PIPING SITE PLAN

N.C. HIGHWAY 55

SUBMERGED TURBINE PUMP

TANK INTERSTITIAL MONITOR

TANK LEVEL PROBE

VENT AND VAPOR

FIRE EXTINGUISHER

ITEM # REFERENCE

FILL

E-STOP

DESIGNED BY J. DOOLEY CHECKED BY J. DOOLEY AS SHOWN

NOT RELEASED FOR CONSTRUCTION

048231

DATE

12/23/2022

DRAWN BY

J. FRENCH

7630.10 SHEET NO.

PE01

1. QUANTITIES SHOWN HEREIN HAVE BEEN PROVIDED FOR INFORMATION PURPOSED ONLY. CONTRACTOR SHALL CONFIRM ALL QUANTITIES PRIOR TO PREPARING A BID AND PRIOR TO INITIATING ON-SITE ACTIVITY. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING MATERIALS AND EQUIPMENT AS NEEDED FOR SYSTEM INSTALLATION. ALLOW FOR CUTTING LOSSES AND WASTAGE WHEN ORDERING PIPING.

2. SELECT STP SUMP HEIGHT BASED ON TANK BURIAL DEPTH NEEDED FOR PIPE INSTALLATION.

ITEM / PART DESCRIPTION:

12,000 GALLON UNDERGROUND STORAGE TANK [COMPARTMENT] (PRM)

8,000 GALLON UNDERGROUND STORAGE TANK [COMPARTMENT] (NE)

- 3. VERIFY DISPENSER PACKAGES WITH OWNER PRIOR TO ORDERING. DISPENSER PACKAGES SHALL INCLUDE MECHANICAL TOTALIZERS, SPEAKERS,
- CALL BUTTONS, AND INTERCOMS.
- 4. COORDINATE MONITORING CONSOLE SPECIFICATIONS WITH OWNER. SHALL HAVE ETHERNET TCP/IP COMMUNICATIONS MODULE. COORDINATE REMOTE POLLING REQUIREMENTS.
- 5. CONTRACTOR SHALL USE COMPONENTS THAT COMPLY WITH ALL REQUIREMENTS OF (NESHAP) EPA REGULATION 40 CFR PART 63 AS APPLICABLE TO THIS PROJECT.
- 6. PETROLEUM PIPING SHOWN SCHEMATICALLY. CONTRACTOR SHALL INSTALL PIPING PER FIELD CONDITIONS WITH DEVELOPER REPRESENTATIVE'S APPROVAL.
- 7. AN APPROVED, CLEARLY IDENTIFIED, AND READILY ACCESSIBLE EMERGENCY FUEL SHUT-OFF SWITCH SHALL BE PROVIDED AND LOCATED NO FURTHER THAN 100 FEET TRAVEL DISTANCE, BUT NOT LESS THAN 20 FEET FROM THE FUEL DISPENSER, SUCH DEVICE SHALL BE DISTINCTLY LABELED AS "EMERGENCY FUEL SHUTOFF". (2018 NCFC 2303.2)
- 8. DISPENSER OPERATING INSTRUCTIONS MUST BE CONSPICUOUSLY POSTED IN AN APPROVED LOCATION ON EVERY DISPENSER. (2018 NCFC
- 9. DISPENSING DEVICES SHALL BE IN CLEAR VIEW OF THE ATTENDANT AT ALL TIMES. OBSTRUCTING SHALL NOT BE PLACED BETWEEN THE DISPENSING AREA AND THE ATTENDANT. (2018 NCFC 2304.2.4)
- 10. THE ATTENDANT SHALL BE ABLE TO COMMUNICATE WITH PERSONS IN THE DISPENSING AREA AT ALL TIMES. AN APPROVED METHOD OF COMMUNICATING WITH THE FIRE DEPARTMENT SHALL BE PROVIDED FOR THE ATTENDANT. (2018 NCFC 2304.2.5)
- 11. APPROVED EMERGENCY PROCEDURES SIGNS SHALL BE POSTED IN A CONSPICUOUS LOCATION AND SHALL READ (2018 NCFC 2304.3.5):
 - IN CASE OF FIRE, SPILL OR RELEASE
 - 1. USE EMERGENCY PUMP SHUTOFF
 - 2. REPORT THE ACCIDENT!

Item #:

105

214

224

FIRE DEPARTMENT TELEPHONE NO. _____

101 20,000 GALLON UNDERGROUND STORAGE TANK (REG)

EMCO COMPOSITE 42" MANHOLE W/ CAM LOCK

3.0 HP FIXED SPEED STP-TRUCK DIESEL

5.0 HP FIXED SPEED STP-TRUCK DIESEL

FE PETRO 2 HP FIZED SPEED W/ MAG SHELL, NO RISER

210 42" TANK STP CONTAINMENT SUMP

SUMP RESIN KIT

2" BALL VALVE

226 UNITED SIGN FILL PIPE ID TAG

FILL SPILL BUCKET

VAPOR BUCKET

4" FILL CAP

VAPOR CAP

228 UNITED SIGN VAPOR RECOVERY ID TAG

8' OPW OVERFILL DROP TUBE

SWIVEL FILL ADAPTOR

SWIVEL VAPOR ADAPTOR

10' OPW OVERFILL DROP TUBE

EXTRACTOR VALVE 4x4x2 (NO CAGE)

STAGE II EXTRACTOR ASSEMBLY

4" DURATUFF BLACK PIPE CAP

2" PRESSURE VACUUM VENT

BRAVO 2" FLANGED FITTING

BRAVO STABILIZER BAR

DOUBLE LAYER 4" CHASE PIPING

2" SINGLE WALL FIBERGLASS PIPING

3" SINGLE WALL VENT PIPING (HARD PIPE)

18" DIA. MANHOLE WITH STEEL COVER

FLEX CONN 1.5" x 18" MxM SWIVEL END

1" x 3/4" CONDUIT DISPENSER ENTRY BOOT (IF NECESSARY)

SUMP PENETRATION BOOT (CONDUITS) (ROUNDED SUMP SURFACES)

BRAVO 1000E FIBERGLASS SUMP FOR ENCORE DISPENSER

48" TANK STP CONTAINMENT SUMP

12,000 GALLON UNDERGROUND STORAGE TANK (DSL)

20,000 GALLON UNDERGROUND STORAGE TANK (XXXXXXXXX)

- FACILITY ADDRESS
- 12. APPROVED PORTABLE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2-A:20-B:C SHALL BE PROVIDED AND LOCATED SUCH THAT AN EXTINGUISHER IS NOT MORE THAN 75 FEET FROM PUMPS, DISPENSERS, OR STORAGE TANK FILL-PIPE OPENINGS. (2018 NCFC 2305.5)
- 13. WARNING SIGNS SHALL BE CONSPICUOUSLY POSTED WITHIN SIGHT OF EACH DISPENSER IN THE FUEL DISPENSING AREA AND SHALL STATE THE FOLLOWING: 1) NO SMOKING; 2) SHUT OFF MONITOR; 3) DISCHARGE YOUR STATIC ELECTRICITY BEFORE FUELING BY TOUCH A METAL SURFACE AWAY FROM FUELING NOZZLE; 4) TO PREVENT STATIC CHARGE, DO NOT REENTER YOUR VEHICLE WHILE GASOLINE IS PUMPING; 5) IF A FIRE STARTS, DO NOT REMOVE NOZZLE - BACK AWAY IMMEDIATELY; 6) IT IS UNLAWFUL AND DANGEROUS TO DISPENSE GASOLINE INTO UNAPPROVED CONTAINER; 7) NO FILLING OF PORTABLE CONTAINERS IN OR ON A MOTOR VEHICLE. PLACE CONTAINER ON GROUND BEFORE FILLING. (2018 NCFC 2305.6)

MANUFACTURER:

CONTAINMENT SOLUTIONS

EMCO WHEATON

FRANKLIN FUELING

RED JACKET

RED JACKET

OPW

UNITED SIGN

UNITED SIGN

EMCO WHEATON

EMCO WHEATON

OPW

OPW

OPW

OPW

OPW

OPW

OPW

OPW

FRANKLIN FUELING

FRANKLIN FUELING

BRAVO

AS APPROVED BY OWNER

PRESCO

AMERON

OPW

AMERON

NOV FIBERGLASS

NOV FIBERGLASS

BRAVO

OPW

BRAVO

EXISTING/UNKNOWN

BRAVO

RIVERSIDE STEEL

PRODUCT TANKS:

TURBINE / TANK SUMP EQUIPMENT:

SPILL CONTAINMENT OVERFILL PROTECTION, VENT AND VAPOR RECOVERY:

PIPE AND FITTINGS:

ISLAND EQUIPMENT:

MODEL / PART #:

DOUBLE WALL TANK

DOUBLE WALL MULTI-COMPARTMENT TANK

DOUBLE WALL MULTI-COMPARTMENT TANK

DOUBLE WALL TANK

DOUBLE WALL TANK

FIBERGLASS

FIBERGLASS

RESIN KIT

A0716-042C

FE-STPM200-VL2

3.0 HP FIXED SPEED STP; LENGTH BY CONTRACTOR

5.0 HP FIXED SPEED STP; LENGTH BY CONTRACTOR

21BV-0200 (BRASS); 21BV-0200SS (STAINLESS STEEL)

A1004EVR-317SS

A1004EVR-317SS

71SO-400C

71SO-410C

634TT-EVR

61SALP-EVR

233-4420

233-4432

61VSA-EVR

1711T-EVR/116-7085

623V-2203

FF20X14HMXM346

FF15X18HMXM346

F-20-FF

D3105Y5-457

AMERON-DUALOY 3000/LCX

AXP40

AMERON-DUALOY 3000/L

DUALOY 3000/L

PSX-34

F-07-FF-10PK

DEB-0075C (3/4"); DEB-0075 (1")

B1000-ENC

BRKT-1000-ENC

3X5X13

QUANTITY: UNIT: FURNISHED BY: INSTALLED BY:

