TENNESSEE D.O.T. DESIGN DIVISION FILE NO. K-21

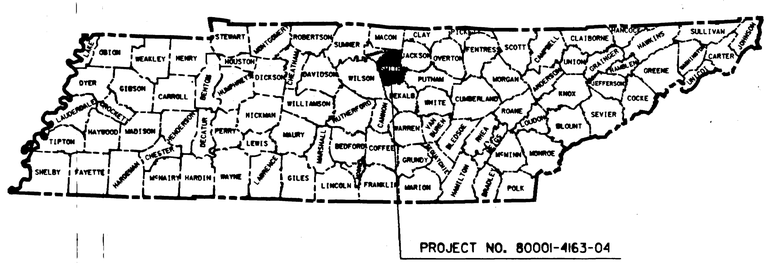
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

TENN.	YEAR	SHEET NO.
	1997	1
FED.AID PROJ.NO.		
STATE PROJ.NO.	80001-4163-04	

SMITH COUNTY

I-40 WELCOME CENTER
WASTEWATER TREATMENT PLANT MODIFICATIONS

STATE HIGHWAY NO. F.A.H.S. NO. I-40



INDEX OF SHEETS

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1	TITLE SHEET
2	ESTIMATED QUANTITIES
2A	GENERAL NOTES AND SCOPE OF WORK
2B & 2C	MISCELLANEOUS DETAILS
3	EXISITING SITE PLAN
4	PROPOSED SITE PLAN
5	HYDRAULIC PROFIILE FOR PROPOSED WASTEWATER FACILITY
6	ALTERATIONS TO EXISTING SEPTIC TANK
7	PROPOSED WASTEWATER RECIRCULATION TANK
7A	PROPOSED FIBERGLASS RECIRCULATION TANK ALTERNATIVE
8	PROPOSED WASTEWATER RECIRCULATING SAND FILTER
9	PROPOSED FLOWMETER/U.V. DISINFECTION SYSTEM
10	PROPOSED ELECTRICAL SITE PLAN
11	ELECTRICAL DETAILS

STANDARD ROADWAY DRAWINGS

DRAWING NO.	CURRENT REVISION DATE	STANDARD TITLE

ROADWAY DESIGN STANDARDS

RD-A-1	9-05-94	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	10-26-94	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-S-11	10-26-93	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPEMENT
RD-S-11A	1-19-96	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION.

SAFETY APPURTENANCES AND FENCE

S-F-10B	7-17-81	RIGHT-OF-WAY CHAIN LINK FENCE

EROSION CONTROL AND LANDSCAPING

EC-STR-1	12-18-95	TEMPORARY DEWATERING STRUCTURE. PAY ITEMS & GENERAL NOTES
EC-STR-3	12-18-96	TEMPORARY SILT FENCE & FILTER BARRIER
EC-STR-5	12-18-95	STRAW OR HAY BALE OR FABRIC TEMPORARY EROSION CHECKS

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED. EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

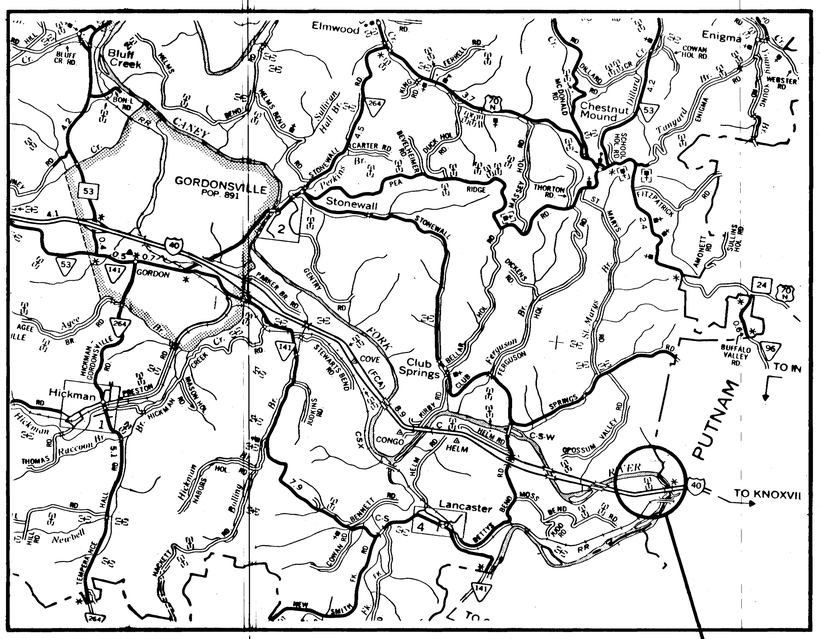
THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1995 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

TDOT C.E. MANAGER 2 CARL COBBLE

DESIGNED BY BARGE, WAGGONER, SUMNER & CANNON, INC.

DESIGNER JIM GILLIAM, GEORGE C. GARDEN, ROBERT BOYD CHECKED BY SHANNA CURLEY, CHARLIE CARRIGAN

P.E. NO. 80001-4162-04



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SCALE: 1"= 1 MILE

PROJECT LENGTH 0.00 MILES

NO EQUATIONS
NO EXCLUSIONS

PROJECT NO. 80001-4163-04 CONST.

WELCOME CENTER

APPROVED: Paul R. Morrison
DIRECTOR, DESIGN DIVISION

DATE:

APPROVED:
COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	2

TENNESSEE D.O.T. | DESIGN DIVISION

FILE NO. 11496-75 K-21

ESTIMATED ROADWAY QUANTITIES

	ITEM No.	DESCRIPTION	UNIT	TOTAL QUANTITY
(1)	209-01.10	EROSION AND SILTATION CONTROL	L.S.	1
(2)	608-36.51	1" POLYVINYL CHLORIDE WATER PIPE	L.F.	100
	608-36.52	2" POLYVINYL CHLORIDE WASTE PIPE	L.F.	260
(3)	608-36.54	4" POLYVINYL CHLORIDE WATER PIPE	L.F.	180
	608-36.55	6" POLYVINYL CHLORIDE WATER PIPE	L.F.	370
	608-36.60	POLYVINYL CHLORIDE WATER PIPE (2.5")	L.F.	230
(4)	611-02.10	MANHOLE, 4' DIAMETER, 0'-6' DEPTH	EACH	1
	707-02	END AND CORNER POST ASSEMBLY (CHAIN-LINK FENCE 6')	EACH	9
	707-02.02	GATE (CHAIN-LINK FENCE-6 FT.) (12 FT. WIDE SINGLE GATE W/ BARBWIRE)	EACH	1
	707-02.07	CHAIN-LINK FENCE (6') W/ BARBWIRE	L.F.	689
	714-03.03	DIRECT BURIAL CONDUIT (3/4" SCHEDULE 40 PVC)	L.F.	480
	714-03.04	DIRECT BURIAL CONDUIT (1" SCHEDULE 40 PVC)	L.F.	170
	714-04.01	CONDUIT (STRUCTURES - 1" RGS)	L.F.	15
	714-04.04	CONDUIT (STRUCTURES - 3/4" RGS)	L.F.	40
	714-06.01	CABLE (1/C #14 AWG)	L.F.	240
(5)	714-06.03	CABLE (1/C #10 AWG)	L.F.	1790
	714-06.04	CABLE (1/C #6 AWG)	L.F.	510
	714-12.01	CONTROL CENTER (RECIRCULATION TANK PUMP STA. C.P.)	L.S.	1
	714-12.11	MODIFY EXISTING CONTROL CENTER (PANEL C AS NOTED)	EACH	1
(6)	714-13	CLASS "A" CONCRETE (ROADWAY STRUCTURE LIGHTING)	C.Y.	0.5
	717-01	MOBILIZATION	L.S.	1
(7)	720-62.14	1" FROST PROOF HOSE BIBB	EACH	1
(8)	720-62.16	3/4" REDUCED PRESSURE BACKFLOW PREVENTER	L.S.	1
(9)	720-62.33	RECIRCULATING SAND FILTER	L.S.	1
(10)	720-62.34	SPLITTER BOX AND ULTRAVIOLET DISINFECTION SYSTEM	L.S.	1
(11)	720-62.80	MODIFICATIONS OF EXISTING SEPTIC TANK	L.S.	1
(12)	720-62.81	RECIRCULATION TANK	L.S.	1
	801-01	SEEDING (WITH MULCH)	UNIT	18
	801-03	WATER (SEEDING AND SODDING)	M.G.	2
	803-01	SODDING (NEW SOD)	S.Y.	400

FOOTNOTES

(1) THE CONTRACTOR WILL SUBMIT AN EROSION CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK. ALL PROVISIONS OF TDOT STANDARD SPECIFICATION SECTION 209, PROJECT EROSION AND SILTATION CONTROL, AND EROSION CONTROL AND LANDSCAPING STANDARD DRAWINGS CITED (SEE SHEET 1) ARE INCLUDED IN THIS LUMP SUM ITEM.

(2) SCH. 40 (FOR WATER SUPPLY), INCLUDES COST FOR PVC FITTINGS, 1" CORP STOP, VALVES & VALVE BOXES, TRENCH & BACKFILL COMPLETE AND IN PLACE.

(3) SCH. 40 (FOR SEWAGE FORCE MAIN AND DRAINAGE PIPING OUTSIDE FILTER), INCLUDES COST FOR PVC FITTINGS, VALVES & VALVE BOXES, TRENCH & BACKFILL COMPLETE AND IN PLACE.

(4) COMPLETE AND IN PLACE (SEE DETAIL, SHEET 2B).

(5) COPPER, TYPE THWN / THHN INSUL. 600 VOLT.

(6) FOR CONTROL PANEL PAD.

(7) INCLUDES DRAIN LINE, FRENCH DRAIN AND ASSOCIATED FITTINGS COMPLETE AND IN PLACE (SEE DETAIL, SHEET 2C).

(8) INCLUDES BACKFLOW PREVENTER, INSULATED COVER, HEATER OR HEAT CORD, CONCRETE PAD AND ASSOCIATED WIRING COMPLETE AND IN PLACE (SEE DETAIL, SHEET 2C).

(9) COMPLETE AND IN PLACE - INCLUDES EXCAVATION, BACKFILL, GRADING, UNDERDRAIN CONTROL VALVE & ASSOCIATED FITTINGS (SEE DETAIL, SHEET 12).

(10) COMPLETE AND IN PLACE - INCLUDES MODIFICATION OF EXISTING CHLORINE CONTACT CHAMBER AND SUBSEQUENT INSTALLATION OF LADDER, ULTRAVIOLET DISINFECTION UNIT AND PALMER-BOWLUS FLUME (SEE DETAIL, SHEET 8). ALSO INCLUDES FLOW SPLITTER (SEE DETAIL, SHEET 2B).

(11) INCLUDES REMOVAL AND PLUGGING OF EXISTING DOSING MECHANISM, INSTALLATION OF FILTERS (3), RISER ACCESSES (2), AND DISCHARGE LINES TO COLLECTION MANHOLE, COMPLETE AND IN PLACE (SEE DETAIL, SHEET 6).

(12) COMPLETE AND IN PLACE - INCLUDES EXCAVATION, LEVELING SAND, BACKFILL, GRADING, FILTERS & ASSOCIATED FITTINGS (SEE DETAIL, SHEET 7). A RECIRCULATION TANK OF APPROVED FIBERGLASS CONSTRUCTION MAY BE BID AS AN ALTERNATIVE (SEE DETAIL, SHEET 7A).

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

ESTIMATED QUANTITIES

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

BWSC#PLOT#TIME###
BWSC#FILENAME#####################################

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	2A

TENNESSEE D.O.T. | DESIGN DIVISION

FILE NO. 11496-75

K-81

GENERAL NOTES

1.0 GRADING

1.1 ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

1.2 THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

2.0 SEEDING AND SODDING

2.1 ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED ON ALL SLOPES .

