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5

# UTAH DIVISION OF WILDLIFE RESOURCES EGAN FISH HATCHERY TURBULENT FOUNTAIN 2010



PREPARED BY:

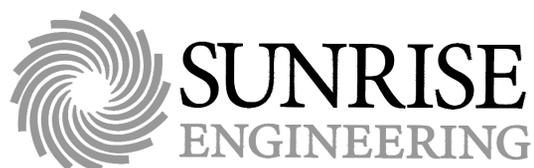
**SUNRISE ENGINEERING, INC.**

25 EAST 500 NORTH

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**State of Utah**  
Department of Administrative Services


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<http://dfcm.utah.gov>

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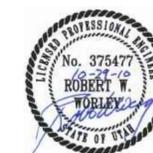


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UTAH DIVISION OF  
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 RESOURCES  
 EGAN  
 FISH HATCHERY  
 TURBULENT  
 FOUNTIAN  
 2010

ENGINEER'S STAMP




MARK	DATE	DESCRIPTION
ISSUE TYPE: 100%		

ISSUE DATE: June 1, 2010

DFCM PROJECT NO: 10202520  
 SEI PROJECT NO: 0XXXX  
 CAD DWG FILE: egan-G01-03  
 DRAWN BY: CIC  
 CHK'D BY: RWW  
 COPYRIGHT: STATE OF UTAH

DRAWING TITLE

TITLE SHEET

DRAWING NUMBER

**G1**

SHEET 1 OF 6

1

2

3

4

5

D

C

B

A

D

C

B

A



1  
**CODE ANALYSIS**

THIS BUILDING IS NOT INTENDED FOR PUBLIC USE OR OCCUPANCY

APPLICABLE CODES			
	Year		Year
International Building Code	2006	National Electrical Code	2008
International Mechanical Code	2006	Uniform Code for Building Conservation	2006
International Fuel Gas Code	2006	ADA Accessibility Guidelines	N/A
International Plumbing Code	2006		
International Fire Code	2006		
International Energy Conservation Code	2006		

A. Occupancy and Group: \_\_\_\_\_ U \_\_\_\_\_

Change in Use: Yes \_\_\_\_\_ No X Mixed Occupancy: Yes \_\_\_\_\_ No X  
Special Use and Occupancy (e.g. High Rise, Covered Mall): \_\_\_\_\_ NO \_\_\_\_\_

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I I II III IV V  
A B A B A B HT A B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):  
North: NONE South: NONE East: NONE West: NONE

E. Mixed Occupancies: NONE Nonseparated Uses: NONE

F. Sprinklers:

Required: NONE Provided: NONE

Type of Sprinkler System (IBC 903.3.1) \_\_\_\_\_ NONE \_\_\_\_\_

G. Number of Stories: 1 Building Height: Subsurface Structure

H. Actual Area per Floor (square feet): \_\_\_\_\_ 3,240 \_\_\_\_\_

I. Tabular Area: (table 503): \_\_\_\_\_ II-B 12,753 SQ. FT. \_\_\_\_\_

J. Area Modifications:

$$a) A_a = \left\{ A_1 + \left[ A_1 \times I_f \right] + \left[ A_1 \times I_s \right] \right\} I_f = \left[ F/P - 0.25 \right] W / 30$$

b) Sum of the Ratio Calculations for Mixed Occupancies:

$$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$$

c) Total Allowable Area for:

- 1) One Story: 12,753 SQ. FT.
- 2) Two Story: A<sub>a</sub>(2) NONE
- 3) Three Story: A<sub>a</sub>(3) NONE

d) Unlimited Area Building: Yes \_\_\_\_\_ No X Code Section: \_\_\_\_\_

K. Fire Resistance Rating Requirements for Building Elements (hours). II-B

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	<u>NONE</u>	<u>NONE</u>	Floors - Ceiling Floors	<u>NONE</u>	<u>NONE</u>
Interior Bearing Walls	<u>NONE</u>	<u>NONE</u>	Roofs - Ceiling Roofs	<u>NONE</u>	<u>NONE</u>
Exterior Non-Bearing Walls	<u>NONE</u>	<u>NONE</u>	Exterior Doors and Windows	<u>NONE</u>	<u>NONE</u>
Structural Frame	<u>NONE</u>	<u>NONE</u>	Shaft Enclosures	<u>NONE</u>	<u>NONE</u>
Partitions - Permanent	<u>NONE</u>	<u>NONE</u>	Fire Walls	<u>NONE</u>	<u>NONE</u>
Fire Barriers	<u>NONE</u>	<u>NONE</u>	Fire Partitions	<u>NONE</u>	<u>NONE</u>
			Smoke Partitions	<u>NONE</u>	<u>NONE</u>

