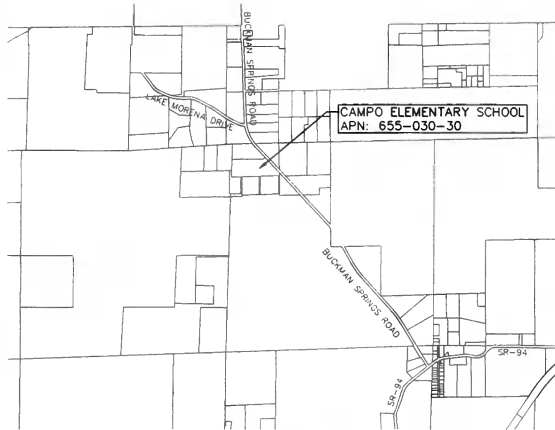


CAMPO ELEMENTARY SCHOOL REHABILITATION OF EXISTING WELL NO. 1 AND 2



LOCATION MAP
NTS

LEGEND

CONTRACTOR ACCESS ROUTE	---
EXISTING WATER LINE	---
PROPOSED WATER LINE	---
EXISTING FENCE	---
PROPOSED FENCE	---
EXISTING FIRE HYDRANT LOCATION	○
PROPOSED FIRE HYDRANT LOCATION	○
EXISTING GATE VALVE	○
PROPOSED GATE VALVE	○
REMOVE	---
CONCRETE	---
EARTH	---
GRAVEL	---

LIST OF APPLICABLE CODES

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 5, TITLE 24 CCR
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 CCR
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

APPLICABLE STANDARDS

FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

NOTES

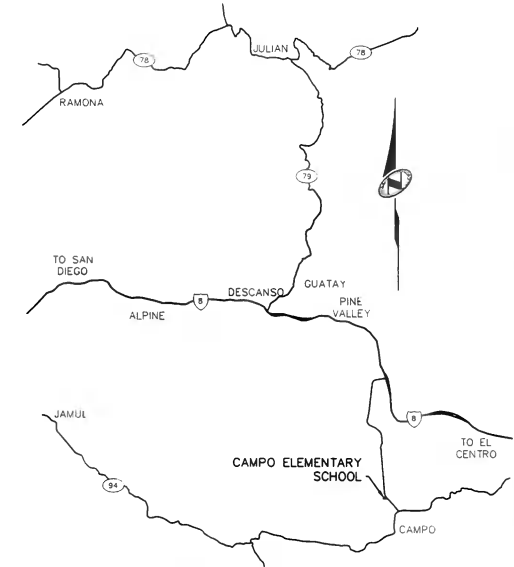
ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

A DSA CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. A MINIMUM CLASS 3 INSPECTOR IS REQUIRED.

ABBREVIATIONS

A.C.	ASBESTOS CEMENT PIPE	MAX.	MAXIMUM
A.C.P.	AGGREGATE	MEAS.	MEASURED
AGC.	APPROXIMATE	MIN.	MINIMUM
APWA	AMERICAN WATER WORKS ASSOCIATION	M.J.	MECHANICAL JOINT
AWWA	AMERICAN WATER WORKS ASSOCIATION	N	NORTH
AS	AS SHOWN	NOS.	NUMBERS
B.D.G.	BUILDING	N.T.S.	NOT TO SCALE
B.M.	BENCHMARK	O.C.	ON CENTER
B.O.P.	BOTTOM OF PIPE	O.D.	OUTSIDE DIAMETER
CTV	CABLE TELEVISION	O.H.	OVERHEAD ELECTRIC
CEC	CAMPO ELEMENTARY SCHOOL	P.E.	PAD ELEVATION
C.I.	CAST IRON	P	PERCENT
C	CENTLINE	P.C.C.	PORTLAND CEMENT CONCRETE
CL	CLASS	PI	POT HOLE
C.G.	CLEAN OUT	PIP	PROJECT IN PLACE
C.O.	CONCRETE	R.O.W.	RIGHT-OF-WAY
D.I.	DUCTILE IRON	P.P.	POWER POLE
DIA	DIAMETER	PR. OR PROP.	PROPOSED
D/W	DRIVEWAY	P.S.F.	POUNDS PER SQUARE FOOT
DWG	DRAWING	P.S.I.	POUNDS PER SQUARE INCH
Δ	DELTA	PVC	POLY VINYL CHLORIDE
E.B.	ELECTRIC BOX	R	RADIUS
EL. OR ELEV.	ELEVATION	RSP	REVISED STANDARD PLAN
E.M.	ELECTRIC METER	ROW, R/W	RIGHT-OF-WAY
E.P.	EDGE OF PAVEMENT	S	SLOPE, SOUTH
E.U.G.	EXISTING	SCH	SCHEDULE
EX. OR EXIST	EXISTING	S.F.	SQUARE FEET
FF	FINISH FLOOR ELEVATION	S.S.	STAINLESS STEEL
FL	FINISH GRADE ELEVATION	SSPW	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK)
F.M.	FORCE MAIN	STA	STATION
F.S.	FINISH SURFACE	STD.	STANDARD
FT.	FEET	STL	STEEL
G.V.	GATE VALVE	T.O.W.	TEMPORARY TELECOMMUNICATIONS
HORIZ.	HORIZONTAL	TEMP.	TEMPORARY
H.P.	HIGH POINT	T.O.P.	TOP OF PIPE
I.D.	INSIDE DIAMETER OR DIMENSION	TOP	TOP
INVT	INVERT	UNLESS NOTED OTHERWISE	UNLESS NOTED OTHERWISE
LF	LINEAL FEET	W.M.	WATER METER
		W.V.	WATER VALVE
		W/V	WITH



VICINITY MAP
NTS

DIVISION OF STATE ARCHITECT STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(APPLICATION NO. _____ FILE NO. _____)

☐ ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET

☐ THIS DRAWING, PAGE OF SPECIFICATIONS/CALCULATIONS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND 2) COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81330 OF EDUCATION CODE AND SECTIONS 4-336, 4-341, AND 4-344* OF TITLE 24, PART 1, (TITLE 24, PART 1, SECTION 4-317 [B])

SIGNATURE _____ DATE _____

ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE

ERIC RODRIGUEZ

PRINT NAME

S-4817

LICENSE NUMBER

12/31/25

EXPIRATION DATE



SCOPE OF WORK DESCRIPTION

THIS PROJECT INCLUDES THE REHABILITATION OF CAMPO ELEMENTARY SCHOOL'S WELL NO. 1 AND WELL NO. 2, RECONNECTING EACH TO THE EXISTING TRANSMISSION PIPELINES TO THE EXISTING TANK, AND SITE WORK: NEW CASING MATERIAL, COLLUM PIPING, FITTINGS, VALVES, MECHANICAL PIPING, PRESSURE GAUGE, APPURTENANCES, AND CONCRETE SEAL ARE TO BE FURNISHED AND INSTALLED FOR EACH WELL. SITE WORK WILL INCLUDE FURNISHING AND INSTALLING YARD PIPING, APPURTENANCES, A GRAVEL PAD FOR EACH WELL, CHAIN LINK FENCING, AND GATE(S) TO PROVIDE ACCESS TO THE WELL NO. 1 SITE. AN EXISTING HYDRANT WILL BE RELOCATED TO PROVIDE ACCESS TO THE WELL NO. 1 SITE. APPROXIMATELY 20 LINEAR FEET OF 6-INCH PVC WATER PIPELINE SHALL BE FURNISHED AND INSTALLED TO CONNECT TO THE PROPOSED HYDRANT. ALL WORK NOT REQUIRED FOR 24-HOUR OPERATIONS, SHALL BE CONDUCTED BETWEEN THE HOURS OF 8:00 AM AND 6:00 PM ON WEEKDAYS, EXCLUDING HOLIDAYS. SATURDAY AND SUNDAY WORK IS ENCOURAGED TO AVOID WORK DURING SCHOOL HOURS, BUT IS LIMITED FROM 8:00 AM TO 4:00 PM. ALSO SEE SPECIFICATION SECTION 01100.

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA (DIG ALERT) (811)

CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA NO LESS THAN SEVEN COMPLETE WORKING DAYS PRIOR TO ANY EXCAVATION FOR VERIFICATION AND LOCATION OF UTILITIES AND NOTIFICATION OF COMMENCEMENT OF WORK PER SPECIFICATION SECTION 01040.

PROJECT DIRECTORY

CLIENT: MOUNTAIN EMPIRE UNIFIED SCHOOL DISTRICT
3291 BUCKMAN SPRINGS ROAD
PINE VALLEY, CA 91962

CIVIL ENGINEER

NVS, INC.
15092 AVENUE OF SCIENCE, SUITE 200
SAN DIEGO, CA 92128
CONTACT: JAMES F. OWENS
JAMES.OWENS@NVS.COM
(858) 385-2187

HYDROGEOLOGIST

NVS, INC.
2525 NATOMAS PARK DRIVE, SUITE 300
SACRAMENTO, CA 95833

CONTACT: PAT DUNN
PAT.DUNN@NVS.COM
(916) 221-0012

STRUCTURAL ENGINEER

NVS, INC.
2525 NATOMAS PARK DRIVE, SUITE 300
SACRAMENTO, CA 95833

CONTACT: ERIC RODRIGUEZ
ERIC.RODRIGUEZ@NVS.COM
(714) 612-8977

SHEET INDEX

SHEET NO.	DWG NO.	DRAWING TITLE
1	T-01	TITLE SHEET
2	M-01	WELL REHABILITATION - WELL NO. 1
3	M-02	WELL REHABILITATION - WELL NO. 2
4	M-03	WELLHEAD PHOTOS
5	M-04	RELOCATE FIRE HYDRANT
6	M-05	WELLS NO. 1 AND 2 PROFILES
7	M-06	WELL REHABILITATION - DETAILS
8	M-000	PUMP STATION - MECHANICAL PLAN AND SCHEDULE
9	M-500	CONTROLS 1
10	M-501	CONTROLS 2
11	M-502	CONTROLS 3

SWRCB/DFA FUNDING AGREEMENT NO. 0000000000002002006

PWS NO. 3700018

APPROVED FOR BIDDING AND CONSTRUCTION
MOUNTAIN EMPIRE UNIFIED SCHOOL DISTRICT DIRECTOR OF FACILITIES AND CONSTRUCTION



NVS

15092 AVENUE OF SCIENCE, SUITE 200
SAN DIEGO, CA 92128
858.385.2187
858.385.2187 FAX
WWW.NVS.COM

REHABILITATION OF EXISTING WELL NO. 1 AND 2 TITLE SHEET

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: APR 2024

DRAWING NUMBER
T-01
1 OF 11 DRAWINGS
SCALE
VERTICAL: 1" = 4'-0"
HORIZONTAL: 1" = 8'-0"
DATE
04-23-2024
PROJECT NUMBER
24-000764-01

CAUTION: The engineer preparing these plans will not be responsible for or liable for unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.



SCALE: 1"=1'-0"

- (1) ½" 304 SST SAMPLE TAP W/ ½" 304 SST NIPPLE & ¾"x½" DIELECTRIC BUSHING
- (2) ½" AIR RELEASE VALVE W/ ½" 304 SST NIPPLE & ¾"x½" DIELECTRIC BUSHING
- (3) ½" HDG STEEL U-VENT W/ FINE MESH BUG SCREEN
- (4) ¾" HDG MALLEABLE IRON TEE
- (5) ¾" BRONZE PRESSURE RELIEF VALVE AND PIPING, TO GRAVEL PAD.
- (6) PROPOSED CONCRETE SEAL, EXTEND TO A MINIMUM OF 6" ABOVE EXISTING GROUND SURFACE. SLOPE AWAY FROM WELLHEAD.
- (7) NOT USED
- (8) 1" CARBON STEEL SOUNDING TUBE W/ THREADED END CAP. SEE NOTE 3.
- (9) NOT USED
- (10) 1½" HDG STEEL PIPE, TYP.
- (11) 1½" HDG MALLEABLE IRON UNION
- (12) 1½" HDG MALLEABLE IRON TEE
- (13) 1½" POSITIVE DISPLACEMENT METER W/ FLOW TOTALIZER
- (14) 1½" BRONZE CHECK VALVE
- (15) 1½" BRONZE BALL VALVE, WATTS LFFBV-3C-M1 OR APPROVED EQUAL
- (16) 1½" HDG MALLEABLE IRON CROSS
- (17) 1½" HDG MALLEABLE IRON ELBOW
- (18) 1½"x2" HDG MALLEABLE IRON REDUCER
- (19) 1½" THREADED HOSE ADAPTOR
- (20) 2" HDG STEEL PIPE, TYP.
- (21) 1½" HDG MALLEABLE IRON TEE
- (22) PROPOSED SST PRESSURE GAUGE
- (23) CAST IRON WELL SEAL W/ 2" DROP PIPE, 1" & ½" VENT OPENINGS
- (24) REMOVE AND REINSTALL EXISTING POWER CABLES TO PUMP
- (25) PIPE SUPPORT, SEE DETAIL 1, THIS SHEET
- (26) EXISTING NATIVE GROUND SURFACE
- (27) 1½" AIR RELEASE VALVE W/ ½" 304 SST NIPPLE & ¾"x½" DIELECTRIC BUSHING
- (28) 1½" HDG STEEL U-VENT W/ FINE MESH BUG SCREEN
- (29) NEW WELLHEAD TO BE A MINIMUM HEIGHT OF AT LEAST 29" ABOVE EXISTING SURFACE
- (30) ¾" BRONZE BALL VALVE, NORMALLY OPEN, WATTS LFFBV-3C-M1 OR APPROVED EQUAL
- (31) 2" HDG MALLEABLE IRON TEE

