PIN: 0840-03-31-9202

MAJOR SITE PLAN

CLEAN GREEN HEADQUARTERS

126 STONE PARK COURT DURHAM, NORTH CAROLINA

DEVELOPER / OWNER

TIM WILKINSON
CLEAN GREEN
303 CHERYL AVENUE
DURHAM, NC 27712
P: (919) 471-9547
F: (919) 598-1166
e-mail: cleangreen@nc.rr.com

ENGINEER/LAND PLANNER

HORVATH ASSOCIATES, PA
16 CONSULTANT PLACE, SUITE 201
DURHAM, N.C. 27707
P: (919) 490-4990
F: (919) 490-8953
e-mail: michael.leigh@horvathassociates.com

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THE FOLLOWING GENERAL CONDITIONS APPLY TO THE SITE:

1. SITE PLAN REMAINS VALID AFTER 4 YEARS ONLY FOR THOSE PORTIONS OF THE SITE THAT HAS ACTIVE PERMITS OR HAS ALREADY RECEIVED CERTIFICATES OF COMPLIANCE.
2. UNDISTURBED LANDSCAPE BUFFERS: 25 & 50 FOOT WIDE UNDISTURBED LANDSCAPE BUFFER. NO CLEARING OR GRADING OTHER THAN SELECTIVE THINNING AND ORDINARY MAINTENANCE OF EXISTING VEGETATION PERMITTED.
3. PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL OR EQUIPMENT AND NOT TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA.
4. THE SITE WILL BE MASS GRADED.
5. ALL SIZES, MATERIALS, SLOPES, LOCATIONS, EXTENSIONS AND DEPTHS FOR ALL PROPOSED UTILITIES (WATERLINES, SANITARY SEWER AND STORM DRAINAGE CONVEYANCE SYSTEMS) SHALL BE DESIGNED TO THE SPECIFICATIONS SET FORTH IN THE DESIGN CRITERIA AND STANDARDS OF THE PUBLIC WORKS DEPARTMENT AND BE SUBJECT TO REVIEW AND APPROVAL BY THE PUBLIC WORKS DEPARTMENT AT CONSTRUCTION DRAWING SUBMITTAL.
6. BACK FLOW PERMIT ARE REQUIRED ON THIS PROJECT. BACKFLOW PREVENTER INSTALLER MUST OBTAIN A BACKFLOW PREVENTER PERMIT (ONLINE) PRIOR TO BEGINNING PREVENTER INSTALLATION. CONTACT THE CROSS-CONNECTION CONTROL OFFICE AT 560-4194 TO OBTAIN ADDITIONAL INFORMATION AND REQUIREMENTS.
7. THE LOCATION OF THE SIDEWALKS SHOWN ON THIS PLAN IS SCHEMATIC. A CITY OF DURHAM AND/OR NCDOT ENCROACHMENT PERMIT IS REQUIRED PRIOR TO ANY CONSTRUCTION. AFTER OBTAINING THE REQUIRED PERMITS, PLEASE CONTACT THE CITY OF DURHAM ENGINEERING CONSTRUCTION INSPECTION OFFICE @ 560-4326 FOR A PRE-CONSTRUCTION CONFERENCE AND FIELD VISIT PRIOR TO ANY WORK ON THE PROPOSED SIDEWALK.
8. a. STATE DRIVEWAY: A NCDOT DRIVEWAY PERMIT IS REQUIRED PRIOR TO ANY DRIVEWAY CONSTRUCTION. CONTACT NCDOT @ 560-6854
   b. CITY DRIVEWAY: A CITY OF DURHAM DRIVEWAY PERMIT IS REQUIRED PRIOR TO ANY DRIVEWAY CONSTRUCTION. SUBMIT PLANS FOR DRIVEWAY PERMIT APPROVAL TO CITY ENGINEERING DEVELOPMENT REVIEW. AFTER OBTAINING THE PERMIT, PLEASE CALL CITY CONSTRUCTION INSPECTOR PRIOR TO START OF CONSTRUCTION @ 560-4326
9. THE FOLLOWING ITEMS ARE NOT REQUIRED FOR SITE PLAN APPROVAL BUT ARE ITEMS THAT ARE REQUIRED BEFORE CONSTRUCTION OF WATER, SEWER, STORM DRAINAGE AND STREETS CAN BEGIN. DEVELOPER IS ULTIMATELY RESPONSIBLE TO MAKE CERTAIN THAT THESE ITEMS ARE COMPLETE AND APPROVED.
   A. CONSTRUCTION DRAWINGS REQUIRED. THE DESIGN ENGINEER (A.N.C.P.E) WILL SUBMIT 3 SETS OF CONSTRUCTION DRAWINGS (PLAN AND PROFILE IF REQUIRED) TO CITY ENGINEERING FOR REVIEW AND APPROVAL BEFORE STARTING CONSTRUCTION. THIS SUBMITTAL MUST BE DONE PRIOR TO APPLYING FOR A BUILDING PERMIT. THE APPROVAL OF CONSTRUCTION DRAWINGS IS SEPARATE FROM SITE PLAN APPROVAL.
   B. FIRE FLOW ANALYSIS REQUIRED. FIRE FLOW ANALYSIS REQUIRED. WATERLINE SIZES MAY CHANGE BASED ON ACCEPTABLE FIRE FLOW ANALYSIS. CONTACT CITY ENGINEERING @ 560-4326 TO SCHEDULE FLOW TEST OR TO OBTAIN CURRENT SYSTEM DATA.
   C. WATER PERMIT REQUIRED. SEWER PERMIT REQUIRED. CONTACT CITY ENGINEERING
10. EXTENSION AGREEMENT REQUIRED. IF SITE IS OUTSIDE CITY LIMITS, EXTENSION AGREEMENT MUST BE FULLY EXECUTED BY CITY COUNCIL PRIOR TO ACTION ON ANNEXATION. SUBMIT APPLICATION WITH ONE COPY OF OVERALL UTILITY PLAN. CONTACT ENGINEERING DIVISION AT 560-4326.
11. IF A METER 2" OR LARGER IS PROPOSED, PLEASE CONTACT WATER MANAGEMENT AT 560-4381 PRIOR TO THE CONSTRUCTION OF THE METER VAULT TO VERIFY THE TYPE AND DIMENSIONS OF THE METER.
12. AS-BUILT DRAWINGS SHALL BE APPROVED PRIOR TO WATER METER AND SANITARY SEWER SERVICE CONNECTION INSTALLATIONS AND PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
13. A LAND DISTURBANCE PERMIT WILL BE REQUIRED PRIOR TO COMMENCEMENT OF ANY LAND DISTURBING ACTIVITIES.
14. A SEDIMENTATION AND EROSION CONTROL PLAN MUST BE SUBMITTED AND APPROVED PRIOR TO ISSUANCE OF A LAND DISTURBING PERMIT. IN AN OFF-SITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND DISTURBANCE PERMIT.
15. 1,000 SF USED FOR STORAGE OF WOOD PALLETS THAT ARE USED TO HOLD CRUSHED OIL FILTERS FOR TRANSPORT TO STEEL FOUNDRY.
16. 4,000 SF STORAGE AREA TO HOLD IN SEALED CONTAINERS THE FOLLOWING MATERIALS AND QUANTITIES.
    A. MOTOR OIL 5,000 GAL.
    B. VEGETABLE OIL 2,000 GAL.
    C. ANTIFREEZE/GLYCOL 3,000 GAL.
    D. BIO DIESEL 500 GAL.

    THESE MATERIALS ARE STORED IN A SELF CONTAINED HOLDING TANK, CAPABLE OF STORING 24,800 GALLONS AT ONE TIME.
17. OUTDOOR GRAVEL PARKING IS USED FOR THE NIGHTLY STORAGE OF DELIVERY TRUCKS. THE STORAGE OF MATERIALS ON THE TRUCKS OVERNIGHT IS PROHIBITED.
18. A COMPLETED STORMWATER FACILITY MAINTENANCE AND OPERATIONAL PERMIT AGREEMENT WITH APPROPRIATE FEES, CALCULATIONS AND DETAILS MUST BE SUBMITTED AT TIME OF CONSTRUCTION PLAN REVIEW. PLANS WILL NOT BE REVIEWED WITHOUT THESE ITEMS. CONTACT STORMWATER SERVICES @ 560-4326 FOR INFORMATION.
19. PERMIT REQUIRED PRIOR TO CONSTRUCTION OF STORM DRAINAGE FACILITIES. PERMIT TO BE OBTAINED FROM CITY OF DURHAM ENGINEERING WITH A COPY OF THE APPROVED PLANS. APPLY FOR PERMIT WITHIN 30 DAYS OF STARTING WORK, PRIOR TO ANY CONSTRUCTION. CONTACT ENGINEERING CONSTRUCTION INSPECTION OFFICE @ 560-4326 A MINIMUM OF 48 HOURS AHEAD OF TIME TO COORDINATE INSPECTION PRIOR TO ACTUAL CONSTRUCTION.
20. ALL DEVELOPMENT WITHIN THE FLOODWAY AND FLOODWAY FRINGE, INCLUDING FILL, NEW CONSTRUCTION, SUBSTANTIAL IMPROVEMENTS, MANUFACTURED HOUSING, STORAGE OF MATERIALS AND STORAGE OF TOXIC OR FLAMMABLE SUBSTANCES, IS PROHIBITED EXCEPT AS PROVIDED BY APPLICABLE FLOOD HAZARD REGULATIONS.
    FEMA MAP NUMBER: 3720064000J
    FEMA MAP DATE: MAY 2, 2006.
21. AN EXECUTED STORMWATER FACILITY OPERATION AND MAINTENANCE PERMIT AGREEMENT (PREPARED BY STORMWATER SERVICES, CITY OF DURHAM), PAYMENT OF A STORMWATER FACILITY PERMIT FEE ($2,000 PER DETENTION/WATER QUALITY DEVICE) AND PERPETUAL SURETY FOR THE CONTINUED OPERATION AND MAINTENANCE OF THE FACILITY IS REQUIRED PRIOR TO CONSTRUCTION PLAN APPROVAL.
22. A COMPLETED CITY OF DURHAM DESIGN SUMMARY IS REQUIRED (FOR EACH DETENTION/WATER QUALITY DEVICE) NO LATER THAN AT THE FIRST CONSTRUCTION DRAWING SUBMITTAL.
23. STORMWATER BMP DESIGNS AND CALCULATIONS WILL NOT BE REVIEWED/APPROVED WITH THE SITE PLAN. ALL DESIGNS TO BE REVIEWED AND APPROVED AT THE CONSTRUCTION DRAWING STAGE.
24. FINAL APPROVAL OF SITE PLAN IS CONTINGENT ON RECEIPT FROM NCEEP DEMONSTRATING THAT THE REQUIRED NITROGEN OFFSET FEES HAVE BEEN PAID IN ACCORDANCE WITH THE APPROVED STORMWATER IMPACT ANALYSIS. △5
25. A SPILL PREVENTION AND COUNTERMEASURES PLAN SHALL BE PROVIDED PRIOR TO CONSTRUCTION PLAN APPROVAL THAT INCLUDES, AT A MINIMUM:
    1. CLEANUP PROCEDURES FOR SPILLS OCCURRING INSIDE AND OUTSIDE THE BUILDING.
    2. COUNTERMEASURES FOR USE IN PREVENTING SPILLS FROM ENTERING THE STORMWATER COLLECTION SYSTEM.
    3. ROUTINE CLEANUP PROCEDURES FOR WORK AREAS AND PARKING AREAS. WASHDOWN WATER SHALL NOT BE PERMITTED TO ENTER THE STORMWATER COLLECTION SYSTEM.

THE FOLLOWING MUST BE DONE PRIOR TO ISSUANCE OF A GRADING PERMIT:

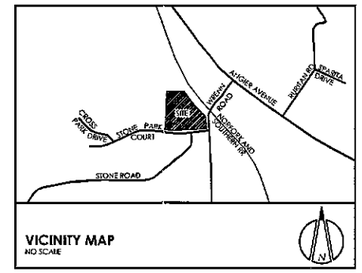
16. TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE OR ISSUANCE OF A GRADING PERMIT AND SHALL INCLUDE WARNING SIGNS POSTED IN BOTH ENGLISH AND SPANISH, AS FOLLOWS: "NO TRESPASSING/TREE PROTECTION AREA/PROHIBIDO ENTRAR/ZONA PROTECTORA LOS ARBOLES".
17. ROOT ZONE PROTECTION AREA EQUALS ONE FOOT OF RADIUS FOR EVERY INCH OF DIAMETER OF EXISTING TREES, OR SIX FOOT RADIUS, WHICHEVER IS GREATER. NO DISTURBANCE ALLOWED WITHIN THIS AREA. AREA MUST BE PROTECTED WITH BOTH TREE PROTECTION FENCING AND WARNING SIGNS.

