CHARLOTTE

FINAL APPROVAL

ENGINEERING PCO / DETENTION / DRAINAGE PLAN	*APPROVED* By mchapman at 11:19 am, Aug 03, 2016
EROSION CONTROL	
URBAN FORESTRY TREE ORDINANCE	*APPROVED* By Stan Armstrong at 10:34 am, Jul 29, 2016
CDOT	*APPROVED*

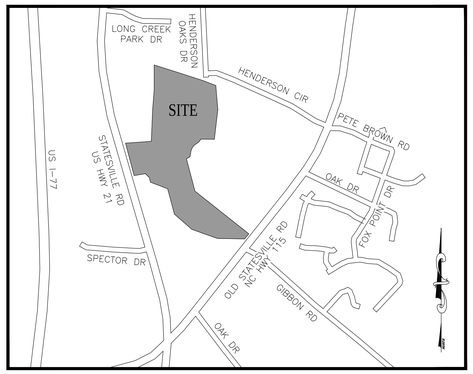
NOTE: THIS PLAN APPROVAL DOES NOT INCLUDE COMMERCIAL ZONING. ALL BUILDING PERMITS AND ZONING APPROVALS CAN BE OBTAINED AT MECKLENBURG COUNTY CODE ENFORCEMENT. PLEASE CALL CTAC AT 704-314-CODE(2633) FOR MORE INFORMATION.

NOTE: SCHEDULE PRE-CONSTRUCTION MEETING AT LEAST 48 HRS. PRIOR TO ANY LAND DISTURBING ACTIVITY USING THE ONLINE FORM AT http://development.charmeck.org

APPROVED FOR CONSTRUCTION
CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT
By: Joshua Weaver 8-3-2016 1 of 2

METROLINA PARK

CHARLOTTE, NORTH CAROLINA



VICINITY MAP
NOT TO SCALE

O·E·G
ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P) 704-749-1432 • F) 704-749-1433

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ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE
AC	ACRES
AC/FT	ACRE FOOT/FEET
ADT	AVERAGE DAILY TRAFFIC
ALT	ALTERNATE
APPROX	APPROXIMATE
ASPH	ASPHALT
AVE	AVENUE
AVG	AVERAGE
BFP	BACKFLOW PREVENTER
BL	BASELINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCHMARK
BO	BLOWOFF
BOC	BACK OF CURB
BOT	BOTTOM
C	CHORD LENGTH
CATV	CABLE TELEVISION
CB	CATCH BASIN
CDOT	CHARLOTTE DEPARTMENT OF TRANSPORTATION
CF	CUBIC FEET
C&G	CURB AND GUTTER
CJ	CONSTRUCTION JOINT
CLDSM	CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCT(ION)
CY	CUBIC YARD
D	DEGREE OF CURVATURE
DBL	DOUBLE
DCB	DOUBLE CATCH BASIN
DEPT	DEPARTMENT
DET	DETAIL
DI	DROP INLET
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DWG	DRAWING
E	EAST
ELEC	ELECTRIC
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
EJ	EXPANSION JOINT
FG	FINISHED GRADE
FH	FIRE HYDRANT
FM	FORCE MAIN
FT	FOOT/FEET
GALV	GALVANIZED
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HW	HEADWALL
HWY	HIGHWAY
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN	INCHES
INV	INVERT
JB	JUNCTION BOX
JCT	JUNCTION
K	RATE OF VERTICAL CURVATURE
L	LENGTH
LAT	LATITUDE
LB	POUND
LF	LINEAR FOOT/FEET
LP	LIGHT POLE
LON	LONGITUDE
LT	LEFT
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MPH	MILES PER HOUR
N	NORTH
NCDENR	NORTH CAROLINA DEPARTMENT OF ENVIROMENT AND NATURAL RESOURCES
NCDOT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
NIC	NOT IN CONTRACT
NO OR #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OCB	OFFSET CATCH BASIN
OCS	OUTLET CONTROL STRUCTURE
OD	OUTSIDE DIAMETER
OEG	ORSBORN ENGINEERING GROUP
OVHD	OVERHEAD
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PED	PEDESTAL
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
POB	POINT OF BEGINNING
PP	POWER POLE
PROJ	PROJECT
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQD	REQUIRED
REV	REVISION
RR	RAILROAD
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH
SAN	SANITARY SEWER
SCDOT	SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
SCH	SCHEDULE
SECT	SECTION
SPEC	SPECIFICATION
STD	STANDARD
STS	STORM SEWER
T	TANGENT
TC	TIME OF CONCENTRATION
TCE	TEMPORARY CONSTRUCTION EASEMENT
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPORARY
TOB	TOP OF BANK
TOC	TOP OF CURB
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
YR	YEAR
&	AND
@	AT
Δ	DELTA

