## SWM / DETENTION CITY ENGINEERING

## DRAINAGE PLAN

# **EROSION CONTROL**

FOR A PRE-CONSTRUCTION MEETING 48 HRS. PRIOR TO ANY LAND DISTURBING ACTIVITY, CONTACT:

# TREE ORDINANCE

**URBAN FORESTRY** 

**CDOT** 

CHARLOTTE DEPT. OF TRANSPORTATION

## **APPROVED**

By Brendan Smith at 4:15 pm, May 09, 2013

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By Brendan Smith at 4:15 pm, May 09, 2013

Ahmad Sabha (704) 517-7893

## **APPROVED**

By Gary Turner (704-336-4330) (gturner@charlottenc.gov) at 2:18 pm, May 10, 2013

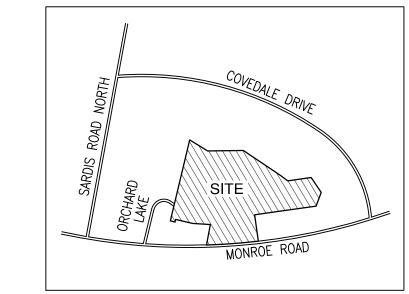
**APPROVED** 

# ORCHARD PARK

# CHARLOTTE, NORTH CAROLINA

CASHEL ROCK INVESTORS 8514 MCALPINE PARKWAY, SUITE 190 CHARLOTTE, NC 28211

PRELIMINARY PLANNED **MULTI-FAMILY SUBDIVISION** APPROVAL CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT By Brent Wilkinson May 13, 2013



VICINITY MAP

design resource group

landscape architecture

civil engineering

urban design

land planning

traffic engineering

transportation planning

2459 wilkinson boulevard, suite 200 charlotte, nc 28208 p 704.343.0608 f 704.358.3093

