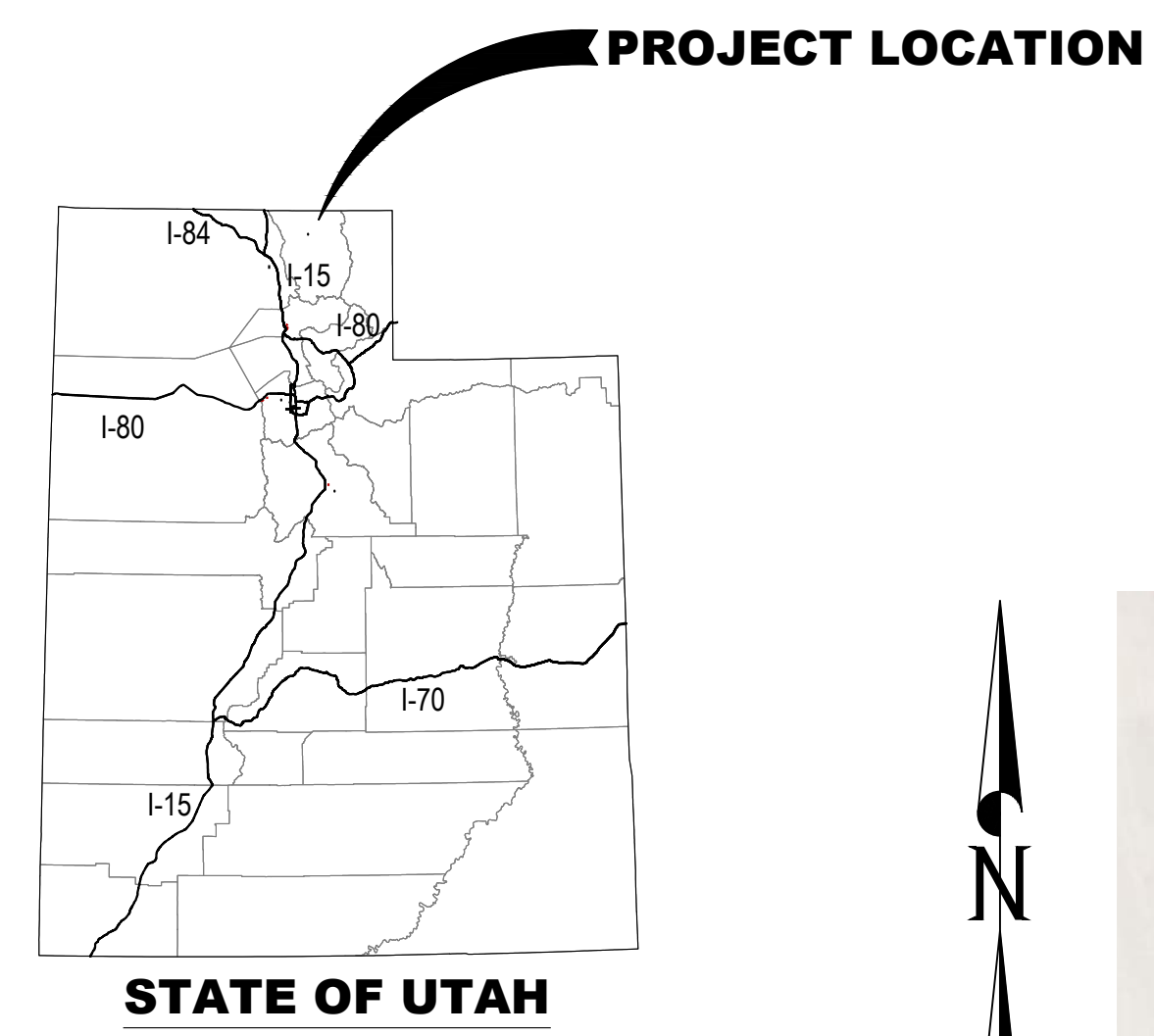


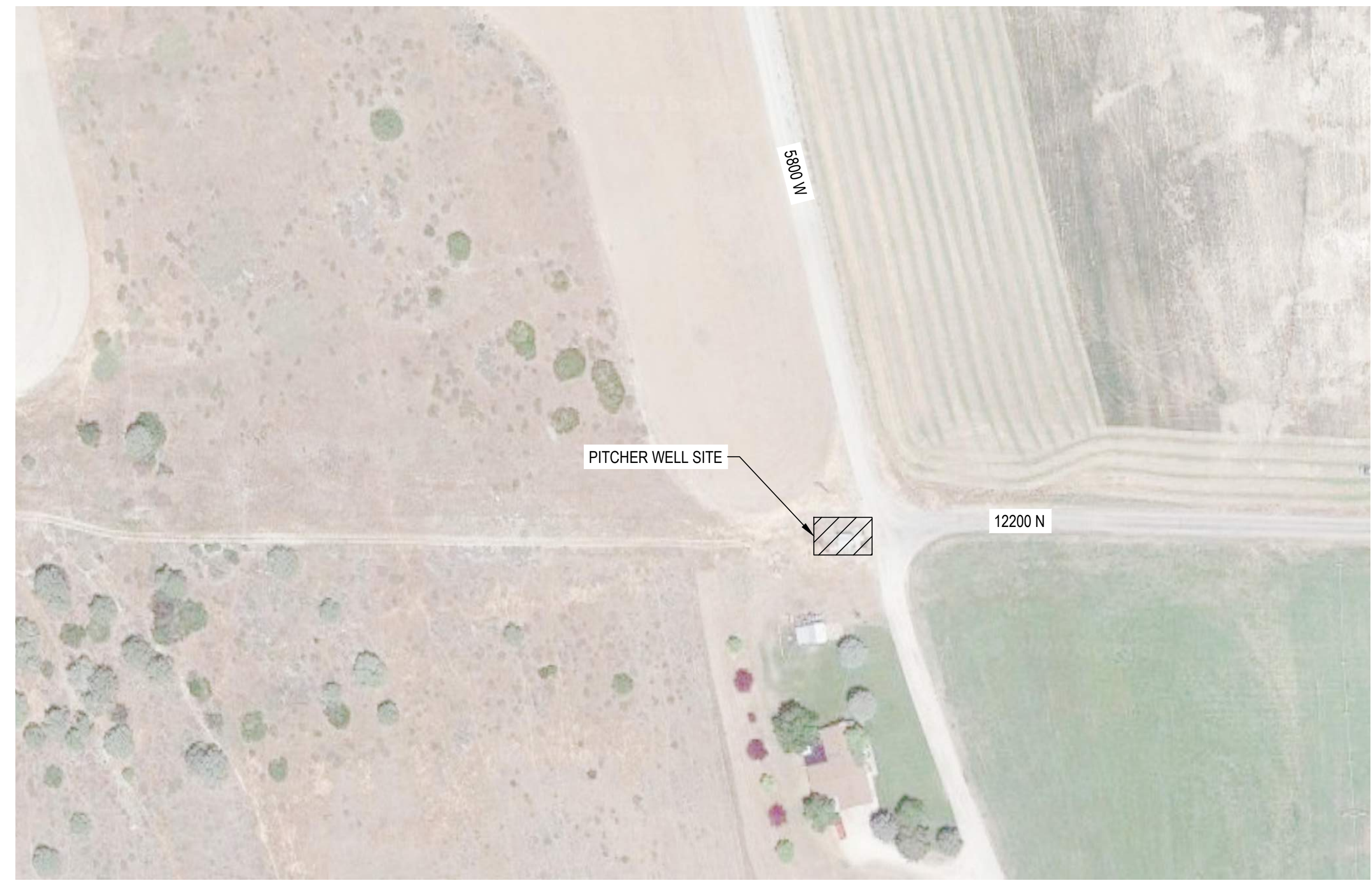
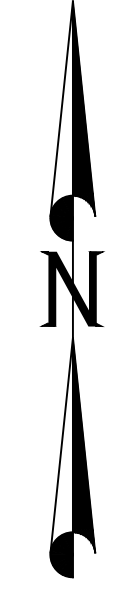
TOWN OF CORNISH PITCHER WELL HOUSE 100% DESIGN

12200 NORTH 5600 WEST
CORNISH, UT 84308

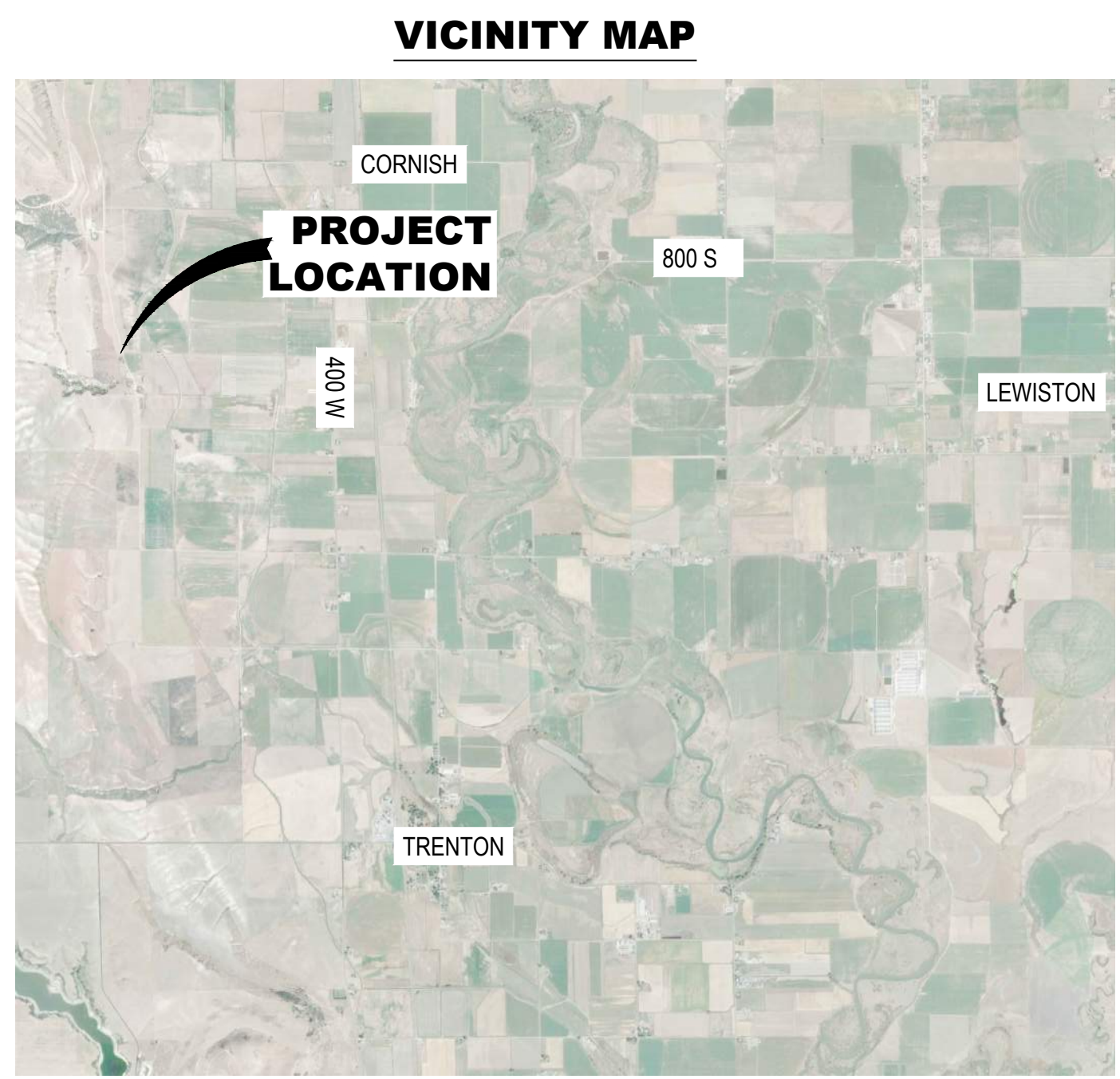
ISSUE DATE: JULY 8, 2022



LEGEND
MAJOR HIGHWAY
COUNTY LINE



PITCHER WELL HOUSE
PROJECT VICINITY MAP



| SHEET LIST TABLE | | |
|------------------|-------------|-------------------------------------|
| SHEET NUMBER | SHEET TITLE | SHEET DESCRIPTION |
| 1 | G001 | TITLE SHEET |
| 2 | G002 | GENERAL NOTES |
| 3 | G003 | SURVEY CONTROL |
| 4 | CD101 | EXISTING CONDITIONS/DEMOLITION PLAN |
| 5 | CP101 | SITE PLAN |
| 6 | CP102 | GRADING PLAN |
| 7 | P101 | BUILDING PIPING PLAN |
| 8 | P102 | BUILDING PIPING SECTION |
| 9 | CP501 | UTILITY DETAILS |
| 10 | CP502 | UTILITY DETAILS |
| 11 | CP503 | UTILITY DETAILS |
| 12 | A101 | FLOOR PLAN |
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| 14 | A202 | BUILDING ELEVATIONS |
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| 16 | A302 | BUILDING SECTIONS |
| 17 | S101 | FOOTING & FOUNDATION PLAN |
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| 19 | S501 | STRUCTURAL DETAILS |
| 20 | S502 | STRUCTURAL DETAILS |
| 21 | S503 | STRUCTURAL DETAILS |
| 22 | S504 | STRUCTURAL DETAILS |
| 23 | E101 | ELECTRICAL LEGEND |
| 24 | E102 | ELECTRICAL LEGEND |
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| 26 | E202 | ELECTRICAL DIAGRAMS |
| 27 | E203 | ELECTRICAL DIAGRAMS |
| 28 | E204 | TYPICAL RVSS CONTROL DIAGRAM |
| 29 | E301 | ELECTRICAL SCHEDULES |
| 30 | E302 | ELECTRICAL SCHEDULES |
| 31 | E401 | SITE PLAN |
| 32 | E402 | POWER PLAN |
| 33 | E403 | INSTRUMENT & CONTROL PLAN |
| 34 | E404 | LIGHTING PLAN |
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| 40 | E601 | ELECTRICAL DETAILS |
| 41 | E602 | ELECTRICAL DETAILS |
| 42 | E603 | ELECTRICAL DETAILS |
| 43 | E604 | ELECTRICAL DETAILS |

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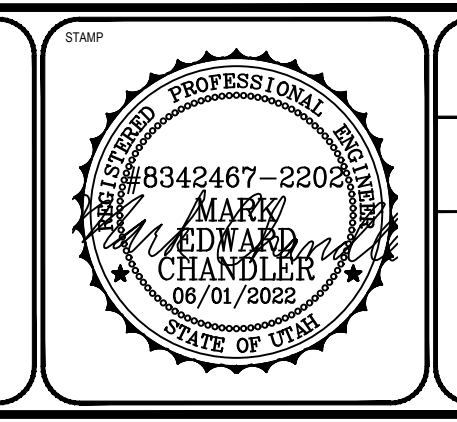
PRINCIPAL: M. HIRST, PE
PROJECT MANAGER: M. CHANDLER, PE, PG
CHECKED BY: M. CHANDLER, PE, PG
DRAWN BY: C. HATCH
DRAWING SCALE: AS SHOWN
ISSUE DATE: JULY 8, 2022

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TOWN OF CORNISH
PITCHER WELL HOUSE
TITLE SHEET

12200 NORTH 5600 WEST
CORNISH, UT 84308



| | | |
|----------------|-----------|-------|
| PROJECT NUMBER | 2019-0406 | |
| SHEET | 1 | OF 43 |
| SHEET NUMBER | G001 | |

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THE CONTRACTOR SHALL CAREFULLY READ ALL OF THE NOTES AND SPECIFICATIONS. THE CONTRACTOR SHALL BE SATISFIED AS TO THEIR TRUE MEANING AND INTENT AND SHALL BE RESPONSIBLE FOR COMPLYING WITH EACH.

GENERAL NOTES:

- 1) ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH ALL JURISDICTIONAL AUTHORITIES.
2) CONTRACTOR SHALL COMPLY WITH THE STANDARDS INDICATED ABOVE AND WITHIN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES, OWNERS, ENGINEERS, AND UTILITY COMPANIES 5 DAYS PRIOR TO A PRE-CONSTRUCTION MEETING:

OWNER: TOWN OF CORNISH
4788 WEST 14300 NORTH
CORNISH, UT 84308
PHONE: (801) 851-8114
CONTACT: MATT LEAK

ENGINEER: CRS ENGINEERS
4246 S RIVERBOAT RD STE 200
TAYLORSVILLE, UTAH 84123
PHONE: (801) 359-5565
FAX: (801) 359-4272
CONTACT: M. CHANDLER, PE, PG

- 3) IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE.
4) WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.
5) THE CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS.
6) THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE, AND HAVE SPECIAL SKILLS ON THE NATURE, EXTENT, AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED.
7) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT, AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS OF ALL PERMITS AND APPROVALS APPLICABLE TO THIS PROJECT.
8) CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT WHERE APPLICABLE FOR ANY WORK DONE WITHIN RIGHTS-OF-WAY OR EASEMENTS FROM CORNISH, UT, UNION PACIFIC RAILROAD, AND UDOT.
9) THE CONTRACTOR SHALL, AT THE TIME OF BIDDING AND, THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF UTAH AND SHALL BE BONDABLE FOR AN AMOUNT EQUAL TO OR GREATER THAN THE AMOUNT BID AND TO DO THE TYPE OF WORK CONTEMPLATED IN THE PLANS AND SPECIFICATIONS.
10) CONTRACTOR SHALL INSPECT THE SITE OF THE WORK PRIOR TO BIDDING TO SATISFY THEMSELVES BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS THEY MAY PREFER, OF THE LOCATION OF THE PROPOSED WORK, AND OF THE ACTUAL CONDITIONS OF, AND AT, THE SITE OF WORK.

CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, THEY HAVE RELIED AND ARE RELYING ON THEIR OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON THEIR OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.

- 11) THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, BARRICADES, SIGNS, FLAGMEN OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
12) THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTORS USE DURING CONSTRUCTION.
13) THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER AND/OR ENGINEER.
14) THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, SECTION CORNERS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY UNNECESSARY LOSS OR DISTURBANCE.
15) THE CONTRACTOR AGREES THAT:
A) THEY SHALL BE RESPONSIBLE TO CLEAN THE JOB SITE AT THE END OF EACH DAY.
B) THEY SHALL BE RESPONSIBLE TO REMOVE AND DISPOSE OF ALL TRASH, SCRAP AND UNUSED MATERIAL AT THEIR OWN EXPENSE IN A TIMELY MANNER.
C) THEY SHALL BE RESPONSIBLE TO MAINTAIN THE SITE IN A NEAT, SAFE AND ORDERLY MANNER AT ALL TIMES.
D) THEY SHALL BE RESPONSIBLE TO KEEP MATERIALS, EQUIPMENT, AND TRASH OUT OF THE WAY OF OTHER CONTRACTORS SO AS NOT TO DELAY THE JOB.
E) THEY SHALL BE RESPONSIBLE FOR THEIR OWN SAFETY, TRAFFIC CONTROL, PERMITS, RETESTING AND RE-INSPECTIONS AT THEIR OWN EXPENSE.
16) THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT.
17) DUST CONTROL SHALL BE PROVIDED AT ALL TIMES, AT THE CONTRACTOR'S EXPENSE.
18) WHEN CONSTRUCTION STAKING IS REQUIRED THE CONTRACTOR SHALL NOTIFY THE ENGINEER/LAND SURVEYOR 1 WEEK IN ADVANCE OF THE NEED FOR STAKING.
19) FOR ALL WORK WITHIN PUBLIC RIGHTS-OF-WAYS OR EASEMENTS, THE CONTRACTOR SHALL PRESERVE THE INTEGRITY AND LOCATION OF ANY AND ALL PUBLIC UTILITIES AND PROVIDE THE NECESSARY CONSTRUCTION TRAFFIC CONTROL.
20) IF EXISTING FEATURES NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FEATURES FROM DAMAGE.
21) IF EXISTING FEATURES NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FEATURES FROM DAMAGE.
22) THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF

- 23) WORK IN EASEMENT AND/OR RIGHTS-OF-WAY IS SUBJECT TO THE APPROVAL AND ACCEPTANCE OF THE REGULATORY AGENCY RESPONSIBLE FOR OPERATION AND/OR MAINTENANCE OF SAID EASEMENT AND/OR RIGHTS-OF-WAY.
24) NO ALLOWANCE WILL BE MADE FOR DISCREPANCIES OR OMISSIONS THAT CAN BE EASILY OBSERVED.
25) FURNISH, MAINTAIN, AND RESTORE ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE.
26) PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH CITY, COUNTY, AND STATE REGULATIONS FOR WORKING IN THE PUBLIC WAY.
27) FURNISH ALL MATERIALS TO COMPLETE THE PROJECT.
28) TRAFFIC CONTROL IS TO CONFORM TO THE CURRENT MUTCD AND UDOT STANDARDS.
29) CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS.
30) ALL EXISTING ASPHALT WILL BE SAW CUT IN NEAT STRAIGHT LINES BY THE CONTRACTOR PRIOR TO EXCAVATION.
31) STRIPING WILL BE PER THE PLANS AND/OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

GENERAL CLEARING AND GRADING NOTES:

- 1) CLEARING, GRUBBING AND DISPOSAL OF VEGETATIVE MATERIAL NEEDS TO BE IN ACCORDANCE WITH STATE AND COUNTY REGULATIONS, WHICH APPLY TO SOLID WASTE.
2) CONTRACTOR SHALL PERFORM EARTHWORK IN ACCORDANCE WITH CORNISH, UT STANDARD SPECIFICATIONS AND CONSTRUCTION STANDARDS, EROSION, SEDIMENT, RE-VEGETATION REQUIREMENTS, AND THE SWPP PLAN AS REQUIRED BY THE STATE OF UTAH.
3) THE CONTRACTOR WILL PERFORM EARTHWORK IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS OUTLINED IN THE CONSTRUCTION STANDARDS.
4) SEDIMENTATION BMP'S SHOWN ON THE EROSION CONTROL AND SEDIMENT CONTROL PLANS (STORM WATER POLLUTION PREVENTION PLAN) TO BE INSTALLED WITHIN THE SAME WORKING DAY THE LAND DISTURBANCE OCCURS.
5) DUST CONTROL BMP'S ARE TO BE ON SITE AND IMPLEMENTED AS SOON AS LAND DISTURBANCE OCCURS.
6) THE EXISTING TOPOGRAPHY SHOWN ON THESE PLANS IS BASED ON DRAWINGS AND A TOPOGRAPHIC SURVEY PERFORMED BY CRS ENGINEERS.
7) THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE STREETS, STORM DRAINS, CHANNELS, DITCHES, AND SWALES FREE FROM DEBRIS, SOIL, MUD, OR OTHER MATERIAL THAT WOULD CAUSE A PUBLIC SAFETY CONCERN OR VIOLATE ANY CITY, STATE, OR FEDERAL LAWS.
8) BMP'S ARE TO BE IN PLACE AND MAINTAINED UNTIL WRITTEN NOTIFICATION IS RECEIVED FROM CORNISH, UT.
9) IF DISTURBANCE OCCURS OUTSIDE THE LIMITS OF DISTURBANCE, WORK WILL STOP AND REMAIN STOPPED UNTIL A WRITTEN RESPONSE IS RECEIVED FROM THE ENGINEER.
10) THE CONTRACTOR SHALL REMOVE ALL VEGETATION AND DELETERIOUS MATERIALS FROM THE SITE UNLESS NOTED OTHERWISE.
11) NATURAL VEGETATION AND SOIL COVER SHALL NOT BE DISTURBED PRIOR TO ACTUAL CONSTRUCTION OF A REQUIRED FACILITY OR IMPROVEMENT.

GENERAL UTILITY NOTES

- 1) THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTORS FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION.
2) START AT THE LOW END OF ALL GRAVITY FED LINES AND WORK UPHILL. FAILURE TO COMPLY WITH THIS NOTE SHALL RELEASE THE CIVIL ENGINEER OF ALL LIABILITY.
3) CONTRACTOR SHALL LAYOUT AND POTHOLE FOR ALL POTENTIAL CONFLICTS WITH UTILITY LINES ON OR OFF SITE AS REQUIRED PRIOR TO ANY CONSTRUCTION.
4) STORM DRAIN - SEE CORNISH, UT STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE STORM DRAIN & APPURTENANCES WITHIN THE PUBLIC RIGHT-OF-WAY AS SHOWN ON THIS PLAN.
5) ALL DIMENSIONS, GRADES OF EXISTING STORM DRAIN PIPES, BOX CULVERTS, STRUCTURES, ETC. SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
6) THESE PLANS SHOW THE LOCATION OF POWER, NATURAL GAS, AND COMMUNICATIONS UTILITIES, BUT ARE NOT DESIGN DRAWINGS FOR THE RELOCATION OR REMOVAL OF EXISTING DRY UTILITIES.
7) VERIFY DEPTHS OF UTILITIES IN THE FIELD BY POT HOLING A MINIMUM OF 300 FEET AHEAD OF PIPELINE CONSTRUCTION TO AVOID CONFLICTS WITH DESIGNED PIPELINE GRADE AND ALIGNMENT.
8) ALL DIMENSIONS, GRADES, AND UTILITY DESIGNS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
9) NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.
10) ALL EXISTING MANHOLES, WATER VALVES, CLEAN OUTS, ETC., ARE TO BE RAISED OR LOWERED TO GRADE.

ABBREVIATIONS

Table with 2 columns: Abbreviation and Full Name. Includes terms like APPROX, ASTM, ANSI, APWA, AWWA, BF, BLDG, C, C TO C, CB, CI, CL, CLR, CMP, CO, CONC, DI, DIM, E, EA, EG, EL, ELEV, EP, EW, EX, FG, FH, FL, FLG, FT, HDPE, HORIZ, HP, ID, IE, INV, IR, IRR, LT, L, LBS, L.F., LIN, LP, MAX, MEG, MIN, MJ, N, N/A, NIC, NO, NTS, OC, OD, OSHA, PE, PG, PI, PJDI, PSF, PSI, PUE, PVC, RCP, R, RT, RJ, S, SEC, SS, STA, T, TB, TBA, TBC, TC, TYP, UDOT, VERT, W, WW, etc.

LEGEND

Legend symbols for utility lines: G (Gas), W (Waterline), SD (Storm Drain), SS (Sanitary Sewer), OP (Overhead Power), BCTV (Buried Communications), SD (Storm Drain), UP (Underground Power), W (Water Line).

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RECORD OF REVISIONS table with columns for revision number, description, and date.

Scale bar showing 0 to 2 inches. Text: IF THE ABOVE SCALE BAR DOES NOT MEASURE 1 INCH IN LENGTH, DO NOT USE THIS DRAWING FOR SCALING PURPOSES.

Project information table: PRINCIPAL (M. HIRST, PE), PROJECT MANAGER (M. CHANDLER, PE, PG), CHECKED BY (M. CHANDLER, PE, PG), DRAWN BY (C. HATCH), DRAWING SCALE (###), ISSUE DATE (JULY 8, 2022).

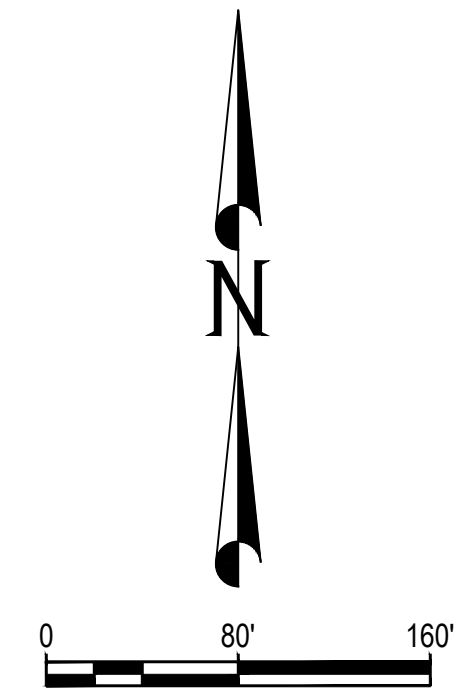
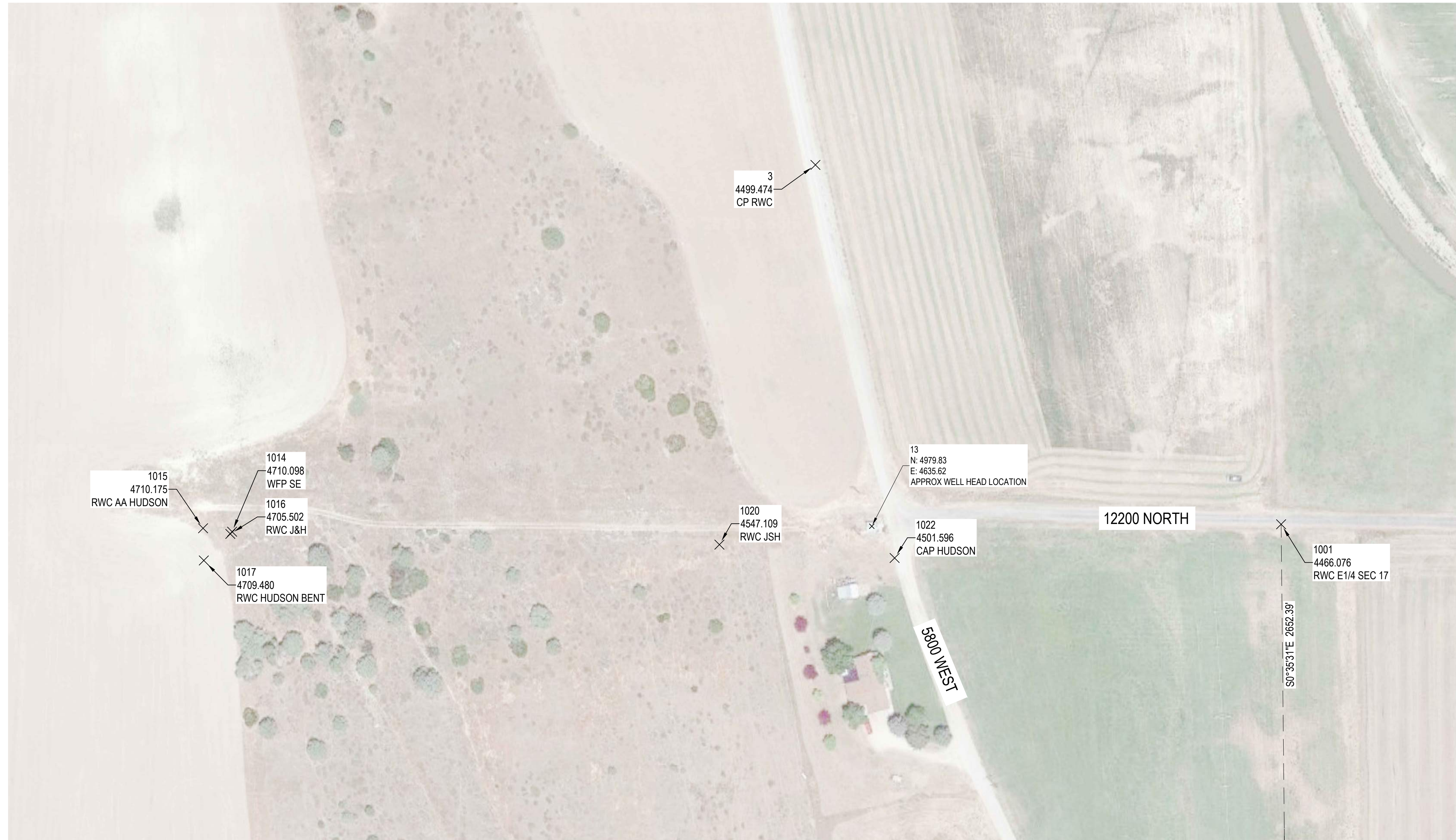
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TOWN OF CORNISH PITCHER WELL HOUSE GENERAL NOTES. Address: 12200 NORTH 5600 WEST. Location: CORNISH, UT 84308.

Professional Engineer Seal for Mark Edward Chandler, State of Utah, License #8342467-2202, dated 06/01/2022.

Project and sheet information: PROJECT NUMBER 2019-0406, SHEET 2 OF 43, SHEET NUMBER G002.

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| SURVEY CONTROL TABLE | | | | |
|----------------------|----------|---------|-----------|-----------------|
| POINT # | NORTHING | EASTING | ELEVATION | DESCRIPTION |
| CP 1001 | 4982.26 | 5142.10 | 4466.08 | RWC E1/4 SEC 17 |
| CP 1003 | -307.75 | 5211.18 | 4504.98 | MON E1/4 SEC207 |
| CP 1004 | 2330.02 | 5169.51 | 4505.12 | RWC SE SEC17 |

NOTE: SURVEY ON LOCAL HORIZONTAL & VERTICAL COORDINATE SYSTEM

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PRINCIPAL: M. HIRST, PE
 PROJECT MANAGER: M. CHANDLER, PE, PG
 CHECKED BY: M. CHANDLER, PE, PG
 DRAWN BY: C. HATCH
 DRAWING SCALE: ####
 ISSUE DATE: JULY 8, 2022

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TOWN OF CORNISH
 PITCHER WELL HOUSE
 SURVEY CONTROL

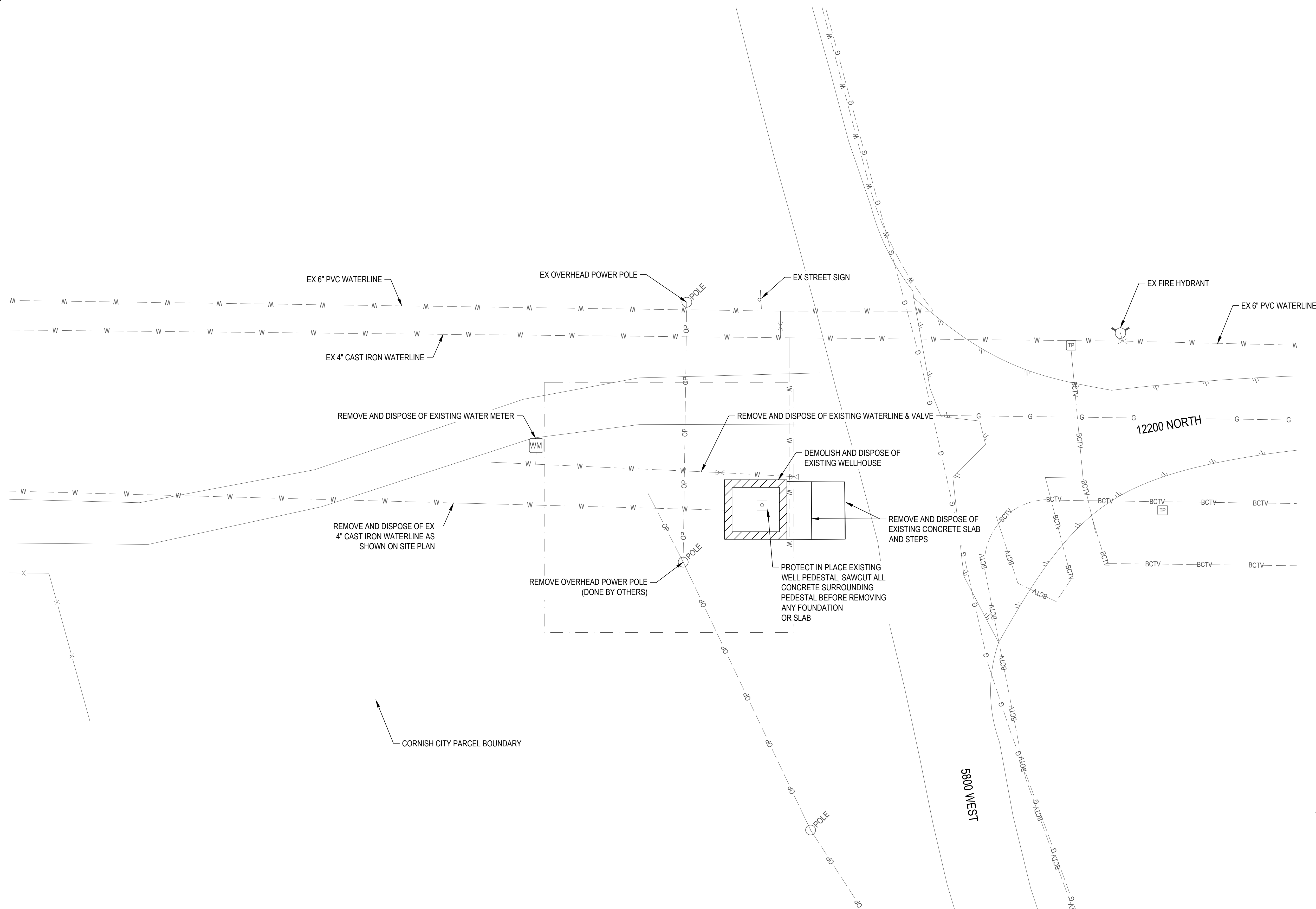
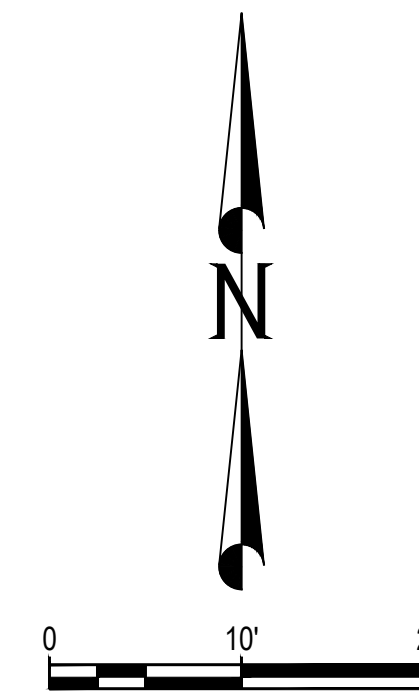
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| PROJECT NUMBER 2019-0406 | |
| SHEET 3 | OF 43 |
| SHEET NUMBER G003 | |

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SHEET NOTES

1. THE ENGINEER HAS MADE AN EXTENSIVE EFFORT TO LOCATE ALL EXISTING UTILITY LINES FROM RECORDS PROVIDED BY OTHERS AND EVIDENCE IN THE FIELD. CONTRACTOR TO VERIFY ALL EXISTING UTILITY LOCATIONS PRIOR TO COMMENCING WORK.

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PRINCIPAL: M. HIRST, PE
PROJECT MANAGER: M. CHANDLER, PE, PG
CHECKED BY: M. CHANDLER, PE, PG
DRAWN BY: C. HATCH
DRAWING SCALE: AS SHOWN
ISSUE DATE: JULY 8, 2022

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TOWN OF CORNISH
PITCHER WELL HOUSE
EXISTING CONDITIONS/DEMOLITION PLAN

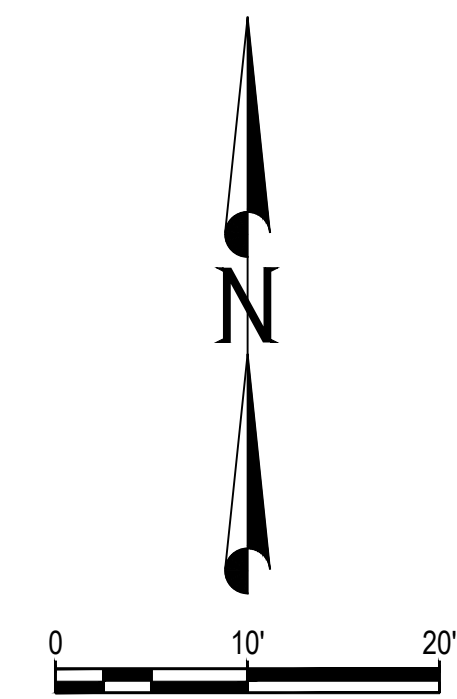
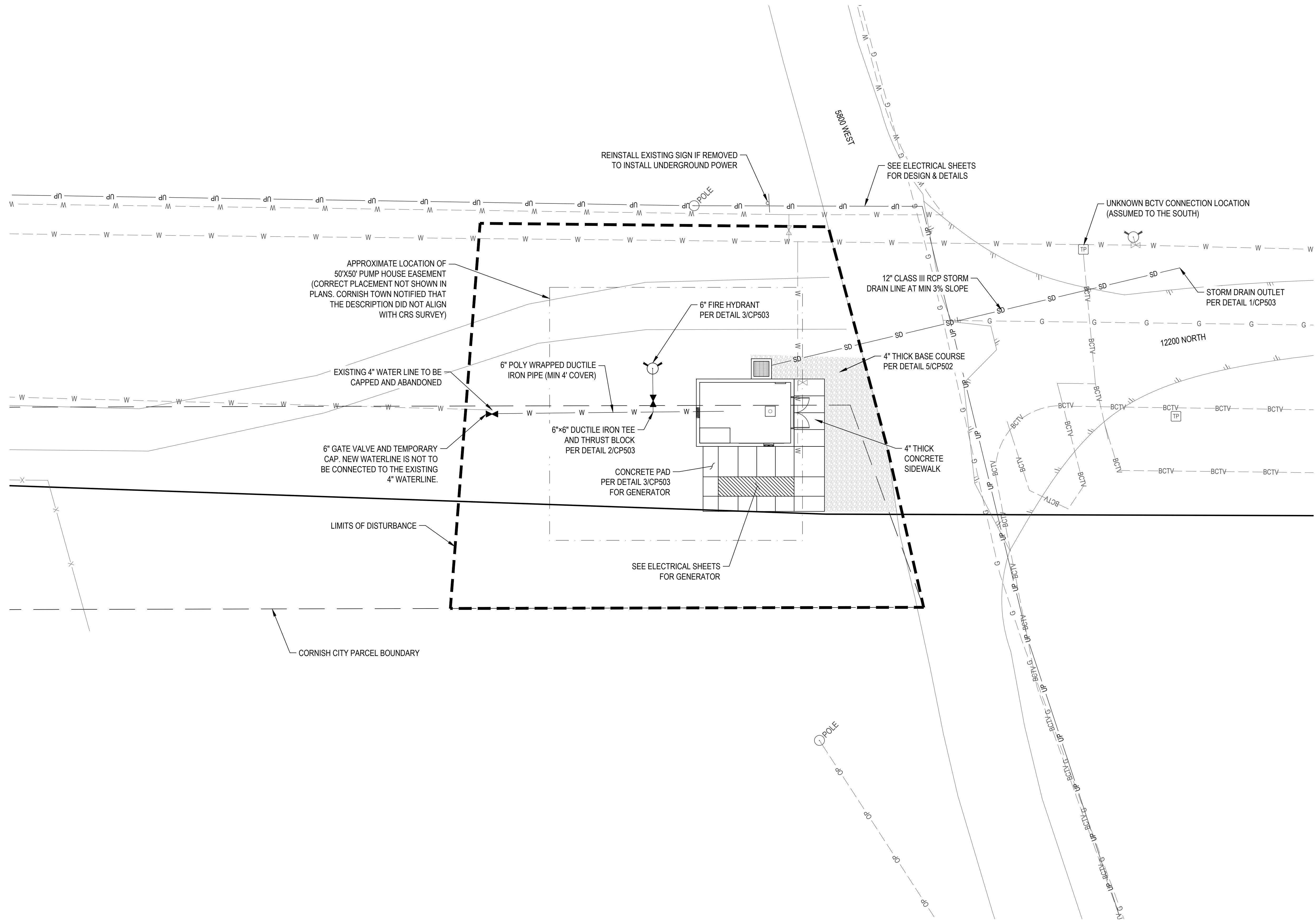
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CORNISH, UT 84308



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| SHEET | 4 | OF 43 |
| SHEET NUMBER | CD101 | |

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NOTE:
RESTORE SURFACE WITH TALL FESCUE SEED MIX

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PRINCIPAL
M. HIRST, PE
PROJECT MANAGER
M. CHANDLER, PE, PG
CHECKED BY
M. CHANDLER, PE, PG
DRAWN BY
C. HATCH
DRAWING SCALE
AS SHOWN
ISSUE DATE
JULY 8, 2022

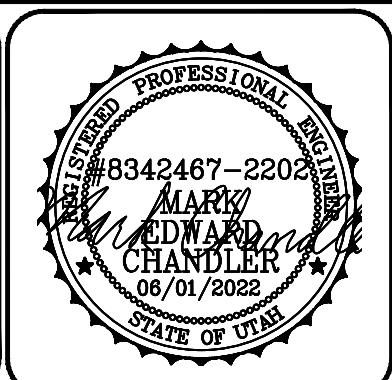
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TOWN OF CORNISH
PITCHER WELL HOUSE
SITE PLAN

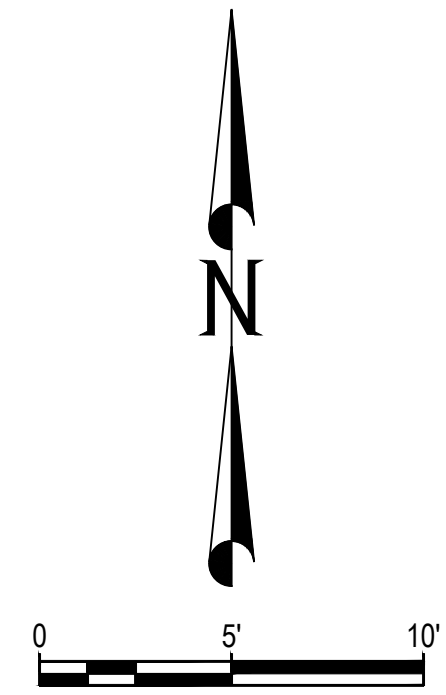
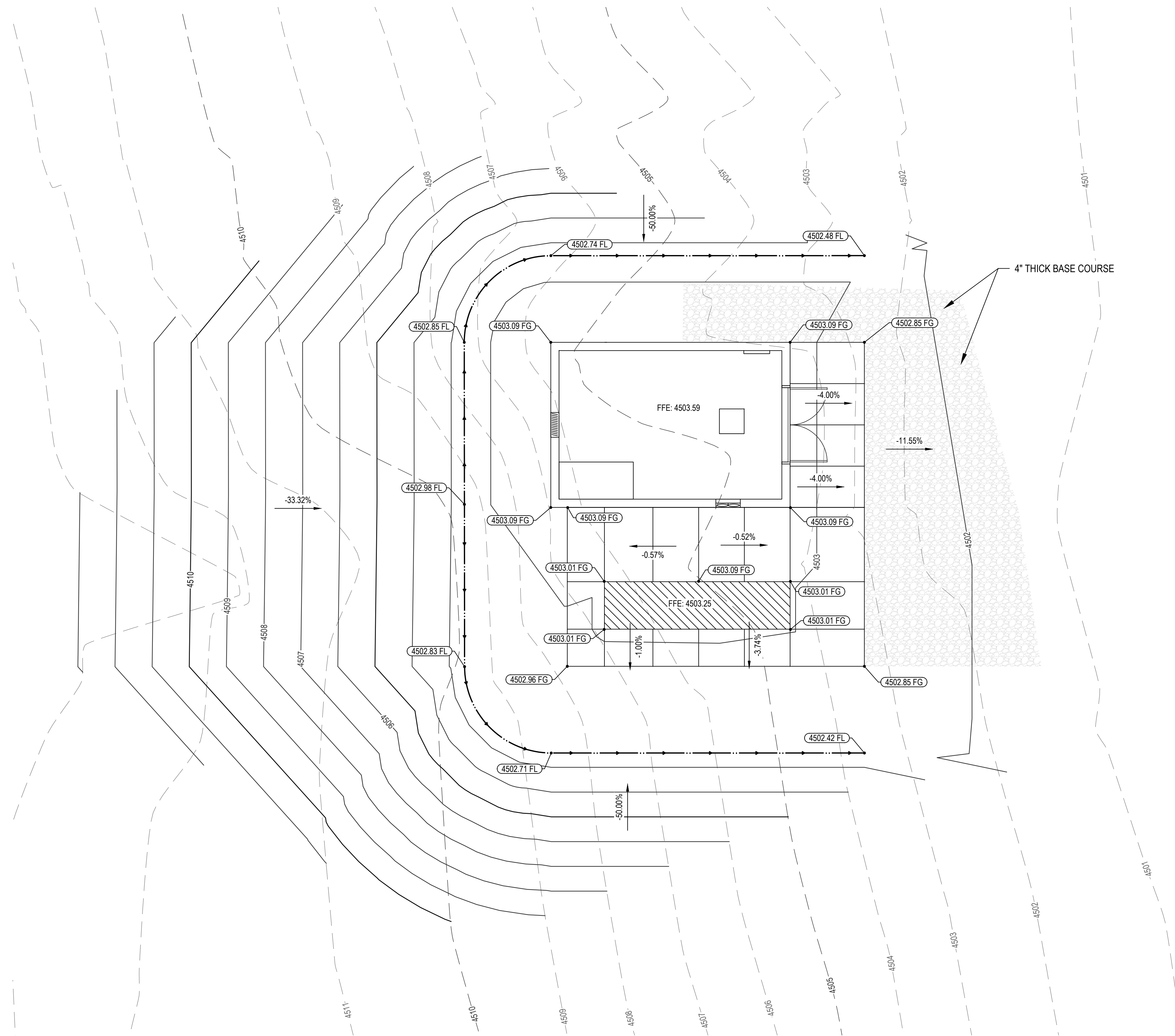
12200 NORTH 5600 WEST

CORNISH, UT 84308



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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 5 | OF 43 |
| SHEET NUMBER | CP101 | |

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APPROXIMATE QUANTITIES

CUT - 330 C.Y.
 FILL - 5 C.Y. (DOES NOT
 INCLUDE STRUCTURAL FILL
 OR BASE COURSE)

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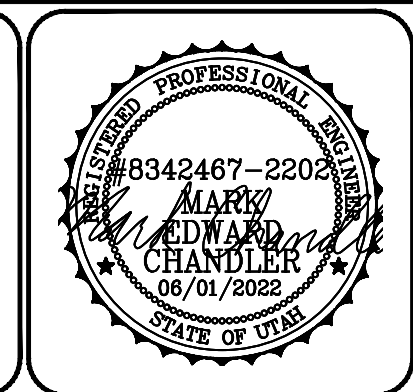
PRINCIPAL: M. HIRST, PE
 PROJECT MANAGER: M. CHANDLER, PE, PG
 CHECKED BY: M. CHANDLER, PE, PG
 DRAWN BY: C. HATCH
 DRAWING SCALE: AS SHOWN
 ISSUE DATE: JULY 8, 2022

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TOWN OF CORNISH
 PITCHER WELL HOUSE
 GRADING PLAN

12200 NORTH 5600 WEST

CORNISH, UT 84308

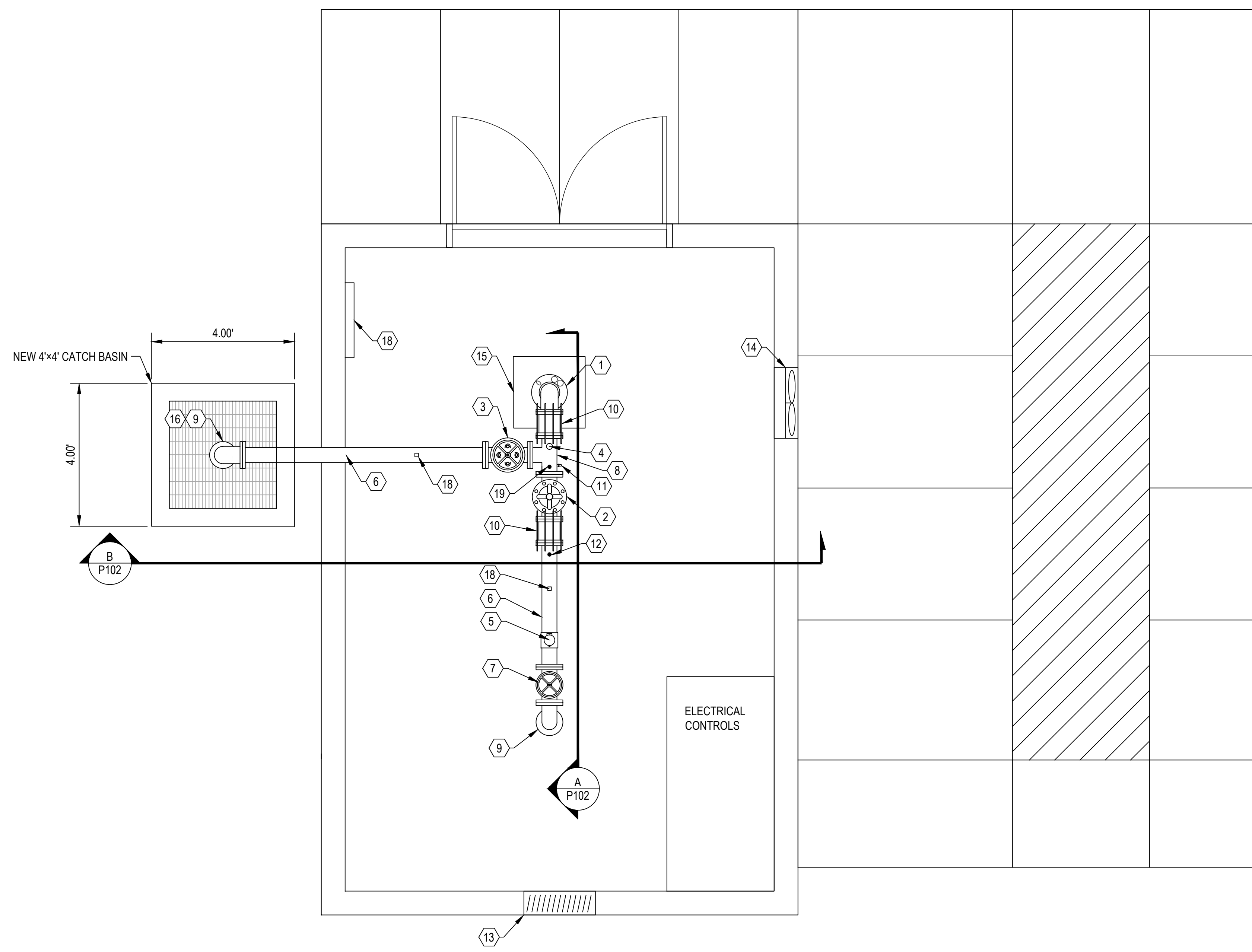


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| PROJECT NUMBER 2019-0406 | |
| SHEET 6 | OF 43 |
| SHEET NUMBER CP102 | |



PARTS LIST

- ① 8X4 DISCHARGE HEAD
- ② 4" CHECK VALVE CLA-VAL 81-02
- ③ 4" PUMP CONTROL VALVE CLA-VAL 61-02 W/ DUAL X105 LIMIT SWITCHES
- ④ 1/2" WELL SERVICE AIR VAC VALVE (VALMATIC #100ST). DISCHARGE PIPING TO FLOOR DRAIN.
- ⑤ 4" ROSEMOUNT 8700 SERIES MAG METER OR APPROVED EQUIVALENT
- ⑥ 4" DUCTILE SPOOL
- ⑦ 4" GATE VALVE
- ⑧ 4"x4" TEE
- ⑨ 4" 90° BEND
- ⑩ 4" DISMANTLING JOINT
- ⑪ 1/2" SMOOTH NOSE SAMPLE TAP W/ ISOLATION VALVE PER DETAIL 3/CP502
- ⑫ PRESSURE GAUGE & TRANSMITTER W/ ISOLATION VALVE PER DETAIL 3/CP502
- ⑬ 2'X2' MOTOR ACTUATED HORIZONTAL LOUVER PER DETAIL 2/SS04
- ⑭ FANTECH 2SHE1021 OR APPROVED EQUIVALENT EXHAUST FAN
- ⑮ 2'X2' WELL PEDESTAL PROTECTED IN PLACE
- ⑯ #4 STAINLESS STEEL SCREEN BOLTED TO DISCHARGE OUTLET
- ⑰ BUILDING SAFETY EQUIPMENT PER DETAIL 7/CP502
- ⑱ PIPE SUPPORT PER DETAIL 4/CP502
- ⑲ COMPOUND PRESSURE GAUGE WITH ISOLATION VALVE



SHEET NOTES

| | |
|----|--|
| 1. | ALL VALVES TO BE ANSI/ASME B16.42 PRESSURE CLASS 150 RATED |
| 2. | ALL SPOOLS AND FITTINGS TO BE DUCTILE IRON AND CONFORM TO AWWA C110 STANDARDS FOR 250 PSI FITTINGS |
| 3. | ALL GASKETS TO CONFORM TO AWWA C111 STANDARDS |
| 4. | DUCTILE IRON PIPE TO HAVE STANDARD CEMENT LINING |
| 5. | DIMENSIONS WILL VARY SLIGHTLY GIVEN CHOSEN MANUFACTURER FOR SPECIFIC PARTS. CONTRACTOR TO VERIFY PIPE DIMENSIONS BEFORE ORDERING ANY PIPE FITTINGS, SPOOLS OR VALVES |
| 6. | STRUCTURAL ITEMS OMITTED FROM PIPING SECTIONS (FOOTINGS, CONCRETE REINFORCEMENT, ETC.) |
| 7. | ALL PIPE FLASHING THROUGH WALLS PER DETAIL 1/CP502 |
| 8. | ALL PIPE BENEATH BUILDING SLAB TO BE CONCRETE ENCASED PER DETAIL 6/CP502 |
| 9. | USE FULL PORT VALVES AND FITTINGS |

