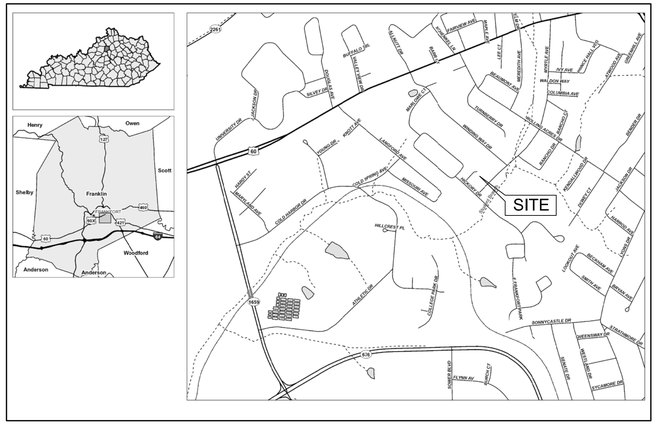
CIVIL CONSTRUCTION PLANS
FOR
FRANKFORT PLANT BOARD SUBSTATION
FRANKFORT, KY

INDEX	
SHEET	SHEET DESCRIPTION
C–1	COVER SHEET
C–2	GENERAL NOTES
C–3	EXISTING TOPO
C–4	SITE PLAN
C–5	EPSC & GRADING PLAN
C–6	DRAINAGE PROFILE
C–7	DETAILS



LOCATION MAP
NOT TO SCALE

UTILITY CONTACTS	
TELEPHONE	WINDSTREAM KDL INC 306 W. Main St Suite 512 Frankfort, KY 40601
CABLE	FRANKFORT PLANT BOARD 318 W. 2nd St. Frankfort, KY 40601 (502) 352–4372
ELECTRIC	FRANKFORT PLANT BOARD 318 W. 2nd St. Frankfort, KY 40601 (502) 352–4372
WATER	FRANKFORT PLANT BOARD 318 W. 2nd St. Frankfort, KY 40601 (502) 352–4372
SEWER	FRANKFORT SEWER 315 W. 2nd St. Frankfort, KY 40601 (502) 875–2448
NATURAL GAS	COLUMBIA GAS 2001 Mercer Rd. Lexington, KY 40511 1–800–432–9515

ENGINEER
KENNY OTT, P.E.
AMERICAN ENGINEERS, INC.
2500 NELSON MILLER PKWY
LOUISVILLE, KENTUCKY 40223
(502) 245-3813

SURVEYOR
JEFF MEYER, P.L.S.
AMERICAN ENGINEERS, INC.
2500 NELSON MILLER PKWY
LOUISVILLE, KENTUCKY 40223
(502) 245-3813

LEGEND / ABBREVIATIONS

ABBREVIATIONS

A	AREA	(N)	NORTH
ALT	ALTERNATE	OC	ON CENTER
AMP	AMPERE	OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATON
ARCH	ARCHITECTURAL	PC	POINT OF CURVATURE
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	PE	POLYETHYLENE
B/C	BACK OF CURB	PH	PHASE
BIT	BITUMINOUS PAVEMENT	PSI	POUNDS PER SQUARE INCH
BM	BENCH MARK	PT	POINT OF TANGENCY
C	CONDUIT	PVC	POLYVINYL CHLORIDE
CAL	CALIPER	PVMT	PAVEMENT
CB	CATCH BASIN	R	RADIUS
CFH	CUBIC FEET PER HOUR	RCP	REINFORCED CONCRETE PIPE
C.I.	CURB ISLAND	REF.	REFERENCE
CIR	CIRCUIT	REQ'D	REQUIRED
CONC	CONCRETE	ROW	RIGHT-OF-WAY
DIA	DIAMETER	RW	RETAINING WALL
(E)	EAST	(S)	SOUTH
E.I.F.S.	EXTERIOR INSULATION FINISHING SYSTEM	SAN	SANITARY SEWER
EL. ELEV	ELEVATION	SB	SOIL BORING
EQ	EQUIVALENT	SF, SQFT	SQUARE FEET
ES	END SECTION	SQ	SQUARE
ETC	ETCETRA	STM	STORM SEWER
FH	FIRE HYDRANT	STRUC	STRUCTURE
FF	FINISHED FLOOR	TC	TOP OF CURB
FT²	FOOT SQUARE	TEL	TELEPHONE
GND. GRD	GROUND	TP	TOP OF PAVEMENT
GP	GUTTER PAN	TRNF	TRANSFORMER
GPD	GALLONS PER DAY	TS	TOP OF SLAB
GPM	GALLONS PER MINUTE	TW	TOP OF WALL
GV&BOX	GATE VALVE AND BOX	TYP	TYPICAL
HC	HIGH CAPACITY	UC	UTILITY CROSSING
HD	HEAVY DUTY	UD	UNDER DRAIN
HEX		W	WIRE
HT	HEIGHT	(W)	WEST
IE	INVERT ELEVATION	W/	WITH
KVA	KILAVOLT AMPERE	WC	WATER COLUMN
LBS	POUNDS	WTR	WATER
LD	LIGHT DUTY	WWF	WELDED WIRE FABRIC
LED	LIGHT EMITTING DIODE		
LF	LINEAR FEET		
LG	LARGE		
MANUF	MANUFACTURE		
MATL	MATERIAL		
MAX	MAXIMUM		
MECH	MECHANICAL		
MIN	MINIMUM		
MH	MANHOLE		

LEGEND

- RIGHT OF WAY
- PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- EXISTING CONCRETE CURB W/ DROP CURB
- EDGE OF PAVEMENT
- EXISTING OVERHEAD WIRES
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING SANITARY SEWER
- EXISTING STORM
- EXISTING GASLINE
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- WATER VALVE
- WATER METER
- GAS METER
- EXISTING POWER POLE
- EXISTING LIGHT POLE (2 LIGHTS)
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM SEWER MANHOLE
- DROP BOX INLET (DBI)
- EXISTING TRANSFORMER PAD
- TELEPHONE PEDESTAL
- EXISTING TREE
- SPRINKLER HEAD
- EXISTING SIGN
- BENCH MARK
- DOWNSPOUT
- ELECTRIC JUNCTION BOX
- EXISTING GUIDE WIRE
- EXISTING CLEANOUT
- EXISTING BOLLARD
- EXISTING STRUCTURE (AS NOTED)
- EXISTING CONCRETE
- EXISTING GRAVEL
- EXISTING LANDSCAPED AREA

Kentucky 811

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

REVISIONS		
NO.	DATE	DESCRIPTION

COVER SHEET

CLIENT: **FRANKFORT PLANT BOARD**

PROJECT: **FPB SUBSTATION EROSION AND DRAINAGE MITIGATION**
305 HICKORY DRIVE
FRANKFORT, KY 40602

Plans Prepared and Submitted By:

AEI
AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
45 Aberdeen Drive, Glasgow KY
270.651.7220