THE FOLLOWING MUST BE DONE PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE:

18. ALL LANDSCAPING MUST BE IN PLACE PRIOR TO REQUEST FOR A CERTIFICATE OF COMPLIANCE.
19. EACH LANDSCAPING COMPLIANCE INSPECTION AFTER THE INITIAL INSPECTION WILL INCUR A RE-INSPECTION FEE, STARTING AT $100+4% TECHNOLOGY SURCHARGE. EACH SUBSEQUENT RE-INSPECTION WILL INCREASE BY $100+4% (EXAMPLE 1ST - $104, 2ND - $208, 3RD - $312, ETC.) PAYMENT MUST BE RECEIVED BY THE DURHAM CITY COUNTY PLANNING DEPARTMENT PRIOR TO RE-INSPECTION.

THE FOLLOWING MUST BE DONE PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY:

20. AN AS-BUILT CERTIFICATION, PROVIDED BY THE ENGINEER, IS REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
21. UDO SITE LIGHTING NOTE (UDO SEC. 7.4): MEASURES SHALL BE PROVIDED TO PREVENT LIGHT SPILLOVER ONTO ADJACENT PROPERTIES AND GLARE TOWARD MOTOR VEHICLE OPERATORS AND SHALL BE INDICATED ON THE SITE PLAN. EXTERIOR LIGHTS SHALL BE SHIELDED SO THAT THEY DO NOT CAST DIRECT LIGHT BEYOND THE PROPERTY LINE. IN ACCORDANCE WITH THESE STANDARDS:
    A. THE MAXIMUM ILLUMINATION AT THE EDGE OF PROPERTY LINE ADJACENT TO RESIDENTIAL ZONING IS 0.5 FOOT CANDLES.
    B. THE MAXIMUM ILLUMINATION AT THE EDGE OF PROPERTY LINE ADJACENT TO NON-RESIDENTIAL ZONING IS 5.0 FOOT CANDLES.
    C. THE MAXIMUM ILLUMINATION AT THE EDGE OF PROPERTY LINE ADJACENT TO A STREET IS 5.0 FOOT CANDLES.
    D. THE LEVEL OF ILLUMINATION AS MEASURED IN FOOT CANDLES AT ANY ONE POINT SHALL MEET THE STANDARDS IN THE TABLE IN UDO SECTION 7.4.3 WITH MINIMUM AND MAXIMUM LEVELS MEASURED ON THE PAVEMENT WITHIN THE LIGHTED AREA.
    E. THE MAXIMUM HEIGHT FOR NON-DIRECTIONAL LIGHTING FIXTURES (FIXTURES DESIGNED TO INSURE THAT NO LIGHT IS TO BE EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND) SHALL BE 30 FEET ABOVE GRADE.
    F. THE MAXIMUM HEIGHT FOR NON-DIRECTIONAL LIGHTING FIXTURES, WHICH ARE DEFINED AS FIXTURES DESIGNED TO ALLOW LIGHT TO BE EMITTED ABOVE A HORIZONTAL LINE PARALLEL TO THE GROUND, SHALL BE 15 FEET ABOVE GRADE. THIS MUST BE VERIFIED BY FIELD SURVEY (BY USE OF PHOTOMETRIC SURVEY) PRIOR TO THE CERTIFICATE OF COMPLIANCE BEING ISSUED. ALL OF THIS INFORMATION, INCLUDING DETAILS, WILL BE REQUIRED ON BUILDING PLANS PRIOR TO ISSUANCE OF BUILDING PERMIT.



VICINITY MAP
NO SCALE

DEVELOPMENT SUMMARY:

SITE SUMMARY	
GROSS LAND AREA:	203,680.80 SF (4.676 AC)
EXISTING ZONING:	I
PROPOSED USE:	WASTE RELATED
WATERSHED:	
RIVER BASIN:	NEUSE AND CAPE FEAR
CITY LIMIT:	INSIDE
URBAN GROWTH AREA:	INSIDE
FIRM:	3,DURHAM
AREA TO BE DISTURBED	161,914 SF
LOT SUMMARY	
MAXIMUM BUILDING HEIGHT	90'
MINIMUM LOT SIZE:	150 SF
STREETYARD SETBACK:	40'
SIDE SETBACK:	50'
REAR SETBACK:	40'
BUILDING SUMMARY	
EXISTING BUILDING AREA:	0
PROPOSED BUILDING AREA:	12,000 SF
PARKING SUMMARY	
REQUIRED PARKING WASTE RELATED :	1/500 SF (INSIDE FLOOR AREA) 1/5000 SF (OUTSIDE STORAGE)
TOTAL REQUIRED PARKING:	12,000 SF (INSIDE FLOOR AREA) = 24.5 SPACES 5,000 SF (OUTSIDE STORAGE) = 1 SPACES
TOTAL PARKING REQUIRED	25.5 SPACES
TOTAL PARKING PROVIDED:	28 SPACES
BIKE PARKING:	REQUIRED 2.5 SPACES
BIKE PARKING PROVIDED:	4 SPACES
IMPERVIOUS SUMMARY	
TOTAL AREA:	203,680.80 SF (4.676 AC)
MAXIMUM ALLOWABLE IMPERVIOUS AREA:	142,576.56 SF (3.273 AC = 70.00%)
EXISTING IMPERVIOUS AREA:	0 SF (0 AC = 0%)
TOTAL PROPOSED IMPERVIOUS AREA:	99,162 SF (2.27 AC = 48.70%)
STREETS / PARKING LOTS:	81,263 SF (1.86 AC = 39.91%)
SIDEWALK / BUILDING:	17,899 SF (0.410 AC = 8.79%)
TREE COVERAGE / OPEN SPACE SUMMARY	
REQUIRED TREE COVERAGE / OPEN SPACE:	20,368.08 SF (10.00%)
PROPOSED TREE COVERAGE / OPEN SPACE:	20,474 SF (10.05%)

SUMMARY OF PROJECT:

1. COLLECTION OF WASTE MOTOR OIL, USED OIL FILTERS, KITCHEN GREASE AND GLYCOL.
2. MANUFACTURING OF COLLECTED WASTE MATERIALS INTO REUSABLE BY-PRODUCTS SOLD TO SPECIFIC MARKETS.
3. ANCILLARY USE OF OFFICE SPACE, WAREHOUSE STORAGE AND INDUSTRIAL MANUFACTURING.

APPROVAL STAMP

CASE #D1000128

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HORVATH ASSOCIATES
16 CONSULTANT PLACE, SUITE 201
DURHAM, NORTH CAROLINA 27707
P 919.490.4990 F 919.490.8953
537 MARKET STREET, SUITE L120
CHATTANOOGA, TENNESSEE 37402
P 423.266.4990 F 423.266.5700
www.horvathassociates.com

CLEAN GREEN HEADQUARTERS
126 STONE PARK COURT
DURHAM, NORTH CAROLINA

COVER SHEET

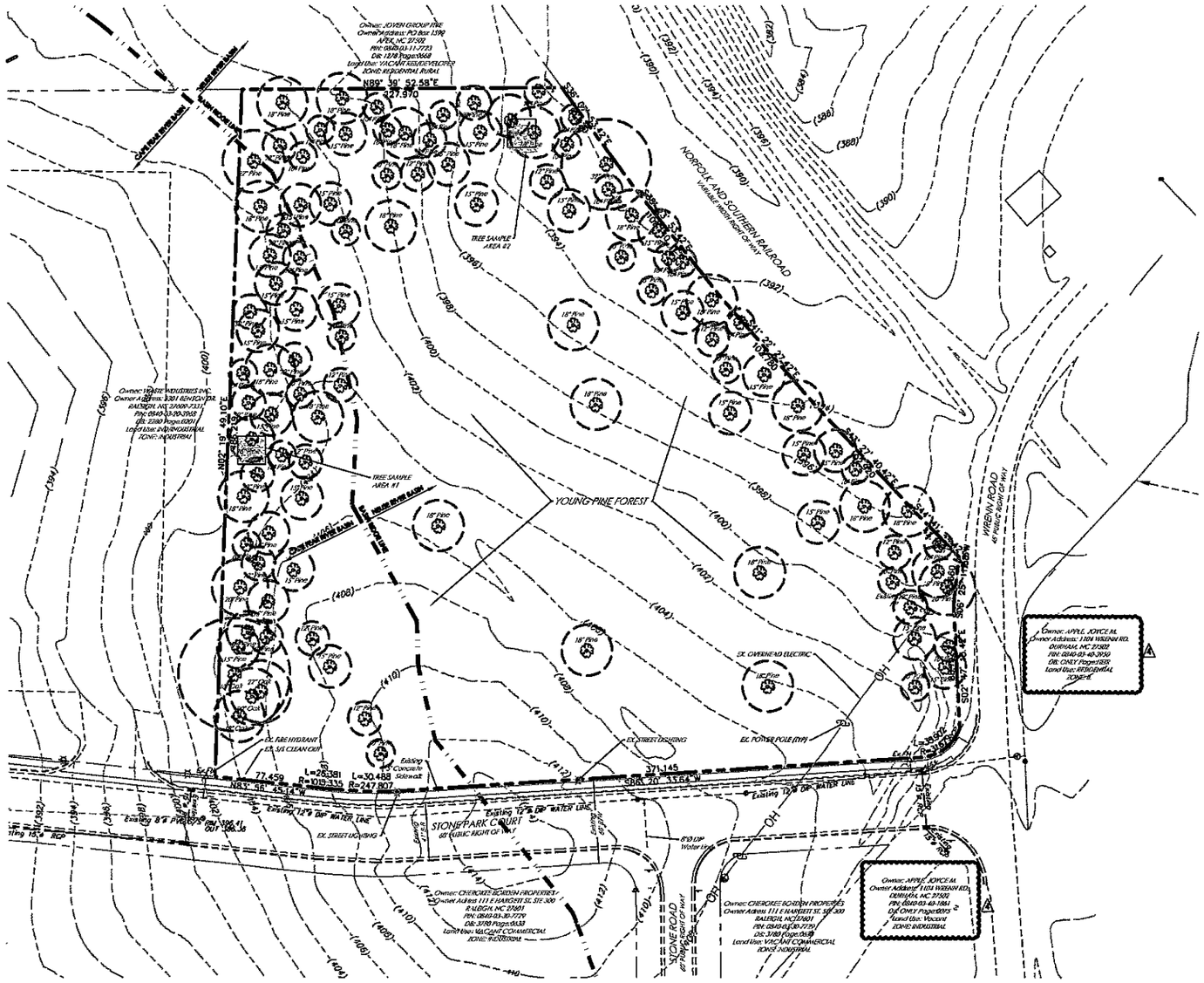
ATTACHMENT 2

NORTH CAROLINA PRELIMINARY NOT FOR CONSTRUCTION

1	1st REVIEW PER CITY COMMENTS 9/07/10	JC
2	2nd REVIEW PER CITY COMMENTS 10/14/10	KRM
4	4th REVIEW PER CITY COMMENTS 12/14/10	JC
△5	5th REVIEW PER CITY COMMENTS 12/17/10	MLJ

DRAWN BY: LRS
CHECKED BY: RLH
DATE: 10 JUNE 2010
SCALE: NOT TO SCALE
PROJECT NO. 0960
SHEET NO. C000
SITE PLAN

PIN: 0840-03-31-9202



1 C001 EXISTING CONDITIONS PLAN
SCALE: 1" = 40'

DEVELOPMENT SUMMARY:

SITE SUMMARY

GROSS LAND AREA:	203,680.80 SF (4.676 AC)
EXISTING ZONING:	
PROPOSED USE:	1 CAR WASH
WATERSHED:	
RIVER BASIN:	NEUSE AND CAPE FEAR
CITY LIMIT:	INSIDE
URBAN GROWTH AREA:	INSIDE
TIER:	DURHAM
AREA TO BE DISTURBED	1 101,765 SF

LOT SUMMARY

MAXIMUM BUILDING HEIGHT:	90'
MINIMUM LOT SIZE:	150 SF
STREETYARD SETBACK:	40'
SIDE SETBACK:	50'
REAR SETBACK:	40'

BUILDING SUMMARY

EXISTING BUILDING AREA:	0
PROPOSED BUILDING AREA:	12,000 SF

PARKING SUMMARY

REQUIRED PARKING WASTE RELATED :	1/500 SF (INSIDE FLOOR AREA) 1/5000 SF (OUTSIDE STORAGE)
TOTAL REQUIRED PARKING:	12,000 SF (INSIDE FLOOR AREA) = 24 SPACES 5,000 SF (OUTSIDE STORAGE) = 1 SPACES
TOTAL PARKING REQUIRED	25 SPACES
TOTAL PARKING PROVIDED:	28 SPACES
BIKE PARKING:	REQUIRED 2 SPACES
PROVIDED:	4 SPACES

IMPERVIOUS SUMMARY

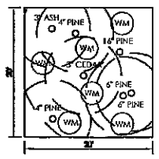
TOTAL AREA:	203,680.80 SF (4.676 AC)
MAXIMUM ALLOWABLE IMPERVIOUS AREA:	142,576.56 SF (3.273 AC = 70.00%)
EXISTING IMPERVIOUS AREA:	0 SF (0.0 AC = 0.0%)
2 TOTAL PROPOSED IMPERVIOUS AREA:	93,182 SF (2.20 AC = 45.70%)
STREETS / PARKING LOTS:	81,263 SF (1.86 AC = 39.91%)
SIDEWALK / BUILDING:	17,899 SF (0.410 AC = 8.79%)

TREE COVERAGE / OPEN SPACE SUMMARY

REQUIRED TREE COVERAGE / OPEN SPACE:	20,368.08 SF (10.00%)
PROPOSED TREE COVERAGE / OPEN SPACE:	20,474 SF (10.05%)

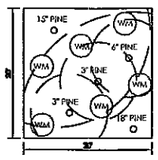
NOTE: DISTANCE "X" FROM TREE SHALL BE A MINIMUM OF 6' OR 1' RADIUS PER 1" OF TREE DIAMETER, WHICHEVER IS GREATER.

