Rancho Seco

Final Status Survey Summary Report

April 2, 2008

Auxiliary Building +0' Rooms 104,105,119-126,128,129,135 and 221

Survey Unit F8130881

Prepared By: Erin L. Brown **Date:** 4/2/2008

FSS Engineer

Reviewed By: _____ **Date:** 4/2/08

Lead FSS Engineer

Approved By: _____ **Date:** 5-7-08

Dismantlement Superintendent, Radiological

FINAL STATUS SURVEY SUMMARY REPORT

Survey Unit:

F8130881, Auxiliary Building +0' Rooms 104,105,119-126,128,129,135 and 221

Survey Unit Description:

Operating History: The reinforced concrete structure contained the RadWaste processing and supporting systems. The building contained six main elevations. Residual radioactive material was known to be present on all levels of the interior of the building. Operating records and the HSA document several events with the potential for a release of radioactivity inside this structure. One report documented contamination of the auxiliary building roof. The roof was later replaced.

Site Characterization: Direct measurements were made of each of the interior elevation surfaces as well as the exterior surfaces of the structure. These measurements confirmed the presence of plant-derived radionuclides. Direct measurements on the –47' elevation showed a mean gross activity level of 320,071 dpm/100 cm^2 and a maximum value of 5,720,000 dpm/100 cm^2. Direct measurements on the –29' elevation showed a mean gross activity level of 544,756 dpm/100 cm^2 and a maximum value of 11,370,000 dpm/100 cm^2. Direct measurements on the –20' elevation showed a mean gross activity level of 247,831 dpm/100 cm^2 and a maximum value of 10,080,000 dpm/100 cm^2. Direct measurements on the grade elevation showed a mean gross activity level of 373,758 dpm/100 cm^2 and a maximum value of 5,800,000 dpm/100 cm^2. Direct measurements on the +20' elevation showed a mean gross activity level of 85,408 dpm/100 cm^2 and a maximum value of 1,900,000 dpm/100 cm^2. Direct measurements on the +40' elevation showed a mean gross activity level of 3,288 dpm/100 cm^2 and a maximum value of 24,781 dpm/100 cm^2. Direct measurements on the building exterior, including the mezzanine roof, showed a mean gross activity level of 1,897 dpm/100 cm^2 and a maximum value of 2,990 dpm/100 cm^2. (The roof had been replaced prior to the classification survey.) Based on the classification procedure (DSIP-0020) and levels of gross activity reported, the interior of the auxiliary building was determined to be a Class 1, 2 area and the exterior was a Class 2, 3. The non-controlled areas were Class 3.

HSA Events: HSA Report pg. 63.

Survey Unit Design Information:

The Survey Unit Design Parameters are presented in Table 1 below. The survey unit and measurement locations are depicted on the maps in Attachment 1. Direct measurement locations were randomly determined and 282 m^2 were scanned for approximately 6% coverage. Samples of removable contamination were collected at each direct measurement location. The instrumentation used for the survey along with the MDC values are listed in Tables 2-1 and 2-2 in Attachment 2.

Table 1. Survey Unit Design Parameters

Survey Design Parameter	Value	Comment
Survey Area:	F813	Auxiliary Building +0' Rooms 104,105,119-126,128,129,135 and 221
Survey Unit:	0881	Structure Surface
Class:	3	LTP Table 5-4
SU Area (m^2)**:**	4926	
Evaluator:	Erin L. Brown	
DCGL (dpm/100 cm^2)**:**	43000	Gross Activity DCGL
Area Factor:	N/A	Class 3
Design DCGLemc (dpm/100 cm^2)**:**	N/A	Class 3
LBGR (dpm/100 cm^2)**:**	21500	Default = 50% DCGL
Design Sigma (dpm/100 cm^2)**:**	6935	
Type I Error:	0.05	
Type II Error:	0.05	
Predominant Nuclide:	Cs-137	
Sample Area (m^2)**:**	N/A	Class 3
Scan Area (m^2)**:**	282	
Scan Coverage (%):	6%	Class 3
$Z_{1-\alpha}$ **:**	1.645	
$Z_{1-\beta}$ **:**	1.645	
Sign P:	0.99865	
Calculated Relative Shift:	3.1	
Relative Shift Used:	3	Uses 3.0 if Relative Shift is >3
N-Value:	11	
Design N-Value + 20%:	14	NUREG-1575 Table 5-5
Design Min Samples N:	14	Class 3
Grid Spacing L:	N/A	Class 3

Survey Results:

A total of 14 direct measurements were made in F8130881. The results including mean, median, standard deviation and range are shown in Table 2. All direct measurements were less than the DCGL. None of the scan measurements indicated areas of elevated activity. Scan activity ranged from 2029 to 6419 dpm/100 cm², based on a surveyor efficiency of 0.5 and no background subtracted. Samples for removable surface activity were all less than 10% of the DCGL as shown in Table 3. Removable surface activity samples were counted for alpha activity and none was detected at the MDC shown in Table 2-1 of Attachment 2.

Table 2. Direct Measurement Results

Measurement ID	Gross Activity (dpm/100 cm²)
F8130881-C0001BD	1805
F8130881-C0002BD	1499
F8130881-C0003BD	1904
F8130881-C0004BD	1551
F8130881-C0005BD	1048
F8130881-C0006BD	1930
F8130881-C0007BD	1707
F8130881-C0008BD	1608
F8130881-C0009BD	1567
F8130881-C0010BD	1940
F8130881-C0011BD	1681
F8130881-C0012BD	1572
F8130881-C0013BD	1484
F8130881-C0014BD	1515
Mean:	1629
Median:	1590
Standard Deviation:	233
Range:	1048 - 1940

Table 3. Removable Surface Activity Results

Measurement ID	Surface Beta Activity (dpm/100 cm^2)
F8130881C0001SM	-0.95
F8130881C0002SM	-2.24
F8130881C0003SM	0.34
F8130881C0004SM	-3.53
F8130881C0005SM	-4.82
F8130881C0006SM	-3.53
F8130881C0007SM	-0.95
F8130881C0008SM	2.93
F8130881C0009SM	-2.24
F8130881C0010SM	-2.24
F8130881C0011SM	1.64
F8130881C0012SM	-2.24
F8130881C0013SM	0.34
F8130881C0014SM	1.64
Mean:	-1.13
Median:	-1.59
Standard Deviation:	2.26
Range:	-4.82 to 2.93

Survey Unit Data Assessment:

The survey design required 14 direct measurements for the Sign Test. The critical value and the results of the Sign Test are presented in Table 4. The sample mean and median values were less than the DCGL. The sample standard deviation was less than the design standard deviation so no additional samples were required.

Table 4. Data Assessment Results

Survey Results Parameter	Value	Comment
Material Background Used (dpm/100 cm^2):	N/A	
Ambient Background Used (dpm/100 cm^2):	N/A	Average Ambient BKG = 0
Actual Direct Measurements (N):	14	
Median (dpm/100 cm^2):	1590	
Mean (dpm/100 cm^2):	1629	
Direct Measurement Standard Deviation (dpm/100 cm^2):	233	
Total Standard Deviation (dpm/100 cm^2):	233	Based on samples and backgrounds.
Maximum (dpm/100 cm^2):	1940	
Material Type:	N/A	Background Subtract Not Applied
Sign Test Final N Value:	14	
S+ Value:	14	
Critical Value:	10	
Sufficient Samples Collected:	Yes	
Maximum Value < DCGL:	Yes	
Median Value < DCGL:	Yes	
Mean Value < DCGL:	Yes	
Maximum Value < DCGLemc:	N/A	Class 3
Total Standard Deviation <= Sigma:	Yes	
Pass the Sign Test?	Yes	
Reject the Null Hypothesis?	Yes	
Does the Survey Unit Pass All Criteria?	Yes	

Survey Unit Investigations and Results:

No investigations were required for either direct or scan measurements and no investigation results are reported.

ALARA Statement:

As stated in Chapter 4 of the LTP, as long as the residual activity within the survey unit is less than the DCGL (i.e. the survey unit average activity is less than the DCGL and the EMC criterion has been met), the ALARA criterion has been met.

Changes in Initial Survey Unit Assumptions:

The survey unit was designed as a Class 3 structure survey and the sample results are consistent with that classification. The variability of the survey results was less than the characterization data used for survey design. No potential areas of elevated activity were detected

Conclusion:

The FSS of this survey unit was properly designed as a Class 3 survey based on Table 5-4 of the LTP. The required number of direct measurements was made and the scan coverage met the requirement of Table 5-6 of the LTP. No direct measurements exceeded the DCGL of 43000 dpm/100 cm^2 and none of the removable surface activity measurements exceeded 10% of the DCGL. No investigations were required.

The direct measurement data support rejection of the null hypothesis, providing high confidence that the survey unit satisfied the release criteria and that the data quality objectives were met.

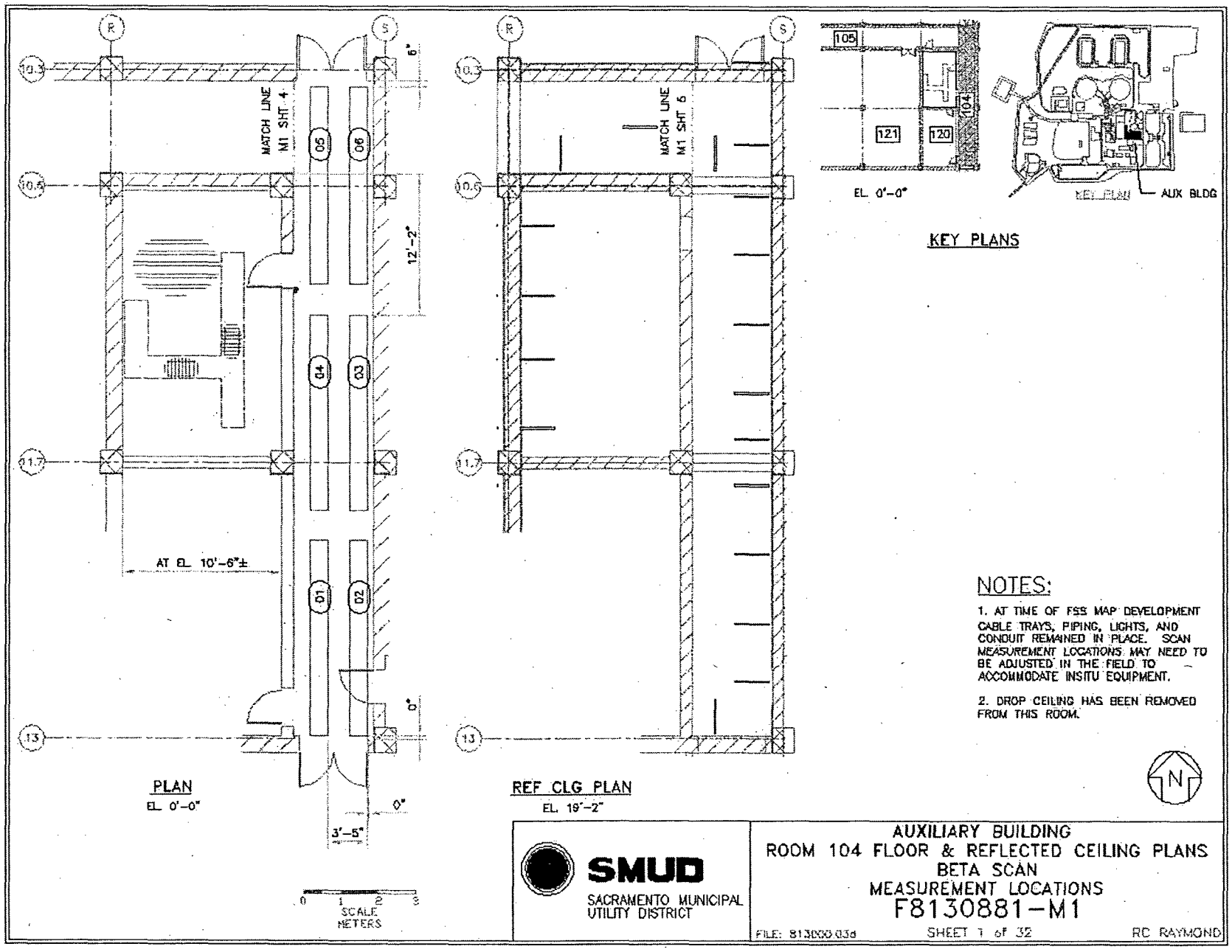
It is concluded that survey unit F8130881 meets the release criteria of 10CFR20.1402.

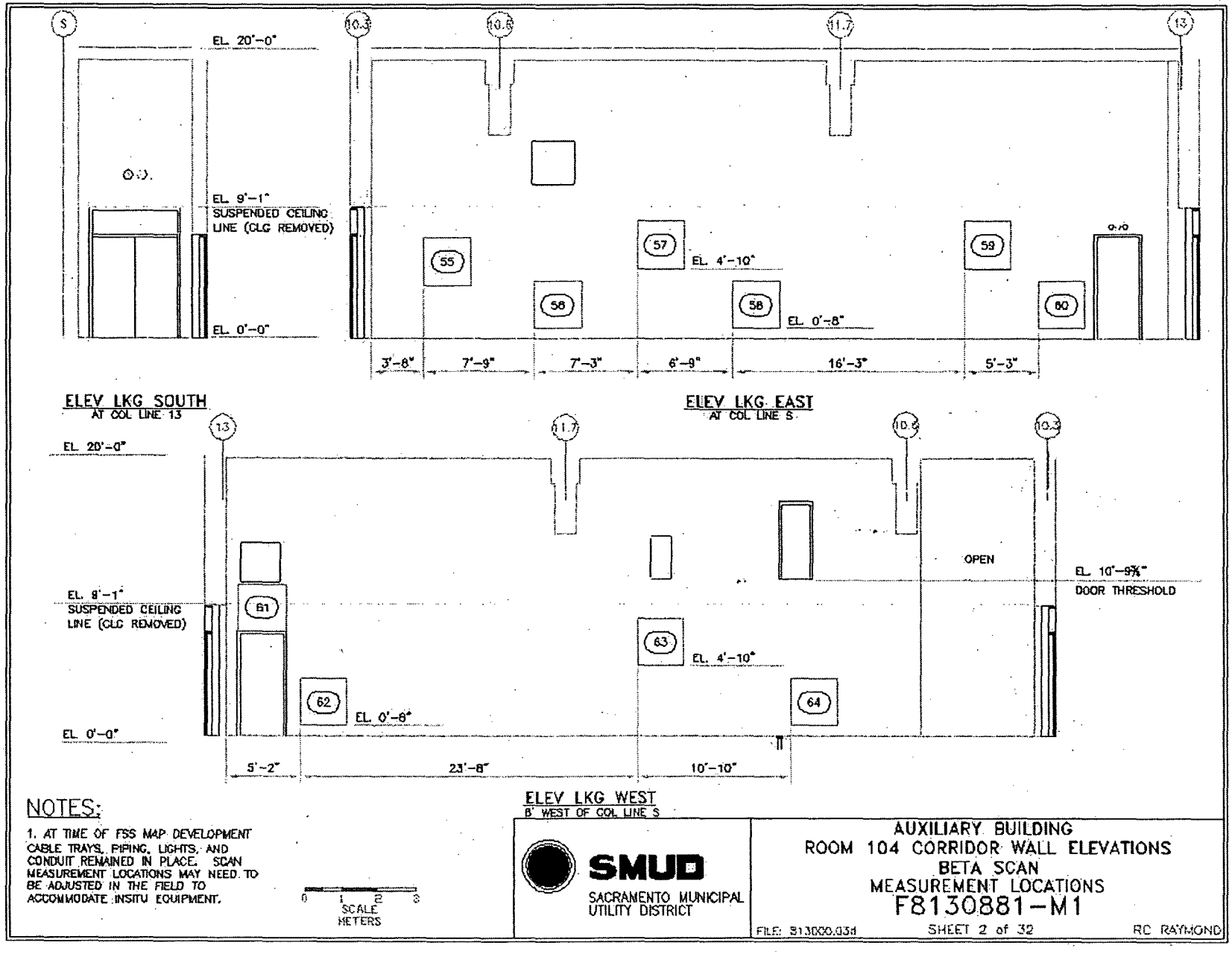
Attachment 1

Maps

April 2, 2008

Survey Unit F8130881


R
S
10.3
10.5
11.7
13
MATCH LINE M1 SHT 4
MATCH LINE M1 SHT 5
05
06
04
03
01
02
6"
12'-2"
0"
AT EL. 10'-6"±
3'-5"
0"
0 1 2 3
SCALE METERS
PLAN
EL. 0'-0"
REF CLG PLAN
EL. 19'-2"
105
104
121
120
EL. 0'-0"
KEY PLAN
AUX BLDG
KEY PLANS
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.
2. DROP CEILING HAS BEEN REMOVED FROM THIS ROOM.
N
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 104 FLOOR & REFLECTED CEILING PLANS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1
FILE: 813000.03d
SHEET 1 of 32
RC RAYMOND



NOTES:

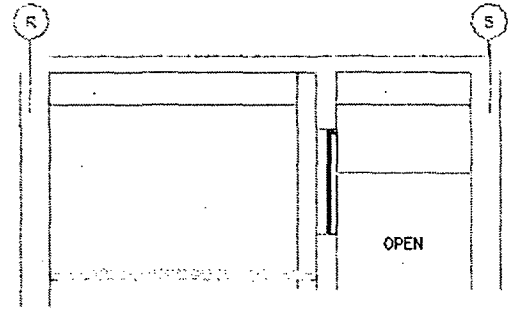
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

0 1 2 3
SCALE
METERS

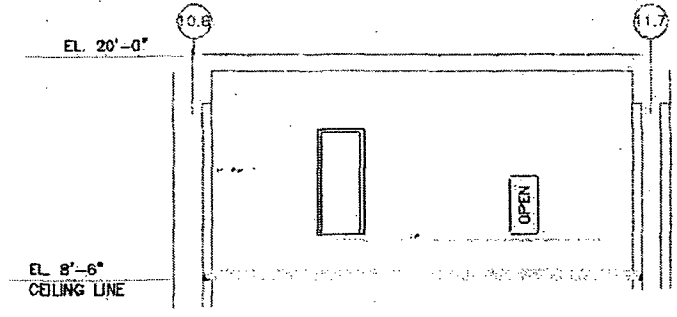
SMUD
SACRAMENTO MUNICIPAL
UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 104 CORRIDOR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

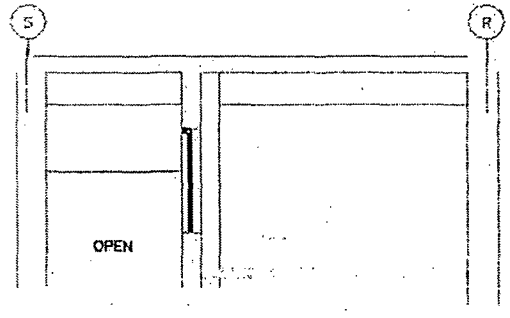
FILE: 813000.038 SHEET 2 of 32 RC RAYMOND



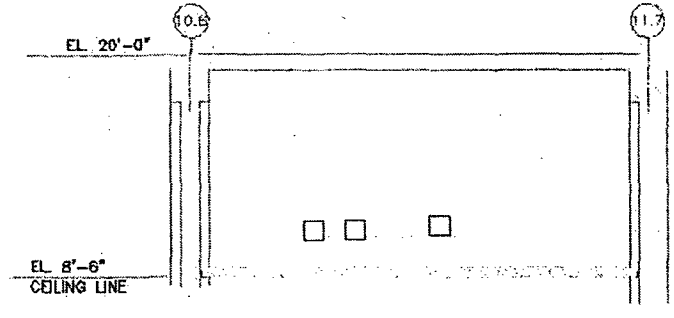
ELEV LKG NORTH
AT COL LINE 10.6



ELEV LKG EAST
9" WEST OF COL LINE S



ELEV LKG SOUTH
AT COL LINE 11.7



ELEV LKG EAST
AT COL LINE R

NOTES:

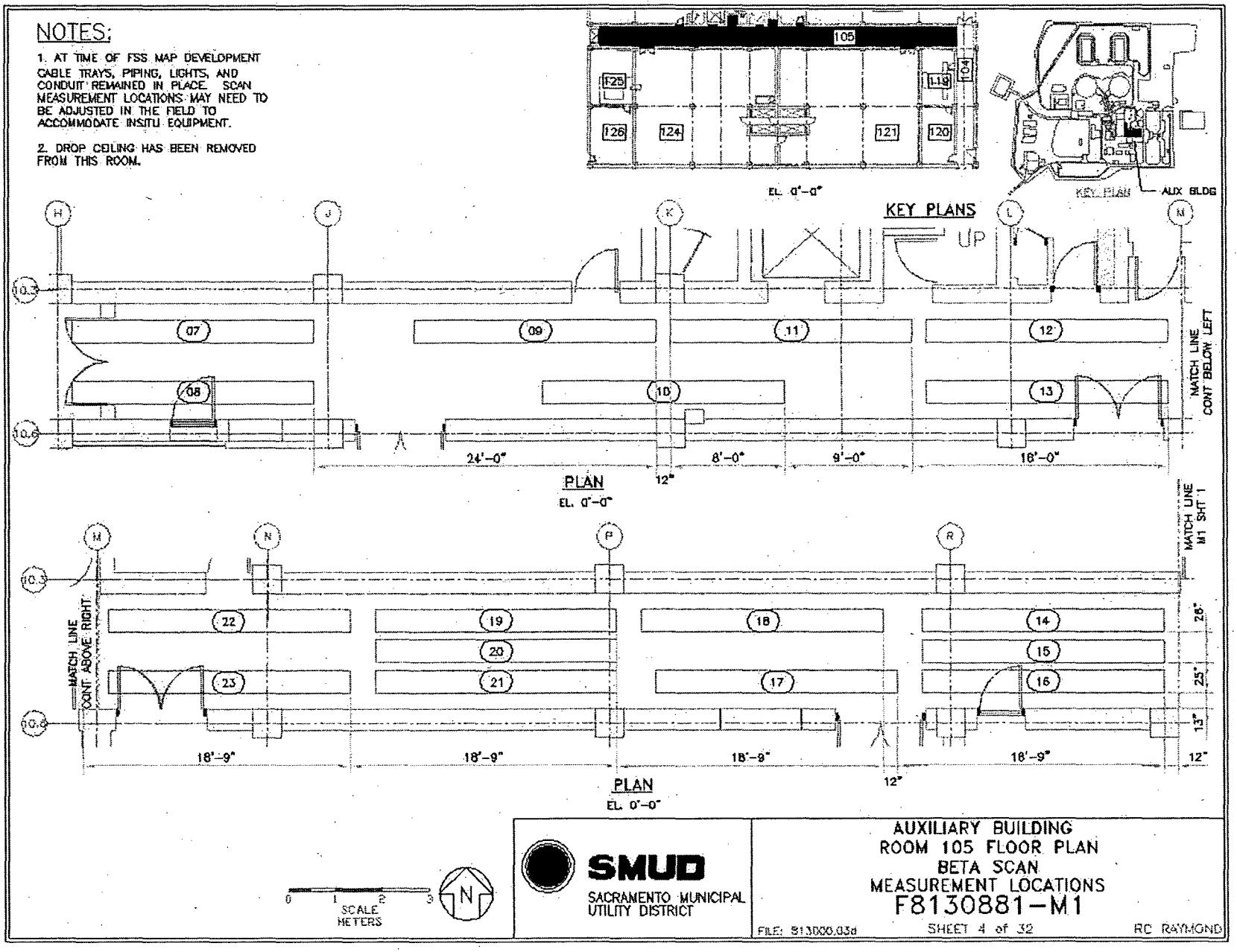
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

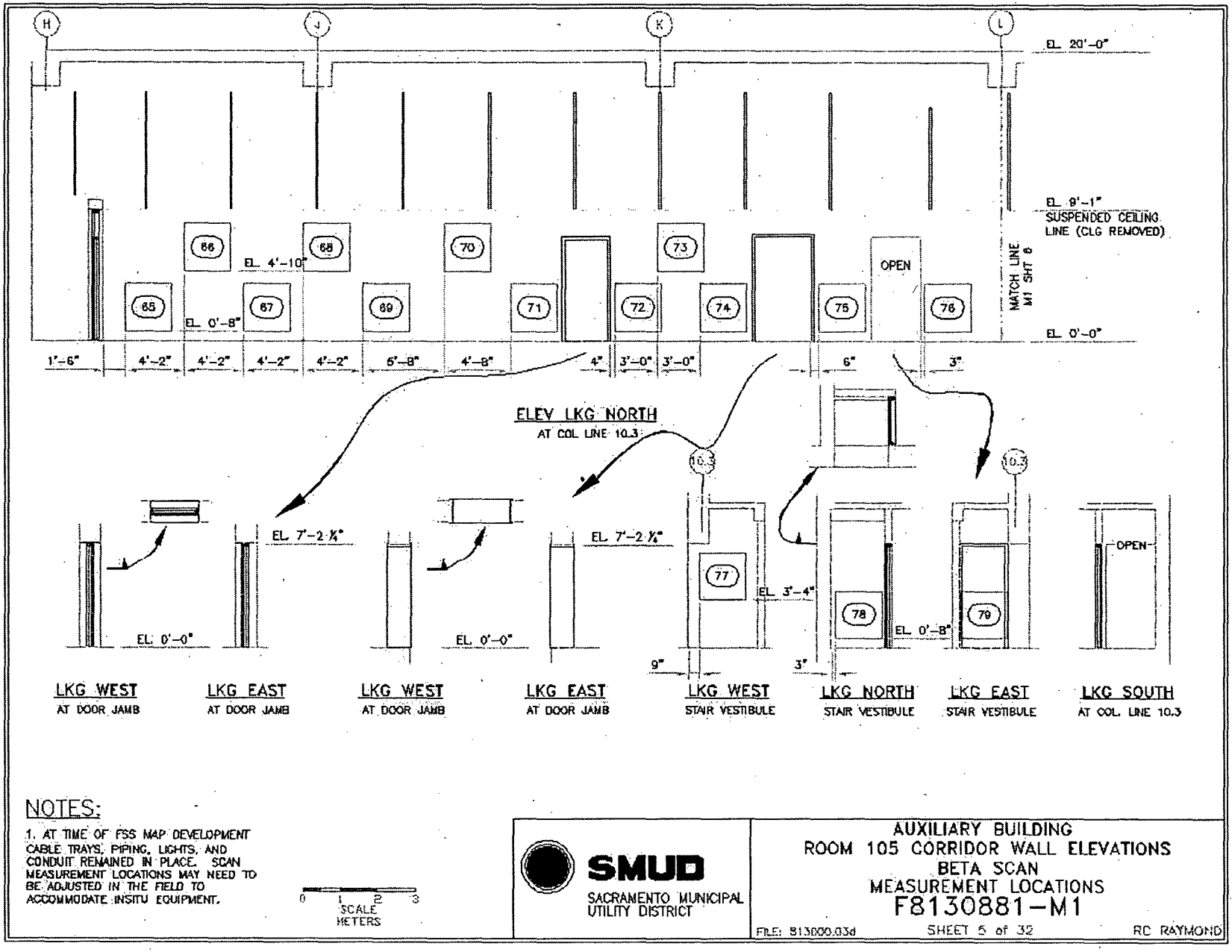
0 1 2 3
SCALE
METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 104 CORRIDOR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.03d SHEET 3 of 32 RC RAYMOND


NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.
2. DROP CEILING HAS BEEN REMOVED FROM THIS ROOM.
105
125
126
124
121
120
119
104
EL. 0'-0"
KEY PLANS
UP
KEY PLAN
AUX BLDG
H
J
K
L
M
07
08
09
10
11
12
13
MATCH LINE CONT BELOW LEFT
24'-0"
8'-0"
9'-0"
16'-0"
12"
PLAN
EL. 0'-0"
M
N
P
R
22
23
19
20
21
18
17
14
15
16
MATCH LINE CONT ABOVE RIGHT
MATCH LINE M1 SHT 1
28"
25"
13"
18'-9"
18'-9"
18'-9"
16'-9"
12"
12"
PLAN
EL. 0'-0"
0 1 2 3
SCALE METERS
N
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 105 FLOOR PLAN
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1
FILE: 813000.03d
SHEET 4 of 32
RC RAYMOND



NOTES:

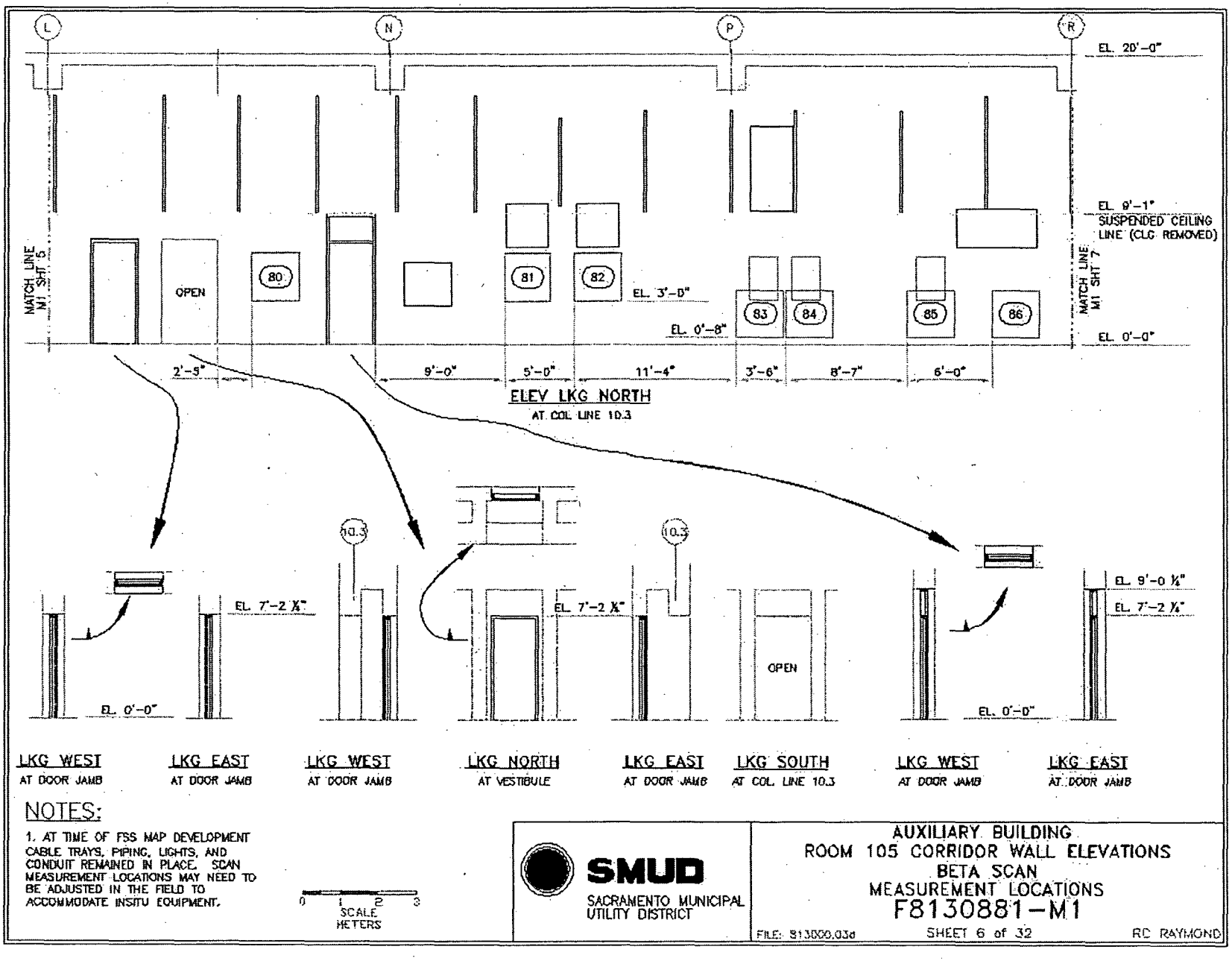
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

0 1 2 3
SCALE
METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 105 CORRIDOR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.03d SHEET 5 of 32 RC RAYMOND



NOTES:

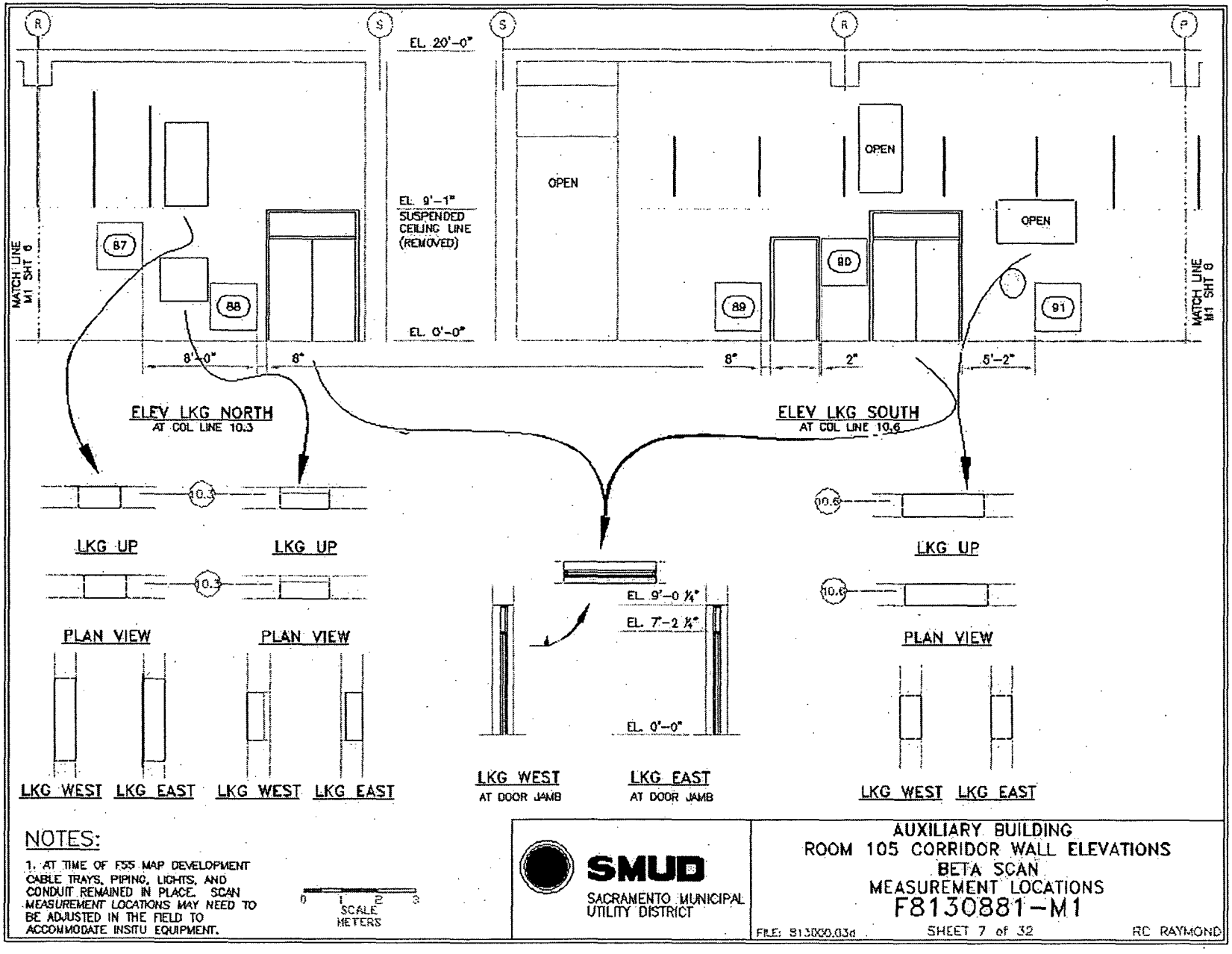
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