Jul 28 2016 9:09 AM

DATE			

JOB #	15029	DATE:	04/29/16

COVER C0.0

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1433 • F: 704-749-1433

EXISTING CONDITIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
CHARLOTTE, NORTH CAROLINA
C-3139

LEGEND:

BRKR - BREAKER BOX
C&G - CURB & GUTTER
CB - CATCH BASIN
CI - CURB INLET
CMP - CORRUGATED METAL PIPE
CP - CALCULATED POINT
CPP - CORRUGATED PLASTIC PIPE
CXO - CLEAN OUT
DB. - DEED BOOK
DI - DROP INLET
ECM - EXISTING CONCRETE MONUMENT
EIP - EXISTING IRON PIPE
EIR - EXISTING IRON ROD
EN - EXISTING NAIL
EU - END UNKNOWN
FH - FIRE HYDRANT
FP - FLAG POLE
FV - FIRE VALVE
GDP - GUARD POST
GM - GAS METER
GP - GATE POST
GV - GAS VALVE
GW - GUY WIRE
HVAC - HEATING, VENTILATION, AIR COND.
ICV - IRRIGATION CONTROL VALVE
LMP - LAMP POST
LP - LIGHT POLE
MBX - MAILBOX
ML - MAP BOOK
MW - MONITORING WELL
N.G.S. - NATIONAL GEODETIC SURVEY
NIR - NEW IRON ROD
NN - NEW NAIL
NPH - NEW PUNCH HOLE
OHIANG - OVERHANG
PB - POWER BOX
PIN - PARCEL IDENTIFICATION NUMBER
PM - POWER METER
PMH - POWER MANHOLE
PP - POWER POLE
PG. - PAGE
PVC - PLASTIC PIPE
R/W - RIGHT-OF-WAY
RCP - REINFORCED CONCRETE PIPE
SDMH - STORM DRAIN MANHOLE
SMP - MULTI-POST SIGN
SSMH - SANITARY SEWER MANHOLE
(T) - TOTAL
TB - TELEPHONE BOX
TBM - TEMPORARY BENCHMARK
TERR. - TERRACOTTA PIPE
TMH - TELEPHONE MANHOLE
TPED - TELEPHONE PEDESTAL
TVB - CABLE TV BOX
WB - WATER BOX
WM - WATER METER
WSP - WATER SPIGOT
WV - WATER VALVE

ZONING:

ZONING RESTRICTIONS AS PER ZONING ORDINANCE: SUBJECT PROPERTY ZONED: I-1(CD)