EA

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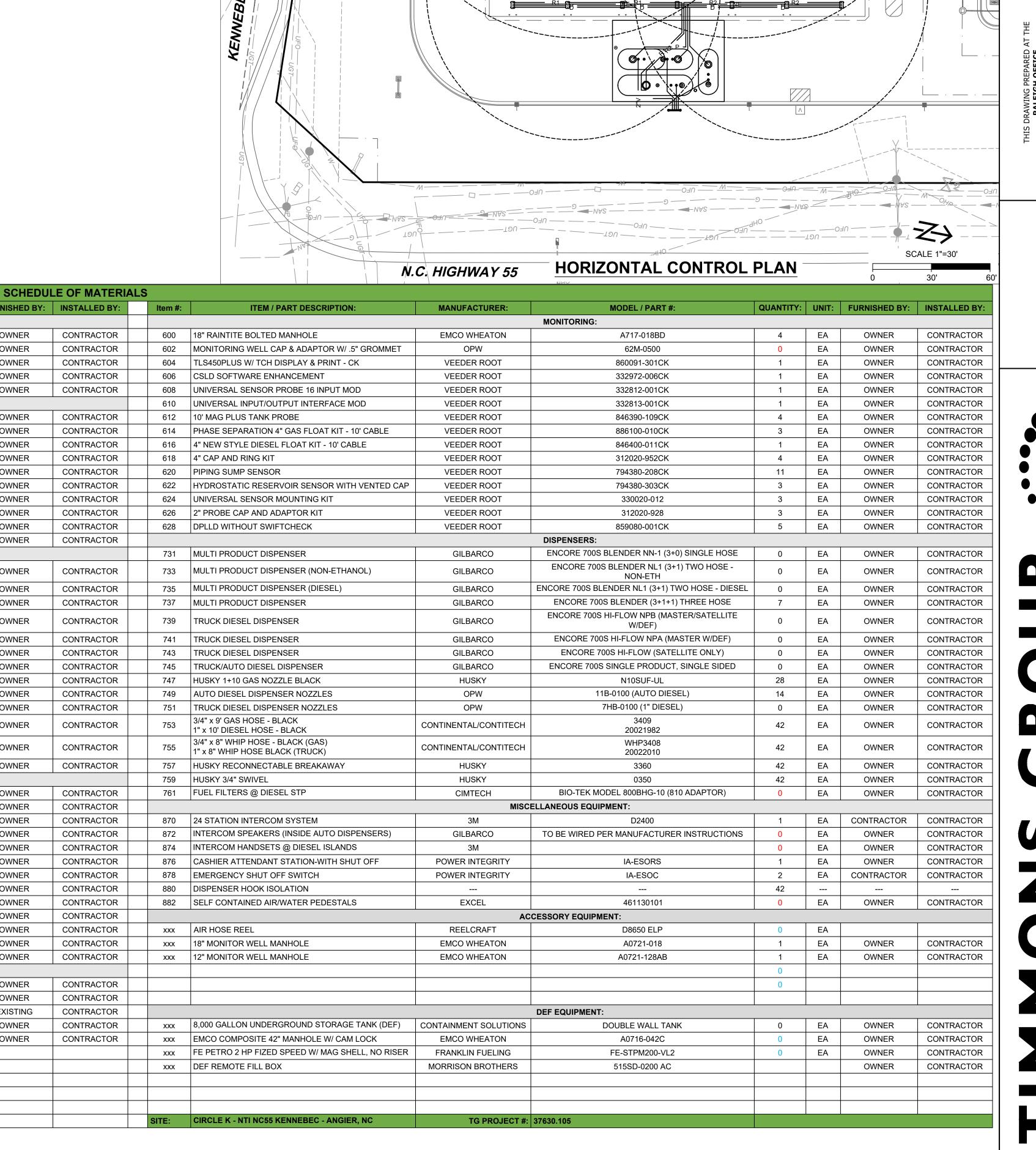
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## NAMITTE BOLTED MANIBELE	MONITOR DESCRIPTION	## ITEM / PART DESCRIPTION ***** ***** ***** ***** ***** ****	STOP	
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HUSKY 1+10 GAS NOZZLE BLACK	HUSKY 1+10 GAS NOZZLE BLACK	HUSKY 1+10 GAS NOZZLE BLACK		CONTRACTOR
TRUCK DIESEL DISPENSER NOZZLES	TRUCK DIESEL DISPENSER NOZZLES	TRUCK DIESEL DISPENSER NOZZLES OPW 7HB-0100 (1" DIESEL) 0 EA		CONTRACTOR
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HUSKY RECONNECTABLE BREAKAWAY	NUMBER 1997	HUSKY RECONNECTABLE BREAKAWAY	OWNER	CONTRACTOR
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8,000 GALLON UNDERGROUND STORAGE TANK (DEF) CONTAINMENT SOLUTIONS DOUBLE WALL TANK 0 EA OWNER CONTRACTOR EMCO COMPOSITE 42" MANHOLE W/ CAM LOCK EMCO WHEATON A0716-042C 0 EA OWNER CONTRACTOR FE PETRO 2 HP FIZED SPEED W/ MAG SHELL, NO RISER FRANKLIN FUELING FE-STPM200-VL2 0 EA OWNER CONTRACTOR	8,000 GALLON UNDERGROUND STORAGE TANK (DEF) CONTAINMENT SOLUTIONS DOUBLE WALL TANK 0 EA OWNER CONTRACTOR EMCO COMPOSITE 42" MANHOLE W/ CAM LOCK EMCO WHEATON A0716-042C 0 EA OWNER CONTRACTOR FE PETRO 2 HP FIZED SPEED W/ MAG SHELL, NO RISER FRANKLIN FUELING FE-STPM200-VL2 0 EA OWNER CONTRACTOR	8,000 GALLON UNDERGROUND STORAGE TANK (DEF) CONTAINMENT SOLUTIONS DOUBLE WALL TANK 0 EMCO COMPOSITE 42" MANHOLE W/ CAM LOCK EMCO WHEATON A0716-042C 0 EA		
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OT RELEASED FOR CONSTRUCTION 12/23/2022 DRAWN BY J. FRENCH DESIGNED BY J. DOOLEY CHECKED BY J. DOOLEY AS SHOWN

337 460 STABILIZER BAR KIT 462 | FLEX CONN 2" x 14" MxM SWIVEL END 470 DETECTABLE TRACER TAPE - YELLOW 472 2" DOUBLE WALL FIBERGLASS PIPING 480 HARD PIPE ADHESIVE 482 BRAVO 3/4 FIBERGLASS CONDUIT ENTRY 10 PACK W/ GLUE 591 SHEAR VALVE - OPW 10 PLUS DOUBLE POPPET 595 EXISTING DISPENSER SUMP 599 3' x 5' x 13" DISPENSER ISLAND FORMS

SHEET NO. PE02

7630.105

.0 EXCAVATION AND BACKFILL

A.EXCAVATION:

IF UNEXPECTED WATER CONDITION OR ROCK IS ENCOUNTERED, IMMEDIATELY CONTACT THE OWNER FOR INSTRUCTIONS BEFORE PROCEEDING WITH THE EXCAVATION.

B. TANK HOLE SIZE IN UNSTABLE SOIL:

SIZE AND EXCAVATION PERIMETER TO ALLOW 36" MINIMUM BETWEEN TANKS, 36" MINIMUM BETWEEN TANK SIDES AND END CAPS, AND 24" MINIMUM BETWEEN END CAPS AND THE WALL OF THE TANK HOLE.

C.TANK HOLE SIZE IN UNSTABLE SOIL:

1. UNSTABLE SOIL IS DEFINED AS HAVING LESS THAN 750 LBS./SQ. FT. COHESION, AS CALCULATED FROM AN UNCONFINED COMPRESSION TEST, OR SOILS WITH AN ULTIMATE BEARING CAPACITY OF LESS THAN 3,500 LBS./SQ. FT. LOOSE SAND, MUCK, BOG, PEAT, SWAMP OR LANDFILL WHERE SOIL IS SOFT ARE GENERALLY CONSIDERED UNSTABLE SOILS.

- 2. SIZE EXCAVATION PERIMETER TO ALLOW 36" MINIMUM BETWEEN TANKS AND A MINIMUM OF QUARTER THE TANK DIAMETER BETWEEN THE TANK ASIDES/END CAPS AND THE WALL OF THE TANK HOLE.
- 3. PERMANENT SHORING MAY BE USED TO STABILIZE THE WALLS OF THE TANK HOLE, AT THE DISCRETION OF THE CONTRACTOR. IF PERMANENT SHORING IS USED, FOLLOW "STABLE SOIL" SIZE CRITERIA. REFER TO "ALTERNATE BACKFILL MATERIALS" BELOW.

D.DEPTH OF TANK HOLE:

1. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING THE TANK HOLE DEPTH, CONSIDERING THE LENGTH OF PIPING RUNS, TO THE PUMP BLOCKS AND VENT RISERS, PIPE BURIAL DEPTH, YARD SLOPE AND THE FOLLOWING CRITERIA: (MEASURE AT THE REMOVE PUMP OPENING).

a. THE MINIMUM DEPTH OF COVER IS 4'-6" AND THE MAXIMUM IS 7'-0".

E. SAFETY REQUIREMENT:

NO PERSON SHALL ENTER A TANK HOLE EXCAVATION BELOW THE 5 FT. DEEP LEVEL UNLESS THE WALLS ARE SHORED OR SIDE SLOPED AS PRESCRIBED BY CURRENT OSHA REGULATIONS AND THE TRENCH SAFETY ACT OF 1986. NO EXCEPTIONS. STATE OR LOCAL REQUIREMENTS THAT ARE MORE RESTRICTIVE THAN COMPLY SPECIFICATIONS ARE TO BE ADHERED TO AS THOUGH SPECIFIED IN COMPANY SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DESIGN, MATERIALS, EQUIPMENT, PERMITS, ETC., FOR SHORING OR SIDE SLOPING A HOLE.

F. FILL AND BACKFILL:

ALL FILL MATERIAL SHALL BE PEA GRAVEL PER TANK MANUFACTURER'S RECOMMENDATIONS.

.1 BALLAST

CLEAN WATER IS TO BE USED AS A BALLAST UNDER ALL CONDITIONS WHERE BALLAST IS REQUIRED.

B.DRY HOLE CONDITION

TANKS, WITH BACKFILL TO TOP OF TANKS, MUST BE BALLASTED IF THERE IS ANY CHANCE THAT SURFACE OR SUBSURFACE WATER WILL ENTER THE TANK HOLE TO A DEPTH OF 36" OR GREATER ABOVE THE BOTTOM OF THE TANKS.

ATTEMPT TO PUMP WATER FROM THE TANK HOLE TO MAINTAIN A "DRY HOLE CONDITION". IF UNABLE TO OBTAIN AND "DRY HOLE CONDITION," OWNER IS TO BE NOTIFIED AND WILL DETERMINE THE COURSE OF ACTION TO BE FOLLOWED. INSTALL FILTER FABRIC, TIE-DOWN "LOGS", AND BEDDING AS SPECIFIED ELSEWHERE. AFTER BACKFILL TO TOP OF TANK, FILL WITH WATER UNTIL THE COMPLETION OF INSTALLATION. CAUTION - BALLAST LEVEL MUST NEVER EXCEED WATER OR BACKFILL LEVEL IN THE

HOLE DURING INSTALLATION. DO NOT REMOVE BALLAST UNTIL TANK SLAB HAS BEEN POURED. DO NOT

SET REMOTE PUMP MOTOR UNTIL BALLAST WATER HAS BEEN REMOVED FROM TANK. .2 DOUBLE WALL / FRP TANK INSTALLATION:

A.MATERIALS:

1. DOUBLE-WALL UNDERGROUND STORAGE TANKS AS SUPPLIED BY OWNER ARE TO BE INSTALLED BY CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS SUPPLIED BY MANUFACTURER

.3 HANDLING OF TANKS:

A. RESPONSIBILITY:

THE CONTRACTOR IS RESPONSIBLE FOR OFF-LOADING THE TANKS FROM THE DELIVERY VEHICLE. A CRANE OR BACKHOE OF SUFFICIENT LIFTING CAPACITY MUST BE USED. THE WEIGHT OF THE DOUBLE WALL TANK IS APPROXIMATELY 14,000 POUNDS.

B. LIFTING & MOVING:

WHEN LIFTING OR MOVING A TANK, ALWAYS USE PROPERLY SIZED EQUIPMENT AND LIFT BY LIFTING LUG(S). ON LARGE TANKS, GREATER THAN 8' DIAMETER, USE A SPREADER BAR TO ENSURE A LIFT ANGLE OF AT LEAST 45° AT EACH LIFTING LUG. NEVER ROLL OR USE CABLES OR CHAINS AROUND A TANK. SET ON SMOOTH GROUND, FREE OF ROCKS AND FOREIGN OBJECTS. EXCEPTION - TANK CAN BE ROLLED UP TO 90° ON A SMOOTH CLEAN SURFACE.

C. CHOCKING:

TANKS ARE TO BE CHOCKED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION UNTIL READY FOR INSTALLATION. IF WINDY CONDITIONS EXIST OR ARE EXPECTED, ANCHOR TANKS USING MINIMUM 1/2" NYLON OR HEMP ROPE OVER EACH TANK AND SECURE TO STAKES OF ADEQUATE SIZE TO PREVENT MOVEMENT OF THE TANKS.