SCALE: NA

DATE: 07-17-2018

DRAWN BY: S. THOMPSON

CHECKED BY: K. OTT

Y:\ 2018 PROJECTS\ 218-121 FPB SUBSTATION\ Site DEV\ Plans

SHEET: C-1

SEED AND SOD NOTES

1. ALL DISTURBED AREAS, INCLUDING WASTE AREAS TO BE SEEDED OR SODDED (UNLESS NOTED TO BE RIP-RAPPED, OR HARD SURFACED). ALL DISTURBED AREAS TO BE SEEDED SHALL BE SPREAD WITH 4" MINIMUM OF TOP SOIL. ALL AREAS TO BE DISKED, LEVELED, AND HAND RAKED. SURFACE AREA SHALL BE ROLLED TO REMOVE LUMPS. FOREIGN MATERIALS SUCH AS ROCKS, LIMBS, ETC. TO BE COLLECTED AND REMOVED DURING CULTIVATION AND RAKING OPERATIONS.
2. ALL UNPAVED AREAS TO RECEIVE A MINIMUM OF 4" TOPSOIL, SEED, MULCHED AND WATERED AS NECESSARY TO PROVIDE SUBSTANTIAL GRASS COVER.
3. INSTALLATION OF SEED SHOULD BE BETWEEN MARCH 1 AND JUNE 15 OR SEPTEMBER 1 AND OCTOBER 15. IF SEEDING IS DONE IN BETWEEN OCTOBER 15 AND MARCH 1, A SEED BLEND SHALL BE USED CONSISTING OF 20% ANNUAL RYE.
4. GRASS SEED SHALL BE A TYPE WHICH WILL THRIVE IN THE PROJECT AREA. THE PROPOSED SEED MIXTURE MUST BE SUBMITTED TO THE OWNER FOR APPROVAL. FERTILIZER SHALL BE 10-10-10, TYPE I, GRADE A. USE APPROXIMATELY 5 LBS. OF GRASS SEED AND 10 LBS OF FERTILIZER FOR EACH 1000 SQ. FT. OF GROUND AREA TO BE SEEDED. COVER ALL SEEDED AREAS WITH 3 BALES OF WHEAT STRAW FOR EACH 1000 SQUARE FOOT. SEEDED AREAS SHALL BE WATERED DAILY FOR 15 DAYS OR AS REQUIRED BY WEATHER CONDITIONS. AFTER SEED HAS GERMINATED, ALL THIN SHALL BE RE-SEEDED.
5. EMBANKMENTS/SLOPES GREATER THAN 3:1 SHALL EITHER BE SEEDED AND COVERED WITH AN EROSION CONTROL MAT OR INSTALLED WITH SOD FOR PROPER STABILIZATION. SOD TO BE STAKED WITH EITHER WOOD STAKES OR U-SHAPED METAL PINS FLUSH WITH GRADE.
6. SOD SHALL BE REGIONALLY GROWN AND OF A SPECIES THAT WILL THRIVE IN THE PROJECT AREA.
7. SOD SHALL BE RELATIVELY FREE OF DISEASES AND WEEDS, STONES LARGER THAN 1/2" IN ANY DIMENSION, PLANT ROOTS, AND OTHER MATERIAL DETRIMENTAL TO A HEALTHY STAND OF TURF ARE TO BE REMOVED, DELIVERED SOD THAT HAS BECOME DRY, MOLDY, OR YELLOW FROM HEATING, OR HAS IRREGULARLY SHAPED PIECES THAT ARE TORN OR HAVE UNEVEN ENDS SHALL BE REJECTED.
8. THE SOD BED WILL BE LOOSENED TO A DEPTH OF 3" TO A SMOOTH EVEN SURFACE AND SHALL BE GRADED TO SUCH ELEVATION SO THE SOD, WHEN IN PLACE, SHALL BE FLUSH WITH ANY ADJACENT SEEDED TURFED AREA, PAVEMENT, CURB, OR OTHER STRUCTURES, EXCEPT WHEN OTHERWISE DIRECTED.
9. PRIOR TO PLACING THE SOD, FERTILIZER 10-10-10, TYPE I, GRADE A, SHALL BE APPLIED UNIFORMLY. SOD SECTIONS SHALL BE HARROWED, RAKED, OR OTHERWISE INCORPORATED INTO THE SOIL. THE SOIL BED, WHEN DRY, SHALL BE MOISTENED TO THE LOOSENED DEPTH.
10. SOD SHALL BE WETTED THOROUGHLY, THEN ROLLED AND TAMPED SUFFICIENTLY TO INCORPORATE THE ROOTS INTO THE SOD BED AND TO ENSURE TIGHT JOINTS BETWEEN THE SECTIONS OR STRIPS.
11. ALL SODDED AREAS SHALL BE MAINTAINED (WATERED) AND REPAIRED AS NECESSARY BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE OF THE PROJECT.
12. THE CONTRACTOR SHALL GUARANTEE ALL SEEDED OR SODDED AREAS FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION. THE CONTRACTOR IS NOT RESPONSIBLE FOR ACTS OF NATURE, NEGLECT BY THE OWNER, OR DAMAGE BY ANIMALS OR MACHINES THAT MAY CAUSE EROSION.

MAINTENANCE OF TRAFFIC NOTES

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE KENTUCKY TRANSPORTATION CABINETS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND ANY OTHER SPECIFICATION SET FORTH IN THE CONSTRUCTION DOCUMENTS.
2. EXCEPT FOR THE ROADWAY AND TRAFFIC CONTROL BID ITEMS LISTED, ALL ITEMS OF WORK NECESSARY TO MAINTAIN AND CONTROL TRAFFIC WILL BE PAID FOR AT THE LUMP SUM BID PRICE OF "MAINTAIN AND CONTROL TRAFFIC" AS SET FORTH IN THE KYTC STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CURRENT EDITION UNLESS OTHERWISE PROVIDED IN THE NOTES.
3. REASONABLE MEANS OF INGRESS AND EGRESS MUST BE MAINTAINED TO ALL PROPERTIES WITHIN THE PROJECT LIMITS TO PROVIDE RESIDENTIAL ACCESSIBILITY. ACCESS TO FIRE HYDRANTS MUST BE MAINTAINED AT ALL TIMES.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUPPLYING ALL FLASHING ARROWS AND VARIABLE MESSAGE BOARDS NECESSARY TO MAINTAIN TRAFFIC FOR THE PROJECT. THE FLASHING ARROWS AND VARIABLE MESSAGE BOARDS SHALL REMAIN PROPERTY OF THE CONTRACTOR.
5. ONE LANE OF TRAFFIC MUST ALWAYS BE MAINTAINED, UNLESS OTHERWISE SPECIFIED, ALONG ALL STREETS WHERE WORK IS TO BE PERFORMED. ALL DRAINAGE FEATURES THAT CROSS A ROAD SHALL BE CONSTRUCTED USING PART WIDTH CONSTRUCTION WITH APPROPRIATE MAINTENANCE OF TRAFFIC BARRICADES AND FLAGGERS.

PAVING NOTES

1. BITUMINOUS PAVING MATERIALS AND OPERATIONS SHALL MEET THE REQUIREMENTS OF DIVISION 400 OF THE KENTUCKY TRANSPORTATION CABINET STANDARD SPECIFICATIONS, CURRENT EDITION.
2. ALL PAVEMENT MARKINGS, INCLUDING STRIPES AND DIRECTIONAL ARROWS, SHALL BE IN COMPLIANCE WITH KENTUCKY TRANSPORTATION CABINET STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION CURRENT EDITION.
3. CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. ALL SIDEWALKS ARE 4' WIDE UNLESS OTHERWISE NOTED. ALL CONCRETE IS CLASS A AND SHALL ADHERE TO KENTUCKY TRANSPORTATION CABINET STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION CURRENT EDITION.
5. CURB AND GUTTER ARE TO BE IN COMPLIANCE WITH CITY OF --- STANDARDS.
6. ALL ENTRANCES WILL BE REPLACED IN LIKE AND KIND.

