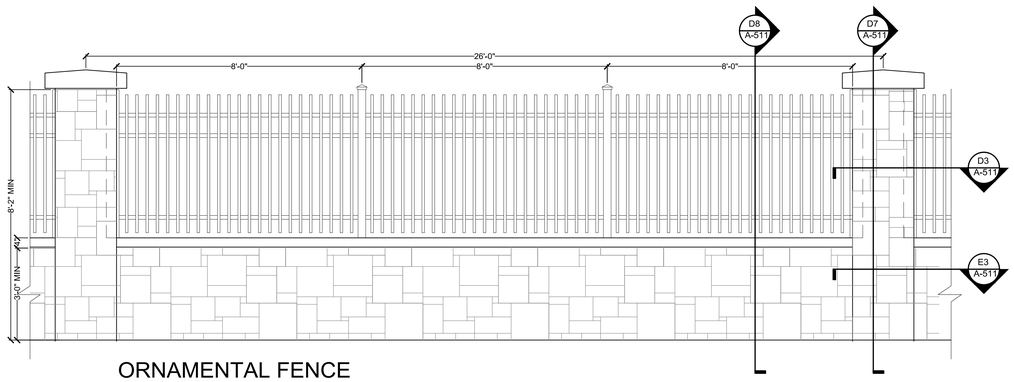
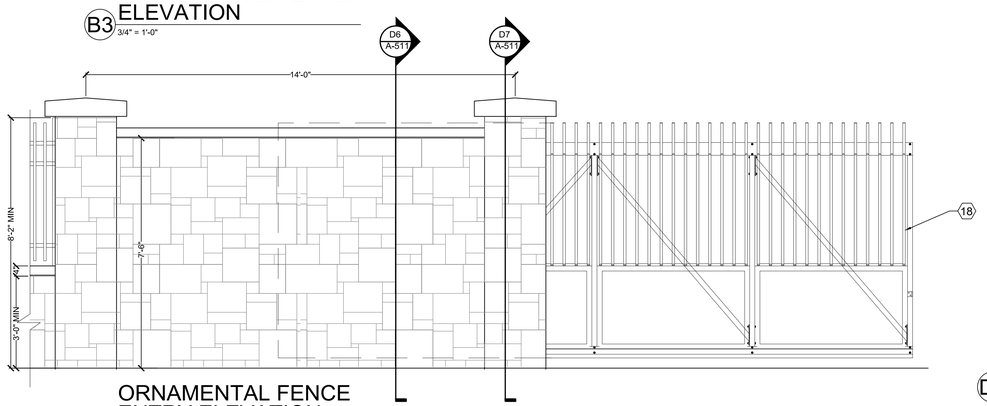
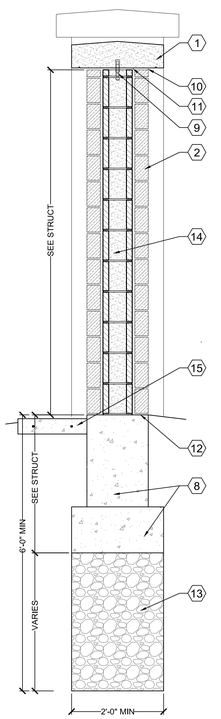


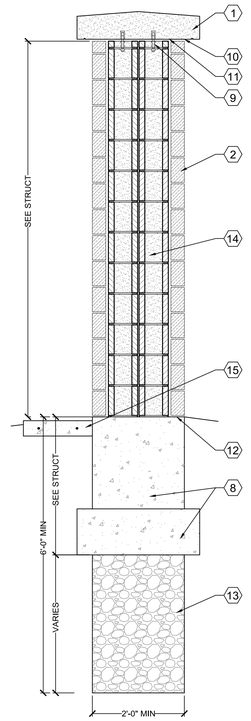
B3 ORNAMENTAL FENCE ELEVATION
3/4" = 1'-0"



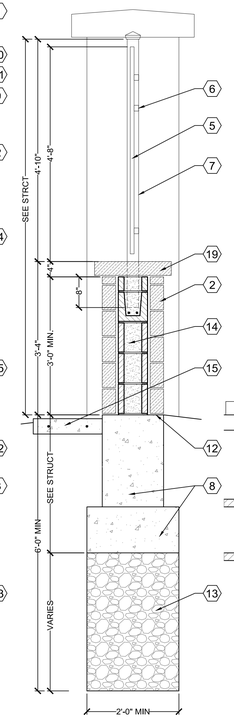
D3 ORNAMENTAL FENCE ENTRY ELEVATION
3/4" = 1'-0"



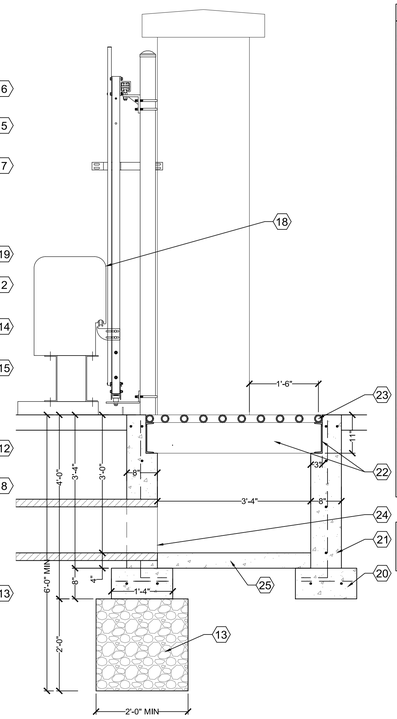
D6 ORNAMENTAL FENCE HIGH WALL SECTION
3/4" = 1'-0"



D7 ORNAMENTAL FENCE COLUMN SECTION
3/4" = 1'-0"



D8 ORNAMENTAL FENCE LOW WALL SECTION
3/4" = 1'-0"



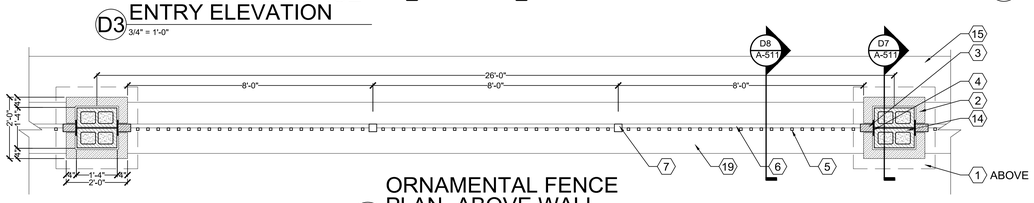
D9 ORNAMENTAL FENCE GATE SECTION
3/4" = 1'-0"

KEYED NOTES

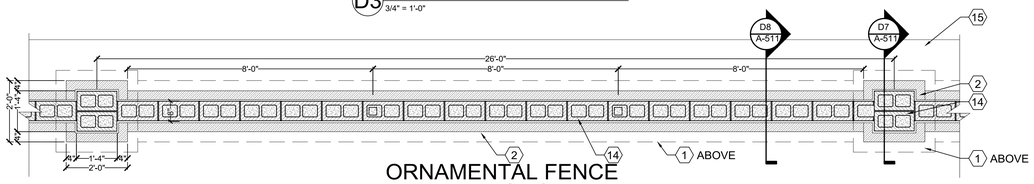
1. CUT STONE CAP.
2. STONE VENEER.
3. ¾"X3"X5" STEEL COLUMN FULL HEIGHT OF COLUMN.
4. ¾"X6" STEEL PLATE FULL HEIGHT OF COLUMN. WELDED TO 3"X5" STEEL COLUMN AND FASTENED TO CONCRETE COLUMN WITH ¾"X4" CONCRETE SCREWS @ 12" O.C.
5. 1X1 ORNAMENTAL PICKET @ 4" O.C. -TYPICAL
6. 1 ½"X1 ½" ORNAMENTAL RAIL -TYPICAL
7. 3"X3" ORNAMENTAL STEEL POST @ 8'-0" MAX O.C. -TYPICAL. EMBED 8" INTO CMU BOND BEAM
8. CAST-IN-PLACE CONCRETE FOOTING, FOUNDATION OR FOOTING SEE STRUCTURAL DRAWINGS.
9. ½" X 4" STAINLESS STEEL PINS INTO CAP. AFTER CAPS HAVE BEEN SET, LOOSE-FIT PIN. SECURE PIN W/ NON-SHRINK GROUT (DO NOT GROUT PIN TO CAP)
10. ALL JOINTS TO BE FILLED WITH BACKER ROD AND SEALANT.
11. LEVELING GROUT ON CONTINUOUS EPDM MEMBRANE.
12. STONE LEDGE.
13. COBBLESTONE BETWEEN 4" AND 8" DIAMETER, 24" WIDE MIN. AND 6' BELOW GRADE MIN.
14. CMU WALL, SEE STRUCTURAL DRAWINGS.
15. CONCRETE MOW STRIP - 4"X18" W/ 2-#4 REBAR, INSIDE OF THE ENTIRETY OF THE ORNAMENTAL FENCE.
16. CATTLE / PRAIRIE DOG GUARD, SEE DETAIL D9/A-511.
17. EGRESS MAN GATE, SEE SPEC 32 31 19.
18. AUTOMATIC SLIDE GATE, SEE SPEC 32 31 19.
19. STONE CAP TO MATCH STONE VENEER.
20. 8"X16" CONCRETE FOOTING W/ 2-#4 LONGITUDINAL AND #4 @ 18" TRANSVERSE.
21. 8" CONC WALL W/ #4 @ 12" HORIZONTAL W/ DOUBLE TOP BAR AND #4 @ 18" O.C. VERTICAL HOOKED INTO FOOTING.
22. C 8X13.5 STEEL CHANNEL @ 4'-0" O.C.
23. 2 ½" SCHED 40 STEEL PIPE @ 6" O.C.
24. 12" RCP GROUTED INTO SIDE OF CATTLE GUARD FOUNDATION WALL, SEE C-102. CONTRACTOR TO SHOW TIE-IN DETAILS IN SHOP DRAWINGS.
25. 4" CONCRETE SLAB, SEE DETAIL C5/C-503.
26. CONCRETE CURB OR SIDEWALK, SEE CIVIL.

CONTRACTOR IS TO COORDINATE WITH USFWS FOR FINAL INSPECTIONS AND APPROVALS OF THE FINAL UPD BARRIERS.

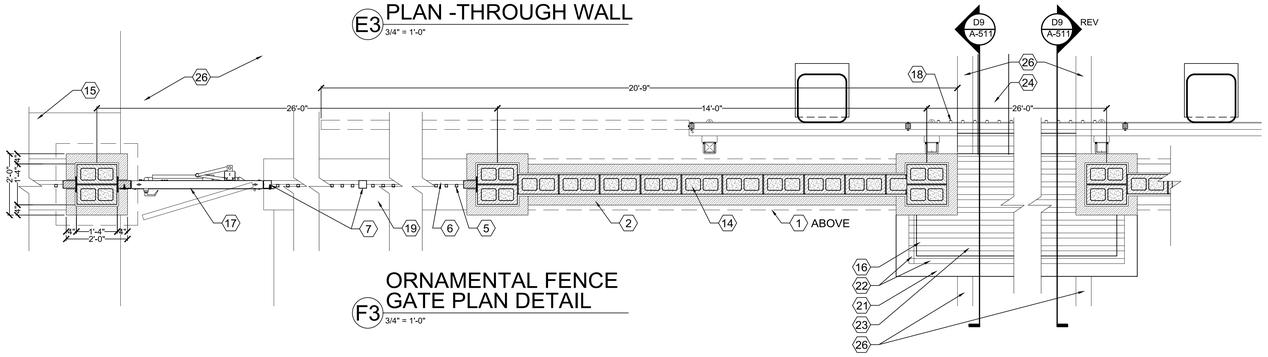
IF SOLID ROCK OR A LARGE BOULDER IS ENCOUNTERED THAT EXTENDS DOWN TO A DEPTH OF 6', THE COBBLE STONE ANTI PRAIRIE DOG BARRIER CAN BE INSTALLED OVER/AROUND THE ROCK OR BOULDER.



D3 ORNAMENTAL FENCE PLAN -ABOVE WALL
3/4" = 1'-0"



E3 ORNAMENTAL FENCE PLAN -THROUGH WALL
3/4" = 1'-0"



F3 ORNAMENTAL FENCE GATE PLAN DETAIL
3/4" = 1'-0"

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COLORADO LICENSED SEAN M. FITZPATRICK 0040436 ARCHITECT
7/22/22

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title: FENCING DETAILS 1	Phase: BID DOCUMENTS	Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE	Project Number: 942CM3001
Approved: Project Director Steve Davis Department of Veterans Affairs, NCA Phone: 202.632.4833 Email: steve.davis@va.gov	N/A	Location: Cedar City, UT	Building Number: N/A
		Issue Date: 7/22/2022 / Checked: TM / Drawn: SF	Drawing Number: A-511
			Sheet 46 of 61

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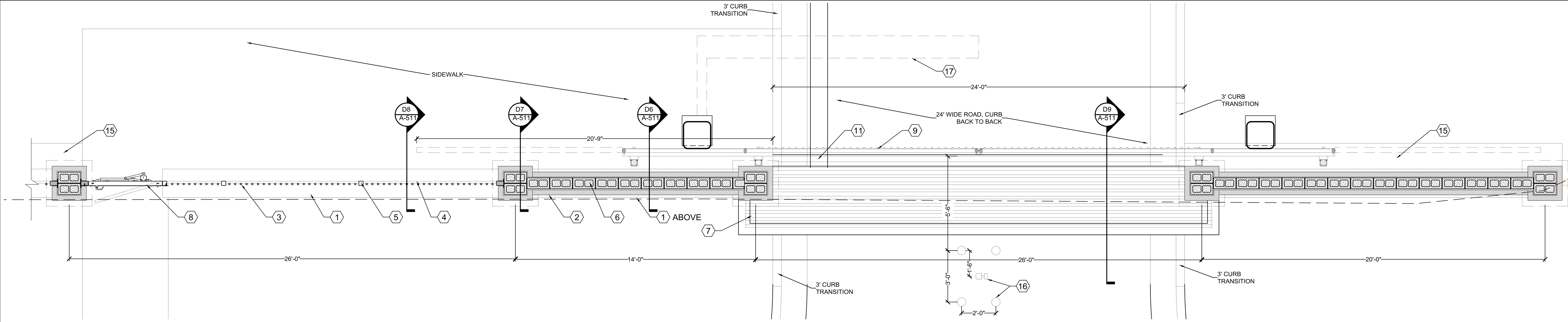
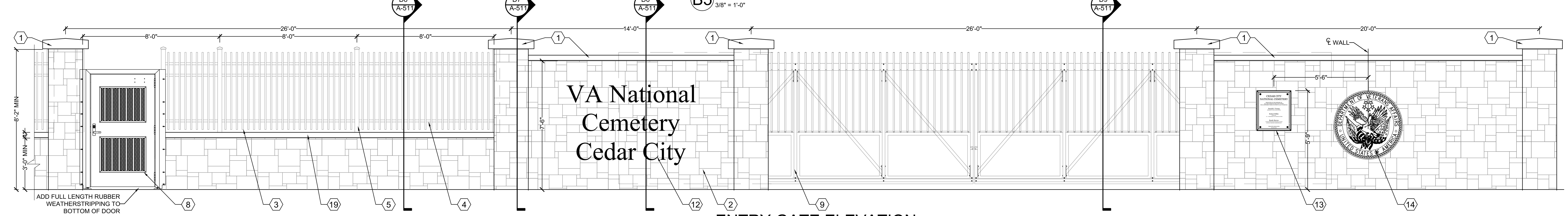
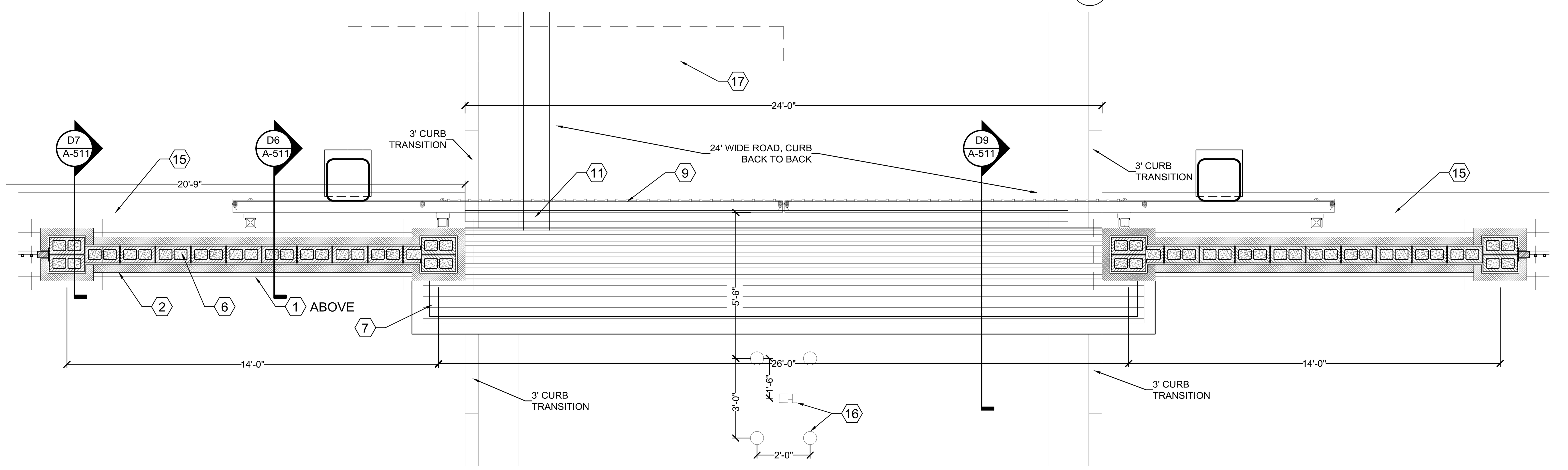


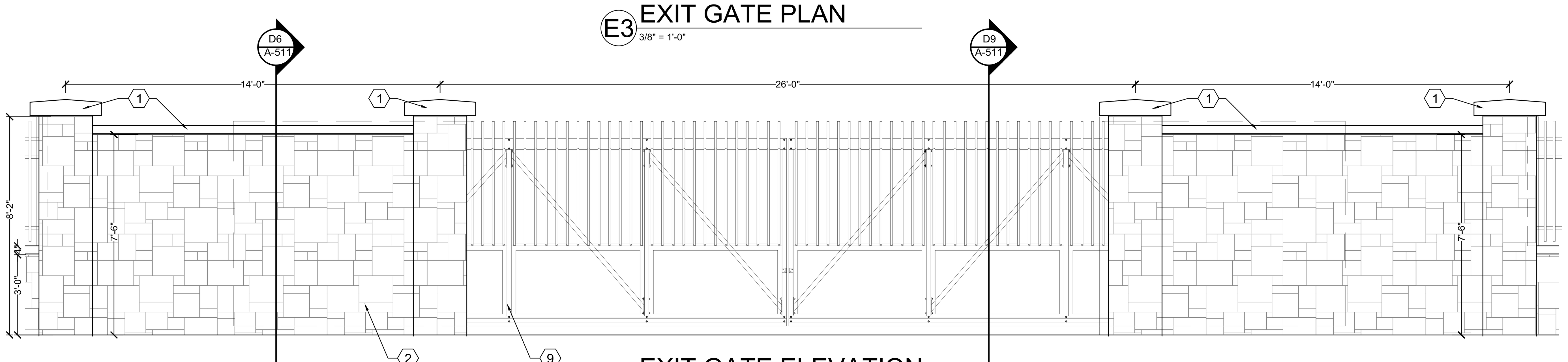
B5 ENTRY GATE PLAN
3/8" = 1'-0"



