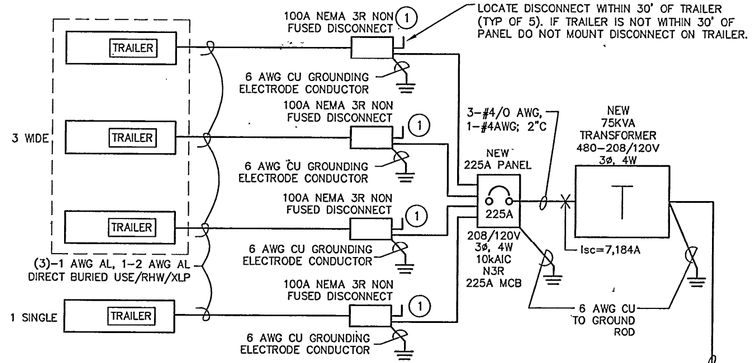
City of Aurora
Building Codes Division
15151 E Alameda Pkwy
Aurora, CO 80012
(303) 739-7420

Notice

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Provide a grounded electrode system bonded to the service equipment enclosure, grounded conductors, and grounded electrode conductors per 2005 NEC 250-50 and 250-104.
Legibly identify each breaker or switch for it's use or purpose on the circuit directory in the panel/switchboard per 2005 NEC 408.4.
Locate the required overcurrent protection per 2005 NEC 240-21.
Install electrical connections per 2005 NEC 110-14, identify disconnects per 2005 NEC 110-22 and provide working space around and provide working space around electrical equipment per 2005 NEC 110-26.
ARKANSAS ST.
S POTOMAC ST.
50' to back of Curb
Panel
Transformer
JE DUNN TRAILER
OFFICE
JE DUNN TRAILER
NORTH
36'
8'
10'
75' To Back of Curb
Underground Service Feeder To Bldg. #1435
JE DUNN CONSTRUCTION
MEDICAL CENTER OF AURORA
CONSTRUCTION TRAILER LAYOUT FOR PERMIT
DATE: 3/06/2007
07-1-15-25
Code violations found during inspection are required to be corrected. Plan/Permit issuance does not grant approval of a code violation. 2003 IBC 105.4



Aurora Medical Center - Owner Temporay Power for Office Trailers							
1/23/2007							
LOAD STUDY SUMMARY:							
NEC 550 18(A)(1) Calculations: (3VA/SF)							
CONSTRUCTION TRAILERS LOAD CALCULATIONS							
TRAILER SIZE		LIGHTING	A/C UNIT	Largest Motor ADD 25%	TOTAL	TOTAL	
WIDTH	LENGTH	VA	VA	A/C VA	VA	AMPS	
12	60	2,160	12,960	3,240	18,360	88.27	125A Feeder 208V, 1PH
12	60	2,160	12,960	3,240	18,360	88.27	125A Feeder 208V, 1PH
12	60	2,160	12,960	3,240	18,360	88.27	125A Feeder 208V, 1PH
12	60	2,160	12,960	3,240	18,360	88.27	125A Feeder 208V, 1PH
Total		8,640	51,840				
Total Trailer Load (Lighting and AC Units)					60,480	VA	
NEC Table 550 31 - Service Diversity for Trailers					8	(Allowed 39%, Using 80%)	
erated Trailer Load					48,384		
Largest Motor at 25%					3240	VA	
Service VA					51,624	VA	
Service Calc (25% largest Motor)					143	Amps @ 208V, 3PH	

Ludvik Electric Load Study							
MEDICAL CENTER OF AURORA							
2/20/2007							
LE Project Number:							
PANEL H1A							
METER READING					24,070	VA	
VA Load times 1.25					30,088	VA	
					36.25	A	
LOAD STUDY SUMMARY:							
ADDED LOAD FROM TRAILORS					51,624	VA	
NEW TOTAL VA					81711.5	VA	
					98	A	
PANEL H1A HAS 225 AMP CAPACITY							

PANEL: OWNER TEMP

MLO					SURFACE		NEMA 3R		
MCB	225				RECESSED				
AMPACITY =	225				200% NTRL				
AIC =	10,000				GRND BAR	X			
VOLTAGE =	208/120	3PH	4W						

VA	DESCRIPTION	P	CB	CKT	PH	CKT	CB	P	DESCRIPTION	VA
7560	TRAILER	2	100	1	A	2				
7560				3	B	4				
7560	TRAILER	2	100	5	C	6				
7560				7	A	8				
7560	TRAILER	2	100	9	B	10				
7560				11	C	12				
7560	TRAILER	2	100	13	A	14				
7560				15	B	16				
				17	C	18				
				19	A	20				
				21	B	22				
				23	C	24				
				25	A	26				
				27	B	28				
				29	C	30				
				31	A	32				
				33	B	34				
				35	C	36				
				37	A	38				
				39	B	40				
				41	C	42				

Load Type	Connected Load (VA)	Demand Factor	Demand Load (VA)	Code Factor	Derated Demand Load (VA)
Lighting	0	1.0	0	1.25	0
Power 1st 10 KVA	0	1.0	0	1.0	0
Power Remaining	0	0.5	0	1.0	0
Largest Motors	0	1.0	0	1.25	0
Remaining Motors	0	1.0	0	1.0	0
Other	60,480	1.0	60,480	1.0	60,480
TOTAL VA					60,480
Phase Totals	A= 22,680	B= 22,680	C= 15,120		
					ID D LOAD (AMPS)= 167.85

