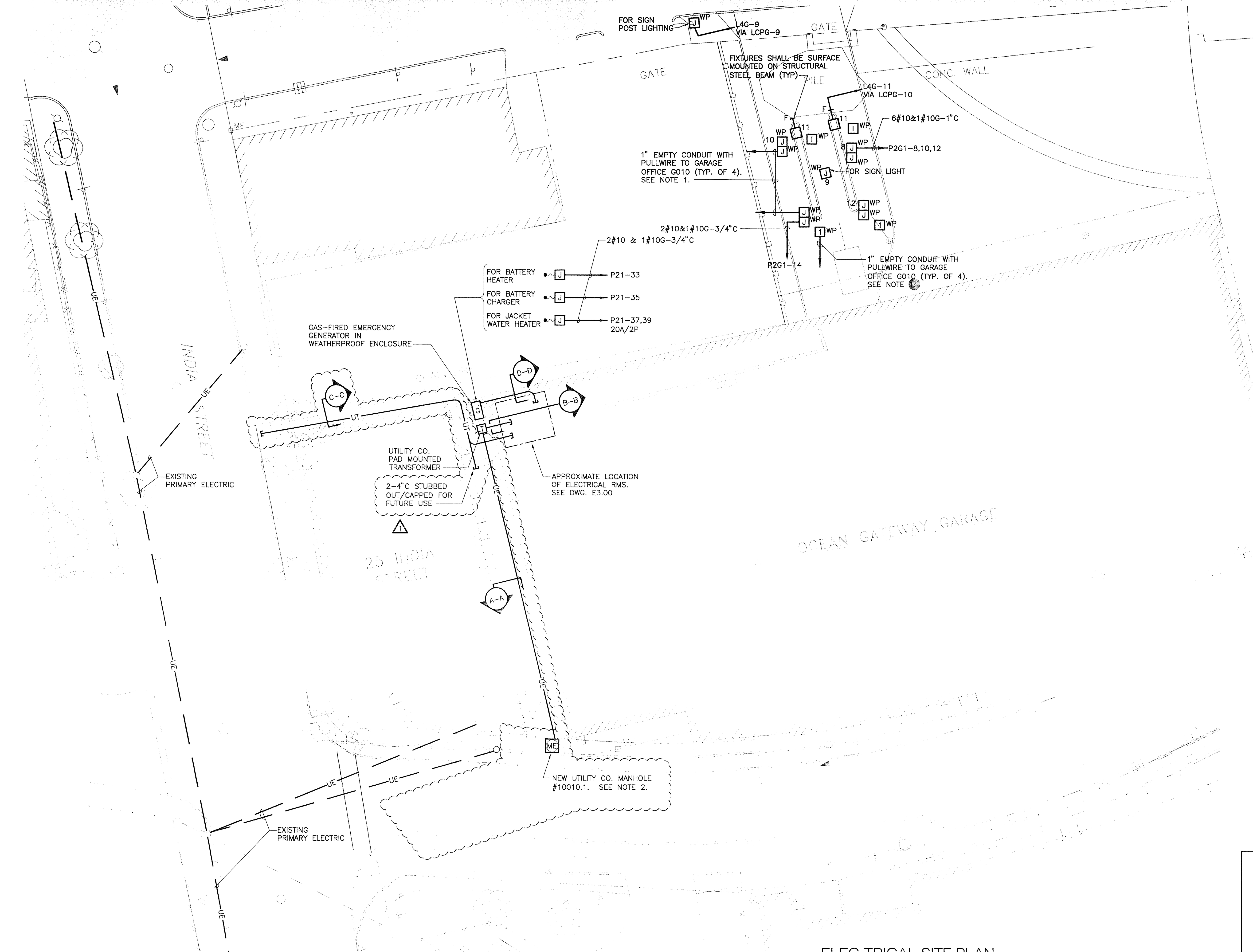