D. OPENINGS:

ALL TANKS ARE SHIPPED WITH DUST COVERS OR STEEL PLUGS IN EACH OPENING. DUST COVERS ARE TO REMAIN IN EACH OPENING UNTIL READY FOR THE PRE-INSTALLATION PRESSURE TEST. ALL TANKS MUST HAVE EITHER A DUST CAP OR STEEL PLUGS IN PLACE OR A 5 PSI PRESSURE RELIEF VALVE IN PLACE AT

E. DAMAGE:

- 1. INSPECT ALL TANKS CAREFULLY FOR SIGNS OF DAMAGE UPON RECEIPT. NOTE ANY DAMAGE ON THE SHIPPING DOCUMENTS AND NOTIFY THE OWNER. CONTACT THE TANK MANUFACTURER FOR ADDITIONAL INFORMATION.
- 2. IF THE TANK IS DAMAGED AT ANY OTHER TIME, DO NOT ATTEMPT REPAIRS. NOTIFY THE OWNER WHO WILL BECOME AWARE OF THE COURSE OF ACTION.

SET TANKS FLAT ON PREPARED BED. THE ACCEPTABLE RANGE OF SLOPE IS 1" MAXIMUM AND 0" MINIMUM; WITH THE FILL END LOWER THAN REMOTE PUMP END OF THE TANK. TANKS THAT EXCEED THE ACCEPTABLE SLOPE OR SLOPE DOWNWARD TO THE REMOTE PUMP END MUST BE PROPERLY RESET

G.INSTALLATION WITH IMPROVED MATERIALS:

1. PLACE A 12" LIFT OF BACKFILL EVENLY AROUND THE TANKS. PUSH BACKFILL COMPLETELY UNDERNEATH AND AROUND THE TANK. PROCEDURE CAN BE DONE FROM BANK OR ADJACENT TANK TOP. IF A MAN WILL BE IN THE HOLE TO "WORK" THE BACKFILL, HOLE MUST BE SHORED OR SIDE

2. PLACE SECOND 12" LIFT OR BACKFILL EVENLY AROUND THE TANKED. ADD BACKFILL EVENLY AROUND THE TANKS UP TO THE TOPS OF THE TANKS.

3. BACKFILL TO SUBGRADE AFTER PIPING AND TESTING IS COMPLETED.

SLOPED AS PRESCRIBED BY CURRENT OSHA REGULATIONS.

H. INSTALLATION WITH ALTERNATE MATERIALS:

ALL ALTERNATE MATERIALS MUST RECEIVE WRITTEN APPROVAL FROM THE TANK MANUFACTURER

.4 TANK TESTING

A.PRE-INSTALLATION TEST SET UP:

PRIOR TO THE PRE-INSTALLATION TEST, ALL SHIPPING PADS MUST BE REMOVED FROM THE TANK AND THE VACUUM ON THE INTERSTITIAL SPACE MUST BE RELEASED. A VACUUM ON THE INTERSTITIAL SPACE IS SUBSTITUTE FOR THE PRE-INSTALLATION TEST. ALL INSTALLATION TESTS MUST BE PERFORMED AND RECORDED ON ACCEPTABLE FORMS.

THE OWNER MUST OBSERVE ALL TESTS. NOTIFY AT LEAST 24 HOURS IN ADVANCE OF ANY TESTS.

C.PRESSURE APPLICATION SYSTEM:

THE PRESSURE APPLICATION SYSTEM IS TO HAVE TWO PRESSURE GAUGES (RANGE 0 TO 10 PSI WITH 5 PSI PRESSURE RELIEFS) IN THE SYSTEM, BOTH IN GOOD CONDITION AND HAVING BEEN TESTED AND CALIBRATED WITHIN A THREE-MONTH PERIOD PRIOR TO THE TANK TEST (COPY OF THE TEST AND CALIBRATION DATA TO BE FURNISHED TO THE OWNER UPON REQUEST). USE EXTREME CARE AROUND AND NEAR THE PRESSURIZED TANK. RELIEVE THE PRESSURE PRIOR TO MOVING THE TANK OR REMOVING ANY FITTINGS. NEVER PRESSURIZE THE SECONDARY (OUTER) TANK WITHOUT PRESSURING THE PRIMARY (INNER) TANK FIRST.

D.LEAKING TANKS:

DO NOT INSTALL A TANK WHICH SHOWS ANY EVIDENCE OF A LEAK. THE OWNER IS TO BE NOTIFIED OF ANY DAMAGE AND WILL BECOME AWARE OF THE COURSE OF ACTION TO BE FOLLOWED.

E. SCOPE OF WORK: THE CONTRACTOR IS RESPONSIBLE FOR ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO CONDUCT THE FOLLOWING TESTS: PRE-INSTALLATION PRESSURE TEST, AIR AFTER-INSTALLATION

PRESSURE TEST, AIR OR HYDROSTATIC F. PRE-INSTALLATION PRESSURE TEST, AIR:

EXTREME CARE IS TO BE USED AROUND AND NEAR THE PRESSURIZED TANK. NEVER PRESSURIZE THE SECONDARY (OUTER) TANK WITHOUT PRESSURIZING THE PRIMARY (INNER) TANK.

1. PRIMARY (INNER) TANK TEST: TIGHTEN ALL TANK FITTINGS. LOCATE A PRESSURE GAUGE IN THE VENT/MONITOR FITTING IN THE SECONDARY (OUTER) TANK. LOCATE A SECOND PRESSURE GAUGE AT A FITTING IN THE MANWAY AND CONNECT THE AIR PRESSURE HOSE TO THE SAME FITTING. PRESSURIZE THE PRIMARY (INNER TANK TO

A MINIMUM OF 4 PSI, MAXIMUM 5 PSI. MONITOR THE PRESSURE GAUGES A MINIMUM OF 1/2 HOUR. THERE

SHOULD BE NO PRESSURE INCREASE IN THE SECONDARY (OUTER) TANK. SOAP ALL TANK FITTINGS.

G.POST-INSTALLATION PRESSURE TEST, AIR:

1. PRIMARY (INNER) TANK TEST:

PERFORM THIS TEST WITH ALL TANK RISERS AND FITTINGS ATTACHED. TIGHTEN ALL TANK FITTINGS. LOCATE A PRESSURE GAUGE IN ONE OF THE INTERSTITIAL SPACE MONITOR FITTINGS IN THE SECONDARY (OUTER) TANK. LOCATE A SECOND PRESSURE GAUGE WITH A 5 PSI PRESSURE RELIEF, TO ONE OF THE PRIMARY (INNER) TANK FITTINGS AND CONNECT THE AIR PRESSURE HOSE TO THIS SAME FITTING. PRESSURIZE THE PRIMARY (INNER) TANK TO A MINIMUM OF 4 PSI (MAXIMUM 5 PSI). SOAP ALL TANK FITTINGS AND MONITOR THE PRESSURE GAUGE FOR A MINIMUM OF ½ HOUR. THERE SHOULD BE NO PRESSURE INCREASE IN THE SECONDARY (OUTER) TANK.

H.POST-INSTALLATION PRESSURE TEST, HYDROSTATIC:

NO TANK THAT SHOWS ANY EVIDENCE OF A LEAK IS TO BE KEPT IN THE SYSTEM. ANY DAMAGE INCURRED TO THE TANK DURING THE INSTALLATION WILL BE CONTRACTOR'S RESPONSIBILITY. THE OWNER IS TO BE NOTIFIED OF ANY DAMAGE AND WILL BE MADE AWARE OF THE COURSE OF ACTION TO BE FOLLOWED. IF A HYDROSTATIC TEST IS REQUIRED BY A LOCAL AGENCY, THE CONTRACTOR IS TO ISOLATE THE TANK FOR TESTING AND RECONNECT WHEN TESTING IS COMPLETE.

I. BALLASTING:

ONLY THE PRIMARY (INNER) TANK SHALL BE USED WHEN BALLASTING THE TANK. NEVER FILL THE SECONDARY (OUTER) TANK WITH A FLUID. IF THE TANKS ARE BALLASTED, CONDUCT HYDROSTATIC TEST (INSTEAD OF THE POST-INSTALLATION AIR TEST) ON THE TANK AND FITTINGS.

J. BURIAL DEPTH:

THE BURIAL DEPTH FROM THE TOP OF THE TANK TO GROUND LEVEL SHALL BE A MINIMUM OF 3 FEET AND A MAXIMUM OF 7 FEET. THE FITTINGS, IF A MANWAY IS USED, WILL BE APPROXIMATELY 5 TO 6 INCHES OFF THE TOP OF THE TANK. THIS SHALL BE CONSIDERED FOR THE SLOPE OF THE PIPING AND THUS MAY AFFECT THE TANK BURIAL DEPTH.

VENT THE PRIMARY TANK AS REQUIRED BY TANK MANUFACTURER.

L. INTERSTITIAL MONITOR:

INSTALL THE MONITORING GAUGE WITHIN RISER PROVIDED BY TANK MANUFACTURER.

M.INSTALLING THE CONTAINMENT SUMP:

THE CONTAINMENT SUMP MUST BE WATERTIGHT TO PREVENT LIQUID INGRESS OR EGRESS. FIBERGLASS INSIDE AND OUTSIDE OF TANK COLLAR

N.INSTALLING THE SPILL CONTAINMENT FILLBOX:

THE SPILL CONTAINMENT FILLBOX MUST BE LIQUID TIGHT. TEST ALL FILLBOXES BY FILLING WITH WATER FOR A MINIMUM OF ONE HOUR. THERE SHOULD BE NO DROP IN THE WATER LEVEL DURING THE TEST. DO NOT DRAIN WATER INTO THE TANK.

1.5 APPROVED MATERIALS

A.APPROVED BACKFILL MATERIALS (CONTRACTOR SHALL CONFIRM TANK MANUFACTURER'S REQUIREMENTS)

- 1. CLEAN SAND: SELECT COARSE GRANULAR MATERIAL, CLEAN, AND FREE OF ANY DELETERIOUS MATTER OR DEBRIS.
- 2. PEA GRAVEL: A CLEAN, NATURALLY ROUNDED AGGREGATE WITH A 1/8" MINIMUM AND A 3/4" MAXIMUM DIAMETER. UP TO 5% OF THE PARTICLES MAY PASS THROUGH A #8 SIEVE.
- 3. STONE OR GRAVEL CRUSHINGS: WASHED MATERIAL WITH A PARTICLE SIZE BETWEEN 1/8" AND ½". UP TO 5% OF THE PARTICLES MAY PASS THROUGH A #8 SIEVE. NOTE: APPROVED MATERIALS MUST BE DRY, FREE OF ICE AND SNOW, AND MEET ATSM C-33, PARAGRAPH 7.1 FOR QUALITY AND SOUNDNESS. THE DRY GRAVEL DENSITY MUST BE A MINIMUM OF 95
- NOTE: BEDDING MATERIAL, TIE-DOWN "LOGS" AND SAMPLE WELLS ARE TO BE PLACED ON THE TOP OF THE FILTER FABRIC. EXCESS FABRIC AT THE TOP OF THE HOLE SHOULD BE FOLDED OVER THE BACKFILL MATERIAL AT THE SUBGRADE LEVEL

B.RECOMMENDED FILTER FABRIC MATERIAL

POUNDS PER CUBIC FOOT

REEMAY INC. - TYPAR 3401 OR TYPAR 3341 PHILLIPS FIBERS CORP. - "SUPAC 4NP" FABRIC

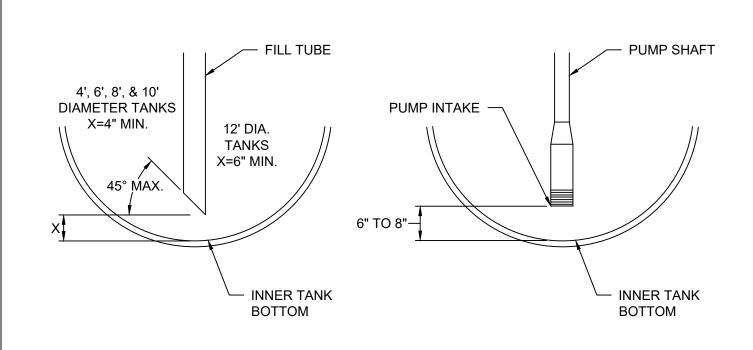
SPECIFICATIONS

2.0 TANK HOLD-DOWNS (TIE-DOWNS)

WHEN SPECIFIED, THE "DEADMAN" SHALL BE INSTALLED PRIOR TO THE BED MATERIAL

B.CAUTION:

DO NOT PLACE TANKS ON CONCRETE SLABS, TIMBERS, BEAMS, CRADLES OR GROUT THE TANKS IN WET CEMENT. THE TANK, WHETHER TIED DOWN OR NOT, MUST NEVER BE LEFT ON THE BED WITHOUT A BACKFILL TO THE TOP OF THE TANK IF THERE IS ANY CHANCE OF WATER, 12" OR MORE ABOVE THE TANK BOTTOM, IN THE HOLE.



