



ADDENDUM NO. 2
Penguin Life Support System Upgrade
REQUEST FOR BIDS #11-1717
August 26, 2010

Acknowledge receipt of this addendum by inserting its number in the Proposal Form. The contents of this addendum are to be covered in the bids and in closing the Contract will become a part thereof. Changes noted herein affect only the specific words in paragraphs mentioned and the balance of the Drawings and/or Specifications remains in full force.

THE FOLLOWING ARE CHANGES TO THE CONTRACT DOCUMENTS

PROJECT MANUAL:

I. SPECIFICATION SECTIONS ADDED:

None

II. MODIFICATIONS TO SPECIFICATIONS:

A. SECTION 011100 - SUMMARY OF WORK

1. Page 2; Paragraph 1.2.B, REPLACE:

“The OR Zoo will issue a separate contract for cleaning of the existing HVAC duct work that serves the animal exhibit area while the penguins are out of the exhibit.”

B. SECTION 033700 - ARTIFICIAL ROCKWORK

1. Page 2; Paragraph 1.3.C, ADD:

“3. Prior to the start of demolition conduct a pre-construction meeting with the Owner to verify extents of demolition and improvements and to discuss procedures for rockwork restoration and repair.”

C. SECTION 096600 - RESILIENT FLOORING

1. Page 2; Paragraph 1.4, ADD:

“C. Qualifications of Manufacturer:

Company specializing in manufacturing the Products specified in this section with minimum 3 years documented experience.”

“D. Qualifications of Installers:

Installer must have at least 3 years of successful experience in application of materials similar to those of this project.”

D. SECTION 225500 - LIFE SUPPORT SYSTEM

1. Page 34; Paragraph 2.8.C, REVISE
2. "The central controls panel shall be capable of providing trending information for the above-noted components. This controls panel shall be based on ~~"Back-Net"~~ "BACnet" for future connection to a central Zoo system."

E. SECTION 230923 - DIRECT DIGITAL CONTROLS

1. Page 3; Paragraph 1.4C, REVISE as shown (additions are in bold, deletions have strikethrough):

"C. System shall utilize BACnet/IP protocol at the Inter-building LAN level. Existing LAN is Delta. **Protocol at building shall be BACnet MS/TP.**"

2. Page 19; Paragraph 3.1A.3, REVISE as shown (additions are in bold, deletions have strikethrough):

"3. Primary Controller LAN: Used to connect Primary Control Units (Primary Control Units- which generally control central plant equipment, air handlers) within a building. This LAN **shall be BACnet MS/TP protocol.** ~~may be Ethernet 10BaseT (IEEE802.3) or a separate high speed peer-to-peer LAN used in conjunction with an Interbuilding LAN Interface Device.~~ The LAN Interface Device shall employ native BACnet /IP on the Ethernet 10BaseT (IEEE802.3) physical layer for connection to Ethernet/ATM routers in each building. The LAN Interface Device shall not require third party routers, gateways or translators for BACnet /IP protocol."

F. SECTION 311000 - SITE CLEARING

1. Page 4; Paragraph 3.3, ADD:

"G. Where construction access is required by heavy equipment within drip line of trees indicated to remain, provide a protective mat of 12-inches of wood chips covered by plywood or approved alternative, to minimize damage to root systems. Coordinate extent of protective mat with Zoo Horticulturist."

G. SECTION 312000 - EARTH MOVING

1. Page 11; Paragraph 3.22, ADD:

"3.22 WET WEATHER REQUIREMENTS

- A. The fine-grained site soils that mantle the site are expected to be highly susceptible to disturbance during construction, especially during periods of wet weather and where soils are in excess of 4 to 5% of optimum moisture content.
- B. The wet weather period for Portland is typically Oct 1st through June 1st. Refer to the wet weather construction recommendations provided in the project geotechnical report.
- C. A 12-inch thick work pad of fragmental rock is usually sufficient to prevent disturbance of subgrade by lighter construction equipment and limited traffic by dump trucks. All costs associated with additional stabilization will be borne by the Contractor.

- D. Improvements beyond those noted in the Drawings, necessary for construction access, shall be provided at the Contractor's expense.
- E. Any temporary aggregate or rock used to support construction activities shall be completely removed prior to final grade preparation. Any subgrade soils disturbed by construction activity should be over-excavated to firm soil and backfilled with structural fill at the Contractor's expense."

