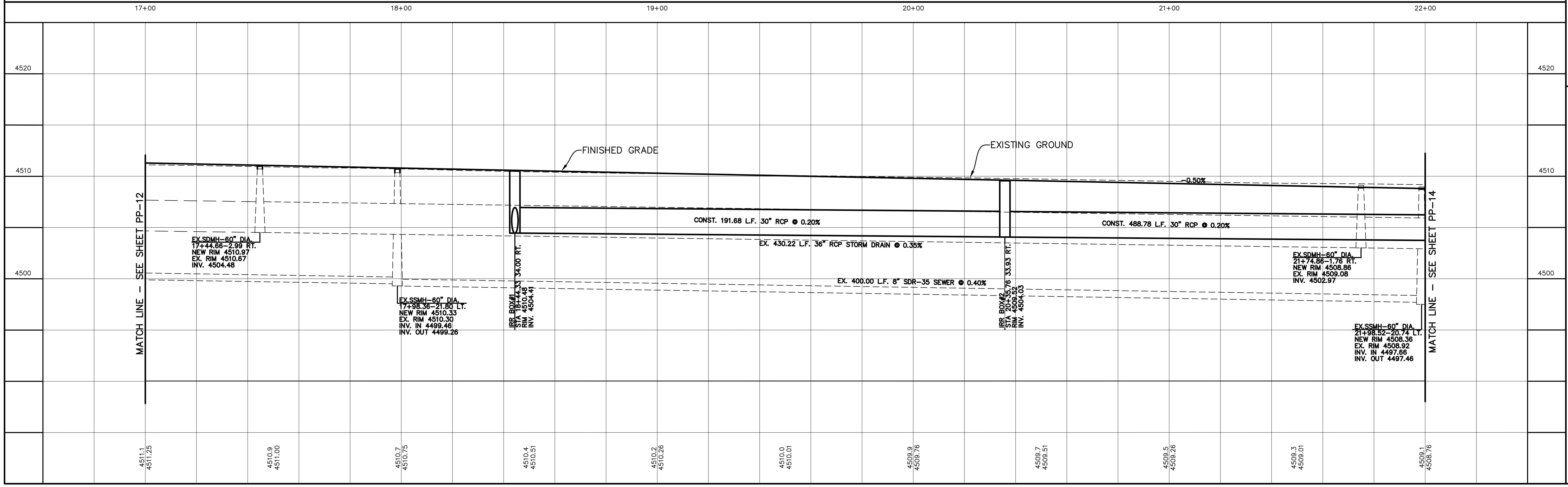


-24"x36"-
SCALE 1" = 20'
-11"x17"-
SCALE 1" = 40'

CONSTRUCTION NOTES:

1. EXISTING FENCE TO BE REMOVED
2. EXISTING DITCH TO BE REMOVED
3. EXISTING OVER HEAD POWER TO BE RELOCATED.
4. EXISTING FENCE TO REMAIN.
5. CONST. 24.14 L.F. 15" RCP STORM DRAIN @ 9.24%.
6. REMOVE AND REPLACE EXISTING IRRIGATION BOX.
7. CONST. 21.80 L.F. 30" RCP @ 0.20%.
8. REMOVE AND REPLACE EXISTING IRRIGATION PIPE, CONST. 20.55 L.F. 30" RCP @ 18.30%.



SHEET NO.
PP-01

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1150 WEST
STA. 17+00 TO STA. 22+00

SPANISH FORK, UTAH

NIELSEN PROPERTY

ATLAS
ENGINEERING
L.L.C.

PHONE: 801-655-0566
FAX: 801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

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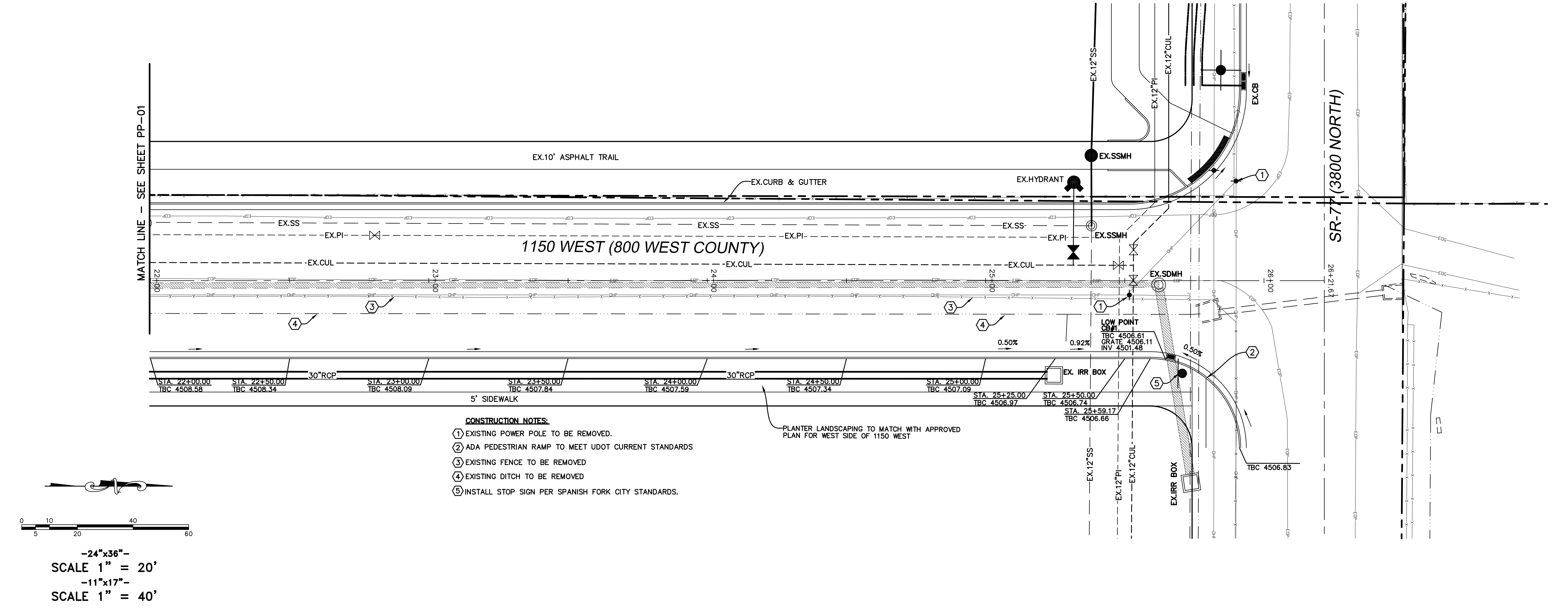
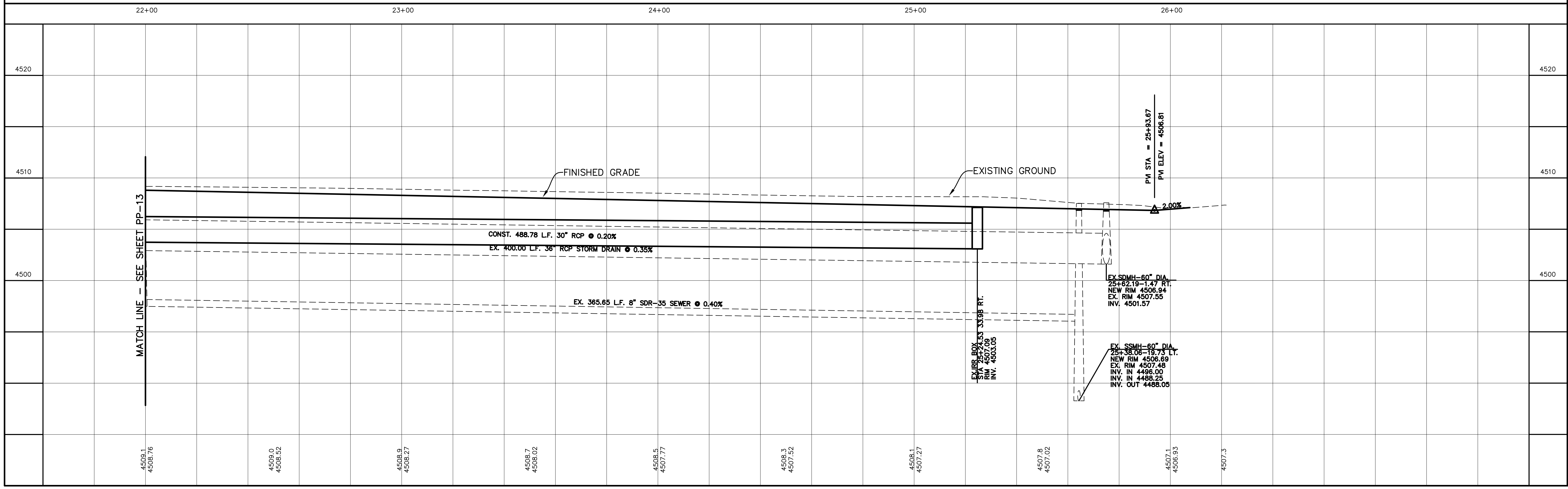


CONSTRUCTION NOTES:

① EXISTING POWER POLE TO BE REMOVED.
② ADA PEDESTRIAN RAMP TO MEET UDOT CURRENT STANDARDS
③ EXISTING FENCE TO BE REMOVED
④ EXISTING DITCH TO BE REMOVED
⑤ INSTALL STOP SIGN PER SPANISH FORK CITY STANDARDS.

–24"x36"–
SCALE 1" = 20'
–11"x17"–
SCALE 1" = 40'



SHEET NO.

PP-02

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1150 WEST
STA. 22+00 TO STA. 26+21.67

SPANISH FORK, UTAH

NIELSEN PROPERTY

ATLAS
ENGINEERING
L.L.C.
PHONE: 801-655-0566
FAX: 801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

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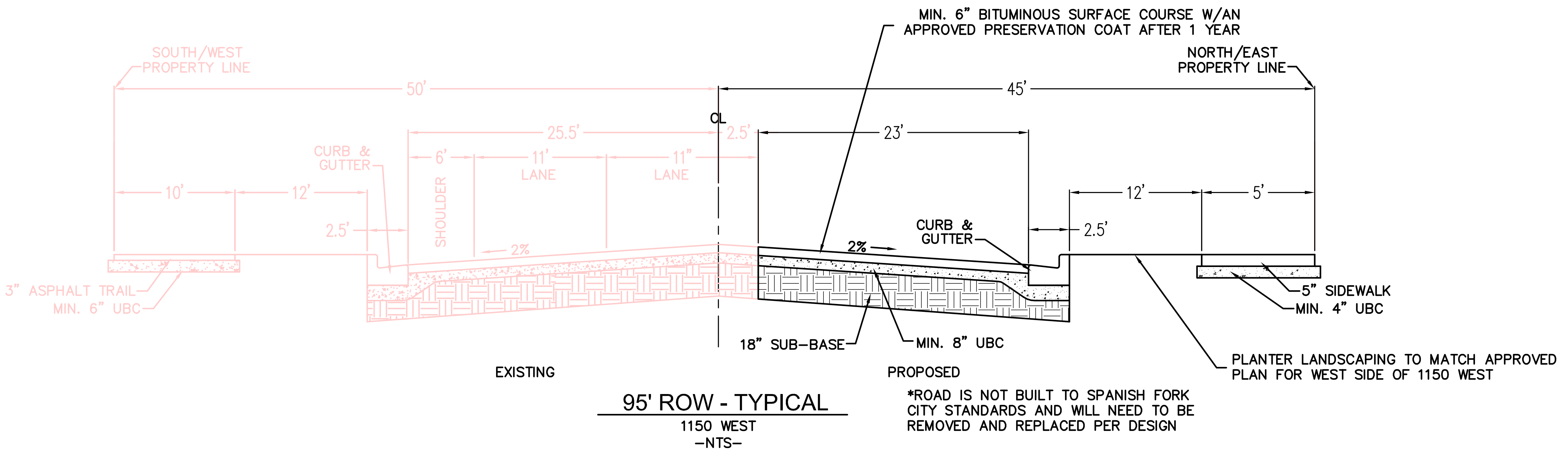
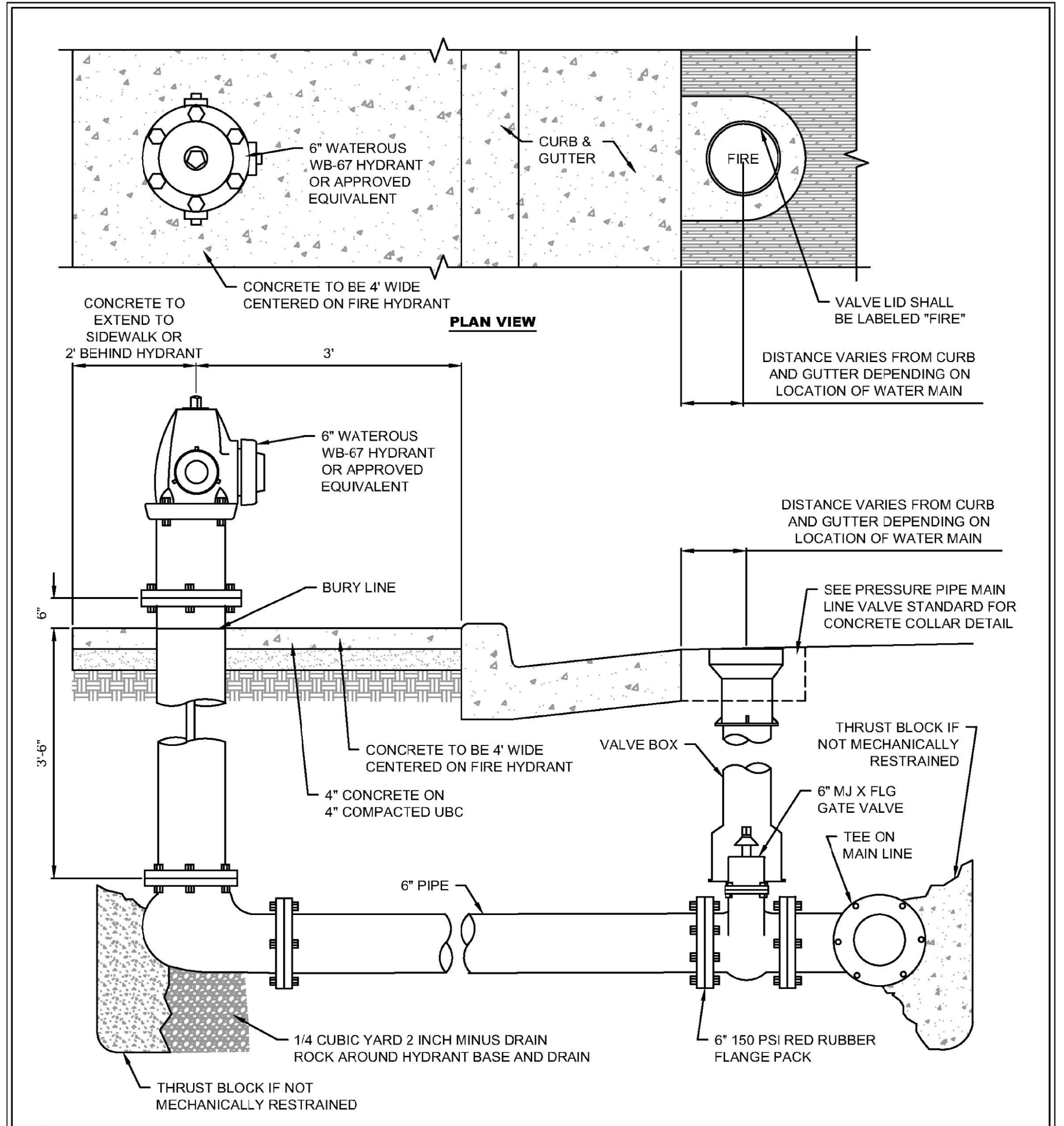


95' ROW - TYPICAL

1150 WEST
-NTS-

*ROAD IS NOT BUILT TO SPANISH FORK CITY STANDARDS AND WILL NEED TO BE REMOVED AND REPLACED PER DESIGN


6" WATEROUS WB-67 HYDRANT OR APPROVED EQUIVALENT
CURB & GUTTER
FIRE
CONCRETE TO BE 4' WIDE CENTERED ON FIRE HYDRANT
CONCRETE TO EXTEND TO SIDEWALK OR 2' BEHIND HYDRANT
PLAN VIEW
VALVE LID SHALL BE LABELED "FIRE"
DISTANCE VARIES FROM CURB AND GUTTER DEPENDING ON LOCATION OF WATER MAIN
3'
6" WATEROUS WB-67 HYDRANT OR APPROVED EQUIVALENT
DISTANCE VARIES FROM CURB AND GUTTER DEPENDING ON LOCATION OF WATER MAIN
BURY LINE
SEE PRESSURE PIPE MAIN LINE VALVE STANDARD FOR CONCRETE COLLAR DETAIL
6"
3'-6"
CONCRETE TO BE 4' WIDE CENTERED ON FIRE HYDRANT
VALVE BOX
THRUST BLOCK IF NOT MECHANICALLY RESTRAINED
4" CONCRETE ON 4" COMPACTED UBC
6" MJ X FLG GATE VALVE
TEE ON MAIN LINE
6" PIPE
1/4 CUBIC YARD 2 INCH MINUS DRAIN ROCK AROUND HYDRANT BASE AND DRAIN
6" 150 PSI RED RUBBER FLANGE PACK
THRUST BLOCK IF NOT MECHANICALLY RESTRAINED

NOTES:
1. FIRE HYDRANTS SHALL BE PAINTED RED.
2. ALL BOLTS SHALL BE FREE FROM CONCRETE AND FULLY ACCESSIBLE.
3. IF THERE IS NOT A PLANTER STRIP, THE CENTER OF THE HYDRANT SHALL BE LOCATED 24" BEHIND THE SIDEWALK WITH A 4' BY 4' CONCRETE PAD CENTERED ON THE HYDRANT.
4. THERE SHALL BE NO OBSTACLES INCLUDING BUT NOT LIMITED TO POLES, UTILITY BOXES, TREES, FENCES, OR WALLS WITHIN 3' OF HYDRANT.
5. RISERS MAY ONLY BE USED WHEN AUTHORIZED BY THE CITY ENGINEER OR HIS/HER DESIGNEE.

SPANISH FORK ENGINEERING

SPANISH FORK CITY
40 SOUTH MAIN STREET
SPANISH FORK, UT 84660
(801) 804-4550

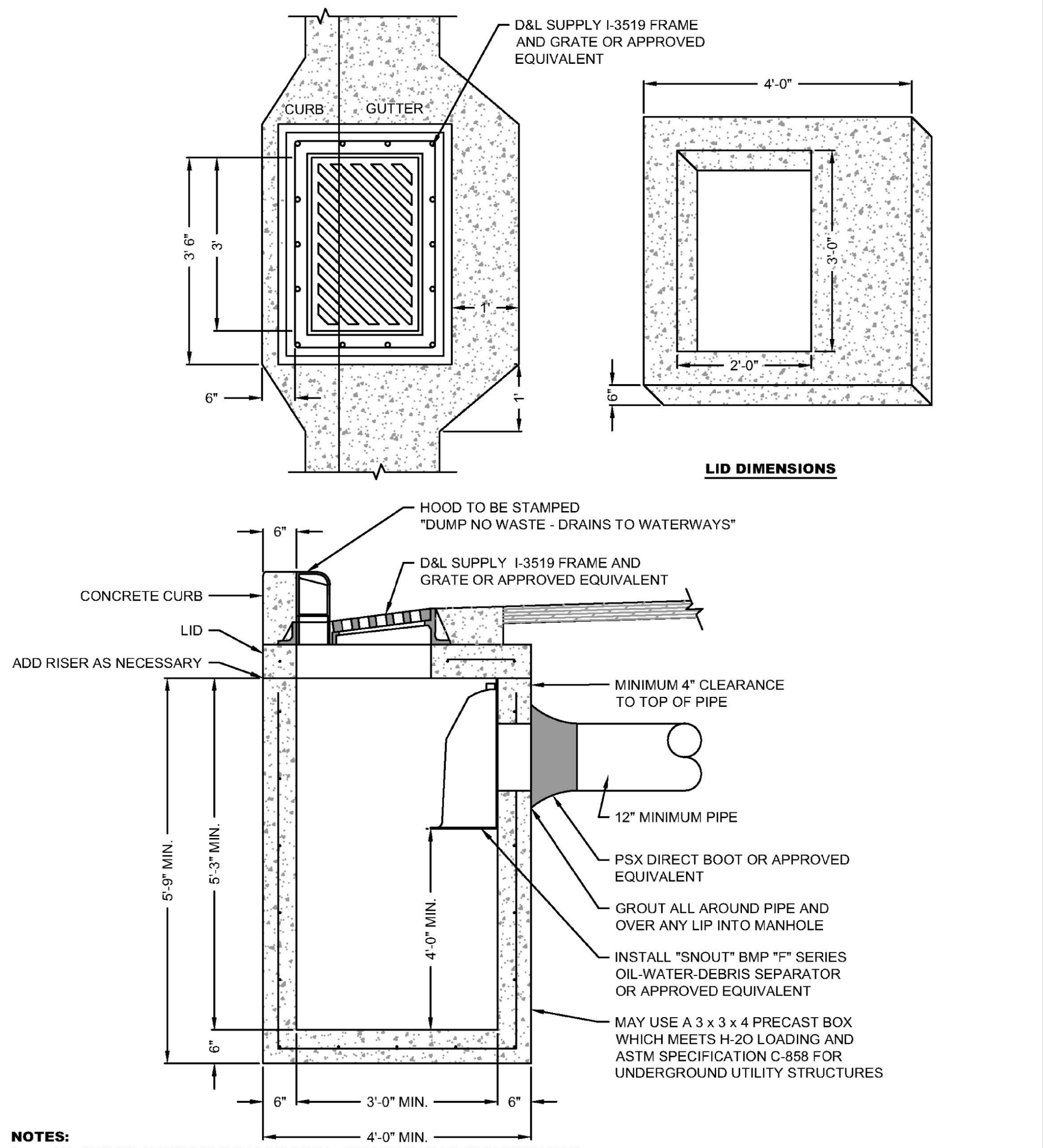
STANDARD DRAWING

FIRE HYDRANT

DRAWN: JLR
DESIGN: MHC
REVISION: .
DATE: 4/16/2019

SCALE
NONE

STANDARD
W-210


D&L SUPPLY I-3519 FRAME AND GRATE OR APPROVED EQUIVALENT
CURB
GUTTER
3' 6"
3'
1'
6"
4'-0"
3'-0"
2'-0"
6"
LID DIMENSIONS
HOOD TO BE STAMPED "DUMP NO WASTE - DRAINS TO WATERWAYS"
6"
D&L SUPPLY I-3519 FRAME AND GRATE OR APPROVED EQUIVALENT
CONCRETE CURB
LID
ADD RISER AS NECESSARY
MINIMUM 4" CLEARANCE TO TOP OF PIPE
12" MINIMUM PIPE
PSX DIRECT BOOT OR APPROVED EQUIVALENT
GROUT ALL AROUND PIPE AND OVER ANY LIP INTO MANHOLE
5'-9" MIN.
5'-3" MIN.
4'-0" MIN.
INSTALL "SNOUT" BMP "F" SERIES OIL-WATER-DEBRIS SEPARATOR OR APPROVED EQUIVALENT
MAY USE A 3 x 3 x 4 PRECAST BOX WHICH MEETS H-2O LOADING AND ASTM SPECIFICATION C-858 FOR UNDERGROUND UTILITY STRUCTURES
6"
6"
3'-0" MIN.
6"
4'-0" MIN.

NOTES:
1. ALL STORM TRANSMISSION LINES SHALL RUN THROUGH STORM MANHOLES.
2. BOX SHALL BE SIZED ACCORDING TO TABLE ON STANDARD #32.
3. UNLESS OTHERWISE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER, #4 REBAR WILL BE SPACED AT MINIMUM OF 12" O.C. IN ALL DIRECTIONS IN CONCRETE, ALL REBAR SHALL OVERLAP A MINIMUM OF 14".
4. KNOCKOUT BOXES SHALL BE ALLOWED WITH CONCRETE COLLARS.

SPANISH FORK ENGINEERING

SPANISH FORK CITY
40 SOUTH MAIN STREET
SPANISH FORK, UT 84660
(801) 804-4550

STANDARD DRAWING

STORM WATER INLET BOX

DRAWN: JLR
DESIGN: MHC
REVISION: .
DATE: 10/6/2020

SCALE
NONE

STANDARD
SD-404

SHEET NO.
DT-01

NO.	REVISIONS	BY	DATE
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12			

DETAIL SHEET

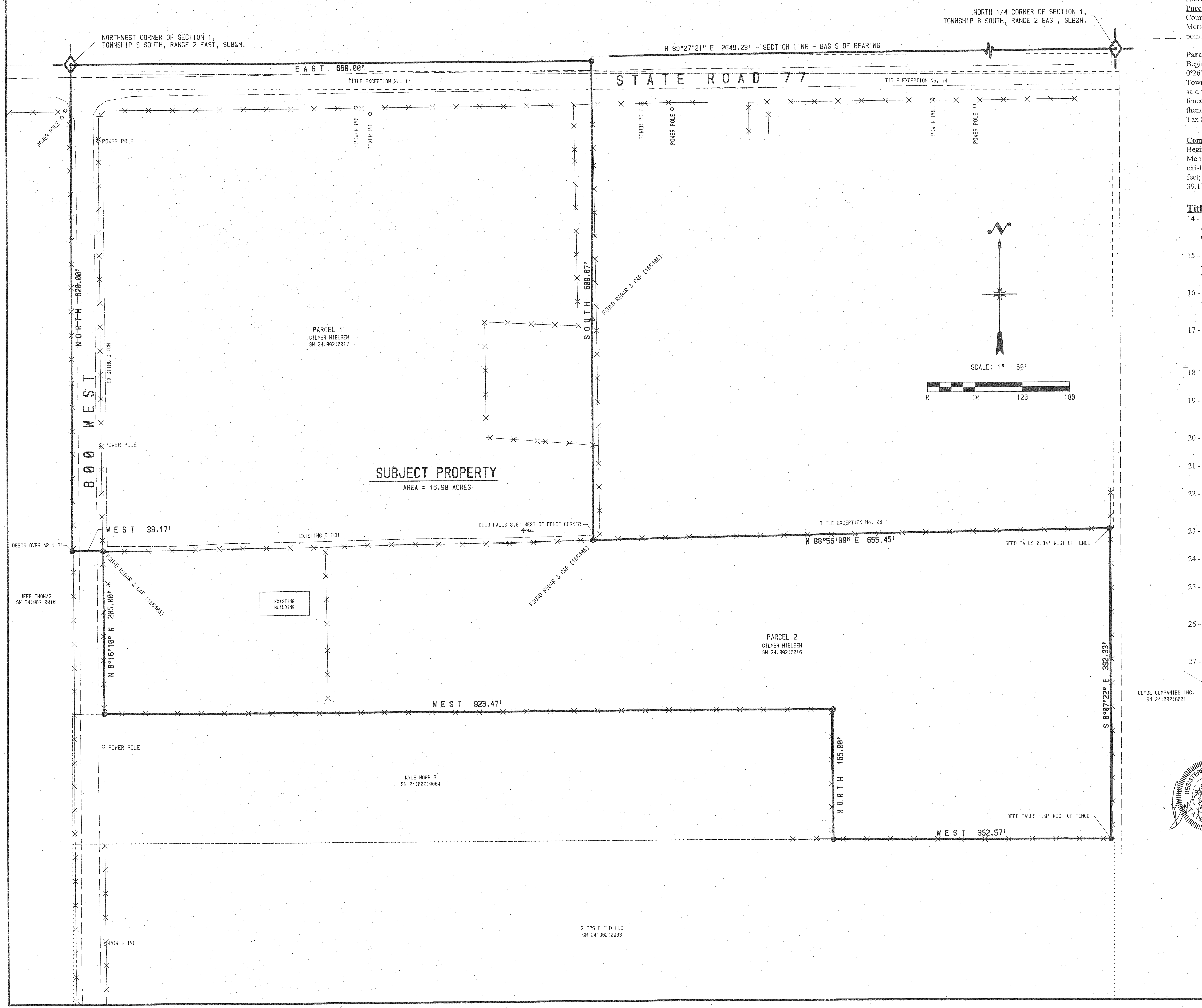
SPANISH FORK, UTAH

NIELSEN PROPERTY

ATLAS ENGINEERING L.L.C.

PHONE: 801-655-0566
FAX: 801-655-0109
946 E. 800 N. SUITE A
SPANISH FORK, UT 84660

Z:\2021\21-041 J6 Industrial\CADD\FINAL\DT-01 good.dwg 9/29/2022 11:17:53 AM MDT



Old Republic National Title Insurance Company
GWC Capital, LLC
File Number: 21-2804
Date: 02/04/2021

Nielsen Property Descriptions:

Parcel 1:
Commencing at the Northwest Corner of Section 1, Township 8 South, Range 2 East, Salt Lake Base and Meridian; thence South 620 feet; thence East 660 feet; thence North 620 feet; thence West 660.00 feet to the point of beginning. Tax Serial Number: 24:002:0017

Parcel 2:
Beginning at a point in a fence on the East side of 800 West Street, Utah County, which point lies South 0°26'55" East 621.45 feet along the Section Line and East 34.31 feet from the Northwest Corner of Section 1, Township 8 South, Range 2 East, Salt Lake Base and Meridian; thence South 0°16''10" East 203.57 feet along said fence line and 800 West Street; thence East 923.47 feet along a fence line; thence South 165.00 feet along a fence line; thence East 352.57 feet along a fence line; thence North 0°07'22" West 392.33 feet along a fence; thence South 88°56'00" West 1276.38 feet along a fence to the point of beginning.
Tax Serial Number: 24:002:0016

Combined Description:
Beginning at the Northwest Corner of Section 1, Township 8 South, Range 2 East, Salt Lake Base and Meridian; thence East 660.00 feet; thence South 609.87 feet; thence North 88°56'00" East 655.45 feet along an existing Quiet Title Line (Entry No. 37655:2016); thence South 0°07'22" East 392.33 feet; thence West 352.57 feet; thence North 165.00 feet; thence West 923.47 feet; thence North 0°16'10" West 205.00 feet; thence West 39.17 feet; thence North 620.00 feet to the point of beginning. Containing 16.98 acres.

Title Exceptions:

14 - Subject to the Easement of Utah Power and Light Company, recorded on March 22, 1985 as Instrument #7596 in Book 2204, Page 815 in the official records of the Utah County Recording Office.. (Shown and labeled on plat).

15 - Subject to the Notice of Creation of Agriculture Protection Area filed bu the Utah County Commission on June 3, 1999 as Entry #65293 in the office of the Utah County Recorder. (Blanket description covering all of subject property).

16 - Subject to the Restrictive Covenant of Paul F. Johnson, recorded on September 26, 2003 as Instrument #157064 in the official records of the Utah County Recorder. (Covenant to not use the subject property or construct any structure thereon without first obtaining a permit from Utah County, applies to Parcel 1).

17 - Subject to the Water Deed filed by Paul F. Johnson to Gilmer R. Nielsen and Dorothy J. Nielsen, husband and wife, as joint tenants, recorded on August 17, 2004 as Instrument #94735 in the official records of the Utah County Recording Office. (A total of 6.9 shares of Spanish Fork River Water and 5 shares of Strawberry Water, applies to Parcel 1).

18 - Subject to the Resolution of Board of County Commissioners, recorded on September 30, 2008 as Entry #107508 in the official records of the Utah County Recording Office.

19 - Subject to the Certificate of Creation of State of Utah, recorded on October 22, 2008 as Instrument #114949 in the official records of the Utah County Recording Office.

20 - Subject to the Resolution of Board of County Commissioners of Utah County, recorded on April 21, 2009 as Instrument #42373 in the official records of the Utah County Recording Office.

21 - Subject to the Certificate of Creation filed by State of Utah, recorded on May 8, 2009 as Instrument #509639 in the official records of the Utah County Recording Office.

22 - Subject to the Notice of Impending Boundary Action of Board of County Commissioners of Utah County, recorded on November 24, 2014 as Instrument #84539 in the official records of the Utah County Recording Office.

23 - Subject to the Certificate of Withdrawal of State of Utah, recorded on November 24, 2014 as Instrument #84540 in the official records of the Utah County Recording Office.

24 - Subject to the Resolution of Board of County Commissioners of Utah County, recorded on November 24, 2014 as Instrument #84542 in the official records of the Utah County Recording Office.

25 - Subject to the Quit Claim Deed of the United States of America and the South Utah Valley Electric Service District, recorded on January 14, 2015 as Instrument #3187 in the official records of the Utah County Recording Office. (Blanket Description covering all of subject property).

26 - Subject to the Quiet Title Action by and between Gilmer R. Nielsen and Dorothy J. Nielsen and Karl E. Blunck and Karen B. Blunck, recorded on January 29, 2016 as Instrument 37655 in the official records of the Utah County Recording Office. (Labeled on plat).

27 - Subject to the Application for Assessment and Taxation of Agricultural Land filed by Gilmer R. Nielsen and Dorothy J. Nielsen, recorded on March 15, 2017 as Instrument #25006 in the official records of the Utah County Recording Office.

SURVEYORS CERTIFICATE:

TO GWC CAPITAL, LLC, AND OLD REPUBLIC NATION TITLE INSURANCE COMPANY.
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1,4,8,11, & 13 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MARCH 19, 2021.

BARRY L
PRETTYMAN
3-22-21
#166406

Barry L. Prettyman
BARRY L. PRETTYMAN PLS 166406

3-22-21
DATE

NARRATIVE:

BASIS OF BEARING IS UTAH COORDINATE BEARINGS, CENTRAL ZONE. (N 89°27'21" E BETWEEN THE NORTHWEST CORNER AND THE NORTH 1/4 CORNER OF SECTION 1, TOWNSHIP 8 SOUTH, RANGE 2 EAST, SLB&M.) PURPOSE OF SURVEY IS TO COMPARE DEEDED PROPERTY AGAINST EXISTING PROPERTY IN ACTUAL POSSESSION AND LOCATE EXISTING IMPROVEMENTS.

LEGEND:

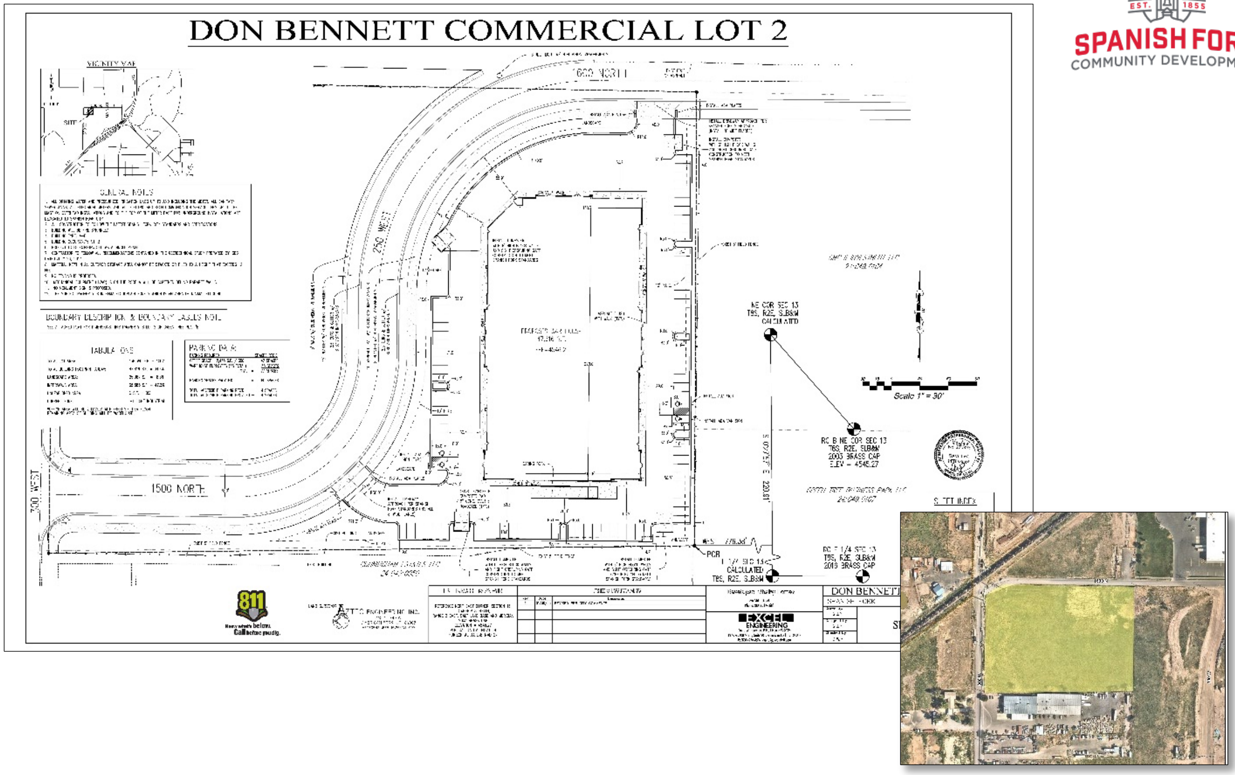
● = 5/8" REBAR WITH ORANGE CAP MARKED PLS 166406.
——— - - ——— NIELSEN DEED LINES
‾ ‾ ‾ ‾ ‾ ADJACENT LAND OWNER DEED LINES
—×—×—× EXISTING FENCES

SHEET No.
1 OF 1

DATE: MAR. 22, 2021
DATE REVISED:
DRAWN BY: B.L.P.
APPROVED BY: B.L.P.
SCALE: 1" = 60'

GWC CAPITAL LLC - NEILSEN
ALTA/NSPS LAND TITLE SURVEY
SPANISH FORK, UTAH

ATLAS ENGINEERING
946 EAST 800 NORTH - SUITE #A
SPANISH FORK, UTAH - 84660
PHONE: (801) 655 - 0566



Don Bennett Commercial Lot 2 Site Plan Approval Request

March 15, 2023, Development Review Committee Meeting.

Located at 1600 North 300 West, including 3.2 acres.

The subject property is zoned I-1.

The applicant has requested that a Site Plan be approved.

Key Issues

1. Subdivision Plat.
2. Development Agreement.
3. Landscaping.

Recommendation

Staff recommends that the proposed Site Plan be approved based on the following findings and subject to the following conditions:

Finding

1. That the application conforms to the City's General Plan Designation and Zoning Map.

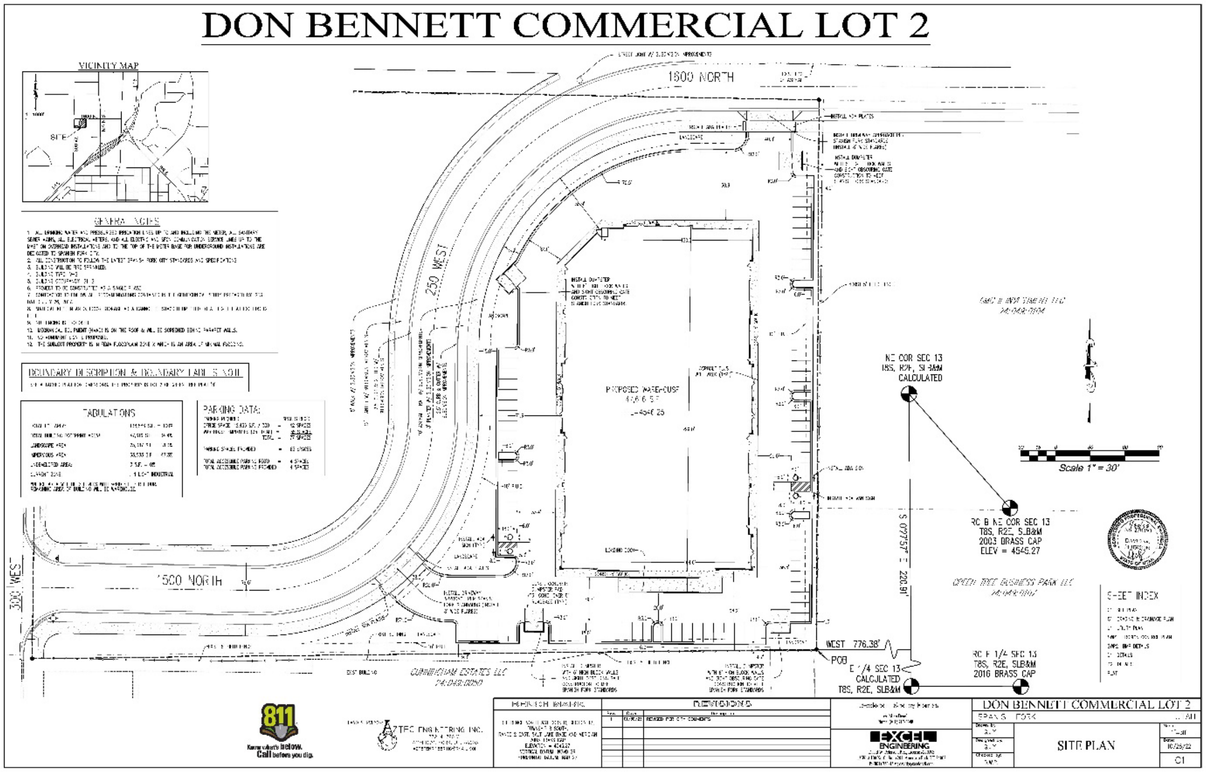
Conditions

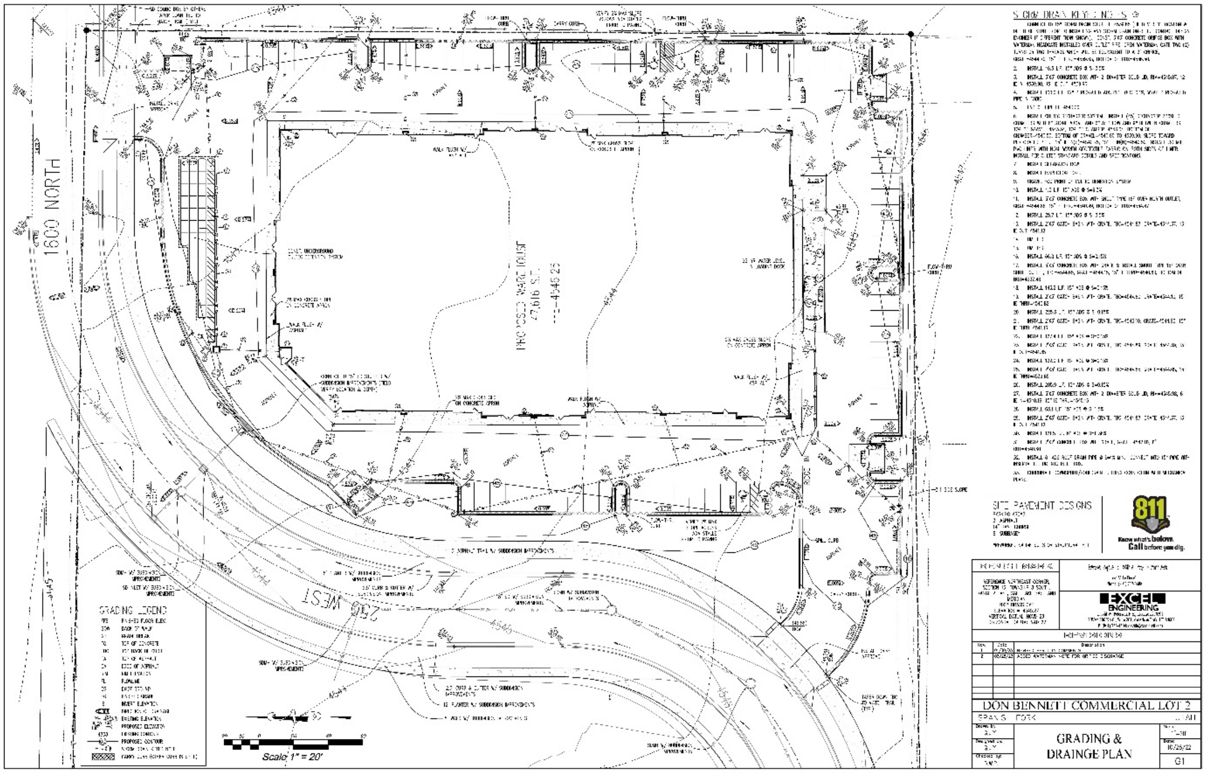
1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.
3. That the subdivision plat be recorded.
4. That the applicant addresses any outstanding subdivision conditions of approval.

Exhibits

1. Site Plan.
2. Elevations.
3. Landscaping.

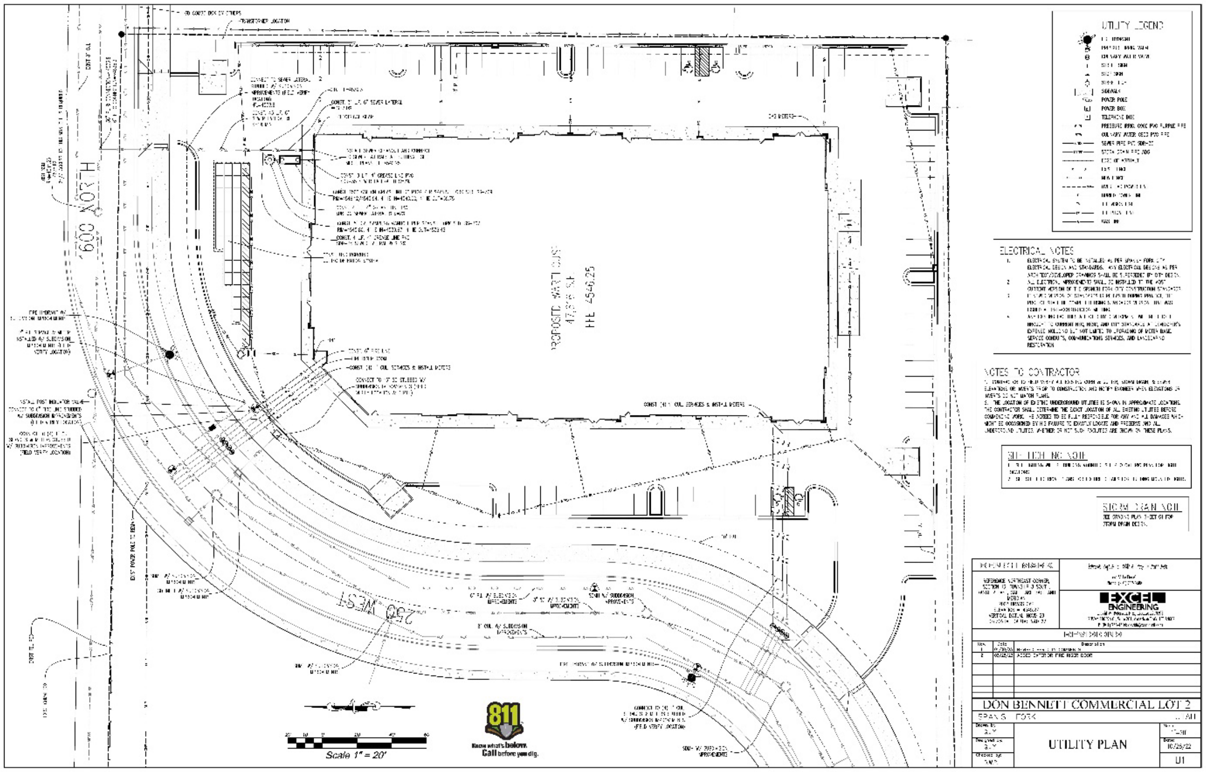
Exhibit 1



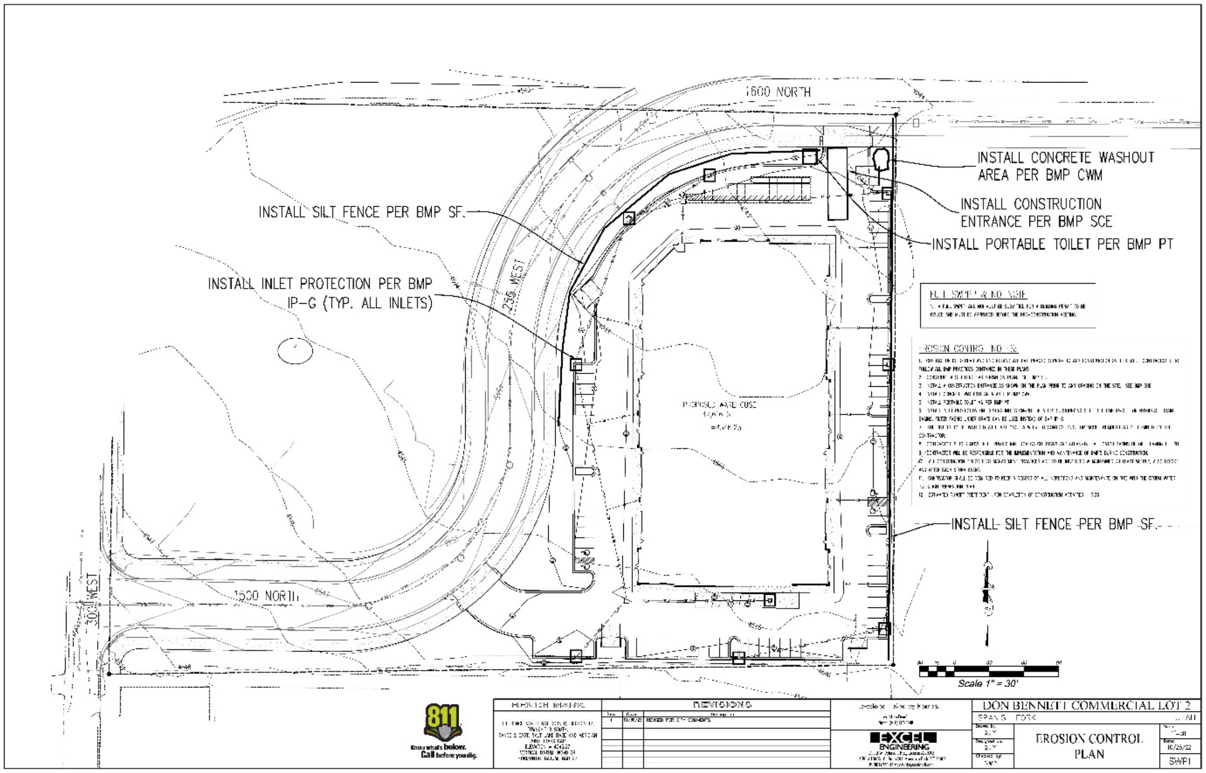


March 15, 2023

Exhibit 1

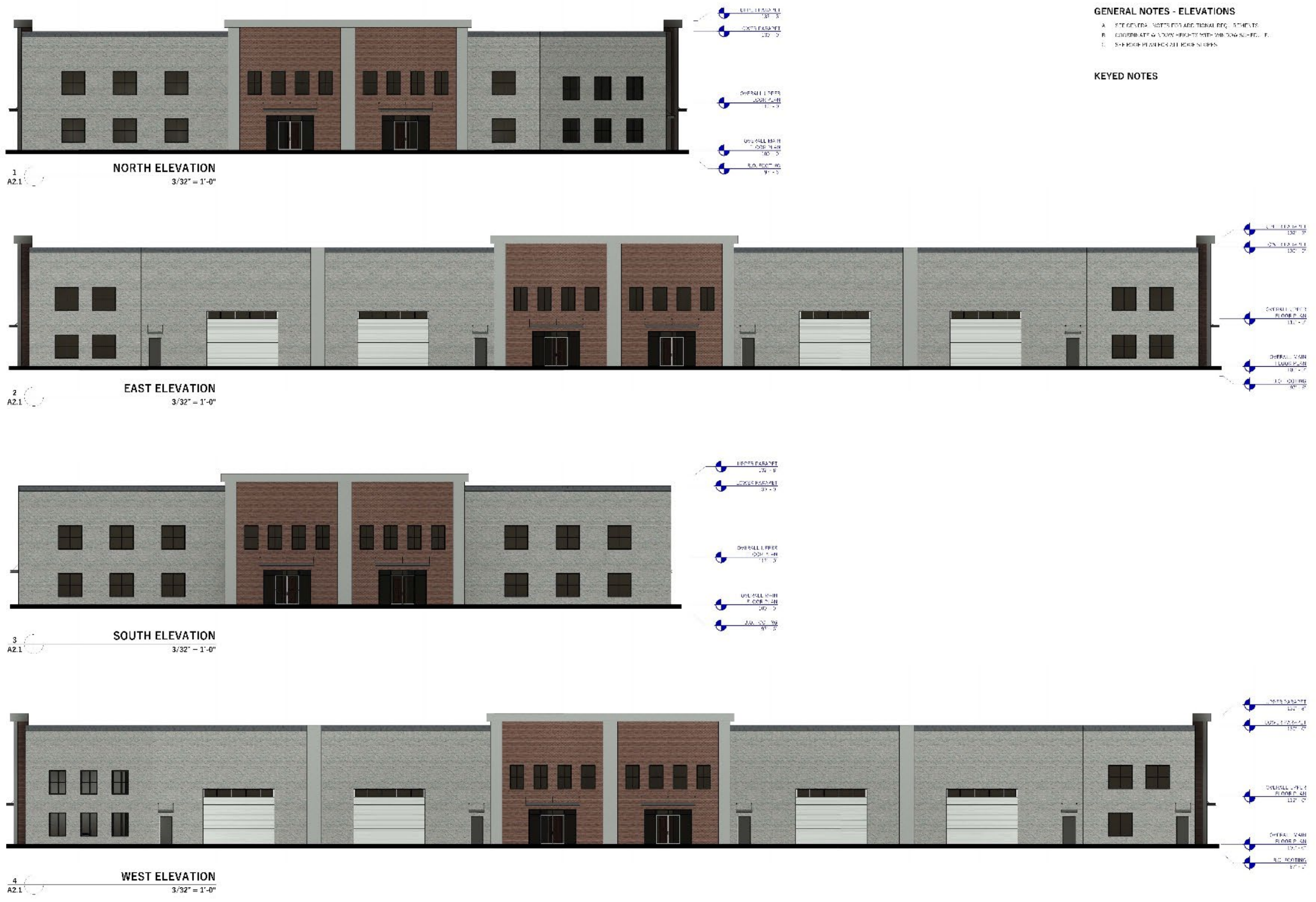


UTILITY LEGEND
ELECTRICAL NOTES
NOTES TO CONTRACTOR
STORM DRAIN NOTE
SEE GRADING PLAN SHEET G1 FOR STORM DRAIN DESIGN.
1600 NORTH
2730 WEST
PROPOSED WAREHOUSE
FFE 4546.25
Scale 1" = 20'
811 Know what's below. Call before you dig.
BENCH MARK
REFERENCE NORTHEAST CORNER, SECTION 13, TOWNSHIP 8 SOUTH
ELEVATION = 4546.27
VERTICAL DATUM: NGVD 29
EXCEL ENGINEERING
REVISIONS
Rev. Date Description
2 03/25/22 ADDED EXTERIOR FIRE RISER DOOR
DON BENNETT COMMERCIAL LOT 2
SPANISH FORK UTAH
Drawn By
Designed By
Checked By
UTILITY PLAN
Date 10/26/22
U1



1600 NORTH
INSTALL CONCRETE WASHOUT AREA PER BMP CWM
INSTALL CONSTRUCTION ENTRANCE PER BMP SCE
INSTALL PORTABLE TOILET PER BMP PT
INSTALL SILT FENCE PER BMP SF.
INSTALL INLET PROTECTION PER BMP IP-G (TYP. ALL INLETS)
2730 WEST
PROPOSED WAREHOUSE
EROSION CONTROL NOTES
INSTALL SILT FENCE PER BMP SF.
1500 NORTH
300 WEST
Scale 1" = 30'
811 Know what's below. Call before you dig.
BENCH MARK
ELEVATION = 4546.27
VERTICAL DATUM: NGVD 29
REVISIONS
Rev. Date Description
1 REVISED PER CITY COMMENTS
EXCEL ENGINEERING
DON BENNETT COMMERCIAL LOT 2
SPANISH FORK UTAH
Drawn By
Designed By
Checked By
EROSION CONTROL PLAN
Date 10/26/22
SWP1

Exhibit 2



1 A2.1 NORTH ELEVATION 3/32" = 1'-0"

2 A2.1 EAST ELEVATION 3/32" = 1'-0"

3 A2.1 SOUTH ELEVATION 3/32" = 1'-0"

4 A2.1 WEST ELEVATION 3/32" = 1'-0"

GENERAL NOTES - ELEVATIONS

A. SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
B. COORDINATE WINDOW HEIGHTS WITH WINDOW SCHEDULE.
C. SEE ROOF PLAN FOR ALL ROOF SLOPES.

KEYED NOTES

PROJECT NUMBER
22101

ISSUE DATE:
DECEMBER 8, 2022

REVISIONS:

No.	Date	Description

CONSULTANT

DEUEL SPANISH FORK WAREHOUSE
W 1600 N
SPANISH FORK, UT 84660

ELEVATIONS

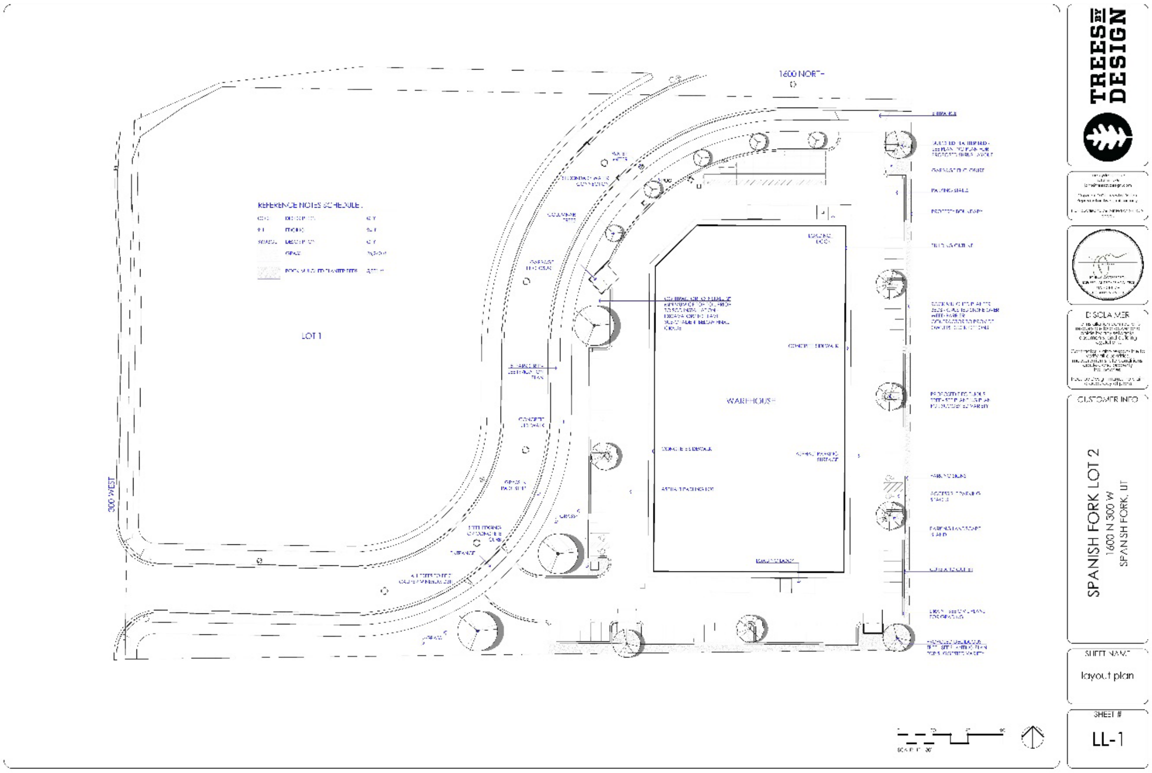
A2.1

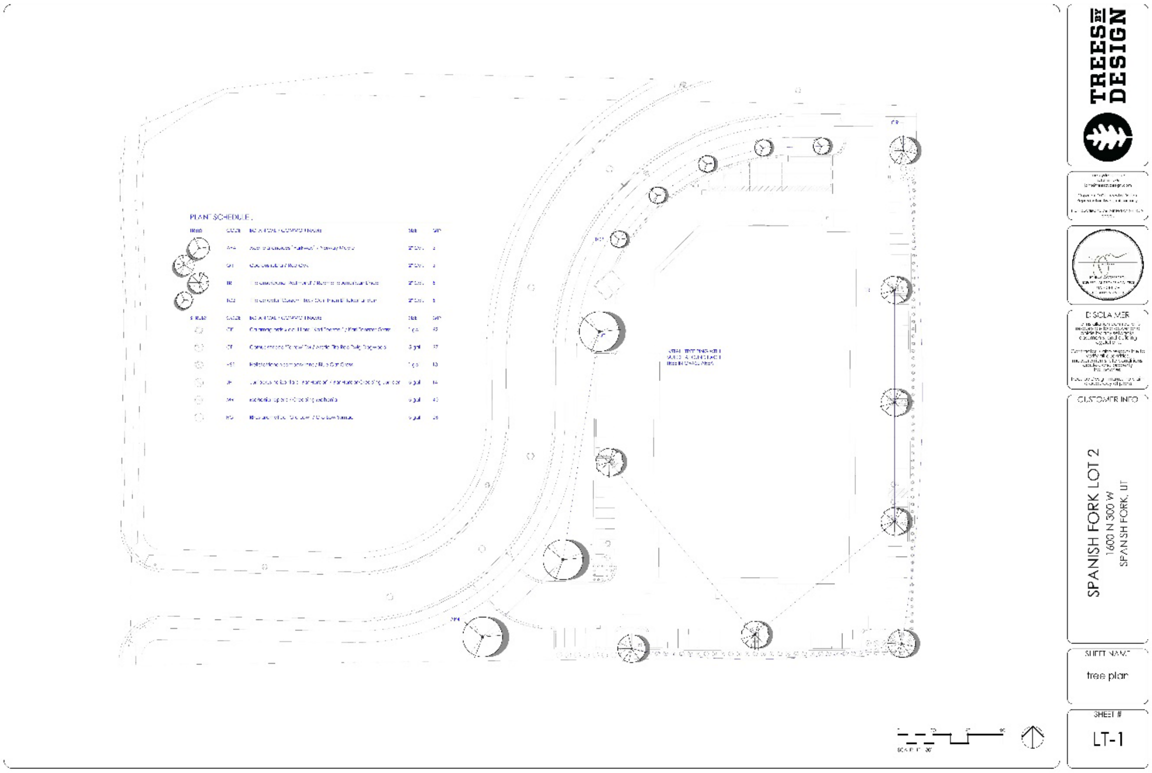
JZW ARCHITECTS

WWW.JZW-A.COM 45 EAST CENTER STREET SUITE 202, NORTH SALT LAKE, UTAH 84054 PHONE: (801) 936-1343

© Copyright 2022 JZW Architects

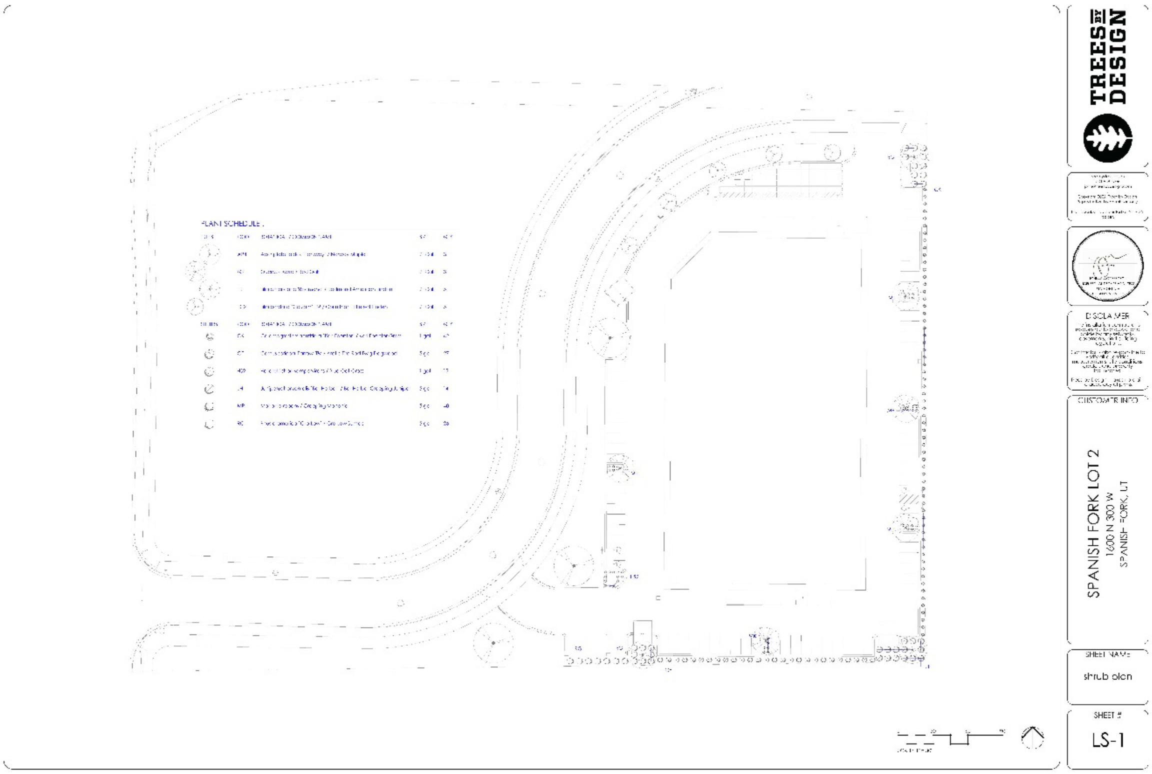
Exhibit 3

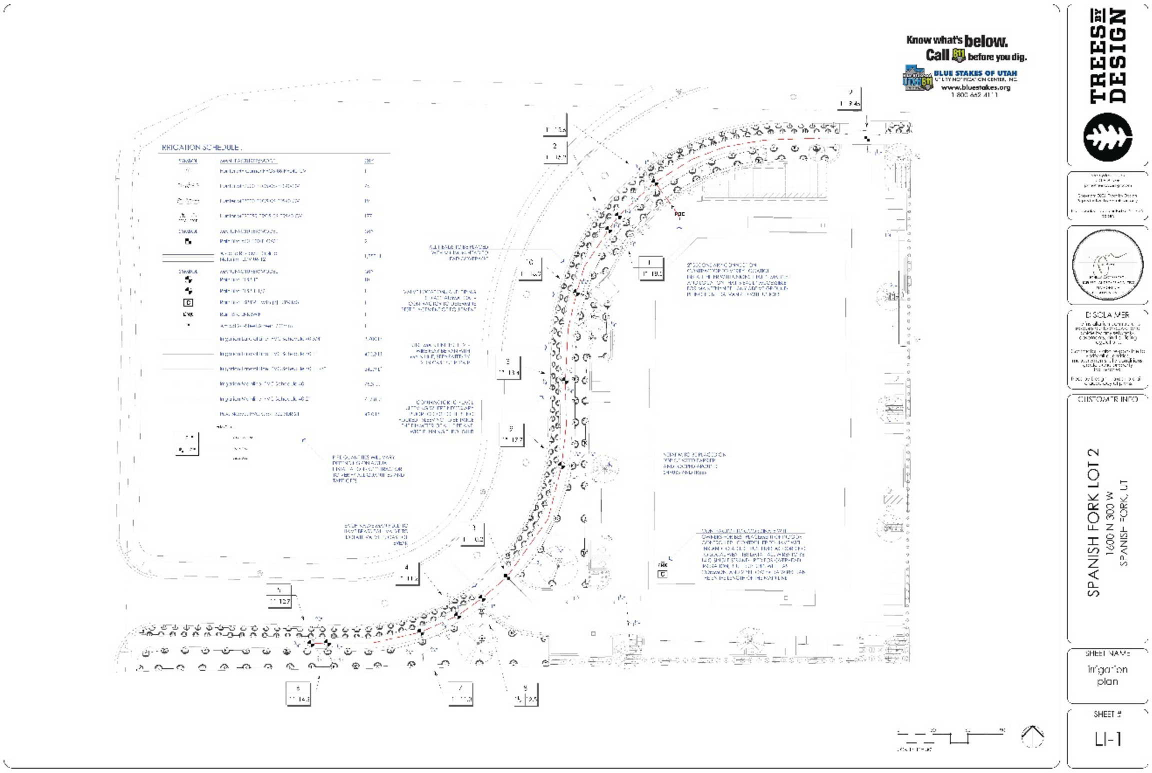




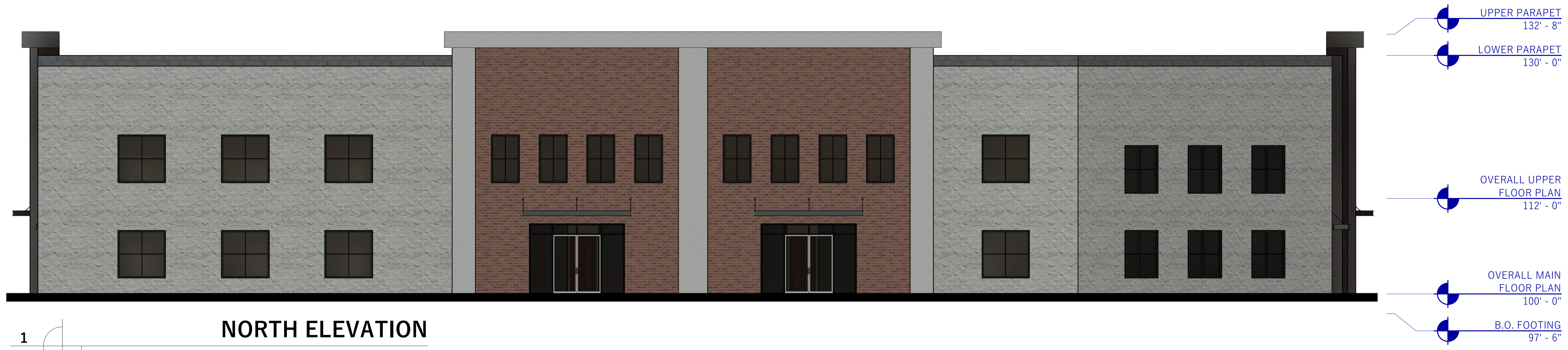
March 15, 2023

Exhibit 3

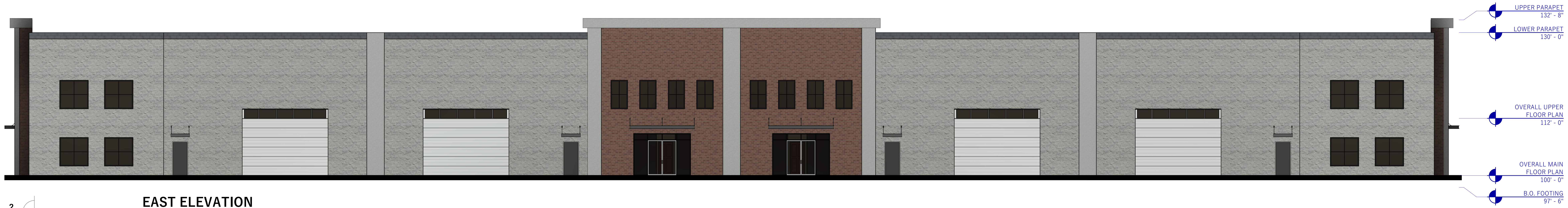




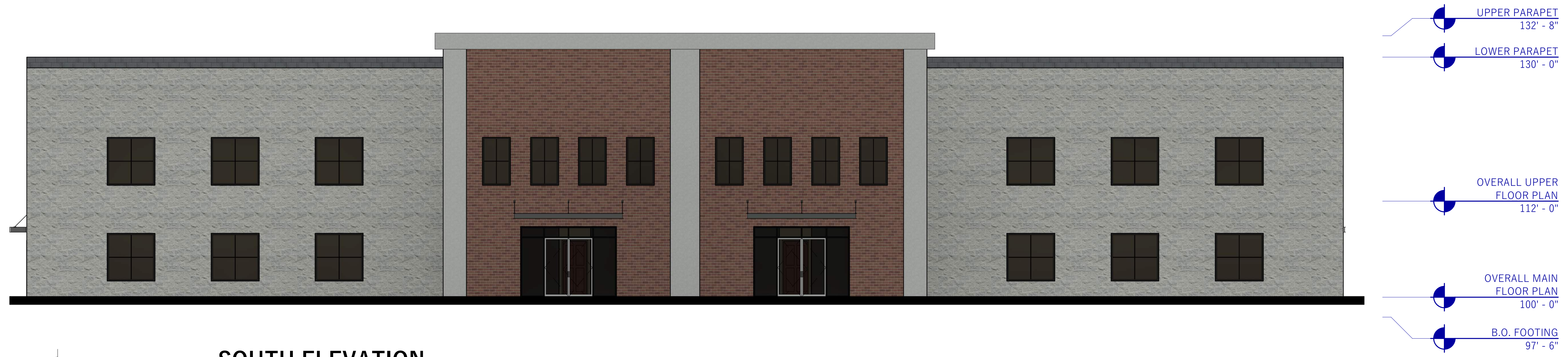
March 15, 2023



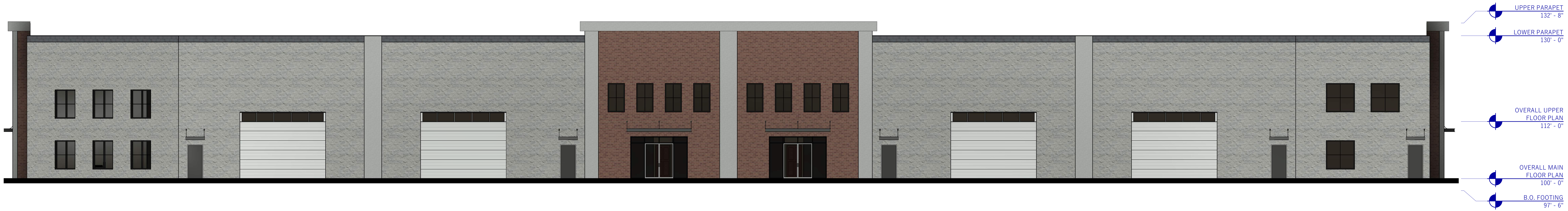
1
A2.1
NORTH ELEVATION
3/32" = 1'-0"



2
A2.1
EAST ELEVATION
3/32" = 1'-0"



3
A2.1
SOUTH ELEVATION
3/32" = 1'-0"



4
A2.1
WEST ELEVATION
3/32" = 1'-0"

GENERAL NOTES - ELEVATIONS

A	SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
B	COORDINATE WINDOW HEIGHTS WITH WINDOW SCHEDULE.
C	SEE ROOF PLAN FOR ALL ROOF SLOPES

KEYED NOTES

PROJECT NUMBER
22101

ISSUE DATE:
DECEMBER 8, 2022

REVISIONS:

No.	Date	Description

CONSULTANT

DEUEL SPANISH FORK WAREHOUSE

W 1600 N
SPANISH FORK, UT 84660

ELEVATIONS

A2.1

JZW
ARCHITECTS

© Copyright 2022 JZW Architects - The Purchaser is granted a single use license for construction only. These plans are copyrighted and are subject to copyright protection as an "architectural work" under the copyright act. The protection includes but is not limited to the overall form as well as the arrangement and composition of spaces. Under such protection, unauthorized use of these plans, work, or structure represented will result in the cessation of construction and / or monetary compensation to JZW Architects.

DON BENNETT COMMERCIAL LOT 2

VICINITY MAP

GENERAL NOTES

1. ALL DRINKING WATER AND PRESSURIZED IRRIGATION LINES UP TO AND INCLUDING THE METER, ALL SANITARY SEWER MAINS, ALL ELECTRICAL METERS, AND ALL ELECTRIC AND SFCN COMMUNICATION SERVICE LINES UP TO THE MAST ON OVERHEAD INSTALLATIONS AND TO THE TOP OF THE METER BASE FOR UNDERGROUND INSTALLATIONS ARE DEDICATED TO SPANISH FORK CITY.
2. ALL CONSTRUCTION TO FOLLOW THE LATEST SPANISH FORK CITY STANDARDS AND SPECIFICATIONS.
3. BUILDING WILL BE FIRE SPRINKLED.
4. BUILDING TYPE: V–B
5. BUILDING OCCUPANCY: S1, B
6. PROJECT TO BE CONSTRUCTED AS A SINGLE PHASE.
7. CONTRACTOR TO FOLLOW ALL RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL STUDY PREPARED BY IGES DATED JULY 26, 2017.
8. MATERIAL KEPT IN AN OUTDOOR STORAGE AREA CANNOT BE STACKED OR PILED TO A HEIGHT THAT EXCEEDS 12 FEET.
9. NO FENCING IS PROPOSED.
10. MECHANICAL EQUIPMENT (HVAC) IS ON THE ROOF & WILL BE SCREENED BEHIND PARAPET WALLS.
11. NO MONUMENT SIGN IS PROPOSED.
12. THE SUBJECT PROPERTY IS IN FEMA FLOODPLAIN ZONE X WHICH IS AN AREA OF MINIMAL FLOODING.

BOUNDARY DESCRIPTION & BOUNDARY LABELS NOTE

SEE ATTACHED PLAT FOR DIMENSIONS. THIS PROPERTY IS LOT 2 OF GREEN TREE PLAT 'B'.

TABULATIONS

TOTAL LOT AREA:	138,586 S.F. = 100%
TOTAL BUILDING FOOTPRINT AREA*:	47,616 S.F. = 34.4%
LANDSCAPE AREA:	25,387 S.F. = 18.3%
IMPERVIOUS AREA:	65,583 S.F. = 47.3%
UNDEVELOPED AREA:	0 S.F. = 0%
CURRENT ZONE:	I–1 LIGHT INDUSTRIAL

*OFFICE AREA WILL BE 2 LEVELS WITH ~800 S.F. PER FLOOR. REMAINING AREA OF BUILDING WILL BE WAREHOUSE.

PARKING DATA:

PARKING REQUIRED		SPACES REQ'D
OFFICE SPACE 12,455 S.F. / 300	=	42 SPACES
WAREHOUSE EMPLOYEES (35 TOTAL)	=	35 SPACES
TOTAL	=	77 SPACES
PARKING SPACES PROVIDED	=	85 SPACES
TOTAL ACCESSIBLE PARKING REQ'D	=	4 SPACES
TOTAL ACCESSIBLE PARKING PROVIDED	=	4 SPACES

No. 270393
DAVID W. PETERSON
1/30/23

SHEET INDEX

- C1 SITE PLAN
- G1 GRADING & DRAINAGE PLAN
- U1 UTILITY PLAN
- SWP1 EROSION CONTROL PLAN
- SWP2 BMP DETAILS
- D1 DETAILS
- D2 DETAILS
- PLAT

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

LAND SURVEYOR: AZTEC ENGINEERING INC.
732 N. 780 W.
AMERICAN FORK, UT. 84003
AZTECENGINEERING@GMAIL.COM

BENCH MARK

REFERENCE NORTHEAST CORNER, SECTION 13,
TOWNSHIP 8 SOUTH,
RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN
2003 BRASS CAP
ELEVATION = 4545.27
VERTICAL DATUM: NGVD 29
HORIZONTAL DATUM: NAD 27

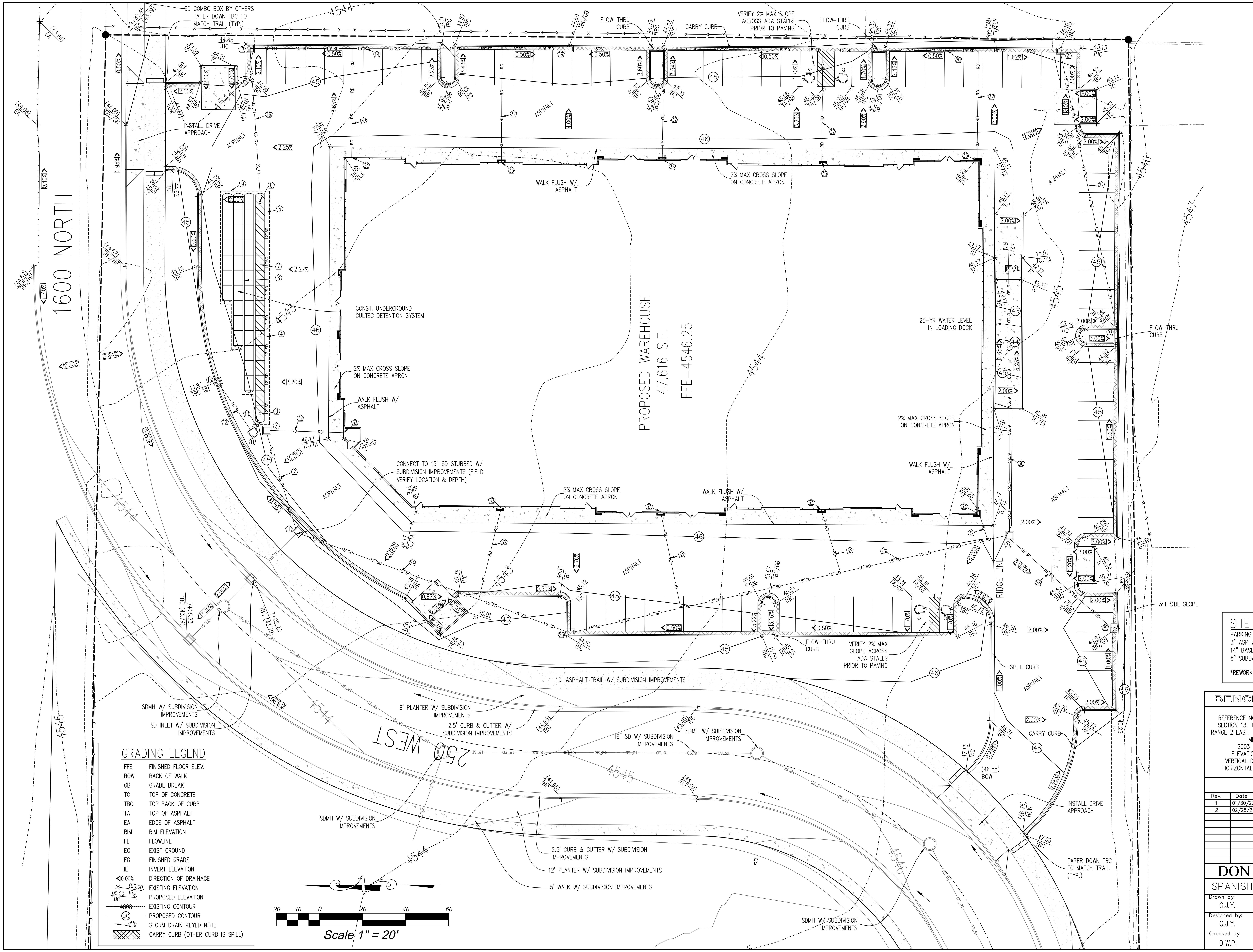
REVISIONS

Rev.	Date	Description
1	01/30/23	REVISED PER CITY COMMENTS

Developer: Shelby Homes
c/o Mike Deuel
Phone: (801) 717-6688

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

DON BENNETT COMMERCIAL LOT 2		
SPANISH FORK		UTAH
Drawn by: G.J.Y.	SITE PLAN	Scale: 1"=30'
Designed by: G.J.Y.		Date: 10/28/22
Checked by: D.W.P.		C1


1600 NORTH
250 WEST
PROPOSED WAREHOUSE
47,616 S.F.
FFE=4546.25
SD COMBO BOX BY OTHERS TAPER DOWN TBC TO MATCH TRAIL (TYP.)
INSTALL DRIVE APPROACH
FLOW-THRU CURB
CARRY CURB
VERIFY 2% MAX SLOPE ACROSS ADA STALLS PRIOR TO PAVING
ASPHALT
WALK FLUSH W/ ASPHALT
2% MAX CROSS SLOPE ON CONCRETE APRON
CONST. UNDERGROUND CULTEC DETENTION SYSTEM
25-YR WATER LEVEL IN LOADING DOCK
CONNECT TO 15" SD STUBBED W/ SUBDIVISION IMPROVEMENTS (FIELD VERIFY LOCATION & DEPTH)
RIDGE LINE
3:1 SIDE SLOPE
SPILL CURB
INSTALL DRIVE APPROACH
TAPER DOWN TBC TO MATCH TRAIL. (TYP.)
10' ASPHALT TRAIL W/ SUBDIVISION IMPROVEMENTS
8' PLANTER W/ SUBDIVISION IMPROVEMENTS
2.5' CURB & GUTTER W/ SUBDIVISION IMPROVEMENTS
18" SD W/ SUBDIVISION IMPROVEMENTS
SDMH W/ SUBDIVISION IMPROVEMENTS
SD INLET W/ SUBDIVISION IMPROVEMENTS
2.5' CURB & GUTTER W/ SUBDIVISION IMPROVEMENTS
12' PLANTER W/ SUBDIVISION IMPROVEMENTS
5' WALK W/ SUBDIVISION IMPROVEMENTS
4544
4545
4546
4547
4543
20 10 0 20 40 60
Scale 1" = 20'

STORM DRAIN KEYED NOTES ⬠

1. CONNECT TO 15" STORM DRAIN STUB, FL=4539.65 (FIELD VERIFY LOCATION & DEPTH OF STUB PRIOR TO INSTALLING ANY STORM DRAIN ON-SITE. CONTACT DESIGN ENGINEER IF DIFFERENT THAN SHOWN). CONST. 3'X3' CONCRETE ORIFICE BOX WITH WATERMAN HEADGATE INSTALLED OVER OUTLET PIPE, OPEN WATERMAN GATE TWO (2) TURNS OR TWO THREADS WHICH WILL BE EQUIVALENT TO A 3" ORIFICE, GRATE=4544.70, 15" IE THRU=4539.65, BOTTOM OF BOX=4536.50.
2. INSTALL 46.5 L.F. 15" ADS @ S=0.5%
3. INSTALL 3'X3' CONCRETE BOX WITH 2' DIAMETER SOLID LID, RIM=4545.07, 12" IE IN=4539.90, 15" IE OUT=4539.90
4. INSTALL 100.0 L.F. 12" PERFORATED ADS PIPE @ S=0.1%, WRAP PERFORATED PIPE IN FABIC,
5. END OF PIPE FL=4540.00
6. INSTALL CULTEC RECHARGER SYSTEM. INSTALL (45) RECHARGER 330XLHD CHAMBERS WITH 6" STONE ABOVE AND 6" & BELOW AND 9" BETWEEN CHAMBERS. TOP OF GRAVEL=4543.54, TOP OF CHAMBER=4543.04, BOTTOM OF CHAMBER=4540.50, BOTTOM OF GRAVEL=4540.00 TO 4539.90, SLOPE TOWARD PERFORATED PIPE. 15" IE IN(S)=4540.75, 15" IE IN(N)=4540.50, INSTALL 30 MIL PVC LINER WITH NON-WOVEN GEOTEXTILE FABRIC ON BOTH SIDES OF LINER. INSTALL PER CULTEC STANDARD DETAILS AND SPECIFICATIONS.
7. INSTALL SEPARATOR ROW
8. INSTALL INSPECTION PORT.
9. GRAVEL FOOTPRINT OF CULTEC DENENTION SYSTEM
10. INSTALL 4.0 L.F. 15" ADS @ S=6.3%
11. INSTALL 3'X3' CONCRETE BOX WITH SNOUT TYPE 18F OVER NORTH OUTLET, GRATE=4544.88, 15" IE THRU=4540.99, BOTTOM OF BOX=4534.87
12. INSTALL 25.7 L.F. 15" ADS @ S=0.5%
13. INSTALL 2'X3' CATCH BASIN WITH GRATE, TBC=4544.87, GRATE=4544.37, 15" IE OUT=4541.12
14. OMITTED
15. OMITTED
16. INSTALL 66.0 L.F. 15" ADS @ S=0.15%
17. INSTALL 3'X3' CONCRETE BOX WITH GRATE & INSTALL SNOUT TYPE 18F OVER SOUTH OUTLET, TBC=4544.65, GRATE=4544.15, 15" IE THRU=4540.60, BOTTOM OF BOX=4537.48
18. INSTALL 145.2 L.F. 15" ADS @ S=0.15%
19. INSTALL 2'X3' CATCH BASIN WITH GRATE, TBC=4544.60, GRATE=4544.10, 15" IE THRU=4540.82
20. INSTALL 225.3 L.F. 15" ADS @ S=0.15%
21. INSTALL 2'X3' CATCH BASIN WITH GRATE, TBC=4545.10, GRATE=4544.60, 15" IE THRU=4541.16
22. INSTALL 127.4 L.F. 15" ADS @ S=0.15%
23. INSTALL 2'X3' CATCH BASIN WITH GRATE, TBC=4544.89, GRATE=4544.39, 15" IE OUT=4541.35
24. INSTALL 132.0 L.F. 15" ADS @ S=0.15%
25. INSTALL 2'X3' CATCH BASIN WITH GRATE, TBC=4544.55, GRATE=4544.05, 15" IE THRU=4539.85
26. INSTALL 205.9 L.F. 15" ADS @ S=0.15%
27. INSTALL 3'X3' CONCRETE BOX WITH 2' DIAMETER SOLID LID, RIM=4545.98, 6" IE IN=4540.16, 15" IE THRU=4540.16
28. INSTALL 63.1 L.F. 15" ADS @ S=1.5%
29. INSTALL 2'X3' CATCH BASIN WITH GRATE, TBC=4544.87, GRATE=4544.37, 15" IE OUT=4541.12
30. INSTALL 121.5 L.F. 6" ADS @ S=0.36%
31. INSTALL 2'X2' CONCRETE BOX WITH GRATE, GRATE=4542.10, 6" IE OUT=4540.60
32. INSTALL 6" ADS ROOF DRAIN PIPE @ S=1% MIN. CONNECT INTO 15" PIPE WITH INSERTA-TEE OR INTO INLET BOX.
33. COORDINATE DOWNSPOUT/ROOFDRAIN BUILDING CONNECTION WITH MECHANICAL PLANS.

SITE PAVEMENT DESIGNS

PARKING AREAS:
3" ASPHALT
14" BASE COURSE
8" SUBBASE*

*REWORKED NATIVE SOILS OR STRUCTURAL FILL

Know what's below.
Call before you dig.

GRADING LEGEND

FFE	FINISHED FLOOR ELEV.
BOW	BACK OF WALK
GB	GRADE BREAK
TC	TOP OF CONCRETE
TBC	TOP BACK OF CURB
TA	TOP OF ASPHALT
EA	EDGE OF ASPHALT
RIM	RIM ELEVATION
FL	FLOWLINE
EG	EXIST GROUND
FG	FINISHED GRADE
IE	INVERT ELEVATION
<0.00%	DIRECTION OF DRAINAGE
(00.00) TBC	EXISTING ELEVATION
00.00 TBC	PROPOSED ELEVATION
----4808----	EXISTING CONTOUR
—(00)—	PROPOSED CONTOUR
⬠00	STORM DRAIN KEYED NOTE
▨	CARRY CURB (OTHER CURB IS SPILL)

BENCH MARK

REFERENCE NORTHEAST CORNER,
SECTION 13, TOWNSHIP 8 SOUTH,
RANGE 2 EAST, SALT LAKE BASE AND
MERIDIAN
2003 BRASS CAP
ELEVATION = 4545.27
VERTICAL DATUM: NGVD 29
HORIZONTAL DATUM: NAD 27

Developer: Shelby Homes
c/o Mike Deuel
Phone: (801) 717-6688

EXCEL
ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

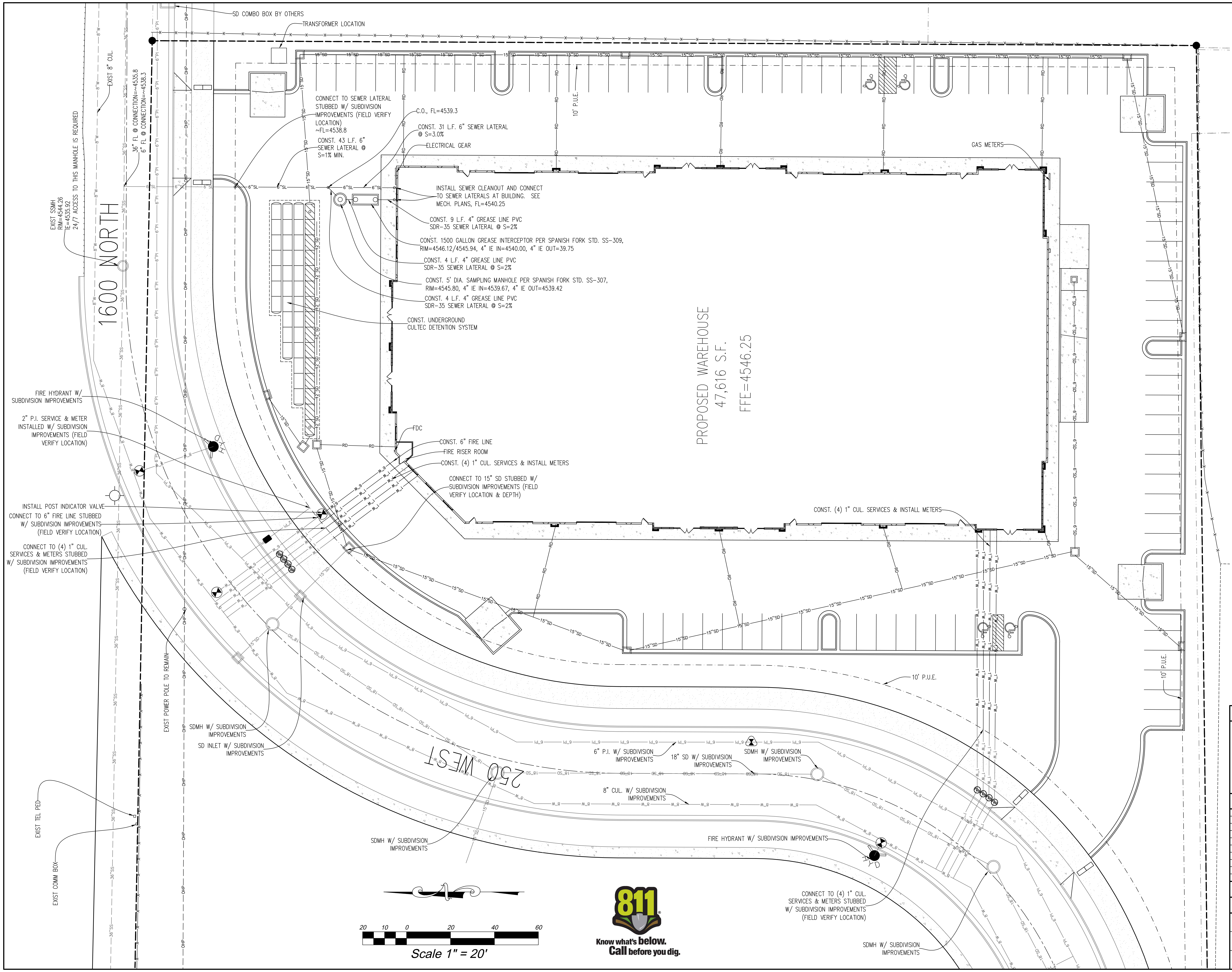
REVISIONS

Rev.	Date	Description
1	01/30/23	REVISED PER CITY COMMENTS
2	02/28/23	ADDED WATERMAN NOTE FOR ORIFICE DISCHARGE

DON BENNETT COMMERCIAL LOT 2

SPANISH FORK UTAH

Drawn by: G.J.Y.	GRADING & DRAINGE PLAN	Scale: 1"=20'
Designed by: G.J.Y.		Date: 10/28/22
Checked by: D.W.P.		G1


SD COMBO BOX BY OTHERS
TRANSFORMER LOCATION
CONNECT TO SEWER LATERAL STUBBED W/ SUBDIVISION IMPROVEMENTS (FIELD VERIFY LOCATION) ~FL=4538.8
CONST. 43 L.F. 6" SEWER LATERAL @ S=1% MIN.
C.O., FL=4539.3
CONST. 31 L.F. 6" SEWER LATERAL @ S=3.0%
ELECTRICAL GEAR
INSTALL SEWER CLEANOUT AND CONNECT TO SEWER LATERALS AT BUILDING. SEE MECH. PLANS, FL=4540.25
CONST. 9 L.F. 4" GREASE LINE PVC SDR-35 SEWER LATERAL @ S=2%
CONST. 1500 GALLON GREASE INTERCEPTOR PER SPANISH FORK STD. SS-309, RIM=4546.12/4545.94, 4" IE IN=4540.00, 4" IE OUT=39.75
CONST. 4 L.F. 4" GREASE LINE PVC SDR-35 SEWER LATERAL @ S=2%
CONST. 5' DIA. SAMPLING MANHOLE PER SPANISH FORK STD. SS-307, RIM=4545.80, 4" IE IN=4539.67, 4" IE OUT=4539.42
CONST. 4 L.F. 4" GREASE LINE PVC SDR-35 SEWER LATERAL @ S=2%
CONST. UNDERGROUND CULTEC DETENTION SYSTEM
10' P.U.E.
GAS METERS
PROPOSED WAREHOUSE
47,616 S.F.
FFE=4546.25
EXIST 8" CUL
36" FL @ CONNECTION=~4535.8
6" FL @ CONNECTION=~4538.3
EXIST SSMH RIM=4544.26 IE=4535.92 24/7 ACCESS TO THIS MANHOLE IS REQUIRED
1600 NORTH
FIRE HYDRANT W/ SUBDIVISION IMPROVEMENTS
2" P.I. SERVICE & METER INSTALLED W/ SUBDIVISION IMPROVEMENTS (FIELD VERIFY LOCATION)
INSTALL POST INDICATOR VALVE
CONNECT TO 6" FIRE LINE STUBBED W/ SUBDIVISION IMPROVEMENTS (FIELD VERIFY LOCATION)
CONNECT TO (4) 1" CUL. SERVICES & METERS STUBBED W/ SUBDIVISION IMPROVEMENTS (FIELD VERIFY LOCATION)
FDC
CONST. 6" FIRE LINE
FIRE RISER ROOM
CONST. (4) 1" CUL. SERVICES & INSTALL METERS
CONNECT TO 15" SD STUBBED W/ SUBDIVISION IMPROVEMENTS (FIELD VERIFY LOCATION & DEPTH)
CONST. (4) 1" CUL. SERVICES & INSTALL METERS
10' P.U.E.
EXIST POWER POLE TO REMAIN
SDMH W/ SUBDIVISION IMPROVEMENTS
SD INLET W/ SUBDIVISION IMPROVEMENTS
6" P.I. W/ SUBDIVISION IMPROVEMENTS
18" SD W/ SUBDIVISION IMPROVEMENTS
SDMH W/ SUBDIVISION IMPROVEMENTS
8" CUL. W/ SUBDIVISION IMPROVEMENTS
250 WEST
SDMH W/ SUBDIVISION IMPROVEMENTS
FIRE HYDRANT W/ SUBDIVISION IMPROVEMENTS
CONNECT TO (4) 1" CUL. SERVICES & METERS STUBBED W/ SUBDIVISION IMPROVEMENTS (FIELD VERIFY LOCATION)
SDMH W/ SUBDIVISION IMPROVEMENTS
EXIST TEL PED
EXIST COMM BOX
20 10 0 20 40 60
Scale 1" = 20'
811 Know what's below. Call before you dig.

UTILITY LEGEND

	FIRE HYDRANT
	PRESSURE IRRIG. VALVE
	CULINARY WATER VALVE
+	STREET SIGN
▲	STOP SIGN
	STREET LIGHT
	SIDEWALK
	POWER POLE
E	POWER BOX
T	TELEPHONE BOX
6"PI	PRESSURE IRRIG. C900 PVC PURPLE PIPE
8"W	CULINARY WATER C900 PVC PIPE
8"SS	SEWER PIPE PVC SDR-35
15"SD	STORM DRAIN PIPE ADS
	EDGE OF ASPHALT
X X	EXIST FENCE
	NEW FENCE
OHP	OVERHEAD POWER LINE
P	BURIED POWER LINE
TV	TELEVISION LINE
TEL	TELEPHONE LINE
G	GAS LINE

ELECTRICAL NOTES

1. ELECTRICAL SYSTEM TO BE INSTALLED AS PER SPANISH FORK CITY ELECTRICAL DESIGN AND STANDARDS. ANY ELECTRICAL DESIGNS AS PER ARCHITECT/DEVELOPER DRAWINGS SHALL BE SUPERSEDED BY CITY DESIGN.
2. ALL ELECTRICAL IMPROVEMENTS SHALL BE INSTALLED TO THE MOST CURRENT VERSION OF THE SPANISH FORK CITY CONSTRUCTION STANDARDS.
3. IF NEWER VERSION OF STANDARDS IS RELEASED DURING PROJECT, THE PROJECT SHALL BE COMPLETED USING STANDARDS VERSION THAT WAS ISSUED AT PRE-CONSTRUCTION MEETING.
4. ANY EXISTING FACILITIES AFFECTED BY DEVELOPMENT WILL NEED TO BE BROUGHT TO CURRENT NEC, NESC, AND CITY STANDARDS AT DEVELOPER'S EXPENSE INCLUDING BUT NOT LIMITED TO UPGRADING OF METER BASE, SERVICE CONDUITS, COMMUNICATIONS SERVICES, AND LANDSCAPING RESTORATION.

NOTES TO CONTRACTOR

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CURB & GUTTER, STORM DRAIN, & SEWER ELEVATIONS OR INVERTS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER WHEN ELEVATIONS OR INVERTS DO NOT MATCH PLANS.
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE AND ALL UNDERGROUND UTILITIES, WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THESE PLANS.

SITE LIGHTING NOTE

1. SITE LIGHTING WILL BE BUILDING MOUNTED. SEE PHOTOMETRIC PLAN FOR LIGHT LOCATIONS.
2. SEE SITE ELECTRICAL PLANS FOR FIXTURE DETAILS FOR BUILDING MOUNTED LIGHTS.

STORM DRAIN NOTE

SEE GRADING PLAN SHEET G1 FOR STORM DRAIN DESIGN.

BENCH MARK

REFERENCE NORTHEAST CORNER,
SECTION 13, TOWNSHIP 8 SOUTH,
RANGE 2 EAST, SALT LAKE BASE AND
MERIDIAN
2003 BRASS CAP
ELEVATION = 4545.27
VERTICAL DATUM: NGVD 29
HORIZONTAL DATUM: NAD 27

Developer: Shelby Homes

c/o Mike Deuel
Phone: (801) 717-6688

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

REVISIONS

Rev.	Date	Description
1	01/30/23	REVISED PER CITY COMMENTS
2	02/28/23	ADDED EXTERIOR FIRE RISER DOOR

DON BENNETT COMMERCIAL LOT 2

SPANISH FORK UTAH

Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.

UTILITY PLAN

Scale: 1"=20'
Date: 10/28/22

1600 NORTH
INSTALL CONCRETE WASHOUT AREA PER BMP CWM
INSTALL CONSTRUCTION ENTRANCE PER BMP SCE
INSTALL PORTABLE TOILET PER BMP PT
INSTALL SILT FENCE PER BMP SF.
INSTALL INLET PROTECTION PER BMP IP-G (TYP. ALL INLETS)
250 WEST
1
PROPOSED WAREHOUSE
47,616 S.F.
FFE=4546.25
1500 NORTH
300 WEST
INSTALL SILT FENCE PER BMP SF.
4545
4544
4543
4546
4547
4548
30 15 0 30 60 90
Scale 1" = 30'

FULL SWPPP & NOI NOTE

1. A FULL SWPPP AND NOI MUST BE SUBMITTED FOR A BUILDING PERMIT TO BE ISSUED AND MUST BE APPROVED BEFORE THE PRE-CONSTRUCTION MEETING.

EROSION CONTROL NOTES:

1. CONTRACTOR IS TO READ AND UNDERSTAND ALL BMP PRACTICES PRIOR TO ANY CONSTRUCTION ON THIS SITE. CONTRACTOR IS TO FOLLOW ALL BMP PRACTICES CONTAINED IN THESE PLANS.
2. CONSTRUCT A SILT FENCE AS SHOWN ON PLAN. SEE BMP SF.
3. INSTALL A CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN PRIOR TO ANY GRADING ON THE SITE. SEE BMP SCE
4. INSTALL CONCRETE WASHOUT AREA AS PER BMP CWM.
5. INSTALL PORTABLE TOILET AS PER BMP PT
6. INSTALL INLET PROTECTION ON EXISTING INLETS ON-SITE & INLETS SURROUNDING SITE. SEE BMP IP-G. FOR NYLOPLAST DRAIN BASINS, FILTER FABRIC UNDER GRATE CAN BE USED INSTEAD OF BMP IP-G
7. THE SITE IS TO BE WATERED AT LEAST ONCE A WEEK TO CONTROL DUST OR MORE FREQUENT AS DETERMINED BY THE CONTRACTOR.
8. CONTRACTOR IS TO REMOVE INLET PROTECTION FROM CATCH BASINS AND CLEAN-OUT ALL CATCH BASINS BEFORE LEAVING THE SITE.
9. CONTRACTOR WILL BE RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF BMP'S DURING CONSTRUCTION.
10. ALL CONSTRUCTION PERIOD BEST MANAGEMENT PRACTICES ARE TO BE INSPECTED & MAINTAINED AT LEAST WEEKLY, ALSO BEFORE AND AFTER EACH STORM EVENT.
11. CONTRACTOR SHALL BE REQUIRED TO KEEP A RECORD OF ALL INSPECTIONS AND MAINTENANCE ON SITE WITH THE STORM WATER POLLUTION PREVENTION PLAN.
12. ESTIMATED RUNOFF COEFFICIENT UPON COMPLETION OF CONSTRUCTION ACTIVITIES = 0.73

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

BENCH MARK

REFERENCE NORTHEAST CORNER, SECTION 13,
TOWNSHIP 8 SOUTH,
RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN
2003 BRASS CAP
ELEVATION = 4545.27
VERTICAL DATUM: NGVD 29
HORIZONTAL DATUM: NAD 27

REVISIONS

Rev.	Date	Description
1	01/30/23	REVISED PER CITY COMMENTS

Developer: Shelby Homes
c/o Mike Deuel
Phone: (801) 717-6688

EXCEL ENGINEERING
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12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

DON BENNETT COMMERCIAL LOT 2

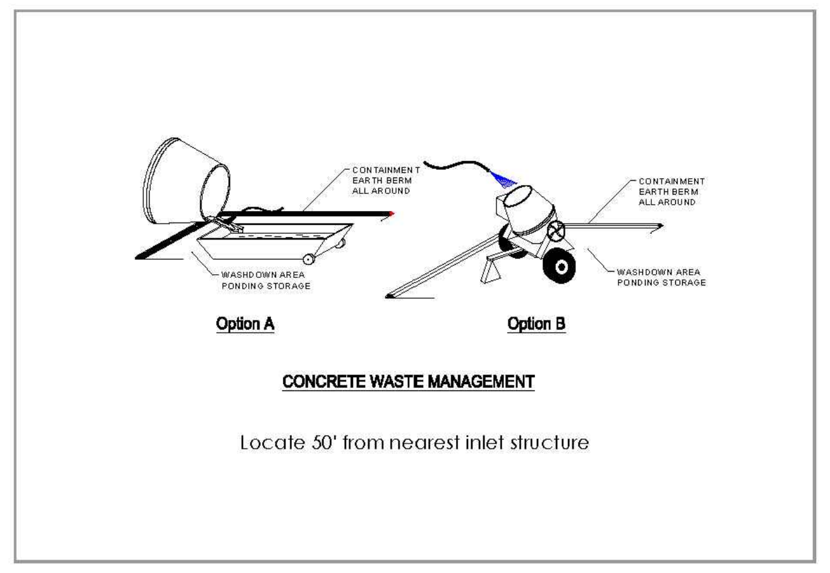
SPANISH FORK UTAH

Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.

EROSION CONTROL PLAN

Scale: 1"=30'
Date: 10/28/22
SWP1

BMP: Concrete Waste Management
CWM
Construction



CONCRETE WASTE MANAGEMENT

Locate 50' from nearest inlet structure

DESCRIPTION:
Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

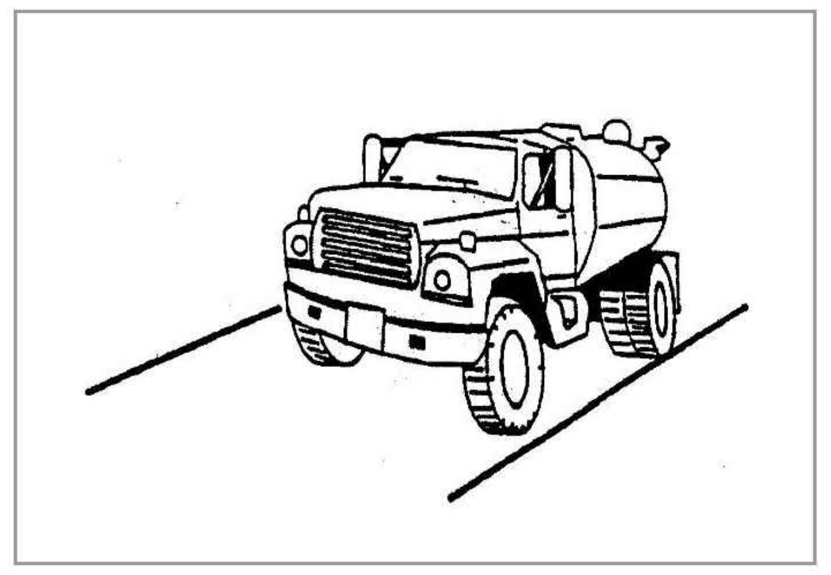
APPLICATION:
This technique is applicable to all types of sites.

INSTALLATION/APPLICATION CRITERIA:
- Store dry materials under cover, away from drainage areas.
- Minimize excess mixing of fresh concrete, mortar or cement on-site.
- Perform washout of concrete trucks off-site or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (6” tall by 6” wide).
- Train employees and subcontractors in proper concrete waste management.

LIMITATIONS:
- Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:
- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis.

BMP: Dust Controls
DC
Construction



DESCRIPTION:
Dust control measures are used to stabilize soil from wind erosion, and reduce dust by construction activities.

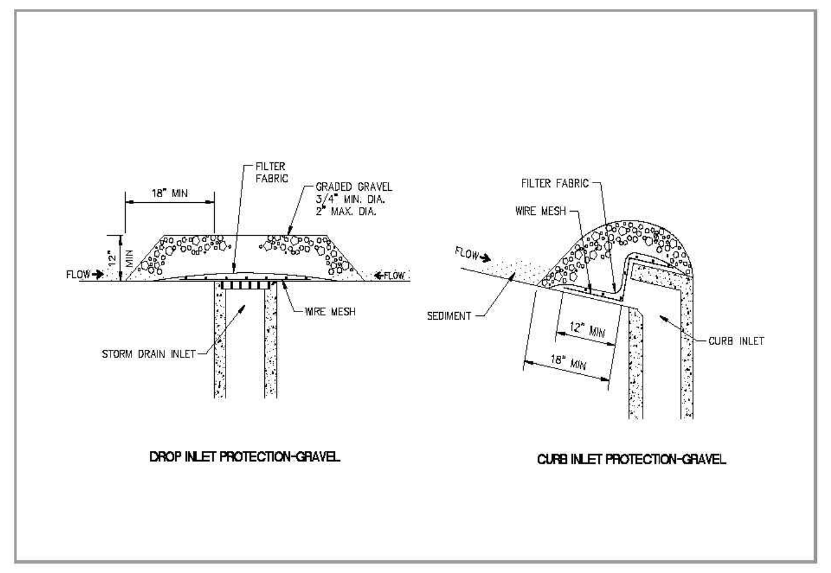
APPLICATION:
Dust control is useful in any process area, loading and unloading area, material handling areas, and transfer areas where dust is generated. Street sweeping is limited to areas that are paved.

INSTALLATION/APPLICATION CRITERIA:
- Mechanical dust collection systems are designed according to the size of dust particles and the amount of air to be processed. Manufacturers’ recommendations should be followed for installation (as well as the design of the equipment).
- Two kinds of street weepers are common: brush and vacuum. Vacuum sweepers are more efficient and work best when the area is dry.
- Mechanical equipment should be operated according to the manufacturers’ recommendations and should be inspected regularly.

LIMITATIONS:
- Generally more expensive than manual systems.
- May be impossible to maintain by plant personnel (the more elaborate equipment).
- Labor and equipment intensive and may not be effective for all pollutants (street sweepers).

MAINTENANCE:
If water sprayers are used, dust-contaminated waters should be collected and taken for treatment. Areas will probably need to be resprayed to keep dust from spreading.

BMP: Inlet Protection-Gravel
IP-G
Construction



DESCRIPTION:
Placement of gravel filter over inlet to storm drain to filter storm water runoff.

APPLICATION:
Construct at inlets in paved or unpaved areas where upgradient area is to be disturbed by construction activities.

INSTALLATION/APPLICATION CRITERIA:
- Place wire mesh (with 1/2 inch openings) over the inlet grate extending one foot past the grate in all directions.
- Place filter fabric over the mesh. Filter fabric should be selected based on soil type.
- Place graded gravel, to a minimum depth of 12-inches, over the filter fabric and extending 18-inches past the grate in all directions.

LIMITATIONS:
- Recommended for maximum drainage area of one acre.
- Excess flows may bypass the inlet requiring down gradient controls.
- Ponding will occur at inlet.

MAINTENANCE:
- Inspect inlet protection after every large storm event and at a minimum of once monthly.
- Remove sediment accumulated when it reaches 4-inches in depth.
- Replace filter fabric and clean or replace gravel if clogging is apparent.

BMP: Land Grading
LG
Construction

DESCRIPTION:
Land grading involves reshaping the ground surface to planned grades as determined by an engineering survey, evaluation, and layout. Land grading provides more suitable topography for buildings, facilities, and other land uses and helps to control surface runoff, soil erosion, and sedimentation during and after construction.

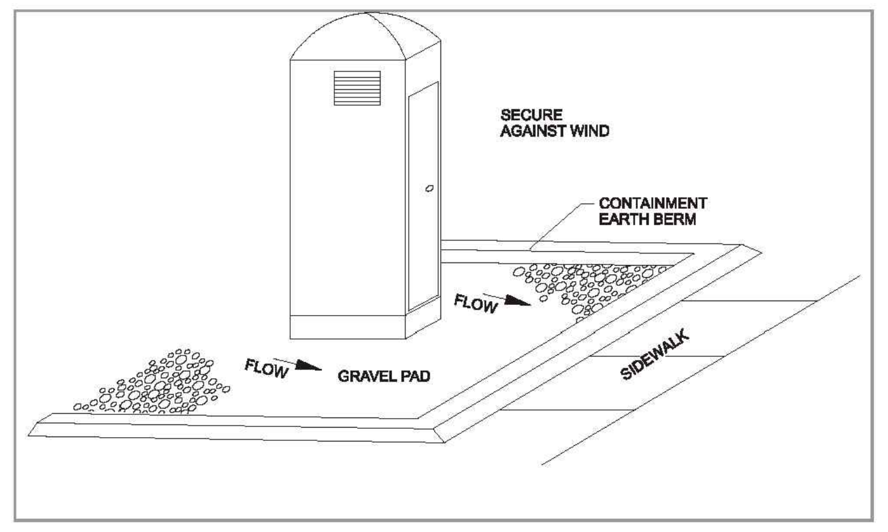
APPLICATIONS:
Land grading is applicable to sites with uneven or steep topography or easily erodible soils, because it stabilizes slopes and decreases runoff velocity. Grading activities should maintain existing drainage patterns as much as possible.

INSTALLATION/APPLICATION CRITERIA:
Before grading activities begin, a construction site operator must make decisions regarding the steepness of cut-and-fill slopes and how the slopes will be: Protected from runoff, stabilized and maintained.

LIMITATIONS:
Improper grading practices that disrupt natural stormwater patterns might lead to poor drainage, high-runoff velocities, and increased peak flows during storm events. Clearing and grading the entire site without vegetated buffers promotes offsite transport of sediments and other pollutants. Design the grading plan with erosion and sediment control and stormwater management goals in mind; to ensure that the plan is implemented as intended, carefully supervise grading crews.

MAINTENANCE:
- Check all graded areas and supporting erosion and sediment control practices periodically, especially after heavy rainfalls.
- Promptly remove all sediment from diversions or other stormwater conveyances, and if washouts or breaks occur, repair them immediately.
- To prevent small-scale eroded areas from becoming significant gullies, maintain them promptly.

BMP: Portable Toilets
PT
Construction



DESCRIPTION:
Temporary on-site sanitary facilities for construction personnel.

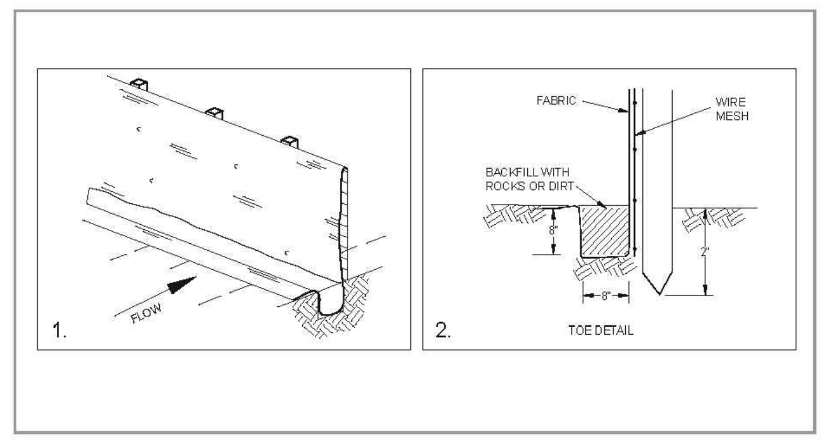
APPLICATION:
All sites with no permanent sanitary facilities or where permanent facility is too far from activities.

INSTALLATION/APPLICATION CRITERIA:
- Locate portable toilets in convenient locations throughout the site.
- Prepare level, gravel surface and provide clear access to the toilets for servicing and for on-site personnel.
- Construct earth berm perimeter (6” tall by 6” wide), control for spill/protection leak.

LIMITATIONS:
- No limitations.

MAINTENANCE:
- Portable toilets should be maintained in good working order by licensed service with daily observation for leak detection.
- Regular waste collection should be arranged with licensed service.
- All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

BMP: Silt Fence
SF
Construction



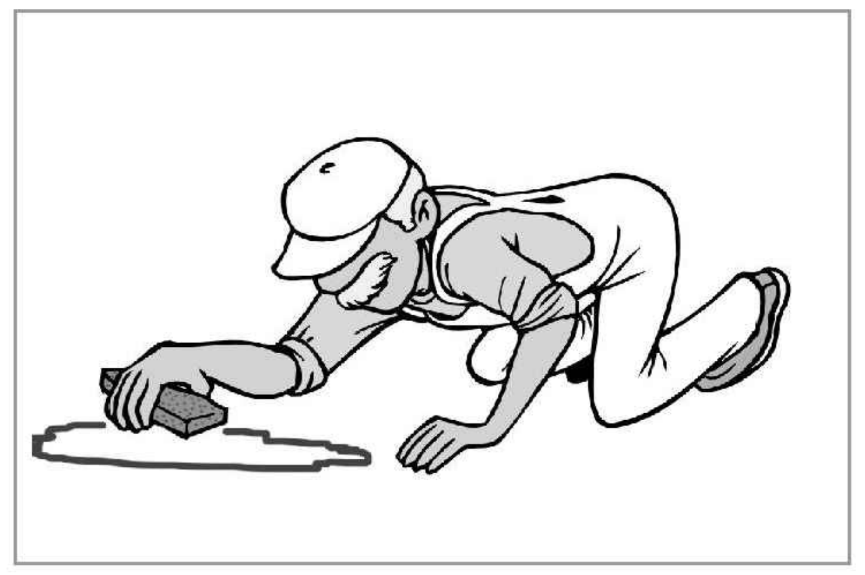
DESCRIPTION:
A temporary sediment barrier consisting of entrenched filter fabric stretched across and secured to supporting posts.
Application:
- Perimeter control: place barrier at down-gradient limits of disturbance
- Sediment barrier: place barrier at toe of slope or soil stockpile
- Protection of existing waterways: place barrier at top of stream bank
- Inlet protection: place fence surrounding catchbasins

INSTALLATION/APPLICATION CRITERIA:
- Place posts 6 feet apart on center along contour (or use preassembled unit) and drive 2 feet minimum into ground. Excavate an anchor trench immediately up-gradient of posts.
- Secure wire mesh (14 gage min. with 6-inch openings) to upslope side of posts. Attach with heavy duty 1 inch long wire staples, tie wires or hog rings.
- Cut fabric to required width, unroll along length of barrier and drape over barrier. Secure fabric to mesh with twine, staples, or similar, with trailing edge extending into anchor trench.
- Backfill trench over filter fabric to anchor.

LIMITATIONS:
- Recommended maximum drainage area of 0.5 acre per 100 feet of fence
- Recommended maximum up-gradient slope length of 150 feet
- Recommended maximum uphill grade of 2:1 (50%)
- Recommended maximum flow rate of 0.5 cfs
- Ponding should not be allowed behind fence

MAINTENANCE:
- Inspect immediately after any rainfall and at least daily during prolonged rainfall.
- Look for runoff bypassing ends of barriers or undercutting barriers.
- Repair or replace damaged areas of the barrier and remove accumulated sediment.
- Reanchor fence as necessary to prevent shortcutting.
- Remove accumulated sediment when it reaches ½ the height of the fence.

BMP: Spill Clean-Up
SCU
Construction



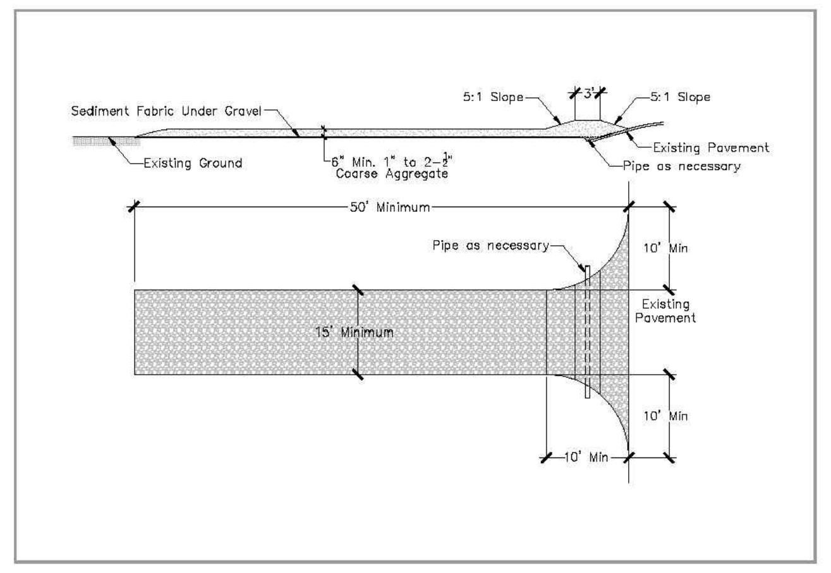
DESCRIPTION:
Practices to clean-up leakage/spillage of on-site materials that may be harmful to receiving waters.

APPLICATION:
All sites

GENERAL:
- Store controlled materials within a storage area.
- Educate personnel on prevention and clean-up techniques.
- Designate an Emergency Coordinator responsible for employing preventative practices and for providing spill response.
- Maintain a supply of clean-up equipment on-site and post a list of local response agencies with phone numbers.

METHODS:
- Clean-up spills/leaks immediately and remediate cause.
- Use as little water as possible. NEVER HOSE DOWN OR BURY SPILL CONTAMINATED MATERIAL.
- Use rags or absorbent material for clean-up. Excavate contaminated soils. Dispose of clean-up material and soil as hazardous waste.
- Document all spills with date, location, substance, volume, actions taken and other pertinent data.
- Contact the Salt Lake County Health Department (313-6700) for any spill of reportable quantity.

BMP: Stabilized Construction Entrance
SCE
Construction



DESCRIPTION:
A stabilized pad of crushed stone located where construction traffic enters or leaves the site from or to paved surface.

APPLICATION:
At any point of ingress or egress at a construction site where adjacent traveled way is paved. Generally applies to sites over 2 acres unless special conditions exist.

INSTALLATION/APPLICATION CRITERIA:
- Clear and grub area and grade to provide maximum slope of 2%.
- Compact subgrade and place filter fabric if desired (recommended for entrances to remain for more than 3 months.
- Place coarse aggregate, 1 to 2-1/2 inches in size, to a minimum depth of 8 inches.

LIMITATIONS:
- Requires periodic top dressing with additional stones.
- Should be used in conjunction with street sweeping on adjacent public right-of-way.

MAINTENANCE:
- Inspect daily for loss of gravel or sediment buildup.
- Inspect adjacent roadway for sediment deposit and clean by sweeping or shoveling.
- Repair entrance and replace gravel as required to maintain control in good working condition.
- Expand stabilized area as required to accommodate traffic and prevent erosion at driveways.

BMP: Street Sweeping
SS
Construction

DESCRIPTION:
Reduce the discharges of pollutants to stormwater from street surfaces by conducting street cleaning on a regular basis.

APPROACH:
- Prioritize cleaning to use the most sophisticated sweepers, at the highest frequency, and in areas with the highest pollutant loading.
- Restrict street parking prior to and during sweeping.
- Increase sweeping frequency just before the rainy season.
- Proper maintenance and operation of sweepers greatly increase their efficiency.
- Keep accurate operation logs to track programs.
- Sweepers effective at removing smaller particles (less than 10 microns) may generate dust that would lead to concerns over worker and public safety.
- Equipment selection can be key for this particular BMP. There are two types used, the mechanical broom sweepers (more effective at picking up large debris and cleaning wet streets), and the vacuum sweepers (more effective at removing fine particles and associated heavy metals). Many communities find it useful to have a compliment of both types in their fleet.

LIMITATIONS:
- Conventional sweepers are not able to remove oil and grease.
- Mechanical sweepers are not effective at removing finer sediments.
- Effectiveness may also be limited by street conditions, traffic congestion, presence of construction projects, climatic conditions and condition of curbs.

MAINTENANCE:
- Replace worn parts as necessary.
- Install main and gutter brooms of the appropriate weight.

REVISIONS

Rev.	Date	Description

Developer: Shelby Homes
c/o Mike Deuel
Phone: (801) 717-6688

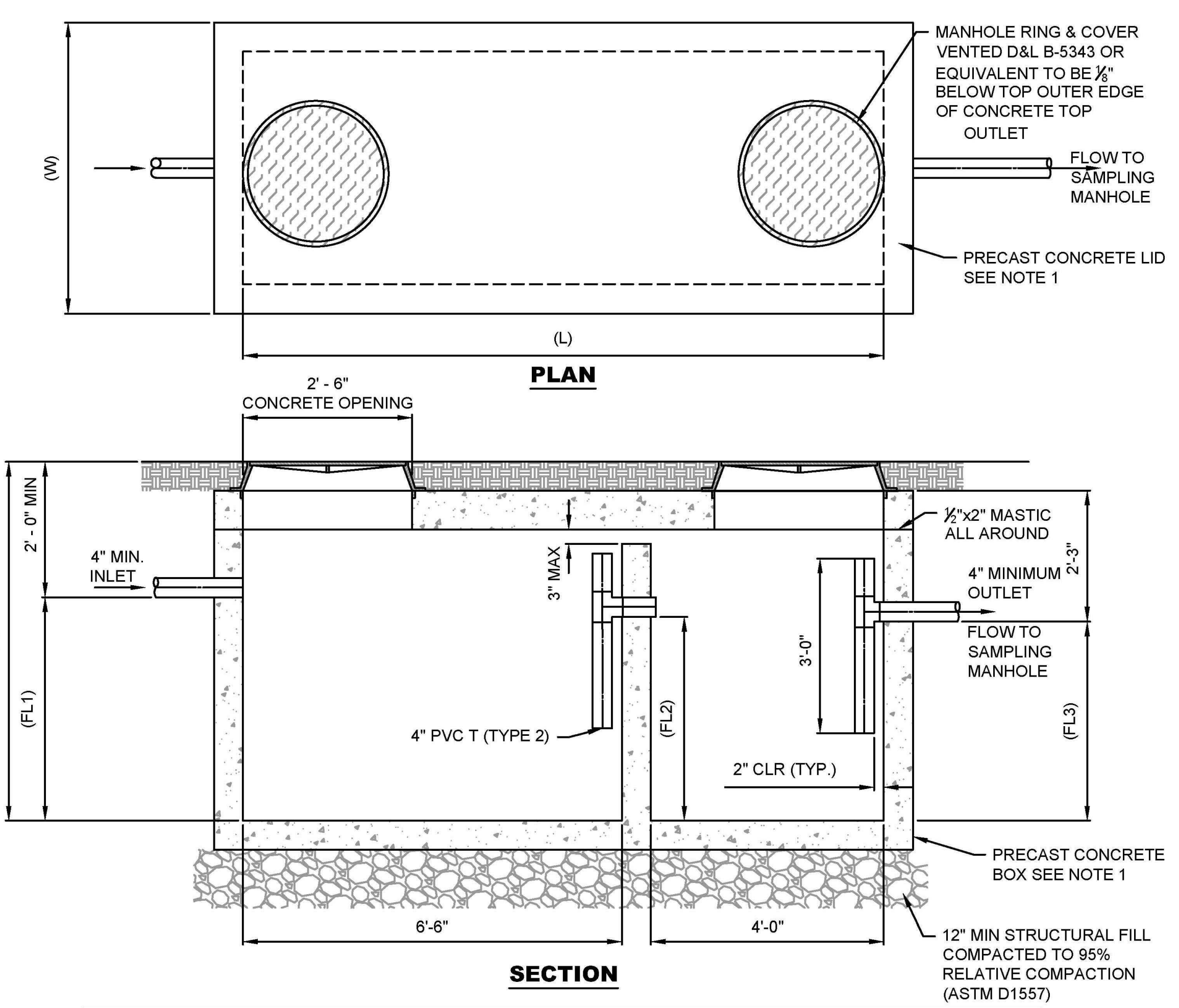
EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

DON BENNETT COMMERCIAL LOT 2
SPANISH FORK UTAH

Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.

BMP DETAILS

Scale: NTS
Date: 10/28/22
SWP2


MANHOLE RING & COVER VENTED D&L B-5343 OR EQUIVALENT TO BE ⅛" BELOW TOP OUTER EDGE OF CONCRETE TOP
OUTLET
FLOW TO SAMPLING MANHOLE
PRECAST CONCRETE LID SEE NOTE 1
(W)
(L)
2' - 6" CONCRETE OPENING
2' - 0" MIN
4" MIN. INLET
3" MAX
½"x2" MASTIC ALL AROUND
4" MINIMUM OUTLET
2'-3"
FLOW TO SAMPLING MANHOLE
3'-0"
(H)
(FL1)
(FL2)
(FL3)
4" PVC T (TYPE 2)
2" CLR (TYP.)
PRECAST CONCRETE BOX SEE NOTE 1
6'-6"
4'-0"
12" MIN STRUCTURAL FILL COMPACTED TO 95% RELATIVE COMPACTION (ASTM D1557)

PLAN

SECTION

1500 - 6000 GALLON GREASE TRAP SCHEDULES

CAPACITY	LENGTH (L)	WIDTH (W)	HEIGHT (H)	INLET (FL1)	INLET (FL2)	INLET (FL3)
1500 GALLON	11'-0"	5'-0"	5'-10"	3'-10"	3'-6"	3'-5"
2000 GALLON	12'-0"	6'-0"	5'-10"	3'-10"	3'-6"	3'-5"
2500 GALLON	13'-0"	7'-0"	5'-10"	3'-10"	3'-6"	3'-5"
3000 GALLON	13'-6"	7'-0"	6'-4"	4'-4"	4'-2"	4'-1"
3500 GALLON	14'-0"	7'-0"	7'-0"	5'-0"	4'-10"	4'-9"
4000 GALLON	14'-0"	7'-0"	8'-4"	6'-4"	6'-2"	6'-1"
6000 GALLON	19'-0"	7'-0"	8'-3"	6'-3"	6'-2"	6'-1"

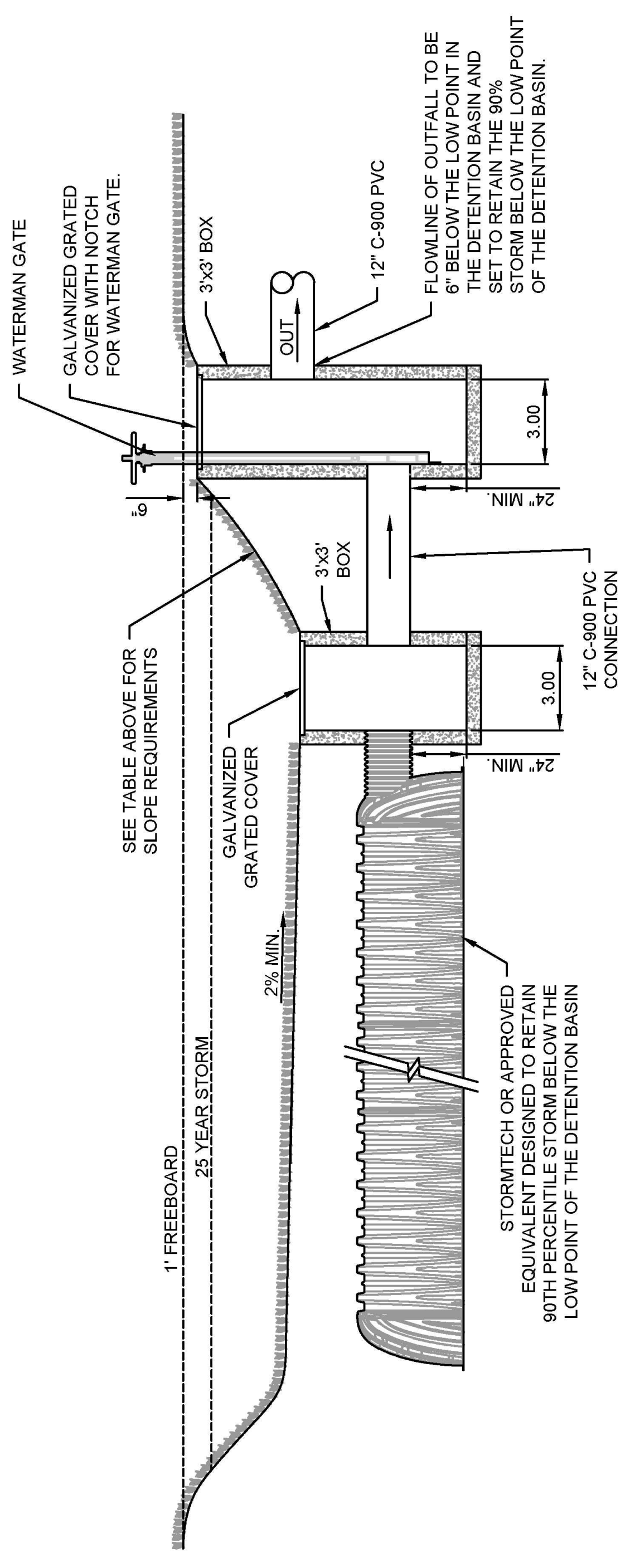
NOTES:
1. THE SUPPLIER OF THE PRECAST BOX, SHALL DESIGN AND PROVIDE DRAWINGS AND CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF UTAH AND SUBMITTED TO SPANISH FORK CITY FOR REVIEW.
2. SUPPLIER SHALL COORDINATE WITH OWNER THE SIZE AND LOCATION OF ALL PIPE PENETRATIONS PRIOR TO FABRICATION.
3. SAMPLING MANHOLE SHALL BE INSTALLED DOWNSTREAM OF GREASE TRAP.
4. GREASE TRAP SIZING TO BE SIZED BY A LICENSED ENGINEER AND SIZED IN ACCORDANCE WITH THE CURRENTLY ADOPTED INTERNATIONAL PLUMBING CODE.

SPANISH FORK CITY
40 SOUTH MAIN STREET
SPANISH FORK, UT 84660
(801) 804-4550

STANDARD DRAWING
1500-6000 GALLON GREASE TRAPS

DRAWN: JLR
DESIGN: MHC
REVISION: .
DATE: 1/18/2022
SCALE NONE
STANDARD SS-309

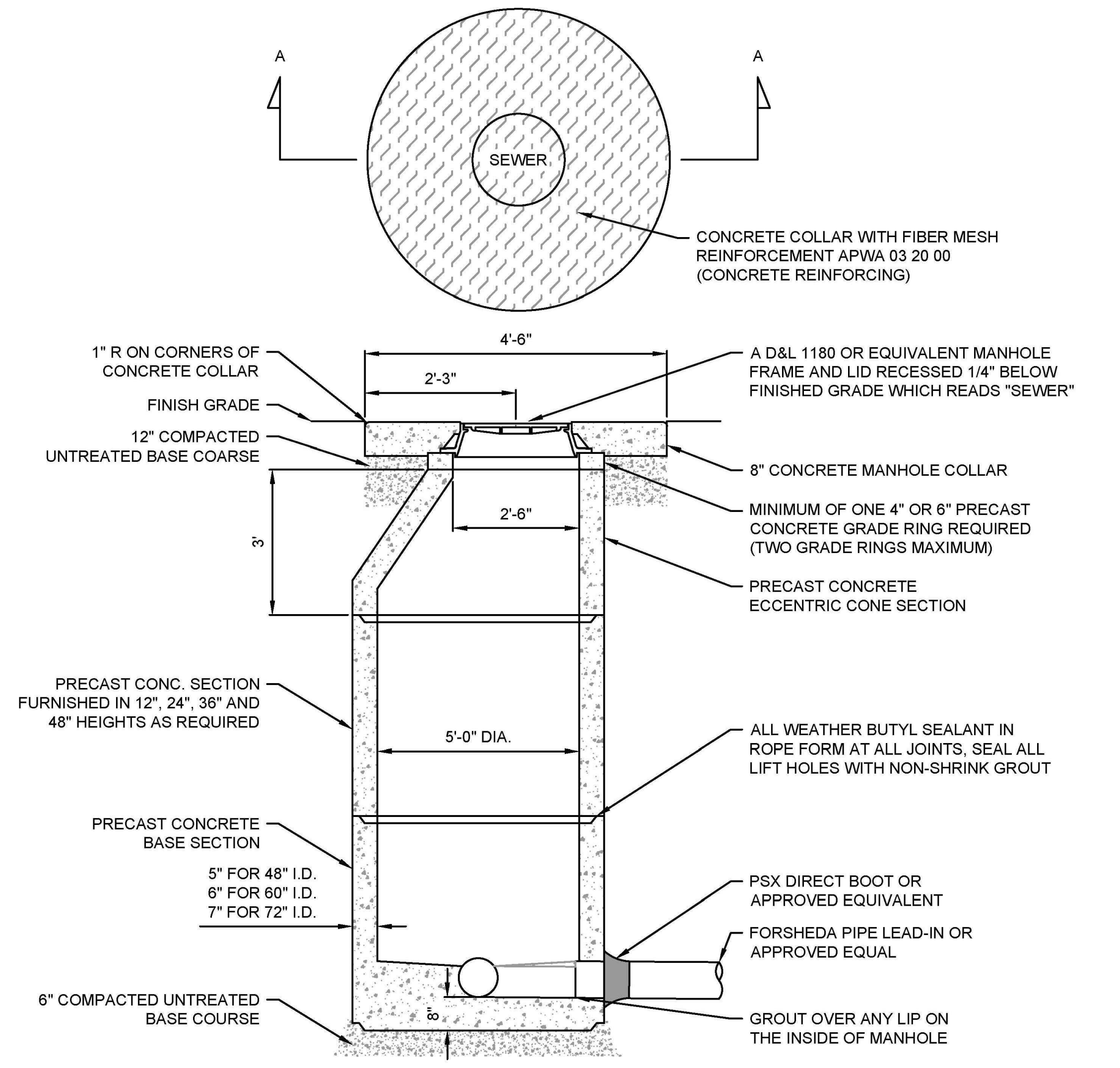
DEPTH	SLOPE
18"	2:1
3'	3:1
ABOVE 3'	4:1


WATERMAN GATE
GALVANIZED GRATED COVER WITH NOTCH FOR WATERMAN GATE.
3'x3' BOX
OUT
12" C-900 PVC
FLOWLINE OF OUTFALL TO BE 6" BELOW THE LOW POINT IN THE DETENTION BASIN AND SET TO RETAIN THE 90% STORM BELOW THE LOW POINT OF THE DETENTION BASIN.
3.00
6"
24" MIN.
SEE TABLE ABOVE FOR SLOPE REQUIREMENTS
3'x3' BOX
12" C-900 PVC CONNECTION
GALVANIZED GRATED COVER
3.00
24" MIN.
2% MIN.
1' FREEBOARD
25 YEAR STORM
STORMTECH OR APPROVED EQUIVALENT DESIGNED TO RETAIN 90TH PERCENTILE STORM BELOW THE LOW POINT OF THE DETENTION BASIN

SPANISH FORK CITY
40 SOUTH MAIN STREET
SPANISH FORK, UT 84660
(801) 804-4550

STANDARD DRAWING
LOW IMPACT DEVELOPMENT (LID) DETENTION BASIN OVERFLOW

DRAWN: JLR
DESIGN: MHC
REVISION: .
DATE: 6/19/2018
SCALE NONE
STANDARD SD-411

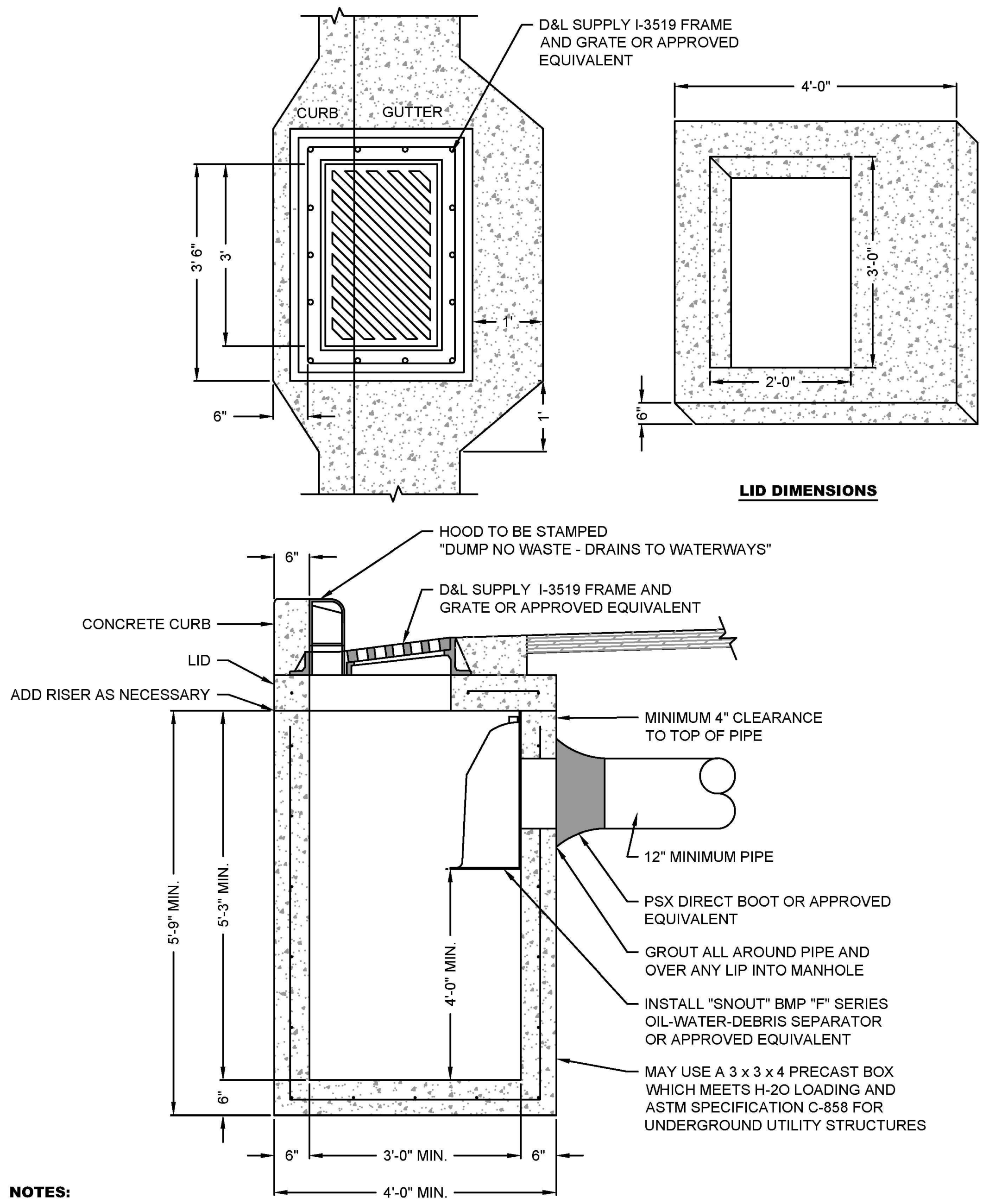

A
A
SEWER
CONCRETE COLLAR WITH FIBER MESH REINFORCEMENT APWA 03 20 00 (CONCRETE REINFORCING)
1" R ON CORNERS OF CONCRETE COLLAR
4'-6"
2'-3"
FINISH GRADE
12" COMPACTED UNTREATED BASE COARSE
A D&L 1180 OR EQUIVALENT MANHOLE FRAME AND LID RECESSED 1/4" BELOW FINISHED GRADE WHICH READS "SEWER"
8" CONCRETE MANHOLE COLLAR
2'-6"
3'
MINIMUM OF ONE 4" OR 6" PRECAST CONCRETE GRADE RING REQUIRED (TWO GRADE RINGS MAXIMUM)
PRECAST CONCRETE ECCENTRIC CONE SECTION
PRECAST CONC. SECTION FURNISHED IN 12", 24", 36" AND 48" HEIGHTS AS REQUIRED
5'-0" DIA.
ALL WEATHER BUTYL SEALANT IN ROPE FORM AT ALL JOINTS, SEAL ALL LIFT HOLES WITH NON-SHRINK GROUT
PRECAST CONCRETE BASE SECTION
5" FOR 48" I.D.
6" FOR 60" I.D.
7" FOR 72" I.D.
PSX DIRECT BOOT OR APPROVED EQUIVALENT
FORSHEDA PIPE LEAD-IN OR APPROVED EQUAL
6" COMPACTED UNTREATED BASE COURSE
8"
GROUT OVER ANY LIP ON THE INSIDE OF MANHOLE

NOTES:
1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
2. REINFORCING STEEL SHALL BE ASTW A615 GRADE 60.
3. THE CONCRETE OVER THE REINFORCING STEEL SHALL BE A MINIMUM OF 1½ INCH.
4. THE STRUCTURE SHALL BE DESIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF UTAH.
5. THE STRUCTURE SHALL AT A MINIMUM MEET THE FOLLOWING DESIGN CRITERIA.
    5.1. WALLS DESIGNED FOR SATURATED EQUIVALENT FLUID AT-REST SOIL PRESSURE OF 120 PCF PLUS TRUCK SURCHARGE.
    5.2. TRUCK LOADING USING AN AASHTO H-20 TRUCK LOAD.
6. PIPING PER SPANISH FORK CITY STANDARDS.
7. ALL MANHOLES MUST HAVE ROUND, NOTCHED LIDS WITH PICK HOLES FOR REMOVAL.
8. THE MINIMUM WIDTH OF CHANNEL WITHIN MANHOLE TO BE DIAMETER OF PIPE.
9. THE CHANNEL WITHIN THE MANHOLE SHALL BE A 1:10 SLOPE.

SPANISH FORK CITY
40 SOUTH MAIN STREET
SPANISH FORK, UT 84660
(801) 804-4550

STANDARD DRAWING
SAMPLING MANHOLE 4FT OR DEEPER

DRAWN: JLR
DESIGN: MHC
REVISION: .
DATE: 1/18/2022
SCALE NONE
STANDARD SS-307


D&L SUPPLY I-3519 FRAME AND GRATE OR APPROVED EQUIVALENT
CURB
GUTTER
3' 6"
3'
1'
6"
1'
4'-0"
3'-0"
2'-0"
6"
HOOD TO BE STAMPED "DUMP NO WASTE - DRAINS TO WATERWAYS"
6"
D&L SUPPLY I-3519 FRAME AND GRATE OR APPROVED EQUIVALENT
CONCRETE CURB
LID
ADD RISER AS NECESSARY
MINIMUM 4" CLEARANCE TO TOP OF PIPE
12" MINIMUM PIPE
PSX DIRECT BOOT OR APPROVED EQUIVALENT
GROUT ALL AROUND PIPE AND OVER ANY LIP INTO MANHOLE
INSTALL "SNOUT" BMP "F" SERIES OIL-WATER-DEBRIS SEPARATOR OR APPROVED EQUIVALENT
MAY USE A 3 x 3 x 4 PRECAST BOX WHICH MEETS H-2O LOADING AND ASTM SPECIFICATION C-858 FOR UNDERGROUND UTILITY STRUCTURES
5'-9" MIN.
5'-3" MIN.
4'-0" MIN.
6"
6"
3'-0" MIN.
6"
4'-0" MIN.

LID DIMENSIONS

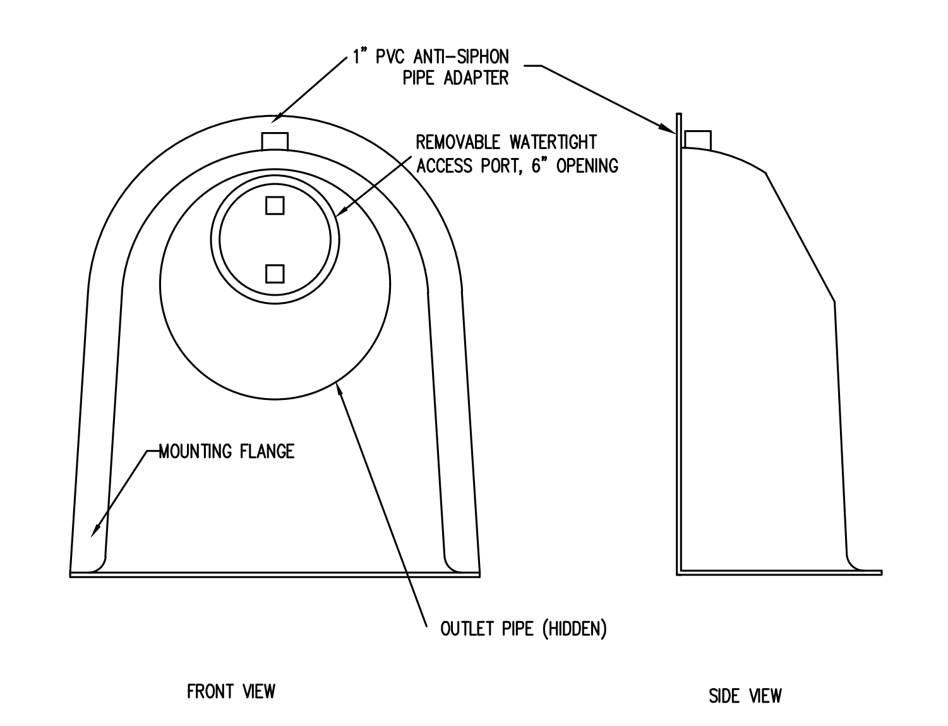
NOTES:
1. ALL STORM TRANSMISSION LINES SHALL RUN THROUGH STORM MANHOLES.
2. BOX SHALL BE SIZED ACCORDING TO TABLE ON STANDARD #32.
3. UNLESS OTHERWISE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER, #4 REBAR WILL BE SPACED AT MINIMUM OF 12" O.C. IN ALL DIRECTIONS IN CONCRETE, ALL REBAR SHALL OVERLAP A MINIMUM OF 14".
4. KNOCKOUT BOXES SHALL BE ALLOWED WITH CONCRETE COLLARS.

SPANISH FORK CITY
40 SOUTH MAIN STREET
SPANISH FORK, UT 84660
(801) 804-4550

STANDARD DRAWING
STORM WATER INLET BOX

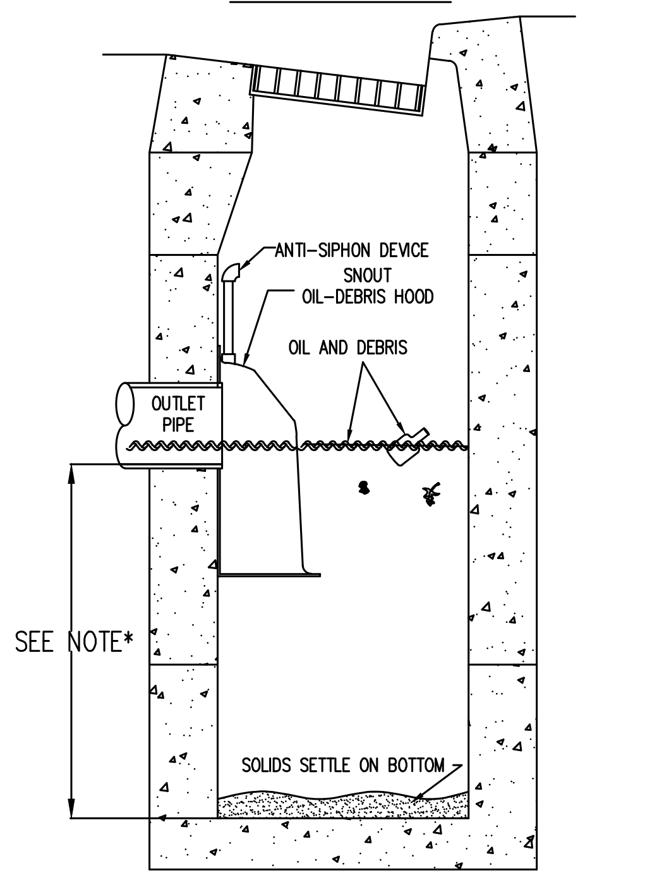
DRAWN: JLR
DESIGN: MHC
REVISION: .
DATE: 10/6/2020
SCALE NONE
STANDARD SD-404

CONFIGURATION DETAIL


1" PVC ANTI-SIPHON PIPE ADAPTER
REMOVABLE WATERTIGHT ACCESS PORT, 6" OPENING
MOUNTING FLANGE
OUTLET PIPE (HIDDEN)
FRONT VIEW
SIDE VIEW

SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION



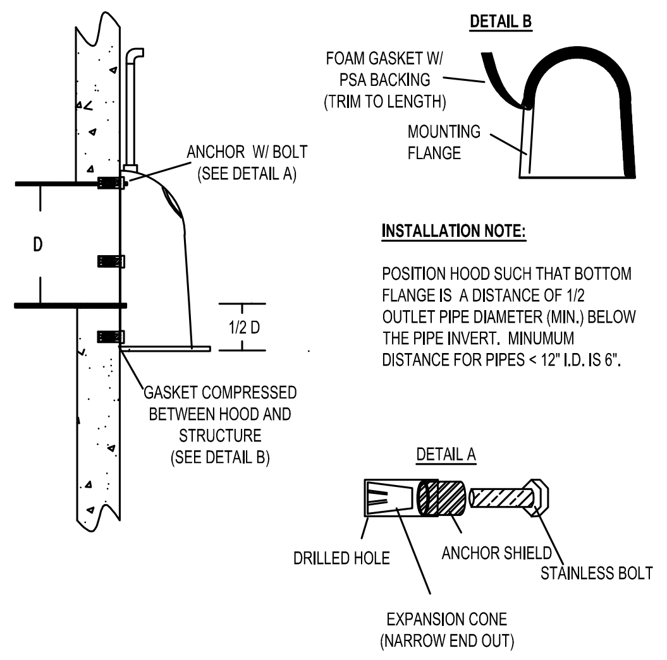
*NOTE- SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5-3X DIAM.

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8' STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

INSTALLATION DETAIL


DETAIL B
FOAM GASKET W/ PSA BACKING (TRIM TO LENGTH)
MOUNTING FLANGE
ANCHOR W/ BOLT (SEE DETAIL A)
D
1/2 D
GASKET COMPRESSED BETWEEN HOOD AND STRUCTURE (SEE DETAIL B)
DETAIL A
DRILLED HOLE
ANCHOR SHIELD
STAINLESS BOLT
EXPANSION CONE (NARROW END OUT)

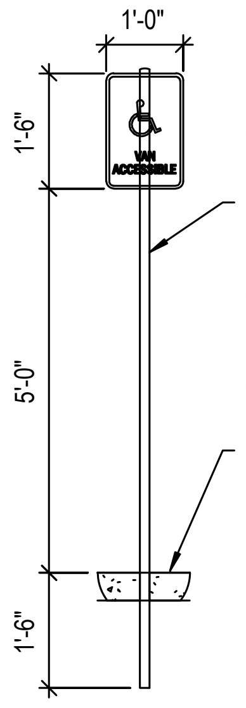
INSTALLATION NOTE:

POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINUMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR
CATCH BASINS AND
WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER SP-SN	

SNOUT DETAIL



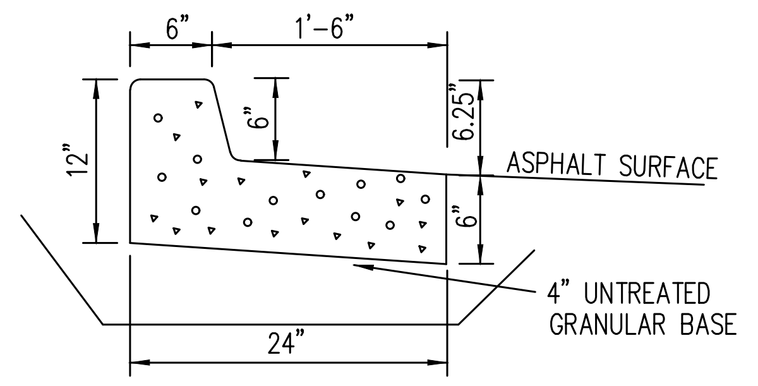
NOTE: WHEN PLACE IN AN ACCESSIBLE ROUTE HEAD CLEARANCE TO BOTTOM OF SIGN TO BE 6'-8"

1-1/2" GALVANIZED PIPE WITH CAP. SET PIPE PRIOR TO PLACEMENT OF CONCRETE OR CORE DRILL AND EPOXY SET PIPE AFTER PLACEMENT OF CONCRETE

FINISHED GRADE

NOTE: ADA COMPLIANT SIGN WITH RADIUS CORNER AND RADIUS BORDER. 18 GAUGE GALVANIZED STEEL WITH BLUE BACKGROUND AND WHITE INTERNATIONAL SYMBOLS. WHITE BAKED ENAMEL AND SCREEN PRINTED COPY.

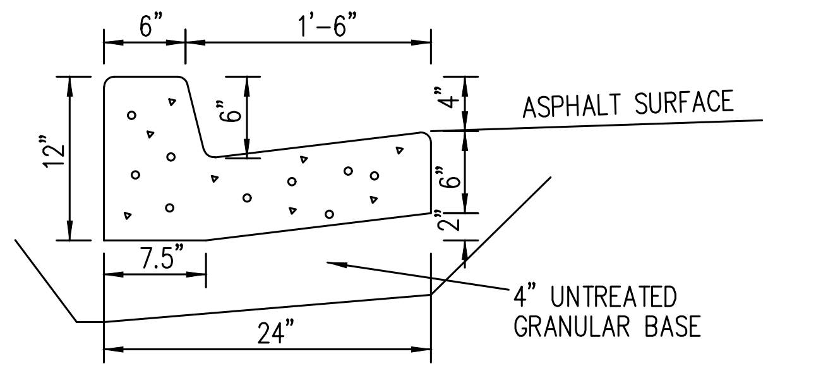
ADA VAN SIGN DETAIL



4" UNTREATED GRANULAR BASE UNDER CURB EXTENDING 6" LATERALLY IN FRONT AND BACK COMPACT TO 95% DENSITY ASTM D 1557-78

SPILL CURB

NOT TO SCALE



4" UNTREATED GRANULAR BASE UNDER CURB EXTENDING 6" LATERALLY IN FRONT AND BACK COMPACT TO 95% DENSITY ASTM D 1557-78

CARRY CURB

NOT TO SCALE

REVISIONS

Rev.	Date	Description
1	01/30/23	REVISED PER CITY COMMENTS
2	02/28/23	ADDED SD-411 DETAIL

Developer: Shelby Homes
c/o Mike Deuel
Phone: (801) 717-6688

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

GREEN TREE SUBDIVISION PLAT B
SPANISH FORK UTAH
Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.
DETAILS
Scale: NTS
Date: 10/28/22
D1

CULTEC RECHARGER® 330XLHD PRODUCT SPECIFICATIONS

GENERAL

CULTEC RECHARGER 330XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT, USA. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
4. THE CHAMBER SHALL BE OPEN-BOTTOMED.
5. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS OR SEPARATE END WALLS
6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 330XLHD SHALL BE 30.5 INCHES (775 mm) TALL, 52 INCHES (1321 mm) WIDE AND 8.5 FEET (2.59 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 330XLHD SHALL BE 7 FEET (2.13 m).
7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 24 INCHES (600 mm) HDPE.
8. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL DIMENSIONS OF EACH SIDE PORTAL SHALL BE 10.5 INCHES (267 mm) HIGH BY 11.5 INCHES (292 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 11.75 INCHES (298 mm).
9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG.
10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 330XLHD CHAMBER SHALL BE 7.459 FT^3 / FT (0.693 m^3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 330XLHD SHALL BE 52.213 FT^3 / UNIT (1.478 m^3 / UNIT) - WITHOUT STONE.
11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT^3 / FT (0.085 m^3 / m) - WITHOUT STONE.
12. THE RECHARGER 330XLHD CHAMBER SHALL HAVE FIFTY-SIX DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.
13. THE RECHARGER 330XLHD CHAMBER SHALL HAVE 16 CORRUGATIONS.
14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, SHALL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT.
15. THE RECHARGER 330XLRHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
16. THE RECHARGER 330XLSHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
17. THE RECHARGER 330XLIHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
18. THE RECHARGER 330XLEHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING NO SEPARATE END PLATES OR END WALLS.
19. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE RECHARGER 330XLHD AND ACT AS CROSS FEED CONNECTIONS.
20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS.
21. THE CHAMBER SHALL HAVE A 6 INCH (152 mm) DIAMETER RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT.
22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
23. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY.
24. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND STRUCTURAL REQUIREMENTS OF IAPMO PS 63-2019, INCLUDING RESISTANCE TO AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS.
25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS OF NSAI IRISH AGREEMENT BOARD CERTIFICATE FOR CULTEC ATTENUATION AND INFILTRATION.
26. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m)
27. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

CULTEC HVLV FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL

CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 330XLHD STORMWATER CHAMBERS.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
4. THE CHAMBER SHALL BE OPEN-BOTTOMED.
5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT^3 / FT (0.085 m^3 / m) - WITHOUT STONE.
7. THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS.
8. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY.

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

GEOTEXTILE PARAMETERS

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M).
4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

CULTEC NO. 4800™ WOVEN GEOTEXTILE

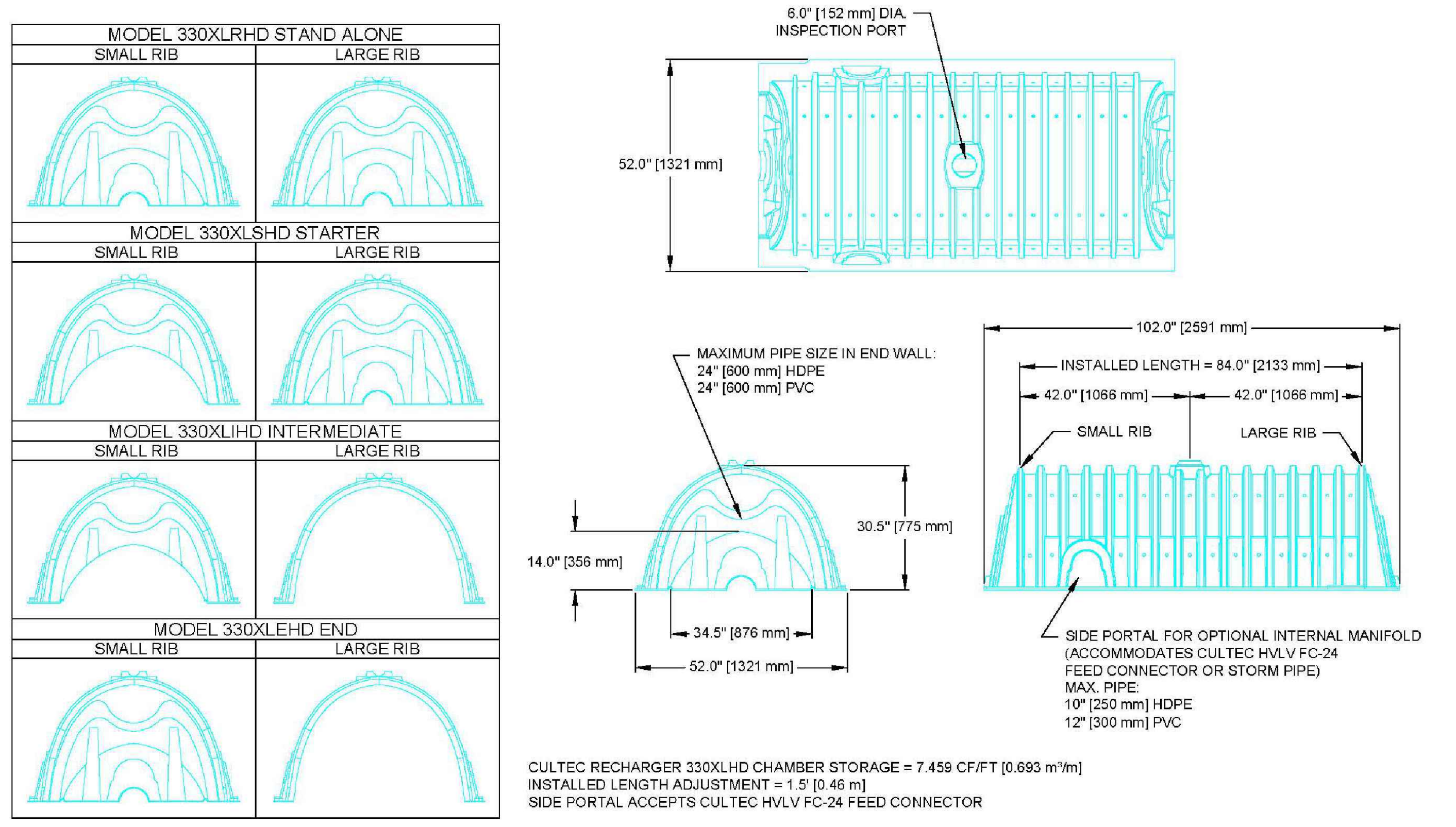
CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

GEOTEXTILE PARAMETERS

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD.
4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,096 LBS/FT (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2, 740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4533 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER ASTM D4751 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM D4491 TESTING METHOD.
14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING METHOD.

330XLHD 1.0

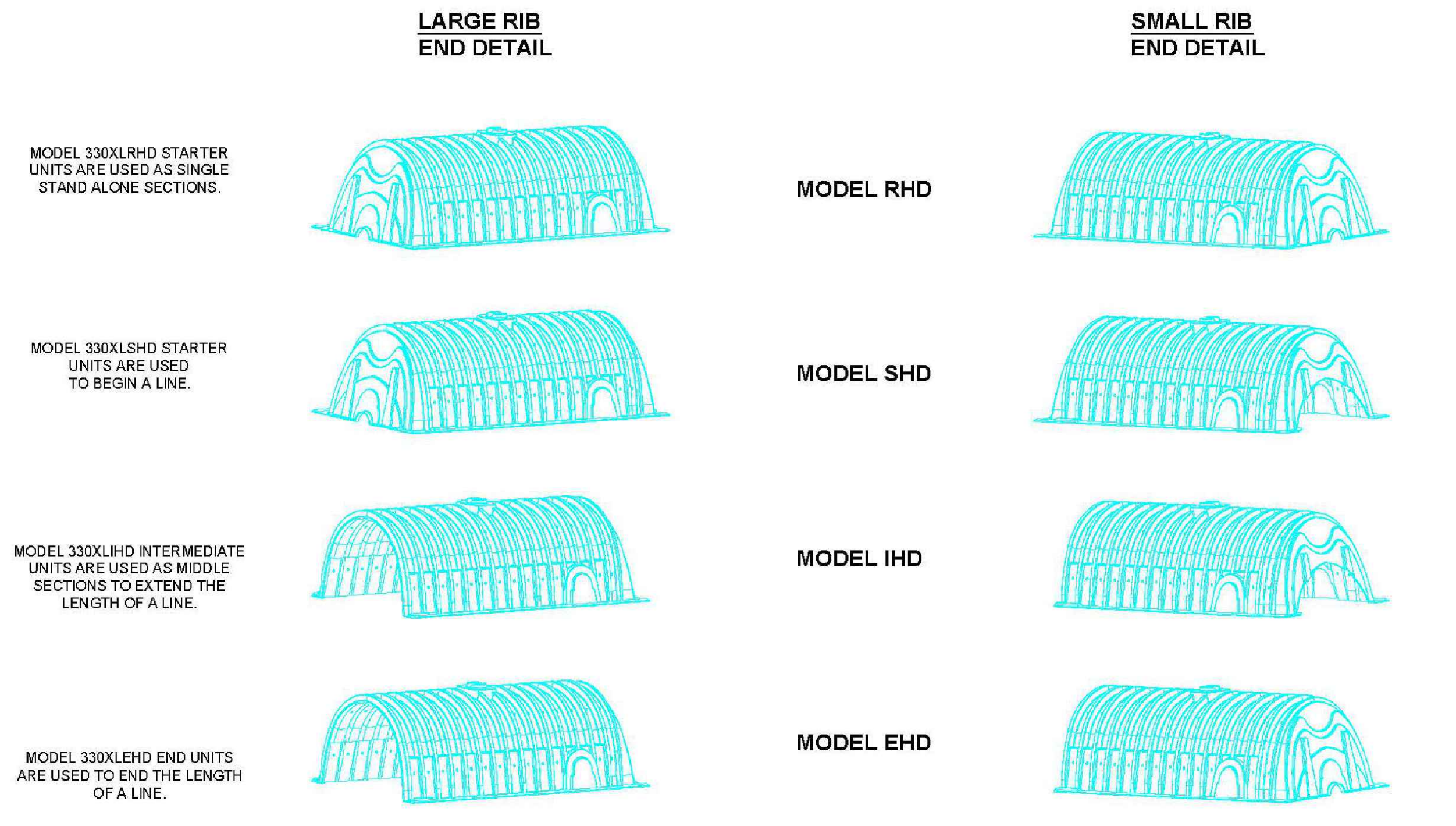
GENERAL NOTES



CULTEC RECHARGER 330XLHD CHAMBER STORAGE = 7.459 CF/FT [0.693 m^3/m]
INSTALLED LENGTH ADJUSTMENT = 1.5' [0.46 m]
SIDE PORTAL ACCEPTS CULTEC HVLV FC-24 FEED CONNECTOR

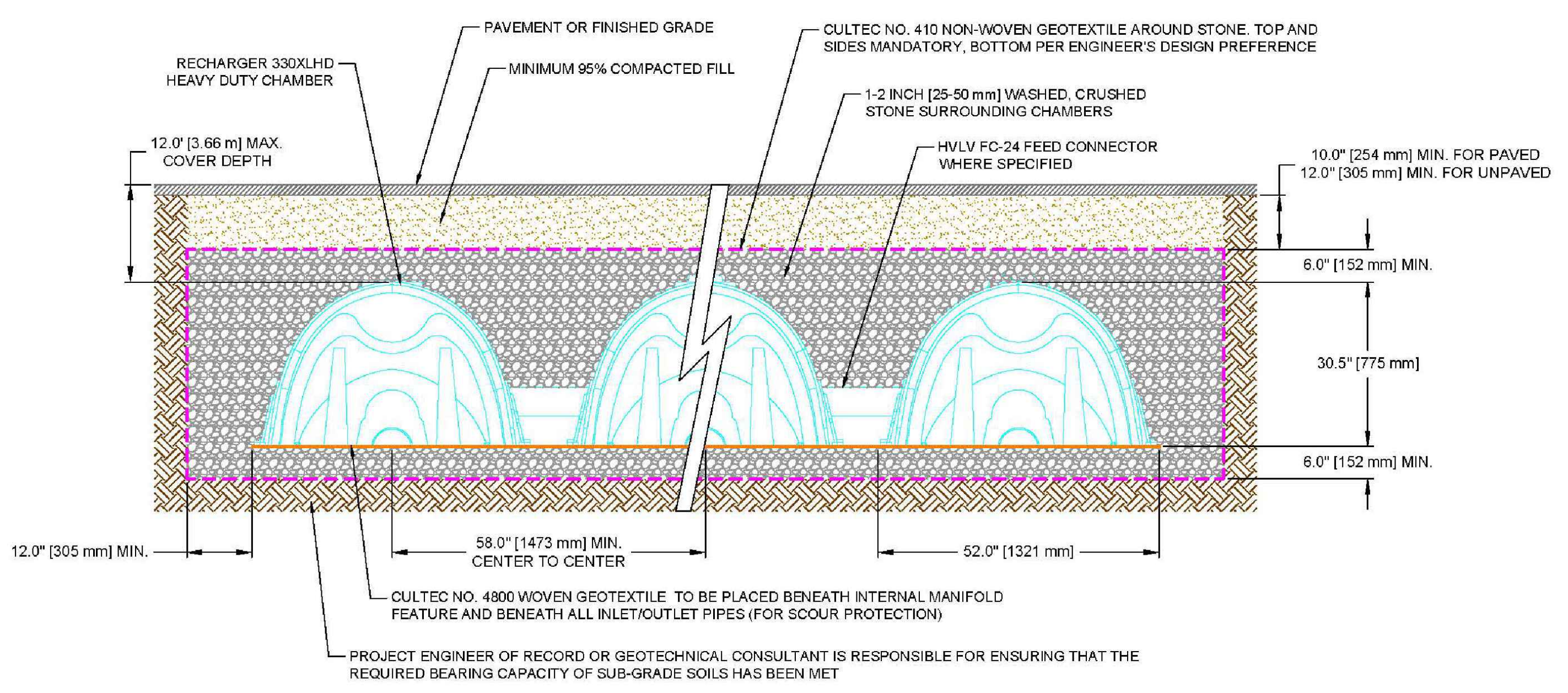
330XLHD 2.0

CULTEC RECHARGER 330XLHD HEAVY DUTY THREE VIEW


LARGE RIB
END DETAIL
SMALL RIB
END DETAIL
MODEL 330XLRHD STARTER UNITS ARE USED AS SINGLE STAND ALONE SECTIONS.
MODEL RHD
MODEL 330XLSHD STARTER UNITS ARE USED TO BEGIN A LINE.
MODEL SHD
MODEL 330XLIHD INTERMEDIATE UNITS ARE USED AS MIDDLE SECTIONS TO EXTEND THE LENGTH OF A LINE.
MODEL IHD
MODEL 330XLEHD END UNITS ARE USED TO END THE LENGTH OF A LINE.
MODEL EHD

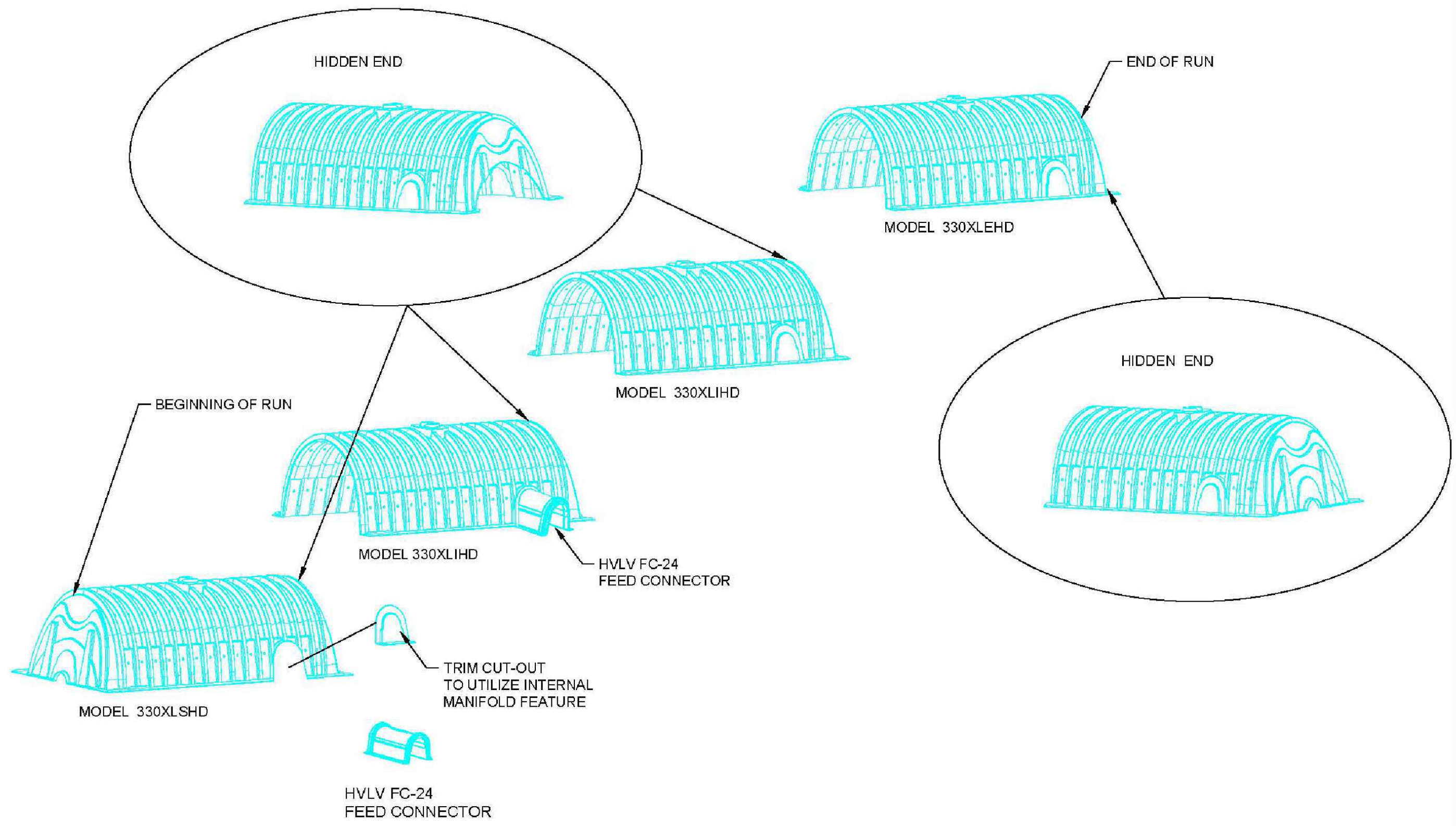
330XLHD 3.0

CULTEC RECHARGER 330XLHD HEAVY DUTY END DETAIL INFORMATION


PAVEMENT OR FINISHED GRADE
RECHARGER 330XLHD
HEAVY DUTY CHAMBER
MINIMUM 95% COMPACTED FILL
CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE
1-2 INCH [25-50 mm] WASHED, CRUSHED STONE SURROUNDING CHAMBERS
HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED
12.0' [3.66 m] MAX. COVER DEPTH
10.0" [254 mm] MIN. FOR PAVED
12.0" [305 mm] MIN. FOR UNPAVED
6.0" [152 mm] MIN.
30.5" [775 mm]
6.0" [152 mm] MIN.
12.0" [305 mm] MIN.
58.0" [1473 mm] MIN.
CENTER TO CENTER
52.0" [1321 mm]
CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION)
PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET

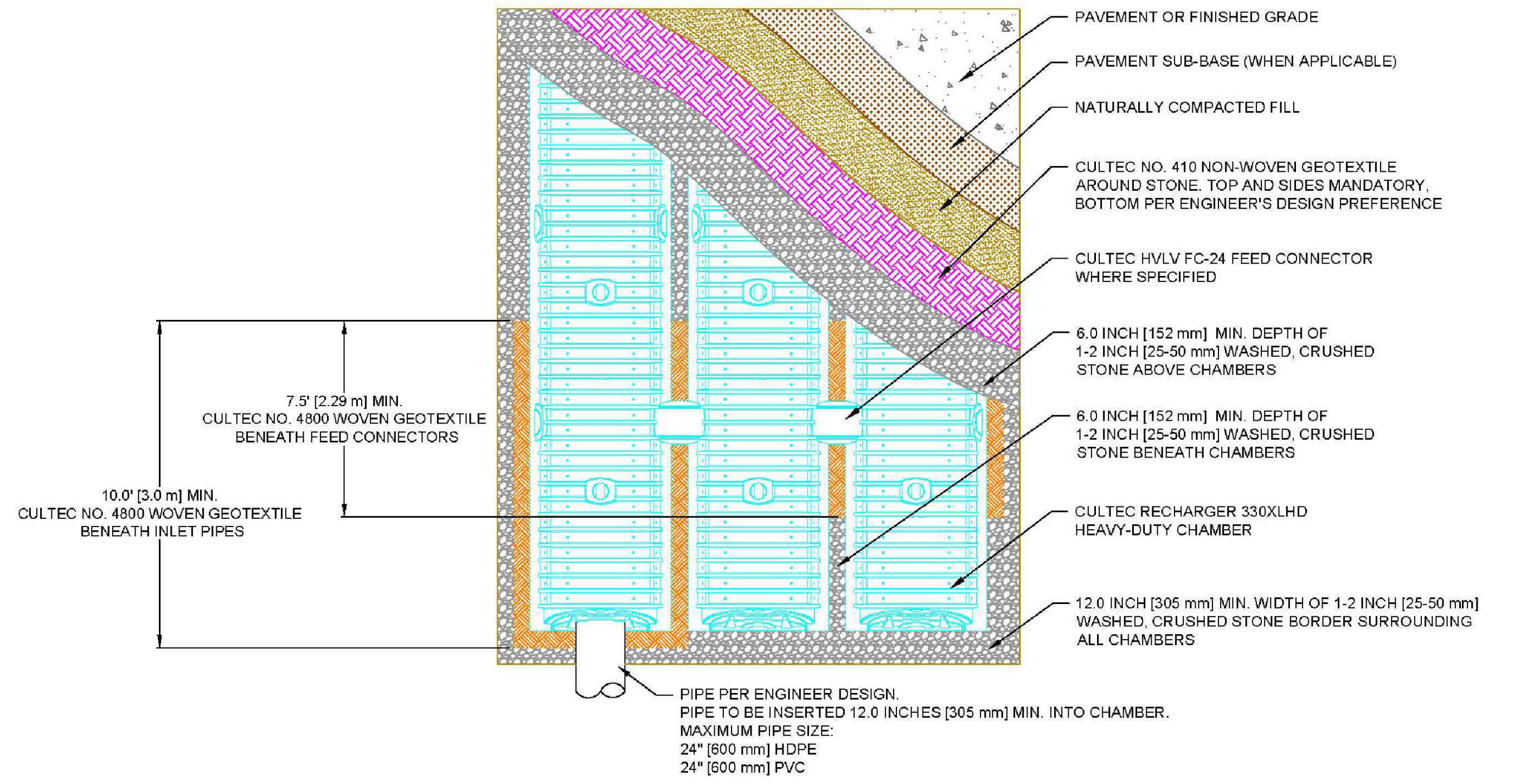
330XLHD 4.0

CULTEC RECHARGER 330XLHD HEAVY DUTY CROSS SECTION



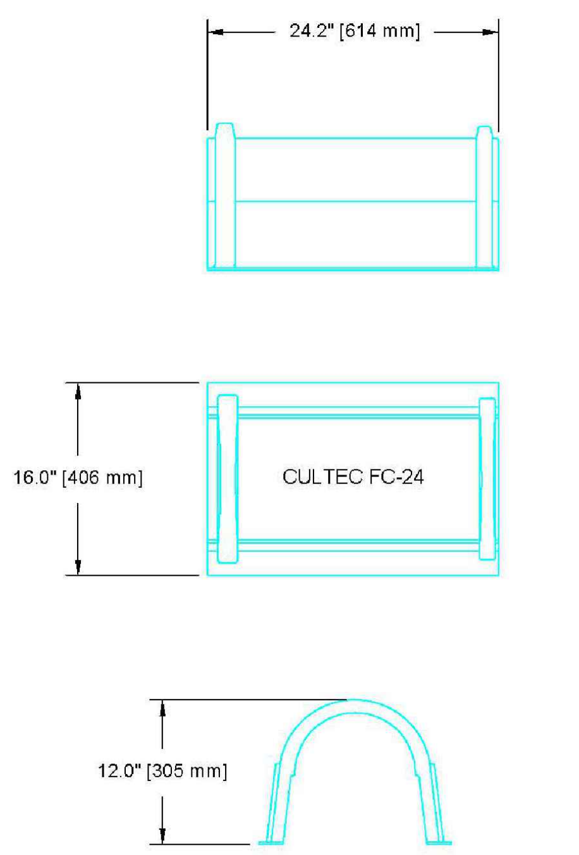
330XLHD 5.0

CULTEC RECHARGER 330XLHD HEAVY DUTY TYPICAL INTERLOCK


PAVEMENT OR FINISHED GRADE
PAVEMENT SUB-BASE (WHEN APPLICABLE)
NATURALLY COMPACTED FILL
CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE
CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED
6.0 INCH [152 mm] MIN. DEPTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE ABOVE CHAMBERS
6.0 INCH [152 mm] MIN. DEPTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE BENEATH CHAMBERS
CULTEC RECHARGER 330XLHD HEAVY-DUTY CHAMBER
12.0 INCH [305 mm] MIN. WIDTH OF 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE BORDER SURROUNDING ALL CHAMBERS
7.5' [2.29 m] MIN.
CULTEC NO. 4800 WOVEN GEOTEXTILE
BENEATH FEED CONNECTORS
10.0' [3.0 m] MIN.
CULTEC NO. 4800 WOVEN GEOTEXTILE
BENEATH INLET PIPES
PIPE PER ENGINEER DESIGN.
PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER.
MAXIMUM PIPE SIZE:
24" [600 mm] HDPE
24" [600 mm] PVC

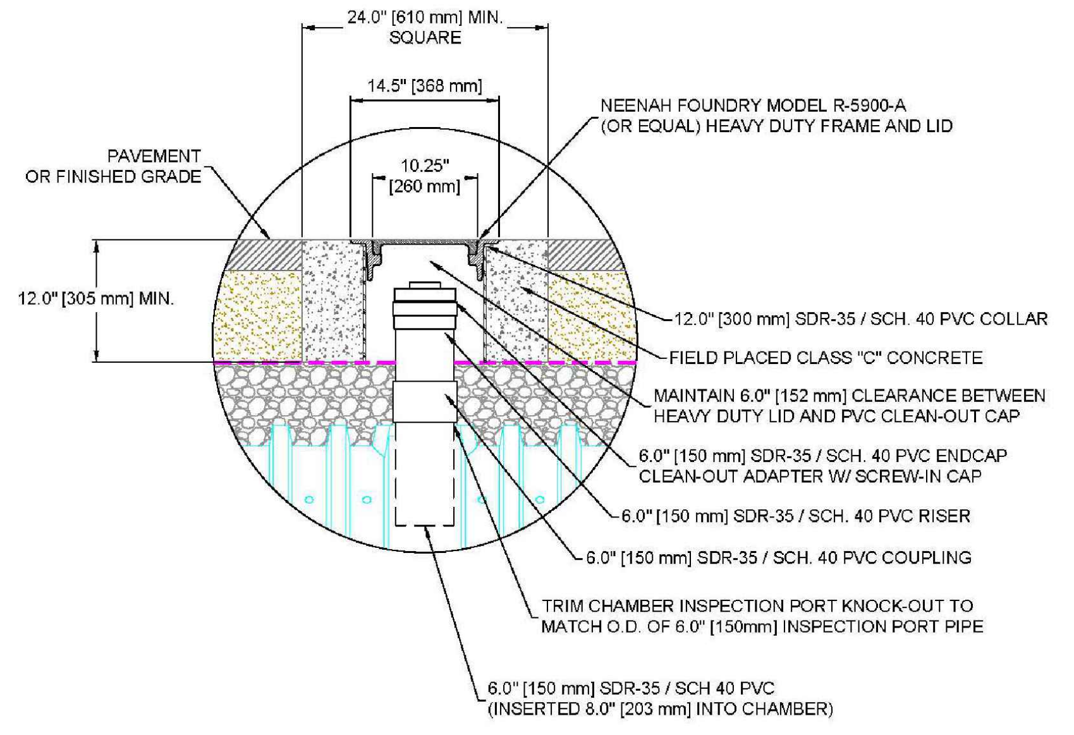
330XLHD 6.0

CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW



330XLHD 7.0

CULTEC HVLV FC-24 FEED CONNECTOR THREE VIEW


24.0" [610 mm] MIN.
SQUARE
14.5" [368 mm]
10.25"
[260 mm]
NEENAH FOUNDRY MODEL R-5900-A
(OR EQUAL) HEAVY DUTY FRAME AND LID
PAVEMENT
OR FINISHED GRADE
12.0" [305 mm] MIN.
12.0" [300 mm] SDR-35 / SCH. 40 PVC COLLAR
FIELD PLACED CLASS "C" CONCRETE
MAINTAIN 6.0" [152 mm] CLEARANCE BETWEEN HEAVY DUTY LID AND PVC CLEAN-OUT CAP
6.0" [150 mm] SDR-35 / SCH. 40 PVC ENDCAP CLEAN-OUT ADAPTER W/ SCREW-IN CAP
6.0" [150 mm] SDR-35 / SCH. 40 PVC RISER
6.0" [150 mm] SDR-35 / SCH. 40 PVC COUPLING
TRIM CHAMBER INSPECTION PORT KNOCK-OUT TO MATCH O.D. OF 6.0" [150mm] INSPECTION PORT PIPE
6.0" [150 mm] SDR-35 / SCH 40 PVC
(INSERTED 8.0" [203 mm] INTO CHAMBER)

330XLHD 8.0

OPTIONAL INSPECTION PORT- ZOOM DETAIL

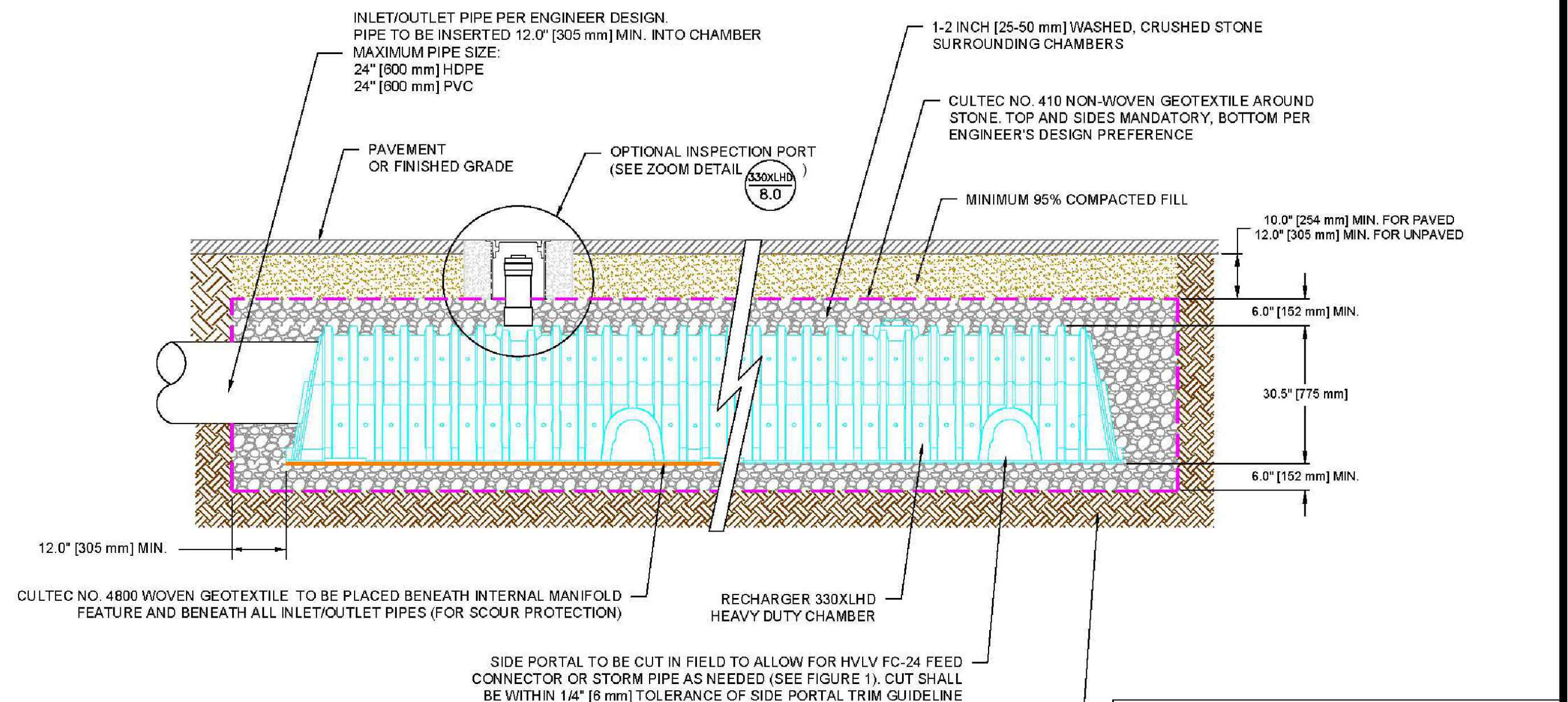
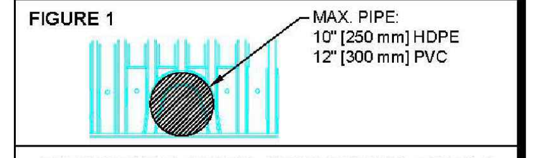

INLET/OUTLET PIPE PER ENGINEER DESIGN.
PIPE TO BE INSERTED 12.0" [305 mm] MIN. INTO CHAMBER
MAXIMUM PIPE SIZE:
24" [600 mm] HDPE
24" [600 mm] PVC
1-2 INCH [25-50 mm] WASHED, CRUSHED STONE SURROUNDING CHAMBERS
CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE
PAVEMENT
OR FINISHED GRADE
OPTIONAL INSPECTION PORT
(SEE ZOOM DETAIL 330XLHD 8.0)
MINIMUM 95% COMPACTED FILL
10.0" [254 mm] MIN. FOR PAVED
12.0" [305 mm] MIN. FOR UNPAVED
6.0" [152 mm] MIN.
30.5" [775 mm]
6.0" [152 mm] MIN.
12.0" [305 mm] MIN.
CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION)
RECHARGER 330XLHD
HEAVY DUTY CHAMBER
SIDE PORTAL TO BE CUT IN FIELD TO ALLOW FOR HVLV FC-24 FEED CONNECTOR OR STORM PIPE AS NEEDED (SEE FIGURE 1). CUT SHALL BE WITHIN 1/4" [6 mm] TOLERANCE OF SIDE PORTAL TRIM GUIDELINE
PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET

FIGURE 1



ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O.D.

