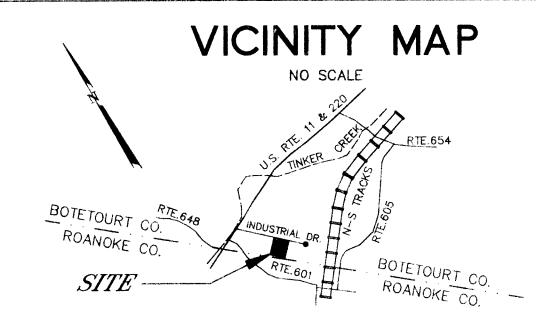
QUANTITY AND COST ESTIMATE CLEARING AND GRUBBING ACRES **EXCAVATION** CY CY **EMBANKMENT** EACH CURB INLET DI-EACH CURB INLET DI-EACH MANHOLE MH-EACH MANHOLE MH-LF -IN. CONCRETE PIPE, CLASS III -IN. CONCRETE PIPE, CLASS IV LF LF -IN. C.M. CULVERT LF -IN. C.M. CULVERT BOX CULVERT LS PAVED DITCH LF SF RIPRAP-CLASS SY SODDED SWALE -IN. CONCRETE ENDWALL, EW-EACH -IN. END SECTION, ES-EACH DRIVEWAY, ENTRANCE TYPE EACH LF SIDEWALK, -FT. WIDE LF HEADER CURB & GUTTER, CG-CURB & GUTTER, CG-EACH VALLEY GUTTER PAVEMENT DESIGN SY CATEGORY SY CATEGORY EACH STREET SIGNS LF -IN. WATER LINE LF -IN. WATER LINE EACH FIRE HYDRANT ASSEMBLIES EACH BLOW-OFFS w/VAULT, FRAME & COVER EACH -IN. GATE VALVES w/VAULT, FRAME & COVER -IN. GATE VALVES w/VAULT, FRAME & COVER EACH SERVICE CONNECTIONS EACH EACH MISCELLANEOUS FITTINGS -IN. SANITARY SEWER LF -IN. SANITARY SEWER EACH ST'D. MANHOLE W/FRAME & COVER EACH SERVICE CONNECTIONS w/CLEANOUTS AS-BUILT PLANS SUBTOTAL CONTINGENCY ESTIMATED TOTAL I hereby certify that the foregoing estimate reflects the current improvements of this

project. SIGNED:



ENGINEER'S NOTES

T.P. PARKER & SON ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF PLANS OR FOR INFORMATION ON PLANS UNTIL SUCH PLANS HAVE BEEN APPROVED BY THE REQUIRED PUBLIC AGENCIES.

ANY WORK COMMENCED ON A PROJECT PRIOR TO PLAN APPROVAL IS AT SOLE RISK OF THE DEVELOPER.

T.P. PARKER & SON DOES NOT GUARANTEE THE COMPLETION OR QUALITY OF PERFORMANCE OF THE CONTRACTS OR THE COMPLETION OR QUALITY OF PERFORMANCE OF CONTRACTS BY SUBCONTRACTORS OR OTHER THIRD PARTIES.

SOURCE OF TOPOGRAPHIC MAPPING IS T.P. PARKER & SON DATED *SEPT.*. 1992

BOUNDARY SURVEY WAS PERFORMED BY T.P. PARKER & SON DATED *SEPT.*, 1992

VDOT NOTES

ALL NECESSARY UTILITY LATERALS WILL BE PLACED PRIOR TO PAVEMENT SURFACING, OR CONDUIT PROVISIONS BE MADE FOR THE SAME (i.e. WATER, SEWER, GAS AND TELEPHONE.)

CARE MUST BE TAKEN DURING CONSTRUCTION TO PREVENT EROSION, DUST, AND MUD FROM DAMAGING ADJACENT PROPERTY, CLOGGING DITCHES, TRACKING PUBLIC STREETS, AND OTHERWISE CREATING A PUBLIC OR PRIVATE NUISANCE TO SURROUNDING AREAS.

IF EROSION IS ENCOUNTERED IN ANY DRAINAGE EASEMENT, IT WILL BE THE RESPONSIBILITY OF THE DEVELOPER TO SOD, RIP-RAP, GROUT, PAVE, OR TO DO WHATEVER IS NECESSARY TO CORRECT THE PROBLEM.

MINIMUM PAVEMENT RADIUS OF 25 FEET REQUIRED AT ALL STREET INTERSECTIONS.

WHILE THESE PLANS HAVE BEEN APPROVED, SUCH APPROVAL DOES NOT EXEMPT CONNECTIONS WITH EXISTING STATE MAINTAINED ROADS FROM CRITICAL REVIEW AT THE TIME PERMIT APPLICATIONS ARE MADE. THIS IS NECESSARY IN ORDER THAT THE PREVAILING CONDITIONS ARE TAKEN INTO CONSIDERATION REGARDING SAFETY REQUIREMENTS. ADDITIONAL SAFETY ACCOMPANIMENTS SUCH AS TURNING LANES MAY OR MAY NOT BE REQUIRED.

SEWER NOTES

A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED LINES.

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING ALL MANHOLES AFTER PAVING. MANHOLE TOPS SHALL BE ADJUSTED TO GRADE

ALL EXISTING UTILITIES MAY NOT BE SHOWN, OR MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS, SECTION 12.05.03, WHERE LINES CROSS.

HOUSE CONNECTIONS ARE TO BE MADE WITH 4" PIPE INSTALLED ON A MINIMUM GRADE OF 1/4 INCH TO 1 FOOT IN THE RIGHT OF WAY.

