

Abbreviations:

&	And	F.R.P.	Fiberglass Reinforced Plastic	P.D.F.	Power Driven Fastener
@	Angle	F.V.	Field Ventry	P.T.	Paint
1	Centaline	F.N.	Finish	PR	Part
PREP./L	Degree	F.F.E.	Finish Floor Elevation	PEN.	Penetration
1	Perpendicular	F.G.	Finish Grade	PERF.	Perforated
1	Property Line	F.A.	Fire Alarm	P.L.A.M.	Plastic Laminate
A.F.F.	Above Finish Floor	F.E.	Fire Extinguisher	P.L.	Plate
ACOUS.	Acoustical	FLASH.	Fire Extinguisher Cabinet	P.L.Y.W.D.	Plywood
ADJ.	Adjustable	F.H.M.S.	Flat Head Machine Bolt	P.P.	Perforated
AGGR.	Aggregate	F.H.M.S.	Flat Head Machine Bolt	P.P.F.	Prefabricated
AL.	Aluminum	F.H.W.S.	Flat Head Wood Screw	P.P.F.	Prefabricated
ALUM./AL.	Aluminum	F.L.R.	Flat Head Wood Screw	P.P.F.	Prefabricated
AD.	Area Drain	F.D.	Floor Drain	P.P.F.	Prefabricated
A.C.	Asphalt Concrete	F.T.	Footing	P.P.F.	Prefabricated
A.V.	Audio Visual	FTG.	Footing	P.P.F.	Prefabricated
AUTO.	Automatic	FURR.	Furring	P.P.F.	Prefabricated
BM.	Beam	GALV.	Galvanized	P.P.F.	Prefabricated
BLK.	Block	G.I.	Galvanized Iron	P.P.F.	Prefabricated
BLKG.	Blocking	G.S.M.	Galvanized Sheet Metal	P.P.F.	Prefabricated
BD.	Board	G.W.H.	Gas Water Heater	P.P.F.	Prefabricated
BOT.	Bottom	GA.	Gauge	P.P.F.	Prefabricated
BLDG.	Building	GLU LAM./G.L.B.	Glue Laminated (Beam)	P.P.F.	Prefabricated
CAB.	Cabinet	G.B.	Grab Bar	P.P.F.	Prefabricated
CATV.	Cable T.V.	GR.	Grade	P.P.F.	Prefabricated
C.I.	Cast Iron	GYP.	Gypsum	P.P.F.	Prefabricated
C.I.B.	Catch Basin	GYP.BD.	Gypsum Wallboard	P.P.F.	Prefabricated
CLKG.	Caulking	HDWR.	Hardware	P.P.F.	Prefabricated
CLS.	Ceiling	HDWD.	Hardwood	P.P.F.	Prefabricated
CNTR./CTR.	Center	HVAC.	Heating/Ventilating	P.P.F.	Prefabricated
C.I.	Chain Link	H.A.	Hair	P.P.F.	Prefabricated
CB.	Chalkboard	H.C.	Hollow Metal	P.P.F.	Prefabricated
CLR.	Clear	H.M.	Hollow Metal	P.P.F.	Prefabricated
C.W.	Cold Water	H.H.	Hollow Metal	P.P.F.	Prefabricated
COL.	Column	H.B.	Hose Bib	P.P.F.	Prefabricated
CONC.	Concrete	HR.	Hour (Fire Rating)	P.P.F.	Prefabricated
C.M.U.	Concrete Masonry Unit	IN.	Inch	P.P.F.	Prefabricated
CONN.	Connection	INCH.	Inch	P.P.F.	Prefabricated
CONST.	Construction	INFO.	Information	P.P.F.	Prefabricated
C.J.	Construction Joint	I.D.	Inside Diameter	P.P.F.	Prefabricated
C.J.	Control Joint	INSUL.	Insulation	P.P.F.	Prefabricated
CONT.	Continuous	INT.	Interior	P.P.F.	Prefabricated
CNTR.	Contractor	INV.	Invert	P.P.F.	Prefabricated
CORR.	Corrosion	JAN.	Janitor	P.P.F.	Prefabricated
C.M.P.	Corrugated Metal Pipe	JOINT.	Joint	P.P.F.	Prefabricated
CUST.	Custodian	JST.	Joist	P.P.F.	Prefabricated
D.	Deep/Depth	KP.	Kickplate	P.P.F.	Prefabricated
DET./DTL.	Detail	KIT.	Kitchen	P.P.F.	Prefabricated
DWG.	Diagonal	LAM.	Laminate	P.P.F.	Prefabricated
DIA./Ø	Diameter	LAV.	Lavatory	P.P.F.	Prefabricated
DM.PT.	Dimension	LT.WT.	Light Weight	P.P.F.	Prefabricated
DM.PT.	Dimension Point	L.F.	Line Feet	P.P.F.	Prefabricated
DW.	Disinfectant	M.B.	Machine Bolt	P.P.F.	Prefabricated
DR.	Door	M.H.	Manhole	P.P.F.	Prefabricated
DBL.	Double	MFR.	Manufacturer	P.P.F.	Prefabricated
DN.	Down	M.O.	Masonry Opening	P.P.F.	Prefabricated
DN.	Downspout	MATL.	Material	P.P.F.	Prefabricated
D.I.	Drain Inlet	M.T.	Mechanical	P.P.F.	Prefabricated
DWG.	Drinking Fountain	MECH.	Mechanical	P.P.F.	Prefabricated
D.F.	Each	MEMB.	Membrane	P.P.F.	Prefabricated
EA.	East	MEZZ.	Mezzanine	P.P.F.	Prefabricated
E.	Electrical	MIN.	Minimum	P.P.F.	Prefabricated
E.W.C.	Electric Water Cooler	MISC.	Miscellaneous	P.P.F.	Prefabricated
E.W.C.	Electric Water Heater	N.P.	Nail Purpose	P.P.F.	Prefabricated
EL/ELEV.	Elevation	(N)	North	P.P.F.	Prefabricated
EMER.	Emergency	NOM.	Nominal	P.P.F.	Prefabricated
ENCL.	Enclosure	N.	North	P.P.F.	Prefabricated
EQ.	Equal	N.C.	Not in Contract	P.P.F.	Prefabricated
(E)EXIST.	Existing	N.T.S.	Not to Scale	P.P.F.	Prefabricated
EXP.	Expansion	W.	Width	P.P.F.	Prefabricated
E.J.	Expansion Joint	W.D.W.	Window	P.P.F.	Prefabricated
EXT.	Exterior	O.F.O.I.	Owner Furnish, Owner Installed	P.P.F.	Prefabricated
F.O.C.	Face of Concrete/Curb	O.F.C.I.	Owner Furnish, Contractor Installed	P.P.F.	Prefabricated
F.O.F.	Face of Finish	O.C.	Opposite	P.P.F.	Prefabricated
F.O.S.	Face of Studs	OPP.	Opposite	P.P.F.	Prefabricated
FR.	Fiberglass Reinforced	O.H.	Opposite Hand	P.P.F.	Prefabricated
F.R.L.	Laminate	O.D.	Outside Diameter	P.P.F.	Prefabricated
		O.H.W.S.	Over Head Wood Screw	P.P.F.	Prefabricated
		O.	Over	P.P.F.	Prefabricated
		O.A.	Overall	P.P.F.	Prefabricated

Symbol Legend:

<b>SHEET NUMBERING SYSTEM</b> Discipline Designation Drawing Type Designation Sheet Sequence Beyond Zero Building Unit Designation	<b>STRUCTURAL GRID IDENTIFIER</b> (center of framing) Grid Designation Building Unit Designation
<b>ROOM NAME and NUMBERING REFERENCE</b> Room Number Building Designation	<b>STRUCTURAL GRID IDENTIFIER</b> (face of framing, concrete or CMU) Grid Designation Building Unit Designation
<b>KEYNOTE REFERENCE</b> (All items indicated with a keynotes are new) 3.02	<b>CENTERLINE</b>
<b>SHEET NOTE REFERENCE</b> SN.01	<b>WORK POINT CONTROL</b>
<b>DEMOLITION NOTE REFERENCE</b> DN. 01	<b>REVISION</b> Revision Number
<b>DETAIL REFERENCE</b> Detail Number Sheet Number	<b>RADIUS</b> Radius Point Number Radius Dimension
<b>BUILDING SECTION REFERENCE</b> Section Number Sheet Number	<b>EXTERIOR ELEVATION REFERENCE</b> Elevation Number Sheet Number
<b>WALL SECTION REFERENCE</b> Section Number Sheet Number	<b>SPECIAL ELEVATION REFERENCE</b>

# NEEDHAM ELEMENTARY SCHOOL - ELECTRICAL SERVICE UPGRADE

## LODI UNIFIED SCHOOL DISTRICT LODI, CA

Architect:

Rainforth Grau Architects  
2101 Capitol Ave, Suite 100  
Sacramento, CA 95816  
916.368.7990

Owner:

LODI UNIFIED SCHOOL DISTRICT  
1305 E VINE STREET  
LODI, CA 95240  
209.953.8000

Contact: KEVIN ARWOOD

Contact: VICKIE BRUM

Consultants:

ELECTRICAL ENGINEER:  
EDGE ELECTRICAL CONSULTING  
1801 7TH STREET, SUITE 150  
SACRAMENTO, CA 95811  
916.256.2460  
ATTN: CHRIS JOHANSON

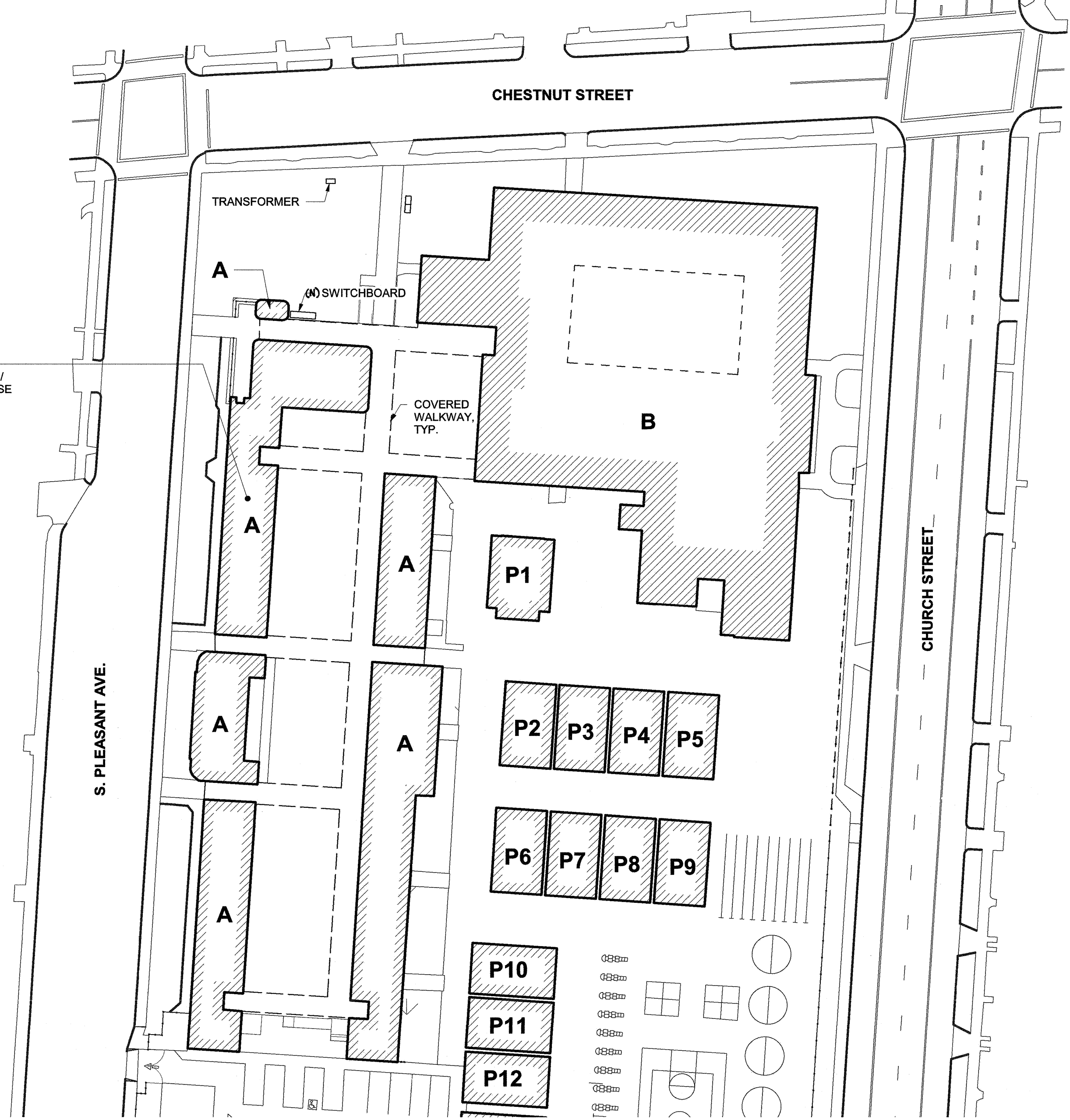
Project Information:

**SITE LOCATION**  
420 S. Pleasant Ave  
Lodi, CA 95240  
209.331.7375

Sheet Index

GENERAL  
A0.1 COVER SHEET

ELECTRICAL  
E1 ELECTRICAL COVER SHEET  
E2 ELECTRICAL SITE PLAN  
E3 ONE LINE DIAGRAM AND DETAILS  
E4 ELECTRICAL DETAILS  
TOTAL SHEET COUNT: 5



1 OVERALL SITE PLAN - REFERENCE

Applicable Codes:

CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND STANDARDS:

TITLE 19, CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS  
TITLE 24, CCR, PART 1, 2019 CALIFORNIA ADMINISTRATIVE CODE  
TITLE 24, CCR, PART 2, 2019 CALIFORNIA BUILDING CODE, VOL. 1 & 2  
TITLE 24, CCR, PART 3, 2019 CALIFORNIA ELECTRICAL CODE  
TITLE 24, CCR, PART 4, 2019 CALIFORNIA MECHANICAL CODE  
TITLE 24, CCR, PART 5, 2019 CALIFORNIA PLUMBING CODE  
TITLE 24, CCR, PART 6, 2019 CALIFORNIA ENERGY CODE  
TITLE 24, CCR, PART 7, 2019 CALIFORNIA FIRE CODE  
TITLE 24, CCR, PART 8, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE  
TITLE 24, CCR, PART 9, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE  
TITLE 24, CCR, PART 10, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE  
TITLE 24, CCR, PART 11, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE  
TITLE 24, CCR, PART 12, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

NFPA 13, 2016 EDITION, INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDMENTS)  
NFPA 72, 2016 EDITION, NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDMENTS)

UL 464, 2003 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES

UL 521, 7TH EDITION, 1999 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

THE CONTRACTOR SHALL KEEP TITLE 24, CCR, PARTS 1-5 ON THE BUILDING SITE AT ALL TIMES.

DSA Procedures:

- ADDENDA MUST BE STAMPED AND SIGNED BY THE ARCHITECT OF RECORD AND APPROVED BY DSA IN ACCORDANCE WITH CCR TITLE 24, PART 1.
- THE CONTRACTOR SHALL BE FAMILIAR WITH, AND PERFORM THE DUTIES IN ACCORDANCE WITH DSA PROCEDURE 13-01, CONSTRUCTION OVERSIGHT PROCESS.
- CHANGES TO THE STRUCTURAL, ACCESSIBILITY, OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS AFTER THE WORK HAS BEEN LET SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN TITLE 24, PART 1, 4-338 AND CONSTRUCTION CHANGE DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN ACCORDANCE WITH DSA IR A-6.
- SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS WILL BE CONSIDERED AS CHANGES TO THE APPROVED PLANS AND SPECIFICATIONS. THEY ARE TO BE TREATED AS CONSTRUCTION CHANGE DOCUMENTS AND WILL REQUIRE DSA'S APPROVAL PRIOR TO FABRICATION AND INSTALLATION IN ACCORDANCE WITH TITLE 24, PART 1, 4-338 AND DSA IR A-6.
- THE PROJECT INSPECTOR MUST BE EMPLOYED BY THE OWNER AND APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND DSA IN ACCORDANCE WITH TITLE 24, PART 1, 4-341.
- SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WOULD MAKE THE BUILDING NON-COMPLIANT WITH THE REQUIREMENTS OF THE EDITION OF THE CBC IN FORCE AT THE TIME OF ORIGINAL CONSTRUCTION, A CHANGE CONSTRUCTION DOCUMENT OR SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK. 7. THIS PROJECT REQUIRES A DSA CERTIFIED CLASS 3 PROJECT INSPECTOR.

SCOPE OF WORK:

REPLACEMENT OF EXISTING ELECTRICAL SERVICE WITH NEW ELECTRICAL SERVICE.

Statement of General Conformance

THE FOLLOWING DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET 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:

- DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND
- 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 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341, AND 4-344" OF TITLE 24, PART 1, (TITLE 24, PART 1, SECTION 4-317 (D)).