2 C001 ROOT ZONE PROTECTION
SCALE: N.T.S.



2-8: 1-3" PINE
1-3: 3-5" OAK
UNDERSTORY:
3'-5' WAX MYRTLES

3 C001 TREE SAMPLE AREA #1
SCALE: N.T.S.



2-8: 1-5" MAPLES
3-8: 1-3" SWEET GUM
UNDERSTORY:
3'-5' WAX MYRTLES

4 C001 TREE SAMPLE AREA #2
SCALE: N.T.S.

EXISTING CONDITIONS NOTES:

1. BOUNDARY SURVEY FROM CITY OF DURHAM GIS.
2. TOPOGRAPHIC INFORMATION FROM CITY OF DURHAM GIS.
3. NO STEEP SLOPES FOUND ON THE SITE.
4. NO DURHAM HISTORIC INVENTORY SITES OR DURHAM NATURAL INVENTORY AREAS LOCATED ON OR WITHIN 100' OF THIS PROPERTY.
5. TREE SAMPLING AREA AND SPECIMEN TREE SURVEYS ARE NOT REQUIRED WITHIN FLOOD PLAIN, STREAM BUFFERS, OR ALONG STEEP SLOPES AS PER THE UDO.
6. NO 100 YR FLOOD PLAIN ARE LOCATED WITHIN THIS SITE AS PER FEMA MAP # 3720084000J. DATED MAY 2, 2006.
7. SEE PLAN FOR EXISTING TREE LOCATIONS.
8. EXISTING SANITARY SEWER MAIN AND 12"Ø WATER MAIN ARE LOCATED IN STONE PARK COURT.

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HORVATH ASSOCIATES
16 CONSULTANT PLACE, SUITE 201
DURHAM, NORTH CAROLINA 27707
P 919.490.4990 F 919.490.5953
537 MARKET STREET, SUITE L120
CHATTANOOGA, TENNESSEE 37402
P 423.266.4990 F 423.266.5700
www.horvathassociates.com

CLEAN GREEN HEADQUARTERS

126 STONE PARK COURT
DURHAM, NORTH CAROLINA

EXISTING CONDITIONS SHEET

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT
PRELIMINARY NOT FOR CONSTRUCTION
MICHAEL FEGER

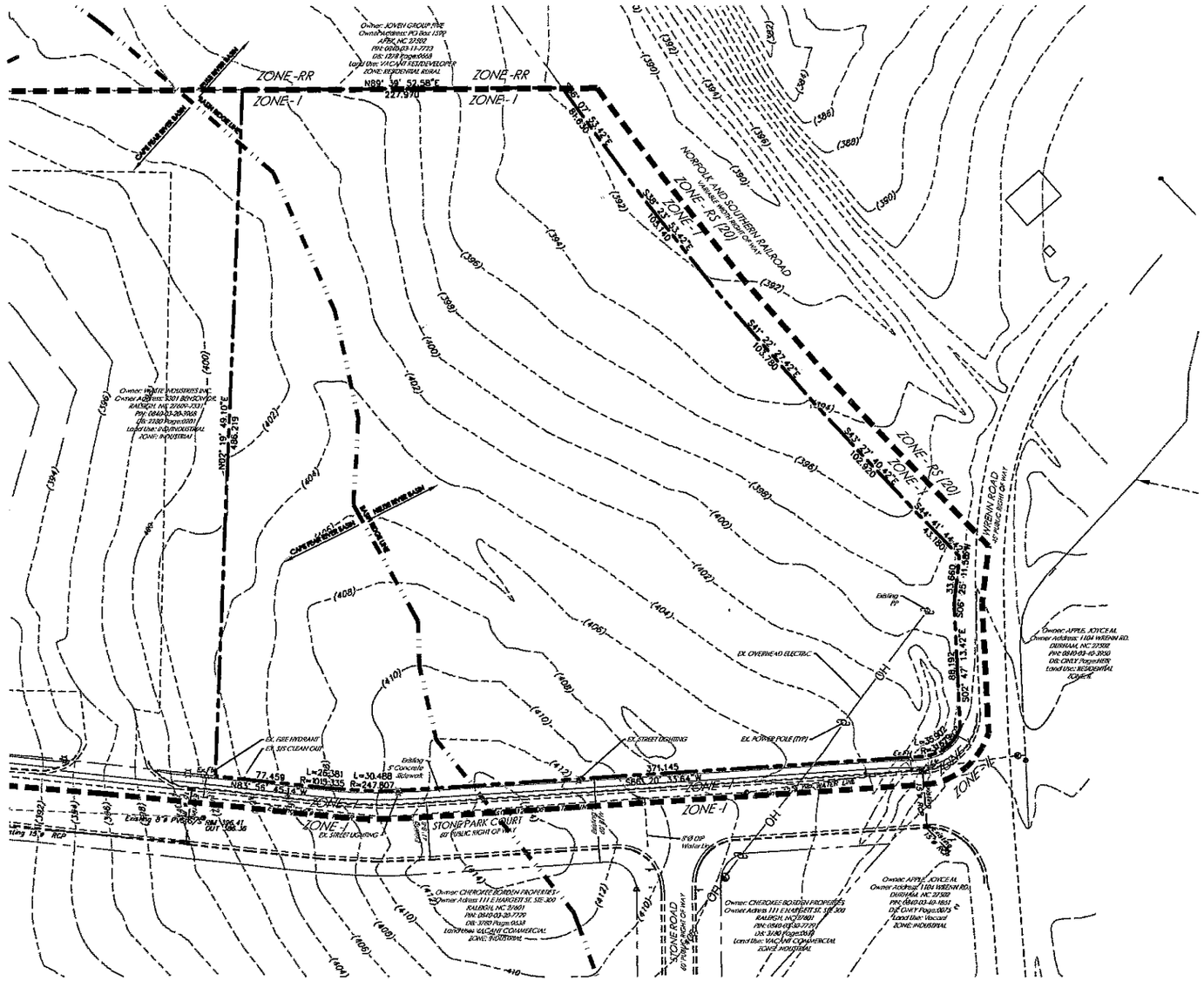
TREE SURVEY ONLY

1	1st REVIEW PER CITY COMMENTS 9/07/10	JC
2	2nd REVIEW PER CITY COMMENTS 10/14/10	KRM
3	2nd REVIEW PER CITY COMMENTS 12/14/10	JC

DRAWN BY: TS	CHECKED BY: MWL
DATE	10 JUNE 2010
SCALE	1" = 40'
PROJECT NO.	0960
SHEET NO.	C001

SITE PLAN

PIN: 0840-03-31-9202



1 C002 EXISTING ZONING PLAN
SCALE: 1" = 40'

0 20 40 80
SCALE: 1" = 40'

HORVATH ASSOCIATES
16 CONSULTANT PLACE, SUITE 201
DURHAM, NORTH CAROLINA 27707
P 919.490.4990 F 919.490.8953
537 MARKET STREET, SUITE U-23
CHATTANOOGA, TENNESSEE 37402
P 423.344.4990 F 423.344.5700
www.horvathassociates.com

CLEAN GREEN HEADQUARTERS

126 STONE PARK COURT
DURHAM, NORTH CAROLINA

EXISTING ZONING PLAN

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT MICHAEL L. SIGLER
PRELIMINARY NOT FOR CONSTRUCTION

TREE SURVEY ONLY

4	4th REVIEW PER CITY COMMENTS 12/14/10	JC

DRAWN BY: TS
CHECKED BY: MWL
DATE: 10 JUNE 2010
SCALE: 1" = 40'
PROJECT NO. 0960
SHEET NO. C002

SITE PLAN

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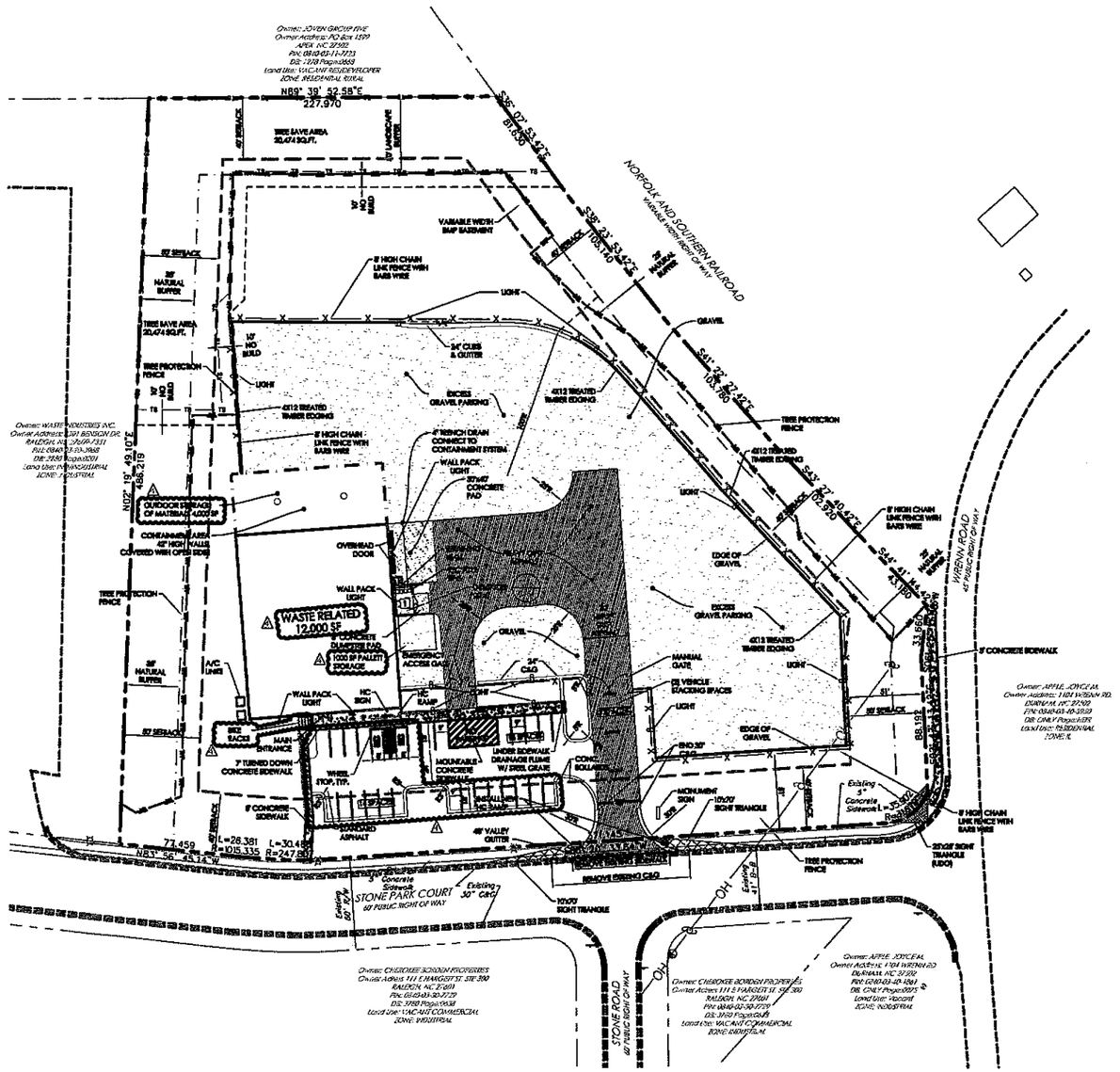