FILL TUBE DETAIL

1. REFERENCE MANUFACTURER SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. FILL TUBE AND PUMP INTAKE DETAIL

PUMP INTAKE DETAIL

2.1 TANK DEADMAN INSTALLATION

A.GENERAL REQUIREMENTS:

- ANCHOR ALL UNDERGROUND STORAGE TANKS WITH CONCRETE DEADMAN WHEN THICKENED TOP-SLAB DOES NOT PROVIDE ADEQUATE WEIGHT.
- 1. TANK BEDDING, BALLASTING AND TANK HOLE BACKFILL PROCEDURE ARE DESCRIBED IN THESE SPECIFICATIONS.
- 2. THE TANK ANCHORAGE SYSTEM SHOWN ON THE DRAWINGS IS DESIGNED FOR A MAXIMUM LEVEL OF
- GROUND WATER EQUAL TO THE SUBGRADE LEVEL.

2.2 MATERIALS

A.CONCRETE DEADMAN:

REINFORCED CONCRETE, 18" X 8" IN CROSS-SECTION WITH CHAMFERED EDGES. LENGTH AS SHOWN ON THE DRAWINGS AND AS PROVIDED BY THE TANK MANUFACTURER.

B. ANCHOR CABLE:

FIBERGLASS AS PROVIDED BY THE MANUFACTURER.

CABLE CLAMPS, CABLE GUIDES, GUARDS, ETC., SHALL BE FURNISHED BY OWNER.

D.PROTECTIVE COATING:

PRIOR TO BACKFILLING TANKS, APPLY A GENEROUS QUANTITY OF ASPHALT OR SIMILAR BITUMINOUS COATING BY BRUSH TO ALL EXPOSED STEEL CABLES, LOOPS AND HARDWARE.

2.3 INSTALLATION PROCEDURE

- A.PREPARE THE TANK HOLE TO RECEIVE THE DEADMAN. INSTALL SHORING (OR SIDE SLOPING) IN ACCORDANCE WITH SECTION 1.3.
- B. PUMP THE WATER OUT OF THE TANK HOLE. KEEP WATER OUT OF THE TANK HOLE UNTIL TANKS HAVE BEEN SET, TIED DOWN, BALLASTED, AND BACKFILLED.
- C.INSERT EACH STRAP THROUGH ITS OWN ANCHOR LOOP IN THE DEADMAN RESERVING SUFFICIENT STRAP SO THAT BOTH ENDS OF THE STRAP WILL BE KEPT AT THE TOP OF THE TANK HOLE AFTER THE DEADMAN ARE SET. LOWER AND POSITION THE DEADMAN IN THE TANK HOLE KEEPING BOTH ENDS OF THE STRAPS AT THE TOP OF THE HOLE. INSTALL THE 12" MINIMUM THICK BEDDING MATERIAL IN TANK HOLE. SMOOTH AND SLOPE PER THE TANK BEDDING INSTRUCTIONS.
- D.PROCEED WITH SETTING THE TANKS BY ADDING BALLAST AS NECESSARY TO SINK AND KEEP DOWN THE TANKS. USE ONLY ENOUGH BALLAST TO HOLD THE TANKS DOWN UNTIL THE BACKFILL IS EVEN WITH THE TOP OF THE TANKS. (REFER TO SECTION 1.1 FOR TANK SETTING REQUIREMENTS.) CAUTION: BALLAST LEVEL IN TANK MUST NEVER EXCEED WATER (OR BACKFILL) LEVEL IN TANK HOLE DURING INSTALLATION.

TANK INTERSTITIAL MONITOR;

UST CONCRETE PAD; -

BURY DEPTH:

4'-6" MIN. - 7'-0" MAX. REFER TO NOTE #5.

O.D. I.D.

REFER TO DETAIL PD-405

REFER TO DETAIL PD-315

HOLD DOWN -

(FIBERGALSS)

└-1' MIN.

STRAPS

VENT AND VAPOR; REFER TO

FILL; REFER TO DETAIL PD-320 (331)

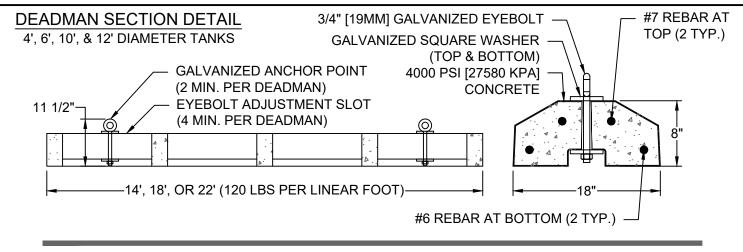
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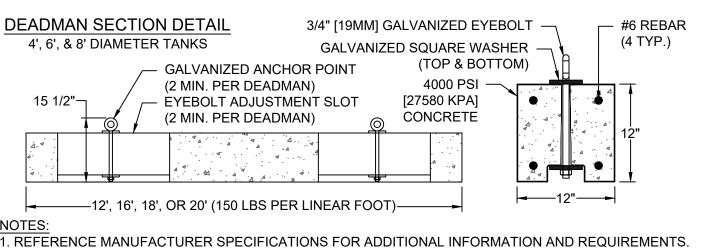
PD-105

→ BEDDING

4. SLOPES FOR EXCAVATION ARE TYPICAL. CONTRACTOR SHALL COMPLY WITH ALL APPROPRIATE OSHA REGULATIONS BASED ON THE ON-SITE SOIL CONDITIONS.

- DETAIL PD-325 OR PD-327





1. REFERENCE MANUFACTURER SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS # PD-110 DEADMAN SECTION DETAIL (CSI) HOLD DOWN STRAP, TURNBUCKLE, TIE-DOWN ASSEMBLY, AND DEADMAN SLOPE SIDES OF TANK 2'-0" MINIMUM PROVIDED BY TANK **EXCAVATION OR USE** TO EDGE OF MANUFACTURER (TYP.) SHORING PER OSHA **EXCAVATION** STANDARDS AND PAD 36" MINIMUM SEPARATION, BETWEEN STORAGE TANKS STORAGE TANK #2 TANK #1 (IF PER PLAN) HOLD DOWN URNBUCKLE STRAP ∏ 12" MINIMUM **ANCHOR** - DEADMAN SHADOW 1. REFERENCE MANUFACTURER SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS 2. TOP OF TANKS TO BE SET AT SAME ELEVATION UNLESS DIRECTED BY CONSTRUCTION MANAGER.

DEADMAN TANK EXCAVATION DETAIL

12/23/2022 DRAWN BY J. FRENCH DESIGNED BY J. DOOLEY CHECKED BY I. DOOLEY

NOT RELEASED FOR CONSTRUCTION

048231

AS SHOWN

7630.105 SHEET NO.

DEADMAN; REFER

TO DETAIL PD-110

AND PD-115

6. REFERENCE MANUFACTURER SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. (CSI) 10' DIA. 20,000 GALLON TANK AND EXCAVATION DETAIL (REG. GAS)

 CONTRACTOR SHALL REFERENCE CIVIL PLANS FOR SLAB ELEVATIONS 2. SLOPE TANK TOWARDS FILL END IF TANK IS INSTALLED WITH A SLOPE. 3. HOLD DOWN STRAP LOCATION ▶ ◀.

PD-205

LIMITS OF TANK -

ANGLE OF SOIL REPOSE ON ALL

SIDES 1:1 WITH

DEPTH

FIELD EXCAVATION.

5. MINIMUM BURY DEPTH BASED ON MANUFACTURER SPECIFICATION AND ANTI-BUOYANCY CALCULATIONS. TOP OF TANKS TO BE SET AT SAME ELEVATION UNLESS DIRECTED BY CONSTRUCTION MANAGER.

TANK LEVEL PROBE;

REFER TO DETAIL PD-310 612

- STP; REFER TO DETAIL PD-305

BY MANUFACTURER) (TYP.)

REFER TO DETAIL PD-105

SHAFT

(TYP.)

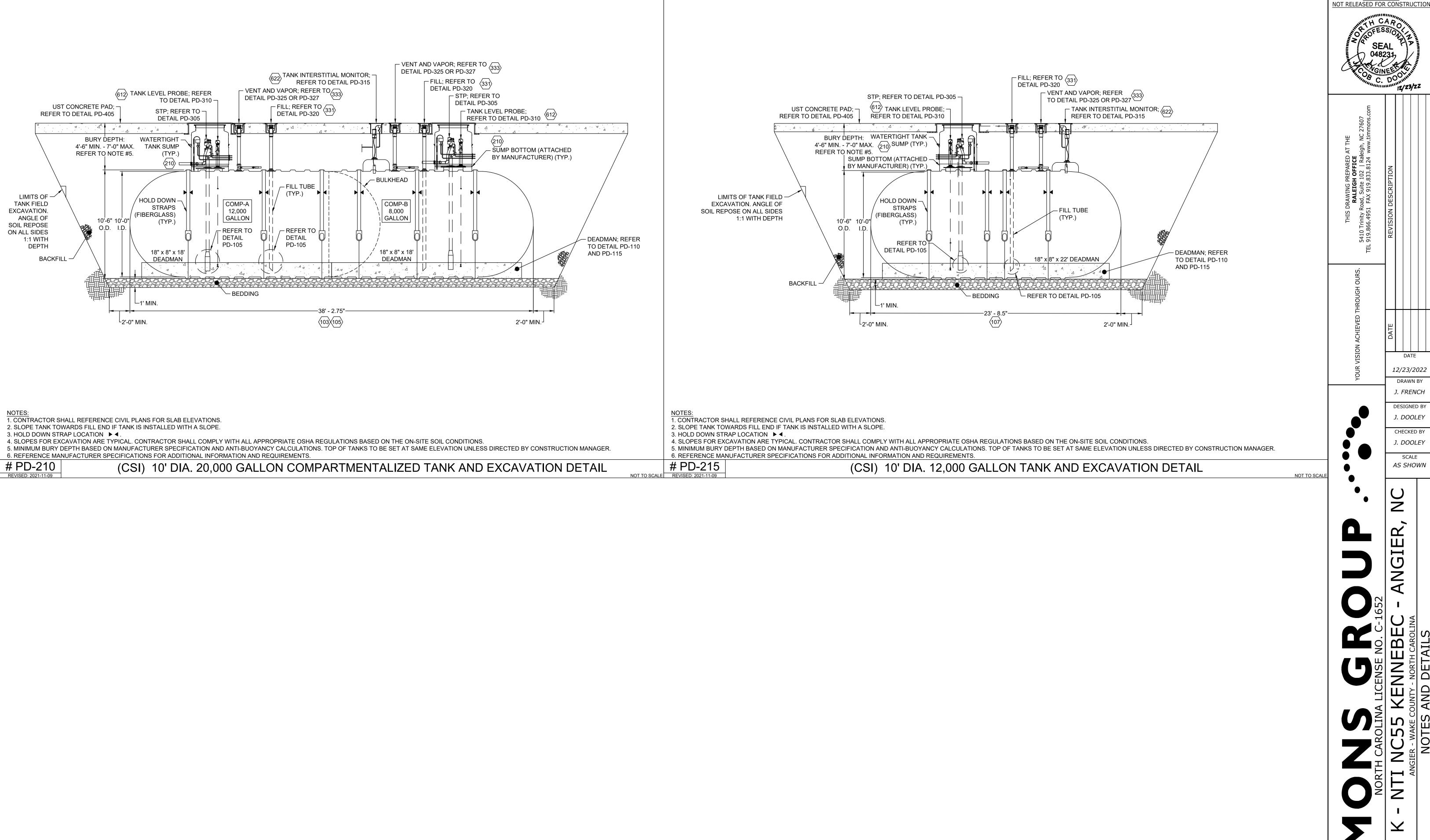
- WATERTIGHT TANK SUMP (TYP.) (212)

