This document and the design it covers are the property of PARSONS. They are loaned only with the borrower's expressed written agreement that they will not be reproduced, copied, loaned, exhibited, or used in any other way, except by written consent from PARSONS to the borrower.

DATE: 08/22:96 TIME: 08:14:14
DESIGN FILE: I:\ligo\site\ee\wae203.d3z

BUILDING NORTH
TRUE NORTH

BEAM TUBE
3" 2" 3"
42"
LEFT TO RIGHT
3/4"C-TURBO CART
3/4"C-GEN. ION PUMP
3/4"C-BAKEOUT CONTROL
1 1/2"C-BAKEOUT CLEAN ROOM

3/4"C-GATE VALVE
42"
BEAM TUBE

DETAIL 1 REF WA-E-203
N.T.S.

DETAIL 2 REF WA-E-203
N.T.S.

3'-0" X 3'-0" X 4'-0"D COMMUNICATION PULL BOX
4" CONDUIT
36'-10"
33'-5"
15'REF
11'-9" 9'-10" 8'-9" 8'-3" 9'-10" 11'-9"
BEAM TUBE ENCLOSURE
BEAM TUBE
SEE NOTE 6
* THESE CONDUITS ARE ONLY REQUIRED AT THE MID STATIONS.
11'-6"
18'-6"
7'-0"
5'-4"
7'-3"
5'-0"
4'
7'-0"
(TYP) 5 WA-E-409

UNCAP EXISTING CONDUITS AND EXTEND TO STUB-UP LOCATION AS INDICATED.
A WA-E-203

ROUGH GRADE
BACKFILL
FUTURE FINISH GRADE
1#1/0 BC GROUND
2"C-COMMUNICATIONS
TBD
2'-0"
2"C-FMCS
2"C-3/C#3/0 W/1#4 GND CHILLER
6"(MIN)
2"C-3/C#8 W/1#10 GND AIR COMPRESSOR
3"(TYP)
3"(MIN)
4"C-4#500KCMIL & 1#2 GND XFMR SECONDARY FEEDERS
2"C-3/C#8 W/1#10 GND & 5/C#12 CONTROL CHILLED WATER PUMP
3"(TYP)
12"
6"(TYP)

DUCT BANK SECTION A REF WA-E-203
NTS

ROUGH GRADE
BACKFILL
FUTURE FINISH GRADE
1#1/0 BC GROUND
TBD
2'-0"
4"C-4#500KCMIL & 1#2 GND XFMR SECONDARY FEEDERS
6"
3"(TYP)
3"(MIN)
6"

DUCT BANK SECTION B REF WA-E-203
NTS

2
1'-9" 1'-11"
2" 2" 3" 3" 3" 3" 3" 3" 3" 3" 3"
9"
B
2" CONDUIT (TYP FOR 6)
LEFT TO RIGHT
3/4"C-TURBO CART
3/4"C-GEN. ION PUMP
3/4"C-BAKEOUT CONTROL
3/4"C-TURBO CART
3/4"C-BAKEOUT CONTROL
LEFT TO RIGHT
3/4"C-GATE VALVE
1 1/2"C-BAKEOUT CLEAN ROOM
3/4"C-GATE VALVE
1 1/2"C-BAKEOUT CLEAN ROOM

DETAIL 9 REF WA-E-203
N.T.S.

4
1'-1" 1'-1"
2" 2" 2 1/2" 2"
3"
B
LEFT TO RIGHT
3/4"C-BAKEOUT CONTROL
3/4"C-GEN. ION PUMP
3/4"C-TURBO CART
LEFT TO RIGHT
1 1/2"C-BAKEOUT CLEAN ROOM
3/4"C-GATE VALVE
3/4"C-GATE VALVE

DETAIL 10 REF WA-E-203
N.T.S.

GENERAL NOTES:

1. FOR STANDARD SYMBOLS, ABBREVIATIONS AND ACRONYMS SEE DWG. WA-E-001.
2. FOR ELECTRICAL SYMBOLS SEE DWG. WA-E-002.
3. FOR STANDARD INSTALLATION DETAILS SEE DWG. WA-E-405 THRU WA-E-407.
4. FOR CABLE TYPE DESCRIPTION SEE DWG. WA-E-007.
5. ALL RUNS ARE SHOWN DIAGRAMMATICALLY ONLY, CONTRACTOR SHALL COORDINATE INSTALLATION WITH OTHER DISCIPLINES.
6. COORDINATES OF CDS POWER CONDUIT STUB-UPS SHALL BE COORDINATED WITH THE VACUUM EQUIPMENT VENDOR.