GRADING AND DRAINAGE NOTES

1. CUT OR FILL SLOPES SHALL NOT BE CONSTRUCTED STEEPER THAN 2H:1V UNLESS SPECIFICALLY NOTED ON THE PLANS.
2. THE CONTRACTOR SHALL SLOPE ALL FINISH SITE GRADES AROUND THE PAVEMENT AREAS TO PROVIDE POSITIVE DRAINAGE AND TO PREVENT PONDING. ANY SURFACE WATER ACCUMULATION IN PAVEMENT AREAS SHALL BE REMOVED IMMEDIATELY TO AVOID DISTURBANCE OF THE SUBGRADE SOILS. FLAT AND PONDING AREAS WILL NOT BE ACCEPTABLE.
3. ALL EXCAVATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST OSHA GUIDELINES AS MANDATED IN CURRENT FEDERAL, STATE AND LOCAL REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE IN PROVIDING SAFE WORKING CONDITIONS IN CONNECTION WITH ANY EXCAVATION WORK.
4. THE GENERAL AND/OR GRADING CONTRACTOR IS ADVISED THAT PRIOR TO ANY SITE WORK, HE/SHE SHOULD OBTAIN AND BE THOROUGHLY ACQUAINTED WITH THE CURRENT SITE GEOTECHNICAL REPORT. IF ANY CONFLICTS BETWEEN THE GEOTECHNICAL REPORT AND THE PLAN SHEETS ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY STOP WORK AND NOTIFY THE ENGINEER BEFORE PROCEEDING.
5. EXISTING ASPHALT AND GRAVEL SHALL BE EXCAVATED TO SUBGRADE.
6. EXISTING ASPHALT, GRAVEL, CURB AND GUTTER, AND OTHER OBJECTIONABLE MATERIALS TYPICAL TO SITE CLEARING ARE TO BE REMOVED AND DISPOSED OF OFF SITE BY THE CONTRACTOR AND AT THE CONTRACTOR'S EXPENSE.
7. SAW CUTTING OF PAVEMENT BETWEEN THE SITE AND THE EXISTING ROADWAY SHALL BE COMPLETED IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION CABINET'S STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
8. ALL EXISTING STRUCTURES, FENCING, TREES, ETC. WITHIN THE CONSTRUCTION AREA, SHALL BE REMOVED AND DISPOSED OF OFF SITE. NO ON SITE BURNING IS ALLOWED.
9. ALL EXCAVATION SHALL BE COMPLETELY BACKFILLED AT THE END OF THE DAYS WORK. ALL AREAS OF PEDESTRIAN AND VEHICULAR TRAFFIC SHALL BE PROTECTED WITH 6' HIGH TEMPORARY CHAIN LINK FENCE PANELS ON MOVABLE STANDARDS.
10. ON SITE STAGING OF MATERIALS AND EQUIPMENT IS LIMITED. TRACKED EQUIPMENT MAY BE STORED IN THE ROADWAY ATOP TRENCH, WITH PROPER TRAFFIC CONTROL DEVICES. ALL OTHER EQUIPMENT AND MATERIALS WILL BE STAGED IN AREAS DIRECTED BY THE ENGINEERS AND/OR THE CITY OF ELIZABETHTOWN. THE CONTRACTOR SHOULD PLAN FOR ON TIME DELIVERY OF MATERIALS.
11. INSTALL 4' HIGH ORANGE CONSTRUCTION FENCING AROUND THE WORK AREA TO PROTECT VEGETATION, ALLOWING ACCESS TO EACH PROPERTY. FENCING MAY BE REMOVED AFTER VEGETATION HAS BEEN ESTABLISHED IN THE WORK AREA.
12. ALL PIPES MARKED FOR REMOVAL SHALL BE REMOVED FROM SITE. ANY PIPE DEEMED TO BE IN GOOD CONDITION MAY BE RETAINED BY THE CITY OF ---. ANY PIPE MARKED FOR SAFELOADING, THAT IS NOT EFFECTED BY TRAFFIC LOADS, CAN BE PLUGGED WITH MORTAR AT EACH END AND ABANDONED IN PLACE, OR REMOVED. IF PIPE IS REMOVED, THE BACKFILL SHALL MEET ANY GEOTECHNICAL RECOMMENDATIONS AND THE DISTURBED AREA SEEDED AND PROTECTED.
13. ALL EXCESS EXCAVATION MATERIALS WILL BE HAULED OFFSITE. THE CITY OF --- MAY REQUEST SOME MATERIAL TO BE STORED AT A DESIGNATED AREA PROVIDED BY THE CITY FOR THE CITY'S USE. ANY EXCESS MATERIAL NOT REQUESTED BY THE CITY IS TO BE REMOVED OFFSITE AT THE CONTRACTOR'S RESPONSIBILITY.
14. THE CONTRACTOR SHALL NOT STOCKPILE DIRT OR MATERIALS IN PROPERTY OWNERS' YARDS, WITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNER.
15. ALL EARTHWORK AND TRENCHING IS UNCLASSIFIED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ANY FURTHER SUBSURFACE GEOTECHNICAL EXPLORATION.
16. SEE MANUFACTURERS SPECIFICATIONS FOR ALL JOINT AND BACKFILLING REQUIREMENTS.
17. SOIL COMPACTION SHALL BE 95% STANDARD PROCTOR BENEATH PAVED SURFACE AND 90% BENEATH GRASS OR LAWNS. MOISTURE CONTENT SHALL BE WITHIN 2.0% OF OPTIMUM IN BOTH CONDITIONS.
18. WETTING AND OR DRYING OF IN-SITE SOILS USED AS FILL OR BACKFILL MAY BE NECESSARY TO ACHIEVE PROPER COMPACTION REQUIREMENTS. THIS IS INCIDENTAL TO EARTHWORK OR PIPE INSTALLATION OPERATIONS.
19. EXISTING STORM STRUCTURES INCLUDING PIPES AND CATCH BASINS THAT ARE SCHEDULED TO BE REMOVED TO CONSTRUCT THE PROPOSED SEWERS ARE CONSIDERED TO BE INCIDENTAL TO CONSTRUCTION.

SANITARY SEWER NOTES

1. PVC PIPE MATERIAL AND JOINTS SHALL CONFORM TO ASTM D-3034, CURRENT EDITION.
2. FLEXIBLE THERMOPLASTIC SEWER PIPE INSTALLATION SHALL CONFORM TO ASTM D-2241, CURRENT EDITION.
3. ALL SEWER LINES SHALL BE LAID 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN EXCEPT WHERE THE WATER MAIN CROSSES OVER THE SANITARY SEWER LINE.
4. ALL PIPELINE TRENCHING AND STRUCTURE EXCAVATION SHALL BE UNCLASSIFIED.
5. SANITARY SEWER PIPE SHALL HAVE A MINIMUM COVER OF THIRTY (30) INCHES, UNLESS OTHERWISE SPECIFIED.
6. ALL BUILDINGS MUST CONNECT TO SANITARY SEWER, NO SEPTIC TANKS WILL BE ALLOWED.
7. ALL SEWERS SHALL BE LOW PRESSURE AIR TESTED. A DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACK FILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
8. SUBGRADE AND BACK FILL FOR SEWERS LOCATED IN FILL AREAS SHALL BE COMPACTED TO NOT LESS THAN 95% OF DENSITY DETERMINED FROM THE STANDARD PROCTER TEST.
9. SANITARY SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHETHER THE WATER MAIN IS ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN AND TO MAINTAIN LINE AND GRADE.
10. ALL COLLECTOR SEWER SHALL BE A MINIMUM OF 8" AND ALL SEWER SERVICE LATERAL LINES OF 6" AND CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION D-3034, CURRENT EDITION.
11. ALL SANITARY SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321, CURRENT EDITION, OR EQUIVALENT.
12. ALL CONNECTIONS TO NEW OR EXISTING MANHOLES SHALL BE EITHER CONFORMING TO KOR-N-SEAL 1 OR APPROVED EQUAL.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING MANHOLE FRAME AND LID AT AN ELEVATION THAT WILL NOT ALLOW STORMWATER TO ACCUMULATE AT AND DRAIN INTO MANHOLE.
14. ALL SEWER SERVICE LATERAL LINES SHALL BE LAID AT 1.0% (MINIMUM).
15. ALL SANITARY SEWER CROSSING EXISTING OR PROPOSED PAVED SURFACES SHALL BE FULL DEPTH STONE IN ACCORDANCE WITH KYTC STANDARD SPECIFICATIONS.
16. ALL MANHOLES SHALL BE SUBJECT TO A NEGATIVE AIR PRESSURE (VACUUM) TEST AFTER FINAL BACKFILL AND ALL GROUT WORK HAS BEEN COMPLETED. THE TEST SHALL BE PERFORMED IN ACCORDANCE WITH ASTM SPECIFICATION C-1244-93, CURRENT EDITION.
17. SANITARY SEWER WORK SHALL CONFORM TO THE CITY OF --- STANDARD SPECIFICATIONS AND DETAILS, CURRENT EDITION.
18. ALL CONSTRUCTION METHODS AND MATERIALS SHALL COMPLY WITH THE CITY OF --- STANDARDS.
19. BACKFILL OF ALL TRENCHES BENEATH STRUCTURES AND/OR PAVEMENT SHALL BE FULL DEPTH STONE IN ACCORDANCE WITH KYTC STANDARD SPECIFICATIONS.
20. THE CONTRACTOR SHALL EXTEND AND RECONNECT, USING APPROPRIATE FITTINGS, AT THE EDGE OF RIGHT-OF-WAY, ALL SEWER SERVICE LATERALS AND WATER SERVICES.