SCOPE OF WORK

PROVIDE POWER TO A TRIPLE WIDE TRAILER AND A SINGLE TRAILER. POWER WILL BE OBTAINED FROM EXISTING PANEL H1A IN BUILDING #1455. AN EXISTING 1" CONDUIT WILL BE USED TO PULL (3) NEW #3 AWG CU, CABLES AND (1) NEW #8 AWG CABLE TO A NEW PULL BOX. FROM NEW PULL BOX THERE WILL BE (3) NEW #1 AWG AND (1) #6 AWG ALUMINUM DIRECT BURIED CABLES TO A NEW 75kVA TRANSFORMER. THE NEW TRANSFORMER WILL FEED A NEW N3R 225A PANEL WHICH WILL FEED THE DISCONNECTS FOR THE TRAILERS.

75kVA TRANSFORMER
MAXIMUM FAULT CURRENT AVAILABLE FROM TRANSFORMER

$$I_{F.L.} = \frac{KVA \times 1,000}{E_{L-L} \times 1.732}$$

$$I_{F.L.} = \frac{75 \times 1,000}{208 \times 1.732}$$

$$I_{F.L.} = 208.3 \text{ AMPS}$$

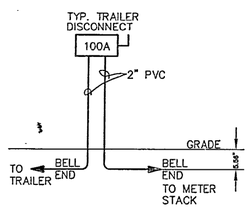
$$M = \frac{100}{\% Z \text{ Trans}} = \frac{100}{2.9} = 34.48$$

$$I_{SC} = I_{F.L.} \times M$$

$$= 208.5 \times 34.48 = 7,184 \text{ AMPS}$$

SHEET NOTES:

1. REFER TO DETAIL FOR CONDUIT STUB UPS AT DISCONNECT.
2. NEW 100A 3 POLE WESTINGHOUSE BREAKER TYPE EHB IN EXISTING PANEL



DISCONNECT DETAIL
N.T.S.

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE APPROVED MAR 19 2007

AC Voltage Drop Calculation Copper Conductors

Source Voltage	Single or Three Phase	Power Factor	Feeder Wire Size	# of Sets	One Way Length	Conduit Type Steel	Conduit Type PVC	Wire Type	NEC Table "X" Reactance	NEC Table "R" Resistance	Calculated "X" Reactance	Calculated "R" Resistance	Calculated "Z" Impedance	Load Current In Amps	Volts Drop	% Drop From Source
480	3	90	3	1	500	-	X	Copper	0.047	0.25	0.0235	0.1375	0.1395	36	8.42	1.75%

ELECTRICAL ONE-LINE DIAGRAM
N.T.S.

07-175425

MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC
AURORA, CO 80309
CONSTRUCTION TRAILER
TEMPORARY SERVICE

3900 SOUTH TELLER
LAKEWOOD, COLORADO 80235
(303) 781-9801

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LUDVIK ELECTRIC

DRAWING TITLE
TEMPORARY POWER
ONE-LINE DIAGRAM
PANEL SCHEDULE,
LOAD STUDY
2-13-07

PROJECT NUMBER
6310-00-70

SHEET NUMBER
OWNRTMP

R:\cad\6310.Medical Center of Aurora\E-DWGS\OWNER-TEMP.dwg, 2/28/2007 7:49:41 AM, LUDVIK

SOUTH POTOMAC STREET

CUT HYDRANT LINE AT WATER MAIN

REMOVE CURB & GUTTER WITHIN THESE LIMITS

LIMITS OF DEMOLITION

SAW CUT & REMOVE CURB & GUTTER

REMOVE CONCRETE PAN

EXISTING PARKING STRUCTURE TO BE DEMOLISHED EXISTING CONCRETE SLAB TO REMAIN FOR CONSTRUCTION YARD.

DIRECT BURIED SERVICE CABLE IN TRENCH

ABANDON WATER LINE

REMOVE OUTLET STRUCTURE AND ST SEWER

REMOVE INLET

REMOVE INLET

REMOVE INLET

REMOVE ST SEWER

REMOVE ST MH

REMOVE FIRE HYDRANT

REMOVE AND RELOCATE EXISTING STATUE RE: LANDSCAPE PLANS

36"ST

15"ST

5600

5599

5598

5597

5595

5590

605

CIP

Temporary 75 KVA Pad Mounted Trans Former

Temporary 225 A Panel

JE Dunn Office Trailers (4) See Detail Drawings

New Quartz J-Box

Direct Buried Service Cable

Existing P.V.C.

Existing 1" P.V.C.

Temporary Office Trailer Lay-out

Existing Panel "H1A"

Existing MOB Bldg # 1455

M.O.B. #1455

THIS SHEET OF DRAWINGS HAS NOT BEEN REVIEWED FOR CODE COMPLIANCE

07-175425

N

NOTES:

1. COORDINATE LANDSCAPE REMOVAL WITH LANDSCAPING PLANS.

2. COORDINATE SIGN REMOVAL WITH HOSPITAL FACILITIES PERSONNEL. DO NOT REMOVE PUBLIC TRAFFIC CONTROL