3.0 UTILITIES

3.1 THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED.

3.2 THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

3.3 THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.

3.4 SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111.

4.0 MISCELLANEOUS

4.1 NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

5.0 WETLANDS MITIGATION & EROSION CONTROL

5.1 TO REDUCE SEDIMENT IN RUNOFF, EROSION CONTROL STRUCTURES SHALL BE INSTALLED PROMPTLY DURING ALL CONSTRUCTION PHASES.

5.2 TO INSURE EROSION CONTROL STRUCTURES WORK PROPERLY, IT IS IMPERATIVE THAT THE SEDIMENT BE REMOVED. THEREFORE, "INSPECTION" AND "MAINTENANCE" OF STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS.

5.3 DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO INSURE THAT STRUCTURAL COMPONENTS OF EROSION CONTROL STRUCTURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTORS OWN EXPENSE.

5.4 STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.

5.5 CLEARING AND GRUBBING IS TO BE HELD TO THE MINIMUM WIDTH NECESSARY TO ACCOMMODATE SLOPES. UNNECESSARY CANOPY REMOVAL (TREES, SHRUBS, ETC.) IS PROHIBITED.

5.6 BORROW AND DISPOSAL AREAS SHALL BE LOCATED IN NON-WETLAND AREAS.

5.7 EQUIPMENT STAGING AND MAINTENANCE AREAS SHALL BE DEVELOPED A SUFFICIENT DISTANCE FROM WETLAND AREAS TO INSURE THAT OIL, GASOLINE AND OTHER PETROLEUM POLLUTANTS DO NOT ENTER THE WETLANDS.

5.8 WETLAND AREAS SHALL NOT TO BE USED AS EQUIPMENT STAGING AREAS OR BORROW SOURCE.

6.0 SPECIAL NOTES

6.1 THE CONTRACTOR WILL SUBMIT AN EROSION CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK. ALL COSTS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-01.10. MATERIAL QUANTITIES REQUIRED TO MEET LEGAL AND REGULATORY STANDARDS ARE CONSIDERED TO BE INCIDENTAL TO THE PROJECT'S CONSTRUCTION WORK AND SHALL BE PROVIDED BY THE CONTRACTOR AS NECESSARY WITHOUT ADDITIONAL COST TO THE OWNER.

6.2 SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES IS TO BE PLACED AT A SITE APPROVED BY THE ENGINEER. IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT IN RUN-OFF. COST FOR THIS TREATMENT IS TO BE INCLUDED IN BID PRICE FOR OTHER ITEMS.

6.3 UPON COMPLETE REMOVAL OF EROSION AND SEDIMENT CONTROL STRUCTURES, THE AREA WHERE THEY WERE CONSTRUCTED IS TO BE TOPSOILED, SEEDED AND MULCHED. COST TO BE INCLUDED IN BID PRICE FOR ITEM NO. 209-01.10

6.4 EXCAVATION FOR SANITARY MANHOLES, SANITARY SEWER LINES, SAND FILTER (INCLUDING PLANT PIPING), RECIRCULATION TANK WILL BE CONSIDERED AS UNCLASSIFIED AND WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST BID FOR EACH RESPECTIVE ITEM.

6.5 LOCATION OF THE FENCE SHALL BE WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

SCOPE OF WORK

FOR WELCOME CENTER

1. THE CLEARING AND GRUBBING AND REMOVAL OF EXISTING STRUCTURES OBSTRUCTING WORK AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

2. THE SITE GRADING AND DRAINAGE FOR THE PROPOSED WASTEWATER FACILITIES IMPROVEMENTS.

3. THE CONSTRUCTION OF PROPOSED WASTEWATER FACILITY MODIFICATIONS INCLUDING GRAVITY SEWER LINES, SEPTIC TANK ALTERATIONS, RECIRCULATION TANK, FORCE MAINS, SAND FILTER, ULTRAVIOLET DISINFECTION UNIT, AND ASSOCIATED APPURTENANCES COMPLETE AND IN PLACE .

4. ALL SEEDING, EROSION CONTROL AND ALL OTHER ITEMS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER TO COMPLETE THE PROJECT.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

GENERAL NOTES AND SCOPE OF WORK

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

09-JAN-1997 12:26
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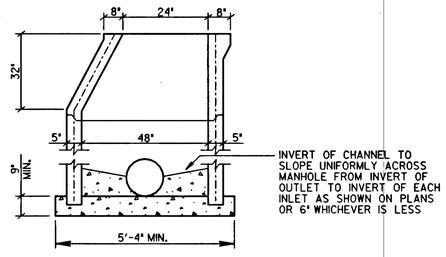
TENNESSEE D.O.T. | DESIGN DIVISION

FILE NO. 11496-75 K-21

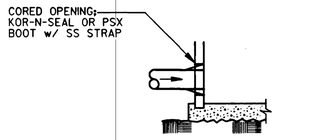
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	28



ECCENTRIC CONE

GENERAL NOTES:

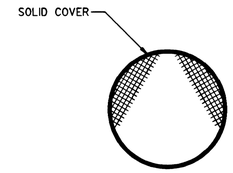
1. ALL MATERIALS, DESIGN, MANUFACTURE, PHYSICAL TEST REQUIREMENTS, FINISH, MARKING, INSPECTION, REJECTION AND REPAIRS TO MEET ASTM C478 FOR PRECAST REINFORCED CONCRETE MANHOLE RISERS AND TOPS EXCEPT AS MAY BE MODIFIED IN THESE SPECIFICATIONS.
2. SIZE AND LOCATE PIPE CUTOUTS AS REQUIRED.
3. MANHOLE STEPS TO BE CAST IN PLACE.
4. ALL CONNECTIONS TO MANHOLES SHALL BE W/ KOR-N-SEAL OR PSX BOOT w/ SS STRAP.

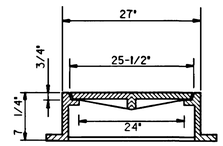


DETAIL - CORED OPENING

STANDARD PRECAST CONCRETE MANHOLES

SCALE: N.T.S. ITEM NO. 611-02.10

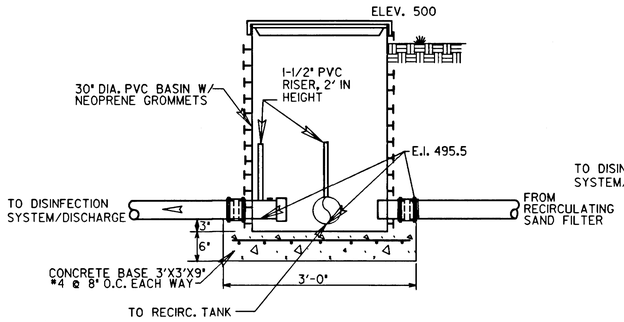


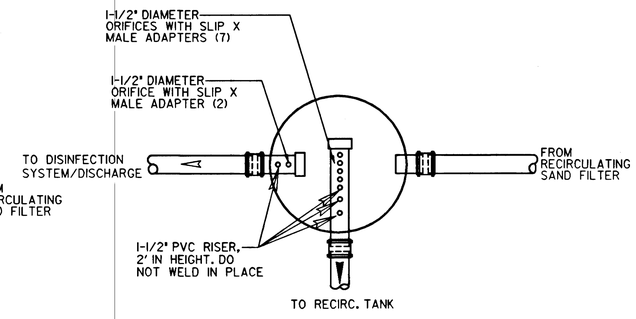


NOTE:
ANCHOR W.J. CASTINGS TO TOP CONE W/ 10 3/4" BOLTS

MANHOLE FRAME AND COVER

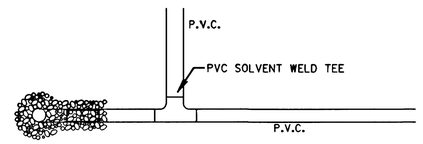
SCALE: N.T.S. ITEM NO. 611-02.10



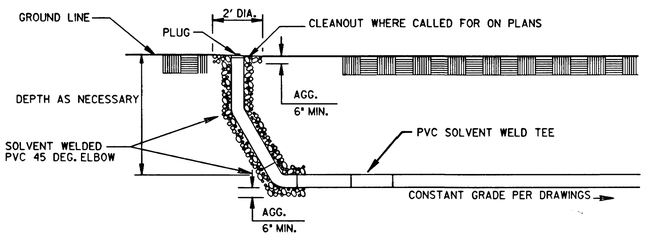


FLOW SPLITTER

SCALE: N.T.S. INCLUDED IN ITEM NO. 720-62.34



PLAN VIEW-N.T.S.



PROFILE VIEW-N.T.S.

CLEANOUT AT GRAVITY SEWER TURNS

SCALE: N.T.S. INCLUDED IN ITEM NO. 608-36.54

4/3/97

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

MISCELLANEOUS DETAILS

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

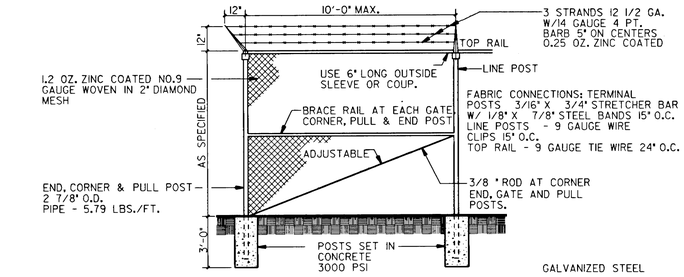
BWSC@PLOT@TIME@@@
BWSC@FILE@NAME@@@

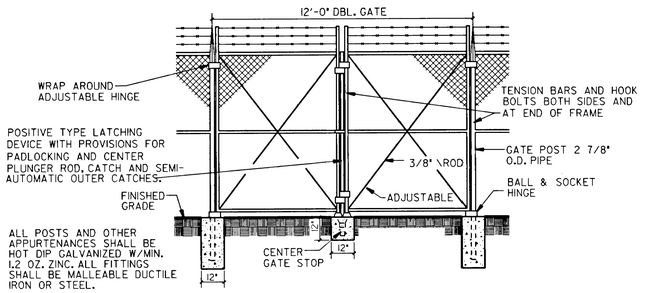
TENNESSEE D.O.T. DESIGN DIVISION

FILE NO. 11496-75

K-21

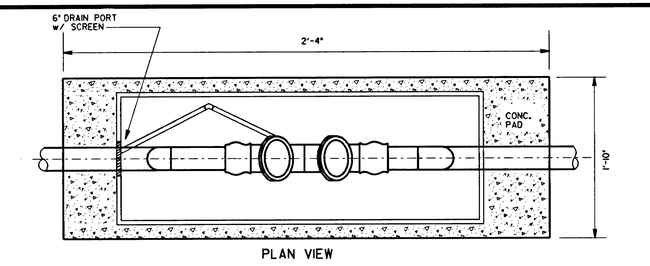
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	2C