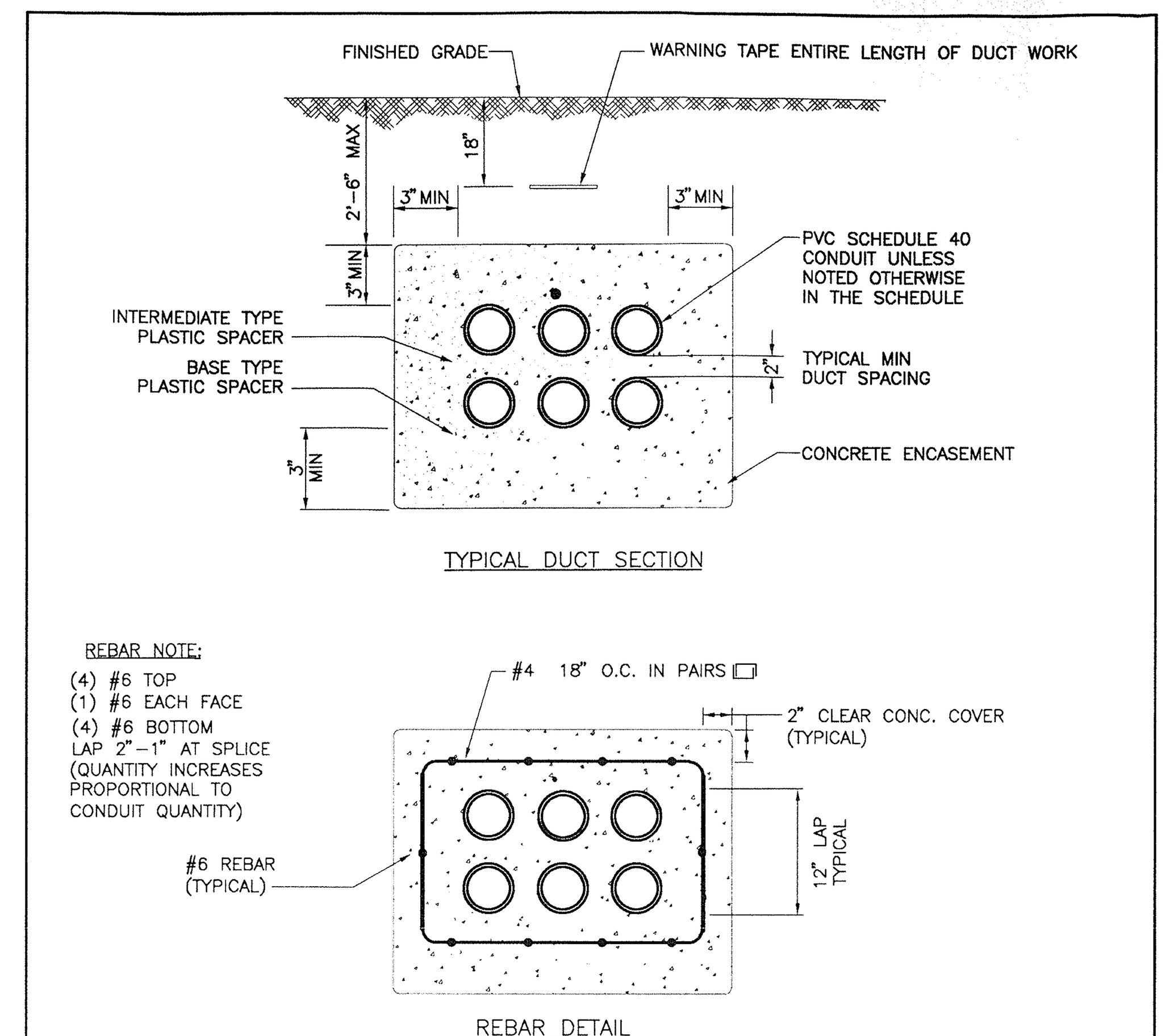
ELEC TRICAL SITE PLAN
SCALE: 1"=20'-0"