SIGNATURE: 10-23-19  
DATE

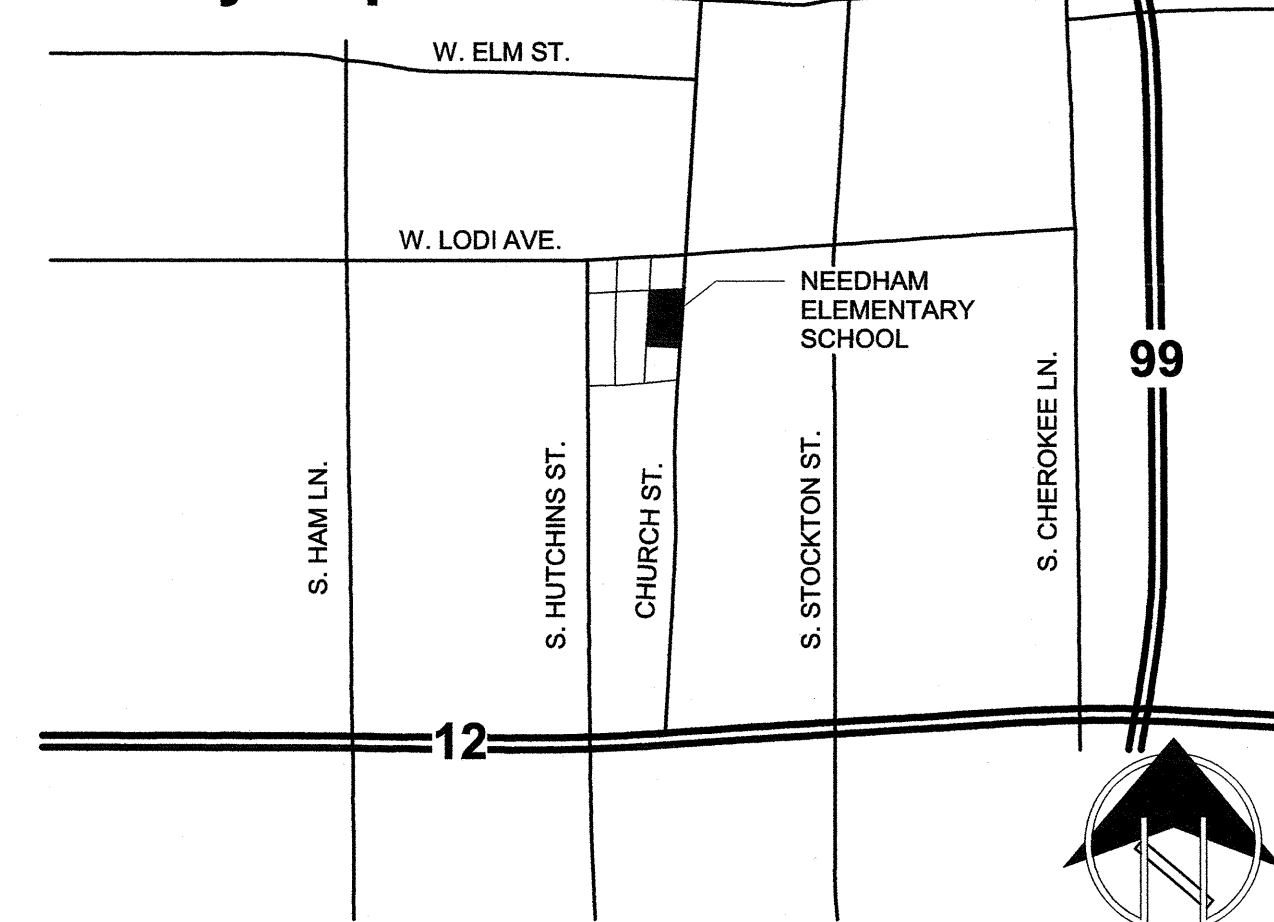
ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE  
Jeffrey Grau

PRINT NAME: C-14648  
LICENSE NUMBER: 5-31-21  
EXPIRATION DATE

LIST COMPLETELY, ITEMS REVIEWED AND ACCEPTED:

ELECTRICAL

Vicinity Map:



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COVER SHEET

PROJECT NO. 18-1366  
DATE: 10/23/19  
SHEET A0.1



MEP COMPONENT  
ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTERS 13, 26 AND 30.

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY OR MOVEABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
- MOVEABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.

- COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 A. FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORTS THE COMPONENT.
- COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, B. LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE, OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK AND ELECTRICAL  
DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.24; 1616.A1.25 AND 1616.A1.26.

THE METHOD SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AD DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP□ MD□ PP□ E■	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
MP□ MD□ PP□ E□	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #0052-13.
MP□ MD□ PP□ E□	OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA, FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL AND CONNECTION LEVEL FOR THE PROJECT AND CONDITIONS.

GENERAL NOTES

- EXISTING UNDERGROUND UTILITIES ARE PRESENT, BUT THEIR EXACT LOCATIONS ARE NOT KNOWN. CONTRACTOR SHALL LOCATE AND PROTECT BEFORE TRENCHING OR EXCAVATING IN ANY AREA. CONSULT UTILITY COMPANIES, "AS-BUILT" DRAWINGS, AND SCHOOL MAINTENANCE PERSONNEL FOR LOCATION OF EXISTING UNDERGROUND WORK. IF EXISTING PIPING OR UTILITIES ARE DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL REPAIR IMMEDIATELY AT OWN EXPENSE. NEW UNDERGROUND SHALL BE MODIFIED AS NECESSARY TO CONFORM TO EXISTING CONDITIONS.
- INFORMATION GIVEN, CONCERNING EXISTING ELECTRICAL INSTALLATION IS AS EXACT AS COULD BE SECURED, BUT EXTREME ACCURACY IS NOT GUARANTEED. CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BIDS AND SATISFY HIMSELF AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED.
- EXISTING CIRCUITS AND SERVICES SHALL NOT BE INTERRUPTED EXCEPT BY SPECIFIC APPROVAL OF THE SCHOOL. ALL SHUTDOWNS SHALL BE SCHEDULED WITH THE SCHOOL.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING AND WALK ROUTES OF NEW UNDERGROUND CONDUITS. NOTE AREAS OF CONCRETE AND ASPHALT BEING CROSSED AND INCLUDE IN BID ALL COSTS FOR CUTTING AND PATCHING AS SHOWN ON DETAILS.
- PROVIDE TRAFFIC RATED (H/20 LOAD) COVER AND BOXES FOR ALL PULLBOXES UNLESS SPECIFICALLY NOTED OTHERWISE.

UTILITY CO. COORDINATION NOTE

ALL WORK PERFORMED BY CONTRACTOR RELATED TO POWER, TELEPHONE AND CABLE TELEVISION SERVICES TO THE SITE SHALL BE IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.

IMMEDIATELY AFTER AWARD OF CONTRACT, CONTRACTOR SHALL MAKE CONTACT WITH THE UTILITY COMPANY REPRESENTATIVES. CONTRACTOR SHALL DISCUSS THE ASPECTS OF THE PROJECT RELATED TO SERVICES AND COORDINATE SCHEDULING OF THE WORK.

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH AND OBTAIN UTILITY COMPANY REQUIREMENTS FROM THE PEOPLE LISTED BELOW. CONTRACTOR SHALL NOT PERFORM ANY WORK RELATED TO SERVICES UNTIL HE HAS OBTAINED REQUIREMENTS, INCLUDING ROUTES AND LOCATIONS, FROM UTILITY COMPANIES.

POWER COMPANY: CITY OF LODI ELECTRIC UTILITY  
CONTACT: BENJAMIN GRIFFITH 209-333-6819

ELECTRICAL SCOPE NOTE

THESE ELECTRICAL DRAWINGS INDICATE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF ELECTRICAL DESIGN CONCEPT, MAJOR ELECTRICAL ELEMENTS, AND THE TYPE OF ELECTRICAL SYSTEMS. AS SCOPE DOCUMENTS, THESE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS. ON THE BASIS OF THE GENERAL SCOPE INDICATED OR DESCRIBED, THE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.