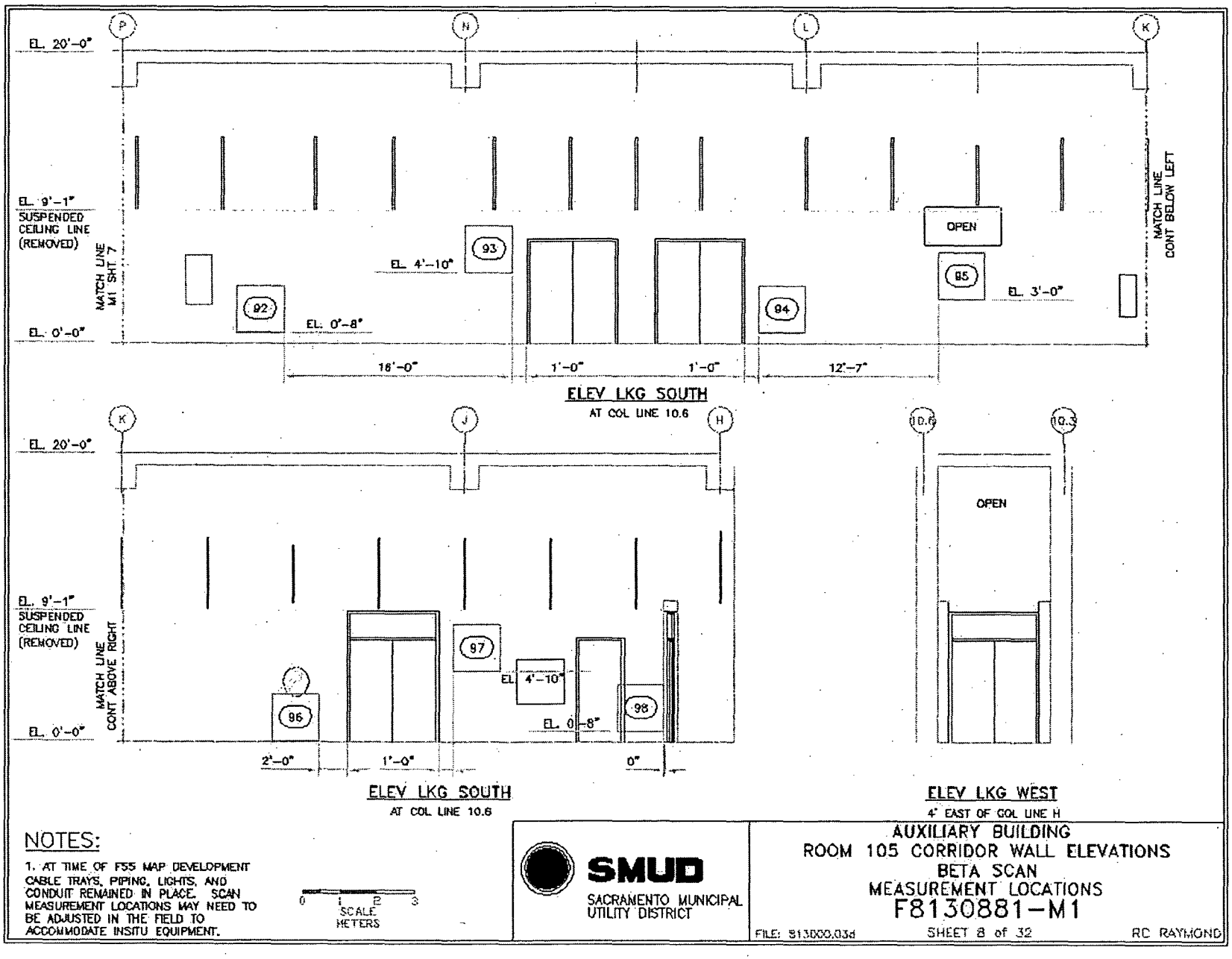
0 1 2 3
SCALE METERS

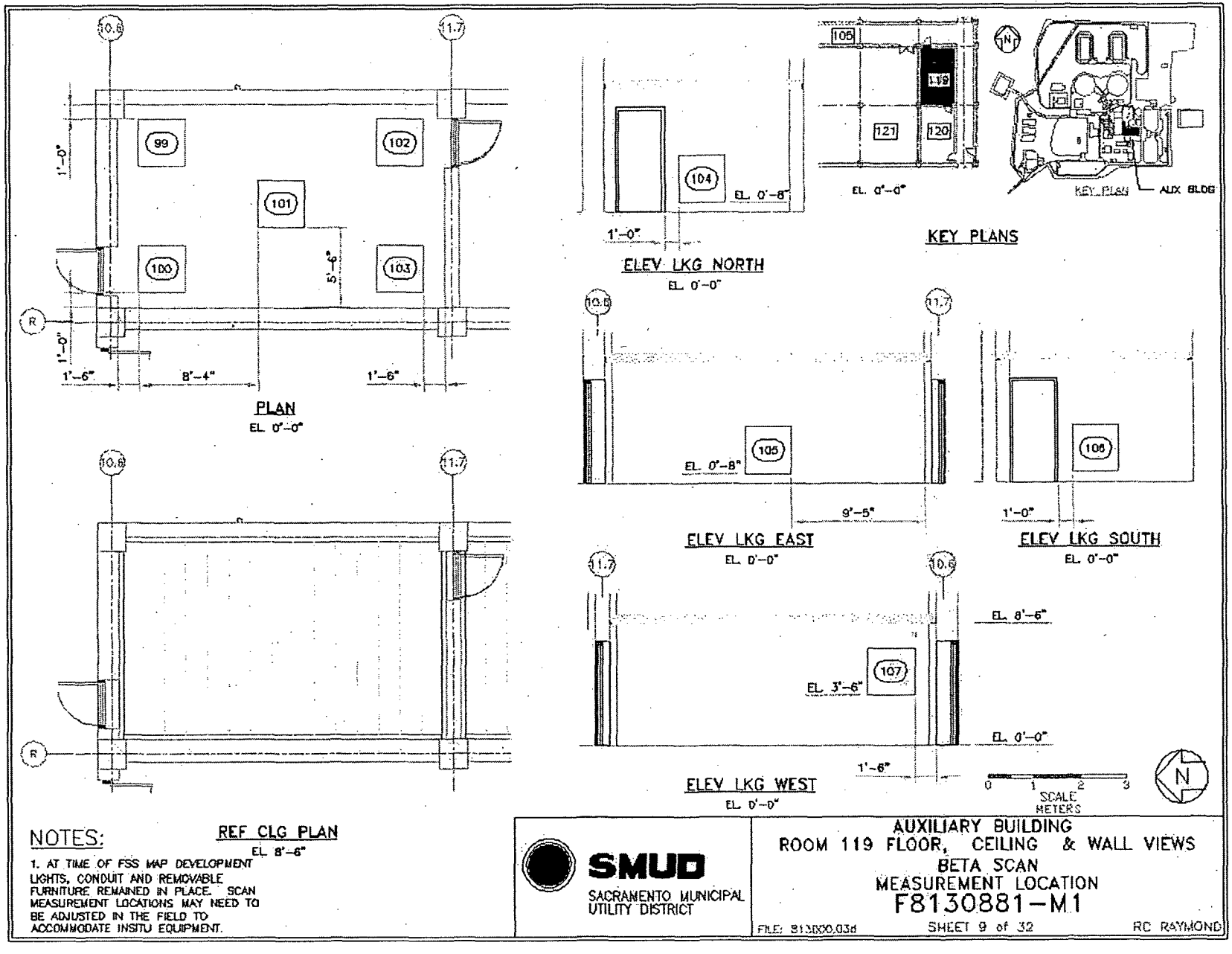
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 105 CORRIDOR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.03d SHEET 6 of 32 RC RAYMOND


R
S
S
R
P
EL. 20'-0"
EL. 9'-1"
SUSPENDED
CEILING LINE
(REMOVED)
EL. 0'-0"
OPEN
OPEN
OPEN
MATCH LINE
M1 SHT 6
MATCH LINE
M1 SHT 6
87
88
89
90
91
8'-0"
8"
8"
2"
5'-2"
ELEV LKG NORTH
AT COL LINE 10.3
ELEV LKG SOUTH
AT COL LINE 10.6
10.3
10.6
LKG UP
LKG UP
LKG UP
10.3
10.6
PLAN VIEW
PLAN VIEW
PLAN VIEW
EL. 9'-0 ½"
EL. 7'-2 ½"
EL. 0'-0"
LKG WEST
LKG EAST
LKG WEST
LKG EAST
LKG WEST
AT DOOR JAMB
LKG EAST
AT DOOR JAMB
LKG WEST
LKG EAST
NOTES:
1. AT TIME OF F55 MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.
0 1 2 3
SCALE
METERS
SMUD
SACRAMENTO MUNICIPAL
UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 105 CORRIDOR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1
FILE: 8130000.03d
SHEET 7 of 32
RC RAYMOND


P
N
L
K
EL. 20'-0"
EL. 9'-1"
SUSPENDED CEILING LINE (REMOVED)
MATCH LINE M1 SHT 7
EL. 0'-0"
92
EL. 0'-8"
EL. 4'-10"
93
94
OPEN
95
EL. 3'-0"
MATCH LINE CONT BELOW LEFT
16'-0"
1'-0"
1'-0"
12'-7"
ELEV LKG SOUTH
AT COL LINE 10.6
K
J
H
EL. 20'-0"
EL. 9'-1"
SUSPENDED CEILING LINE (REMOVED)
MATCH LINE CONT ABOVE RIGHT
EL. 0'-0"
96
97
EL. 4'-10"
EL. 0'-8"
98
2'-0"
1'-0"
0"
ELEV LKG SOUTH
AT COL LINE 10.6
10.6
10.3
OPEN
ELEV LKG WEST
4' EAST OF COL LINE H
NOTES:
1. AT TIME OF F55 MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.
0 1 2 3
SCALE METERS
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 105 CORRIDOR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1
FILE: 813000.03d
SHEET 8 of 32
RC RAYMOND



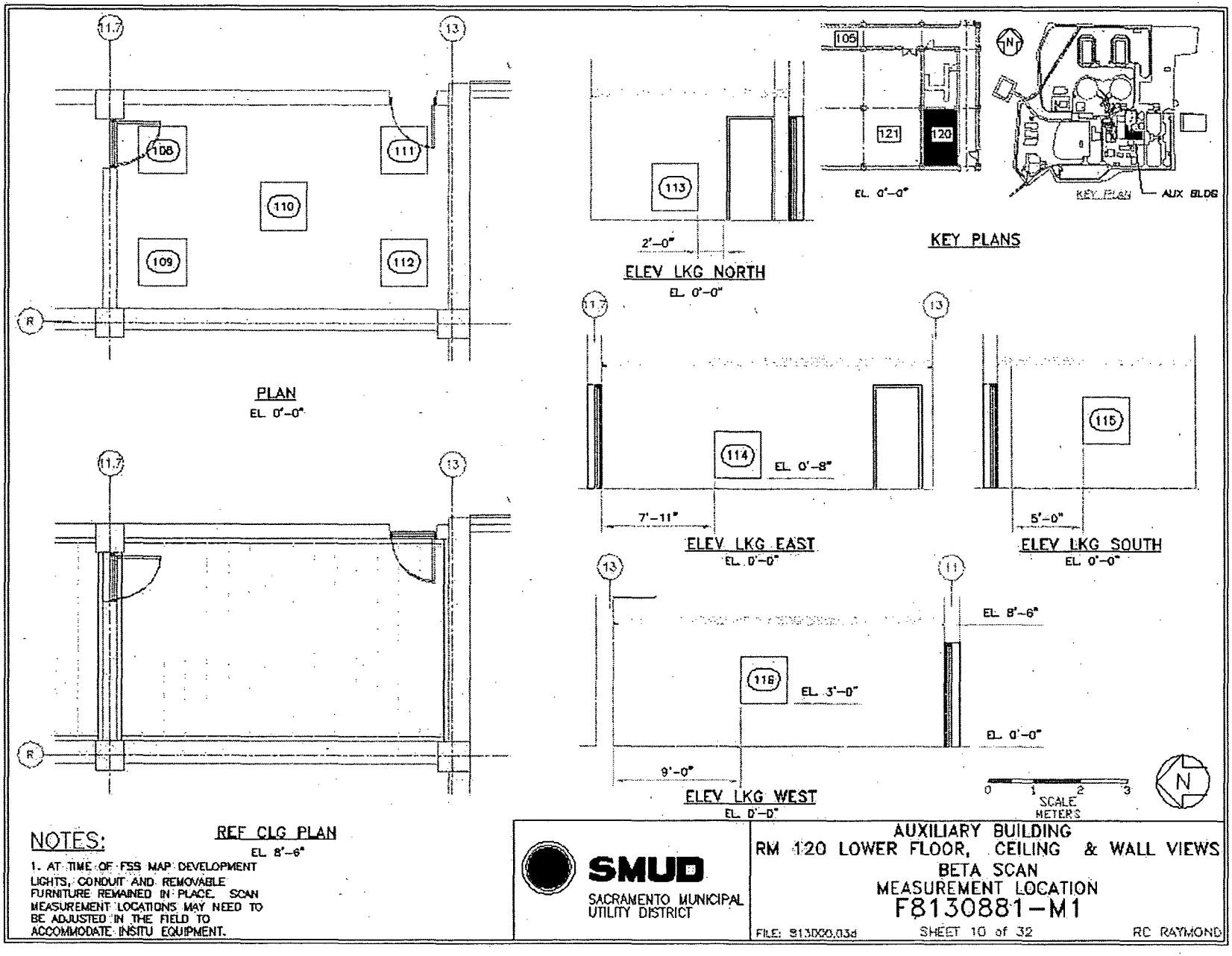
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND REMOVABLE FURNITURE REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 119 FLOOR, CEILING & WALL VIEWS
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: B13000.03d SHEET 9 of 32 RC RAYMOND



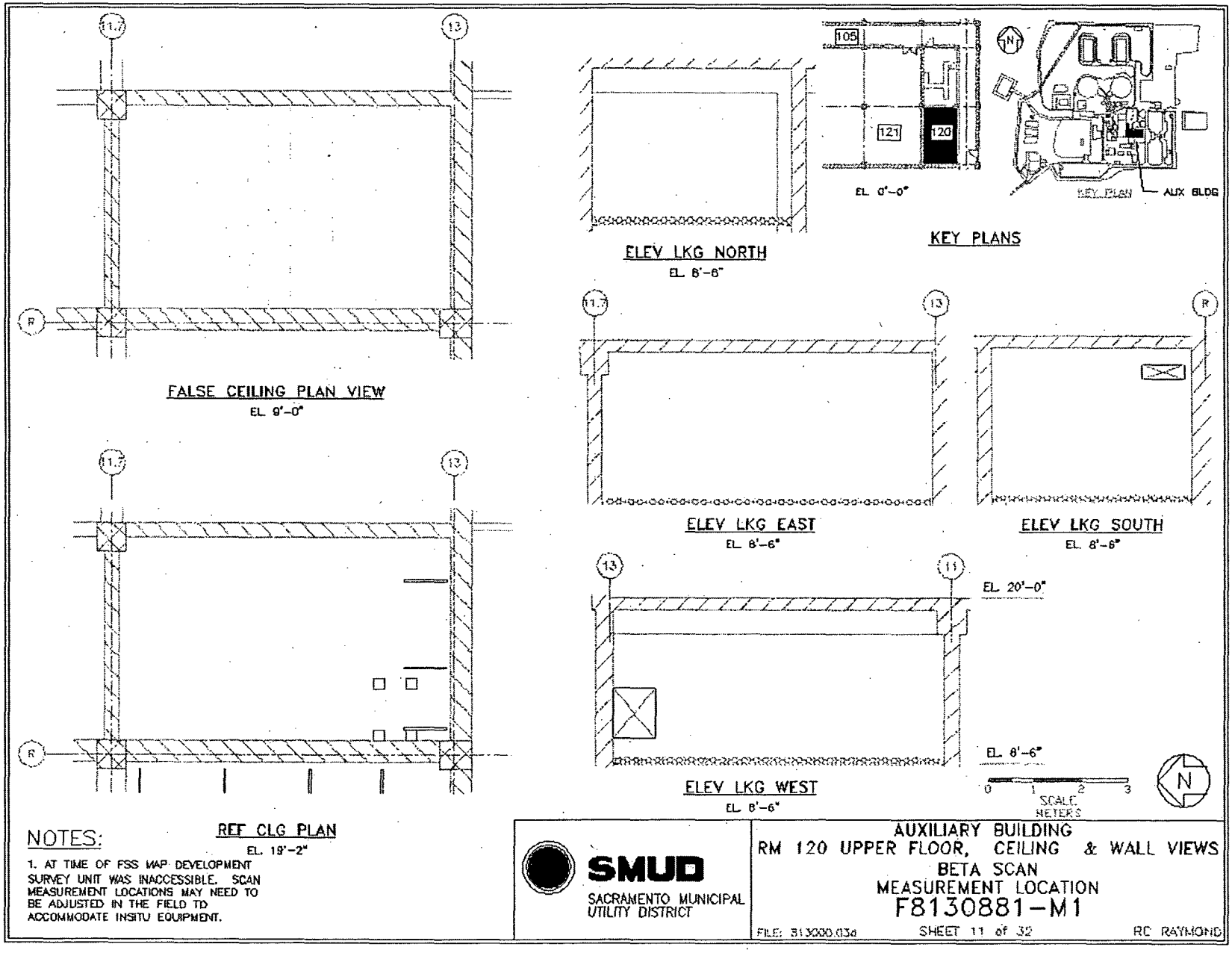
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND REMOVABLE FURNITURE REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 120 LOWER FLOOR, CEILING & WALL VIEWS
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: 813090.03d SHEET 10 of 32 RC RAYMOND



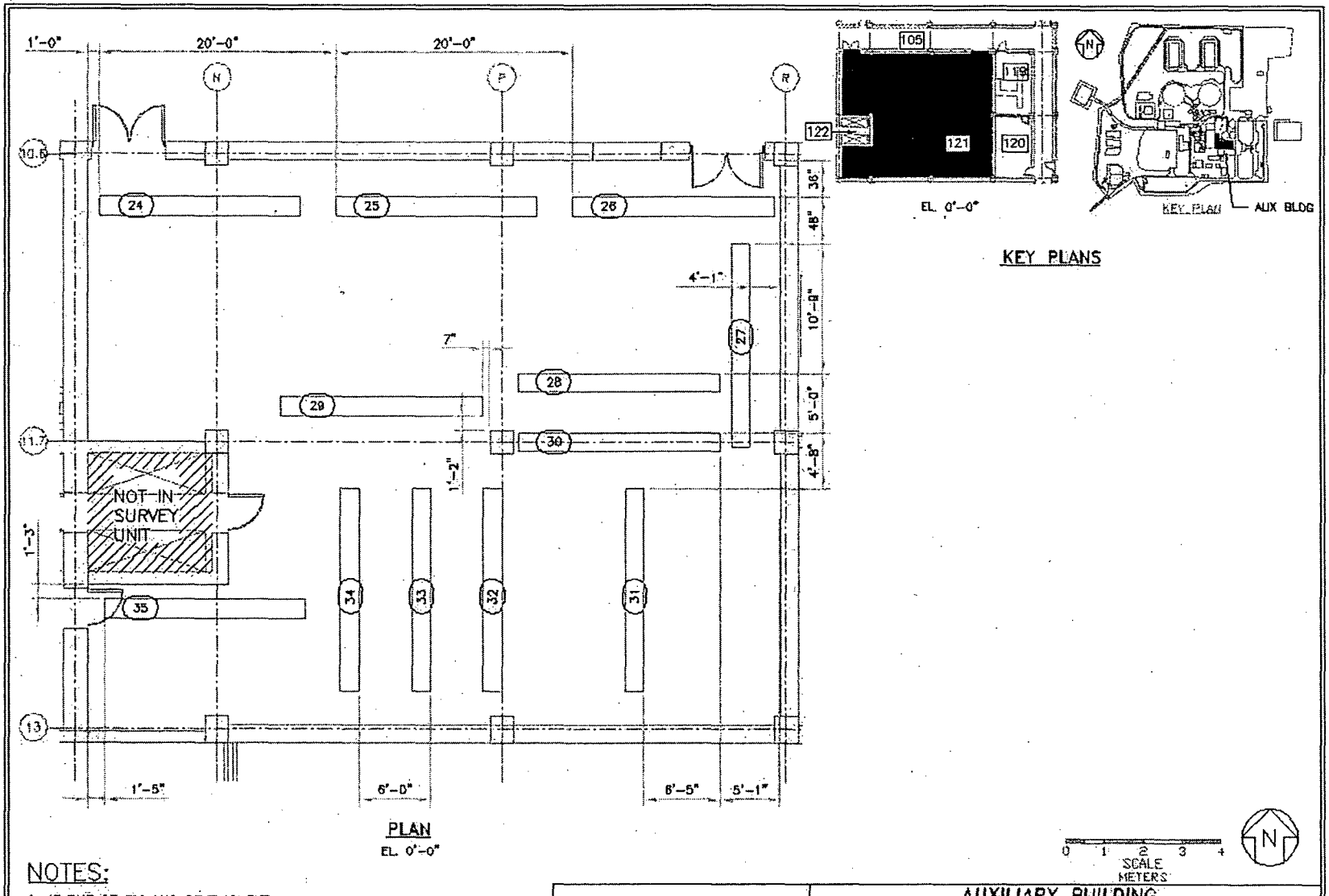
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT SURVEY UNIT WAS INACCESSIBLE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 120 UPPER FLOOR, CEILING & WALL VIEWS
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: 813000.03d SHEET 11 of 32 RC RAYMOND



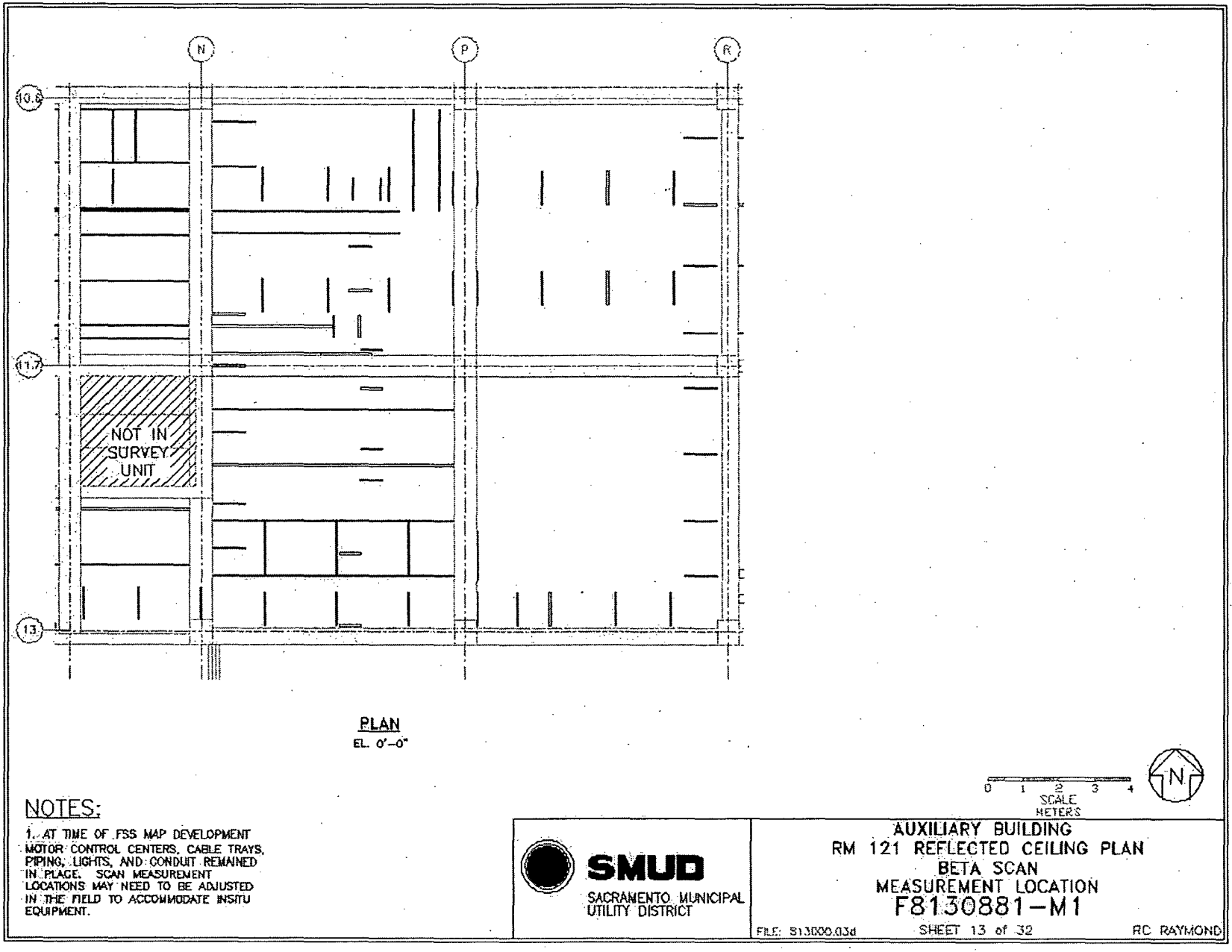
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 121 FLOOR PLAN
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: S13IX30.03d SHEET 12 of 32 RC RAYMOND



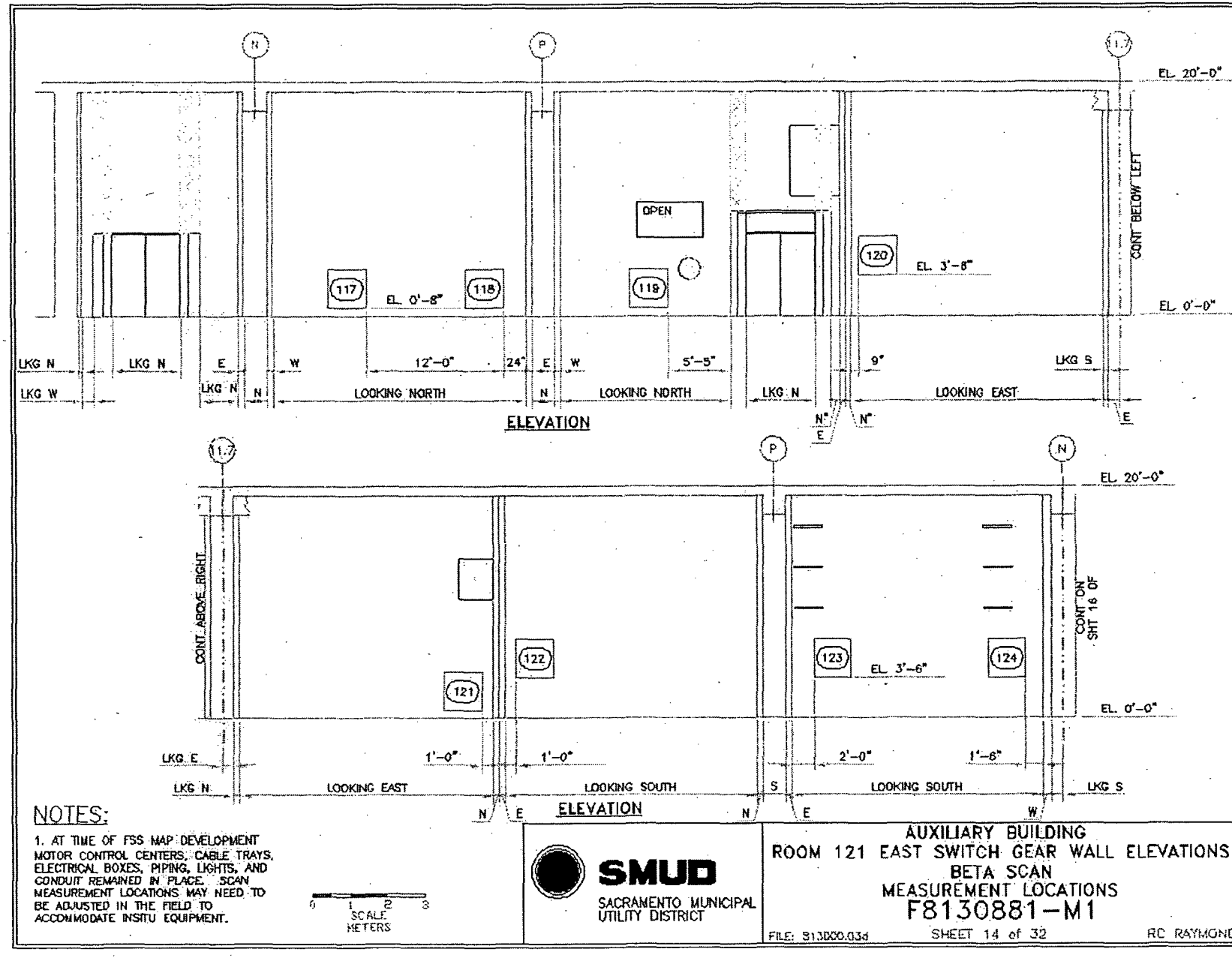
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 121 REFLECTED CEILING PLAN
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: S13000.03d SHEET 13 of 32 RC RAYMOND



NOTES:

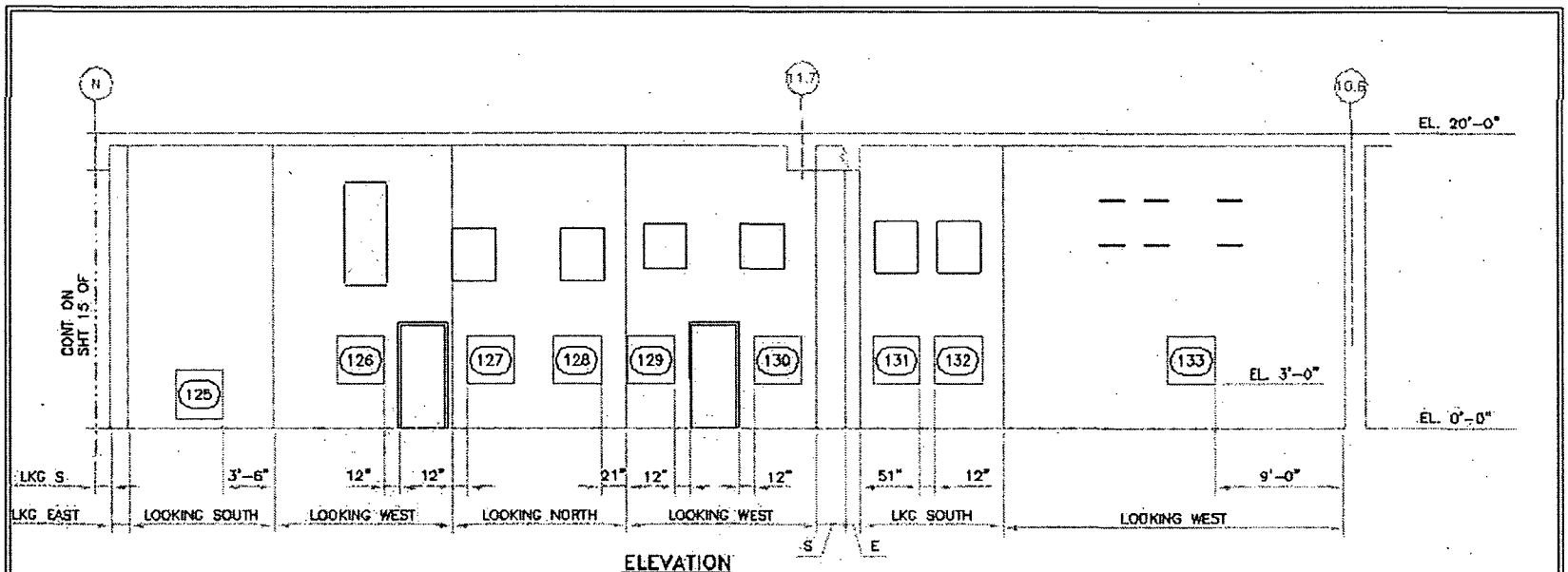
1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 121 EAST SWITCH GEAR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.034 SHEET 14 of 32 RC RAYMOND



ELEVATION

NOTES:

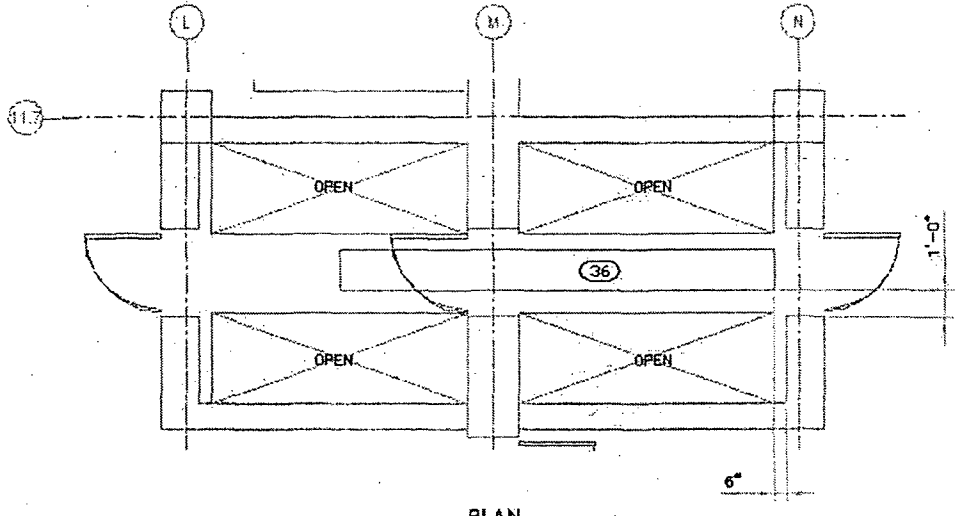
1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

0 1 2 3
SCALE
METERS

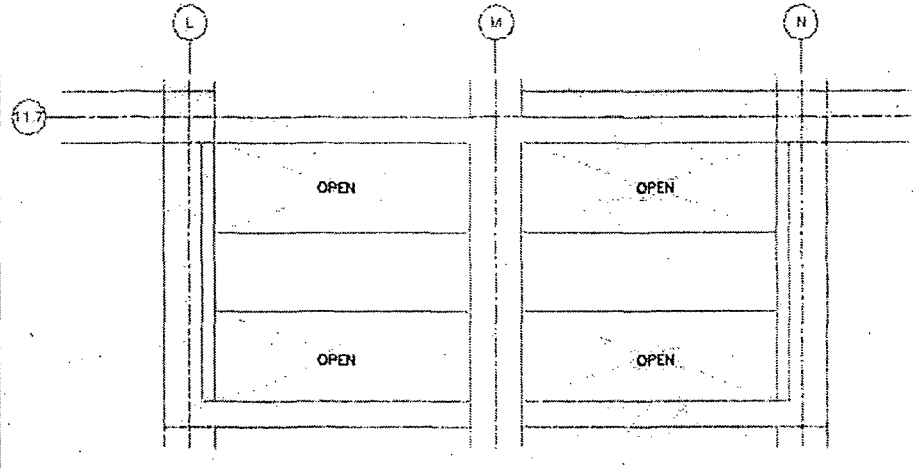
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 121 EAST SWITCH GEAR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

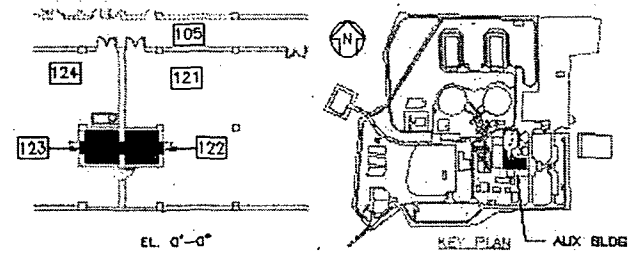
FILE: 8130X00.03d SHEET 15 of 32 RC RAYMOND



PLAN
EL. 0'-0"



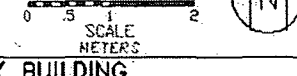
REFLECTED CEILING PLAN
EL. 19'-2"



KEY PLANS

NOTES:

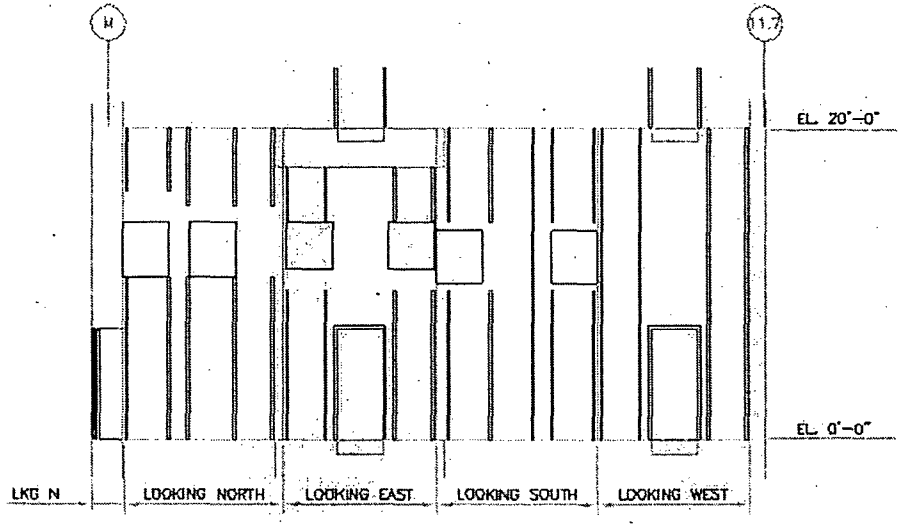
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.