www.drgrp.com

# CONSTRUCTION DOCUMENTS

### **GENERAL NOTES:**

- 1. SURVEY INFORMATION OBTAINED BY R.B. PHARR AND ASSOCIATES, P.A.
- 2. ARCHITECTURAL DIMENSIONS TO BE VERIFIED BY SURVEYOR. REFER TO ARCHITECTURAL PLANS FOR EXACT
- 3. SURVEYOR SHALL REPORT ANY ENCROACHMENTS OR DISCREPANCIES GENERATED BY THE SITE PLAN AGAINST ANY SITE DEVELOPMENT REQUIREMENTS SPECIFIED BY THE SITE PLAN TO THE OWNER, LANDSCAPE ARCHITECT OR CIVIL ENGINEER PRIOR TO ANY ACTUAL CONSTRUCTION.
- 4. COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR 5. ALL ROAD IMPROVEMENTS AT MONROE ROAD AND ORCHARD LAKE DRIVE ARE TO BE COORDINATED WITH
- THE CITY OF CHARLOTTE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
- 6. DEVELOPER WILL PROVIDE STREET SIGNS PER CMLDS# 50.05 (9" SIGNS ONLY)
- 7. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED
- 8. IN ROLLING AND HILLY TERRAINS, SWEEPING OF THE STONE BASE AND/OR APPLICATION OF A TACK COAT MAY BE REQUIRED NEAR INTERSECTIONS. THESE REQUIREMENTS WILL BE ESTABLISHED BY THE INSPECTOR AND BASED ON FIELD CONDITIONS.
- 9. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY
- 10. IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB. 11. SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED
- 12. CURB AND GUTTER SHOWN ON PLANS ALONG ORCHARD LAKE DRIVE MAY BE ADJUSTED BASED UPON FIELD STAKING BY CITY ENGINEERING. ASSOCIATED STORM DRAINAGE MAY ALSO REQUIRE MODIFICATION BASED
- 13. THE PURPOSE OF THE STORM DRAINAGE EASEMENT (SDE) IS TO PROVIDE STORM WATER CONVEYANCE AND ANY STRUCTURES AND/OR OBSTRUCTION TO STORM WATER FLOW IS PROHIBITED.
- 14. HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINAGE PIPE INSTALLED WITHIN EXISTING OR PROPOSED PUBLIC STREET RIGHT-OF-WAY MUST BE APPROVED BY THE CITY'S INSPECTOR PRIOR TO ANY BACKFILL BEING PLACED. BACKFILL MATERIAL MUST BE APPROVED BY THE CITY INSPECTOR PRIOR TO PLACEMENT OF
- THE MATERIAL WITHIN THE PUBLIC STREET RIGHT—OF—WAY. 15. THE DEVELOPER SHALL MAINTAIN EACH STREAM, CREEK, OR BACKWASH CHANNEL IN AN UNOBSTRUCTED STATE AND SHALL REMOVE FROM THE CHANNEL AND BANKS OF THE STREAM ALL DEBRIS, LOGS, TIMBER, JUNK AND OTHER ACCUMULATIONS.
- 16. ANY BUILDING WITHIN THE 100+1 BUILDING RESTRICTION FLOODLINE IS SUBJECT TO THE RESTRICTIONS OF
- THE (CITY OF CHARLOTTE/MECKLENBURG COUNTY) SUBDIVISION ORDINANCE, SECTION 7.200.8. 17. ANY CONSTRUCTION OR USE WITHIN THE AREAS DELINEATED AS COMMUNITY ENCROACHMENT (0.1') FLOODWAY ENCROACHMENT AREA IS SUBJECT TO THE RESTRICTIONS IMPOSED BY THE FLOODWAY
- REGULATIONS OF THE CITY OF CHARLOTTE AND MECKLENBURG COUNTY. 18. PE SEALED SHOP DRAWINGS FOR RETAINING WALL MUST BE SUBMITTED TO CITY ENGINEER PRIOR TO
- 19. "AS-BUILT" DRAWINGS AND PLANS OF THE STORM DRAINAGE SYSTEM, INCLUDING DESIGNED DITCHES, MUST BE SUBMITTED PRIOR TO SUBDIVISION FINAL INSPECTION TO THE CITY/COUNTY ENGINEERING DEPARTMENT IN
- ACCORDANCE WITH THE CITY/COUNTY SUBDIVISION ORDINANCE. 20. PRIOR TO INSTALLATION, PE SEALED SHOP DRAWINGS FOR UNDERGROUND DETENTION SYSTEMS MUST BE
- FURNISHED TO CITY OF CHARLOTTE ENGINEERING FOR APPROVAL. 21. PRIOR TO CO, SURVEYOR SEALED AS-BUILT DRAWINGS OF UNDERGROUND DETENTION SYSTEMS MUST BE
- 22. NONSTANDARD ITEMS (IE: PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A
- RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE (CHARLOTTE DEPARTMENT OF TRANSPORTATION/NORTH CAROLINA DEPARTMENT OF TRANSPORTATION) BEFORE INSTALLATION.
- 23. PRIOR TO PLAT RECORDATION, OFFSITE R/W AND/OR CONSTRUCTION EASEMENTS ARE REQUIRED TO BE OBTAINED ACCORDING TO THE GUIDELINES OF THE "OFFSITE R/W ACQUISITION PROCESS". THESE NEEDED R/W AND CONSTRUCTION LIMITS ARE CLEARLY SHOWN ON THE ROADWAY IMPROVEMENT PLAN. 24. THE DEVELOPER SHALL CONTACT THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (GUS JORDI,
- 704-336-7086) TO IDENTIFY ANY CONFLICTS WITH TRAFFIC SIGNALIZATION EQUIPMENT. 60- 90 DAYS WILL BE REQUIRED TO COORDINATE RELOCATION. DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELATED RELOCATION COST AND/OR ANY REPAIR COST CAUSED BY THE CONTRACTOR/DEVELOPER.
- 25. PIPE SYSTEMS AND/OR CHANNELS LOCATED WITHIN PUBLIC DRAINAGE EASEMENTS ARE THE MAINTENANCE
- RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER. 26. ALL CONSTRUCTION TO CONFORM TO CHARLOTTE / MECKLENBURG LAND DEVELOPMENT STANDARDS. 27. FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE COUNTY FIRE MARSHALL DURING THE BUILDING PERMIT PROCESS
- 28. CERTIFICATION OF STREET CUT PERMITS ARE REQUIRED FOR UTILITY CUTS ON CITY STREETS. ALLOW 7 DAYS PROCESSING FOR PERMIT. FOR INFORMATION CONTACT CDOT (704-336-4025) OR VISIT http://www.charmeck.org/Departments/Transportation/Street+Maintenance/Home.htm
- 29. ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND. 30. PER SECTION 18-175(e) OF CITY CODE AND SECTION 10.00 OF THE CITY'S POST CONSTRUCTION CONTROLS ADMINISTRATIVE MANUAL, ALL REQUIRED NATURAL AREAS AND/OR POST CONSTRUCTION CONTROL EASEMENTS (PCCE's) MUST BE RECORDED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
- . ALL BUILDINGS WITHIN THE BOUNDARY OF THIS SITE, UNLESS OTHERWISE STATED AS EXEMPT, SHALL HAVE "ACCESSIBLE ROUTES" AS REQUIRED THAT CONFORM TO THE REQUIREMENTS OF "THE AMERICANS WITH DISABILITIES ACT", "FAIR HOUSING
- STANDARDS", AND GOVERNING STATE HANDICAP CODE STANDARDS. THESE STANDARDS FOR ACCESSIBILITY INCLUDE, BUT ARE NOT LIMITED TO:
- MAXIMUM WALK SLOPE = 1:20 MAXIMUM RAMP SLOPE = 1:12 WITH RAILING
- MAXIMUM CROSS SLOPE = 1/4" PER FOOT (2%) ALL WALKS TO BE BROOM FINISHED CONCRETE UNLESS OTHERWISE SPECIFIED ON
- DRAWINGS
- MAXIMUM ACCESSIBLE ROUTE LENGTH (NC) = 200'
- 2. THE PAVEMENT SLOPE WITHIN ACCESSIBLE PARKING SPACES SHALL NOT EXCEED
- 3. CONTRACTOR TO CONTACT DESIGN RESOURCE GROUP FOR ANY VARYING SITE CONDITIONS OR DISCREPANCIES AFFECTING SITE ACCESSIBILITY REQUIREMENTS.