ABBREVIATIONS

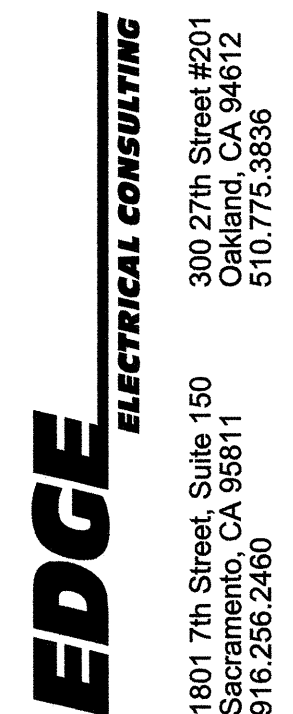
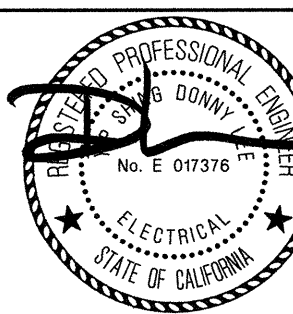
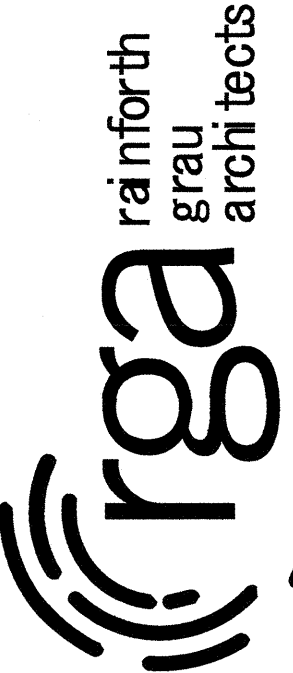
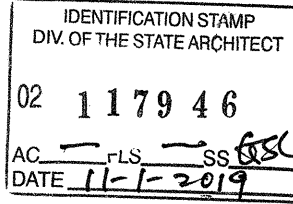
1PH, 3PH 1P, 2P, 3P 3W, 4W (D) (E) (ER) (N) (R)	1 PHASE, 3 PHASE 1 POLE, 2 POLE, 3 POLE 3 WIRE, 4 WIRE DEMO, DEMOLISH EXISTING EXISTING RELOCATED NEW RELOCATE	MCA MCB MCC MLO MOCP MT	MINIMUM CIRCUIT AMPACITY MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MAIN LUGS ONLY MAXIMUM OVER-CURRENT PROTECTION EMPTY CONDUIT W/ PULL-LINE
A, AMPS AC AF AFF AIC	AMPERES ALTERNATING CURRENT FRAME RATING IN AMPERES ABOVE FINISHED FLOOR AMPERES INTERRUPTING CAPACITY ALUMINUM ATS AT TRIP RATING IN AMPERES AMERICAN WIRE GAUGE	NC NCTC NEC NEMA NIES	-N- NORMALLY CLOSED NURSE CALL TERMINAL CABINET NATIONAL ELECTRIC CODE NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION NOT INCLUDED IN ELECTRICAL SCOPE NIGHT LIGHT NORMALLY OPEN NOT TO SCALE
BTR	BUILDING TELECOM ROOM	OCF OFCI OFOI	-O- OVER-CURRENT PROTECTION OWNER FURNISHED CONTRACTOR INSTALLED OWNER FURNISHED OWNER INSTALLED
C CB,C/B CEC CT CU	CONDUIT CIRCUIT BREAKER CALIFORNIA ELECTRICAL CODE CURRENT TRANSFORMER COPPER	PT PVC	-P- POTENTIAL TRANSFORMER POLYVINYL CHLORIDE CONDUIT
DC	DIRECT CURRENT	RLA RSC	-R- RUNNING LOAD AMP RIGID STEEL CONDUIT
EA ELEC EMT	EACH ELECTRICAL ELECTRICAL METALLIC TUBING	SPD SPDT SPST SST	-S- SURGE PROTECTION DEVICE SINGLE POLE DOUBLE THROW SINGLE POLE SINGLE THROW SOLID STATE TRIP
FA FACP FATC FLA FT	FIRE ALARM FIRE ALARM CONTROL PANEL FIRE ALARM TERMINAL CABINET FULL LOAD AMPS FOOT OR FEET	TER TR TM TTB	-T- TELECOM EQUIPMENT ROOM TELECOM ROOM THERMAL MAGNETIC TERMINAL BACKBOARD
G, GND GA GFCI	GROUND GAUGE GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT INTERRUPTER	UG UL UON UPS	-U- UNDERGROUND UNDERWRITERS LAB. UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY
HOA HP	HAND-OFF-AUTO HORSE POWER	V VA VAC	-V- VOLTS VOLT-AMPS VOLTS ALTERNATE CURRENT
J-BOX	JUNCTION BOX	W WP	-W- WATTS WEATHERPROOF
KVA KW	ONE THOUSAND VOLT-AMPS ONE THOUSAND WATTS	XFMR XFER	-X- TRANSFORMER TRANSFER SWITCH
LCP LTG	LIGHTING CONTROL PANEL LIGHTING		

SHEET INDEX

SHEET	DESCRIPTION
E1	ELECTRICAL COVER SHEET
E2	ELECTRICAL SITE PLAN
E3	ONE LINE DIAGRAM AND DETAILS
E4	ELECTRICAL DETAILS

ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
_____	RACEWAY INSTALLED IN CEILING OR WALL. ROUTE EXPOSED IN ALL UNFINISHED AREAS.
- - - - -	RACEWAY INSTALLED BELOW FINISHED FLOOR OR GRADE.
— X —	EXISTING CONDUIT RUN TO BE ABANDONED. REMOVE (E) CONDUCTORS.
— - —	EXISTING CONDUIT RUN, VERIFY ROUTING ON THE JOB.
⬡	EQUIPMENT DESIGNATION.
⬡ T	TRANSFORMER.
⬡ M	UTILITY METER.
⬡	CIRCUIT BREAKER.
⬡	FUSED DISCONNECT SWITCH.
■	BRANCH CIRCUIT PANELBOARD, SURFACE MOUNTED.
■	BRANCH CIRCUIT PANELBOARD, FLUSH MOUNTED.



NEEDHAM SCHOOL  
ELECTRICAL SERVICE UPGRADE

LODI UNIFIED SCHOOL DISTRICT  
LODI, CA

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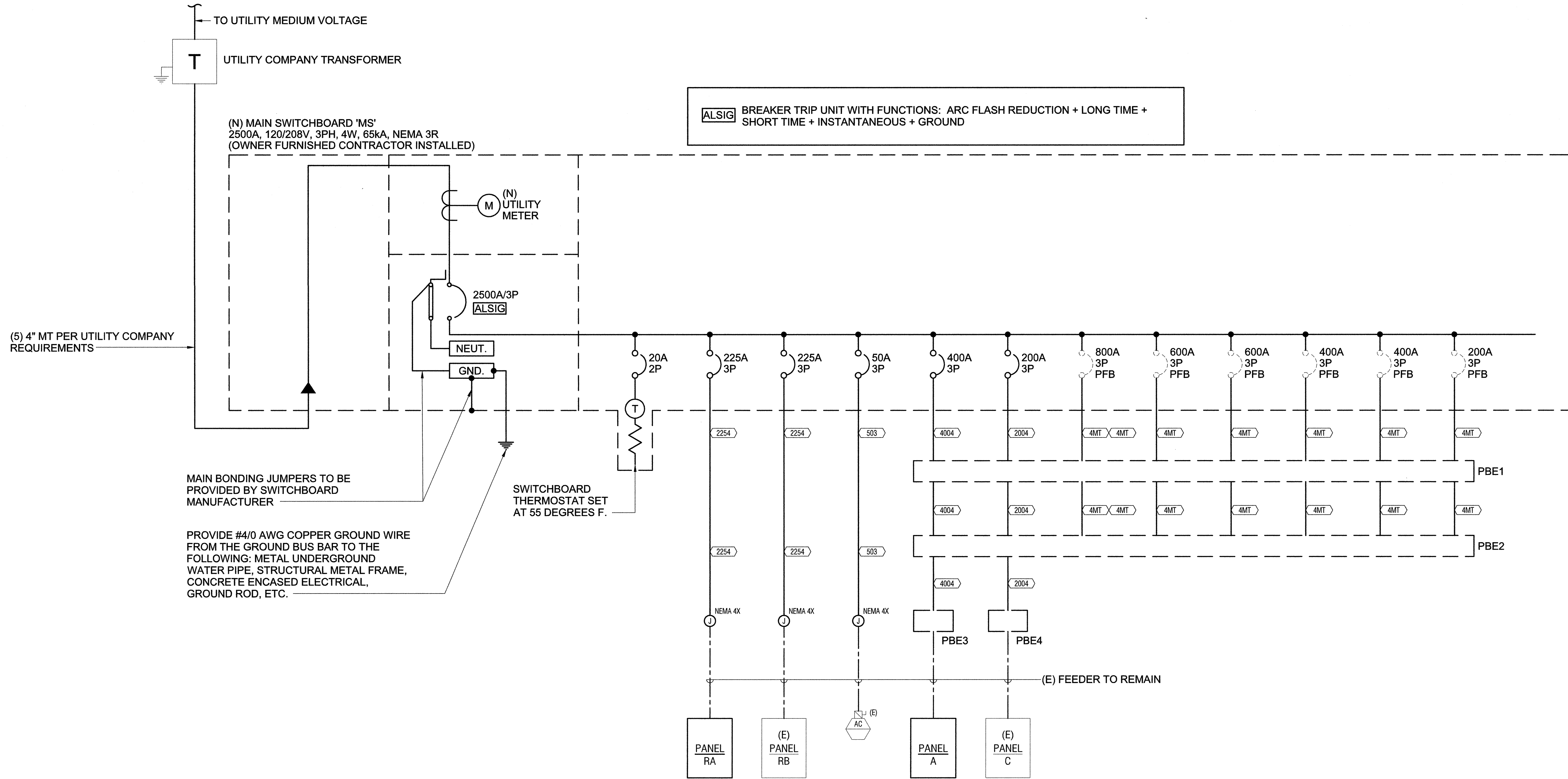
ELECTRICAL COVER  
SHEET