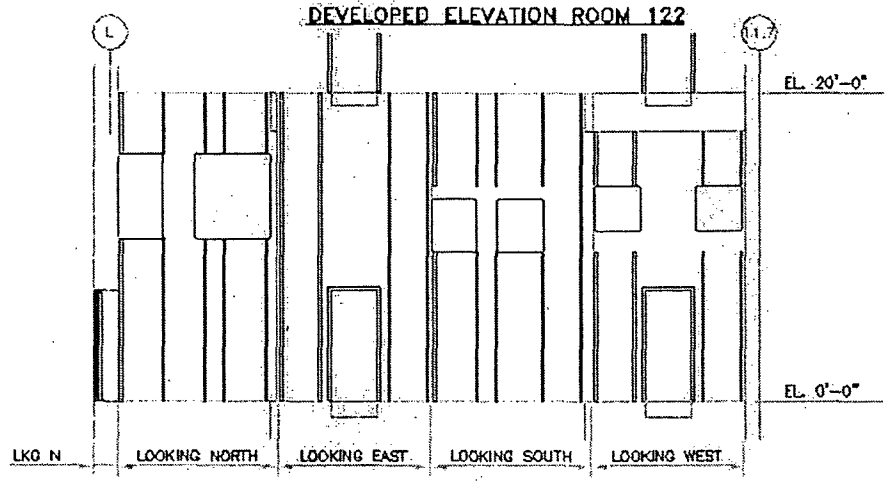
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 122 & 123 FLOOR & REFLECT CEILING PLAN
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: 813000.03d SHEET 16 of 332 RC RAYMOND



DEVELOPED ELEVATION ROOM 122



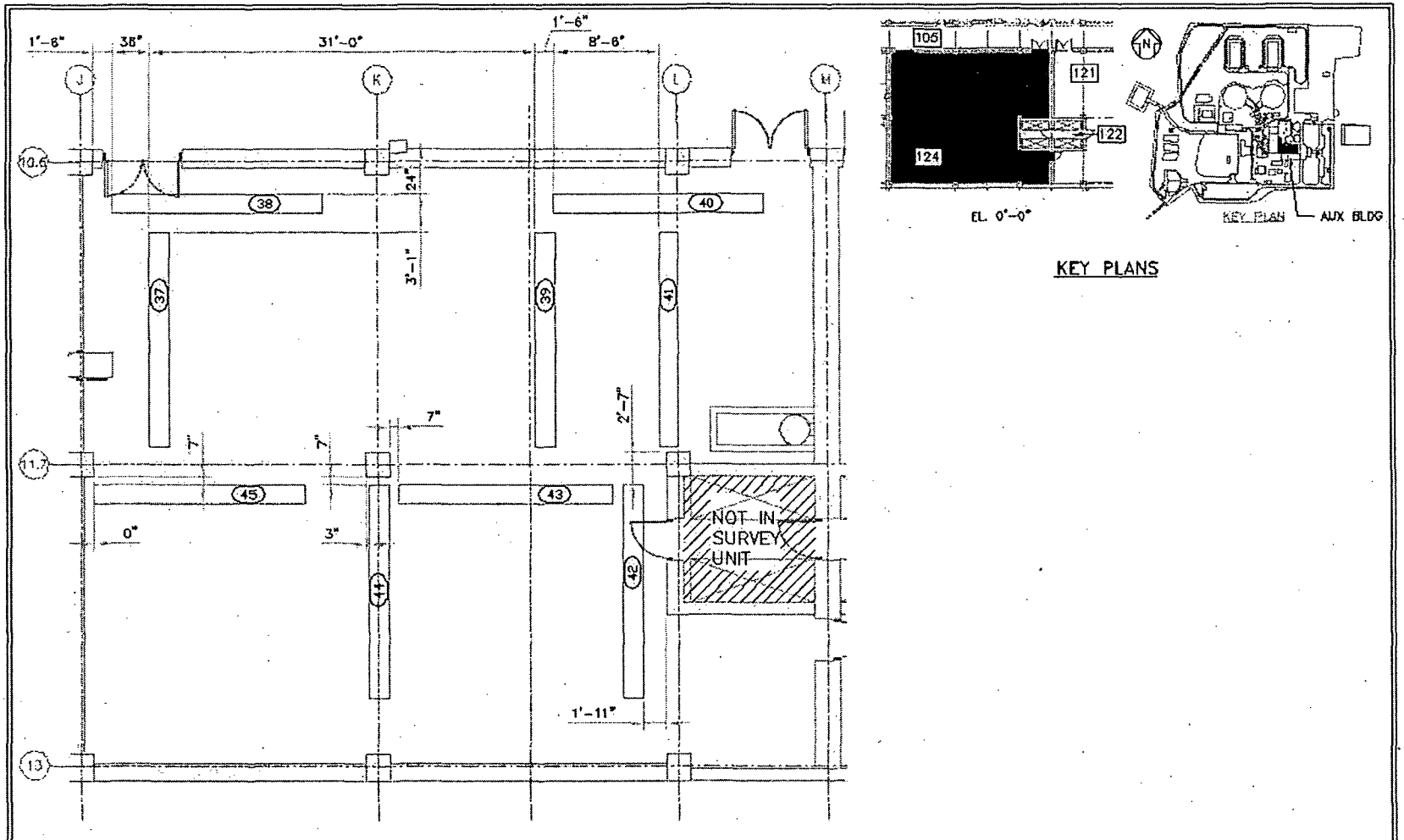
DEVELOPED ELEVATION ROOM 123

0 1 2 3
SCALE
METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 122 & 123 CABLE SHAFT ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: S130000.03d SHEET 17 of 32 RC RAYMOND



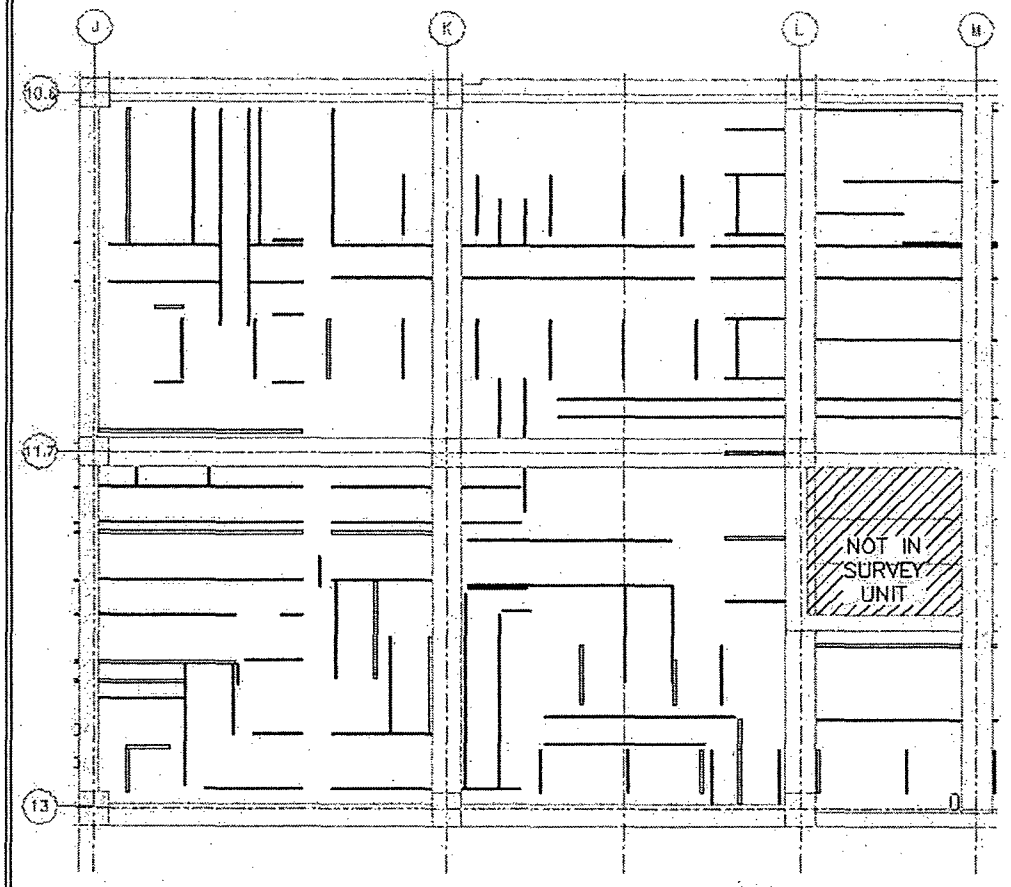
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

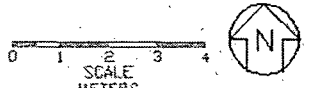
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 124 FLOOR PLAN
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: 813000.038 SHEET 18 of 32 RC RAYMOND



PLAN
EL. 0'-0"



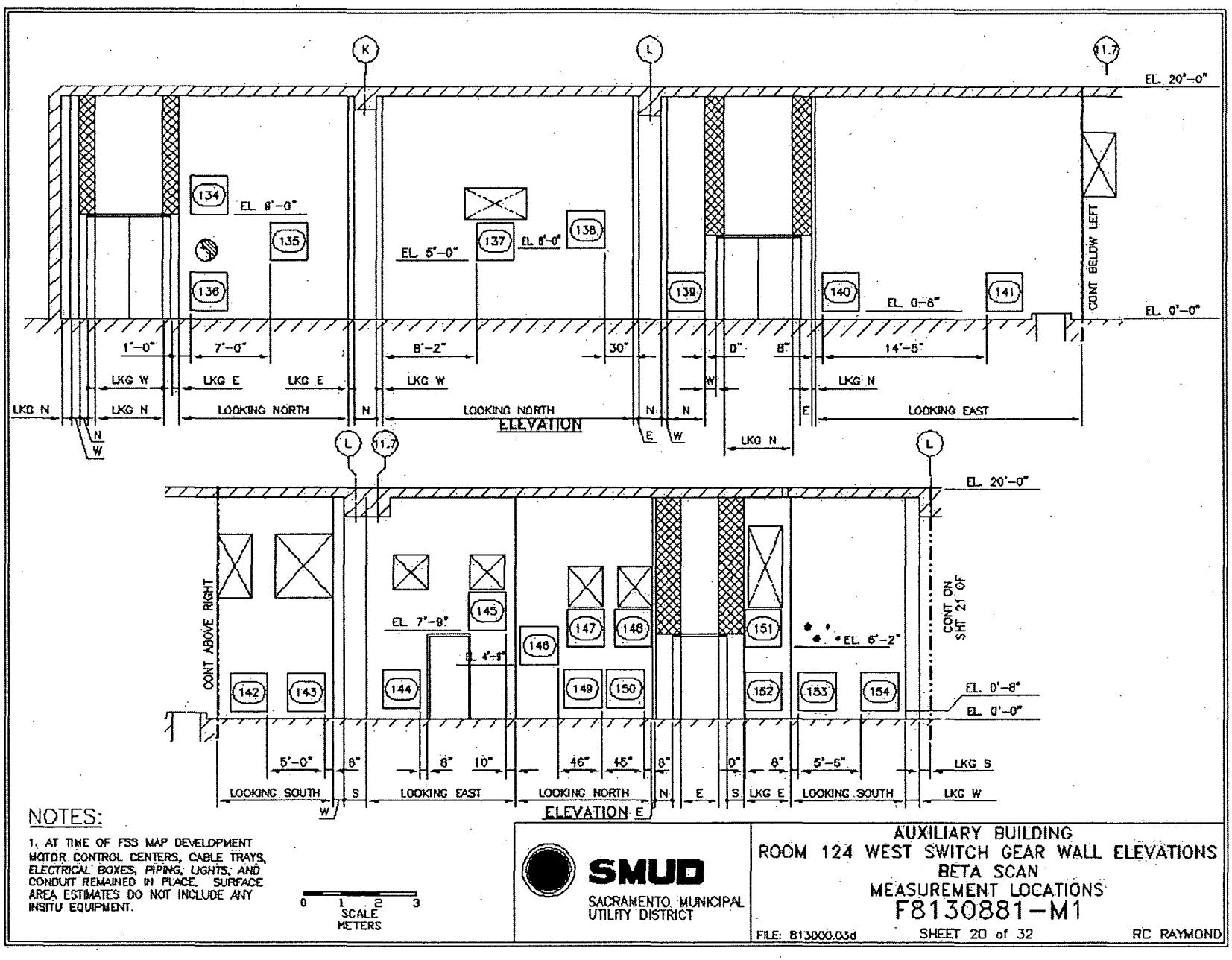
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 124 REFLECTED CEILING PLAN
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: 813000.034 SHEET 19 of 32 RC RAYMOND



NOTES:

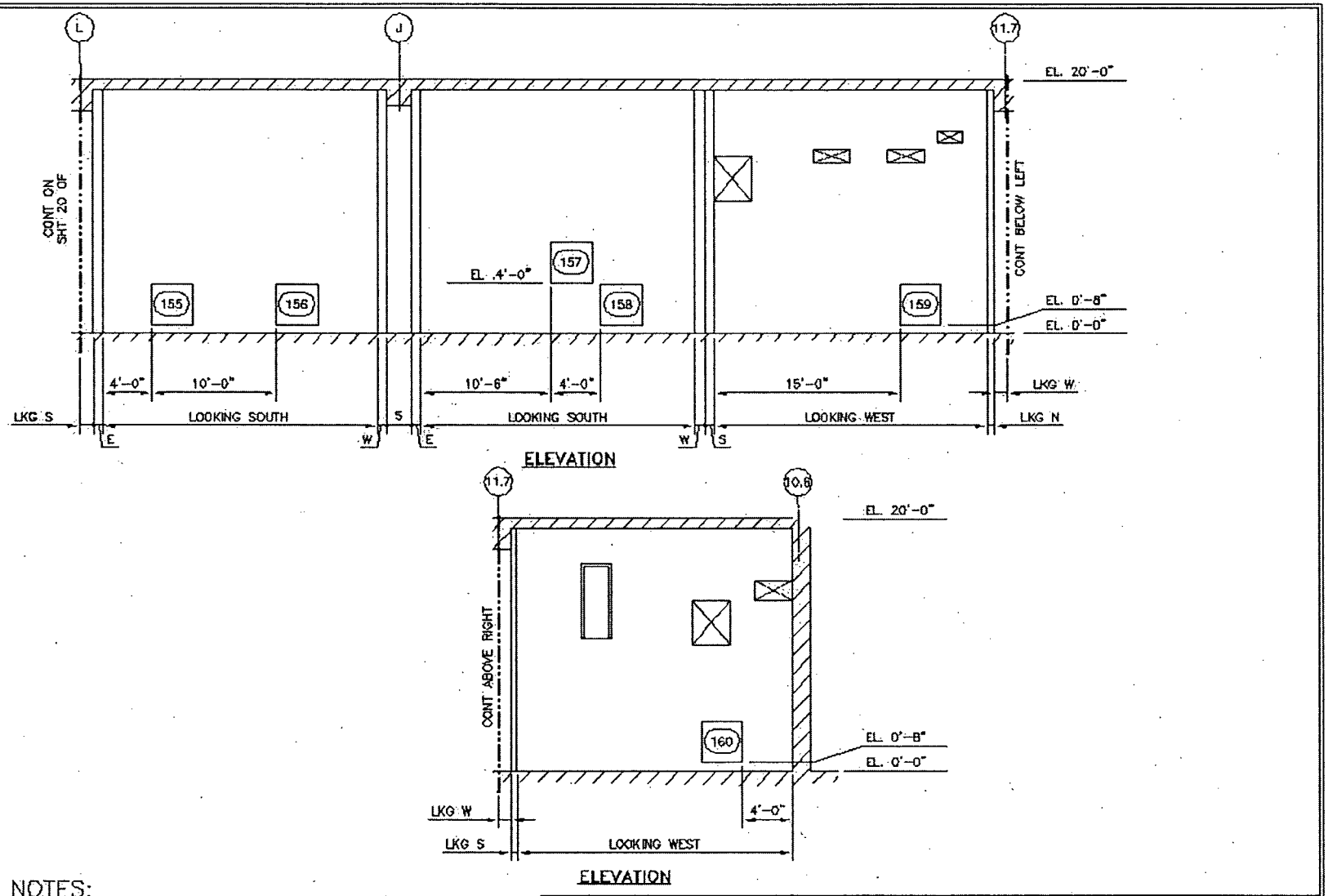
1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 124 WEST SWITCH GEAR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: B13000.03d SHEET 20 of 32 RC RAYMOND



NOTES:

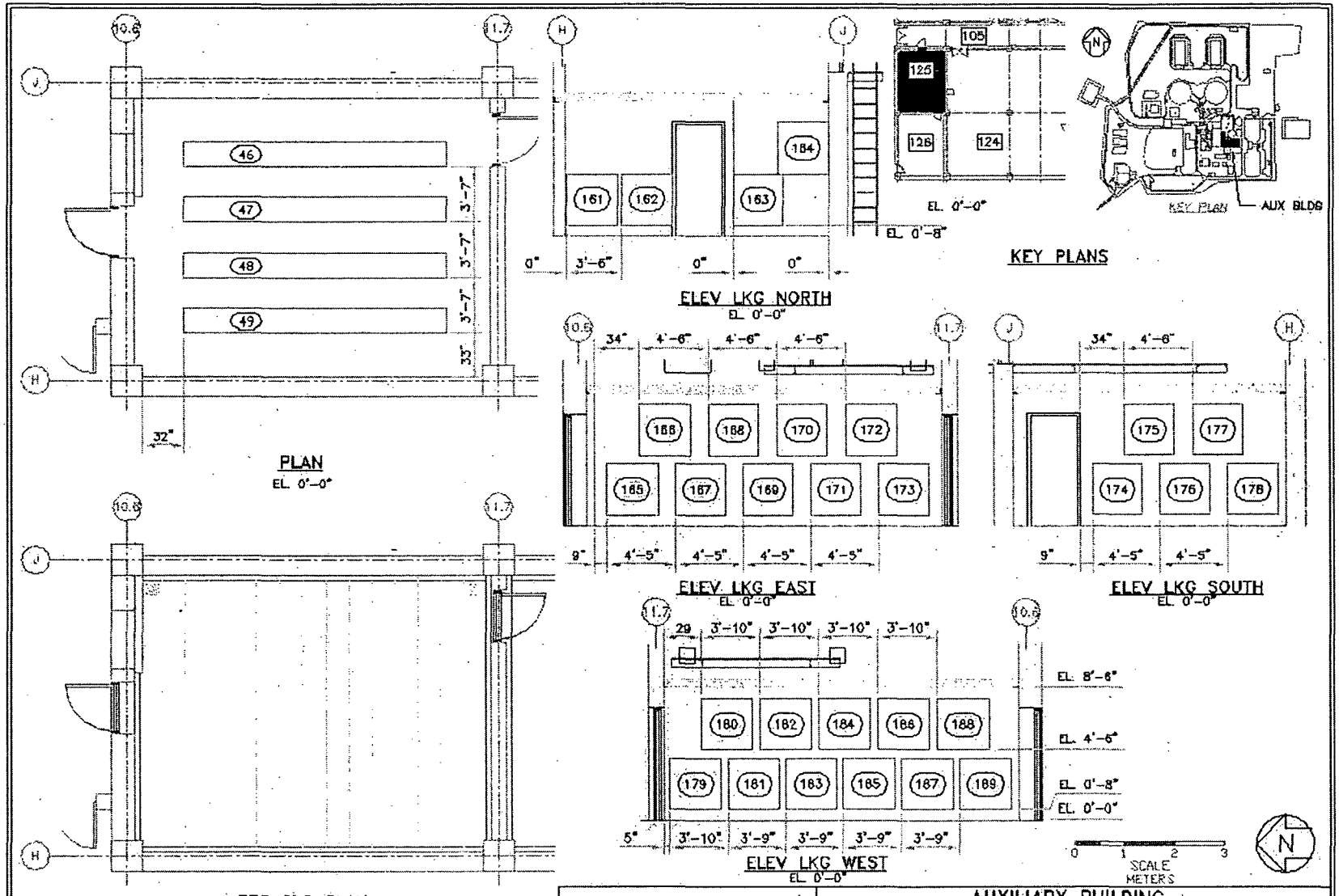
1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 124 WEST SWITCH GEAR WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.03d SHEET 21 of 32 RC RAYMOND



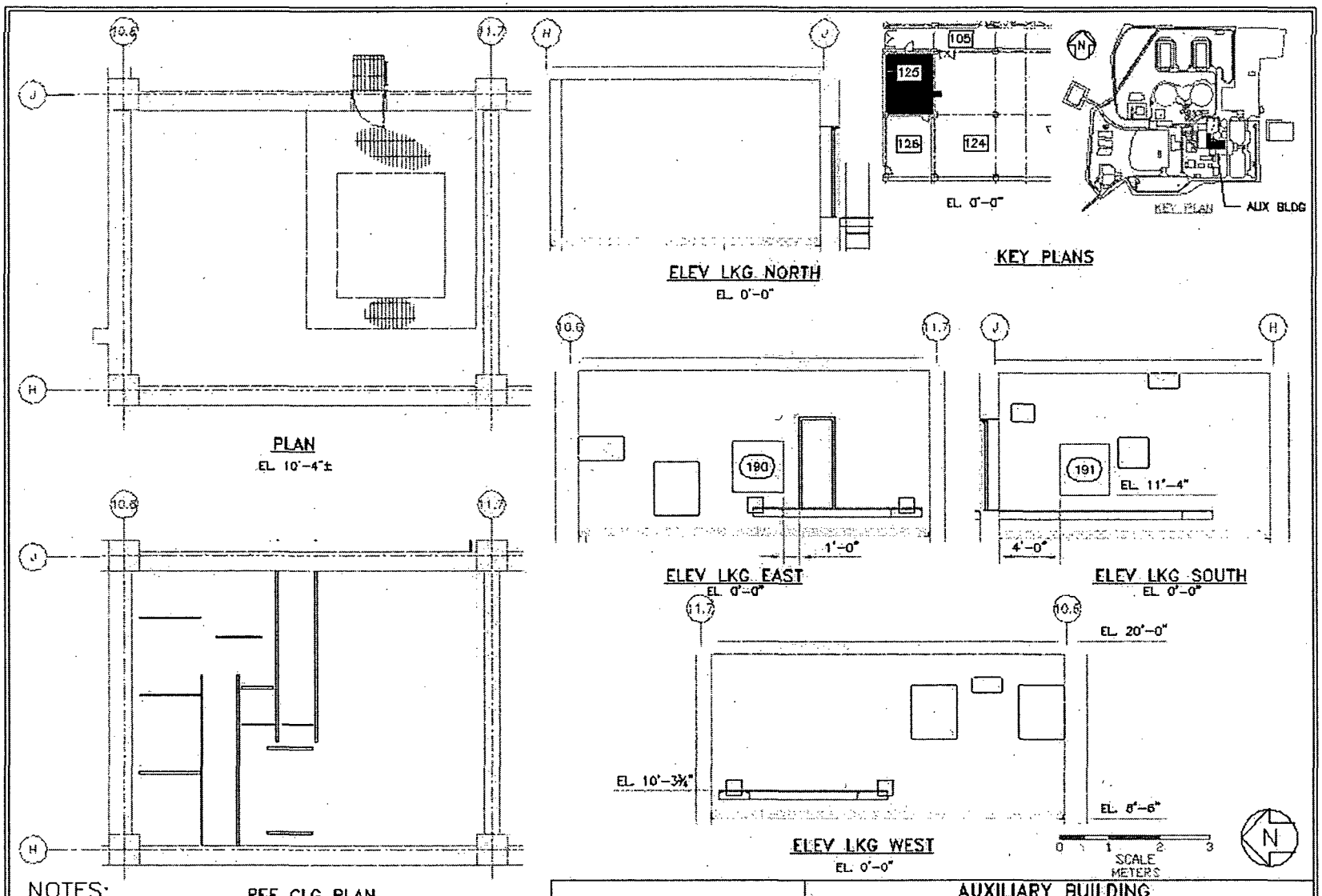
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND REMOVABLE FURNITURE REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 125 LOWER FLOOR, CEILING & WALL VIEWS
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

FILE: B13000.03d SHEET 22 of 32 RC RAYMOND



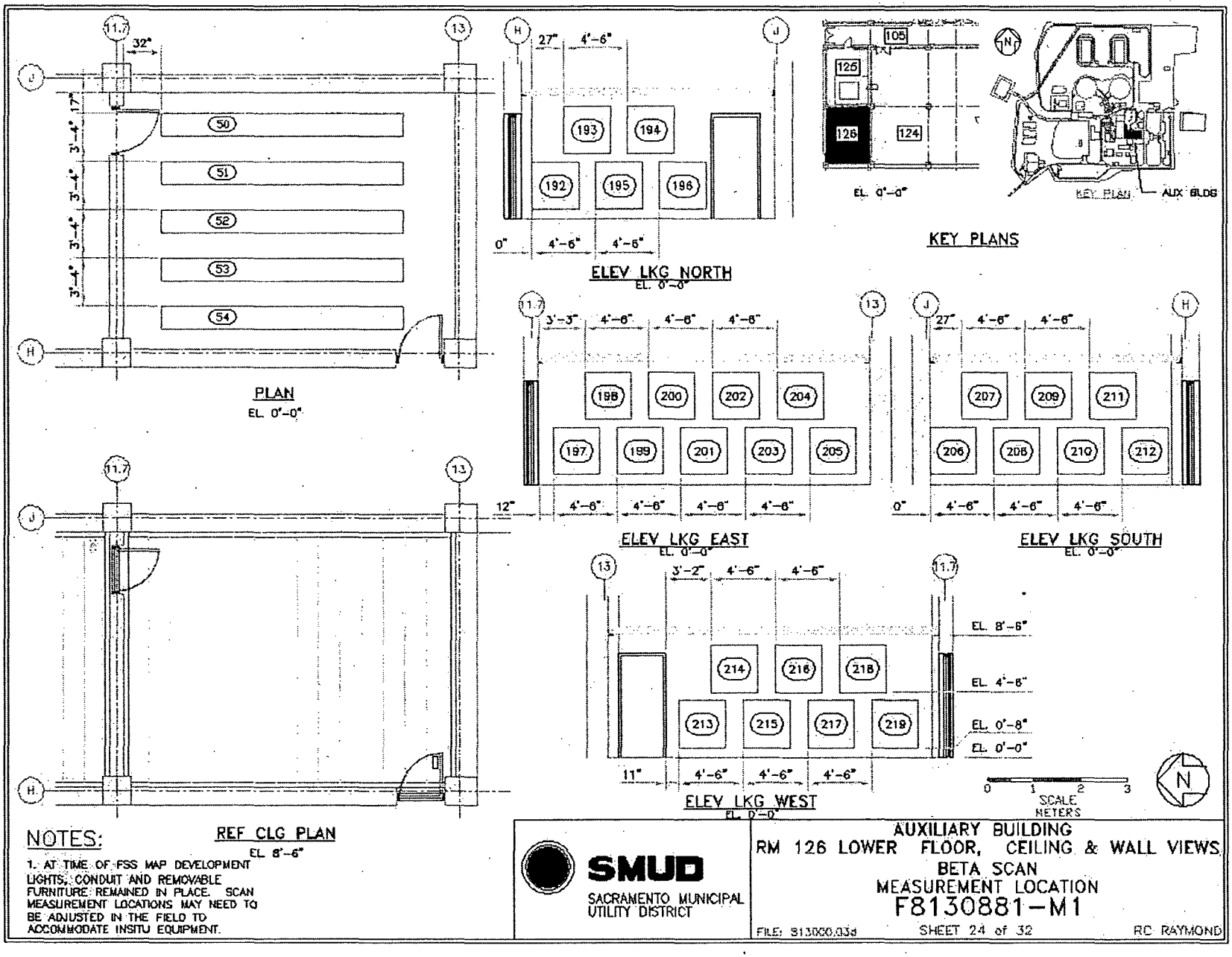
NOTES:

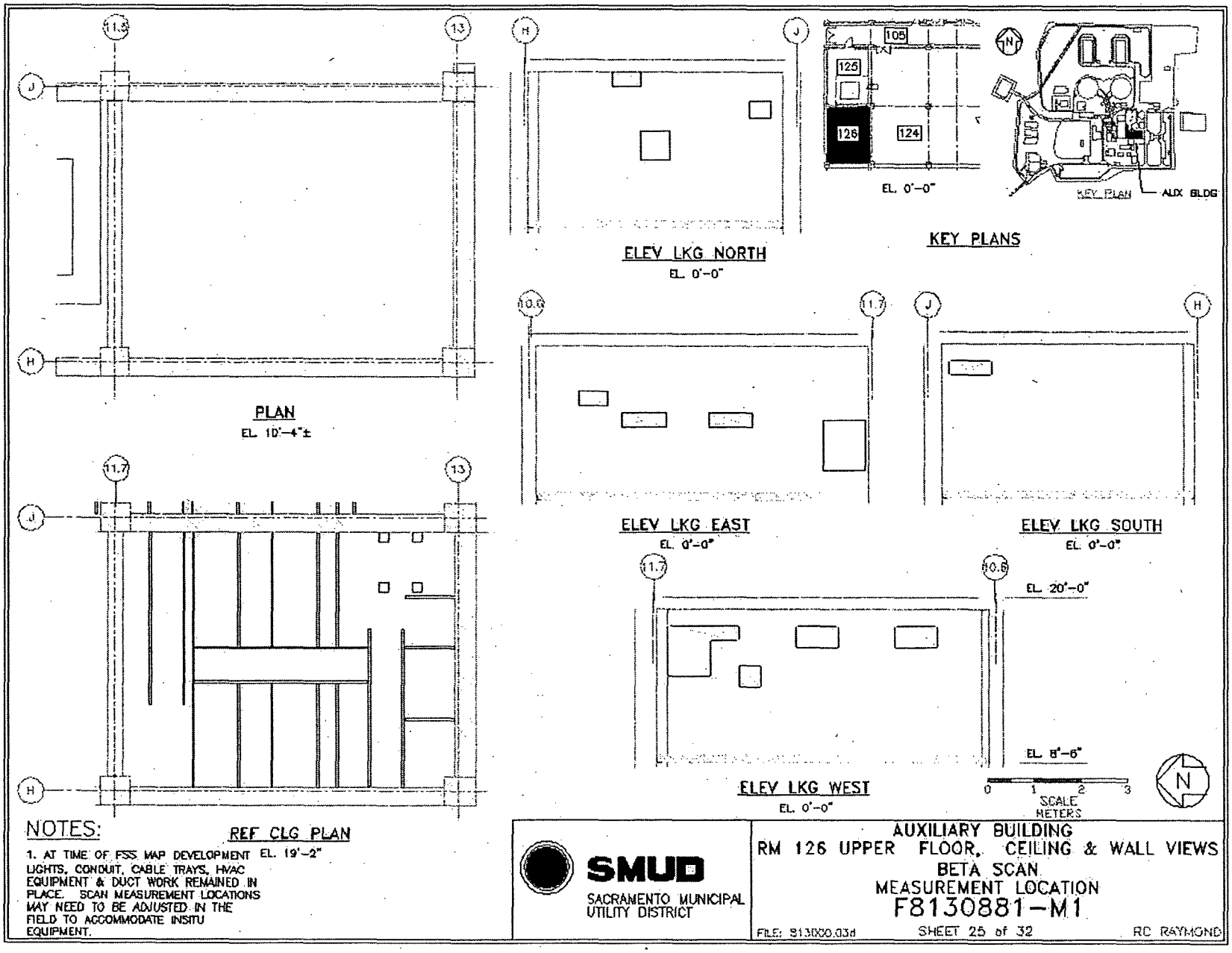
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT, CABLE TRAYS, HVAC EQUIPMENT & DUCT WORK REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

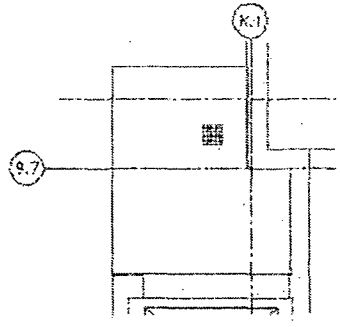
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 125 UPPER FLOOR, CEILING & WALL VIEWS
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1

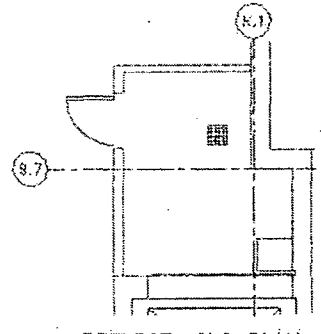
FILE: 813000.03d SHEET 23 of 32 RC RAYMOND


PLAN
EL. 0'-0"
ELEV LKG NORTH
EL. 0'-0"
KEY PLANS
KEY PLAN
AUX BLDG
ELEV LKG EAST
EL. 0'-0"
ELEV LKG SOUTH
EL. 0'-0"
ELEV LKG WEST
EL. 0'-0"
REF CLG PLAN
EL. 8'-6"
SCALE METERS
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND REMOVABLE FURNITURE REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
RM 126 LOWER FLOOR, CEILING & WALL VIEWS
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1
FILE: S130000.03d
SHEET 24 of 32
RC RAYMOND

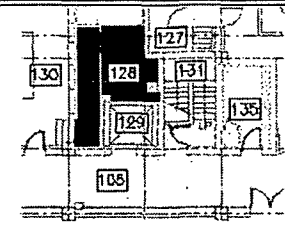

11.7
13
J
H
PLAN
EL. 10'-4"±
H
J
ELEV LKG NORTH
EL. 0'-0"
105
125
126
124
EL. 0'-0"
N
KEY PLAN
AUX BLDG
KEY PLANS
10.6
11.7
ELEV LKG EAST
EL. 0'-0"
J
H
ELEV LKG SOUTH
EL. 0'-0"
11.7
10.6
EL. 20'-0"
EL. 8'-6"
ELEV LKG WEST
EL. 0'-0"
0
1
2
3
SCALE
METERS
N
NOTES:
REF CLG PLAN
1. AT TIME OF FSS MAP DEVELOPMENT EL. 19'-2" LIGHTS, CONDUIT, CABLE TRAYS, HVAC EQUIPMENT & DUCT WORK REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
RM 126 UPPER FLOOR, CEILING & WALL VIEWS
BETA SCAN
MEASUREMENT LOCATION
F8130881-M1
FILE: 813000.03d
SHEET 25 of 32
RC RAYMOND



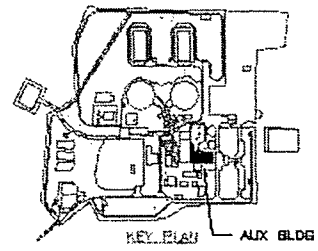
PLAN
EL. 8'-3"