LATERALS FROM MANHOLES SHALL BE P.V.C. OR DUCTILE IRON-OF SUFFICIENT LENGTH TO PROVIDE TWO (2) FEET OF BEARING ON NATURAL GROUND. ANY TRANSITION FROM DUCTILE IRON SHALL BE MADE WITH AN ADAPTOR COUPLING.

ALL TRENCHES SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS. LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

WATER NOTES

A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED LINES.

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING VALVE VAULTS AFTER PAVING AND ADJUSTMENT TO FINAL GRADE IF NECESSARY.

ALL EXISTING UTILITIES MAY NOT BE SHOWN, OR MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS, SECTION 12.05.03, WHERE LINES CROSS.

ALL TRENCHES SHALL BE COMPACTED ACCORDING TO _______ STANDARDS.

LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

WATER LINE SHALL BE MINIMUM CLASS 50 DUCTILE IRON IN ACCORDANCE TO AWWA C151 OR SDR14 PVC IN ACCORDANCE TO C-900.

GENERAL NOTES

ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF BOTETOURT CO. AND/OR THE VIRGINIA DEPARTMENT OF TRANSPORTATION.

THE CONTRACTOR OR DEVELOPER IS REQUIRED TO NOTIFY THE BOTETOURT CO. ENGINEERING DIVISION IN WRITING AT LEAST THREE (3) DAYS PRIOR TO ANY CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- A. INSTALLATION OF APPROVED EROSION CONTROL DEVICES.
 - B. CLEARING AND GRUBBING.
 - C. SUBGRADE EXCAVATION. D. INSTALLING STORM SEWERS OR CULVERTS.
 - E. INSTALLING CURB AND GUTTER FORMS. F. PLACING CURB AND GUTTER.
 - G. PLACING OTHER CONCRETE.
 - H. PLACING GRAVEL BASE. I. PLACING ANY ROADWAY SURFACE.
 - J. INSTALLING WATER LINES.
 - K. INSTALLING SANITARY SEWER LINES.
- A PRECONSTRUCTION CONFERENCE SHOULD BE SCHEDULED WITH THE BOTETOURT $oldsymbol{\succeq}$ county engineering division, to be held at least one day prior to ANY CONSTRUCTION.

MEASURES TO CONTROL EROSION AND SILTATION MUST BE PROVIDED FOR > PRIOR TO PLAN APPROVAL, PLAN APPROVAL IN NO WAY RELIEVES THE DEVELOPER OR CONTRACTOR OF THE RESPONSIBILITIES CONTAINED IN EROSION AND SILTATION CONTROL POLICIES.

A PERMIT MUST BE OBTAINED FROM THE SALEM VDOT RESIDENCY OFFICE PRIOR TO CONSTRUCTION IN THE HIGHWAY RIGHT OF WAY.

PLAN APPROVAL DOES NOT GUARANTEE THE ISSUANCE OF ANY PERMITS BY VDOT. AN APPROVED SET OF PLANS AND ALL PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.

FIELD CONSTRUCTION SHALL HONOR PROPOSED DRAINAGE DIVIDES AS SHOWN ON PLANS.

CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AT THE JOB SITE.

CONSTRUCTION DEBRIS SHALL BE CONTAINED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT. NO LESS THAN ONE LITTER RECEPTACLE SHALL BE PROVIDED ON-SITE.

THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING MUD FROM TRUCKS AND/OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT THE STREETS ARE IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.

THE DEVELOPER AND/OR CONTRACTOR SHALL SUPPLY ALL UTILITY COMPANIES WITH COPIES OF APPROVED PLANS, ADVISING THEN THAT ALL GRADING AND INSTALLATION SHALL CONFORM TO APPROVED PLANS.

CONTRACTORS SHALL NOTIFY UTILITIES OF PROPOSED CONSTRUCTION AT LEAST TWO. BUT NOT MORE THAN TEN WORKING DAYS IN ADVANCE, AREA PUBLIC UTILITIES MAY BE NOTIFIED THROUGH MISS UTILITY AT (800) 552-7001.

ALL WORK SHALL BE SUBJECT TO INSPECTION BY BOTETOURT COUNTY AND/OR VDOT INSPECTORS.

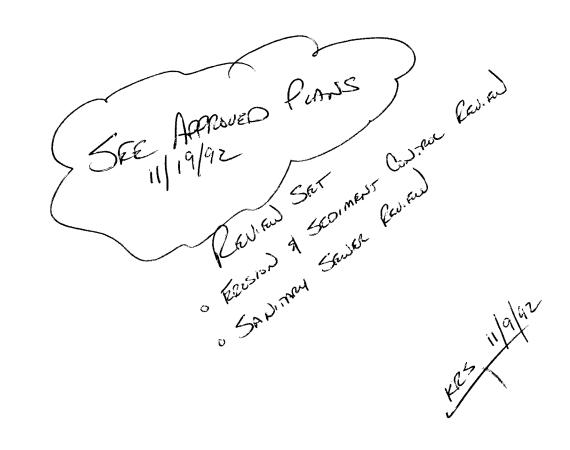
FIELD CORRECTIONS SHALL BE APPROVED BY THE BOTETOURT COUNTY ENGINEERING DIVISION PRIOR TO SUCH CONSTRUCTION.

GRADE STAKES SHALL BE SET FOR ALL CURB AND GUTTER, CULVERT, SANITARY SEWER, AND STORM SEWER.

LOCATION OF UNDERGROUND UTILITIES IS BASED ON FIELD SURVEYS, AS SHOWN BY AVAILABLE RECORDS, AND AS LOCATED BY THE UTILITY LOCATOR SERVICE. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

THE SITE WORK AND LANDSCAPING CONTRACTOR(S) SHALL COMPLY WITH LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES, BOTH ON AND OFF THE SITE, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM CONTAINED IN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION, FOR DETAILS AND SPECIFICATIONS OF EROSION CONTROL ITEMS SHOWN ON THESE PLANS.