DRAWINGS:

I. NEW DRAWINGS ISSUED:

NONE

II. REVISIONS TO DRAWINGS:

A. DRAWING RC01 NAME: G1.3 SITE DEMOLITION PLAN, REVISION MADE:

- 1. As shown on drawing.

B. DRAWING RC02 NAME: C3.0 UTILITY PLAN, REVISION MADE:

- 1. As shown on drawing.

C. DRAWING RE01 NAME: E1.0 ELECTRICAL SITE PLAN, REVISION MADE:

- 1. Approximate lengths of electrical conduit as indicated on drawing.

D. DRAWING E5.1 NAME: ELECTRICAL ONE-LINE DIAGRAM, REVISION MADE:

- 1. REVISE Detail bubble 1/E3.2 to read "1/E5.2" and detail bubble 1/E3.4 to read "1/E5.4".

E. DRAWING LS0.1 NAME: LIFE SUPPORT SYSTEM SCHEMATIC FLOW DIAGRAM, REVISION MADE:

- 1. ADD Sheet Note 3 to read: "3. Refer to Specifications Section 22 55 00 - Life Support System for information on controls."

SUBSTITUTION REQUESTS:

I. THE FOLLOWING MANUFACTURERS ARE ACCEPTABLE:

A. SECTION 221000 - PLUMBING PIPING & PUMPS, 2.3 Piping Specialties

- 1. Outside HB-1 - Woodford 67P Series

B. SECTION 225500 - LIFE SUPPORT SYSTEM, 2.4.B.16 - Horizontal Pressure Sand Filters (For Penguin Pool System)

- 1. Stark Fiberglass Filters

NOTE: Stark filters are acceptable provided that the 4'x10' filter is submitted to meet the minimum 70 square feet of total effective filtration area on the two filters. This approval does not preclude the Contractor's obligation to verify the filters can be accommodated within the available space.

C. SECTION 225500 - LIFE SUPPORT SYSTEM, 2.3.A - End Suction Centrifugal Circulating Pumps (Horizontal Installations)

1. Fybroc 1530 Series Close Couple Pumps

D. SECTION 230923 - DIRECT DIGITAL CONTROLS

1. TAC I/A SERIES

E. SECTION 236000 - CENTRAL COOLING EQUIPMENT, 2.2 Heat Exchanger

1. Delta Hydronics Plate Heat Exchanger A216MD

F. SECTION 265000 - LIGHTING

- | | |
|-------------|---|
| 1. Type 'A' | HEW 92-4-232-A-WET/X-EB2-UNV |
| 2. Type 'B' | Luminaire Lighting LVP 1212-1PLC13-120-CP-WHT-WET |
| 3. Type 'D' | BROWNLEE 7016-70M |
| 4. Type 'E' | HEW WPA4-PSMH-50-MED-PC-120 |

G. SHEET E4.2 - LIGHTING CONTROL PANEL, Detail 1

1. Leviton Z-Max Plus

CONTRACTOR QUESTIONS:

1. Drawing C3.0. Site Utilities. This drawing shows the 6" overflow sewer line from the skimmer sump draining into the sanitary sewer with both the atrium drain (36) and the area drain (7) contributing storm drainage to the sanitary sewer. Please verify whether the existing manhole is storm drainage or sanitary sewer. If sanitary sewer, is this correct?

Answer: Manhole is part of a combined sewer system.

2. Drawing LSO.1. Please provide Pipe size of ozone supply line (316SS Type L Pipe (E) from the ozone contact tank (I) to the ozone splitter box. Also provide Pipe size for the ozone supply line from the splitter box to the ozone contact tank (18).

Answer: 1/2-inch or 3/4-inch as recommended by the Ozone generator manufacturer.

3. The new power feed for the Penguin house is fed from an existing circuit breaker in the Emergency Generator Distribution Panel. The "trip" unit must be changed to a 400-Amp unit. Would anyone at the zoo know the manufacturer of the circuit breaker with the type/catalog number? I think that it would be a Square D line-up but I need to confirm that Square D is the Manufacturer.

Answer: This information has to be field verified.