DEVELOPMENT SUMMARY:

SITE SUMMARY

GROSS LAND AREA:	203,680.80 SF (4.676 AC)
EXISTING ZONING:	
PROPOSED USE:	WASTE RELATED
WATERSHED:	
RIVER BASIN:	NEUSE AND CAPE FEAR
CITY LIMIT:	INSIDE
URBAN GROWTH AREA:	INSIDE
TIER:	[illegible]
AREA TO BE DISTURBED	101,010.35

LOT SUMMARY

MAXIMUM BUILDING HEIGHT:	90'
MINIMUM LOT SIZE:	150 SF
STREETYARD SETBACK:	40'
SIDE SETBACK:	50'
REAR SETBACK:	40'

BUILDING SUMMARY

EXISTING BUILDING AREA:	0
PROPOSED BUILDING AREA:	12,000 SF

PARKING SUMMARY

REQUIRED PARKING WASTE RELATED : 1/500 SF (INSIDE FLOOR AREA)
1/5000 SF (OUTSIDE STORAGE)

TOTAL REQUIRED PARKING:	12,000 SF (INSIDE FLOOR AREA)	= 24 SPACES
	5,000 SF (OUTSIDE STORAGE)	= 1 SPACES
TOTAL PARKING REQUIRED		25 SPACES
TOTAL PARKING PROVIDED:		28 SPACES
BIKE PARKING:		REQUIRED 2 SPACES
BIKE PARKING PROVIDED:		4 SPACES

IMPERVIOUS SUMMARY

TOTAL AREA:	203,680.80 SF (4.676 AC)
MAXIMUM ALLOWABLE IMPERVIOUS AREA:	142,576.56 SF (3.273 AC = 70.00%)
EXISTING IMPERVIOUS AREA:	13,910 SF (0.32 AC = 6.83%)
TOTAL PROPOSED IMPERVIOUS AREA:	101,102 SF (2.32 AC = 49.63%)
STREET / PARKING LOTS:	81,263 SF (1.86 AC = 39.91%)
SIDEWALK / BUILDING:	17,899 SF (0.410 AC = 8.79%)

TREE COVERAGE / OPEN SPACE SUMMARY

REQUIRED TREE COVERAGE / OPEN SPACE:	20,368.08 SF [10.00%]
PROPOSED TREE COVERAGE / OPEN SPACE:	20,474 SF [10.05%]

GENERAL SITE NOTES

1. ALL ON SITE PERIMETER CURB & GUTTER SHALL BE 24" UNLESS OTHERWISE NOTED.
2. BUILDING AND ROADWAY STAKE OUT TO BE PERFORMED BY A REGISTERED LAND SURVEYOR. ALL DIMENSIONS FROM BLDG TO PL OR CL CONTROL AND PARKING LOT TO PL ARE TO BE FIELD VERIFIED. NOTIFY THE ENGINEER OF ANY DISCREPANCY.
3. ALL PARKING LOT DIMENSIONS ARE TO BACK OF CURB AND FACE OF SIDEWALK, UNLESS OTHERWISE NOTED ON THE PLANS.
4. CURB & GUTTER TO SLOPE (NEGATIVE OR POSITIVE) SAME AS PAVEMENT EDGE. PONDING OF WATER IS PROHIBITED.
5. ALL CURB & GUTTER RADII SHALL BE 3' (TO BC) UNLESS OTHERWISE NOTED.
6. ALL SIDEWALKS ARE 5' WIDE WITH EXPANSION JOINTS @ 45' OC UNLESS OTHERWISE NOTED ON THE DRAWINGS.
7. ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE IN STRICT ACCORDANCE WITH CITY OF DURHAM AND NCDOT STANDARDS AND SPECIFICATIONS.
8. GARBAGE VOLUME IS NOT EXPECTED TO EXCEED THE CAPACITY OF FOUR 96-GALLON CARTS PER WEEK. ALL RECYCLABLES WILL BE SEPARATED FROM GARBAGE AND PLACED IN COLLECTION BINS. A WASTE HANDLING FACILITY WILL BE CONSTRUCTED AT THE LOCATION DESIGNATED ON THE PLANS IN COMPLIANCE WITH ORDINANCE AND S.W.M. STANDARDS SHOULD GARBAGE EXCEED THE FOUR CART PER WEEK LIMIT.

OUTDOOR STORAGE MATERIALS

1. 1,000 SF USED FOR STORAGE OF WOOD PALLETS THAT ARE USED TO HOLD CRUSHED OIL FILTERS FOR TRANSPORT TO STEEL FOUNDRY.
2. 4,000 SF STORAGE AREA TO HOLD IN SEALED CONTAINERS THE FOLLOWING MATERIALS AND QUANTITIES.
   A. MOTOR OIL 5,000 GAL.
   B. VEGETABLE OIL 2,000 GAL.
   C. ANTIFREEZE/GLYCOL 3,000 GAL.
   D. BIO DIESEL 500 GAL.

   THESE MATERIALS ARE STORED IN A SELF CONTAINED HOLDING TANK, CAPABLE OF STORING 74,000 GALLONS AT ONE TIME.

N

0 20 40 80
SCALE: 1" = 40'

1 C100 SITE PLAN
SCALE: 1" = 40'

HORVATH ASSOCIATES

16 CONSULTANT PLACE, SUITE 201
DURHAM, NORTH CAROLINA 27707
P 919.490.4990 F 919.490.8953

537 MARKET STREET, SUITE 1130
CHATTANOOGA, TENNESSEE 37402
P 423.266.4990 F 423.266.5700

www.horvathassociates.com

CLEAN GREEN HEADQUARTERS

126 STONE PARK COURT
DURHAM, NORTH CAROLINA

SITE PLAN

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER RALPH L. HORVATH
PRELIMINARY NOT FOR CONSTRUCTION

1	1st REVIEW PER CITY COMMENTS 9/07/10	JC
2	2nd REVIEW PER CITY COMMENTS 10/14/10	KRM
3	4th REVIEW PER CITY COMMENTS 12/14/10	JC

DRAWN BY: LRS
CHECKED BY: RLH
DATE: 10 JUNE 2010
SCALE: 1" = 40'
PROJECT NO. 0960
SHEET NO. C100
SITE PLAN

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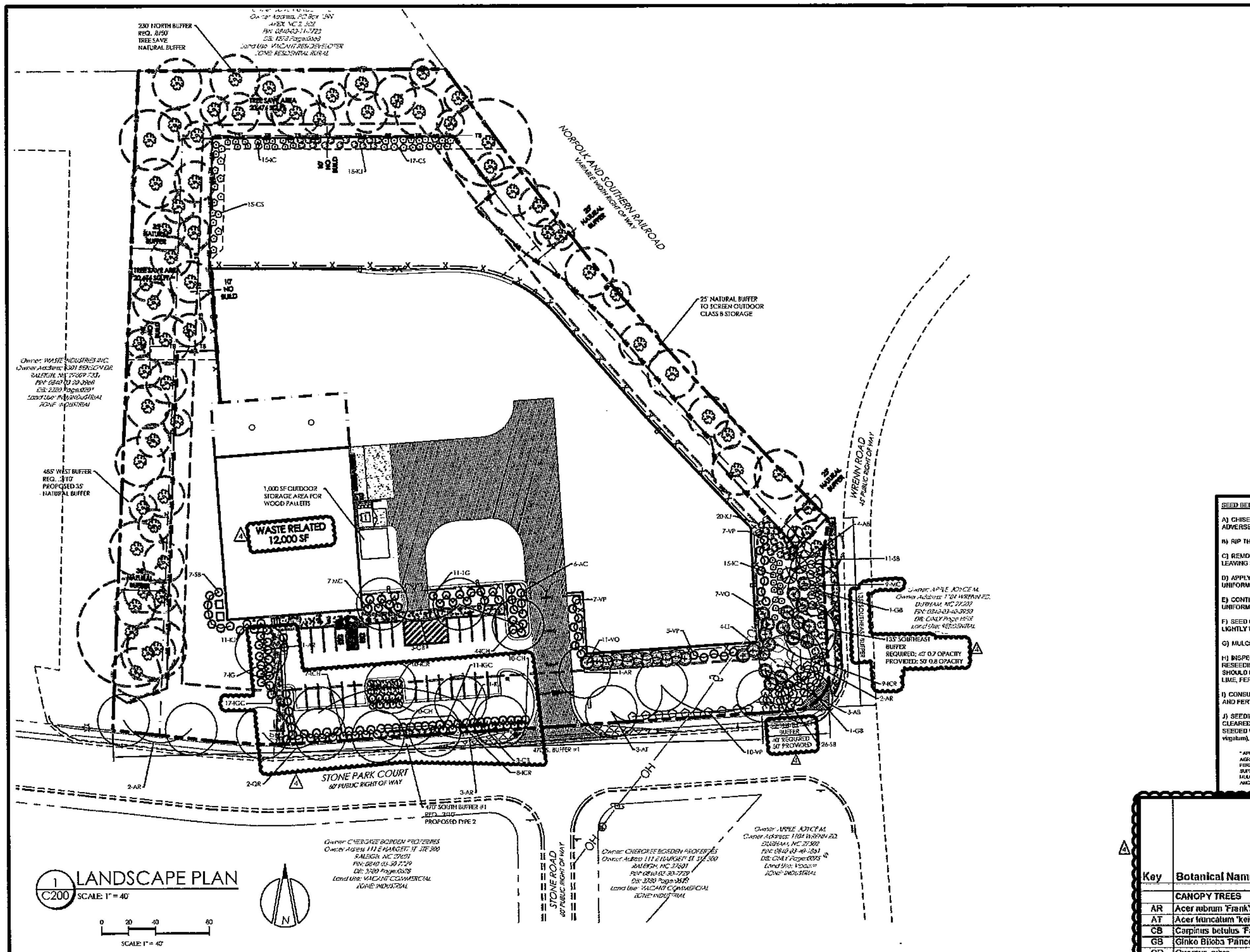
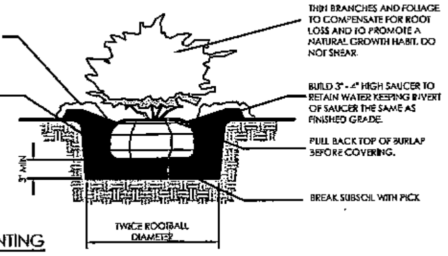
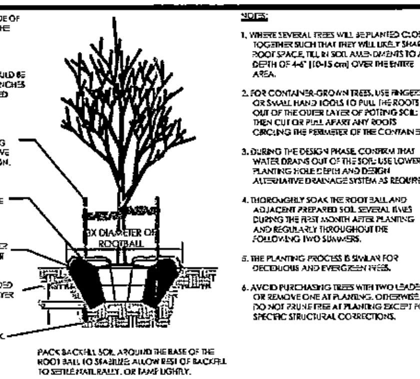
PIN: 0840-03-31-9202



1 / C200 LANDSCAPE PLAN
SCALE: 1" = 40'



2 / C200 SHRUB PLANTING
SCALE: N.T.S.



NOTES:

1. WHERE SEVERAL TREES WILL BE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4-6" (10-15 cm) OVER THE ENTIRE AREA.
2. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
3. DURING THE DESIGN PHASE, CONFIRM THAT WATER DRAINS OUT OF THE SOIL; USE LOWERED PLANTING HOLE DEPTH AND DESIGN ALTERNATIVE DRAINAGE SYSTEM AS REQUIRED.
4. THOROUGHLY SOAK THE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. THE PLANTING PROCESS IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.
6. AVOID PURCHASING TREES WITH TWO LEADERS OR REMOVE ONE AT PLANTING. OTHERWISE DO NOT PRUNE TREE AT PLANTING EXCEPT FOR SPECIFIC STRUCTURAL CORRECTIONS.

3 / C200 TREE PLANTING AND STAKING
SCALE: N.T.S.

SEED BED PREPARATION

A) CHISEL COMPACTED AREA AND SPREAD TOPSOIL 3" DEEP OVER ADVERSE SOIL CONDITIONS.

B) RIP THE ENTIRE AREA TO A 4' DEPTH.

C) REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.

D) APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE "BELOW)

E) CONTINUE TILLAGE UNTIL A WELL PULVERIZED, FIRM, REASONABLY UNIFORM SEED BED IS PREPARED 5" TO 6" DEEP.

F) SEED ON A FRESHLY PREPARED SEED BED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.

G) MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.

H) INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDING WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.

I) CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

J) SEEDING RE-VEGETATION FOR ALL EASEMENTS AND MASS GRADING: CLEARED/DISTURBED EASEMENTS NEAR STREAM BUFFERS TO BE SEEDED WITH NATIVE GRASS SPECIES- "SWITCHGRASS" (Panicum virgatum), @ A RATE OF 50#/ACRE.