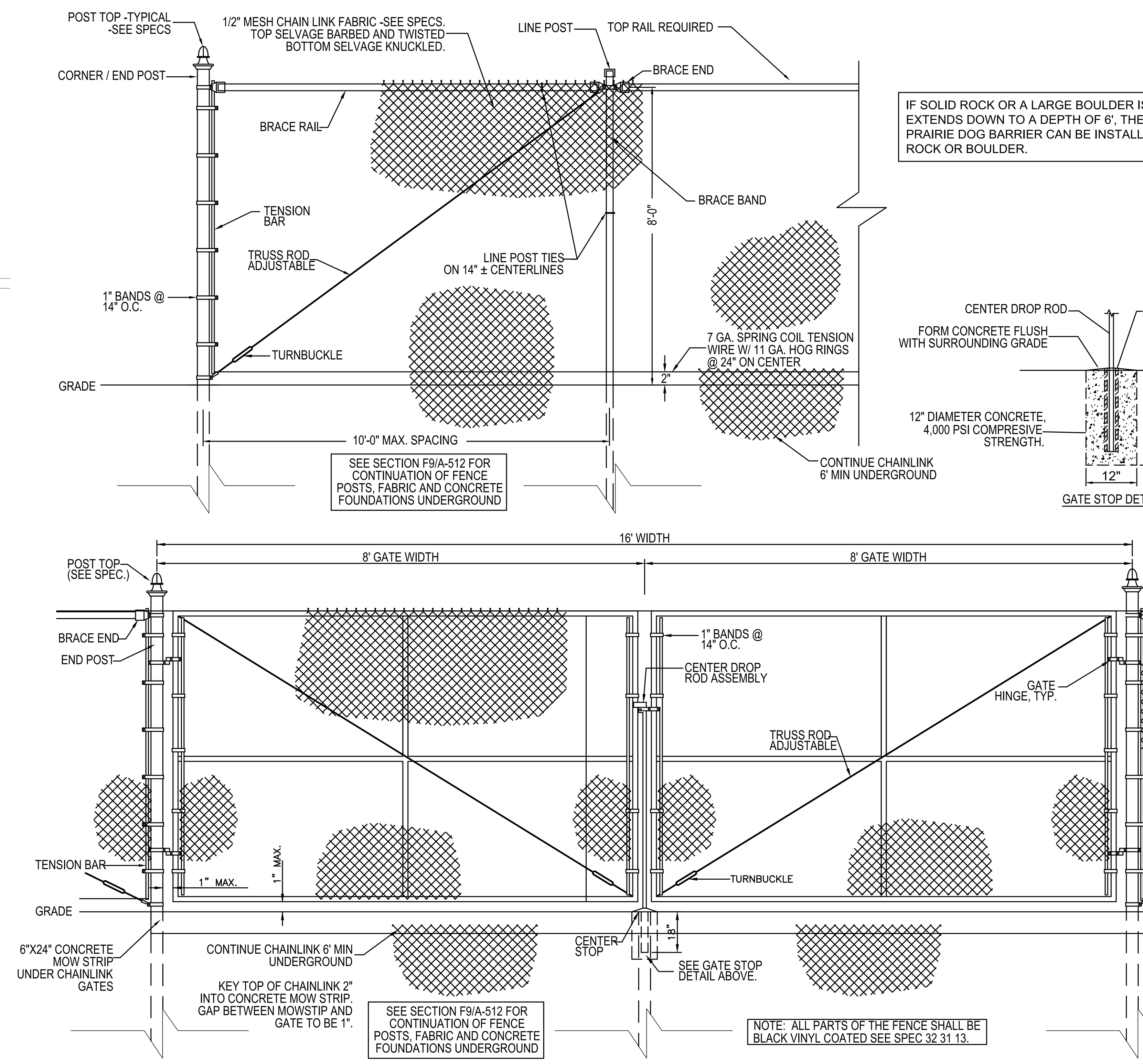
C5 ENTRY GATE ELEVATION
3/8" = 1'-0"



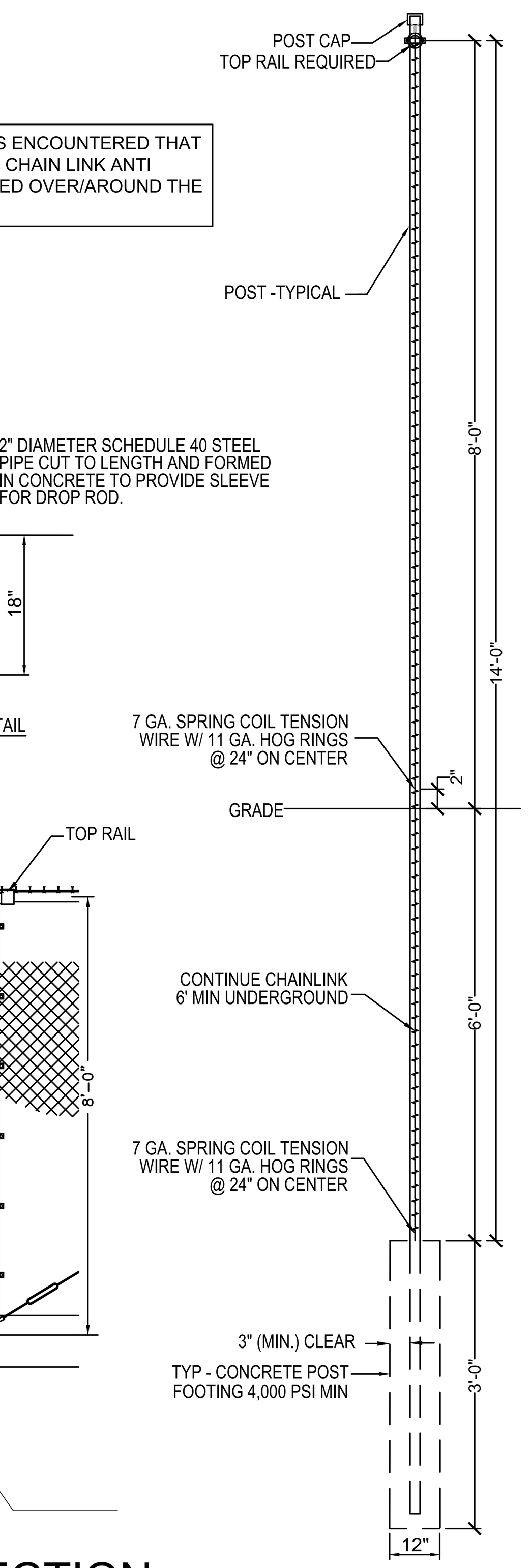
E3 EXIT GATE PLAN
3/8" = 1'-0"



F3 EXIT GATE ELEVATION
3/8" = 1'-0"



F8 CHAINLINK FENCE ELEVATION
NTS



F9 CHAINLINK FENCE SECTION
NTS

KEYED NOTES

1. CUT STONE CAP.
2. STONE VENEER.
3. 1X1 ORNAMENTAL PICKET @ 4" O.C. -TYPICAL
4. 1 ½"X1 ½" ORNAMENTAL RAIL -TYPICAL
5. 3"X3" ORNAMENTAL STEEL POST @ 8'-0" MAX O.C. -TYPICAL
6. CMU WALL, SEE STRUCTURAL DRAWINGS.
7. CATTLE / PRAIRIE DOG GUARD, SEE DETAIL D9/A-511.
8. EGRESS MAN GATE, SEE SPEC 32 31 19.
9. AUTOMATIC SLIDE GATE, SEE SPEC 32 31 19.
10. STONE CAP TO MATCH STONE VENEER.
11. 12" RCP GROUTED INTO SIDE OF CATTLE GUARD FOUNDATION WALL, SEE C-102. CONTRACTOR TO SHOW TIE-IN DETAILS IN SHOP DRAWINGS.
12. 12" TALL X 1 ½" DEEP CAST BRONZE CEMETERY NAME LETTERING. SEE SPEC 10 14 00 AND SHEET A-401. THE CEMETERY NAME IS ONLY A PLACEHOLDER. ACTUAL CEMETERY NAME WILL BE PROVIDED DURING THE SUBMITTAL PROCESS.
13. CAST BRONZE DEDICATION PLAQUE, SEE F6/A-506.
14. CAST BRONZE VA PLAQUE, SEE F3/A-506.
15. CONCRETE MOW STRIP - 4"X18" W/ 2-#4 REBAR, INSIDE OF THE ENTIRETY OF THE ORNAMENTAL FENCE.
16. CARD READER FOR GATE OPERATION AND BOLLARD PROTECTION. SEE T-101 AND SPECIFICATIONS.
17. GATE VEHICLE LOOP DETECTION FOR EXITING. PLACE WHERE REQUIRED FOR PROPER OPERATION.

CONTRACTOR IS TO COORDINATE WITH USFWS FOR FINAL INSPECTIONS AND APPROVALS OF THE FINAL UPD FENCING.

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7/22/22

National Cemetery Administration Design and Construction Service
VA U.S. Department of Veterans Affairs

Drawing Title: FENCING DETAILS 2

Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
Email: steve.davis@va.gov

Phase: BID DOCUMENTS

N/A

Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE

Location: Cedar City, UT

Issue Date: 7/22/2022 | Checked: TM | Drawn: SF

Project Number: 942CM3001
Building Number: N/A
Drawing Number: A-512

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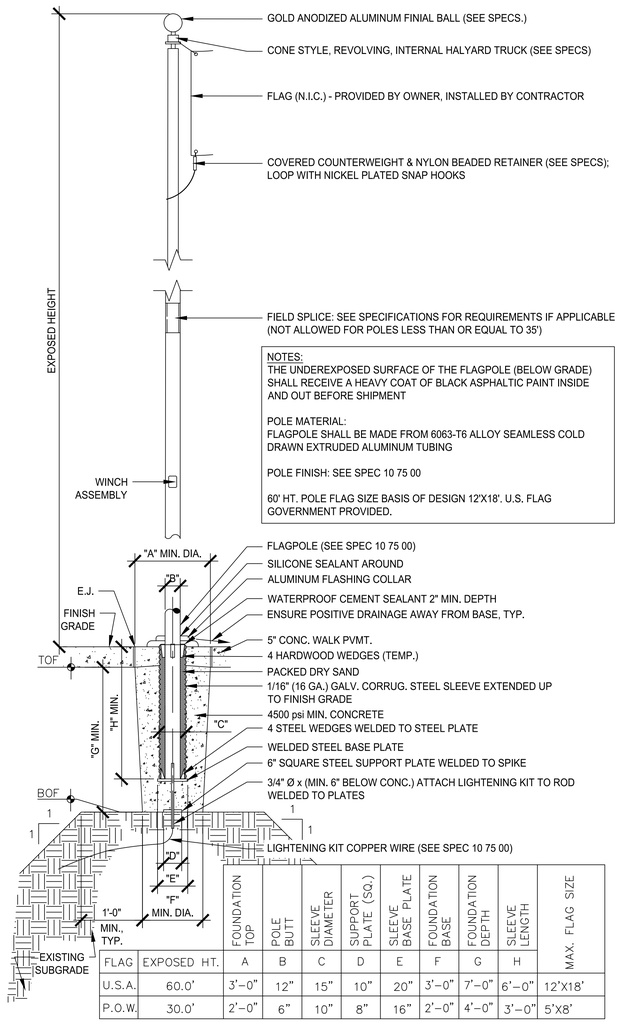


NOTES:
THE UNDEREXPOSED SURFACE OF THE FLAGPOLE (BELOW GRADE) SHALL RECEIVE A HEAVY COAT OF BLACK ASPHALTIC PAINT INSIDE AND OUT BEFORE SHIPMENT

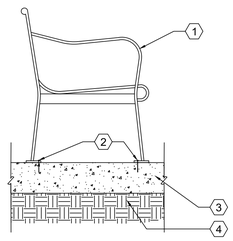
POLE MATERIAL:
FLAGPOLE SHALL BE MADE FROM 6063-T6 ALLOY SEAMLESS COLD DRAWN EXTRUDED ALUMINUM TUBING

POLE FINISH: SEE SPEC 10 75 00

60' HT. POLE FLAG SIZE BASIS OF DESIGN 12'X18'. U.S. FLAG GOVERNMENT PROVIDED.

FLAG	EXPOSED HT.	FOUNDATION TOP A	POLE BUTT B	SLEEVE DIAMETER C	SUPPORT PLATE (SQ.) D	SLEEVE BASE PLATE E	FOUNDATION BASE F	FOUNDATION DEPTH G	SLEEVE LENGTH H	MAX. FLAG SIZE
U.S.A.	60.0'	3'-0"	12"	15"	10"	20"	3'-0"	7'-0"	6'-0"	12'X18'
P.O.W.	30.0'	2'-0"	6"	10"	8"	16"	2'-0"	4'-0"	3'-0"	5'X8'

E1 FLAG POLE DETAIL
3/8" = 1'-0"



KEYED NOTES

1. BENCH, SEE SPEC SECTION 32 33 00
2. (1) 5/8" I.D. STAINLESS STEEL ANCHOR BOLT W/ STAINLESS STEEL ACORN NUT (TYP. OF 4) INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS.
3. COMMITTAL SHELTER SLAB, SEE DETAIL 1/S-501.
4. SUBGRADE, SEE DETAIL 1/S501.

F1 BENCH DETAIL
1" = 1'-0"

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National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title: MISC SITE DETAILS
Phase: BID DOCUMENTS
Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE
Project Number: 942CM3001
Building Number: N/A
Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
Email: steve.davis@va.gov
N/A
Location: Cedar City, UT
Drawing Number: A-513
Issue Date: 7/22/2022
Checked: TM
Drawn: SF
Sheet 48 of 61

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GENERAL ELECTRICAL CONSTRUCTION NOTES

(GENERAL NOTES APPLY TO ALL DRAWINGS)

1. THE ELECTRICAL INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, THE AMERICANS WITH DISABILITIES ACT, AND OTHER APPLICABLE STATE AND LOCAL CODES.
2. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE WORK OF THEIR TRADE WITH THAT OF THE OTHER TRADES INVOLVED IN THE PROJECT. CONFLICTS WITH OTHER TRADES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT SUPERINTENDENT PRIOR TO INSTALLATION. WORK SHOULD ALSO BE COORDINATED AROUND PORTABLE AND MOBILE EQUIPMENT.
3. THE ELECTRICAL CONTRACTOR SHALL SCHEDULE THEIR WORK SO THAT THE CONSTRUCTION SCHEDULE IS MAINTAINED.
4. THE ELECTRICAL CONTRACTOR SHALL REQUEST A COMPLETE SET OF THE ARCHITECTURAL, STRUCTURAL, CIVIL, HVAC, PLUMBING, AND FIRE PROTECTION DRAWINGS TO VERIFY CONNECTIONS TO THE EQUIPMENT.
5. THE ELECTRICAL CONTRACTOR SHALL FURNISH MATERIALS AND LABOR FOR A COMPLETE ELECTRICAL INSTALLATION AS INDICATED IN THESE DOCUMENTS. MATERIAL, APPARATUS, AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS LABORATORIES (UL) LABEL WHERE APPLICABLE.
6. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING AND POWER SERVICE WHILE THE BUILDING/RENOVATION AREA IS UNDER CONSTRUCTION ACCORDING TO CURRENT OSHA STANDARDS.
7. ALL CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR (GREEN COLORED INSULATION) ROUTED IN CONDUIT AND SIZED PER NEC.
8. ALL CONDUITS BELOW GRADE SHALL BE PVC. ALL ELBOWS TURNING UP TOWARD ABOVE GRADE, AND ALL CONDUITS EXPOSED ABOVE GRADE SHALL BE RGS.
9. FLEXIBLE (TYPE MC) CABLE SHALL BE ALLOWED FOR THE FLEXIBLE CONNECTIONS TO VIBRATING EQUIPMENT AND RECESSED LIGHTING FIXTURES IN LAY-IN TYPE CEILINGS. A GROUNDING CONDUCTOR SHALL BE INCLUDED WITH THE POWER CONDUCTORS INSIDE THE FLEXIBLE CONNECTION.
10. THE ELECTRICAL CONTRACTOR SHALL RUN LOW VOLTAGE (UNDER 100V) CONDUCTORS AND COMMUNICATIONS OR FIRE ALARM CABLING IN CONDUIT. ALL DROPS TO DEVICES SHALL BE IN ACCORDANCE WITH NOTE 8 ABOVE.
11. THE ELECTRICAL CONTRACTOR SHALL UTILIZE TYPE THHN/THWN-2 CONDUCTORS IN ALL AREAS EXCEPT WHERE SERVICE ENTRANCE CONDUCTORS ARE PROVIDED AS PART OF THE SCOPE OF WORK. WHERE SERVICE ENTRANCE CONDUCTORS ARE PROVIDED AS PART OF THE SCOPE OF WORK THEY SHALL UTILIZE TYPE XHHW INSULATION. FOR ALL INSTANCES OF MEDIUM VOLTAGE, PROVIDE CABLE SPECIFIED IN PROJECT SPECIFICATIONS.
12. THE ELECTRICAL CONTRACTOR SHALL PROVIDE COPPER CONDUCTORS. CONDUCTORS SHALL BE SOLID FOR SIZES #10 AWG AND SMALLER. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED.
13. THE ELECTRICAL CONTRACTOR SHALL LIMIT LIGHTING AND RECEPTACLE BRANCH CIRCUIT HOMERUNS TO 5 CONDUCTORS: 3 PHASE CONDUCTORS, 1 NEUTRAL CONDUCTOR, AND 1 EQUIPMENT GROUNDING CONDUCTOR.
14. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE FOLLOWING COLOR CODING OF CIRCUITS/FEEDERS.
    CIRCUITS/FEEDERS RATED 13.8KV /2400V/ 480Y/277V:
    PHASE "A" = BROWN
    PHASE "B" = ORANGE
    PHASE "C" = YELLOW
    NEUTRAL = GRAY
    GROUNDING = GREEN
    ISOLATED G = GREEN/YELLOW STRIPE
    CIRCUITS/FEEDERS RATED 240/120V or 208Y/120V:
    PHASE "A" = BLACK
    PHASE "B" = RED
    PHASE "C" = BLUE
    NEUTRAL = WHITE
    GROUNDING = GREEN
    ISOLATED G = GREEN/YELLOW STRIPE
15. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, AND FUSIBLE UNLESS INDICATED OTHERWISE.
16. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY ADDITIONAL SUPPORT FOR ALL ELECTRICAL EQUIPMENT WHERE THE BUILDING STRUCTURE IS NOT SUITABLE FOR A PROPERLY SUPPORTED INSTALLATION.
17. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AN OUTLET BOX FOR EACH LIGHTING FIXTURE, WIRING DEVICE, OR JUNCTION POINT. ELECTRICAL BOXES SHALL BE OF SUFFICIENT CAPACITY FOR THE NUMBER OF CONDUCTORS AND SPLICES WITHIN THE BOX IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
18. DEVICE PLATES SHALL BE INSTALLED ON OUTLETS FOR ALL SWITCHES, RECEPTACLES, ETC. AND COLOR SHALL BE AS SELECTED BY ARCHITECT. WHERE MORE THAN ONE SWITCH IS INDICATED IN THE SAME LOCATION, SWITCHES SHALL BE GANGED UNDER A COMMON ONE-PIECE PLATE. MULTIPIECE COVER PLATES ARE NOT ACCEPTABLE.
19. THE ELECTRICAL CONTRACTOR SHALL FIRESTOP, DRAFT STOP, AND/OR PROTECT THE ANNULAR SPACE AROUND ALL RACEWAY, CONDUIT, WIRE, AND CABLE PENETRATIONS THROUGH WALLS, PARTITIONS, FLOORS, CEILINGS AND ROOFS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND UL LISTING REQUIREMENTS.
20. ALL INTERIOR BRANCH CIRCUITS SHALL BE INSTALLED OVERHEAD INSIDE BUILDINGS.
21. UNDERGROUND EXTERIOR BRANCH CIRCUITS SHALL BE RAN OVERHEAD INSIDE BUILDINGS TO AN EXTERIOR WALL, THEN DOWN BEFORE PENETRATING THE EXTERIOR WALL AND LEAVING THE BUILDING UNDERGROUND.
22. ALL EXTERIOR UNDERGROUND BRANCH CIRCUITS SHALL BE INSTALLED LAST AFTER ALL OTHER UNDERGROUND UTILITY WORK ASSOCIATED WITH THIS PROJECT IS COMPLETE.
23. THE ELECTRICAL CONTRACTOR SHALL LABEL EACH RECEPTACLE, DISCONNECT, AND MISCELLANEOUS EQUIPMENT WITH BOTH THE PANELBOARD AND CIRCUIT NUMBER. PROVIDE SELF ADHESIVE LABEL TO DEVICE COVERPLATE.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
T	DRY TYPE TRANSFORMER WITH VOLTAGES, KVA, AND PHASES AS SHOWN ON DRAWINGS.
30/3/1	HEAVY DUTY FUSIBLE DISCONNECT SWITCH, RATINGS AS INDICATED (AMPS/POLES/ /ENCLOSURE) FUSED IF INDICATED.
*HOA 30/3/3R	HEAVY DUTY NON-FUSED DISCONNECT SWITCH, RATINGS AS INDICATED (AMPS/POLES/ /ENCLOSURE). NON-FUSED SWITCH TYPE. OVERLOADS SIZED PER MOTOR NAMEPLATE DATA. *** SUBSCRIPT INDICATES STARTER SIZE. "HOA" - INDICATES "HAND-OFF-AUTO" SELECTOR SWITCH MOUNTED ON DOOR. "OO" - INDICATES "ON-OFF" SELECTOR SWITCH MOUNTED ON DOOR.
	EQUIPMENT AS NOTED.
3#10, #10G, 1"C	EXAMPLE OF WIRING AND CONDUIT NOTATION.
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT ROUTED EXPOSED
	CONDUIT ROUTED CONCEALED ABOVE DROPPED CEILING AND/OR WALLS.
	CONDUIT WITH THREE CONDUCTORS, ONE NEUTRAL AND ONE GROUND
J	JUNCTION BOX, CEILING MOUNTED
J	JUNCTION BOX, WALL MOUNTED
5 HP	MOTOR, HORSEPOWER AS INDICATED.
OR	SURFACE MOUNTED PANELBOARD.
	RECESSED MOUNTED PANELBOARD.
*	FLUSH MOUNTED DUPLEX CONVENIENCE OUTLET NEMA 5-20R, 120V, 20 AMP, 3 WIRE, MOUNTED 18" AFF, *** IF SUBSCRIPT APPLIES, SEE BELOW: "GFI" - INDICATES GROUND FAULT INTERRUPTING TYPE. "WP" - INDICATES WEATHERPROOF COVER. "C" - INDICATES COUNTER TOP RECEPTACLE MOUNTED 6" ABOVE COUNTER TOP.
$_{S}$	SINGLE POLE LIGHT SWITCH, FLUSH MOUNTED 48" AFF, 120/277V, 20AMP. ON STRIKE SIDE OF DOOR OR WHERE OTHERWISE INDICATED ON PLANS. * IF SUBSCRIPT APPLIES, SEE BELOW: "K" - KEY OPERATED SINGLE POLE SWITCH. SWITCH SHALL INTERRUPT UNSWITCHED PHASE CONDUCTOR SERVING EMERGENCY LIGHTING UNITS FOR TESTING PURPOSES. "OC"- DUAL TECHNOLOGY WALL OCCUPANCY SENSOR, WATTSTOPPER #DW-100-W
T	THERMOSTAT BY OTHERS
OS	WALL MOUNTED OCCUPANCY SENSOR WITH PROGRAMMABLE TIME-DELAY, SET AT 30 MIN.
S	SPEAKER