4. How do the larger LSS equipment components, i.e., sand filters, get installed without large hatches into the mechanical room?

Answer: The sand filters and larger LSS equipment components can be placed in the basement prior to constructing the roof. Construction sequencing is up to the Contractor's means & methods.

5. How does the Contractor identify salvaged items and what is done with them?

Answer: Zoo staff will coordinate with the selected Contractor to identify any salvage items not already indicated on the drawings prior to the start of construction.

6. Is there an alternate access for bringing in the crane? Is there a weight limit? Concern about damaging asphalt.

Answer: An alternate access path may be granted with enough lead time to enter through Gate E on the paved main pathway. Zoo staff will coordinate schedule and review proposed weight loadings with the selected Contractor.

7. What are the requirements for temporary power and water supply to the Lorikeet and Insect Zoo exhibits?

Answer: Reference Note 3 on sheet E1.0 for power supply and detail 2/P2.0 for temporary water supply.

8. What are the noise restrictions for the project?

Answer: Although animals and public will not be in the penguin building during construction, the Zoo requires the Contractor to avoid excessive noise or vibration as noted in Section 011100 - paragraph 1.7. Although there are no decibel thresholds defined, Supplementary Conditions Section 007300-1.01.D.4, further states the Contractor shall "take every precaution to minimize noise, spreading of dust and debris, causing undue vibrations or impacts and other nuisances. Do no structural or other damage to any in-place improvements." Monitor vibration during the jack-hammering of the existing concrete to avoid damage to the existing exhibit glass and pool.

9. Are there prevailing wage requirements?

Answer: Refer to Invitation to Bid, Section 001116 in the 4th paragraph under Basis of Award. "This is a public works project. The Contractors and all subcontractors and suppliers, shall be required to comply with ORS 279C.800 through 279C.870 and ensure that all workers are paid not less than, and in accordance with, the Prevailing Wages published by the Oregon Bureau of Labor and Industries. In order to insure compliance of prevailing wage requirements, under Chapter 279, Metro will require that all payrolls be submitted on a schedule to be determined by Metro."

The applicable rates for Region 2 (Clackamas, Multnomah, and Washington Counties) can be found at www.oregon.gov/BOLI.

10. How will the low bid be evaluated with Add Alternates?

Answer: Bids shall include the base bid plus any owner selected alternates as indicated in the first paragraph of Article 12, Section 002113.

11. Can you share the budget?

Answer: As indicated in Addendum 1, the Owner has opted not to share estimates for this project. The scope of the work is well enough defined for contractors to determine their own bonding needs.

12. Where is access to the inside of the exhibit?

Answer: The inside of the exhibit will be accessed through the keeper kitchen.

13. What's the existing rockwork waterproofing material?

Answer: Existing waterproofing appears to be fluid applied membrane at locations where rockwork texture coat has exposed waterproofing.

14. Who is responsible to install rockwork waterproofing material?

Answer: Means & Methods are up to the general contractor and the waterproofing/artificial rockwork contractor(s).

15. Who does the demo on the rock work?

Answer: Means & Methods are up to the general contractor and the waterproofing/artificial rockwork contractor(s).

16. Is parking available in the main visitor parking lot?

Answer: In addition to limited parking spaces in the Zoo employee lot (through Gate A), there will be additional contractor parking in the main visitor parking lot from November 1, 2010 to March 11, 2011.

17. Are delivery people required to have identification?

Answer: Yes, they must sign in at Gate A and get identification.

18. Regarding Section 225500 - Page 31, how many cubic feet of media is required?

Answer: Approximately 180 CF of media (3' depth within 60 SF filter area).

19. According to structural drawing S2.2 the trickling filter weighs 25,000 lbs. However, what does the height of the vessel need to be to ensure the gravity components of the design will work?