DSA APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-122492 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☐
DATE: 01/03/2024

SCALE: 1"=80'

1. EXCEPT AS NOTED OTHERWISE, CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING ABOVE GRADE WELL PIPING AND APPURTENANCES. CONTRACTOR SHALL COORDINATE WITH CONSTRUCTION MANAGER PRIOR TO ANY DEMOLITION WORK.
2. CONTRACTOR WILL NEED TO LIFT, REMOVE, STORE, AND RE-INSTALL EXISTING WELL PUMP/MOTOR AND DROP PIPING FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
3. THE STEEL SOUNDING TUBE, WITH FACTORY THREADED TAP FOR VENT, SHALL BE SHOP WELDED TO THE PROPOSED STEEL CASING. THE SOUNDING TUBE AND CASING SHALL BE PRIMED AND EPOXY COATED.
4. CONTRACTOR SHALL DISINFECT EXISTING WELL, EXISTING WELL PIPING, AND PROPOSED WELL PIPING IN ACCORDANCE WITH AWWA STANDARD C654-13 PRIOR TO PLACING WELL BACK INTO SERVICE.
5. NEW WELLHEAD CASING SHALL BE A MINIMUM HEIGHT OF 25" ABOVE THE FINISH ELEVATION OF THE PROPOSED GRAVEL PAD WHICH WILL BE SET 4" ABOVE THE ELEVATION OF EXISTING GROUND.
6. INSTALL APPROXIMATELY 10 LF 2" HDPE WATER PIPE. CONNECT TO EXISTING PIPELINE TO EXISTING TANK.
7. CONTRACTOR SHALL MAINTAIN EQUIPMENT, MATERIALS, AND PERSONNEL IN CLOSE PROXIMITY TO WELLHEAD AND SHALL NOT INFRINGE ON SCHOOL AREAS OUTSIDE OF THE FENCED AREA IN WHICH WELL NO. 1 IS LOCATED.
8. ONLY ONE WELL SHALL BE DISCONNECTED FROM THE SYSTEM AT ANY TIME.
9. LOCATE AND EXPOSE ALL POWER AND SIGNAL CONDUITS BENEATH THE FOOTPRINT OF PROPOSED GRAVEL PAD PRIOR TO INITIATING DRILLING OR OTHER GROUND DISTURBING ACTIVITIES.
10. FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL COMPLY WITH CFC CH. 33 AND CBC CH. 33.



SCALE: 1"=1'-0"

SCALE: 1"=1'-0"



NT

1
TYP

DATE: 10/4/2023 TIME: 2:49:02 PM
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DESIGNER: JTW PROJ. MGR: JFO

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NV5

15092 AVENUE OF SCIENCE, SUITE 200
SAN DIEGO, CA 92128
858.385.0500 TEL
858.385.0400 FAX
WWW.NV5.COM

WELL REHABILITATION - WELL NO. 1

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: OCT 2023

DRAWING NUMBER

M-01

2 OF 7 DRAWINGS

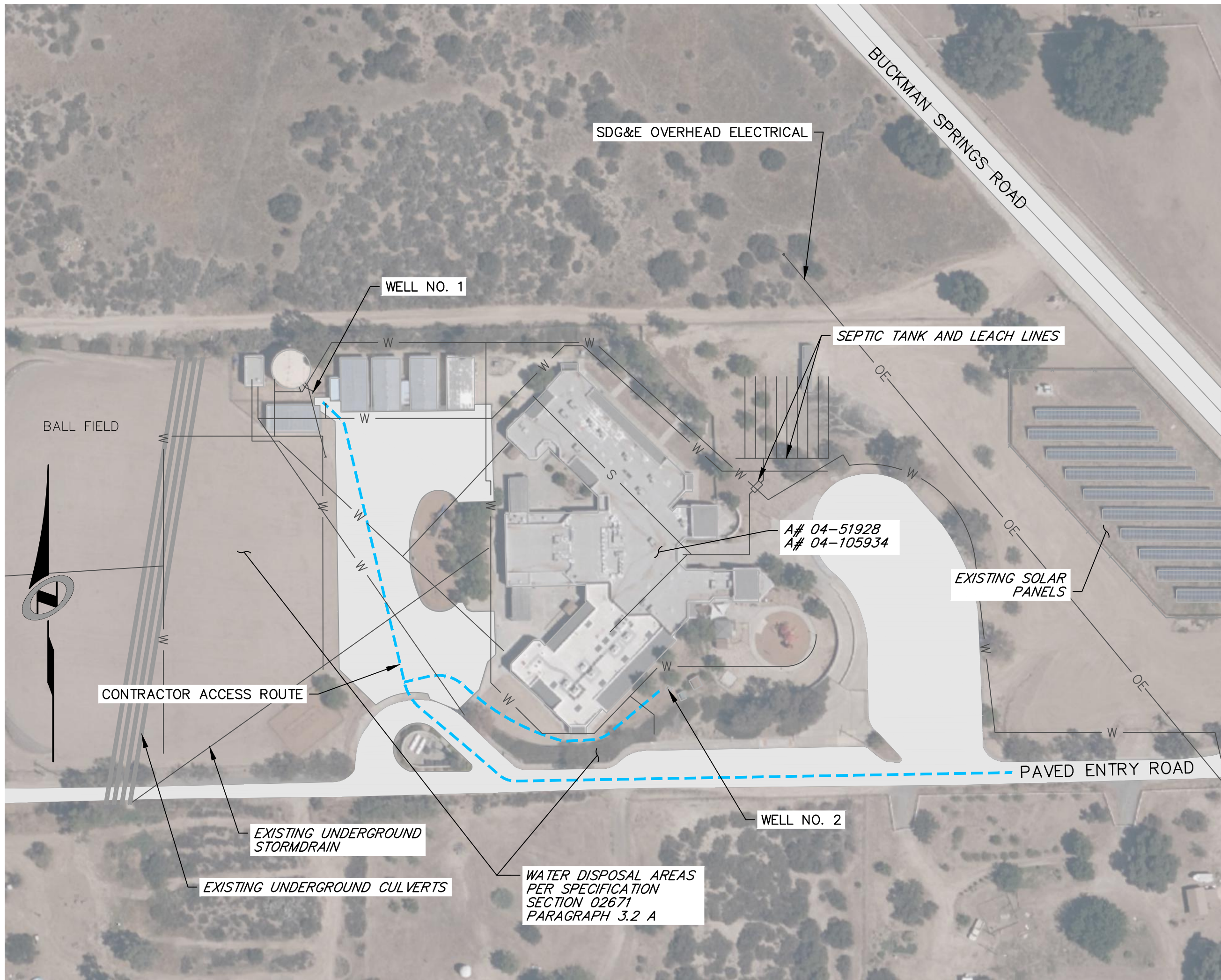
SCALE

VERTICAL: $1'' = AS$

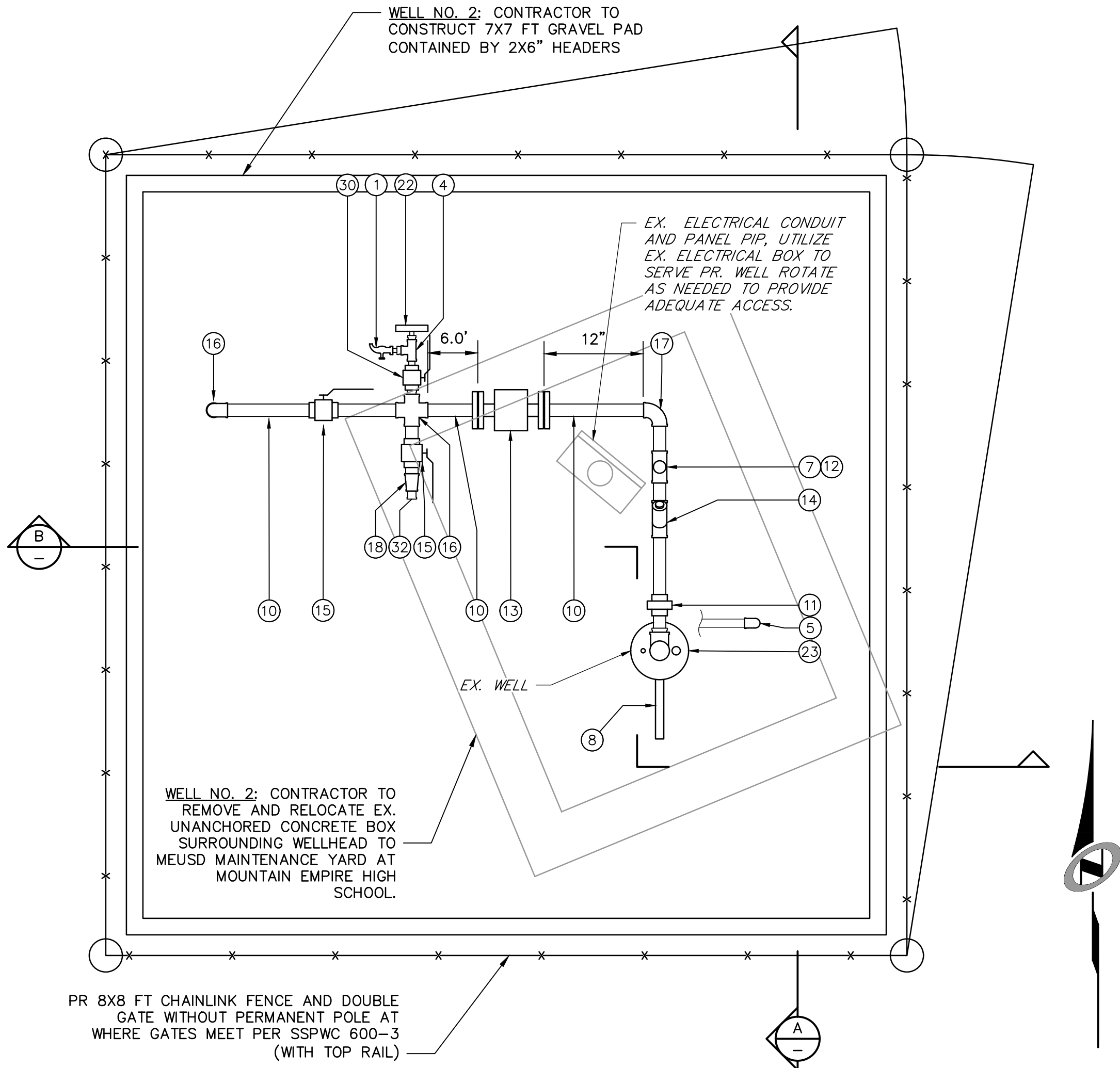
HORIZONTAL: 1" = AS
DSA PROJECT NUMBER

04-122492
NV5 JOB NUMBER

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.



WELL NO. 1 AND 2 SITE PLAN
SCALE: 1"=80'



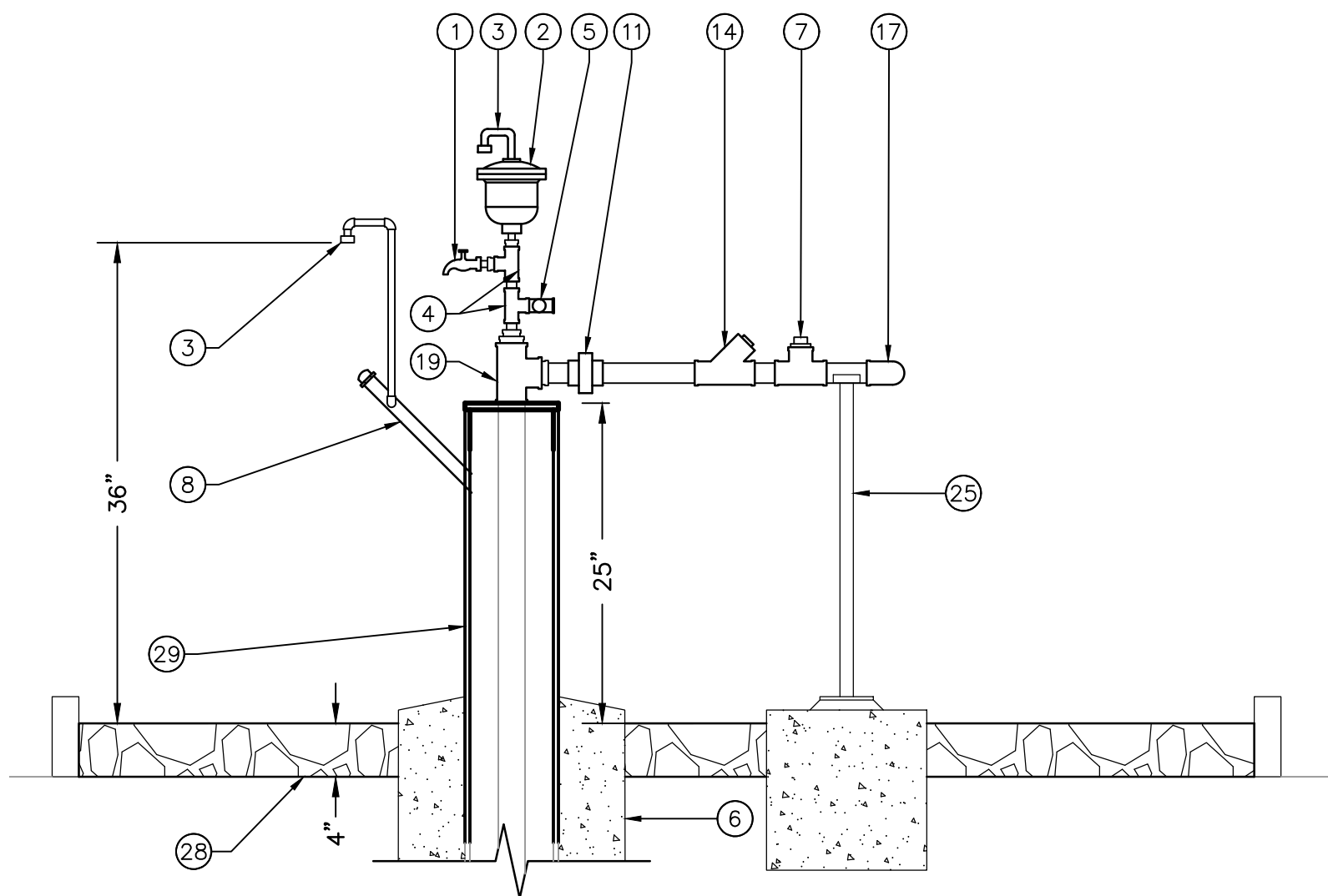
WELL NO. 2 - MECHANICAL PLAN
SCALE: 1"=1'-0"