- SITE DATA
- TAX MAP NO: ZONING: **REZONING PETITION NO:**
- SITE AREA: OPEN SPACE REQUIRED (OVERALL): OPEN SPACE PROVIDED:
- AREA 1A ZONING:
- SITE AREA (PHASE LINE AND EXCLUDING NEW RIGHT OF WAY): PROPOSED USE:
- DENSITY: MAX UNITS: PROPOSED UNITS: TOTAL BUILDING SQUARE FOOTAGE
- MAX FAR: PROPOSED FAR:
- PARKING REQUIRED: LOADING SPACE REQUIRED:
- PARKING PROVIDED
- BICYCLE PARKING REQUIRED:
- BICYCLE PARKING PROVIDED: IMPERVIOUS AREA:
- PRE 1978 IMPERVIOUS AREA: SETBACK: SIDE YARD: REAR YARD:
- BUILDING SEPARATION BUILDING HEIGHT: PROPOSED BUILDING HEIGHT: BUILDINGS 5&6:
- 40' MAXIMUM TRASH & RECYCLING PICK UP REQUIRED:
- (1) 8 CY. COMPACTOR PER 90 UNITS or (1) 8 CY DUMPSTER PER 30 UNITS (1) 144 SF RECYCLING STATION PER 80 UNITS
- TRASH & RECYCLING PICK UP PROVIDED:
- (1) CARDBOARD RECYCLING DUMPSTER (1) 231 SF RECYCLING STATION