PROJECT NO. 18-1366.00  
DATE: 10/21/19  
SHEET

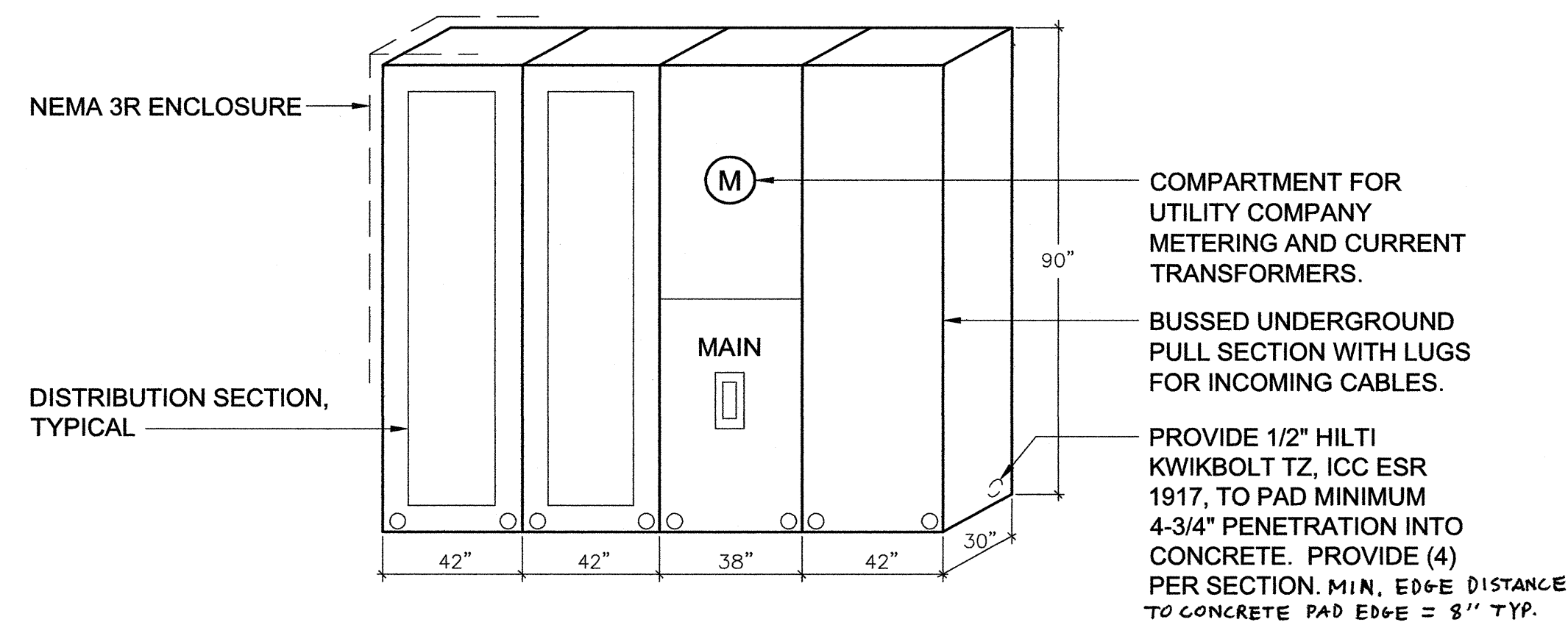
E1





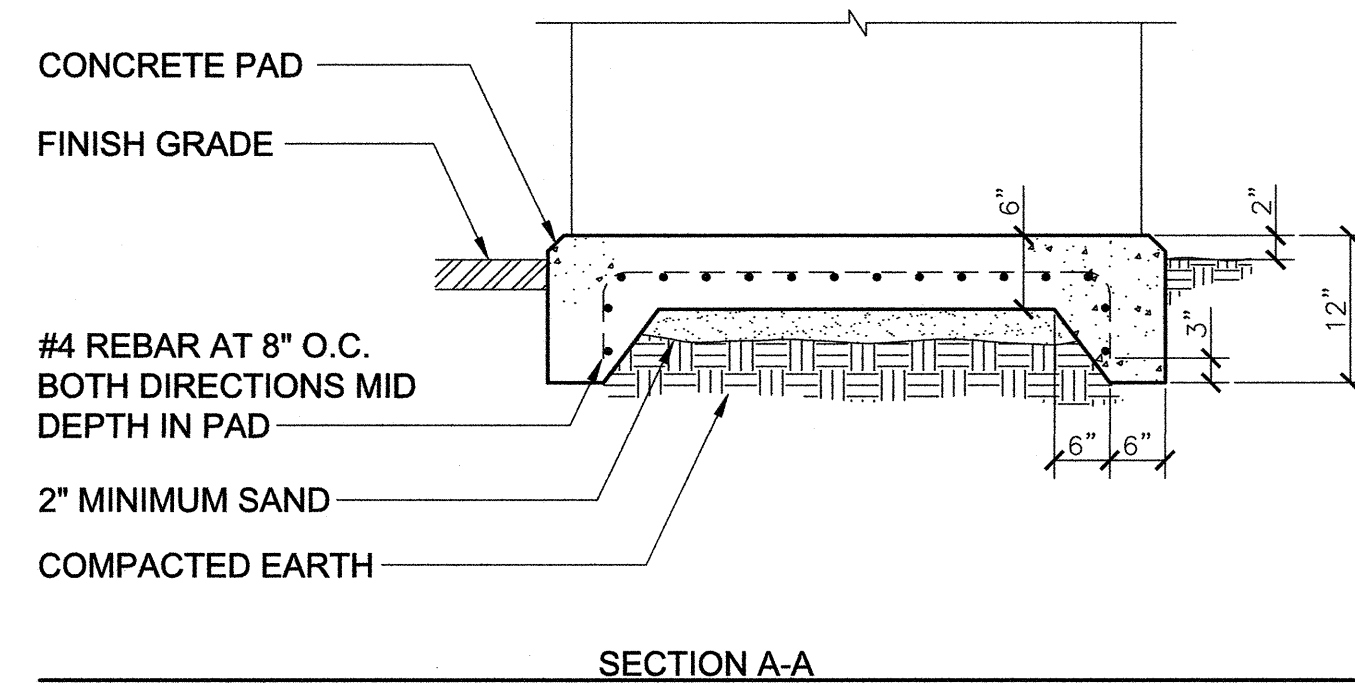
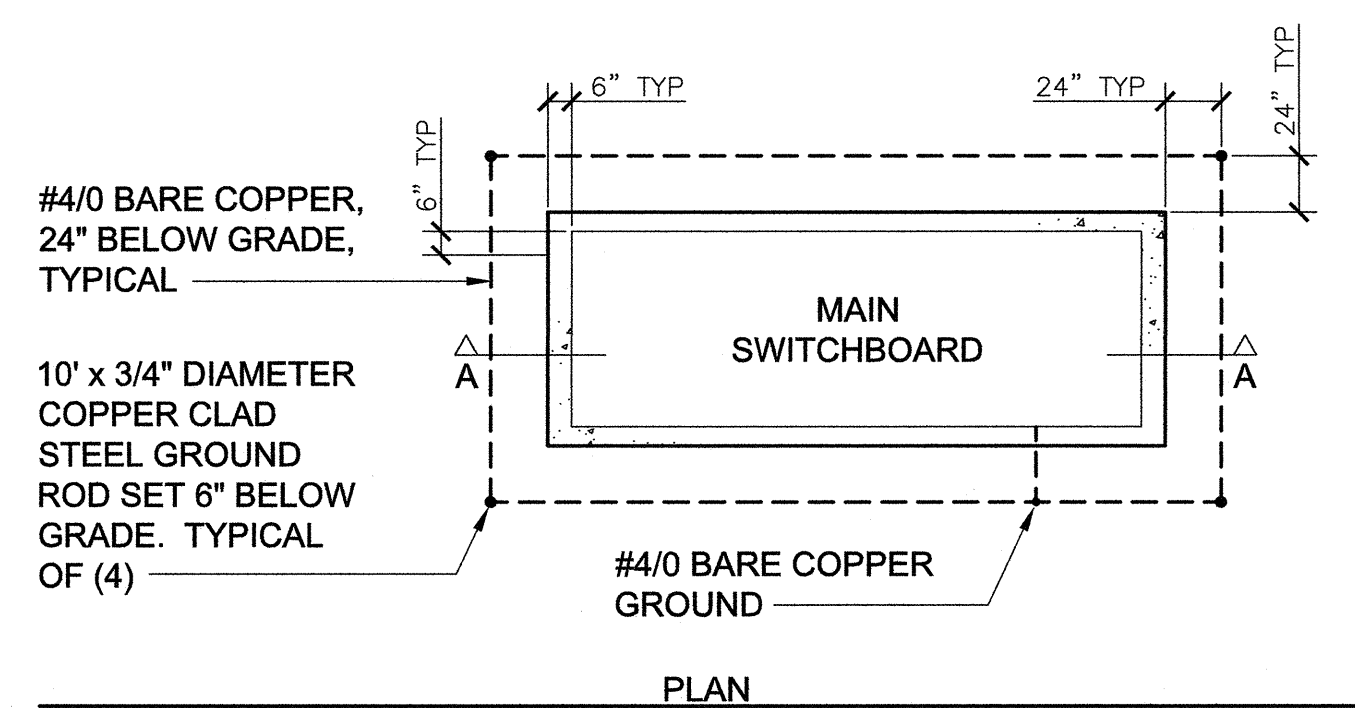