EQUIPMENT SCHEDULE

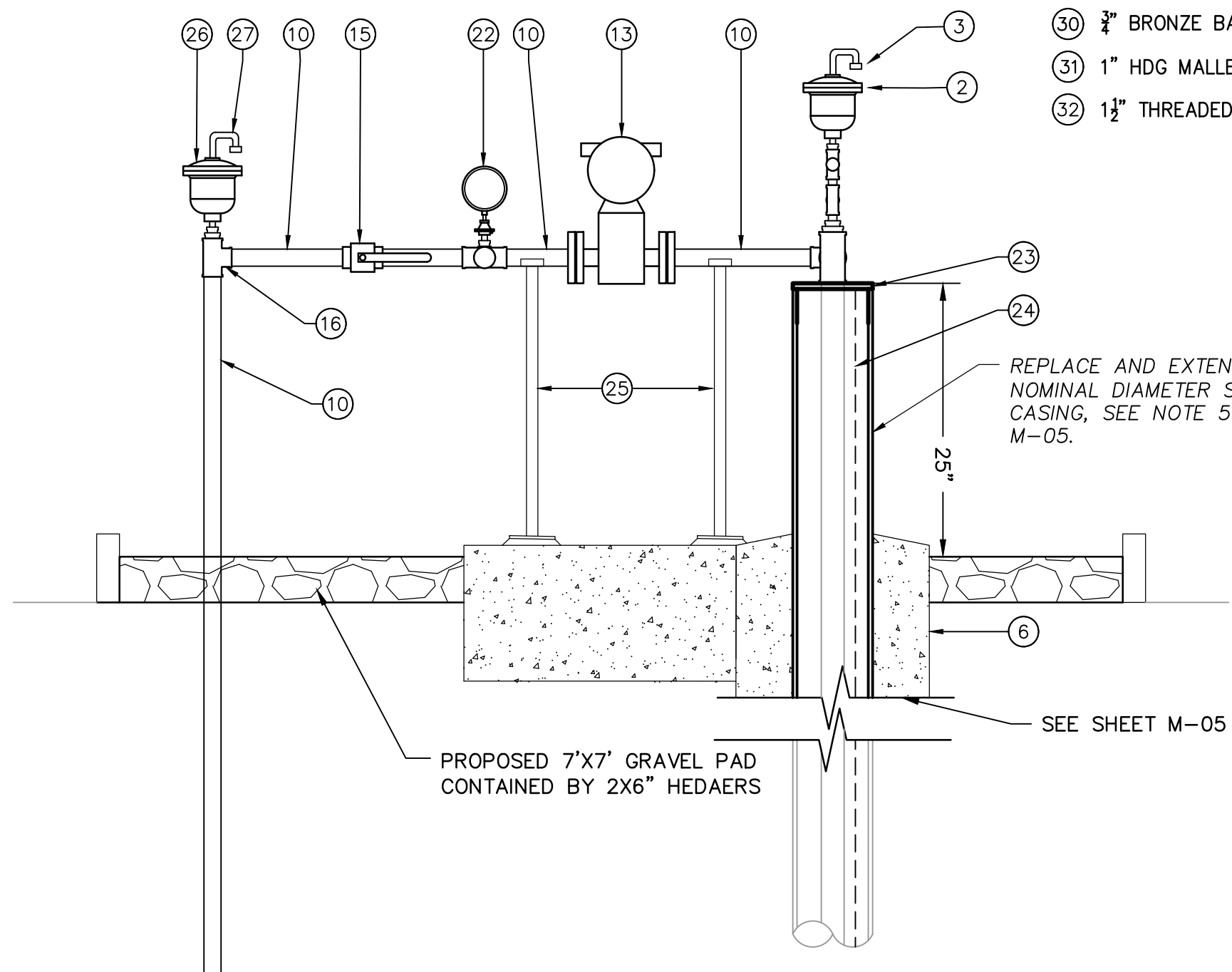
- 1/2" 304 SST SAMPLE TAP W/ 1/2" 304 SST NIPPLE & 3/4"x1/2" DIELECTRIC BUSHING
- 1/2" AIR RELEASE VALVE W/ 1/2" 304 SST NIPPLE & 3/4"x1/2" DIELECTRIC BUSHING
- 1/2" HDG STEEL U-VENT W/ FINE MESH BUG SCREEN
- 3/4" HDG MALLEABLE IRON TEE
- 3/4" BRONZE PRESSURE RELIEF VALVE AND PIPING, TO GRAVEL PAD
- PROPOSED CONCRETE SEAL, EXTEND TO A MINIMUM OF 6" ABOVE EXISTING GROUND SURFACE. SLOPE AWAY FROM WELLHEAD.
- 1" HDG MALLEABLE IRON PLUG
- 1" CARBON STEEL SOUNDING TUBE W/ THREADED END CAP. SEE NOTE 3.
- NOT USED
- 1 1/2" HDG STEEL PIPE, TYP.
- 1 1/2" HDG MALLEABLE IRON UNION
- 1 1/2" HDG MALLEABLE IRON TEE
- 1 1/2" POSITIVE DISPLACEMENT METER W/ FLOW TOTALIZER
- 1 1/2" BRONZE CHECK VALVE
- 1 1/2" BRONZE BALL VALVE, WATTS LFFBV-3C-M1 OR APPROVED EQUAL
- 1 1/2" HDG MALLEABLE IRON CROSS
- 1 1/2" HDG MALLEABLE IRON ELBOW
- 1 1/2"x2" HDG MALLEABLE IRON REDUCER
- 2" HDG MALLEABLE IRON TEE
- 2" HDG STEEL PIPE, TYP.
- 2" HDG MALLEABLE IRON ELBOW
- SST PRESSURE GAUGE
- CAST IRON WELL SEAL W/ 2" DROP PIPE, 1" & 1/2" VENT OPENINGS
- EXISTING POWER CABLES TO PUMP
- PIPE SUPPORT, SEE DETAIL 1, SHEET M-01
- 1 1/2" AIR RELEASE VALVE W/ 1/2" 304 SST NIPPLE & 3/4"x1/2" DIELECTRIC BUSHING
- 1 1/2" HDG STEEL U-VENT W/ FINE MESH BUG SCREEN
- EXISTING NATIVE GROUND SURFACE
- NEW WELLHEAD TO BE A MINIMUM HEIGHT OF AT LEAST 29" ABOVE EXISTING SURFACE
- 3" BRONZE BALL VALVE, NORMALLY OPEN, WATTS LFFBV-3C-M1 OR APPROVED EQUAL
- 1" HDG MALLEABLE IRON ELBOW WITH THREADS FOR HOSE CONNECTION
- 1 1/2" THREADED HOSE ADAPTOR

GENERAL NOTES:

- EXCEPT AS NOTED OTHERWISE, CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING ABOVE GRADE WELL PIPING AND APPURTENANCES. CONTRACTOR SHALL COORDINATE WITH CONSTRUCTION MANAGER PRIOR TO ANY DEMOLITION WORK.
- CONTRACTOR WILL NEED TO LIFT, REMOVE, STORE, AND RE-INSTALL EXISTING WELL PUMP/MOTOR AND DROP PIPING FOR AND INSTALLATION OF THE PROPOSED IMPROVEMENTS.
- THE STEEL SOUNDING TUBE, WITH FACTORY THREADED TAP FOR VENT, SHALL BE WELDED TO THE PROPOSED STEEL CASING EXTENSION. THE SOUNDING TUBE AND CASING SHALL BE PRIMED AND EPOXY COATED.
- CONTRACTOR SHALL DISINFECT EXISTING WELL, EXISTING WELL PIPING, AND PROPOSED WELL PIPING IN ACCORDANCE WITH AWWA STANDARD C654-13 PRIOR TO PLACING WELL BACK INTO SERVICE.
- CONTRACTOR SHALL RAISE WELLHEAD CASING TO A MINIMUM HEIGHT OF 25" ABOVE THE FINISH ELEVATION OF THE PROPOSED GRAVEL PAD WHICH WILL BE SET APPROXIMATELY 4" ABOVE THE ELEVATION OF EXISTING GROUND. NEW STEEL CASING WILL BE WELDED TO THE EXISTING CASING WHERE EXISTING MATERIAL IS COMPETENT, REPLACING ANY DAMAGED OR INCOMPETENT MATERIAL ON THE EXISTING WELL CASING. EXCAVATION BELOW EXISTING GROUND WILL BE NECESSARY TO REACH COMPETENT CASING MATERIAL.
- INSTALL APPROXIMATELY 10 LF 1.5" STEEL WATER PIPE. CONNECT TO EXISTING PIPELINE TO EXISTING TANK.
- CONTRACTOR SHALL MAINTAIN EQUIPMENT, MATERIALS, AND PERSONNEL IN CLOSE PROXIMITY TO WELLHEAD AND SHALL NOT INFRINGE ON AREAS OUTSIDE OF THE FENCED AREA IN WHICH WELL NO. 2 IS LOCATED. CONTRACTOR TO PROVIDE TEMPORARY FENCING TO CONTAIN ANY EQUIPMENT TO REMAIN ONSITE DURING CONSTRUCTION.
- ONLY ONE WELL SHALL BE DISCONNECTED FROM THE SYSTEM AT ANY TIME.
- EXISTING WELL NO. 2 PVC CASING TO BE SECURED WITHIN STEEL CASING. SEE SHEET M-05.
- LOCATE AND EXPOSE ALL POWER AND SIGNAL CONDUITS AND WATER PIPELINES BENEATH FOOTPRINT OF PROPOSED FENCING IMMEDIATELY FOLLOWING REMOVAL OF UTILITY BOX ENCLOSING WELL NO. 2.
- FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL COMPLY WITH CFC CH. 33 AND CBC CH. 33.



SECTION A
SCALE: 1"=1'-0"



SECTION B
SCALE: 1"=1'-0"

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PATH: N:\21-0001154-01\CADD\CIVIL\WELL_IMP
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DESIGNER: JTW PROJ. MGR: JFO

NO.	BY	DATE	REVISIONS:

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.



NV5

15092 AVENUE OF SCIENCE, SUITE 200
SAN DIEGO, CA 92128
858.385.0500 TEL
858.385.0400 FAX
WWW.NV5.COM

REHABILITATION OF EXISTING WELL NO. 1 AND 2
WELL REHABILITATION - WELL NO. 2

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: OCT 2023

DRAWING NUMBER
M-02
3 OF 7 DRAWINGS
SCALE
VERTICAL: 1"= AS
HORIZONTAL: 1"= AS
DSA PROJECT NUMBER
04-122492
NV5-255 NUMBER
21-0001154-01

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-122492 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☐
DATE: 01/03/2024



FOR FENCE AND
GATE MODIFICATIONS,
SEE SHEET M-04

RELOCATE EX. FIRE HYDRANT,
SEE SHEET M-04



WELL NO. 2: CONTRACTOR TO REMOVE
AND RELOCATE EX. UNANCHORED
CONCRETE BOX SURROUNDING
WELLHEAD. COORDINATION WITH MEUSD
REQUIRED PER SPECIFICATION SECTION
01040.

WELL NO. 1

WELL NO. 2

DATE: 10/4/2023 TIME: 2:52:15 PM
SERVER: LAYOUT: LAYOUT
PATH: N:\21-0001154-01\CADD\CIVIL\WELL_IMP
DRAWING NAME: C-03.DWG
PAGE SETUP: ---
DESIGNER: RMP PROJ. MGR: JFO

NO.	BY	DATE	REVISIONS:

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.