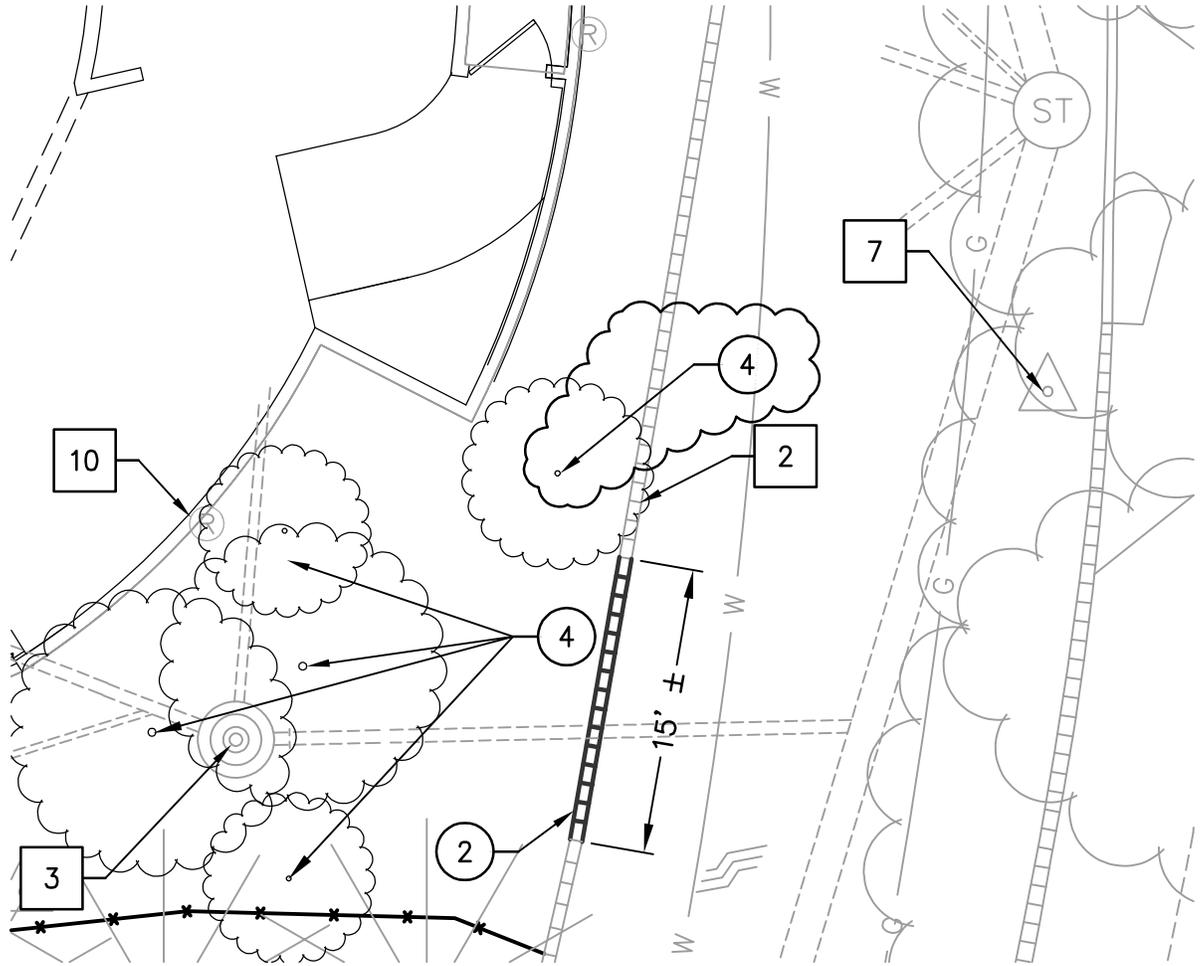
Answer: Structural design based on a higher water depth than anticipated operating depth of about 3'. Total height of vessel approximately 9' (3.5' open at bottom, 3' of media set on a fiberglass divider and about 2'-2.5' above media for pipe connections).

ATTACHED DOCUMENTS:

- Revised Drawing RC 01
- Revised Drawing RC 02
- Revised Drawing RE 01

END OF ADDENDUM NO. 2

I:\c\p\2009\309265-Oregon-Zoo-Penguin-Exhibit\CAU\PL01\100% CD\9265_G1.3_DM.dwg IAB:RC 01



