**GENERAL NOTES**

1. **The Contractor shall anticipate all underground utilities and make sure that the existing wires, gas lines, storm and sanitary sewers, telephone or electric light cables are properly located, and delimited by flags or stakes.**

2. **The Contractor shall, at its own expense, maintain in proper working order and without interruption of service all existing utilities and services which may be obstructed in the performance of any work. The Contractor shall be responsible for damage to the owners and engineers.**

3. **No utility company involved to have their utilities located and marked in the field. All underground utilities shall be unconfederate to location and elevation before construction begins to coordinate with utility owner if utility inspector must be on site when locating or excavating any utilities.**

4. **Sheeting and bracing, install sheeting and bracing necessary to support the sides of trenches and other excavations with vertical sides, as required by current OSHA regulations.**

5. **Water in excavation, keep water free from ground or surface water at all times. Provide pumps of adequate capacity or other approved method to remove water from the excavation in such a manner that it will not interfere with the progress of the work or the proper placing of other work. The cost of dewatering the excavation shall be subsidiary to construction.**

6. **Window cover: All pipes shall have a minimum cover of three (3) feet.**

7. **The Contractor shall provide and maintain all horizontal and vertical construction scaffolding as required for the project development.**

8. **Any locations of the filter fabric fence shown on the plans are approximate only. The exact location of the filter fabric fence shall be determined by the Engineer or the Engineer’s representative. The filter fabric fence shall be maintained in proper condition at all times, the cost of repairing the filter fabric fence shall be the responsibility of the Contractor.**

9. **All extruded iron pipe shall be engaged with helical polyethylene wrap. All ductile iron pipe crossing or laying parallel to a buried utility shall be wrapped with a double layer of polyethylene encasement for all pipe within 10’ of the utility.**

10. **Temporary fencing with gates shall be provided by the Contractor. The Contractor shall keep the construction site clean and free of all debris. Temporary fencing with gates shall be allowed during construction. The disturbed area will be grade to equal or better condition.**

11. **Topsoil replacement is required in all areas. Topsoil shall be replaced to a depth of the original topsoil. The topsoil shall be kept separate from general excavated material. All culled areas back from the excavation shall not be included in the top four inches of topsoil backfill. All areas of backfill or excavation shall be brought to within four (4) feet of final grade and brought to grade with compacted top soil.**

12. **Upon completion of final grading, all areas disturbed by the Contractor shall be seeded and fertilized. The Contractor shall install erosion control matting on all slopes greater than 5:1. The Contractor shall seed areas indicated on the landscape plan with specified grasses for at least two cuttings, or as required to ensure growth.**

13. **All highway shall be stable.**

**ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AT</td>
<td>ALTITUDE</td>
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<tr>
<td>LE</td>
<td>LINE</td>
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<tr>
<td>LB</td>
<td>LENGTH</td>
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<td>FT</td>
<td>FEET</td>
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<tr>
<td>FL</td>
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<td>DIA</td>
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<td>FLG</td>
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<tr>
<td>PVC</td>
<td>POLYVINYL CHLORIDE</td>
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<tr>
<td>HDPE</td>
<td>HIGH DENSITY POLYETHYLENE</td>
</tr>
<tr>
<td>C.I</td>
<td>CAST IRON</td>
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<tr>
<td>MS</td>
<td>MASONRY</td>
</tr>
<tr>
<td>RCP</td>
<td>REINFORCED CONCRETE PIPE</td>
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<tr>
<td>C.F</td>
<td>CEMENT FLEXIBLE</td>
</tr>
<tr>
<td>RCP</td>
<td>ROAD REINFORCED CONCRETE PIPE</td>
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<tr>
<td>PS</td>
<td>POUND</td>
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<tr>
<td>MFT</td>
<td>METRIC</td>
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</table>
REMOVE 90° BEND
AND INSTALL 6"
TEE (FLANGED,
DUCTILE IRON
2" BALL VALVE
INSTALL 2" COMBINATION
AIR / VACUUM VALVE
APCO MODEL 145C
REINSTALL EXISTING
GATE VALVE

EXISTING 30"
BUTTERFLY VALVE
(NORMALLY CLOSED)
FROM LAKESIDE
FIBERGLASS PIPE
HOSE FROM
FLOATING PUMPS
HATCHERY
MAIN
HATCHERY
ENTRANCE
EXISTING HATCHERY LIMITS. EXISTING
DRIVEWAY AND ROADS INSIDE HATCHERY
TO BE USED ONLY FOR INSTALLATION OF
SCADA SYSTEM. ALL CONTRACTOR
VEHICLES TO ENTER AND EXIT HATCHERY
VIA TOLL GATE ROAD.

F.M. 1180
F.M. 1180

AERIAL IS 2010 TNRIS MAP FOR ARCHER COUNTY.