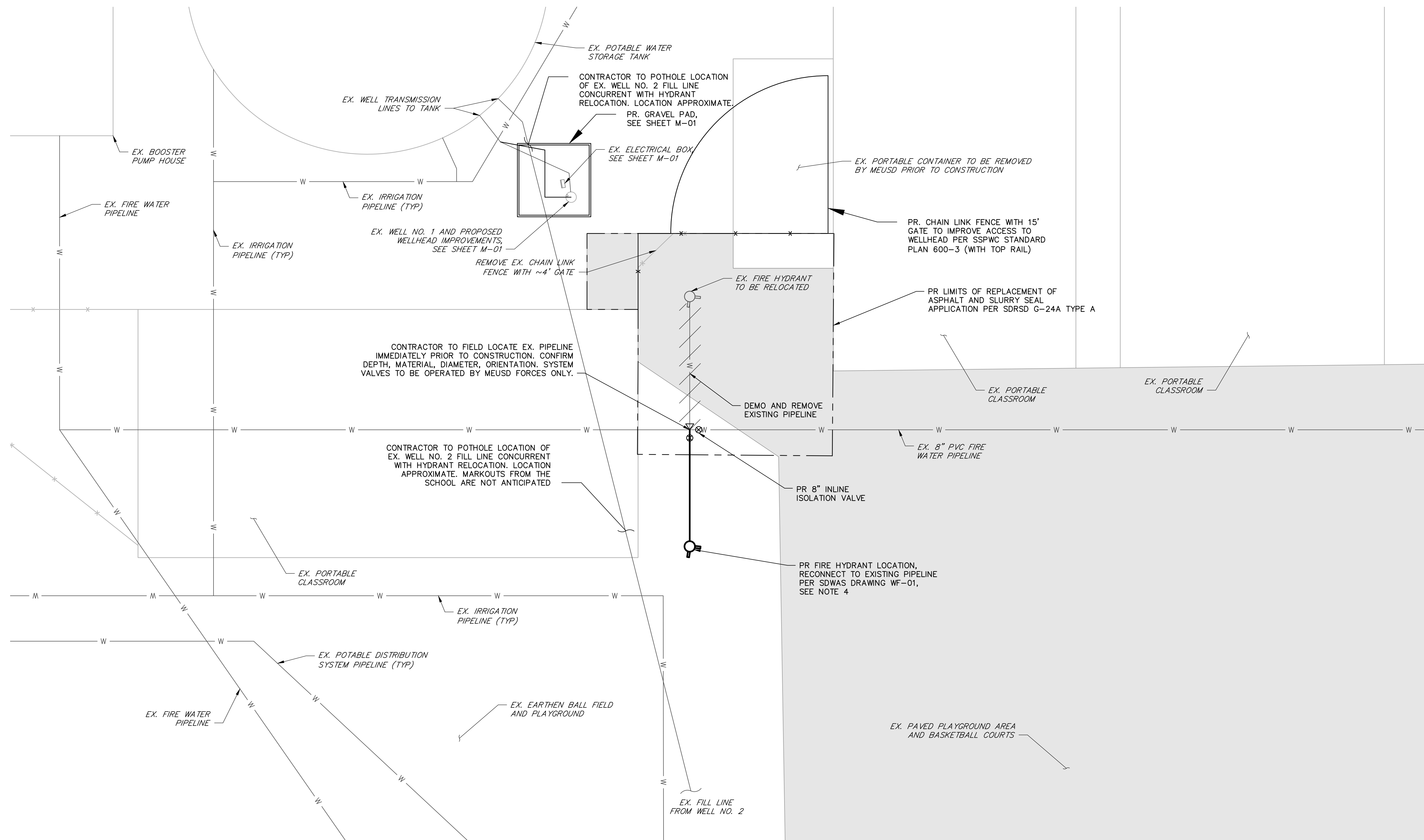
15092 AVENUE OF SCIENCE, SUITE 200
SAN DIEGO, CA 92128
858.385.0500 TEL
858.385.0400 FAX
WWW.NV5.COM

REHABILITATION OF EXISTING WELL NO. 1 AND 2
WELLHEAD PHOTOS

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: OCT 2023

DRAWING NUMBER
M-03
4 OF 7 DRAWINGS
SCALE
VERTICAL: 1"= 30'
HORIZONTAL: 1"= 30'
DSA PROJECT NUMBER
04-122492
NVS JOB NUMBER
21-0001154-01

**GENERAL NOTES:**

1. CONTRACTOR SHALL HOUSE ALL MATERIALS ASSOCIATED WITH THE CONSTRUCTION OF THE PIPELINE AND RELOCATED HYDRANT INSIDE OF THE EXISTING FENCE.
2. CONTRACTOR TO REPLACE PAVEMENT REMOVED OR DAMAGED AS PART OF THE HYDRANT RELOCATION. RESURFACE TRENCH PER SAN DIEGO COUNTY DESIGN STD. DS-22.
3. CONTRACTOR TO COORDINATE CONSTRUCTION SCHEDULE WITH MEUSD TO MINIMIZE IMPACTS OF CONSTRUCTION ON ADJACENT CLASSROOMS AND RECREATION AREAS. CONTRACTOR TO RELOCATE HYDRANT PRIOR TO INITIATING WORK AT WELL NO. 1.
4. LOCATIONS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL EXPOSE AND CONFIRM THE LOCATION, DEPTH, SIZE, MATERIAL, AND ORIENTATION OF EXISTING PIPELINES TO BE CONNECTED PRIOR TO CONSTRUCTION. SEE SPECIFICATION SECTION 01530.
5. LOCATIONS AND OPERABILITY OF EXISTING VALVES UNKNOWN. SHUTDOWN OF FIRE SYSTEM IS LIKELY REQUIRED TO COMPLETE PROPOSED WORK. WORK TO BE PERFORMED WHEN STUDENTS ARE NOT PRESENT. SEE SPECIFICATION SECTION 01047.

RELOCATED HYDRANT SITE PLAN

SCALE: 1"=5'

DATE: 10/4/2023 TIME: 2:53:40 PM
SERVER: LAYOUT: LAYOUT
PATH: N:\21-0001154-01\CADD\CIVIL\WELL_IMP
DRAWING NAME: C-04.DWG
PAGE SETUP: ---
DESIGNER: JTW PROJ. MGR: JFO

NO.	BY	DATE	REVISIONS:

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REHABILITATION OF EXISTING WELL NO. 1 AND 2

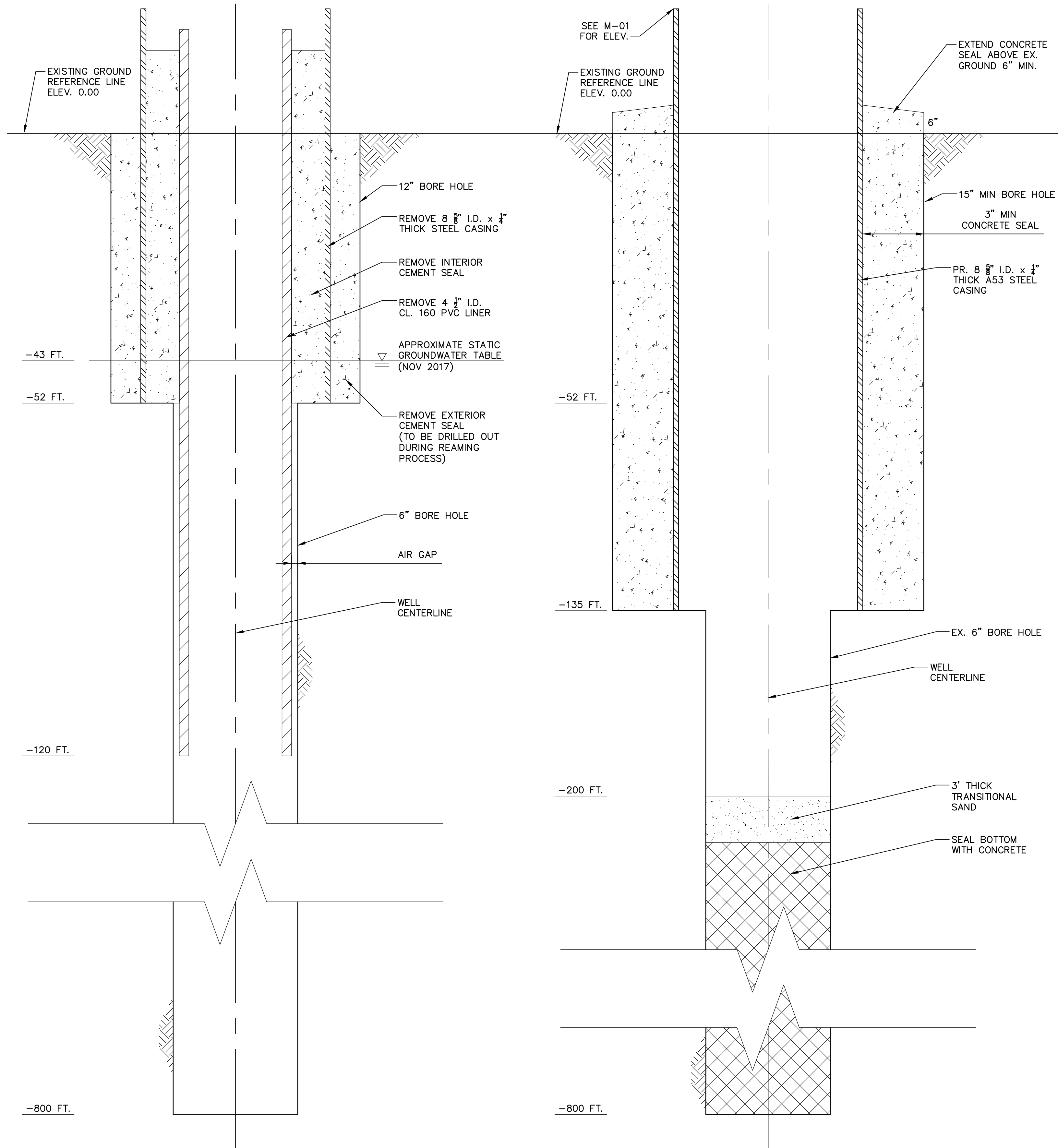
RELOCATE FIRE HYDRANT

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: OCT 2023

DRAWING NUMBER
M-04
5 OF 7 DRAWINGS
SCALE
VERTICAL: 1"= 5'
HORIZONTAL: 1"= 5'
DSA PROJECT NUMBER
04-122492
NVS-255 NUMBER
21-0001154-01

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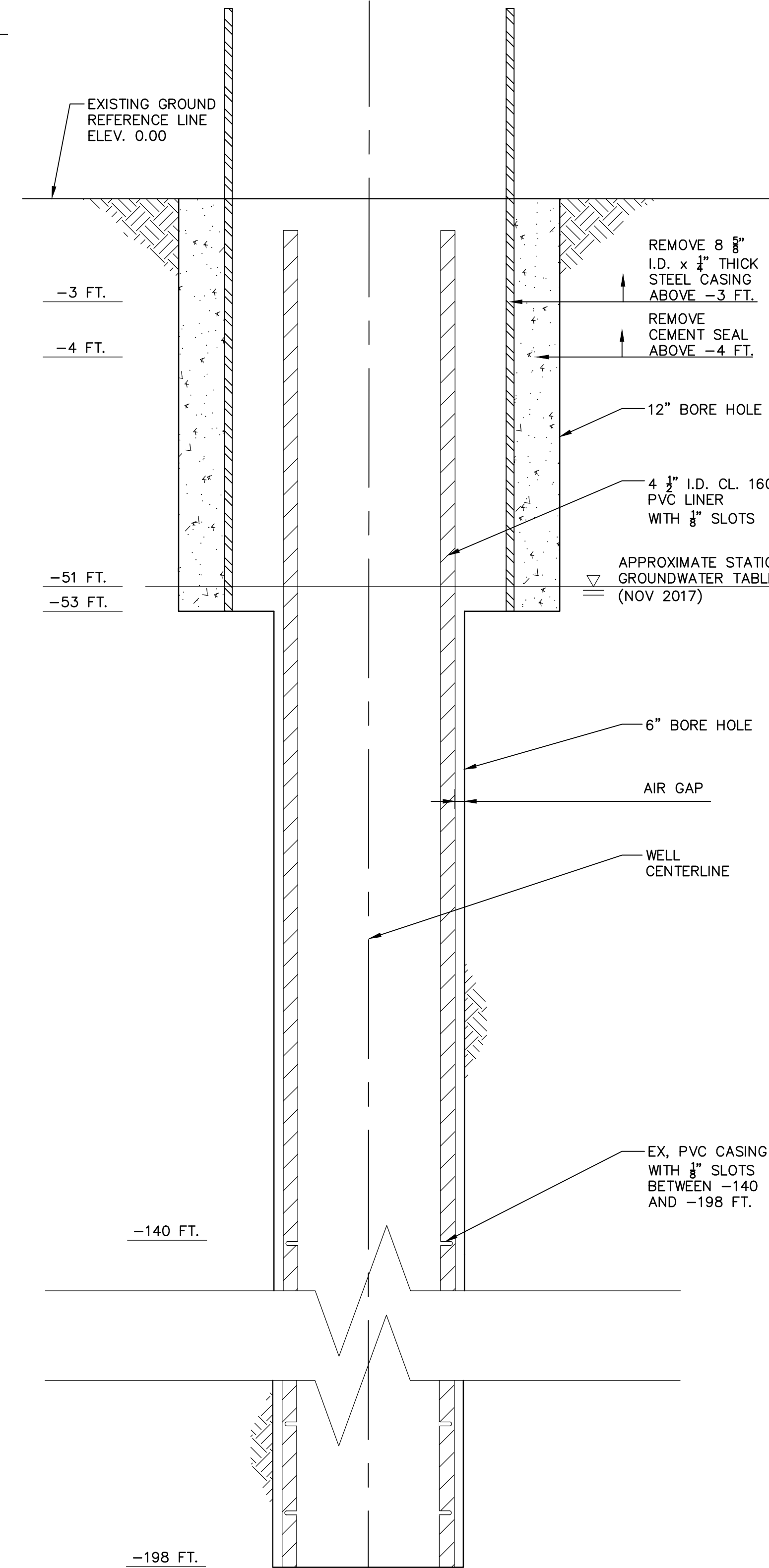