NOTES:

1. FOR NODE NUMBERING SCHEDULE SEE DWG. WA-E-008.

A WA-E-203
B WA-E-203
EXTEND CONDUITS FROM PULLBOX TO STUB-UP LOCATION AS INDICATED.
INSTALL (2)-4#500 KCMIL & 1#2 GND CABLES IN (2) 4" C PROVIDED BY OTHERS
3#2(TRIPLEXED) & 1#6 GND (DIRECT BURIAL) CONT. TO UTILITY SWGR. SEE DWG. WA-E-005(BY OTHERS)
FOR THIS COORDINATE LOCATION SEE CIVIL DRAWING BT-C-015
2#C-3/C#8 W/1#10 GND
2#C-3/C#2/0 & 1#4 GND
XFMR TR-01
WP-01
WP-02
AC-01
AC-02
CH-01
CH-02
3#2(TRIPLEXED) & 1#6 GND (DIRECT BURIAL) CONT. TO END STATION SEE DWG. WA-E-005(BY OTHERS)
LEFT TO RIGHT
2#C-3/C#8 W/1#10 GND AIR COMPRESSORS
2#C- FMCS
2-2"C-COMMUNICATIONS
2#C-3/C#8 W/1#10 GND
2#C-3/C#3/0 W/1#4 GND

BEAM TUBE
42"
3/4"C-TURBO CART

DETAIL 3 REF WA-E-203
N.T.S.

BEAM TUBE
3" 2" 2"
42"
LEFT TO RIGHT
1 1/2"C-BAKEOUT CLEAN ROOM
3/4"C-BAKEOUT CONTROL
3/4"C-GEN. ION PUMP
3/4"C-TURBO CART

DETAIL 5 REF WA-E-203
N.T.S.

BEAM TUBE
3"
42"
LEFT TO RIGHT
1 1/2"C-BAKEOUT CLEAN ROOM
3/4"C-BAKEOUT CONTROL

DETAIL 4 REF WA-E-203
N.T.S.

TOP TO BOTTOM
2"C-VD INTERFACE
2"C-VD INTERFACE
3/4"C-GATE VALVE
4"
2"
42"
BEAM TUBE

DETAIL 6 REF WA-E-203
N.T.S.

2
4 1/2" 5 1/2" 2"
3" 3" 3"
4'-6"
D
6'-0"
9'-10"

DETAIL 7 REF WA-E-203
N.T.S.

2
C
2"C COMMUNICATIONS
1'-6"
4"
4"

DETAIL 8 REF WA-E-203
N.T.S.

A
18'-10"
6" 6" 6"
2" CONDUIT (TYP FOR 4) CDS RACK POWER

DETAIL 11 REF WA-E-203
N.T.S.

1
2" CONDUIT (TYP FOR 2) CDS/VE INTERFACE RACK POWER
6"
7'-3"
B
5'-4"

DETAIL 12 REF WA-E-203
N.T.S.

CHILLER YARD
CHILLER YARD

0 8 16 24 32FT
1/8" = 1'-0"

END STATION "B"
ARM 1
MID STATION "B"
BUILDING NORTH
TRUE NORTH
LVEA
ARM 2
OSB
MID STATION "A"
END STATION "A"
MAINT BLDG
CHILLER YARD
CHILLER YARD

KEY PLAN

REFERENCES		REVISIONS							
DRAWING NO.	DESCRIPTION	NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION
		1	8-22-96	MM				REVISED PER LIGO-L960622-02-D

ISSUED FOR CONSTRUCTION		
DRAWN	M. M.	6-25-96
CHECKED		
ENGINEER		
PROJ		

PARSONS
100 WEST WALNUT STREET
PASADENA, CALIFORNIA

LIGO
CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LASER INTERFEROMETER GRAVITATIONAL-WAVE OBSERVATORY
SITE NO. 1 - HANFORD, WASHINGTON

TITLE
ELECTRICAL
MID & END A STATIONS
UNDERGROUND
PLAN

SCALE	CONTRACT NUMBER	PROJECT NUMBER
AS NOTED	PP150969	8094

SHEET NUMBER: WA-E-203
REVISIONS: 1

LIGO-D960413-01-D

LIGOWAF3.BDR