18" x 8" x 18' DEADMAN

2'-0" MIN.-

SUMP BOTTOM (ATTACHED

PE03



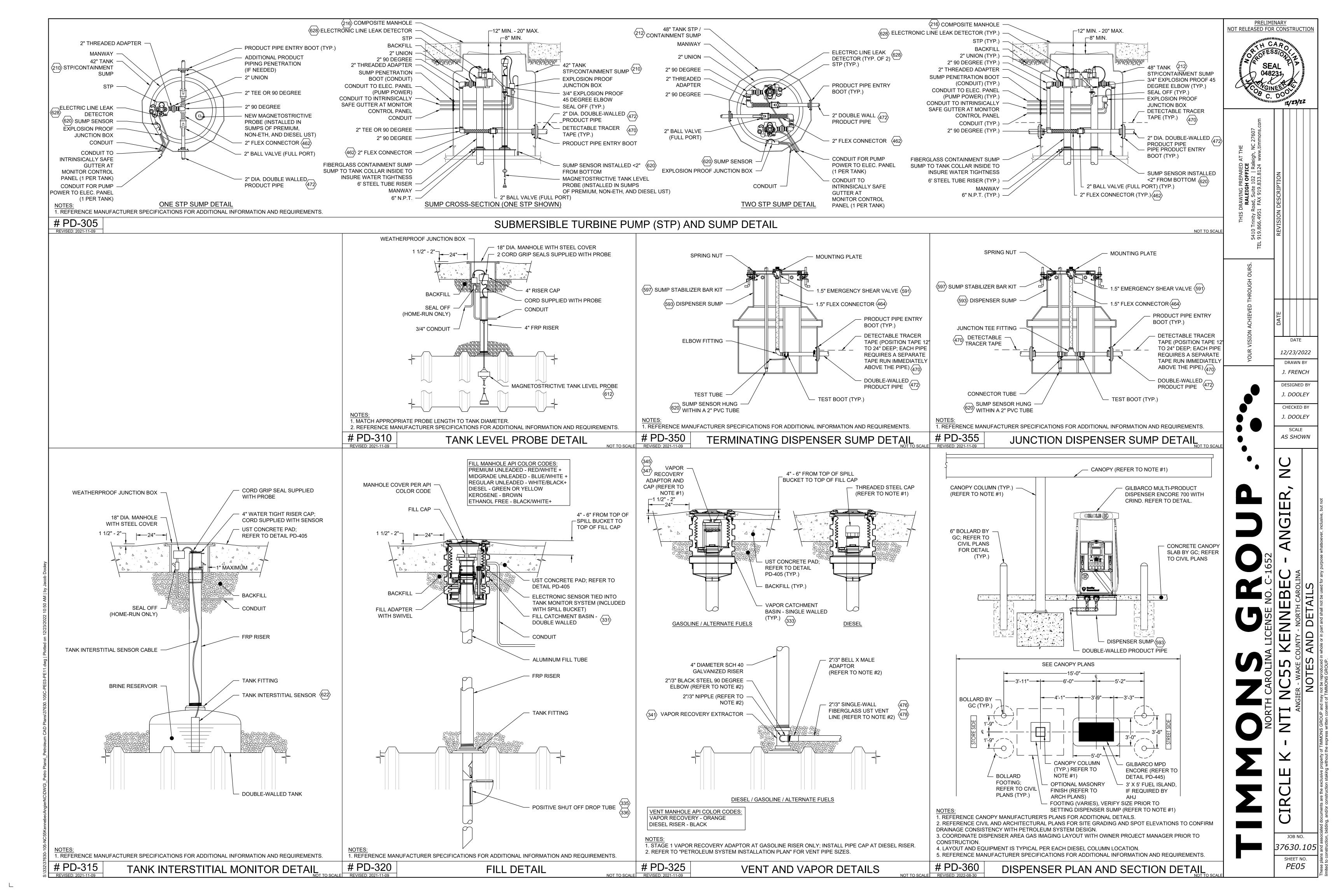
J. FRENCH DESIGNED BY J. DOOLEY AS SHOWN

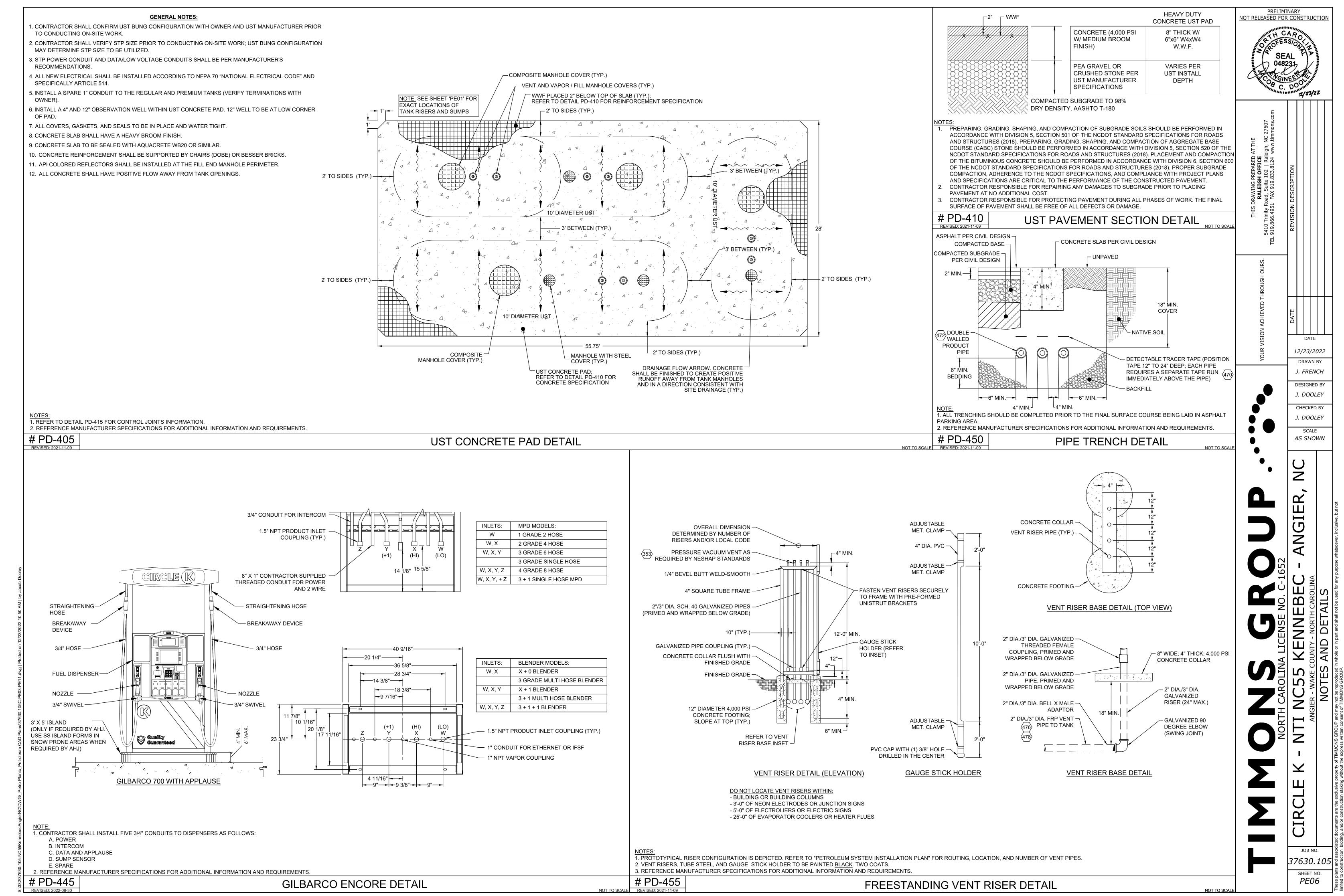
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SHEET NO.

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- CODES AND STANDARDS: COMPLY WITH PROVISIONS OF THE FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS,
- EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE SHOWN OR SPECIFIED:
- 1. AMERICAN CONCRETE INSTITUTE (ACI) 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
- ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE." 3. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE.

- ROUGH GRADING OF SITE TO BE COMPACTED TO AT LEAST 90% OF THE MODIFIED PROCTOR AT TANK SLAB & PUMP
- 1. WORK SHALL INCLUDE ANY ADDITIONAL SCRAPING, FILLING, COMPACTING, SUBGRADE TO PROPER GRADES, ELEVATIONS AND SHAPE TO RECEIVE WORK OF THIS SECTION.
- MAINTAIN FINISHED SUBBASE ELEVATION, AT NO MORE THAN 0.5 INCH ABOVE OR BELOW ELEVATIONS SHOWN ON CIVIL DRAWINGS.

- ALL MATERIALS SHALL BE FREE FROM DEFECTS AND IMPERFECTIONS AND OF THE CLASSIFICATIONS AND GRADES DESIGNATED.
- CONCRETE MATERIALS:
 - a) PORTLAND CEMENT: ASTM C-150, NORMAL TYPE ITYPE II (FOR DRAINAGE STRUCTURES) TYPE III (HIGH-EARLY).
- b) PORTLAND CEMENT: ASTM C-185-77 TYPE 1A AIR ENTRAINING PORTLAND CEMENT
- c) COARSE AGGREGATE: C-33-77 MAXIMUM NOMINAL SIZE SHALL BE AS FOLLOWS:
- FOOTINGS: 1-1/2". ALL OTHER CONCRETE: 34".
- d) WATER: CLEAN, POTABLE, AND FREE OF DELETERIOUS AMOUNTS OF ACIDS AND ORGANIC MATERIALS
- e) SAND: ASTM C-33, CLEAN, SHARP, NATURAL SAND FREE FROM LOAM, CLAY, AND LUMPS.
- REINFORCING STEEL:
- a) RE-BAR (GAUGE AS NOTED IN DRAWINGS)
- JOINTS:
- a) PERFORMED EXPANSION JOINTS
 - EXTERIOR CONCRETE: ASTM D-1751, "SEALTIGHT FIBRE" EXPANSION JOINT FILLER. CONCRETE TANK MAT JOINTS WITHIN 12 FEET OF DISPENSER ISLANDS, SEALTIGHT ASPHALT EXPANSION JOINT FILLER AT ALL OTHER YARD IMPROVEMENTS. THICKNESS: ½" THICK UNLESS OTHERWISE INDICATED
 - ii. INTERIOR CONCRETE SLABS: ASTM C-994, "SEALTIGHT ASPHALT" EXPANSION JOINT FILLER.THICKNESS: ½ INCH THICK UNLESS OTHERWISE INDICATED.
- iii. MANUFACTURER: W.R. MEADOWS OF GEORGIA, INC., ATLANTA, GEORGIA 30336 (404-691-5358). b) JOINT SEALING COMPOUND: (EXTERIOR CONCRETE SLABS)
- 2 COMPONENT NON-SAG/SELF LEVELING FED. SPEC. TT-S00227EPOLYURETHANEL SIKAFLEX 2-C NS/SL. (GASOLINE RESISTANT)COLOR: LIMESTONE GRAYPRIMER: SIKAFLEX 429MANUFACTURER: SIKA CORPORATION, LYNDHURST, NJ 07071 (201-933-8800)
- c) SEALANT BACKER ROD: ROUND CLOSED CELL POLYETHYLENE; COMPATIBLE WITH SEALANT, 50% LARGER THAN
- MANUFACTURER: DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN 48640 (201-845-5000).
- 2. REFER TO CIVIL PLANS FOR STEEL PIPE GUARD DETAILS.
- 3. NON-SHRINK GROUT: FACTORY PACKAGED PRE-MIXED COMPOUND, REQUIRING ONLY MIXING WITH WATER AT PROJECT SITE.