EPSC NOTES

1. ALL EROSION SEDIMENT CONTROLS SHALL BE CHECKED AT THE BEGINNING AND END OF EACH DAY, WHEN CONSTRUCTION IS OCCURRING, TO ASCERTAIN THAT THE MEASURES ARE IN PLACE AND FUNCTIONING PROPERLY. EROSION SEDIMENT CONTROLS SHALL ALSO BE INSPECTED WEEKLY AND/OR AFTER RAINFALL EVENTS IN EXCESS OF 1/2" OVER A 24 HOUR PERIOD. ANY DAMAGE OBSERVED SHALL BE REPAIRED BY THE END OF THAT WORKING DAY. MEASURES SHALL BE MAINTAINED UNTIL THE ENGINEER DETERMINES THAT THEY ARE NO LONGER NEEDED.
2. THE CONTRACTOR SHALL BE REQUIRED TO CLEAN AND REMOVE SEDIMENT FROM SILT CHECKS, SILT FENCE, STONE BAGS, ETC., WHENEVER THEY BECOME ONEOTHIRD FULL, AND SHALL PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE ENGINEER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
4. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
5. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY AN ON SITE INSPECTION AND IF APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
6. STONE BAGS SHALL BE PLACED AT ALL DROP BOX INLETS AND HEADWALL LOCATIONS. (SEE DETAILSO
7. DURING CONSTRUCTION OF STORM SEWERS, BULKHEADS (STONE BAGS) WILL BE USED TO PREVENT SEDIMENT FROM ENTERING PIPES. BEFORE BULKHEADS ARE REMOVED IN ORDER TO CONTINUE STORM SEWER INSTALLATION, THE EXCAVATION MUST BE DEWATERED INTO A FILTER BAG (COMMERCIALLY AVAILABLE) OR SILT BASIN APPROVED BY THE ENGINEER.
8. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL, SEED, FERTILIZE, AND MULCH, AND SHALL BE WATERED AS NECESSARY TO PROVIDE SUBSTANTIAL GROUND COVER.
9. ANY DISTURBED AREAS THAT ARE DORMANT FOR 14 DAYS SHALL BE TREATED WITH TEMPORARY SEEDED AND STRAW, OR TEMPORARY MULCH.
10. ALL STANDARD DRAWINGS REFER TO THE STANDARDS ACCEPTED BY THE CITY OF ELIZABETHTOWN AND THE KENTUCKY TRANSPORTATION CABINET.
11. ALL SLOPES STEEPER THAN 3:1 AND NOT PAVED SHALL HAVE EXCELSIOR BLANKET INSTALLED.

GENERAL NOTES

1. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED FEDERAL, STATE AND LOCAL PERMITS AND APPROVALS NECESSARY TO PERFORM AND COMPLETE THE PROJECT AS SHOWN ON THESE PLANS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL PERMIT AUTHORITIES.
2. NO SITE GRADING, STRIPPING, EXCAVATION, FILLING OR OTHER DISTURBANCE OF THE NATURAL GROUND COVER SHALL TAKE PLACE UNTIL PROPOSED EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND MEET/EXCEED KY DOW AND CITY OF --- REQUIREMENTS.
3. PERMIT AND BOND WILL BE REQUIRED FOR ALL WORK WITHIN THE KYTC RIGHT-OF-WAY PRIOR TO CONSTRUCTION APPROVAL.
4. THE CONTRACTOR SHALL BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND THE REQUIREMENTS OF LOCAL UTILITY COMPANIES.
5. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL BARRICADES, WARNING SIGNS, FLASHING LIGHTS AND COMPLY WITH OSHA REGULATIONS AND SAFETY REQUIREMENTS.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF ALL VEHICLE TRAFFIC IN AND AROUND THE CONSTRUCTION AREA.
7. ALL CONSTRUCTION WITHIN KYTC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION CABINET STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, UNLESS OTHERWISE SPECIFIED. THE CURRENT KENTUCKY STANDARD DRAWINGS AND CITY OF --- WILL ALSO APPLY UNLESS OTHERWISE NOTED ON THE PLANS.

UTILITY NOTES

1. THE CONTRACTOR IS ADVISED THAT ALL EXISTING UTILITIES SHOWN WERE FIELD SURVEYED AND BASED ON GIS MAPPING PROVIDED BY THE CITY OF --- THEREFORE SHALL BE CONSIDERED APPROXIMATE ONLY. OTHER UTILITIES MAY EXIST THAT ARE UNMAPPED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND VERIFY ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION BY CONTACTING THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO EXCAVATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL UTILITY COMPANIES, TO COORDINATE ALL CONNECTIONS AND CONSTRUCTION ACTIVITIES WITH THE UTILITY COMPANIES SUCH THAT ACCESS TO WORK AREAS OR SCHEDULE CONFLICTS DO NOT INTERRUPT OR DELAY THE PROJECT'S SCHEDULE, AND TO PAY ALL REQUIRED FEES AND COSTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL UTILITIES TO BUILDINGS INCLUDING WATER, GAS, ELECTRIC, TELEPHONE AND CABLE.
4. BACKFILL OF ALL TRENCHES BENEATH STRUCTURES AND/OR PAVEMENT SHALL BE FULL DEPTH STONE IN ACCORDANCE WITH KYTC STANDARD SPECIFICATIONS.
5. CONTRACTORS ARE ADVISED TO COORDINATE INSTALLATION OF ALL BURIED CONDUITS AND LINES SUCH THAT LINES WHICH CROSS ARE LAID BEGINNING WITH DEEPEST LINE FIRST.
6. DEPTH OF WATERLINE SHALL BE ADJUSTED AS REQUIRED TO ALLOW FOR SPECIFIED PLACEMENT OF SANITARY AND STORM SEWERS, BUT IN NO CASE SHALL THERE BE LESS THAN 18" OF VERTICAL COVER.
7. ALL TRENCHING, PIPE LAYING, AND BACK FILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
8. CONTRACTOR SHALL OBTAIN APPROVAL FROM ALL GOVERNING AGENCIES HAVING JURISDICTION OF UTILITY SYSTEMS PRIOR TO INSTALLATION.
9. ALL GATE VALVES SHALL BE PROVIDED WITH VALVE BOX IN ACCORDANCE WITH WATER UTILITY STANDARDS.
10. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS, AND SHALL BE CONSTRUCTED ACCORDING TO WATER DEPARTMENT STANDARDS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS OF EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. ANY CONFLICTS DISCOVERED AFTER CONSTRUCTION HAS BEGUN, SHALL BE CORRECTED AT CONTRACTORS EXPENSE.
12. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES IS TEN FEET MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER. THE MINIMUM VERTICAL SEPARATION IS 18".
13. CONTRACTOR SHALL COORDINATE WATER AND SEWER SERVICE CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF --- /--- COUNTY WATER DISTRICT NO. 2.
14. THE CONTRACTOR SHALL FLUSH AND TEST ALL NEW UTILITY LINES ACCORDING TO THE KENTUCKY DIVISION OF WATER OR THE CITY OF --- / --- COUNTY WATER DISTRICT NO. 2 STANDARDS.
15. ALL GAS MAIN CONSTRUCTION SHALL CONFORM TO CITY OF ELIZABETHTOWN STANDARDS.