* APPLY:
AGRICULTURAL LIMESTONE: 2T/AC (3 TON IN CLAY)
FERTILIZER: 10-10-10 AT 800-1000#/AC
SUPERPHOSPHATE: 500#/AC OF 20% ANALYSIS SUPERPHOSPHATE
MULCH: 2 TON (80 BALES) SMALL GRAIN STRAW/ACRE
ANCHOR: LIQUID ASPHALT 400 GAL/AC EMULSIFIED ASPHALT 300 GAL/AC

SEEDING SCHEDULE

FOR SHOULDERS, SIDE DITCHES & SLOPES (MAX 2:1)

DATE	TYPE	PLANTING RATE
AUG 15-NOV1	CREEPING RED FESCUE	300 #/AC
NOV 1-MAR 1	CREEPING RED FESCUE	300 #/AC
	AND ABRUZZI RYE	25 #/AC
MAR 1-APR 15	CREEPING RED FESCUE	300 #/AC
APR 15-JUN 30	HULLED COMMON BERMUDA GRASS	25 #/AC
JUL 15-AUG 15	TALL FESCUE	120 #/AC
	AND BROWNTOP MILLET	35 #/AC
	OR SORGHUM-SUDAN HYBRIDS	30 #/AC

FOR SLOPES (3:1 TO 2:1)

DATE	TYPE	PLANTING RATE
MAR 1-JUNE (APR 15-MAY 30) (MAR 1-JUNE 30)	CREEPING RED FESCUE OR ADD LITTLE BLUESTEM OR ADD HULLED COMMON BERMUDA GRASS	50#/AC 10/12#/AC 25 #/AC
JUN 1-SEPT 1	***CREEPING RED FESCUE AND	120 #/AC
	***BROWNTOP MILLET	35 #/AC
	***OR SORGHUM-SUDAN HYBRIDS	30 #/AC
SEPT 1-MAR 1 (NOV 1-MAR 1)	CREEPING RED FESCUE ADD ABRUZZI RYE	120 #/AC 25 #/AC

CONSULT CONSERVATION ENGINEER OR SCS FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS. OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

***TEMPORARY-SEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

STREET TREE CALCULATIONS

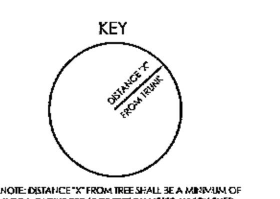
STONE PARK COURT:	520 LF
LESS WIDTH OF MAIN PART OF DRIVEWAYS:	45 LF
WRENN ROAD:	140 LF
LINEAR FEET OF REQUIRED STREET TREE PLANTING:	615 LF
NUMBER OF 3" STREET TREES REQUIRED:	13 TREES

TREE COVERAGE CALCULATIONS

GROSS LAND AREA:	203,680.50 SF (4.675 AC)
REQUIRED TREE SAVE AREA:	20,368.05 SF (10 %)
PROPOSED TREE SAVE AREA:	20,474 SF (10.05 %)

LANDSCAPE NOTES:

1. SHRUBS MUST BE PLANTED NO CLOSER THAN 6 FEET TO ANY PROPOSED TREE OR WITHIN THE DRIPLINE OF ANY EXISTING TREE.
2. NO LARGE TREE WILL BE CREDITED OR PERMITTED IN A PLANTING ISLAND SMALLER THAN 200 S.F.
3. TREES AND SHRUBS SHOULD BE SPACED AT LEAST 3 FEET FROM THE BACK OF CURBS IN ORDER TO AVOID CONFLICTS WITH CAR OVERHANGS.
4. ALL PLANT MATERIALS MUST MEET OR EXCEED THE MINIMUM SIZES SHOWN AT THE TIME OF INSTALLATION.
5. ALL PARKING SPACES TO BE WITHIN 50' OF A SINGLE TREE.
6. CONTRACTOR SHALL MULCH ALL PLANT BEDS AND TREE WELLS WITH A 3" MINIMUM OF TRIPLE SHREDDED PINE BARK.
7. CONTRACTOR SHALL TILL & ADD SOIL AMENDMENTS WHEN PREPARING ALL PLANT BEDS. ALL ROCKS, TREE LIMB DEBRIS AND OTHER IMPEDIMENTS SHALL BE REMOVED.
8. CONTRACTOR SHALL PROVIDED AN 1 YEAR WARRANTY ON ALL PLANT MATERIAL AND INSTALLATION FROM DATE OF ACCEPTANCE.



NOTE: DISTANCE "X" FROM TREE SHALL BE A MINIMUM OF 6' OR 1' RADIUS PER 1" OF TREE DIAMETER, WHICH EVER IS GREATER.

4 / C200 ROOT ZONE PROTECTION-TREE SAVE AREA
SCALE: N.T.S.

BUFFER TABLE

Buffer	South One		Southeast		West		North	
Type	Alt 2 - 20%		Alt 4 - 70%		Alt 3 - 20%		Alt 3 - 80%	
Length	470		135		465		230	
	REQ	PROV	REQ	PROV	REQ	PROV	REQ	PROV
Canopy Tree	10	10	0	1	0		0	
Evergreen Tree	0	0	0	0	10		18	
Decid Understory	10	10	16	18	15		39	
Evergreen Understory	0	0	12	14	0		0	
Shrub	57	58	76	81	63		170	
			Required 40' 0.7 Opacity					
			Provided 50' 0.8 Opacity		Natural Buffers Provided			

Key	Botanical Name	Common Name	Min. Ht. or Size	VUA Parking Lot and Buffer	Street - Buffer Plantings	TOTALS	Type of Plant
	CANOPY TREES						
AR	Acer rubrum 'Frank's Red'	Red Sunset Maple	2.5 inches	2	7	9	Deciduous
AT	Acer truncatum 'keithsform'	Norwegian Sunset Maple	2.5 inches		3	3	Deciduous
CB	Carpinus betulus 'Fastigiata'	European Hornbeam	2.5 inches	3		3	Deciduous
GB	Ginko Biloba 'Princeton'	Princeton Sentry Ginko	2.5 inches	3	2	5	Deciduous
QR	Quercus rubra	Red Oak	2.5 inches		2	2	Deciduous
	Total Canopy Trees			8	14		Street Trees 3" Cal
	UNDERSTORY TREES						
AB	Acer buergeranum	Trident Maple	6 feet		7	7	Deciduous
LI	Lagerstroemia indica X	Crape Myrtle 'varieties'	6 feet		4	4	Deciduous
MC	Myrica cerifera	Southern Wax Myrtle	6 feet	6	9	15	Evergreen
VO	Viburnum odoratissmum 'Red Tip'	Red Tip viburnum	3 feet		11	11	Evergreen
VP	Viburnum plicatum 'Shasta'	Doublefile viburnum	3 feet		29	29	Deciduous
VR	Viburnum rhytidophyllum	Leatherleaf Viburnum	6 feet		7	7	Evergreen
	Total Understory Trees			6	67		
	SHRUBS						
AC	Abelia 'Edward Goucher'	Edward Goucher Abelia	2 feet	7		7	Semi-Evergreen Shrub
CH	Cotoneaster horizontalis	Rockspray cotoneaster	2 feet	20		20	Semi-Evergreen Shrub
CS	Camellia sasanqua	Sasanqua Camelia	2 feet		32	32	Evergreen-Shrub
IC	Ilex counuta 'Needlepoint'	Needlepoint Holly	2 feet		30	30	Evergreen- Shrub
ICH	Ilex crenata 'Hellen'	Dwarf Japanese Holly	2 feet	15		15	Evergreen-Shrub
ICR	Ilex cornuta 'Rotunda'	Rotunda Holly	2 feet	10	32	42	Evergreen-Shrub
IG	Ilex glabra	Inkberry Holly	2 feet	11		11	Evergreen-Shrub
IGC	Ilex glabra "Chamzin'	Nordic Inkberry Holly	2 feet	28		28	Evergreen-Shrub
KJ	Kenia japonica	Japanese Kerria	2 feet	22	35	57	Deciduous-Shrub
SB	Spirea x bumalda 'Anthony waterer'	Anthony Waterer spirea	2 feet		44	44	Deciduous-Shrub
	Total Shrubs			113	173		
	GRAND TOTAL			127	254		

HORVATH ASSOCIATES

16 CONSULTANT PLACE, SUITE 201
DURHAM, NORTH CAROLINA 27707
P 919.490.4990 F 919.490.8953

537 MARKET STREET, SUITE LL20
CHATTANOOGA, TENNESSEE 37402
P 423.266.4990 F 423.266.5700

www.horvathassociates.com

CLEAN GREEN HEADQUARTERS

126 STONE PARK COURT
DURHAM, NORTH CAROLINA

LANDSCAPE PLAN

PRELIMINARY NOT FOR CONSTRUCTION
NORTH CAROLINA No. MICHAEL LEIGH

1	1st REVIEW PER CITY COMMENTS 8/27/10	JC
2	2nd REVIEW PER CITY COMMENTS 10/14/10	KRM
3	3rd REVIEW PER CITY COMMENTS 11/23/10	JC
4	4th REVIEW PER CITY COMMENTS 12/14/10	JC

DRAWN BY: LRS CHECKED BY:

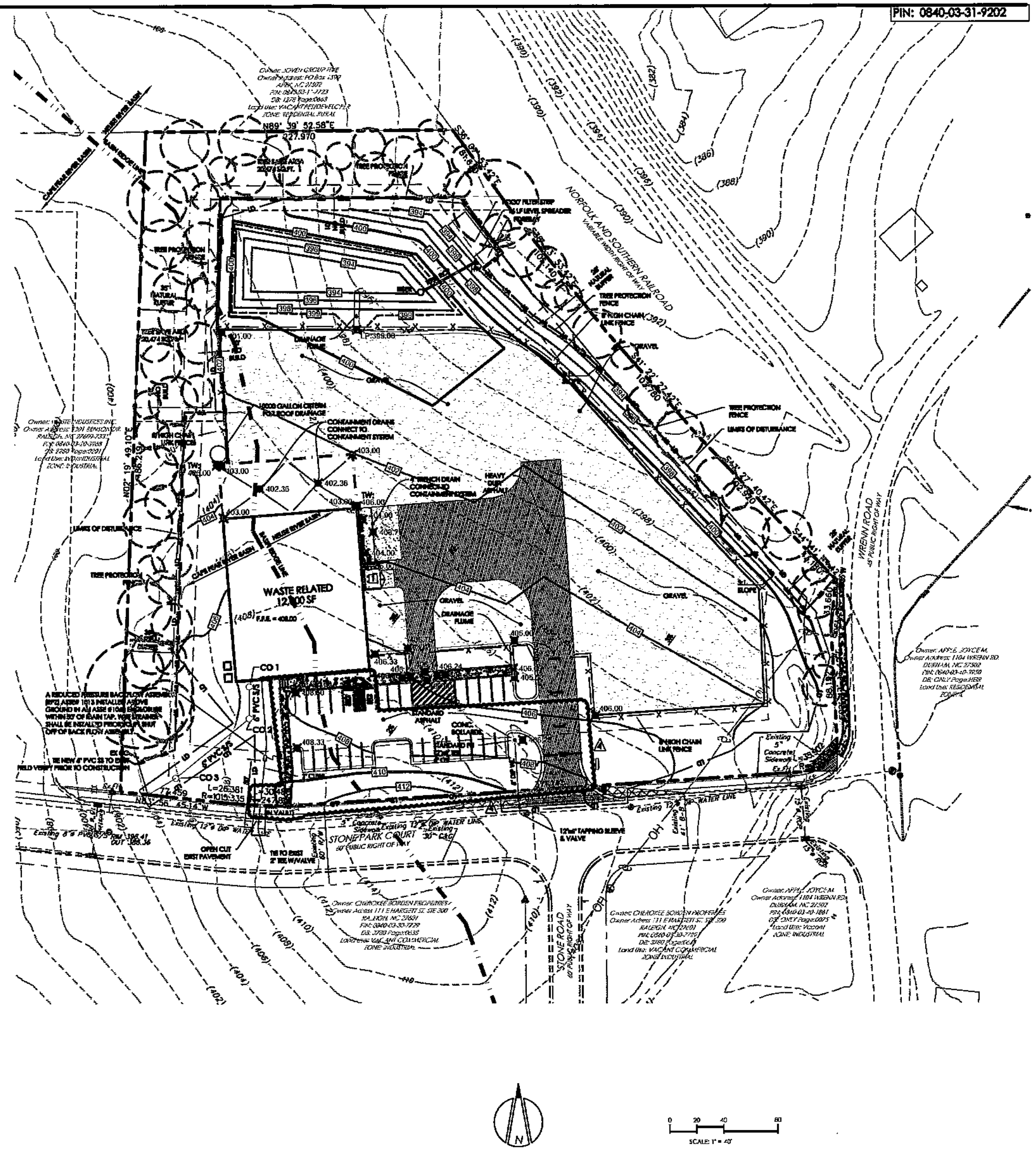
DATE 10 JUNE 2010

SCALE 1" = 40'

PROJECT NO. 0960

SHEET NO. C200

SITE PLAN



GENERAL NOTES

1. THE OUTDOOR STORAGE AREA IS PART OF THE SITE CONTAINMENT AREA AND SHALL HAVE THE FLOWING CHARACTERISTICS THAT WILL BE DETAILED DURING CONSTRUCTION DRAWING APPROVAL: THE CONTAINMENT AREA WILL BE CLOSED FROM ANY RAINWATER OR OUTSIDE STORMWATER ENTERING OR LEAVING THE AREA. IT SHALL BE GRADED TO DRAIN TO THE CENTER AND ALL DRAINS SHALL LEAD TO A CLOSED CONTAINMENT SYSTEM THAT IS NOT CONNECTED TO EITHER SANITARY OR THE STORMWATER SYSTEM.
2. THE 4,000 SF CONTAINMENT AREA IS COVERED BY A OPEN ROOF WITH PARTIAL SIDE WALLS THAT ALLOW THE AREA TO CONTAIN UP TO 74,800 GALLONS OF LIQUID MATERIAL. THE MAXIMUM AMOUNT OF MATERIAL STORED ON SITE IN THIS AREA IS 10,500 GALLONS. THE PARTIAL WALLS (HOLDING AREA) ARE SOLID MASONRY AND THE FLOOR IS POURED CONCRETE.