CONCRETE:

- a) BE READY-MIX, MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C 94 AND AS SPECIFIED
- b) WHEN AIR TEMPERATURE IS BETWEEN 85 DEGREES F AND 90 DEGREES F, REDUCE MIXING AND DELIVERY TIME TO
- c) CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH IN PLACE AT 28 DAYS:
- EXTERIOR SLABS AND CURBS: 4000 (MINIMUM) PSI AIR ENTRAINED 6% +/- 1%. SLUMP: 4" TO 5", WATER CEMENT RATIO 0.35 MAXIMUM.
- ii. FOUNDATIONS AND FOOTING: 3000 PSI
- iii. INTERIOR SLABS ON GRADE: 3000 PSI, RATIO 0.67 MAXIMUM.
- 5. STANDARD THREADED FASTENERS: a) ANCHOR BOLTS: ATSM A-307
- b) INSTALL ANCHOR BOLTS, OTHER ANCHORAGES REQUIRED FOR SECURING STRUCTURAL STEEL TO FOUNDATIONS
- a) CONFORM TO SHAPES, LINES AND DIMENSIONS INDICATED; SHALL BE MORTAR TIGHT AND WELL SECURED
- AGAINST WARPING, BULGING, AND DEFLECTION, PREPARED FOR REMOVAL WITHOUT DAMAGE. b) WHERE SOIL CONDITIONS PERMIT AND ARE APPROVED BY THE SUB-CODE OFFICIAL, SIDE FOOTING FORMS MAY BE

- UNEXPOSED CONCRETE SURFACES: STANDARD GRADE OR BETTER LUMBER OR APA PLYWOOD RATED SHEATHING. EXPOSURE 1.
- ii. EXPOSED SURFACES: PLYWOOD OR METAL TO PRODUCE A SMOOTH FORM FINISH. **EXECUTION:**

FORMWORK ERECTION:

- VERIFY LINES, LEVELS AND CENTERS BEFORE PROCEEDING WITH FORM WORK. ENSURE THAT DIMENSIONS AGREE WITH
- CONSTRUCT FORMWORK, SHORING, AND BRACING TO MEET DESIGN AND CODE REQUIREMENTS SO THAT RESULTANT FINISH CONCRETE CONFIRMS TO REQUIRED SHAPES, LINES, AND DIMENSIONS.
- PROVIDE BRACING TO ENSURE STABILITY OF FORMWORK. PROP OR STRAIGHTEN FORMWORK LIABLE TO BE OVERSTRESSED BY CONSTRUCTION LOADS.

INSPECTION

- VERIFY THAT FORMWORK AND EXCAVATIONS ARE COMPLETED.
- a) CHECK THAT REINFORCEMENT, PIPING, CONDUITS AND OTHER EMBEDDED ITEMS ARE SECURED IN PLACE.
- b) CORRECT CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK
- SEPARATE SLABS ON GRADES FROM VERTICAL FACES, STRUCTURAL ELEMENTS AND OTHER FIXED OBJECTS WITH PRE-MOLDED JOINT FILLER.
 - a) LOCATE JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT AND NOT MORE THAN ½ INCH BELOW TOP SURFACE
 - b) LOCATE EXPANSION JOINTS IN CURBS AND WALKS AT 20'-0" O.C. UNLESS OTHERWISE INDICATED ON PLANS. SET PERPENDICULAR TO LONGITUDINAL AXIS OF WALKS, CURBS, AND GUTTERS. MAKE JOINTS OF CURBS COINCIDE
- c) TOOLED JOINTS FOR SIDEWALKS: FORM IN CONCRETE BY GROOVING TOP PORTION WITH A CUTTING TOOK AND FINISHING EDGES WITH A JOINTER. SPACE AT WIDTH OF SIDEWALK, BUT NOT OVER 5'-0" CENTERS EACH WAY.
- EXTERIOR CONCRETE EXPANSION JOINTS (GASOLINE RESISTANT)
- a) INSTALL SEALANT BACKER ROD ON TOP OF FIDE EXPANSION JOINT FILLER SO THAT CLEAR JOINT DEPTH IS ½ OF JOINT WIDTH BUT NEVER LESS THAN 3/8 INCH.
- b) CLEAN ALL SURFACES. JOINT WALL SHALL BE SOUND, CLEAN, DRY, AND FREE FROM OIL, GREASE AND ANY OTHER FOREIGN MATTER. INSTALL BOND BREAKER AT BOTTOM JOINT TO PREVENT BOND.
- APPLY CLOTH MASKING TAPE ALONG EDGES OF JOINT TO OBTAIN NEAT STRAIGHT EDGES. APPLY PRIMER WITH A BRUSH ON CLEAN, DRY, SOUND JOINT SLOT SURFACES. INSTALL SEALANT WHEN
- PRIMER IS DRY (APPROXIMATELY 15-30 MINUTES).
- d) PRE-CONDITION MATERIAL TO APPROXIMATE 75F. MIX COMPONENT B TO COMPONENT A IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- e) INSTALL SEALANT INTO JOINTS WITHIN 1/16 INCH OF SURFACE.

f) REMOVE MASKING TAPE BEFORE SEALANT HAS SET

CONCRETE REINFORCEMENT:

- PLACE REINFORCING SUPPORTED BY CHAIRS OR CONCRETE BRICKS AND SECURED AGAINST DISPLACEMENT. MANUALLY PULLING STEEL UP NOT PERMITTED.
- BEFORE PLACING CONCRETE, ENSURE REINFORCING IS CLEAN, FREE OF LOOSE SCALE, DIRT, OR OTHER FOREIGN COATINGS WHICH WOULD REDUCE BOND TO CONCRETE.
- 3. LAP BARS 40 DIAMETERS AT SPLICES AND RETURNED 24 DIAMETERS AT CORNERS. 4. CONCRETE COVER: REINFORCEMENT: SHALL BE INSTALLED TO PROVIDE THE FOLLOWING MINIMUM CONCRETE COVER
- OVER STEEL ENFORCEMENT. b) FOOTINGS: 3 INCHES OUTSIDE OF STEEL
- c) FLOOR SLABS ON EARTH BOTTOM: 2 INCHES OUTSIDE OF VERTICAL STEEL

- d) FORMED WALLS AGAINST EARTH: 2 INCHES OUTSIDE OF VERTICAL STEEL
- e) CONCRETE WALKS, CURBS, GUTTERS, ETC.: 1-1/2" MINIMUM CONCRETE COVER.
- WELDED WIRE FABRIC: OF SIZES, SPACING INDICATED ON DRAWINGS; PLACED THROUGHOUT RESPECTIVE AREAS, WITH A MINIMUM OVERLAP OF 6 INCHES OR ONE SPACE, LACE SPLICES WITH WIRE. EXTENDED WITHIN 3 INCHES ON MAT EDGES AND JOINTS.
- ii. ENTRANCE DRIVEWAYS, RAMPS, SIDEWALKS, CURBS, ETC., OUTSIDE OF PROPERTY LINES SHALL BE OF THICKNESS AND REINFORCED AS INDICATED ON CIVIL DRAWINGS, UNLESS REQUIRED OTHERWISE BY

E. CONCRETE PLACEMENTS

- ASSURE THAT EXCAVATIONS AND FORMWORK ARE COMPLETED. HAND EXCAVATE FOOTING BOTTOMS TO PROPER ELEVATIONS. FILL EXCESSIVE EXCAVATIONS WITH CONCRETE.
- a) DO NOT PLACE FOOTINGS ON NEW FILL UNLESS COMPACTED TO SPECIFIED DENSITY (I.E. 90% OF MODIFIED
- b) VERIFY THAT REINFORCEMENT, EXPANSION JOINT MATERIAL, OTHER EMBEDDED ITEMS ARE SECURED IN PLACE.
- c) NOTIFY OWNER'S REPRESENTATIVE A MINIMUM OF 24 HOURS PRIOR TO THE START OF CONCRETE PLACEMENT.
- d) PLACING CONCRETE SLABS: SUPPORT AND CONSOLIDATE CONCRETE SLABS IN A CONTINUOUS OPERATION, WITHIN LIMITS OF CONSTRUCTION JOINTS, UNTIL COMPLETING PLACEMENT OF A PANEL OR SECTION.
- 2. COORDINATE MECHANICAL & ELECTRICAL, SUBCONTRACTORS COORDINATING LOCATIONS OF PIPELINES, CONDUITS,
- ETC., PASSING THROUGH FOOTINGS. REINFORCE FOOTINGS TO BRIDGE SUCH LINES. a) DROP FOOTINGS WHEN REQUIRED FOR CLEARANCE OF PIPES, ETC., ABOVE FOOTINGS, THROUGH FOUNDATION
- b) PROVIDE "STEPS" AT CHANGES IN FOOTING LEVELS, FULL WIDTH OF FOOTINGS, FILLED SOLIDLY FULL DEPTH OF
- EXCAVATION. FOUNDATIONS:
- a) CONSTRUCT FOUNDATIONS FOR SITE LIGHTING POLES, CANOPY, STRUCTURES IDENTIFICATION SIGN, PRICE SIGN, BARRIER-FREE SIGN, AND OTHER EQUIPMENT INDICATED ON SITE PLAN.
- i. INSTALL ANCHOR BOLTS WITH NUTS ON THREADS (FURNISHED BY MANUFACTURER) FOR SITE LIGHTING POLES IN POSITION DETERMINED BY TEMPLATE.
- FURNISH AND INSTALL STEEL ANCHOR BOLTS/PLATES WITH HEX NUTS AND FLAT WASHERS FOR BUILDING(S), IDENTIFICATION SIGN, PRICE SIGN, CANOPY, ETC.

- a) CANOPY FABRICATOR WILL FURNISH ERECTION DATE AND ANSWER ANY QUESTIONS REGARDING FOUNDATIONS OR ERECTION PROCEDURES. COORDINATE WORK WITH CANOPY FABRICATOR.
- b) VERITY THAT BASE PLATES AND/OR LEVELING PLACES ARE LEVEL AND AT PROPER ELEVATION READY TO RECEIVE COLUMNS, AND THAT COLUMN ANCHOR BOLTS ARE LOCATED CORRECTLY AND IN PROPER ALIGNMENT.
- c) IF CONCRETE FOUNDATIONS CANNOT BE READY AS SCHEDULED, NOTIFY OWNER'S REPRESENTATIVE AND CANOPY FABRICATOR. FABRICATOR REQUIRES ONE WEEK'S NOTICE FOR ERECTION.
- 5. IDENTIFICATION SIGN AND PRICE SIGN FOUNDATIONS:
 - a) SIGNS: FURNISHED BY OWNER SIGN SUPPLIER AND DELIVERED TO THE PROJECT SITE.
 - b) SIGN SUPPLIER WILL FURNISH DATE OF DELIVERY AND DELIVERED TO THE PROJECT SITE.
 - c) CONTRACTOR SHALL FORM CONCRETE FOUNDATIONS WITH ANCHOR BOLTS, GROUT BASE PLACES AND ERECT
- 6. KEEP THE LOT FREE OF DITCHES AND MOUNDS OF DIRT TO ENABLE THE ERECTION EQUIPMENT TO BE DRIVEN AROUND THE PROPERTY FOR ACCESSIBILITY TO THE FOUNDATIONS.