DEMOLITION KEY NOTES

4 REMOVE EXISTING TREE AND/OR STUMP.



SCALE:
1" = 20'
JOB NO.:
309265
DATE:
08/25/2010

TITLE:
ADDENDUM 3 - ADDITIONAL TREE DEMOLITION

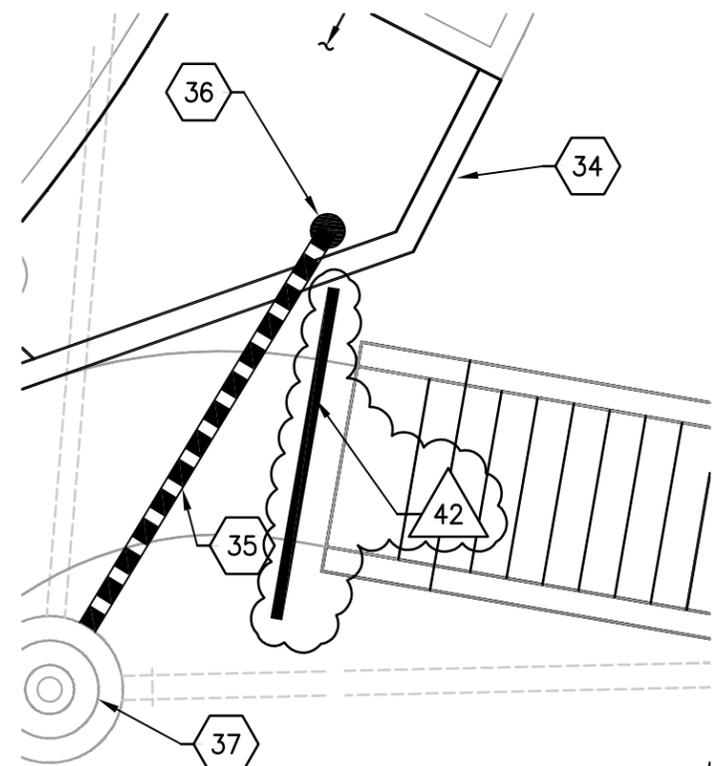
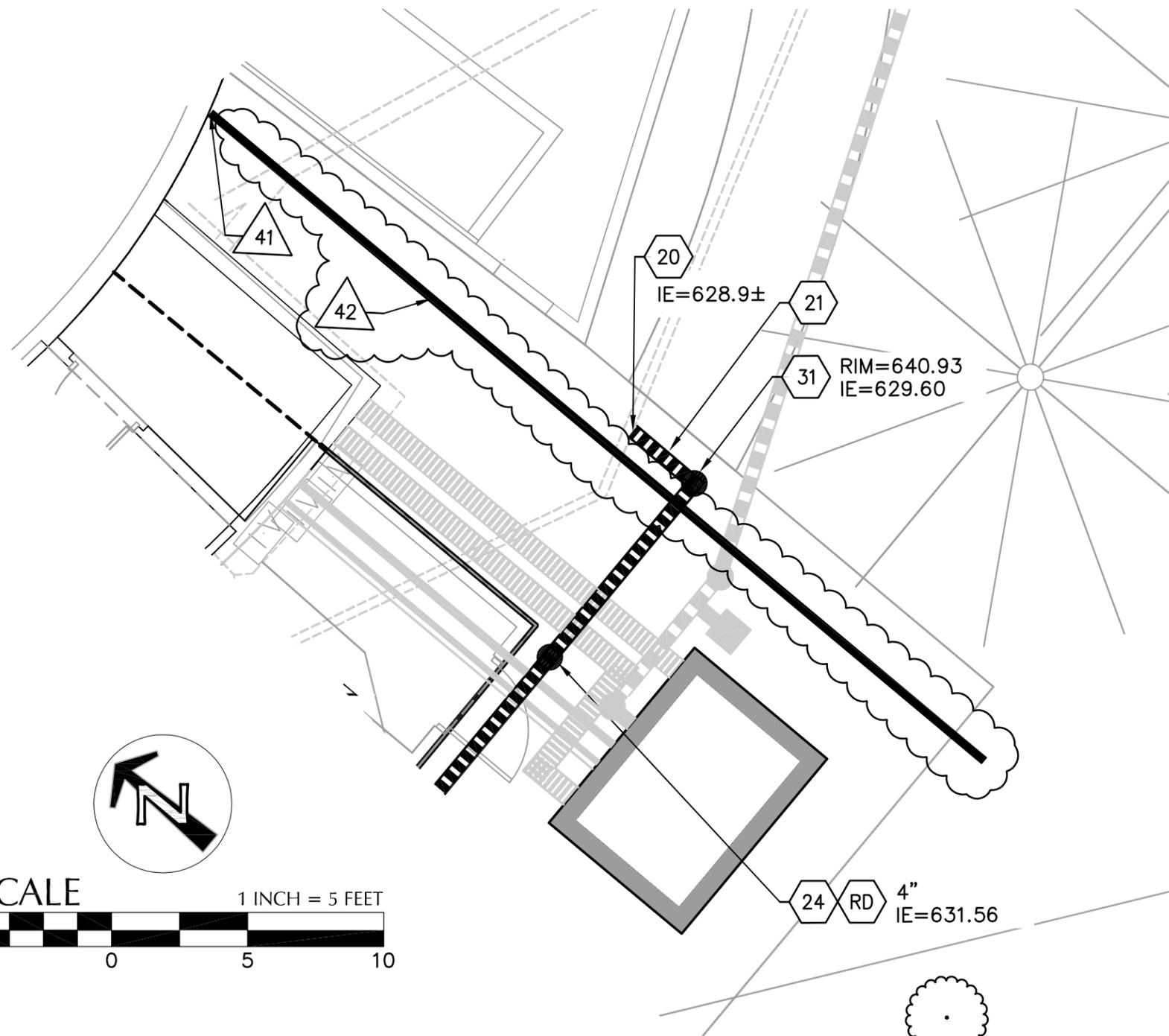
PROJECT:
PENGUIN LIFE SUPPORT SYSTEM
OREGON ZOO

