

OWNER: SEMCO, INC.
1800 EAST POINTE DRIVE
COLUMBIA, MISSOURI 65201-3508

DEVELOPER: AVIS CONSTRUCTION COMPANY, INC.
521 RUTHERFORD AVENUE, N.E.
ROANOKE, VIRGINIA 24022

PROPERTY ADDRESS: BLUE HILLS DRIVE
ROANOKE, VIRGINIA 24012

TAX #7230105 18.437 ACRES ZONED LM

PROPOSED USE: MANUFACTURING FACILITY

SQUARE FOOTAGE: MANUFACTURING 80,000 SF
OFFICE 5,100 SF

PARKING REQUIRED BASED ON 1/300 SF OFFICE SPACE: 17

NUMBER OF EMPLOYEES: 85 MAXIMUM ON PEAK SHIFT

TOTAL PARKING REQUIRED: 17+85 = 102 SPACES

PARKING PROVIDED: 121 SPACES (INCLUDING 5 HC)

LOT COVERAGE:

TOTAL LOT AREA = 18.437 AC

TOTAL DEVELOPED AREA

INCLUDING FUTURE EXPANSION = 6.97 AC

LOT COVERAGE = 6.97 AC/18.437 AC = 38%

LANDSCAPING REQUIREMENTS:

LENGTH OF STREET FRONTAGE = 231'±

231'/50' = 4.6 STREET TREES REQUIRED, 6 STREET TREES PROVIDED

SCREENING: LENGTH OF AREA TO BE SCREENED (ALONG REAR PROPERTY LINE) = 1025.47'

1025.47'/50' = 20.5 SCREEN TREES REQUIRED 23 SCREEN TREES PROVIDED

PARKING LOT LANDSCAPING:

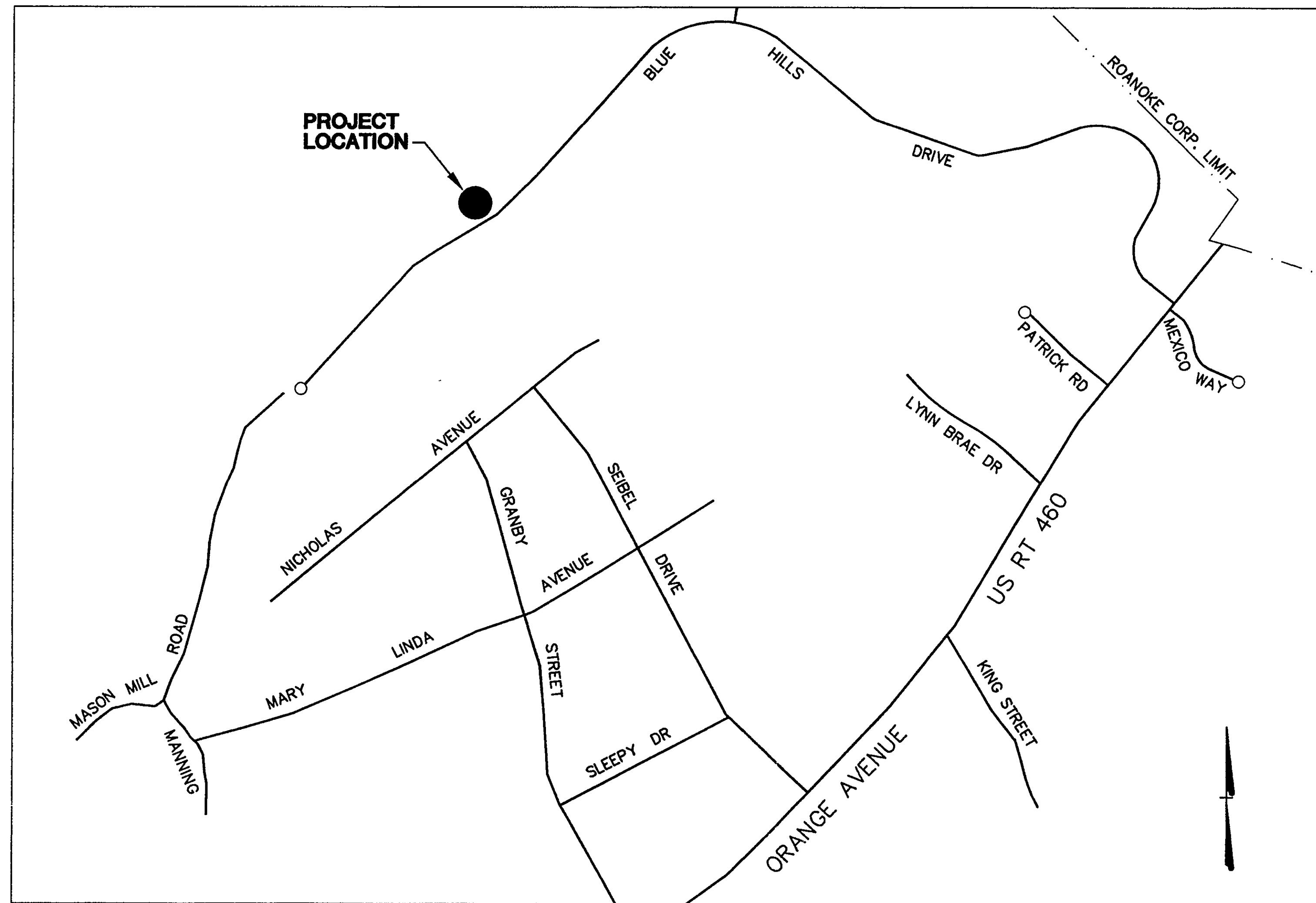
TOTAL AREA OF PARKING AREA = 1.40 AC

TOTAL LANDSCAPED AREA OF PARKING AREA = 0.26 AC

PERCENTAGE OF PARKING LOT LANDSCAPED AREA = .26/1.40 = 18.7%

ALL ISLANDS HAVE GREENSPIRE LINDEN FOR CANOPY COVER

CAPTION PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA
SO DESIGNATED BY THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT.
THIS DETERMINATION IS BASED ON FEMA FLOOD INSURANCE RATE MAPS AND
HAS NOT BEEN VERIFIED BY ACTUAL FIELD ELEVATIONS.



VICINITY MAP
NO SCALE

CITY CONSTRUCTION NOTES

NOTICE:

ALL LANDOWNERS, DEVELOPERS AND CONTRACTORS:

FAILURE TO COMPLY WITH THE CONSTRUCTION PROCEDURE REQUIREMENTS LISTED BELOW MAY RESULT
IN THE COSTLY REMOVAL OF STRUCTURES, TIME DELAYS OR THE ISSUANCE OF A STOP WORK ORDER.