L. Design Occupant Load: NONE

Exit Width Required: \_\_\_\_\_ Exit Width Provided: \_\_\_\_\_

M. Minimum Number of Required Plumbing Facilities: NONE IBC 2902.4.1

- Water Closets - Required (m) \_\_\_\_\_ (f) \_\_\_\_\_ Provided (m) \_\_\_\_\_ (f) \_\_\_\_\_
- Urinals - Required (m) \_\_\_\_\_ (f) \_\_\_\_\_ Provided (m) \_\_\_\_\_ (f) \_\_\_\_\_
- Lavatories - Required (m) \_\_\_\_\_ (f) \_\_\_\_\_ Provided (m) \_\_\_\_\_ (f) \_\_\_\_\_
- Bath Tubs or Showers: \_\_\_\_\_
- Drinking Fountains: \_\_\_\_\_ Service Sinks: \_\_\_\_\_

FOOTNOTES:

- In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.
- Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
  - High Rise Requirements.
  - Atriums.
  - Performance Based Criteria.
  - Means or Egress Analysis.
  - Fire Assembly Locator Sheet.
  - Exterior and Interior Accessibility Route.
  - Fire Stopping, Including Tested Design Number.

3  
**SPECIAL INSPECTION AND TESTING UNDER THE PROVISIONS OF IBC 1704 AND FOR MISCELLANEOUS AREAS**

Indicate required Special inspections for project by checking the appropriate boxes and provide specific instructions as to the inspection requirements and the expectations of the architect, engineer and owner:

**CONCRETE CONSTRUCTION (IBC 1704.4)**

Item	Detailed Instructions and Frequencies		
Materials (1704.4.1)	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed
Steel placement	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed
Bolts prior & during placement	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed
Use of required design mix	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Whenever mix is modified
Concrete sampling for strength test, slump, air content, and temperature of concrete	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed to insure compliance
Concrete & shotcrete placement	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed
Curing temperature and techniques	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed
Form work	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed

**SOILS CONSTRUCTION (IBC 1704.7)**

Item	Detailed Instructions and Frequencies		
Site preparation	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed
Structural fill material	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Period spot checks as needed or whenever source changes
Structural fill lift thickness	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed
Structural fill soil densities	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed at least daily
Backfill soils materials	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Period spot checks as needed or whenever source changes
Backfill soil densities	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Periodic	Periodic spot checks as needed at least daily

**Special Inspectors Shall:**

- Be approved by the Building Official prior to performing any duties;
- Provide proof of licensure as a special inspector by the State of Utah for each type of inspection;
- Inspection reports are to meet the requirements of IBC 1704.1.2 and DFCM standards;
- Inspection reports are to be submitted to the code consultant, architect, DFCM project manager, and the State of Utah Building Official within 48 hrs. of inspections;
- A final inspection report shall be submitted following completion of the project documenting the types of special inspections performed and a statement indicating that the structure is in compliance with the drawings, specifications and applicable codes. IBC 1704.1.2

Updated October 8, 2009

5  
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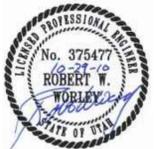


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WILDLIFE  
RESOURCES  
EGAN  
FISH HATCHERY  
TURBULENT  
FOUNTAIN  
2010**

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CAD DWG FILE: egan-G01-03

DRAWN BY: CJC

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DRAWING TITLE

**CODE ANALYSIS  
AND  
SPECIAL INSPECTION**

DRAWING NUMBER

**G3**

SHEET 3 OF 6



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DFCM PROJECT NO: 10202520  
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DRAWING TITLE