ALL STORM DRAIN CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.



SHEET INDEX

SHEET #

TITLE COVER SHEET DIMENSIONAL AND LANDSCAPING LOCATION GRADING, UTILITIES, AND EROSIO. A/E FIRM: # OF SETS: GENERAL DETAILS SOIL EROSION & SEDIMENTATION

					SYMBOLS	
	ABBRE	VIATIONS		EXISTING	NEW	
AHFH	ARROW HEAD TOP OF	MIN	MINIMUM	100.5 E	100.5	SPOT ELEVATION
	FIRE HYDRANT	MON	MONUMENT		100	CONTOURS
APPROX ASPH	APPROXIMATE ASPHALT	NBL PROP	NORTH BOUND LANE PROPOSED	===8"SS====	8"SS	SANITARY SEWER LINE
BC BC	BOTTOM OF CURB	PUE	PUBLIC UTILITY EASEMENT		4"W	WATERLINE
BIT	BITUMINOUS	PVMT	PAVEMENT			
BLDG	BUILDING	R	RADIUS	======================================		STORM DRAIN
BLK	BLOCK	RT D (M	RIGHT OF WAY	2"G	2"G ——	GAS LINE
BM BW	BENCHMARK BOTTOM OF WALL	R/W REQD	RIGHT OF WAY REQUIRED	**************************************		OVERHEAD ELECTRIC LINE
CB	CINDER BLOCK	RR	RAILROAD	Accordance with a statement of the state		
C&G	CURB & GUTTER	RYS	REAR YARD SETBACK	·	•	OVERHEAD TELEPHONE LINE
CMP	CORRUGATED METAL PIPE	SAN	SANITARY	CATV	CATV	OVERHEAD CABLE TELEVISION LINE
CONC	CONCRETE	SBL	SOUTH BOUND LANE	UE UT-	UE UT	UNDERGROUND TEL OR ELEC LINE
COR DBL	CORNER DOUBLE	SD SECT	STORM DRAIN SECTION	M	M	WATER OR GAS METER
DEFL	DEFLECTION	SE	SLOPE EASEMENT		um	
DI.	DROP INLET	SS	SANITARY SEWER	_		VALVE
DiA	DIAMETER	SSE	SANITARY SEWER EASEMENT	——ф F.H.		FIRE HYDRANT
DE	DRAINAGE EASEMENT	STA	STATION			MANHOLE
EBL	EAST BOUND LINE	STD	STANDARD	c.o.	C.O.	CLEANOUT
ELEC ELEV	ELECTRIC ELEVATION	STO SYS	STORAGE SIDE YARD SETBACK	[
ENTR	ENTRANCE	TBM	TEMPORARY BENCHMARK			DROP INLET (CURB OR GRATE)
EP	EDGE OF PAVEMENT	TC	TOP OF CURB	· ·	ф	UTILITY POLE, GUY & ANCHOR
EW	ENDWALL	TEL	TELEPHONE	Nondayan and the second		DITCH OR SWALE
EXIST FDN	EXISTING FOUNDATION	TRANS TW	TRANSFORMER TOP OF WALL			CENTERLINE OR BASELINE
FF	FINISHED FLOOR	TYP	TYPICAL	P	P	PROPERTY LINE
HPT	HIGH POINT	VDOT	VIRGINIA DEPARTMENT OF	_	L	
INV	INVERT		TRANSPORTATION	\triangle	\triangle	SURVEY TRAVERSE POINT
IP.	IRON PIN	VERT	VERTICAL	Δ	Δ	DEFLECTION ANGLE
LT MBL	LEFT MINIMUM BUILDING LINE	WBL YD	WEST BOUND LANE YARD	4	X .	DIRECT ANGLE
МН	MANHOLE			O\$ Y.L.	♣ Y.L.	YARD LIGHTING
FG	FINISH GRADE			О⊐ Ү.Н.	← Y.H.	YARD HYDRANT
				®		WELL
				•		BENCHMARK
				Accompanies X minimization X minimization X		FENCE
						TREE LINE
						RAILROAD
				&.		HANDICAPPED SPACE

LEGEND

NAME OF R.W. HATTER WELDING, INC. **DEVELOPMENT**

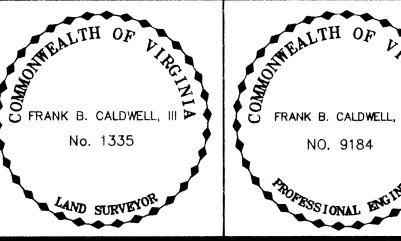
LOT 3 - BOTETOURT INDUSTRIAL PARK LOCATION INDUSTRIAL DRIVE COUNTY OF BOTETOURT, VIRGINIA

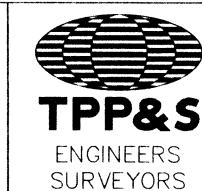
MR. BOB HATTER ROUTE 5, BOX 232 OWNER MONETA, VIRGINIA, 24121 PHONE: (703) 721-2068

DEVELOPER SAME AS OWNER

TAX MAP #(S) 106C BLOCK #(S) 1 PARCEL #(S)___3

REVISIONS Designed By: CLW Ву No. Date Drawn By: CLW Date: 10-02-92 W.O. # <u>92-1561</u>