330XLHD 9.0

CULTEC INTERNAL MANIFOLD- OPTIONAL INSPECTION PORT DETAIL

CULTEC, Inc.™
Subsurface Stormwater Management Systems
P.O. Box 280
878 Federal Road
Brookfield, CT 06804
www.cultec.com
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PH: (800) 4-CULTEC
FX: (203) 775-1462
tech@cultec.com
CULTEC

THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

RECHARGER 330XLHD
DETAIL SHEET
TRAFFIC APPLICATION

CULTEC STORMWATER CHAMBER

PROJECT NO:	DATE: 2019
DESIGNED BY: CULTEC, INC	CHECKED BY: TECH
SCALE: N.T.S.	SHEET NO: 1 OF 1

* LINE BOTTOM & SIDES OF GRAVEL BED W/ NON-REINFORCED 30 mil PVC LINER.

* FOR ALL SEALING OF OVERLAPS OF PVC LINER, ALLOW 24-HR FOR LINER TO CURE PRIOR TO PLACING ANY ROCK OVER LINER PER MANUFACTURERS SPECIFICATIONS.

* SEE KEYED NOTES ON G1 FOR CULTEC SYSTEM DESIGN.

REVISIONS

Rev.	Date	Description
1	01/30/23	REVISED PER CITY COMMENTS

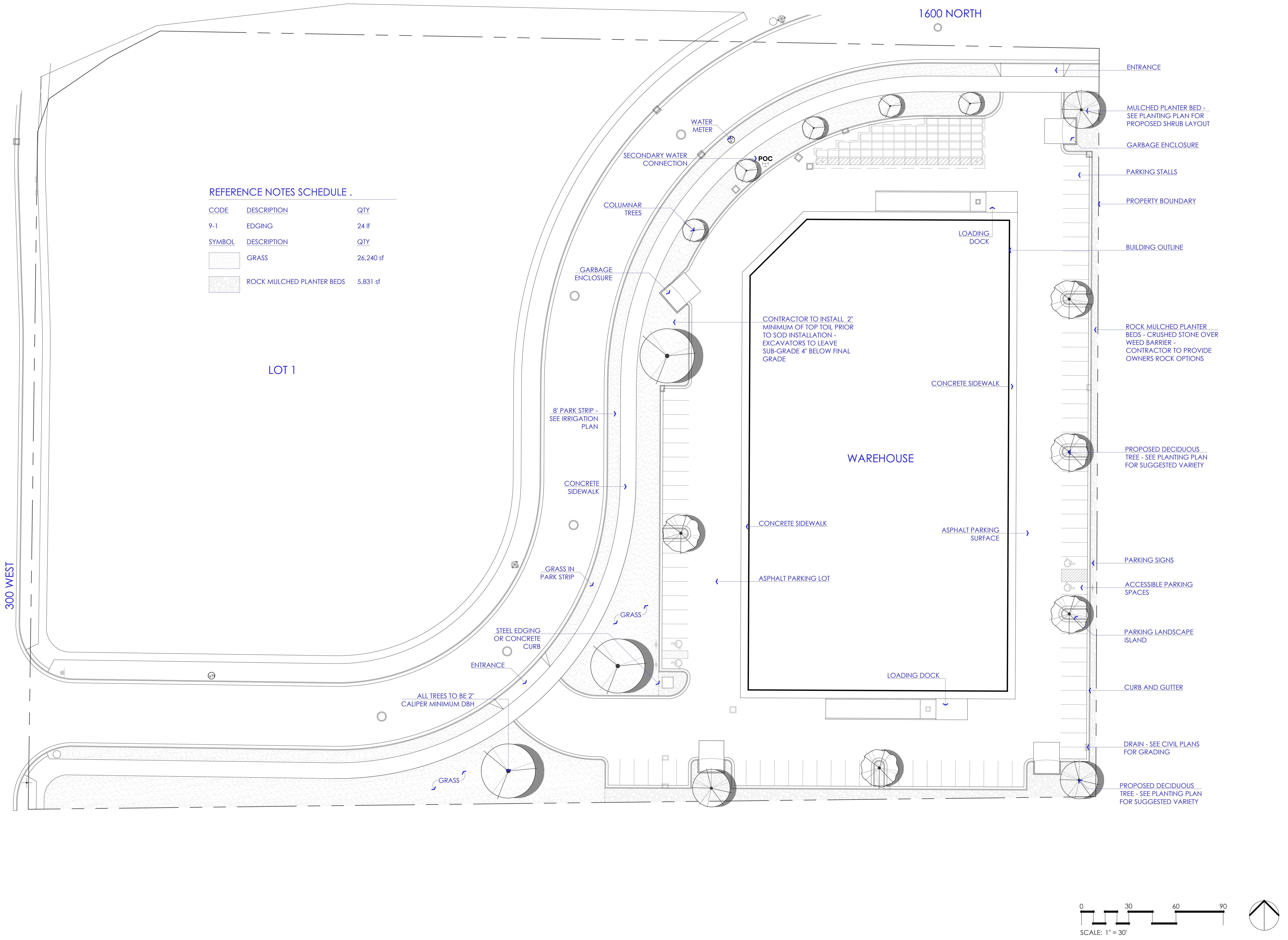
Developer: Shelby Homes
c/o Mike Deuel
Phone: (801) 717-6688

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

GREEN TREE SUBDIVISION PLAT B

SPANISH FORK UTAH

Drawn by: G.J.Y.	DETAILS	Scale: NTS
Designed by: G.J.Y.		Date: 10/28/22
Checked by: D.W.P.		D2


1600 NORTH
300 WEST
LOT 1
WAREHOUSE
ENTRANCE
MULCHED PLANTER BED - SEE PLANTING PLAN FOR PROPOSED SHRUB LAYOUT
GARBAGE ENCLOSURE
PARKING STALLS
PROPERTY BOUNDARY
BUILDING OUTLINE
ROCK MULCHED PLANTER BEDS - CRUSHED STONE OVER WEED BARRIER - CONTRACTOR TO PROVIDE OWNERS ROCK OPTIONS
PROPOSED DECIDUOUS TREE - SEE PLANTING PLAN FOR SUGGESTED VARIETY
PARKING SIGNS
ACCESSIBLE PARKING SPACES
PARKING LANDSCAPE ISLAND
CURB AND GUTTER
DRAIN - SEE CIVIL PLANS FOR GRADING
PROPOSED DECIDUOUS TREE - SEE PLANTING PLAN FOR SUGGESTED VARIETY
WATER METER
SECONDARY WATER CONNECTION
POC
COLUMNAR TREES
LOADING DOCK
GARBAGE ENCLOSURE
CONTRACTOR TO INSTALL 2" MINIMUM OF TOP TOIL PRIOR TO SOD INSTALLATION - EXCAVATORS TO LEAVE SUB-GRADE 4" BELOW FINAL GRADE
CONCRETE SIDEWALK
8' PARK STRIP - SEE IRRIGATION PLAN
CONCRETE SIDEWALK
CONCRETE SIDEWALK
ASPHALT PARKING SURFACE
GRASS IN PARK STRIP
ASPHALT PARKING LOT
GRASS
STEEL EDGING OR CONCRETE CURB
ENTRANCE
LOADING DOCK
ALL TREES TO BE 2" CALIPER MINIMUM DBH
GRASS
0
30
60
90
SCALE: 1" = 30'

REFERENCE NOTES SCHEDULE .

CODE	DESCRIPTION	QTY
9-1	EDGING	24 lf
SYMBOL	DESCRIPTION	QTY
░	GRASS	26,240 sf
▨	ROCK MULCHED PLANTER BEDS	5,831 sf

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801.888.4506
john@treesbydesign.com

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LICENSED LANDSCAPE ARCHITECT
STATE OF UTAH
LIC. #11615148-5301

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The installation contractor is responsible to discover and abide by any setbacks, easements, and building regulations.

Contractor is also responsible to verify all quantities, measurements, site conditions, grades, and property boundaries.

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CUSTOMER INFO

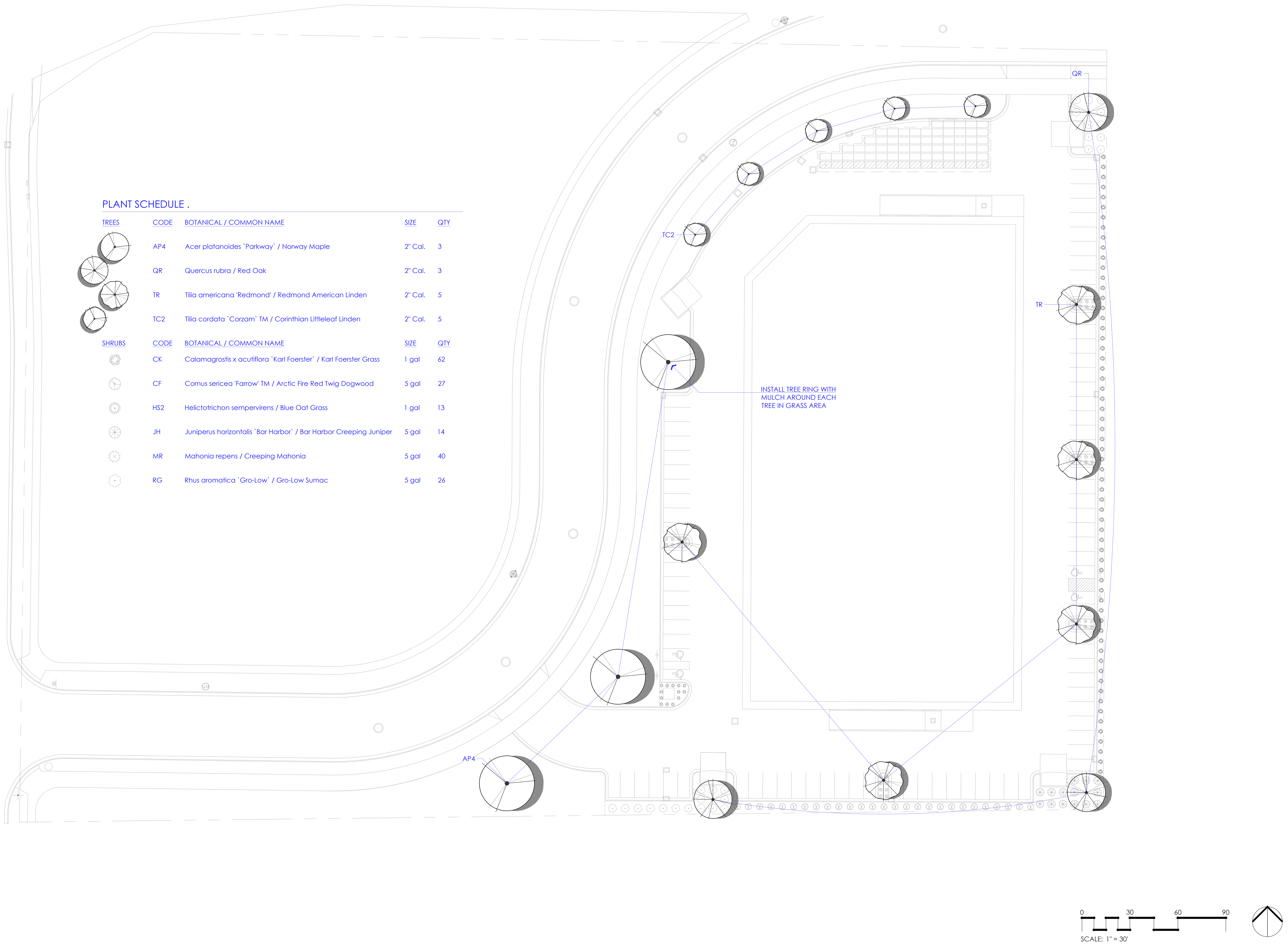
SPANISH FORK LOT 2
1600 N 300 W
SPANISH FORK, UT

SHEET NAME
layout plan

SHEET #
LL-1

PLANT SCHEDULE .

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	QTY
	AP4	Acer platanoides `Parkway` / Norway Maple	2" Cal.	3
	QR	Quercus rubra / Red Oak	2" Cal.	3
	TR	Tilia americana 'Redmond' / Redmond American Linden	2" Cal.	5
	TC2	Tilia cordata `Corzam` TM / Corinthian Littleleaf Linden	2" Cal.	5
SHRUBS	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**QTY**
	CK	Calamagrostis x acutiflora `Karl Foerster` / Karl Foerster Grass	1 gal	62
	CF	Cornus sericea 'Farrow' TM / Arctic Fire Red Twig Dogwood	5 gal	27
	HS2	Helictotrichon sempervirens / Blue Oat Grass	1 gal	13
	JH	Juniperus horizontalis `Bar Harbor` / Bar Harbor Creeping Juniper	5 gal	14
	MR	Mahonia repens / Creeping Mahonia	5 gal	40
	RG	Rhus aromatica `Gro-Low` / Gro-Low Sumac	5 gal	26



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CUSTOMER INFO

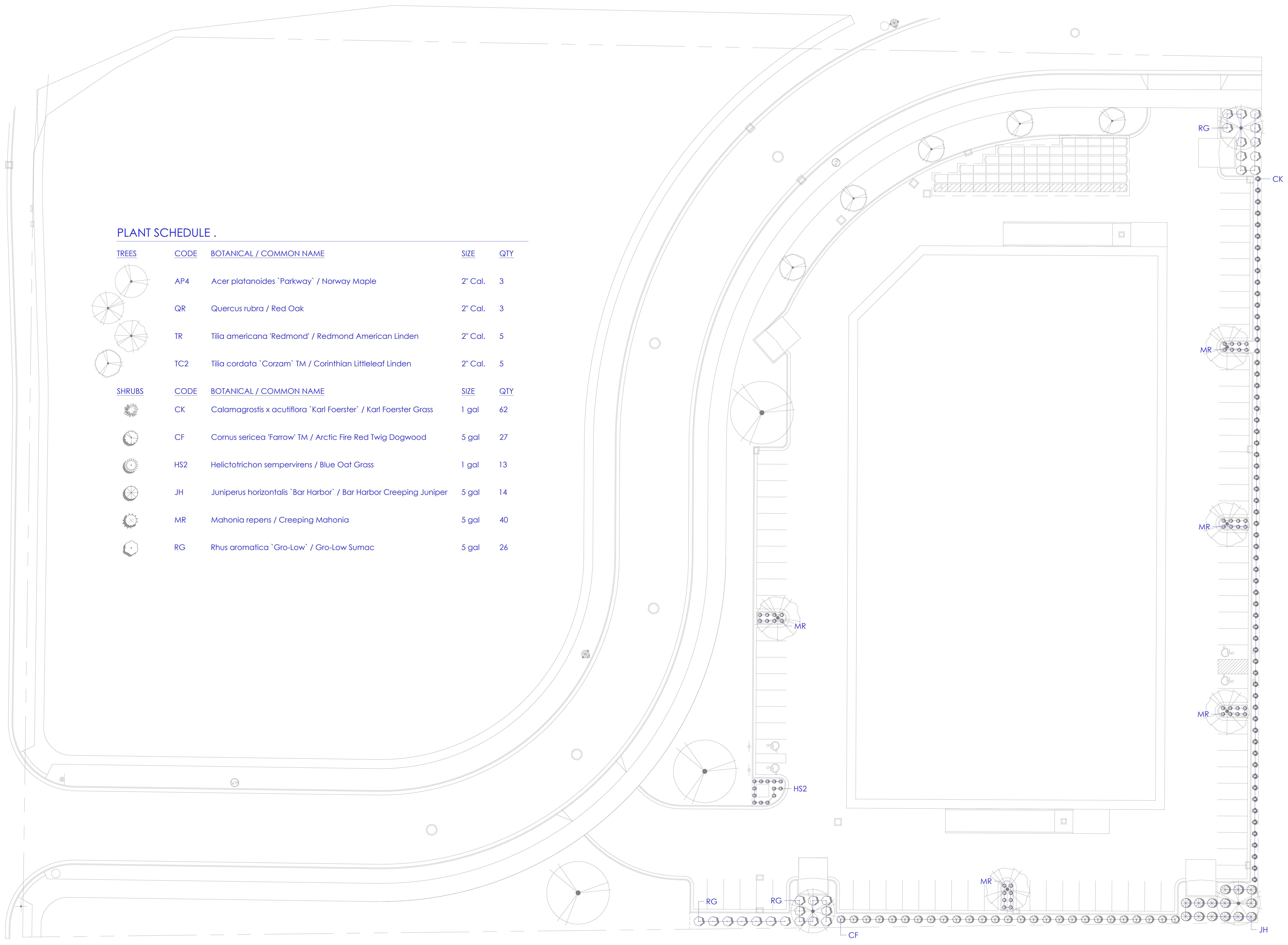
SPANISH FORK LOT 2
1600 N 300 W
SPANISH FORK, UT

SHEET NAME

tree plan

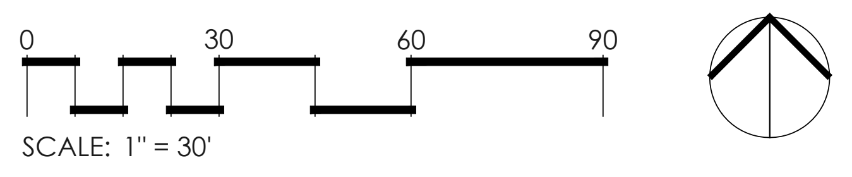
SHEET

LT-1



PLANT SCHEDULE .

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	QTY
	AP4	Acer platanoides `Parkway` / Norway Maple	2" Cal.	3
	QR	Quercus rubra / Red Oak	2" Cal.	3
	TR	Tilia americana 'Redmond' / Redmond American Linden	2" Cal.	5
	TC2	Tilia cordata `Corzam` TM / Corinthian Littleleaf Linden	2" Cal.	5
SHRUBS	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**QTY**
	CK	Calamagrostis x acutiflora `Karl Foerster` / Karl Foerster Grass	1 gal	62
	CF	Cornus sericea 'Farrow' TM / Arctic Fire Red Twig Dogwood	5 gal	27
	HS2	Helictotrichon sempervirens / Blue Oat Grass	1 gal	13
	JH	Juniperus horizontalis `Bar Harbor` / Bar Harbor Creeping Juniper	5 gal	14
	MR	Mahonia repens / Creeping Mahonia	5 gal	40
	RG	Rhus aromatica `Gro-Low` / Gro-Low Sumac	5 gal	26



SCALE: 1" = 30'

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CUSTOMER INFO

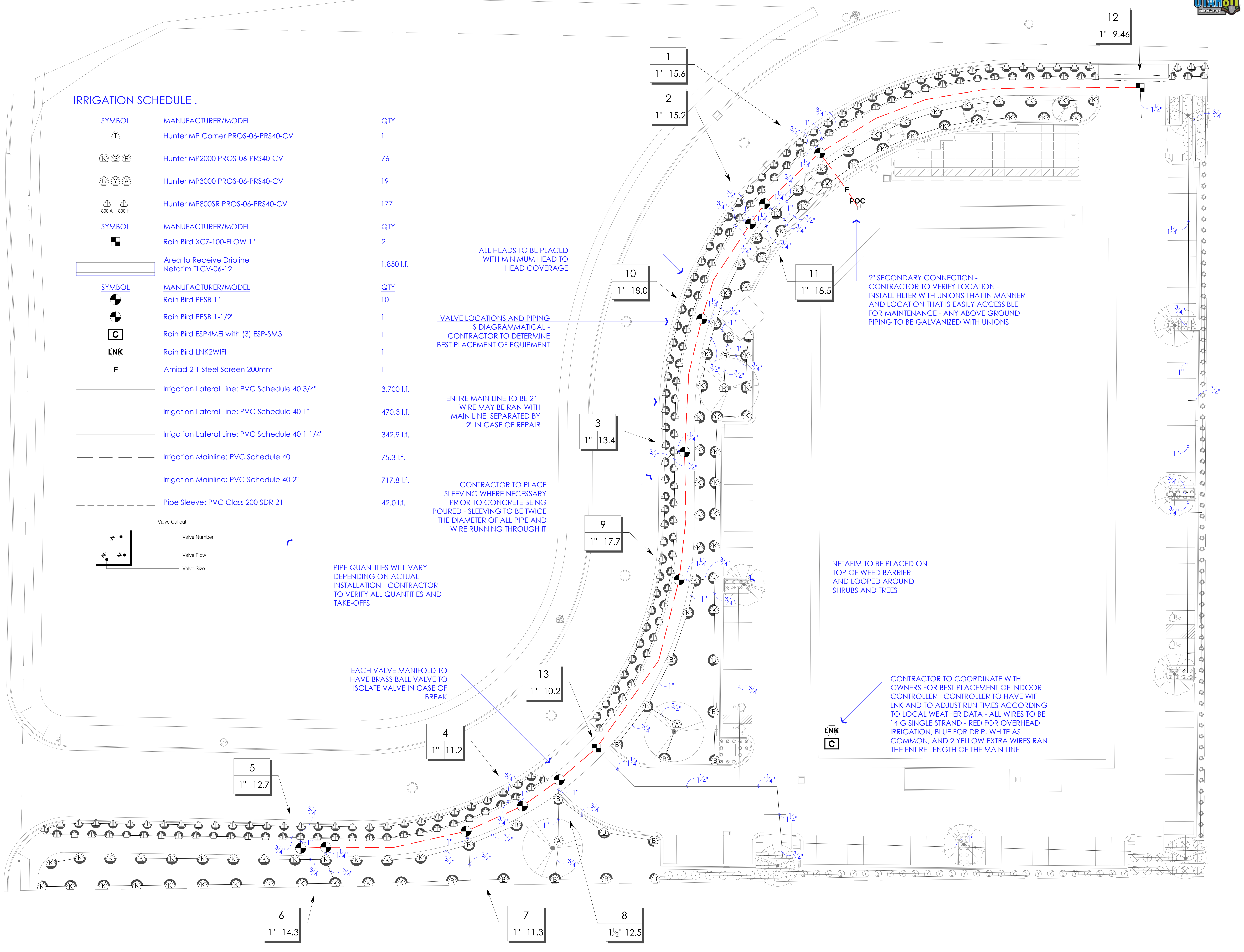
SPANISH FORK LOT 2
1600 N 300 W
SPANISH FORK, UT

SHEET NAME

shrub plan

SHEET #

LS-1



## IRRIGATION SCHEDULE .

SYMBOL	MANUFACTURER/MODEL	QTY
T	Hunter MP Corner PROS-06-PRS40-CV	1
K G R	Hunter MP2000 PROS-06-PRS40-CV	76
B Y A	Hunter MP3000 PROS-06-PRS40-CV	19
800 A 800 F	Hunter MP800SR PROS-06-PRS40-CV	177
SYMBOL	MANUFACTURER/MODEL	QTY
▚	Rain Bird XCZ-100-FLOW 1"	2
▤	Area to Receive Dripline Netafim TLCV-06-12	1,850 l.f.
SYMBOL	MANUFACTURER/MODEL	QTY
◕	Rain Bird PESB 1"	10
◕	Rain Bird PESB 1-1/2"	1
C	Rain Bird ESP4MEi with (3) ESP-SM3	1
LNK	Rain Bird LNK2WIFI	1
F	Amiad 2-T-Steel Screen 200mm	1
———	Irrigation Lateral Line: PVC Schedule 40 3/4"	3,700 l.f.
———	Irrigation Lateral Line: PVC Schedule 40 1"	470.3 l.f.
———	Irrigation Lateral Line: PVC Schedule 40 1 1/4"	342.9 l.f.
— — — —	Irrigation Mainline: PVC Schedule 40	75.3 l.f.
— — — —	Irrigation Mainline: PVC Schedule 40 2"	717.8 l.f.
= = = =	Pipe Sleeve: PVC Class 200 SDR 21	42.0 l.f.

Valve Callout

— Valve Number
#" — Valve Size
— Valve Flow

PIPE QUANTITIES WILL VARY DEPENDING ON ACTUAL INSTALLATION - CONTRACTOR TO VERIFY ALL QUANTITIES AND TAKE-OFFS

ALL HEADS TO BE PLACED WITH MINIMUM HEAD TO HEAD COVERAGE

VALVE LOCATIONS AND PIPING IS DIAGRAMMATICAL - CONTRACTOR TO DETERMINE BEST PLACEMENT OF EQUIPMENT

ENTIRE MAIN LINE TO BE 2" - WIRE MAY BE RAN WITH MAIN LINE, SEPARATED BY 2" IN CASE OF REPAIR

CONTRACTOR TO PLACE SLEEVING WHERE NECESSARY PRIOR TO CONCRETE BEING POURED - SLEEVING TO BE TWICE THE DIAMETER OF ALL PIPE AND WIRE RUNNING THROUGH IT

EACH VALVE MANIFOLD TO HAVE BRASS BALL VALVE TO ISOLATE VALVE IN CASE OF BREAK

2" SECONDARY CONNECTION - CONTRACTOR TO VERIFY LOCATION - INSTALL FILTER WITH UNIONS THAT IN MANNER AND LOCATION THAT IS EASILY ACCESSIBLE FOR MAINTENANCE - ANY ABOVE GROUND PIPING TO BE GALVANIZED WITH UNIONS

NETAFIM TO BE PLACED ON TOP OF WEED BARRIER AND LOOPED AROUND SHRUBS AND TREES

CONTRACTOR TO COORDINATE WITH OWNERS FOR BEST PLACEMENT OF INDOOR CONTROLLER - CONTROLLER TO HAVE WIFI LNK AND TO ADJUST RUN TIMES ACCORDING TO LOCAL WEATHER DATA - ALL WIRES TO BE 14 G SINGLE STRAND - RED FOR OVERHEAD IRRIGATION, BLUE FOR DRIP, WHITE AS COMMON, AND 2 YELLOW EXTRA WIRES RAN THE ENTIRE LENGTH OF THE MAIN LINE

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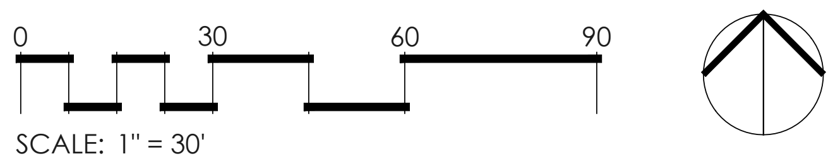

SCALE: 1" = 30'

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CUSTOMER INFO

SPANISH FORK LOT 2
1600 N 300 W
SPANISH FORK, UT

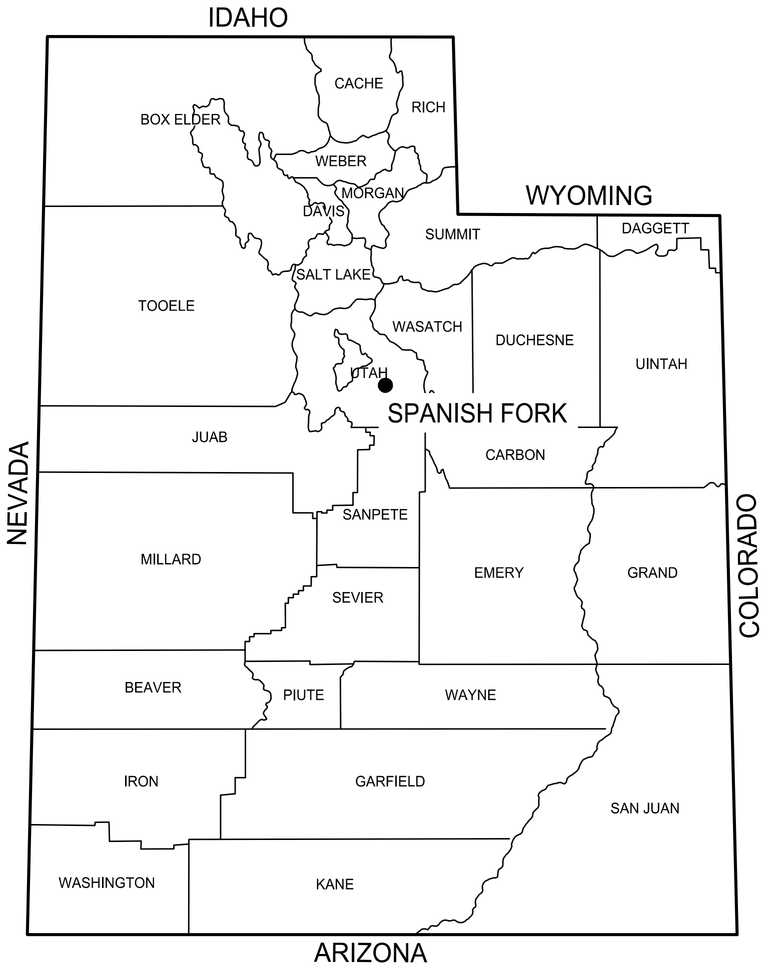
SHEET NAME
irrigation plan

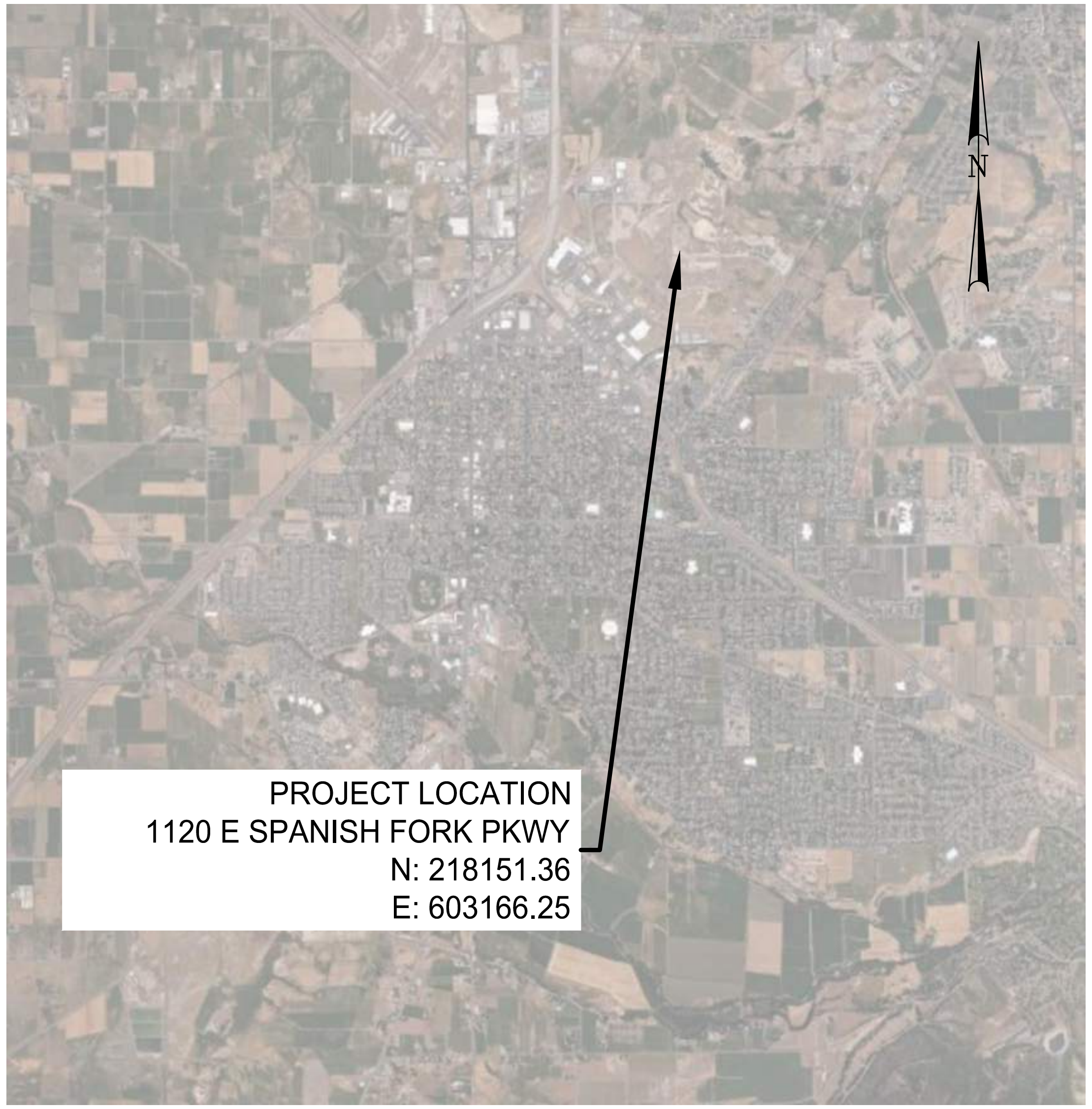
SHEET #
LI-1

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT NE-2
1120 E SPANISH FORK PKWY
UTAH COUNTY
2022

PROJECT NO.	SHEET NO.
2202-061	C-001

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION





PROJECT LOCATION
1120 E SPANISH FORK PKWY
N: 218151.36
E: 603166.25

VICINITY MAP

APPROVAL

RECOMMENDED FOR APPROVAL:

ENGINEER DATE

APPROVED:

CLIENT DATE

INDEX TO SHEETS

SHEET NO.	SHEET TITLE
C-001	TITLE
C-002	LEGEND
C-003	GENERAL NOTES
V-101	SURVEY CONTROL
C-101	SITE PLAN
C-501	DETAILS

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h:\jd\proj\2202-061\dwg\title_2202-061 ne-2

LEGEND

EXISTING FEATURES

swr	SANITARY SEWER LINE
SMH	SANITARY SEWER MANHOLE
wtr	CULINARY WATER LINE
⋈	CULINARY WATER VALVE
be	BURIED POWER LINE
e	OVERHEAD POWER LINE
btel	BURIED TELEPHONE LINE
tel	OVERHEAD TELEPHONE LINE
bctv	BURIED CABLE TV LINE
ctv	OVERHEAD CABLE TV LINE
fo	FIBER OPTIC LINE
gas	NATURAL GAS LINE
ir	IRRIGATION LINE
sd	STORM DRAIN
—x—x—x—x—x—x—x—	FENCE LINE (BARBED OR STOCKTIGHT)
—⌁—⌁—⌁—⌁—⌁—⌁—	FENCE LINE (CHAIN LINK)
- - - - - - - -	DRAINAGE CULVERT
— — — — — — —	CONCRETE SURFACING (SIDEWALK, CURB, GUTTER, ETC.)
— · · · — · · · —	FLOW LINE OF DITCH
— — — — — — —	EDGE OF ASPHALT SURFACING
- - - - - - - -	EDGE OF GRAVEL SURFACING
-------------	EDGE OF DIRT SURFACING
	FIRE HYDRANT
M	WATER METER
M	GAS METER
▨	STRUCTURE
G.W. EPP	POWER POLE & GUY WIRE
SCO	SANITARY SEWER CLEAN OUT
✿	TREE
○	DELINEATOR POST
—o—	STREET SIGN
T	TELEPHONE PEDESTAL
⌂	MAILBOX
⊡	CABLE TV PEDESTAL
WMH	WATER MANHOLE
○—☼	LIGHT POLE

MISC. FEATURES

━━━━━━━━	SUBDIVISION BOUNDARY LINE
— — — — — — —	LOT LINES
—— r/w —— r/w ——	EXISTING RIGHT OF WAY LINE
—— — - —— — - ——	EXISTING N/A LINE
—— r/w —— r/w —— BLOCK LINE	EXISTING CITY BLOCK LINES
━━ R/W ━━ R/W ━━	PROPOSED RIGHT-OF-WAY LINE
— · · — · · — · · —	SECTION LINE
— — — — — —	QUARTER SECTION LINE
- - - - - - - - - - - -	(P.U.E.) PUBLIC UTILITY EASEMENT
— · · — · · — · · —	DEED LINE
━━━━━━━━	PROPERTY LINE

ABBREVIATIONS

TBC	TOP BACK OF CURB	EPP	POWER POLE
FLG	FLOW LINE OF GUTTER	SMH	SEWER MANHOLE
LOC	LIP OF CURB	CMH	COMMUNICATION MANHOLE
TSW	TOP OF SIDEWALK	R/W	RIGHT-OF-WAY
TOC	TOP OF CONCRETE	T.C.E.	TEMPORARY CONSTRUCTION EASEMENT
EOA	EDGE OF ASPHALT		
TOA	TOP OF ASPHALT	P.U.E.	PUBLIC UTILITY EASEMENT
TOG	TOP OF GRATE		
FLC	FLOW LINE OF CULVERT	STA	STATION
SW	SIDEWALK	L / LT	LEFT
FG	FINISHED GROUND	R / RT	RIGHT

PROPOSED FEATURES

SWR	SANITARY SEWER LINE
SMH	SANITARY SEWER MANHOLE
├—— SCO	SANITARY SEWER SERVICE
WTR	CULINARY WATER LINE
⧓	CULINARY WATER VALVE
BE	BURIED POWER LINE
E	OVERHEAD POWER LINE
BTEL	BURIED TELEPHONE LINE
TEL	OVERHEAD TELEPHONE LINE
BCTV	BURIED CABLE TV LINE
CTV	OVERHEAD CABLE TV LINE
FO	FIBER OPTIC LINE
GAS	NATURAL GAS LINE
IR	IRRIGATION LINE
SD	STORM DRAIN
—X—X—X—X—X—X—	FENCE LINE (BARBED OR STOCKTIGHT)
—⌁—⌁—⌁—⌁—⌁—⌁—	FENCE LINE (CHAIN LINK)
▭	DRAINAGE CULVERT
————————	EDGE OF ASPHALT
————————	EDGE OF CONCRETE
	FIRE HYDRANT
M	CULINARY WATER METER
M	GAS METER
○	DELINEATOR POST
—o—	STREET SIGN
EPP	POWER POLE
⌂	MAILBOX
●—☀	LIGHT POLE
░	CONCRETE SURFACING
▒	ASPHALT SURFACING
CUT CUT	TOP OF CUT LIMITS
FILL FILL	TOE OF FILL LIMITS

NO.	DATE	REMARKS

REVISIONS

UPDATED: 3/8/2023
PLOTTED: 3/9/2023

DWG NAME:
h:\JD\Proj\2202-061\dwg\TITLE_2202-061 NE-2.dwg

SCALE:
NONE

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APPROVED ______ QUALITY MANAGEMENT REVIEW ______ DATE

SPANISH FORK CITY
SFCN HUT NE-2
LEGEND

PROJECT NUMBER: 2202-061

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY

SHEET NO. C-002

GENERAL NOTES

GENERAL NOTES

1. REQUEST AND RECEIVE ACCEPTANCE FROM ENGINEER PRIOR TO MAKING MODIFICATIONS TO DRAWINGS, SPECIFICATIONS, OR CONSTRUCTION SCHEDULE.
2. PERFORM CONSTRUCTION IN ACCORDANCE WITH LATEST VERSION (2017) OF APWA UTAH CHAPTER MANUAL OF STANDARD SPECIFICATIONS AND MANUAL OF STANDARD PLANS, INCLUDING AMENDMENTS, DDW RULES, INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL FIRE CODE (IFC), INTERNATIONAL RESIDENTIAL CODE (IRC), AND/OR OWNER STANDARDS AND SPECIFICATIONS.
3. IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, STATE RULES, DRAWINGS AND SPECIFICATIONS, ADHERE TO MOST STRINGENT REQUIREMENTS.
4. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY AND ARE BASED ON UTILITY MAPS AND FIELD SURVEY.
5. LOCATE AND PROTECT EXISTING UTILITIES AND ANY OBSTRUCTIONS DURING COURSE OF CONSTRUCTION. NOTIFY BLUE STAKES (811) AT LEAST 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES ON SITE. RESTORE UTILITIES DAMAGED DURING CONSTRUCTION TO CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITION PRIOR TO CONSTRUCTION.
6. NOTIFY ENGINEER OR PROJECT REPRESENTATIVE OF ANY CONFLICTS BETWEEN EXISTING FEATURES AND NEW CONSTRUCTION.
7. UNLESS DETAILED, SPECIFIED OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN APPLICABLE TYPICAL DETAILS AND GENERAL NOTES.
8. CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL AND SECURITY.
9. MEET UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY AND U.S. EPA REQUIREMENTS, RULES, AND REGULATIONS.
10. OBTAIN REQUIRED APPROVALS AND PERMITS AND PAY REQUIRED FEES PRIOR TO BEGINNING CONSTRUCTION.
11. FOR MATERIALS USED AND WORK PERFORMED IN UTAH DEPARTMENT OF TRANSPORTATION (UDOT) RIGHT-OF-WAY, CONFORM TO UDOT STANDARDS AND SPECIFICATIONS.
12. CONDUCT CONSTRUCTION OPERATIONS WITH NECESSARY SIGNS, BARRICADES, AND FLASHERS PLACED TO COMPLY WITH OSHA, UTAH STATE INDUSTRIAL COMMISSION, LOCAL SAFETY STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. NO FULL ROAD CLOSURES WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF OWNER. MAINTAIN TRAFFIC IN TWO DIRECTIONS AT ALL TIMES FOR ROADS AND ROAD CROSSINGS, UNLESS EXTENUATING CIRCUMSTANCES PROHIBIT. ROAD CLOSURE REQUESTS MUST BE MADE 1 WEEK BEFORE NEEDING TO CLOSE THE ROAD.
14. PROVIDE WRITTEN NOTIFICATION INCLUDING CONTACT INFORMATION, TO RESIDENTS AND BUSINESSES IMPACTED BY CONSTRUCTION. PROVIDE NOTICE MINIMUM OF 48 HOURS IN ADVANCE OF WORK BEING PERFORMED. MAINTAIN DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES UNLESS PARKING ARRANGEMENTS HAVE BEEN MADE WITH RESIDENTS AND BUSINESSES WHILE WORK IS COMPLETED ADJACENT TO OR ON THEIR PROPERTIES.
15. WORK WITH INDIVIDUAL PROPERTY OWNERS OR BUSINESS FOR ACCESS AND PERMISSION TO CONNECT TO UTILITY SERVICE AT PROPERTIES.
16. OBTAIN RIGHT OF INGRESS AND EGRESS SHOULD WORK OR PERSONNEL VENTURE ONTO PRIVATE PROPERTY WHICH IS NOT INCLUDED IN OWNER ACQUIRED RIGHTS-OF-WAY AND EASEMENTS.
17. CONSTRUCTION WORK WITHIN 30 FEET OF A GOVERNMENT SURVEY MONUMENT OR PUBLIC LAND SURVEY GOVERNMENT CORNER LOCATION MUST OBTAIN A COUNTY PERMIT BEFORE BEGINNING CONSTRUCTION WORK.

GENERAL CONSTRUCTION NOTES

1. NOTIFY OWNER, AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. SCHEDULE AND ATTEND PRE-CONSTRUCTION MEETING PRIOR TO STARTING CONSTRUCTION ACTIVITIES. SCHEDULE MEETING THROUGH OWNER OR OWNER'S REPRESENTATIVE.
3. PROVIDE CONSTRUCTION SCHEDULE TO ENGINEER AND OWNER.
4. FIELD VERIFY EXISTING CONDITIONS. QUANTITIES, LENGTHS, VOLUMES, AND AREAS INDICATED ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR. CONTRACTOR TO VERIFY QUANTITIES AND DETERMINE EXACT MEASUREMENTS, AS NECESSARY.
5. VERIFY DIMENSIONS BEFORE STARTING WORK AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
6. OBTAIN APPROVAL FROM OWNER PRIOR TO CONSTRUCTION FOR USE OF STAGING AREAS (IF ANY) NOT SHOWN ON DRAWINGS. COORDINATE WITH OWNER TO IDENTIFY POTENTIAL USEABLE STAGING AREAS. RESTORE STAGING AREA TO PRECONSTRUCTION CONDITION.
7. PROTECT EXISTING IMPROVEMENTS DURING CONSTRUCTION AND REPLACE OR RESTORE IMPROVEMENTS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITY. RESTORE IMPROVEMENTS TO AS-GOOD-AS OR BETTER-THAN CONDITION THAT EXISTED PRIOR TO CONSTRUCTION. REPAIR IRRIGATION/SPRINKLERS WITHIN 24 HOURS FOLLOWING PLACEMENT OF IMPROVEMENTS.
8. PROPERLY BACKFILL, COMPACT, AND RESTORE PAVEMENT WITHIN STREET RIGHT-OF-WAY.
9. DISPOSE WASTE OFF SITE AT LANDFILL OR OTHER LEGAL DISPOSAL FACILITY.
10. REMOVE SURPLUS EXCAVATION FROM SITE. USE TOPSOIL OR OTHER NATIVE MATERIAL IN LANDSCAPE OR NATIVE GRADING. STOCKPILE TOPSOIL SEPARATELY FROM OTHER EXCAVATED MATERIALS. PLACE TOPSOIL IN LANDSCAPED AREAS IN 4 INCHES THICK MINIMUM AND GRADE TO DRAIN.
11. PERFORM CONSTRUCTION QUALITY CONTROL TESTING, INCLUDING SOILS, BACKFILL, CONCRETE, UTILITIES, ETC.
12. PERFORM MATERIALS TESTING AND SUBMIT COPIES OF TEST RESULTS TO ENGINEER AND/OR OWNER AS REQUIRED PER SPECIFICATIONS. COORDINATE TESTING WITH INSPECTORS AND/OR ENGINEER. PERFORM DENSITY TESTING ON TRENCH BACKFILL, GRANULAR BORROW, AND UTBC PLACEMENT FOR ROADWAY AND PRIOR TO ANY CONCRETE PLACEMENT WHERE NECESSARY. SEE SPECIFICATIONS FOR TESTING FREQUENCY.
13. PROVIDE SITE DUST CONTROL AND SUPPRESSION FOR DURATION OF PROJECT, INCLUDING WEEKENDS.

GENERAL EROSION CONTROL NOTES

1. PREPARE AND SUBMIT STORM WATER POLLUTION PREVENTION PLAN (SWPPP). PRIOR TO STARTING CONSTRUCTION FILE NOTICE OF INTENT (NOI) AND AT END OF CONSTRUCTION FILE NOTICE OF TERMINATION (NOT).
2. PERFORM CONSTRUCTION WORK IN ACCORDANCE WITH UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) REGULATIONS.
3. DURING CONSTRUCTION, PREVENT AND CONTROL EROSION DUE TO WIND AND WATER. FOLLOW PROCEDURES AND BEST MANAGEMENT PRACTICES INDICATED IN SWPPP AND INSTALL EROSION CONTROL MEASURES INDICATED IN SWPPP.
4. PROVIDE ADDITIONAL EROSION CONTROL MEASURES WHEN UNFORESEEN PROBLEMS OCCUR OR IF SWPPP DOES NOT FUNCTION AS INTENDED. ADJUST EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) AS NECESSARY DUE TO GRADE CHANGES DURING CONSTRUCTION. OWNER MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON INSPECTION OF PROPOSED FACILITIES.
5. KEEP STREETS CLEAN AND FREE FROM SOIL AND DEBRIS DURING CONSTRUCTION.
6. PROTECT STORM DRAIN FACILITIES ON SITE AND ADJACENT TO SITE FROM SITE RUNOFF. INSTALL INLET PROTECTION DEVICES IMMEDIATELY UPON INDIVIDUAL INLETS BECOMING FUNCTIONAL.
7. SEED AREAS DISTURBED DURING CONSTRUCTION WITH APPROPRIATE NATIVE SEED MIX OR PLACE LANDSCAPING TO MATCH EXISTING.
8. DISPOSE OF WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, ETC.) IN MANNER THAT PREVENTS CONTACT WITH STORM WATER DISCHARGES FROM SITE.
9. STABILIZE CONSTRUCTION AREAS AT END OF EACH WORKING DAY. INCLUDE BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF PAVING FOR ROAD CONSTRUCTION.
10. MAINTAIN MEASURES CONTAINED IN SWPPP IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF SITE. CHECK EROSION AND SEDIMENTATION CONTROL MEASURES BY QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF END OF RAINFALL EVENT. COMPLETE ANY NEEDED CLEANING AND REPAIRS WITHIN TIME FRAMES SPECIFIED IN SWPPP AND/OR UPDES GENERAL PERMIT.
11. CLEAN UTILITY LINES TO REMOVE DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE. PROTECT DOWN-GRADE LINES FROM WASH-WATER DURING CLEANING PROCESS TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS.
12. POWER WASH EXCAVATION EQUIPMENT BEFORE ENTERING DIFFERENT VEGETATION MATRIX.
13. REMOVE INLET PROTECTION DEVICES AFTER NOT AND FINAL ACCEPTANCE BY OWNER.

GENERAL UTILITY NOTES

1. CONTRACTOR TO COORDINATE ALL UTILITY CONNECTIONS AND SERVICES PRIOR TO COMMENCING CONSTRUCTION. STAGE CONSTRUCTION TO MITIGATE DELAYS OF SERVICES AND PERMITTING.
2. PROVIDE UTILITY PIPING AND APPURTENANCES IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND IN CONFORMANCE WITH APPROPRIATE JURISDICTIONAL SPECIFICATIONS AND DETAILS.
3. PROVIDE SUBMITTALS TO ENGINEER FOR REVIEW AND ACCEPTANCE FOR BEDDING, BACKFILL, PIPE, METERS, BOXES, VALVES, FIRE HYDRANTS, BLOWOFFS, VAULTS, MANHOLES, INLET BOXES, ETC. PROVIDE SUBMITTALS WITH SUFFICIENT INFORMATION TO SHOW THAT PROPOSED PRODUCTS AND MATERIALS CONFORM TO OWNER'S STANDARDS AND SPECIFICATIONS.

GENERAL STORM WATER NOTES

1. FOLLOW IRC R401.3 FOR ALL SITE DRAINAGE:
   - 1.1. DIVERT SURFACE DRAINAGE TO STORM SEWER OR APPROVED POINT OF COLLECTION THAT DOES NOT CREATE HAZARD.
   - 1.2. GRADE LOTS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
   - 1.3. GRADE 6" OF FALL WITHIN THE FIRST 10' OF FOUNDATION PERIMETER.
   - 1.4. WHERE LOT LINES, SLOPES OR PHYSICAL BARRIERS PREVENT 6" OF FALL, CONSTRUCT DRAINAGE SWALES TO ENSURE DRAINAGE AWAY FROM STRUCTURE.
   - 1.5. SLOPE IMPERVIOUS SURFACES WITHIN 10' OF BUILDING FOUNDATION A MINIMUM OF 2% AWAY FROM BUILDING.

MATERIALS NOTES

1. ALL MATERIALS WILL CONFORM TO CITY'S SPECIFICATIONS AND STANDARDS UNLESS OTHERWISE INDICATED.
2. EARTHWORK
   - 1.1. SUBMIT LAB REPORTS AS CONSTRUCTION RECORD PER AASHTO T180 (D) FOR A-1 SOILS AND AASTHO T90 (D) FOR ALL OTHER SOILS ENCOUNTERED ON SITE, AS CLASSIFIED PER AASHTO M145.
   - 1.2. SUBMIT FIELD REPORTS AS CONSTRUCTION RECORD PER ASTM D6938 FOR EVERY DAY AND EVERY TYPE OF SOIL WORKED, PER DAY.
   - 1.3. WITHIN RIGHT-OF-WAY AND OTHER TRAVELED AREAS OR UNDER STRUCTURES, COMPACT BACKFILL, EMBANKMENT, IMPORTED FILL AND PAVEMENT MATERIALS TO 95 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY. IN OTHER NON-TRAVEL AREAS, COMPACT FILLS AND EMBANKMENT MATERIALS TO 90 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY.
   - 1.4. ONLY USE MATERIALS APPROVED BY THE ENGINEER. NO GEOTECHNICAL REPORT WAS COMPLETED FOR THIS PROJECT.

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Dig Safely.

NO.	DATE	REMARKS

REVISIONS

UPDATED: 3/8/2023
PLOTTED: 3/9/2023
DWG NAME: h:\JD\Proj\2202-061\dwg\TITLE_2202-061 NE-2.dwg
SCALE: NO SCALE

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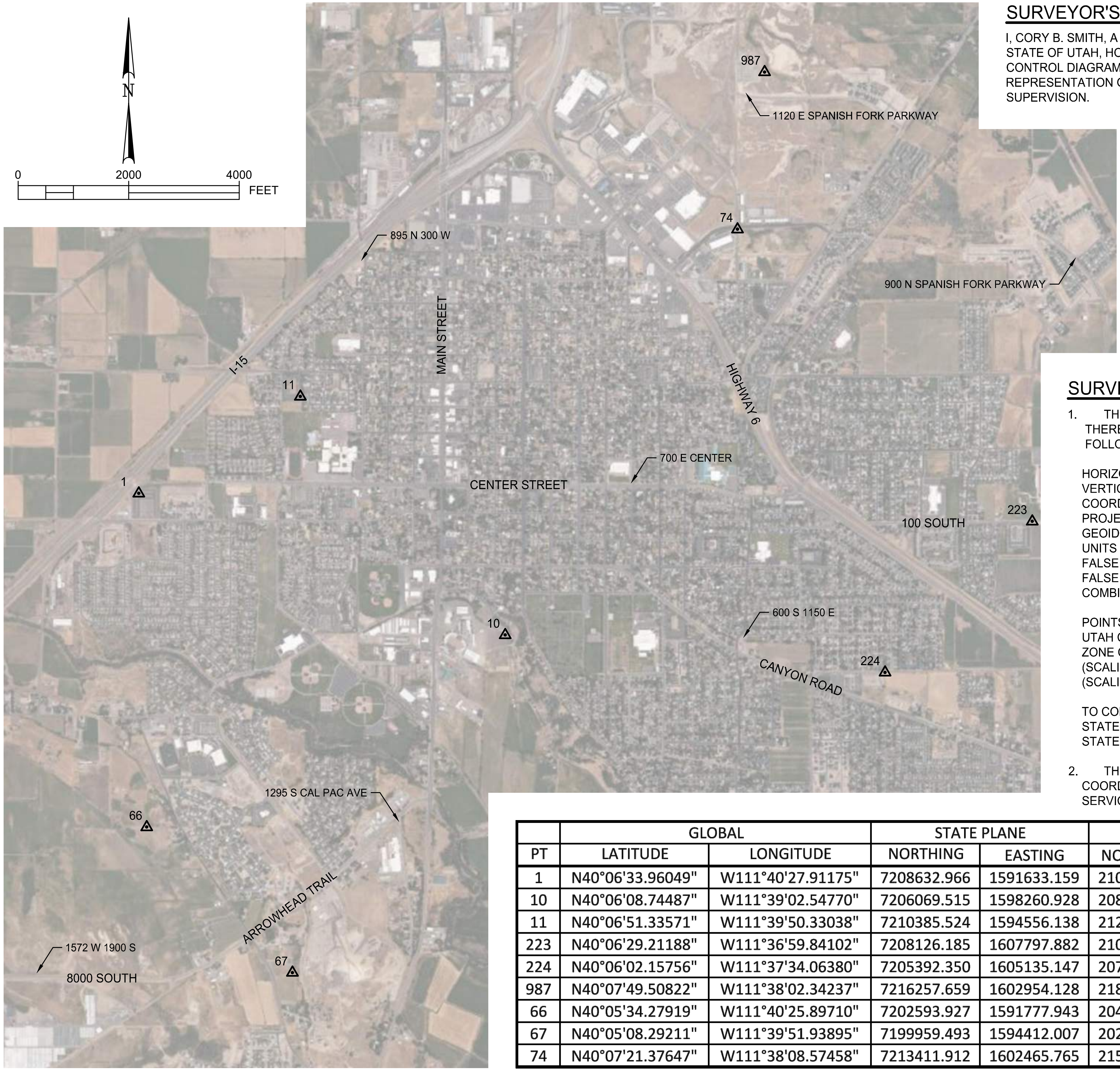
APPROVED: QUALITY MANAGEMENT REVIEW DATE

SPANISH FORK CITY
SFCN HUT NE-2
GENERAL NOTES
PROJECT NUMBER: 2202-061
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY
SHEET NO. C-003



SURVEYOR'S CERTIFICATE

I, CORY B. SMITH, A PROFESSIONAL LAND SURVEYOR AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH, HOLDING CERTIFICATE #11349296, CERTIFY THAT I HAVE PREPARED THE CONTROL DIAGRAM REPRESENTED HEREIN AND THAT THE SAME IS AN ACCURATE REPRESENTATION OF A CONTROL SURVEY, AND WAS CONDUCTED UNDER MY DIRECT SUPERVISION.

Cory B. Smith

NO. 11349296
CORY B. SMITH
06/27/2022
Electronic Seal

CORY B. SMITH, P.L.S. #11349296

SURVEY DATUM

1. THE "PROJECT COORDINATES" AND BEARINGS AND DISTANCES DERIVED THEREFROM ARE EXPRESSED IN A LOCAL GROUND SYSTEM DEFINED AS FOLLOWS:

HORIZONTAL DATUM = NORTH AMERICAN DATUM OF 1983 (N.A.D.83)
VERTICAL DATUM =NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88)
COORDINATE SYSTEM= US STATE PLANE 1983, UTAH CENTRAL ZONE (4302)
PROJECTED AT GROUND
GEOID MODEL = GEOID 12B
UNITS = US SURVEY FOOT
FALSE NORTHING = -7,000,000
FALSE EASTING= -1,000,000
COMBINED SCALE FACTOR= 0.99969464

POINTS WERE SCALED FROM COORDINATE 0,0 IN THE NAD 83 US STATE PLANE UTAH CENTRAL ZONE COORDINATE SYSTEM USING THE COMBINED SCALE FACTOR LISTED ABOVE.
(SCALING LATITUDE = N20°31'27.66067")
(SCALING LONGITUDE = W116°02'57.11642")

TO CONVERT TO STATE PLANE COORDINATES USE THE FOLLOWING:
STATE PLANE NORTHING= (PROJECT NORTHING + 7,000,000)/ 1.0003054533
STATE PLANE EASTING= (PROJECT EASTING + 1,000,000)/ 1.0003054533

2. THE CONTROL SURVEY WAS PERFORMED IN JULY 2021. SURVEY CONTROL COORDINATES WERE ESTABLISHED USING THE NGS ONLINE POSITIONING USER SERVICE (OPUS) AT POINT 1.

	GLOBAL		STATE PLANE		PROJECT			
PT	LATITUDE	LONGITUDE	NORTHING	EASTING	NORTHING	EASTING	ELEV	DESCRIPTION
1	N40°06'33.96049"	W111°40'27.91175"	7208632.966	1591633.159	210834.867	592119.329	4567.80	NAIL
10	N40°06'08.74487"	W111°39'02.54770"	7206069.515	1598260.928	208270.632	598749.122	4588.66	NAIL
11	N40°06'51.33571"	W111°39'50.33038"	7210385.524	1594556.138	212587.960	595043.200	4570.79	NAIL
223	N40°06'29.21188"	W111°36'59.84102"	7208126.185	1607797.882	210327.931	608288.989	4729.51	E/4 SEC 20 UT CO BC 2007
224	N40°06'02.15756"	W111°37'34.06380"	7205392.350	1605135.147	207593.261	605625.441	4733.77	S/4 SEC 20 UT CO BC 1955
987	N40°07'49.50822"	W111°38'02.34237"	7216257.659	1602954.128	218461.888	603443.755	4563.85	NAIL
66	N40°05'34.27919"	W111°40'25.89710"	7202593.927	1591777.943	204793.983	592264.156	4575.45	W/4 SEC 25 UT CO BC 1956
67	N40°05'08.29211"	W111°39'51.93895"	7199959.493	1594412.007	202158.744	594899.026	4616.16	S/4 SEC 25 UT CO BC 1956
74	N40°07'21.37647"	W111°38'08.57458"	7213411.912	1602465.765	215615.272	602955.244	4586.42	E/4 SEC 18 UT CO BC 1970

UPDATED: 6/27/2022
PLOTTED: 6/27/2022

DWG NAME: H:\JD\Proj\2202-061\dwg\SURVEY CONTROL_2202-061.dwg

REVISIONS

NO.	DATE	REMARKS

SCALE: 1"=2000'

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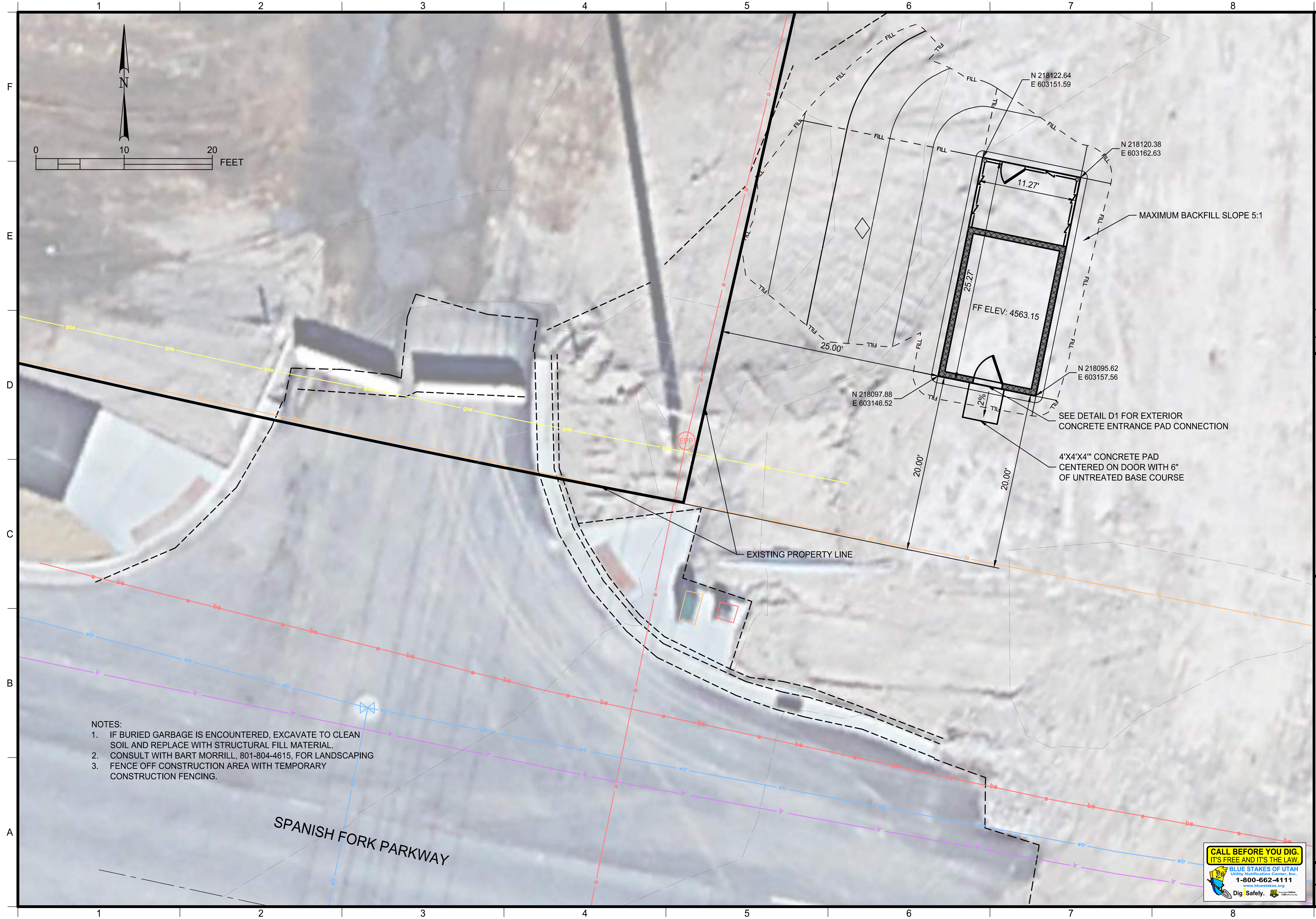
SPANISH FORK CITY
SFCN HUT
SURVEY CONTROL

PROJECT NUMBER: 2202-061

SUBMITTAL:

UTAH
COUNTY

SHEET NO. V-101



MAXIMUM BACKFILL SLOPE 5:1

SEE DETAIL D1 FOR EXTERIOR CONCRETE ENTRANCE PAD CONNECTION

4'X4'X4" CONCRETE PAD CENTERED ON DOOR WITH 6" OF UNTREATED BASE COURSE

EXISTING PROPERTY LINE

NOTES:

1. IF BURIED GARBAGE IS ENCOUNTERED, EXCAVATE TO CLEAN SOIL AND REPLACE WITH STRUCTURAL FILL MATERIAL.
2. CONSULT WITH BART MORRILL, 801-804-4615, FOR LANDSCAPING
3. FENCE OFF CONSTRUCTION AREA WITH TEMPORARY CONSTRUCTION FENCING.

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NO.	DATE	REMARKS

REVISIONS

UPDATED: 3/9/2023
PLOTTED: 3/9/2023

DWG NAME: h:\JD\Proj\2202-061\dwg\SP_2202-061 NE-2.dwg

SCALE: 1" = 10'

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APPROVED: ______ QUALITY MANAGEMENT REVIEW ______ DATE

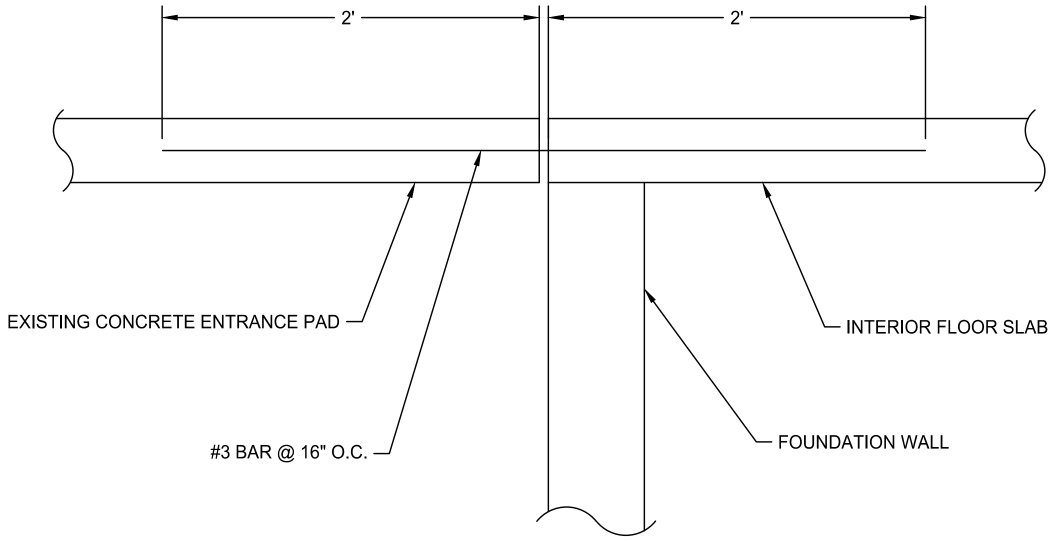
SPANISH FORK CITY
SFCN HUT NE-2
SITE PLAN

PROJECT NUMBER: 2202-061

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY

SHEET NO. C-101



D1	EXTERIOR CONCRETE ENTRANCE PAD CONNECTION
SCALE	NTS

D5	
SCALE	NTS

A1	DETAIL
SCALE	

A5	DETAIL
SCALE	

NO.	DATE	REMARKS

REVISIONS

SCALE: VARIES
DWG NAME: h:\JD\Proj\2202-061\dwg\SP_2202-061 NE-2.dwg
UPDATED: 3/9/2023
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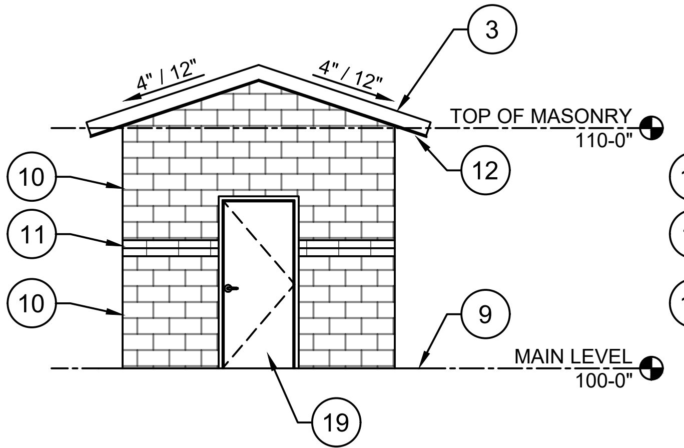
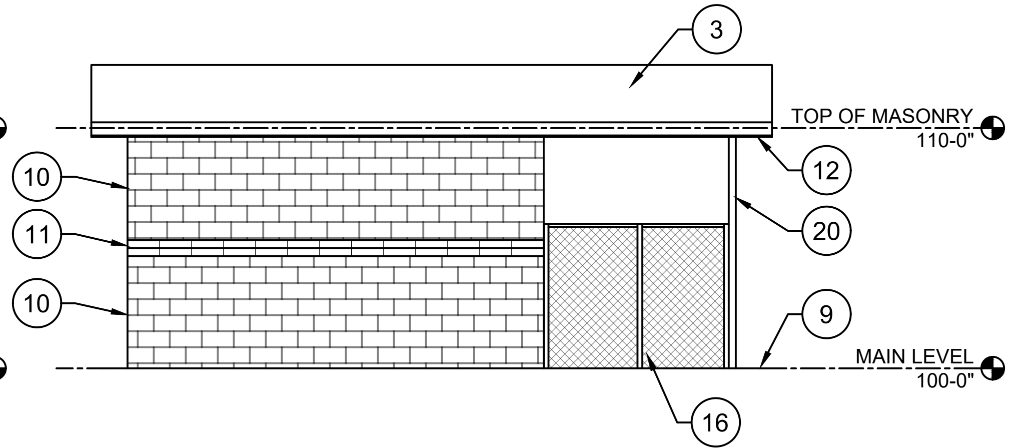
APPROVED ______ QUALITY MANAGEMENT REVIEW ______ DATE

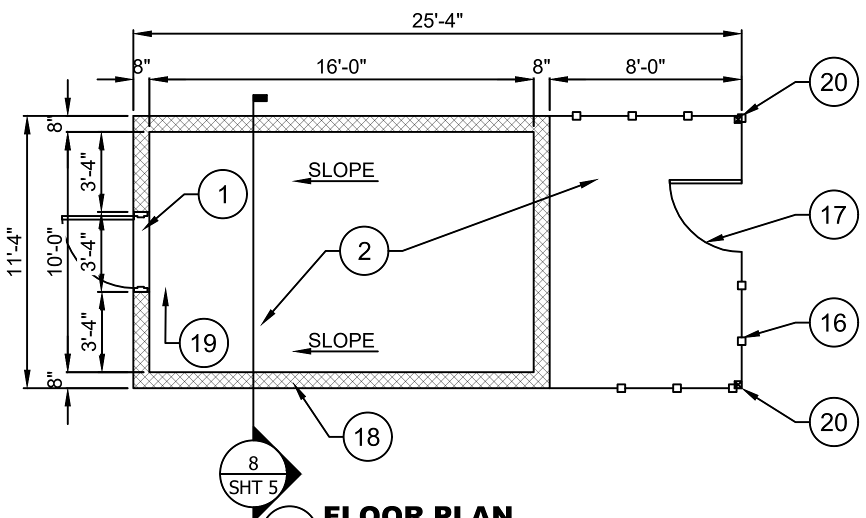
SPANISH FORK CITY
SFCN HUT NE-2
DETAILS
PROJECT NUMBER: 2202-061
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION
UTAH
COUNTY
SHEET NO. C-501



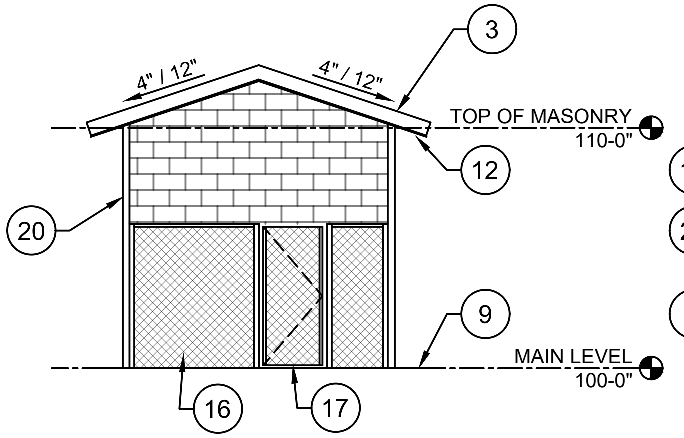
4 ELEVATION
Scale: 1/4" = 1'-0"



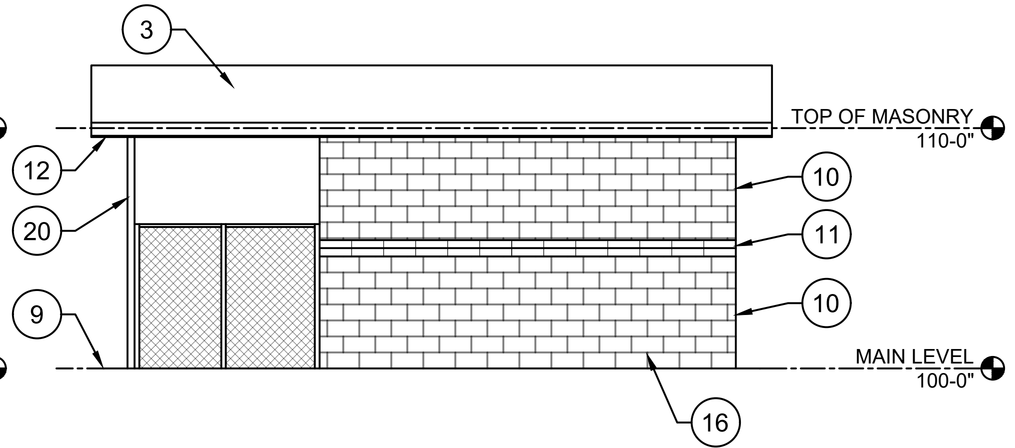
5 ELEVATION
Scale: 1/4" = 1'-0"



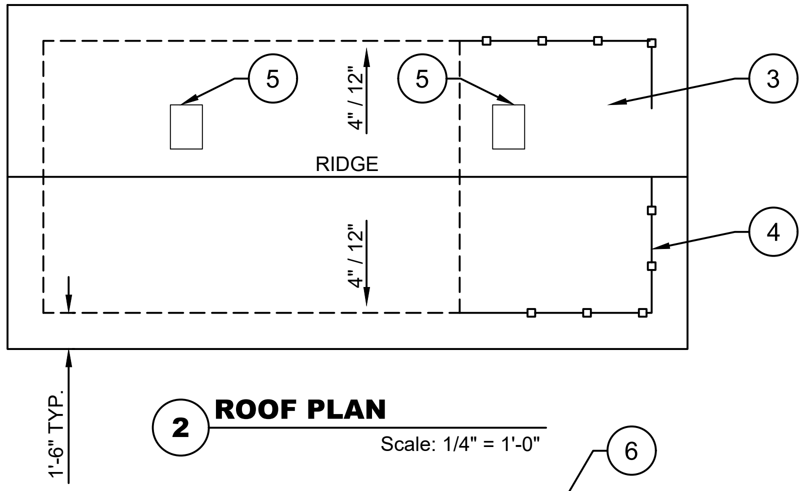
1 FLOOR PLAN
Scale: 1/4" = 1'-0"



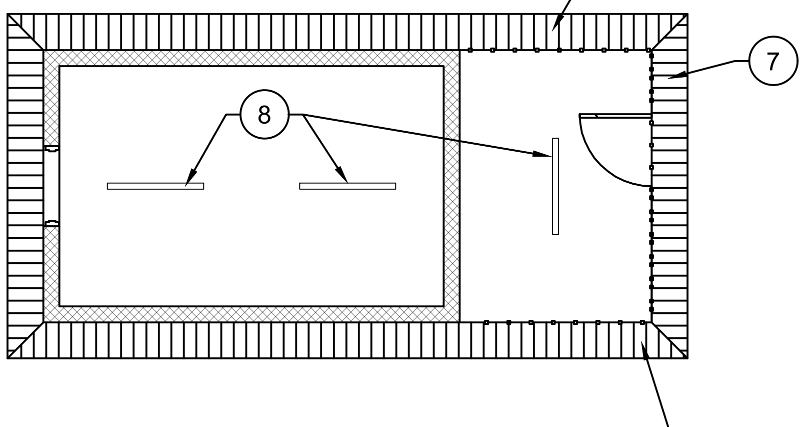
6 ELEVATION
Scale: 1/4" = 1'-0"



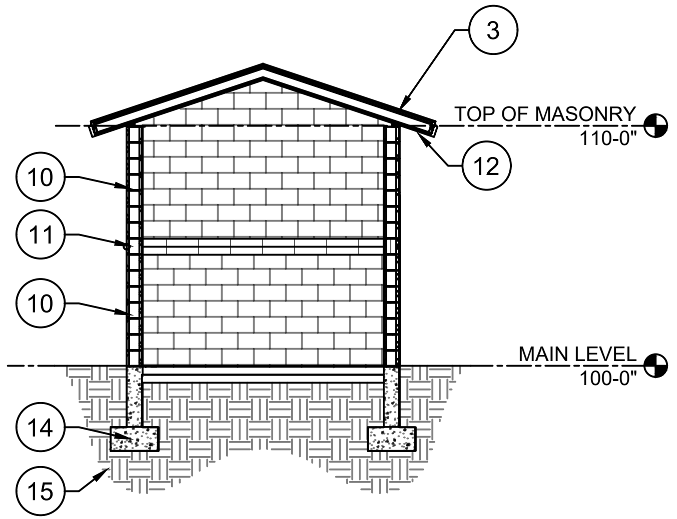
7 ELEVATION
Scale: 1/4" = 1'-0"



2 ROOF PLAN
Scale: 1/4" = 1'-0"



3 REFLECTED CEILING PLAN
Scale: 1/4" = 1'-0"



8 BUILDING SECTION
Scale: 1/4" = 1'-0"

1. DOOR THRESHOLD.
2. CONCRETE SLAB PER STRUCTURAL DESIGN - SLOPE TO DOOR OPENING.
3. PRE-FINISHED STANDING SEAM METAL ROOF OVER HIGH TEMPERATURE SELF-ADHERED UNDERLAYMENT
4. LINE OF WALL/FENCE BELOW
5. STATIC ROOF VENT W/ 50 SQ. IN. FREE CLEAR AREA PER UNIT.
6. PRE-FINISHED VENTED METAL SOFFIT
7. PRE-FINISHED METAL SOFFIT
8. LIGHT FIXTURE
9. APPROXIMATE FINISH GRADE - SEE CIVIL DRAWINGS
10. 8" HIGH COLORED HONED CMU WALL - COLOR #1
11. TWO ROWS 4" HIGH COLORED HONED CMU WALL - COLOR #2
12. PRE-FINISHED METAL FASCIA
13. PRE-FINISHED METAL SOFFIT
14. CONCRETE FOOTING AND FOUNDATION
15. EARTH FILL
16. 6' BLACK VINYL CHAINLINK FENCE
17. 6' BLACK VINYL CHAINLINK GATE.
18. TYPICAL REFERENCE FOR CONSTRUCTION TYPE. SEE SHEET A1.2
19. TYPICAL REFERENCE FOR DOOR TYPE. SEE SHEET A1.2 FOR DOOR SCHEDULE
20. 4X4 POST - SEE STRUCTURAL PLANS

J:\Shared drives\Public Works\SFCN\Projects - SFCN\SFCN Fiber Huts\DWG\Draft Building - SFCN Fiber Huts.dwg

SPANISH FORK CITY
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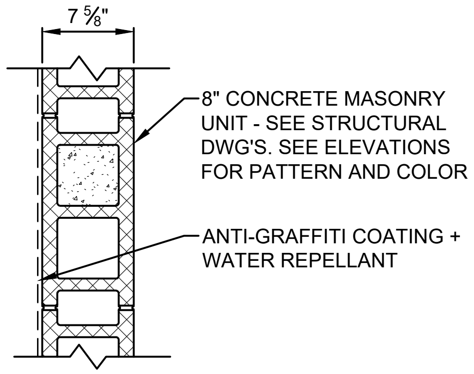
SPANISH FORK
ENGINEERING

SFCN FIBER HUTS
FIBER HUT PLANS

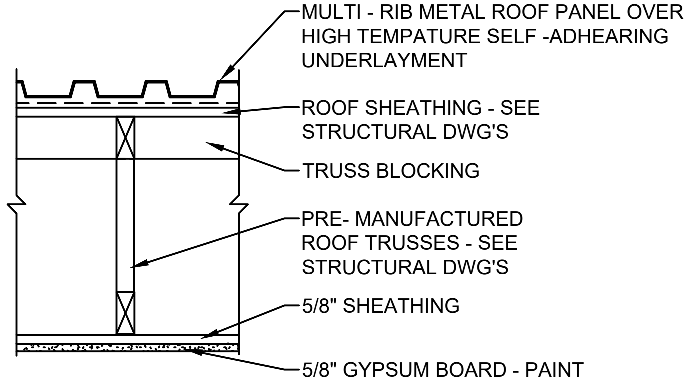
REVISION	BY	DATE

DRAWN: JLR
DESIGN: JHJ
CHECK: CMT
DATE: 6/7/2022
SCALE: 1/8"=1'-0"
DRAWING #: A1.1


7 ⅝"
8" CONCRETE MASONRY UNIT - SEE STRUCTURAL DWG'S. SEE ELEVATIONS FOR PATTERN AND COLOR
ANTI-GRAFFITI COATING + WATER REPELLANT

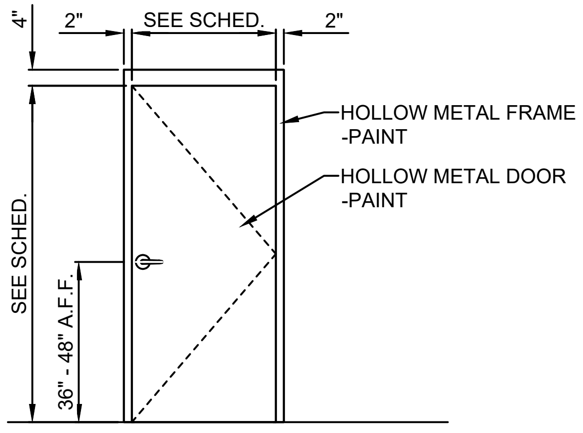
1-1 WALL CONSTRUCTION TYPE 1-1

Scale: N.T.S.

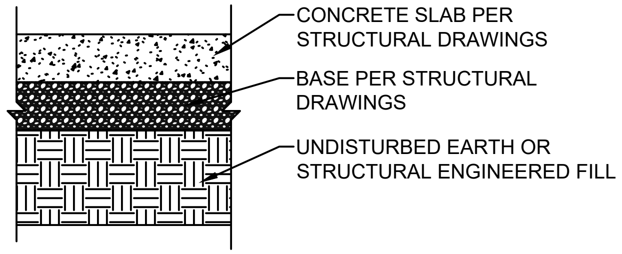

MULTI - RIB METAL ROOF PANEL OVER HIGH TEMPATURE SELF -ADHEARING UNDERLAYMENT
ROOF SHEATHING - SEE STRUCTURAL DWG'S
TRUSS BLOCKING
PRE- MANUFACTURED ROOF TRUSSES - SEE STRUCTURAL DWG'S
5/8" SHEATHING
5/8" GYPSUM BOARD - PAINT

2-1 ROOF/CEILING CONSTRUCTION

Scale: N.T.S.



TYPE A


CONCRETE SLAB PER STRUCTURAL DRAWINGS
BASE PER STRUCTURAL DRAWINGS
UNDISTURBED EARTH OR STRUCTURAL ENGINEERED FILL

3-1 FLOOR CONSTRUCTION

Scale: N.T.S.

DOOR SCHEDULE

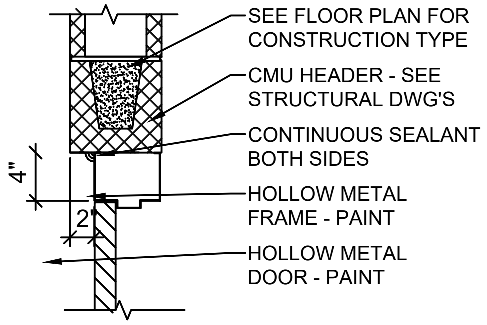
DOOR NUMBER	ROOM NUMBER	ROOM NAME	DOOR TYPE	DOOR SIZE			HARDWARE SET	DOOR DETAILS	
				WIDTH	HEIGHT	THICK		HEAD	JAMB
101	101	FIBER HUT	A	3'-0"	7'-0"	1 ¾ "	1	1/2/2022	2/2/2022

DOOR HARDWARE SCHEDULE

NUMBER		ITEM	PRODUCTS NUMBER	FIN.	MANU.
3	EA	HINGE	3BB81 4.5 X 4.5	652	PBB
1	EA	STORMROOM LOCK	L280S C	626	GENL
1	EA	SURFACE CLOSER	4040XP RWPA AL X SNB	689	LCNHA
1	EA	KICK PLATE	198S 10 X 34	630	HAG
1	SET	SEALS	160	GRY	NGP
1	EA	DOOR SWEEP	200NA 36"	AL	NGP
1	EA	THREASHOLD	425 E 36"	628	NGP

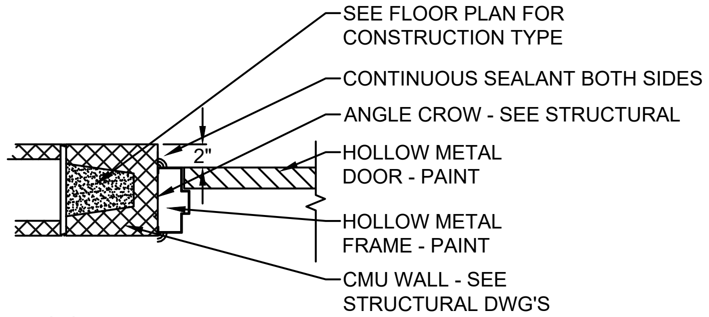
EXTERIOR FINISH SCHEDULE

CMU BLOCK - COLOR #1	COLOR TO BE DETERMINED WITH EACH SITE
CMU BLOCK - COLOR #2	COLOR TO BE DETERMINED WITH EACH SITE
MANUFACTURED MASONRY VENEER	MANUFACTURER: CREATIVE MINES STYLE: CRAFT BOARD FORM COLOR: BARNWOOD
PAINTED HM DOORS & FRAMES	MANUFACTURER: SHERWIN WILLIAMS COLOR: ELEPHANT EAR (SW 9168)
STANDING SEAM METAL ROOF	McELROY OR APPROVED EQUAL COLOR: DARK BRONZE
PRE-FINISHED METAL SOFFIT & FASCIA AS SPECIFIED	COLOR: MATCH METAL ROOF


SEE FLOOR PLAN FOR CONSTRUCTION TYPE
CMU HEADER - SEE STRUCTURAL DWG'S
CONTINUOUS SEALANT BOTH SIDES
HOLLOW METAL FRAME - PAINT
HOLLOW METAL DOOR - PAINT
4"
2"

1 DOOR HEAD DETAIL

Scale: N.T.S.


SEE FLOOR PLAN FOR CONSTRUCTION TYPE
CONTINUOUS SEALANT BOTH SIDES
ANGLE CROW - SEE STRUCTURAL
2"
HOLLOW METAL DOOR - PAINT
HOLLOW METAL FRAME - PAINT
CMU WALL - SEE STRUCTURAL DWG'S

2 DOOR JAMB DETAIL

Scale: N.T.S.

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SPANISH FORK ENGINEERING
EST. 1855

SFCN FIBER HUTS

FIBER HUT PLANS

REVISION	BY	DATE

DRAWN: JLR
DESIGN: JHJ
CHECK: CMT
DATE: 5/12/2022
SCALE: N.T.S.
DRAWING #: A1.2

DESIGN CRITERIA

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE

CLASSIFICATION: RISK CATEGORY I

LIVE LOADING
ROOF: 20 PSF (REDUCIBLE)

DEAD LOADING
ROOF: 13 PSF

SNOW LOADING (BASED ON 2018 UTAH GROUND SNOW LOAD MAP)
ELEVATION: 4600 FT (APPROX.)
GROUND SNOW LOAD: Pg = 33 PSF
EXPOSURE FACTOR: Ce = 0.9
SNOW IMPORTANCE FACTOR: Is = 0.8
THERMAL FACTOR: Ct = 1.1
CALCULATED SNOW LOAD: Pf = 18.3 PSF
DESIGN SNOW LOAD: Pf = 18.3 PSF
SLOPE FACTOR: Cs = 1.0

WIND LOADING
WIND EXPOSURE: C
WIND SPEED: 100 MPH
WIND IMPORTANCE FACTOR: Iw = 1.0

SEISMIC LOADING
LOCATION: 40.10858° LAT., -111.66481° LON.
SEISMIC IMPORTANCE FACTOR: Ie = 1.00
MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss = 1.5g S1 = 0.549g
SITE CLASS: D
SPECTRAL RESPONSE COEFFICIENTS: SDS = 1.2g SD1 = 0.641g
SEISMIC DESIGN CATEGORY: D
SEISMIC FORCE RESISTING SYSTEM: SPECIAL REINFORCED MASONRY SHEAR WALLS.

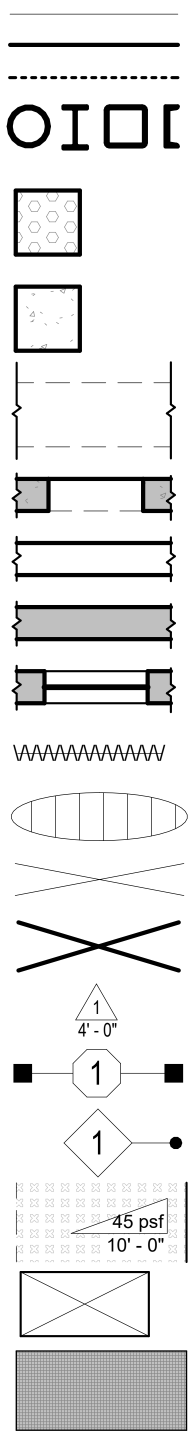
OUT-OF-PLANE FORCE: Fp = 0.48 Wp
SEISMIC RESPONSE COEFFICIENT: Cs=0.360
RESPONSE MODIFICATION FACTOR: R=5
OVERSTRENGTH FACTOR: Ω = 2
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE METHOD

SOILS
SOIL BEARING PRESSURE: 1500 PSF
PROJECT GEOTECHNICAL INVESTIGATION: NONE

SHEET INDEX

SHEET #	DESCRIPTION
STRUCTURAL	
S-001	STRUCTURAL NOTES
S-002	STRUCTURAL NOTES
S-101	FOUNDATION PLAN
S-102	ROOF FRAMING PLAN
S-501	STRUCTURAL DETAILS
S-502	STRUCTURAL DETAILS
S-701	TYPICAL STRUCTURAL DETAILS
S-702	TYPICAL STRUCTURAL DETAILS
S-801	SPECIFICATIONS
S-802	SPECIFICATIONS
S-803	SPECIFICATIONS
S-804	SPECIFICATIONS

STRUCTURAL PLAN LEGEND



JOIST OR TRUSS
BEAM OR GIRDER
PURLIN
STEEL COLUMN
MASONRY COLUMN
CONCRETE COLUMN
CONCRETE FOOTING
RECESSED FOUNDATION WALL
NON-BEARING STRUCTURAL WALL
BEARING WALL
BEAM IN WALL
STEEL STRAP
STEEL DECK
OWS JOIST CROSS BRIDGING
STEEL JOIST CROSS BRIDGING
SHEARWALL TYPE AND LENGTH, SEE SHEARWALL SCHEDULE
STRUCTURAL CONNECTOR, SEE CONNECTOR SCHEDULE
HOLDOWN, SEE HOLDOWN SCHEDULE. "H" INDICATES LOCATION OF HOLDOWN IDENTIFIED ON LEVEL ABOVE.
SNOW DRIFT AREA AND LOAD, ON TOP OF BASE SNOW LOAD. DRIFT LOAD IS 0 PSF AT DOTTED LINE AND INCREASES LINEARLY TO MAXIMUM LOAD.
SHEATHING
PERMANENT EQUIPMENT

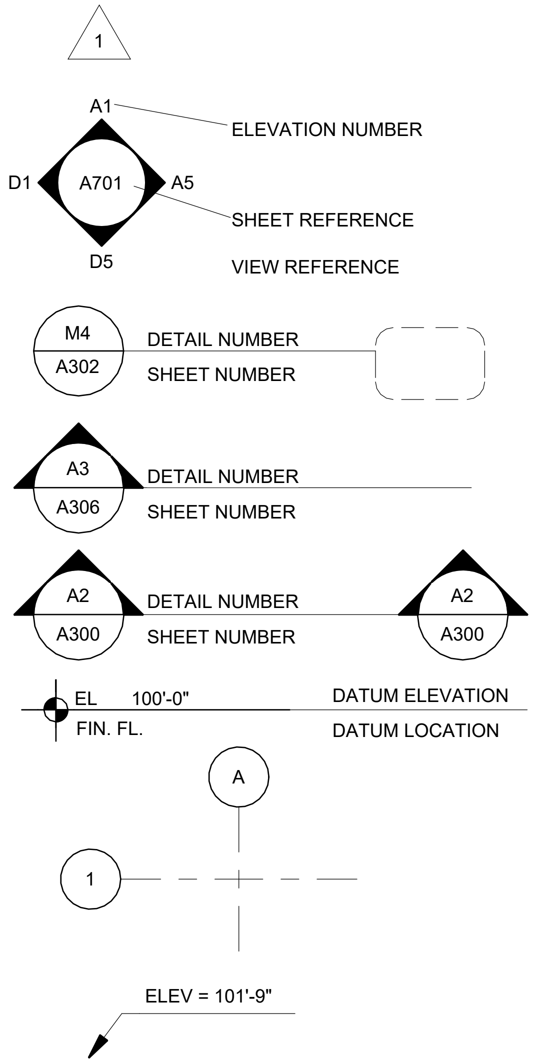
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
LICENSED PROFESSIONAL ENGINEER
STATE OF UTAH

STRUCTURAL TAGS LEGEND

TAG	DESCRIPTION
AB-1	ANCHOR BOLT, SEE ANCHOR BOLT SCHEDULE
CB-1	CONCRETE BEAM, SEE CONCRETE BEAM SCHEDULE
CC-1	CONCRETE COLUMN, SEE CONCRETE COLUMN SCHEDULE
CF-1	CONCRETE FOOTING, SEE CONCRETE FOOTING SCHEDULE
CS-1	CONCRETE SLAB, SEE CONCRETE SLAB SCHEDULE
CW-1	CONCRETE WALL, SEE CONCRETE WALL SCHEDULE
DB-1	COLD-FORMED STEEL BEAM, SEE COLD-FORMED STEEL BEAM SCHEDULE
DJ-1	COLD-FORMED STEEL JOIST, SEE COLD-FORMED STEEL JOIST SCHEDULE
DW-1	COLD-FORMED STEEL WALL, SEE COLD-FORMED STEEL WALL SCHEDULE
MC-1	MASONRY COLUMN, SEE MASONRY COLUMN SCHEDULE
ML-1	MASONRY LINTEL, SEE MASONRY LINTEL SCHEDULE
MW-1	MASONRY WALL, SEE MASONRY WALL SCHEDULE
SB-1	STEEL BEAM, SEE STEEL BEAM SCHEDULE
SC-1	STEEL COLUMN, SEE STEEL COLUMN SCHEDULE
SD-1	STEEL DECK, SEE STEEL DECK SCHEDULE
SJ-1	STEEL JOIST, SEE STEEL JOIST SCHEDULE
WB-1	WOOD BEAM, SEE WOOD BEAM SCHEDULE
WC-1	WOOD COLUMN, SEE WOOD COLUMN SCHEDULE
WJ-1	WOOD JOIST, SEE WOOD JOIST SCHEDULE
WW-1	WOOD WALL, SEE WOOD WALL SCHEDULE

GRAPHICS LEGEND

REVISIONS MARK
ELEVATION SYMBOL
DETAIL REFERENCE
WALL/DETAIL SECTION
BUILDING SECTION
DATUM ELEVATION
REFERENCE GRID
NEW POINT ELEVATION



SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille
Engineering
www.jonesanddemille.com

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL NOTES

2202-061
PROJECT NUMBER
S-001
SHEET NO.

GENERAL NOTES

1. NOTES AND TYPICAL DETAILS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON PLANS.
2. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
3. CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES ETC. ON THE JOB.
5. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER WHERE CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE STRUCTURE THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED WITH AFFECTED PARTIES.
6. IF CONTRACTOR'S WORK IS NOT CONSTRUCTED ACCORDING TO APPROVED CONSTRUCTION DOCUMENTS (INCLUDING STAMPED WRITTEN COMMUNICATIONS), CONTRACTOR SHALL EITHER:
   A. REMOVE THE NON-CONFORMING WORK AND RECONSTRUCT THE WORK ACCORDING TO DRAWINGS, AT CONTRACTOR'S OWN EXPENSE.
   B. PAY FOR AND PROVIDE AN EVALUATION AND LETTER FROM THE ENGINEER STATING THAT THE NON-CONFORMING WORK MEETS APPLICABLE BUILDING CODES.
   C. PAY FOR AND PROVIDE AN EVALUATION AND LETTER FROM THE ENGINEER STATING THAT THE NON-CONFORMING WORK DOES NOT MEET APPLICABLE BUILDING CODES AND DETAILING THE UPGRADES THAT ARE REQUIRED TO BRING THE NON-COMPLIANT WORK INTO COMPLIANCE.
7. VERBAL COMMUNICATIONS SHALL NOT BE CONSIDERED PART OF THE APPROVED CONSTRUCTION DOCUMENTS.

EARTHWORK

1. ENGINEER SHALL VERIFY CONDITION AND/OR ADEQUACY OF ALL SUBGRADES, FILLS, AND BACK FILLS, ETC.
2. SHORE AND BRACE AS REQUIRED.
3. DE-WATER AS REQUIRED TO REMOVE STANDING WATER FROM EXCAVATIONS.
4. FOUNDATIONS ARE SHOWN AND DIMENSIONED AS BEING FORMED. INCREASE FOOTING WIDTHS BY 2" FOR FOOTINGS PLACED IN NEAT EXCAVATIONS.
5. CLEAN ALL DEBRIS FROM EXCAVATIONS.
6. NOTIFY ENGINEER 48 HOURS IN ADVANCE OF PLACING CONCRETE.
7. PROVIDE 30" MINIMUM FOOTING EMBEDMENT FROM FINISH GRADE FOR FROST PROTECTION AT EXTERIOR FOOTINGS.
8. PROVIDE 12" OF STRUCTURAL FILL BENEATH ALL FOOTINGS.
9. EXTEND STRUCTURAL FILL LATERALLY A DISTANCE EQUAL TO 1/2 THE STRUCTURAL FILL DEPTH BEYOND EDGE OF FOOTING ON EACH SIDE.
10. COMPACT STRUCTURAL FILL BENEATH FOOTINGS TO 95% OF MAXIMUM DRY DENSITY DETERMINED BY ASTM D1557.

ENGINEERED LUMBER

1. INSTALL ENGINEERED LUMBER PRODUCTS PER MANUFACTURER'S RECOMMENDATIONS UNO.
2. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR HOLES AND NOTCHES IN ENGINEERED LUMBER.
3. MINIMUM GRADES:
   A. LAMINATED VENEER LUMBER: MICROLAM LVL 2.0E

FASTENER REQUIREMENTS

1. SIMPSON HARDWARE: USE ONLY PNEUMATIC FASTENERS APPROVED BY SIMPSON.
2. INSTALL PNEUMATIC FASTENERS INTO PLYWOOD SHEATHING WITHIN THE 10% TOLERANCE LIMIT FOR HAND DRIVEN NAILS PER ASTM F1667-05 FOR HEAD DIAMETER.
3. NAIL HEADS: FULL ROUND HEADS.
4. DO NOT SUBSTITUTE PNEUMATIC (COOLER) NAILS FOR SPECIFIED COMMON NAILS WITHOUT APPROVAL FROM ENGINEER.
5. DO NOT COUNTERSINK NAIL HEADS.

MINIMUM NAIL SHANK DIAMETER & LENGTH:

COMMON NAIL	PNEUMATIC (COOLER)	STAPLES
8d = 2-1/2" x 0.131"	8d = 2-3/8" x 0.113"	MINIMUM 7/16" CROWN
10d = 3" x 0.148"	10d = 2-7/8" x 0.120"	14,15,16 GAGE
12d = 3-1/4" x 0.148"	3-1/4" x 0.131"	1-3/4" MIN. LENGTH
16d = 3-1/2" x 0.162"	3-1/4" x 0.148"	
20d = 4" x 0.192"		

#8826183-2202
MATTHEW
PAUL
LAURENDEAU
05/12/2022

CONCRETE

1. GENERAL
   A. DO NOT PLACE PIPES OR DUCTS IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
   B. REFER TO ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL MOLDS, GROOVES, ORNAMENTS, CLIPS AND GROUNDS TO BE CAST IN CONCRETE.
   C. COORDINATE WITH ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
2. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO FACE OF MAIN BARS AND DENOTE CLEAR COVERAGE.
3. CONCRETE MIX DESIGN: PREPARED BY INDEPENDENT LABORATORY AND APPROVED BY ENGINEER.

CONCRETE REINFORCING

1. PROVIDE LAP SPLICE UNO. SEE TABLE "CONCRETE REINFORCEMENT LAP SPLICES".
2. LAP SPLICE WELDED WIRE FABRIC TWO SQUARES MIN. EACH DIRECTION.
3. SECURELY POSITION REINFORCING DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE BEFORE PLACING CONCRETE (WET SETTING IS PROHIBITED).

CONCRETE REINFORCEMENT LAP SPLICES

f'c = 4,000 PSI									
LOCATION	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP	24	32	40	48	70	80	91	102	113
OTHER	20	25	31	38	55	62	70	79	87

1. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE BASED ON ACI 318-11, SECTIONS 12.2.2 AND 12.15 RESPECTIVELY. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
2. LAP SPLICE LENGTHS SHOWN ARE FOR CLASS B AND CASE 1.
3. TOP REINFORCEMENT IS HORIZONTAL REINFORCEMENT THAT HAS MORE THAN TWELVE INCHES OF FRESH CONCRETE CAST BELOW IT. THIS INCLUDES HORIZONTAL REINFORCEMENT IN WALLS. ALL VERTICAL BARS ARE CONSIDERED AS "OTHER".
4. FOR LIGHTWEIGHT CONCRETE AGGREGATE CONCRETE, MULTIPLY TABULATED VALUES BY 1.3.
5. FOR EPOXY-COATED BARS, MULTIPLY TABULATED VALUES BY:
   A. TOP BARS: 1.31.
   B. OTHER BARS: 1.5.
6. FOR BARS WITH COVER OF LESS THAN 1 BAR DIAMETER OR WITH CLEAR SPACING OF LESS THAN 2 BAR DIAMETERS, MULTIPLY TABULATED VALUES BY 2.0.

MASONRY REINFORCEMENT LAP SPLICES

f'm = 2,000 PSI									
	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH, IN.	12	15	23	43	58	88	111	141	174

1. LAP SPLICE LENGTHS ARE BASED ON TMS 402-16 SECTION 6.1.6.1.1.
2. TABULATED VALUES ARE BASED ON MINIMUM MASONRY COVER OF 3 INCHES.
3. FOR EPOXY-COATED BARS, MULTIPLY TABULATED VALUES BY 1.5.

SAFETY

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL STATE OF UTAH SAFETY STANDARDS AND OSHA REQUIREMENTS AS THEY APPLY TO THE PROJECT.
2. ENGINEER DOES NOT ACCEPT ANY RESPONSIBILITY FOR CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.

WOOD

1. STRUCTURAL WOOD SPECIFICATIONS:
   A. DOUGLAS FIR- COAST REGION: WEST COAST LUMBER INSPECTION BUREAU GRADING RULES #16.
   B. REDWOOD: CALIFORNIA REDWOOD ASSOC. GRADING RULES, 1987 EDITION.
   C. SHEATHING: U.S. PRODUCT STANDARD PS 1-83 FOR SOFT PLYWOOD.
2. MINIMUM GRADES:
   A. SOLID-SAWN BEAMS: DF#2.
   B. SOLID-SAWN JOISTS: DF#2.
   C. ALL MEMBERS: FREE OF HEART CENTER.
   D. ROOF SHEATHING: 5/8" APA RATED SHEATHING, EXPOSURE 1.
3. PROVIDE SOLID BLOCKING BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.
4. CUTTING OF WOOD JOISTS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-FIFTH THE JOIST DEPTH FROM THE TOP, AND LOCATED NOT FARTHER FROM THE END THAN THREE TIMES THE JOIST DEPTH. SEE TYPICAL DETAIL.
5. BORE HOLES FOR BOLTS IN WOOD WITH BIT OF SAME NOMINAL DIAMETER AS BOLT + 1/16".
6. BORE HOLES FOR LAG SCREWS FIRST TO SAME NOMINAL DIAMETER AND DEPTH AS SHANK. BORE REMAINDER OF HOLE NO LARGER THAN ROOT OF THREAD.
7. SCREW, DO NOT DRIVE, LAG SCREWS AND WOOD SCREWS INTO PLACE.
8. PROVIDE METAL WASHERS UNDER HEADS OR END NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO INSERTED EXPANDING FASTENERS - RED HEAD, ETC.

BOLT DIAM	MI WASHER	STEEL WASHER
1/2" DIAM	2-1/2" DIAM x 1/4"	2" x 2" x 1/4"
5/8" DIAM	2-3/4" DIAM x 5/16"	2-1/2" x 2-1/2" X 1/4"
3/4" DIAM	3" DIAM x 7/16"	3" x 3" x5/16"
7/8" DIAM	3-1/2" DIAM x 7/16"	3-1/2" x 3-1/2" x 3/8"
1" DIAM	4" DIAM x 1/2"	3-3/4" x 3-3/4" x 3/8"
1-1/4" DIAM	5" DIAM x 5/8"	5" x 5" x 1/2"

CARRIAGE BOLT DIAM	CUT WROUGHT STEEL WASHER
1/2" DIAM	3/4" (2" OD)
5/8" DIAM	7/8" (2-1/4" (OD)
3/4" DIAM	1" (2-1/2" OD)
7/8" DIAM	1-3/8" (3" OD)
1" DIAM	1-1/2" (3-1/4" OD)

11. ALL BOLT AND LAG SCREWS SHALL TIGHTENED AT TIME OF INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
12. LAY ALL STRUCTURAL PLYWOOD ON ROOF WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
13. BLOCK STRUCTURAL PLYWOOD JOINTS WITH 3X4 FLAT BLOCKING WHERE NOTED ON FRAMING PLANS AND WITH BLOCKING SAME SIZE AS STUDS AT WALLS.
14. CONSTRUCTION ADHESIVE: ASTM D3498 OR AFG-01.
15. CROSS BRIDGING BETWEEN JOISTS OR RAFTERS: SEE FRAMING PLANS AND TYPICAL DETAILS.
16. PROVIDE BLOCKING AT ALL CEILING LEVELS.
17. WHERE FRAMING HANGERS ARE REQUIRED AND ARE NOT SHOWN ON SECTIONS, DETAILS, OR PLANS, USE THE FOLLOWING SIMPSON HANGERS. SLOPE, SKEW, TURN IN FLANGES AND PROVIDE TOP FLANGE HANGERS AS REQUIRED.
   A. 2X & 3X MEMBERS: U HANGERS
   B. 4X MEMBERS: HU HANGERS
   C. 6X MEMBERS: HUTF HANGERS
   D. TJI MEMBERS: IUS HANGERS
   E. GLU LAM MEMBERS: LEG HANGERS
18. METAL HARDWARE: MANUFACTURED BY SIMPSON STRONG TIE COMPANY. INSTALL PER SIMPSON SPECIFICATIONS.
19. WOOD SYMBOLS:

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REVISIONS

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL NOTES

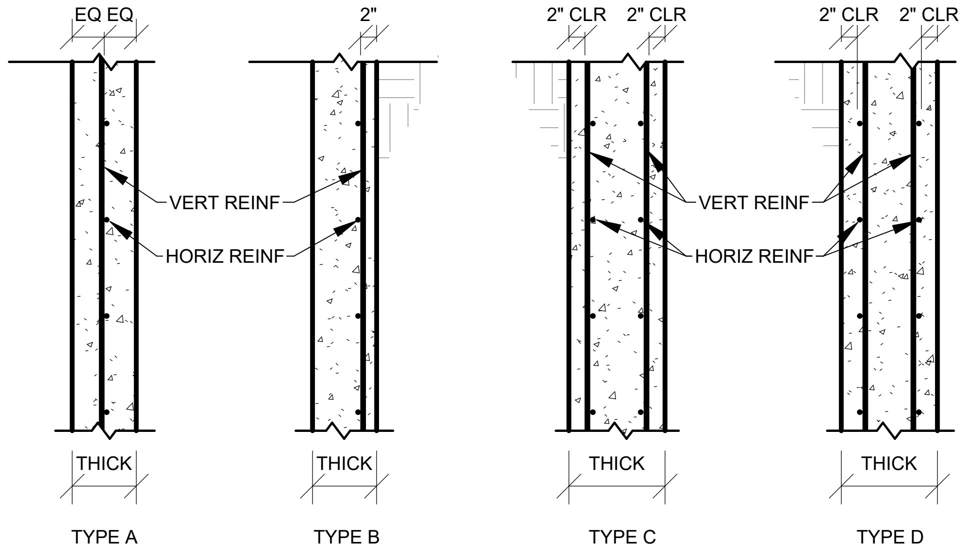
2202-061
PROJECT NUMBER
S-002
SHEET NO.

CONCRETE WALL SCHEDULE

MARK	THICKNESS	HORIZ REINF	VERT REINF	TYPE	REMARKS
CW-1	8"	(3) #4 BARS	#4 @ 16" OC	A	

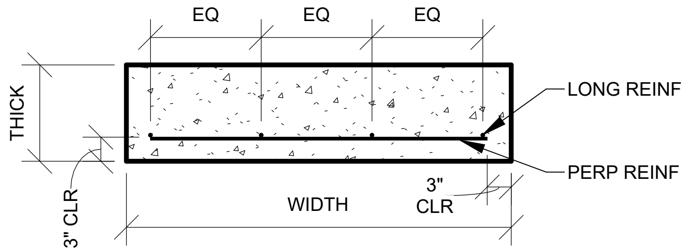
CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK	LONG REINF	PERP REINF	REMARKS
CF-1	2' - 0"	CONT.	1' - 0"	(3) #4 BARS	#4 @ 16" OC	

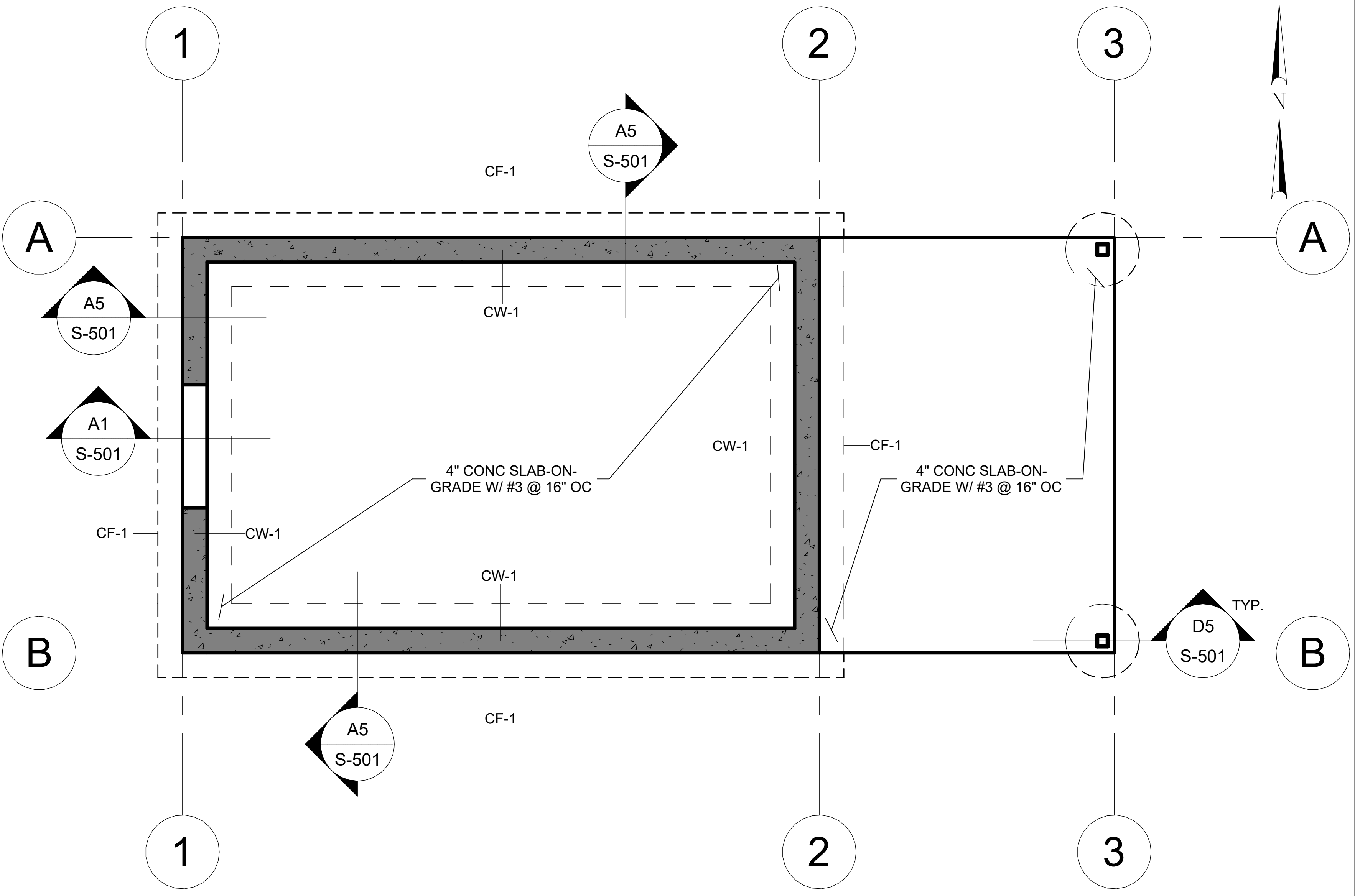


NOTES:
E.F. = EACH FACE
O.F. = OUTSIDE FACE (AGAINST SOIL)
I.F. = INSIDE FACE

CONCRETE WALLS (SECTION VIEW)



CONCRETE FOOTING



A1	FOUNDATION PLAN
SCALE	1/4" = 1'-0"

FOUNDATION NOTES

1. REFER TO TYPICAL NOTES, DETAILS, & SCHEDULES.
2. SEE CIVIL & ARCH PLANS FOR EXTERIOR CONCRETE WORK AND SITE GRADING.
3. SEE ARCHITECTURAL DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, DIMENSIONS, AND ELEVATIONS.
4. WHERE SLAB DEPRESSION IS INDICATED FOR TILE OR SIMILAR FLOORING, RECESS FLOOR 2".
5. PLACE STRUCTURAL FILL BENEATH FOOTINGS & BUILDING SLABS PER TYPICAL DETAIL "STRUCTURAL FILL PLACEMENT" AND PER EARTHWORK NOTES.
6. PROVIDE TEMPORARY SHORING UNTIL MAIN FLOOR FRAMING IS COMPLETE FOR ANY WALL OVER 6' TALL THAT RETAINS SOIL TO RESIST INDUCED LATERAL LOADS.

#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022

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NO.	DATE	DESCRIPTION

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
FOUNDATION PLAN

2202-061
PROJECT NUMBER
S-101
SHEET NO.

MASONRY WALL SCHEDULE

MARK	THICK	HORIZ REINF	VERT REINF	GROUT
MW-1	8"	#4 @ 32" OC	#4 @ 48" OC	SOLID

SEE D5/S-701 FOR MASONRY WALL DETAIL.

MASONRY LINTEL SCHEDULE

MARK	WIDTH	HEIGHT	HORIZ REINF	STIRRUPS
ML-1	3' - 4"	8"	(1) #5 BAR	N/A

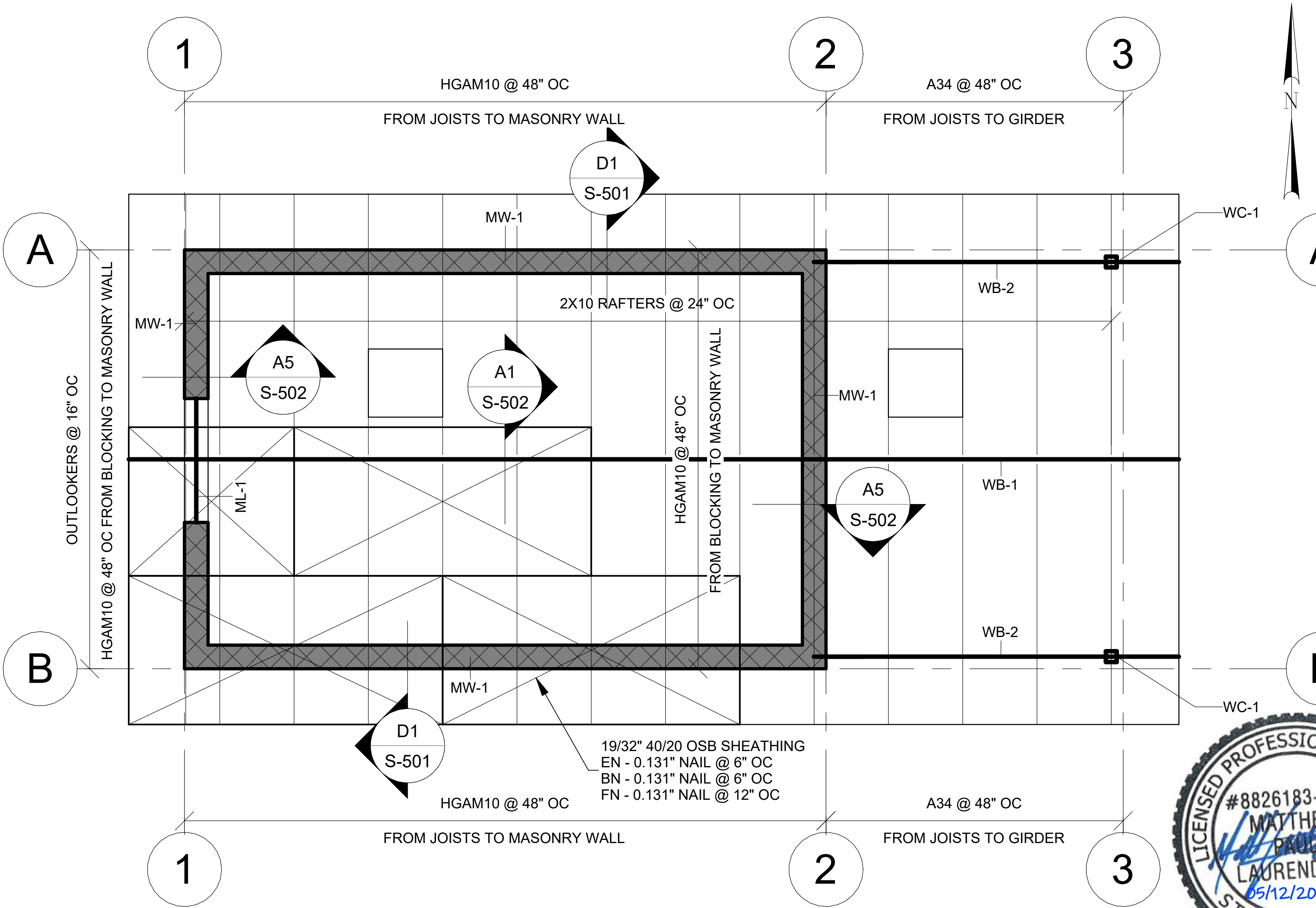
SEE A5/S-701 FOR MASONRY LINTEL DETAIL.

WOOD COLUMN SCHEDULE

MARK	MEMBER	SPECIES	COLUMN CAP	COLUMN BASE	REMARKS
WC-1	4x4	DF#2	SIMPSON CC44	(2) SIMPSON CB44	

WOOD BEAM SCHEDULE

MARK	SIZE	WOOD SPECIES	END SUPPORT(S)		REMARKS
			END 1	END 2	
WB-1	(2) 1 3/4x14	LVL	HGAM10 (TO MASONRY)	HGAM10 (TO MASONRY)	MUST BE CONTINUOUS
WB-2	(2) 2x10	DF-L #2	HGAM10 (TO MASONRY)	CC44 (TO COLUMN)	



#8826183-2202
MATTHEW PRUE LAURENDEAU
05/12/2022

A1 *ROOF FRAMING PLAN*

SCALE 1/4" = 1'-0"

MASONRY WALL NOTES

1. PROVIDE (1) #5 VERTICAL REINFORCING BAR AT ALL CORNERS, ENDS OF WALLS AND JAMBS UNLESS NOTED OTHERWISE.
2. HORIZONTAL REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS AND AT INTERSECTING WALLS. PROVIDE CORNER BARS WITH THE REQUIRED LAP SPLICE LENGTH.
3. TERMINATE ALL HORIZONTAL REINFORCING BARS AT ENDS OF WALLS AND EDGES OF OPENINGS WITH A STANDARD HOOK AROUND VERTICAL REINFORCING BARS.
4. SEE PLANS, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS.
5. GROUT SOLID ALL CELLS BELOW GRADE, CELLS CONTAINING EMBEDS (HSA'S, DBA'S, ANCHOR BOLTS, ETC.), AND CELLS CONTAINING REINFORCING. CONSOLIDATE GROUT AS PER THE GENERAL STRUCTURAL NOTES.
6. HORIZONTAL WALL REINFORCING SHALL BE PLACED INSIDE THE VERTICALS OF MASONRY COLUMNS.
7. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.

MASONRY LINTEL NOTES

1. PLACE FIRST SET OF HORIZONTAL BARS IN BOTTOM COURSE.
2. PLACE SECOND SET OF HORIZONTAL BARS (IF REQ'D) IN TOP COURSE.
3. PLACE THIRD AND SUBSEQUENT SETS OF HORIZONTAL BARS (IF REQ'D) EQUALLY SPACED VERTICALLY IN LINTEL. WHEN AN EVEN COURSE IS NOT POSSIBLE, SHIFT BARS DOWN TO NEXT COURSE.
4. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS BEYOND EDGE OF OPENING. IF HORIZONTAL REINFORCING CANNOT BE EXTENDED 48 BAR DIAMETERS BEYOND EDGE OF OPENING, PROVIDE 90 DEGREE STANDARD HOOK.
5. GROUT MASONRY LINTELS MONOLITHICALLY WITH SUPPORT WALL OR COLUMN AT EACH END.
6. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY.
7. SPLICE BOTTOM BARS OVER SUPPORTS ONLY.
8. CONTINUE HORIZONTAL WALL REINFORCING THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN SAME LOCATION, REPLACE SMALLER BARS WITH LARGER BARS.
9. PROVIDE VERTICAL WALL REINF IN LINTELS OVER 4'-0" DEEP WITHOUT STIRRUPS.

FRAMING NOTES

1. REFER TO TYPICAL NOTES, DETAILS, & SCHEDULES.
2. SEE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT SHOWN.
3. DIMENSIONS FOR SHEARWALLS ARE TO EDGE OF SHEARWALL, NOT LOCATION OF HOLDOWN.
4. INSTALL ALL HANGERS, CLIPS, ANCHORS, AND OTHER HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
5. SHOP-FABRICATED WOOD TRUSSES SHALL BE DESIGNED FOR THE UNIFORM LOADS SPECIFIED IN THE SHOP-FABRICATED WOOD TRUSSES NOTES AND ANY CONCENTRATED GRAVITY AND LATERAL LOADS INDICATED ON THE STRUCTURAL FRAMING PLANS. NOTATION AND SYMBOLS FOR LOADS SHOWN ARE PER ASCE 7.
6. ALL TRUSSES SHALL BE DESIGNED TO TRANSFER AN OUT-OF-PLANE SERVICE SEISMIC OR WIND LOAD OF 0.7 KIPS (Fp) FROM THE HEEL TO THE DIAPHRAGM AT BEARING LOCATIONS.
7. FORM UP & FILL ALL BEAM & JOIST POCKETS W/ NON-SHRINK GROUT PRIOR TO PLACING FINISHES, UNO.
8. COORDINATE MECHANICAL UNIT WEIGHTS AND LOCATIONS WITH JOIST MANUFACTURER
9. PROVIDE BRIDGING AS REQ'D TO PREVENT CHORD BUCKLING.
10. PROVIDE TRUSS BLOCKING AT ALL BEARING WALLS WHERE TRUSS HEEL HEIGHT PROHIBITS USE OF 2X BLOCKING.
11. TRUSS BLOCKING SHALL BE ABLE TO RESIST A LATERAL LOAD (WIND OR SEISMIC) OF 250 PLF.
12. PROVIDE ATTIC VENTILATION AT TRUSS HEEL TO WALL CONNECTIONS BY OMITTING BLOCKING EVERY FOURTH TRUSS BAY. MAINTAIN A MINIMUM OF 3 CONSECUTIVE BAYS W/ BLOCKING.

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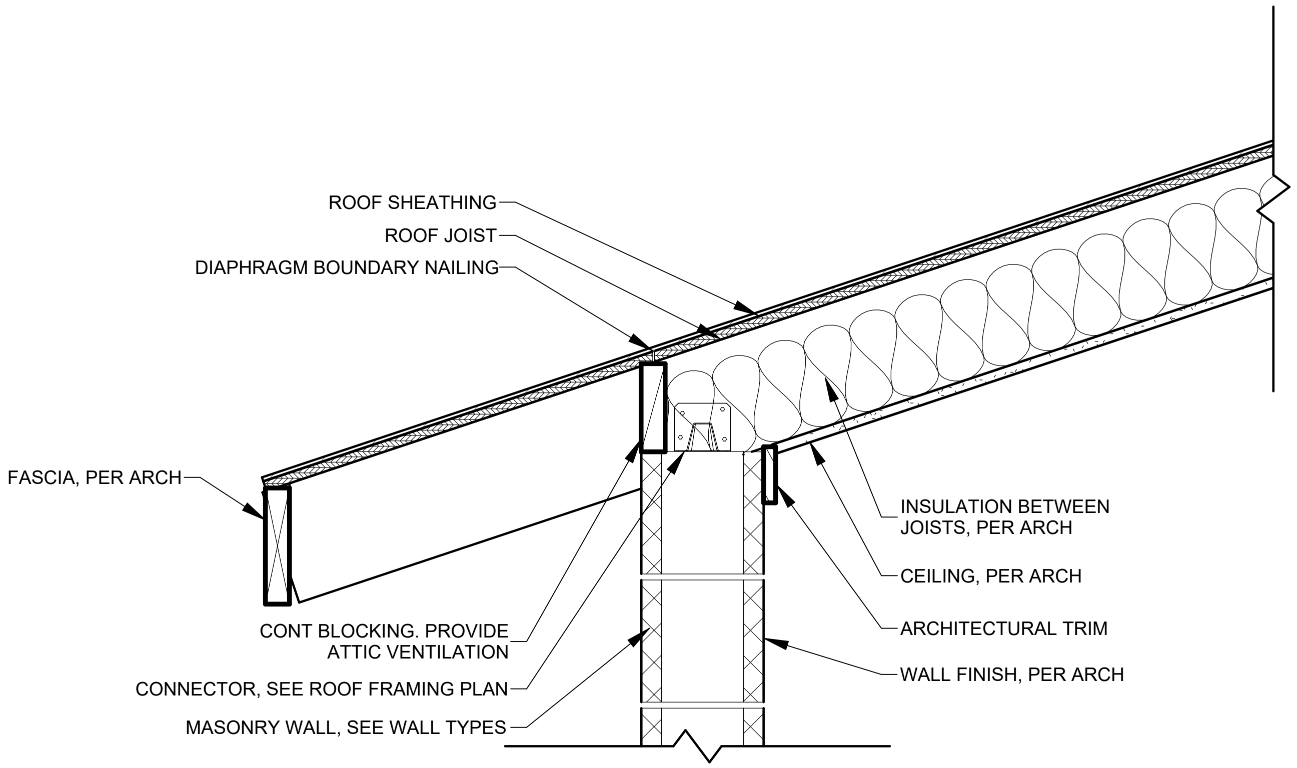
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
ROOF FRAMING PLAN

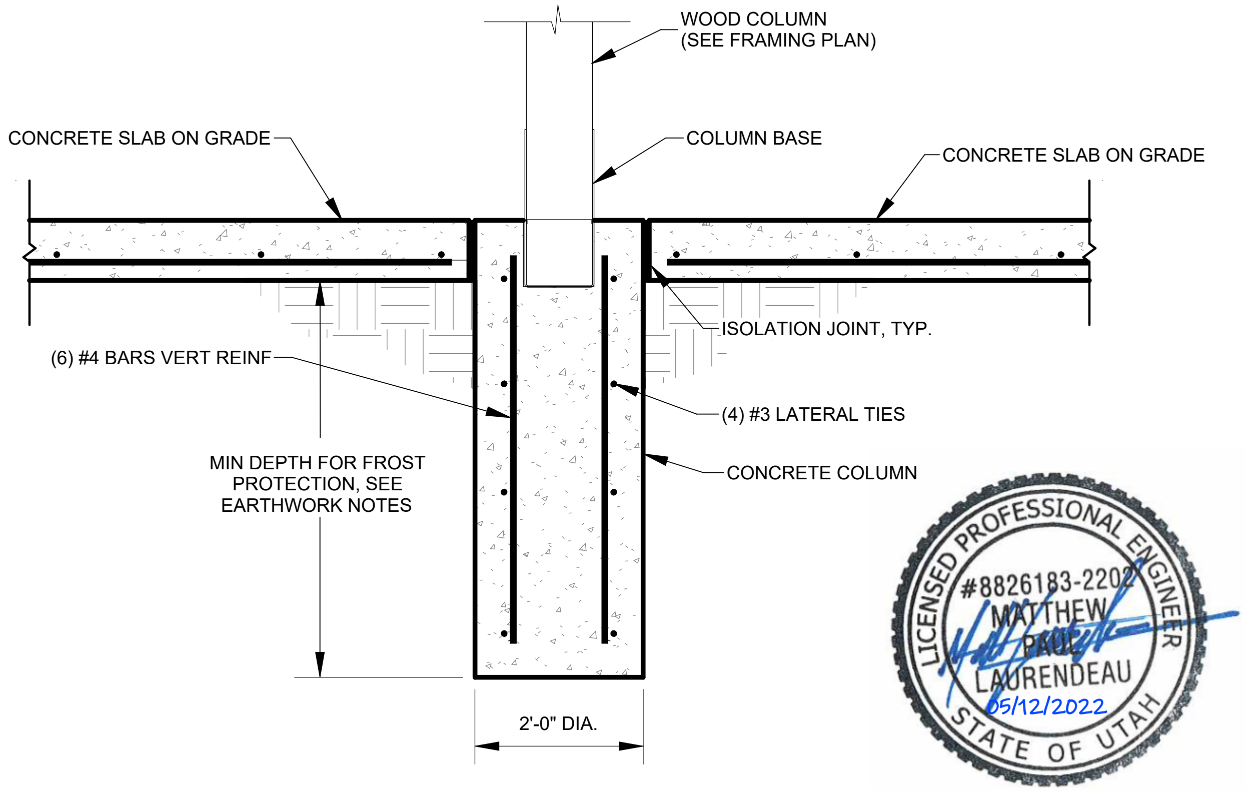
2202-061
PROJECT NUMBER

S-102
SHEET NO.


ROOF SHEATHING
ROOF JOIST
DIAPHRAGM BOUNDARY NAILING
FASCIA, PER ARCH
INSULATION BETWEEN JOISTS, PER ARCH
CEILING, PER ARCH
ARCHITECTURAL TRIM
WALL FINISH, PER ARCH
CONT BLOCKING. PROVIDE ATTIC VENTILATION
CONNECTOR, SEE ROOF FRAMING PLAN
MASONRY WALL, SEE WALL TYPES

D1 WOOD RAFTER ON MASONRY WALL

SCALE NTS



LICENSED PROFESSIONAL ENGINEER
#8826183-2202
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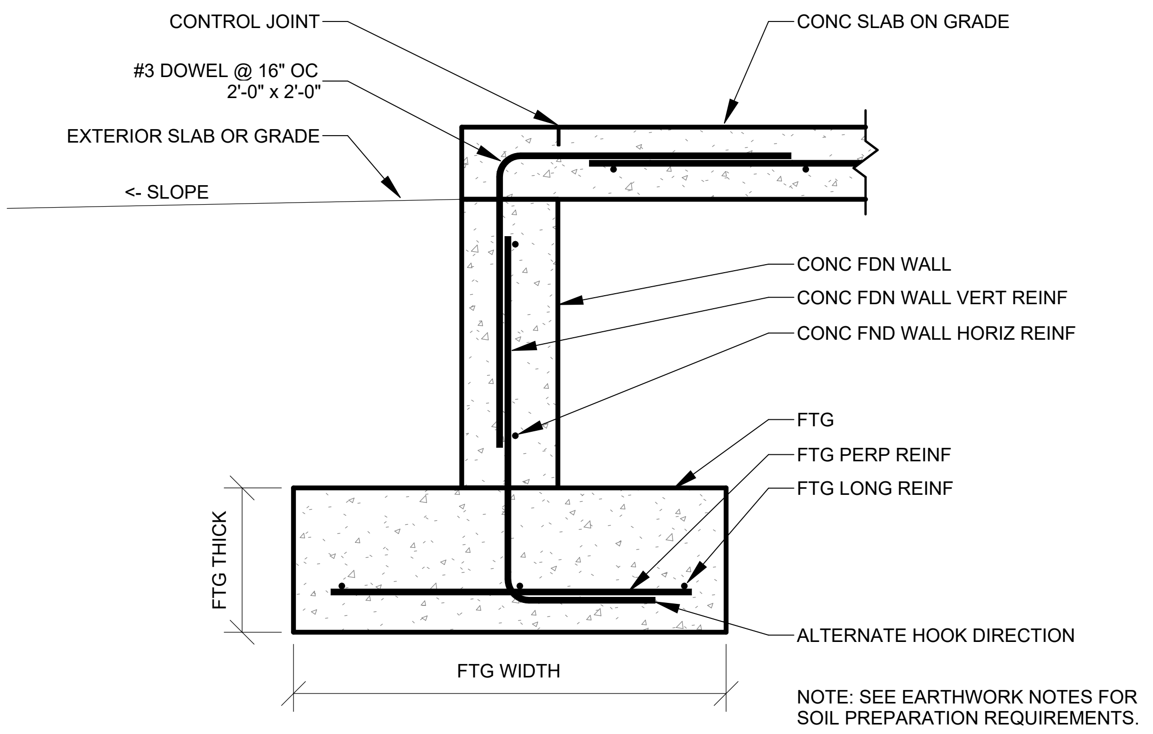
05/12/2022
STATE OF UTAH

D5 WOOD COLUMN ON SONOTUBE PIER

SCALE NTS



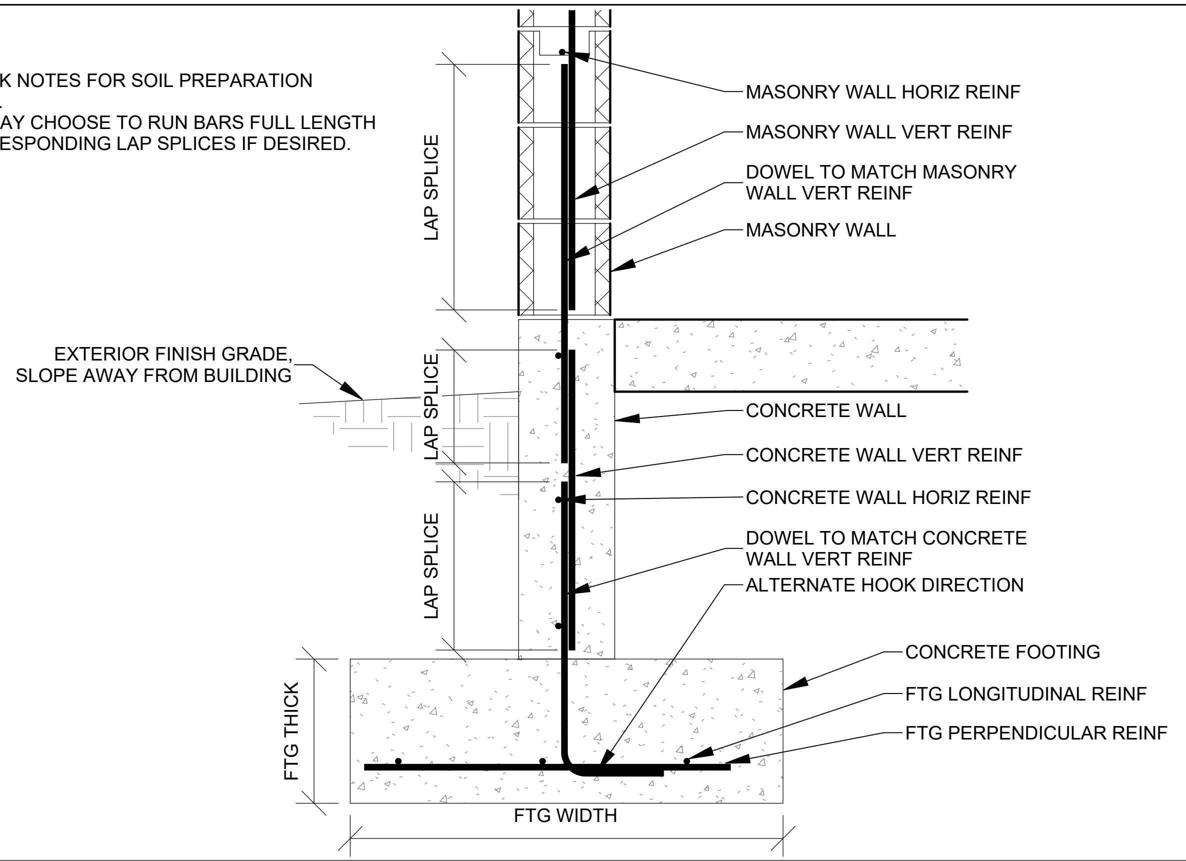
NOTE: SEE EARTHWORK NOTES FOR SOIL PREPARATION REQUIREMENTS.

A1 CONCRETE SLAB OVER FOUNDATION WALL @ DOOR OPENINGS

SCALE NTS

NOTES:

1. SEE EARTHWORK NOTES FOR SOIL PREPARATION REQUIREMENTS.
2. CONTRACTOR MAY CHOOSE TO RUN BARS FULL LENGTH AND OMIT CORRESPONDING LAP SPLICES IF DESIRED.



A5 MASONRY WALL ON CONCRETE FOUNDATION WALL

SCALE NTS

SUBMITTAL

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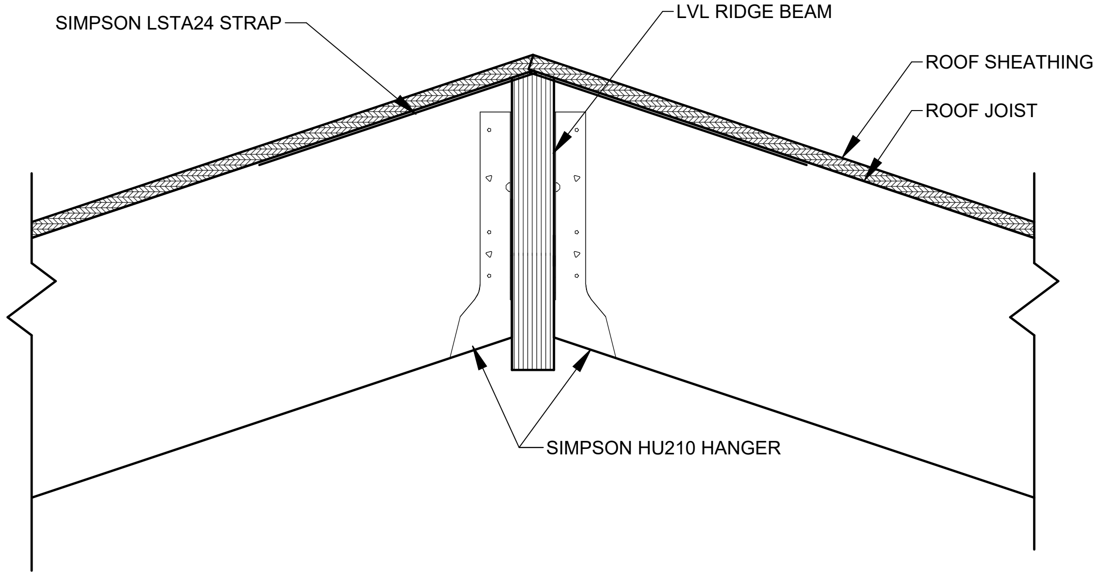
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

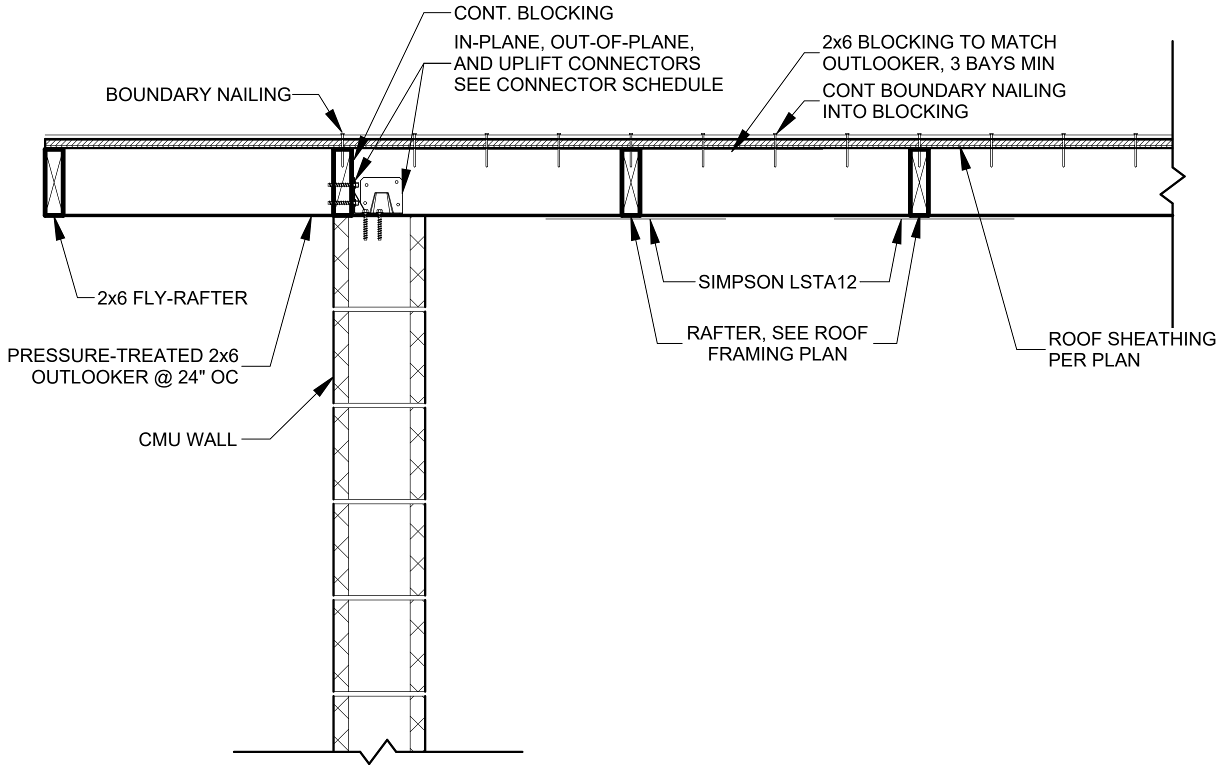
S-501
SHEET NO.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
STATE OF UTAH



A1 DIMENSIONAL LUMBER ROOF JOIST TO RIDGE BEAM

SCALE NTS


CONT. BLOCKING
IN-PLANE, OUT-OF-PLANE, AND UPLIFT CONNECTORS SEE CONNECTOR SCHEDULE
BOUNDARY NAILING
2x6 BLOCKING TO MATCH OUTLOOKER, 3 BAYS MIN
CONT BOUNDARY NAILING INTO BLOCKING
2x6 FLY-RAFTER
PRESSURE-TREATED 2x6 OUTLOOKER @ 24" OC
CMU WALL
SIMPSON LSTA12
RAFTER, SEE ROOF FRAMING PLAN
ROOF SHEATHING PER PLAN

A5 OUTLOOKERS AT GABLE END OF MASONRY WALL

SCALE NTS

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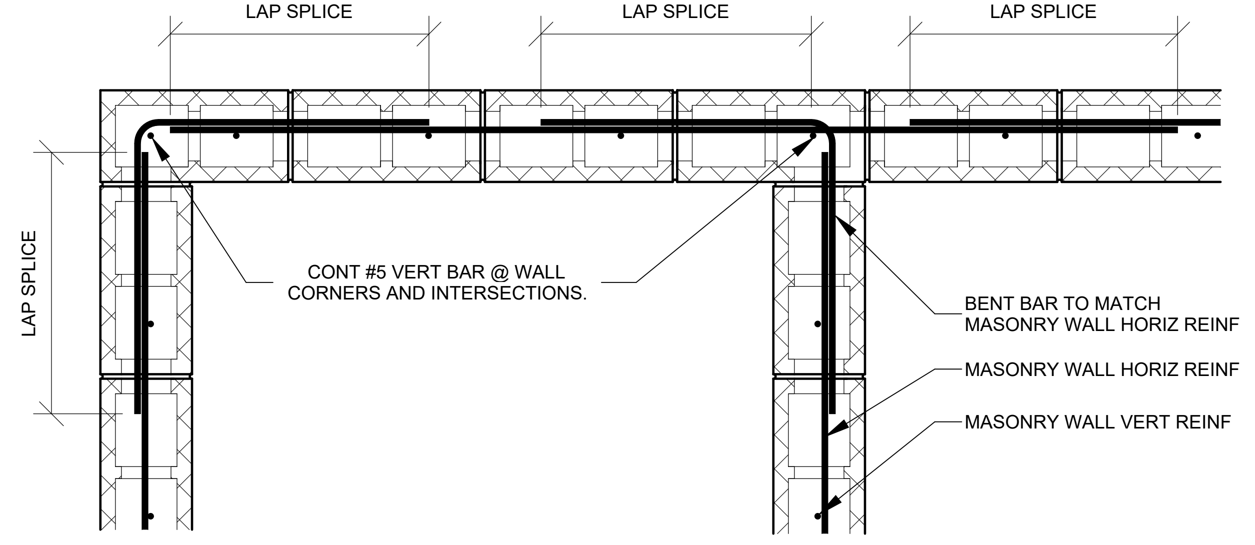
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL DETAILS

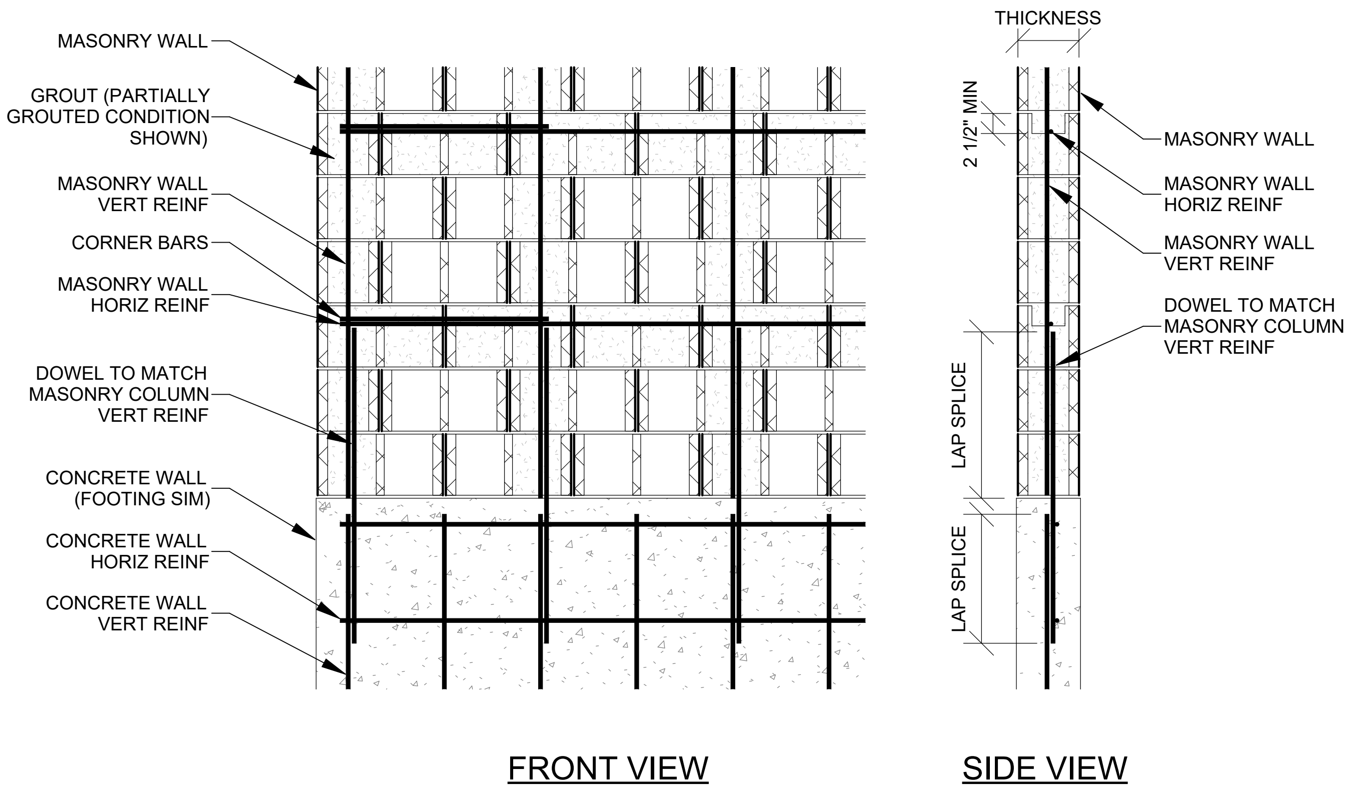
2202-061
PROJECT NUMBER
S-502
SHEET NO.


LAP SPLICE
LAP SPLICE
LAP SPLICE
LAP SPLICE
CONT #5 VERT BAR @ WALL CORNERS AND INTERSECTIONS.
BENT BAR TO MATCH MASONRY WALL HORIZ REINF
MASONRY WALL HORIZ REINF
MASONRY WALL VERT REINF

NOTES:
1. SEE MASONRY WALL SCHEDULE FOR REINF SIZE AND SPACING.
2. SEE MASONRY NOTES FOR LAP SPLICE LENGTHS.
3. SEE ARCHITECTURAL SHEETS FOR MASONRY UNIT SIZES.

D1 MASONRY WALL REINFORCEMENT LAYOUT

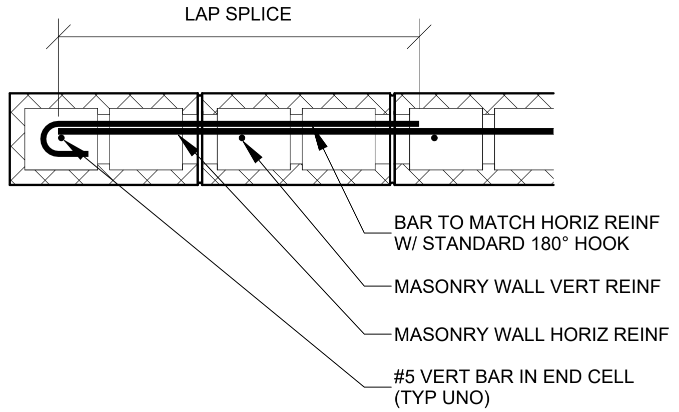
SCALE NTS



FRONT VIEW SIDE VIEW

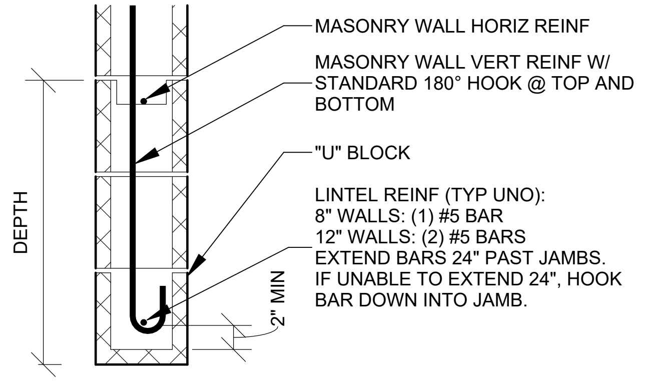
D5 MASONRY WALL

SCALE NTS


LAP SPLICE
BAR TO MATCH HORIZ REINF W/ STANDARD 180° HOOK
MASONRY WALL VERT REINF
MASONRY WALL HORIZ REINF
#5 VERT BAR IN END CELL (TYP UNO)

A1 MASONRY JAMB

SCALE NTS


MASONRY WALL HORIZ REINF
MASONRY WALL VERT REINF W/ STANDARD 180° HOOK @ TOP AND BOTTOM
"U" BLOCK
DEPTH
2" MIN

LINTEL REINF (TYP UNO):
8" WALLS: (1) #5 BAR
12" WALLS: (2) #5 BARS
EXTEND BARS 24" PAST JAMBS.
IF UNABLE TO EXTEND 24", HOOK BAR DOWN INTO JAMB.

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05/12/2022

A5 MASONRY LINTEL

SCALE NTS

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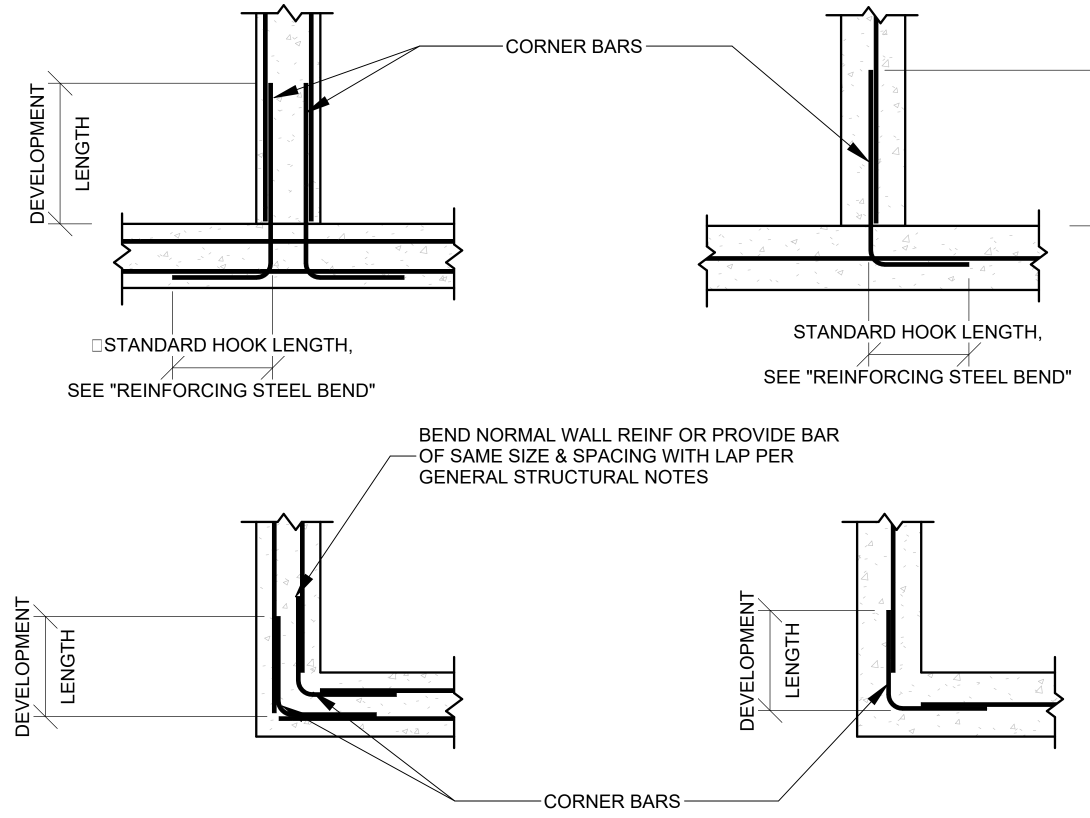
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
TYPICAL STRUCTURAL DETAILS

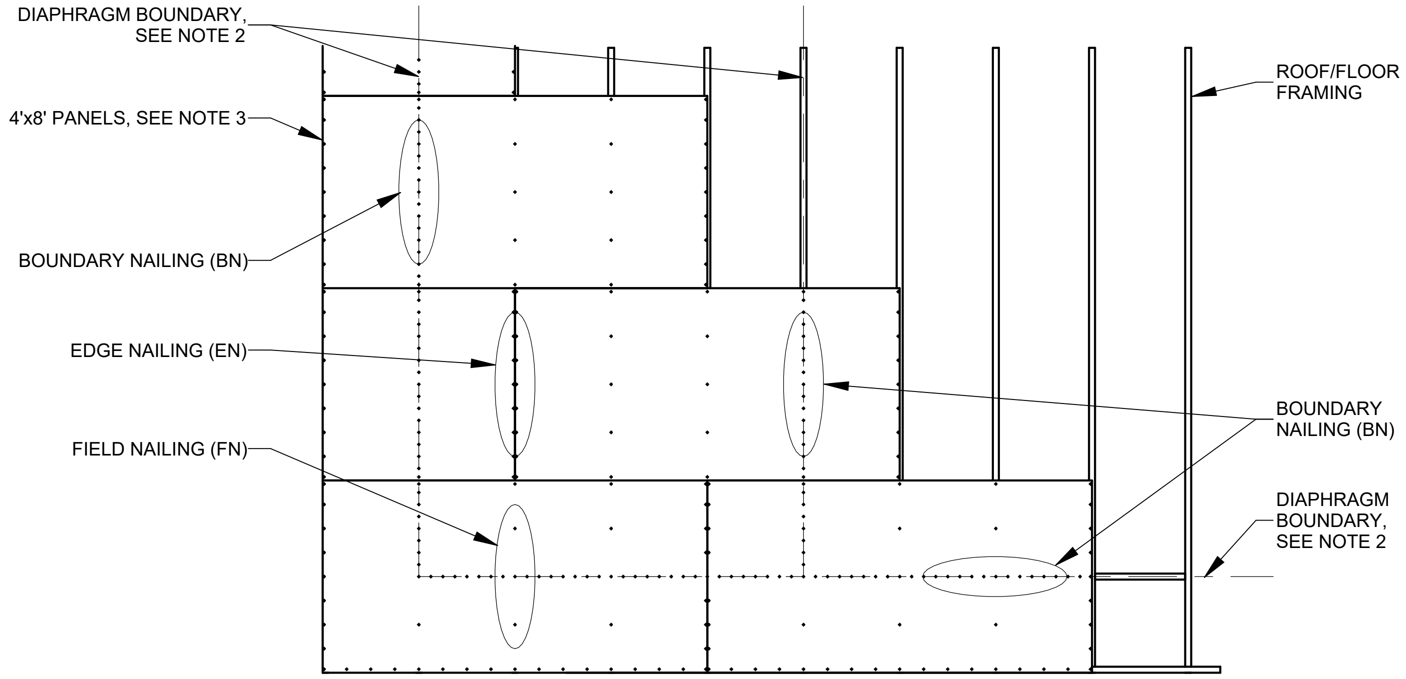
2202-061
PROJECT NUMBER

S-701
SHEET NO.


CORNER BARS
DEVELOPMENT LENGTH
DEVELOPMENT LENGTH
□STANDARD HOOK LENGTH, SEE "REINFORCING STEEL BEND"
STANDARD HOOK LENGTH, SEE "REINFORCING STEEL BEND"
BEND NORMAL WALL REINF OR PROVIDE BAR OF SAME SIZE & SPACING WITH LAP PER GENERAL STRUCTURAL NOTES
DEVELOPMENT LENGTH
DEVELOPMENT LENGTH
CORNER BARS

D1 REINFORCEMENT AT TYPICAL WALL CORNERS & INTERSECTION

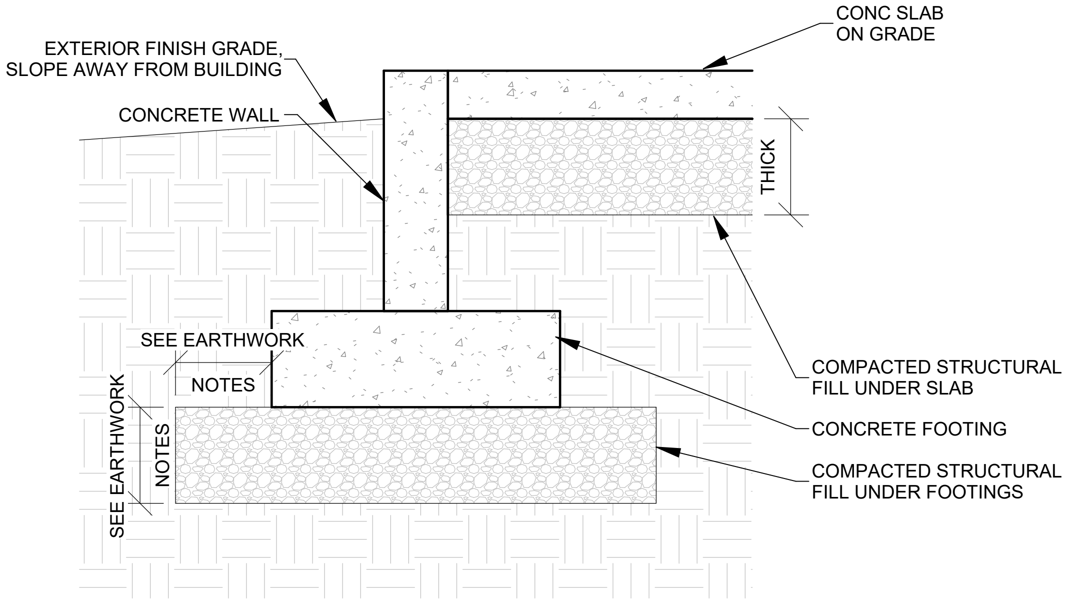
SCALE NTS



NOTE:
1. SEE STRUCTURAL FRAMING PLANS FOR SHEATHING TYPE AND THICKNESS, BOUNDARY NAILING, EDGE NAILING, AND FIELD NAILING.
2. BOUNDARIES EXIST ALONG ALL SHEAR WALLS AND ALONG ALL DRAG ELEMENTS.
3. SHEATHING ORIENTATION: LONG DIRECTION (STRONG AXIS) PERPENDICULAR TO FRAMING & SHORT DIRECTION (WEAK AXIS) PARALLEL TO FRAMING.

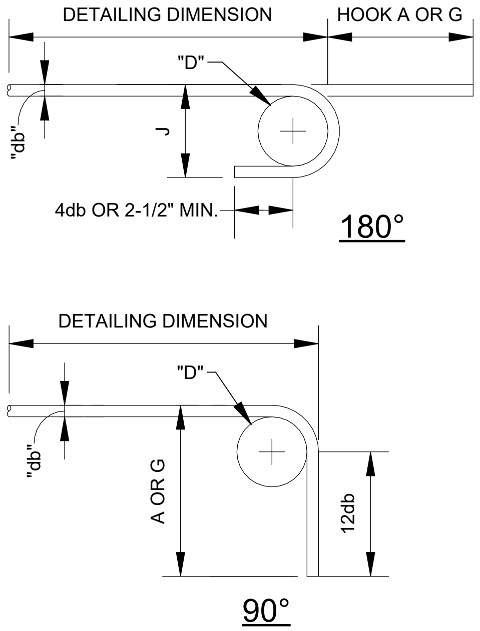
D5 DIAPHRAGM NAILING - UNBLOCKED

SCALE NTS


CONC SLAB ON GRADE
EXTERIOR FINISH GRADE, SLOPE AWAY FROM BUILDING
CONCRETE WALL
THICK
SEE EARTHWORK NOTES
SEE EARTHWORK NOTES
COMPACTED STRUCTURAL FILL UNDER SLAB
CONCRETE FOOTING
COMPACTED STRUCTURAL FILL UNDER FOOTINGS

A1 STRUCTURAL FILL PLACEMENT

SCALE NTS



END HOOKS

BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	1'-0"
#7	5-1/4"	10"	7"	1'-2"
#8	6	11"	8"	1'-4"
#9	9-1/2"	1'-3"	11-3/4"	1'-7"
#10	10-3/4"	1'-5"	1' 1-1/4"	1'-10"
#11	12"	1'-7"	1' 2-3/4"	2'-0"
#14	18-1/4"	2'-3"	1' 9-3/4"	2'-7"
#18	24"	3'-0"	2' 4-1/2"	3'-5"

D = FINISHED INSIDE BEND DIA.
db = NOMINAL BAR DIAMETER
Min. D = 6db FOR #3 THROUGH #8
= 8db FOR #9, #10, AND # 11
= 10db FOR #14, AND #18

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05/12/2022

A5 REINFORCING STEEL BEND

SCALE NTS

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NO.	DATE	DESCRIPTION

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
TYPICAL STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

S-702
SHEET NO.