PROPOSED OFFICE
MECHANICAL, AND INDEPENDENT
RETAILER IDEA
HATCHERY CONTROLS

EXISTING FLOATING PUMPS
INSTALL AIR RELEASE VALVE ON 6" RISER
ON 30" LINE
REFER TO DETAILS

EXISTING 20" OZONE
FACILITY

FABRICATED PIPES

EXISTING 30" WASTEWATER VALVE
INSTALLATION DETAILS

INSTALL 2" COMBINATION
AIR / VACUUM VALVE
APCO MODEL 145C

AIR RELEASE VALVE DETAIL

PROPOSED FLOATING
PUMP CONTROLS

PROPOSED CONSTRUCTION
ACCESS

PROPOSED CONSTRUCTION
ACCESS

AIR RELEASE VALVE DETAIL

PM
100'
FURNISH AND INSTALL 430 LF OF GAME FENCE REFER TO DETAILS
INSTALL DESTRUCT SKIDS FURNISHED BY OZONE MANUFACTURER. TWO SKIDS TO COVER DESIRED OPERATING RANGE. OZONE GAS PIPING OUTSIDE THE CONTAINER PROVIDED AND INSTALLED BY THE CONTRACTOR. OFF GAS PIPING SHALL BE RUN LEVEL, PLUMB, HEAT TRACED AND INSULATED.

PROPOSED DIESEL GENERATOR
SEA CONTAINER DOORS (TYP)
INSTALL LIQUID OZONE ANALYZER REFER TO DETAILS
3" SCH 10 316 SS DISCHARGE PIPING FROM INJECTION SKIDS TO THE PIPELINE FLASH REACTOR. CONTAINER SHALL BE PROVIDED WITH TWO 3" FLANGED OUTLET CONNECTIONS FOR THE INJECTION SKIDS. EACH INJECTION SKID SHALL BE Piped SEPARATELY TO THE PIPELINE FLASH REACTOR. ALL PIPING OUTSIDE THE CONTAINER SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. ABOVE GRADE PIPING SHALL BE RUN LEVEL, PLUMB, HEAT TRACED AND INSULATED.

CONTACT TANK REFER TO DETAILS
INSTALL LIQUID OZONE ANALYZER REFER TO DETAILS
CONTACT TANK OFFGAS PIPING TO DESTRUCT SKIDS
INSTALL PIPE BOLLARDS (7) REFER TO DETAILS
PROPOSED SITE PLAN
NOTE: THIS LAYOUT IS TYPICAL AND CAN CHANGE WITH OZONE MANUFACTURER'S LAYOUT. ALL PIPING, SHOWN IS REPRESENTATIVE OF LAYOUT. ALL ADDITIONAL BENDS AND FITTINGS TO CONNECT FROM OUTSIDE UNITS TO CONTAINER UNITS INSIDE SHALL BE INSTALLED AT NO ADDITIONAL COST TO PROJECT.

NOTES:
SKID DIMENSIONS AND EXACT LOCATIONS TO BE VERIFIED WITH OZONE MANUFACTURER. INSTALL PIPING, BENDS, AND FITTINGS FURNISHED BY OZONE MANUFACTURER PER RECOMMENDATIONS BETWEEN UNITS.

PROJECT NUMBER: 128632
HATCHERY OZONE SYSTEM
TBPE FIRM NO. F-1356
DUNDEE STATE FISH HATCHERY

79 SY OF ALL WEATHER ACCESS ROAD 6" OF CRUSHED LIMESTONE BASE COURSE (TxDOT ITEM 247; TYPE A, GRADE 1-2) SHALL BE COMPACTED TO 95% MODIFIED PROCTOR (ASTM D-1557) MOISTURE CONTENT SHALL BE MAINTAINED AT (±) 3% OF OPTIMUM.
PIPELINE FLASH REACTOR DETAIL

NOTE:
- FLASH MIXER AND INJECTION DETAILS
- OUTDOOR RATED LIGHT MOUNTED ON CONTAINER BY OZONE MANUFACTURER.
- PROPOSED INSULATION, JACKETING, CONTROLS, AND HEAT TRACING TO BE SUPPLIED BY AND SHIPPED LOOSE BY OZONE EQUIPMENT MANUFACTURER COMPLETE WITH INSTALLATION INSTRUCTIONS AND DETAIL BY CONTRACTOR.
- CONTROLS AND HEAT TRACING TO BE PRESSURE TESTED FROM OZONE CONTAINER BUILDING AND DETAIL IN SUBMITTAL DRAWINGS.

OUTSIDE RATED LIGHT MOUNTED ON CONTAINER BY OZONE MANUFACTURER.

NOTE:
- OUTDOOR RATED LIGHT MOUNTED ON CONTAINER BY OZONE MANUFACTURER.
- PIPE SUPPORTS TO REFER TO DETAILS.

NOTE:
- OUTDOOR RATED LIGHT MOUNTED ON CONTAINER BY OZONE MANUFACTURER.