ROOF DRAINS AND GUTTER FLOW SHALL BE DIVERTED AWAY FROM THE CONTAINMENT SYSTEM. OUTSIDE PARKING AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE CONTAINMENT AREA.

1 / C400 GRADING / DRAINAGE AND UTILITY PLAN

SCALE: 1" = 40'

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HORVATH ASSOCIATES
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DURHAM, NORTH CAROLINA 27707
P 919.490.4990 F 919.490.8953
537 MARKET STREET, SUITE LL20
CHATTANOOGA, TENNESSEE 37402
P 423.266.4990 F 423.266.5700
www.horvathassociates.com

CLEAN GREEN HEADQUARTERS

126 STONE PARK COURT
DURHAM, NORTH CAROLINA

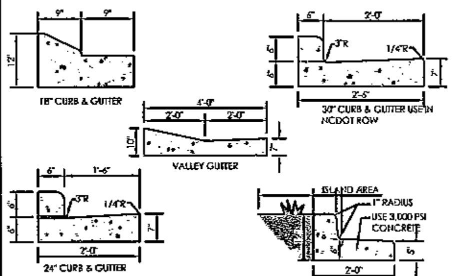
GRADING / DRAINAGE AND UTILITY PLAN

PRELIMINARY NOT FOR CONSTRUCTION

1	1st REVIEW PER CITY COMMENTS 9/07/10	JC
2	2nd REVIEW PER CITY COMMENTS 10/14/10	KRM
4	4th REVIEW PER CITY COMMENTS 12/14/10	JC

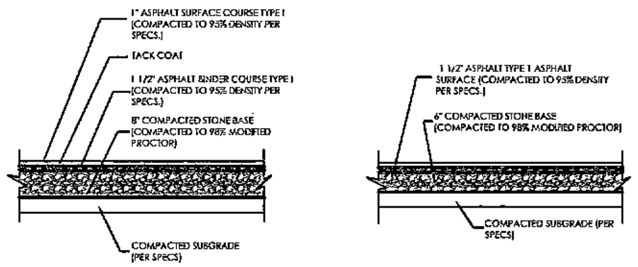
DRAWN BY: LRS CHECKED BY: RLH
DATE: 10 JUNE 2010
SCALE: 1" = 40'
PROJECT NO. 0960
SHEET NO. C400
SITE PLAN

PIN: 0840-03-31-9202



1 C800 CURB & GUTTER SECTIONS
SCALE: N.T.S.

NOTE - EXPANSION JOINT EVERY 40' CONSTRUCTION JOINT EVERY 10'

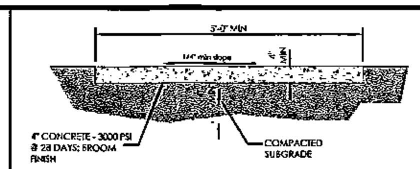


HEAVY DUTY ASPHALT PAVEMENT SECTION

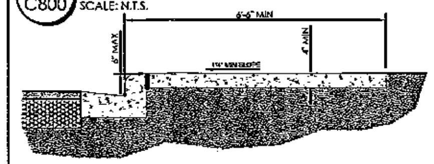
STANDARD DUTY ASPHALT PAVEMENT SECTION

NOTE:
MINIMUM PAVEMENT SECTIONS IF GREATER THAN GEOTECHNICAL ENGINEERS RECOMMENDATION

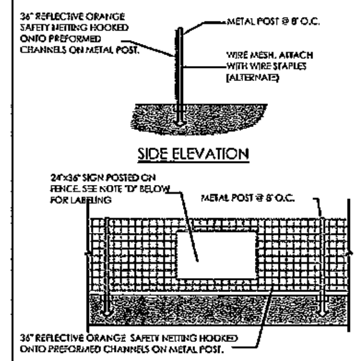
2 C800 STANDARD & HEAVY DUTY ASPHALT SECTIONS
SCALE: N.T.S.



3 C800 TYPICAL SIDEWALK
SCALE: N.T.S.



4 C800 SIDEWALK WITH CURB & GUTTER
SCALE: N.T.S.



5 C800 TREE PROTECTION FENCE
SCALE: N.T.S.

TREE PROTECTION NOTES:

A) INSTALL TREE PROTECTION FENCING AT THE SAME TIME AS THE EROSION CONTROL MEASURES. MAINTAIN FENCING UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETED.

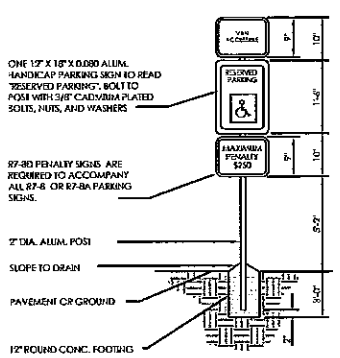
B) INSTALL TREE PROTECTION FENCING ALONG THE ENTIRE LENGTH OF THE PROPOSED CLEARING LIMITS AS DENOTED ON THE PLAN.

C) LOCATE TREE PROTECTION MEASURES SO THAT THEY MAINTAIN A 6 FOOT RADIUS AROUND EXISTING PLANTS OR PROVIDE A 1 FOOT RADIUS FOR EACH 1 INCH DIAMETER OF TREES (MEASURED AT A POINT 4-½ FEET ABOVE GROUND), WHICHEVER IS GREATER.

D) POST A SIGN ON THE FENCING STATING "TREE PROTECTION AREA/NO TRESPASSING" AND "ZONA PROTECTORA PARA LOS ARBOLES/PROHIBIDO ENTRAR". SPACE SIGNS EVERY 75-100 FEET.

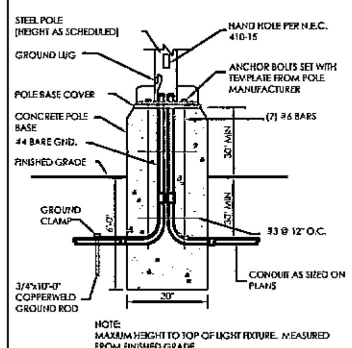
E) AT THE START OF GRADING INVOLVING THE LOWERING OF THE EXISTING GRADE AROUND A TREE OR THE STRIPPING OF TOPSOIL, MAKE A CLEAN, SHARP, VERTICAL CUT AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. INSTALL THE TREE PROTECTION FENCING ON THE SIDE FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE PROTECTED AREA.

F) TREE PROTECTION FENCING MUST BE INSTALLED PRIOR TO ISSUANCE OF ANY PERMITS.



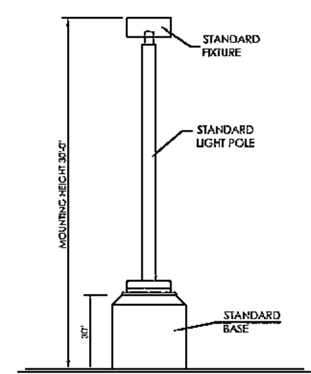
6 C800 HANDICAP SIGN
SCALE: N.T.S.

NOTE: POLE BASE SHOWN HERE FOR COORDINATION PURPOSES ONLY, BASE TO BE CONSTRUCTED PER STRUCTURAL DETAILS.

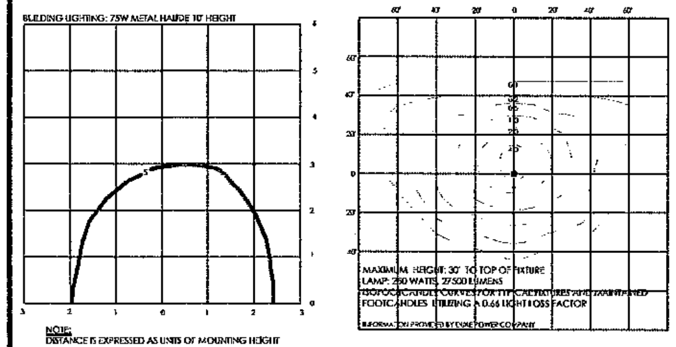


NOTE:
MAXIMUM HEIGHT TO TOP OF LIGHT FIXTURE. MEASURED FROM FINISHED GRADE

7 C800 LIGHT POLE BASE
SCALE: N.T.S.



8 C800 LIGHT POLE
SCALE: N.T.S.



NOTE:
DISTANCE IS EXPRESSED AS UNITS OF MOUNTING HEIGHT

WALL MOUNTED FIXTURE

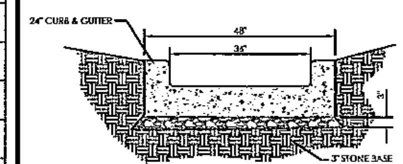
SINGLE 250 WATT HIGH PRESSURE SODIUM SHOEBOX
30' MOUNTING HEIGHT FIXTURE AIMED 5 DEGREES FROM NADIR
LIGHTING DESIGNED BY DUKE POWER COMPANY

INFORMATION PROVIDED BY DUKE POWER COMPANY

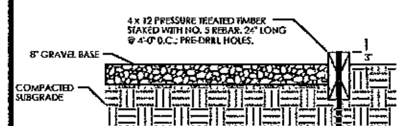
POLE MOUNTED FIXTURE

NOTE:
ALL LIGHTING FIXTURES SHALL BE FULL-CUTOFF TO PREVENT GLARE OVER PROPERTY LINES

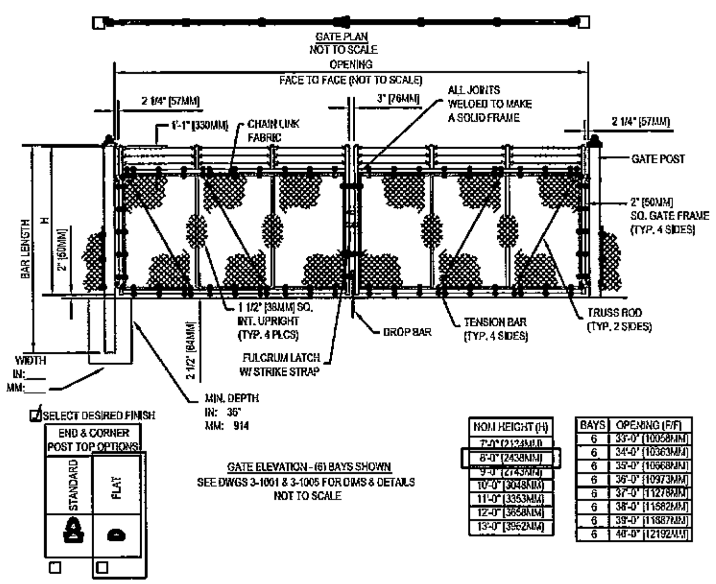
9 C800 SIGHT LIGHTING CURVES
SCALE: N.T.S.