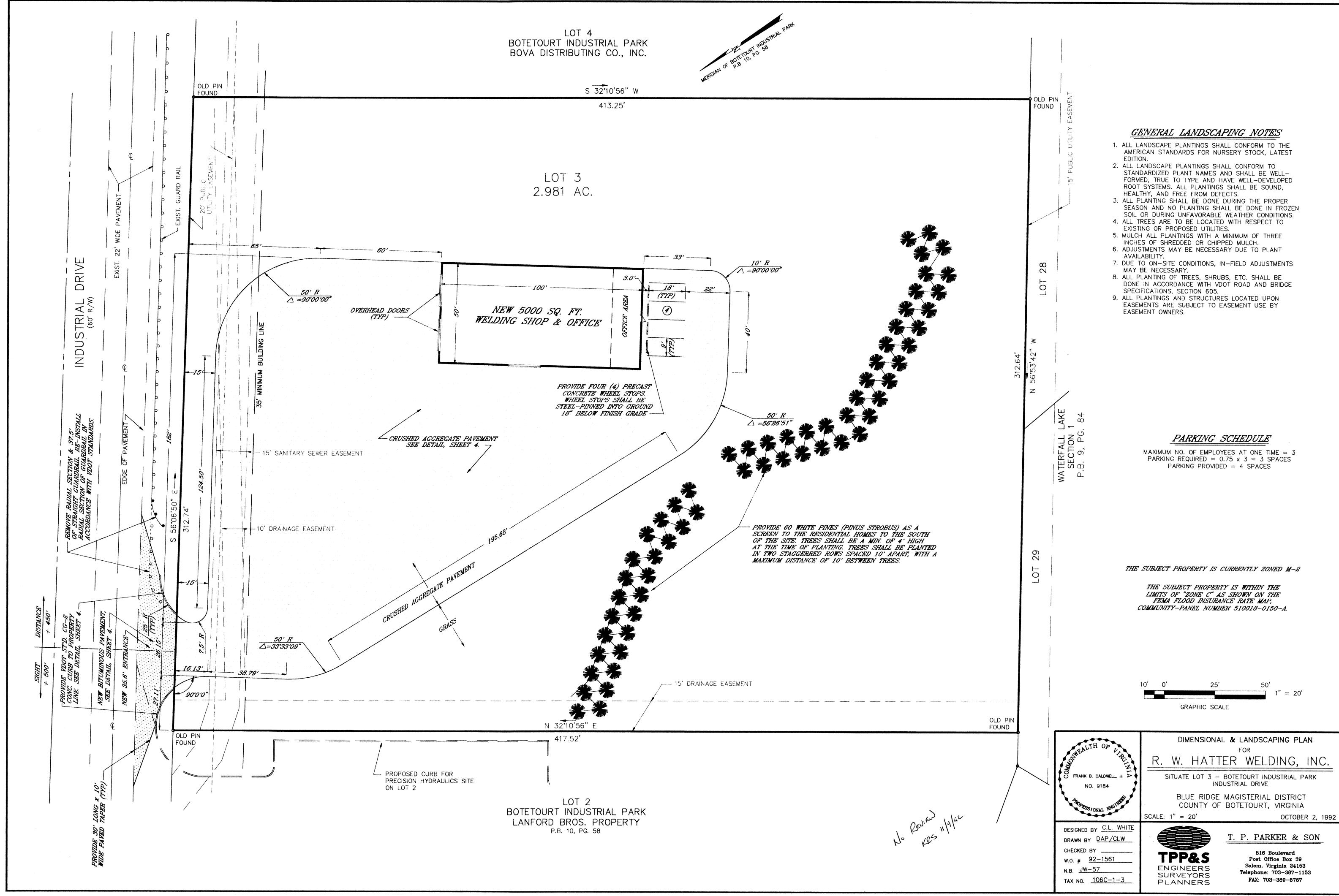


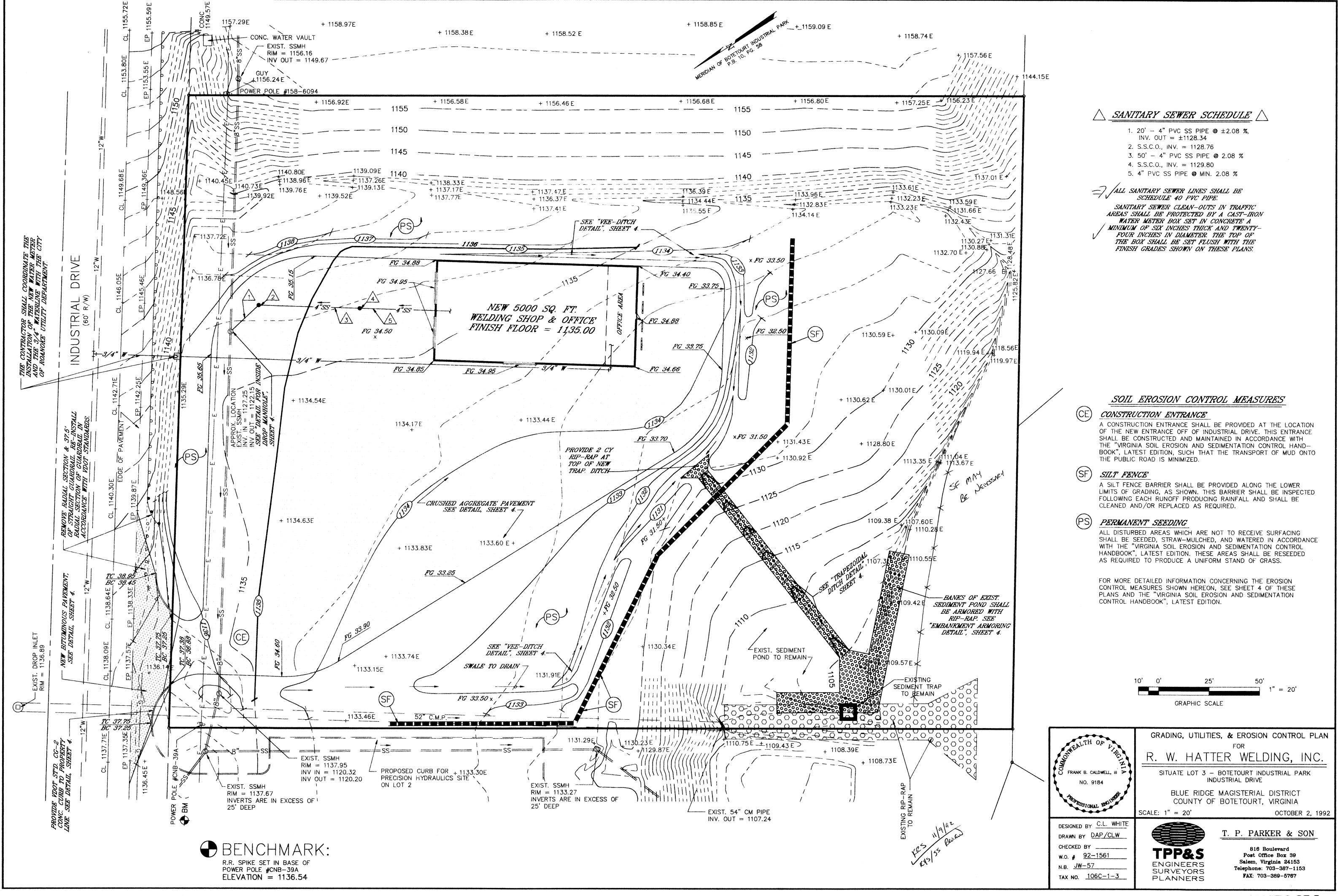


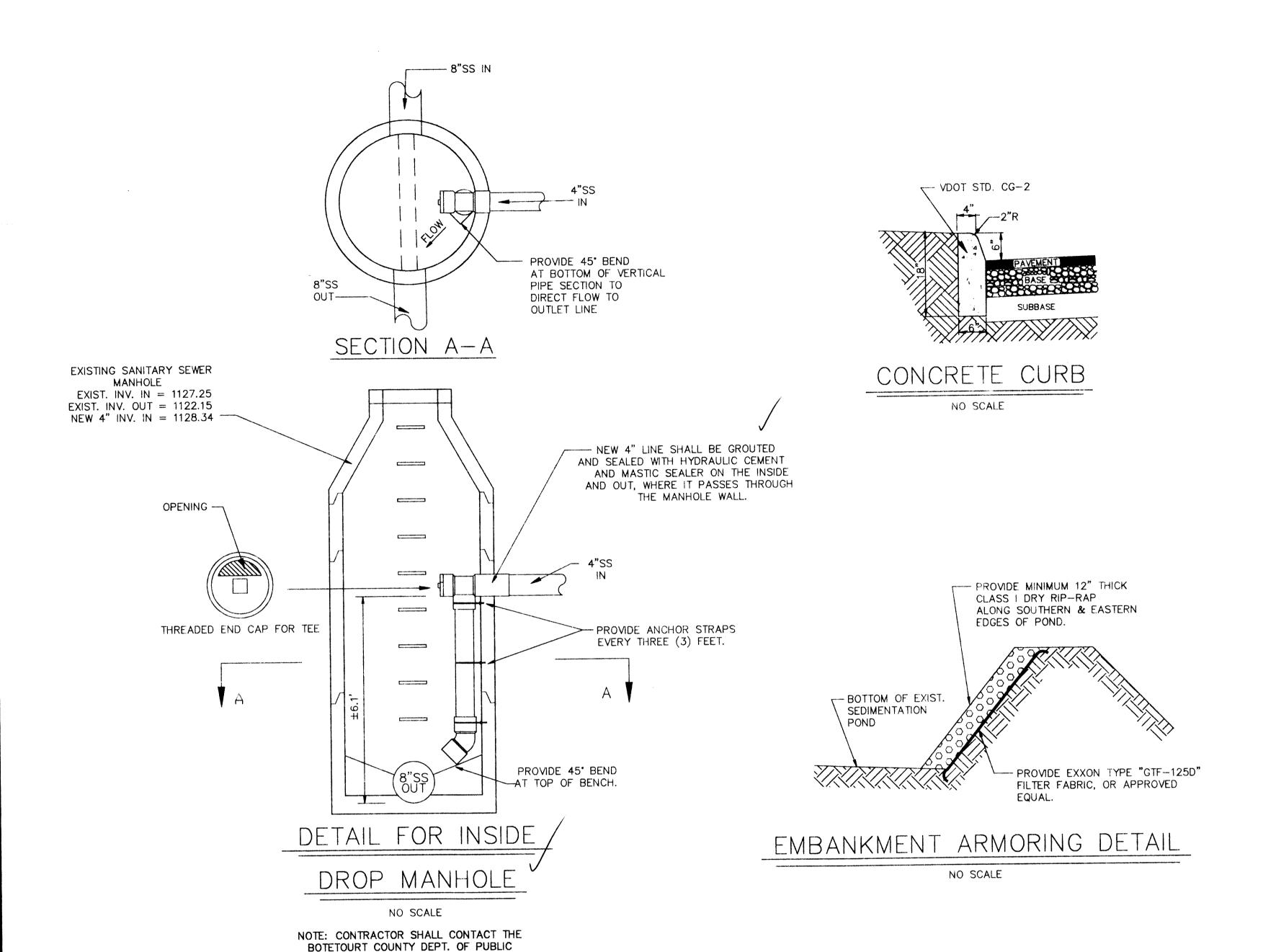
PLANNERS

T. P. PARKER & SON

816 Boulevard Post Office Box 39 Salem, Virginia 24153 Telephone: 703-387-1153 FAX: 703-389-5767







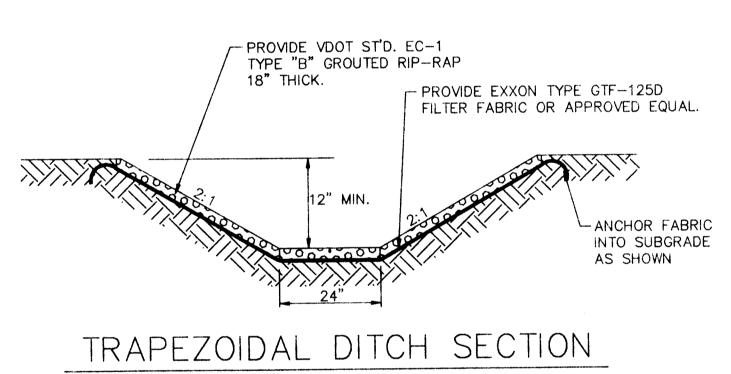
WORKS (703) 992-8316 TO INSPECT THE CONSTRUCTION OF THE LATERAL-TO-MANHOLE JOINT PRIOR TO BACKFILLING AGAINST THE MANHOLE.

SUBGRADE AND AGGREGATE SHALL BE LAID AND COMPACTED TO 90 % OF STANDARD PROCTOR USING A VIBRATORY ROLLER OR SIMILAR APPROVED COMPACTION EQUIPMENT-6" OF CRUSHER-RUN AGGREGATE-- COMPACTED SUBGRADE