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

1. SUBMITTALS
   - A. PRODUCT DATA
   - B. DESIGN DATA
   - C. CONCRETE PLACEMENT PLAN
     - a. SUBMIT MINIMUM 48 HOURS PRIOR TO EACH PLACEMENT.
   - D. BATCH TICKET
   - E. WARRANTY
2. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO ACI 318.
   - B. COMPLY WITH ACI 305.1 WHEN PLACING CONCRETE DURING HOT WEATHER.
   - C. COMPLY WITH ACI 306.1 WHEN PLACING CONCRETE DURING COLD WEATHER.
   - D. ACQUIRE CEMENT AND AGGREGATE FROM ONE SOURCE FOR WORK.
3. WARRANTY
   - A. PROVIDE WRITTEN GUARANTEE TO PROMPTLY REMOVE AND/OR REPAIR DEFECTIVE CONCRETE FOR TWO YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION.
4. MATERIALS
   - A. CONCRETE:
     - a. CEMENT:
       - PORTLAND CEMENT COMPLYING WITH ASTM C150.
       - USE TYPE II - MODERATE SULFATE RESISTANT OR TYPE II-V BLEND FOR CLASS A THROUGH C CONCRETE.
       - USE TYPE V - HIGH SULFATE RESISTANT FOR CLASS S2 AND S3 CONCRETE. MEET OR EXCEED SULFATE EXPOSURE CLASS S2 SEVERE IN ACCORDANCE WITH TABLES 4.2.1 AND 4.3.1 OF ACI 318.
     - b. COARSE AGGREGATE:
       - COMPLY WITH ASTM C33.
       - MAXIMUM SIZE: ACCORDING TO ACI 318.
         1. NOT LARGER THAN 1/5 NARROWEST DIMENSION BETWEEN SIDES OF FORM.
         2. NOT LARGER THAN 1/3 DEPTH OF SLAB.
         3. NOT LARGER THAN ¾ MINIMUM CLEAR DISTANCE BETWEEN REINFORCING BAR OR BETWEEN REINFORCING BARS AND FORMS, WHICHEVER IS SMALLEST.
     - c. FINE AGGREGATE:
       - COMPLY WITH ASTM C33.
       - WATER:
         1. COMPLY WITH ACI 318.
         2. POTABLE.
   - B. ADMIXTURES:
     - a. DO NOT USE CALCIUM CHLORIDE OR ADMIXTURES THAT CONTAIN CALCIUM CHLORIDE.
     - b. AIR ENTRAINMENT: COMPLY WITH ASTM C260. USE PRE-MEASURED ADMIXTURES FOR AIR ENTRAINMENT ADDED ON SITE.
     - c. CHEMICAL: SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
       - COMPLY WITH ASTM C494.
       - TYPE A - WATER REDUCING. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 5 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - TYPE D - WATER REDUCING AND RETARDING. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 5 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - TYPE F - WATER REDUCING, HIGH RANGE. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 9 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - SET RETARDING ADMIXTURES MAY BE USED WHEN HAUL TIME WILL BE EXCEEDED. ESTABLISH EFFECTIVE LIFE OF CONCRETE MIX BY TRIAL BATCH.
     - d. FLY ASH: COMPLY WITH ASTM C618, CLASS F, AND NOT EXCEED 3 PERCENT LOSS ON IGNITION AND DO NOT EXCEED 15 PERCENT CAO CONTENT. MAY BE USED TO REPLACE CEMENT. LIMIT CONTENT OF FLY ASH TO 30 PERCENT OF REQUIRED CEMENT CONTENT BY WEIGHT. SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
     - e. PLASTICIZING: COMPLY WITH ASTM C1017 AND SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
   - C. FIBROUS REINFORCING: WHERE INDICATED ON DRAWINGS. ASTM C1116, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED, MD GRADED, FIBERS CONTAINING NO REPROCESSED OLEFIN MATERIALS. MINIMUM APPLICATION RATE SHALL BE 4.0 POUNDS PER CUBIC YARD UNLESS NOTED OTHERWISE. MANUFACTURED BY FIBERMESH OR EQUAL.
5. CONCRETE MIX
   - A. LEAN CONCRETE FILL
     - a. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c): 1,500 PSI.
     - b. CEMENT: ASTM C-150, TYPE II.
   - B. STRUCTURAL CONCRETE
     - a. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c):
       - FOOTINGS: 4,000 PSI.
       - WALLS: 4,000 PSI.
       - SLABS ON GRADE: 4,000 PSI.
     - b. CEMENT: ASTM C-150, TYPE II.
     - c. CONCRETE EXPOSED TO EXTERIOR CONDITIONS: AIR ENTRAINED TO 5%-7% AIR CONTENT.
6. EXAMINATION
   - A. VERIFY REQUIREMENTS FOR CONCRETE COVER OVER REINFORCEMENT.
   - B. VERIFY THAT ANCHORS, SEATS, PLATES, REINFORCEMENT, AND OTHER ITEMS TO BE CAST INTO CONCRETE ARE ACCURATELY PLACED, POSITIONED SECURELY, AND WILL NOT INTERFERE WITH PLACING CONCRETE.
7. PREPARATION
   - A. PREVIOUSLY PLACED CONCRETE:
     - a. PREPARE PREVIOUSLY PLACED CONCRETE BY CLEANING WITH STEEL BRUSH AND APPLYING BONDING AGENT IN ACCORDANCE WITH MANUFACTURER’S RECOMMENDATIONS.
     - b. REMOVE LAITANCE, COATINGS, AND UNSOUND MATERIALS.
   - B. IN LOCATIONS WHERE NEW CONCRETE IS DOWELED TO EXISTING WORK, DRILL HOLES IN EXISTING CONCRETE, INSERT STEEL DOWELS, AND PACK SOLID WITH EPOXY.
   - C. IF CONCRETE SUBGRADE IS DRY, DAMPEN WITH WATER PRIOR TO PLACING CONCRETE. KEEP SUBGRADE FIRM AND FREE FROM EXCESS WATER.
   - D. REMOVE DEBRIS AND ICE FROM FORMWORK, REINFORCEMENT, AND CONCRETE SUBSTRATES.
   - E. REMOVE WATER FROM AREAS RECEIVING CONCRETE BEFORE CONCRETE IS PLACED.
8. INSTALLATION
   - A. PLACING CONCRETE:
     - a. PLACE CONCRETE ACCORDING TO ACI 318.
     - b. NOTIFY ENGINEER MINIMUM 48 HOURS PRIOR TO COMMENCEMENT OF OPERATIONS.
     - c. ENSURE THAT REINFORCEMENT, INSERTS, EMBEDDED PARTS, FORMED EXPANSION AND CONTRACTION JOINTS, AND OTHER MATERIALS ARE NOT DISTURBED DURING CONCRETE PLACEMENT.
     - d. JOINT FILLER:
       - SEPARATE SLABS ON GRADE FROM VERTICAL SURFACES WITH 1/2-INCH-THICK JOINT FILLER OR 30 POUND FELT.
       - PLACE JOINT FILLER IN SLAB PATTERN PLACEMENT SEQUENCE; SET TOP TO REQUIRED ELEVATIONS; SECURE TO RESIST MOVEMENT BY WET CONCRETE.
       - EXTEND JOINT FILLER FROM BOTTOM OF SLAB TO WITHIN 1/2 INCH OF FINISHED SLAB SURFACE, UNLESS INDICATED OTHERWISE ON DRAWINGS. APPLY SEALANT IN JOINTS WHERE INDICATED ON DRAWINGS.
     - e. CONVEY CONCRETE FROM MIXER TO PLACE OF FINAL POSITION BY METHODS THAT WILL PREVENT SEGREGATION OF MIX OR LOSS OF MATERIALS. USE TREMIE OR OTHER ACCEPTED METHOD. DO NOT ALLOW CONCRETE TO FREE FALL MORE THAN 5 FEET, OR LESS IF SEGREGATION OF MIX OCCURS.
     - f. AFTER CONCRETE HAS BEEN CONVEYED FROM MIXER, DO NOT ADD WATER. ADDING WATER TO PLACE CONCRETE WILL BE CAUSE FOR REJECTION.
     - g. PLACE CONCRETE IN CONTINUOUS OPERATION FOR EACH PANEL OR SECTION AS DETERMINED BY PREDETERMINED JOINTS.
     - h. CONSOLIDATE CONCRETE DURING PLACEMENT USING HAND TOOLS, MECHANICAL VIBRATORS, VIBRATING SCREEDS, AND FINISHING MACHINES IN ACCORDANCE WITH ACI 309R. CONSOLIDATION TECHNIQUES WILL BE REVIEWED AND ACCEPTED WITH CONCRETE PLACEMENT PLAN.
       - DO NOT USE VIBRATOR TO MOVE CONCRETE HORIZONTALLY.
       - DO NOT VIBRATE HIGH SLUMP (GREATER THAN 6 INCHES) CONCRETE, UNLESS ACCEPTED BY ENGINEER.
       - DO NOT OVER VIBRATE CONCRETE.
       - PROVIDE SUFFICIENT VIBRATORS TO CONSOLIDATE CONCRETE WITHIN 15 MINUTES AFTER PLACEMENT OF CONCRETE IN FORMS.
       - PROVIDE AT LEAST TWO VIBRATORS FOR EACH CONCRETE PLACEMENT GREATER THAN 25 CUBIC YARDS.
       - DO NOT ATTACH VIBRATORS TO OR AGAINST FORMS OR REINFORCING STEEL.
       - DO NOT ALLOW VIBRATORS TO PENETRATE CONCRETE LAYERS THAT HAVE TAKEN INITIAL SET.
       - MAINTAIN RECORDS OF CONCRETE PLACEMENT, INCLUDING DATE, LOCATION, QUANTITY, AIR TEMPERATURE, AND TEST SAMPLES TAKEN.
       - PLACE CONCRETE CONTINUOUSLY BETWEEN PREDETERMINED EXPANSION, CONTROL, AND CONSTRUCTION JOINTS.
       - DO NOT INTERRUPT SUCCESSIVE PLACEMENT AND DO NOT PERMIT COLD JOINTS TO OCCUR.
       - PLACE FLOOR SLABS WITH SAW-CUT PATTERN INDICATED ON DRAWINGS.
       - SAW-CUT JOINTS:
         1. SAW-CUT JOINTS WITHIN 12 HOURS AFTER PLACING.
         2. USE 3/16 INCH THICK BLADE.
         3. CUT 1/4 DEPTH OF SLAB THICKNESS.
       - SCREEDING:
         1. SCREED FLOORS AND SLABS ON GRADE LEVEL, UNLESS INDICATED OTHERWISE ON DRAWINGS.
         2. MINIMUM SURFACE FLATNESS: MINIMUM FF 25.
         3. MINIMUM SURFACE LEVELNESS: MINIMUM FL 20.
   - B. CONCRETE FINISHING:
     - a. STEEL TROWEL INTERIOR SURFACES. CONSOLIDATE CONCRETE SURFACE BY FINAL HAND TROWELING OPERATION, FREE OF TROWEL MARKS, UNIFORM IN TEXTURE AND APPEARANCE.
     - b. IN AREAS WITH FLOOR DRAINS, MAINTAIN FLOOR ELEVATION AT WALLS AND PITCH SURFACES UNIFORMLY TO DRAINS AT 1/8 INCH PER FOOT NOMINAL UNLESS INDICATED OTHERWISE ON DRAWINGS.
     - c. PROVIDE NON-SLIP BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS AND SLABS. SLIGHTLY ROUGHEN CONCRETE SURFACE BY GROOMING WITH FIBER-BRISTLE BROOM.
     - d. DO NOT USE STEEL TROWELS OR FRESNO TO FINISH EXTERIOR CONCRETE.
     - e. DO NOT USE JITTER BUGS FOR CONCRETE CONSOLIDATION.
   - C. CURING AND PROTECTION:
     - a. IMMEDIATELY AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL INJURY.
     - b. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR PERIOD AS NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
     - c. CURE HORIZONTAL CONCRETE SURFACES ACCORDING TO ACI 308.1 USING ONE OF FOLLOWING METHODS:
       - PONDING: MAINTAIN 100 PERCENT COVERAGE OF WATER OVER SLAB CONTINUOUSLY FOR SEVEN DAYS.
       - SPRAYING: SPRAY WATER OVER SLAB AND MAINTAIN WET FOR SEVEN DAYS.
       - ABSORPTIVE MATT: COVER SLAB WITH SATURATED MAT LAPPING ENDS AND SIDES. MAINTAIN SATURATED CONDITION FOR SEVEN DAYS.
       - MEMBRANE CURING COMPOUND: APPLY CURING COMPOUND IN TWO COATS WITH SECOND COAT APPLIED AT RIGHT ANGLES TO FIRST.
       - POLYETHYLENE FILM: SPREAD OVER SLAB, LAP EDGES AND SIDES, SEAL WITH PRESSURE SENSITIVE TAPE AND COVER WITH PLYWOOD AS NECESSARY TO SECURE FILM. MAINTAIN IN PLACE FOR SEVEN DAYS.
     - d. CURE VERTICAL SURFACES ACCORDING TO ACI 308.1 USING ONE OF FOLLOWING METHODS:
       - SPRAYING: SPRAY WATER OVER SURFACE AND MAINTAIN WET FOR SEVEN DAYS.
       - MEMBRANE CURING COMPOUND: APPLY CURING COMPOUND IN TWO COATS WITH SECOND COAT APPLIED AT RIGHT ANGLES TO FIRST.
     - e. PROVIDE ADDITIONAL PROTECTION AS NECESSARY TO PREVENT FREEZING DURING COLD WEATHER.
     - f. USE CURING METHOD WHICH IS COMPATIBLE WITH FINISH COAT OF CONCRETE SURFACE.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
STATE OF UTAH
05/12/2022

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-801
SHEET NO.

SECTION 03 20 00
CONCRETE REINFORCING

1. SUBMITTALS
   - A. SHOP DRAWINGS:
     - A. INDICATE BAR SIZES, SPACING, LOCATIONS, SPLICE LOCATIONS, AND QUANTITIES OF REINFORCING STEEL AND WELDED WIRE FABRIC.
     - B. INDICATE BENDING AND CUTTING SCHEDULES.
     - C. INDICATE SUPPORTING AND SPACING DEVICES.
   - B. MANUFACTURER'S MATERIAL CERTIFICATE: CERTIFY THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
2. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO ACI 318.
   - B. PREPARE SHOP DRAWINGS ACCORDING TO ACI SP-66.
3. DELIVERY, STORAGE, AND HANDLING
   - A. STORE MATERIALS ON SKIDS ABOVE GRADE. MEET ADDITIONAL STORAGE REQUIREMENTS ACCORDING TO MANUFACTURER INSTRUCTIONS.
   - B. PROTECTION:
     - A. PROTECT MATERIALS FROM MOISTURE BY STORING IN CLEAN, DRY LOCATION REMOTE FROM CONSTRUCTION OPERATIONS AREAS.
     - B. PROVIDE ADDITIONAL PROTECTION ACCORDING TO MANUFACTURER INSTRUCTIONS.
   - C. EXISTING CONDITIONS
     - A. VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION.
4. PRODUCTS
   - A. REINFORCEMENT
     - A. REINFORCING STEEL:
       - COMPLY WITH ASTM A615.
       - YIELD STRENGTH: 60 KSI.
       - BILLET BARS: DEFORMED, UNLES INDICATED OTHERWISE ON DRAWINGS.
       - FINISH: UNCOATED.
   - B. FABRICATION
     - A. FABRICATE CONCRETE REINFORCEMENT ACCORDING TO ACI 318.
     - B. FORM REINFORCEMENT BENDS AND HOOKS WITH STANDARD DIAMETERS AND EXTENSION LENGTHS ACCORDING TO ACI 318.
     - C. FABRICATE COLUMN REINFORCEMENT WITH OFFSET BENDS AT REINFORCEMENT SPLICES.
     - D. WHERE REQUIRED, SHOP WELD REINFORCEMENT ACCORDING TO AWS D1.4. WELDING OF REINFORCEMENT NOT PERMITTED UNLESS SPECIFICALLY DETAILED ON DRAWINGS OR ACCEPTED IN WRITING BY ENGINEER.
     - E. SPLICING:
       - IF NOT INDICATED ON DRAWINGS, LOCATE REINFORCEMENT SPLICES AT POINT OF MINIMUM STRESS AND STAGGER SPLICE LOCATIONS OF ADJACENT PARALLEL BARS.
       - FOR SPLICING DEVICES, FOLLOW MANUFACTURER'S INSTRUCTIONS.
   - C. ACCESSORY MATERIALS
     - A. TIE WIRE: MINIMUM 16 GAGE, ANNEALED TYPE.
     - B. CHAIRS, BOLSTERS, BAR SUPPORTS, AND SPACERS:
       - SIZE AND SHAPE: TO STRENGTHEN AND SUPPORT REINFORCEMENT DURING CONCRETE PLACEMENT CONDITIONS.
       - WHERE APPLICABLE, FURNISH LOAD-BEARING PAD ON BOTTOM TO PREVENT VAPOR RETARDER PUNCTURE.
     - C. SPECIAL CHAIRS, BOLSTERS, BAR SUPPORTS, AND SPACERS ADJACENT TO WEATHER-EXPOSED CONCRETE SURFACES:
       - MATERIAL: PLASTIC-TIPPED STEEL.
       - SIZE AND SHAPE: TO MEET PROJECT CONDITIONS.
5. EXECUTION
   - A. INSTALLATION
     - A. PLACE, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT.
     - B. DO NOT DEVIATE FROM REQUIRED POSITION BEYOND SPECIFIED TOLERANCE.
     - C. DO NOT WELD REINFORCEMENT.
     - D. DO NOT DISPLACE OR DAMAGE VAPOR RETARDER.
     - E. ACCOMMODATE PLACEMENT OF FORMED OPENINGS.
     - F. SPACING:
       - SPACE REINFORCEMENT BARS WITH MINIMUM CLEAR SPACING ACCORDING TO ACI 318.
       - IF BARS ARE INDICATED IN MULTIPLE LAYERS, PLACE UPPER BARS DIRECTLY ABOVE LOWER BARS.
     - g. MAINTAIN MINIMUM CONCRETE COVER AROUND REINFORCEMENT FOR CAST-IN-PLACE NON-PRESTRESSED CONCRETE MEMBERS ACCORDING TO ACI 318 AS FOLLOWS:
       - CONCRETE PLACED AGAINST FORMS (INCLUDING CONCRETE TO BE BACKFILLED): 2"
       - CONCRETE PLACED AGAINST GROUND: 3"
       - SLABS (ON GROUND): CENTER BAR IN SLAB.
     - H. SPLICE REINFORCING WHERE INDICATED ON DRAWINGS OR ACCORDING TO SPLICE DEVICE MANUFACTURER'S INSTRUCTIONS.
   - B. TOLERANCES
     - A. INSTALL REINFORCEMENT WITHIN FOLLOWING TOLERANCES FOR FLEXURAL MEMBERS, WALLS, AND COMPRESSION MEMBERS:
       - REINFORCEMENT DEPTH GREATER THAN 8 INCHES:
         1. DEPTH TOLERANCE: PLUS OR MINUS 3/8 INCH.
         2. CONCRETE COVER TOLERANCE: MINUS 3/8 INCH.
       - REINFORCEMENT DEPTH LESS THAN OR EQUAL TO 8 INCHES:
         1. DEPTH TOLERANCE: PLUS OR MINUS 1/2 INCH.
         2. CONCRETE COVER TOLERANCE: MINUS 1/2 INCH.
     - B. FOUNDATION WALLS: INSTALL REINFORCEMENT WITHIN TOLERANCES ACCORDING TO ACI 117.
   - C. FIELD QUALITY CONTROL TESTING
     - A. PERFORM FIELD INSPECTION OF REINFORCEMENT ACCORDING TO ACI 318. INSPECT FOR CORRECT MATERIALS, FABRICATION, SIZES, LOCATIONS, SPACING, CONCRETE COVER, AND SPLICING.
   - D. FIELD ACCEPTANCE TESTING
     - A. FIELD INSPECTION TESTING WILL BE PERFORMED BY OWNER'S TESTING LABORATORY ACCORDING TO ACI 318.
     - B. PROVIDE UNRESTRICTED ACCESS TO WORK AND COOPERATE WITH APPOINTED INSPECTION FIRM.
     - C. REINFORCEMENT INSPECTION:
       - PERIODIC PLACEMENT INSPECTION: INSPECT FOR CORRECT MATERIALS, FABRICATION, SIZES, LOCATIONS, SPACING, CONCRETE COVER, AND SPLICING.
       - PLACEMENT ACCEPTANCE: IN ACCORDANCE WITH ACI 318 MATERIAL REQUIREMENTS AND SPECIFIED PLACEMENT TOLERANCES.
6. PROTECTION
   - A. PROTECT REINFORCEMENT AND ACCESSORIES FROM DAMAGE AND DISPLACEMENT UNTIL CONCRETE IS PLACED.

SECTION 04 05 16
MASONRY GROUTING

1. SUBMITTALS
   - A. MANUFACTURER'S CERTIFICATE: INDICATE PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
2. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO TMS 402 AND 602.
3. DELIVERY, STORAGE, AND HANDLING
   - A. STORE MATERIALS ACCORDING TO MANUFACTURER INSTRUCTIONS.
   - B. PROTECTION:
     - a. PROTECT MATERIALS FROM MOISTURE AND DUST BY STORING IN CLEAN, DRY LOCATION REMOTE FROM CONSTRUCTION OPERATIONS AREAS.
     - b. PROVIDE ADDITIONAL PROTECTION ACCORDING TO MANUFACTURER INSTRUCTIONS.
4. AMBIENT CONDITIONS
   - A. COLD WEATHER REQUIREMENTS: WHEN AMBIENT TEMPERATURE OR TEMPERATURE OF MASONRY UNITS IS LESS THAN 40 DEGREES FAHRENHEIT, COMPLY WITH TMS 402 AND 602.
   - B. HOT WEATHER REQUIREMENTS: WHEN AMBIENT TEMPERATURE IS GREATER THAN 100 DEGREES FAHRENHEIT OR IF AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES FAHRENHEIT WITH WIND VELOCITY GREATER THAN 8 MILES PER HOUR, COMPLY WITH TMS 402 AND 602.
5. MATERIALS
   - A. PORTLAND CEMENT: COMPLY WITH ASTM C150, TYPE II.
   - B. GROUT AGGREGATE: COMPLY WITH ASTM C404, FINE AND COARSE.
   - C. FLY ASH: COMPLY WITH ASTM C618.
   - D. WATER: CLEAN AND POTABLE.
   - E. CALCIUM CHLORIDE: NOT ALLOWED.
6. MIXES
   - A. GROUT:
     - a. GROUT FOR NON-STRUCTURAL MASONRY:
       - COMPRESSIVE STRENGTH: 2,000 PSI AT 28 DAYS.
       - MIXING: ACCORDING TO ASTM C476, FINE, COARSE.
     - b. GROUT FOR STRUCTURAL MASONRY:
       - COMPRESSIVE STRENGTH: 2,000 PSI AT 28 DAYS.
       - MIXING: ACCORDING TO ASTM C476, FINE, COARSE.
     - c. APPLICATION:
       - COARSE GROUT: GROUTING SPACES WITH MINIMUM 2 INCHES DIMENSION IN EACH DIRECTION.
       - FINE GROUT: GROUTING OTHER SPACES.
7. EXAMINATION
   - A. REQUEST INSPECTION OF SPACES TO BE GROUTED.
8. PREPARATION
   - A. CLEAN LAITANCE AND LOOSE MATERIALS FROM SPACES TO BE GROUTED.
9. INSTALLATION
   - A. MIXING:
     - a. THOROUGHLY MIX GROUT INGREDIENTS IN QUANTITIES NEEDED FOR IMMEDIATE USE ACCORDING TO ASTM C476.
   - B. DO NOT PLACE GROUT UNTIL MASONRY UNITS HAVE ATTAINED SUFFICIENT STRENGTH.
   - C. DO NOT PLACE GROUT UNTIL REINFORCING IS SECURED IN PLACE. DO NOT DISPLACE REINFORCEMENT WHILE PLACING GROUT.
   - D. GROUT CELLS OF CONCRETE MASONRY UNITS WITH REINFORCING, AND GROUT NON-REINFORCED CELLS WHERE INDICATED ON DRAWINGS.
   - E. PLACE GROUT ACCORDING TO TMS 402 AND 602.
   - F. CLEAN EXPOSED SURFACES OF EXCESS GROUT WHILE GROUT IS WET.
   - G. ENSURE GROUT COMPLETELY FILLS INTENDED CELLS, VERTICALLY AND HORIZONTALLY.
10. FIELD QUALITY CONTROL
    - A. TESTING:
      - a. MIX: COMPLY WITH ASTM C1019 FOR COMPRESSIVE STRENGTH AND COMPLY WITH ASTM C143 FOR SLUMP.
      - B. COMPRESSIVE STRENGTH OF MORTAR, GROUT, AND MASONRY: COMPLY WITH ASTM C1314.

LICENSED PROFESSIONAL ENGINEER
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MATTHEW PAUL LAURENDEAU
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STATE OF UTAH

SUBMITTAL		
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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-802
SHEET NO.

SECTION 04 22 00
CONCRETE UNIT MASONRY

1. SUBMITTALS
   - A. PRODUCT DATA.
   - B. SAMPLES:
     - a. SUBMIT TWO FULL-SIZE SAMPLES OF UNITS TO ILLUSTRATE COLOR, TEXTURE, AND EXTREMES OF COLOR RANGE.
2. MAINTENANCE MATERIAL SUBMITTALS
   - A. EXTRA STOCK MATERIALS: 5% OF EACH SIZE, COLOR, AND TYPE OF UNITS.
3. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO ACI 530/530.1 - BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES AND RELATED COMMENTARIES.
4. AMBIENT CONDITIONS
   - A. DO NOT STORE REINFORCING MATERIAL DIRECTLY ON GROUND. UTILIZE BLOCKING AND OTHER METHODS TO PREVENT RUST ON ACCESSORIES PRIOR TO INSTALLATION.
   - B. COLD WEATHER REQUIREMENTS: ACCORDING TO ACI 530.1 WHEN AMBIENT TEMPERATURE OR TEMPERATURE OF MASONRY UNITS IS LESS THAN 40 DEGREES F.
   - C. HOT WEATHER REQUIREMENTS: ACCORDING TO ACI 530.1 WHEN AMBIENT TEMPERATURE IS GREATER THAN 100 DEGREES F OR AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES F WITH WIND VELOCITY GREATER THAN 8 MPH.
5. EXISTING CONDITIONS
   - A. FIELD MEASUREMENTS: VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION. INDICATE FIELD MEASUREMENTS ON SHOP DRAWINGS.
6. PERFORMANCE AND DESIGN CRITERIA
   - A. CONCRETE MASONRY COMPRESSIVE STRENGTH (F'M): 2,000 PSI; DETERMINED BY UNIT STRENGTH METHOD.
     - a. CONCRETE MASONRY UNITS (CMU): 2,000 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH.
7. MATERIALS
   - A. DECORATIVE CMU: ASTM C90; LIGHT WEIGHT; COLOR AS SELECTED TO FOLLOW ARCHITECTURAL DRAWINGS.
8. ACCESSORIES
   - A. REINFORCING STEEL: ASTM A615, 60 KSI YIELD GRADE, DEFORMED BILLET BARS, UNCOATED FINISH.
   - B. MORTAR AND GROUT: AS SPECIFIED IN SECTION 04 05 14 - MASONRY MORTARING AND GROUTING.
9. SOURCE QUALITY CONTROL
   - A. TESTING: TEST BRICK EFFLORESCENCE ACCORDING TO ASTM C67. BRICK RATED GREATER THAN "SLIGHTLY EFFLORESCED" IS NOT ACCEPTABLE.
10. EXAMINATION
    - A. VERIFY THAT:
      - a. FIELD CONDITIONS ARE ACCEPTABLE AND READY TO RECEIVE WORK.
      - b. ITEMS PROVIDED BY OTHER SECTIONS OF WORK ARE PROPERLY SIZED AND LOCATED.
      - c. BUILT-IN ITEMS ARE IN PROPER LOCATION AND READY FOR ROUGHING INTO MASONRY WORK.
11. PREPARATION
    - A. FURNISH TEMPORARY BRACING DURING INSTALLATION OF MASONRY WORK. MAINTAIN IN PLACE UNTIL BUILDING STRUCTURE PROVIDES PERMANENT SUPPORT.
12. INSTALLATION
    - A. ESTABLISH LINES, LEVELS, AND COURSING INDICATED. PROTECT FROM DISPLACEMENT.
    - B. MAINTAIN MASONRY COURSES TO UNIFORM DIMENSION. FORM BED AND HEAD JOINTS OF UNIFORM THICKNESS.
    - C. COURSING OF CMU:
      - a. BOND: RUNNING.
      - b. COURSING: ONE UNIT AND ONE MORTAR JOINT TO EQUAL 8 INCHES.
      - c. MORTAR JOINTS: CONCAVE.
    - D. PLACING AND BONDING:
      - a. LAY HOLLOW MASONRY UNITS WITH FACE SHELL BEDDING ON HEAD AND BED JOINTS.
      - b. BUTTERING CORNERS OF JOINTS OR EXCESSIVE FURROWING OF MORTAR JOINTS ARE NOT PERMITTED.
      - c. REMOVE EXCESS MORTAR AS WORK PROGRESSES.
      - d. INTERLOCK INTERSECTIONS AND EXTERNAL CORNERS.
      - e. DO NOT SHIFT OR TAP MASONRY UNITS AFTER MORTAR HAS ACHIEVED INITIAL SET. WHERE ADJUSTMENT IS REQUIRED, REMOVE MORTAR AND REPLACE.
      - f. PERFORM SITE CUTTING OF MASONRY UNITS WITH PROPER TOOLS TO ASSURE STRAIGHT, CLEAN, UNCHIPPED EDGES. PREVENT BROKEN MASONRY UNIT CORNERS OR EDGES.
      - G. ISOLATE TOP OF MASONRY FROM HORIZONTAL STRUCTURAL FRAMING MEMBERS AND SLABS OR DECKS WITH COMPRESSIBLE JOINT FILLER.
    - E. LINTELS:
      - a. INSTALL CONCRETE MASONRY BOND BEAM LINTELS OVER OPENINGS.
      - b. INSTALL REINFORCED UNIT MASONRY LINTELS OVER MISCELLANEOUS OPENINGS LESS THAN 12 INCHES WIDE WHERE LINTELS ARE NOT SCHEDULED OR INDICATED.
      - c. DO NOT SPLICE REINFORCING BARS.
      - d. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
      - e. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
      - f. ALLOW MASONRY LINTELS TO ATTAIN SPECIFIED STRENGTH BEFORE REMOVING TEMPORARY SUPPORTS.
      - g. MAINTAIN MINIMUM 6-INCH BEARING ON EACH SIDE OF OPENING.
    - F. GROUTED COMPONENTS:
      - a. REINFORCE BOND BEAMS AND PILASTERS AS INDICATED.
      - b. LAP SPLICES BAR DIAMETERS AS REQUIRED BY CODE.
      - c. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
      - d. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
      - e. AT BEARING LOCATIONS, FILL MASONRY CORES WITH GROUT FOR MINIMUM 12 INCHES BOTH SIDES OF OPENING.
    - G. REINFORCED MASONRY:
      - a. LAY MASONRY UNITS WITH CELLS VERTICALLY ALIGNED AND CLEAR OF MORTAR AND UNOBSTRUCTED.
      - b. PLACE REINFORCEMENT BARS AS INDICATED.
      - c. SPLICE REINFORCEMENT[AS INDICATED.
      - d. SUPPORT AND SECURE REINFORCEMENT FROM DISPLACEMENT.
      - e. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
      - f. PLACE GROUT ACCORDING TO ACI 530.1.
    - H. CONTROL JOINTS:
      - a. INSTALL CONTROL JOINTS AT THE FOLLOWING MAXIMUM SPACINGS, UNLESS OTHERWISE INDICATED ON DRAWINGS:
        - EXTERIOR WALLS: 20 FEET O.C. AND WITHIN 24 INCHES ON ONE SIDE OF EACH INTERIOR AND EXTERIOR CORNER.
        - INTERIOR WALLS: 30 FEET O.C.
        - AT CHANGES IN WALL HEIGHT.
      - b. DO NOT CONTINUE HORIZONTAL CONTROL JOINT REINFORCEMENT THROUGH CONTROL JOINTS.
      - c. INSTALL PREFORMED CONTROL JOINT DEVICE IN CONTINUOUS LENGTHS. SEAL BUTT AND CORNER JOINTS.
    - I. EXPANSION JOINTS:
      - a. FORM EXPANSION JOINTS BY OMITTING MORTAR AND CUTTING UNIT TO FORM OPEN SPACE.
      - b. DO NOT CONTINUE HORIZONTAL REINFORCEMENT THROUGH EXPANSION JOINTS.
    - J. BUILT-IN WORK:
      - a. AS WORK PROGRESSES, INSTALL BUILT-IN METAL DOOR FRAMES AND OTHER ITEMS TO BE BUILT IN THE WORK AND FURNISHED BY OTHER SECTIONS.
      - b. INSTALL BUILT-IN ITEMS PLUMB AND LEVEL.
      - c. BED ANCHORS OF METAL DOOR FRAMES IN ADJACENT MORTAR JOINTS. FILL FRAME VOIDS SOLID WITH GROUT OR MORTAR. FILL ADJACENT MASONRY CORES WITH GROUT MINIMUM 16 INCHES FROM FRAMED OPENINGS.
      - d. DO NOT BUILD IN MATERIALS SUBJECT TO DETERIORATION.
    - K. CUTTING AND FITTING:
      - a. CUT AND FIT FOR CHASES, PIPES, CONDUIT, ETC. COORDINATE WITH OTHER SECTIONS OF WORK TO PROVIDE CORRECT SIZE, SHAPE, AND LOCATION.
      - b. OBTAIN ENGINEER'S APPROVAL PRIOR TO CUTTING OR FITTING MASONRY WORK NOT INDICATED OR WHERE APPEARANCE OR STRENGTH OF MASONRY WORK MAY BE IMPAIRED.
13. TOLERANCES
    - A. MAXIMUM VARIATION FROM ALIGNMENT OF COLUMNS: 1/4 INCH.
    - B. MAXIMUM VARIATION FROM UNIT TO ADJACENT UNIT: 1/16 INCH.
    - C. MAXIMUM VARIATION FROM PLANE OF WALL: 1/4 INCH IN 10 FEET AND 1/2 INCH IN 20 FEET OR MORE.
    - D. MAXIMUM VARIATION FROM PLUMB: 1/4 INCH PER STORY NON-CUMULATIVE; 1/2 INCH IN TWO STORIES OR MORE.
    - E. MAXIMUM VARIATION FROM LEVEL COURSING: 1/8 INCH IN 3 FEET AND 1/4 INCH IN 10 FEET; 1/2 INCH IN 30 FEET.
    - F. MAXIMUM VARIATION OF JOINT THICKNESS: 1/8 INCH IN 3 FEET.
    - G. MAXIMUM VARIATION FROM CROSS SECTIONAL THICKNESS OF WALLS: 1/4 INCH.
    - H. MAXIMUM VARIATION FOR STEEL REINFORCEMENT:
      - a. INSTALL REINFORCEMENT WITHIN THE TOLERANCES SPECIFIED IN ACI 530.1 FOR FOUNDATION WALLS.
      - b. PLUS OR MINUS 1/2 INCH WHEN DISTANCE FROM CENTERLINE OF STEEL TO OPPOSITE FACE OF MASONRY IS 8 INCHES OR LESS.
      - c. PLUS OR MINUS 1 INCH WHEN DISTANCE IS BETWEEN 8 AND 24 INCHES.
      - d. PLUS OR MINUS 1-1/4 INCH WHEN DISTANCE IS GREATER THAN 24 INCHES.
      - e. PLUS OR MINUS 2 INCHES FROM LOCATION ALONG FACE OF WALL.
14. FIELD QUALITY CONTROL
    - A. CMU: TEST EACH TYPE ACCORDING TO ASTM C140.
    - B. PRISM TESTS: TEST COMPRESSIVE STRENGTH OF COMPLETED REINFORCED MASONRY ACCORDING TO ASTM C1314.
15. CLEANING
    - A. CLEAN SOILED SURFACES WITH CLEANING SOLUTION.
16. PROTECTION
    - A. PROTECT EXPOSED EXTERNAL CORNERS SUBJECT TO DAMAGE.
    - B. PROTECT BASE OF WALLS FROM MUD AND MORTAR SPLATTER.
    - C. PROTECT MASONRY AND OTHER ITEMS BUILT INTO MASONRY WALLS FROM MORTAR DROPPINGS AND STAINING CAUSED BY MORTAR.
    - D. PROTECT TOPS OF MASONRY WORK WITH WATERPROOF COVERINGS SECURED IN PLACE WITHOUT DAMAGING MASONRY. PROVIDE COVERINGS WHERE MASONRY IS EXPOSED TO WEATHER WHEN WORK IS NOT IN PROGRESS. MAINTAIN PROTECTION ON TOPS OF COMPLETED EXTERIOR WALLS UNTIL INSTALLATION OF PERMANENT WATERPROOF CAP MATERIALS.

#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
www.jonesanddemille.com

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-803
SHEET NO.

SECTION 31 23 23
FILL

1. DEFINITIONS
   - A. BACKFILL: SOIL PLACED AROUND STRUCTURES TO INDICATED FINISH GRADE.
   - B. COARSE GRAINED SOIL: SOILS WITH MORE THAN 50 PERCENT RETAINED ON NO. 200 SIEVE.
   - C. FILL: SOIL PLACED ON SITE TO INDICATED FINISH GRADE.
   - D. FINE GRAINED SOIL: SOILS WITH 50 PERCENT OR MORE PASSING NO. 200 SIEVE.
   - E. SOIL CLASSIFICATION: IN ACCORDANCE WITH ASTM D2487 AND AASHTO M145.
   - F. TOPSOIL: TOP 6 INCHES OF EXISTING ONSITE SOIL.
2. SUBMITTALS
   - A. TEST RESULTS: SUBMIT PROCTOR AND DENSITY QUALITY CONTROL TEST RESULTS WITHIN 24 HOURS AFTER TESTING IS COMPLETED.
3. QUALITY ASSURANCE
   - A. OBTAIN MATERIALS FROM SAME SOURCE THROUGHOUT.
4. PRODUCTS
   - A. MATERIALS
     - A. TOPSOIL: TOP 6 INCHES OF EXISTING ONSITE SOIL.
     - B. FILL AND BACKFILL: USE EXISTING ONSITE EXCAVATED SOIL FREE FROM RUBBISH, DEBRIS, ORGANIC MATERIAL, FROZEN MATERIAL, OR OTHER OBJECTIONABLE MATERIALS.
     - C. IMPORTED FILL: A-1A THROUGH A-4 SOILS AS CLASSIFIED IN ACCORDANCE WITH AASHTO M145.
     - d. GRANULAR BACKFILL BORROW: NON-PLASTIC, WELL GRADED, 2 INCH MAXIMUM SIZE, A-1A SOIL AS CLASSIFIED IN ACCORDANCE WITH AASHTO M145.
     - e. STRUCTURAL FILL: WELL-GRADED, CLEAN, HARD, TOUGH, DURABLE AND SOUND MINERAL AGGREGATES CONSISTING OF CRUSHED STONE, CRUSHED GRAVEL OR CRUSHED SLAG; FREE OF ORGANIC MATTER AND CONTAMINATION FROM CHEMICAL OR PETROLEUM PRODUCTS; MEETING THE FOLLOWING REQUIREMENTS:
       - DRY RODDED UNIT WEIGHT: NOT LESS THAN 75 PCF.
       - LIQUID LIMIT/PLASTIC INDEX: NON-PLASTIC.
       - AGGREGATE WEAR: NOT TO EXCEED 50 PERCENT.
       - GRADATION: ESTABLISH JOB-MIX (TARGET) GRADATION WITHIN GRADATION TARGET BAND LISTED BELOW. PERCENT PASSING IS BASED ON TOTAL AGGREGATE (DRY WEIGHT), AND FINE AND COARSE AGGREGATE HAVING APPROXIMATELY SAME BULK SPECIFIC GRAVITIES.
         1. 1 1/2 INCH: 100
         2. 1 INCH: 90-100
         3. 3/4 INCH: 70-85
         4. 1/2 INCH: 65-80
         5. 3/8 INCH: 55-75
         6. NO. 4: 40-65
         7. NO. 16: 25-40
         8. NO. 200: 7-11
       - TWO FRACTURED FACE: 50% MINIMUM.
       - CBR WITH 10 LB. SURCHARGE MEASURED AT 0.20 INCH PENETRATION: 70% MINIMUM.
5. EXECUTION
   - A. EXAMINATION
     - A. VERIFY SURVEY BENCH MARK AND INTENDED ELEVATIONS FOR WORK ARE AS INDICATED ON DRAWINGS.
     - B. VERIFY SUB-DRAINAGE, DAMPPROOFING AND WATERPROOFING ARE COMPLETE PRIOR TO BACKFILLING FOR SITE STRUCTURES.
     - C. VERIFY STRUCTURAL ABILITY OF UNSUPPORTED WALLS TO SUPPORT LOADS IMPOSED BY BACKFILL.
   - B. PREPARATION
     - A. IDENTIFY REQUIRED LINES, LEVELS, CONTOURS, AND DATUM.
     - B. ERECT AND MAINTAIN TEMPORARY BARRIERS, SAFETY DEVICES AND SIMILAR MEASURES FOR PROTECTION OF PUBLIC AND EXISTING IMPROVEMENTS TO REMAIN.
     - C. MAINTAIN DEWATERING UNTIL FINAL FILL AND BACKFILL MATERIALS ARE IN PLACE.
   - C. CONSTRUCTION – GENERAL
     - A. IF EXCAVATED MATERIAL IS NOT SUFFICIENT FOR REQUIRED FILL AND BACKFILL, USE IMPORTED FILL [**BORROW**] MATERIAL.
     - B. PLACE FILL AND BACKFILL TO CONTOURS AND ELEVATIONS INDICATED ON DRAWINGS.
     - C. MIX ROCKS WITH FINER MATERIALS TO MINIMIZE VOIDS.
     - D. UNLESS INDICATED OTHERWISE, PLACE AND COMPACT FILL AND BACKFILL MATERIAL IN CONTINUOUS LAYERS NOT EXCEEDING 12 INCHES NON-COMPACTED DEPTH. IF TESTS INDICATE UNSATISFACTORY DENSITY, REDUCE LAYER THICKNESS.
     - E. MAINTAIN OPTIMUM MOISTURE CONTENT OF FILL AND BACKFILL MATERIALS TO ATTAIN REQUIRED COMPACTION DENSITY.
     - **F.** COMPACT FILL AND BACKFILL MATERIALS TO DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
     - G. WHERE POSSIBLE, GRADE SURPLUS SOIL TO BLEND IN WITH EXISTING CONTOURS, AND REMOVE REMAINING SURPLUS SOIL FROM SITE.
   - D. FILL
     - A. IF FILL HEIGHT IS 6 FEET OR LESS AND UNDERLYING GROUND CONSISTS OF LOOSE MATERIAL, SCARIFY AND COMPACT TOP 8 INCHES OF UNDERLYING GROUND TO AT LEAST 90 PERCENT OF MAXIMUM LABORATORY DENSITY PRIOR TO PLACING FILL MATERIALS.
     - B. DO NOT PLACE ROCKS EXCEEDING 4 INCHES WITHIN 12 INCHES OF PAVEMENT SUBGRADE.
     - C. SLOPE GRADE AS INDICATED ON DRAWINGS.
   - E. BACKFILL
     - A. BACKFILL AREAS EXCAVATED FOR STRUCTURES AND OTHER IMPROVEMENTS. BACKFILL TO CONTOURS AND ELEVATIONS INDICATED WITH SUITABLE MATERIALS.
     - B. EMPLOY PLACEMENT METHOD THAT DOES NOT DISTURB OR DAMAGE STRUCTURE OR OTHER WORK.
     - C. BACKFILL SIMULTANEOUSLY ON EACH SIDE OF UNSUPPORTED FOUNDATION WALLS UNTIL SUPPORTS ARE IN PLACE.
     - D. DO NOT PLACE ROCKS EXCEEDING 2 INCHES WITHIN 2 FEET OF STRUCTURES.
     - E. UNLESS INDICATED OTHERWISE ON DRAWINGS, SLOPE GRADE AWAY FROM STRUCTURES AT MINIMUM 5 PERCENT SLOPE FOR MINIMUM DISTANCE OF 10 FEET.
   - F. GRANULAR BACKFILL BORROW
     - A. WHERE INDICATED ON DRAWINGS, PLACE GRANULAR BACKFILL BORROW FOR BACKFILL WITHIN TWO FEET OF BOX CULVERTS, BRIDGES AND OTHER STRUCTURES.
     - B. PLACE AND COMPACT GRANULAR BACKFILL BORROW IN CONTINUOUS LAYERS NOT EXCEEDING 6 INCHES COMPACTED DEPTH.
   - G. STRUCTURAL FILL
     - A. WHERE INDICATED ON DRAWINGS, PLACE STRUCTURAL FILL.
     - B. PRIOR TO PLACING STRUCTURAL FILL, SCARIFY AND COMPACT TOP 8 INCHES OF UNDERLYING GROUND TO AT LEAST 90 PERCENT OF MAXIMUM LABORATORY DENSITY.
     - C. PLACE AND COMPACT STRUCTURAL FILL IN CONTINUOUS LAYERS NOT EXCEEDING 6 INCHES COMPACTED DEPTH.
   - H. FINISHING
     - A. FINISH FILL AND BACKFILL TO REASONABLY SMOOTH AND UNIFORM SURFACE.
     - B. MAKE GRADE CHANGES GRADUAL. BLEND SLOPE INTO LEVEL AREAS.
   - I. TOLERANCES
     - A. TOP SURFACE OF GENERAL FILL AND BACKFILL: PLUS OR MINUS 0.1 FOOT FROM REQUIRED ELEVATION.
     - B. TOP SURFACE OF SUBGRADE: PLUS OR MINUS 0.04 FOOT FROM REQUIRED ELEVATION.
     - C. MOISTURE CONTENT: PLUS OR MINUS 2 PERCENT OF OPTIMUM. TEST IN ACCORDANCE WITH ASTM D6938.
   - J. FIELD QUALITY CONTROL TESTING
     - A. MAXIMUM LABORATORY DENSITY: DETERMINED IN ACCORDANCE WITH AASHTO T180, METHOD D FOR A-1 SOILS AND AASHTO T99, METHOD D FOR OTHER SOILS. TEST FOR EACH TYPE OF SOIL ENCOUNTERED ON SITE.
     - B. ESTABLISH ROLLER PATTERNS NECESSARY TO ACHIEVE DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
     - C. DENSITY TESTS: PERFORM IN ACCORDANCE WITH ASTM D6938.
       - FREQUENCY:
         1. FILL, BACKFILL AND STRUCTURAL FILL: TAKE MINIMUM OF TWO TESTS FOR EACH 1,500 SQUARE YARDS PER EACH LAYER.
         2. GRANULAR BACKFILL BORROW: TAKE MINIMUM OF TWO TESTS FOR EACH LAYER ON EACH STRUCTURE OR PIPE CULVERT.
       - ACCEPTANCE: EQUALS OR EXCEEDS DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
       - IF TESTS INDICATE WORK IS NOT ACCEPTABLE, RE-COMPACT AND RETEST. IF NECESSARY, REMOVE AND REPLACE WORK.
   - K. FIELD ACCEPTANCE TESTING
     - A. MAXIMUM LABORATORY DENSITY: ENGINEER WILL DETERMINE IN ACCORDANCE WITH AASHTO T180, METHOD D FOR A-1 SOILS AND AASHTO T99, METHOD D FOR OTHER SOILS . ENGINEER WILL TEST EACH TYPE OF SOIL ENCOUNTERED ON SITE.
     - B. ESTABLISH ROLLER PATTERNS NECESSARY TO ACHIEVE DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
     - C. DENSITY TESTS: ENGINEER WILL PERFORM IN ACCORDANCE WITH ASTM D6938.
       - FREQUENCY:
         1. FILL, BACKFILL AND STRUCTURAL FILL: TAKE MINIMUM OF TWO TESTS FOR EACH 1,500 SQUARE YARDS PER EACH LAYER.
         2. GRANULAR BACKFILL BORROW: TAKE MINIMUM OF TWO TESTS FOR EACH LAYER ON EACH STRUCTURE.
       - ACCEPTANCE: EQUALS OR EXCEEDS DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
       - IF TESTS INDICATE WORK IS NOT ACCEPTABLE, RE-COMPACT AND RETEST. IF NECESSARY, REMOVE AND REPLACE WORK.
   - L. PROTECTION
     - A. PROTECT EXISTING UTILITIES AND IMPROVEMENTS INDICATED TO REMAIN, FROM DAMAGE.
     - B. PROTECT PLANT LIFE, LAWNS, AND OTHER FEATURES REMAINING AS PART OF FINAL LANDSCAPING.
     - C. PROTECT STRUCTURES, UTILITIES AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.
     - D. PROTECT BENCH MARKS AND SURVEY CONTROL POINT FROM DAMAGE OR DISPLACEMENT.
     - E. REPAIR OR REPLACE ITEMS DAMAGED BY EXCAVATION OR BACKFILLING.
   - M. COMPACTION SCHEDULE
     - A. FILL AND BACKFILL FOR NON-TRAVELED AREAS: COMPACT TO MINIMUM 90 PERCENT OF MAXIMUM LABORATORY DENSITY. INCLUDES LANDSCAPE AREAS.
     - B. FILL AND BACKFILL FOR TRAVELED AREAS AND STRUCTURES: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY. INCLUDES ROADS, PARKING LOTS, DRIVEWAYS, SIDEWALKS AND STRUCTURES.
     - C. GRANULAR BACKFILL BORROW: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY.
     - D. STRUCTURAL FILL: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY.

#8826183-2202
MATTHEW PAUL LAURENDEAU
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SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

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www.jonesanddemille.com

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER
S-804
SHEET NO.

MECHANICAL SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

SYMBOL	EXPLANATION
ø	ROUND MEASUREMENT
Ⓣ$_{X-X}$	THERMOSTAT/SENSOR
X #	MECHANICAL EQUIPMENT SYMBOL
#	KEYED NOTE REFERENCE

SITE CONDITIONS

SITE:

CITY: SPANISH FORK, UT
ELEVATION: 4,577'

OUTDOOR CONDITIONS:

WINTER: HTG: 6° F
SUMMER: CLG: 96° F
INDOOR CONDITIONS

WINTER: HTG: 60° F
SUMMER: CLG: 78° F

IF TEMPERATURES SHOWN DO NOT MATCH CONDITIONS DESIRED FOR THIS PROJECT CONTACT THE ENGINEER OF RECORD.

DESIGN CONTACTS

PROJECT MANAGER	SAMANTHA KOEPP
MECHANICAL ENGINEER:	MARK MAKIN
MECHANICAL DESIGNER:	JESSE EGAN

MECHANICAL SHEET INDEX

SHEET NUMBER	SHEET TITLE
MP0.1	MECHANICAL & PLUMBING NOTES
MP1.1	MECHANICAL & PLUMBING PLAN
MP5.1	MECHANICAL & PLUMBING DETAILS
MP6.1	MECHANICAL & PLUMBING SCHEDULES
MP7.1	MECHANICAL SPECIFICATIONS
MP7.2	MECHANICAL SPECIFICATIONS
MP7.3	MECHANICAL SPECIFICATIONS
MP7.4	MECHANICAL SPECIFICATIONS
MP7.5	PLUMBING SPECIFICATIONS
MP7.6	PLUMBING SPECIFICATIONS

PLUMBING SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

——————SS——————	SANITARY OR WASTE PIPING
— — — — —	VENT PIPING
ø	ROUND MEASUREMENT.
(P-#)	PLUMBING FIXTURE SYMBOL
M #	MECHANICAL EQUIPMENT SYMBOL
#	KEYED NOTE REFERENCE

SUBMITTALS:

1. CONTRACTOR TO ALLOW 10 WORKING DAYS FOR SUBMITTAL TURNAROUND.
2. CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL EQUIPMENT AND MATERIALS IN A SINGLE PACKAGE. PIECEMEAL SUBMITTALS WILL BE RETURNED WITH A NOTE TO REVISE AND RESUBMIT.
3. SUBMITTALS WILL BE CHECKED FOR COMPLIANCE WITH CAPACITY REQUIREMENTS AND ELECTRICAL REQUIREMENTS. CONTRACTOR TO VERIFY THAT WEIGHTS, DIMENSIONS, AND DUCT CONNECTIONS ON SUBMITTED EQUIPMENT IS CONSISTENT WITH SCHEDULED EQUIPMENT PRIOR TO SUBMITTAL. CHANGES IN SCOPE BROUGHT ABOUT BY SUBMITTED EQUIPMENT THAT DOES NOT COMPLY WITH THE WEIGHTS, DIMENSIONS, OR CONNECTION LOCATIONS ON SCHEDULED EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

COMMISSIONING NOTES:

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL DOCUMENTATION TO THE OWNER AS PER THE LISTED 2018 IECC CODE REFERENCES BELOW:

C408.2.1 A COMMISSIONING PLAN SHALL BE DEVELOPED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND SHALL INCLUDE THE FOLLOWING ITEMS:

1. A NARRATIVE DESCRIPTION OF THE ACTIVITIES THAT WILL BE ACCOMPLISHED DURING EACH PHASE OF COMMISSIONING, INCLUDING THE PERSONNEL INTENDED TO ACCOMPLISH EACH OF THE ACTIVITIES.
2. A LISTING OF THE SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND A DESCRIPTION OF THE TESTS TO BE PERFORMED.
3. FUNCTIONS TO BE TESTED, INCLUDING, BUT NOT LIMITED TO CALIBRATIONS AND ECONOMIZER CONTROLS.
4. CONDITIONS UNDER WHICH THE TESTS WILL BE PERFORMED. AT A MINIMUM, TESTING SHALL AFFIRM WINTER AND SUMMER DESIGN CONDITIONS AND FULL OUTSIDE AIR CONDITIONS.
5. MEASURABLE CRITERIA FOR PERFORMANCE.

C408.2.4 PRELIMINARY COMMISSIONING REPORT. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL AND SERVICE HOT WATER FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW. THE REPORT SHALL BE IDENTIFIED AS "PRELIMINARY COMMISSIONING REPORT," SHALL INCLUDE THE COMPLETED COMMISSIONING COMPLIANCE CHECKLIST, FIGURE C408.2.4, AND SHALL IDENTIFY:

1. ITEMIZATION OF DEFICIENCIES FOUND DURING TESTING REQUIRED BY THIS SECTION THAT HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION.
2. DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS.
3. CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.
4. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
5. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS, INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.

C408.2.4.1 ACCEPTANCE OF REPORT. BUILDINGS, OR PORTIONS THEREOF, SHALL NOT BE CONSIDERED AS ACCEPTABLE FOR A FINAL INSPECTION PURSUANT TO SECTION C105.2.6 UNTIL THE CODE OFFICIAL HAS RECEIVED THE PRELIMINARY COMMISSIONING REPORT FROM THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT.

C408.2.4.2 THE CODE OFFICIAL SHALL BE PERMITTED TO REQUIRE THAT A COPY OF THE PRELIMINARY COMMISSIONING REPORT BE MADE AVAILABLE FOR REVIEW BY THE CODE OFFICIAL.

C408.2.5 DOCUMENTATION REQUIREMENTS. THE CONSTRUCTION DOCUMENTS SHALL SPECIFY THAT THE DOCUMENTS DESCRIBED IN THIS SECTION BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

DOCUMENTS SHALL INCLUDED BUT ARE NOT LIMITED TO: DRAWINGS, MANUALS, SYSTEM BALANCING REPORT, AND FINAL COMMISSIONING REPORT.

PROJECT MECHANICAL NOTES:

1. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL A 7-DAY PROGRAMMABLE THERMOSTAT FOR EACH HEAT PUMP. VERIFY THERMOSTAT LOCATION WITH OWNER REPRESENTATIVE IN FIELD. INSTALL THERMOSTAT AT 48" A.F.F.. PROVIDE AND INSTALL A HEAVY DUTY VANDAL RESISTANT COVER IN ALL COMMON AREAS.
2. COORDINATE EXACT LOCATION OF ALL MECHANICAL UNITS WITH GENERAL CONTRACTOR. VERIFY IN FIELD.
3. PROVIDE AND INSTALL ALL NECESSARY COMPONENTS FOR FAN COIL/HEAT PUMP UNIT SYSTEMS. (IE REFRIGERANT LINES, CONDENSATE PIPING, ACCESS PANELS (FIRE RATED AS REQUIRED), MOUNTING/SUPPORT HARDWARE, ETC.) ALL PER MANUFACTURERS RECOMMENDATIONS.
4. MECHANICAL CONTRACTOR TO PROVIDE DOCUMENTATION OF REQUIRED MANUFACTURER START-UP FOR EQUIPMENT INCLUDING MANUFACTURER, MODEL NUMBER, SERIAL NUMBER, COOLING CAPACITY, ALL ENTERING AND LEAVING TEMPERATURES, CONNECTED CIRCUIT VOLTAGE, AND VERIFICATION OF PROPER FUNCTION OF THERMOSTAT. CONTRACTOR SHALL PROVIDE MANUALS FOR EQUIPMENT AND NAME OF SERVICE AGENCY.
5. ALL FRESH/OUTSIDE AIR INTAKES SHALL BE 10 FEET MIN. FROM ALL EXHAUST & PLUMBING VENTS.
6. HEATING LOADS COMPLETED USING CHVAC OR OTHER APPROVED CALCULATION METHODS.
7. REFRIGERANT PIPING INSULATION.
   - 1.1. INSULATE ALL REFRIGERANT SUCTION PIPING WITH 1/2" THICK FLEXIBLE FOAMED PLASTIC CLOSED CELL PIPE INSULATION.
   - 1.2. INSULATION SHALL HAVE A "K" FACTOR OF NOT MORE THAN .26 AT 70°F AND A WATER VAPOR TRANSMISSION RATE OF 0.1 PERM-INCH OR LESS IN CONFORMANCE WITH ASTM C-177 & ASTM C-355 WATER METHOD.
   - 1.3. WHEN INSULATION IS EXPOSED TO SUNLIGHT WRAP WITH POLYTAPE WITH ONE THIRD OVERLAP.
   - 1.4. INSTALL INSULATION BY SLITTING TUBULAR SECTIONS AND APPLYING OVER PIPING.
   - 1.5. PAINT ALL INSULATION AND/OR TAPE EXPOSED TO THE EXTERIOR WITH ULTRAVIOLET RESISTING PAINT.
8. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED.

PROJECT PLUMBING NOTES:

1. SEE PIPING SCHEMATIC FOR ADDITIONAL INFORMATION ON WASTE & VENT PIPING DIAMETERS.
2. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. CONCEAL ALL PIPING IN FINISHED AREAS.
3. PROVIDE AND INSTALL 2"ø SEWER LINE. FIELD LOCATE. MAKE CONNECTION TO COMPLETE SEWER SYSTEM. VERIFY ALL INVERT ELEVATIONS AND ALL REQUIREMENTS WITH OWNER REPRESENTATIVE AND CIVIL PLANS.
4. PIPING LOCATIONS ARE GRAPHICALLY SHOWN. PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL PIPE ROUTING IN FIELD PER AVAILABLE SPACE AND BUILDING CONSTRUCTION.
5. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE AND INSTALL ALL REQUIRED CLEANOUTS. CLEANOUTS FOR HORIZONTAL DRAINS SHALL BE INSTALLED NO MORE THAN 100' APART. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45°. A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK. CLEANOUTS SHALL BE ACCESSIBLE AND THE SAME SIZE AS THE WASTE LINES ON WHICH THEY ARE INSTALLED.
6. COORDINATE WITH OTHER TRADES TO ENSURE AND ALL PLUMBING VENTS ARE A MINIMUM OF 10-FEET FROM ALL FRESH AIR INTAKES.
7. SANITARY WASTE AND VENT PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2018 IPC TABLES 702.1, 702.2 AND 702.3 & 702.4.
8. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

REGISTERED PROFESSIONAL ENGINEER
4858829
MARK L. MAKIN
5/12/22
STATE OF UTAH

Z:\Projects\J22\J22066.00\Mechanical\J22066.00 - MECHALL.dwg

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SFCN FIBER HUTS

FIBER HUT PLANS

MECHANICAL & PLUMBING NOTES

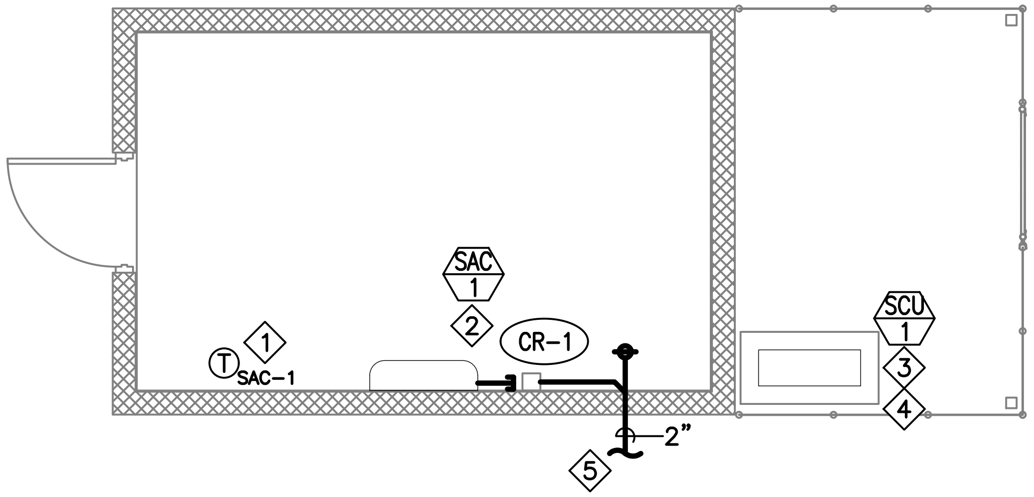
	REVISION	BY	DATE
DRAWN: JE	1 CITY CMNTS	JE	05/10/2022
DESIGN: JE			
CHECK: MM			
DATE: 5/10/2022			

DRAWING #:
MP0.1

MECHANICAL KEYED NOTES:

1. FIELD VERIFY THERMOSTAT LOCATION WITH OWNERS REPRESENTATIVE. INSTALL THERMOSTAT AT 48" A.F.F..
2. PROPOSED LOCATION OF WALL-MOUNT FAN COIL UNIT. FIELD VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE. CONTRACTOR SHALL MAKE CONNECTION TO OUTDOOR UNIT. ROUTE CONDENSATE PIPING TO CR-1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. PROPOSED LOCATION OF OUTDOOR CONDENSING UNIT FOR INDOOR FAN COIL ON PAD. PENETRATION FOR REFRIGERANT PIPING SHALL BE THROUGH THE WALL. FIELD VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE AND INSTALL 4" HOUSEKEEPING PAD FOR CONDENSING UNITS BY MECHANICAL CONTRACTOR. PROVIDE MANUFACTURER REQUIRED CLEARANCES.
5. ROUTE CONDENSATE DRAIN PIPING FROM INDOOR FAN COIL UNIT TO GRAVEL SUMP ON EXTERIOR OF BUILDING. FIELD VERIFY EXACT LOCATION WITH CIVIL UTILITIES.

△1



MECHANICAL & PLUMBING PLAN

SCALE: 3/16" = 1'-0"

NOTE:
CONDENSATE TO BE PIPED IN A WAY TO PREVENT IT FROM FREEZING DURING THE WINTER. CONTRACTOR TO ENSURE THAT PIPING CAN REACH GRAVEL SUMP OR CITY SEWER CONNECTION WITHOUT FREEZING DURING WINTER OPERATION.

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FIBER HUT PLANS

MECHANICAL &
PLUMBING PLAN

	REVISION	BY	DATE
DRAWN: JE	1 CITY CMNTS	JE	05/10/2022
DESIGN: JE			
CHECK: MM			
DATE: 5/10/2022			

DRAWING #:
MP1.1

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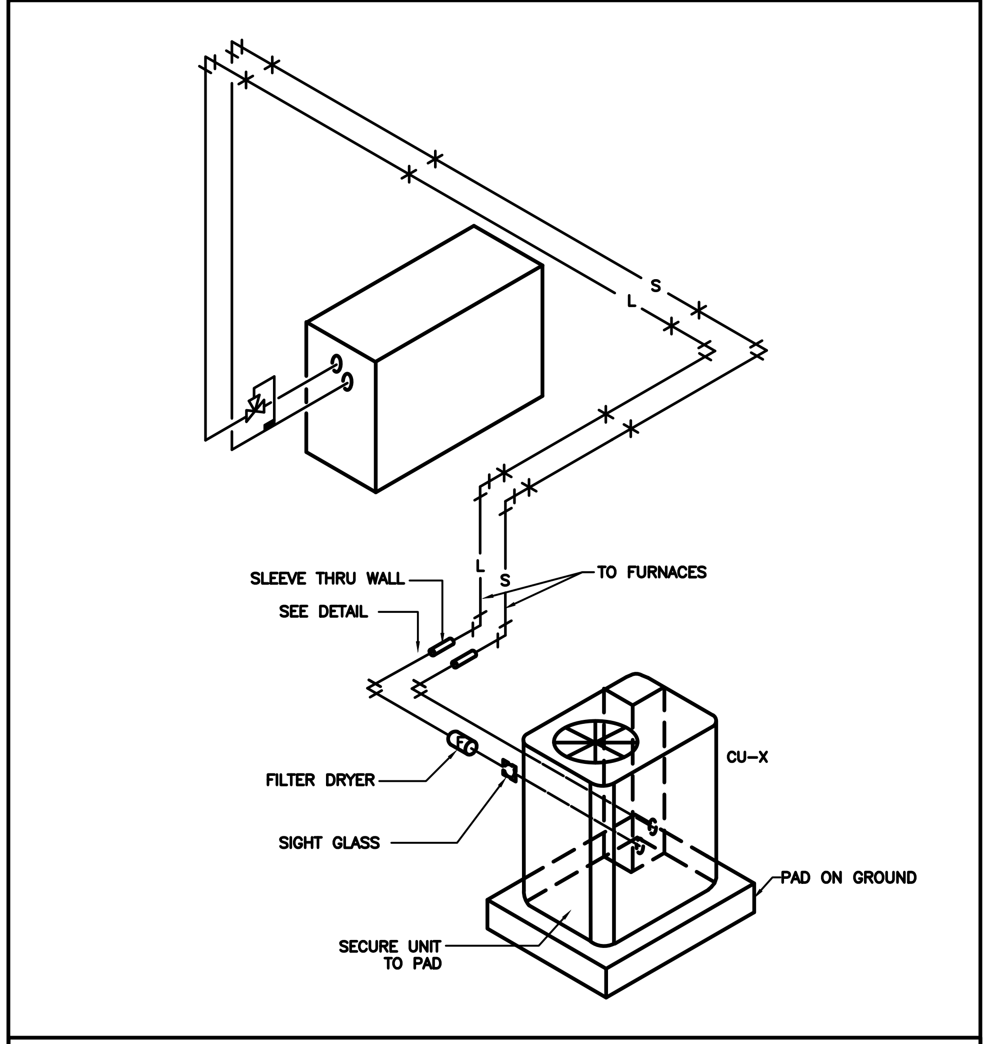
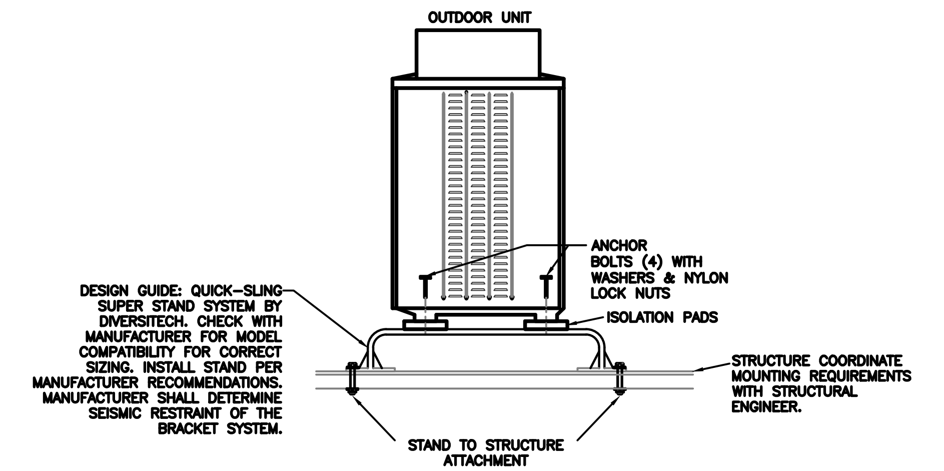


TYPICAL REFRIGERANT SCHEMATIC (CU ON GROUND)

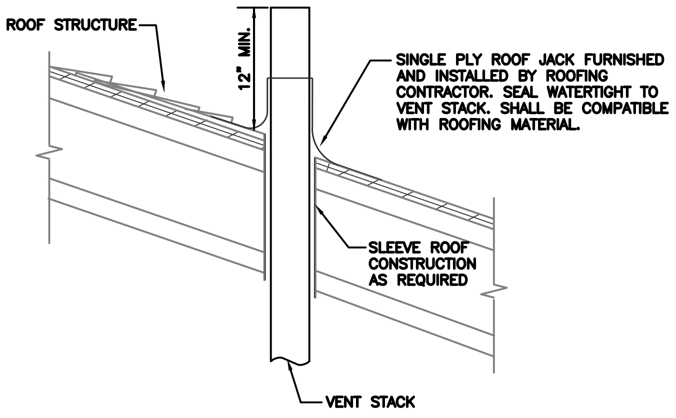
SCALE: NONE


OUTDOOR UNIT
DESIGN GUIDE: QUICK–SLING SUPER STAND SYSTEM BY DIVERSITECH. CHECK WITH MANUFACTURER FOR MODEL COMPATIBILITY FOR CORRECT SIZING. INSTALL STAND PER MANUFACTURER RECOMMENDATIONS. MANUFACTURER SHALL DETERMINE SEISMIC RESTRAINT OF THE BRACKET SYSTEM.
ANCHOR BOLTS (4) WITH WASHERS & NYLON LOCK NUTS
ISOLATION PADS
STRUCTURE COORDINATE MOUNTING REQUIREMENTS WITH STRUCTURAL ENGINEER.
STAND TO STRUCTURE ATTACHMENT

NOTES:
1. INSTALL UNIT LEVEL OR, IF ON A SLOPE, MAINTAIN SLOPE TOLERANCE OF 2 DEGREES (OR 2 INCHES PER 5 FEET).
2. COORDINATE WITH ARCHITECTURAL FOR MOUNTING HEIGHT REQUIREMENTS
3. PROTECT ADJACENT SURFACE(S) TO AVOID EXPOSURE OF ADJACENT SURFACE TO UNIT REFRIGERANT AND OIL DURING INSTALLATION.
4. FOLLOW ALL MANUFACTURER RECOMMENDATIONS.
5. VERIFY STAND LOCATION(S) WITH STRUCTURAL AND ARCHITECTURAL PLANS.
6. INSTALL UNIT WITH MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL SIDES OF THE UNIT. SEE UNIT MANUFACTURER INSTALLATION MANUAL FOR RECOMMENDED DISTANCES.
7. SECURE STAND TO STRUCTURE UNDER THE DIRECTION OF THE STRUCTURAL ENGINEER AND PER MANUFACTURER RECOMMENDATIONS.

TYPICAL OUTDOOR UNIT ON STAND DETAIL

SCALE: NONE


ROOF STRUCTURE
12" MIN.
SINGLE PLY ROOF JACK FURNISHED AND INSTALLED BY ROOFING CONTRACTOR. SEAL WATERTIGHT TO VENT STACK. SHALL BE COMPATIBLE WITH ROOFING MATERIAL.
SLEEVE ROOF CONSTRUCTION AS REQUIRED
VENT STACK

TYPICAL VENT THROUGH SLOPED ROOF DETAIL

SCALE: NONE

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FIBER HUT PLANS

MECHANICAL & PLUMBING DETAILS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #: MP5.1

SPLIT SYSTEM HEAT PUMP INDOOR & OUTDOOR UNITS

INDOOR UNIT							OUTDOOR/HEAT PUMP UNIT								REMARKS
MARK	DESIGN GUIDE	NOMINAL SUPPLY CFM	NOMINAL COOLING BTU/H	NOMINAL HEATING BTU/H	ELECTRICAL		DESIGN GUIDE	ELECTRICAL			REFRIGERANT	SEER	HSPF	MARK	
					VOLTAGE (DC VOLTS)	UNIT MCA		VOLT/PH/HZ	UNIT MCA	UNIT MOCP					
SAC 1	MITSUBISHI PKA–SERIES	810	34,200	37,000	24	1	PUZ–SERIES	230/1/60	18	40	R410A	14	9.3	SCU 1	1 – 9

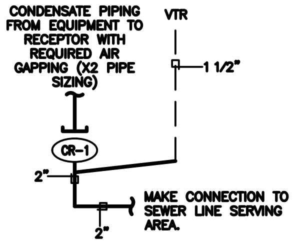
1. SITE CONDITIONS ARE 96/62 DEG. DB/WB SUMMER, 6 DEG. F DB WINTER, AND AN ELEVATION OF 4,577' FEET ABOVE SEA LEVEL.
2. APPROVED MANUFACTURERS: DAIKIN, MITSUBISHI, FRIEDRICH, FUJITSU, SANYO. (SUBJECT TO DOCUMENT CONFORMANCE)1 STAGE HEATING AND COOLING.
3. WITH R410a REFRIGERANT.
4. PROVIDE AND INSTALL ALL REQUIRED MOUNTING HARDWARE.
5. PROVIDE AND INSTALL CONDENSATE PIPING TO NEAREST PLUMBING DRAIN.
6. WITH LOW AMBIENT KIT TO ALLOW OPERATION TO –10 DEG. F.
7. FACTORY THERMOSTAT CONTROLS.
8. PROVIDE SNOW STAND AND WIND BAFFLES AS REQUIRED FOR YEAR ROUND OPERATION.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE CONNECTION BETWEEN INDOOR AND OUTDOOR UNIT.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	PIPE SIZE					REMARKS
		TRAP	WASTE	VENT	C.W.	H.W.	
CR-1	CONDENSATE RECEPTOR	2"	2"	1 1/2"	—	—	CONDENSATE RECEPTOR WITH HUB FUNNEL FOR CONDENSATE FROM HIGH EFFICIENCY EQUIPMENT. PROVIDE AND INSTALL TRAP GUARD.

NOTES:
1. VERIFY ALL MANUFACTURERS, FINISHES, AND OPTIONS WITH OWNER BEFORE ORDERING ANY PLUMBING FIXTURES.

2. MINIMUM UNDERGROUND SANITARY SEWER PIPING SIZE SHALL BE 2 INCHES.


CONDENSATE PIPING FROM EQUIPMENT TO RECEPTOR WITH REQUIRED AIR GAPPING (X2 PIPE SIZING)
VTR
1 1/2"
CR-1
2"
MAKE CONNECTION TO SEWER LINE SERVING AREA.
2"

TYPICAL CONDENSATE

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MECHANICAL & PLUMBING SCHEDULES

DATE	BY	REVISION
05/10/2022	JE	1 CITY CMNTS

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #:
MP6.1

SECTION 23 Mechanical – GENERAL PROVISIONS
Not all specification items are used in every project.

PART 1 – GENERAL

- **Scope:**
    - A. Provisions of this section apply to all work specified in all sections under Division 23.
    - B. In addition, work in Division 23 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.
    - C. Contractor is responsible for results deviating from the plans.
- **Examination of Premises:** Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.
- **The Mechanical Contractor** shall be licensed and hold a current contracting license that has been valid for a minimum of two years as a Mechanical Contractor in the State where the project is located.
- **The Mechanical Contractor** shall have a minimum of five years experience installing commercial cooling and heating systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers as a separate document in addition to the mechanical bid submitted if required by the General Contractor.
- **The Mechanical Contractor** shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the mechanical bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.
- **Regulations, Permits, Fees, Charges, Inspections:**
    - A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IBC, IMC, IPC, NEC, NFPA codes and all City codes.
    - B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards.
        1. 2018 International Mechanical Code
        2. 2018 International Building Code
        3. 2018 International Energy Code
        4. 2018 International Plumbing Code
        5. 2018 International Energy Code
        6. 2018 International Fuel Gas Code
        7. ASHRAE 90.1 – 2016

        ***Current codes adopted by the respective jurisdiction will supercede this list of codes.
    - C. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.
    - D. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.
        1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.
    - D. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.
- **Drawings and Specifications:**
    - A. Refer to Division 1 for information on submittals and shop drawings.
    - B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.
- **Record Drawings:** Provide record drawings for all work under sections in Division 22 & 23. See Division 1 for detailed requirements covering preparation of record drawings.
- **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

Approvals of Materials and Equipment: Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

- **Maintenance Manual:**
    - A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.
    - B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.
- **Maintenance Manual:**
    - A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.
    - B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.
- **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.
- **Cooperative Work:**
    - A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.
    - B. Cooperative Work Includes:
        1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 & 23 but provided under other divisions of these specifications.
        2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 23.
        3. Electrical work as specified herein. Refer to Division 26 for requirements.
- **Construction Facilities:**
    - A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.
    - B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.
- **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 23 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.
- **Mechanical Wiring:**
    - A. Provide all temperature control wiring, all interlock wiring, and equipment control wiring for the equipment that is to be provided under this Division unless specifically shown on electrical drawings.
    - B. All wiring shall be not less than No. 14 insulated, color coded wire in electrical metallic tubing. Installation shall comply with Division 26.
    - C. Before ordering motors, equipment, etc., verify the available voltage and phase with the electrical trades.
- **Electrical Work:**
    - A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.
    - B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.
    - C. Under the Automatic Temperature Control section of these specifications, furnish and install all wiring, conduit, electric automatic temperature control devices, thermostats, relays, pneumatic electric switches, automatic control switches and pilot lights. See the Automatic Temperature Control Section, for additional detailed information.
    - D. All loose starters and control devices for equipment furnished under Division 23 (except as otherwise specified under Automatic Temperature Control Section) are to be furnished under that particular section of Division 23 and installed under the electrical division.
    - E. Contractor shall be responsible for the checking and testing of all controls and the interlocks for a complete and satisfactory operating system.
    - F. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.
    - G. Submit a complete list of all motors prior to final closeout of job indicating the location, horsepower, voltage, phase specified in Table 132 of ANSI B.1.
    - H. All field wiring and equipment must conform to the applicable section of the Electrical specifications, Division 26.
- **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:
    - A. ASME Boiler and Pressure Vessel Code
    - B. Section IX ANSI Code for Power Piping: B31.1
- **Product Handling**
    - A. Protection: Take all precautions necessary to protect the materials of this section, before, during and after installation.
    - B. Replacements: In the event of damage immediately repair all damaged and defective work to the approval of the Engineer, at no additional cost to the Owner.
- **Job Conditions**
    - A. Examination of site: Examine the site and include in bid proposal all conditions under which work is to be performed.
- **Miscellaneous**
    - A. Permit and Fees: Apply and pay for all necessary permits, inspections, examinations and fees or charges required by Public Authorities having jurisdiction.
    - B. Locations and Accessibility: Contractor shall fully inform himself regarding peculiarities and limitations of space available for installation of work under this section. Valves, motors, controls and other devices requiring service. Maintenance and adjustments shall be placed in fully accessible positions and locations, provide access doors where required in ductwork and/or construction whether specifically detailed or not, and mender all such devices accessible.
    - C. Scaffolding: Furnish all scaffolding, rigging and hoisting as required for the proper execution of the work.
    - D. All HVAC equipment shall be labeled. Information on labels shall include: Identification number and name same as the drawings, flow and static pressure and the area to which the unit serves. Labels shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$ inch high.
    - E. All gas fired equipment shall include a label indication that the appliance has been adjusted, modified or re–calibrated for the altitude wherein the project is to be located. The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.
- **Submittals**
    - A. Shop Drawings: Within 15 days after award of contract, and before any of the materials of this section are fabricated and delivered to the jobsite, submit complete shop drawings and equipment submittals for the Engineer to review in accordance with these specifications. show all details of all ductwork and equipments pads.
    - B. Product Data:
        1. Submit six (6) copies of all manufacturer's product data simultaneously with all shop drawings submittals.
        2. Product data to include, all air conditioning equipment, hangers, fans and other standard items as required to complement shop drawings for a submittal indications products to be used on this work.
    - C. Record Drawings: Maintain throughout the progress of the work project record drawings and submit to the Owner.
    - D. Operating Manuals and Maintenance Manuals:
        1. Submit four (4) copies of all operating instructions and maintenance manuals.
        2. Fully instruct Owner's operating personnel and demonstrate performance, operation and maintenance of equipment. Amount of allocated for said instruction and demonstration of equipment and systems shall be part of these obligations. Submit to Engineer a letter signed by Owner's representative who will operate system stating that he has been fully instructed by contractor about operation and maintenance of equipment and system.
        3. Submit one (1) additional set of approved instructions and one (1) additional set of approved control diagrams.
    - E. Guarantees: In addition to equipment warranties, furnish a written guarantee against defects in materials and workmanship for one year. Guarantee shall include repair of damage to, or replacement of any part of equipment or premises caused by leaks or breaks in pipe or equipment provided under this section.

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JOB# J22066.00
DATE PLOTTED: 05/12/2022

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FIBER HUT PLANS

MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #:
MP7.1

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– Equipment Identification

A. Except for individual room heating units and items furnished under temperature control all items of mechanical equipment, including fans, pumps, boilers and electrical switches and starters for mechanical equipment and gauges shall be labeled.

B. Information on labels shall include the following:

1. Identification number and name. Generally this number and name shall be the same as that shown on the drawings or in the specs.

2. If the item is a fan or pump, the flow and head shall be indicated.

3. If the item is part of a unit, the label shall have in addition to its item number, the number of the main item it is serving.

4. Valves shall be tagged with the area served and their normal operating positions shall be indicated.

5. Where the main unit is served by the valve is apparent, only the valve function needs to be included on the nameplate.

C. The types of Nameplates shall be as follows:
1. The valve tags shall be $\frac{1}{2}$" embossed aluminum tapes with identification on one side for valves. Tags for magnetic starters shall be screwed to the metal starter cover. Gags sags shall be Addressograph No. B–5300.

2. Equipment nameplates shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$" high.

D. Valve tags shall be connected to valve stems by steel rings or chains. Screws shall be used for equipment labels prior to installation. The contractor shall submit to the Engineer a complete list of all valves and each item of equipment to be identified with the proper identification.

PART 2 – PRODUCTS

– Machinery Drives:

A. Use V–belts designed for 150% of capacity for all belt drives. For multiple belt drives, use matched sets, so marked at the factory.

B. On drives with not more than two belts, provide adjustable pitch motor sheaves with the midpoint of the adjustment range equal to that required to achieve the specified fan capacity.

C. On motors with drives with more than two belts, furnish nonadjustable sheaves, providing the specified fan capacity.

– Machinery Accessories:

A. Lubricating Devices: Provide all oil level gauges, oil pressure gauges, grease cups, grease gun fittings, as required by the equipment. Extend all lubricating fittings to readily accessible locations.

B. Guards: Provide totally–enclosed OSHA type belt guards for all rotating equipment. Design guards to be readily removable for access to belt drives.

– Equipment Design and Installation:

A. Uniformity: Unless otherwise specified, provide all equipment of same type or classification by the same manufacturer.

B. Design: Design all equipment in accordance with ASME, AGA, UL and other applicable technical standards as follows:

C. Pressures vessels – ASME Code constructed and stamped

D. Electric appliances – UL labeled

E. Fire protection equipment – UL approved and labeled

F. Fans – AMCA rated and stamped

G. Cooling equipment – ARI certified

H. Fire dampers, smoke dampers, combination fire and smoke dampers – UL listed

I. Concrete Inserts:

1. The work under this section includes furnishing and installing all concrete inserts required for all materials and equipment specified herein or in other sections of Division 23.

2. Provide concrete inserts equal to Unistrut Series 3200 with standard, plain, oiled finish. Provide exposed Unistrut pipe supports with factory finished enamel paint.

– Temperature Controls

A. Thermostats shall be provided with the air conditioning units. They shall be installed and wired by the HVAC contractor. T–stats for AC units shall be programmable with night setback and override control.

– Equal Materials and Substitutions

A. In addition to manufacturers specified, the following shall also be considered equal. Provided corresponding models meet specified requirements. Equivalent substituted equipment named herein shall be submitted to Architect for approval. Submit alternate selections for prior approval. Must be received by Engineer 10 days prior to due date/bid opening.

Split System: From manufacturers listed in the schedule.

– Refrigerant Lines

A. Refrigerant lines are to be sized as per manufacturer's requirements. Lines to be fully insulated with 1 inch foam flex or equal. Insulation exposed to the sun shall be painted with two coats of protective paint. The system is to be evacuated to 200 microns, hold vacuum 24 hours. Break with freon and leak test with halide detector. Each heat pump to be provided with a refrigerant line kit.

– High Wall Fan Coil Unit

A. Furnish and install indoor, wall–mounted, direct expansion, fan coil unit to be used without ductwork. Unit shall consist of tangential, direct–drive fan. Fan motor, cooling coil, piping connections, electrical controls, microprocessor control system, integral temperature sensing, and factory–supplied mounting bracket. Unit shall be capable of being used in a refrigerant circuit with a matching air–cooled outdoor condensing unit. Cabinet discharge and inlet grilles shall be attractively styled, high impact polystyrene. Cabinet shall be fully insulated for improved thermal and acoustic performance. Fan shall be tangential direct–drive blower type with air intake at the upper front face of the unit and discharge at the bottom front. Automatic, motor–driven vertical air sweep shall be provided standard. Air sweep operation shall be user selectable. Horizontal direction may be manually adjusted and vertical air sweep may be manually set. Coil shall be copper tube with aluminum fins and galvanized steel pan under the coil shall have a drain connection for hose attachment to remove condensate. Condensate pan shall have internal trap and auxiliary drip pan under coil header. The size oo9 and 012 units shall use capillary tubes in the outdoor unit for refrigerant control, and the size 018, 024 units shall use an accessory accurater piston refrigerant metering device in the indoor unit. Provide the following functions as a minimum: automatic restart, a timer function, temperature–sensing controls, evaporative coil, freeze protection, wireless infrared remote control, auto stop features, automatic air sweep control, dehumidification mode, fan–only operation, diagnostics, user–selectable fan speed control, and compressor restart time delay. Unit shall be rated per ARI standards 210/240 and shall be listed in the ARI directory matched system. Units shall be UL listed. Provide equipment from manufacturers listed in the equipment schedule.

– Split System Outdoor Heat Pump Unit

Model of size and capacity indicated. Units shall be complete assembled and tested complete with refrigerant charge and ready to operate. Total unit shall be UL listed and carry a UL label

A. Cabinet shall be constructed of galvanized steel, bonderized and coated with a power coat paint.

B. Coils shall be of nonferrous construction with aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed.

C. Compressors shall be hermetically sealed. Compressor will be mounted on rubber vibrations isolators.

D. Refrigerant circuit components shall include the following: Liquid tube shutoff valve with seat connections, suction tube shutoff valves with sweat connections, system charge of refrigerant R410, Compressor oil, accumulator, freezestat, and reversing valve.

E. Compressor fans shall be direct drive propeller type, discharging air upward. Fan motors shall be totally enclosed, 1–phase type class B insulation and permanently lubricated bearings, shafts shall be corrosion resistant. Fan blades shall be statically and dynamically balanced. Condenser fan openings shall be equipped with steel wire safety guards.

– Pipe Identification

A. Identification of piping shall be done with "Brady" or "Westline" labels. The color coding shall comply with OSHA ANSI Safety Color Coding Regulations.

B. The identifying color coded bands, legends, and directional arrows on piping and duct systems shall be located adjacent to each valve, at every point of entry and exit where piping pass through a wall or ceiling, on each riser and junction, every 50 feet on long continuous lines and adjacent to all special fittings (regulating valves, etc.)

C. Legends shall be applied on the color band on the perimeter of the pipe in a location that will be readily visible to operating personnel from the floor in the area.

D. Color coding shall follow ANSI standards:

MATERIAL	BACKGROUND COLOR	IDENTIFYING LEGEND	LETTERING
Domestic Cold Water	Green	Domestic Cold Water	White
Waste	Yellow	Waste Water	Black

– Pipe Hangers

A. All necessary structural members, hangers, and supports of approved design shall be provided to keep piping in proper alignment and to prevent transmission of injurious thrusts and vibrations. Pipe hangers shall generally be of the clevis pipe–clamp type with suspension bolts. All bolts shall have provision for vertical adjustment and shall be equipped with locknuts.

B. No hanger shall be welded directly to steel joist. Where joist occur, clips shall be installed and hanger rod attached to clips. All piping hung from joists shall be hung from joist panel points. Protective saddles shall be provided on all insulated piping at point of hanger. Hangers shall not penetrate insulation.

C. The following is schedule of maximum spacing for hangers or other supports and sizes of suspension rods for piping. In addition to the spacing listed, an additional hanger shall be provided 1 foot 0 inches from each pipe drop, rise, or turn.

Pipe Size	Rod Diameter	Maximum Spacing
1–1/4 inch and smaller	1/2 inch	6 Feet

D. Pipe hangers shall not be welded to metal pan floor. Pipe hangers shall be concrete inserts installed in holes drilled in concrete.

E. All hangers, supports, and anchors shall be assembled with heavy pattern, hexagon carbon steel nuts.

F. Perforated metal strap shall not be permitted.

G. all pipe hangers, inserts, trapezes, etc., and all necessary accessories required to support the piping shall be provided by this contractor.

H. All pipe hangers shall be installed outside of insulation on the insulated lines.

I. Manufacturers may be Blaw–Knox, Grinnell, or Pipe Shields, Inc.

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SFCN FIBER HUTS

FIBER HUT PLANS

MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #:
MP7.2

PART 3 – EXECUTION

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test, uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

E. Mechanical equipment installed on the roof shall not be installed any closer than 10'–0" to the edge of the roof unless there is a 42" high parapet or equipment guardrail.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

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B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

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A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

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REGISTERED PROFESSIONAL ENGINEER
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MARK L. MAKIN
5/12/22
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FIBER HUT PLANS

MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

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- **Owner–Furnished and Other Equipment:**
    - A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.
- **Equipment Identification**
    - A. All major equipment shall bear firmly attached metal nameplates which state name of manufacturer, model number and electrical data.
- **Discrepancies**
    - A. In the event of discrepancy, immediately notify the Owner.
    - B. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
- **Initial Lubrication, Adjusting, and Filling Systems**
    - A. Before operating any mechanical system, equipment bearings shall be lubricated and bolts, pulleys, and other moving parts checked for alignment and tolerances in accordance with manufacturer's operating instructions. Vibrations and noise shall be suppressed.
- **Cleaning of Equipment, Materials and Premises**
    - A. Be painted smooth and clean, ready for painters. Clean entire premises of unused materials, rubbish, debris, grease spots and dirt left by subcontractor.
- **Equipment and Material**
    - A. Install all equipment and material per manufacturer's recommendations.
- **Accessibility**
    - A. Install work readily accessible for normal operation, reading of instruments, adjustment, service inspection and repair, provide access panels where indicated and required. Access panels shall be the responsibility of respective subcontractors.
    - B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.
    - C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–In."
- **Equipment Final Connections:**
    - A. Provide all piping and duct final connections for all equipment under Division 22 & 23 as required herein specified and indicated on the drawings.
    - B. Air Conditioning, Heating, and Ventilating: Provide final connections complete with necessary valves, drains, unions, flanges and duct connections for equipment furnished and installed under other sections of the specifications, except as otherwise designated. Included under the HVAC sections of the specifications are the final connections to the following:
        - 1. Condensate drain piping from air conditioning equipment.
        - 2. Supply, return, relief, outside air and exhaust duct connections for all equipment including exhaust fans.
        - 3. Piping connections for all equipment.
- **Machinery Drives:** After tests have been performed on the air conditioning and air handling systems, make without cost not more than two changes in the size of the nonadjustable sheaves to obtain the required air quantities.
- **Machinery Accessories:**
    - A. Application: Do not install any equipment in an application not recommended by the manufacturer.
    - B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.
- **Objectionable Noise and Vibration:** Construct and brace the metal partitions, ducts and sheet metal housings to prevent vibration or rattling when systems are in operation. Install connections to equipment so noise and vibration will not reach the conditioned area through ducts, piping, conduit, sheet metal work, or the building structure. Provide power–driven equipment suspended from the structure with spring type isolation.
- **Welding:**
    - A. Procedures:
        - 1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.
        - 2. Architect's inspector or authorized representative will review performance qualification records of individual welders.
    - B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.
        - 1. Manual shielded metal–arc.
    - C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.
    - D. Welding Filler Material:
        - 1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.
        - 2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.
    - E. Preheat and Interpass Temperature:
    - F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.
- **Operation**
    - D. Place system in operation and regulate and adjust to Owner's satisfaction. System shall operate quietly and without vibration or noise.
    - E. Contractor shall make necessary field adjustments for even temperatures throughout the project.
- **Certification**
    - A. Upon completion, the contractor shall inspect work of this section and deliver to Owner a written certification that installed materials and workmanship conform to specifications.

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MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

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DRAWING #: MP7.4

SECTION 22 PLUMBING – GENERAL PROVISIONS

Not all specification items are used in every project.

PART 1 – GENERAL

– **Scope:**

Furnish all labor, materials, equipment, appliances and necessary incidentals for the complete installation of all plumbing shown on the drawings and as specified.

A. Work specified in this section

1. Sanitary soil, waste and vent systems.
2. Domestic hot and cold water systems.
3. Domestic water heaters.
4. Furnish and set all sleeves for pipes passing through walls and floors.
5. Pipe covering, insulation and wrapping.
6. Excavation and backfill.
7. Rougn–in and final connections to air conditioning equipment of condensate drains.
8. All plumbing fixtures, water heaters, valves, and other miscellaneous items or equipment required for a complete installation.
9. Provide collars at fire rated penetrations.

B. Provisions of this section apply to all work specified in all sections under Division 22. All items indicated on site, Architectural, Mechanical, or Plumbing drawings are to be provided complete from point of connection to finished fixture in conformance with all governing authority requirements. Nothing in these drawings or specifications shall be construed to permit work in violation of governing codes.

C. In addition, work in Division 22 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.

1. Examination of Premises: Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.
2. The Plumbing Contractor shall be licensed and hold a current contracting license as a Plumbing Contractor that has been valid for a minimum of two years in the State where the project is located.
3. The Plumbing Contractor shall have a minimum of five years experience installing commercial plumbing systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers if required by the General Contractor.
4. The Plumbing Contractor shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the plumbing bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.

D. Contractor is responsible for results caused by deviating from the plans.

– **Regulations, Permits, Fees, Charges, Inspections:**

A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IMC, IPC, IECC, NEC, NFPA codes and all City codes.

B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards:

1. 2018 International Plumbing Code
2. 2018 International Building Code
3. 2018 International Mechanical Code
4. 2018 International Energy Conservation Code.

C. Current codes adopted by the respective jurisdiction will supercede the listed codes.

D. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.

E. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.

1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.

F. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.

– **Drawings and Specifications:**

A. Refer to Division 1 for information on submittals and shop drawings.

B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.

– **Record Drawings:** Provide record drawings for all work under sections in Division 22. See Division 1 for detailed requirements covering preparation of record drawings.

– **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

– **Approvals of Materials and Equipment:** Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 22 as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.

– **Cooperative Work:**

A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.

B. Cooperative Work Includes:

1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 but provided under other divisions of these specifications.

2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 22.

3. Electrical work as specified herein. Refer to Division 26 for requirements.

– **Construction Facilities:**

A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.

B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.

– **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 22 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.

– **Electrical Work:**

A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.

B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.

C. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.

D. Submit a complete list of all motors prior to final closeout of job indicating the locations, horsepower, voltage, phase specified in Table 132 of ANSI B.1.

E. All field wiring and equipment must conform to the applicable sections of the Electrical specifications, Division 26.

– **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:

A. ASME Boiler and Pressure Vessel Code

B. Section IX ANSI Code for Power Piping: B31.1

C. AWS D10.12.D10.12M Welded joints for gas piping.

– **Product Handling**

A. Protection: Take all precautions necessary to protect the materials of this section before, during, and after installation.

B. Replacements: In the event of damage, immediately repair all damaged and defective work to the approval of the Engineer, at not additional cost to the Owner.

– **Submittals:**

A. Manufacturer's Literature: Within 35 days after award of contract and before any of the materials of this section are delivered to the job site submit seven complete brochures of all materials and equipment, per Division 1 of the specifications.

B. Other Submittals:

1. Shop Drawings.
2. Sterilization Test Report
3. Test Data.

C. Sets in bound booklet form of written operating and maintenance instructions and brochures for equipment specified in this section. Fully instruct Owners Operating Personnel.

D. Record Drawings: Keep an accurate dimensioned record of As–Built locations and elevations, as referred to approved base datum, of buried concealed.

E. Operation and Maintenance Instructions: Deliver to Architect tow complete lines, manhole, cleanouts, valves, plugged tees, capped ends, and of work which is installed different from shown in the plans.

– **Miscellaneous:**

A. Examination of the site: Exercise care in examining the site and coordinate all work indicated on the drawings with existing conditions. Report to Architect in writing conditions that will prevent proper provisions of this work. Verify depth and location of all service lines with servicing companies having jurisdiction before excavating, by submission of the bid. The contractor warrants that he has familiarized himself with the existing conditions and will perform all work as required for hookup and as required by the contract documents at no additional cost.

B. Permits and fees: Arrange and pay for all permits, inspections and fee required by all governing agencies.

C. Service connections: Make all necessary arrangements with applicable utility company for connection to existing service lines. Pay all fees associated with work including meters, hookup charge and utility assessments fees.

D. Drawings: Coordinate all space requirements with other trades, drawings indicate desired location and arrangement of piping, equipment, and other items and are to be followed as closely as possible.

PART 2 – PRODUCTS

– **General**

A. Pipe sleeves and wrapping: Provide polished chromium plated and brass set screw flanges where plumbing piping pass through walls, floors, ceilings, and partitions in finished portions of building including flanges on pipes at fixtures. All sleeves in concrete and exterior walls shall be 20 GA. galvanized iron one inch O.D. larger than the pipe, caulked if below grade in a moisture proof manner. All pipes penetrating through fire walls and floors shall be properly safed with Dow Corning 3=6548 silicone RTV foam or equal. Install per manufacturer's directions.

B. Pipe Identification:

1. Piping identification per ANSI and OSHA Standards: Each individual pipeline shall be marked for quick and easy identification as to contents and character of material carried in the pipes by set on SNA or STR Marker.
2. Markers shall be installed and spaced at not more than 20 foot intervals and so located that markers shall be visible where piping is exposed.
3. Color scheme shall be as follows:

	Background or Color Band	Identification Marker
Domestic Hot Water –	Yellow	Black on Yellow
Domestic Hot Water Return –	Yellow	Black on Yellow
Domestic Cold Water –	Green	White on Green
Sanitary Sewer –	Green	White on Green
Sanitary Vent –	Green	White on Green
Natural Gas –	Yellow	Black on Yellow
Storm Water –	Green	White on Green
Freon –	Black	White on Black

C. One marker shall installed at each side of valves, special fittings and at branch take–offs. In furred spaces install one band 2 feet above floor and 19 inches below ceiling line.

D. Materials: Materials when not otherwise definitely specified shall conform to the applicable ASTM, ASME, AGA and ASA standards.

E. All gas fired equipment shall include a label indicating that the appliance has been adjusted, modified or re–calibrated for the altitude where in the project is to be located (Green Sticker). The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.

– **Pipe and Fitting Schedule:**

Pipe and Fittings:

A. No pipe of foreign manufacturer will be acceptable on projects required to meet the Buy American Act.

B. All piping, fittings, flanges, etc. shall be free from defects and shall comply with the appropriate ASTM specifications.

C. PVC pipe and fittings: ASTM D1785 Class 150 with ASTM D 2564 solvent cement joints unless otherwise specified. Schedule 40. PVC plastic pipe fittings: ASTM F 628, schedule 40.

D. Acrylonitrile Butadiene Styrene (ABS) plastic pipe: ASTM D 2661, schedule 40, ASTM F 628 schedule 40. ABS plastic pipe fittings: ASTM F 409, accessible and replaceable, solvent cement and threaded types, drain pattern.

E. Condensate drains shall be Type L hard copper tubing with wrought–copper fittings (can't be used for condensing gas–fired applications) or PVC pipe and fittings where allowed. A P–trap shall be provided at drains.

F. All soil, waste, vent, roof drain and roof drain overflow piping below ground shall be ABS or PVC plastic pipe, rated for domestic waste and vent, with ABS or PVC plastic socket type drain, waste vent pattern fittings, solvent cemented joints. Install ABS drainage pipe and fittings according to ASTM D661. Install PVC drainage pipe and fittings according to ASTM F891.

– **Roof Flashing:**

A. Sanitary Vent Flashings: SEMCO 1100–3 or 1100–5, with one–piece lead flashing and counterflashing sleeve.

– **Pipe Sleeves:**

A. At concrete walls for floors, adjust–to–crete, paramount, hole–out Sperzel Cretesleeve floor sleeves shall extend to top of concrete curbs for piping rising through floors. Wall sleeves shall be flush with finished surface, sleeves shall be sized to allow $\frac{1}{2}$ inch clearance around pipe insulation. Insulation and covering shall be continuous through wall and floor sleeves.

– **Cleanouts:**

A. Full size cleanouts shall be installed at the base of each soil waste stack. All other cleanouts shall be installed where shown on the drawings and where required by State, Local or National Plumbing Codes.

B. All cleanouts shall be installed in locations easily accessible for rodding. Cleanouts in wall shall be JR Smith 4402, in floors JR Smith 4023/ Cleanouts shall be JR Smith, Wade or Josam.

– **Pipe Insulation:**

A. All domestic hot water, hot water recirculation and cold water piping shall be covered with Owens Corning ASJ–25 fiberglass pipe insulation with vapor seal jacket. Insulation thickness shall be $\frac{1}{2}$ inch for cold water and 1 inch for hot water.

B. Insulate all piping under Lavatories accessible to physically handicapped with hot water supply and "P" trap prefabricated insulation, Handi Lav Guard.

– **Pipe Hangers:**

A. Hangers shall be supplied with factory installed isolation and DI–Chromate finish.

B. Pipe 2 inches and smaller: Grinnel F69. Pipe 2–1/2 inch and larger: Grinnel F65. Concrete Inserts: Grinnel 281 and 282. Riser clamps for copper piping: Grinnel 261P, plastic coated. Riser clamps for other piping: Grinnel 261,

C. Hanger rods shall conform to the following: Pipe size 2 inch and smaller: $\frac{3}{8}$ inch rods. Pipe size 2–1/2 inch and 3 inch: $\frac{1}{2}$ inch rods. Pipe size 3 inch and larger: $\frac{5}{8}$ inch rods.

– **Plumbing Fixtures:**

A. Fixtures shall be the water saving typer with maximum usage of 1.6 gallons per flush for water closets, 2.5 gallons per minute for showers, 3.0 gallons per minute for service sinks, 1.0 gallon per flush for urinals, 0.5 gallons per minute for public lavatories, 2.2 gallons per minute for private lavatories and 2.2 gallons per minute for sinks.

B. All fixtures shall be caulked to the floor or wall with water resistant white butyl rubber caulking compound. Trim for shall match in design. Supply faucets shall have renewable seats and barrels.

PLUMBING EQUIPMENT	MANUFACTURER
Floor Drains & Floor Sinks:	Zurn, JR Smith, Wade, Josam, Ancon, Mifab, Watts, or Equal
Cleanouts:	Zurn, JR Smith, Wade, Josam, Mikro, Mifab, Watts, or Equal
Insulation:	CertainTeed, Manville, Pittsburgh, Armstrong, LSP Products, or Owens–Corning
P–Traps:	American Standard, Kohler, McGuire, Brasscraft, Dearborn, EBC

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FIBER HUT PLANS

PLUMBING SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #: MP7.5

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PART 3 – EXECUTION

– **Surface Conditions:**

A. Inspection: All plumbing shall be installed in accordance with the requirements of all governing authorities, The original design, and referenced standards.

B. Discrepancies:
1. In the event of discrepancy, immediately notify the Architect.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved. Interferences between installed work of various trades due to lack of coordination shall be resolved by the Architect whose decision is final. Relocate or offset any work as required to accommodate work of other trades at no extra cost to the Owner when so directed by the Architect.

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Locations and Space Requirements:**

A. Contractor shall fully inform himself regarding peculiarities and limitation of spaces available for installation of work under this division. Drawings indicate desired location and arrangement of piping, equipment and other items and are to be followed as closely as possible. Work specified and not clearly defined by drawings shall be installed and arranged in a satisfactory manner. In any case and at any time a change in location required by obstacles or the installation of other trades not shown on the plumbing plans shall be made by contractor without additional charge provided the change is ordered before work is installed and no extra materials are required.

B. Verify all spaces, dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

C. Obtain all necessary rough in data and dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

D. Maintain ample headroom clearances and accessibility. Maintain ceiling heights.

E. Constantly check work of other trades to prevent interference with this installation.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test,uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Excavation and Backfill:**

A. Perform all necessary excavation, shoring and backfilling required for the proper laying of all pipes and conduits inside the building and premises, and outside as may be necessary. Conform to Division 2 requirements. Remove all excess excavated materials from the site or dispose of on site as directed by General Contractor.

B. Excavate all trenches open cut, keep trench banks as nearly vertical as practicable, and sheet and brace trenches where required for stability and safety. Excavate trenches true to line and make bottoms not less than 18" wide but no wider than necessary to provide ample work room. Grade trench bottoms accurately to provide uniform bearing and support for each section of pipe on undisturbed soil along its entire length. Dig "bell" holes after the trench bottom has been graded. Machine grade only to the top line of the pipes, doing the balance by hand. Do not cut any trench near or under footings without first consulting the Architect. Comply with OSHA requirements.

C. Provide backfilling and compaction in accordance with requirement of Division 2 and under the direction of the Architect and the Owner's testing firm to the required density. Make the first 2 feet of fill in 6" layers, each thoroughly compacted as directed, and free from rocks, large clods of earth, leaves, branches, and debris. Compact the rest of the backfill to prevent settlement as directed, using in the backfill no rocks larger than 4" in diameter, and using no rocks at all in the top 12".

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Plumbing: Provide all services designated and required, including waste and water. Valve and cap all stub–outs for water and gas. Cap all waste and vent outlets.

2. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

– **Owner–Furnished and Other Equipment:**

A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–in."

– **Equipment Final Connections:**

A. Provide all piping final connections for all equipment under Division 22 as required herein specified and indicated on the drawings.

B. Plumbing: Provide final plumbing connections complete with shutoff valves, risers, traps, vacuum breakers and indirect wastes for all equipment furnished and installed under other sections of these specifications, except as otherwise designated. Included under the Plumbing section of the specifications are the final connections to the following:

1. Miscellaneous equipment specified to be furnished and installed under other divisions of the specifications.

2. Cold water make–up connections to air conditioning equipment.

3. Kitchen equipment, furnished under other sections of the specifications.

– **Sterilization:**

A. Sterilize each unit that will have water in it, the water supply piping and distribution system with liquid chloride or hydrochloride before acceptance of operation in accordance with AWWA C601, "Standard for Disinfection Water Mains" work shall be done by contractor and unless otherwise required by Public Authorities having Jurisdiction, shall conform to the following:

B Materials
1. Liquid Chlorine: U.S. Army Specification 4–1. 2. Hydrochloride: Liquid shall conform to FED. Spec. O–C–11RA (INT. 4).

C. Method: Amount of chlorine shall provide a dosage of 50 PPM minimum. Introduce chlorinating materials into lines and distribution system in approved manner after a contact period of 24 hours during which period chlorine residual shall be maintained at 5 PPM minimum, flush out systems with clean water until residual content is not greater than 0.2 PPM. Flush entire system open and close valves in lines being sterilized several times during contact period.

D. Sterilization report shall be turned into the Engineer for review prior to requesting a substantial completion inspection.

– **Machinery Accessories:**

A. Application: Do not install any equipment in an application not recommended by the manufacturer.

B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

– **Pipe and Equipment Supports:**

A. Where supports, foundations, stands, suspended platforms for machinery, tanks, or other equipment are indicated or specified, perform the following:

1. Locate support members to avoid equipment strains and interference with piping connections, tube pulling or other maintenance operations.

2. Where saddles are required, use cast iron or welded steel saddles with curvature to fit the tank shell.

3. Mount power–driven equipment on common base with driver.

B. Concrete Inserts: Furnish and install all concrete inserts required for all materials and equipment specified and/or shown on the drawings for Division 22.

C. Concrete Foundations: Work under this section includes coordination of construction of all concrete foundations indicated or required for equipment specified herein or in other sections under Division 22. Materials and workmanship shall be described under Division 3.

D. Grout under all equipment after leveling, filling completely the space between machinery bed plate and foundation surface as specified in Division 3. Finish exposed surface of grout for a neat appearance.

E. Floor Stands: Where equipment is mounted standard or on legs, construct of structural steel or steel pipe and fittings, cross–brace and fasten with flanges or plates bolted to floor.

F. Ceiling or Wall Supports: Use suspended platform, strap hangers, bracket or shelf, whichever is most suitable for equipment and location. Construct of structural steel members, steel plates, rods or pipe as required. Cross–brace and fasten to building structure or inserts in an approved manner.

G. Steel Work: Neatly fabricate and erect steel work with burrs and welding spatter ground off. Paint after fabrication with a rust–inhibitive primer.

– **Hangers and Supports:**

A. Hold horizontal pipe runs firmly in place using approved steel and iron hangers, supports, and/or pipe rest unless otherwise indicated. Suspend hanger rods from concrete inserts or from approved brackets, clamps or clips. Hang pipes individually or in groups if supporting structure is adequate to support weight of piping and fluid. Except for buried piping, hang or support pipe runs so that they may expand or contract freely without strain to pipe or equipment.

1. Horizontal steel piping: Provide hangers or supports every 10 ft. except every 8 ft. for piping 1–1/4 inch and smaller.

2. Horizontal copper tubing: For 2 inch diameter and over, provide hangers every 10 feet, for 1–1/2 inch diameter and smaller every 6 feet.

3. Horizontal cast–iron no–hub piping: Provide hangers or supports at each side of no–hub fittings. Provide anti–separation bracing at each 90 degree change in direction.

4. Horizontal cast–iron hub and spigot piping: Provide hangers or supports at each hub.

5. Vertical piping: Support at floor with iron pipe clamps.

– **Test:**

A. Perform test to Architect's satisfaction. Make test in presence of Owner's Rep and at the time suitable to him if requested. Furnish necessary labor and equipment and bear cost for testing. Cost of replacing and/or repairing damage resulting therefor shall be borne by this contractor, should the contractor refuse or neglect to make test necessary to satisfy the Architect that requirement of specifications and drawings are met, such tests may be made by an independent testing company and the contractor charged for all expenses.

B. Hydrostatic test: Make by completely filling piping system with water and eliminating accumulations of air so that leakage, no matter how small, will be apparent on testing gauge immediately. Maintain pressure until pipe under test has been examined, but in no case less than 24 hours. Test system at the following pressure:

SYSTEM	TEST PRESSURE
Domestic Cold Water	150 PSIG
Domestic Hot Water	150 PSIG

C. Sanitary soil, waste, bent systems test: Before installation of fixtures, cap end of system and fill lines with water to 10 feet above the section being tested. (including bents) and allow to stand for at least fifteen (15) minutes before inspection starts. Make test in sections if necessary or convenient. However, include interconnections between new sections and previously tested section in the new test.

D. Roof drainage system: Test as specified for sanitary system.

E. Gas systems: Test with compressed air at 10 PSI for six hours or longer as directed to provide a tight seal without leaks. Use pressure recorder to record pressure of all lines for duration of test.

F. Repair all leaks and retest as required.

– **Cleanouts:**

A. Provide cleanouts where indicated and required. Unless otherwise indicated, cleanouts shall be accessible with extensions to grade to outside of buildings, or to floors above as indicated or required. Do not locate cleanouts in public lobbies and public corridors unless approved by Architect.

B. Membranes: Where waterproofing membrane occurs under floor, bring membrane to cleanout without puncturing and permanently anchor to integral anchoring flange with heavy cast–iron clamping collar and rustproof bolts.

C. Covers: Set cleanout covers with all finished wall, floor or grade. In all cases securely anchor by means of integral lugs and bolts. Where surfacing material such as resilient coverings is specified, ascertain thickness being used and set cleanout top so finished floor is smooth.

D. Use Acorn 3500 thread compound.

– **Pipe Installation:**

A. Make pipe runs straight and true. Springing or forcing piping into place is not permitted. Install in manner to prevent any undue strain on equipment. Make joints smooth and unobstructed inside and out, and ream pipe ends thoroughly to remove burrs. Conceal piping in finished portions of the building except as otherwise directed or indicated. Cap or plug ends and openings in pipe and fittings immediately to exclude dirt until equipment is installed or final connections are made.

B. Install piping to clear beams unless sleeving is indicated. Constantly check work of other trades to prevent interference with this installation. Obtain approval from Architect if coring or cutting of concrete work is necessary due to failure to install required sleeves prior to the time of concrete pour. Cost of coring and cutting work shall be borne by the subcontractor.

C. Exposed plated or enameled pipe: Make connections to equipment with special care. Show not tool marks or threads.

D. Dielectric Unions: Make connections between two dissimilar metal pipes with dielectric unions.

E. Unions: Provide a union on one side of each shutoff valve. At both sides of automatic valves. At equipment connections and elsewhere indicated or required, unless flanges are indicated.

F. Floor, wall ceiling plates: Provide where pipes pierce finished surfaces.

G. Noise: Install soil, waste, and water piping in a manner that prevents any unusual noise from flow of water under normal conditions.

H. Shutoff Valves: Provide where indicated and required for adequate control of system and for isolation of fixture groups and equipment.

I. Buried Pipe: Install with minimum 36 inches coverage unless otherwise indicated. Lay piping accurately to grade where invert elevations are indicated. When required provide thrust blocks per manufacturer's recommendations.

J. Equipment and Materials: Install per manufacturer's recommendations.

K. Accessibility: Install work readily accessible for normal operation, reading of instruments, adjustments, service, inspections and repair. Provide access panels where indicated and required.

L. Pipe Joints: Make screwed joints with a minimum amount of compound applied to the male thread only. All joints shall be made per code requirements and manufacturer's recommendations.

M. Provide pipe isolation at all hangers for non–insulated materials.

N. Piping Rough–in for Fixtures: Support or secure to building construction of firmly anchored waste piping so that pipes cannot be displaced. Do not secure to walls. Use of makeshift devices, such as rope, wire, tape, etc. is prohibited.

O. Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The minimum slope for horizontal pipe 4" or larger in diameter may have a slot of not less than 1% ($\frac{1}{8}$ inch per foot). The minimum slope of horizontal pipe less that 4'; may have a slope of not less than 2% ($\frac{1}{4}$ inch per foot).

– **Cleanup:**

A. In addition to cleanup specified under Division 1, thoroughly clean all parts of the equipment. Where exposed parts are to be painted, thoroughly clean off any splattered construction materials and remove all oil and grease spots. Wipe the surface carefully and scrape out all cracks and corners.

B. Thoroughly flush and clean out all water circulating systems. Remove, clean and replace all strainer elements.

C. During the progress of the work, keep the premises clean and free of debris.

– **Painting:**

A. Except as otherwise specified or indicated in the architectural drawings and/or specifications, paint all exposed unfinished metal with one coat of rust–inhibiting primer.

B. Finished painting is specified under Division 9.

– **Connections to Services:** Provide all connections to sanitary sewer lines, storm sewer, gas lines, water lines, electrical services furnished under other contracts, except as otherwise specifically designated. Provide all necessary tees, taps and connections required to properly connect to all mains. Verify all required City requirements before making any piping connections to sanitary sewer, storm sewer, water or gas piping and conform to them during installation.

– **Welding:**

A. Procedures:

1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

1. Manual shielded metal–arc.

2. Gas tungsten–arc.

3. Other welding processes may be used providing they are qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

D. Welding Filler Material:

1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.

E. Preheat and Interpass Temperature:

F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

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SFCN FIBER HUTS

FIBER HUT PLANS

PLUMBING SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #:
MP7.6

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ELECTRICAL GENERAL NOTES:

1. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD, AND TO THE SATISFACTION OF THE ENGINEER.
2. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
3. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
4. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOF, ETC.
5. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
6. NO WIRING SHALL RUN IN DUCT WORK.
7. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED IN THE CONDUCTORS SMALLER THAN #10 AWG.
8. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
9. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND OTHER DRAWINGS PRIOR TO BID.
10. ALL JUNCTION BOXES SHALL HAVE MINIMUM DEPTH OF 2–1/8" UNLESS OTHERWISE SPECIFIED. SECURE ALL JUNCTION BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER PLASTER RINGS.
11. CONNECT ALL EM FIXTURES, NIGHT LIGHTS, EGRESS LIGHTS, AND EXIT SIGNS TO UNSWITCHED CONDUCTOR.
12. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
13. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC,) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH–IN.
14. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH–IN.
15. ALL FIXTURES, DEVICES, CONDUIT, AND FITTINGS TO BE MADE OF NON–CORROSIVE MATERIAL FOR BUILDING INSIDE.
16. ALL PENETRATIONS THROUGH BUILDING STRUCTURE SHALL BE SEALED.

ELECTRICAL SYMBOLS

SYMBOL	EXPLANATION
———	BRANCH CIRCUIT ON/IN CEILING OR WALL
— — — —	BRANCH CIRCUIT IN GROUND
A–1,3	BRANCH CIRCUIT HOMERUNS TO PANEL
CH 1	MECHANICAL EQUIPMENT SYMBOL
◇1	KEYED NOTE REFERENCE
42X	FEEDER TAG (SEE FEEDER SCHEDULE)
▬	LIGHTING AND POWER PANELBOARD
⊚	SPECIAL RECEPTACLE
⊖	DUPLEX RECEPTACLE OUTLET
	⊖ WP ——MODIFIER A–3 ——PANEL SPACE ASSIGNMENT REF ——EQUIPMENT DESIGNATION
	WP WEATHERPROOF COVER & LISTED WEATHER RESISTANT DEVICE
SYMBOL	EXPLANATION
F1	FIXTURE TYPE SYMBOL
▭	LINIER FIXTURE (TYPICAL)
▨	EMERGENCY LIGHTING UNIT
▭	WALL PACK
	EMERGENCY LIGHTING UNIT
⊠◁	ALARM HORN/STROBE
C	CONDUIT
$	SINGLE POLE SWITCH (SUBSCRIPT AS INDICATED BELOW)
2	TWO POLE SWITCH
3	3–WAY SWITCH
M	MANUAL STARTER WITH THERMAL OVERLOAD

NOTE: ALL SYMBOLS MAY NOT BE USED.

DESIGN CONTACTS

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ELECTRICAL TEAM LEAD:	JOE HUTCHINGS
ELECTRICAL DESIGNER:	JOHNNY BENCH

SHEET INDEX

SHEET NUMBER	SHEET TITLE
E0.1	COVER SHEET
E1.0	POWER AND LIGHTING PLAN
E5.1	ELECTRICAL DETAILS
E5.2	ELECTRICAL DETAILS
E5.3	ELECTRICAL DETAILS
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E7.1	ELECTRICAL SPECIFICATIONS
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E7.3	ELECTRICAL SPECIFICATIONS
E7.4	ELECTRICAL SPECIFICATIONS

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COVER SHEET

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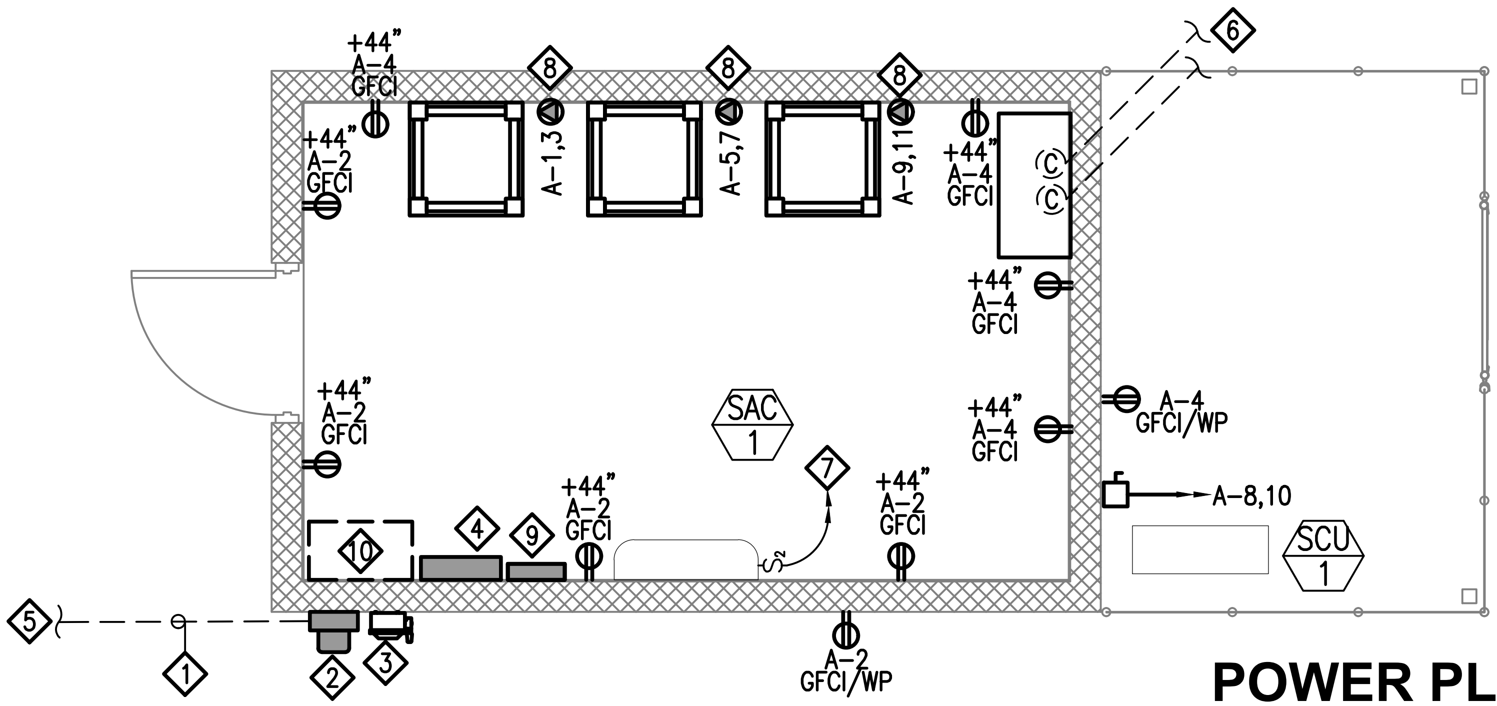
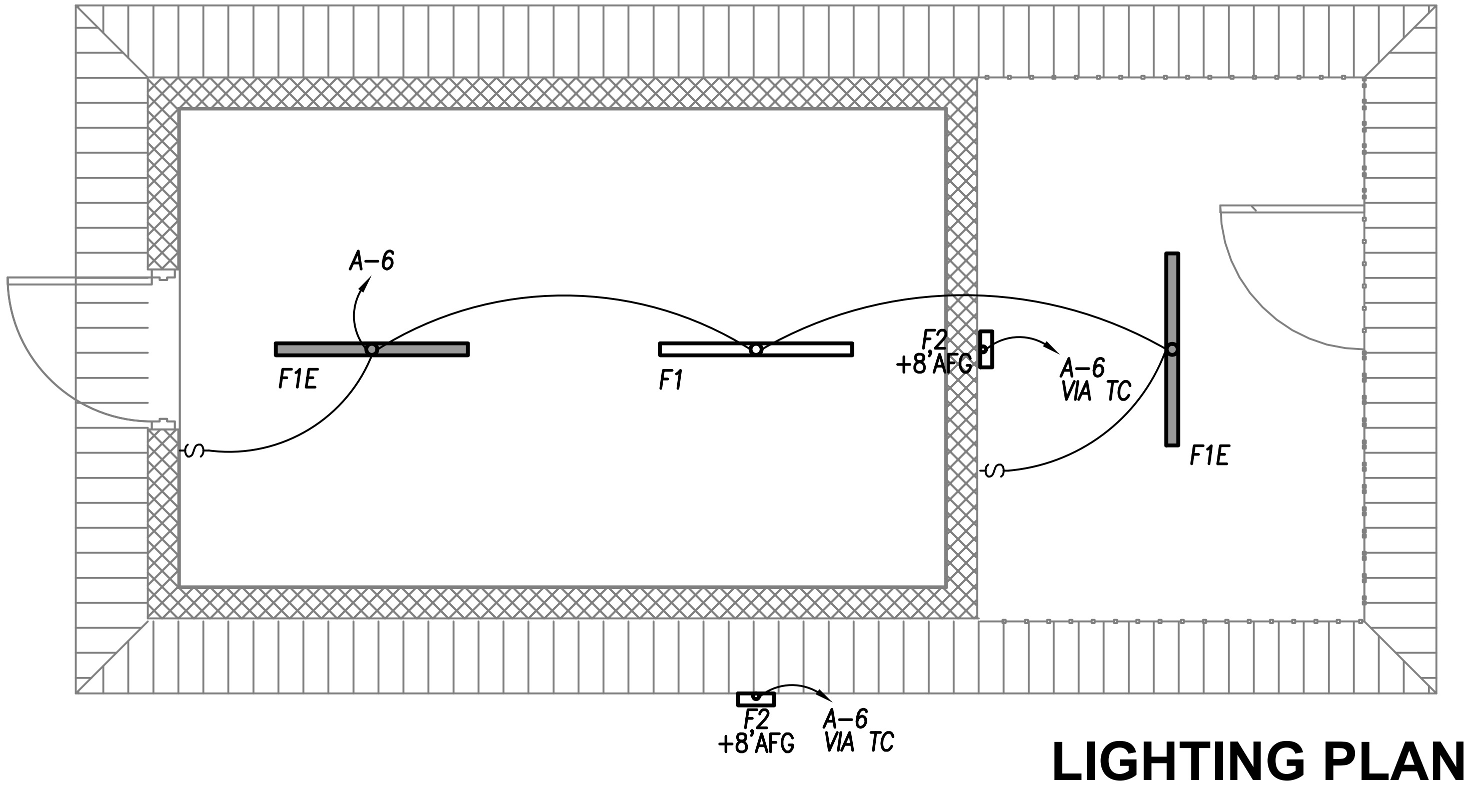


POWER PLAN

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



LIGHTING PLAN

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

ELECTRICAL KEYED NOTES:

1. INSTALL CONDUIT TO EXISTING POWER POLE. VERIFY EXACT LOCATION WITH SPANISH FORK CITY POWER DIVISION.
2. METER.
3. MAIN BUILDING DISCONNECT.
4. PANELBOARD 'A'. SEE PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
5. SEE ONE LINE DIAGRAM ON SHEET E5.1 FOR DETAILS.
6. PROVIDE (2) 3" CONDUIT STUBBED OUTSIDE BUILDING FOOTING AND CAPPED. FOR FUTURE COMMUNICATIONS. COORDINATE LOCATION WITH OWNER.
7. SAC-1 POWERED BY SCU-1. PROVIDE INTERCONNECTING CONDUIT AND WIRE.
8. RECEPTACLE FOR SERVER RACK. VERIFY AMPERAGE AND TYPE WITH CITY BEFORE INSTALL.
9. PROPOSED LOCATION OF TIME CLOCK. CONNECT TO EXTERIOR LIGHTING.
10. PROVIDE ADEQUATE SPACE ON WALL FOR FUTURE PROPANE GENERATOR TRANSFER SWITCH.

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POWER AND LIGHTING PLAN

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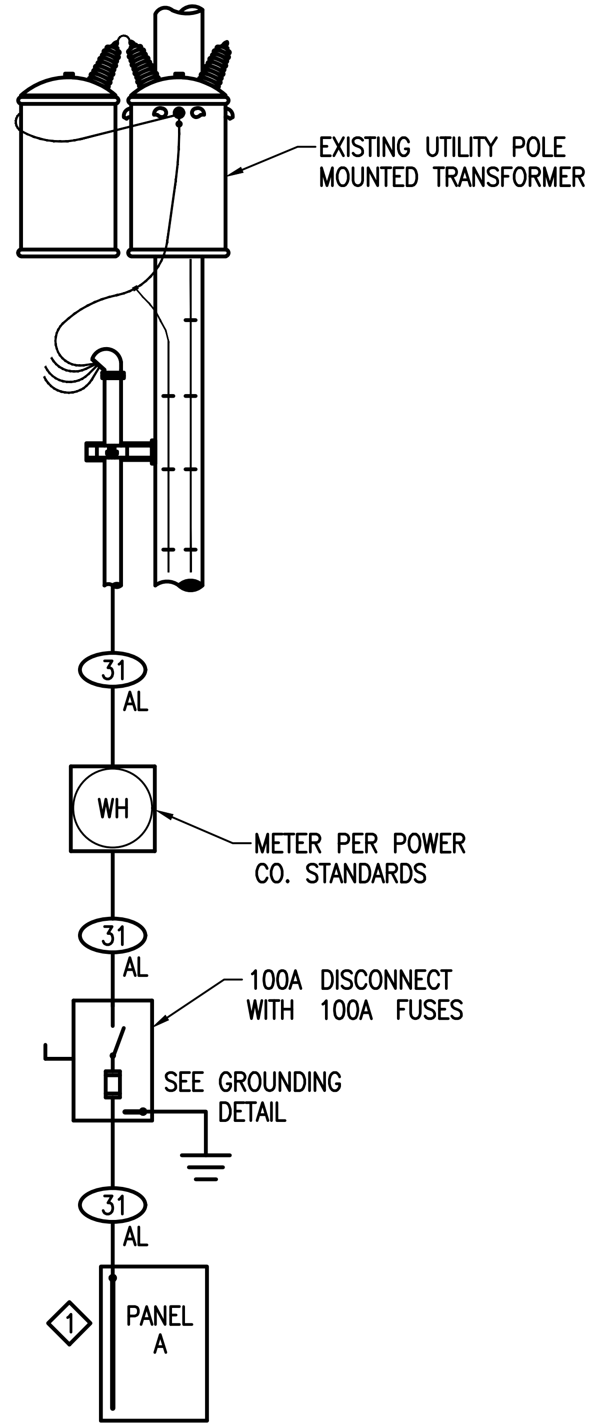
KEYED NOTES:

1. PROVIDE AVAILABLE FAULT CURRENT FIELD MARKINGS AT PANEL PER NEC 110.24.


EXISTING UTILITY POLE MOUNTED TRANSFORMER
31 AL
WH
METER PER POWER CO. STANDARDS
31 AL
100A DISCONNECT WITH 100A FUSES
SEE GROUNDING DETAIL
31 AL
1
PANEL A

1 POWER ONE-LINE DIAGRAM

SCALE: NTS

ALUMINUM FEEDER SCHEDULE

TYPE	CONDUIT SIZE		CONDUCTORS		70°C AMP RATING
	PVC	EMT	QUAN.	SIZE	
38 AL	3/4"	3/4"	3	#8	40
33 AL	1-1/4"	1-1/4"	3	#3	75
32 AL	1-1/4"	1-1/4"	3	#2	90
31 AL	1-1/2"	1-1/2"	3	#1	100
31X AL	1-1/2"	1-1/2"	3	1/0	120
34X AL	2-1/2"	2-1/2"	3	4/0	180

OVERCURRENT DEVICE	ALUMINUM
15	12
20	10
30	8
40	8
60	8
100	6
200	4
300	2
400	1
500	1/0
600	2/0
800	3/0

NOTE:

1. SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETAIL FOR GROUND CONDUCTORS RATING.
2. ALL INSULATION SHALL BE THHN (ABOVE GRADE) OR THWN (BELOW GRADE) UNLESS NOTED OTHERWISE.
3. PVC CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC & THWN ARE APPROVED FOR UNDERGROUND FEEDERS ONLY.

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NOTE:

1. WHEN PRESENT CONTRACTOR SHALL PROVIDE ALL GROUNDING MEANS INDICATED. CONTRACTOR SHALL REFER TO ELECTRICAL ONE-LINE DIAGRAM AND GROUNDING ELECTRODE CONDUCTOR SCHEDULE (THIS DETAIL) FOR GROUNDING ELECTRODE CONDUCTOR SIZE. CONTRACTOR SHALL REFER TO ELECTRICAL SPECIFICATIONS FOR SPECIFICS OF GROUNDING SYSTEM INSTALLATION AND MATERIALS.
2. GROUNDING ROD SHALL BE MIN. 9FT. AWAY FROM IRRIGATION CONTROLLER.

KEYED NOTE:

◇1 T&B 3900 BU GROUND CLAMP WITH 3/4" CONDUIT HUB AND CABLE CLAMP

◇2 FULL SIZE GROUNDING ELECTRODE CONDUCTOR IN PVC.

◇3 EXOTHERMICALLY WELDED (TYPICAL)

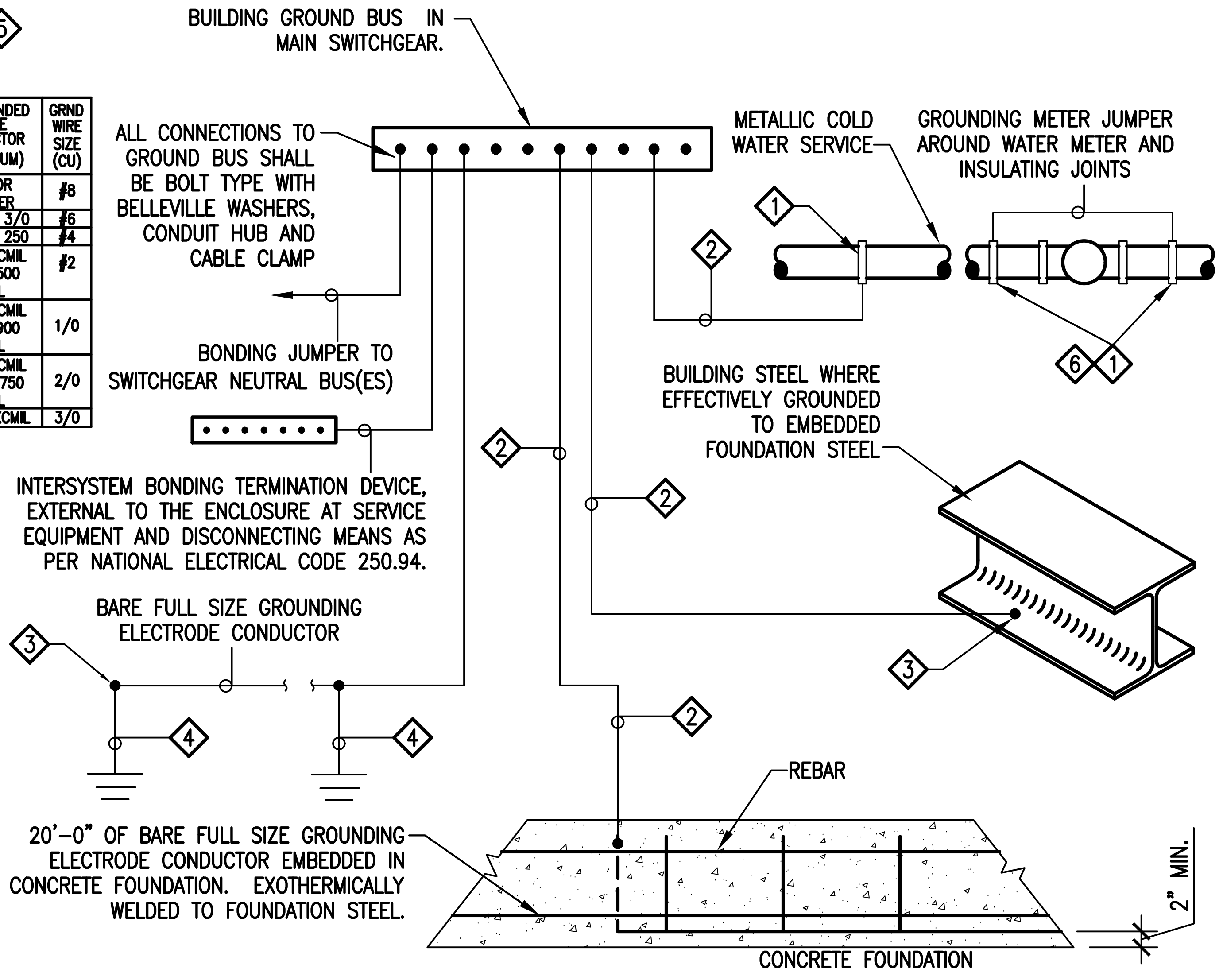
◇4 DRIVEN GROUND RODS ⅝"x8' COPPER/STEEL ON BUILDING EXTERIOR

◇5 TABLE TAKEN FROM NEC 250.66. UNGROUNDED PHASE CONDUCTOR REFERS TO THE SIZE OF THE LARGEST UNGROUNDED SERVICE-ENTRANCE CONDUCTOR OR EQUIVALENT AREA FOR PARALLEL CONDUCTORS. SEE NEC 250.66.

◇6 BOND METAL PIPING PER NEC 250.104.

GROUNDING ELECTRODE CONDUCTOR ◇5

UNGROUNDED PHASE CONDUCTOR (COPPER)	UNGROUNDED PHASE CONDUCTOR (ALUMINUM)	GRND WIRE SIZE (CU)
#2 OR SMALLER	1/0 OR SMALLER	#8
1 OR 1/0	2/0 OR 3/0	#6
2/0 OR 3/0	4/0 OR 250	#4
>3/0 THRU 350 KCMIL	>250 KCMIL THRU 500 KCMIL	#2
>350 KCMIL THRU 600 KCMIL	>500 KCMIL THRU 900 KCMIL	1/0
>600 KCMIL THRU 1100 KCMIL	>900 KCMIL THRU 1750 KCMIL	2/0
>1100 KCMIL	>1750 KCMIL	3/0

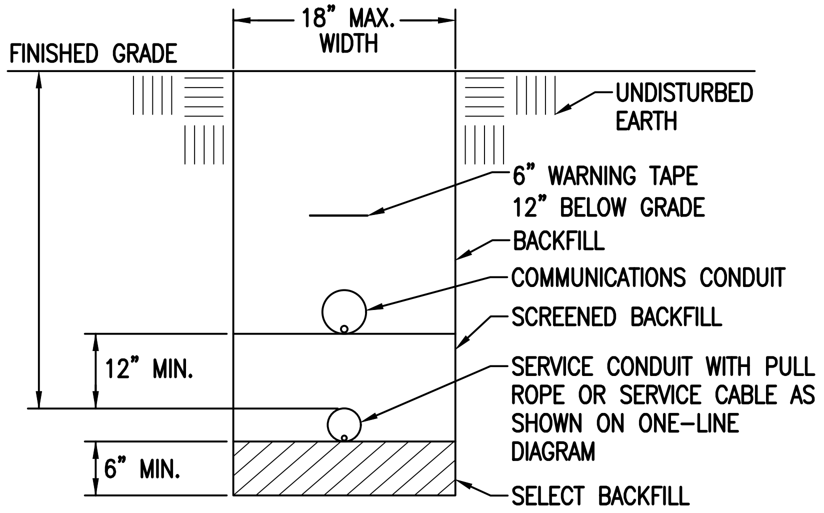

BUILDING GROUND BUS IN MAIN SWITCHGEAR.
ALL CONNECTIONS TO GROUND BUS SHALL BE BOLT TYPE WITH BELLEVILLE WASHERS, CONDUIT HUB AND CABLE CLAMP
METALLIC COLD WATER SERVICE
GROUNDING METER JUMPER AROUND WATER METER AND INSULATING JOINTS
1
2
6
1
BONDING JUMPER TO SWITCHGEAR NEUTRAL BUS(ES)
BUILDING STEEL WHERE EFFECTIVELY GROUNDED TO EMBEDDED FOUNDATION STEEL
2
2
INTERSYSTEM BONDING TERMINATION DEVICE, EXTERNAL TO THE ENCLOSURE AT SERVICE EQUIPMENT AND DISCONNECTING MEANS AS PER NATIONAL ELECTRICAL CODE 250.94.
BARE FULL SIZE GROUNDING ELECTRODE CONDUCTOR
3
3
4
4
2
REBAR
20'-0" OF BARE FULL SIZE GROUNDING ELECTRODE CONDUCTOR EMBEDDED IN CONCRETE FOUNDATION. EXOTHERMICALLY WELDED TO FOUNDATION STEEL.
2" MIN.
CONCRETE FOUNDATION

1 SERVICE GROUNDING DETAIL

SCALE: NTS

LOCATION DESCRIPTION	MIN. DEPTH
BELOW CONCRETE SLAB (NOT TRAFFIC)	18 INCHES
BELOW TRAFFIC SURFACES	24 INCHES
PARKING LOT (PAVED OR NON-PAVED)	24 INCHES
OTHER LOCATIONS	24 INCHES
UTILITY SECONDARY	24 INCHES*
UTILITY PRIMARY	48 INCHES*

(SEE NEC TABLE 300.5)
* VERIFY ALL DIMENSIONS WITH LOCAL POWER COMPANY STANDARDS AND SPECIFICATIONS.



2 TRENCHING DETAIL

SCALE: NTS

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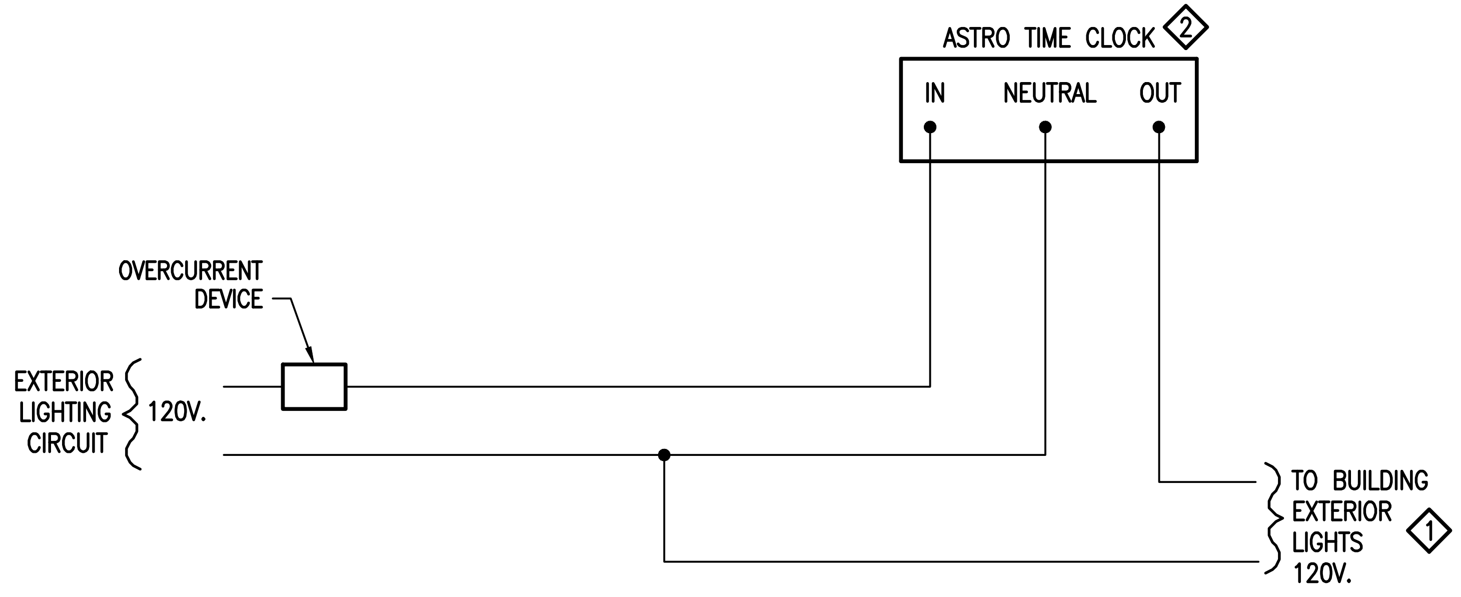

KEYED NOTE:

① CIRCUIT AMPERAGE SHALL NOT EXCEED PHOTOCELL AND TIME CLOCK RATING.

② TIME CLOCK SHALL BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS.

1 LIGHTING CONTROL WIRING DIAGRAM

SCALE: NTS

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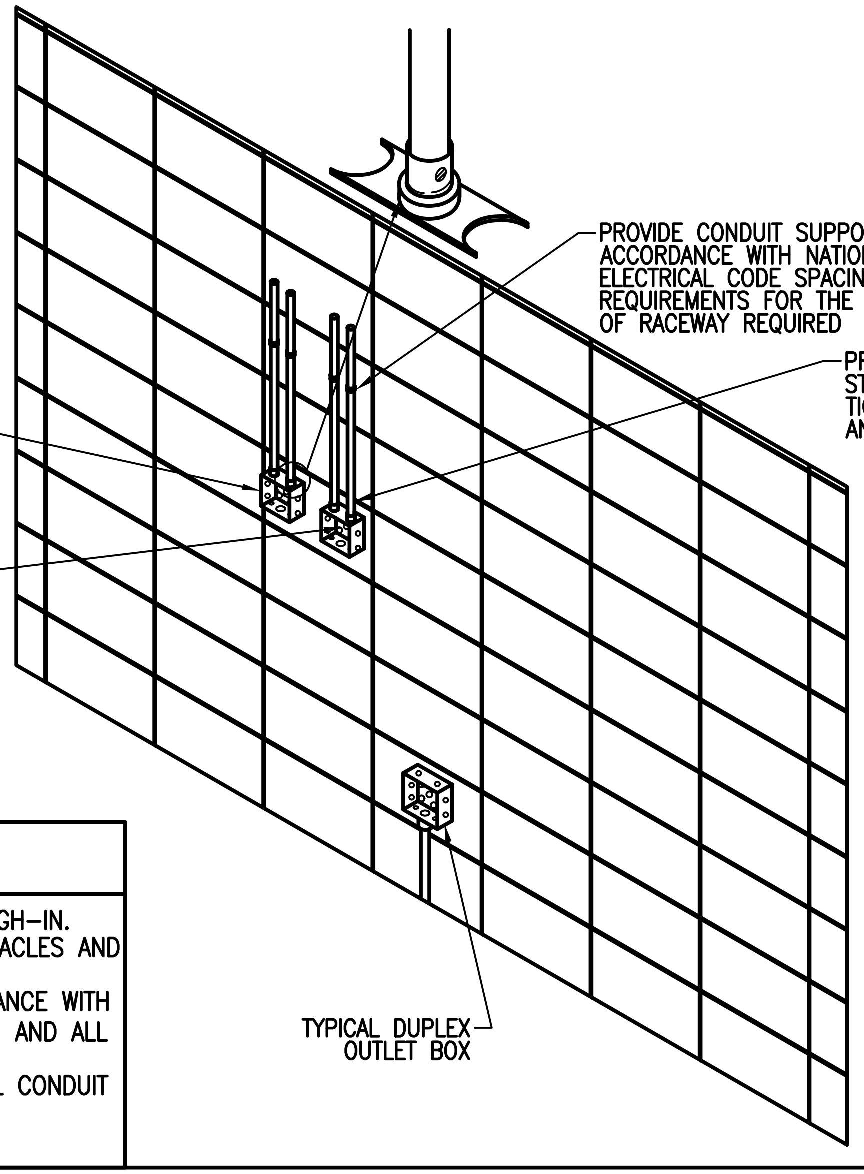
PROVIDE CONDUIT SUPPORTS IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE SPACING REQUIREMENTS FOR THE TYPE OF RACEWAY REQUIRED
PROVIDE CONDUIT OFFSET OR STRAP BACKS. CONDUIT TO SIT TIGHT AGAINST WALL OR TO BE ANCHORED FIRMLY TO STRUCTURE.
TYPICAL WALL OUTLETS
PROVIDE STEEL BOX SUPPORT ANCHORS IN ACCORDANCE TO NATIONAL ELECTRICAL CODE FOR CONCRETE OR BLOCK CONSTRUCTION.
TYPICAL DUPLEX OUTLET BOX

GENERAL NOTES:

1. TYPICAL FOR CONCRETE & BLOCK ROUGH-IN.
2. INDUSTRIAL COVER PLATES FOR RECEPTACLES AND SWITCHES NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL, MECHANICAL DRAWINGS' AND ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH NEC PROVIDE ALL CONDUIT AND BOX SUPPORT.

1 ROUGH-IN DETAIL FOR EXPOSED EMT CONDUIT

SCALE: NTS

1

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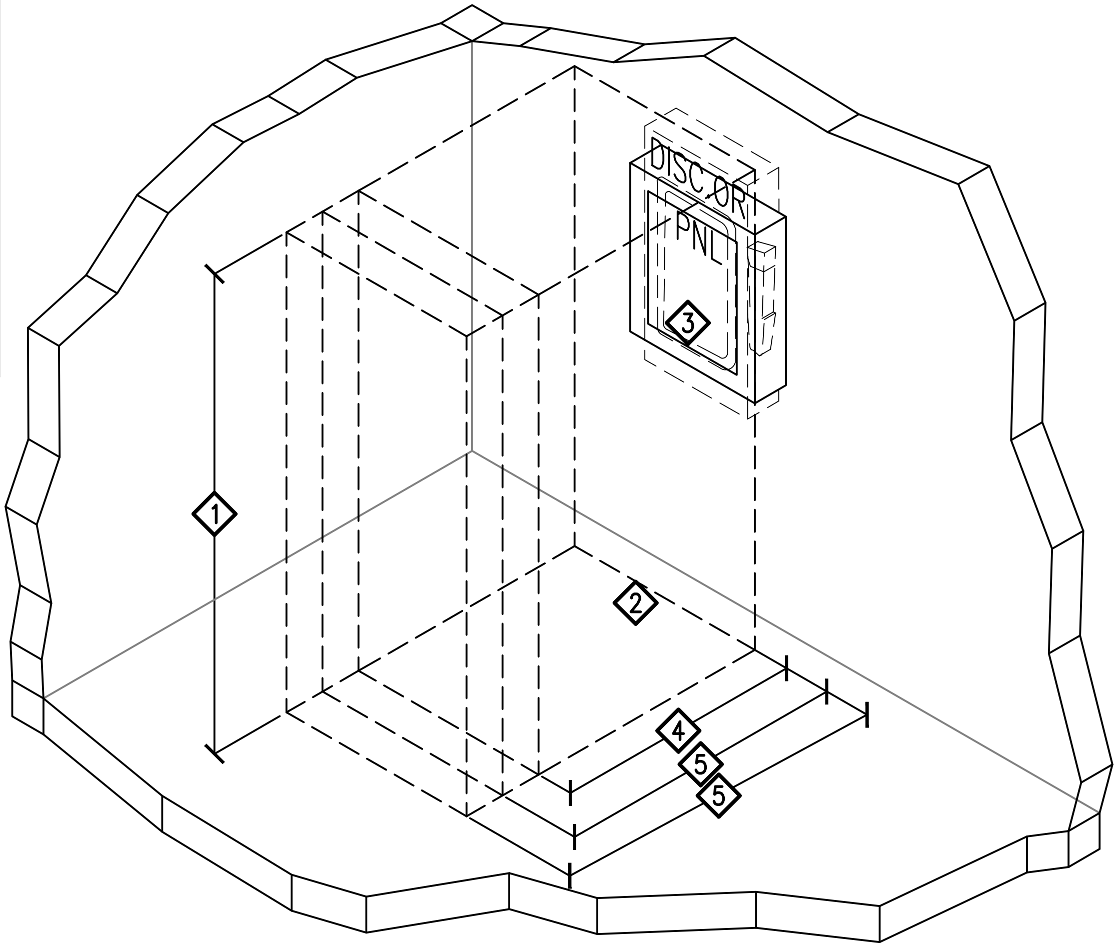
KEYED NOTES:

1. THE MINIMUM HEADROOM OF WORKING SPACE SHALL BE 6½ FT.
2. THE WIDTH OF THE WORKING SPACE SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 IN., WHICHEVER IS GREATER. THE PANEL DOOR SHALL OPEN AT LEAST 90 DEGREES.
3. ALL CIRCUIT BREAKERS OR DISCONNECT HANDLES SHALL BE NOT MORE THAN 6 FT 7 IN. ABOVE THE FLOOR WHEN IN THEIR HIGHEST POSITION.
4. 3 FT CLEARANCE IF 0–150V TO GROUND
5. 3.5FT CLEARANCE IF 151–600V TO GROUND. 4FT IF EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.

GENERAL NOTE:

1. ALL WORKING SPACE CLEARANCE FROM FACE OF PANEL.



1 ELECTRICAL EQUIPMENT WORK SPACE CLEARANCES

SCALE: NTS

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FAULT CURRENT CALCULATION TABLE

MAIN UTILITY COMPANY TRANSFORMER	TRANSFORMER KVA	AFC AT UTILITY	%Z
1Ø 120/240V -100A	25	10,000 A	1.50%

CONFIGURATION						FEEDER			SYSTEM								
FROM		TO		LENGTH	SOURCE FAULT CURRENT	FEEDER SIZE	FEEDERS PER PHASE	WIRE CONSTANT	LINE TO LINE VOLTS	XFMR SECONDARY VOLTS	PHASE	KVA	%Z	MOTOR LOAD	FAULT CURRENT AT EQUIPMENT	FULL OR SERIES RATED	MINIMUM SYMMETRICAL EQUIPMENT AIC RATING
TRANSFORMER	UTILITY	METER	MAIN	10'-0"	10,000 AIC	1 AL	1	4,678	240 V		1Ø		-		9,182 AIC	FULL	10,000 AIC
METER	MAIN	SWITCH	DISC	5'-0"	9,182 AIC	1 AL	1	4,678	240 V		1Ø		-		8,821 AIC	FULL	10,000 AIC
SWITCH	DISC	PANELBOARD	A	5'-0"	8,821 AIC	1 AL	1	4,678	240 V		1Ø		-		8,488 AIC	FULL	10,000 AIC

NOTE: DISTANCES INDICATED ARE FOR FAULT-CURRENT ANALYSIS ONLY. CONTRACTOR SHALL USE FIELD MEASUREMENTS ESTABLISH CONDUCTOR LENGTHS FOR ORDERING PURPOSES.

EQUIPMENT SCHEDULE

SYMBOL	**DESCRIPTION**	**SERVICE**		**DISCONNECT**		**STARTER**	**LOAD**			**MOCP/ BRKR**	**REMARKS**
		VOLTS	**PHASE**	**SIZE**	**FUSE**		**HP/TON**	**VA**	**AMPS**		
SCU 1	HEAT PUMP	240 V	1Ø	30A NEMA 3R	-	INTEGRAL		4,320	18.0A	40A	
SAC 2	FAN COIL	240 V	1Ø	2 POLE SWITCH	-	INTEGRAL		240	1.0A	-A	INDOOR UNIT POWERED BY OUTDOOR UNIT.

NOTES:

1. VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, FLA, ETC.) WITH MECHANICAL DRAWINGS/SUBMITTALS BEFORE FOR ACTUAL EQUIPMENT INSTALLED.
2. ALL FUSES SHALL BE DUAL ELEMENT TIME DELAY. FINAL BREAKER/FUSE & DISCONNECT SIZE SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATION FOR ACTUAL EQUIPMENT INSTALLED.
3. MAXIMUM VALUES INDICATED.
4. DISCONNECTING MEANS NOT REQUIRED FOR EQUIPMENT WITHIN SIGHT (AS DEFINED IN NEC) OF BRANCH PANEL SERVING EQUIPMENT. SEE NEC 422.31 (B).
5. DISCONNECTING MEANS NOT REQUIRED FOR APPLIANCES NOT OVER 300 VA. SEE NEC 422.31 (A).

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ELECTRICAL SCHEDULES

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PANEL SCHEDULE "A"

VOLTAGE: 240 / 120 VOLTS		**BUS RATING (AMPS):**	100	**REMARKS:**	
MOUNTING: SURFACE	**PHASE:** 1	**MAIN LUGS ONLY**			
ENCLOSURE: NEMA 1	**WIRE:** 3	**SHORT CIRCUIT RATING:**	SEE FAULT CURRENT TABLE		

CIRCUIT BREAKER				CIRCUIT NAME	FEEDER			CKT. LOAD		LOAD/PHASE (VA)		CKT. LOAD		FEEDER			CIRCUIT NAME	CIRCUIT BREAKER			
No.	AMPS	POLE	MOD.		C	WIRE	GRD	DEMAND FACTOR	WATTS	ØA	ØB	WATTS	DEMAND FACTOR	GRD	WIRE	C		MOD.	POLE	AMPS	No.
1	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	2,900		900	1.00	#12	#12	¾"	CO RECEPTACLES	-	1	20	2
3	-	-	-	-	-	#10	-	1.00	2,000		2,900	900	1.00	#12	#12	¾"	CO RECEPTACLES	-	1	20	4
5	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	2,250		250	1.00	#12	#12	¾"	LIGHTING	-	1	20	6
7	-	-	-	-	-	#10	-	1.00	2,000		4,160	2,160	1.00	#10	#10	¾"	SCU-1	-	2	30	8
9	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	4,160		2,160	1.00	-	#10	-	-	-	-	-	10
11	-	-	-	-	-	#10	-	1.00	2,000		2,000		1.00				SPACE	-			12
13			-	SPACE				1.00		0			1.00				SPACE	-			14
15			-	SPACE				1.00			0		1.00				SPACE	-			16
17			-	SPACE				1.00		0			1.00				SPACE	-			18
19			-	SPACE				1.00			0		1.00				SPACE	-			20
21			-	SPACE				1.00		0			1.00				SPACE	-			22
23			-	SPACE				1.00			0		1.00				SPACE	-			24
25			-	SPACE				1.00		0			1.00				SPACE	-			26
27			-	SPACE				1.00			0		1.00				SPACE	-			28
29			-	SPACE				1.00		0			1.00				SPACE	-			30

NOTES :

1. ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.
2. LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.
3. PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"
4. FIRE ALARM SYSTEMS SHALL HAVE BRANCH CIRCUITS IDENTIFIED BY RED LABELS STATING "FIRE ALARM CIRCUIT" AS REQUIRED BY THE NATIONAL ELECTRICAL CODE ARTICLE 760.41B
5. ABBREVIATIONS: CO-CONVENIENCE OUTLET, RR-RESTROOM, (N)ORTH, (S)OUTH, (E)AST, (W)EST.

ØA	ØB	TOTALS	
9,310	9,060	18,370	CONNECTED LOAD (VA)
		77	CONNECTED LOAD (A)
0	0	0	DEMAND FACTOR ADJUSTMENTS (VA)
9,310	9,060	18,370	TOTAL LOAD (VA)
78	76		TOTAL LOAD (A)
		78	MAXIMUM LOAD (A)
51%	49%		PHASE BALANCE

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LIGHT FIXTURE SCHEDULE

FIXTURE NUMBER	FIXTURE MANUFACTURER	FIXTURE CATALOG #	LAMPS		FIXTURE			DESCRIPTION	REMARKS
			TYPE	QTY.	VOLTS	WATTS	MOUNTING		
F1	METALUX LITHONIA DAY-BRITE LSI COLUMBIA ORACLE	4SNLED-LD4-30SL-LW-UNV-L835-CD1-U ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-WH FSS440L835-UNV-DIM SDL-4-LED-SS-WW-UE LCL4-35LW-EDU 4-OC1-LED-3000L-DIM10-MVOLT-35K-80	LED 3500 KELVIN 3000 LUMENS 80 CRI	-	120	29	SURFACE/CHAIN	48" LED STRIP	
F1E	METALUX LITHONIA DAY-BRITE LSI COLUMBIA ORACLE	4SNLED-LD4-30SL-LW-UNV-EL14W-L835-CD1-U ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-E7W-WH FSS440L835-UNV-DIM-EMLED SDL-4-LED-SS-WW-UE-EM LCL4-35LW-EDU-ELL14 4-OC1-LED-3000L-DIM10-MVOLT-35K-80-O-EMG-LED	LED 3500 KELVIN 3000 LUMENS 80 CRI	-	120	29	SURFACE/CHAIN	48" LED STRIP WITH EMERGENCY BATTERY PACK	
F2	LITHONIA	WST LED P2 40K MVOLT	LED 4000 KELVIN 3469 LUMENS 80 CRI	-	120	25	SURFACE	WALL PACK	

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ELECTRICAL SPECIFICATIONS

GENERAL PROVISION

A. REFERENCE
   1. THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS TITLE, INSOFAR AS THEY APPLY HERETO.
   2. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, “ELECTRICAL CONTRACTOR” IS INFERRED AND INTENDED.

B. CONTRACT DRAWINGS
   1. THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.
   2. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.
   3. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.
   4. OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS
   1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.

D. MANUFACTURER'S DRAWINGS
   1. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW. (6) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES,AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR: APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS	TYPE SUBMITTALS REQUESTED
LIGHTING AND POWER PANELS	SHOP DRAWINGS
LIGHTING FIXTURES	CATALOG CUTS

E. GUARANTEES
   1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

WORK INCLUDED

A. INSTALLATION, MATERIALS, AND WORKMANSHIP
   1. FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.
   2. THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION. AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSED DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.
   3. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.

B. COORDINATION OF PLANS AND SPECIFICATIONS
   1. CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING
   1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.
   2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.
   3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

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CODES AND FEES

A. CODES:
  1. ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.

B. FEES:
  1. OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND INSPECTIONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.

B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.

C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

CONDUIT

A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.

B. ALL WIRING SHALL BE RUN IN EMT CONDUIT OR MC CABLE WITH GROUND CONDUCTOR UNLESS OTHERWISE NOTED.

C. ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN ½" UNLESS OTHERWISE NOTED.

D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

WIRE AND CABLE

A. ALL CONDUCTORS SHALL BE COPPER AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN. CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.

B. ALL BRANCH CIRCUITS IN PATIENT CARE AREAS SHALL BE MEDICAL GRADE MC CABLE. ALL BRANCH CIRCUITS IN OFFICE AND COMMON AREAS SHALL BE TYPE NM OR MC CABLE.

C. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS.

D. THE FOLLOWING COLOR CODE SHALL BE USED:

	120/240 VOLT	120/208 VOLT	277/480 VOLT
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	RED	ORANGE
PHASE C		BLUE	YELLOW
NEUTRAL	WHITE	WHITE	WHITE
GROUND	GREEN	GREEN	GREEN

E. CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE.

F. CONDUCTORS NO. 8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED TAPE, MINIMUM SIZE ½", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS:
  1. AT EACH TERMINAL.
  2. AT EACH CONDUIT ENTRANCE.
  3. AT INTERVALS NOT MORE THAN 12 INCHES APART IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC.

G. ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANEL BOARD GUTTERS. MARKERS SHALL INDICATE CORRESPONDING BRANCH--CIRCUIT NUMBERS.

H. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR.

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BOXES AND PLATES

A. FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULL BOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.
B. PULL BOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND GAUGE, SIZED IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE U.L. LABELED.
C. BOXES AT EXTERIOR AREAS TO BE WATERTIGHT AND DUST-TIGHT WITH CASKETED COVERS.
D. ALL BOXES FOR EXPOSED WORK IN FINISHED SPACES SHALL BE "FS" TYPE WITH THREADED HUBS WITH RIGID CONDUIT RISER (DEEP WIRE MOLD BOXES).
E. ALL BOXES SHALL BE RIGIDLY SUPPORTED INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.
F. FLOOR BOXES:
    1. DESCRIPTION: FLOOR BOXES COMPATIBLE WITH FLOOR BOX SERVICE FITTINGS PROVIDED IN ACCORDANCE WITH THE WIRING DEVICES SECTION OF THIS SPECIFICATION; WITH PARTITIONS TO SEPARATE MULTIPLE SERVICES; FURNISHED WITH ALL COMPONENTS, ADAPTERS, AND TRIMS REQUIRED FOR COMPLETE INSTALLATION.
    2. USE CAST IRON OR NONMETALLIC FLOOR BOXES WITHIN SLAB ON GRADE.
    3. USE SHEET-STEEL, CAST IRON, OR NONMETALLIC FLOOR BOXES WITHIN SLAB ABOVE GRADE.
    4. METALLIC FLOOR BOXES: FULLY ADJUSTABLE (WITH INTEGRAL MEANS FOR LEVELING ADJUSTMENT PRIOR TO AND AFTER CONCRETE POUR).
    5. MANUFACTURER: SAME AS MANUFACTURER OF FLOOR BOX SERVICE FITTINGS.
G. UNDERGROUND BOXES/ENCLOSURES:
    1. DESCRIPTION: IN-GROUND, OPEN BOTTOM BOXES FURNISHED WITH FLUSH, NON-SKID COVERS WITH LEGEND INDICATING TYPE OF SERVICE AND STAINLESS STEEL TAMPER RESISTANT COVER BOLTS.
    2. SIZE: AS INDICATED ON DRAWINGS.
    3. DEPTH: AS REQUIRED TO EXTEND BELOW FROST LINE TO PREVENT FROST UPHEAVAL, BUT NOT LESS THAN 12 INCHES.
    4. APPLICATIONS:
        a. SIDEWALKS AND LANDSCAPED AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 8 LOAD RATING.
        b. PARKING LOTS, IN AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 15 LOAD RATING.
        c. DO NOT USE POLYMER CONCRETE ENCLOSURES IN AREAS SUBJECT TO DELIBERATE VEHICULAR TRAFFIC.
H. COMPOSITE UNDERGROUND BOXES/ENCLOSURES: COMPLY WITH SCTE 77.

WIRING DEVICES

A. WIRING DEVICES SHALL BE SIMILAR TO THOSE LISTED BELOW AND OF SPECIFIED AMPERAGE. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.
B. DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 125 VOLT
    1. HUBBELL 5352
    2. ARROW HART 5352
C. SINGLE POLE SWITCHES - 20 AMP, 120 VOLT
D. WEATHERPROOF RECEPTACLES - 20 AMP, 125 VOLT - NEMA 5-20R
    1. HUBBELL 5352 WITH 5205 COVER INTERMATIC GUARDIAN
    2. I SERIES, NEMA 3R COVER
    3. ARROW HART 5352 WITH 4500 COVER
E. G.F.C.I. RECEPTACLE - 20 AMP, 125 VOLT - NEMA 5-20 R
    1. HUBBELL GF 5262 WITH MATCHING NYLON COVER PLATE OR WO-26 W.P. COVER
F. GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250.146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

IDENTIFICATION

A. EACH PIECE OF SERVICE EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS, ALL EXHAUST FAN MANUAL STARTING SWITCHES.
B. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK RACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM ¼" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEET METAL SCREW ATTACHMENT. NO "DYMO" OR SIMILAR TYPE LABELS WILL BE ALLOWED.
C. PANEL BOARD DIRECTORY: A TYPED CIRCUIT DIRECTORY SHALL BE PROVIDED INDICATING LOCAL AREA SERVED AND LOCATION FOR EACH BRANCH CIRCUIT.

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FAX: 801.375.2676

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SFCN FIBER HUTS
FIBER HUT PLANS

ELECTRICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 3/29/2022

DRAWING #: E7.3

GROUNDING

A. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER THE WIRE AND CABLE SECTION OF THIS SPECIFICATION.
B. ALL GROUND CLAMPS SHALL BE PENN-UNION “GPL” TYPE OR SIMILAR BY O.Z. OR BURNDY.
C. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON- METALLIC ELECTRICAL CONDUIT WITH U.L. LABEL SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.
D. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS -ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC--250--24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-30.
E. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE: 2) THE GROUND PIGTAIL TO THE BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE. MOUNTED BOXES OR FLUSH TYPE BOXES.
F. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

POWER AND LIGHTING PANELS

A. FURNISH AND INSTALL, AS SCHEDULED AND SHOWN ON THE DRAWINGS, POWER PANELS FOR OPERATION ON VOLTAGES INDICATED.
B. ALL TERMINATIONS SHALL BE MARKED “75°C ONLY”, “60/75° C” OR LISTED FOR USE OF 75° C INSULATED CONDUCTORS AT FULL 75° C AMPACITY.
C. ALL BUS BARS SHALL BE SILVER OR TIN PLATED COPPER.
D. CABINETS SHALL BE OF COMMERCIAL GALVANIZED SHEET STEEL, CODE GAUGE AND SIZE, SURFACE OR RECESSED MOUNTED AS CALLED FOR IN THE DRAWINGS.
E. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
F. PANEL SHALL HAVE A COPPER GROUND BAR SIMILAR TO NEUTRAL BAR IN NUMBER, SIZE, AND TYPE OF ANTI-TURN SOLDERLESS LUGS. THIS GROUND BAR SHALL BE FACTORY BONDED TO THE PANEL TUB IN THE GUTTER SPACE OPPOSITE THE MAINS AND THE NEUTRAL ASSEMBLY AND SHALL HAVE THE SCREWDRIVER SLOTS FACING THE FRONT OF THE PANEL.
G. QUALITY STANDARD: SQUARE D TYPE NQ.

LIGHTING FIXTURES

A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN.
B. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
C. ALL LIGHTING FIXTURES INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE FURNISHED COMPLETE WITH AS INDICATED ON THE FIXTURE SCHEDULE.
D. ANY LIGHTING FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.
E. ALL LIGHTING FIXTURES SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
F. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

11381139
M. RYAN
BEAGLES
5/12/22

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SFCN FIBER HUTS
FIBER HUT PLANS

ELECTRICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 3/29/2022

DRAWING #:
E7.4

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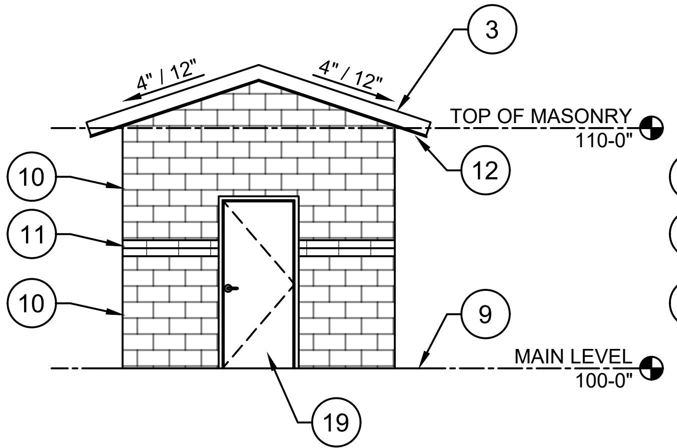
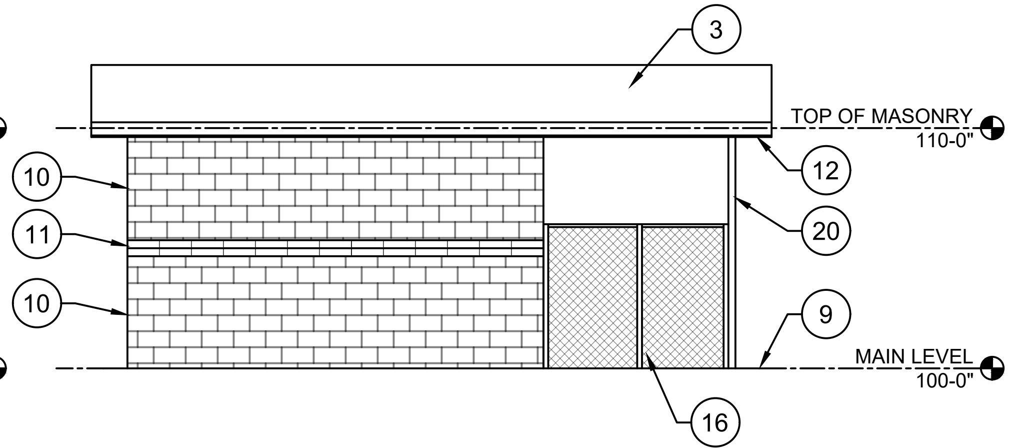


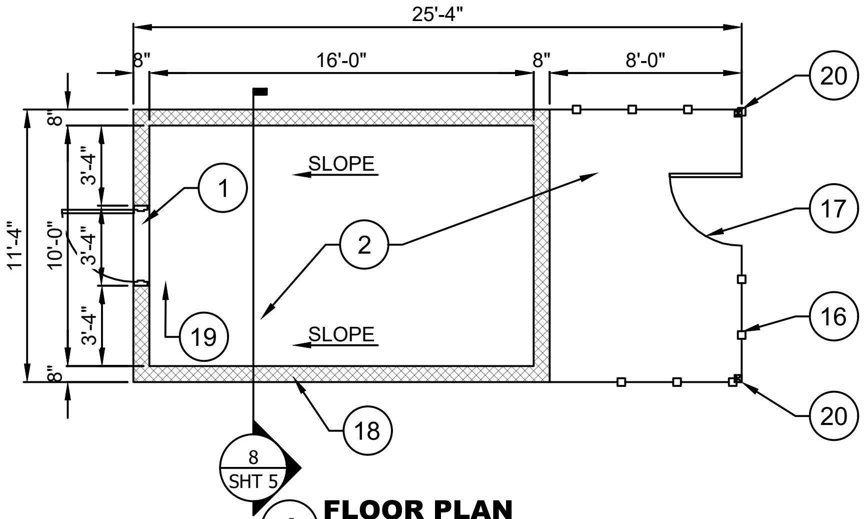
4 ELEVATION

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



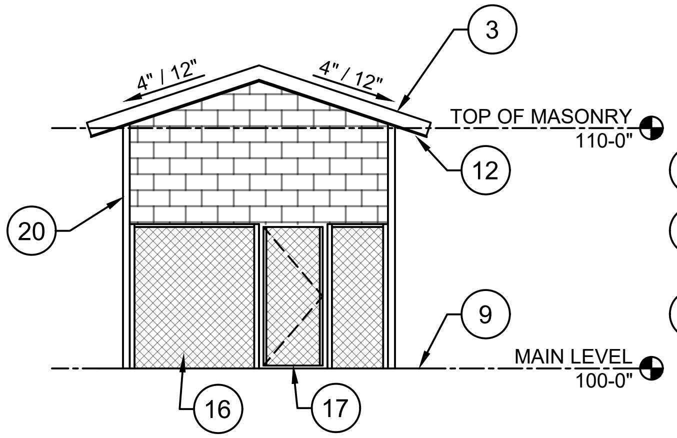
5 ELEVATION

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



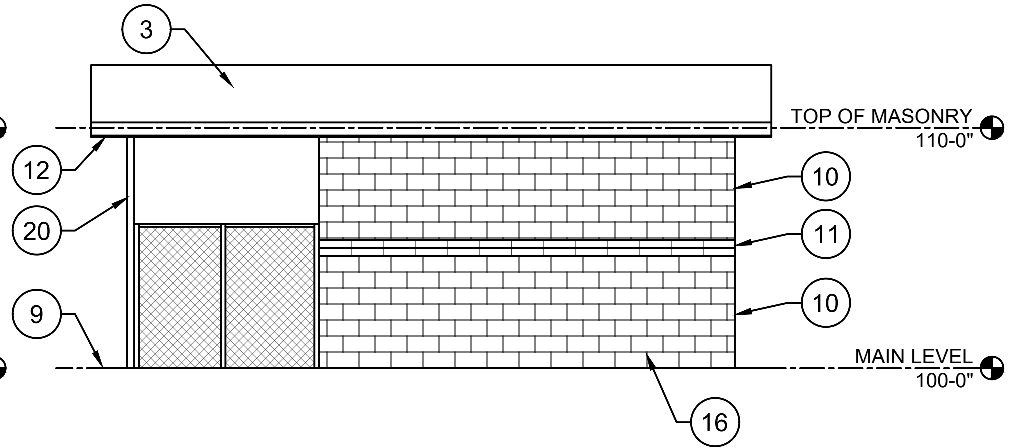
1 FLOOR PLAN

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



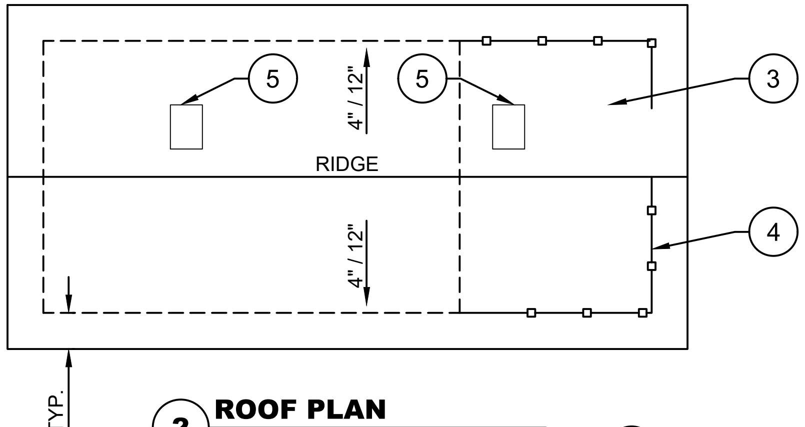
6 ELEVATION

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



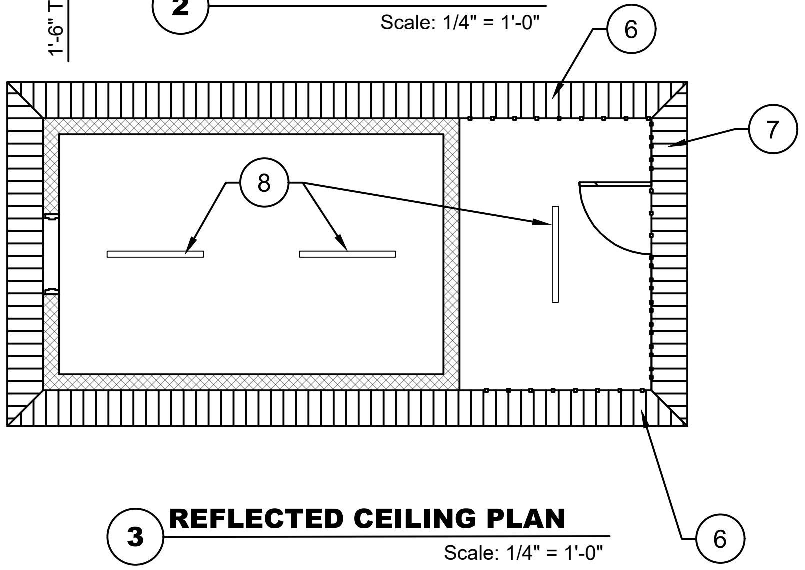
7 ELEVATION

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



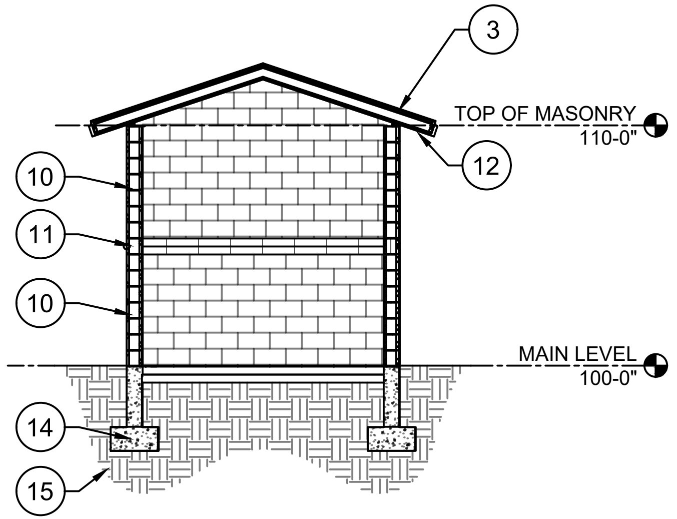
2 ROOF PLAN

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



3 REFLECTED CEILING PLAN

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



8 BUILDING SECTION

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

1. DOOR THRESHOLD.
2. CONCRETE SLAB PER STRUCTURAL DESIGN - SLOPE TO DOOR OPENING.
3. PRE-FINISHED STANDING SEAM METAL ROOF OVER HIGH TEMPERATURE SELF-ADHERED UNDERLAYMENT
4. LINE OF WALL/FENCE BELOW
5. STATIC ROOF VENT W/ 50 SQ. IN. FREE CLEAR AREA PER UNIT.
6. PRE-FINISHED VENTED METAL SOFFIT
7. PRE-FINISHED METAL SOFFIT
8. LIGHT FIXTURE
9. APPROXIMATE FINISH GRADE - SEE CIVIL DRAWINGS
10. 8" HIGH COLORED HONED CMU WALL - COLOR #1
11. TWO ROWS 4" HIGH COLORED HONED CMU WALL - COLOR #2
12. PRE-FINISHED METAL FASCIA
13. PRE-FINISHED METAL SOFFIT
14. CONCRETE FOOTING AND FOUNDATION
15. EARTH FILL
16. 6' BLACK VINYL CHAINLINK FENCE
17. 6' BLACK VINYL CHAINLINK GATE.
18. TYPICAL REFERENCE FOR CONSTRUCTION TYPE. SEE SHEET A1.2
19. TYPICAL REFERENCE FOR DOOR TYPE. SEE SHEET A1.2 FOR DOOR SCHEDULE
20. 4X4 POST - SEE STRUCTURAL PLANS

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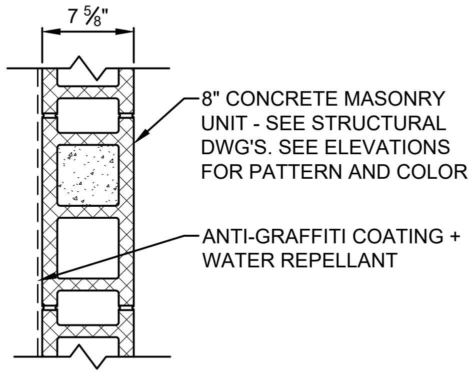
SPANISH FORK
ENGINEERING

SFCN FIBER HUTS

FIBER HUT PLANS

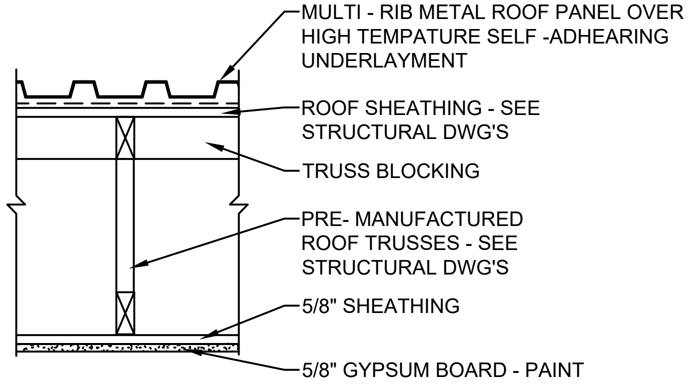
REVISION	BY	DATE

DRAWN: JLR
DESIGN: JHJ
CHECK: CMT
DATE: 6/7/2022
SCALE: 1/8"=1'-0"'
DRAWING #: A1.1


7 ⅝"
8" CONCRETE MASONRY UNIT - SEE STRUCTURAL DWG'S. SEE ELEVATIONS FOR PATTERN AND COLOR
ANTI-GRAFFITI COATING + WATER REPELLANT

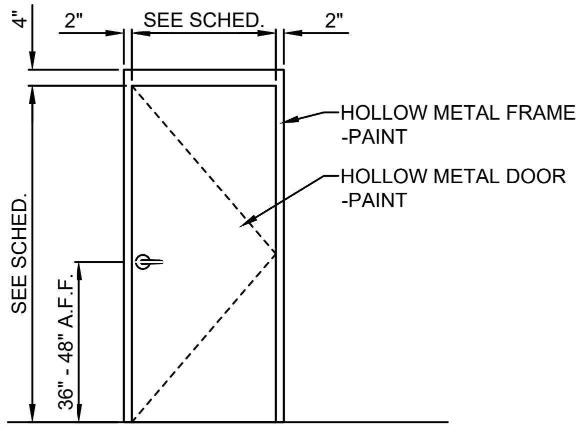
1-1 WALL CONSTRUCTION TYPE 1-1

Scale: N.T.S.

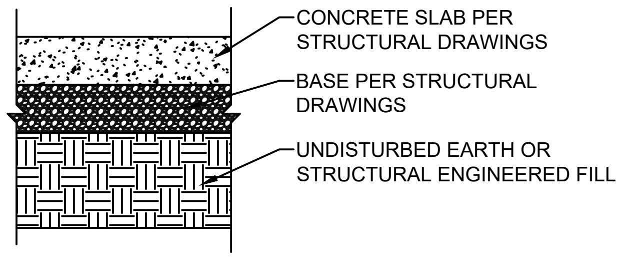

MULTI - RIB METAL ROOF PANEL OVER HIGH TEMPATURE SELF -ADHEARING UNDERLAYMENT
ROOF SHEATHING - SEE STRUCTURAL DWG'S
TRUSS BLOCKING
PRE- MANUFACTURED ROOF TRUSSES - SEE STRUCTURAL DWG'S
5/8" SHEATHING
5/8" GYPSUM BOARD - PAINT

2-1 ROOF/CEILING CONSTRUCTION

Scale: N.T.S.



TYPE A


CONCRETE SLAB PER STRUCTURAL DRAWINGS
BASE PER STRUCTURAL DRAWINGS
UNDISTURBED EARTH OR STRUCTURAL ENGINEERED FILL

3-1 FLOOR CONSTRUCTION

Scale: N.T.S.

DOOR SCHEDULE

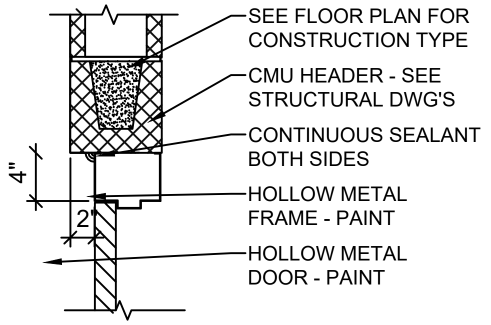
DOOR NUMBER	ROOM NUMBER	ROOM NAME	DOOR TYPE	DOOR SIZE			HARDWARE SET	DOOR DETAILS	
				WIDTH	HEIGHT	THICK		HEAD	JAMB
101	101	FIBER HUT	A	3'-0"	7'-0"	1 ¾ "	1	1/2/2022	2/2/2022

DOOR HARDWARE SCHEDULE

NUMBER		ITEM	PRODUCTS NUMBER	FIN.	MANU.
3	EA	HINGE	3BB81 4.5 X 4.5	652	PBB
1	EA	STORMROOM LOCK	L280S C	626	GENL
1	EA	SURFACE CLOSER	4040XP RWPA AL X SNB	689	LCNHA
1	EA	KICK PLATE	198S 10 X 34	630	HAG
1	SET	SEALS	160	GRY	NGP
1	EA	DOOR SWEEP	200NA 36"	AL	NGP
1	EA	THREASHOLD	425 E 36"	628	NGP

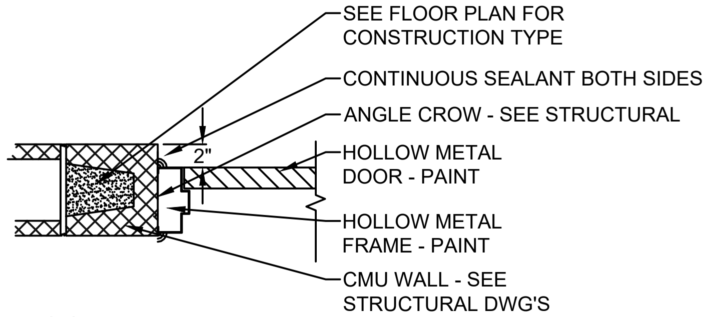
EXTERIOR FINISH SCHEDULE

CMU BLOCK - COLOR #1	COLOR TO BE DETERMINED WITH EACH SITE
CMU BLOCK - COLOR #2	COLOR TO BE DETERMINED WITH EACH SITE
MANUFACTURED MASONRY VENEER	MANUFACTURER: CREATIVE MINES STYLE: CRAFT BOARD FORM COLOR: BARNWOOD
PAINTED HM DOORS & FRAMES	MANUFACTURER: SHERWIN WILLIAMS COLOR: ELEPHANT EAR (SW 9168)
STANDING SEAM METAL ROOF	McELROY OR APPROVED EQUAL COLOR: DARK BRONZE
PRE-FINISHED METAL SOFFIT & FASCIA AS SPECIFIED	COLOR: MATCH METAL ROOF


SEE FLOOR PLAN FOR CONSTRUCTION TYPE
CMU HEADER - SEE STRUCTURAL DWG'S
CONTINUOUS SEALANT BOTH SIDES
HOLLOW METAL FRAME - PAINT
HOLLOW METAL DOOR - PAINT
4"
2"

1 DOOR HEAD DETAIL

Scale: N.T.S.