EX. WELL NO. 1 PROFILE

HORIZ. SCALE: 1"=3"
WELL COMPLETION REPORT NO. 491663

PR. WELL NO. 1 PROFILE

HORIZ. SCALE: 1"=3"



EX. WELL NO. 2 PROFILE

HORIZ. SCALE: 1"=3"
WELL COMPLETION REPORT NO. 491666

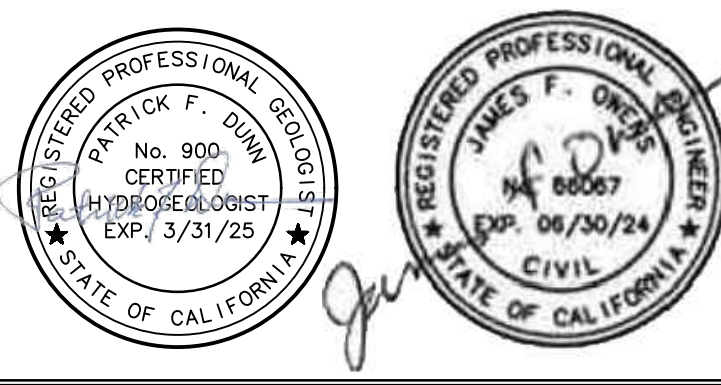
PR. WELL NO. 2 PROFILE

HORIZ. SCALE: 1"=3"

XREFS: 24X361 - WellImp.dwg

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SERVER: _____ LAYOUT: _____
PATH: _____
DRAWING NAME: _____
PAGE SETUP: _____
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REHABILITATION OF EXISTING WELL NO. 1 AND 2

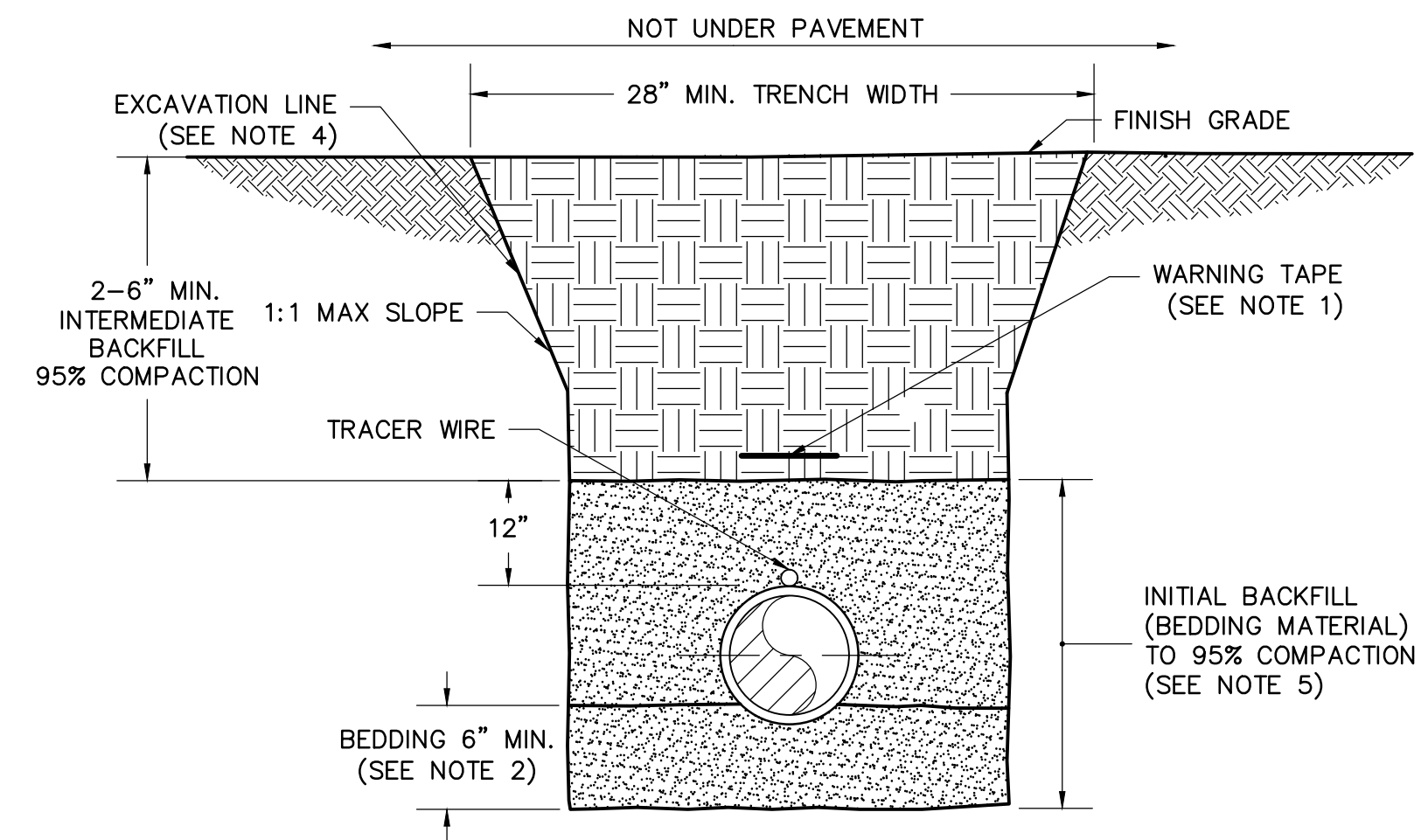
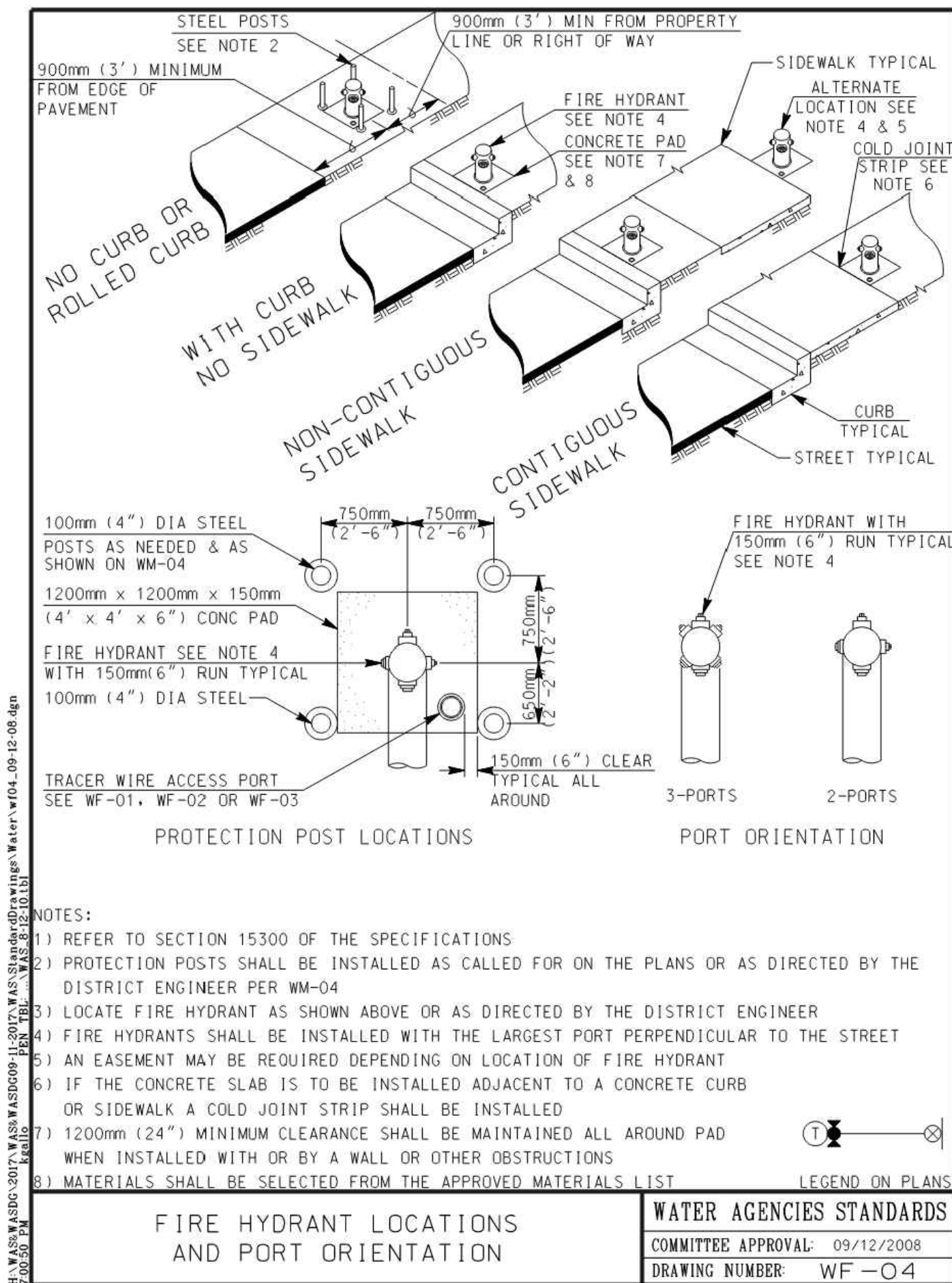
WELLS NO. 1 AND 2 PROFILES

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: OCT 2023

DRAWING NUMBER
M-05
6 OF 7 DRAWINGS
SCALE
VERTICAL: 1"= NTS
HORIZONTAL: 1"= 3"
DSA PROJECT NUMBER
04-122492
NV5 JOB NUMBER
21-0001154-01

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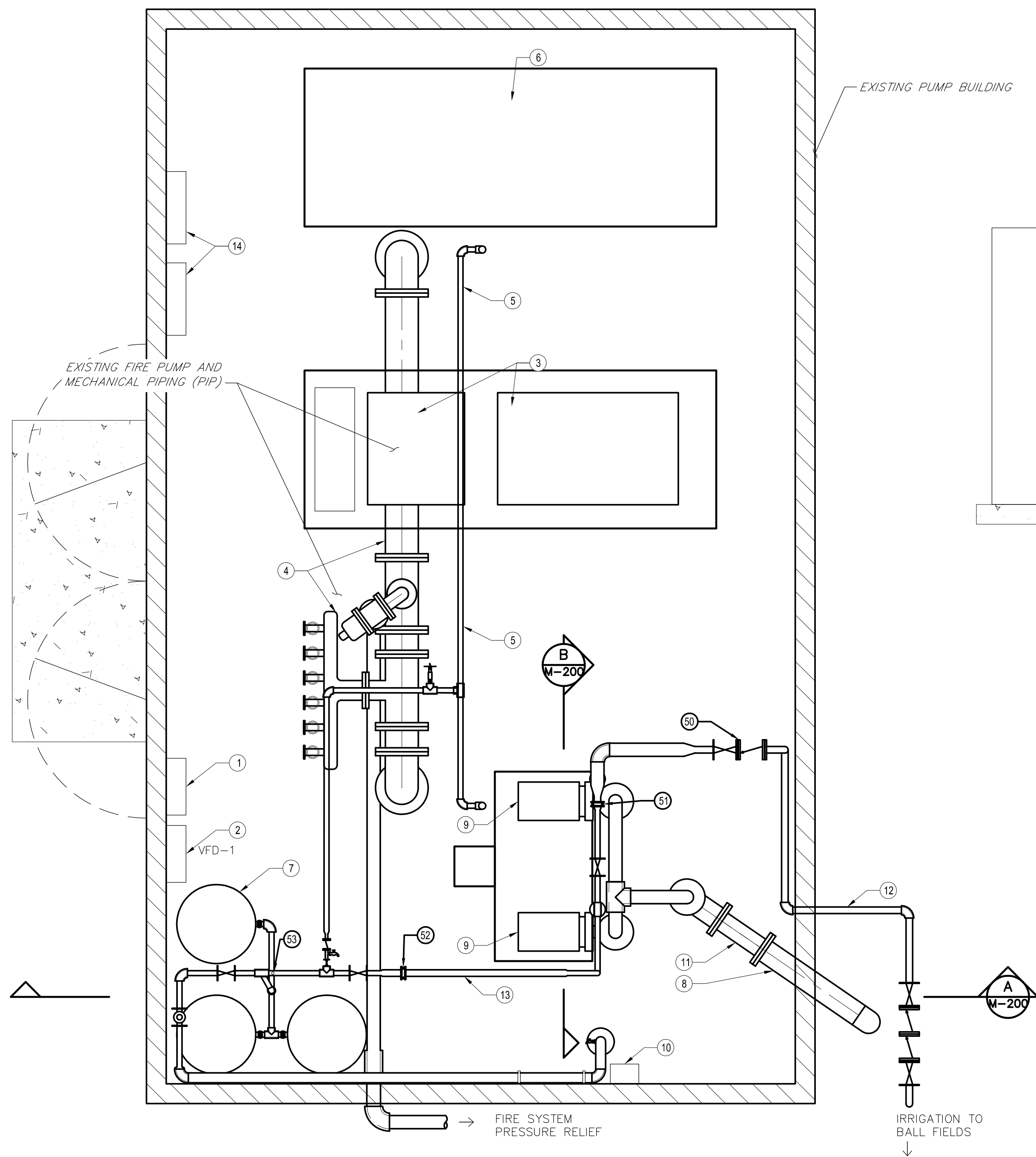