100%

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PRINCIPAL
M. HIRST, PE

PROJECT MANAGER
M. CHANDLER, PE, PG

CHECKED BY
M. CHANDLER, PE, PG

DRAWN BY
C. HATCH

DRAWING SCALE
AS SHOWN

ISSUE DATE
JULY 8, 2022

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TOWN OF CORNISH
PITCHER WELL HOUSE
BUILDING PIPING PLAN

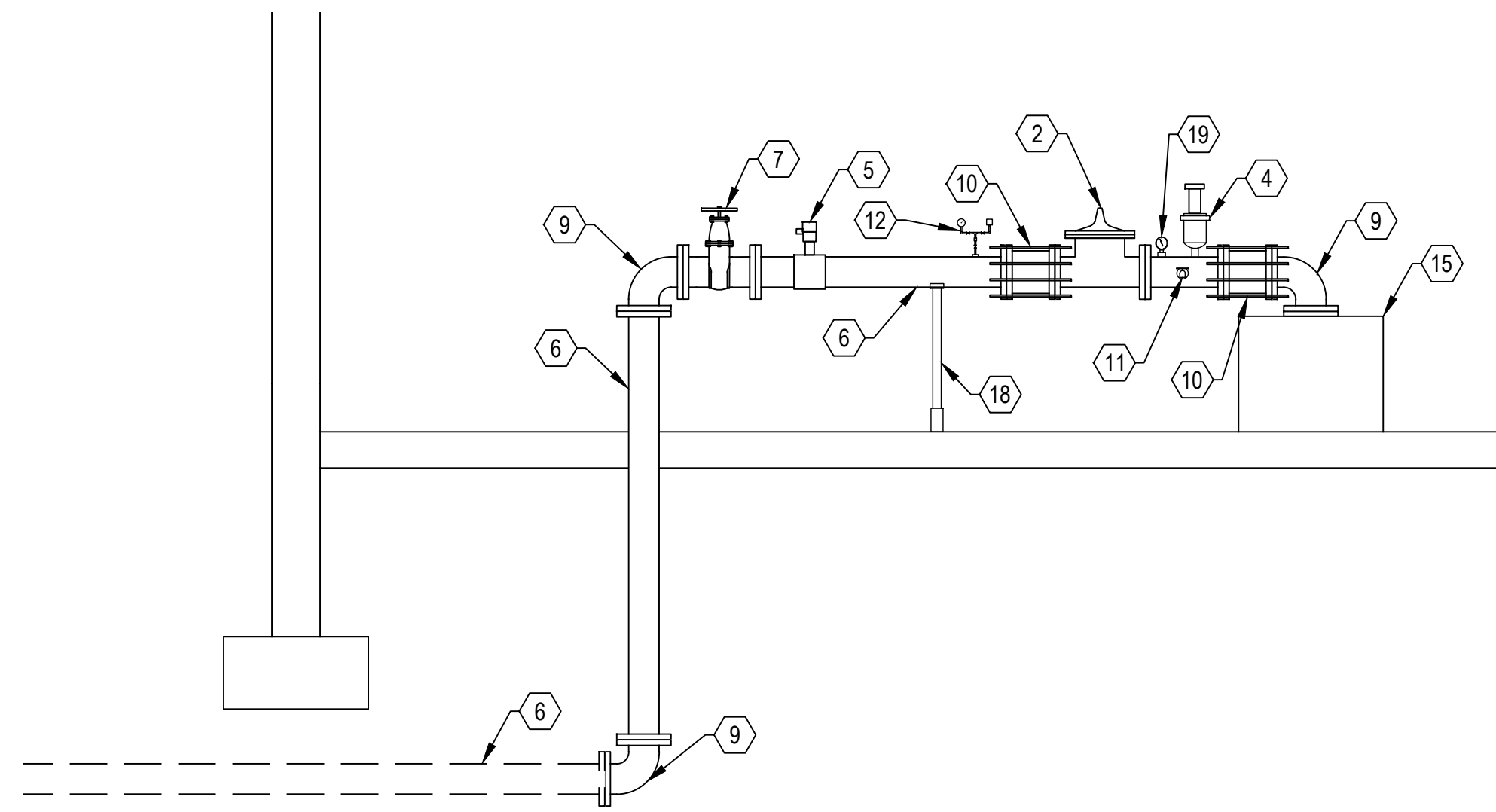
12200 NORTH 5600 WEST

CORNISH, UT 84308

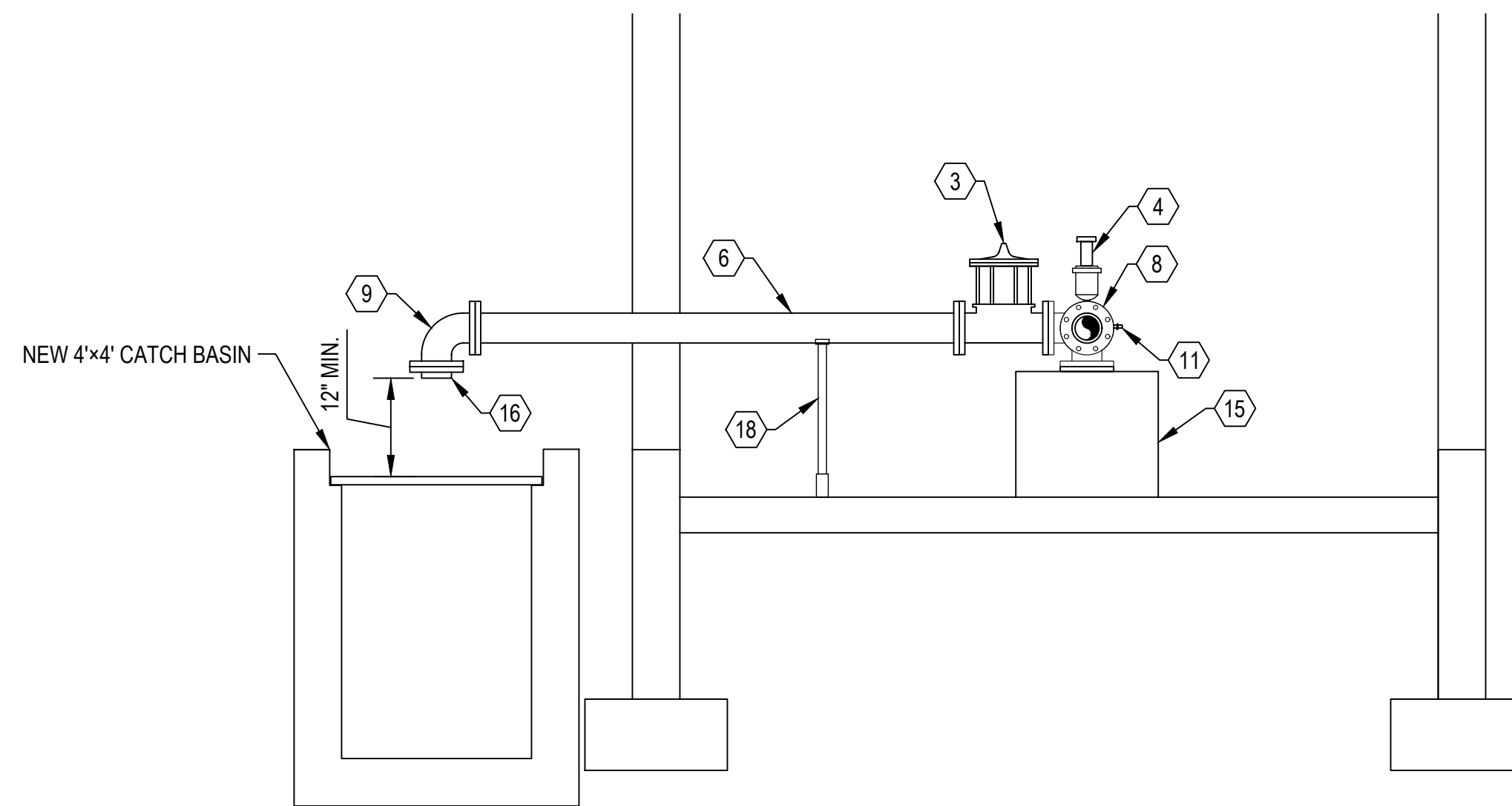


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 7 | OF 43 |
| SHEET NUMBER | P101 | |

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SECTION A
P102 SCALE: NONE



SECTION B
P102 SCALE: NONE

PARTS LIST

- 1 8X4 DISCHARGE HEAD
- 2 4" CHECK VALVE CLA-VAL 81-02
- 3 4" PUMP CONTROL VALVE CLA-VAL 61-02 W/ DUAL X105 LIMIT SWITCHES
- 4 1/2" WELL SERVICE AIR VAC VALVE (VALMATIC #100ST). DISCHARGE PIPING TO FLOOR DRAIN.
- 5 4" ROSEMOUNT 8700 SERIES MAG METER OR APPROVED EQUIVALENT
- 6 4" DUCTILE SPOOL
- 7 4" GATE VALVE
- 8 4"x4" TEE
- 9 4" 90° BEND
- 10 4" DISMANTLING JOINT
- 11 1/2" SMOOTH NOSE SAMPLE TAP W/ ISOLATION VALVE PER DETAIL 3/CP502
- 12 PRESSURE GAUGE & TRANSMITTER W/ ISOLATION VALVE PER DETAIL 3/CP502
- 13 2'X2' MOTOR ACTUATED HORIZONTAL LOUVER PER DETAIL 2/S504
- 14 FANTECH 2SHE1021 OR APPROVED EQUIVALENT EXHAUST FAN
- 15 2'X2' WELL PEDESTAL PROTECTED IN PLACE
- 16 #4 STAINLESS STEEL SCREEN BOLTED TO DISCHARGE OUTLET
- 17 BUILDING SAFETY EQUIPMENT PER DETAIL 7/CP502
- 18 PIPE SUPPORT PER DETAIL 4/CP502
- 19 COMPOUND PRESSURE GAUGE WITH ISOLATION VALVE

SHEET NOTES

| | |
|----|--|
| 1. | ALL VALVES TO BE ANSI/ASME B16.42 PRESSURE CLASS 150 RATED |
| 2. | ALL SPOOLS AND FITTINGS TO BE DUCTILE IRON AND CONFORM TO AWWA C110 STANDARDS FOR 250 PSI FITTINGS |
| 3. | ALL GASKETS TO CONFORM TO AWWA C111 STANDARDS |
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| 5. | DIMENSIONS WILL VARY SLIGHTLY GIVEN CHOSEN MANUFACTURER FOR SPECIFIC PARTS. CONTRACTOR TO VERIFY PIPE DIMENSIONS BEFORE ORDERING ANY PIPE FITTINGS, SPOOLS OR VALVES |
| 6. | STRUCTURAL ITEMS OMITTED FROM PIPING SECTIONS (FOOTINGS, CONCRETE REINFORCEMENT, ETC.) |
| 7. | ALL PIPE FLASHING THROUGH WALLS PER DETAIL 1/CP502 |
| 8. | ALL PIPE BENEATH BUILDING SLAB TO BE CONCRETE ENCASED PER DETAIL 6/CP502 |
| 9. | USE FULL PORT VALVES AND FITTINGS |

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| NO. | DATE | DESCRIPTION |
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 PROJECT MANAGER: M. CHANDLER, PE, PG
 CHECKED BY: M. CHANDLER, PE, PG
 DRAWN BY: C. HATCH
 DRAWING SCALE: AS SHOWN
 ISSUE DATE: JULY 8, 2022

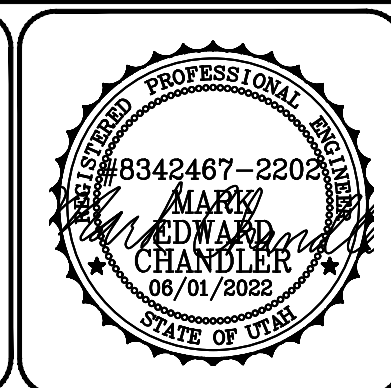
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TOWN OF CORNISH
 PITCHER WELL HOUSE
 BUILDING PIPING SECTION

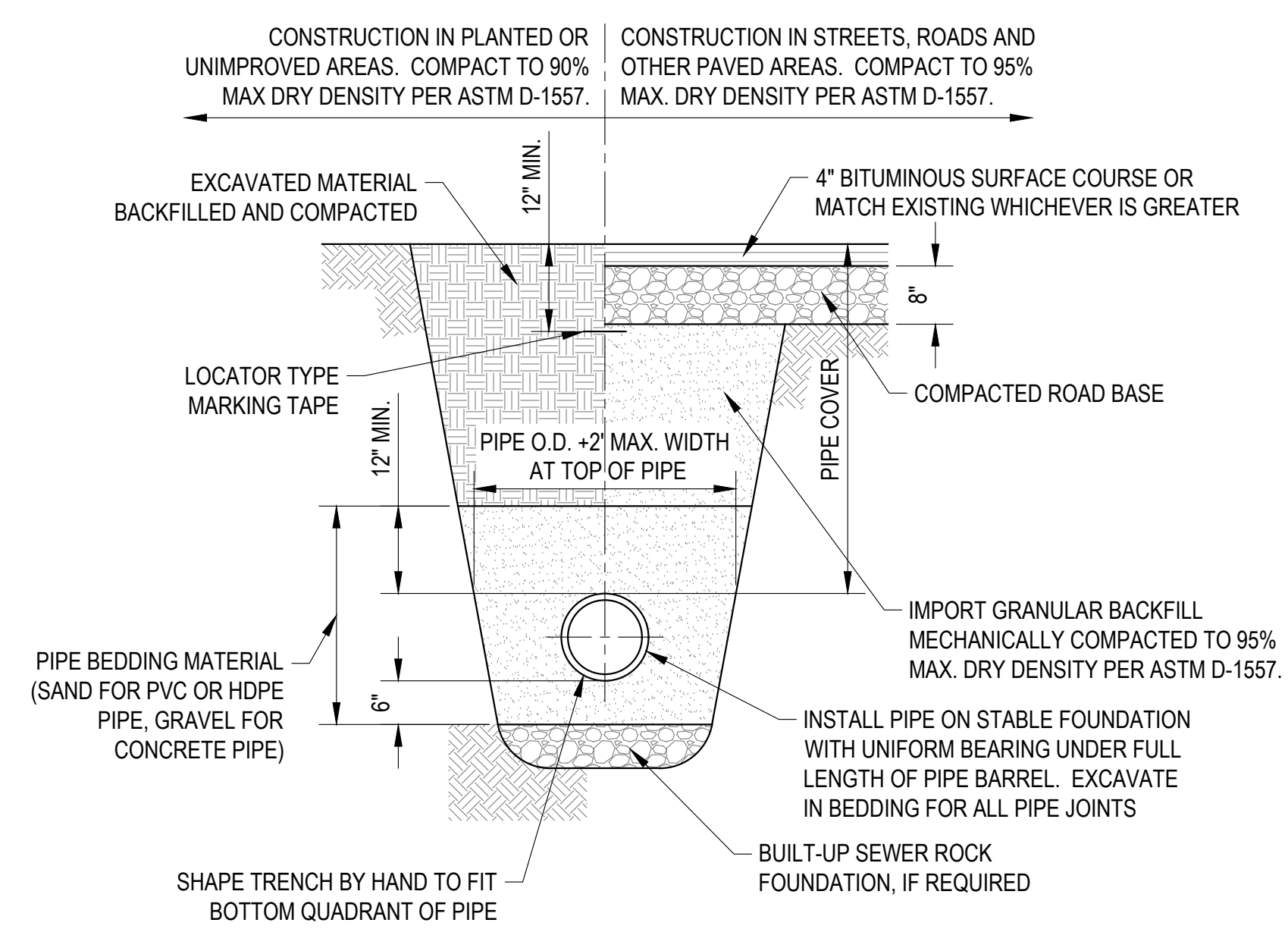
12200 NORTH 5600 WEST

CORNISH, UT 84308

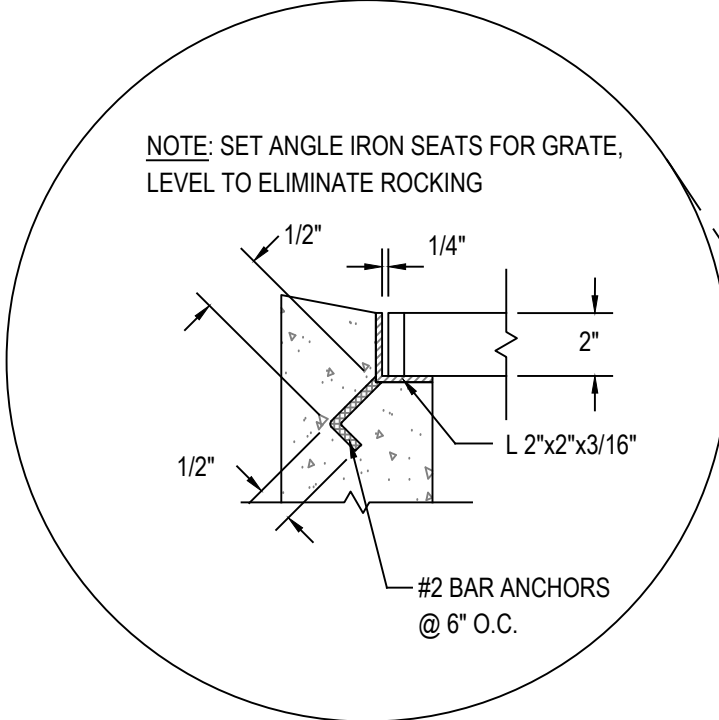


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 8 | OF 43 |
| SHEET NUMBER | P102 | |

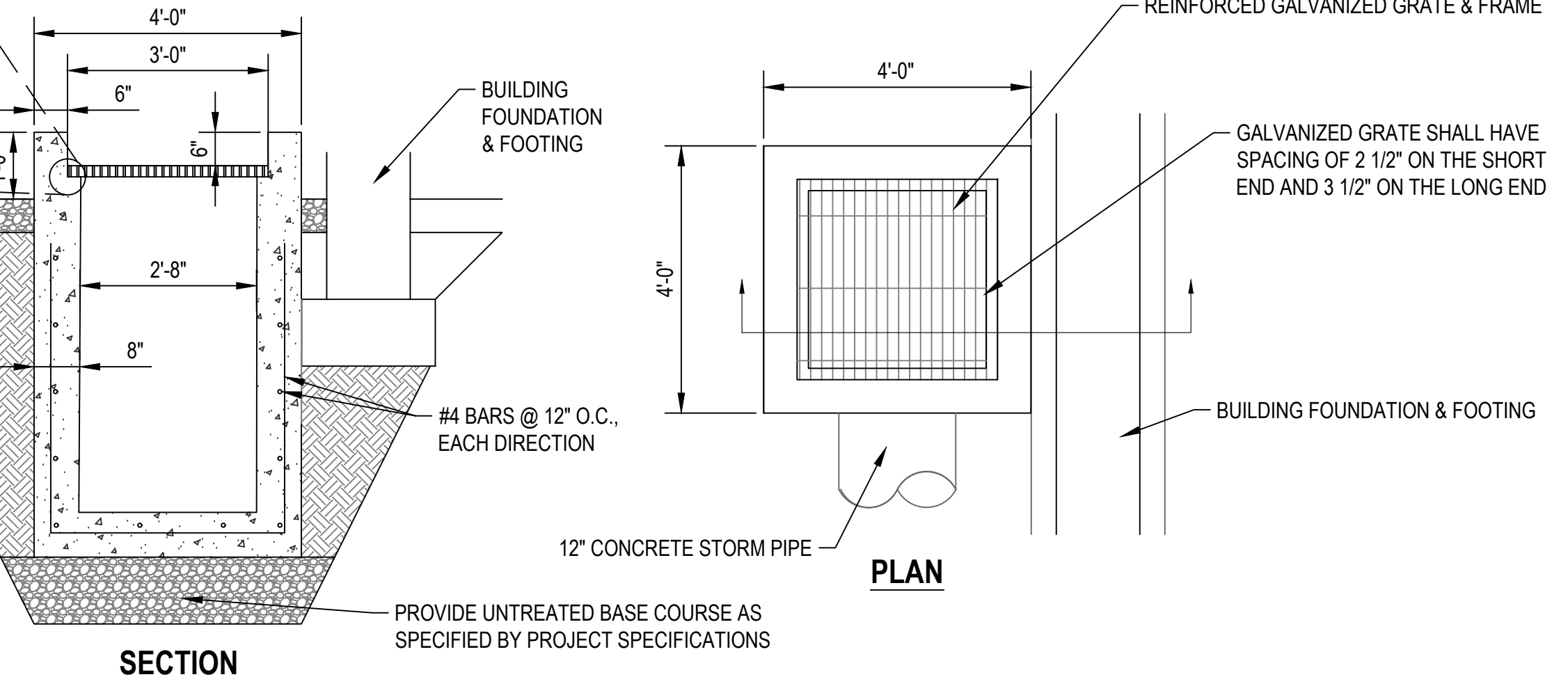
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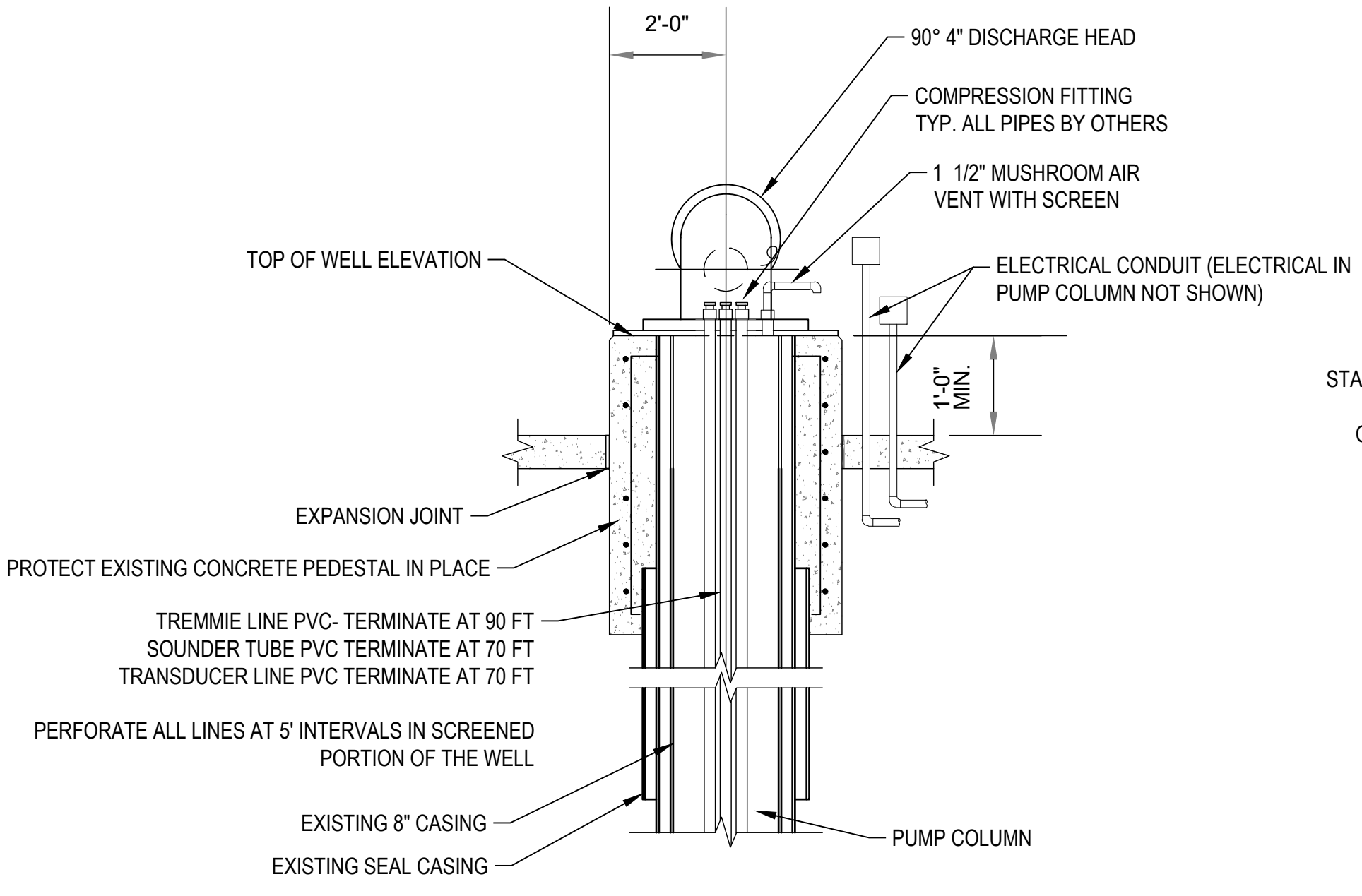
1 TYPICAL PIPE TRENCH SECTION
CP501 SCALE: NONE



• ADD AN ANTI-THEFT LOCKDOWN ATTACHMENT TO THE BLOW-OFF DISCHARGE BOX TO PREVENT STEALING OF THE GRATE

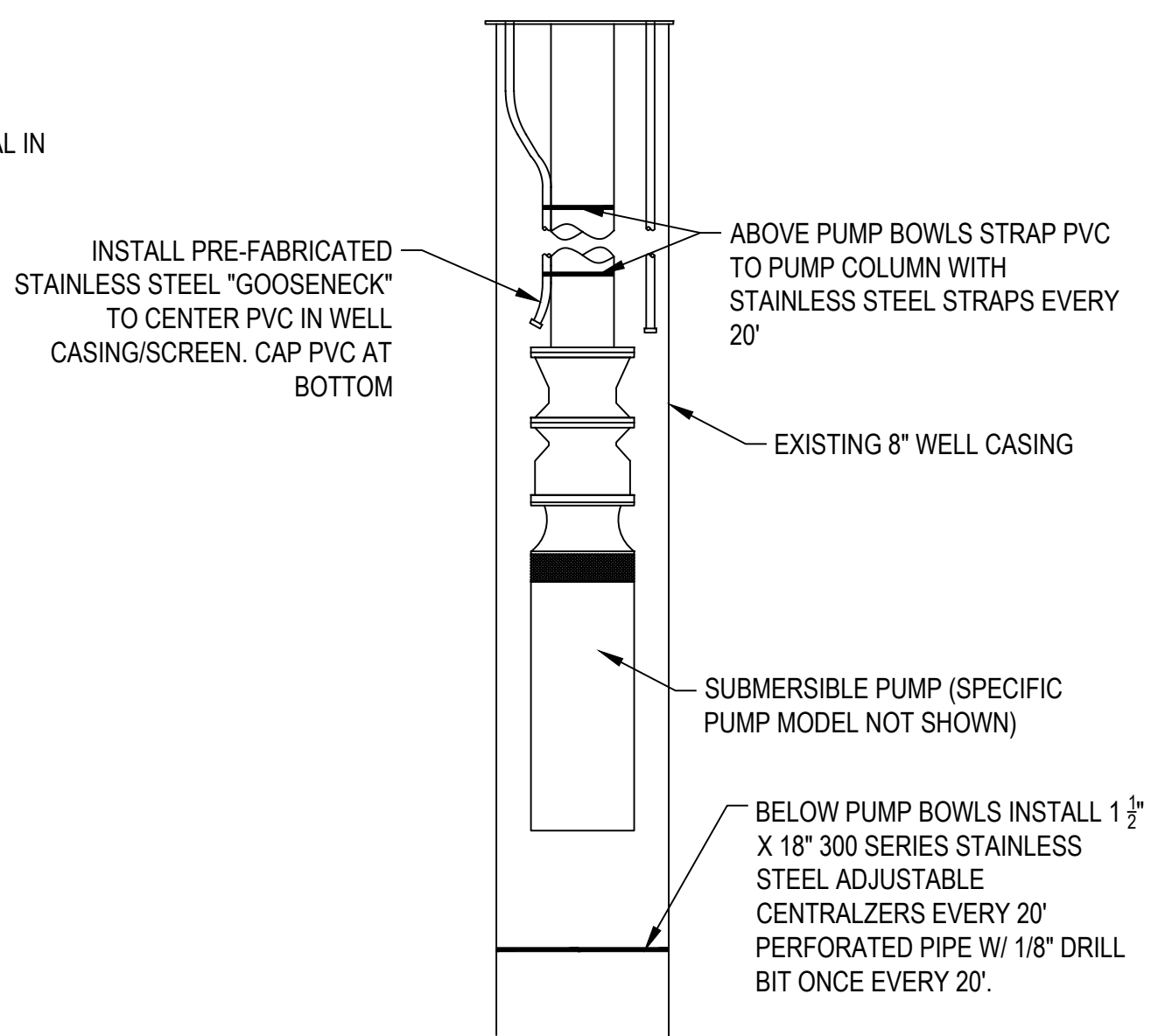


2 BLOW OFF DISCHARGE BOX
CP501 SCALE: NONE



- NOTE:
1. STRAP DEPTH GAUGE PIPE TO CASING DURING PUMP INSTALLATION. USE STAINLESS STEEL CLAMPS AT A 10'-0" O.C. DO NOT CRUSH PIPE.
 2. PUMP SUPPLIER TO REMOVE TEMPORARY CAP. INSTALL A NEW 1.25" THICK BASE FLANGE AT AN ELEVATION TO ACCOMMODATE THE INDICATED DISCHARGE CENTERLINE, NEW CASING THICKNESS TO MATCH EXISTING CASING
 3. SECURE MOTOR CABLE TO PUMP COLUMN EVERY 20FT DURING INSTALLATION.

3 WELL DETAIL
CP501 SCALE: NONE



4 TREMMIE LINE
CP501 SCALE: NONE

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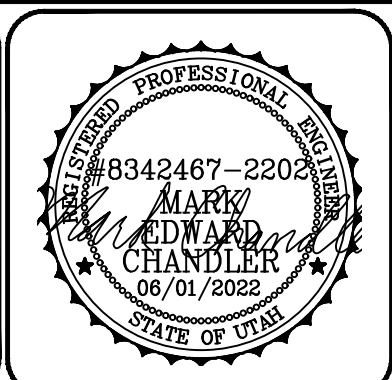
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DRAWN BY: C. HATCH
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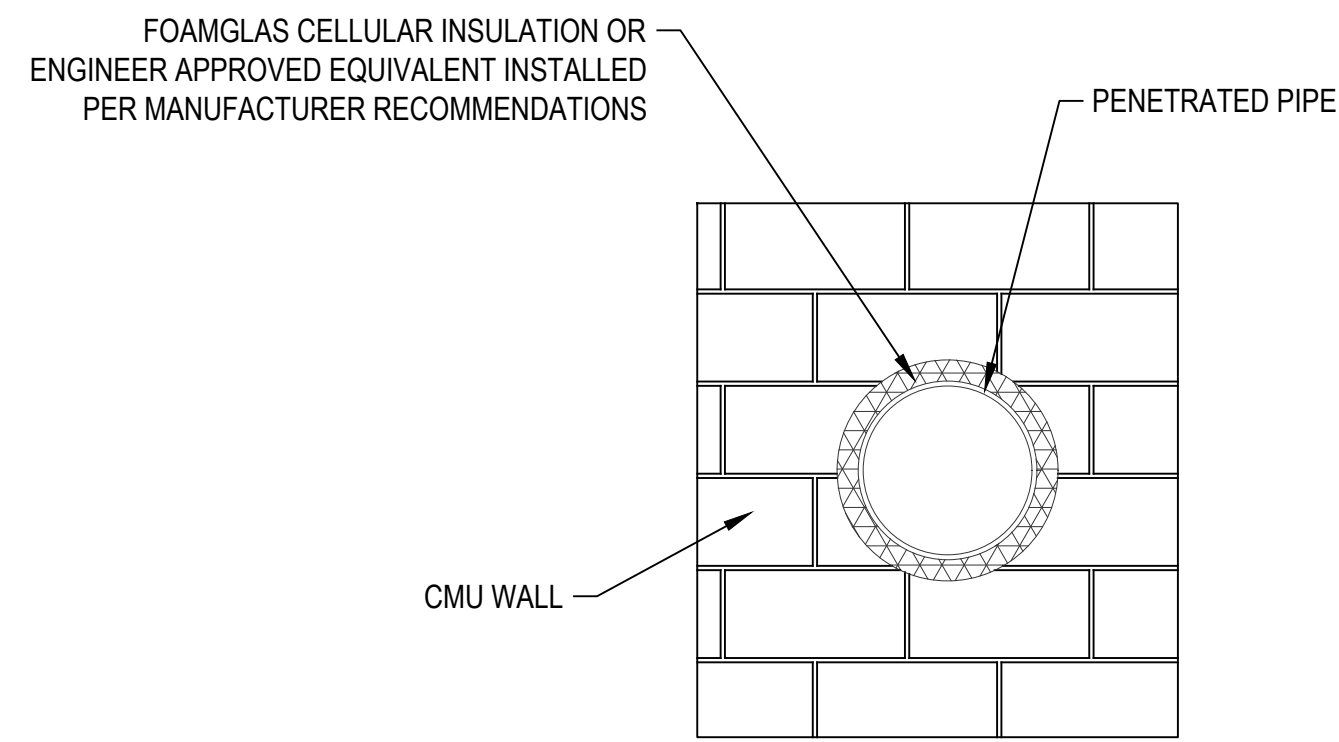
TOWN OF CORNISH
PITCHER WELL HOUSE
UTILITY DETAILS

12200 NORTH 5600 WEST
CORNISH, UT 84308

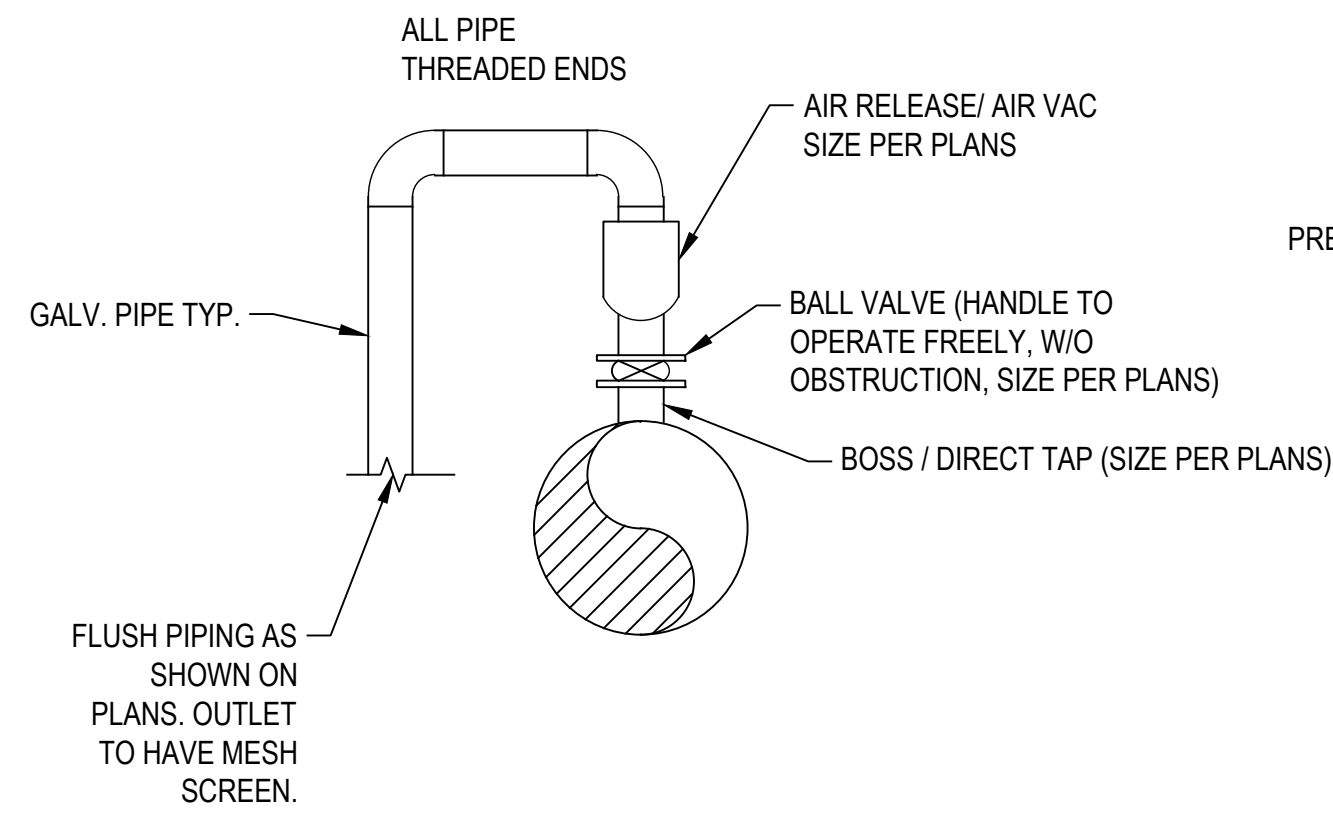


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 9 | OF 43 |
| SHEET NUMBER | CP501 | |

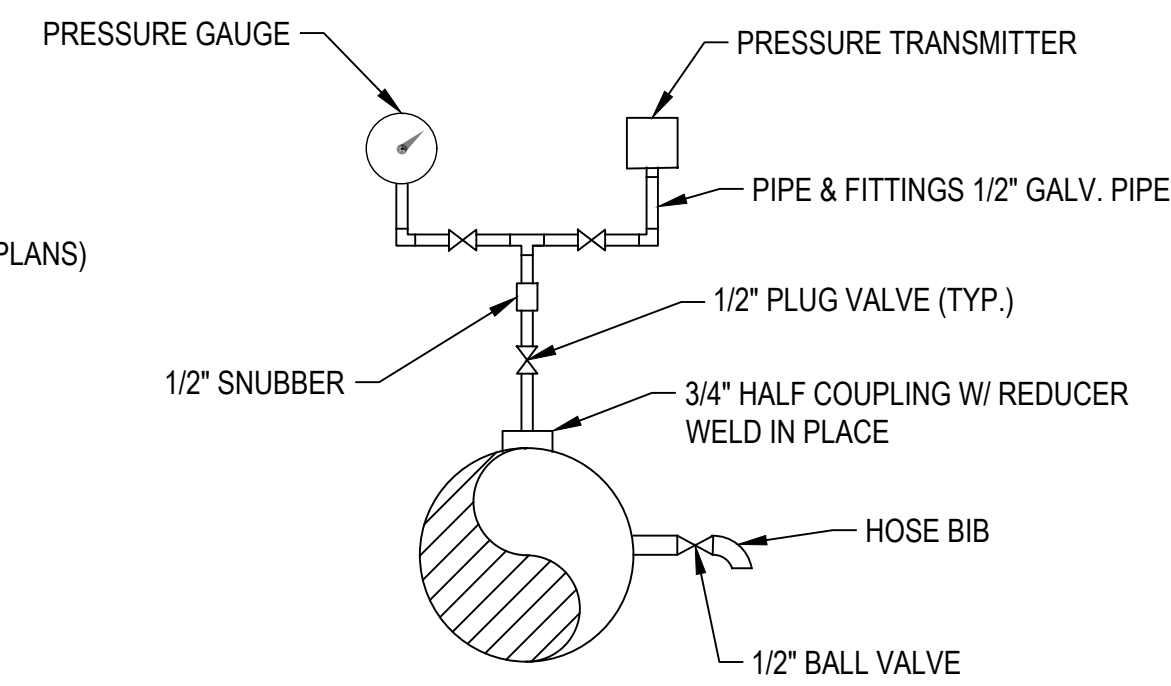
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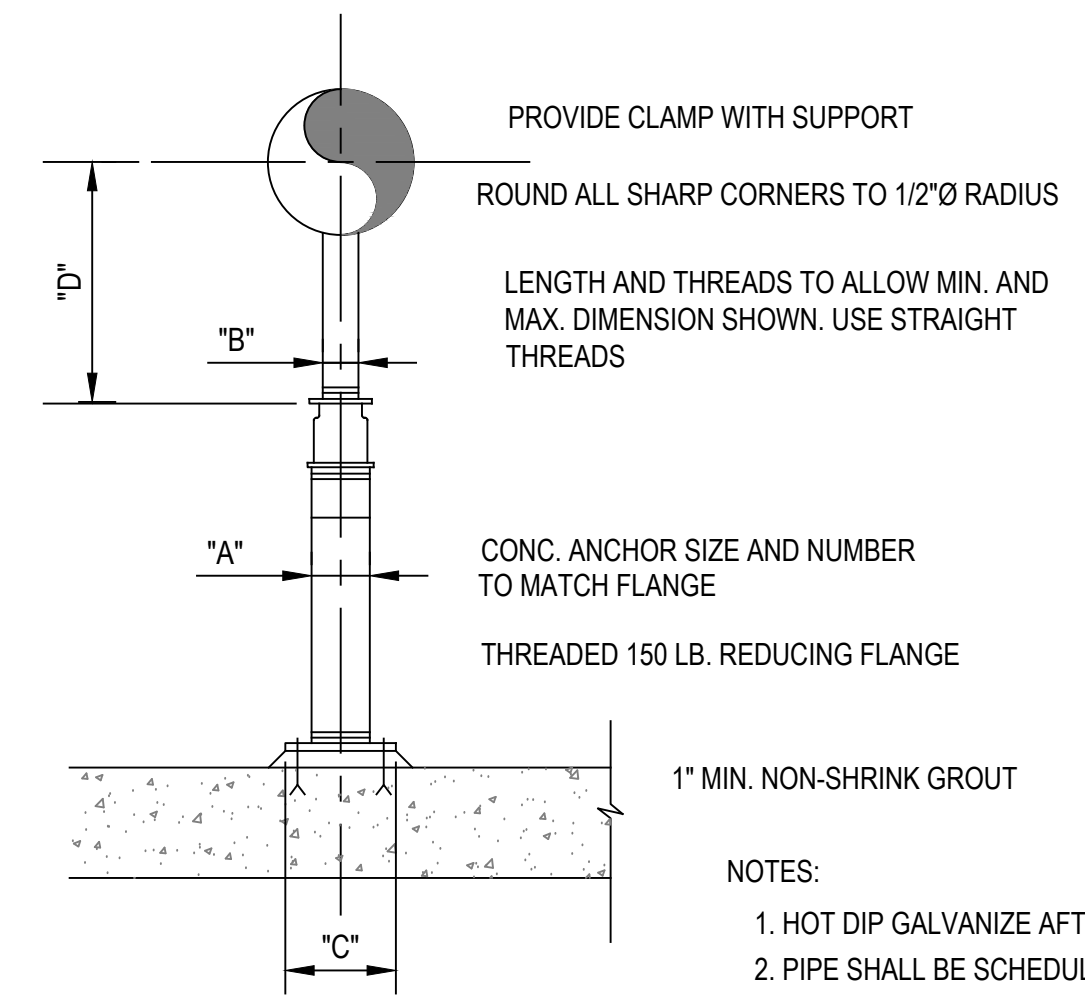
1 PIPE FLASHING
CP502 SCALE: NONE



2 AIR/VAC ASSEMBLY
CP502 SCALE: NONE



3 PRESSURE GAUGE & SAMPLE TAP
CP502 SCALE: NONE

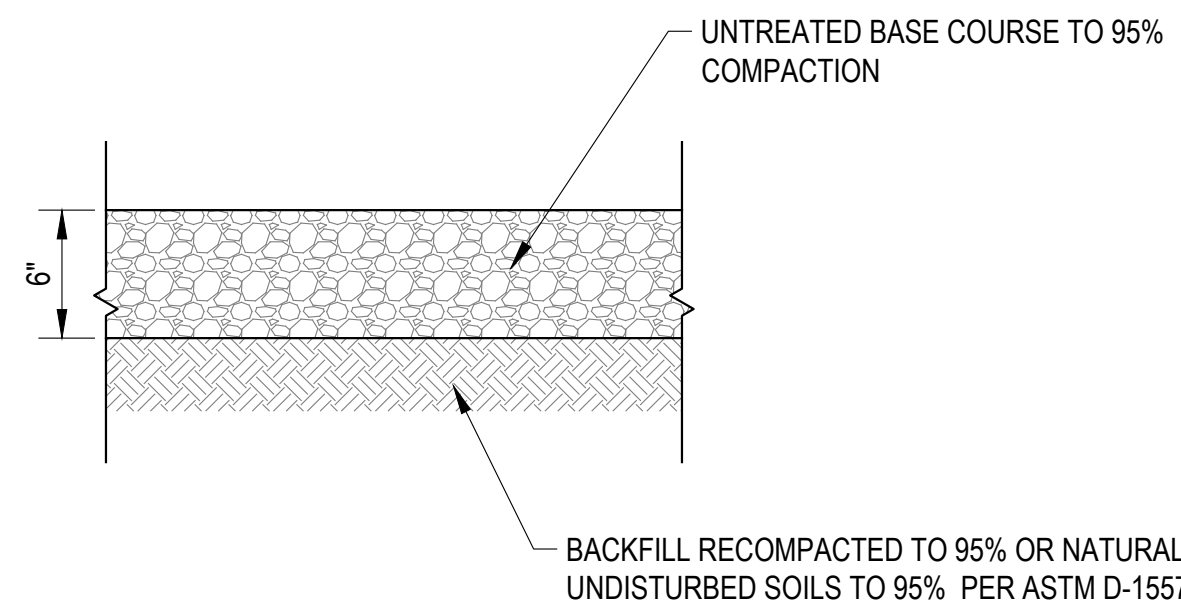


ADJUSTABLE PIPE SADDLE SUPPORT SCHEDULE

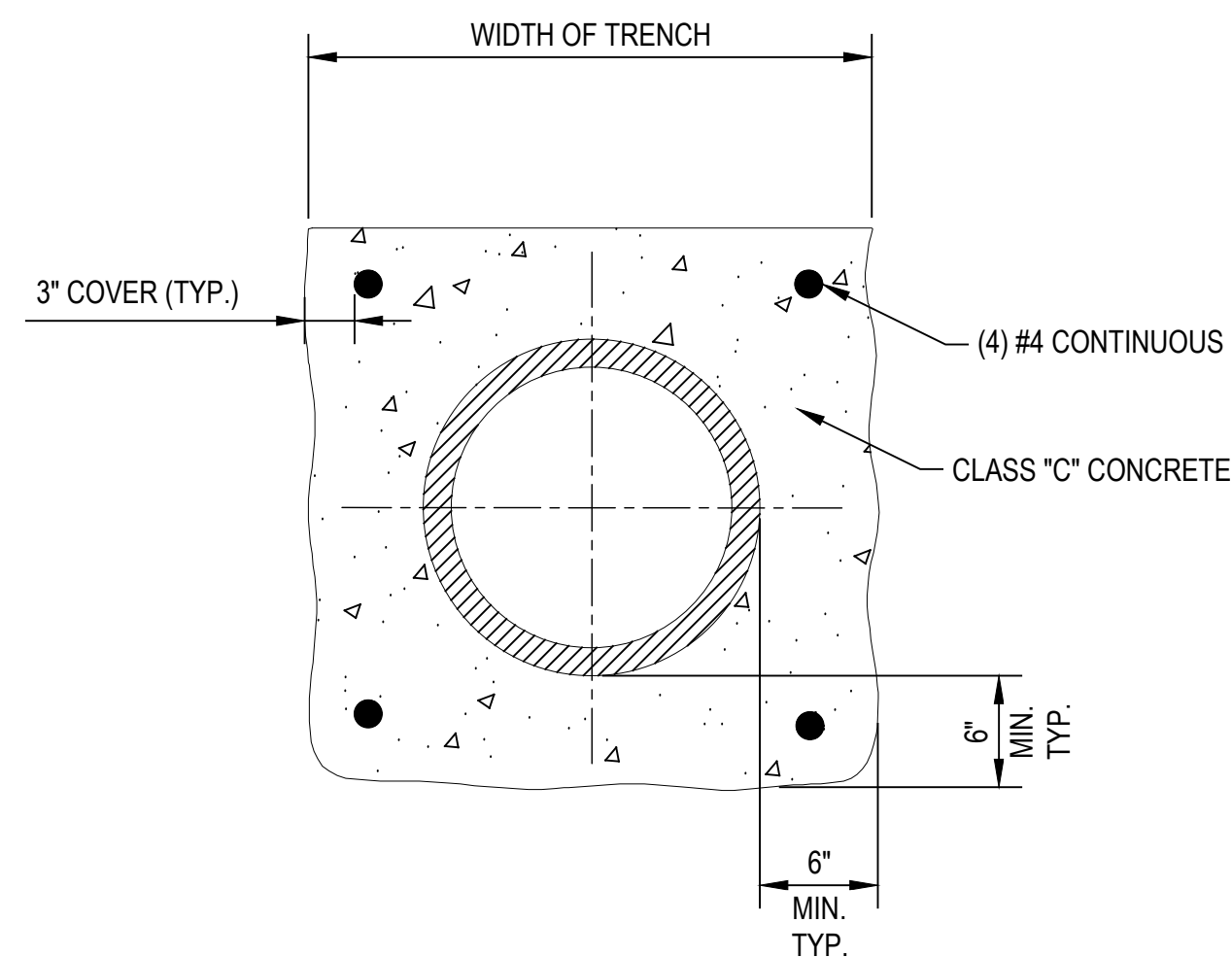
| PIPE SIZE | A | B | C | D | |
|-----------|--------|--------|----|---------|---------|
| | | | | MINIMUM | MAXIMUM |
| 2 1/2" | 2 1/2" | 1 1/2" | 9" | 6" | 13" |
| 3" | 2 1/2" | 1 1/2" | 9" | 8 1/2" | 13 1/2" |
| 3 1/2" | 2 1/2" | 1 1/2" | 9" | 8 1/2" | 13 1/2" |
| 4" | 3" | 2 1/2" | 9" | 9 1/2" | 14" |
| 6" | 3" | 2 1/2" | 9" | 10 1/2" | 15 1/2" |
| 8" | 3" | 2 1/2" | 9" | 11 1/2" | 16 1/2" |
| 10" | 3" | 2 1/2" | 9" | 13 1/2" | 18 1/2" |
| 12" | 3" | 2 1/2" | 9" | 15" | 19 1/2" |

USE 2 1/2" SUPPORTS FOR PIPE LESS THAN 2 1/2"

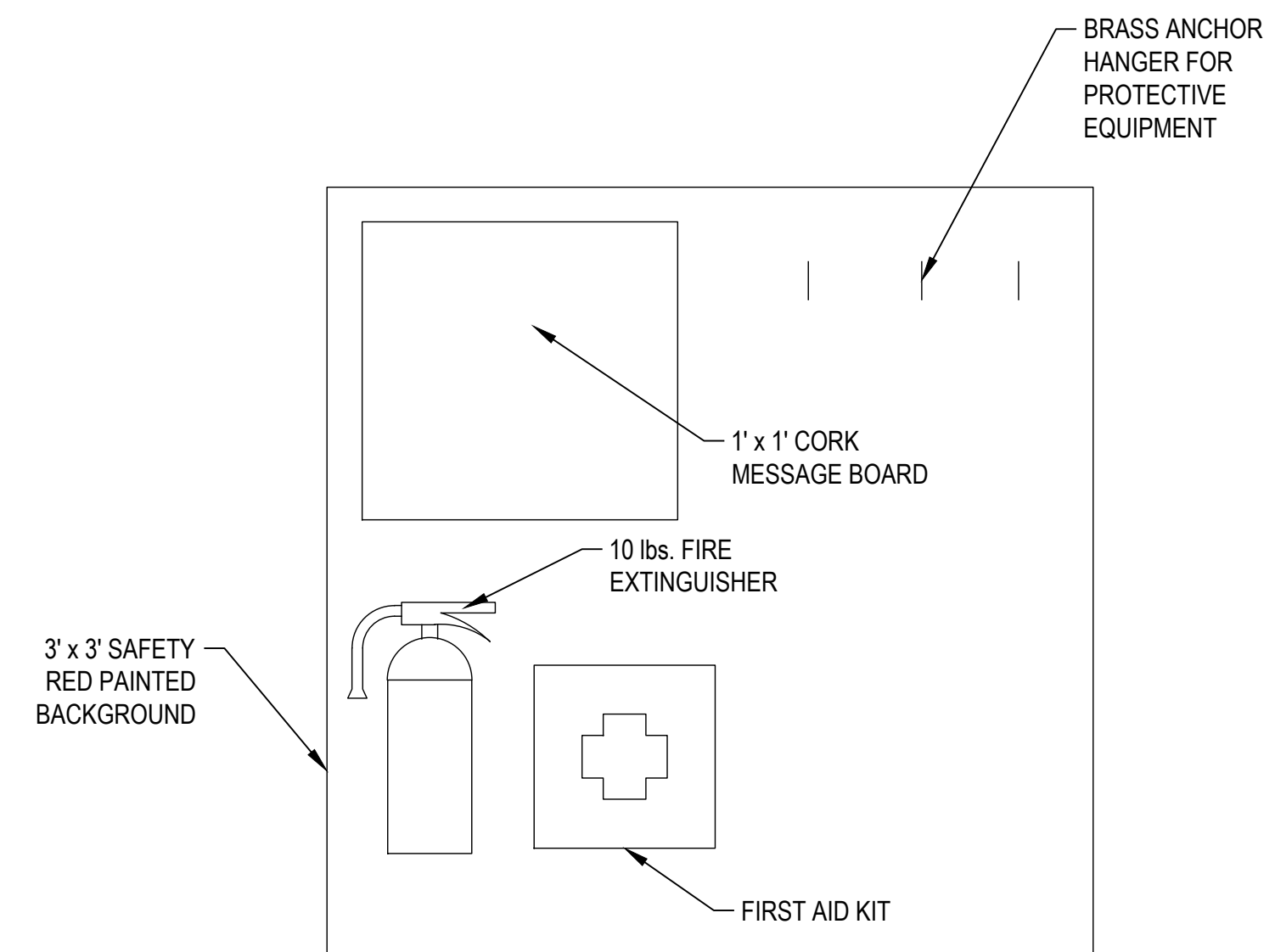
4 TYPICAL PIPE SUPPORT DETAIL
CP502 SCALE: NONE



5 ROAD BASE PARKING SECTION
CP502 SCALE: NONE



6 CONCRETE ENCASEMENT OF PIPE
CP502 SCALE: NONE



7 SAFETY EQUIPMENT
CP502 SCALE: NONE

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DRAWN BY: C. HATCH
DRAWING SCALE: AS SHOWN
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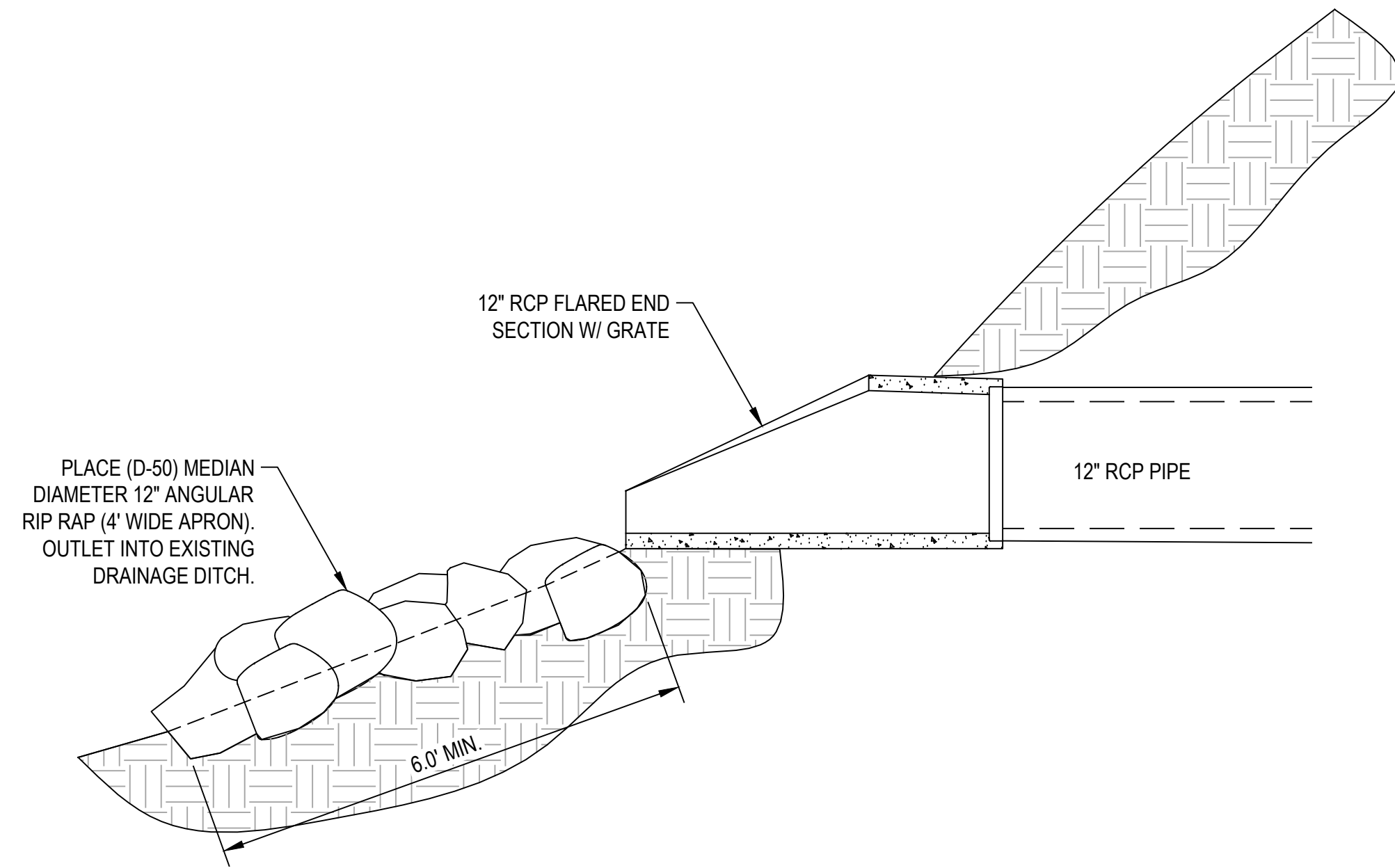
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CORNISH, UT 84308

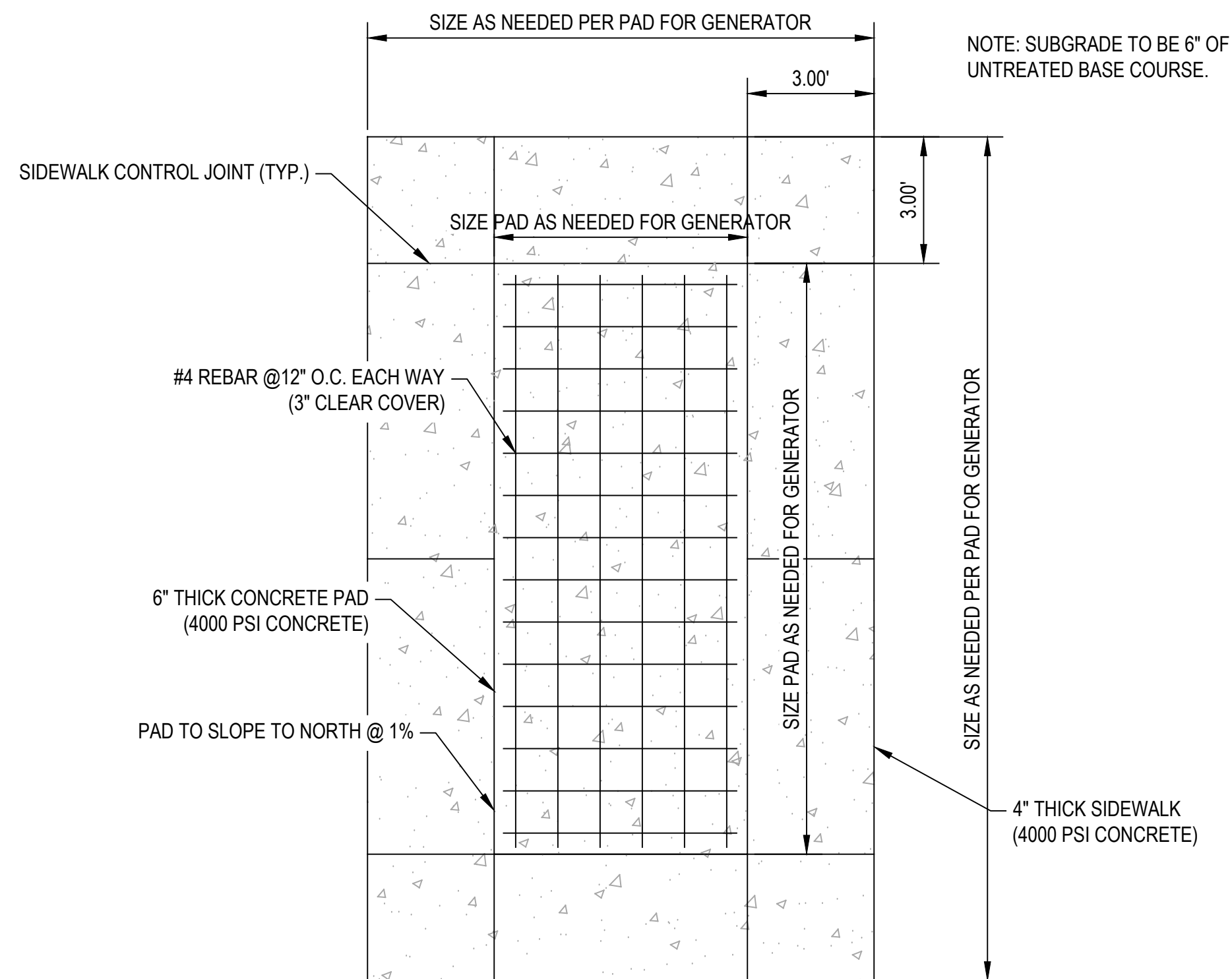


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 10 | OF 43 |
| SHEET NUMBER | CP502 | |

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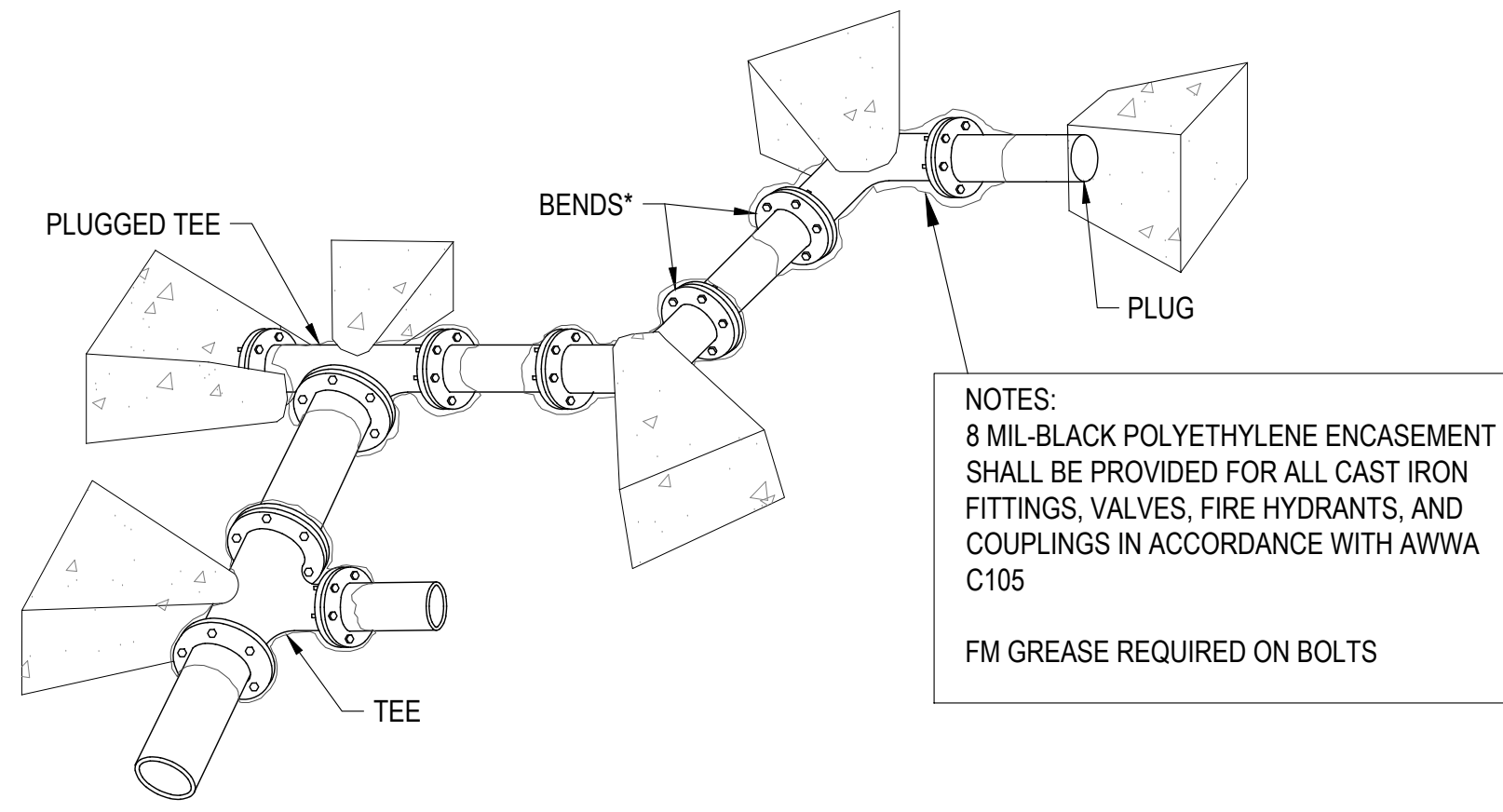
1 STORM DRAIN OUTLET
CP503 / SCALE: NONE