CRUSHED AGGREGATE PAVING DETAIL NO SCALE

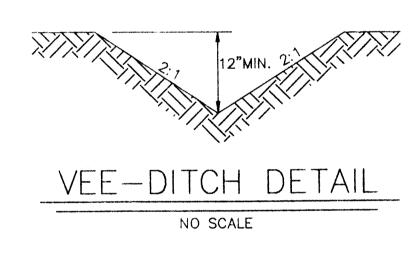
ALL COMPACTION AND PAVING OPERATIONS SHALL CONFORM TO VDOT STANDARDS AND SPECIFICATIONS - 2" TYPE SM-2A BITUMINOUS CONCRETE WEAR COURSE 6" TYPE 21-B AGGREGATE BASE MATERIAL ------- COMPACTED SUBGRADE BITUMINOUS PAVEMENT DETAIL

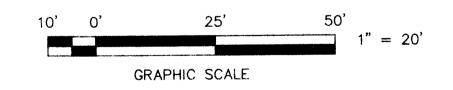
NO SCALE



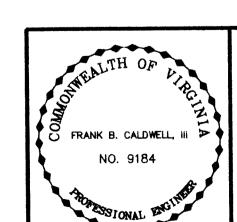
TRAPEZOIDAL DITCH SHALL EXTEND FROM THE TOP OF SLOPE TO THE BOTTOM OF THE EXISTING SEDIMENT POND AS SHOWN ON SHEET 3 OF 5.