SITE PLAN

DRAWING NUMBER

**C1**

SHEET 4 OF 6

**A**  
**C1** SITE PLAN - EGAN FISH HATCHERY  
 1" = 30'

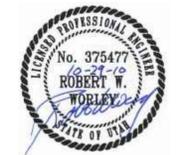
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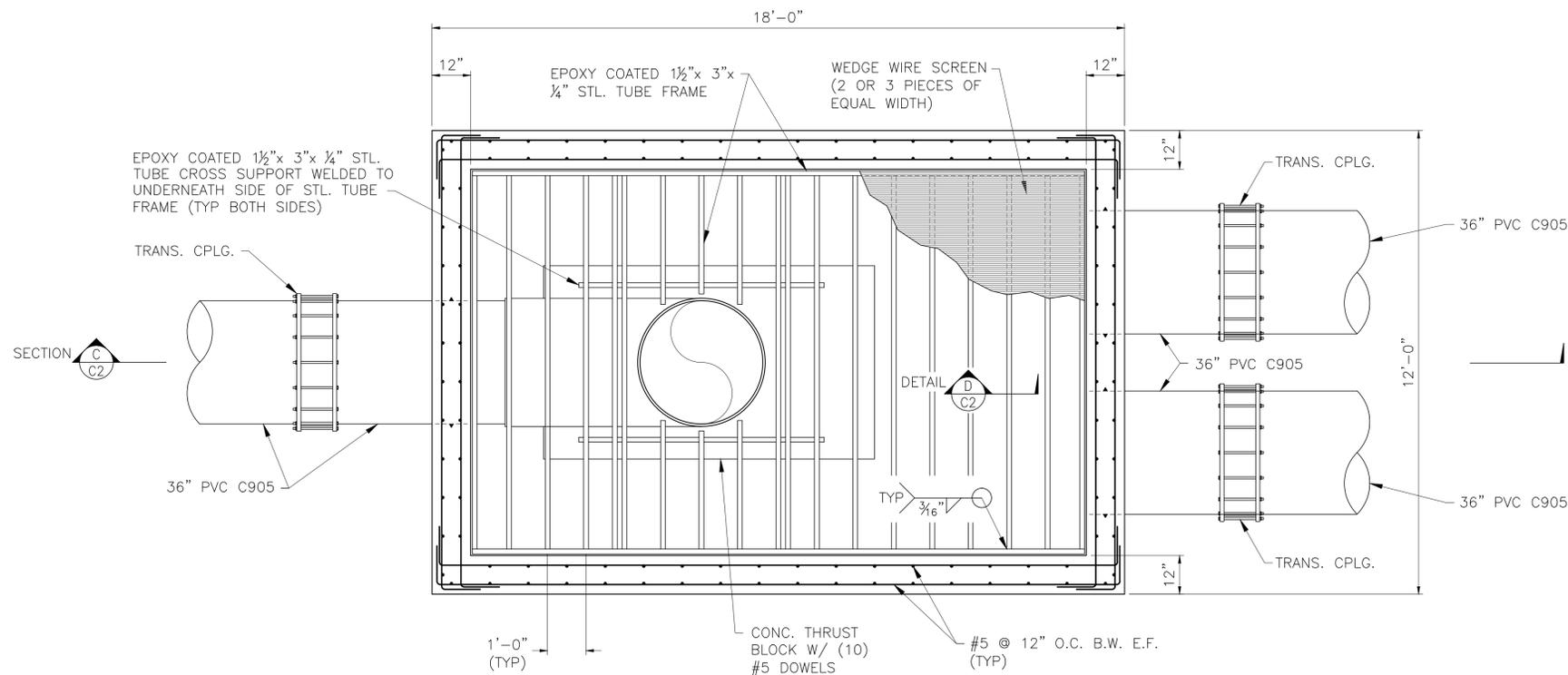
DRAWING TITLE