10 C800 3' FLUME CURB
SCALE: N.T.S.



11 C800 GRAVEL EDGING DETAIL
SCALE: N.T.S.



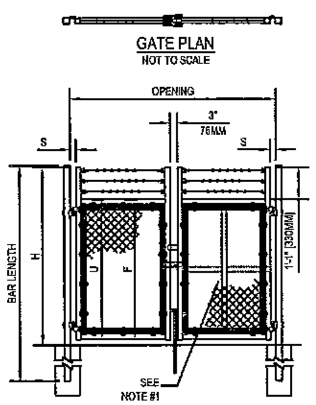
GATE ELEVATION - (6) BAYS SHOWN
SEE DWGS 3-1001 & 3-1005 FOR DIMS & DETAILS
NOT TO SCALE

NOM HEIGHT (H)
7'-0" [2134MM]
8'-0" [2438MM]
9'-0" [2743MM]
10'-0" [3048MM]
11'-0" [3353MM]
12'-0" [3658MM]
13'-0" [3962MM]

BAYS	OPENING (F/F)
6	33'-0" [10058MM]
6	34'-0" [10363MM]
6	35'-0" [10668MM]
6	36'-0" [10973MM]
6	37'-0" [11278MM]
6	38'-0" [11582MM]
6	39'-0" [11887MM]
6	40'-0" [12192MM]

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER-HALCO ONLY.
4. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
5. FOOTING WIDTH TO BE (4) X POST WIDTH.
6. GATES MAY BE MANUALLY OR ELECTRICALLY OPERATED. HARDWARE WILL VARY FOR ELECTRICALLY OPERATED GATES.
7. CONTRACTORS NOTE: PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 014-067.

TYPICAL DOUBLE SWING GATE



DOUBLE GATE ELEVATION
NOT TO SCALE

DOUBLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ. & RND SIZES	POST TO UPRIGHT
8'-0" [2438MM] THROUGH 12'-0" [3658MM]	2 1/2" [63.5MM] SQ. OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
14'-0" [4267MM] THROUGH 24'-0" [7315MM]	3" [76MM] SQ. OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
26'-0" [7925MM] THROUGH 36'-0" [10973MM]	6" [152MM] SQ. OR 6.625" [168MM] OD	FOR GATE POSTS: SQ-2 1/4" [57MM] RND-3 1/2" [89MM]
38'-0" [11582MM] THROUGH 40'-0" [12192MM]	8" [203MM] SQ. OR 8.625" [219MM] OD	FOR GATE POSTS: SQ-2 1/4" [57MM] RND-3 1/2" [89MM]

SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
NOM. HT. INCL. BARBED WIRE	ACTUAL DIM.	ACTUAL DIM.
7'-0" [2134MM]	6'-10" [2083MM]	5'-8 1/2" [1740MM]
8'-0" [2438MM]	7'-10" [2388MM]	6'-8 1/2" [2045MM]
9'-0" [2743MM]	8'-10" [2692MM]	7'-8 1/2" [2350MM]
10'-0" [3048MM]	9'-10" [2997MM]	8'-8 1/2" [2654MM]
11'-0" [3353MM]	10'-10" [3302MM]	9'-8 1/2" [2959MM]
12'-0" [3658MM]	11'-10" [3607MM]	10'-8 1/2" [3264MM]
13'-0" [3962MM]	12'-10" [3912MM]	11'-8 1/2" [3569MM]

NOTES:
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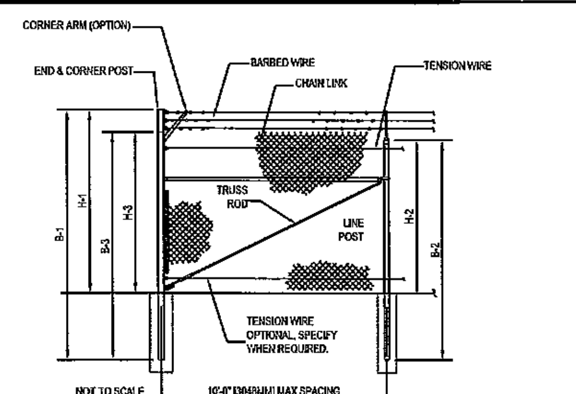
2. DO NOT SCALE DRAWINGS.
3. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER-HALCO ONLY.
4. CENTER UPRIGHT REQUIRED ON GATE LEAVES 8'-0" [2438MM] & WIDER. CENTER RAIL REQUIRED ON GATE LEAVES 10'-0" [3048MM] & HIGHER.
5. THIS DWG CORRESPONDS WITH DWGS 3-1020R, 3-1025R, 3-1025M & 3-1025L.
6. CONTRACTORS NOTE: PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 014-066b.

TYPICAL DOUBLE LEAF SWING GATE



FENCE HEIGHT	UPRIGHT END & CORNER POSTS		LINE POSTS		CORNER POSTS WITH CORNER ARM	
NOM HT INCLUDING BARBED WIRE	B-1 BAR LENGTH	H-1 HEIGHT ABOVE GRADE	B-2 BAR LENGTH	H-2 HEIGHT ABOVE GRADE	B-3 BAR LENGTH	H-3 HEIGHT ABOVE GRADE
7'-0" [2134MM]	10'-0" [3048MM]	7'-0 5/8" [2150MM]	8'-9" [2642MM]	5'-8 7/8" [1749MM]	9'-0" [2743MM]	6'-0 5/8" [1845MM]
8'-0" [2438MM]	11'-0" [3353MM]	8'-0 5/8" [2454MM]	9'-8" [2946MM]	6'-8 7/8" [2054MM]	10'-0" [3048MM]	7'-0 5/8" [2150MM]
9'-0" [2743MM]	12'-0" [3658MM]	9'-0 5/8" [2759MM]	10'-8" [3251MM]	7'-8 7/8" [2359MM]	11'-0" [3353MM]	8'-0 5/8" [2454MM]
10'-0" [3048MM]	13'-0" [3962MM]	10'-0 5/8" [3064MM]	11'-8" [3556MM]	8'-8 7/8" [2664MM]	12'-0" [3658MM]	9'-0 5/8" [2759MM]
11'-0" [3353MM]	14'-0" [4267MM]	11'-0 5/8" [3369MM]	12'-8" [3861MM]	9'-8 7/8" [2969MM]	13'-0" [3962MM]	10'-0 5/8" [3064MM]
12'-0" [3658MM]	15'-0" [4572MM]	12'-0 5/8" [3674MM]	13'-8" [4166MM]	10'-8 7/8" [3273MM]	14'-0" [4267MM]	11'-0 5/8" [3369MM]

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
4. THIS DWG CORRESPONDS WITH DWGS 1-1020, 1-1040, 1-1120 & 1-1140.
5. CONTRACTORS NOTE: PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 014-004d.

FENCE ELEVATION

12 C800 FENCE DETAILS
SCALE: N.T.S.

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HORVATH ASSOCIATES

16 CONSULTANT PLACE, SUITE 201
DURHAM, NORTH CAROLINA 27707
P 919.490.4990 F 919.490.8953

537 MARKET STREET, SUITE LL20
CHATTANOOGA, TENNESSEE 37402
P 423.266.4990 F 423.266.5700

www.horvathassociates.com

CLEAN GREEN HEADQUARTERS
126 STONE PARK COURT
DURHAM, NORTH CAROLINA

DETAIL SHEET

PRELIMINARY NOT FOR CONSTRUCTION

1	1st REVIEW PER CITY COMMENTS 9/07/10	JC
2	2nd REVIEW PER CITY COMMENTS 10/14/10	KRM
4	4th REVIEW PER CITY COMMENTS 12/14/10	JC

DRAWN BY: LRS CHECKED BY: RLH

DATE: 10 JUNE 2010

SCALE: AS NOTED

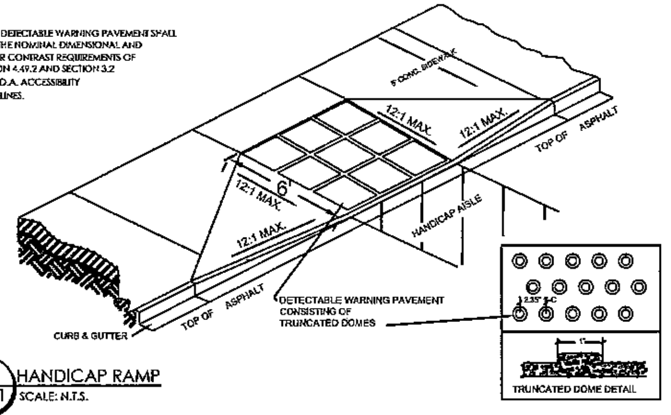
PROJECT NO. 0960

SHEET NO. C800

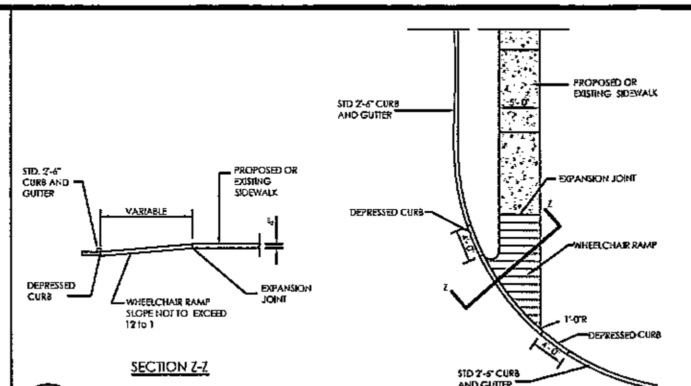
SITE PLAN

PIN: 0840-03-31-9202

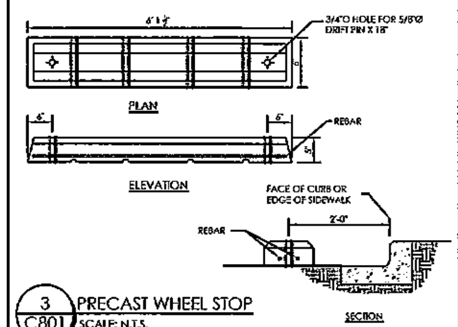
NOTE: DETECTABLE WARNING PAVEMENT SHALL MEET THE NOMINAL DIMENSIONAL AND COLOR CONTRAST REQUIREMENTS OF SECTION 4.49.2 AND SECTION 3.2 THE A.D.A. ACCESSIBILITY GUIDELINES.



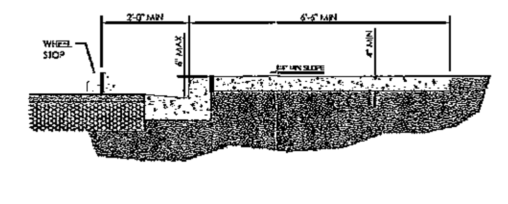
1 / C801 HANDICAP RAMP
SCALE: N.T.S.



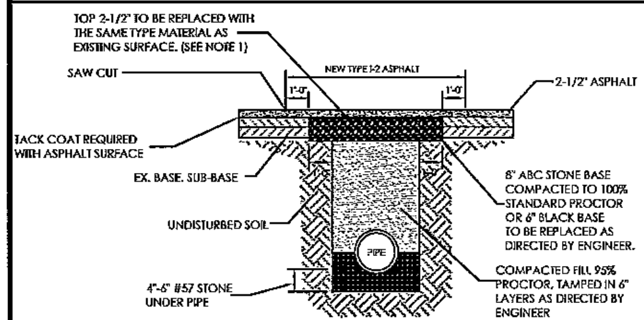
2 / C801 SLOPED RAMP
SCALE: N.T.S.



3 / C801 PRECAST WHEEL STOP
SCALE: N.T.S.



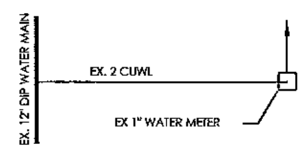
4 / C801 SIDEWALK WITH CURB & GUTTER
SCALE: N.T.S.



NOTES:
1. WHERE RESURFACING IS REQUIRED ON THE PROJECT, OMIT THE 2-1/2" SHOWN ABOVE. GRADE CONCRETE PATCH SURFACE SAME AS EXISTING SURFACE
2. SURFACES ARE TO BE THOROUGHLY CLEANED AND BITUMINOUS TACK COAT APPLIED BEFORE PLACEMENT OF ASPHALT SURFACE COURSE

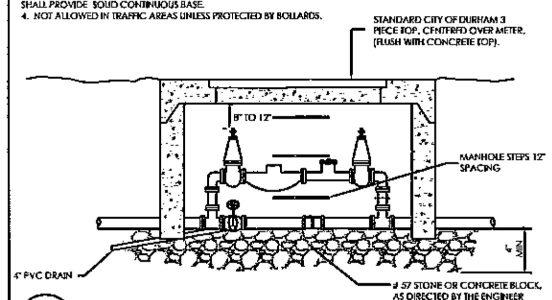
5 / C801 PAVING CUT SECTION
SCALE: N.T.S.