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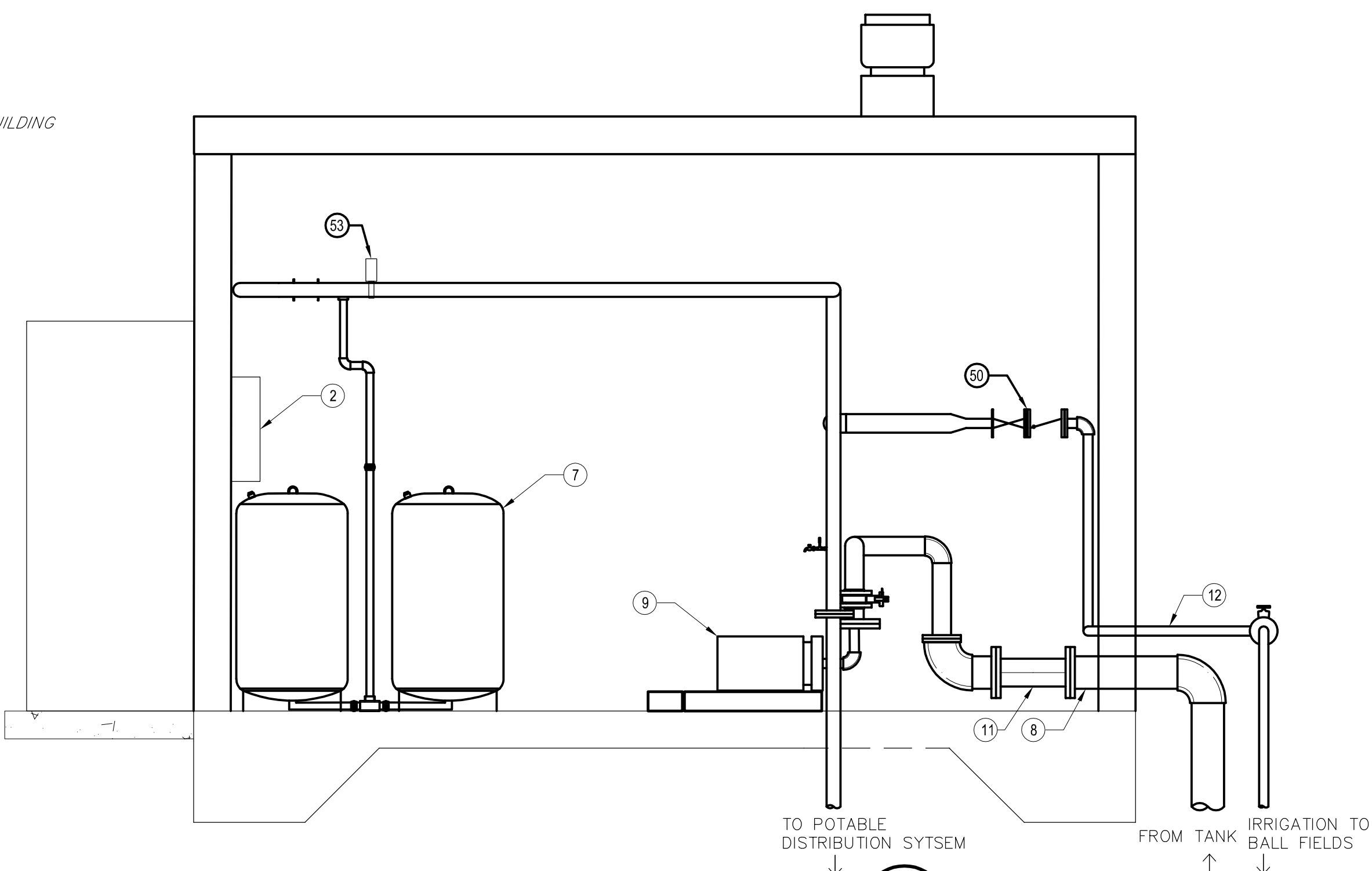
AWING NUMBER
M-06
 OF **7** DRAWINGS
 SCALE
 TICAL: 1" = AS
 HORIZONTAL: 1" = 5'
 A PROJECT NUMBER
04-122492
 NV5 JOB NUMBER
21-0001154-01

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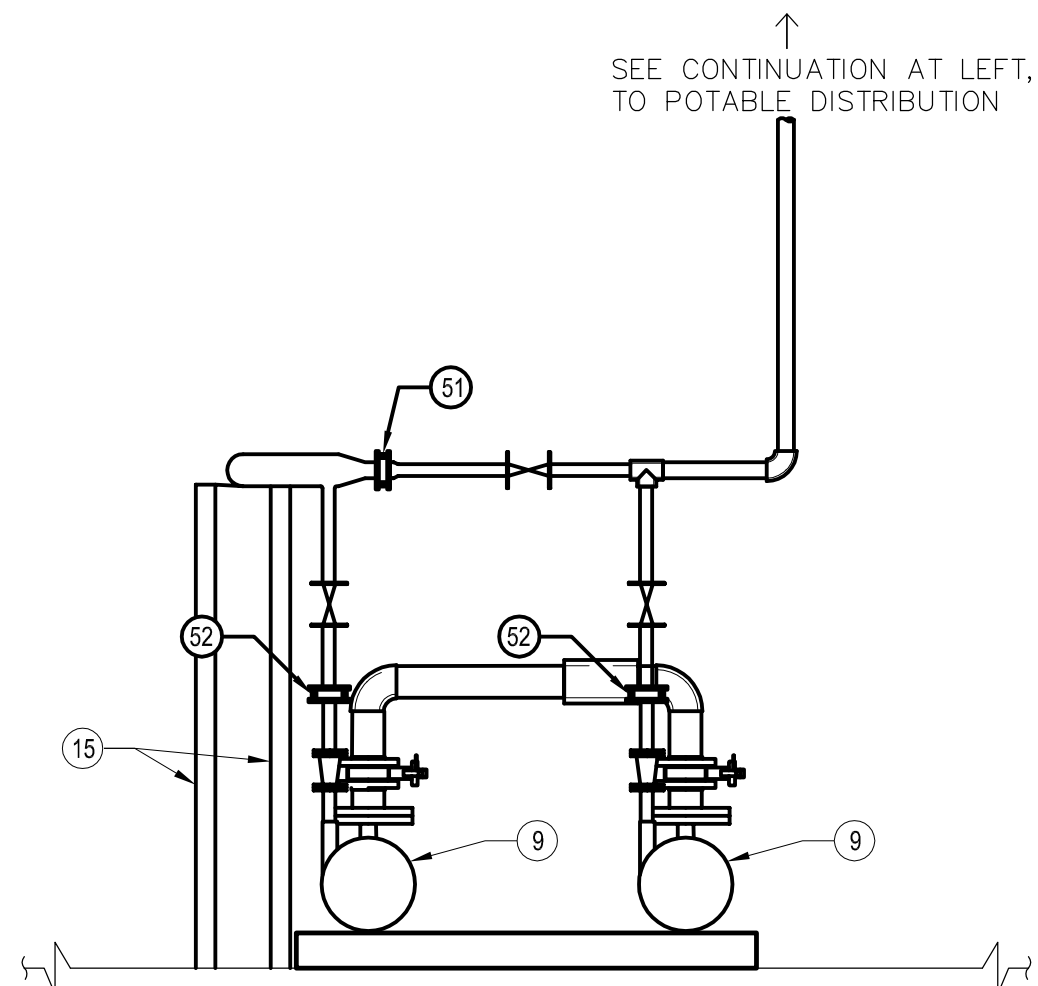
CAMPO ELEMENTARY BOOSTER PUMP - MECHANICAL PLAN

SCALE: 1"=2'-0"



SECTION A

SCALE: 1"=2'-0"



SECTION B

SCALE: 1"=2'-0"

CONSTRUCTION NOTES

- EXISTING WELL NO. 1 AND 2 PUMP CONTROLS
- EXISTING BOOSTER PUMP CONTROLS. REMOVE BOOSTER PUMP CONTROLS AND REPLACE WITH VARIABLE FREQUENCY DRIVE PUMP CONTROL PANEL
- EXISTING FIRE PUMP AND DIESEL ENGINE
- EXISTING FIRE PUMP MECHANICAL PIPING
- EXISTING OVERHEAD FIRE SPRINKLER LINES FOR BOOSTER PUMP BUILDING
- EXISTING FIRE PUMP GAS TANK AREA WITH RAISED CURB SECONDARY CONTAINMENT
- EXISTING HYDROPNEUMATIC TANKS SERVING DOMESTIC POTABLE WATER SYSTEM
- EXISTING 6" PVC WATER PIPELINE FROM EXISTING WATER STORAGE TANK
- EXISTING 10 HP BOOSTER PUMP (POTABLE WATER)
- EXISTING ELECTRICAL APPURTENANCE - STORAGE TANK LEVEL SIGNAL SPLITTER BOX
- EXISTING 6" DI COUPLING
- EXISTING 2" PIPELINE TO EXISTING CES IRRIGATION SYSTEM
- EXISTING PIPELINE FROM BOOSTER PUMPS TO DOMESTIC POTABLE WATER SYSTEM VIA EXISTING HYDROPNEUMATIC TANKS
- EXISTING ELECTRICAL PANELS (480 V)
- EXISTING PIPE SUPPORT
- CONTRACTOR TO VERIFY PIPE MATERIAL, REMOVE CHECK VALVE AND INSTALL (2) BLIND FLANGES FOR FUTURE USE. VALVE SIZING TO MATCH EXISTING PIPE SIZE TO CREATE PHYSICAL SEPARATION FROM IRRIGATION SYSTEM
- REMOVE EXISTING AND INSTALL NEW 2" MUELLER 71 CLASS 125 STEAM SPECIALTY CHECK VALVE. REVERSE FLOW DIRECTION TO ALLOW FOR BOTH BOOSTER PUMPS TO SERVE DOMESTIC POTABLE WATER SYSTEM.
- REMOVE EXISTING AND INSTALL NEW 2" MUELLER 71 CLASS 125 STEAM SPECIALTY CHECK VALVE.
- NEW PRESSURE TRANSDUCER (PT-01), 4-20MA, 0-200 PSI, 1/4" NPT CONNECTED TO VFD PANEL FOR REGULATING PUMP PRESSURE.

VARIABLE FREQUENCY DRIVE SCHEDULE

TAG	STATION TYPE	PANEL CATEGORY	PUMP HP	ELECTRICAL SERVICE			OPERATION	UL LISTED	VFD MODEL	VFD CONTROLLER MODEL	REMARK
				FLA	V	PH					
VFD-1	DUPLEX	PREMIER	10	17.5	208	3	MUNICIPAL WATER PUMPING, DUPLEX CONTROL PANEL FOR CONSTANT PRESSURE APPLICATION	508A	SCHNEIDER ELECTRIC ALTIVAR 320 SERIES VARIABLE FREQUENCY DRIVES, 17.5 MAX AMPS EACH	VFDC-4100	TWO PUMPS(E) WITH LEAD-LAG OPERATION

VARIABLE FREQUENCY DRIVE CONTROL PANEL SHALL INCLUDE:

- TYPE 3R, PAINTED WHITE HOFFMAN WEATHERFLO ENCLOSURE W/ PAD LOCKABLE HANDLE
- POWDER COATED STEEL BACKPANEL
- ALUMINIUM INNER DOOR (DEAD FRONT)
- HAND-OFF-AUTO- 3 POSITION SELECTOR SWITCHES
- PUMP RUN 22MM PILOT LIGHTS

A. GENERAL

- THE OPERATION OF THE PUMP STATION SHALL BE BY VFD CONTROLLER. ONCE INITIALLY STARTED BY OPERATOR INPUT, THE WATER PUMPING SYSTEM SHALL BE AUTOMATICALLY STARTED AND STOPPED BY THE CONTROLLER UNTIL THE OPERATOR STOPS THE SYSTEM BY INPUT TO THE VFD CONTROLLER.
- POTABLE WATER PUMPS TO OPERATE IN A LEAD LAG CONFIGURATION. LEAD PUMP TO BE REASSIGNED AS LAG, AND LAG ASSIGNED AS LEAD EVER 2 WEEKS TO PROMOTE EVEN WEAR.
- PROVIDE PRESSURE SENSOR/TRANSMITTERS LOCATED AT THE PUMP OUTLET HEADER.