NOTE:
- POWER FOR HEAT TRACING AND CONTROLS TO BE PROVIDED FROM OZONE CONTAINER BUILDING AND DETAILED IN SUBMITTAL DRAWINGS.
NOTES:

1. STEEL MEMBER, GRATING, AND STAIR TREADS SHALL BE HOT DIPPED GALVANIZED STEEL

2. HANDRAILS SHALL BE ANODIZED ALUMINUM

3. TANK SHALL BE TESTED FOR LEAKAGE. CONTRACTOR SHALL REPAIR ALL LEAKS WITH DE NEEF INJECTION GROUT OR ENGINEER APPROVED EQUAL

4. EPOXY COATED REBAR SHALL BE USED FOR CONTACT TANK

5. REBAR CHAIRS SHALL BE 316 STAINLESS STEEL

6. TANK SHALL BE TESTED FOR LEAKAGE. CONTRACTOR SHALL REPAIR ALL LEAKS WITH DE NEEF INJECTION GROUT OR ENGINEER APPROVED EQUAL

7. ≥0.50" BLACK EXCESSIVE ANCHORS BY STAIR MANUFACTURER

8. GALVANIZED STEEL SUPPORT PIPE WITH BASE PLATE AND ANCHOR BOLTS, TYPICAL (BY STAIR MANUFACTURER)

9. GALVANIZED STEEL GRATING (BY STAIR MANUFACTURER)

10. GALVANIZED STEEL STAIR TREADS (BY STAIR MANUFACTURER)

11. ALUMINUM PIPE POST AND RAILS WITH 5'-0" SPACING ON POST MAX (BY STAIR MANUFACTURER)

12. ALUMINUM HANDRAIL WITH 5'-0" SPACING ON POST MAX (BY STAIR MANUFACTURER)

13. ALUMINUM HANDRAIL (ROOF AND STAIRS)

14. 316 SS HAND HOLD WELDED TO OUTSIDE OF PLATE (TYP)

15. 3" 316 SS FLANGED WALL PIPE FOR MOUNTING RADAR LEVEL TRANSmitter

16. ROOF ACCESS STAIRS REFER TO DETAILS

17. ALUMINUM HANDRAIL WELDED TO OUTSIDE OF PLATE (TYP)

18. 4'-0" X 3'-6" 316 SS PLATE BOLT TO WALL WITH 9-1/2" 316 SS HILTI KWIK

19. 24" 316 SS WALL PIPE FROM OZONE SYSTEM

20. 24" OUTLET PIPE TO HATCHERY

21. 30" 316 SS LOCKABLE ACCESS MANWAY

22. 30" 316 SS LOCKABLE ACCESS MANWAY

23. 6" 316 SS DRAIN LINE

24. 6" 316 SS WALL PIPE

25. DEMISTER (PROVIDED BY OZONE MANUFACTURER)

26. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

27. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

28. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

29. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

30. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

31. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

32. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

33. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

34. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

35. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

36. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

37. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

38. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

39. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)

40. 6" PRESSURE VACUUM RELIEF VALVE (PROVIDED BY OZONE MANUFACTURER)
FL ELEV = 1028.55

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION OF PROPOSED DRAIN LINE.

!!! CAUTION !!!
EXISTING OVERHEAD UTILITIES IN VICINITY CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR ELECTRIC FACILITIES

!!! WARNING !!!
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND AVOIDING ALL EXISTING UTILITIES BY CALLING THE "ONE CALL" LOCATOR SERVICE AT 1-800-344-8377 (DIG TESS) OR 1-800-245-4545 TEXAS ONE CALL AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

DRAIN LINE STA 0+00
6" DRAIN LINE WITH CONCRETE SLOPE PROTECTION
N = 7347262.08
E = 1836488.40

DRAIN LINE STA 0+11
6" 90° 316 SS BEND
N = 7347251.60
E = 1836491.16

DRAIN LINE STA 0+24
6" 316 SS PLUG VALVE ASSEMBLY
N = 7347254.85
E = 1836503.49

DRAIN LINE STA 0+27
6" 316 SS PLUG VALVE ASSEMBLY
N = 7347255.61
E = 1836506.39

DRAIN LINE STA 0+29
6" 316 SS TEE
N = 7347255.23
E = 1836504.94

DRAIN LINE STA 0+38
6" 45° 316 SS BEND
N = 7347258.46
E = 1836517.21

DRAIN LINE STA 0+83
6" DRAIN LINE WITH CONCRETE SLOPE PROTECTION
N = 7347235.72
E = 1836556.30

PROPOSED OZONE CONTACT TANK DRAIN LINE

DRAIN LINE STA 0+25
TIE-IN TO OZONE CONTACT TANK DRAIN LINE
N = 7347265.70
E = 1836502.18

DRAIN LINE STA 0+00
TIE-IN TO OZONE CONTACT TANK DRAIN LINE

94 LF OF 6" SCH 10 316L SS DRAIN LINE

PROPOSED OZONE CONTACT TANK

OZONE TANK

DRAIN LINE PLAN AND PROFILE

HORIZONTAL SCALE IN FEET
VERTICAL SCALE IN FEET

SHEET TITLE
HAT CHERY SYSTEM
PROJECT NUMBER: 128632

SHEET NUMBER
11
FOUNDATION NOTES:

1. SCARIFY THE EXISTING GROUND SURFACE BENEATH THE PROPOSED FOUNDATION TO A MINIMUM DEPTH OF 6". REMOVE ALL WEAK AND HIGHLY ORGANIC SOILS PRIOR TO CONSTRUCTION AND RECULATE WITHIN ± 2% OF THE OPTIMUM MOISTURE CONTENT.

2. REPLACE ALL REMOVED SOILS AS NECESSARY WITH SELECT FILL IN 8 INCH LIFTS AND RECULATE IN ACCORDANCE WITH NOTE 1 ABOVE.

3. FOUNDATIONS SHALL BE CONSTRUCTED WITH STRUCTURAL CONCRETE PER SECTION 03305.

4. ANCHOR BOLTS FOR THE PROPOSED EQUIPMENT SHALL BE SIZED, LOCATED, AND INSTALLED IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

5. FOUNDATION DIMENSIONS ARE BASED ON EQUIPMENT DIMENSIONS PROVIDED BY WEDECO. CONTRACTOR SHALL ADJUST DIMENSIONS AS REQUIRED TO ACCOMMODATE APPROVED EQUIPMENT SUBMITTALS AT NO ADDITIONAL COST TO THE OWNER.

6. CJ DENOTES CONTROL JOINT. REFER TO STRUCTURAL DETAILS.
EQUIPMENT FOUNDATION DETAIL

SECTION A-A

2'-0" (TYP.)

3" (TYP.)

6" A

B

INSTALL ANCHOR BOLTS PER MANUFACTURER'S RECOMMENDATIONS (TYP.)

REFERENCE FOUNDATION

NOTES BELOW FOR SUBGRADE PREPARATION

(2) #6 BARS TOP AND BOTTOM (TYP.)

#4 STIRRUPS @ 12" O.C. (TYP.)

#4 BARS @ 12" O.C.

EQUIPMENT FOUNDATION DETAIL

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>FOUNDATION DIMENSIONS (FT)</th>
<th>EQUIPMENT WEIGHT (LBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDBY GENERATOR (WITH FUEL)</td>
<td>14'-0&quot; x 12'-10&quot; x 10,000</td>
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<tr>
<td>CLOSED LOOP CHILLER</td>
<td>9'-0&quot; x 6'-0&quot; x 1,450</td>
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<tr>
<td>COMPRESSED AIR AND O2 BUFFER TANKS</td>
<td>13'-0&quot; x 3'-9&quot; x 1,300</td>
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<tr>
<td>OZONE DESTRUCT SKIDS (x2)</td>
<td>10'-6&quot; x 5'-0&quot; x 1,500 (EACH)</td>
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FOUNDER NOTES:
1. SCARIFY THE EXISTING GROUND SURFACE BENEATH THE PROPOSED FOUNDATION TO A MINIMUM DEPTH OF 6". REMOVE ALL WEAK AND HIGHLY ORGANIC SOILS PRIOR TO CONSTRUCTION AND RECOMPACT TO 95% OF THE STANDARD PROCTOR WITHIN ± 2% OF THE OPTIMUM MOISTURE CONTENT.
2. REPLACE ALL REMOVED SOILS AS NECESSARY WITH SELECT FILL IN 8 INCH LIFTS AND RECOMPACT IN ACCORDANCE WITH NOTE 1 ABOVE.
3. FOUNDATIONS SHALL BE CONSTRUCTED WITH STRUCTURAL CONCRETE PER SECTION 03300.
4. ANCHOR BOLTS FOR THE PROPOSED EQUIPMENT SHALL BE SIZED, LOCATED, AND INSTALLED IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
5. FOUNDATION DIMENSIONS ARE BASED ON EQUIPMENT DIMENSIONS PROVIDED BY WEDECO. CONTRACTOR SHALL ADJUST DIMENSIONS AS REQUIRED TO ACCOMMODATE APPROVED EQUIPMENT SUBMITTALS AT NO ADDITIONAL COST TO THE OWNER.
CONSTRUCTION

1. VERIFY ALL CONDITIONS AT THE JOBSITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. THE CONTRACTOR SHALL COMPLETE THE STRUCTURAL DESIGN WITHIN THE MECHANICAL, ELECTRICAL, AND PLUMBING (MEP) SYSTEMS. THE CONTRACTOR SHALL SUBMIT DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL ELEMENTS.
3. ALL ENCLOSURE ELEVATIONS, ELEVATIONS, AND CONDITIONS SHALL BE SPECIFIED ON THE DRAWINGS. THE CONTRACTOR SHALL COMPLETE THE ENCLOSURE WITHIN THE SPECIFIED TIMEFRAME AND ALL ENCLOSURE REQUIREMENTS PRIOR TO SUBMISSION.