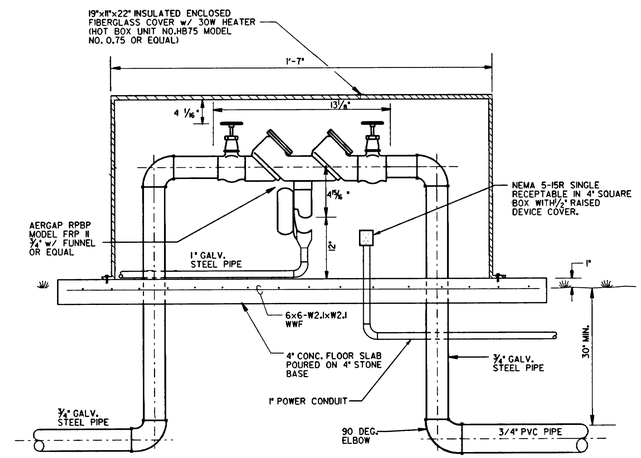


FENCE & GATE DETAIL

SCALE: N.T.S. ITEM NOS. 707-02.02 & 707-02.07



PLAN VIEW

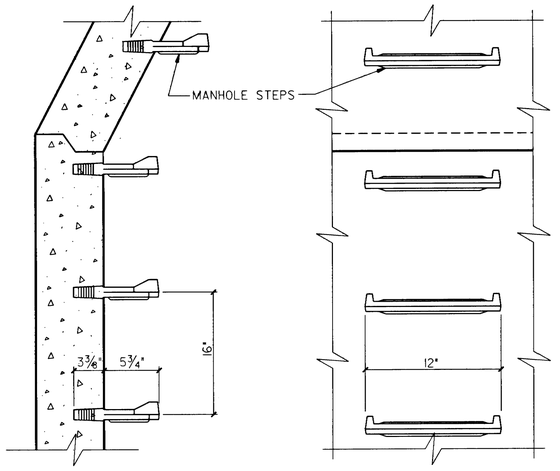


SECTION VIEW

REDUCED PRESSURE BACKFLOW PREVENTER

SCALE: N.T.S. ITEM NO. 720-62.16

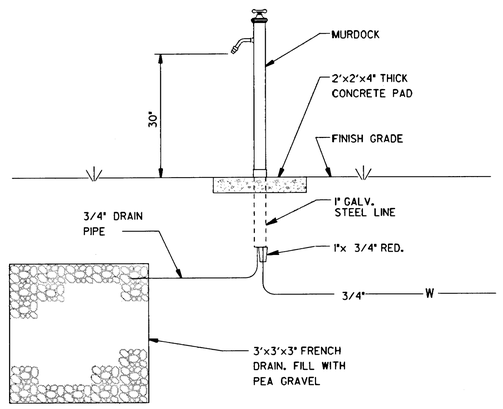
NOTE:
3/8' STEEL REINFORCED ROD ENCAPSULATED IN POLYPROPYLENE PLASTIC OR EQUAL



SECTION ELEVATION

DETAIL OF STANDARD LADDER BARS

SCALE: N.T.S. INCLUDED IN ITEM NO. 611-02.10

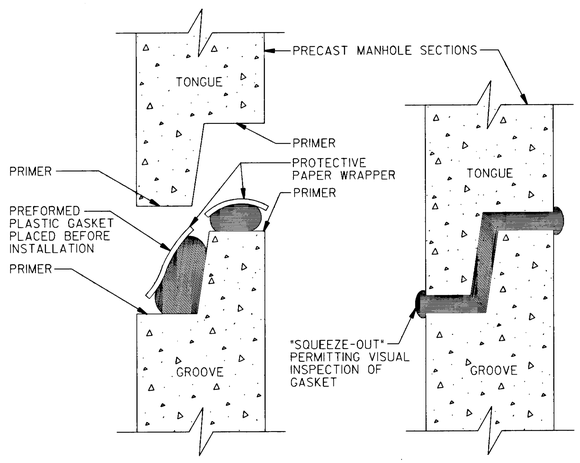


NOTE:
POST HYDRANT TO BE MURDOCK : BFHE-75 3/4', NON-FREEZING WITH VACUUM BREAKER OR APPROVED EQUAL. CONTRACTOR TO PROVIDE NECESSARY REDUCER.

FROST PROOF HOSE BIBB

SCALE: N.T.S. ITEM NO. 720-62.14

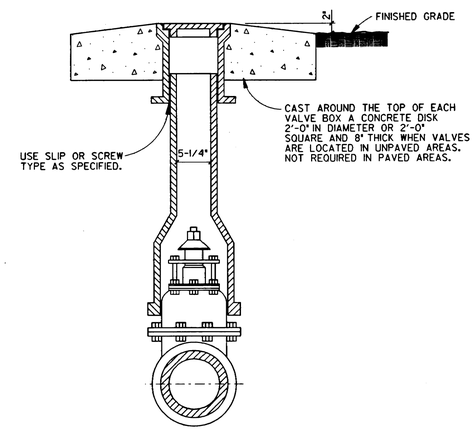
NOTE:
WHERE MASTIC DOES NOT PROTRUDE, EITHER INSIDE OR OUTSIDE, POINT UP JOINT WITH GROUT.



OPEN JOINT CLOSED JOINT

DETAIL OF PLASTIC GASKET FOR PRECAST MANHOLE SECTIONS

SCALE: N.T.S. ITEM NO. 611-02.10



GEORGE C. GARNER — 1/16/97 — No. 10225 — REGISTERED ENGINEER — STATE OF TENNESSEE

TYPICAL VALVE BOX DETAIL

SCALE: N.T.S. INCLUDED IN ITEM NO. 608-36.51

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

MISCELLANEOUS DETAILS

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

14-JAN-1997 10:06
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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO. 11496-63

K-21

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	3

MAGNETIC

STORM DRAIN (TYP)

24" RCP

IE = 497.7

CONCRETE FLUME

LOCATION OF EXISTING LINES TO AND FROM INTERMITTENT SAND FILTER APPROXIMATE.

VENTS-EXISTING UNDERGROUND INTERMITTENT SAND FILTER

SSMH
TOC = 507.8
IE = 497.6

SSMH
TOC = 508.7
IE = 497.6

SSMH
TOC = 508.6
IE = 503.5

SSMH
TOC = 508.0
IE = 497.9

EXISTING SEPTIC TANK

IE = 504.2

SSMH
TOC = 512.3
IE = 504.2

LIGHT POLE (TYP)

24" RCP

IE = 518.6

CONCRETE STORM DRAIN

PICNIC TABLE

HOSE BIB (TYP)

GRILL CIRCLE

PAVED SIDEWALK

PAVILION

FENCED-IN CEMETERY

SHED

GRAVEL DRIVE

CONCRETE PAD

EXISTING CHLORINE CONTACT CHAMBER

VENT PIPE (TYP)

TREE LINE (TYP)

500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523

GRAPHIC SCALE

20 0 10 20 40 60

(IN FEET)
1 inch = 20 ft.

George C. Barker 1/16/97

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EXISTING SITE PLAN

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

09-JAN-1997 13:35
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TENNESSEE D.O.T.
DESIGN DIVISION

K-21
FILE NO. 11496-63

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	4

MAGNETIC

FROST PROOF HOSE BIBB

RPBP WITH HOT BOX

INSTALL MANHOLE (SEE DETAIL, SHEET 2B)

E.I. OUT 502.00

SSMH TOC = 507.8 IE = 497.6

SSMH TOC = 508.7 IE = 497.6

SSMH TOC = 508.6 IE = 503.5

SSMH TOC = 502.0 IE = 497.9

SSMH TOC = 512.3 IE = 504.2

IE = 504.2

LIGHT POLE (TYP)

TIE TO EXISTING WATER LINE WITH 1" PVC PROVIDE 1" GATE VALVE WITH VALVE BOX

24" RCP

IE = 510.6

CONCRETE STORM DRAIN

MODIFY EXISTING SEPTIC TANK TO INCLUDE 3 FILTERED DISCHARGES WITH NEW LINES TO COMBINING MANHOLE. (SEE DETAIL OF SEPTIC TANK, SHEET 6)

EXISTING 8" PVC SEWER TO INTERMITTENT FILTER TO BE ABANDONED

STORM DRAIN (TYP)

24" RCP

IE = 492.7

CONCRETE FLUME

STA 0+70
E.I. 500.53

167 DEG.

40'

6" SCHEDULE 40 PVC @2.1% CONSTANT GRADE. ALL FITTINGS PVC SOLVENT-WELDED

EXISTING 3/4" WATER LINE CONTRACTOR TO FIELD LOCATE AND VERIFY

PICNIC TABLE

10'

40'

CLEANOUT

141.44 DEG.

STA 1+50
E.I. 498.85

CUT ALL VENTS 1 FT. BELOW GROUND LEVEL. FILL WITH EXCESS SOIL TO EXISTING GRADE. (INCLUDED IN ITEM 720-62.33)

HOSE BIB (TYP)

GRILL CIRCLE

FENCED-IN CEMETERY

GRAVEL DRIVE

EXISTING INTERMITTENT SAND FILTER TO BE ABANDONED

STA 2+00
E.I. 498.40

2"SCH 40 PVC BACKWASH DISCHARGE LINE (SOLVENT WELD FITTINGS AS REQUIRED) MAINTAIN 18" MIN. COVER OUTSIDE FILTER). TIE TO SEWER LINE WIHT 6X2 SANITARY TEE.

PROPOSED RECIRCULATING SAND FILTER (SEE DETAIL FOR ELEVATIONS, DISTRIBUTION & COLLECTION PIPING, SHEET 8)

DISTRIBUTING VALVE #1 (SEE DETAIL, SHEET 5)

EXISTING 8" PVC TO BE ABANDONED

2"SCH 40 PVC BACKWASH SUPPLY LINE (SOLVENT WELD FITTINGS AS REQUIRED) MAINTAIN 18" MIN. COVER OUTSIDE FILTER).

DISTRIBUTING VALVE #2

CONCRETE PAD

FENCE

CUT AND CAP

CLEANOUT

FLOW SPLITTER (SEE DETAIL, SHEET 2B)

12' DOUBLE GATE (SEE DETAL, SHEET 2C)

STA 3+03
E.I. 495.64

129 DEG.

STA 3+45
E.I. 494.76
142.24 DEG.

MODIFY EXISTING CHLORINE CONTACT CHAMBER TO INCLUDE FLUME AND U.V. DISINFECTION UNIT (SEE DETAIL, SHEET 9)

PROPOSED RECIRCULATION TANK (SEE DETAIL, SHEET 7&7A)

EXISTING 8" PVC GRAVITY DISCHARGE TO CANEY FORK RIVER TO REMAIN

REMOVE EXISTING FENCE

4" SCH 40 PVC @2.2% UNIFORM SLOPE

UNDERDRAIN LEVEL CONTROL VALVE

CLEANOUT

48' ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5
ZONE 6
ZONE 7
ZONE 8

80'

20'

E.I. OUT 498.00

TREE LINE (TYP)