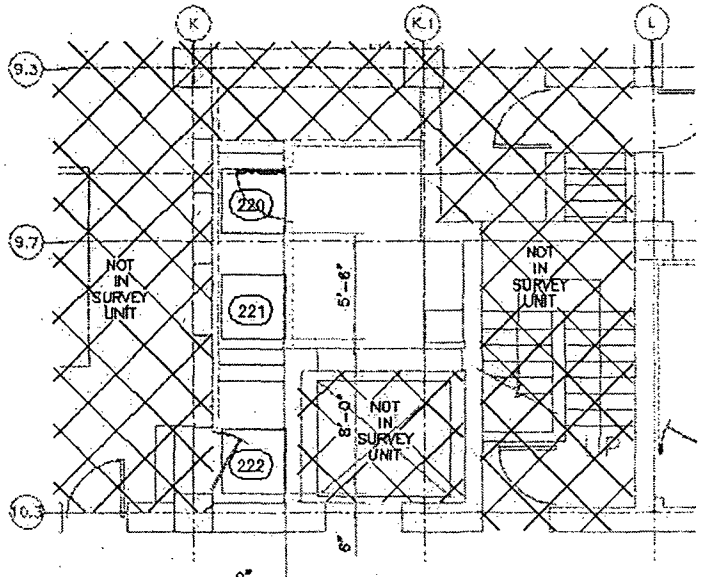
REFLECT. CLG PLAN
EL. 8'-0"



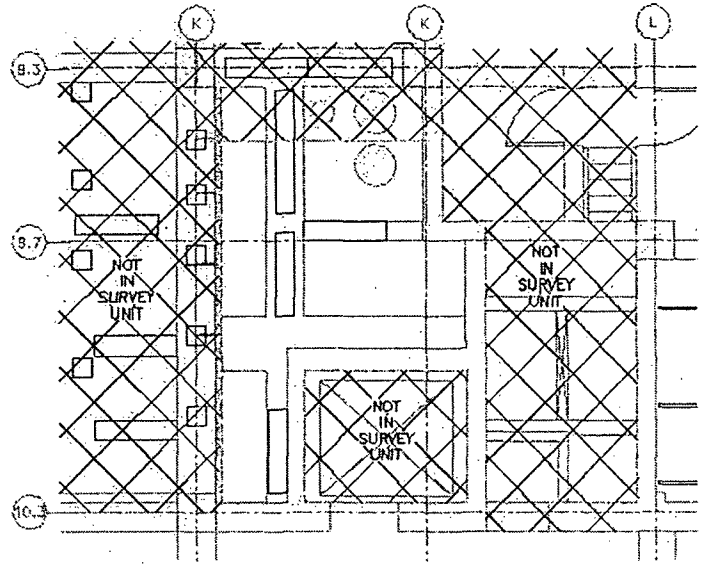
EL. 0'-0"



KEY PLANS



PLAN
EL. 0'-0"



REFLECTED CEILING PLAN
EL. 17'-8"

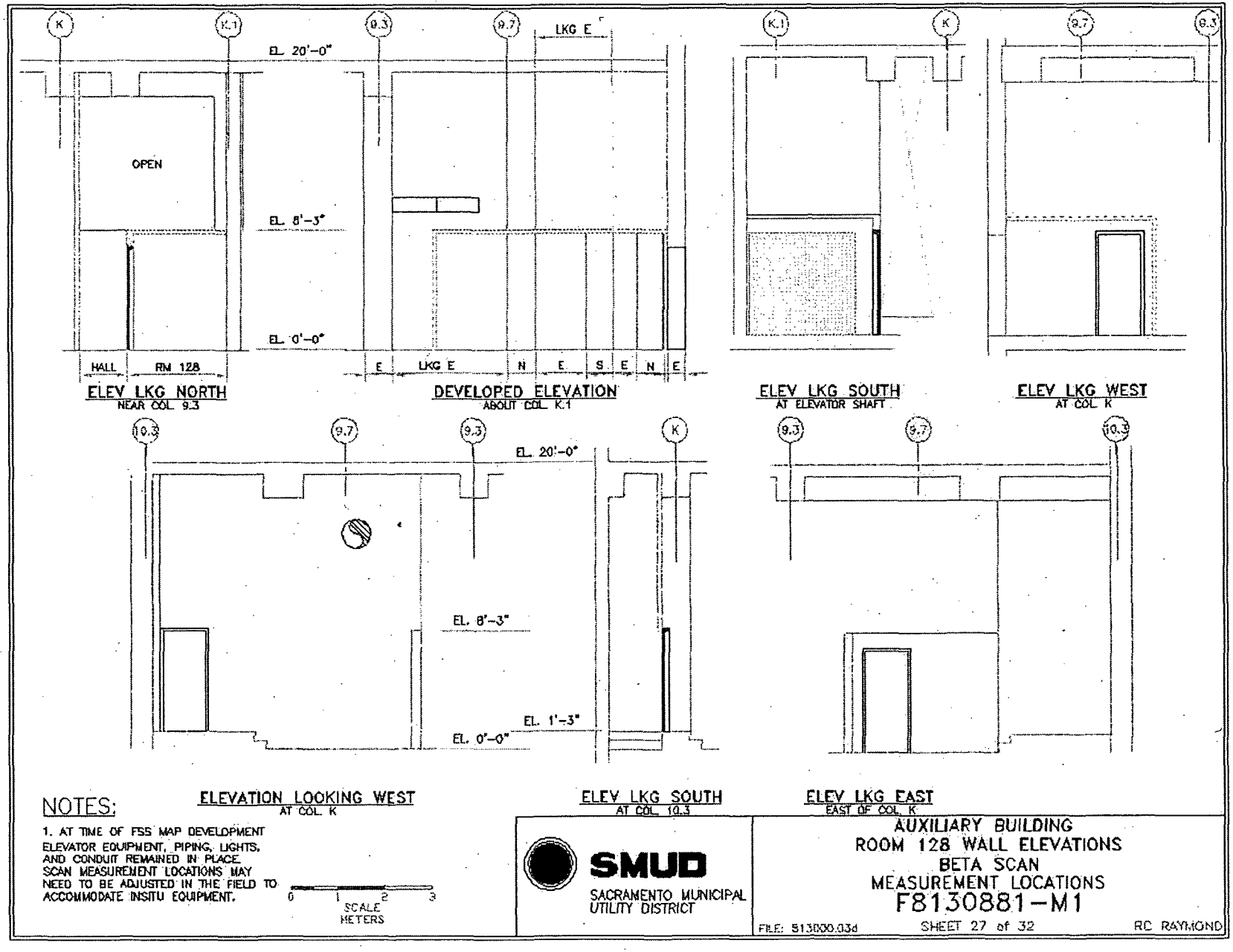
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT ELEVATOR EQUIPMENT, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 128 FLOOR & REFLECT CLG PLANS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.03d SHEET 26 of 32 RC RAYMOND



NOTES:

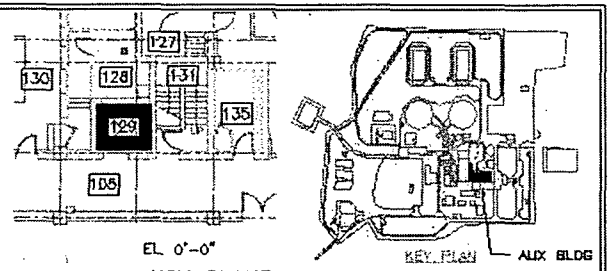
1. AT TIME OF FSS MAP DEVELOPMENT ELEVATOR EQUIPMENT, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

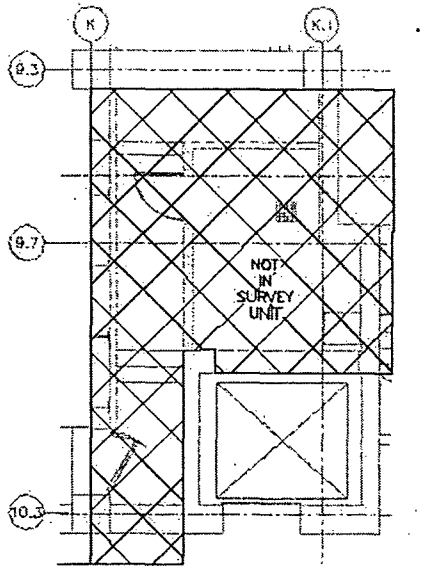
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 128 WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

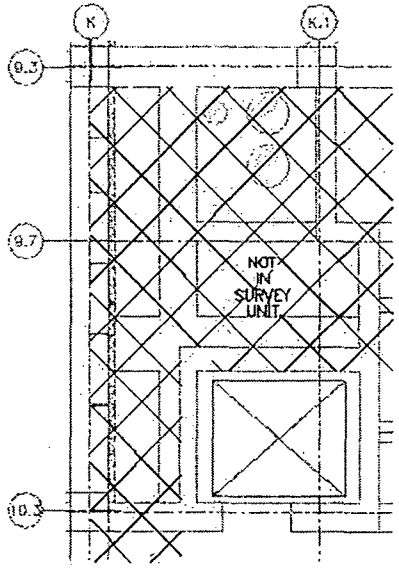
FILE: 513000.03d SHEET 27 of 32 RC RAYMOND



KEY PLANS



PLAN
EL. 0'-0"



REFLECTED CEILING PLAN
EL. 59'-5"±

N

NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT ELEVATOR EQUIPMENT, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 129, 221 & 346 FLR & REFLECT CLG PLANS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.03d SHEET 28 of 32 RC RAYMOND

NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT ELEVATOR EQUIPMENT, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

0 1 2 3
SCALE
METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 129, 221 & 346 WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: B13000.03d SHEET 29 of 32 RC RAYMOND

NOTES:

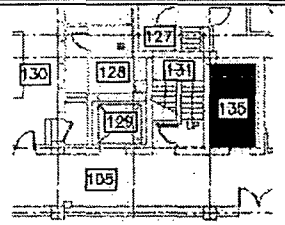
1. AT TIME OF FSS MAP DEVELOPMENT ELEVATOR EQUIPMENT, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.

0 1 2 3
SCALE
METERS

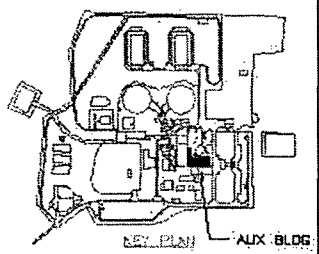
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 129, 221 & 346 WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

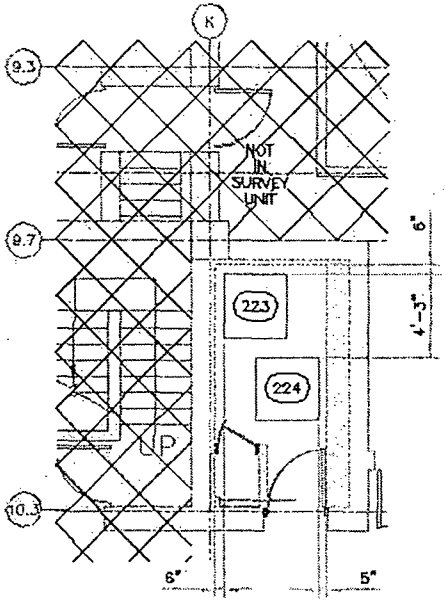
FILE: B13000.03d SHEET 30 of 32 RC RAYMOND



EL 0'-0"

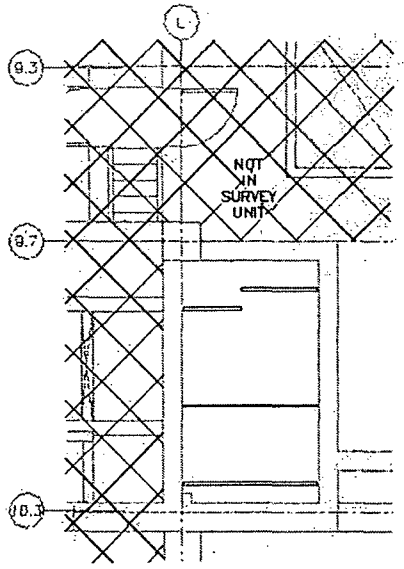


KEY PLANS



PLAN

EL 0'-0"



REFLECTED CEILING PLAN

EL 59'-5"±

N

NOTES:

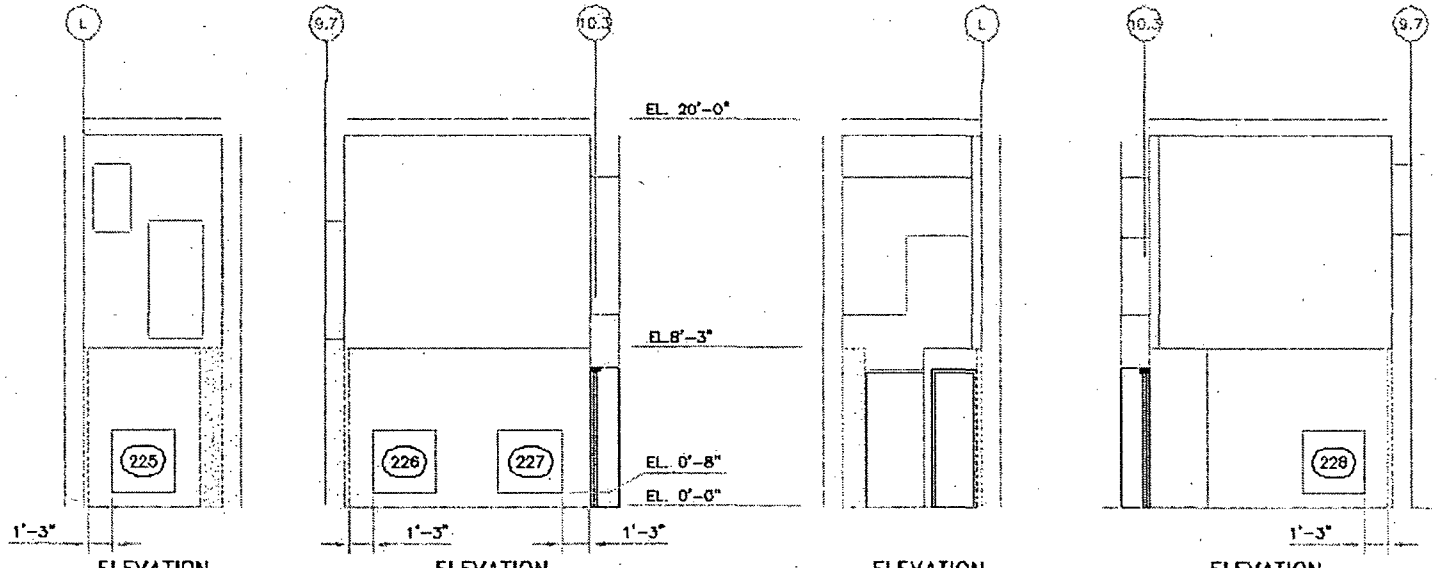
1. AT TIME OF FSS MAP DEVELOPMENT PIPING, CONDUIT & HVAC DUCT WORK REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.
2. DROP CEILING AT EL. 8'-0" PREVIOUSLY REMOVED.

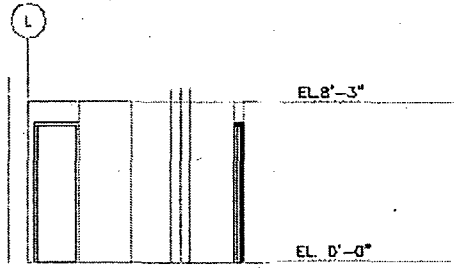
0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 135 FLOOR & REFLECT CLG PLANS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.03d SHEET 31 of 32 RC RAYMOND

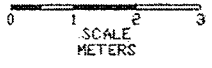




DEVELOPED VIEW
CLOSET

NOTES:

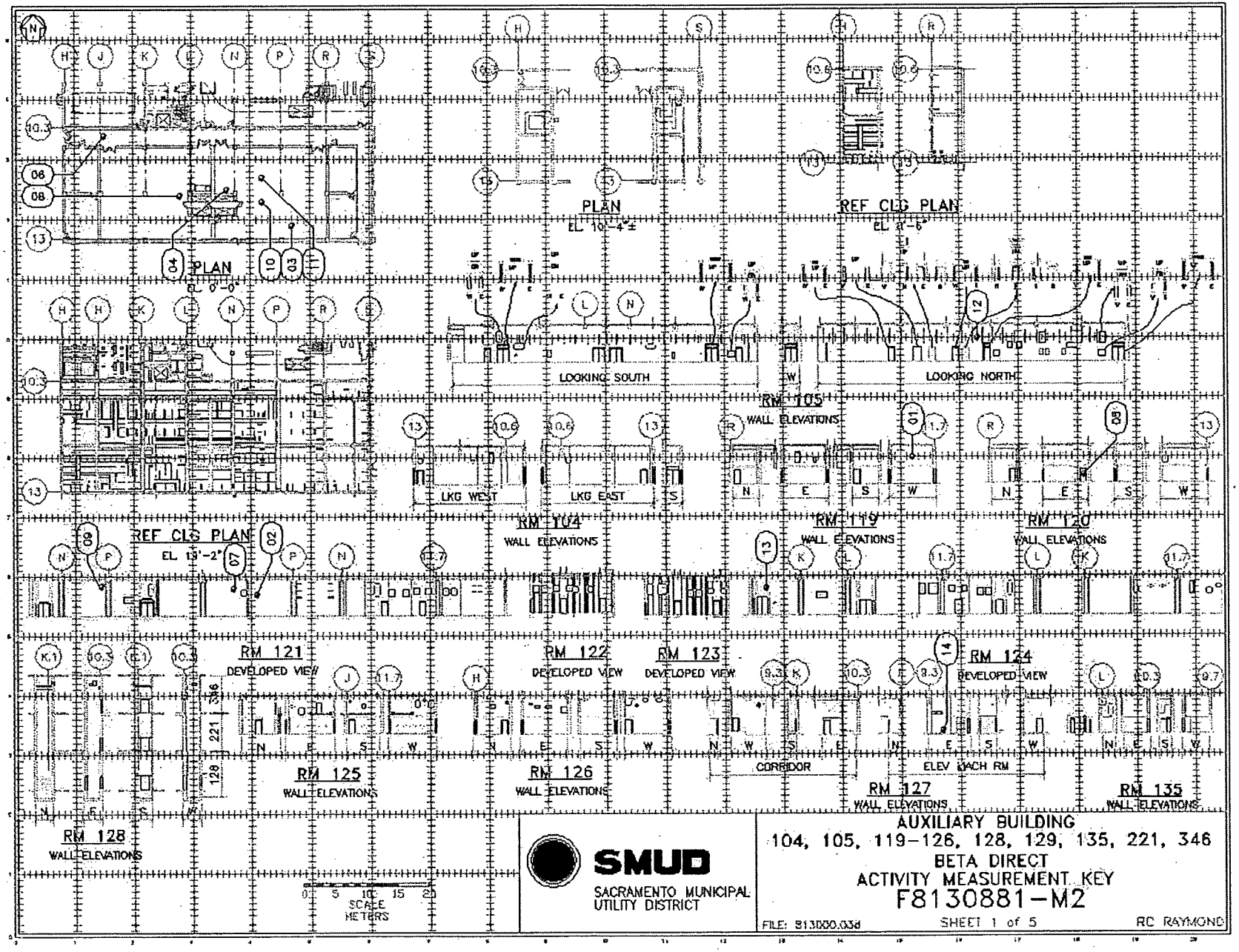
1. AT TIME OF FSS MAP DEVELOPMENT PIPING, CONDUIT & HVAC DUCT WORK REMAINED IN PLACE. SCAN MEASUREMENT LOCATIONS MAY NEED TO BE ADJUSTED IN THE FIELD TO ACCOMMODATE INSITU EQUIPMENT.
2. DROP CEILING AT EL. 8'-0" PREVIOUSLY REMOVED.

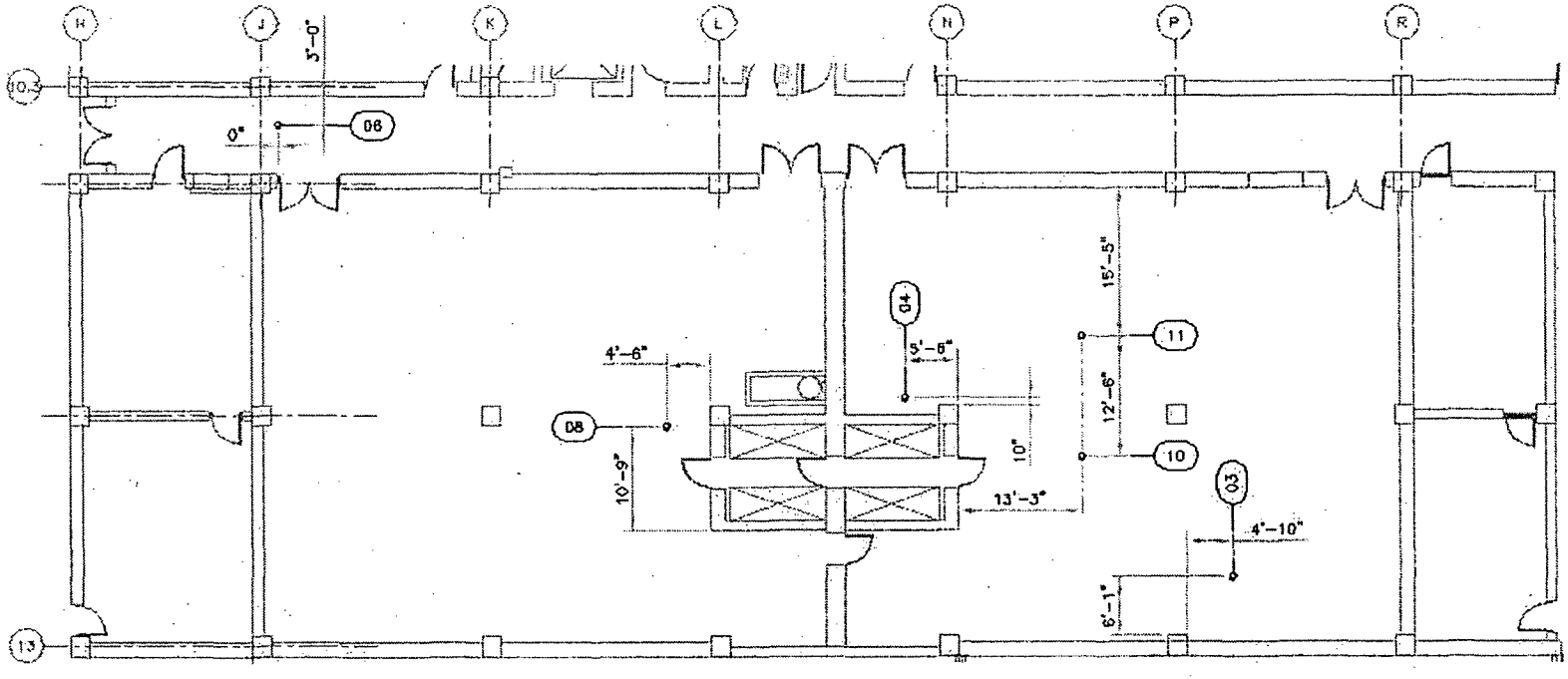


SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 135 WALL ELEVATIONS
BETA SCAN
MEASUREMENT LOCATIONS
F8130881-M1

FILE: 813000.03d SHEET 32 of 32 RC RAYMOND


PLAN
EL 0'-0"
PLAN
EL 10'-4"±
REF CLG PLAN
EL 8'-6"
REF CLG PLAN
EL 13'-2"
LOOKING SOUTH
LOOKING NORTH
LKG WEST
LKG EAST
RM 104
WALL ELEVATIONS
RM 105
WALL ELEVATIONS
RM 119
WALL ELEVATIONS
RM 120
WALL ELEVATIONS
RM 121
DEVELOPED VIEW
RM 122
DEVELOPED VIEW
RM 123
DEVELOPED VIEW
RM 124
DEVELOPED VIEW
RM 125
WALL ELEVATIONS
RM 126
WALL ELEVATIONS
CORRIDOR
ELEV EACH RM
RM 127
WALL ELEVATIONS
RM 135
WALL ELEVATIONS
RM 128
WALL ELEVATIONS
SCALE METERS
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
104, 105, 119–126, 128, 129, 135, 221, 346
BETA DIRECT
ACTIVITY MEASUREMENT KEY
F8130881–M2
FILE: 813030.038
SHEET 1 of 5
RC RAYMOND



PLAN
EL. 0'-0"

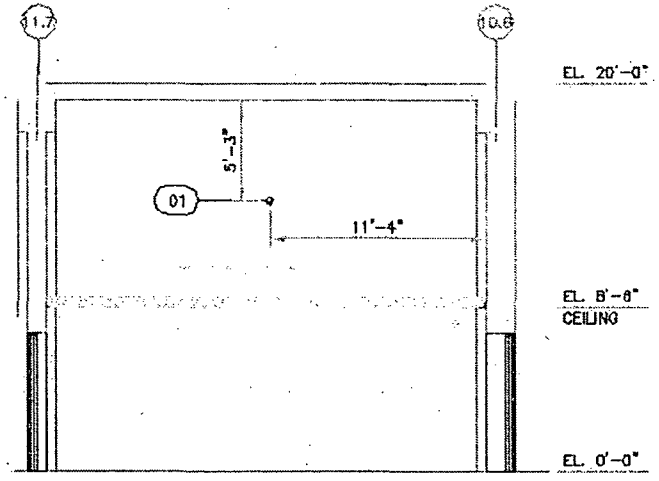
0 1 2 3 4 5
SCALE
METERS

N

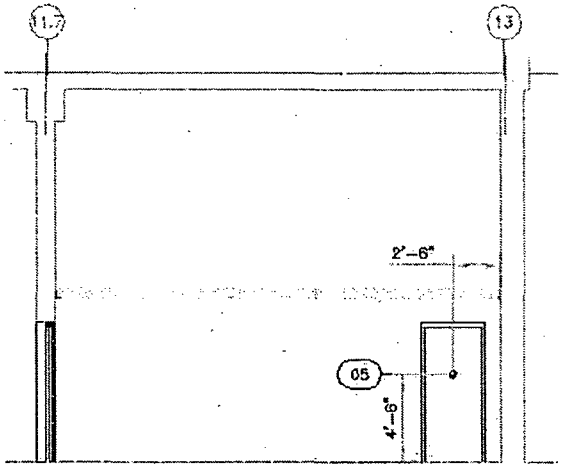
SMUD
SACRAMENTO MUNICIPAL
UTILITY DISTRICT

AUXILIARY BUILDING
ROOMS 105, 121 & 124 FLOOR PLAN
BETA DIRECT
ACTIVITY MEASURMENT LOCATIONS
F8130881-M2

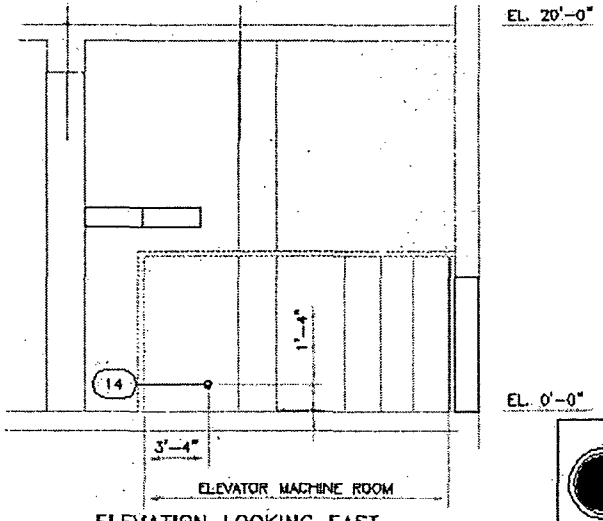
FILE: 813XXX.03d SHEET 2 of 5 RC RAYMOND



ELEVATION LOOKING WEST
ROOM 119 UPPER



ELEVATION LOOKING EAST
ROOM 120 LOWER



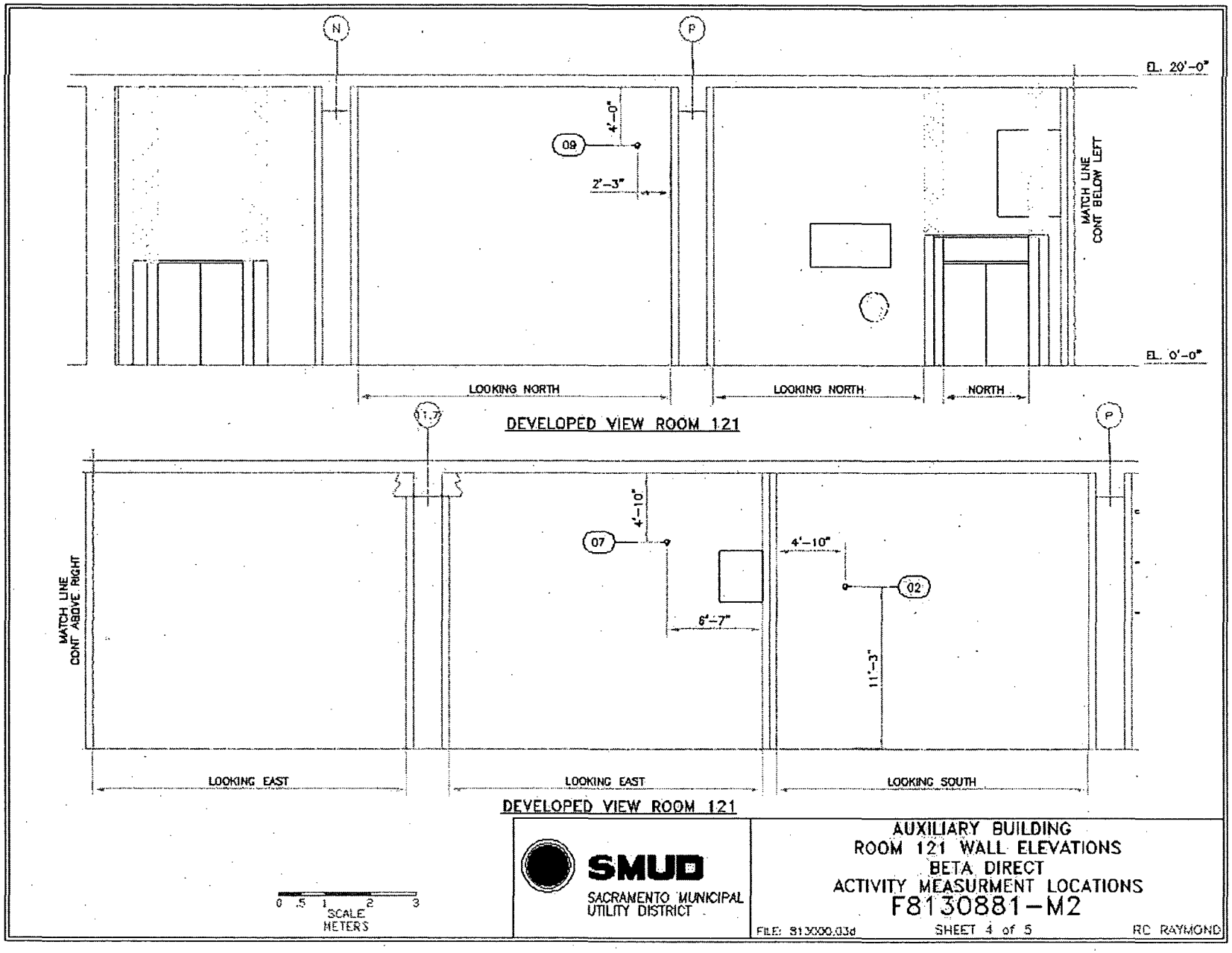
ELEVATION LOOKING EAST
ROOM 127

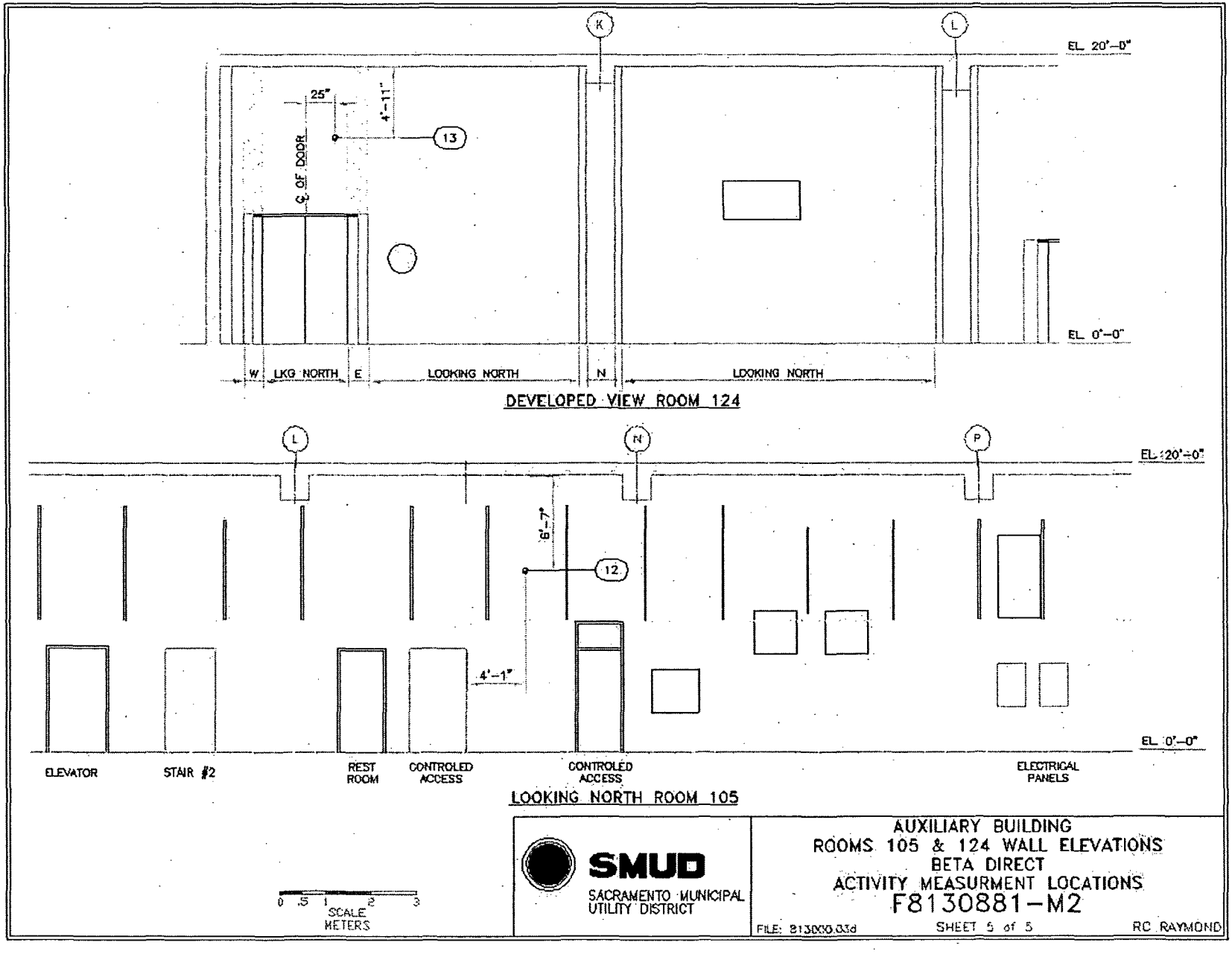
0 .5 1 2 3
SCALE
METERS

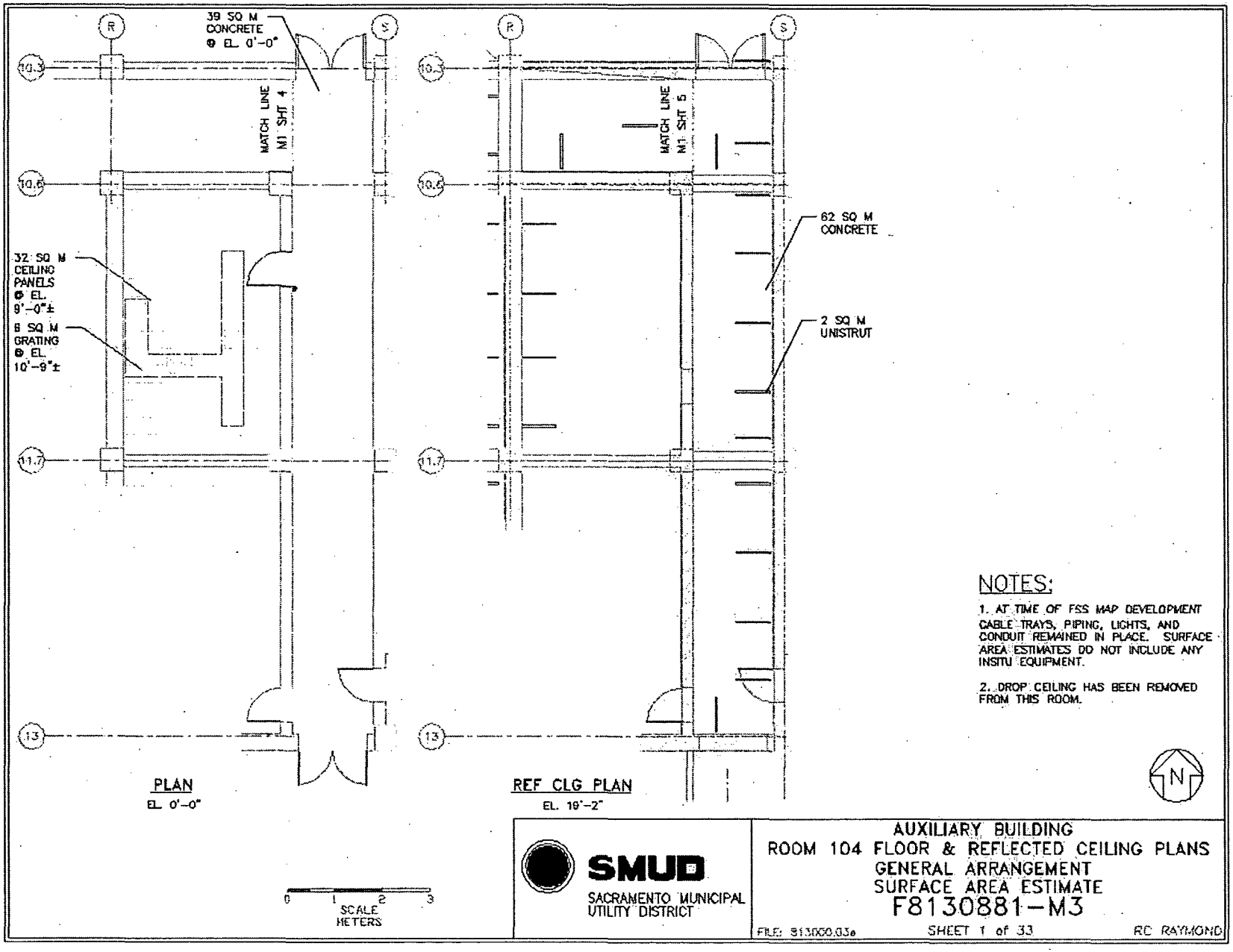
SMUD
SACRAMENTO MUNICIPAL
UTILITY DISTRICT

AUXILIARY BUILDING
ROOMS 119, 120 & 127 WALL ELEVATIONS
BETA DIRECT
ACTIVITY MEASURMENT LOCATIONS
F8130881-M2

FILE: B13000.03d SHEET 3 of 5 RC RAYMOND


N
P
EL. 20'-0"
4'-0"
09
2'-3"
MATCH LINE
CONT BELOW LEFT
EL. 0'-0"
LOOKING NORTH
LOOKING NORTH
NORTH
DEVELOPED VIEW ROOM 121
N
P
4'-10"
07
4'-10"
02
6'-7"
11'-3"
MATCH LINE
CONT ABOVE RIGHT
LOOKING EAST
LOOKING EAST
LOOKING SOUTH
DEVELOPED VIEW ROOM 121
0 .5 1 2 3
SCALE
METERS
SMUD
SACRAMENTO MUNICIPAL
UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 121 WALL ELEVATIONS
BETA DIRECT
ACTIVITY MEASURMENT LOCATIONS
F8130881-M2
FILE: 813000.03d
SHEET 4 of 5
RC RAYMOND