SEE FLOOR PLAN FOR CONSTRUCTION TYPE
CONTINUOUS SEALANT BOTH SIDES
ANGLE CROW - SEE STRUCTURAL
2"
HOLLOW METAL DOOR - PAINT
HOLLOW METAL FRAME - PAINT
CMU WALL - SEE STRUCTURAL DWG'S

2 DOOR JAMB DETAIL

Scale: N.T.S.

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SPANISH FORK
ENGINEERING

SFCN FIBER HUTS

FIBER HUT PLANS

REVISION	BY	DATE

DRAWN: JLR
DESIGN: JHJ
CHECK: CMT
DATE: 5/12/2022

SCALE: N.T.S.

DRAWING #: A1.2

DESIGN CRITERIA

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE

CLASSIFICATION: RISK CATEGORY I

LIVE LOADING
ROOF: 20 PSF (REDUCIBLE)

DEAD LOADING
ROOF: 13 PSF

SNOW LOADING (BASED ON 2018 UTAH GROUND SNOW LOAD MAP)
ELEVATION: 4600 FT (APPROX.)
GROUND SNOW LOAD: Pg = 33 PSF
EXPOSURE FACTOR: Ce = 0.9
SNOW IMPORTANCE FACTOR: Is = 0.8
THERMAL FACTOR: Ct = 1.1
CALCULATED SNOW LOAD: Pf = 18.3 PSF
DESIGN SNOW LOAD: Pf = 18.3 PSF
SLOPE FACTOR: Cs = 1.0

WIND LOADING
WIND EXPOSURE: C
WIND SPEED: 100 MPH
WIND IMPORTANCE FACTOR: Iw = 1.0

SEISMIC LOADING
LOCATION: 40.10858° LAT., -111.66481° LON.
SEISMIC IMPORTANCE FACTOR: Ie = 1.00
MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss = 1.5g S1 = 0.549g
SITE CLASS: D
SPECTRAL RESPONSE COEFFICIENTS: SDS = 1.2g SD1 = 0.641g
SEISMIC DESIGN CATEGORY: D
SEISMIC FORCE RESISTING SYSTEM: SPECIAL REINFORCED MASONRY SHEAR WALLS.

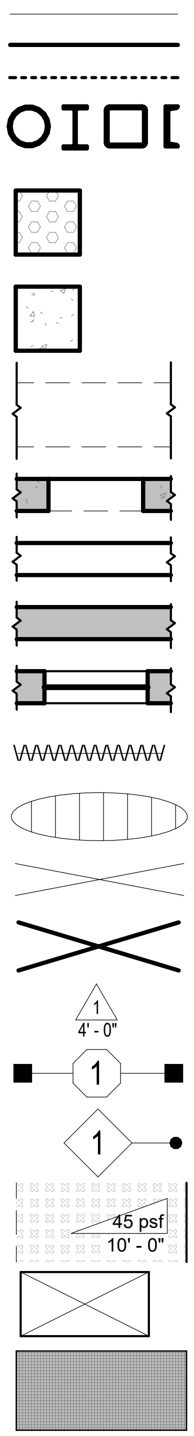
OUT-OF-PLANE FORCE: Fp = 0.48 Wp
SEISMIC RESPONSE COEFFICIENT: Cs=0.360
RESPONSE MODIFICATION FACTOR: R=5
OVERSTRENGTH FACTOR: Ω = 2
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE METHOD

SOILS
SOIL BEARING PRESSURE: 1500 PSF
PROJECT GEOTECHNICAL INVESTIGATION: NONE

SHEET INDEX

SHEET #	DESCRIPTION
STRUCTURAL	
S-001	STRUCTURAL NOTES
S-002	STRUCTURAL NOTES
S-101	FOUNDATION PLAN
S-102	ROOF FRAMING PLAN
S-501	STRUCTURAL DETAILS
S-502	STRUCTURAL DETAILS
S-701	TYPICAL STRUCTURAL DETAILS
S-702	TYPICAL STRUCTURAL DETAILS
S-801	SPECIFICATIONS
S-802	SPECIFICATIONS
S-803	SPECIFICATIONS
S-804	SPECIFICATIONS

STRUCTURAL PLAN LEGEND



JOIST OR TRUSS
BEAM OR GIRDER
PURLIN
STEEL COLUMN
MASONRY COLUMN
CONCRETE COLUMN
CONCRETE FOOTING
RECESSED FOUNDATION WALL
NON-BEARING STRUCTURAL WALL
BEARING WALL
BEAM IN WALL
STEEL STRAP
STEEL DECK
OWS JOIST CROSS BRIDGING
STEEL JOIST CROSS BRIDGING
SHEARWALL TYPE AND LENGTH, SEE SHEARWALL SCHEDULE
STRUCTURAL CONNECTOR, SEE CONNECTOR SCHEDULE
HOLDOWN, SEE HOLDOWN SCHEDULE. "H" INDICATES LOCATION OF HOLDOWN IDENTIFIED ON LEVEL ABOVE.
SNOW DRIFT AREA AND LOAD, ON TOP OF BASE SNOW LOAD. DRIFT LOAD IS 0 PSF AT DOTTED LINE AND INCREASES LINEARLY TO MAXIMUM LOAD.
SHEATHING
PERMANENT EQUIPMENT

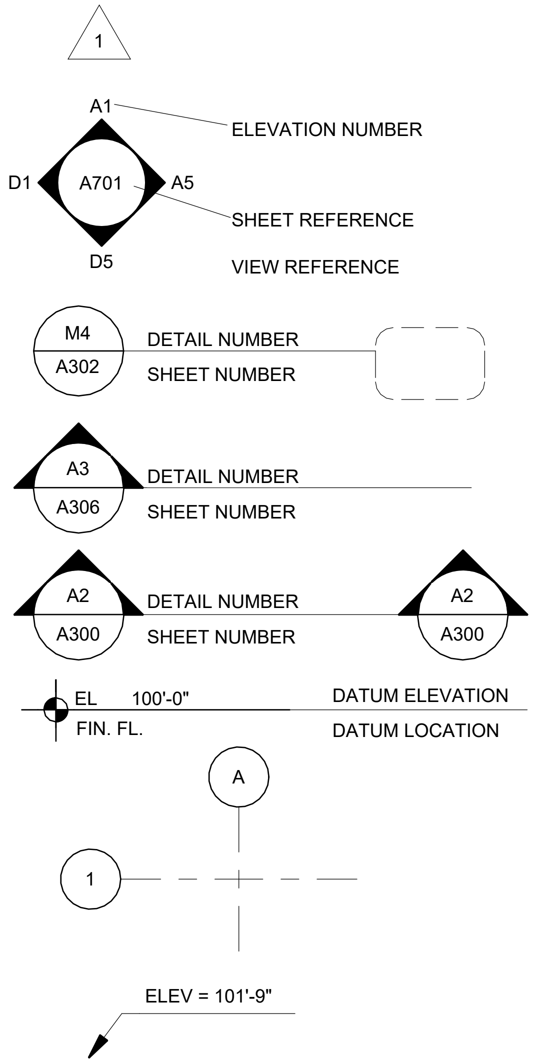
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
LICENSED PROFESSIONAL ENGINEER
STATE OF UTAH

STRUCTURAL TAGS LEGEND

TAG	DESCRIPTION
AB-1	ANCHOR BOLT, SEE ANCHOR BOLT SCHEDULE
CB-1	CONCRETE BEAM, SEE CONCRETE BEAM SCHEDULE
CC-1	CONCRETE COLUMN, SEE CONCRETE COLUMN SCHEDULE
CF-1	CONCRETE FOOTING, SEE CONCRETE FOOTING SCHEDULE
CS-1	CONCRETE SLAB, SEE CONCRETE SLAB SCHEDULE
CW-1	CONCRETE WALL, SEE CONCRETE WALL SCHEDULE
DB-1	COLD-FORMED STEEL BEAM, SEE COLD-FORMED STEEL BEAM SCHEDULE
DJ-1	COLD-FORMED STEEL JOIST, SEE COLD-FORMED STEEL JOIST SCHEDULE
DW-1	COLD-FORMED STEEL WALL, SEE COLD-FORMED STEEL WALL SCHEDULE
MC-1	MASONRY COLUMN, SEE MASONRY COLUMN SCHEDULE
ML-1	MASONRY LINTEL, SEE MASONRY LINTEL SCHEDULE
MW-1	MASONRY WALL, SEE MASONRY WALL SCHEDULE
SB-1	STEEL BEAM, SEE STEEL BEAM SCHEDULE
SC-1	STEEL COLUMN, SEE STEEL COLUMN SCHEDULE
SD-1	STEEL DECK, SEE STEEL DECK SCHEDULE
SJ-1	STEEL JOIST, SEE STEEL JOIST SCHEDULE
WB-1	WOOD BEAM, SEE WOOD BEAM SCHEDULE
WC-1	WOOD COLUMN, SEE WOOD COLUMN SCHEDULE
WJ-1	WOOD JOIST, SEE WOOD JOIST SCHEDULE
WW-1	WOOD WALL, SEE WOOD WALL SCHEDULE

GRAPHICS LEGEND

REVISIONS MARK
ELEVATION SYMBOL
DETAIL REFERENCE
WALL/DETAIL SECTION
BUILDING SECTION
DATUM ELEVATION
REFERENCE GRID
NEW POINT ELEVATION



SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
www.jonesanddemille.com

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL NOTES

2202-061
PROJECT NUMBER
S-001
SHEET NO.

GENERAL NOTES

1. NOTES AND TYPICAL DETAILS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON PLANS.
2. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
3. CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES ETC. ON THE JOB.
5. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER WHERE CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE STRUCTURE THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED WITH AFFECTED PARTIES.
6. IF CONTRACTOR'S WORK IS NOT CONSTRUCTED ACCORDING TO APPROVED CONSTRUCTION DOCUMENTS (INCLUDING STAMPED WRITTEN COMMUNICATIONS), CONTRACTOR SHALL EITHER:
    A. REMOVE THE NON-CONFORMING WORK AND RECONSTRUCT THE WORK ACCORDING TO DRAWINGS, AT CONTRACTOR'S OWN EXPENSE.
    B. PAY FOR AND PROVIDE AN EVALUATION AND LETTER FROM THE ENGINEER STATING THAT THE NON-CONFORMING WORK MEETS APPLICABLE BUILDING CODES.
    C. PAY FOR AND PROVIDE AN EVALUATION AND LETTER FROM THE ENGINEER STATING THAT THE NON-CONFORMING WORK DOES NOT MEET APPLICABLE BUILDING CODES AND DETAILING THE UPGRADES THAT ARE REQUIRED TO BRING THE NON-COMPLIANT WORK INTO COMPLIANCE.
7. VERBAL COMMUNICATIONS SHALL NOT BE CONSIDERED PART OF THE APPROVED CONSTRUCTION DOCUMENTS.

EARTHWORK

1. ENGINEER SHALL VERIFY CONDITION AND/OR ADEQUACY OF ALL SUBGRADES, FILLS, AND BACK FILLS, ETC.
2. SHORE AND BRACE AS REQUIRED.
3. DE-WATER AS REQUIRED TO REMOVE STANDING WATER FROM EXCAVATIONS.
4. FOUNDATIONS ARE SHOWN AND DIMENSIONED AS BEING FORMED. INCREASE FOOTING WIDTHS BY 2" FOR FOOTINGS PLACED IN NEAT EXCAVATIONS.
5. CLEAN ALL DEBRIS FROM EXCAVATIONS.
6. NOTIFY ENGINEER 48 HOURS IN ADVANCE OF PLACING CONCRETE.
7. PROVIDE 30" MINIMUM FOOTING EMBEDMENT FROM FINISH GRADE FOR FROST PROTECTION AT EXTERIOR FOOTINGS.
8. PROVIDE 12" OF STRUCTURAL FILL BENEATH ALL FOOTINGS.
9. EXTEND STRUCTURAL FILL LATERALLY A DISTANCE EQUAL TO 1/2 THE STRUCTURAL FILL DEPTH BEYOND EDGE OF FOOTING ON EACH SIDE.
10. COMPACT STRUCTURAL FILL BENEATH FOOTINGS TO 95% OF MAXIMUM DRY DENSITY DETERMINED BY ASTM D1557.

ENGINEERED LUMBER

1. INSTALL ENGINEERED LUMBER PRODUCTS PER MANUFACTURER'S RECOMMENDATIONS UNO.
2. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR HOLES AND NOTCHES IN ENGINEERED LUMBER.
3. MINIMUM GRADES:
    A. LAMINATED VENEER LUMBER: MICROLAM LVL 2.0E

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
STATE OF UTAH

FASTENER REQUIREMENTS

1. SIMPSON HARDWARE: USE ONLY PNEUMATIC FASTENERS APPROVED BY SIMPSON.
2. INSTALL PNEUMATIC FASTENERS INTO PLYWOOD SHEATHING WITHIN THE 10% TOLERANCE LIMIT FOR HAND DRIVEN NAILS PER ASTM F1667-05 FOR HEAD DIAMETER.
3. NAIL HEADS: FULL ROUND HEADS.
4. DO NOT SUBSTITUTE PNEUMATIC (COOLER) NAILS FOR SPECIFIED COMMON NAILS WITHOUT APPROVAL FROM ENGINEER.
5. DO NOT COUNTERSINK NAIL HEADS.

MINIMUM NAIL SHANK DIAMETER & LENGTH:

COMMON NAIL	PNEUMATIC (COOLER)	STAPLES
8d = 2-1/2" x 0.131"	8d = 2-3/8" x 0.113"	MINIMUM 7/16" CROWN
10d = 3" x 0.148"	10d = 2-7/8" x 0.120"	14,15,16 GAGE
12d = 3-1/4" x 0.148"	3-1/4" x 0.131"	1-3/4" MIN. LENGTH
16d = 3-1/2" x 0.162"	3-1/4" x 0.148"	
20d = 4" x 0.192"		

CONCRETE

1. GENERAL
    A. DO NOT PLACE PIPES OR DUCTS IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
    B. REFER TO ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL MOLDS, GROOVES, ORNAMENTS, CLIPS AND GROUNDS TO BE CAST IN CONCRETE.
    C. COORDINATE WITH ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
2. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO FACE OF MAIN BARS AND DENOTE CLEAR COVERAGE.
3. CONCRETE MIX DESIGN: PREPARED BY INDEPENDENT LABORATORY AND APPROVED BY ENGINEER.

CONCRETE REINFORCING

1. PROVIDE LAP SPLICE UNO. SEE TABLE "CONCRETE REINFORCEMENT LAP SPLICES".
2. LAP SPLICE WELDED WIRE FABRIC TWO SQUARES MIN. EACH DIRECTION.
3. SECURELY POSITION REINFORCING DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE BEFORE PLACING CONCRETE (WET SETTING IS PROHIBITED).

CONCRETE REINFORCEMENT LAP SPLICES

f'c = 4,000 PSI

LOCATION	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP	24	32	40	48	70	80	91	102	113
OTHER	20	25	31	38	55	62	70	79	87

1. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE BASED ON ACI 318-11, SECTIONS 12.2.2 AND 12.15 RESPECTIVELY. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
2. LAP SPLICE LENGTHS SHOWN ARE FOR CLASS B AND CASE 1.
3. TOP REINFORCEMENT IS HORIZONTAL REINFORCEMENT THAT HAS MORE THAN TWELVE INCHES OF FRESH CONCRETE CAST BELOW IT. THIS INCLUDES HORIZONTAL REINFORCEMENT IN WALLS. ALL VERTICAL BARS ARE CONSIDERED AS "OTHER".
4. FOR LIGHTWEIGHT CONCRETE AGGREGATE CONCRETE, MULTIPLY TABULATED VALUES BY 1.3.
5. FOR EPOXY-COATED BARS, MULTIPLY TABULATED VALUES BY:
    A. TOP BARS: 1.31.
    B. OTHER BARS: 1.5.
6. FOR BARS WITH COVER OF LESS THAN 1 BAR DIAMETER OR WITH CLEAR SPACING OF LESS THAN 2 BAR DIAMETERS, MULTIPLY TABULATED VALUES BY 2.0.

MASONRY REINFORCEMENT LAP SPLICES

f'm = 2,000 PSI

	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH, IN.	12	15	23	43	58	88	111	141	174

1. LAP SPLICE LENGTHS ARE BASED ON TMS 402-16 SECTION 6.1.6.1.1.
2. TABULATED VALUES ARE BASED ON MINIMUM MASONRY COVER OF 3 INCHES.
3. FOR EPOXY-COATED BARS, MULTIPLY TABULATED VALUES BY 1.5.

SAFETY

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL STATE OF UTAH SAFETY STANDARDS AND OSHA REQUIREMENTS AS THEY APPLY TO THE PROJECT.
2. ENGINEER DOES NOT ACCEPT ANY RESPONSIBILITY FOR CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.

WOOD

1. STRUCTURAL WOOD SPECIFICATIONS:
    A. DOUGLAS FIR- COAST REGION: WEST COAST LUMBER INSPECTION BUREAU GRADING RULES #16.
    B. REDWOOD: CALIFORNIA REDWOOD ASSOC. GRADING RULES, 1987 EDITION.
    C. SHEATHING: U.S. PRODUCT STANDARD PS 1-83 FOR SOFT PLYWOOD.
2. MINIMUM GRADES:
    A. SOLID-SAWN BEAMS: DF#2.
    B. SOLID-SAWN JOISTS: DF#2.
    C. ALL MEMBERS: FREE OF HEART CENTER.
    D. ROOF SHEATHING: 5/8" APA RATED SHEATHING, EXPOSURE 1.
3. PROVIDE SOLID BLOCKING BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.
4. CUTTING OF WOOD JOISTS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-FIFTH THE JOIST DEPTH FROM THE TOP, AND LOCATED NOT FARTHER FROM THE END THAN THREE TIMES THE JOIST DEPTH. SEE TYPICAL DETAIL.
5. BORE HOLES FOR BOLTS IN WOOD WITH BIT OF SAME NOMINAL DIAMETER AS BOLT + 1/16".
6. BORE HOLES FOR LAG SCREWS FIRST TO SAME NOMINAL DIAMETER AND DEPTH AS SHANK. BORE REMAINDER OF HOLE NO LARGER THAN ROOT OF THREAD.
7. SCREW, DO NOT DRIVE, LAG SCREWS AND WOOD SCREWS INTO PLACE.
8. PROVIDE METAL WASHERS UNDER HEADS OR END NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO INSERTED EXPANDING FASTENERS - RED HEAD, ETC.

BOLT DIAM	MI WASHER	STEEL WASHER
1/2" DIAM	2-1/2" DIAM x 1/4"	2" x 2" x 1/4"
5/8" DIAM	2-3/4" DIAM x 5/16"	2-1/2" x 2-1/2" X 1/4"
3/4" DIAM	3" DIAM x 7/16"	3" x 3" x5/16"
7/8" DIAM	3-1/2" DIAM x 7/16"	3-1/2" x 3-1/2" x 3/8"
1" DIAM	4" DIAM x 1/2"	3-3/4" x 3-3/4" x 3/8"
1-1/4" DIAM	5" DIAM x 5/8"	5" x 5" x 1/2"

CARRIAGE BOLT DIAM	CUT WROUGHT STEEL WASHER
1/2" DIAM	3/4" (2" OD)
5/8" DIAM	7/8" (2-1/4" (OD)
3/4" DIAM	1" (2-1/2" OD)
7/8" DIAM	1-3/8" (3" OD)
1" DIAM	1-1/2" (3-1/4" OD)

11. ALL BOLT AND LAG SCREWS SHALL TIGHTENED AT TIME OF INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
12. LAY ALL STRUCTURAL PLYWOOD ON ROOF WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
13. BLOCK STRUCTURAL PLYWOOD JOINTS WITH 3X4 FLAT BLOCKING WHERE NOTED ON FRAMING PLANS AND WITH BLOCKING SAME SIZE AS STUDS AT WALLS.
14. CONSTRUCTION ADHESIVE: ASTM D3498 OR AFG-01.
15. CROSS BRIDGING BETWEEN JOISTS OR RAFTERS: SEE FRAMING PLANS AND TYPICAL DETAILS.
16. PROVIDE BLOCKING AT ALL CEILING LEVELS.
17. WHERE FRAMING HANGERS ARE REQUIRED AND ARE NOT SHOWN ON SECTIONS, DETAILS, OR PLANS, USE THE FOLLOWING SIMPSON HANGERS. SLOPE, SKEW, TURN IN FLANGES AND PROVIDE TOP FLANGE HANGERS AS REQUIRED.
    A. 2X & 3X MEMBERS: U HANGERS
    B. 4X MEMBERS: HU HANGERS
    C. 6X MEMBERS: HUTF HANGERS
    D. TJI MEMBERS: IUS HANGERS
    E. GLU LAM MEMBERS: LEG HANGERS
18. METAL HARDWARE: MANUFACTURED BY SIMPSON STRONG TIE COMPANY. INSTALL PER SIMPSON SPECIFICATIONS.
19. WOOD SYMBOLS:

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL NOTES

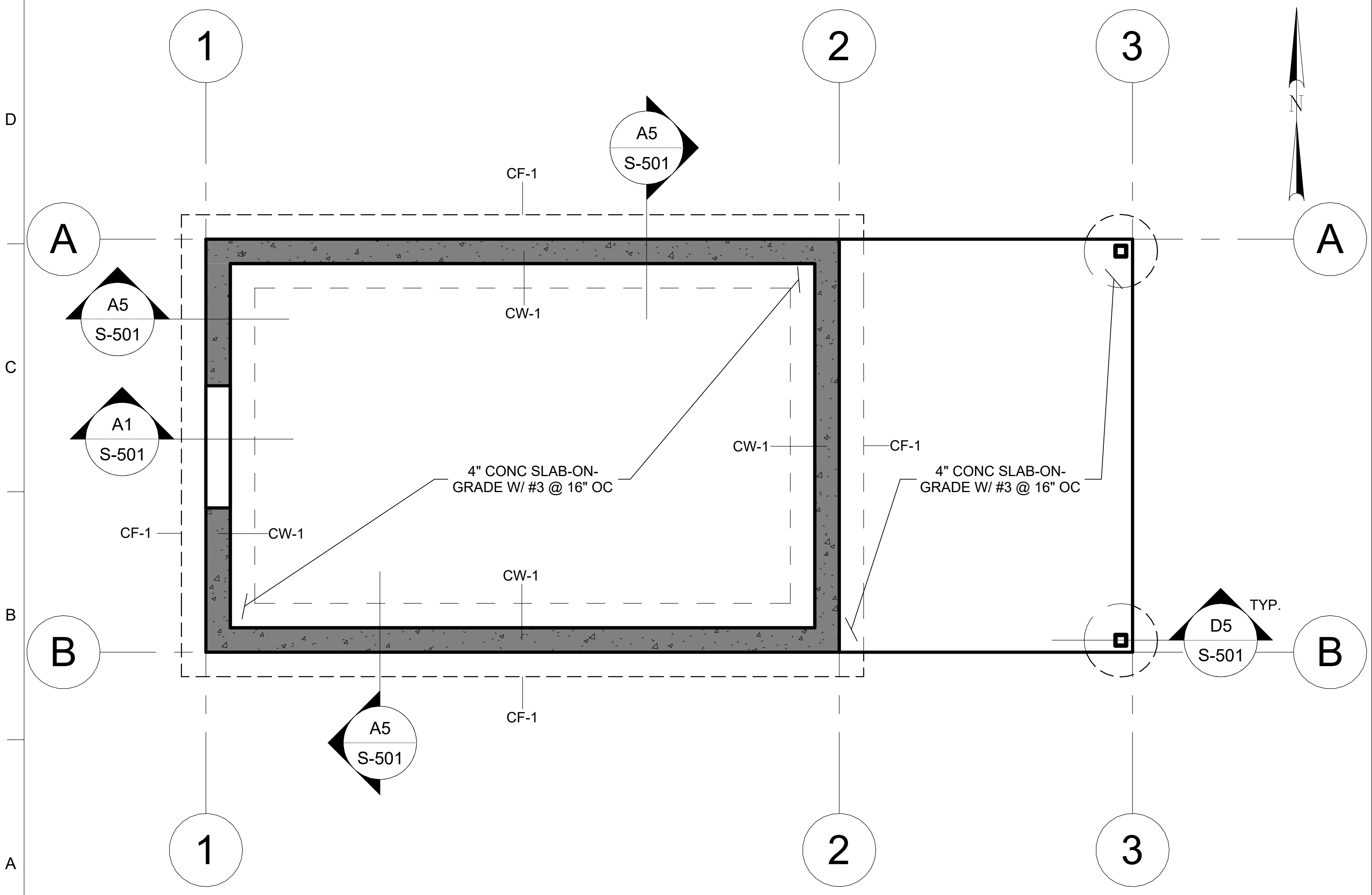
2202-061
PROJECT NUMBER
S-002
SHEET NO.

CONCRETE WALL SCHEDULE

MARK	THICKNESS	HORIZ REINF	VERT REINF	TYPE	REMARKS
CW-1	8"	(3) #4 BARS	#4 @ 16" OC	A	

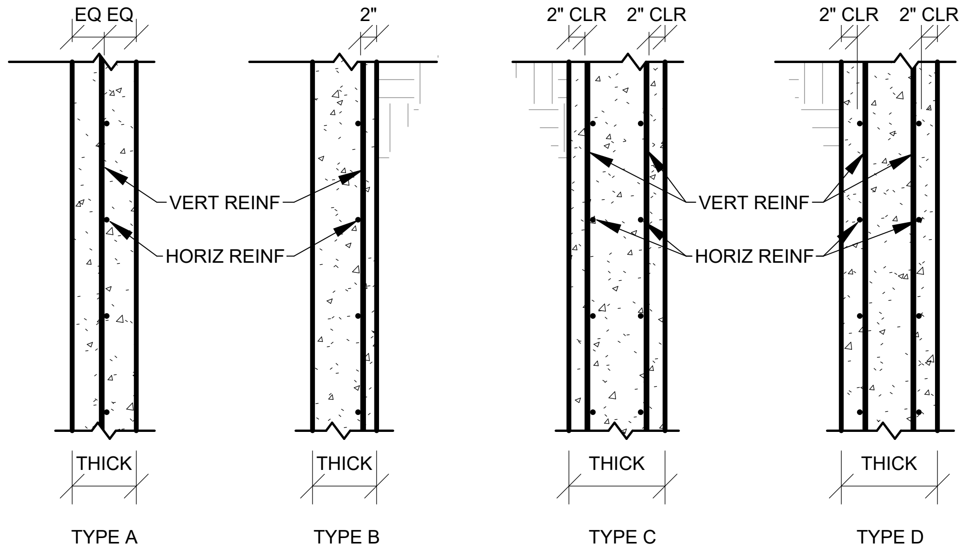
CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK	LONG REINF	PERP REINF	REMARKS
CF-1	2' - 0"	CONT.	1' - 0"	(3) #4 BARS	#4 @ 16" OC	



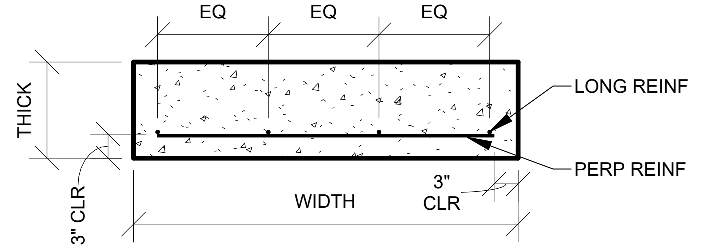
A1 FOUNDATION PLAN

SCALE 1/4" = 1'-0"



NOTES:
E.F. = EACH FACE
O.F. = OUTSIDE FACE (AGAINST SOIL)
I.F. = INSIDE FACE

CONCRETE WALLS (SECTION VIEW)



CONCRETE FOOTING

FOUNDATION NOTES

1. REFER TO TYPICAL NOTES, DETAILS, & SCHEDULES.
2. SEE CIVIL & ARCH PLANS FOR EXTERIOR CONCRETE WORK AND SITE GRADING.
3. SEE ARCHITECTURAL DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, DIMENSIONS, AND ELEVATIONS.
4. WHERE SLAB DEPRESSION IS INDICATED FOR TILE OR SIMILAR FLOORING, RECESS FLOOR 2".
5. PLACE STRUCTURAL FILL BENEATH FOOTINGS & BUILDING SLABS PER TYPICAL DETAIL "STRUCTURAL FILL PLACEMENT" AND PER EARTHWORK NOTES.
6. PROVIDE TEMPORARY SHORING UNTIL MAIN FLOOR FRAMING IS COMPLETE FOR ANY WALL OVER 6' TALL THAT RETAINS SOIL TO RESIST INDUCED LATERAL LOADS.

#8826183-2202
MATTHEW PAGE LAURENDEAU
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COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
FOUNDATION PLAN

2202-061
PROJECT NUMBER

S-101
SHEET NO.

MASONRY WALL SCHEDULE

MARK	THICK	HORIZ REINF	VERT REINF	GROUT
MW-1	8"	#4 @ 32" OC	#4 @ 48" OC	SOLID

SEE D5/S-701 FOR MASONRY WALL DETAIL.

MASONRY LINTEL SCHEDULE

MARK	WIDTH	HEIGHT	HORIZ REINF	STIRRUPS
ML-1	3' - 4"	8"	(1) #5 BAR	N/A

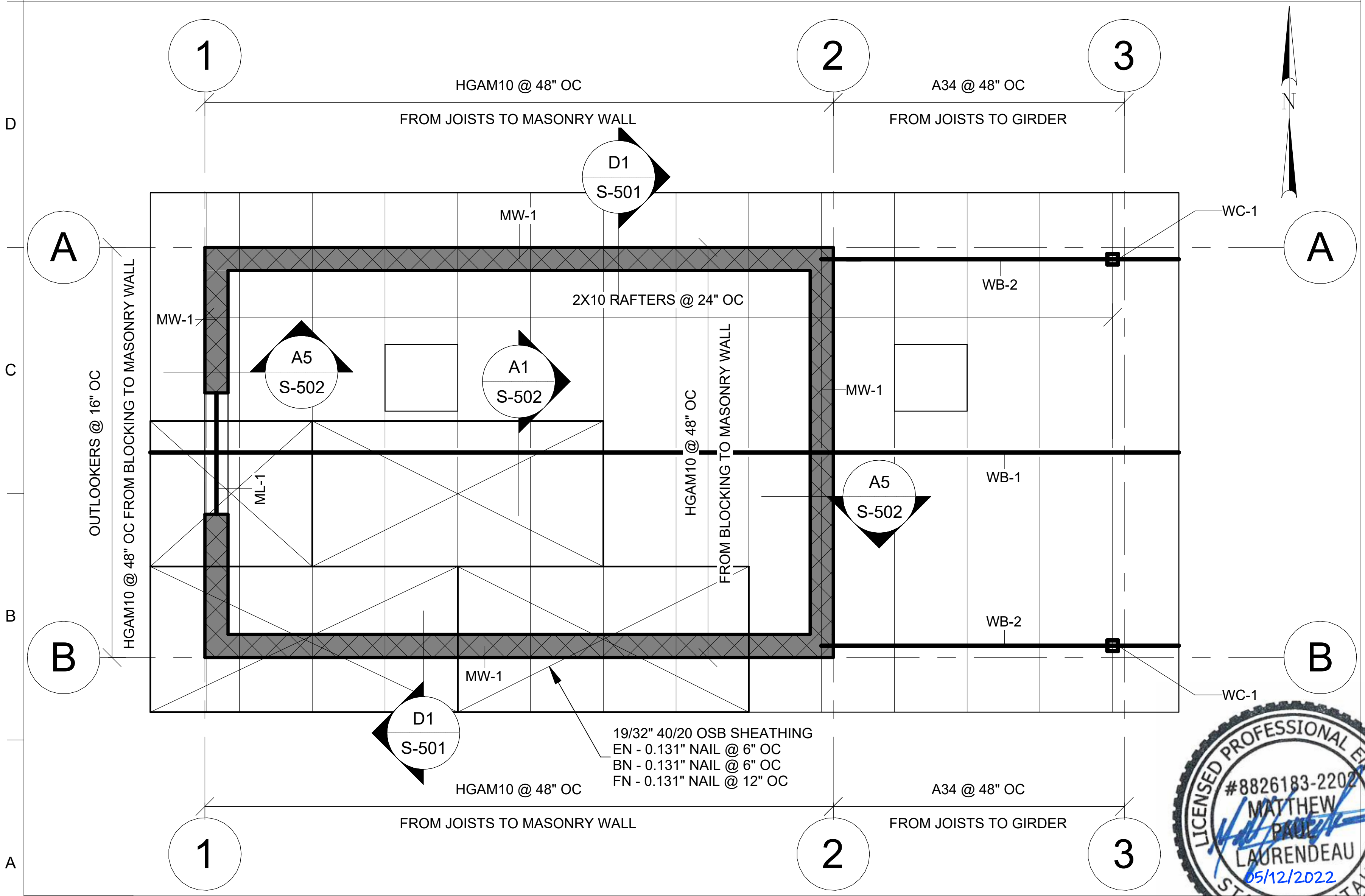
SEE A5/S-701 FOR MASONRY LINTEL DETAIL.

WOOD COLUMN SCHEDULE

MARK	MEMBER	SPECIES	COLUMN CAP	COLUMN BASE	REMARKS
WC-1	4x4	DF#2	SIMPSON CC44	(2) SIMPSON CB44	

WOOD BEAM SCHEDULE

MARK	SIZE	WOOD SPECIES	END SUPPORT(S)		REMARKS
			END 1	END 2	
WB-1	(2) 1 3/4x14	LVL	HGAM10 (TO MASONRY)	HGAM10 (TO MASONRY)	MUST BE CONTINUOUS
WB-2	(2) 2x10	DF-L #2	HGAM10 (TO MASONRY)	CC44 (TO COLUMN)	



A1 ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"

MASONRY WALL NOTES

1. PROVIDE (1) #5 VERTICAL REINFORCING BAR AT ALL CORNERS, ENDS OF WALLS AND JAMBS UNLESS NOTED OTHERWISE.
2. HORIZONTAL REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS AND AT INTERSECTING WALLS. PROVIDE CORNER BARS WITH THE REQUIRED LAP SPLICE LENGTH.
3. TERMINATE ALL HORIZONTAL REINFORCING BARS AT ENDS OF WALLS AND EDGES OF OPENINGS WITH A STANDARD HOOK AROUND VERTICAL REINFORCING BARS.
4. SEE PLANS, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS.
5. GROUT SOLID ALL CELLS BELOW GRADE, CELLS CONTAINING EMBEDS (HSA'S, DBA'S, ANCHOR BOLTS, ETC.), AND CELLS CONTAINING REINFORCING. CONSOLIDATE GROUT AS PER THE GENERAL STRUCTURAL NOTES.
6. HORIZONTAL WALL REINFORCING SHALL BE PLACED INSIDE THE VERTICALS OF MASONRY COLUMNS.
7. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.

MASONRY LINTEL NOTES

1. PLACE FIRST SET OF HORIZONTAL BARS IN BOTTOM COURSE.
2. PLACE SECOND SET OF HORIZONTAL BARS (IF REQ'D) IN TOP COURSE.
3. PLACE THIRD AND SUBSEQUENT SETS OF HORIZONTAL BARS (IF REQ'D) EQUALLY SPACED VERTICALLY IN LINTEL. WHEN AN EVEN COURSE IS NOT POSSIBLE, SHIFT BARS DOWN TO NEXT COURSE.
4. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS BEYOND EDGE OF OPENING. IF HORIZONTAL REINFORCING CANNOT BE EXTENDED 48 BAR DIAMETERS BEYOND EDGE OF OPENING, PROVIDE 90 DEGREE STANDARD HOOK.
5. GROUT MASONRY LINTELS MONOLITHICALLY WITH SUPPORT WALL OR COLUMN AT EACH END.
6. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY.
7. SPLICE BOTTOM BARS OVER SUPPORTS ONLY.
8. CONTINUE HORIZONTAL WALL REINFORCING THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN SAME LOCATION, REPLACE SMALLER BARS WITH LARGER BARS.
9. PROVIDE VERTICAL WALL REINF IN LINTELS OVER 4'-0" DEEP WITHOUT STIRRUPS.

FRAMING NOTES

1. REFER TO TYPICAL NOTES, DETAILS, & SCHEDULES.
2. SEE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT SHOWN.
3. DIMENSIONS FOR SHEARWALLS ARE TO EDGE OF SHEARWALL, NOT LOCATION OF HOLDOWN.
4. INSTALL ALL HANGERS, CLIPS, ANCHORS, AND OTHER HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
5. SHOP-FABRICATED WOOD TRUSSES SHALL BE DESIGNED FOR THE UNIFORM LOADS SPECIFIED IN THE SHOP-FABRICATED WOOD TRUSSES NOTES AND ANY CONCENTRATED GRAVITY AND LATERAL LOADS INDICATED ON THE STRUCTURAL FRAMING PLANS. NOTATION AND SYMBOLS FOR LOADS SHOWN ARE PER ASCE 7.
6. ALL TRUSSES SHALL BE DESIGNED TO TRANSFER AN OUT-OF-PLANE SERVICE SEISMIC OR WIND LOAD OF 0.7 KIPS (Fp) FROM THE HEEL TO THE DIAPHRAGM AT BEARING LOCATIONS.
7. FORM UP & FILL ALL BEAM & JOIST POCKETS W/ NON-SHRINK GROUT PRIOR TO PLACING FINISHES, UNO.
8. COORDINATE MECHANICAL UNIT WEIGHTS AND LOCATIONS WITH JOIST MANUFACTURER
9. PROVIDE BRIDGING AS REQ'D TO PREVENT CHORD BUCKLING.
10. PROVIDE TRUSS BLOCKING AT ALL BEARING WALLS WHERE TRUSS HEEL HEIGHT PROHIBITS USE OF 2X BLOCKING.
11. TRUSS BLOCKING SHALL BE ABLE TO RESIST A LATERAL LOAD (WIND OR SEISMIC) OF 250 PLF.
12. PROVIDE ATTIC VENTILATION AT TRUSS HEEL TO WALL CONNECTIONS BY OMITTING BLOCKING EVERY FOURTH TRUSS BAY. MAINTAIN A MINIMUM OF 3 CONSECUTIVE BAYS W/ BLOCKING.

#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022

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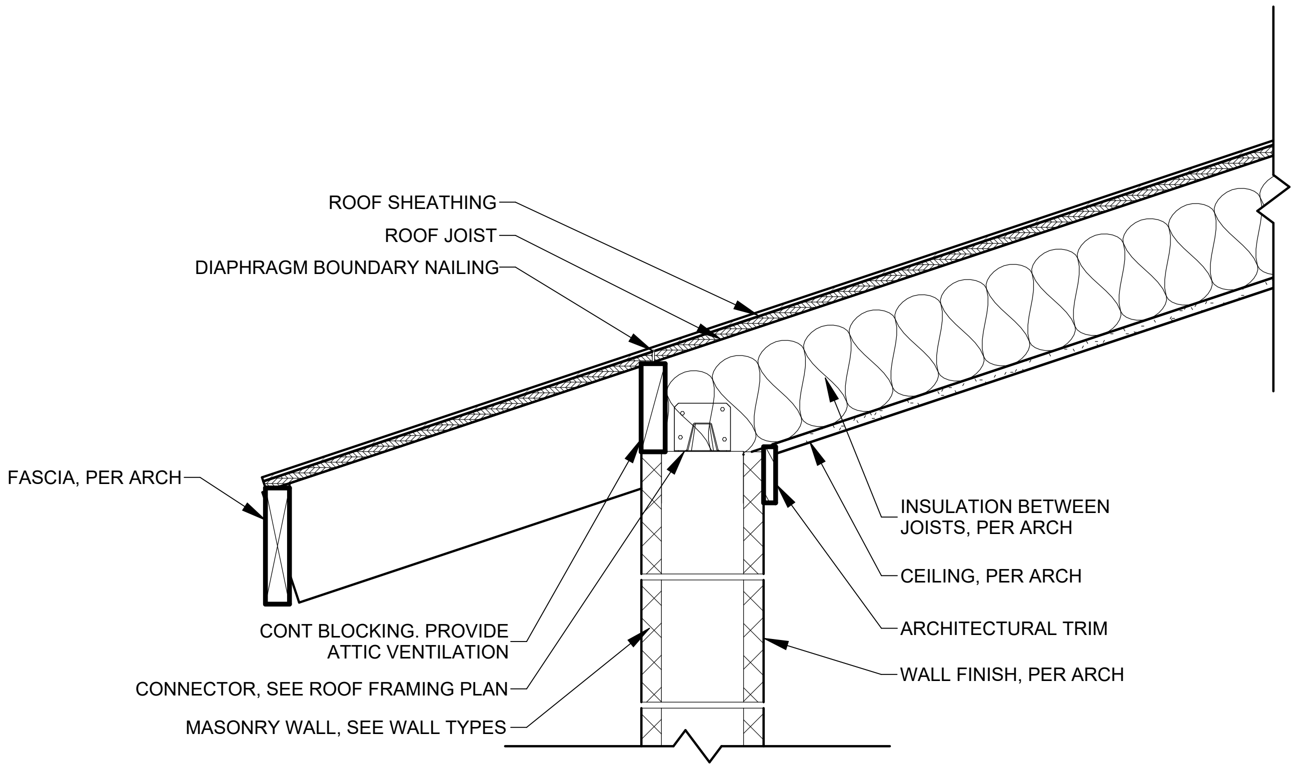
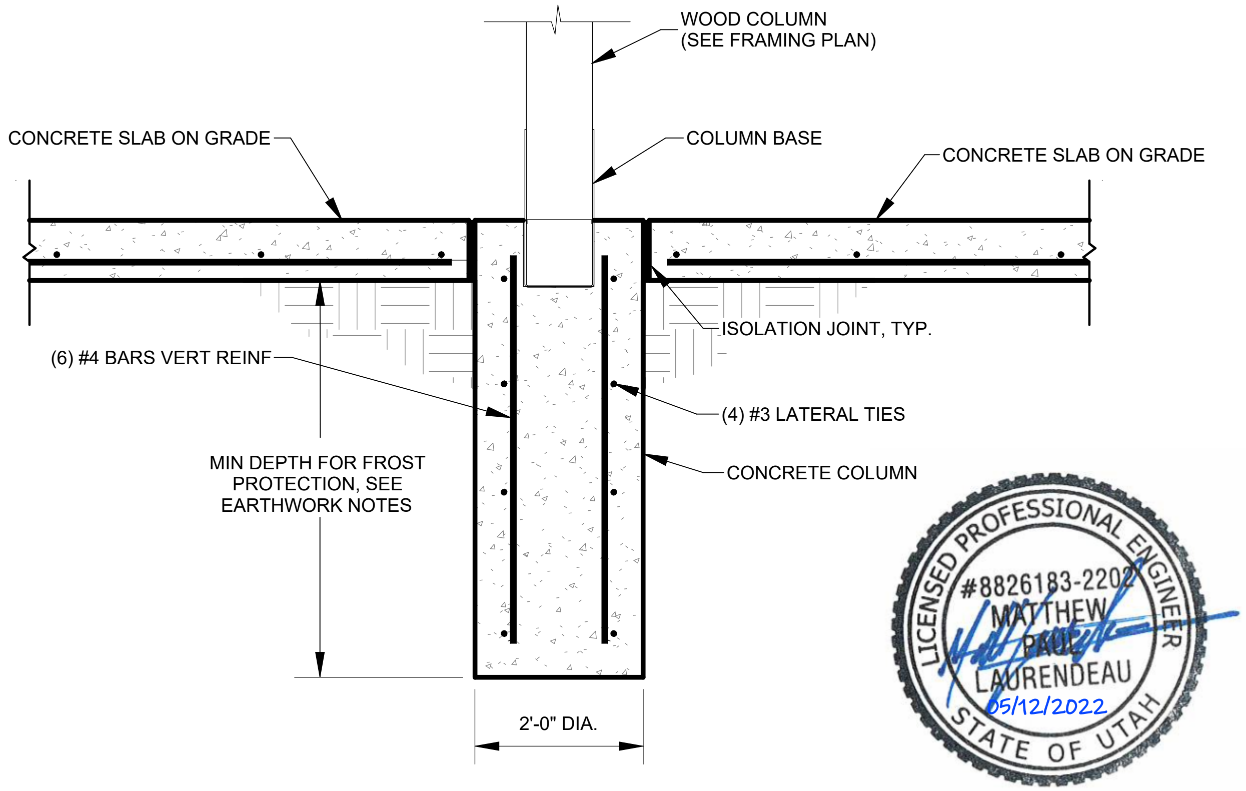
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
ROOF FRAMING PLAN

2202-061
PROJECT NUMBER

S-102
SHEET NO.


ROOF SHEATHING
ROOF JOIST
DIAPHRAGM BOUNDARY NAILING
FASCIA, PER ARCH
INSULATION BETWEEN JOISTS, PER ARCH
CEILING, PER ARCH
ARCHITECTURAL TRIM
WALL FINISH, PER ARCH
CONT BLOCKING. PROVIDE ATTIC VENTILATION
CONNECTOR, SEE ROOF FRAMING PLAN
MASONRY WALL, SEE WALL TYPES

D1	WOOD RAFTER ON MASONRY WALL
SCALE	NTS



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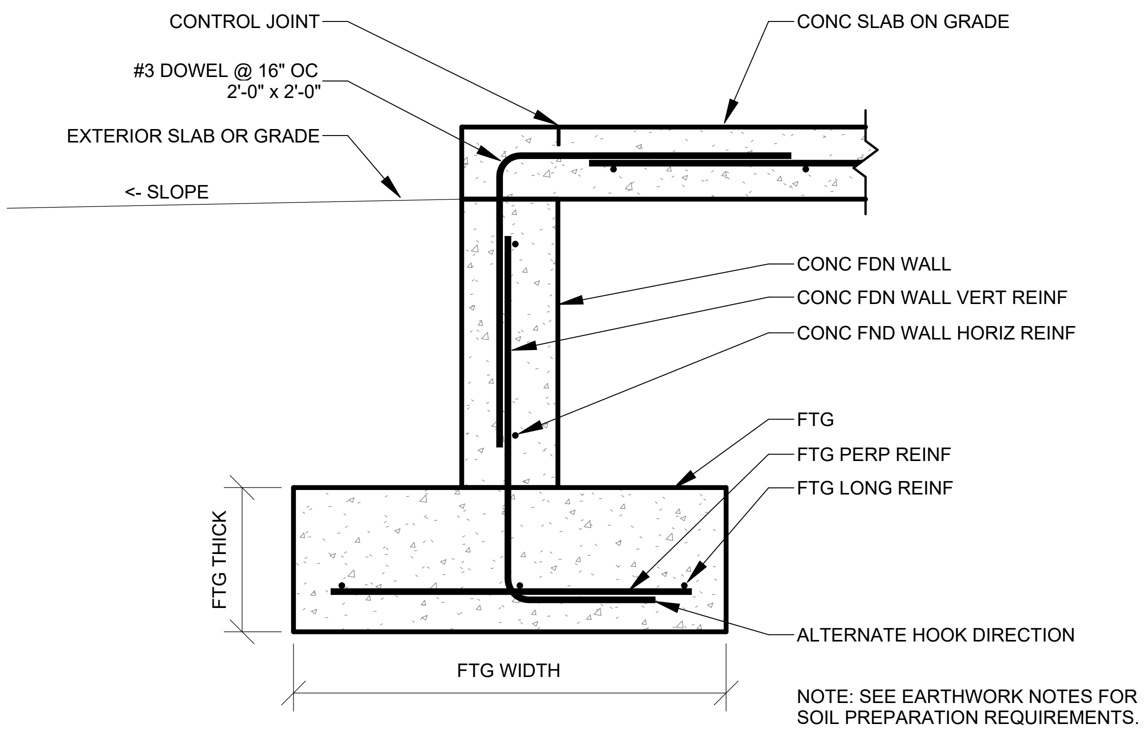
05/12/2022
STATE OF UTAH

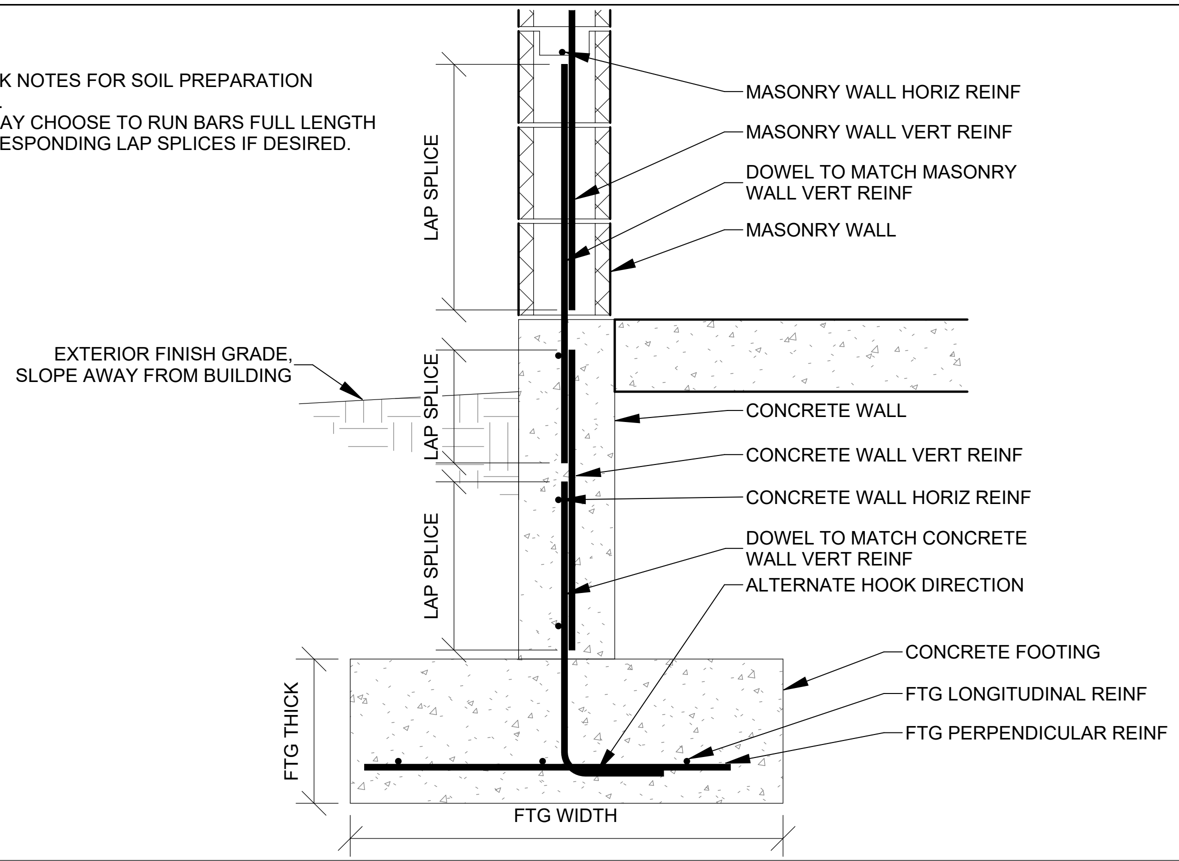
D5	WOOD COLUMN ON SONOTUBE PIER
SCALE	NTS



NOTE: SEE EARTHWORK NOTES FOR SOIL PREPARATION REQUIREMENTS.

A1	CONCRETE SLAB OVER FOUNDATION WALL @ DOOR OPENINGS
SCALE	NTS

NOTES:
1. SEE EARTHWORK NOTES FOR SOIL PREPARATION REQUIREMENTS.
2. CONTRACTOR MAY CHOOSE TO RUN BARS FULL LENGTH AND OMIT CORRESPONDING LAP SPLICES IF DESIRED.



A5	MASONRY WALL ON CONCRETE FOUNDATION WALL
SCALE	NTS

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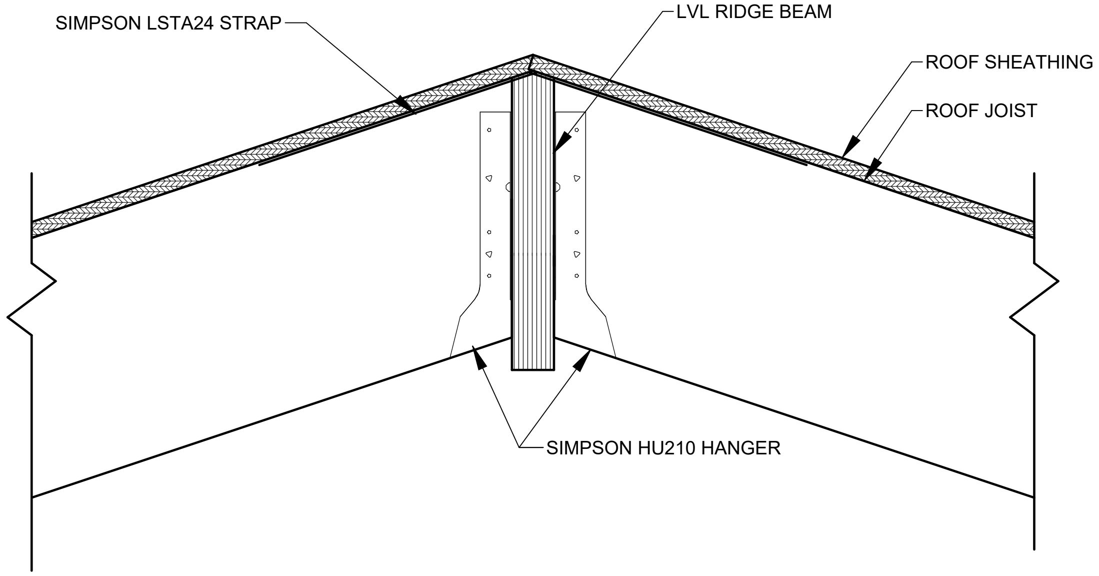
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN

STRUCTURAL DETAILS

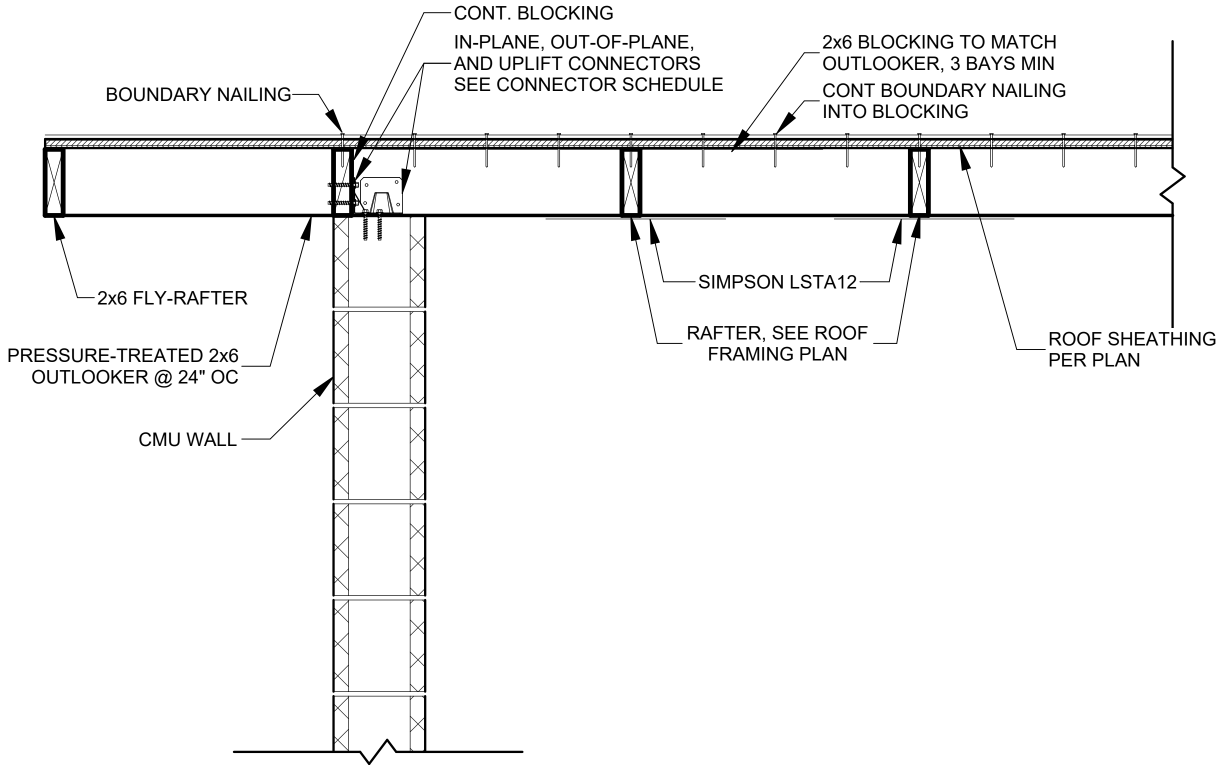
2202-061
PROJECT NUMBER

S-501
SHEET NO.



A1 DIMENSIONAL LUMBER ROOF JOIST TO RIDGE BEAM

SCALE NTS


CONT. BLOCKING
IN-PLANE, OUT-OF-PLANE, AND UPLIFT CONNECTORS SEE CONNECTOR SCHEDULE
2x6 BLOCKING TO MATCH OUTLOOKER, 3 BAYS MIN
CONT BOUNDARY NAILING INTO BLOCKING
BOUNDARY NAILING
2x6 FLY-RAFTER
PRESSURE-TREATED 2x6 OUTLOOKER @ 24" OC
CMU WALL
SIMPSON LSTA12
RAFTER, SEE ROOF FRAMING PLAN
ROOF SHEATHING PER PLAN

A5 OUTLOOKERS AT GABLE END OF MASONRY WALL

SCALE NTS

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

S-502
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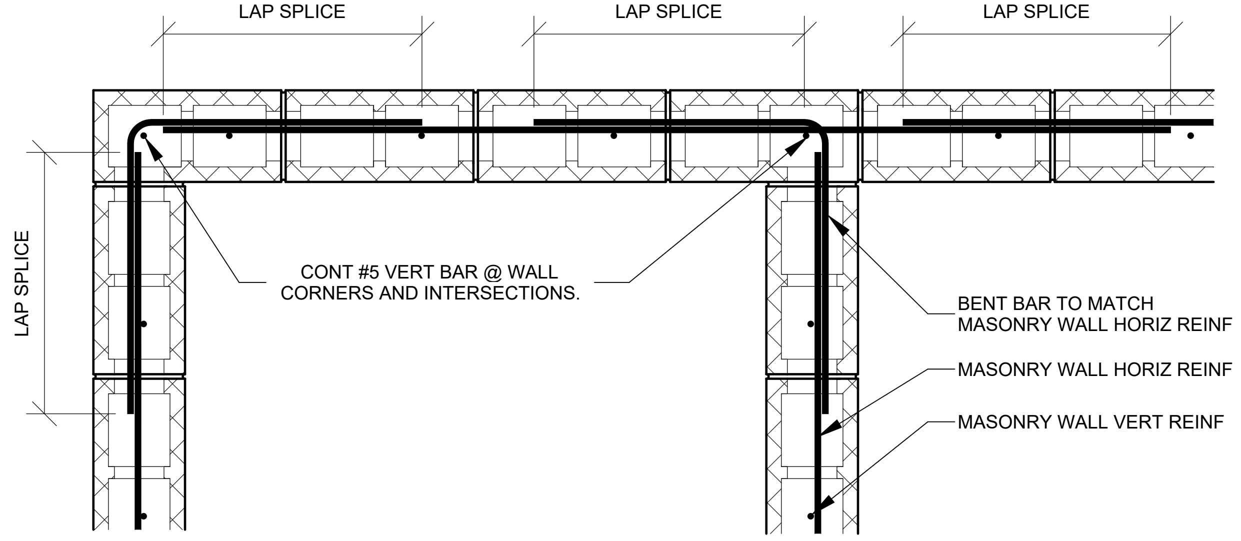
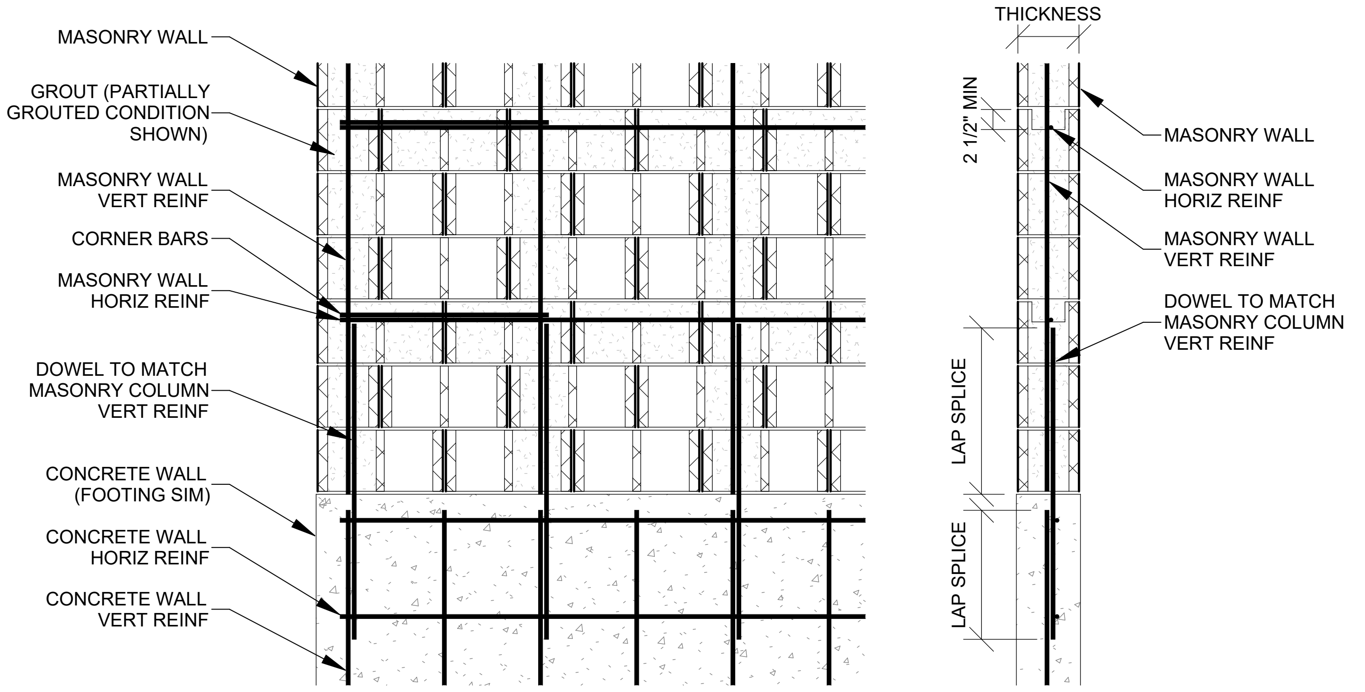

LAP SPLICE
LAP SPLICE
LAP SPLICE
LAP SPLICE
CONT #5 VERT BAR @ WALL CORNERS AND INTERSECTIONS.
BENT BAR TO MATCH MASONRY WALL HORIZ REINF
MASONRY WALL HORIZ REINF
MASONRY WALL VERT REINF

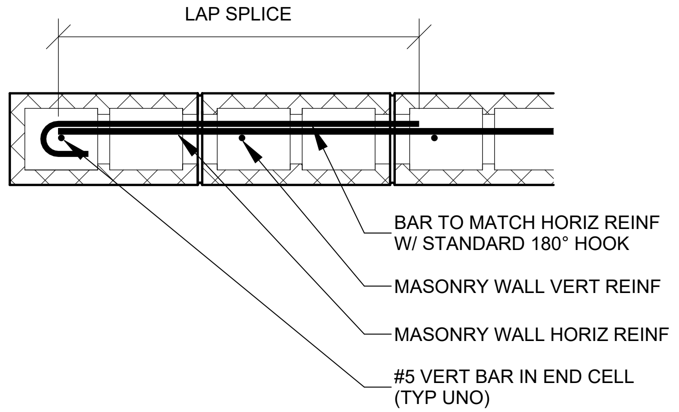
NOTES:
1. SEE MASONRY WALL SCHEDULE FOR REINF SIZE AND SPACING.
2. SEE MASONRY NOTES FOR LAP SPLICE LENGTHS.
3. SEE ARCHITECTURAL SHEETS FOR MASONRY UNIT SIZES.

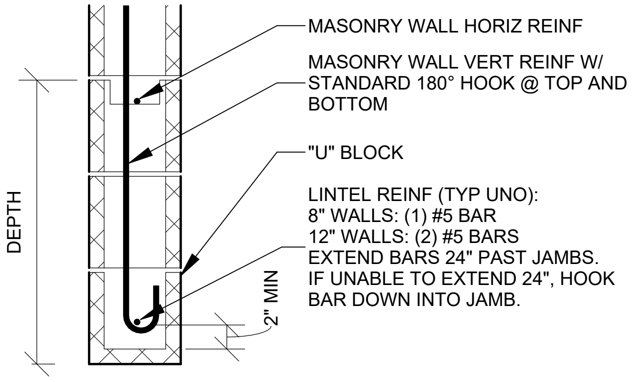
D1	MASONRY WALL REINFORCEMENT LAYOUT
SCALE	NTS



FRONT VIEW　SIDE VIEW

D5	MASONRY WALL
SCALE	NTS


LAP SPLICE
BAR TO MATCH HORIZ REINF W/ STANDARD 180° HOOK
MASONRY WALL VERT REINF
MASONRY WALL HORIZ REINF
#5 VERT BAR IN END CELL (TYP UNO)


MASONRY WALL HORIZ REINF
MASONRY WALL VERT REINF W/ STANDARD 180° HOOK @ TOP AND BOTTOM
"U" BLOCK
DEPTH
2" MIN

LINTEL REINF (TYP UNO):
8" WALLS: (1) #5 BAR
12" WALLS: (2) #5 BARS
EXTEND BARS 24" PAST JAMBS.
IF UNABLE TO EXTEND 24", HOOK BAR DOWN INTO JAMB.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
STATE OF UTAH

A1	MASONRY JAMB
SCALE	NTS

A5	MASONRY LINTEL
SCALE	NTS

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
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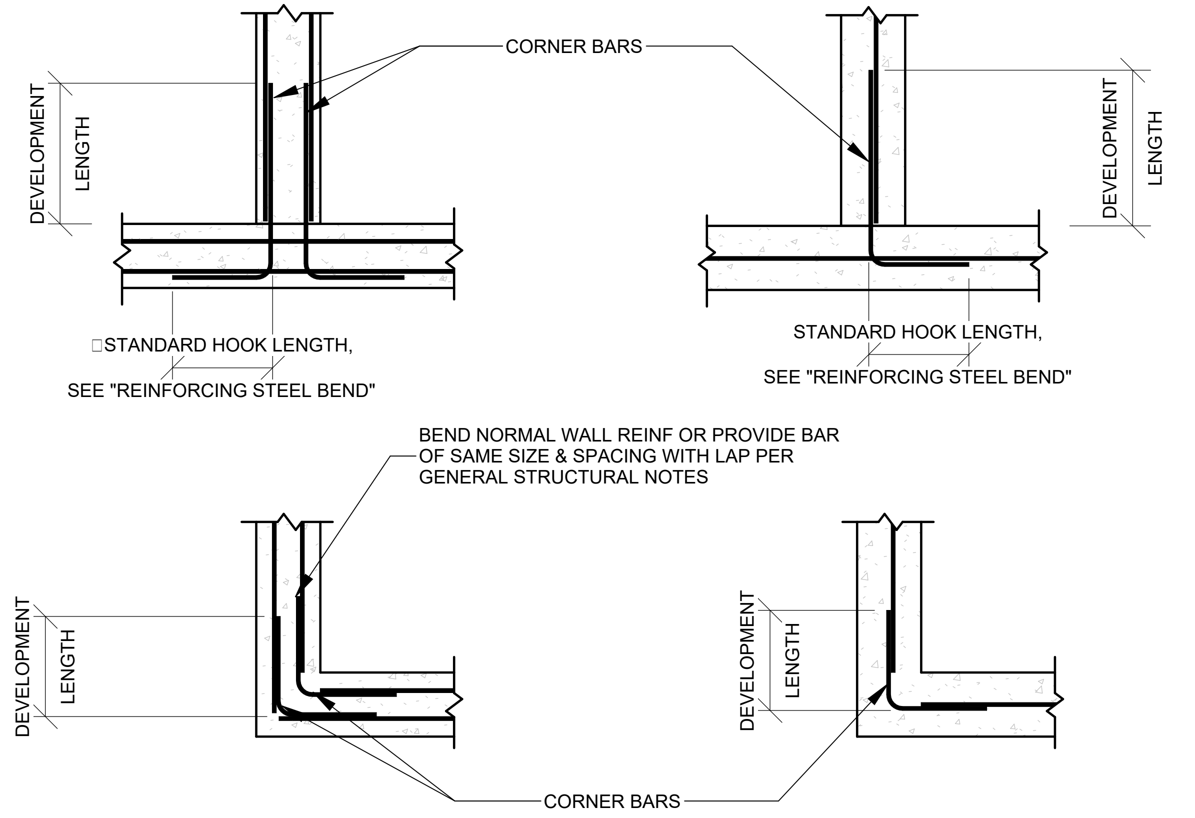
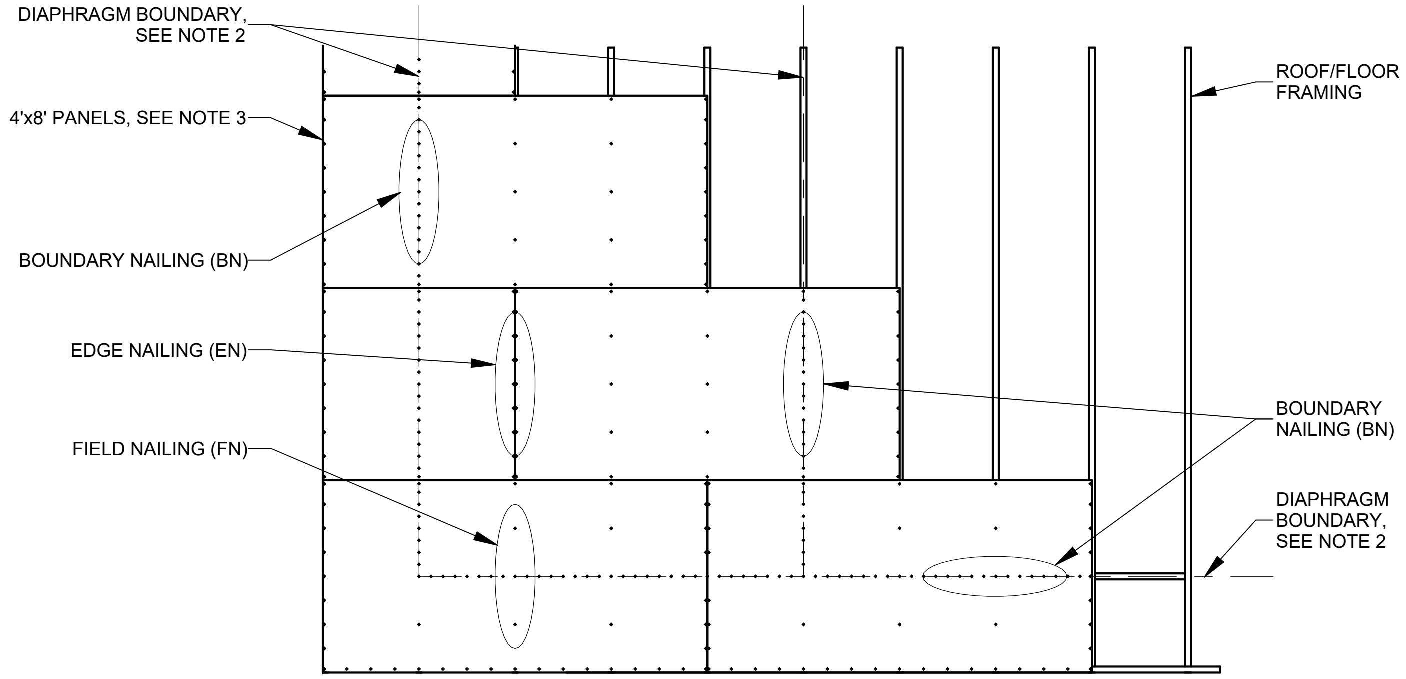
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
TYPICAL STRUCTURAL DETAILS

2202-061
PROJECT NUMBER
S-701
SHEET NO.


CORNER BARS
DEVELOPMENT LENGTH
STANDARD HOOK LENGTH, SEE "REINFORCING STEEL BEND"
DEVELOPMENT LENGTH
STANDARD HOOK LENGTH, SEE "REINFORCING STEEL BEND"
BEND NORMAL WALL REINF OR PROVIDE BAR OF SAME SIZE & SPACING WITH LAP PER GENERAL STRUCTURAL NOTES
DEVELOPMENT LENGTH
DEVELOPMENT LENGTH
CORNER BARS

D1 REINFORCEMENT AT TYPICAL WALL CORNERS & INTERSECTION

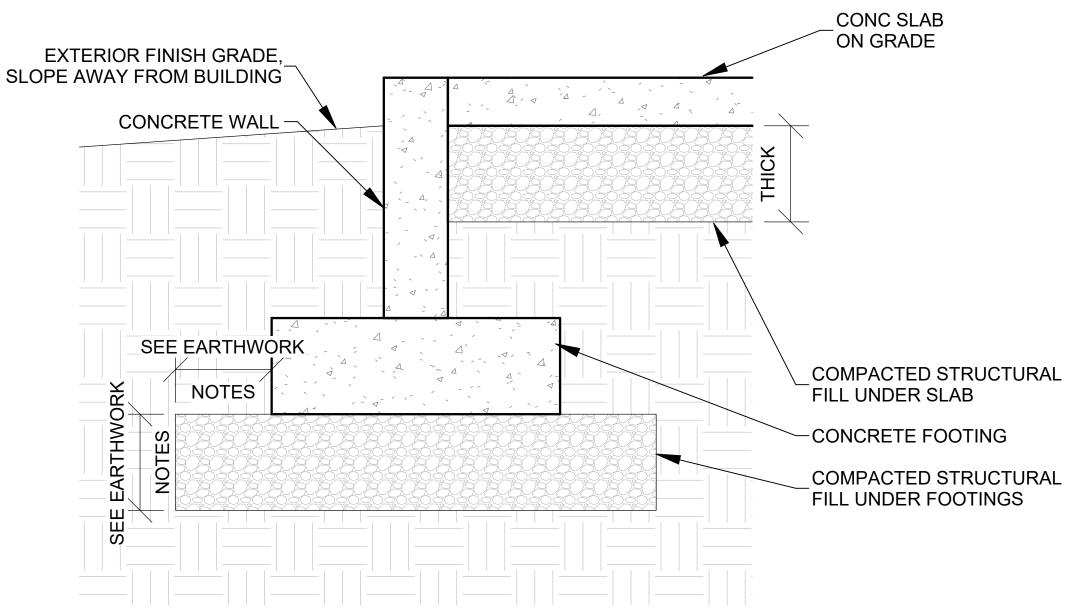
SCALE NTS



NOTE:
1. SEE STRUCTURAL FRAMING PLANS FOR SHEATHING TYPE AND THICKNESS, BOUNDARY NAILING, EDGE NAILING, AND FIELD NAILING.
2. BOUNDARIES EXIST ALONG ALL SHEAR WALLS AND ALONG ALL DRAG ELEMENTS.
3. SHEATHING ORIENTATION: LONG DIRECTION (STRONG AXIS) PERPENDICULAR TO FRAMING & SHORT DIRECTION (WEAK AXIS) PARALLEL TO FRAMING.

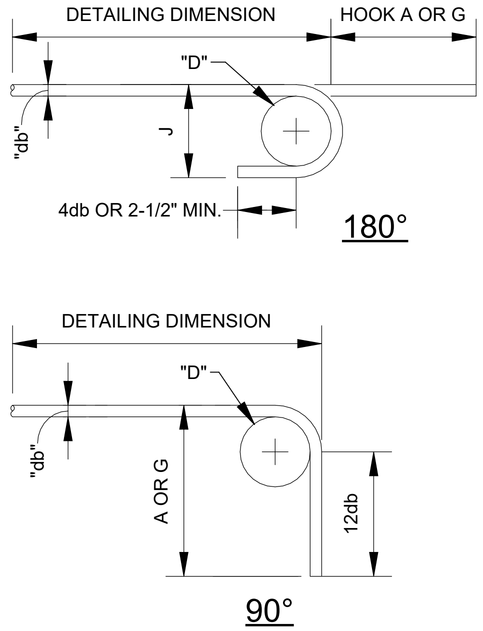
D5 DIAPHRAGM NAILING - UNBLOCKED

SCALE NTS


CONC SLAB ON GRADE
EXTERIOR FINISH GRADE, SLOPE AWAY FROM BUILDING
CONCRETE WALL
THICK
SEE EARTHWORK NOTES
COMPACTED STRUCTURAL FILL UNDER SLAB
CONCRETE FOOTING
SEE EARTHWORK NOTES
COMPACTED STRUCTURAL FILL UNDER FOOTINGS

A1 STRUCTURAL FILL PLACEMENT

SCALE NTS



END HOOKS

BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	1'-0"
#7	5-1/4"	10"	7"	1'-2"
#8	6	11"	8"	1'-4"
#9	9-1/2"	1'-3"	11-3/4"	1'-7"
#10	10-3/4"	1'-5"	1' 1-1/4"	1'-10"
#11	12"	1'-7"	1' 2-3/4"	2'-0"
#14	18-1/4"	2'-3"	1' 9-3/4"	2'-7"
#18	24"	3'-0"	2' 4-1/2"	3'-5"

D = FINISHED INSIDE BEND DIA.
db = NOMINAL BAR DIAMETER
Min. D = 6db FOR #3 THROUGH #8
= 8db FOR #9, #10, AND # 11
= 10db FOR #14, AND #18

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A5 REINFORCING STEEL BEND

SCALE NTS

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
TYPICAL STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

S-702
SHEET NO.

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

1. SUBMITTALS
   - A. PRODUCT DATA
   - B. DESIGN DATA
   - C. CONCRETE PLACEMENT PLAN
     - a. SUBMIT MINIMUM 48 HOURS PRIOR TO EACH PLACEMENT.
   - D. BATCH TICKET
   - E. WARRANTY
2. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO ACI 318.
   - B. COMPLY WITH ACI 305.1 WHEN PLACING CONCRETE DURING HOT WEATHER.
   - C. COMPLY WITH ACI 306.1 WHEN PLACING CONCRETE DURING COLD WEATHER.
   - D. ACQUIRE CEMENT AND AGGREGATE FROM ONE SOURCE FOR WORK.
3. WARRANTY
   - A. PROVIDE WRITTEN GUARANTEE TO PROMPTLY REMOVE AND/OR REPAIR DEFECTIVE CONCRETE FOR TWO YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION.
4. MATERIALS
   - A. CONCRETE:
     - a. CEMENT:
       - PORTLAND CEMENT COMPLYING WITH ASTM C150.
       - USE TYPE II - MODERATE SULFATE RESISTANT OR TYPE II-V BLEND FOR CLASS A THROUGH C CONCRETE.
       - USE TYPE V - HIGH SULFATE RESISTANT FOR CLASS S2 AND S3 CONCRETE. MEET OR EXCEED SULFATE EXPOSURE CLASS S2 SEVERE IN ACCORDANCE WITH TABLES 4.2.1 AND 4.3.1 OF ACI 318.
     - b. COARSE AGGREGATE:
       - COMPLY WITH ASTM C33.
       - MAXIMUM SIZE: ACCORDING TO ACI 318.
         1. NOT LARGER THAN 1/5 NARROWEST DIMENSION BETWEEN SIDES OF FORM.
         2. NOT LARGER THAN 1/3 DEPTH OF SLAB.
         3. NOT LARGER THAN ¾ MINIMUM CLEAR DISTANCE BETWEEN REINFORCING BAR OR BETWEEN REINFORCING BARS AND FORMS, WHICHEVER IS SMALLEST.
     - c. FINE AGGREGATE:
       - COMPLY WITH ASTM C33.
       - WATER:
         1. COMPLY WITH ACI 318.
         2. POTABLE.
   - B. ADMIXTURES:
     - a. DO NOT USE CALCIUM CHLORIDE OR ADMIXTURES THAT CONTAIN CALCIUM CHLORIDE.
     - b. AIR ENTRAINMENT: COMPLY WITH ASTM C260. USE PRE-MEASURED ADMIXTURES FOR AIR ENTRAINMENT ADDED ON SITE.
     - c. CHEMICAL: SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
       - COMPLY WITH ASTM C494.
       - TYPE A - WATER REDUCING. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 5 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - TYPE D - WATER REDUCING AND RETARDING. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 5 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - TYPE F - WATER REDUCING, HIGH RANGE. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 9 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - SET RETARDING ADMIXTURES MAY BE USED WHEN HAUL TIME WILL BE EXCEEDED. ESTABLISH EFFECTIVE LIFE OF CONCRETE MIX BY TRIAL BATCH.
     - d. FLY ASH: COMPLY WITH ASTM C618, CLASS F, AND NOT EXCEED 3 PERCENT LOSS ON IGNITION AND DO NOT EXCEED 15 PERCENT CAO CONTENT. MAY BE USED TO REPLACE CEMENT. LIMIT CONTENT OF FLY ASH TO 30 PERCENT OF REQUIRED CEMENT CONTENT BY WEIGHT. SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
     - e. PLASTICIZING: COMPLY WITH ASTM C1017 AND SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
   - C. FIBROUS REINFORCING: WHERE INDICATED ON DRAWINGS. ASTM C1116, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED, MD GRADED, FIBERS CONTAINING NO REPROCESSED OLEFIN MATERIALS. MINIMUM APPLICATION RATE SHALL BE 4.0 POUNDS PER CUBIC YARD UNLESS NOTED OTHERWISE. MANUFACTURED BY FIBERMESH OR EQUAL.
5. CONCRETE MIX
   - A. LEAN CONCRETE FILL
     - a. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c): 1,500 PSI.
     - b. CEMENT: ASTM C-150, TYPE II.
   - B. STRUCTURAL CONCRETE
     - a. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c):
       - FOOTINGS: 4,000 PSI.
       - WALLS: 4,000 PSI.
       - SLABS ON GRADE: 4,000 PSI.
     - b. CEMENT: ASTM C-150, TYPE II.
     - c. CONCRETE EXPOSED TO EXTERIOR CONDITIONS: AIR ENTRAINED TO 5%-7% AIR CONTENT.
6. EXAMINATION
   - A. VERIFY REQUIREMENTS FOR CONCRETE COVER OVER REINFORCEMENT.
   - B. VERIFY THAT ANCHORS, SEATS, PLATES, REINFORCEMENT, AND OTHER ITEMS TO BE CAST INTO CONCRETE ARE ACCURATELY PLACED, POSITIONED SECURELY, AND WILL NOT INTERFERE WITH PLACING CONCRETE.
7. PREPARATION
   - A. PREVIOUSLY PLACED CONCRETE:
     - a. PREPARE PREVIOUSLY PLACED CONCRETE BY CLEANING WITH STEEL BRUSH AND APPLYING BONDING AGENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
     - b. REMOVE LAITANCE, COATINGS, AND UNSOUND MATERIALS.
   - B. IN LOCATIONS WHERE NEW CONCRETE IS DOWELED TO EXISTING WORK, DRILL HOLES IN EXISTING CONCRETE, INSERT STEEL DOWELS, AND PACK SOLID WITH EPOXY.
   - C. IF CONCRETE SUBGRADE IS DRY, DAMPEN WITH WATER PRIOR TO PLACING CONCRETE. KEEP SUBGRADE FIRM AND FREE FROM EXCESS WATER.
   - D. REMOVE DEBRIS AND ICE FROM FORMWORK, REINFORCEMENT, AND CONCRETE SUBSTRATES.
   - E. REMOVE WATER FROM AREAS RECEIVING CONCRETE BEFORE CONCRETE IS PLACED.
8. INSTALLATION
   - A. PLACING CONCRETE:
     - a. PLACE CONCRETE ACCORDING TO ACI 318.
     - b. NOTIFY ENGINEER MINIMUM 48 HOURS PRIOR TO COMMENCEMENT OF OPERATIONS.
     - c. ENSURE THAT REINFORCEMENT, INSERTS, EMBEDDED PARTS, FORMED EXPANSION AND CONTRACTION JOINTS, AND OTHER MATERIALS ARE NOT DISTURBED DURING CONCRETE PLACEMENT.
     - d. JOINT FILLER:
       - SEPARATE SLABS ON GRADE FROM VERTICAL SURFACES WITH 1/2-INCH-THICK JOINT FILLER OR 30 POUND FELT.
       - PLACE JOINT FILLER IN SLAB PATTERN PLACEMENT SEQUENCE; SET TOP TO REQUIRED ELEVATIONS; SECURE TO RESIST MOVEMENT BY WET CONCRETE.
       - EXTEND JOINT FILLER FROM BOTTOM OF SLAB TO WITHIN 1/2 INCH OF FINISHED SLAB SURFACE, UNLESS INDICATED OTHERWISE ON DRAWINGS. APPLY SEALANT IN JOINTS WHERE INDICATED ON DRAWINGS.
     - e. CONVEY CONCRETE FROM MIXER TO PLACE OF FINAL POSITION BY METHODS THAT WILL PREVENT SEGREGATION OF MIX OR LOSS OF MATERIALS. USE TREMIE OR OTHER ACCEPTED METHOD. DO NOT ALLOW CONCRETE TO FREE FALL MORE THAN 5 FEET, OR LESS IF SEGREGATION OF MIX OCCURS.
     - f. AFTER CONCRETE HAS BEEN CONVEYED FROM MIXER, DO NOT ADD WATER. ADDING WATER TO PLACE CONCRETE WILL BE CAUSE FOR REJECTION.
     - g. PLACE CONCRETE IN CONTINUOUS OPERATION FOR EACH PANEL OR SECTION AS DETERMINED BY PREDETERMINED JOINTS.
     - h. CONSOLIDATE CONCRETE DURING PLACEMENT USING HAND TOOLS, MECHANICAL VIBRATORS, VIBRATING SCREEDS, AND FINISHING MACHINES IN ACCORDANCE WITH ACI 309R. CONSOLIDATION TECHNIQUES WILL BE REVIEWED AND ACCEPTED WITH CONCRETE PLACEMENT PLAN.
       - DO NOT USE VIBRATOR TO MOVE CONCRETE HORIZONTALLY.
       - DO NOT VIBRATE HIGH SLUMP (GREATER THAN 6 INCHES) CONCRETE, UNLESS ACCEPTED BY ENGINEER.
       - DO NOT OVER VIBRATE CONCRETE.
       - PROVIDE SUFFICIENT VIBRATORS TO CONSOLIDATE CONCRETE WITHIN 15 MINUTES AFTER PLACEMENT OF CONCRETE IN FORMS.
       - PROVIDE AT LEAST TWO VIBRATORS FOR EACH CONCRETE PLACEMENT GREATER THAN 25 CUBIC YARDS.
       - DO NOT ATTACH VIBRATORS TO OR AGAINST FORMS OR REINFORCING STEEL.
       - DO NOT ALLOW VIBRATORS TO PENETRATE CONCRETE LAYERS THAT HAVE TAKEN INITIAL SET.
       - MAINTAIN RECORDS OF CONCRETE PLACEMENT, INCLUDING DATE, LOCATION, QUANTITY, AIR TEMPERATURE, AND TEST SAMPLES TAKEN.
       - PLACE CONCRETE CONTINUOUSLY BETWEEN PREDETERMINED EXPANSION, CONTROL, AND CONSTRUCTION JOINTS.
       - DO NOT INTERRUPT SUCCESSIVE PLACEMENT AND DO NOT PERMIT COLD JOINTS TO OCCUR.
       - PLACE FLOOR SLABS WITH SAW-CUT PATTERN INDICATED ON DRAWINGS.
       - SAW-CUT JOINTS:
         1. SAW-CUT JOINTS WITHIN 12 HOURS AFTER PLACING.
         2. USE 3/16 INCH THICK BLADE.
         3. CUT 1/4 DEPTH OF SLAB THICKNESS.
       - SCREEDING:
         1. SCREED FLOORS AND SLABS ON GRADE LEVEL, UNLESS INDICATED OTHERWISE ON DRAWINGS.
         2. MINIMUM SURFACE FLATNESS: MINIMUM FF 25.
         3. MINIMUM SURFACE LEVELNESS: MINIMUM FL 20.
   - B. CONCRETE FINISHING:
     - a. STEEL TROWEL INTERIOR SURFACES. CONSOLIDATE CONCRETE SURFACE BY FINAL HAND TROWELING OPERATION, FREE OF TROWEL MARKS, UNIFORM IN TEXTURE AND APPEARANCE.
     - b. IN AREAS WITH FLOOR DRAINS, MAINTAIN FLOOR ELEVATION AT WALLS AND PITCH SURFACES UNIFORMLY TO DRAINS AT 1/8 INCH PER FOOT NOMINAL UNLESS INDICATED OTHERWISE ON DRAWINGS.
     - c. PROVIDE NON-SLIP BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS AND SLABS. SLIGHTLY ROUGHEN CONCRETE SURFACE BY GROOMING WITH FIBER-BRISTLE BROOM.
     - d. DO NOT USE STEEL TROWELS OR FRESNO TO FINISH EXTERIOR CONCRETE.
     - e. DO NOT USE JITTER BUGS FOR CONCRETE CONSOLIDATION.
   - C. CURING AND PROTECTION:
     - a. IMMEDIATELY AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL INJURY.
     - b. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR PERIOD AS NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
     - c. CURE HORIZONTAL CONCRETE SURFACES ACCORDING TO ACI 308.1 USING ONE OF FOLLOWING METHODS:
       - PONDING: MAINTAIN 100 PERCENT COVERAGE OF WATER OVER SLAB CONTINUOUSLY FOR SEVEN DAYS.
       - SPRAYING: SPRAY WATER OVER SLAB AND MAINTAIN WET FOR SEVEN DAYS.
       - ABSORPTIVE MATT: COVER SLAB WITH SATURATED MAT LAPPING ENDS AND SIDES. MAINTAIN SATURATED CONDITION FOR SEVEN DAYS.
       - MEMBRANE CURING COMPOUND: APPLY CURING COMPOUND IN TWO COATS WITH SECOND COAT APPLIED AT RIGHT ANGLES TO FIRST.
       - POLYETHYLENE FILM: SPREAD OVER SLAB, LAP EDGES AND SIDES, SEAL WITH PRESSURE SENSITIVE TAPE AND COVER WITH PLYWOOD AS NECESSARY TO SECURE FILM. MAINTAIN IN PLACE FOR SEVEN DAYS.
     - d. CURE VERTICAL SURFACES ACCORDING TO ACI 308.1 USING ONE OF FOLLOWING METHODS:
       - SPRAYING: SPRAY WATER OVER SURFACE AND MAINTAIN WET FOR SEVEN DAYS.
       - MEMBRANE CURING COMPOUND: APPLY CURING COMPOUND IN TWO COATS WITH SECOND COAT APPLIED AT RIGHT ANGLES TO FIRST.
     - e. PROVIDE ADDITIONAL PROTECTION AS NECESSARY TO PREVENT FREEZING DURING COLD WEATHER.
     - f. USE CURING METHOD WHICH IS COMPATIBLE WITH FINISH COAT OF CONCRETE SURFACE.

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER
S-801
SHEET NO.

SECTION 03 20 00
CONCRETE REINFORCING

1. SUBMITTALS
   A. SHOP DRAWINGS:
      A. INDICATE BAR SIZES, SPACING, LOCATIONS, SPLICE LOCATIONS, AND QUANTITIES OF REINFORCING STEEL AND WELDED WIRE FABRIC.
      B. INDICATE BENDING AND CUTTING SCHEDULES.
      C. INDICATE SUPPORTING AND SPACING DEVICES.
   B. MANUFACTURER'S MATERIAL CERTIFICATE: CERTIFY THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
2. QUALITY ASSURANCE
   A. PERFORM WORK ACCORDING TO ACI 318.
   B. PREPARE SHOP DRAWINGS ACCORDING TO ACI SP-66.
3. DELIVERY, STORAGE, AND HANDLING
   A. STORE MATERIALS ON SKIDS ABOVE GRADE. MEET ADDITIONAL STORAGE REQUIREMENTS ACCORDING TO MANUFACTURER INSTRUCTIONS.
   B. PROTECTION:
      A. PROTECT MATERIALS FROM MOISTURE BY STORING IN CLEAN, DRY LOCATION REMOTE FROM CONSTRUCTION OPERATIONS AREAS.
      B. PROVIDE ADDITIONAL PROTECTION ACCORDING TO MANUFACTURER INSTRUCTIONS.
   C. EXISTING CONDITIONS
      A. VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION.
4. PRODUCTS
   A. REINFORCEMENT
      A. REINFORCING STEEL:
         - COMPLY WITH ASTM A615.
         - YIELD STRENGTH: 60 KSI.
         - BILLET BARS: DEFORMED, UNLES INDICATED OTHERWISE ON DRAWINGS.
         - FINISH: UNCOATED.
   B. FABRICATION
      A. FABRICATE CONCRETE REINFORCEMENT ACCORDING TO ACI 318.
      B. FORM REINFORCEMENT BENDS AND HOOKS WITH STANDARD DIAMETERS AND EXTENSION LENGTHS ACCORDING TO ACI 318.
      C. FABRICATE COLUMN REINFORCEMENT WITH OFFSET BENDS AT REINFORCEMENT SPLICES.
      D. WHERE REQUIRED, SHOP WELD REINFORCEMENT ACCORDING TO AWS D1.4. WELDING OF REINFORCEMENT NOT PERMITTED UNLESS SPECIFICALLY DETAILED ON DRAWINGS OR ACCEPTED IN WRITING BY ENGINEER.
      E. SPLICING:
         - IF NOT INDICATED ON DRAWINGS, LOCATE REINFORCEMENT SPLICES AT POINT OF MINIMUM STRESS AND STAGGER SPLICE LOCATIONS OF ADJACENT PARALLEL BARS.
         - FOR SPLICING DEVICES, FOLLOW MANUFACTURER'S INSTRUCTIONS.
   C. ACCESSORY MATERIALS
      A. TIE WIRE: MINIMUM 16 GAGE, ANNEALED TYPE.
      B. CHAIRS, BOLSTERS, BAR SUPPORTS, AND SPACERS:
         - SIZE AND SHAPE: TO STRENGTHEN AND SUPPORT REINFORCEMENT DURING CONCRETE PLACEMENT CONDITIONS.
         - WHERE APPLICABLE, FURNISH LOAD-BEARING PAD ON BOTTOM TO PREVENT VAPOR RETARDER PUNCTURE.
      C. SPECIAL CHAIRS, BOLSTERS, BAR SUPPORTS, AND SPACERS ADJACENT TO WEATHER-EXPOSED CONCRETE SURFACES:
         - MATERIAL: PLASTIC-TIPPED STEEL.
         - SIZE AND SHAPE: TO MEET PROJECT CONDITIONS.
5. EXECUTION
   A. INSTALLATION
      A. PLACE, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT.
      B. DO NOT DEVIATE FROM REQUIRED POSITION BEYOND SPECIFIED TOLERANCE.
      C. DO NOT WELD REINFORCEMENT.
      D. DO NOT DISPLACE OR DAMAGE VAPOR RETARDER.
      E. ACCOMMODATE PLACEMENT OF FORMED OPENINGS.
      F. SPACING:
         - SPACE REINFORCEMENT BARS WITH MINIMUM CLEAR SPACING ACCORDING TO ACI 318.
         - IF BARS ARE INDICATED IN MULTIPLE LAYERS, PLACE UPPER BARS DIRECTLY ABOVE LOWER BARS.
      g. MAINTAIN MINIMUM CONCRETE COVER AROUND REINFORCEMENT FOR CAST-IN-PLACE NON-PRESTRESSED CONCRETE MEMBERS ACCORDING TO ACI 318 AS FOLLOWS:
         - CONCRETE PLACED AGAINST FORMS (INCLUDING CONCRETE TO BE BACKFILLED): 2"
         - CONCRETE PLACED AGAINST GROUND: 3"
         - SLABS (ON GROUND): CENTER BAR IN SLAB.
      H. SPLICE REINFORCING WHERE INDICATED ON DRAWINGS OR ACCORDING TO SPLICE DEVICE MANUFACTURER'S INSTRUCTIONS.
   B. TOLERANCES
      A. INSTALL REINFORCEMENT WITHIN FOLLOWING TOLERANCES FOR FLEXURAL MEMBERS, WALLS, AND COMPRESSION MEMBERS:
         - REINFORCEMENT DEPTH GREATER THAN 8 INCHES:
           1. DEPTH TOLERANCE: PLUS OR MINUS 3/8 INCH.
           2. CONCRETE COVER TOLERANCE: MINUS 3/8 INCH.
         - REINFORCEMENT DEPTH LESS THAN OR EQUAL TO 8 INCHES:
           1. DEPTH TOLERANCE: PLUS OR MINUS 1/2 INCH.
           2. CONCRETE COVER TOLERANCE: MINUS 1/2 INCH.
      B. FOUNDATION WALLS: INSTALL REINFORCEMENT WITHIN TOLERANCES ACCORDING TO ACI 117.
   C. FIELD QUALITY CONTROL TESTING
      A. PERFORM FIELD INSPECTION OF REINFORCEMENT ACCORDING TO ACI 318. INSPECT FOR CORRECT MATERIALS, FABRICATION, SIZES, LOCATIONS, SPACING, CONCRETE COVER, AND SPLICING.
   D. FIELD ACCEPTANCE TESTING
      A. FIELD INSPECTION TESTING WILL BE PERFORMED BY OWNER'S TESTING LABORATORY ACCORDING TO ACI 318.
      B. PROVIDE UNRESTRICTED ACCESS TO WORK AND COOPERATE WITH APPOINTED INSPECTION FIRM.
      C. REINFORCEMENT INSPECTION:
         - PERIODIC PLACEMENT INSPECTION: INSPECT FOR CORRECT MATERIALS, FABRICATION, SIZES, LOCATIONS, SPACING, CONCRETE COVER, AND SPLICING.
         - PLACEMENT ACCEPTANCE: IN ACCORDANCE WITH ACI 318 MATERIAL REQUIREMENTS AND SPECIFIED PLACEMENT TOLERANCES.
6. PROTECTION
   A. PROTECT REINFORCEMENT AND ACCESSORIES FROM DAMAGE AND DISPLACEMENT UNTIL CONCRETE IS PLACED.

SECTION 04 05 16
MASONRY GROUTING

1. SUBMITTALS
   A. MANUFACTURER'S CERTIFICATE: INDICATE PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
2. QUALITY ASSURANCE
   A. PERFORM WORK ACCORDING TO TMS 402 AND 602.
3. DELIVERY, STORAGE, AND HANDLING
   A. STORE MATERIALS ACCORDING TO MANUFACTURER INSTRUCTIONS.
   B. PROTECTION:
      a. PROTECT MATERIALS FROM MOISTURE AND DUST BY STORING IN CLEAN, DRY LOCATION REMOTE FROM CONSTRUCTION OPERATIONS AREAS.
      b. PROVIDE ADDITIONAL PROTECTION ACCORDING TO MANUFACTURER INSTRUCTIONS.
4. AMBIENT CONDITIONS
   A. COLD WEATHER REQUIREMENTS: WHEN AMBIENT TEMPERATURE OR TEMPERATURE OF MASONRY UNITS IS LESS THAN 40 DEGREES FAHRENHEIT, COMPLY WITH TMS 402 AND 602.
   B. HOT WEATHER REQUIREMENTS: WHEN AMBIENT TEMPERATURE IS GREATER THAN 100 DEGREES FAHRENHEIT OR IF AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES FAHRENHEIT WITH WIND VELOCITY GREATER THAN 8 MILES PER HOUR, COMPLY WITH TMS 402 AND 602.
5. MATERIALS
   A. PORTLAND CEMENT: COMPLY WITH ASTM C150, TYPE II.
   B. GROUT AGGREGATE: COMPLY WITH ASTM C404, FINE AND COARSE.
   C. FLY ASH: COMPLY WITH ASTM C618.
   D. WATER: CLEAN AND POTABLE.
   E. CALCIUM CHLORIDE: NOT ALLOWED.
6. MIXES
   A. GROUT:
      a. GROUT FOR NON-STRUCTURAL MASONRY:
         - COMPRESSIVE STRENGTH: 2,000 PSI AT 28 DAYS.
         - MIXING: ACCORDING TO ASTM C476, FINE, COARSE.
      b. GROUT FOR STRUCTURAL MASONRY:
         - COMPRESSIVE STRENGTH: 2,000 PSI AT 28 DAYS.
         - MIXING: ACCORDING TO ASTM C476, FINE, COARSE.
      c. APPLICATION:
         - COARSE GROUT: GROUTING SPACES WITH MINIMUM 2 INCHES DIMENSION IN EACH DIRECTION.
         - FINE GROUT: GROUTING OTHER SPACES.
7. EXAMINATION
   A. REQUEST INSPECTION OF SPACES TO BE GROUTED.
8. PREPARATION
   A. CLEAN LAITANCE AND LOOSE MATERIALS FROM SPACES TO BE GROUTED.
9. INSTALLATION
   A. MIXING:
      a. THOROUGHLY MIX GROUT INGREDIENTS IN QUANTITIES NEEDED FOR IMMEDIATE USE ACCORDING TO ASTM C476.
   B. DO NOT PLACE GROUT UNTIL MASONRY UNITS HAVE ATTAINED SUFFICIENT STRENGTH.
   C. DO NOT PLACE GROUT UNTIL REINFORCING IS SECURED IN PLACE. DO NOT DISPLACE REINFORCEMENT WHILE PLACING GROUT.
   D. GROUT CELLS OF CONCRETE MASONRY UNITS WITH REINFORCING, AND GROUT NON-REINFORCED CELLS WHERE INDICATED ON DRAWINGS.
   E. PLACE GROUT ACCORDING TO TMS 402 AND 602.
   F. CLEAN EXPOSED SURFACES OF EXCESS GROUT WHILE GROUT IS WET.
   G. ENSURE GROUT COMPLETELY FILLS INTENDED CELLS, VERTICALLY AND HORIZONTALLY.
10. FIELD QUALITY CONTROL
    A. TESTING:
       a. MIX: COMPLY WITH ASTM C1019 FOR COMPRESSIVE STRENGTH AND COMPLY WITH ASTM C143 FOR SLUMP.
       B. COMPRESSIVE STRENGTH OF MORTAR, GROUT, AND MASONRY: COMPLY WITH ASTM C1314.

#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-802
SHEET NO.

SECTION 04 22 00
CONCRETE UNIT MASONRY

1. SUBMITTALS
   - A. PRODUCT DATA.
   - B. SAMPLES:
     - a. SUBMIT TWO FULL-SIZE SAMPLES OF UNITS TO ILLUSTRATE COLOR, TEXTURE, AND EXTREMES OF COLOR RANGE.
2. MAINTENANCE MATERIAL SUBMITTALS
   - A. EXTRA STOCK MATERIALS: 5% OF EACH SIZE, COLOR, AND TYPE OF UNITS.
3. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO ACI 530/530.1 - BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES AND RELATED COMMENTARIES.
4. AMBIENT CONDITIONS
   - A. DO NOT STORE REINFORCING MATERIAL DIRECTLY ON GROUND. UTILIZE BLOCKING AND OTHER METHODS TO PREVENT RUST ON ACCESSORIES PRIOR TO INSTALLATION.
   - B. COLD WEATHER REQUIREMENTS: ACCORDING TO ACI 530.1 WHEN AMBIENT TEMPERATURE OR TEMPERATURE OF MASONRY UNITS IS LESS THAN 40 DEGREES F.
   - C. HOT WEATHER REQUIREMENTS: ACCORDING TO ACI 530.1 WHEN AMBIENT TEMPERATURE IS GREATER THAN 100 DEGREES F OR AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES F WITH WIND VELOCITY GREATER THAN 8 MPH.
5. EXISTING CONDITIONS
   - A. FIELD MEASUREMENTS: VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION. INDICATE FIELD MEASUREMENTS ON SHOP DRAWINGS.
6. PERFORMANCE AND DESIGN CRITERIA
   - A. CONCRETE MASONRY COMPRESSIVE STRENGTH (F'M): 2,000 PSI; DETERMINED BY UNIT STRENGTH METHOD.
     - a. CONCRETE MASONRY UNITS (CMU): 2,000 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH.
7. MATERIALS
   - A. DECORATIVE CMU: ASTM C90; LIGHT WEIGHT; COLOR AS SELECTED TO FOLLOW ARCHITECTURAL DRAWINGS.
8. ACCESSORIES
   - A. REINFORCING STEEL: ASTM A615, 60 KSI YIELD GRADE, DEFORMED BILLET BARS, UNCOATED FINISH.
   - B. MORTAR AND GROUT: AS SPECIFIED IN SECTION 04 05 14 - MASONRY MORTARING AND GROUTING.
9. SOURCE QUALITY CONTROL
   - A. TESTING: TEST BRICK EFFLORESCENCE ACCORDING TO ASTM C67. BRICK RATED GREATER THAN "SLIGHTLY EFFLORESCED" IS NOT ACCEPTABLE.
10. EXAMINATION
    - A. VERIFY THAT:
      - a. FIELD CONDITIONS ARE ACCEPTABLE AND READY TO RECEIVE WORK.
      - b. ITEMS PROVIDED BY OTHER SECTIONS OF WORK ARE PROPERLY SIZED AND LOCATED.
      - c. BUILT-IN ITEMS ARE IN PROPER LOCATION AND READY FOR ROUGHING INTO MASONRY WORK.
11. PREPARATION
    - A. FURNISH TEMPORARY BRACING DURING INSTALLATION OF MASONRY WORK. MAINTAIN IN PLACE UNTIL BUILDING STRUCTURE PROVIDES PERMANENT SUPPORT.
12. INSTALLATION
    - A. ESTABLISH LINES, LEVELS, AND COURSING INDICATED. PROTECT FROM DISPLACEMENT.
    - B. MAINTAIN MASONRY COURSES TO UNIFORM DIMENSION. FORM BED AND HEAD JOINTS OF UNIFORM THICKNESS.
    - C. COURSING OF CMU:
      - a. BOND: RUNNING.
      - b. COURSING: ONE UNIT AND ONE MORTAR JOINT TO EQUAL 8 INCHES.
      - c. MORTAR JOINTS: CONCAVE.
    - D. PLACING AND BONDING:
      - a. LAY HOLLOW MASONRY UNITS WITH FACE SHELL BEDDING ON HEAD AND BED JOINTS.
      - b. BUTTERING CORNERS OF JOINTS OR EXCESSIVE FURROWING OF MORTAR JOINTS ARE NOT PERMITTED.
      - c. REMOVE EXCESS MORTAR AS WORK PROGRESSES.
      - d. INTERLOCK INTERSECTIONS AND EXTERNAL CORNERS.
      - e. DO NOT SHIFT OR TAP MASONRY UNITS AFTER MORTAR HAS ACHIEVED INITIAL SET. WHERE ADJUSTMENT IS REQUIRED, REMOVE MORTAR AND REPLACE.
      - f. PERFORM SITE CUTTING OF MASONRY UNITS WITH PROPER TOOLS TO ASSURE STRAIGHT, CLEAN, UNCHIPPED EDGES. PREVENT BROKEN MASONRY UNIT CORNERS OR EDGES.
      - G. ISOLATE TOP OF MASONRY FROM HORIZONTAL STRUCTURAL FRAMING MEMBERS AND SLABS OR DECKS WITH COMPRESSIBLE JOINT FILLER.
    - E. LINTELS:
      - a. INSTALL CONCRETE MASONRY BOND BEAM LINTELS OVER OPENINGS.
      - b. INSTALL REINFORCED UNIT MASONRY LINTELS OVER MISCELLANEOUS OPENINGS LESS THAN 12 INCHES WIDE WHERE LINTELS ARE NOT SCHEDULED OR INDICATED.
      - c. DO NOT SPLICE REINFORCING BARS.
      - d. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
      - e. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
      - f. ALLOW MASONRY LINTELS TO ATTAIN SPECIFIED STRENGTH BEFORE REMOVING TEMPORARY SUPPORTS.
      - g. MAINTAIN MINIMUM 6-INCH BEARING ON EACH SIDE OF OPENING.
    - F. GROUTED COMPONENTS:
      - a. REINFORCE BOND BEAMS AND PILASTERS AS INDICATED.
      - b. LAP SPLICES BAR DIAMETERS AS REQUIRED BY CODE.
      - c. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
      - d. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
      - e. AT BEARING LOCATIONS, FILL MASONRY CORES WITH GROUT FOR MINIMUM 12 INCHES BOTH SIDES OF OPENING.
    - G. REINFORCED MASONRY:
      - a. LAY MASONRY UNITS WITH CELLS VERTICALLY ALIGNED AND CLEAR OF MORTAR AND UNOBSTRUCTED.
      - b. PLACE REINFORCEMENT BARS AS INDICATED.
      - c. SPLICE REINFORCEMENT[AS INDICATED.
      - d. SUPPORT AND SECURE REINFORCEMENT FROM DISPLACEMENT.
      - e. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
      - f. PLACE GROUT ACCORDING TO ACI 530.1.
    - H. CONTROL JOINTS:
      - a. INSTALL CONTROL JOINTS AT THE FOLLOWING MAXIMUM SPACINGS, UNLESS OTHERWISE INDICATED ON DRAWINGS:
        - EXTERIOR WALLS: 20 FEET O.C. AND WITHIN 24 INCHES ON ONE SIDE OF EACH INTERIOR AND EXTERIOR CORNER.
        - INTERIOR WALLS: 30 FEET O.C.
        - AT CHANGES IN WALL HEIGHT.
      - b. DO NOT CONTINUE HORIZONTAL CONTROL JOINT REINFORCEMENT THROUGH CONTROL JOINTS.
      - c. INSTALL PREFORMED CONTROL JOINT DEVICE IN CONTINUOUS LENGTHS. SEAL BUTT AND CORNER JOINTS.
    - I. EXPANSION JOINTS:
      - a. FORM EXPANSION JOINTS BY OMITTING MORTAR AND CUTTING UNIT TO FORM OPEN SPACE.
      - b. DO NOT CONTINUE HORIZONTAL REINFORCEMENT THROUGH EXPANSION JOINTS.
    - J. BUILT-IN WORK:
      - a. AS WORK PROGRESSES, INSTALL BUILT-IN METAL DOOR FRAMES AND OTHER ITEMS TO BE BUILT IN THE WORK AND FURNISHED BY OTHER SECTIONS.
      - b. INSTALL BUILT-IN ITEMS PLUMB AND LEVEL.
      - c. BED ANCHORS OF METAL DOOR FRAMES IN ADJACENT MORTAR JOINTS. FILL FRAME VOIDS SOLID WITH GROUT OR MORTAR. FILL ADJACENT MASONRY CORES WITH GROUT MINIMUM 16 INCHES FROM FRAMED OPENINGS.
      - d. DO NOT BUILD IN MATERIALS SUBJECT TO DETERIORATION.
    - K. CUTTING AND FITTING:
      - a. CUT AND FIT FOR CHASES, PIPES, CONDUIT, ETC. COORDINATE WITH OTHER SECTIONS OF WORK TO PROVIDE CORRECT SIZE, SHAPE, AND LOCATION.
      - b. OBTAIN ENGINEER'S APPROVAL PRIOR TO CUTTING OR FITTING MASONRY WORK NOT INDICATED OR WHERE APPEARANCE OR STRENGTH OF MASONRY WORK MAY BE IMPAIRED.
13. TOLERANCES
    - A. MAXIMUM VARIATION FROM ALIGNMENT OF COLUMNS: 1/4 INCH.
    - B. MAXIMUM VARIATION FROM UNIT TO ADJACENT UNIT: 1/16 INCH.
    - C. MAXIMUM VARIATION FROM PLANE OF WALL: 1/4 INCH IN 10 FEET AND 1/2 INCH IN 20 FEET OR MORE.
    - D. MAXIMUM VARIATION FROM PLUMB: 1/4 INCH PER STORY NON-CUMULATIVE; 1/2 INCH IN TWO STORIES OR MORE.
    - E. MAXIMUM VARIATION FROM LEVEL COURSING: 1/8 INCH IN 3 FEET AND 1/4 INCH IN 10 FEET; 1/2 INCH IN 30 FEET.
    - F. MAXIMUM VARIATION OF JOINT THICKNESS: 1/8 INCH IN 3 FEET.
    - G. MAXIMUM VARIATION FROM CROSS SECTIONAL THICKNESS OF WALLS: 1/4 INCH.
    - H. MAXIMUM VARIATION FOR STEEL REINFORCEMENT:
      - a. INSTALL REINFORCEMENT WITHIN THE TOLERANCES SPECIFIED IN ACI 530.1 FOR FOUNDATION WALLS.
      - b. PLUS OR MINUS 1/2 INCH WHEN DISTANCE FROM CENTERLINE OF STEEL TO OPPOSITE FACE OF MASONRY IS 8 INCHES OR LESS.
      - c. PLUS OR MINUS 1 INCH WHEN DISTANCE IS BETWEEN 8 AND 24 INCHES.
      - d. PLUS OR MINUS 1-1/4 INCH WHEN DISTANCE IS GREATER THAN 24 INCHES.
      - e. PLUS OR MINUS 2 INCHES FROM LOCATION ALONG FACE OF WALL.
14. FIELD QUALITY CONTROL
    - A. CMU: TEST EACH TYPE ACCORDING TO ASTM C140.
    - B. PRISM TESTS: TEST COMPRESSIVE STRENGTH OF COMPLETED REINFORCED MASONRY ACCORDING TO ASTM C1314.
15. CLEANING
    - A. CLEAN SOILED SURFACES WITH CLEANING SOLUTION.
16. PROTECTION
    - A. PROTECT EXPOSED EXTERNAL CORNERS SUBJECT TO DAMAGE.
    - B. PROTECT BASE OF WALLS FROM MUD AND MORTAR SPLATTER.
    - C. PROTECT MASONRY AND OTHER ITEMS BUILT INTO MASONRY WALLS FROM MORTAR DROPPINGS AND STAINING CAUSED BY MORTAR.
    - D. PROTECT TOPS OF MASONRY WORK WITH WATERPROOF COVERINGS SECURED IN PLACE WITHOUT DAMAGING MASONRY. PROVIDE COVERINGS WHERE MASONRY IS EXPOSED TO WEATHER WHEN WORK IS NOT IN PROGRESS. MAINTAIN PROTECTION ON TOPS OF COMPLETED EXTERIOR WALLS UNTIL INSTALLATION OF PERMANENT WATERPROOF CAP MATERIALS.

LICENSED PROFESSIONAL ENGINEER
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2202-061
PROJECT NUMBER
S-803
SHEET NO.

SECTION 31 23 23
FILL

- 1. DEFINITIONS
  - A. BACKFILL: SOIL PLACED AROUND STRUCTURES TO INDICATED FINISH GRADE.
  - B. COARSE GRAINED SOIL: SOILS WITH MORE THAN 50 PERCENT RETAINED ON NO. 200 SIEVE.
  - C. FILL: SOIL PLACED ON SITE TO INDICATED FINISH GRADE.
  - D. FINE GRAINED SOIL: SOILS WITH 50 PERCENT OR MORE PASSING NO. 200 SIEVE.
  - E. SOIL CLASSIFICATION: IN ACCORDANCE WITH ASTM D2487 AND AASHTO M145.
  - F. TOPSOIL: TOP 6 INCHES OF EXISTING ONSITE SOIL.
- 2. SUBMITTALS
  - A. TEST RESULTS: SUBMIT PROCTOR AND DENSITY QUALITY CONTROL TEST RESULTS WITHIN 24 HOURS AFTER TESTING IS COMPLETED.
- 3. QUALITY ASSURANCE
  - A. OBTAIN MATERIALS FROM SAME SOURCE THROUGHOUT.
- 4. PRODUCTS
  - A. MATERIALS
    - A. TOPSOIL: TOP 6 INCHES OF EXISTING ONSITE SOIL.
    - B. FILL AND BACKFILL: USE EXISTING ONSITE EXCAVATED SOIL FREE FROM RUBBISH, DEBRIS, ORGANIC MATERIAL, FROZEN MATERIAL, OR OTHER OBJECTIONABLE MATERIALS.
    - C. IMPORTED FILL: A-1A THROUGH A-4 SOILS AS CLASSIFIED IN ACCORDANCE WITH AASHTO M145.
    - d. GRANULAR BACKFILL BORROW: NON-PLASTIC, WELL GRADED, 2 INCH MAXIMUM SIZE, A-1A SOIL AS CLASSIFIED IN ACCORDANCE WITH AASHTO M145.
    - e. STRUCTURAL FILL: WELL-GRADED, CLEAN, HARD, TOUGH, DURABLE AND SOUND MINERAL AGGREGATES CONSISTING OF CRUSHED STONE, CRUSHED GRAVEL OR CRUSHED SLAG; FREE OF ORGANIC MATTER AND CONTAMINATION FROM CHEMICAL OR PETROLEUM PRODUCTS; MEETING THE FOLLOWING REQUIREMENTS:
      - DRY RODDED UNIT WEIGHT: NOT LESS THAN 75 PCF.
      - LIQUID LIMIT/PLASTIC INDEX: NON-PLASTIC.
      - AGGREGATE WEAR: NOT TO EXCEED 50 PERCENT.
      - GRADATION: ESTABLISH JOB-MIX (TARGET) GRADATION WITHIN GRADATION TARGET BAND LISTED BELOW. PERCENT PASSING IS BASED ON TOTAL AGGREGATE (DRY WEIGHT), AND FINE AND COARSE AGGREGATE HAVING APPROXIMATELY SAME BULK SPECIFIC GRAVITIES.
        1. 1 1/2 INCH: 100
        2. 1 INCH: 90-100
        3. 3/4 INCH: 70-85
        4. 1/2 INCH: 65-80
        5. 3/8 INCH: 55-75
        6. NO. 4: 40-65
        7. NO. 16: 25-40
        8. NO. 200: 7-11
      - TWO FRACTURED FACE: 50% MINIMUM.
      - CBR WITH 10 LB. SURCHARGE MEASURED AT 0.20 INCH PENETRATION: 70% MINIMUM.
- 5. EXECUTION
  - A. EXAMINATION
    - A. VERIFY SURVEY BENCH MARK AND INTENDED ELEVATIONS FOR WORK ARE AS INDICATED ON DRAWINGS.
    - B. VERIFY SUB-DRAINAGE, DAMPPROOFING AND WATERPROOFING ARE COMPLETE PRIOR TO BACKFILLING FOR SITE STRUCTURES.
    - C. VERIFY STRUCTURAL ABILITY OF UNSUPPORTED WALLS TO SUPPORT LOADS IMPOSED BY BACKFILL.
  - B. PREPARATION
    - A. IDENTIFY REQUIRED LINES, LEVELS, CONTOURS, AND DATUM.
    - B. ERECT AND MAINTAIN TEMPORARY BARRIERS, SAFETY DEVICES AND SIMILAR MEASURES FOR PROTECTION OF PUBLIC AND EXISTING IMPROVEMENTS TO REMAIN.
    - C. MAINTAIN DEWATERING UNTIL FINAL FILL AND BACKFILL MATERIALS ARE IN PLACE.
  - C. CONSTRUCTION – GENERAL
    - A. IF EXCAVATED MATERIAL IS NOT SUFFICIENT FOR REQUIRED FILL AND BACKFILL, USE IMPORTED FILL [**BORROW**] MATERIAL.
    - B. PLACE FILL AND BACKFILL TO CONTOURS AND ELEVATIONS INDICATED ON DRAWINGS.
    - C. MIX ROCKS WITH FINER MATERIALS TO MINIMIZE VOIDS.
    - D. UNLESS INDICATED OTHERWISE, PLACE AND COMPACT FILL AND BACKFILL MATERIAL IN CONTINUOUS LAYERS NOT EXCEEDING 12 INCHES NON-COMPACTED DEPTH. IF TESTS INDICATE UNSATISFACTORY DENSITY, REDUCE LAYER THICKNESS.
    - E. MAINTAIN OPTIMUM MOISTURE CONTENT OF FILL AND BACKFILL MATERIALS TO ATTAIN REQUIRED COMPACTION DENSITY.
    - **F.** COMPACT FILL AND BACKFILL MATERIALS TO DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
    - G. WHERE POSSIBLE, GRADE SURPLUS SOIL TO BLEND IN WITH EXISTING CONTOURS, AND REMOVE REMAINING SURPLUS SOIL FROM SITE.
  - D. FILL
    - A. IF FILL HEIGHT IS 6 FEET OR LESS AND UNDERLYING GROUND CONSISTS OF LOOSE MATERIAL, SCARIFY AND COMPACT TOP 8 INCHES OF UNDERLYING GROUND TO AT LEAST 90 PERCENT OF MAXIMUM LABORATORY DENSITY PRIOR TO PLACING FILL MATERIALS.
    - B. DO NOT PLACE ROCKS EXCEEDING 4 INCHES WITHIN 12 INCHES OF PAVEMENT SUBGRADE.
    - C. SLOPE GRADE AS INDICATED ON DRAWINGS.
  - E. BACKFILL
    - A. BACKFILL AREAS EXCAVATED FOR STRUCTURES AND OTHER IMPROVEMENTS. BACKFILL TO CONTOURS AND ELEVATIONS INDICATED WITH SUITABLE MATERIALS.
    - B. EMPLOY PLACEMENT METHOD THAT DOES NOT DISTURB OR DAMAGE STRUCTURE OR OTHER WORK.
    - C. BACKFILL SIMULTANEOUSLY ON EACH SIDE OF UNSUPPORTED FOUNDATION WALLS UNTIL SUPPORTS ARE IN PLACE.
    - D. DO NOT PLACE ROCKS EXCEEDING 2 INCHES WITHIN 2 FEET OF STRUCTURES.
    - E. UNLESS INDICATED OTHERWISE ON DRAWINGS, SLOPE GRADE AWAY FROM STRUCTURES AT MINIMUM 5 PERCENT SLOPE FOR MINIMUM DISTANCE OF 10 FEET.
  - F. GRANULAR BACKFILL BORROW
    - A. WHERE INDICATED ON DRAWINGS, PLACE GRANULAR BACKFILL BORROW FOR BACKFILL WITHIN TWO FEET OF BOX CULVERTS, BRIDGES AND OTHER STRUCTURES.
    - B. PLACE AND COMPACT GRANULAR BACKFILL BORROW IN CONTINUOUS LAYERS NOT EXCEEDING 6 INCHES COMPACTED DEPTH.
  - G. STRUCTURAL FILL
    - A. WHERE INDICATED ON DRAWINGS, PLACE STRUCTURAL FILL.
    - B. PRIOR TO PLACING STRUCTURAL FILL, SCARIFY AND COMPACT TOP 8 INCHES OF UNDERLYING GROUND TO AT LEAST 90 PERCENT OF MAXIMUM LABORATORY DENSITY.
    - C. PLACE AND COMPACT STRUCTURAL FILL IN CONTINUOUS LAYERS NOT EXCEEDING 6 INCHES COMPACTED DEPTH.
  - H. FINISHING
    - A. FINISH FILL AND BACKFILL TO REASONABLY SMOOTH AND UNIFORM SURFACE.
    - B. MAKE GRADE CHANGES GRADUAL. BLEND SLOPE INTO LEVEL AREAS.
  - I. TOLERANCES
    - A. TOP SURFACE OF GENERAL FILL AND BACKFILL: PLUS OR MINUS 0.1 FOOT FROM REQUIRED ELEVATION.
    - B. TOP SURFACE OF SUBGRADE: PLUS OR MINUS 0.04 FOOT FROM REQUIRED ELEVATION.
    - C. MOISTURE CONTENT: PLUS OR MINUS 2 PERCENT OF OPTIMUM. TEST IN ACCORDANCE WITH ASTM D6938.
  - J. FIELD QUALITY CONTROL TESTING
    - A. MAXIMUM LABORATORY DENSITY: DETERMINED IN ACCORDANCE WITH AASHTO T180, METHOD D FOR A-1 SOILS AND AASHTO T99, METHOD D FOR OTHER SOILS. TEST FOR EACH TYPE OF SOIL ENCOUNTERED ON SITE.
    - B. ESTABLISH ROLLER PATTERNS NECESSARY TO ACHIEVE DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
    - C. DENSITY TESTS: PERFORM IN ACCORDANCE WITH ASTM D6938.
      - FREQUENCY:
        1. FILL, BACKFILL AND STRUCTURAL FILL: TAKE MINIMUM OF TWO TESTS FOR EACH 1,500 SQUARE YARDS PER EACH LAYER.
        2. GRANULAR BACKFILL BORROW: TAKE MINIMUM OF TWO TESTS FOR EACH LAYER ON EACH STRUCTURE OR PIPE CULVERT.
      - ACCEPTANCE: EQUALS OR EXCEEDS DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
      - IF TESTS INDICATE WORK IS NOT ACCEPTABLE, RE-COMPACT AND RETEST. IF NECESSARY, REMOVE AND REPLACE WORK.
  - K. FIELD ACCEPTANCE TESTING
    - A. MAXIMUM LABORATORY DENSITY: ENGINEER WILL DETERMINE IN ACCORDANCE WITH AASHTO T180, METHOD D FOR A-1 SOILS AND AASHTO T99, METHOD D FOR OTHER SOILS . ENGINEER WILL TEST EACH TYPE OF SOIL ENCOUNTERED ON SITE.
    - B. ESTABLISH ROLLER PATTERNS NECESSARY TO ACHIEVE DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
    - C. DENSITY TESTS: ENGINEER WILL PERFORM IN ACCORDANCE WITH ASTM D6938.
      - FREQUENCY:
        1. FILL, BACKFILL AND STRUCTURAL FILL: TAKE MINIMUM OF TWO TESTS FOR EACH 1,500 SQUARE YARDS PER EACH LAYER.
        2. GRANULAR BACKFILL BORROW: TAKE MINIMUM OF TWO TESTS FOR EACH LAYER ON EACH STRUCTURE.
      - ACCEPTANCE: EQUALS OR EXCEEDS DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
      - IF TESTS INDICATE WORK IS NOT ACCEPTABLE, RE-COMPACT AND RETEST. IF NECESSARY, REMOVE AND REPLACE WORK.
  - L. PROTECTION
    - A. PROTECT EXISTING UTILITIES AND IMPROVEMENTS INDICATED TO REMAIN, FROM DAMAGE.
    - B. PROTECT PLANT LIFE, LAWNS, AND OTHER FEATURES REMAINING AS PART OF FINAL LANDSCAPING.
    - C. PROTECT STRUCTURES, UTILITIES AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.
    - D. PROTECT BENCH MARKS AND SURVEY CONTROL POINT FROM DAMAGE OR DISPLACEMENT.
    - E. REPAIR OR REPLACE ITEMS DAMAGED BY EXCAVATION OR BACKFILLING.
  - M. COMPACTION SCHEDULE
    - A. FILL AND BACKFILL FOR NON-TRAVELED AREAS: COMPACT TO MINIMUM 90 PERCENT OF MAXIMUM LABORATORY DENSITY. INCLUDES LANDSCAPE AREAS.
    - B. FILL AND BACKFILL FOR TRAVELED AREAS AND STRUCTURES: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY. INCLUDES ROADS, PARKING LOTS, DRIVEWAYS, SIDEWALKS AND STRUCTURES.
    - C. GRANULAR BACKFILL BORROW: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY.
    - D. STRUCTURAL FILL: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY.

LICENSED PROFESSIONAL ENGINEER
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MATTHEW PAUL LAURENDEAU
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SPECIFICATIONS

2202-061
PROJECT NUMBER
S-804
SHEET NO.

MECHANICAL SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

SYMBOL	EXPLANATION
ø	ROUND MEASUREMENT
Ⓣ X-X	THERMOSTAT/SENSOR
⬡ X #	MECHANICAL EQUIPMENT SYMBOL
◈ #	KEYED NOTE REFERENCE

SITE CONDITIONS

SITE:

CITY:	SPANISH FORK, UT
ELEVATION:	4,577'

OUTDOOR CONDITIONS:

WINTER:	HTG: 6° F
SUMMER:	CLG: 96° F

INDOOR CONDITIONS

WINTER:	HTG: 60° F
SUMMER:	CLG: 78° F

IF TEMPERATURES SHOWN DO NOT MATCH CONDITIONS DESIRED FOR THIS PROJECT CONTACT THE ENGINEER OF RECORD.

DESIGN CONTACTS

PROJECT MANAGER	SAMANTHA KOEPP
MECHANICAL ENGINEER:	MARK MAKIN
MECHANICAL DESIGNER:	JESSE EGAN

MECHANICAL SHEET INDEX

SHEET NUMBER	SHEET TITLE
MP0.1	MECHANICAL & PLUMBING NOTES
MP1.1	MECHANICAL & PLUMBING PLAN
MP5.1	MECHANICAL & PLUMBING DETAILS
MP6.1	MECHANICAL & PLUMBING SCHEDULES
MP7.1	MECHANICAL SPECIFICATIONS
MP7.2	MECHANICAL SPECIFICATIONS
MP7.3	MECHANICAL SPECIFICATIONS
MP7.4	MECHANICAL SPECIFICATIONS
MP7.5	PLUMBING SPECIFICATIONS
MP7.6	PLUMBING SPECIFICATIONS

PLUMBING SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

——●——	SANITARY OR WASTE PIPING
— — — — —	VENT PIPING
ø	ROUND MEASUREMENT.
(P-#)	PLUMBING FIXTURE SYMBOL
⬡ M #	MECHANICAL EQUIPMENT SYMBOL
◈ #	KEYED NOTE REFERENCE

SUBMITTALS:

1. CONTRACTOR TO ALLOW 10 WORKING DAYS FOR SUBMITTAL TURNAROUND.
2. CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL EQUIPMENT AND MATERIALS IN A SINGLE PACKAGE. PIECEMEAL SUBMITTALS WILL BE RETURNED WITH A NOTE TO REVISE AND RESUBMIT.
3. SUBMITTALS WILL BE CHECKED FOR COMPLIANCE WITH CAPACITY REQUIREMENTS AND ELECTRICAL REQUIREMENTS. CONTRACTOR TO VERIFY THAT WEIGHTS, DIMENSIONS, AND DUCT CONNECTIONS ON SUBMITTED EQUIPMENT IS CONSISTENT WITH SCHEDULED EQUIPMENT PRIOR TO SUBMITTAL. CHANGES IN SCOPE BROUGHT ABOUT BY SUBMITTED EQUIPMENT THAT DOES NOT COMPLY WITH THE WEIGHTS, DIMENSIONS, OR CONNECTION LOCATIONS ON SCHEDULED EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

COMMISSIONING NOTES:

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL DOCUMENTATION TO THE OWNER AS PER THE LISTED 2018 IECC CODE REFERENCES BELOW:

C408.2.1 A COMMISSIONING PLAN SHALL BE DEVELOPED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND SHALL INCLUDE THE FOLLOWING ITEMS:

1. A NARRATIVE DESCRIPTION OF THE ACTIVITIES THAT WILL BE ACCOMPLISHED DURING EACH PHASE OF COMMISSIONING, INCLUDING THE PERSONNEL INTENDED TO ACCOMPLISH EACH OF THE ACTIVITIES.
2. A LISTING OF THE SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND A DESCRIPTION OF THE TESTS TO BE PERFORMED.
3. FUNCTIONS TO BE TESTED, INCLUDING, BUT NOT LIMITED TO CALIBRATIONS AND ECONOMIZER CONTROLS.
4. CONDITIONS UNDER WHICH THE TESTS WILL BE PERFORMED. AT A MINIMUM, TESTING SHALL AFFIRM WINTER AND SUMMER DESIGN CONDITIONS AND FULL OUTSIDE AIR CONDITIONS.
5. MEASURABLE CRITERIA FOR PERFORMANCE.

C408.2.4 PRELIMINARY COMMISSIONING REPORT. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL AND SERVICE HOT WATER FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW. THE REPORT SHALL BE IDENTIFIED AS "PRELIMINARY COMMISSIONING REPORT," SHALL INCLUDE THE COMPLETED COMMISSIONING COMPLIANCE CHECKLIST, FIGURE C408.2.4, AND SHALL IDENTIFY:

1. ITEMIZATION OF DEFICIENCIES FOUND DURING TESTING REQUIRED BY THIS SECTION THAT HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION.
2. DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS.
3. CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.
4. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
5. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS, INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.

C408.2.4.1 ACCEPTANCE OF REPORT. BUILDINGS, OR PORTIONS THEREOF, SHALL NOT BE CONSIDERED AS ACCEPTABLE FOR A FINAL INSPECTION PURSUANT TO SECTION C105.2.6 UNTIL THE CODE OFFICIAL HAS RECEIVED THE PRELIMINARY COMMISSIONING REPORT FROM THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT.

C408.2.4.2 THE CODE OFFICIAL SHALL BE PERMITTED TO REQUIRE THAT A COPY OF THE PRELIMINARY COMMISSIONING REPORT BE MADE AVAILABLE FOR REVIEW BY THE CODE OFFICIAL.

C408.2.5 DOCUMENTATION REQUIREMENTS. THE CONSTRUCTION DOCUMENTS SHALL SPECIFY THAT THE DOCUMENTS DESCRIBED IN THIS SECTION BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

DOCUMENTS SHALL INCLUDED BUT ARE NOT LIMITED TO: DRAWINGS, MANUALS, SYSTEM BALANCING REPORT, AND FINAL COMMISSIONING REPORT.

PROJECT MECHANICAL NOTES:

1. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL A 7-DAY PROGRAMMABLE THERMOSTAT FOR EACH HEAT PUMP. VERIFY THERMOSTAT LOCATION WITH OWNER REPRESENTATIVE IN FIELD. INSTALL THERMOSTAT AT 48" A.F.F.. PROVIDE AND INSTALL A HEAVY DUTY VANDAL RESISTANT COVER IN ALL COMMON AREAS.
2. COORDINATE EXACT LOCATION OF ALL MECHANICAL UNITS WITH GENERAL CONTRACTOR. VERIFY IN FIELD.
3. PROVIDE AND INSTALL ALL NECESSARY COMPONENTS FOR FAN COIL/HEAT PUMP UNIT SYSTEMS. (IE REFRIGERANT LINES, CONDENSATE PIPING, ACCESS PANELS (FIRE RATED AS REQUIRED), MOUNTING/SUPPORT HARDWARE, ETC.) ALL PER MANUFACTURERS RECOMMENDATIONS.
4. MECHANICAL CONTRACTOR TO PROVIDE DOCUMENTATION OF REQUIRED MANUFACTURER START-UP FOR EQUIPMENT INCLUDING MANUFACTURER, MODEL NUMBER, SERIAL NUMBER, COOLING CAPACITY, ALL ENTERING AND LEAVING TEMPERATURES, CONNECTED CIRCUIT VOLTAGE, AND VERIFICATION OF PROPER FUNCTION OF THERMOSTAT. CONTRACTOR SHALL PROVIDE MANUALS FOR EQUIPMENT AND NAME OF SERVICE AGENCY.
5. ALL FRESH/OUTSIDE AIR INTAKES SHALL BE 10 FEET MIN. FROM ALL EXHAUST & PLUMBING VENTS.
6. HEATING LOADS COMPLETED USING CHVAC OR OTHER APPROVED CALCULATION METHODS.
7. REFRIGERANT PIPING INSULATION.
   1.1. INSULATE ALL REFRIGERANT SUCTION PIPING WITH 1/2" THICK FLEXIBLE FOAMED PLASTIC CLOSED CELL PIPE INSULATION.
   1.2. INSULATION SHALL HAVE A "K" FACTOR OF NOT MORE THAN .26 AT 70°F AND A WATER VAPOR TRANSMISSION RATE OF 0.1 PERM-INCH OR LESS IN CONFORMANCE WITH ASTM C-177 & ASTM C-355 WATER METHOD.
   1.3. WHEN INSULATION IS EXPOSED TO SUNLIGHT WRAP WITH POLYTAPE WITH ONE THIRD OVERLAP.
   1.4. INSTALL INSULATION BY SLITTING TUBULAR SECTIONS AND APPLYING OVER PIPING.
   1.5. PAINT ALL INSULATION AND/OR TAPE EXPOSED TO THE EXTERIOR WITH ULTRAVIOLET RESISTING PAINT.
8. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED.

PROJECT PLUMBING NOTES:

1. SEE PIPING SCHEMATIC FOR ADDITIONAL INFORMATION ON WASTE & VENT PIPING DIAMETERS.
2. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. CONCEAL ALL PIPING IN FINISHED AREAS.
3. PROVIDE AND INSTALL 2"ø SEWER LINE. FIELD LOCATE. MAKE CONNECTION TO COMPLETE SEWER SYSTEM. VERIFY ALL INVERT ELEVATIONS AND ALL REQUIREMENTS WITH OWNER REPRESENTATIVE AND CIVIL PLANS.
4. PIPING LOCATIONS ARE GRAPHICALLY SHOWN. PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL PIPE ROUTING IN FIELD PER AVAILABLE SPACE AND BUILDING CONSTRUCTION.
5. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE AND INSTALL ALL REQUIRED CLEANOUTS. CLEANOUTS FOR HORIZONTAL DRAINS SHALL BE INSTALLED NO MORE THAN 100' APART. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45°. A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK. CLEANOUTS SHALL BE ACCESSIBLE AND THE SAME SIZE AS THE WASTE LINES ON WHICH THEY ARE INSTALLED.
6. COORDINATE WITH OTHER TRADES TO ENSURE AND ALL PLUMBING VENTS ARE A MINIMUM OF 10-FEET FROM ALL FRESH AIR INTAKES.
7. SANITARY WASTE AND VENT PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2018 IPC TABLES 702.1, 702.2 AND 702.3 & 702.4.
8. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

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5/12/22

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FIBER HUT PLANS

MECHANICAL & PLUMBING NOTES

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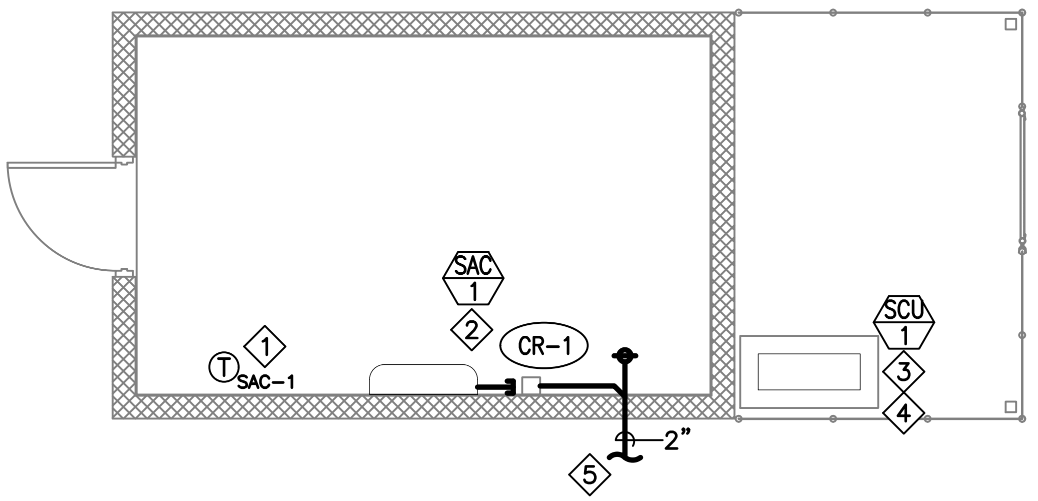
MECHANICAL KEYED NOTES:

1. FIELD VERIFY THERMOSTAT LOCATION WITH OWNERS REPRESENTATIVE. INSTALL THERMOSTAT AT 48" A.F.F..
2. PROPOSED LOCATION OF WALL—MOUNT FAN COIL UNIT. FIELD VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE. CONTRACTOR SHALL MAKE CONNECTION TO OUTDOOR UNIT. ROUTE CONDENSATE PIPING TO CR—1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. PROPOSED LOCATION OF OUTDOOR CONDENSING UNIT FOR INDOOR FAN COIL ON PAD. PENETRATION FOR REFRIGERANT PIPING SHALL BE THROUGH THE WALL. FIELD VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE AND INSTALL 4" HOUSEKEEPING PAD FOR CONDENSING UNITS BY MECHANICAL CONTRACTOR. PROVIDE MANUFACTURER REQUIRED CLEARANCES.
5. ROUTE CONDENSATE DRAIN PIPING FROM INDOOR FAN COIL UNIT TO GRAVEL SUMP ON EXTERIOR OF BUILDING. FIELD VERIFY EXACT LOCATION WITH CIVIL UTILITIES.



MECHANICAL & PLUMBING PLAN

SCALE: 3/16" = 1'—0"

NOTE:
CONDENSATE TO BE PIPED IN A WAY TO PREVENT IT FROM FREEZING DURING THE WINTER. CONTRACTOR TO ENSURE THAT PIPING CAN REACH GRAVEL SUMP OR CITY SEWER CONNECTION WITHOUT FREEZING DURING WINTER OPERATION.

REGISTERED PROFESSIONAL ENGINEER
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MECHANICAL & PLUMBING PLAN

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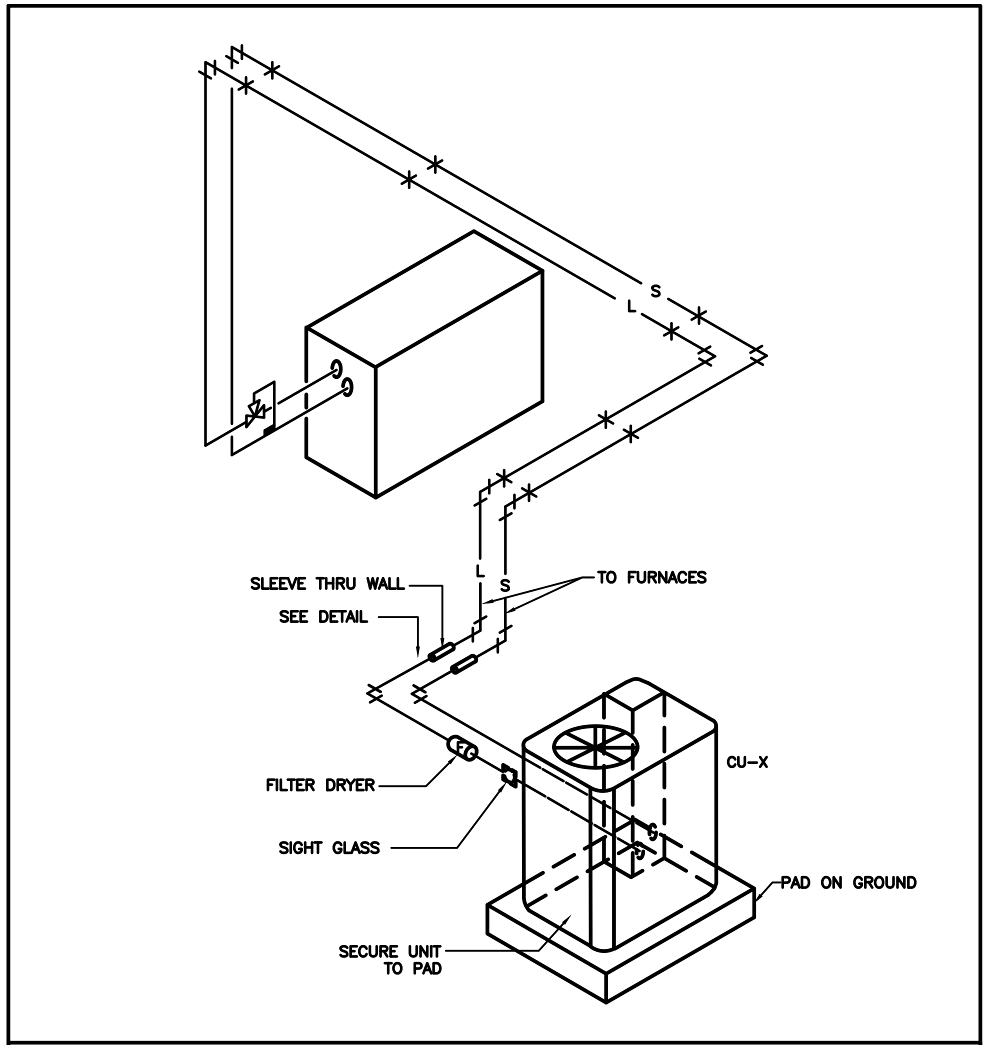
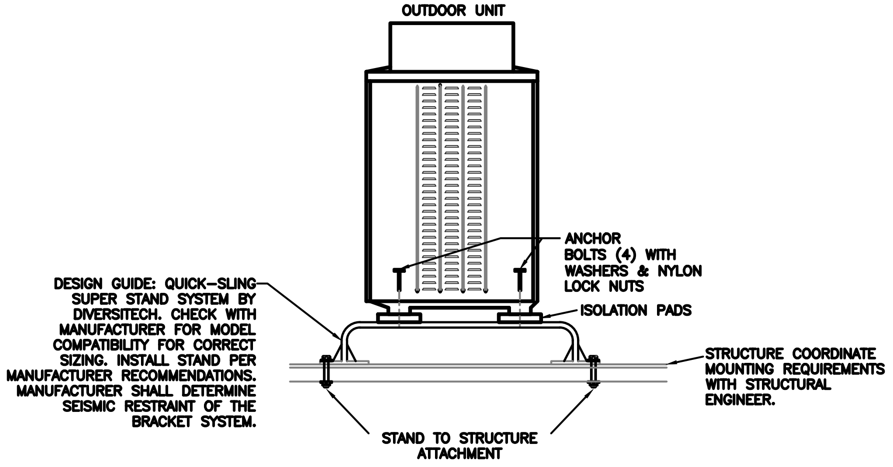


TYPICAL REFRIGERANT SCHEMATIC (CU ON GROUND)

SCALE: NONE

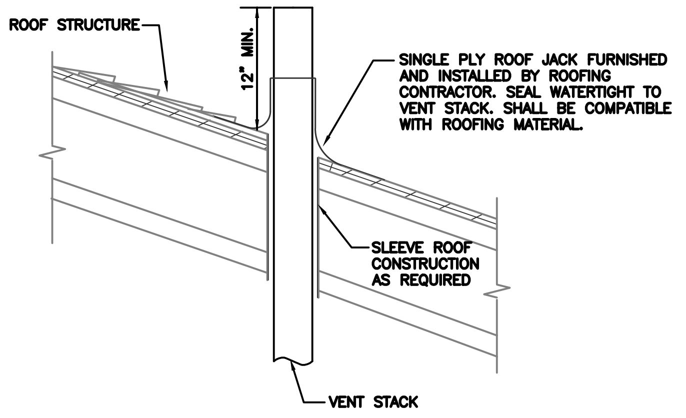


NOTES:

1. INSTALL UNIT LEVEL OR, IF ON A SLOPE, MAINTAIN SLOPE TOLERANCE OF 2 DEGREES (OR 2 INCHES PER 5 FEET).
2. COORDINATE WITH ARCHITECTURAL FOR MOUNTING HEIGHT REQUIREMENTS
3. PROTECT ADJACENT SURFACE(S) TO AVOID EXPOSURE OF ADJACENT SURFACE TO UNIT REFRIGERANT AND OIL DURING INSTALLATION.
4. FOLLOW ALL MANUFACTURER RECOMMENDATIONS.
5. VERIFY STAND LOCATION(S) WITH STRUCTURAL AND ARCHITECTURAL PLANS.
6. INSTALL UNIT WITH MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL SIDES OF THE UNIT. SEE UNIT MANUFACTURER INSTALLATION MANUAL FOR RECOMMENDED DISTANCES.
7. SECURE STAND TO STRUCTURE UNDER THE DIRECTION OF THE STRUCTURAL ENGINEER AND PER MANUFACTURER RECOMMENDATIONS.

TYPICAL OUTDOOR UNIT ON STAND DETAIL

SCALE: NONE



TYPICAL VENT THROUGH SLOPED ROOF DETAIL

SCALE: NONE

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SPLIT SYSTEM HEAT PUMP INDOOR & OUTDOOR UNITS

INDOOR UNIT							OUTDOOR/HEAT PUMP UNIT								
					ELECTRICAL			ELECTRICAL							
MARK	DESIGN GUIDE	NOMINAL SUPPLY CFM	NOMINAL COOLING BTU/H	NOMINAL HEATING BTU/H	VOLTAGE (DC VOLTS)	UNIT MCA	DESIGN GUIDE	VOLT/PH/HZ	UNIT MCA	UNIT MOCP	REFRIGERANT	SEER	HSPF	MARK	REMARKS
SAC 1	MITSUBISHI PKA-SERIES	810	34,200	37,000	24	1	PUZ-SERIES	230/1/60	18	40	R410A	14	9.3	SCU 1	1 – 9

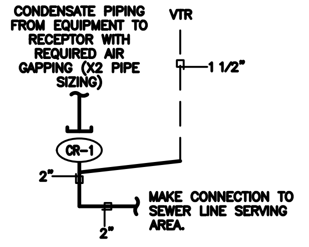
1. SITE CONDITIONS ARE 96/62 DEG. DB/WB SUMMER, 6 DEG. F DB WINTER, AND AN ELEVATION OF 4,577' FEET ABOVE SEA LEVEL.
2. APPROVED MANUFACTURERS: DAIKIN, MITSUBISHI, FRIEDRICH, FUJITSU, SANYO. (SUBJECT TO DOCUMENT CONFORMANCE)1 STAGE HEATING AND COOLING.
3. WITH R410a REFRIGERANT.
4. PROVIDE AND INSTALL ALL REQUIRED MOUNTING HARDWARE.
5. PROVIDE AND INSTALL CONDENSATE PIPING TO NEAREST PLUMBING DRAIN.
6. WITH LOW AMBIENT KIT TO ALLOW OPERATION TO –10 DEG. F.
7. FACTORY THERMOSTAT CONTROLS.
8. PROVIDE SNOW STAND AND WIND BAFFLES AS REQUIRED FOR YEAR ROUND OPERATION.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE CONNECTION BETWEEN INDOOR AND OUTDOOR UNIT.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	PIPE SIZE					REMARKS
		TRAP	WASTE	VENT	C.W.	H.W.	
CR-1	CONDENSATE RECEPTOR	2"	2"	1 1/2"	—	—	CONDENSATE RECEPTOR WITH HUB FUNNEL FOR CONDENSATE FROM HIGH EFFICIENCY EQUIPMENT. PROVIDE AND INSTALL TRAP GUARD.

NOTES:
1. VERIFY ALL MANUFACTURERS, FINISHES, AND OPTIONS WITH OWNER BEFORE ORDERING ANY PLUMBING FIXTURES.

2. MINIMUM UNDERGROUND SANITARY SEWER PIPING SIZE SHALL BE 2 INCHES.


CONDENSATE PIPING FROM EQUIPMENT TO RECEPTOR WITH REQUIRED AIR GAPPING (X2 PIPE SIZING)
VTR
1 1/2"
CR-1
2"
MAKE CONNECTION TO SEWER LINE SERVING AREA.
2"

TYPICAL CONDENSATE

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MECHANICAL & PLUMBING SCHEDULES

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SECTION 23 Mechanical – GENERAL PROVISIONS
Not all specification items are used in every project.

PART 1 – GENERAL

- **Scope:**
  - A. Provisions of this section apply to all work specified in all sections under Division 23.
  - B. In addition, work in Division 23 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.
  - C. Contractor is responsible for results deviating from the plans.
- **Examination of Premises:** Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.
- **The Mechanical Contractor** shall be licensed and hold a current contracting license that has been valid for a minimum of two years as a Mechanical Contractor in the State where the project is located.
- **The Mechanical Contractor** shall have a minimum of five years experience installing commercial cooling and heating systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers as a separate document in addition to the mechanical bid submitted if required by the General Contractor.
- **The Mechanical Contractor** shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the mechanical bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.
- **Regulations, Permits, Fees, Charges, Inspections:**
  - A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IBC, IMC, IPC, NEC, NFPA codes and all City codes.
  - B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards.
    1. 2018 International Mechanical Code
    2. 2018 International Building Code
    3. 2018 International Energy Code
    4. 2018 International Plumbing Code
    5. 2018 International Energy Code
    6. 2018 International Fuel Gas Code
    7. ASHRAE 90.1 – 2016

    ***Current codes adopted by the respective jurisdiction will supercede this list of codes.
  - C. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.
  - D. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.
    1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.
  - D. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.
- **Drawings and Specifications:**
  - A. Refer to Division 1 for information on submittals and shop drawings.
  - B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.
- **Record Drawings:** Provide record drawings for all work under sections in Division 22 & 23. See Division 1 for detailed requirements covering preparation of record drawings.
- **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

Approvals of Materials and Equipment: Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

- **Maintenance Manual:**
  - A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.
  - B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.
- **Maintenance Manual:**
  - A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.
  - B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.
- **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.
- **Cooperative Work:**
  - A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.
  - B. Cooperative Work Includes:
    1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 & 23 but provided under other divisions of these specifications.
    2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 23.
    3. Electrical work as specified herein. Refer to Division 26 for requirements.
- **Construction Facilities:**
  - A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.
  - B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.
- **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 23 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.
- **Mechanical Wiring:**
  - A. Provide all temperature control wiring, all interlock wiring, and equipment control wiring for the equipment that is to be provided under this Division unless specifically shown on electrical drawings.
  - B. All wiring shall be not less than No. 14 insulated, color coded wire in electrical metallic tubing. Installation shall comply with Division 26.
  - C. Before ordering motors, equipment, etc., verify the available voltage and phase with the electrical trades.
- **Electrical Work:**
  - A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.
  - B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.
  - C. Under the Automatic Temperature Control section of these specifications, furnish and install all wiring, conduit, electric automatic temperature control devices, thermostats, relays, pneumatic electric switches, automatic control switches and pilot lights. See the Automatic Temperature Control Section, for additional detailed information.
  - D. All loose starters and control devices for equipment furnished under Division 23 (except as otherwise specified under Automatic Temperature Control Section) are to be furnished under that particular section of Division 23 and installed under the electrical division.
  - E. Contractor shall be responsible for the checking and testing of all controls and the interlocks for a complete and satisfactory operating system.
  - F. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.
  - G. Submit a complete list of all motors prior to final closeout of job indicating the location, horsepower, voltage, phase specified in Table 132 of ANSI B.1.
  - H. All field wiring and equipment must conform to the applicable section of the Electrical specifications, Division 26.
- **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:
  - A. ASME Boiler and Pressure Vessel Code
  - B. Section IX ANSI Code for Power Piping: B31.1
- **Product Handling**
  - A. Protection: Take all precautions necessary to protect the materials of this section, before, during and after installation.
  - B. Replacements: In the event of damage immediately repair all damaged and defective work to the approval of the Engineer, at no additional cost to the Owner.
- **Job Conditions**
  - A. Examination of site: Examine the site and include in bid proposal all conditions under which work is to be performed.
- **Miscellaneous**
  - A. Permit and Fees: Apply and pay for all necessary permits, inspections, examinations and fees or charges required by Public Authorities having jurisdiction.
  - B. Locations and Accessibility: Contractor shall fully inform himself regarding peculiarities and limitations of space available for installation of work under this section. Valves, motors, controls and other devices requiring service. Maintenance and adjustments shall be placed in fully accessible positions and locations, provide access doors where required in ductwork and/or construction whether specifically detailed or not, and mender all such devices accessible.
  - C. Scaffolding: Furnish all scaffolding, rigging and hoisting as required for the proper execution of the work.
  - D. All HVAC equipment shall be labeled. Information on labels shall include: Identification number and name same as the drawings, flow and static pressure and the area to which the unit serves. Labels shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$ inch high.
  - E. All gas fired equipment shall include a label indication that the appliance has been adjusted, modified or re–calibrated for the altitude wherein the project is to be located. The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.
- **Submittals**
  - A. Shop Drawings: Within 15 days after award of contract, and before any of the materials of this section are fabricated and delivered to the jobsite, submit complete shop drawings and equipment submittals for the Engineer to review in accordance with these specifications. show all details of all ductwork and equipments pads.
  - B. Product Data:
    1. Submit six (6) copies of all manufacturer's product data simultaneously with all shop drawings submittals.
    2. Product data to include, all air conditioning equipment, hangers, fans and other standard items as required to complement shop drawings for a submittal indications products to be used on this work.
  - C. Record Drawings: Maintain throughout the progress of the work project record drawings and submit to the Owner.
  - D. Operating Manuals and Maintenance Manuals:
    1. Submit four (4) copies of all operating instructions and maintenance manuals.
    2. Fully instruct Owner's operating personnel and demonstrate performance, operation and maintenance of equipment. Amount of allocated for said instruction and demonstration of equipment and systems shall be part of these obligations. Submit to Engineer a letter signed by Owner's representative who will operate system stating that he has been fully instructed by contractor about operation and maintenance of equipment and system.
    3. Submit one (1) additional set of approved instructions and one (1) additional set of approved control diagrams.
  - E. Guarantees: In addition to equipment warranties, furnish a written guarantee against defects in materials and workmanship for one year. Guarantee shall include repair of damage to, or replacement of any part of equipment or premises caused by leaks or breaks in pipe or equipment provided under this section.

REGISTERED PROFESSIONAL ENGINEER
4858829
MARK L. MAKIN
5/12/22
STATE OF UTAH

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MECHANICAL SPECIFICATIONS

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1 CITY CMNTS	JE	05/10/2022

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– Equipment Identification

A. Except for individual room heating units and items furnished under temperature control all items of mechanical equipment, including fans, pumps, boilers and electrical switches and starters for mechanical equipment and gauges shall be labeled.

B. Information on labels shall include the following:

1. Identification number and name. Generally this number and name shall be the same as that shown on the drawings or in the specs.
2. If the item is a fan or pump, the flow and head shall be indicated.
3. If the item is part of a unit, the label shall have in addition to its item number, the number of the main item it is serving.
4. Valves shall be tagged with the area served and their normal operating positions shall be indicated.
5. Where the main unit is served by the valve is apparent, only the valve function needs to be included on the nameplate.

C. The types of Nameplates shall be as follows:

1. The valve tags shall be $\frac{1}{2}$" embossed aluminum tapes with identification on one side for valves. Tags for magnetic starters shall be screwed to the metal starter cover. Gags sags shall be Addressograph No. B–5300.
2. Equipment nameplates shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$" high.

D. Valve tags shall be connected to valve stems by steel rings or chains. Screws shall be used for equipment labels prior to installation. The contractor shall submit to the Engineer a complete list of all valves and each item of equipment to be identified with the proper identification.

PART 2 – PRODUCTS

– Machinery Drives:

A. Use V–belts designed for 150% of capacity for all belt drives. For multiple belt drives, use matched sets, so marked at the factory.

B. On drives with not more than two belts, provide adjustable pitch motor sheaves with the midpoint of the adjustment range equal to that required to achieve the specified fan capacity.

C. On motors with drives with more than two belts, furnish nonadjustable sheaves, providing the specified fan capacity.

– Machinery Accessories:

A. Lubricating Devices: Provide all oil level gauges, oil pressure gauges, grease cups, grease gun fittings, as required by the equipment. Extend all lubricating fittings to readily accessible locations.

B. Guards: Provide totally–enclosed OSHA type belt guards for all rotating equipment. Design guards to be readily removable for access to belt drives.

– Equipment Design and Installation:

A. Uniformity: Unless otherwise specified, provide all equipment of same type or classification by the same manufacturer.

B. Design: Design all equipment in accordance with ASME, AGA, UL and other applicable technical standards as follows:

C. Pressures vessels – ASME Code constructed and stamped

D. Electric appliances – UL labeled

E. Fire protection equipment – UL approved and labeled

F. Fans – AMCA rated and stamped

G. Cooling equipment – ARI certified

H. Fire dampers, smoke dampers, combination fire and smoke dampers – UL listed

I. Concrete Inserts:

1. The work under this section includes furnishing and installing all concrete inserts required for all materials and equipment specified herein or in other sections of Division 23.

2. Provide concrete inserts equal to Unistrut Series 3200 with standard, plain, oiled finish. Provide exposed Unistrut pipe supports with factory finished enamel paint.

– Temperature Controls

A. Thermostats shall be provided with the air conditioning units. They shall be installed and wired by the HVAC contractor. T–stats for AC units shall be programmable with night setback and override control.

– Equal Materials and Substitutions

A. In addition to manufacturers specified, the following shall also be considered equal. Provided corresponding models meet specified requirements. Equivalent substituted equipment named herein shall be submitted to Architect for approval. Submit alternate selections for prior approval. Must be received by Engineer 10 days prior to due date/bid opening.

Split System: From manufacturers listed in the schedule.

– Refrigerant Lines

A. Refrigerant lines are to be sized as per manufacturer's requirements. Lines to be fully insulated with 1 inch foam flex or equal. Insulation exposed to the sun shall be painted with two coats of protective paint. The system is to be evacuated to 200 microns, hold vacuum 24 hours. Break with freon and leak test with halide detector. Each heat pump to be provided with a refrigerant line kit.

– High Wall Fan Coil Unit

A. Furnish and install indoor, wall–mounted, direct expansion, fan coil unit to be used without ductwork. Unit shall consist of tangential, direct–drive fan. Fan motor, cooling coil, piping connections, electrical controls, microprocessor control system, integral temperature sensing, and factory–supplied mounting bracket. Unit shall be capable of being used in a refrigerant circuit with a matching air–cooled outdoor condensing unit. Cabinet discharge and inlet grilles shall be attractively styled, high impact polystyrene. Cabinet shall be fully insulated for improved thermal and acoustic performance. Fan shall be tangential direct–drive blower type with air intake at the upper front face of the unit and discharge at the bottom front. Automatic, motor–driven vertical air sweep shall be provided standard. Air sweep operation shall be user selectable. Horizontal direction may be manually adjusted and vertical air sweep may be manually set. Coil shall be copper tube with aluminum fins and galvanized steel pan under the coil shall have a drain connection for hose attachment to remove condensate. Condensate pan shall have internal trap and auxiliary drip pan under coil header. The size oo9 and 012 units shall use capillary tubes in the outdoor unit for refrigerant control, and the size 018, 024 units shall use an accessory accurater piston refrigerant metering device in the indoor unit. Provide the following functions as a minimum: automatic restart, a timer function, temperature–sensing controls, evaporative coil, freeze protection, wireless infrared remote control, auto stop features, automatic air sweep control, dehumidification mode, fan–only operation, diagnostics, user–selectable fan speed control, and compressor restart time delay. Unit shall be rated per ARI standards 210/240 and shall be listed in the ARI directory matched system. Units shall be UL listed. Provide equipment from manufacturers listed in the equipment schedule.

– Split System Outdoor Heat Pump Unit

Model of size and capacity indicated. Units shall be complete assembled and tested complete with refrigerant charge and ready to operate. Total unit shall be UL listed and carry a UL label

A. Cabinet shall be constructed of galvanized steel, bonderized and coated with a power coat paint.

B. Coils shall be of nonferrous construction with aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed.

C. Compressors shall be hermetically sealed. Compressor will be mounted on rubber vibrations isolators.

D. Refrigerant circuit components shall include the following: Liquid tube shutoff valve with seat connections, suction tube shutoff valves with sweat connections, system charge of refrigerant R410, Compressor oil, accumulator, freezestat, and reversing valve.

E. Compressor fans shall be direct drive propeller type, discharging air upward. Fan motors shall be totally enclosed, 1–phase type class B insulation and permanently lubricated bearings, shafts shall be corrosion resistant. Fan blades shall be statically and dynamically balanced. Condenser fan openings shall be equipped with steel wire safety guards.

– Pipe Identification

A. Identification of piping shall be done with "Brady" or "Westline" labels. The color coding shall comply with OSHA ANSI Safety Color Coding Regulations.

B. The identifying color coded bands, legends, and directional arrows on piping and duct systems shall be located adjacent to each valve, at every point of entry and exit where piping pass through a wall or ceiling, on each riser and junction, every 50 feet on long continuous lines and adjacent to all special fittings (regulating valves, etc.)

C. Legends shall be applied on the color band on the perimeter of the pipe in a location that will be readily visible to operating personnel from the floor in the area.

D. Color coding shall follow ANSI standards:

MATERIAL	BACKGROUND COLOR	IDENTIFYING LEGEND	LETTERING
Domestic Cold Water	Green	Domestic Cold Water	White
Waste	Yellow	Waste Water	Black

– Pipe Hangers

A. All necessary structural members, hangers, and supports of approved design shall be provided to keep piping in proper alignment and to prevent transmission of injurious thrusts and vibrations. Pipe hangers shall generally be of the clevis pipe–clamp type with suspension bolts. All bolts shall have provision for vertical adjustment and shall be equipped with locknuts.

B. No hanger shall be welded directly to steel joist. Where joist occur, clips shall be installed and hanger rod attached to clips. All piping hung from joists shall be hung from joist panel points. Protective saddles shall be provided on all insulated piping at point of hanger. Hangers shall not penetrate insulation.

C. The following is schedule of maximum spacing for hangers or other supports and sizes of suspension rods for piping. In addition to the spacing listed, an additional hanger shall be provided 1 foot 0 inches from each pipe drop, rise, or turn.

Pipe Size	Rod Diameter	Maximum Spacing
1–1/4 inch and smaller	1/2 inch	6 Feet

D. Pipe hangers shall not be welded to metal pan floor. Pipe hangers shall be concrete inserts installed in holes drilled in concrete.

E. All hangers, supports, and anchors shall be assembled with heavy pattern, hexagon carbon steel nuts.

F. Perforated metal strap shall not be permitted.

G. all pipe hangers, inserts, trapezes, etc., and all necessary accessories required to support the piping shall be provided by this contractor.

H. All pipe hangers shall be installed outside of insulation on the insulated lines.

I. Manufacturers may be Blaw–Knox, Grinnell, or Pipe Shields, Inc.

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FIBER HUT PLANS

MECHANICAL SPECIFICATIONS

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1 CITY CMNTS	JE	05/10/2022

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PART 3 – EXECUTION

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test, uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

E. Mechanical equipment installed on the roof shall not be installed any closer than 10'–0" to the edge of the roof unless there is a 42" high parapet or equipment guardrail.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test, uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

   1. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

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FIBER HUT PLANS

MECHANICAL SPECIFICATIONS

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1 CITY CMNTS	JE	05/10/2022

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DRAWING #:
MP7.3

- **Owner–Furnished and Other Equipment:**

  A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

- **Equipment identification**

  A. All major equipment shall bear firmly attached metal nameplates which state name of manufacturer, model number and electrical data.

- **Discrepancies**

  A. In the event of discrepancy, immediately notify the Owner.

  B. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

- **Initial Lubrication, Adjusting, and Filling Systems**

  A. Before operating any mechanical system, equipment bearings shall be lubricated and bolts, pulleys, and other moving parts checked for alignment and tolerances in accordance with manufacturer's operating instructions. Vibrations and noise shall be suppressed.

- **Cleaning of Equipment, Materials and Premises**

  A. Be painted smooth and clean, ready for painters. Clean entire premises of unused materials, rubbish, debris, grease spots and dirt left by subcontractor.

- **Equipment and Material**

  A. Install all equipment and material per manufacturer's recommendations.

- **Accessibility**

  A. Install work readily accessible for normal operation, reading of instruments, adjustment, service inspection and repair, provide access panels where indicated and required. Access panels shall be the responsibility of respective subcontractors.

  B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

  C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–In."

- **Equipment Final Connections:**

  A. Provide all piping and duct final connections for all equipment under Division 22 & 23 as required herein specified and indicated on the drawings.

  B. Air Conditioning, Heating, and Ventilating: Provide final connections complete with necessary valves, drains, unions, flanges and duct connections for equipment furnished and installed under other sections of the specifications, except as otherwise designated. Included under the HVAC sections of the specifications are the final connections to the following:

     1. Condensate drain piping from air conditioning equipment.

     2. Supply, return, relief, outside air and exhaust duct connections for all equipment including exhaust fans.

     3. Piping connections for all equipment.

- **Machinery Drives:** After tests have been performed on the air conditioning and air handling systems, make without cost not more than two changes in the size of the nonadjustable sheaves to obtain the required air quantities.

- **Machinery Accessories:**

  A. Application: Do not install any equipment in an application not recommended by the manufacturer.

  B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

- **Objectionable Noise and Vibration:** Construct and brace the metal partitions, ducts and sheet metal housings to prevent vibration or rattling when systems are in operation. Install connections to equipment so noise and vibration will not reach the conditioned area through ducts, piping, conduit, sheet metal work, or the building structure. Provide power–driven equipment suspended from the structure with spring type isolation.

- **Welding:**

  A. Procedures:

     1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

     2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

  B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

     1. Manual shielded metal–arc.

  C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

  D. Welding Filler Material:

     1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

     2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.

  E. Preheat and Interpass Temperature:

  F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

- **Operation**

  D. Place system in operation and regulate and adjust to Owner's satisfaction. System shall operate quietly and without vibration or noise.

  E. Contractor shall make necessary field adjustments for even temperatures throughout the project.

- **Certification**

  A. Upon completion, the contractor shall inspect work of this section and deliver to Owner a written certification that installed materials and workmanship conform to specifications.

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MECHANICAL SPECIFICATIONS

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SECTION 22 PLUMBING – GENERAL PROVISIONS

Not all specification items are used in every project.

PART 1 – GENERAL

– **Scope:**

Furnish all labor, materials, equipment, appliances and necessary incidentals for the complete installation of all plumbing shown on the drawings and as specified.

A. Work specified in this section

1. Sanitary soil, waste and vent systems.
2. Domestic hot and cold water systems.
3. Domestic water heaters.
4. Furnish and set all sleeves for pipes passing through walls and floors.
5. Pipe covering, insulation and wrapping.
6. Excavation and backfill.
7. Rougn–in and final connections to air conditioning equipment of condensate drains.
8. All plumbing fixtures, water heaters, valves, and other miscellaneous items or equipment required for a complete installation.
9. Provide collars at fire rated penetrations.

B. Provisions of this section apply to all work specified in all sections under Division 22. All items indicated on site, Architectural, Mechanical, or Plumbing drawings are to be provided complete from point of connection to finished fixture in conformance with all governing authority requirements. Nothing in these drawings or specifications shall be construed to permit work in violation of governing codes.

C. In addition, work in Division 22 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.

1. Examination of Premises: Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.
2. The Plumbing Contractor shall be licensed and hold a current contracting license as a Plumbing Contractor that has been valid for a minimum of two years in the State where the project is located.
3. The Plumbing Contractor shall have a minimum of five years experience installing commercial plumbing systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers if required by the General Contractor.
4. The Plumbing Contractor shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the plumbing bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.

D. Contractor is responsible for results caused by deviating from the plans.

– **Regulations, Permits, Fees, Charges, Inspections:**

A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IMC, IPC, IECC, NEC, NFPA codes and all City codes.

B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards:

1. 2018 International Plumbing Code
2. 2018 International Building Code
3. 2018 International Mechanical Code
4. 2018 International Energy Conservation Code.

C. Current codes adopted by the respective jurisdiction will supercede the listed codes.

D. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.

E. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.

1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.

F. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.

– **Drawings and Specifications:**

A. Refer to Division 1 for information on submittals and shop drawings.

B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.

– **Record Drawings:** Provide record drawings for all work under sections in Division 22. See Division 1 for detailed requirements covering preparation of record drawings.

– **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

– **Approvals of Materials and Equipment:** Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 22 as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.

– **Cooperative Work:**

A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.

B. Cooperative Work Includes:

1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 but provided under other divisions of these specifications.

2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 22.

3. Electrical work as specified herein. Refer to Division 26 for requirements.

– **Construction Facilities:**

A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.

B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.

– **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 22 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.

– **Electrical Work:**

A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.

B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.

C. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.

D. Submit a complete list of all motors prior to final closeout of job indicating the locations, horsepower, voltage, phase specified in Table 132 of ANSI B.1.

E. All field wiring and equipment must conform to the applicable sections of the Electrical specifications, Division 26.

– **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:

A. ASME Boiler and Pressure Vessel Code

B. Section IX ANSI Code for Power Piping: B31.1

C. AWS D10.12.D10.12M Welded joints for gas piping.

– **Product Handling**

A. Protection: Take all precautions necessary to protect the materials of this section before, during, and after installation.

B. Replacements: In the event of damage, immediately repair all damaged and defective work to the approval of the Engineer, at not additional cost to the Owner.

– **Submittals:**

A. Manufacturer's Literature: Within 35 days after award of contract and before any of the materials of this section are delivered to the job site submit seven complete brochures of all materials and equipment, per Division 1 of the specifications.

B. Other Submittals:

1. Shop Drawings.
2. Sterilization Test Report
3. Test Data.

C. Sets in bound booklet form of written operating and maintenance instructions and brochures for equipment specified in this section. Fully instruct Owners Operating Personnel.

D. Record Drawings: Keep an accurate dimensioned record of As–Built locations and elevations, as referred to approved base datum, of buried concealed.

E. Operation and Maintenance Instructions: Deliver to Architect tow complete lines, manhole, cleanouts, valves, plugged tees, capped ends, and of work which is installed different from shown in the plans.

– **Miscellaneous:**

A. Examination of the site: Exercise care in examining the site and coordinate all work indicated on the drawings with existing conditions. Report to Architect in writing conditions that will prevent proper provisions of this work. Verify depth and location of all service lines with servicing companies having jurisdiction before excavating, by submission of the bid. The contractor warrants that he has familiarized himself with the existing conditions and will perform all work as required for hookup and as required by the contract documents at no additional cost.

B. Permits and fees: Arrange and pay for all permits, inspections and fee required by all governing agencies.

C. Service connections: Make all necessary arrangements with applicable utility company for connection to existing service lines. Pay all fees associated with work including meters, hookup charge and utility assessements fees.

D. Drawings: Coordinate all space requirements with other trades, drawings indicate desired location and arrangement of piping, equipment, and other items and are to be followed as closely as possible.

PART 2 – PRODUCTS

– **General**

A. Pipe sleeves and wrapping: Provide polished chromium plated and brass set screw flanges where plumbing piping pass through walls, floors, ceilings, and partitions in finished portions of building including flanges on pipes at fixtures. All sleeves in concrete and exterior walls shall be 20 GA. galvanized iron one inch O.D. larger than the pipe, caulked if below grade in a moisture proof manner. All pipes penetrating through fire walls and floors shall be properly safed with Dow Corning 3=6548 silicone RTV foam or equal. Install per manufacturer's directions.

B. Pipe Identification:

1. Piping identification per ANSI and OSHA Standards: Each individual pipeline shall be marked for quick and easy identification as to contents and character of material carried in the pipes by set on SNA or STR Marker.
2. Markers shall be installed and spaced at not more than 20 foot intervals and so located that markers shall be visible where piping is exposed.
3. Color scheme shall be as follows:

	Background or Color Band	Identification Marker
Domestic Hot Water –	Yellow	Black on Yellow
Domestic Hot Water Return –	Yellow	Black on Yellow
Domestic Cold Water –	Green	White on Green
Sanitary Sewer –	Green	White on Green
Sanitary Vent –	Green	White on Green
Natural Gas –	Yellow	Black on Yellow
Storm Water –	Green	White on Green
Freon –	Black	White on Black

C. One marker shall installed at each side of valves, special fittings and at branch take–offs. In furred spaces install one band 2 feet above floor and 19 inches below ceiling line.

D. Materials: Materials when not otherwise definitely specified shall conform to the applicable ASTM, ASME, AGA and ASA standards.

E. All gas fired equipment shall include a label indicating that the appliance has been adjusted, modified or re–calibrated for the altitude where in the project is to be located (Green Sticker). The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.

– **Pipe and Fitting Schedule:**

Pipe and Fittings:

A. No pipe of foreign manufacturer will be acceptable on projects required to meet the Buy American Act.

B. All piping, fittings, flanges, etc. shall be free from defects and shall comply with the appropriate ASTM specifications.

C. PVC pipe and fittings: ASTM D1785 Class 150 with ASTM D 2564 solvent cement joints unless otherwise specified. Schedule 40. PVC plastic pipe fittings: ASTM F 628, schedule 40.

D. Acrylonitrile Butadiene Styrene (ABS) plastic pipe: ASTM D 2661, schedule 40, ASTM F 628 schedule 40. ABS plastic pipe fittings: ASTM F 409, accessible and replaceable, solvent cement and threaded types, drain pattern.

E. Condensate drains shall be Type L hard copper tubing with wrought–copper fittings (can't be used for condensing gas–fired applications) or PVC pipe and fittings where allowed. A P–trap shall be provided at drains.

F. All soil, waste, vent, roof drain and roof drain overflow piping below ground shall be ABS or PVC plastic pipe, rated for domestic waste and vent, with ABS or PVC plastic socket type drain, waste vent pattern fittings, solvent cemented joints. Install ABS drainage pipe and fittings according to ASTM D661. Install PVC drainage pipe and fittings according to ASTM F891.

– **Roof Flashing:**

A. Sanitary Vent Flashings: SEMCO 1100–3 or 1100–5, with one–piece lead flashing and counterflashing sleeve.

– **Pipe Sleeves:**

A. At concrete walls for floors, adjust–to–crete, paramount, hole–out Sperzel Cretesleeve floor sleeves shall extend to top of concrete curbs for piping rising through floors. Wall sleeves shall be flush with finished surface, sleeves shall be sized to allow ½ inch clearance around pipe insulation. Insulation and covering shall be continuous through wall and floor sleeves.

– **Cleanouts:**

A. Full size cleanouts shall be installed at the base of each soil waste stack. All other cleanouts shall be installed where shown on the drawings and where required by State, Local or National Plumbing Codes.

B. All cleanouts shall be installed in locations easily accessible for rodding. Cleanouts in wall shall be JR Smith 4402, in floors JR Smith 4023/ Cleanouts shall be JR Smith, Wade or Josam.

– **Pipe Insulation:**

A. All domestic hot water, hot water recirculation and cold water piping shall be covered with Owens Corning ASJ–25 fiberglass pipe insulation with vapor seal jacket. Insulation thickness shall be ½ inch for cold water and 1 inch for hot water.

B. Insulate all piping under Lavatories accessible to physically handicapped with hot water supply and "P" trap prefabricated insulation, Handi Lav Guard.

– **Pipe Hangers:**

A. Hangers shall be supplied with factory installed isolation and DI–Chromate finish.

B. Pipe 2 inches and smaller: Grinnel F69. Pipe 2–1/2 inch and larger: Grinnel F65. Concrete Inserts: Grinnel 281 and 282. Riser clamps for copper piping: Grinnel 261P, plastic coated. Riser clamps for other piping: Grinnel 261,

C. Hanger rods shall conform to the following: Pipe size 2 inch and smaller: ⅜ inch rods. Pipe size 2–1/2 inch and 3 inch: ½ inch rods. Pipe size 3 inch and larger: ⅝ inch rods.

– **Plumbing Fixtures:**

A. Fixtures shall be the water saving typer with maximum usage of 1.6 gallons per flush for water closets, 2.5 gallons per minute for showers, 3.0 gallons per minute for service sinks, 1.0 gallon per flush for urinals, 0.5 gallons per minute for public lavatories, 2.2 gallons per minute for private lavatories and 2.2 gallons per minute for sinks.

B. All fixtures shall be caulked to the floor or wall with water resistant white butyl rubber caulking compound. Trim for shall match in design. Supply faucets shall have renewable seats and barrels.

PLUMBING EQUIPMENT	MANUFACTURER
Floor Drains & Floor Sinks:	Zurn, JR Smith, Wade, Josam, Ancon, Mifab, Watts, or Equal
Cleanouts:	Zurn, JR Smith, Wade, Josam, Mikro, Mifab, Watts, or Equal
Insulation:	CertainTeed, Manville, Pittsburgh, Armstrong, LSP Products, or Owens–Corning
P–Traps:	American Standard, Kohler, McGuire, Brasscraft, Dearborn, EBC

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SFCN FIBER HUTS

FIBER HUT PLANS

PLUMBING SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #: MP7.5

PART 3 – EXECUTION

– **Surface Conditions:**

A. Inspection: All plumbing shall be installed in accordance with the requirements of all governing authorities, The original design, and referenced standards.

B. Discrepancies:
1. In the event of discrepancy, immediately notify the Architect.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved. Interferences between installed work of various trades due to lack of coordination shall be resolved by the Architect whose decision is final. Relocate or offset any work as required to accommodate work of other trades at no extra cost to the Owner when so directed by the Architect.

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Locations and Space Requirements:**

A. Contractor shall fully inform himself regarding peculiarities and limitation of spaces available for installation of work under this division. Drawings indicate desired location and arrangement of piping, equipment and other items and are to be followed as closely as possible. Work specified and not clearly defined by drawings shall be installed and arranged in a satisfactory manner. In any case and at any time a change in location required by obstacles or the installation of other trades not shown on the plumbing plans shall be made by contractor without additional charge provided the change is ordered before work is installed and no extra materials are required.

B. Verify all spaces, dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

C. Obtain all necessary rough in data and dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

D. Maintain ample headroom clearances and accessibility. Maintain ceiling heights.

E. Constantly check work of other trades to prevent interference with this installation.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test,uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Excavation and Backfill:**

A. Perform all necessary excavation, shoring and backfilling required for the proper laying of all pipes and conduits inside the building and premises, and outside as may be necessary. Conform to Division 2 requirements. Remove all excess excavated materials from the site or dispose of on site as directed by General Contractor.

B. Excavate all trenches open cut, keep trench banks as nearly vertical as practicable, and sheet and brace trenches where required for stability and safety. Excavate trenches true to line and make bottoms not less than 18" wide but no wider than necessary to provide ample work room. Grade trench bottoms accurately to provide uniform bearing and support for each section of pipe on undisturbed soil along its entire length. Dig "bell" holes after the trench bottom has been graded. Machine grade only to the top line of the pipes, doing the balance by hand. Do not cut any trench near or under footings without first consulting the Architect. Comply with OSHA requirements.

C. Provide backfilling and compaction in accordance with requirement of Division 2 and under the direction of the Architect and the Owner's testing firm to the required density. Make the first 2 feet of fill in 6" layers, each thoroughly compacted as directed, and free from rocks, large clods of earth, leaves, branches, and debris. Compact the rest of the backfill to prevent settlement as directed, using in the backfill no rocks larger than 4" in diameter, and using no rocks at all in the top 12".