GRAPHIC SCALE

20 0 10 20 40 60

1 inch = 20 ft.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

George C. Barker 4/3/97
STATE OF TENNESSEE

PROPOSED SITE PLAN

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

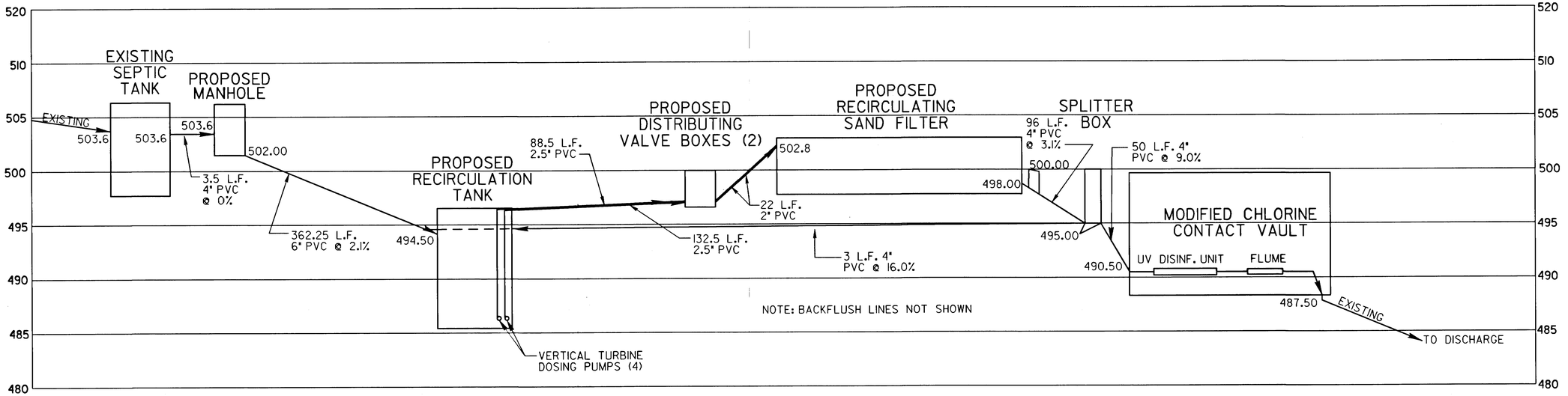
BWSC$PLOT$TIME$$$
BWSC$FILE$NAME$$$

TENNESSEE D.O.T. DESIGN DIVISION

FILE NO. 11496-75

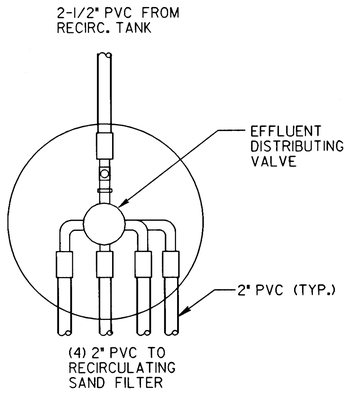
K-21

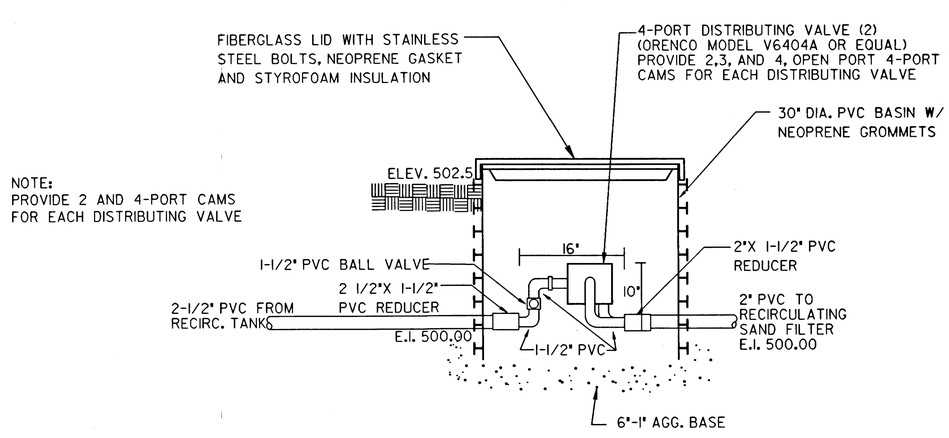
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	5



HYDRAULIC PROFILE

SCALE: N.T.S.





DISTRIBUTING VALVE BOXES (2)

SCALE: N.T.S.

George C. Burton 4/3/97

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

HYDRAULIC PROFILE FOR PROPOSED WASTEWATER FACILITY

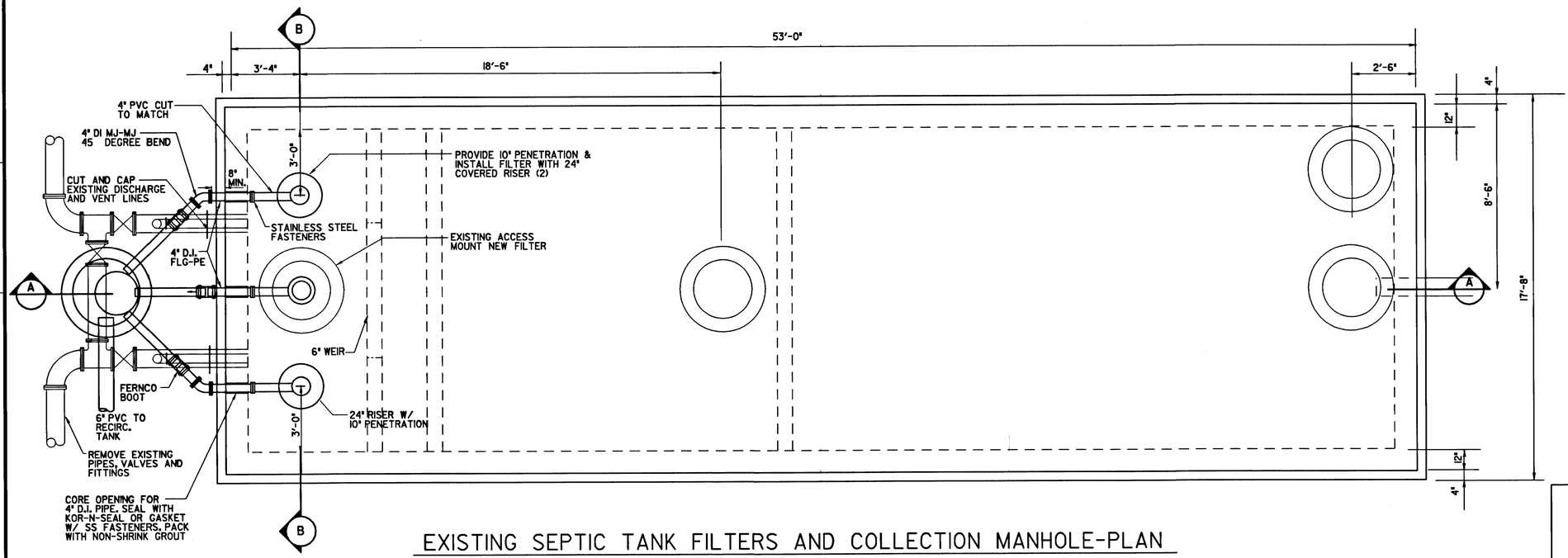
I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

BWSC$PLOT$TIME$$$
BWSC$FILE$NAME$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	6

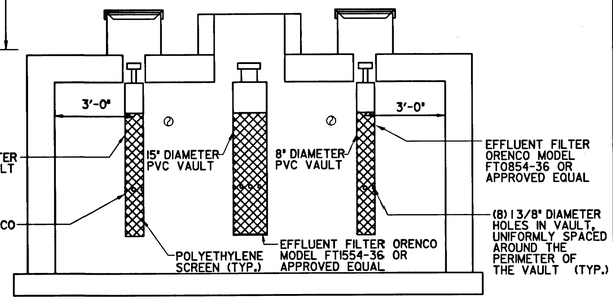
TENNESSEE D.O.T. DESIGN DIVISION

FILE NO. K-81



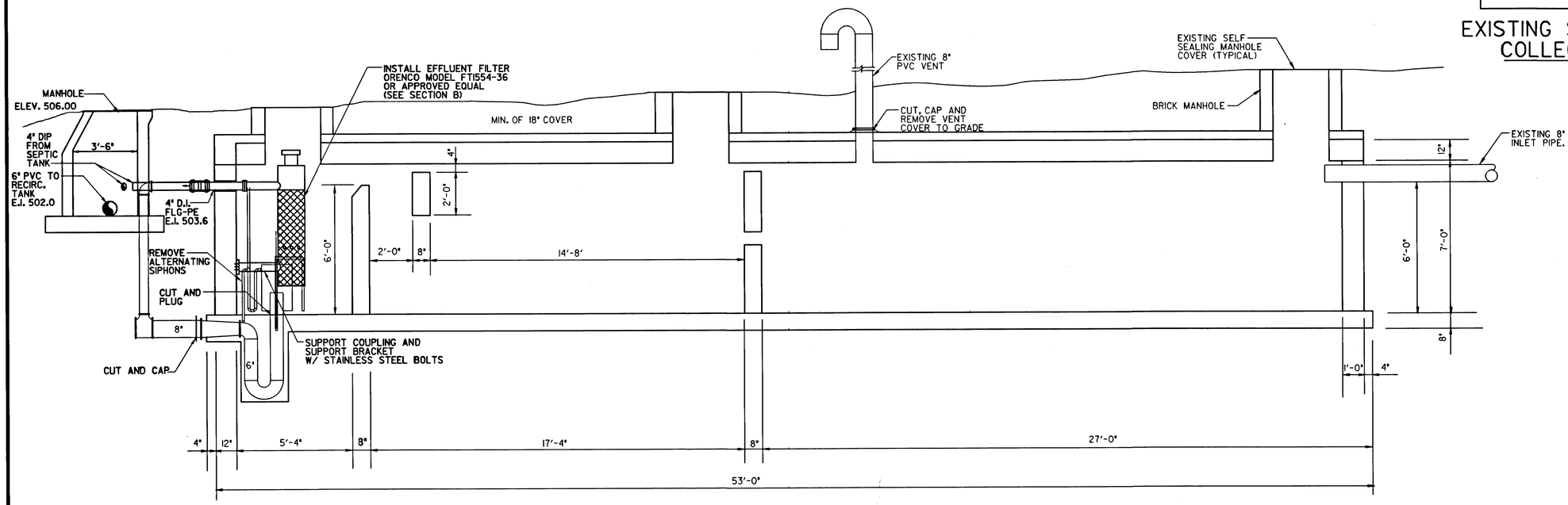
EXISTING SEPTIC TANK FILTERS AND COLLECTION MANHOLE-PLAN

SCALE: 3/8"=1'-0"



EXISTING SEPTIC TANK FILTERS AND COLLECTION MANHOLE-SECTION (B)

SCALE: 3/8"=1'-0"



EXISTING SEPTIC TANK FILTERS AND COLLECTION MANHOLE-SECTION (A)