K
L
EL 20'-0"
25"
4'-11"
13
℄ OF DOOR
EL 0'-0"
W
LKG NORTH
E
LOOKING NORTH
N
LOOKING NORTH
DEVELOPED VIEW ROOM 124
L
N
P
EL 20'-0"
6'-7"
12
4'-1"
EL 0'-0"
ELEVATOR
STAIR #2
REST ROOM
CONTROLED ACCESS
CONTROLED ACCESS
ELECTRICAL PANELS
LOOKING NORTH ROOM 105
0 .5 1 2 3
SCALE METERS
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
ROOMS 105 & 124 WALL ELEVATIONS
BETA DIRECT
ACTIVITY MEASURMENT LOCATIONS
F8130881-M2
FILE: 813000.03d
SHEET 5 of 5
RC RAYMOND



NOTES:

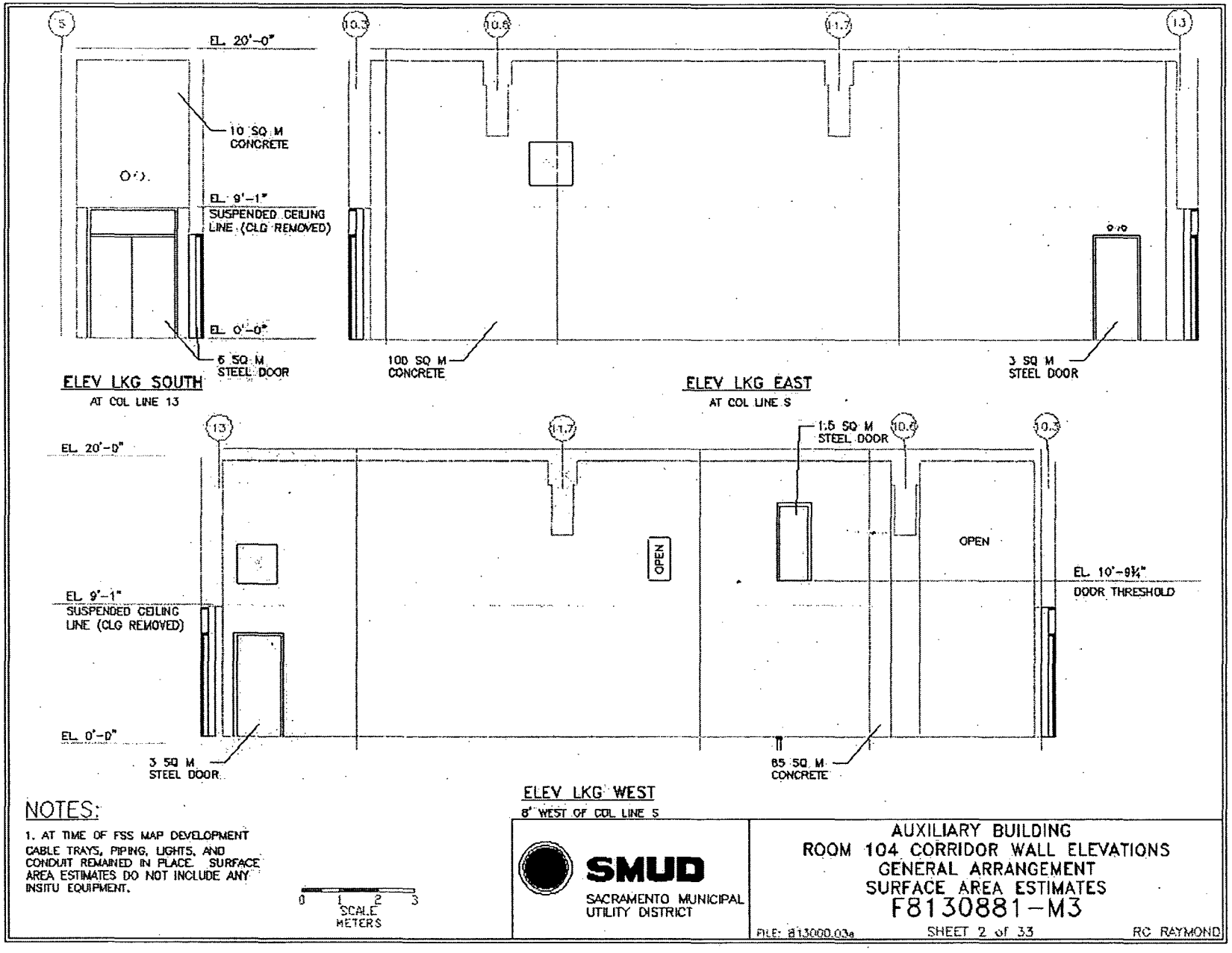
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

2. DROP CEILING HAS BEEN REMOVED FROM THIS ROOM.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 104 FLOOR & REFLECTED CEILING PLANS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 8130000.03e SHEET 1 of 33 RC RAYMOND



NOTES:

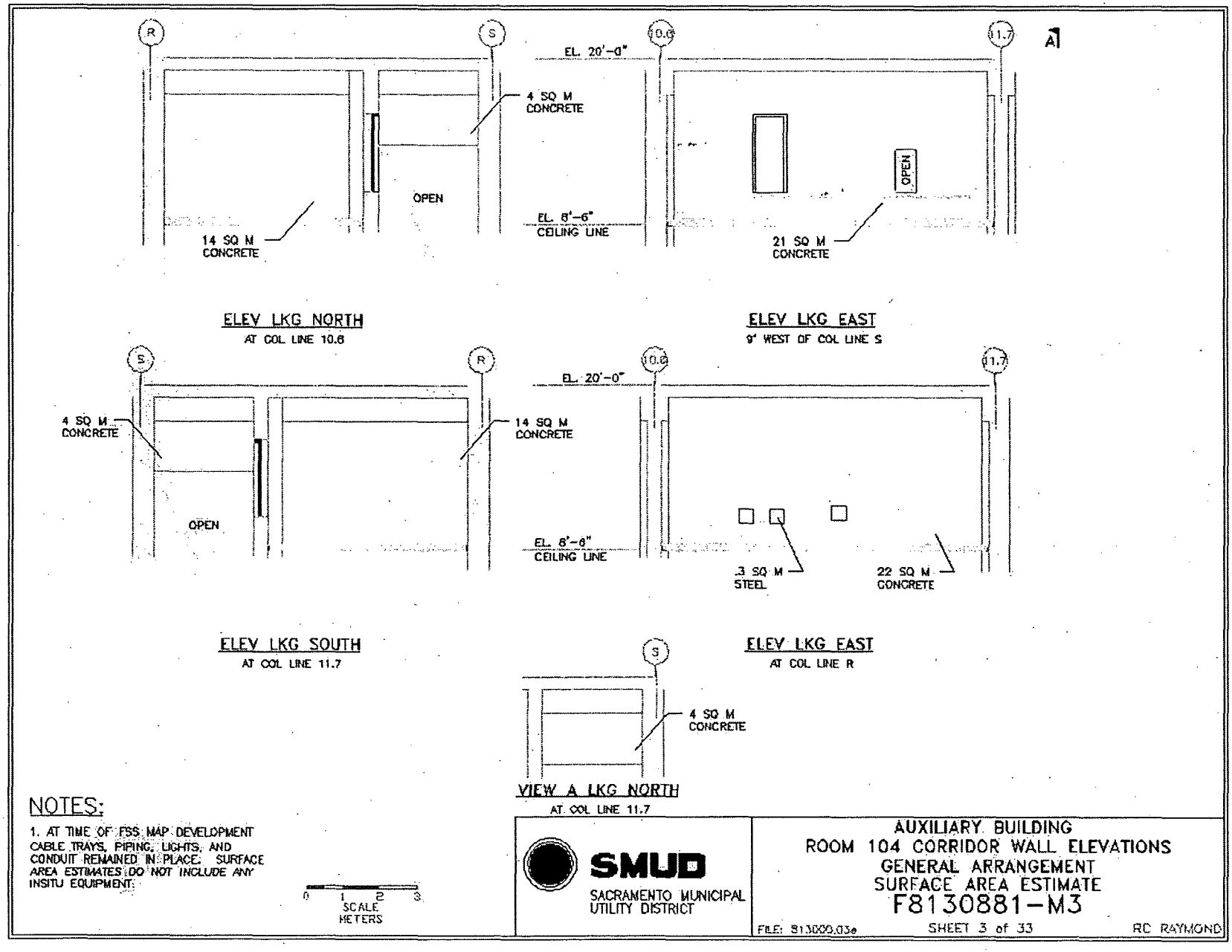
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

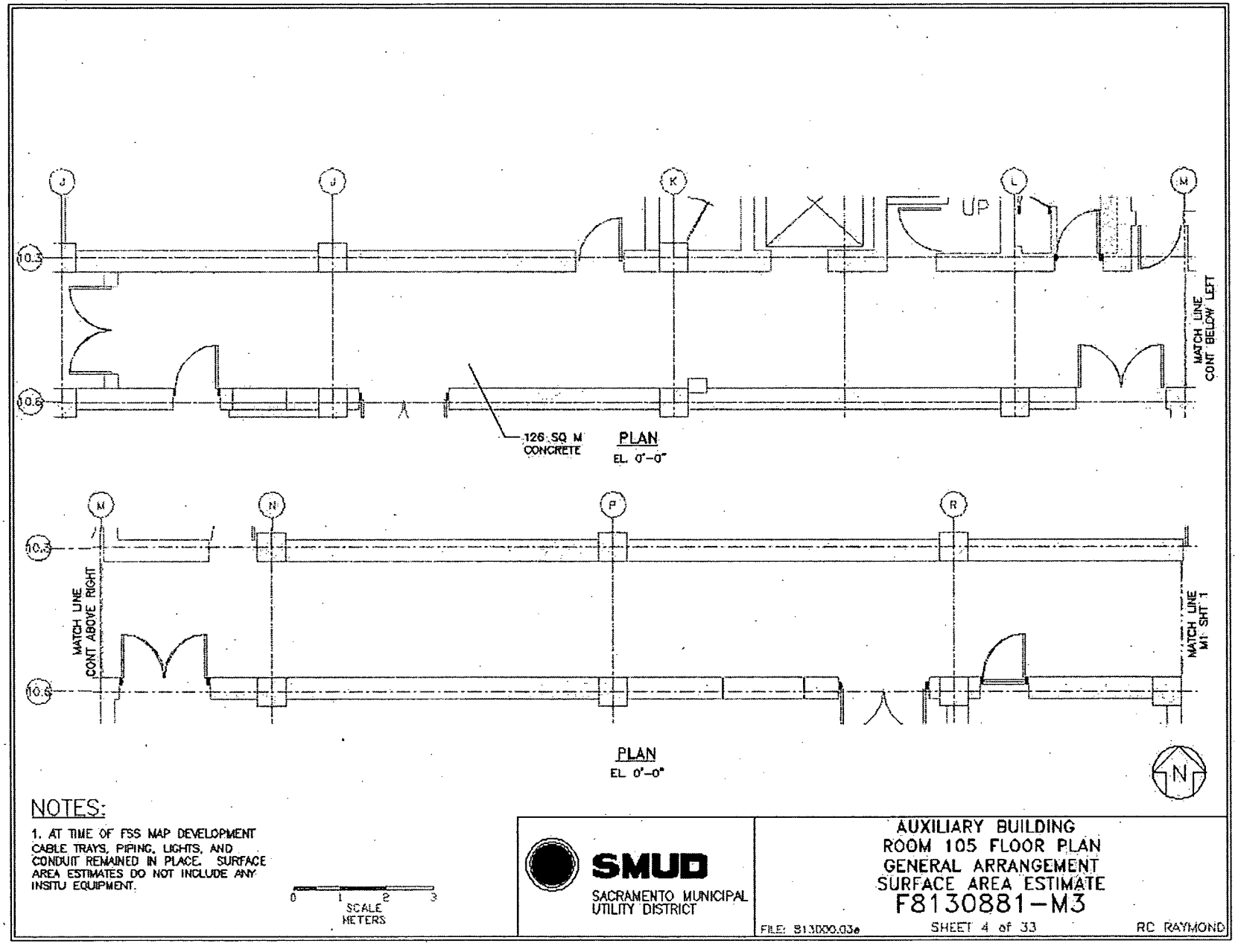
0 1 2 3
SCALE METERS

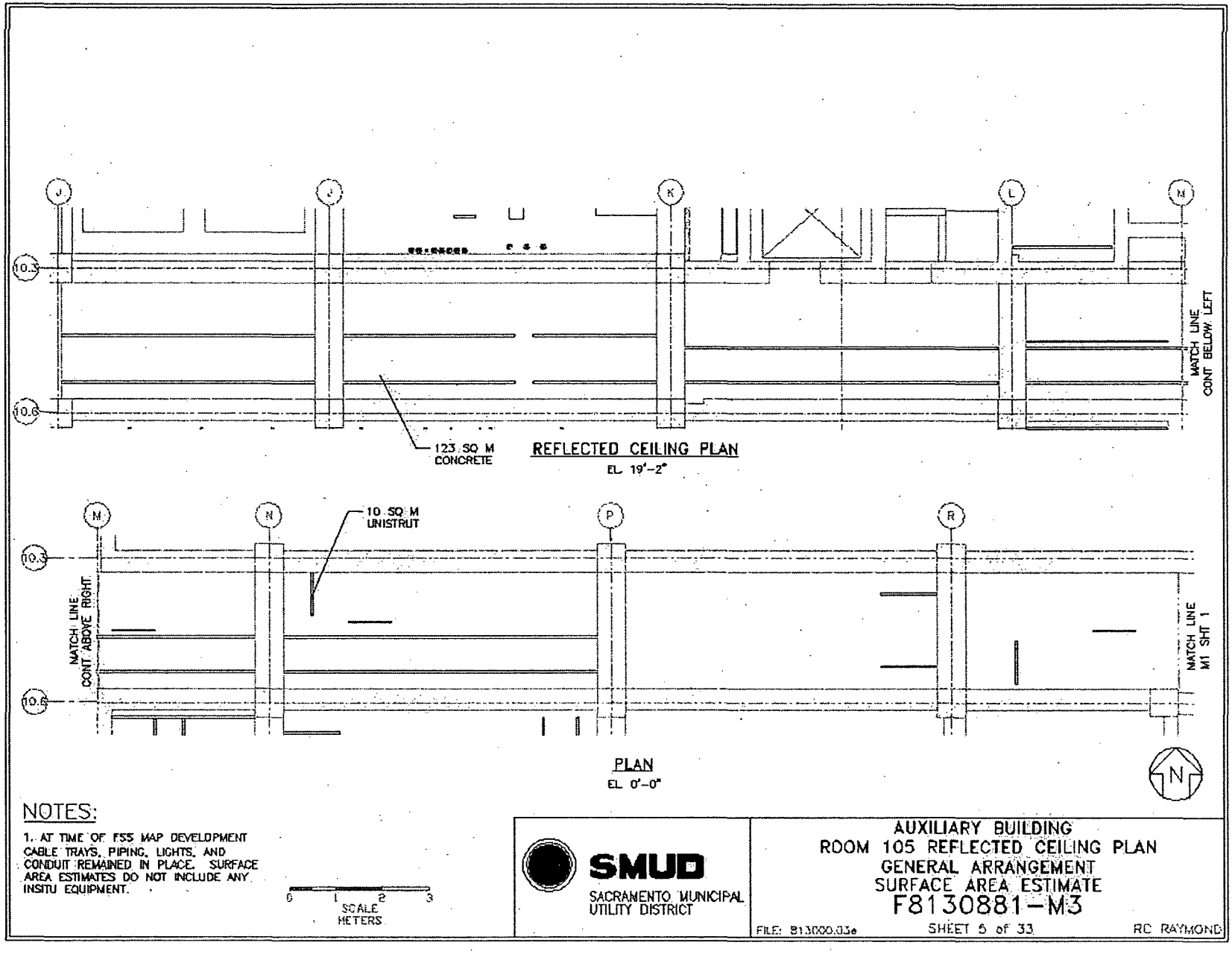
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 104 CORRIDOR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATES
F8130881-M3

FILE: 813000.03a SHEET 2 of 33 RC RAYMOND


R
S
10.6
11.7
A1
EL. 20'-0"
4 SQ M CONCRETE
OPEN
EL. 8'-6" CEILING LINE
14 SQ M CONCRETE
OPEN
21 SQ M CONCRETE
ELEV LKG NORTH
AT COL LINE 10.6
ELEV LKG EAST
9" WEST OF COL LINE S
S
R
10.6
11.7
4 SQ M CONCRETE
14 SQ M CONCRETE
EL. 20'-0"
OPEN
EL. 8'-6" CEILING LINE
.3 SQ M STEEL
22 SQ M CONCRETE
ELEV LKG SOUTH
AT COL LINE 11.7
ELEV LKG EAST
AT COL LINE R
S
4 SQ M CONCRETE
VIEW A LKG NORTH
AT COL LINE 11.7
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
0 1 2 3
SCALE METERS
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 104 CORRIDOR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: 813000.03e
SHEET 3 of 33
RC RAYMOND


J
J
K
L
M
UP
10.3
10.6
MATCH LINE
CONT BELOW LEFT
126 SQ M
CONCRETE
PLAN
EL. 0'-0"
M
N
P
R
10.3
10.6
MATCH LINE
CONT ABOVE RIGHT
MATCH LINE
M1 SHT 1
PLAN
EL. 0'-0"
N
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
0 1 2 3
SCALE
METERS
SMUD
SACRAMENTO MUNICIPAL
UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 105 FLOOR PLAN
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: B13000.03e
SHEET 4 of 33
RC RAYMOND



REFLECTED CEILING PLAN
EL 19'-2"

PLAN
EL 0'-0"

NOTES:

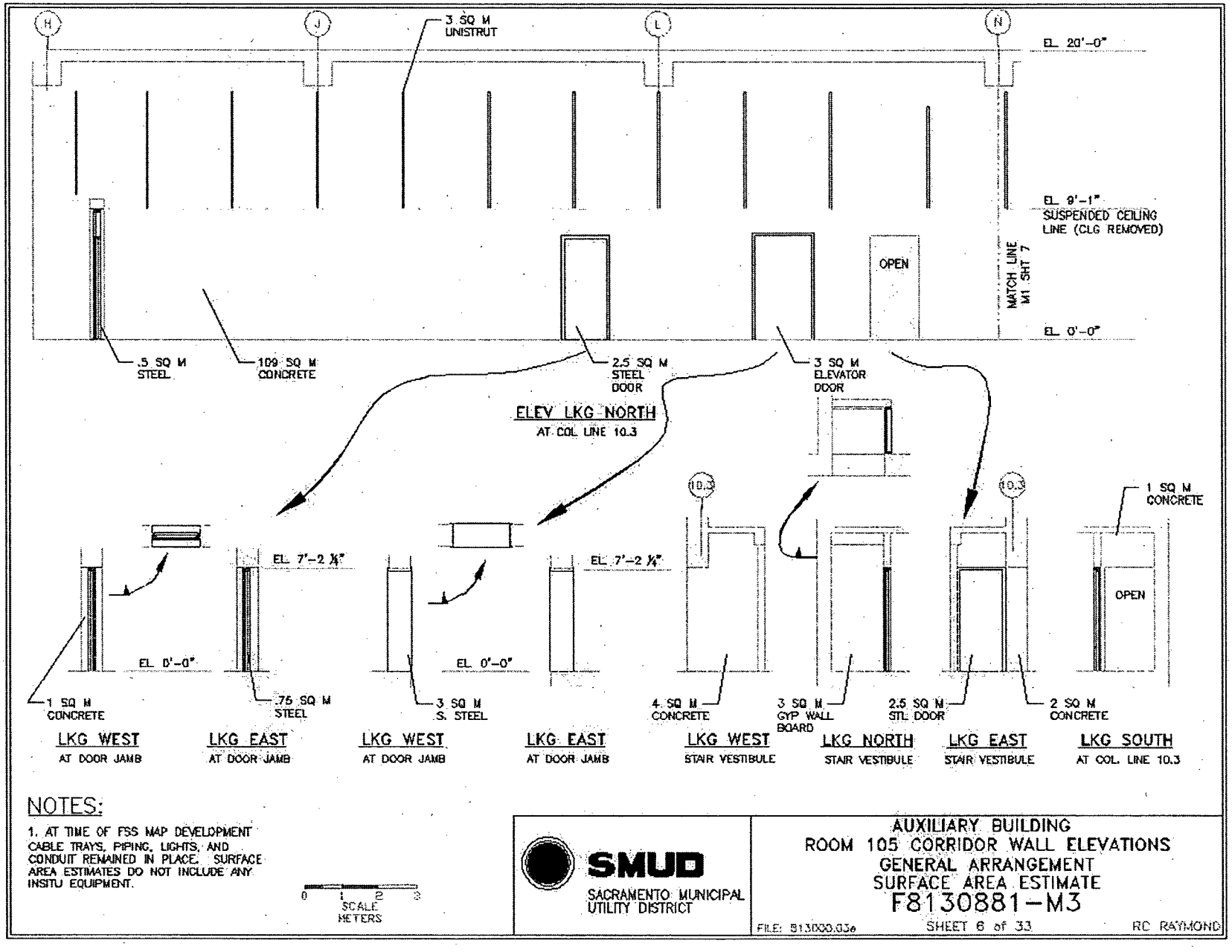
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE
METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 105 REFLECTED CEILING PLAN
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: B13000.03e SHEET 5 of 33 RC RAYMOND



NOTES:

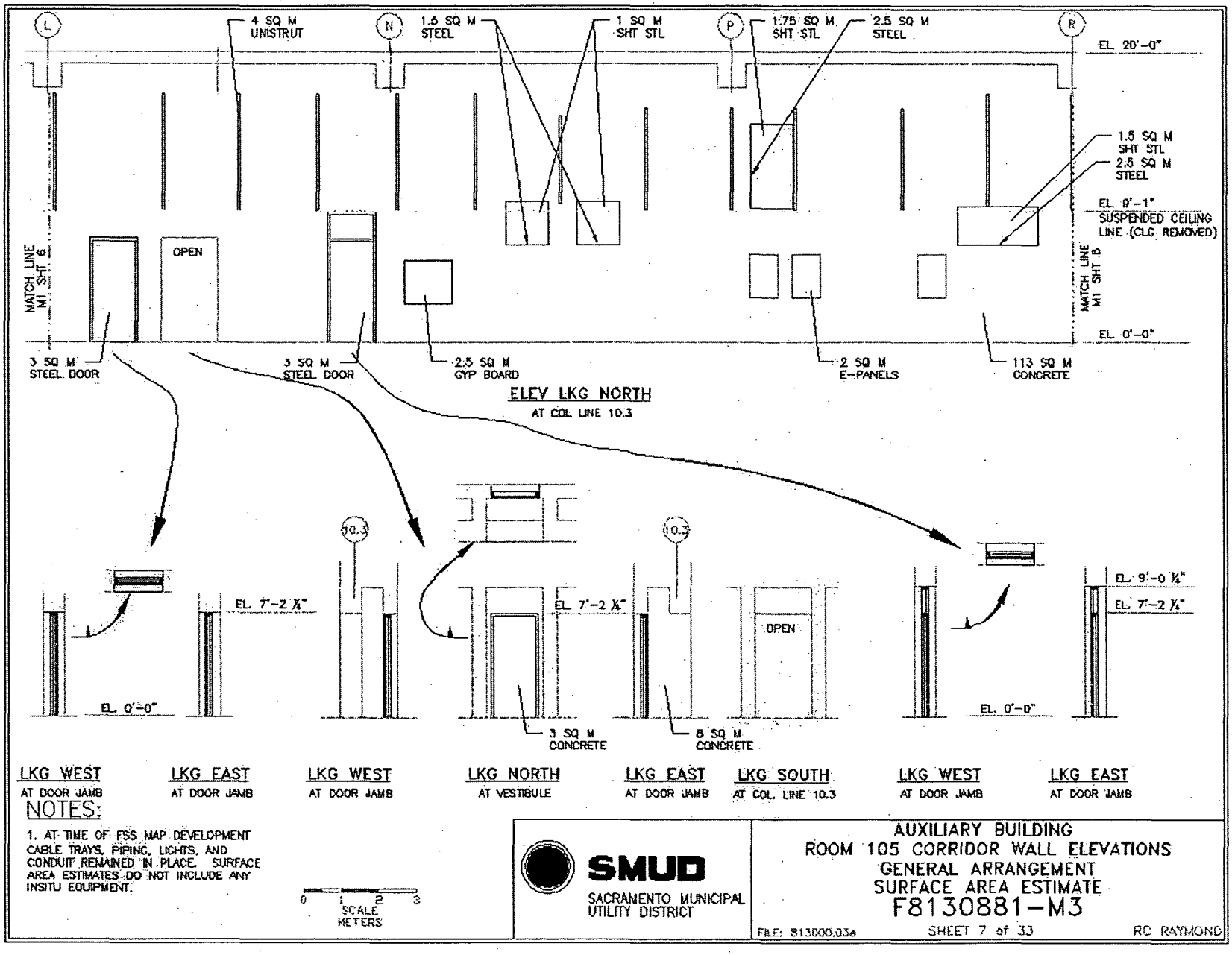
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

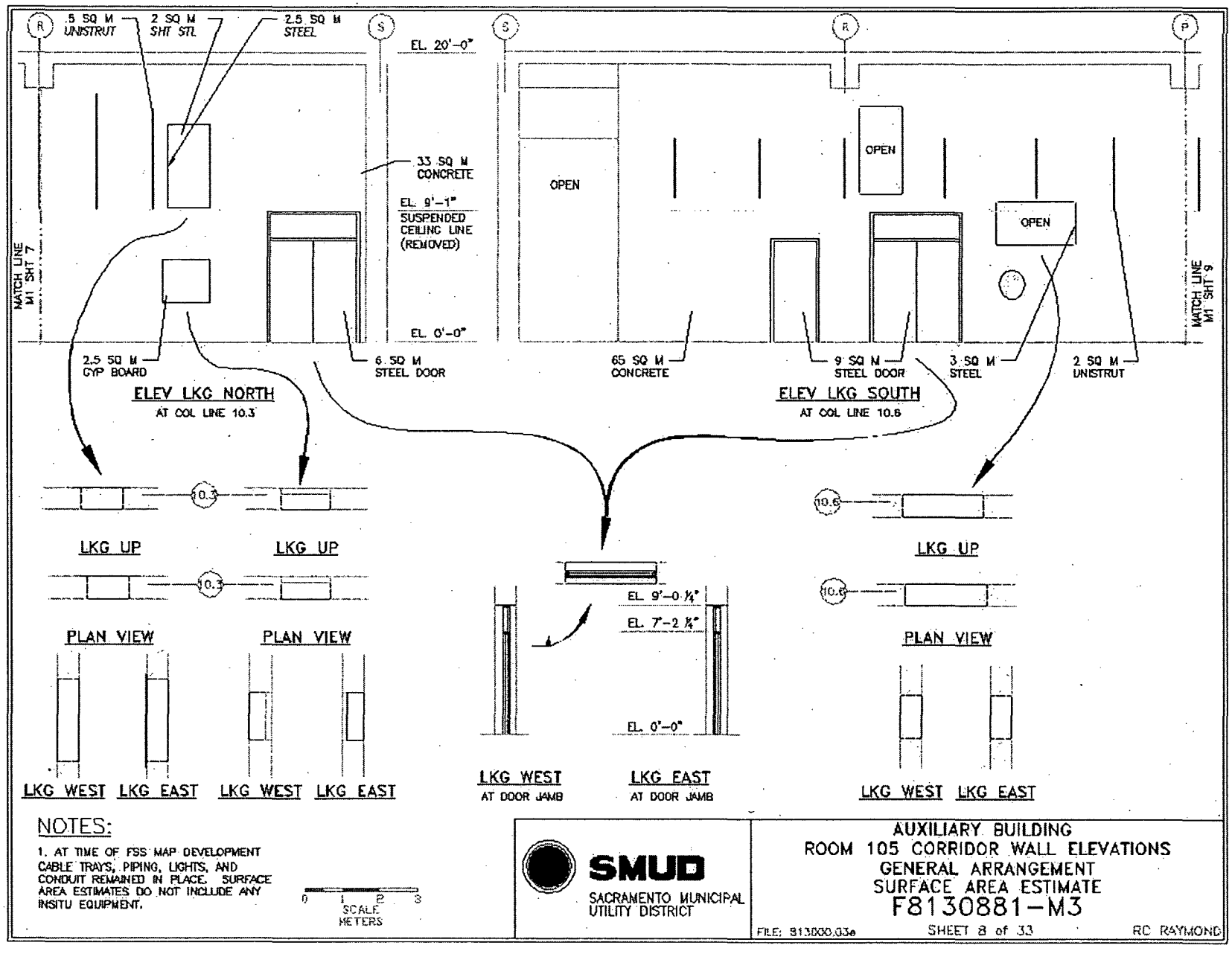
0 1 2 3
SCALE METERS

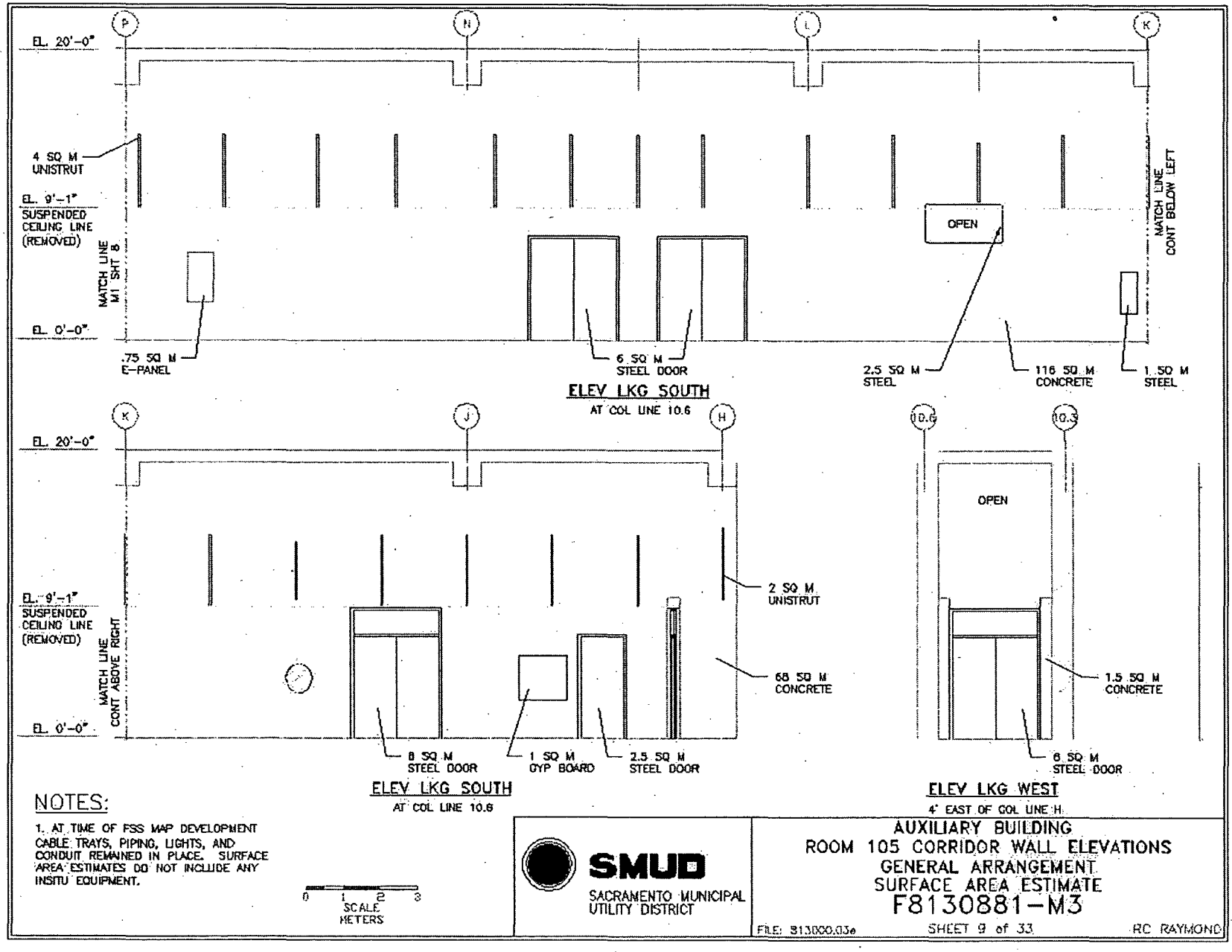
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