1 ONE LINE DIAGRAM  
NO SCALE



- NOTES:
- DIMENSIONS MAY VARY. CONTRACTOR SHALL USE ACTUAL DIMENSIONS OF EQUIPMENT BEING PROVIDED FOR LAYOUT AND CLEARANCES.
  - PROVIDE STAINLESS STEEL OR GALVANIZED ANCHORS.
  - 50% OF KWIKBOLT TZ ANCHORS MUST BE PULL TESTED TO 2,000 LBS.
  - CONTRACTOR SHALL PROVIDE SWITCHBOARD SECTIONS AS SHOWN. SUBMITTALS PROPOSING FEWER SECTIONS WILL BE RETURNED WITHOUT REVIEW.
  - THE MAIN SWITCHBOARD IS OWNER FURNISHED CONTRACTOR INSTALLED.
  - MAX. OPERATION WEIGHT = 4,500 POUNDS

3 MAIN SWITCHBOARD ELEVATION  
NO SCALE



2 MAIN SWITCHBOARD PAD DETAIL  
NO SCALE

COPPER FEEDER SCHEDULE					
FEEDER TAG	FEEDER DESCRIPTION	CONDUIT	CONDUCTORS		NOTES
			PHASE/NEUTRAL	GROUND	
400A	400 AMP, 3 PHASE, 4 WIRE	2-2.50"	2 SETS OF 4 #4/0 AWG	1 #2 AWG PER SET	-
225A	225 AMP, 3 PHASE, 4 WIRE	1-2.50"	4 #250 KCMIL	1 #4 AWG	-
200A	200 AMP, 3 PHASE, 4 WIRE	1-2.50"	4 #4/0 AWG	1 #6 AWG	-
50B	50 AMP, 3 PHASE, 3 WIRE	1-1.00"	3 #6 AWG	1 #10 AWG	-
4MT	EMPTY CONDUIT	1-4.00"	-	-	-

MS LOAD CALCULATION				
LOAD	QTY.	KVA	MULT.	TOTAL KVA
(E) MAIN SWITCHBOARD	1	174	1.25	218
FUTURE MP BUILDING	1	225	1.0	225
FUTURE CLASSROOM	14	15	1.0	210
FUTURE PORTABLE CLASSROOM	5	15	1.0	75
TOTAL				728 / 0.36 = 2023 AMPS

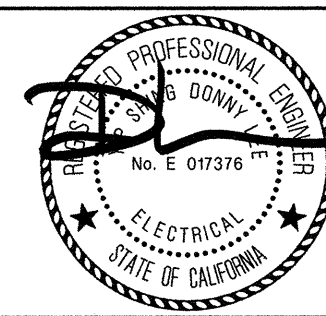
NEEDHAM SCHOOL  
ELECTRICAL SERVICE UPGRADE

LODI UNIFIED SCHOOL DISTRICT  
LODI, CA

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ONE LINE DIAGRAM AND DETAILS