REVISIONS		
NO.	DATE	DESCRIPTION

GENERAL NOTES

CLIENT: FRANKFORT PLANT BOARD

PROJECT: FPB SUBSTATION EROSION AND DRAINAGE MITIGATION
305 HICKORY DRIVE
FRANKFORT, KY 40602

Plans Prepared and Submitted By:
AEI
AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
65 Aberdeen Drive, Glasgow, KY
270.651.7220

SCALE: NA

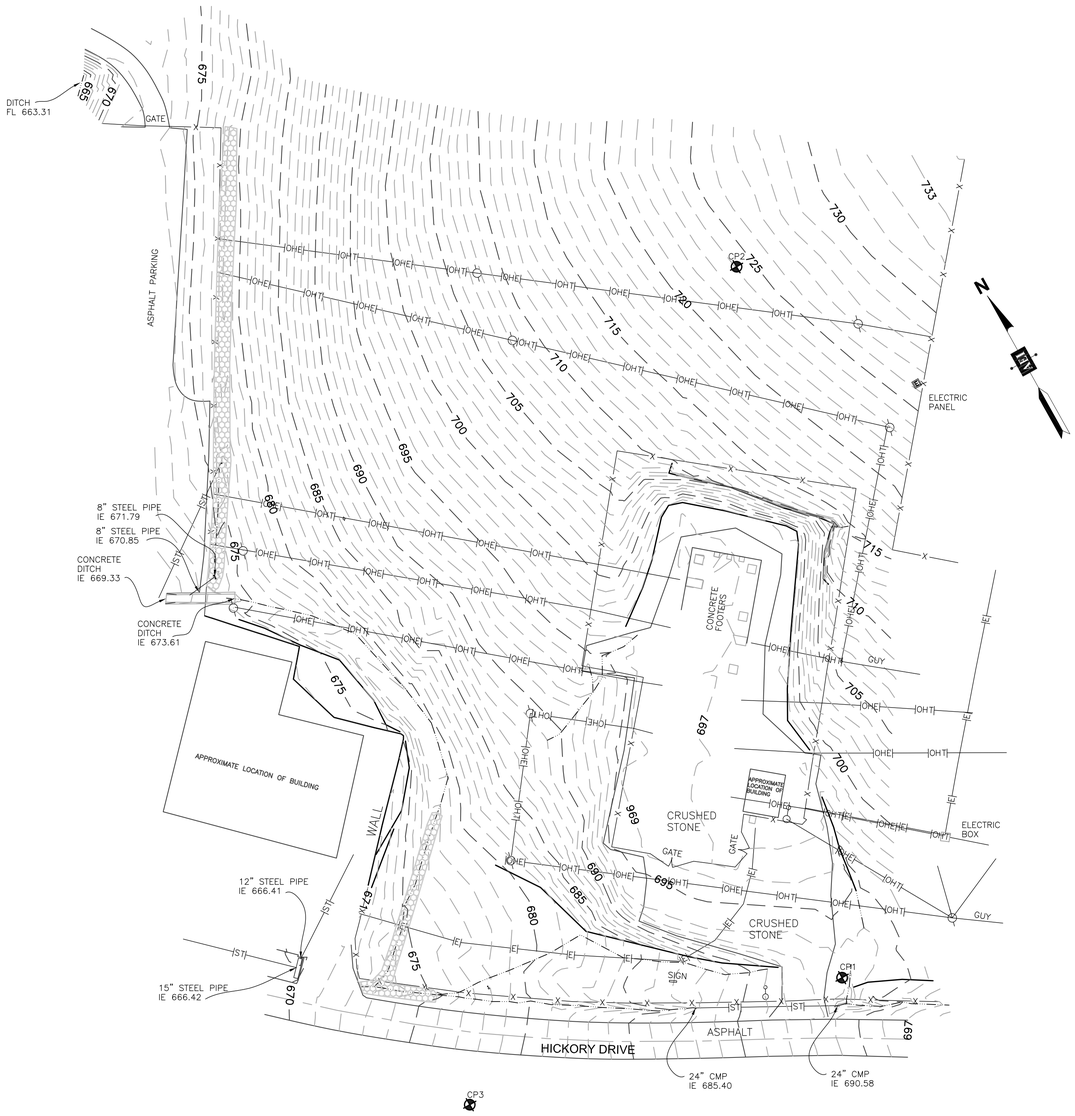
DATE: 07-17-2018

DRAWN BY: S. THOMPSON

CHECKED BY: K. OTT

Y:\ 2018 PROJECTS\ 218-121 FPB SUBSTATION\ Site DEV\ Plans

SHEET: C-2



LEGEND

SYMBOLS THAT MAY APPEAR ON DRAWING

- EXISTING OVERHEAD ELECTRIC & TELEPHONE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FENCE
- EXISTING STORM PIPE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING GAS LINE
- EXISTING GAS VALVE
- EXISTING COMMUNICATIONS BOX
- EXISTING GAS METER
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC METER
- EXISTING WATER METER
- T.G. TOP OF GRATE ELEVATION
- I.E. INVERT ELEVATION
- MH MANHOLE
- CBI CURB BOX INLET
- DBI DROP BOX INLET
- IPC IRON PIN & CAP
- EXISTING SIGN
- EXISTING ADA PARKING
- EXISTING WATER VALVE
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING TELEPHONE MANHOLE
- EXISTING 8" BOLLARD
- BENCH MARK

POINT	DESCRIPTION	STATE PLANE COORDINATES			STATION & OFFSET
		NORTH (Y)	EAST (X)	ELEV (Z)	
CP #1	5/8" DIA. REBAR W/CAP	3960334.97	5181799.80	693.65	--
CP #2	5/8" DIA. REBAR W/CAP	3960708.71	5181947.45	--	--
CP #3	5/8" DIA. REBAR W/CAP	3960377.51	5181584.04	--	--

NOTE:

NAD83 KY. SINGLE ZONE, NGVD88 GEOID 12B

BEFORE "U" DIG
FOR BURIED LINES & CABLE LOCATIONS
(800) 752-6007

BEFORE YOU DIG

THE CONTRACTOR IS INSTRUCTED TO CALL 1-800-752-6007 TO REACH KY 811, THE ONE-CALL SYSTEM FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES. THE CALL IS TO BE PLACED A MINIMUM OF TWO (2) AND NO MORE THAN TEN (10) BUSINESS DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHOULD BE AWARE THAT OWNERS OF UNDERGROUND FACILITIES ARE NOT REQUIRED TO BE MEMBERS OF THE KY 811 ONE-CALL BEFORE-U-DIG (BUD) SERVICE. THE CONTRACTOR MUST COORDINATE EXCAVATION WITH THE UTILITY OWNERS, INCLUDING THOSE WHOM DO NOT SUBSCRIBE TO KY 811. IT MAY BE NECESSARY FOR THE CONTRACTOR TO CONTACT THE COUNTY CLERK TO DETERMINE WHAT UTILITY COMPANIES HAVE FACILITIES IN THE AREA.

REVISIONS		
NO.	DATE	DESCRIPTION
1	2.12.19	PR FENCE REV

EXISTING CONDITIONS

CLIENT: FRANKFORT PLANT BOARD

PROJECT: FPB SUBSTATION EROSION AND DRAINAGE MITIGATION
305 HICKORY DRIVE
FRANKFORT, KY 40602

Plans Prepared and Submitted By:
AEI
AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
65 Aberdeen Drive, Glasgow KY
270.651.7220

SCALE: 1" = 40'