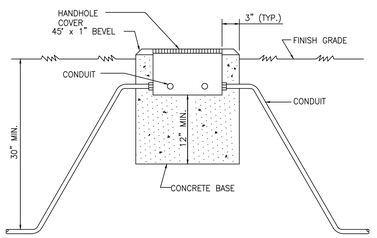
ABBREVIATIONS

A	AMPERES	EXIST	EXISTING	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	FACP	FIRE ALARM CONTROL PANEL	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
AHU	AIR HANDLING UNIT	FBO	FURNISHED BY OTHERS	PB	PUSH BUTTON
AIC	ASYMMETRICAL INTERRUPTING CURRENT	FWE	FURNISHED WITH EQUIPMENT	PNL	PANEL(S)
ATS	AUTOMATIC TRANSFER SWITCH	GFI	GROUND FAULT INTERRUPTER	RECEPT	RECEPTACLE
BFG	BELOW FINISHED GRADE	GND	GROUND	REQD	REQUIRED
C	CONDUIT	HP	HORSEPOWER	RGS	RIGID GALVANIZED STEEL CONDUIT
CAT	CATALOG	HID	HIGH INTENSITY DISCHARGE	RM	ROOM
DTT	DOUBLE TWIN TUBE	IMC	INTERMEDIATE METAL CONDUIT	RTU	ROOF TOP UNIT
DWG	DRAWING(S)	JB	JUNCTION BOX	SPD	SURGE PROTECTION DEVICE
EA	EACH	LTG	LIGHTING	TYP	TYPICAL
EB	ELECTRONIC BALLAST	MCB	MAIN CIRCUIT BREAKER	UH	UNIT HEATER
EC	EMPTY CONDUIT	MCCB	MOLDED CASE CIRCUIT BREAKER	UNO	UNLESS NOTED OTHERWISE
ECB	ENCLOSED CIRCUIT BREAKER	MLO	MAIN LUGS ONLY	V	VOLT(S)
EF	EXHAUST FAN	MT	MOUNT	VA	VOLT-AMPERE(S)
EM	EMERGENCY	MTD	MOUNTED	WP	WEATHERPROOF
EMT	ELECTRICAL METALLIC TUBING	MTG	MOUNTING	XFMR	TRANSFORMER
EQUIP	EQUIPMENT	N	NEUTRAL		
EWC	ELECTRIC WATER COOLER	NEC	NATIONAL ELECTRICAL CODE		
EWH	ELECTRIC WATER HEATER	NF	NON FUSED		
		NIC	NOT IN CONTRACT		

TYPICAL DEVICE MOUNTING HEIGHT

RECEPTACLES	18" AFF	FIRE ALARM PULL STATION	MATCH EXISTING
LIGHT SWITCHES	48" AFF	FIRE ALARM AUDIO/VISUAL ALARM	MATCH EXISTING
TELEPHONE OUTLETS	18"AFF	EXIT LIGHTS (WALL MTD.)	1' ABOVE DOOR
TELEPHONE OUTLET (WALL MTD.)	48" AFF	EMERGENCY LIGHTS (WALL MTD.)	7'-6" AFF (UNO)
COMPUTER OUTLETS	18" AFF	ANNUNCIATOR PANELS	48" AFF

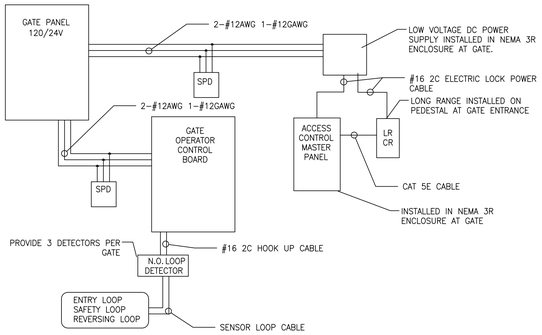
NOTE: DIMENSIONS ARE TO DEVICE CENTERLINE UNLESS NOTED OTHERWISE.



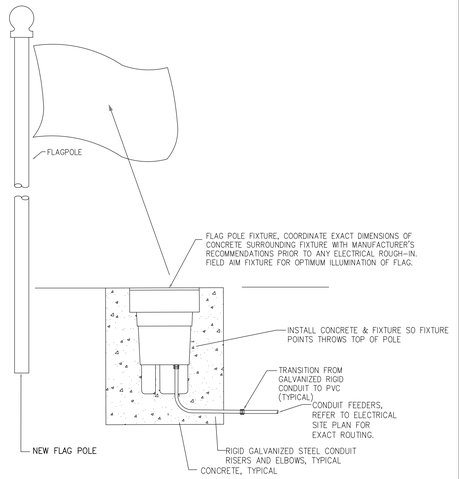
HANDHOLE SCHEDULE

SYMBOL	TYPE	DESCRIPTION
$\square_L$	L	LARGE HANDHOLE (W:28"x L:28" x H:24")
$\square_S$	S	SMALL HANDHOLE (W:12" x L:12" x H:12")

D6 HANDHOLE DETAIL
SCALE: NOT TO SCALE



F6 GATE CONTROL RISER
SCALE: NOT TO SCALE



C9 FLAG POLE FIXTURE MOUNTING DETAIL
SCALE: NOT TO SCALE

E9 UNDERGROUND CONDUIT DETAIL
SCALE: NOT TO SCALE

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	DESCRIPTION	MANUFACTURER	MODEL	VOLTAGE	WATTS	MOUNTING
B	B	IN GROUND MOUNTED FLOOD-LIGHT WITH AIMABLE LAMP AND FLOOD GUARD.	KIM LIGHTING	LTV81FF-SS-SP-24L-RGBW-UV OR APPROVED EQUAL	120 V	30W	MOUNTED IN GROUND SEE DETAIL ON THIS SHEET

BID DOCUMENT SUBMITTAL

COMMITTAL SHELTER MODIFICATIONS	**4/28/2022**
ADDITION OF UNDERGROUND DETENTION FACILITY	**12/15/2021**
CD1 - REDESIGN	**1/22/2021**
Revisions:	**4/28/2022**

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COLORADO No. 27320 PROFESSIONAL ENGINEER MATTHEW A. GRAY 7-27-22

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL NOTES & LEGENDS

Phase: BID DOCUMENTS

Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE

Project Number: 942CM3001

Building Number: N/A

Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
Email: steve.davis@va.gov

N/A

Location: Cedar City, UT

Drawing Number: E-001

Issue Date: 7/22/2022 | Checked: MG | Drawn: JSC

Sheet 49 of 61

VA FORM 08 - 6231

NEW WORK KEYED NOTES (#)

1 UTILITY OWNED TRANSFORMER. POWER METER TO BE PROVIDED BY UTILITY AND FIELD COORDINATED AT TRANSFORMER. PAD TO BE PURCHASED FROM UTILITY AND INSTALLED BY CONTRACTOR. FUSED DISCONNECT TO BE PROVIDED BY CONTRACTOR AND FIELD COORDINATED.

2 240/120V 1-P PANEL LC1. REFER TO SHEET E-601 FOR ADDITIONAL INFORMATION.

3 GATE MOTOR AND CONTROLLER POWERED FROM PANEL LC1. SEE SHEET T-101.

4 J-BOX FOR CONNECTION OF SECURITY DEVICES POWERED FROM PANEL LC1.

5 FLAG LIGHTS TO BE POWERED BY PANEL LD1. (2)#12, (1)#12G IN 1/2"C. FOR ADDITIONAL INFORMATION SEE SHEET E-601.

6 CONDUCTOR AND CONDUIT RUN FROM PANEL LA1 AT PUMP HOUSE TO COMMITTAL SHELTER PANEL LD1. SEE PARTIAL ONE-LINE DIAGRAM ON SHEET E-102 FOR ADDITIONAL INFORMATION.

7 240/120V 1-P PANEL LB1. REFER TO SHEET E-601 FOR ADDITIONAL INFORMATION.

8 GATE MOTOR #1 AND CONTROLLER POWERED FROM PANEL LB1. SEE SHEET T-101.

9 J-BOX FOR CONNECTION OF SECURITY DEVICES POWERED FROM PANEL LB1.

10 240/120V 1-P PANEL LD1. REFER TO SHEET E-601 FOR ADDITIONAL INFORMATION.

11 ADDITIONAL GATE #1 MOTOR. SEE SHEET E-601 FOR ADDITIONAL INFORMATION.

12 ADDITIONAL GATE #2 MOTOR. SEE SHEET E-601 FOR ADDITIONAL INFORMATION.

13 ELECTRICAL HANDHOLE TYPE-S REFER TO D6/E-001 FOR ADDITIONAL INFORMATION.

14 CONTRACTOR TO PROVIDE NEMA 3R - 24"x20"x12" - LOCKABLE ENCLOSURE FOR TAPS PLAYER. SEE SHEET E-601 FOR ADDITIONAL INFORMATION.

15 4-OHM SPEAKER. SEE SHEET E-102 FOR ADDITIONAL INFORMATION.

16 TAPS PLAYER PUSHBUTTON SEE SHEET E-601 FOR ADDITIONAL INFORMATION.

17 CONDUCTOR AND CONDUIT RUN FROM PANEL LA1 AT PUMP HOUSE TO PANEL LB1 AT GATE #1. SEE PARTIAL ONE-LINE DIAGRAM ON SHEET E-102 FOR ADDITIONAL INFORMATION.

18 CONDUCTOR AND CONDUIT RUN FROM UTILITY TRANSFORMER TO PANEL LA1. SEE PARTIAL ONE-LINE DIAGRAM ON SHEET E-102 FOR ADDITIONAL INFORMATION.

19 CONDUCTOR AND CONDUIT RUN FROM PANEL LA1 AT PUMP HOUSE TO PANEL LC1 AT GATE #2. SEE PARTIAL ONE-LINE DIAGRAM ON SHEET E-102 FOR ADDITIONAL INFORMATION.

20 ELECTRICAL HANDHOLE TYPE-S REFER TO D6/E-001 FOR ADDITIONAL INFORMATION.

21 PROVIDE 120V POWER FROM PANEL LA1, CIRCUIT 16, PUMP HOUSE, FOR HEAT TRACE. COORDINATE EXACT LOCATION WITH MECHANICAL/PLUMBING DRAWINGS.

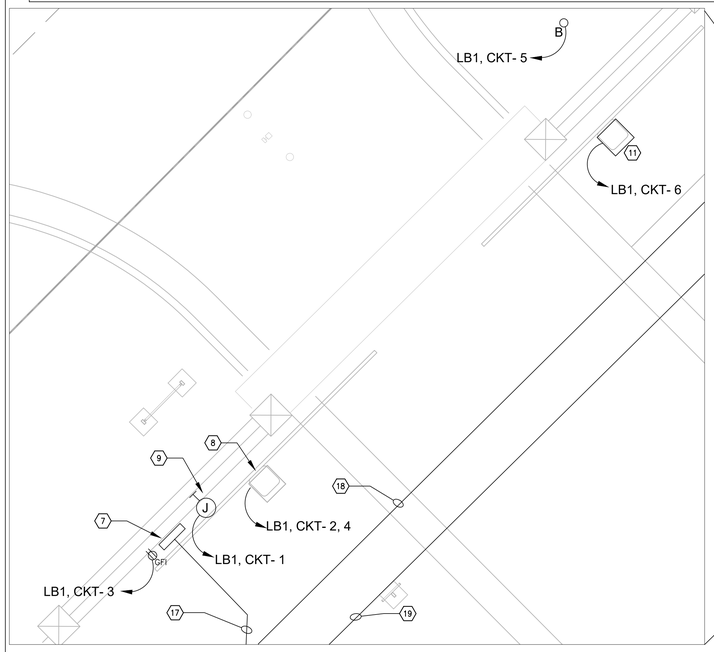
GENERAL NOTES:

1. ANY WORK RELATED TO THE POWER LINES WILL NEED TO BE COORDINATED WITH THE LOCAL ELECTRICAL UTILITY (ROCKY MOUNTAIN POWER). CONTACT: MARK LEWIS AT (435) 865-3343.

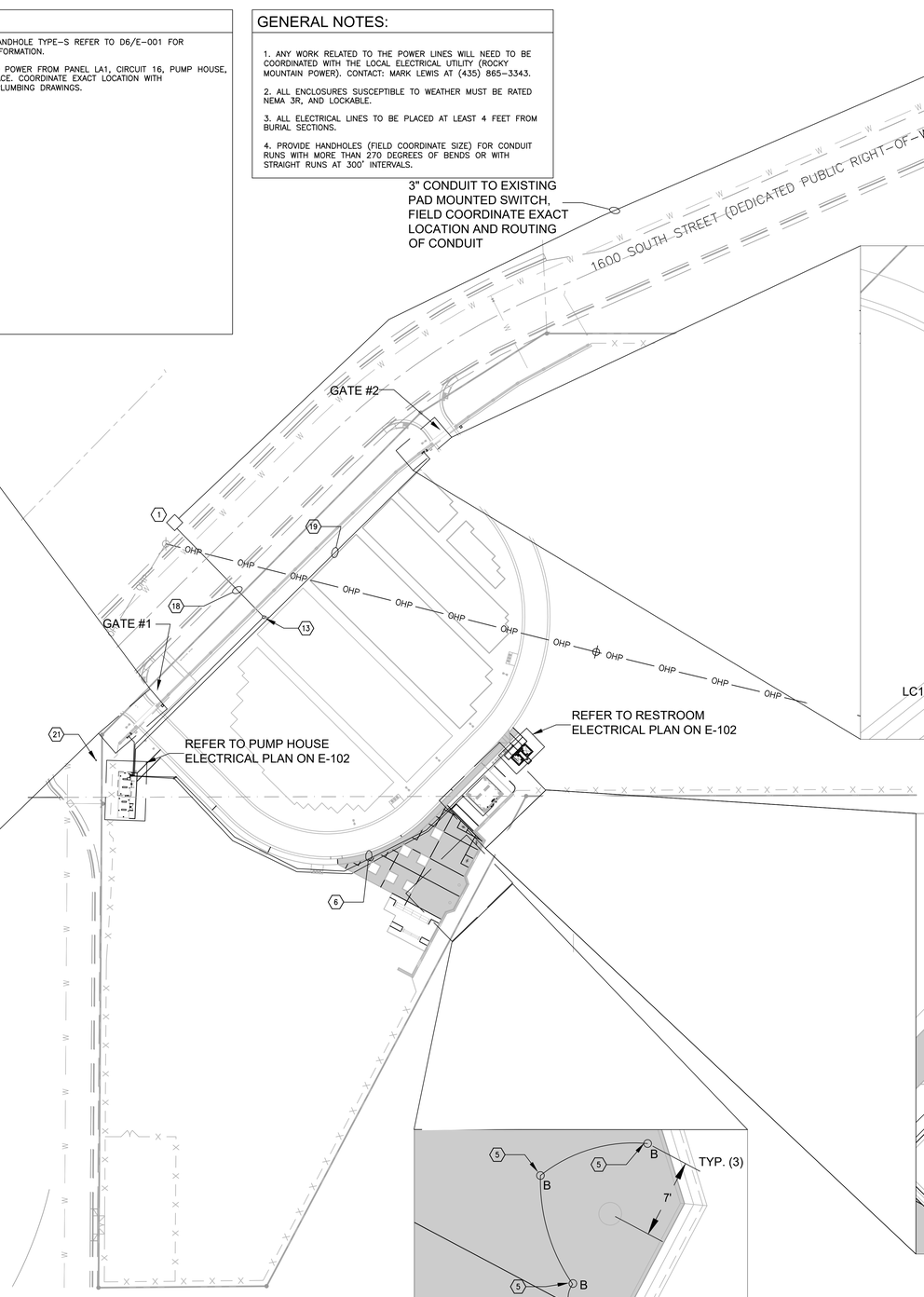
2. ALL ENCLOSURES SUSCEPTIBLE TO WEATHER MUST BE RATED NEMA 3R, AND LOCKABLE.

3. ALL ELECTRICAL LINES TO BE PLACED AT LEAST 4 FEET FROM BURIAL SECTIONS.

4. PROVIDE HANDHOLES (FIELD COORDINATE SIZE) FOR CONDUIT RUNS WITH MORE THAN 270 DEGREES OF BENDS OR WITH STRAIGHT RUNS AT 300' INTERVALS.