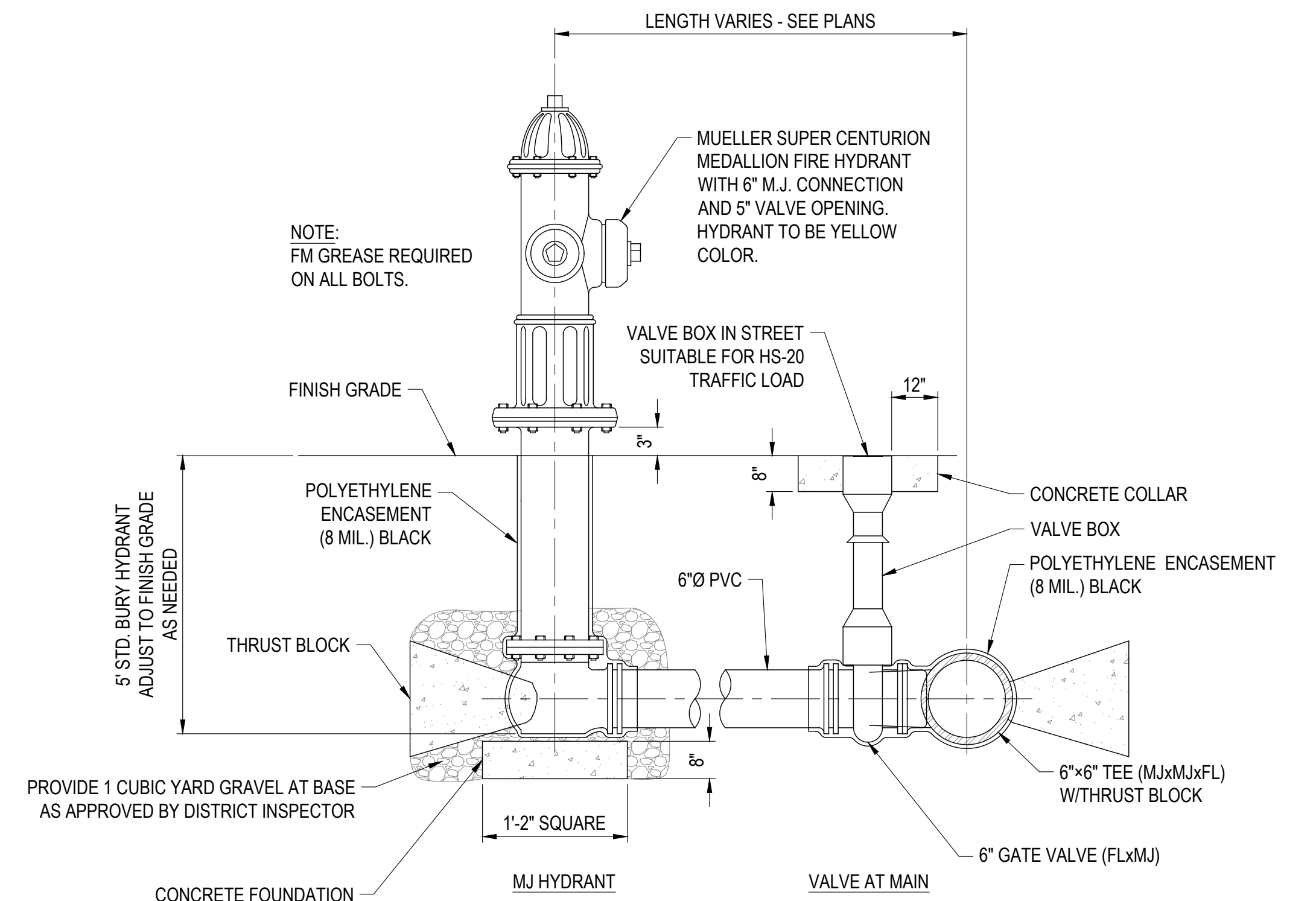
3 CONCRETE GENERATOR PAD
CP503 / SCALE: NONE

THRUST BLOCKS
FROM APWA 2017 STANDARDS

| PIPE DIAMETER | MINIMUM BEARING AREA (SQ. FT) | | |
|---------------|-------------------------------|----------------|----------------------|
| | 90 DEGREE BEND | 45 DEGREE BEND | TEE, DEAD END, VALVE |
| 4" | 3 | 2 | 2 |



2 THRUST BLOCK
CP503 / SCALE: NONE



3 FIRE HYDRANT ASSEMBLY
CP503 / SCALE: NONE

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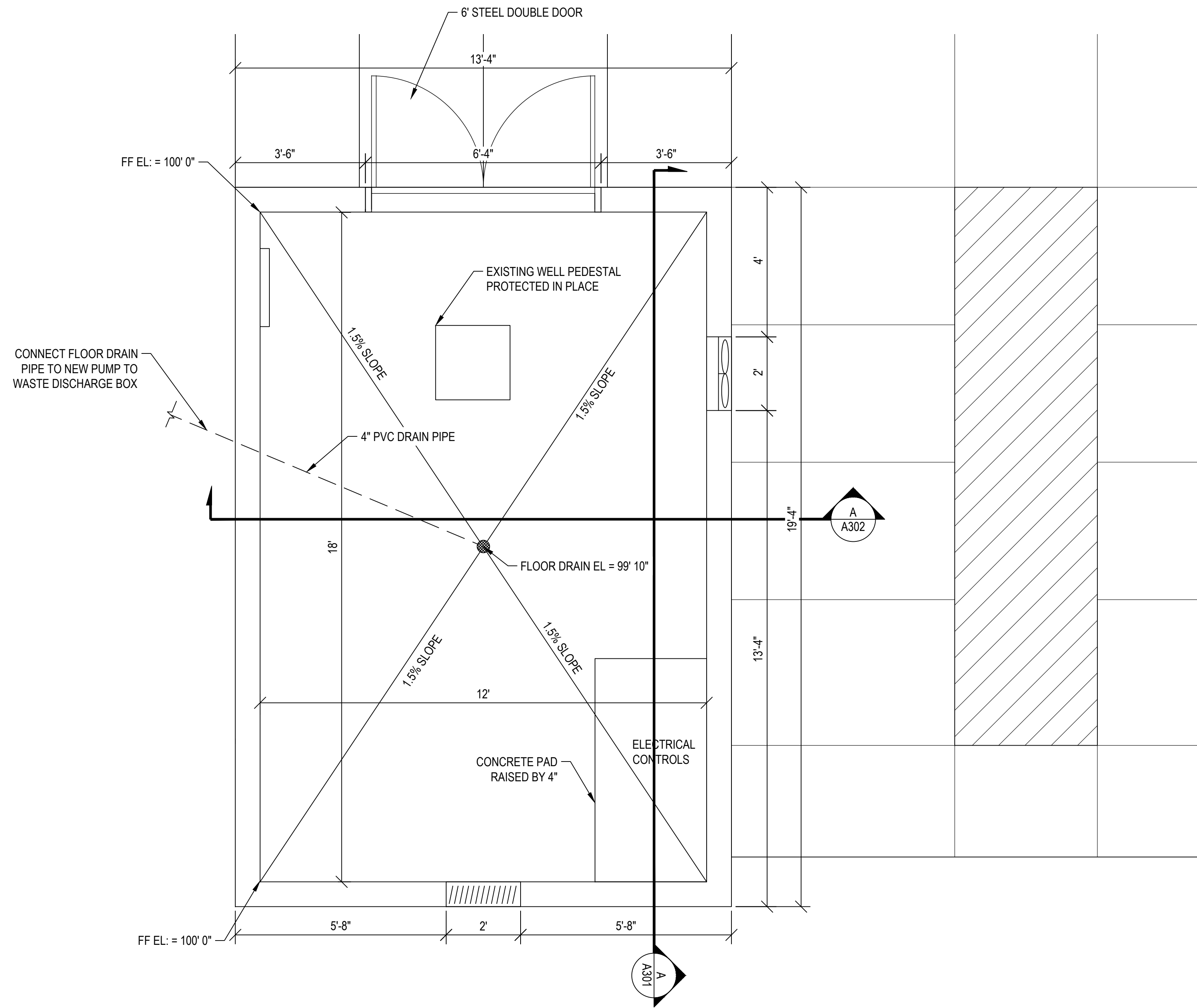
TOWN OF CORNISH
PITCHER WELL HOUSE
UTILITY DETAILS

12200 NORTH 5600 WEST
CORNISH, UT 84308



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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 11 | OF 43 |
| SHEET NUMBER | CP503 | |

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1 FLOOR PLAN
A101 SCALE: 1/2" = 1'-0"

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PROJECT MANAGER
M. CHANDLER, PE, PG
CHECKED BY
M. CHANDLER, PE, PG
DRAWN BY
C. HATCH
DRAWING SCALE
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ISSUE DATE
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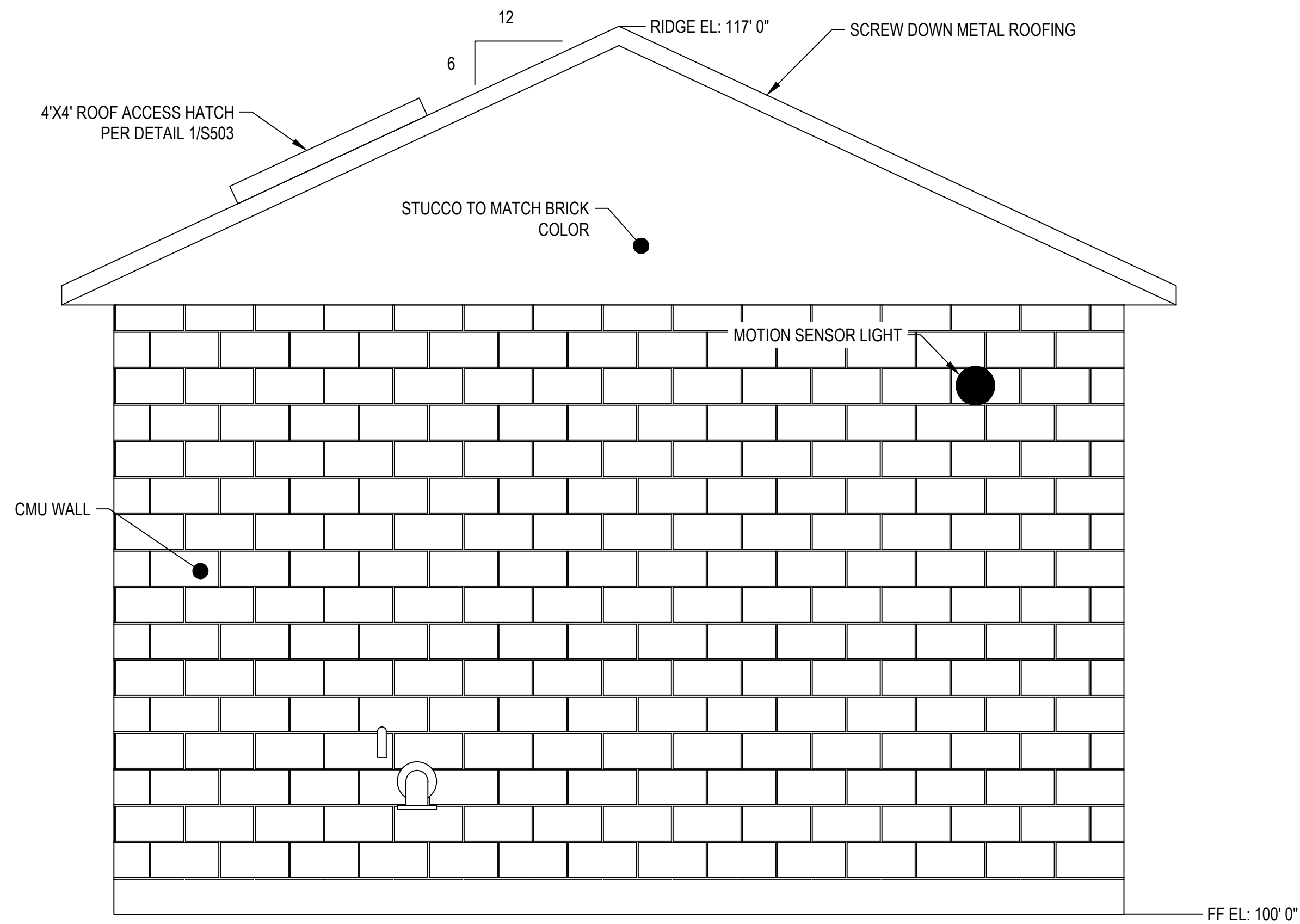
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FLOOR PLAN

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CORNISH, UT 84308

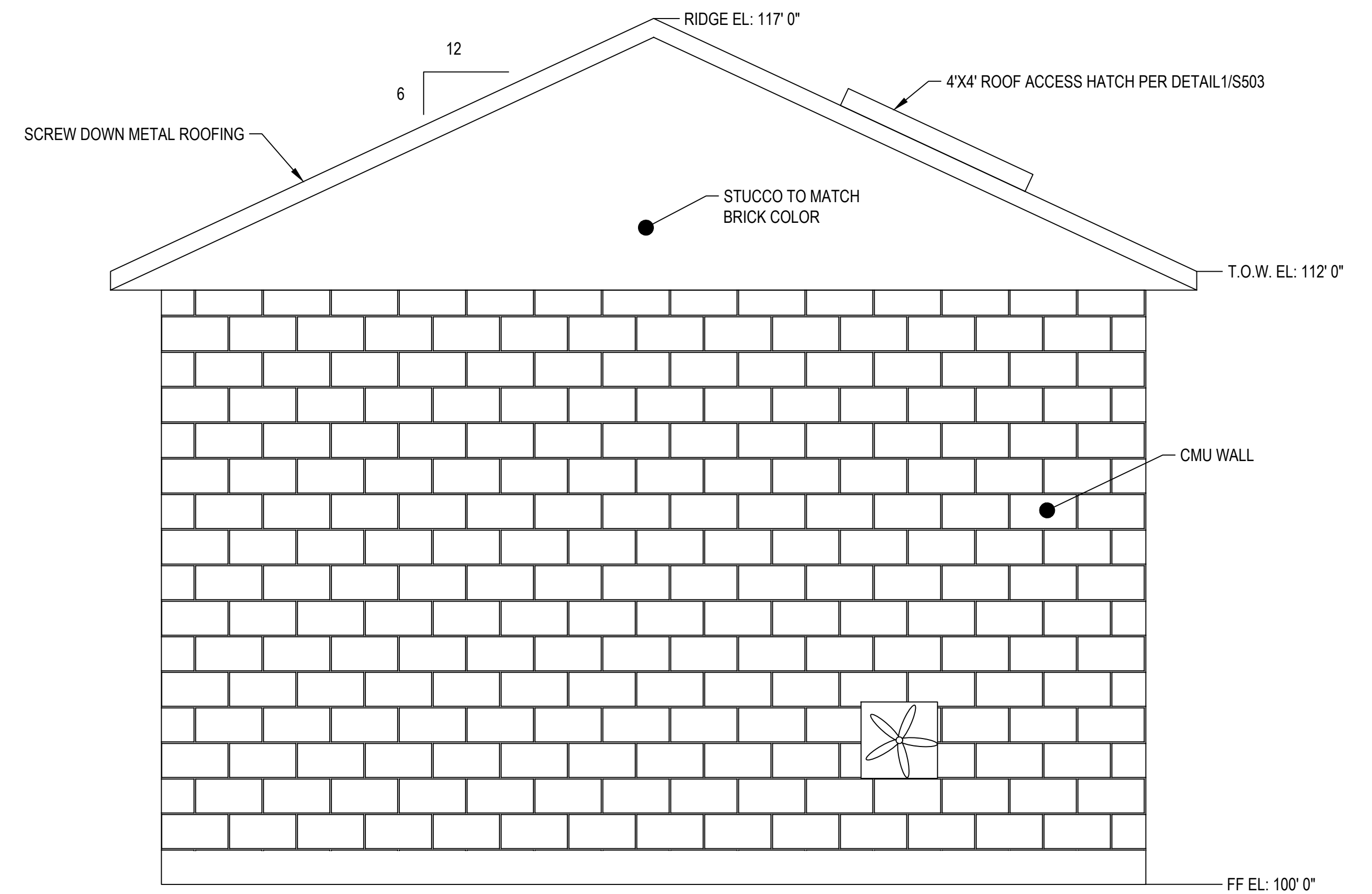


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 12 | OF 43 |
| SHEET NUMBER | A101 | |

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A NORTH ELEVATION
A201 SCALE: 1/2" = 1'-0"



B SOUTH ELEVATION
A201 SCALE: 1/2" = 1'-0"

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DRAWING SCALE: AS SHOWN
ISSUE DATE: JULY 8, 2022

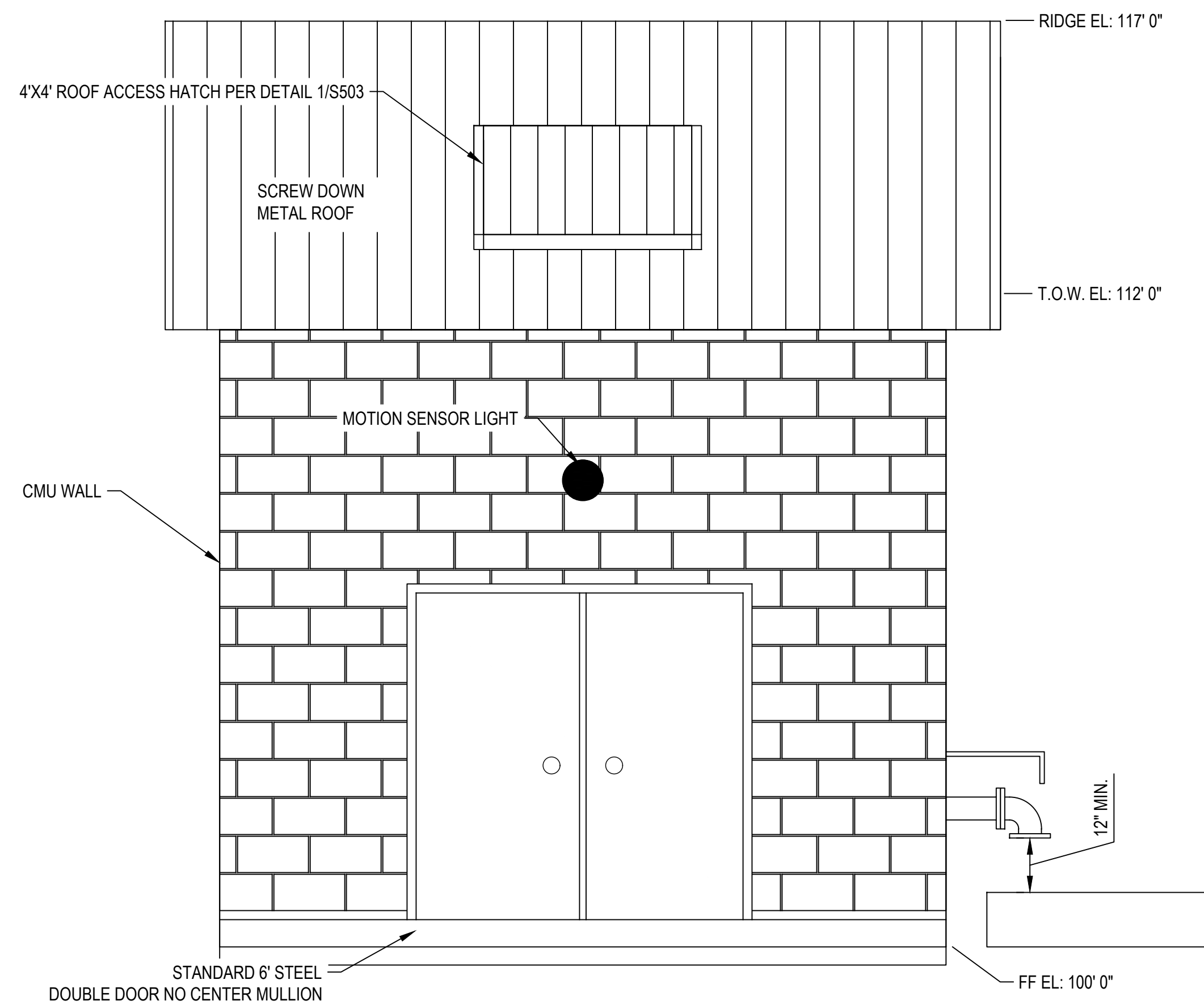
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TOWN OF CORNISH
PITCHER WELL HOUSE
BUILDING ELEVATIONS
12200 NORTH 5600 WEST
CORNISH, UT 84308

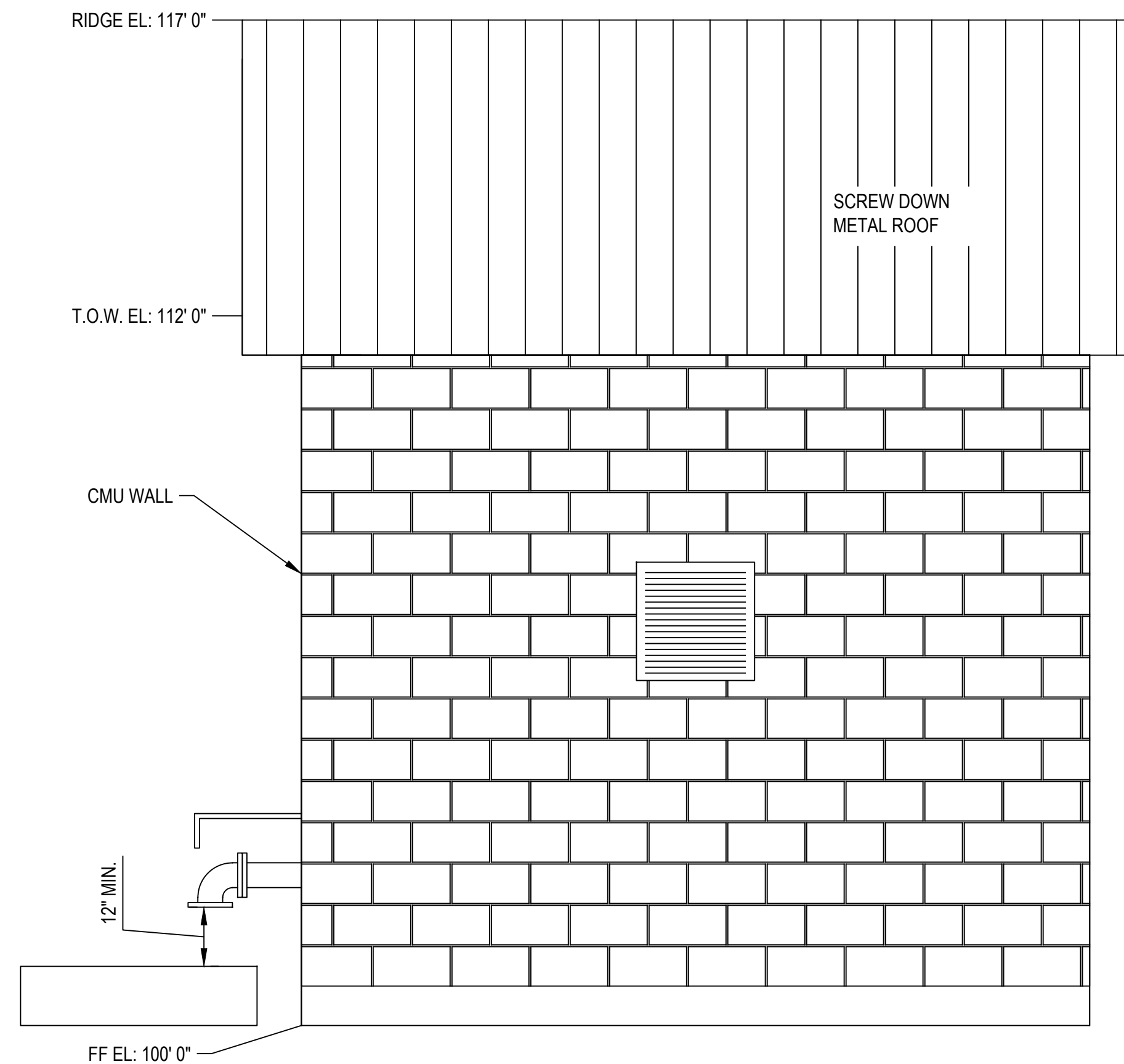


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 13 | OF 43 |
| SHEET NUMBER | A201 | |

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A EAST ELEVATION
A202 SCALE: 1/2" = 1'-0"



B WEST ELEVATION
A202 SCALE: 1/2" = 1'-0"

100%

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0 1 2
IF THE ABOVE SCALE BAR DOES NOT MEASURE 1-INCH IN LENGTH, DO NOT USE THIS DRAWING FOR SCALING PURPOSES. DIMENSIONS AND MEASUREMENTS SPECIFIED IN THE DRAWING TAKE PRECEDENCE TO SCALED MEASUREMENTS.

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PROJECT MANAGER: M. CHANDLER, PE, PG
CHECKED BY: M. CHANDLER, PE, PG
DRAWN BY: C. HATCH
DRAWING SCALE: AS SHOWN
ISSUE DATE: JULY 8, 2022

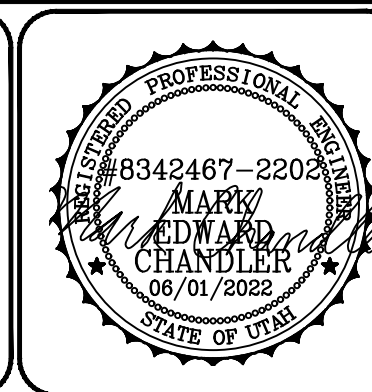
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TOWN OF CORNISH
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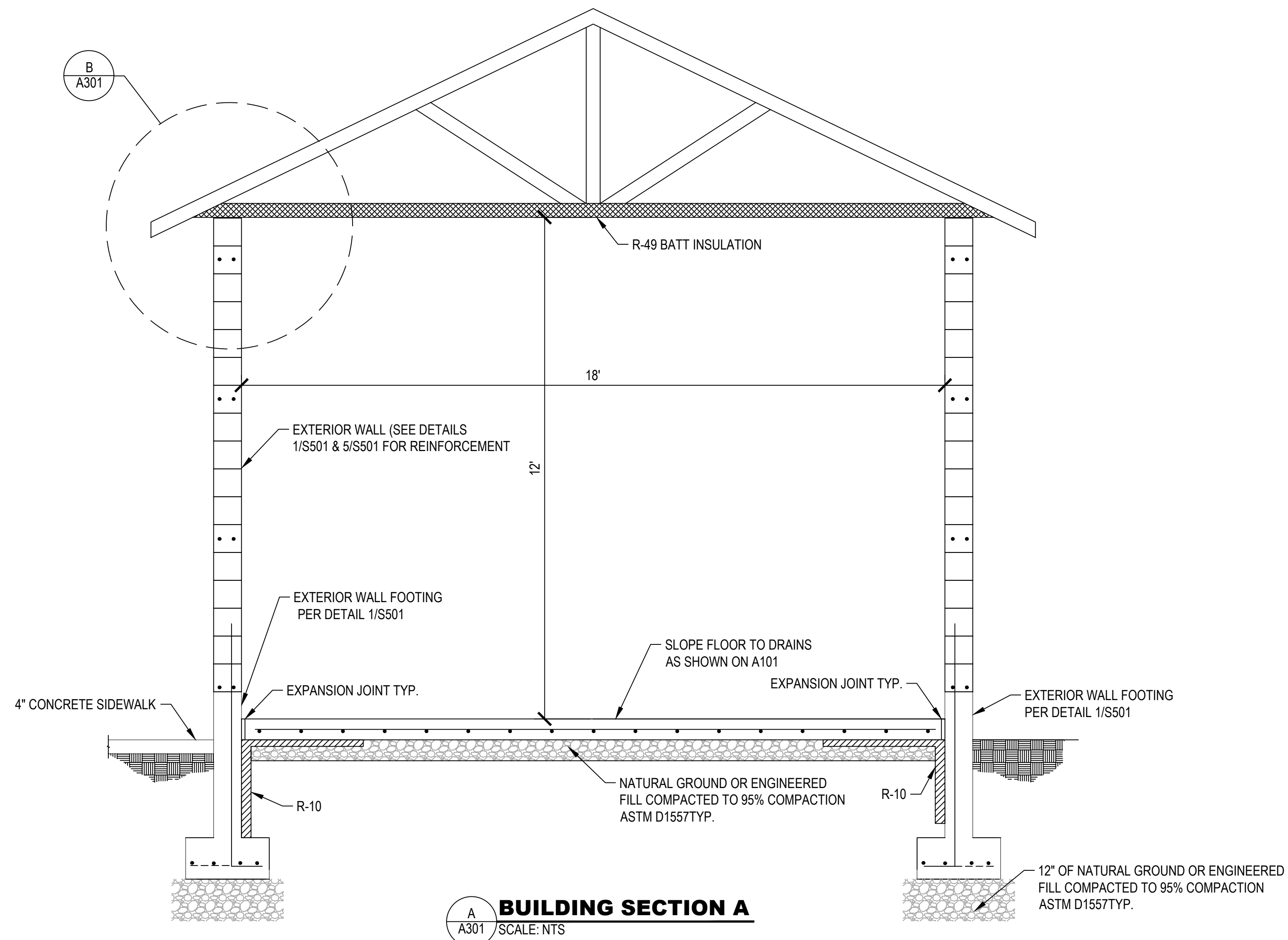
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CORNISH, UT 84308

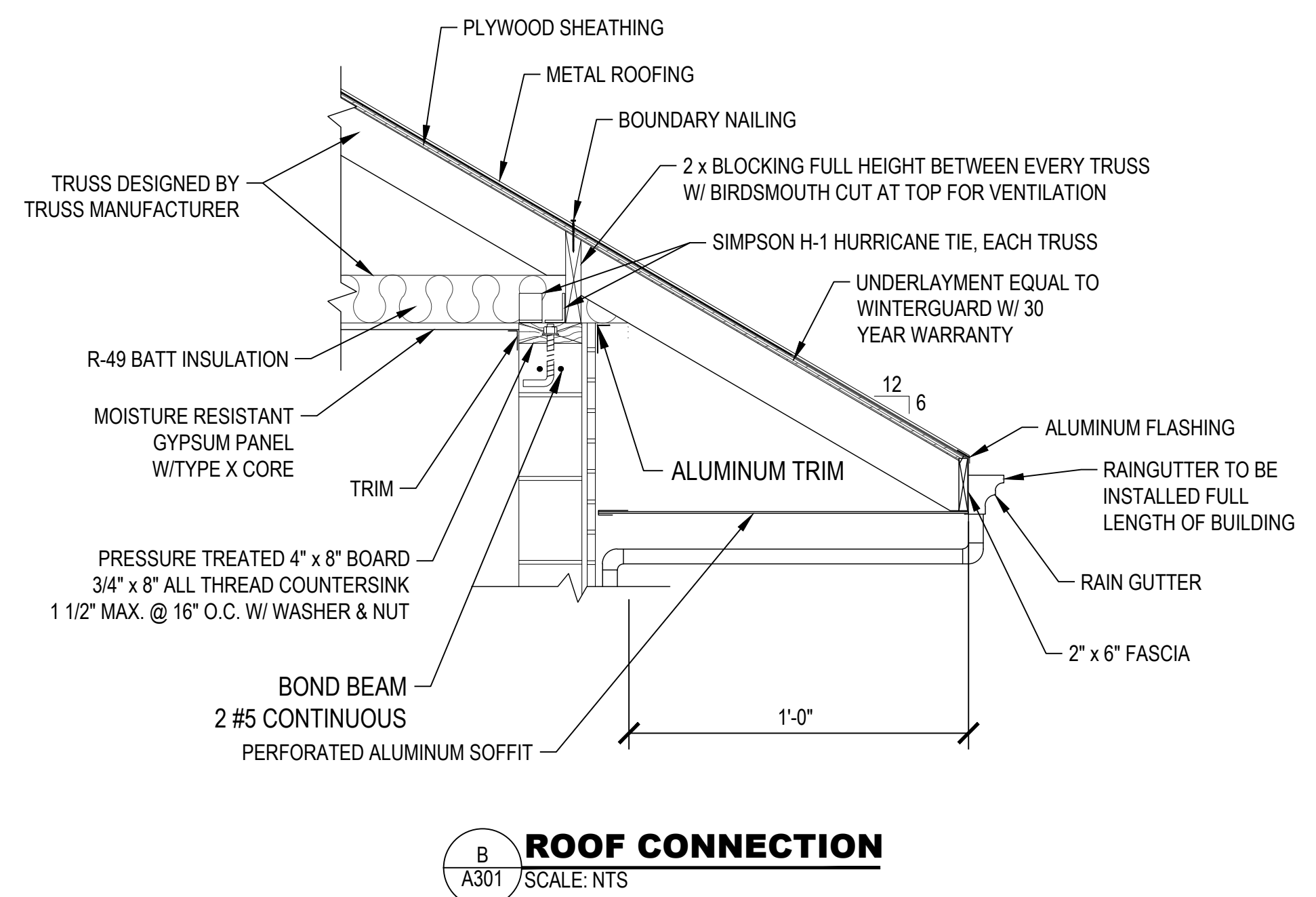


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 14 | OF 43 |
| SHEET NUMBER | A202 | |

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BUILDING SECTION A
SCALE: NTS



ROOF CONNECTION
SCALE: NTS

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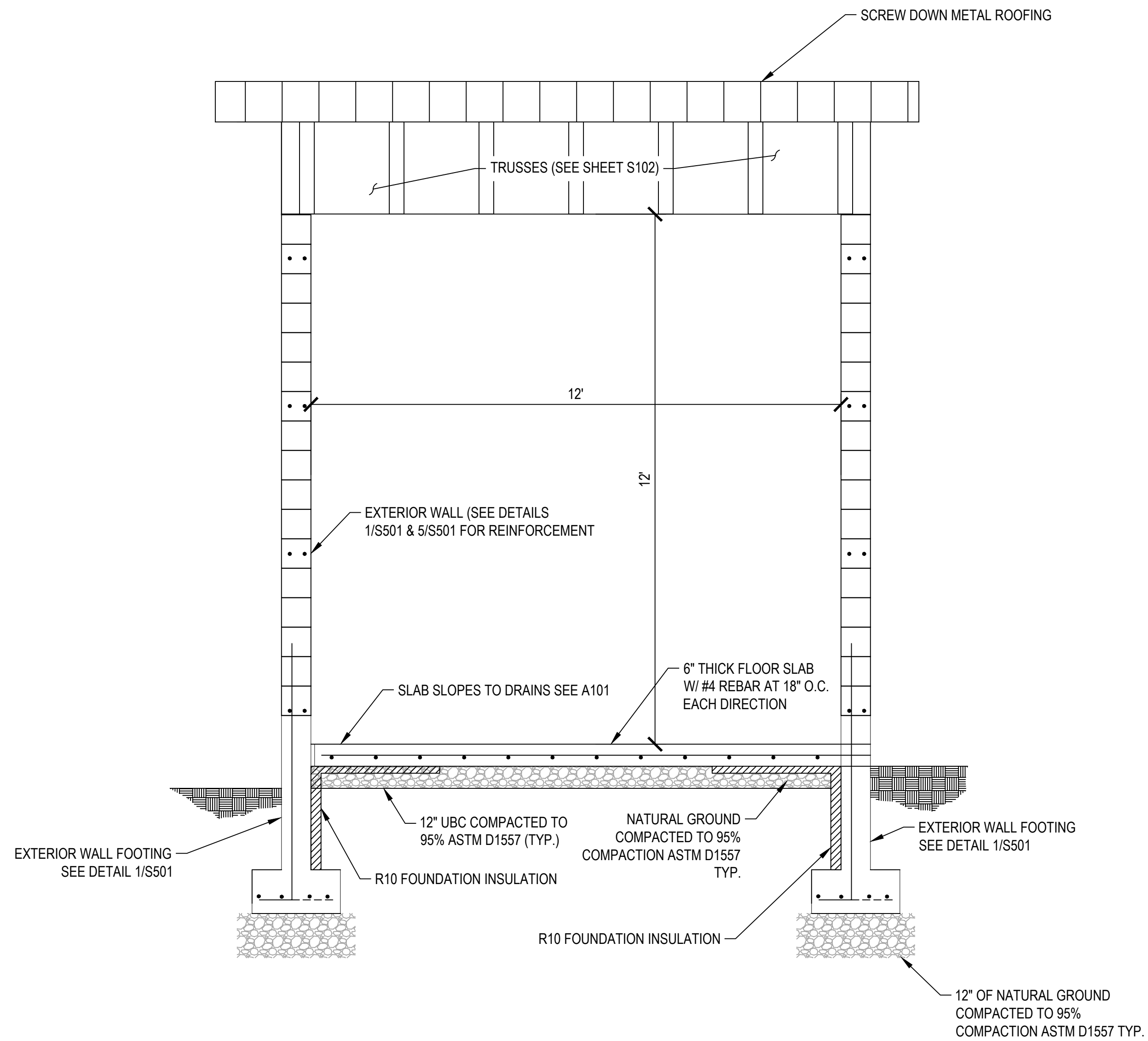
TOWN OF CORNISH
PITCHER WELL HOUSE
BUILDING SECTIONS

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CORNISH, UT 84308



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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 15 | OF 43 |
| SHEET NUMBER | A301 | |

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A
A302 **BUILDING SECTION C**
SCALE: NTS

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PRINCIPAL
M. HIRST, PE

PROJECT MANAGER
M. CHANDLER, PE, PG

CHECKED BY
M. CHANDLER, PE, PG

DRAWN BY
C. HATCH

DRAWING SCALE
AS SHOWN

ISSUE DATE
JULY 8, 2022

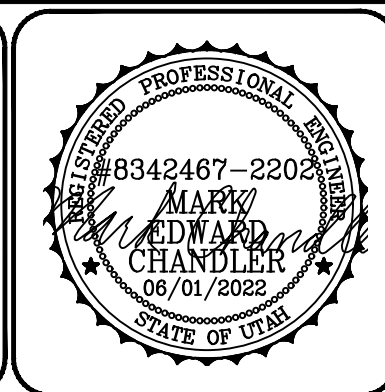
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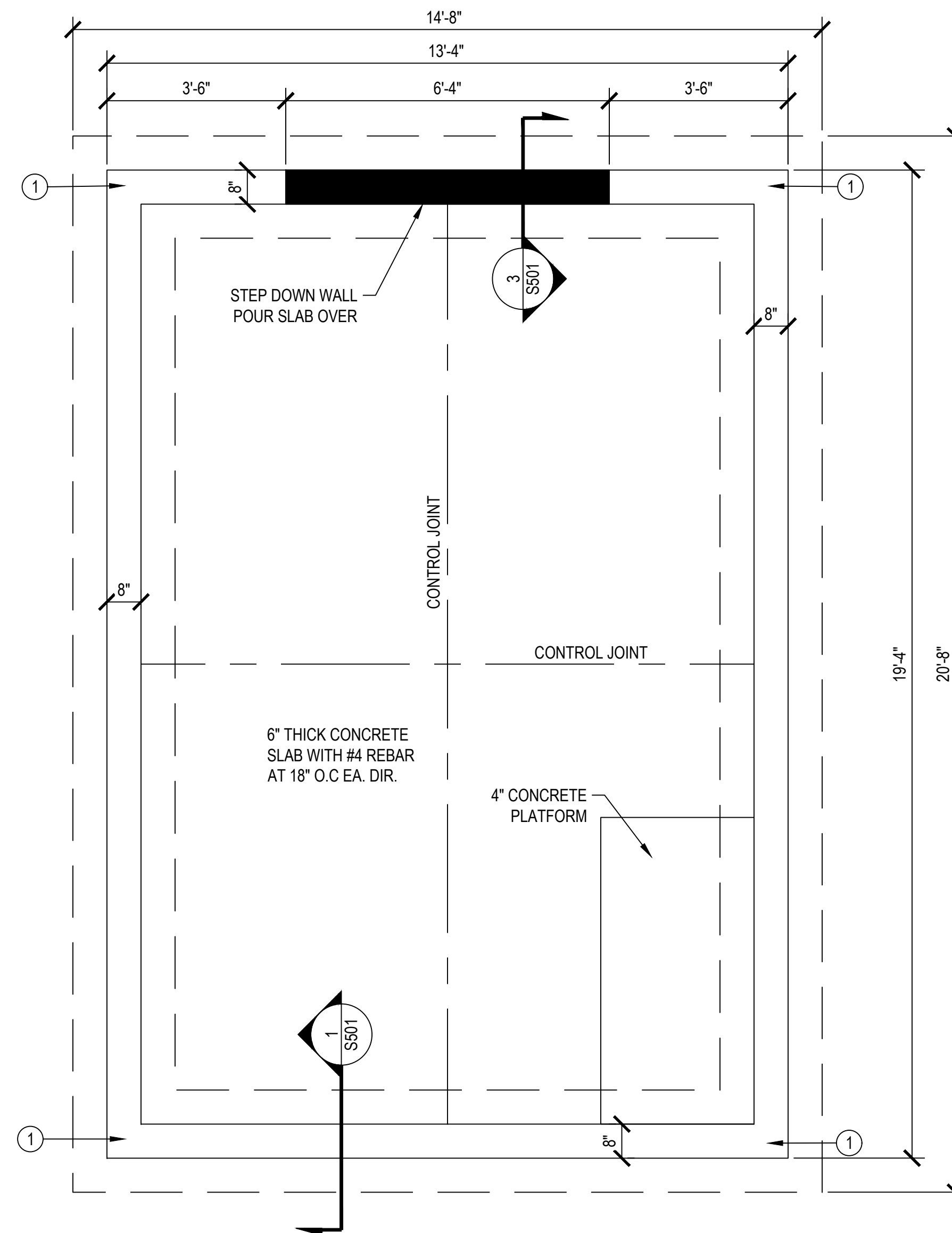


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 16 | OF 43 |
| SHEET NUMBER | A302 | |

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HOLD DOWN SCHEDULE

① SIMPSON LSTHD8



① **FOUNDATION PLAN**
S101 SCALE: 1/2" = 1'-0"

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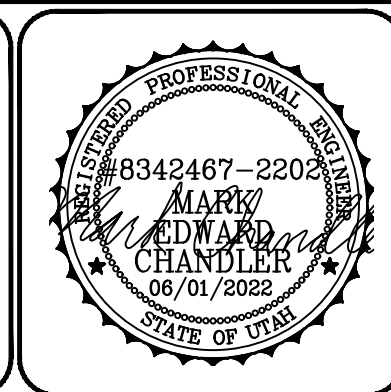
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TOWN OF CORNISH
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FOOTING & FOUNDATION PLAN

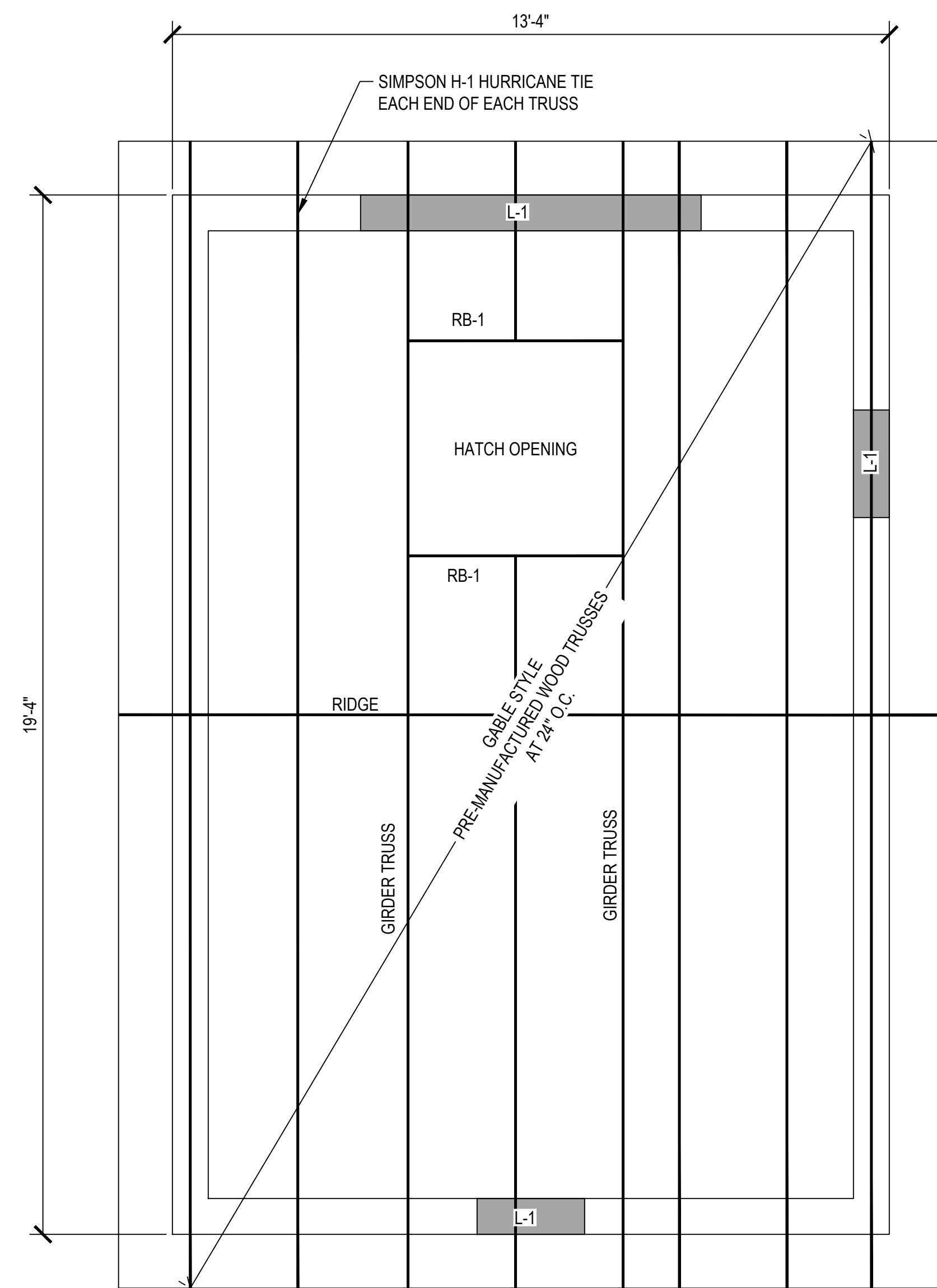
12200 NORTH 5600 WEST

CORNISH, UT 84308

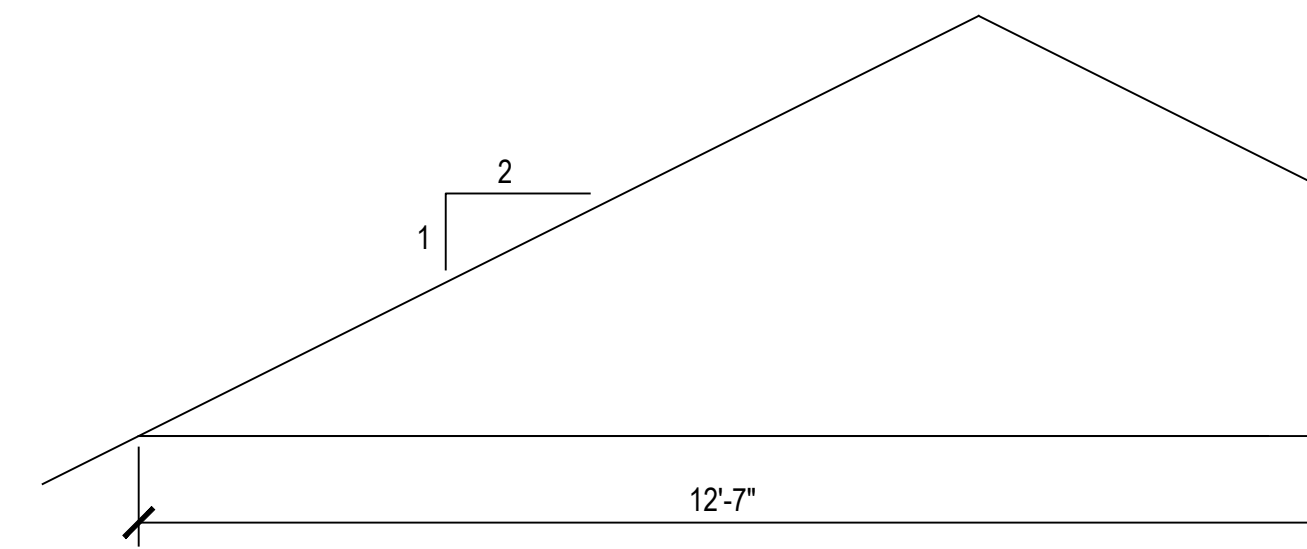


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 17 | OF 43 |
| SHEET NUMBER | S101 | |

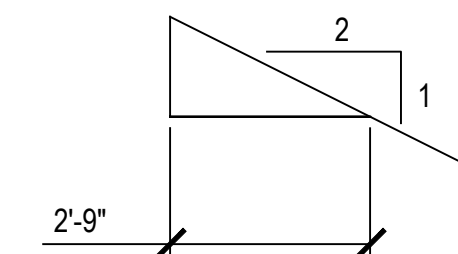
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1
S103 **ROOF FRAMING PLAN**
SCALE: 1/2" = 1'-0"



2
S103 **MONO TRUSS #1**
SCALE: NTS



3
S103 **MONO TRUSS #2**
SCALE: NTS

LINTEL SCHEDULE

| | W | H | REINFORCEMENT |
|-----|----|-----|-----------------------|
| L-1 | 8" | 16" | (2) #5 GRADE 60 REBAR |

BEAM SCHEDULE

| | # | DIM. | REINFORCEMENT |
|------|-----|------|---------------|
| RB-1 | (2) | 2X6 | #2DF |

NOTE:
TRUSSES TO BE DESIGNED BY MANUFACTURER

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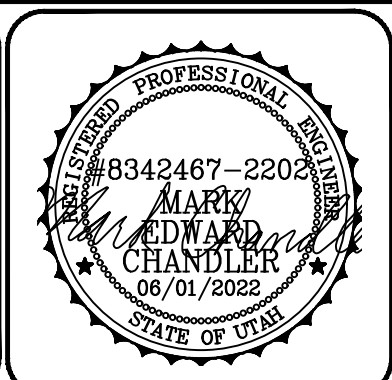
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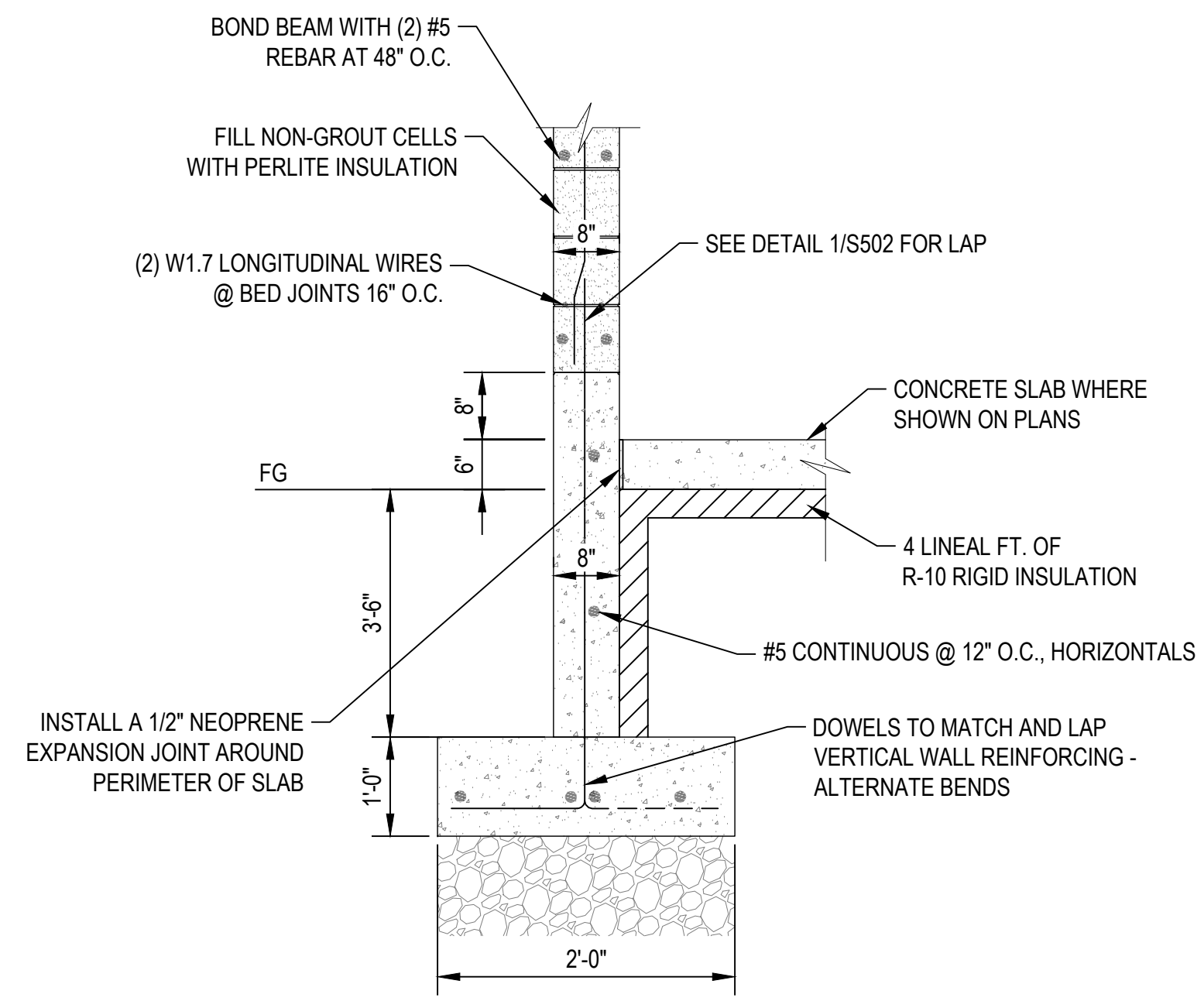
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PITCHER WELL HOUSE
FRAMING PLAN

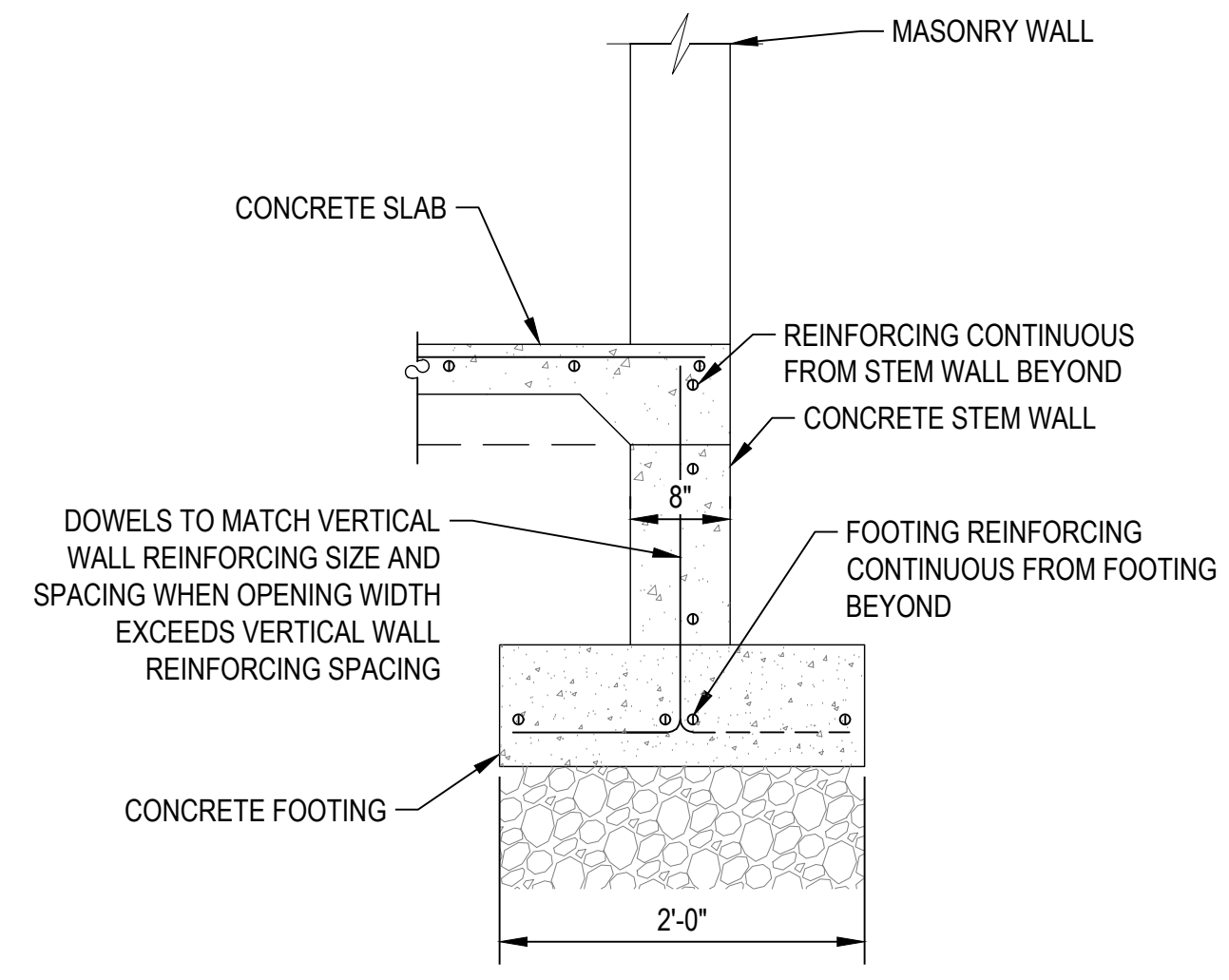
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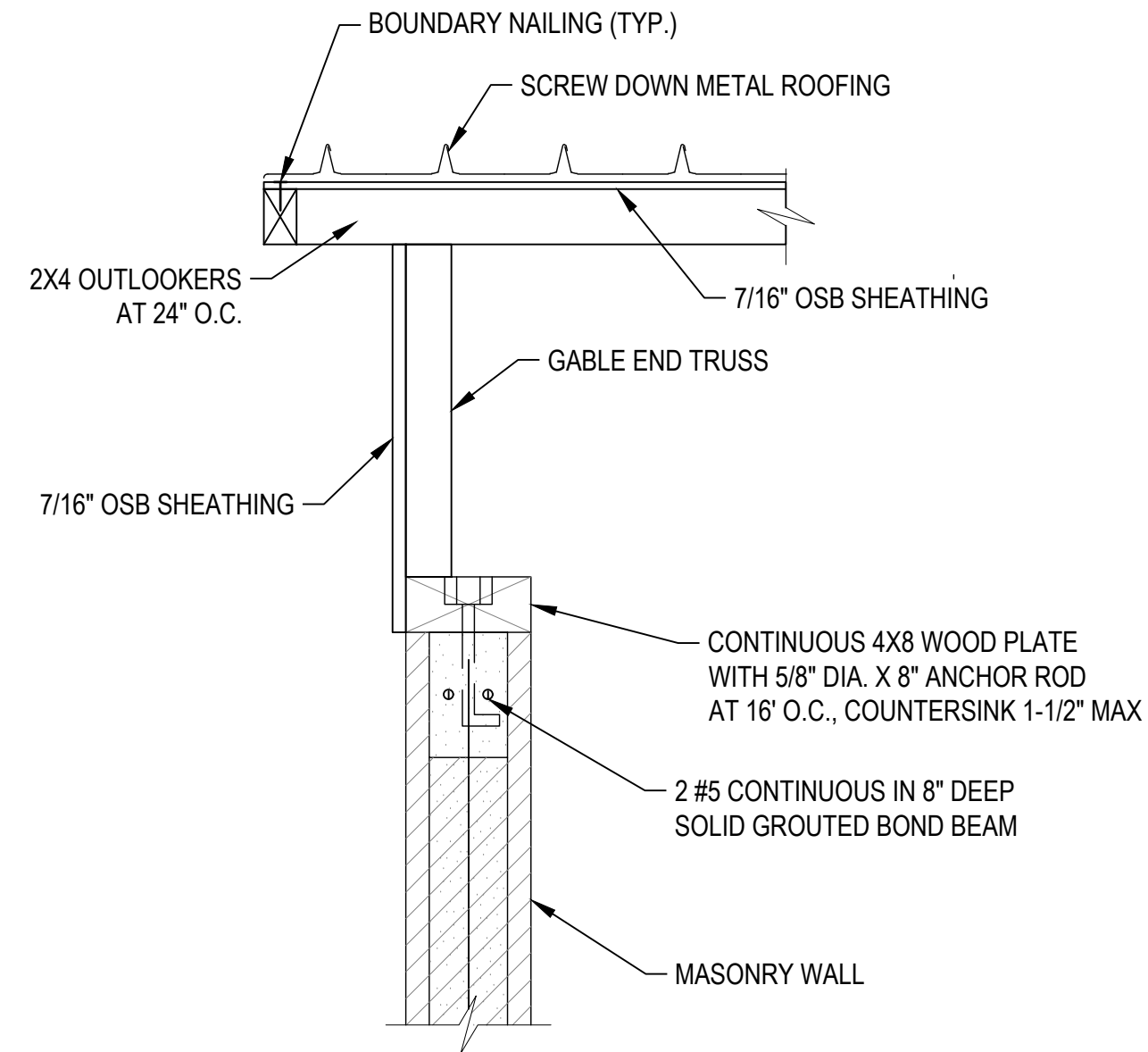
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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 18 | OF 43 |
| SHEET NUMBER | S102 | |



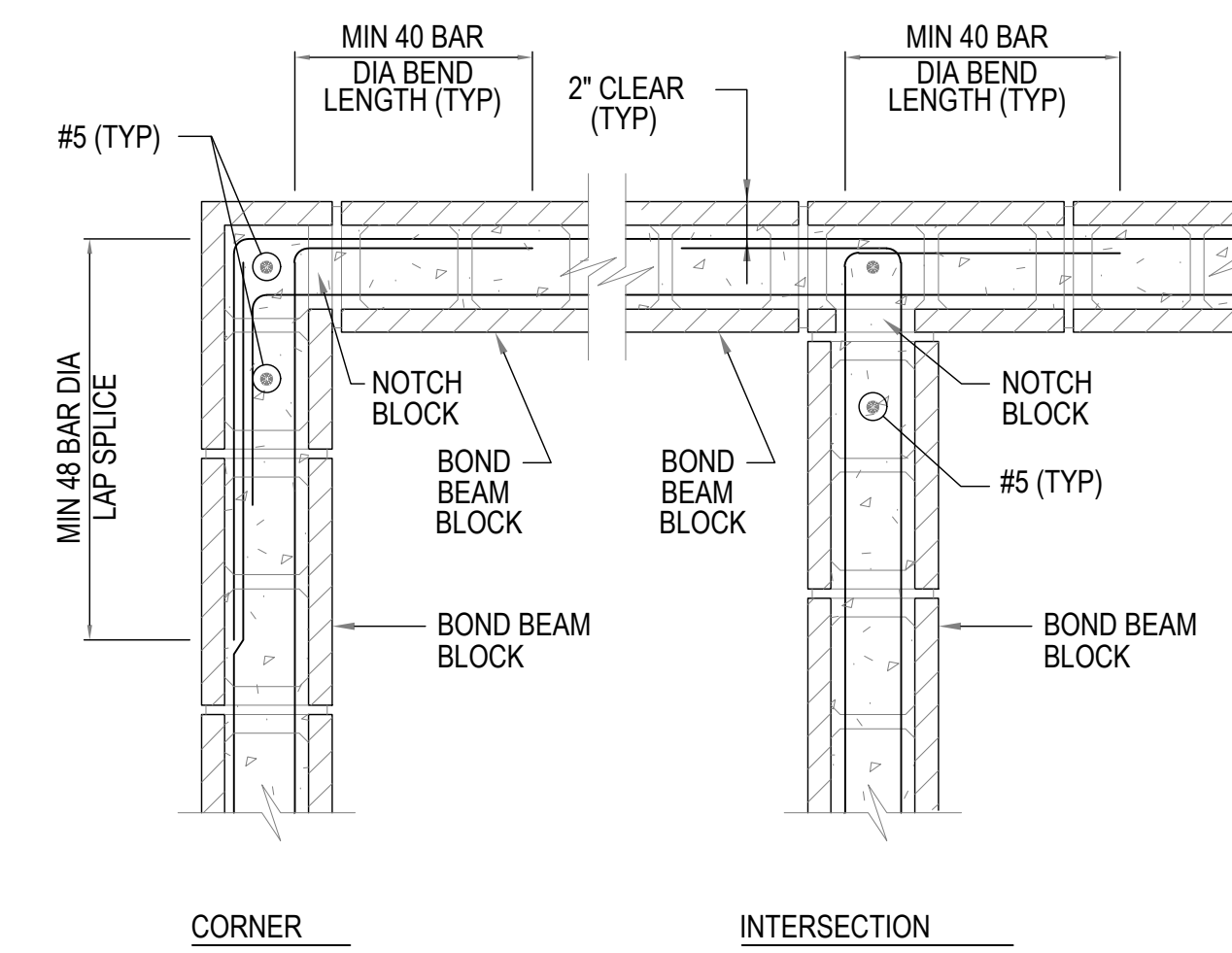
1 TYPICAL EXTERIOR WALL FOOTING
S501 SCALE: NONE



2 SECTION AT WALL OPENING
S501 SCALE: NONE



3 ROOF OVERHANG
S501 SCALE: NONE



4 MASONRY WALL - REINFORCING AT BOND BEAM
S501 SCALE: NONE

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PROJECT MANAGER
M. HIRST, PE
PROJECT MANAGER
M. CHANDLER, PE, PG
CHECKED BY
M. CHANDLER, PE, PG
DRAWN BY
C. HATCH
DRAWING SCALE
AS SHOWN
ISSUE DATE
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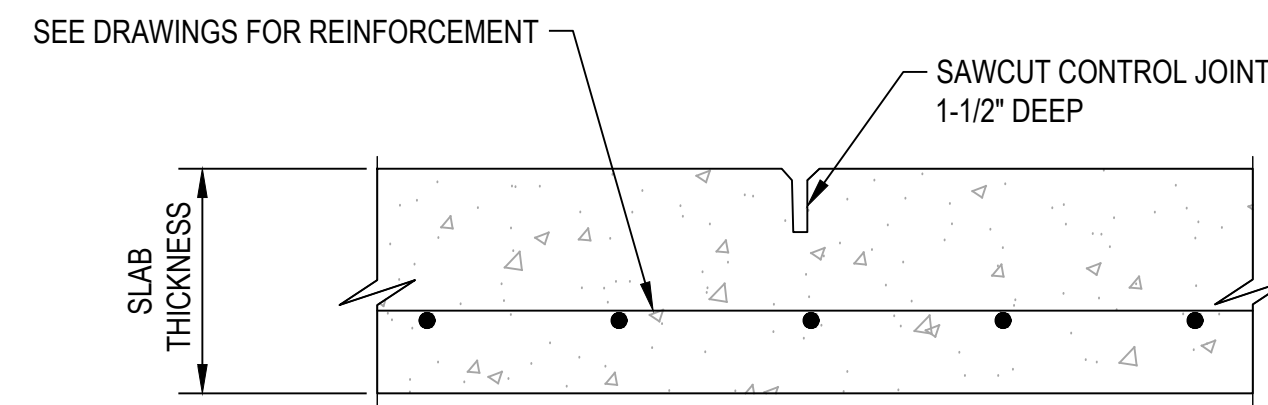
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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 19 | OF 43 |
| SHEET NUMBER | S501 | |

REINFORCING SPLICE LENGTH TABLE - TYPICAL U.N.O.