DATE: 07-17-2018

DRAWN BY: S. THOMPSON

CHECKED BY: K. OTT

Y:\ 2018 PROJECTS\ 218-121 FPB SUBSTATION\ Site DEV\ Plans

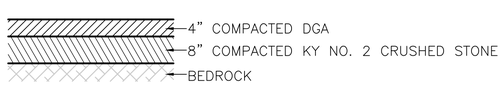
SHEET: C-3

LEGEND

SYMBOLS THAT MAY APPEAR ON DRAWING

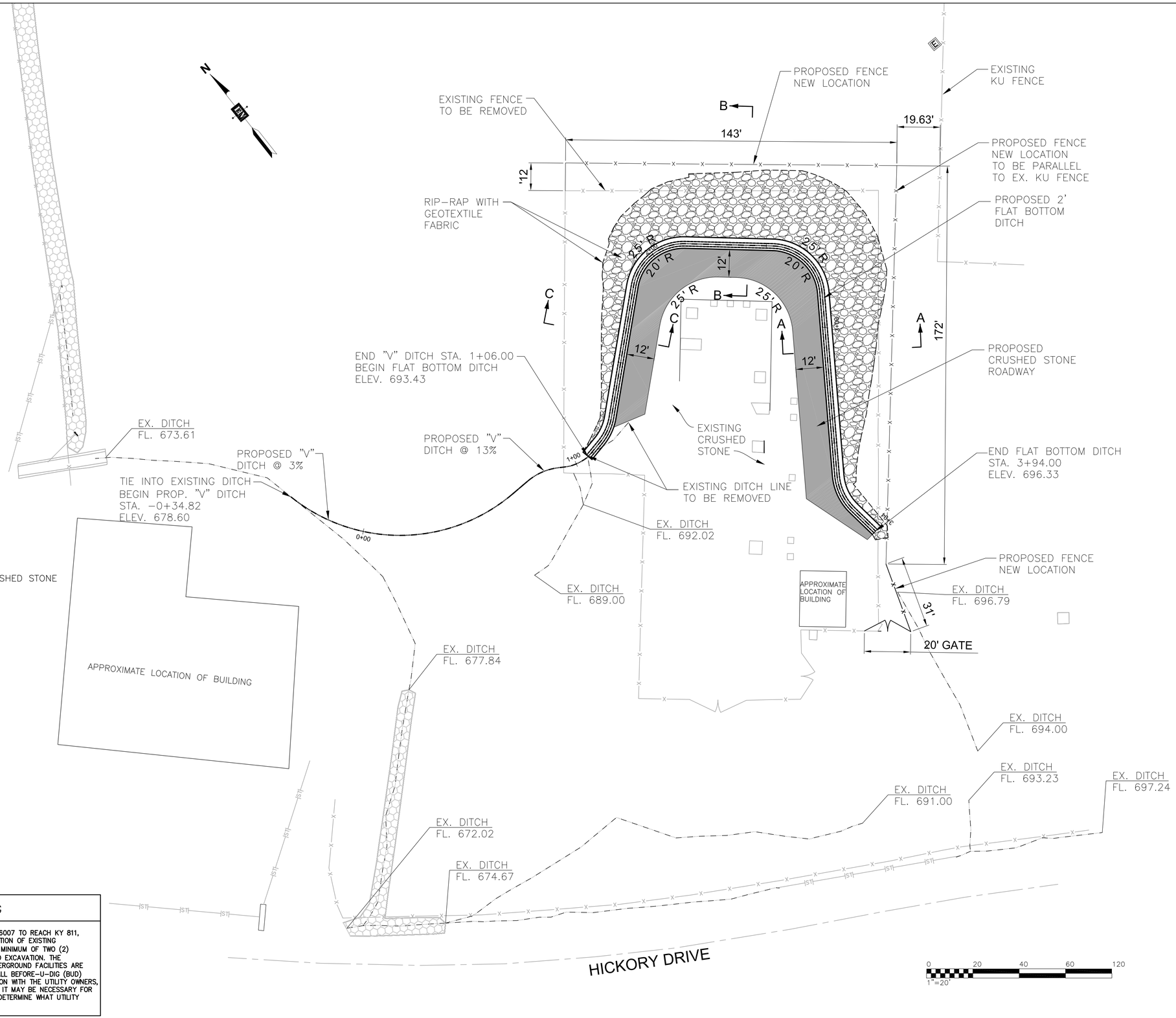
- EXISTING OVERHEAD ELECTRIC & TELEPHONE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FENCE
- EXISTING STORM PIPE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING GAS LINE
- EXISTING GAS VALVE
- EXISTING COMMUNICATIONS BOX
- EXISTING GAS METER
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC METER
- EXISTING WATER METER
- T.G. — TOP OF GRATE ELEVATION
- I.E. — INVERT ELEVATION
- MH — MANHOLE
- CBI — CURB BOX INLET
- DBI — DROP BOX INLET
- IPC — IRON PIN & CAP
- EXISTING SIGN
- EXISTING ADA PARKING
- EXISTING WATER VALVE
- EXISTING POWER POLE
- EX. LP — EXISTING LIGHT POLE
- EX. FH — EXISTING FIRE HYDRANT
- EXISTING TELEPHONE MANHOLE
- EXISTING 8" BOLLARD
- BENCH MARK

CRUSHED STONE SHALL BE COMPACTED WITH VIBRATORY COMPACTION



TYPICAL CRUSHED STONE ROADWAY SECTION

NTS



BEFORE YOU DIG

THE CONTRACTOR IS INSTRUCTED TO CALL 1-800-752-6007 TO REACH KY 811, THE ONE-CALL SYSTEM FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES. THE CALL IS TO BE PLACED A MINIMUM OF TWO (2) AND NO MORE THAN TEN (10) BUSINESS DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHOULD BE AWARE THAT OWNERS OF UNDERGROUND FACILITIES ARE NOT REQUIRED TO BE MEMBERS OF THE KY 811 ONE-CALL BEFORE-U-DIG (BUD) SERVICE. THE CONTRACTOR MUST COORDINATE EXCAVATION WITH THE UTILITY OWNERS, INCLUDING THOSE WHOM DO NOT SUBSCRIBE TO KY 811. IT MAY BE NECESSARY FOR THE CONTRACTOR TO CONTACT THE COUNTY CLERK TO DETERMINE WHAT UTILITY COMPANIES HAVE FACILITIES IN THE AREA.

BUD — BEFORE "U" DIG FOR BURIED LINES & CABLE LOCATIONS (800) 752-6007

REVISIONS		
NO.	DATE	DESCRIPTION
1	2-12-19	PR FENCE REV

SITE PLAN

CLIENT: FRANKFORT PLANT BOARD

PROJECT: FPB SUBSTATION EROSION AND DRAINAGE MITIGATION
305 HICKORY DRIVE
FRANKFORT, KY 40602

Plans Prepared and Submitted By:
AEI
AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
45 Aberdeen Drive, Glasgow KY
270.651.7220

SCALE: 1" = 20'

DATE: 07-17-2018

DRAWN BY: S. THOMPSON

CHECKED BY: K. OTT

Y:\ 2018 PROJECTS\ 218-121 FPB SUBSTATION\ Site DEV\ Plans

SHEET: C-4

EROSION CONTROL NOTES:

1. EROSION CONTROL MEASURES TO BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AT NO ADDITIONAL COST. CONTRACTOR SHALL PLAN ACCORDINGLY FOR EROSION CONTROL MEASURES.
2. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURE AND PRACTICES SHALL OCCUR PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
4. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 30 DAYS SHALL BE STABILIZED WITH PERMANENT SEEDING.
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN, AND REPAIRED AS NECESSARY AT NO ADDITIONAL COST.
6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DETERMINED NECESSARY BY ON-SITE INSPECTION.
7. THE CONSTRUCTION SITE DOES NOT APPEAR TO BE IN A FLOOD ZONE PER FIRM FLOOD INSURANCE RATE MAP NUMBER 21093C0282D, DATED 08/16/2007.

PERMANENT SEEDING SPECIFICATIONS:

DEFINITION

SEEDING DISTURBED AREAS WITH PERENNIAL GRASSES AND/OR LEGUMES TO PROVIDE A PERMANENT VEGETATIVE COVER TO LESSEN RUNOFF AND OIL EROSION.

PURPOSE

TO LESSEN SOIL EROSION AND PERMANENTLY STABILIZE DISTURBED AREAS CREATED BY GRADING OF CONSTRUCTION SITES.

CONDITIONS WHERE PRACTICE APPLIES

ALL BARE SOIL AREAS ON CONSTRUCTION SITES WHICH ARE NOT COVERED BY STRUCTURES, PAVING SYSTEMS OR OTHER EROSION CONTROL DEVICES.

PREPARATION

PREPARE SEEDED BY RIPPING, CHISELING, HARROWING, OR PLOWING TO DEPTH OF SIX INCHES SO AS TO PRODUCE A LOOSE, FRIABLE SURFACE. REMOVE ALL STONES, BOULDERS, STUMPS, OR DEBRIS FROM THE SURFACE WHICH WOULD PROHIBIT GERMINATION OF PLANT GROWTH.

INCORPORATE INTO THE SOIL 800 TO 1,000 POUNDS OF 10-10-10 FERTILIZER PLUS 500 POUNDS OF 20% SUPERPHOSPHATE PER ACRE & TWO TONS OF DOLOMITIC LIME PER ACRE UNLESS SOIL TESTS INDICATE THAT A LOWER RATE OF LIME CAN BE USED.

MULCH AFTER SEEDING WITH 1.5 TONS OF GRAIN STRAW PER ACRE AND EITHER CRIMP STRAW INTO SOIL OR TACK WITH LIQUID ASPHALT AT 400 GALLONS PER ACRE OR EMULSIFIED ASPHALT AT 300 GALLONS PER ACRE.
SELECT SEEDING MIXTURE FROM TABLE FOUND ON THIS SHEET.