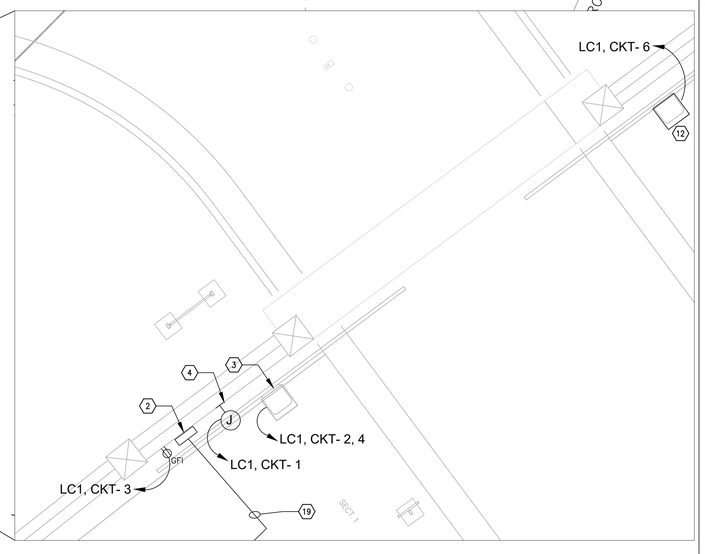


E1 ELECTRICAL - GATE #1
SCALE: NOT TO SCALE

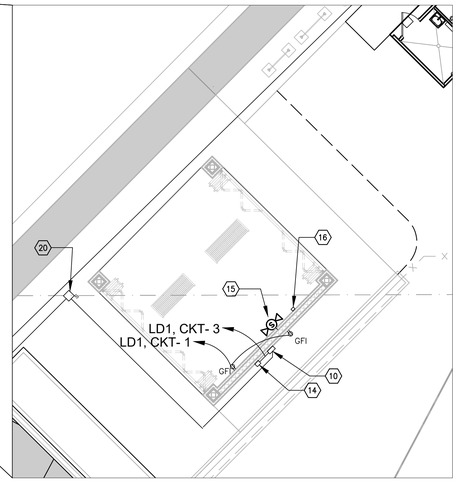


F4 ELECTRICAL SITE - PLAN
SCALE: 1" = 50'

F6 ELECTRICAL SITE - PLAN
SCALE: NOT TO SCALE



D8 ELECTRICAL - GATE #2
SCALE: NOT TO SCALE



F8 ELECTRICAL - COMMITTAL SHELTER
SCALE: NOT TO SCALE

N
0 10' 25' 50' 100'
1"=50'-0"

BID DOCUMENT SUBMITTAL

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
ADDITION OF UNDERGROUND DETENTION FACILITY	12/15/2021
CD1 - REDESIGN	1/22/2021
Revisions:	4/28/2022

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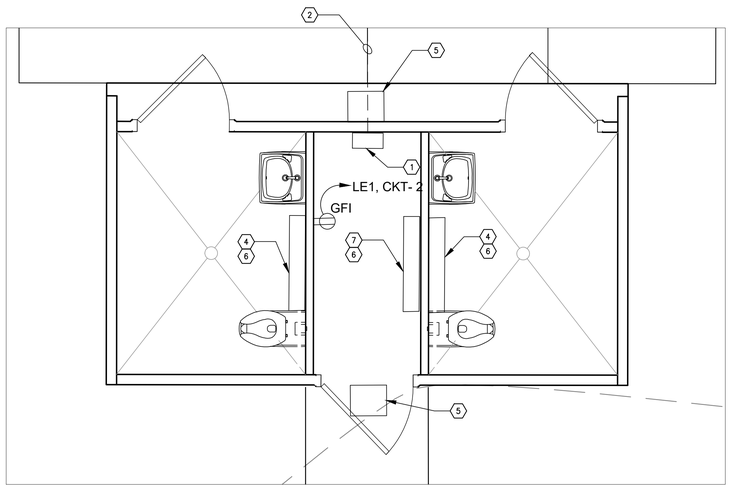
GEORGE M. GRIFFITH No. 27220 PROFESSIONAL ENGINEER
1-25-22

National Cemetery Administration Design and Construction Service

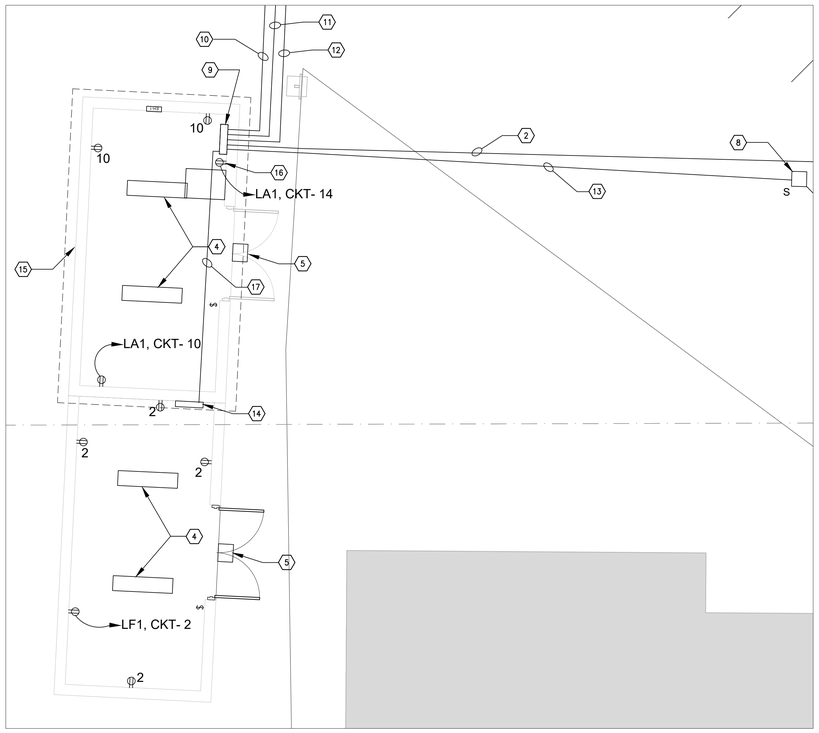
VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL SITE PLAN
Phase: BID DOCUMENTS
Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE
Project Number: 942CM3001
Building Number: N/A
Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
Email: steve.davis@va.gov
N/A
Location: Cedar City, UT
Drawing Number: E-101
Issue Date: 7/22/2022
Checked: MG
Drawn: JSC
Sheet 50 of 61

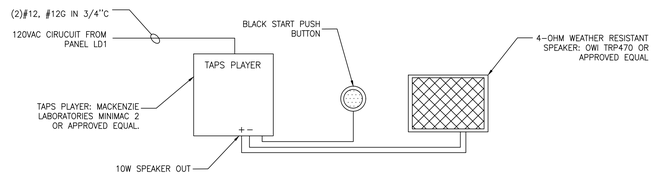
VA FORM 08 - 6231



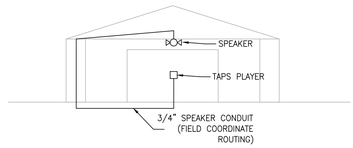
C1 ELECTRICAL - RESTROOM (3)
SCALE: NOT TO SCALE



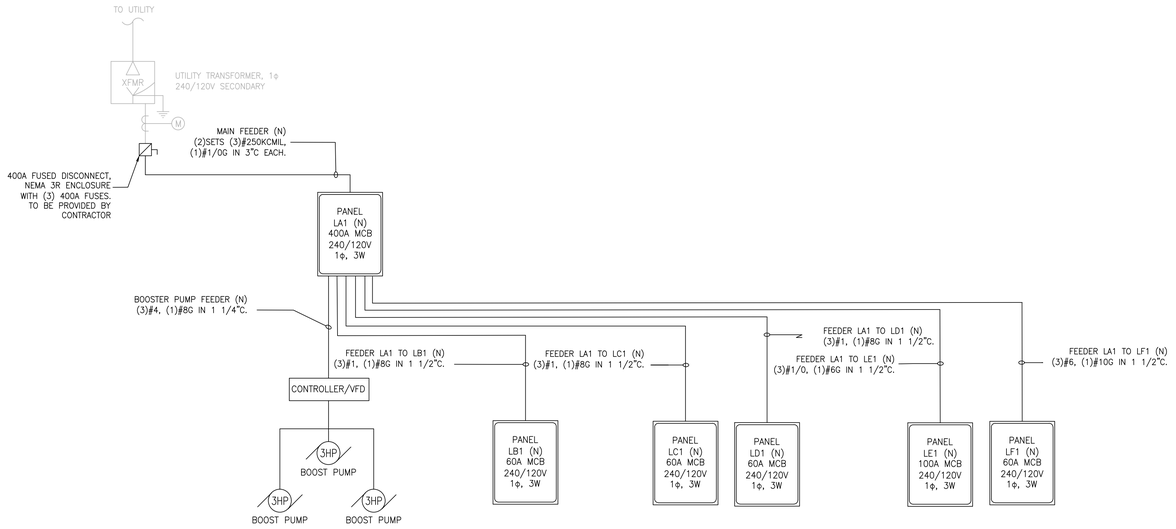
F1 ELECTRICAL - PUMP HOUSE (3)
SCALE: NOT TO SCALE



B6 SPEAKER WIRING DIAGRAM
SCALE: NOT TO SCALE



C6 SPEAKER ROUTING DIAGRAM
SCALE: NOT TO SCALE



F6 PARTIAL ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

GENERAL NOTES:

1. ANY WORK RELATED TO THE POWER LINES WILL NEED TO BE COORDINATED WITH THE LOCAL ELECTRICAL UTILITY (ROCKY MOUNTAIN POWER). CONTACT: MARK LEWIS AT (435) 865-3343.

2. ALL ENCLOSURES SUSCEPTIBLE TO WEATHER MUST BE RATED NEMA 3R, AND LOCKABLE.

3. ALL ELECTRICAL LINES TO BE PLACED AT LEAST 4 FEET FROM BURIAL SECTIONS.

4. ALL RECEPTACLES SHALL BE GFCI PROTECTED BY CIRCUIT BREAKERS OR BY OTHER GFCI RECEPTACLES.

5. PROVIDE HANDHOLES (FIELD COORDINATE SIZE) FOR CONDUIT RUNS WITH MORE THAN 270 DEGREES OF BENDS OR WITH STRAIGHT RUNS AT 300'S INTERVALS.

NEW WORK KEYED NOTES (#)

1. 240/120V 1-P PANEL LE1. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.
2. CONDUCTOR AND CONDUIT RUN FROM PANEL LA1 AT PUMP HOUSE TO PANEL LE1 AT RESTROOM. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.
3. BUILDING LIGHTING, RECEPTACLES, HEAT, AND VENTING BY MANUFACTURER. DEVICES SHOWN ON PLAN AS REQUESTED BY MANUFACTURER. CIRCUITING BY MANUFACTURER.
4. 1X4' LED SURFACE MOUNT, 2500 LUMEN MIN., 3500 DEGREE COLOR TEMPERATURE MIN. LIGHTING FIXTURE. DEVICES SHOWN ON PLAN AS REQUESTED BY MANUFACTURER. CIRCUITING BY MANUFACTURER.
5. EXTERIOR WALLPACK WITH INTEGRAL PHOTOCELL SENSOR. DEVICES SHOWN ON PLAN AS REQUESTED BY MANUFACTURER. CIRCUITING BY MANUFACTURER.
6. OCCUPANCY SENSOR CONTROLLED LIGHTS. EXHAUST FANS TO COME ON WITH RESTROOM LIGHTS. DEVICES SHOWN ON PLAN AS REQUESTED BY MANUFACTURE. CIRCUITING BY MANUFACTURER.
7. CHASE LIGHT TO BE OCCUPANCY SENSOR CONTROLLED. DEVICES SHOWN ON PLAN AS REQUESTED BY MANUFACTURER. CIRCUITING BY MANUFACTURER.
8. ELECTRICAL HANDHOLE TYPE-S REFER TO E-001 DETAIL-2 FOR ADDITIONAL INFORMATION
9. 240/120V 1-P PANEL LA1. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.
10. CONDUCTOR AND CONDUIT RUN FROM PANEL LA1AT PUMP HOUSE TO PANEL LB1 AT GATE #1. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.
11. CONDUCTOR AND CONDUIT RUN FROM UTILITY TRANSFORMER TO PANEL LA1 AT PUMP HOUSE. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.
12. CONDUCTOR AND CONDUIT RUN FROM PANEL LA1 AT PUMP HOUSE TO PANEL LC1 AT GATE #2. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.
13. CONDUCTORS AND CONDUIT RUN FROM PANEL LA1 TO PANEL LD1 AT COMMITTAL SHELTER. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.
14. 240/120V 1-P PANEL LF1. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.
15. J-BOX CONNECTION FOR SECURITY DEVICES POWERED FROM PANEL LA1.
16. DEDICATED SECURITY SYSTEMS OUTLET MOUNTED AT 5'-6"AFF.
17. CONDUCTORS AND CONDUIT RUN FROM PANEL LA1 AT PUMP HOUSE TO PANEL LF1 AT PUMP HOUSE STORAGE BUILDING. SEE PARTIAL ONE-LINE DIAGRAM BELOW FOR ADDITIONAL INFORMATION.

BID DOCUMENT SUBMITTAL

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
ADDITION OF UNDERGROUND DETENTION FACILITY	12/15/2021
CD1 - REDESIGN	1/22/2021
Revisions:	4/28/2022

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CORE No. 22205 PROFESSIONAL ENGINEER MARK A. GRIFFITH 1-25-22

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL PLANS - RESTROOM AND PUMP HOUSE

Phase: BID DOCUMENTS

Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
Email: steve.davis@va.gov

N/A

Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE

Location: Cedar City, UT

Issue Date: 7/22/2022 | Checked: MG | Drawn: JSC

Project Number: 942CM3001
Building Number: N/A
Drawing Number: E-102
Sheet 51 of 61

VA FORM 08-6231

PANEL NAME	LOCATION:	VOLTAGE: 240/ 120V 1 PHASE 400A MCB	MOUNTING / ENCLOSURE: SURFACE / NEMA 1
LA1	PUMP HOUSE		

AMPS	POLES	TYPE	CIRCUIT DESCRIPTION	KVA	CKT	A	B		CKT	KVA	CIRCUIT DESCRIPTION	TYPE	POLES	AMPS
20	1		IRRIGATION CONTROLLER	1.0	1	5.8			2	5.6	BOOSTER PUMP		2	60
60	2		PANEL LD1	1.5	3		6.3		4	5.6				
				–	5	5.0			6	5.0	PANEL LB1		2	60
60	2		PANEL LC1	5.0	7		6.0		8	1.0				
				1.0	9	1.6			10	0.6	RECEPTACLES		1	20
20	1		LIGHTS	0.5	11		1.0		12	0.5	EXTERIOR LIGHT AND PEC		1	20
20	1		HEATER	1.2	13	2.2			14	1.0	DEDICATED SECURITY RECEPTACLE		1	20
				1.2	15		1.7		16	0.5	HEAT TRACE		1	20
100	2		PANEL LE1	1.4	17	2.4			18		PANEL LF1		2	60
				1.9	19		1.9		20					
* HACR TYPE BREAKER				PHASE TOTAL		17.0	17.0		KVA					
** GROUND FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED CONNECTED LOAD		34.0 KVA	141.6 A
*** ARC FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED DIVERSIFIED LOAD		– KVA	– A

PANEL DIVERSIFIED LOAD CALCULATION:

L	LIGHTING (@ 125%)		0.00	0.00
R	RECPTACLE (1ST 10kVA @ 100%, REMAINDER @ 50%)		0.00	0.00
M	MOTOR (LARGEST @ 250%, REMAINING @ 100%)		0.00	0.00
H	HEATING	(LARGER OF HEATING OR AC LOAD @ 100%)	0.00	0.00
AC	AC		0.00	
K	KITCHEN		0.00	0.00
	MISCELLANEOUS (@ 100%)		5.70	5.70
SP	XFMR OR SUB-PANEL (@ 100%)		0.00	0.00

B8 IRRIGATION PANEL LA1 - NEW
SCALE: NOT TO SCALE

PANEL NAME	LOCATION:	VOLTAGE: 240/ 120V 1 PHASE 60A MCB	MOUNTING / ENCLOSURE: SURFACE / NEMA 3R
LB1	GATE #1		

AMPS	POLES	TYPE	CIRCUIT DESCRIPTION	KVA	CKT	A	B	C	CKT	KVA	CIRCUIT DESCRIPTION	TYPE	POLES	AMPS
20	1		GATE #1 SECURITY DEVICES	0.5	1	2.5			2	2.0	GATE #1 MOTOR #1		1	20
20	1		RECEPTACLE	0.5	3		1.0		4	0.5	GATE #1 CONTROLLER		1	20
20	1		GATE#1 SIGN LIGHT	0.5	5	2.5			6	2.0	GATE #1 MOTOR #2		1	20
					7				8					
* HACR TYPE BREAKER				PHASE TOTAL		5.0	1.0		KVA					
** GROUND FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED CONNECTED LOAD		6.0 KVA	25 A
*** ARC FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED DIVERSIFIED LOAD		– KVA	– A

PANEL DIVERSIFIED LOAD CALCULATION:

L	LIGHTING (@ 125%)		0.00	0.00
R	RECPTACLE (1ST 10kVA @ 100%, REMAINDER @ 50%)		0.00	0.00
M	MOTOR (LARGEST @ 250%, REMAINING @ 100%)		0.00	0.00
H	HEATING	(LARGER OF HEATING OR AC LOAD @ 100%)	0.00	0.00
AC	AC		0.00	
K	KITCHEN		0.00	0.00
	MISCELLANEOUS (@ 100%)		5.70	5.70
SP	XFMR OR SUB-PANEL (@ 100%)		0.00	0.00

D8 GATE PANEL LB1 - NEW
SCALE: NOT TO SCALE

PANEL NAME	LOCATION:	VOLTAGE: 240/ 120V 1 PHASE 60A MCB	MOUNTING / ENCLOSURE: SURFACE / NEMA 3R
LC1	GATE #2		

AMPS	POLES	TYPE	CIRCUIT DESCRIPTION	KVA	CKT	A	B	C	CKT	KVA	CIRCUIT DESCRIPTION	TYPE	POLES	AMPS
20	1		GATE #2 SECURITY DEVICES	0.5	1	2.5			2	2.0	GATE #2 MOTOR #1		1	20
20	1		RECEPTACLE	0.5	3		1.0		4	0.5	GATE #2 CONTROLLER		1	20
20	1		GATE #2 SIGN LIGHT	0.1	5	2.1			6	2.0	GATE #2 MOTOR #2		1	20
					7				8					
* HACR TYPE BREAKER				PHASE TOTAL		4.6	1.0		KVA					
** GROUND FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED CONNECTED LOAD		5.6 KVA	23 A
*** ARC FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED DIVERSIFIED LOAD		– KVA	– A

PANEL DIVERSIFIED LOAD CALCULATION:

L	LIGHTING (@ 125%)		0.00	0.00
R	RECPTACLE (1ST 10kVA @ 100%, REMAINDER @ 50%)		0.00	0.00
M	MOTOR (LARGEST @ 250%, REMAINING @ 100%)		0.00	0.00
H	HEATING	(LARGER OF HEATING OR AC LOAD @ 100%)	0.00	0.00
AC	AC		0.00	
K	KITCHEN		0.00	0.00
	MISCELLANEOUS (@ 100%)		5.70	5.70
SP	XFMR OR SUB-PANEL (@ 100%)		0.00	0.00

F8 GATE PANEL LC1 - NEW
SCALE: NOT TO SCALE

PANEL NAME	LOCATION:	VOLTAGE: 240 /120V 1 PHASE 60A MCB	MOUNTING / ENCLOSURE: SURFACE / NEMA 3R
LD1	COMMITTAL SHELTER		

AMPS	POLES	TYPE	CIRCUIT DESCRIPTION	KVA	CKT	A	B	C	CKT	KVA	CIRCUIT DESCRIPTION	TYPE	POLES	AMPS
20	1		COMMITTAL SHELTER RECEPTACLES	0.5	1	1.5			2	1.0	LIGHTS FOR FLAG		1	20
20	1		SPARE	–	3	–			4	–	SPARE		1	20
20	1		SPARE		5	–			6		SPARE		1	20
* HACR TYPE BREAKER				PHASE TOTAL		1.5			KVA					
** GROUND FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED CONNECTED LOAD		1.5 KVA	6.25 A
*** ARC FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED DIVERSIFIED LOAD		– KVA	– A

PANEL DIVERSIFIED LOAD CALCULATION:

L	LIGHTING (@ 125%)		0.00	0.00
R	RECPTACLE (1ST 10kVA @ 100%, REMAINDER @ 50%)		0.00	0.00
M	MOTOR (LARGEST @ 250%, REMAINING @ 100%)		0.00	0.00
H	HEATING	(LARGER OF HEATING OR AC LOAD @ 100%)	0.00	0.00
AC	AC		0.00	
K	KITCHEN		0.00	0.00
	MISCELLANEOUS (@ 100%)		5.70	5.70
SP	XFMR OR SUB-PANEL (@ 100%)		0.00	0.00

B6 SHELTER PANEL LD1 - NEW
SCALE: NOT TO SCALE

PANEL NAME	LOCATION:	VOLTAGE: 240/ 120V 1 PHASE 100A MCB	MOUNTING / ENCLOSURE: SURFACE / NEMA 3R
LE1	RESTROOM		

AMPS	POLES	TYPE	CIRCUIT DESCRIPTION	KVA	CKT	A	B	C	CKT	KVA	CIRCUIT DESCRIPTION	TYPE	POLES	AMPS
20	1		CHASE LIGHTS	0.03	1	0.21			2	0.18	CHASE RECEPTACLE		1	20
20	1		RESTROOM #1 LIGHTS AND EXHAUST FAN	0.13	3		0.26		4	0.13	RESTROOM #2 LIGHT & EXHAUST FAN		1	20
20	1		PHOTO CONTROLLED EXTERIOR LIGHTS	0.03	5	1.17			6	1.14	RESTROOM #2 HAND DRYER		1	20
20	1		RESTROOM #1 HAND DRYER	1.14	7		1.94		8	0.80	HEATERS		1	20
* HACR TYPE BREAKER				PHASE TOTAL		1.38	1.94		KVA					
** GROUND FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED CONNECTED LOAD		3.32 KVA	13.83 A
*** ARC FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED DIVERSIFIED LOAD		– KVA	– A

PANEL DIVERSIFIED LOAD CALCULATION:

L	LIGHTING (@ 125%)		0.00	0.00
R	RECPTACLE (1ST 10kVA @ 100%, REMAINDER @ 50%)		0.00	0.00
M	MOTOR (LARGEST @ 250%, REMAINING @ 100%)		0.00	0.00
H	HEATING	(LARGER OF HEATING OR AC LOAD @ 100%)	0.00	0.00
AC	AC		0.00	
K	KITCHEN		0.00	0.00
	MISCELLANEOUS (@ 100%)		2.48	2.48
SP	XFMR OR SUB-PANEL (@ 100%)		0.00	0.00

D6 RESTROOM PANEL LE1 - NEW
SCALE: NOT TO SCALE

PANEL NAME	LOCATION:	VOLTAGE: 240/ 120V 1 PHASE 60A MCB	MOUNTING / ENCLOSURE: SURFACE / NEMA 3R
LF1	PUMP HOUSE STORAGE BUILDING		