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Plumbing: Provide all services designated and required, including waste and water. Valve and cap all stub–outs for water and gas. Cap all waste and vent outlets.

2. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

– **Owner–Furnished and Other Equipment:**

A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–in."

– **Equipment Final Connections:**

A. Provide all piping final connections for all equipment under Division 22 as required herein specified and indicated on the drawings.

B. Plumbing: Provide final plumbing connections complete with shutoff valves, risers, traps, vacuum breakers and indirect wastes for all equipment furnished and installed under other sections of these specifications, except as otherwise designated. Included under the Plumbing section of the specifications are the final connections to the following:

1. Miscellaneous equipment specified to be furnished and installed under other divisions of the specifications.

2. Cold water make–up connections to air conditioning equipment.

3. Kitchen equipment, furnished under other sections of the specifications.

– **Sterilization:**

A. Sterilize each unit that will have water in it, the water supply piping and distribution system with liquid chloride or hydrochloride before acceptance of operation in accordance with AWWA C601, "Standard for Disinfection Water Mains" work shall be done by contractor and unless otherwise required by Public Authorities having Jurisdiction, shall conform to the following:

B Materials
1. Liquid Chlorine: U.S. Army Specification 4–1. 2. Hydrochloride: Liquid shall conform to FED. Spec. O–C–11RA (INT. 4).

C. Method: Amount of chlorine shall provide a dosage of 50 PPM minimum. Introduce chlorinating materials into lines and distribution system in approved manner after a contact period of 24 hours during which period chlorine residual shall be maintained at 5 PPM minimum, flush out systems with clean water until residual content is not greater than 0.2 PPM. Flush entire system open and close valves in lines being sterilized several times during contact period.

D. Sterilization report shall be turned into the Engineer for review prior to requesting a substantial completion inspection.

– **Machinery Accessories:**

A. Application: Do not install any equipment in an application not recommended by the manufacturer.

B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

– **Pipe and Equipment Supports:**

A. Where supports, foundations, stands, suspended platforms for machinery, tanks, or other equipment are indicated or specified, perform the following:

1. Locate support members to avoid equipment strains and interference with piping connections, tube pulling or other maintenance operations.

2. Where saddles are required, use cast iron or welded steel saddles with curvature to fit the tank shell.

3. Mount power–driven equipment on common base with driver.

B. Concrete Inserts: Furnish and install all concrete inserts required for all materials and equipment specified and/or shown on the drawings for Division 22.

C. Concrete Foundations: Work under this section includes coordination of construction of all concrete foundations indicated or required for equipment specified herein or in other sections under Division 22. Materials and workmanship shall be described under Division 3.

D. Grout under all equipment after leveling, filling completely the space between machinery bed plate and foundation surface as specified in Division 3. Finish exposed surface of grout for a neat appearance.

E. Floor Stands: Where equipment is mounted standard or on legs, construct of structural steel or steel pipe and fittings, cross–brace and fasten with flanges or plates bolted to floor.

F. Ceiling or Wall Supports: Use suspended platform, strap hangers, bracket or shelf, whichever is most suitable for equipment and location. Construct of structural steel members, steel plates, rods or pipe as required. Cross–brace and fasten to building structure or inserts in an approved manner.

G. Steel Work: Neatly fabricate and erect steel work with burrs and welding spatter ground off. Paint after fabrication with a rust–inhibitive primer.

– **Hangers and Supports:**

A. Hold horizontal pipe runs firmly in place using approved steel and iron hangers, supports, and/or pipe rest unless otherwise indicated. Suspend hanger rods from concrete inserts or from approved brackets, clamps or clips. Hang pipes individually or in groups if supporting structure is adequate to support weight of piping and fluid. Except for buried piping, hang or support pipe runs so that they may expand or contract freely without strain to pipe or equipment.

1. Horizontal steel piping: Provide hangers or supports every 10 ft. except every 8 ft. for piping 1–1/4 inch and smaller.

2. Horizontal copper tubing: For 2 inch diameter and over, provide hangers every 10 feet, for 1–1/2 inch diameter and smaller every 6 feet.

3. Horizontal cast–iron no–hub piping: Provide hangers or supports at each side of no–hub fittings. Provide anti–separation bracing at each 90 degree change in direction.

4. Horizontal cast–iron hub and spigot piping: Provide hangers or supports at each hub.

5. Vertical piping: Support at floor with iron pipe clamps.

– **Test:**

A. Perform test to Architect's satisfaction. Make test in presence of Owner's Rep and at the time suitable to him if requested. Furnish necessary labor and equipment and bear cost for testing. Cost of replacing and/or repairing damage resulting therefor shall be borne by this contractor, should the contractor refuse or neglect to make test necessary to satisfy the Architect that requirement of specifications and drawings are met, such tests may be made by an independent testing company and the contractor charged for all expenses.

B. Hydrostatic test: Make by completely filling piping system with water and eliminating accumulations of air so that leakage, no matter how small, will be apparent on testing gauge immediately. Maintain pressure until pipe under test has been examined, but in no case less than 24 hours. Test system at the following pressure:

SYSTEM	TEST PRESSURE
Domestic Cold Water	150 PSIG
Domestic Hot Water	150 PSIG

C. Sanitary soil, waste, bent systems test: Before installation of fixtures, cap end of system and fill lines with water to 10 feet above the section being tested. (including bents) and allow to stand for at least fifteen (15) minutes before inspection starts. Make test in sections if necessary or convenient. However, include interconnections between new sections and previously tested section in the new test.

D. Roof drainage system: Test as specified for sanitary system.

E. Gas systems: Test with compressed air at 10 PSI for six hours or longer as directed to provide a tight seal without leaks. Use pressure recorder to record pressure of all lines for duration of test.

F. Repair all leaks and retest as required.

– **Cleanouts:**

A. Provide cleanouts where indicated and required. Unless otherwise indicated, cleanouts shall be accessible with extensions to grade to outside of buildings, or to floors above as indicated or required. Do not locate cleanouts in public lobbies and public corridors unless approved by Architect.

B. Membranes: Where waterproofing membrane occurs under floor, bring membrane to cleanout without puncturing and permanently anchor to integral anchoring flange with heavy cast–iron clamping collar and rustproof bolts.

C. Covers: Set cleanout covers with all finished wall, floor or grade. In all cases securely anchor by means of integral lugs and bolts. Where surfacing material such as resilient coverings is specified, ascertain thickness being used and set cleanout top so finished floor is smooth.

D. Use Acorn 3500 thread compound.

– **Pipe Installation:**

A. Make pipe runs straight and true. Springing or forcing piping into place is not permitted. Install in manner to prevent any undue strain on equipment. Make joints smooth and unobstructed inside and out, and ream pipe ends thoroughly to remove burrs. Conceal piping in finished portions of the building except as otherwise directed or indicated. Cap or plug ends and openings in pipe and fittings immediately to exclude dirt until equipment is installed or final connections are made.

B. Install piping to clear beams unless sleeving is indicated. Constantly check work of other trades to prevent interference with this installation. Obtain approval from Architect if coring or cutting of concrete work is necessary due to failure to install required sleeves prior to the time of concrete pour. Cost of coring and cutting work shall be borne by the subcontractor.

C. Exposed plated or enameled pipe: Make connections to equipment with special care. Show not tool marks or threads.

D. Dielectric Unions: Make connections between two dissimilar metal pipes with dielectric unions.

E. Unions: Provide a union on one side of each shutoff valve. At both sides of automatic valves. At equipment connections and elsewhere indicated or required, unless flanges are indicated.

F. Floor, wall ceiling plates: Provide where pipes pierce finished surfaces.

G. Noise: Install soil, waste, and water piping in a manner that prevents any unusual noise from flow of water under normal conditions.

H. Shutoff Valves: Provide where indicated and required for adequate control of system and for isolation of fixture groups and equipment.

I. Buried Pipe: Install with minimum 36 inches coverage unless otherwise indicated. Lay piping accurately to grade where invert elevations are indicated. When required provide thrust blocks per manufacturer's recommendations.

J. Equipment and Materials: Install per manufacturer's recommendations.

K. Accessibility: Install work readily accessible for normal operation, reading of instruments, adjustments, service, inspections and repair. Provide access panels where indicated and required.

L. Pipe Joints: Make screwed joints with a minimum amount of compound applied to the male thread only. All joints shall be made per code requirements and manufacturer's recommendations.

M. Provide pipe isolation at all hangers for non–insulated materials.

N. Piping Rough–in for Fixtures: Support or secure to building construction of firmly anchored waste piping so that pipes cannot be displaced. Do not secure to walls. Use of makeshift devices, such as rope, wire, tape, etc. is prohibited.

O. Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The minimum slope for horizontal pipe 4" or larger in diameter may have a slot of not less than 1% ($\frac{1}{8}$ inch per foot). The minimum slope of horizontal pipe less that 4'; may have a slope of not less than 2% ($\frac{1}{4}$ inch per foot).

– **Cleanup:**

A. In addition to cleanup specified under Division 1, thoroughly clean all parts of the equipment. Where exposed parts are to be painted, thoroughly clean off any splattered construction materials and remove all oil and grease spots. Wipe the surface carefully and scrape out all cracks and corners.

B. Thoroughly flush and clean out all water circulating systems. Remove, clean and replace all strainer elements.

C. During the progress of the work, keep the premises clean and free of debris.

– **Painting:**

A. Except as otherwise specified or indicated in the architectural drawings and/or specifications, paint all exposed unfinished metal with one coat of rust–inhibiting primer.

B. Finished painting is specified under Division 9.

– **Connections to Services:** Provide all connections to sanitary sewer lines, storm sewer, gas lines, water lines, electrical services furnished under other contracts, except as otherwise specifically designated. Provide all necessary tees, taps and connections required to properly connect to all mains. Verify all required City requirements before making any piping connections to sanitary sewer, storm sewer, water or gas piping and conform to them during installation.

– **Welding:**

A. Procedures:

1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

1. Manual shielded metal–arc.

2. Gas tungsten–arc.

3. Other welding processes may be used providing they are qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

D. Welding Filler Material:

1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.

E. Preheat and Interpass Temperature:

F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

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5/12/22

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PLUMBING SPECIFICATIONS

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ELECTRICAL GENERAL NOTES:

1. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD, AND TO THE SATISFACTION OF THE ENGINEER.
2. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
3. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
4. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOF, ETC.
5. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
6. NO WIRING SHALL RUN IN DUCT WORK.
7. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED IN THE CONDUCTORS SMALLER THAN #10 AWG.
8. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
9. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND OTHER DRAWINGS PRIOR TO BID.
10. ALL JUNCTION BOXES SHALL HAVE MINIMUM DEPTH OF 2–1/8" UNLESS OTHERWISE SPECIFIED. SECURE ALL JUNCTION BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER PLASTER RINGS.
11. CONNECT ALL EM FIXTURES, NIGHT LIGHTS, EGRESS LIGHTS, AND EXIT SIGNS TO UNSWITCHED CONDUCTOR.
12. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
13. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC,) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH–IN.
14. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH–IN.
15. ALL FIXTURES, DEVICES, CONDUIT, AND FITTINGS TO BE MADE OF NON–CORROSIVE MATERIAL FOR BUILDING INSIDE.
16. ALL PENETRATIONS THROUGH BUILDING STRUCTURE SHALL BE SEALED.

ELECTRICAL SYMBOLS

SYMBOL	EXPLANATION
———	BRANCH CIRCUIT ON/IN CEILING OR WALL
— — — —	BRANCH CIRCUIT IN GROUND
A–1,3	BRANCH CIRCUIT HOMERUNS TO PANEL
CH 1	MECHANICAL EQUIPMENT SYMBOL
◇1	KEYED NOTE REFERENCE
(42X)	FEEDER TAG (SEE FEEDER SCHEDULE)
▬	LIGHTING AND POWER PANELBOARD
◬	SPECIAL RECEPTACLE
⊖	DUPLEX RECEPTACLE OUTLET
	WP ← MODIFIER ⊖ A–3 ← PANEL SPACE ASSIGNMENT REF ← EQUIPMENT DESIGNATION WP WEATHERPROOF COVER & LISTED WEATHER RESISTANT DEVICE
SYMBOL	EXPLANATION
F1	FIXTURE TYPE SYMBOL
▭	LINIER FIXTURE (TYPICAL)
▨	EMERGENCY LIGHTING UNIT
▭	WALL PACK
	EMERGENCY LIGHTING UNIT
⊠◁	ALARM HORN/STROBE
C	CONDUIT
$	SINGLE POLE SWITCH (SUBSCRIPT AS INDICATED BELOW)
2	TWO POLE SWITCH
3	3–WAY SWITCH
M	MANUAL STARTER WITH THERMAL OVERLOAD

NOTE: ALL SYMBOLS MAY NOT BE USED.

DESIGN CONTACTS

ELECTRICAL ENGINEER:	RYAN BEAGLES
ELECTRICAL TEAM LEAD:	JOE HUTCHINGS
ELECTRICAL DESIGNER:	JOHNNY BENCH

SHEET INDEX

SHEET NUMBER	SHEET TITLE
E0.1	COVER SHEET
E1.0	POWER AND LIGHTING PLAN
E5.1	ELECTRICAL DETAILS
E5.2	ELECTRICAL DETAILS
E5.3	ELECTRICAL DETAILS
E5.4	ELECTRICAL DETAILS
E5.5	ELECTRICAL DETAILS
E5.6	ELECTRICAL DETAILS
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E6.2	ELECTRICAL SCHEDULES
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E7.1	ELECTRICAL SPECIFICATIONS
E7.2	ELECTRICAL SPECIFICATIONS
E7.3	ELECTRICAL SPECIFICATIONS
E7.4	ELECTRICAL SPECIFICATIONS

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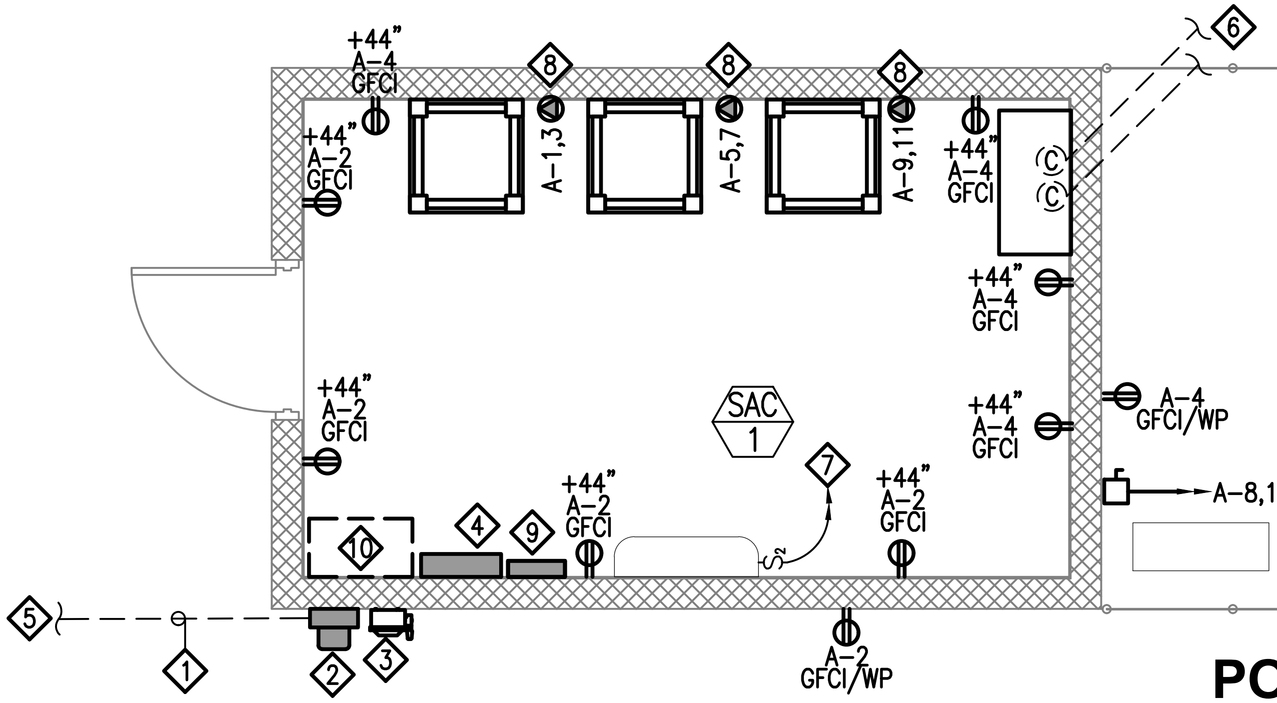
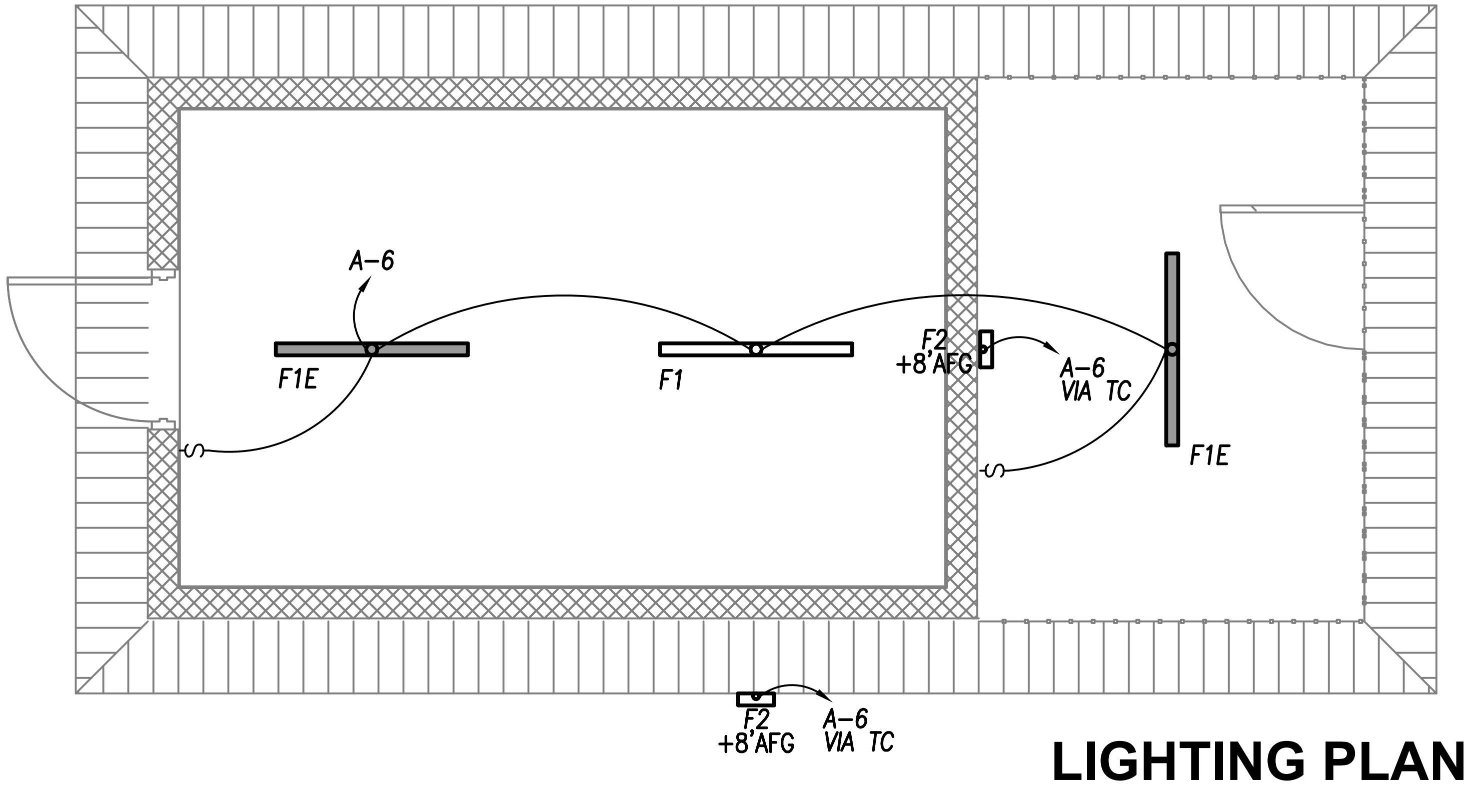


POWER PLAN

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



LIGHTING PLAN

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

ELECTRICAL KEYED NOTES:

1. INSTALL CONDUIT TO EXISTING POWER POLE. VERIFY EXACT LOCATION WITH SPANISH FORK CITY POWER DIVISION.
2. METER.
3. MAIN BUILDING DISCONNECT.
4. PANELBOARD 'A'. SEE PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
5. SEE ONE LINE DIAGRAM ON SHEET E5.1 FOR DETAILS.
6. PROVIDE (2) 3" CONDUIT STUBBED OUTSIDE BUILDING FOOTING AND CAPPED. FOR FUTURE COMMUNICATIONS. COORDINATE LOCATION WITH OWNER.
7. SAC-1 POWERED BY SCU-1. PROVIDE INTERCONNECTING CONDUIT AND WIRE.
8. RECEPTACLE FOR SERVER RACK. VERIFY AMPERAGE AND TYPE WITH CITY BEFORE INSTALL.
9. PROPOSED LOCATION OF TIME CLOCK. CONNECT TO EXTERIOR LIGHTING.
10. PROVIDE ADEQUATE SPACE ON WALL FOR FUTURE PROPANE GENERATOR TRANSFER SWITCH.

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POWER AND LIGHTING PLAN

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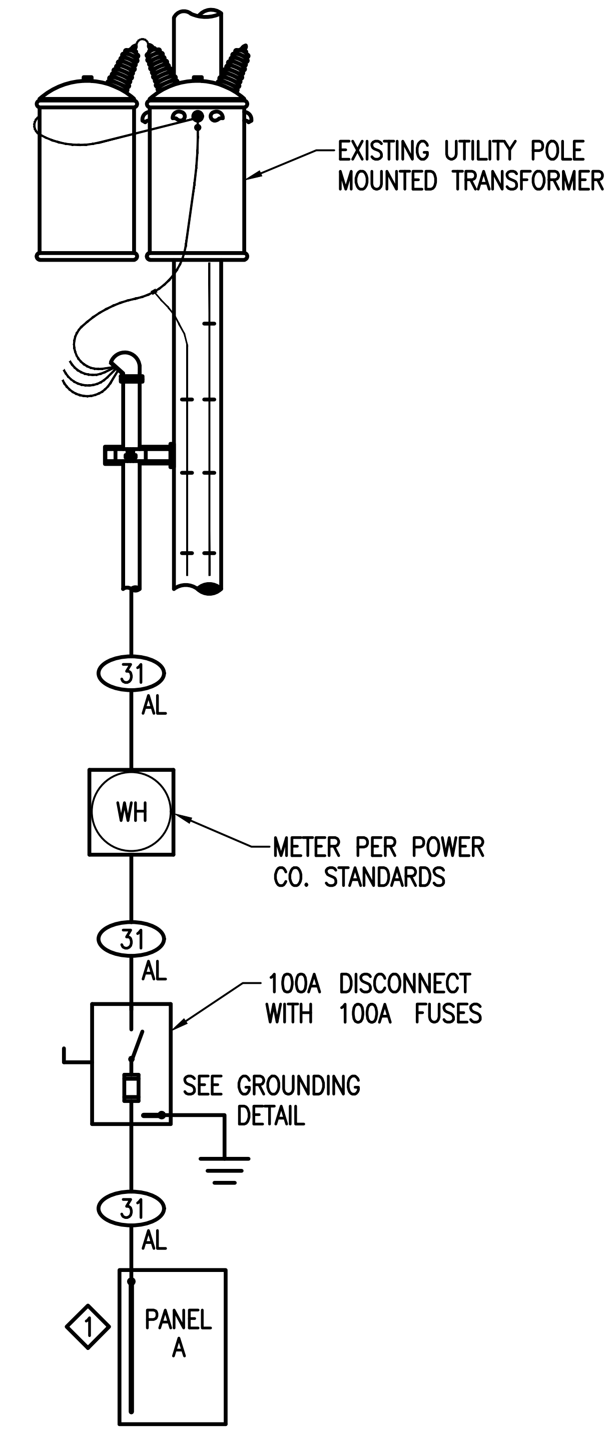
EXISTING UTILITY POLE MOUNTED TRANSFORMER
31 AL
WH
METER PER POWER CO. STANDARDS
31 AL
100A DISCONNECT WITH 100A FUSES
SEE GROUNDING DETAIL
31 AL
1
PANEL A

KEYED NOTES:

1. PROVIDE AVAILABLE FAULT CURRENT FIELD MARKINGS AT PANEL PER NEC 110.24.

1 POWER ONE-LINE DIAGRAM

SCALE: NTS

ALUMINUM FEEDER SCHEDULE

TYPE	CONDUIT SIZE		CONDUCTORS		70°C AMP RATING
	PVC	EMT	QUAN.	SIZE	
38 AL	3/4"	3/4"	3	#8	40
33 AL	1-1/4"	1-1/4"	3	#3	75
32 AL	1-1/4"	1-1/4"	3	#2	90
31 AL	1-1/2"	1-1/2"	3	#1	100
31X AL	1-1/2"	1-1/2"	3	1/0	120
34X AL	2-1/2"	2-1/2"	3	4/0	180

OVERCURRENT DEVICE	ALUMINUM
15	12
20	10
30	8
40	8
60	8
100	6
200	4
300	2
400	1
500	1/0
600	2/0
800	3/0

NOTE:

1. SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETAIL FOR GROUND CONDUCTORS RATING.
2. ALL INSULATION SHALL BE THHN (ABOVE GRADE) OR THWN (BELOW GRADE) UNLESS NOTED OTHERWISE.
3. PVC CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC & THWN ARE APPROVED FOR UNDERGROUND FEEDERS ONLY.

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NOTE:

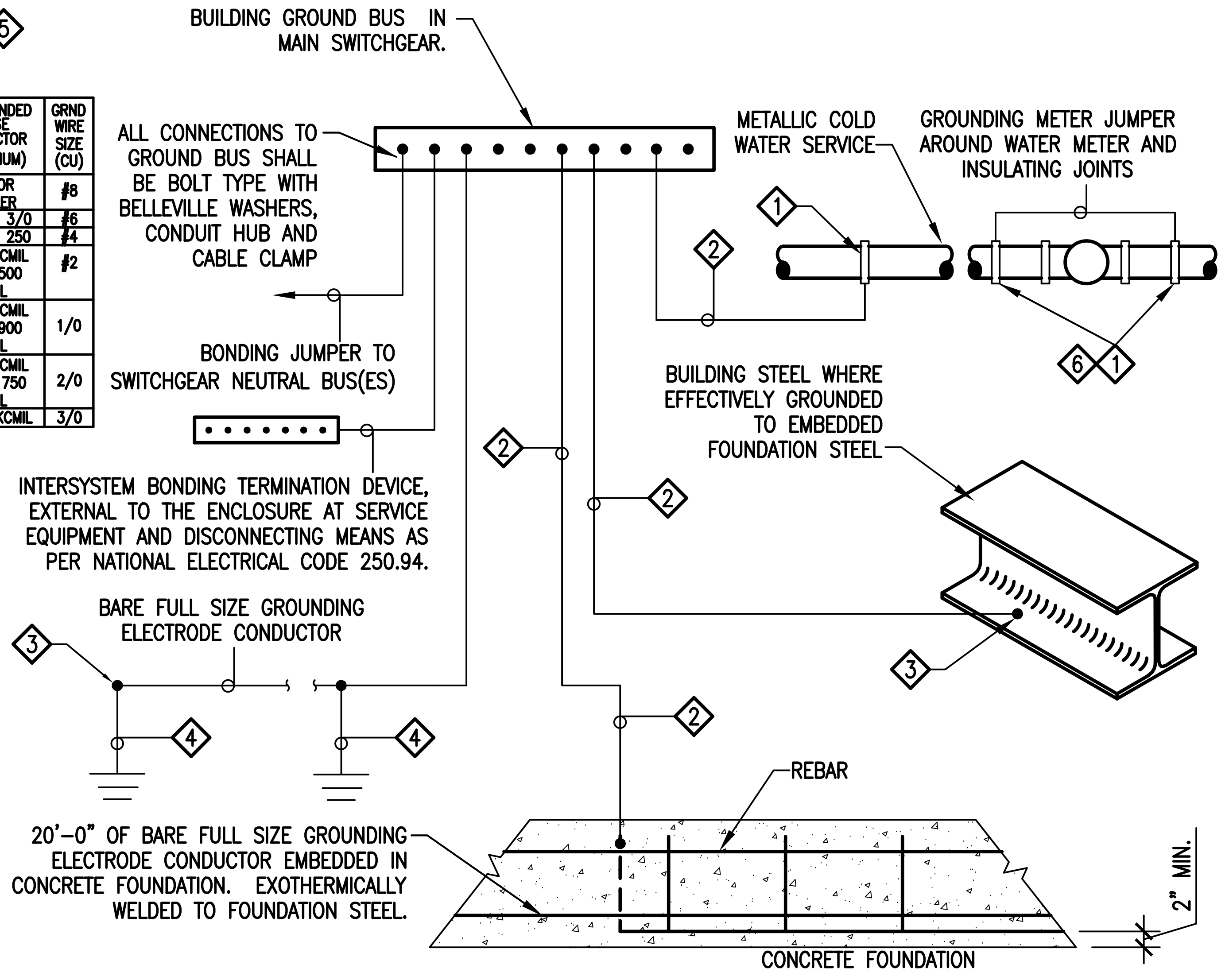
1. WHEN PRESENT CONTRACTOR SHALL PROVIDE ALL GROUNDING MEANS INDICATED. CONTRACTOR SHALL REFER TO ELECTRICAL ONE-LINE DIAGRAM AND GROUNDING ELECTRODE CONDUCTOR SCHEDULE (THIS DETAIL) FOR GROUNDING ELECTRODE CONDUCTOR SIZE. CONTRACTOR SHALL REFER TO ELECTRICAL SPECIFICATIONS FOR SPECIFICS OF GROUNDING SYSTEM INSTALLATION AND MATERIALS.
2. GROUNDING ROD SHALL BE MIN. 9FT. AWAY FROM IRRIGATION CONTROLLER.

KEYED NOTE:

1. T&B 3900 BU GROUND CLAMP WITH 3/4" CONDUIT HUB AND CABLE CLAMP
2. FULL SIZE GROUNDING ELECTRODE CONDUCTOR IN PVC.
3. EXOTHERMICALLY WELDED (TYPICAL)
4. DRIVEN GROUND RODS ⅝"x8' COPPER/STEEL ON BUILDING EXTERIOR
5. TABLE TAKEN FROM NEC 250.66. UNGROUNDED PHASE CONDUCTOR REFERS TO THE SIZE OF THE LARGEST UNGROUNDED SERVICE-ENTRANCE CONDUCTOR OR EQUIVALENT AREA FOR PARALLEL CONDUCTORS. SEE NEC 250.66.
6. BOND METAL PIPING PER NEC 250.104.

GROUNDING ELECTRODE CONDUCTOR 5

UNGROUNDED PHASE CONDUCTOR (COPPER)	UNGROUNDED PHASE CONDUCTOR (ALUMINUM)	GRND WIRE SIZE (CU)
#2 OR SMALLER	1/0 OR SMALLER	#8
1 OR 1/0	2/0 OR 3/0	#6
2/0 OR 3/0	4/0 OR 250	#4
>3/0 THRU 350 KCMIL	>250 KCMIL THRU 500 KCMIL	#2
>350 KCMIL THRU 600 KCMIL	>500 KCMIL THRU 900 KCMIL	1/0
>600 KCMIL THRU 1100 KCMIL	>900 KCMIL THRU 1750 KCMIL	2/0
>1100 KCMIL	>1750 KCMIL	3/0

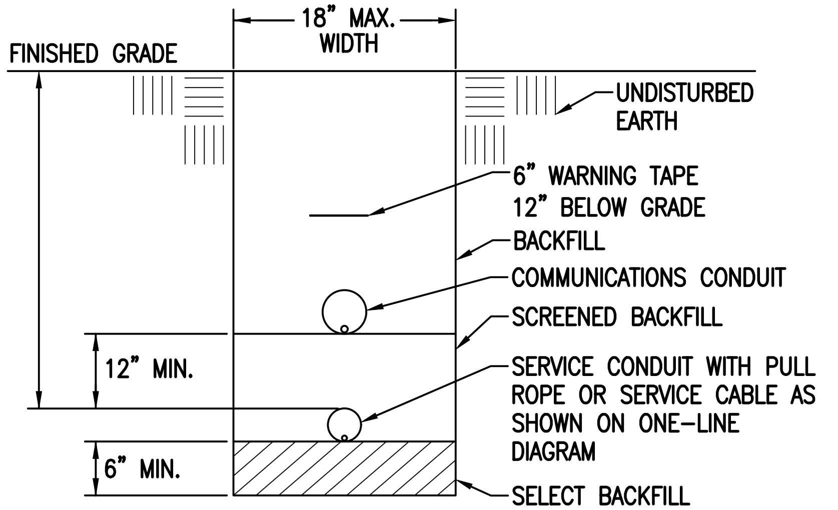

BUILDING GROUND BUS IN MAIN SWITCHGEAR.
ALL CONNECTIONS TO GROUND BUS SHALL BE BOLT TYPE WITH BELLEVILLE WASHERS, CONDUIT HUB AND CABLE CLAMP
METALLIC COLD WATER SERVICE
GROUNDING METER JUMPER AROUND WATER METER AND INSULATING JOINTS
1
2
6
1
BONDING JUMPER TO SWITCHGEAR NEUTRAL BUS(ES)
BUILDING STEEL WHERE EFFECTIVELY GROUNDED TO EMBEDDED FOUNDATION STEEL
2
2
INTERSYSTEM BONDING TERMINATION DEVICE, EXTERNAL TO THE ENCLOSURE AT SERVICE EQUIPMENT AND DISCONNECTING MEANS AS PER NATIONAL ELECTRICAL CODE 250.94.
BARE FULL SIZE GROUNDING ELECTRODE CONDUCTOR
3
3
4
4
2
REBAR
20'-0" OF BARE FULL SIZE GROUNDING ELECTRODE CONDUCTOR EMBEDDED IN CONCRETE FOUNDATION. EXOTHERMICALLY WELDED TO FOUNDATION STEEL.
2" MIN.
CONCRETE FOUNDATION

1 SERVICE GROUNDING DETAIL

SCALE: NTS

LOCATION DESCRIPTION	MIN. DEPTH
BELOW CONCRETE SLAB (NOT TRAFFIC)	18 INCHES
BELOW TRAFFIC SURFACES	24 INCHES
PARKING LOT (PAVED OR NON-PAVED)	24 INCHES
OTHER LOCATIONS	24 INCHES
UTILITY SECONDARY	24 INCHES*
UTILITY PRIMARY	48 INCHES*

(SEE NEC TABLE 300.5)
* VERIFY ALL DIMENSIONS WITH LOCAL POWER COMPANY STANDARDS AND SPECIFICATIONS.



2 TRENCHING DETAIL

SCALE: NTS

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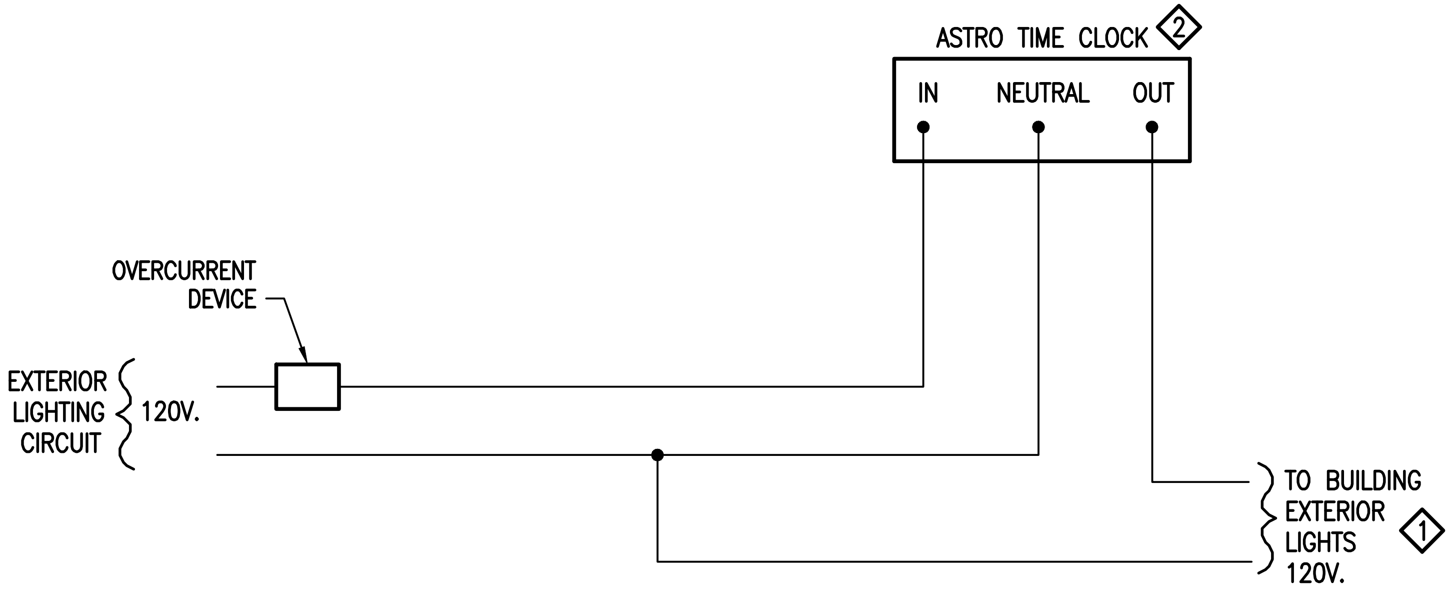
ASTRO TIME CLOCK ②
IN
NEUTRAL
OUT
OVERCURRENT DEVICE
EXTERIOR LIGHTING CIRCUIT
120V.
TO BUILDING EXTERIOR LIGHTS 120V. ①

KEYED NOTE:

1. CIRCUIT AMPERAGE SHALL NOT EXCEED PHOTOCELL AND TIME CLOCK RATING.
2. TIME CLOCK SHALL BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS.

1 LIGHTING CONTROL WIRING DIAGRAM

SCALE: NTS

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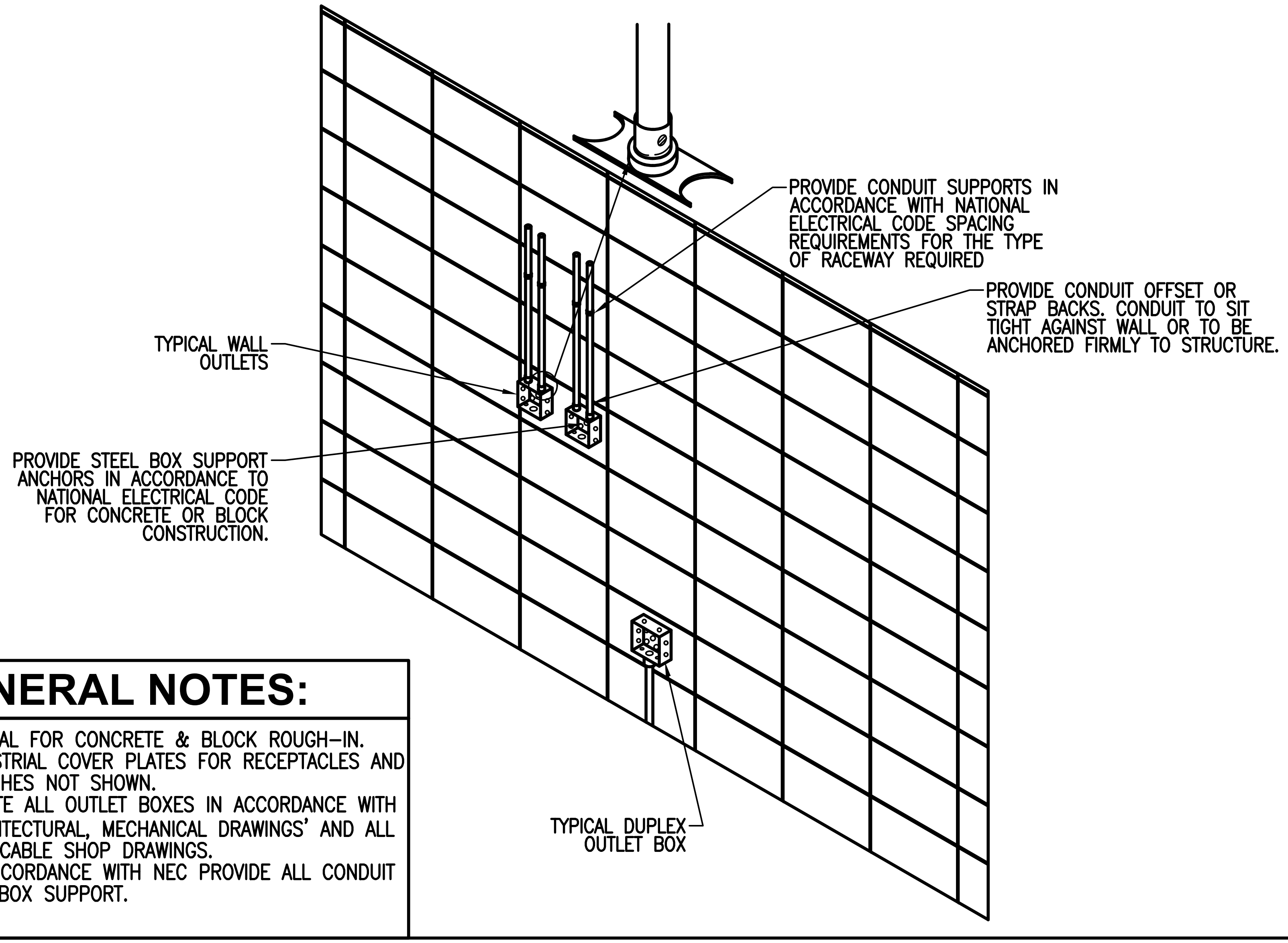
PROVIDE CONDUIT SUPPORTS IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE SPACING REQUIREMENTS FOR THE TYPE OF RACEWAY REQUIRED
PROVIDE CONDUIT OFFSET OR STRAP BACKS. CONDUIT TO SIT TIGHT AGAINST WALL OR TO BE ANCHORED FIRMLY TO STRUCTURE.
TYPICAL WALL OUTLETS
PROVIDE STEEL BOX SUPPORT ANCHORS IN ACCORDANCE TO NATIONAL ELECTRICAL CODE FOR CONCRETE OR BLOCK CONSTRUCTION.
TYPICAL DUPLEX OUTLET BOX

GENERAL NOTES:

1. TYPICAL FOR CONCRETE & BLOCK ROUGH-IN.
2. INDUSTRIAL COVER PLATES FOR RECEPTACLES AND SWITCHES NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL, MECHANICAL DRAWINGS' AND ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH NEC PROVIDE ALL CONDUIT AND BOX SUPPORT.

1 ROUGH-IN DETAIL FOR EXPOSED EMT CONDUIT

SCALE: NTS

1

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KEYED NOTES:

① THE MINIMUM HEADROOM OF WORKING SPACE SHALL BE 6½ FT.

② THE WIDTH OF THE WORKING SPACE SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 IN., WHICHEVER IS GREATER. THE PANEL DOOR SHALL OPEN AT LEAST 90 DEGREES.

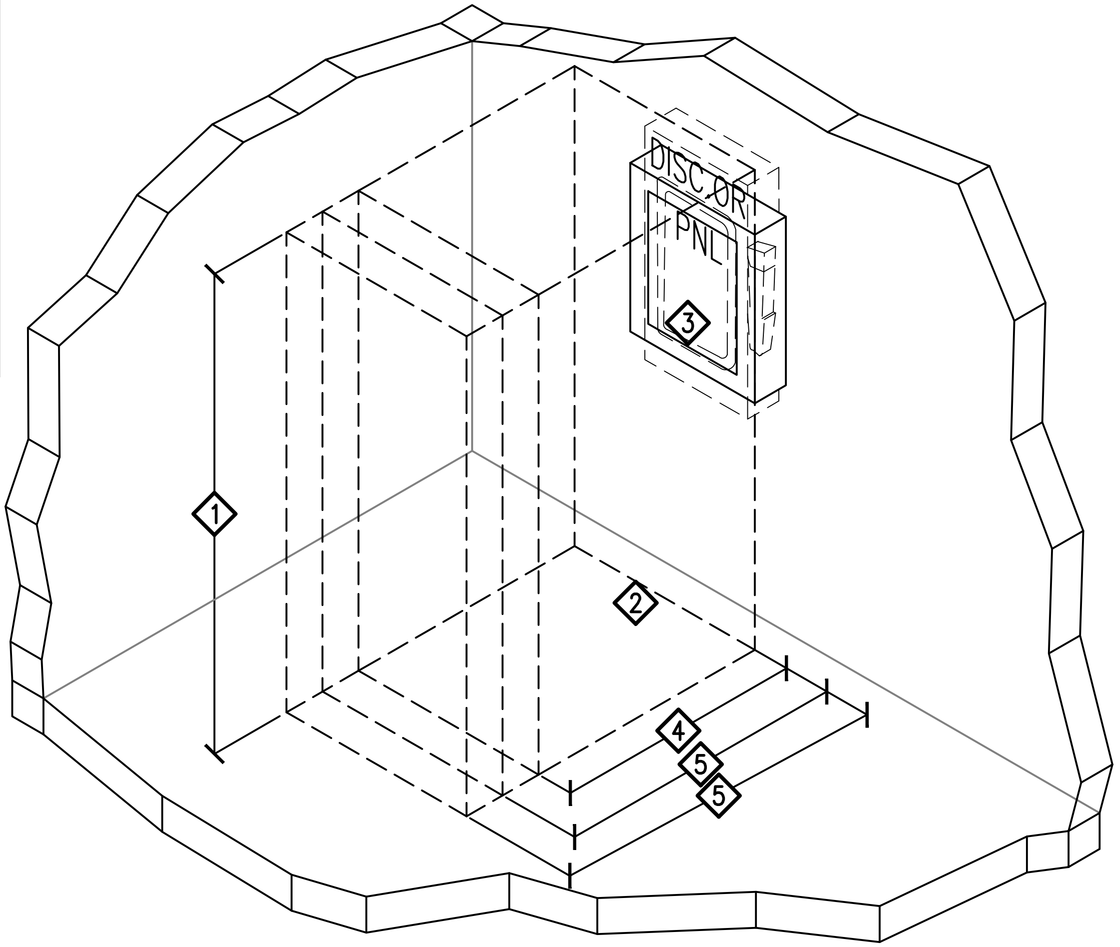
③ ALL CIRCUIT BREAKERS OR DISCONNECT HANDLES SHALL BE NOT MORE THAN 6 FT 7 IN. ABOVE THE FLOOR WHEN IN THEIR HIGHEST POSITION.

④ 3 FT CLEARANCE IF 0–150V TO GROUND

⑤ 3.5FT CLEARANCE IF 151–600V TO GROUND. 4FT IF EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.

GENERAL NOTE:

1. ALL WORKING SPACE CLEARANCE FROM FACE OF PANEL.



1 ELECTRICAL EQUIPMENT WORK SPACE CLEARANCES

SCALE: NTS

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ELECTRICAL DETAILS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

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5/12/22

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FAULT CURRENT CALCULATION TABLE

MAIN UTILITY COMPANY TRANSFORMER	TRANSFORMER KVA	AFC AT UTILITY	%Z
1Ø 120/240V -100A	25	10,000 A	1.50%

CONFIGURATION						FEEDER			SYSTEM						FAULT CURRENT AT EQUIPMENT	FULL OR SERIES RATED	MINIMUM SYMMETRICAL EQUIPMENT AIC RATING
FROM		TO		LENGTH	SOURCE FAULT CURRENT	FEEDER SIZE	FEEDERS PER PHASE	WIRE CONSTANT	LINE TO LINE VOLTS	XFMR SECONDARY VOLTS	PHASE	KVA	%Z	MOTOR LOAD			
TRANSFORMER	UTILITY	METER	MAIN	10'-0"	10,000 AIC	1 AL	1	4,678	240 V		1Ø		-		9,182 AIC	FULL	10,000 AIC
METER	MAIN	SWITCH	DISC	5'-0"	9,182 AIC	1 AL	1	4,678	240 V		1Ø		-		8,821 AIC	FULL	10,000 AIC
SWITCH	DISC	PANELBOARD	A	5'-0"	8,821 AIC	1 AL	1	4,678	240 V		1Ø		-		8,488 AIC	FULL	10,000 AIC

NOTE: DISTANCES INDICATED ARE FOR FAULT-CURRENT ANALYSIS ONLY. CONTRACTOR SHALL USE FIELD MEASUREMENTS ESTABLISH CONDUCTOR LENGTHS FOR ORDERING PURPOSES.

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SERVICE		DISCONNECT		STARTER	LOAD			MOCP/ BRKR	REMARKS
		VOLTS	PHASE	SIZE	FUSE		HP/TON	VA	AMPS		
SCU 1	HEAT PUMP	240 V	1Ø	30A NEMA 3R	-	INTEGRAL		4,320	18.0A	40A	
SAC 2	FAN COIL	240 V	1Ø	2 POLE SWITCH	-	INTEGRAL		240	1.0A	-A	INDOOR UNIT POWERED BY OUTDOOR UNIT.

NOTES:

1. VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, FLA, ETC.) WITH MECHANICAL DRAWINGS/SUBMITTALS BEFORE FOR ACTUAL EQUIPMENT INSTALLED.
2. ALL FUSES SHALL BE DUAL ELEMENT TIME DELAY. FINAL BREAKER/FUSE & DISCONNECT SIZE SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATION FOR ACTUAL EQUIPMENT INSTALLED.
3. MAXIMUM VALUES INDICATED.
4. DISCONNECTING MEANS NOT REQUIRED FOR EQUIPMENT WITHIN SIGHT (AS DEFINED IN NEC) OF BRANCH PANEL SERVING EQUIPMENT. SEE NEC 422.31 (B).
5. DISCONNECTING MEANS NOT REQUIRED FOR APPLIANCES NOT OVER 300 VA. SEE NEC 422.31 (A).

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PANEL SCHEDULE "A"

VOLTAGE: 240 / 120 VOLTS
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
PHASE: 1
WIRE: 3
BUS RATING (AMPS): 100
MAIN LUGS ONLY
SHORT CIRCUIT RATING: SEE FAULT CURRENT TABLE
REMARKS:

CIRCUIT BREAKER				CIRCUIT NAME	FEEDER			CKT. LOAD		LOAD/PHASE (VA)		CKT. LOAD		FEEDER			CIRCUIT NAME	CIRCUIT BREAKER			
No.	AMPS	POLE	MOD.		C	WIRE	GRD	DEMAND FACTOR	WATTS	ØA	ØB	WATTS	DEMAND FACTOR	GRD	WIRE	C		MOD.	POLE	AMPS	No.
1	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	2,900		900	1.00	#12	#12	¾"	CO RECEPTACLES	-	1	20	2
3	-	-	-	-	-	#10	-	1.00	2,000		2,900	900	1.00	#12	#12	¾"	CO RECEPTACLES	-	1	20	4
5	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	2,250		250	1.00	#12	#12	¾"	LIGHTING	-	1	20	6
7	-	-	-	-	-	#10	-	1.00	2,000		4,160	2,160	1.00	#10	#10	¾"	SCU-1	-	2	30	8
9	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	4,160		2,160	1.00	-	#10	-	-	-	-	-	10
11	-	-	-	-	-	#10	-	1.00	2,000		2,000		1.00				SPACE	-			12
13			-	SPACE				1.00		0			1.00				SPACE	-			14
15			-	SPACE				1.00			0		1.00				SPACE	-			16
17			-	SPACE				1.00		0			1.00				SPACE	-			18
19			-	SPACE				1.00			0		1.00				SPACE	-			20
21			-	SPACE				1.00		0			1.00				SPACE	-			22
23			-	SPACE				1.00			0		1.00				SPACE	-			24
25			-	SPACE				1.00		0			1.00				SPACE	-			26
27			-	SPACE				1.00			0		1.00				SPACE	-			28
29			-	SPACE				1.00		0			1.00				SPACE	-			30

NOTES :

1. ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.
2. LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.
3. PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"
4. FIRE ALARM SYSTEMS SHALL HAVE BRANCH CIRCUITS IDENTIFIED BY RED LABELS STATING "FIRE ALARM CIRCUIT" AS REQUIRED BY THE NATIONAL ELECTRICAL CODE ARTICLE 760.41B
5. ABBREVIATIONS: CO-CONVENIENCE OUTLET, RR-RESTROOM, (N)ORTH, (S)OUTH, (E)AST, (W)EST.

ØA	ØB	TOTALS	
9,310	9,060	18,370	CONNECTED LOAD (VA)
		77	CONNECTED LOAD (A)
0	0	0	DEMAND FACTOR ADJUSTMENTS (VA)
9,310	9,060	18,370	TOTAL LOAD (VA)
78	76		TOTAL LOAD (A)
		78	MAXIMUM LOAD (A)
51%	49%		PHASE BALANCE

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LIGHT FIXTURE SCHEDULE

FIXTURE NUMBER	FIXTURE MANUFACTURER	FIXTURE CATALOG #	LAMPS		FIXTURE			DESCRIPTION	REMARKS
			TYPE	QTY.	VOLTS	WATTS	MOUNTING		
F1	METALUX LITHONIA DAY-BRITE LSI COLUMBIA ORACLE	4SNLED-LD4-30SL-LW-UNV-L835-CD1-U ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-WH FSS440L835-UNV-DIM SDL-4-LED-SS-WW-UE LCL4-35LW-EDU 4-OC1-LED-3000L-DIM10-MVOLT-35K-80	LED 3500 KELVIN 3000 LUMENS 80 CRI	-	120	29	SURFACE/CHAIN	48" LED STRIP	
F1E	METALUX LITHONIA DAY-BRITE LSI COLUMBIA ORACLE	4SNLED-LD4-30SL-LW-UNV-EL14W-L835-CD1-U ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-E7W-WH FSS440L835-UNV-DIM-EMLED SDL-4-LED-SS-WW-UE-EM LCL4-35LW-EDU-ELL14 4-OC1-LED-3000L-DIM10-MVOLT-35K-80-O-EMG-LED	LED 3500 KELVIN 3000 LUMENS 80 CRI	-	120	29	SURFACE/CHAIN	48" LED STRIP WITH EMERGENCY BATTERY PACK	
F2	LITHONIA	WST LED P2 40K MVOLT	LED 4000 KELVIN 3469 LUMENS 80 CRI	-	120	25	SURFACE	WALL PACK	

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ELECTRICAL SPECIFICATIONS

GENERAL PROVISION

A. REFERENCE
   1. THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS TITLE, INSOFAR AS THEY APPLY HERETO.
   2. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, “ELECTRICAL CONTRACTOR” IS INFERRED AND INTENDED.

B. CONTRACT DRAWINGS
   1. THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.
   2. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.
   3. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.
   4. OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS
   1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.

D. MANUFACTURER'S DRAWINGS
   1. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW. (6) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES,AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR: APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS	TYPE SUBMITTALS REQUESTED
LIGHTING AND POWER PANELS	SHOP DRAWINGS
LIGHTING FIXTURES	CATALOG CUTS

E. GUARANTEES
   1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

WORK INCLUDED

A. INSTALLATION, MATERIALS, AND WORKMANSHIP
   1. FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.
   2. THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION. AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSED DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.
   3. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.

B. COORDINATION OF PLANS AND SPECIFICATIONS
   1. CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING
   1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.
   2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.
   3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

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CODES AND FEES

A. CODES:
   1. ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.

B. FEES:
   1. OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND INSPECTIONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.

B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.

C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

CONDUIT

A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.

B. ALL WIRING SHALL BE RUN IN EMT CONDUIT OR MC CABLE WITH GROUND CONDUCTOR UNLESS OTHERWISE NOTED.

C. ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN ½" UNLESS OTHERWISE NOTED.

D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

WIRE AND CABLE

A. ALL CONDUCTORS SHALL BE COPPER AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN. CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.

B. ALL BRANCH CIRCUITS IN PATIENT CARE AREAS SHALL BE MEDICAL GRADE MC CABLE. ALL BRANCH CIRCUITS IN OFFICE AND COMMON AREAS SHALL BE TYPE NM OR MC CABLE.

C. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS.

D. THE FOLLOWING COLOR CODE SHALL BE USED:

	120/240 VOLT	120/208 VOLT	277/480 VOLT
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	RED	ORANGE
PHASE C		BLUE	YELLOW
NEUTRAL	WHITE	WHITE	WHITE
GROUND	GREEN	GREEN	GREEN

E. CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE.

F. CONDUCTORS NO. 8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED TAPE, MINIMUM SIZE ½", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS:
   1. AT EACH TERMINAL.
   2. AT EACH CONDUIT ENTRANCE.
   3. AT INTERVALS NOT MORE THAN 12 INCHES APART IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC.

G. ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANEL BOARD GUTTERS. MARKERS SHALL INDICATE CORRESPONDING BRANCH--CIRCUIT NUMBERS.

H. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR.

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BOXES AND PLATES

A. FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULL BOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.
B. PULL BOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND GAUGE, SIZED IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE U.L. LABELED.
C. BOXES AT EXTERIOR AREAS TO BE WATERTIGHT AND DUST-TIGHT WITH CASKETED COVERS.
D. ALL BOXES FOR EXPOSED WORK IN FINISHED SPACES SHALL BE "FS" TYPE WITH THREADED HUBS WITH RIGID CONDUIT RISER (DEEP WIRE MOLD BOXES).
E. ALL BOXES SHALL BE RIGIDLY SUPPORTED INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.
F. FLOOR BOXES:
    1. DESCRIPTION: FLOOR BOXES COMPATIBLE WITH FLOOR BOX SERVICE FITTINGS PROVIDED IN ACCORDANCE WITH THE WIRING DEVICES SECTION OF THIS SPECIFICATION; WITH PARTITIONS TO SEPARATE MULTIPLE SERVICES; FURNISHED WITH ALL COMPONENTS, ADAPTERS, AND TRIMS REQUIRED FOR COMPLETE INSTALLATION.
    2. USE CAST IRON OR NONMETALLIC FLOOR BOXES WITHIN SLAB ON GRADE.
    3. USE SHEET-STEEL, CAST IRON, OR NONMETALLIC FLOOR BOXES WITHIN SLAB ABOVE GRADE.
    4. METALLIC FLOOR BOXES: FULLY ADJUSTABLE (WITH INTEGRAL MEANS FOR LEVELING ADJUSTMENT PRIOR TO AND AFTER CONCRETE POUR).
    5. MANUFACTURER: SAME AS MANUFACTURER OF FLOOR BOX SERVICE FITTINGS.
G. UNDERGROUND BOXES/ENCLOSURES:
    1. DESCRIPTION: IN-GROUND, OPEN BOTTOM BOXES FURNISHED WITH FLUSH, NON-SKID COVERS WITH LEGEND INDICATING TYPE OF SERVICE AND STAINLESS STEEL TAMPER RESISTANT COVER BOLTS.
    2. SIZE: AS INDICATED ON DRAWINGS.
    3. DEPTH: AS REQUIRED TO EXTEND BELOW FROST LINE TO PREVENT FROST UPHEAVAL, BUT NOT LESS THAN 12 INCHES.
    4. APPLICATIONS:
        a. SIDEWALKS AND LANDSCAPED AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 8 LOAD RATING.
        b. PARKING LOTS, IN AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 15 LOAD RATING.
        c. DO NOT USE POLYMER CONCRETE ENCLOSURES IN AREAS SUBJECT TO DELIBERATE VEHICULAR TRAFFIC.
H. COMPOSITE UNDERGROUND BOXES/ENCLOSURES: COMPLY WITH SCTE 77.

WIRING DEVICES

A. WIRING DEVICES SHALL BE SIMILAR TO THOSE LISTED BELOW AND OF SPECIFIED AMPERAGE. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.
B. DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 125 VOLT
    1. HUBBELL 5352
    2. ARROW HART 5352
C. SINGLE POLE SWITCHES - 20 AMP, 120 VOLT
D. WEATHERPROOF RECEPTACLES - 20 AMP, 125 VOLT - NEMA 5-20R
    1. HUBBELL 5352 WITH 5205 COVER INTERMATIC GUARDIAN
    2. I SERIES, NEMA 3R COVER
    3. ARROW HART 5352 WITH 4500 COVER
E. G.F.C.I. RECEPTACLE - 20 AMP, 125 VOLT - NEMA 5-20 R
    1. HUBBELL GF 5262 WITH MATCHING NYLON COVER PLATE OR WO-26 W.P. COVER
F. GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250.146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

IDENTIFICATION

A. EACH PIECE OF SERVICE EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS, ALL EXHAUST FAN MANUAL STARTING SWITCHES.
B. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK RACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM ¼" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEET METAL SCREW ATTACHMENT. NO "DYMO" OR SIMILAR TYPE LABELS WILL BE ALLOWED.
C. PANEL BOARD DIRECTORY: A TYPED CIRCUIT DIRECTORY SHALL BE PROVIDED INDICATING LOCAL AREA SERVED AND LOCATION FOR EACH BRANCH CIRCUIT.

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M. RYAN
BEAGLES
5/12/22

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SFCN FIBER HUTS
FIBER HUT PLANS

ELECTRICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 3/29/2022

DRAWING #: E7.3

GROUNDING

A. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER THE WIRE AND CABLE SECTION OF THIS SPECIFICATION.
B. ALL GROUND CLAMPS SHALL BE PENN-UNION “GPL” TYPE OR SIMILAR BY O.Z. OR BURNDY.
C. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON- METALLIC ELECTRICAL CONDUIT WITH U.L. LABEL SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.
D. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS -ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC--250--24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-30.
E. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE: 2) THE GROUND PIGTAIL TO THE BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE. MOUNTED BOXES OR FLUSH TYPE BOXES.
F. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

POWER AND LIGHTING PANELS

A. FURNISH AND INSTALL, AS SCHEDULED AND SHOWN ON THE DRAWINGS, POWER PANELS FOR OPERATION ON VOLTAGES INDICATED.
B. ALL TERMINATIONS SHALL BE MARKED “75°C ONLY”, “60/75° C” OR LISTED FOR USE OF 75° C INSULATED CONDUCTORS AT FULL 75° C AMPACITY.
C. ALL BUS BARS SHALL BE SILVER OR TIN PLATED COPPER.
D. CABINETS SHALL BE OF COMMERCIAL GALVANIZED SHEET STEEL, CODE GAUGE AND SIZE, SURFACE OR RECESSED MOUNTED AS CALLED FOR IN THE DRAWINGS.
E. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
F. PANEL SHALL HAVE A COPPER GROUND BAR SIMILAR TO NEUTRAL BAR IN NUMBER, SIZE, AND TYPE OF ANTI-TURN SOLDERLESS LUGS. THIS GROUND BAR SHALL BE FACTORY BONDED TO THE PANEL TUB IN THE GUTTER SPACE OPPOSITE THE MAINS AND THE NEUTRAL ASSEMBLY AND SHALL HAVE THE SCREWDRIVER SLOTS FACING THE FRONT OF THE PANEL.
G. QUALITY STANDARD: SQUARE D TYPE NQ.

LIGHTING FIXTURES

A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN.
B. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
C. ALL LIGHTING FIXTURES INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE FURNISHED COMPLETE WITH AS INDICATED ON THE FIXTURE SCHEDULE.
D. ANY LIGHTING FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.
E. ALL LIGHTING FIXTURES SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
F. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

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M. RYAN
BEAGLES
5/12/22

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SFCN FIBER HUTS

FIBER HUT PLANS

ELECTRICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

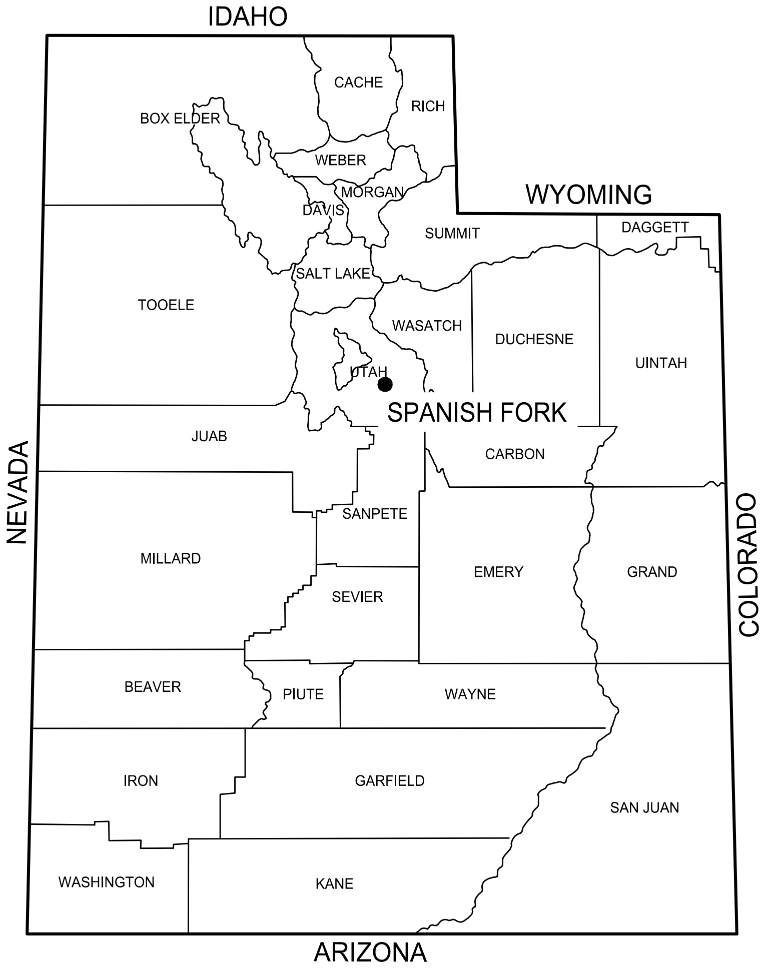
DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 3/29/2022

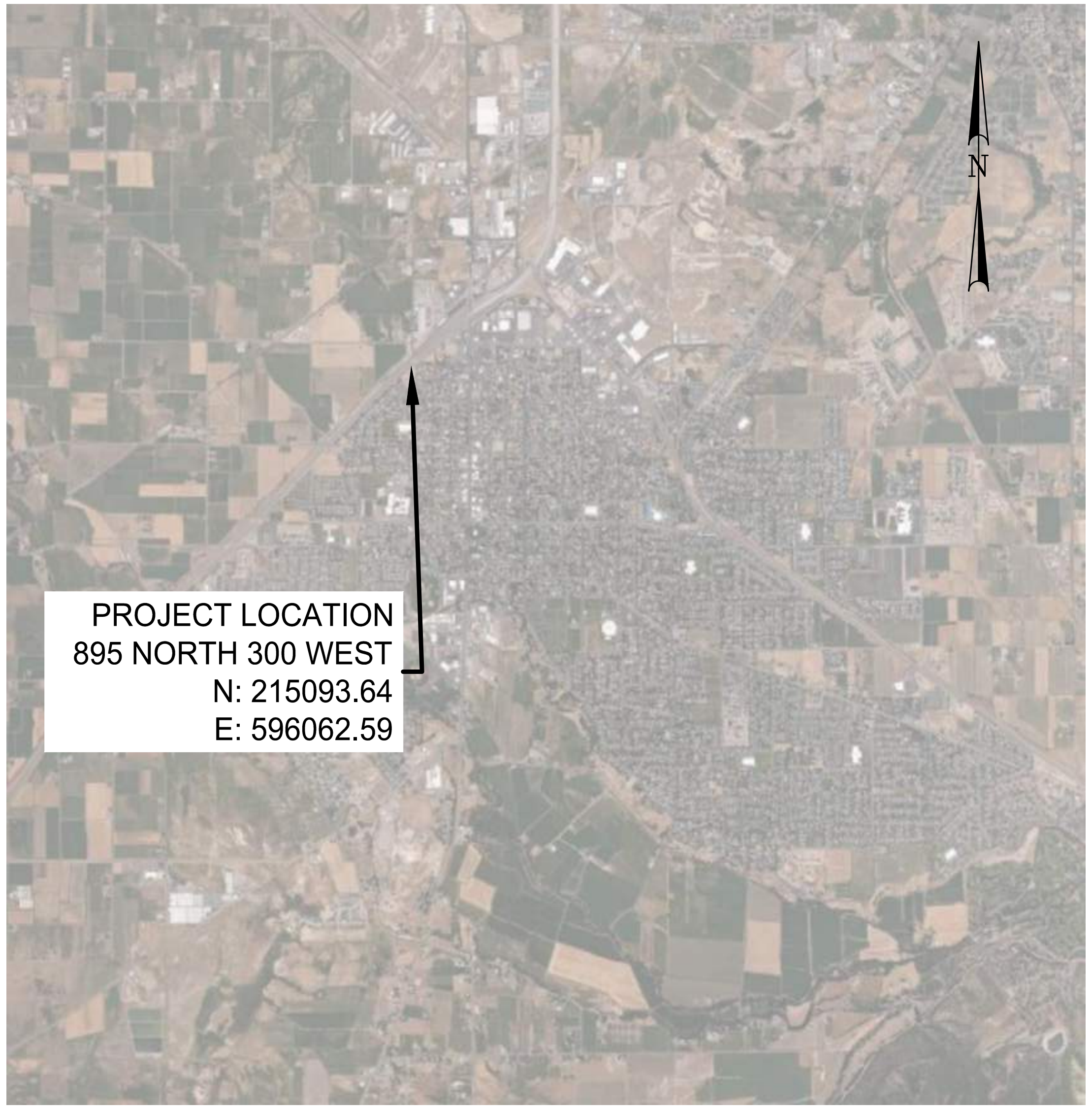
DRAWING #:
E7.4

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT NE-1
895 NORTH 300 WEST
UTAH COUNTY
2022

PROJECT NO.	SHEET NO.
2202-061	C-001

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION





PROJECT LOCATION
895 NORTH 300 WEST
N: 215093.64
E: 596062.59

VICINITY MAP

APPROVAL

RECOMMENDED FOR APPROVAL:

ENGINEER DATE

APPROVED:

CLIENT DATE

INDEX TO SHEETS

SHEET NO.	SHEET TITLE
C-001	TITLE
C-002	LEGEND
C-003	GENERAL NOTES
V-101	SURVEY CONTROL
C-101	SITE PLAN
C-501	DETAILS

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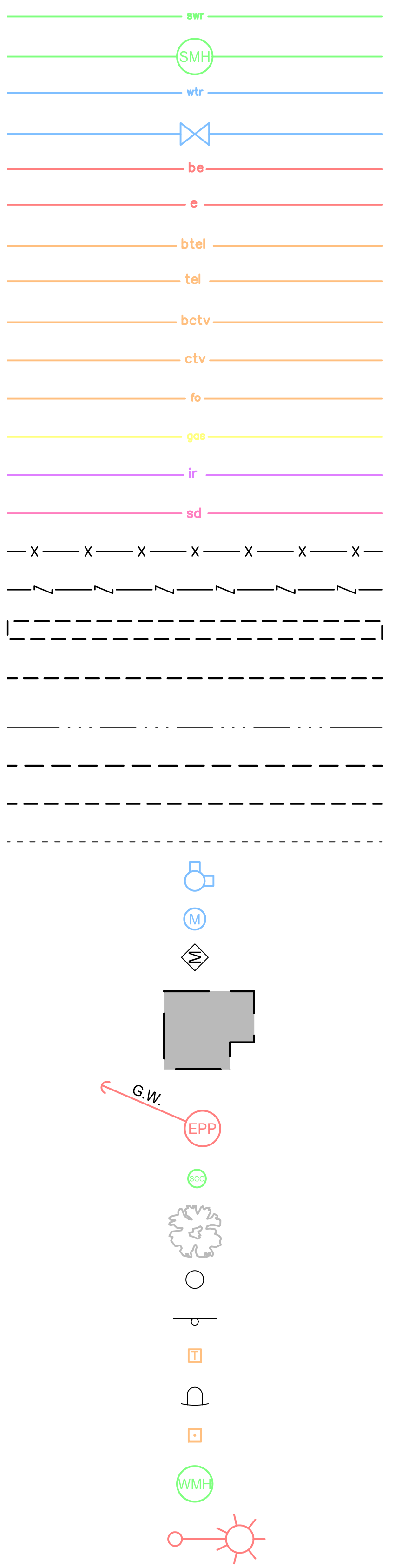
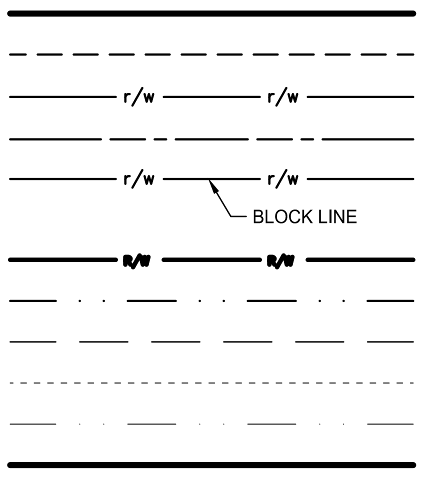
LEGEND

EXISTING FEATURES



- SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- CULINARY WATER LINE
- CULINARY WATER VALVE
- BURIED POWER LINE
- OVERHEAD POWER LINE
- BURIED TELEPHONE LINE
- OVERHEAD TELEPHONE LINE
- BURIED CABLE TV LINE
- OVERHEAD CABLE TV LINE
- FIBER OPTIC LINE
- NATURAL GAS LINE
- IRRIGATION LINE
- STORM DRAIN
- FENCE LINE (BARBED OR STOCKTIGHT)
- FENCE LINE (CHAIN LINK)
- DRAINAGE CULVERT
- CONCRETE SURFACING (SIDEWALK, CURB, GUTTER, ETC.)
- FLOW LINE OF DITCH
- EDGE OF ASPHALT SURFACING
- EDGE OF GRAVEL SURFACING
- EDGE OF DIRT SURFACING
- FIRE HYDRANT
- WATER METER
- GAS METER
- STRUCTURE
- POWER POLE & GUY WIRE
- SANITARY SEWER CLEAN OUT
- TREE
- DELINEATOR POST
- STREET SIGN
- TELEPHONE PEDESTAL
- MAILBOX
- CABLE TV PEDESTAL
- WATER MANHOLE
- LIGHT POLE

MISC. FEATURES

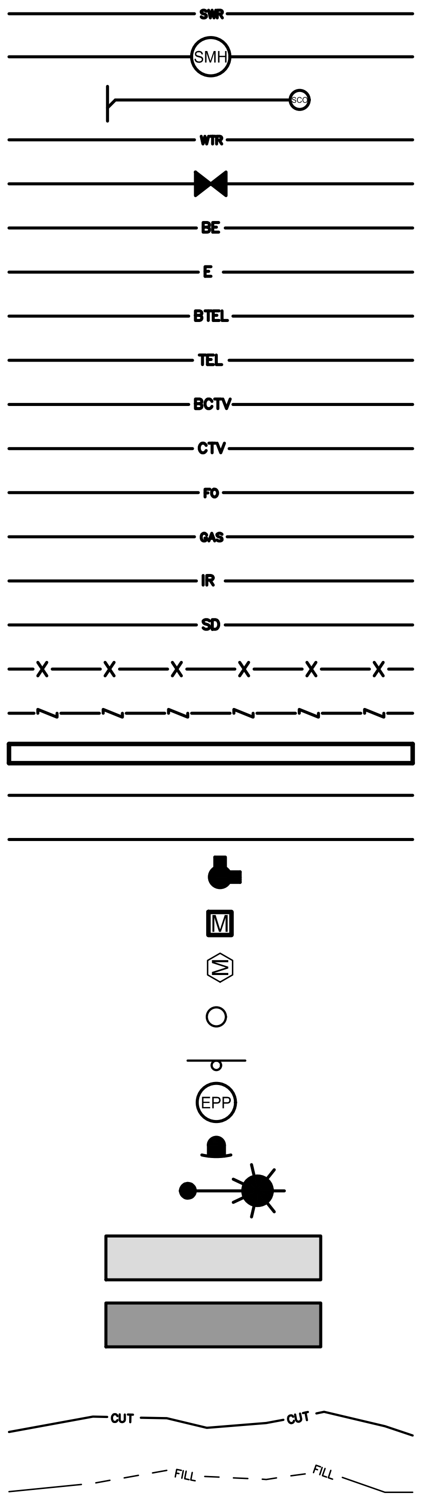


- SUBDIVISION BOUNDARY LINE
- LOT LINES
- EXISTING RIGHT OF WAY LINE
- EXISTING N/A LINE
- EXISTING CITY BLOCK LINES
- PROPOSED RIGHT-OF-WAY LINE
- SECTION LINE
- QUARTER SECTION LINE
- (P.U.E.) PUBLIC UTILITY EASEMENT
- DEED LINE
- PROPERTY LINE

ABBREVIATIONS

TBC	TOP BACK OF CURB	EPP	POWER POLE
FLG	FLOW LINE OF GUTTER	SMH	SEWER MANHOLE
LOC	LIP OF CURB	CMH	COMMUNICATION MANHOLE
TSW	TOP OF SIDEWALK	R/W	RIGHT-OF-WAY
TOC	TOP OF CONCRETE	T.C.E.	TEMPORARY CONSTRUCTION EASEMENT
EOA	EDGE OF ASPHALT		
TOA	TOP OF ASPHALT	P.U.E.	PUBLIC UTILITY EASEMENT
TOG	TOP OF GRATE		
FLC	FLOW LINE OF CULVERT	STA	STATION
SW	SIDEWALK	L / LT	LEFT
FG	FINISHED GROUND	R / RT	RIGHT

PROPOSED FEATURES



- SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- SANITARY SEWER SERVICE
- CULINARY WATER LINE
- CULINARY WATER VALVE
- BURIED POWER LINE
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- STREET SIGN
- POWER POLE
- MAILBOX
- LIGHT POLE
- CONCRETE SURFACING
- ASPHALT SURFACING
- TOP OF CUT LIMITS
- TOE OF FILL LIMITS

UPDATED: 3/8/2023
PLOTTED: 3/9/2023

DWG NAME: h:\JD\Proj\2202-061\dwg\TITLE_2202-061 NE-1.dwg

SCALE: NONE

REVISIONS

NO.	DATE	REMARKS

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APPROVAL RECOMM: PROJECT DESIGN ENGINEER DATE
APPROVED: QUALITY MANAGEMENT REVIEW DATE

SPANISH FORK CITY
SFCN HUT NE-1
LEGEND

PROJECT NUMBER: 2202-061

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY

SHEET NO. C-002

GENERAL NOTES

GENERAL NOTES

1. REQUEST AND RECEIVE ACCEPTANCE FROM ENGINEER PRIOR TO MAKING MODIFICATIONS TO DRAWINGS, SPECIFICATIONS, OR CONSTRUCTION SCHEDULE.
2. PERFORM CONSTRUCTION IN ACCORDANCE WITH LATEST VERSION (2017) OF APWA UTAH CHAPTER MANUAL OF STANDARD SPECIFICATIONS AND MANUAL OF STANDARD PLANS, INCLUDING AMENDMENTS, DDW RULES, INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL FIRE CODE (IFC), INTERNATIONAL RESIDENTIAL CODE (IRC), AND/OR OWNER STANDARDS AND SPECIFICATIONS.
3. IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, STATE RULES, DRAWINGS AND SPECIFICATIONS, ADHERE TO MOST STRINGENT REQUIREMENTS.
4. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY AND ARE BASED ON UTILITY MAPS AND FIELD SURVEY.
5. LOCATE AND PROTECT EXISTING UTILITIES AND ANY OBSTRUCTIONS DURING COURSE OF CONSTRUCTION. NOTIFY BLUE STAKES (811) AT LEAST 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES ON SITE. RESTORE UTILITIES DAMAGED DURING CONSTRUCTION TO CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITION PRIOR TO CONSTRUCTION.
6. NOTIFY ENGINEER OR PROJECT REPRESENTATIVE OF ANY CONFLICTS BETWEEN EXISTING FEATURES AND NEW CONSTRUCTION.
7. UNLESS DETAILED, SPECIFIED OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN APPLICABLE TYPICAL DETAILS AND GENERAL NOTES.
8. CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL AND SECURITY.
9. MEET UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY AND U.S. EPA REQUIREMENTS, RULES, AND REGULATIONS.
10. OBTAIN REQUIRED APPROVALS AND PERMITS AND PAY REQUIRED FEES PRIOR TO BEGINNING CONSTRUCTION.
11. FOR MATERIALS USED AND WORK PERFORMED IN UTAH DEPARTMENT OF TRANSPORTATION (UDOT) RIGHT-OF-WAY, CONFORM TO UDOT STANDARDS AND SPECIFICATIONS.
12. CONDUCT CONSTRUCTION OPERATIONS WITH NECESSARY SIGNS, BARRICADES, AND FLASHERS PLACED TO COMPLY WITH OSHA, UTAH STATE INDUSTRIAL COMMISSION, LOCAL SAFETY STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. NO FULL ROAD CLOSURES WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF OWNER. MAINTAIN TRAFFIC IN TWO DIRECTIONS AT ALL TIMES FOR ROADS AND ROAD CROSSINGS, UNLESS EXTENUATING CIRCUMSTANCES PROHIBIT. ROAD CLOSURE REQUESTS MUST BE MADE 1 WEEK BEFORE NEEDING TO CLOSE THE ROAD.
14. PROVIDE WRITTEN NOTIFICATION INCLUDING CONTACT INFORMATION, TO RESIDENTS AND BUSINESSES IMPACTED BY CONSTRUCTION. PROVIDE NOTICE MINIMUM OF 48 HOURS IN ADVANCE OF WORK BEING PERFORMED. MAINTAIN DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES UNLESS PARKING ARRANGEMENTS HAVE BEEN MADE WITH RESIDENTS AND BUSINESSES WHILE WORK IS COMPLETED ADJACENT TO OR ON THEIR PROPERTIES.
15. WORK WITH INDIVIDUAL PROPERTY OWNERS OR BUSINESS FOR ACCESS AND PERMISSION TO CONNECT TO UTILITY SERVICE AT PROPERTIES.
16. OBTAIN RIGHT OF INGRESS AND EGRESS SHOULD WORK OR PERSONNEL VENTURE ONTO PRIVATE PROPERTY WHICH IS NOT INCLUDED IN OWNER ACQUIRED RIGHTS-OF-WAY AND EASEMENTS.
17. CONSTRUCTION WORK WITHIN 30 FEET OF A GOVERNMENT SURVEY MONUMENT OR PUBLIC LAND SURVEY GOVERNMENT CORNER LOCATION MUST OBTAIN A COUNTY PERMIT BEFORE BEGINNING CONSTRUCTION WORK.

GENERAL CONSTRUCTION NOTES

1. NOTIFY OWNER, AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. SCHEDULE AND ATTEND PRE-CONSTRUCTION MEETING PRIOR TO STARTING CONSTRUCTION ACTIVITIES. SCHEDULE MEETING THROUGH OWNER OR OWNER'S REPRESENTATIVE.
3. PROVIDE CONSTRUCTION SCHEDULE TO ENGINEER AND OWNER.
4. FIELD VERIFY EXISTING CONDITIONS. QUANTITIES, LENGTHS, VOLUMES, AND AREAS INDICATED ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR. CONTRACTOR TO VERIFY QUANTITIES AND DETERMINE EXACT MEASUREMENTS, AS NECESSARY.
5. VERIFY DIMENSIONS BEFORE STARTING WORK AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
6. OBTAIN APPROVAL FROM OWNER PRIOR TO CONSTRUCTION FOR USE OF STAGING AREAS (IF ANY) NOT SHOWN ON DRAWINGS. COORDINATE WITH OWNER TO IDENTIFY POTENTIAL USEABLE STAGING AREAS. RESTORE STAGING AREA TO PRECONSTRUCTION CONDITION.
7. PROTECT EXISTING IMPROVEMENTS DURING CONSTRUCTION AND REPLACE OR RESTORE IMPROVEMENTS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITY. RESTORE IMPROVEMENTS TO AS-GOOD-AS OR BETTER-THAN CONDITION THAT EXISTED PRIOR TO CONSTRUCTION. REPAIR IRRIGATION/SPRINKLERS WITHIN 24 HOURS FOLLOWING PLACEMENT OF IMPROVEMENTS.
8. PROPERLY BACKFILL, COMPACT, AND RESTORE PAVEMENT WITHIN STREET RIGHT-OF-WAY.
9. DISPOSE WASTE OFF SITE AT LANDFILL OR OTHER LEGAL DISPOSAL FACILITY.
10. REMOVE SURPLUS EXCAVATION FROM SITE. USE TOPSOIL OR OTHER NATIVE MATERIAL IN LANDSCAPE OR NATIVE GRADING. STOCKPILE TOPSOIL SEPARATELY FROM OTHER EXCAVATED MATERIALS. PLACE TOPSOIL IN LANDSCAPED AREAS IN 4 INCHES THICK MINIMUM AND GRADE TO DRAIN.
11. PERFORM CONSTRUCTION QUALITY CONTROL TESTING, INCLUDING SOILS, BACKFILL, CONCRETE, UTILITIES, ETC.
12. PERFORM MATERIALS TESTING AND SUBMIT COPIES OF TEST RESULTS TO ENGINEER AND/OR OWNER AS REQUIRED PER SPECIFICATIONS. COORDINATE TESTING WITH INSPECTORS AND/OR ENGINEER. PERFORM DENSITY TESTING ON TRENCH BACKFILL, GRANULAR BORROW, AND UTBC PLACEMENT FOR ROADWAY AND PRIOR TO ANY CONCRETE PLACEMENT WHERE NECESSARY. SEE SPECIFICATIONS FOR TESTING FREQUENCY.
13. PROVIDE SITE DUST CONTROL AND SUPPRESSION FOR DURATION OF PROJECT, INCLUDING WEEKENDS.

GENERAL EROSION CONTROL NOTES

1. PREPARE AND SUBMIT STORM WATER POLLUTION PREVENTION PLAN (SWPPP). PRIOR TO STARTING CONSTRUCTION FILE NOTICE OF INTENT (NOI) AND AT END OF CONSTRUCTION FILE NOTICE OF TERMINATION (NOT).
2. PERFORM CONSTRUCTION WORK IN ACCORDANCE WITH UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) REGULATIONS.
3. DURING CONSTRUCTION, PREVENT AND CONTROL EROSION DUE TO WIND AND WATER. FOLLOW PROCEDURES AND BEST MANAGEMENT PRACTICES INDICATED IN SWPPP AND INSTALL EROSION CONTROL MEASURES INDICATED IN SWPPP.
4. PROVIDE ADDITIONAL EROSION CONTROL MEASURES WHEN UNFORESEEN PROBLEMS OCCUR OR IF SWPPP DOES NOT FUNCTION AS INTENDED. ADJUST EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) AS NECESSARY DUE TO GRADE CHANGES DURING CONSTRUCTION. OWNER MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON INSPECTION OF PROPOSED FACILITIES.
5. KEEP STREETS CLEAN AND FREE FROM SOIL AND DEBRIS DURING CONSTRUCTION.
6. PROTECT STORM DRAIN FACILITIES ON SITE AND ADJACENT TO SITE FROM SITE RUNOFF. INSTALL INLET PROTECTION DEVICES IMMEDIATELY UPON INDIVIDUAL INLETS BECOMING FUNCTIONAL.
7. SEED AREAS DISTURBED DURING CONSTRUCTION WITH APPROPRIATE NATIVE SEED MIX OR PLACE LANDSCAPING TO MATCH EXISTING.
8. DISPOSE OF WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, ETC.) IN MANNER THAT PREVENTS CONTACT WITH STORM WATER DISCHARGES FROM SITE.
9. STABILIZE CONSTRUCTION AREAS AT END OF EACH WORKING DAY. INCLUDE BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF PAVING FOR ROAD CONSTRUCTION.
10. MAINTAIN MEASURES CONTAINED IN SWPPP IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF SITE. CHECK EROSION AND SEDIMENTATION CONTROL MEASURES BY QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF END OF RAINFALL EVENT. COMPLETE ANY NEEDED CLEANING AND REPAIRS WITHIN TIME FRAMES SPECIFIED IN SWPPP AND/OR UPDES GENERAL PERMIT.
11. CLEAN UTILITY LINES TO REMOVE DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE. PROTECT DOWN-GRADE LINES FROM WASH-WATER DURING CLEANING PROCESS TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS.
12. POWER WASH EXCAVATION EQUIPMENT BEFORE ENTERING DIFFERENT VEGETATION MATRIX.
13. REMOVE INLET PROTECTION DEVICES AFTER NOT AND FINAL ACCEPTANCE BY OWNER.

GENERAL UTILITY NOTES

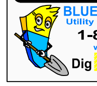
1. CONTRACTOR TO COORDINATE ALL UTILITY CONNECTIONS AND SERVICES PRIOR TO COMMENCING CONSTRUCTION. STAGE CONSTRUCTION TO MITIGATE DELAYS OF SERVICES AND PERMITTING.
2. PROVIDE UTILITY PIPING AND APPURTENANCES IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND IN CONFORMANCE WITH APPROPRIATE JURISDICTIONAL SPECIFICATIONS AND DETAILS.
3. PROVIDE SUBMITTALS TO ENGINEER FOR REVIEW AND ACCEPTANCE FOR BEDDING, BACKFILL, PIPE, METERS, BOXES, VALVES, FIRE HYDRANTS, BLOWOFFS, VAULTS, MANHOLES, INLET BOXES, ETC. PROVIDE SUBMITTALS WITH SUFFICIENT INFORMATION TO SHOW THAT PROPOSED PRODUCTS AND MATERIALS CONFORM TO OWNER'S STANDARDS AND SPECIFICATIONS.

GENERAL STORM WATER NOTES

1. FOLLOW IRC R401.3 FOR ALL SITE DRAINAGE:
    - 1.1. DIVERT SURFACE DRAINAGE TO STORM SEWER OR APPROVED POINT OF COLLECTION THAT DOES NOT CREATE HAZARD.
    - 1.2. GRADE LOTS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
    - 1.3. GRADE 6" OF FALL WITHIN THE FIRST 10' OF FOUNDATION PERIMETER.
    - 1.4. WHERE LOT LINES, SLOPES OR PHYSICAL BARRIERS PREVENT 6" OF FALL, CONSTRUCT DRAINAGE SWALES TO ENSURE DRAINAGE AWAY FROM STRUCTURE.
    - 1.5. SLOPE IMPERVIOUS SURFACES WITHIN 10' OF BUILDING FOUNDATION A MINIMUM OF 2% AWAY FROM BUILDING.

MATERIALS NOTES

1. ALL MATERIALS WILL CONFORM TO CITY'S SPECIFICATIONS AND STANDARDS UNLESS OTHERWISE INDICATED.
2. EARTHWORK
    - 1.1. SUBMIT LAB REPORTS AS CONSTRUCTION RECORD PER AASHTO T180 (D) FOR A-1 SOILS AND AASTHO T90 (D) FOR ALL OTHER SOILS ENCOUNTERED ON SITE, AS CLASSIFIED PER AASHTO M145.
    - 1.2. SUBMIT FIELD REPORTS AS CONSTRUCTION RECORD PER ASTM D6938 FOR EVERY DAY AND EVERY TYPE OF SOIL WORKED, PER DAY.
    - 1.3. WITHIN RIGHT-OF-WAY AND OTHER TRAVELED AREAS OR UNDER STRUCTURES, COMPACT BACKFILL, EMBANKMENT, IMPORTED FILL AND PAVEMENT MATERIALS TO 95 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY. IN OTHER NON-TRAVEL AREAS, COMPACT FILLS AND EMBANKMENT MATERIALS TO 90 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY.
    - 1.4. ONLY USE MATERIALS APPROVED BY THE ENGINEER. NO GEOTECHNICAL REPORT WAS COMPLETED FOR THIS PROJECT.



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UPDATED: 3/8/2023
PLOTTED: 3/9/2023

NO.	DATE	REMARKS

REVISIONS

DWG NAME: h:\JD\Proj\2202-061\dwg\TITLE_2202-061 NE-1.dwg

SCALE: NO SCALE

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APPROVAL RECOMM: ______ PROJECT DESIGN ENGINEER ______ DATE
APPROVED ______ QUALITY MANAGEMENT REVIEW ______ DATE

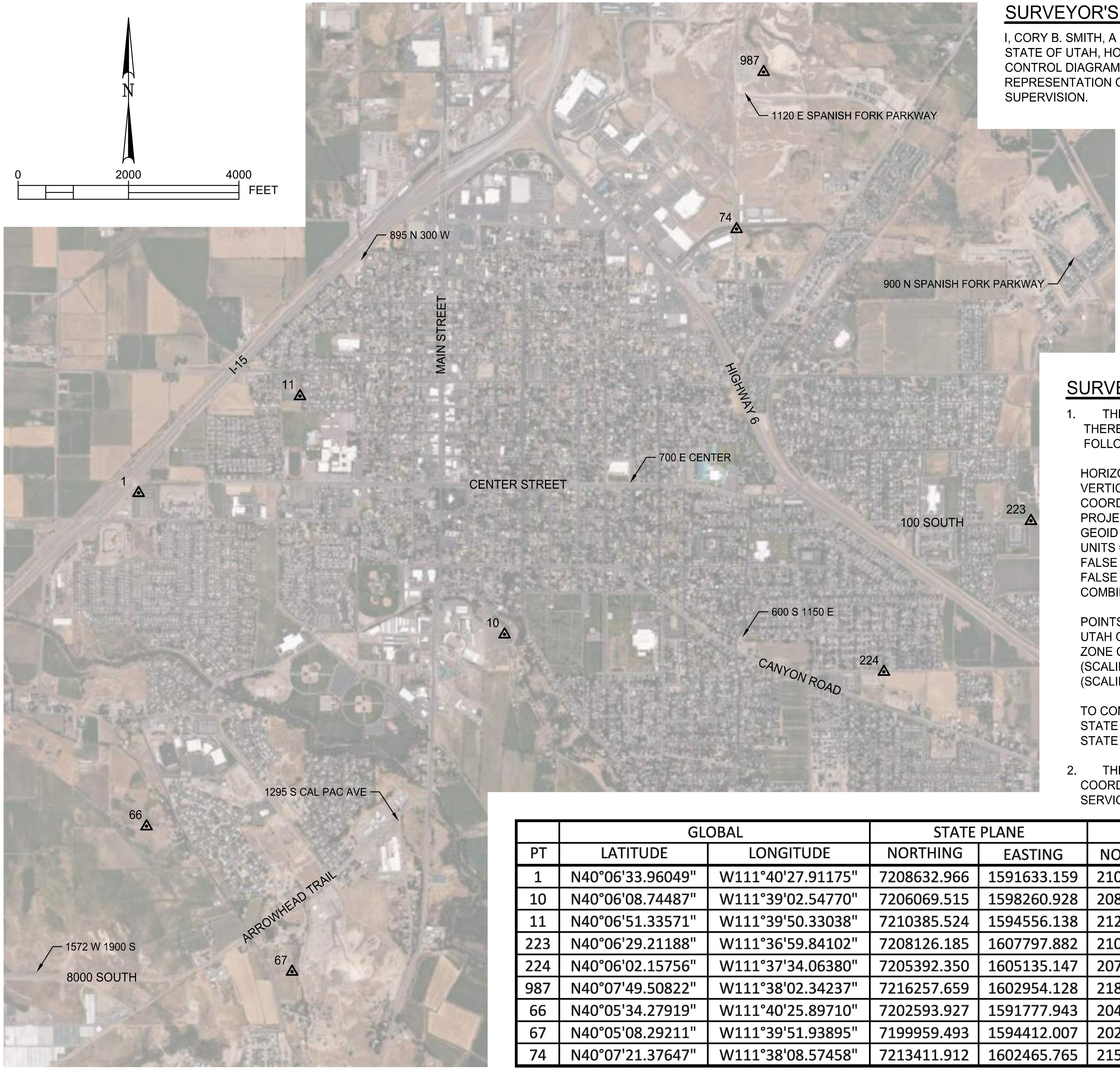
SPANISH FORK CITY
SFCN HUT NE-1
GENERAL NOTES

PROJECT NUMBER: 2202-061

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY

SHEET NO. C-003



SURVEYOR'S CERTIFICATE

I, CORY B. SMITH, A PROFESSIONAL LAND SURVEYOR AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH, HOLDING CERTIFICATE #11349296, CERTIFY THAT I HAVE PREPARED THE CONTROL DIAGRAM REPRESENTED HEREIN AND THAT THE SAME IS AN ACCURATE REPRESENTATION OF A CONTROL SURVEY, AND WAS CONDUCTED UNDER MY DIRECT SUPERVISION.

Cory B. Smith

NO. 11349296
CORY B. SMITH
06/27/2022
Electronic Seal

CORY B. SMITH, P.L.S. #11349296

SURVEY DATUM

1. THE "PROJECT COORDINATES" AND BEARINGS AND DISTANCES DERIVED THEREFROM ARE EXPRESSED IN A LOCAL GROUND SYSTEM DEFINED AS FOLLOWS:

HORIZONTAL DATUM = NORTH AMERICAN DATUM OF 1983 (N.A.D.83)
VERTICAL DATUM =NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88)
COORDINATE SYSTEM= US STATE PLANE 1983, UTAH CENTRAL ZONE (4302)
PROJECTED AT GROUND
GEOID MODEL = GEOID 12B
UNITS = US SURVEY FOOT
FALSE NORTHING = -7,000,000
FALSE EASTING= -1,000,000
COMBINED SCALE FACTOR= 0.99969464

POINTS WERE SCALED FROM COORDINATE 0,0 IN THE NAD 83 US STATE PLANE UTAH CENTRAL ZONE COORDINATE SYSTEM USING THE COMBINED SCALE FACTOR LISTED ABOVE.
(SCALING LATITUDE = N20°31'27.66067")
(SCALING LONGITUDE = W116°02'57.11642")

TO CONVERT TO STATE PLANE COORDINATES USE THE FOLLOWING:
STATE PLANE NORTHING= (PROJECT NORTHING + 7,000,000)/ 1.0003054533
STATE PLANE EASTING= (PROJECT EASTING + 1,000,000)/ 1.0003054533

2. THE CONTROL SURVEY WAS PERFORMED IN JULY 2021. SURVEY CONTROL COORDINATES WERE ESTABLISHED USING THE NGS ONLINE POSITIONING USER SERVICE (OPUS) AT POINT 1.

	GLOBAL		STATE PLANE		PROJECT			
PT	LATITUDE	LONGITUDE	NORTHING	EASTING	NORTHING	EASTING	ELEV	DESCRIPTION
1	N40°06'33.96049"	W111°40'27.91175"	7208632.966	1591633.159	210834.867	592119.329	4567.80	NAIL
10	N40°06'08.74487"	W111°39'02.54770"	7206069.515	1598260.928	208270.632	598749.122	4588.66	NAIL
11	N40°06'51.33571"	W111°39'50.33038"	7210385.524	1594556.138	212587.960	595043.200	4570.79	NAIL
223	N40°06'29.21188"	W111°36'59.84102"	7208126.185	1607797.882	210327.931	608288.989	4729.51	E/4 SEC 20 UT CO BC 2007
224	N40°06'02.15756"	W111°37'34.06380"	7205392.350	1605135.147	207593.261	605625.441	4733.77	S/4 SEC 20 UT CO BC 1955
987	N40°07'49.50822"	W111°38'02.34237"	7216257.659	1602954.128	218461.888	603443.755	4563.85	NAIL
66	N40°05'34.27919"	W111°40'25.89710"	7202593.927	1591777.943	204793.983	592264.156	4575.45	W/4 SEC 25 UT CO BC 1956
67	N40°05'08.29211"	W111°39'51.93895"	7199959.493	1594412.007	202158.744	594899.026	4616.16	S/4 SEC 25 UT CO BC 1956
74	N40°07'21.37647"	W111°38'08.57458"	7213411.912	1602465.765	215615.272	602955.244	4586.42	E/4 SEC 18 UT CO BC 1970

UPDATED: 6/27/2022
PLOTTED: 6/27/2022
REMARKS
NO. DATE
REVISIONS
DWG NAME: H:\JD\Proj\2202-061\dwg\SURVEY CONTROL_2202-061.dwg
SCALE: 1"=2000'

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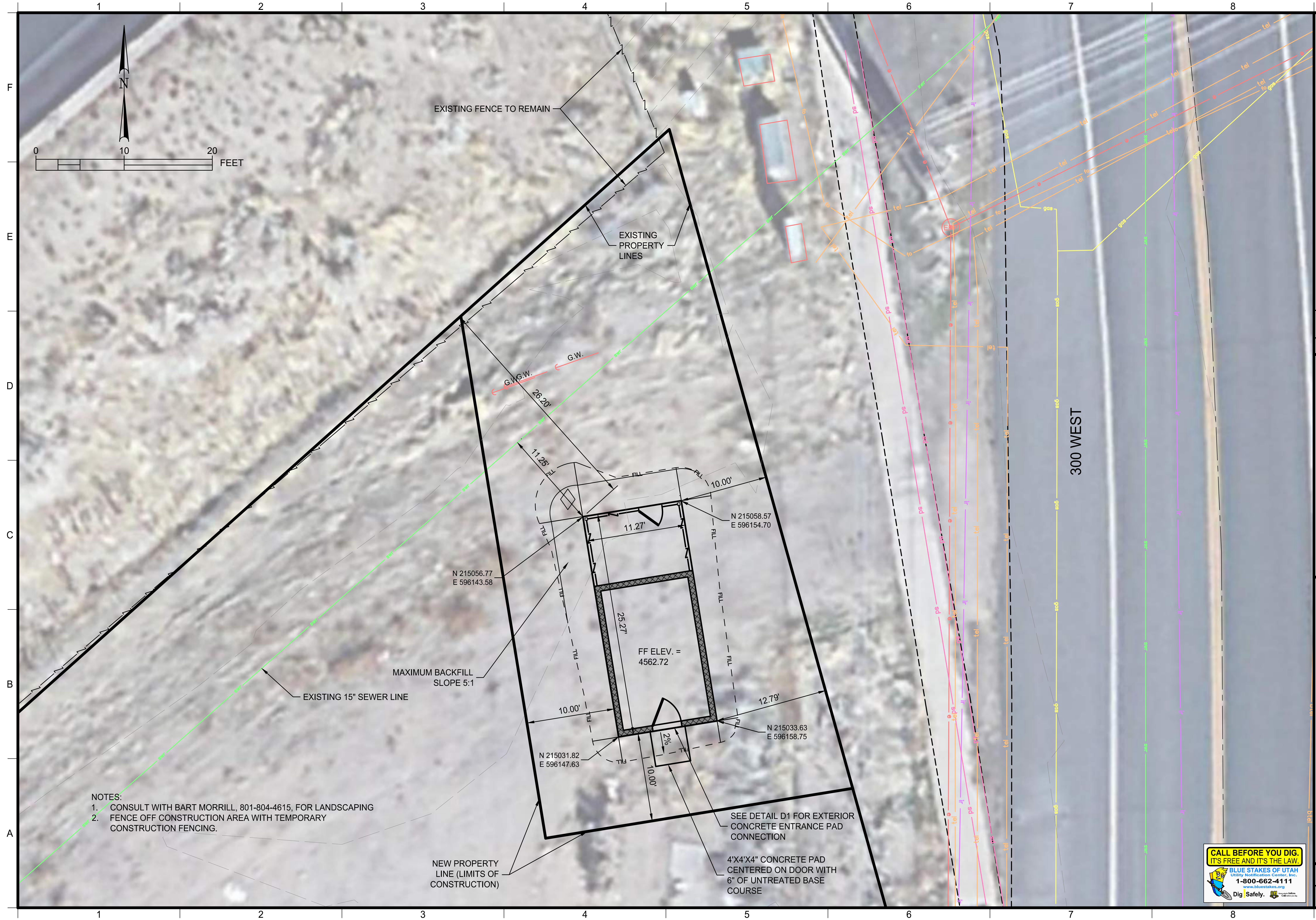
APPROVED: QUALITY MANAGEMENT REVIEW DATE

SPANISH FORK CITY
SFCN HUT
SURVEY CONTROL
PROJECT NUMBER: 2202-061
SUBMITTAL:
UTAH
COUNTY
SHEET NO. V-101



NOTES:
1. CONSULT WITH BART MORRILL, 801-804-4615, FOR LANDSCAPING
2. FENCE OFF CONSTRUCTION AREA WITH TEMPORARY CONSTRUCTION FENCING.

NO.	DATE	REMARKS

REVISIONS

DWG NAME: h:\JD\Proj\2202-061\dwg\SP_2202-061 NE-1.dwg
UPDATED: 3/9/2023
PLOTTED: 3/9/2023
SCALE: 1" = 10'

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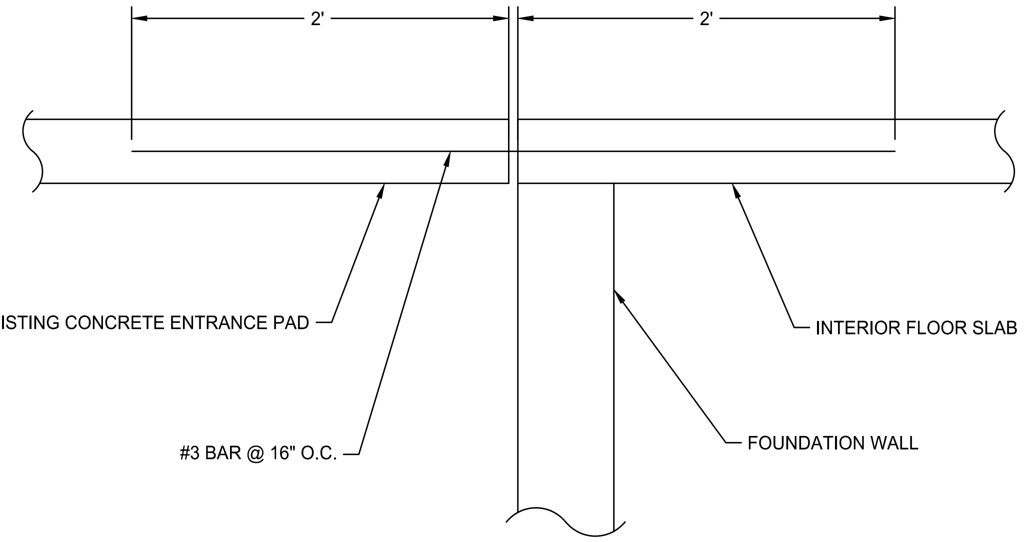
APPROVED: ______ QUALITY MANAGEMENT REVIEW ______ DATE

SPANISH FORK CITY
SFCN HUT NE-1
SITE PLAN
PROJECT NUMBER: 2202-061
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY

SHEET NO. C-101



D1	*EXTERIOR CONCRETE ENTRANCE PAD CONNECTION*
SCALE	NTS

D5	
SCALE	NTS

A1	
SCALE	

A5	
SCALE	

NO.	DATE	REMARKS

REVISIONS

SCALE: VARIES

DWG NAME: h:\JD\Proj\2202-061\dwg\SP_2202-061 NE-1.dwg

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APPROVED QUALITY MANAGEMENT REVIEW DATE

SPANISH FORK CITY

SFCN HUT NE-1

DETAILS

PROJECT NUMBER: 2202-061

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

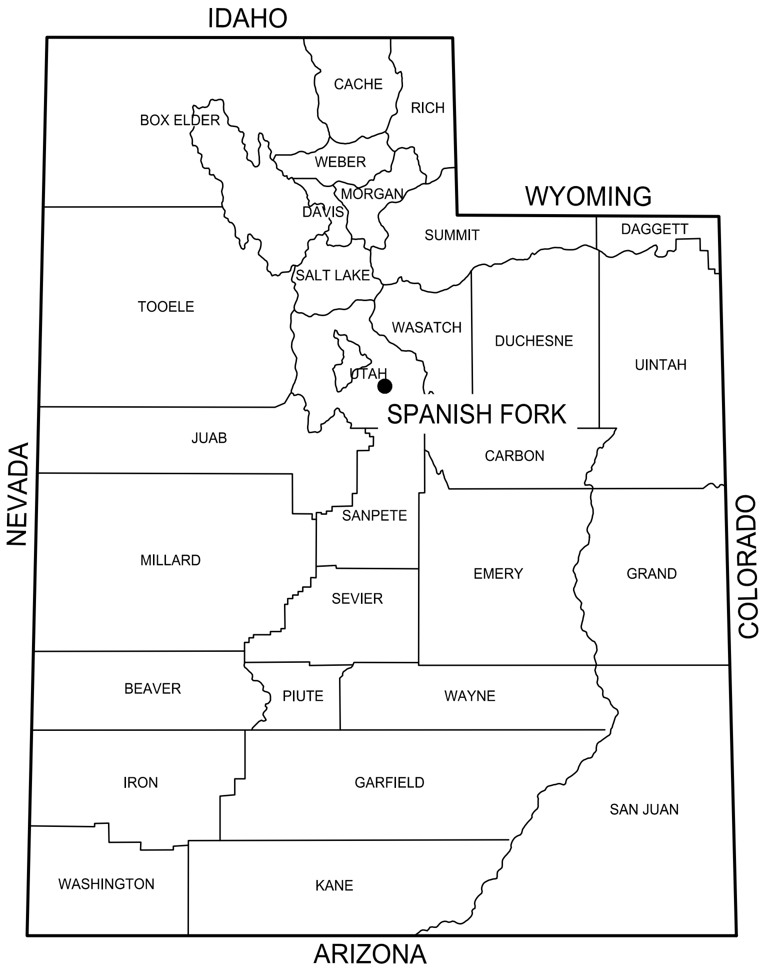
UTAH
COUNTY

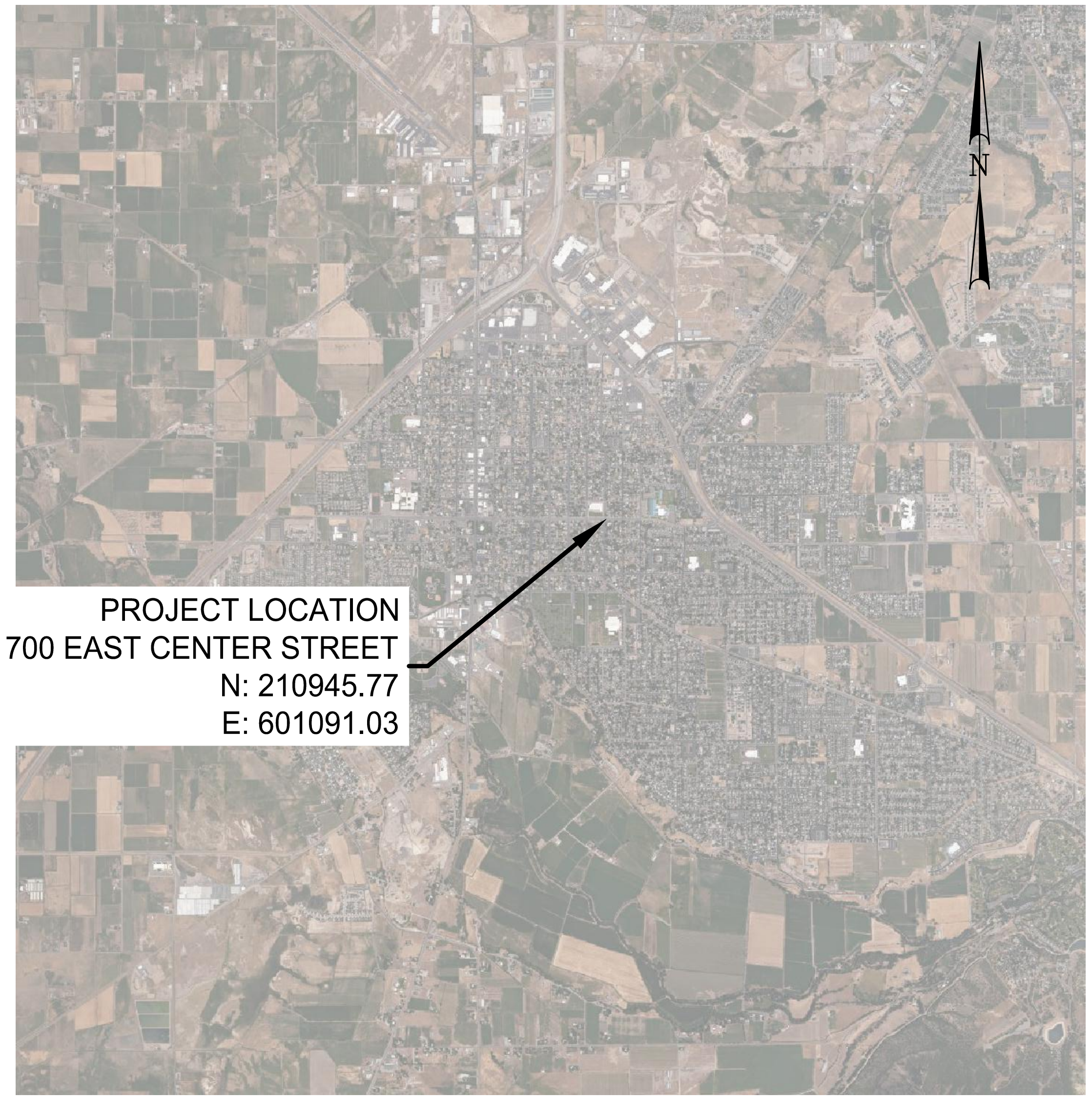
SHEET NO. C-501

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT SE-3
700 EAST CENTER STREET
UTAH COUNTY
2022

PROJECT NO.	SHEET NO.
2202-061	C-001

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION





VICINITY MAP

INDEX TO SHEETS

SHEET NO.	SHEET TITLE
C-001	TITLE
C-002	LEGEND
C-003	GENERAL NOTES
V-101	SURVEY CONTROL
C-101	SITE PLAN
C-501	DETAILS

APPROVAL

RECOMMENDED FOR APPROVAL:

ENGINEER DATE

APPROVED:

CLIENT DATE

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h:\jd\proj\2202-061\dwg\title_2202-061 se-3

LEGEND

EXISTING FEATURES

swr	SANITARY SEWER LINE
SMH	SANITARY SEWER MANHOLE
wtr	CULINARY WATER LINE
⋈	CULINARY WATER VALVE
be	BURIED POWER LINE
e	OVERHEAD POWER LINE
btel	BURIED TELEPHONE LINE
tel	OVERHEAD TELEPHONE LINE
bctv	BURIED CABLE TV LINE
ctv	OVERHEAD CABLE TV LINE
fo	FIBER OPTIC LINE
gas	NATURAL GAS LINE
ir	IRRIGATION LINE
sd	STORM DRAIN
—x—x—x—x—x—x—x—	FENCE LINE (BARBED OR STOCKTIGHT)
	FENCE LINE (CHAIN LINK)
	DRAINAGE CULVERT
	CONCRETE SURFACING (SIDEWALK, CURB, GUTTER, ETC.)
	FLOW LINE OF DITCH
	EDGE OF ASPHALT SURFACING
	EDGE OF GRAVEL SURFACING
	EDGE OF DIRT SURFACING
	FIRE HYDRANT
M	WATER METER
	GAS METER
	STRUCTURE
G.W. EPP	POWER POLE & GUY WIRE
	SANITARY SEWER CLEAN OUT
	TREE
○	DELINEATOR POST
	STREET SIGN
	TELEPHONE PEDESTAL
	MAILBOX
	CABLE TV PEDESTAL
WMH	WATER MANHOLE
	LIGHT POLE

MISC. FEATURES

	SUBDIVISION BOUNDARY LINE
	LOT LINES
r/w r/w	EXISTING RIGHT OF WAY LINE
	EXISTING N/A LINE
r/w r/w BLOCK LINE	EXISTING CITY BLOCK LINES
R/W R/W	PROPOSED RIGHT-OF-WAY LINE
	SECTION LINE
	QUARTER SECTION LINE
	(P.U.E.) PUBLIC UTILITY EASEMENT
	DEED LINE
	PROPERTY LINE

ABBREVIATIONS

TBC	TOP BACK OF CURB	EPP	POWER POLE
FLG	FLOW LINE OF GUTTER	SMH	SEWER MANHOLE
LOC	LIP OF CURB	CMH	COMMUNICATION MANHOLE
TSW	TOP OF SIDEWALK	R/W	RIGHT-OF-WAY
TOC	TOP OF CONCRETE	T.C.E.	TEMPORARY CONSTRUCTION EASEMENT
EOA	EDGE OF ASPHALT		
TOA	TOP OF ASPHALT	P.U.E.	PUBLIC UTILITY EASEMENT
TOG	TOP OF GRATE		
FLC	FLOW LINE OF CULVERT	STA	STATION
SW	SIDEWALK	L / LT	LEFT
FG	FINISHED GROUND	R / RT	RIGHT

PROPOSED FEATURES

SWR	SANITARY SEWER LINE
SMH	SANITARY SEWER MANHOLE
SCO	SANITARY SEWER SERVICE
WTR	CULINARY WATER LINE
⧓	CULINARY WATER VALVE
BE	BURIED POWER LINE
E	OVERHEAD POWER LINE
BTEL	BURIED TELEPHONE LINE
TEL	OVERHEAD TELEPHONE LINE
BCTV	BURIED CABLE TV LINE
CTV	OVERHEAD CABLE TV LINE
FO	FIBER OPTIC LINE
GAS	NATURAL GAS LINE
IR	IRRIGATION LINE
SD	STORM DRAIN
—X—X—X—X—X—X—	FENCE LINE (BARBED OR STOCKTIGHT)
	FENCE LINE (CHAIN LINK)
	DRAINAGE CULVERT
	EDGE OF ASPHALT
	EDGE OF CONCRETE
	FIRE HYDRANT
M	CULINARY WATER METER
	GAS METER
○	DELINEATOR POST
	STREET SIGN
EPP	POWER POLE
	MAILBOX
	LIGHT POLE
▨	CONCRETE SURFACING
▨	ASPHALT SURFACING
CUT CUT	TOP OF CUT LIMITS
FILL FILL	TOE OF FILL LIMITS

REMARKS
NO. DATE
REVISIONS

UPDATED: 3/9/2023
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DWG NAME: h:\JD\Proj\2202-061\dwg\TITLE_2202-061 SE-3.dwg
SCALE: NONE

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SPANISH FORK CITY
SFCN HUT SE-3
LEGEND
PROJECT NUMBER: 2202-061
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION
UTAH
COUNTY
SHEET NO. C-002

GENERAL NOTES

GENERAL NOTES

1. REQUEST AND RECEIVE ACCEPTANCE FROM ENGINEER PRIOR TO MAKING MODIFICATIONS TO DRAWINGS, SPECIFICATIONS, OR CONSTRUCTION SCHEDULE.
2. PERFORM CONSTRUCTION IN ACCORDANCE WITH LATEST VERSION (2017) OF APWA UTAH CHAPTER MANUAL OF STANDARD SPECIFICATIONS AND MANUAL OF STANDARD PLANS, INCLUDING AMENDMENTS, DDW RULES, INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL FIRE CODE (IFC), INTERNATIONAL RESIDENTIAL CODE (IRC), AND/OR OWNER STANDARDS AND SPECIFICATIONS.
3. IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, STATE RULES, DRAWINGS AND SPECIFICATIONS, ADHERE TO MOST STRINGENT REQUIREMENTS.
4. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY AND ARE BASED ON UTILITY MAPS AND FIELD SURVEY.
5. LOCATE AND PROTECT EXISTING UTILITIES AND ANY OBSTRUCTIONS DURING COURSE OF CONSTRUCTION. NOTIFY BLUE STAKES (811) AT LEAST 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES ON SITE. RESTORE UTILITIES DAMAGED DURING CONSTRUCTION TO CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITION PRIOR TO CONSTRUCTION.
6. NOTIFY ENGINEER OR PROJECT REPRESENTATIVE OF ANY CONFLICTS BETWEEN EXISTING FEATURES AND NEW CONSTRUCTION.
7. UNLESS DETAILED, SPECIFIED OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN APPLICABLE TYPICAL DETAILS AND GENERAL NOTES.
8. CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL AND SECURITY.
9. MEET UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY AND U.S. EPA REQUIREMENTS, RULES, AND REGULATIONS.
10. OBTAIN REQUIRED APPROVALS AND PERMITS AND PAY REQUIRED FEES PRIOR TO BEGINNING CONSTRUCTION.
11. FOR MATERIALS USED AND WORK PERFORMED IN UTAH DEPARTMENT OF TRANSPORTATION (UDOT) RIGHT-OF-WAY, CONFORM TO UDOT STANDARDS AND SPECIFICATIONS.
12. CONDUCT CONSTRUCTION OPERATIONS WITH NECESSARY SIGNS, BARRICADES, AND FLASHERS PLACED TO COMPLY WITH OSHA, UTAH STATE INDUSTRIAL COMMISSION, LOCAL SAFETY STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. NO FULL ROAD CLOSURES WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF OWNER. MAINTAIN TRAFFIC IN TWO DIRECTIONS AT ALL TIMES FOR ROADS AND ROAD CROSSINGS, UNLESS EXTENUATING CIRCUMSTANCES PROHIBIT. ROAD CLOSURE REQUESTS MUST BE MADE 1 WEEK BEFORE NEEDING TO CLOSE THE ROAD.
14. PROVIDE WRITTEN NOTIFICATION INCLUDING CONTACT INFORMATION, TO RESIDENTS AND BUSINESSES IMPACTED BY CONSTRUCTION. PROVIDE NOTICE MINIMUM OF 48 HOURS IN ADVANCE OF WORK BEING PERFORMED. MAINTAIN DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES UNLESS PARKING ARRANGEMENTS HAVE BEEN MADE WITH RESIDENTS AND BUSINESSES WHILE WORK IS COMPLETED ADJACENT TO OR ON THEIR PROPERTIES.
15. WORK WITH INDIVIDUAL PROPERTY OWNERS OR BUSINESS FOR ACCESS AND PERMISSION TO CONNECT TO UTILITY SERVICE AT PROPERTIES.
16. OBTAIN RIGHT OF INGRESS AND EGRESS SHOULD WORK OR PERSONNEL VENTURE ONTO PRIVATE PROPERTY WHICH IS NOT INCLUDED IN OWNER ACQUIRED RIGHTS-OF-WAY AND EASEMENTS.
17. CONSTRUCTION WORK WITHIN 30 FEET OF A GOVERNMENT SURVEY MONUMENT OR PUBLIC LAND SURVEY GOVERNMENT CORNER LOCATION MUST OBTAIN A COUNTY PERMIT BEFORE BEGINNING CONSTRUCTION WORK.

GENERAL CONSTRUCTION NOTES

1. NOTIFY OWNER, AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. SCHEDULE AND ATTEND PRE-CONSTRUCTION MEETING PRIOR TO STARTING CONSTRUCTION ACTIVITIES. SCHEDULE MEETING THROUGH OWNER OR OWNER'S REPRESENTATIVE.
3. PROVIDE CONSTRUCTION SCHEDULE TO ENGINEER AND OWNER.
4. FIELD VERIFY EXISTING CONDITIONS. QUANTITIES, LENGTHS, VOLUMES, AND AREAS INDICATED ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR. CONTRACTOR TO VERIFY QUANTITIES AND DETERMINE EXACT MEASUREMENTS, AS NECESSARY.
5. VERIFY DIMENSIONS BEFORE STARTING WORK AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
6. OBTAIN APPROVAL FROM OWNER PRIOR TO CONSTRUCTION FOR USE OF STAGING AREAS (IF ANY) NOT SHOWN ON DRAWINGS. COORDINATE WITH OWNER TO IDENTIFY POTENTIAL USEABLE STAGING AREAS. RESTORE STAGING AREA TO PRECONSTRUCTION CONDITION.
7. PROTECT EXISTING IMPROVEMENTS DURING CONSTRUCTION AND REPLACE OR RESTORE IMPROVEMENTS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITY. RESTORE IMPROVEMENTS TO AS-GOOD-AS OR BETTER-THAN CONDITION THAT EXISTED PRIOR TO CONSTRUCTION. REPAIR IRRIGATION/SPRINKLERS WITHIN 24 HOURS FOLLOWING PLACEMENT OF IMPROVEMENTS.
8. PROPERLY BACKFILL, COMPACT, AND RESTORE PAVEMENT WITHIN STREET RIGHT-OF-WAY.
9. DISPOSE WASTE OFF SITE AT LANDFILL OR OTHER LEGAL DISPOSAL FACILITY.
10. REMOVE SURPLUS EXCAVATION FROM SITE. USE TOPSOIL OR OTHER NATIVE MATERIAL IN LANDSCAPE OR NATIVE GRADING. STOCKPILE TOPSOIL SEPARATELY FROM OTHER EXCAVATED MATERIALS. PLACE TOPSOIL IN LANDSCAPED AREAS IN 4 INCHES THICK MINIMUM AND GRADE TO DRAIN.
11. PERFORM CONSTRUCTION QUALITY CONTROL TESTING, INCLUDING SOILS, BACKFILL, CONCRETE, UTILITIES, ETC.
12. PERFORM MATERIALS TESTING AND SUBMIT COPIES OF TEST RESULTS TO ENGINEER AND/OR OWNER AS REQUIRED PER SPECIFICATIONS. COORDINATE TESTING WITH INSPECTORS AND/OR ENGINEER. PERFORM DENSITY TESTING ON TRENCH BACKFILL, GRANULAR BORROW, AND UTBC PLACEMENT FOR ROADWAY AND PRIOR TO ANY CONCRETE PLACEMENT WHERE NECESSARY. SEE SPECIFICATIONS FOR TESTING FREQUENCY.
13. PROVIDE SITE DUST CONTROL AND SUPPRESSION FOR DURATION OF PROJECT, INCLUDING WEEKENDS.

GENERAL EROSION CONTROL NOTES

1. PREPARE AND SUBMIT STORM WATER POLLUTION PREVENTION PLAN (SWPPP). PRIOR TO STARTING CONSTRUCTION FILE NOTICE OF INTENT (NOI) AND AT END OF CONSTRUCTION FILE NOTICE OF TERMINATION (NOT).
2. PERFORM CONSTRUCTION WORK IN ACCORDANCE WITH UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) REGULATIONS.
3. DURING CONSTRUCTION, PREVENT AND CONTROL EROSION DUE TO WIND AND WATER. FOLLOW PROCEDURES AND BEST MANAGEMENT PRACTICES INDICATED IN SWPPP AND INSTALL EROSION CONTROL MEASURES INDICATED IN SWPPP.
4. PROVIDE ADDITIONAL EROSION CONTROL MEASURES WHEN UNFORESEEN PROBLEMS OCCUR OR IF SWPPP DOES NOT FUNCTION AS INTENDED. ADJUST EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) AS NECESSARY DUE TO GRADE CHANGES DURING CONSTRUCTION. OWNER MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON INSPECTION OF PROPOSED FACILITIES.
5. KEEP STREETS CLEAN AND FREE FROM SOIL AND DEBRIS DURING CONSTRUCTION.
6. PROTECT STORM DRAIN FACILITIES ON SITE AND ADJACENT TO SITE FROM SITE RUNOFF. INSTALL INLET PROTECTION DEVICES IMMEDIATELY UPON INDIVIDUAL INLETS BECOMING FUNCTIONAL.
7. SEED AREAS DISTURBED DURING CONSTRUCTION WITH APPROPRIATE NATIVE SEED MIX OR PLACE LANDSCAPING TO MATCH EXISTING.
8. DISPOSE OF WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, ETC.) IN MANNER THAT PREVENTS CONTACT WITH STORM WATER DISCHARGES FROM SITE.
9. STABILIZE CONSTRUCTION AREAS AT END OF EACH WORKING DAY. INCLUDE BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF PAVING FOR ROAD CONSTRUCTION.
10. MAINTAIN MEASURES CONTAINED IN SWPPP IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF SITE. CHECK EROSION AND SEDIMENTATION CONTROL MEASURES BY QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF END OF RAINFALL EVENT. COMPLETE ANY NEEDED CLEANING AND REPAIRS WITHIN TIME FRAMES SPECIFIED IN SWPPP AND/OR UPDES GENERAL PERMIT.
11. CLEAN UTILITY LINES TO REMOVE DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE. PROTECT DOWN-GRADE LINES FROM WASH-WATER DURING CLEANING PROCESS TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS.
12. POWER WASH EXCAVATION EQUIPMENT BEFORE ENTERING DIFFERENT VEGETATION MATRIX.
13. REMOVE INLET PROTECTION DEVICES AFTER NOT AND FINAL ACCEPTANCE BY OWNER.

GENERAL UTILITY NOTES

1. CONTRACTOR TO COORDINATE ALL UTILITY CONNECTIONS AND SERVICES PRIOR TO COMMENCING CONSTRUCTION. STAGE CONSTRUCTION TO MITIGATE DELAYS OF SERVICES AND PERMITTING.
2. PROVIDE UTILITY PIPING AND APPURTENANCES IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND IN CONFORMANCE WITH APPROPRIATE JURISDICTIONAL SPECIFICATIONS AND DETAILS.
3. PROVIDE SUBMITTALS TO ENGINEER FOR REVIEW AND ACCEPTANCE FOR BEDDING, BACKFILL, PIPE, METERS, BOXES, VALVES, FIRE HYDRANTS, BLOWOFFS, VAULTS, MANHOLES, INLET BOXES, ETC. PROVIDE SUBMITTALS WITH SUFFICIENT INFORMATION TO SHOW THAT PROPOSED PRODUCTS AND MATERIALS CONFORM TO OWNER'S STANDARDS AND SPECIFICATIONS.

GENERAL STORM WATER NOTES

1. FOLLOW IRC R401.3 FOR ALL SITE DRAINAGE:
    - 1.1. DIVERT SURFACE DRAINAGE TO STORM SEWER OR APPROVED POINT OF COLLECTION THAT DOES NOT CREATE HAZARD.
    - 1.2. GRADE LOTS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
    - 1.3. GRADE 6" OF FALL WITHIN THE FIRST 10' OF FOUNDATION PERIMETER.
    - 1.4. WHERE LOT LINES, SLOPES OR PHYSICAL BARRIERS PREVENT 6" OF FALL, CONSTRUCT DRAINAGE SWALES TO ENSURE DRAINAGE AWAY FROM STRUCTURE.
    - 1.5. SLOPE IMPERVIOUS SURFACES WITHIN 10' OF BUILDING FOUNDATION A MINIMUM OF 2% AWAY FROM BUILDING.

MATERIALS NOTES

1. ALL MATERIALS WILL CONFORM TO CITY'S SPECIFICATIONS AND STANDARDS UNLESS OTHERWISE INDICATED.
2. EARTHWORK
    - 1.1. SUBMIT LAB REPORTS AS CONSTRUCTION RECORD PER AASHTO T180 (D) FOR A-1 SOILS AND AASTHO T90 (D) FOR ALL OTHER SOILS ENCOUNTERED ON SITE, AS CLASSIFIED PER AASHTO M145.
    - 1.2. SUBMIT FIELD REPORTS AS CONSTRUCTION RECORD PER ASTM D6938 FOR EVERY DAY AND EVERY TYPE OF SOIL WORKED, PER DAY.
    - 1.3. WITHIN RIGHT-OF-WAY AND OTHER TRAVELED AREAS OR UNDER STRUCTURES, COMPACT BACKFILL, EMBANKMENT, IMPORTED FILL AND PAVEMENT MATERIALS TO 95 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY. IN OTHER NON-TRAVEL AREAS, COMPACT FILLS AND EMBANKMENT MATERIALS TO 90 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY.
    - 1.4. ONLY USE MATERIALS APPROVED BY THE ENGINEER. NO GEOTECHNICAL REPORT WAS COMPLETED FOR THIS PROJECT.

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1-800-662-4111
www.bluestakes.org
Dig Safely.

NO.	DATE	REMARKS

REVISIONS

UPDATED: 3/9/2023
PLOTTED: 3/9/2023
DWG NAME: h:\JD\Proj\2202-061\dwg\TITLE_2202-061 SE-3.dwg
SCALE: NO SCALE

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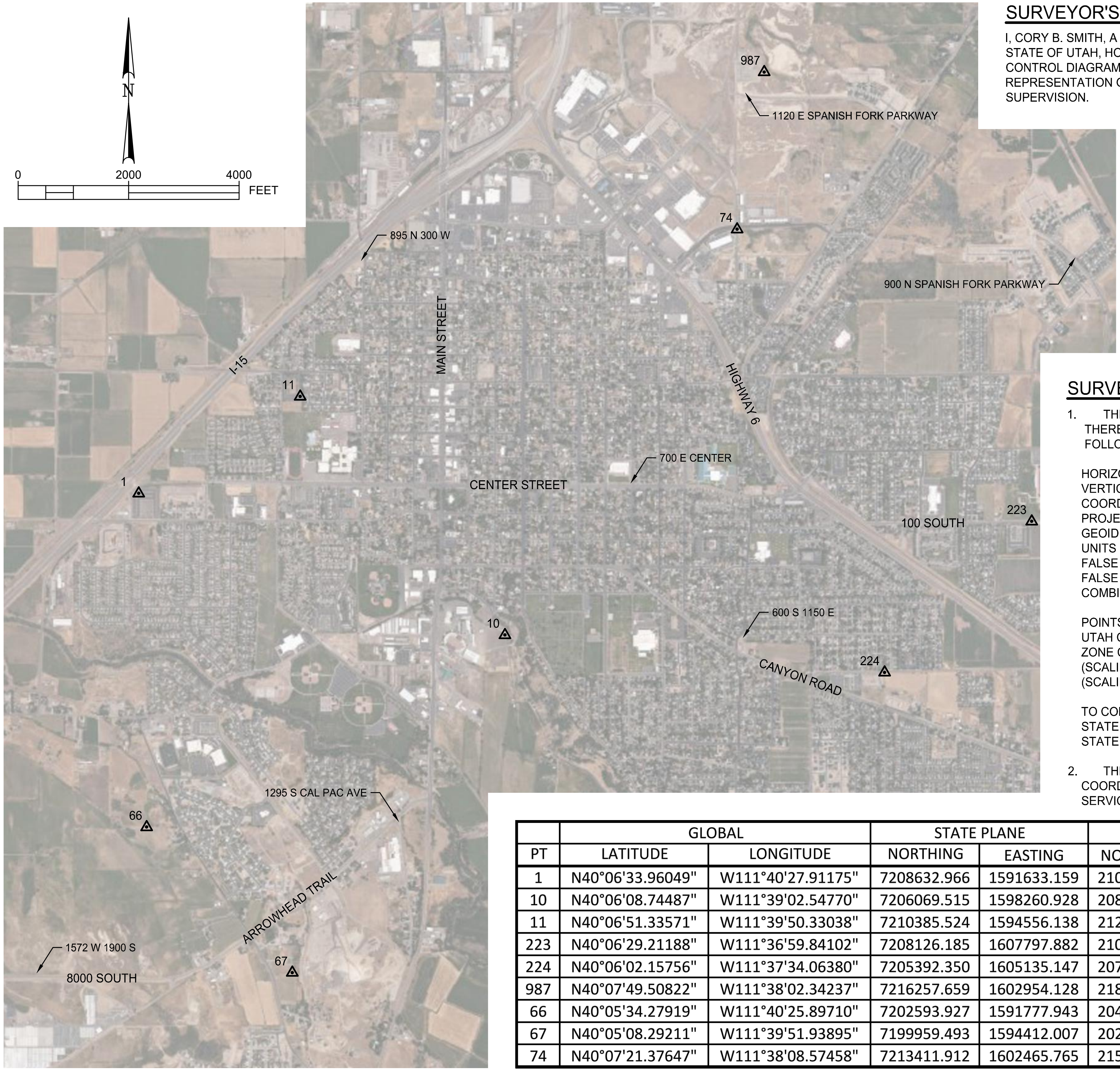
APPROVAL RECOMM: ________ PROJECT DESIGN ENGINEER ________ DATE
APPROVED ________ QUALITY MANAGEMENT REVIEW ________ DATE

SPANISH FORK CITY
SFCN HUT SE-3
GENERAL NOTES
PROJECT NUMBER: 2202-061
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION
UTAH
COUNTY
SHEET NO. C-003



SURVEYOR'S CERTIFICATE

I, CORY B. SMITH, A PROFESSIONAL LAND SURVEYOR AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH, HOLDING CERTIFICATE #11349296, CERTIFY THAT I HAVE PREPARED THE CONTROL DIAGRAM REPRESENTED HEREIN AND THAT THE SAME IS AN ACCURATE REPRESENTATION OF A CONTROL SURVEY, AND WAS CONDUCTED UNDER MY DIRECT SUPERVISION.

Cory B. Smith

NO. 11349296
CORY B. SMITH
06/27/2022
Electronic Seal

CORY B. SMITH, P.L.S. #11349296

SURVEY DATUM

1. THE "PROJECT COORDINATES" AND BEARINGS AND DISTANCES DERIVED THEREFROM ARE EXPRESSED IN A LOCAL GROUND SYSTEM DEFINED AS FOLLOWS:

HORIZONTAL DATUM = NORTH AMERICAN DATUM OF 1983 (N.A.D.83)
VERTICAL DATUM =NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88)
COORDINATE SYSTEM= US STATE PLANE 1983, UTAH CENTRAL ZONE (4302)
PROJECTED AT GROUND
GEOID MODEL = GEOID 12B
UNITS = US SURVEY FOOT
FALSE NORTHING = -7,000,000
FALSE EASTING= -1,000,000
COMBINED SCALE FACTOR= 0.99969464

POINTS WERE SCALED FROM COORDINATE 0,0 IN THE NAD 83 US STATE PLANE UTAH CENTRAL
ZONE COORDINATE SYSTEM USING THE COMBINED SCALE FACTOR LISTED ABOVE.
(SCALING LATITUDE = N20°31'27.66067")
(SCALING LONGITUDE = W116°02'57.11642")

TO CONVERT TO STATE PLANE COORDINATES USE THE FOLLOWING:
STATE PLANE NORTHING= (PROJECT NORTHING + 7,000,000)/ 1.0003054533
STATE PLANE EASTING= (PROJECT EASTING + 1,000,000)/ 1.0003054533

2. THE CONTROL SURVEY WAS PERFORMED IN JULY 2021. SURVEY CONTROL COORDINATES WERE ESTABLISHED USING THE NGS ONLINE POSITIONING USER SERVICE (OPUS) AT POINT 1.

	GLOBAL		STATE PLANE		PROJECT			
PT	LATITUDE	LONGITUDE	NORTHING	EASTING	NORTHING	EASTING	ELEV	DESCRIPTION
1	N40°06'33.96049"	W111°40'27.91175"	7208632.966	1591633.159	210834.867	592119.329	4567.80	NAIL
10	N40°06'08.74487"	W111°39'02.54770"	7206069.515	1598260.928	208270.632	598749.122	4588.66	NAIL
11	N40°06'51.33571"	W111°39'50.33038"	7210385.524	1594556.138	212587.960	595043.200	4570.79	NAIL
223	N40°06'29.21188"	W111°36'59.84102"	7208126.185	1607797.882	210327.931	608288.989	4729.51	E/4 SEC 20 UT CO BC 2007
224	N40°06'02.15756"	W111°37'34.06380"	7205392.350	1605135.147	207593.261	605625.441	4733.77	S/4 SEC 20 UT CO BC 1955
987	N40°07'49.50822"	W111°38'02.34237"	7216257.659	1602954.128	218461.888	603443.755	4563.85	NAIL
66	N40°05'34.27919"	W111°40'25.89710"	7202593.927	1591777.943	204793.983	592264.156	4575.45	W/4 SEC 25 UT CO BC 1956
67	N40°05'08.29211"	W111°39'51.93895"	7199959.493	1594412.007	202158.744	594899.026	4616.16	S/4 SEC 25 UT CO BC 1956
74	N40°07'21.37647"	W111°38'08.57458"	7213411.912	1602465.765	215615.272	602955.244	4586.42	E/4 SEC 18 UT CO BC 1970

NO.	DATE	REMARKS

REVISIONS

SCALE: 1"=2000'
DWG NAME: H:\JD\Proj\2202-061\dwg\SURVEY CONTROL_2202-061.dwg
UPDATED: 6/27/2022
PLOTTED: 6/27/2022

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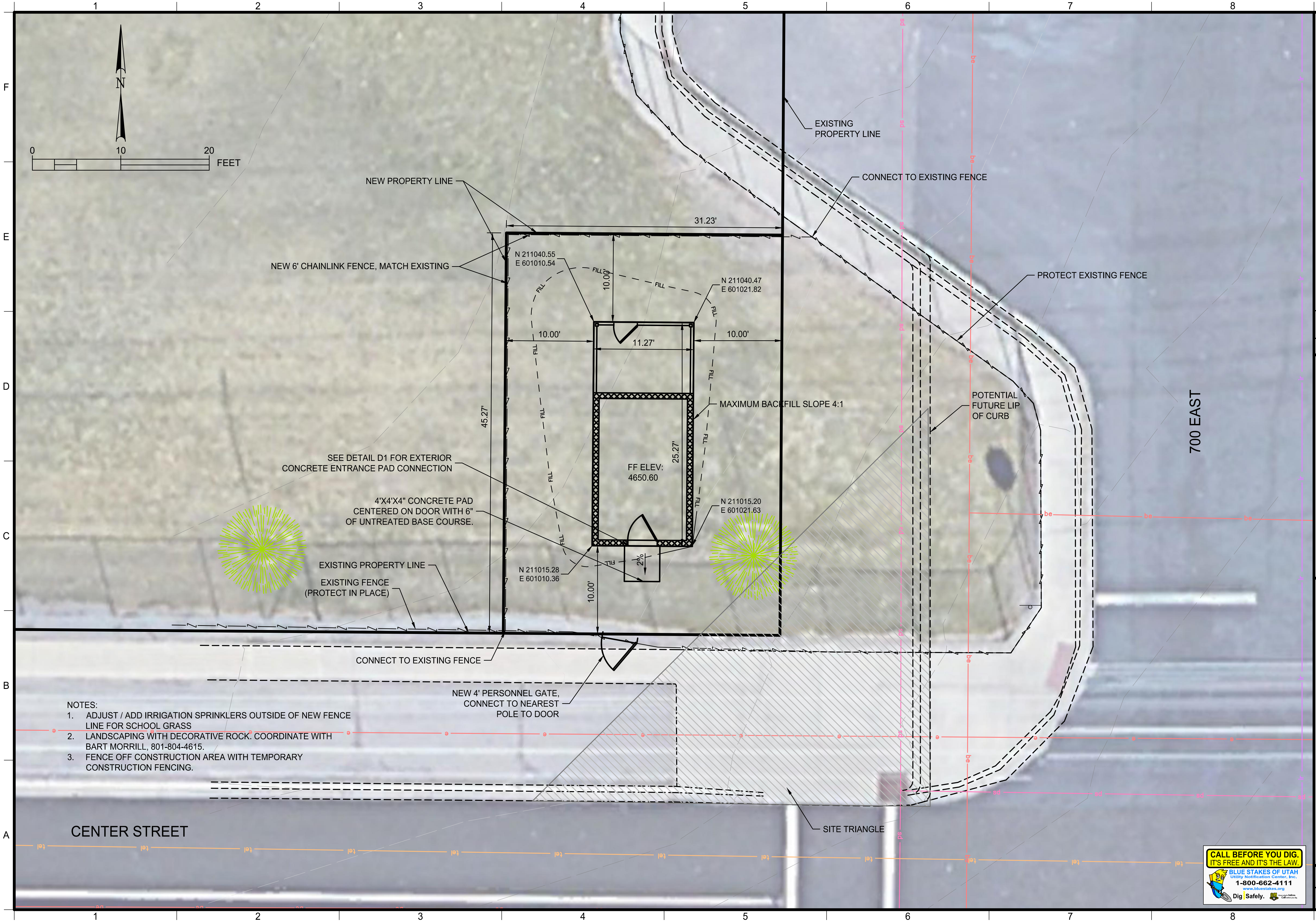
APPROVED ____ QUALITY MANAGEMENT REVIEW ____ DATE

SPANISH FORK CITY
SFCN HUT
SURVEY CONTROL
PROJECT NUMBER: 2202-061
SUBMITTAL:

UTAH
COUNTY

SHEET NO. V-101


1
2
3
4
5
6
7
8
F
E
D
C
B
A
N
0
10
20
FEET
NEW PROPERTY LINE
31.23'
EXISTING PROPERTY LINE
CONNECT TO EXISTING FENCE
NEW 6' CHAINLINK FENCE, MATCH EXISTING
N 211040.55
E 601010.54
N 211040.47
E 601021.82
PROTECT EXISTING FENCE
FILL
10.00'
10.00'
11.27'
10.00'
45.27'
25.27'
MAXIMUM BACKFILL SLOPE 4:1
POTENTIAL FUTURE LIP OF CURB
700 EAST
SEE DETAIL D1 FOR EXTERIOR CONCRETE ENTRANCE PAD CONNECTION
FF ELEV: 4650.60
4'X4'X4" CONCRETE PAD CENTERED ON DOOR WITH 6" OF UNTREATED BASE COURSE.
N 211015.20
E 601021.63
2%
EXISTING PROPERTY LINE
N 211015.28
E 601010.36
EXISTING FENCE (PROTECT IN PLACE)
10.00'
CONNECT TO EXISTING FENCE
NEW 4' PERSONNEL GATE, CONNECT TO NEAREST POLE TO DOOR
SITE TRIANGLE
CENTER STREET
be
sd
tel

NOTES:

1. ADJUST / ADD IRRIGATION SPRINKLERS OUTSIDE OF NEW FENCE LINE FOR SCHOOL GRASS
2. LANDSCAPING WITH DECORATIVE ROCK. COORDINATE WITH BART MORRILL, 801-804-4615.
3. FENCE OFF CONSTRUCTION AREA WITH TEMPORARY CONSTRUCTION FENCING.

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NO.	DATE	REMARKS

REVISIONS

SCALE: 1" = 10'
DWG NAME: h:\JD\Proj\2202-061\dwg\SP_2202-061 SE-3.dwg
UPDATED: 3/9/2023
PLOTTED: 3/9/2023

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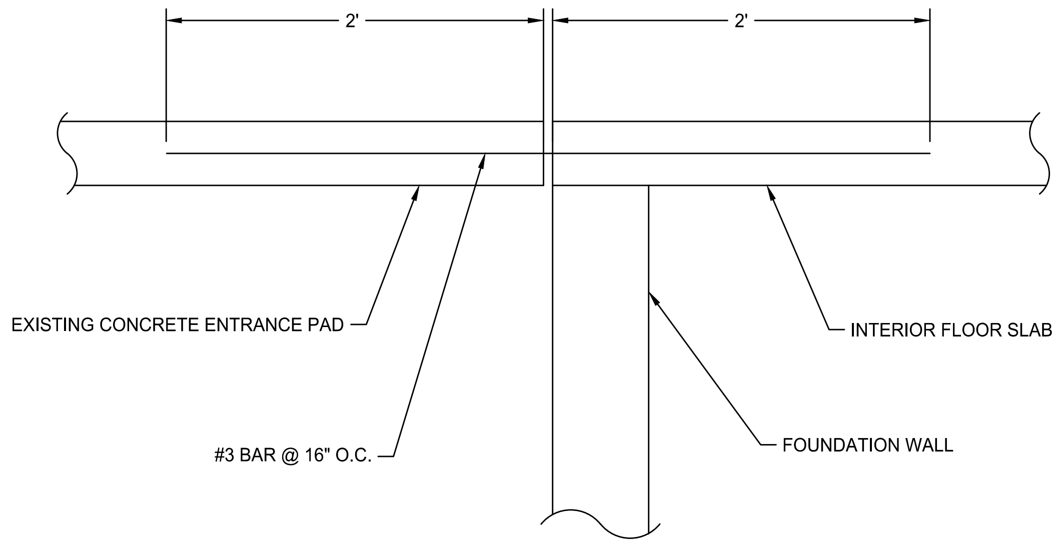
APPROVED ______ QUALITY MANAGEMENT REVIEW ______ DATE

SPANISH FORK CITY
SFCN HUT SE-3
SITE PLAN

PROJECT NUMBER: 2202-061
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY

SHEET NO. C-101



D1	*EXTERIOR CONCRETE ENTRANCE PAD CONNECTION*
SCALE	NTS

D5	
SCALE	

A1	
SCALE	

A5	
SCALE	

NO.	DATE	REMARKS

REVISIONS

SCALE: VARIES

DWG NAME: h:\JD\Proj\2202-061\dwg\SP_2202-061 SE-3.dwg

UPDATED: 3/9/2023
PLOTTED: 3/9/2023

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APPROVED ______ QUALITY MANAGEMENT REVIEW ______ DATE

SPANISH FORK CITY

SFCN HUT SE-3

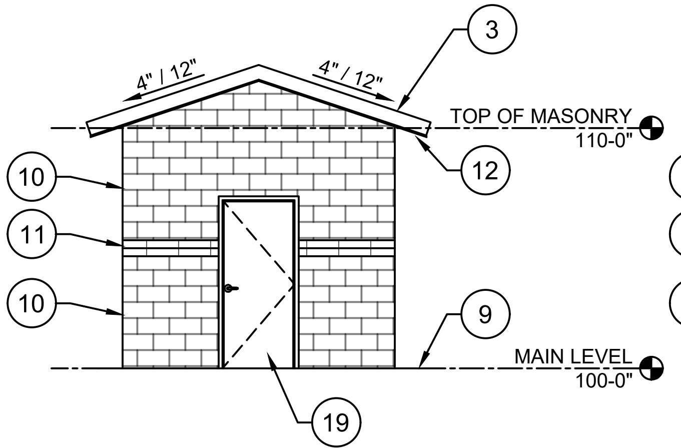
DETAILS

PROJECT NUMBER: 2202-061

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

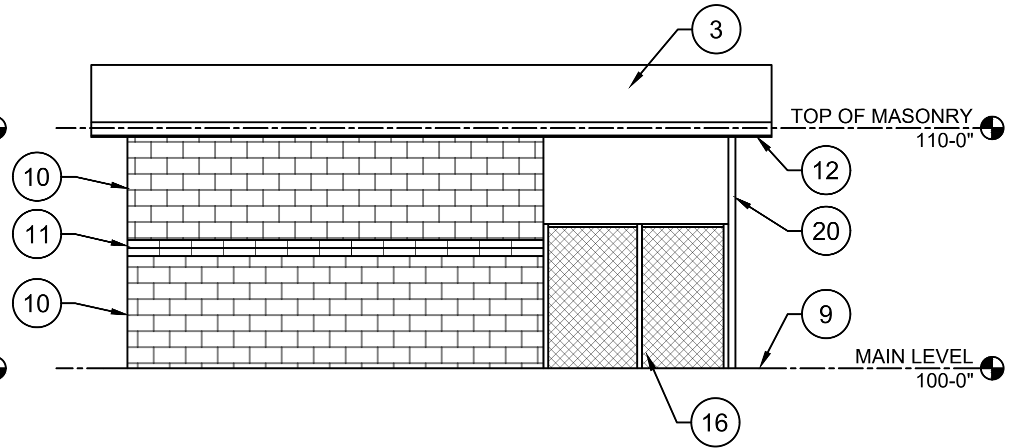
UTAH
COUNTY

SHEET NO. C-501



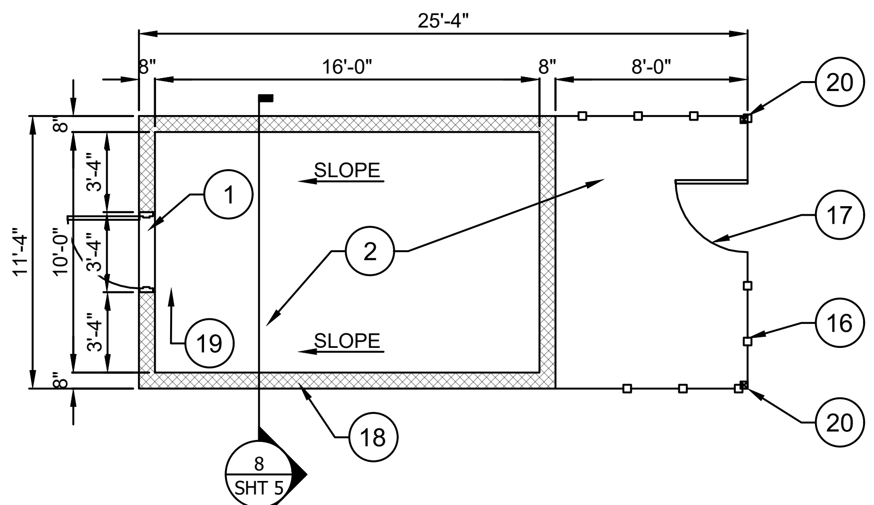
4 ELEVATION

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



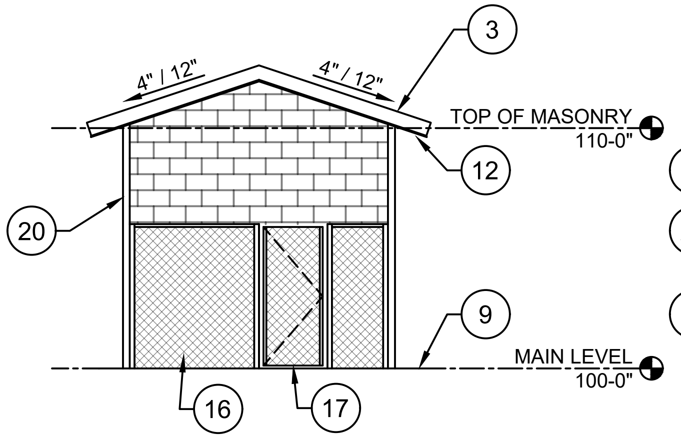
5 ELEVATION

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



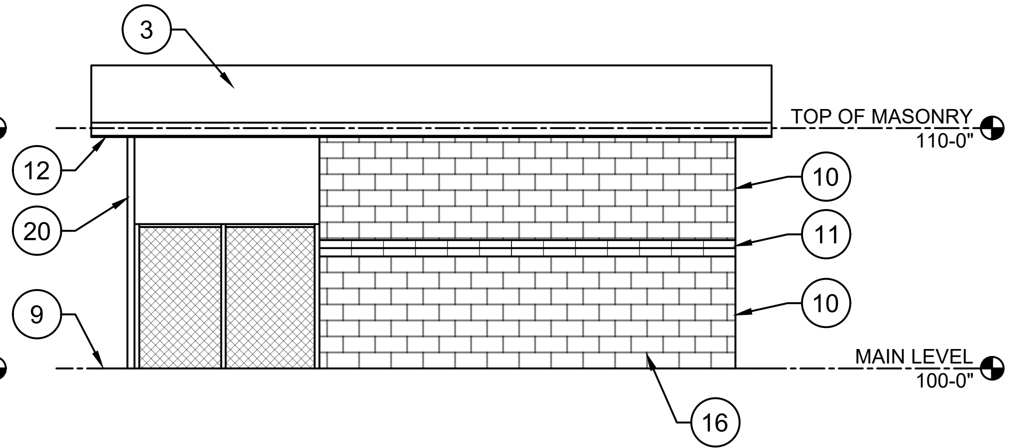
1 FLOOR PLAN

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



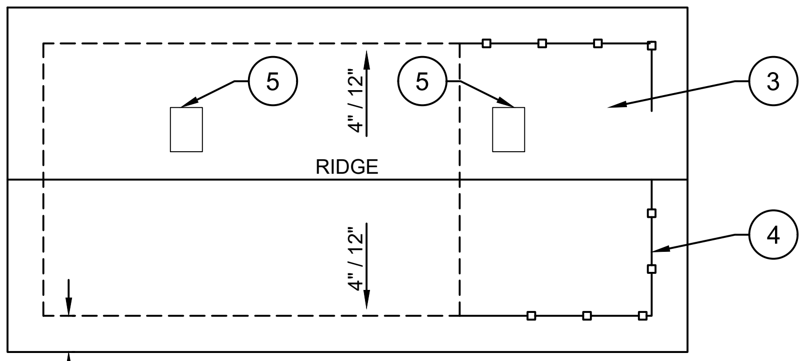
6 ELEVATION

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



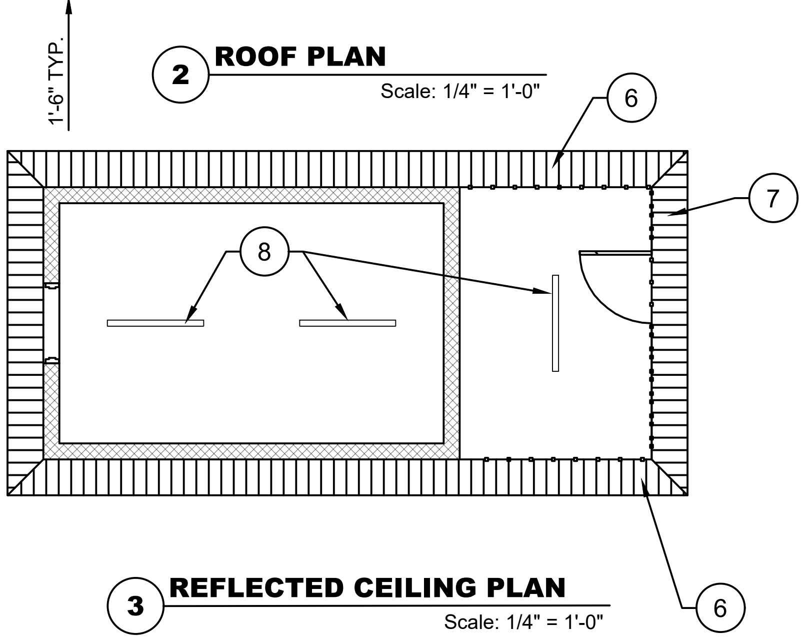
7 ELEVATION

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



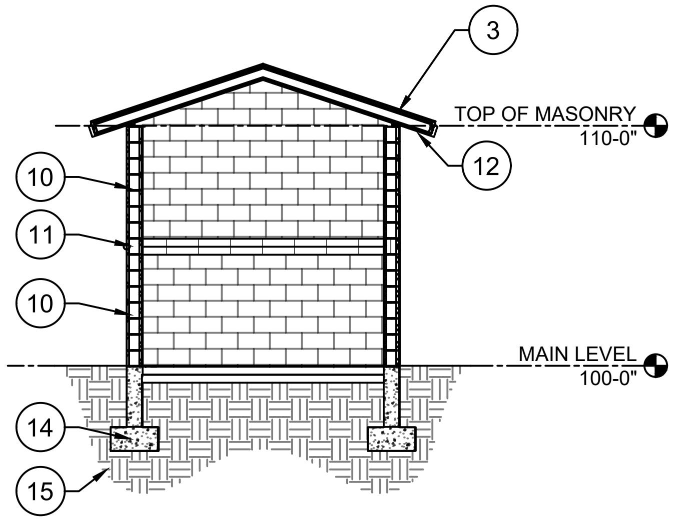
2 ROOF PLAN

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



3 REFLECTED CEILING PLAN

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



8 BUILDING SECTION

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

1. DOOR THRESHOLD.
2. CONCRETE SLAB PER STRUCTURAL DESIGN - SLOPE TO DOOR OPENING.
3. PRE-FINISHED STANDING SEAM METAL ROOF OVER HIGH TEMPERATURE SELF-ADHERED UNDERLAYMENT
4. LINE OF WALL/FENCE BELOW
5. STATIC ROOF VENT W/ 50 SQ. IN. FREE CLEAR AREA PER UNIT.
6. PRE-FINISHED VENTED METAL SOFFIT
7. PRE-FINISHED METAL SOFFIT
8. LIGHT FIXTURE
9. APPROXIMATE FINISH GRADE - SEE CIVIL DRAWINGS
10. 8" HIGH COLORED HONED CMU WALL - COLOR #1
11. TWO ROWS 4" HIGH COLORED HONED CMU WALL - COLOR #2
12. PRE-FINISHED METAL FASCIA
13. PRE-FINISHED METAL SOFFIT
14. CONCRETE FOOTING AND FOUNDATION
15. EARTH FILL
16. 6' BLACK VINYL CHAINLINK FENCE
17. 6' BLACK VINYL CHAINLINK GATE.
18. TYPICAL REFERENCE FOR CONSTRUCTION TYPE. SEE SHEET A1.2
19. TYPICAL REFERENCE FOR DOOR TYPE. SEE SHEET A1.2 FOR DOOR SCHEDULE
20. 4X4 POST - SEE STRUCTURAL PLANS

J:\Shared drives\Public Works\SFCN\Projects - SFCN\SFCN Fiber Huts\DWG\Draft Building - SFCN Fiber Huts.dwg

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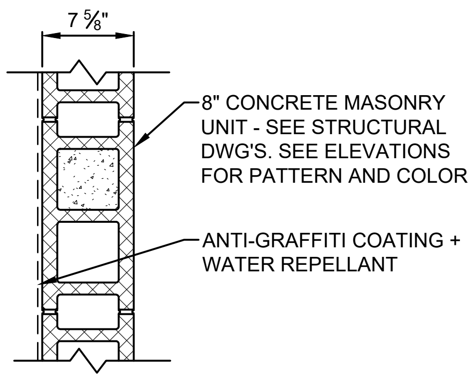
SPANISH FORK
ENGINEERING

SFCN FIBER HUTS

FIBER HUT PLANS

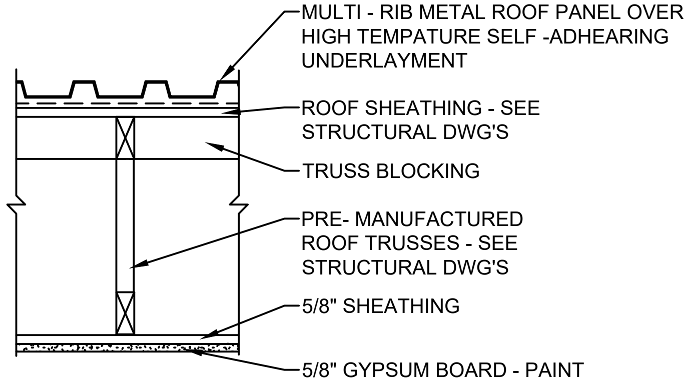
REVISION	BY	DATE

DRAWN: JLR
DESIGN: JHJ
CHECK: CMT
DATE: 6/7/2022
SCALE: 1/8"=1'-0"
DRAWING #: A1.1


7 ⅝"
8" CONCRETE MASONRY UNIT - SEE STRUCTURAL DWG'S. SEE ELEVATIONS FOR PATTERN AND COLOR
ANTI-GRAFFITI COATING + WATER REPELLANT

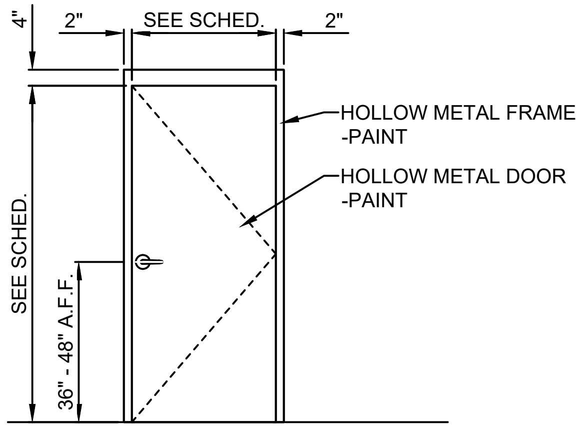
1-1 WALL CONSTRUCTION TYPE 1-1

Scale: N.T.S.

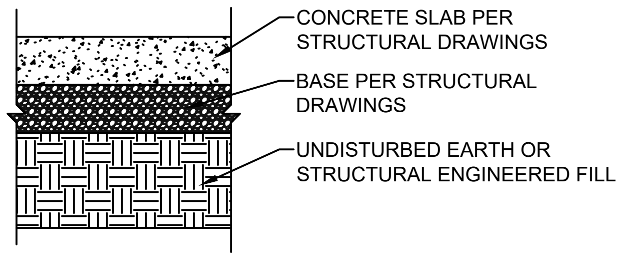

MULTI - RIB METAL ROOF PANEL OVER HIGH TEMPATURE SELF -ADHEARING UNDERLAYMENT
ROOF SHEATHING - SEE STRUCTURAL DWG'S
TRUSS BLOCKING
PRE- MANUFACTURED ROOF TRUSSES - SEE STRUCTURAL DWG'S
5/8" SHEATHING
5/8" GYPSUM BOARD - PAINT

2-1 ROOF/CEILING CONSTRUCTION

Scale: N.T.S.



TYPE A


CONCRETE SLAB PER STRUCTURAL DRAWINGS
BASE PER STRUCTURAL DRAWINGS
UNDISTURBED EARTH OR STRUCTURAL ENGINEERED FILL

3-1 FLOOR CONSTRUCTION

Scale: N.T.S.

DOOR SCHEDULE

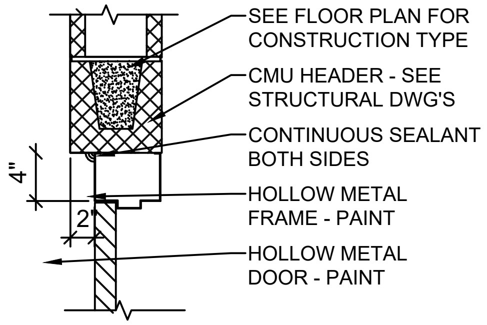
DOOR NUMBER	ROOM NUMBER	ROOM NAME	DOOR TYPE	DOOR SIZE			HARDWARE SET	DOOR DETAILS	
				WIDTH	HEIGHT	THICK		HEAD	JAMB
101	101	FIBER HUT	A	3'-0"	7'-0"	1¾"	1	1/2/2022	2/2/2022

DOOR HARDWARE SCHEDULE

NUMBER		ITEM	PRODUCTS NUMBER	FIN.	MANU.
3	EA	HINGE	3BB81 4.5 X 4.5	652	PBB
1	EA	STORMROOM LOCK	L280S C	626	GENL
1	EA	SURFACE CLOSER	4040XP RWPA AL X SNB	689	LCNHA
1	EA	KICK PLATE	198S 10 X 34	630	HAG
1	SET	SEALS	160	GRY	NGP
1	EA	DOOR SWEEP	200NA 36"	AL	NGP
1	EA	THREASHOLD	425 E 36"	628	NGP

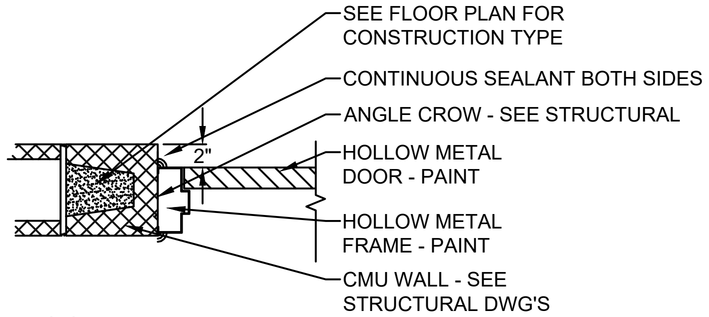
EXTERIOR FINISH SCHEDULE

CMU BLOCK - COLOR #1	COLOR TO BE DETERMINED WITH EACH SITE
CMU BLOCK - COLOR #2	COLOR TO BE DETERMINED WITH EACH SITE
MANUFACTURED MASONRY VENEER	MANUFACTURER: CREATIVE MINES STYLE: CRAFT BOARD FORM COLOR: BARNWOOD
PAINTED HM DOORS & FRAMES	MANUFACTURER: SHERWIN WILLIAMS COLOR: ELEPHANT EAR (SW 9168)
STANDING SEAM METAL ROOF	McELROY OR APPROVED EQUAL COLOR: DARK BRONZE
PRE-FINISHED METAL SOFFIT & FASCIA AS SPECIFIED	COLOR: MATCH METAL ROOF


SEE FLOOR PLAN FOR CONSTRUCTION TYPE
CMU HEADER - SEE STRUCTURAL DWG'S
CONTINUOUS SEALANT BOTH SIDES
4"
2"
HOLLOW METAL FRAME - PAINT
HOLLOW METAL DOOR - PAINT

1 DOOR HEAD DETAIL

Scale: N.T.S.


SEE FLOOR PLAN FOR CONSTRUCTION TYPE
CONTINUOUS SEALANT BOTH SIDES
ANGLE CROW - SEE STRUCTURAL
2"
HOLLOW METAL DOOR - PAINT
HOLLOW METAL FRAME - PAINT
CMU WALL - SEE STRUCTURAL DWG'S

2 DOOR JAMB DETAIL

Scale: N.T.S.

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SPANISH FORK, UTAH 84660
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SFCN FIBER HUTS
FIBER HUT PLANS

REVISION	BY	DATE

DRAWN: JLR
DESIGN: JHJ
CHECK: CMT
DATE: 5/12/2022
SCALE: N.T.S.
DRAWING #: A1.2

DESIGN CRITERIA

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE

CLASSIFICATION: RISK CATEGORY I

LIVE LOADING
ROOF: 20 PSF (REDUCIBLE)

DEAD LOADING
ROOF: 13 PSF

SNOW LOADING (BASED ON 2018 UTAH GROUND SNOW LOAD MAP)
ELEVATION: 4600 FT (APPROX.)
GROUND SNOW LOAD: Pg = 33 PSF
EXPOSURE FACTOR: Ce = 0.9
SNOW IMPORTANCE FACTOR: Is = 0.8
THERMAL FACTOR: Ct = 1.1
CALCULATED SNOW LOAD: Pf = 18.3 PSF
DESIGN SNOW LOAD: Pf = 18.3 PSF
SLOPE FACTOR: Cs = 1.0

WIND LOADING
WIND EXPOSURE: C
WIND SPEED: 100 MPH
WIND IMPORTANCE FACTOR: Iw = 1.0

SEISMIC LOADING
LOCATION: 40.10858° LAT., -111.66481° LON.
SEISMIC IMPORTANCE FACTOR: Ie = 1.00
MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss = 1.5g S1 = 0.549g
SITE CLASS: D
SPECTRAL RESPONSE COEFFICIENTS: SDS = 1.2g SD1 = 0.641g
SEISMIC DESIGN CATEGORY: D
SEISMIC FORCE RESISTING SYSTEM: SPECIAL REINFORCED MASONRY SHEAR WALLS.

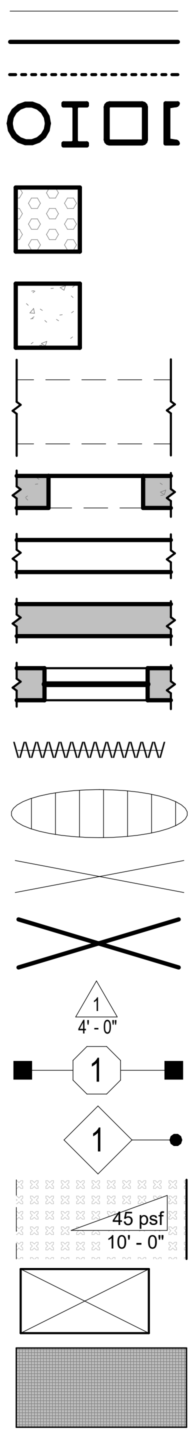
OUT-OF-PLANE FORCE: Fp = 0.48 Wp
SEISMIC RESPONSE COEFFICIENT: Cs=0.360
RESPONSE MODIFICATION FACTOR: R=5
OVERSTRENGTH FACTOR: Ω = 2
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE METHOD

SOILS
SOIL BEARING PRESSURE: 1500 PSF
PROJECT GEOTECHNICAL INVESTIGATION: NONE

SHEET INDEX

SHEET #	DESCRIPTION
STRUCTURAL	
S-001	STRUCTURAL NOTES
S-002	STRUCTURAL NOTES
S-101	FOUNDATION PLAN
S-102	ROOF FRAMING PLAN
S-501	STRUCTURAL DETAILS
S-502	STRUCTURAL DETAILS
S-701	TYPICAL STRUCTURAL DETAILS
S-702	TYPICAL STRUCTURAL DETAILS
S-801	SPECIFICATIONS
S-802	SPECIFICATIONS
S-803	SPECIFICATIONS
S-804	SPECIFICATIONS

STRUCTURAL PLAN LEGEND



JOIST OR TRUSS
BEAM OR GIRDER
PURLIN
STEEL COLUMN
MASONRY COLUMN
CONCRETE COLUMN
CONCRETE FOOTING
RECESSED FOUNDATION WALL
NON-BEARING STRUCTURAL WALL
BEARING WALL
BEAM IN WALL
STEEL STRAP
STEEL DECK
OWS JOIST CROSS BRIDGING
STEEL JOIST CROSS BRIDGING
SHEARWALL TYPE AND LENGTH, SEE SHEARWALL SCHEDULE
STRUCTURAL CONNECTOR, SEE CONNECTOR SCHEDULE
HOLDOWN, SEE HOLDOWN SCHEDULE. "H" INDICATES LOCATION OF HOLDOWN IDENTIFIED ON LEVEL ABOVE.
SNOW DRIFT AREA AND LOAD, ON TOP OF BASE SNOW LOAD. DRIFT LOAD IS 0 PSF AT DOTTED LINE AND INCREASES LINEARLY TO MAXIMUM LOAD.
SHEATHING
PERMANENT EQUIPMENT

#8826183-2202
MATTHEW PAUL LAURENDEAU
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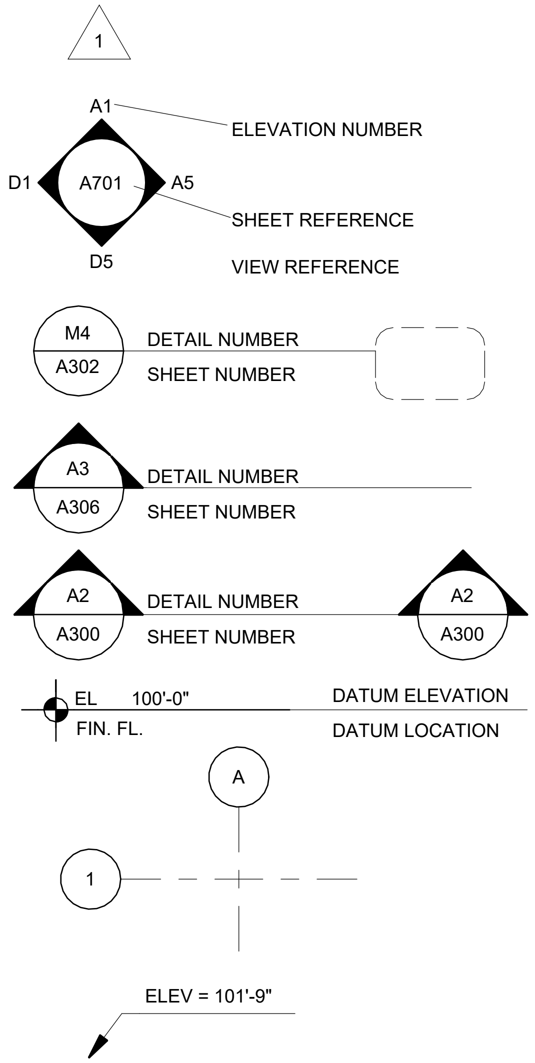
STRUCTURAL TAGS LEGEND

TAG	DESCRIPTION
AB-1	ANCHOR BOLT, SEE ANCHOR BOLT SCHEDULE
CB-1	CONCRETE BEAM, SEE CONCRETE BEAM SCHEDULE
CC-1	CONCRETE COLUMN, SEE CONCRETE COLUMN SCHEDULE
CF-1	CONCRETE FOOTING, SEE CONCRETE FOOTING SCHEDULE
CS-1	CONCRETE SLAB, SEE CONCRETE SLAB SCHEDULE
CW-1	CONCRETE WALL, SEE CONCRETE WALL SCHEDULE
DB-1	COLD-FORMED STEEL BEAM, SEE COLD-FORMED STEEL BEAM SCHEDULE
DJ-1	COLD-FORMED STEEL JOIST, SEE COLD-FORMED STEEL JOIST SCHEDULE
DW-1	COLD-FORMED STEEL WALL, SEE COLD-FORMED STEEL WALL SCHEDULE
MC-1	MASONRY COLUMN, SEE MASONRY COLUMN SCHEDULE
ML-1	MASONRY LINTEL, SEE MASONRY LINTEL SCHEDULE
MW-1	MASONRY WALL, SEE MASONRY WALL SCHEDULE
SB-1	STEEL BEAM, SEE STEEL BEAM SCHEDULE
SC-1	STEEL COLUMN, SEE STEEL COLUMN SCHEDULE
SD-1	STEEL DECK, SEE STEEL DECK SCHEDULE
SJ-1	STEEL JOIST, SEE STEEL JOIST SCHEDULE
WB-1	WOOD BEAM, SEE WOOD BEAM SCHEDULE
WC-1	WOOD COLUMN, SEE WOOD COLUMN SCHEDULE
WJ-1	WOOD JOIST, SEE WOOD JOIST SCHEDULE
WW-1	WOOD WALL, SEE WOOD WALL SCHEDULE

GRAPHICS LEGEND

REVISIONS MARK
ELEVATION SYMBOL
DETAIL REFERENCE
WALL/DETAIL SECTION
BUILDING SECTION
DATUM ELEVATION
REFERENCE GRID
NEW POINT ELEVATION



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STRUCTURAL NOTES

2202-061
PROJECT NUMBER
S-001
SHEET NO.

GENERAL NOTES

1. NOTES AND TYPICAL DETAILS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON PLANS.
2. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
3. CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES ETC. ON THE JOB.
5. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER WHERE CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE STRUCTURE THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED WITH AFFECTED PARTIES.
6. IF CONTRACTOR'S WORK IS NOT CONSTRUCTED ACCORDING TO APPROVED CONSTRUCTION DOCUMENTS (INCLUDING STAMPED WRITTEN COMMUNICATIONS), CONTRACTOR SHALL EITHER:
    A. REMOVE THE NON-CONFORMING WORK AND RECONSTRUCT THE WORK ACCORDING TO DRAWINGS, AT CONTRACTOR'S OWN EXPENSE.
    B. PAY FOR AND PROVIDE AN EVALUATION AND LETTER FROM THE ENGINEER STATING THAT THE NON-CONFORMING WORK MEETS APPLICABLE BUILDING CODES.
    C. PAY FOR AND PROVIDE AN EVALUATION AND LETTER FROM THE ENGINEER STATING THAT THE NON-CONFORMING WORK DOES NOT MEET APPLICABLE BUILDING CODES AND DETAILING THE UPGRADES THAT ARE REQUIRED TO BRING THE NON-COMPLIANT WORK INTO COMPLIANCE.
7. VERBAL COMMUNICATIONS SHALL NOT BE CONSIDERED PART OF THE APPROVED CONSTRUCTION DOCUMENTS.

EARTHWORK

1. ENGINEER SHALL VERIFY CONDITION AND/OR ADEQUACY OF ALL SUBGRADES, FILLS, AND BACK FILLS, ETC.
2. SHORE AND BRACE AS REQUIRED.
3. DE-WATER AS REQUIRED TO REMOVE STANDING WATER FROM EXCAVATIONS.
4. FOUNDATIONS ARE SHOWN AND DIMENSIONED AS BEING FORMED. INCREASE FOOTING WIDTHS BY 2" FOR FOOTINGS PLACED IN NEAT EXCAVATIONS.
5. CLEAN ALL DEBRIS FROM EXCAVATIONS.
6. NOTIFY ENGINEER 48 HOURS IN ADVANCE OF PLACING CONCRETE.
7. PROVIDE 30" MINIMUM FOOTING EMBEDMENT FROM FINISH GRADE FOR FROST PROTECTION AT EXTERIOR FOOTINGS.
8. PROVIDE 12" OF STRUCTURAL FILL BENEATH ALL FOOTINGS.
9. EXTEND STRUCTURAL FILL LATERALLY A DISTANCE EQUAL TO 1/2 THE STRUCTURAL FILL DEPTH BEYOND EDGE OF FOOTING ON EACH SIDE.
10. COMPACT STRUCTURAL FILL BENEATH FOOTINGS TO 95% OF MAXIMUM DRY DENSITY DETERMINED BY ASTM D1557.

ENGINEERED LUMBER

1. INSTALL ENGINEERED LUMBER PRODUCTS PER MANUFACTURER'S RECOMMENDATIONS UNO.
2. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR HOLES AND NOTCHES IN ENGINEERED LUMBER.
3. MINIMUM GRADES:
    A. LAMINATED VENEER LUMBER: MICROLAM LVL 2.0E

FASTENER REQUIREMENTS

1. SIMPSON HARDWARE: USE ONLY PNEUMATIC FASTENERS APPROVED BY SIMPSON.
2. INSTALL PNEUMATIC FASTENERS INTO PLYWOOD SHEATHING WITHIN THE 10% TOLERANCE LIMIT FOR HAND DRIVEN NAILS PER ASTM F1667-05 FOR HEAD DIAMETER.
3. NAIL HEADS: FULL ROUND HEADS.
4. DO NOT SUBSTITUTE PNEUMATIC (COOLER) NAILS FOR SPECIFIED COMMON NAILS WITHOUT APPROVAL FROM ENGINEER.
5. DO NOT COUNTERSINK NAIL HEADS.

MINIMUM NAIL SHANK DIAMETER & LENGTH:

COMMON NAIL	PNEUMATIC (COOLER)	STAPLES
8d = 2-1/2" x 0.131"	8d = 2-3/8" x 0.113"	MINIMUM 7/16" CROWN
10d = 3" x 0.148"	10d = 2-7/8" x 0.120"	14,15,16 GAGE
12d = 3-1/4" x 0.148"	3-1/4" x 0.131"	1-3/4" MIN. LENGTH
16d = 3-1/2" x 0.162"	3-1/4" x 0.148"	
20d = 4" x 0.192"		

#8826183-2202
MATTHEW
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LAURENDEAU
05/12/2022

CONCRETE

1. GENERAL
    A. DO NOT PLACE PIPES OR DUCTS IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
    B. REFER TO ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL MOLDS, GROOVES, ORNAMENTS, CLIPS AND GROUNDS TO BE CAST IN CONCRETE.
    C. COORDINATE WITH ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
2. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO FACE OF MAIN BARS AND DENOTE CLEAR COVERAGE.
3. CONCRETE MIX DESIGN: PREPARED BY INDEPENDENT LABORATORY AND APPROVED BY ENGINEER.

CONCRETE REINFORCING

1. PROVIDE LAP SPLICE UNO. SEE TABLE "CONCRETE REINFORCEMENT LAP SPLICES".
2. LAP SPLICE WELDED WIRE FABRIC TWO SQUARES MIN. EACH DIRECTION.
3. SECURELY POSITION REINFORCING DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE BEFORE PLACING CONCRETE (WET SETTING IS PROHIBITED).