NO SCALE









DESIGNED BY C.L. WHITE

TAX NO. 106C-1-3

DRAWN BY DAP/CLW

CHECKED BY

w.o. # <u>92-1561</u>

N.B. <u>JW-57</u>

R. W. HATTER WELDING, INC.

GENERAL DETAILS

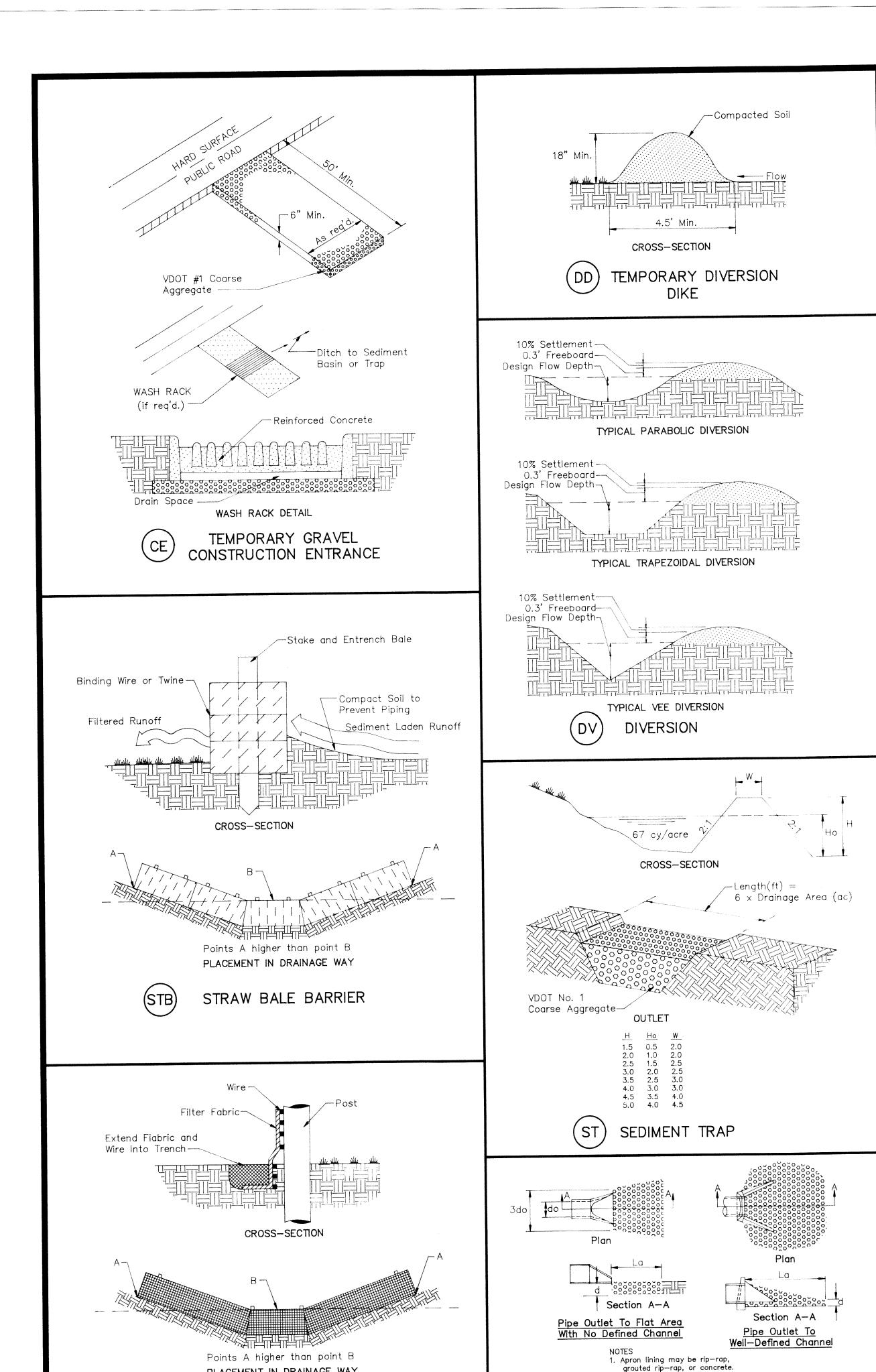
SITUATE LOT 3 — BOTETOURT INDUSTRIAL PARK INDUSTRIAL DRIVE

BLUE RIDGE MAGISTERIAL DISTRICT COUNTY OF BOTETOURT, VIRGINIA

ENGINEERS SURVEYORS PLANNERS

T. P. PARKER & SON 816 Boulevard Post Office Box 39 Salem, Virginia 24153 Telephone: 703-387-1153 FAX: 703-389-5767

OCTOBER 2, 1992



2. La is the length of the riprap apron as calculated using

plates 1.36d and 1.36e.