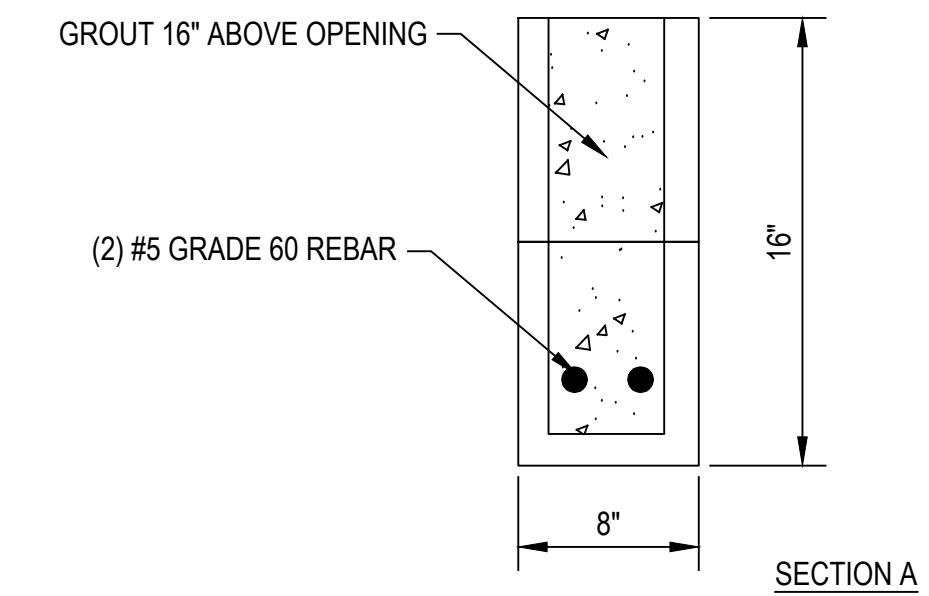
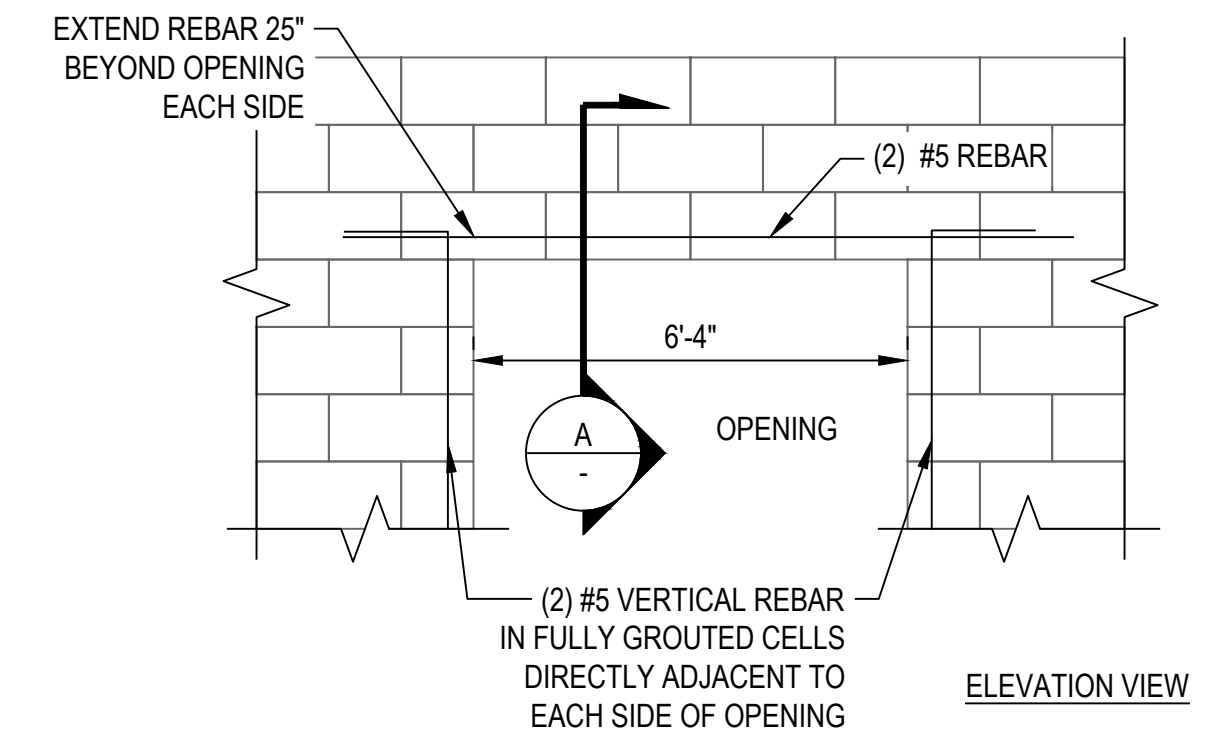
| BAR SIZE | | CONCRETE | | | | | | | | | MASONRY | |
|----------|-------------------------|----------|------------|---------|----------|------------|-------|---------|--------|-------|----------|------------|
| IN-LB | AREA (IN ²) | FOOTING | GRADE BEAM | | WALL | | SLAB | COLUMN* | BEAM | | VERTICAL | HORIZONTAL |
| | | | BOTTOM | TOP | VERTICAL | HORIZONTAL | | | BOTTOM | TOP | | |
| #3 | 0.11 | 1'-4" | 1'-4" | 1'-9" | 1'-4" | 1'-4" | 1'-4" | ----- | ----- | ----- | ----- | ----- |
| #4 | 0.20 | 1'-10" | 1'-10" | 2'-4" | 1'-7" | 1'-7" | 1'-7" | 1'-3" | 1'-7" | 2'-0" | 2'-1" | 2'-4" |
| #5 | 0.31 | 2'-3" | 2'-3" | 2'-11" | 2'-7" | 2'-7" | 2'-7" | 1'-7" | 2'-0" | 2'-7" | 2'-7" | 3'-6" |
| #6 | 0.44 | 2'-8" | 2'-8" | 3'-6" | 3'-1" | 3'-1" | 3'-1" | 1'-11" | 2'-4" | 3'-1" | 4'-9" | 7'-0" |
| #7 | 0.60 | 3'-2" | 3'-11" | 5'-1" | 4'-6" | 4'-6" | 4'-6" | 2'-3" | 3'-5" | 4'-5" | ----- | ----- |
| #8 | 0.79 | 3'-9" | 4'-6" | 5'-10" | 5'-2" | 5'-2" | 5'-2" | 2'-6" | 5'-2" | 6'-9" | ----- | ----- |
| #9 | 1.00 | 4'-1" | 6'-9" | 8'-9" | ----- | ----- | ----- | 2'-10" | 5'-10" | 7'-7" | ----- | ----- |
| #10 | 1.27 | 4'-7" | 7'-7" | 9'-10" | ----- | ----- | ----- | 3'-2" | 6'-7" | 8'-6" | ----- | ----- |
| #11 | 1.56 | 5'-1" | 8'-5" | 10'-11" | ----- | ----- | ----- | 3'-6" | 7'-3" | 9'-5" | ----- | ----- |
| #14 | 2.25 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| #18 | 4.00 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |

* CONCRETE COLUMN STRAIGHT DOWEL EMBEDMENT SHALL BE 22 BAR DIAMETERS

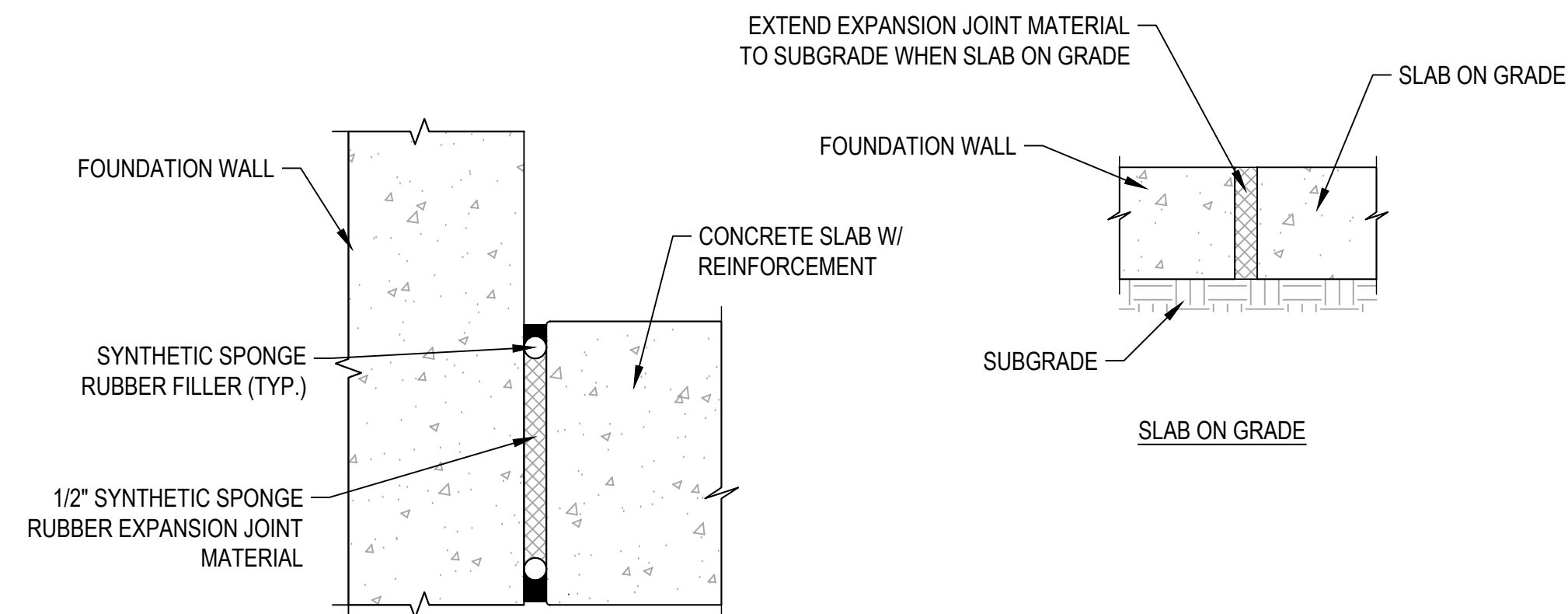
1 LAP SPLICE SCHEDULE FOR GRADE 60 UNCOATED REINFORCING
S502 SCALE: NONE



2 CONSTRUCTION JOINT
S502 SCALE: NONE



3 LINTEL DETAIL
S502 SCALE: NONE



NOTES:
1. FOR WALLS, FORM ALL JOINT EDGES AT 1/4" CHAMFER

4 EXPANSION JOINT
S502 SCALE: NONE

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CHECKED BY: M. CHANDLER, PE, PG
DRAWN BY: C. HATCH
DRAWING SCALE: AS SHOWN
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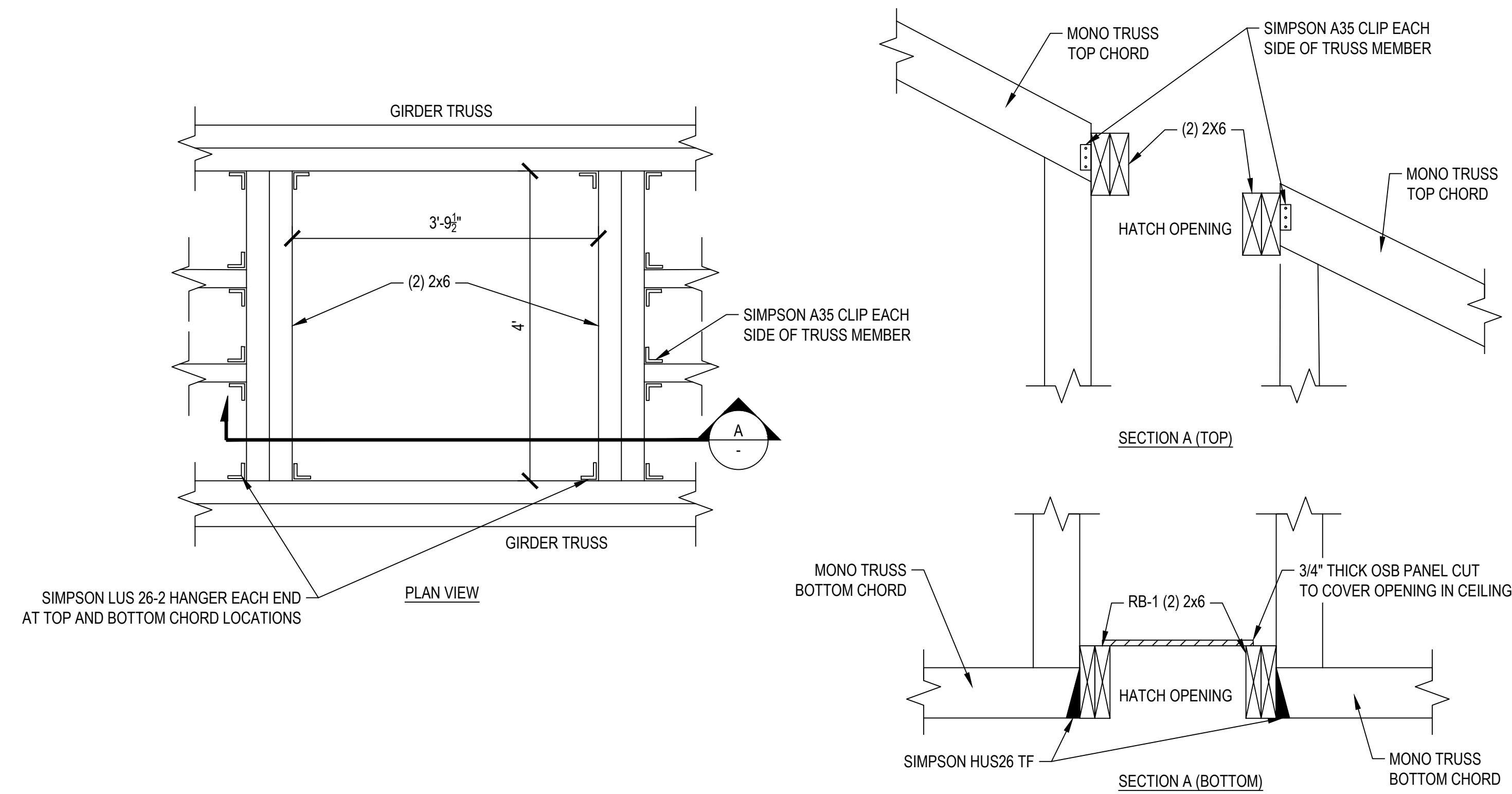
TOWN OF CORNISH
PITCHER WELL HOUSE
STRUCTURAL DETAILS

12200 NORTH 5600 WEST
CORNISH, UT 84308

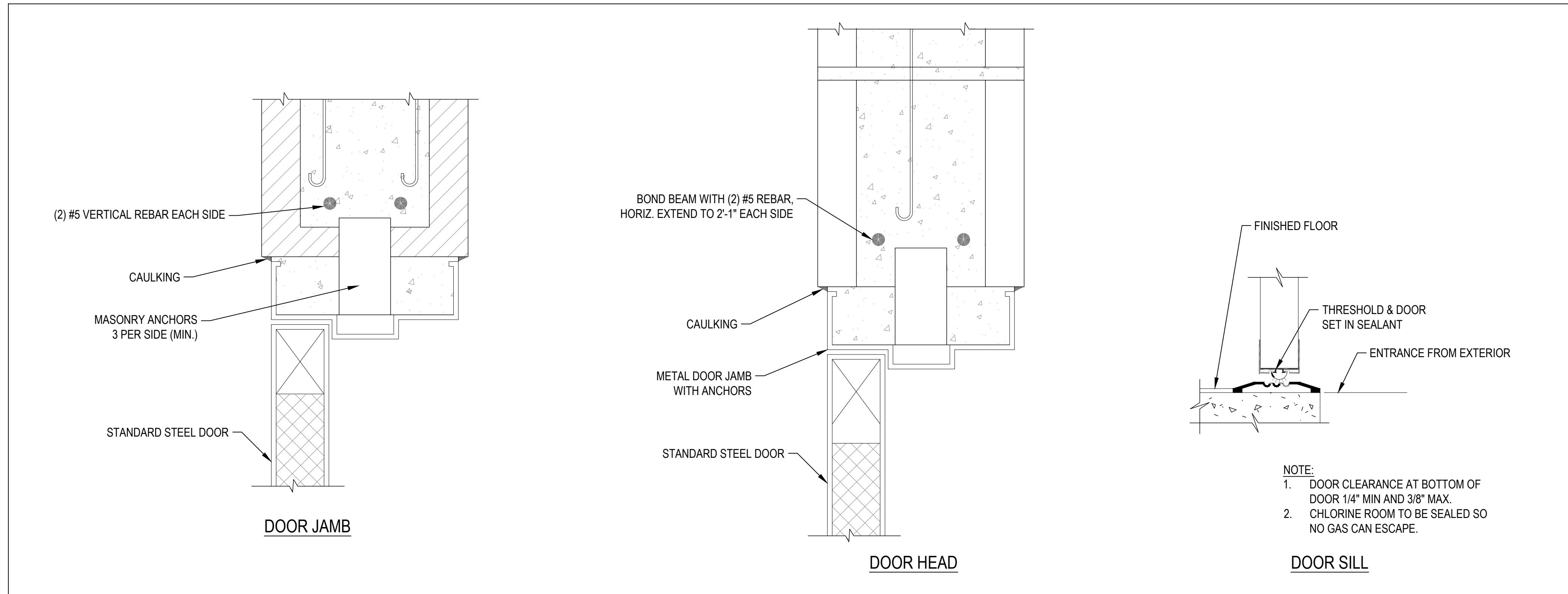


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| PROJECT NUMBER | 2019-0406 | |
| SHEET | 20 | OF 43 |
| SHEET NUMBER | S502 | |

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1 HATCH OPENING
S503 / SCALE: NONE



2 DOORWAY (TYP.)
S503 / SCALE: NONE

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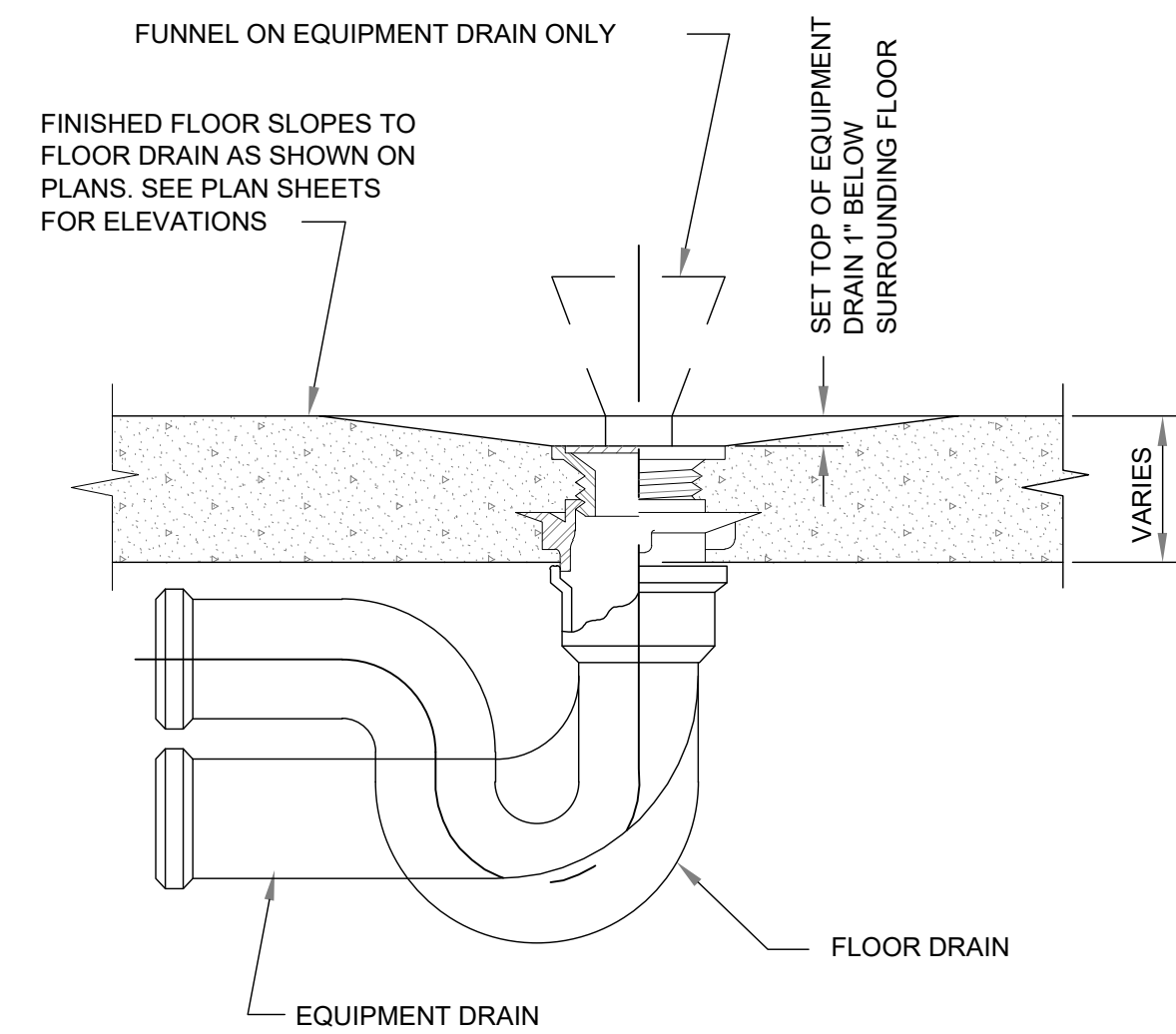
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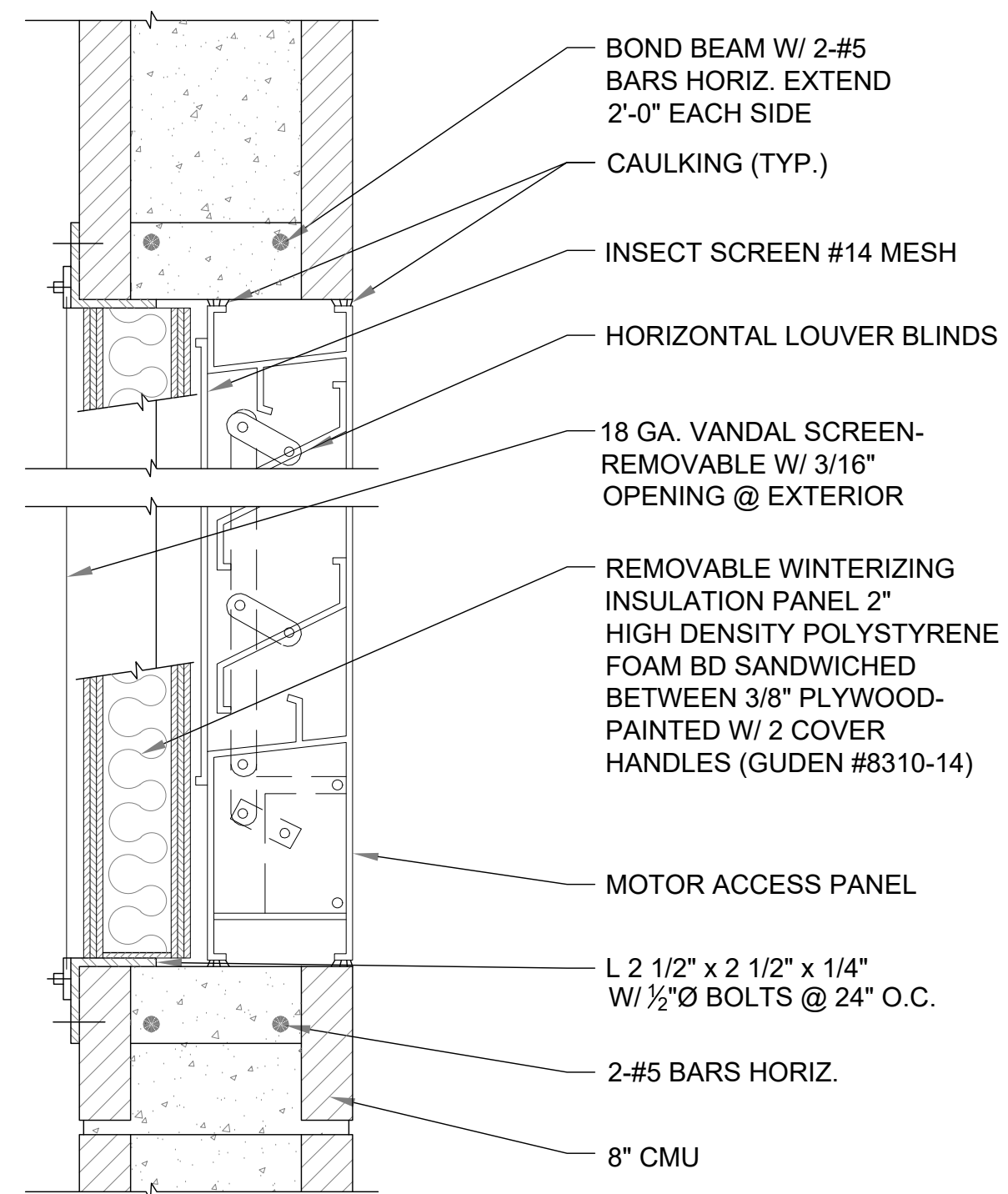
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| SHEET | 21 | OF 43 |
| SHEET NUMBER | S503 | |

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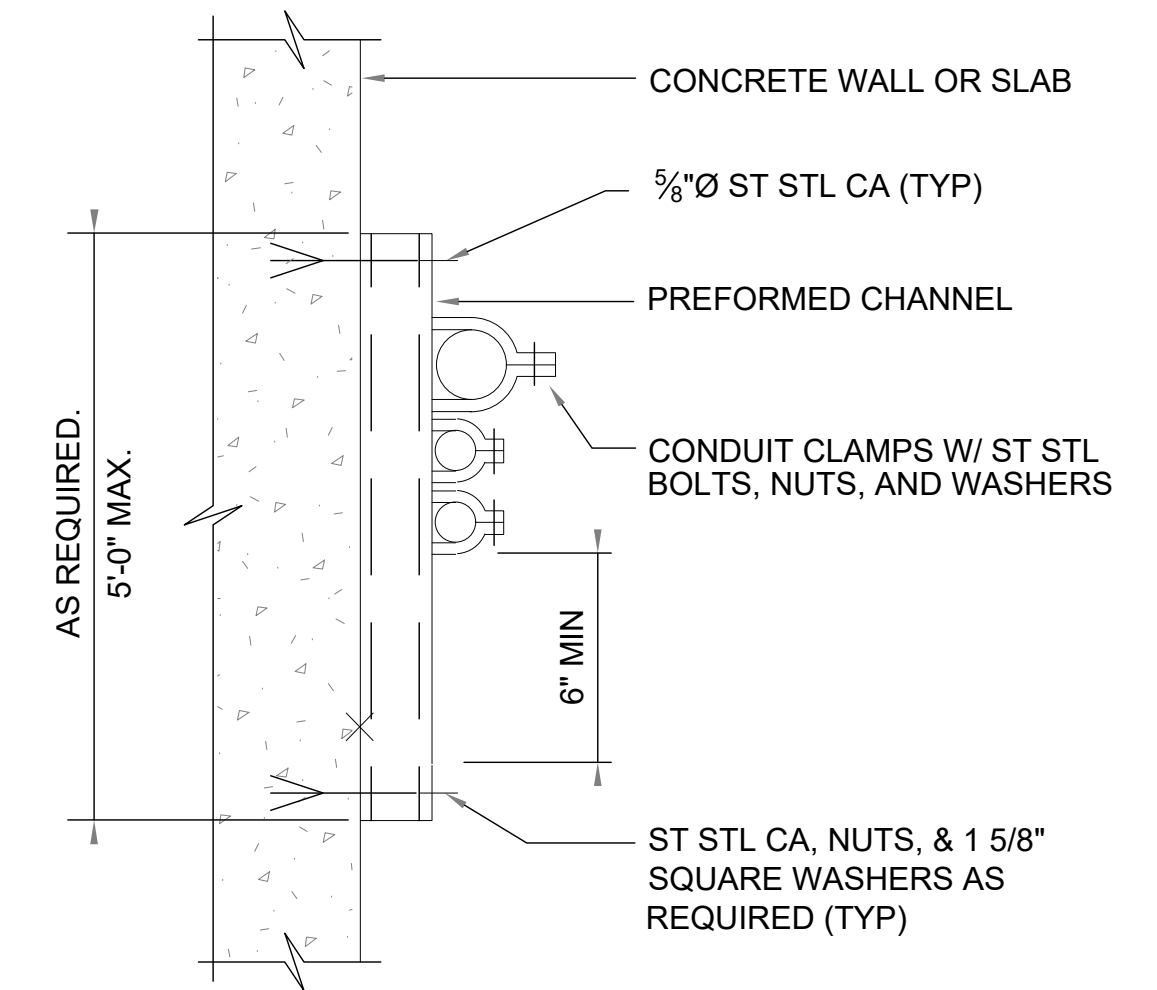


- NOTES:**
1. TRAP IS REQUIRED WHEN DRAINING INTO SANITARY SEWER ONLY UNLESS OTHERWISE NOTED.
 2. PROVIDE 12" RADIUS SLOPE TO EQUIPMENT DRAINS WHERE FLOOR DOES NOT SLOPE TO DRAIN.

1 FLOOR DRAIN (F.D.) OR EQUIPMENT DRAIN (E.D.)
S504 SCALE: NONE



2 HORIZONTAL LOUVER
S504 SCALE: NONE



- NOTES:**
1. THIS DETAIL TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
 2. PREFORMED CHANNEL, FITTINGS, AND CLAMPS SHALL BE HOT-DIP GALVANIZED STEEL. FIELD COAT ALL CUTS PER SPECIFICATIONS.
 3. PVC COATING REQUIRED IN FLUORIDE ROOMS.
 4. CHANNELS TO BE SPACED AT 5'-0" OC MAXIMUM.

3 CONDUIT SUPPORT
S504 SCALE: NONE

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| PROJECT MANAGER M. CHANDLER, PE, PG |
| CHECKED BY M. CHANDLER, PE, PG |
| DRAWN BY C. HATCH |
| DRAWING SCALE AS SHOWN |
| ISSUE DATE JULY 8, 2022 |

CRS

CRS ENGINEERS
Answers to Infrastructure®

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TOWN OF CORNISH
PITCHER WELL HOUSE
STRUCTURAL DETAILS

12200 NORTH 5600 WEST

CORNISH, UT 84308



| |
|------------------------------------|
| PROJECT NUMBER 2019-0406 |
| SHEET 22 OF 43 |
| SHEET NUMBER S504 |

File Path: M:\2020\081 - Cornish Pitcher Well\Drawings\E-101.dwg Jun 24, 2022 - 1:28pm

GENERAL DRAWING SYMBOLS AND REFERENCES

Table with 2 columns: Symbol and Description. Includes Reference Note, Demolition Note, Revision Note, Identification Note, Photo Reference, HPE Detail Bubble, Equipment Reference, Wire Size Reference, Photo Reference, Section/Elevation Reference, and Equipment ID Tag.

PLAN SYMBOLS

Table with 2 columns: Symbol and Description. Includes Equipment (Circuit Distribution Panelboard, Power Distribution Panelboard, Control Panel Enclosure, Lighting Control Panel, Disconnect), HVAC Equipment (Unit Heater, Condensing Unit, Rooftop Mounted Equipment).

LIGHTING SYMBOLS

Table with 2 columns: Symbol and Description. Includes Fixture Number (F1), Emergency Fixture (EM), Clock, Occupancy Sensor, LED Fixtures (Surface or recessed 1x2, 1x4, 18"x4', 1x8, 2x2, 2x4, 2x2 recessed, 4 foot wall mounted), and other lighting symbols.

GROUNDING SYMBOLS

Table with 2 columns: Symbol and Description. Includes Ground Rod (3/4" x 10' copper coated steel), Bolted Ground Connection, Welded Ground Connection, and Ground Conductor (#2/0 bare copper).

Table with 2 columns: Symbol and Description. Includes Track Lighting (Track Light Fixture, Track Light Fixture Head), Exit Fixtures (Quadrants indicate faces illuminated, Surface or ceiling, Wall mounted, with directional arrows, with emergency lights, emergency fixture), and Exterior Lights (Wall Pak Fixture, Warning Light).

LIGHT SWITCHES

Table with 2 columns: Symbol and Description. Includes Single Pole Switch, Ganged switches in common box with common cover plate, Switch superscript modifier, and Switch subscript modifier.

ONE-LINE SYMBOLS

Table with 2 columns: Symbol and Description. Includes Power Source, Transformer, Equipment Grounding, Connection Dot, Circuit Breaker, Panelboard, Amps and Poles, and Motor.

CONDUIT AND RACEWAYS

Table with 2 columns: Symbol and Description. Includes Raceway or wiring system in or under floor, Flex Conduit, Raceway or wiring system above floor level, Homerun designations, Junction Box, Raceway or wiring system turned toward/away from viewer, and Conduit stub and cap.

WIRING DEVICES

Table with 2 columns: Symbol and Description. Includes 20 Amp rated receptacle (Single stroke = single, Double stroke = duplex), Existing receptacle, Ganged receptacles, GFCI receptacle, Ceiling mounted duplex receptacle, Recessed floor duplex receptacle, 480 Volt receptacle, Cable television coax cable connection, Data Jack Only, Voice Jack Only, Data/Voice Jack, Recessed floor data/voice jack, Photoelectric control unit, and Occupancy sensor.

H.P.E. INC. ELECTRICAL ENGINEERS POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051 708 EAST 50 SOUTH AMERICAN FORK, UT 84003 FAX (801) 642-2154 HPE PROJECT: 20.081 FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST ©2022

GENERAL NOTES:

- 1. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH-IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO ENSURE NEC CODE CLEARANCE REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
2. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED BEFORE BEGINNING ROUGH-IN.
3. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH-IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC.
4. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH ELECTRICAL ROOMS OR SPACES; OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN THE OTHER AREAS.
5. ALL PENETRATIONS OF FLOORS, WALLS AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL.
6. FOR PACKAGE EQUIPMENT PROVIDED ON THE PROJECT, SOME CONDUITS AND WIRES ARE SHOWN ON THE DRAWINGS, BUT IT IS EXPECTED THAT SOME ADDITIONAL CONDUITS AND WIRES MAY BE REQUIRED BY THE EQUIPMENT MANUFACTURERS TO COMPLETE INSTALLATION. IT IS INCUMBENT UPON THE GENERAL CONTRACTOR TO COORDINATE THIS REQUIREMENT WITH HIS SUBCONTRACTORS TO MAKE SURE THAT EQUIPMENT SUPPLIER PROVIDED ALL NECESSARY ELECTRICAL INFORMATION TO ELECTRICAL SUBCONTRACTOR FOR INCLUSION WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS.
7. IF OTHER THAN FIRST NAMED EQUIPMENT IS USED, IT SHALL BE CAREFULLY CHECKED FOR ELECTRICAL REQUIREMENTS AND CONTROL REQUIREMENTS OF ALTERNATE EQUIPMENT. SHOULD CHANGES OR ADDITIONS OCCUR IN ELECTRICAL WORK, OR THE WORK OF OTHER CONTRACTORS BE REVISED BY THE ALTERNATE EQUIPMENT, THE COST OF ALL CHANGES SHALL BE BORNE BY THE ELECTRICAL CONTRACTOR.

Sheet List Table

Table with 2 columns: Sheet Number and Sheet Title. Lists sheets E-101 through E-604 and CP-1 through CP-2 with their respective titles.

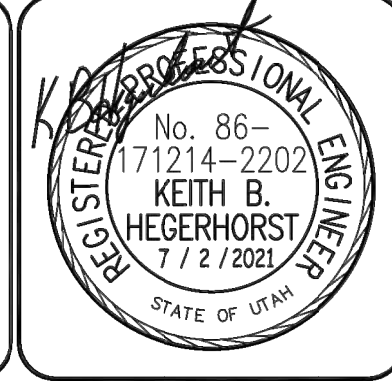
REVISIONS table with columns for No., Description, and Date.

IF THE ABOVE SCALE BAR DOES NOT MEASURE 1-INCH IN LENGTH, DO NOT USE THIS DRAWING FOR SCALING PURPOSES. DIMENSIONS AND MEASUREMENTS SPECIFIED IN THE DRAWING TAKE PRECEDENCE TO SCALED MEASUREMENTS. THE INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF CRS ENGINEERS AND IS NOT TO BE REPRODUCED, MODIFIED OR USED FOR ANY OTHER PROJECT OR EXTENSION OF THIS PROJECT EXCEPT BY AGREEMENT WITH CRS ENGINEERS.

PROJECT INFORMATION table including Project Manager (M. Chandler), Checked by (C. Hatch), Drawn by (Gillian Sorenson), Drawing Scale (AS SHOWN), and Issue Date (July 8, 2022).

CRS ENGINEERS logo and contact information: 4246 S Riverboat Rd, Ste 200 | Salt Lake City, UT 84123 | P: 801.359.5565 | www.crsengineers.com

CORNISH TOWN CORP PITCHER WELL HOUSE ELECTRICAL LEGEND, SHT. 1 12200 NORTH 5600 WEST CORNHIS, UT 84308



PROJECT NUMBER: 2019-0180 SHEET: 23 OF 43 SHEET NUMBER: E-101

File Path: M:\2018\081 - Cornish Pitcher Well Drawings\02.dwg Jun 24, 2022 - 1:29pm

| CONDUIT/CONDUCTOR SCHEDULE * | | | | | |
|------------------------------|----------|----------------|----------------|-------------------|----------------------|
| THHN, THWN, THWN-2 | | | | | |
| AMP RATING | WIRE ID. | CONDUCTOR QTY. | CONDUCTOR SIZE | MIN. CONDUIT SIZE | EXCEPTIONS |
| 20 | 212 | 2 | | 3/4" | |
| | 312 | 3 | #12 | 3/4" | |
| | 412 | 4 | | 3/4" | |
| 30 | 20 | 2 | | 3/4" | |
| | 30 | 3 | #10 | 3/4" | |
| | 40 | 4 | | 3/4" | |
| 50 | 28 | 2 | | 3/4" | |
| | 38 | 3 | #8 | 3/4" | |
| | 48 | 4 | | 3/4" | |
| 65 | 26 | 2 | | 3/4" | |
| | 36 | 3 | #6 | 3/4" | |
| | 46 | 4 | | 3/4" | 1"(C9) |
| | 24 | 2 | | 3/4" | 1"(C2,C9) |
| 85 | 34 | 3 | #4 | 1" | 3/4"(C4), 1-1/4"(C9) |
| | 44 | 4 | | 1" | 1-1/4"(C9) |
| 115 | 22 | 2 | | 1" | |
| | 32 | 3 | #2 | 1" | 1-1/4"(C9) |
| | 42 | 4 | | 1-1/4" | |
| 130 | 21 | 2 | | 1-1/4" | 1"(C3,C4) |
| | 31 | 3 | #1 | 1-1/4" | 1"(C3) |
| | 41 | 4 | | 1-1/4" | 1-1/2"(C2,C9,C10) |
| 150 | 210 | 2 | | 1-1/4" | |
| | 310 | 3 | 1/0 | 1-1/4" | 1-1/2"(C3,C9) |
| | 410 | 4 | | 1-1/2" | 2"(C9) |
| 175 | 220 | 2 | | 1-1/4" | 1-1/2"(C3,C4,C9) |
| | 320 | 3 | 2/0 | 1-1/2" | |
| | 420 | 4 | | 2" | |
| 200 | 230 | 2 | | 1-1/2" | 1-1/4"(C4) |
| | 330 | 3 | 3/0 | 1-1/2" | 2"(C3,C9) |
| | 430 | 4 | | 2" | |
| 230 | 240 | 2 | | 1-1/2" | 2"(C3) |
| | 340 | 3 | 4/0 | 2" | |
| | 440 | 4 | | 2" | 2-1/2"(C9) |
| 255 | 225 | 2 | | 2" | 1-1/2"(C4) |
| | 325 | 3 | 250 KCMIL | 2" | 2-1/2"(C1,C8) |
| | 425 | 4 | | 2-1/2" | 2"(C4) |
| 310 | 235 | 2 | | 2" | 2-1/2"(C9) |
| | 335 | 3 | 350 KCMIL | 2-1/2" | 2"(C4) |
| | 435 | 4 | | 3" | 2-1/2"(C1,C4) |
| 380 | 250 | 2 | | 2-1/2" | 2"(C4) |
| | 350 | 3 | 500 KCMIL | 3" | 2-1/2"(C1,C4) |
| | 450 | 4 | | 3" | 3-1/2"(C9) |
| 475 | 275 | 2 | | 3" | |
| | 375 | 3 | 750 KCMIL | 3-1/2" | 3"(C1,C7,C8) |
| | 475 | 4 | | 4" | 3-1/2"(C1,C4,C8) |

* CONDUCTOR QUANTITY DOES NOT INCLUDE GROUNDING CONDUCTOR. SEE EQUIPMENT GROUNDING CONDUCTORS FOR WIRE SIZE.

WHERE: C1 = ELECTRICAL METALLIC TUBING
 C2 = ELECTRICAL NON-METALLIC TUBING
 C3 = FLEXIBLE STEEL CONDUIT
 C4 = INTERMEDIATE METALLIC CONDUIT
 C7 = LIQUIDTIGHT FLEXIBLE METAL CONDUIT
 C8 = RIGID METALLIC CONDUIT
 C9 = PVC SCHEDULE 80 CONDUIT
 C10 = PVC SCHEDULE 40 CONDUIT

GROUNDING ELECTRODE CONDUCTOR SERVICE ENTRANCE OR SEPARATELY DERIVED SYSTEM

| COPPER CONDUCTOR #2 OR SMALLER | WIRE SIZE |
|--------------------------------|-----------|
| 1 OR 1/0 | #8 |
| 2/0 OR 3/0 | #6 |
| >3/0 THRU 350 KCMIL | #4 |
| >350 KCMIL THRU 600 KCMIL | #2 |
| >600 KCMIL THRU 1100 KCMIL | 1/0 |
| >1100 KCMIL | 2/0 |
| | 3/0 |

EQUIPMENT GROUNDING CONDUCTORS

| FUSE OR CB SIZE | SIZE (COPPER) |
|-----------------|---------------|
| 15 | 14 |
| 20 | 12 |
| 30 | 10 |
| 40 | 10 |
| 60 | 10 |
| 100 | 8 |
| 200 | 6 |
| 300 | 4 |
| 400 | 3 |
| 500 | 2 |
| 600 | 1 |
| 800 | 1/0 |
| 1000 | 2/0 |
| 1200 | 3/0 |
| 1600 | 4/0 |
| 2000 | 250 |
| 2500 | 350 |

CORNISH PITCHER WELL TAG LIST HVAC EQUIPMENT

| TAG | DESCRIPTION | LOCATION | SUPPLIED BY | INSTALLED BY |
|-------|------------------------|-----------|-------------|--------------|
| EF-1 | EXHAUST FAN | WELL ROOM | CONTRACTOR | CONTRACTOR |
| LA-1 | INTAKE LOUVER ACTUATOR | WELL ROOM | CONTRACTOR | CONTRACTOR |
| UH-1A | UNIT HEATER | WELL ROOM | CONTRACTOR | CONTRACTOR |
| UH-1B | UNIT HEATER | WELL ROOM | CONTRACTOR | CONTRACTOR |

PUMP AND EQUIPMENT

| TAG | DESCRIPTION | LOCATION | SUPPLIED BY | INSTALLED BY |
|--------|------------------------------|-----------|-------------|--------------|
| ATS | AUTOMATIC TRANSFER SWITCH | OUTSIDE | CONTRACTOR | CONTRACTOR |
| CP-1 | MAIN CONTROL PANEL | WELL ROOM | CONTRACTOR | CONTRACTOR |
| CP-2 | MOTOR CONTROL PANEL | WELL ROOM | CONTRACTOR | CONTRACTOR |
| CTE | METERING CT ENCLOSURE | OUTSIDE | CONTRACTOR | CONTRACTOR |
| GEN | BACKUP POWER GENERATOR | OUTSIDE | CONTRACTOR | CONTRACTOR |
| MSD | UTILITY METER SOCKET | OUTSIDE | CONTRACTOR | CONTRACTOR |
| MSD | MAIN SERVICE DISCONNECT | OUTSIDE | CONTRACTOR | CONTRACTOR |
| P-1 | WELL PUMP | WELL ROOM | CONTRACTOR | CONTRACTOR |
| PNL-H | MAIN DISTRIBUTION PANELBOARD | WELL ROOM | CONTRACTOR | CONTRACTOR |
| PNL-L | LOW VOLTAGE PANELBOARD | WELL ROOM | CONTRACTOR | CONTRACTOR |
| RVSS-1 | REDUCED VOLTAGE SOFT STARTER | WELL ROOM | CONTRACTOR | CONTRACTOR |
| XFMR-L | LOW VOLTAGE TRANSFORMER | WELL ROOM | CONTRACTOR | CONTRACTOR |

SWITCHES

| TAG | DESCRIPTION | LOCATION | SUPPLIED BY | INSTALLED BY |
|-------|---|-----------|-------------|--------------|
| HS-1 | WELL RM. EF-2 HAND-OFF-AUTO SELECTOR SWITCH | WELL ROOM | CONTRACTOR | CONTRACTOR |
| LSH-1 | FLOOR HIGH WATER SWITCH | WELL ROOM | CONTRACTOR | CONTRACTOR |
| PSH-1 | WELL HIGH DISCHARGE PRESSURE SWITCH | WELL ROOM | CONTRACTOR | CONTRACTOR |
| TS-1 | ROOM THERMOSTAT | WELL ROOM | CONTRACTOR | CONTRACTOR |
| ZS-1A | MAN-DOOR 1A POSITION SWITCH | WELL ROOM | CONTRACTOR | CONTRACTOR |
| ZS-1B | MAN-DOOR 1B POSITION SWITCH | WELL ROOM | CONTRACTOR | CONTRACTOR |
| ZS-2 | WELL ROOF HATCH POSITION SWITCH | WELL ROOM | CONTRACTOR | CONTRACTOR |
| ZS-3A | WV-1 IN FULL WASTE POSITION | WELL ROOM | CONTRACTOR | CONTRACTOR |

INSTRUMENTS

| TAG | DESCRIPTION | LOCATION | SUPPLIED BY | INSTALLED BY |
|-------|-----------------------------------|--------------|-------------|--------------|
| FE-1 | WELL FLOW ELEMENT | WELL ROOM | CONTRACTOR | CONTRACTOR |
| FIT-1 | WELL FLOW INDICATOR/TRANSMITTER | WELL ROOM | CONTRACTOR | CONTRACTOR |
| FIT-2 | SPRING FLOW INDICATOR/TRANSMITTER | SPRING SHACK | EXISTING | EXISTING |
| LT-1 | WELL LEVEL TRANSMITTER | WELL ROOM | CONTRACTOR | CONTRACTOR |
| PT-1 | SYSTEM PRESSURE TRANSMITTER | WELL ROOM | CONTRACTOR | CONTRACTOR |
| TT-1 | TEMPERATURE TRANSMITTER | WELL ROOM | CONTRACTOR | CONTRACTOR |

VALVES

| TAG | DESCRIPTION | LOCATION | SUPPLIED BY | INSTALLED BY |
|------|----------------------------------|-----------|-------------|--------------|
| SV-1 | WASTE VALVE PILOT SOLENOID VALVE | WELL ROOM | CONTRACTOR | CONTRACTOR |
| WV-1 | WASTE VALVE | WELL ROOM | CONTRACTOR | CONTRACTOR |

H.P.E. INC. ELECTRICAL ENGINEERS
 POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS
 HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
 708 EAST 50 SOUTH AMERICAN FORK, UT 84003 FAX (801) 642-2154
 HPE PROJECT: 20.081 ©2022
 FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

GENERAL NOTES:

1. NOT USED.

SHEET KEYNOTES:

1. NOT USED.

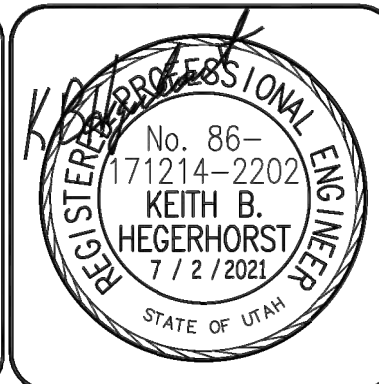
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DESIGNED BY: D. ANDERSON, PE.
 PROJECT MANAGER: M. CHANDLER, PE. PG. CFM.
 CHECKED BY: C. HATCH
 DRAWN BY: GILLIAN SORENSON
 DRAWING SCALE: AS SHOWN
 ISSUE DATE: JULY 8, 2022

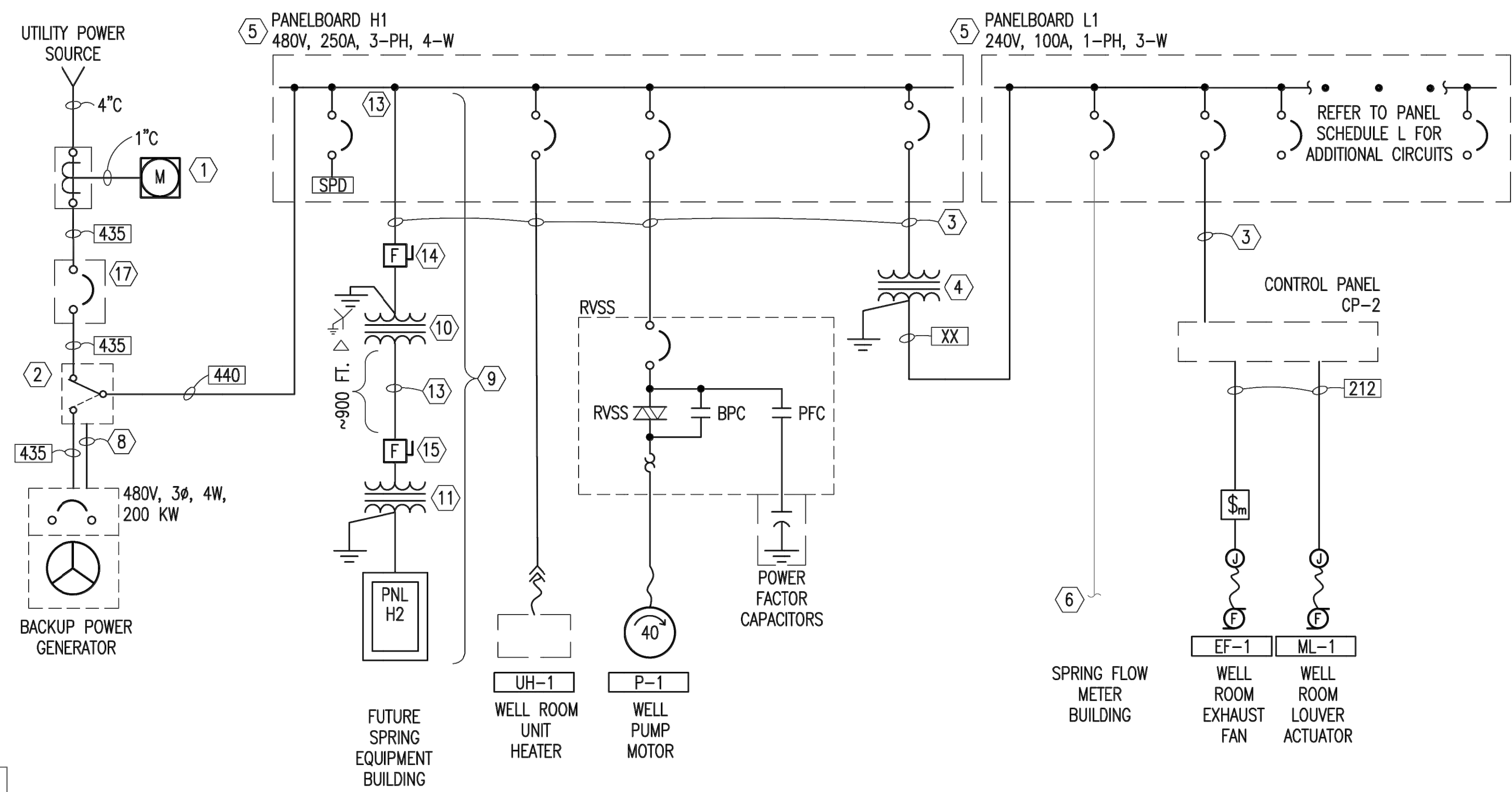
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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL LEGEND, SHT. 2
 12200 NORTH 5600 WEST
 CORNISH, UT 84308



| | |
|----------------|-----------|
| PROJECT NUMBER | 2019-0180 |
| SHEET | 24 OF 43 |
| SHEET NUMBER | E-102 |

| ELECTRICAL UTILITY INSTALLATION | | |
|-----------------------------------|----------------------|-----------------|
| UTILITY INFORMATION | | |
| UTILITY COMPANY: | ROCKY MOUNTAIN POWER | |
| UTILITY COMPANY CONTACT: | IAN BARKER | |
| CONTACT INFORMATION: | PHONE: 801-220-7297 | |
| WORK ORDER NUMBER: | 6835022 | |
| SERVICE PRIMARY | | |
| SUPPLIED BY: | CONTRACTOR | CONTRACTOR |
| INSTALLED BY: | CONTRACTOR | CONTRACTOR |
| PRIMARY TRENCHING/BACKFILL: | CONTRACTOR | CONTRACTOR |
| PRIMARY CONDUIT: | UTILITY COMPANY | UTILITY COMPANY |
| PRIMARY CONDUCTOR: | UTILITY COMPANY | UTILITY COMPANY |
| SERVICE TRANSFORMER | | |
| SUPPLIED BY: | CONTRACTOR | CONTRACTOR |
| INSTALLED BY: | CONTRACTOR | CONTRACTOR |
| TRANSFORMER PAD: | CONTRACTOR | CONTRACTOR |
| TRANSFORMER: | UTILITY COMPANY | UTILITY COMPANY |
| SERVICE SECONDARY | | |
| SUPPLIED BY: | CONTRACTOR | CONTRACTOR |
| INSTALLED BY: | CONTRACTOR | CONTRACTOR |
| SECONDARY TRENCHING/BACKFILL: | CONTRACTOR | CONTRACTOR |
| SECONDARY CONDUIT: | UTILITY COMPANY | UTILITY COMPANY |
| SECONDARY CONDUCTOR: | UTILITY COMPANY | UTILITY COMPANY |
| METERING EQUIPMENT | | |
| SUPPLIED BY: | CONTRACTOR | CONTRACTOR |
| INSTALLED BY: | CONTRACTOR | CONTRACTOR |
| METER: | UTILITY COMPANY | UTILITY COMPANY |
| METER SOCKET: | CONTRACTOR | CONTRACTOR |
| COMBO METER/MAIN: | CONTRACTOR | CONTRACTOR |
| CURRENT TRANSFORMER ENCL.: | CONTRACTOR | CONTRACTOR |
| CT ENCL. TO METER SOCKET WIRING: | UTILITY COMPANY | UTILITY COMPANY |
| CT ENCL. TO METER SOCKET CONDUIT: | CONTRACTOR | CONTRACTOR |
| MAIN SERVICE DISCONNECT | | |
| SUPPLIED BY: | CONTRACTOR | CONTRACTOR |
| INSTALLED BY: | CONTRACTOR | CONTRACTOR |
| CIRCUIT BREAKER: | CONTRACTOR | CONTRACTOR |
| FUSED DISCONNECT SWITCH: | CONTRACTOR | CONTRACTOR |



1 POWER ONE-LINE DIAGRAM
 SCALE: NTS



COMMERCIAL / INDUSTRIAL CUSTOMER INFORMATION SHEET
 Please complete this form and return to the Estimator assigned to your job

Business Information

Name of Customer's Business: _____ Phone No.: _____ Request Number: _____
 Address: _____ Fax No.: _____
 Person responsible for advance and contract billing (if different than monthly billing customer): _____
 Address: Street Address City, State, Zip _____ E-mail Address: _____
 Building Square Footage: _____ Note: Please breakdown into warehouse, office and manufacturing if applicable
 Hours of Operation (include days & hours): _____

Service Description

Desired Secondary Voltage: 3 Phase 277/480 V If 'other' list here Note: Not all voltages may be available
 Panel Size (in Amps): 200 Number of Meters: 1 List addresses for each above
 Nearest Pole or Equipment number: _____ Type of Service Desired: Underground
 Electrical Contractor: _____ Phone #: _____

Load List (attach additional sheets if necessary)

| Description | Phase and Voltage | New Load to be added | Load to be removed | Total Connected Load after changes | Unit |
|---|-------------------|----------------------|--------------------|------------------------------------|-------|
| HVAC (name plate rating) | 1 Phase 120/240 V | - | - | - | Tons* |
| Refrigeration Equipment | 1 Phase 120/240 V | - | - | - | Tons* |
| Total connected Tons | | | | 0 Tons | |
| Exhaust Fans | 1 Phase 120/240 V | 0.5 | - | 0.5 | HP |
| Gas/Fuel/Sump Pump | 1 Phase 120/240 V | - | - | - | HP |
| Small Motors (include motor codes) | 3 Phase 120/208 V | 10 | - | 10 | HP |
| Air Compressor | 1 Phase 120/240 V | - | - | - | HP |
| Swimming Pool | 1 Phase 120/240 V | - | - | - | HP |
| Largest Motor (not included above) & code | 3 Phase 277/480 V | 40 | - | 40 | HP |
| Total connected HP | | | | 50.5 HP | |
| Electric Heat | 3 Phase 277/480 V | 17 | - | 17 | kW |
| Water Heating | 1 Phase 120/240 V | - | - | - | kW |
| Lighting | 1 Phase 120/240 V | -0.5 | - | -0.5 | kW |
| Outlets | 1 Phase 120/240 V | 1.44 | - | 1.44 | kW |
| Office Equipment | 1 Phase 120/240 V | 1.0 | - | 1.0 | kW |
| Kitchen Equipment | 1 Phase 120/240 V | - | - | - | kW |
| Computers, Magnetic Power Supplies | 1 Phase 120/240 V | - | - | - | kW |
| Machinery | 1 Phase 120/240 V | - | - | - | kW |
| Thermoplastic Injection Equipment | 1 Phase 120/240 V | - | - | - | kW |
| Elevators | 1 Phase 120/240 V | - | - | - | kW |
| Boiler | 1 Phase 120/240 V | - | - | - | kW |
| Snow Melting | 1 Phase 120/240 V | - | - | - | kW |
| Signs | 1 Phase 120/240 V | - | - | - | kW |
| X-Ray Equipment | 1 Phase 120/240 V | - | - | - | kW |
| Washer/Dryer | 1 Phase 120/240 V | - | - | - | kW |
| Miscellaneous | 1 Phase 120/240 V | 2.4 | - | 2.4 | kW |
| Heat Exchanger | 1 Phase 120/240 V | - | - | - | kW |
| Humidifier | 1 Phase 120/240 V | - | - | - | kW |
| Future | 1 Phase 120/240 V | - | - | 0 | kW |
| Total connected kW | | | | 17.5 kW | |

It is important to provide the most accurate information available, as it is used by the Estimator to design PacificCorp's facilities and determine the customer's costs. Please sign and date this form before giving it to your estimator.