TURBULENT FOUNTAIN  
36" PIPELINE

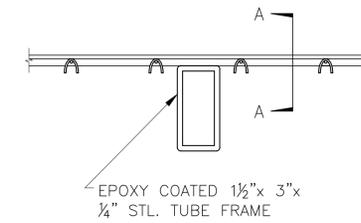
DRAWING NUMBER

C2

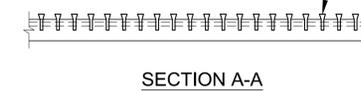
SHEET 5 OF 6



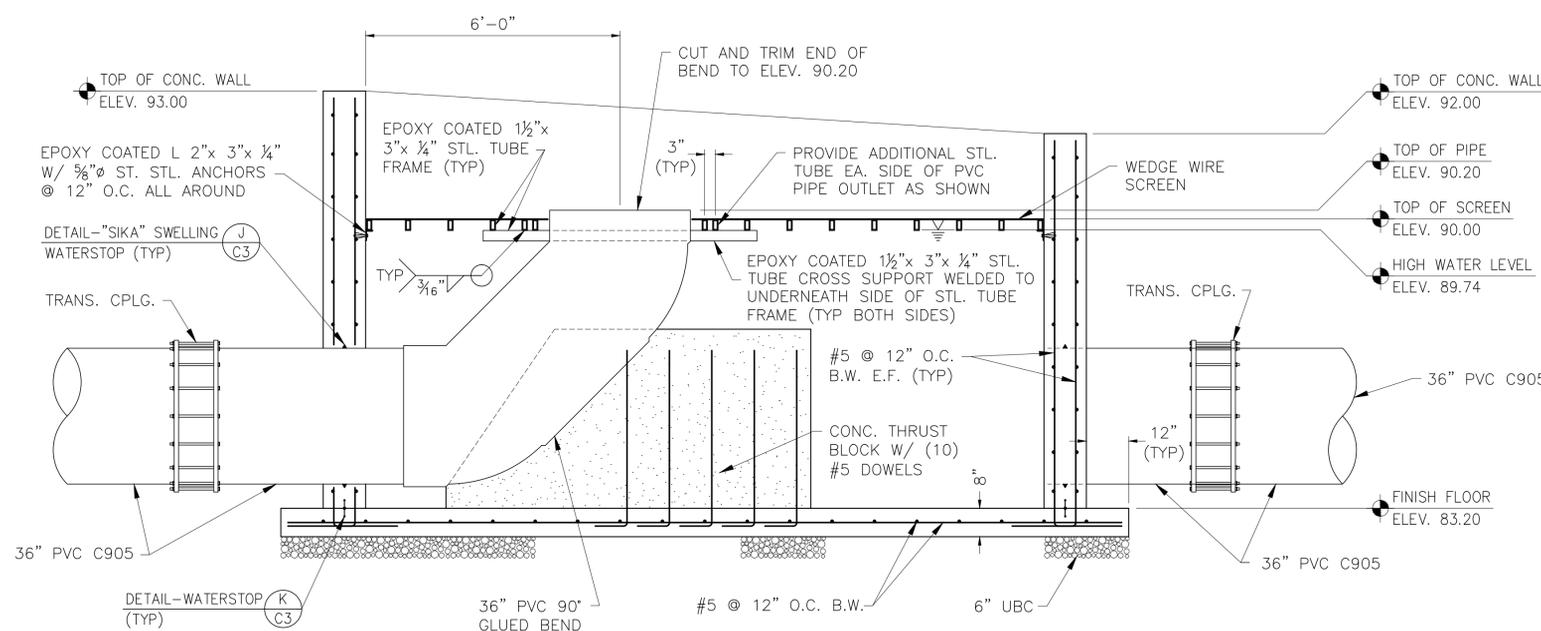
**B** PLAN - TURBULENT FOUNTAIN (36" PIPELINE)  
**C1** 1/2" = 1'-0"



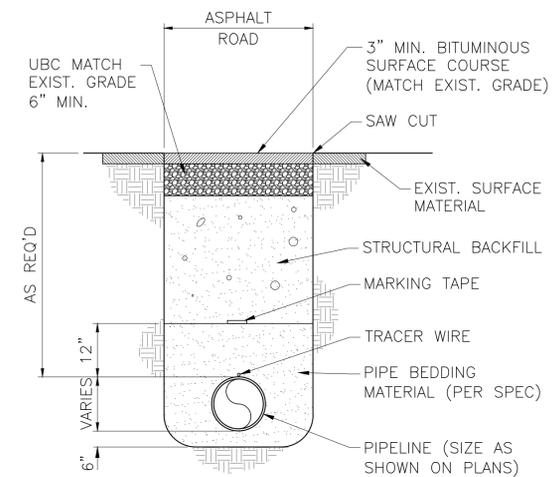
B-9 304 ST. STL. WEDGE WIRE W/  
1/4" SLOT OPENINGS & U-CLIPS @  
3" O.C. BY "HENDRICKS CO." OR  
APPD. EQ.