CONSTRUCTION PROCEDURE REQUIREMENTS

- CITY INSPECTIONS** - TO INSURE THE COORDINATION OF TIMELY AND PROPER INSPECTIONS, A PRE-CONSTRUCTION CONFERENCE SHALL BE INITIATED BY THE CONTRACTOR WITH CITY DEVELOPMENT INSPECTOR. CALL (540)853-1227 TO ARRANGE A CONFERENCE AT LEAST THREE (3) DAYS PRIOR TO ANTICIPATED CONSTRUCTION.
- STREET OPENING PERMIT** - PRIOR TO THE COMMENCEMENT OF ANY DIGGING, ALTERATION OR CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY (STREETS, ALLEYS, PUBLIC EASEMENTS), A STREET OPENING PERMIT SHALL BE APPLIED FOR AND OBTAINED BY THE CONTRACTOR FROM THE CITY OF ROANOKE.
- PLANS AND PERMITS** - A COPY OF THE PLANS APPROVED BY THE CITY (SIGNED BY THE PROPER CITY OFFICIALS) AND ALL PERMITS ISSUED BY THE CITY SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES OF ONGOING CONSTRUCTION.
- LOCATION OF UTILITIES** - THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
- CONSTRUCTION ENTRANCE** - THE CONTRACTOR SHALL INSTALL AN ADEQUATE CONSTRUCTION ENTRANCE FOR ALL CONSTRUCTION RELATED EGRESS FROM THE SITE. CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SHOWN ON PLANS.
- STREETS TO REMAIN CLEAN** - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT THE PUBLIC STREET ADJACENT TO THE CONSTRUCTION ENTRANCE REMAINS FREE OF MUD, DIRT, DUST AND/OR ANY TYPE OF CONSTRUCTION MATERIALS OR LITTER AT ALL TIMES.
- BARRICADES/DITCHES** - THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL EXCAVATED DITCHES AND SHALL FURNISH AND ENSURE THAT ALL BARRICADES PROPER AND NECESSARY FOR THE SAFETY OF PUBLIC ARE IN PLACE.
- SEWER AND PAVEMENT REPLACEMENT** - CONSTRUCTION OF SANITARY SEWERS AND THE REPLACEMENT OF PAVEMENT SHALL BE IN ACCORDANCE WITH APPROVED STANDARDS AND SPECIFICATION OF THE CITY OF ROANOKE.
- APPROVED PLANS/CONSTRUCTION CHANGES** - ANY CHANGE OR VARIATION FROM CONSTRUCTION DESIGN AS SHOWN ON THE OFFICIALLY APPROVED PLANS SHALL BE APPROVED BY THE DEVELOPMENT ENGINEER PRIOR TO SAID CHANGES OR VARIATION IN CONSTRUCTION BEING MADE.
- FINAL ACCEPTANCE/CITY** - THE DEVELOPER OR CONTRACTOR SHALL FURNISH THE CITY OF ROANOKE'S ENGINEERING DEPARTMENT WITH A FINAL CORRECT SET OF AS-BUILT PLANS TO FINAL ACCEPTANCE BY THE CITY.
- STREET OPENING PERMIT** - A STREET OPENING PERMIT SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY WORK DONE WITH THE RIGHT-OF-WAY.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
- ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PREPARED, AS FAR AS PRACTICAL.
- IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN INSTALLED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
- FOR THE EROSION CONTROL KEY SYMBOLS SHOWN THE PLANS, REFER TO THE VIRGINIAN UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIAN EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THESE SYMBOLS AND KEYS ARE TO BE UTILIZED ON ALL EROSION CONTROL PLANS SUBMITTED TO ROANOKE CITY.

EROSION AND SEDIMENT CONTROL COST ESTIMATE				
DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	SY	140	\$5	\$700
CONSTRUCTION ROAD STABILIZATION	SY	12518	\$5	\$62,590
CULVERT	EA	1	\$100	\$100
INLET PROTECTION	EA	10	\$100	\$1000
OUTLET PROTECTION	SY	90	\$50	\$4,500
MATTING	SF	6000	\$69/1000	\$414
RIP-RAP	TN	310	\$5	\$1,550
ROCK CHECK DAMS	EA	5	\$500	\$2,500
SEEDING	AC	8	\$1200	\$9,600
SILT FENCE	LF	3091	\$4	\$12,364
TEMPORARY DIVERSION DIKE	LF	731	\$5	\$3,655
TEMPORARY SEDIMENT BASIN	LS	1	\$10,000	\$10,000
SUBTOTAL				\$108,973
CONTINGENCY (10%)				\$10,897
TOTAL				\$119,870

GENERAL NOTES

- PROVIDE NEW MATERIALS AND WORKMANSHIP IN CONFORMANCE WITH ALL APPLICABLE CODES, STATE AND FEDERAL LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND OTHER CRITERIA WHICH WOULD NORMALLY APPLY TO WORK OF THIS NATURE. NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERING A CONFLICT IN CODES, ORDINANCES, STANDARDS, OR OTHER CRITERIA. APPLICABLE CODES AND STANDARDS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING:
(A) BOCA - BASIC CODED
(B) CITY OF ROANOKE
(C) VDOT - VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS
(D) VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND HANDBOOK, LATEST EDITION
(E) OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
(F) ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS
- MAINTAIN A SET OF APPROVED PLANS ON SITE AT ALL TIMES DURING CONSTRUCTION.
- OBTAIN EACH REQUIRED PERMIT PRIOR TO COMMENCING THAT PART OF THE WORK. PAY REQUIRED FEES.
- NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF CONDITIONS WHICH DIFFER FROM THOSE SHOWN ON THE PLANS.
- COMPLY WITH LOCAL ORDINANCES FOR BURNING OF WASTE. TRANSPORT WASTE MATERIALS AND UNSUITABLE MATERIALS FROM OWNER'S PROPERTY.
- VERIFY THE LOCATION AND ELEVATION OF EACH EXISTING UNDERGROUND UTILITY IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF WORK. CONTACT ENGINEER IMMEDIATELY IF THERE APPEARS TO BE A CONFLICT. UPON DISCOVERY OF A UTILITY WHICH IS NOT SHOWN, AND UPON DISCOVERY OF A LOCATION OR ELEVATION AT WHICH DIFFERS FROM THAT SHOWN, TO LOCATE UTILITIES, CALL "MISS UTILITY", 1-800-552-7001. UTILITY LOCATIONS SHOWN ARE THE RESULT OF A COMBINATION OF FIELD LOCATION EXISTING INFORMATION. LOCATIONS ARE APPROXIMATE.
- REPAIR ALL DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, CAUSE AS A RESULT OF CONSTRUCTION ACTIVITIES AT NOT ADDITIONAL COST TO OWNER.
- NOTIFY OWNERS OF UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF EXCAVATION.
- EXISTING TOPOGRAPHIC MAPPING WAS PROVIDED BY THE CITY OF ROANOKE, AUGMENTED BY GABRIEL ROBERTSON, P.L.S. IN FEBRUARY 2004