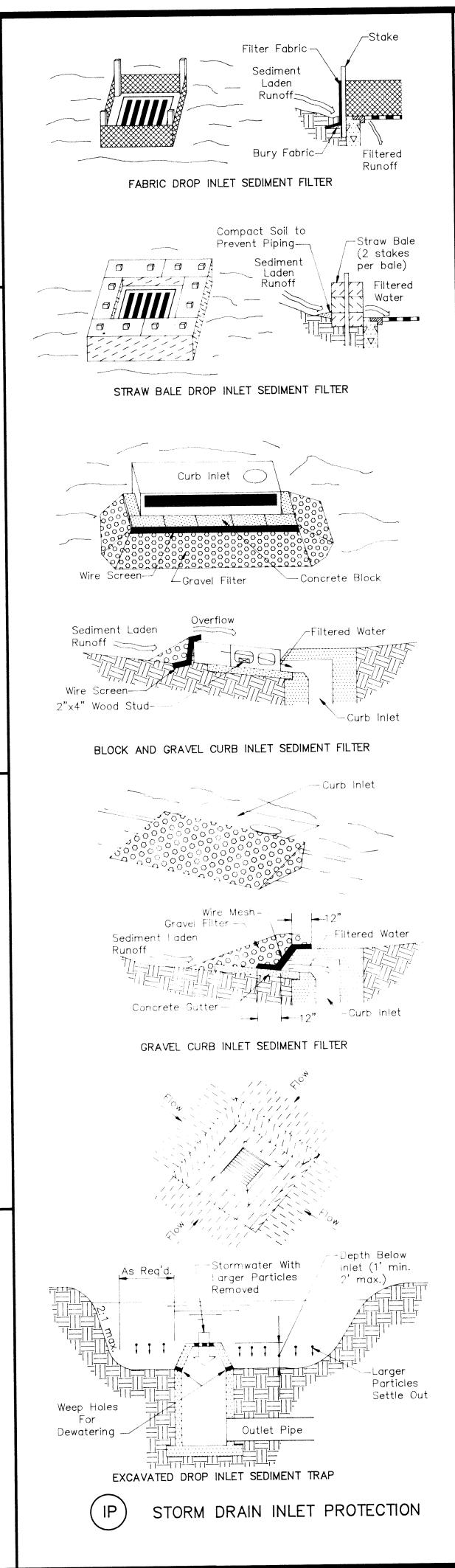
3. d = 1.5 times the maximum

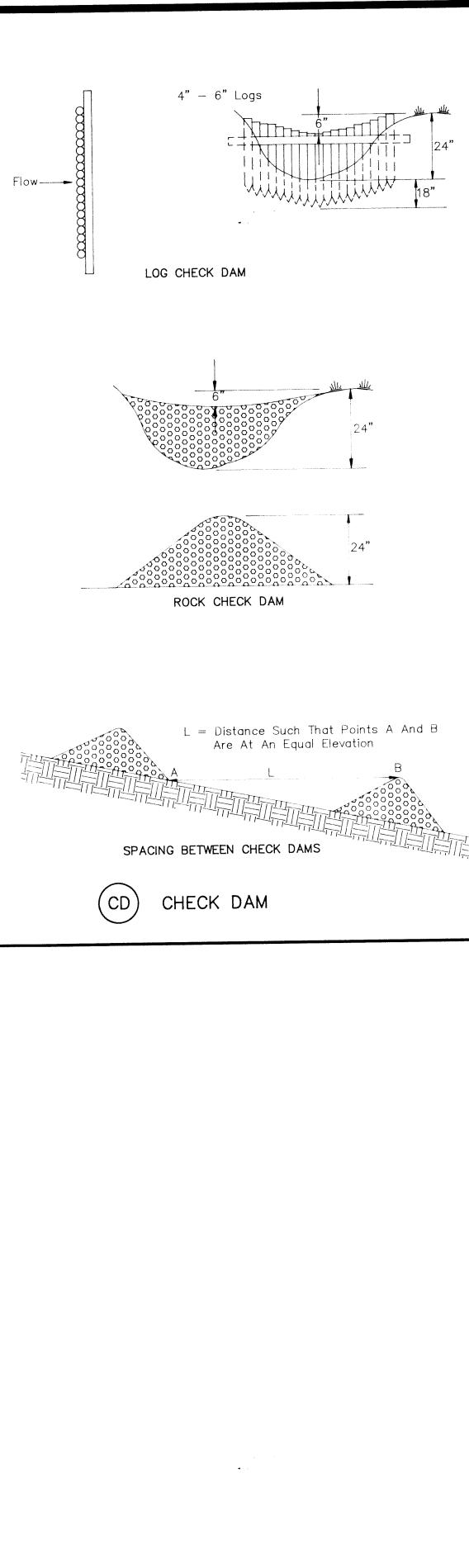
stone diameter, but not less

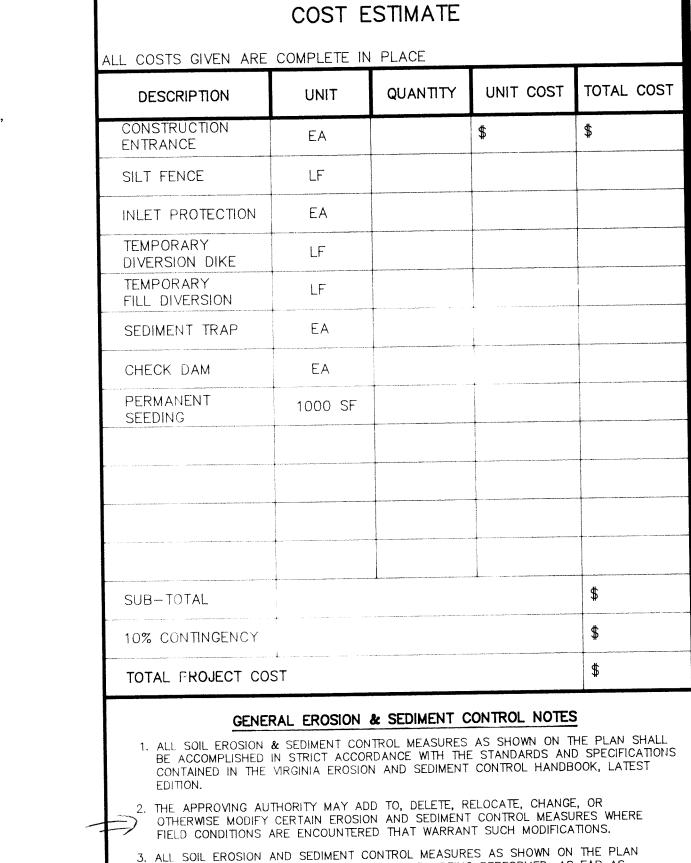
OUTLET PROTECTION

PLACEMENT IN DRAINAGE WAY

SILT FENCE







EROSION-SILTATION CONTROL

TYPE B (SLOPES 3:1 OR STEEPER) TYPE A 15 MARCH TO 1 MAY 15 OCTOBER TO 1 FEBRUARY CROWN VETCH @ 1/2 LB / 1000 SF K-31 FESCUE @ 5 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF BORZY WINTER RYE @ 1/2 LB / 1000 SF RED TOP @ 1/8 LB / 1000 SF 1 FEBRUARY TO 1 JUNE 15 AUGUST TO 1 OCTOBER K-31 FESCUE @ 5 LB / 1000 SF CROWN VETCH @ 1/2 LB / 1000 SF

SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS

ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN

5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY

6. FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES

CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK,

PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT

4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR

PROPERTY AT THE END OF EACH DAY'S WORK.