PLACING CONCRETE SLABS:

- 1. SOFT SPOTS IN SUBGRADE SHALL BE TAMPED OR ROLLED TO FIRM BEARING. MOIST MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE BACKFILL.
- 2. DEPOSIT AND CONSOLIDATE CONCRETE SLABS IN A CONTINUOUS OPERATION, WITHIN THE LIMITS OF CONSTRUCTION
- JOINTS UNTIL THE PLACING OF A SECTION IS COMPLETED. CONSOLIDATE BY HAND, DO NOT SPREAD CONCRETE BY VIBRATION.
- 4. BRING SLAB SURFACES TO THE CORRECT LEVEL WITH A STRAIGHT EDGE AND STRIKE OFF. USE BULL FLOATS OR DARBIES TO SMOOTH THE SURFACE, LEAVING IT FREE OF HUMPS OR HOLLOWS. DO NOT SPRINKLE WATER ON THE PLASTIC
- 5. INSTALL VAPOR BARRIER UNDER SLABS ON GRADE. LAP JOINTS MINIMUM 4 INCHES. DO NOT DISTURB OR DAMAGE VAPOR BARRIER WHILE PLACING CONCRETE REINFORCING. IF DAMAGE DOES OCCUR, REPAIR AREAS BEFORE REPLACING
- ENSURE FLOOR SURFACES ARE DEPRESSED SUFFICIENTLY TO ACCOMMODATE FINISH MATERIAL
- 7. SLOPE CONCRETE AWAY (1 INCH FIRST FOOT AROUND MANHOLES) FROM SPILL CONTAINMENT MANHOLES. 8. FLOOR DRAIN AREAS: KEEP FLOOR LEVEL AT WALLS AND SLOPE SURFACES TO DRAINS.

HOT WEATHER PLACING:

- WHEN HOT WEATHER CONDITIONS EXIST THAT WOULD SERIOUSLY IMPAIR THE QUALITY AND STRENGTH OF THE CONCRETE, PLACE CONCRETE IN COMPLIANCE WITH ACI 305 AND AS HEREIN SPECIFIED.
- 2. COOL INGREDIENTS BEFORE MIXING TO MAINTAIN CONCRETE TEMPERATURE A TIME OF PLACEMENT BELOW 90 DEGREES F. MIXING WATER MAY BE CHILLED, TO CONTROL THE CONCRETE TEMPERATURE, PROVIDED THE WATER EQUIVALENT IS INCLUDED IN THE TOTAL AMOUNT OF MIXING WATER.
- WET FORMS THOROUGHLY BEFORE PLACING CONCRETE.

4. DO NOT USE RETARDING ADMIXTURES WITHOUT THE WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.

SLAB FINISHES: FLOAT FINISH:

- a) AFTER THE CONCRETE HAS BEEN EDGED AND JOINTED APPLY FLOAT FINISH.
- b) WORK SLAB EDGES AND FORM JOINTS WITH EDGING TOOL AND ROUND TO ¼ INCH RADIUS.
- c) AFTER PLACING CONCRETE SLABS, DO NOT WORK THE SURFACE FURTHER UNTIL READY FOR FLOATING. BEGIN FLOATING WHEN THE SURFACE WATER HAS DISAPPEARED OR WHEN THE CONCRETE HAS STIFFENED SUFFICIENTLY TO PERMIT THE OPERATION OF A POWER-DRIVEN FLOAT, OR BOTH. CONSOLIDATE THE SURFACE WITH A POWER-DRIVEN FLOATS, OR BY HAND-FLOATING WHEN AREA IS SMALL.
- d) MAINTAIN SURFACE PLANE TO A TOLERANCE NOT EXCEEDING ¼ INCH IN 10 FEET WHEN TESTED WITH A 10 FOOT STRAIGHT EDGE PLACED ON THE SURFACE AT NOT LESS THAN 2 DIFFERENT ANGLES. CUT DOWN HIGH SPOTS AND FILL ALL LOW SPOTS TO UNIFORMLY SLOPE SURFACES TO DRAINS. IMMEDIATELY AFTER LEVELING, REFLOAT THE SURFACE TO A UNIFORM, SMOOTH, GRANULAR TEXTURE.

TROWEL FINISH:

- a) APPLY STEEL TROWEL FINISH TO CONCRETE SLABS FOR SURFACES TO RECEIVE FLOOR COVERING. TROWELING AFTER ONLY BULLFLOATING OR DARBYING WILL NOT BE PERMITTED.
- b) AFTER FLOATING, BEGIN THE FIRST TROWEL FINISH OPERATION USING A POWER-DRIVEN TRAWLER. BEGIN FINAL TROWELING OF 0.01 INCH AT DISPENSER MATS AND MAXIMUM VARIATIONS AT ALL OTHER AREAS OF 1/8 INCH IN 10 FEET WHEN TESTED WITH A 10 FOOT STRAIGHT EDGE.
- c) CONSOLIDATE THE CONCRETE SURFACE BY THE FINAL HAND TROWELING OPERATION, FREE OF TROWEL MARKS, UNIFORM IN TEXTURE AND APPEARANCE AND WITH SURFACE PLANE.

- a) APPLY AFTER HAND TROWELING, FINISH SURFACE BY SCORING IN PARALLEL LINES WITH A FINE HAIR STABLE
- b) FINISH EXTERIOR RAMPS, CONCRETE SIDEWALKS, PLATFORMS WITH NON-SLIP BROOM SURFACE BY SCORING IN PARALLEL LINES WITH A MEDIUM BROOM FINISH.
- c) SCORING SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAFFIC. COORDINATE FINISH REQUIREMENTS WITH THE OWNER REPRESENTATIVE.
- a) CONCRETE SLABS TO RECEIVE QUARRY OR CERAMIC TILE SHALL HAVE STEEL TROWEL AND FINE BROOM FINISH WITH NO CURING COMPOUNDS USED.
- b) CONCRETE SLABS TO RECEIVE VINYL COMPOSITION TILE SHALL BE SCREEDED TO A LEVEL AND TRUE SURFACE, THEN STEEL TROWELED TO A UNIFORM SURFACE, FREE OF SCORE MARKS, GROOVES, OR DEPRESSIONS.

- 1. PLACE CURBS ON GRADED UNDISTURBED BOTTOMS AND IN ACCORDANCE WITH DOT SPECIFICATIONS FOR CONCRETE CURB & GUTTER.
- a) DEPOSIT CONCRETE IN MAXIMUM LAYERS OF 6 INCHES. CHECK FACE AND TOP OF CURB WITH 10 FOOT STRAIGHT EDGE, ELIMINATE IRREGULARITIES MORE THAN 1/4 INCH. ROUND TOP OF FACE OF CURBS WITH FINISHED TOOL. b) FORMS SHALL BE MADE OF WOOD OR STEEL IN SIZE TO MAINTAIN FORM SECTION STRAIGHT UNDER PRESSURE OF NEWLY PLACES CONCRETE. REMOVE FORMS WITHIN 24 HOURS AFTER PLACING CONCRETE. FINISH EXPOSED
- c) PARGING: NOT PERMITTED.

SURFACES WITH FLOAT AND TROWL, REPAIR DEFECTS.

- d) LOCATE EXPANSION JOINTS IN CURBS TO MATCH JOINTS IN SIDEWALK AT INTERVAL NOT TO EXCEED 20' UNLESS OTHERWISE INDICATED.
- e) LOCATE CONTROL JOINTS 10 FEET O.C. CONTROL JOINTS: MADE BY SCORING CONCRETE FACE ¾ INCH INTO CURB

J. CONCRETE CURING & PROTECTION:

- a) PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURE, AND MAINTAIN WITHOUT DRYING AT A RELATIVELY CONSTANT TEMPERATURE FOR THE PERIOD OF TIME NECESSARY FOR PROPER HARDENING OF THE CONCRETE. CURE CONCRETE BY MOISTURE-RETAINING COVER
- b) START INITIAL CURING AS SOON AS FREE WATER HAS DISAPPEARED FROM THE CONCRETE SURFACE AFTER PLACING AND FINISHING. CONTINUE CURING FOR AT LEAST 7 CONSECUTIVE DAYS DURING WHICH THE CONCRETE IS EXPOSED TO AIR TEMPERATURES ABOVE 50 DEGREES F. AVOID RAPID DRYING AT THE END OF THE FINAL
- c) CEMENT DUSTING TO DRY UP STANDING WATER ON NEW CONCRETE WILL NOT BE ALLOWED.
- 2. CURING METHODS: USE ONLY WATER THAT IS FREE OF IMPURITIES WHICH COULD ETCH OR DISCOLOR EXPOSED, NATURAL CONCRETE SURFACES.
- PROTECTION: DURING THE CURING PERIOD PROTECT CONCRETE FORM DAMAGE CAUSED BY RAIN. PROTECT ALL FINISHED CONCRETE SURFACES FROM DAMAGE BY SUBSEQUENT CONSTRUCTION OPERATIONS.

CONCRETE SURFACE REPAIRS:

- REPAIR AND PATCH DEFECTIVE AREAS WITH CEMENT MORTAR IMMEDIATELY AFTER REMOVAL OF FORMS, BUT ONLY WHEN ACCEPTABLE TO OWNER'S REPRESENTATIVE. CUT ROCK POCKETS, HONEYCOMBS, VOIDS OVER ½ INCH DIAMETER DOWN TO SOLID CONCRETE BUT, IN NO CASE TO A DEPTH LESS THAN 1".
- a) WHEN DRY PATCHING MORTAR SHALL MATCH COLOR OF SURROUNDING SURFACES. PROVIDE TEST AREAS AT INCONSPICUOUS LOCATIONS TO VERIFY MIXTURE AND COLOR MATCH BEFORE PROCEEDING WITH PATCHING.
- REPAIR CONCEAL FORMED SURFACES THAT CONTAIN DEFECTS THAT ADVERSELY AFFECT THE DURABILITY OF THE CONCRETE. IF DEFECTS CANNOT BE REPAIRED, REMOVE AND REPLACE THE CONCRETE.

MISCELLANEOUS CONCRETE ITEMS:

- CONCRETE PAVEMENTS, CONCRETE SIDEWALKS, RAMPS, CURBING, AND OTHER CONCRETE THAT EXIST ARE NOT INDICATED TO BE REMOVED SHALL BE MAINTAINED AS PART OF THE WORK OF THIS CONTRACT.
- a) DEMOLISH AND REMOVE EXISTING ITEMS CONFLICTING WITH NEW WORK AND NEW FINISHES.
- b) PATCHING, REPAIRING SHALL BE INTEGRAL WITH EXISTING WORK TO COMPLETE THE PROJECT c) BEFORE CONSTRUCTION BEGINS, OWNER REPRESENTATIVE WITH CONTRACTOR SHALL TAKE PHOTOGRAPHS AND REVIEW EXISTING CONDITIONS OF SIDEWALKS, CURBS, ETC., TO VERIFY EXISTING CONDITIONS FOR PATCHING,

a) PRIOR TO GROUTING, CONTRACTOR SHALL

ii. LIGHTLY ROUGHEN CONCRETE.

REMOVALS, AND REPAIRING.

- REMOVE DIRT, OIL, GREASE, ETC., ON SURFACES IN CONTACT W/ GROUT. SATURATE W/ CLEAN WATER, REMOVE WATER PRIOR TO PLACING GROUT.
- 3. CANOPY MANUFACTURER WILL ERECT CANOPY ON COLUMNS USING THE FOLLOWING PROCEDURE:
- a) PLACE WASHER ON LOWER NUT AND ADJUST FOR ELEVATION.
- b) SET COLUMN IN PLACE.