DUCT BANK CONDUIT SCHEDULE

TAG	DESCRIPTION	CONDUIT	CONDUCTORS
E1	PRIMARY ELECTRIC	5"	NOTE 6
SP1	SPARE	5"	NOTE 6
E2	SECONDARY ELECTRIC	4"	SEE ONE LINE DIAGRAM
SP2	SPARE	4"	NOTE 6
T1	TELEPHONE SERVICE	4"	NOTE 6
T2	CATV SERVICE	4"	NOTE 6
E3	LIFE SAFETY EMERGENCY SERVICE		SEE ONE LINE DIAGRAM
E4	STANDBY EMERGENCY SERVICE		SEE ONE LINE DIAGRAM
C1	GENERATOR CONTROLS		

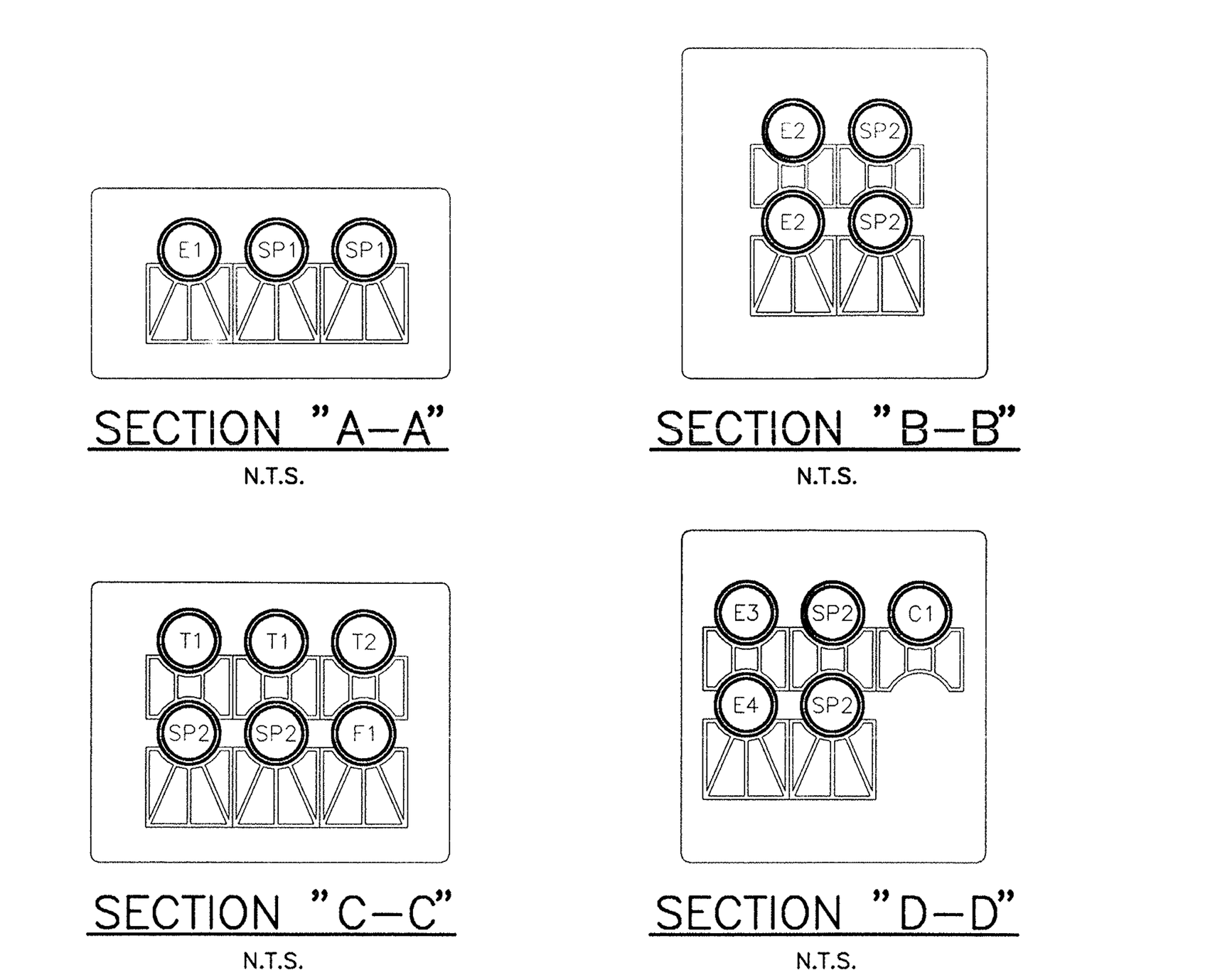
NOTES:
1. REFER TO DUCT BANK SECTIONS FOR CORRESPONDING CONDUIT AND CONDUCTOR.
2. REFER TO THE TYPICAL DUCT BANK SECTION FOR DETAILS REQUIRED IN THE CONSTRUCTION OF THE DUCT BANK ENVELOPE.
3. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION INCLUDING BUT NOT LIMITED TO DUCT BANK REINFORCEMENT REQUIRED UNDER PAVED AREAS INTENDED FOR VEHICULAR TRAFFIC AND AT MANHOLE/BUILDING INTERFACES.
4. ALL CONDUCTORS INSTALLED IN DUCT SHALL BE SUITABLE FOR WET LOCATIONS.
5. ALL SERVICE ENTRANCE AND GENERATOR OUTPUT CONDUCTORS INSTALLED IN DUCT SHALL BE TYPE USE.
6. PROVIDE ALL EMPTY/SPARE CONDUIT WITH NYLON PULL STRING.