SCALE: 3/8"=1'-0" ITEM NOS. 720-62.80 AND 611-02.10

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

ALTERATIONS TO EXISTING SEPTIC TANK

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

4/3/97

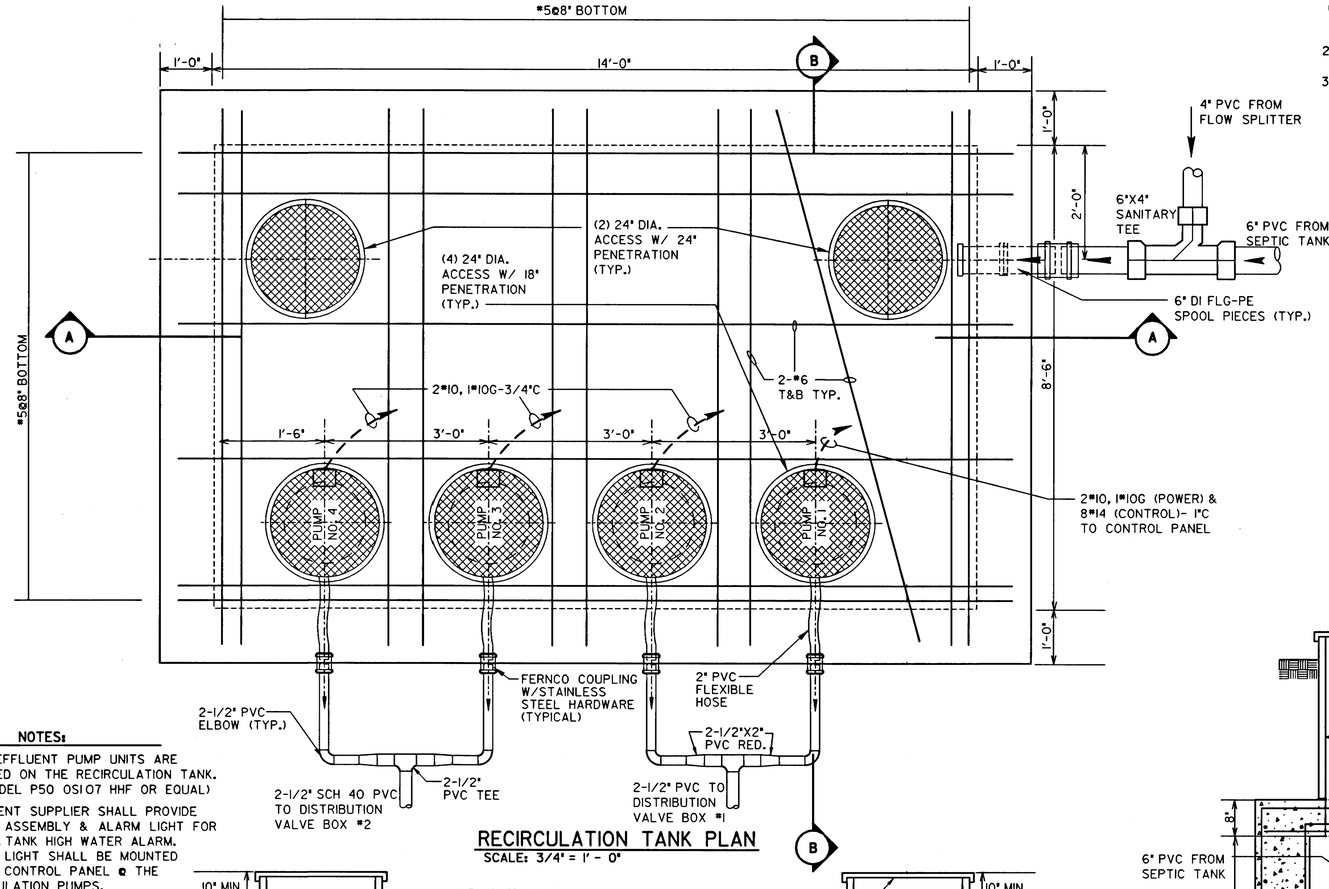
BWSC$PLOT$TIME$$$
BWSC$FILE$NAME$$$

TENNESSEE D.O.T. | DESIGN DIVISION

FILE NO. 11496-75

K-21

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	7

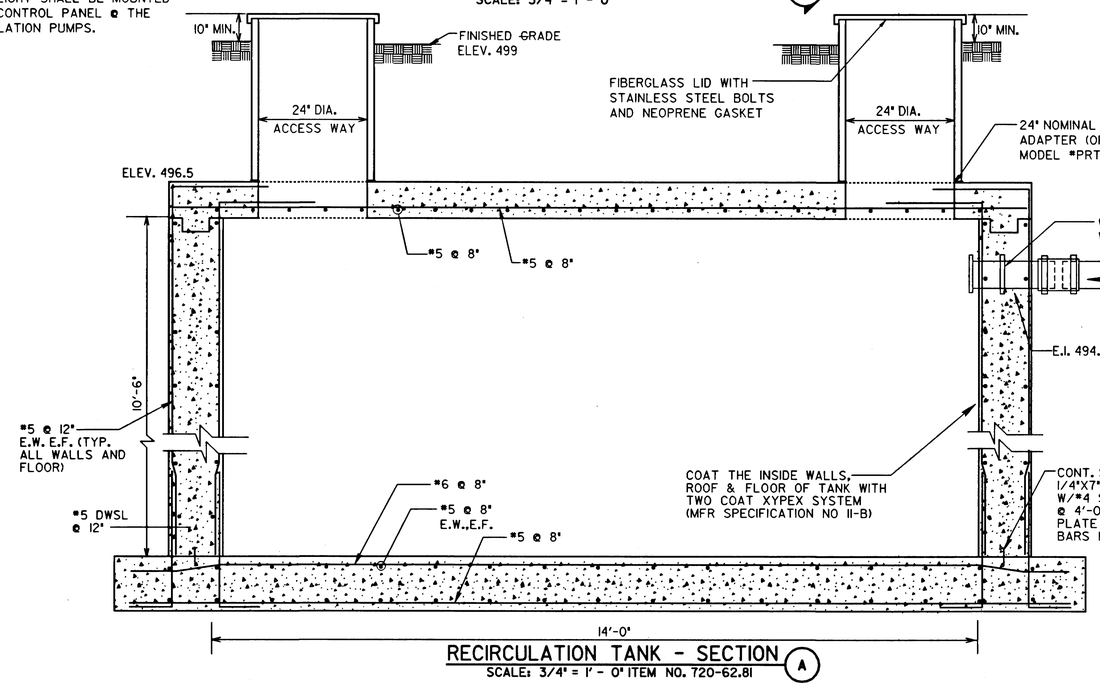


RECIRCULATION TANK PLAN

SCALE: 3/4" = 1' - 0"

NOTES:

1. FOUR EFFLUENT PUMP UNITS ARE REQUIRED ON THE RECIRCULATION TANK. (OSI MODEL P50 OSI07 HHF OR EQUAL)
2. EQUIPMENT SUPPLIER SHALL PROVIDE ALARM ASSEMBLY & ALARM LIGHT FOR RECIRC. TANK HIGH WATER ALARM. ALARM LIGHT SHALL BE MOUNTED IN THE CONTROL PANEL @ THE RECIRCULATION PUMPS.



RECIRCULATION TANK - SECTION (A)

SCALE: 3/4" = 1' - 0" ITEM NO. 720-62.81

STRUCTURAL GENERAL NOTES

CODES AND STANDARDS:

1. AMERICAN CONCRETE INSTITUTE,"BUILDING CODE REQUIREMENTS FOR REINFORCEMENT CONCRETE" (ACI 318-83).
2. AMERICAN CONCRETE INSTITUTE, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", (ACI 301) LATEST ADOPTED EDITION.
3. STANDARD BUILDING CODE (SBCCI) 1991 EDITION.

DESIGN LOADS:

1. SOIL UNIT WEIGHT - 120 PSF
2. EQUIVALENT FLUID PRESSURE - 50 PSF/FT.

REINFORCED CONCRETE:

1. MATERIALS
   - A. CONCRETE - 28 DAY STRENGTH - f'c - 4,000 PSI
   - B. REINFORCING STEEL - ASTM A615, GRADE 60
   - C. ALL EXPOSED CONCRETE SHALL BE AIR ENTRAINED
   - D. ALL WATER RETAINING STRUCTURES SHALL HAVE WATER/CEMENT RATIO=0.45 AND SHALL CONTAIN SUPER PLASTICIZER TO ACHIEVE 6" TO 8" SLUMP.
2. SHOP DRAWINGS SHALL CONFORM TO CONTRACT DRAWINGS AND TO "DETAILS AND DETAILING OF REINFORCED CONCRETE STRUCTURES" (ACI 315-80).
3. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS." (ACI LATEST ADOPTED EDTION.
4. DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE CRSI, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."
5. EMBEDDED ITEMS SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS. CONTACTOR IS TO FURNISH ALL EMBEDDED ITEMS UNLESS SHOWN ON THE DRAWINGS AS FURNISHED BY OTHERS.
6. CONTRACTOR IS TO PROVIDE AND COORDINATE WITH ALL OTHER TRADES FOR SIZE AND LOCATIONS OF ANY AND ALL OPENINGS, SLEEVES, ETC.

FOUNDATIONS:

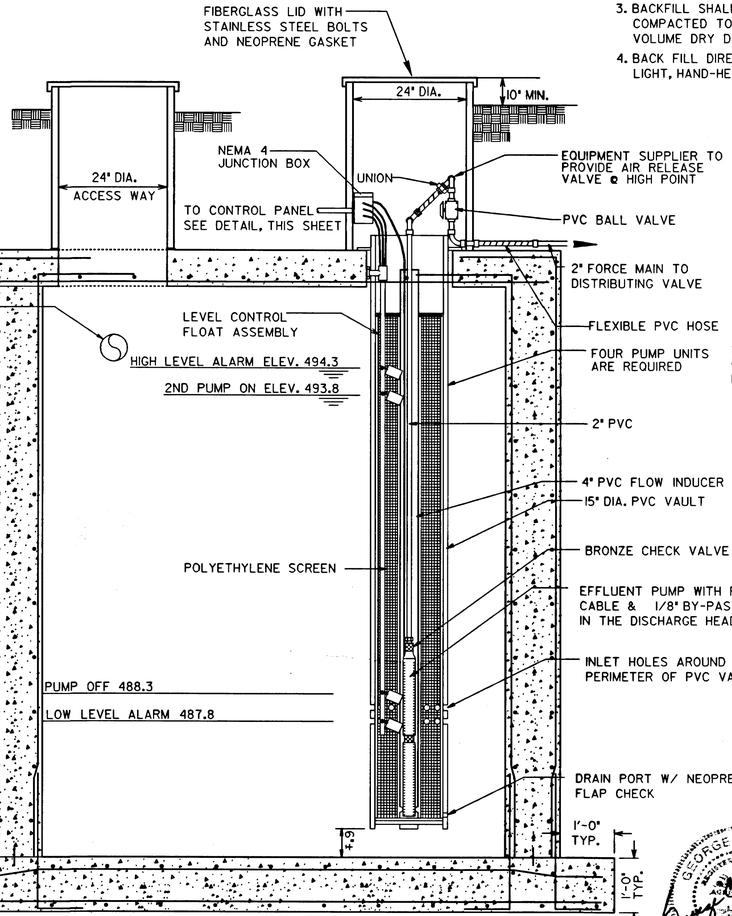
1. ALLOWABLE SOIL BEARING PRESSURE - 3,000 PSF
2. ALLOWABLE SOIL BEARING PRESSURES ARE BASED ON BEARING AGAINST FIRM, UNDISTURBED SOIL. NOTIFY ENGINEERS OF DISCREPANCIES.

MISCELLANEOUS:

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS PRIOR TO BEGINNING WORK.
2. FOR LOCATION OF MISCELLANEOUS ITEMS (SUCH AS OPENINGS, INSERTS, ETC.) AFFECTING STRUCTURAL WORK, SEE CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS.

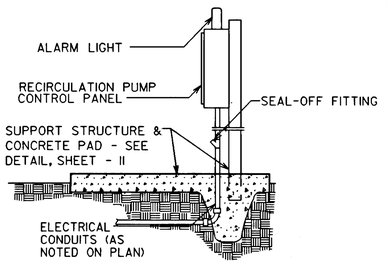
NOTES

1. TOP SLAB SHALL BE PLACED AND CURED BEFORE BACKFILLING AROUND TANK.
2. HEAVY COMPACTORS AND GRADING EQUIPMENT SHALL NOT OPERATE WITHIN 5 FEET OF THE WALLS.
3. BACKFILL SHALL BE PLACED IN 6-INCH THICK LOOSE LIFTS AND COMPACTED TO BETWEEN 80 AND 83% OF THE MATERIALS SOLID VOLUME DRY DENSITY.
4. BACK FILL DIRECTLY BEHIND THE WALLS SHALL BE COMPACTED WITH LIGHT, HAND-HELD COMPACTORS ONLY.