CONCRETE REINFORCEMENT LAP SPLICES

f'c = 4,000 PSI

LOCATION	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP	24	32	40	48	70	80	91	102	113
OTHER	20	25	31	38	55	62	70	79	87

1. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE BASED ON ACI 318-11, SECTIONS 12.2.2 AND 12.15 RESPECTIVELY. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
2. LAP SPLICE LENGTHS SHOWN ARE FOR CLASS B AND CASE 1.
3. TOP REINFORCEMENT IS HORIZONTAL REINFORCEMENT THAT HAS MORE THAN TWELVE INCHES OF FRESH CONCRETE CAST BELOW IT. THIS INCLUDES HORIZONTAL REINFORCEMENT IN WALLS. ALL VERTICAL BARS ARE CONSIDERED AS "OTHER".
4. FOR LIGHTWEIGHT CONCRETE AGGREGATE CONCRETE, MULTIPLY TABULATED VALUES BY 1.3.
5. FOR EPOXY-COATED BARS, MULTIPLY TABULATED VALUES BY:
    A. TOP BARS: 1.31.
    B. OTHER BARS: 1.5.
6. FOR BARS WITH COVER OF LESS THAN 1 BAR DIAMETER OR WITH CLEAR SPACING OF LESS THAN 2 BAR DIAMETERS, MULTIPLY TABULATED VALUES BY 2.0.

MASONRY REINFORCEMENT LAP SPLICES

f'm = 2,000 PSI

	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH, IN.	12	15	23	43	58	88	111	141	174

1. LAP SPLICE LENGTHS ARE BASED ON TMS 402-16 SECTION 6.1.6.1.1.
2. TABULATED VALUES ARE BASED ON MINIMUM MASONRY COVER OF 3 INCHES.
3. FOR EPOXY-COATED BARS, MULTIPLY TABULATED VALUES BY 1.5.

SAFETY

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL STATE OF UTAH SAFETY STANDARDS AND OSHA REQUIREMENTS AS THEY APPLY TO THE PROJECT.
2. ENGINEER DOES NOT ACCEPT ANY RESPONSIBILITY FOR CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.

WOOD

1. STRUCTURAL WOOD SPECIFICATIONS:
    A. DOUGLAS FIR- COAST REGION: WEST COAST LUMBER INSPECTION BUREAU GRADING RULES #16.
    B. REDWOOD: CALIFORNIA REDWOOD ASSOC. GRADING RULES, 1987 EDITION.
    C. SHEATHING: U.S. PRODUCT STANDARD PS 1-83 FOR SOFT PLYWOOD.
2. MINIMUM GRADES:
    A. SOLID-SAWN BEAMS: DF#2.
    B. SOLID-SAWN JOISTS: DF#2.
    C. ALL MEMBERS: FREE OF HEART CENTER.
    D. ROOF SHEATHING: 5/8" APA RATED SHEATHING, EXPOSURE 1.
3. PROVIDE SOLID BLOCKING BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.
4. CUTTING OF WOOD JOISTS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-FIFTH THE JOIST DEPTH FROM THE TOP, AND LOCATED NOT FARTHER FROM THE END THAN THREE TIMES THE JOIST DEPTH. SEE TYPICAL DETAIL.
5. BORE HOLES FOR BOLTS IN WOOD WITH BIT OF SAME NOMINAL DIAMETER AS BOLT + 1/16".
6. BORE HOLES FOR LAG SCREWS FIRST TO SAME NOMINAL DIAMETER AND DEPTH AS SHANK. BORE REMAINDER OF HOLE NO LARGER THAN ROOT OF THREAD.
7. SCREW, DO NOT DRIVE, LAG SCREWS AND WOOD SCREWS INTO PLACE.
8. PROVIDE METAL WASHERS UNDER HEADS OR END NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO INSERTED EXPANDING FASTENERS - RED HEAD, ETC.

BOLT DIAM	MI WASHER	STEEL WASHER
1/2" DIAM	2-1/2" DIAM x 1/4"	2" x 2" x 1/4"
5/8" DIAM	2-3/4" DIAM x 5/16"	2-1/2" x 2-1/2" X 1/4"
3/4" DIAM	3" DIAM x 7/16"	3" x 3" x5/16"
7/8" DIAM	3-1/2" DIAM x 7/16"	3-1/2" x 3-1/2" x 3/8"
1" DIAM	4" DIAM x 1/2"	3-3/4" x 3-3/4" x 3/8"
1-1/4" DIAM	5" DIAM x 5/8"	5" x 5" x 1/2"

CARRIAGE BOLT DIAM	CUT WROUGHT STEEL WASHER
1/2" DIAM	3/4" (2" OD)
5/8" DIAM	7/8" (2-1/4" (OD)
3/4" DIAM	1" (2-1/2" OD)
7/8" DIAM	1-3/8" (3" OD)
1" DIAM	1-1/2" (3-1/4" OD)

11. ALL BOLT AND LAG SCREWS SHALL TIGHTENED AT TIME OF INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
12. LAY ALL STRUCTURAL PLYWOOD ON ROOF WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
13. BLOCK STRUCTURAL PLYWOOD JOINTS WITH 3X4 FLAT BLOCKING WHERE NOTED ON FRAMING PLANS AND WITH BLOCKING SAME SIZE AS STUDS AT WALLS.
14. CONSTRUCTION ADHESIVE: ASTM D3498 OR AFG-01.
15. CROSS BRIDGING BETWEEN JOISTS OR RAFTERS: SEE FRAMING PLANS AND TYPICAL DETAILS.
16. PROVIDE BLOCKING AT ALL CEILING LEVELS.
17. WHERE FRAMING HANGERS ARE REQUIRED AND ARE NOT SHOWN ON SECTIONS, DETAILS, OR PLANS, USE THE FOLLOWING SIMPSON HANGERS. SLOPE, SKEW, TURN IN FLANGES AND PROVIDE TOP FLANGE HANGERS AS REQUIRED.
    A. 2X & 3X MEMBERS: U HANGERS
    B. 4X MEMBERS: HU HANGERS
    C. 6X MEMBERS: HUTF HANGERS
    D. TJI MEMBERS: IUS HANGERS
    E. GLU LAM MEMBERS: LEG HANGERS
18. METAL HARDWARE: MANUFACTURED BY SIMPSON STRONG TIE COMPANY. INSTALL PER SIMPSON SPECIFICATIONS.
19. WOOD SYMBOLS:

☒ CONTINUOUS

⧄ BLOCKING

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NO.	DATE	DESCRIPTION

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL NOTES

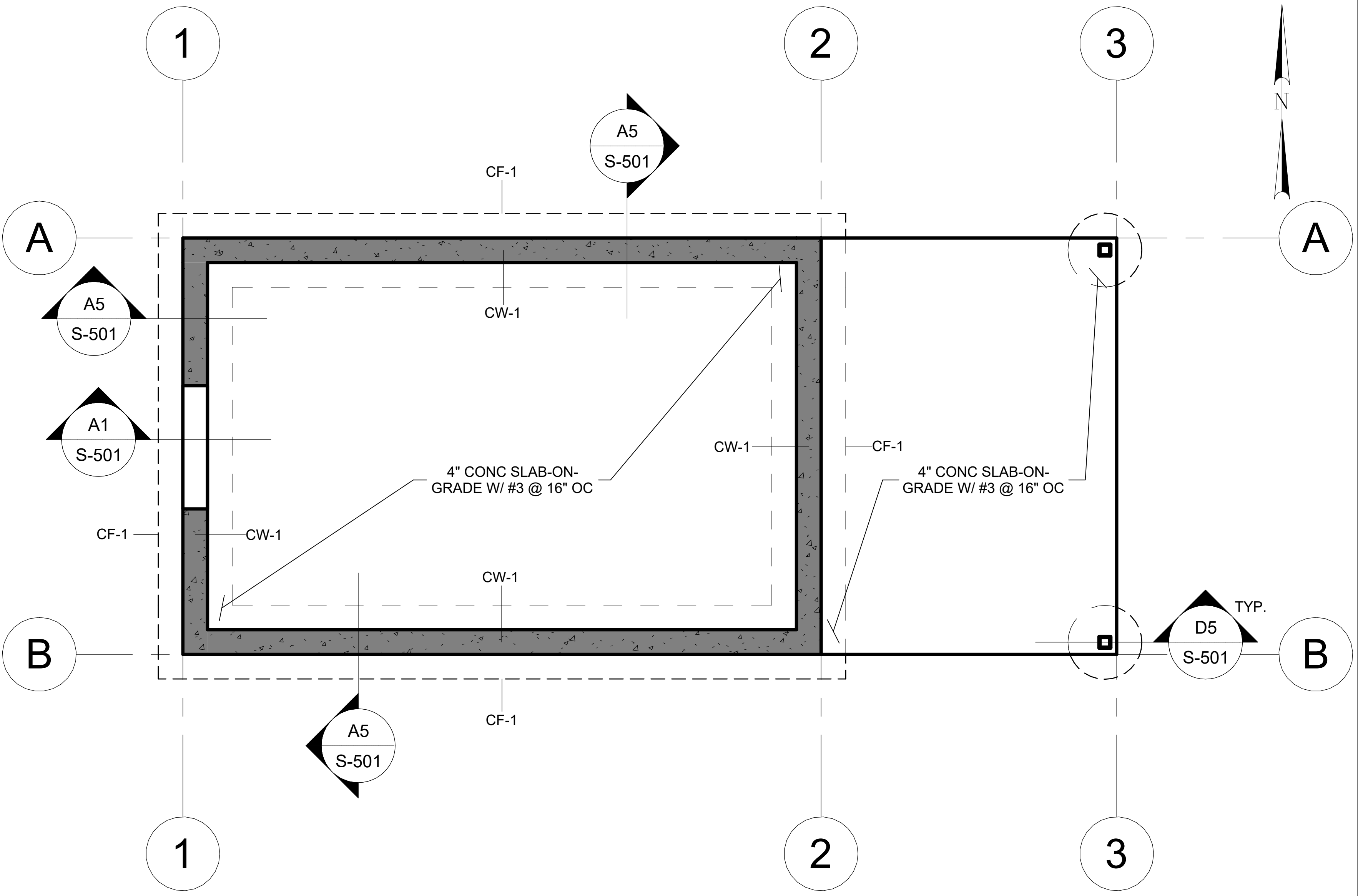
2202-061
PROJECT NUMBER
S-002
SHEET NO.

CONCRETE WALL SCHEDULE

MARK	THICKNESS	HORIZ REINF	VERT REINF	TYPE	REMARKS
CW-1	8"	(3) #4 BARS	#4 @ 16" OC	A	

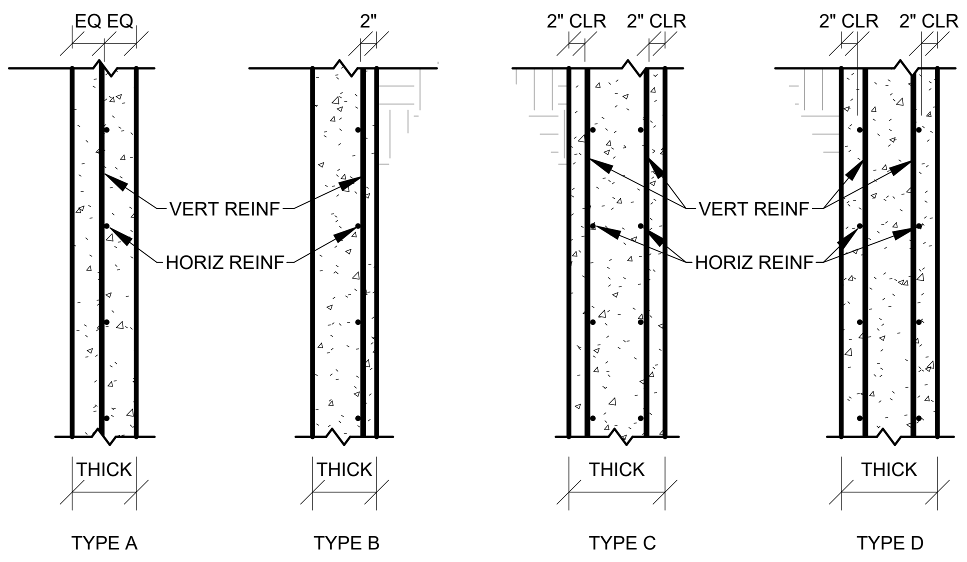
CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK	LONG REINF	PERP REINF	REMARKS
CF-1	2' - 0"	CONT.	1' - 0"	(3) #4 BARS	#4 @ 16" OC	



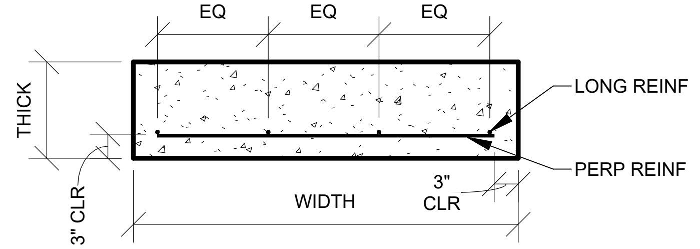
A1 FOUNDATION PLAN

SCALE 1/4" = 1'-0"



NOTES:
E.F. = EACH FACE
O.F. = OUTSIDE FACE (AGAINST SOIL)
I.F. = INSIDE FACE

CONCRETE WALLS (SECTION VIEW)



CONCRETE FOOTING

FOUNDATION NOTES

1. REFER TO TYPICAL NOTES, DETAILS, & SCHEDULES.
2. SEE CIVIL & ARCH PLANS FOR EXTERIOR CONCRETE WORK AND SITE GRADING.
3. SEE ARCHITECTURAL DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, DIMENSIONS, AND ELEVATIONS.
4. WHERE SLAB DEPRESSION IS INDICATED FOR TILE OR SIMILAR FLOORING, RECESS FLOOR 2".
5. PLACE STRUCTURAL FILL BENEATH FOOTINGS & BUILDING SLABS PER TYPICAL DETAIL "STRUCTURAL FILL PLACEMENT" AND PER EARTHWORK NOTES.
6. PROVIDE TEMPORARY SHORING UNTIL MAIN FLOOR FRAMING IS COMPLETE FOR ANY WALL OVER 6' TALL THAT RETAINS SOIL TO RESIST INDUCED LATERAL LOADS.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
STATE OF UTAH

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SPANISH FORK CITY
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FOUNDATION PLAN

2202-061
PROJECT NUMBER

S-101
SHEET NO.

MASONRY WALL SCHEDULE

MARK	THICK	HORIZ REINF	VERT REINF	GROUT
MW-1	8"	#4 @ 32" OC	#4 @ 48" OC	SOLID

SEE D5/S-701 FOR MASONRY WALL DETAIL.

MASONRY LINTEL SCHEDULE

MARK	WIDTH	HEIGHT	HORIZ REINF	STIRRUPS
ML-1	3' - 4"	8"	(1) #5 BAR	N/A

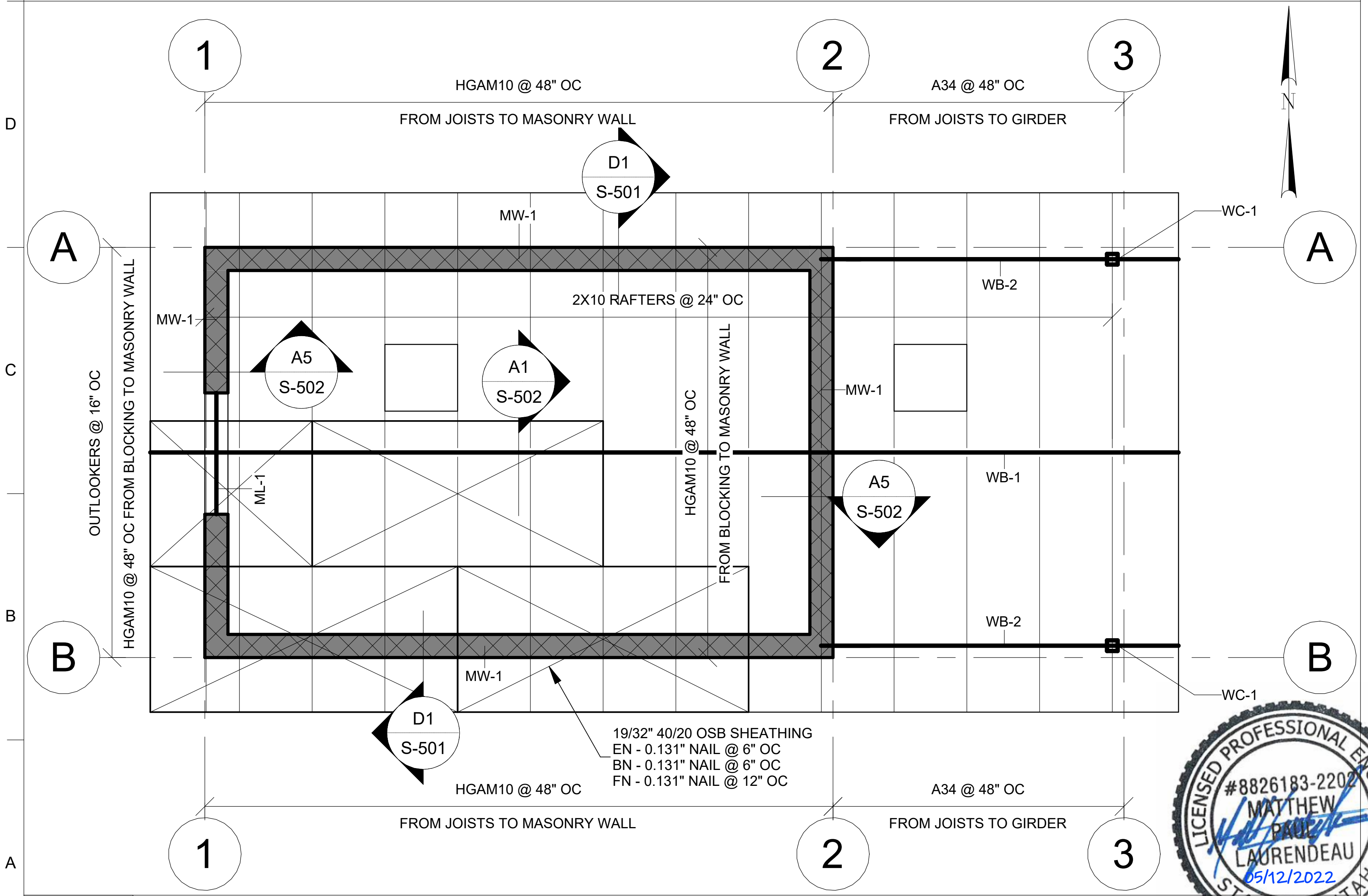
SEE A5/S-701 FOR MASONRY LINTEL DETAIL.

WOOD COLUMN SCHEDULE

MARK	MEMBER	SPECIES	COLUMN CAP	COLUMN BASE	REMARKS
WC-1	4x4	DF#2	SIMPSON CC44	(2) SIMPSON CB44	

WOOD BEAM SCHEDULE

MARK	SIZE	WOOD SPECIES	END SUPPORT(S)		REMARKS
			END 1	END 2	
WB-1	(2) 1 3/4x14	LVL	HGAM10 (TO MASONRY)	HGAM10 (TO MASONRY)	MUST BE CONTINUOUS
WB-2	(2) 2x10	DF-L #2	HGAM10 (TO MASONRY)	CC44 (TO COLUMN)	



A1	ROOF FRAMING PLAN
SCALE	1/4" = 1'-0"

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PRUE LAURENDEAU
05/12/2022
STATE OF UTAH

MASONRY WALL NOTES

1. PROVIDE (1) #5 VERTICAL REINFORCING BAR AT ALL CORNERS, ENDS OF WALLS AND JAMBS UNLESS NOTED OTHERWISE.
2. HORIZONTAL REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS AND AT INTERSECTING WALLS. PROVIDE CORNER BARS WITH THE REQUIRED LAP SPLICE LENGTH.
3. TERMINATE ALL HORIZONTAL REINFORCING BARS AT ENDS OF WALLS AND EDGES OF OPENINGS WITH A STANDARD HOOK AROUND VERTICAL REINFORCING BARS.
4. SEE PLANS, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS.
5. GROUT SOLID ALL CELLS BELOW GRADE, CELLS CONTAINING EMBEDS (HSA'S, DBA'S, ANCHOR BOLTS, ETC.), AND CELLS CONTAINING REINFORCING. CONSOLIDATE GROUT AS PER THE GENERAL STRUCTURAL NOTES.
6. HORIZONTAL WALL REINFORCING SHALL BE PLACED INSIDE THE VERTICALS OF MASONRY COLUMNS.
7. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.

MASONRY LINTEL NOTES

1. PLACE FIRST SET OF HORIZONTAL BARS IN BOTTOM COURSE.
2. PLACE SECOND SET OF HORIZONTAL BARS (IF REQ'D) IN TOP COURSE.
3. PLACE THIRD AND SUBSEQUENT SETS OF HORIZONTAL BARS (IF REQ'D) EQUALLY SPACED VERTICALLY IN LINTEL. WHEN AN EVEN COURSE IS NOT POSSIBLE, SHIFT BARS DOWN TO NEXT COURSE.
4. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS BEYOND EDGE OF OPENING. IF HORIZONTAL REINFORCING CANNOT BE EXTENDED 48 BAR DIAMETERS BEYOND EDGE OF OPENING, PROVIDE 90 DEGREE STANDARD HOOK.
5. GROUT MASONRY LINTELS MONOLITHICALLY WITH SUPPORT WALL OR COLUMN AT EACH END.
6. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY.
7. SPLICE BOTTOM BARS OVER SUPPORTS ONLY.
8. CONTINUE HORIZONTAL WALL REINFORCING THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN SAME LOCATION, REPLACE SMALLER BARS WITH LARGER BARS.
9. PROVIDE VERTICAL WALL REINF IN LINTELS OVER 4'-0" DEEP WITHOUT STIRRUPS.

FRAMING NOTES

1. REFER TO TYPICAL NOTES, DETAILS, & SCHEDULES.
2. SEE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT SHOWN.
3. DIMENSIONS FOR SHEARWALLS ARE TO EDGE OF SHEARWALL, NOT LOCATION OF HOLDOWN.
4. INSTALL ALL HANGERS, CLIPS, ANCHORS, AND OTHER HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
5. SHOP-FABRICATED WOOD TRUSSES SHALL BE DESIGNED FOR THE UNIFORM LOADS SPECIFIED IN THE SHOP-FABRICATED WOOD TRUSSES NOTES AND ANY CONCENTRATED GRAVITY AND LATERAL LOADS INDICATED ON THE STRUCTURAL FRAMING PLANS. NOTATION AND SYMBOLS FOR LOADS SHOWN ARE PER ASCE 7.
6. ALL TRUSSES SHALL BE DESIGNED TO TRANSFER AN OUT-OF-PLANE SERVICE SEISMIC OR WIND LOAD OF 0.7 KIPS (Fp) FROM THE HEEL TO THE DIAPHRAGM AT BEARING LOCATIONS.
7. FORM UP & FILL ALL BEAM & JOIST POCKETS W/ NON-SHRINK GROUT PRIOR TO PLACING FINISHES, UNO.
8. COORDINATE MECHANICAL UNIT WEIGHTS AND LOCATIONS WITH JOIST MANUFACTURER
9. PROVIDE BRIDGING AS REQ'D TO PREVENT CHORD BUCKLING.
10. PROVIDE TRUSS BLOCKING AT ALL BEARING WALLS WHERE TRUSS HEEL HEIGHT PROHIBITS USE OF 2X BLOCKING.
11. TRUSS BLOCKING SHALL BE ABLE TO RESIST A LATERAL LOAD (WIND OR SEISMIC) OF 250 PLF.
12. PROVIDE ATTIC VENTILATION AT TRUSS HEEL TO WALL CONNECTIONS BY OMITTING BLOCKING EVERY FOURTH TRUSS BAY. MAINTAIN A MINIMUM OF 3 CONSECUTIVE BAYS W/ BLOCKING.

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NO.	DATE	DESCRIPTION

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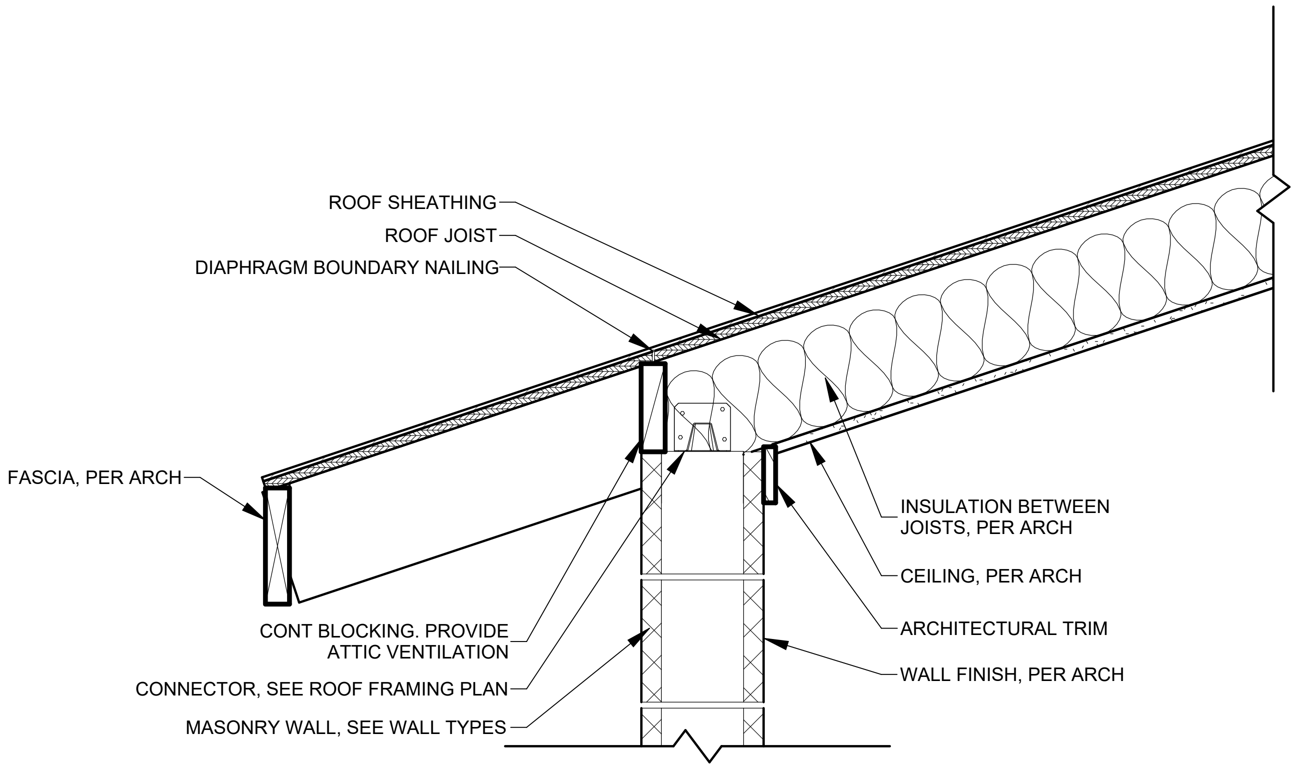
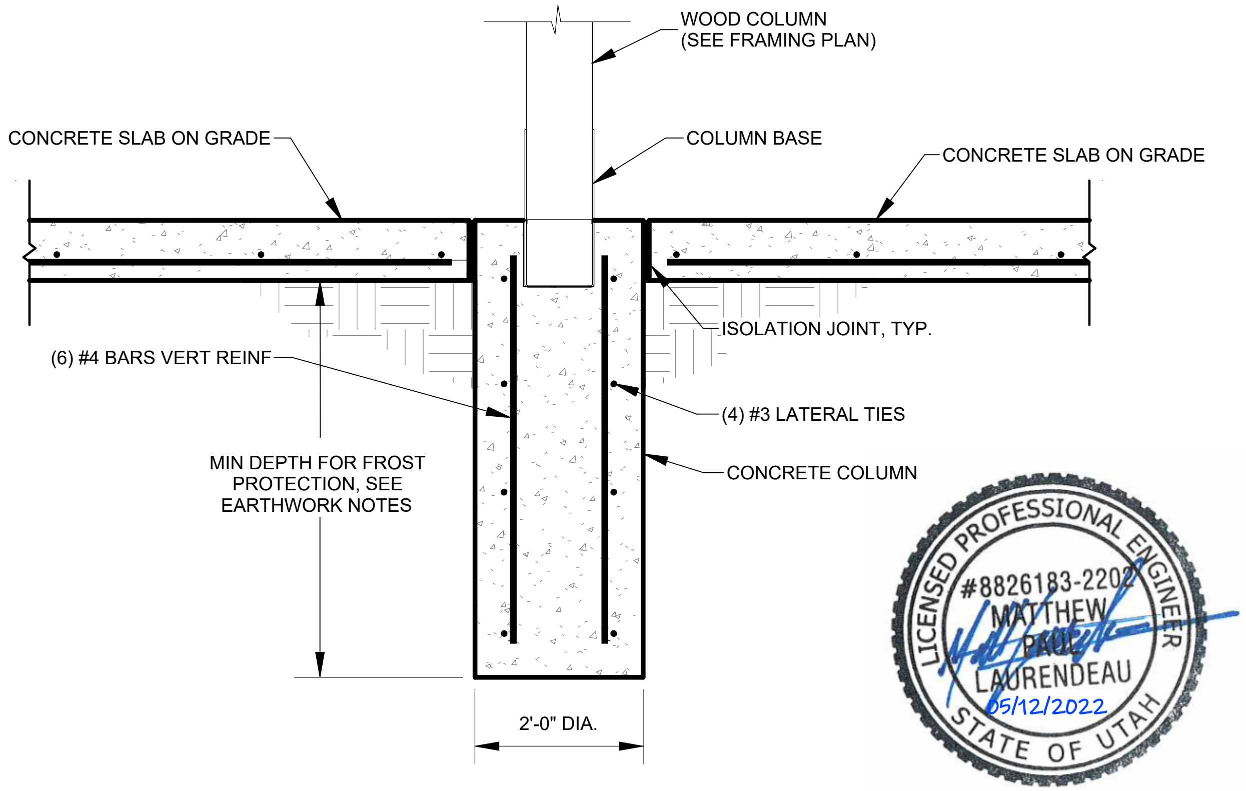
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
ROOF FRAMING PLAN

2202-061
PROJECT NUMBER

S-102
SHEET NO.


ROOF SHEATHING
ROOF JOIST
DIAPHRAGM BOUNDARY NAILING
FASCIA, PER ARCH
INSULATION BETWEEN JOISTS, PER ARCH
CEILING, PER ARCH
ARCHITECTURAL TRIM
WALL FINISH, PER ARCH
CONT BLOCKING. PROVIDE ATTIC VENTILATION
CONNECTOR, SEE ROOF FRAMING PLAN
MASONRY WALL, SEE WALL TYPES

D1	WOOD RAFTER ON MASONRY WALL
SCALE	NTS



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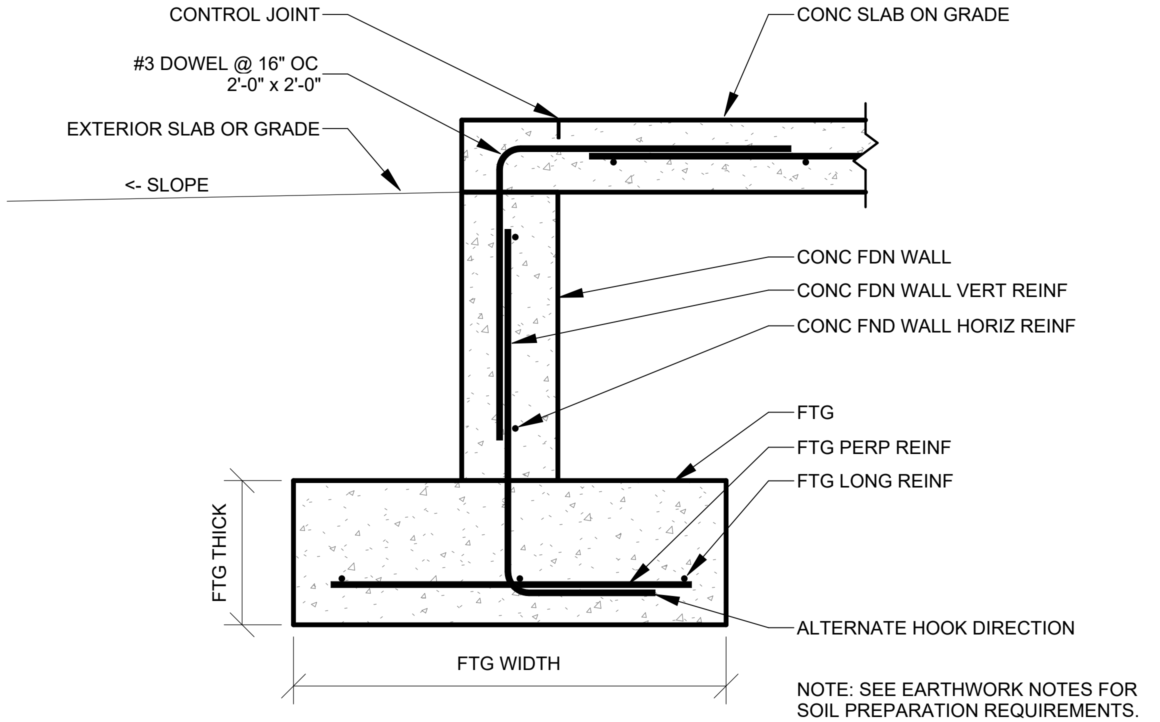
D5	WOOD COLUMN ON SONOTUBE PIER
SCALE	NTS

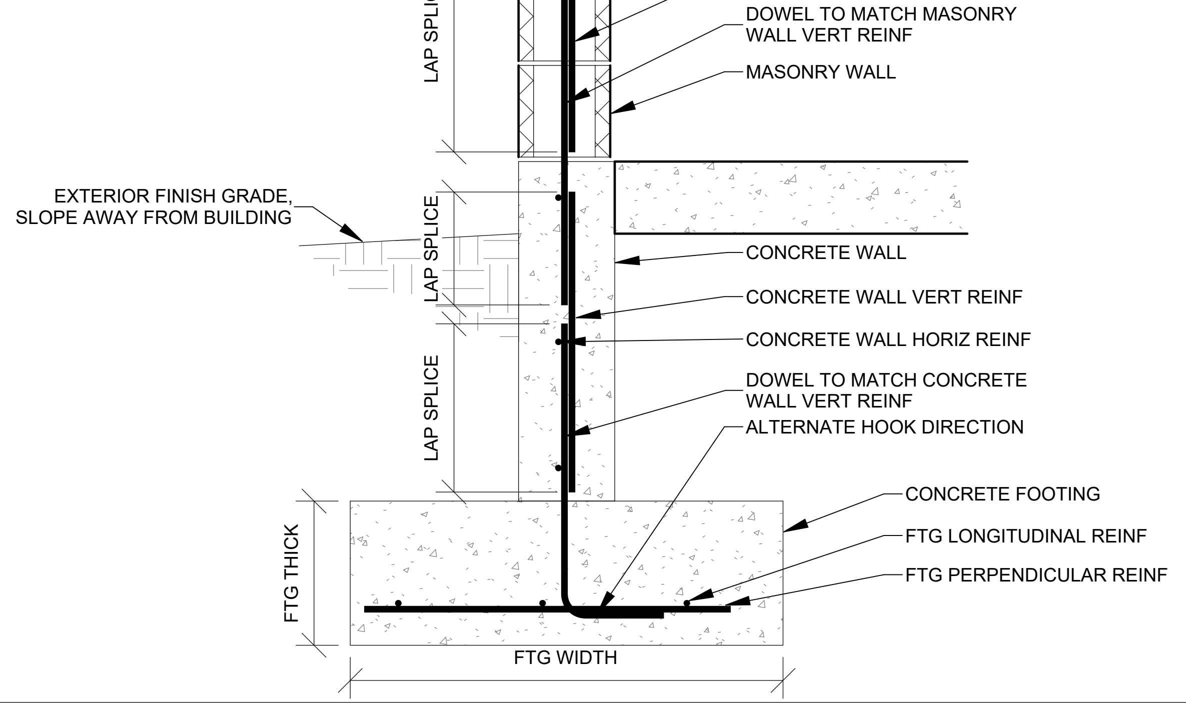


NOTE: SEE EARTHWORK NOTES FOR SOIL PREPARATION REQUIREMENTS.

A1	CONCRETE SLAB OVER FOUNDATION WALL @ DOOR OPENINGS
SCALE	NTS

NOTES:

1. SEE EARTHWORK NOTES FOR SOIL PREPARATION REQUIREMENTS.
2. CONTRACTOR MAY CHOOSE TO RUN BARS FULL LENGTH AND OMIT CORRESPONDING LAP SPLICES IF DESIRED.



A5	MASONRY WALL ON CONCRETE FOUNDATION WALL
SCALE	NTS

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

S-501
SHEET NO.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW
PAUL
LAURENDEAU
05/12/2022
STATE OF UTAH

SUBMITTAL		
NO.	DATE	DESCRIPTION

REVISIONS

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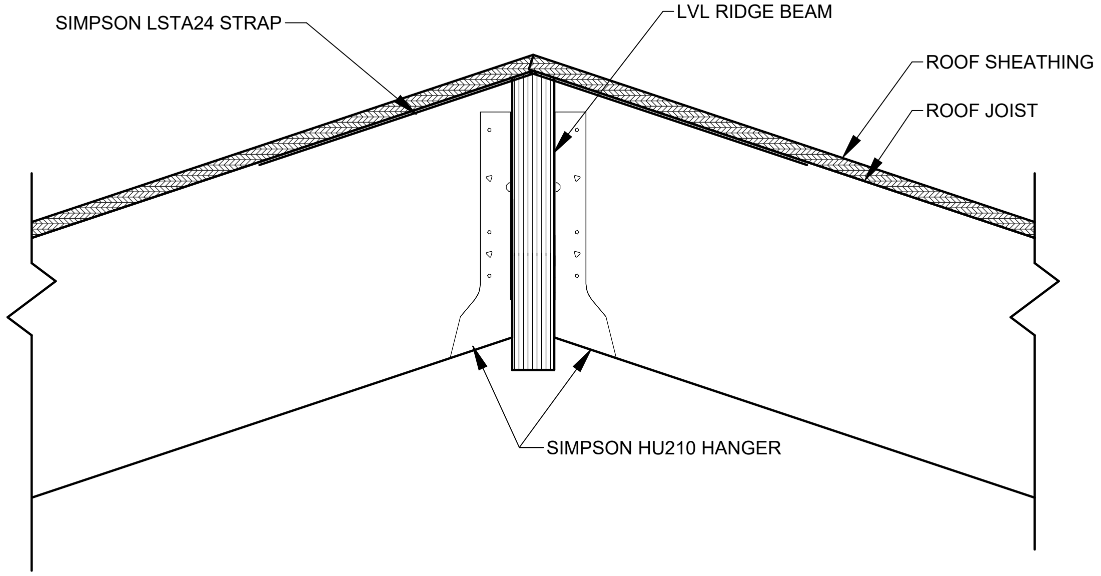
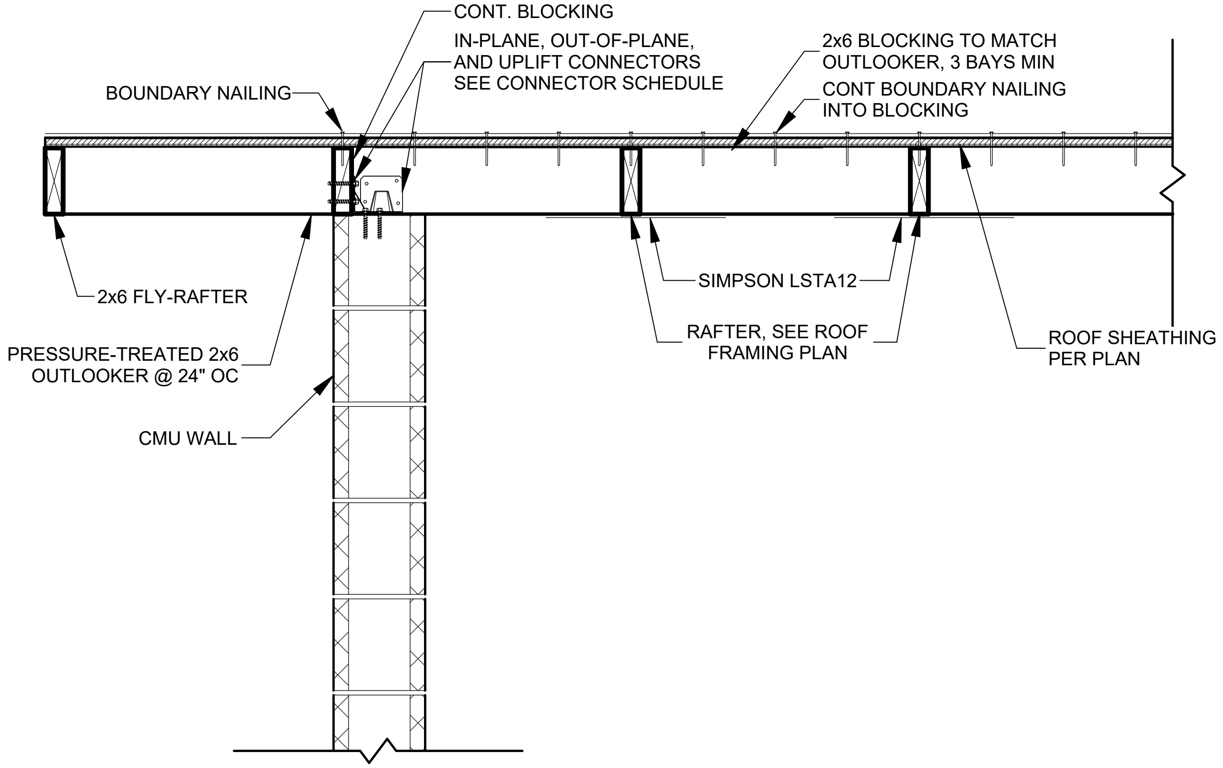
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL DETAILS

2202-061
PROJECT NUMBER
S-502
SHEET NO.



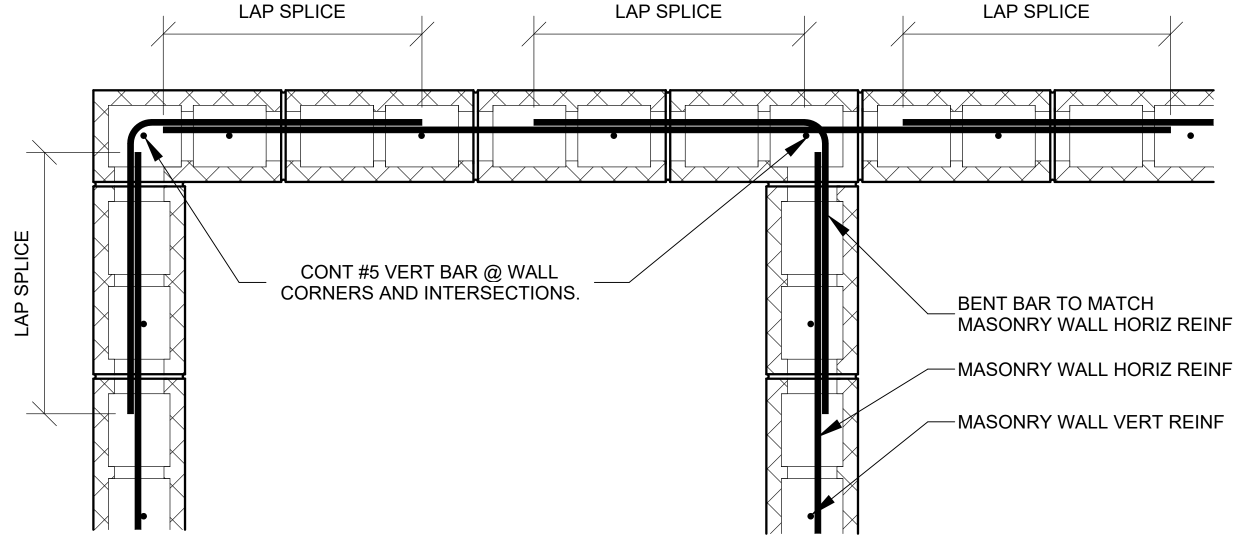
A1 DIMENSIONAL LUMBER ROOF JOIST TO RIDGE BEAM

SCALE NTS


CONT. BLOCKING
IN-PLANE, OUT-OF-PLANE, AND UPLIFT CONNECTORS SEE CONNECTOR SCHEDULE
2x6 BLOCKING TO MATCH OUTLOOKER, 3 BAYS MIN
CONT BOUNDARY NAILING INTO BLOCKING
BOUNDARY NAILING
2x6 FLY-RAFTER
PRESSURE-TREATED 2x6 OUTLOOKER @ 24" OC
CMU WALL
SIMPSON LSTA12
RAFTER, SEE ROOF FRAMING PLAN
ROOF SHEATHING PER PLAN

A5 OUTLOOKERS AT GABLE END OF MASONRY WALL

SCALE NTS

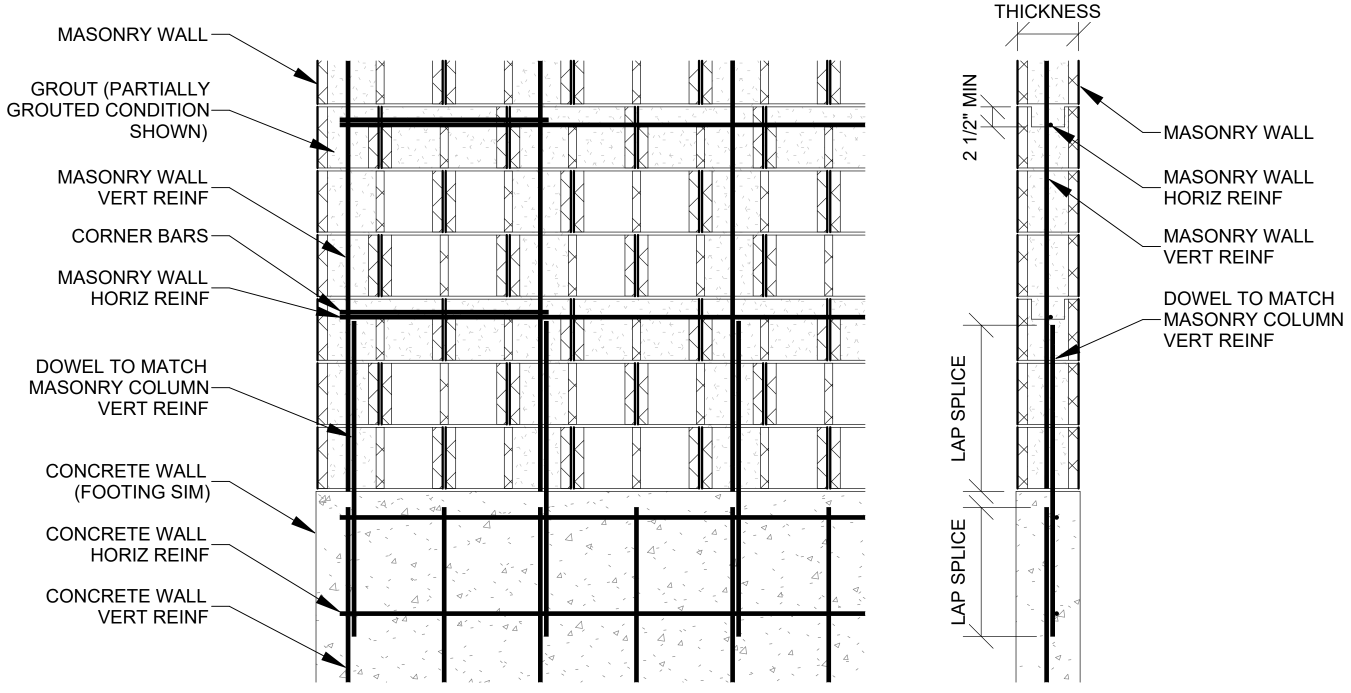

LAP SPLICE
LAP SPLICE
LAP SPLICE
LAP SPLICE
CONT #5 VERT BAR @ WALL CORNERS AND INTERSECTIONS.
BENT BAR TO MATCH MASONRY WALL HORIZ REINF
MASONRY WALL HORIZ REINF
MASONRY WALL VERT REINF

NOTES:

1. SEE MASONRY WALL SCHEDULE FOR REINF SIZE AND SPACING.
2. SEE MASONRY NOTES FOR LAP SPLICE LENGTHS.
3. SEE ARCHITECTURAL SHEETS FOR MASONRY UNIT SIZES.

D1 MASONRY WALL REINFORCEMENT LAYOUT

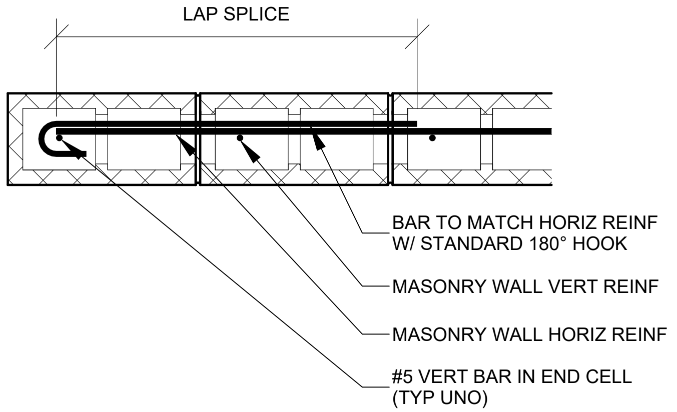
SCALE NTS



FRONT VIEW SIDE VIEW

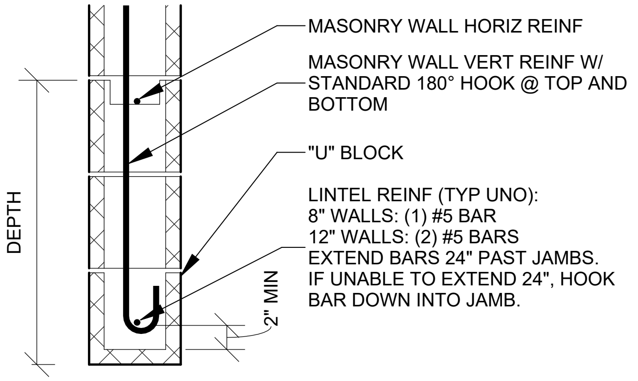
D5 MASONRY WALL

SCALE NTS


LAP SPLICE
BAR TO MATCH HORIZ REINF W/ STANDARD 180° HOOK
MASONRY WALL VERT REINF
MASONRY WALL HORIZ REINF
#5 VERT BAR IN END CELL (TYP UNO)

A1 MASONRY JAMB

SCALE NTS


MASONRY WALL HORIZ REINF
MASONRY WALL VERT REINF W/ STANDARD 180° HOOK @ TOP AND BOTTOM
"U" BLOCK
DEPTH
2" MIN

LINTEL REINF (TYP UNO):
8" WALLS: (1) #5 BAR
12" WALLS: (2) #5 BARS
EXTEND BARS 24" PAST JAMBS.
IF UNABLE TO EXTEND 24", HOOK BAR DOWN INTO JAMB.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
STATE OF UTAH

A5 MASONRY LINTEL

SCALE NTS

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

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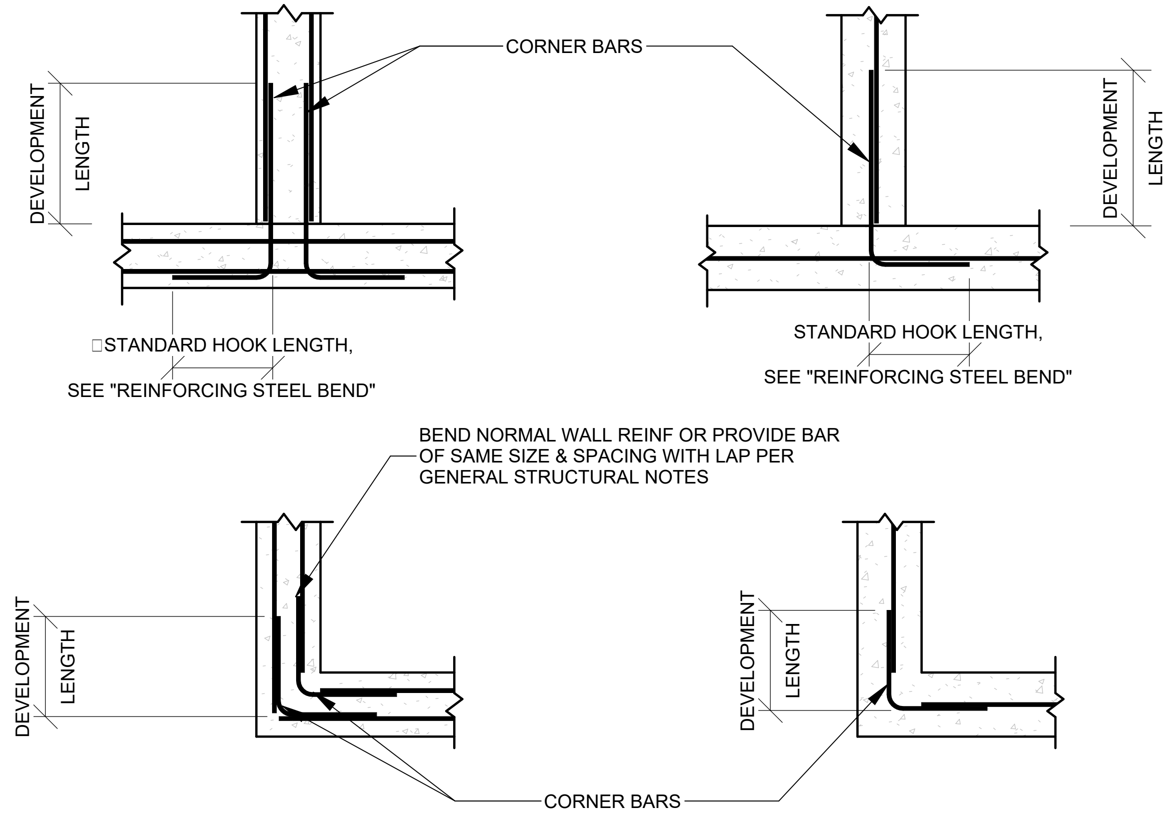
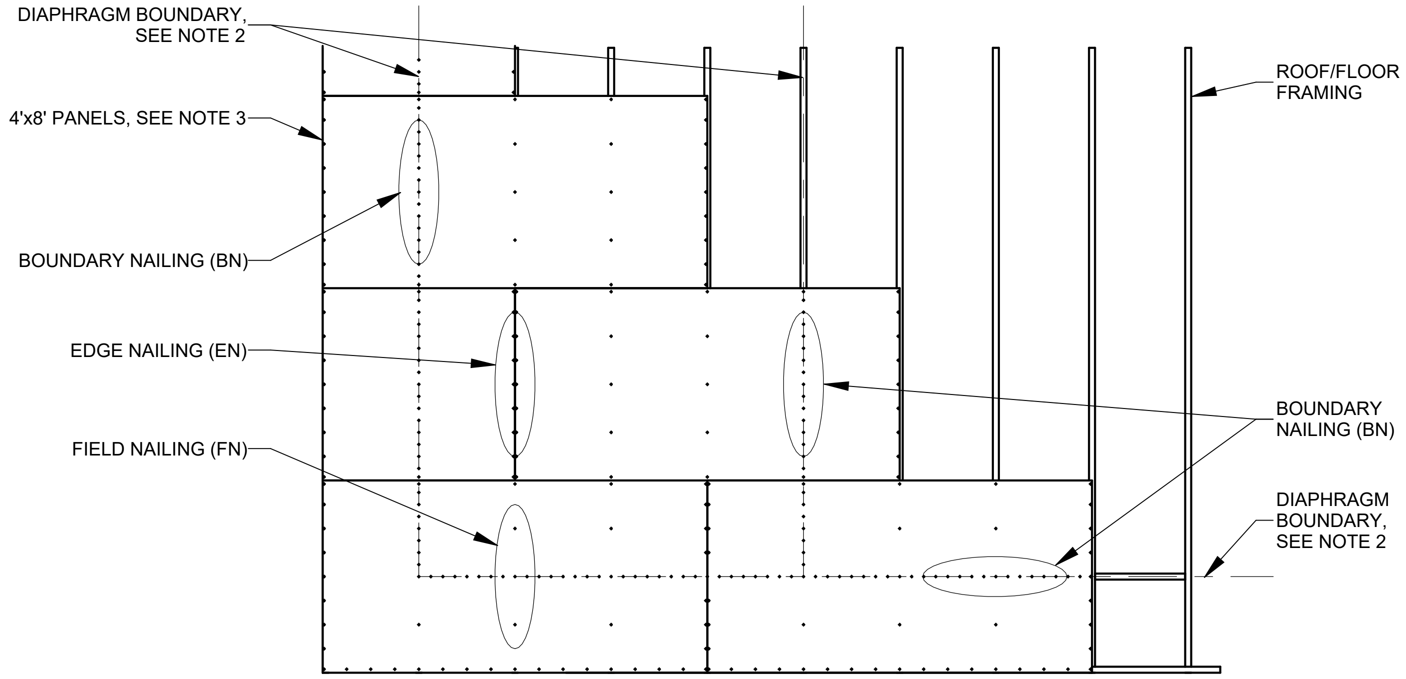
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
TYPICAL STRUCTURAL DETAILS

2202-061
PROJECT NUMBER
S-701
SHEET NO.


CORNER BARS
DEVELOPMENT LENGTH
DEVELOPMENT LENGTH
STANDARD HOOK LENGTH,
SEE "REINFORCING STEEL BEND"
STANDARD HOOK LENGTH,
SEE "REINFORCING STEEL BEND"
BEND NORMAL WALL REINF OR PROVIDE BAR OF SAME SIZE & SPACING WITH LAP PER GENERAL STRUCTURAL NOTES
DEVELOPMENT LENGTH
DEVELOPMENT LENGTH
CORNER BARS

D1 — REINFORCEMENT AT TYPICAL WALL CORNERS & INTERSECTION

SCALE NTS

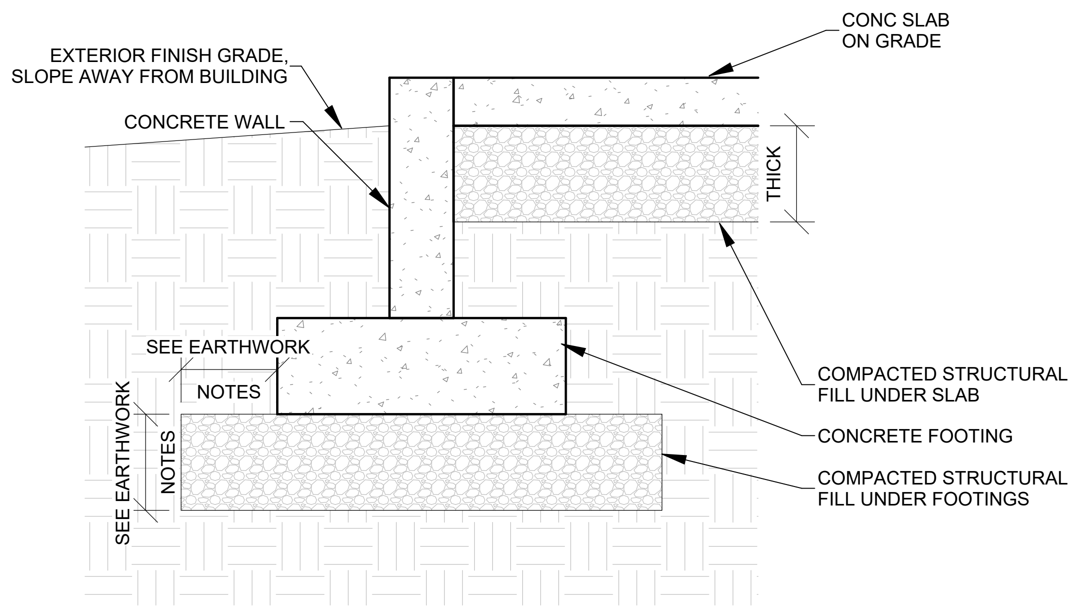


NOTE:

1. SEE STRUCTURAL FRAMING PLANS FOR SHEATHING TYPE AND THICKNESS, BOUNDARY NAILING, EDGE NAILING, AND FIELD NAILING.
2. BOUNDARIES EXIST ALONG ALL SHEAR WALLS AND ALONG ALL DRAG ELEMENTS.
3. SHEATHING ORIENTATION: LONG DIRECTION (STRONG AXIS) PERPENDICULAR TO FRAMING & SHORT DIRECTION (WEAK AXIS) PARALLEL TO FRAMING.

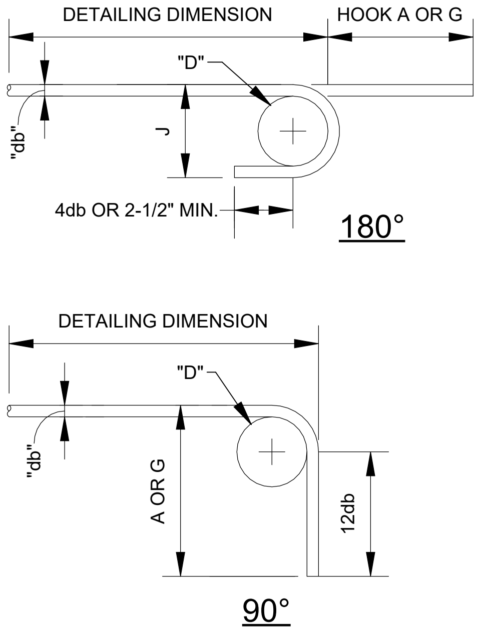
D5 — DIAPHRAGM NAILING - UNBLOCKED

SCALE NTS


CONC SLAB ON GRADE
EXTERIOR FINISH GRADE, SLOPE AWAY FROM BUILDING
CONCRETE WALL
THICK
SEE EARTHWORK NOTES
SEE EARTHWORK NOTES
COMPACTED STRUCTURAL FILL UNDER SLAB
CONCRETE FOOTING
COMPACTED STRUCTURAL FILL UNDER FOOTINGS

A1 — STRUCTURAL FILL PLACEMENT

SCALE NTS



END HOOKS

BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	1'-0"
#7	5-1/4"	10"	7"	1'-2"
#8	6	11"	8"	1'-4"
#9	9-1/2"	1'-3"	11-3/4"	1'-7"
#10	10-3/4"	1'-5"	1' 1-1/4"	1'-10"
#11	12"	1'-7"	1' 2-3/4"	2'-0"
#14	18-1/4"	2'-3"	1' 9-3/4"	2'-7"
#18	24"	3'-0"	2' 4-1/2"	3'-5"

D = FINISHED INSIDE BEND DIA.
db = NOMINAL BAR DIAMETER
Min. D = 6db FOR #3 THROUGH #8
= 8db FOR #9, #10, AND # 11
= 10db FOR #14, AND #18

#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022

A5 — REINFORCING STEEL BEND

SCALE NTS

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
TYPICAL STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

S-702
SHEET NO.

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

1. SUBMITTALS
   - A. PRODUCT DATA
   - B. DESIGN DATA
   - C. CONCRETE PLACEMENT PLAN
     - a. SUBMIT MINIMUM 48 HOURS PRIOR TO EACH PLACEMENT.
   - D. BATCH TICKET
   - E. WARRANTY
2. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO ACI 318.
   - B. COMPLY WITH ACI 305.1 WHEN PLACING CONCRETE DURING HOT WEATHER.
   - C. COMPLY WITH ACI 306.1 WHEN PLACING CONCRETE DURING COLD WEATHER.
   - D. ACQUIRE CEMENT AND AGGREGATE FROM ONE SOURCE FOR WORK.
3. WARRANTY
   - A. PROVIDE WRITTEN GUARANTEE TO PROMPTLY REMOVE AND/OR REPAIR DEFECTIVE CONCRETE FOR TWO YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION.
4. MATERIALS
   - A. CONCRETE:
     - a. CEMENT:
       - PORTLAND CEMENT COMPLYING WITH ASTM C150.
       - USE TYPE II - MODERATE SULFATE RESISTANT OR TYPE II-V BLEND FOR CLASS A THROUGH C CONCRETE.
       - USE TYPE V - HIGH SULFATE RESISTANT FOR CLASS S2 AND S3 CONCRETE. MEET OR EXCEED SULFATE EXPOSURE CLASS S2 SEVERE IN ACCORDANCE WITH TABLES 4.2.1 AND 4.3.1 OF ACI 318.
     - b. COARSE AGGREGATE:
       - COMPLY WITH ASTM C33.
       - MAXIMUM SIZE: ACCORDING TO ACI 318.
         - 1. NOT LARGER THAN 1/5 NARROWEST DIMENSION BETWEEN SIDES OF FORM.
         - 2. NOT LARGER THAN 1/3 DEPTH OF SLAB.
         - 3. NOT LARGER THAN ¾ MINIMUM CLEAR DISTANCE BETWEEN REINFORCING BAR OR BETWEEN REINFORCING BARS AND FORMS, WHICHEVER IS SMALLEST.
     - c. FINE AGGREGATE:
       - COMPLY WITH ASTM C33.
       - WATER:
         - 1. COMPLY WITH ACI 318.
         - 2. POTABLE.
   - B. ADMIXTURES:
     - a. DO NOT USE CALCIUM CHLORIDE OR ADMIXTURES THAT CONTAIN CALCIUM CHLORIDE.
     - b. AIR ENTRAINMENT: COMPLY WITH ASTM C260. USE PRE-MEASURED ADMIXTURES FOR AIR ENTRAINMENT ADDED ON SITE.
     - c. CHEMICAL: SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
       - COMPLY WITH ASTM C494.
       - TYPE A - WATER REDUCING. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 5 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - TYPE D - WATER REDUCING AND RETARDING. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 5 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - TYPE F - WATER REDUCING, HIGH RANGE. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 9 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
       - SET RETARDING ADMIXTURES MAY BE USED WHEN HAUL TIME WILL BE EXCEEDED. ESTABLISH EFFECTIVE LIFE OF CONCRETE MIX BY TRIAL BATCH.
     - d. FLY ASH: COMPLY WITH ASTM C618, CLASS F, AND NOT EXCEED 3 PERCENT LOSS ON IGNITION AND DO NOT EXCEED 15 PERCENT CAO CONTENT. MAY BE USED TO REPLACE CEMENT. LIMIT CONTENT OF FLY ASH TO 30 PERCENT OF REQUIRED CEMENT CONTENT BY WEIGHT. SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
     - e. PLASTICIZING: COMPLY WITH ASTM C1017 AND SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
   - C. FIBROUS REINFORCING: WHERE INDICATED ON DRAWINGS. ASTM C1116, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED, MD GRADED, FIBERS CONTAINING NO REPROCESSED OLEFIN MATERIALS. MINIMUM APPLICATION RATE SHALL BE 4.0 POUNDS PER CUBIC YARD UNLESS NOTED OTHERWISE. MANUFACTURED BY FIBERMESH OR EQUAL.
5. CONCRETE MIX
   - A. LEAN CONCRETE FILL
     - a. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c): 1,500 PSI.
     - b. CEMENT: ASTM C-150, TYPE II.
   - B. STRUCTURAL CONCRETE
     - a. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c):
       - FOOTINGS: 4,000 PSI.
       - WALLS: 4,000 PSI.
       - SLABS ON GRADE: 4,000 PSI.
     - b. CEMENT: ASTM C-150, TYPE II.
     - c. CONCRETE EXPOSED TO EXTERIOR CONDITIONS: AIR ENTRAINED TO 5%-7% AIR CONTENT.
6. EXAMINATION
   - A. VERIFY REQUIREMENTS FOR CONCRETE COVER OVER REINFORCEMENT.
   - B. VERIFY THAT ANCHORS, SEATS, PLATES, REINFORCEMENT, AND OTHER ITEMS TO BE CAST INTO CONCRETE ARE ACCURATELY PLACED, POSITIONED SECURELY, AND WILL NOT INTERFERE WITH PLACING CONCRETE.
7. PREPARATION
   - A. PREVIOUSLY PLACED CONCRETE:
     - a. PREPARE PREVIOUSLY PLACED CONCRETE BY CLEANING WITH STEEL BRUSH AND APPLYING BONDING AGENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
     - b. REMOVE LAITANCE, COATINGS, AND UNSOUND MATERIALS.
   - B. IN LOCATIONS WHERE NEW CONCRETE IS DOWELED TO EXISTING WORK, DRILL HOLES IN EXISTING CONCRETE, INSERT STEEL DOWELS, AND PACK SOLID WITH EPOXY.
   - C. IF CONCRETE SUBGRADE IS DRY, DAMPEN WITH WATER PRIOR TO PLACING CONCRETE. KEEP SUBGRADE FIRM AND FREE FROM EXCESS WATER.
   - D. REMOVE DEBRIS AND ICE FROM FORMWORK, REINFORCEMENT, AND CONCRETE SUBSTRATES.
   - E. REMOVE WATER FROM AREAS RECEIVING CONCRETE BEFORE CONCRETE IS PLACED.
8. INSTALLATION
   - A. PLACING CONCRETE:
     - a. PLACE CONCRETE ACCORDING TO ACI 318.
     - b. NOTIFY ENGINEER MINIMUM 48 HOURS PRIOR TO COMMENCEMENT OF OPERATIONS.
     - c. ENSURE THAT REINFORCEMENT, INSERTS, EMBEDDED PARTS, FORMED EXPANSION AND CONTRACTION JOINTS, AND OTHER MATERIALS ARE NOT DISTURBED DURING CONCRETE PLACEMENT.
     - d. JOINT FILLER:
       - SEPARATE SLABS ON GRADE FROM VERTICAL SURFACES WITH 1/2-INCH-THICK JOINT FILLER OR 30 POUND FELT.
       - PLACE JOINT FILLER IN SLAB PATTERN PLACEMENT SEQUENCE; SET TOP TO REQUIRED ELEVATIONS; SECURE TO RESIST MOVEMENT BY WET CONCRETE.
       - EXTEND JOINT FILLER FROM BOTTOM OF SLAB TO WITHIN 1/2 INCH OF FINISHED SLAB SURFACE, UNLESS INDICATED OTHERWISE ON DRAWINGS. APPLY SEALANT IN JOINTS WHERE INDICATED ON DRAWINGS.
     - e. CONVEY CONCRETE FROM MIXER TO PLACE OF FINAL POSITION BY METHODS THAT WILL PREVENT SEGREGATION OF MIX OR LOSS OF MATERIALS. USE TREMIE OR OTHER ACCEPTED METHOD. DO NOT ALLOW CONCRETE TO FREE FALL MORE THAN 5 FEET, OR LESS IF SEGREGATION OF MIX OCCURS.
     - f. AFTER CONCRETE HAS BEEN CONVEYED FROM MIXER, DO NOT ADD WATER. ADDING WATER TO PLACE CONCRETE WILL BE CAUSE FOR REJECTION.
     - g. PLACE CONCRETE IN CONTINUOUS OPERATION FOR EACH PANEL OR SECTION AS DETERMINED BY PREDETERMINED JOINTS.
     - h. CONSOLIDATE CONCRETE DURING PLACEMENT USING HAND TOOLS, MECHANICAL VIBRATORS, VIBRATING SCREEDS, AND FINISHING MACHINES IN ACCORDANCE WITH ACI 309R. CONSOLIDATION TECHNIQUES WILL BE REVIEWED AND ACCEPTED WITH CONCRETE PLACEMENT PLAN.
       - DO NOT USE VIBRATOR TO MOVE CONCRETE HORIZONTALLY.
       - DO NOT VIBRATE HIGH SLUMP (GREATER THAN 6 INCHES) CONCRETE, UNLESS ACCEPTED BY ENGINEER.
       - DO NOT OVER VIBRATE CONCRETE.
       - PROVIDE SUFFICIENT VIBRATORS TO CONSOLIDATE CONCRETE WITHIN 15 MINUTES AFTER PLACEMENT OF CONCRETE IN FORMS.
       - PROVIDE AT LEAST TWO VIBRATORS FOR EACH CONCRETE PLACEMENT GREATER THAN 25 CUBIC YARDS.
       - DO NOT ATTACH VIBRATORS TO OR AGAINST FORMS OR REINFORCING STEEL.
       - DO NOT ALLOW VIBRATORS TO PENETRATE CONCRETE LAYERS THAT HAVE TAKEN INITIAL SET.
       - MAINTAIN RECORDS OF CONCRETE PLACEMENT, INCLUDING DATE, LOCATION, QUANTITY, AIR TEMPERATURE, AND TEST SAMPLES TAKEN.
       - PLACE CONCRETE CONTINUOUSLY BETWEEN PREDETERMINED EXPANSION, CONTROL, AND CONSTRUCTION JOINTS.
       - DO NOT INTERRUPT SUCCESSIVE PLACEMENT AND DO NOT PERMIT COLD JOINTS TO OCCUR.
       - PLACE FLOOR SLABS WITH SAW-CUT PATTERN INDICATED ON DRAWINGS.
       - SAW-CUT JOINTS:
         - 1. SAW-CUT JOINTS WITHIN 12 HOURS AFTER PLACING.
         - 2. USE 3/16 INCH THICK BLADE.
         - 3. CUT 1/4 DEPTH OF SLAB THICKNESS.
       - SCREEDING:
         - 1. SCREED FLOORS AND SLABS ON GRADE LEVEL, UNLESS INDICATED OTHERWISE ON DRAWINGS.
         - 2. MINIMUM SURFACE FLATNESS: MINIMUM FF 25.
         - 3. MINIMUM SURFACE LEVELNESS: MINIMUM FL 20.
   - B. CONCRETE FINISHING:
     - a. STEEL TROWEL INTERIOR SURFACES. CONSOLIDATE CONCRETE SURFACE BY FINAL HAND TROWELING OPERATION, FREE OF TROWEL MARKS, UNIFORM IN TEXTURE AND APPEARANCE.
     - b. IN AREAS WITH FLOOR DRAINS, MAINTAIN FLOOR ELEVATION AT WALLS AND PITCH SURFACES UNIFORMLY TO DRAINS AT 1/8 INCH PER FOOT NOMINAL UNLESS INDICATED OTHERWISE ON DRAWINGS.
     - c. PROVIDE NON-SLIP BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS AND SLABS. SLIGHTLY ROUGHEN CONCRETE SURFACE BY GROOMING WITH FIBER-BRISTLE BROOM.
     - d. DO NOT USE STEEL TROWELS OR FRESNO TO FINISH EXTERIOR CONCRETE.
     - e. DO NOT USE JITTER BUGS FOR CONCRETE CONSOLIDATION.
   - C. CURING AND PROTECTION:
     - a. IMMEDIATELY AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL INJURY.
     - b. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR PERIOD AS NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
     - c. CURE HORIZONTAL CONCRETE SURFACES ACCORDING TO ACI 308.1 USING ONE OF FOLLOWING METHODS:
       - PONDING: MAINTAIN 100 PERCENT COVERAGE OF WATER OVER SLAB CONTINUOUSLY FOR SEVEN DAYS.
       - SPRAYING: SPRAY WATER OVER SLAB AND MAINTAIN WET FOR SEVEN DAYS.
       - ABSORPTIVE MATT: COVER SLAB WITH SATURATED MAT LAPPING ENDS AND SIDES. MAINTAIN SATURATED CONDITION FOR SEVEN DAYS.
       - MEMBRANE CURING COMPOUND: APPLY CURING COMPOUND IN TWO COATS WITH SECOND COAT APPLIED AT RIGHT ANGLES TO FIRST.
       - POLYETHYLENE FILM: SPREAD OVER SLAB, LAP EDGES AND SIDES, SEAL WITH PRESSURE SENSITIVE TAPE AND COVER WITH PLYWOOD AS NECESSARY TO SECURE FILM. MAINTAIN IN PLACE FOR SEVEN DAYS.
     - d. CURE VERTICAL SURFACES ACCORDING TO ACI 308.1 USING ONE OF FOLLOWING METHODS:
       - SPRAYING: SPRAY WATER OVER SURFACE AND MAINTAIN WET FOR SEVEN DAYS.
       - MEMBRANE CURING COMPOUND: APPLY CURING COMPOUND IN TWO COATS WITH SECOND COAT APPLIED AT RIGHT ANGLES TO FIRST.
     - e. PROVIDE ADDITIONAL PROTECTION AS NECESSARY TO PREVENT FREEZING DURING COLD WEATHER.
     - f. USE CURING METHOD WHICH IS COMPATIBLE WITH FINISH COAT OF CONCRETE SURFACE.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
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STATE OF UTAH

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REVISIONS

Jones & DeMille
Engineering
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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-801
SHEET NO.

SECTION 03 20 00
CONCRETE REINFORCING

1. SUBMITTALS
   - A. SHOP DRAWINGS:
     - A. INDICATE BAR SIZES, SPACING, LOCATIONS, SPLICE LOCATIONS, AND QUANTITIES OF REINFORCING STEEL AND WELDED WIRE FABRIC.
     - B. INDICATE BENDING AND CUTTING SCHEDULES.
     - C. INDICATE SUPPORTING AND SPACING DEVICES.
   - B. MANUFACTURER'S MATERIAL CERTIFICATE: CERTIFY THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
2. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO ACI 318.
   - B. PREPARE SHOP DRAWINGS ACCORDING TO ACI SP-66.
3. DELIVERY, STORAGE, AND HANDLING
   - A. STORE MATERIALS ON SKIDS ABOVE GRADE. MEET ADDITIONAL STORAGE REQUIREMENTS ACCORDING TO MANUFACTURER INSTRUCTIONS.
   - B. PROTECTION:
     - A. PROTECT MATERIALS FROM MOISTURE BY STORING IN CLEAN, DRY LOCATION REMOTE FROM CONSTRUCTION OPERATIONS AREAS.
     - B. PROVIDE ADDITIONAL PROTECTION ACCORDING TO MANUFACTURER INSTRUCTIONS.
   - C. EXISTING CONDITIONS
     - A. VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION.
4. PRODUCTS
   - A. REINFORCEMENT
     - A. REINFORCING STEEL:
       - COMPLY WITH ASTM A615.
       - YIELD STRENGTH: 60 KSI.
       - BILLET BARS: DEFORMED, UNLES INDICATED OTHERWISE ON DRAWINGS.
       - FINISH: UNCOATED.
   - B. FABRICATION
     - A. FABRICATE CONCRETE REINFORCEMENT ACCORDING TO ACI 318.
     - B. FORM REINFORCEMENT BENDS AND HOOKS WITH STANDARD DIAMETERS AND EXTENSION LENGTHS ACCORDING TO ACI 318.
     - C. FABRICATE COLUMN REINFORCEMENT WITH OFFSET BENDS AT REINFORCEMENT SPLICES.
     - D. WHERE REQUIRED, SHOP WELD REINFORCEMENT ACCORDING TO AWS D1.4. WELDING OF REINFORCEMENT NOT PERMITTED UNLESS SPECIFICALLY DETAILED ON DRAWINGS OR ACCEPTED IN WRITING BY ENGINEER.
     - E. SPLICING:
       - IF NOT INDICATED ON DRAWINGS, LOCATE REINFORCEMENT SPLICES AT POINT OF MINIMUM STRESS AND STAGGER SPLICE LOCATIONS OF ADJACENT PARALLEL BARS.
       - FOR SPLICING DEVICES, FOLLOW MANUFACTURER’S INSTRUCTIONS.
   - C. ACCESSORY MATERIALS
     - A. TIE WIRE: MINIMUM 16 GAGE, ANNEALED TYPE.
     - B. CHAIRS, BOLSTERS, BAR SUPPORTS, AND SPACERS:
       - SIZE AND SHAPE: TO STRENGTHEN AND SUPPORT REINFORCEMENT DURING CONCRETE PLACEMENT CONDITIONS.
       - WHERE APPLICABLE, FURNISH LOAD-BEARING PAD ON BOTTOM TO PREVENT VAPOR RETARDER PUNCTURE.
     - C. SPECIAL CHAIRS, BOLSTERS, BAR SUPPORTS, AND SPACERS ADJACENT TO WEATHER-EXPOSED CONCRETE SURFACES:
       - MATERIAL: PLASTIC-TIPPED STEEL.
       - SIZE AND SHAPE: TO MEET PROJECT CONDITIONS.
5. EXECUTION
   - A. INSTALLATION
     - A. PLACE, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT.
     - B. DO NOT DEVIATE FROM REQUIRED POSITION BEYOND SPECIFIED TOLERANCE.
     - C. DO NOT WELD REINFORCEMENT.
     - D. DO NOT DISPLACE OR DAMAGE VAPOR RETARDER.
     - E. ACCOMMODATE PLACEMENT OF FORMED OPENINGS.
     - F. SPACING:
       - SPACE REINFORCEMENT BARS WITH MINIMUM CLEAR SPACING ACCORDING TO ACI 318.
       - IF BARS ARE INDICATED IN MULTIPLE LAYERS, PLACE UPPER BARS DIRECTLY ABOVE LOWER BARS.
     - g. MAINTAIN MINIMUM CONCRETE COVER AROUND REINFORCEMENT FOR CAST-IN-PLACE NON-PRESTRESSED CONCRETE MEMBERS ACCORDING TO ACI 318 AS FOLLOWS:
       - CONCRETE PLACED AGAINST FORMS (INCLUDING CONCRETE TO BE BACKFILLED): 2"
       - CONCRETE PLACED AGAINST GROUND: 3"
       - SLABS (ON GROUND): CENTER BAR IN SLAB.
     - H. SPLICE REINFORCING WHERE INDICATED ON DRAWINGS OR ACCORDING TO SPLICE DEVICE MANUFACTURER'S INSTRUCTIONS.
   - B. TOLERANCES
     - A. INSTALL REINFORCEMENT WITHIN FOLLOWING TOLERANCES FOR FLEXURAL MEMBERS, WALLS, AND COMPRESSION MEMBERS:
       - REINFORCEMENT DEPTH GREATER THAN 8 INCHES:
         1. DEPTH TOLERANCE: PLUS OR MINUS 3/8 INCH.
         2. CONCRETE COVER TOLERANCE: MINUS 3/8 INCH.
       - REINFORCEMENT DEPTH LESS THAN OR EQUAL TO 8 INCHES:
         1. DEPTH TOLERANCE: PLUS OR MINUS 1/2 INCH.
         2. CONCRETE COVER TOLERANCE: MINUS 1/2 INCH.
     - B. FOUNDATION WALLS: INSTALL REINFORCEMENT WITHIN TOLERANCES ACCORDING TO ACI 117.
   - C. FIELD QUALITY CONTROL TESTING
     - A. PERFORM FIELD INSPECTION OF REINFORCEMENT ACCORDING TO ACI 318. INSPECT FOR CORRECT MATERIALS, FABRICATION, SIZES, LOCATIONS, SPACING, CONCRETE COVER, AND SPLICING.
   - D. FIELD ACCEPTANCE TESTING
     - A. FIELD INSPECTION TESTING WILL BE PERFORMED BY OWNER'S TESTING LABORATORY ACCORDING TO ACI 318.
     - B. PROVIDE UNRESTRICTED ACCESS TO WORK AND COOPERATE WITH APPOINTED INSPECTION FIRM.
     - C. REINFORCEMENT INSPECTION:
       - PERIODIC PLACEMENT INSPECTION: INSPECT FOR CORRECT MATERIALS, FABRICATION, SIZES, LOCATIONS, SPACING, CONCRETE COVER, AND SPLICING.
       - PLACEMENT ACCEPTANCE: IN ACCORDANCE WITH ACI 318 MATERIAL REQUIREMENTS AND SPECIFIED PLACEMENT TOLERANCES.
6. PROTECTION
   - A. PROTECT REINFORCEMENT AND ACCESSORIES FROM DAMAGE AND DISPLACEMENT UNTIL CONCRETE IS PLACED.

SECTION 04 05 16
MASONRY GROUTING

1. SUBMITTALS
   - A. MANUFACTURER'S CERTIFICATE: INDICATE PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
2. QUALITY ASSURANCE
   - A. PERFORM WORK ACCORDING TO TMS 402 AND 602.
3. DELIVERY, STORAGE, AND HANDLING
   - A. STORE MATERIALS ACCORDING TO MANUFACTURER INSTRUCTIONS.
   - B. PROTECTION:
     - a. PROTECT MATERIALS FROM MOISTURE AND DUST BY STORING IN CLEAN, DRY LOCATION REMOTE FROM CONSTRUCTION OPERATIONS AREAS.
     - b. PROVIDE ADDITIONAL PROTECTION ACCORDING TO MANUFACTURER INSTRUCTIONS.
4. AMBIENT CONDITIONS
   - A. COLD WEATHER REQUIREMENTS: WHEN AMBIENT TEMPERATURE OR TEMPERATURE OF MASONRY UNITS IS LESS THAN 40 DEGREES FAHRENHEIT, COMPLY WITH TMS 402 AND 602.
   - B. HOT WEATHER REQUIREMENTS: WHEN AMBIENT TEMPERATURE IS GREATER THAN 100 DEGREES FAHRENHEIT OR IF AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES FAHRENHEIT WITH WIND VELOCITY GREATER THAN 8 MILES PER HOUR, COMPLY WITH TMS 402 AND 602.
5. MATERIALS
   - A. PORTLAND CEMENT: COMPLY WITH ASTM C150, TYPE II.
   - B. GROUT AGGREGATE: COMPLY WITH ASTM C404, FINE AND COARSE.
   - C. FLY ASH: COMPLY WITH ASTM C618.
   - D. WATER: CLEAN AND POTABLE.
   - E. CALCIUM CHLORIDE: NOT ALLOWED.
6. MIXES
   - A. GROUT:
     - a. GROUT FOR NON-STRUCTURAL MASONRY:
       - COMPRESSIVE STRENGTH: 2,000 PSI AT 28 DAYS.
       - MIXING: ACCORDING TO ASTM C476, FINE, COARSE.
     - b. GROUT FOR STRUCTURAL MASONRY:
       - COMPRESSIVE STRENGTH: 2,000 PSI AT 28 DAYS.
       - MIXING: ACCORDING TO ASTM C476, FINE, COARSE.
     - c. APPLICATION:
       - COARSE GROUT: GROUTING SPACES WITH MINIMUM 2 INCHES DIMENSION IN EACH DIRECTION.
       - FINE GROUT: GROUTING OTHER SPACES.
7. EXAMINATION
   - A. REQUEST INSPECTION OF SPACES TO BE GROUTED.
8. PREPARATION
   - A. CLEAN LAITANCE AND LOOSE MATERIALS FROM SPACES TO BE GROUTED.
9. INSTALLATION
   - A. MIXING:
     - a. THOROUGHLY MIX GROUT INGREDIENTS IN QUANTITIES NEEDED FOR IMMEDIATE USE ACCORDING TO ASTM C476.
   - B. DO NOT PLACE GROUT UNTIL MASONRY UNITS HAVE ATTAINED SUFFICIENT STRENGTH.
   - C. DO NOT PLACE GROUT UNTIL REINFORCING IS SECURED IN PLACE. DO NOT DISPLACE REINFORCEMENT WHILE PLACING GROUT.
   - D. GROUT CELLS OF CONCRETE MASONRY UNITS WITH REINFORCING, AND GROUT NON-REINFORCED CELLS WHERE INDICATED ON DRAWINGS.
   - E. PLACE GROUT ACCORDING TO TMS 402 AND 602.
   - F. CLEAN EXPOSED SURFACES OF EXCESS GROUT WHILE GROUT IS WET.
   - G. ENSURE GROUT COMPLETELY FILLS INTENDED CELLS, VERTICALLY AND HORIZONTALLY.
10. FIELD QUALITY CONTROL
    - A. TESTING:
      - a. MIX: COMPLY WITH ASTM C1019 FOR COMPRESSIVE STRENGTH AND COMPLY WITH ASTM C143 FOR SLUMP.
      - B. COMPRESSIVE STRENGTH OF MORTAR, GROUT, AND MASONRY: COMPLY WITH ASTM C1314.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW
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05/12/2022
STATE OF UTAH

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-802
SHEET NO.

SECTION 04 22 00
CONCRETE UNIT MASONRY

1. SUBMITTALS
   A. PRODUCT DATA.
   B. SAMPLES:
      a. SUBMIT TWO FULL-SIZE SAMPLES OF UNITS TO ILLUSTRATE COLOR, TEXTURE, AND EXTREMES OF COLOR RANGE.
2. MAINTENANCE MATERIAL SUBMITTALS
   A. EXTRA STOCK MATERIALS: 5% OF EACH SIZE, COLOR, AND TYPE OF UNITS.
3. QUALITY ASSURANCE
   A. PERFORM WORK ACCORDING TO ACI 530/530.1 - BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES AND RELATED COMMENTARIES.
4. AMBIENT CONDITIONS
   A. DO NOT STORE REINFORCING MATERIAL DIRECTLY ON GROUND. UTILIZE BLOCKING AND OTHER METHODS TO PREVENT RUST ON ACCESSORIES PRIOR TO INSTALLATION.
   B. COLD WEATHER REQUIREMENTS: ACCORDING TO ACI 530.1 WHEN AMBIENT TEMPERATURE OR TEMPERATURE OF MASONRY UNITS IS LESS THAN 40 DEGREES F.
   C. HOT WEATHER REQUIREMENTS: ACCORDING TO ACI 530.1 WHEN AMBIENT TEMPERATURE IS GREATER THAN 100 DEGREES F OR AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES F WITH WIND VELOCITY GREATER THAN 8 MPH.
5. EXISTING CONDITIONS
   A. FIELD MEASUREMENTS: VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION. INDICATE FIELD MEASUREMENTS ON SHOP DRAWINGS.
6. PERFORMANCE AND DESIGN CRITERIA
   A. CONCRETE MASONRY COMPRESSIVE STRENGTH (F'M): 2,000 PSI; DETERMINED BY UNIT STRENGTH METHOD.
      a. CONCRETE MASONRY UNITS (CMU): 2,000 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH.
7. MATERIALS
   A. DECORATIVE CMU: ASTM C90; LIGHT WEIGHT; COLOR AS SELECTED TO FOLLOW ARCHITECTURAL DRAWINGS.
8. ACCESSORIES
   A. REINFORCING STEEL: ASTM A615, 60 KSI YIELD GRADE, DEFORMED BILLET BARS, UNCOATED FINISH.
   B. MORTAR AND GROUT: AS SPECIFIED IN SECTION 04 05 14 - MASONRY MORTARING AND GROUTING.
9. SOURCE QUALITY CONTROL
   A. TESTING: TEST BRICK EFFLORESCENCE ACCORDING TO ASTM C67. BRICK RATED GREATER THAN "SLIGHTLY EFFLORESCED" IS NOT ACCEPTABLE.
10. EXAMINATION
    A. VERIFY THAT:
       a. FIELD CONDITIONS ARE ACCEPTABLE AND READY TO RECEIVE WORK.
       b. ITEMS PROVIDED BY OTHER SECTIONS OF WORK ARE PROPERLY SIZED AND LOCATED.
       c. BUILT-IN ITEMS ARE IN PROPER LOCATION AND READY FOR ROUGHING INTO MASONRY WORK.
11. PREPARATION
    A. FURNISH TEMPORARY BRACING DURING INSTALLATION OF MASONRY WORK. MAINTAIN IN PLACE UNTIL BUILDING STRUCTURE PROVIDES PERMANENT SUPPORT.
12. INSTALLATION
    A. ESTABLISH LINES, LEVELS, AND COURSING INDICATED. PROTECT FROM DISPLACEMENT.
    B. MAINTAIN MASONRY COURSES TO UNIFORM DIMENSION. FORM BED AND HEAD JOINTS OF UNIFORM THICKNESS.
    C. COURSING OF CMU:
       a. BOND: RUNNING.
       b. COURSING: ONE UNIT AND ONE MORTAR JOINT TO EQUAL 8 INCHES.
       c. MORTAR JOINTS: CONCAVE.
    D. PLACING AND BONDING:
       a. LAY HOLLOW MASONRY UNITS WITH FACE SHELL BEDDING ON HEAD AND BED JOINTS.
       b. BUTTERING CORNERS OF JOINTS OR EXCESSIVE FURROWING OF MORTAR JOINTS ARE NOT PERMITTED.
       c. REMOVE EXCESS MORTAR AS WORK PROGRESSES.
       d. INTERLOCK INTERSECTIONS AND EXTERNAL CORNERS.
       e. DO NOT SHIFT OR TAP MASONRY UNITS AFTER MORTAR HAS ACHIEVED INITIAL SET. WHERE ADJUSTMENT IS REQUIRED, REMOVE MORTAR AND REPLACE.
       f. PERFORM SITE CUTTING OF MASONRY UNITS WITH PROPER TOOLS TO ASSURE STRAIGHT, CLEAN, UNCHIPPED EDGES. PREVENT BROKEN MASONRY UNIT CORNERS OR EDGES.
       G. ISOLATE TOP OF MASONRY FROM HORIZONTAL STRUCTURAL FRAMING MEMBERS AND SLABS OR DECKS WITH COMPRESSIBLE JOINT FILLER.
    E. LINTELS:
       a. INSTALL CONCRETE MASONRY BOND BEAM LINTELS OVER OPENINGS.
       b. INSTALL REINFORCED UNIT MASONRY LINTELS OVER MISCELLANEOUS OPENINGS LESS THAN 12 INCHES WIDE WHERE LINTELS ARE NOT SCHEDULED OR INDICATED.
       c. DO NOT SPLICE REINFORCING BARS.
       d. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
       e. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
       f. ALLOW MASONRY LINTELS TO ATTAIN SPECIFIED STRENGTH BEFORE REMOVING TEMPORARY SUPPORTS.
       g. MAINTAIN MINIMUM 6-INCH BEARING ON EACH SIDE OF OPENING.
    F. GROUTED COMPONENTS:
       a. REINFORCE BOND BEAMS AND PILASTERS AS INDICATED.
       b. LAP SPLICES BAR DIAMETERS AS REQUIRED BY CODE.
       c. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
       d. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
       e. AT BEARING LOCATIONS, FILL MASONRY CORES WITH GROUT FOR MINIMUM 12 INCHES BOTH SIDES OF OPENING.
    G. REINFORCED MASONRY:
       a. LAY MASONRY UNITS WITH CELLS VERTICALLY ALIGNED AND CLEAR OF MORTAR AND UNOBSTRUCTED.
       b. PLACE REINFORCEMENT BARS AS INDICATED.
       c. SPLICE REINFORCEMENT[AS INDICATED.
       d. SUPPORT AND SECURE REINFORCEMENT FROM DISPLACEMENT.
       e. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
       f. PLACE GROUT ACCORDING TO ACI 530.1.
    H. CONTROL JOINTS:
       a. INSTALL CONTROL JOINTS AT THE FOLLOWING MAXIMUM SPACINGS, UNLESS OTHERWISE INDICATED ON DRAWINGS:
          - EXTERIOR WALLS: 20 FEET O.C. AND WITHIN 24 INCHES ON ONE SIDE OF EACH INTERIOR AND EXTERIOR CORNER.
          - INTERIOR WALLS: 30 FEET O.C.
          - AT CHANGES IN WALL HEIGHT.
       b. DO NOT CONTINUE HORIZONTAL JOINT REINFORCEMENT THROUGH CONTROL JOINTS.
       c. INSTALL PREFORMED CONTROL JOINT DEVICE IN CONTINUOUS LENGTHS. SEAL BUTT AND CORNER JOINTS.
    I. EXPANSION JOINTS:
       a. FORM EXPANSION JOINTS BY OMITTING MORTAR AND CUTTING UNIT TO FORM OPEN SPACE.
       b. DO NOT CONTINUE HORIZONTAL REINFORCEMENT THROUGH EXPANSION JOINTS.
    J. BUILT-IN WORK:
       a. AS WORK PROGRESSES, INSTALL BUILT-IN METAL DOOR FRAMES AND OTHER ITEMS TO BE BUILT IN THE WORK AND FURNISHED BY OTHER SECTIONS.
       b. INSTALL BUILT-IN ITEMS PLUMB AND LEVEL.
       c. BED ANCHORS OF METAL DOOR FRAMES IN ADJACENT MORTAR JOINTS. FILL FRAME VOIDS SOLID WITH GROUT OR MORTAR. FILL ADJACENT MASONRY CORES WITH GROUT MINIMUM 16 INCHES FROM FRAMED OPENINGS.
       d. DO NOT BUILD IN MATERIALS SUBJECT TO DETERIORATION.
    K. CUTTING AND FITTING:
       a. CUT AND FIT FOR CHASES, PIPES, CONDUIT, ETC. COORDINATE WITH OTHER SECTIONS OF WORK TO PROVIDE CORRECT SIZE, SHAPE, AND LOCATION.
       b. OBTAIN ENGINEER'S APPROVAL PRIOR TO CUTTING OR FITTING MASONRY WORK NOT INDICATED OR WHERE APPEARANCE OR STRENGTH OF MASONRY WORK MAY BE IMPAIRED.
13. TOLERANCES
    A. MAXIMUM VARIATION FROM ALIGNMENT OF COLUMNS: 1/4 INCH.
    B. MAXIMUM VARIATION FROM UNIT TO ADJACENT UNIT: 1/16 INCH.
    C. MAXIMUM VARIATION FROM PLANE OF WALL: 1/4 INCH IN 10 FEET AND 1/2 INCH IN 20 FEET OR MORE.
    D. MAXIMUM VARIATION FROM PLUMB: 1/4 INCH PER STORY NON-CUMULATIVE; 1/2 INCH IN TWO STORIES OR MORE.
    E. MAXIMUM VARIATION FROM LEVEL COURSING: 1/8 INCH IN 3 FEET AND 1/4 INCH IN 10 FEET; 1/2 INCH IN 30 FEET.
    F. MAXIMUM VARIATION OF JOINT THICKNESS: 1/8 INCH IN 3 FEET.
    G. MAXIMUM VARIATION FROM CROSS SECTIONAL THICKNESS OF WALLS: 1/4 INCH.
    H. MAXIMUM VARIATION FOR STEEL REINFORCEMENT:
       a. INSTALL REINFORCEMENT WITHIN THE TOLERANCES SPECIFIED IN ACI 530.1 FOR FOUNDATION WALLS.
       b. PLUS OR MINUS 1/2 INCH WHEN DISTANCE FROM CENTERLINE OF STEEL TO OPPOSITE FACE OF MASONRY IS 8 INCHES OR LESS.
       c. PLUS OR MINUS 1 INCH WHEN DISTANCE IS BETWEEN 8 AND 24 INCHES.
       d. PLUS OR MINUS 1-1/4 INCH WHEN DISTANCE IS GREATER THAN 24 INCHES.
       e. PLUS OR MINUS 2 INCHES FROM LOCATION ALONG FACE OF WALL.
14. FIELD QUALITY CONTROL
    A. CMU: TEST EACH TYPE ACCORDING TO ASTM C140.
    B. PRISM TESTS: TEST COMPRESSIVE STRENGTH OF COMPLETED REINFORCED MASONRY ACCORDING TO ASTM C1314.
15. CLEANING
    A. CLEAN SOILED SURFACES WITH CLEANING SOLUTION.
16. PROTECTION
    A. PROTECT EXPOSED EXTERNAL CORNERS SUBJECT TO DAMAGE.
    B. PROTECT BASE OF WALLS FROM MUD AND MORTAR SPLATTER.
    C. PROTECT MASONRY AND OTHER ITEMS BUILT INTO MASONRY WALLS FROM MORTAR DROPPINGS AND STAINING CAUSED BY MORTAR.
    D. PROTECT TOPS OF MASONRY WORK WITH WATERPROOF COVERINGS SECURED IN PLACE WITHOUT DAMAGING MASONRY. PROVIDE COVERINGS WHERE MASONRY IS EXPOSED TO WEATHER WHEN WORK IS NOT IN PROGRESS. MAINTAIN PROTECTION ON TOPS OF COMPLETED EXTERIOR WALLS UNTIL INSTALLATION OF PERMANENT WATERPROOF CAP MATERIALS.

#8826183-2202
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05/12/2022

SUBMITTAL

NO.	DATE	DESCRIPTION

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-803
SHEET NO.

SECTION 31 23 23
FILL

1. DEFINITIONS
   - A. BACKFILL: SOIL PLACED AROUND STRUCTURES TO INDICATED FINISH GRADE.
   - B. COARSE GRAINED SOIL: SOILS WITH MORE THAN 50 PERCENT RETAINED ON NO. 200 SIEVE.
   - C. FILL: SOIL PLACED ON SITE TO INDICATED FINISH GRADE.
   - D. FINE GRAINED SOIL: SOILS WITH 50 PERCENT OR MORE PASSING NO. 200 SIEVE.
   - E. SOIL CLASSIFICATION: IN ACCORDANCE WITH ASTM D2487 AND AASHTO M145.
   - F. TOPSOIL: TOP 6 INCHES OF EXISTING ONSITE SOIL.
2. SUBMITTALS
   - A. TEST RESULTS: SUBMIT PROCTOR AND DENSITY QUALITY CONTROL TEST RESULTS WITHIN 24 HOURS AFTER TESTING IS COMPLETED.
3. QUALITY ASSURANCE
   - A. OBTAIN MATERIALS FROM SAME SOURCE THROUGHOUT.
4. PRODUCTS
   - A. MATERIALS
     - A. TOPSOIL: TOP 6 INCHES OF EXISTING ONSITE SOIL.
     - B. FILL AND BACKFILL: USE EXISTING ONSITE EXCAVATED SOIL FREE FROM RUBBISH, DEBRIS, ORGANIC MATERIAL, FROZEN MATERIAL, OR OTHER OBJECTIONABLE MATERIALS.
     - C. IMPORTED FILL: A-1A THROUGH A-4 SOILS AS CLASSIFIED IN ACCORDANCE WITH AASHTO M145.
     - d. GRANULAR BACKFILL BORROW: NON-PLASTIC, WELL GRADED, 2 INCH MAXIMUM SIZE, A-1A SOIL AS CLASSIFIED IN ACCORDANCE WITH AASHTO M145.
     - e. STRUCTURAL FILL: WELL-GRADED, CLEAN, HARD, TOUGH, DURABLE AND SOUND MINERAL AGGREGATES CONSISTING OF CRUSHED STONE, CRUSHED GRAVEL OR CRUSHED SLAG; FREE OF ORGANIC MATTER AND CONTAMINATION FROM CHEMICAL OR PETROLEUM PRODUCTS; MEETING THE FOLLOWING REQUIREMENTS:
       - DRY RODDED UNIT WEIGHT: NOT LESS THAN 75 PCF.
       - LIQUID LIMIT/PLASTIC INDEX: NON-PLASTIC.
       - AGGREGATE WEAR: NOT TO EXCEED 50 PERCENT.
       - GRADATION: ESTABLISH JOB-MIX (TARGET) GRADATION WITHIN GRADATION TARGET BAND LISTED BELOW. PERCENT PASSING IS BASED ON TOTAL AGGREGATE (DRY WEIGHT), AND FINE AND COARSE AGGREGATE HAVING APPROXIMATELY SAME BULK SPECIFIC GRAVITIES.
         1. 1 1/2 INCH: 100
         2. 1 INCH: 90-100
         3. 3/4 INCH: 70-85
         4. 1/2 INCH: 65-80
         5. 3/8 INCH: 55-75
         6. NO. 4: 40-65
         7. NO. 16: 25-40
         8. NO. 200: 7-11
       - TWO FRACTURED FACE: 50% MINIMUM.
       - CBR WITH 10 LB. SURCHARGE MEASURED AT 0.20 INCH PENETRATION: 70% MINIMUM.
5. EXECUTION
   - A. EXAMINATION
     - A. VERIFY SURVEY BENCH MARK AND INTENDED ELEVATIONS FOR WORK ARE AS INDICATED ON DRAWINGS.
     - B. VERIFY SUB-DRAINAGE, DAMPPROOFING AND WATERPROOFING ARE COMPLETE PRIOR TO BACKFILLING FOR SITE STRUCTURES.
     - C. VERIFY STRUCTURAL ABILITY OF UNSUPPORTED WALLS TO SUPPORT LOADS IMPOSED BY BACKFILL.
   - B. PREPARATION
     - A. IDENTIFY REQUIRED LINES, LEVELS, CONTOURS, AND DATUM.
     - B. ERECT AND MAINTAIN TEMPORARY BARRIERS, SAFETY DEVICES AND SIMILAR MEASURES FOR PROTECTION OF PUBLIC AND EXISTING IMPROVEMENTS TO REMAIN.
     - C. MAINTAIN DEWATERING UNTIL FINAL FILL AND BACKFILL MATERIALS ARE IN PLACE.
   - C. CONSTRUCTION – GENERAL
     - A. IF EXCAVATED MATERIAL IS NOT SUFFICIENT FOR REQUIRED FILL AND BACKFILL, USE IMPORTED FILL [**BORROW**] MATERIAL.
     - B. PLACE FILL AND BACKFILL TO CONTOURS AND ELEVATIONS INDICATED ON DRAWINGS.
     - C. MIX ROCKS WITH FINER MATERIALS TO MINIMIZE VOIDS.
     - D. UNLESS INDICATED OTHERWISE, PLACE AND COMPACT FILL AND BACKFILL MATERIAL IN CONTINUOUS LAYERS NOT EXCEEDING 12 INCHES NON-COMPACTED DEPTH. IF TESTS INDICATE UNSATISFACTORY DENSITY, REDUCE LAYER THICKNESS.
     - E. MAINTAIN OPTIMUM MOISTURE CONTENT OF FILL AND BACKFILL MATERIALS TO ATTAIN REQUIRED COMPACTION DENSITY.
     - **F.** COMPACT FILL AND BACKFILL MATERIALS TO DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
     - G. WHERE POSSIBLE, GRADE SURPLUS SOIL TO BLEND IN WITH EXISTING CONTOURS, AND REMOVE REMAINING SURPLUS SOIL FROM SITE.
   - D. FILL
     - A. IF FILL HEIGHT IS 6 FEET OR LESS AND UNDERLYING GROUND CONSISTS OF LOOSE MATERIAL, SCARIFY AND COMPACT TOP 8 INCHES OF UNDERLYING GROUND TO AT LEAST 90 PERCENT OF MAXIMUM LABORATORY DENSITY PRIOR TO PLACING FILL MATERIALS.
     - B. DO NOT PLACE ROCKS EXCEEDING 4 INCHES WITHIN 12 INCHES OF PAVEMENT SUBGRADE.
     - C. SLOPE GRADE AS INDICATED ON DRAWINGS.
   - E. BACKFILL
     - A. BACKFILL AREAS EXCAVATED FOR STRUCTURES AND OTHER IMPROVEMENTS. BACKFILL TO CONTOURS AND ELEVATIONS INDICATED WITH SUITABLE MATERIALS.
     - B. EMPLOY PLACEMENT METHOD THAT DOES NOT DISTURB OR DAMAGE STRUCTURE OR OTHER WORK.
     - C. BACKFILL SIMULTANEOUSLY ON EACH SIDE OF UNSUPPORTED FOUNDATION WALLS UNTIL SUPPORTS ARE IN PLACE.
     - D. DO NOT PLACE ROCKS EXCEEDING 2 INCHES WITHIN 2 FEET OF STRUCTURES.
     - E. UNLESS INDICATED OTHERWISE ON DRAWINGS, SLOPE GRADE AWAY FROM STRUCTURES AT MINIMUM 5 PERCENT SLOPE FOR MINIMUM DISTANCE OF 10 FEET.
   - F. GRANULAR BACKFILL BORROW
     - A. WHERE INDICATED ON DRAWINGS, PLACE GRANULAR BACKFILL BORROW FOR BACKFILL WITHIN TWO FEET OF BOX CULVERTS, BRIDGES AND OTHER STRUCTURES.
     - B. PLACE AND COMPACT GRANULAR BACKFILL BORROW IN CONTINUOUS LAYERS NOT EXCEEDING 6 INCHES COMPACTED DEPTH.
   - G. STRUCTURAL FILL
     - A. WHERE INDICATED ON DRAWINGS, PLACE STRUCTURAL FILL.
     - B. PRIOR TO PLACING STRUCTURAL FILL, SCARIFY AND COMPACT TOP 8 INCHES OF UNDERLYING GROUND TO AT LEAST 90 PERCENT OF MAXIMUM LABORATORY DENSITY.
     - C. PLACE AND COMPACT STRUCTURAL FILL IN CONTINUOUS LAYERS NOT EXCEEDING 6 INCHES COMPACTED DEPTH.
   - H. FINISHING
     - A. FINISH FILL AND BACKFILL TO REASONABLY SMOOTH AND UNIFORM SURFACE.
     - B. MAKE GRADE CHANGES GRADUAL. BLEND SLOPE INTO LEVEL AREAS.
   - I. TOLERANCES
     - A. TOP SURFACE OF GENERAL FILL AND BACKFILL: PLUS OR MINUS 0.1 FOOT FROM REQUIRED ELEVATION.
     - B. TOP SURFACE OF SUBGRADE: PLUS OR MINUS 0.04 FOOT FROM REQUIRED ELEVATION.
     - C. MOISTURE CONTENT: PLUS OR MINUS 2 PERCENT OF OPTIMUM. TEST IN ACCORDANCE WITH ASTM D6938.
   - J. FIELD QUALITY CONTROL TESTING
     - A. MAXIMUM LABORATORY DENSITY: DETERMINED IN ACCORDANCE WITH AASHTO T180, METHOD D FOR A-1 SOILS AND AASHTO T99, METHOD D FOR OTHER SOILS. TEST FOR EACH TYPE OF SOIL ENCOUNTERED ON SITE.
     - B. ESTABLISH ROLLER PATTERNS NECESSARY TO ACHIEVE DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
     - C. DENSITY TESTS: PERFORM IN ACCORDANCE WITH ASTM D6938.
       - FREQUENCY:
         1. FILL, BACKFILL AND STRUCTURAL FILL: TAKE MINIMUM OF TWO TESTS FOR EACH 1,500 SQUARE YARDS PER EACH LAYER.
         2. GRANULAR BACKFILL BORROW: TAKE MINIMUM OF TWO TESTS FOR EACH LAYER ON EACH STRUCTURE OR PIPE CULVERT.
       - ACCEPTANCE: EQUALS OR EXCEEDS DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
       - IF TESTS INDICATE WORK IS NOT ACCEPTABLE, RE-COMPACT AND RETEST. IF NECESSARY, REMOVE AND REPLACE WORK.
   - K. FIELD ACCEPTANCE TESTING
     - A. MAXIMUM LABORATORY DENSITY: ENGINEER WILL DETERMINE IN ACCORDANCE WITH AASHTO T180, METHOD D FOR A-1 SOILS AND AASHTO T99, METHOD D FOR OTHER SOILS . ENGINEER WILL TEST EACH TYPE OF SOIL ENCOUNTERED ON SITE.
     - B. ESTABLISH ROLLER PATTERNS NECESSARY TO ACHIEVE DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
     - C. DENSITY TESTS: ENGINEER WILL PERFORM IN ACCORDANCE WITH ASTM D6938.
       - FREQUENCY:
         1. FILL, BACKFILL AND STRUCTURAL FILL: TAKE MINIMUM OF TWO TESTS FOR EACH 1,500 SQUARE YARDS PER EACH LAYER.
         2. GRANULAR BACKFILL BORROW: TAKE MINIMUM OF TWO TESTS FOR EACH LAYER ON EACH STRUCTURE.
       - ACCEPTANCE: EQUALS OR EXCEEDS DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
       - IF TESTS INDICATE WORK IS NOT ACCEPTABLE, RE-COMPACT AND RETEST. IF NECESSARY, REMOVE AND REPLACE WORK.
   - L. PROTECTION
     - A. PROTECT EXISTING UTILITIES AND IMPROVEMENTS INDICATED TO REMAIN, FROM DAMAGE.
     - B. PROTECT PLANT LIFE, LAWNS, AND OTHER FEATURES REMAINING AS PART OF FINAL LANDSCAPING.
     - C. PROTECT STRUCTURES, UTILITIES AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.
     - D. PROTECT BENCH MARKS AND SURVEY CONTROL POINT FROM DAMAGE OR DISPLACEMENT.
     - E. REPAIR OR REPLACE ITEMS DAMAGED BY EXCAVATION OR BACKFILLING.
   - M. COMPACTION SCHEDULE
     - A. FILL AND BACKFILL FOR NON-TRAVELED AREAS: COMPACT TO MINIMUM 90 PERCENT OF MAXIMUM LABORATORY DENSITY. INCLUDES LANDSCAPE AREAS.
     - B. FILL AND BACKFILL FOR TRAVELED AREAS AND STRUCTURES: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY. INCLUDES ROADS, PARKING LOTS, DRIVEWAYS, SIDEWALKS AND STRUCTURES.
     - C. GRANULAR BACKFILL BORROW: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY.
     - D. STRUCTURAL FILL: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW
PAUL
LAURENDEAU
05/12/2022
STATE OF UTAH

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille
Engineering
www.jonesanddemille.com

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-804
SHEET NO.

MECHANICAL SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

SYMBOL	EXPLANATION
ø	ROUND MEASUREMENT
Ⓣ X–X	THERMOSTAT/SENSOR
⬡ X #	MECHANICAL EQUIPMENT SYMBOL
◇ #	KEYED NOTE REFERENCE

SITE CONDITIONS

SITE:

CITY:	SPANISH FORK, UT
ELEVATION:	4,577'

OUTDOOR CONDITIONS:

WINTER:	HTG: 6° F
SUMMER:	CLG: 96° F

INDOOR CONDITIONS

WINTER:	HTG: 60° F
SUMMER:	CLG: 78° F

IF TEMPERATURES SHOWN DO NOT MATCH CONDITIONS DESIRED FOR THIS PROJECT CONTACT THE ENGINEER OF RECORD.

DESIGN CONTACTS

PROJECT MANAGER	SAMANTHA KOEPP
MECHANICAL ENGINEER:	MARK MAKIN
MECHANICAL DESIGNER:	JESSE EGAN

MECHANICAL SHEET INDEX

SHEET NUMBER	SHEET TITLE
MP0.1	MECHANICAL & PLUMBING NOTES
MP1.1	MECHANICAL & PLUMBING PLAN
MP5.1	MECHANICAL & PLUMBING DETAILS
MP6.1	MECHANICAL & PLUMBING SCHEDULES
MP7.1	MECHANICAL SPECIFICATIONS
MP7.2	MECHANICAL SPECIFICATIONS
MP7.3	MECHANICAL SPECIFICATIONS
MP7.4	MECHANICAL SPECIFICATIONS
MP7.5	PLUMBING SPECIFICATIONS
MP7.6	PLUMBING SPECIFICATIONS

PLUMBING SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

——SS——	SANITARY OR WASTE PIPING
— — — — —	VENT PIPING
ø	ROUND MEASUREMENT.
(P–#)	PLUMBING FIXTURE SYMBOL
⬡ M #	MECHANICAL EQUIPMENT SYMBOL
◇ #	KEYED NOTE REFERENCE

SUBMITTALS:

1. CONTRACTOR TO ALLOW 10 WORKING DAYS FOR SUBMITTAL TURNAROUND.
2. CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL EQUIPMENT AND MATERIALS IN A SINGLE PACKAGE. PIECEMEAL SUBMITTALS WILL BE RETURNED WITH A NOTE TO REVISE AND RESUBMIT.
3. SUBMITTALS WILL BE CHECKED FOR COMPLIANCE WITH CAPACITY REQUIREMENTS AND ELECTRICAL REQUIREMENTS. CONTRACTOR TO VERIFY THAT WEIGHTS, DIMENSIONS, AND DUCT CONNECTIONS ON SUBMITTED EQUIPMENT IS CONSISTENT WITH SCHEDULED EQUIPMENT PRIOR TO SUBMITTAL. CHANGES IN SCOPE BROUGHT ABOUT BY SUBMITTED EQUIPMENT THAT DOES NOT COMPLY WITH THE WEIGHTS, DIMENSIONS, OR CONNECTION LOCATIONS ON SCHEDULED EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

COMMISSIONING NOTES:

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL DOCUMENTATION TO THE OWNER AS PER THE LISTED 2018 IECC CODE REFERENCES BELOW:

C408.2.1 A COMMISSIONING PLAN SHALL BE DEVELOPED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND SHALL INCLUDE THE FOLLOWING ITEMS:

1. A NARRATIVE DESCRIPTION OF THE ACTIVITIES THAT WILL BE ACCOMPLISHED DURING EACH PHASE OF COMMISSIONING, INCLUDING THE PERSONNEL INTENDED TO ACCOMPLISH EACH OF THE ACTIVITIES.
2. A LISTING OF THE SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND A DESCRIPTION OF THE TESTS TO BE PERFORMED.
3. FUNCTIONS TO BE TESTED, INCLUDING, BUT NOT LIMITED TO CALIBRATIONS AND ECONOMIZER CONTROLS.
4. CONDITIONS UNDER WHICH THE TESTS WILL BE PERFORMED. AT A MINIMUM, TESTING SHALL AFFIRM WINTER AND SUMMER DESIGN CONDITIONS AND FULL OUTSIDE AIR CONDITIONS.
5. MEASURABLE CRITERIA FOR PERFORMANCE.

C408.2.4 PRELIMINARY COMMISSIONING REPORT. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL AND SERVICE HOT WATER FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW. THE REPORT SHALL BE IDENTIFIED AS "PRELIMINARY COMMISSIONING REPORT," SHALL INCLUDE THE COMPLETED COMMISSIONING COMPLIANCE CHECKLIST, FIGURE C408.2.4, AND SHALL IDENTIFY:

1. ITEMIZATION OF DEFICIENCIES FOUND DURING TESTING REQUIRED BY THIS SECTION THAT HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION.
2. DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS.
3. CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.
4. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
5. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS, INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.

C408.2.4.1 ACCEPTANCE OF REPORT. BUILDINGS, OR PORTIONS THEREOF, SHALL NOT BE CONSIDERED AS ACCEPTABLE FOR A FINAL INSPECTION PURSUANT TO SECTION C105.2.6 UNTIL THE CODE OFFICIAL HAS RECEIVED THE PRELIMINARY COMMISSIONING REPORT FROM THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT.

C408.2.4.2 THE CODE OFFICIAL SHALL BE PERMITTED TO REQUIRE THAT A COPY OF THE PRELIMINARY COMMISSIONING REPORT BE MADE AVAILABLE FOR REVIEW BY THE CODE OFFICIAL.

C408.2.5 DOCUMENTATION REQUIREMENTS. THE CONSTRUCTION DOCUMENTS SHALL SPECIFY THAT THE DOCUMENTS DESCRIBED IN THIS SECTION BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

DOCUMENTS SHALL INCLUDED BUT ARE NOT LIMITED TO: DRAWINGS, MANUALS, SYSTEM BALANCING REPORT, AND FINAL COMMISSIONING REPORT.

PROJECT MECHANICAL NOTES:

1. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL A 7–DAY PROGRAMMABLE THERMOSTAT FOR EACH HEAT PUMP. VERIFY THERMOSTAT LOCATION WITH OWNER REPRESENTATIVE IN FIELD. INSTALL THERMOSTAT AT 48" A.F.F.. PROVIDE AND INSTALL A HEAVY DUTY VANDAL RESISTANT COVER IN ALL COMMON AREAS.
2. COORDINATE EXACT LOCATION OF ALL MECHANICAL UNITS WITH GENERAL CONTRACTOR. VERIFY IN FIELD.
3. PROVIDE AND INSTALL ALL NECESSARY COMPONENTS FOR FAN COIL/HEAT PUMP UNIT SYSTEMS. (IE REFRIGERANT LINES, CONDENSATE PIPING, ACCESS PANELS (FIRE RATED AS REQUIRED), MOUNTING/SUPPORT HARDWARE, ETC.) ALL PER MANUFACTURERS RECOMMENDATIONS.
4. MECHANICAL CONTRACTOR TO PROVIDE DOCUMENTATION OF REQUIRED MANUFACTURER START–UP FOR EQUIPMENT INCLUDING MANUFACTURER, MODEL NUMBER, SERIAL NUMBER, COOLING CAPACITY, ALL ENTERING AND LEAVING TEMPERATURES, CONNECTED CIRCUIT VOLTAGE, AND VERIFICATION OF PROPER FUNCTION OF THERMOSTAT. CONTRACTOR SHALL PROVIDE MANUALS FOR EQUIPMENT AND NAME OF SERVICE AGENCY.
5. ALL FRESH/OUTSIDE AIR INTAKES SHALL BE 10 FEET MIN. FROM ALL EXHAUST & PLUMBING VENTS.
6. HEATING LOADS COMPLETED USING CHVAC OR OTHER APPROVED CALCULATION METHODS.
7. REFRIGERANT PIPING INSULATION.
   - 1.1. INSULATE ALL REFRIGERANT SUCTION PIPING WITH 1/2" THICK FLEXIBLE FOAMED PLASTIC CLOSED CELL PIPE INSULATION.
   - 1.2. INSULATION SHALL HAVE A "K" FACTOR OF NOT MORE THAN .26 AT 70°F AND A WATER VAPOR TRANSMISSION RATE OF 0.1 PERM–INCH OR LESS IN CONFORMANCE WITH ASTM C–177 & ASTM C–355 WATER METHOD.
   - 1.3. WHEN INSULATION IS EXPOSED TO SUNLIGHT WRAP WITH POLYTAPE WITH ONE THIRD OVERLAP.
   - 1.4. INSTALL INSULATION BY SLITTING TUBULAR SECTIONS AND APPLYING OVER PIPING.
   - 1.5. PAINT ALL INSULATION AND/OR TAPE EXPOSED TO THE EXTERIOR WITH ULTRAVIOLET RESISTING PAINT.
8. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED.

PROJECT PLUMBING NOTES:

1. SEE PIPING SCHEMATIC FOR ADDITIONAL INFORMATION ON WASTE & VENT PIPING DIAMETERS.
2. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. CONCEAL ALL PIPING IN FINISHED AREAS.
3. PROVIDE AND INSTALL 2"ø SEWER LINE. FIELD LOCATE. MAKE CONNECTION TO COMPLETE SEWER SYSTEM. VERIFY ALL INVERT ELEVATIONS AND ALL REQUIREMENTS WITH OWNER REPRESENTATIVE AND CIVIL PLANS.
4. PIPING LOCATIONS ARE GRAPHICALLY SHOWN. PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL PIPE ROUTING IN FIELD PER AVAILABLE SPACE AND BUILDING CONSTRUCTION.
5. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE AND INSTALL ALL REQUIRED CLEANOUTS. CLEANOUTS FOR HORIZONTAL DRAINS SHALL BE INSTALLED NO MORE THAN 100' APART. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45°. A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK. CLEANOUTS SHALL BE ACCESSIBLE AND THE SAME SIZE AS THE WASTE LINES ON WHICH THEY ARE INSTALLED.
6. COORDINATE WITH OTHER TRADES TO ENSURE AND ALL PLUMBING VENTS ARE A MINIMUM OF 10–FEET FROM ALL FRESH AIR INTAKES.
7. SANITARY WASTE AND VENT PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2018 IPC TABLES 702.1, 702.2 AND 702.3 & 702.4.
8. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

REGISTERED PROFESSIONAL ENGINEER
4858829
MARK L. MAKIN
5/12/22
STATE OF UTAH

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FIBER HUT PLANS

MECHANICAL & PLUMBING NOTES

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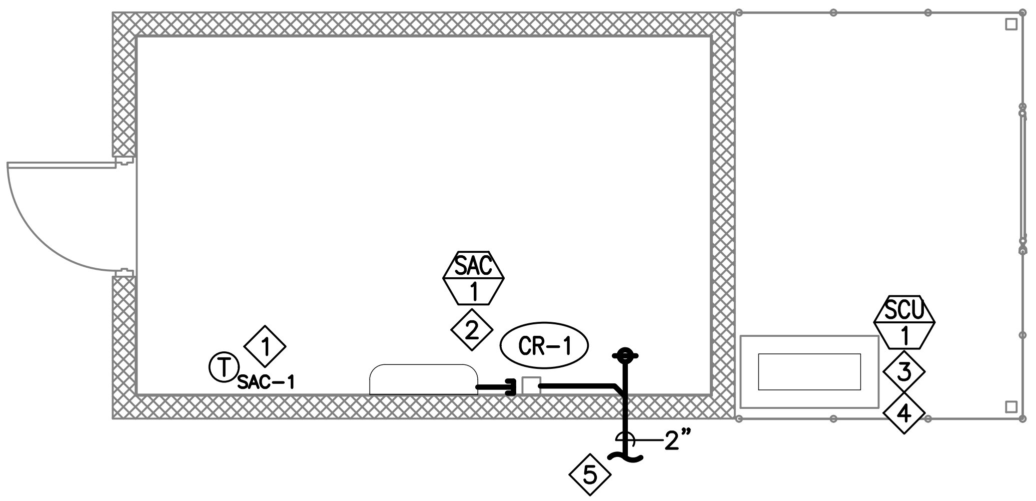
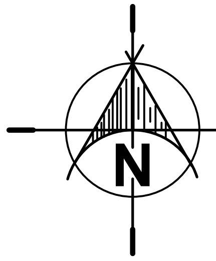
MECHANICAL KEYED NOTES:

1. FIELD VERIFY THERMOSTAT LOCATION WITH OWNERS REPRESENTATIVE. INSTALL THERMOSTAT AT 48" A.F.F..
2. PROPOSED LOCATION OF WALL-MOUNT FAN COIL UNIT. FIELD VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE. CONTRACTOR SHALL MAKE CONNECTION TO OUTDOOR UNIT. ROUTE CONDENSATE PIPING TO CR-1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. PROPOSED LOCATION OF OUTDOOR CONDENSING UNIT FOR INDOOR FAN COIL ON PAD. PENETRATION FOR REFRIGERANT PIPING SHALL BE THROUGH THE WALL. FIELD VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE AND INSTALL 4" HOUSEKEEPING PAD FOR CONDENSING UNITS BY MECHANICAL CONTRACTOR. PROVIDE MANUFACTURER REQUIRED CLEARANCES.
5. ROUTE CONDENSATE DRAIN PIPING FROM INDOOR FAN COIL UNIT TO GRAVEL SUMP ON EXTERIOR OF BUILDING. FIELD VERIFY EXACT LOCATION WITH CIVIL UTILITIES.





MECHANICAL & PLUMBING PLAN

SCALE: 3/16" = 1'-0"

NOTE:
CONDENSATE TO BE PIPED IN A WAY TO PREVENT IT FROM FREEZING DURING THE WINTER. CONTRACTOR TO ENSURE THAT PIPING CAN REACH GRAVEL SUMP OR CITY SEWER CONNECTION WITHOUT FREEZING DURING WINTER OPERATION.

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MECHANICAL &
PLUMBING PLAN

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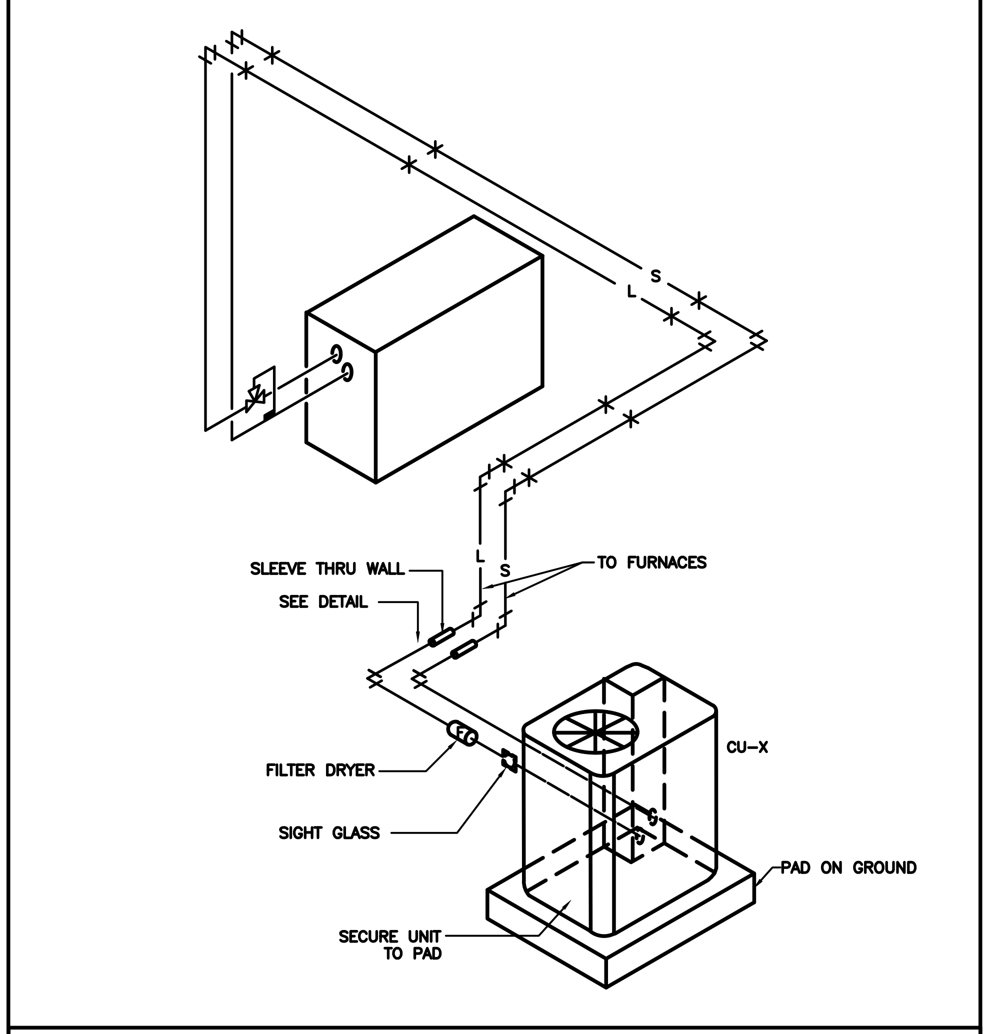
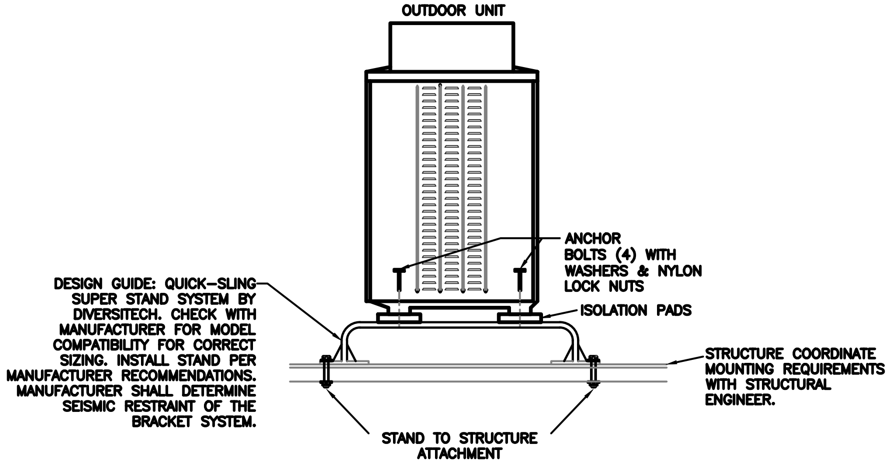


TYPICAL REFRIGERANT SCHEMATIC (CU ON GROUND)

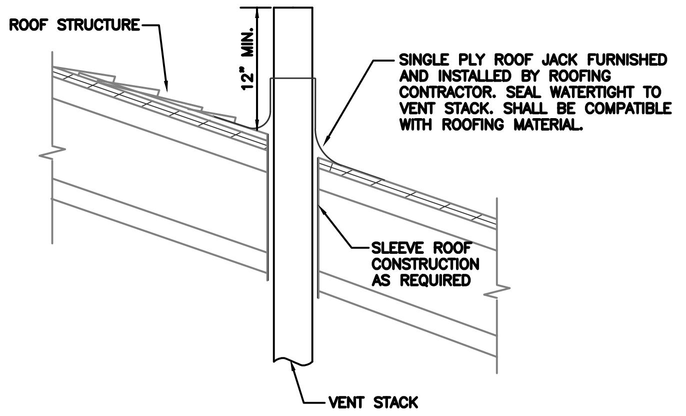
SCALE: NONE


OUTDOOR UNIT
ANCHOR BOLTS (4) WITH WASHERS & NYLON LOCK NUTS
ISOLATION PADS
DESIGN GUIDE: QUICK–SLING SUPER STAND SYSTEM BY DIVERSITECH. CHECK WITH MANUFACTURER FOR MODEL COMPATIBILITY FOR CORRECT SIZING. INSTALL STAND PER MANUFACTURER RECOMMENDATIONS. MANUFACTURER SHALL DETERMINE SEISMIC RESTRAINT OF THE BRACKET SYSTEM.
STRUCTURE COORDINATE MOUNTING REQUIREMENTS WITH STRUCTURAL ENGINEER.
STAND TO STRUCTURE ATTACHMENT

NOTES:
1. INSTALL UNIT LEVEL OR, IF ON A SLOPE, MAINTAIN SLOPE TOLERANCE OF 2 DEGREES (OR 2 INCHES PER 5 FEET).
2. COORDINATE WITH ARCHITECTURAL FOR MOUNTING HEIGHT REQUIREMENTS
3. PROTECT ADJACENT SURFACE(S) TO AVOID EXPOSURE OF ADJACENT SURFACE TO UNIT REFRIGERANT AND OIL DURING INSTALLATION.
4. FOLLOW ALL MANUFACTURER RECOMMENDATIONS.
5. VERIFY STAND LOCATION(S) WITH STRUCTURAL AND ARCHITECTURAL PLANS.
6. INSTALL UNIT WITH MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL SIDES OF THE UNIT. SEE UNIT MANUFACTURER INSTALLATION MANUAL FOR RECOMMENDED DISTANCES.
7. SECURE STAND TO STRUCTURE UNDER THE DIRECTION OF THE STRUCTURAL ENGINEER AND PER MANUFACTURER RECOMMENDATIONS.

TYPICAL OUTDOOR UNIT ON STAND DETAIL

SCALE: NONE


ROOF STRUCTURE
12" MIN.
SINGLE PLY ROOF JACK FURNISHED AND INSTALLED BY ROOFING CONTRACTOR. SEAL WATERTIGHT TO VENT STACK. SHALL BE COMPATIBLE WITH ROOFING MATERIAL.
SLEEVE ROOF CONSTRUCTION AS REQUIRED
VENT STACK

TYPICAL VENT THROUGH SLOPED ROOF DETAIL

SCALE: NONE

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FIBER HUT PLANS

MECHANICAL & PLUMBING DETAILS

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SPLIT SYSTEM HEAT PUMP INDOOR & OUTDOOR UNITS

INDOOR UNIT							OUTDOOR/HEAT PUMP UNIT								REMARKS
					ELECTRICAL			ELECTRICAL							
MARK	DESIGN GUIDE	NOMINAL SUPPLY CFM	NOMINAL COOLING BTU/H	NOMINAL HEATING BTU/H	VOLTAGE (DC VOLTS)	UNIT MCA	DESIGN GUIDE	VOLT/PH/HZ	UNIT MCA	UNIT MOCP	REFRIGERANT	SEER	HSPF	MARK	
SAC 1	MITSUBISHI PKA-SERIES	810	34,200	37,000	24	1	PUZ-SERIES	230/1/60	18	40	R410A	14	9.3	SCU 1	1 – 9

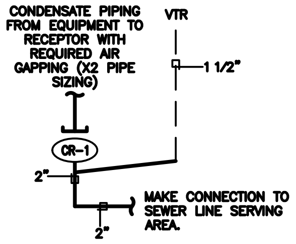
1. SITE CONDITIONS ARE 96/62 DEG. DB/WB SUMMER, 6 DEG. F DB WINTER, AND AN ELEVATION OF 4,577' FEET ABOVE SEA LEVEL.
2. APPROVED MANUFACTURERS: DAIKIN, MITSUBISHI, FRIEDRICH, FUJITSU, SANYO. (SUBJECT TO DOCUMENT CONFORMANCE)1 STAGE HEATING AND COOLING.
3. WITH R410a REFRIGERANT.
4. PROVIDE AND INSTALL ALL REQUIRED MOUNTING HARDWARE.
5. PROVIDE AND INSTALL CONDENSATE PIPING TO NEAREST PLUMBING DRAIN.
6. WITH LOW AMBIENT KIT TO ALLOW OPERATION TO -10 DEG. F.
7. FACTORY THERMOSTAT CONTROLS.
8. PROVIDE SNOW STAND AND WIND BAFFLES AS REQUIRED FOR YEAR ROUND OPERATION.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE CONNECTION BETWEEN INDOOR AND OUTDOOR UNIT.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	PIPE SIZE					REMARKS
		TRAP	WASTE	VENT	C.W.	H.W.	
CR-1	CONDENSATE RECEPTOR	2"	2"	1 1/2"	——	——	CONDENSATE RECEPTOR WITH HUB FUNNEL FOR CONDENSATE FROM HIGH EFFICIENCY EQUIPMENT. PROVIDE AND INSTALL TRAP GUARD.

NOTES:
1. VERIFY ALL MANUFACTURERS, FINISHES, AND OPTIONS WITH OWNER BEFORE ORDERING ANY PLUMBING FIXTURES.

2. MINIMUM UNDERGROUND SANITARY SEWER PIPING SIZE SHALL BE 2 INCHES.


CONDENSATE PIPING FROM EQUIPMENT TO RECEPTOR WITH REQUIRED AIR GAPPING (X2 PIPE SIZING)
VTR
1 1/2"
CR-1
2"
MAKE CONNECTION TO SEWER LINE SERVING AREA.
2"

TYPICAL CONDENSATE

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SFCN FIBER HUTS

FIBER HUT PLANS

MECHANICAL & PLUMBING SCHEDULES

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

4858829
MARK L. MAKIN
5/12/22

DRAWING #: MP6.1

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SECTION 23 Mechanical – GENERAL PROVISIONS

Not all specification items are used in every project.

PART 1 – GENERAL

– **Scope:**

A. Provisions of this section apply to all work specified in all sections under Division 23.

B. In addition, work in Division 23 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.

C. Contractor is responsible for results deviating from the plans.

– **Examination of Premises:** Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.

– **The Mechanical Contractor** shall be licensed and hold a current contracting license that has been valid for a minimum of two years as a Mechanical Contractor in the State where the project is located.

– **The Mechanical Contractor** shall have a minimum of five years experience installing commercial cooling and heating systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers as a separate document in addition to the mechanical bid submitted if required by the General Contractor.

– **The Mechanical Contractor** shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the mechanical bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.

– **Regulations, Permits, Fees, Charges, Inspections:**

A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IBC, IMC, IPC, NEC, NFPA codes and all City codes.

B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards.
1. 2018 International Mechanical Code
2. 2018 International Building Code
3. 2018 International Energy Code
4. 2018 International Plumbing Code
5. 2018 International Energy Code
6. 2018 International Fuel Gas Code
7. ASHRAE 90.1 – 2016

***Current codes adopted by the respective jurisdiction will supercede this list of codes.

C. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.

D. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.

1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.

D. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.

– **Drawings and Specifications:**

A. Refer to Division 1 for information on submittals and shop drawings.

B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.

– **Record Drawings:** Provide record drawings for all work under sections in Division 22 & 23. See Division 1 for detailed requirements covering preparation of record drawings.

– **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

Approvals of Materials and Equipment: Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.

– **Cooperative Work:**

A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.

B. Cooperative Work Includes:

1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 & 23 but provided under other divisions of these specifications.

2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 23.

3. Electrical work as specified herein. Refer to Division 26 for requirements.

– **Construction Facilities:**

A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.

B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.

– **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 23 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.

– **Mechanical Wiring:**

A. Provide all temperature control wiring, all interlock wiring, and equipment control wiring for the equipment that is to be provided under this Division unless specifically shown on electrical drawings.

B. All wiring shall be not less than No. 14 insulated, color coded wire in electrical metallic tubing. Installation shall comply with Division 26.

C. Before ordering motors, equipment, etc., verify the available voltage and phase with the electrical trades.

– **Electrical Work:**

A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.

B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.

C. Under the Automatic Temperature Control section of these specifications, furnish and install all wiring, conduit, electric automatic temperature control devices, thermostats, relays, pneumatic electric switches, automatic control switches and pilot lights. See the Automatic Temperature Control Section, for additional detailed information.

D. All loose starters and control devices for equipment furnished under Division 23 (except as otherwise specified under Automatic Temperature Control Section) are to be furnished under that particular section of Division 23 and installed under the electrical division.

E. Contractor shall be responsible for the checking and testing of all controls and the interlocks for a complete and satisfactory operating system.

F. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.

G. Submit a complete list of all motors prior to final closeout of job indicating the location, horsepower, voltage, phase specified in Table 132 of ANSI B.1.

H. All field wiring and equipment must conform to the applicable section of the Electrical specifications, Division 26.

– **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:

A. ASME Boiler and Pressure Vessel Code

B. Section IX ANSI Code for Power Piping: B31.1

– **Product Handling**

A. Protection: Take all precautions necessary to protect the materials of this section, before, during and after installation.

B. Replacements: In the event of damage immediately repair all damaged and defective work to the approval of the Engineer, at no additional cost to the Owner.

– **Job Conditions**

A. Examination of site: Examine the site and include in bid proposal all conditions under which work is to be performed.

– **Miscellaneous**

A. Permit and Fees: Apply and pay for all necessary permits, inspections, examinations and fees or charges required by Public Authorities having jurisdiction.

B. Locations and Accessibility: Contractor shall fully inform himself regarding peculiarities and limitations of space available for installation of work under this section. Valves, motors, controls and other devices requiring service. Maintenance and adjustments shall be placed in fully accessible positions and locations, provide access doors where required in ductwork and/or construction whether specifically detailed or not, and mender all such devices accessible.

C. Scaffolding: Furnish all scaffolding, rigging and hoisting as required for the proper execution of the work.

D. All HVAC equipment shall be labeled. Information on labels shall include: Identification number and name same as the drawings, flow and static pressure and the area to which the unit serves. Labels shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$ inch high.

E. All gas fired equipment shall include a label indication that the appliance has been adjusted, modified or re–calibrated for the altitude wherein the project is to be located. The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.

– **Submittals**

A. Shop Drawings: Within 15 days after award of contract, and before any of the materials of this section are fabricated and delivered to the jobsite, submit complete shop drawings and equipment submittals for the Engineer to review in accordance with these specifications. show all details of all ductwork and equipments pads.

B. Product Data:
1. Submit six (6) copies of all manufacturer's product data simultaneously with all shop drawings submittals.

2. Product data to include, all air conditioning equipment, hangers, fans and other standard items as required to complement shop drawings for a submittal indications products to be used on this work.

C. Record Drawings: Maintain throughout the progress of the work project record drawings and submit to the Owner.

D. Operating Manuals and Maintenance Manuals:

1. Submit four (4) copies of all operating instructions and maintenance manuals.

2. Fully instruct Owner's operating personnel and demonstrate performance, operation and maintenance of equipment. Amount of allocated for said instruction and demonstration of equipment and systems shall be part of these obligations. Submit to Engineer a letter signed by Owner's representative who will operate system stating that he has been fully instructed by contractor about operation and maintenance of equipment and system.

3. Submit one (1) additional set of approved instructions and one (1) additional set of approved control diagrams.

E. Guarantees: In addition to equipment warranties, furnish a written guarantee against defects in materials and workmanship for one year. Guarantee shall include repair of damage to, or replacement of any part of equipment or premises caused by leaks or breaks in pipe or equipment provided under this section.

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MECHANICAL SPECIFICATIONS

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1 CITY CMNTS	JE	05/10/2022

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– Equipment Identification

A. Except for individual room heating units and items furnished under temperature control all items of mechanical equipment, including fans, pumps, boilers and electrical switches and starters for mechanical equipment and gauges shall be labeled.

B. Information on labels shall include the following:

1. Identification number and name. Generally this number and name shall be the same as that shown on the drawings or in the specs.
2. If the item is a fan or pump, the flow and head shall be indicated.
3. If the item is part of a unit, the label shall have in addition to its item number, the number of the main item it is serving.
4. Valves shall be tagged with the area served and their normal operating positions shall be indicated.
5. Where the main unit is served by the valve is apparent, only the valve function needs to be included on the nameplate.

C. The types of Nameplates shall be as follows:

1. The valve tags shall be $\frac{1}{2}$" embossed aluminum tapes with identification on one side for valves. Tags for magnetic starters shall be screwed to the metal starter cover. Gags sags shall be Addressograph No. B–5300.
2. Equipment nameplates shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$" high.

D. Valve tags shall be connected to valve stems by steel rings or chains. Screws shall be used for equipment labels prior to installation. The contractor shall submit to the Engineer a complete list of all valves and each item of equipment to be identified with the proper identification.

PART 2 – PRODUCTS

– Machinery Drives:

A. Use V–belts designed for 150% of capacity for all belt drives. For multiple belt drives, use matched sets, so marked at the factory.

B. On drives with not more than two belts, provide adjustable pitch motor sheaves with the midpoint of the adjustment range equal to that required to achieve the specified fan capacity.

C. On motors with drives with more than two belts, furnish nonadjustable sheaves, providing the specified fan capacity.

– Machinery Accessories:

A. Lubricating Devices: Provide all oil level gauges, oil pressure gauges, grease cups, grease gun fittings, as required by the equipment. Extend all lubricating fittings to readily accessible locations.

B. Guards: Provide totally–enclosed OSHA type belt guards for all rotating equipment. Design guards to be readily removable for access to belt drives.

– Equipment Design and Installation:

A. Uniformity: Unless otherwise specified, provide all equipment of same type or classification by the same manufacturer.

B. Design: Design all equipment in accordance with ASME, AGA, UL and other applicable technical standards as follows:

C. Pressures vessels – ASME Code constructed and stamped

D. Electric appliances – UL labeled

E. Fire protection equipment – UL approved and labeled

F. Fans – AMCA rated and stamped

G. Cooling equipment – ARI certified

H. Fire dampers, smoke dampers, combination fire and smoke dampers – UL listed

I. Concrete Inserts:

1. The work under this section includes furnishing and installing all concrete inserts required for all materials and equipment specified herein or in other sections of Division 23.

2. Provide concrete inserts equal to Unistrut Series 3200 with standard, plain, oiled finish. Provide exposed Unistrut pipe supports with factory finished enamel paint.

– Temperature Controls

A. Thermostats shall be provided with the air conditioning units. They shall be installed and wired by the HVAC contractor. T–stats for AC units shall be programmable with night setback and override control.

– Equal Materials and Substitutions

A. In addition to manufacturers specified, the following shall also be considered equal. Provided corresponding models meet specified requirements. Equivalent substituted equipment named herein shall be submitted to Architect for approval. Submit alternate selections for prior approval. Must be received by Engineer 10 days prior to due date/bid opening.

Split System: From manufacturers listed in the schedule.

– Refrigerant Lines

A. Refrigerant lines are to be sized as per manufacturer's requirements. Lines to be fully insulated with 1 inch foam flex or equal. Insulation exposed to the sun shall be painted with two coats of protective paint. The system is to be evacuated to 200 microns, hold vacuum 24 hours. Break with freon and leak test with halide detector. Each heat pump to be provided with a refrigerant line kit.

– High Wall Fan Coil Unit

A. Furnish and install indoor, wall–mounted, direct expansion, fan coil unit to be used without ductwork. Unit shall consist of tangential, direct–drive fan. Fan motor, cooling coil, piping connections, electrical controls, microprocessor control system, integral temperature sensing, and factory–supplied mounting bracket. Unit shall be capable of being used in a refrigerant circuit with a matching air–cooled outdoor condensing unit. Cabinet discharge and inlet grilles shall be attractively styled, high impact polystyrene. Cabinet shall be fully insulated for improved thermal and acoustic performance. Fan shall be tangential direct–drive blower type with air intake at the upper front face of the unit and discharge at the bottom front. Automatic, motor–driven vertical air sweep shall be provided standard. Air sweep operation shall be user selectable. Horizontal direction may be manually adjusted and vertical air sweep may be manually set. Coil shall be copper tube with aluminum fins and galvanized steel pan under the coil shall have a drain connection for hose attachment to remove condensate. Condensate pan shall have internal trap and auxiliary drip pan under coil header. The size oo9 and 012 units shall use capillary tubes in the outdoor unit for refrigerant control, and the size 018, 024 units shall use an accessory accurater piston refrigerant metering device in the indoor unit. Provide the following functions as a minimum: automatic restart, a timer function, temperature–sensing controls, evaporative coil, freeze protection, wireless infrared remote control, auto stop features, automatic air sweep control, dehumidification mode, fan–only operation, diagnostics, user–selectable fan speed control, and compressor restart time delay. Unit shall be rated per ARI standards 210/240 and shall be listed in the ARI directory matched system. Units shall be UL listed. Provide equipment from manufacturers listed in the equipment schedule.

– Split System Outdoor Heat Pump Unit

Model of size and capacity indicated. Units shall be complete assembled and tested complete with refrigerant charge and ready to operate. Total unit shall be UL listed and carry a UL label

A. Cabinet shall be constructed of galvanized steel, bonderized and coated with a power coat paint.

B. Coils shall be of nonferrous construction with aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed.

C. Compressors shall be hermetically sealed. Compressor will be mounted on rubber vibrations isolators.

D. Refrigerant circuit components shall include the following: Liquid tube shutoff valve with seat connections, suction tube shutoff valves with sweat connections, system charge of refrigerant R410, Compressor oil, accumulator, freezestat, and reversing valve.

E. Compressor fans shall be direct drive propeller type, discharging air upward. Fan motors shall be totally enclosed, 1–phase type class B insulation and permanently lubricated bearings, shafts shall be corrosion resistant. Fan blades shall be statically and dynamically balanced. Condenser fan openings shall be equipped with steel wire safety guards.

– Pipe Identification

A. Identification of piping shall be done with "Brady" or "Westline" labels. The color coding shall comply with OSHA ANSI Safety Color Coding Regulations.

B. The identifying color coded bands, legends, and directional arrows on piping and duct systems shall be located adjacent to each valve, at every point of entry and exit where piping pass through a wall or ceiling, on each riser and junction, every 50 feet on long continuous lines and adjacent to all special fittings (regulating valves, etc.)

C. Legends shall be applied on the color band on the perimeter of the pipe in a location that will be readily visible to operating personnel from the floor in the area.

D. Color coding shall follow ANSI standards:

MATERIAL	BACKGROUND COLOR	IDENTIFYING LEGEND	LETTERING
Domestic Cold Water	Green	Domestic Cold Water	White
Waste	Yellow	Waste Water	Black

– Pipe Hangers

A. All necessary structural members, hangers, and supports of approved design shall be provided to keep piping in proper alignment and to prevent transmission of injurious thrusts and vibrations. Pipe hangers shall generally be of the clevis pipe–clamp type with suspension bolts. All bolts shall have provision for vertical adjustment and shall be equipped with locknuts.

B. No hanger shall be welded directly to steel joist. Where joist occur, clips shall be installed and hanger rod attached to clips. All piping hung from joists shall be hung from joist panel points. Protective saddles shall be provided on all insulated piping at point of hanger. Hangers shall not penetrate insulation.

C. The following is schedule of maximum spacing for hangers or other supports and sizes of suspension rods for piping. In addition to the spacing listed, an additional hanger shall be provided 1 foot 0 inches from each pipe drop, rise, or turn.

Pipe Size	Rod Diameter	Maximum Spacing
1–1/4 inch and smaller	1/2 inch	6 Feet

D. Pipe hangers shall not be welded to metal pan floor. Pipe hangers shall be concrete inserts installed in holes drilled in concrete.

E. All hangers, supports, and anchors shall be assembled with heavy pattern, hexagon carbon steel nuts.

F. Perforated metal strap shall not be permitted.

G. all pipe hangers, inserts, trapezes, etc., and all necessary accessories required to support the piping shall be provided by this contractor.

H. All pipe hangers shall be installed outside of insulation on the insulated lines.

I. Manufacturers may be Blaw–Knox, Grinnell, or Pipe Shields, Inc.

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1 CITY CMNTS	JE	05/10/2022

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DRAWING #:
MP7.2

PART 3 – EXECUTION

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test, uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

E. Mechanical equipment installed on the roof shall not be installed any closer than 10'–0" to the edge of the roof unless there is a 42" high parapet or equipment guardrail.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test, uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

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– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

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MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
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DRAWING #:
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– **Owner–Furnished and Other Equipment:**

A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

– **Equipment Identification**

A. All major equipment shall bear firmly attached metal nameplates which state name of manufacturer, model number and electrical data.

– **Discrepancies**

A. In the event of discrepancy, immediately notify the Owner.

B. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

– **Initial Lubrication, Adjusting, and Filling Systems**

A. Before operating any mechanical system, equipment bearings shall be lubricated and bolts, pulleys, and other moving parts checked for alignment and tolerances in accordance with manufacturer's operating instructions. Vibrations and noise shall be suppressed.

– **Cleaning of Equipment, Materials and Premises**

A. Be painted smooth and clean, ready for painters. Clean entire premises of unused materials, rubbish, debris, grease spots and dirt left by subcontractor.

– **Equipment and Material**

A. Install all equipment and material per manufacturer's recommendations.

– **Accessibility**

A. Install work readily accessible for normal operation, reading of instruments, adjustment, service inspection and repair, provide access panels where indicated and required. Access panels shall be the responsibility of respective subcontractors.

B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–In."

– **Equipment Final Connections:**

A. Provide all piping and duct final connections for all equipment under Division 22 & 23 as required herein specified and indicated on the drawings.

B. Air Conditioning, Heating, and Ventilating: Provide final connections complete with necessary valves, drains, unions, flanges and duct connections for equipment furnished and installed under other sections of the specifications, except as otherwise designated. Included under the HVAC sections of the specifications are the final connections to the following:

1. Condensate drain piping from air conditioning equipment.

2. Supply, return, relief, outside air and exhaust duct connections for all equipment including exhaust fans.

3. Piping connections for all equipment.

– **Machinery Drives:** After tests have been performed on the air conditioning and air handling systems, make without cost not more than two changes in the size of the nonadjustable sheaves to obtain the required air quantities.

– **Machinery Accessories:**

A. Application: Do not install any equipment in an application not recommended by the manufacturer.

B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

– **Objectionable Noise and Vibration:** Construct and brace the metal partitions, ducts and sheet metal housings to prevent vibration or rattling when systems are in operation. Install connections to equipment so noise and vibration will not reach the conditioned area through ducts, piping, conduit, sheet metal work, or the building structure. Provide power–driven equipment suspended from the structure with spring type isolation.

– **Welding:**

A. Procedures:

1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

1. Manual shielded metal–arc.

C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

D. Welding Filler Material:

1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.

E. Preheat and Interpass Temperature:

F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

– **Operation**

D. Place system in operation and regulate and adjust to Owner's satisfaction. System shall operate quietly and without vibration or noise.

E. Contractor shall make necessary field adjustments for even temperatures throughout the project.

– **Certification**

A. Upon completion, the contractor shall inspect work of this section and deliver to Owner a written certification that installed materials and workmanship conform to specifications.

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MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #:
MP7.4

SECTION 22 PLUMBING – GENERAL PROVISIONS
Not all specification items are used in every project.

PART 1 – GENERAL

– **Scope:**

Furnish all labor, materials, equipment, appliances and necessary incidentals for the complete installation of all plumbing shown on the drawings and as specified.

A. Work specified in this section

1. Sanitary soil, waste and vent systems.
2. Domestic hot and cold water systems.
3. Domestic water heaters.
4. Furnish and set all sleeves for pipes passing through walls and floors.
5. Pipe covering, insulation and wrapping.
6. Excavation and backfill.
7. Rougn–in and final connections to air conditioning equipment of condensate drains.
8. All plumbing fixtures, water heaters, valves, and other miscellaneous items or equipment required for a complete installation.
9. Provide collars at fire rated penetrations.

B. Provisions of this section apply to all work specified in all sections under Division 22. All items indicated on site, Architectural, Mechanical, or Plumbing drawings are to be provided complete from point of connection to finished fixture in conformance with all governing authority requirements. Nothing in these drawings or specifications shall be construed to permit work in violation of governing codes.

C. In addition, work in Division 22 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.

1. Examination of Premises: Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.
2. The Plumbing Contractor shall be licensed and hold a current contracting license as a Plumbing Contractor that has been valid for a minimum of two years in the State where the project is located.
3. The Plumbing Contractor shall have a minimum of five years experience installing commercial plumbing systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers if required by the General Contractor.
4. The Plumbing Contractor shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the plumbing bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.

D. Contractor is responsible for results caused by deviating from the plans.

– **Regulations, Permits, Fees, Charges, Inspections:**

A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IMC, IPC, IECC, NEC, NFPA codes and all City codes.

B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards:

1. 2018 International Plumbing Code
2. 2018 International Building Code
3. 2018 International Mechanical Code
4. 2018 International Energy Conservation Code.

C. Current codes adopted by the respective jurisdiction will supercede the listed codes.

D. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.

E. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.

1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.

F. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.

– **Drawings and Specifications:**

A. Refer to Division 1 for information on submittals and shop drawings.

B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.

– **Record Drawings:** Provide record drawings for all work under sections in Division 22. See Division 1 for detailed requirements covering preparation of record drawings.

– **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

– **Approvals of Materials and Equipment:** Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 22 as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.

– **Cooperative Work:**

A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.

B. Cooperative Work Includes:

1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 but provided under other divisions of these specifications.

2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 22.

3. Electrical work as specified herein. Refer to Division 26 for requirements.

– **Construction Facilities:**

A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.

B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.

– **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 22 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.

– **Electrical Work:**

A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.

B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.

C. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.

D. Submit a complete list of all motors prior to final closeout of job indicating the locations, horsepower, voltage, phase specified in Table 132 of ANSI B.1.

E. All field wiring and equipment must conform to the applicable sections of the Electrical specifications, Division 26.

– **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:

A. ASME Boiler and Pressure Vessel Code

B. Section IX ANSI Code for Power Piping: B31.1

C. AWS D10.12.D10.12M Welded joints for gas piping.

– **Product Handling**

A. Protection: Take all precautions necessary to protect the materials of this section before, during, and after installation.

B. Replacements: In the event of damage, immediately repair all damaged and defective work to the approval of the Engineer, at not additional cost to the Owner.

– **Submittals:**

A. Manufacturer's Literature: Within 35 days after award of contract and before any of the materials of this section are delivered to the job site submit seven complete brochures of all materials and equipment, per Division 1 of the specifications.

B. Other Submittals:

1. Shop Drawings.
2. Sterilization Test Report
3. Test Data.

C. Sets in bound booklet form of written operating and maintenance instructions and brochures for equipment specified in this section. Fully instruct Owners Operating Personnel.

D. Record Drawings: Keep an accurate dimensioned record of As–Built locations and elevations, as referred to approved base datum, of buried concealed.

E. Operation and Maintenance Instructions: Deliver to Architect tow complete lines, manhole, cleanouts, valves, plugged tees, capped ends, and of work which is installed different from shown in the plans.

– **Miscellaneous:**

A. Examination of the site: Exercise care in examining the site and coordinate all work indicated on the drawings with existing conditions. Report to Architect in writing conditions that will prevent proper provisions of this work. Verify depth and location of all service lines with servicing companies having jurisdiction before excavating, by submission of the bid. The contractor warrants that he has familiarized himself with the existing conditions and will perform all work as required for hookup and as required by the contract documents at no additional cost.

B. Permits and fees: Arrange and pay for all permits, inspections and fee required by all governing agencies.

C. Service connections: Make all necessary arrangements with applicable utility company for connection to existing service lines. Pay all fees associated with work including meters, hookup charge and utility assessments fees.

D. Drawings: Coordinate all space requirements with other trades, drawings indicate desired location and arrangement of piping, equipment, and other items and are to be followed as closely as possible.

PART 2 – PRODUCTS

– **General**

A. Pipe sleeves and wrapping: Provide polished chromium plated and brass set screw flanges where plumbing piping pass through walls, floors, ceilings, and partitions in finished portions of building including flanges on pipes at fixtures. All sleeves in concrete and exterior walls shall be 20 GA. galvanized iron one inch O.D. larger than the pipe, caulked if below grade in a moisture proof manner. All pipes penetrating through fire walls and floors shall be properly safed with Dow Corning 3=6548 silicone RTV foam or equal. Install per manufacturer's directions.

B. Pipe Identification:

1. Piping identification per ANSI and OSHA Standards: Each individual pipeline shall be marked for quick and easy identification as to contents and character of material carried in the pipes by set on SNA or STR Marker.
2. Markers shall be installed and spaced at not more than 20 foot intervals and so located that markers shall be visible where piping is exposed.
3. Color scheme shall be as follows:

	Background or Color Band	Identification Marker
Domestic Hot Water –	Yellow	Black on Yellow
Domestic Hot Water Return –	Yellow	Black on Yellow
Domestic Cold Water –	Green	White on Green
Sanitary Sewer –	Green	White on Green
Sanitary Vent –	Green	White on Green
Natural Gas –	Yellow	Black on Yellow
Storm Water –	Green	White on Green
Freon –	Black	White on Black

C. One marker shall installed at each side of valves, special fittings and at branch take–offs. In furred spaces install one band 2 feet above floor and 19 inches below ceiling line.

D. Materials: Materials when not otherwise definitely specified shall conform to the applicable ASTM, ASME, AGA and ASA standards.

E. All gas fired equipment shall include a label indicating that the appliance has been adjusted, modified or re–calibrated for the altitude where in the project is to be located (Green Sticker). The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.

– **Pipe and Fitting Schedule:**

Pipe and Fittings:

A. No pipe of foreign manufacturer will be acceptable on projects required to meet the Buy American Act.

B. All piping, fittings, flanges, etc. shall be free from defects and shall comply with the appropriate ASTM specifications.

C. PVC pipe and fittings: ASTM D1785 Class 150 with ASTM D 2564 solvent cement joints unless otherwise specified. Schedule 40. PVC plastic pipe fittings: ASTM F 628, schedule 40.

D. Acrylonitrile Butadiene Styrene (ABS) plastic pipe: ASTM D 2661, schedule 40, ASTM F 628 schedule 40. ABS plastic pipe fittings: ASTM F 409, accessible and replaceable, solvent cement and threaded types, drain pattern.

E. Condensate drains shall be Type L hard copper tubing with wrought–copper fittings (can't be used for condensing gas–fired applications) or PVC pipe and fittings where allowed. A P–trap shall be provided at drains.

F. All soil, waste, vent, roof drain and roof drain overflow piping below ground shall be ABS or PVC plastic pipe, rated for domestic waste and vent, with ABS or PVC plastic socket type drain, waste vent pattern fittings, solvent cemented joints. Install ABS drainage pipe and fittings according to ASTM D661. Install PVC drainage pipe and fittings according to ASTM F891.

– **Roof Flashing:**

A. Sanitary Vent Flashings: SEMCO 1100–3 or 1100–5, with one–piece lead flashing and counterflashing sleeve.

– **Pipe Sleeves:**

A. At concrete walls for floors, adjust–to–crete, paramount, hole–out Sperzel Cretesleeve floor sleeves shall extend to top of concrete curbs for piping rising through floors. Wall sleeves shall be flush with finished surface, sleeves shall be sized to allow $\frac{1}{2}$ inch clearance around pipe insulation. Insulation and covering shall be continuous through wall and floor sleeves.

– **Cleanouts:**

A. Full size cleanouts shall be installed at the base of each soil waste stack. All other cleanouts shall be installed where shown on the drawings and where required by State, Local or National Plumbing Codes.

B. All cleanouts shall be installed in locations easily accessible for rodding. Cleanouts in wall shall be JR Smith 4402, in floors JR Smith 4023/ Cleanouts shall be JR Smith, Wade or Josam.

– **Pipe Insulation:**

A. All domestic hot water, hot water recirculation and cold water piping shall be covered with Owens Corning ASJ–25 fiberglass pipe insulation with vapor seal jacket. Insulation thickness shall be $\frac{1}{2}$ inch for cold water and 1 inch for hot water.

B. Insulate all piping under Lavatories accessible to physically handicapped with hot water supply and "P" trap prefabricated insulation, Handi Lav Guard.

– **Pipe Hangers:**

A. Hangers shall be supplied with factory installed isolation and DI–Chromate finish.

B. Pipe 2 inches and smaller: Grinnel F69. Pipe 2–1/2 inch and larger: Grinnel F65. Concrete Inserts: Grinnel 281 and 282. Riser clamps for copper piping: Grinnel 261P, plastic coated. Riser clamps for other piping: Grinnel 261,

C. Hanger rods shall conform to the following: Pipe size 2 inch and smaller: $\frac{3}{8}$ inch rods. Pipe size 2–1/2 inch and 3 inch: $\frac{1}{2}$ inch rods. Pipe size 3 inch and larger: $\frac{5}{8}$ inch rods.

– **Plumbing Fixtures:**

A. Fixtures shall be the water saving typer with maximum usage of 1.6 gallons per flush for water closets, 2.5 gallons per minute for showers, 3.0 gallons per minute for service sinks, 1.0 gallon per flush for urinals, 0.5 gallons per minute for public lavatories, 2.2 gallons per minute for private lavatories and 2.2 gallons per minute for sinks.

B. All fixtures shall be caulked to the floor or wall with water resistant white butyl rubber caulking compound. Trim for shall match in design. Supply faucets shall have renewable seats and barrels.

PLUMBING EQUIPMENT	MANUFACTURER
Floor Drains & Floor Sinks:	Zurn, JR Smith, Wade, Josam, Ancon, Mifab, Watts, or Equal
Cleanouts:	Zurn, JR Smith, Wade, Josam, Mikro, Mifab, Watts, or Equal
Insulation:	CertainTeed, Manville, Pittsburgh, Armstrong, LSP Products, or Owens–Corning
P–Traps:	American Standard, Kohler, McGuire, Brasscraft, Dearborn, EBC

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5/12/22

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PLUMBING SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #: MP7.5

PART 3 – EXECUTION

– **Surface Conditions:**

A. Inspection: All plumbing shall be installed in accordance with the requirements of all governing authorities, The original design, and referenced standards.

B. Discrepancies:

1. In the event of discrepancy, immediately notify the Architect.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved. Interferences between installed work of various trades due to lack of coordination shall be resolved by the Architect whose decision is final. Relocate or offset any work as required to accommodate work of other trades at no extra cost to the Owner when so directed by the Architect.

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Locations and Space Requirements:**

A. Contractor shall fully inform himself regarding peculiarities and limitation of spaces available for installation of work under this division. Drawings indicate desired location and arrangement of piping, equipment and other items and are to be followed as closely as possible. Work specified and not clearly defined by drawings shall be installed and arranged in a satisfactory manner. In any case and at any time a change in location required by obstacles or the installation of other trades not shown on the plumbing plans shall be made by contractor without additional charge provided the change is ordered before work is installed and no extra materials are required.

B. Verify all spaces, dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

C. Obtain all necessary rough in data and dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

D. Maintain ample headroom clearances and accessibility. Maintain ceiling heights.

E. Constantly check work of other trades to prevent interference with this installation.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test,uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Excavation and Backfill:**

A. Perform all necessary excavation, shoring and backfilling required for the proper laying of all pipes and conduits inside the building and premises, and outside as may be necessary. Conform to Division 2 requirements. Remove all excess excavated materials from the site or dispose of on site as directed by General Contractor.

B. Excavate all trenches open cut, keep trench banks as nearly vertical as practicable, and sheet and brace trenches where required for stability and safety. Excavate trenches true to line and make bottoms not less than 18" wide but no wider than necessary to provide ample work room. Grade trench bottoms accurately to provide uniform bearing and support for each section of pipe on undisturbed soil along its entire length. Dig "bell" holes after the trench bottom has been graded. Machine grade only to the top line of the pipes, doing the balance by hand. Do not cut any trench near or under footings without first consulting the Architect. Comply with OSHA requirements.

C. Provide backfilling and compaction in accordance with requirement of Division 2 and under the direction of the Architect and the Owner's testing firm to the required density. Make the first 2 feet of fill in 6" layers, each thoroughly compacted as directed, and free from rocks, large clods of earth, leaves, branches, and debris. Compact the rest of the backfill to prevent settlement as directed, using in the backfill no rocks larger than 4" in diameter, and using no rocks at all in the top 12".

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Plumbing: Provide all services designated and required, including waste and water. Valve and cap all stub–outs for water and gas. Cap all waste and vent outlets.

2. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

– **Owner–Furnished and Other Equipment:**

A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–in."

– **Equipment Final Connections:**

A. Provide all piping final connections for all equipment under Division 22 as required herein specified and indicated on the drawings.

B. Plumbing: Provide final plumbing connections complete with shutoff valves, risers, traps, vacuum breakers and indirect wastes for all equipment furnished and installed under other sections of these specifications, except as otherwise designated. Included under the Plumbing section of the specifications are the final connections to the following:

1. Miscellaneous equipment specified to be furnished and installed under other divisions of the specifications.
2. Cold water make–up connections to air conditioning equipment.
3. Kitchen equipment, furnished under other sections of the specifications.

– **Sterilization:**

A. Sterilize each unit that will have water in it, the water supply piping and distribution system with liquid chloride or hydrochloride before acceptance of operation in accordance with AWWA C601, "Standard for Disinfection Water Mains" work shall be done by contractor and unless otherwise required by Public Authorities having Jurisdiction, shall conform to the following:

B Materials

1. Liquid Chlorine: U.S. Army Specification 4–1. 2. Hydrochloride: Liquid shall conform to FED. Spec. O–C–11RA (INT. 4).

C. Method: Amount of chlorine shall provide a dosage of 50 PPM minimum. Introduce chlorinating materials into lines and distribution system in approved manner after a contact period of 24 hours during which period chlorine residual shall be maintained at 5 PPM minimum, flush out systems with clean water until residual content is not greater than 0.2 PPM. Flush entire system open and close valves in lines being sterilized several times during contact period.

D. Sterilization report shall be turned into the Engineer for review prior to requesting a substantial completion inspection.

– **Machinery Accessories:**

A. Application: Do not install any equipment in an application not recommended by the manufacturer.

B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

– **Pipe and Equipment Supports:**

A. Where supports, foundations, stands, suspended platforms for machinery, tanks, or other equipment are indicated or specified, perform the following:

1. Locate support members to avoid equipment strains and interference with piping connections, tube pulling or other maintenance operations.

2. Where saddles are required, use cast iron or welded steel saddles with curvature to fit the tank shell.

3. Mount power–driven equipment on common base with driver.

B. Concrete Inserts: Furnish and install all concrete inserts required for all materials and equipment specified and/or shown on the drawings for Division 22.

C. Concrete Foundations: Work under this section includes coordination of construction of all concrete foundations indicated or required for equipment specified herein or in other sections under Division 22. Materials and workmanship shall be described under Division 3.

D. Grout under all equipment after leveling, filling completely the space between machinery bed plate and foundation surface as specified in Division 3. Finish exposed surface of grout for a neat appearance.

E. Floor Stands: Where equipment is mounted standard or on legs, construct of structural steel or steel pipe and fittings, cross–brace and fasten with flanges or plates bolted to floor.

F. Ceiling or Wall Supports: Use suspended platform, strap hangers, bracket or shelf, whichever is most suitable for equipment and location. Construct of structural steel members, steel plates, rods or pipe as required. Cross–brace and fasten to building structure or inserts in an approved manner.

G. Steel Work: Neatly fabricate and erect steel work with burrs and welding spatter ground off. Paint after fabrication with a rust–inhibitive primer.

– **Hangers and Supports:**

A. Hold horizontal pipe runs firmly in place using approved steel and iron hangers, supports, and/or pipe rest unless otherwise indicated. Suspend hanger rods from concrete inserts or from approved brackets, clamps or clips. Hang pipes individually or in groups if supporting structure is adequate to support weight of piping and fluid. Except for buried piping, hang or support pipe runs so that they may expand or contract freely without strain to pipe or equipment.

1. Horizontal steel piping: Provide hangers or supports every 10 ft. except every 8 ft. for piping 1–1/4 inch and smaller.

2. Horizontal copper tubing: For 2 inch diameter and over, provide hangers every 10 feet, for 1–1/2 inch diameter and smaller every 6 feet.

3. Horizontal cast–iron no–hub piping: Provide hangers or supports at each side of no–hub fittings. Provide anti–separation bracing at each 90 degree change in direction.

4. Horizontal cast–iron hub and spigot piping: Provide hangers or supports at each hub.

5. Vertical piping: Support at floor with iron pipe clamps.

– **Test:**

A. Perform test to Architect's satisfaction. Make test in presence of Owner's Rep and at the time suitable to him if requested. Furnish necessary labor and equipment and bear cost for testing. Cost of replacing and/or repairing damage resulting therefor shall be borne by this contractor, should the contractor refuse or neglect to make test necessary to satisfy the Architect that requirement of specifications and drawings are met, such tests may be made by an independent testing company and the contractor charged for all expenses.

B. Hydrostatic test: Make by completely filling piping system with water and eliminating accumulations of air so that leakage, no matter how small, will be apparent on testing gauge immediately. Maintain pressure until pipe under test has been examined, but in no case less than 24 hours. Test system at the following pressure:

SYSTEM	TEST PRESSURE
Domestic Cold Water	150 PSIG
Domestic Hot Water	150 PSIG

C. Sanitary soil, waste, bent systems test: Before installation of fixtures, cap end of system and fill lines with water to 10 feet above the section being tested. (including bents) and allow to stand for at least fifteen (15) minutes before inspection starts. Make test in sections if necessary or convenient. However, include interconnections between new sections and previously tested section in the new test.

D. Roof drainage system: Test as specified for sanitary system.

E. Gas systems: Test with compressed air at 10 PSI for six hours or longer as directed to provide a tight seal without leaks. Use pressure recorder to record pressure of all lines for duration of test.

F. Repair all leaks and retest as required.

– **Cleanouts:**

A. Provide cleanouts where indicated and required. Unless otherwise indicated, cleanouts shall be accessible with extensions to grade to outside of buildings, or to floors above as indicated or required. Do not locate cleanouts in public lobbies and public corridors unless approved by Architect.

B. Membranes: Where waterproofing membrane occurs under floor, bring membrane to cleanout without puncturing and permanently anchor to integral anchoring flange with heavy cast–iron clamping collar and rustproof bolts.

C. Covers: Set cleanout covers with all finished wall, floor or grade. In all cases securely anchor by means of integral lugs and bolts. Where surfacing material such as resilient coverings is specified, ascertain thickness being used and set cleanout top so finished floor is smooth.

D. Use Acorn 3500 thread compound.

– **Pipe Installation:**

A. Make pipe runs straight and true. Springing or forcing piping into place is not permitted. Install in manner to prevent any undue strain on equipment. Make joints smooth and unobstructed inside and out, and ream pipe ends thoroughly to remove burrs. Conceal piping in finished portions of the building except as otherwise directed or indicated. Cap or plug ends and openings in pipe and fittings immediately to exclude dirt until equipment is installed or final connections are made.

B. Install piping to clear beams unless sleeving is indicated. Constantly check work of other trades to prevent interference with this installation. Obtain approval from Architect if coring or cutting of concrete work is necessary due to failure to install required sleeves prior to the time of concrete pour. Cost of coring and cutting work shall be borne by the subcontractor.

C. Exposed plated or enameled pipe: Make connections to equipment with special care. Show not tool marks or threads.

D. Dielectric Unions: Make connections between two dissimilar metal pipes with dielectric unions.

E. Unions: Provide a union on one side of each shutoff valve. At both sides of automatic valves. At equipment connections and elsewhere indicated or required, unless flanges are indicated.

F. Floor, wall ceiling plates: Provide where pipes pierce finished surfaces.

G. Noise: Install soil, waste, and water piping in a manner that prevents any unusual noise from flow of water under normal conditions.

H. Shutoff Valves: Provide where indicated and required for adequate control of system and for isolation of fixture groups and equipment.

I. Buried Pipe: Install with minimum 36 inches coverage unless otherwise indicated. Lay piping accurately to grade where invert elevations are indicated. When required provide thrust blocks per manufacturer's recommendations.

J. Equipment and Materials: Install per manufacturer's recommendations.

K. Accessibility: Install work readily accessible for normal operation, reading of instruments, adjustments, service, inspections and repair. Provide access panels where indicated and required.

L. Pipe Joints: Make screwed joints with a minimum amount of compound applied to the male thread only. All joints shall be made per code requirements and manufacturer's recommendations.

M. Provide pipe isolation at all hangers for non–insulated materials.

N. Piping Rough–in for Fixtures: Support or secure to building construction of firmly anchored waste piping so that pipes cannot be displaced. Do not secure to walls. Use of makeshift devices, such as rope, wire, tape, etc. is prohibited.

O. Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The minimum slope for horizontal pipe 4" or larger in diameter may have a slot of not less than 1% ($\frac{1}{8}$ inch per foot). The minimum slope of horizontal pipe less that 4'; may have a slope of not less than 2% ($\frac{1}{4}$ inch per foot).

– **Cleanup:**

A. In addition to cleanup specified under Division 1, thoroughly clean all parts of the equipment. Where exposed parts are to be painted, thoroughly clean off any splattered construction materials and remove all oil and grease spots. Wipe the surface carefully and scrape out all cracks and corners.

B. Thoroughly flush and clean out all water circulating systems. Remove, clean and replace all strainer elements.

C. During the progress of the work, keep the premises clean and free of debris.

– **Painting:**

A. Except as otherwise specified or indicated in the architectural drawings and/or specifications, paint all exposed unfinished metal with one coat of rust–inhibiting primer.

B. Finished painting is specified under Division 9.

– **Connections to Services:** Provide all connections to sanitary sewer lines, storm sewer, gas lines, water lines, electrical services furnished under other contracts, except as otherwise specifically designated. Provide all necessary tees, taps and connections required to properly connect to all mains. Verify all required City requirements before making any piping connections to sanitary sewer, storm sewer, water or gas piping and conform to them during installation.

– **Welding:**

A. Procedures:

1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

1. Manual shielded metal–arc.

2. Gas tungsten–arc.

3. Other welding processes may be used providing they are qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

D. Welding Filler Material:

1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.

E. Preheat and Interpass Temperature:

F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

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PLUMBING SPECIFICATIONS

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MP7.6

ELECTRICAL GENERAL NOTES:

1. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD, AND TO THE SATISFACTION OF THE ENGINEER.
2. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
3. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
4. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOF, ETC.
5. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
6. NO WIRING SHALL RUN IN DUCT WORK.
7. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED IN THE CONDUCTORS SMALLER THAN #10 AWG.
8. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
9. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND OTHER DRAWINGS PRIOR TO BID.
10. ALL JUNCTION BOXES SHALL HAVE MINIMUM DEPTH OF 2-1/8" UNLESS OTHERWISE SPECIFIED. SECURE ALL JUNCTION BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER PLASTER RINGS.
11. CONNECT ALL EM FIXTURES, NIGHT LIGHTS, EGRESS LIGHTS, AND EXIT SIGNS TO UNSWITCHED CONDUCTOR.
12. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
13. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC,) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH-IN.
14. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
15. ALL FIXTURES, DEVICES, CONDUIT, AND FITTINGS TO BE MADE OF NON-CORROSIVE MATERIAL FOR BUILDING INSIDE.
16. ALL PENETRATIONS THROUGH BUILDING STRUCTURE SHALL BE SEALED.

ELECTRICAL SYMBOLS

SYMBOL	EXPLANATION
———	BRANCH CIRCUIT ON/IN CEILING OR WALL
— — — —	BRANCH CIRCUIT IN GROUND
A-1,3	BRANCH CIRCUIT HOMERUNS TO PANEL
CH 1	MECHANICAL EQUIPMENT SYMBOL
◇1	KEYED NOTE REFERENCE
(42X)	FEEDER TAG (SEE FEEDER SCHEDULE)
▬	LIGHTING AND POWER PANELBOARD
⊛	SPECIAL RECEPTACLE
⊖	DUPLEX RECEPTACLE OUTLET
⊖ WP A-3 REF	WP —MODIFIER A-3 —PANEL SPACE ASSIGNMENT REF —EQUIPMENT DESIGNATION
WP	WEATHERPROOF COVER & LISTED WEATHER RESISTANT DEVICE
SYMBOL	EXPLANATION
F1	FIXTURE TYPE SYMBOL
▭	LINIER FIXTURE (TYPICAL)
▭	EMERGENCY LIGHTING UNIT
▭	WALL PACK
⊗	EMERGENCY LIGHTING UNIT
⊠◁	ALARM HORN/STROBE
C	CONDUIT
$	SINGLE POLE SWITCH (SUBSCRIPT AS INDICATED BELOW)
2	TWO POLE SWITCH
3	3-WAY SWITCH
M	MANUAL STARTER WITH THERMAL OVERLOAD

NOTE: ALL SYMBOLS MAY NOT BE USED.