Customer Signature _____ **Date** _____

Note:
 * You may wish to consult a trained professional (electrician, engineer, etc.) prior to providing the information to your estimator.
 * Commercial metering can have many restrictions that should be discussed with the estimator prior to the purchase and installation of your metering equipment. There are also restrictions regarding master metering. If your plans call for master metering, please discuss this with your estimator.
 * Motors larger than 5hp three phase or 5hp single phase will require approval by our engineering department prior to installation in order to determine the acceptable starting current.
 * Tons = HP x 1.25 / 12,000

- GENERAL NOTES:**
- REFER TO CONDUIT/CONDUCTOR TABLE FOR WIRE AND CONDUIT REQUIREMENTS.
 - FOR EQUIPMENT LOCATIONS REFER TO ELECTRICAL PLANS.
 - REFER TO "ELECTRICAL UTILITY INSTALLATION" TABLE FOR CONTRACTOR AND UTILITY RESPONSIBILITIES.

- SHEET KEYNOTES:**
- METER SOCKET: AS REQUIRED BY UTILITY COMPANY.
 - AUTOMATIC TRANSFER SWITCH (ATS): 600V, 225A (MIN), 3-PHASE, 4-WIRE, NEMA1.
 - FOR WIRE AND CONDUIT REQUIREMENTS REFER TO PANELBOARD SCHEDULE.
 - TRANSFORMER L: 7.5 KVA, 480 VAC PRI, 240/120 VAC SECONDARY.
 - REFER TO PANELBOARD SCHEDULE FOR PANELBOARD INFORMATION.
 - SPRING FLOW METER IS LOCATED IN A BUILDING (SHACK) WEST OF THE EXISTING WELL. IT IS APPROXIMATELY 900-1000 FEET FROM THE WELL BUILDING. PRESENT POWER TO THE SHACK IS A 30A/1P CIRCUIT BREAKER IN THE EXISTING PANELBOARD FOR A 120 VAC BRANCH CIRCUIT TO THE SHACK. THE SPRING FLOW METER BUILDING CONDUCTORS ARE AWG#2 CONDUCTORS IN 2" CONDUIT. CONTRACTOR SHALL REMOVE POWER FROM THE EXISTING POWER PANEL AND RE-INSTALL FROM THE NEW PANELBOARD L AS REQUIRED. PROVIDE A BURIED J-BOX TO TRANSITION FROM AWG#10 CONDUCTORS TO THE EXISTING AWG#2 CONDUCTORS IN THE 2" AS REQUIRED. LOCATE J-BOX ON AS-BUILD DRAWINGS. USE WATERPROOF CONNECTIONS AS REQUIRED.
 - REFER TO ADDITIONAL UTILITY POWER SITE TRENCHING AND CONDUIT NOT SHOWN ON THIS ONE-LINE.
 - 1" C, WITH CONDUCTORS AS REQUIRED FOR ATS TO REMOTELY START/STOP THE BACKUP POWER GENERATOR.
 - FUTURE EQUIPMENT. DO NOT PROVIDE FOR THIS PROJECT AT THIS TIME. STUB CONDUIT FROM FUTURE FUSED DISCONNECT TO 5-FT. OUTSIDE BUILDING AND IDENTIFY LOCATION ON AS-BUILD DRAWINGS.
 - TRANSFORMER T1: 112.5 KVA, 480Y/277 V PRIMARY, 600 V SECONDARY.
 - TRANSFORMER T2: 112.5 KVA, 600 V PRIMARY, 480Y/277 V SECONDARY.
 - FUTURE: (1) 3" C, W/3-3/0 ALUMINUM, #6 AL GROUND, (1) 3" C SPARE.
 - PROVIDE PANEL WITH FEED-THRU LUG CONNECTION FOR FUTURE LOAD.
 - FUSED DISCONNECT: 200A, 600V, 3-POLE WITH 150A FUSES.
 - FUSED DISCONNECT: 200A, 600V, 3-POLE WITH 110A FUSES.
 - 1" C, CONDUCTORS BY UTILITY COMPANY.
 - MAIN SERVICE DISCONNECT: 225A, 600V, 3-POLE, NEMA 3R ENCLOSURE.

File Path: M:\20.081 - Cornish Pitcher Well Drawings\E-201.dwg Jun 24, 2022 - 1:28pm

| NO. | DESCRIPTION | DATE |
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IF THE ABOVE SCALE BAR DOES NOT MEASURE 1-INCH IN LENGTH, DO NOT USE THIS DRAWING FOR SCALING PURPOSES. DIMENSIONS AND MEASUREMENTS SPECIFIED IN THE DRAWING TAKE PRECEDENCE TO SCALED MEASUREMENTS.

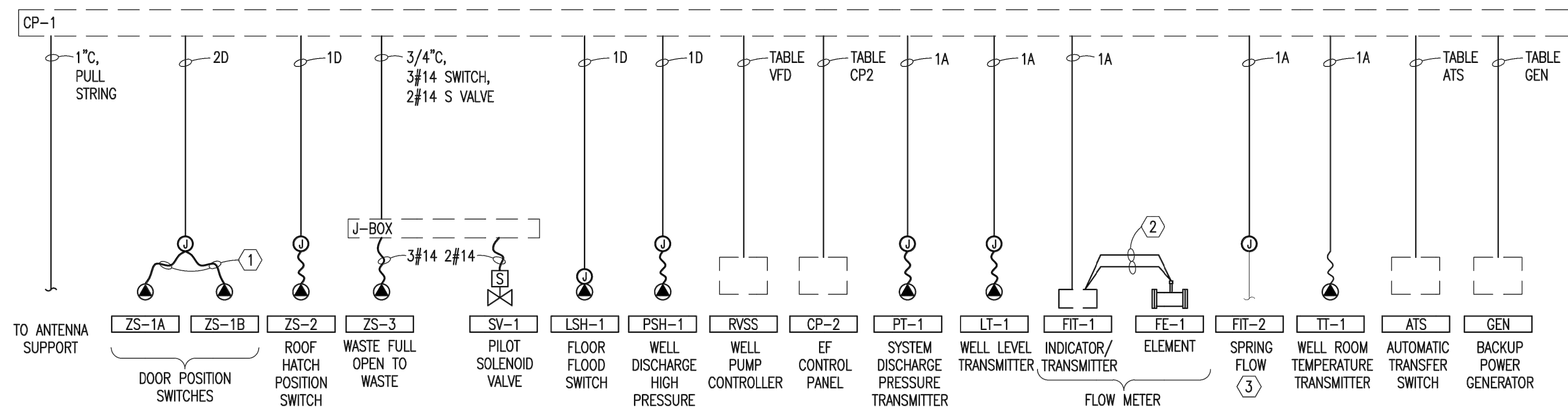
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DESIGNED BY: D. ANDERSON, PE.
 PROJECT MANAGER: M. CHANDLER, PE, PG. CFM.
 CHECKED BY: C. HATCH
 DRAWN BY: GILLIAN SORENSON
 DRAWING SCALE: AS SHOWN
 ISSUE DATE: JULY 8, 2022

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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL DIAGRAMS, SHT. 1
 12200 NORTH 5600 WEST
 CORNISH, UT 84308

PROJECT NUMBER: 2019-0180
 SHEET: 25 OF 43
 SHEET NUMBER: E-201
 REGISTERED PROFESSIONAL ENGINEER
 No. 86-171214-2202
 KEITH B. HEGERHORST
 7/2/2022
 STATE OF UTAH



1 CONTROL ONE-LINE DIAGRAMS
 SCALE: NTS

GENERAL NOTES:

- FOR LOCATIONS OF INSTRUMENTS, PANEL AND DEVICES, REFER TO INSTRUMENTATION AND CONTROL PLAN.
- CONTRACTOR MAY COMBINE CONDUITS AND JUNCTION BOXES. DO NOT INSTALL DISCRETE AND ANALOG SIGNALS IN SAME RACEWAY.
- SEE POWER PLANS AND PANEL SCHEDULES FOR POWER REQUIREMENTS TO EQUIPMENT AND/OR INSTRUMENTS.

SHEET KEYNOTES:

- CONDUCTOR/CABLE SUPPLIED BY MANUFACTURER.
- CONDUCTORS BY FLOW METER SUPPLIER. CONDUIT SIZE AND QUANTITY OF CONDUCTORS VARY DEPENDING ON FLOW METER SUPPLIED. COORDINATE WITH FLOW METER SUPPLIER PRIOR TO ROUGH-IN. VERIFY LENGTH OF CONDUCTORS BEFORE ORDERING.
- REFER TO E-403, KEYNOTE 2.

I&C WIRE/CONDUIT TABLE

| IDENT. | CONDUIT SIZE | CONDUCTOR | | SIGNAL DESCRIPTION |
|--------|--------------|-----------|----------------|---------------------------|
| | | QTY | SIZE | |
| 1A | 3/4" | 1 | #18TSP | 1 ANALOG SIGNAL |
| 2A | 3/4" | 2 | #18TSP | 2 ANALOG SIGNALS |
| 3A | 3/4" | 3 | #18TSP | 3 ANALOG SIGNALS |
| IDENT. | CONDUIT SIZE | QTY | CONDUCTOR SIZE | SIGNAL DESCRIPTION |
| 1D | 3/4" | 2 | #14 | 1 COMMON, 1 DISCRETE SIG. |
| 2D | 3/4" | 3 | #14 | 1 COMMON, 2 DISCRETE SIG. |
| 3D | 3/4" | 4 | #14 | 1 COMMON, 3 DISCRETE SIG. |
| 4D | 3/4" | 5 | #14 | 1 COMMON, 4 DISCRETE SIG. |

TABLE RVSS (CP-1 TO RVSS)

| CONDUIT SIZE | CONDUCTOR | | CP-1 TO RVSS SIGNAL DESCRIPTION |
|--------------|-----------|------|---------------------------------|
| | QTY | SIZE | |
| 3/4" | 1 | #14 | COMMON INPUT |
| | 1 | #14 | COMMON OUTPUT |
| | 1 | #14 | RVSS HAND-OFF-AUTO IN AUTO |
| | 1 | #14 | RVSS HAND-OFF-AUTO IN HAND |
| | 1 | #14 | RVSS RUNNING |
| | 1 | #14 | RVSS RUN COMMAND |
| | 1 | #14 | RVSS FAULT |
| | 4 | #14 | SPARES |

TABLE CP2 (CP-1 TO CP-2)

| CONDUIT SIZE | CONDUCTOR | | CP-1 TO CP-2 SIGNAL DESCRIPTION |
|--------------|-----------|------|---------------------------------|
| | QTY | SIZE | |
| 3/4" | 1 | #14 | COMMON OUTPUT |
| | 1 | #14 | COMMON INPUT |
| | 1 | #14 | WELL RM. EF-1 HOA IN AUTO |
| | 1 | #14 | WELL RM. EF-1 HOA IN HAND |
| | 1 | #14 | WELL RM. EF-1 ON |
| | 1 | #14 | WELL RM. EF-1 RUN COMMAND |
| | 4 | #14 | SPARE |

TABLE GEN

| CONDUIT SIZE | CONDUCTOR | | CP-1 TO GENERATOR SIGNAL DESCRIPTION |
|--------------|-----------|------|--------------------------------------|
| | QTY | SIZE | |
| 3/4" | 1 | #14 | COMMON |
| | 1 | #14 | GENERATOR RUNNING |
| | 1 | #14 | GENERATOR FAULT |

TABLE ATS

| CONDUIT SIZE | CONDUCTOR | | CP-1 TO ATS SIGNAL DESCRIPTION |
|--------------|-----------|------|--------------------------------|
| | QTY | SIZE | |
| 3/4" | 1 | #14 | COMMON INPUT |
| | 1 | #14 | ATS IN GENERATOR POSITION |
| | 1 | #14 | ATS IN UTILITY POSITION |

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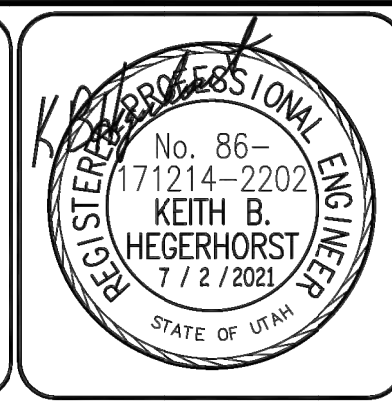
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PRINCIPAL
 D. ANDERSON, PE.
 PROJECT MANAGER
 M. CHANDLER, PE, PG. CFM.
 CHECKED BY
 C. HATCH
 DRAWN BY
 GILLIAN SORENSON
 DRAWING SCALE
 AS SHOWN
 ISSUE DATE
 JULY 8, 2022

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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL DIAGRAMS, SH. 2
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| PROJECT NUMBER 2019-0180 |
| SHEET 26 OF 43 |
| SHEET NUMBER E-202 |

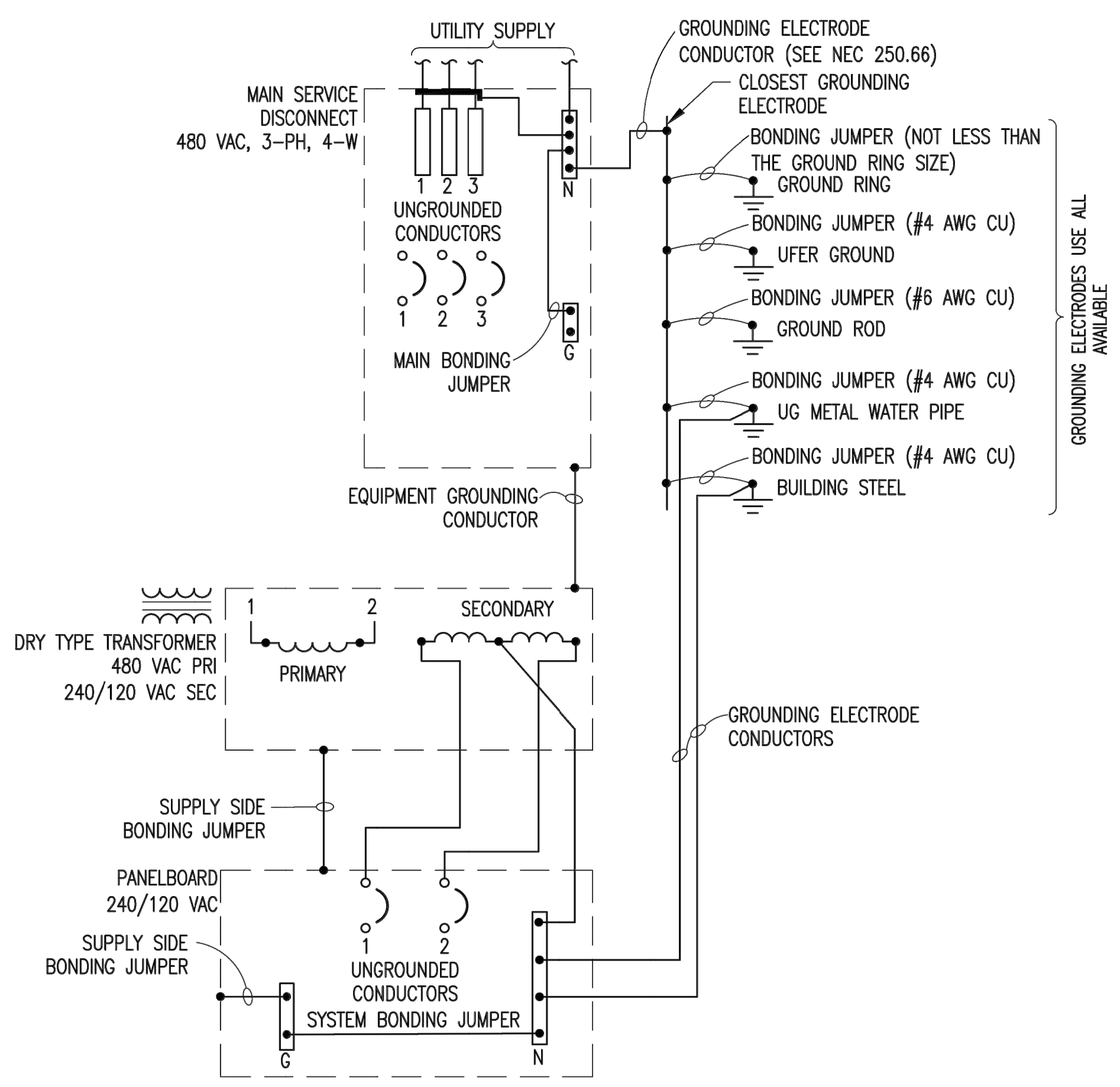
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GENERAL NOTES:

1. NOT USED.

SHEET KEYNOTES:

1. NOT USED.



240/120 VAC SEPARATELY DERIVED SYSTEM,
 GROUNDING ELECTRODE IN FIRST DISCONNECT MEANS (PANELBOARD)

1 GROUNDING SEPARATELY DERIVED SYTSEM
 SCALE: NTS

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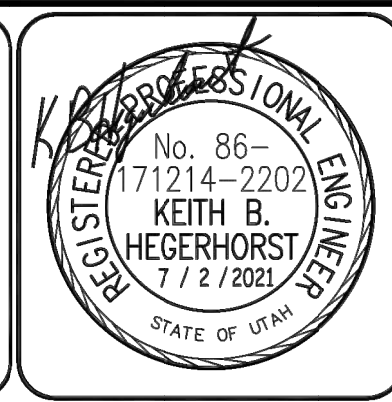
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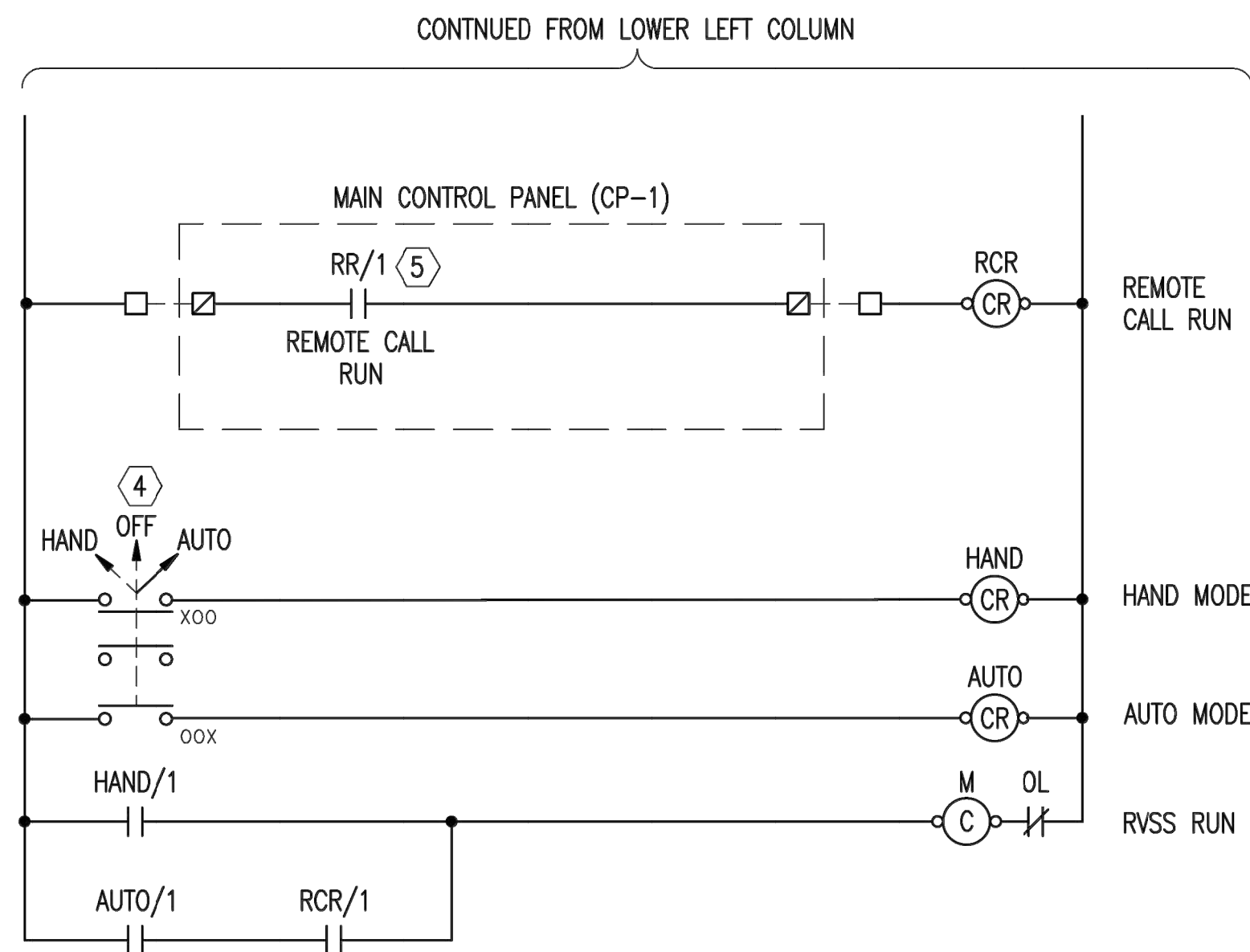
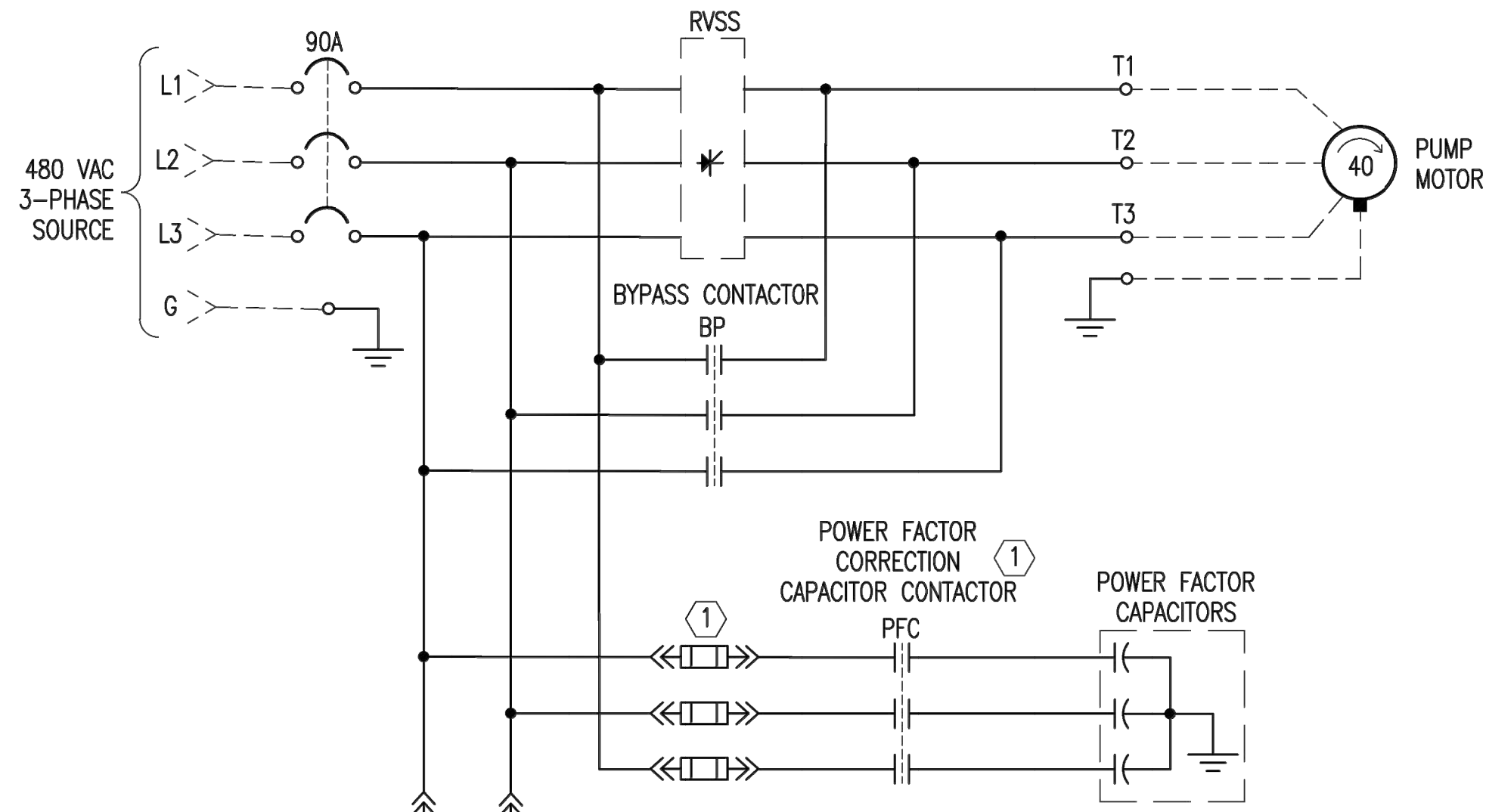
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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL DIAGRAMS, SHT. 3

12200 NORTH 5600 WEST
 CORNISH, UT 84308



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| PROJECT NUMBER | 2019-0180 |
| SHEET | 27 OF 43 |
| SHEET NUMBER | E-203 |



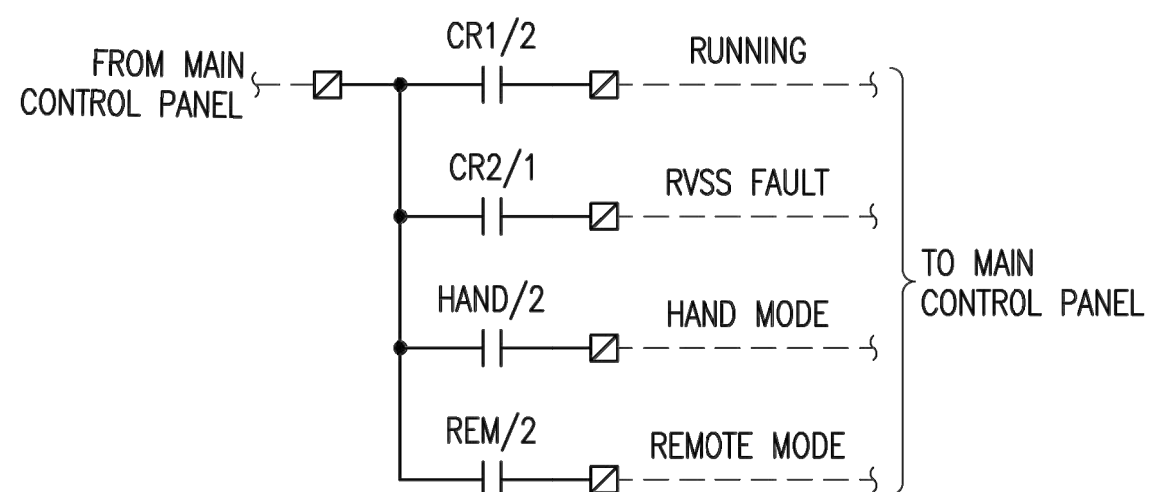
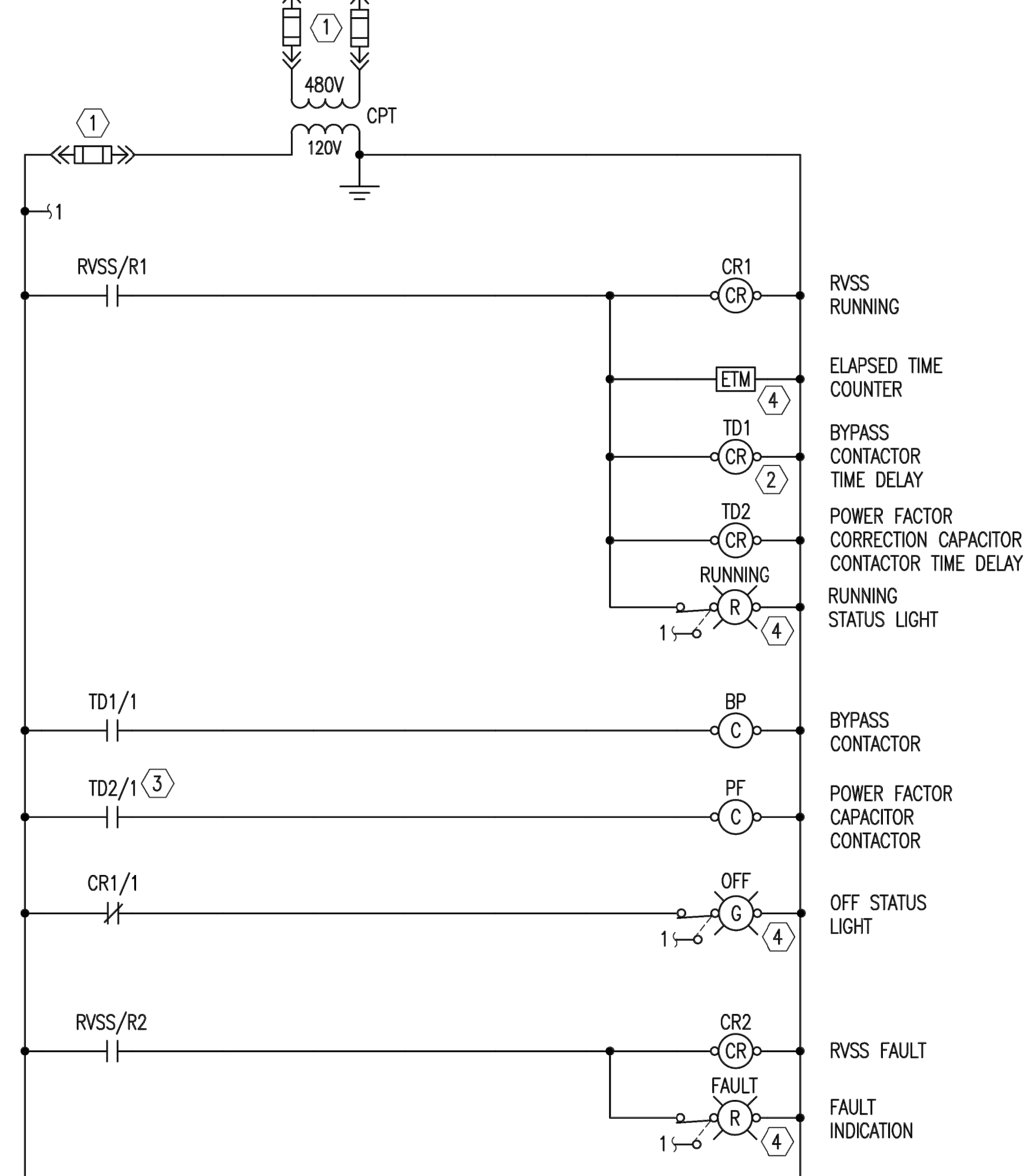
TERMINAL LEGEND

- FIELD TERMINAL
- ☒ MAIN CONTROL PANEL (CP-1)
- ⊙ CONTROL PANEL (CP-2)
- RVSS MOTOR CONTROLLER

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- GENERAL NOTES:**
- CONTROL DIAGRAM IS TYPICAL AND SHALL BE MODIFIED BY THE CONTRACTOR FOR THE SPECIFIC EQUIPMENT SUPPLIED.
 - DIAGRAM IS BASED ON THE HIGH DISCHARGE PRESSURE AND LOW INTAKE LEVEL SHUTDOWN LOGIC PROVIDED BY THE MAIN CONTROL PANEL PLC AND NOT HARD-WIRED IN THE MOTOR CONTROLLER. BOTH ALARMS SHALL SHUTDOWN THE WELL PUMP IN HAND AND REMOTE MODES.

- SHEET KEYNOTES:**
- SUPPLIER SHALL SIZE FUSES.
 - BYPASS CONTACTOR TIME DELAY FUNCTIONS MAY BE BUILT INTO THE RVSS UNIT.
 - POWER FACTOR CAPACITORS SHALL BE ENERGIZED AFTER MOTOR IS RUNNING FULL SPEED AND ON THE BY-PASS CONTACTOR.
 - DEVICE SHALL BE INSTALLED IN THE MOTOR CONTROLLER DOOR.
 - RELAY IS IN CP-1 (MAIN CONTROL PANEL) AND THE RELAY DESIGNATION IS DETERMINED BY THE OWNER.



1 RVSS CONTROL WIRING DIAGRAM
 SCALE: NTS

CONTINUED IN UPPER RIGHT COLUMN

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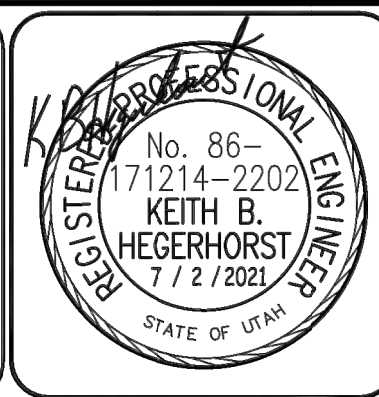
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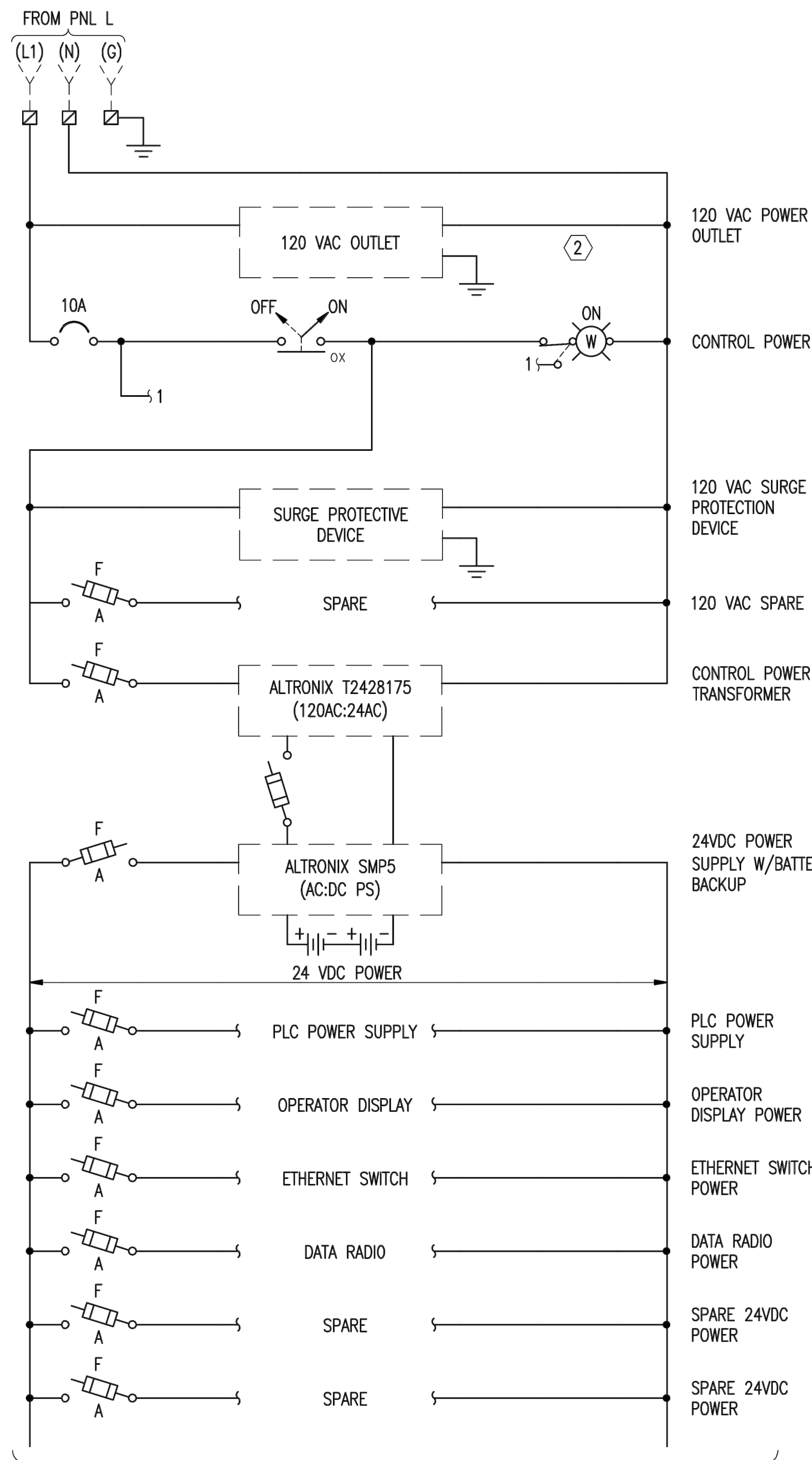
CORNISH TOWN CORP
 PITCHER WELL HOUSE
 TYPICAL RVSS CONTROL DIAGRAM

12200 NORTH 5600 WEST
 CORNISH, UT 84308

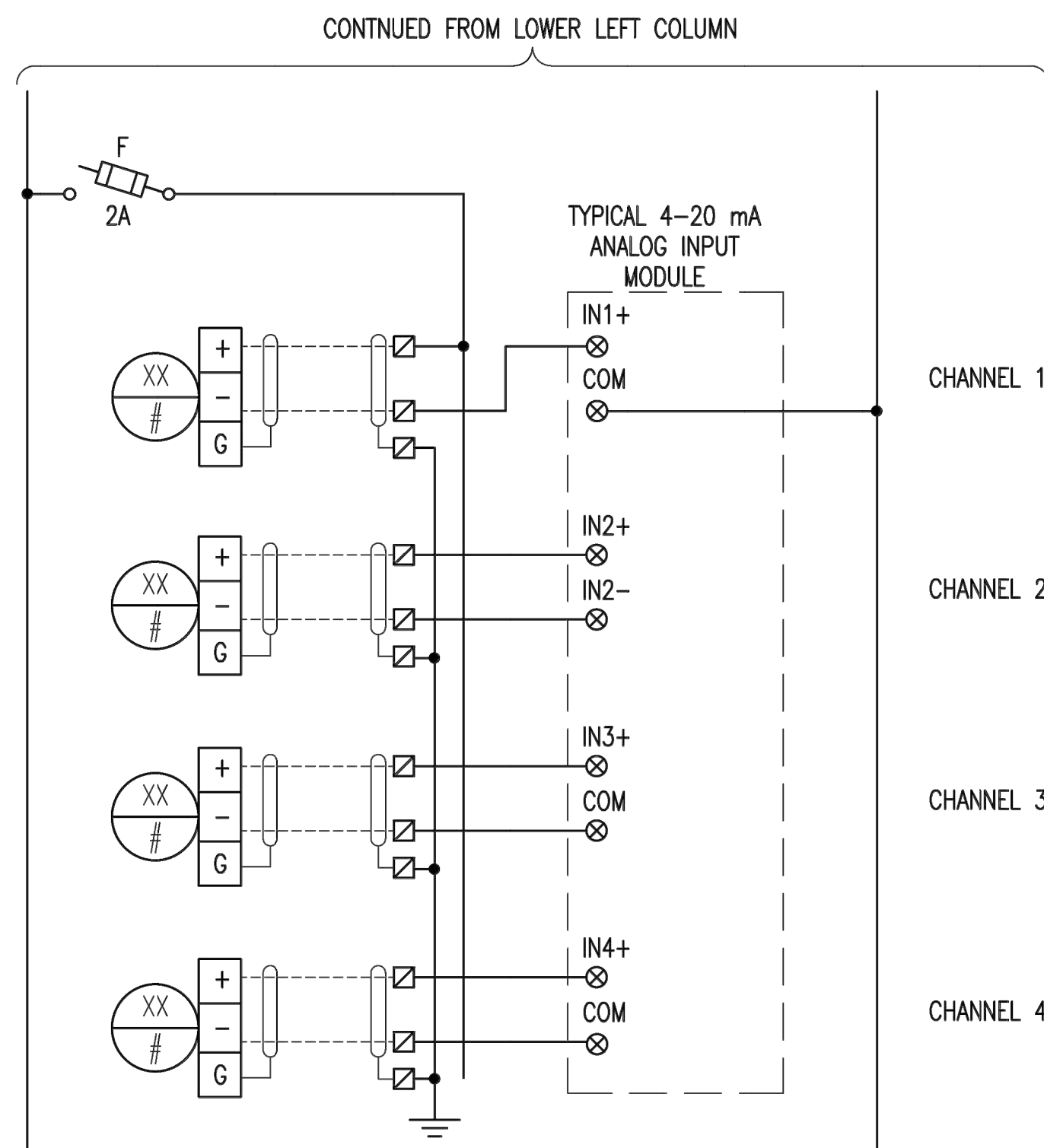


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| PROJECT NUMBER: 2019-0180 |
| SHEET 28 OF 43 |
| E-204 |

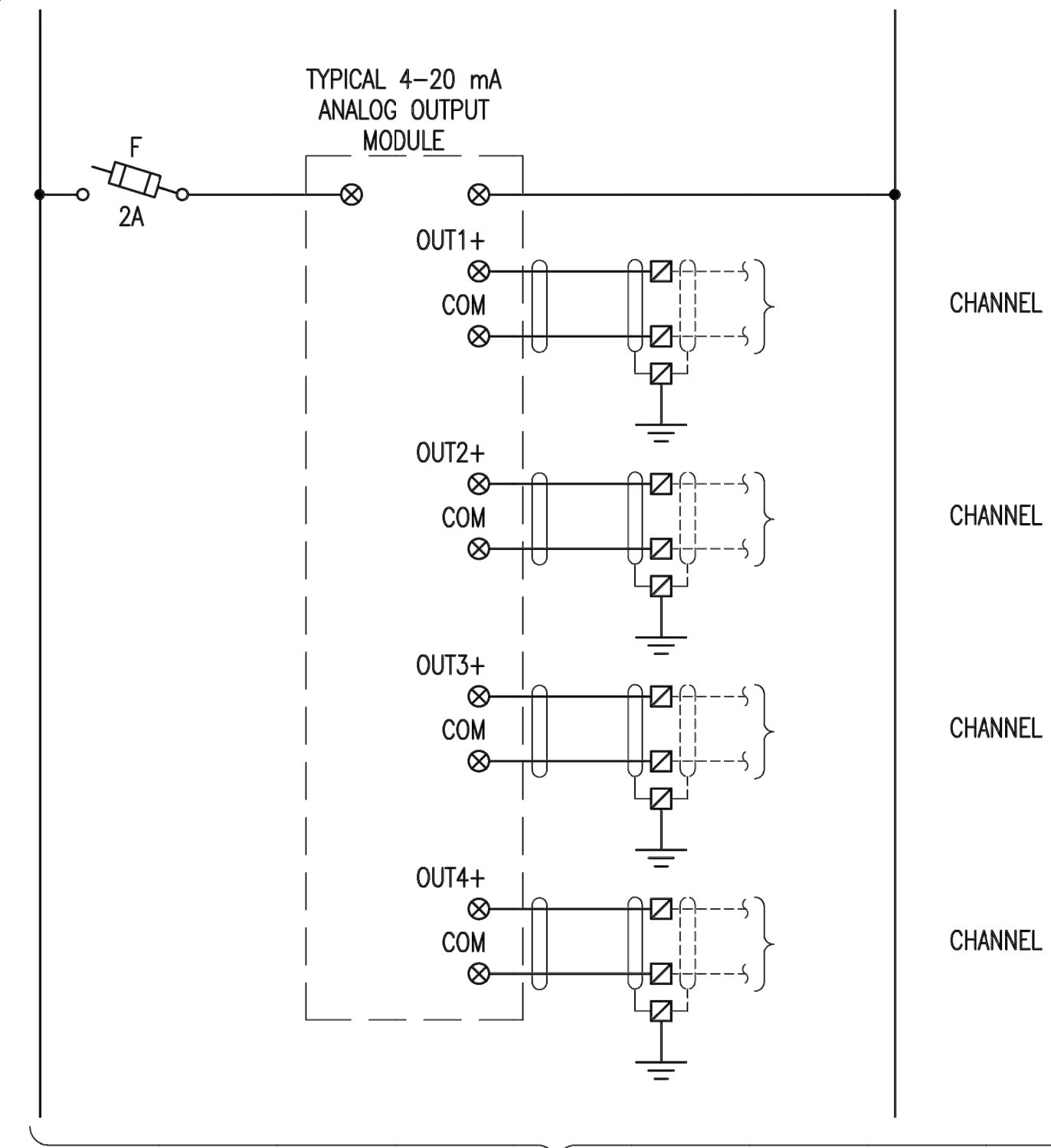
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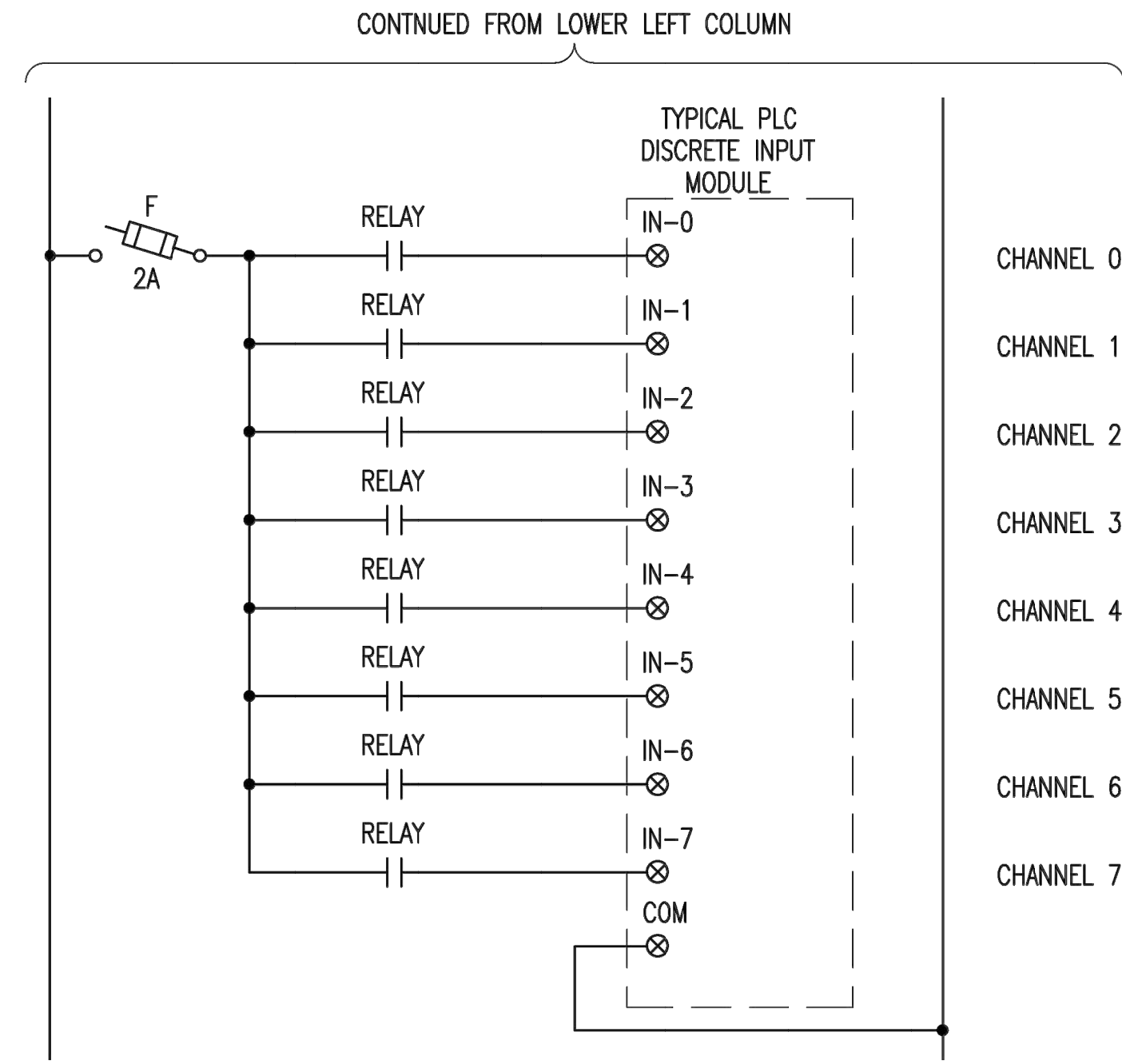
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1
 TYPICAL POWER LOGIC
 SCALE: NTS



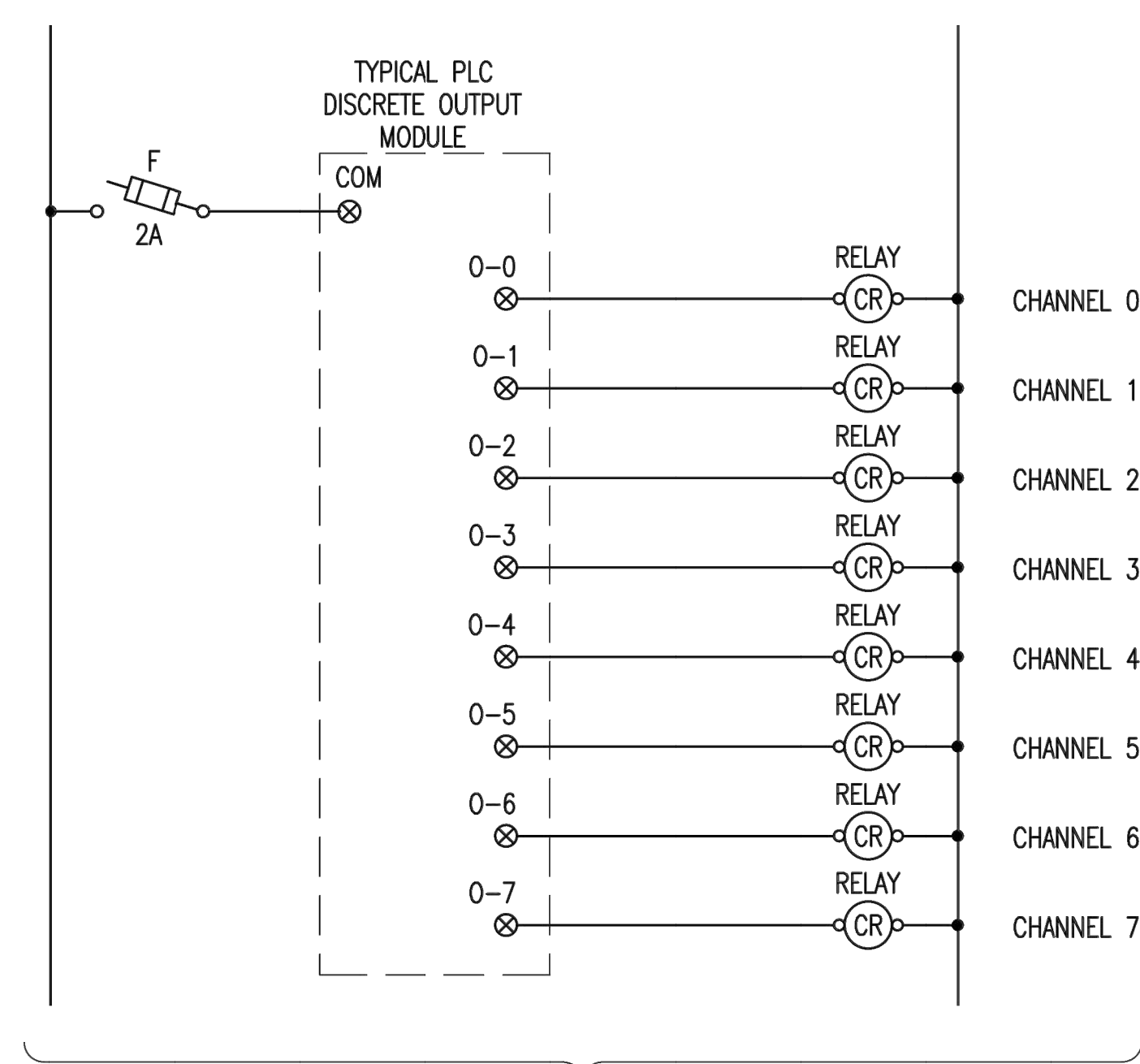
2
 TYPICAL PLC ANALOG INPUT MODULE
 SCALE: NTS



3
 TYPICAL PLC ANALOG OUTPUT MODULE
 SCALE: NTS



4
 TYPICAL PLC DISCRETE INPUT MODULE
 SCALE: NTS



CONTINUED ON E-206

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GENERAL NOTES:

- CP-1 DIAGRAM IS TYPICAL AND SHALL BE MODIFIED BY THE CONTRACTOR FOR THE SPECIFIC DEVICES PROVIDED.
- CONTRACTOR SHALL ASSIGN OVERCURRENT DEVICE, TERMINAL AND WIRE NUMBERS AS REQUIRED.
- CP-1 INPUT-OUTPUT LIST PROVIDED ON E-501.

SHEET KEYNOTES:

- EACH FILTER CONTROL PANEL OUTPUTS A 24VDC SIGNAL FOR TWO CHANNELS. AN INTERPOSING RELAY IS REQUIRED. CHANNEL IDENTIFICATION SHALL BE CONFIGURED DURING START UP. WIRE RELAY CONTACT TO PLC INPUT.
- DC POWER SUPPLY WITH BATTERY BACKUP SHOWN. CONTRACTOR MAY PROVIDE 120 VAC UNINTERRUPTIBLE POWER SUPPLY (UPS). MODIFY DIAGRAM AS REQUIRED IF UPS IS PROVIDED.

TERMINAL LEGEND

- FIELD TERMINAL
- ⊠ MAIN CONTROL PANEL (CP-1)
- ⊙ CONTROL PANEL (CP-2)
- RVSS MOTOR CONTROLLER

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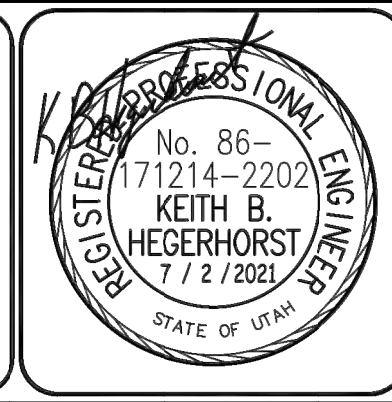
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 PROJECT MANAGER: M. CHANDLER, PE, PG. CFM.
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CORNISH TOWN CORP
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 CP-1 TYPICAL DIAGRAMS, SHT. 1

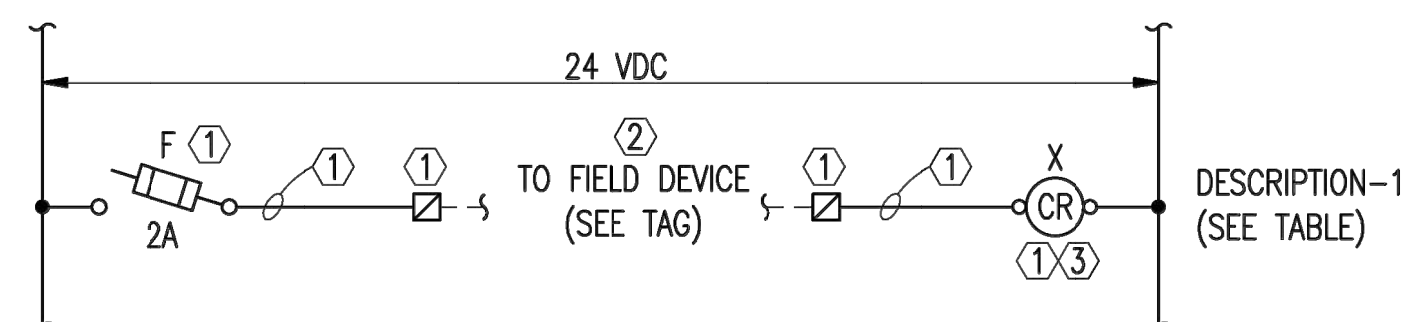
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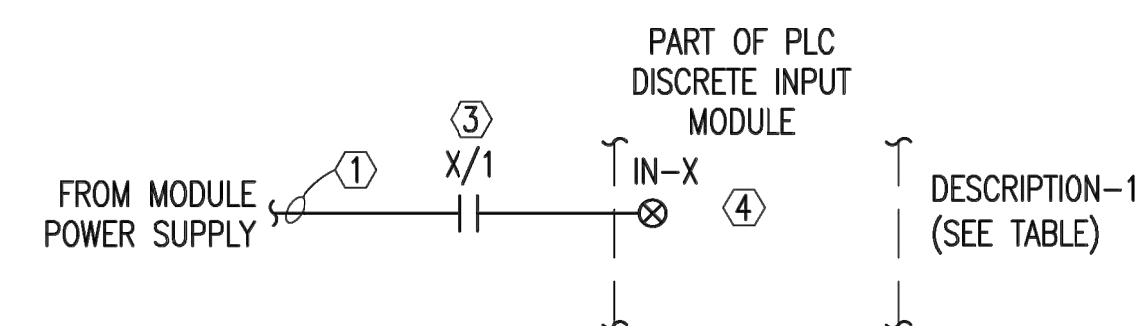
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| PROJECT NUMBER | 2019-0180 |
| SHEET | 29 OF 43 |
| SHEET NUMBER | E-205 |

NOTES:

1. CONTRACTOR SHALL ASSIGN FUSE, RELAY, TERMINAL AND WIRE NUMBERS AS REQUIRED.
2. CONTRACTOR MAY COMBINE CONDUCTORS IN COMMON CONDUIT TO DEVICES IN SAME PROXIMITY.
3. PROVIDE AN INTERPOSING RELAY AND WIRE RELAY CONTACT TO PLC INPUT AS INDICATED.
4. CONTRACTOR SHALL ASSIGN PLC MODULE AND CHANNEL.