RECIRCULATION TANK - SECTION (B)

SCALE: 3/4" = 1' - 0"



CONTROL PANEL DETAIL

SCALE: N.T.S. ITEM NO. 720-62.41

ROBERT E. BOYD, REGISTERED ENGINEER, No. 22371, STATE OF TENNESSEE, 4/3/97

JAMES N. GILLIAM, REGISTERED ENGINEER, AGRICULTURAL, No. 7900, STATE OF TENNESSEE, ELECTRICAL, 4/3/97

GEORGE E. OLIVER, REGISTERED ENGINEER, No. 102222, STATE OF TENNESSEE, 4/3/97

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED WASTEWATER RECIRCULATION TANK

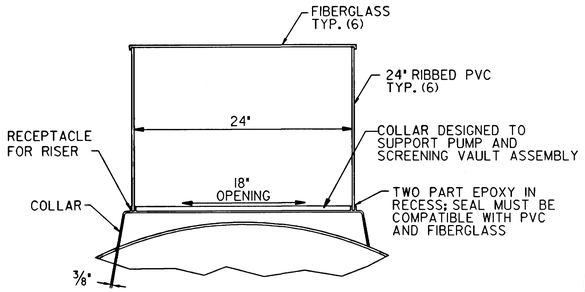
I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

BMSCHPLOTTIME=
BMSCHFILENAME=

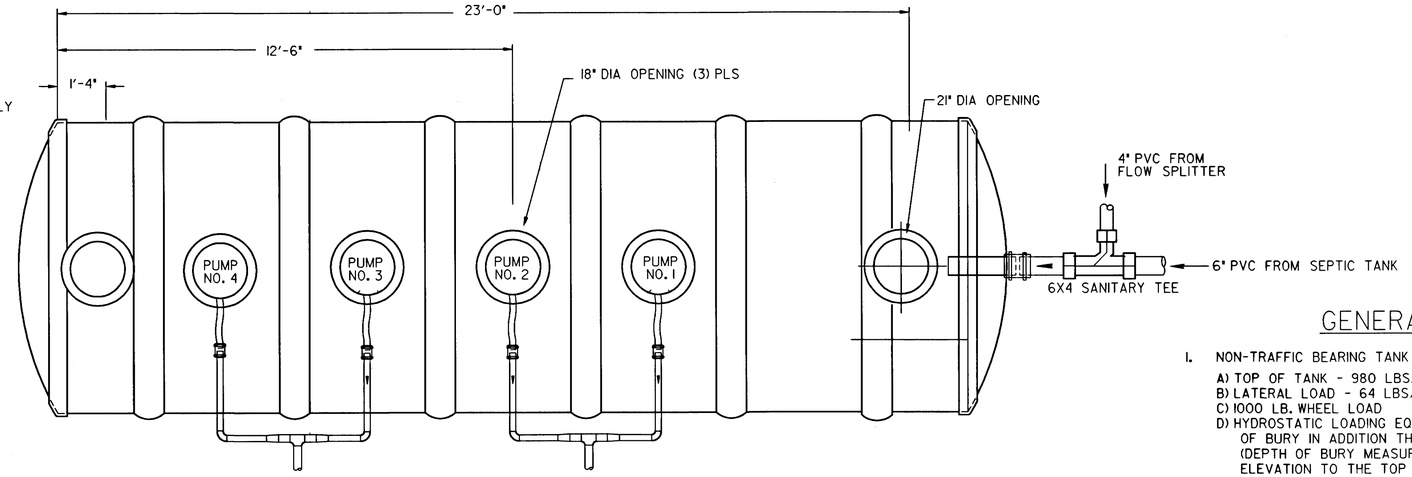
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	7A

TENNESSEE D.O.T. DESIGN DIVISION

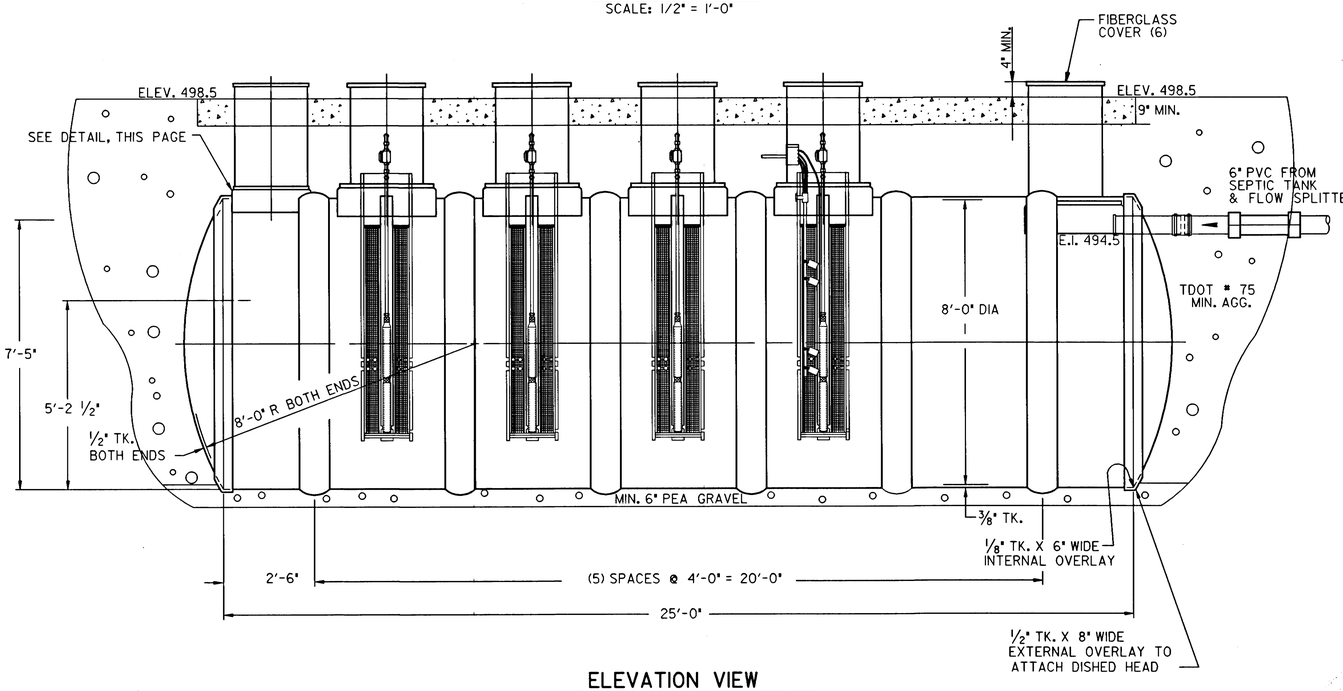
FILE NO. 11496-75 K-21



DETAIL B
SCALE: NONE



PLAN VIEW
SCALE: 1/2" = 1'-0"



ELEVATION VIEW
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. NON-TRAFFIC BEARING TANK CONDITIONS ARE AS FOLLOWS:
   A) TOP OF TANK - 980 LBS/SQ. FT.
   B) LATERAL LOAD - 64 LBS/CU. FT.
   C) 1000 LB. WHEEL LOAD
   D) HYDROSTATIC LOADING EQUAL TO THE MAXIMUM DEPTH OF BURY IN ADDITION THE SOIL LOADING. (DEPTH OF BURY MEASURED FROM THE GROUND ELEVATION TO THE TOP OF THE TANK).
2. COMPACTION TO 90% STANDARD PROCTOR DENSITY 6" ENVELOPE OF SELECT BACKFILL REQUIRED FOR HS-20 LOADING ASTM-698 BELOW SPRING-LINE WHILE TANK IS FILLED WITH WATER. (PEA GRAVEL STRONGLY RECOMMENDED).
3. TANK CONSTRUCTION SHALL CONFORM TO IAMPO STANDARD IGC 1-87 AND ASTM 3299 WHERE APPLICABLE.
4. TANK STRUCTURAL REINFORCEMENT IS FILAMENT WOUND. HEADS ARE CONTACT MOLDED.
5. INTERIOR CORROSION BARRIER REINFORCEMENT WITH "C" VEIL, THICKNESS 100 MILS.
6. SURFACE COAT = PARAFFINATED RESIN WITH ULTRAVIOLET INHIBITORS.
7. SLAB SHALL BE DESIGNED TO DRAIN TO GRADE. NO WATER SHALL STAND ON THE SLAB.
8. TANK MANUFACTURER SUBMIT DESIGN BY REGISTERED STRUCTURAL ENGINEER WITH DOCUMENTED EXPERIENCE IN UNDERGROUND FIBERGLASS TANK INSTALLATIONS. DESIGN SHALL INCLUDE SLAB ON GRADE AND BACKFILL REQUIREMENTS.
9. APPROVED MANUFACTURER: FIBERGLASS STRUCTURE INC., 5808 SUMMITVIEW, SUITE F, YAKIMA, WA 98908, (509)965-8437

WASTEWATER RECIRCULATION TANK

ALTERNATE ITEM NO. 720-62.81

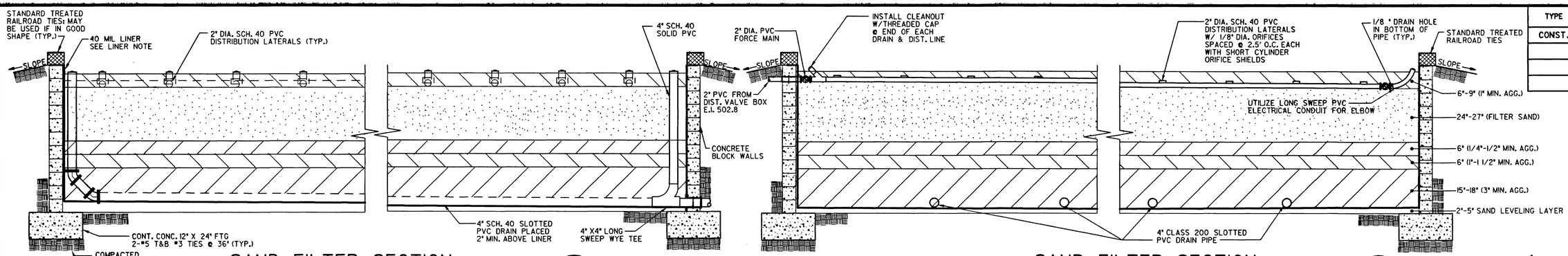
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED FIBERGLASS RECIRCULATION TANK ALTERNATIVE
I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

BWSC#PLOT#TIME#
BWSC#FILE#NAME#

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO. K-21

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	8



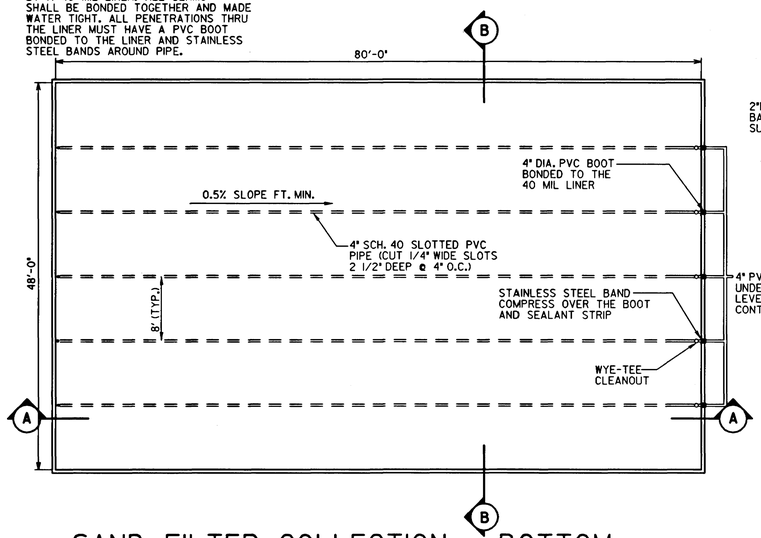
SAND FILTER SECTION (A)

SCALE: N.T.S.

SAND FILTER SECTION (B)

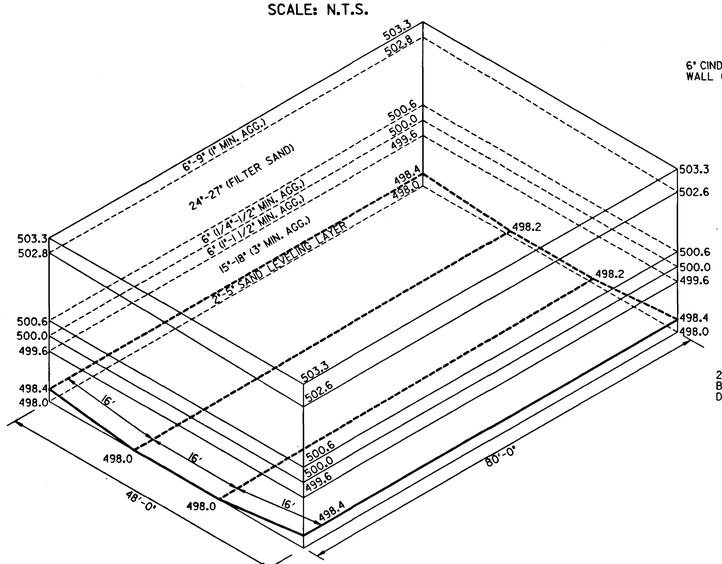
SCALE: N.T.S.