DESIGN CONTACTS

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ELECTRICAL TEAM LEAD:	JOE HUTCHINGS
ELECTRICAL DESIGNER:	JOHNNY BENCH

SHEET INDEX

SHEET NUMBER	SHEET TITLE
E0.1	COVER SHEET
E1.0	POWER AND LIGHTING PLAN
E5.1	ELECTRICAL DETAILS
E5.2	ELECTRICAL DETAILS
E5.3	ELECTRICAL DETAILS
E5.4	ELECTRICAL DETAILS
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E7.1	ELECTRICAL SPECIFICATIONS
E7.2	ELECTRICAL SPECIFICATIONS
E7.3	ELECTRICAL SPECIFICATIONS
E7.4	ELECTRICAL SPECIFICATIONS

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COVER SHEET

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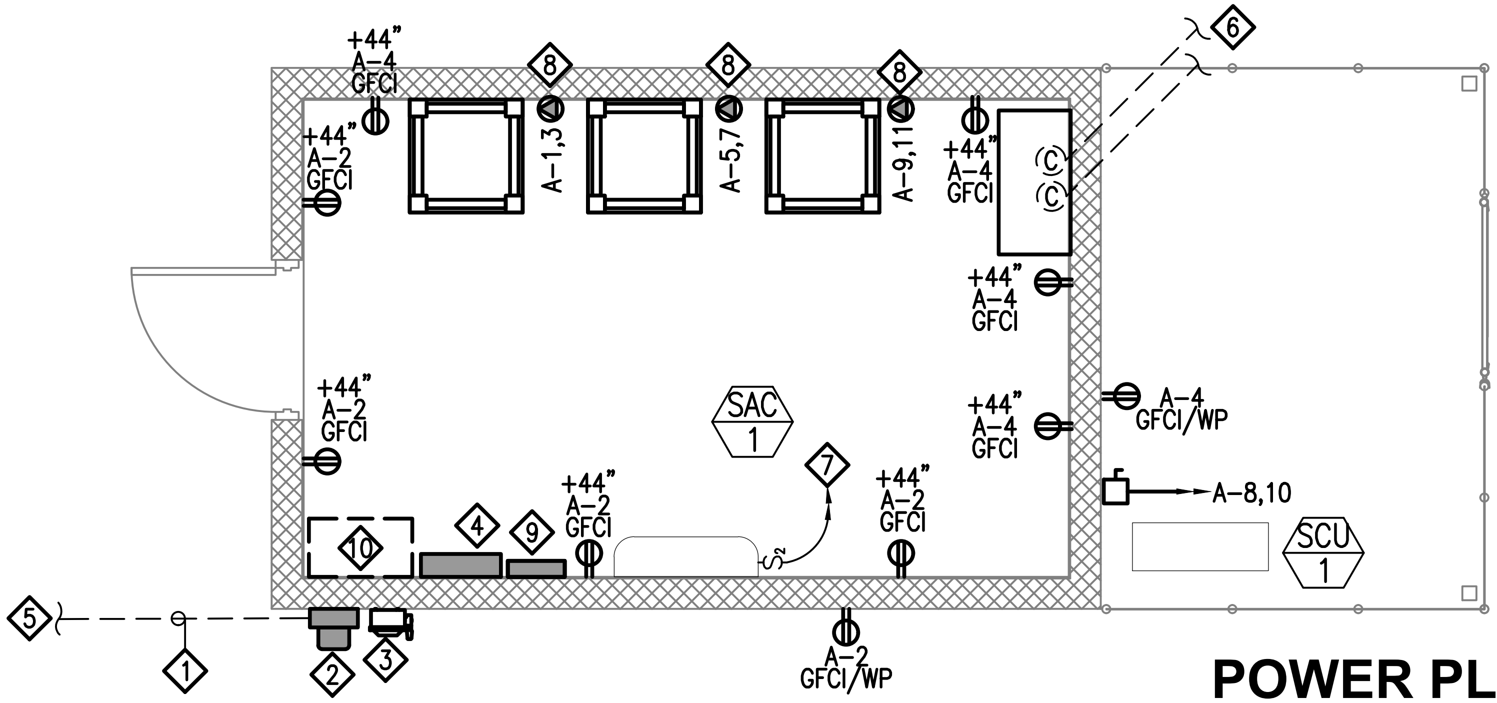
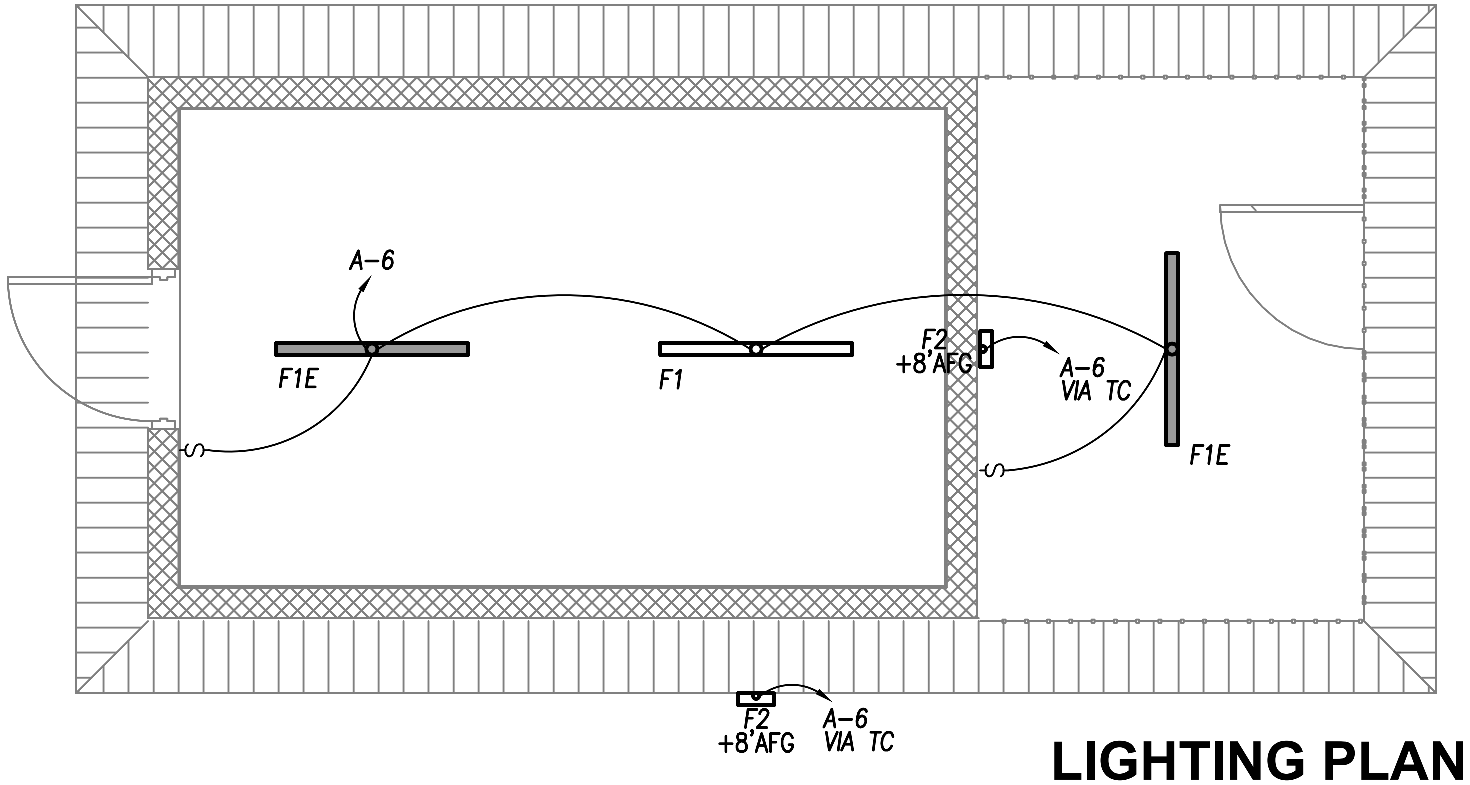


POWER PLAN
SCALE: 1/4" = 1'-0"



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

ELECTRICAL KEYED NOTES:

1. INSTALL CONDUIT TO EXISTING POWER POLE. VERIFY EXACT LOCATION WITH SPANISH FORK CITY POWER DIVISION.
2. METER.
3. MAIN BUILDING DISCONNECT.
4. PANELBOARD 'A'. SEE PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
5. SEE ONE LINE DIAGRAM ON SHEET E5.1 FOR DETAILS.
6. PROVIDE (2) 3" CONDUIT STUBBED OUTSIDE BUILDING FOOTING AND CAPPED. FOR FUTURE COMMUNICATIONS. COORDINATE LOCATION WITH OWNER.
7. SAC-1 POWERED BY SCU-1. PROVIDE INTERCONNECTING CONDUIT AND WIRE.
8. RECEPTACLE FOR SERVER RACK. VERIFY AMPERAGE AND TYPE WITH CITY BEFORE INSTALL.
9. PROPOSED LOCATION OF TIME CLOCK. CONNECT TO EXTERIOR LIGHTING.
10. PROVIDE ADEQUATE SPACE ON WALL FOR FUTURE PROPANE GENERATOR TRANSFER SWITCH.

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POWER AND LIGHTING PLAN

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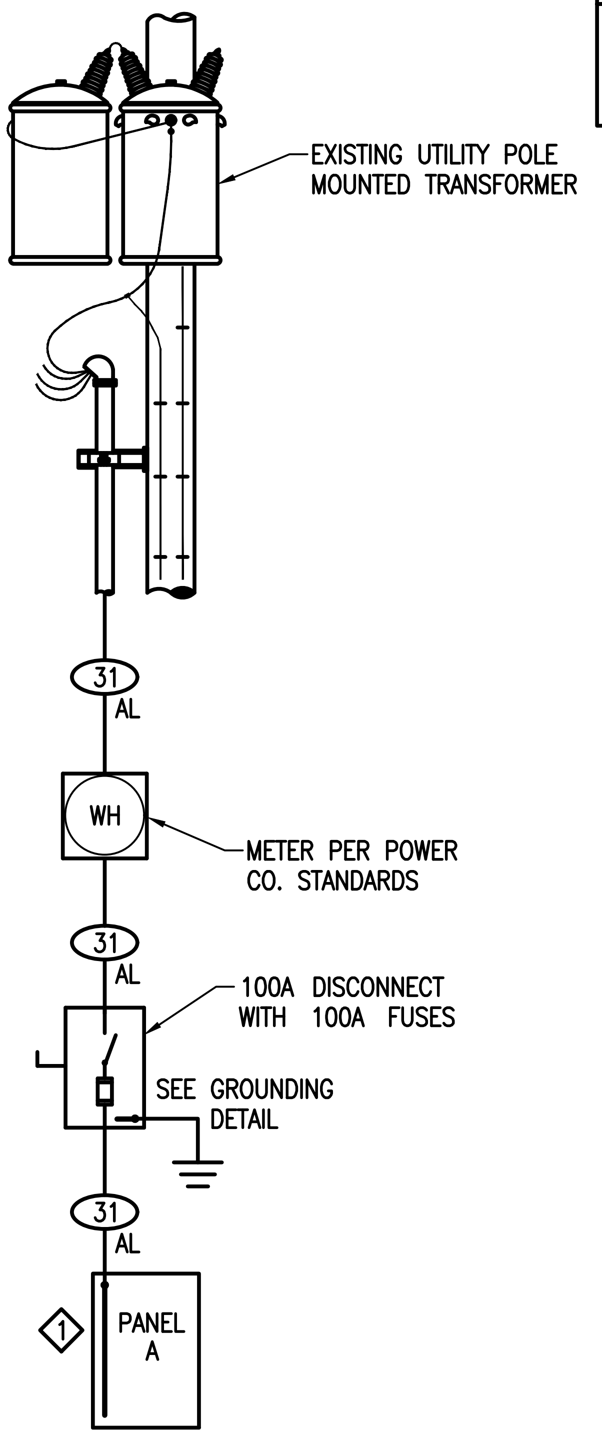
EXISTING UTILITY POLE MOUNTED TRANSFORMER
31 AL
WH
METER PER POWER CO. STANDARDS
31 AL
100A DISCONNECT WITH 100A FUSES
SEE GROUNDING DETAIL
31 AL
1
PANEL A

KEYED NOTES:

1. PROVIDE AVAILABLE FAULT CURRENT FIELD MARKINGS AT PANEL PER NEC 110.24.

1 POWER ONE-LINE DIAGRAM

SCALE: NTS

ALUMINUM FEEDER SCHEDULE

TYPE	CONDUIT SIZE		CONDUCTORS		70°C AMP RATING
	PVC	EMT	QUAN.	SIZE	
38 AL	3/4"	3/4"	3	#8	40
33 AL	1-1/4"	1-1/4"	3	#3	75
32 AL	1-1/4"	1-1/4"	3	#2	90
31 AL	1-1/2"	1-1/2"	3	#1	100
31X AL	1-1/2"	1-1/2"	3	1/0	120
34X AL	2-1/2"	2-1/2"	3	4/0	180

OVERCURRENT DEVICE	ALUMINUM
15	12
20	10
30	8
40	8
60	8
100	6
200	4
300	2
400	1
500	1/0
600	2/0
800	3/0

NOTE:

1. SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETAIL FOR GROUND CONDUCTORS RATING.
2. ALL INSULATION SHALL BE THHN (ABOVE GRADE) OR THWN (BELOW GRADE) UNLESS NOTED OTHERWISE.
3. PVC CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC & THWN ARE APPROVED FOR UNDERGROUND FEEDERS ONLY.

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ELECTRICAL DETAILS

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NOTE:

1. WHEN PRESENT CONTRACTOR SHALL PROVIDE ALL GROUNDING MEANS INDICATED. CONTRACTOR SHALL REFER TO ELECTRICAL ONE-LINE DIAGRAM AND GROUNDING ELECTRODE CONDUCTOR SCHEDULE (THIS DETAIL) FOR GROUNDING ELECTRODE CONDUCTOR SIZE. CONTRACTOR SHALL REFER TO ELECTRICAL SPECIFICATIONS FOR SPECIFICS OF GROUNDING SYSTEM INSTALLATION AND MATERIALS.

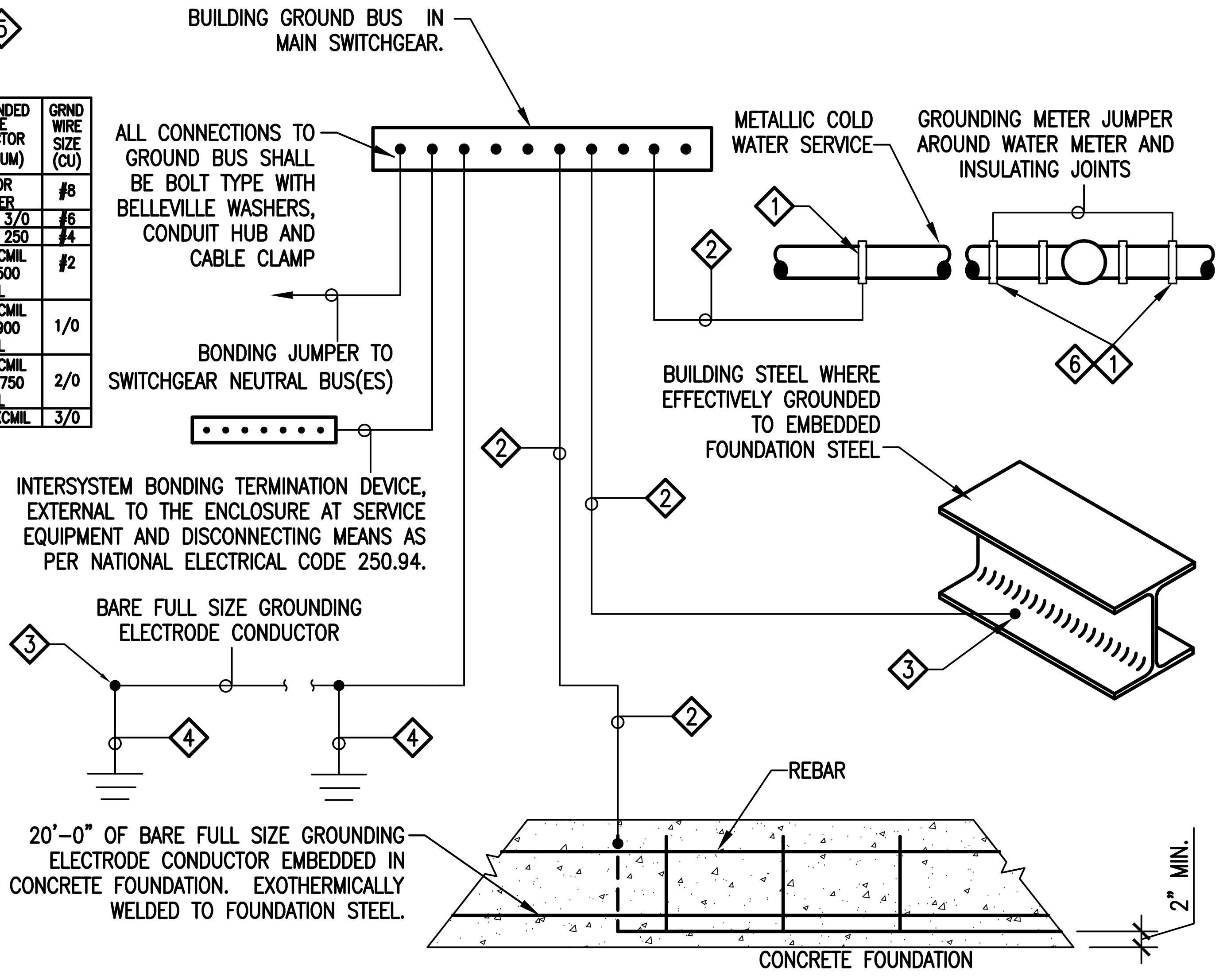
2. GROUNDING ROD SHALL BE MIN. 9FT. AWAY FROM IRRIGATION CONTROLLER.

KEYED NOTE:

1. T&B 3900 BU GROUND CLAMP WITH 3/4" CONDUIT HUB AND CABLE CLAMP
2. FULL SIZE GROUNDING ELECTRODE CONDUCTOR IN PVC.
3. EXOTHERMICALLY WELDED (TYPICAL)
4. DRIVEN GROUND RODS ⅝"x8' COPPER/STEEL ON BUILDING EXTERIOR
5. TABLE TAKEN FROM NEC 250.66. UNGROUNDED PHASE CONDUCTOR REFERS TO THE SIZE OF THE LARGEST UNGROUNDED SERVICE-ENTRANCE CONDUCTOR OR EQUIVALENT AREA FOR PARALLEL CONDUCTORS. SEE NEC 250.66.
6. BOND METAL PIPING PER NEC 250.104.

GROUNDING ELECTRODE CONDUCTOR 5

UNGROUNDED PHASE CONDUCTOR (COPPER)	UNGROUNDED PHASE CONDUCTOR (ALUMINUM)	GRND WIRE SIZE (CU)
#2 OR SMALLER	1/0 OR SMALLER	#8
1 OR 1/0	2/0 OR 3/0	#6
2/0 OR 3/0	4/0 OR 250	#4
>3/0 THRU 350 KCMIL	>250 KCMIL THRU 500 KCMIL	#2
>350 KCMIL THRU 600 KCMIL	>500 KCMIL THRU 900 KCMIL	1/0
>600 KCMIL THRU 1100 KCMIL	>900 KCMIL THRU 1750 KCMIL	2/0
>1100 KCMIL	>1750 KCMIL	3/0

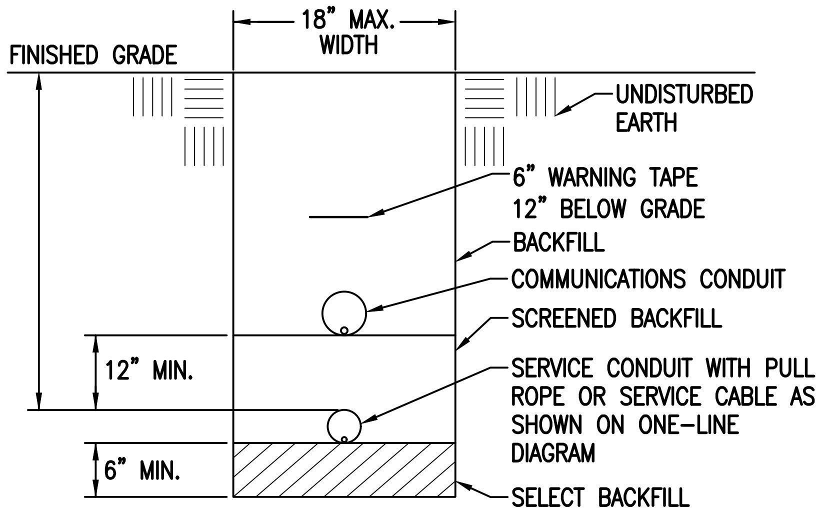

BUILDING GROUND BUS IN MAIN SWITCHGEAR.
ALL CONNECTIONS TO GROUND BUS SHALL BE BOLT TYPE WITH BELLEVILLE WASHERS, CONDUIT HUB AND CABLE CLAMP
METALLIC COLD WATER SERVICE
GROUNDING METER JUMPER AROUND WATER METER AND INSULATING JOINTS
1
2
6
BONDING JUMPER TO SWITCHGEAR NEUTRAL BUS(ES)
BUILDING STEEL WHERE EFFECTIVELY GROUNDED TO EMBEDDED FOUNDATION STEEL
INTERSYSTEM BONDING TERMINATION DEVICE, EXTERNAL TO THE ENCLOSURE AT SERVICE EQUIPMENT AND DISCONNECTING MEANS AS PER NATIONAL ELECTRICAL CODE 250.94.
BARE FULL SIZE GROUNDING ELECTRODE CONDUCTOR
3
4
REBAR
20'-0" OF BARE FULL SIZE GROUNDING ELECTRODE CONDUCTOR EMBEDDED IN CONCRETE FOUNDATION. EXOTHERMICALLY WELDED TO FOUNDATION STEEL.
2" MIN.
CONCRETE FOUNDATION

1 SERVICE GROUNDING DETAIL

SCALE: NTS

LOCATION DESCRIPTION	MIN. DEPTH
BELOW CONCRETE SLAB (NOT TRAFFIC)	18 INCHES
BELOW TRAFFIC SURFACES	24 INCHES
PARKING LOT (PAVED OR NON-PAVED)	24 INCHES
OTHER LOCATIONS	24 INCHES
UTILITY SECONDARY	24 INCHES*
UTILITY PRIMARY	48 INCHES*

(SEE NEC TABLE 300.5)
* VERIFY ALL DIMENSIONS WITH LOCAL POWER COMPANY STANDARDS AND SPECIFICATIONS.



2 TRENCHING DETAIL

SCALE: NTS

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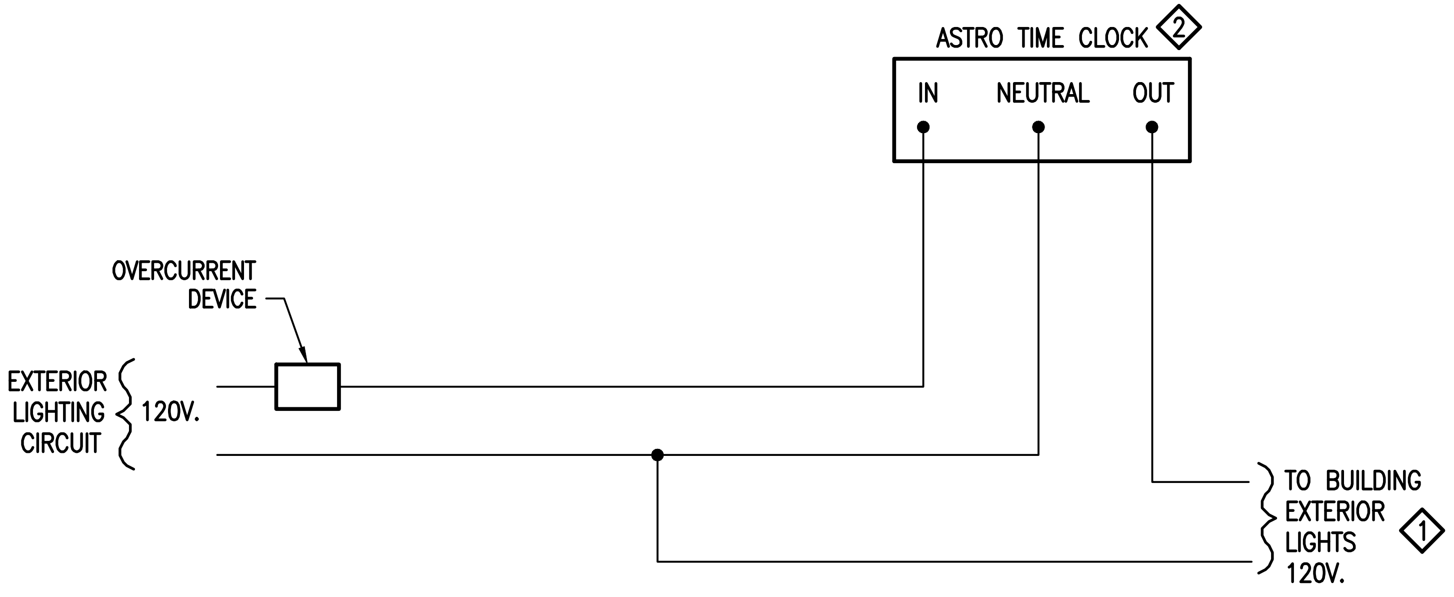

KEYED NOTE:

1. CIRCUIT AMPERAGE SHALL NOT EXCEED PHOTOCELL AND TIME CLOCK RATING.
2. TIME CLOCK SHALL BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS.

1 LIGHTING CONTROL WIRING DIAGRAM

SCALE: NTS

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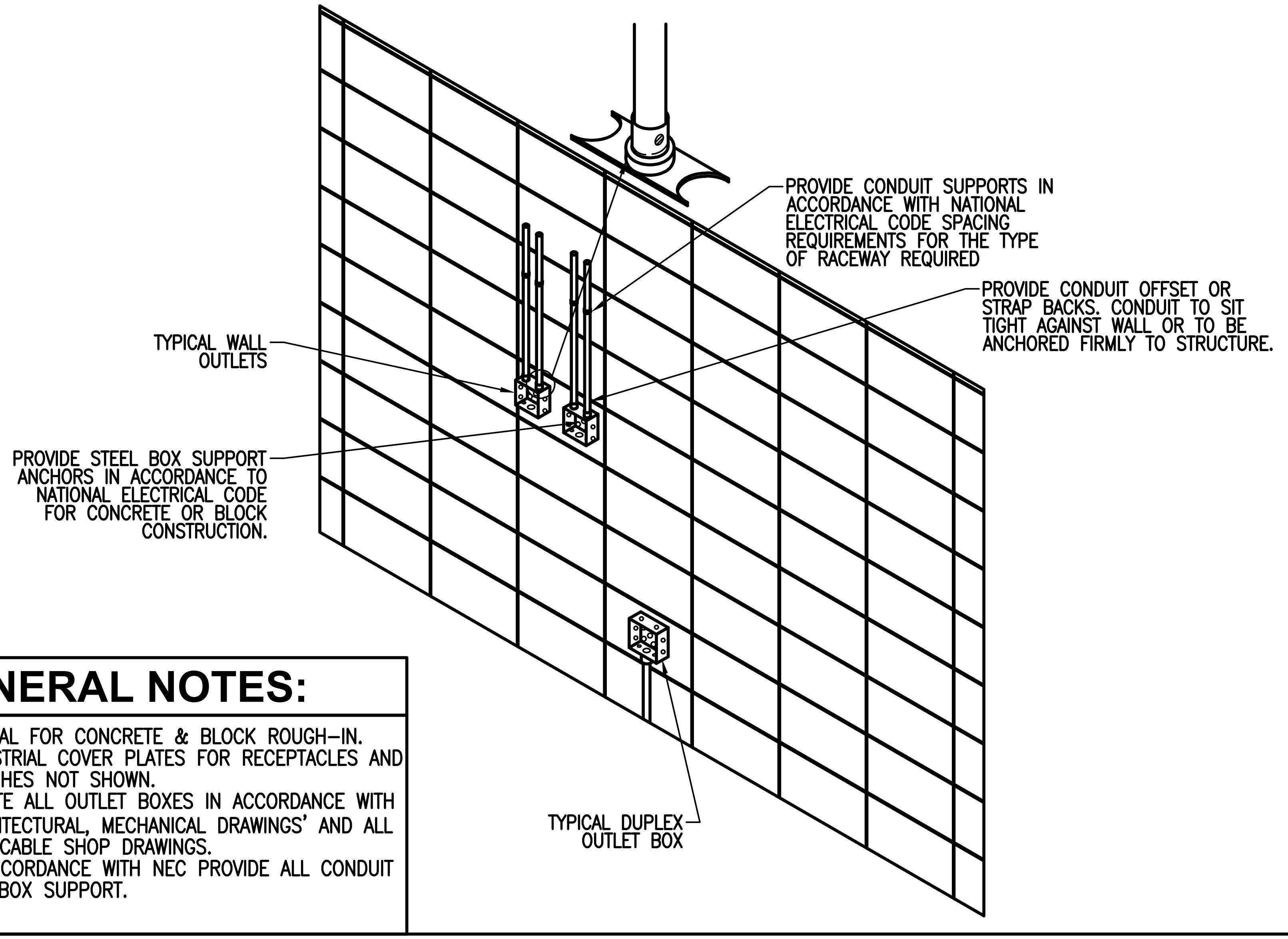
PROVIDE CONDUIT SUPPORTS IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE SPACING REQUIREMENTS FOR THE TYPE OF RACEWAY REQUIRED
PROVIDE CONDUIT OFFSET OR STRAP BACKS. CONDUIT TO SIT TIGHT AGAINST WALL OR TO BE ANCHORED FIRMLY TO STRUCTURE.
TYPICAL WALL OUTLETS
PROVIDE STEEL BOX SUPPORT ANCHORS IN ACCORDANCE TO NATIONAL ELECTRICAL CODE FOR CONCRETE OR BLOCK CONSTRUCTION.
TYPICAL DUPLEX OUTLET BOX

GENERAL NOTES:

1. TYPICAL FOR CONCRETE & BLOCK ROUGH-IN.
2. INDUSTRIAL COVER PLATES FOR RECEPTACLES AND SWITCHES NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL, MECHANICAL DRAWINGS' AND ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH NEC PROVIDE ALL CONDUIT AND BOX SUPPORT.

1 ROUGH-IN DETAIL FOR EXPOSED EMT CONDUIT

SCALE: NTS

1

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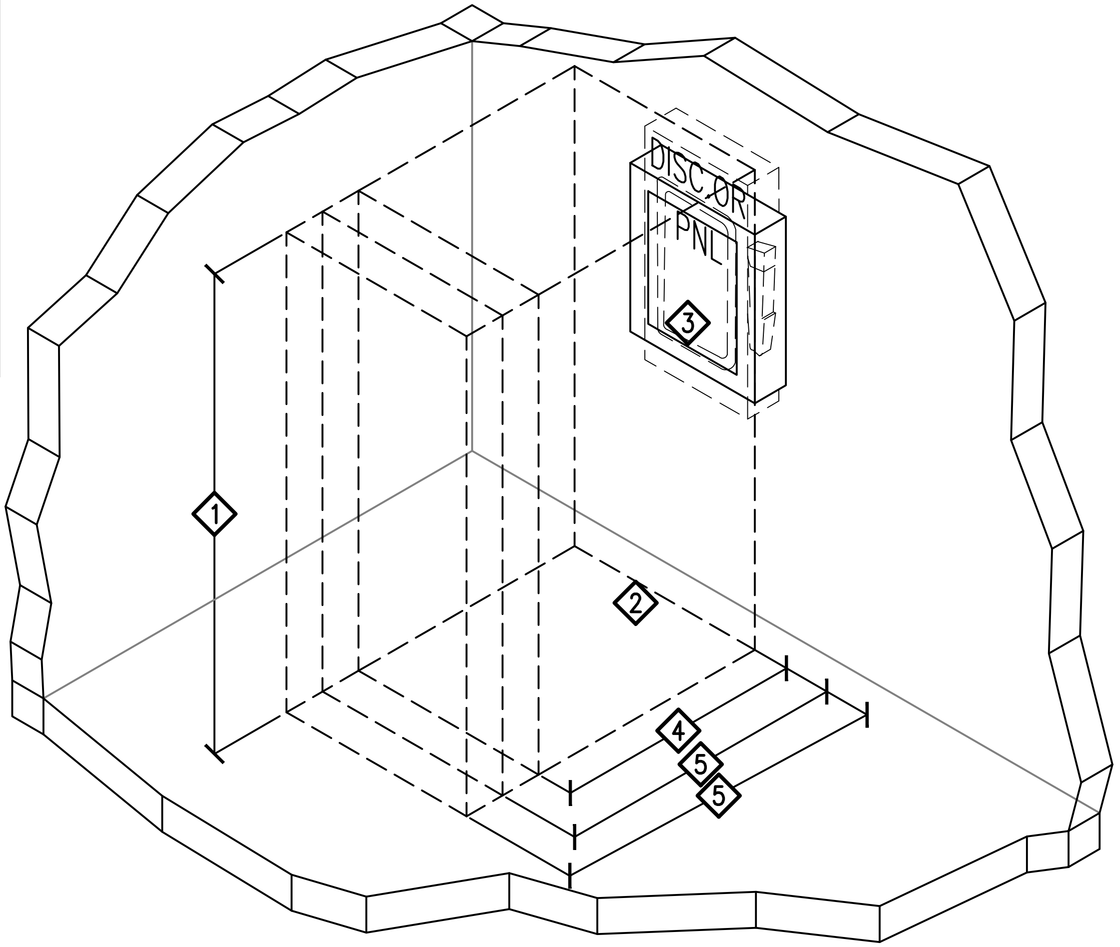
KEYED NOTES:

1. THE MINIMUM HEADROOM OF WORKING SPACE SHALL BE 6½ FT.
2. THE WIDTH OF THE WORKING SPACE SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 IN., WHICHEVER IS GREATER. THE PANEL DOOR SHALL OPEN AT LEAST 90 DEGREES.
3. ALL CIRCUIT BREAKERS OR DISCONNECT HANDLES SHALL BE NOT MORE THAN 6 FT 7 IN. ABOVE THE FLOOR WHEN IN THEIR HIGHEST POSITION.
4. 3 FT CLEARANCE IF 0–150V TO GROUND
5. 3.5FT CLEARANCE IF 151–600V TO GROUND. 4FT IF EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.

GENERAL NOTE:

1. ALL WORKING SPACE CLEARANCE FROM FACE OF PANEL.



1 ELECTRICAL EQUIPMENT WORK SPACE CLEARANCES

SCALE: NTS

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FAULT CURRENT CALCULATION TABLE

MAIN UTILITY COMPANY TRANSFORMER	TRANSFORMER KVA	AFC AT UTILITY	%Z
1Ø 120/240V -100A	25	10,000 A	1.50%

CONFIGURATION						FEEDER			SYSTEM								
FROM		TO		LENGTH	SOURCE FAULT CURRENT	FEEDER SIZE	FEEDERS PER PHASE	WIRE CONSTANT	LINE TO LINE VOLTS	XFMR SECONDARY VOLTS	PHASE	KVA	%Z	MOTOR LOAD	FAULT CURRENT AT EQUIPMENT	FULL OR SERIES RATED	MINIMUM SYMMETRICAL EQUIPMENT AIC RATING
TRANSFORMER	UTILITY	METER	MAIN	10'-0"	10,000 AIC	1 AL	1	4,678	240 V		1Ø		-		9,182 AIC	FULL	10,000 AIC
METER	MAIN	SWITCH	DISC	5'-0"	9,182 AIC	1 AL	1	4,678	240 V		1Ø		-		8,821 AIC	FULL	10,000 AIC
SWITCH	DISC	PANELBOARD	A	5'-0"	8,821 AIC	1 AL	1	4,678	240 V		1Ø		-		8,488 AIC	FULL	10,000 AIC

NOTE: DISTANCES INDICATED ARE FOR FAULT-CURRENT ANALYSIS ONLY. CONTRACTOR SHALL USE FIELD MEASUREMENTS ESTABLISH CONDUCTOR LENGTHS FOR ORDERING PURPOSES.

EQUIPMENT SCHEDULE

SYMBOL	**DESCRIPTION**	**SERVICE**		**DISCONNECT**		**STARTER**	**LOAD**			**MOCP/ BRKR**	**REMARKS**
		VOLTS	**PHASE**	**SIZE**	**FUSE**		**HP/TON**	**VA**	**AMPS**		
SCU 1	HEAT PUMP	240 V	1Ø	30A NEMA 3R	-	INTEGRAL		4,320	18.0A	40A	
SAC 2	FAN COIL	240 V	1Ø	2 POLE SWITCH	-	INTEGRAL		240	1.0A	-A	INDOOR UNIT POWERED BY OUTDOOR UNIT.

NOTES:

1. VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, FLA, ETC.) WITH MECHANICAL DRAWINGS/SUBMITTALS BEFORE FOR ACTUAL EQUIPMENT INSTALLED.
2. ALL FUSES SHALL BE DUAL ELEMENT TIME DELAY. FINAL BREAKER/FUSE & DISCONNECT SIZE SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATION FOR ACTUAL EQUIPMENT INSTALLED.
3. MAXIMUM VALUES INDICATED.
4. DISCONNECTING MEANS NOT REQUIRED FOR EQUIPMENT WITHIN SIGHT (AS DEFINED IN NEC) OF BRANCH PANEL SERVING EQUIPMENT. SEE NEC 422.31 (B).
5. DISCONNECTING MEANS NOT REQUIRED FOR APPLIANCES NOT OVER 300 VA. SEE NEC 422.31 (A).

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PANEL SCHEDULE "A"

VOLTAGE:	240 / 120 VOLTS			**BUS RATING (AMPS):**	100	**REMARKS:**	
MOUNTING:	SURFACE	**PHASE:**	1	**MAIN LUGS ONLY**			
ENCLOSURE:	NEMA 1	**WIRE:**	3	**SHORT CIRCUIT RATING:**	SEE FAULT CURRENT TABLE		

CIRCUIT BREAKER				CIRCUIT NAME	FEEDER			CKT. LOAD		LOAD/PHASE (VA)		CKT. LOAD		FEEDER			CIRCUIT NAME	CIRCUIT BREAKER			
No.	**AMPS**	**POLE**	**MOD.**		**C**	**WIRE**	**GRD**	**DEMAND FACTOR**	**WATTS**	**ØA**	**ØB**	**WATTS**	**DEMAND FACTOR**	**GRD**	**WIRE**	**C**		**MOD.**	**POLE**	**AMPS**	**No.**
1	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	2,900		900	1.00	#12	#12	¾"	CO RECEPTACLES	-	1	20	2
3	-	-	-	-	-	#10	-	1.00	2,000		2,900	900	1.00	#12	#12	¾"	CO RECEPTACLES	-	1	20	4
5	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	2,250		250	1.00	#12	#12	¾"	LIGHTING	-	1	20	6
7	-	-	-	-	-	#10	-	1.00	2,000		4,160	2,160	1.00	#10	#10	¾"	SCU-1	-	2	30	8
9	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	4,160		2,160	1.00	-	#10	-	-	-	-	-	10
11	-	-	-	-	-	#10	-	1.00	2,000		2,000		1.00				SPACE	-			12
13			-	SPACE				1.00		0			1.00				SPACE	-			14
15			-	SPACE				1.00			0		1.00				SPACE	-			16
17			-	SPACE				1.00		0			1.00				SPACE	-			18
19			-	SPACE				1.00			0		1.00				SPACE	-			20
21			-	SPACE				1.00		0			1.00				SPACE	-			22
23			-	SPACE				1.00			0		1.00				SPACE	-			24
25			-	SPACE				1.00		0			1.00				SPACE	-			26
27			-	SPACE				1.00			0		1.00				SPACE	-			28
29			-	SPACE				1.00		0			1.00				SPACE	-			30

NOTES :

1. ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.
2. LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.
3. PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"
4. FIRE ALARM SYSTEMS SHALL HAVE BRANCH CIRCUITS IDENTIFIED BY RED LABELS STATING “FIRE ALARM CIRCUIT” AS REQUIRED BY THE NATIONAL ELECTRICAL CODE ARTICLE 760.41B
5. ABBREVIATIONS: CO-CONVENIENCE OUTLET, RR-RESTROOM, (N)ORTH, (S)OUTH, (E)AST, (W)EST.

ØA	ØB	TOTALS	
9,310	9,060	18,370	CONNECTED LOAD (VA)
		77	CONNECTED LOAD (A)
0	0	0	DEMAND FACTOR ADJUSTMENTS (VA)
9,310	9,060	18,370	TOTAL LOAD (VA)
78	76		TOTAL LOAD (A)
		78	MAXIMUM LOAD (A)
51%	49%		PHASE BALANCE

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LIGHT FIXTURE SCHEDULE

FIXTURE NUMBER	FIXTURE MANUFACTURER	FIXTURE CATALOG #	LAMPS		FIXTURE			DESCRIPTION	REMARKS
			TYPE	QTY.	VOLTS	WATTS	MOUNTING		
F1	METALUX LITHONIA DAY-BRITE LSI COLUMBIA ORACLE	4SNLED-LD4-30SL-LW-UNV-L835-CD1-U ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-WH FSS440L835-UNV-DIM SDL-4-LED-SS-WW-UE LCL4-35LW-EDU 4-OC1-LED-3000L-DIM10-MVOLT-35K-80	LED 3500 KELVIN 3000 LUMENS 80 CRI	-	120	29	SURFACE/CHAIN	48" LED STRIP	
F1E	METALUX LITHONIA DAY-BRITE LSI COLUMBIA ORACLE	4SNLED-LD4-30SL-LW-UNV-EL14W-L835-CD1-U ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-E7W-WH FSS440L835-UNV-DIM-EMLED SDL-4-LED-SS-WW-UE-EM LCL4-35LW-EDU-ELL14 4-OC1-LED-3000L-DIM10-MVOLT-35K-80-O-EMG-LED	LED 3500 KELVIN 3000 LUMENS 80 CRI	-	120	29	SURFACE/CHAIN	48" LED STRIP WITH EMERGENCY BATTERY PACK	
F2	LITHONIA	WST LED P2 40K MVOLT	LED 4000 KELVIN 3469 LUMENS 80 CRI	-	120	25	SURFACE	WALL PACK	

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ELECTRICAL SPECIFICATIONS

GENERAL PROVISION

A. REFERENCE

1. THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS TITLE, INSOFAR AS THEY APPLY HERETO.
2. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, "ELECTRICAL CONTRACTOR" IS INFERRED AND INTENDED.

B. CONTRACT DRAWINGS

1. THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.
2. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.
3. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.
4. OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS

1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.

D. MANUFACTURER'S DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW. (6) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES,AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR: APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS	TYPE SUBMITTALS REQUESTED
LIGHTING AND POWER PANELS	SHOP DRAWINGS
LIGHTING FIXTURES	CATALOG CUTS

E. GUARANTEES

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

WORK INCLUDED

A. INSTALLATION, MATERIALS, AND WORKMANSHIP

1. FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.
2. THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION. AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSED DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.
3. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.

B. COORDINATION OF PLANS AND SPECIFICATIONS

1. CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING

1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.
2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.
3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

11381139
M. RYAN
BEAGLES
5/12/22

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SFCN FIBER HUTS
FIBER HUT PLANS

ELECTRICAL SPECIFICATIONS

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1 CITY CMNTS	JE	05/10/2022

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E7.1

CODES AND FEES

A. CODES:
   1. ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.

B. FEES:
   1. OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND INSPECTIONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.

B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.

C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

CONDUIT

A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.

B. ALL WIRING SHALL BE RUN IN EMT CONDUIT OR MC CABLE WITH GROUND CONDUCTOR UNLESS OTHERWISE NOTED.

C. ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN ½" UNLESS OTHERWISE NOTED.

D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

WIRE AND CABLE

A. ALL CONDUCTORS SHALL BE COPPER AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN. CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.

B. ALL BRANCH CIRCUITS IN PATIENT CARE AREAS SHALL BE MEDICAL GRADE MC CABLE. ALL BRANCH CIRCUITS IN OFFICE AND COMMON AREAS SHALL BE TYPE NM OR MC CABLE.

C. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS.

D. THE FOLLOWING COLOR CODE SHALL BE USED:

	120/240 VOLT	120/208 VOLT	277/480 VOLT
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	RED	ORANGE
PHASE C		BLUE	YELLOW
NEUTRAL	WHITE	WHITE	WHITE
GROUND	GREEN	GREEN	GREEN

E. CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE.

F. CONDUCTORS NO. 8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED TAPE, MINIMUM SIZE ½", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS:
   1. AT EACH TERMINAL.
   2. AT EACH CONDUIT ENTRANCE.
   3. AT INTERVALS NOT MORE THAN 12 INCHES APART IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC.

G. ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANEL BOARD GUTTERS. MARKERS SHALL INDICATE CORRESPONDING BRANCH--CIRCUIT NUMBERS.

H. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR.

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ELECTRICAL SPECIFICATIONS

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BOXES AND PLATES

A. FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULL BOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.
B. PULL BOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND GAUGE, SIZED IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE U.L. LABELED.
C. BOXES AT EXTERIOR AREAS TO BE WATERTIGHT AND DUST-TIGHT WITH CASKETED COVERS.
D. ALL BOXES FOR EXPOSED WORK IN FINISHED SPACES SHALL BE "FS" TYPE WITH THREADED HUBS WITH RIGID CONDUIT RISER (DEEP WIRE MOLD BOXES).
E. ALL BOXES SHALL BE RIGIDLY SUPPORTED INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.
F. FLOOR BOXES:
    1. DESCRIPTION: FLOOR BOXES COMPATIBLE WITH FLOOR BOX SERVICE FITTINGS PROVIDED IN ACCORDANCE WITH THE WIRING DEVICES SECTION OF THIS SPECIFICATION; WITH PARTITIONS TO SEPARATE MULTIPLE SERVICES; FURNISHED WITH ALL COMPONENTS, ADAPTERS, AND TRIMS REQUIRED FOR COMPLETE INSTALLATION.
    2. USE CAST IRON OR NONMETALLIC FLOOR BOXES WITHIN SLAB ON GRADE.
    3. USE SHEET-STEEL, CAST IRON, OR NONMETALLIC FLOOR BOXES WITHIN SLAB ABOVE GRADE.
    4. METALLIC FLOOR BOXES: FULLY ADJUSTABLE (WITH INTEGRAL MEANS FOR LEVELING ADJUSTMENT PRIOR TO AND AFTER CONCRETE POUR).
    5. MANUFACTURER: SAME AS MANUFACTURER OF FLOOR BOX SERVICE FITTINGS.
G. UNDERGROUND BOXES/ENCLOSURES:
    1. DESCRIPTION: IN-GROUND, OPEN BOTTOM BOXES FURNISHED WITH FLUSH, NON-SKID COVERS WITH LEGEND INDICATING TYPE OF SERVICE AND STAINLESS STEEL TAMPER RESISTANT COVER BOLTS.
    2. SIZE: AS INDICATED ON DRAWINGS.
    3. DEPTH: AS REQUIRED TO EXTEND BELOW FROST LINE TO PREVENT FROST UPHEAVAL, BUT NOT LESS THAN 12 INCHES.
    4. APPLICATIONS:
        a. SIDEWALKS AND LANDSCAPED AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 8 LOAD RATING.
        b. PARKING LOTS, IN AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 15 LOAD RATING.
        c. DO NOT USE POLYMER CONCRETE ENCLOSURES IN AREAS SUBJECT TO DELIBERATE VEHICULAR TRAFFIC.
H. COMPOSITE UNDERGROUND BOXES/ENCLOSURES: COMPLY WITH SCTE 77.

WIRING DEVICES

A. WIRING DEVICES SHALL BE SIMILAR TO THOSE LISTED BELOW AND OF SPECIFIED AMPERAGE. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.
B. DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 125 VOLT
    1. HUBBELL 5352
    2. ARROW HART 5352
C. SINGLE POLE SWITCHES - 20 AMP, 120 VOLT
D. WEATHERPROOF RECEPTACLES - 20 AMP, 125 VOLT - NEMA 5-20R
    1. HUBBELL 5352 WITH 5205 COVER INTERMATIC GUARDIAN
    2. I SERIES, NEMA 3R COVER
    3. ARROW HART 5352 WITH 4500 COVER
E. G.F.C.I. RECEPTACLE - 20 AMP, 125 VOLT - NEMA 5-20 R
    1. HUBBELL GF 5262 WITH MATCHING NYLON COVER PLATE OR WO-26 W.P. COVER
F. GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250.146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

IDENTIFICATION

A. EACH PIECE OF SERVICE EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS, ALL EXHAUST FAN MANUAL STARTING SWITCHES.
B. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK RACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM ¼" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEET METAL SCREW ATTACHMENT. NO "DYMO" OR SIMILAR TYPE LABELS WILL BE ALLOWED.
C. PANEL BOARD DIRECTORY: A TYPED CIRCUIT DIRECTORY SHALL BE PROVIDED INDICATING LOCAL AREA SERVED AND LOCATION FOR EACH BRANCH CIRCUIT.

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5/12/22
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FIBER HUT PLANS

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GROUNDING

A. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER THE WIRE AND CABLE SECTION OF THIS SPECIFICATION.

B. ALL GROUND CLAMPS SHALL BE PENN-UNION “GPL” TYPE OR SIMILAR BY O.Z. OR BURNDY.

C. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON- METALLIC ELECTRICAL CONDUIT WITH U.L. LABEL SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.

D. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS -ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC--250--24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-30.

E. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE: 2) THE GROUND PIGTAIL TO THE BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE. MOUNTED BOXES OR FLUSH TYPE BOXES.

F. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

POWER AND LIGHTING PANELS

A. FURNISH AND INSTALL, AS SCHEDULED AND SHOWN ON THE DRAWINGS, POWER PANELS FOR OPERATION ON VOLTAGES INDICATED.

B. ALL TERMINATIONS SHALL BE MARKED “75°C ONLY”, “60/75° C” OR LISTED FOR USE OF 75° C INSULATED CONDUCTORS AT FULL 75° C AMPACITY.

C. ALL BUS BARS SHALL BE SILVER OR TIN PLATED COPPER.

D. CABINETS SHALL BE OF COMMERCIAL GALVANIZED SHEET STEEL, CODE GAUGE AND SIZE, SURFACE OR RECESSED MOUNTED AS CALLED FOR IN THE DRAWINGS.

E. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.

F. PANEL SHALL HAVE A COPPER GROUND BAR SIMILAR TO NEUTRAL BAR IN NUMBER, SIZE, AND TYPE OF ANTI-TURN SOLDERLESS LUGS. THIS GROUND BAR SHALL BE FACTORY BONDED TO THE PANEL TUB IN THE GUTTER SPACE OPPOSITE THE MAINS AND THE NEUTRAL ASSEMBLY AND SHALL HAVE THE SCREWDRIVER SLOTS FACING THE FRONT OF THE PANEL.

G. QUALITY STANDARD: SQUARE D TYPE NQ.

LIGHTING FIXTURES

A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN.

B. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.

C. ALL LIGHTING FIXTURES INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE FURNISHED COMPLETE WITH AS INDICATED ON THE FIXTURE SCHEDULE.

D. ANY LIGHTING FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.

E. ALL LIGHTING FIXTURES SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER.

F. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

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FIBER HUT PLANS

ELECTRICAL SPECIFICATIONS

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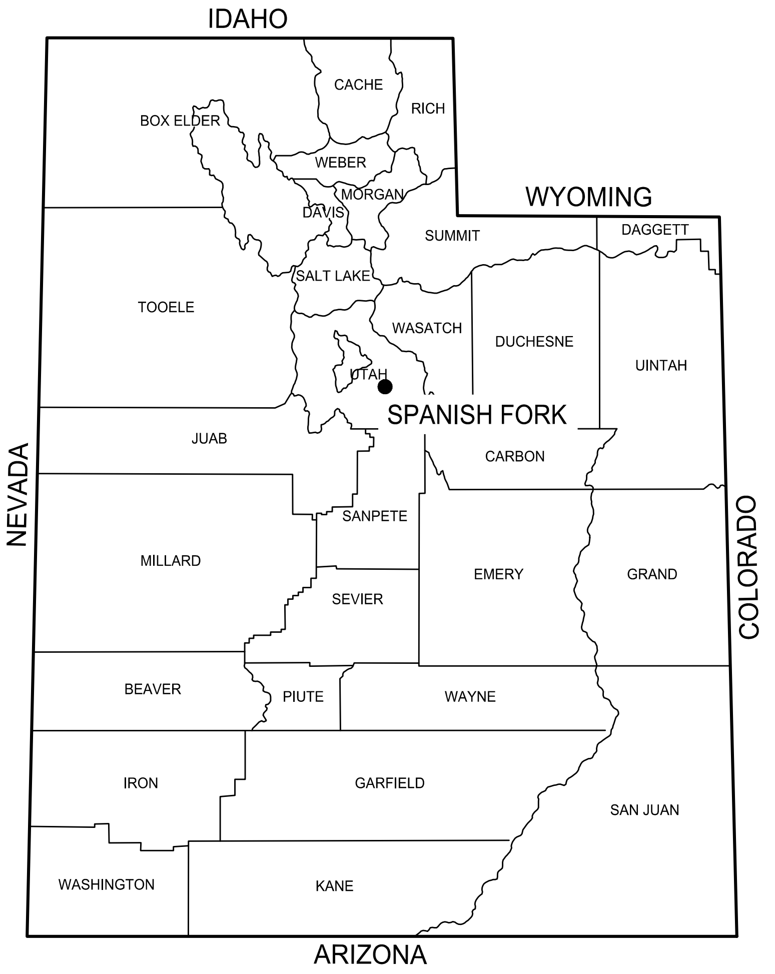
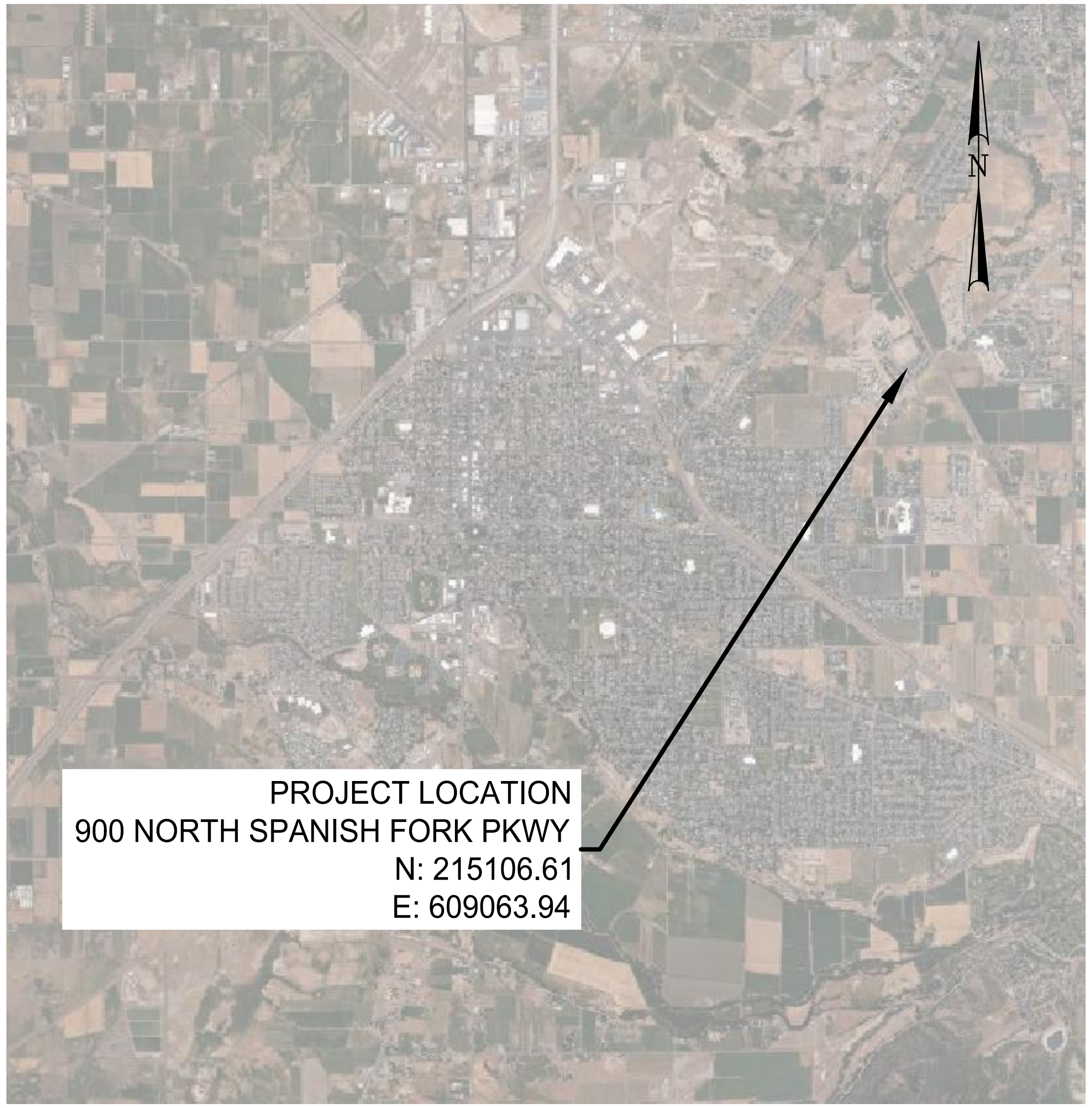
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT NE-3
900 N SPANISH FORK PKWY
UTAH COUNTY
2022

PROJECT NO.	SHEET NO.
2202-061	C-001

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION





VICINITY MAP

APPROVAL

RECOMMENDED FOR APPROVAL:

ENGINEER DATE

APPROVED:

CLIENT DATE

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C-003	GENERAL NOTES
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C-101	SITE PLAN
C-501	DETAILS

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LEGEND

EXISTING FEATURES

swr	SANITARY SEWER LINE
SMH	SANITARY SEWER MANHOLE
wtr	CULINARY WATER LINE
⋈	CULINARY WATER VALVE
be	BURIED POWER LINE
e	OVERHEAD POWER LINE
btel	BURIED TELEPHONE LINE
tel	OVERHEAD TELEPHONE LINE
bctv	BURIED CABLE TV LINE
ctv	OVERHEAD CABLE TV LINE
fo	FIBER OPTIC LINE
gas	NATURAL GAS LINE
ir	IRRIGATION LINE
sd	STORM DRAIN
—x—x—x—x—x—x—x—	FENCE LINE (BARBED OR STOCKTIGHT)
	FENCE LINE (CHAIN LINK)
	DRAINAGE CULVERT
	CONCRETE SURFACING (SIDEWALK, CURB, GUTTER, ETC.)
	FLOW LINE OF DITCH
	EDGE OF ASPHALT SURFACING
	EDGE OF GRAVEL SURFACING
	EDGE OF DIRT SURFACING
	FIRE HYDRANT
M	WATER METER
	GAS METER
▨	STRUCTURE
G.W. EPP	POWER POLE & GUY WIRE
	SANITARY SEWER CLEAN OUT
	TREE
○	DELINEATOR POST
	STREET SIGN
	TELEPHONE PEDESTAL
	MAILBOX
	CABLE TV PEDESTAL
WMH	WATER MANHOLE
	LIGHT POLE

MISC. FEATURES

	SUBDIVISION BOUNDARY LINE
	LOT LINES
r/w r/w	EXISTING RIGHT OF WAY LINE
	EXISTING N/A LINE
r/w r/w BLOCK LINE	EXISTING CITY BLOCK LINES
R/W R/W	PROPOSED RIGHT-OF-WAY LINE
	SECTION LINE
	QUARTER SECTION LINE
	(P.U.E.) PUBLIC UTILITY EASEMENT
	DEED LINE
	PROPERTY LINE

ABBREVIATIONS

TBC	TOP BACK OF CURB	EPP	POWER POLE
FLG	FLOW LINE OF GUTTER	SMH	SEWER MANHOLE
LOC	LIP OF CURB	CMH	COMMUNICATION MANHOLE
TSW	TOP OF SIDEWALK	R/W	RIGHT-OF-WAY
TOC	TOP OF CONCRETE	T.C.E.	TEMPORARY CONSTRUCTION EASEMENT
EOA	EDGE OF ASPHALT		
TOA	TOP OF ASPHALT	P.U.E.	PUBLIC UTILITY EASEMENT
TOG	TOP OF GRATE		
FLC	FLOW LINE OF CULVERT	STA	STATION
SW	SIDEWALK	L / LT	LEFT
FG	FINISHED GROUND	R / RT	RIGHT

PROPOSED FEATURES

SWR	SANITARY SEWER LINE
SMH	SANITARY SEWER MANHOLE
	SANITARY SEWER SERVICE
WTR	CULINARY WATER LINE
⋈	CULINARY WATER VALVE
BE	BURIED POWER LINE
E	OVERHEAD POWER LINE
BTEL	BURIED TELEPHONE LINE
TEL	OVERHEAD TELEPHONE LINE
BCTV	BURIED CABLE TV LINE
CTV	OVERHEAD CABLE TV LINE
FO	FIBER OPTIC LINE
GAS	NATURAL GAS LINE
IR	IRRIGATION LINE
SD	STORM DRAIN
—X—X—X—X—X—X—	FENCE LINE (BARBED OR STOCKTIGHT)
	FENCE LINE (CHAIN LINK)
	DRAINAGE CULVERT
	EDGE OF ASPHALT
	EDGE OF CONCRETE
	FIRE HYDRANT
M	CULINARY WATER METER
	GAS METER
○	DELINEATOR POST
	STREET SIGN
EPP	POWER POLE
	MAILBOX
	LIGHT POLE
▭	CONCRETE SURFACING
▬	ASPHALT SURFACING
CUT CUT	TOP OF CUT LIMITS
FILL FILL	TOE OF FILL LIMITS

NO.	DATE	REMARKS

REVISIONS

SCALE: NONE

DWG NAME: h:\JD\Proj\2202-061\dwg\TITLE_2202-061 NE-3.dwg

UPDATED: 3/8/2023
PLOTTED: 3/9/2023

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GIS - ENVIRONMENTAL - MATERIALS TESTING
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APPROVAL RECOMM: ______ PROJECT DESIGN ENGINEER ______ DATE

APPROVED ______ QUALITY MANAGEMENT REVIEW ______ DATE

SPANISH FORK CITY
SFCN HUT NE-3
LEGEND

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

PROJECT NUMBER: 2202-061

UTAH
COUNTY

SHEET NO. C-002

GENERAL NOTES

GENERAL NOTES

1. REQUEST AND RECEIVE ACCEPTANCE FROM ENGINEER PRIOR TO MAKING MODIFICATIONS TO DRAWINGS, SPECIFICATIONS, OR CONSTRUCTION SCHEDULE.
2. PERFORM CONSTRUCTION IN ACCORDANCE WITH LATEST VERSION (2017) OF APWA UTAH CHAPTER MANUAL OF STANDARD SPECIFICATIONS AND MANUAL OF STANDARD PLANS, INCLUDING AMENDMENTS, DDW RULES, INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL FIRE CODE (IFC), INTERNATIONAL RESIDENTIAL CODE (IRC), AND/OR OWNER STANDARDS AND SPECIFICATIONS.
3. IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, STATE RULES, DRAWINGS AND SPECIFICATIONS, ADHERE TO MOST STRINGENT REQUIREMENTS.
4. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY AND ARE BASED ON UTILITY MAPS AND FIELD SURVEY.
5. LOCATE AND PROTECT EXISTING UTILITIES AND ANY OBSTRUCTIONS DURING COURSE OF CONSTRUCTION. NOTIFY BLUE STAKES (811) AT LEAST 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES ON SITE. RESTORE UTILITIES DAMAGED DURING CONSTRUCTION TO CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITION PRIOR TO CONSTRUCTION.
6. NOTIFY ENGINEER OR PROJECT REPRESENTATIVE OF ANY CONFLICTS BETWEEN EXISTING FEATURES AND NEW CONSTRUCTION.
7. UNLESS DETAILED, SPECIFIED OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN APPLICABLE TYPICAL DETAILS AND GENERAL NOTES.
8. CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL AND SECURITY.
9. MEET UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY AND U.S. EPA REQUIREMENTS, RULES, AND REGULATIONS.
10. OBTAIN REQUIRED APPROVALS AND PERMITS AND PAY REQUIRED FEES PRIOR TO BEGINNING CONSTRUCTION.
11. FOR MATERIALS USED AND WORK PERFORMED IN UTAH DEPARTMENT OF TRANSPORTATION (UDOT) RIGHT-OF-WAY, CONFORM TO UDOT STANDARDS AND SPECIFICATIONS.
12. CONDUCT CONSTRUCTION OPERATIONS WITH NECESSARY SIGNS, BARRICADES, AND FLASHERS PLACED TO COMPLY WITH OSHA, UTAH STATE INDUSTRIAL COMMISSION, LOCAL SAFETY STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. NO FULL ROAD CLOSURES WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF OWNER. MAINTAIN TRAFFIC IN TWO DIRECTIONS AT ALL TIMES FOR ROADS AND ROAD CROSSINGS, UNLESS EXTENUATING CIRCUMSTANCES PROHIBIT. ROAD CLOSURE REQUESTS MUST BE MADE 1 WEEK BEFORE NEEDING TO CLOSE THE ROAD.
14. PROVIDE WRITTEN NOTIFICATION INCLUDING CONTACT INFORMATION, TO RESIDENTS AND BUSINESSES IMPACTED BY CONSTRUCTION. PROVIDE NOTICE MINIMUM OF 48 HOURS IN ADVANCE OF WORK BEING PERFORMED. MAINTAIN DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES UNLESS PARKING ARRANGEMENTS HAVE BEEN MADE WITH RESIDENTS AND BUSINESSES WHILE WORK IS COMPLETED ADJACENT TO OR ON THEIR PROPERTIES.
15. WORK WITH INDIVIDUAL PROPERTY OWNERS OR BUSINESS FOR ACCESS AND PERMISSION TO CONNECT TO UTILITY SERVICE AT PROPERTIES.
16. OBTAIN RIGHT OF INGRESS AND EGRESS SHOULD WORK OR PERSONNEL VENTURE ONTO PRIVATE PROPERTY WHICH IS NOT INCLUDED IN OWNER ACQUIRED RIGHTS-OF-WAY AND EASEMENTS.
17. CONSTRUCTION WORK WITHIN 30 FEET OF A GOVERNMENT SURVEY MONUMENT OR PUBLIC LAND SURVEY GOVERNMENT CORNER LOCATION MUST OBTAIN A COUNTY PERMIT BEFORE BEGINNING CONSTRUCTION WORK.

GENERAL CONSTRUCTION NOTES

1. NOTIFY OWNER, AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. SCHEDULE AND ATTEND PRE-CONSTRUCTION MEETING PRIOR TO STARTING CONSTRUCTION ACTIVITIES. SCHEDULE MEETING THROUGH OWNER OR OWNER'S REPRESENTATIVE.
3. PROVIDE CONSTRUCTION SCHEDULE TO ENGINEER AND OWNER.
4. FIELD VERIFY EXISTING CONDITIONS. QUANTITIES, LENGTHS, VOLUMES, AND AREAS INDICATED ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR. CONTRACTOR TO VERIFY QUANTITIES AND DETERMINE EXACT MEASUREMENTS, AS NECESSARY.
5. VERIFY DIMENSIONS BEFORE STARTING WORK AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
6. OBTAIN APPROVAL FROM OWNER PRIOR TO CONSTRUCTION FOR USE OF STAGING AREAS (IF ANY) NOT SHOWN ON DRAWINGS. COORDINATE WITH OWNER TO IDENTIFY POTENTIAL USEABLE STAGING AREAS. RESTORE STAGING AREA TO PRECONSTRUCTION CONDITION.
7. PROTECT EXISTING IMPROVEMENTS DURING CONSTRUCTION AND REPLACE OR RESTORE IMPROVEMENTS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITY. RESTORE IMPROVEMENTS TO AS-GOOD-AS OR BETTER-THAN CONDITION THAT EXISTED PRIOR TO CONSTRUCTION. REPAIR IRRIGATION/SPRINKLERS WITHIN 24 HOURS FOLLOWING PLACEMENT OF IMPROVEMENTS.
8. PROPERLY BACKFILL, COMPACT, AND RESTORE PAVEMENT WITHIN STREET RIGHT-OF-WAY.
9. DISPOSE WASTE OFF SITE AT LANDFILL OR OTHER LEGAL DISPOSAL FACILITY.
10. REMOVE SURPLUS EXCAVATION FROM SITE. USE TOPSOIL OR OTHER NATIVE MATERIAL IN LANDSCAPE OR NATIVE GRADING. STOCKPILE TOPSOIL SEPARATELY FROM OTHER EXCAVATED MATERIALS. PLACE TOPSOIL IN LANDSCAPED AREAS IN 4 INCHES THICK MINIMUM AND GRADE TO DRAIN.
11. PERFORM CONSTRUCTION QUALITY CONTROL TESTING, INCLUDING SOILS, BACKFILL, CONCRETE, UTILITIES, ETC.
12. PERFORM MATERIALS TESTING AND SUBMIT COPIES OF TEST RESULTS TO ENGINEER AND/OR OWNER AS REQUIRED PER SPECIFICATIONS. COORDINATE TESTING WITH INSPECTORS AND/OR ENGINEER. PERFORM DENSITY TESTING ON TRENCH BACKFILL, GRANULAR BORROW, AND UTBC PLACEMENT FOR ROADWAY AND PRIOR TO ANY CONCRETE PLACEMENT WHERE NECESSARY. SEE SPECIFICATIONS FOR TESTING FREQUENCY.
13. PROVIDE SITE DUST CONTROL AND SUPPRESSION FOR DURATION OF PROJECT, INCLUDING WEEKENDS.

GENERAL EROSION CONTROL NOTES

1. PREPARE AND SUBMIT STORM WATER POLLUTION PREVENTION PLAN (SWPPP). PRIOR TO STARTING CONSTRUCTION FILE NOTICE OF INTENT (NOI) AND AT END OF CONSTRUCTION FILE NOTICE OF TERMINATION (NOT).
2. PERFORM CONSTRUCTION WORK IN ACCORDANCE WITH UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) REGULATIONS.
3. DURING CONSTRUCTION, PREVENT AND CONTROL EROSION DUE TO WIND AND WATER. FOLLOW PROCEDURES AND BEST MANAGEMENT PRACTICES INDICATED IN SWPPP AND INSTALL EROSION CONTROL MEASURES INDICATED IN SWPPP.
4. PROVIDE ADDITIONAL EROSION CONTROL MEASURES WHEN UNFORESEEN PROBLEMS OCCUR OR IF SWPPP DOES NOT FUNCTION AS INTENDED. ADJUST EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) AS NECESSARY DUE TO GRADE CHANGES DURING CONSTRUCTION. OWNER MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON INSPECTION OF PROPOSED FACILITIES.
5. KEEP STREETS CLEAN AND FREE FROM SOIL AND DEBRIS DURING CONSTRUCTION.
6. PROTECT STORM DRAIN FACILITIES ON SITE AND ADJACENT TO SITE FROM SITE RUNOFF. INSTALL INLET PROTECTION DEVICES IMMEDIATELY UPON INDIVIDUAL INLETS BECOMING FUNCTIONAL.
7. SEED AREAS DISTURBED DURING CONSTRUCTION WITH APPROPRIATE NATIVE SEED MIX OR PLACE LANDSCAPING TO MATCH EXISTING.
8. DISPOSE OF WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, ETC.) IN MANNER THAT PREVENTS CONTACT WITH STORM WATER DISCHARGES FROM SITE.
9. STABILIZE CONSTRUCTION AREAS AT END OF EACH WORKING DAY. INCLUDE BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF PAVING FOR ROAD CONSTRUCTION.
10. MAINTAIN MEASURES CONTAINED IN SWPPP IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF SITE. CHECK EROSION AND SEDIMENTATION CONTROL MEASURES BY QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF END OF RAINFALL EVENT. COMPLETE ANY NEEDED CLEANING AND REPAIRS WITHIN TIME FRAMES SPECIFIED IN SWPPP AND/OR UPDES GENERAL PERMIT.
11. CLEAN UTILITY LINES TO REMOVE DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE. PROTECT DOWN-GRADE LINES FROM WASH-WATER DURING CLEANING PROCESS TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS.
12. POWER WASH EXCAVATION EQUIPMENT BEFORE ENTERING DIFFERENT VEGETATION MATRIX.
13. REMOVE INLET PROTECTION DEVICES AFTER NOT AND FINAL ACCEPTANCE BY OWNER.

GENERAL UTILITY NOTES

1. CONTRACTOR TO COORDINATE ALL UTILITY CONNECTIONS AND SERVICES PRIOR TO COMMENCING CONSTRUCTION. STAGE CONSTRUCTION TO MITIGATE DELAYS OF SERVICES AND PERMITTING.
2. PROVIDE UTILITY PIPING AND APPURTENANCES IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND IN CONFORMANCE WITH APPROPRIATE JURISDICTIONAL SPECIFICATIONS AND DETAILS.
3. PROVIDE SUBMITTALS TO ENGINEER FOR REVIEW AND ACCEPTANCE FOR BEDDING, BACKFILL, PIPE, METERS, BOXES, VALVES, FIRE HYDRANTS, BLOWOFFS, VAULTS, MANHOLES, INLET BOXES, ETC. PROVIDE SUBMITTALS WITH SUFFICIENT INFORMATION TO SHOW THAT PROPOSED PRODUCTS AND MATERIALS CONFORM TO OWNER'S STANDARDS AND SPECIFICATIONS.

GENERAL STORM WATER NOTES

1. FOLLOW IRC R401.3 FOR ALL SITE DRAINAGE:
   - 1.1. DIVERT SURFACE DRAINAGE TO STORM SEWER OR APPROVED POINT OF COLLECTION THAT DOES NOT CREATE HAZARD.
   - 1.2. GRADE LOTS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
   - 1.3. GRADE 6" OF FALL WITHIN THE FIRST 10' OF FOUNDATION PERIMETER.
   - 1.4. WHERE LOT LINES, SLOPES OR PHYSICAL BARRIERS PREVENT 6" OF FALL, CONSTRUCT DRAINAGE SWALES TO ENSURE DRAINAGE AWAY FROM STRUCTURE.
   - 1.5. SLOPE IMPERVIOUS SURFACES WITHIN 10' OF BUILDING FOUNDATION A MINIMUM OF 2% AWAY FROM BUILDING.

MATERIALS NOTES

1. ALL MATERIALS WILL CONFORM TO CITY'S SPECIFICATIONS AND STANDARDS UNLESS OTHERWISE INDICATED.
2. EARTHWORK
   - 1.1. SUBMIT LAB REPORTS AS CONSTRUCTION RECORD PER AASHTO T180 (D) FOR A-1 SOILS AND AASTHO T90 (D) FOR ALL OTHER SOILS ENCOUNTERED ON SITE, AS CLASSIFIED PER AASHTO M145.
   - 1.2. SUBMIT FIELD REPORTS AS CONSTRUCTION RECORD PER ASTM D6938 FOR EVERY DAY AND EVERY TYPE OF SOIL WORKED, PER DAY.
   - 1.3. WITHIN RIGHT-OF-WAY AND OTHER TRAVELED AREAS OR UNDER STRUCTURES, COMPACT BACKFILL, EMBANKMENT, IMPORTED FILL AND PAVEMENT MATERIALS TO 95 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY. IN OTHER NON-TRAVEL AREAS, COMPACT FILLS AND EMBANKMENT MATERIALS TO 90 PERCENT OF ASTM D1557 MAXIMUM LABORATORY DENSITY.
   - 1.4. ONLY USE MATERIALS APPROVED BY THE ENGINEER. NO GEOTECHNICAL REPORT WAS COMPLETED FOR THIS PROJECT.

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NO.	DATE	REMARKS

REVISIONS

UPDATED: 3/8/2023
PLOTTED: 3/9/2023
DWG NAME: h:\JD\Proj\2202-061\dwg\TITLE_2202-061 NE-3.dwg
SCALE: NO SCALE

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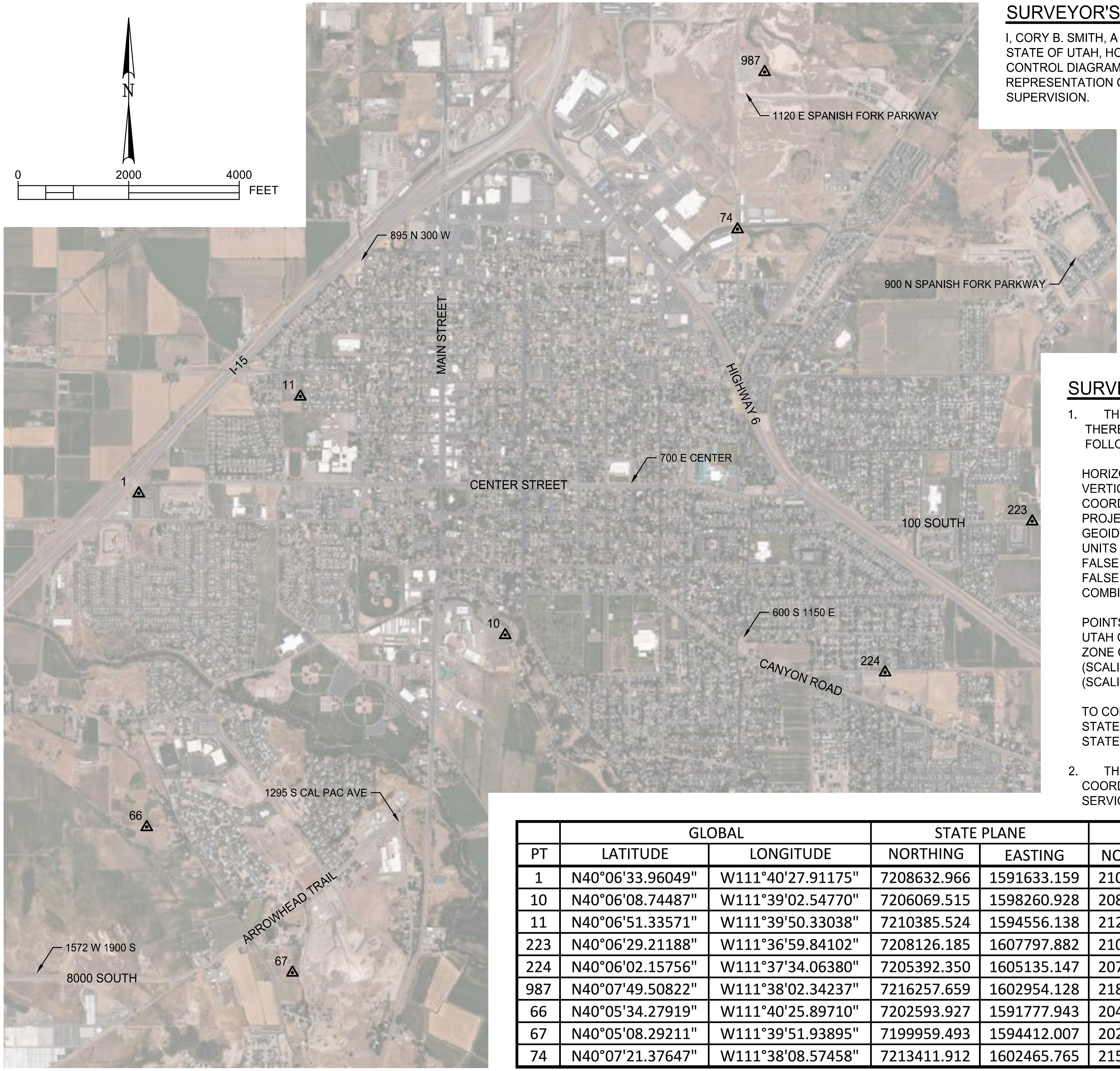
APPROVAL RECOMM: PROJECT DESIGN ENGINEER DATE
APPROVED: QUALITY MANAGEMENT REVIEW DATE

SPANISH FORK CITY
SFCN HUT NE-3
GENERAL NOTES
PROJECT NUMBER: 2202-061
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION
UTAH
COUNTY
SHEET NO. C-003



SURVEYOR'S CERTIFICATE

I, CORY B. SMITH, A PROFESSIONAL LAND SURVEYOR AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH, HOLDING CERTIFICATE #11349296, CERTIFY THAT I HAVE PREPARED THE CONTROL DIAGRAM REPRESENTED HEREIN AND THAT THE SAME IS AN ACCURATE REPRESENTATION OF A CONTROL SURVEY, AND WAS CONDUCTED UNDER MY DIRECT SUPERVISION.

Cory B. Smith

NO. 11349296
CORY B. SMITH
06/27/2022
Electronic Seal

CORY B. SMITH, P.L.S. #11349296

SURVEY DATUM

1. THE "PROJECT COORDINATES" AND BEARINGS AND DISTANCES DERIVED THEREFROM ARE EXPRESSED IN A LOCAL GROUND SYSTEM DEFINED AS FOLLOWS:

   HORIZONTAL DATUM = NORTH AMERICAN DATUM OF 1983 (N.A.D.83)
   VERTICAL DATUM =NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88)
   COORDINATE SYSTEM= US STATE PLANE 1983, UTAH CENTRAL ZONE (4302)
   PROJECTED AT GROUND
   GEOID MODEL = GEOID 12B
   UNITS = US SURVEY FOOT
   FALSE NORTHING = -7,000,000
   FALSE EASTING= -1,000,000
   COMBINED SCALE FACTOR= 0.99969464

   POINTS WERE SCALED FROM COORDINATE 0,0 IN THE NAD 83 US STATE PLANE UTAH CENTRAL ZONE COORDINATE SYSTEM USING THE COMBINED SCALE FACTOR LISTED ABOVE.
   (SCALING LATITUDE = N20°31'27.66067")
   (SCALING LONGITUDE = W116°02'57.11642")

   TO CONVERT TO STATE PLANE COORDINATES USE THE FOLLOWING:
   STATE PLANE NORTHING= (PROJECT NORTHING + 7,000,000)/ 1.0003054533
   STATE PLANE EASTING= (PROJECT EASTING + 1,000,000)/ 1.0003054533

2. THE CONTROL SURVEY WAS PERFORMED IN JULY 2021. SURVEY CONTROL COORDINATES WERE ESTABLISHED USING THE NGS ONLINE POSITIONING USER SERVICE (OPUS) AT POINT 1.

	GLOBAL		STATE PLANE		PROJECT			
PT	LATITUDE	LONGITUDE	NORTHING	EASTING	NORTHING	EASTING	ELEV	DESCRIPTION
1	N40°06'33.96049"	W111°40'27.91175"	7208632.966	1591633.159	210834.867	592119.329	4567.80	NAIL
10	N40°06'08.74487"	W111°39'02.54770"	7206069.515	1598260.928	208270.632	598749.122	4588.66	NAIL
11	N40°06'51.33571"	W111°39'50.33038"	7210385.524	1594556.138	212587.960	595043.200	4570.79	NAIL
223	N40°06'29.21188"	W111°36'59.84102"	7208126.185	1607797.882	210327.931	608288.989	4729.51	E/4 SEC 20 UT CO BC 2007
224	N40°06'02.15756"	W111°37'34.06380"	7205392.350	1605135.147	207593.261	605625.441	4733.77	S/4 SEC 20 UT CO BC 1955
987	N40°07'49.50822"	W111°38'02.34237"	7216257.659	1602954.128	218461.888	603443.755	4563.85	NAIL
66	N40°05'34.27919"	W111°40'25.89710"	7202593.927	1591777.943	204793.983	592264.156	4575.45	W/4 SEC 25 UT CO BC 1956
67	N40°05'08.29211"	W111°39'51.93895"	7199959.493	1594412.007	202158.744	594899.026	4616.16	S/4 SEC 25 UT CO BC 1956
74	N40°07'21.37647"	W111°38'08.57458"	7213411.912	1602465.765	215615.272	602955.244	4586.42	E/4 SEC 18 UT CO BC 1970

UPDATED: 6/27/2022
PLOTTED: 6/27/2022

DWG NAME:
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NO.	DATE	REMARKS

REVISIONS

SCALE:
1"=2000'

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APPROVED QUALITY MANAGEMENT REVIEW DATE

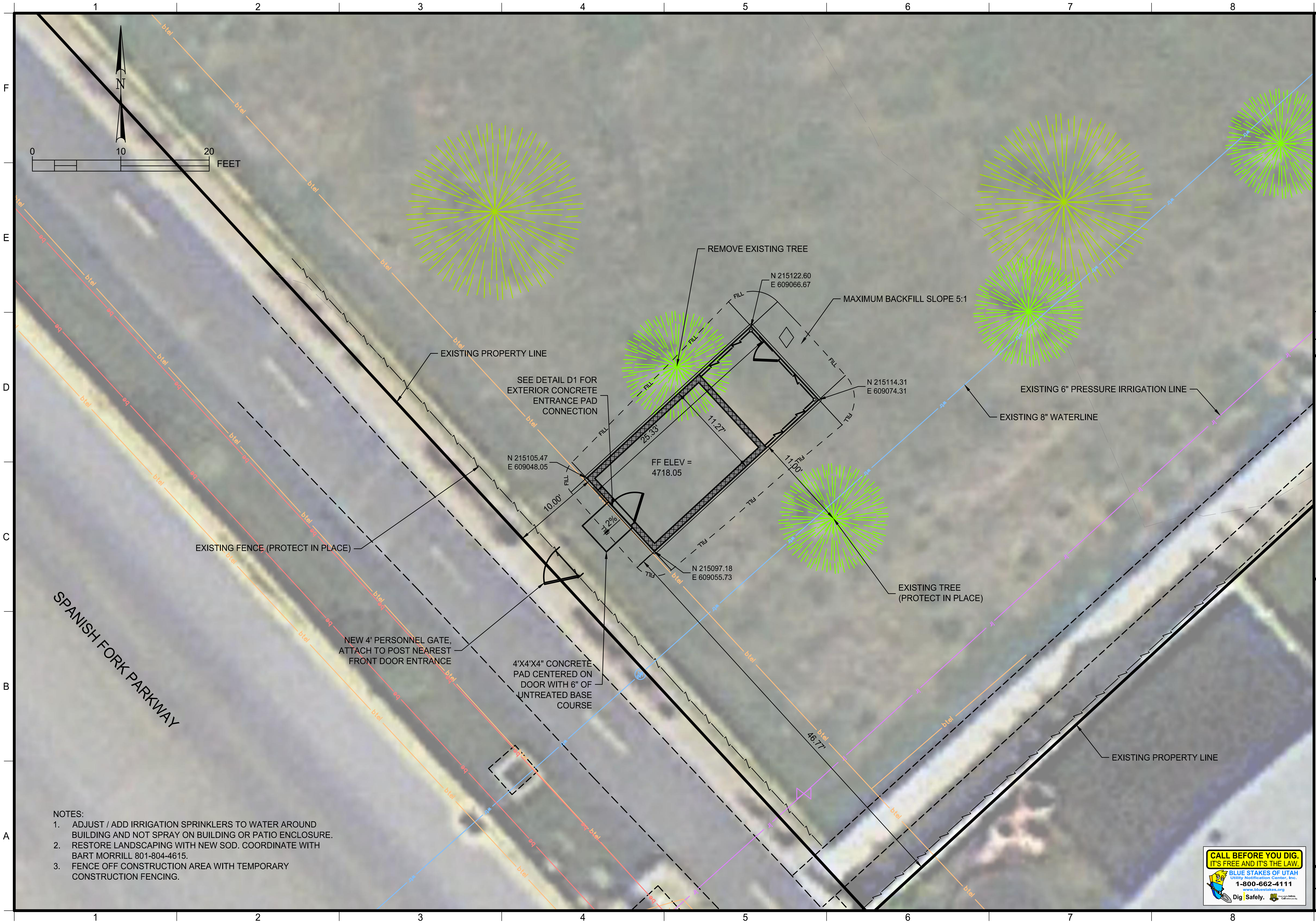
SPANISH FORK CITY
SFCN HUT
SURVEY CONTROL

PROJECT NUMBER: 2202-061

SUBMITTAL:

UTAH
COUNTY

SHEET NO. V-101


N
0
10
20
FEET
SPANISH FORK PARKWAY
REMOVE EXISTING TREE
N 215122.60
E 609066.67
MAXIMUM BACKFILL SLOPE 5:1
EXISTING PROPERTY LINE
SEE DETAIL D1 FOR EXTERIOR CONCRETE ENTRANCE PAD CONNECTION
N 215114.31
E 609074.31
EXISTING 6" PRESSURE IRRIGATION LINE
EXISTING 8" WATERLINE
25.33'
11.27'
FF ELEV = 4718.05
N 215105.47
E 609048.05
10.00'
11.00'
2%
FILL
EXISTING FENCE (PROTECT IN PLACE)
N 215097.18
E 609055.73
EXISTING TREE (PROTECT IN PLACE)
NEW 4' PERSONNEL GATE, ATTACH TO POST NEAREST FRONT DOOR ENTRANCE
4'X4'X4" CONCRETE PAD CENTERED ON DOOR WITH 6" OF UNTREATED BASE COURSE
46.77'
EXISTING PROPERTY LINE
btel
eq
1
2
3
4
5
6
7
8
A
B
C
D
E
F

NOTES:

1. ADJUST / ADD IRRIGATION SPRINKLERS TO WATER AROUND BUILDING AND NOT SPRAY ON BUILDING OR PATIO ENCLOSURE.
2. RESTORE LANDSCAPING WITH NEW SOD. COORDINATE WITH BART MORRILL 801-804-4615.
3. FENCE OFF CONSTRUCTION AREA WITH TEMPORARY CONSTRUCTION FENCING.

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REVISIONS

SCALE: 1" = 10'
DWG NAME: h:\JD\Proj\2202-061\dwg\SP_2202-061 NE-3.dwg
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APPROVED ______ QUALITY MANAGEMENT REVIEW ______ DATE

SPANISH FORK CITY

SFCN HUT NE-3

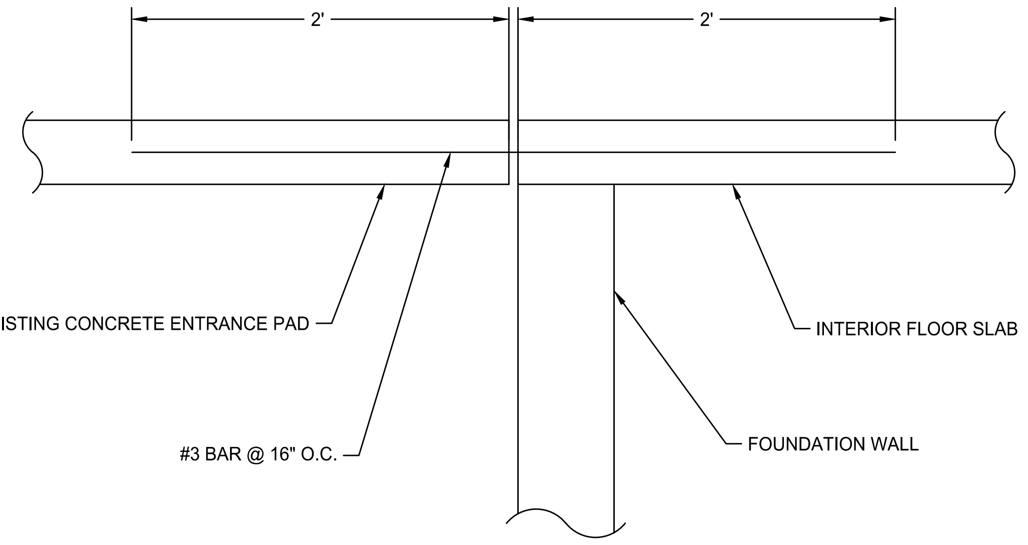
SITE PLAN

PROJECT NUMBER: 2202-061

SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY

SHEET NO. C-101



D1	EXTERIOR CONCRETE ENTRANCE PAD CONNECTION
SCALE	NTS

D5	
SCALE	

A1	DETAIL
SCALE	

A5	DETAIL
SCALE	

NO.	DATE	REMARKS

REVISIONS

SCALE: VARIES

DWG NAME: h:\JD\Proj\2202-061\dwg\SP_2202-061 NE-3.dwg

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SPANISH FORK CITY

SFCN HUT NE-3

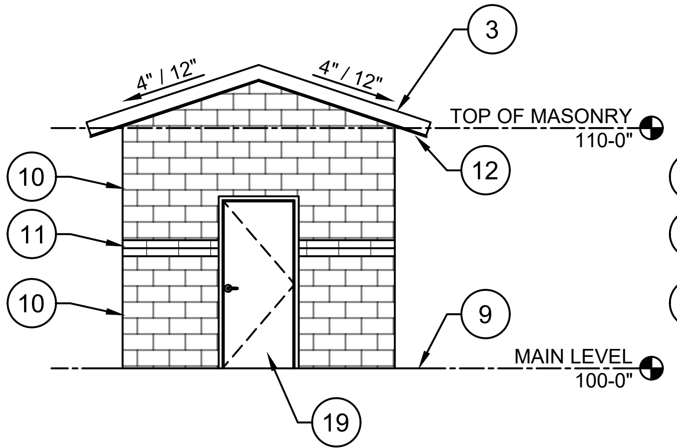
DETAILS

PROJECT NUMBER: 2202-061

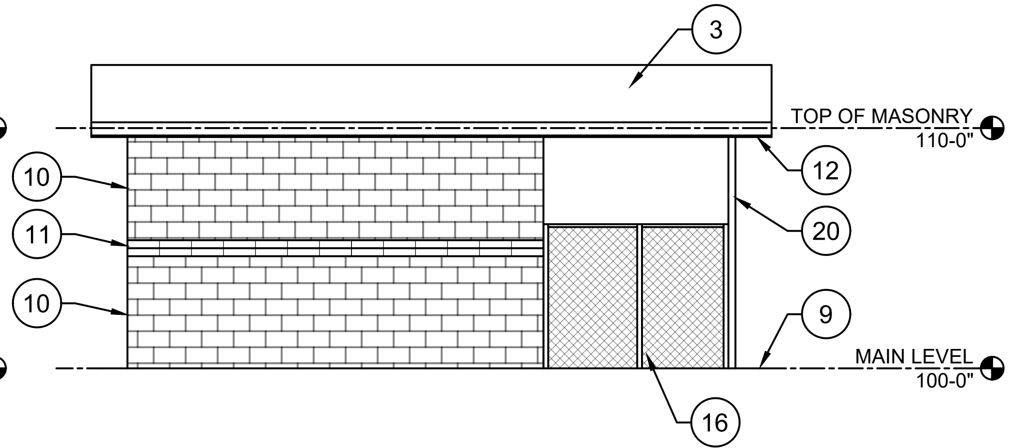
SUBMITTAL: REVIEW - NOT FOR CONSTRUCTION

UTAH
COUNTY

SHEET NO. C-501



4 ELEVATION
Scale: 1/4" = 1'-0"



5 ELEVATION
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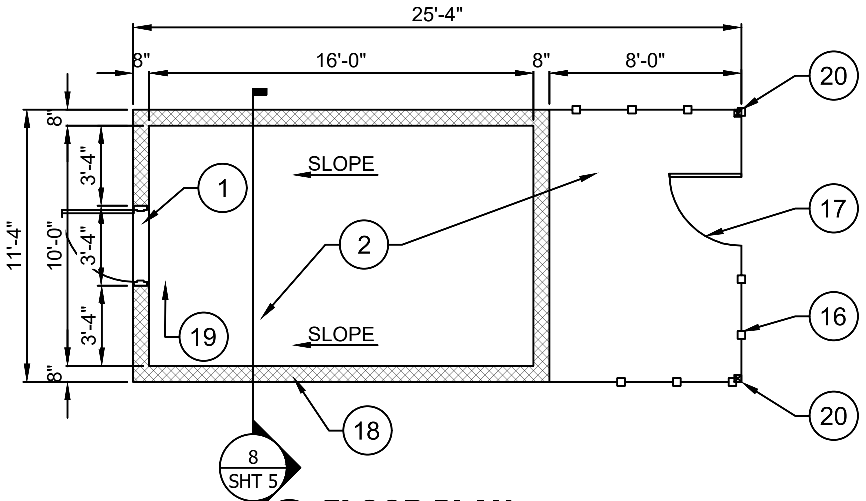
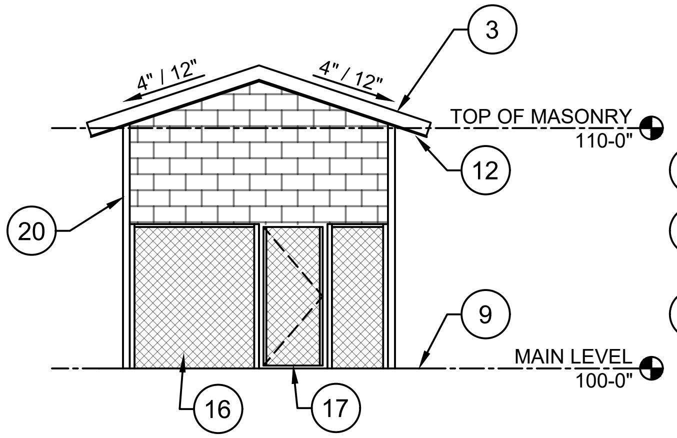
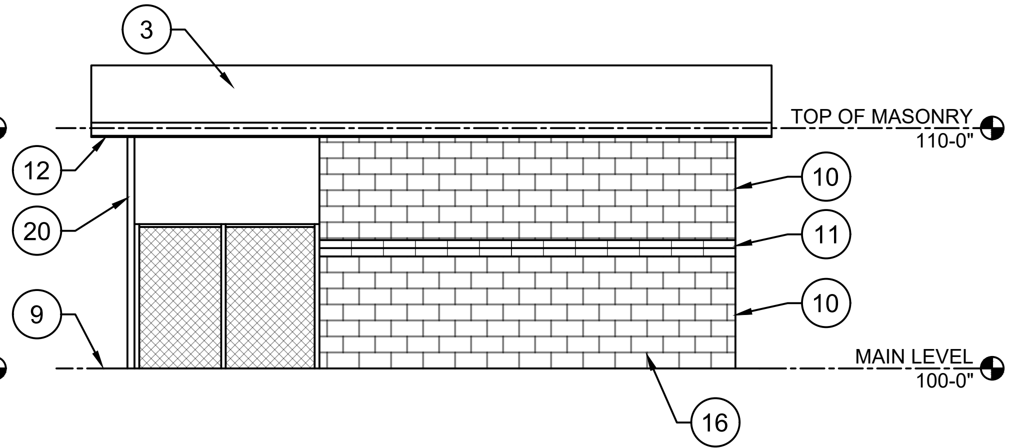


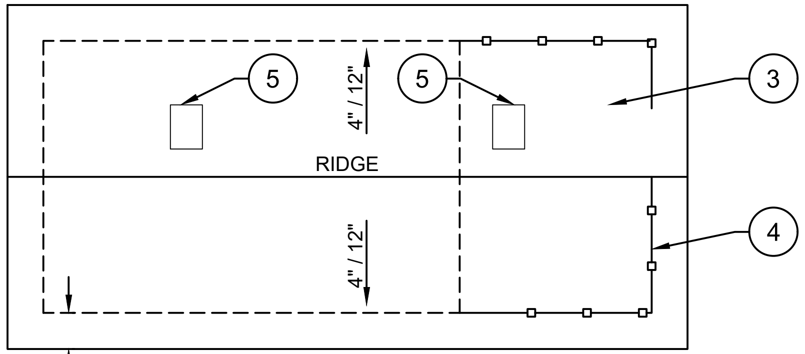
1 FLOOR PLAN
Scale: 1/4" = 1'-0"



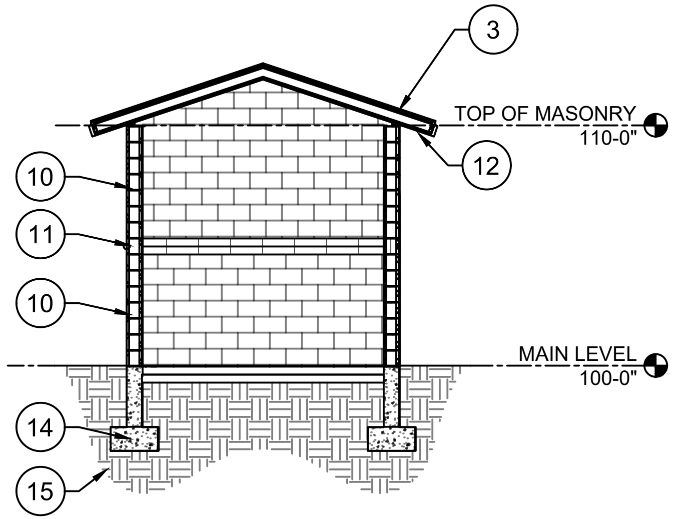
6 ELEVATION
Scale: 1/4" = 1'-0"



7 ELEVATION
Scale: 1/4" = 1'-0"

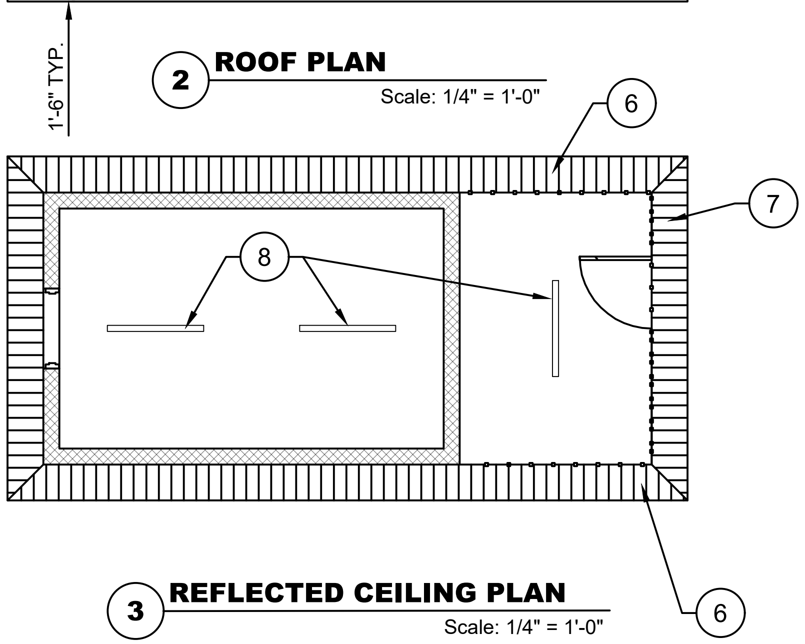


2 ROOF PLAN
Scale: 1/4" = 1'-0"



8 BUILDING SECTION
Scale: 1/4" = 1'-0"

1. DOOR THRESHOLD.
2. CONCRETE SLAB PER STRUCTURAL DESIGN - SLOPE TO DOOR OPENING.
3. PRE-FINISHED STANDING SEAM METAL ROOF OVER HIGH TEMPERATURE SELF-ADHERED UNDERLAYMENT
4. LINE OF WALL/FENCE BELOW
5. STATIC ROOF VENT W/ 50 SQ. IN. FREE CLEAR AREA PER UNIT.
6. PRE-FINISHED VENTED METAL SOFFIT
7. PRE-FINISHED METAL SOFFIT
8. LIGHT FIXTURE
9. APPROXIMATE FINISH GRADE - SEE CIVIL DRAWINGS
10. 8" HIGH COLORED HONED CMU WALL - COLOR #1
11. TWO ROWS 4" HIGH COLORED HONED CMU WALL - COLOR #2
12. PRE-FINISHED METAL FASCIA
13. PRE-FINISHED METAL SOFFIT
14. CONCRETE FOOTING AND FOUNDATION
15. EARTH FILL
16. 6' BLACK VINYL CHAINLINK FENCE
17. 6' BLACK VINYL CHAINLINK GATE.
18. TYPICAL REFERENCE FOR CONSTRUCTION TYPE. SEE SHEET A1.2
19. TYPICAL REFERENCE FOR DOOR TYPE. SEE SHEET A1.2 FOR DOOR SCHEDULE
20. 4X4 POST - SEE STRUCTURAL PLANS



3 REFLECTED CEILING PLAN
Scale: 1/4" = 1'-0"

J:\Shared drives\Public Works\SFCN\Projects - SFCN\SFCN Fiber Huts\DWG\Draft Building - SFCN Fiber Huts.dwg

SPANISH FORK CITY
ENGINEERING & SURVEYING
40 SOUTH MAIN STREET
SPANISH FORK, UTAH 84660
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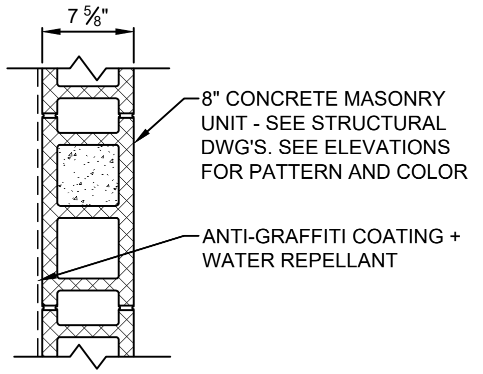
SPANISH FORK
ENGINEERING

SFCN FIBER HUTS

FIBER HUT PLANS

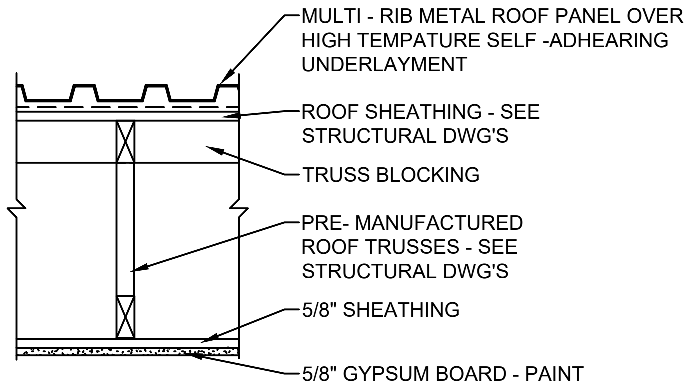
REVISION	BY	DATE

DRAWN: JLR
DESIGN: JHJ
CHECK: CMT
DATE: 6/7/2022
SCALE: 1/8"=1'-0"
DRAWING #: A1.1


7 5/8"
8" CONCRETE MASONRY UNIT - SEE STRUCTURAL DWG'S. SEE ELEVATIONS FOR PATTERN AND COLOR
ANTI-GRAFFITI COATING + WATER REPELLANT

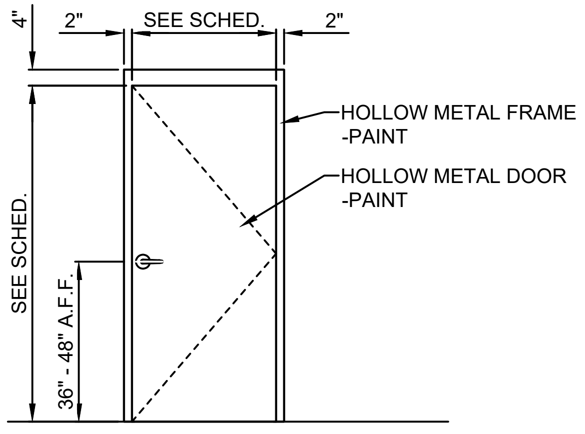
1-1 WALL CONSTRUCTION TYPE 1-1

Scale: N.T.S.


MULTI - RIB METAL ROOF PANEL OVER HIGH TEMPATURE SELF -ADHEARING UNDERLAYMENT
ROOF SHEATHING - SEE STRUCTURAL DWG'S
TRUSS BLOCKING
PRE- MANUFACTURED ROOF TRUSSES - SEE STRUCTURAL DWG'S
5/8" SHEATHING
5/8" GYPSUM BOARD - PAINT

2-1 ROOF/CEILING CONSTRUCTION

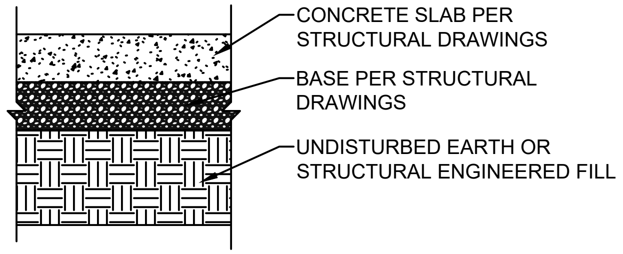
Scale: N.T.S.



TYPE A

DOOR SCHEDULE

DOOR NUMBER	ROOM NUMBER	ROOM NAME	DOOR TYPE	DOOR SIZE			HARDWARE SET	DOOR DETAILS	
				WIDTH	HEIGHT	THICK		HEAD	JAMB
101	101	FIBER HUT	A	3'-0"	7'-0"	1 ¾"	1	1/2/2022	2/2/2022


CONCRETE SLAB PER STRUCTURAL DRAWINGS
BASE PER STRUCTURAL DRAWINGS
UNDISTURBED EARTH OR STRUCTURAL ENGINEERED FILL

3-1 FLOOR CONSTRUCTION

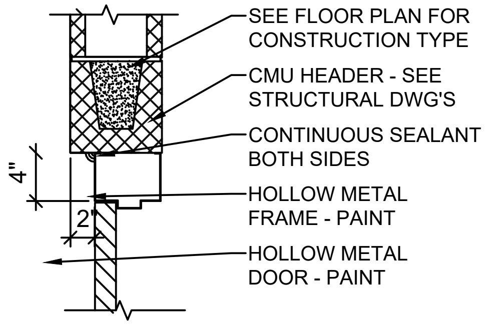
Scale: N.T.S.

DOOR HARDWARE SCHEDULE

NUMBER		ITEM	PRODUCTS NUMBER	FIN.	MANU.
3	EA	HINGE	3BB81 4.5 X 4.5	652	PBB
1	EA	STORMROOM LOCK	L280S C	626	GENL
1	EA	SURFACE CLOSER	4040XP RWPA AL X SNB	689	LCNHA
1	EA	KICK PLATE	198S 10 X 34	630	HAG
1	SET	SEALS	160	GRY	NGP
1	EA	DOOR SWEEP	200NA 36"	AL	NGP
1	EA	THREASHOLD	425 E 36"	628	NGP

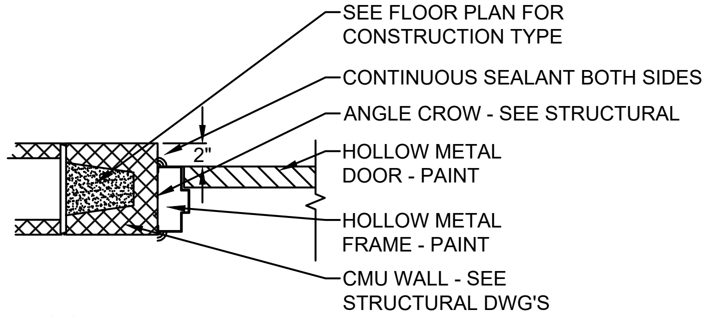
EXTERIOR FINISH SCHEDULE

CMU BLOCK - COLOR #1	COLOR TO BE DETERMINED WITH EACH SITE
CMU BLOCK - COLOR #2	COLOR TO BE DETERMINED WITH EACH SITE
MANUFACTURED MASONRY VENEER	MANUFACTURER: CREATIVE MINES STYLE: CRAFT BOARD FORM COLOR: BARNWOOD
PAINTED HM DOORS & FRAMES	MANUFACTURER: SHERWIN WILLIAMS COLOR: ELEPHANT EAR (SW 9168)
STANDING SEAM METAL ROOF	McELROY OR APPROVED EQUAL COLOR: DARK BRONZE
PRE-FINISHED METAL SOFFIT & FASCIA AS SPECIFIED	COLOR: MATCH METAL ROOF


SEE FLOOR PLAN FOR CONSTRUCTION TYPE
CMU HEADER - SEE STRUCTURAL DWG'S
CONTINUOUS SEALANT BOTH SIDES
HOLLOW METAL FRAME - PAINT
HOLLOW METAL DOOR - PAINT
4"
2"

1 DOOR HEAD DETAIL

Scale: N.T.S.


SEE FLOOR PLAN FOR CONSTRUCTION TYPE
CONTINUOUS SEALANT BOTH SIDES
ANGLE CROW - SEE STRUCTURAL
2"
HOLLOW METAL DOOR - PAINT
HOLLOW METAL FRAME - PAINT
CMU WALL - SEE STRUCTURAL DWG'S

2 DOOR JAMB DETAIL

Scale: N.T.S.

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SPANISH FORK ENGINEERING

SFCN FIBER HUTS

FIBER HUT PLANS

REVISION	BY	DATE

DRAWN: JLR
DESIGN: JHJ
CHECK: CMT
DATE: 5/12/2022
SCALE: N.T.S.
DRAWING #: A1.2

DESIGN CRITERIA

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE

CLASSIFICATION: RISK CATEGORY I

LIVE LOADING
ROOF: 20 PSF (REDUCIBLE)

DEAD LOADING
ROOF: 13 PSF

SNOW LOADING (BASED ON 2018 UTAH GROUND SNOW LOAD MAP)
ELEVATION: 4600 FT (APPROX.)
GROUND SNOW LOAD: Pg = 33 PSF
EXPOSURE FACTOR: Ce = 0.9
SNOW IMPORTANCE FACTOR: Is = 0.8
THERMAL FACTOR: Ct = 1.1
CALCULATED SNOW LOAD: Pf = 18.3 PSF
DESIGN SNOW LOAD: Pf = 18.3 PSF
SLOPE FACTOR: Cs = 1.0

WIND LOADING
WIND EXPOSURE: C
WIND SPEED: 100 MPH
WIND IMPORTANCE FACTOR: Iw = 1.0

SEISMIC LOADING
LOCATION: 40.10858° LAT., -111.66481° LON.
SEISMIC IMPORTANCE FACTOR: Ie = 1.00
MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss = 1.5g S1 = 0.549g
SITE CLASS: D
SPECTRAL RESPONSE COEFFICIENTS: SDS = 1.2g SD1 = 0.641g
SEISMIC DESIGN CATEGORY: D
SEISMIC FORCE RESISTING SYSTEM: SPECIAL REINFORCED MASONRY SHEAR WALLS.

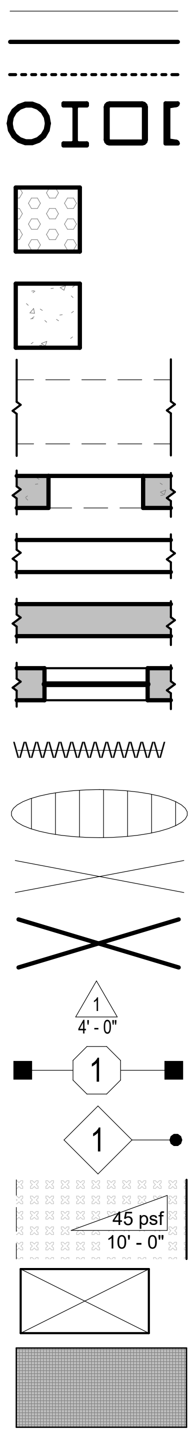
OUT-OF-PLANE FORCE: Fp = 0.48 Wp
SEISMIC RESPONSE COEFFICIENT: Cs=0.360
RESPONSE MODIFICATION FACTOR: R=5
OVERSTRENGTH FACTOR: Ω = 2
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE METHOD

SOILS
SOIL BEARING PRESSURE: 1500 PSF
PROJECT GEOTECHNICAL INVESTIGATION: NONE

SHEET INDEX

SHEET #	DESCRIPTION
STRUCTURAL	
S-001	STRUCTURAL NOTES
S-002	STRUCTURAL NOTES
S-101	FOUNDATION PLAN
S-102	ROOF FRAMING PLAN
S-501	STRUCTURAL DETAILS
S-502	STRUCTURAL DETAILS
S-701	TYPICAL STRUCTURAL DETAILS
S-702	TYPICAL STRUCTURAL DETAILS
S-801	SPECIFICATIONS
S-802	SPECIFICATIONS
S-803	SPECIFICATIONS
S-804	SPECIFICATIONS

STRUCTURAL PLAN LEGEND



JOIST OR TRUSS
BEAM OR GIRDER
PURLIN
STEEL COLUMN
MASONRY COLUMN
CONCRETE COLUMN
CONCRETE FOOTING
RECESSED FOUNDATION WALL
NON-BEARING STRUCTURAL WALL
BEARING WALL
BEAM IN WALL
STEEL STRAP
STEEL DECK
OWS JOIST CROSS BRIDGING
STEEL JOIST CROSS BRIDGING
SHEARWALL TYPE AND LENGTH, SEE SHEARWALL SCHEDULE
STRUCTURAL CONNECTOR, SEE CONNECTOR SCHEDULE
HOLDOWN, SEE HOLDOWN SCHEDULE. "H" INDICATES LOCATION OF HOLDOWN IDENTIFIED ON LEVEL ABOVE.
SNOW DRIFT AREA AND LOAD, ON TOP OF BASE SNOW LOAD. DRIFT LOAD IS 0 PSF AT DOTTED LINE AND INCREASES LINEARLY TO MAXIMUM LOAD.
SHEATHING
PERMANENT EQUIPMENT

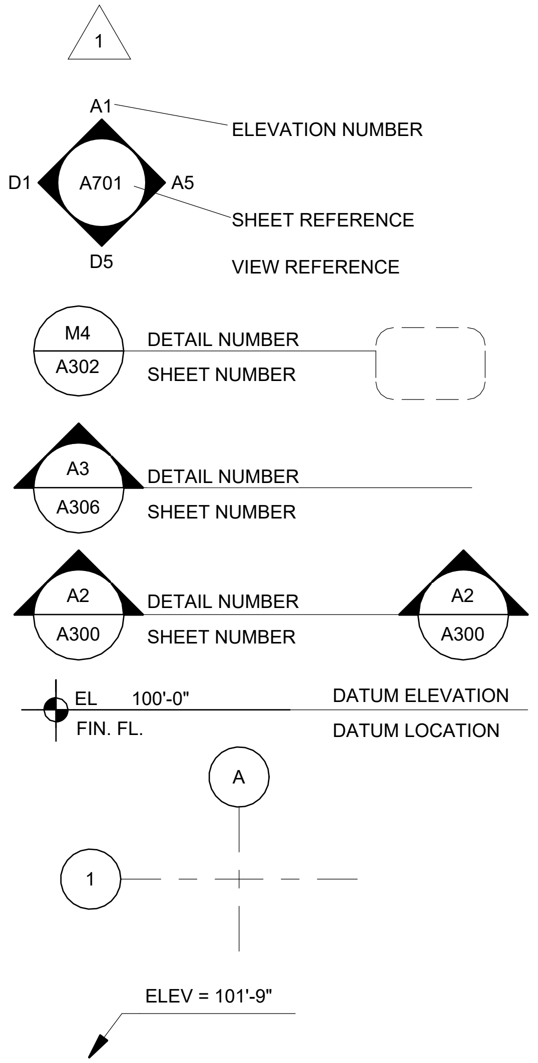
LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
STATE OF UTAH

STRUCTURAL TAGS LEGEND

TAG	DESCRIPTION
AB-1	ANCHOR BOLT, SEE ANCHOR BOLT SCHEDULE
CB-1	CONCRETE BEAM, SEE CONCRETE BEAM SCHEDULE
CC-1	CONCRETE COLUMN, SEE CONCRETE COLUMN SCHEDULE
CF-1	CONCRETE FOOTING, SEE CONCRETE FOOTING SCHEDULE
CS-1	CONCRETE SLAB, SEE CONCRETE SLAB SCHEDULE
CW-1	CONCRETE WALL, SEE CONCRETE WALL SCHEDULE
DB-1	COLD-FORMED STEEL BEAM, SEE COLD-FORMED STEEL BEAM SCHEDULE
DJ-1	COLD-FORMED STEEL JOIST, SEE COLD-FORMED STEEL JOIST SCHEDULE
DW-1	COLD-FORMED STEEL WALL, SEE COLD-FORMED STEEL WALL SCHEDULE
MC-1	MASONRY COLUMN, SEE MASONRY COLUMN SCHEDULE
ML-1	MASONRY LINTEL, SEE MASONRY LINTEL SCHEDULE
MW-1	MASONRY WALL, SEE MASONRY WALL SCHEDULE
SB-1	STEEL BEAM, SEE STEEL BEAM SCHEDULE
SC-1	STEEL COLUMN, SEE STEEL COLUMN SCHEDULE
SD-1	STEEL DECK, SEE STEEL DECK SCHEDULE
SJ-1	STEEL JOIST, SEE STEEL JOIST SCHEDULE
WB-1	WOOD BEAM, SEE WOOD BEAM SCHEDULE
WC-1	WOOD COLUMN, SEE WOOD COLUMN SCHEDULE
WJ-1	WOOD JOIST, SEE WOOD JOIST SCHEDULE
WW-1	WOOD WALL, SEE WOOD WALL SCHEDULE

GRAPHICS LEGEND

REVISIONS MARK
ELEVATION SYMBOL
DETAIL REFERENCE
WALL/DETAIL SECTION
BUILDING SECTION
DATUM ELEVATION
REFERENCE GRID
NEW POINT ELEVATION



SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
www.jonesanddemille.com

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL NOTES

2202-061
PROJECT NUMBER
S-001
SHEET NO.

GENERAL NOTES

1. NOTES AND TYPICAL DETAILS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON PLANS.
2. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
3. CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES ETC. ON THE JOB.
5. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER WHERE CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE STRUCTURE THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED WITH AFFECTED PARTIES.
6. IF CONTRACTOR'S WORK IS NOT CONSTRUCTED ACCORDING TO APPROVED CONSTRUCTION DOCUMENTS (INCLUDING STAMPED WRITTEN COMMUNICATIONS), CONTRACTOR SHALL EITHER:
    A. REMOVE THE NON-CONFORMING WORK AND RECONSTRUCT THE WORK ACCORDING TO DRAWINGS, AT CONTRACTOR'S OWN EXPENSE.
    B. PAY FOR AND PROVIDE AN EVALUATION AND LETTER FROM THE ENGINEER STATING THAT THE NON-CONFORMING WORK MEETS APPLICABLE BUILDING CODES.
    C. PAY FOR AND PROVIDE AN EVALUATION AND LETTER FROM THE ENGINEER STATING THAT THE NON-CONFORMING WORK DOES NOT MEET APPLICABLE BUILDING CODES AND DETAILING THE UPGRADES THAT ARE REQUIRED TO BRING THE NON-COMPLIANT WORK INTO COMPLIANCE.
7. VERBAL COMMUNICATIONS SHALL NOT BE CONSIDERED PART OF THE APPROVED CONSTRUCTION DOCUMENTS.

EARTHWORK

1. ENGINEER SHALL VERIFY CONDITION AND/OR ADEQUACY OF ALL SUBGRADES, FILLS, AND BACK FILLS, ETC.
2. SHORE AND BRACE AS REQUIRED.
3. DE-WATER AS REQUIRED TO REMOVE STANDING WATER FROM EXCAVATIONS.
4. FOUNDATIONS ARE SHOWN AND DIMENSIONED AS BEING FORMED. INCREASE FOOTING WIDTHS BY 2" FOR FOOTINGS PLACED IN NEAT EXCAVATIONS.
5. CLEAN ALL DEBRIS FROM EXCAVATIONS.
6. NOTIFY ENGINEER 48 HOURS IN ADVANCE OF PLACING CONCRETE.
7. PROVIDE 30" MINIMUM FOOTING EMBEDMENT FROM FINISH GRADE FOR FROST PROTECTION AT EXTERIOR FOOTINGS.
8. PROVIDE 12" OF STRUCTURAL FILL BENEATH ALL FOOTINGS.
9. EXTEND STRUCTURAL FILL LATERALLY A DISTANCE EQUAL TO 1/2 THE STRUCTURAL FILL DEPTH BEYOND EDGE OF FOOTING ON EACH SIDE.
10. COMPACT STRUCTURAL FILL BENEATH FOOTINGS TO 95% OF MAXIMUM DRY DENSITY DETERMINED BY ASTM D1557.

ENGINEERED LUMBER

1. INSTALL ENGINEERED LUMBER PRODUCTS PER MANUFACTURER'S RECOMMENDATIONS UNO.
2. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR HOLES AND NOTCHES IN ENGINEERED LUMBER.
3. MINIMUM GRADES:
    A. LAMINATED VENEER LUMBER: MICROLAM LVL 2.0E

FASTENER REQUIREMENTS

1. SIMPSON HARDWARE: USE ONLY PNEUMATIC FASTENERS APPROVED BY SIMPSON.
2. INSTALL PNEUMATIC FASTENERS INTO PLYWOOD SHEATHING WITHIN THE 10% TOLERANCE LIMIT FOR HAND DRIVEN NAILS PER ASTM F1667-05 FOR HEAD DIAMETER.
3. NAIL HEADS: FULL ROUND HEADS.
4. DO NOT SUBSTITUTE PNEUMATIC (COOLER) NAILS FOR SPECIFIED COMMON NAILS WITHOUT APPROVAL FROM ENGINEER.
5. DO NOT COUNTERSINK NAIL HEADS.

MINIMUM NAIL SHANK DIAMETER & LENGTH:

COMMON NAIL	PNEUMATIC (COOLER)	STAPLES
8d = 2-1/2" x 0.131"	8d = 2-3/8" x 0.113"	MINIMUM 7/16" CROWN
10d = 3" x 0.148"	10d = 2-7/8" x 0.120"	14,15,16 GAGE
12d = 3-1/4" x 0.148"	3-1/4" x 0.131"	1-3/4" MIN. LENGTH
16d = 3-1/2" x 0.162"	3-1/4" x 0.148"	
20d = 4" x 0.192"		

#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022

CONCRETE

1. GENERAL
    A. DO NOT PLACE PIPES OR DUCTS IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
    B. REFER TO ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL MOLDS, GROOVES, ORNAMENTS, CLIPS AND GROUNDS TO BE CAST IN CONCRETE.
    C. COORDINATE WITH ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
2. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO FACE OF MAIN BARS AND DENOTE CLEAR COVERAGE.
3. CONCRETE MIX DESIGN: PREPARED BY INDEPENDENT LABORATORY AND APPROVED BY ENGINEER.

CONCRETE REINFORCING

1. PROVIDE LAP SPLICE UNO. SEE TABLE "CONCRETE REINFORCEMENT LAP SPLICES".
2. LAP SPLICE WELDED WIRE FABRIC TWO SQUARES MIN. EACH DIRECTION.
3. SECURELY POSITION REINFORCING DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE BEFORE PLACING CONCRETE (WET SETTING IS PROHIBITED).

CONCRETE REINFORCEMENT LAP SPLICES

f'c = 4,000 PSI

LOCATION	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP	24	32	40	48	70	80	91	102	113
OTHER	20	25	31	38	55	62	70	79	87

1. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE BASED ON ACI 318-11, SECTIONS 12.2.2 AND 12.15 RESPECTIVELY. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
2. LAP SPLICE LENGTHS SHOWN ARE FOR CLASS B AND CASE 1.
3. TOP REINFORCEMENT IS HORIZONTAL REINFORCEMENT THAT HAS MORE THAN TWELVE INCHES OF FRESH CONCRETE CAST BELOW IT. THIS INCLUDES HORIZONTAL REINFORCEMENT IN WALLS. ALL VERTICAL BARS ARE CONSIDERED AS "OTHER".
4. FOR LIGHTWEIGHT CONCRETE AGGREGATE CONCRETE, MULTIPLY TABULATED VALUES BY 1.3.
5. FOR EPOXY-COATED BARS, MULTIPLY TABULATED VALUES BY:
    A. TOP BARS: 1.31.
    B. OTHER BARS: 1.5.
6. FOR BARS WITH COVER OF LESS THAN 1 BAR DIAMETER OR WITH CLEAR SPACING OF LESS THAN 2 BAR DIAMETERS, MULTIPLY TABULATED VALUES BY 2.0.

MASONRY REINFORCEMENT LAP SPLICES

f'm = 2,000 PSI

	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH, IN.	12	15	23	43	58	88	111	141	174

1. LAP SPLICE LENGTHS ARE BASED ON TMS 402-16 SECTION 6.1.6.1.1.
2. TABULATED VALUES ARE BASED ON MINIMUM MASONRY COVER OF 3 INCHES.
3. FOR EPOXY-COATED BARS, MULTIPLY TABULATED VALUES BY 1.5.

SAFETY

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL STATE OF UTAH SAFETY STANDARDS AND OSHA REQUIREMENTS AS THEY APPLY TO THE PROJECT.
2. ENGINEER DOES NOT ACCEPT ANY RESPONSIBILITY FOR CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.

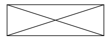
WOOD

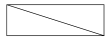
1. STRUCTURAL WOOD SPECIFICATIONS:
    A. DOUGLAS FIR- COAST REGION: WEST COAST LUMBER INSPECTION BUREAU GRADING RULES #16.
    B. REDWOOD: CALIFORNIA REDWOOD ASSOC. GRADING RULES, 1987 EDITION.
    C. SHEATHING: U.S. PRODUCT STANDARD PS 1-83 FOR SOFT PLYWOOD.
2. MINIMUM GRADES:
    A. SOLID-SAWN BEAMS: DF#2.
    B. SOLID-SAWN JOISTS: DF#2.
    C. ALL MEMBERS: FREE OF HEART CENTER.
    D. ROOF SHEATHING: 5/8" APA RATED SHEATHING, EXPOSURE 1.
3. PROVIDE SOLID BLOCKING BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.
4. CUTTING OF WOOD JOISTS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-FIFTH THE JOIST DEPTH FROM THE TOP, AND LOCATED NOT FARTHER FROM THE END THAN THREE TIMES THE JOIST DEPTH. SEE TYPICAL DETAIL.
5. BORE HOLES FOR BOLTS IN WOOD WITH BIT OF SAME NOMINAL DIAMETER AS BOLT + 1/16".
6. BORE HOLES FOR LAG SCREWS FIRST TO SAME NOMINAL DIAMETER AND DEPTH AS SHANK. BORE REMAINDER OF HOLE NO LARGER THAN ROOT OF THREAD.
7. SCREW, DO NOT DRIVE, LAG SCREWS AND WOOD SCREWS INTO PLACE.
8. PROVIDE METAL WASHERS UNDER HEADS OR END NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO INSERTED EXPANDING FASTENERS - RED HEAD, ETC.

BOLT DIAM	MI WASHER	STEEL WASHER
1/2" DIAM	2-1/2" DIAM x 1/4"	2" x 2" x 1/4"
5/8" DIAM	2-3/4" DIAM x 5/16"	2-1/2" x 2-1/2" X 1/4"
3/4" DIAM	3" DIAM x 7/16"	3" x 3" x5/16"
7/8" DIAM	3-1/2" DIAM x 7/16"	3-1/2" x 3-1/2" x 3/8"
1" DIAM	4" DIAM x 1/2"	3-3/4" x 3-3/4" x 3/8"
1-1/4" DIAM	5" DIAM x 5/8"	5" x 5" x 1/2"

CARRIAGE BOLT DIAM	CUT WROUGHT STEEL WASHER
1/2" DIAM	3/4" (2" OD)
5/8" DIAM	7/8" (2-1/4" (OD)
3/4" DIAM	1" (2-1/2" OD)
7/8" DIAM	1-3/8" (3" OD)
1" DIAM	1-1/2" (3-1/4" OD)

11. ALL BOLT AND LAG SCREWS SHALL TIGHTENED AT TIME OF INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
12. LAY ALL STRUCTURAL PLYWOOD ON ROOF WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
13. BLOCK STRUCTURAL PLYWOOD JOINTS WITH 3X4 FLAT BLOCKING WHERE NOTED ON FRAMING PLANS AND WITH BLOCKING SAME SIZE AS STUDS AT WALLS.
14. CONSTRUCTION ADHESIVE: ASTM D3498 OR AFG-01.
15. CROSS BRIDGING BETWEEN JOISTS OR RAFTERS: SEE FRAMING PLANS AND TYPICAL DETAILS.
16. PROVIDE BLOCKING AT ALL CEILING LEVELS.
17. WHERE FRAMING HANGERS ARE REQUIRED AND ARE NOT SHOWN ON SECTIONS, DETAILS, OR PLANS, USE THE FOLLOWING SIMPSON HANGERS. SLOPE, SKEW, TURN IN FLANGES AND PROVIDE TOP FLANGE HANGERS AS REQUIRED.
    A. 2X & 3X MEMBERS: U HANGERS
    B. 4X MEMBERS: HU HANGERS
    C. 6X MEMBERS: HUTF HANGERS
    D. TJI MEMBERS: IUS HANGERS
    E. GLU LAM MEMBERS: LEG HANGERS
18. METAL HARDWARE: MANUFACTURED BY SIMPSON STRONG TIE COMPANY. INSTALL PER SIMPSON SPECIFICATIONS.
19. WOOD SYMBOLS:


CONTINUOUS


BLOCKING

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
www.jonesanddemille.com

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL NOTES

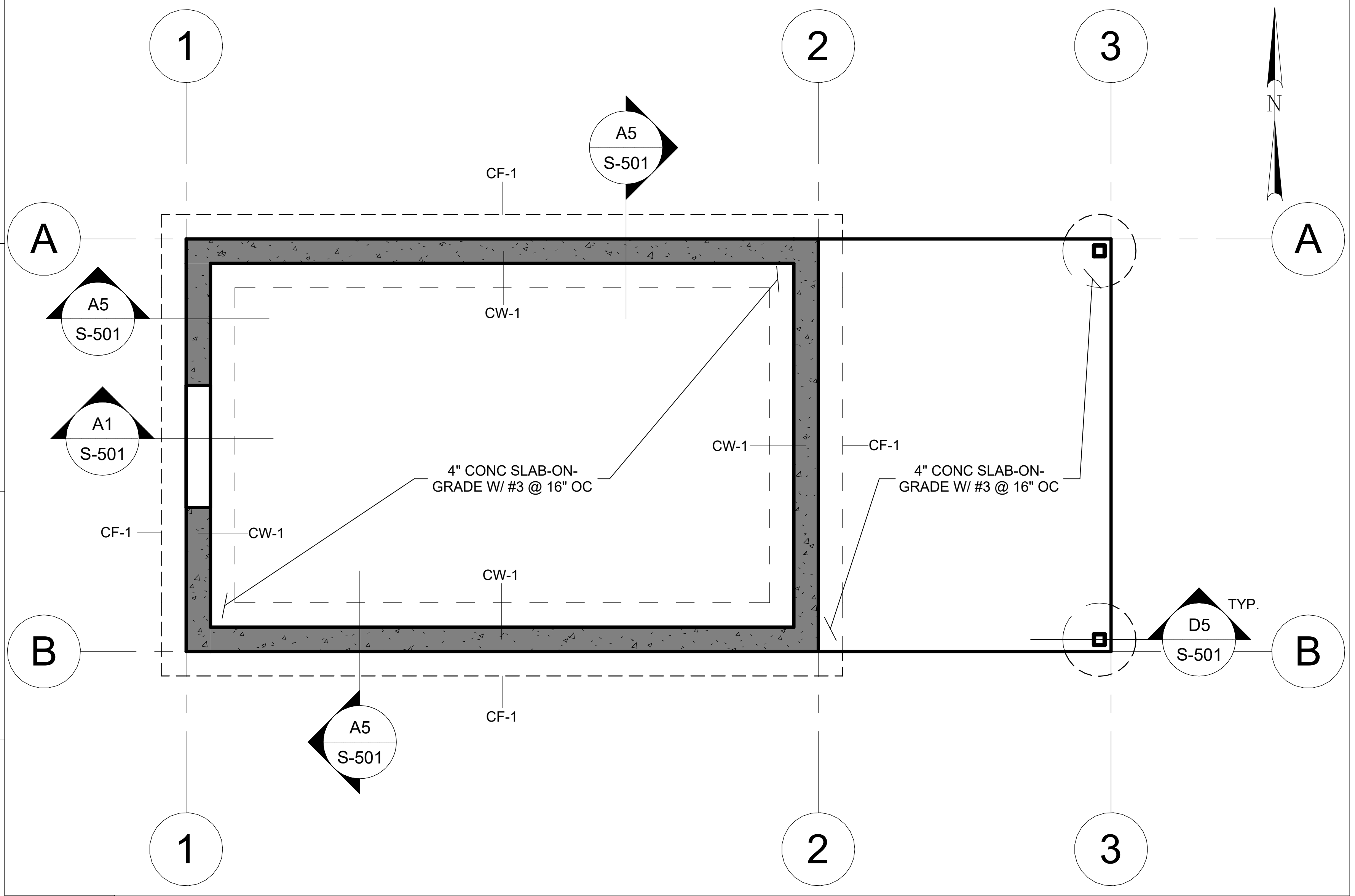
2202-061
PROJECT NUMBER
S-002
SHEET NO.

CONCRETE WALL SCHEDULE

MARK	THICKNESS	HORIZ REINF	VERT REINF	TYPE	REMARKS
CW-1	8"	(3) #4 BARS	#4 @ 16" OC	A	

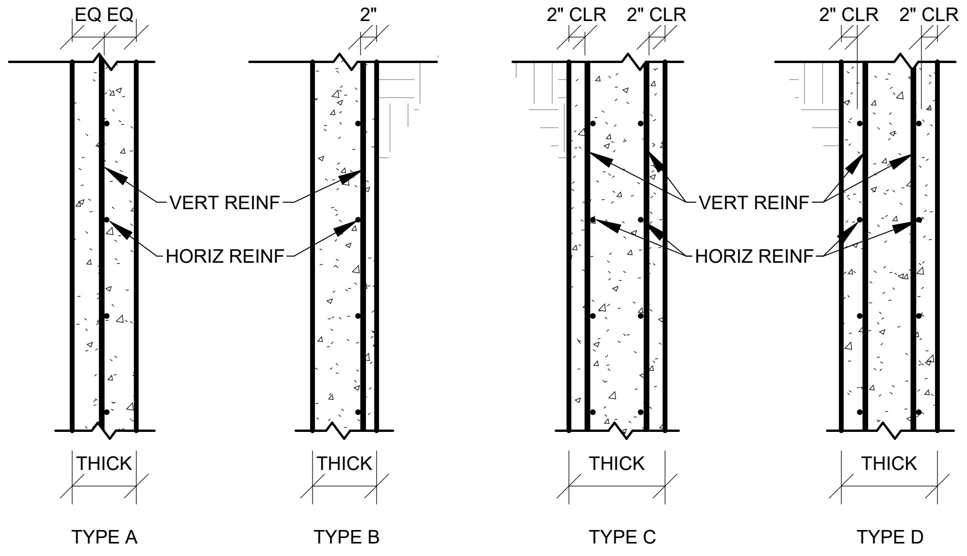
CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK	LONG REINF	PERP REINF	REMARKS
CF-1	2' - 0"	CONT.	1' - 0"	(3) #4 BARS	#4 @ 16" OC	



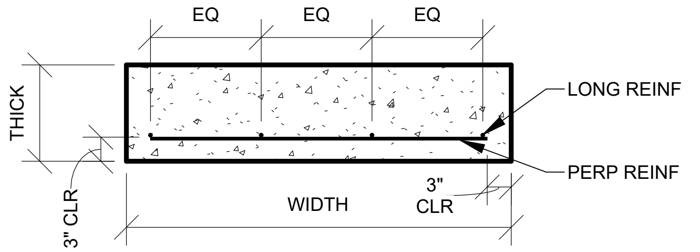
A1 FOUNDATION PLAN

SCALE 1/4" = 1'-0"



NOTES:
E.F. = EACH FACE
O.F. = OUTSIDE FACE (AGAINST SOIL)
I.F. = INSIDE FACE

CONCRETE WALLS (SECTION VIEW)



CONCRETE FOOTING

FOUNDATION NOTES

1. REFER TO TYPICAL NOTES, DETAILS, & SCHEDULES.
2. SEE CIVIL & ARCH PLANS FOR EXTERIOR CONCRETE WORK AND SITE GRADING.
3. SEE ARCHITECTURAL DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, DIMENSIONS, AND ELEVATIONS.
4. WHERE SLAB DEPRESSION IS INDICATED FOR TILE OR SIMILAR FLOORING, RECESS FLOOR 2".
5. PLACE STRUCTURAL FILL BENEATH FOOTINGS & BUILDING SLABS PER TYPICAL DETAIL "STRUCTURAL FILL PLACEMENT" AND PER EARTHWORK NOTES.
6. PROVIDE TEMPORARY SHORING UNTIL MAIN FLOOR FRAMING IS COMPLETE FOR ANY WALL OVER 6' TALL THAT RETAINS SOIL TO RESIST INDUCED LATERAL LOADS.

#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
FOUNDATION PLAN

2202-061
PROJECT NUMBER
S-101
SHEET NO.

MASONRY WALL SCHEDULE

MARK	THICK	HORIZ REINF	VERT REINF	GROUT
MW-1	8"	#4 @ 32" OC	#4 @ 48" OC	SOLID

SEE D5/S-701 FOR MASONRY WALL DETAIL.

MASONRY LINTEL SCHEDULE

MARK	WIDTH	HEIGHT	HORIZ REINF	STIRRUPS
ML-1	3' - 4"	8"	(1) #5 BAR	N/A

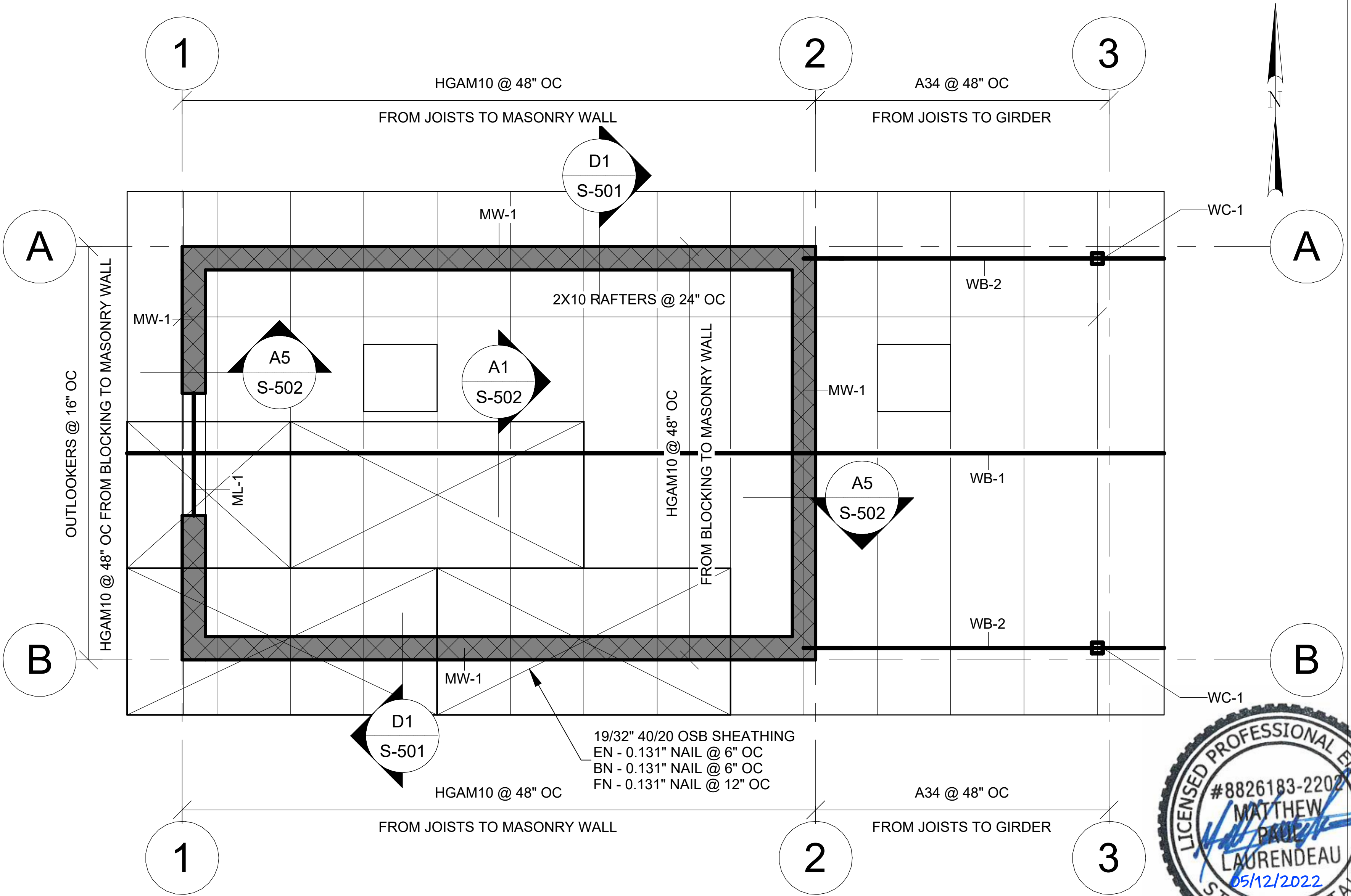
SEE A5/S-701 FOR MASONRY LINTEL DETAIL.

WOOD COLUMN SCHEDULE

MARK	MEMBER	SPECIES	COLUMN CAP	COLUMN BASE	REMARKS
WC-1	4x4	DF#2	SIMPSON CC44	(2) SIMPSON CB44	

WOOD BEAM SCHEDULE

MARK	SIZE	WOOD SPECIES	END SUPPORT(S)		REMARKS
			END 1	END 2	
WB-1	(2) 1 3/4x14	LVL	HGAM10 (TO MASONRY)	HGAM10 (TO MASONRY)	MUST BE CONTINUOUS
WB-2	(2) 2x10	DF-L #2	HGAM10 (TO MASONRY)	CC44 (TO COLUMN)	



A1 *ROOF FRAMING PLAN*

SCALE 1/4" = 1'-0"

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MASONRY WALL NOTES

1. PROVIDE (1) #5 VERTICAL REINFORCING BAR AT ALL CORNERS, ENDS OF WALLS AND JAMBS UNLESS NOTED OTHERWISE.
2. HORIZONTAL REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS AND AT INTERSECTING WALLS. PROVIDE CORNER BARS WITH THE REQUIRED LAP SPLICE LENGTH.
3. TERMINATE ALL HORIZONTAL REINFORCING BARS AT ENDS OF WALLS AND EDGES OF OPENINGS WITH A STANDARD HOOK AROUND VERTICAL REINFORCING BARS.
4. SEE PLANS, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS.
5. GROUT SOLID ALL CELLS BELOW GRADE, CELLS CONTAINING EMBEDS (HSA'S, DBA'S, ANCHOR BOLTS, ETC.), AND CELLS CONTAINING REINFORCING. CONSOLIDATE GROUT AS PER THE GENERAL STRUCTURAL NOTES.
6. HORIZONTAL WALL REINFORCING SHALL BE PLACED INSIDE THE VERTICALS OF MASONRY COLUMNS.
7. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.

MASONRY LINTEL NOTES

1. PLACE FIRST SET OF HORIZONTAL BARS IN BOTTOM COURSE.
2. PLACE SECOND SET OF HORIZONTAL BARS (IF REQ'D) IN TOP COURSE.
3. PLACE THIRD AND SUBSEQUENT SETS OF HORIZONTAL BARS (IF REQ'D) EQUALLY SPACED VERTICALLY IN LINTEL. WHEN AN EVEN COURSE IS NOT POSSIBLE, SHIFT BARS DOWN TO NEXT COURSE.
4. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS BEYOND EDGE OF OPENING. IF HORIZONTAL REINFORCING CANNOT BE EXTENDED 48 BAR DIAMETERS BEYOND EDGE OF OPENING, PROVIDE 90 DEGREE STANDARD HOOK.
5. GROUT MASONRY LINTELS MONOLITHICALLY WITH SUPPORT WALL OR COLUMN AT EACH END.
6. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY.
7. SPLICE BOTTOM BARS OVER SUPPORTS ONLY.
8. CONTINUE HORIZONTAL WALL REINFORCING THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN SAME LOCATION, REPLACE SMALLER BARS WITH LARGER BARS.
9. PROVIDE VERTICAL WALL REINF IN LINTELS OVER 4'-0" DEEP WITHOUT STIRRUPS.

FRAMING NOTES

1. REFER TO TYPICAL NOTES, DETAILS, & SCHEDULES.
2. SEE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT SHOWN.
3. DIMENSIONS FOR SHEARWALLS ARE TO EDGE OF SHEARWALL, NOT LOCATION OF HOLDOWN.
4. INSTALL ALL HANGERS, CLIPS, ANCHORS, AND OTHER HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
5. SHOP-FABRICATED WOOD TRUSSES SHALL BE DESIGNED FOR THE UNIFORM LOADS SPECIFIED IN THE SHOP-FABRICATED WOOD TRUSSES NOTES AND ANY CONCENTRATED GRAVITY AND LATERAL LOADS INDICATED ON THE STRUCTURAL FRAMING PLANS. NOTATION AND SYMBOLS FOR LOADS SHOWN ARE PER ASCE 7.
6. ALL TRUSSES SHALL BE DESIGNED TO TRANSFER AN OUT-OF-PLANE SERVICE SEISMIC OR WIND LOAD OF 0.7 KIPS (Fp) FROM THE HEEL TO THE DIAPHRAGM AT BEARING LOCATIONS.
7. FORM UP & FILL ALL BEAM & JOIST POCKETS W/ NON-SHRINK GROUT PRIOR TO PLACING FINISHES, UNO.
8. COORDINATE MECHANICAL UNIT WEIGHTS AND LOCATIONS WITH JOIST MANUFACTURER
9. PROVIDE BRIDGING AS REQ'D TO PREVENT CHORD BUCKLING.
10. PROVIDE TRUSS BLOCKING AT ALL BEARING WALLS WHERE TRUSS HEEL HEIGHT PROHIBITS USE OF 2X BLOCKING.
11. TRUSS BLOCKING SHALL BE ABLE TO RESIST A LATERAL LOAD (WIND OR SEISMIC) OF 250 PLF.
12. PROVIDE ATTIC VENTILATION AT TRUSS HEEL TO WALL CONNECTIONS BY OMITTING BLOCKING EVERY FOURTH TRUSS BAY. MAINTAIN A MINIMUM OF 3 CONSECUTIVE BAYS W/ BLOCKING.

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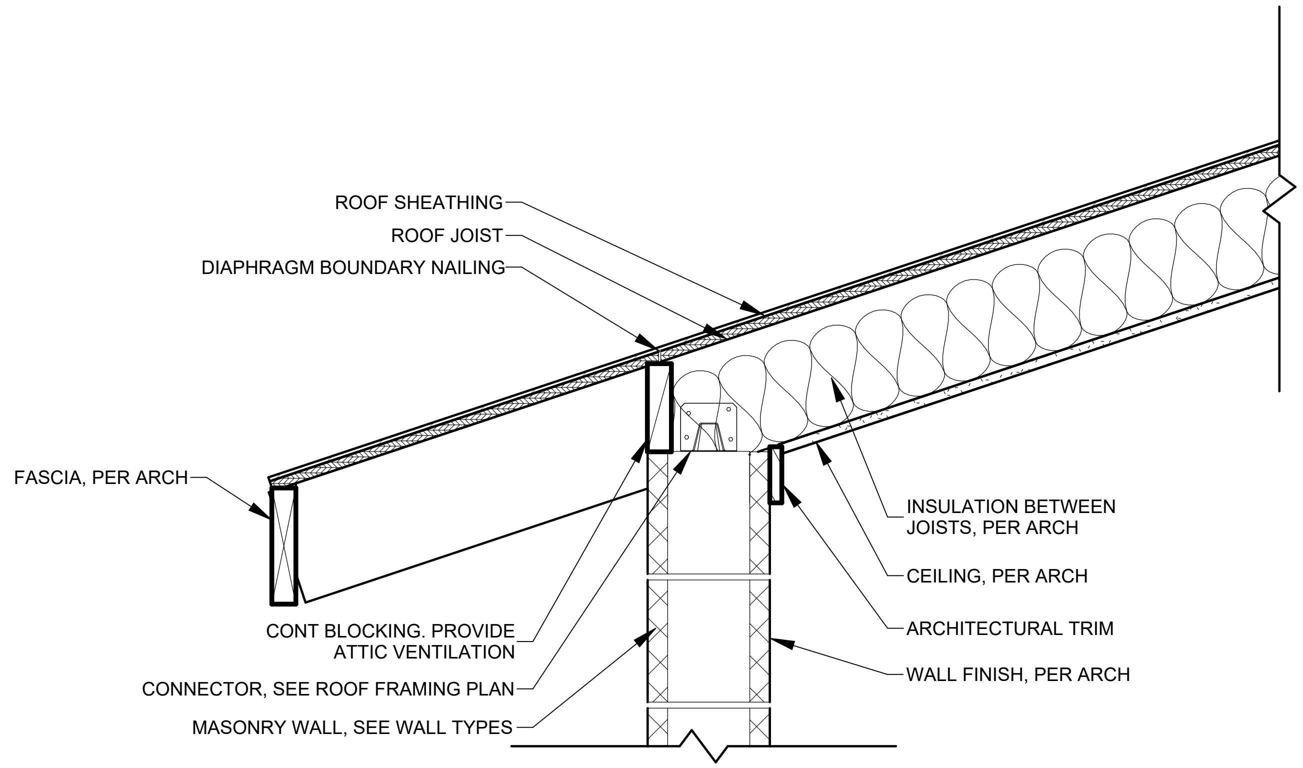
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
ROOF FRAMING PLAN

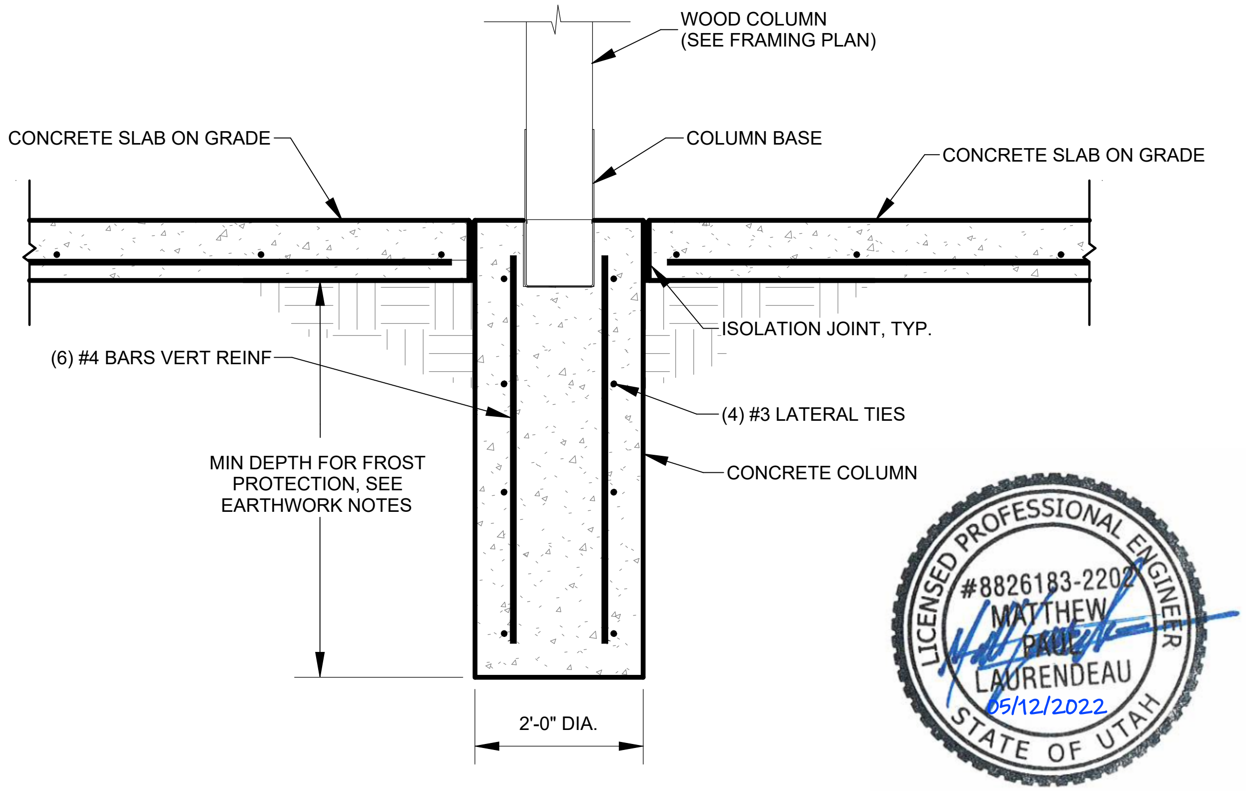
2202-061
PROJECT NUMBER

S-102
SHEET NO.


ROOF SHEATHING
ROOF JOIST
DIAPHRAGM BOUNDARY NAILING
FASCIA, PER ARCH
INSULATION BETWEEN JOISTS, PER ARCH
CEILING, PER ARCH
ARCHITECTURAL TRIM
WALL FINISH, PER ARCH
CONT BLOCKING. PROVIDE ATTIC VENTILATION
CONNECTOR, SEE ROOF FRAMING PLAN
MASONRY WALL, SEE WALL TYPES

D1 WOOD RAFTER ON MASONRY WALL

SCALE NTS



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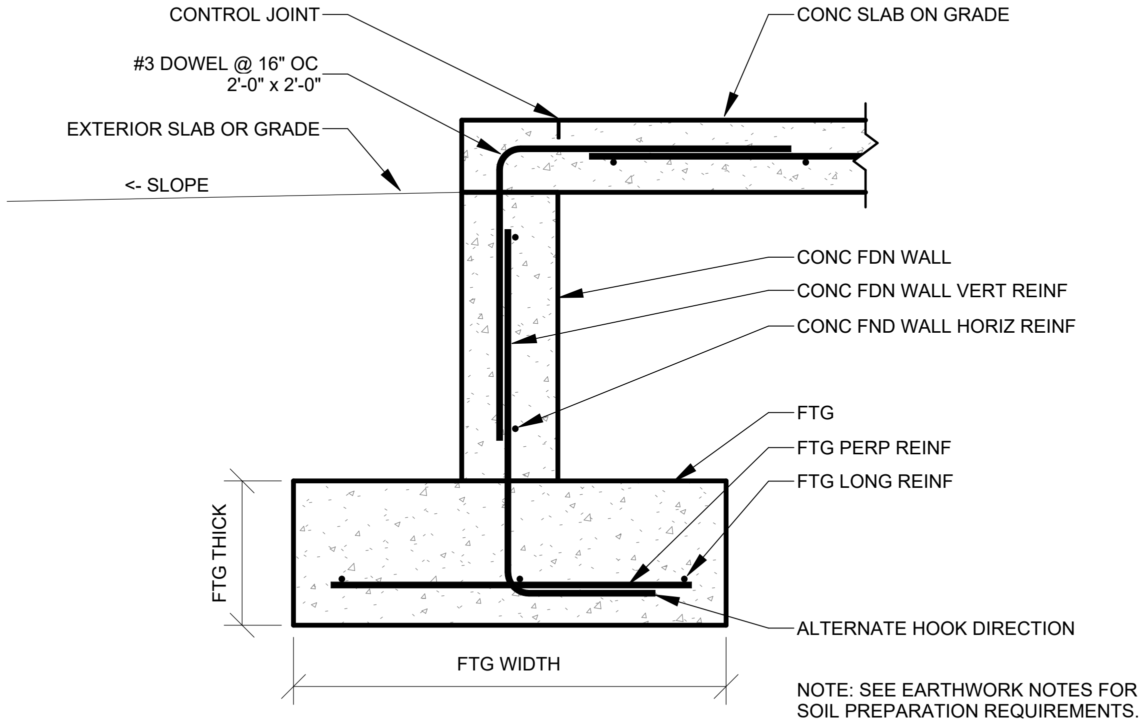
05/12/2022
STATE OF UTAH

D5 WOOD COLUMN ON SONOTUBE PIER

SCALE NTS

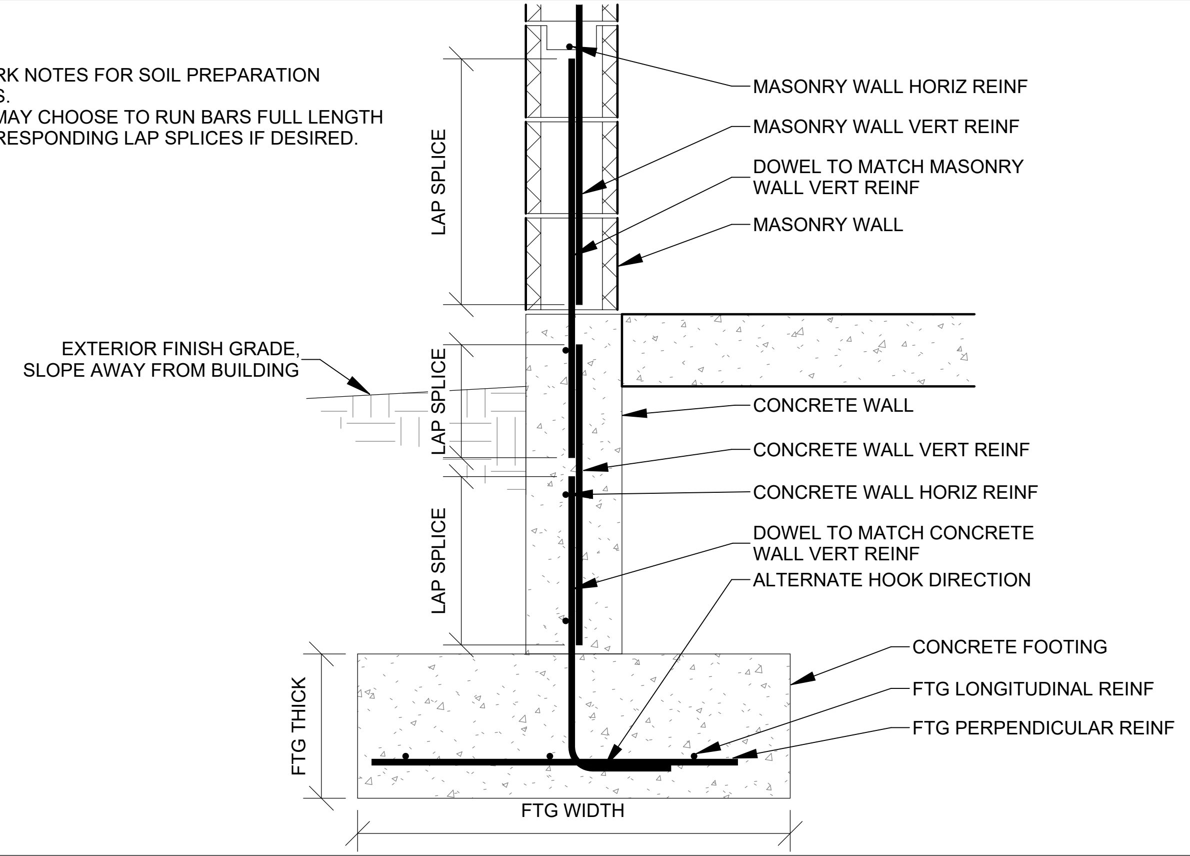


NOTE: SEE EARTHWORK NOTES FOR SOIL PREPARATION REQUIREMENTS.

A1 CONCRETE SLAB OVER FOUNDATION WALL @ DOOR OPENINGS

SCALE NTS

NOTES:
1. SEE EARTHWORK NOTES FOR SOIL PREPARATION REQUIREMENTS.
2. CONTRACTOR MAY CHOOSE TO RUN BARS FULL LENGTH AND OMIT CORRESPONDING LAP SPLICES IF DESIRED.



A5 MASONRY WALL ON CONCRETE FOUNDATION WALL

SCALE NTS

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NO.	DATE	DESCRIPTION

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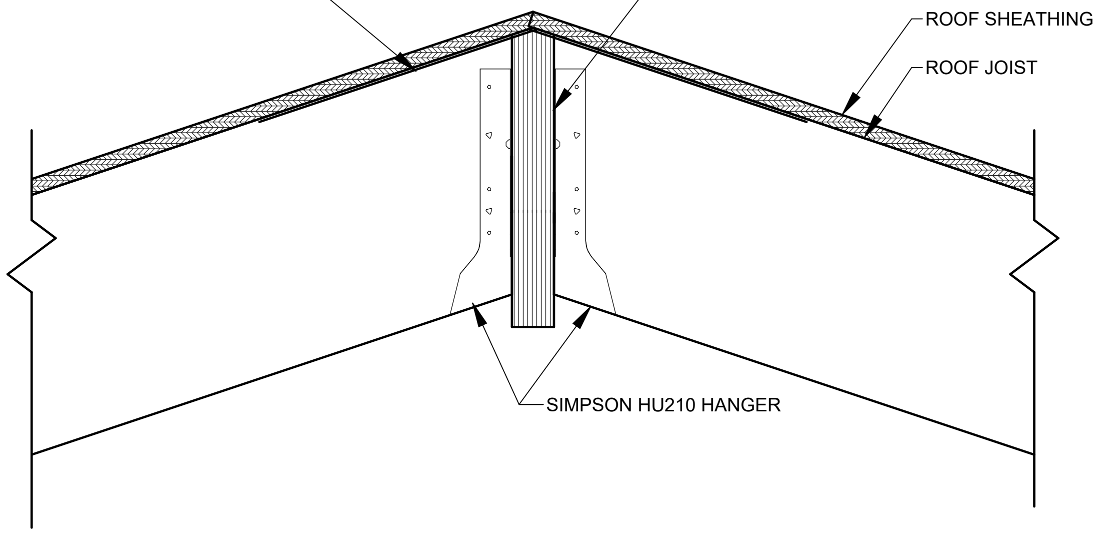
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

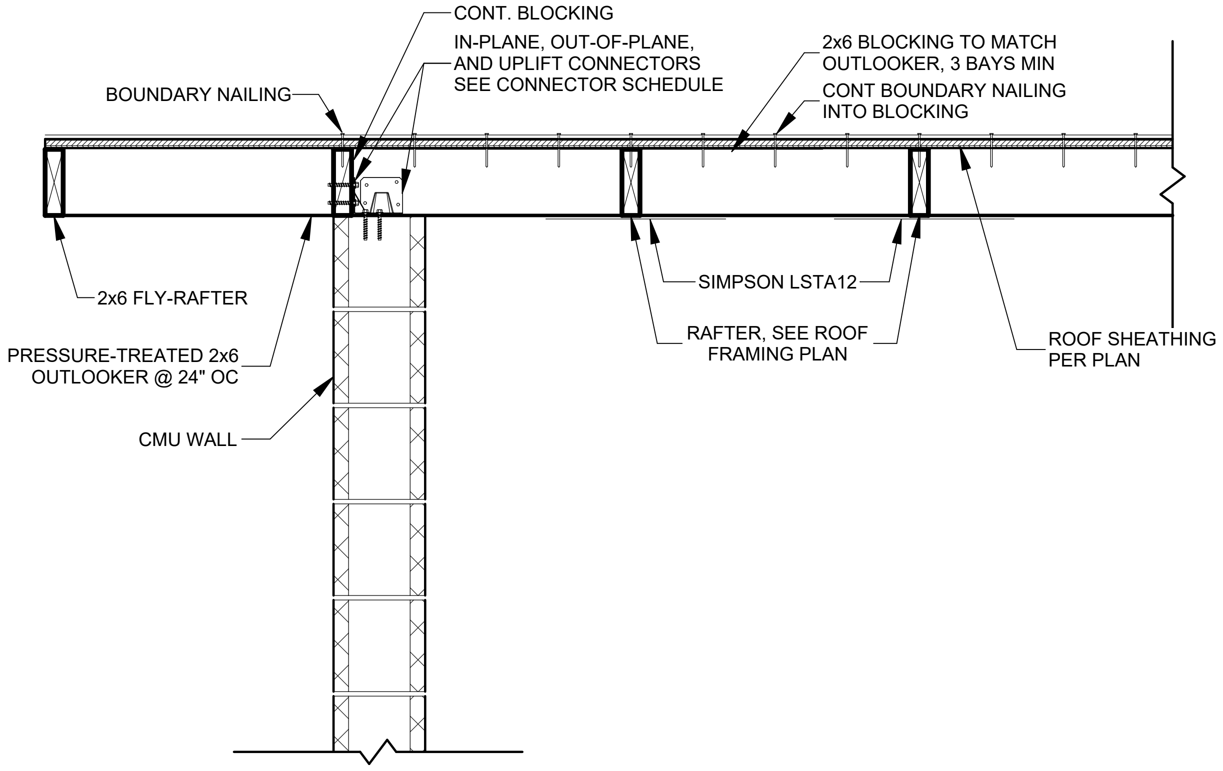
S-501
SHEET NO.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
STATE OF UTAH
05/12/2022



A1 DIMENSIONAL LUMBER ROOF JOIST TO RIDGE BEAM

SCALE NTS


CONT. BLOCKING
IN-PLANE, OUT-OF-PLANE, AND UPLIFT CONNECTORS SEE CONNECTOR SCHEDULE
BOUNDARY NAILING
2x6 BLOCKING TO MATCH OUTLOOKER, 3 BAYS MIN
CONT BOUNDARY NAILING INTO BLOCKING
2x6 FLY-RAFTER
PRESSURE-TREATED 2x6 OUTLOOKER @ 24" OC
CMU WALL
SIMPSON LSTA12
RAFTER, SEE ROOF FRAMING PLAN
ROOF SHEATHING PER PLAN

A5 OUTLOOKERS AT GABLE END OF MASONRY WALL

SCALE NTS

SUBMITTAL

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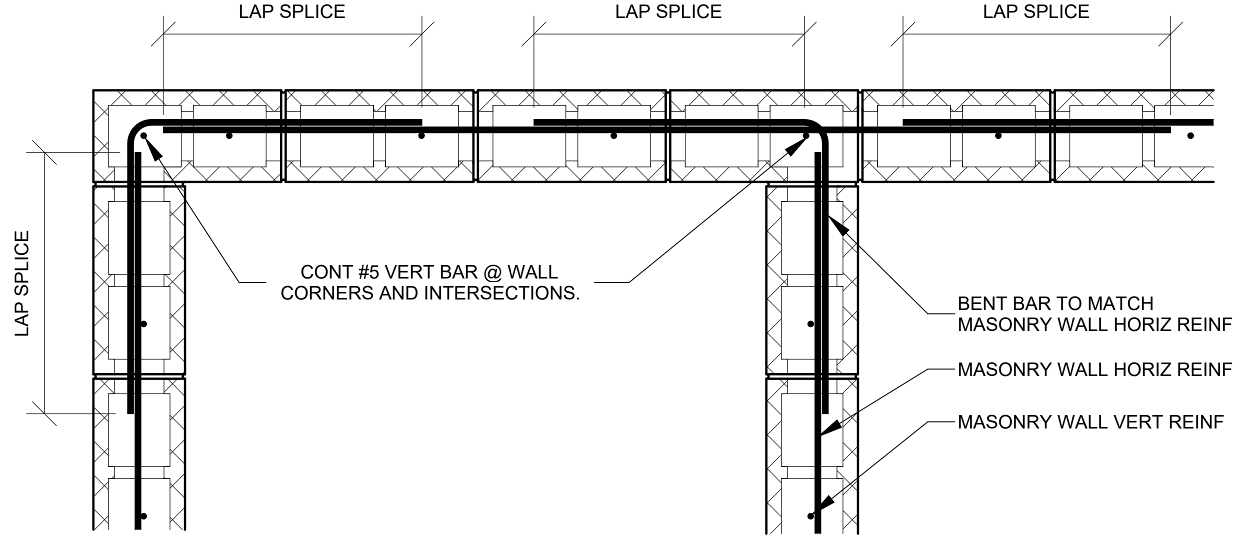
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

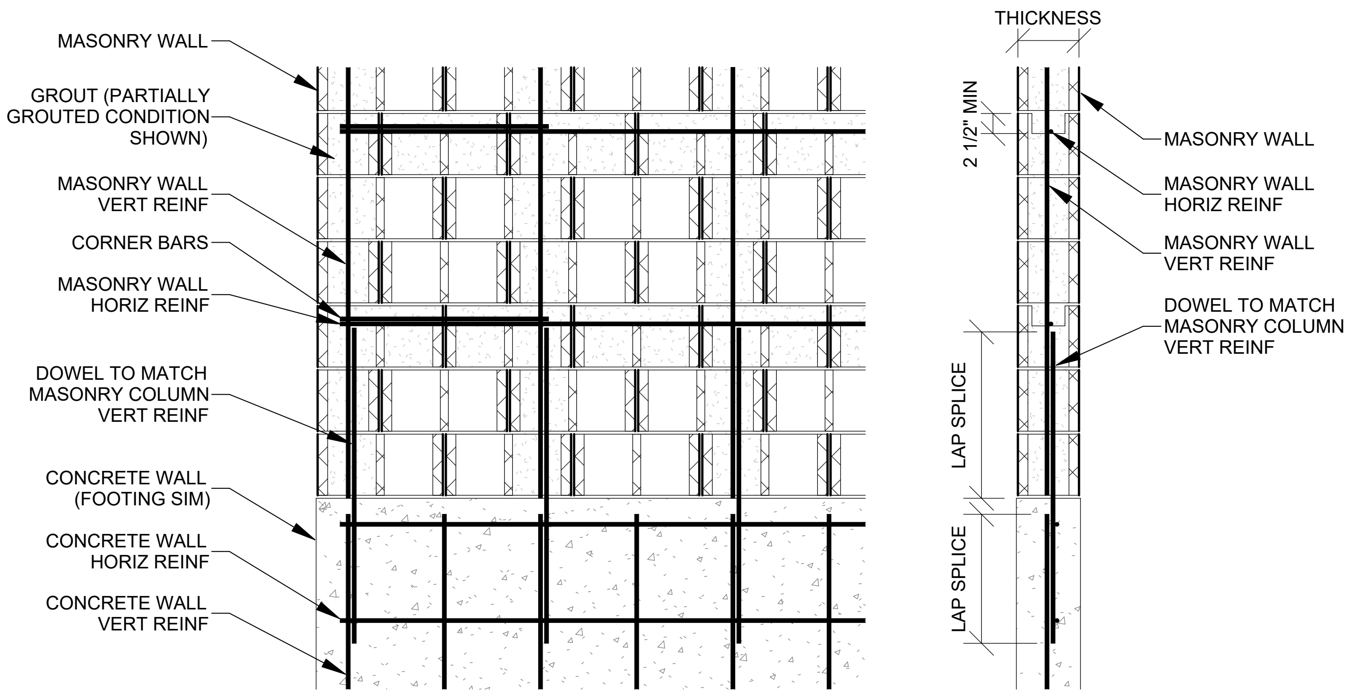
S-502
SHEET NO.


LAP SPLICE
LAP SPLICE
LAP SPLICE
LAP SPLICE
CONT #5 VERT BAR @ WALL CORNERS AND INTERSECTIONS.
BENT BAR TO MATCH MASONRY WALL HORIZ REINF
MASONRY WALL HORIZ REINF
MASONRY WALL VERT REINF

NOTES:
1. SEE MASONRY WALL SCHEDULE FOR REINF SIZE AND SPACING.
2. SEE MASONRY NOTES FOR LAP SPLICE LENGTHS.
3. SEE ARCHITECTURAL SHEETS FOR MASONRY UNIT SIZES.

D1 MASONRY WALL REINFORCEMENT LAYOUT

SCALE NTS

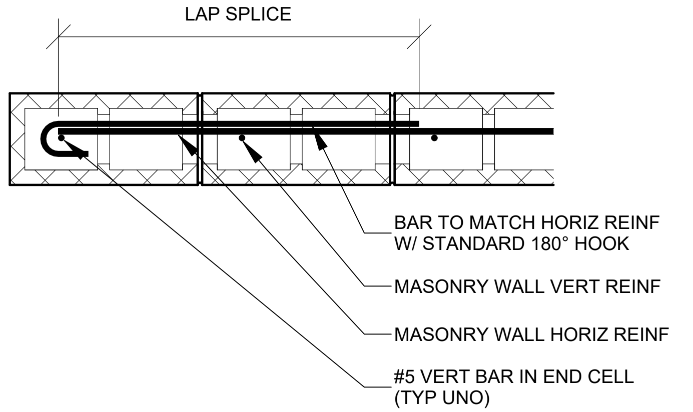


FRONT VIEW

SIDE VIEW

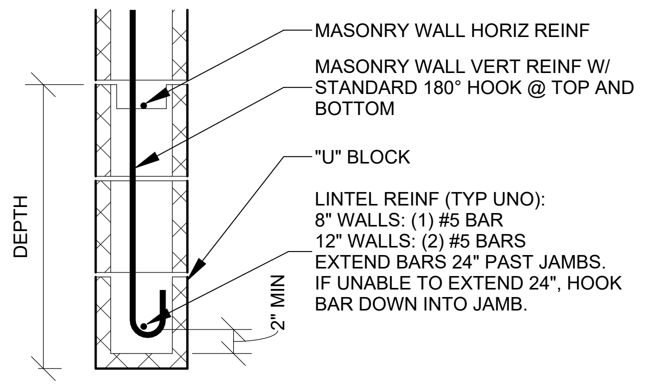
D5 MASONRY WALL

SCALE NTS


LAP SPLICE
BAR TO MATCH HORIZ REINF W/ STANDARD 180° HOOK
MASONRY WALL VERT REINF
MASONRY WALL HORIZ REINF
#5 VERT BAR IN END CELL (TYP UNO)

A1 MASONRY JAMB

SCALE NTS


MASONRY WALL HORIZ REINF
MASONRY WALL VERT REINF W/ STANDARD 180° HOOK @ TOP AND BOTTOM
"U" BLOCK
DEPTH
2" MIN

LINTEL REINF (TYP UNO):
8" WALLS: (1) #5 BAR
12" WALLS: (2) #5 BARS
EXTEND BARS 24" PAST JAMBS.
IF UNABLE TO EXTEND 24", HOOK BAR DOWN INTO JAMB.

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05/12/2022
STATE OF UTAH

A5 MASONRY LINTEL

SCALE NTS

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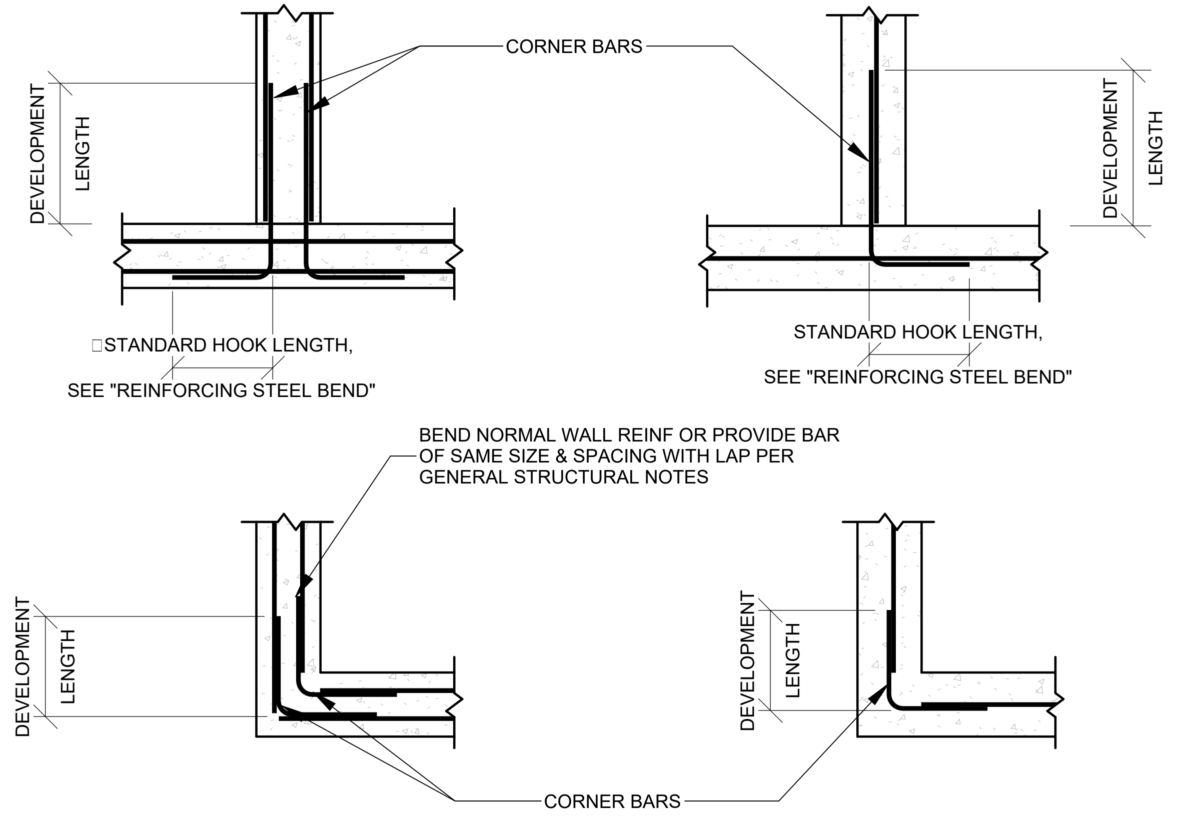
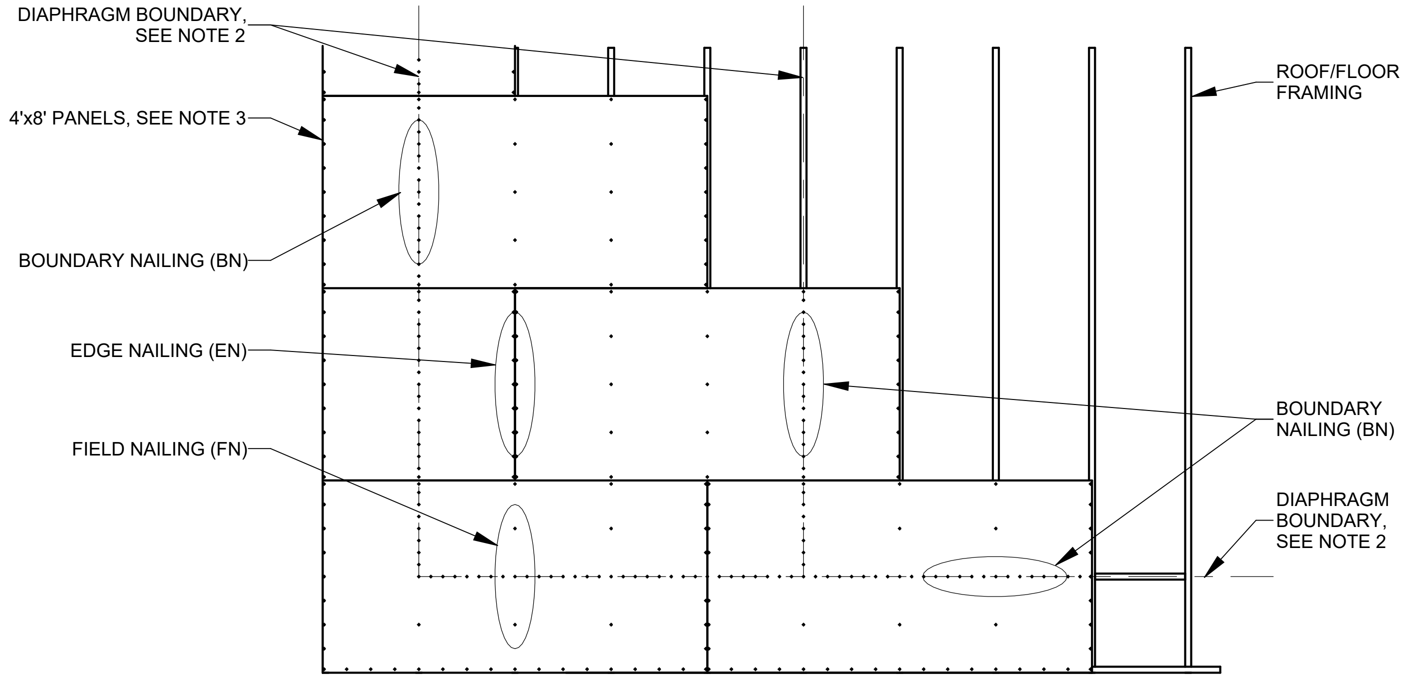
SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
TYPICAL STRUCTURAL DETAILS

2202-061
PROJECT NUMBER
S-701
SHEET NO.