INTERPOSE RELAY LOGIC

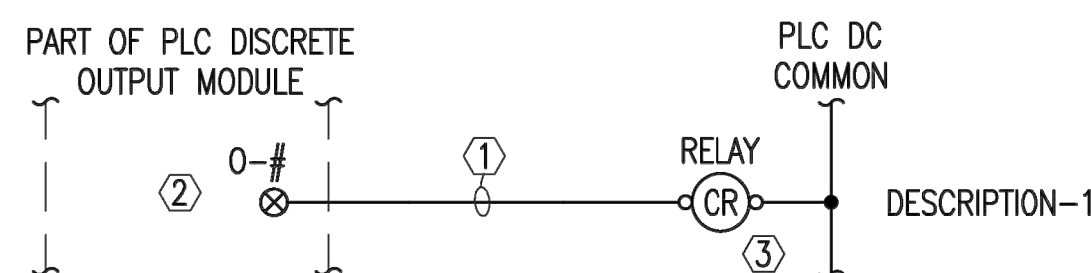


PLC DISCRETE INPUT LOGIC

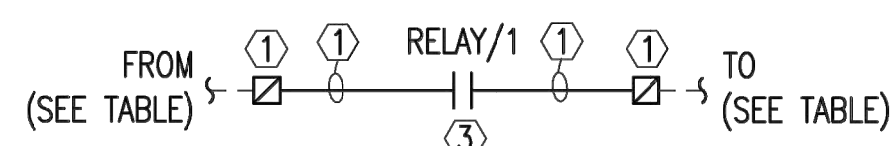
1 CP-1 PLC INPUT WIRING
SCALE: NTS

NOTES:

1. CONTRACTOR SHALL ASSIGN FUSE, RELAY, TERMINAL AND WIRE NUMBERS AS REQUIRED.
2. CONTRACTOR SHALL ASSIGN PLC MODULE AND CHANNEL.
3. PROVIDE AN INTERPOSING RELAY AND WIRE RELAY CONTACT TO PLC INPUT AS INDICATED.



PLC DISCRETE OUTPUT LOGIC

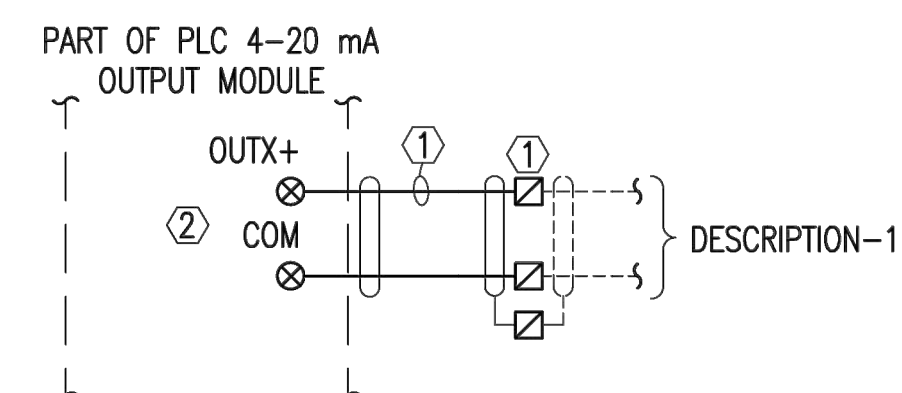


INTERPOSE RELAY LOGIC

2 CP-1 OUTPUT WIRING
SCALE: NTS

NOTES:

1. CONTRACTOR SHALL ASSIGN FUSE, RELAY, TERMINAL AND WIRE NUMBERS AS REQUIRED.
2. CONTRACTOR SHALL ASSIGN PLC MODULE AND CHANNEL.

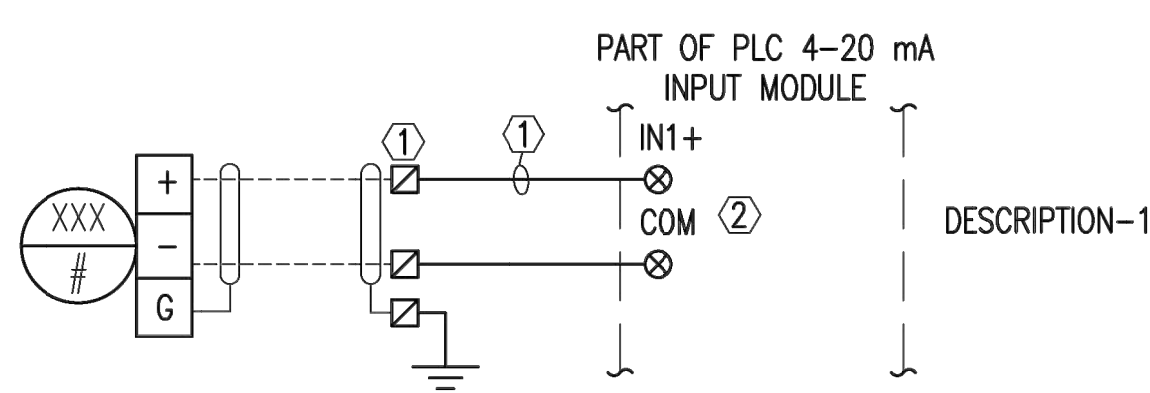


PLC ANALOG OUTPUT

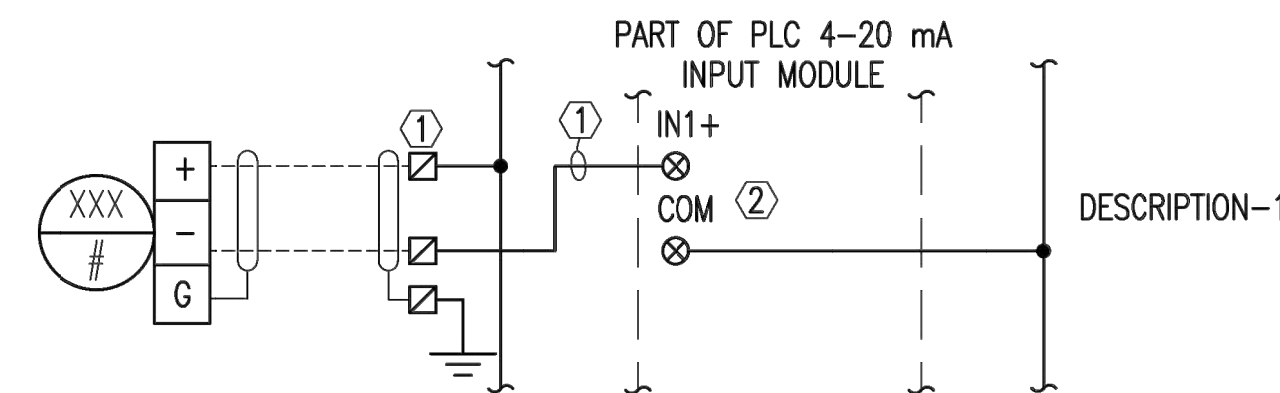
3 CP-1 PLC ANALOG OUTPUT WIRING
SCALE: NTS

NOTES:

1. CONTRACTOR SHALL ASSIGN FUSE, RELAY, TERMINAL AND WIRE NUMBERS AS REQUIRED.
2. CONTRACTOR SHALL ASSIGN PLC MODULE AND CHANNEL.



PLC ANALOG INPUT TYPE 1



PLC ANALOG INPUT TYPE 2

4 CP-1 ANALOG INPUT WIRING
SCALE: NTS

GENERAL NOTES:

1. NOT USED.

SHEET KEYNOTES:

1. NOT USED.

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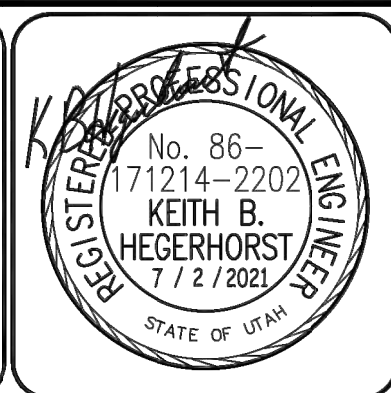
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PRINCIPAL
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PROJECT MANAGER
M. CHANDLER, PE, PG. CFM.
CHECKED BY
C. HATCH
DRAWN BY
GILLIAN SORENSON
DRAWING SCALE
AS SHOWN
REVISION DATE
JULY 8, 2022

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CORNISH TOWN CORP
PITCHER WELL HOUSE
 CP-1 TYPICAL DIAGRAMS, SHT. 2

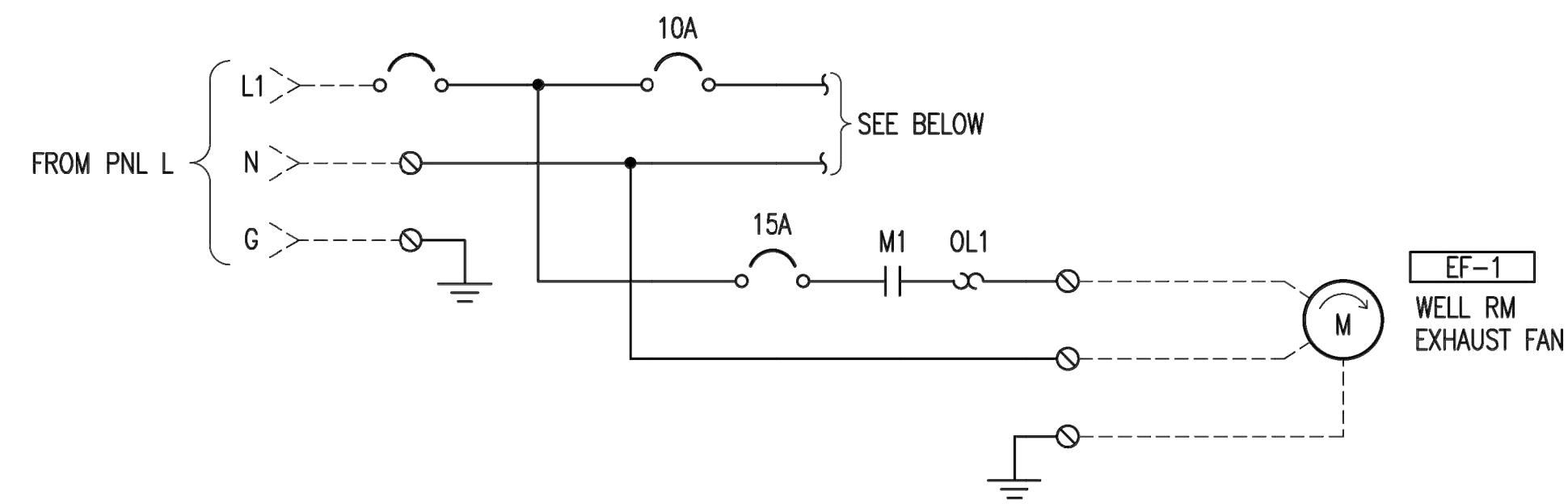
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| SHEET 30 | OF 43 |
| SHEET NUMBER E-206 | |

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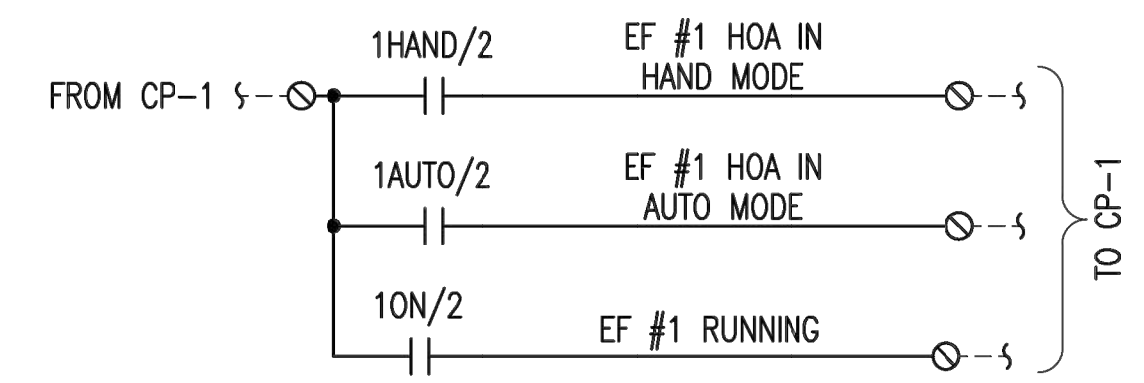
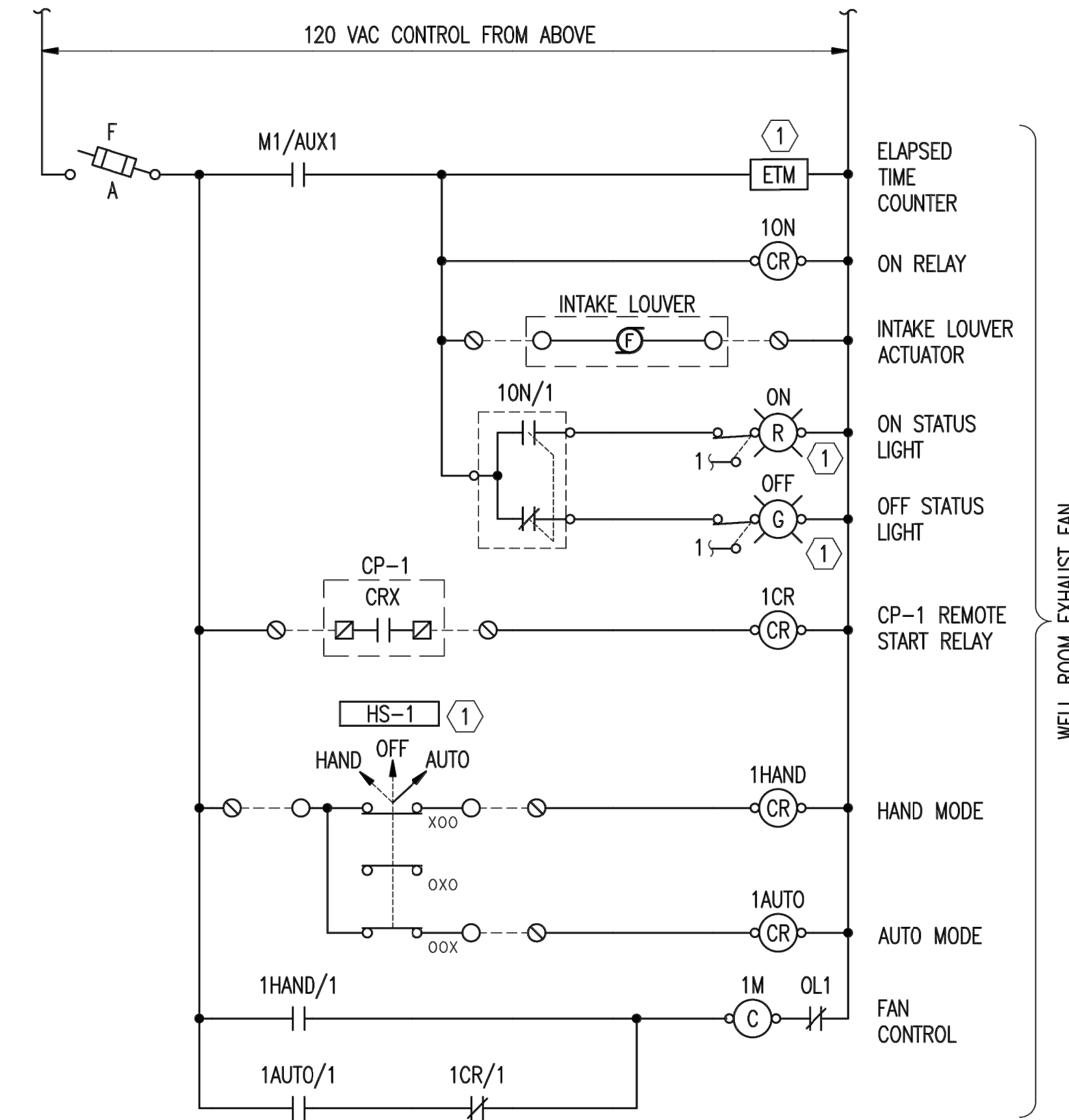


GENERAL NOTES:

1. CP-2 TYPICAL ARRANGEMENT SHOWN ON E-504.
2. CONTROL DIAGRAM IS TYPICAL AND INDICATES THE BASIC CONTROL CONCEPT. CONTRACTOR TO MODIFY AS REQUIRED FOR THE PROVIDED COMPONENTS AND PROVIDE WIRE, TERMINAL AND FUSE NUMBERS AS REQUIRED.

SHEET KEYNOTES:

1. DEVICE SHALL BE INSTALLED ON ENCLOSURE DOOR AND AVAILABLE TO THE OPERATOR.
2. INTAKE LOUVER ACTUATOR, WIRE THE LOUVER TO AUTOMATICALLY OPEN WHEN THE FAN IS RUNNING. LOUVER CLOSES WHEN THE FAN IS STOPPED. PROVIDE 3/4" C WITH 2#14 TO THE LOUVER ACTUATOR.
3. COORDINATE WITH CP-1 PROVIDER FOR RELAY DESIGNATION.



1 CP-2 TYPICAL CONTROL DIAGRAM
 SCALE: NTS

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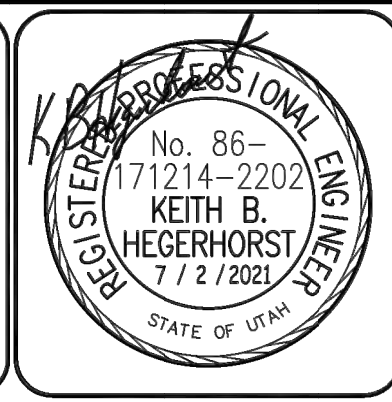
IF THE ABOVE SCALE BAR DOES NOT MEASURE 1-INCH IN LENGTH, DO NOT USE THIS DRAWING FOR SCALING PURPOSES. DIMENSIONS AND MEASUREMENTS SPECIFIED IN THE DRAWING TAKE PRECEDENCE TO SCALED MEASUREMENTS.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF CRS ENGINEERS AND IS NOT TO BE REPRODUCED, MODIFIED OR USED FOR ANY OTHER PROJECT OR EXTENSION OF THIS PROJECT EXCEPT BY AGREEMENT WITH CRS ENGINEERS.

PRINCIPAL
 D. ANDERSON, PE.
 PROJECT MANAGER
 M. CHANDLER, PE. PG. CFM.
 CHECKED BY
 C. HATCH
 DRAWN BY
 GILLIAN SORENSON
 DRAWING SCALE
 AS SHOWN
 ISSUE DATE
 JULY 8, 2022

CRS ENGINEERS
 Answers to Infrastructure®
 4246 S Riverboat Rd, Ste 200 | Salt Lake City, UT 84123 | P: 801.359.5565 | www.crsengineers.com

CORNISH TOWN CORP
 PITCHER WELL HOUSE
 CP-2 WIRING DIAGRAM
 12200 NORTH 5600 WEST
 CORNISH, UT 84308



| | |
|-----------------------------|----------|
| PROJECT NUMBER 2019-0180 | |
| SHEET 31 | OF 43 |
| SHEET NUMBER E-207 | |

PANELBOARD H

| LOCATION: WELL ROOM | | MFR: SQUARE D COMPANY | | 225 AMPS | | VOLTS: 480Y/277 | | | | | | | | | | | | | | | |
|-----------------------------------|---|-----------------------|-------|--------------------|--------|-----------------|---------|--------|---------|--------|---------|---|-------|---------|-------------------|------|-----------------|----|---|----|---|
| DIMENSIONS: 26"W x 6.5"D x 52"H | | TYPE: NF | | X M.L.O | | PHASE: 3 | | | | | | | | | | | | | | | |
| MOUNTING: SURFACE | | NEMA: 1 | | 22,000 A.I.C. | | WIRES: 4 | | | | | | | | | | | | | | | |
| FEED: BOTTOM | | | | X SURGE PROTECTION | | FED FROM: ATS | | | | | | | | | | | | | | | |
| | | PHASE LOADS | | | | | | | | | | | | | | | | | | | |
| BRKR | | CIRCUIT | CONT. | N-CONT. | A | | B | | C | | N-CONT. | | CONT. | CIRCUIT | DESCRIPTION | BRKR | | | | | |
| A | P | ID | WATTS | WATTS | NO | CONT. | N-CONT. | CONT. | N-CONT. | NO | WATTS | WATTS | ID | | A | P | | | | | |
| 20 | 3 | CP-1 SURGE DEVICE | | | 1 | 2,616 | 1,700 | | | | | | 2 | 1,700 | 2,616 | 38 | TRANSFORMER L | 40 | 3 | | |
| - | - | - | | | 3 | | | 122 | 1,930 | | | 4 | 1,930 | 122 | - | - | - | - | - | | |
| - | - | - | | | 5 | | | | | 0 | 0 | 6 | | - | - | - | AVAILABLE SPACE | - | 1 | | |
| 90 | 3 | WELL VFD (40 HP) | 36 | 14,394 | 7 | 14,394 | 1,100 | | | | | 8 | 1,100 | 312 | UNIT HEATER UH-1A | 20 | 3 | | | | |
| - | - | - | | 14,394 | 9 | | | 14,394 | 1,100 | | | 10 | 1,100 | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | 14,394 | 11 | | | | | 14,394 | 1,100 | 12 | 1,100 | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | | 13 | 0 | 1,100 | | | | | 14 | 1,100 | 312 | UNIT HEATER UH-1B | 20 | 3 | | | | |
| - | - | - | | | 15 | | | 0 | 1,100 | | | 16 | 1,100 | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | | 17 | | | | | 0 | 1,100 | 18 | 1,100 | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | | 19 | 0 | 0 | | | | | 20 | | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | | 21 | | | 0 | 0 | | | 22 | | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | | 23 | | | | | 0 | 0 | 24 | | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | | 25 | 0 | 0 | | | | | 26 | | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | | 27 | | | 0 | 0 | | | 28 | | - | - | - | AVAILABLE SPACE | - | - | | |
| - | - | - | | | 29 | | | | | 0 | 0 | 30 | | - | - | - | AVAILABLE SPACE | - | - | | |
| FEED THRU LUG PROVISION (XFMR T1) | | | | 2,250 | 98,696 | 2,150 | 34,287 | 100 | 32,295 | 0 | 32,115 | | | | | | | | | 20 | 1 |
| TOTAL WATTS: | | | | 45,431 | 98,696 | 19,160 | 38,187 | 14,616 | 36,425 | 14,394 | 34,315 | 10,230 | 2,738 | | | | | | | | |
| CONTINUOUS LOAD: | | | | 48,169 | | | | | | | | | | | | | | | | | |
| CONTINUOUS LOAD * 125%: | | | | 60,211 | | | | | | | | | | | | | | | | | |
| NON-CONTINUOUS LOAD: | | | | 108,926 | | | | | | | | | | | | | | | | | |
| DESIGN WATTS: | | | | 169,137 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | ** CIRCUIT BREAKER SHALL BE PROVIDED IN THE FUTURE. | | | | | | | | | |

PANELBOARD L

| LOCATION: WELL ROOM | | MFR: SQUARE D | | 100 AMPS | | VOLTS: 120/240 | | | | | | | | | | | |
|----------------------------------|---|-----------------|-------|---------------|-------|----------------|---------|-------|---------|----|---------|-------|-------|------------------------------|-------------|------|--|
| DIMENSIONS: 20"W x 5.75"D x 38"H | | TYPE: NQ | | 35 M.C.B. | | PHASE: 1 | | | | | | | | | | | |
| MOUNTING: SURFACE | | NEMA: 1 | | 10,000 A.I.C. | | WIRES: 3 | | | | | | | | | | | |
| FEED: BOTTOM | | | | X SPD | | FED FROM: MDP | | | | | | | | | | | |
| | | PHASE LOADS | | | | | | | | | | | | | | | |
| BRKR | | CIRCUIT | CONT. | N-CONT. | A | | B | | C | | N-CONT. | | CONT. | CIRCUIT | DESCRIPTION | BRKR | |
| A | P | ID | WATTS | WATTS | NO | CONT. | N-CONT. | CONT. | N-CONT. | NO | WATTS | WATTS | ID | | A | P | |
| 20 | 1 | LTS, INTERIOR | 212 | 360 | 1 | 1,380 | 0 | | | 2 | | | 212 | CP-1 MCP/SCADA RTU | 20 | 1 | |
| 20 | 1 | LTS, EXTERIOR | 212 | 72 | 3 | | | 122 | 0 | 4 | | | 212 | WELL FLOW METER | 20 | 1 | |
| 20 | 1 | CO, WELL ROOM | 212 | | 900 | 5 | 60 | 950 | | 6 | 50 | 60 | 20 | SPRING BUILDING & FLOW METER | 30 | 1 | |
| 20 | 1 | CO, EXTERIOR | 212 | | 180 | 7 | | 0 | 930 | 8 | 750 | | 212 | GEN. KEEP WARM HEATER | 20 | 2 | |
| 20 | 1 | SPARE | | | 9 | 0 | 750 | | | 10 | 750 | | - | - | - | - | |
| 20 | 1 | SPARE | | | 11 | | | 0 | 1,000 | 12 | 1,000 | | 212 | GEN. BATTERY CHARGER | 20 | 1 | |
| 1 | | AVAILABLE SPACE | | | 13 | 1,176 | 0 | | 0 | 14 | | 1,176 | 212 | EVAPORATIVE COOLER | 20 | 1 | |
| 1 | | AVAILABLE SPACE | | | 15 | | | 0 | 0 | 16 | | | | CP-1 CONTROL PANEL | 20 | 1 | |
| 1 | | AVAILABLE SPACE | | | 17 | 0 | 0 | | | 18 | | | | AVAILABLE SPACE | 20 | 1 | |
| TOTAL WATTS: | | | | 452 | 1,080 | 2,616 | 1,700 | 122 | 1,930 | 0 | 0 | 2,550 | 2,286 | | | | |
| CONTINUOUS LOAD: | | | | 2,738 | | | | | | | | | | | | | |
| CONTINUOUS LOAD * 125%: | | | | 3,423 | | | | | | | | | | | | | |
| NON-CONTINUOUS LOAD: | | | | 3,630 | | | | | | | | | | | | | |
| DESIGN WATTS: | | | | 7,053 | | | | | | | | | | | | | |
| MIN. RATING (AMPS): | | | | 29 | | | | | | | | | | | | | |

TRANSFORMER L

| LOCATION: WELL ROOM | | 8.5 PRIMARY AMPS | | PRIMARY VOLTS: 480 | | | |
|--------------------------------|--|---------------------|---------|---------------------------|---------|-------|---------|
| DIMENSIONS: 20"W x 16"D x 27"H | | 19.6 SECONDARY AMPS | | SECONDARY VOLTS: 208Y/120 | | | |
| MOUNTING: FLOOR | | | | KVA: 7.5 | | | |
| | | | | FED FROM: | | | |
| | | PHASE LOADS | | | | | |
| | | CONT. | N-CONT. | A | | B | |
| | | WATTS | WATTS | CONT. | N-CONT. | CONT. | N-CONT. |
| CP-1 CONTROL PANEL | | 2,738 | 3,630 | 2,616 | 1,700 | 122 | 1,930 |
| TOTAL WATTS: | | 2,738 | 3,630 | 2,616 | 1,700 | 122 | 1,930 |
| CONTINUOUS LOAD: | | 2,738 | | | | | |
| CONTINUOUS LOAD * 125%: | | 3,423 | | | | | |
| NON-CONTINUOUS LOAD: | | 3,630 | | | | | |
| DESIGN WATTS: | | 7,053 | | | | | |

GENERAL NOTES:

- 1. NOT USED.

SHEET KEYNOTES:

- 1. NOT USED.

CP-2 CONTROL PANEL

| LOCATION: WELL ROOM | | MFR: CUSTOM | | N/A AMPS | | VOLTS: 208Y/120 | | | | | | | | | | |
|---------------------------|---|----------------------------|-------|-------------------|----|-----------------|---------|-------|---------|----|---------|-------|-------|---------|-------------|------|
| DIMENSIONS: BY CONTRACTOR | | TYPE: | | PHASE: 3 | | PHASE: 3 | | | | | | | | | | |
| MOUNTING: SURFACE | | NEMA: 1 | | WIRES: 4 | | WIRES: 4 | | | | | | | | | | |
| FEED: | | | | FED FROM: PANEL L | | | | | | | | | | | | |
| | | PHASE LOADS | | | | | | | | | | | | | | |
| BRKR | | CIRCUIT | CONT. | N-CONT. | A | | B | | C | | N-CONT. | | CONT. | CIRCUIT | DESCRIPTION | BRKR |
| A | P | ID | WATTS | WATTS | NO | CONT. | N-CONT. | CONT. | N-CONT. | NO | WATTS | WATTS | ID | | A | P |
| 20 | 1 | WELL MAIN ROOM EXHAUST FAN | 212 | 355 | 1 | 355 | | | | | | | | | | |
| TOTAL WATTS: | | | | 355 | 0 | 355 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| CONTINUOUS LOAD: | | | | 355 | | | | | | | | | | | | |
| CONTINUOUS LOAD * 125%: | | | | 444 | | | | | | | | | | | | |
| NON-CONTINUOUS LOAD: | | | | 0 | | | | | | | | | | | | |
| DESIGN WATTS: | | | | 444 | | | | | | | | | | | | |
| MIN. RATING (AMPS): | | | | 1 | | | | | | | | | | | | |

File Path: M:\2018\081 - Cornish Pitcher Well\Drawings\E-301.dwg Jun 24, 2022 - 1:28pm

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
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0 1 2
 IF THE ABOVE SCALE BAR DOES NOT MEASURE 1-INCH IN LENGTH, DO NOT USE THIS DRAWING FOR SCALING PURPOSES. DIMENSIONS AND MEASUREMENTS SPECIFIED IN THE DRAWING TAKE PRECEDENCE TO SCALED MEASUREMENTS.

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PRINCIPAL
D. ANDERSON, PE.
 PROJECT MANAGER

PROJECT MANAGER
M. CHANDLER, PE, PG. CFM.

CHECKED BY
C. HATCH

DRAWN BY
GILLIAN SORENSON

DRAWING SCALE
AS SHOWN

ISSUE DATE
JULY 8, 2022



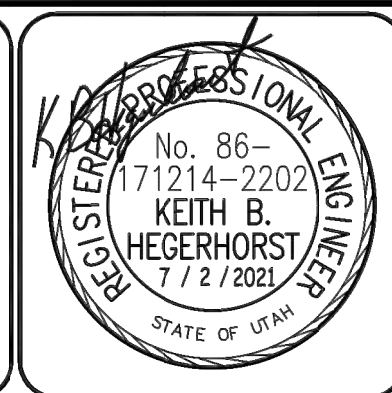
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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL SCHEDULES, SHT. 1

12200 NORTH 5600 WEST

CORNISH, UT 84308



| | |
|------------------------------|----------|
| PROJECT NUMBER 2019-0180 | |
| SHEET 32 | OF 43 |
| SHEET NUMBER E-301 | |

1 FUTURE TRANSFORMER T1

| | | | | | | | | |
|--------------------------------|---------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| LOCATION: WELL ROOM | 122.2 PRIMARY AMPS | PRIMARY VOLTS: 480Y/277 | | | | | | |
| DIMENSIONS: 20"W x 16"D x 27"H | 97.8 SECONDARY AMPS | SECONDARY VOLTS: 600V | | | | | | |
| MOUNTING: FLOOR | | KVA: 112.5 | | | | | | |
| FED FROM: | | | | | | | | |
| PHASE LOADS | | | | | | | | |
| | CONT. WATTS | N-CONT. WATTS | A CONT. WATTS | N-CONT. WATTS | B CONT. WATTS | N-CONT. WATTS | C CONT. WATTS | N-CONT. WATTS |
| CP-1 CONTROL PANEL | 2,250 | 98,696 | 2,150 | 34,287 | 100 | 32,295 | 0 | 32,115 |
| TOTAL WATTS: | 2,250 | 98,696 | 2,150 | 34,287 | 100 | 32,295 | 0 | 32,115 |
| CONTINUOUS LOAD: | 2,250 | | | | | | | |
| CONTINUOUS LOAD * 125%: | 2,813 | | | | | | | |
| NON-CONTINUOUS LOAD: | 98,696 | | | | | | | |
| DESIGN WATTS: | 101,509 | | | | | | | |

1 FUTURE TRANSFORMER T2

| | | | | | | | | |
|--------------------------------|----------------------|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| LOCATION: SPRING SITE | 97.8 PRIMARY AMPS | PRIMARY VOLTS: 600V | | | | | | |
| DIMENSIONS: 20"W x 16"D x 27"H | 122.2 SECONDARY AMPS | SECONDARY VOLTS: 480Y/277 | | | | | | |
| MOUNTING: FLOOR | | KVA: 112.5 | | | | | | |
| FED FROM: | | | | | | | | |
| PHASE LOADS | | | | | | | | |
| | CONT. WATTS | N-CONT. WATTS | A CONT. WATTS | N-CONT. WATTS | B CONT. WATTS | N-CONT. WATTS | C CONT. WATTS | N-CONT. WATTS |
| CP-1 CONTROL PANEL | 2,250 | 98,696 | 2,150 | 34,287 | 100 | 32,295 | 0 | 32,115 |
| TOTAL WATTS: | 2,250 | 98,696 | 2,150 | 34,287 | 100 | 32,295 | 0 | 32,115 |
| CONTINUOUS LOAD: | 2,250 | | | | | | | |
| CONTINUOUS LOAD * 125%: | 2,813 | | | | | | | |
| NON-CONTINUOUS LOAD: | 98,696 | | | | | | | |
| DESIGN WATTS: | 101,509 | | | | | | | |

GENERAL NOTES:

1. NOT USED.

SHEET KEYNOTES:

1. TRANSFORMER T1, T2, PANELBOARD H2 AND L2 ARE FUTURE EQUIPMENT. THEY ARE SHOWN ON THESE DRAWINGS AS DESIGN INFORMATION ONLY FOR THE ANTICIPATED FUTURE WELL EQUIPMENT.

1 FUTURE PANELBOARD H2

| | | | | | | | | | | | | | | | | | |
|------------------------------|---------|-------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------|-------|-------|---------|-------------|-----------------|---|---|
| LOCATION: SPRING RO BUILDING | MFGR: | AMPS | VOLTS: 480Y/277 | | | | | | | | | | | | | | |
| DIMENSIONS: | TYPE: | M.L.O. | PHASE: 3 | | | | | | | | | | | | | | |
| MOUNTING: | NEMA: | A.I.C. | WIRES: 4 | | | | | | | | | | | | | | |
| FEED: | | SURGE PROTECTION | FED FROM: | | | | | | | | | | | | | | |
| PHASE LOADS | | | | | | | | | | | | | | | | | |
| BRKR | CIRCUIT | CONT. WATTS | N-CONT. WATTS | A CONT. WATTS | N-CONT. WATTS | B CONT. WATTS | N-CONT. WATTS | C CONT. WATTS | N-CONT. WATTS | NO | WATTS | WATTS | CIRCUIT | DESCRIPTION | BRKR | | |
| A | P | DESCRIPTION | ID | WATTS | WATTS | NO | CONT. | N-CONT. | CONT. | N-CONT. | NO | WATTS | WATTS | ID | DESCRIPTION | A | P |
| 3 | | CP-1 SURGE DEVICE | - | - | - | 1 | 2,150 | 2,172 | | | 2 | 2,172 | 2,150 | | TRANSFORMER L | | 3 |
| - | - | - | - | - | - | 3 | | | 100 | 180 | 4 | 180 | 100 | - | - | - | - |
| - | - | - | - | - | - | 5 | | | | | 6 | | | - | AVAILABLE SPACE | - | 1 |
| 3 | | RO UNIT | - | - | - | 7 | 13,840 | 9 | 0 | 15,507 | 8 | 1,667 | | | HEATER (5 KW) | | 3 |
| - | - | - | - | - | - | 9 | 13,840 | 9 | | | 10 | 1,667 | | - | - | - | - |
| - | - | - | - | - | - | 11 | 13,840 | 11 | | | 12 | 1,667 | | - | - | - | - |
| 3 | | CIP UNIT | - | - | - | 13 | 16,608 | 13 | 0 | 16,608 | 14 | | | | - | - | - |
| - | - | - | - | - | - | 15 | 16,608 | 15 | | | 16 | | | | - | - | - |
| - | - | - | - | - | - | 17 | 16,608 | 17 | | | 18 | | | | - | - | - |
| TOTAL WATTS: | | 0 | 91,344 | 2,150 | 34,287 | 100 | 32,295 | 0 | 32,115 | 7,352 | 2,250 | | | | | | |
| CONTINUOUS LOAD: | | 2,250 | | | | | | | | | | | | | | | |
| CONTINUOUS LOAD * 125%: | | 2,813 | | | | | | | | | | | | | | | |
| NON-CONTINUOUS LOAD: | | 98,696 | | | | | | | | | | | | | | | |
| DESIGN WATTS: | | 101,509 | | | | | | | | | | | | | | | |
| MIN. RATING (AMPS): | | 122 | | | | | | | | | | | | | | | |

FIXTURE SCHEDULE

| TYPE | DESCRIPTION | MANUFACTURER | | FIX VA | LAMP | LUMENS | KELVIN | MOUNTING | NOTES |
|------|--|--------------|---------------------------------|--------|------|--------|--------|----------|-------|
| | | NAME | CATALOG NO. | | | | | | |
| F1 | 4' LED ENCLOSED INDUSTRIAL, FIBERGLASS HOUSING, DAMP LOCATION, MVOLT | METALUX | 4VT2 LD5-4-DR-UNV-L840-CD1-WL-U | 38 | LED | 4000 | 4000 | SURFACE | |
| F2 | LED WALL MOUNTED FULL CUTOFF MINI AREA WALL PACK FOR WET LOCATIONS | LUMARK | AXCS1-MSP/DIM-L12 ISHH-01 | 14 | LED | 1806 | 4000 | WALL | |

NOTES: 1)

HVAC MECHANICAL EQUIPMENT SCHEDULE

| ITEM | DESCRIPTION | EQUIPMENT RATING | | | | DISCONNECT | | | | STARTER | | NOTES | | | | |
|-------|-------------------------------|------------------|----|----|-------|------------|-----|------|-------|---------|------|-------|------------|------------|------|-----------|
| | | VOLTS | PH | HP | WATTS | FLA | MCA | AMPS | VOLTS | POLES | NEMA | | FUSE | CONNECTION | TYPE | NEMA SIZE |
| EF-1 | EXHAUST FAN, WELL ROOM | 120 | 1 | F | 106 | 0.88 | - | - | - | - | - | - | HARD-WIRED | FVNR | 0 | |
| L-1 | LOUVER ACTUATOR, EF-1 EXHAUST | 120 | 1 | F | - | - | - | - | - | - | - | - | HARD-WIRED | N/A | - | |
| UH-1A | UNIT HEATER, WELL ROOM | 480 | 3 | | 3,300 | 3.97 | - | - | - | - | - | - | HARD-WIRED | INCL | - | |
| UH-1B | UNIT HEATER, WELL ROOM | 480 | 3 | | 3,300 | 3.97 | - | - | - | - | - | - | HARD-WIRED | INCL | - | |

NOTES: 1)

1 FUTURE PANELBOARD L2

| | | | | | | | | | | | | | | | | | |
|------------------------------|----------------|-----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------|-------|-------|---------|-------------|-----------------|---|---|
| LOCATION: SPRING RO BUILDING | MFGR: SQUARE D | 100 AMPS | VOLTS: 120/240 | | | | | | | | | | | | | | |
| DIMENSIONS: | TYPE: NQ | X M.L.O. | PHASE: 1 | | | | | | | | | | | | | | |
| MOUNTING: | NEMA: 1 | 10,000 A.I.C. | WIRES: 3 | | | | | | | | | | | | | | |
| FEED: | | X SPD | FED FROM: MDP | | | | | | | | | | | | | | |
| PHASE LOADS | | | | | | | | | | | | | | | | | |
| BRKR | CIRCUIT | CONT. WATTS | N-CONT. WATTS | A CONT. WATTS | N-CONT. WATTS | B CONT. WATTS | N-CONT. WATTS | C CONT. WATTS | N-CONT. WATTS | NO | WATTS | WATTS | CIRCUIT | DESCRIPTION | BRKR | | |
| A | P | DESCRIPTION | ID | WATTS | WATTS | NO | CONT. | N-CONT. | CONT. | N-CONT. | NO | WATTS | WATTS | ID | DESCRIPTION | A | P |
| 20 | 1 | LTS, INTERIOR | | 150 | | 1 | 1,650 | 0 | | | 2 | | 1,500 | | CONTROL POWER | | 1 |
| 20 | 1 | LTS, EXTERIOR | | 50 | | 3 | | | 100 | 0 | 4 | | 50 | | FLOW METER | | 1 |
| 20 | 1 | CO, INTERIOR | | | 540 | 5 | 500 | 540 | | | 6 | | 500 | | TELEMETRY | | 1 |
| 20 | 1 | CO, EXTERIOR | | | 180 | 7 | | | 0 | 180 | 8 | | | | AVAILABLE SPACE | | |
| 20 | 1 | EXHAUST FAN | | | 1,632 | 9 | 0 | 1,632 | | | 10 | | | | AVAILABLE SPACE | | |
| 20 | 1 | SPARE | | | 11 | | | | 0 | 0 | 12 | | | | AVAILABLE SPACE | | |
| 1 | | AVAILABLE SPACE | | | 13 | | 0 | 0 | | | 14 | | | | AVAILABLE SPACE | | |
| 1 | | AVAILABLE SPACE | | | 15 | | 0 | 0 | | | 16 | | | | AVAILABLE SPACE | | |
| 1 | | AVAILABLE SPACE | | | 17 | | 0 | 0 | | | 18 | | | | AVAILABLE SPACE | | 1 |
| TOTAL WATTS: | | 200 | 2,352 | 2,150 | 2,172 | 100 | 180 | 0 | 0 | 0 | 2,050 | | | | | | |
| CONTINUOUS LOAD: | | 2,250 | | | | | | | | | | | | | | | |
| CONTINUOUS LOAD * 125%: | | 2,813 | | | | | | | | | | | | | | | |
| NON-CONTINUOUS LOAD: | | 2,352 | | | | | | | | | | | | | | | |
| DESIGN WATTS: | | 5,165 | | | | | | | | | | | | | | | |
| MIN. RATING (AMPS): | | 22 | | | | | | | | | | | | | | | |

EQUIPMENT SCHEDULE

| ITEM | DESCRIPTION | EQUIPMENT RATING | | | | DISCONNECT | | | | STARTER | | NOTES | | | | |
|-------|----------------------------|------------------|----|----|-------|------------|-----|------|-------|---------|------|-------|------------|------------|------|-----------|
| | | VOLTS | PH | HP | WATTS | FLA | MCA | AMPS | VOLTS | POLES | NEMA | | FUSE | CONNECTION | TYPE | NEMA SIZE |
| ATS | AUTOMATIC TRANSFER SWITCH | 600 | 3 | - | - | - | - | 200 | 600 | 3 | 3R | - | HARD-WIRED | - | - | |
| CP-1 | MAIN CONTROL PANEL/RTU | 120 | 1 | - | 600 | - | - | - | - | - | - | - | HARD-WIRED | - | - | |
| CP-2 | CONTROL PANEL CP-2 | 120 | 1 | - | 3,543 | - | - | - | - | - | - | - | HARD-WIRED | - | - | |
| FCV-1 | FLOW CONTROL VALVE | - | - | - | - | - | - | - | - | - | - | - | HARD-WIRED | - | - | |
| FE-1 | WELL FLOW ELEMENT | - | - | - | - | - | - | - | - | - | - | - | HARD-WIRED | - | - | |
| FIT-1 | WELL FLOW METER | 120 | 1 | - | 50 | - | - | - | - | - | - | - | HARD-WIRED | - | - | |
| FIT-1 | SPRING FLOW METER | 120 | 1 | - | 50 | - | - | - | - | - | - | - | HARD-WIRED | - | - | 2) |
| P-1 | WELL PUMP | 460 | 3 | 40 | - | 52 | - | - | - | - | - | - | HARD-WIRED | RVSS | 40 | |
| RVSS | WELL PUMP MOTOR CONTROLLER | 480 | 3 | 40 | - | 14 | - | - | - | - | - | - | HARD-WIRED | - | - | 1) |
| T-1 | TRANSFORMER | - | - | - | - | - | - | 100 | 600 | 3 | 1 | - | HARD-WIRED | - | - | |
| V-1 | PUMP-TO-WASTE VALVE | 120 | 1 | - | - | - | - | - | - | - | - | - | HARD-WIRED | - | - | |

NOTES: 1) REFER TO TYPICAL VFD CONTROL DIAGRAM ON EXX
 2) EXISTING FLOW METER, REFER TO PLANS FOR MORE INFORMATION.

File Path: M:\20.081 - Cornish Pitcher Well Drawings\E-302.dwg Jun 24, 2022 - 1:28pm

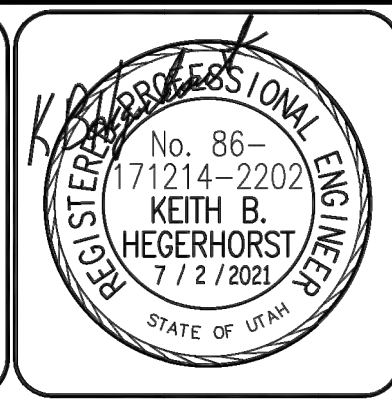
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 IF THE ABOVE SCALE BAR DOES NOT MEASURE 1-INCH IN LENGTH, DO NOT USE THIS DRAWING FOR SCALING PURPOSES. DIMENSIONS AND MEASUREMENTS SPECIFIED IN THE DRAWING TAKE PRECEDENCE TO SCALED MEASUREMENTS.
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PROJECT MANAGER
 D. ANDERSON, PE.
 M. CHANDLER, PE. PG. CFM.
 CHECKED BY
 C. HATCH
 DRAWN BY
 GILLIAN SORENSON
 AS SHOWN
 ISSUE DATE
 JULY 8, 2022

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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL SCHEDULES, SH. 2
 12200 NORTH 5600 WEST
 CORNISH, UT 84308



| | |
|----------------|-----------|
| PROJECT NUMBER | 2019-0180 |
| SHEET | 33 OF 43 |
| SHEET NUMBER | E-302 |

File Path: M:\2021\081 - Cornish Pitcher Well\Drawings\E-401.dwg Jun 24, 2022 - 1:29pm

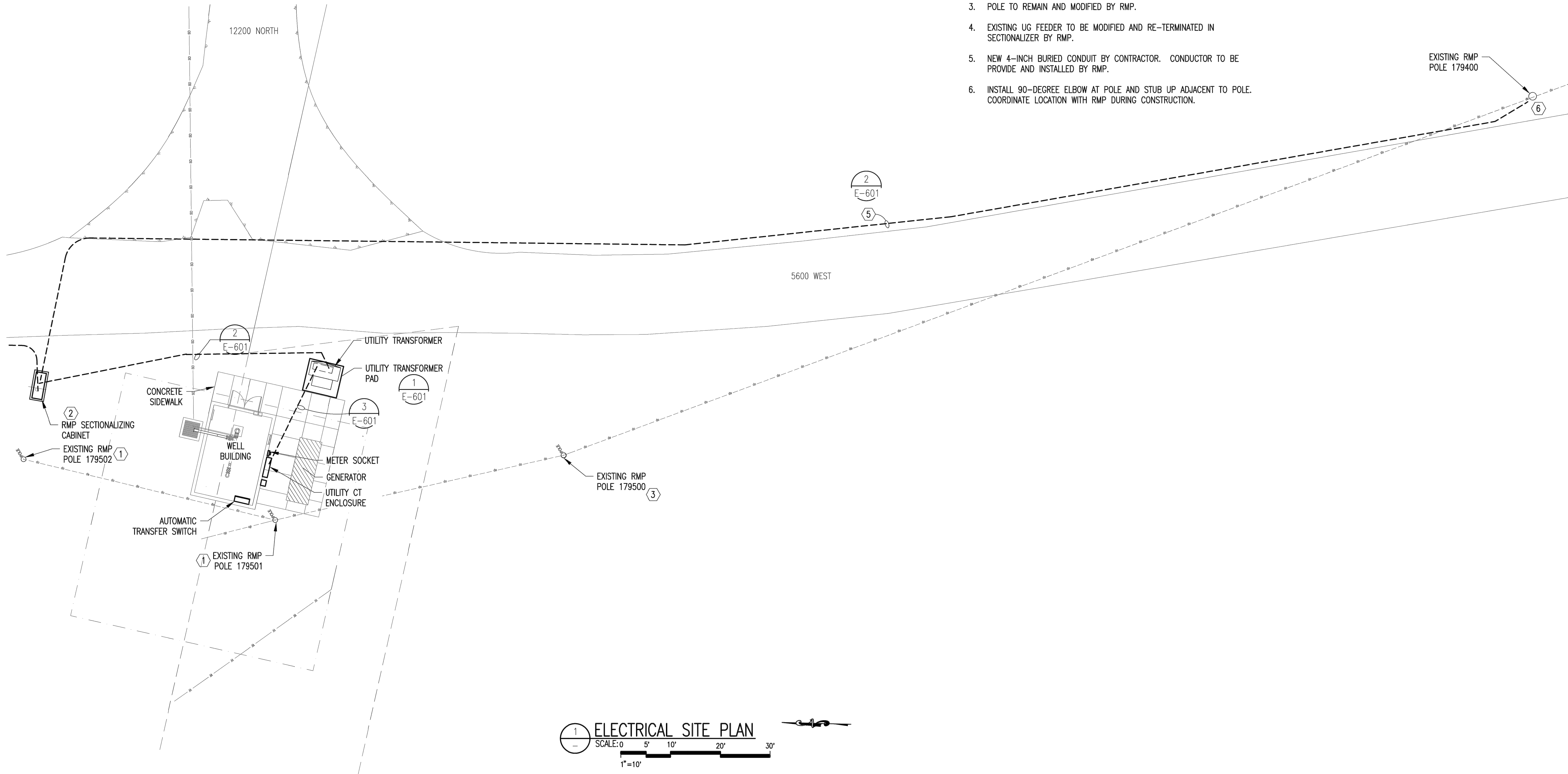
H.P.E. INC. ELECTRICAL ENGINEERS
 POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS
 HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
 708 EAST 50 SOUTH AMERICAN FORK, UT 84003 FAX (801) 642-2154
 HPE PROJECT: 20.081 ©2022
 FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

GENERAL NOTES:

1. ALL UTILITY WORK SHALL BE AS REQUIRED BY THE UTILITY COMPANY.

SHEET KEYNOTES:

1. POLE TO BE REMOVED BY UTILITY COMPANY.
2. SECTIONALIZER SUPPLIED AND INSTALLED BY UTILITY COMPANY
3. POLE TO REMAIN AND MODIFIED BY RMP.
4. EXISTING UG FEEDER TO BE MODIFIED AND RE-TERMINATED IN SECTIONALIZER BY RMP.
5. NEW 4-INCH BURIED CONDUIT BY CONTRACTOR. CONDUCTOR TO BE PROVIDE AND INSTALLED BY RMP.
6. INSTALL 90-DEGREE ELBOW AT POLE AND STUB UP ADJACENT TO POLE. COORDINATE LOCATION WITH RMP DURING CONSTRUCTION.



1 ELECTRICAL SITE PLAN
 SCALE: 0 5' 10' 20' 30'
 1" = 10'

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| 1 | 6/7/2021 | STATE REVIEW COMMENTS |
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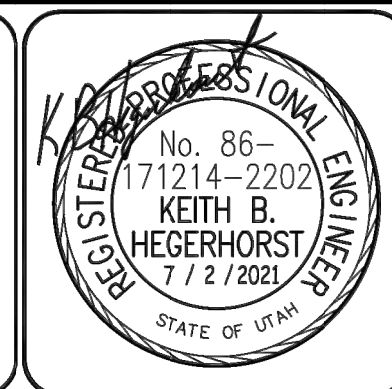
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PRINCIPAL
 D. ANDERSON, PE.
 PROJECT MANAGER
 M. CHANDLER, PE. PG. CFM.
 CHECKED BY
 C. HATCH
 DRAWN BY
 GILLIAN SORENSON
 DRAWING SCALE
 AS SHOWN
 ISSUE DATE
 JULY 8, 2022

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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 SITE PLAN
 12200 NORTH 5600 WEST
 CORNISH, UT 84308



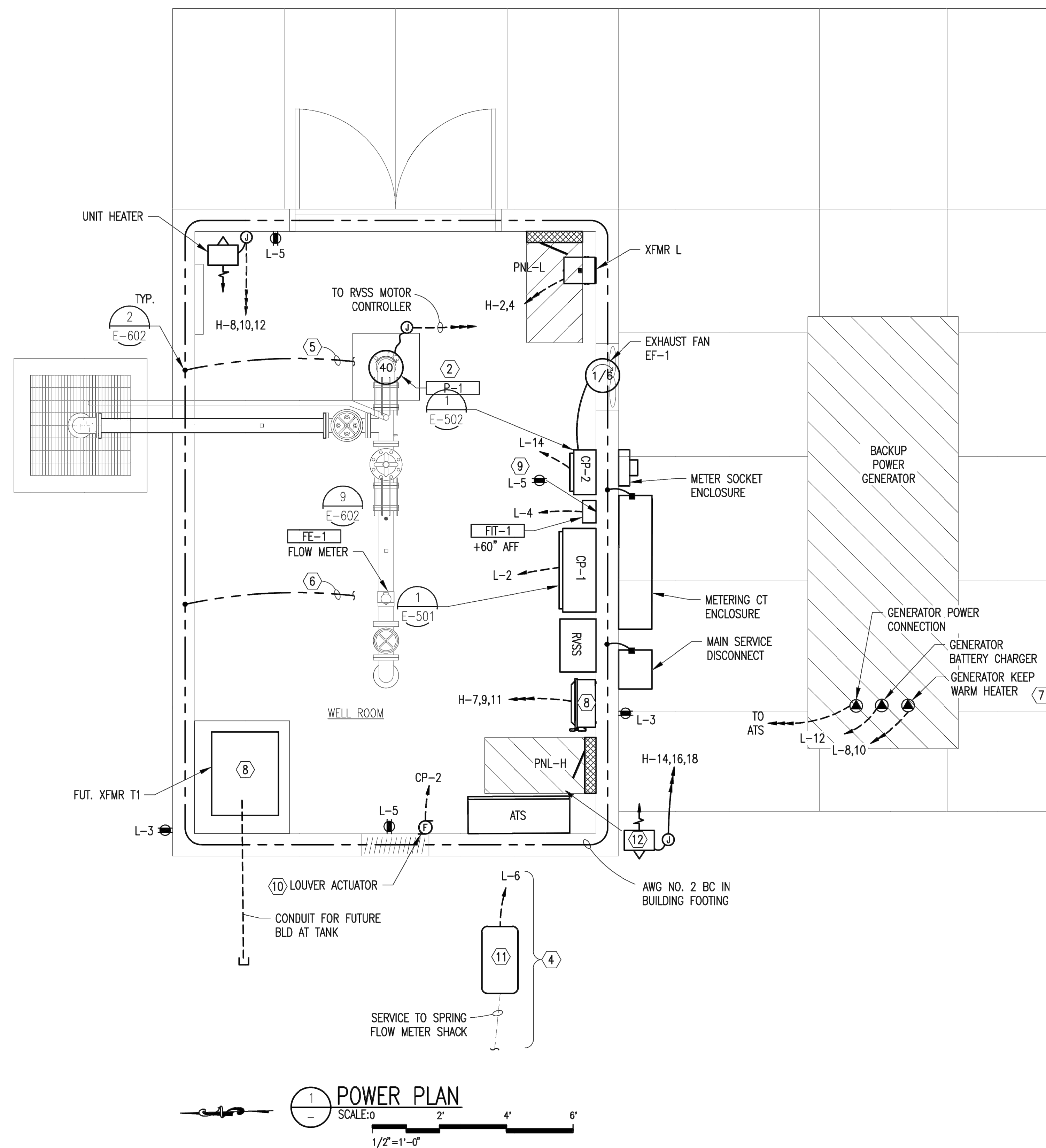
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|----------------|-----------|
| PROJECT NUMBER | 2019-0180 |
| SHEET | 34 OF 43 |
| SHEET NUMBER | E-401 |

GENERAL NOTES:

- REFER TO ONE-LINE DIAGRAM AND PANEL SCHEDULES FOR CIRCUIT ID, THEN REFER TO THE CONDUIT/CONDUCTOR TABLE FOR WIRE AND CONDUIT REQUIREMENTS.
- ALL INTERIOR OUTLETS SHALL BE +36" AFF. ALL EXTERIOR OUTLETS SHALL BE +18" AFS WITH IN-SERVICE WEATHERPROOF COVERS.
- NOT USED.