(1) 8 CY. DUMPSTER

NOTE: PRIVATE TRASH COLLECTION WITH MULTIPLE WEEKLY PICK UPS

## AREA 2

- LOT AREA (PHASE LINE AND EXCLUDING NEW RIGHT OF WAY): SETBACK
- SIDE YARD: REAR YARD: **BUILDING SEPARATION:** BUILDING HEIGHT: MINIMUM LOT WIDTH:
- AREA 3

MINIMUM LOT WIDTH:

- ZONING: LOT AREA (PHASE LINE AND EXCLUDING NEW RIGHT OF WAY):
- MAX FAR: SETBACK SIDE YARD: REAR YARD: BUILDING HEIGHT:

UR-C (CD)

0.80

213-491-22

UR-2 (CD)

36 UNITS

43,840 SF

24.08 ACRES TOTAL

30% ~ 7.22 ACRES

7.74 ACRES (AREA 1A&1B)

228,058 SF (5.24 AC.)

6.87 (36 UNITS/5.24 AC.)

43,840/228,058 = 0.19 FAR

= 36 MIN - 72 MAX

58 REGULAR SPACES

74 TOTAL SPACES

2 VAN ACCESSIBLE SPACES

5 SHORT TERM SPACES (1 RACK)

14 ON STREET SPACES

48,006 SF (1.10 ACRES)

0 SF (0 ACRES)

(1 SP/UNIT MIN - 2 SP/UNIT MAX)

1 SPACE PER 20 UNITS (2 SHORT TERM SPACES)

TOWN HOME STYLE APARTMENTS

270 UNITS TOTAL (AREA 1A+1B)

UR-2 (CD), UR-C (CD), I-1 (CD)

- 28,895 SF (0.66 AC.) PER CONDITIONAL NOTES OF REZONING PLAN 14' ALONG ORCHARD LAKE DRIVE (PER REZONING) 20' ALONG MONROE ROAD (PER REZONING)
- 58' MAXIMUM (PER REZONING)
- I-1 (CD) ±129,414 SF (2.97 AC.) PER CONDITIONAL NOTES OF REZONING PLAN
- O OR 5' PER ORDINANCE REQUIREMENTS 58' MAXIMUM

- AREA 1B
- SITE AREA (PHASE LINE AND EXCLUDING NEW RIGHT OF WAY): PROPOSED USE:
- MAX UNITS: PROPOSED UNITS: BUILDINGS 1 & 2: BUILDINGS 3 & 4:
- TOTAL BUILDING SQUARE FOOTAGE: MAX FAR: PROPOSED FAR:
- PARKING REQUIRED BUILDINGS 1 & 2 BUILDINGS 3 & 4

PARKING PROVIDED:

- LOADING SPACES REQUIRED: BUILDINGS 1 & 2 BUILDINGS 3 & 4
- PARKING PROVIDED (CONTINUED): BUILDINGS 3 & 4:
- BICYCLE PARKING REQUIRED: BUILDINGS 1 & 2: BUILDINGS 3 & 4:
- BICYCLE PARKING PROVIDED: BUILDINGS 1 & 2: BUILDINGS 3 & 4:
- IMPERVIOUS AREA: PRE 1978 IMPERVIOUS AREA: SETBACK:
- SIDE YARD: REAR YARD: BUILDING SEPARATION BUILDING HEIGHT: PROPOSED BUILDING HEIGHT:
- BUILDINGS 1,2,3,&4: TRASH & RECYCLING PICK UP REQUIRED: BUILDINGS 1 & 2:
- BUILDINGS 3 & 4:
- TRASH & RECYCLING PICK UP PROVIDED: BUILDINGS 1 & 2:
- BUILDINGS 3 & 4:

- 17.08 (230 UNITS/ 13.46 AC.) 270 UNITS TOTAL (AREA 1A+1B) 162
- 230 UNITS 240,763 SF 240,763/586,124 = 0.41 FAR

586,124 SF (13.46 AC.)