LINER NOTE:
ALL WALLS AND FLOOR TO BE COVERED BY A 40 MIL LINER. ALL SEAMS SHALL BE BONDED TOGETHER AND MADE WATER TIGHT. ALL PENETRATIONS THRU THE LINER MUST HAVE A PVC BOOT BONDED TO THE LINER AND STAINLESS STEEL BANDS AROUND PIPE.



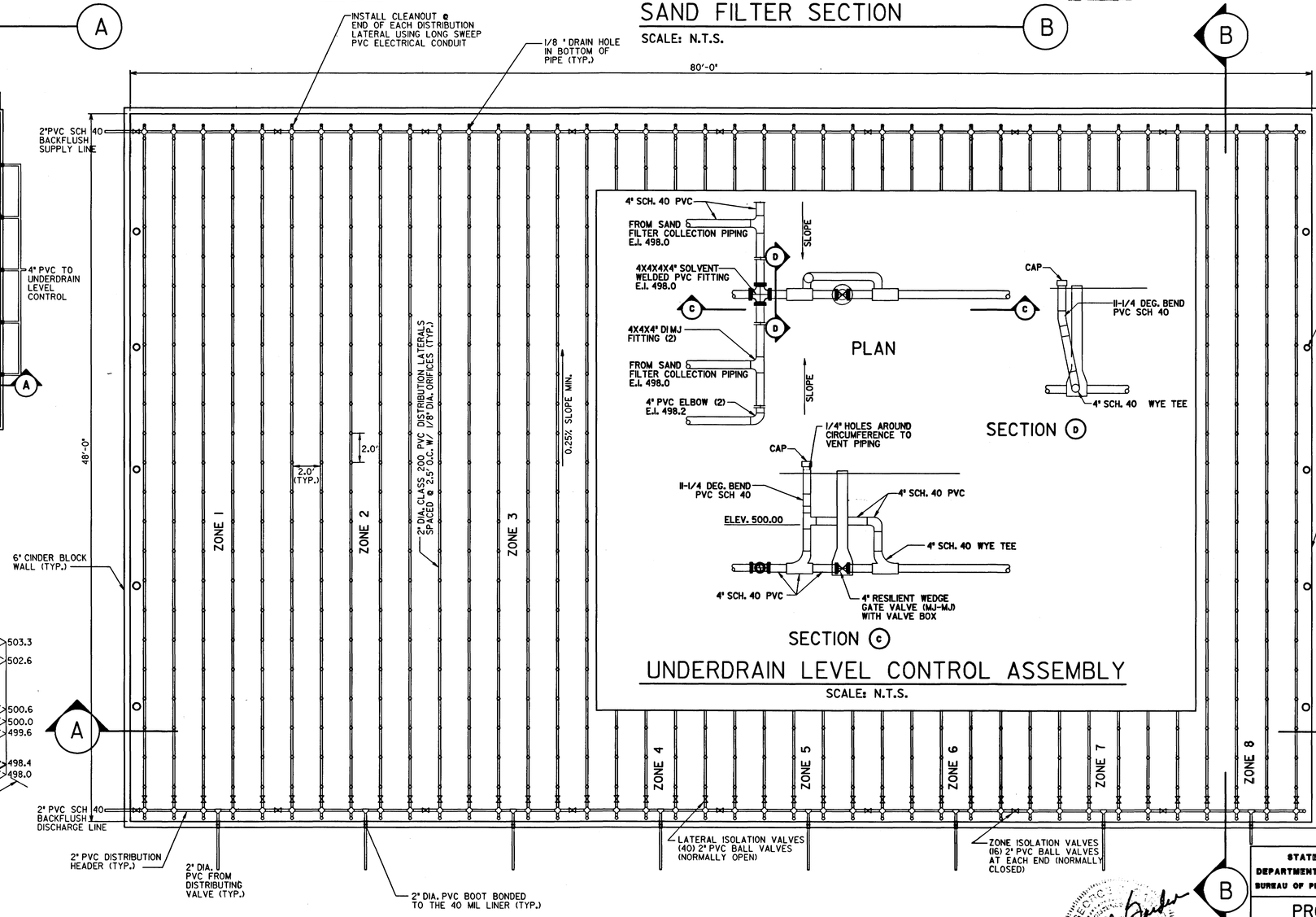
SAND FILTER COLLECTION - BOTTOM

SCALE: N.T.S.



SAND FILTER COLLECTION - ELEVATIONS

SCALE: N.T.S.



SAND FILTER DISTRIBUTION - TOP

SCALE: N.T.S. ITEM NO. 720-62.33

UNDERDRAIN LEVEL CONTROL ASSEMBLY

SCALE: N.T.S.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED WASTEWATER RECIRCULATING SAND FILTER

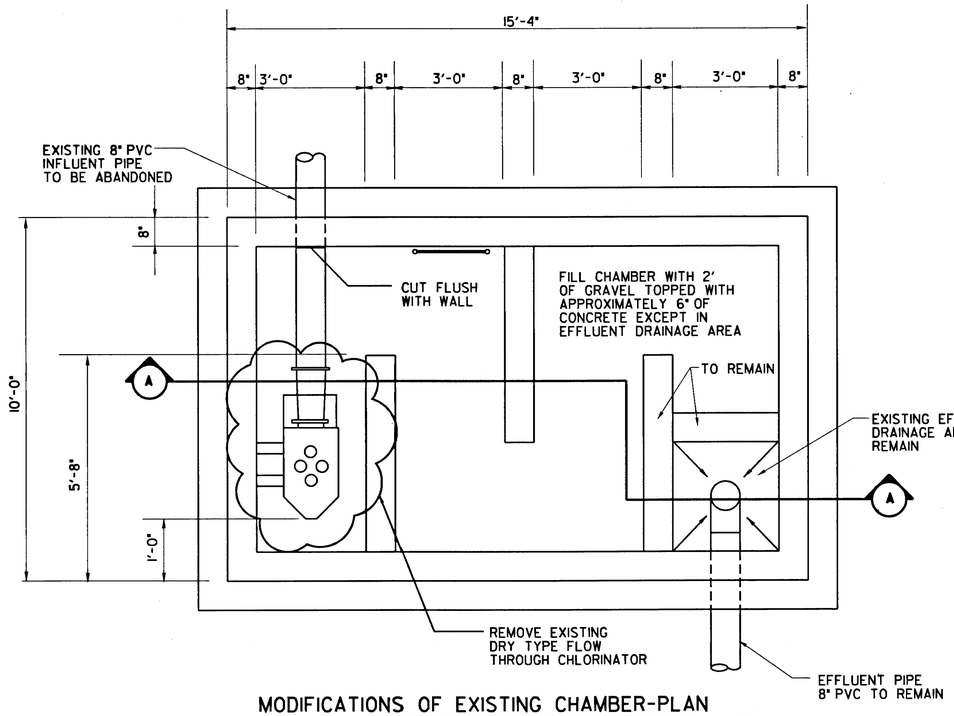
I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

BWSC$PLOT$TIME$$$
BWSC$FILE$NAME$$$

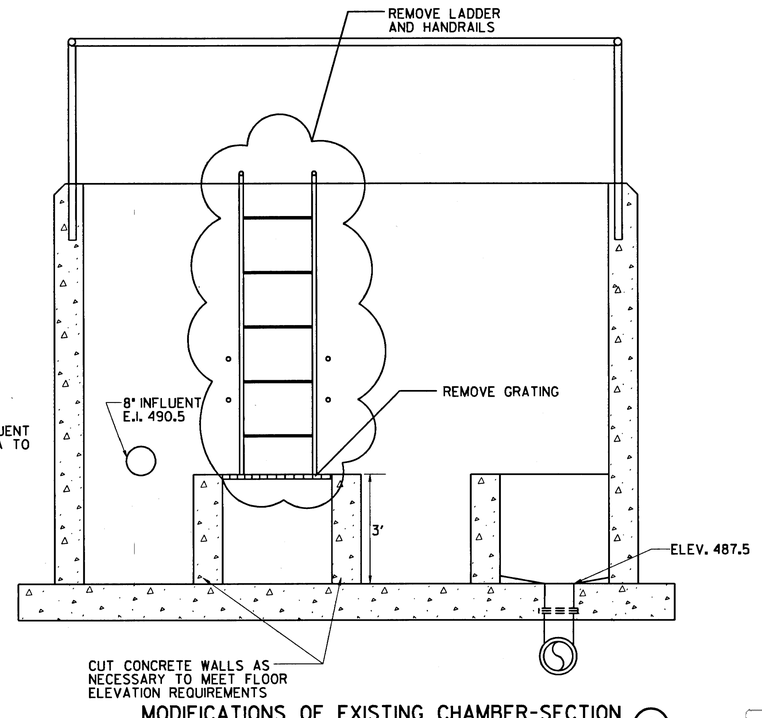
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	9