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SHEET E3

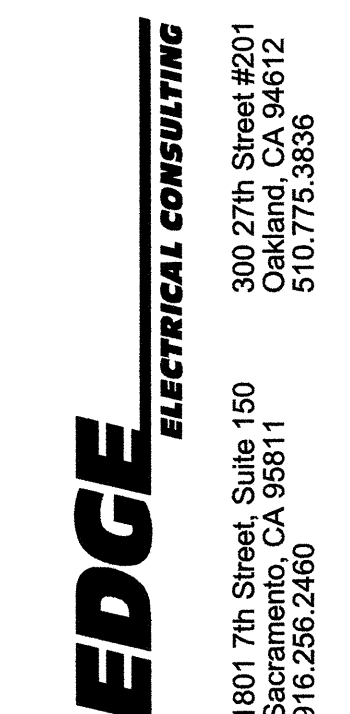
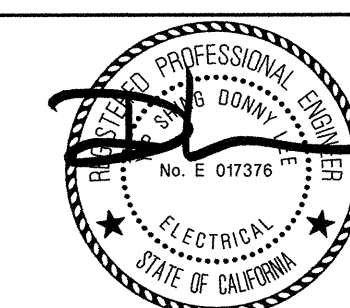
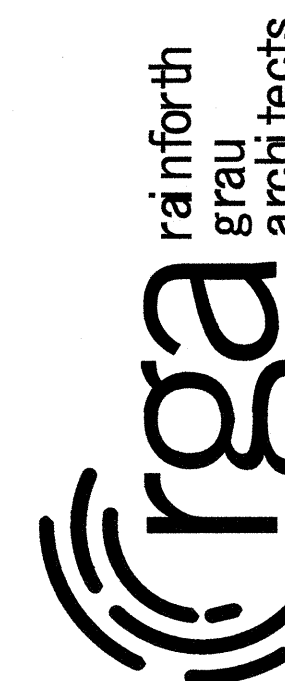
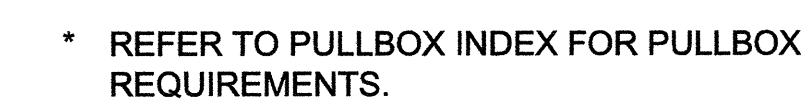
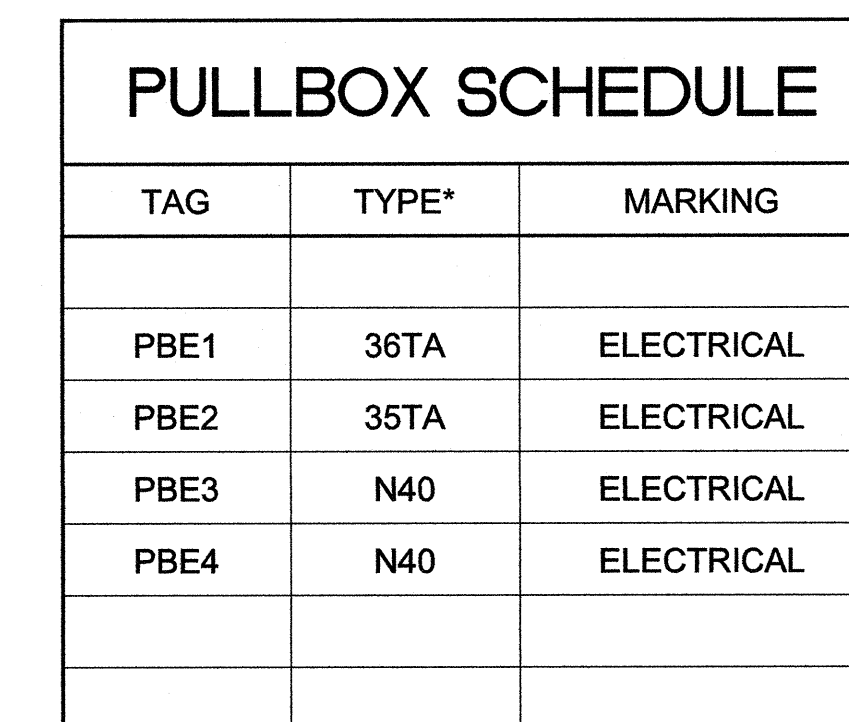
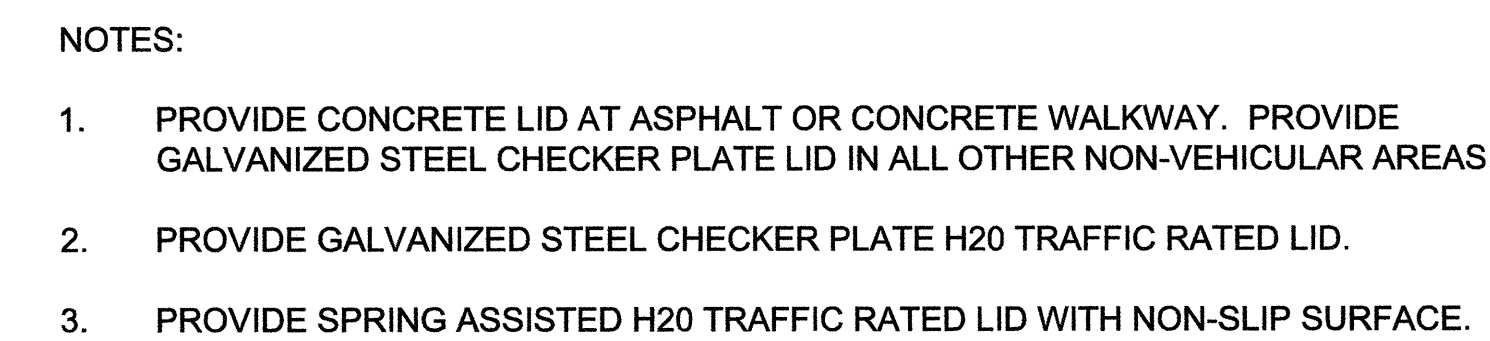
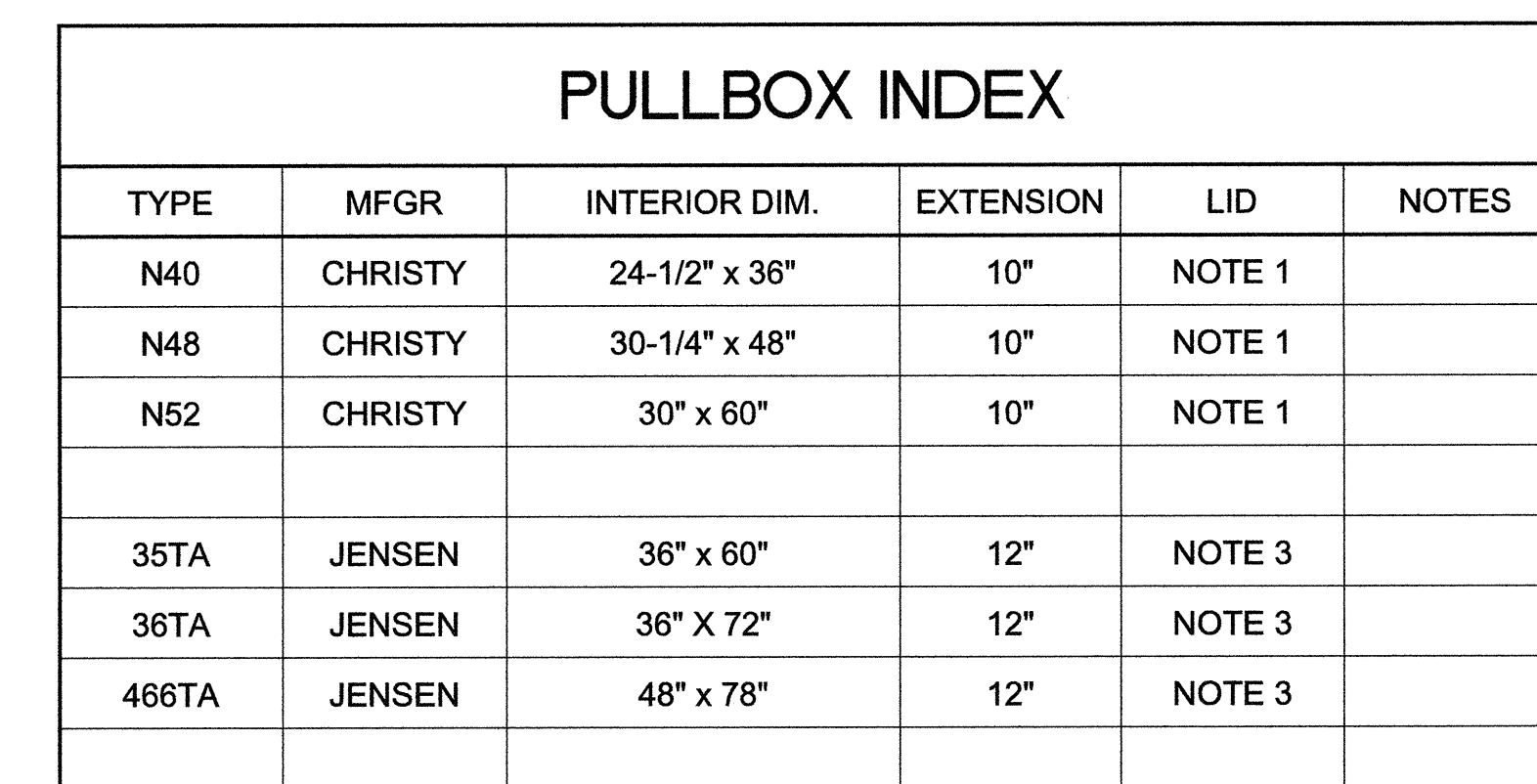
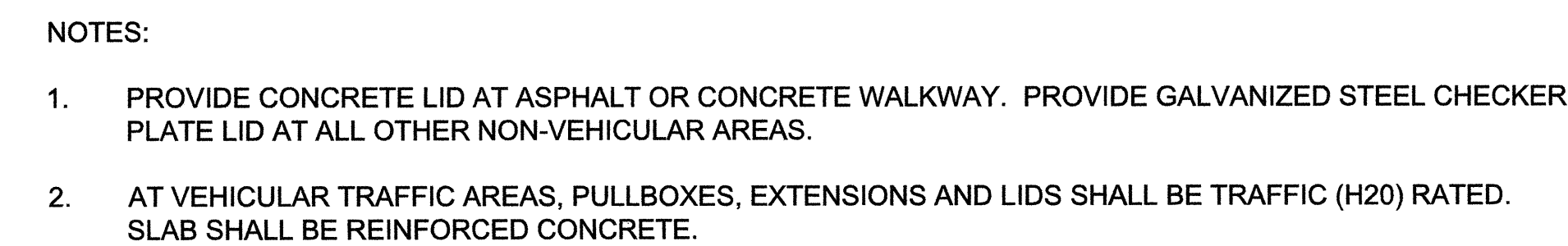
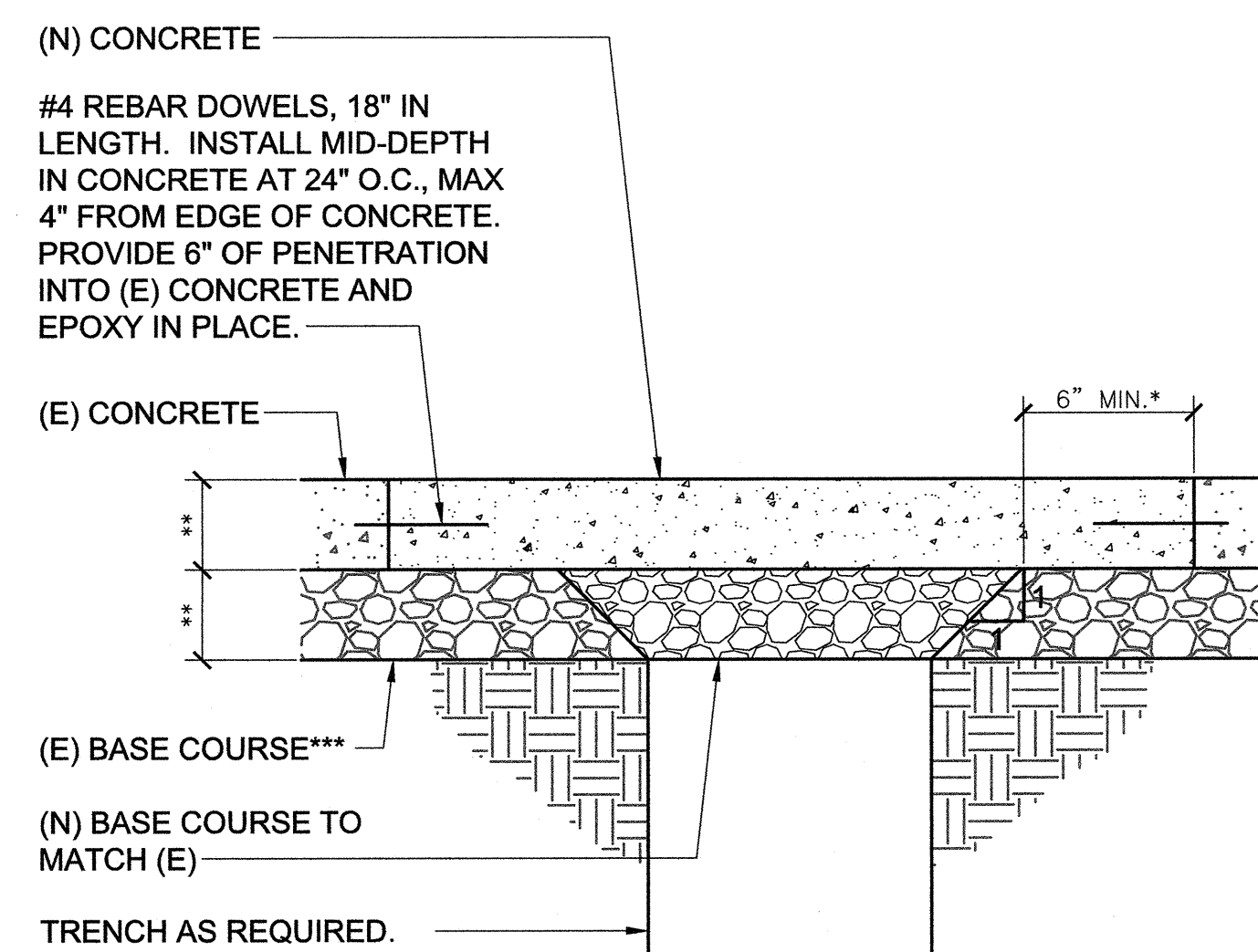
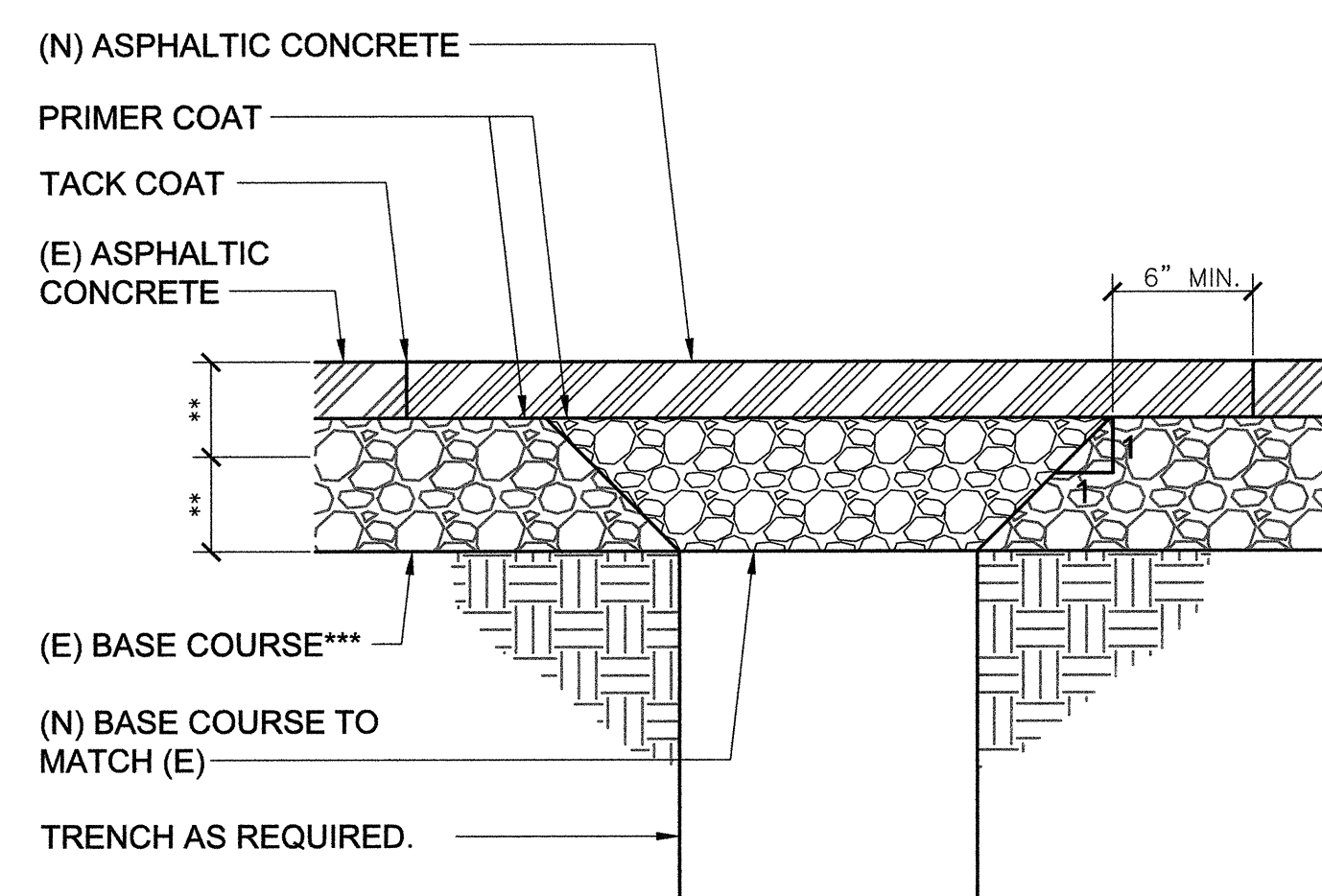