UR-2 (CD)

**APARTMENTS** 

- 1 SP/UNIT MIN 2 SP/UNIT MAX 162 MIN - 324 MAX 68 MIN - 136 MAX
- (1) 10x25' SPACE
- 25 ON STREET SPACES 4 VAN ACCESSIBLE SPACES 7 REGULAR ACCESSIBLE SPACES 7 GARAGE SPACES 1 ACCESSIBLE GARAGE SPACE
- 270 TOTAL SPACES 98 REGULAR SPACES 11 ON STREET SPACES 2 VAN ACCESSIBLE SPACES 1 REGULAR ACCESSIBLE SPACES 4 GARAGE SPACES
- 116 TOTAL SPACES 1 SPACE PER 20 UNITS 9 SHORT TERM SPACES 4 SHORT TERM SPACES

1 LOADING SPACE

- 10 SHORT TERM SPACES (2 RACKS) 5 SHORT TERM SPACES (1 RACK) 227,610 SF (5.23 ACRES)
- 0 SF (0 ACRES) 58' MAXIMUM

DUMPSTER PER 30 UNITS

(1) 8 CY. COMPACTOR PER 90 UNITS or (1) 8 CY DUMPSTER PER 30 UNITS (1) 144 SF RECYCLING STATION PER 80 UNITS

(1) 8 CY. COMPACTOR PER 90 UNITS or (1) 8 CY

- (1) 144 SF RECYCLING STATION PER 80 UNITS (1) 8 CY. COMPACTOR (1) CARDBOARD RECYCLING DUMPSTER
- (1) 195 SF STATION (1) 8 CY. DUMPSTER (1) 231 SF RECYCLING STATION
- (1) CARDBOARD RECYCLING DUMPSTER NOTE: TRASH AND RECYCLING COLLECTION SHALL BE PROVIDED BY PRIVATE COLLECTION SERVICE. DEVELOPER ACKNOWLEDGES THAT CHARLOTTE SOLID WASTE DEPARTMENT WILL NOT NOW OR IN THE FUTURE SERVE THIS DEVELOPMENT UNLESS THE REQUIREMENTS OF THE ORDINANCE FOR MINIMUM TRASH COLLECTION FACILITES ARE

SHEET SCHEDULE CASHEL ROCK INVESTORS 8514 MCALPINE PARKWAY CO.0 COVER SHEET SUITE #190 CHARLOTTE, NC 28211 RZ-1 EXISTING CONDITIONS PLAN RZ-2 TECHNICAL DATA SHEET CASHEL ROCK INVESTORS 8514 MCALPINE PARKWAY RZ-3 SCHEMATIC SITE PLAN SUITE #190 CHARLOTTE, NC 28211 RZ-4 DEVELOPMENT STANDARDS RZ-5 BUILDING ELEVATIONS RZ-6 ADMINISTRATIVE APPROVAL PLAN 333 WEST TRADE STREET C1.0 EXISTING CONDITIONS SUITE 200 CHARLOTTE, NC 28202 C2.0 SITE PLAN C2.1 INTERSECTION SIGHT DISTANCE DESIGN RESOURCE GROUP, PA 2459 WILKINSON BOULEVARD C2.2 ACCESSIBLE ROUTE PLAN C2.3 OPEN SPACE PLAN C2.4 PAVEMENT MARKING PLAN CIVIL ENGINEER: DESIGN RESOURCE GROUP, PA 2459 WILKINSON BOULEVARD SUITE 200 CHARLOTTE, NC 28208 C3.0 EROSION CONTROL PHASE C3.1 EROSION CONTROL PHASE 2 C4.0 OVERALL GRADING PLAN C4.1 GRADING PLAN 420 HAWTHORNE LANE CHARLOTTE, NC 28204 704.376.2186 C4.2 GRADING PLAN C4.3 GRADING PLAN C4.4 GRADING PLAN C4.5 GRADING PLAN C4.6 STORM DRAINAGE PLAN C4.7 STORM DRAINAGE AREAS PLAN C4.8 STORM WATER MANAGEMENT PLAN C4.9 OFF-SITE STORM DRAINAGE  $\leftarrow$  SHEET C4.9 ADDED FOR RTAP (01/28/13) C5.0 WATER AND SEWER PLAN ~~~~~~~ C5.1 SANITARY SEWER PROFILES C5.2 SANITARY SEWER PROFILES C5.3 SANITARY SEWER PROFILES C6.0 REQUIRED LANDSCAPING PLAN C6.1 WET POND PLANTING PLAN C7.0 ROAD PROFILES C7.1 ROAD PROFILES C7.2 TRAFFIC CONTROL PLAN C8.0 SITE DETAILS