NOTE - EXPANSION JOINT EVERY 40' CONSTRUCTION JOINT EVERY 10'



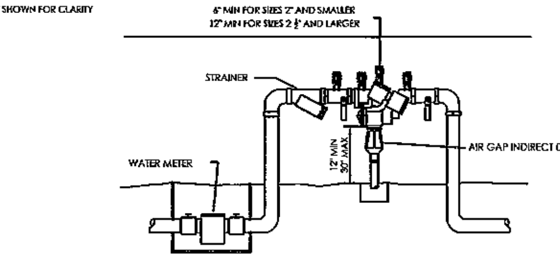
6 / C801 WATER SERVICE
SCALE: N.T.S.

1. SEE VARIOUS METER DETAILS FOR VAULT DIMENSIONS
2. 4" DRAIN TO EXISTING DITCH, OR STORM DRAIN - APPROVED BY THE ENGINEER.
3. ADJUST WITH CONCRETE BLOCK TO FINISHED GRADE IF NEEDED. BLOCK SHALL PROVIDE SOLID CONTINUOUS BASE.
4. NOT ALLOWED IN TRAFFIC AREAS UNLESS PROTECTED BY BOLLARDS.



7 / C801 STANDARD WATER METER VAULT
SCALE: N.T.S. (FOR 1 1/2", 2" AND 3" METERS)

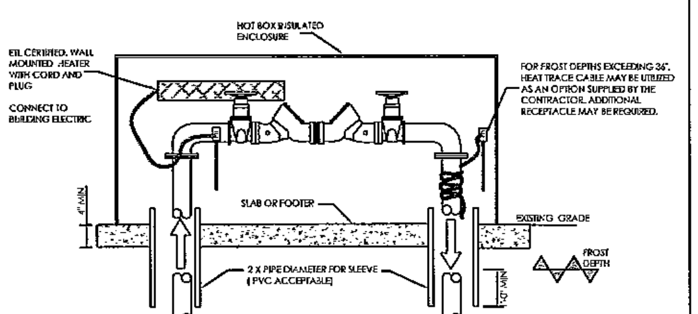
HOT BOX NOT SHOWN FOR CLARITY



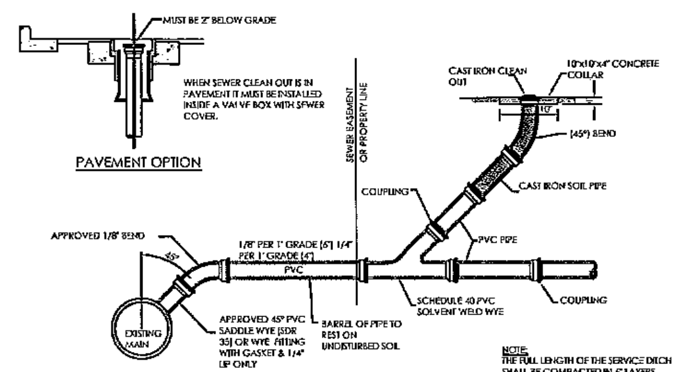
NOTES:
1. CLEARANCES MEASURED BETWEEN HIGEST POINT OF BACKFLOW PREVENTER AND OVERHEAD OBSTRUCTION.
2. BOTTOM CLEARANCES MEASURED BETWEEN LOWEST POINT OF BACKFLOW PREVENTER AND FLOOR OR GRADE.
3. ALL BACKFLOW PREVENTERS SHALL BE INSTALLED WITH ADEQUATE CLEARANCE FOR TESTING AND MAINTANCE.
4. ALL BACKFLOW PREVENTERS SHALL BE INSTALLED IN A MANNER THAT PROTECTS THEM FROM FREEZING.

8 / C801 BACKFLOW PREVENTER
SCALE: N.T.S.

NOTE:
INSTALL IN STRICT ACCORDANCE WITH THE ENGINEER OR UTILITY SPECIFICATION. UTILITY SPECIFICATION.

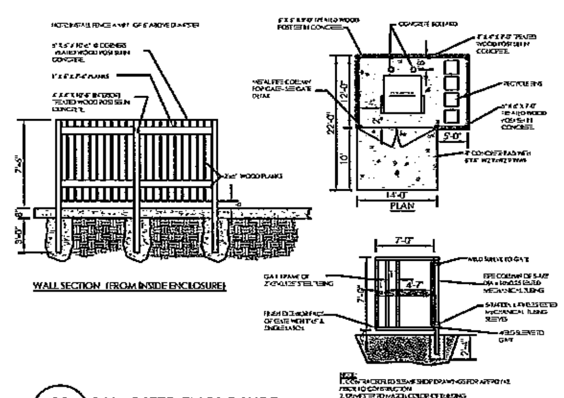


9 / C801 HOT BOX ENCLOSURE
SCALE: N.T.S.

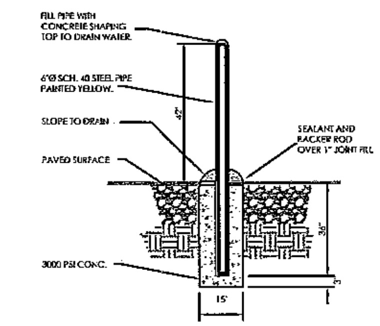


NOTE:
THE FULL LENGTH OF THE SERVICE DITCH SHALL BE COMPACTED IN 6" LAYERS WITH MECHANICAL TAMP.

10 / C801 SEWER LATERAL CONNECTION
SCALE: N.T.S.

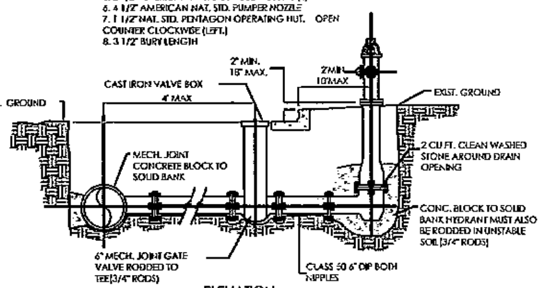


11 / C801 DUMPSTER ENCLOSURE
SCALE: N.T.S.



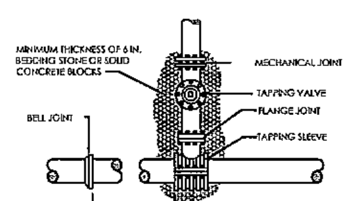
12 / C801 CONCRETE BOLLARD
SCALE: N.T.S.

FIRE HYDRANT:
MAKE: MUELLER CAT. NO. CENTURION A421
MAKE: AMERICAN CAT. NO. MARK-73
MAKE: KENNEDY CAT NO. MEDALLION
1. A.W.W.A. STANDARD
2. 6" FIRE HYDRANT
3. 4 1/2" VALVE OPENING
4. 6" MECH. JT. SUPPLY INLET
5. 2 1/2" AMERICAN NAT. STD. HOSE NOZZLES (2)
6. 4 1/2" AMERICAN NAT. STD. PUMPER NOZZLE
7. 1 1/2" NAT. STD. PENTAGON OPERATING NUT. OPEN COUNTER CLOCKWISE (LEFT.)
8. 3 1/2" BURY LENGTH



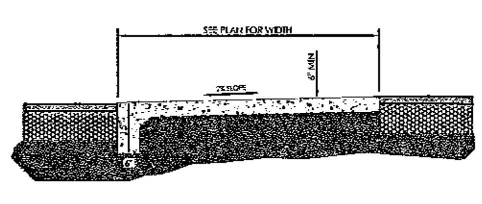
NOTE: HYDRANT NEEDS TO BE PROVIDED WITH 5" DIAMETER STORZ CONNECTION

13 / C801 FIRE HYDRANT
SCALE: N.T.S.

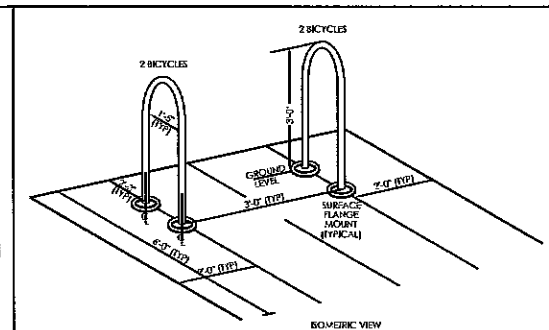


NOTES:
THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING THE TAPPING SLEEVE AND VALVE. SCFW WILL ACTUALLY MAKE THE TAP AT A COST TO THE CONTRACTOR.
RESTRAIN OR BLOCK THE TAPPING SLEEVE AND VALVE AS REQUIRED FOR AN MJ TEE.

14 / C801 TAPPING SLEEVE
SCALE: N.T.S.



15 / C801 MOUNTABLE SIDEWALK FLUSH WITH PAVEMENT
SCALE: N.T.S.



1. 2" NOM. SCHED. 40, ASTM A500, WELDED SEAMLESS-STEEL PIPE CONSTRUCTION
2. 3/8"x3" H.R. STEEL FLAT-BAR FOR FOOT ASSEMBLIES
3. 1/2" DIA. H.R. STEEL ROUND-BAR FOR LOCK-RETAINING YOKES
4. 2-1/2" NOM. SCHED. 40, ASTM A500, WELDED SEAMLESS-STEEL PIPES FOR BELOW-GRADE SLEEVES

16 / C801 INVERTED 'U' BICYCLE RACK
SCALE: N.T.S.

SEC. 10.4.4 Design Standards for Bicycle Parking

A. Bicycle Parking may be located in any parking area or in other locations that are easily accessible and do not impede pedestrian or motorized vehicle movement into or around the site. Designating space for bicycle parking within buildings is a preferred option when feasible.
B. Requirements for bicycle parking in other areas may be met by:
   1. A bicycle storage room, bicycle lockers, or bicycle racks within a building;
   2. Bicycle racks or lockers in a parking structure, underneath an awning or marquee, or near a main building; or
   3. Bicycle racks on the public right-of-way with approval from the City or State where such racks do not conflict with pedestrian use
C. When a percentage of the required motorized vehicle spaces are provided in a structure, an equal percentage of the required bicycle spaces shall be located inside that structure, unless other accessible, covered bicycle parking is located elsewhere on site.
D. Where bicycle parking facilities are not clearly visible to approaching cyclists, signs shall be posted to direct cyclists to the facilities.
E. Facilities shall provide at least a 30 inch clearance from the centerline of each adjacent bicycle and at least 24 inches from walls or other obstructions.
F. An aisle or other space shall be provided for bicycles to enter and leave the facility. The aisle shall have a width of at least four feet to the front or the rear of a standard six-foot bicycle parked in the facility.
G. Each bicycle parking space shall be sufficient to accommodate a bicycle at least six feet in length and two feet wide. Overhead clearance shall be at least seven feet.
H. Bicycle parking spaces shall be clearly marked as such and shall be separated from motorized vehicle parking by some form of physical barrier designed to protect a bicycle from being hit by a motorized vehicle.
I. Each bicycle parking space shall be provided with some form of stable frame permanently anchored to a foundation to which a bicycle frame and wheels may be conveniently secured using either a chain and padlock or a U-lock. The frame shall support a bicycle in a stable position without damage to frame, wheels, or components. The rack known as an "Inverted U-rack" is the preferred type.
J. Outdoor bicycle parking facilities shall be surfaced in the same manner as the motorized vehicle parking area and shall be equally level and accessible to the street.
K. Lighting and other security design features shall be provided in bicycle parking facilities equivalent to that provided in the facilities for motorized vehicles.
L. Bicycle parking should be located no further from the building's main entrance that the closest motorized vehicle parking space, excluding parking for persons with disabilities. Exceptions to this standard may be approved by the Development Review Board, considering site constraints and the availability of structured and/or enclosed parking for vehicles and bicycles. Uses with several major entrances shall locate a portion of the required bicycle parking at each entrance.

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HORVATH ASSOCIATES
16 CONSULTANT PLACE, SUITE 201
DURHAM, NORTH CAROLINA 27707
P 919.490.4990 F 919.490.8953
537 MARKET STREET, SUITE LL20
CHATTANOOGA, TENNESSEE 37402
P 423.266.4990 F 423.266.5700
www.horvathassociates.com

CLEAN GREEN HEADQUARTERS
126 STONE PARK COURT
DURHAM, NORTH CAROLINA

DETAIL SHEET

PRELIMINARY NOT FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL SEAL ... DONALD L. HORVATH

1	1st REVIEW PER CITY COMMENTS 9/07/10	JC
2	2nd REVIEW PER CITY COMMENTS 10/14/10	KRM
4	4th REVIEW PER CITY COMMENTS 12/14/10	JC

DRAWN BY: LRS
CHECKED BY: RLH
DATE: 10 JUNE 2010
SCALE: AS NOTED
PROJECT NO. 0960
SHEET NO. C801

SITE PLAN