SHEET KEYNOTES:

- VERIFY LOCATION OF FILTER CONTROL PANEL PRIOR TO CONDUIT ROUGH-IN. LOCATION SHOWN MAY NOT BE ACCURATE.
- WELL IS A SUBMERSIBLE MOTOR/PUMP.
- INSTALL RECEPTACLE 6-INCHES ABOVE SCALE DISPLAY.
- REFER TO E-201/KEYNOTE 7. LOCATION SHOWN ON THIS PLAN IS NOT ACCURATE, BUT IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD LOCATE CONDUIT AND J-BOX AS NECESSARY.
- GROUND WELL CASING AS REQUIRED BY NEC 250.112 (M).
- GROUND FLOW METER AS REQUIRED BY THE MANUFACTURER.
- VERIFY VOLTAGE OF GENERATOR HEATER AND MODIFY AS REQUIRED FOR THE HEATER SUPPLIED WITH THE GENERATOR.
- FUTURE EQUIPMENT. PROVIDE ADEQUATE SPACE ON EQUIPMENT ROOM WALL FOR THE FUTURE EQUIPMENT.
- INSTALL RECEPTACLE BELOW FLOW INDICATOR.
- VERIFY LOCATION OF LOUVER ACTUATOR PRIOR TO CONDUIT ROUGH-IN.
- POLYMER CONCRETE PULL BOX.
- WALL MOUNT UNIT HEATER ABOVE ELECTRICAL EQUIPMENT



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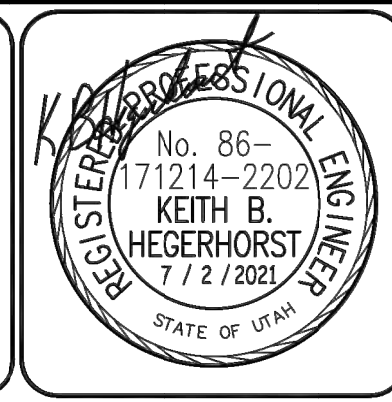
1 POWER PLAN
 SCALE: 0' 2' 4' 6'
 1/2" = 1'-0"

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| <p>IF THE ABOVE SCALE BAR DOES NOT MEASURE 1-INCH IN LENGTH, DO NOT USE THIS DRAWING FOR SCALING PURPOSES. DIMENSIONS AND MEASUREMENTS SPECIFIED IN THE DRAWING TAKE PRECEDENCE TO SCALED MEASUREMENTS.</p> <p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF CRS ENGINEERS AND IS NOT TO BE REPRODUCED, MODIFIED OR USED FOR ANY OTHER PROJECT OR EXTENSION OF THIS PROJECT EXCEPT BY AGREEMENT WITH CRS ENGINEERS.</p> | <p>PRINCIPAL D. ANDERSON, PE.</p> <p>PROJECT MANAGER M. CHANDLER, PE, PG. CFM.</p> <p>CHECKED BY C. HATCH</p> <p>DRAWN BY GILLIAN SORENSON</p> <p>DRAWING SCALE AS SHOWN</p> <p>ISSUE DATE JULY 8, 2022</p> |
|--|---|

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 PITCHER WELL HOUSE
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 CORNISH, UT 84308



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| PROJECT NUMBER 2019-0180 | SHEET 35 | OF 43 |
| SHEET NUMBER E-402 | | |

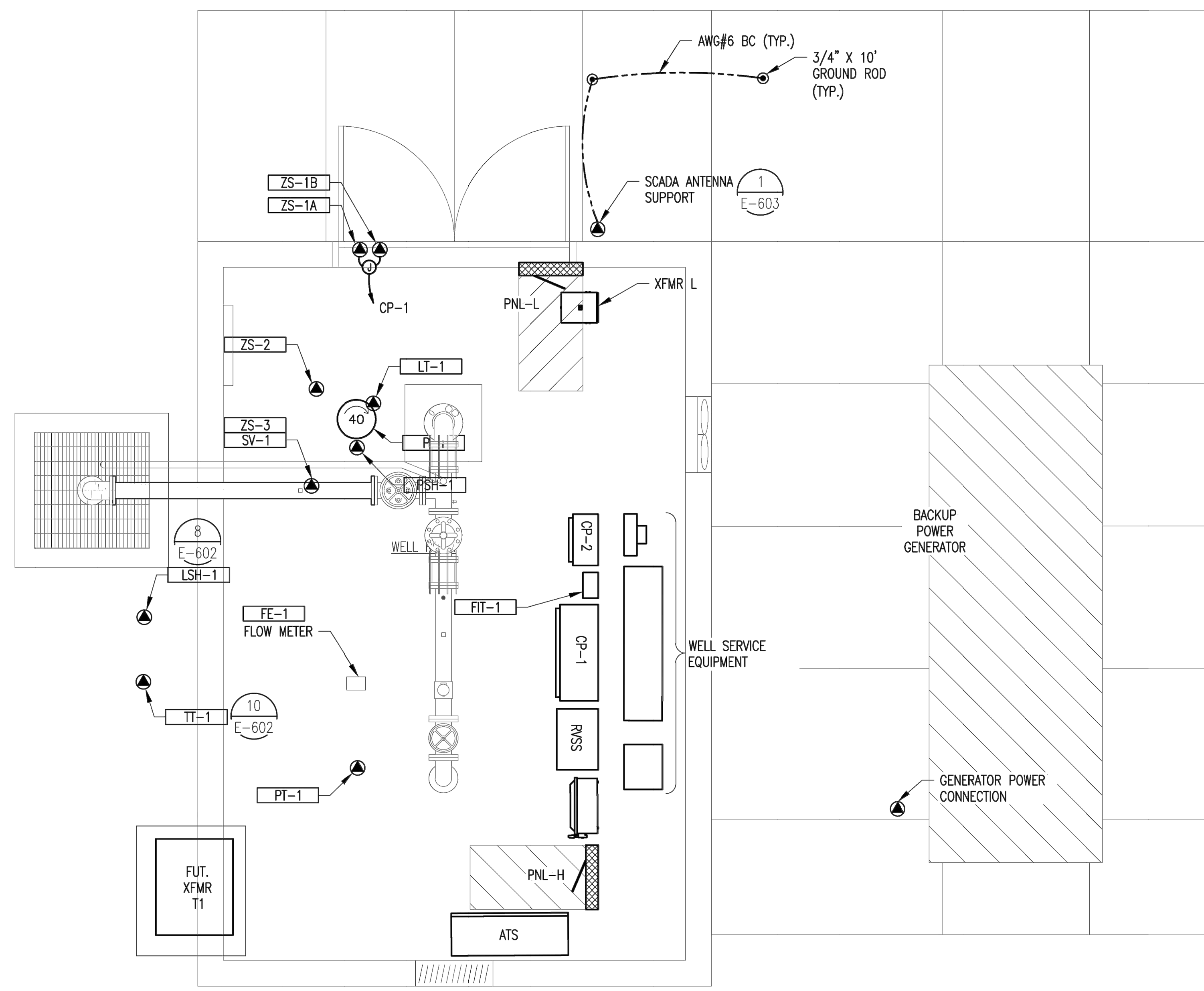
H.P.E. INC. ELECTRICAL ENGINEERS
 POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS
 HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
 708 EAST 50 SOUTH AMERICAN FORK, UT 84003 FAX (801) 642-2154
 HPE PROJECT: 20.081 ©2020
 FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

GENERAL NOTES:

1. REFER TO THE INSTRUMENTATION AND CONTROL ONE-LINE DIAGRAM FOR WIRE AND CONDUIT REQUIREMENTS.
2. NOT USED.

SHEET KEYNOTES:

- 1.



POWER PLAN
 SCALE: 1/2" = 1'-0"
 0 2' 4' 6'

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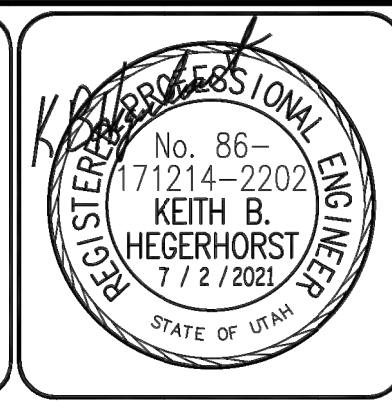
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DESIGNED BY: D. ANDERSON, PE.
 PROJECT MANAGER: M. CHANDLER, PE, PG. CFM.
 CHECKED BY: C. HATCH
 DRAWN BY: GILLIAN SORENSON
 DRAWING SCALE: AS SHOWN
 ISSUE DATE: JULY 8, 2022

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CORNISH TOWN CORP
PITCHER WELL HOUSE
 INSTRUMENT & CONTROL PLAN
 12200 NORTH 5600 WEST
 CORNISH, UT 84308



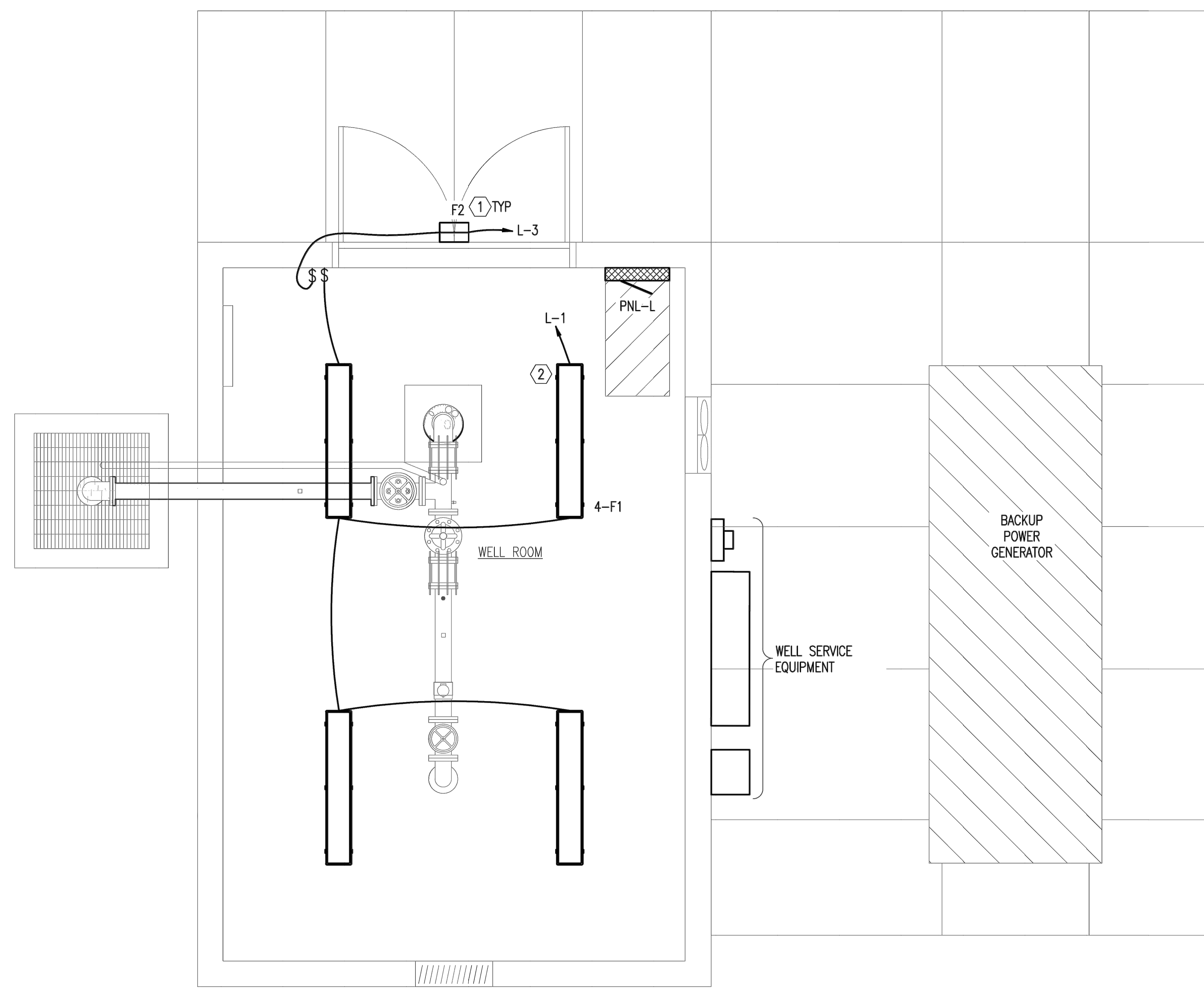
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| PROJECT NUMBER | 2019-0180 |
| SHEET | 36 OF 43 |
| SHEET NUMBER | E-403 |

GENERAL NOTES:

- REFER TO PANELBOARD SCHEDULE FOR CIRCUIT ID, THEN REFER TO CONDUIT/CONDUCTOR TABLE FOR WIRE AND CONDUIT REQUIREMENTS.

SHEET KEYNOTES:

- INSTALL EXTERIOR FIXTURES 8-INCHES ABOVE THE DOOR FRAME.
- PROVIDE A 90-MINUTE EMERGENCY BATTERY IN THIS FIXTURE.



1 POWER PLAN
 SCALE: 1/2" = 1'-0"
 0 2' 4' 6'

File Path: M:\20.081 - Cornish Pitcher Well Drawings\E-404.dwg Jun 24, 2022 - 1:28pm

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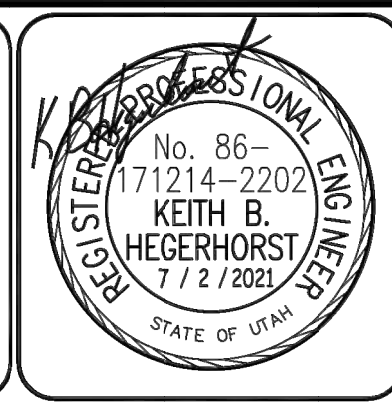
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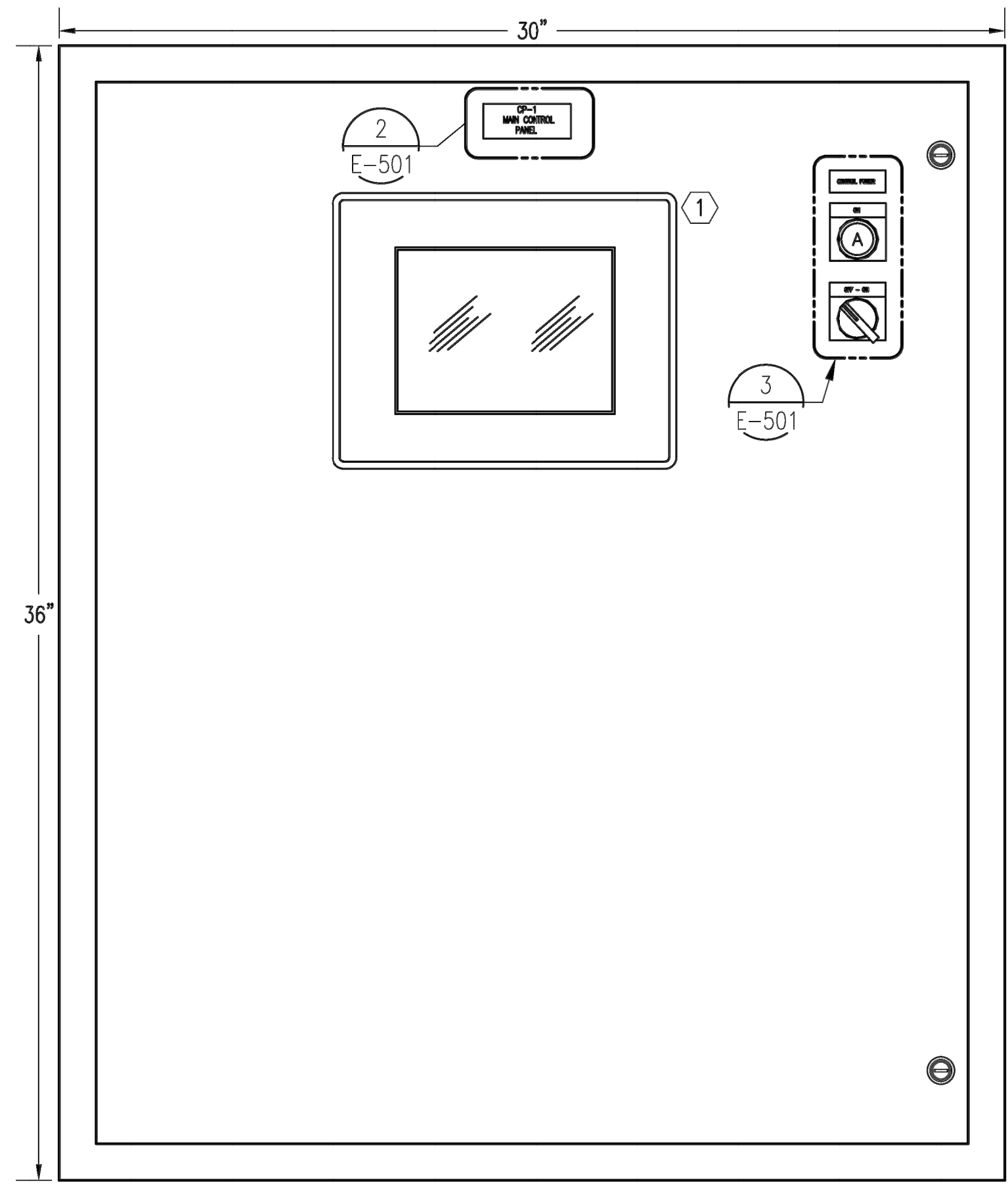
PROJECT MANAGER
 D. ANDERSON, PE.
 M. CHANDLER, PE, PG. CFM.
 CHECKED BY
 C. HATCH
 DRAWN BY
 GILLIAN SORENSON
 DRAWING SCALE
 AS SHOWN
 ISSUE DATE
 JULY 8, 2022

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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 LIGHTING PLAN
 12200 NORTH 5600 WEST
 CORNISH, UT 84308



| | |
|----------------|-----------|
| PROJECT NUMBER | 2019-0180 |
| SHEET | 37 OF 43 |
| SHEET NUMBER | E-404 |



CP-1 MAIN CONTROL PANEL I/O LIST
 DISCRETE INPUTS

| DESCRIPTION | FROM | TO | NOTES |
|---------------------------------------|-------|------|-------|
| ATS IN UTILITY POSITION | ATS | CP-1 | |
| ATS IN GENERATOR POSITION | ATS | CP-1 | |
| CP-1 POWER LOSS | CP-1 | CP-1 | |
| GENERATOR RUNNING | GEN | CP-1 | |
| GENERATOR FAULT | GEN | CP-1 | |
| WASTE VALVE (V-1) FULL WASTE POSITION | ZS-3 | CP-1 | |
| WELL HATCH OPEN | ZS-5 | CP-1 | |
| WELL HIGH DISCHARGE PRESSURE | PSH-1 | CP-1 | |
| WELL RM. EF (EF-1) HOA IN AUTO | CP-2 | CP-1 | |
| WELL RM. EF (EF-1) HOA IN HAND | CP-2 | CP-1 | |
| WELL RM. EF (EF-1) RUNNING | CP-2 | CP-1 | |
| WELL ROOM DOOR 1A OPEN | ZS-1A | CP-1 | |
| WELL ROOM DOOR 1B OPEN | ZS-1B | CP-1 | |
| WELL ROOM FLOOR HIGH WATER | LSH-1 | CP-1 | |
| WELL ROOM ROOF HATCH OPEN | ZS-2 | CP-1 | |
| WELL RVSS FAULT | RVSS | CP-1 | |
| WELL RVSS HOA IN AUTO | RVSS | CP-1 | |
| WELL RVSS HOA IN HAND | RVSS | CP-1 | |
| WELL RVSS RUNNING | RVSS | CP-1 | |

NOTES: 1)

DISCRETE OUTPUTS

| DESCRIPTION | FROM | TO | NOTES |
|--|------|------|-------|
| WASTE VALVE (V-1) PILOT SOLENOID VALVE | CP-1 | SV-1 | |
| WELL ROOM EF (EF-1) RUN | CP-1 | CP-2 | |
| WELL RVSS RUN COMMAND | CP-1 | RVSS | |

NOTES: 1)

ANALOG INPUTS

| DESCRIPTION | FROM | TO | NOTES |
|------------------|-------|------|-------|
| WELL FLOW | FIT-1 | CP-1 | |
| ROOM TEMPERATURE | TT-1 | CP-1 | |
| SPRING FLOW | FIT-2 | CP-1 | 1) |
| SYSTEM PRESSURE | PT-1 | CP-1 | |
| WELL LEVEL | LT-1 | CP-1 | |

NOTES: 1) REFER TO E-403 KEYNOTE 2.

ANALOG OUTPUTS

| DESCRIPTION | FROM | TO | NOTES |
|-------------|------|----|-------|
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NOTES: 1)

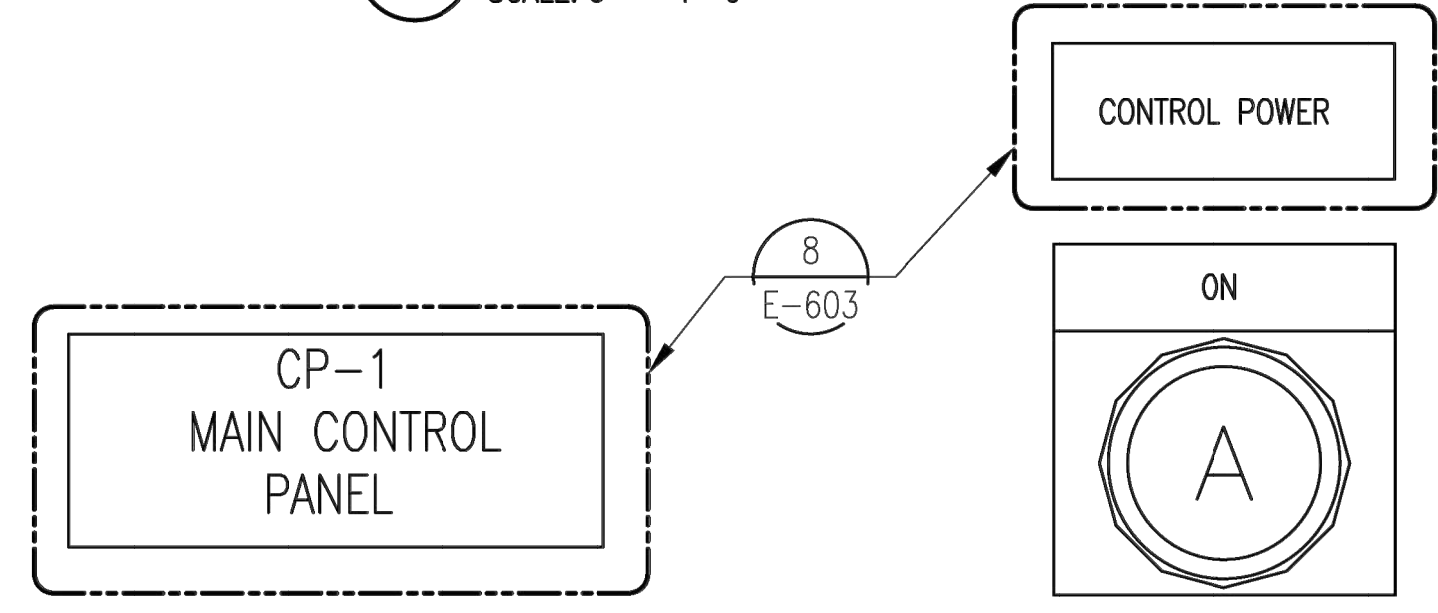
GENERAL NOTES:

- ENCLOSURE DIMENSIONS SHOWN ARE TYPICAL AND SHALL BE MODIFIED BY THE PANEL FABRICATOR AS REQUIRED FOR THE INTERNAL DEVICES AND COMPONENTS FOR THIS PROJECT.
- REFER TO E-205 AND E-206 FOR TYPICAL WIRING DIAGRAMS.

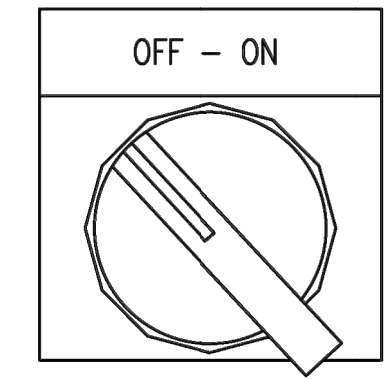
SHEET KEYNOTES:

- 10" OPERATOR HMI DISPLAY SCREEN.
- NOT USED.

1 CP-1 ARRANGEMENT
 SCALE: 3" = 1'-0"



2 ENLARGED VIEW
 SCALE: NTS



3 ENLARGED VIEW
 SCALE: NTS

File Path: M:\20.081 - Cornish Pitcher Well Drawings\E-501.dwg Jun 24, 2022 - 1:28pm

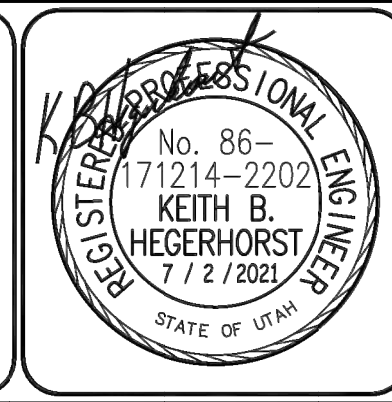
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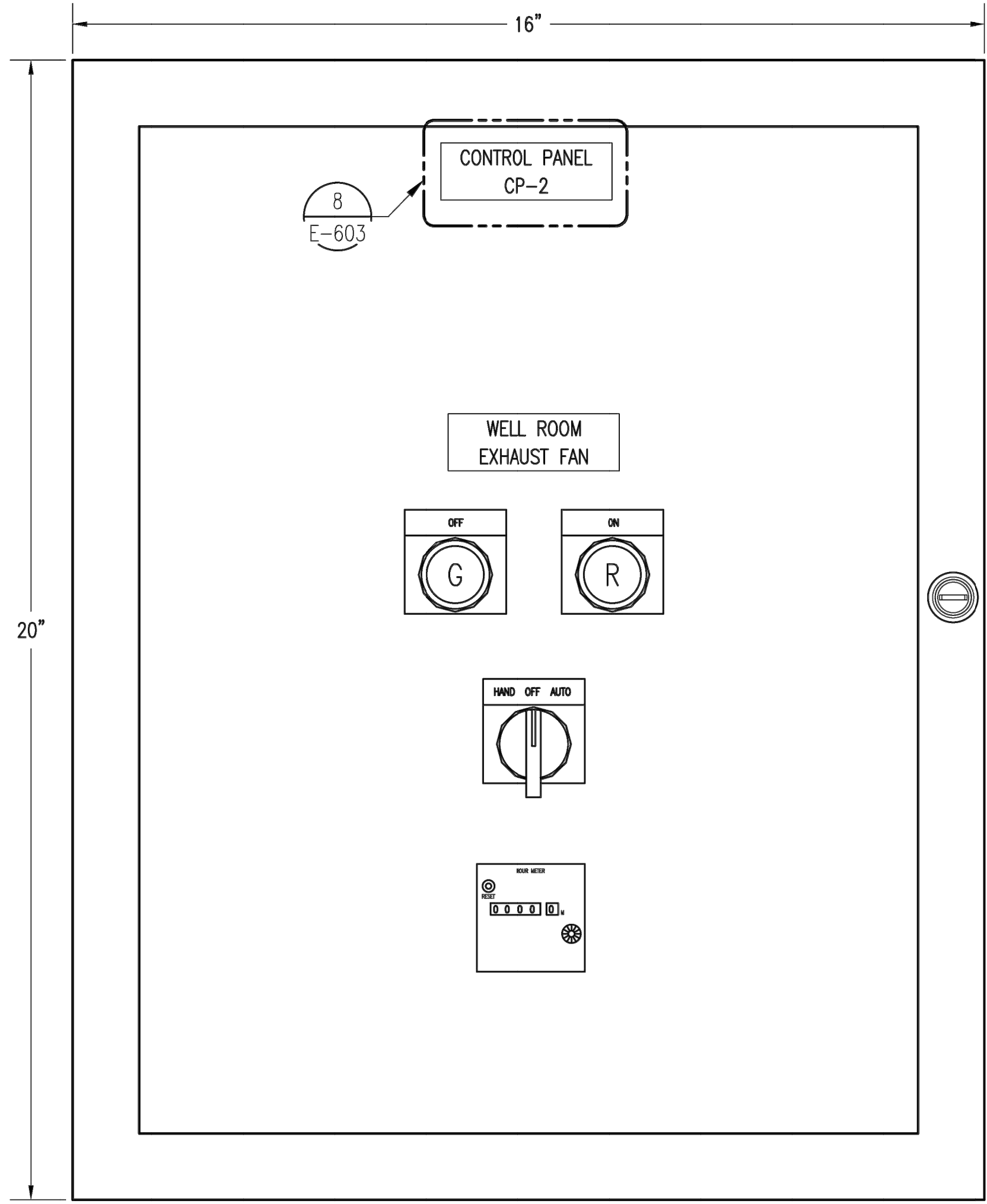
PRINCIPAL: D. ANDERSON, PE.
 PROJECT MANAGER: M. CHANDLER, PE, PG. CFM.
 CHECKED BY: C. HATCH
 DRAWN BY: GILLIAN SORENSON
 DRAWING SCALE: AS SHOWN
 ISSUE DATE: JULY 8, 2022

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 CP-1 ARRANGEMENT & I/O LIST
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 CORNISH, UT 84308



| | | |
|------------------------------|-------------|----------|
| PROJECT NUMBER 2019-0180 | SHEET 38 | OF 43 |
| SHEET NUMBER E-501 | | |



GENERAL NOTES:

1. ENCLOSURE DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE MODIFIED AS REQUIRE BY THE CONTRACTOR FOR THE SELECTED COMPONENTS.
2. INTERNAL COMPONENT ARRANGEMENT NOT SHOWN AND SHALL BE PROVIDED BY THE CONTRACTOR.
3. TYPICAL WIRING DIAGRAM SHOWN ON E-207.

SHEET KEYNOTES:

1. NOT USED.

1 CP-2 ARRANGEMENT
 SCALE: 6" = 1'-0"

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PRINCIPAL
 D. ANDERSON, PE.
 PROJECT MANAGER

CHECKED BY
 M. CHANDLER, PE, PG. CFM.

DRAWN BY
 C. HATCH

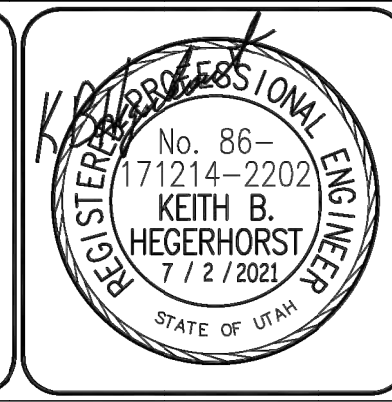
GILLIAN SORENSON
 DRAWING SCALE
 AS SHOWN
 ISSUE DATE
 JULY 8, 2022

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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 CP-2 ARRANGEMENT

12200 NORTH 5600 WEST
 CORNISH, UT 84308



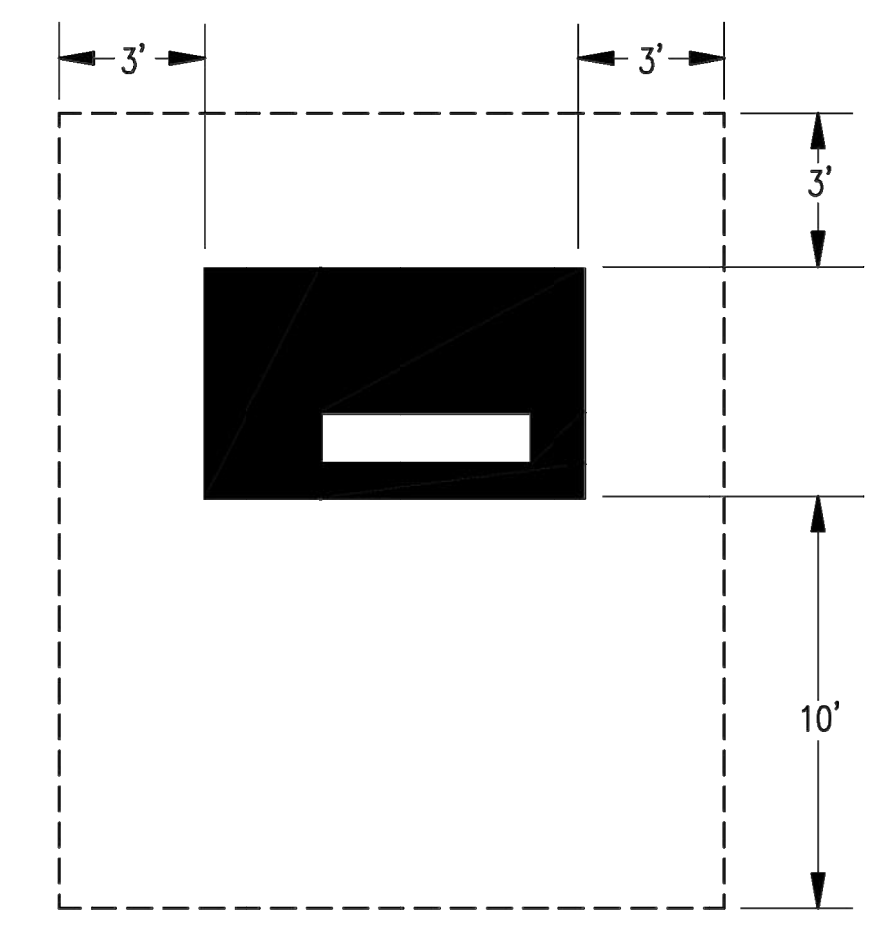
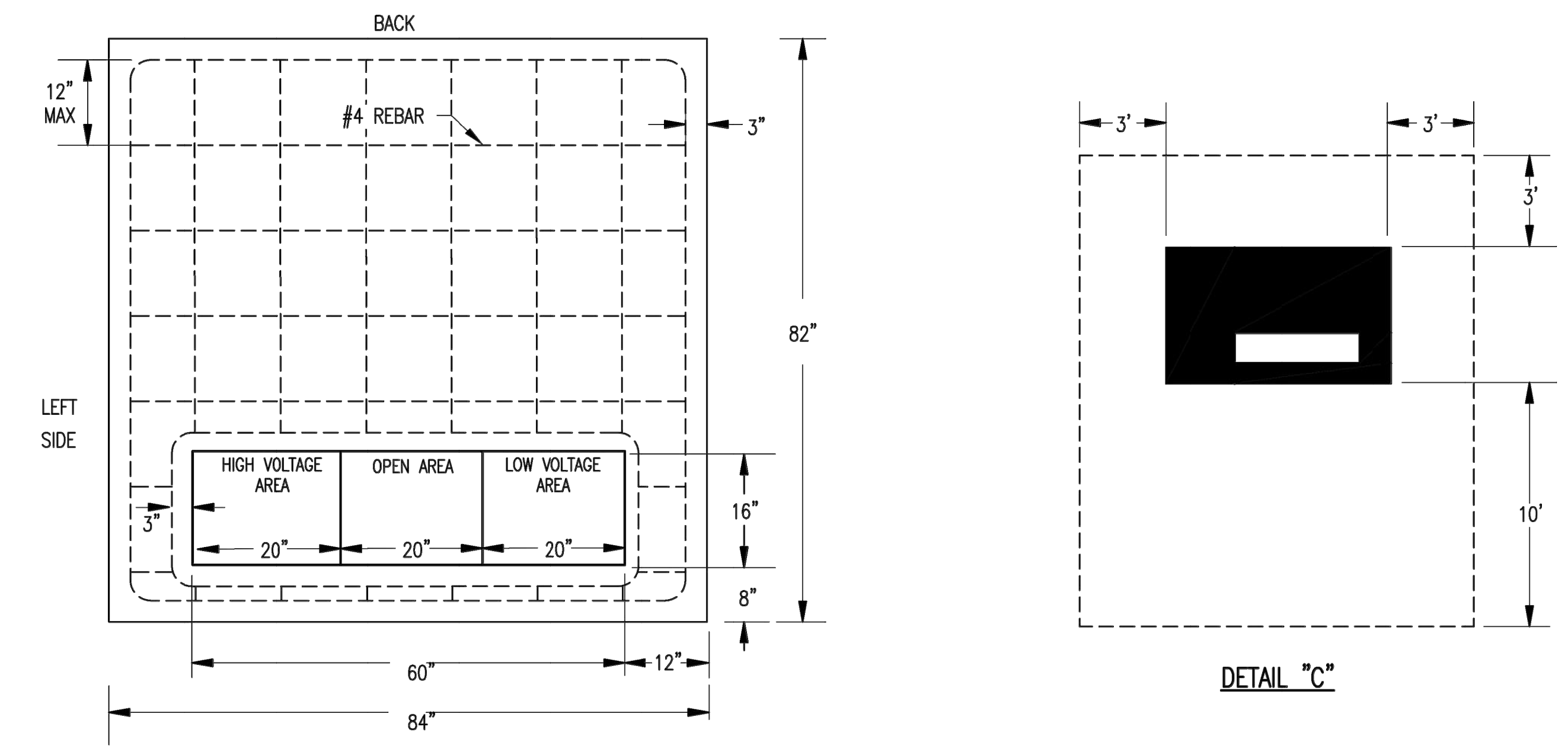
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| PROJECT NUMBER 2019-0180 | |
| SHEET 39 | OF 43 |
| SHEET NUMBER E-502 | |

GENERAL NOTES:

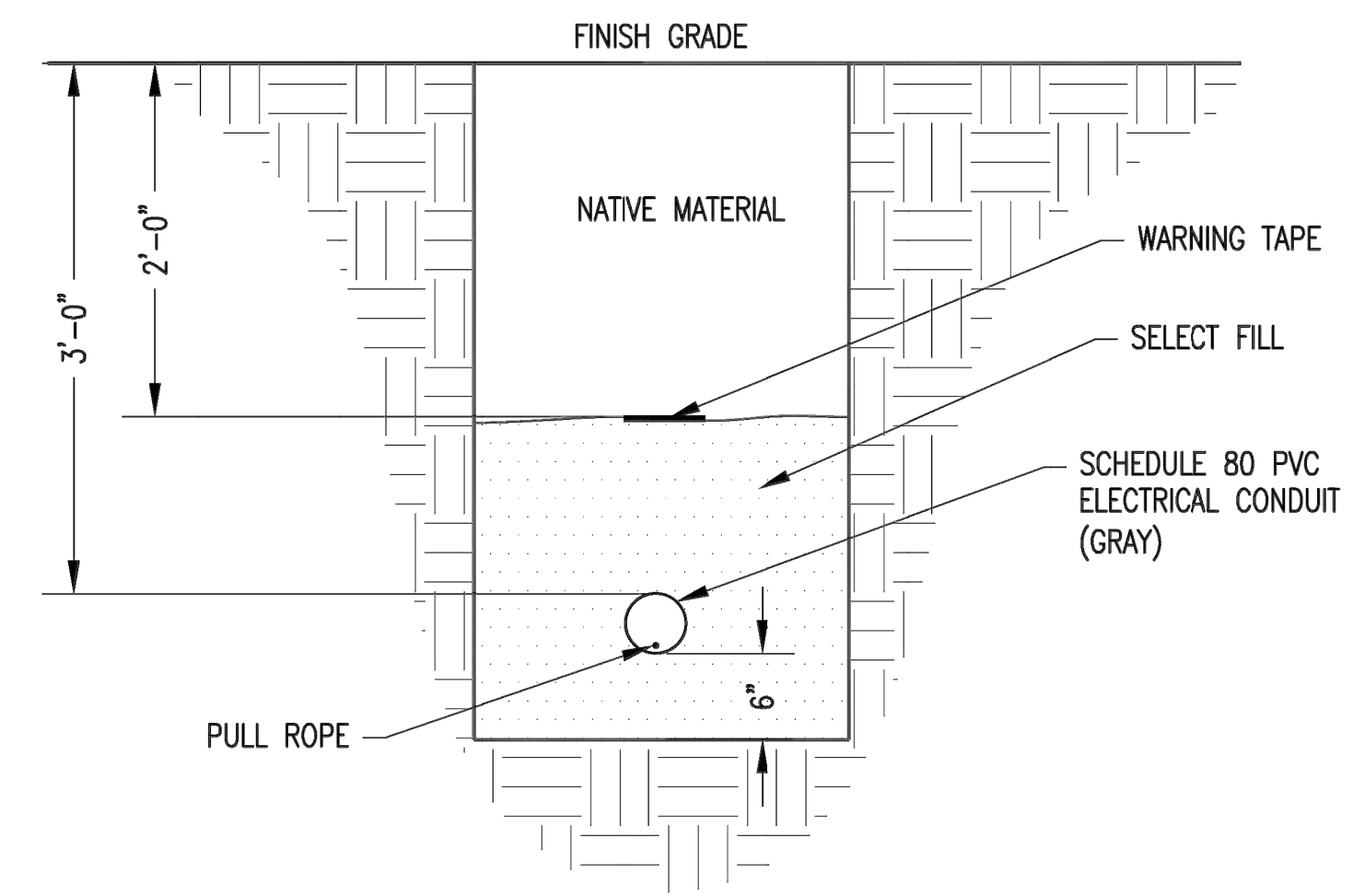
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SHEET KEYNOTES:

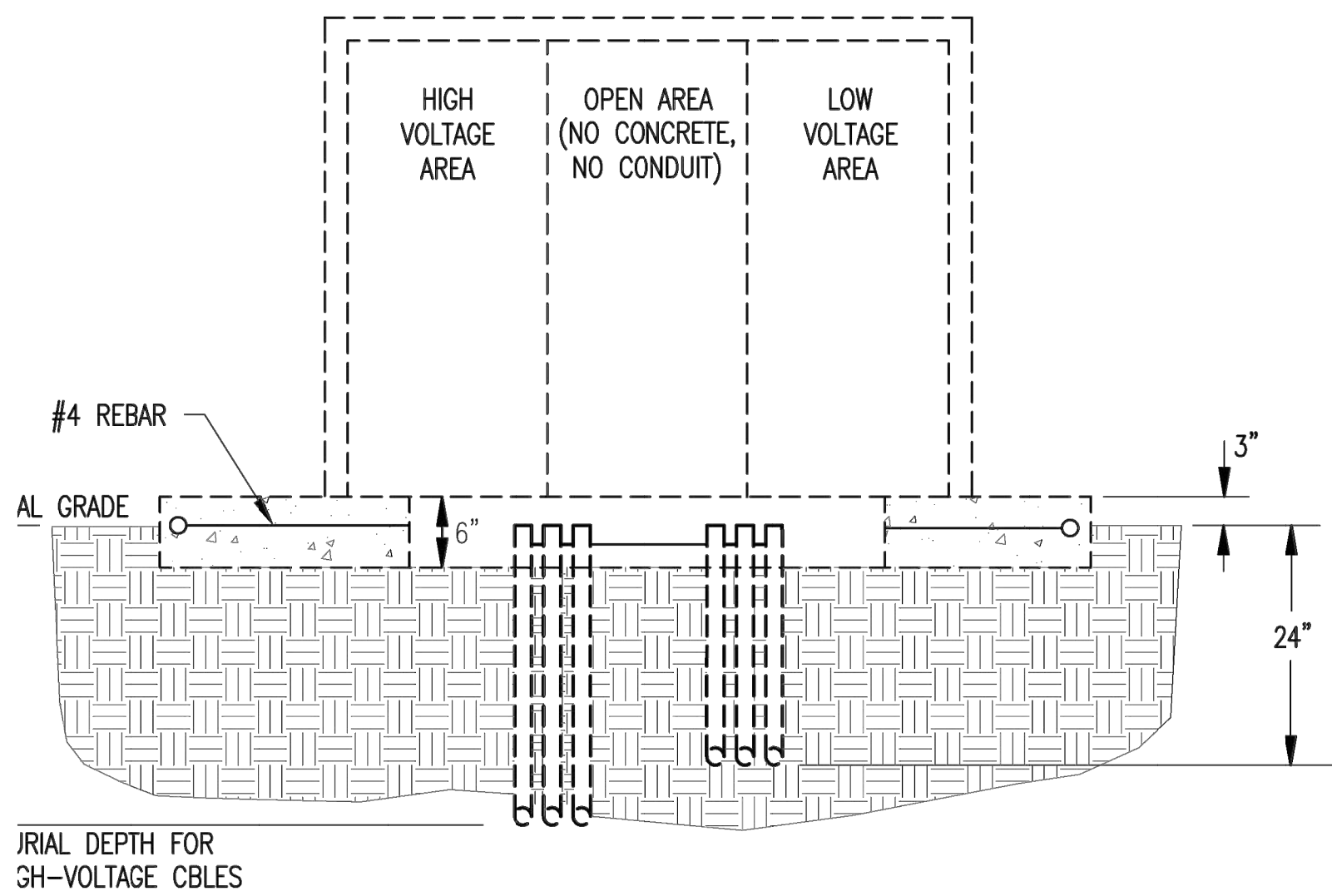
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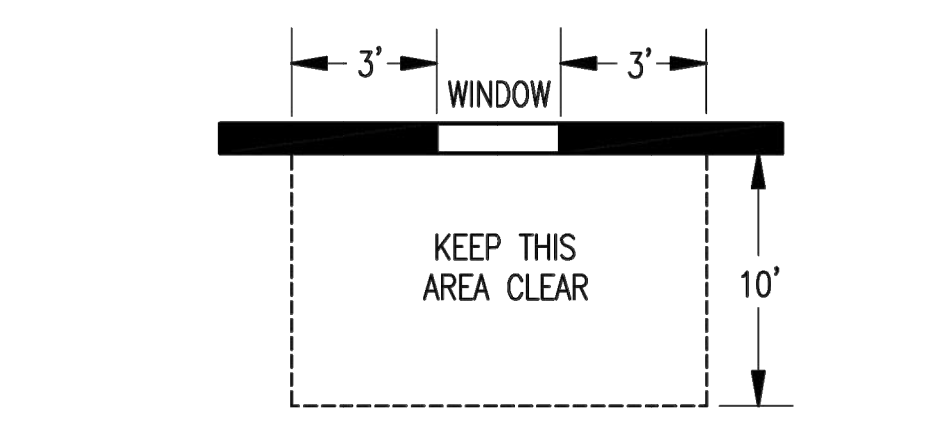
DETAIL "C"



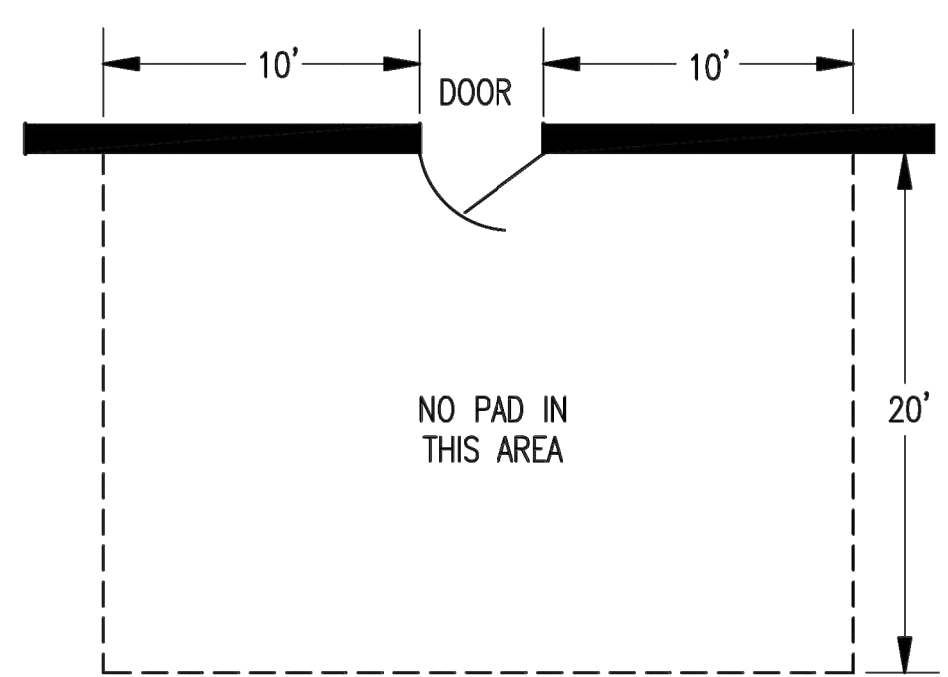
2 PRIMARY SERVICE TRENCH DETAIL
 SCALE: 1" = 1'-0"



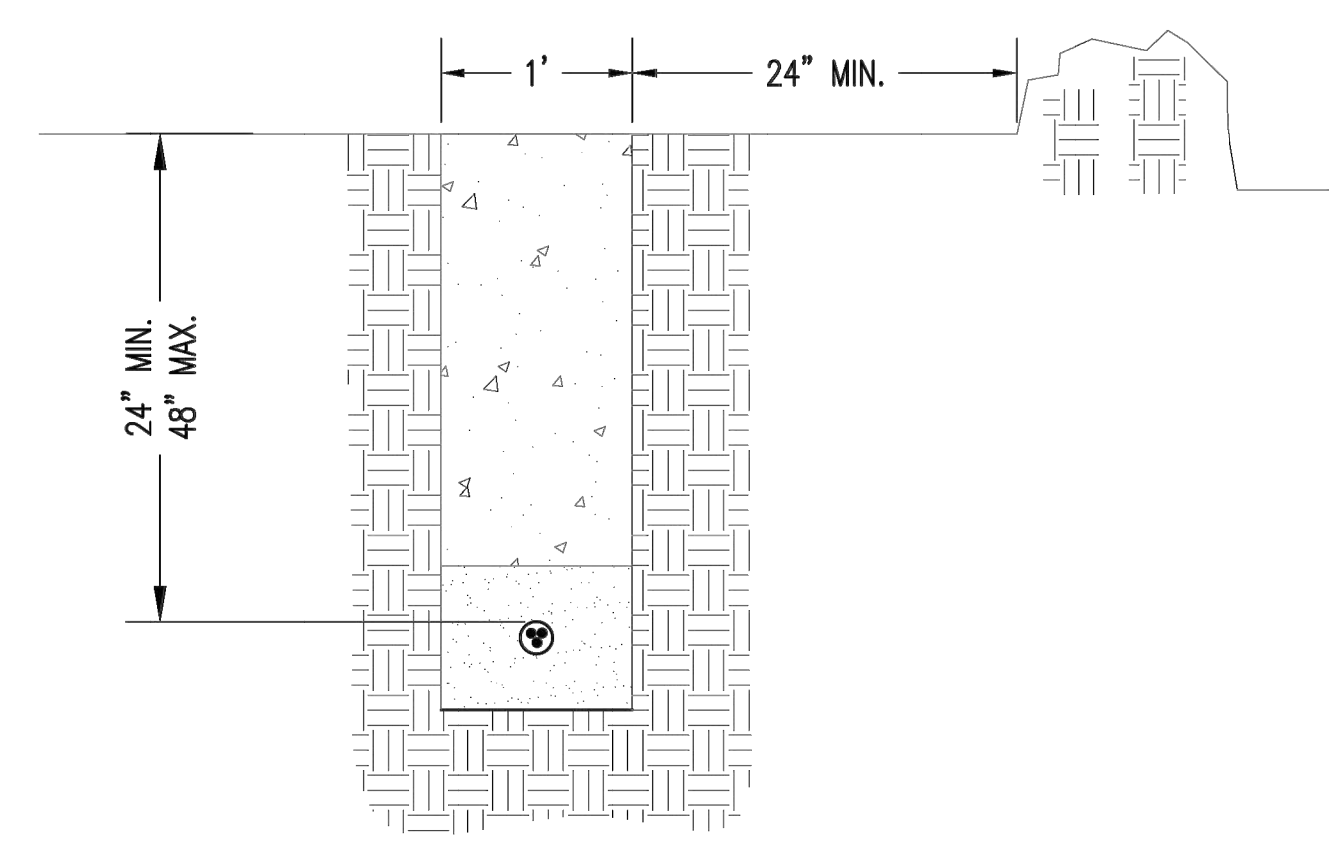
MINIMUM DEPTH FOR
 HIGH-VOLTAGE CABLES



DETAIL "A"



DETAIL "B"



3 SECONDARY SERVICE TRENCH DETAIL
 SCALE: 1" = 1'-0"

NOTES:

1. **SITE PREPARATION:** ALL DIRT BENEATH THE PAD SITE MUST BE COMPACTED AND LEVEL PRIOR TO SETTING OR POURING THE PAD TO PREVENT SETTLING.
2. **CONCRETE:** SHALL BE MADE USING A STANDARD BRAND OF PORTLAND CEMENT. STEEL REINFORCEMENT SHALL BE #4 REBAR PLACED ACCORDING TO THE DRAWINGS. THE PAD MUST BE POURED AT LEAST THREE FULL DAYS PRIOR TO SETTING THE UNIT. CONCRETE MUST BE KEPT ABOVE FREEZING AT LEAST 72 HOURS AFTER POURING. THE FINISHED SURFACE MUST BE COMPLETELY FLAT AND LEVEL. ALL WORK MUST BE DONE TO HIGH QUALITY STANDARDS.
3. **PREFABRICATION:** THE PAD MAY EITHER BE CONSTRUCTED ON THE SITE OR PREFABRICATED ACCORDING TO SPECIFICATIONS. PREFABRICATED PADS SHALL BE SET LEVEL AND PLUMB.
4. **TRANSFORMER CONDUIT WINDOW LAYOUT:** LOW VOLTAGE CONDUITS SHALL BE FORMED AS TIGHTLY AS POSSIBLE AGAINST RIGHT SIDE OF THE OPENING AND SHALL IN NO CASE EXTEND FURTHER THAN 16" FROM THE RIGHT SIDE OF CONDUIT WINDOW ON THE PAD. NO MORE THAN 4 CONDUITS WILL BE USED ON THE LOW VOLTAGE SIDE. DO NOT PUT ANY CONCRETE IN OR UNDER THE CONDUIT WINDOW. USE DIRT TO SEPARATE CONDUITS. BELL ENDS ARE REQUIRED FOR ALL METAL CONDUITS BUT NOT FOR PLASTIC CONDUIT.

1 RMP TRANSFORMER PAD
 SCALE: 3/4" = 1'-0"

File Path: M:\20.081 - Cornish Pitcher Well\Drawings\E-601.dwg Jun 24, 2022 - 1:29pm

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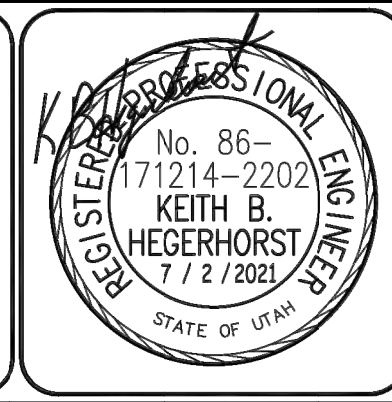
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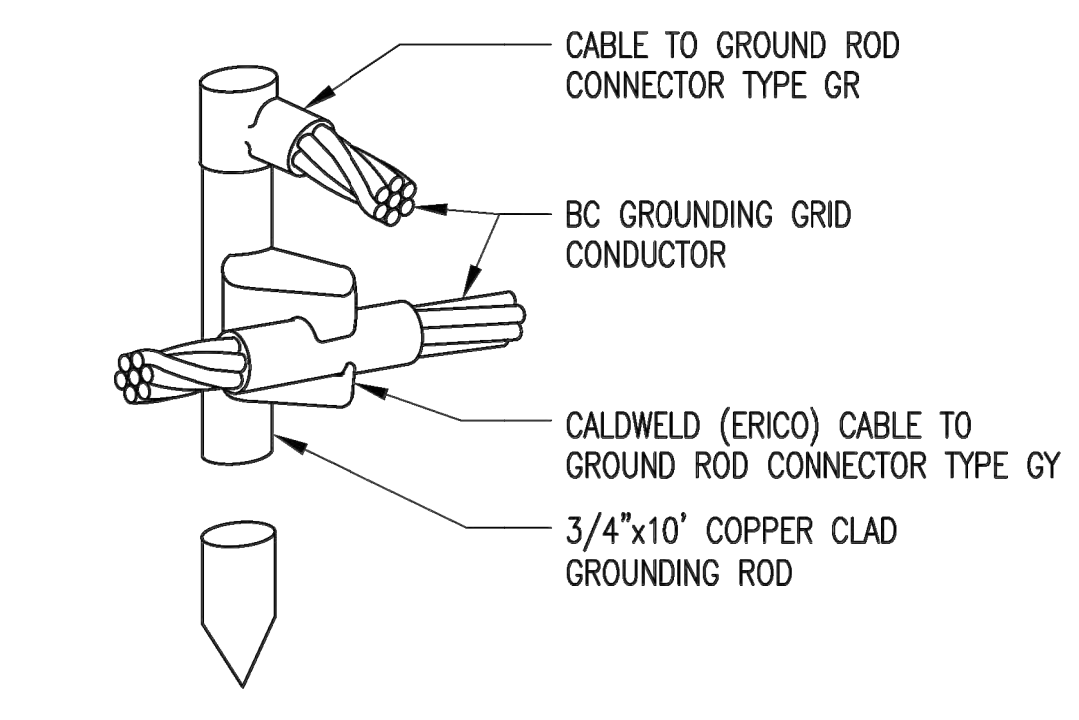
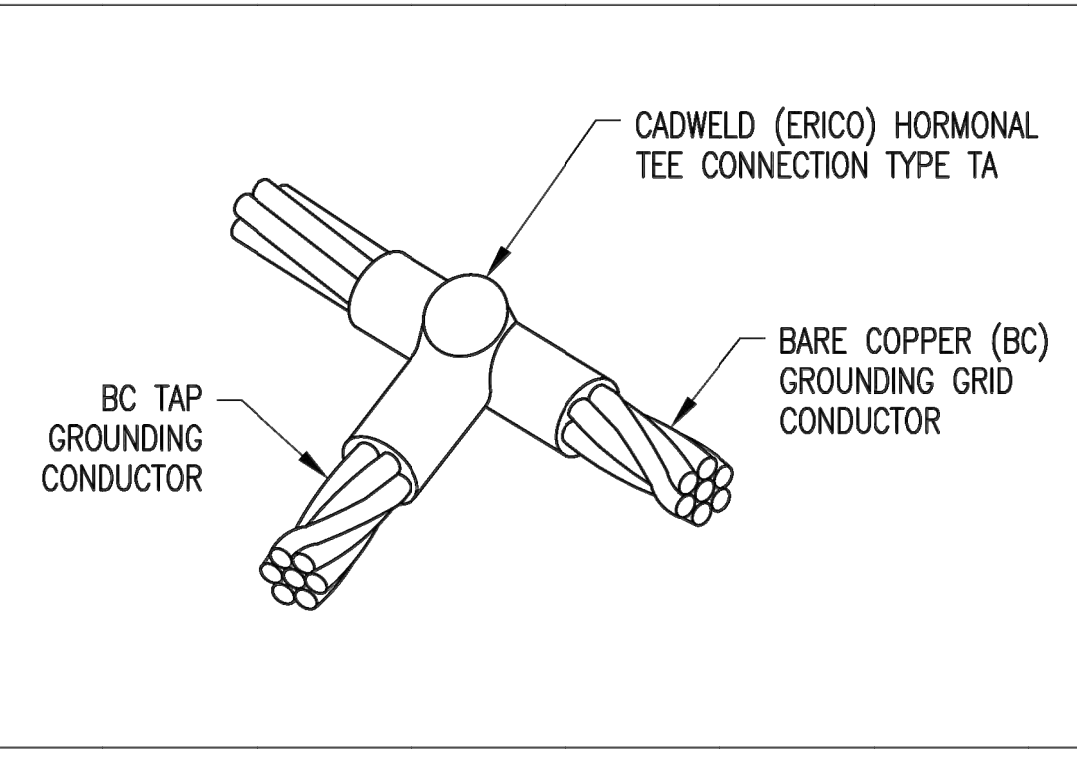
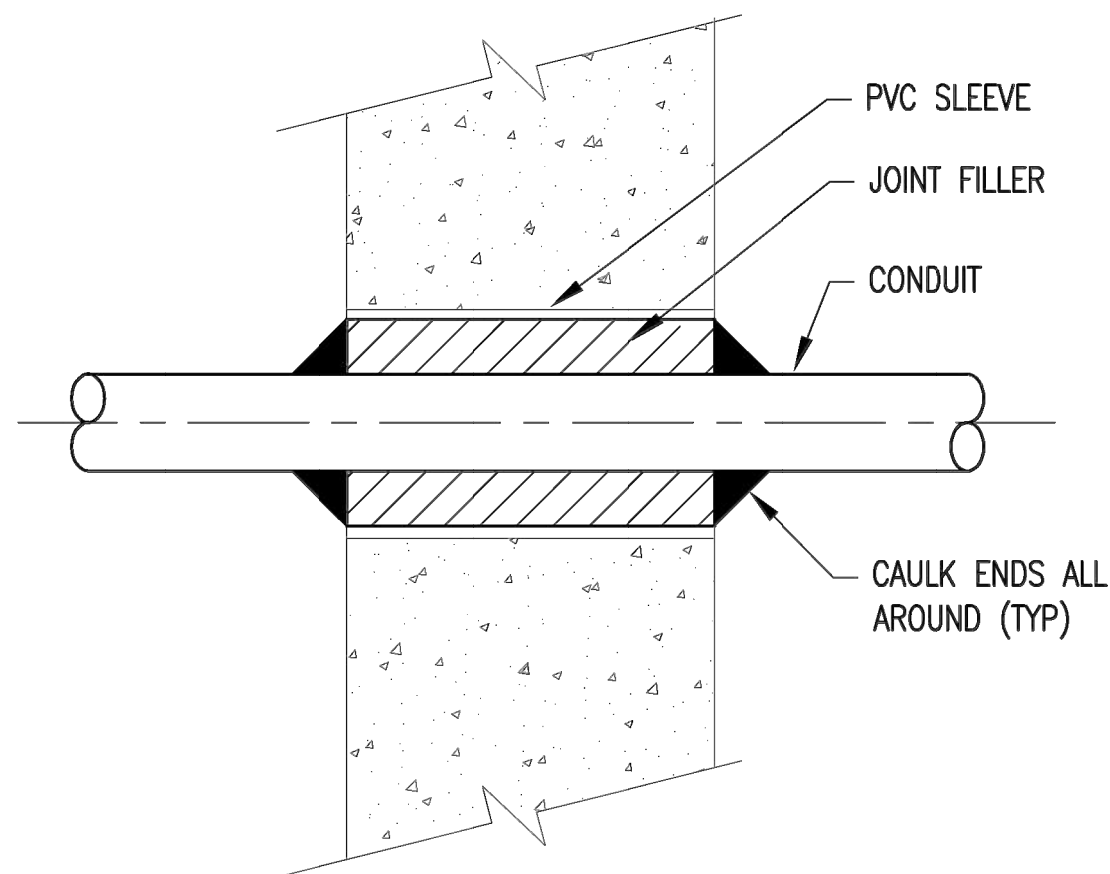
PRINCIPAL
 D. ANDERSON, PE.
 PROJECT MANAGER
 M. CHANDLER, PE, PG. CFM.
 CHECKED BY
 C. HATCH
 DRAWN BY
 GILLIAN SORENSON
 DRAWING SCALE
 AS SHOWN
 PLOTTED DATE
 JULY 8, 2022

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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL DETAILS SHT. 1
 12200 NORTH 5600 WEST
 CORNISH, UT 84308