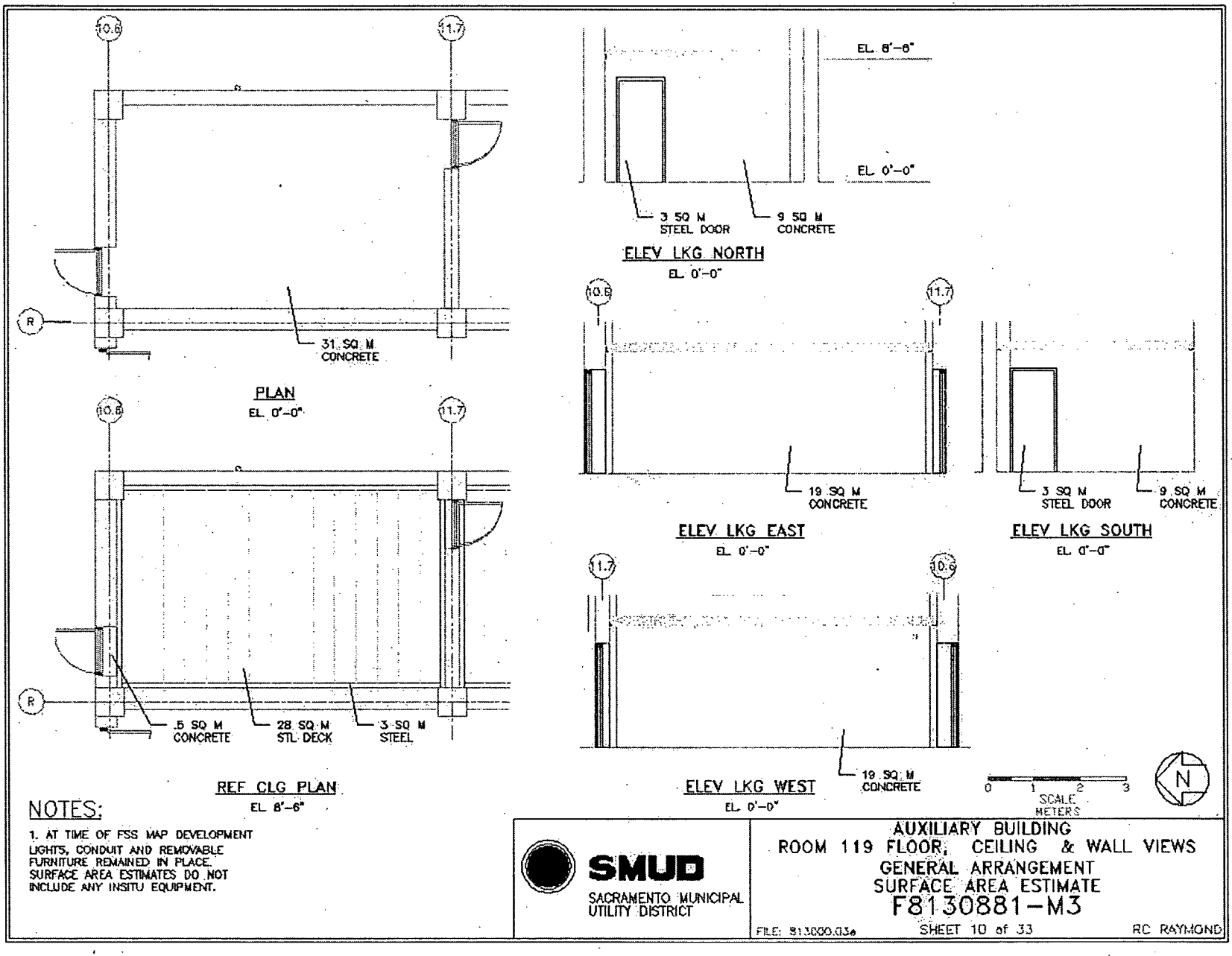
AUXILIARY BUILDING
ROOM 105 CORRIDOR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03a SHEET 6 of 33 RC RAYMOND


L
N
P
R
4 SQ M UNISTRUT
1.5 SQ M STEEL
1 SQ M SHT STL
1.75 SQ M SHT STL
2.5 SQ M STEEL
EL 20'-0"
1.5 SQ M SHT STL
2.5 SQ M STEEL
EL 9'-1" SUSPENDED CEILING LINE (CLG REMOVED)
MATCH LINE M1 SHT 6
MATCH LINE M1 SHT 8
OPEN
EL 0'-0"
3 SQ M STEEL DOOR
3 SQ M STEEL DOOR
2.5 SQ M GYP BOARD
2 SQ M E-PANELS
113 SQ M CONCRETE
ELEV LKG NORTH
AT COL LINE 10.3
10.3
10.3
EL 7'-2 ¼"
EL 7'-2 ¼"
EL 9'-0 ¼"
EL 7'-2 ¼"
OPEN
EL 0'-0"
EL 0'-0"
3 SQ M CONCRETE
8 SQ M CONCRETE
LKG WEST AT DOOR JAMB
LKG EAST AT DOOR JAMB
LKG WEST AT DOOR JAMB
LKG NORTH AT VESTIBULE
LKG EAST AT DOOR JAMB
LKG SOUTH AT COL LINE 10.3
LKG WEST AT DOOR JAMB
LKG EAST AT DOOR JAMB
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
0 1 2 3
SCALE METERS
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 105 CORRIDOR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: 813000.03e
SHEET 7 of 33
RC RAYMOND


.5 SQ M UNISTRUT
2 SQ M SHT STL
2.5 SQ M STEEL
EL. 20'-0"
33 SQ M CONCRETE
EL. 9'-1" SUSPENDED CEILING LINE (REMOVED)
EL. 0'-0"
MATCH LINE M1 SHT 7
MATCH LINE M1 SHT 9
OPEN
OPEN
OPEN
2.5 SQ M GYP BOARD
6 SQ M STEEL DOOR
65 SQ M CONCRETE
9 SQ M STEEL DOOR
3 SQ M STEEL
2 SQ M UNISTRUT
ELEV LKG NORTH
AT COL LINE 10.3
ELEV LKG SOUTH
AT COL LINE 10.6
LKG UP
LKG UP
LKG UP
PLAN VIEW
PLAN VIEW
PLAN VIEW
EL. 9'-0 ½"
EL. 7'-2 ½"
EL. 0'-0"
LKG WEST LKG EAST
LKG WEST LKG EAST
LKG WEST
AT DOOR JAMB
LKG EAST
AT DOOR JAMB
LKG WEST LKG EAST
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
0 1 2 3
SCALE METERS
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 105 CORRIDOR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: 813000.03e
SHEET 8 of 33
RC RAYMOND


P
N
L
K
EL. 20'-0"
4 SQ M
UNISTRUT
EL. 9'-1"
SUSPENDED
CEILING LINE
(REMOVED)
MATCH LINE
M1 SHT 8
EL. 0'-0"
.75 SQ M
E-PANEL
6 SQ M
STEEL DOOR
OPEN
2.5 SQ M
STEEL
116 SQ M
CONCRETE
1.50 M
STEEL
MATCH LINE
CONT BELOW LEFT
ELEV LKG SOUTH
AT COL LINE 10.6
K
J
H
EL. 20'-0"
EL. 9'-1"
SUSPENDED
CEILING LINE
(REMOVED)
MATCH LINE
CONT ABOVE RIGHT
EL. 0'-0"
2 SQ M
UNISTRUT
68 SQ M
CONCRETE
8 SQ M
STEEL DOOR
1 SQ M
GYP BOARD
2.5 SQ M
STEEL DOOR
ELEV LKG SOUTH
AT COL LINE 10.6
10.6
10.3
OPEN
1.5 SQ M
CONCRETE
6 SQ M
STEEL DOOR
ELEV LKG WEST
4' EAST OF COL LINE H
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
0 1 2 3
SCALE
METERS
SMUD
SACRAMENTO MUNICIPAL
UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 105 CORRIDOR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: B13000.03e
SHEET 9 of 33
RC RAYMOND



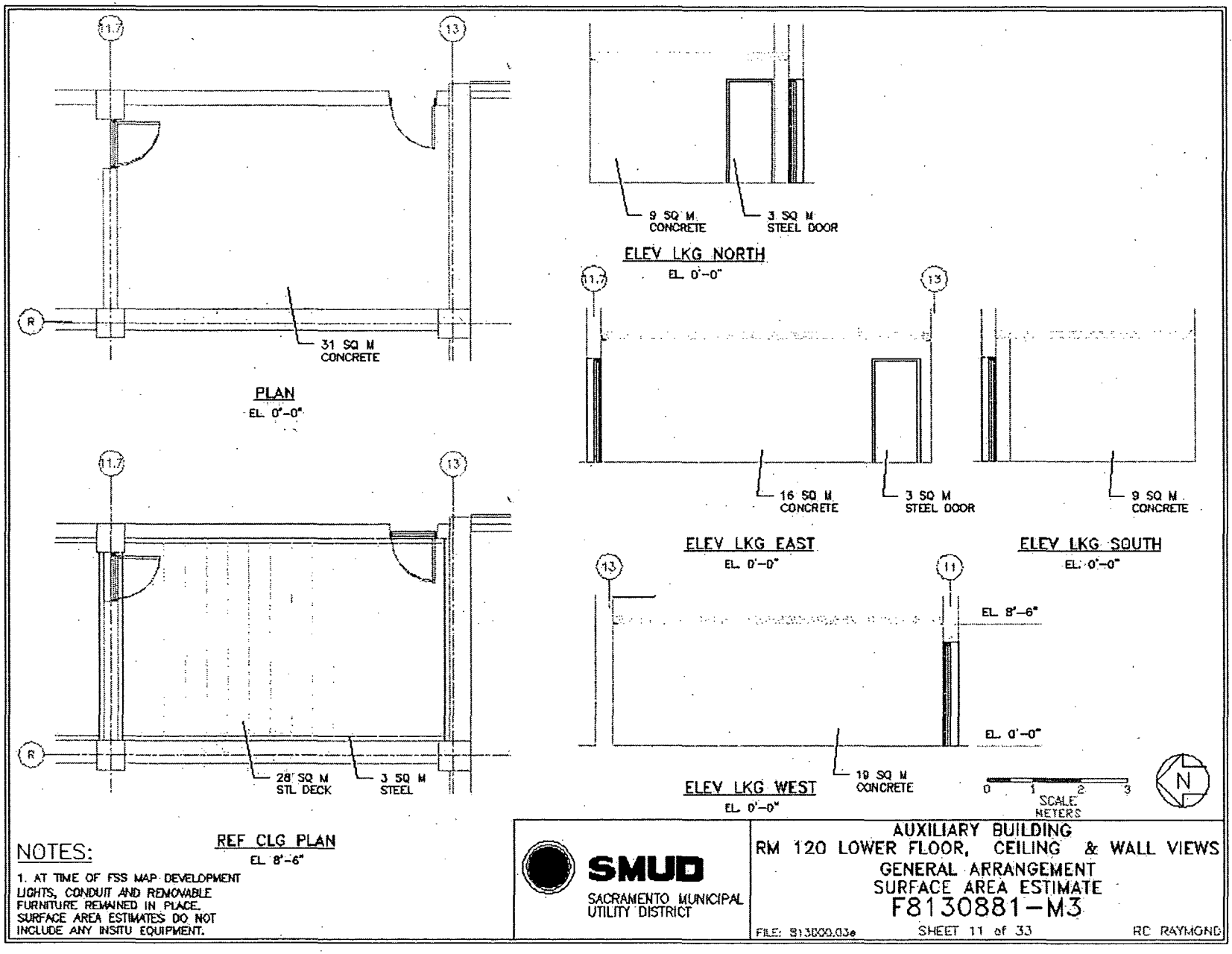
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND REMOVABLE FURNITURE REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 119 FLOOR, CEILING & WALL VIEWS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 10 of 33 RC RAYMOND



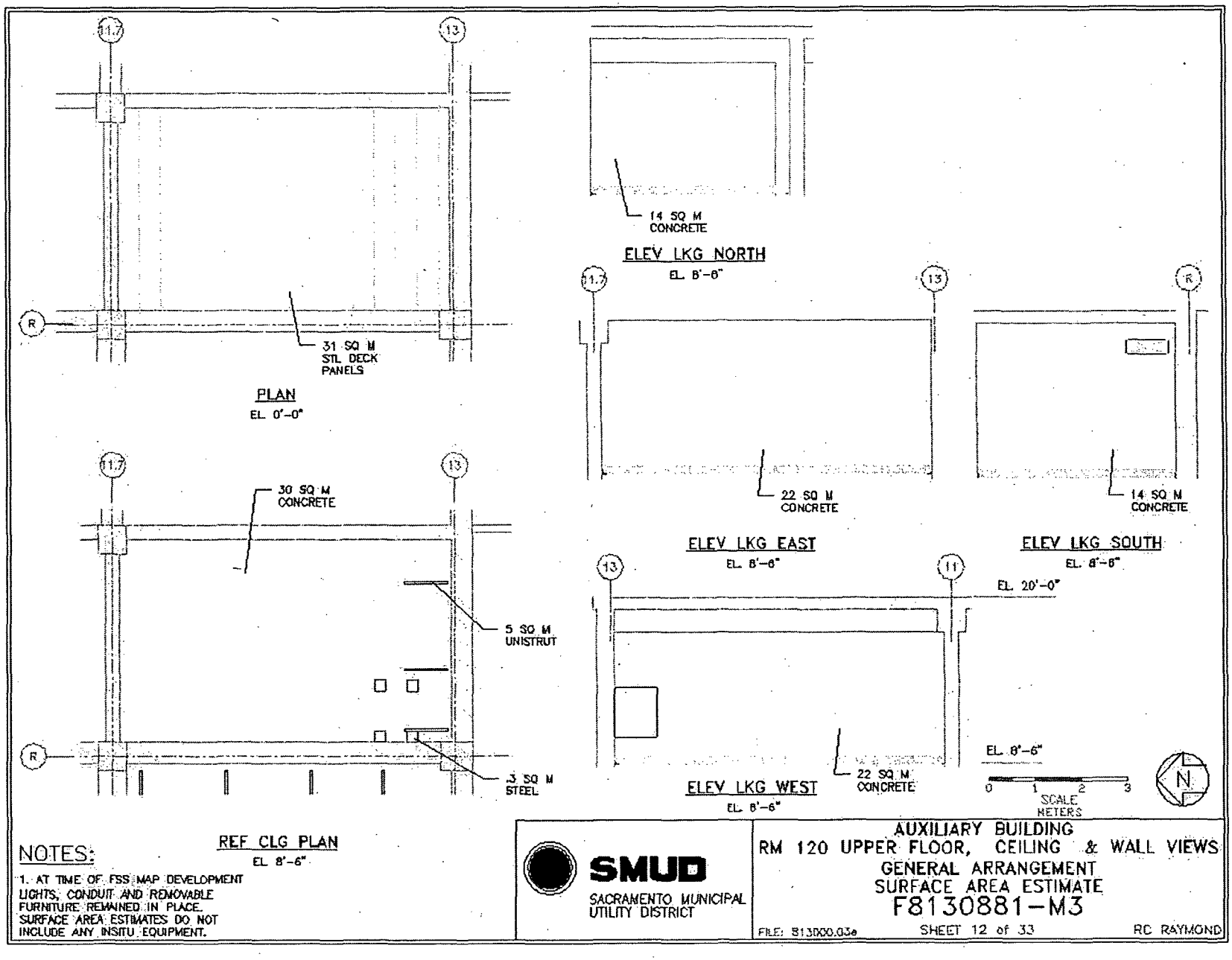
NOTES:

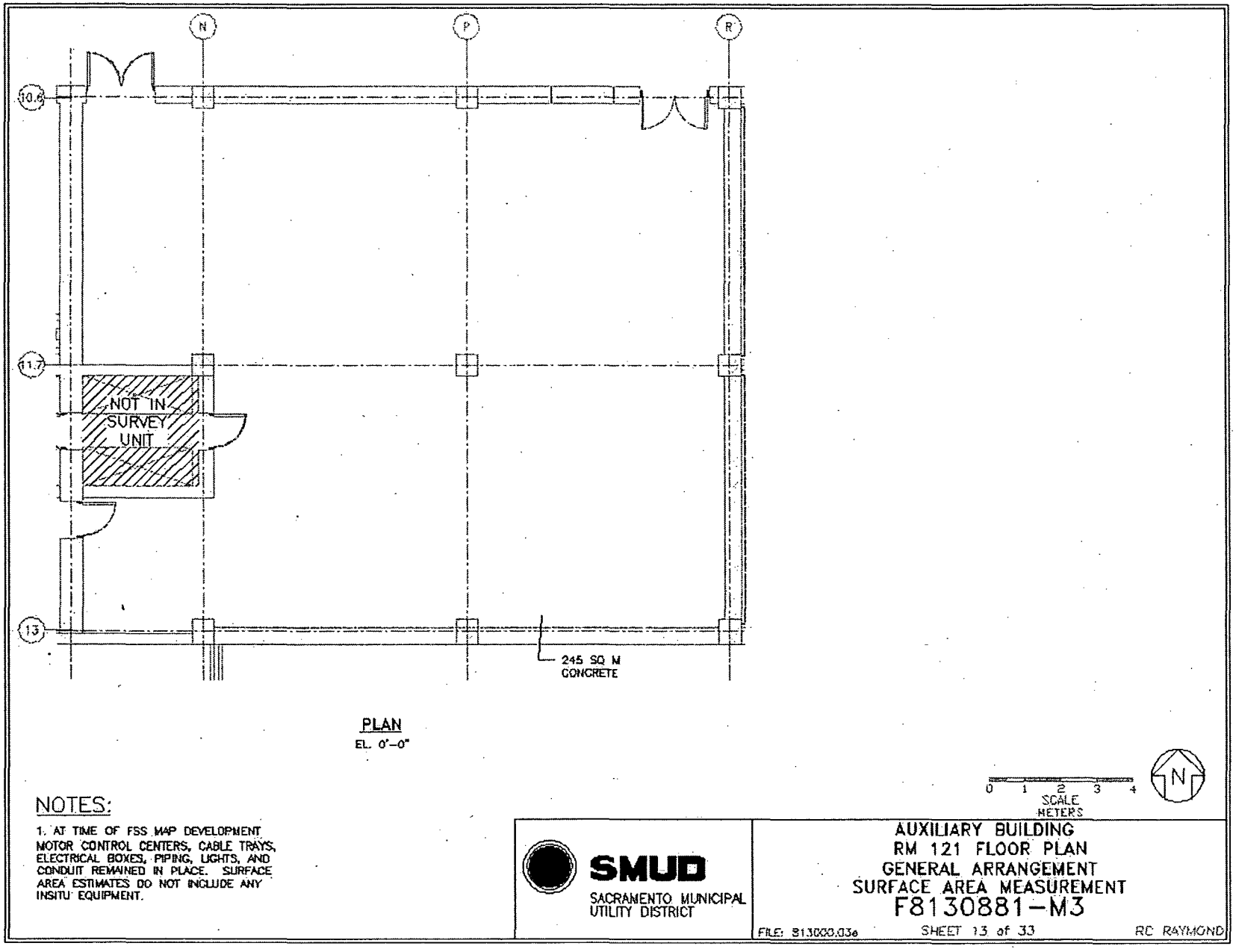
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND REMOVABLE FURNITURE REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 120 LOWER FLOOR, CEILING & WALL VIEWS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 11 of 33 RC RAYMOND


11.7
13
R
31 SQ M
STL DECK
PANELS
PLAN
EL 0'-0"
14 SQ M
CONCRETE
ELEV LKG NORTH
EL 8'-6"
22 SQ M
CONCRETE
14 SQ M
CONCRETE
30 SQ M
CONCRETE
5 SQ M
UNISTRUT
3 SQ M
STEEL
REF CLG PLAN
EL 8'-6"
ELEV LKG EAST
EL 8'-6"
11
EL 20'-0"
ELEV LKG SOUTH
EL 8'-6"
ELEV LKG WEST
EL 8'-6"
22 SQ M
CONCRETE
EL 8'-6"
0
1
2
3
SCALE
METERS
N
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND REMOVABLE FURNITURE REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
RM 120 UPPER FLOOR, CEILING & WALL VIEWS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: 813000.03a
SHEET 12 of 33
RC RAYMOND



PLAN
EL. 0'-0"

0 1 2 3 4
SCALE METERS

N

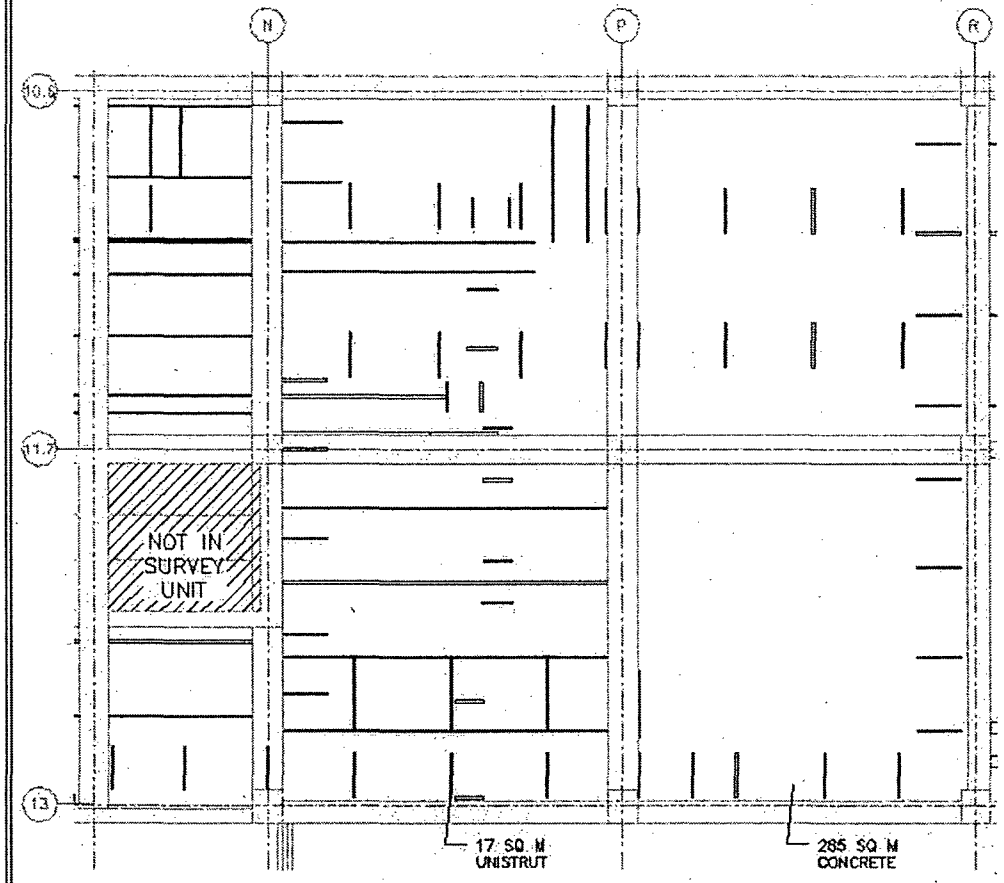
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 121 FLOOR PLAN
GENERAL ARRANGEMENT
SURFACE AREA MEASUREMENT
F8130881-M3

FILE: 813000.03e SHEET 13 of 33 RC RAYMOND



PLAN
EL. 0'-0"

0 1 2 3 4
SCALE METERS

N

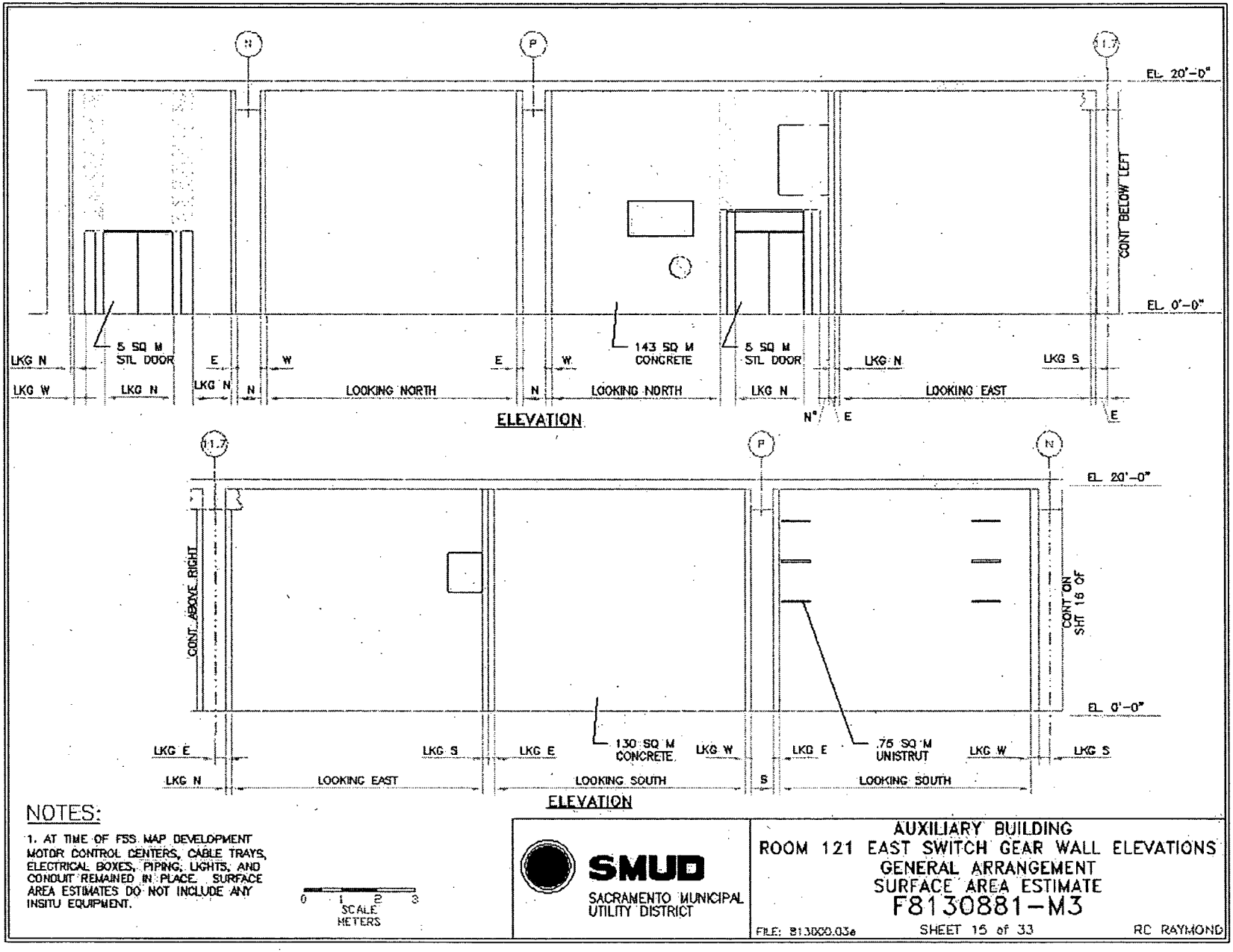
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 121 REFLECTED CEILING PLAN
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03# SHEET 14 of 33 RC RAYMOND



NOTES:

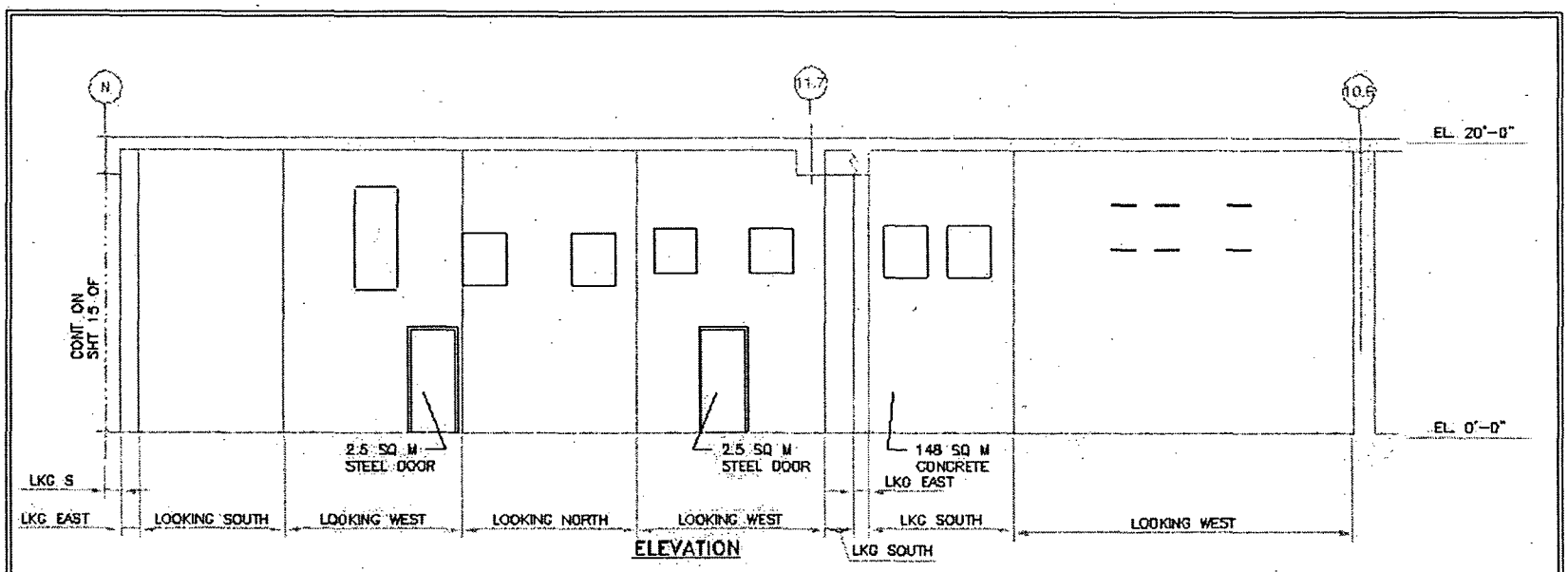
1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 121 EAST SWITCH GEAR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 15 of 33 RC RAYMOND



ELEVATION

NOTES:

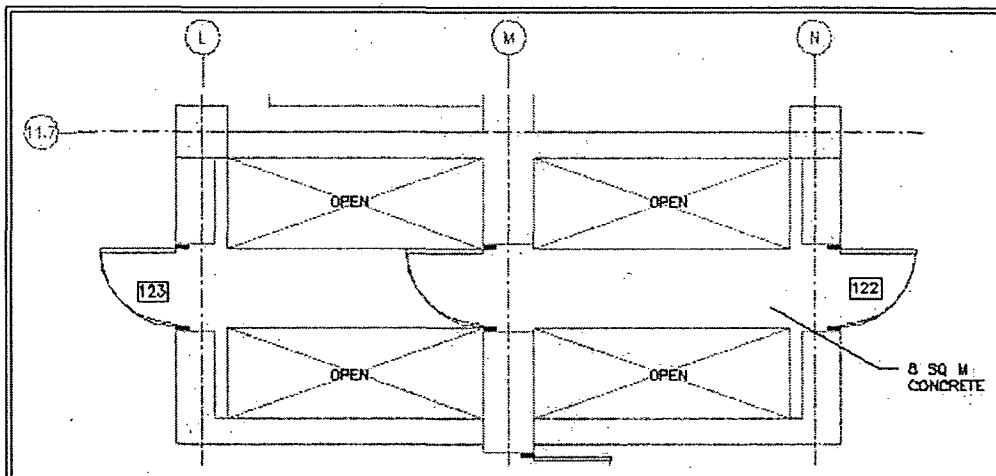
1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

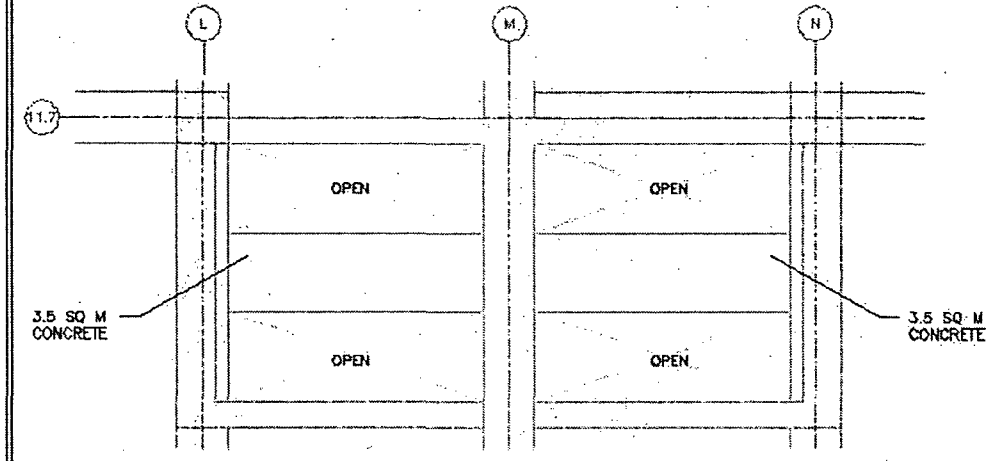
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 121 EAST SWITCH GEAR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 16 of 33 RC RAYMOND



PLAN
EL. 0'-0"



NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

REFLECTED CEILING PLAN
EL. 19'-2"

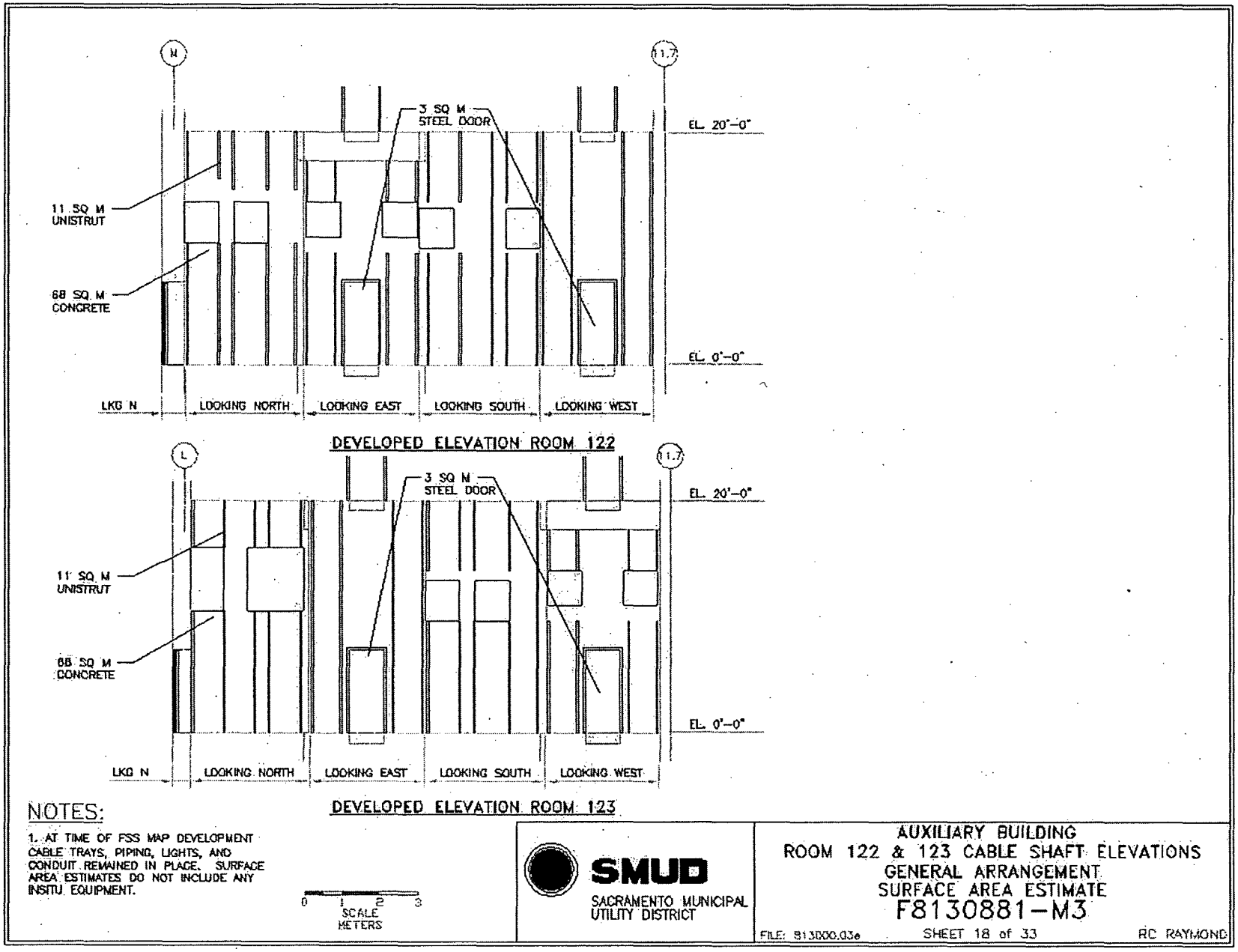
0 .5 1 2
SCALE
METERS

N

SMUD
SACRAMENTO MUNICIPAL
UTILITY DISTRICT

AUXILIARY BUILDING
RM 122 & 123 FLOOR & REFLECT CEILING PLAN
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813030.03e SHEET 17 of 33 RC RAYMOND