SHEET NO.:
RC 01

REFERENCE SHEET NO.:
G1.3

IRRIGATION SLEEVE KEY NOTES

- 40 INSTALL (1)-4" AND (1)-2" SCH. 40 PVC SLEEVES 30" DEEP EXTENDING 1' BEYOND EDGE OF PAVING; AND MARK FOR FUTURE IRRIGATION LOCATE.
- 41 PROVIDE SWEEP BEND AND RISER FOR IRRIGATION SLEEVE TO CONTROL PANEL.
- 42 INSTALL (1)-4" SCH. 40 PVC SLEEVE 30" DEEP EXTENDING 1' BEYOND EDGE OF PAVING AND MARK FOR FUTURE IRRIGATION LOCATE.
- 43 COORDINATE SLEEVE LOCATION WITH BASEMENT IRRIGATION SUPPLY.



1 ENLARGED STORM DRAINAGE PIPING DETAIL
SCALE: 1" = 5'

3 ENLARGED STORMWATER PLANTER DETAIL
SCALE: 1" = 5'

<p>Consulting Engineers 111 SW Fifth Avenue Suite 2400 Portland, Oregon 97204 (503) 227-3251 STRUCT. FAX (503) 227-7980 CIVIL FAX (503) 274-4681</p>	SCALE: AS SHOWN	TITLE: ADDENDUM 03 - IRRIGATION SLEEVES	SHEET NO.: RC 02
	JOB NO.: 309265	PROJECT: PENGUIN LIFE SUPPORT SYSTEM UPGRADE OREGON ZOO	REFERENCE SHEET NO.: C3.0
	DATE: 08/25/2010		

I:\p\2009\309265-Oregon-Zoo-Penguin-Exhibit\CAU\PL01\100% CD\9265_C3.0_U1.dwg TAB: RC_02