PRACTICAL.

LATEST EDITION.

ANNUAL RYE @ 1/2 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF 1 JUNE TO 1 SEPTEMBER RED TOP @ 1/8 LB / 1000 SF K-31 FESCUE @ 5 LB / 1000 SF GERMAN MILLET @ 1/2 LB / 1000 SF 1 SEPTEMBER TO 15 OCTOBER

140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE

K-31 FESCUE @ 5 LB / 1000 SF

ANNUAL RYE @ 1/2 LB / 1000 SF

FERTILIZER: 5-20-10 @ 25 LB / 1000 SF 38-0-0 **@** 7 LB / 1000 SF

SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING: INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

TOTAL DISTURBED AREA = 1.330 AC. = 57.952 SQ. FT.

PERMANENT SEEDING MIXTURE

EROSION AND SILTATION CONTROL DETAILS

R.W. HATTER WELDING, INC. SITUATE LOT 3

BOTETOURT INDUSTRIAL PARK INDUSTRIAL DRIVE COUNTY OF BOTETOURT, VIRGINIA

DATE: 0CT0BER 2, 1992 DESIGNED BY CLW

DRAWN BY (CADD)

w.o. # <u>92-156</u>/

N.B. JW-57

TAX NO. 106C-1-3

CHECKED BY

ENGINEERS

SURVEYORS **PLANNERS**

P. PARKER & SON 816 Boulevard Post Office Box 39 Salem, Virginia 24153 Telephone: 703-387-1153 FAX: 703-389-5767

NO SCALE