**D** DETAIL - WEDGEWIRE SUPPORT  
**TYP** N.T.S.



**C** SECTION - TURBULENT FOUNTAIN (36" PIPELINE)  
**C2** 1/2" = 1'-0"



NOTES:  
1. TRENCH DETAILS INSIDE OF ROADWAYS ASPHALT/GRAVEL ROADS.  
2. ASPHALT ROADS SHALL BE SAW CUT.  
3. MAX PAY WIDTH SHALL BE 5'-0".

**E** DETAIL - PAVED ROADWAY TRENCH  
**TYP** N.T.S.

DESIGNED BY:

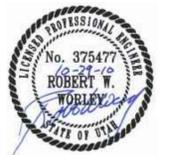


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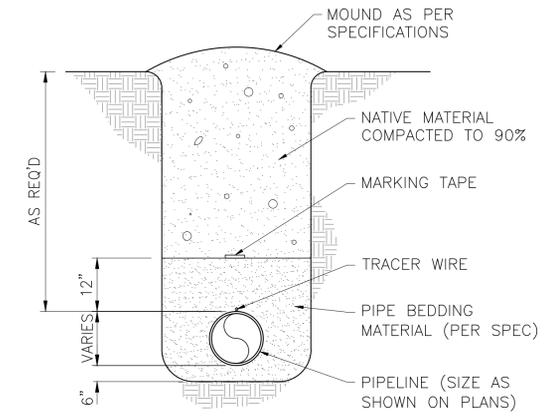
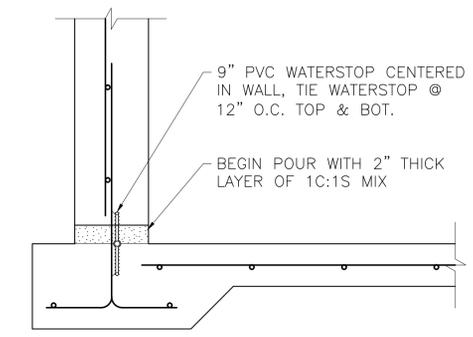
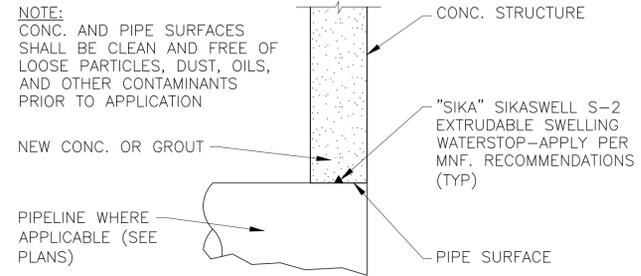