TENNESSEE D.O.T.
DESIGN DIVISION

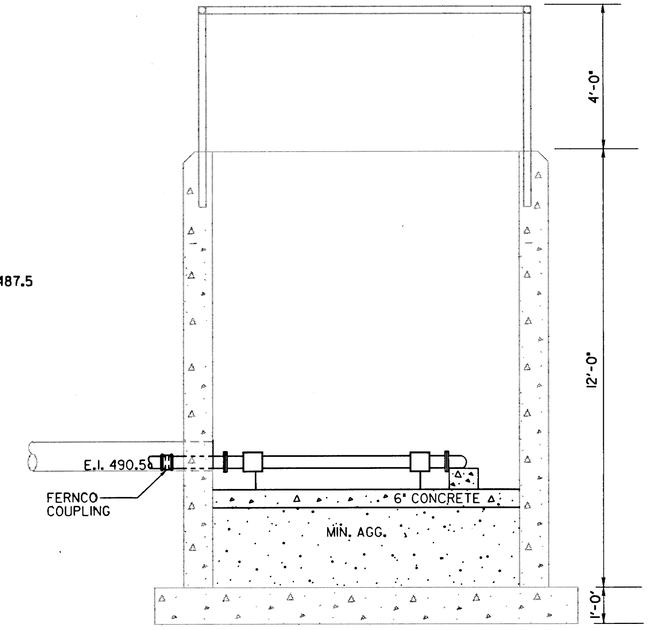
FILE NO. K-21



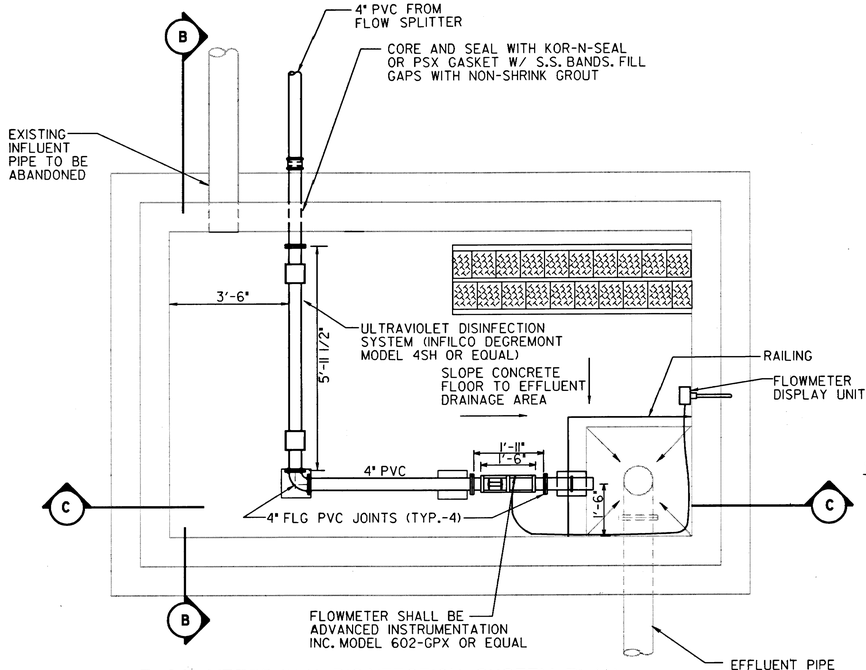
MODIFICATIONS OF EXISTING CHAMBER-PLAN



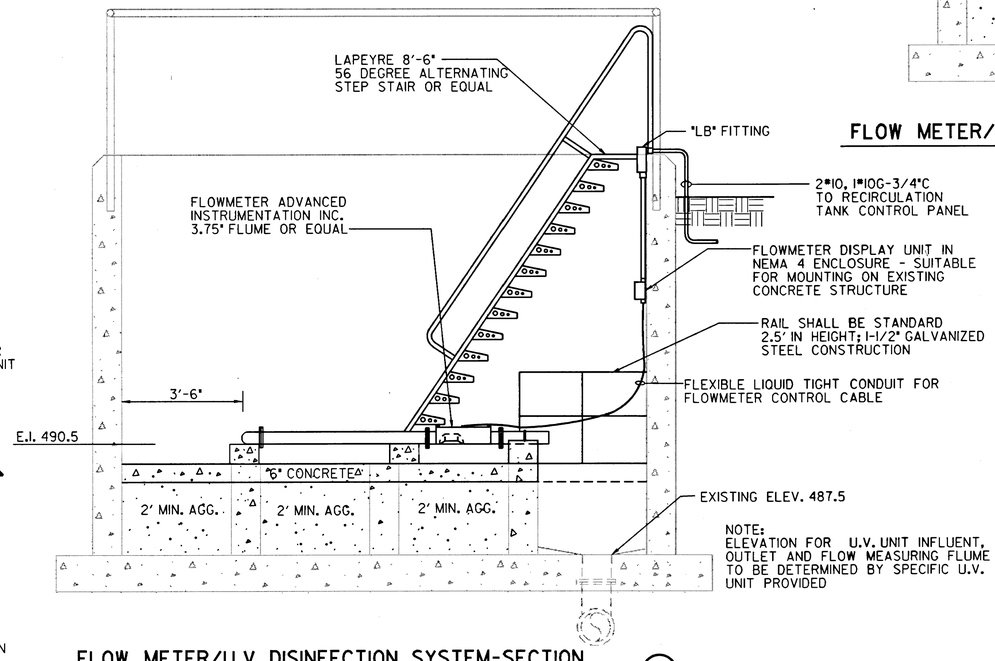
MODIFICATIONS OF EXISTING CHAMBER-SECTION (A)



FLOW METER/U.V. DISINFECTION SYSTEM-SECTION (B)



FLOW METER/U.V. DISINFECTION SYSTEM-PLAN



FLOW METER/U.V. DISINFECTION SYSTEM-SECTION (C)

MODIFICATION OF CHLORINE CONTACT CHAMBER FOR FLOW METER AND U.V. DISINFECTION SYSTEM

SCALE: 1/2"=1'-0" ITEM NO. 720-62.34

GEORGE C. GARD — REGISTERED — 102565 — STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED FLOW METER/ U.V. DISINFECTION SYSTEM

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

10-JAN-1997 10:07
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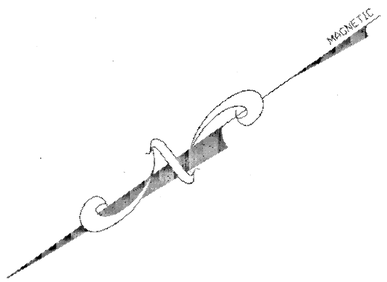
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO. 11496-63

K-21

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	10



REDUCED PRESSURE BACKFLOW PREVENTER-SEE SHEET 2C FOR HEATER WIRING REQUIREMENTS

2#10,1#10G-3/4"C. TO RECIRCULATION TANK CONTROL PANEL

EXISTING MAINTENANCE FACILITY

EXISTING SQUARE D CO. 120/240V, 1-PHASE, 3 WIRE, QO LOADCENTER PANEL - FURNISH NEW 50A/2P BRANCH CIRCUIT BREAKER AND INSTALL IN AVAILABLE SPACE

SEE CONDUIT ENTRY DETAIL 1, SHEET 11

3#6,1#10G-1"C.

RECIRCULATION TANK CONTROL PANEL-SEE SHEET 11, DETAIL 2 FOR MOUNTING DETAIL

COMBINATION FLOWMETER & ULTRAVIOLET DISINFECTION UNITS SEE SHEET 9 FOR WIRING REQUIREMENT

NEW RECIRCULATION TANK WITH FOUR (4) 240V, 1-PHASE, 3/4 HP PUMPS SEE SHEET 7/7A FOR WIRING REQUIREMENTS

GRAPHIC SCALE

1 inch = 20 ft.

JAMES N. GILLIAM
REGISTERED ENGINEER
No. 7505
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED ELECTRICAL SITE PLAN

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

15-JAN-1997 12:30
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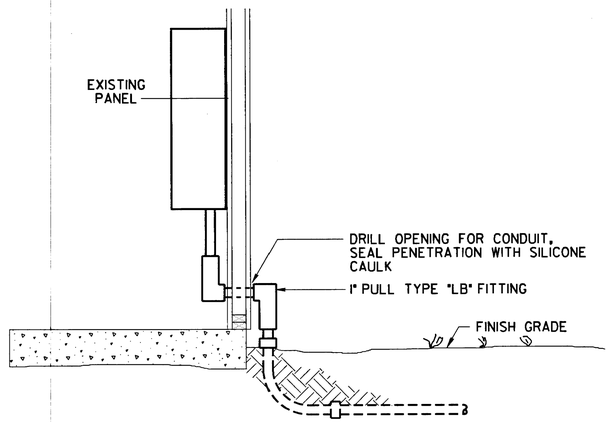
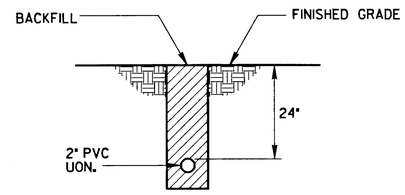
TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO. 11496-63 | K-21

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1997	80001-4163-04	11



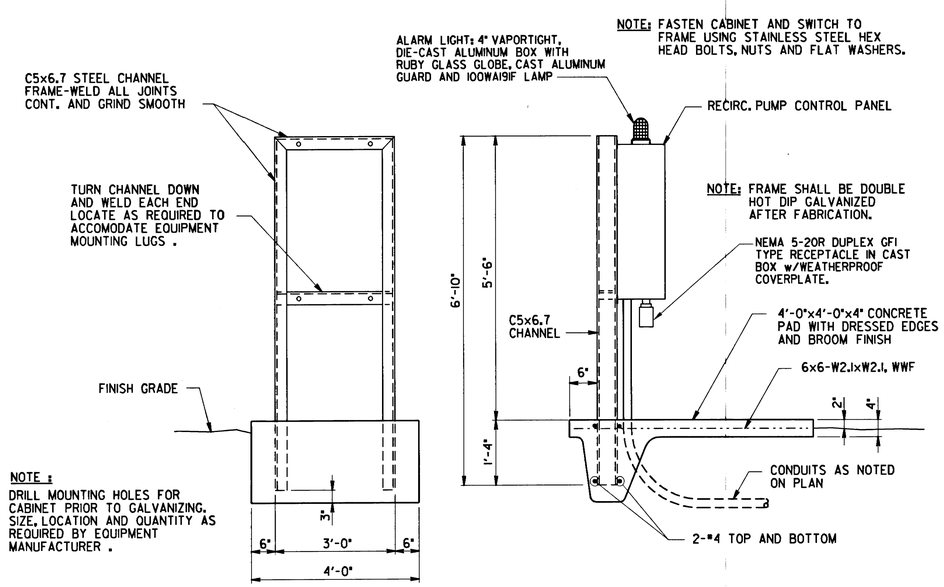
1/11 DETAIL - CONDUIT ENTRY
NTS



3/11 DETAIL - UNDERGROUND CONDUIT INSTALLATION
NTS

NOTES:

1. ALL TRENCHES SHALL MEET OSHA STANDARDS.
2. TRENCH DEPTHS & WIDTHS GIVEN ARE THE MINIMUM WORKING REQUIREMENTS.
3. ALL EXCAVATED AND OTHER MATERIALS SHALL BE PLACED AT LEAST 2' FROM EDGE OF THE TRENCH.
4. ALL SELECTED BACKFILL SHALL BE FREE FROM STONES, ROCK, OR OTHER MATERIAL WHICH MIGHT DAMAGE THE CONDUIT SYSTEM. SELECTED BACKFILL SHALL CONTAIN NO SOLID MATERIAL LARGER THAN 2" IN DIAM. IF NATIVE SOILS ARE NOT SUITABLE. #67 CRUSHED GRAVEL SHALL USED.
5. A MINIMUM OF 12" VERTICAL & HORIZONTAL CLEARANCE IS REQUIRED BETWEEN CONDUIT AND PIPING OF OTHER UTILITIES UNLESS THE SAID UTILITY HAS A GREATER CLEARANCE REQUIREMENT.
6. CONDUIT CROSSING UNDER DRAINAGE DITCHES OR SMALL CREEKS SHALL HAVE 4" CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT. SHALL BE FIELD DETERMINED BY THE A/E.
7. ALL BACKFILL UNDER PAVED AREAS SHALL BE #67 CRUSHED GRAVEL.



FRONT VIEW
(PANEL OR CONTROL PANEL NOT SHOWN FOR CLARITY)

SIDE VIEW

2/11 DETAIL – RECIRCULATION PUMP CONTROL PANEL MOUNTING DETAIL
SCALE: NONE

ELECTRICAL SPECIFICATIONS:

A. ALL WORK SHALL CONFORM TO THE LATEST ADOPTED NATIONAL ELECTRICAL CODE (NEC), STATE AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTIONS.

B. CONTRACTORS SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITING A BID.

C. FIELD VERIFY THE LOCATION OF ALL EXISTING VEGETATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL TREES AND SHRUBBERY DAMAGED OR KILLED DUE TO CARELESSNESS OR NEW CONSTRUCTION.

D. BEGINNING OF DEMOLITION MEANS CONTRACTOR ACCEPTS EXISTING CONDITIONS.

E. ALL SALVAGEABLE MATERIALS RESULTING FROM ELECTRICAL DEMOLITION SHALL REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT SITE AND LEGALLY DISPOSE OF ALL MATERIALS AND EQUIPMENT THAT THE OWNER DOES NOT WISH TO RETAIN. ALL COSTS TO BE INCLUDED IN PRICE OF ITEMS BID ON.

F. REST AREA SHALL REMAIN IN OPERATION DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE SUITABLE BARRIERS FOR ALL OPEN EXCAVATION AND TAKE PRECAUTIONS TO PROTECT THE PUBLIC AND REST AREA PERSONNEL FROM INJURY DUE TO DEMOLITION AND NEW CONSTRUCTION.

G. UNDERGROUND CONDUITS SHALL HAVE A MINIMUM COVER OF 24" TO FINISH GRADE.

H. PROVIDE MAGNETICALLY DETECTABLE ELECTRICAL WARNING TAPE FOR ALL NEW UNDERGROUND WIRING WITH THE EXCEPTION OF ROADWAY OR WALKWAY CROSSINGS. TAPE SHALL BE RED IN COLOR AND PRINTED CONTINUOUSLY WITH THE WORDING "CAUTION ELECTRIC" OR SIMILAR.

JAMES N. GILLIAM — REGISTERED ENGINEER — No. 7550 — STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

ELECTRICAL DETAILS

I-40 WELCOME CENTER
SMITH COUNTY, TENNESSEE

14-JAN-1997 12:27
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