AMPS	POLES	TYPE	CIRCUIT DESCRIPTION	KVA	CKT	A	B	C	CKT	KVA	CIRCUIT DESCRIPTION	TYPE	POLES	AMPS
20	1		LIGHTS	0.5	1	1.4			2	0.9	RECEPTACLE		1	20
20	1		SPARE		3				4		SPARE		1	20
20	1		SPARE		5				6		SPARE		1	20
					7				8					
* HACR TYPE BREAKER				PHASE TOTAL		1.4	0.0		KVA					
** GROUND FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED CONNECTED LOAD		1.40 KVA	5.83 A
*** ARC FAULT CIRCUIT INTERRUPTER BREAKER											TOTAL ADDED DIVERSIFIED LOAD		– KVA	– A

PANEL DIVERSIFIED LOAD CALCULATION:

L	LIGHTING (@ 125%)		0.00	0.00
R	RECPTACLE (1ST 10kVA @ 100%, REMAINDER @ 50%)		0.00	0.00
M	MOTOR (LARGEST @ 250%, REMAINING @ 100%)		0.00	0.00
H	HEATING	(LARGER OF HEATING OR AC LOAD @ 100%)	0.00	0.00
AC	AC		0.00	
K	KITCHEN		0.00	0.00
	MISCELLANEOUS (@ 100%)		2.48	2.48
SP	XFMR OR SUB-PANEL (@ 100%)		0.00	0.00

F6 PUMP HOUSE PANEL LF1 - NEW
SCALE: NOT TO SCALE

BID DOCUMENT SUBMITTAL

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
ADDITION OF UNDERGROUND DETENTION FACILITY	12/15/2021
CD1 - REDESIGN	1/22/2021
Revisions:	4/28/2022

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GEORGIA No. 27203 PROFESSIONAL ENGINEER MARK A. GRITTER 7-25-22

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL SCHEDULES

Phase: BID DOCUMENTS

Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
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N/A

Project Title: NATIONAL CEMETERY DEVELOPMENT
CEDAR CITY RURAL INITIATIVE

Location: Cedar City, UT

Issue Date: 7/22/2022 | Checked: MG | Drawn: JSC

Project Number: 942CM3001
Building Number: N/A
Drawing Number: E-601
Sheet 52 of 61

VA FORM 08 - 6231

A. DESIGN CRITERIA

1. 2018 INTERNATIONAL BUILDING CODE
2. ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
3. ACI 301-10 SPECIFICATIONS FOR STRUCTURAL CONCRETE.
4. ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY.
5. ACI 530-13 BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES.
6. AISC 360-16 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
7. DESIGN DEAD LOADS:
   - CONCRETE — 150 PCF
   - MASONRY (IF FULLY GROUTED) — 135 PCF
   - SHELTER (SELF WEIGHT) — (ACTUAL)
   - COLLATERAL DL — 3 PSF
8. DESIGN LIVE LOADS:
   - ROOF (NON REDUCIBLE) — 20 PSF
   - SLAB ON GRADE — 150 PSF
9. WIND DESIGN DATA:
   - ULTIMATE DESIGN WIND SPEED (3 SECOND GUST) ASCE 7-16 (MWFRS) — V_{ult} = 101 MPH
   - RISK CATEGORY — II
   - EXPOSURE CATEGORY — C
   - TOPOGRAPHIC FACTOR — K_{zt} = 1.0
   - GUST-EFFECT FACTOR — G = 0.85
   - ENCLOSURE CLASSIFICATION — PARTIALLY ENCLOSED (COMMITTAL SHELTER)
   - INTERNAL PRESSURE COEFFICIENT — GC_{pi} = +/- 0.55 (COMMITTAL SHELTER)
10. EARTHQUAKE DESIGN DATA:
    - RISK CATEGORY — II
    - SEISMIC IMPORTANCE FACTOR — I_e = 1.00
    - MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER AT SHORT PERIODS — S_S = 0.79g
    - MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER AT A PERIOD OF 1 SEC — S_1 = 0.255g
    - SITE CLASS — D
    - DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER AT SHORT PERIODS — S_{DS} = 0.631g
    - DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER AT A PERIOD OF 1 SEC — S_{D1} = 0.254g
    - SEISMIC DESIGN CATEGORY — D
    - ANALYSIS PROCEDURE USED: (DETERMINED BY COMMITTAL SHELTER VENDOR)
    - BASIC SEISMIC FORCE-RESISTING SYSTEM: STEEL ORDINARY MOMENT FRAME
    - RESPONSE MODIFICATION FACTOR — R = 3.5
    - SEISMIC RESPONSE COEFFICIENT — Cs = 0.180
    - SEISMIC BASE SHEAR — (DETERMINED BY COMMITTAL SHELTER VENDOR)

B. GENERAL

1. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK. NOTIFY THE NCA COR/PM IN WRITING OF CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS.
2. PROVIDE ADEQUATE BRACING FOR STRUCTURES SO THAT THEY WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURES AND FOUNDATIONS ARE DESIGNED FOR A COMPLETED CONDITION ONLY AND THEREFORE REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION. STRUCTURES SHALL BE CONSIDERED COMPLETE WHEN ALL STRUCTURAL MEMBERS ARE INSTALLED AND HAVE ATTAINED THEIR SPECIFIED DESIGN STRENGTH AS SHOWN ON THE DRAWINGS.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING SHORING, TEMPORARY SUPPORTS, ETC.
4. COORDINATE NCA COR/PM CONTRACT DOCUMENTS WITH CIVIL AND ARCHITECTURAL DRAWINGS. NOTIFY STRUCTURAL ENGINEER OF ANY CONFLICT AND/OR OMISSION PRIOR TO STARTING WORK.
5. REVIEW OF SUBMITTALS AND/OR SHOP DRAWINGS BY THE NCA COR/PM DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL TO THE NCA COR/PM. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION.

C. FOUNDATIONS

1. THE DESIGN OF THE FOUNDATIONS AND SLAB IS BASED ON CRITERIA ESTABLISHED IN THE REPORT OF GEOTECHNICAL EXPLORATION PREPARED BY GEM ENGINEERING, INC DATED MARCH, 16 2020. FOUNDATIONS AND THICKENED SLABS ARE DESIGNED FOR AN ALLOWABLE NET SOIL BEARING CAPACITY OF 2500PSF.
2. A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF UTAH SHALL INSPECT THE CONDITION AND ASSURE THE ADEQUACY OF ALL SUB GRADES, FILLS AND BACK FILLS BEFORE PLACEMENT OF FOUNDATIONS, FOOTINGS, SLABS AND WALLS .CONTRACTOR SHALL SUBMIT REPORTS TO THE NCA PM/COR DESCRIBING OBSERVATIONS AND FINDINGS, INCLUDING ANY NON-CONFORMING WORK. SUBMIT A COMPLETED FINAL REPORT OF SPECIAL INSPECTIONS AT THE COMPLETION OF SPECIAL INSPECTION ACTIVITIES.
3. GROUND WATER SHALL BE KEPT AT LEAST 3 FEET BELOW THE DEEPEST FOUNDATION BEARING ELEVATION DURING CONSTRUCTION.
4. FOOTINGS MAY BE CAST INTO AN EARTH FORMED TRENCH IF SOIL CONDITIONS PERMIT.
5. EXCAVATION FOR FOOTING SHALL BE CUT TO ACCURATE SIZE AND DIMENSIONS AS SHOWN ON PLANS. ALL SOIL BELOW SLAB AND FOOTINGS SHALL BE PROPERLY COMPACTED AND SUB-GRADE BROUGHT TO A TRUE AND LEVEL PLANE BEFORE PLACING CONCRETE.
6. FOOTING CONCRETE SHALL BE CAST ON THE SAME DAY THE EXCAVATION IS APPROVED. IF THE BEARING SURFACE IS ALLOWED TO BECOME DISTURBED IN ANY WAY, IT SHALL BE REWORKED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER PRIOR TO CASTING OF THE CONCRETE.
7. NO EXCAVATION SHALL BE CLOSER THAN A SLOPE OF 3:1 (3 HORIZONTAL TO 1 VERTICAL) TO A FOOTING. PROVIDE SHORING AND PROTECTION FOR EXCAVATION BANKS AS NECESSARY TO PRESERVE SAFETY AND PREVENT CAVING.
8. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE FOUNDATION CONCRETE IS PLACED.
9. THERE SHALL BE NO HORIZONTAL OR VERTICAL CONSTRUCTION JOINTS IN ANY FOUNDATION WITHOUT PRIOR WRITTEN APPROVAL FROM THE NCA COR/PM, EXCEPT WHERE INDICATED ON THE DRAWINGS.
10. CONCRETE CAST ON SLOPING SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATION UNTIL THE INTENDED POUR IS COMPLETED.
11. FROST DEPTH IS 30 INCHES BELOW GRADE. FOUNDATIONS TO BEAR BELOW FROST DEPTH OR ON NON-FROST SUSCEPTIBLE MATERAL WHICH EXTENDS BELOW THE FROST DEPTH WHERE NOTED ON THE DRAWINGS. NON-FROST SUSCEPTIBLE MATERIAL IS DEFINED AS GRANULAR FILL CLASSIFIED GW OR GP PER UNIFIED SOIL CLASSIFICATION WITH 3 TO 5% FINER THAN 0.02mm BY WEIGHT, AND ACCEPTABLE TO THE TESTING AGENCY.

D. CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 301-10 SPECIFICATIONS FOR STRUCTURAL CONCRETE. DESIGN IS BASED ON ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY.
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE V.
3. PROVIDE MAXIMUM WATER - CEMENTITIOUS MATERIAL RATIO OF 0.45
4. AIR CONTENT EXPOSED TO FREEZE THAW
   ¾ AGGREGATE: 6 ±1.5
   ½ AGGREGATE: 5.5 ±1.5
5. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH IN ACCORDANCE WITH THE FOLLOWING:

LOCATION	STRENGTH
FOUNDATIONS	4500 PSI
SLAB ON GRADE	4500 PSI
ALL OTHER CONCRETE	4500 PSI

6. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY AN INDEPENDENT TESTING LABORATORY AND SUBMITTED TO THE NCA PM/COR FOR REVIEW A MINIMUM OF 15 DAYS PRIOR TO USE. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S.
7. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE.
8. USE OF CALCIUM CHLORIDE, CHLORIDE IONS OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.
9. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.
10. WELDED WIRE REINFORCEMENT (W.W.R.) SHALL CONFORM TO ASTM A185 AND SHALL BE PROVIDED IN FLAT SHEETS (ROLLS NOT PERMITTED). LAP TWO SQUARES AT SPLICES.
11. UNLESS NOTED OTHERWISE, SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN BY THE TESTING AGENCY NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 100 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQUARE FEET OF SURFACE AREA FOR SLABS AND WALLS. IF THE ABOVE FREQUENCY WOULD RESULT IN LESS THAN 5 STRENGTH TESTS FOR A GIVEN CLASS OF CONCRETE, TEST 5 RANDOMLY SELECTED BATCHES OR EACH BATCH IF FEWER THAN 5 BATCHES ARE USED. SAMPLE CONCRETE IN ACCORDANCE WITH ASTM C172. PERFORM THE FOLLOWING TESTS IN ACCORDANCE WITH THE INDICATED STANDARD:
    - SLUMP: ASTM C143
    - AIR CONTENT: ASTM C231 OR C173
    - COMPRESSIVE STRENGTH: ASTM C39, WITH ONE CYLINDER AT 7 DAYS, 2 CYLINDERS AT 28 DAYS, AND ONE SPECIMEN HELD IN RESERVE.
12. HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED ONLY WHERE INDICATED. THE LOCATION OF VERTICAL CONSTRUCTION JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED BY MECHANICAL MEANS AND CLEANED.
13. PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE; SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE CLASS "B" TENSION SPLICE UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH CLASS "B" TENSION SPLICES. UNLESS NOTED OTHERWISE LAP LENGTHS EXPRESSED IN NUMBER OF BAR DIAMETERS SHALL BE AS FOLLOWS. APPROVED MECHANICAL COUPLERS MAY BE USED IN LIEU OF PHYSICAL SPLICING:

REINFORCING BAR LAP SPLICE SCHEDULE (GENERAL USE), U.N.O.			
BAR SIZE	CLASS	TOP BARS	OTHER BARS
		f'c=4500 PSI	f'c=4000 PSI
#6 OR SMALLER	B	64 DIA	49 DIA
LARGER THAN #6	B	80 DIA	62 DIA

NOTE:

TOP BARS ARE HORIZONTAL BARS WHERE THE DEPTH OF CONCRETE CAST IN ONE LIFT BENEATH THE BAR EXCEEDS 12". PROVIDE TOP BAR LAP SPLICE LENGTH FOR ALL CONCRETE WALL HORIZONTAL BARS.

14. MINIMUM CONCRETE COVER (UNLESS NOTED OTHERWISE) SHALL BE:

CONCRETE COVER – #11 BARS AND SMALLER		
A	UNFORMED SURFACE IN CONTACT WITH THE GROUND	
*	ALL MEMBERS ALL BAR SIZES	3 INCHES
B	FORMED SURFACES EXPOSED TO EARTH OR WATER	
*	#6 BARS AND LARGER	2 INCHES
*	#5 BARS AND SMALLER	1 1/2 INCHES
C	FORMED SURFACES NOT EXPOSED TO EARTH OR WATER	
*	BEAMS, COLUMNS, PEDESTALS, AND TENSION TIES	1 1/2 INCHES
*	STRUCTURAL SLABS, WALLS, JOISTS	3/4 INCHES

15. SCHEDULED OR DETAILED REINFORCING STEEL SHALL NOT BE TACK WELDED FOR ANY REASON. WELDED REINFORCING STEEL SPLICES ARE NOT PERMITTED WITHOUT ENGINEER APPROVAL, WHERE WELDING IS APPROVED IT SHALL CONFORM TO AWS D1.4 STRUCTURAL WELDING CODE - REINFORCING STEEL.
16. SAW-CUT CONTROL JOINTS SHALL BE PLACED AS SOON AS CONCRETE IS ABLE TO BE SAW-CUT WITHOUT PULLING AGGREGATE FROM FLOOR USING A DRY-CUT EARLY ENTRY SAW. SLABS SHALL NOT BE LEFT OVERNIGHT, OR ANY REASONABLE AMOUNT OF TIME, WITHOUT SAWING JOINTS. WEATHER IS CRITICAL TO SCHEDULE SAWING OF JOINTS. IF LARGE AREAS OF SLAB ARE POURED AT ONE TIME, SEVERAL SAWS MAY BE REQUIRED TO PROVIDE JOINTS IN TIME TO PREVENT SHRINKAGE CRACKING. PROPER JOINTING OF SLAB IS CRITICAL. REFER TO ACI MANUAL OF CONCRETE PRACTICE FOR PROPER JOINTING TECHNIQUES.
17. PROVIDE 5 BOLT DIAMETERS OR 4½" MINIMUM, WHICHEVER IS LARGER, COVER FOR ANCHOR BOLTS, LOCATE PERIMETER FOUNDATION HORIZONTAL REINFORCEMENT TO THE OUTSIDE OF ANCHOR BOLTS FOR CONFINEMENT, U.N.O.
18. PROVIDE TEMPORARY SHORING AND BRACING OF ALL STRUCTURAL AND MISCELLANEOUS ELEMENTS UNTIL CONCRETE HAS OBTAINED DESIGN STRENGTH AND ALL PERMANENT BRACING ELEMENTS ARE INSTALLED.
19. WHEN PLACING CONCRETE UNDER HOT OR COLD WEATHER CONDITIONS COMPLY WITH THE LATEST EDITIONS OF ACI305R: "HOT WEATHER CONCRETING" OR ACI306R: "COLD WEATHER CONCRETING".
20. TIE ALL REINFORCING STEEL AND EMBEDMENTS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCEMENT AND EMBEDMENTS WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES. "STICKING" DOWELS INTO WET CONCRETE IS NOT PERMITTED.
21. ELASTOMERIC JOINT SEALANT: DOW CORNING 888 NON-SAG SILICONE JOINT SEALANT FOR PORTLAND CEMENT CONCRETE PAVEMENT JOINTS.
22. JOINT BACK-UP MATERIAL: POLYETHYLENE FOAM, CLOSED CELL. USE WITH ELASTOMERIC JOINT SEALANT ONLY.
23. SUBMIT REINFORCING BAR SHOP DRAWINGS INCLUDING PLACEMENT PLANS, BAR BENDING DIAGRAMS SPLICE LENGTHS AND LOCATIONS, BAR SPACING, CONCRETE COVER, SUPPORT DEVICES AND ACCESSORIES CONFORM TO ACI 318 AND ACI SP-66.
24. SUBMIT PROPOSED CURING METHODS AND MATERIALS A MINIMUM OF 15 DAYS PRIOR TO USE.
25. TOLERANCES SHALL CONFORM TO ACI 117 AND ACI 347.
26. LIQUID CURING AND SEALING COMPOUND: ASTM C1315, TYPE 1 (VOC COMPLIANT, 350 g/L) STYRENE ACRYLATE OR METHACRYLATE TYPE 25% MINIMUM SOLIDS CONTENT, CLEAR, NON-YELLOWING. STYRENE BUTADIENE NOT ALLOWED AS PART OF THE BLEND. PRIOR TO TURNOVER OF PROJECT TO OWNER, CLEAN THE SLAB-ON-GRADE
27. THE FOLLOWING SHALL CONFORM TO THE FOLLOWING GRADES:
    - ANCHOR BOLTS — ASTM F1554, GRADE 36, W/ ROD AND HARDWARE MECHANICALLY GALV, U.N.O.
    - EXPANSIVE JOINT FILLER — ASTM D1752, WITH COMPRESSION OF 10PSI TO 25PSI
      NON-EXTRUDING 1/4" THICK U.N.O., FULL DEPTH OF CONCRETE. BLOCK OUT FILLER AT TOP TO
      ALLOW FOR SEALANT AND BACKER ROD. ACCEPTABLE PRODUCTS: SONNEBORN "EXPANSION
      JOINT FILLER" AND W.R. MEADOWS 'CERAMAR".

E. MASONRY:

1. CONCRETE MASONRY DESIGN AND CONSTRUCTION SHALL CONFORM TO: ACI 530-13/ASCE 5-13, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, ACI 530.1-13/ASCE 6-13, SPECIFICATIONS FOR MASONRY STRUCTURES.
2. PROVIDE NORMAL WEIGHT, HOLLOW, LOAD-BEARING CONCRETE MASONRY UNITS (CMU) CONFORMING TO ASTM C90.
3. PROVIDE CONCRETE MASONRY WITH MINIMUM AVERAGE COMPRESSIVE STRENGTH,
   f'm = 2,000 PSI.
4. PROVIDE TYPE "S" MORTAR IN ACCORDANCE WITH ASTM C270, U.N.O. MORTAR BED JOINTS SHALL NOT EXCEED 3/8" THICKNESS.
5. PROVIDE GROUT FOR REINFORCED MASONRY IN ACCORDANCE WITH ASTM C476 WITH MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI UNLESS NOTED OTHERWISE.
6. PROVIDE HORIZONTAL JOINT REINFORCEMENT LADDER TYPE COMPLYING WITH ASTM A82, NO. 9 GAUGE OR HEAVIER, ZINC COATED, PLACED 16 INCHES ON CENTER UNLESS NOTED OTHERWISE.
7. PROVIDE MINIMUM 2#5 VERTICAL IN TWO ADJACENT CELLS GROUTED FULL HEIGHT, AT EACH SIDE OF OPENINGS AND WALL ENDS, AND EACH SIDE OF MASONRY CONTROL JOINTS,
8. LAY MASONRY UNITS IN RUNNING BOND UNLESS NOTED OTHERWISE.
9. SIDES AND TOPS OF MASONRY WALL PANELS SHALL BE ANCHORED TO STRUCTURE AND AT 16"O.C. TO STRUCTURE BY DOVETAIL ANCHORS, METAL STRAPS, OR EQUIVALENT UNLESS NOTED OTHERWISE.
10. FOR OPENINGS IN MASONRY WALLS GREATER THAN 2'-0", PROVIDE STRUCTURAL LINTEL ABOVE OPENINGS. USE REINFORCED STRUCTURAL LINTEL GROUTED SOLID.
11. MASONRY TO BE INSPECTED PER INTERNATIONAL BUILDING CODE SECTION 1705.4, REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION.
12. ALL CONCRETE MASONRY UNITS REINFORCING (VERT. & HORIZ.) SHALL BE LAPPED THUS:

BAR	LAP LENGTH	DOWEL HOOK EMBEDMENT LENGTH
#4	2'-0"	8"
#5	2'-6"	10"
#6	3'-0"	12"

F. POST INSTALLED ANCHOR BOLTS

1. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR OTHER MANUFACTURERS AND METHODS AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE PUBLISHED DATA DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS SHALL BE APPROVED POST-INSTALLED ANCHOR SYSTEMS TESTED TO EITHER ICC AC-193 FOR MECHANICAL ANCHORS OR AC-308 FOR ADHESIVE ANCHORS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT ICC ESR REPORT.
2. INSTALL ANCHORS PER THE MANUFACTURER WRITTEN INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING. ANCHORS MUST BE INSTALLED USING THE HILTI PROFIS SYSTEM.
3. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
4. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
5. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. IF THIS OCCURS, THE ENGINEER OF RECORD SHALL BE NOTIFIED. DO NOT CUT OR DAMAGE EXISTING REINFORCING BARS WITHOUT WRITTEN APPROVAL.

G. SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS SHALL BE AS PER IBC CHAPTER 17 "SPECIAL INSPECTIONS AND TESTS", AND ARE PROVIDED HERE, IN PART FOR REFERENCE.
2. THE OWNER SHALL SELECT A QUALIFIED TESTING/INSPECTION AGENCY AND WILL PAY FOR THE STRUCTURAL TESTING AND SPECIAL INSPECTION SERVICES THAT ARE REQUIRED BY THE CONTRACT DOCUMENTS.
3. CONTRACTOR SHALL PAY FOR ANY ADDITIONAL STRUCTURAL TESTING/INSPECTION REQUIRED FOR WORK OR MATERIALS NOT COMPLYING WITH CONTRACT DOCUMENTS DUE TO THE CONTRACTOR'S NEGLIGENCE OR NONCONFORMANCE.
4. CONTRACTOR SHALL PAY FOR ANY ADDITIONAL STRUCTURAL TESTING/INSPECTION REQUIRED FOR THEIR CONVENIENCE.
5. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO MEETS THE REQUIREMENTS OF SECTION 1704 AS FOUND IN THE IBC.
6. THE SPECIAL INSPECTOR SHALL KEEP DAILY RECORDS OF INSPECTIONS AND SHALL PROVIDE MONTHLY WRITTEN REPORTS OF THESE INSPECTIONS AND TESTS TO THE ENGINEER OF RECORD.
7. ANY TESTS OR INSPECTIONS INDICATING ITEMS NOT IN STRICT CONFORMANCE WITH THE CONTRACT DOCUMENTS AND APPLICABLE REFERENCED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR IMMEDIATE CORRECTION AND DOCUMENTED WITH THE INSPECTOR'S FIELD REPORT. IF THE DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER OF RECORD.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL STATEMENT OF SPECIAL INSPECTIONS WHICH STATES THAT THE SPECIAL INSPECTIONS AND TESTING REQUIRED FOR THIS PROJECT HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
9. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORK IS PERFORMED IN STRICT CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. A QUALITY CONTROL PROGRAM SHALL BE USED BY THE GENERAL CONTRACTOR. THE SPECIAL INSPECTIONS SHALL NOT BE USED AS THE CONTRACTOR'S QUALITY CONTROL.

1705.3 – REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECTION OF REINFORCEMENT AND VERIFY PLACEMENT.	--	X	ACI 318: CH 20, 25.2, 25.3, 26.6.1–26.6.3	1908.4
3. INSPECTION OF ANCHORS CAST IN CONCRETE.	--	X	ACI 318: 17.8.2	--
4. INSPECTION OF ANCHORS POST–INSTALLED IN HARDENED CONCRETE MEMBERS. a. ADHESIVE ANCHORS INSTALLED IN HORIZ. OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS b. MECHANICAL AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X	X	ACI 318: 17.8.2.4, ACI 318: 17.8.2	--
5. VERIFYING USE OF REQUIRED DESIGN MIX.	--	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF CONCRETE.	X	--	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	1908.10
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	--	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	--	X	ACI 318: 26.5.3–26.5.5	1908.9
11. VERIFICATION OF IN–SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	--	X	ACI 318: 26.11.2	--
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	--	X	ACI 318: 26.11.1.2(b)	--

1705.4 – REQUIRED SPECIAL INSPECTIONS AND TESTS OF MASONRY

TYPE	CONTINUOUS	PERIODIC
1. VERIFICATION OF f'm PRIOR TO CONSTRUCTION.	--	X
2. VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) OF SELF–CONSOLIDATING GROUT AS DELIVERED TO THE PROJECT.	X	--
3. VERIFY COMPLIANCE WITH APPROVED SUBMITTALS.	--	X
4. VERIFY PROPORTIONS OF SITE–MIXED MORTAR, GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	--	X
5. VERIFY GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES.	--	X
6. VERIFY CONSTRUCTION OF MORTAR JOINTS.	--	X
7. VERIFY PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.	--	X
8. VERIFY GROUT SPACE PRIOR TO GROUTING.	--	X
9. VERIFY PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	X	--
10. VERIFY SIZE AND LOCATION OF STRUCTURAL MASONRY ELEMENTS.	--	X
11. VERIFY TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	--	X
12. VERIFY PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	--	X
13. PREPARE GROUT AND MORTAR SPECIMENS.	--	X
14. OBSERVE PREPARATION OF PRISMS.	--	X

1705.6 – REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	--	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	--	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	--	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	--
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	--	X

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
ADDITION OF UNDERGROUND DETENTION FACILITY	12/15/2021
CD1 - REDESIGN	1/22/2021
Revisions:	4/28/2022

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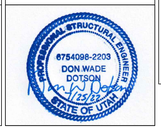

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

BID DOCUMENT SUBMITTAL

Drawing Title: STRUCTURAL GENERAL NOTES	Phase: BID DOCUMENTS	Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE	Project Number: 942CM3001
			Building Number: N/A
Approved: Project Director Steve Davis Department of Veterans Affairs, NCA Phone: 202.632.4833 Email: steve.davis@va.gov	N/A	Location: Cedar City, UT	Drawing Number: S-001
		Issue Date: 7/22/2022 / Checked: AGS / Drawn: JRV	Sheet 53 of 61

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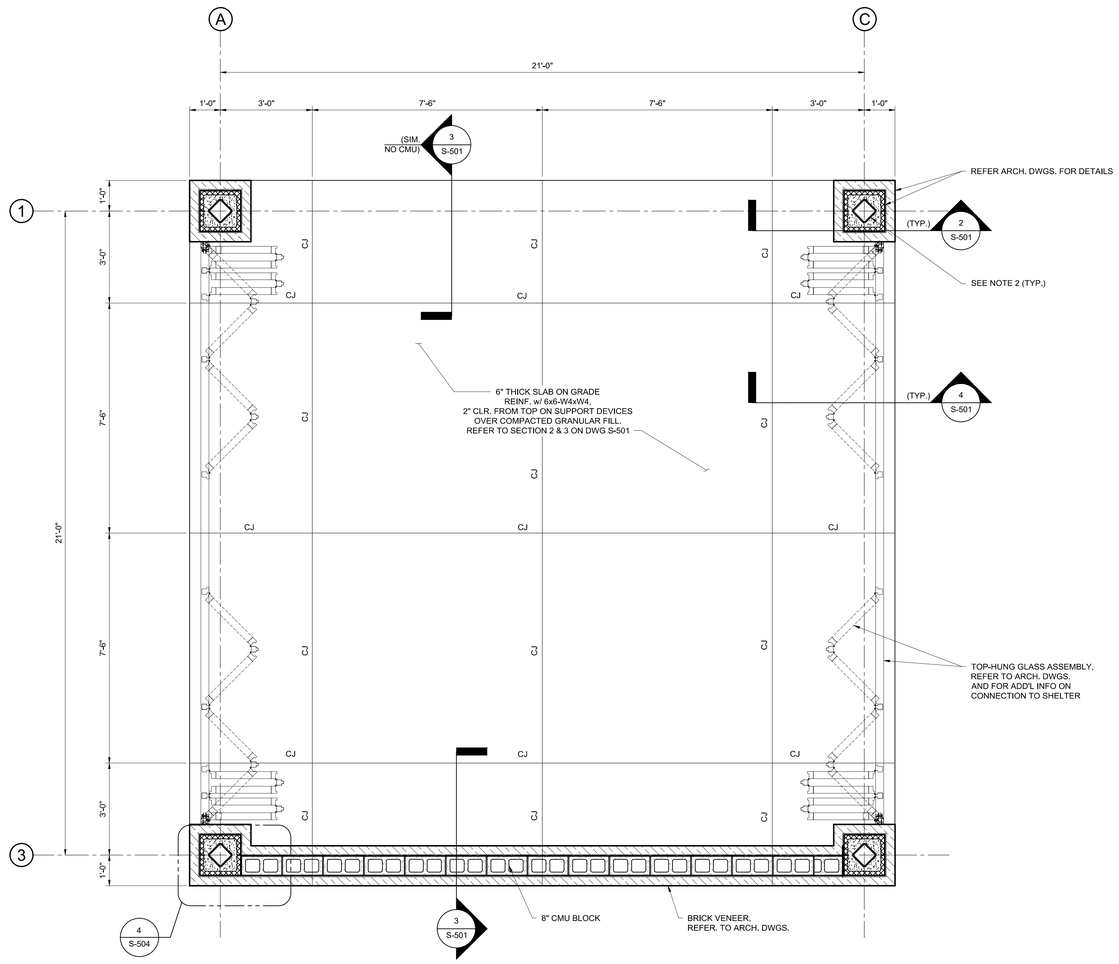

1 FOUNDATION PLAN
SCALE: 1/2"=1'-0"

NOTES:

1. REFER TO DWG. S-001 FOR STRUCTURAL DES IGN CRITERIA, AND MATERIAL CONSTRUCTION REQUIREMENTS.
2. PRE-ENGINEERED SHELTER POST. VENDOR SHALL PROVIDE ANCHOR BOLTS COORDINATED WITH FOUNDATION SYSTEM FOR APPROVAL PRIOR TO CONSTRUCTION. ANCHOR DESIGN SHALL BE BASED ON A PINNED CONNECTION.
3. FINAL LOADS FROM PRE-ENGINEERED SHELTER VENDOR SHALL BE PROVIDED TO VERIFY SHELTER FOUNDATION SYSTEM.
4. REFERENCE CIVIL FOR ACTUAL TOP OF SLAB ELEVATIONS INDICATING SLOPE OF SLAB.
5. CONTRACTOR SHALL COORDINATE UNDERGROUND UTILITIES WITH THE LOCATION OF ALL FOOTINGS AS REQUIRED.
6. CJ INDICATES CONTROL JOINT. SEE DWG. S-501.
7. REFER TO DWG. S-504 FOR TYPICAL MASONRY DETAILS, AND FOR CONNECTION OF TOP OF CMU WALL TO SHELTER ROOF BEAM.

BID DOCUMENT SUBMITTAL

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
ADDITION OF UNDERGROUND DETENTION FACILITY	12/15/2021
CD1 - REDESIGN	1/22/2021
Revisions:	4/28/2022

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PROFESSIONAL STRUCTURAL ENGINEER
6754098-2203
DON WADE DOTSON
STATE OF UTAH

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title: COMMITTAL SHELTER FOUNDATION PLAN

Phase: BID DOCUMENTS

Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE

Project Number: 942CM3001

Building Number: N/A

Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
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N/A

Location: Cedar City, UT

Issue Date: 7/22/2022 | Checked: AGS | Drawn: JRV

Drawing Number: S-101

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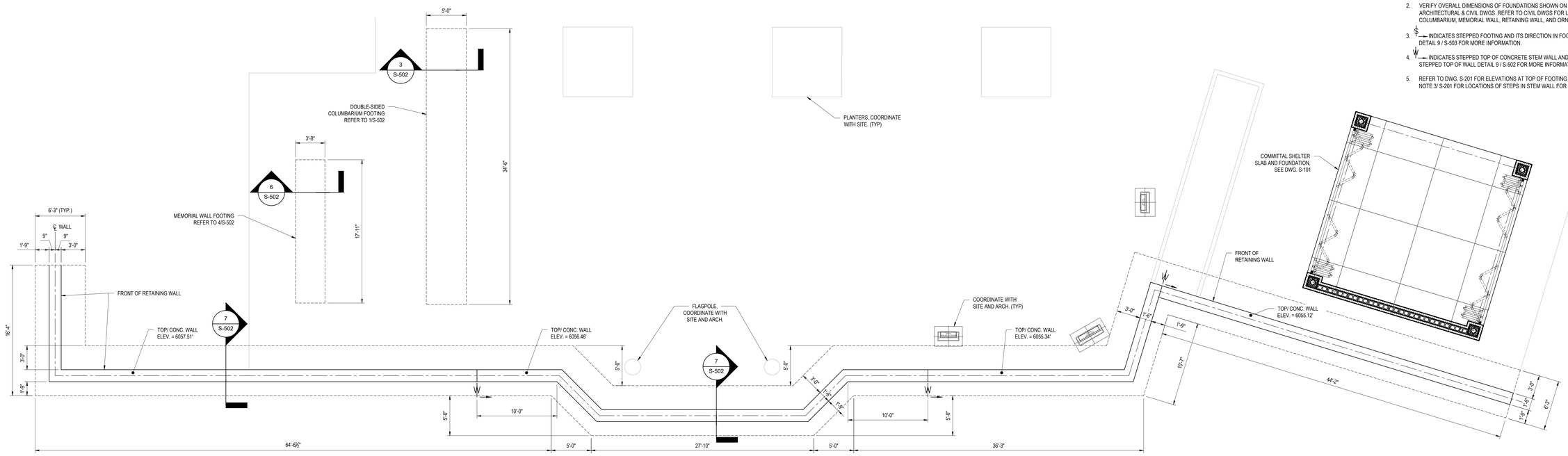
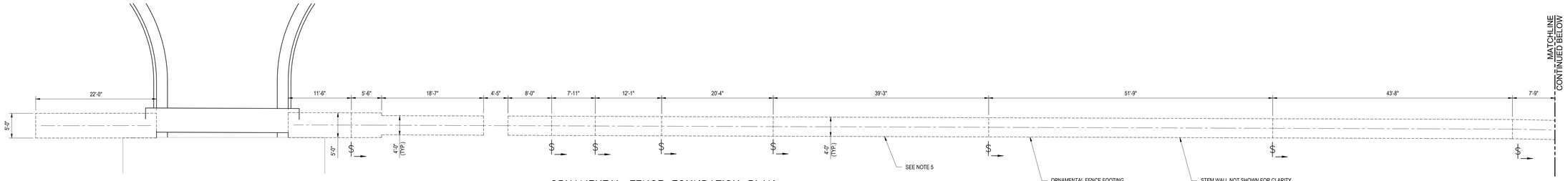
NOTES:

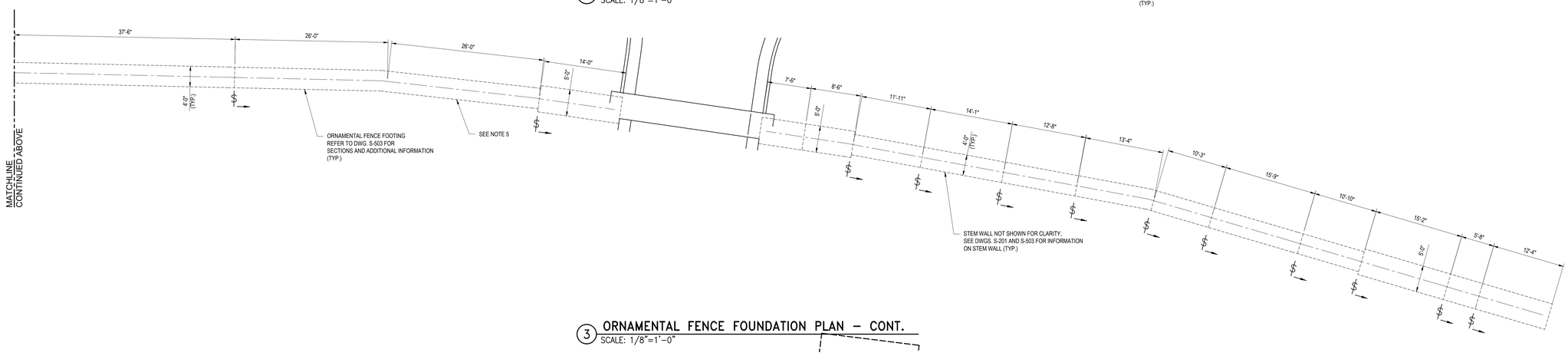
1. REFER TO DWG. S-001 FOR STRUCTURAL DESIGN CRITERIA, AND MATERIAL CONSTRUCTION REQUIREMENTS.
2. VERIFY OVERALL DIMENSIONS OF FOUNDATIONS SHOWN ON THIS DWG MATCH WITH ARCHITECTURAL & CIVIL DWGS. REFER TO CIVIL DWGS FOR LOCATIONS OF DOUBLE SIDED COLUMBARIUM, MEMORIAL WALL, RETAINING WALL, AND ORNAMENTAL FENCE.
3. ⟨$⟩ INDICATES STEPPED FOOTING AND ITS DIRECTION IN FOOTING. REFER STEPPED FOOTING DETAIL 9 / S-503 FOR MORE INFORMATION.
4. ⟨$⟩ INDICATES STEPPED TOP OF CONCRETE STEM WALL AND ITS DIRECTION IN WALL. REFER STEPPED TOP OF WALL DETAIL 9 / S-502 FOR MORE INFORMATION.
5. REFER TO DWG. S-201 FOR ELEVATIONS AT TOP OF FOOTING AND TOP OF STEM WALLS, AND NOTE 3/ S-201 FOR LOCATIONS OF STEPS IN STEM WALL FOR ORNAMENTAL FENCE.



1 RETAINING WALL & COLUMBARIUM & MEMORIAL WALL PLANS
SCALE: 3/16"=1'-0"



2 ORNAMENTAL FENCE FOUNDATION PLAN
SCALE: 1/8"=1'-0"



3 ORNAMENTAL FENCE FOUNDATION PLAN – CONT.
SCALE: 1/8"=1'-0"

BID DOCUMENT SUBMITTAL

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
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CD1 - REDESIGN	1/22/2021
Revisions:	4/28/2022

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4/28/22

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VA U.S. Department of Veterans Affairs

Drawing Title: FOUNDATION AND RETAINING WALL PLANS

Phase: BID DOCUMENTS

Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE

Project Number: 942CM3001

Building Number: N/A

Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
Email: steve.davis@va.gov

N/A

Location: Cedar City, UT

Drawing Number: S-102

Issue Date: 7/22/2022 | Checked: AGS | Drawn: JRV

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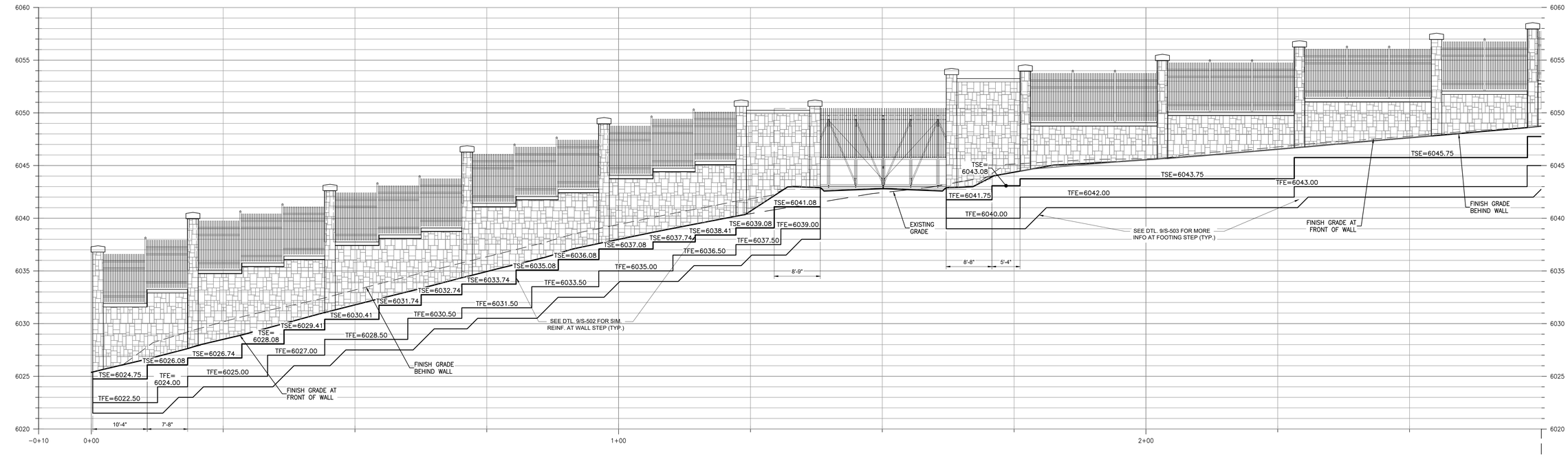
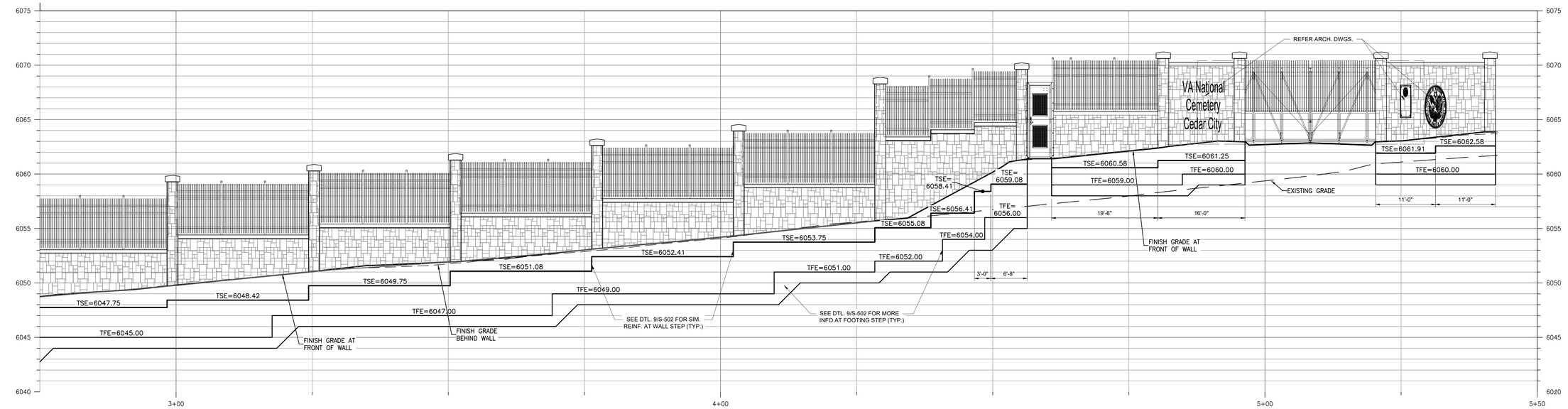


C1 **WALL PROFILE**
SCALE:1/8" = 1'−0" (HORIZ) 1/4" = 1'−0" (VERT)



F1 **WALL PROFILE**
SCALE:1/8" = 1'−0" (HORIZ) 1/4" = 1'−0" (VERT)

NOTES:
1. TFE INDICATES TOP OF FOOTING ELEVATION
2. TSE INDICATES TOP OF STEM WALL ELEVATION
3. STEPS IN STEM WALL ARE LOCATED LINED UP WITH THE FACE OF COLUMN VENEER, AND/OR AT ⅄ POINTS OF TYPICAL 24'-0" SECTIONS OF ORNAMENTAL PICKETS AS SHOWN, UNLESS NOTED OTHERWISE.
4. REFER TO DWG. S-102 FOR STEP LOCATIONS OF FOOTING.