GRADING NOTES:

- REMOVE TREES, SHRUBS, GRASS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS AS REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVE TREES AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS, COMPLETELY IN AREAS REQUIRED FOR SUBSEQUENT SEEDING. CUT OFF TREES AND STUMPS IN AREAS TO RECEIVE FILL MORE THAN THREE FEET IN DEPTH TO WITHIN EIGHT INCHES OF THE ORIGINAL GROUND SURFACE.
- BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.
- CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.
- EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING AND UB-1 FOR SANITARY SEWER AND WATER. BACKFILL TRENCHES WITH CONTROLLED FILL.
- PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. CONVEY WATER REMOVED FROM EXCAVATIONS AND RAIN WATER TO COLLECTING OR RUNOFF AREAS. ESTABLISH AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DITCHES.
- PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHED AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THAN 35 DEGREES FAHRENHEIT (1° C).
- UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING INCLUDING ADJACENT TRANSITION AREAS. SMOOTH FINISH SURFACES WITHIN SPECIFIED TOLERANCES, COMPACT TO UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. GRADE AREAS ADJACENT TO BUILDING LINES TO DRAIN AWAY FROM STRUCTURES AND TO PREVENT PONDING.
- FINISH LAWN AREAS TO WITHIN ONE INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS. SHAPE SURFACE UNDER WALKS AND PAVEMENTS TO LINE, GRADE AND CROSS SECTION, WITH NOT MORE THAN 2" ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS.
- PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, EROSION, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.
- PLACE ALL FILL AND BACKFILL AS CONTROLLED FILL AS FOLLOWS:
(A) ESTABLISH SUITABLE SUBGRADE CONDITIONS PRIOR TO PLACING FILL BY PROOF ROLLING, UNDERCUTTING AND COMPACTING AS NECESSARY.
(B) PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" FOR HAND TAMPERS.
(C) PRIOR TO COMPACTION, PROVIDE MOISTURE CONTENT TO WITHIN 3% OF OPTIMUM BY MOISTENING OR AERATION EACH LAYER. DO NOT PLACE FILL MATERIAL ON SURFACES WHICH ARE MUDDY, FROZEN OR CONTAIN FROST OR ICE.
(D) COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGE OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 (STANDARD PROCTOR):
(1) 98% FOR COMPACTED STRUCTURAL FILL WITHIN THE UPPER 12 INCHES OF SLABS, PAVEMENT, WALKS, AND FOUNDATIONS
(11) 98% FOR COMPACTED STRUCTURAL FILL FOR GENERAL EARTHWORK
- OWNER SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.