EROSION PREVENTION MAINTENANCE SCHEDULE:

ALL BMP'S NEED TO BE MAINTAINED EVERY SEVEN (7) DAYS, AFTER EVERY STORM EVENT THAT EQUALS OR EXCEEDS 1/2 INCH PRECIPITATION, AND AFTER HEAVY USE.

SILT FENCE:

1. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SILT FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE HEIGHT OF THE FENCE.
2. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF THE FENCE IMMEDIATELY.
3. TAKE CARE TO AVOID UNDERMINING OR DAMAGING THE FENCE WHEN CLEANING OUT SEDIMENT.
4. REMOVE THE SILT FENCE AFTER ITS CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED. REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE IT USING THE APPROPRIATE PERMANENT STABILIZATION METHOD.

INLET PROTECTION:

1. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE STONE BAGS SILT CHECK BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE HEIGHT OF THE FENCE.
2. IF STONE BAGS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE OR DAMAGES OCCUR, REPLACE THE AFFECTED STONE BAGS IMMEDIATELY.
3. TAKE CARE TO AVOID UNDERMINING OR DAMAGING THE STONE BAGS WHEN CLEANING OUT SEDIMENT.
4. REMOVE THE STONE BAGS AFTER ITS CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED. REMOVE THE STONE BAGS AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE IT USING THE APPROPRIATE PERMANENT STABILIZATION METHOD.

ROCK CHECK DAM:

1. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE ROCK CHECK DAM BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 3/4 THE HEIGHT OF THE DAM.
2. IF ROCK CHECK DAM SOCK TEARS, BEGINS TO BE INEFFECTIVE IN ANY WAY, REPLACE THE AFFECTED SECTION OF THE ROCK CHECK DAM IMMEDIATELY.
3. TAKE CARE TO AVOID UNDERMINING OR DAMAGING THE ROCK CHECK DAM WHEN CLEANING OUT SEDIMENT.

MAINTENANCE:

INSPECT RIPRAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

NOTES

1. L IS THE LENGTH OF THE RIPRAP APRON.
2. d=1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAIL WATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

LEGEND

SYMBOLS THAT MAY APPEAR ON DRAWING

- EXISTING OVERHEAD ELECTRIC & TELEPHONE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FENCE
- EXISTING STORM PIPE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING GAS LINE
- EXISTING GAS VALVE
- EXISTING COMMUNICATIONS BOX
- EXISTING GAS METER
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC METER
- EXISTING WATER METER
- T.G. TOP OF GRATE ELEVATION
- I.E. INVERT ELEVATION
- MH MANHOLE
- CB CURB BOX INLET
- DB DROP BOX INLET
- IPC IRON PIN & CAP
- EXISTING SIGN
- EXISTING ADA PARKING
- EXISTING WATER VALVE
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING TELEPHONE MANHOLE
- EXISTING 8" BOLLARD
- BENCH MARK

BEFORE YOU DIG

THE CONTRACTOR IS INSTRUCTED TO CALL 1-800-752-6007 TO REACH KY 811, THE ONE-CALL SYSTEM FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES. THE CALL IS TO BE PLACED A MINIMUM OF TWO (2) AND NO MORE THAN TEN (10) BUSINESS DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHOULD BE AWARE THAT OWNERS OF UNDERGROUND FACILITIES ARE NOT REQUIRED TO BE MEMBERS OF THE KY 811 ONE-CALL BEFORE-U-DIG (BUD) SERVICE. THE CONTRACTOR MUST COORDINATE EXCAVATION WITH THE UTILITY OWNERS, INCLUDING THOSE WHOM DO NOT SUBSCRIBE TO KY 811. IT MAY BE NECESSARY FOR THE CONTRACTOR TO CONTACT THE COUNTY CLERK TO DETERMINE WHAT UTILITY COMPANIES HAVE FACILITIES IN THE AREA.

BUD — BEFORE "U" DIG FOR BURIED LINES & CABLE LOCATIONS (800) 752-6007

REVISIONS		
NO.	DATE	DESCRIPTION
1	2.12.18	PR FENCE REV

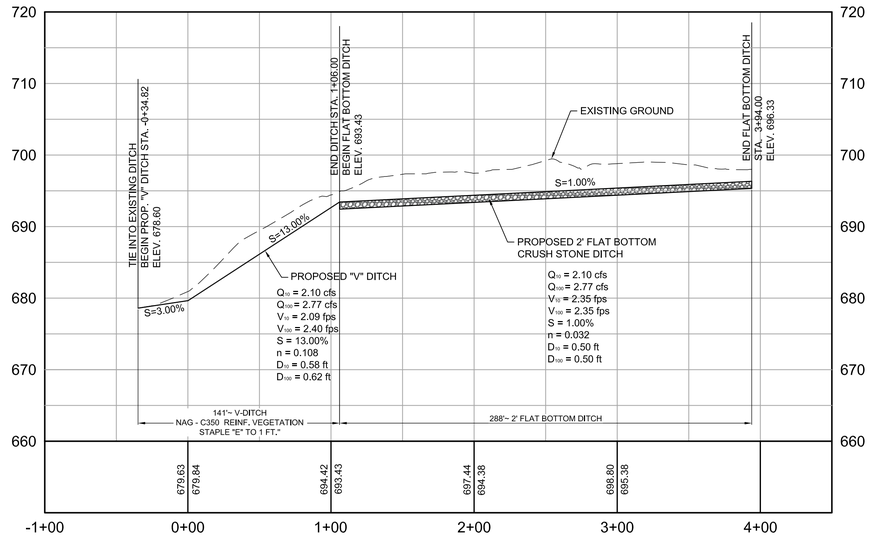
EPSC & GRADING PLAN

CLIENT: FRANKFORT PLANT BOARD

PROJECT: FPB SUBSTATION EROSION AND DRAINAGE MITIGATION
305 HICKORY DRIVE
FRANKFORT, KY 40602

Plans Prepared and Submitted by:
AEI
AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
45 Aberdeen Drive Glasgow KY
270.651.7220

SCALE: 1" = 20'
DATE: 07-17-2018
DRAWN BY: S. THOMPSON
CHECKED BY: K. OTT
Y:\ 2018 PROJECTS\ 218-121 FPB SUBSTATION\ Site DEV\ Plans
SHEET: C-5



PROPOSED PROFILE

SCALE: 1"=50' H, 1"=5' V

REVISIONS

NO.	DATE	DESCRIPTION

DRAINAGE PROFILE

CLIENT:
FRANKFORT PLANT BOARD

PROJECT:
FPB SUBSTATION EROSION AND DRAINAGE MITIGATION
305 HICKORY DRIVE
FRANKFORT, KY 40602

Plans Prepared and Submitted By:
AEI
AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
45 Aberdeen Drive, Glasgow KY
270.651.7220