NOTES:

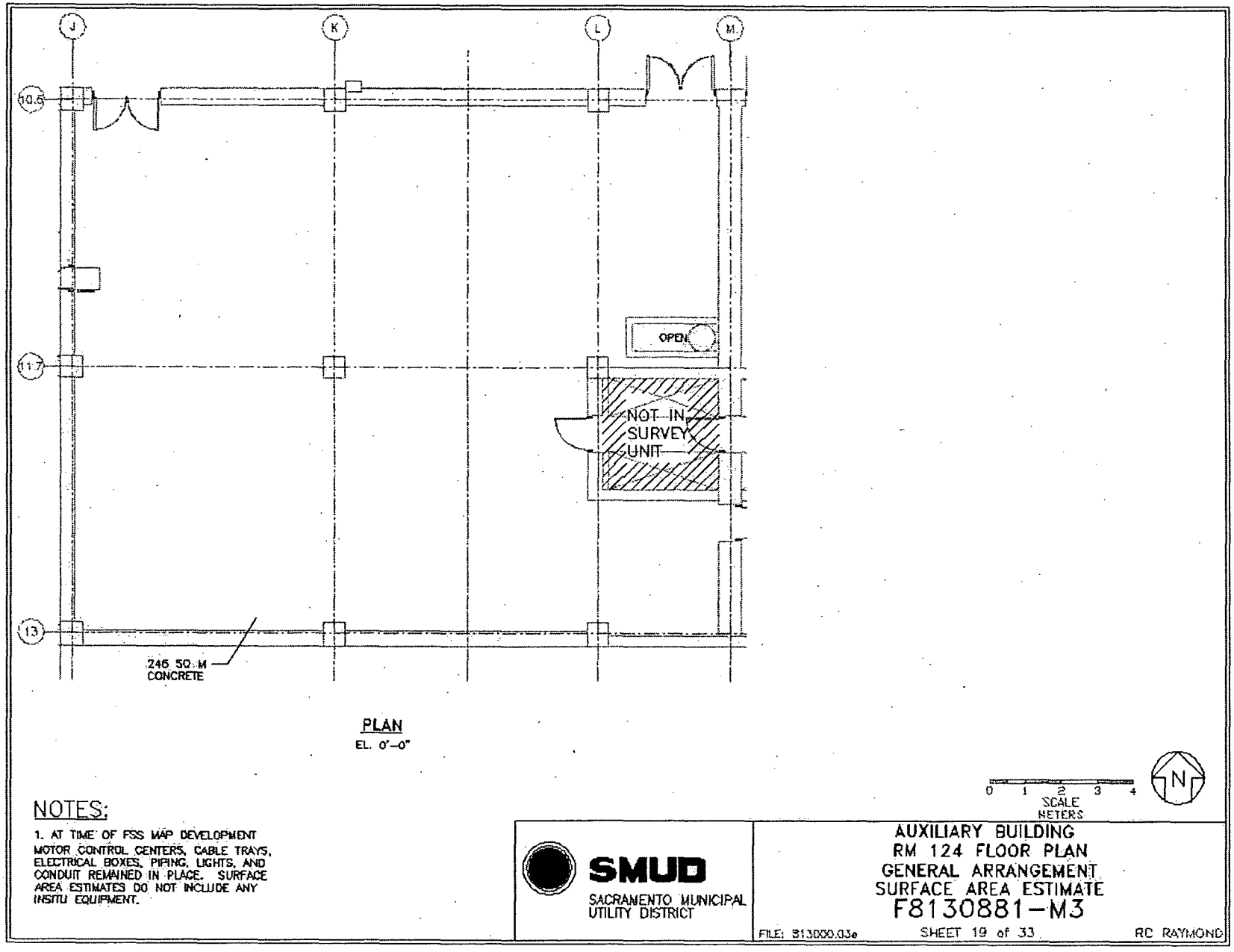
1. AT TIME OF FSS MAP DEVELOPMENT CABLE TRAYS, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE
METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 122 & 123 CABLE SHAFT ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 18 of 33 RC RAYMOND



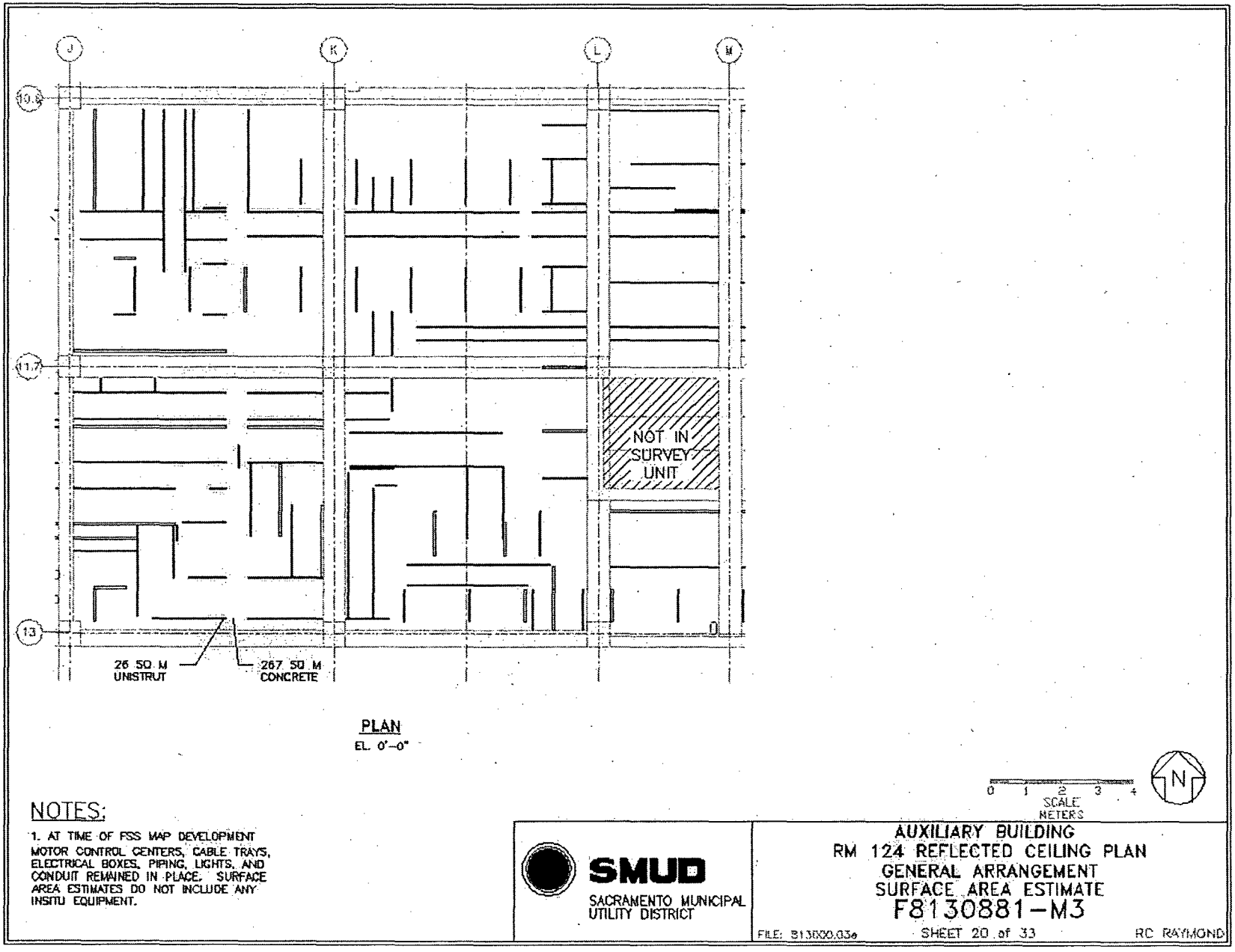
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 124 FLOOR PLAN
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 19 of 33 RC RAYMOND



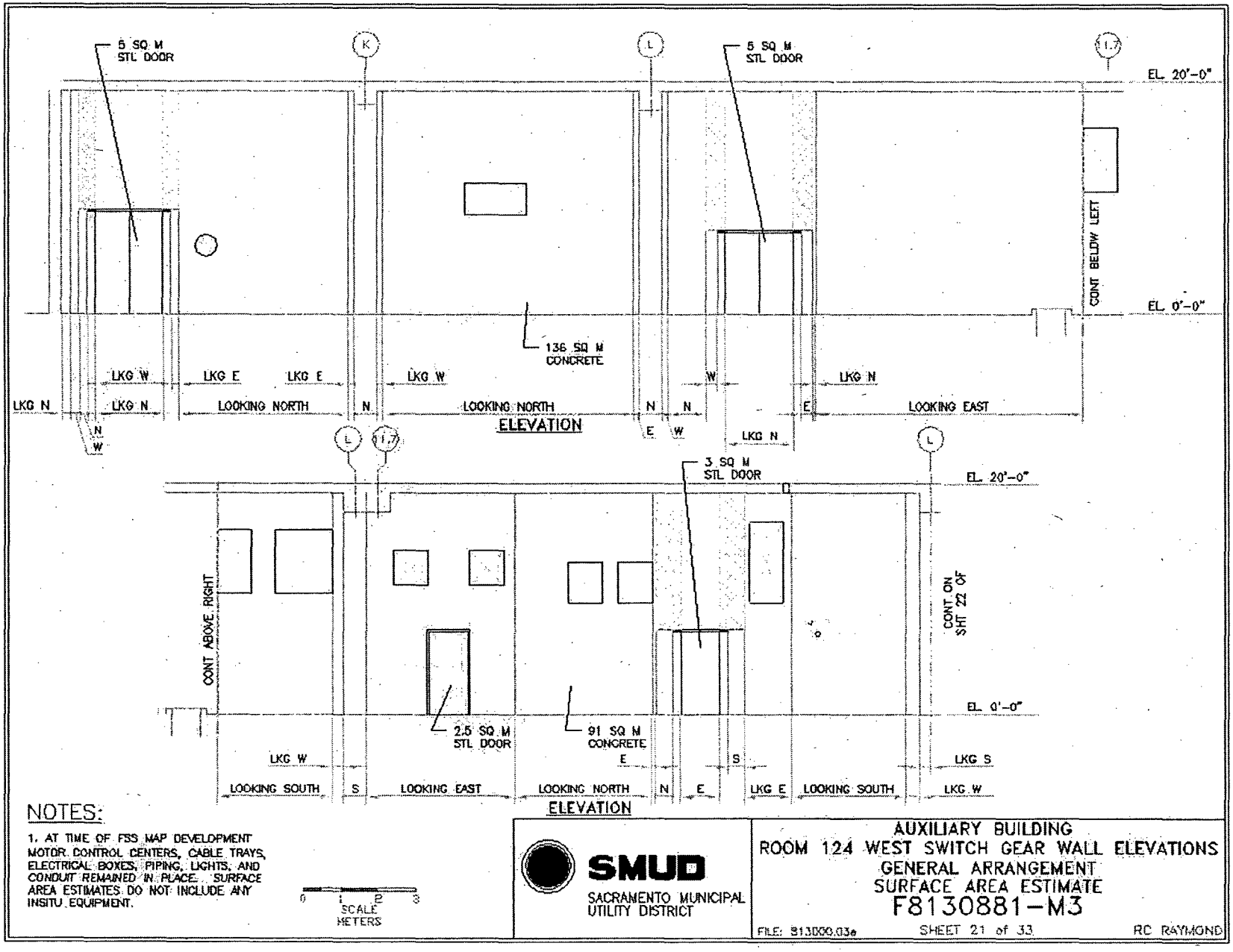
NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 124 REFLECTED CEILING PLAN
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: B13X00.03e SHEET 20 of 33 RC RAYMOND



NOTES:

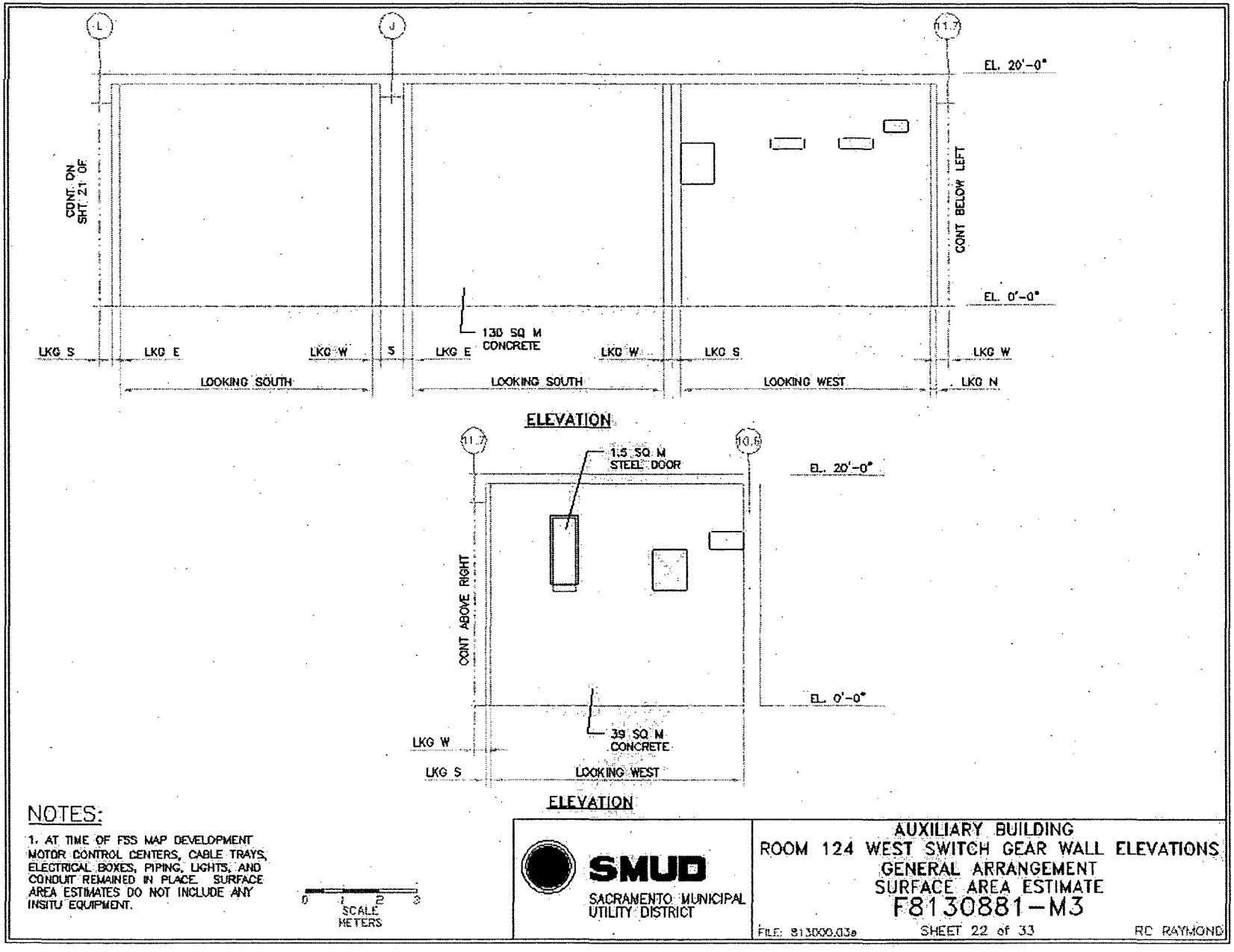
1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE
METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 124 WEST SWITCH GEAR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 21 of 33 RC RAYMOND



NOTES:

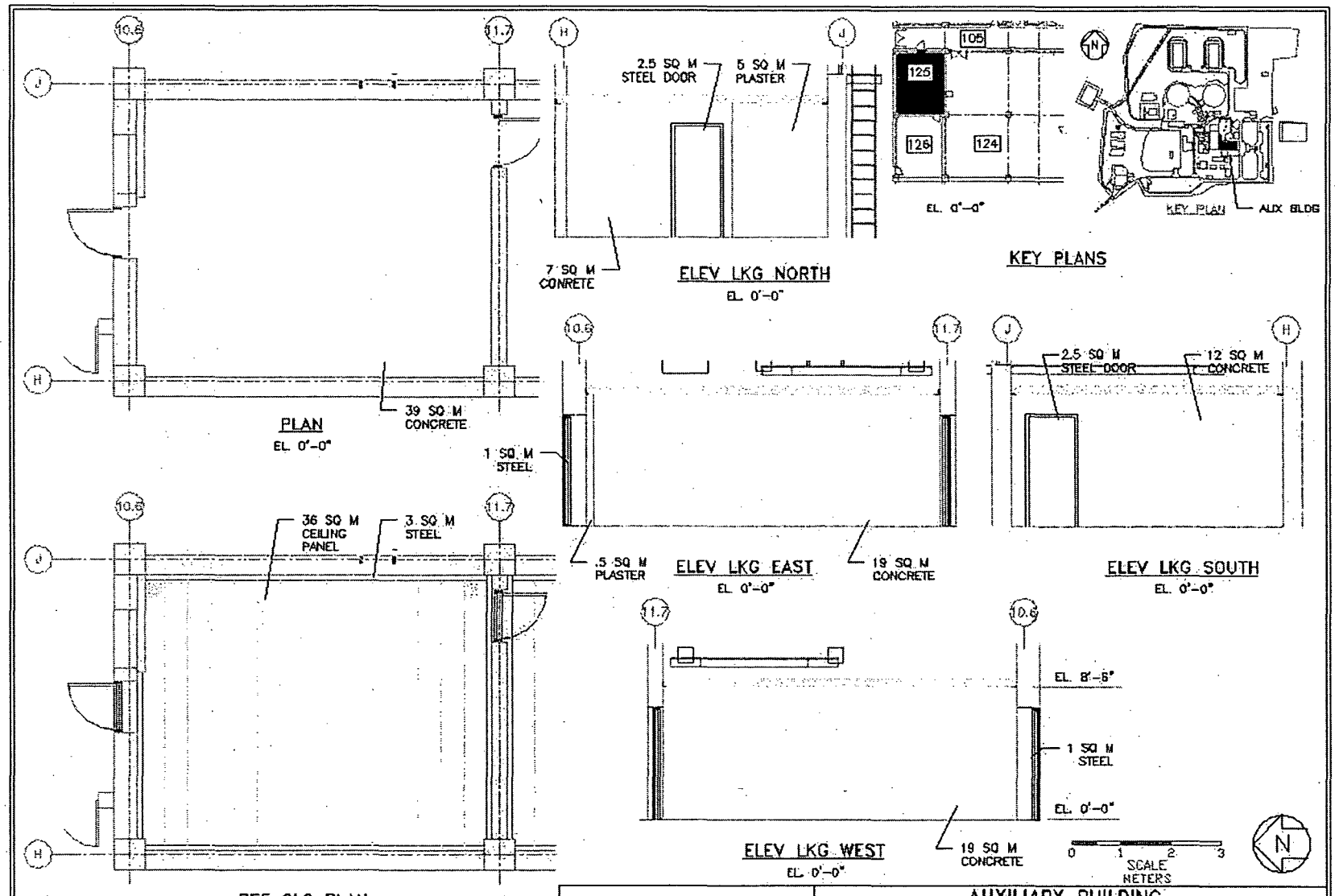
1. AT TIME OF FSS MAP DEVELOPMENT MOTOR CONTROL CENTERS, CABLE TRAYS, ELECTRICAL BOXES, PIPING, LIGHTS, AND CONDUIT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 124 WEST SWITCH GEAR WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 22 of 33 RC RAYMOND



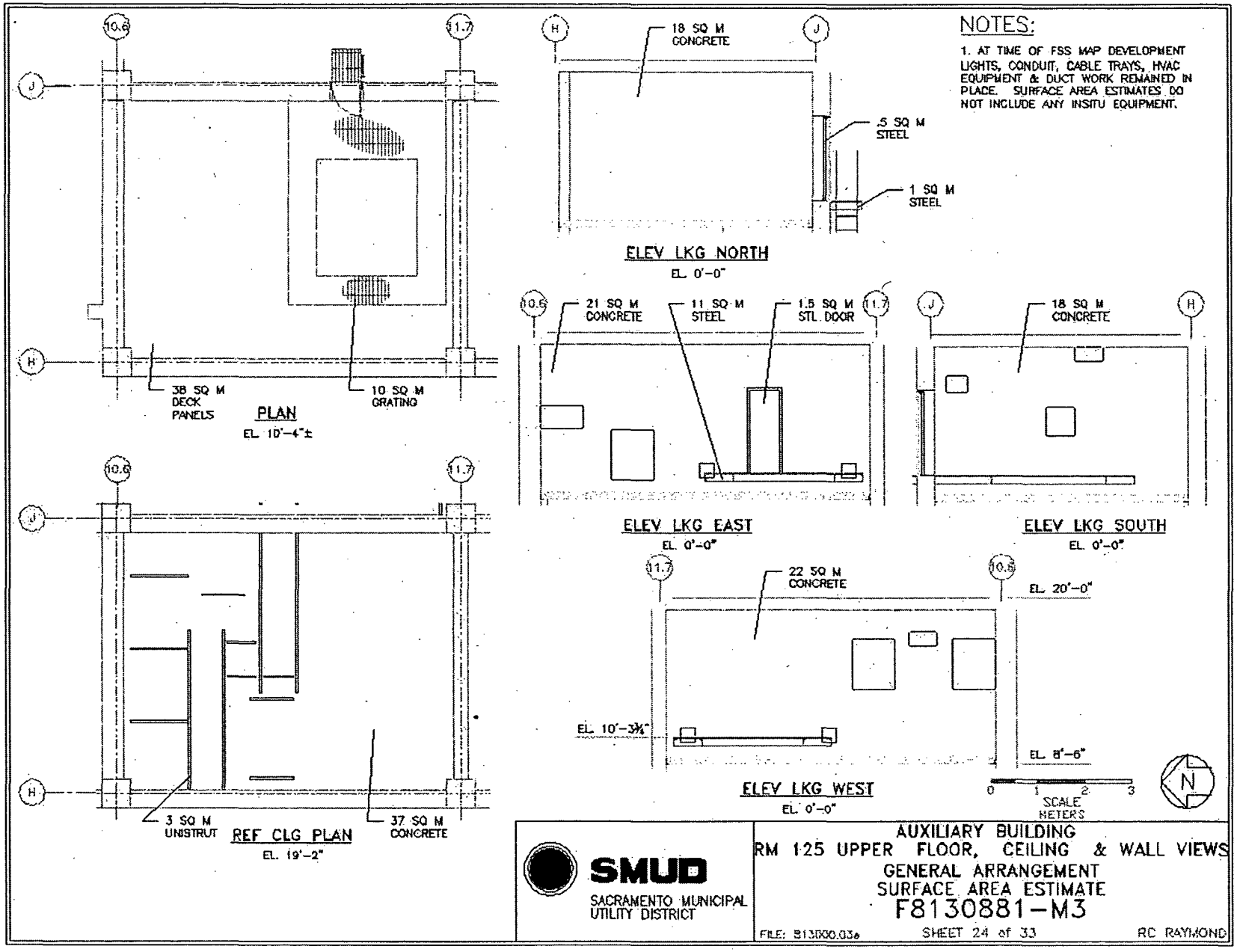
NOTES:

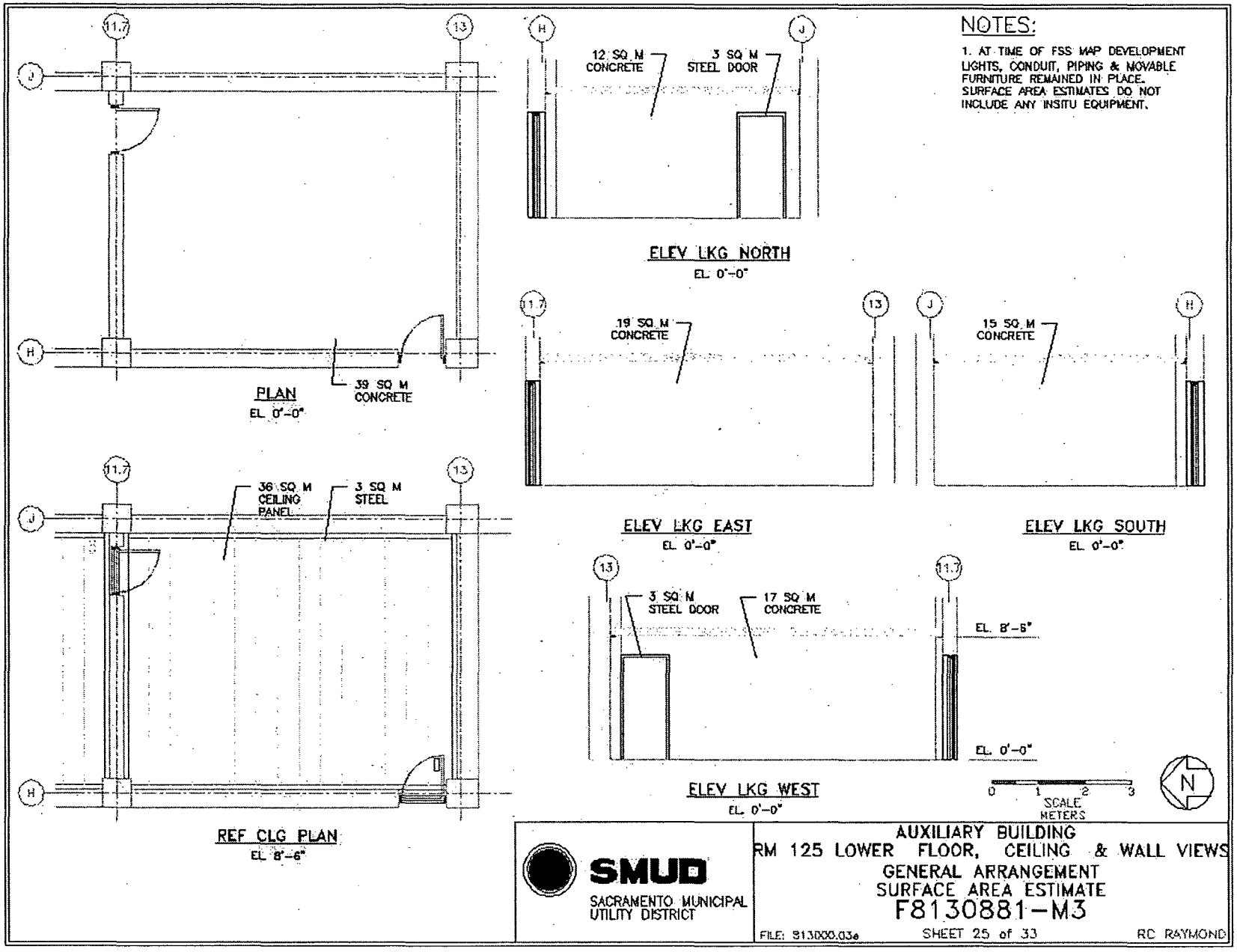
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND REMOVABLE FURNITURE REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

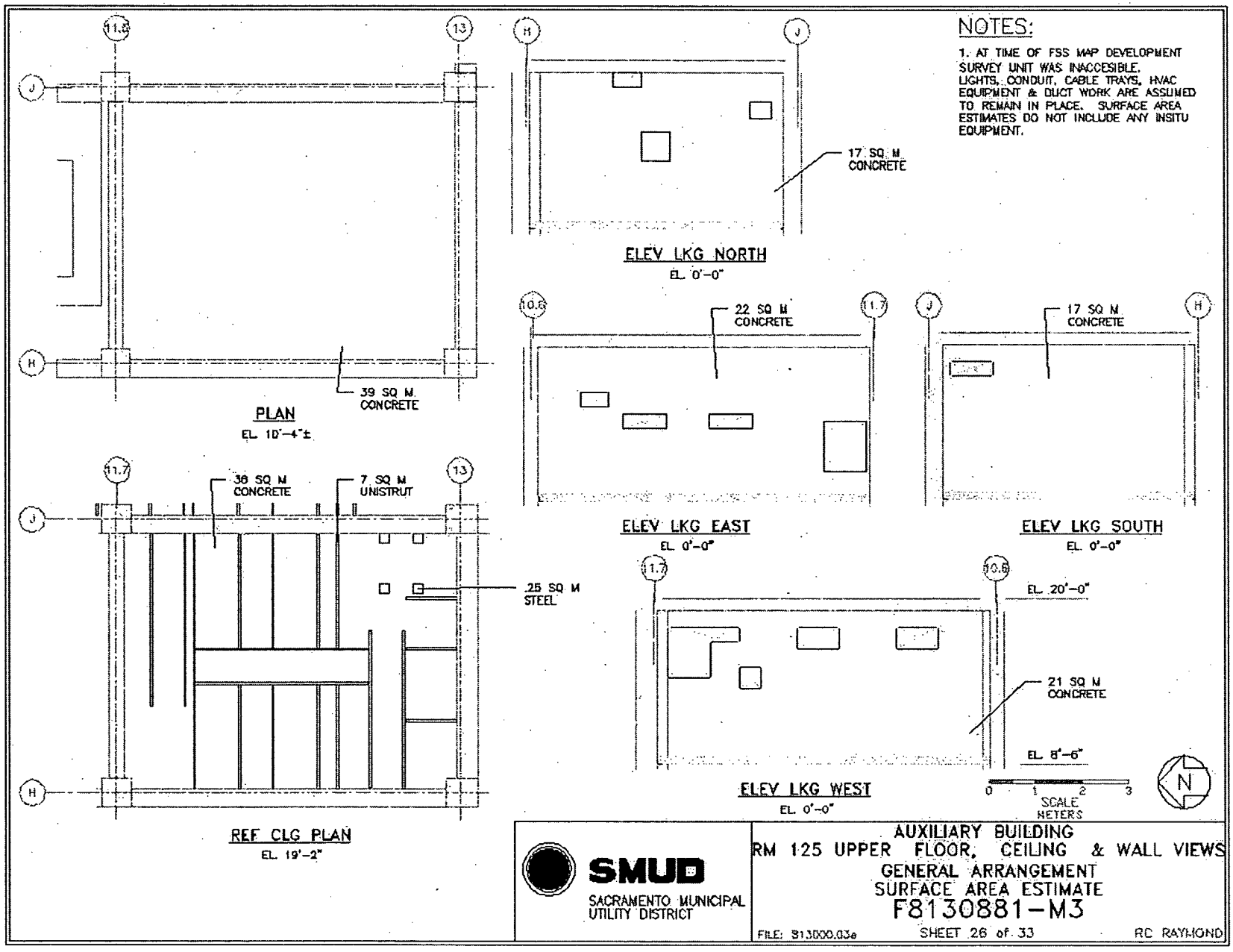
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

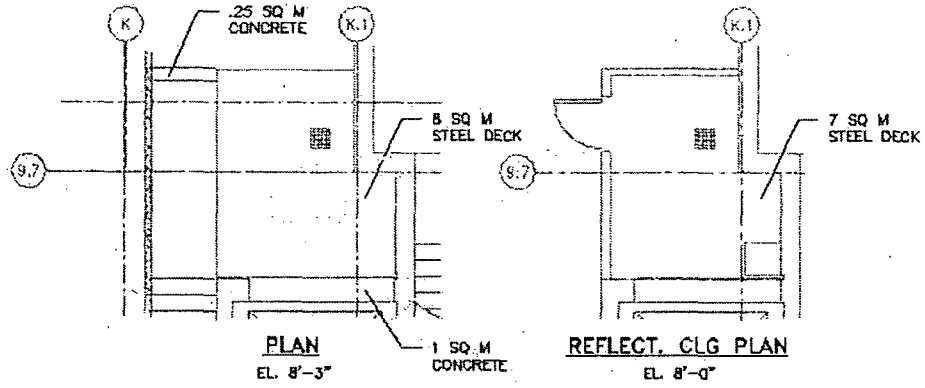
AUXILIARY BUILDING
RM 125 LOWER FLOOR, CEILING & WALL VIEWS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

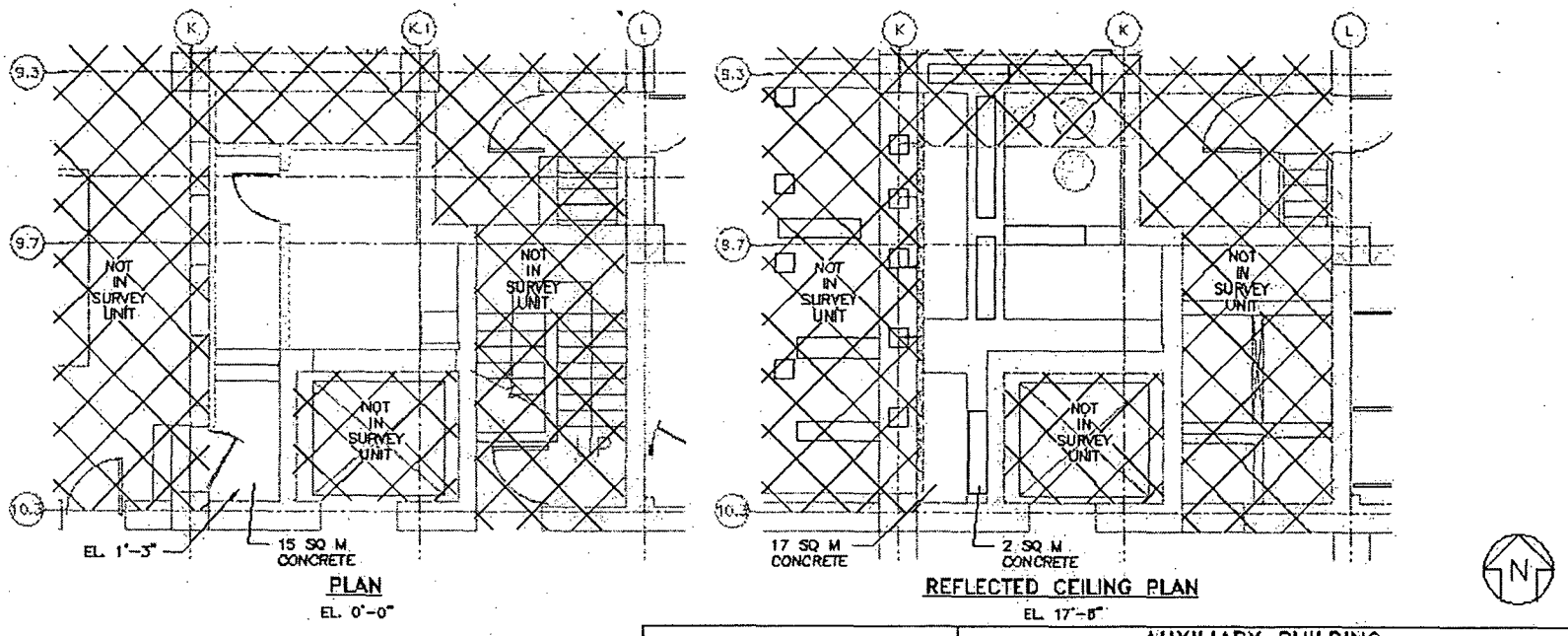
FILE: B13000.03e SHEET 23 of 33 RC RAYMOND


NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT, CABLE TRAYS, HVAC EQUIPMENT & DUCT WORK REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
10.6
11.7
J
H
38 SQ M DECK PANELS
10 SQ M GRATING
PLAN
EL. 10'-4"±
18 SQ M CONCRETE
.5 SQ M STEEL
1 SQ M STEEL
ELEV LKG NORTH
EL. 0'-0"
21 SQ M CONCRETE
11 SQ M STEEL
1.5 SQ M STL. DOOR
ELEV LKG EAST
EL. 0'-0"
18 SQ M CONCRETE
ELEV LKG SOUTH
EL. 0'-0"
22 SQ M CONCRETE
EL. 20'-0"
EL. 10'-3¾"
EL. 8'-6"
ELEV LKG WEST
EL. 0'-0"
0 1 2 3
SCALE METERS
N
3 SQ M UNISTRUT
37 SQ M CONCRETE
REF CLG PLAN
EL. 19'-2"
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
RM 1-25 UPPER FLOOR, CEILING & WALL VIEWS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: B13030.03a
SHEET 24 of 33
RC RAYMOND


11.7
13
J
H
39 SQ M CONCRETE
PLAN
EL 0'-0"
36 SQ M CEILING PANEL
3 SQ M STEEL
REF CLG PLAN
EL 8'-6"
12 SQ M CONCRETE
3 SQ M STEEL DOOR
ELEV LKG NORTH
EL 0'-0"
19 SQ M CONCRETE
15 SQ M CONCRETE
ELEV LKG EAST
EL 0'-0"
ELEV LKG SOUTH
EL 0'-0"
3 SQ M STEEL DOOR
17 SQ M CONCRETE
EL 8'-6"
EL 0'-0"
ELEV LKG WEST
EL 0'-0"
0 1 2 3
SCALE METERS
N
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT, PIPING & MOVABLE FURNITURE REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
RM 125 LOWER FLOOR, CEILING & WALL VIEWS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: 813000.03e
SHEET 25 of 33
RC RAYMOND


NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT SURVEY UNIT WAS INACCESIBLE. LIGHTS, CONDUIT, CABLE TRAYS, HVAC EQUIPMENT & DUCT WORK ARE ASSUMED TO REMAIN IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
PLAN
EL 10'-4"±
39 SQ M CONCRETE
ELEV LKG NORTH
EL 0'-0"
17 SQ M CONCRETE
ELEV LKG EAST
EL 0'-0"
22 SQ M CONCRETE
ELEV LKG SOUTH
EL 0'-0"
17 SQ M CONCRETE
REF CLG PLAN
EL 19'-2"
36 SQ M CONCRETE
7 SQ M UNISTRUT
25 SQ M STEEL
ELEV LKG WEST
EL 0'-0"
EL 20'-0"
21 SQ M CONCRETE
EL 8'-6"
SCALE METERS
N
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
RM 125 UPPER FLOOR, CEILING & WALL VIEWS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: 813000.03e
SHEET 26 of 33
RC RAYMOND





NOTES:

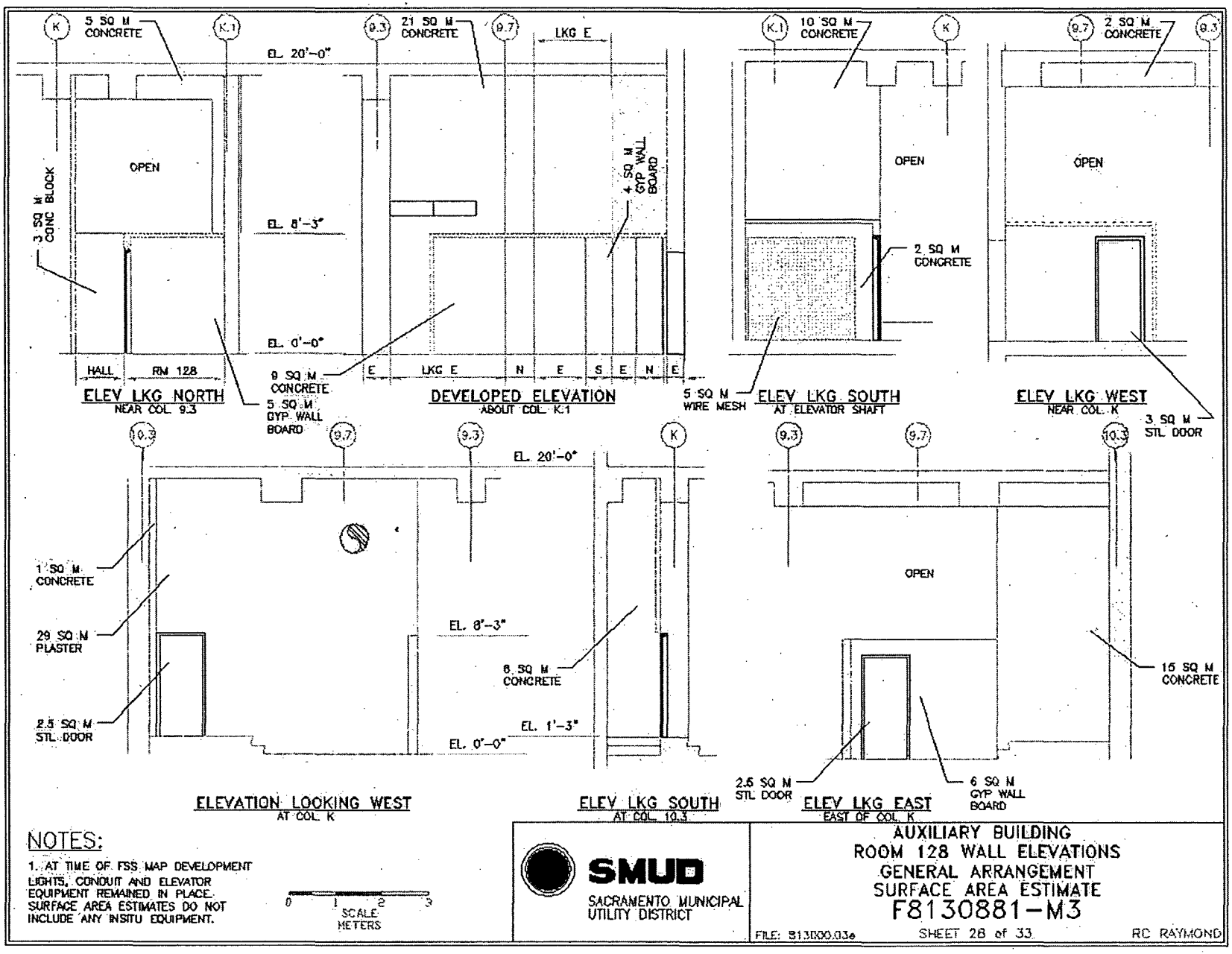
1. AT TIME OF FSS, MAP DEVELOPMENT LIGHTS, CONDUIT AND ELEVATOR EQUIPMENT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

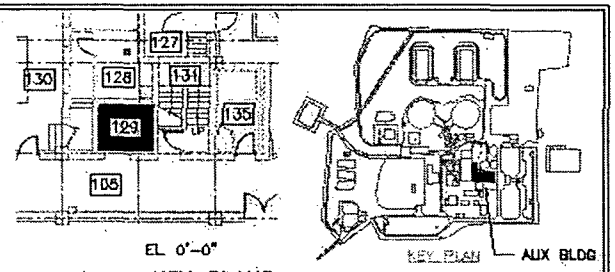
0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

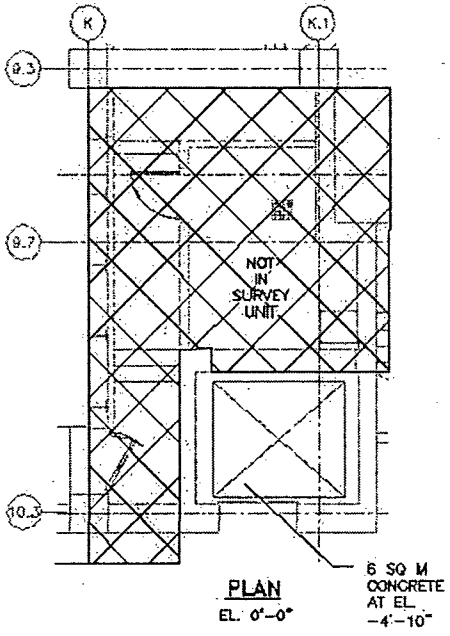
AUXILIARY BUILDING
ROOM 128 FLOOR PLAN
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: B13000.03e SHEET 27 of 33 RC RAYMOND

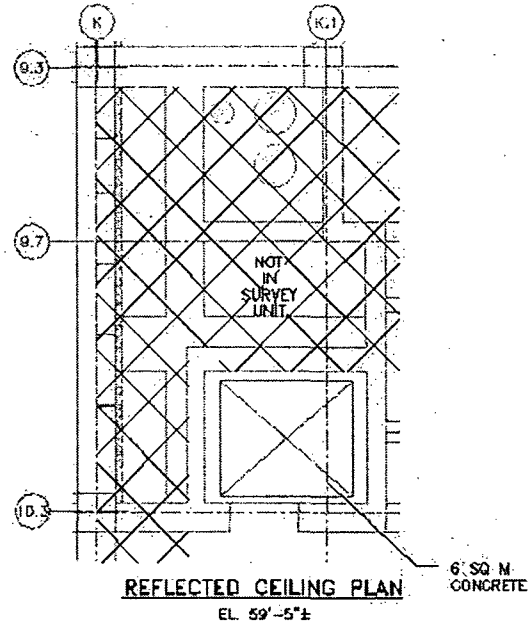

K
5 SQ M CONCRETE
K.1
9.3
21 SQ M CONCRETE
9.7
LKG E
EL. 20'-0"
OPEN
3 SQ M CONC BLOCK
EL. 8'-3"
4 SQ M GYP WALL BOARD
EL. 0'-0"
HALL
RM 128
9 SQ M CONCRETE
5 SQ M GYP WALL BOARD
E
LKG E
N
E
S
E
N
E
ELEV LKG NORTH
NEAR COL. 9.3
DEVELOPED ELEVATION
ABOUT COL. K.1
10 SQ M CONCRETE
2 SQ M CONCRETE
5 SQ M WIRE MESH
ELEV LKG SOUTH
AT ELEVATOR SHAFT
ELEV LKG WEST
NEAR COL. K
3 SQ M STL DOOR
10.3
1 SQ M CONCRETE
29 SQ M PLASTER
2.5 SQ M STL DOOR
6 SQ M CONCRETE
15 SQ M CONCRETE
2.5 SQ M STL DOOR
6 SQ M GYP WALL BOARD
ELEVATION LOOKING WEST
AT COL. K
ELEV LKG SOUTH
AT COL. 10.3
ELEV LKG EAST
EAST OF COL. K
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND ELEVATOR EQUIPMENT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
0 1 2 3
SCALE METERS
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
AUXILIARY BUILDING
ROOM 128 WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
FILE: B13000.03e
SHEET 28 of 33
RC RAYMOND



KEY PLANS



PLAN
EL. 0'-0"



REFLECTED CEILING PLAN
EL. 59'-5"±

NOTES:

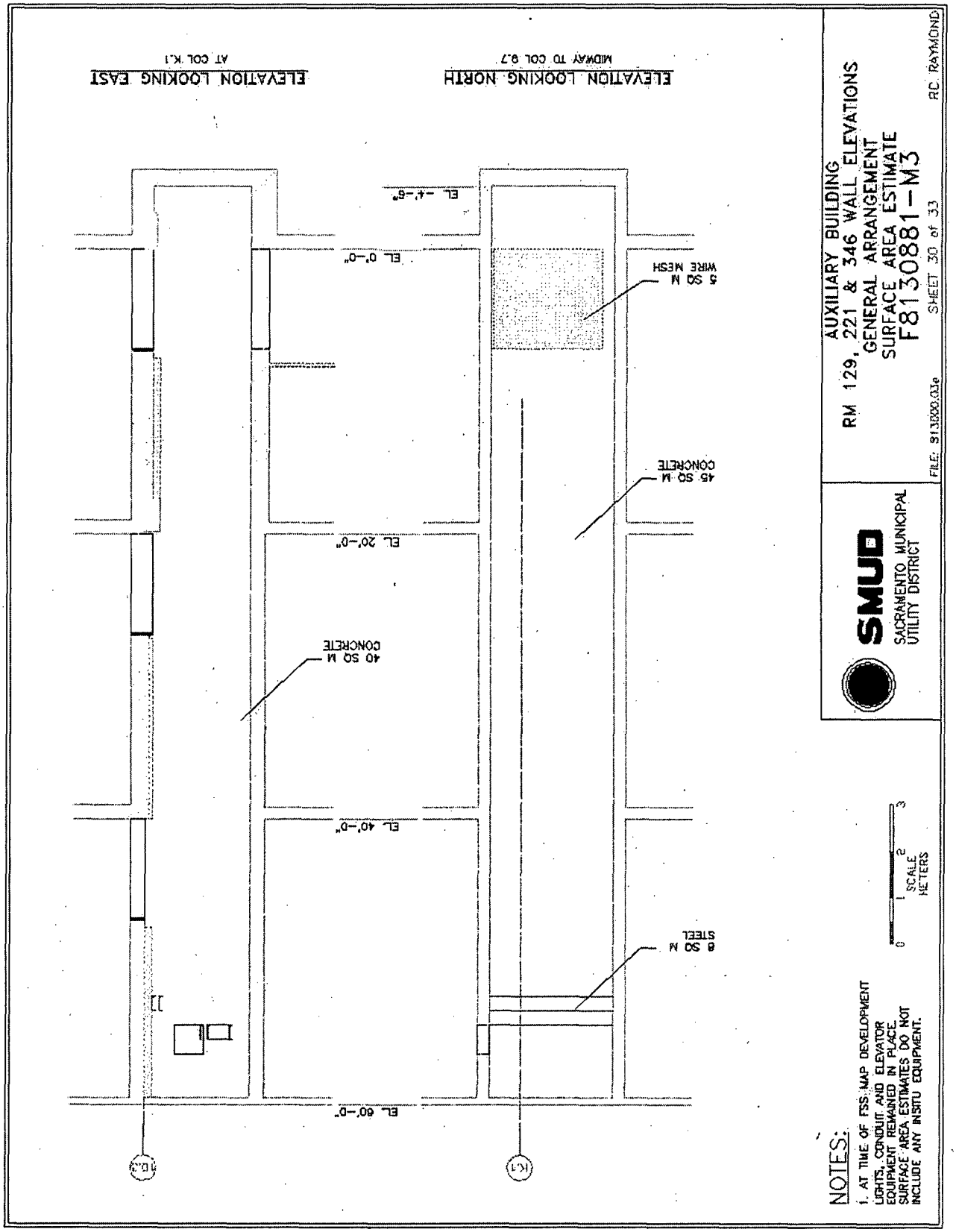
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND ELEVATOR EQUIPMENT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
RM 129, 221 & 346 FLR & REFLECT CLG PLANS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M1

FILE: 813080.03e SHEET 29 of 33 RC RAYMOND


ELEVATION LOOKING NORTH
MIDWAY TO COL 9.7
ELEVATION LOOKING EAST
AT COL K.1
EL -4'-6"
EL 0'-0"
EL 20'-0"
EL 40'-0"
EL 60'-0"
5 SQ M WIRE MESH
45 SQ M CONCRETE
40 SQ M CONCRETE
8 SQ M STEEL
AUXILIARY BUILDING
RM 129, 221 & 346 WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3
SHEET 30 of 33
RC RAYMOND
FILE: 813000.A3e
SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
SCALE METERS
NOTES:
1. AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND ELEVATOR EQUIPMENT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

NOTES:

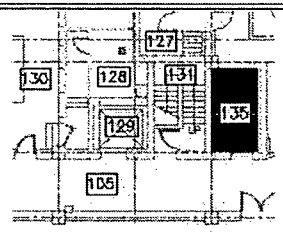
1: AT TIME OF FSS MAP DEVELOPMENT LIGHTS, CONDUIT AND ELEVATOR EQUIPMENT REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.

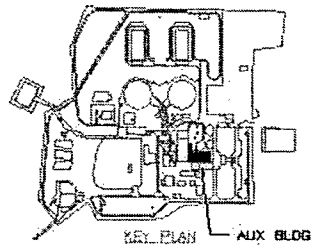
0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

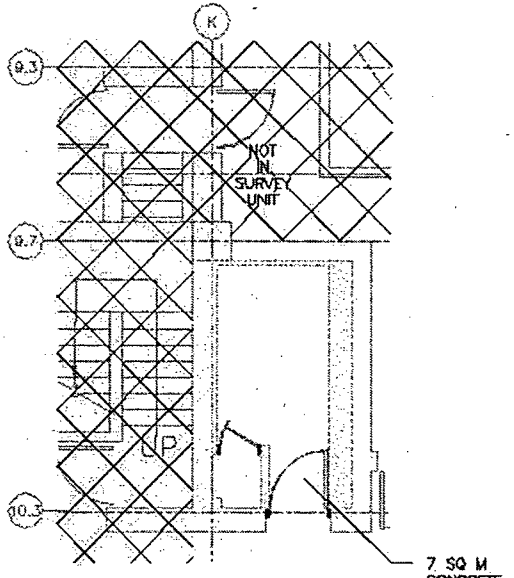
AUXILIARY BUILDING
RM 129, 221 & 346 WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 31 of 33 RC RAYMOND

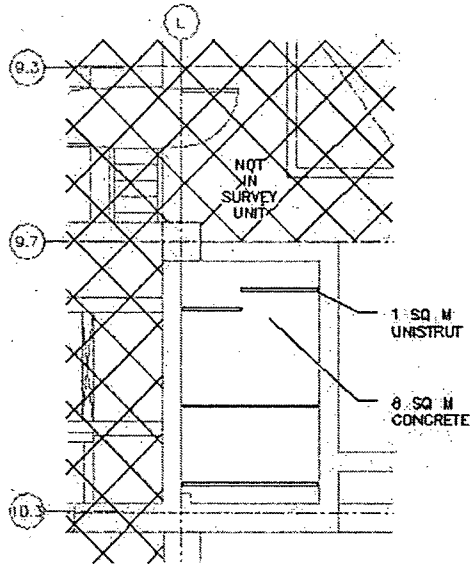




KEY PLANS



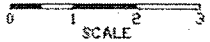
PLAN
EL 0'-0"



REFLECTED CEILING PLAN
EL 59'-5"±

NOTES:

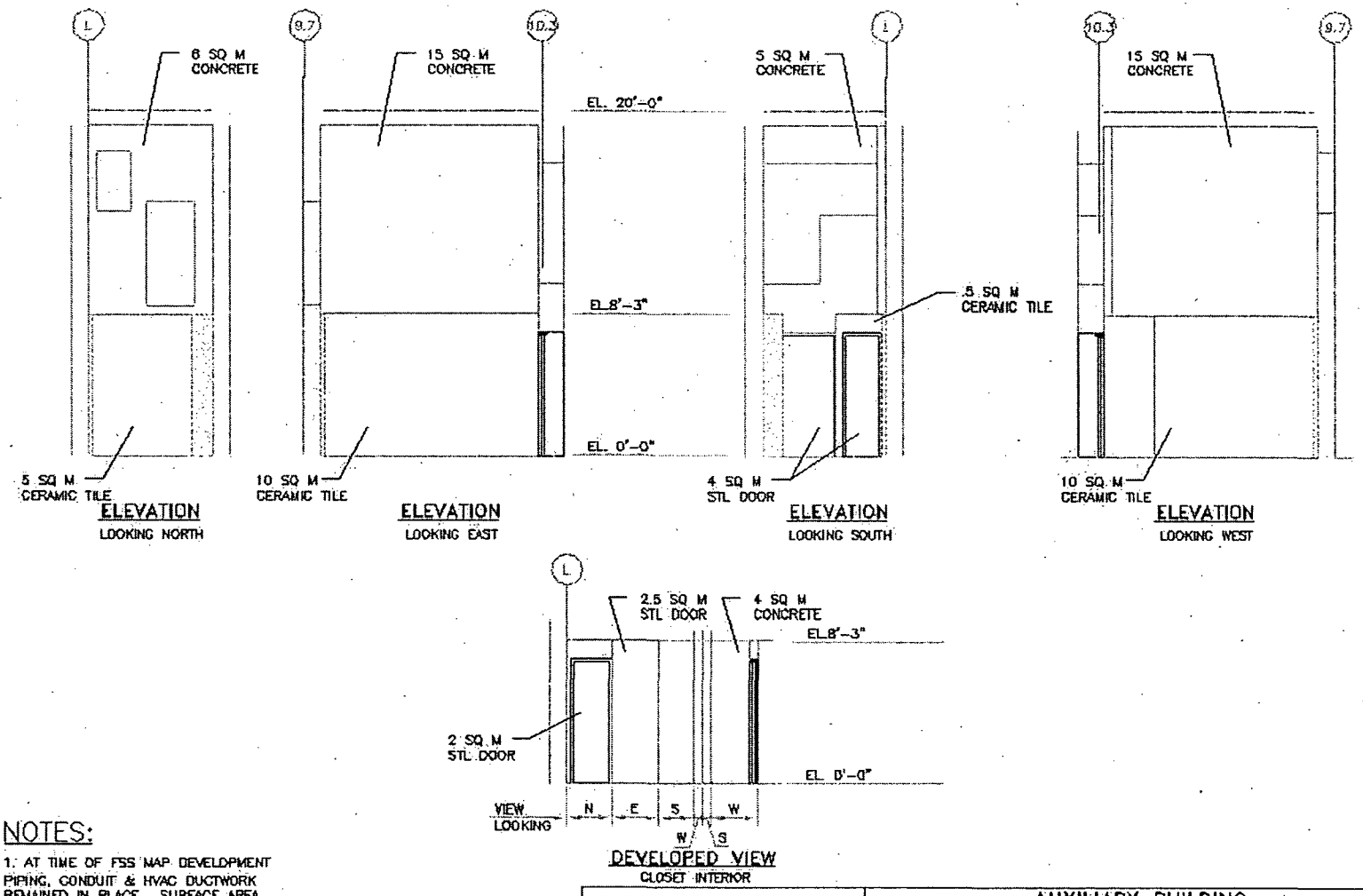
1. AT TIME OF FSS MAP DEVELOPMENT PIPING, CONDUIT & HVAC DUCTWORK REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
2. DROP CEILING AT 8'-0" PREVIOUSLY REMOVED.



SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 135 FLOOR & REFLECT CLG PLANS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 32 of 33 RC RAYMOND



NOTES:

1. AT TIME OF FSS MAP DEVELOPMENT PIPING, CONDUIT & HVAC DUCTWORK REMAINED IN PLACE. SURFACE AREA ESTIMATES DO NOT INCLUDE ANY INSITU EQUIPMENT.
2. DROP CEILING AT 8'-0" PREVIOUSLY REMOVED.

0 1 2 3
SCALE METERS

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

AUXILIARY BUILDING
ROOM 135 WALL ELEVATIONS
GENERAL ARRANGEMENT
SURFACE AREA ESTIMATE
F8130881-M3

FILE: 813000.03e SHEET 33 of 33 RC RAYMOND

Attachment 2

Instrumentation

April 2, 2008

Survey Unit F8130881

Table 2-1. Survey Unit Instrumentation

Instrument Model; Serial No.	Detector Model; Serial No.	MDC Static (dpm/100 cm²)	MDC Scan (dpm/100 cm²)
M2350; 193715	43-68B; 148630	433	1033
M2350; 180738	43-68/5B; 148942	433	1033
M2350; 142499	43-37; 148502	N/A	616
ISOCS	1983920	N/A	1210 (Cs^{137})
ISOCS	1983920	N/A	1190 (Co^{60})
Tennelec; 0401171	N/A	5.9 dpm α, 11.7 dpm β	N/A

Table 2-2. Investigation Criteria and DCGL

Parameter	Value (dpm/100 cm²)
Investigation Criteria - Direct	21500
Investigation Criteria – Scan	43000
$DCGL_W$	43000
$DCGL_{EMC}$	N/A

Attachment 3

Investigation

April 2, 2008

Survey Unit F8130881

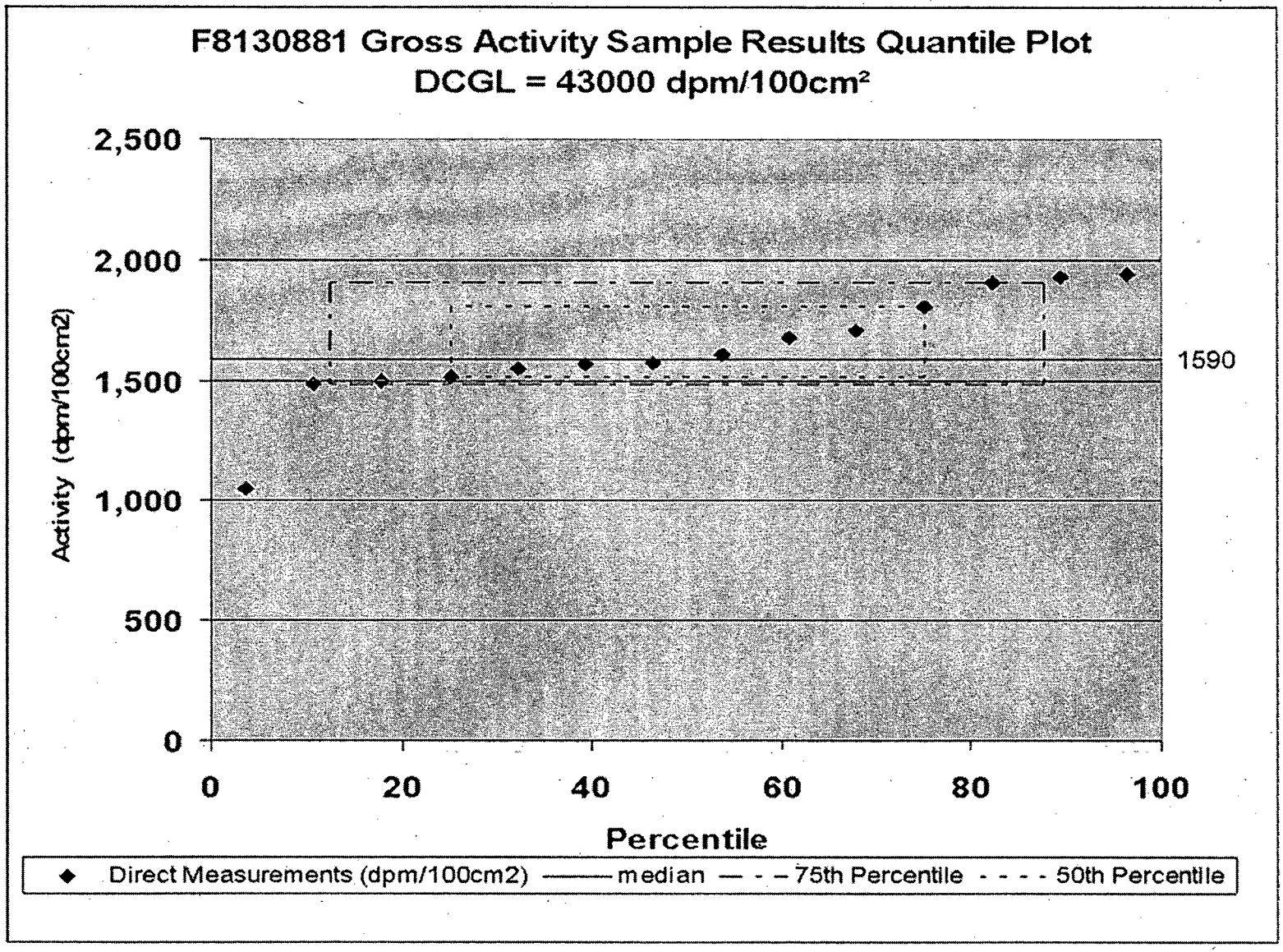
(none required)

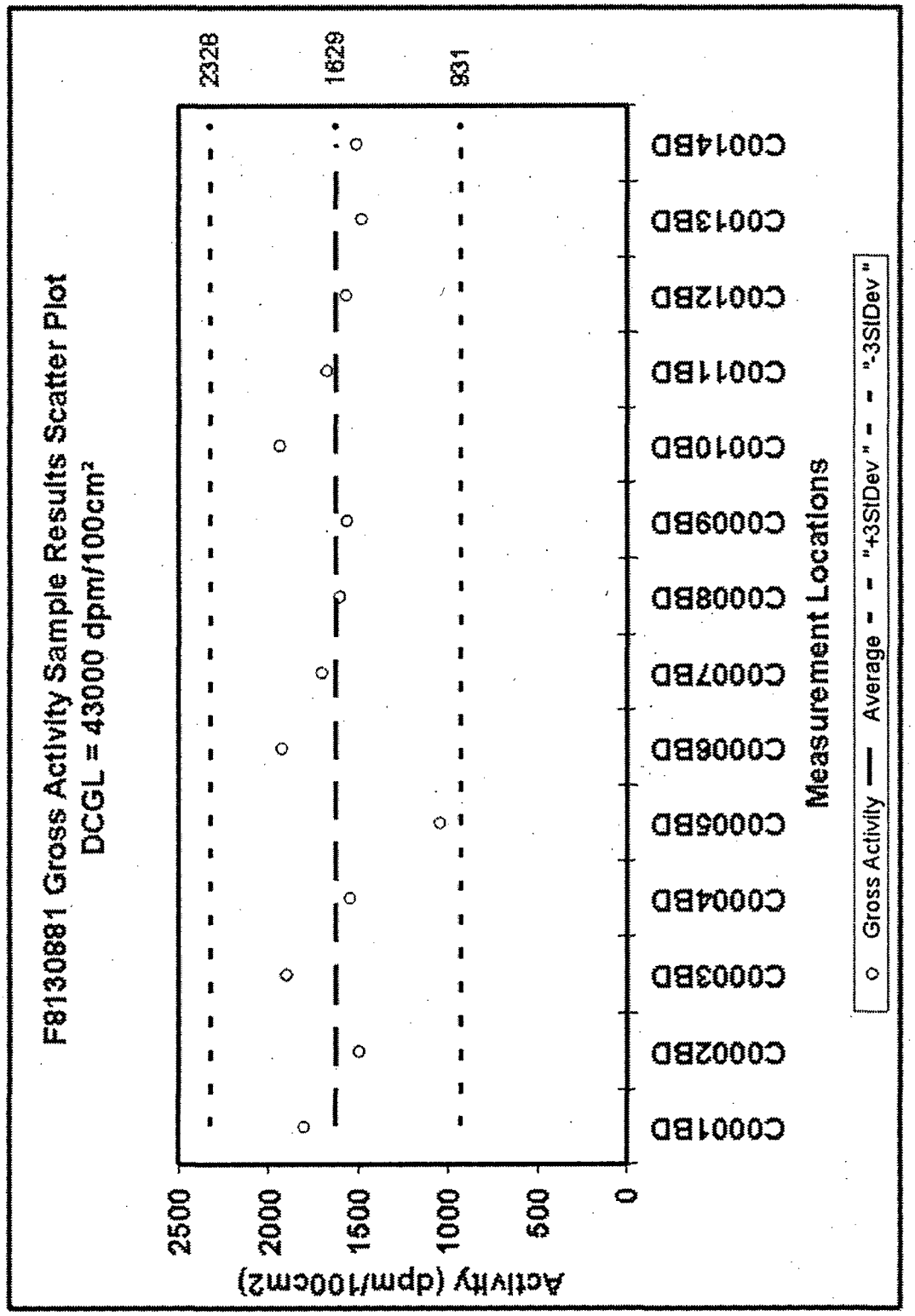
Attachment 4

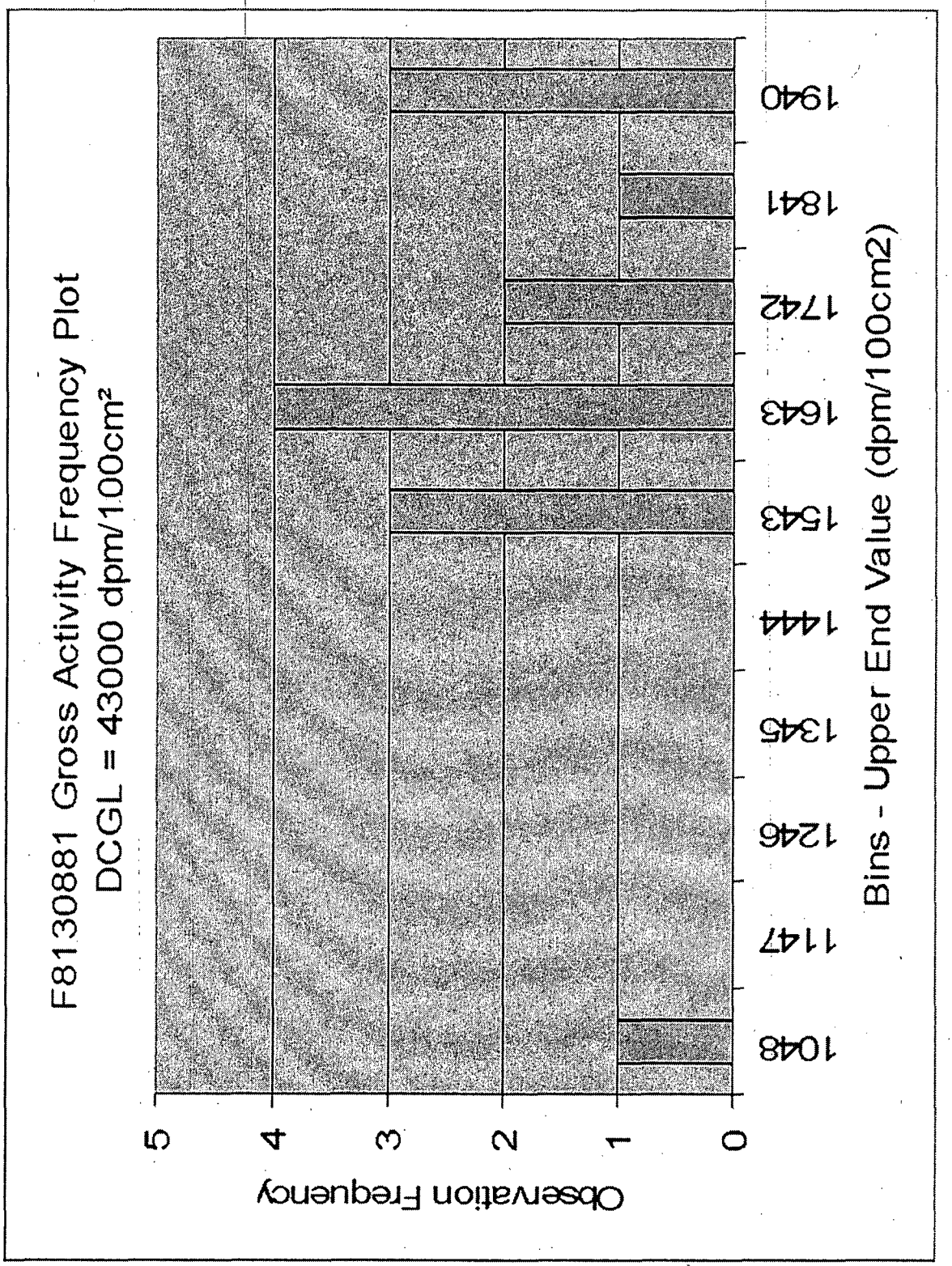
Data Assessment

April 2, 2008

Survey Unit F8130881


F8130881 Gross Activity Sample Results Quantile Plot
DCGL = 43000 dpm/100cm²
Activity (dpm/100cm2)
2,500
2,000
1,500
1,000
500
0
1590
0
20
40
60
80
100
Percentile
Direct Measurements (dpm/100cm2)
median
75th Percentile
50th Percentile


F8130881 Gross Activity Sample Results Scatter Plot
DCGL = 43000 dpm/100cm²
2328
1629
931
2500
2000
1500
1000
500
0
Activity (dpm/100cm2)
C00014BD
C00013BD
C00012BD
C00011BD
C00010BD
C00009BD
C00008BD
C00007BD
C00006BD
C00005BD
C00004BD
C00003BD
C00002BD
C00001BD
Measurement Locations
Gross Activity
Average
"+3StDev"
"-3StDev"


F8130881 Gross Activity Frequency Plot
DCGL = 43000 dpm/100cm²
Observation Frequency
0
1
2
3
4
5
1048
1147
1246
1345
1444
1543
1643
1742
1841
1940
Bins - Upper End Value (dpm/100cm2)