1/4" WIDTH →

FRONT VIEW

2. SAWCUT JOINTS THE SAME DAY AS THE POUR.

| 24" -

PD-415

4" DIA. SCH. 40 PVC

PORTION - LENGTH

NON-SLOTTED

AS REQUIRED

PEA GRAVEL

4" DIA. SLOTTED

(MAX .010") PVC

PIPE - LENGTH

AS REQUIRED

- c) PLACE WASHER ON PLATE AND TIGHTEN NUT,
- d) ADJUST FOR ELEVATION AND PLUMB COLUMN. e) GROUT: BY CONCRETE CONTRACTOR.
- NON-SHRINK GROUT: a) USE FOR GROUTING THE SPACE BETWEEN THE TOP OF THE CONC. BEARING SURFACE AND THE BOTTOM OF
- PLATES, ANCHORS, GROUTING ANCHOR BOLTS. b) PROVIDE CLEARANCE BETWEEN THE FORMWORK AND THE AREA TO BE GROUTED TO PERMIT PLACEMENT OF

· 1/4" RADIUS; CAULK JOINT W/ MASTERSEAL SL 2 POLYURETHANE

WITH MANUFACTURER'S RECOMMENDATIONS.

DETAIL VIEW

UST PAD CONTROL JOINT DETAIL

SEALANT AS MANUFACTURED BY BASF. INSTALL IN ACCORDANCE

REFER TO NOTE 3

JOINT SEALANT

BACKER ROD

- 1/8" FIRST SAWCUT

— TOP OF PAVEMENT

1/4" SECOND SAWCUT (IF REQUIRED)

12" DIA. SCH. 40 PVC —

PORTION - LENGTH

NON-SLOTTED

AS REQUIRED

PEA GRAVEL

12" DIA. SLOTTED

(MAX .010") PVC

PIPE - LENGTH

AS REQUIRED

- T/2 (BUT NOT LESS THAN 1/4")

| -24" - |

c) PLACE AND CURE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

CONCRETE

JOINT)

I. REFER TO UST CONCRETE PAD DETAIL FOR CONCRETE DESIGN

WELL MANHOLE

REINFORCEMENT

(HOLD BACK 2"

FROM CONTROL

3. WAIT AS LONG AS FEASIBLE TO SEAL JOINTS TO ALLOW CONCRETE SHRINKAGE TO OCCUR. IF REQUIRED,

RE-SAW JOINT IMMEDIATELY PRIOR TO INSTALLING SEALANT TO ACHIEVE NECESSARY JOINT WIDTH.

- 12" DIA. BOLT DOWN OBSERVATION

CONCRETE

DEADMAN

- SCH 40 PVC

BOTTOM OF OBSERVATION

WELL MUST BE 24" MIN. BELOW

4" OBSERVATION WELL

BOTTOM OF UNDERGROUND

SLIP-ON CAP

STORAGE TANK

ENSURE JOINT IS CLEAN, DRY, AND SIDES ARE PREPARED PER MANUFACTURER'S RECOMMENDATIONS.

4. REFERENCE MANUFACTURER SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

4" LOCKABLE OBSERVATION CAP

STORAGE TANK

a) OBTAIN 7 DAY CYLINDERS FOR TESTING AT 1 EVERY 1000 SQUARE FEET UNDER CANOPY AND ONE CYLINDER AT TANK SLAB.

VENT (RIGID) PIPING SPECIFICATIONS

2.1 PRODUCT, VENT & VAPOR RECOVERY PIPING

1. STEEL PIPE: NONE PERMITTED FOR PRODUCT DISCHARGE OR VENTING EXCEPT AT VENT RISERS.

ALL INSTALLATIONS SHALL CONFORM TO PIPE MANUFACTURER'S SPECIFICATIONS AND GUIDELINES

1. FIBERGLASS PIPE: PROTECT AGAINST ABRASION FROM SHARP OR HARD OBJECTS; IMPACT DAMAGE FROM IMPROPER STORAGE, TRANSPORTING, LAYING OR BACKFILLING. INSPECT ALL PIPES FOR

2. STEEL PIPE AND FITTINGS: PROTECT AGAINST DAMAGE TO THE PROTECTIVE COATING.

2.2 INSTALLATION REQUIREMENTS A.LAYING OF PIPE:

DAMAGE PRIOR TO USING IN THE PIPING SYSTEM.

- 1. INTERIOR SURFACE OF ALL PIPE AND FITTINGS MUST BE FREE FROM DIRT, SCALE, METAL, FIBERGLASS PARTICLES, ETC., BEFORE CONNECTING.
- 2. DO NOT SUPPORT PIPING WITH FOREIGN OBJECTS, SUCH AS SCRAPS OF WOOD, PIPE, ETC. USE MAJOR OIL APPROVED PIPING SUPPORT.

B.CUTTING OF PIPE:

1. CUT PIPE TO ENSURE A SQUARE CUT END. CUT PIPE END MUST BE WITHIN 1/8" OF SQUARE.

C.TAPERING & REAMING:

1. FIBERGLASS PIPE: ALL CUT ENDS MUST BE TAPERED PER PIPE MANUFACTURER SPECIFICATIONS. PROTECT PIPE DURING TAPERING TO PREVENT PIPE DAMAGE. FINISH TAPER SHALL BE SMOOTH, CLEAN, AND FREE FROM SURFACE DEFECTS. LENGTH OF TAPER FOR 2" DIAMETER PIPE IS 1 5/8" AND FOR 3" DIAMETER PIPE IS 1 3/4". FOR OTHER SIZE PIPE, CONSULT PIPE MANUFACTURER'S SPECS. 2. STEEL PIPE: REAM ENDS PER INDUSTRY STANDARDS.

D.BONDING & ADHESIVE SYSTEMS:

- 1. ALL FIBERGLASS PIPE SURFACES TO BE BONDED SHALL BE CLEANED WITH SOLVENT AS RECOMMENDED BY MANUFACTURER. APPLY PRESSURE UNTIL MECHANICAL LOCK IS ACHIEVED. BACK AXIAL PRESSURE SHOULD BE MAINTAINED ON ALL PREVIOUSLY ASSEMBLED JOINTS TO REDUCE THE
- 2. INSPECT ALL FITTINGS FOR PROPER ALIGNMENT AND POSSIBLE "BACK OUT" AT THE JOINTS. 3. FOLLOW PIPE MANUFACTURER'S RECOMMENDATIONS ON CURE TIME.

THREADED JOINTS MUST BE REAMED AND HAVE CLEAN CUT, PERFECT THREADS AND BE MADE UP WITH NON-HARDENING JOINT COMPOUND INSOLUBLE IN PETROLEUM PRODUCTS. **DO NOT USE ADHESIVE** FOR THREADED CONNECTIONS

CONNECTS TO THE FIBERGLASS PIPING. DO NOT USE ADHESIVE FOR THREADED CONNECTIONS.

FIBERGLASS THREADED END ADAPTORS ARE TO BE THREADED INTO THE STEEL PIPE OR FITTING BEFORE BONDING ONTO THE FIBERGLASS PIPE. ALL FLEXIBLE CONNECTORS ARE MADE FEMALE AND

F. FIBERGLASS TO STEEL PIPE CONNECTIONS:

POSITION THE VALVE SO THAT THE LINE TEST PORT PLUG IS ACCESSIBLE.

H. SETTING & BEDDING PIPE: 1. PIPING SHALL BE PLACES ON PREPARED BED IN SUCH A MANNER AS TO MINIMIZE POINTS AT WHICH ONE PIPE MAY CROSS OVER ANOTHER PIPE. AT POINTS WHERE PIPING MUST CROSS OVER, A MINIMUM OF 4 INCHES MUST SEPARATE THE PIPES.

I. CLEANING SOLVENTS: REMOVE ANY ACCUMULATION OF ACCIDENTAL SPILL OF PIPE CLEANING SOLVENTS ON THE TANK

2. PROCEED TO "FIRST TEST" PRIOR TO BACKFILLING TRENCHES WHEN PIPING IS PLACED ON THE BED.

J. FLEX CONNECTOR BOOTS:

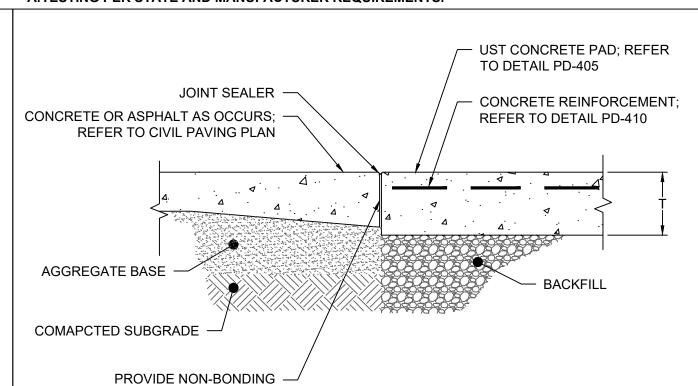
G.SPECIAL FITTINGS:

ENCASE ALL FLEX CONNECTORS IN AN ISOLATION BOOT WHEN IN CONTACT WITH SOIL OR BACKFILL MATERIAL. MOVE THE ISOLATION TO INSPECT AND TEST ALL PRIMARY PIPING AND FLEX CONNECTOR.

IMMEDIATELY WITH A CLEAN CLOTH. AFTER THE PIPING IS COMPLETE, INSPECT THE CONTAINMENT

2.3 TESTING OF PIPING: A.TESTING PER STATE AND MANUFACTURER REQUIREMENTS.

SUMP AND OTHER COLLECTION POINTS FOR PIPING CLEANING SOLVENTS.



MATERIAL AT VERTICAL FACE OF

FIRST POUR (I.E. ELASTOMERIC)

WELL MANHOLE

CONCRETE

DEADMAN

- SCH 40 PVC

BOTTOM OF OBSERVATION

WELL MUST BE 24" MIN. BELOW

12" OBSERVATION WELL

BOTTOM OF UNDERGROUND

SLIP-ON CAP

STORAGE TANK

12" LOCKABLE OBSERVATION O

UNDERGROUND

STORAGE TANK

PD-420 UST CONCRETE PAD EDGE DETAIL - 18" DIA. BOLT DOWN OBSERVATION

GROUNDWATER GRADIENTS ARE KNOWN.

5. WELL SCREEN SHALL BE PLACED:

UST CONCRETE PAD AS REQUIRED BY LOCAL CODE AND AS SHOWN ON PLANS. SLOTS WILL EXTEND TO WITHIN 24" BELOW GRADE. 2. DO NOT PAINT INSIDE MANHOLE

3. DO NOT GLUE REDUCERS, CAPS, OR COLLARS WITH PVC SOLVENT 4. LOCATE OBSERVATION WELL "DOWN STREAM" OF THE TANKS IF

1. (2) PVC SLOTTED OBSERVATION WELL SCREENS WILL BE INSTALLED IN

A. 2'-0" BELOW GROUND SURFACE B. 2'-0" ABOVE STATIC GROUNDWATER (IF ENCOUNTERED IN TANK EXCAVATION)

C. 5'-0" INTO GROUNDWATER (IF ENCOUNTERED IN TANK EXCAVATION) D. 2'-0" MIN. BELOW TANK BOTTOM

6. REFERENCE MANUFACTURER SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

048231

NOT RELEASED FOR CONSTRUCTION

I. FRENCH DESIGNED BY

SHEET NO.

12/23/2022 DRAWN BY

CHECKED BY I. DOOLEY

AS SHOWN

7630.10

PD-425 **OBSERVATION WELLS DETAIL**