SCALE: 1:10

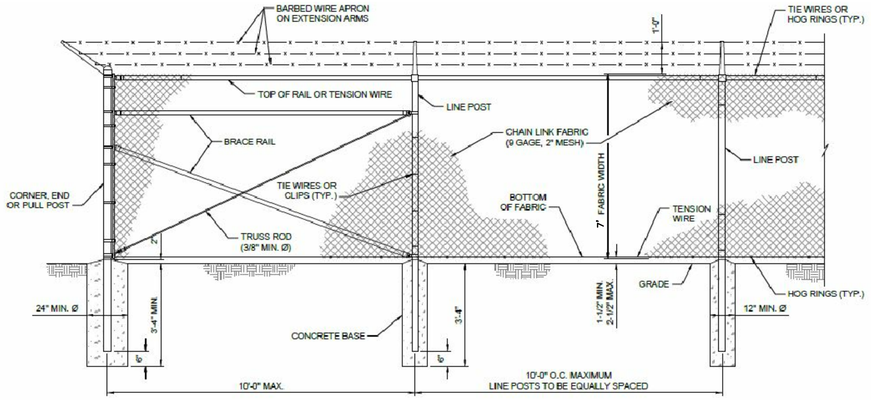
DATE: 07-17-2018

DRAWN BY: S. THOMPSON

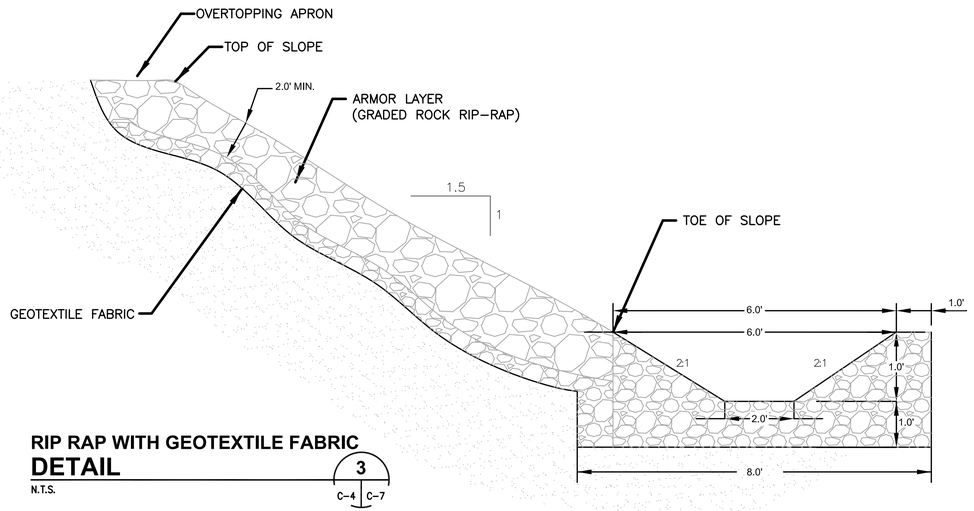
CHECKED BY: K. OTT

Y:\ 2018 PROJECTS\ 218-121 FPB SUBSTATION\ Site DEV\ Plans

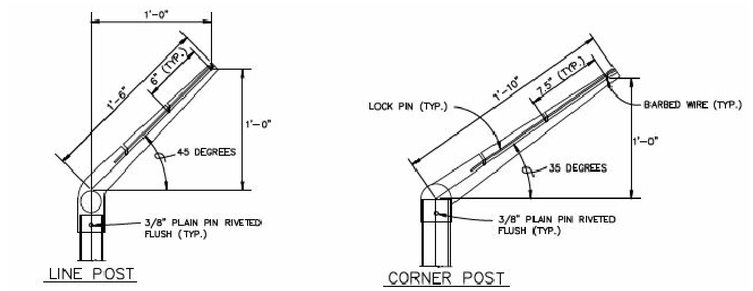
SHEET:
C-6



CHAIN-LINK SECURITY FENCE
DETAIL 1
N.T.S. C-4 | C-7



RIP RAP WITH GEOTEXTILE FABRIC
DETAIL 3
N.T.S. C-4 | C-7

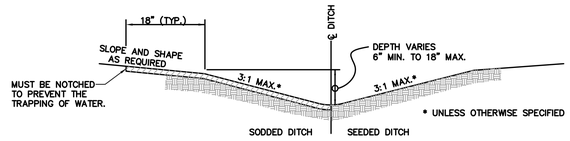


EXTENSION ARM
DETAIL 2
N.T.S. C-4 | C-7

FENCING NOTES:

1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE SPECIFICATIONS.
2. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE SIDE OPPOSITE THE SECURE AREA.
3. UNLESS SPECIFICALLY SHOWN OR SPECIFIED, ALL FE6 FENCE SHALL HAVE AN APRON EXTENDED OUTWARD FROM THE AREA BEING PROTECTED.
4. C-SECTION POSTS SHALL BE INSTALLED SO THAT THE VOID INSIDE THE POST IS COMPLETELY FILLED WITH CONCRETE UP TO THE TOP OF THE FOUNDATION.
5. PROPOSED FENCE TO MATCH EXISTING FENCE DIMENSIONS.

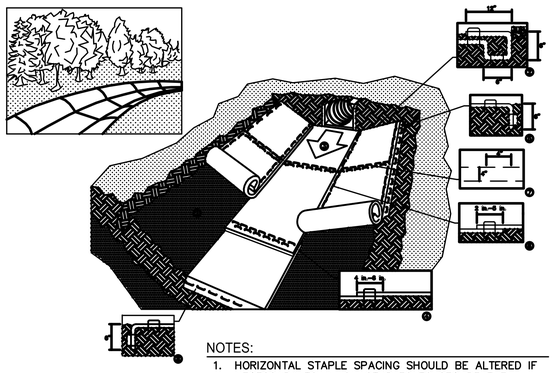
STEEL POST SCHEDULE		
USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)	
	FABRIC WIDTH 72" OR LESS	FABRIC WIDTH 72" OR LESS
CORNER, END & PULL POSTS TUBULAR – ROUND	4.00" O.D.	2.875" O.D.
LINE POSTS TUBULAR – ROUND	2.375" O.D.	2.375" O.D.
TOP, BOTTOM & BRACE RAILS TUBULAR – ROUND		1.66" O.D.

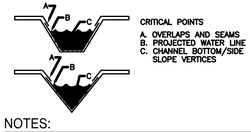


NOTES:

1. SODDED OR SEEDED DITCHES SHOULD NOT BE USED WHERE SLOPES ARE 10% OR GREATER OR WHERE THE VELOCITY IS GREATER THAN 4 FEET PER SECOND.
2. SOD SHALL BE PLACED SO THAT DITCHES SHALL BE FREE-DRAINING AT THE EDGE OF ALL PAVEMENTS AND DRIVEWAYS.
3. DITCH LINING SHALL BE DESIGNED FOR FULL BANK FLOW.

EARTH "V" DITCH
DETAIL 4
N.T.S. C-4 | C-7





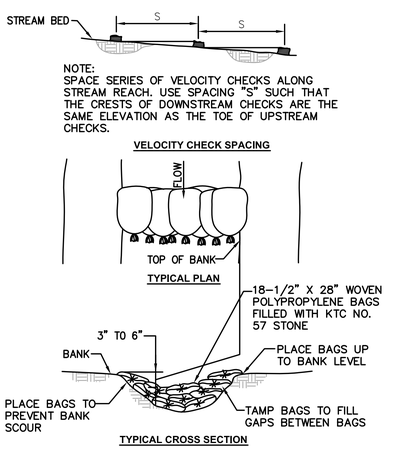
NOTES:

1. HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
2. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

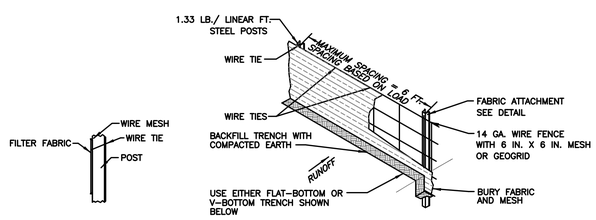
NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. (WHEN USING CELL-O-SEED. DO NOT SEED PREPARED ARE. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN).
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6"X6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12' PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4 IN. – 6 IN. OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2 IN. – 5IN. (DEPENDING ON BLANKET TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 FT. – 40FT. INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

CHANNEL INSTALLATION NORTH AMERICAN GREEN
DETAIL 5
N.T.S. C-4 | C-7

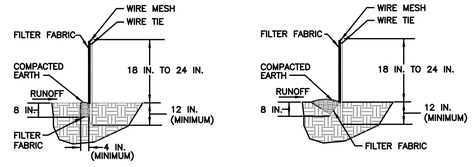


ROCK CHECK
DETAIL 6
N.T.S. C-4 | C-7



FABRIC ATTACHMENT DETAIL

SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH SECTION

V-SHAPED TRENCH SECTION

REINFORCED SILT FENCE
DETAIL 7
N.T.S. MSD DETAIL: EF-09-01 C-4 | C-7

REVISIONS		
NO.	DATE	DESCRIPTION
1	2.12.18	PR FENCE REV

DETAILS

CLIENT: FRANKFORT PLANT BOARD

PROJECT: FPB SUBSTATION EROSION AND DRAINAGE MITIGATION
305 HICKORY DRIVE
FRANKFORT, KY 40602

Plans Prepared and Submitted By:
AEI
AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
45 Aberdeen Drive Glasgow KY 270.651.7220

SCALE: NA
DATE: 07-17-2018
DRAWN BY: S. THOMPSON
CHECKED BY: K. OTT

Y:\ 2018 PROJECTS\ 218-121 FPB SUBSTATION\ Site DEV\ Plans

SHEET: C-7