MINIMUM SETBACK: 20'
*MINIMUM SIDE YARD: 0 OR 5' **
MINIMUM REAR YARD: 10'
*MAXIMUM BUILDING HEIGHT: 40' **

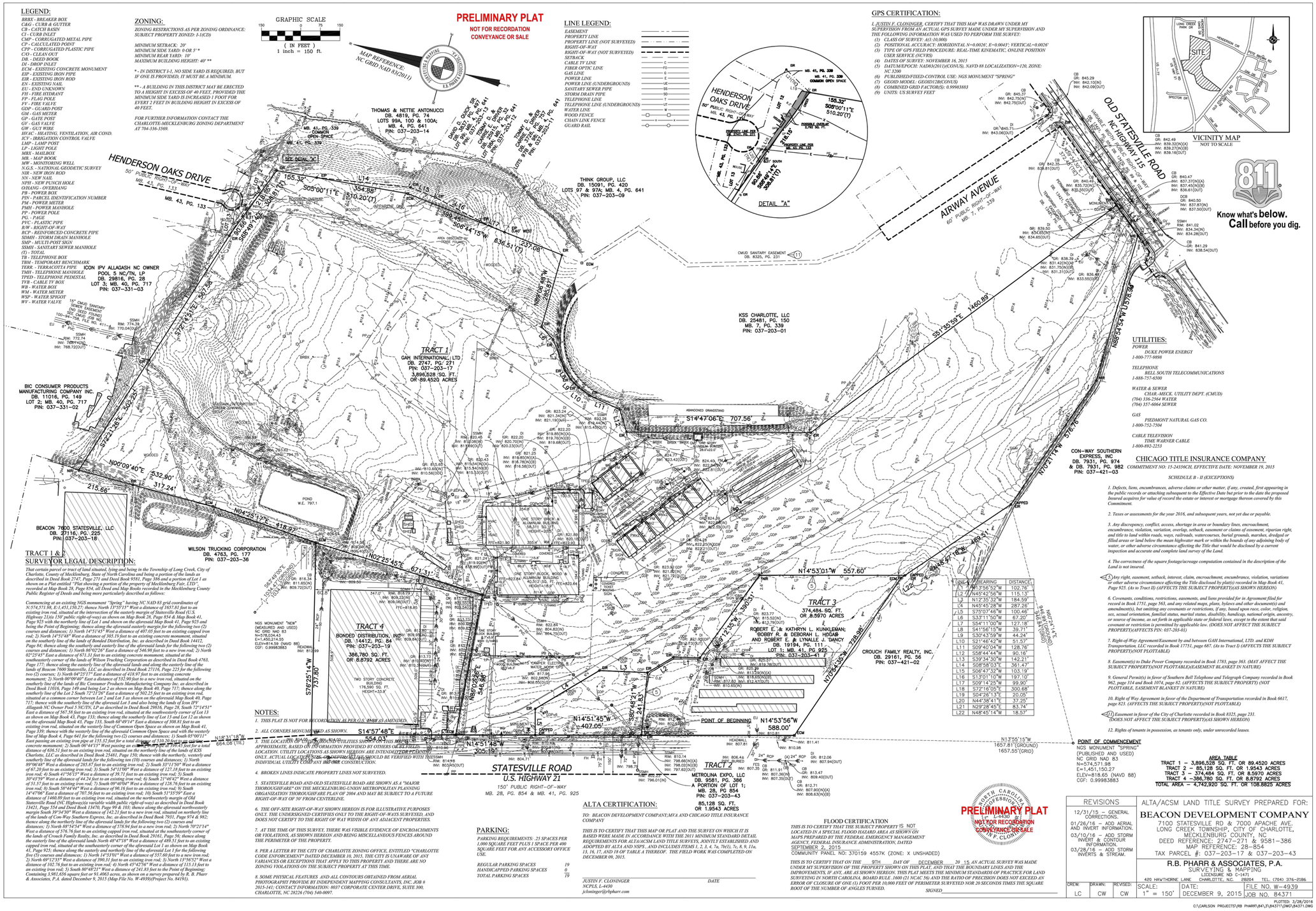
** - IN DISTRICT I-1, NO SIDE YARD IS REQUIRED, BUT IF ONE IS PROVIDED, IT MUST BE A MINIMUM.*

*** - A BUILDING IN THIS DISTRICT MAY BE ERECTED TO A HEIGHT IN EXCESS OF 40 FEET, PROVIDED THE MINIMUM SIDE YARD IS INCREASED 1 FOOT FOR EVERY 2 FEET IN BUILDING HEIGHT IN EXCESS OF 40 FEET.*

FOR FURTHER INFORMATION CONTACT THE CHARLOTTE-MECKLENBURG ZONING DEPARTMENT AT 704-336-3569.

GRAPHIC SCALE
150 0 75 150
(IN FEET)
1 inch = 150 ft.

PRELIMINARY PLAT
NOT FOR RECORDATION
CONVEYANCE OR SALE



LINE LEGEND:

EASEMENT
PROPERTY LINE
PROPERTY LINE (NOT SURVEYED)
RIGHT-OF-WAY
RIGHT-OF-WAY (NOT SURVEYED)
SETBACK
CABLE TV LINE
FIBER OPTIC LINE
GAS LINE
POWER LINE
POWER LINE (UNDERGROUND)
SANITARY SEWER PIPE
STORM DRAIN PIPE
TELEPHONE LINE
TELEPHONE LINE (UNDERGROUND)
WATER LINE
WOOD FENCE
CHAIN LINK FENCE
GUARD RAIL