CORNER BARS
DEVELOPMENT LENGTH
DEVELOPMENT LENGTH
□STANDARD HOOK LENGTH,
SEE "REINFORCING STEEL BEND"
STANDARD HOOK LENGTH,
SEE "REINFORCING STEEL BEND"
BEND NORMAL WALL REINF OR PROVIDE BAR OF SAME SIZE & SPACING WITH LAP PER GENERAL STRUCTURAL NOTES
DEVELOPMENT LENGTH
DEVELOPMENT LENGTH
CORNER BARS

D1 REINFORCEMENT AT TYPICAL WALL CORNERS & INTERSECTION

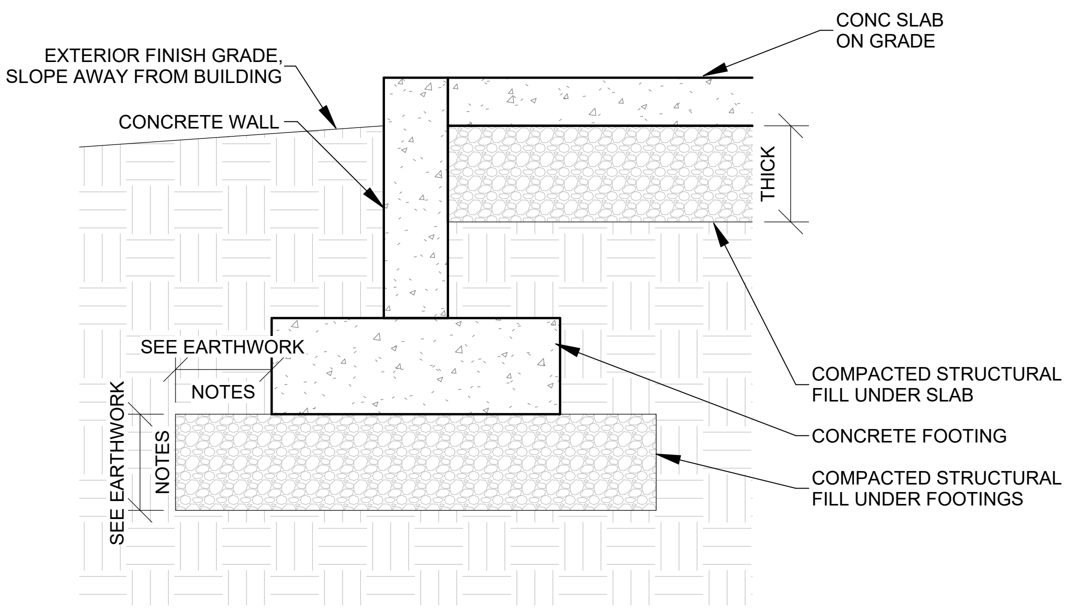
SCALE NTS



NOTE:
1. SEE STRUCTURAL FRAMING PLANS FOR SHEATHING TYPE AND THICKNESS, BOUNDARY NAILING, EDGE NAILING, AND FIELD NAILING.
2. BOUNDARIES EXIST ALONG ALL SHEAR WALLS AND ALONG ALL DRAG ELEMENTS.
3. SHEATHING ORIENTATION: LONG DIRECTION (STRONG AXIS) PERPENDICULAR TO FRAMING & SHORT DIRECTION (WEAK AXIS) PARALLEL TO FRAMING.

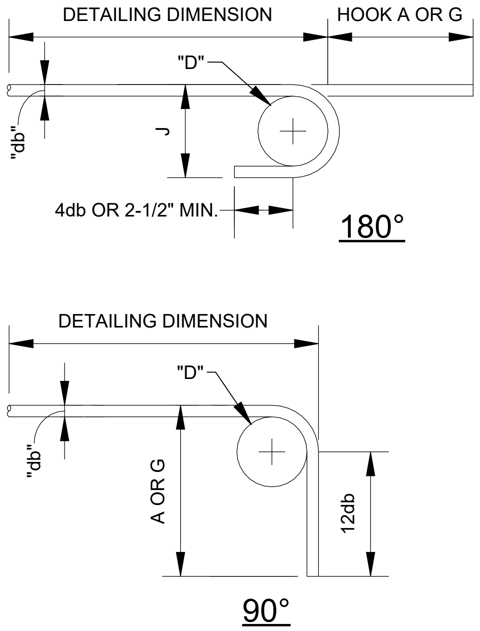
D5 DIAPHRAGM NAILING - UNBLOCKED

SCALE NTS


EXTERIOR FINISH GRADE, SLOPE AWAY FROM BUILDING
CONCRETE WALL
CONC SLAB ON GRADE
THICK
SEE EARTHWORK NOTES
SEE EARTHWORK NOTES
COMPACTED STRUCTURAL FILL UNDER SLAB
CONCRETE FOOTING
COMPACTED STRUCTURAL FILL UNDER FOOTINGS

A1 STRUCTURAL FILL PLACEMENT

SCALE NTS



END HOOKS

BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	1'-0"
#7	5-1/4"	10"	7"	1'-2"
#8	6	11"	8"	1'-4"
#9	9-1/2"	1'-3"	11-3/4"	1'-7"
#10	10-3/4"	1'-5"	1' 1-1/4"	1'-10"
#11	12"	1'-7"	1' 2-3/4"	2'-0"
#14	18-1/4"	2'-3"	1' 9-3/4"	2'-7"
#18	24"	3'-0"	2' 4-1/2"	3'-5"

D = FINISHED INSIDE BEND DIA.
db = NOMINAL BAR DIAMETER
Min. D = 6db FOR #3 THROUGH #8
= 8db FOR #9, #10, AND # 11
= 10db FOR #14, AND #18

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STATE OF UTAH

A5 REINFORCING STEEL BEND

SCALE NTS

SUBMITTAL

NO.	DATE	DESCRIPTION

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
TYPICAL STRUCTURAL DETAILS

2202-061
PROJECT NUMBER

S-702
SHEET NO.

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

1. SUBMITTALS
   A. PRODUCT DATA
   B. DESIGN DATA
   C. CONCRETE PLACEMENT PLAN
      a. SUBMIT MINIMUM 48 HOURS PRIOR TO EACH PLACEMENT.
   D. BATCH TICKET
   E. WARRANTY
2. QUALITY ASSURANCE
   A. PERFORM WORK ACCORDING TO ACI 318.
   B. COMPLY WITH ACI 305.1 WHEN PLACING CONCRETE DURING HOT WEATHER.
   C. COMPLY WITH ACI 306.1 WHEN PLACING CONCRETE DURING COLD WEATHER.
   D. ACQUIRE CEMENT AND AGGREGATE FROM ONE SOURCE FOR WORK.
3. WARRANTY
   A. PROVIDE WRITTEN GUARANTEE TO PROMPTLY REMOVE AND/OR REPAIR DEFECTIVE CONCRETE FOR TWO YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION.
4. MATERIALS
   A. CONCRETE:
      a. CEMENT:
         - PORTLAND CEMENT COMPLYING WITH ASTM C150.
         - USE TYPE II - MODERATE SULFATE RESISTANT OR TYPE II-V BLEND FOR CLASS A THROUGH C CONCRETE.
         - USE TYPE V - HIGH SULFATE RESISTANT FOR CLASS S2 AND S3 CONCRETE. MEET OR EXCEED SULFATE EXPOSURE CLASS S2 SEVERE IN ACCORDANCE WITH TABLES 4.2.1 AND 4.3.1 OF ACI 318.
      b. COARSE AGGREGATE:
         - COMPLY WITH ASTM C33.
         - MAXIMUM SIZE: ACCORDING TO ACI 318.
           1. NOT LARGER THAN 1/5 NARROWEST DIMENSION BETWEEN SIDES OF FORM.
           2. NOT LARGER THAN 1/3 DEPTH OF SLAB.
           3. NOT LARGER THAN ¾ MINIMUM CLEAR DISTANCE BETWEEN REINFORCING BAR OR BETWEEN REINFORCING BARS AND FORMS, WHICHEVER IS SMALLEST.
      c. FINE AGGREGATE:
         - COMPLY WITH ASTM C33.
         - WATER:
           1. COMPLY WITH ACI 318.
           2. POTABLE.
   B. ADMIXTURES:
      a. DO NOT USE CALCIUM CHLORIDE OR ADMIXTURES THAT CONTAIN CALCIUM CHLORIDE.
      b. AIR ENTRAINMENT: COMPLY WITH ASTM C260. USE PRE-MEASURED ADMIXTURES FOR AIR ENTRAINMENT ADDED ON SITE.
      c. CHEMICAL: SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
         - COMPLY WITH ASTM C494.
         - TYPE A - WATER REDUCING. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 5 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
         - TYPE D - WATER REDUCING AND RETARDING. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 5 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
         - TYPE F - WATER REDUCING, HIGH RANGE. SLUMP REQUIREMENTS ON TABLE 3 OF THIS SECTION MAY BE CHANGED TO 9 INCHES MAXIMUM FOR ALL CLASSES OF CONCRETE.
         - SET RETARDING ADMIXTURES MAY BE USED WHEN HAUL TIME WILL BE EXCEEDED. ESTABLISH EFFECTIVE LIFE OF CONCRETE MIX BY TRIAL BATCH.
      d. FLY ASH: COMPLY WITH ASTM C618, CLASS F, AND NOT EXCEED 3 PERCENT LOSS ON IGNITION AND DO NOT EXCEED 15 PERCENT CAO CONTENT. MAY BE USED TO REPLACE CEMENT. LIMIT CONTENT OF FLY ASH TO 30 PERCENT OF REQUIRED CEMENT CONTENT BY WEIGHT. SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
      e. PLASTICIZING: COMPLY WITH ASTM C1017 AND SUBMIT WITH MIX DESIGN FOR REVIEW PRIOR TO USE.
   C. FIBROUS REINFORCING: WHERE INDICATED ON DRAWINGS. ASTM C1116, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED, MD GRADED, FIBERS CONTAINING NO REPROCESSED OLEFIN MATERIALS. MINIMUM APPLICATION RATE SHALL BE 4.0 POUNDS PER CUBIC YARD UNLESS NOTED OTHERWISE. MANUFACTURED BY FIBERMESH OR EQUAL.
5. CONCRETE MIX
   A. LEAN CONCRETE FILL
      a. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c): 1,500 PSI.
      b. CEMENT: ASTM C-150, TYPE II.
   B. STRUCTURAL CONCRETE
      a. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c):
         - FOOTINGS: 4,000 PSI.
         - WALLS: 4,000 PSI.
         - SLABS ON GRADE: 4,000 PSI.
      b. CEMENT: ASTM C-150, TYPE II.
      c. CONCRETE EXPOSED TO EXTERIOR CONDITIONS: AIR ENTRAINED TO 5%-7% AIR CONTENT.
6. EXAMINATION
   A. VERIFY REQUIREMENTS FOR CONCRETE COVER OVER REINFORCEMENT.
   B. VERIFY THAT ANCHORS, SEATS, PLATES, REINFORCEMENT, AND OTHER ITEMS TO BE CAST INTO CONCRETE ARE ACCURATELY PLACED, POSITIONED SECURELY, AND WILL NOT INTERFERE WITH PLACING CONCRETE.
7. PREPARATION
   A. PREVIOUSLY PLACED CONCRETE:
      a. PREPARE PREVIOUSLY PLACED CONCRETE BY CLEANING WITH STEEL BRUSH AND APPLYING BONDING AGENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
      b. REMOVE LAITANCE, COATINGS, AND UNSOUND MATERIALS.
   B. IN LOCATIONS WHERE NEW CONCRETE IS DOWELED TO EXISTING WORK, DRILL HOLES IN EXISTING CONCRETE, INSERT STEEL DOWELS, AND PACK SOLID WITH EPOXY.
   C. IF CONCRETE SUBGRADE IS DRY, DAMPEN WITH WATER PRIOR TO PLACING CONCRETE. KEEP SUBGRADE FIRM AND FREE FROM EXCESS WATER.
   D. REMOVE DEBRIS AND ICE FROM FORMWORK, REINFORCEMENT, AND CONCRETE SUBSTRATES.
   E. REMOVE WATER FROM AREAS RECEIVING CONCRETE BEFORE CONCRETE IS PLACED.
8. INSTALLATION
   A. PLACING CONCRETE:
      a. PLACE CONCRETE ACCORDING TO ACI 318.
      b. NOTIFY ENGINEER MINIMUM 48 HOURS PRIOR TO COMMENCEMENT OF OPERATIONS.
      c. ENSURE THAT REINFORCEMENT, INSERTS, EMBEDDED PARTS, FORMED EXPANSION AND CONTRACTION JOINTS, AND OTHER MATERIALS ARE NOT DISTURBED DURING CONCRETE PLACEMENT.
      d. JOINT FILLER:
         - SEPARATE SLABS ON GRADE FROM VERTICAL SURFACES WITH 1/2-INCH-THICK JOINT FILLER OR 30 POUND FELT.
         - PLACE JOINT FILLER IN SLAB PATTERN PLACEMENT SEQUENCE; SET TOP TO REQUIRED ELEVATIONS; SECURE TO RESIST MOVEMENT BY WET CONCRETE.
         - EXTEND JOINT FILLER FROM BOTTOM OF SLAB TO WITHIN 1/2 INCH OF FINISHED SLAB SURFACE, UNLESS INDICATED OTHERWISE ON DRAWINGS. APPLY SEALANT IN JOINTS WHERE INDICATED ON DRAWINGS.
      e. CONVEY CONCRETE FROM MIXER TO PLACE OF FINAL POSITION BY METHODS THAT WILL PREVENT SEGREGATION OF MIX OR LOSS OF MATERIALS. USE TREMIE OR OTHER ACCEPTED METHOD. DO NOT ALLOW CONCRETE TO FREE FALL MORE THAN 5 FEET, OR LESS IF SEGREGATION OF MIX OCCURS.
      f. AFTER CONCRETE HAS BEEN CONVEYED FROM MIXER, DO NOT ADD WATER. ADDING WATER TO PLACE CONCRETE WILL BE CAUSE FOR REJECTION.
      g. PLACE CONCRETE IN CONTINUOUS OPERATION FOR EACH PANEL OR SECTION AS DETERMINED BY PREDETERMINED JOINTS.
      h. CONSOLIDATE CONCRETE DURING PLACEMENT USING HAND TOOLS, MECHANICAL VIBRATORS, VIBRATING SCREEDS, AND FINISHING MACHINES IN ACCORDANCE WITH ACI 309R. CONSOLIDATION TECHNIQUES WILL BE REVIEWED AND ACCEPTED WITH CONCRETE PLACEMENT PLAN.
         - DO NOT USE VIBRATOR TO MOVE CONCRETE HORIZONTALLY.
         - DO NOT VIBRATE HIGH SLUMP (GREATER THAN 6 INCHES) CONCRETE, UNLESS ACCEPTED BY ENGINEER.
         - DO NOT OVER VIBRATE CONCRETE.
         - PROVIDE SUFFICIENT VIBRATORS TO CONSOLIDATE CONCRETE WITHIN 15 MINUTES AFTER PLACEMENT OF CONCRETE IN FORMS.
         - PROVIDE AT LEAST TWO VIBRATORS FOR EACH CONCRETE PLACEMENT GREATER THAN 25 CUBIC YARDS.
         - DO NOT ATTACH VIBRATORS TO OR AGAINST FORMS OR REINFORCING STEEL.
         - DO NOT ALLOW VIBRATORS TO PENETRATE CONCRETE LAYERS THAT HAVE TAKEN INITIAL SET.
         - MAINTAIN RECORDS OF CONCRETE PLACEMENT, INCLUDING DATE, LOCATION, QUANTITY, AIR TEMPERATURE, AND TEST SAMPLES TAKEN.
         - PLACE CONCRETE CONTINUOUSLY BETWEEN PREDETERMINED EXPANSION, CONTROL, AND CONSTRUCTION JOINTS.
         - DO NOT INTERRUPT SUCCESSIVE PLACEMENT AND DO NOT PERMIT COLD JOINTS TO OCCUR.
         - PLACE FLOOR SLABS WITH SAW-CUT PATTERN INDICATED ON DRAWINGS.
         - SAW-CUT JOINTS:
           1. SAW-CUT JOINTS WITHIN 12 HOURS AFTER PLACING.
           2. USE 3/16 INCH THICK BLADE.
           3. CUT 1/4 DEPTH OF SLAB THICKNESS.
         - SCREEDING:
           1. SCREED FLOORS AND SLABS ON GRADE LEVEL, UNLESS INDICATED OTHERWISE ON DRAWINGS.
           2. MINIMUM SURFACE FLATNESS: MINIMUM FF 25.
           3. MINIMUM SURFACE LEVELNESS: MINIMUM FL 20.
   B. CONCRETE FINISHING:
      a. STEEL TROWEL INTERIOR SURFACES. CONSOLIDATE CONCRETE SURFACE BY FINAL HAND TROWELING OPERATION, FREE OF TROWEL MARKS, UNIFORM IN TEXTURE AND APPEARANCE.
      b. IN AREAS WITH FLOOR DRAINS, MAINTAIN FLOOR ELEVATION AT WALLS AND PITCH SURFACES UNIFORMLY TO DRAINS AT 1/8 INCH PER FOOT NOMINAL UNLESS INDICATED OTHERWISE ON DRAWINGS.
      c. PROVIDE NON-SLIP BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS AND SLABS. SLIGHTLY ROUGHEN CONCRETE SURFACE BY GROOMING WITH FIBER-BRISTLE BROOM.
      d. DO NOT USE STEEL TROWELS OR FRESNO TO FINISH EXTERIOR CONCRETE.
      e. DO NOT USE JITTER BUGS FOR CONCRETE CONSOLIDATION.
   C. CURING AND PROTECTION:
      a. IMMEDIATELY AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL INJURY.
      b. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR PERIOD AS NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
      c. CURE HORIZONTAL CONCRETE SURFACES ACCORDING TO ACI 308.1 USING ONE OF FOLLOWING METHODS:
         - PONDING: MAINTAIN 100 PERCENT COVERAGE OF WATER OVER SLAB CONTINUOUSLY FOR SEVEN DAYS.
         - SPRAYING: SPRAY WATER OVER SLAB AND MAINTAIN WET FOR SEVEN DAYS.
         - ABSORPTIVE MATT: COVER SLAB WITH SATURATED MAT LAPPING ENDS AND SIDES. MAINTAIN SATURATED CONDITION FOR SEVEN DAYS.
         - MEMBRANE CURING COMPOUND: APPLY CURING COMPOUND IN TWO COATS WITH SECOND COAT APPLIED AT RIGHT ANGLES TO FIRST.
         - POLYETHYLENE FILM: SPREAD OVER SLAB, LAP EDGES AND SIDES, SEAL WITH PRESSURE SENSITIVE TAPE AND COVER WITH PLYWOOD AS NECESSARY TO SECURE FILM. MAINTAIN IN PLACE FOR SEVEN DAYS.
      d. CURE VERTICAL SURFACES ACCORDING TO ACI 308.1 USING ONE OF FOLLOWING METHODS:
         - SPRAYING: SPRAY WATER OVER SURFACE AND MAINTAIN WET FOR SEVEN DAYS.
         - MEMBRANE CURING COMPOUND: APPLY CURING COMPOUND IN TWO COATS WITH SECOND COAT APPLIED AT RIGHT ANGLES TO FIRST.
      e. PROVIDE ADDITIONAL PROTECTION AS NECESSARY TO PREVENT FREEZING DURING COLD WEATHER.
      f. USE CURING METHOD WHICH IS COMPATIBLE WITH FINISH COAT OF CONCRETE SURFACE.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
STATE OF UTAH

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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

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PROJECT NUMBER
S-801
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SECTION 03 20 00
CONCRETE REINFORCING

1. SUBMITTALS
    A. SHOP DRAWINGS:
        A. INDICATE BAR SIZES, SPACING, LOCATIONS, SPLICE LOCATIONS, AND QUANTITIES OF REINFORCING STEEL AND WELDED WIRE FABRIC.
        B. INDICATE BENDING AND CUTTING SCHEDULES.
        C. INDICATE SUPPORTING AND SPACING DEVICES.
    B. MANUFACTURER'S MATERIAL CERTIFICATE: CERTIFY THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
2. QUALITY ASSURANCE
    A. PERFORM WORK ACCORDING TO ACI 318.
    B. PREPARE SHOP DRAWINGS ACCORDING TO ACI SP-66.
3. DELIVERY, STORAGE, AND HANDLING
    A. STORE MATERIALS ON SKIDS ABOVE GRADE. MEET ADDITIONAL STORAGE REQUIREMENTS ACCORDING TO MANUFACTURER INSTRUCTIONS.
    B. PROTECTION:
        A. PROTECT MATERIALS FROM MOISTURE BY STORING IN CLEAN, DRY LOCATION REMOTE FROM CONSTRUCTION OPERATIONS AREAS.
        B. PROVIDE ADDITIONAL PROTECTION ACCORDING TO MANUFACTURER INSTRUCTIONS.
    C. EXISTING CONDITIONS
        A. VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION.
4. PRODUCTS
    A. REINFORCEMENT
        A. REINFORCING STEEL:
            - COMPLY WITH ASTM A615.
            - YIELD STRENGTH: 60 KSI.
            - BILLET BARS: DEFORMED, UNLES INDICATED OTHERWISE ON DRAWINGS.
            - FINISH: UNCOATED.
    B. FABRICATION
        A. FABRICATE CONCRETE REINFORCEMENT ACCORDING TO ACI 318.
        B. FORM REINFORCEMENT BENDS AND HOOKS WITH STANDARD DIAMETERS AND EXTENSION LENGTHS ACCORDING TO ACI 318.
        C. FABRICATE COLUMN REINFORCEMENT WITH OFFSET BENDS AT REINFORCEMENT SPLICES.
        D. WHERE REQUIRED, SHOP WELD REINFORCEMENT ACCORDING TO AWS D1.4. WELDING OF REINFORCEMENT NOT PERMITTED UNLESS SPECIFICALLY DETAILED ON DRAWINGS OR ACCEPTED IN WRITING BY ENGINEER.
        E. SPLICING:
            - IF NOT INDICATED ON DRAWINGS, LOCATE REINFORCEMENT SPLICES AT POINT OF MINIMUM STRESS AND STAGGER SPLICE LOCATIONS OF ADJACENT PARALLEL BARS.
            - FOR SPLICING DEVICES, FOLLOW MANUFACTURER'S INSTRUCTIONS.
    C. ACCESSORY MATERIALS
        A. TIE WIRE: MINIMUM 16 GAGE, ANNEALED TYPE.
        B. CHAIRS, BOLSTERS, BAR SUPPORTS, AND SPACERS:
            - SIZE AND SHAPE: TO STRENGTHEN AND SUPPORT REINFORCEMENT DURING CONCRETE PLACEMENT CONDITIONS.
            - WHERE APPLICABLE, FURNISH LOAD-BEARING PAD ON BOTTOM TO PREVENT VAPOR RETARDER PUNCTURE.
        C. SPECIAL CHAIRS, BOLSTERS, BAR SUPPORTS, AND SPACERS ADJACENT TO WEATHER-EXPOSED CONCRETE SURFACES:
            - MATERIAL: PLASTIC-TIPPED STEEL.
            - SIZE AND SHAPE: TO MEET PROJECT CONDITIONS.
5. EXECUTION
    A. INSTALLATION
        A. PLACE, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT.
        B. DO NOT DEVIATE FROM REQUIRED POSITION BEYOND SPECIFIED TOLERANCE.
        C. DO NOT WELD REINFORCEMENT.
        D. DO NOT DISPLACE OR DAMAGE VAPOR RETARDER.
        E. ACCOMMODATE PLACEMENT OF FORMED OPENINGS.
        F. SPACING:
            - SPACE REINFORCEMENT BARS WITH MINIMUM CLEAR SPACING ACCORDING TO ACI 318.
            - IF BARS ARE INDICATED IN MULTIPLE LAYERS, PLACE UPPER BARS DIRECTLY ABOVE LOWER BARS.
        g. MAINTAIN MINIMUM CONCRETE COVER AROUND REINFORCEMENT FOR CAST-IN-PLACE NON-PRESTRESSED CONCRETE MEMBERS ACCORDING TO ACI 318 AS FOLLOWS:
            - CONCRETE PLACED AGAINST FORMS (INCLUDING CONCRETE TO BE BACKFILLED): 2"
            - CONCRETE PLACED AGAINST GROUND: 3"
            - SLABS (ON GROUND): CENTER BAR IN SLAB.
        H. SPLICE REINFORCING WHERE INDICATED ON DRAWINGS OR ACCORDING TO SPLICE DEVICE MANUFACTURER'S INSTRUCTIONS.
    B. TOLERANCES
        A. INSTALL REINFORCEMENT WITHIN FOLLOWING TOLERANCES FOR FLEXURAL MEMBERS, WALLS, AND COMPRESSION MEMBERS:
            - REINFORCEMENT DEPTH GREATER THAN 8 INCHES:
                1. DEPTH TOLERANCE: PLUS OR MINUS 3/8 INCH.
                2. CONCRETE COVER TOLERANCE: MINUS 3/8 INCH.
            - REINFORCEMENT DEPTH LESS THAN OR EQUAL TO 8 INCHES:
                1. DEPTH TOLERANCE: PLUS OR MINUS 1/2 INCH.
                2. CONCRETE COVER TOLERANCE: MINUS 1/2 INCH.
        B. FOUNDATION WALLS: INSTALL REINFORCEMENT WITHIN TOLERANCES ACCORDING TO ACI 117.
    C. FIELD QUALITY CONTROL TESTING
        A. PERFORM FIELD INSPECTION OF REINFORCEMENT ACCORDING TO ACI 318. INSPECT FOR CORRECT MATERIALS, FABRICATION, SIZES, LOCATIONS, SPACING, CONCRETE COVER, AND SPLICING.
    D. FIELD ACCEPTANCE TESTING
        A. FIELD INSPECTION TESTING WILL BE PERFORMED BY OWNER'S TESTING LABORATORY ACCORDING TO ACI 318.
        B. PROVIDE UNRESTRICTED ACCESS TO WORK AND COOPERATE WITH APPOINTED INSPECTION FIRM.
        C. REINFORCEMENT INSPECTION:
            - PERIODIC PLACEMENT INSPECTION: INSPECT FOR CORRECT MATERIALS, FABRICATION, SIZES, LOCATIONS, SPACING, CONCRETE COVER, AND SPLICING.
            - PLACEMENT ACCEPTANCE: IN ACCORDANCE WITH ACI 318 MATERIAL REQUIREMENTS AND SPECIFIED PLACEMENT TOLERANCES.
6. PROTECTION
    A. PROTECT REINFORCEMENT AND ACCESSORIES FROM DAMAGE AND DISPLACEMENT UNTIL CONCRETE IS PLACED.

SECTION 04 05 16
MASONRY GROUTING

1. SUBMITTALS
    A. MANUFACTURER'S CERTIFICATE: INDICATE PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
2. QUALITY ASSURANCE
    A. PERFORM WORK ACCORDING TO TMS 402 AND 602.
3. DELIVERY, STORAGE, AND HANDLING
    A. STORE MATERIALS ACCORDING TO MANUFACTURER INSTRUCTIONS.
    B. PROTECTION:
        a. PROTECT MATERIALS FROM MOISTURE AND DUST BY STORING IN CLEAN, DRY LOCATION REMOTE FROM CONSTRUCTION OPERATIONS AREAS.
        b. PROVIDE ADDITIONAL PROTECTION ACCORDING TO MANUFACTURER INSTRUCTIONS.
4. AMBIENT CONDITIONS
    A. COLD WEATHER REQUIREMENTS: WHEN AMBIENT TEMPERATURE OR TEMPERATURE OF MASONRY UNITS IS LESS THAN 40 DEGREES FAHRENHEIT, COMPLY WITH TMS 402 AND 602.
    B. HOT WEATHER REQUIREMENTS: WHEN AMBIENT TEMPERATURE IS GREATER THAN 100 DEGREES FAHRENHEIT OR IF AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES FAHRENHEIT WITH WIND VELOCITY GREATER THAN 8 MILES PER HOUR, COMPLY WITH TMS 402 AND 602.
5. MATERIALS
    A. PORTLAND CEMENT: COMPLY WITH ASTM C150, TYPE II.
    B. GROUT AGGREGATE: COMPLY WITH ASTM C404, FINE AND COARSE.
    C. FLY ASH: COMPLY WITH ASTM C618.
    D. WATER: CLEAN AND POTABLE.
    E. CALCIUM CHLORIDE: NOT ALLOWED.
6. MIXES
    A. GROUT:
        a. GROUT FOR NON-STRUCTURAL MASONRY:
            - COMPRESSIVE STRENGTH: 2,000 PSI AT 28 DAYS.
            - MIXING: ACCORDING TO ASTM C476, FINE, COARSE.
        b. GROUT FOR STRUCTURAL MASONRY:
            - COMPRESSIVE STRENGTH: 2,000 PSI AT 28 DAYS.
            - MIXING: ACCORDING TO ASTM C476, FINE, COARSE.
        c. APPLICATION:
            - COARSE GROUT: GROUTING SPACES WITH MINIMUM 2 INCHES DIMENSION IN EACH DIRECTION.
            - FINE GROUT: GROUTING OTHER SPACES.
7. EXAMINATION
    A. REQUEST INSPECTION OF SPACES TO BE GROUTED.
8. PREPARATION
    A. CLEAN LAITANCE AND LOOSE MATERIALS FROM SPACES TO BE GROUTED.
9. INSTALLATION
    A. MIXING:
        a. THOROUGHLY MIX GROUT INGREDIENTS IN QUANTITIES NEEDED FOR IMMEDIATE USE ACCORDING TO ASTM C476.
    B. DO NOT PLACE GROUT UNTIL MASONRY UNITS HAVE ATTAINED SUFFICIENT STRENGTH.
    C. DO NOT PLACE GROUT UNTIL REINFORCING IS SECURED IN PLACE. DO NOT DISPLACE REINFORCEMENT WHILE PLACING GROUT.
    D. GROUT CELLS OF CONCRETE MASONRY UNITS WITH REINFORCING, AND GROUT NON-REINFORCED CELLS WHERE INDICATED ON DRAWINGS.
    E. PLACE GROUT ACCORDING TO TMS 402 AND 602.
    F. CLEAN EXPOSED SURFACES OF EXCESS GROUT WHILE GROUT IS WET.
    G. ENSURE GROUT COMPLETELY FILLS INTENDED CELLS, VERTICALLY AND HORIZONTALLY.
10. FIELD QUALITY CONTROL
    A. TESTING:
        a. MIX: COMPLY WITH ASTM C1019 FOR COMPRESSIVE STRENGTH AND COMPLY WITH ASTM C143 FOR SLUMP.
        B. COMPRESSIVE STRENGTH OF MORTAR, GROUT, AND MASONRY: COMPLY WITH ASTM C1314.

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SPANISH FORK CITY
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SPECIFICATIONS

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SECTION 04 22 00
CONCRETE UNIT MASONRY

1. SUBMITTALS
    - A. PRODUCT DATA.
    - B. SAMPLES:
        - a. SUBMIT TWO FULL-SIZE SAMPLES OF UNITS TO ILLUSTRATE COLOR, TEXTURE, AND EXTREMES OF COLOR RANGE.
2. MAINTENANCE MATERIAL SUBMITTALS
    - A. EXTRA STOCK MATERIALS: 5% OF EACH SIZE, COLOR, AND TYPE OF UNITS.
3. QUALITY ASSURANCE
    - A. PERFORM WORK ACCORDING TO ACI 530/530.1 - BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES AND RELATED COMMENTARIES.
4. AMBIENT CONDITIONS
    - A. DO NOT STORE REINFORCING MATERIAL DIRECTLY ON GROUND. UTILIZE BLOCKING AND OTHER METHODS TO PREVENT RUST ON ACCESSORIES PRIOR TO INSTALLATION.
    - B. COLD WEATHER REQUIREMENTS: ACCORDING TO ACI 530.1 WHEN AMBIENT TEMPERATURE OR TEMPERATURE OF MASONRY UNITS IS LESS THAN 40 DEGREES F.
    - C. HOT WEATHER REQUIREMENTS: ACCORDING TO ACI 530.1 WHEN AMBIENT TEMPERATURE IS GREATER THAN 100 DEGREES F OR AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES F WITH WIND VELOCITY GREATER THAN 8 MPH.
5. EXISTING CONDITIONS
    - A. FIELD MEASUREMENTS: VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION. INDICATE FIELD MEASUREMENTS ON SHOP DRAWINGS.
6. PERFORMANCE AND DESIGN CRITERIA
    - A. CONCRETE MASONRY COMPRESSIVE STRENGTH (F'M): 2,000 PSI; DETERMINED BY UNIT STRENGTH METHOD.
        - a. CONCRETE MASONRY UNITS (CMU): 2,000 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH.
7. MATERIALS
    - A. DECORATIVE CMU: ASTM C90; LIGHT WEIGHT; COLOR AS SELECTED TO FOLLOW ARCHITECTURAL DRAWINGS.
8. ACCESSORIES
    - A. REINFORCING STEEL: ASTM A615, 60 KSI YIELD GRADE, DEFORMED BILLET BARS, UNCOATED FINISH.
    - B. MORTAR AND GROUT: AS SPECIFIED IN SECTION 04 05 14 - MASONRY MORTARING AND GROUTING.
9. SOURCE QUALITY CONTROL
    - A. TESTING: TEST BRICK EFFLORESCENCE ACCORDING TO ASTM C67. BRICK RATED GREATER THAN "SLIGHTLY EFFLORESCED" IS NOT ACCEPTABLE.
10. EXAMINATION
    - A. VERIFY THAT:
        - a. FIELD CONDITIONS ARE ACCEPTABLE AND READY TO RECEIVE WORK.
        - b. ITEMS PROVIDED BY OTHER SECTIONS OF WORK ARE PROPERLY SIZED AND LOCATED.
        - c. BUILT-IN ITEMS ARE IN PROPER LOCATION AND READY FOR ROUGHING INTO MASONRY WORK.
11. PREPARATION
    - A. FURNISH TEMPORARY BRACING DURING INSTALLATION OF MASONRY WORK. MAINTAIN IN PLACE UNTIL BUILDING STRUCTURE PROVIDES PERMANENT SUPPORT.
12. INSTALLATION
    - A. ESTABLISH LINES, LEVELS, AND COURSING INDICATED. PROTECT FROM DISPLACEMENT.
    - B. MAINTAIN MASONRY COURSES TO UNIFORM DIMENSION. FORM BED AND HEAD JOINTS OF UNIFORM THICKNESS.
    - C. COURSING OF CMU:
        - a. BOND: RUNNING.
        - b. COURSING: ONE UNIT AND ONE MORTAR JOINT TO EQUAL 8 INCHES.
        - c. MORTAR JOINTS: CONCAVE.
    - D. PLACING AND BONDING:
        - a. LAY HOLLOW MASONRY UNITS WITH FACE SHELL BEDDING ON HEAD AND BED JOINTS.
        - b. BUTTERING CORNERS OF JOINTS OR EXCESSIVE FURROWING OF MORTAR JOINTS ARE NOT PERMITTED.
        - c. REMOVE EXCESS MORTAR AS WORK PROGRESSES.
        - d. INTERLOCK INTERSECTIONS AND EXTERNAL CORNERS.
        - e. DO NOT SHIFT OR TAP MASONRY UNITS AFTER MORTAR HAS ACHIEVED INITIAL SET. WHERE ADJUSTMENT IS REQUIRED, REMOVE MORTAR AND REPLACE.
        - f. PERFORM SITE CUTTING OF MASONRY UNITS WITH PROPER TOOLS TO ASSURE STRAIGHT, CLEAN, UNCHIPPED EDGES. PREVENT BROKEN MASONRY UNIT CORNERS OR EDGES.
        - G. ISOLATE TOP OF MASONRY FROM HORIZONTAL STRUCTURAL FRAMING MEMBERS AND SLABS OR DECKS WITH COMPRESSIBLE JOINT FILLER.
    - E. LINTELS:
        - a. INSTALL CONCRETE MASONRY BOND BEAM LINTELS OVER OPENINGS.
        - b. INSTALL REINFORCED UNIT MASONRY LINTELS OVER MISCELLANEOUS OPENINGS LESS THAN 12 INCHES WIDE WHERE LINTELS ARE NOT SCHEDULED OR INDICATED.
        - c. DO NOT SPLICE REINFORCING BARS.
        - d. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
        - e. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
        - f. ALLOW MASONRY LINTELS TO ATTAIN SPECIFIED STRENGTH BEFORE REMOVING TEMPORARY SUPPORTS.
        - g. MAINTAIN MINIMUM 6-INCH BEARING ON EACH SIDE OF OPENING.
    - F. GROUTED COMPONENTS:
        - a. REINFORCE BOND BEAMS AND PILASTERS AS INDICATED.
        - b. LAP SPLICES BAR DIAMETERS AS REQUIRED BY CODE.
        - c. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
        - d. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
        - e. AT BEARING LOCATIONS, FILL MASONRY CORES WITH GROUT FOR MINIMUM 12 INCHES BOTH SIDES OF OPENING.
    - G. REINFORCED MASONRY:
        - a. LAY MASONRY UNITS WITH CELLS VERTICALLY ALIGNED AND CLEAR OF MORTAR AND UNOBSTRUCTED.
        - b. PLACE REINFORCEMENT BARS AS INDICATED.
        - c. SPLICE REINFORCEMENT[AS INDICATED.
        - d. SUPPORT AND SECURE REINFORCEMENT FROM DISPLACEMENT.
        - e. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
        - f. PLACE GROUT ACCORDING TO ACI 530.1.
    - H. CONTROL JOINTS:
        - a. INSTALL CONTROL JOINTS AT THE FOLLOWING MAXIMUM SPACINGS, UNLESS OTHERWISE INDICATED ON DRAWINGS:
            - EXTERIOR WALLS: 20 FEET O.C. AND WITHIN 24 INCHES ON ONE SIDE OF EACH INTERIOR AND EXTERIOR CORNER.
            - INTERIOR WALLS: 30 FEET O.C.
            - AT CHANGES IN WALL HEIGHT.
        - b. DO NOT CONTINUE HORIZONTAL CONTROL JOINT REINFORCEMENT THROUGH CONTROL JOINTS.
        - c. INSTALL PREFORMED CONTROL JOINT DEVICE IN CONTINUOUS LENGTHS. SEAL BUTT AND CORNER JOINTS.
    - I. EXPANSION JOINTS:
        - a. FORM EXPANSION JOINTS BY OMITTING MORTAR AND CUTTING UNIT TO FORM OPEN SPACE.
        - b. DO NOT CONTINUE HORIZONTAL REINFORCEMENT THROUGH EXPANSION JOINTS.
    - J. BUILT-IN WORK:
        - a. AS WORK PROGRESSES, INSTALL BUILT-IN METAL DOOR FRAMES AND OTHER ITEMS TO BE BUILT IN THE WORK AND FURNISHED BY OTHER SECTIONS.
        - b. INSTALL BUILT-IN ITEMS PLUMB AND LEVEL.
        - c. BED ANCHORS OF METAL DOOR FRAMES IN ADJACENT MORTAR JOINTS. FILL FRAME VOIDS SOLID WITH GROUT OR MORTAR. FILL ADJACENT MASONRY CORES WITH GROUT MINIMUM 16 INCHES FROM FRAMED OPENINGS.
        - d. DO NOT BUILD IN MATERIALS SUBJECT TO DETERIORATION.
    - K. CUTTING AND FITTING:
        - a. CUT AND FIT FOR CHASES, PIPES, CONDUIT, ETC. COORDINATE WITH OTHER SECTIONS OF WORK TO PROVIDE CORRECT SIZE, SHAPE, AND LOCATION.
        - b. OBTAIN ENGINEER'S APPROVAL PRIOR TO CUTTING OR FITTING MASONRY WORK NOT INDICATED OR WHERE APPEARANCE OR STRENGTH OF MASONRY WORK MAY BE IMPAIRED.
13. TOLERANCES
    - A. MAXIMUM VARIATION FROM ALIGNMENT OF COLUMNS: 1/4 INCH.
    - B. MAXIMUM VARIATION FROM UNIT TO ADJACENT UNIT: 1/16 INCH.
    - C. MAXIMUM VARIATION FROM PLANE OF WALL: 1/4 INCH IN 10 FEET AND 1/2 INCH IN 20 FEET OR MORE.
    - D. MAXIMUM VARIATION FROM PLUMB: 1/4 INCH PER STORY NON-CUMULATIVE; 1/2 INCH IN TWO STORIES OR MORE.
    - E. MAXIMUM VARIATION FROM LEVEL COURSING: 1/8 INCH IN 3 FEET AND 1/4 INCH IN 10 FEET; 1/2 INCH IN 30 FEET.
    - F. MAXIMUM VARIATION OF JOINT THICKNESS: 1/8 INCH IN 3 FEET.
    - G. MAXIMUM VARIATION FROM CROSS SECTIONAL THICKNESS OF WALLS: 1/4 INCH.
    - H. MAXIMUM VARIATION FOR STEEL REINFORCEMENT:
        - a. INSTALL REINFORCEMENT WITHIN THE TOLERANCES SPECIFIED IN ACI 530.1 FOR FOUNDATION WALLS.
        - b. PLUS OR MINUS 1/2 INCH WHEN DISTANCE FROM CENTERLINE OF STEEL TO OPPOSITE FACE OF MASONRY IS 8 INCHES OR LESS.
        - c. PLUS OR MINUS 1 INCH WHEN DISTANCE IS BETWEEN 8 AND 24 INCHES.
        - d. PLUS OR MINUS 1-1/4 INCH WHEN DISTANCE IS GREATER THAN 24 INCHES.
        - e. PLUS OR MINUS 2 INCHES FROM LOCATION ALONG FACE OF WALL.
14. FIELD QUALITY CONTROL
    - A. CMU: TEST EACH TYPE ACCORDING TO ASTM C140.
    - B. PRISM TESTS: TEST COMPRESSIVE STRENGTH OF COMPLETED REINFORCED MASONRY ACCORDING TO ASTM C1314.
15. CLEANING
    - A. CLEAN SOILED SURFACES WITH CLEANING SOLUTION.
16. PROTECTION
    - A. PROTECT EXPOSED EXTERNAL CORNERS SUBJECT TO DAMAGE.
    - B. PROTECT BASE OF WALLS FROM MUD AND MORTAR SPLATTER.
    - C. PROTECT MASONRY AND OTHER ITEMS BUILT INTO MASONRY WALLS FROM MORTAR DROPPINGS AND STAINING CAUSED BY MORTAR.
    - D. PROTECT TOPS OF MASONRY WORK WITH WATERPROOF COVERINGS SECURED IN PLACE WITHOUT DAMAGING MASONRY. PROVIDE COVERINGS WHERE MASONRY IS EXPOSED TO WEATHER WHEN WORK IS NOT IN PROGRESS. MAINTAIN PROTECTION ON TOPS OF COMPLETED EXTERIOR WALLS UNTIL INSTALLATION OF PERMANENT WATERPROOF CAP MATERIALS.

#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
www.jonesanddemille.com

SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-803
SHEET NO.

SECTION 31 23 23
FILL

1. DEFINITIONS
   A. BACKFILL: SOIL PLACED AROUND STRUCTURES TO INDICATED FINISH GRADE.
   B. COARSE GRAINED SOIL: SOILS WITH MORE THAN 50 PERCENT RETAINED ON NO. 200 SIEVE.
   C. FILL: SOIL PLACED ON SITE TO INDICATED FINISH GRADE.
   D. FINE GRAINED SOIL: SOILS WITH 50 PERCENT OR MORE PASSING NO. 200 SIEVE.
   E. SOIL CLASSIFICATION: IN ACCORDANCE WITH ASTM D2487 AND AASHTO M145.
   F. TOPSOIL: TOP 6 INCHES OF EXISTING ONSITE SOIL.
2. SUBMITTALS
   A. TEST RESULTS: SUBMIT PROCTOR AND DENSITY QUALITY CONTROL TEST RESULTS WITHIN 24 HOURS AFTER TESTING IS COMPLETED.
3. QUALITY ASSURANCE
   A. OBTAIN MATERIALS FROM SAME SOURCE THROUGHOUT.
4. PRODUCTS
   A. MATERIALS
      A. TOPSOIL: TOP 6 INCHES OF EXISTING ONSITE SOIL.
      B. FILL AND BACKFILL: USE EXISTING ONSITE EXCAVATED SOIL FREE FROM RUBBISH, DEBRIS, ORGANIC MATERIAL, FROZEN MATERIAL, OR OTHER OBJECTIONABLE MATERIALS.
      C. IMPORTED FILL: A-1A THROUGH A-4 SOILS AS CLASSIFIED IN ACCORDANCE WITH AASHTO M145.
      d. GRANULAR BACKFILL BORROW: NON-PLASTIC, WELL GRADED, 2 INCH MAXIMUM SIZE, A-1A SOIL AS CLASSIFIED IN ACCORDANCE WITH AASHTO M145.
      e. STRUCTURAL FILL: WELL-GRADED, CLEAN, HARD, TOUGH, DURABLE AND SOUND MINERAL AGGREGATES CONSISTING OF CRUSHED STONE, CRUSHED GRAVEL OR CRUSHED SLAG; FREE OF ORGANIC MATTER AND CONTAMINATION FROM CHEMICAL OR PETROLEUM PRODUCTS; MEETING THE FOLLOWING REQUIREMENTS:
         - DRY RODDED UNIT WEIGHT: NOT LESS THAN 75 PCF.
         - LIQUID LIMIT/PLASTIC INDEX: NON-PLASTIC.
         - AGGREGATE WEAR: NOT TO EXCEED 50 PERCENT.
         - GRADATION: ESTABLISH JOB-MIX (TARGET) GRADATION WITHIN GRADATION TARGET BAND LISTED BELOW. PERCENT PASSING IS BASED ON TOTAL AGGREGATE (DRY WEIGHT), AND FINE AND COARSE AGGREGATE HAVING APPROXIMATELY SAME BULK SPECIFIC GRAVITIES.
           1. 1 1/2 INCH: 100
           2. 1 INCH: 90-100
           3. 3/4 INCH: 70-85
           4. 1/2 INCH: 65-80
           5. 3/8 INCH: 55-75
           6. NO. 4: 40-65
           7. NO. 16: 25-40
           8. NO. 200: 7-11
         - TWO FRACTURED FACE: 50% MINIMUM.
         - CBR WITH 10 LB. SURCHARGE MEASURED AT 0.20 INCH PENETRATION: 70% MINIMUM.
5. EXECUTION
   A. EXAMINATION
      A. VERIFY SURVEY BENCH MARK AND INTENDED ELEVATIONS FOR WORK ARE AS INDICATED ON DRAWINGS.
      B. VERIFY SUB-DRAINAGE, DAMPPROOFING AND WATERPROOFING ARE COMPLETE PRIOR TO BACKFILLING FOR SITE STRUCTURES.
      C. VERIFY STRUCTURAL ABILITY OF UNSUPPORTED WALLS TO SUPPORT LOADS IMPOSED BY BACKFILL.
   B. PREPARATION
      A. IDENTIFY REQUIRED LINES, LEVELS, CONTOURS, AND DATUM.
      B. ERECT AND MAINTAIN TEMPORARY BARRIERS, SAFETY DEVICES AND SIMILAR MEASURES FOR PROTECTION OF PUBLIC AND EXISTING IMPROVEMENTS TO REMAIN.
      C. MAINTAIN DEWATERING UNTIL FINAL FILL AND BACKFILL MATERIALS ARE IN PLACE.
   C. CONSTRUCTION – GENERAL
      A. IF EXCAVATED MATERIAL IS NOT SUFFICIENT FOR REQUIRED FILL AND BACKFILL, USE IMPORTED FILL [**BORROW**] MATERIAL.
      B. PLACE FILL AND BACKFILL TO CONTOURS AND ELEVATIONS INDICATED ON DRAWINGS.
      C. MIX ROCKS WITH FINER MATERIALS TO MINIMIZE VOIDS.
      D. UNLESS INDICATED OTHERWISE, PLACE AND COMPACT FILL AND BACKFILL MATERIAL IN CONTINUOUS LAYERS NOT EXCEEDING 12 INCHES NON-COMPACTED DEPTH. IF TESTS INDICATE UNSATISFACTORY DENSITY, REDUCE LAYER THICKNESS.
      E. MAINTAIN OPTIMUM MOISTURE CONTENT OF FILL AND BACKFILL MATERIALS TO ATTAIN REQUIRED COMPACTION DENSITY.
      F. COMPACT FILL AND BACKFILL MATERIALS TO DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
      G. WHERE POSSIBLE, GRADE SURPLUS SOIL TO BLEND IN WITH EXISTING CONTOURS, AND REMOVE REMAINING SURPLUS SOIL FROM SITE.
   D. FILL
      A. IF FILL HEIGHT IS 6 FEET OR LESS AND UNDERLYING GROUND CONSISTS OF LOOSE MATERIAL, SCARIFY AND COMPACT TOP 8 INCHES OF UNDERLYING GROUND TO AT LEAST 90 PERCENT OF MAXIMUM LABORATORY DENSITY PRIOR TO PLACING FILL MATERIALS.
      B. DO NOT PLACE ROCKS EXCEEDING 4 INCHES WITHIN 12 INCHES OF PAVEMENT SUBGRADE.
      C. SLOPE GRADE AS INDICATED ON DRAWINGS.
   E. BACKFILL
      A. BACKFILL AREAS EXCAVATED FOR STRUCTURES AND OTHER IMPROVEMENTS. BACKFILL TO CONTOURS AND ELEVATIONS INDICATED WITH SUITABLE MATERIALS.
      B. EMPLOY PLACEMENT METHOD THAT DOES NOT DISTURB OR DAMAGE STRUCTURE OR OTHER WORK.
      C. BACKFILL SIMULTANEOUSLY ON EACH SIDE OF UNSUPPORTED FOUNDATION WALLS UNTIL SUPPORTS ARE IN PLACE.
      D. DO NOT PLACE ROCKS EXCEEDING 2 INCHES WITHIN 2 FEET OF STRUCTURES.
      E. UNLESS INDICATED OTHERWISE ON DRAWINGS, SLOPE GRADE AWAY FROM STRUCTURES AT MINIMUM 5 PERCENT SLOPE FOR MINIMUM DISTANCE OF 10 FEET.
   F. GRANULAR BACKFILL BORROW
      A. WHERE INDICATED ON DRAWINGS, PLACE GRANULAR BACKFILL BORROW FOR BACKFILL WITHIN TWO FEET OF BOX CULVERTS, BRIDGES AND OTHER STRUCTURES.
      B. PLACE AND COMPACT GRANULAR BACKFILL BORROW IN CONTINUOUS LAYERS NOT EXCEEDING 6 INCHES COMPACTED DEPTH.
   G. STRUCTURAL FILL
      A. WHERE INDICATED ON DRAWINGS, PLACE STRUCTURAL FILL.
      B. PRIOR TO PLACING STRUCTURAL FILL, SCARIFY AND COMPACT TOP 8 INCHES OF UNDERLYING GROUND TO AT LEAST 90 PERCENT OF MAXIMUM LABORATORY DENSITY.
      C. PLACE AND COMPACT STRUCTURAL FILL IN CONTINUOUS LAYERS NOT EXCEEDING 6 INCHES COMPACTED DEPTH.
   H. FINISHING
      A. FINISH FILL AND BACKFILL TO REASONABLY SMOOTH AND UNIFORM SURFACE.
      B. MAKE GRADE CHANGES GRADUAL. BLEND SLOPE INTO LEVEL AREAS.
   I. TOLERANCES
      A. TOP SURFACE OF GENERAL FILL AND BACKFILL: PLUS OR MINUS 0.1 FOOT FROM REQUIRED ELEVATION.
      B. TOP SURFACE OF SUBGRADE: PLUS OR MINUS 0.04 FOOT FROM REQUIRED ELEVATION.
      C. MOISTURE CONTENT: PLUS OR MINUS 2 PERCENT OF OPTIMUM. TEST IN ACCORDANCE WITH ASTM D6938.
   J. FIELD QUALITY CONTROL TESTING
      A. MAXIMUM LABORATORY DENSITY: DETERMINED IN ACCORDANCE WITH AASHTO T180, METHOD D FOR A-1 SOILS AND AASHTO T99, METHOD D FOR OTHER SOILS. TEST FOR EACH TYPE OF SOIL ENCOUNTERED ON SITE.
      B. ESTABLISH ROLLER PATTERNS NECESSARY TO ACHIEVE DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
      C. DENSITY TESTS: PERFORM IN ACCORDANCE WITH ASTM D6938.
         - FREQUENCY:
           1. FILL, BACKFILL AND STRUCTURAL FILL: TAKE MINIMUM OF TWO TESTS FOR EACH 1,500 SQUARE YARDS PER EACH LAYER.
           2. GRANULAR BACKFILL BORROW: TAKE MINIMUM OF TWO TESTS FOR EACH LAYER ON EACH STRUCTURE OR PIPE CULVERT.
         - ACCEPTANCE: EQUALS OR EXCEEDS DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
         - IF TESTS INDICATE WORK IS NOT ACCEPTABLE, RE-COMPACT AND RETEST. IF NECESSARY, REMOVE AND REPLACE WORK.
   K. FIELD ACCEPTANCE TESTING
      A. MAXIMUM LABORATORY DENSITY: ENGINEER WILL DETERMINE IN ACCORDANCE WITH AASHTO T180, METHOD D FOR A-1 SOILS AND AASHTO T99, METHOD D FOR OTHER SOILS . ENGINEER WILL TEST EACH TYPE OF SOIL ENCOUNTERED ON SITE.
      B. ESTABLISH ROLLER PATTERNS NECESSARY TO ACHIEVE DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
      C. DENSITY TESTS: ENGINEER WILL PERFORM IN ACCORDANCE WITH ASTM D6938.
         - FREQUENCY:
           1. FILL, BACKFILL AND STRUCTURAL FILL: TAKE MINIMUM OF TWO TESTS FOR EACH 1,500 SQUARE YARDS PER EACH LAYER.
           2. GRANULAR BACKFILL BORROW: TAKE MINIMUM OF TWO TESTS FOR EACH LAYER ON EACH STRUCTURE.
         - ACCEPTANCE: EQUALS OR EXCEEDS DENSITY INDICATED IN COMPACTION SCHEDULE AT END OF THIS SECTION.
         - IF TESTS INDICATE WORK IS NOT ACCEPTABLE, RE-COMPACT AND RETEST. IF NECESSARY, REMOVE AND REPLACE WORK.
   L. PROTECTION
      A. PROTECT EXISTING UTILITIES AND IMPROVEMENTS INDICATED TO REMAIN, FROM DAMAGE.
      B. PROTECT PLANT LIFE, LAWNS, AND OTHER FEATURES REMAINING AS PART OF FINAL LANDSCAPING.
      C. PROTECT STRUCTURES, UTILITIES AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.
      D. PROTECT BENCH MARKS AND SURVEY CONTROL POINT FROM DAMAGE OR DISPLACEMENT.
      E. REPAIR OR REPLACE ITEMS DAMAGED BY EXCAVATION OR BACKFILLING.
   M. COMPACTION SCHEDULE
      A. FILL AND BACKFILL FOR NON-TRAVELED AREAS: COMPACT TO MINIMUM 90 PERCENT OF MAXIMUM LABORATORY DENSITY. INCLUDES LANDSCAPE AREAS.
      B. FILL AND BACKFILL FOR TRAVELED AREAS AND STRUCTURES: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY. INCLUDES ROADS, PARKING LOTS, DRIVEWAYS, SIDEWALKS AND STRUCTURES.
      C. GRANULAR BACKFILL BORROW: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY.
      D. STRUCTURAL FILL: COMPACT TO MINIMUM 96 PERCENT OF MAXIMUM LABORATORY DENSITY.

LICENSED PROFESSIONAL ENGINEER
#8826183-2202
MATTHEW PAUL LAURENDEAU
05/12/2022
STATE OF UTAH

SUBMITTAL

NO.	DATE	DESCRIPTION

REVISIONS

Jones & DeMille Engineering
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SPANISH FORK CITY
COMMUNITY NETWORK FIBER HUT STRUCTURAL DESIGN
SPECIFICATIONS

2202-061
PROJECT NUMBER

S-804
SHEET NO.

MECHANICAL SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

SYMBOL	EXPLANATION
ø	ROUND MEASUREMENT
Ⓣ X-X	THERMOSTAT/SENSOR
⬡ X #	MECHANICAL EQUIPMENT SYMBOL
◇ #	KEYED NOTE REFERENCE

SITE CONDITIONS

SITE:

CITY: SPANISH FORK, UT
ELEVATION: 4,577'

OUTDOOR CONDITIONS:

WINTER: HTG: 6° F
SUMMER: CLG: 96° F
INDOOR CONDITIONS

WINTER: HTG: 60° F
SUMMER: CLG: 78° F

IF TEMPERATURES SHOWN DO NOT MATCH CONDITIONS DESIRED FOR THIS PROJECT CONTACT THE ENGINEER OF RECORD.

DESIGN CONTACTS

PROJECT MANAGER	SAMANTHA KOEPP
MECHANICAL ENGINEER:	MARK MAKIN
MECHANICAL DESIGNER:	JESSE EGAN

MECHANICAL SHEET INDEX

SHEET NUMBER	SHEET TITLE
MP0.1	MECHANICAL & PLUMBING NOTES
MP1.1	MECHANICAL & PLUMBING PLAN
MP5.1	MECHANICAL & PLUMBING DETAILS
MP6.1	MECHANICAL & PLUMBING SCHEDULES
MP7.1	MECHANICAL SPECIFICATIONS
MP7.2	MECHANICAL SPECIFICATIONS
MP7.3	MECHANICAL SPECIFICATIONS
MP7.4	MECHANICAL SPECIFICATIONS
MP7.5	PLUMBING SPECIFICATIONS
MP7.6	PLUMBING SPECIFICATIONS

PLUMBING SYMBOLS

NOTES:
1. ALL SYMBOLS MAY NOT BE USED.
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

——●——	SANITARY OR WASTE PIPING
— — — — —	VENT PIPING
ø	ROUND MEASUREMENT.
(P-#)	PLUMBING FIXTURE SYMBOL
⬡ M #	MECHANICAL EQUIPMENT SYMBOL
◇ #	KEYED NOTE REFERENCE

SUBMITTALS:

1. CONTRACTOR TO ALLOW 10 WORKING DAYS FOR SUBMITTAL TURNAROUND.
2. CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL EQUIPMENT AND MATERIALS IN A SINGLE PACKAGE. PIECEMEAL SUBMITTALS WILL BE RETURNED WITH A NOTE TO REVISE AND RESUBMIT.
3. SUBMITTALS WILL BE CHECKED FOR COMPLIANCE WITH CAPACITY REQUIREMENTS AND ELECTRICAL REQUIREMENTS. CONTRACTOR TO VERIFY THAT WEIGHTS, DIMENSIONS, AND DUCT CONNECTIONS ON SUBMITTED EQUIPMENT IS CONSISTENT WITH SCHEDULED EQUIPMENT PRIOR TO SUBMITTAL. CHANGES IN SCOPE BROUGHT ABOUT BY SUBMITTED EQUIPMENT THAT DOES NOT COMPLY WITH THE WEIGHTS, DIMENSIONS, OR CONNECTION LOCATIONS ON SCHEDULED EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

COMMISSIONING NOTES:

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL DOCUMENTATION TO THE OWNER AS PER THE LISTED 2018 IECC CODE REFERENCES BELOW:

C408.2.1 A COMMISSIONING PLAN SHALL BE DEVELOPED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND SHALL INCLUDE THE FOLLOWING ITEMS:

1. A NARRATIVE DESCRIPTION OF THE ACTIVITIES THAT WILL BE ACCOMPLISHED DURING EACH PHASE OF COMMISSIONING, INCLUDING THE PERSONNEL INTENDED TO ACCOMPLISH EACH OF THE ACTIVITIES.
2. A LISTING OF THE SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND A DESCRIPTION OF THE TESTS TO BE PERFORMED.
3. FUNCTIONS TO BE TESTED, INCLUDING, BUT NOT LIMITED TO CALIBRATIONS AND ECONOMIZER CONTROLS.
4. CONDITIONS UNDER WHICH THE TESTS WILL BE PERFORMED. AT A MINIMUM, TESTING SHALL AFFIRM WINTER AND SUMMER DESIGN CONDITIONS AND FULL OUTSIDE AIR CONDITIONS.
5. MEASURABLE CRITERIA FOR PERFORMANCE.

C408.2.4 PRELIMINARY COMMISSIONING REPORT. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL AND SERVICE HOT WATER FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW. THE REPORT SHALL BE IDENTIFIED AS "PRELIMINARY COMMISSIONING REPORT," SHALL INCLUDE THE COMPLETED COMMISSIONING COMPLIANCE CHECKLIST, FIGURE C408.2.4, AND SHALL IDENTIFY:

1. ITEMIZATION OF DEFICIENCIES FOUND DURING TESTING REQUIRED BY THIS SECTION THAT HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION.
2. DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS.
3. CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.
4. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
5. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS, INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.

C408.2.4.1 ACCEPTANCE OF REPORT. BUILDINGS, OR PORTIONS THEREOF, SHALL NOT BE CONSIDERED AS ACCEPTABLE FOR A FINAL INSPECTION PURSUANT TO SECTION C105.2.6 UNTIL THE CODE OFFICIAL HAS RECEIVED THE PRELIMINARY COMMISSIONING REPORT FROM THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT.

C408.2.4.2 THE CODE OFFICIAL SHALL BE PERMITTED TO REQUIRE THAT A COPY OF THE PRELIMINARY COMMISSIONING REPORT BE MADE AVAILABLE FOR REVIEW BY THE CODE OFFICIAL.

C408.2.5 DOCUMENTATION REQUIREMENTS. THE CONSTRUCTION DOCUMENTS SHALL SPECIFY THAT THE DOCUMENTS DESCRIBED IN THIS SECTION BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

DOCUMENTS SHALL INCLUDED BUT ARE NOT LIMITED TO: DRAWINGS, MANUALS, SYSTEM BALANCING REPORT, AND FINAL COMMISSIONING REPORT.

PROJECT MECHANICAL NOTES:

1. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL A 7-DAY PROGRAMMABLE THERMOSTAT FOR EACH HEAT PUMP. VERIFY THERMOSTAT LOCATION WITH OWNER REPRESENTATIVE IN FIELD. INSTALL THERMOSTAT AT 48" A.F.F.. PROVIDE AND INSTALL A HEAVY DUTY VANDAL RESISTANT COVER IN ALL COMMON AREAS.
2. COORDINATE EXACT LOCATION OF ALL MECHANICAL UNITS WITH GENERAL CONTRACTOR. VERIFY IN FIELD.
3. PROVIDE AND INSTALL ALL NECESSARY COMPONENTS FOR FAN COIL/HEAT PUMP UNIT SYSTEMS. (IE REFRIGERANT LINES, CONDENSATE PIPING, ACCESS PANELS (FIRE RATED AS REQUIRED), MOUNTING/SUPPORT HARDWARE, ETC.) ALL PER MANUFACTURERS RECOMMENDATIONS.
4. MECHANICAL CONTRACTOR TO PROVIDE DOCUMENTATION OF REQUIRED MANUFACTURER START-UP FOR EQUIPMENT INCLUDING MANUFACTURER, MODEL NUMBER, SERIAL NUMBER, COOLING CAPACITY, ALL ENTERING AND LEAVING TEMPERATURES, CONNECTED CIRCUIT VOLTAGE, AND VERIFICATION OF PROPER FUNCTION OF THERMOSTAT. CONTRACTOR SHALL PROVIDE MANUALS FOR EQUIPMENT AND NAME OF SERVICE AGENCY.
5. ALL FRESH/OUTSIDE AIR INTAKES SHALL BE 10 FEET MIN. FROM ALL EXHAUST & PLUMBING VENTS.
6. HEATING LOADS COMPLETED USING CHVAC OR OTHER APPROVED CALCULATION METHODS.
7. REFRIGERANT PIPING INSULATION.
   - 1.1. INSULATE ALL REFRIGERANT SUCTION PIPING WITH 1/2" THICK FLEXIBLE FOAMED PLASTIC CLOSED CELL PIPE INSULATION.
   - 1.2. INSULATION SHALL HAVE A "K" FACTOR OF NOT MORE THAN .26 AT 70°F AND A WATER VAPOR TRANSMISSION RATE OF 0.1 PERM-INCH OR LESS IN CONFORMANCE WITH ASTM C-177 & ASTM C-355 WATER METHOD.
   - 1.3. WHEN INSULATION IS EXPOSED TO SUNLIGHT WRAP WITH POLYTAPE WITH ONE THIRD OVERLAP.
   - 1.4. INSTALL INSULATION BY SLITTING TUBULAR SECTIONS AND APPLYING OVER PIPING.
   - 1.5. PAINT ALL INSULATION AND/OR TAPE EXPOSED TO THE EXTERIOR WITH ULTRAVIOLET RESISTING PAINT.
8. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED.

PROJECT PLUMBING NOTES:

1. SEE PIPING SCHEMATIC FOR ADDITIONAL INFORMATION ON WASTE & VENT PIPING DIAMETERS.
2. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. CONCEAL ALL PIPING IN FINISHED AREAS.
3. PROVIDE AND INSTALL 2"ø SEWER LINE. FIELD LOCATE. MAKE CONNECTION TO COMPLETE SEWER SYSTEM. VERIFY ALL INVERT ELEVATIONS AND ALL REQUIREMENTS WITH OWNER REPRESENTATIVE AND CIVIL PLANS.
4. PIPING LOCATIONS ARE GRAPHICALLY SHOWN. PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL PIPE ROUTING IN FIELD PER AVAILABLE SPACE AND BUILDING CONSTRUCTION.
5. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE AND INSTALL ALL REQUIRED CLEANOUTS. CLEANOUTS FOR HORIZONTAL DRAINS SHALL BE INSTALLED NO MORE THAN 100' APART. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45°. A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK. CLEANOUTS SHALL BE ACCESSIBLE AND THE SAME SIZE AS THE WASTE LINES ON WHICH THEY ARE INSTALLED.
6. COORDINATE WITH OTHER TRADES TO ENSURE AND ALL PLUMBING VENTS ARE A MINIMUM OF 10-FEET FROM ALL FRESH AIR INTAKES.
7. SANITARY WASTE AND VENT PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2018 IPC TABLES 702.1, 702.2 AND 702.3 & 702.4.
8. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

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5/12/22
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JOB# J22066.00
DATE PLOTTED: 05/12/2022

SFCN FIBER HUTS

FIBER HUT PLANS

MECHANICAL & PLUMBING NOTES

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

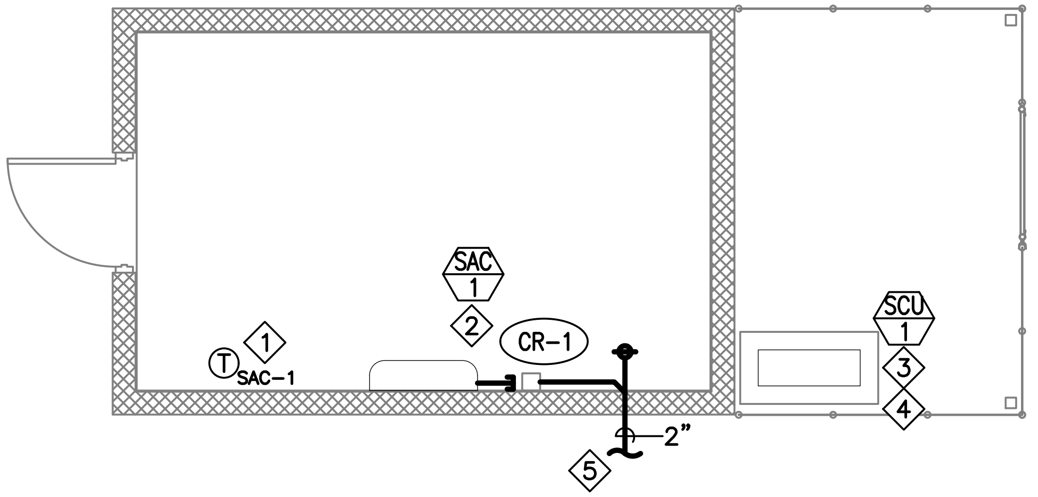
DRAWING #:
MP0.1

Z:\Projects\J22\J22066.00\Mechanical\J22066.00 - MECHALL.dwg

MECHANICAL KEYED NOTES:

1. FIELD VERIFY THERMOSTAT LOCATION WITH OWNERS REPRESENTATIVE. INSTALL THERMOSTAT AT 48" A.F.F..
2. PROPOSED LOCATION OF WALL–MOUNT FAN COIL UNIT. FIELD VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE. CONTRACTOR SHALL MAKE CONNECTION TO OUTDOOR UNIT. ROUTE CONDENSATE PIPING TO CR–1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. PROPOSED LOCATION OF OUTDOOR CONDENSING UNIT FOR INDOOR FAN COIL ON PAD. PENETRATION FOR REFRIGERANT PIPING SHALL BE THROUGH THE WALL. FIELD VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE AND INSTALL 4" HOUSEKEEPING PAD FOR CONDENSING UNITS BY MECHANICAL CONTRACTOR. PROVIDE MANUFACTURER REQUIRED CLEARANCES.
5. ROUTE CONDENSATE DRAIN PIPING FROM INDOOR FAN COIL UNIT TO GRAVEL SUMP ON EXTERIOR OF BUILDING. FIELD VERIFY EXACT LOCATION WITH CIVIL UTILITIES.

△1



MECHANICAL & PLUMBING PLAN

SCALE: 3/16" = 1'–0"

N

NOTE:
CONDENSATE TO BE PIPED IN A WAY TO PREVENT IT FROM FREEZING DURING THE WINTER. CONTRACTOR TO ENSURE THAT PIPING CAN REACH GRAVEL SUMP OR CITY SEWER CONNECTION WITHOUT FREEZING DURING WINTER OPERATION.

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SFCN FIBER HUTS

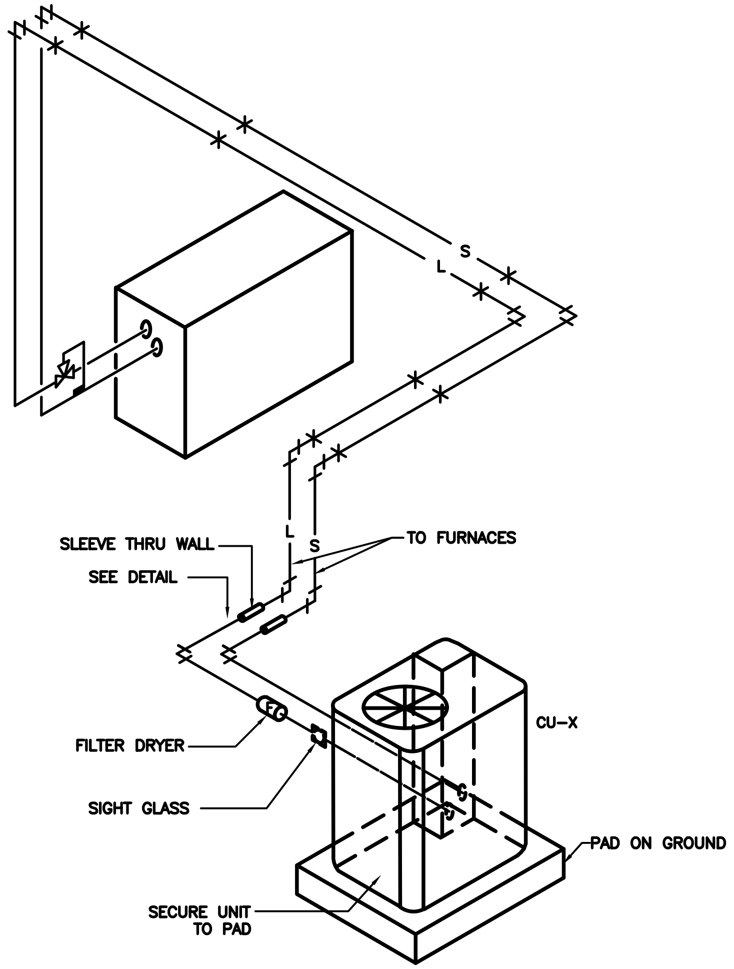
FIBER HUT PLANS

MECHANICAL & PLUMBING PLAN

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

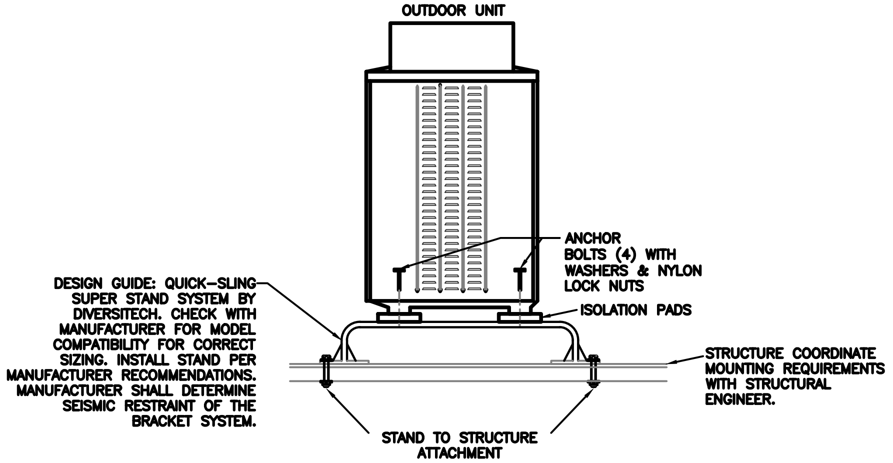
DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #: MP1.1



TYPICAL REFRIGERANT SCHEMATIC (CU ON GROUND)

SCALE: NONE

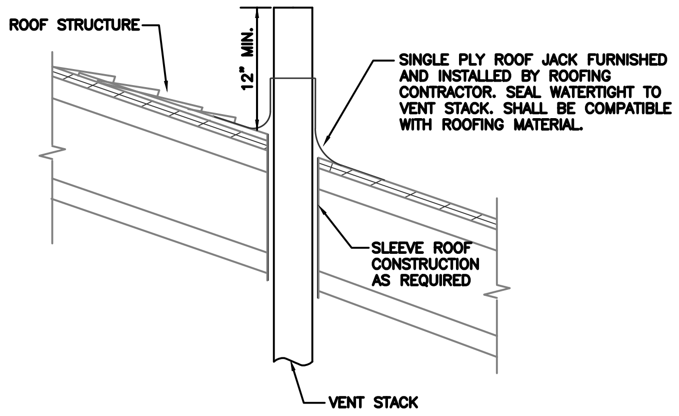

OUTDOOR UNIT
ANCHOR BOLTS (4) WITH WASHERS & NYLON LOCK NUTS
ISOLATION PADS
STRUCTURE COORDINATE MOUNTING REQUIREMENTS WITH STRUCTURAL ENGINEER.
STAND TO STRUCTURE ATTACHMENT

DESIGN GUIDE: QUICK–SLING SUPER STAND SYSTEM BY DIVERSITECH. CHECK WITH MANUFACTURER FOR MODEL COMPATIBILITY FOR CORRECT SIZING. INSTALL STAND PER MANUFACTURER RECOMMENDATIONS. MANUFACTURER SHALL DETERMINE SEISMIC RESTRAINT OF THE BRACKET SYSTEM.

NOTES:
1. INSTALL UNIT LEVEL OR, IF ON A SLOPE, MAINTAIN SLOPE TOLERANCE OF 2 DEGREES (OR 2 INCHES PER 5 FEET).
2. COORDINATE WITH ARCHITECTURAL FOR MOUNTING HEIGHT REQUIREMENTS
3. PROTECT ADJACENT SURFACE(S) TO AVOID EXPOSURE OF ADJACENT SURFACE TO UNIT REFRIGERANT AND OIL DURING INSTALLATION.
4. FOLLOW ALL MANUFACTURER RECOMMENDATIONS.
5. VERIFY STAND LOCATION(S) WITH STRUCTURAL AND ARCHITECTURAL PLANS.
6. INSTALL UNIT WITH MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL SIDES OF THE UNIT. SEE UNIT MANUFACTURER INSTALLATION MANUAL FOR RECOMMENDED DISTANCES.
7. SECURE STAND TO STRUCTURE UNDER THE DIRECTION OF THE STRUCTURAL ENGINEER AND PER MANUFACTURER RECOMMENDATIONS.

TYPICAL OUTDOOR UNIT ON STAND DETAIL

SCALE: NONE


ROOF STRUCTURE
12" MIN.
SINGLE PLY ROOF JACK FURNISHED AND INSTALLED BY ROOFING CONTRACTOR. SEAL WATERTIGHT TO VENT STACK. SHALL BE COMPATIBLE WITH ROOFING MATERIAL.
SLEEVE ROOF CONSTRUCTION AS REQUIRED
VENT STACK

TYPICAL VENT THROUGH SLOPED ROOF DETAIL

SCALE: NONE

4858829
MARK L. MAKIN
5/12/22

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SFCN FIBER HUTS

FIBER HUT PLANS

MECHANICAL & PLUMBING DETAILS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

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MP5.1

SPLIT SYSTEM HEAT PUMP INDOOR & OUTDOOR UNITS

INDOOR UNIT							OUTDOOR/HEAT PUMP UNIT								REMARKS
MARK	DESIGN GUIDE	NOMINAL SUPPLY CFM	NOMINAL COOLING BTU/H	NOMINAL HEATING BTU/H	ELECTRICAL		DESIGN GUIDE	ELECTRICAL			REFRIGERANT	SEER	HSPF	MARK	
					VOLTAGE (DC VOLTS)	UNIT MCA		VOLT/PH/HZ	UNIT MCA	UNIT MOCP					
SAC 1	MITSUBISHI PKA-SERIES	810	34,200	37,000	24	1	PUZ-SERIES	230/1/60	18	40	R410A	14	9.3	SCU 1	1 – 9

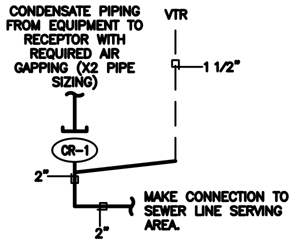
1. SITE CONDITIONS ARE 96/62 DEG. DB/WB SUMMER, 6 DEG. F DB WINTER, AND AN ELEVATION OF 4,577' FEET ABOVE SEA LEVEL.
2. APPROVED MANUFACTURERS: DAIKIN, MITSUBISHI, FRIEDRICH, FUJITSU, SANYO. (SUBJECT TO DOCUMENT CONFORMANCE)1 STAGE HEATING AND COOLING.
3. WITH R410a REFRIGERANT.
4. PROVIDE AND INSTALL ALL REQUIRED MOUNTING HARDWARE.
5. PROVIDE AND INSTALL CONDENSATE PIPING TO NEAREST PLUMBING DRAIN.
6. WITH LOW AMBIENT KIT TO ALLOW OPERATION TO –10 DEG. F.
7. FACTORY THERMOSTAT CONTROLS.
8. PROVIDE SNOW STAND AND WIND BAFFLES AS REQUIRED FOR YEAR ROUND OPERATION.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE CONNECTION BETWEEN INDOOR AND OUTDOOR UNIT.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	PIPE SIZE					REMARKS
		TRAP	WASTE	VENT	C.W.	H.W.	
CR-1	CONDENSATE RECEPTOR	2"	2"	1 1/2"	——	——	CONDENSATE RECEPTOR WITH HUB FUNNEL FOR CONDENSATE FROM HIGH EFFICIENCY EQUIPMENT. PROVIDE AND INSTALL TRAP GUARD.

NOTES:
1. VERIFY ALL MANUFACTURERS, FINISHES, AND OPTIONS WITH OWNER BEFORE ORDERING ANY PLUMBING FIXTURES.

2. MINIMUM UNDERGROUND SANITARY SEWER PIPING SIZE SHALL BE 2 INCHES.


CONDENSATE PIPING FROM EQUIPMENT TO RECEPTOR WITH REQUIRED AIR GAPPING (X2 PIPE SIZING)
VTR
1 1/2"
CR-1
2"
MAKE CONNECTION TO SEWER LINE SERVING AREA.
2"

TYPICAL CONDENSATE

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MARK L. MAKIN
5/12/22
REGISTERED PROFESSIONAL ENGINEER
STATE OF UTAH

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MECHANICAL & PLUMBING SCHEDULES

DRAWN: JE	REVISION	BY	DATE
DESIGN: JE	1 CITY CMNTS	JE	05/10/2022
CHECK: MM			
DATE: 5/10/2022			

DRAWING #:
MP6.1

SECTION 23 Mechanical – GENERAL PROVISIONS

Not all specification items are used in every project.

PART 1 – GENERAL

– **Scope:**

A. Provisions of this section apply to all work specified in all sections under Division 23.

B. In addition, work in Division 23 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.

C. Contractor is responsible for results deviating from the plans.

– **Examination of Premises:** Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.

– **The Mechanical Contractor** shall be licensed and hold a current contracting license that has been valid for a minimum of two years as a Mechanical Contractor in the State where the project is located.

– **The Mechanical Contractor** shall have a minimum of five years experience installing commercial cooling and heating systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers as a separate document in addition to the mechanical bid submitted if required by the General Contractor.

– **The Mechanical Contractor** shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the mechanical bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.

– **Regulations, Permits, Fees, Charges, Inspections:**

A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IBC, IMC, IPC, NEC, NFPA codes and all City codes.

B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards.

1. 2018 International Mechanical Code
2. 2018 International Building Code
3. 2018 International Energy Code
4. 2018 International Plumbing Code
5. 2018 International Energy Code
6. 2018 International Fuel Gas Code
7. ASHRAE 90.1 – 2016

***Current codes adopted by the respective jurisdiction will supercede this list of codes.

C. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.

D. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.

1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.

D. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.

– **Drawings and Specifications:**

A. Refer to Division 1 for information on submittals and shop drawings.

B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.

– **Record Drawings:** Provide record drawings for all work under sections in Division 22 & 23. See Division 1 for detailed requirements covering preparation of record drawings.

– **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

Approvals of Materials and Equipment: Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 23, as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.

– **Cooperative Work:**

A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.

B. Cooperative Work Includes:

1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 & 23 but provided under other divisions of these specifications.
2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 23.
3. Electrical work as specified herein. Refer to Division 26 for requirements.

– **Construction Facilities:**

A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.

B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.

– **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 23 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.

– **Mechanical Wiring:**

A. Provide all temperature control wiring, all interlock wiring, and equipment control wiring for the equipment that is to be provided under this Division unless specifically shown on electrical drawings.

B. All wiring shall be not less than No. 14 insulated, color coded wire in electrical metallic tubing. Installation shall comply with Division 26.

C. Before ordering motors, equipment, etc., verify the available voltage and phase with the electrical trades.

– **Electrical Work:**

A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.

B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.

C. Under the Automatic Temperature Control section of these specifications, furnish and install all wiring, conduit, electric automatic temperature control devices, thermostats, relays, pneumatic electric switches, automatic control switches and pilot lights. See the Automatic Temperature Control Section, for additional detailed information.

D. All loose starters and control devices for equipment furnished under Division 23 (except as otherwise specified under Automatic Temperature Control Section) are to be furnished under that particular section of Division 23 and installed under the electrical division.

E. Contractor shall be responsible for the checking and testing of all controls and the interlocks for a complete and satisfactory operating system.

F. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.

G. Submit a complete list of all motors prior to final closeout of job indicating the location, horsepower, voltage, phase specified in Table 132 of ANSI B.1.

H. All field wiring and equipment must conform to the applicable section of the Electrical specifications, Division 26.

– **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:

A. ASME Boiler and Pressure Vessel Code

B. Section IX ANSI Code for Power Piping: B31.1

– **Product Handling**

A. Protection: Take all precautions necessary to protect the materials of this section, before, during and after installation.

B. Replacements: In the event of damage immediately repair all damaged and defective work to the approval of the Engineer, at no additional cost to the Owner.

– **Job Conditions**

A. Examination of site: Examine the site and include in bid proposal all conditions under which work is to be performed.

– **Miscellaneous**

A. Permit and Fees: Apply and pay for all necessary permits, inspections, examinations and fees or charges required by Public Authorities having jurisdiction.

B. Locations and Accessibility: Contractor shall fully inform himself regarding peculiarities and limitations of space available for installation of work under this section. Valves, motors, controls and other devices requiring service. Maintenance and adjustments shall be placed in fully accessible positions and locations, provide access doors where required in ductwork and/or construction whether specifically detailed or not, and mender all such devices accessible.

C. Scaffolding: Furnish all scaffolding, rigging and hoisting as required for the proper execution of the work.

D. All HVAC equipment shall be labeled. Information on labels shall include: Identification number and name same as the drawings, flow and static pressure and the area to which the unit serves. Labels shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$ inch high.

E. All gas fired equipment shall include a label indication that the appliance has been adjusted, modified or re–calibrated for the altitude wherein the project is to be located. The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.

– **Submittals**

A. Shop Drawings: Within 15 days after award of contract, and before any of the materials of this section are fabricated and delivered to the jobsite, submit complete shop drawings and equipment submittals for the Engineer to review in accordance with these specifications. show all details of all ductwork and equipments pads.

B. Product Data:

1. Submit six (6) copies of all manufacturer's product data simultaneously with all shop drawings submittals.
2. Product data to include, all air conditioning equipment, hangers, fans and other standard items as required to complement shop drawings for a submittal indications products to be used on this work.

C. Record Drawings: Maintain throughout the progress of the work project record drawings and submit to the Owner.

D. Operating Manuals and Maintenance Manuals:

1. Submit four (4) copies of all operating instructions and maintenance manuals.
2. Fully instruct Owner's operating personnel and demonstrate performance, operation and maintenance of equipment. Amount of allocated for said instruction and demonstration of equipment and systems shall be part of these obligations. Submit to Engineer a letter signed by Owner's representative who will operate system stating that he has been fully instructed by contractor about operation and maintenance of equipment and system.
3. Submit one (1) additional set of approved instructions and one (1) additional set of approved control diagrams.

E. Guarantees: In addition to equipment warranties, furnish a written guarantee against defects in materials and workmanship for one year. Guarantee shall include repair of damage to, or replacement of any part of equipment or premises caused by leaks or breaks in pipe or equipment provided under this section.

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MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

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DATE: 5/10/2022

DRAWING #: MP7.1

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– Equipment Identification

A. Except for individual room heating units and items furnished under temperature control all items of mechanical equipment, including fans, pumps, boilers and electrical switches and starters for mechanical equipment and gauges shall be labeled.

B. Information on labels shall include the following:

1. Identification number and name. Generally this number and name shall be the same as that shown on the drawings or in the specs.
2. If the item is a fan or pump, the flow and head shall be indicated.
3. If the item is part of a unit, the label shall have in addition to its item number, the number of the main item it is serving.
4. Valves shall be tagged with the area served and their normal operating positions shall be indicated.
5. Where the main unit is served by the valve is apparent, only the valve function needs to be included on the nameplate.

C. The types of Nameplates shall be as follows:

1. The valve tags shall be $\frac{1}{2}$" embossed aluminum tapes with identification on one side for valves. Tags for magnetic starters shall be screwed to the metal starter cover. Gags sags shall be Addressograph No. B–5300.
2. Equipment nameplates shall be black faced Formica with white engraved lettering at least $\frac{3}{16}$" high.

D. Valve tags shall be connected to valve stems by steel rings or chains. Screws shall be used for equipment labels prior to installation. The contractor shall submit to the Engineer a complete list of all valves and each item of equipment to be identified with the proper identification.

PART 2 – PRODUCTS

– Machinery Drives:

A. Use V–belts designed for 150% of capacity for all belt drives. For multiple belt drives, use matched sets, so marked at the factory.

B. On drives with not more than two belts, provide adjustable pitch motor sheaves with the midpoint of the adjustment range equal to that required to achieve the specified fan capacity.

C. On motors with drives with more than two belts, furnish nonadjustable sheaves, providing the specified fan capacity.

– Machinery Accessories:

A. Lubricating Devices: Provide all oil level gauges, oil pressure gauges, grease cups, grease gun fittings, as required by the equipment. Extend all lubricating fittings to readily accessible locations.

B. Guards: Provide totally–enclosed OSHA type belt guards for all rotating equipment. Design guards to be readily removable for access to belt drives.

– Equipment Design and Installation:

A. Uniformity: Unless otherwise specified, provide all equipment of same type or classification by the same manufacturer.

B. Design: Design all equipment in accordance with ASME, AGA, UL and other applicable technical standards as follows:

C. Pressures vessels – ASME Code constructed and stamped

D. Electric appliances – UL labeled

E. Fire protection equipment – UL approved and labeled

F. Fans – AMCA rated and stamped

G. Cooling equipment – ARI certified

H. Fire dampers, smoke dampers, combination fire and smoke dampers – UL listed

I. Concrete Inserts:

1. The work under this section includes furnishing and installing all concrete inserts required for all materials and equipment specified herein or in other sections of Division 23.

2. Provide concrete inserts equal to Unistrut Series 3200 with standard, plain, oiled finish. Provide exposed Unistrut pipe supports with factory finished enamel paint.

– Temperature Controls

A. Thermostats shall be provided with the air conditioning units. They shall be installed and wired by the HVAC contractor. T–stats for AC units shall be programmable with night setback and override control.

– Equal Materials and Substitutions

A. In addition to manufacturers specified, the following shall also be considered equal. Provided corresponding models meet specified requirements. Equivalent substituted equipment named herein shall be submitted to Architect for approval. Submit alternate selections for prior approval. Must be received by Engineer 10 days prior to due date/bid opening.

Split System: From manufacturers listed in the schedule.

– Refrigerant Lines

A. Refrigerant lines are to be sized as per manufacturer's requirements. Lines to be fully insulated with 1 inch foam flex or equal. Insulation exposed to the sun shall be painted with two coats of protective paint. The system is to be evacuated to 200 microns, hold vacuum 24 hours. Break with freon and leak test with halide detector. Each heat pump to be provided with a refrigerant line kit.

– High Wall Fan Coil Unit

A. Furnish and install indoor, wall–mounted, direct expansion, fan coil unit to be used without ductwork. Unit shall consist of tangential, direct–drive fan. Fan motor, cooling coil, piping connections, electrical controls, microprocessor control system, integral temperature sensing, and factory–supplied mounting bracket. Unit shall be capable of being used in a refrigerant circuit with a matching air–cooled outdoor condensing unit. Cabinet discharge and inlet grilles shall be attractively styled, high impact polystyrene. Cabinet shall be fully insulated for improved thermal and acoustic performance. Fan shall be tangential direct–drive blower type with air intake at the upper front face of the unit and discharge at the bottom front. Automatic, motor–driven vertical air sweep shall be provided standard. Air sweep operation shall be user selectable. Horizontal direction may be manually adjusted and vertical air sweep may be manually set. Coil shall be copper tube with aluminum fins and galvanized steel pan under the coil shall have a drain connection for hose attachment to remove condensate. Condensate pan shall have internal trap and auxiliary drip pan under coil header. The size oo9 and 012 units shall use capillary tubes in the outdoor unit for refrigerant control, and the size 018, 024 units shall use an accessory accurater piston refrigerant metering device in the indoor unit. Provide the following functions as a minimum: automatic restart, a timer function, temperature–sensing controls, evaporative coil, freeze protection, wireless infrared remote control, auto stop features, automatic air sweep control, dehumidification mode, fan–only operation, diagnostics, user–selectable fan speed control, and compressor restart time delay. Unit shall be rated per ARI standards 210/240 and shall be listed in the ARI directory matched system. Units shall be UL listed. Provide equipment from manufacturers listed in the equipment schedule.

– Split System Outdoor Heat Pump Unit

Model of size and capacity indicated. Units shall be complete assembled and tested complete with refrigerant charge and ready to operate. Total unit shall be UL listed and carry a UL label

A. Cabinet shall be constructed of galvanized steel, bonderized and coated with a power coat paint.

B. Coils shall be of nonferrous construction with aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed.

C. Compressors shall be hermetically sealed. Compressor will be mounted on rubber vibrations isolators.

D. Refrigerant circuit components shall include the following: Liquid tube shutoff valve with seat connections, suction tube shutoff valves with sweat connections, system charge of refrigerant R410, Compressor oil, accumulator, freezestat, and reversing valve.

E. Compressor fans shall be direct drive propeller type, discharging air upward. Fan motors shall be totally enclosed, 1–phase type class B insulation and permanently lubricated bearings, shafts shall be corrosion resistant. Fan blades shall be statically and dynamically balanced. Condenser fan openings shall be equipped with steel wire safety guards.

– Pipe Identification

A. Identification of piping shall be done with "Brady" or "Westline" labels. The color coding shall comply with OSHA ANSI Safety Color Coding Regulations.

B. The identifying color coded bands, legends, and directional arrows on piping and duct systems shall be located adjacent to each valve, at every point of entry and exit where piping pass through a wall or ceiling, on each riser and junction, every 50 feet on long continuous lines and adjacent to all special fittings (regulating valves, etc.)

C. Legends shall be applied on the color band on the perimeter of the pipe in a location that will be readily visible to operating personnel from the floor in the area.

D. Color coding shall follow ANSI standards:

MATERIAL	BACKGROUND COLOR	IDENTIFYING LEGEND	LETTERING
Domestic Cold Water	Green	Domestic Cold Water	White
Waste	Yellow	Waste Water	Black

– Pipe Hangers

A. All necessary structural members, hangers, and supports of approved design shall be provided to keep piping in proper alignment and to prevent transmission of injurious thrusts and vibrations. Pipe hangers shall generally be of the clevis pipe–clamp type with suspension bolts. All bolts shall have provision for vertical adjustment and shall be equipped with locknuts.

B. No hanger shall be welded directly to steel joist. Where joist occur, clips shall be installed and hanger rod attached to clips. All piping hung from joists shall be hung from joist panel points. Protective saddles shall be provided on all insulated piping at point of hanger. Hangers shall not penetrate insulation.

C. The following is schedule of maximum spacing for hangers or other supports and sizes of suspension rods for piping. In addition to the spacing listed, an additional hanger shall be provided 1 foot 0 inches from each pipe drop, rise, or turn.

Pipe Size	Rod Diameter	Maximum Spacing
1–1/4 inch and smaller	1/2 inch	6 Feet

D. Pipe hangers shall not be welded to metal pan floor. Pipe hangers shall be concrete inserts installed in holes drilled in concrete.

E. All hangers, supports, and anchors shall be assembled with heavy pattern, hexagon carbon steel nuts.

F. Perforated metal strap shall not be permitted.

G. all pipe hangers, inserts, trapezes, etc., and all necessary accessories required to support the piping shall be provided by this contractor.

H. All pipe hangers shall be installed outside of insulation on the insulated lines.

I. Manufacturers may be Blaw–Knox, Grinnell, or Pipe Shields, Inc.

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ROYAL ENGINEERING

SFCN FIBER HUTS

FIBER HUT PLANS

MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

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DRAWING #: MP7.2

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PART 3 – EXECUTION

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test, uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

E. Mechanical equipment installed on the roof shall not be installed any closer than 10'–0" to the edge of the roof unless there is a 42" high parapet or equipment guardrail.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

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– **Accessibility:**

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B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

   1. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

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MECHANICAL SPECIFICATIONS

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- **Owner—Furnished and Other Equipment:**

  A. Rough—in only for all Owner—furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

- **Equipment identification**

  A. All major equipment shall bear firmly attached metal nameplates which state name of manufacturer, model number and electrical data.

- **Discrepancies**

  A. In the event of discrepancy, immediately notify the Owner.

  B. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

- **Initial Lubrication, Adjusting, and Filling Systems**

  A. Before operating any mechanical system, equipment bearings shall be lubricated and bolts, pulleys, and other moving parts checked for alignment and tolerances in accordance with manufacturer's operating instructions. Vibrations and noise shall be suppressed.

- **Cleaning of Equipment, Materials and Premises**

  A. Be painted smooth and clean, ready for painters. Clean entire premises of unused materials, rubbish, debris, grease spots and dirt left by subcontractor.

- **Equipment and Material**

  A. Install all equipment and material per manufacturer's recommendations.

- **Accessibility**

  A. Install work readily accessible for normal operation, reading of instruments, adjustment, service inspection and repair, provide access panels where indicated and required. Access panels shall be the responsibility of respective subcontractors.

  B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

  C. Rough—in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough—In."

- **Equipment Final Connections:**

  A. Provide all piping and duct final connections for all equipment under Division 22 & 23 as required herein specified and indicated on the drawings.

  B. Air Conditioning, Heating, and Ventilating: Provide final connections complete with necessary valves, drains, unions, flanges and duct connections for equipment furnished and installed under other sections of the specifications, except as otherwise designated. Included under the HVAC sections of the specifications are the final connections to the following:

    1. Condensate drain piping from air conditioning equipment.

    2. Supply, return, relief, outside air and exhaust duct connections for all equipment including exhaust fans.

    3. Piping connections for all equipment.

- **Machinery Drives:** After tests have been performed on the air conditioning and air handling systems, make without cost not more than two changes in the size of the nonadjustable sheaves to obtain the required air quantities.

- **Machinery Accessories:**

  A. Application: Do not install any equipment in an application not recommended by the manufacturer.

  B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

- **Objectionable Noise and Vibration:** Construct and brace the metal partitions, ducts and sheet metal housings to prevent vibration or rattling when systems are in operation. Install connections to equipment so noise and vibration will not reach the conditioned area through ducts, piping, conduit, sheet metal work, or the building structure. Provide power—driven equipment suspended from the structure with spring type isolation.

- **Welding:**

  A. Procedures:

    1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

    2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

  B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

    1. Manual shielded metal—arc.

  C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

  D. Welding Filler Material:

    1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

    2. All shielded metal—arc welding shall be performed using low—hydrogen type electrodes such as E 7018.

  E. Preheat and Interpass Temperature:

  F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

- **Operation**

  D. Place system in operation and regulate and adjust to Owner's satisfaction. System shall operate quietly and without vibration or noise.

  E. Contractor shall make necessary field adjustments for even temperatures throughout the project.

- **Certification**

  A. Upon completion, the contractor shall inspect work of this section and deliver to Owner a written certification that installed materials and workmanship conform to specifications.

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FIBER HUT PLANS

MECHANICAL SPECIFICATIONS

REVISION	BY	DATE
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DRAWING #:
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SECTION 22 PLUMBING – GENERAL PROVISIONS

Not all specification items are used in every project.

PART 1 – GENERAL

– **Scope:**

Furnish all labor, materials, equipment, appliances and necessary incidentals for the complete installation of all plumbing shown on the drawings and as specified.

A. Work specified in this section

1. Sanitary soil, waste and vent systems.
2. Domestic hot and cold water systems.
3. Domestic water heaters.
4. Furnish and set all sleeves for pipes passing through walls and floors.
5. Pipe covering, insulation and wrapping.
6. Excavation and backfill.
7. Rougn–in and final connections to air conditioning equipment of condensate drains.
8. All plumbing fixtures, water heaters, valves, and other miscellaneous items or equipment required for a complete installation.
9. Provide collars at fire rated penetrations.

B. Provisions of this section apply to all work specified in all sections under Division 22. All items indicated on site, Architectural, Mechanical, or Plumbing drawings are to be provided complete from point of connection to finished fixture in conformance with all governing authority requirements. Nothing in these drawings or specifications shall be construed to permit work in violation of governing codes.

C. In addition, work in Division 22 is governed by the provisions of the Bidding Requirements, Contract Forms, General Conditions and all sections under Division 1, General Requirements.

1. Examination of Premises: Visit the site, verify all measurements and job conditions, and pay all costs necessary to perform the work. Coordinate division of fee responsibilities with the General Contractor.
2. The Plumbing Contractor shall be licensed and hold a current contracting license as a Plumbing Contractor that has been valid for a minimum of two years in the State where the project is located.
3. The Plumbing Contractor shall have a minimum of five years experience installing commercial plumbing systems similar to those described in these specifications and provide a list of previous projects, including name of project and contact person names and phone numbers if required by the General Contractor.
4. The Plumbing Contractor shall be able to bond work he is bidding to perform and shall provide a written statement from the bonding agency proposed to be used for this project as a separate document in addition to the plumbing bid submitted if required by the General Contractor. The bonding agency shall be one having a Best's insurance rating of A or A+.

D. Contractor is responsible for results caused by deviating from the plans.

– **Regulations, Permits, Fees, Charges, Inspections:**

A. Regulations: Comply with all applicable codes, rules and regulations. All materials and work must comply with local construction, mechanical, plumbing, electrical and fire codes. As a minimum, comply with the following: IMC, IPC, IECC, NEC, NFPA codes and all City codes.

B. In addition to the requirements of all governing codes, ordinances and agencies, conform to the requirements of the following codes and standards:

1. 2018 International Plumbing Code
2. 2018 International Building Code
3. 2018 International Mechanical Code
4. 2018 International Energy Conservation Code.

C. Current codes adopted by the respective jurisdiction will supercede the listed codes.

D. Fees and Permits: Pay all connection, installation, use, development, etc., fees and/or charges. Obtain and pay for all required permits and licenses. Coordinate division of fee responsibilities with the General Contractor.

E. Inspections: All work must be inspected and approved by local authorities. Prior to final approval, furnish the Architect with certificates of inspections and approvals by the local authorities in accordance with Division 1.

1. Preheat and interpass temperature shall be determined by temperature indicating crayons, contact pyrometers or other equally suitable means.

F. Postweld Heat Treatment: Postweld heat treatment for pressure components shall be as specified in Table 131 of ANSI B31.1.

– **Drawings and Specifications:**

A. Refer to Division 1 for information on submittals and shop drawings.

B. If a conflict exists between the drawings and specifications, promptly notify the Architect and Engineer.

– **Record Drawings:** Provide record drawings for all work under sections in Division 22. See Division 1 for detailed requirements covering preparation of record drawings.

– **Work and Materials:** Unless otherwise specified, all materials must be new and of the quality specified. The workmanship shall be of a quality that is acceptable to the Architect and is equal to the standards of the trades. Contractor must staff the project with sufficient skilled workmen, including a fully qualified construction Superintendent, to complete the work in the time allotted. The Superintendent must be qualified to supervise all of the work in his work category.

– **Approvals of Materials and Equipment:** Refer to Division 1 for description of material and equipment for prior approvals and substitutions. Must be received by Engineer 10 days prior to due date/bid opening.

– **Maintenance Manual:**

A. Prior to completion of the project, compile a complete equipment and maintenance manual for all equipment supplied under sections of Division 22 as described in Division 1.

B. Manuals shall be bound in a three–ring binder. A preliminary submittal of the manual shall be made to the Architect 90 days after receiving approved submittals. Final submittal of the manual shall be made four weeks prior to substantial completion of the project.

– **Equipment Purchases:** Arrange for purchase and delivery of all materials and equipment within 15 days after approval of submittals. Coordinate with General Contractor.

– **Cooperative Work:**

A. Correct without charge any work requiring alteration due to lack of proper supervision or failure to make proper provision in time. Correct without charge any damage to adjacent work caused by the alteration. See Division 1 for additional requirements.

B. Cooperative Work Includes:

1. General supervision and responsibility for proper location, rough–in and size of work related to Division 22 but provided under other divisions of these specifications.

2. Installation of sleeves, inserts and anchors bolts for work under sections in Division 22.

3. Electrical work as specified herein. Refer to Division 26 for requirements.

– **Construction Facilities:**

A. General: Under this division of the specifications execute all work in a manner to provide safe and lawful ingress and egress to the Owner's establishment and such facilities shall be kept clear of materials or equipment as directed by the Architect. Refer to Division 1 for additional requirements.

B. Furnish and maintain from the beginning to the completion of all work all lawful and necessary guards, railings, fences, canopies, lights, and warning signs. Take all necessary precautions required by city and state laws to avoid injury or damage to any and all persons and property.

– **Guarantee:** Guarantee all material, equipment, and workmanship for all sections under Division 22 in writing to be free from defects of material and workmanship for one year from date of final acceptance as outlined in Division 1. Replace without charge any material or equipment proving defective during this period. The guarantee shall include performance of the equipment under all conditions of load, installing any additional items of control and/or protective devices as required and the replacing of any refrigerant lost.

– **Electrical Work:**

A. Electrical wiring, including power wiring and control wiring (except as otherwise specified under Automatic Temperature Controls), all raceways, wiring, outlet and junction boxes, and labor for installation of the wiring and equipment shall be included in Electrical Division 26 of the specifications.

B. All starters in motor control centers are to be furnished and installed under the Electrical Division of the specifications.

C. Before ordering any motors and equipment. Verify the available voltage and phase for all motors with the Electrical Contractor.

D. Submit a complete list of all motors prior to final closeout of job indicating the locations, horsepower, voltage, phase specified in Table 132 of ANSI B.1.

E. All field wiring and equipment must conform to the applicable sections of the Electrical specifications, Division 26.

– **Welding Codes and Standards:** All welding and other criteria covered by this specification shall be in accordance with the following code:

A. ASME Boiler and Pressure Vessel Code

B. Section IX ANSI Code for Power Piping: B31.1

C. AWS D10.12.D10.12M Welded joints for gas piping.

– **Product Handling**

A. Protection: Take all precautions necessary to protect the materials of this section before, during, and after installation.

B. Replacements: In the event of damage, immediately repair all damaged and defective work to the approval of the Engineer, at not additional cost to the Owner.

– **Submittals:**

A. Manufacturer's Literature: Within 35 days after award of contract and before any of the materials of this section are delivered to the job site submit seven complete brochures of all materials and equipment, per Division 1 of the specifications.

B. Other Submittals:

1. Shop Drawings.
2. Sterilization Test Report
3. Test Data.

C. Sets in bound booklet form of written operating and maintenance instructions and brochures for equipment specified in this section. Fully instruct Owners Operating Personnel.

D. Record Drawings: Keep an accurate dimensioned record of As–Built locations and elevations, as referred to approved base datum, of buried concealed.

E. Operation and Maintenance Instructions: Deliver to Architect tow complete lines, manhole, cleanouts, valves, plugged tees, capped ends, and of work which is installed different from shown in the plans.

– **Miscellaneous:**

A. Examination of the site: Exercise care in examining the site and coordinate all work indicated on the drawings with existing conditions. Report to Architect in writing conditions that will prevent proper provisions of this work. Verify depth and location of all service lines with servicing companies having jurisdiction before excavating, by submission of the bid. The contractor warrants that he has familiarized himself with the existing conditions and will perform all work as required for hookup and as required by the contract documents at no additional cost.

B. Permits and fees: Arrange and pay for all permits, inspections and fee required by all governing agencies.

C. Service connections: Make all necessary arrangements with applicable utility company for connection to existing service lines. Pay all fees associated with work including meters, hookup charge and utility assessments fees.

D. Drawings: Coordinate all space requirements with other trades, drawings indicate desired location and arrangement of piping, equipment, and other items and are to be followed as closely as possible.

PART 2 – PRODUCTS

– **General**

A. Pipe sleeves and wrapping: Provide polished chromium plated and brass set screw flanges where plumbing piping pass through walls, floors, ceilings, and partitions in finished portions of building including flanges on pipes at fixtures. All sleeves in concrete and exterior walls shall be 20 GA. galvanized iron one inch O.D. larger than the pipe, caulked if below grade in a moisture proof manner. All pipes penetrating through fire walls and floors shall be properly safed with Dow Corning 3–6548 silicone RTV foam or equal. Install per manufacturer's directions.

B. Pipe Identification:

1. Piping identification per ANSI and OSHA Standards: Each individual pipeline shall be marked for quick and easy identification as to contents and character of material carried in the pipes by set on SNA or STR Marker.
2. Markers shall be installed and spaced at not more than 20 foot intervals and so located that markers shall be visible where piping is exposed.
3. Color scheme shall be as follows:

	Background or Color Band	Identification Marker
Domestic Hot Water –	Yellow	Black on Yellow
Domestic Hot Water Return –	Yellow	Black on Yellow
Domestic Cold Water –	Green	White on Green
Sanitary Sewer –	Green	White on Green
Sanitary Vent –	Green	White on Green
Natural Gas –	Yellow	Black on Yellow
Storm Water –	Green	White on Green
Freon –	Black	White on Black

C. One marker shall installed at each side of valves, special fittings and at branch take–offs. In furred spaces install one band 2 feet above floor and 19 inches below ceiling line.

D. Materials: Materials when not otherwise definitely specified shall conform to the applicable ASTM, ASME, AGA and ASA standards.

E. All gas fired equipment shall include a label indicating that the appliance has been adjusted, modified or re–calibrated for the altitude where in the project is to be located (Green Sticker). The appliance shall also include a compliance statement indicating that the appliance has been adjusted, modified or re–calibrated for the proper operation at the altitude of the project and shall be listed capable for use with natural gas or propane gas if propane is listed on the drawings.

– **Pipe and Fitting Schedule:**

Pipe and Fittings:

A. No pipe of foreign manufacturer will be acceptable on projects required to meet the Buy American Act.

B. All piping, fittings, flanges, etc. shall be free from defects and shall comply with the appropriate ASTM specifications.

C. PVC pipe and fittings: ASTM D1785 Class 150 with ASTM D 2564 solvent cement joints unless otherwise specified. Schedule 40. PVC plastic pipe fittings: ASTM F 628, schedule 40.

D. Acrylonitrile Butadiene Styrene (ABS) plastic pipe: ASTM D 2661, schedule 40, ASTM F 628 schedule 40. ABS plastic pipe fittings: ASTM F 409, accessible and replaceable, solvent cement and threaded types, drain pattern.

E. Condensate drains shall be Type L hard copper tubing with wrought–copper fittings (can't be used for condensing gas–fired applications) or PVC pipe and fittings where allowed. A P–trap shall be provided at drains.

F. All soil, waste, vent, roof drain and roof drain overflow piping below ground shall be ABS or PVC plastic pipe, rated for domestic waste and vent, with ABS or PVC plastic socket type drain, waste vent pattern fittings, solvent cemented joints. Install ABS drainage pipe and fittings according to ASTM D661. Install PVC drainage pipe and fittings according to ASTM F891.

– **Roof Flashing:**

A. Sanitary Vent Flashings: SEMCO 1100–3 or 1100–5, with one–piece lead flashing and counterflashing sleeve.

– **Pipe Sleeves:**

A. At concrete walls for floors, adjust–to–crete, paramount, hole–out Sperzel Cretesleeve floor sleeves shall extend to top of concrete curbs for piping rising through floors. Wall sleeves shall be flush with finished surface, sleeves shall be sized to allow ½ inch clearance around pipe insulation. Insulation and covering shall be continuous through wall and floor sleeves.

– **Cleanouts:**

A. Full size cleanouts shall be installed at the base of each soil waste stack. All other cleanouts shall be installed where shown on the drawings and where required by State, Local or National Plumbing Codes.

B. All cleanouts shall be installed in locations easily accessible for rodding. Cleanouts in wall shall be JR Smith 4402, in floors JR Smith 4023/ Cleanouts shall be JR Smith, Wade or Josam.

– **Pipe Insulation:**

A. All domestic hot water, hot water recirculation and cold water piping shall be covered with Owens Corning ASJ–25 fiberglass pipe insulation with vapor seal jacket. Insulation thickness shall be ½ inch for cold water and 1 inch for hot water.

B. Insulate all piping under Lavatories accessible to physically handicapped with hot water supply and "P" trap prefabricated insulation, Handi Lav Guard.

– **Pipe Hangers:**

A. Hangers shall be supplied with factory installed isolation and DI–Chromate finish.

B. Pipe 2 inches and smaller: Grinnel F69. Pipe 2–1/2 inch and larger: Grinnel F65. Concrete Inserts: Grinnel 281 and 282. Riser clamps for copper piping: Grinnel 261P, plastic coated. Riser clamps for other piping: Grinnel 261,

C. Hanger rods shall conform to the following: Pipe size 2 inch and smaller: ⅜ inch rods. Pipe size 2–1/2 inch and 3 inch: ½ inch rods. Pipe size 3 inch and larger: ⅝ inch rods.

– **Plumbing Fixtures:**

A. Fixtures shall be the water saving typer with maximum usage of 1.6 gallons per flush for water closets, 2.5 gallons per minute for showers, 3.0 gallons per minute for service sinks, 1.0 gallon per flush for urinals, 0.5 gallons per minute for public lavatories, 2.2 gallons per minute for private lavatories and 2.2 gallons per minute for sinks.

B. All fixtures shall be caulked to the floor or wall with water resistant white butyl rubber caulking compound. Trim for shall match in design. Supply faucets shall have renewable seats and barrels.

PLUMBING EQUIPMENT	MANUFACTURER
Floor Drains & Floor Sinks:	Zurn, JR Smith, Wade, Josam, Ancon, Mifab, Watts, or Equal
Cleanouts:	Zurn, JR Smith, Wade, Josam, Mikro, Mifab, Watts, or Equal
Insulation:	CertainTeed, Manville, Pittsburgh, Armstrong, LSP Products, or Owens–Corning
P–Traps:	American Standard, Kohler, McGuire, Brasscraft, Dearborn, EBC

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SFCN FIBER HUTS

FIBER HUT PLANS

PLUMBING SPECIFICATIONS

REVISION	BY	DATE
1 CITY CMNTS	JE	05/10/2022

DRAWN: JE
DESIGN: JE
CHECK: MM
DATE: 5/10/2022

DRAWING #: MP7.5

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PART 3 – EXECUTION

– **Surface Conditions:**

A. Inspection: All plumbing shall be installed in accordance with the requirements of all governing authorities, The original design, and referenced standards.

B. Discrepancies:
1. In the event of discrepancy, immediately notify the Architect.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved. Interferences between installed work of various trades due to lack of coordination shall be resolved by the Architect whose decision is final. Relocate or offset any work as required to accommodate work of other trades at no extra cost to the Owner when so directed by the Architect.

– **Verification of Dimensions:**

A. Scaled and figured dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions at site, and be responsible for properly fitting equipment and materials together and to the structure in spaces provided.

B. Drawings are essentially diagrammatic and many offsets, bends, special fittings and exact locations are not indicated. Carefully study drawings and premises in order to determine best methods, exact locations, routes, building obstructions, and install apparatus and equipment in available locations. Install apparatus and equipment in manner and in locations to avoid obstructions, preserve headroom, and keep openings and passageways clear.

– **Locations and Space Requirements:**

A. Contractor shall fully inform himself regarding peculiarities and limitation of spaces available for installation of work under this division. Drawings indicate desired location and arrangement of piping, equipment and other items and are to be followed as closely as possible. Work specified and not clearly defined by drawings shall be installed and arranged in a satisfactory manner. In any case and at any time a change in location required by obstacles or the installation of other trades not shown on the plumbing plans shall be made by contractor without additional charge provided the change is ordered before work is installed and no extra materials are required.

B. Verify all spaces, dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

C. Obtain all necessary rough in data and dimensions for all fixtures, equipment, or owner–furnished equipment and equipment furnished under other sections.

D. Maintain ample headroom clearances and accessibility. Maintain ceiling heights.

E. Constantly check work of other trades to prevent interference with this installation.

– **Cutting and Patching:** Cut work and patch per Division 1 as necessary to properly install the new work. As the work progresses, coordinate necessary openings, holes, chases, etc., in their correct location. If the required openings, holes and chases are not in their correct locations, make the necessary corrections at no cost to the Owner. Avoid excessive cutting and do not cut structural members without the consent of the Architect. Patching by General Contractor at Mechanical, Plumbing or Fire Protection Contractor's expense. Include as a part of the work under this contract all structural framing required by penetrations through the roof and necessary steel to support ducts and pipes between structural steel unless shown on the structural drawings.

– **Closing–in of Unfinished Work:** Cover no work until inspected, tested and approved. Where work is covered before inspection and test,uncover it, and when inspected, tested and approved, restore all work to original proper condition.

– **Excavation and Backfill:**

A. Perform all necessary excavation, shoring and backfilling required for the proper laying of all pipes and conduits inside the building and premises, and outside as may be necessary. Conform to Division 2 requirements. Remove all excess excavated materials from the site or dispose of on site as directed by General Contractor.

B. Excavate all trenches open cut, keep trench banks as nearly vertical as practicable, and sheet and brace trenches where required for stability and safety. Excavate trenches true to line and make bottoms not less than 18" wide but no wider than necessary to provide ample work room. Grade trench bottoms accurately to provide uniform bearing and support for each section of pipe on undisturbed soil along its entire length. Dig "bell" holes after the trench bottom has been graded. Machine grade only to the top line of the pipes, doing the balance by hand. Do not cut any trench near or under footings without first consulting the Architect. Comply with OSHA requirements.

C. Provide backfilling and compaction in accordance with requirement of Division 2 and under the direction of the Architect and the Owner's testing firm to the required density. Make the first 2 feet of fill in 6" layers, each thoroughly compacted as directed, and free from rocks, large clods of earth, leaves, branches, and debris. Compact the rest of the backfill to prevent settlement as directed, using in the backfill no rocks larger than 4" in diameter, and using no rocks at all in the top 12".

– **Accessibility:**

A. Install valves, dampers, thermometers, gauges, traps, cleanouts, control devices or other specialties requiring reading, adjustment, inspection, repairs, removal or replacement conveniently and accessibly throughout the finished building. Where any of these devices are shown on the contract drawings to be installed above any inaccessible ceiling, the Mechanical Contractor shall furnish access doors or panels as required.

B. All access doors or panels in walls and ceilings required for access to control devices, traps, valves and similar devices are to be furnished and installed as part of the work under this section. Provide type as specified under Division 8.

C. Provide ducts which pierce a fire separation with fire dampers of same fire rating as the separation.

D. Refer to drawings and "Finish Schedule" for type of wall and ceiling in each area and for rated construction.

E. Coordinate work of various sections to locate valves, traps, and dampers with others to avoid unnecessary duplication of access doors.

– **Roof Flashings:** Flash and counterflash all piping, conduits and ductwork penetrating roofing membrane with flashing per roofing manufacturer's recommendations. Refer to architectural drawings for detailing of duct and pipe penetrations through roof.

– **Equipment Rough–in:**

A. Rough in all equipment and fixtures as designated on the drawings and in the specifications. The drawings indicate only the approximate location of rough–ins. The exact rough–in locations must be determined from large–scale certified drawings. The Contractor shall obtain all certified rough–in information before progressing with any work for rough–in final connections.

B. Be responsible for providing all outlets and services of proper size at the required locations.

C. Minor changes in the contract drawings shall be anticipated and provided for under this division of the specifications.

D. Rough–in only (unless otherwise designated on the drawings) shall include the following:

1. Plumbing: Provide all services designated and required, including waste and water. Valve and cap all stub–outs for water and gas. Cap all waste and vent outlets.

2. Mechanical: Provide all services as indicated and required, including all ductwork, piping and valves. Valve and cap all piping stub–outs. Cap all ductwork stub–outs in a manner suitable for future extension.

– **Owner–Furnished and Other Equipment:**

A. Rough–in only for all Owner–furnished equipment (see Division 1) and all equipment furnished under other sections of the specifications, except as otherwise specified and/or noted on the drawings.

B. Provide all services designated, valve and cap all piping, cap all waste piping and ductwork and leave in a clean and orderly manner.

C. Rough–in requirements shall be as outlined in the preceding paragraph titled "Equipment Rough–in."

– **Equipment Final Connections:**

A. Provide all piping final connections for all equipment under Division 22 as required herein specified and indicated on the drawings.

B. Plumbing: Provide final plumbing connections complete with shutoff valves, risers, traps, vacuum breakers and indirect wastes for all equipment furnished and installed under other sections of these specifications, except as otherwise designated. Included under the Plumbing section of the specifications are the final connections to the following:

1. Miscellaneous equipment specified to be furnished and installed under other divisions of the specifications.

2. Cold water make–up connections to air conditioning equipment.

3. Kitchen equipment, furnished under other sections of the specifications.

– **Sterilization:**

A. Sterilize each unit that will have water in it, the water supply piping and distribution system with liquid chloride or hydrochloride before acceptance of operation in accordance with AWWA C601, "Standard for Disinfection Water Mains" work shall be done by contractor and unless otherwise required by Public Authorities having Jurisdiction, shall conform to the following:

B Materials
1. Liquid Chlorine: U.S. Army Specification 4–1. 2. Hydrochloride: Liquid shall conform to FED. Spec. O–C–11RA (INT. 4).

C. Method: Amount of chlorine shall provide a dosage of 50 PPM minimum. Introduce chlorinating materials into lines and distribution system in approved manner after a contact period of 24 hours during which period chlorine residual shall be maintained at 5 PPM minimum, flush out systems with clean water until residual content is not greater than 0.2 PPM. Flush entire system open and close valves in lines being sterilized several times during contact period.

D. Sterilization report shall be turned into the Engineer for review prior to requesting a substantial completion inspection.

– **Machinery Accessories:**

A. Application: Do not install any equipment in an application not recommended by the manufacturer.

B. Installation: Align, level and adjust all equipment for proper operation. Install so connecting and disconnecting of piping and accessories can readily be done and so all parts are readily accessible for inspection, service and repair. Install equipment in accordance with manufacturer's recommendations.

– **Pipe and Equipment Supports:**

A. Where supports, foundations, stands, suspended platforms for machinery, tanks, or other equipment are indicated or specified, perform the following:

1. Locate support members to avoid equipment strains and interference with piping connections, tube pulling or other maintenance operations.

2. Where saddles are required, use cast iron or welded steel saddles with curvature to fit the tank shell.

3. Mount power–driven equipment on common base with driver.

B. Concrete Inserts: Furnish and install all concrete inserts required for all materials and equipment specified and/or shown on the drawings for Division 22.

C. Concrete Foundations: Work under this section includes coordination of construction of all concrete foundations indicated or required for equipment specified herein or in other sections under Division 22. Materials and workmanship shall be described under Division 3.

D. Grout under all equipment after leveling, filling completely the space between machinery bed plate and foundation surface as specified in Division 3. Finish exposed surface of grout for a neat appearance.

E. Floor Stands: Where equipment is mounted standard or on legs, construct of structural steel or steel pipe and fittings, cross–brace and fasten with flanges or plates bolted to floor.

F. Ceiling or Wall Supports: Use suspended platform, strap hangers, bracket or shelf, whichever is most suitable for equipment and location. Construct of structural steel members, steel plates, rods or pipe as required. Cross–brace and fasten to building structure or inserts in an approved manner.

G. Steel Work: Neatly fabricate and erect steel work with burrs and welding spatter ground off. Paint after fabrication with a rust–inhibitive primer.

– **Hangers and Supports:**

A. Hold horizontal pipe runs firmly in place using approved steel and iron hangers, supports, and/or pipe rest unless otherwise indicated. Suspend hanger rods from concrete inserts or from approved brackets, clamps or clips. Hang pipes individually or in groups if supporting structure is adequate to support weight of piping and fluid. Except for buried piping, hang or support pipe runs so that they may expand or contract freely without strain to pipe or equipment.

1. Horizontal steel piping: Provide hangers or supports every 10 ft. except every 8 ft. for piping 1–1/4 inch and smaller.

2. Horizontal copper tubing: For 2 inch diameter and over, provide hangers every 10 feet, for 1–1/2 inch diameter and smaller every 6 feet.

3. Horizontal cast–iron no–hub piping: Provide hangers or supports at each side of no–hub fittings. Provide anti–separation bracing at each 90 degree change in direction.

4. Horizontal cast–iron hub and spigot piping: Provide hangers or supports at each hub.

5. Vertical piping: Support at floor with iron pipe clamps.

– **Test:**

A. Perform test to Architect's satisfaction. Make test in presence of Owner's Rep and at the time suitable to him if requested. Furnish necessary labor and equipment and bear cost for testing. Cost of replacing and/or repairing damage resulting therefor shall be borne by this contractor, should the contractor refuse or neglect to make test necessary to satisfy the Architect that requirement of specifications and drawings are met, such tests may be made by an independent testing company and the contractor charged for all expenses.

B. Hydrostatic test: Make by completely filling piping system with water and eliminating accumulations of air so that leakage, no matter how small, will be apparent on testing gauge immediately. Maintain pressure until pipe under test has been examined, but in no case less than 24 hours. Test system at the following pressure:

SYSTEM	TEST PRESSURE
Domestic Cold Water	150 PSIG
Domestic Hot Water	150 PSIG

C. Sanitary soil, waste, bent systems test: Before installation of fixtures, cap end of system and fill lines with water to 10 feet above the section being tested. (including bents) and allow to stand for at least fifteen (15) minutes before inspection starts. Make test in sections if necessary or convenient. However, include interconnections between new sections and previously tested section in the new test.

D. Roof drainage system: Test as specified for sanitary system.

E. Gas systems: Test with compressed air at 10 PSI for six hours or longer as directed to provide a tight seal without leaks. Use pressure recorder to record pressure of all lines for duration of test.

F. Repair all leaks and retest as required.

– **Cleanouts:**

A. Provide cleanouts where indicated and required. Unless otherwise indicated, cleanouts shall be accessible with extensions to grade to outside of buildings, or to floors above as indicated or required. Do not locate cleanouts in public lobbies and public corridors unless approved by Architect.

B. Membranes: Where waterproofing membrane occurs under floor, bring membrane to cleanout without puncturing and permanently anchor to integral anchoring flange with heavy cast–iron clamping collar and rustproof bolts.

C. Covers: Set cleanout covers with all finished wall, floor or grade. In all cases securely anchor by means of integral lugs and bolts. Where surfacing material such as resilient coverings is specified, ascertain thickness being used and set cleanout top so finished floor is smooth.

D. Use Acorn 3500 thread compound.

– **Pipe Installation:**

A. Make pipe runs straight and true. Springing or forcing piping into place is not permitted. Install in manner to prevent any undue strain on equipment. Make joints smooth and unobstructed inside and out, and ream pipe ends thoroughly to remove burrs. Conceal piping in finished portions of the building except as otherwise directed or indicated. Cap or plug ends and openings in pipe and fittings immediately to exclude dirt until equipment is installed or final connections are made.

B. Install piping to clear beams unless sleeving is indicated. Constantly check work of other trades to prevent interference with this installation. Obtain approval from Architect if coring or cutting of concrete work is necessary due to failure to install required sleeves prior to the time of concrete pour. Cost of coring and cutting work shall be borne by the subcontractor.

C. Exposed plated or enameled pipe: Make connections to equipment with special care. Show not tool marks or threads.

D. Dielectric Unions: Make connections between two dissimilar metal pipes with dielectric unions.

E. Unions: Provide a union on one side of each shutoff valve. At both sides of automatic valves. At equipment connections and elsewhere indicated or required, unless flanges are indicated.

F. Floor, wall ceiling plates: Provide where pipes pierce finished surfaces.

G. Noise: Install soil, waste, and water piping in a manner that prevents any unusual noise from flow of water under normal conditions.

H. Shutoff Valves: Provide where indicated and required for adequate control of system and for isolation of fixture groups and equipment.

I. Buried Pipe: Install with minimum 36 inches coverage unless otherwise indicated. Lay piping accurately to grade where invert elevations are indicated. When required provide thrust blocks per manufacturer's recommendations.

J. Equipment and Materials: Install per manufacturer's recommendations.

K. Accessibility: Install work readily accessible for normal operation, reading of instruments, adjustments, service, inspections and repair. Provide access panels where indicated and required.

L. Pipe Joints: Make screwed joints with a minimum amount of compound applied to the male thread only. All joints shall be made per code requirements and manufacturer's recommendations.

M. Provide pipe isolation at all hangers for non–insulated materials.

N. Piping Rough–in for Fixtures: Support or secure to building construction of firmly anchored waste piping so that pipes cannot be displaced. Do not secure to walls. Use of makeshift devices, such as rope, wire, tape, etc. is prohibited.

O. Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The minimum slope for horizontal pipe 4" or larger in diameter may have a slot of not less than 1% ($\frac{1}{8}$ inch per foot). The minimum slope of horizontal pipe less that 4'; may have a slope of not less than 2% ($\frac{1}{4}$ inch per foot).

– **Cleanup:**

A. In addition to cleanup specified under Division 1, thoroughly clean all parts of the equipment. Where exposed parts are to be painted, thoroughly clean off any splattered construction materials and remove all oil and grease spots. Wipe the surface carefully and scrape out all cracks and corners.

B. Thoroughly flush and clean out all water circulating systems. Remove, clean and replace all strainer elements.

C. During the progress of the work, keep the premises clean and free of debris.

– **Painting:**

A. Except as otherwise specified or indicated in the architectural drawings and/or specifications, paint all exposed unfinished metal with one coat of rust–inhibiting primer.

B. Finished painting is specified under Division 9.

– **Connections to Services:** Provide all connections to sanitary sewer lines, storm sewer, gas lines, water lines, electrical services furnished under other contracts, except as otherwise specifically designated. Provide all necessary tees, taps and connections required to properly connect to all mains. Verify all required City requirements before making any piping connections to sanitary sewer, storm sewer, water or gas piping and conform to them during installation.

– **Welding:**

A. Procedures:

1. All procedures and welders must be qualified in accordance with the requirements of Section IX, ASME Boiler and Pressure Vessel Code and ANSI code for power piping B31.1. Procedure qualification test records and acceptance shall be submitted with the welding procedure prior to the start of fabrication.

2. Architect's inspector or authorized representative will review performance qualification records of individual welders.

B. Welding Processes: The following welding processes are permitted, provided that the procedure is qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

1. Manual shielded metal–arc.

2. Gas tungsten–arc.

3. Other welding processes may be used providing they are qualified in accordance with Section IX, ASME Boiler and Pressure Vessel Code.

C. Restrictions: Weld bevel preparations shall be provided on all welding fittings and shall be machined or ground to remove all discoloration if flame or arc cut.

D. Welding Filler Material:

1. A filler material control procedure shall be submitted to Owner for review and acceptance prior to performing any welding.

2. All shielded metal–arc welding shall be performed using low–hydrogen type electrodes such as E 7018.

E. Preheat and Interpass Temperature:

F. Preheat for pressure components shall be as specified in Table 132 of ANSI B.1.

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PLUMBING SPECIFICATIONS

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ELECTRICAL GENERAL NOTES:

1. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD, AND TO THE SATISFACTION OF THE ENGINEER.
2. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
3. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
4. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOF, ETC.
5. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
6. NO WIRING SHALL RUN IN DUCT WORK.
7. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED IN THE CONDUCTORS SMALLER THAN #10 AWG.
8. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
9. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND OTHER DRAWINGS PRIOR TO BID.
10. ALL JUNCTION BOXES SHALL HAVE MINIMUM DEPTH OF 2–1/8" UNLESS OTHERWISE SPECIFIED. SECURE ALL JUNCTION BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER PLASTER RINGS.
11. CONNECT ALL EM FIXTURES, NIGHT LIGHTS, EGRESS LIGHTS, AND EXIT SIGNS TO UNSWITCHED CONDUCTOR.
12. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
13. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC,) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH–IN.
14. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH–IN.
15. ALL FIXTURES, DEVICES, CONDUIT, AND FITTINGS TO BE MADE OF NON–CORROSIVE MATERIAL FOR BUILDING INSIDE.
16. ALL PENETRATIONS THROUGH BUILDING STRUCTURE SHALL BE SEALED.

ELECTRICAL SYMBOLS

SYMBOL	EXPLANATION
———	BRANCH CIRCUIT ON/IN CEILING OR WALL
— — —	BRANCH CIRCUIT IN GROUND
A–1,3	BRANCH CIRCUIT HOMERUNS TO PANEL
CH 1	MECHANICAL EQUIPMENT SYMBOL
◇1	KEYED NOTE REFERENCE
(42X)	FEEDER TAG (SEE FEEDER SCHEDULE)
▬	LIGHTING AND POWER PANELBOARD
◬	SPECIAL RECEPTACLE
⊜	DUPLEX RECEPTACLE OUTLET
	⊜ WP ← MODIFIER A–3 ← PANEL SPACE ASSIGNMENT REF ← EQUIPMENT DESIGNATION WP WEATHERPROOF COVER & LISTED WEATHER RESISTANT DEVICE
SYMBOL	EXPLANATION
F1	FIXTURE TYPE SYMBOL
▭	LINIER FIXTURE (TYPICAL)
▨	EMERGENCY LIGHTING UNIT
▭	WALL PACK
	EMERGENCY LIGHTING UNIT
⊠◁	ALARM HORN/STROBE
C	CONDUIT
$	SINGLE POLE SWITCH (SUBSCRIPT AS INDICATED BELOW)
2	TWO POLE SWITCH
3	3–WAY SWITCH
M	MANUAL STARTER WITH THERMAL OVERLOAD

NOTE: ALL SYMBOLS MAY NOT BE USED.

DESIGN CONTACTS

ELECTRICAL ENGINEER:	RYAN BEAGLES
ELECTRICAL TEAM LEAD:	JOE HUTCHINGS
ELECTRICAL DESIGNER:	JOHNNY BENCH

SHEET INDEX

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COVER SHEET

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1 CITY CMNTS	JE	05/10/2022

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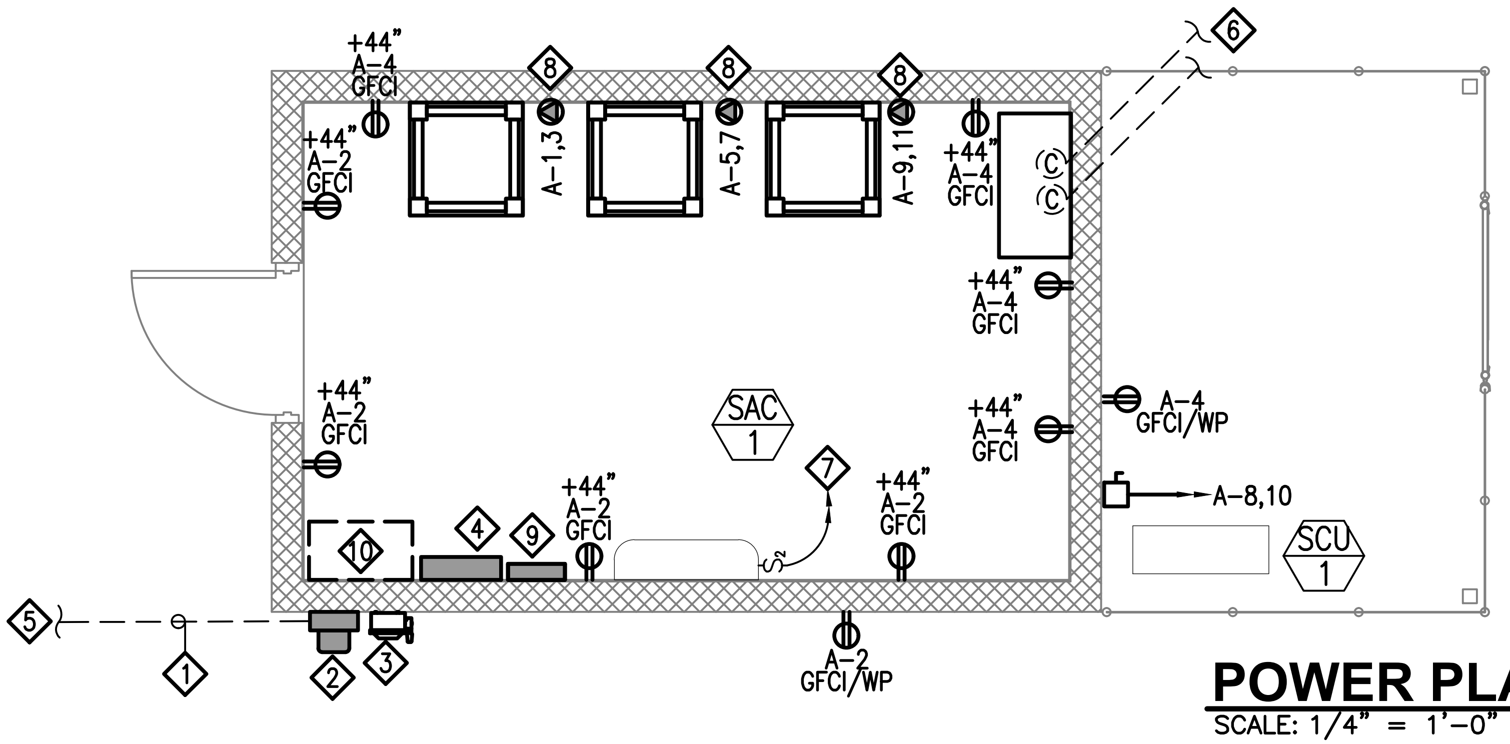
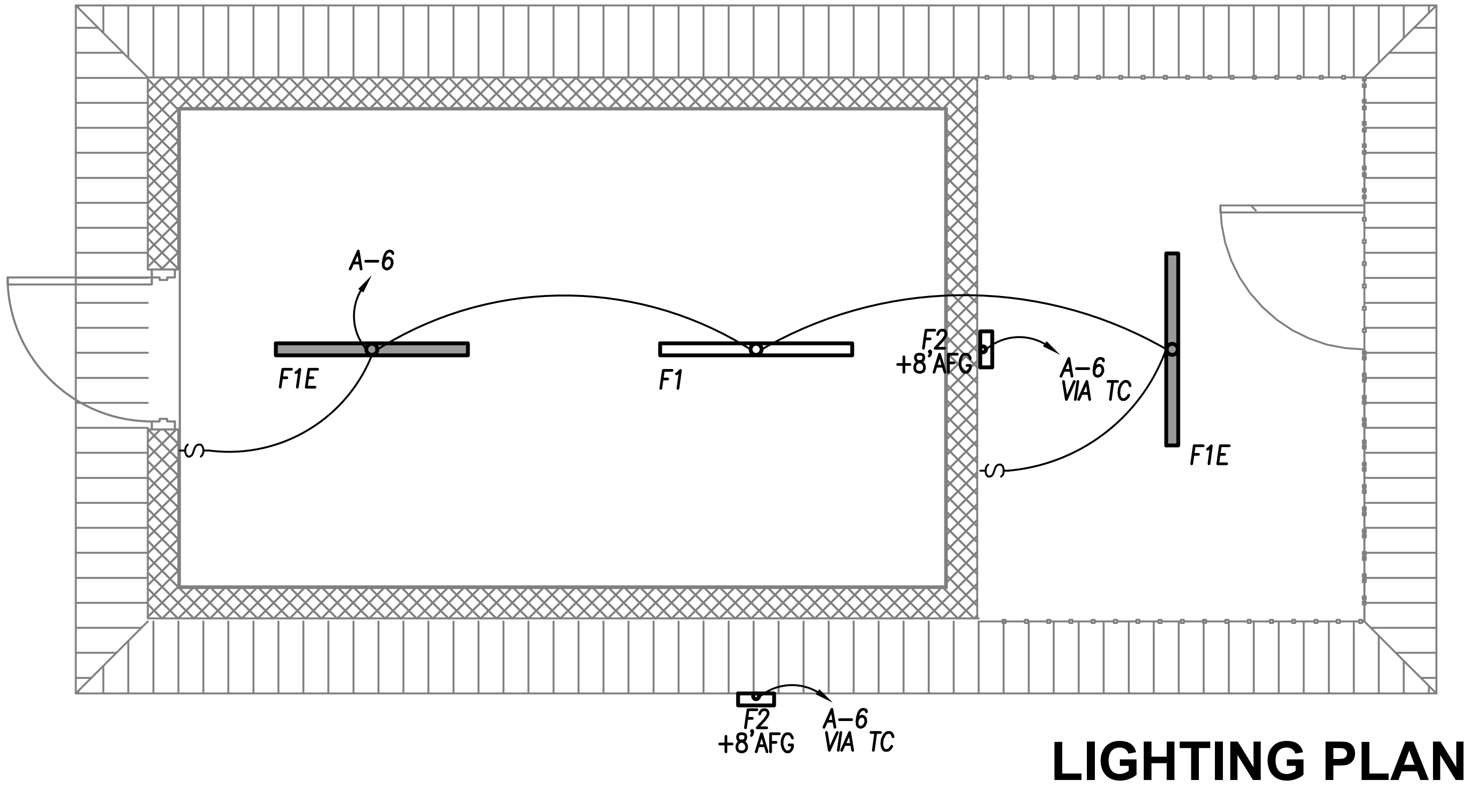


POWER PLAN

SCALE: 1/4" = 1'–0"



LIGHTING PLAN

SCALE: 1/4" = 1'–0"

ELECTRICAL KEYED NOTES:

1. INSTALL CONDUIT TO EXISTING POWER POLE. VERIFY EXACT LOCATION WITH SPANISH FORK CITY POWER DIVISION.
2. METER.
3. MAIN BUILDING DISCONNECT.
4. PANELBOARD 'A'. SEE PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
5. SEE ONE LINE DIAGRAM ON SHEET E5.1 FOR DETAILS.
6. PROVIDE (2) 3" CONDUIT STUBBED OUTSIDE BUILDING FOOTING AND CAPPED. FOR FUTURE COMMUNICATIONS. COORDINATE LOCATION WITH OWNER.
7. SAC–1 POWERED BY SCU–1. PROVIDE INTERCONNECTING CONDUIT AND WIRE.
8. RECEPTACLE FOR SERVER RACK. VERIFY AMPERAGE AND TYPE WITH CITY BEFORE INSTALL.
9. PROPOSED LOCATION OF TIME CLOCK. CONNECT TO EXTERIOR LIGHTING.
10. PROVIDE ADEQUATE SPACE ON WALL FOR FUTURE PROPANE GENERATOR TRANSFER SWITCH.

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DATE: 3/29/2022

DRAWING #: E1.0

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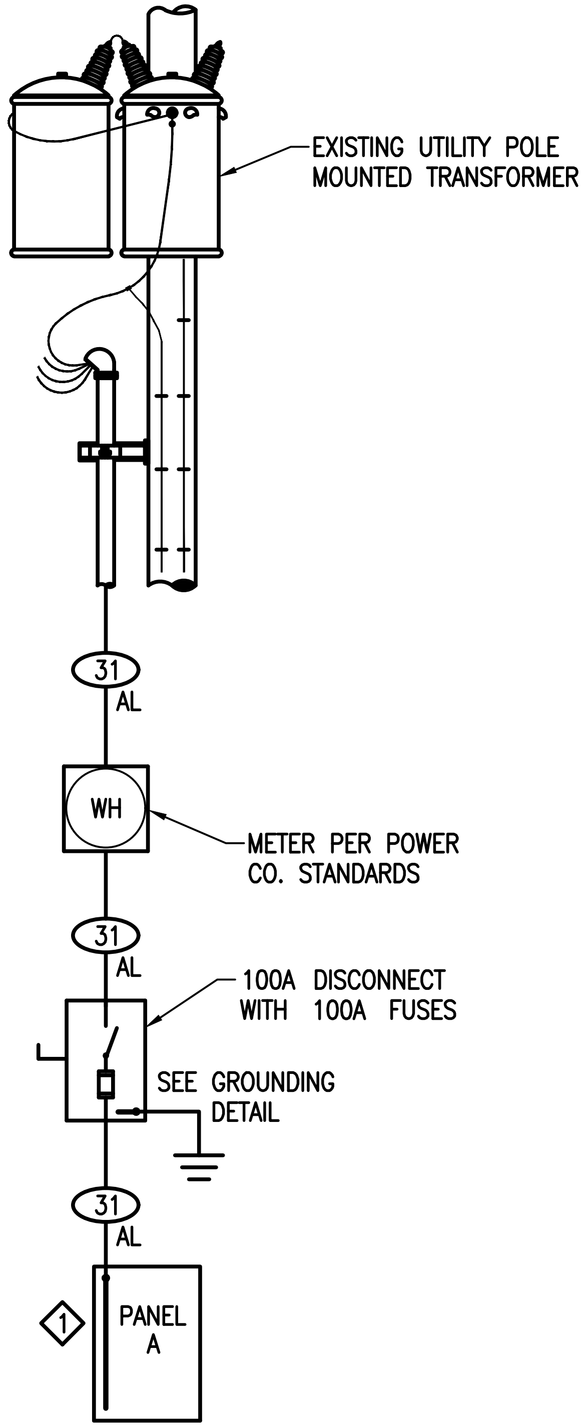
KEYED NOTES:

1. PROVIDE AVAILABLE FAULT CURRENT FIELD MARKINGS AT PANEL PER NEC 110.24.


EXISTING UTILITY POLE MOUNTED TRANSFORMER
31
AL
WH
METER PER POWER CO. STANDARDS
31
AL
100A DISCONNECT WITH 100A FUSES
SEE GROUNDING DETAIL
31
AL
1
PANEL A

1 POWER ONE-LINE DIAGRAM

SCALE: NTS

ALUMINUM FEEDER SCHEDULE

TYPE	CONDUIT SIZE		CONDUCTORS		70°C AMP RATING
	PVC	EMT	QUAN.	SIZE	
38 AL	3/4"	3/4"	3	#8	40
33 AL	1-1/4"	1-1/4"	3	#3	75
32 AL	1-1/4"	1-1/4"	3	#2	90
31 AL	1-1/2"	1-1/2"	3	#1	100
31X AL	1-1/2"	1-1/2"	3	1/0	120
34X AL	2-1/2"	2-1/2"	3	4/0	180

OVERCURRENT DEVICE	ALUMINUM
15	12
20	10
30	8
40	8
60	8
100	6
200	4
300	2
400	1
500	1/0
600	2/0
800	3/0

NOTE:

1. SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETAIL FOR GROUND CONDUCTORS RATING.
2. ALL INSULATION SHALL BE THHN (ABOVE GRADE) OR THWN (BELOW GRADE) UNLESS NOTED OTHERWISE.
3. PVC CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC & THWN ARE APPROVED FOR UNDERGROUND FEEDERS ONLY.

11381139
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BEAGLES
5/12/22

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FIBER HUT PLANS

ELECTRICAL DETAILS

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1 CITY CMNTS	JE	05/10/2022

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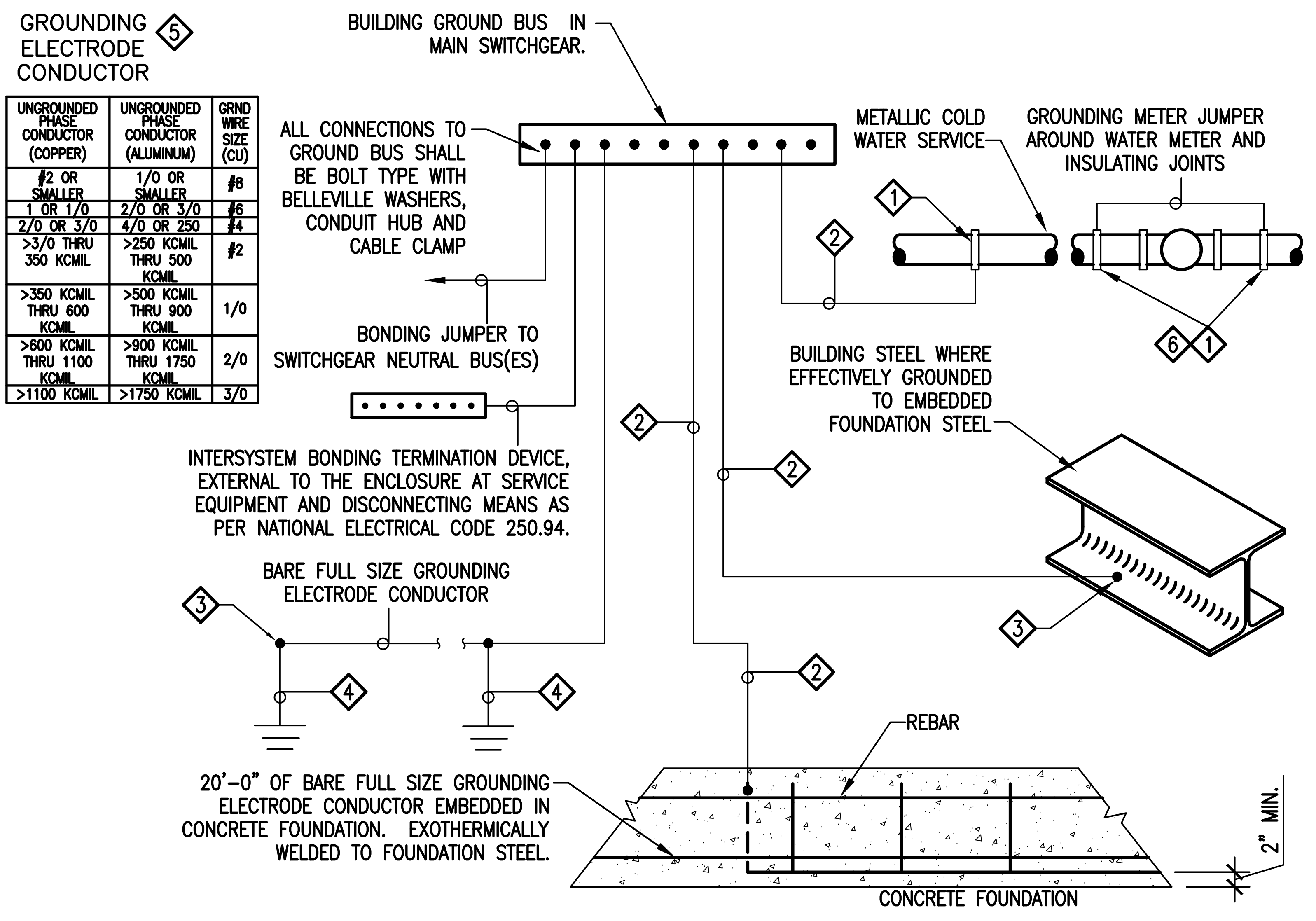
NOTE:

1. WHEN PRESENT CONTRACTOR SHALL PROVIDE ALL GROUNDING MEANS INDICATED. CONTRACTOR SHALL REFER TO ELECTRICAL ONE-LINE DIAGRAM AND GROUNDING ELECTRODE CONDUCTOR SCHEDULE (THIS DETAIL) FOR GROUNDING ELECTRODE CONDUCTOR SIZE. CONTRACTOR SHALL REFER TO ELECTRICAL SPECIFICATIONS FOR SPECIFICS OF GROUNDING SYSTEM INSTALLATION AND MATERIALS.
2. GROUNDING ROD SHALL BE MIN. 9FT. AWAY FROM IRRIGATION CONTROLLER.

KEYED NOTE:

1. T&B 3900 BU GROUND CLAMP WITH 3/4" CONDUIT HUB AND CABLE CLAMP
2. FULL SIZE GROUNDING ELECTRODE CONDUCTOR IN PVC.
3. EXOTHERMICALLY WELDED (TYPICAL)
4. DRIVEN GROUND RODS ⅝"x8' COPPER/STEEL ON BUILDING EXTERIOR
5. TABLE TAKEN FROM NEC 250.66. UNGROUNDED PHASE CONDUCTOR REFERS TO THE SIZE OF THE LARGEST UNGROUNDED SERVICE-ENTRANCE CONDUCTOR OR EQUIVALENT AREA FOR PARALLEL CONDUCTORS. SEE NEC 250.66.
6. BOND METAL PIPING PER NEC 250.104.



GROUNDING ELECTRODE CONDUCTOR ⑤

UNGROUNDED PHASE CONDUCTOR (COPPER)	UNGROUNDED PHASE CONDUCTOR (ALUMINUM)	GRND WIRE SIZE (CU)
#2 OR SMALLER	1/0 OR SMALLER	#8
1 OR 1/0	2/0 OR 3/0	#6
2/0 OR 3/0	4/0 OR 250	#4
>3/0 THRU 350 KCMIL	>250 KCMIL THRU 500 KCMIL	#2
>350 KCMIL THRU 600 KCMIL	>500 KCMIL THRU 900 KCMIL	1/0
>600 KCMIL THRU 1100 KCMIL	>900 KCMIL THRU 1750 KCMIL	2/0
>1100 KCMIL	>1750 KCMIL	3/0

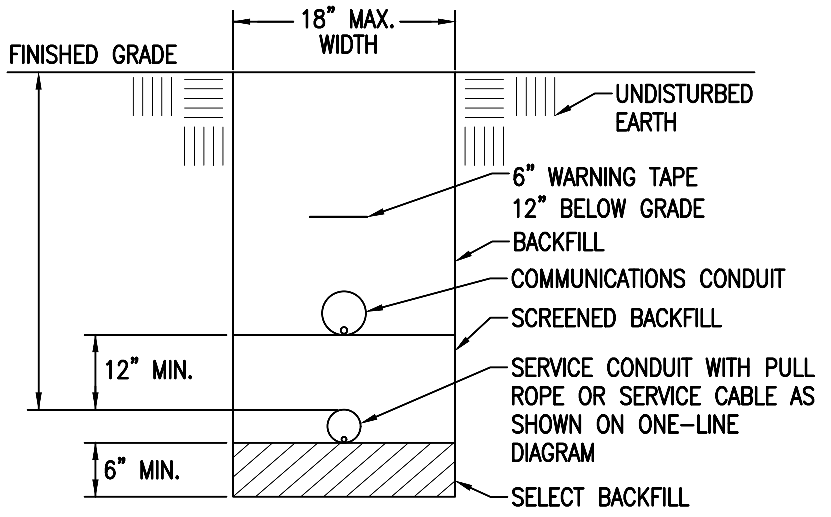
BUILDING GROUND BUS IN MAIN SWITCHGEAR.
ALL CONNECTIONS TO GROUND BUS SHALL BE BOLT TYPE WITH BELLEVILLE WASHERS, CONDUIT HUB AND CABLE CLAMP
BONDING JUMPER TO SWITCHGEAR NEUTRAL BUS(ES)
INTERSYSTEM BONDING TERMINATION DEVICE, EXTERNAL TO THE ENCLOSURE AT SERVICE EQUIPMENT AND DISCONNECTING MEANS AS PER NATIONAL ELECTRICAL CODE 250.94.
METALLIC COLD WATER SERVICE
GROUNDING METER JUMPER AROUND WATER METER AND INSULATING JOINTS
1
2
6
1
BUILDING STEEL WHERE EFFECTIVELY GROUNDED TO EMBEDDED FOUNDATION STEEL
2
2
3
BARE FULL SIZE GROUNDING ELECTRODE CONDUCTOR
3
4
4
2
REBAR
20'-0" OF BARE FULL SIZE GROUNDING ELECTRODE CONDUCTOR EMBEDDED IN CONCRETE FOUNDATION. EXOTHERMICALLY WELDED TO FOUNDATION STEEL.
2" MIN.
CONCRETE FOUNDATION

① SERVICE GROUNDING DETAIL

SCALE: NTS

LOCATION DESCRIPTION	MIN. DEPTH
BELOW CONCRETE SLAB (NOT TRAFFIC)	18 INCHES
BELOW TRAFFIC SURFACES	24 INCHES
PARKING LOT (PAVED OR NON-PAVED)	24 INCHES
OTHER LOCATIONS	24 INCHES
UTILITY SECONDARY	24 INCHES*
UTILITY PRIMARY	48 INCHES*

(SEE NEC TABLE 300.5)
* VERIFY ALL DIMENSIONS WITH LOCAL POWER COMPANY STANDARDS AND SPECIFICATIONS.



② TRENCHING DETAIL

SCALE: NTS

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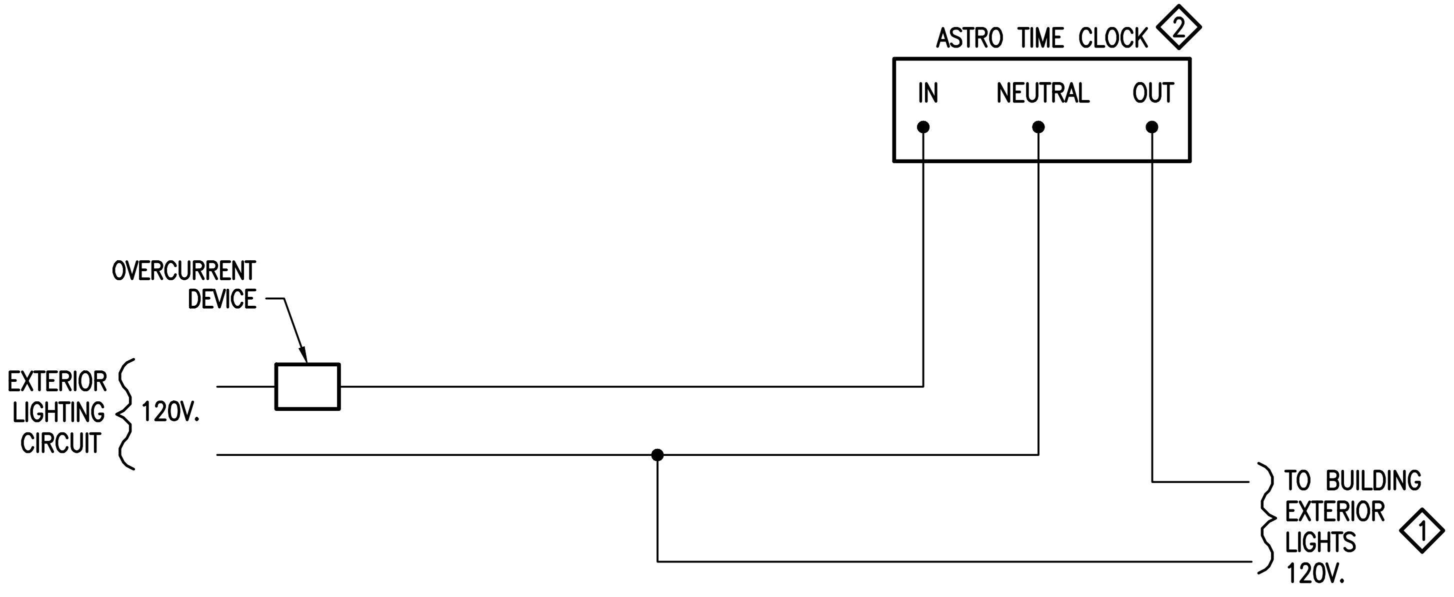
ASTRO TIME CLOCK ②
IN
NEUTRAL
OUT
OVERCURRENT DEVICE
EXTERIOR LIGHTING CIRCUIT
120V.
TO BUILDING EXTERIOR LIGHTS 120V. ①

KEYED NOTE:

1. CIRCUIT AMPERAGE SHALL NOT EXCEED PHOTOCELL AND TIME CLOCK RATING.
2. TIME CLOCK SHALL BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS.

1 LIGHTING CONTROL WIRING DIAGRAM

SCALE: NTS

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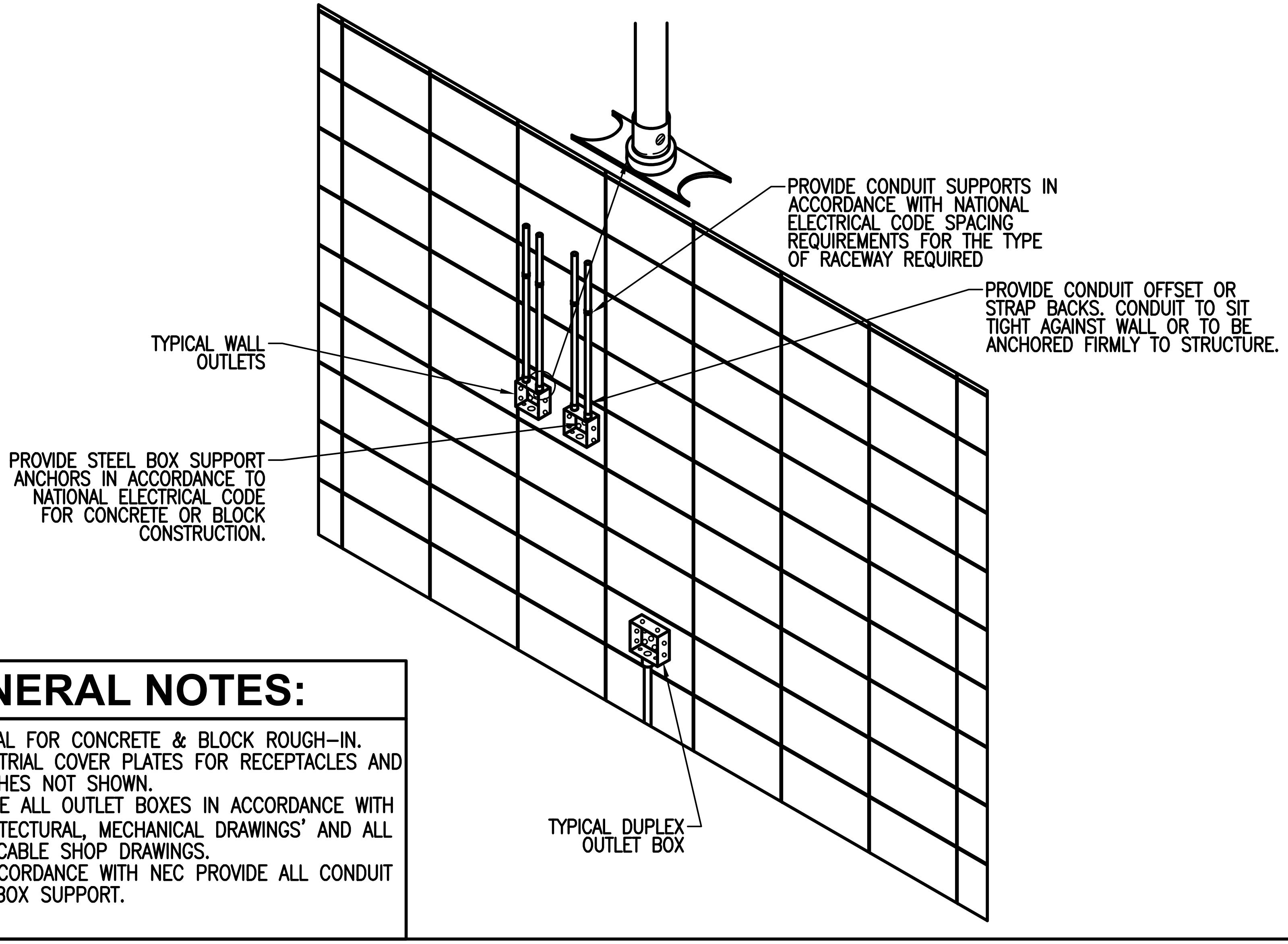
PROVIDE CONDUIT SUPPORTS IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE SPACING REQUIREMENTS FOR THE TYPE OF RACEWAY REQUIRED
PROVIDE CONDUIT OFFSET OR STRAP BACKS. CONDUIT TO SIT TIGHT AGAINST WALL OR TO BE ANCHORED FIRMLY TO STRUCTURE.
TYPICAL WALL OUTLETS
PROVIDE STEEL BOX SUPPORT ANCHORS IN ACCORDANCE TO NATIONAL ELECTRICAL CODE FOR CONCRETE OR BLOCK CONSTRUCTION.
TYPICAL DUPLEX OUTLET BOX

GENERAL NOTES:

1. TYPICAL FOR CONCRETE & BLOCK ROUGH–IN.
2. INDUSTRIAL COVER PLATES FOR RECEPTACLES AND SWITCHES NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL, MECHANICAL DRAWINGS' AND ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH NEC PROVIDE ALL CONDUIT AND BOX SUPPORT.

1

ROUGH-IN DETAIL FOR EXPOSED EMT CONDUIT

SCALE: NTS

1

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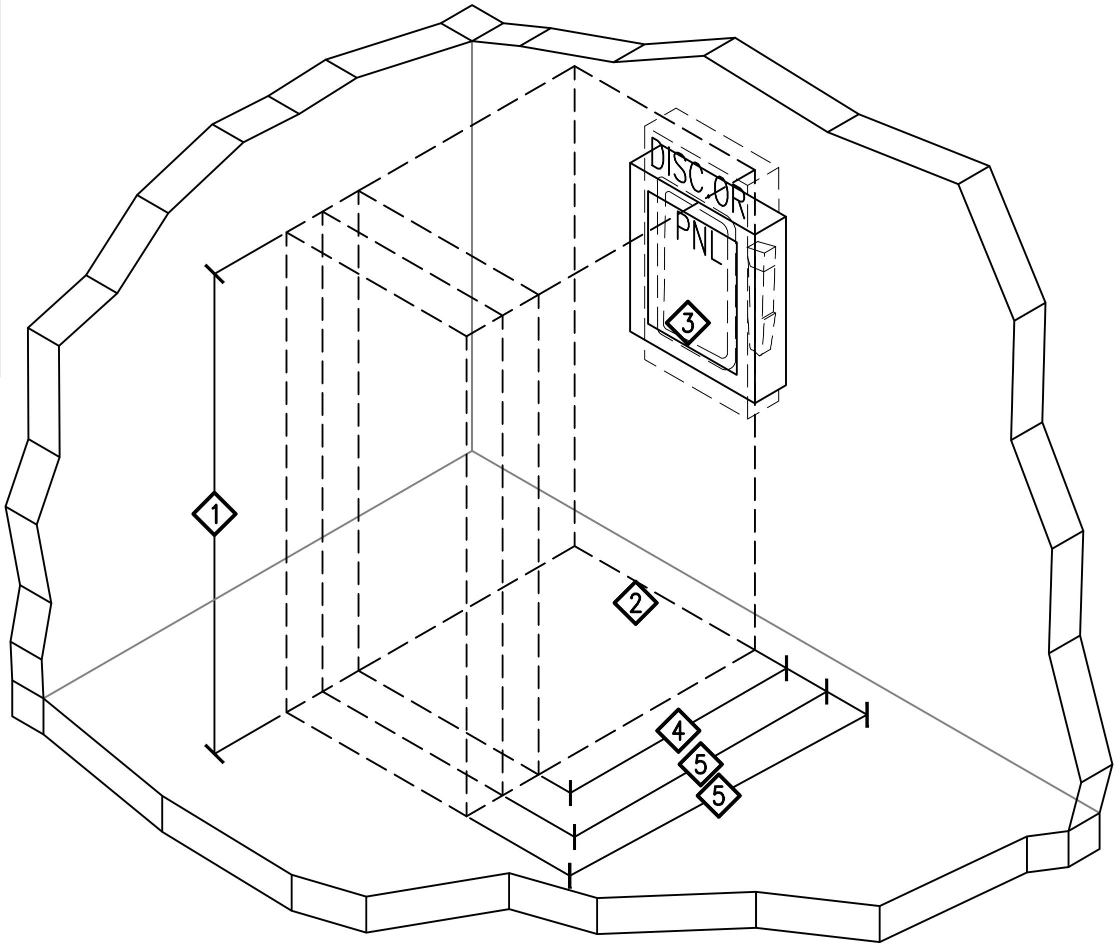
KEYED NOTES:

1. THE MINIMUM HEADROOM OF WORKING SPACE SHALL BE 6½ FT.
2. THE WIDTH OF THE WORKING SPACE SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 IN., WHICHEVER IS GREATER. THE PANEL DOOR SHALL OPEN AT LEAST 90 DEGREES.
3. ALL CIRCUIT BREAKERS OR DISCONNECT HANDLES SHALL BE NOT MORE THAN 6 FT 7 IN. ABOVE THE FLOOR WHEN IN THEIR HIGHEST POSITION.
4. 3 FT CLEARANCE IF 0–150V TO GROUND
5. 3.5FT CLEARANCE IF 151–600V TO GROUND. 4FT IF EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.

GENERAL NOTE:

1. ALL WORKING SPACE CLEARANCE FROM FACE OF PANEL.



1 ELECTRICAL EQUIPMENT WORK SPACE CLEARANCES

SCALE: NTS

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FAULT CURRENT CALCULATION TABLE

MAIN UTILITY COMPANY TRANSFORMER	TRANSFORMER KVA	AFC AT UTILITY	%Z
1Ø 120/240V -100A	25	10,000 A	1.50%

CONFIGURATION						FEEDER			SYSTEM						FAULT CURRENT AT EQUIPMENT	FULL OR SERIES RATED	MINIMUM SYMMETRICAL EQUIPMENT AIC RATING
FROM		TO		LENGTH	SOURCE FAULT CURRENT	FEEDER SIZE	FEEDERS PER PHASE	WIRE CONSTANT	LINE TO LINE VOLTS	XFMR SECONDARY VOLTS	PHASE	KVA	%Z	MOTOR LOAD			
TRANSFORMER	UTILITY	METER	MAIN	10'-0"	10,000 AIC	1 AL	1	4,678	240 V		1Ø		-		9,182 AIC	FULL	10,000 AIC
METER	MAIN	SWITCH	DISC	5'-0"	9,182 AIC	1 AL	1	4,678	240 V		1Ø		-		8,821 AIC	FULL	10,000 AIC
SWITCH	DISC	PANELBOARD	A	5'-0"	8,821 AIC	1 AL	1	4,678	240 V		1Ø		-		8,488 AIC	FULL	10,000 AIC

NOTE: DISTANCES INDICATED ARE FOR FAULT-CURRENT ANALYSIS ONLY. CONTRACTOR SHALL USE FIELD MEASUREMENTS ESTABLISH CONDUCTOR LENGTHS FOR ORDERING PURPOSES.

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	SERVICE		DISCONNECT		STARTER	LOAD			MOCP/ BRKR	REMARKS
		VOLTS	PHASE	SIZE	FUSE		HP/TON	VA	AMPS		
SCU 1	HEAT PUMP	240 V	1Ø	30A NEMA 3R	-	INTEGRAL		4,320	18.0A	40A	
SAC 2	FAN COIL	240 V	1Ø	2 POLE SWITCH	-	INTEGRAL		240	1.0A	-A	INDOOR UNIT POWERED BY OUTDOOR UNIT.

NOTES:

1. VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, FLA, ETC.) WITH MECHANICAL DRAWINGS/SUBMITTALS BEFORE FOR ACTUAL EQUIPMENT INSTALLED.
2. ALL FUSES SHALL BE DUAL ELEMENT TIME DELAY. FINAL BREAKER/FUSE & DISCONNECT SIZE SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATION FOR ACTUAL EQUIPMENT INSTALLED.
3. MAXIMUM VALUES INDICATED.
4. DISCONNECTING MEANS NOT REQUIRED FOR EQUIPMENT WITHIN SIGHT (AS DEFINED IN NEC) OF BRANCH PANEL SERVING EQUIPMENT. SEE NEC 422.31 (B).
5. DISCONNECTING MEANS NOT REQUIRED FOR APPLIANCES NOT OVER 300 VA. SEE NEC 422.31 (A).

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PANEL SCHEDULE "A"

VOLTAGE:	240 / 120 VOLTS			**BUS RATING (AMPS):**	100
MOUNTING:	SURFACE	**PHASE:**	1	**MAIN LUGS ONLY**	
ENCLOSURE:	NEMA 1	**WIRE:**	3	**SHORT CIRCUIT RATING:**	SEE FAULT CURRENT TABLE

REMARKS:

CIRCUIT BREAKER				CIRCUIT NAME	FEEDER			CKT. LOAD		LOAD/PHASE (VA)		CKT. LOAD		FEEDER			CIRCUIT NAME	CIRCUIT BREAKER			
No.	AMPS	POLE	MOD.		C	WIRE	GRD	DEMAND FACTOR	WATTS	ØA	ØB	WATTS	DEMAND FACTOR	GRD	WIRE	C		MOD.	POLE	AMPS	No.
1	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	2,900		900	1.00	#12	#12	¾"	CO RECEPTACLES	-	1	20	2
3	-	-	-	-	-	#10	-	1.00	2,000		2,900	900	1.00	#12	#12	¾"	CO RECEPTACLES	-	1	20	4
5	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	2,250		250	1.00	#12	#12	¾"	LIGHTING	-	1	20	6
7	-	-	-	-	-	#10	-	1.00	2,000		4,160	2,160	1.00	#10	#10	¾"	SCU-1	-	2	30	8
9	30	2	-	SERVER RACK	¾"	#10	#10	1.00	2,000	4,160		2,160	1.00	-	#10	-	-	-	-	-	10
11	-	-	-	-	-	#10	-	1.00	2,000		2,000		1.00				SPACE	-			12
13			-	SPACE				1.00		0			1.00				SPACE	-			14
15			-	SPACE				1.00			0		1.00				SPACE	-			16
17			-	SPACE				1.00		0			1.00				SPACE	-			18
19			-	SPACE				1.00			0		1.00				SPACE	-			20
21			-	SPACE				1.00		0			1.00				SPACE	-			22
23			-	SPACE				1.00			0		1.00				SPACE	-			24
25			-	SPACE				1.00		0			1.00				SPACE	-			26
27			-	SPACE				1.00			0		1.00				SPACE	-			28
29			-	SPACE				1.00		0			1.00				SPACE	-			30

NOTES :

1. ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.
2. LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.
3. PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"
4. FIRE ALARM SYSTEMS SHALL HAVE BRANCH CIRCUITS IDENTIFIED BY RED LABELS STATING “FIRE ALARM CIRCUIT” AS REQUIRED BY THE NATIONAL ELECTRICAL CODE ARTICLE 760.41B
5. ABBREVIATIONS: CO-CONVENIENCE OUTLET, RR-RESTROOM, (N)ORTH, (S)OUTH, (E)AST, (W)EST.

ØA	ØB	TOTALS	
9,310	9,060	18,370	CONNECTED LOAD (VA)
		77	CONNECTED LOAD (A)
0	0	0	DEMAND FACTOR ADJUSTMENTS (VA)
9,310	9,060	18,370	TOTAL LOAD (VA)
78	76		TOTAL LOAD (A)
		78	MAXIMUM LOAD (A)
51%	49%		PHASE BALANCE

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LIGHT FIXTURE SCHEDULE

FIXTURE NUMBER	FIXTURE MANUFACTURER	FIXTURE CATALOG #	LAMPS		FIXTURE			DESCRIPTION	REMARKS
			TYPE	QTY.	VOLTS	WATTS	MOUNTING		
F1	METALUX LITHONIA DAY-BRITE LSI COLUMBIA ORACLE	4SNLED-LD4-30SL-LW-UNV-L835-CD1-U ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-WH FSS440L835-UNV-DIM SDL-4-LED-SS-WW-UE LCL4-35LW-EDU 4-OC1-LED-3000L-DIM10-MVOLT-35K-80	LED 3500 KELVIN 3000 LUMENS 80 CRI	-	120	29	SURFACE/CHAIN	48" LED STRIP	
F1E	METALUX LITHONIA DAY-BRITE LSI COLUMBIA ORACLE	4SNLED-LD4-30SL-LW-UNV-EL14W-L835-CD1-U ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-E7W-WH FSS440L835-UNV-DIM-EMLED SDL-4-LED-SS-WW-UE-EM LCL4-35LW-EDU-ELL14 4-OC1-LED-3000L-DIM10-MVOLT-35K-80-O-EMG-LED	LED 3500 KELVIN 3000 LUMENS 80 CRI	-	120	29	SURFACE/CHAIN	48" LED STRIP WITH EMERGENCY BATTERY PACK	
F2	LITHONIA	WST LED P2 40K MVOLT	LED 4000 KELVIN 3469 LUMENS 80 CRI	-	120	25	SURFACE	WALL PACK	

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ELECTRICAL SPECIFICATIONS

GENERAL PROVISION

A. REFERENCE

1. THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS TITLE, INSOFAR AS THEY APPLY HERETO.
2. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, “ELECTRICAL CONTRACTOR” IS INFERRED AND INTENDED.

B. CONTRACT DRAWINGS

1. THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.
2. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.
3. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.
4. OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS

1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.

D. MANUFACTURER'S DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW. (6) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES,AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR: APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS	TYPE SUBMITTALS REQUESTED
LIGHTING AND POWER PANELS	SHOP DRAWINGS
LIGHTING FIXTURES	CATALOG CUTS

E. GUARANTEES

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

WORK INCLUDED

A. INSTALLATION, MATERIALS, AND WORKMANSHIP

1. FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.
2. THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION. AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSED DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.
3. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.

B. COORDINATION OF PLANS AND SPECIFICATIONS

1. CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING

1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.
2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.
3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

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CODES AND FEES

A. CODES:

1. ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.

B. FEES:

1. OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND INSPECTIONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.

B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.

C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

CONDUIT

A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.

B. ALL WIRING SHALL BE RUN IN EMT CONDUIT OR MC CABLE WITH GROUND CONDUCTOR UNLESS OTHERWISE NOTED.

C. ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN ½" UNLESS OTHERWISE NOTED.

D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

WIRE AND CABLE

A. ALL CONDUCTORS SHALL BE COPPER AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN. CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.

B. ALL BRANCH CIRCUITS IN PATIENT CARE AREAS SHALL BE MEDICAL GRADE MC CABLE. ALL BRANCH CIRCUITS IN OFFICE AND COMMON AREAS SHALL BE TYPE NM OR MC CABLE.

C. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS.

D. THE FOLLOWING COLOR CODE SHALL BE USED:

	120/240 VOLT	120/208 VOLT	277/480 VOLT
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	RED	ORANGE
PHASE C		BLUE	YELLOW
NEUTRAL	WHITE	WHITE	WHITE
GROUND	GREEN	GREEN	GREEN

E. CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE.

F. CONDUCTORS NO. 8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED TAPE, MINIMUM SIZE ½", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS:

1. AT EACH TERMINAL.
2. AT EACH CONDUIT ENTRANCE.
3. AT INTERVALS NOT MORE THAN 12 INCHES APART IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC.

G. ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANEL BOARD GUTTERS. MARKERS SHALL INDICATE CORRESPONDING BRANCH--CIRCUIT NUMBERS.

H. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR.

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BOXES AND PLATES

A. FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULL BOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.
B. PULL BOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND GAUGE, SIZED IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE U.L. LABELED.
C. BOXES AT EXTERIOR AREAS TO BE WATERTIGHT AND DUST-TIGHT WITH CASKETED COVERS.
D. ALL BOXES FOR EXPOSED WORK IN FINISHED SPACES SHALL BE "FS" TYPE WITH THREADED HUBS WITH RIGID CONDUIT RISER (DEEP WIRE MOLD BOXES).
E. ALL BOXES SHALL BE RIGIDLY SUPPORTED INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.
F. FLOOR BOXES:
    1. DESCRIPTION: FLOOR BOXES COMPATIBLE WITH FLOOR BOX SERVICE FITTINGS PROVIDED IN ACCORDANCE WITH THE WIRING DEVICES SECTION OF THIS SPECIFICATION; WITH PARTITIONS TO SEPARATE MULTIPLE SERVICES; FURNISHED WITH ALL COMPONENTS, ADAPTERS, AND TRIMS REQUIRED FOR COMPLETE INSTALLATION.
    2. USE CAST IRON OR NONMETALLIC FLOOR BOXES WITHIN SLAB ON GRADE.
    3. USE SHEET-STEEL, CAST IRON, OR NONMETALLIC FLOOR BOXES WITHIN SLAB ABOVE GRADE.
    4. METALLIC FLOOR BOXES: FULLY ADJUSTABLE (WITH INTEGRAL MEANS FOR LEVELING ADJUSTMENT PRIOR TO AND AFTER CONCRETE POUR).
    5. MANUFACTURER: SAME AS MANUFACTURER OF FLOOR BOX SERVICE FITTINGS.
G. UNDERGROUND BOXES/ENCLOSURES:
    1. DESCRIPTION: IN-GROUND, OPEN BOTTOM BOXES FURNISHED WITH FLUSH, NON-SKID COVERS WITH LEGEND INDICATING TYPE OF SERVICE AND STAINLESS STEEL TAMPER RESISTANT COVER BOLTS.
    2. SIZE: AS INDICATED ON DRAWINGS.
    3. DEPTH: AS REQUIRED TO EXTEND BELOW FROST LINE TO PREVENT FROST UPHEAVAL, BUT NOT LESS THAN 12 INCHES.
    4. APPLICATIONS:
        a. SIDEWALKS AND LANDSCAPED AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 8 LOAD RATING.
        b. PARKING LOTS, IN AREAS SUBJECT ONLY TO OCCASIONAL NONDELIBERATE VEHICULAR TRAFFIC: USE POLYMER CONCRETE OR COMPOSITE ENCLOSURE WITH MINIMUM SCTE 77, TIER 15 LOAD RATING.
        c. DO NOT USE POLYMER CONCRETE ENCLOSURES IN AREAS SUBJECT TO DELIBERATE VEHICULAR TRAFFIC.
H. COMPOSITE UNDERGROUND BOXES/ENCLOSURES: COMPLY WITH SCTE 77.

WIRING DEVICES

A. WIRING DEVICES SHALL BE SIMILAR TO THOSE LISTED BELOW AND OF SPECIFIED AMPERAGE. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.
B. DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 125 VOLT
    1. HUBBELL 5352
    2. ARROW HART 5352
C. SINGLE POLE SWITCHES - 20 AMP, 120 VOLT
D. WEATHERPROOF RECEPTACLES - 20 AMP, 125 VOLT - NEMA 5-20R
    1. HUBBELL 5352 WITH 5205 COVER INTERMATIC GUARDIAN
    2. I SERIES, NEMA 3R COVER
    3. ARROW HART 5352 WITH 4500 COVER
E. G.F.C.I. RECEPTACLE - 20 AMP, 125 VOLT - NEMA 5-20 R
    1. HUBBELL GF 5262 WITH MATCHING NYLON COVER PLATE OR WO-26 W.P. COVER
F. GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250.146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

IDENTIFICATION

A. EACH PIECE OF SERVICE EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS, ALL EXHAUST FAN MANUAL STARTING SWITCHES.
B. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK RACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM ¼" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEET METAL SCREW ATTACHMENT. NO "DYMO" OR SIMILAR TYPE LABELS WILL BE ALLOWED.
C. PANEL BOARD DIRECTORY: A TYPED CIRCUIT DIRECTORY SHALL BE PROVIDED INDICATING LOCAL AREA SERVED AND LOCATION FOR EACH BRANCH CIRCUIT.

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GROUNDING

A. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER THE WIRE AND CABLE SECTION OF THIS SPECIFICATION.
B. ALL GROUND CLAMPS SHALL BE PENN-UNION “GPL” TYPE OR SIMILAR BY O.Z. OR BURNDY.
C. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON- METALLIC ELECTRICAL CONDUIT WITH U.L. LABEL SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.
D. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS -ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC--250--24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-30.
E. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE: 2) THE GROUND PIGTAIL TO THE BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE. MOUNTED BOXES OR FLUSH TYPE BOXES.
F. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

POWER AND LIGHTING PANELS

A. FURNISH AND INSTALL, AS SCHEDULED AND SHOWN ON THE DRAWINGS, POWER PANELS FOR OPERATION ON VOLTAGES INDICATED.
B. ALL TERMINATIONS SHALL BE MARKED “75°C ONLY”, “60/75° C” OR LISTED FOR USE OF 75° C INSULATED CONDUCTORS AT FULL 75° C AMPACITY.
C. ALL BUS BARS SHALL BE SILVER OR TIN PLATED COPPER.
D. CABINETS SHALL BE OF COMMERCIAL GALVANIZED SHEET STEEL, CODE GAUGE AND SIZE, SURFACE OR RECESSED MOUNTED AS CALLED FOR IN THE DRAWINGS.
E. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
F. PANEL SHALL HAVE A COPPER GROUND BAR SIMILAR TO NEUTRAL BAR IN NUMBER, SIZE, AND TYPE OF ANTI-TURN SOLDERLESS LUGS. THIS GROUND BAR SHALL BE FACTORY BONDED TO THE PANEL TUB IN THE GUTTER SPACE OPPOSITE THE MAINS AND THE NEUTRAL ASSEMBLY AND SHALL HAVE THE SCREWDRIVER SLOTS FACING THE FRONT OF THE PANEL.
G. QUALITY STANDARD: SQUARE D TYPE NQ.

LIGHTING FIXTURES

A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN.
B. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
C. ALL LIGHTING FIXTURES INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE FURNISHED COMPLETE WITH AS INDICATED ON THE FIXTURE SCHEDULE.
D. ANY LIGHTING FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.
E. ALL LIGHTING FIXTURES SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
F. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

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M. RYAN
BEAGLES
5/12/22

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SFCN FIBER HUTS

FIBER HUT PLANS

ELECTRICAL SPECIFICATIONS

DRAWN: JE	REVISION	BY	DATE
DESIGN: JE	1 CITY CMNTS	JE	05/10/2022
CHECK: MM			
DATE: 3/29/2022			

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