NOTES

1. STRUCTURAL

2. THICK LAYER OF ROCK (COURSE AGGREGATE TYPE A1) ENCAPSULATE ROCK WITH FILTER FABRIC AT 1.23. NO MATERIAL SHALL BE FABRICATED FOR WHICH SHOP DRAWINGS AND/OR ENGINEER SUFFICIENT TIME TO REVIEW DRAWINGS.

3. CONCRETE TEMPERERATURES: 1. DETERMINE DRAWING REQUIREMENTS PRIOR TO SHAPING AND CASTING 8.5 CU. YD. OF CONCRETE. 2. USE OF COMPRESSIVE STRENGTH TESTS TO BE APPLICABLE TO ALL PARTS OF THE CONTRUCTION DOCUMENTS SPECIFIED, OTHERWISE ON PLANS OR DETAILS. DEVIATIONS IN SPLICE LOCATIONS AND LENGTHS ARE NOT ALLOWED UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE

1. CAST PLACE CONCRETE MIX CEMENT SHALL BE AS SHOWN BELOW COMPETITIONS MATERIAL.
2. CAST PLACE IN CONCRETE CEMENT DIRECTLY ON THE FOUNDATION ELEMENTS AS SHOWN IN THE DRAWINGS. CEMENT SHALL BE IN ACCORDANCE WITH ASTM C 31/C 31M.

CONCRETE MIX REQUIREMENTS

1. MINIMUM COMPRESSIVE STRENGTH FOR REINFORCING BAR (C4AF)

REVISED DRAWINGS

1. VERIFY ALL CONDITIONS AT THE JOBSITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. THE CONTRACTOR SHALL COMPLETE THE STRUCTURAL DESIGN WITHIN THE MECHANICAL, ELECTRICAL, AND PLUMBING (MEP) SYSTEMS. THE CONTRACTOR SHALL SUBMIT DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL ELEMENTS.

NOTES

1. STRUCTURAL

2. THICK LAYER OF ROCK (COURSE AGGREGATE TYPE A1) ENCAPSULATE ROCK WITH FILTER FABRIC AT 1.23. NO MATERIAL SHALL BE FABRICATED FOR WHICH SHOP DRAWINGS AND/OR ENGINEER SUFFICIENT TIME TO REVIEW DRAWINGS.

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CONCRETE

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2. CAST PLACE IN CONCRETE CEMENT DIRECTLY ON THE FOUNDATION ELEMENTS AS SHOWN IN THE DRAWINGS. CEMENT SHALL BE IN ACCORDANCE WITH ASTM C 31/C 31M.

CONCRETE MIX REQUIREMENTS

1. MINIMUM COMPRESSIVE STRENGTH FOR REINFORCING BAR (C4AF)

REVISED DRAWINGS

1. VERIFY ALL CONDITIONS AT THE JOBSITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
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3. CONCRETE TEMPERERATURES: 1. DETERMINE DRAWING REQUIREMENTS PRIOR TO SHAPING AND CASTING 8.5 CU. YD. OF CONCRETE. 2. USE OF COMPRESSIVE STRENGTH TESTS TO BE APPLICABLE TO ALL PARTS OF THE CONTRUCTION DOCUMENTS SPECIFIED, OTHERWISE ON PLANS OR DETAILS. DEVIATIONS IN SPLICE LOCATIONS AND LENGTHS ARE NOT ALLOWED UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE

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CONCRETE MIX REQUIREMENTS

1. MINIMUM COMPRESSIVE STRENGTH FOR REINFORCING BAR (C4AF)

REVISED DRAWINGS

1. VERIFY ALL CONDITIONS AT THE JOBSITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. THE CONTRACTOR SHALL COMPLETE THE STRUCTURAL DESIGN WITHIN THE MECHANICAL, ELECTRICAL, AND PLUMBING (MEP) SYSTEMS. THE CONTRACTOR SHALL SUBMIT DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL ELEMENTS.

NOTES

1. STRUCTURAL

2. THICK LAYER OF ROCK (COURSE AGGREGATE TYPE A1) ENCAPSULATE ROCK WITH FILTER FABRIC AT 1.23. NO MATERIAL SHALL BE FABRICATED FOR WHICH SHOP DRAWINGS AND/OR ENGINEER SUFFICIENT TIME TO REVIEW DRAWINGS.