RECEIVED

MAY 25 2004

CITY OF ROANOKE
PLANNING BUILDING AND DEVELOPMENT

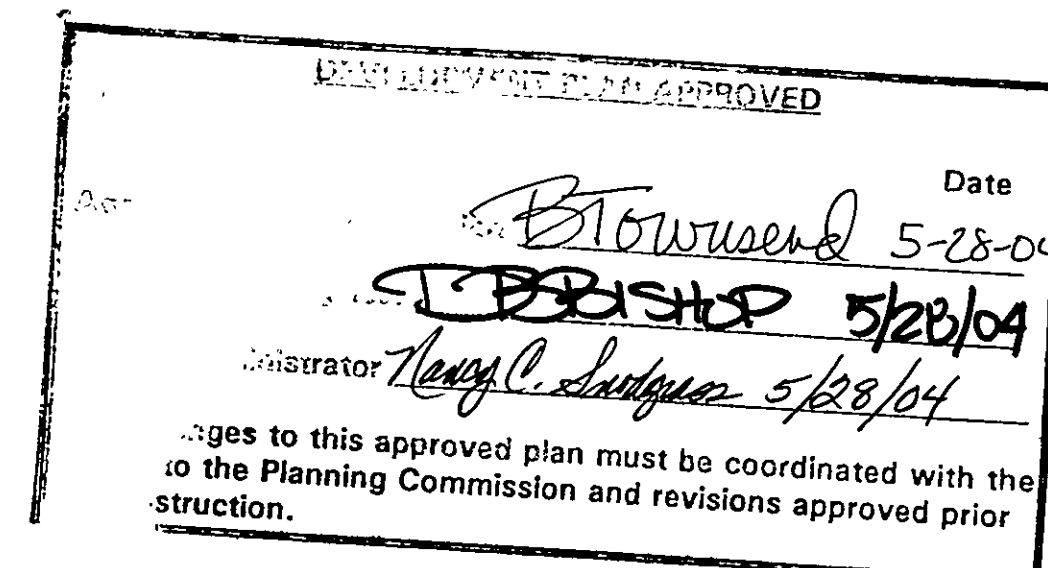
SHEET LIST

- C-1 TITLE SHEET
C-2 EXISTING SITE CONDITIONS
C-3 UTILITIES AND DIMENSIONAL LAYOUT
C-4 SITE GRADING AND STORM DRAIN
C-5 SOIL EROSION AND SEDIMENT CONTROL
C-6 SOIL EROSION AND SEDIMENT CONTROL DETAILS
C-7 ROADWAY PROFILES
C-8 WATER AND SEWER PROFILES
C-9 WATER AND SEWER DETAILS
C-10 STORM DRAINAGE PROFILES

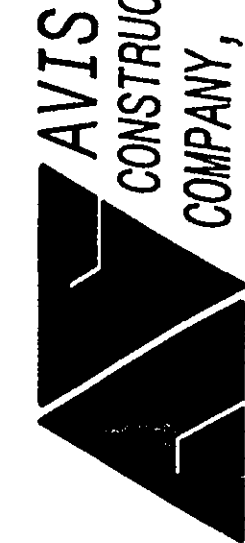
- A-1 FLOOR PLAN
A-2 ELEVATIONS
A-3 OFFICE AND RESTROOM PLAN AND ELEVATIONS
A-4 DOOR AND FINISH SCHEDULES

- F-1 FOUNDATION PLAN
F-2 GENERAL FOUNDATION NOTES AND TYPICAL DETAILS
F-3 SECTIONS AND DETAILS

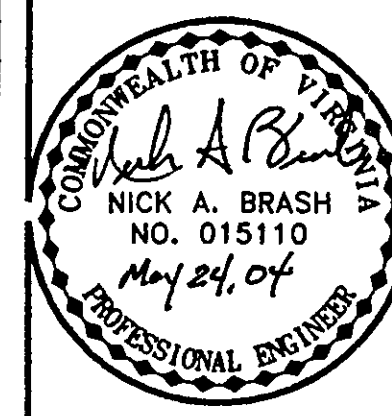
- L-1 LANDSCAPING PLAN



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SEMCO INC.
NEW MANUFACTURING FACILITY
ROANOKE, VIRGINIA



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508 MARKET STREET, SE
ROANOKE, VIRGINIA 24011
PHONE (540)342-8423
FAX (540)342-8425

L.A. Gates
Company

SHEET TITLE
TITLE SHEET

DESIGNED NAB
DRAWN RLW
PROJECT NUMBER 04.001
DATE MAY 24, 2004
CADD-FILL 04001-C1.DWG
SHEET

C-1