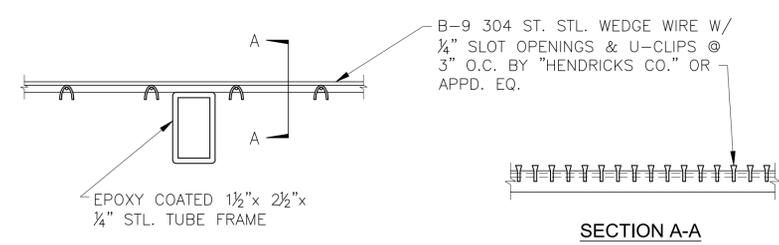
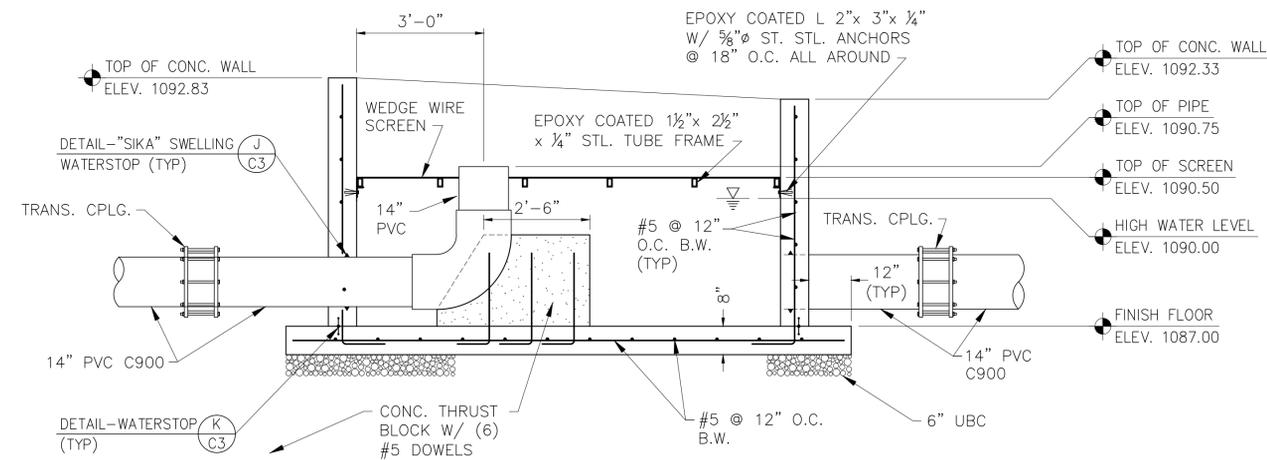
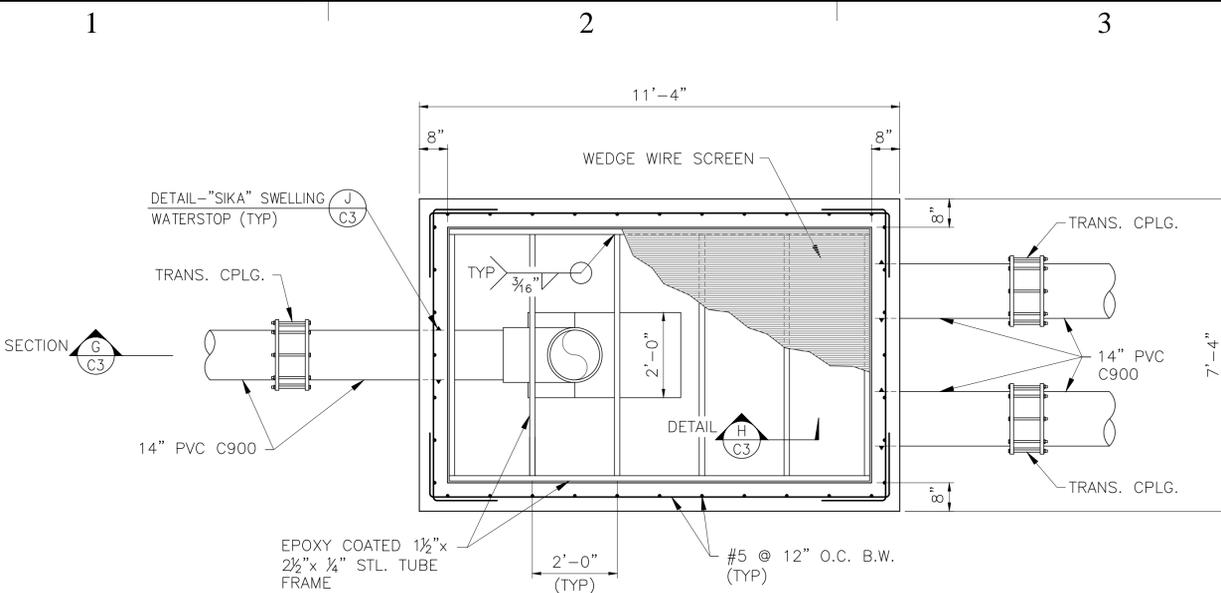
DRAWING TITLE

TURBULENT FOUNTAIN  
14" PIPELINE  
AND TYPICAL DETAILS

DRAWING NUMBER

C3

SHEET 6 OF 6



NOTE:  
CONC. AND PIPE SURFACES  
SHALL BE CLEAN AND FREE OF  
LOOSE PARTICLES, DUST, OILS,  
AND OTHER CONTAMINANTS  
PRIOR TO APPLICATION

NEW CONC. OR GROUT  
PIPELINE WHERE  
APPLICABLE (SEE  
PLANS)

NOTE:  
TRENCH DETAIL OUTSIDE OF TRAVELED ROADWAY  
OR DESIGNATED ROAD RIGHT-OF-WAY.