3. CONCRETE TEMPERERATURES: 1. DETERMINE DRAWING REQUIREMENTS PRIOR TO SHAPING AND CASTING 8.5 CU. YD. OF CONCRETE. 2. USE OF COMPRESSIVE STRENGTH TESTS TO BE APPLICABLE TO ALL PARTS OF THE CONTRUCTION DOCUMENTS SPECIFIED, OTHERWISE ON PLANS OR DETAILS. DEVIATIONS IN SPLICE LOCATIONS AND LENGTHS ARE NOT ALLOWED UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE

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2. CAST PLACE IN CONCRETE CEMENT DIRECTLY ON THE FOUNDATION ELEMENTS AS SHOWN IN THE DRAWINGS. CEMENT SHALL BE IN ACCORDANCE WITH ASTM C 31/C 31M.

CONCRETE MIX REQUIREMENTS

1. MINIMUM COMPRESSIVE STRENGTH FOR REINFORCING BAR (C4AF)

REVISED DRAWINGS

1. VERIFY ALL CONDITIONS AT THE JOBSITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. THE CONTRACTOR SHALL COMPLETE THE STRUCTURAL DESIGN WITHIN THE MECHANICAL, ELECTRICAL, AND PLUMBING (MEP) SYSTEMS. THE CONTRACTOR SHALL SUBMIT DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL ELEMENTS.

NOTES

1. STRUCTURAL

2. THICK LAYER OF ROCK (COURSE AGGREGATE TYPE A1) ENCAPSULATE ROCK WITH FILTER FABRIC AT 1.23. NO MATERIAL SHALL BE FABRICATED FOR WHICH SHOP DRAWINGS AND/OR ENGINEER SUFFICIENT TIME TO REVIEW DRAWINGS.

3. CONCRETE TEMPERERATURES: 1. DETERMINE DRAWING REQUIREMENTS PRIOR TO SHAPING AND CASTING 8.5 CU. YD. OF CONCRETE. 2. USE OF COMPRESSIVE STRENGTH TESTS TO BE APPLICABLE TO ALL PARTS OF THE CONTRUCTION DOCUMENTS SPECIFIED, OTHERWISE ON PLANS OR DETAILS. DEVIATIONS IN SPLICE LOCATIONS AND LENGTHS ARE NOT ALLOWED UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE

1. CAST PLACE CONCRETE MIX CEMENT SHALL BE AS SHOWN BELOW COMPETITIONS MATERIAL.
2. CAST PLACE IN CONCRETE CEMENT DIRECTLY ON THE FOUNDATION ELEMENTS AS SHOWN IN THE DRAWINGS. CEMENT SHALL BE IN ACCORDANCE WITH ASTM C 31/C 31M.

CONCRETE MIX REQUIREMENTS

1. MINIMUM COMPRESSIVE STRENGTH FOR REINFORCING BAR (C4AF)
NOTE:
ALL WELDS SHALL BE PER WORKSHOP MANUFACTURER RECOMMENDATIONS.

VERTICAL TEE
MITER CORNERS OF VERTICAL JOINTS AND WELD SIMILAR AS SHOWN BELOW FOR FLAT JOINTS

SECOND WELD
FIRST WELD

6" RIBBED 5/8" THICK WATERSTOP, GREENSTREAK 679 OR ENGINEER APPROVED EQUAL
CONTINUOUS WOOD BLOCKING, REMOVE AFTER SLAB CONCRETE HAS SET

TYPICAL WATERSTOP DETAIL AT BASE OF WALL

INTERSECTIONS
CORNERS

CORNER BAR REINFORCING AT ALL WALLS

HANDRAIL DETAIL
POST TO BE 1 1/2" DIA. SCH 40 ALUMINUM PIPE ASTM B221 6'-0" MAXIMUM SPACE
1/4" x 4" ALUMINUM TOE PLATE
3/8" x 5" x 5" ALUMINUM BASE PLATE
5/8" x 1 1/2" SCH 40 ALUMINUM PIPE ASTM B221
3 1/2" x 1/2" 316 STAINLESS STEEL EXPANSION BOLTS (TYP 4x)

TYPICAL CHAMFER DETAIL
3/4" x 45° CHAMFER ALL EXPOSED EDGES
3 1/2" x 1/2" 316 STAINLESS STEEL EXPANSION BOLTS (TYP 4x)

TYPICAL WATERSTOP JOINT DETAIL
WATERSTOP JOINT DETAIL
WATERSTOP JOINT DETAIL
48 BAR DI.
2'-0" MIN.
CONCRETE SLAB
JOINT SEALANT
1/4" RADIUS
1" EXPANSION JOINT
1" PRE-FORMED EXPANSION JOINT FILLER

EXPANSION JOINT DETAIL

NOTE:
TYPICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY. MAINTAIN TYPICAL REINFORCEMENT SPACING AND CUT BARS AS REQUIRED TO ENSURE A 2" CLEAR COVER AROUND OPENINGS.