NOTES:
1. PROVIDE WORKBOX AND 1" EMPTY CONDUIT WITH PULLWIRE FOR INTERCOM STATION AND CCTV CAMERAS AS INDICATED. CONDUIT SHALL BE STUBBED OUT ABOVE FINISHED ACCESSIBLE CEILING IN OFFICE G10 AND LABELED FOR FUTURE USE. PROVIDE CONDUIT BUSHINGS AT BOTH ENDS.
2. REFER TO UTILITY CO. (CMP) UNDERGROUND ELECTRICAL LAYOUT DRAWING 905-3768 FOR ADDITIONAL INFORMATION.



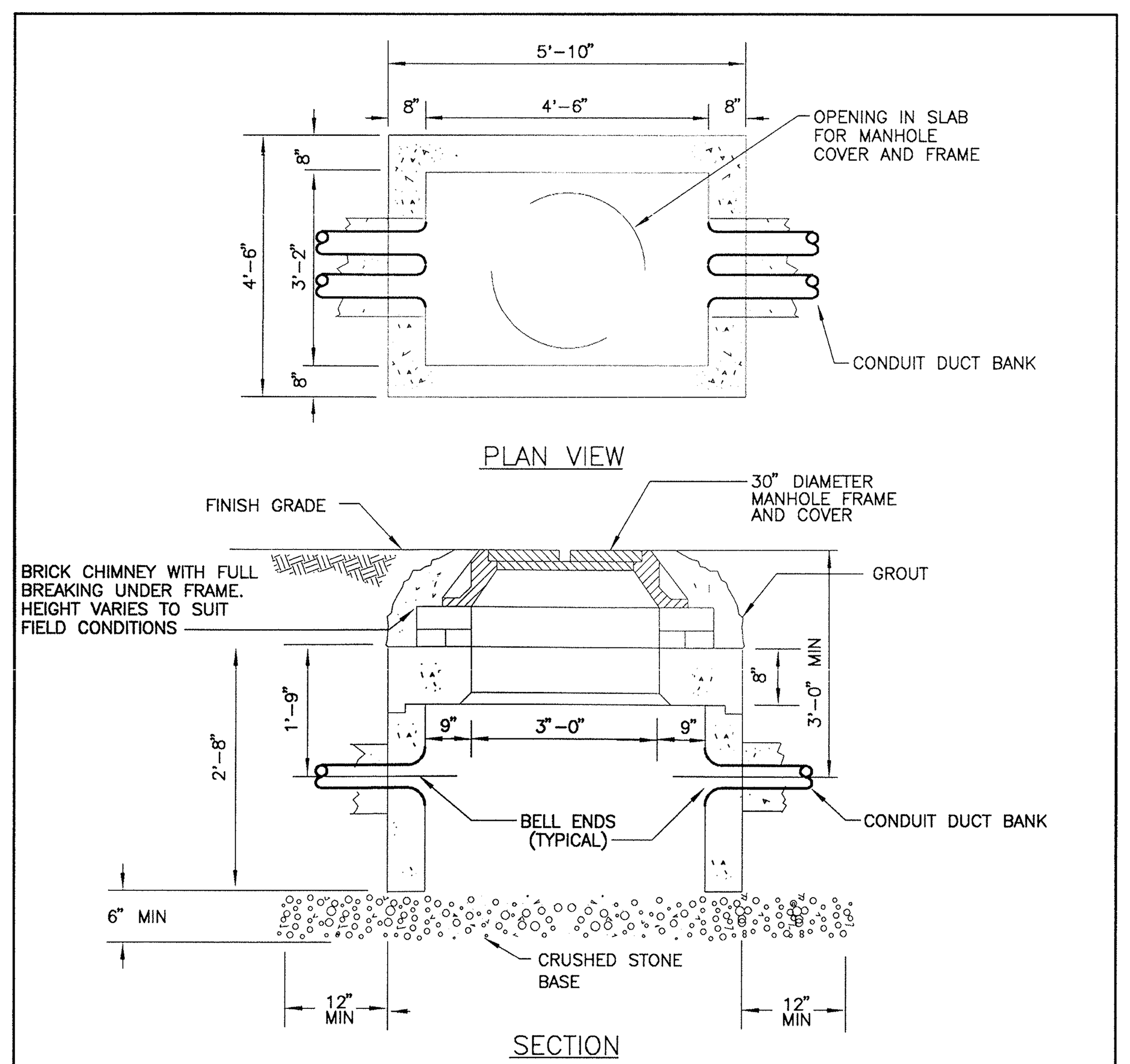
NOTES:
1. THIS DETAIL IS INTENDED TO ILLUSTRATE CONSTRUCTION OF TYPICAL DUCT BANK. REFER TO REFERENCED SECTION FOR QUANTITY AND SIZE OF CONDUIT REQUIRED. DUCT CONSTRUCTION SHALL BE MODIFIED TO ACCOMMODATE REQUIREMENTS ILLUSTRATED IN THE ACTUAL SECTION, UTILIZING THE CRITERIA ESTABLISHED IN THIS DETAIL AND AS WRITTEN IN THE SPECIFICATIONS.
2. REBAR SHALL BE USED FOR ALL DUCT BANKS INSTALLED UNDER TRAVELED WAYS, ROADWAYS, AND TRANSITIONS INTO MANHOLES/HANDHOLES AND FOUNDATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.
3. WARNING TAPE SHALL BE DETECTABLE TYPE FOIL BACKED 4 MIL POLYETHYLENE WITH FADE RESISTANT "BURIED ELECTRIC LINE BELOW" A MINIMUM OF 12 INCHES ABOVE THE BURIED SERVICE. TAPE SHALL BE EQUAL TO T & B NAF-0705