C8.1 | SITE DETAILS

C8.2 SITE DETAILS

C8.3 SITE DETAILS

C8.4 SITE DETAILS

C9.0 EROSION CONTROL DETAILS

C9.1 | EROSION CONTROL DETAILS

C9.2 STORM DRAINAGE DETAILS

C9.3 STORM DRAINAGE DETAILS

C9.7A STRUCTURAL DETAILS

A1.0 BUILDING ELEVATIONS

CONSTRUCTION SCHEDULE:

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C9.4 WATER QUALITY & DETENTION DETAILS

C9.5 WATER & SANITARY SEWER DETAILS

C9.6 WATER & SANITARY SEWER DETAILS

IT IS ANTICIPATED THAT CONSTRUCTION OF PHASE 1A AND PHASE

PHASE 2 AND 3 ARE OUTPARCELS AND WILL BE DEVELOPED AT A

1B SHALL BEGIN IN THE SPRING OF 2012, AND BE COMPLETED BY

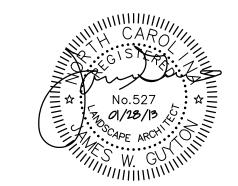
THE SUMMER OF 2014. ACTUAL CONSTRUCTION SCHEDULE MAY

LATER TIME, AND SHALL BE SUBJECT TO LAND DEVELOPMENT

REVIEW OF THE FINAL SITE PLANS PRIOR TO CONSTRUCTION.

C9.7 STRUCTURAL NOTES AND DETAILS

## CONSTRUCTION DOCUMENTS



SCALE: NTS

PROIECT #: 377-001 DRAWN BY: JWG CHECKED BY:

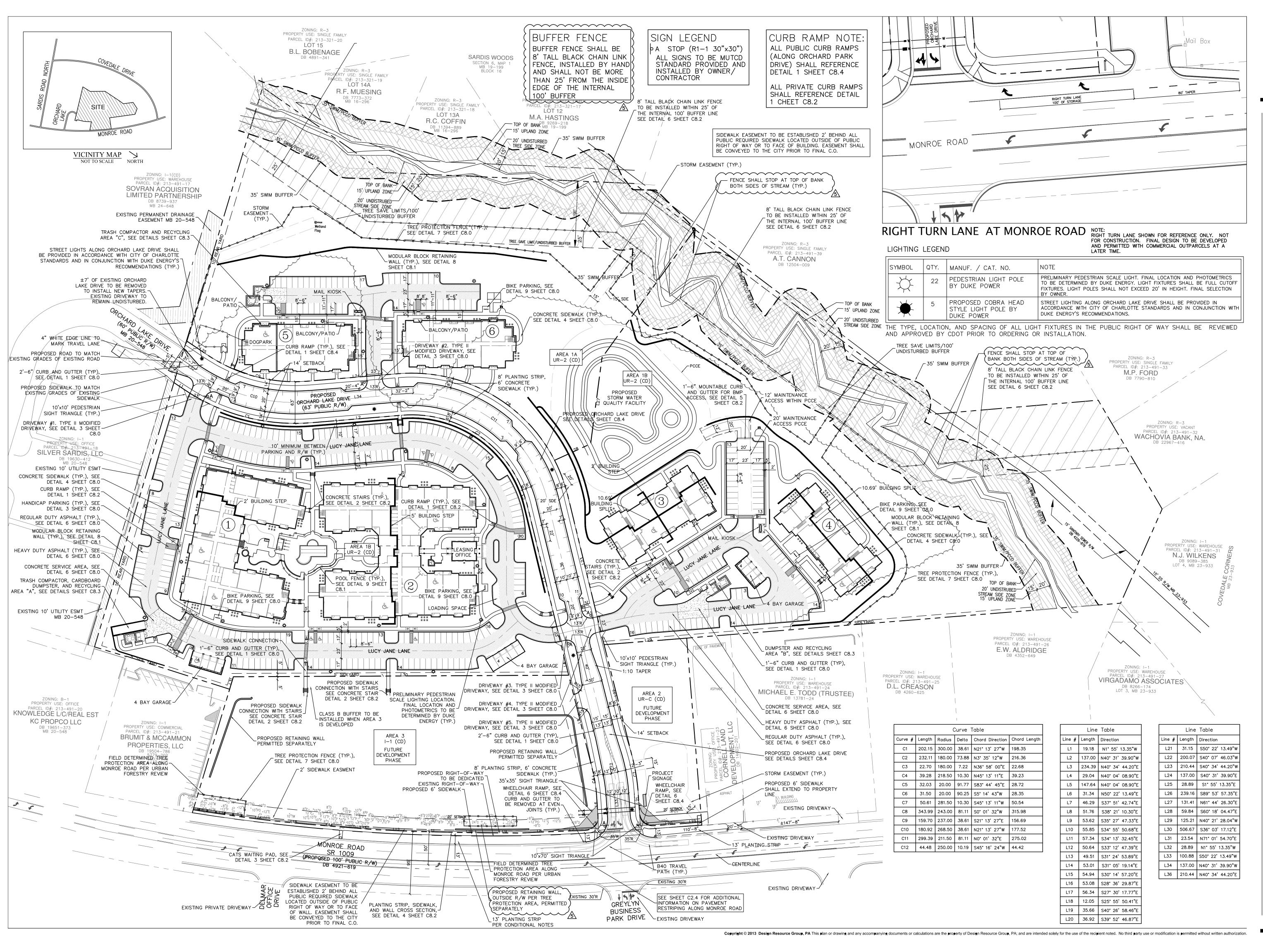
COVER SHEET

JULY 15, 2011

4. 01/28/13 RTAP

**REVISIONS:** 

1. 9/12/11 REV. PER CMPC COMMENTS 2. 12/9/11 REV. PER CMPC COMMENTS 3. 03/29/12 RTAP





design resource group

- landscape architecture
- civil engineering
- urban design
- land planning
- traffic engineering transportation planning

2459 wilkinson boulevard, suite 200 charlotte, nc 28208

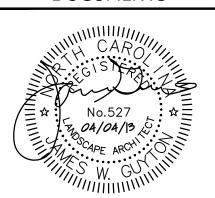
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CONSTRUCTION DOCUMENTS



SCALE: 1" = 60'

PROJECT #: 337-001 DRAWN BY:

SITE PLAN

JULY 15, 2011

4. 01/28/13 RTAP

**REVISIONS:** 

CHECKED BY:

1. 9/12/11 REV. PER CMPC COMMENTS 2. 12/9/11 REV. PER CMPC COMMENTS 3. 03/29/12 RTAP

5. 4/4/13 RTAP, PER REVIEW COMMENTS