TYPICAL REINFORCEMENT AT CONCRETE WALL/SLAB OPENING

TYPICAL REINFORCEMENT AT CONCRETE WALL/SLAB OPENING

ELEVATION

TYPICAL REINFORCEMENT AT CONCRETE WALL/SLAB OPENING

ELEVATION
ALL PROPOSED PIPE AND FITTINGS SHALL BE STAINLESS STEEL FOR INSTALLATION AFTER OZONE INJECTION (BLOW OFF VALVE ON PROPOSED 30")
NOTES:
1. GATE SHALL BE 8' TALL, 15 8" 16 GA. GALVANIZED TUBING W/ 4" x 4" GALVANIZED WIRE MESH WELDED TO FRAME.
2. GATE LEAVES TO BE SIZED AND MOUNTED SUCH THAT GAPS BETWEEN GATE LEAVES, GATE POSTS, AND GROUND IS NOT MORE THAN 2" OR LESS THAN 1".
3. CONCRETE SHALL BE CLASS A
4. GATE TO SWING IN THE DIRECTION SHOWN ON THE PLANS.
5. CONTRACTOR TO PROVIDE 2' OF GALVANIZED CHAIN & COMBINATION LOCK MEETING TPWD REQUIREMENTS FOR EACH GATE.

TYPICAL 8' GAME FENCE INSTALLATION DETAIL

NOTES:
1. GAME FENCE WIRE FABRIC SHALL BE A NOMINAL 96", FIXED-KNOT GAME FENCE WITH 20 HORIZONTAL WIRES, WITH HORIZONTAL OPENINGS OF 6-3", 2-4", 2-5", 3-6", AND 6-7" AND 6 INCH HORIZONTAL SPACING BETWEEN THE VERTICAL STAY WIRES SHALL BE USED.
2. LINE POSTS SHALL BE 2.375"Ø STEEL PIPE INSTALLED EVERY 125' (MAX.)
3. TEE POSTS SHALL BE 1.5 LBS/FT STEEL PIPE INSTALLED EVERY 25' (MAX.) USE 25' POST SPACING AS A GUIDELINE. IN ROUGH TERRAIN, A CLOSER POST SPACING WILL BE REQUIRED.
4. A LINE POST SHOULD BE PLACED ON TOP OF HILLS AND BOTTOM OF ALL DIPS. THE RATIO OF TEE POSTS TO LINE POSTS SHOWN WILL ENSURE THE SPACE BETWEEN LINE POSTS IS 125'.
5. CAP ALL PIPE WITH A PRESSED STEEL PIPE CAP.
6. CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3500 (CLASS A).
7. LINE BRACES SHOULD BE SPACED EVERY 1000' (MAX.) SEE DETAIL, THIS SHEET.

TYPICAL MANUAL/SWING GATE FOR 8' GAME FENCE DETAIL

NOTES:
1. CONTRACTOR SHALL SUBMIT PROPOSED FENCE MATERIAL AND RELATED SUPPLIES WITH CERTIFICATION OF SPECIFICATIONS COMPLIANCE FOR APPROVAL PRIOR TO PURCHASE OR DELIVERY OF ANY MATERIALS.
2. ALL POSTS AND BRACES SHALL BE GALVANIZED.
3. ALL TENSION WIRE AND WIRE TIES SHALL BE OF THE SAME MATERIAL IDENTIFIED WITH THE FABRIC TYPE. WIRE TIES SHALL BE 12 1/2 GA. ASW.
4. AREAS DISTURBED BY FENCING OPERATIONS SHALL BE SEEDED AND FERTILIZED.
5. GROUNDING OF FENCE IS REQUIRED. ALL GROUNDS SHALL BE INSTALLED DIRECTLY UNDER THE CROSSING OF OVERHEAD ELECTRICAL POWER LINES AND AT 500' INTERVALS.
6. OPENINGS BELOW FABRIC SHALL NOT EXCEED 4" WHERE TERRAIN CAUSES SLACK IN BOTTOM OF THE FABRIC. THE BOTTOM OF THE FABRIC SHALL BE SECURED BY STEEL STAKES 30" IN LENGTH, SPACED ADEQUATELY TO PREVENT WILDLIFE FROM GETTING BENEATH FABRIC.
7. DURING FENCE POST CONSTRUCTION, CARE SHALL BE EXERCISED TO PREVENT MARRING OR BUCKLING. DAMAGED POSTS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
8. IF THE NEED FOR ROCK EXCAVATION OR DRILLING THROUGH ROCK BECOMES PRESENT, NO EXTRA COMPENSATION OR EXTENSION OF TIME SHALL BE MADE.
9. THE PIPE BRACE ASSEMBLY SHOWN ON THIS SHEET SHALL BE USED FOR ALL CORNER, END AND GATE POSTS AND AT 1,000' INTERVALS.
10. ALL MATERIAL SPECIFICATIONS FOR THE CONSTRUCTION OF THE SWING GATE SHALL MATCH THOSE OF THE WILDLIFE FENCE UNLESS OTHERWISE SPECIFIED.
NOTES:
1. OVERHEAD PRIMARY EXTENSION TO BE CONTRACTED BY TPWD.