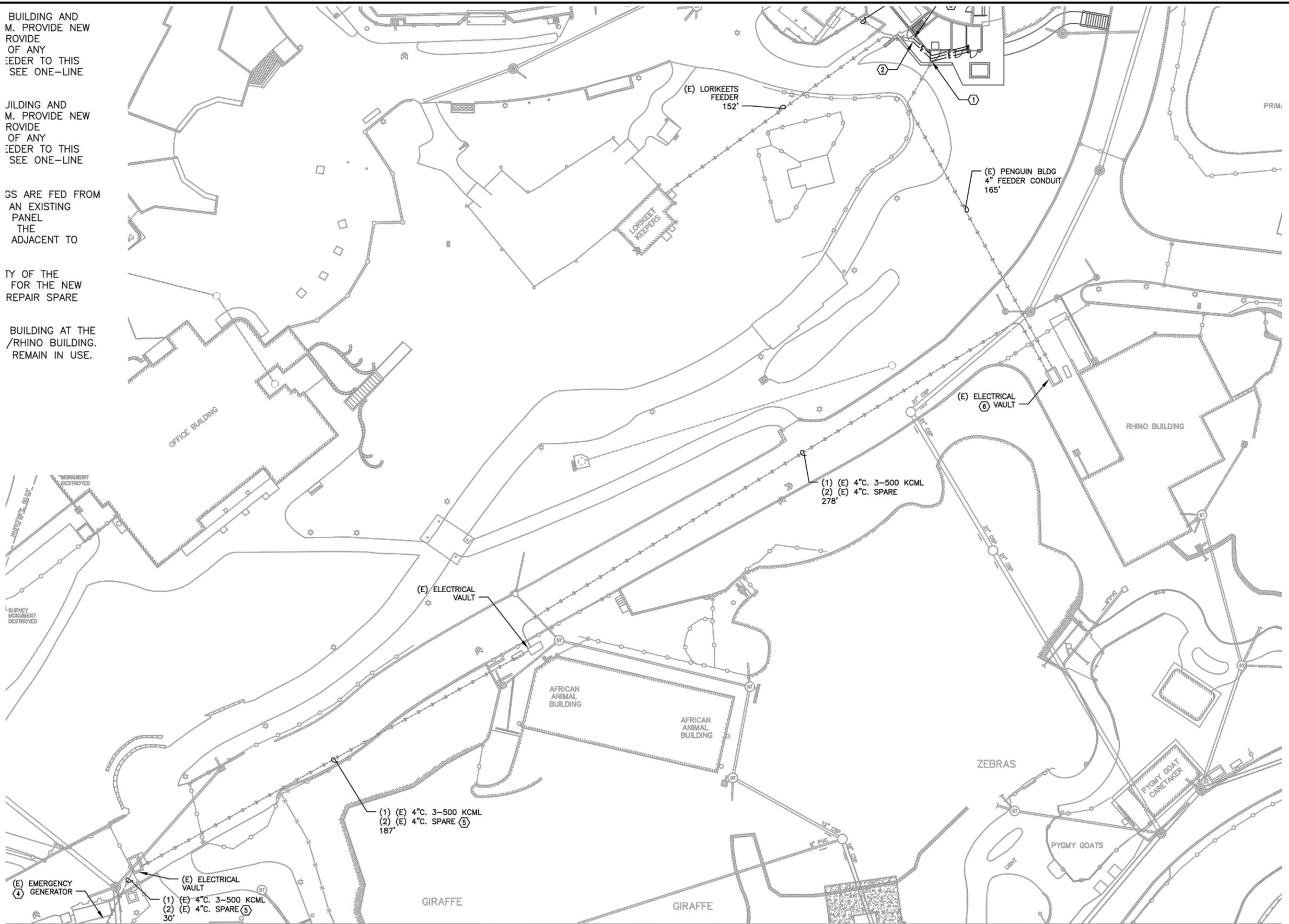
BUILDING AND
M. PROVIDE NEW
ROVIDE
OF ANY
EDER TO THIS
SEE ONE-LINE

BUILDING AND
M. PROVIDE NEW
ROVIDE
OF ANY
EDER TO THIS
SEE ONE-LINE

SS ARE FED FROM
AN EXISTING
PANEL
THE
ADJACENT TO

TY OF THE
FOR THE NEW
REPAIR SPARE

BUILDING AT THE
/RHINO BUILDING.
REMAIN IN USE.



MONUMENT DESTROYED
SURVEY MONUMENT DESTROYED

kpff
Consulting Engineers
111 SW 5th Avenue
Suite 2400
Portland, Oregon 97204
(503) 227-3291
STRUCT. FAX (503) 227-7980
CIVIL FAX (503) 274-4681

SCALE:
NTS
JOB NO.:
309265
DATE:
08/25/10

TITLE:
ADDENDUM#2
PROJECT:
PENGUIN LIFE SUPPORT SYSTEM UPGRADE
OREGON ZOO

SHEET NO.:
RE 01
REFERENCE SHEET NO.:
E1.0

11/17/08 File: D:\Documents and Settings\PDedyo\My Documents\Drawing1.dwg TAB:RE 01