RDK | TYPICAL ELECTRICAL DUCT DETAIL | ES002



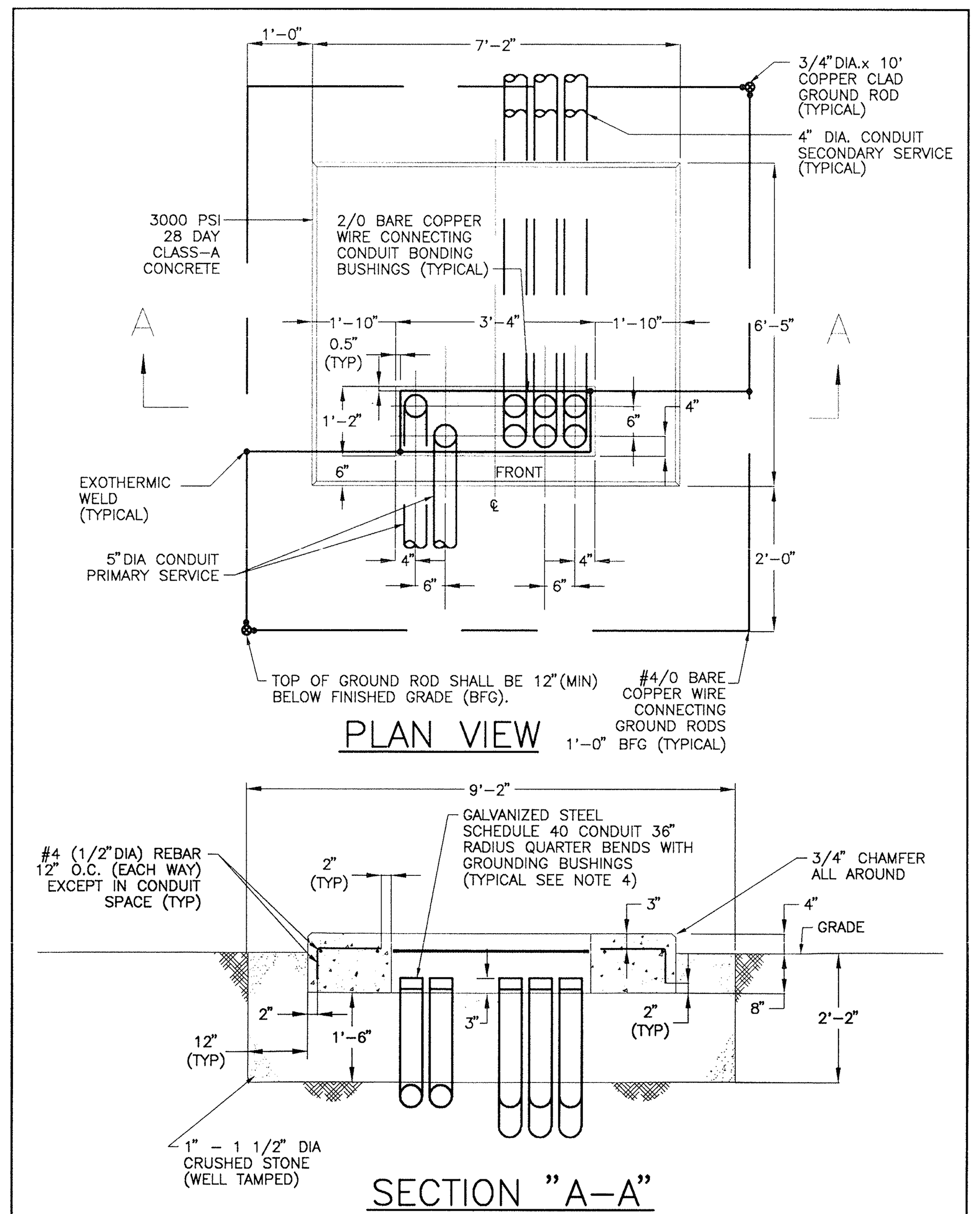
NOTES:
1. REFER TO TYPICAL ELECTRICAL DUCT DETAIL THIS SHEET FOR GENERAL CONSTRUCTION REQUIREMENTS.
2. REFER TO THE DUCT BANK CONDUIT SCHEDULE THIS SHEET FOR CONDUIT AND CONDUCTOR REQUIREMENTS ASSOCIATED WITH CONDUIT TAG.