B. VARIABLE WATER PUMPING CONTROL

- THE LEAD WATER PUMP SHALL BE STARTED AT MINIMUM SPEED. THE LEAD PUMP SPEED SHALL BE SLOWLY INCREASED IN 5% INCREMENTS (ADJ.) AND MODULATED TO THE LOWEST SPEED REQUIRED TO MAINTAIN SET POINT OF THE PRESSURE SENSOR/TRANSMITTERS. UPON FAILURE OF THE LEAD PUMP TO MAINTAIN THE SYSTEM PRESSURE, OR LEAD PUMP OPERATING BEYOND 70% OF FULL FLOW, THE LAG PUMP SHALL BE ENERGIZED. THE LAG PUMP SPEED SHALL BE SLOWLY INCREASED IN 5% INCREMENTS (ADJ.) AND MODULATED TO THE LOWEST SPEED REQUIRED TO MAINTAIN SET POINT OF THE PRESSURE SENSOR/TRANSMITTERS.
- WHEN THE PRESSURE SETPOINT IS EXCEEDED, THE LAG PUMP SPEED SHALL BE DECREASED IN 5% INCREMENTS (ADJ.) UNTIL THE SETPOINT IS REACHED, OR PUMP IS AT 0% LOAD AND DEGENERIZED. LEAD PUMP SPEED SHALL CONTINUE TO BE DECREASED UNTIL THE SETPOINT IS REACHED AFTER LAG PUMP IS DENERGIZED.
- MINIMUM WATER PUMP SPEED SHALL BE THE LOWEST SPEED REQUIRED TO MAINTAIN SET POINTS OF WATER PRESSURE SENSOR/TRANSMITTERS. SET POINT FOR THE PRESSURE SENSOR SHALL BE ADJUSTABLE. THE FINAL SETTINGS COORDINATED WITH THE MECHANICAL CONTRACTOR TO PROVIDE FULL FLOW AT THE MOST REMOTE OUTLET POINT.

C. ALARMS

- UPON FAULT DETECTION ON LEAD PUMP, THE LAG PUMP SHALL BE ASSIGNED AS LEAD AND VISUAL INDICATOR TO ANNUNCIATE FAULT.

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VFD DUPLEX PUMP STATION CONTROL SEQUENCE

DATE: 8/27/2024	TIME: 10:53:40 AM	NO.	BY	DATE	REVISIONS:
SERVEN: _____	LAYOUT: M-01				
PATH: CASDP\Project\21-0001154-01\Cadd\Mechanical					
DRAWING NAME: M-200.DWG					
PAGE SETUP: ---					
DESIGNER: CWK	PROJ. MGR: MY				

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REHABILITATION OF EXISTING PUMP STATION

PUMP STATION - MECHANICAL PLAN AND SCHEDULE

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: FEB 2024

DRAWING NUMBER

M-200

8 OF 11 DRAWINGS

SCALE

VERTICAL: 1"= AS

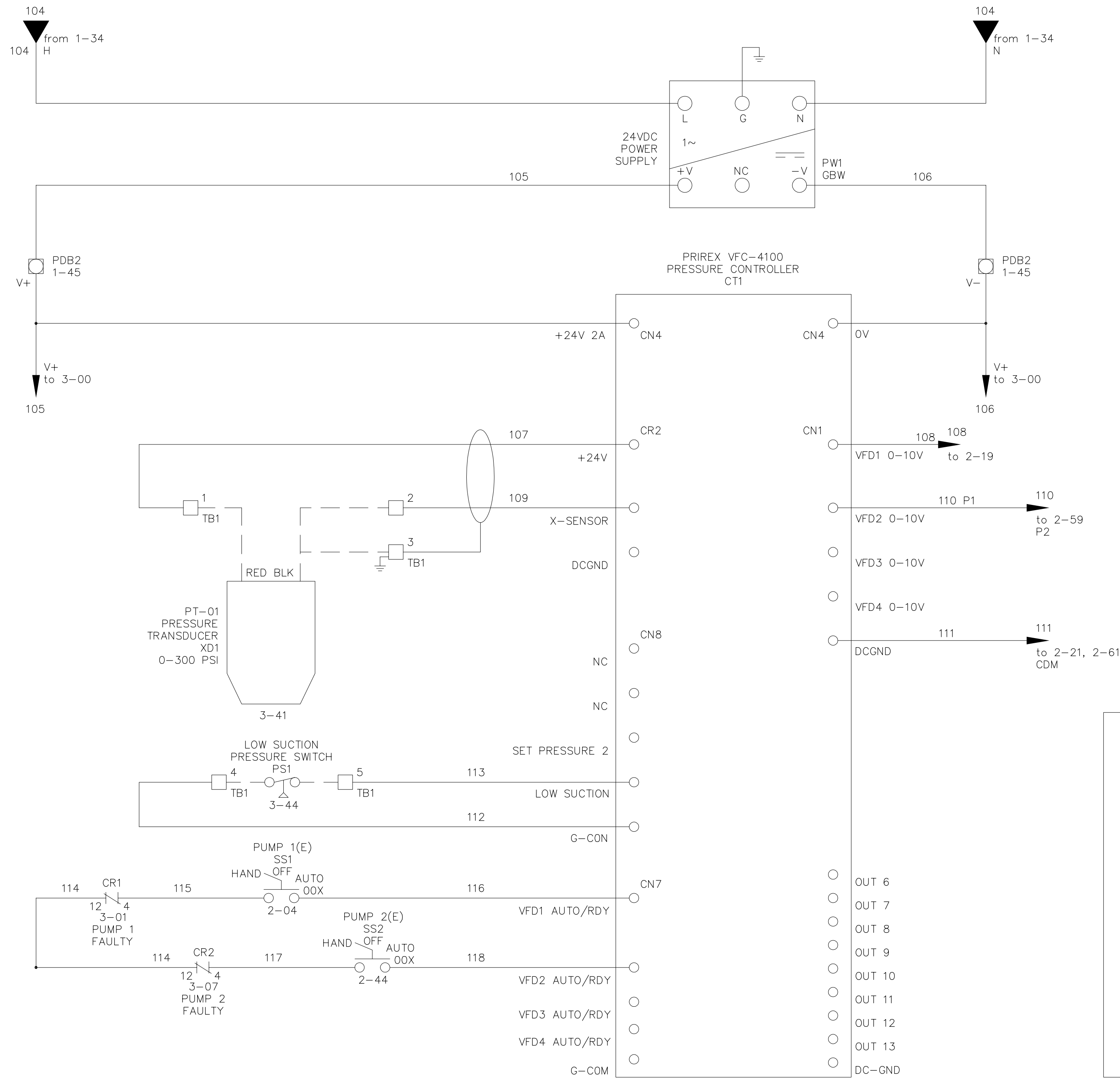
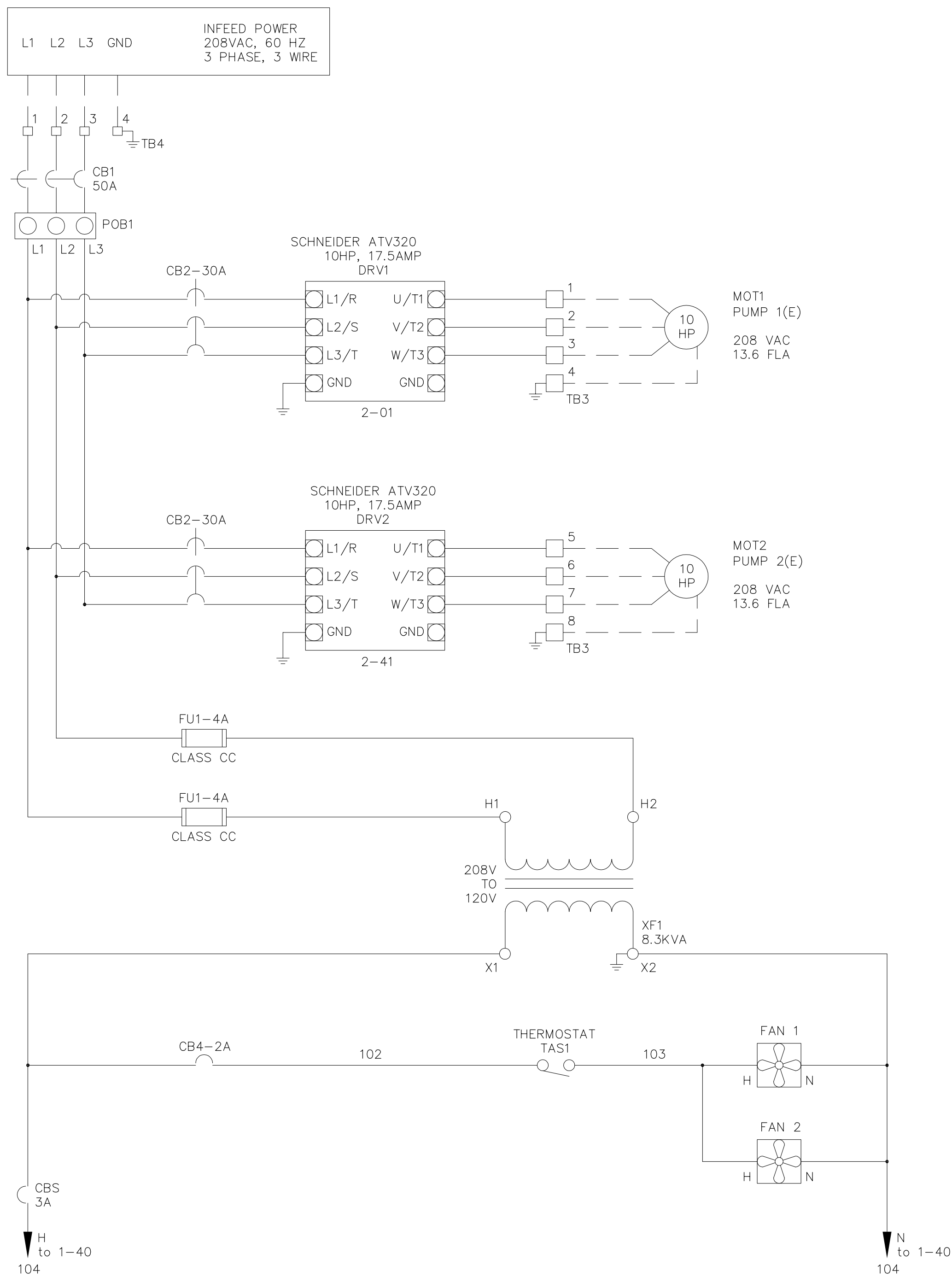
HORIZONTAL: 1"= AS

DSA PROJECT NUMBER

04-122492

NV5 JOB NUMBER

21-0001154-01



VFDC-4100 PARAMETERS
CHANGED FROM DEFAULT

PUMP SET:
P1 = USED
P2 = USED

PRESSURE:
SET PRESSURE = 60 PSI
HIGH PRE. LIMIT = 65 PSI
LOW PRE. LIMIT = 25 PSI
START LEAD PRESS. = -3 PSI
START LAG PRESS. = -7 PSI
STOP LAG PRESS. = 3 PSI

SENSOR:
SENSOR VALUE = 300 PSI

VFD:
VFD STOP TIME = 30 SEC
VFD MINIMUM RATE = 59%
VFD STOP RATE = 60%

SYSTEM:
RELAY 1 = PUMP 1 RUN
RELAY 2 = PUMP 2 RUN

NOTE: FOR REFERENCE
ONLY

DATE: 8/27/2024	TIME: 10:55:04 AM	NO.	BY	DATE	REVISIONS:
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PATH: \\NV5.COM\SHARES\CADD\PROJECT\21-0001154-01\CADD\MECHANICAL					
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PAGE SETUP: ---					
DESIGNER: CWK	PROJ. MGR: MY				

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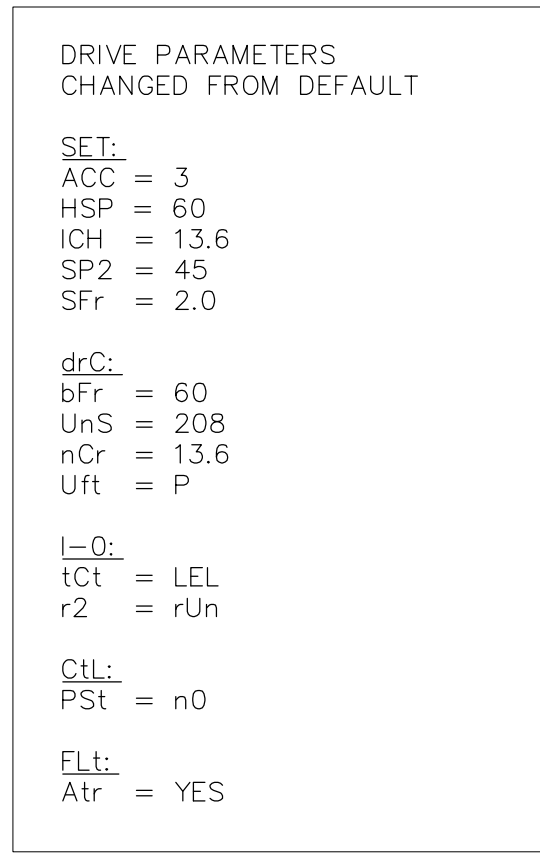
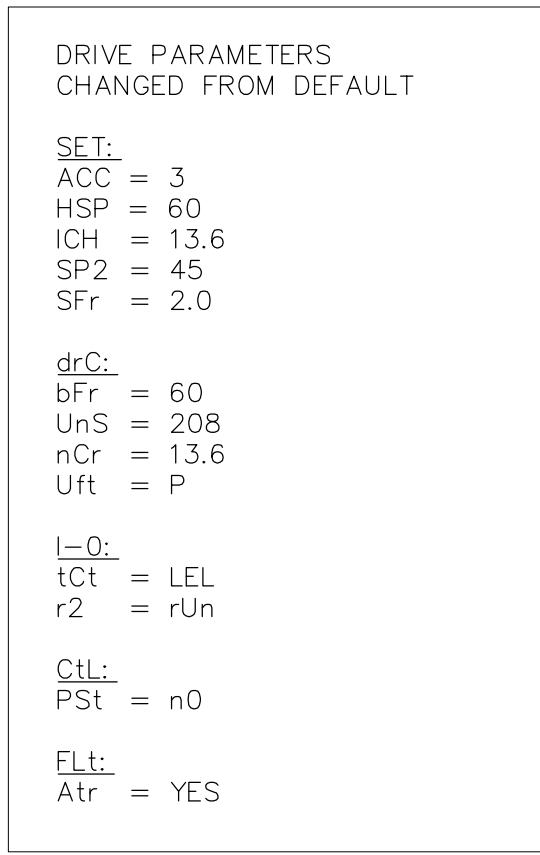
REHABILITATION OF EXISTING PUMP STATION