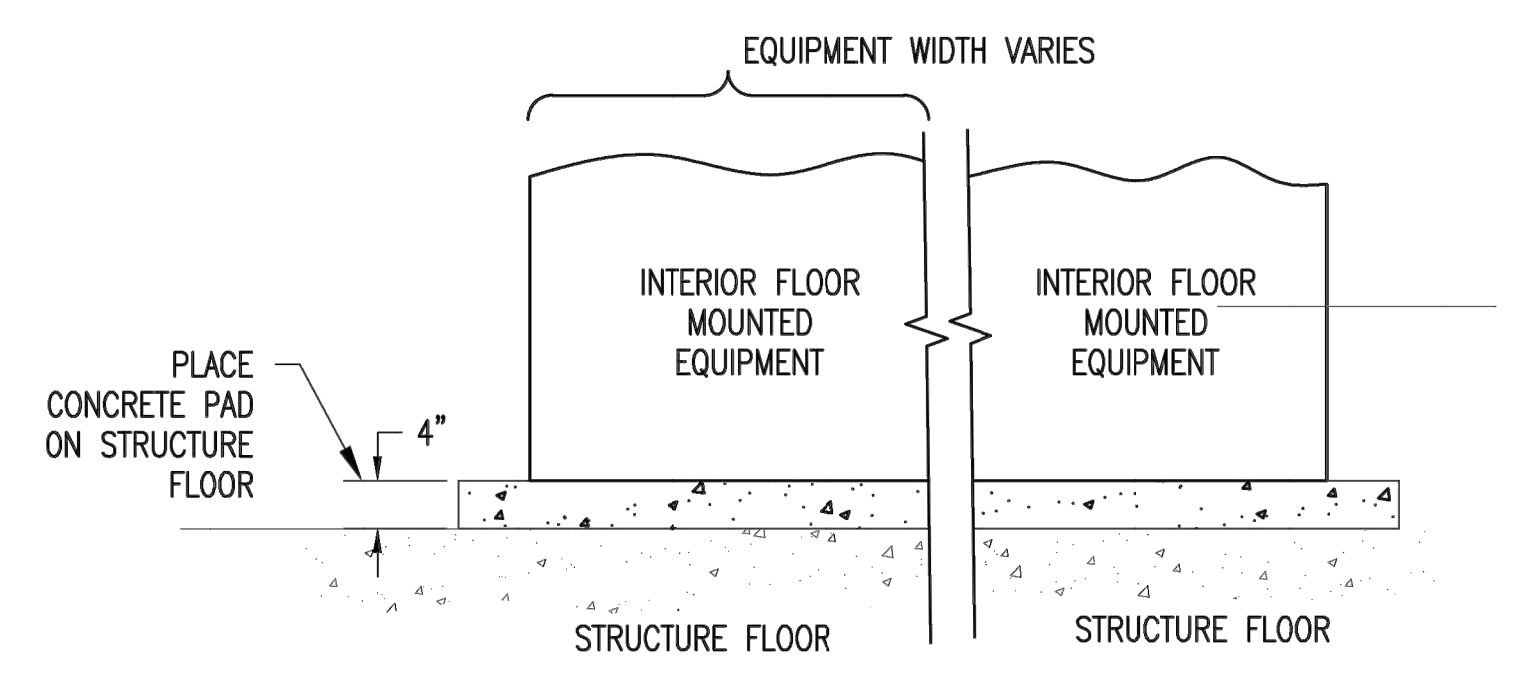
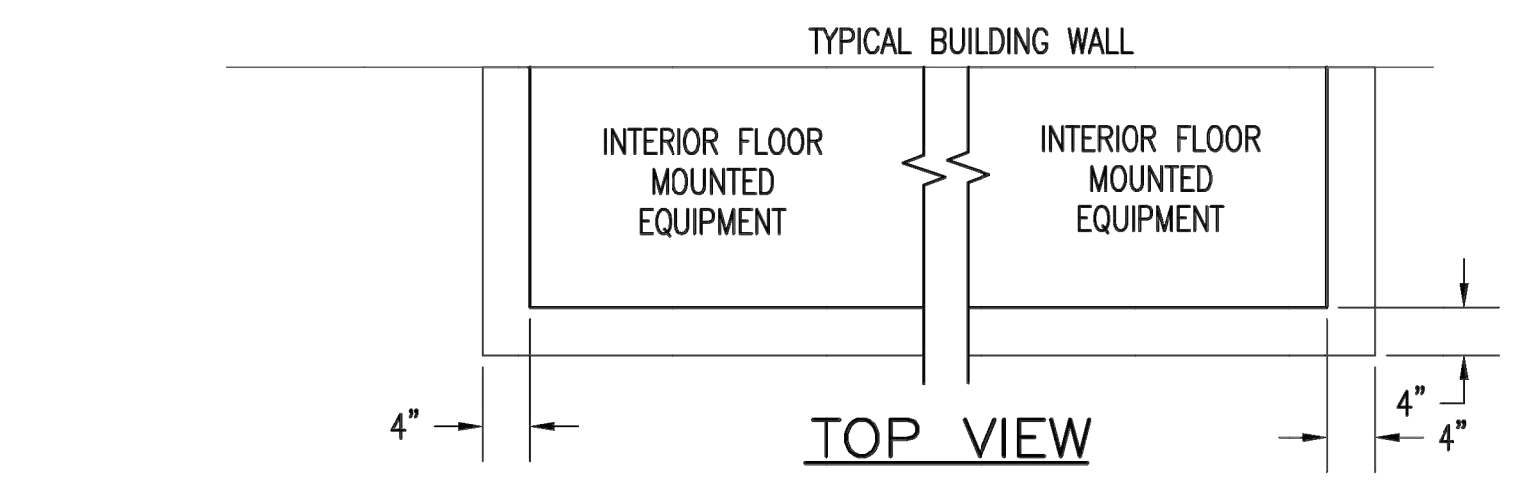
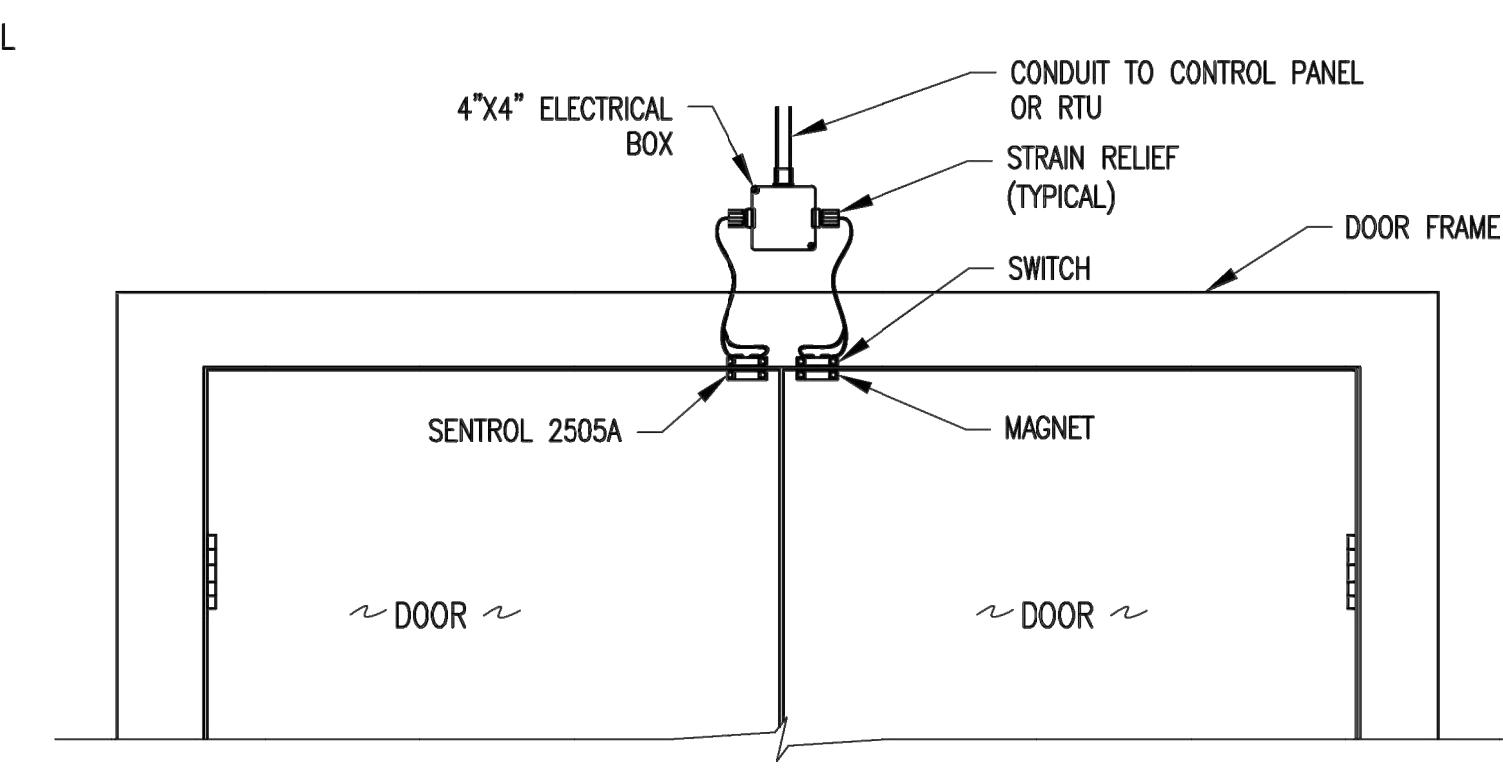
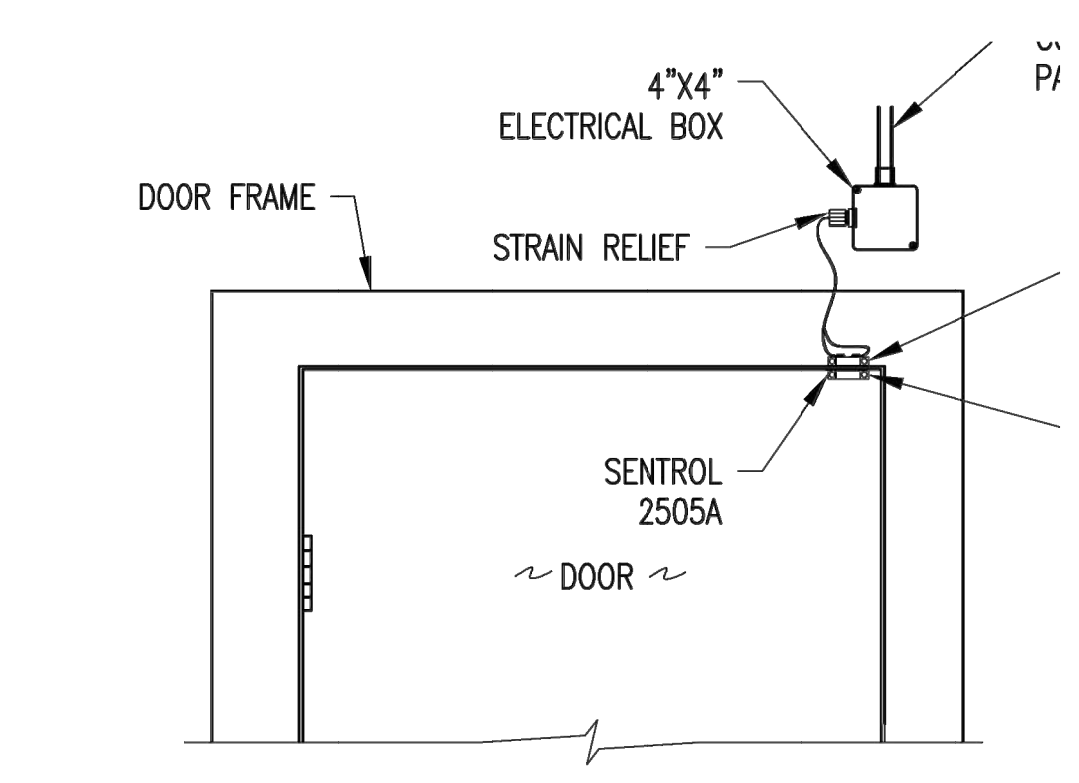
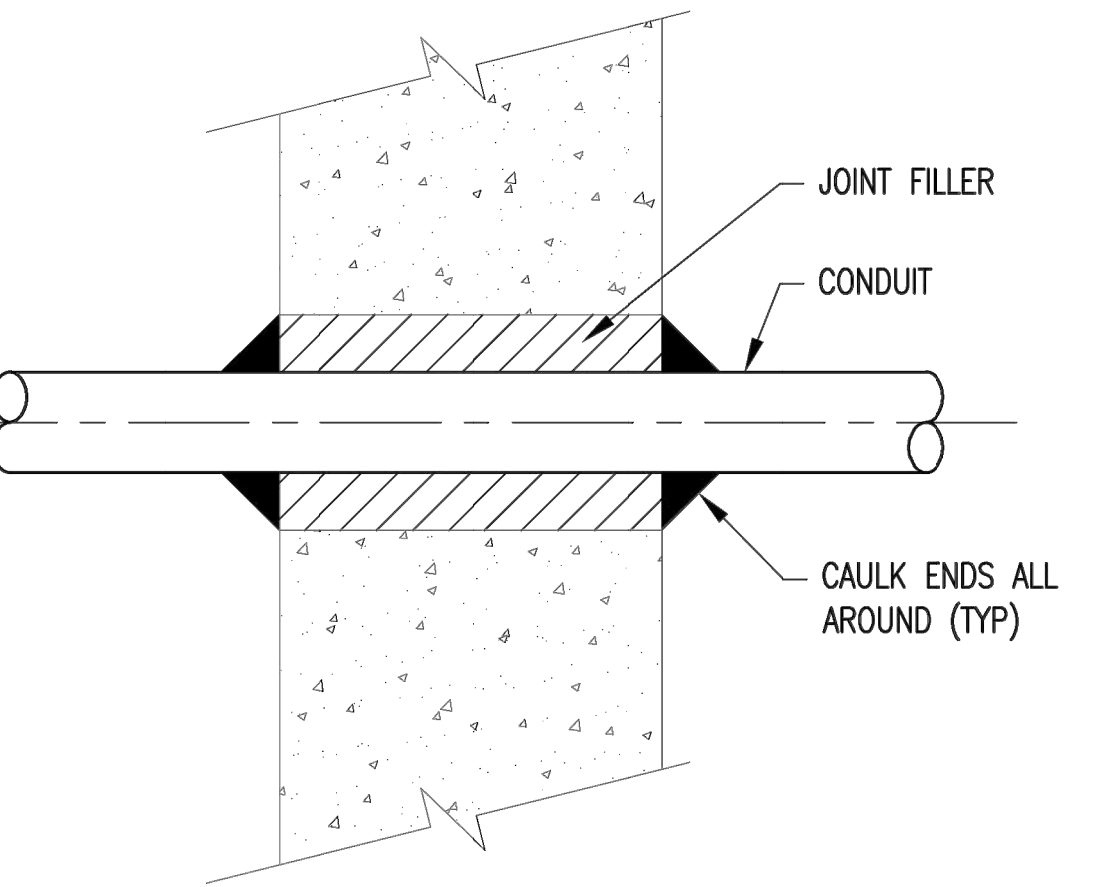
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| PROJECT NUMBER | 2019-0180 |
| SHEET | 40 OF 43 |
| SHEET NUMBER | E-601 |



1 CONDUIT PENETRATION THRU NEW WALL
 SCALE: 3" = 1'-0"

2 GROUNDING TAP
 SCALE: 1" = 1'-0"

3 GROUND ROD CONNECTION
 SCALE: 6" = 1'-0"

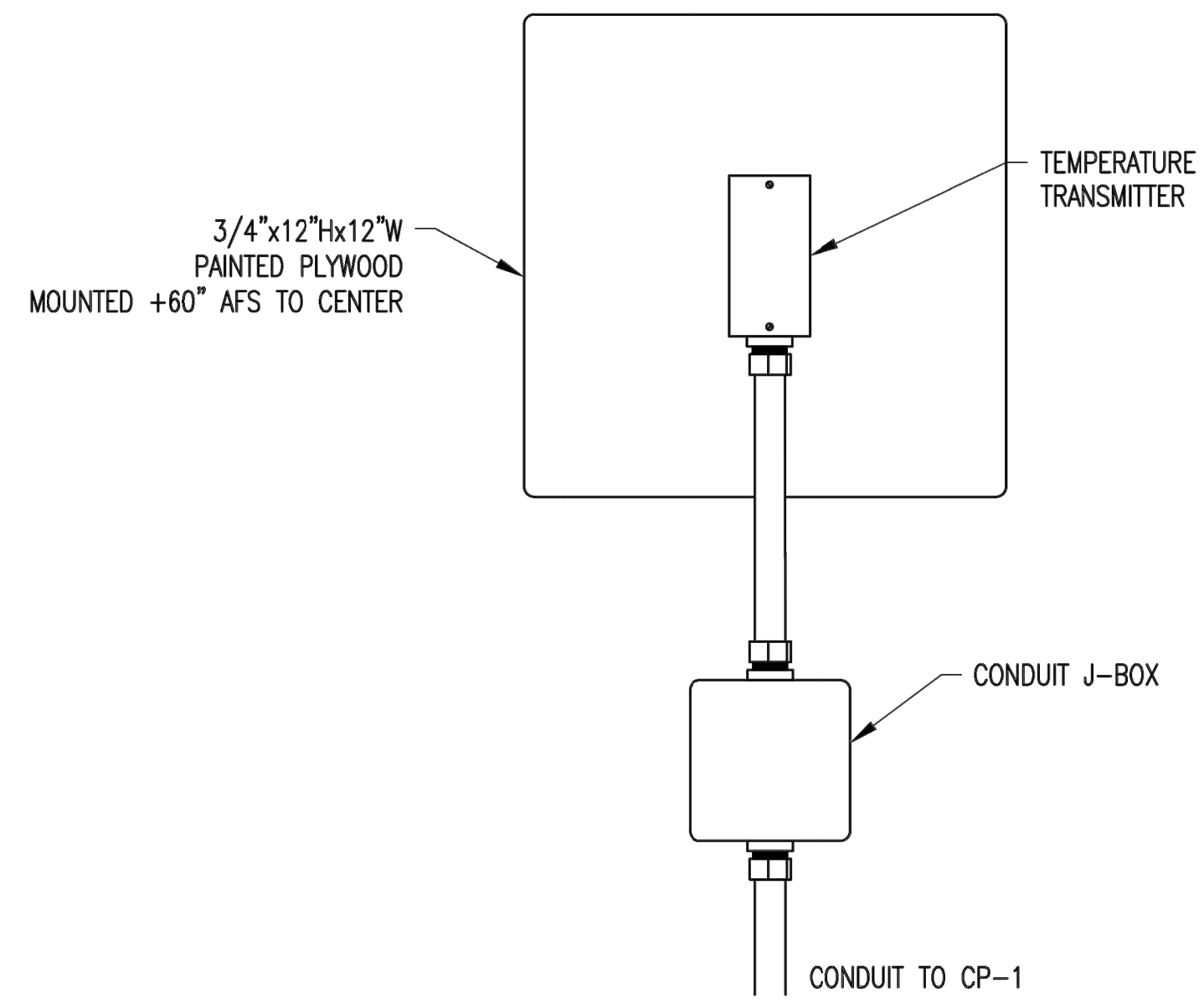
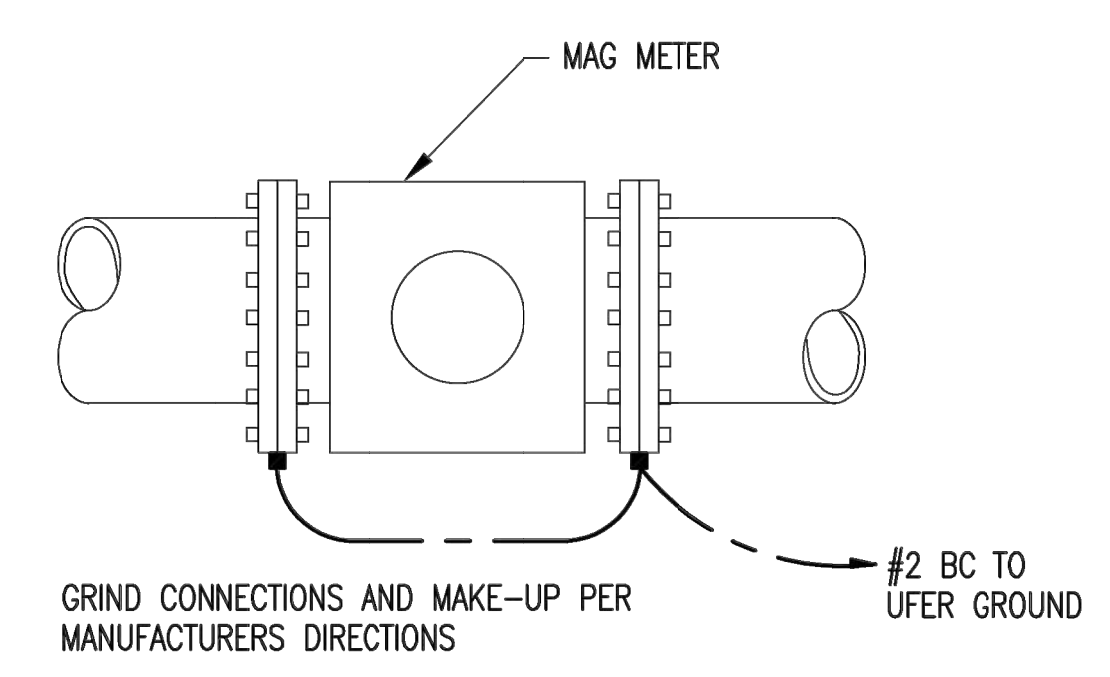
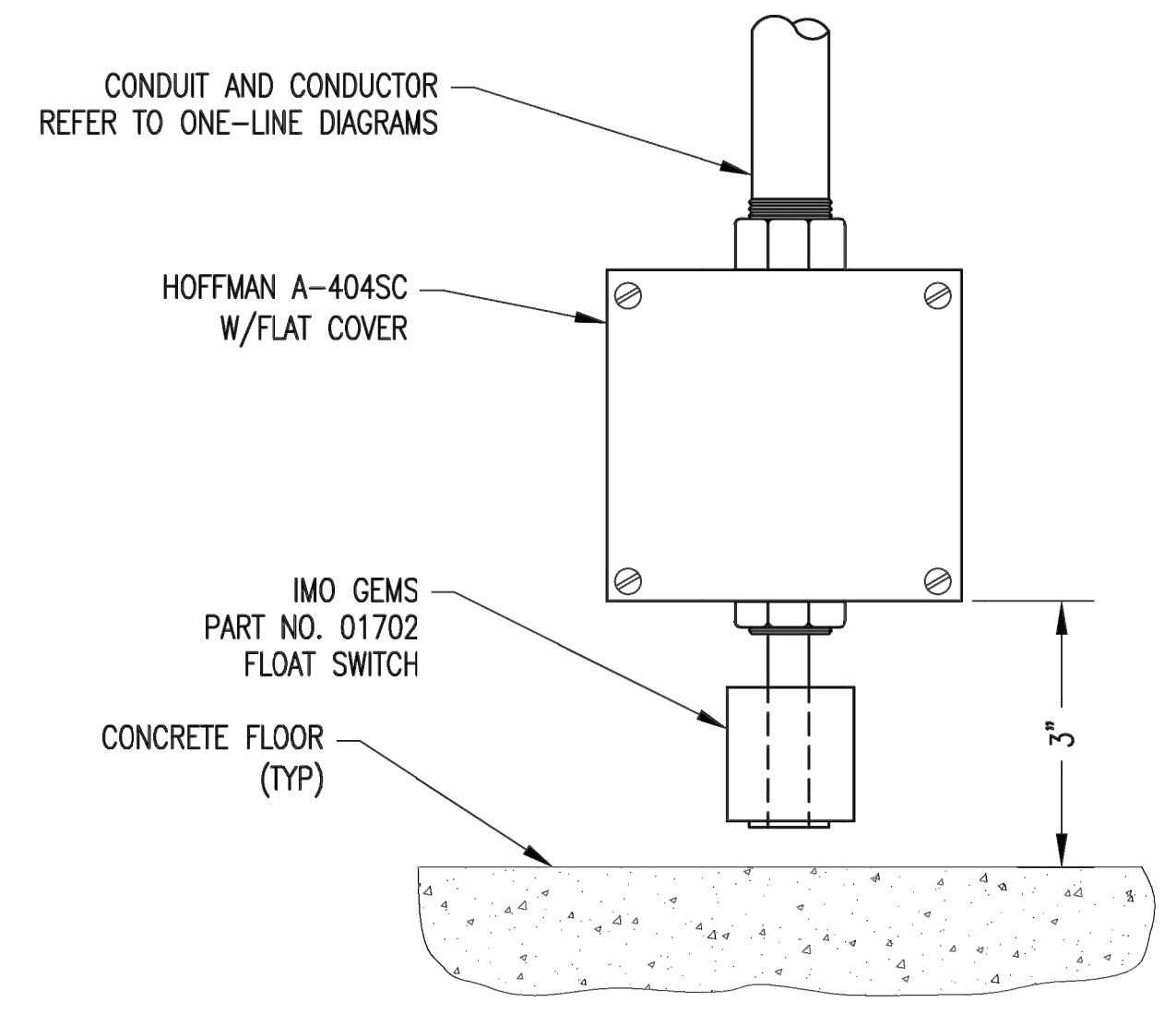


5 SINGLE DOOR POSITION SWITCH
 SCALE: 1" = 1'-0"

6 DOUBLE DOOR POSITION SWITCH
 SCALE: 1" = 1'-0"

7 EQUIPMENT CONCRETE HOUSEKEEPING PAD
 SCALE: 3/4" = 1'-0"

4 CONDUIT PENETRATION THRU EXISTING WALL
 SCALE: 3" = 1'-0"



9 TYPICAL MAG METER GROUNDING
 SCALE: 1 1/2" = 1'-0"

10 TEMPERATURE TRANSMITTER
 SCALE: 3" = 1'-0"

8 FLOOR FLOOD SWITCH
 SCALE: 6" = 1'-0"

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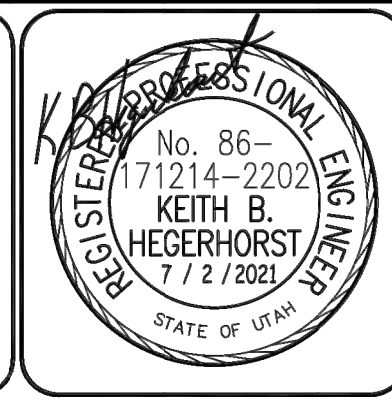
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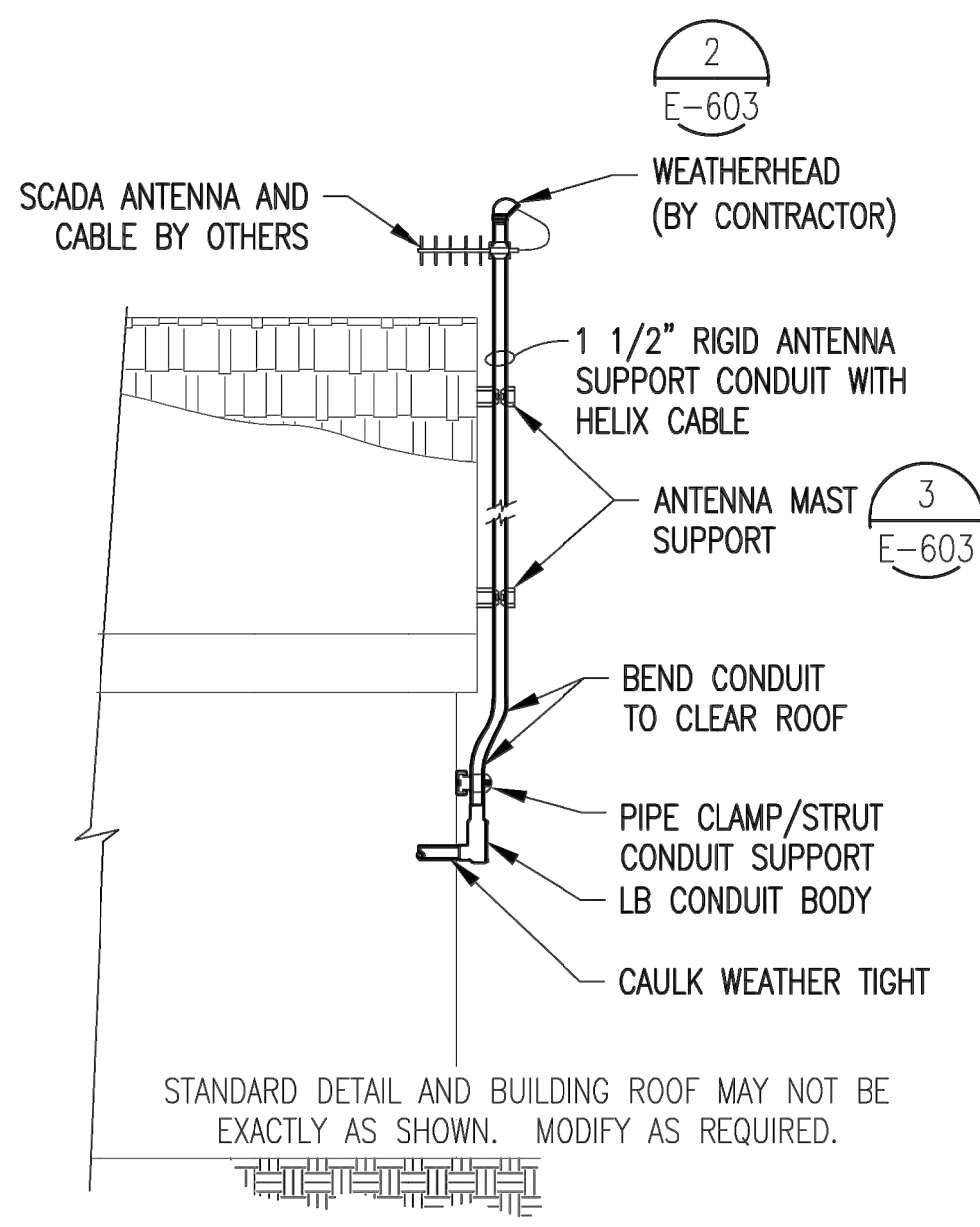
PRINCIPAL: D. ANDERSON, PE.
 PROJECT MANAGER: M. CHANDLER, PE, PG. CFM.
 CHECKED BY: C. HATCH
 DRAWN BY: GILLIAN SORENSON
 DRAWING SCALE: AS SHOWN
 ISSUE DATE: JULY 8, 2022

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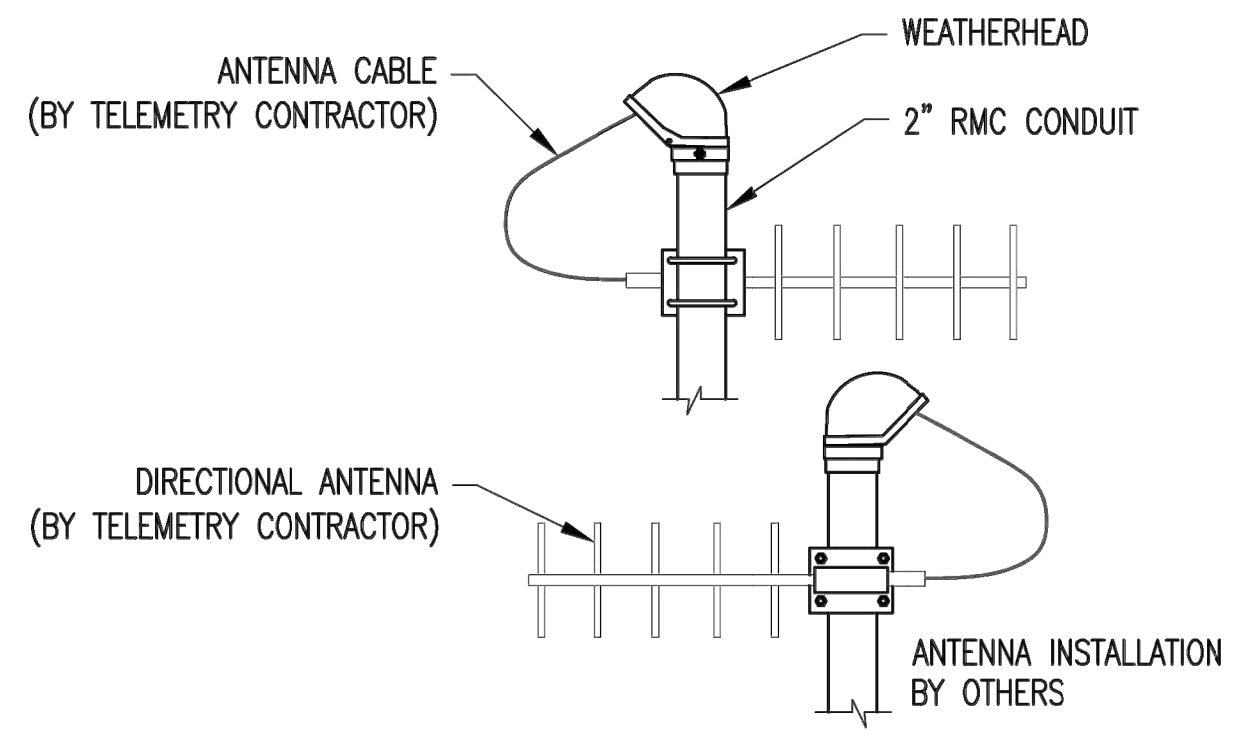
CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL DETAILS SHT. 2
 12200 NORTH 5600 WEST
 CORNISH, UT 84308



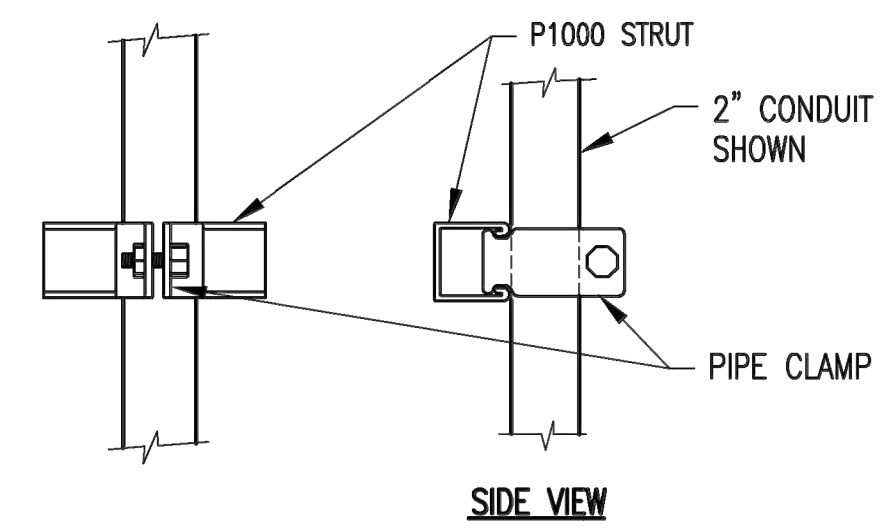
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| PROJECT NUMBER: 2019-0180 | |
| SHEET: 41 | OF: 43 |
| SHEET NUMBER: E-602 | |



1 SCADA ANTENNA SUPPORT INSTALLATION
 SCALE: 1/2" = 1'-0"



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

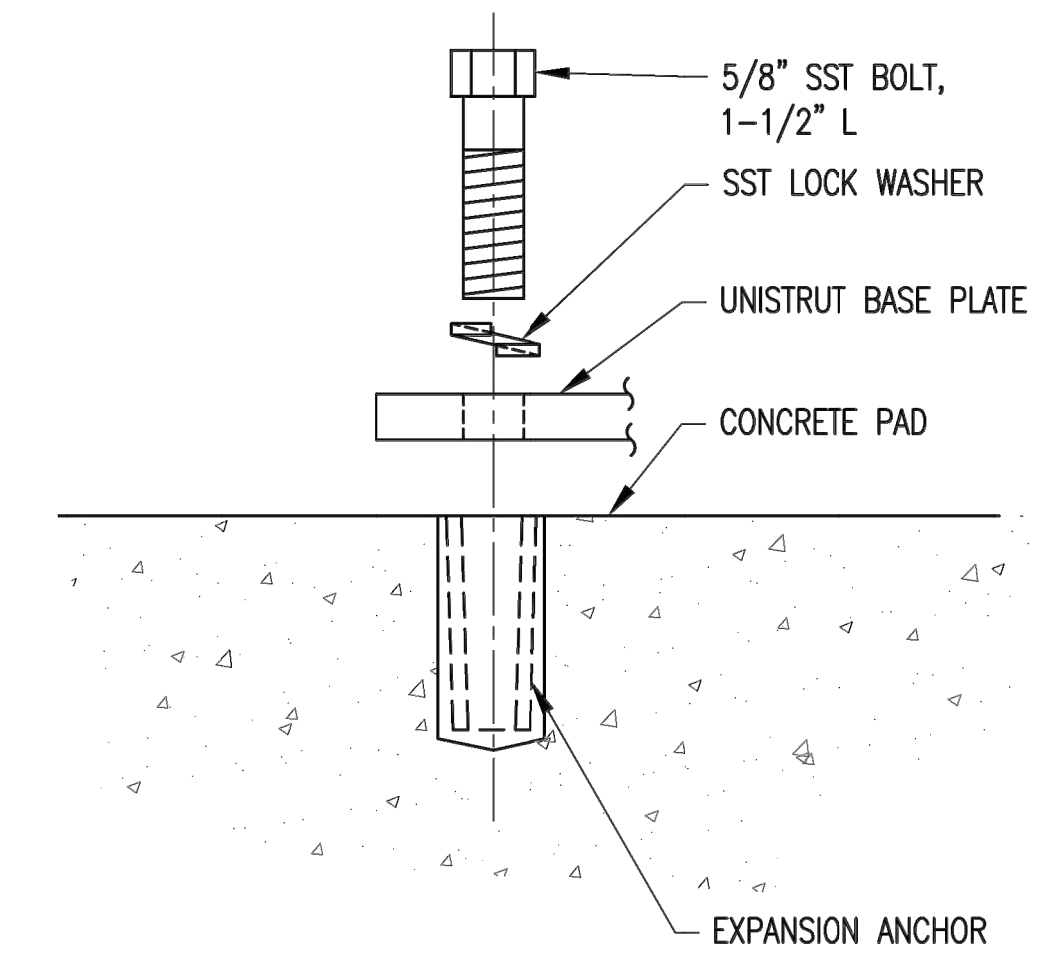


CONDUIT PIPE CLAMPS*

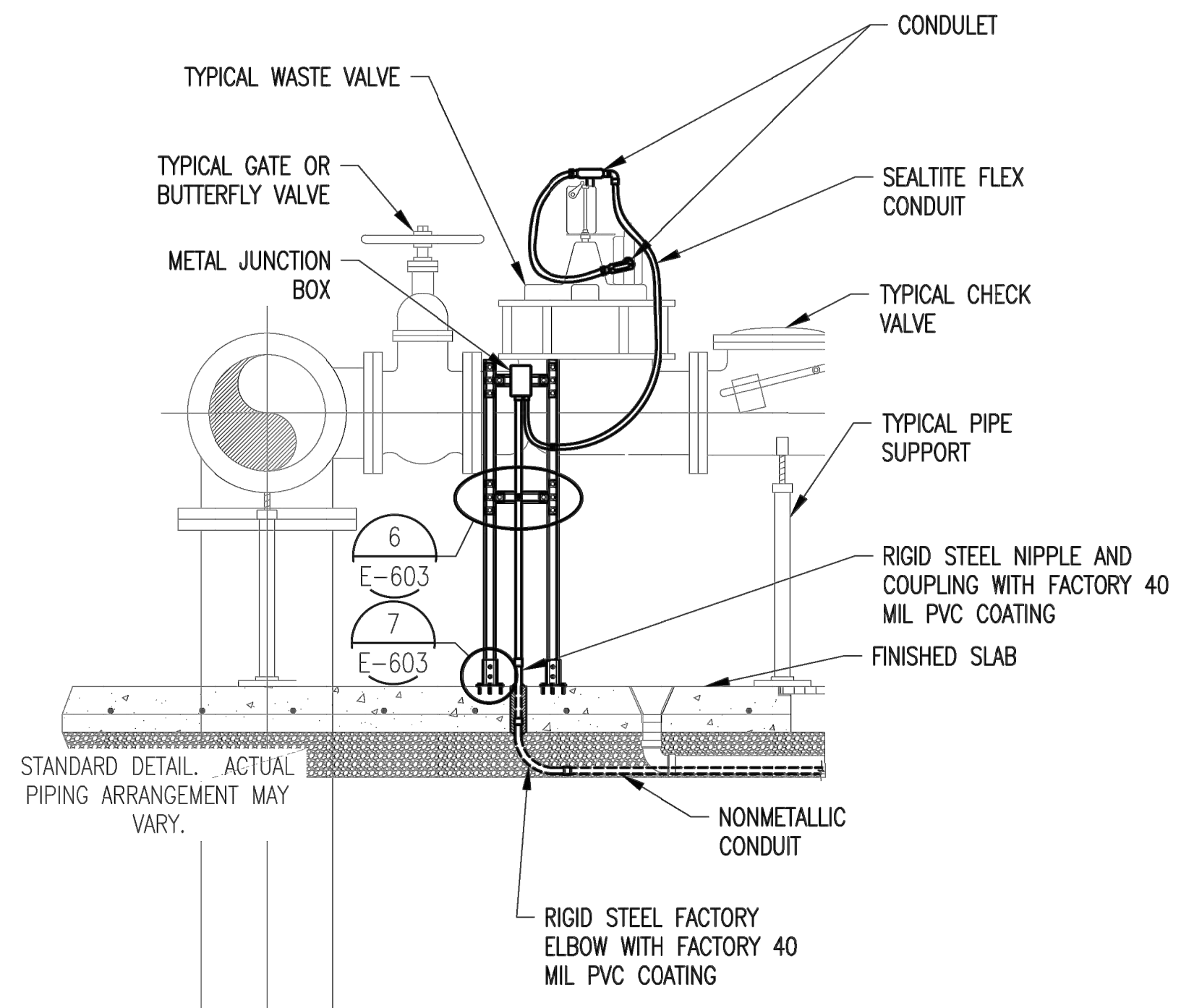
| SIZE | EMT | RGS | EMT/RGS |
|--------|-------|-------|---------|
| 1/2" | P1426 | P1111 | - |
| 3/4" | P1427 | P1112 | P1212 |
| 1" | P1428 | P1113 | P1213 |
| 1-1/4" | P1429 | P1114 | P1214 |
| 1-1/2" | P1430 | P1115 | P1215 |
| 2" | P1431 | P1117 | P1217 |
| 2-1/2" | P1118 | P1118 | - |
| 3" | P1119 | P1119 | - |
| 3-1/2" | P1120 | P1120 | - |
| 4" | P1121 | P1121 | - |

* = SUPPLIED WITH SLOTTED HEAD SCREW AND NUT

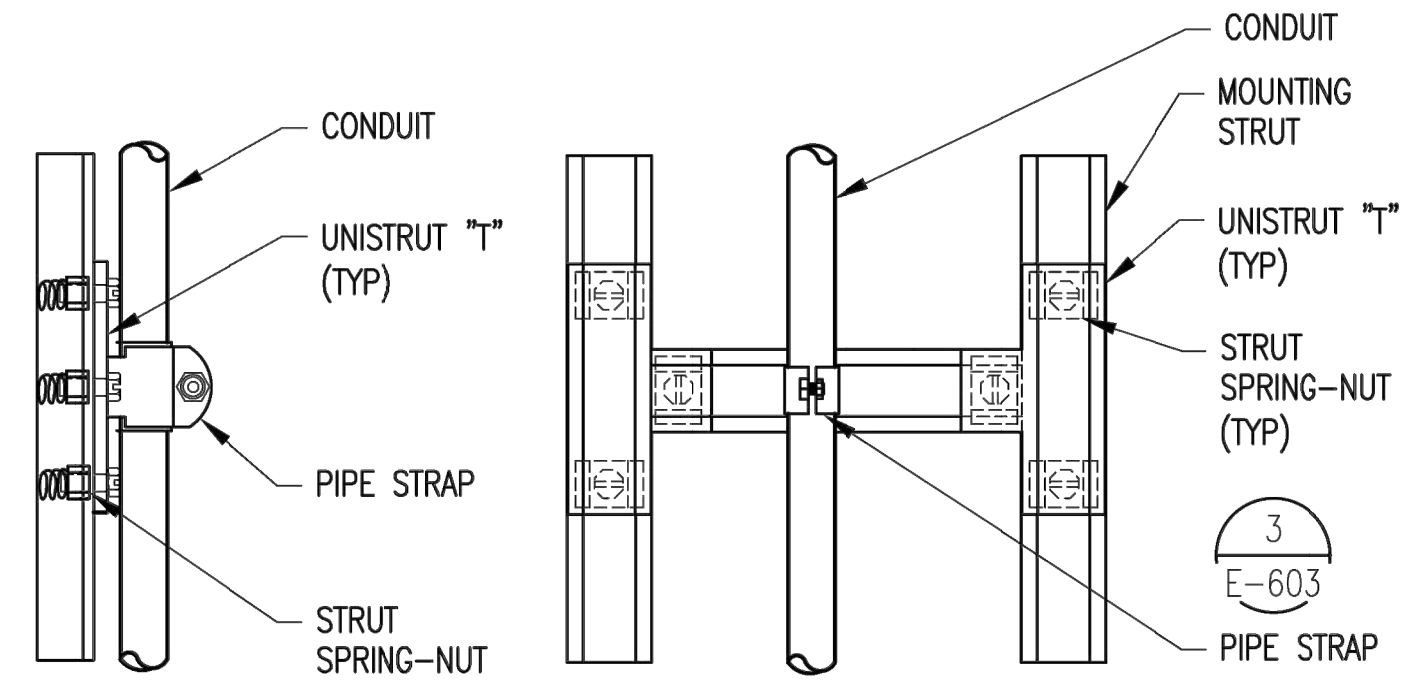
3 CONDUIT SUPPORT CLAMP
 SCALE: 3" = 1'-0"



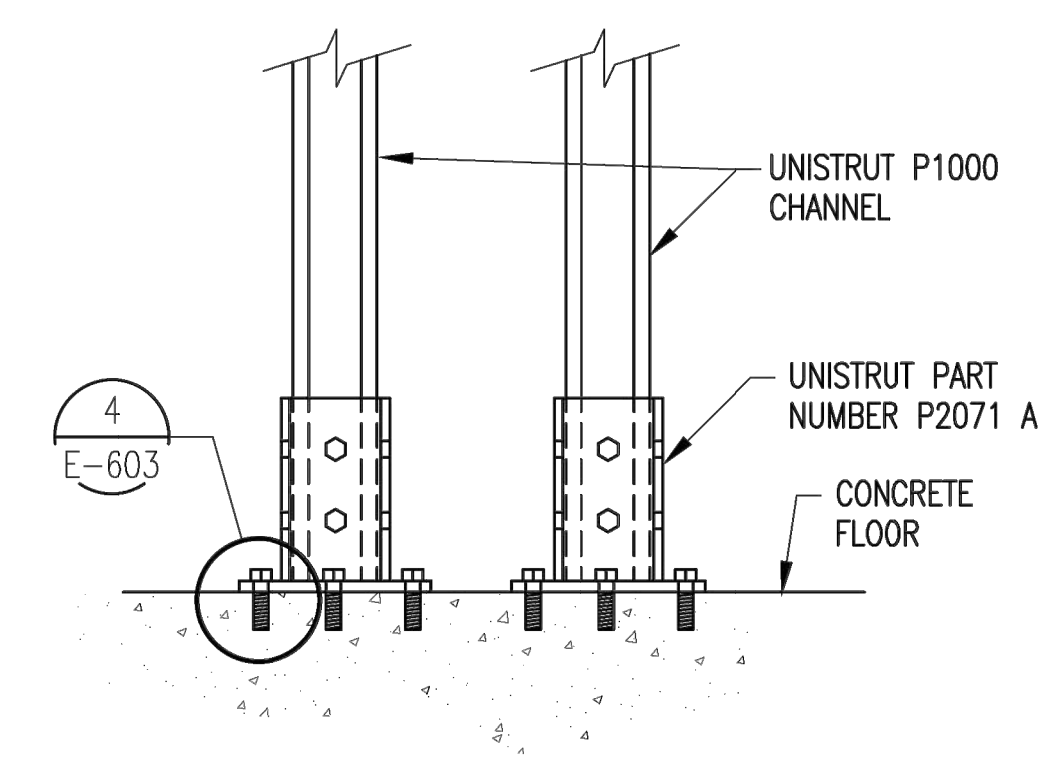
4 BASE ANCHOR DETAIL
 SCALE: 6" = 1'-0"



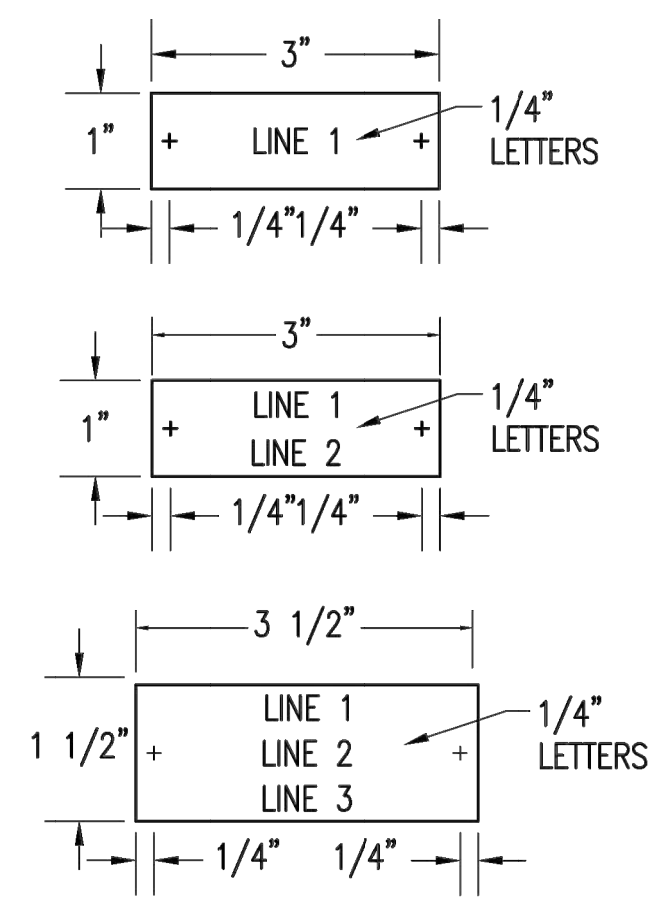
5 CONDUIT SUPPORT DETAIL
 SCALE: 3/4" = 1'-0"



6 CONDUIT SUPPORT BRACKET
 SCALE: 3" = 1'-0"



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



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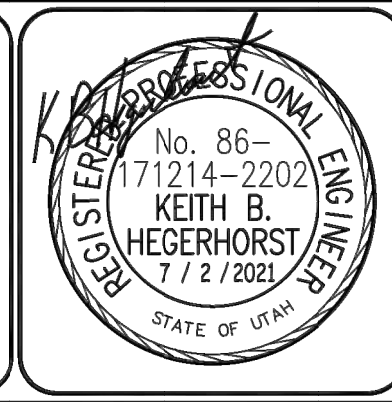
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DESIGNED BY: D. ANDERSON, PE.
 PROJECT MANAGER: M. CHANDLER, PE, PG. CFM.
 CHECKED BY: C. HATCH
 DRAWN BY: GILLIAN SORENSON
 DRAWING SCALE: AS SHOWN
 ISSUE DATE: JULY 8, 2022

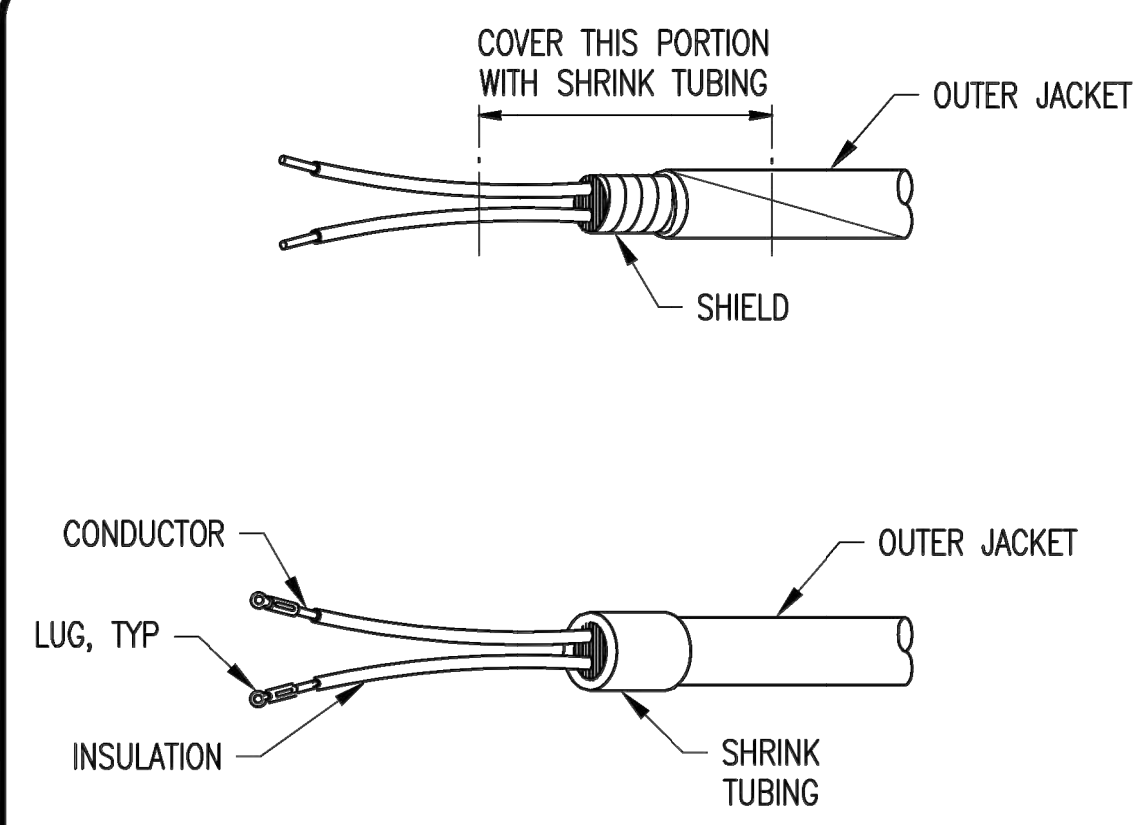
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CORNISH TOWN CORP
 PITCHER WELL HOUSE
 ELECTRICAL DETAILS SHT. 3

12200 NORTH 5600 WEST
 CORNISH, UT 84308



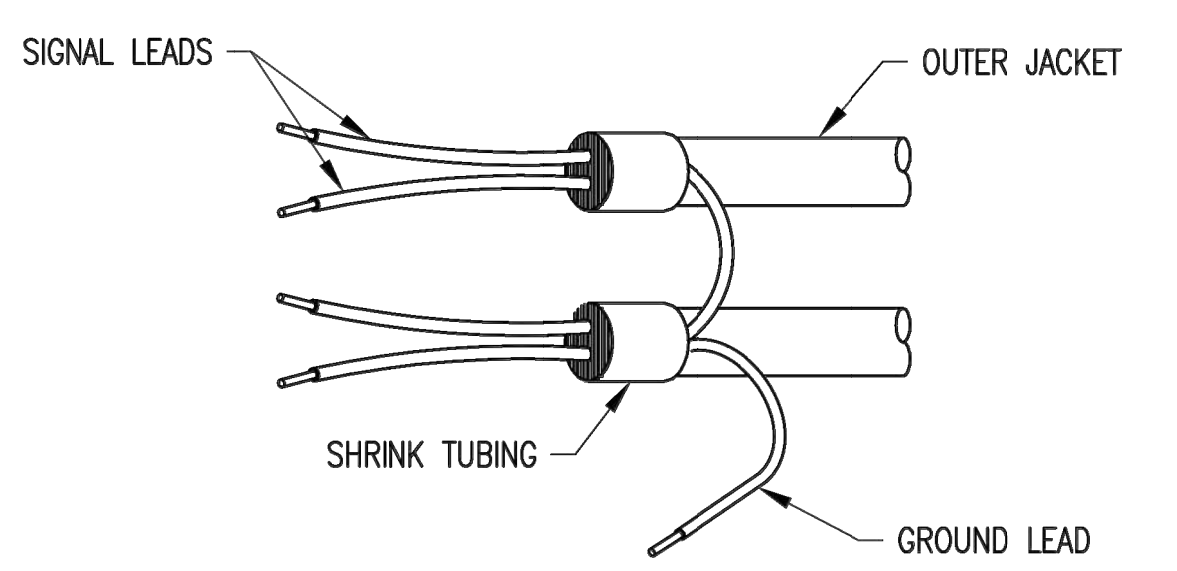
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| PROJECT NUMBER: 2019-0180 | |
| SHEET: 42 | OF: 43 |
| SHEET NUMBER: E-603 | |



NOTE:
SHIELD NOT GROUNDED AT TERMINATION.

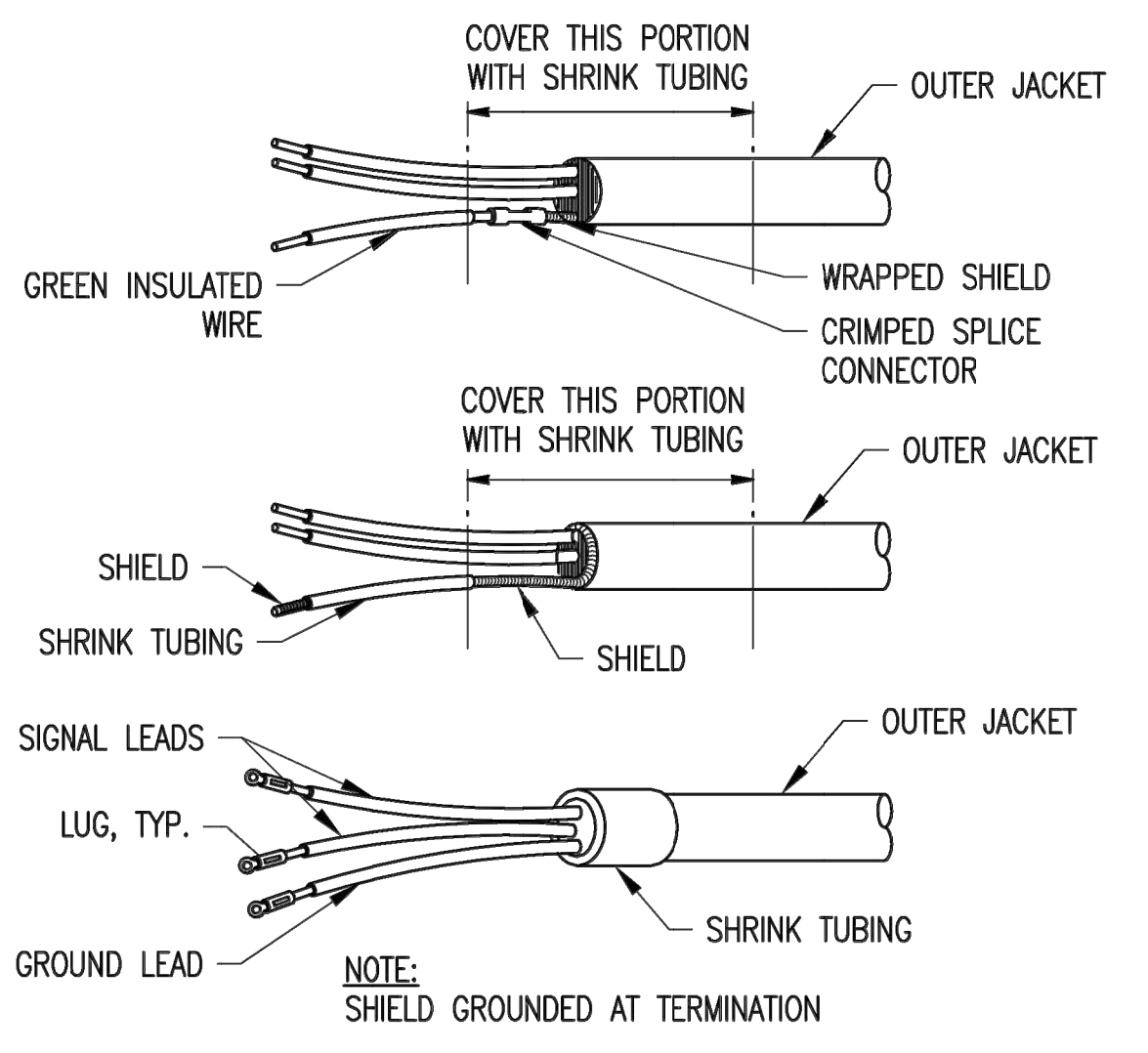
TERMINATION OF SHIELDED CONTROL CABLE NTS

1 SIGNAL CABLE TERMINATIONS
SCALE: NTS



UNACCEPTABLE METHOD OF GROUNDING
CONTROL CABLE SHIELD NTS

2 SIGNAL CABLE TERMINATIONS
SCALE: NTS



NOTE:
SHIELD GROUNDED AT TERMINATION

TERMINATION OF SHIELDED CONTROL CABLE NTS

3 SIGNAL CABLE TERMINATIONS
SCALE: NTS

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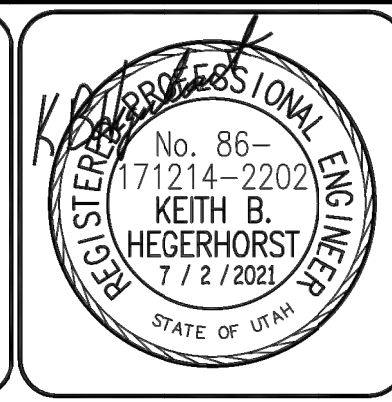
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PRINCIPAL
D. ANDERSON, PE.
 PROJECT MANAGER
M. CHANDLER, PE, PG. CFM.
 CHECKED BY
C. HATCH
 DRAWN BY
GILLIAN SORENSON
 DRAWING SCALE
AS SHOWN
 ISSUE DATE
JULY 8, 2022

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|-----------------------------|----------|
| PROJECT NUMBER 2019-0180 | |
| SHEET 43 | OF 43 |
| SHEET NUMBER E-604 | |