0' 5' 10' 15'
1/8"=1'−0" (HORIZ)
0' 1' 5' 10'
1/4"=1'−0" (VERT)

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COMMITTAL SHELTER MODIFICATIONS	**4/28/2022**
ADDITION OF UNDERGROUND DETENTION FACILITY	**12/15/2021**
CD1 - REDESIGN	**1/22/2021**
Revisions:	**4/28/2022**

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PROFESSIONAL STRUCTURAL ENGINEER 6754098-2203 DON WADE DOTSON 4/15/22 STATE OF UTAH

National Cemetery Administration Design and Construction Service
VA U.S. Department of Veterans Affairs

Drawing Title ORNAMENTAL FENCE ELEVATION
Phase BID DOCUMENTS
Project Title NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE
Project Number 942CM3001
Building Number N/A
Location Cedar City, UT
Drawing Number S-201
Issue Date 7/22/2022
Checked CAP
Drawn MJL
Sheet 56 of 61

Approved: Project Director
Steve Davis
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Phone: 202.632.4833
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N/A

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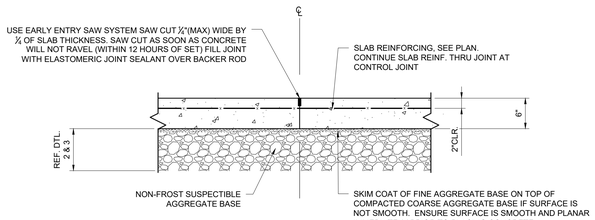
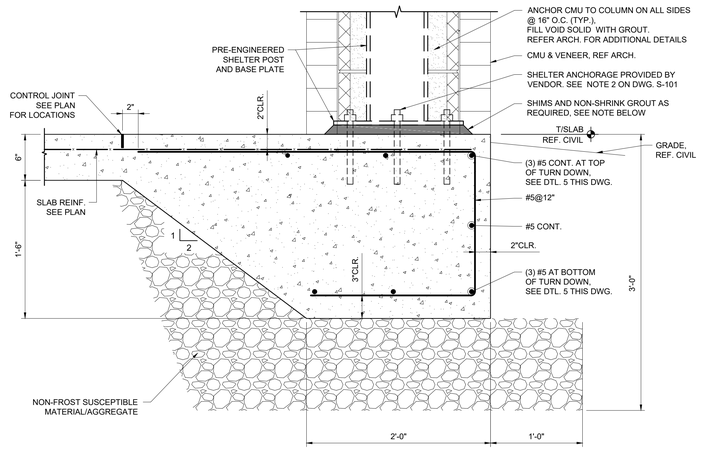
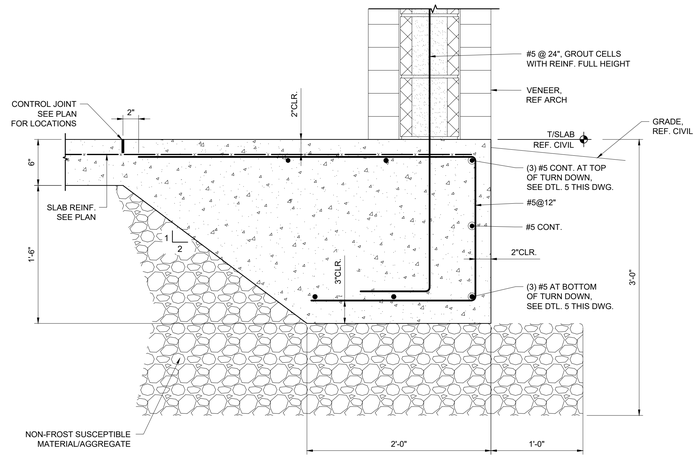


1 TYP. S.O.G. DETAIL
SCALE: N.T.S.



2 SLAB TURN DOWN AT COLUMN
SCALE: 1-1/2" = 1'-0"

NOTE:
CONTRACTOR SHALL ADD SHIMS AND NON-SHRINK GROUT PAD BELOW BASE PLATE TO LEVEL THE SHELTER AS REQUIRED.



3 SLAB TURN DOWN AT CMU WALL
SCALE: 1-1/2" = 1'-0"

NOTES:
1. REFER TO DWG. S-001 FOR STRUCTURAL DES IGN CRITERIA, AND MATERIAL CONSTRUCTION REQUIREMENTS.
2. REFER TO DWG. S-504 FOR TYPICAL MASONRY DETAILS.

4 SLAB TURN DOWN AT GLASS PARTITION
SCALE: 1-1/2" = 1'-0"

NOTE
1. ALL BARS IN SLAB TURN DOWN ARE TERMINATED AND LAPPED AS SHOWN.

5 TURN DOWN CORNER REINF. ARRANGEMENT
SCALE: N.T.S.

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
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CD1 - REDESIGN	1/22/2021
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6754098-2203
DON WADE DOTSON
7/22/22
STATE OF UTAH

National Cemetery Administration
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BID DOCUMENT SUBMITTAL

Drawing Title: COMMITTAL SHELTER DETAILS	Phase: BID DOCUMENTS	Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE	Project Number: 942CM3001
Approved: Project Director Steve Davis Department of Veterans Affairs, NCA Phone: 202.632.4833 Email: steve.davis@va.gov	N/A	Location: Cedar City, UT	Building Number: N/A
		Issue Date: 7/22/2022 / Checked: AGS / Drawn: JRV	Drawing Number: S-501
			Sheet 57 of 61

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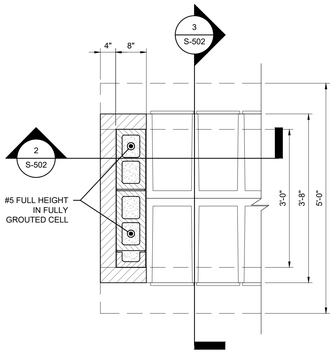
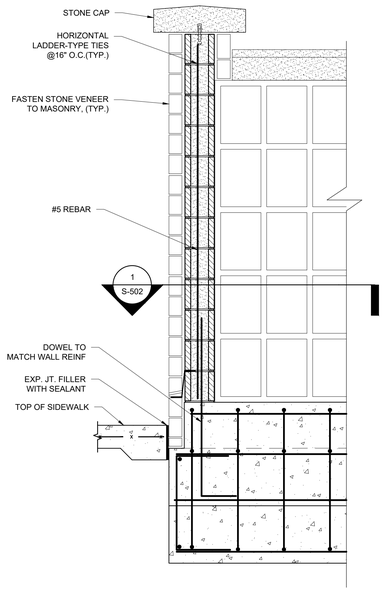
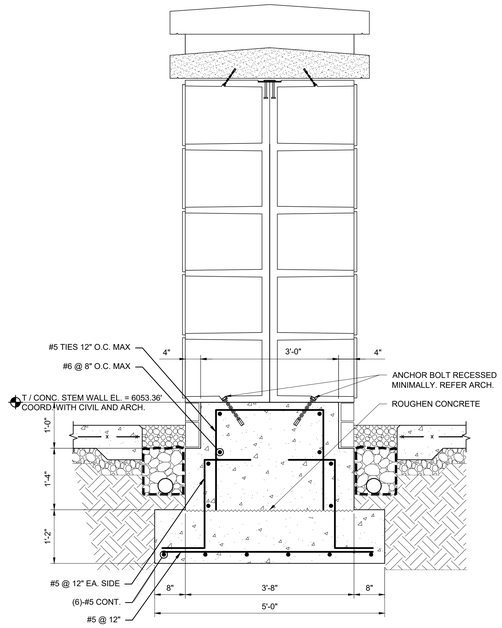


1 DOUBLE-SIDED COLUMBARIUM FOOTING PLAN
SCALE: 3/4"=1'-0"



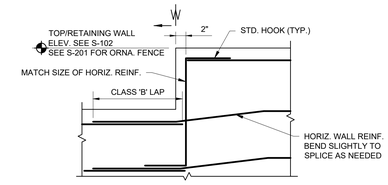
2 DOUBLE-SIDED COLUMBARIUM FOOTING ELEVATION
SCALE: 3/4"=1'-0"



3 DOUBLE-SIDED COLUMBARIUM FOOTING SECTION
SCALE: 3/4"=1'-0"

NOTE:

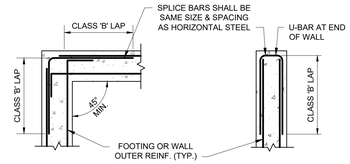
1. REFER TO ARCH DWG'S FOR ADDITIONAL COLUMBARIUM AND MEMORIAL WALL DETAILS.



NOTE

1. W INDICATES STEP IN TOP OF RETAINING WALL ONLY.
2. FOR MORE INFO ON STEPS IN TOP OF ORNAMENTAL FENCE, SEE DWG. S-201.

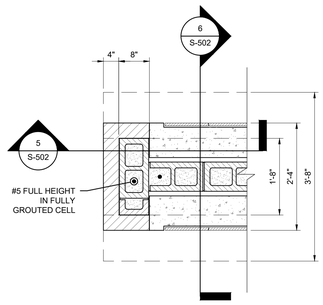
9 STEP AT TOP OF WALL
SCALE: N.T.S.



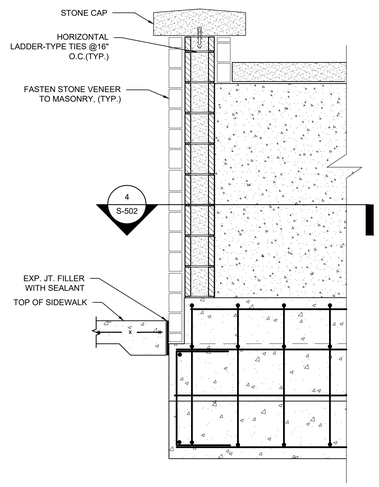
NOTE

1. ONLY OUTER LONGITUDINAL REBAR SHOWN FOR CLARITY. ALL FOOTING BARS TERMINATED AND LAPPED AS SHOWN.

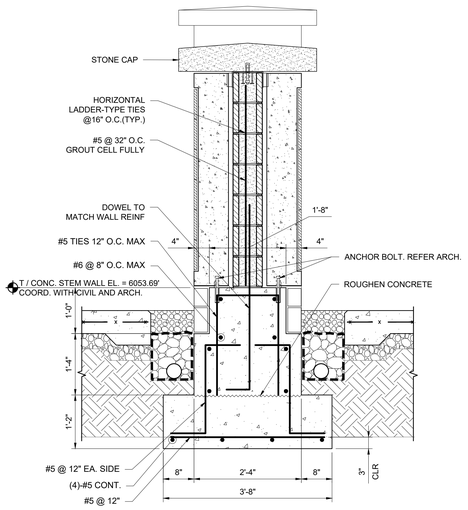
8 TYP. CONC. WALL AND FOOTING REINFORCEMENT ARRANGEMENT
SCALE: N.T.S.



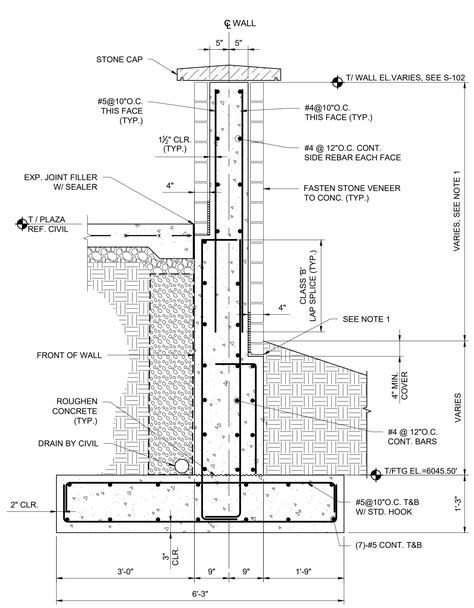
4 MEMORIAL WALL FOOTING PLAN
SCALE: 3/4"=1'-0"



5 MEMORIAL WALL FOOTING ELEVATION
SCALE: 3/4"=1'-0"



6 MEMORIAL WALL FOOTING SECTION
SCALE: 3/4"=1'-0"



NOTES:

1. STEP STONE LEDGE IN 12" VERTICAL INCREMENTS THEN RUN STEP HORIZONTAL UNTIL MIN. 4" COVER TO GRADE LINE IS MET AT ENDS OF WALL.
2. SEE DETAILS 8 & 9 THIS DWG. FOR ADDITIONAL REINFORCEMENT INFO.

7 SECTION – RETAINING WALL
SCALE: 3/4"=1'-0"

BID DOCUMENT SUBMITTAL

COMMITTAL SHELTER MODIFICATIONS	**4/28/2022**
ADDITION OF UNDERGROUND DETENTION FACILITY	**12/15/2021**
CD1 - REDESIGN	**1/22/2021**
Revisions:	**4/28/2022**

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11/15/22
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National Cemetery Administration
Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title
COLUMBARIUM AND WALLS
STRUCTURAL DETAILS

Approved: Project Director
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Phase
BID DOCUMENTS

N/A

Project Title
NATIONAL CEMETERY DEVELOPMENT
CEDAR CITY RURAL INITIATIVE

Location
Cedar City, UT

Issue Date 7/22/2022 | **Checked** AGS | **Drawn** JRV

Project Number 942CM3001

Building Number N/A

Drawing Number S-502

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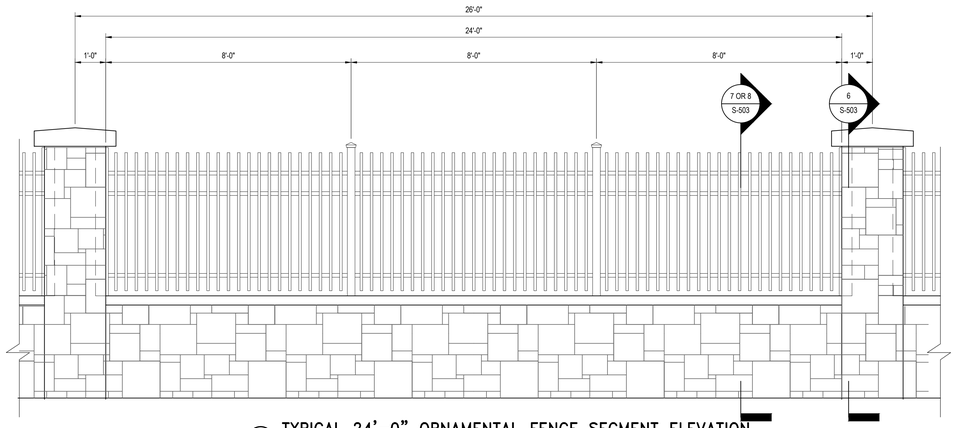
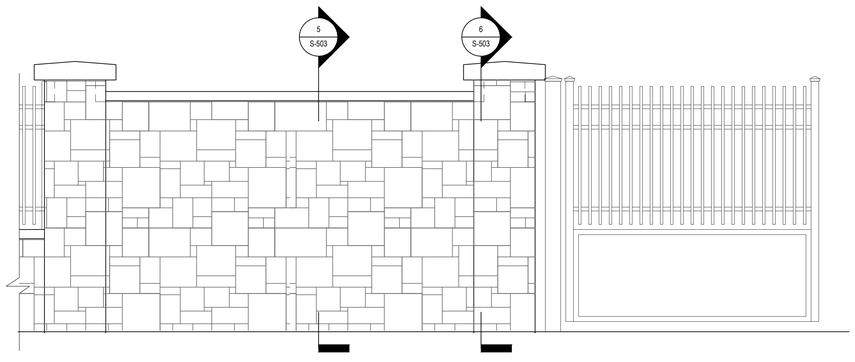
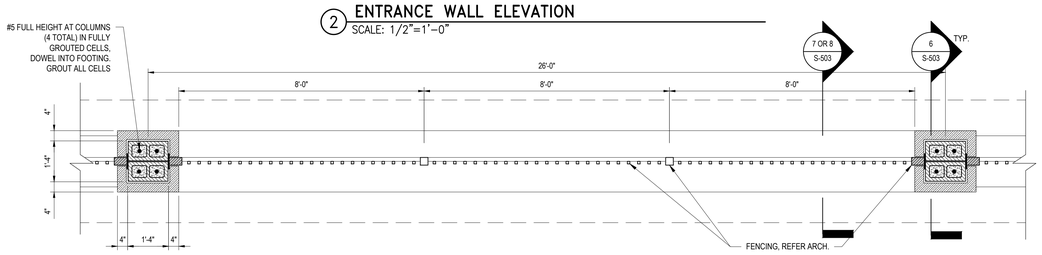


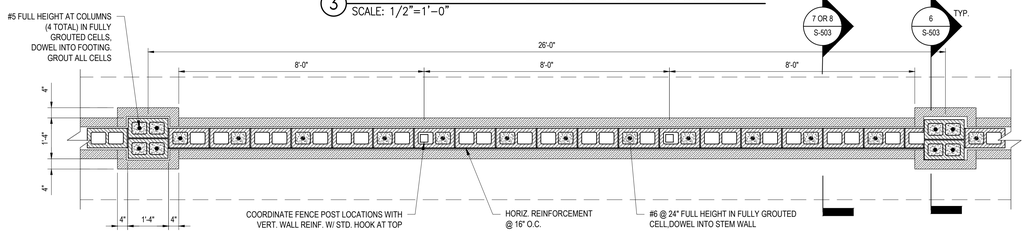
1 TYPICAL 24'-0" ORNAMENTAL FENCE SEGMENT ELEVATION
SCALE: 1/2"=1'-0"



2 ENTRANCE WALL ELEVATION
SCALE: 1/2"=1'-0"



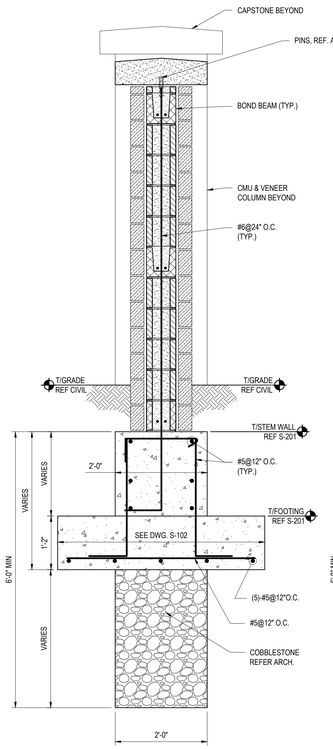
3 TYPICAL ORNAMENTAL FENCE PLAN – ABOVE WALL
SCALE: 1/2"=1'-0"



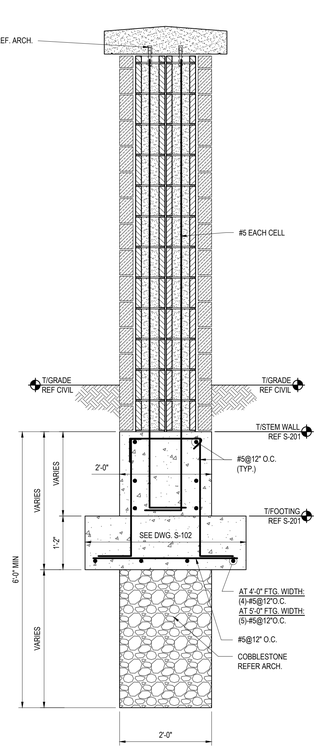
4 TYPICAL ORNAMENTAL FENCE PLAN – THROUGH WALL
SCALE: 1/2"=1'-0"

NOTES:

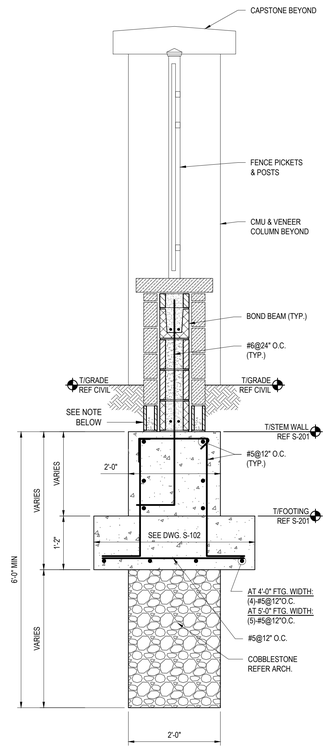
1. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL ORNAMENTAL FENCE DETAILS.
2. REFER TO DWG. S-201 FOR ELEVATIONS OF CONCRETE COMPONENTS.
3. REFER TO DWG. S-504 FOR ADDITIONAL MASONRY CONSTRUCTION DETAILS.