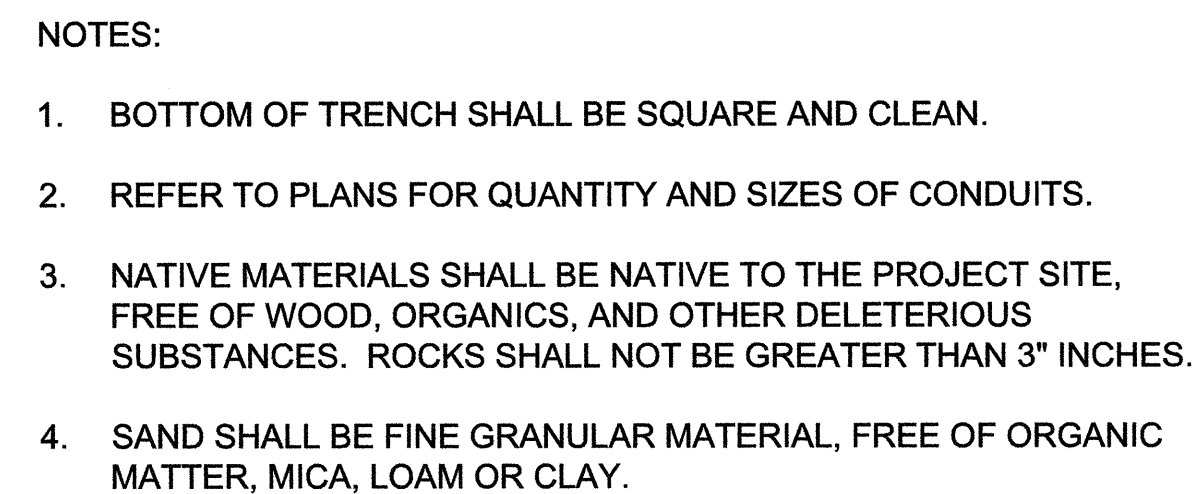
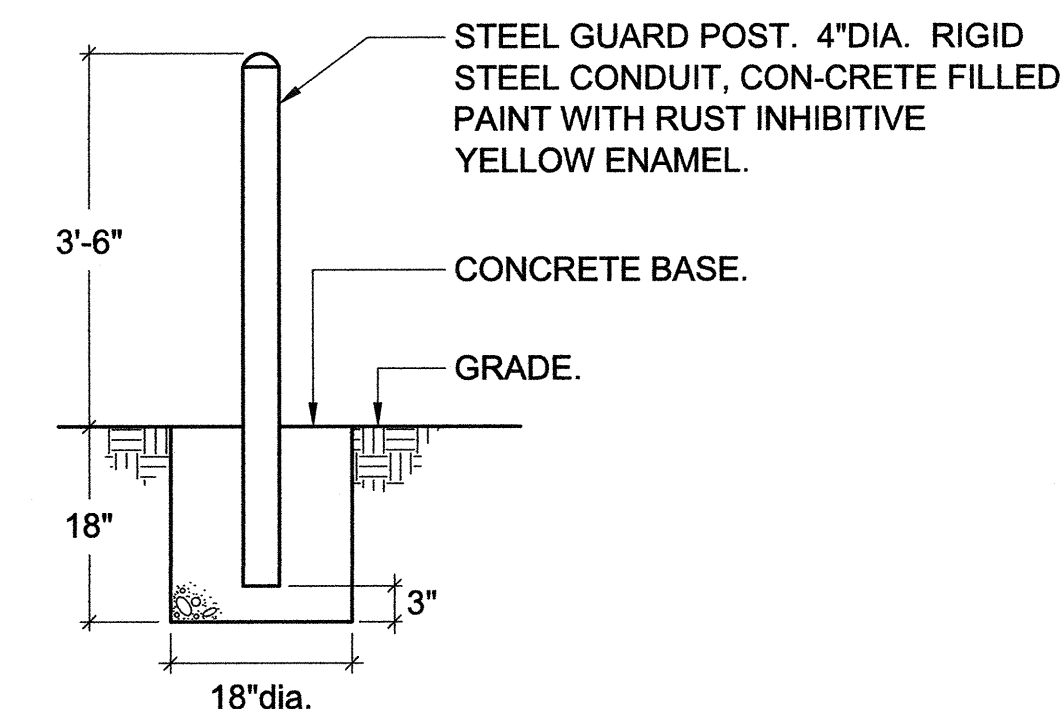
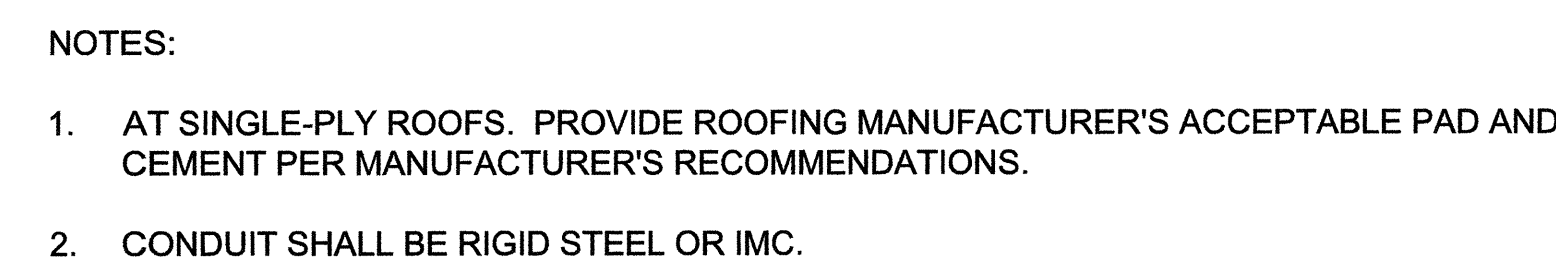


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IDENTIFICATION STAMP  
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**NEEDHAM SCHOOL  
ELECTRICAL SERVICE UPGRADE**

**LODI UNIFIED SCHOOL DISTRICT**  
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## ELECTRICAL DETAILS

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E4