CONTROL 1

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

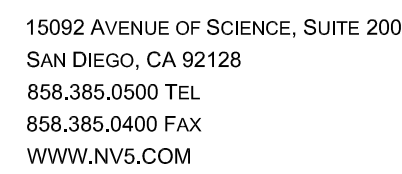
DATE SUBMITTED: FEB 2024

DRAWING NUMBER
M-500
9 OF 11 DRAWINGS
SCALE
VERTICAL: 1"= AS
HORIZONTAL: 1"= AS
DSA PROJECT NUMBER
04-122492
NV5 JOB NUMBER
21-0001154-01



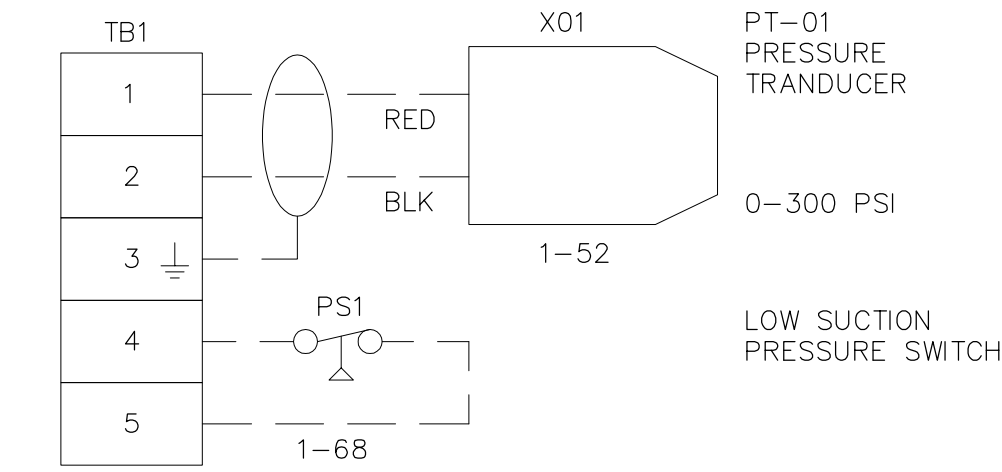
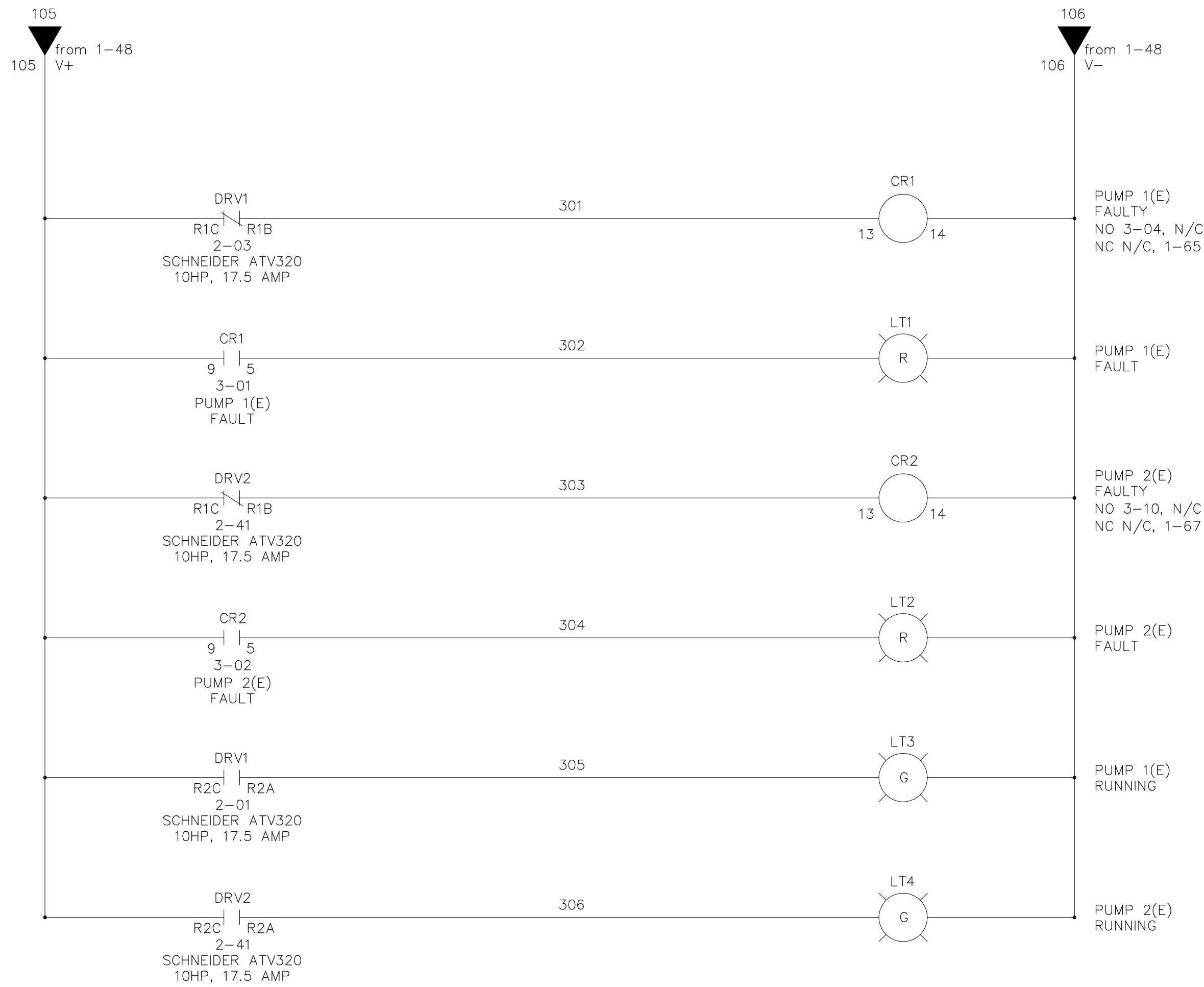
PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: FEB 2024

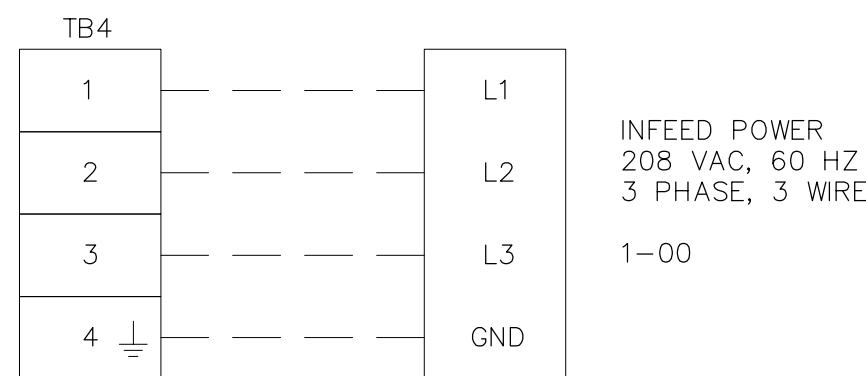
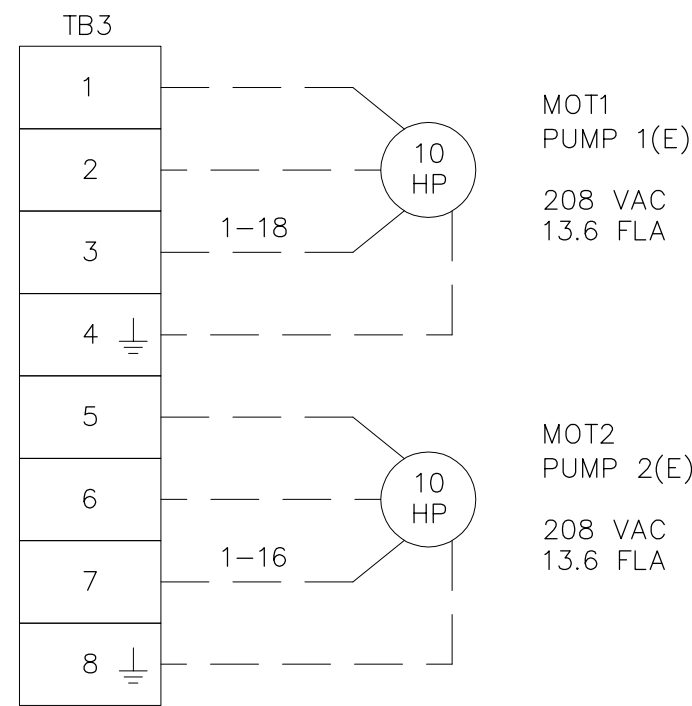
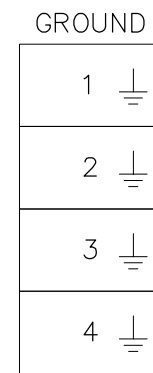
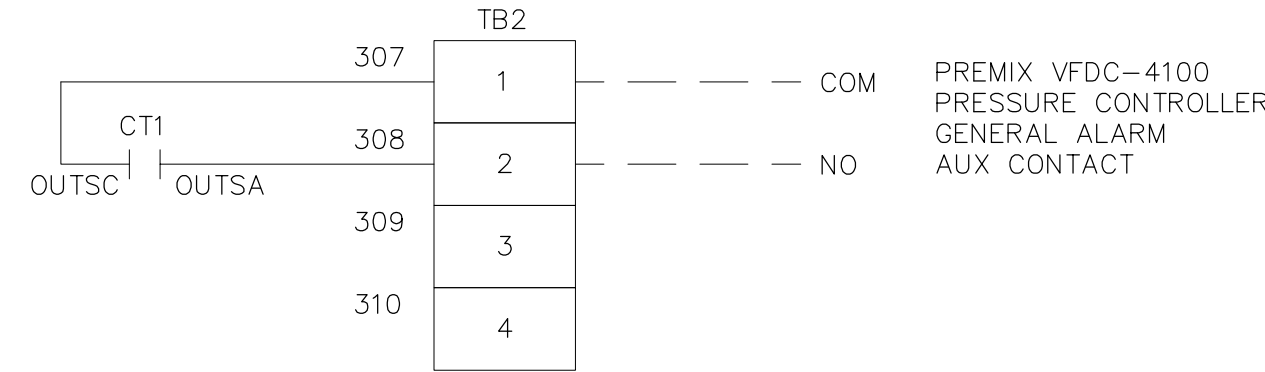


REHABILITATION OF EXISTING PUMP STATION

CONTROL 2



- NOTES:
1. FIELD WIRING IS SHOWN — — — — —
 2. TEMPERATURE RATING OF FIELD INSTALLED CONDUCTORS LESS THAN 100 AMPS MUST BE RATED 60 DEG C OR ABOVE. FIELD INSTALLED CONDUCTORS GREATER THAN OR EQUAL TO 100 AMPS MUST BE RATED 75 DEG C OR ABOVE.
 3. FIELD WIRING WILL ACCEPT COPPER CONDUCTORS ONLY.
 4. TORQUE RATING OF FIELD WIRING TERMINAL CLAMPING SCREWS:
13.3-15.9 IN/LBS FOR TB1-TB3 & GROUND
22.1-26.5 IN/LBS FOR TB4
 5. MAIN SERVICE DISCONNECT PROVIDED BY OTHERS.



FIELD WIRING SECTION

NOTE: FOR REFERENCE ONLY

DATE: 8/27/2024	TIME: 10:58:09 AM	NO.	BY	DATE	REVISIONS:
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PATH: \\NV5.COM\SHARES\CADD\PROJECT\21-0001154-01\CADD\MECHANICAL					
DRAWING NAME: M-502.DWG					
PAGE SETUP: ---					
DESIGNER: CWK	PROJ. MGR: MY				

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REHABILITATION OF EXISTING PUMP STATION

CONTROL 3

PREPARED FOR: CAMPO ELEMENTARY SCHOOL

DATE SUBMITTED: FEB 2024

DRAWING NUMBER
M-502
11 OF 11 DRAWINGS
SCALE
VERTICAL: 1"= AS
HORIZONTAL: 1"= AS
DSA PROJECT NUMBER
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21-0001154-01