5 FOOTING SECTION
SCALE: 3/4"=1'-0"

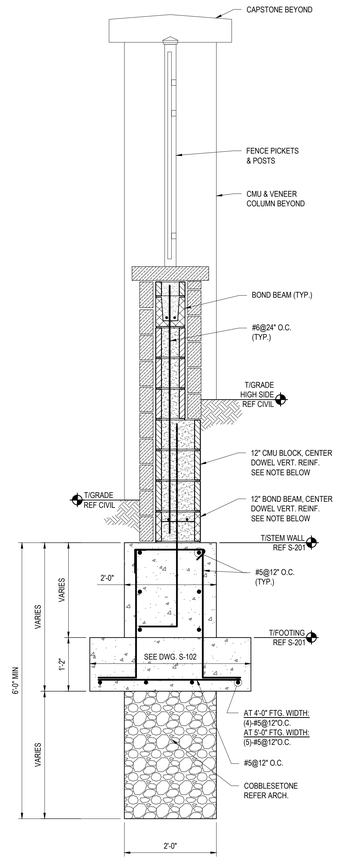


6 FOOTING SECTION AT COLUMN
SCALE: 3/4"=1'-0"



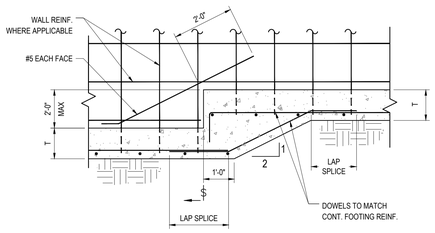
7 FOOTING SECTION
SCALE: 3/4"=1'-0"

CONTRACTOR'S OPTION:
AT LOCATIONS WHERE THE PROPOSED GRADE IS 6" OR HIGHER ON BOTH SIDES THAN THE TOP CMU BLOCK(S), INSTALL 4" WIDE CMU BLOCKS ON BOTH SIDES OR INSTALL A 12" WIDE CMU BLOCK AND 4" WIDE BLOCK (SIM. TO SECTION 8 THIS DWG.) FOR STONE VENEER TO BEAR ON INSTEAD OF CONCRETE STEM WALL. MAINTAIN MIN. 6" COVER OF GRADE OVER TOP OF CONCRETE STEM WALL.



8 FOOTING SECTION
SCALE: 3/4"=1'-0"

CONTRACTOR'S OPTION:
AT LOCATIONS WHERE PROPOSED GRADE OF NORTHERN SIDE (OUTSIDE CEMETERY) OF FENCE IS 8" OR HIGHER THAN THE OTHER SIDE OF FENCE, CONTRACTOR SHALL INSTALL 12" WIDE CMU BLOCK FOR STONE VENEER TO BEAR ON INSTEAD OF CONCRETE STEM WALL. MAINTAIN MIN. 6" COVER OF GRADE OVER TOP OF CONCRETE STEM WALL.



9 STEPPED FOOTING DETAIL
SCALE: NTS

NOTE
"T" INDICATES THICKNESS OF FOOTING, SEE DETAIL 5-7/S-503

BID DOCUMENT SUBMITTAL

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
ADDITION OF UNDERGROUND DETENTION FACILITY	12/15/2021
CD1 - REDESIGN	1/22/2021
Revisions:	4/28/2022

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PROFESSIONAL STRUCTURAL ENGINEER
6754098-2203
DON WADE DOTSON
12/15/22
STATE OF UTAH

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title: ORNAMENTAL FENCE STRUCTURAL DTLS

Approved: Project Director
Steve Davis
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Phone: 202.632.4833
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Phase: BID DOCUMENTS

N/A

Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE

Location: Cedar City, UT

Issue Date: 7/22/2022
Checked: AGS
Drawn: JRV

Project Number: 942CM3001
Building Number: N/A
Drawing Number: S-503
Sheet 59 of 61

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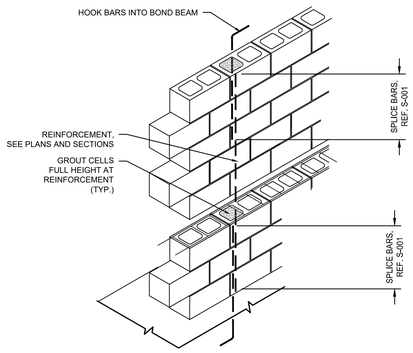
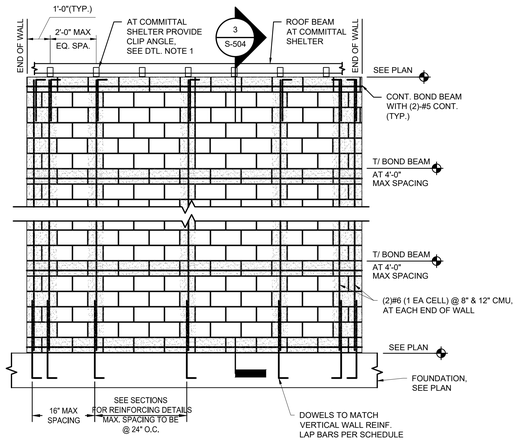
NOTES:

1. REFER TO DWG. S-001 FOR STRUCTURAL DES IGN CRITERIA, AND MATERIAL CONSTRUCTION REQUIREMENTS.



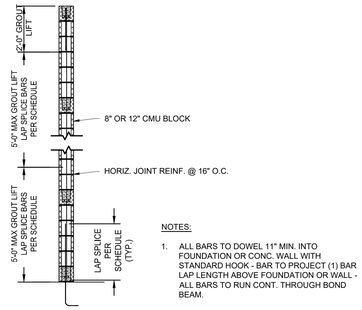
1 TYP. REINFORCED MASONRY CONSTRUCTION
SCALE: 3/8"=1'-0"



2 TYP. WALL ELEVATION
SCALE: 3/8"=1'-0"

NOTES:

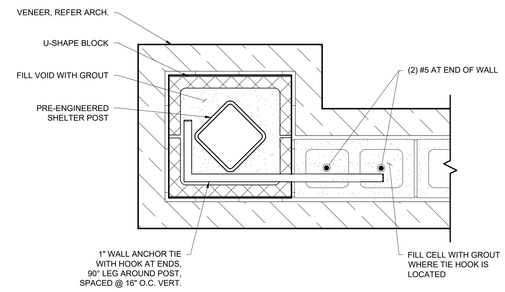
1. DESIGN COMMITTAL SHELTER ROOF BEAM LOCATED DIRECTLY ABOVE CMU WALL AT EACH CLIP ANGLE, AND THE CLIP ANGLE CONNECTION FOR A DESIGN OF 300 LB. LATERAL LOAD (ULT.).



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

NOTES:

1. ALL BARS TO DOWEL 11" MIN. INTO FOUNDATION OR CONC. WALL WITH STANDARD HOOK - BAR TO PROJECT (1) BAR LAP LENGTH ABOVE FOUNDATION OR WALL - ALL BARS TO RUN CONT. THROUGH BOND BEAM.



4 CMU WALL/COLUMN ANCHOR
SCALE: 1-1/2"=1'-0"

COMMITTAL SHELTER MODIFICATIONS	4/28/2022
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STATE OF UTAH
12/9/22

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

BID DOCUMENT SUBMITTAL

Drawing Title: TYPICAL MASONRY DETAILS
Phase: BID DOCUMENTS
Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE
Project Number: 942CM3001
Building Number: N/A
Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
Email: steve.davis@va.gov
N/A
Location: Cedar City, UT
Drawing Number: S-504
Issue Date: 7/22/2022
Checked: AGS
Drawn: JRV
Sheet 60 of 61

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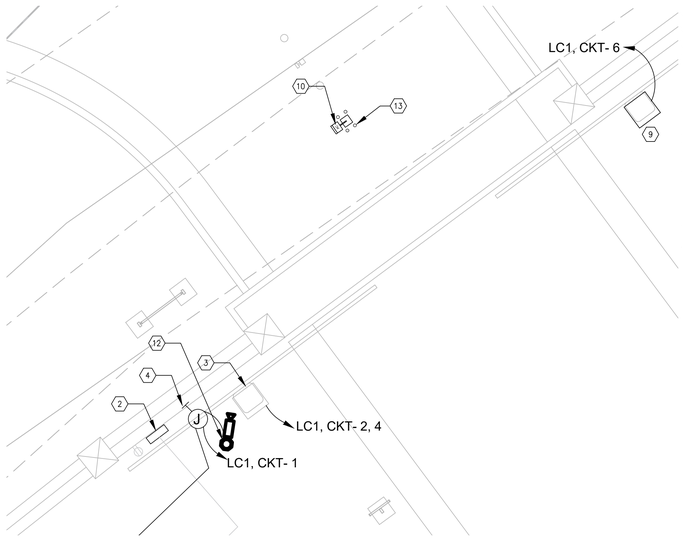
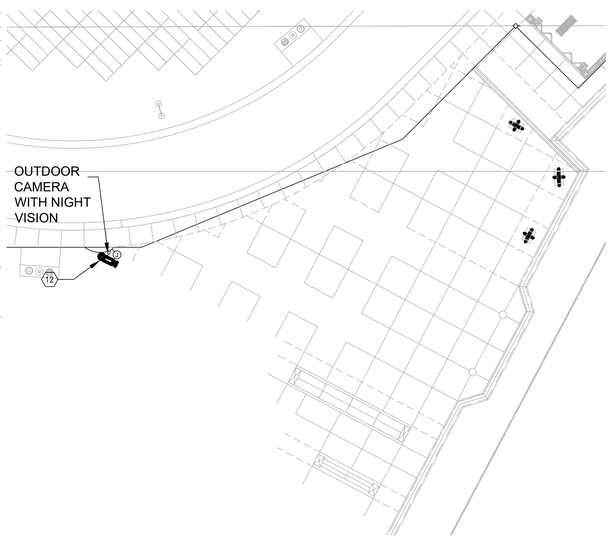
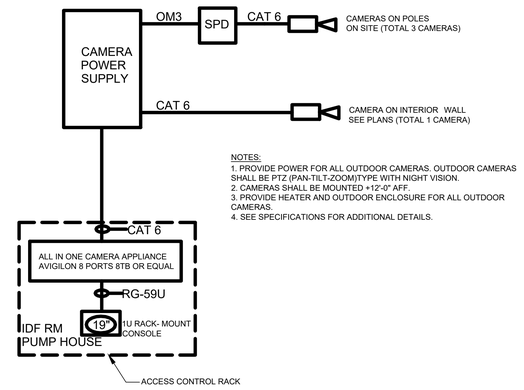


1 COMMUNICATION PLAN - GATE #1
SCALE: NOT TO SCALE

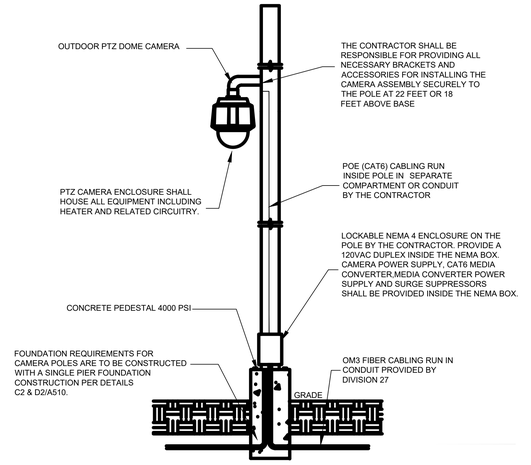


3 COMMUNICATION PLAN-SITE
SCALE: NOT TO SCALE

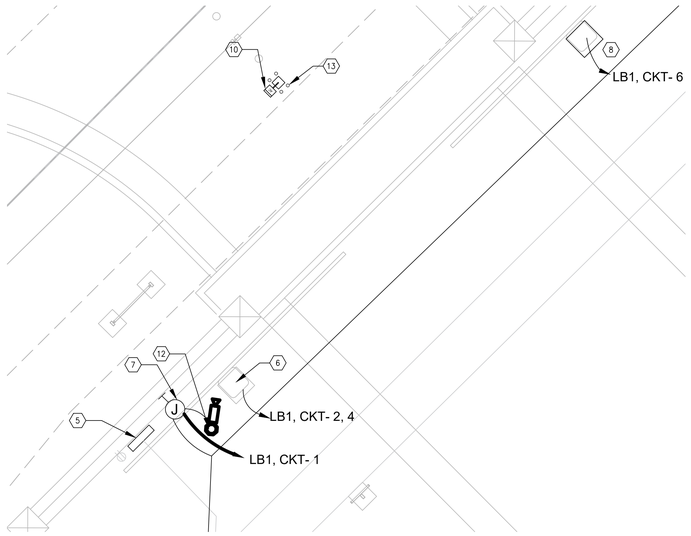


NOTES:
1. PROVIDE POWER FOR ALL OUTDOOR CAMERAS. OUTDOOR CAMERAS SHALL BE PTZ (PAN-TILT-ZOOM)TYPE WITH NIGHT VISION.
2. CAMERAS SHALL BE MOUNTED +12'-0" AFF.
3. PROVIDE HEATER AND OUTDOOR ENCLOSURE FOR ALL OUTDOOR CAMERAS.
4. SEE SPECIFICATIONS FOR ADDITIONAL DETAILS.

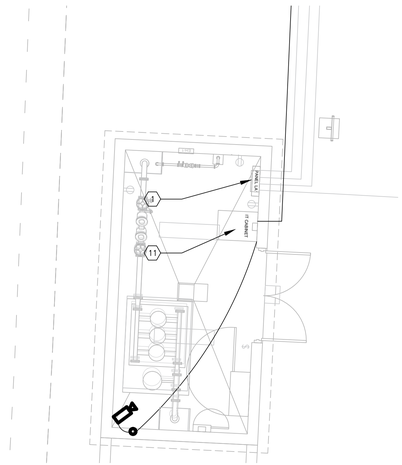
5 CCTV SYSTEM RISER DIAGRAM
SCALE: NOT TO SCALE



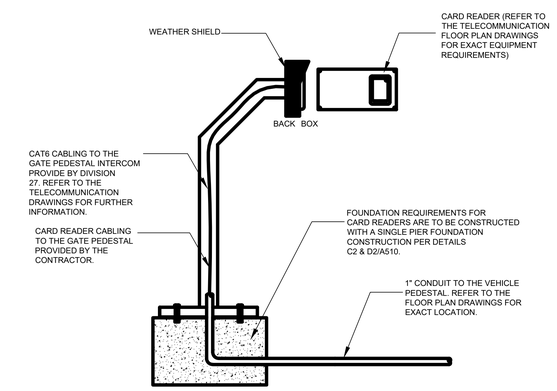
7 PTZ EXTERIOR POLE MOUNTED CAMERA DETAIL
SCALE: NOT TO SCALE



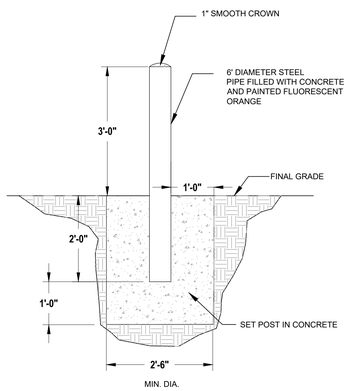
2 COMMUNICATION PLAN - GATE #2
SCALE: NOT TO SCALE



4 COMMUNICATION PLAN- PUMP HOUSE
SCALE: NOT TO SCALE



6 VEHICLE PEDESTAL DEVICE DETAIL
SCALE: NOT TO SCALE



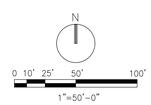
8 STEEL BOLLARD DETAIL
SCALE: NOT TO SCALE

GENERAL NOTES:

1. ANY WORK RELATED TO THE POWER LINES WILL NEED TO BE COORDINATED WITH THE LOCAL ELECTRICAL UTILITY (ROCKY MOUNTAIN POWER). CONTACT: MARK LEWIS AT (435) 865-3343.

NEW WORK KEY NOTES:

1. 240/120V 1-P PANEL LA1. REFER TO SHEET E-601 FOR ADDITIONAL INFORMATION.
2. 240/120V 1-P PANEL LC1. REFER TO SHEET E-601 FOR ADDITIONAL INFORMATION.
3. GATE MOTOR AND CONTROLLER POWERED FROM PANEL LC1.
4. J-BOX FOR CONNECTION OF SECURITY DEVICES POWERED FROM LC1.
5. 240/120V 1-P PANEL LB1. REFER TO SHEET E-601 FOR ADDITIONAL INFORMATION.
6. GATE MOTOR AND CONTROLLER POWERED FROM PANEL LB1.
7. J-BOX FOR CONNECTION OF SECURITY DEVICES POWERED FROM LB1.
8. ADDITIONAL GATE #2 MOTOR. SEE SHEET E-601 FOR ADDITIONAL INFORMATION.
9. ADDITIONAL GATE #1 MOTOR. SEE SHEET E-601 FOR ADDITIONAL INFORMATION.
10. CARD READER (ELKA 1100 STANDARD ACCESS CONTROL COLUMNS OR EQUAL).
11. IT EQUIPMENT RACK (TRIPP LITE HEAVY DUTY SRW18UHD OR EQUAL).
12. CAMERA POLE (CAMERA.POLES 20FT STEEL ROUND CAMERA OR EQUAL).
13. STEEL BOLLARD DEVICE PROTECTION (SEE DETAIL 8). FOUR BOLLARDS EACH LOCATION, IN A 2'W'3'L RECTANGULAR CONFIGURATION TO PROTECT CARD READERS (SEE SHEET A-512).



BID DOCUMENT SUBMITTAL

CD1 - REDESIGN	1/22/2021
Revisions:	Date:

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COLORADO LICENSED SINA SABOKTAKIN 56436 PROFESSIONAL ENGINEER

National Cemetery Administration Design and Construction Service

VA U.S. Department of Veterans Affairs

Drawing Title: TEL-COMMUNICATION PLAN AND DETAIL

Approved: Project Director
Steve Davis
Department of Veterans Affairs, NCA
Phone: 202.632.4833
Email: steve.davis@va.gov

Phase: BID DOCUMENTS

N/A

Project Title: NATIONAL CEMETERY DEVELOPMENT CEDAR CITY RURAL INITIATIVE

Location: Cedar City, UT

Issue Date: 7/22/2022 | Checked: TM | Drawn: SF

Project Number: 942CM3001
Building Number: N/A
Drawing Number: T-101
Sheet 61 of 61

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