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NOTES:

1. SET LEVEL CONTROLLER/TOP HEAD REQUIRED TO DELIVER 2000 GPM TO HIGHEST POND LEVEL.

2. POND VALVES CONTROL FLOW RATE. OPERATOR MUST CHECK FLOW METER AHEAD OF PONDS TO INSURE FLOW IS GREATER THAN 200 GPM.

3. O3 PRESENT CLOSES FV-1102.

4. 12,445 GAL. OUTLET BOX. SIX MINUTES 13 SECONDS AT 2000 GPM. DISSOLVED O3 ANALYZER RESPONSE TIME IS 30 SECONDS.
PROJECT NUMBER: 128632
HATCHERY OZONE SYSTEM AT DUNDEE FISH HATCHERY
ELECTRICAL
SITE PLAN
E-4.1

KEYED NOTES:
1 PROVIDE POWER, CONTROL, & INSTRUMENTATION CONDUIT & CABLE AS CALLED FOR IN APPROVED SUBMITTALS. TYPICAL FOR ALL EQUIPMENT OUTSIDE O3 CONTAINER BUILDING.
2 2X: 3EA. 3/0, 1#3 - 2"C
3 2X: 3EA. 3/0, 1#3 - 2"C, 2#14 - 0.5"C, & 6#10 - 0.75"C. CONDUIT ONLY IF ADD. ALT. GEN. NOT AWARDED.
4 1"C - CABLE FROM FE TO FIQT-1102
5 #12 - 0.5"C FROM SUMP PUMP RECEPTACLE TO PDP 41.2
6 2/C#16SH - 0.75"C FROM ZSH-41.1 TO PLC
7 6EA. 2/C#16SH - 1.5"C FROM HV-904 TO PLC
8 2/C#16SH - 1.5"C FROM FIQT-1102 TO PLC
9 2/C#16SH - 1.5"C FROM ZSH-41.1 TO PLC
10 GENERATOR, CONDUIT(S) FROM GENERATOR TO DESIGNATED MARK, CONDUCTORS FROM GENERATOR TO ATS, AND SCADA ARE ADD. ALTERNATE ITEMS ONLY. GROUND CABLES FROM GROUND LOOP TO GENERATOR ARE ADD. ALTERNATE ITEMS.
**Sheet Title:**

**Sheet Number:**

**Project Number:** 128632

**Hatchery Ozone System at Dundee Fish Hatchery**

**Electrical Details I**

**TYPICAL CONDUIT DETAIL**

- **NOTES:**
  - All above ground conduit, whether or not associated with stub-up, shall be RSC (Rigid Steel Conduit).

**FLOW METER VAULT DETAIL**

- **NOTES:**
  - Field verify location of existing utilities, conduit, etc. prior to construction.

**TYPICAL RACK LAYOUT**

- **NOTES:**
  - CBDS 41.1 600AF/###AT SE NEMA 3R

**SECTION - ELEVATION VIEW**

- **NOTES:**
  - 2x: 4ea. 3/0 & 1#3 - 2"C GND.

**PULL BOX DETAIL**

- **NOTES:**
  - Use the following conduit and wire sizes that are shown in the plans and the drawings.

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SHEET TITLE:
PROJECT NUMBER: 128632
HATCHERY OZONE SYSTEM AT DUNDEE FISH HATCHERY
ELECTRICAL
DETAILS II
E-6.2

METER POLE DETAIL

LEGEND:

1.5" CABLE BY UTILITY .CO
WEATHERHEAD
2X: 4EA. 3/0 & 1#3 - 2" C
WOOD POLE BY UTILITY CO.
CT METER
GROUND ROD
0.75" x 30'
TO CBDS 41.1

DIESEL ENGINE DRIVEN GENERATOR P & I
DIAGRAM AT OZONE EQUIPMENT SITE
ADD. ALTERNATE ITEM

LESION:

FOR GENERATOR AT O3 PRODUCTION EQUIPMENT

SECTION - ELEVATION VIEW

THIS SPACE NOT USED

THIS SPACE NOT USED

THIS SPACE NOT USED

THIS SPACE NOT USED

ADD. ALTERNATE ITEM

SELF CONTAINED FUEL TANK

LOCAL PANEL
ALARMS
SCADA
ALARMS
AND INDICATORS

FACTOR LI

FUEL LT

LUBRICANT PSLL

COOLANT

OVERCRANK COOLANT

COOLANT TSL

GX00

LSL

GX01

XSHH

GX02

TSHH

GX03

XAHH

GX02

LAL

GX01

TAL

GX00

DOOR SWITCH

ZS

GX07

ZAH

GX07A-F

XA

GX00 GENERATOR FAULT

LEGEND:

X=1 FOR GENERATOR AT O3 PRODUCTION EQUIPMENT

THIS SPACE NOT USED

THIS SPACE NOT USED

THIS SPACE NOT USED

THIS SPACE NOT USED

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