RDK | ELECTRICAL DUCT SECTIONS | ES004



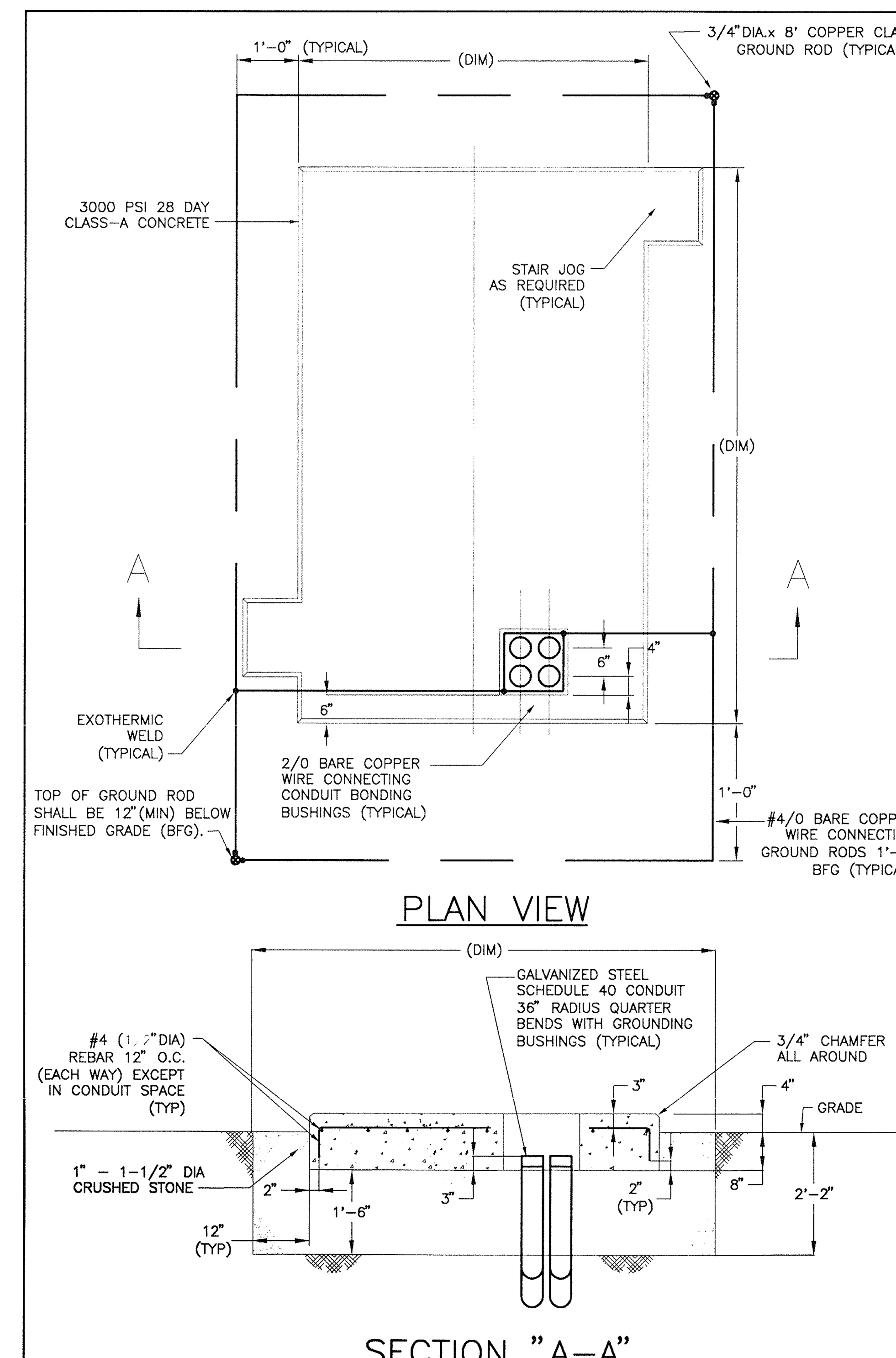
NOTES:
1. FRAME AND COVER SHALL BE CAST IRON BY BOSTON FOUNDRY OR EQUAL BY LEBARON OR NEENAH. COVER SHALL BE CAST WITH 1 1/2" HIGH LETTERS IDENTIFYING THE SERVICE (PRIMARY, SECONDARY ELECTRIC OR TELEPHONE).
2. DESIGN LOAD SHALL ACCOMMODATE UP TO AASH TO HS20-44.
3. CONCRETE ENCASED DUCT SHALL BE TIED INTO THE HANDHOLE WALL TO MINIMIZE DIFFERENTIAL SETTLEMENT. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.

RDK | TYPICAL PRECAST HANDHOLE DETAIL | ES006



NOTES:
1. REFER TO EXACT UTILITY COMPANY REQUIREMENTS FOR MODIFICATIONS THAT MAY BE REQUIRED TO THIS PAD LAYOUT.
2. ALL GROUND GRID CONNECTIONS SHALL BE EXOTHERMIC WELD.
3. DO NOT ALLOW PRIMARY AND SECONDARY CONDUITS TO CROSS EACH OTHER INSIDE OR OUTSIDE THE PAD. LOCATE SECONDARY CONDUITS AS FAR TO THE RIGHT AS POSSIBLE IN THE PAD OPENING.
4. ALL QUARTER BENDS (PRIMARY AND SECONDARY) SHALL BE GALVANIZED STEEL SCHEDULE 40 WITH GROUNDING BUSHINGS. CAP ALL CONDUIT ENDS TO PREVENT MOISTURE AND DEBRIS FROM ENTERING CONDUITS PRIOR TO TRANSFORMER INSTALLATION.
5. PRIMARY DUCT GROUND SHALL BE CONNECTED TO PAD GROUND GRID.

RDK | TRANSFORMER PAD DETAIL THREE PHASE 112.5 THRU 750 KVA | ES008



NOTES:
1. REFER TO EXACT INSTALLATION REQUIREMENTS OF THE GENERATOR AND ASSOCIATED ENCLOSURE MANUFACTURER FOR MODIFICATIONS THAT MAY BE REQUIRED TO THIS PAD LAYOUT. THIS DETAIL IS INTENDED TO ILLUSTRATE GENERAL REQUIREMENTS. PAD SHALL EXTEND 1'-0" BEYOND ENCLOSURE ON ALL SIDES. PAD SHALL JOG OUT TO ACCOMMODATE STAIR LANDINGS.
2. ALL GROUND GRID CONNECTIONS SHALL BE EXOTHERMIC WELD.
3. CAP ALL CONDUIT ENDS TO PREVENT MOISTURE AND DEBRIS FROM ENTERING CONDUITS PRIOR TO GENERATOR INSTALLATION.
4. CRUSHED STONE SHALL EXTEND TO COVER GROUND AT SPECIFIED 18" DEPTH UNDER ALL AIR INTAKE LOUVER LOCATIONS.

RDK | GENERATOR PAD DETAIL | ES011

SIMON DESIGN ENGINEERING LLC
42 Washington Street, Suite 300
Wellesley, MA 02481
info@sde-us.com
781.237.2226 tel
781.237.2272 fax
www.sde-us.com

RDK ENGINEERS
Andover, MA · Boston, MA
Richard D. Kimball Company, Inc
200 Brickstone Square
Andover, MA 01810-1488
P 978-475-0298
F 978-475-5768
W www.rdkengineers.com

CONSTRUCTION SET

OWNER
RIVERWALK, LLC
2 MARKET STREET; SUITE 500
PORTLAND, ME 04101

CLIENT
RIVERWALK, LLC
2 MARKET STREET; SUITE 500
PORTLAND, ME 04101

PROJECT
OCEAN GATEWAY PARKING GARAGE
MIDDLE STREET
PORTLAND, MAINE

REVISIONS

NO.	DATE	DESCRIPTION
1	08/10/07	BULLETIN 1

DATE FEB 22, 2007
SCALE
PROJECT NO. 05-032

STATE OF MAINE · TIMOTHY TYSON · No. 9808 · LICENSED · PROFESSIONAL ENGINEER

DRAWING TITLE
ELECTRICAL SITE PLAN

SHEET NUMBER
E1.00

J:\2005\25617 - Ocean Gateway Parking Garage Portland\Electrical\Plot Sheets\25617 E1.00 ELEC SITE PLAN.dwg [PaperSpace] August 08, 2007 - 4:57pm trowe
J:\2005\25617 - Ocean Gateway Parking Garage Portland\Electrical\Plot Sheets\25617 E1.00 ELEC SITE PLAN.dwg, 8/8/2007 4:57:49 PM, RDK Oce 2.pc3