GPS CERTIFICATION:

I, JUSTIN F. CLONINGER, CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL GPS SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

(1) CLASS OF SURVEY: A(1:10,000)
(2) POSITIONAL ACCURACY: HORIZONTAL N=0.0026'; E=0.0043'; VERTICAL=0.0026'
(3) TYPE OF GPS FIELD PROCEDURE: REAL-TIME KINEMATIC, ONLINE POSITION USER SERVICE (NCVRS)
(4) DATES OF SURVEY: NOVEMBER 16, 2015
(5) DATUM/EPOCH: NAD83(2011)(CONUS), NAVD 88 LOCALIZATION=120, ZONE: NC 3200
(6) PUBLISHED/FIXED-CONTROL USE: NGS MONUMENT "SPRING"
(7) GEOID MODEL: GEOID12B(CONUS)
(8) COMBINED GRID FACTOR(S): 0.99983883
(9) UNITS: US SURVEY FEET

VICINITY MAP
NOT TO SCALE

Know what's **below.**
Call before you dig.

UTILITIES:

POWER
DUKE POWER ENERGY
1-800-777-9898

TELEPHONE
BELL SOUTH TELECOMMUNICATIONS
1-888-757-6500

WATER & SEWER
CHAR.-MECK. UTILITY DEPT. (CMUD)
(704) 336-2564 WATER
(704) 357-6064 SEWER

GAS
PIEDMONT NATURAL GAS CO.
1-800-752-7504

CABLE TELEVISION
TIME WARNER CABLE
1-800-892-2253

CHICAGO TITLE INSURANCE COMPANY

COMMITMENT NO: 15-24556CH, EFFECTIVE DATE: NOVEMBER 19, 2015

SCHEDULE B - II (EXCEPTIONS)

1. Defects, liens, encumbrances, adverse claims or other matter, if any, created, first appearing in the public records or attaching subsequent to the Effective Date but prior to the date the proposed Insured acquires for value of record the estate or interest or mortgage thereon covered by this Commitment.

2. Taxes or assessments for the year 2016, and subsequent years, not yet due or payable.

3. Any discrepancy, conflict, access, shortage in area or boundary lines, encroachment, encumbrance, violation, variation, overlap, setback, easement or claims of easement, riparian right, and title to land within roads, ways, railroads, watercourses, burial grounds, marshes, dredged or filled areas or land below the mean highwater mark or within the bounds of any adjoining body of water, or other adverse circumstance affecting the Title that would be disclosed by a current inspection and accurate and complete land survey of the Land.

4. The correctness of the square footage/acreage computation contained in the description of the Land is not insured.

5. Any right, easement, setback, interest, claim, encroachment, encumbrance, violation, variations or other adverse circumstance affecting the Title disclosed by plat(s) recorded in Map Book 41, Page 925. (As to Tract II) (AFFECTS THE SUBJECT PROPERTY)(AS SHOWN HEREON)

6. Covenants, conditions, restrictions, easements, and liens provided for in Agreement filed for record in Book 1751, page 563, and any related maps, plans, bylaws and other document(s) and amendment(s), but omitting any covenants or restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law. (DOES NOT AFFECT THE SUBJECT PROPERTY)(AFFECTS PIN 037-203-01)

7. Right-of-Way Agreement/Easement by and between GAH International, LTD. and KDH Transportation, LLC recorded in Book 17751, page 687. (As to Tract I) (AFFECTS THE SUBJECT PROPERTY)(NOT PLOTTABLE)

8. Easement(s) to Duke Power Company recorded in Book 1783, page 363. (MAY AFFECT THE SUBJECT PROPERTY)(NOT PLOTTABLE)(EASEMENT BLANKET IN NATURE)

9. General Permit(s) in favor of Southern Bell Telephone and Telegraph Company recorded in Book 962, page 314 and Book 1074, page 82. (AFFECTS THE SUBJECT PROPERTY) (NOT PLOTTABLE, EASEMENT BLANKET IN NATURE)

10. Right of Way Agreement in favor of the Department of Transportation recorded in Book 6617, page 823. (AFFECTS THE SUBJECT PROPERTY)(NOT PLOTTABLE)

11. Easement in favor of the City of Charlotte recorded in Book 8325, page 231. (DOES NOT AFFECT THE SUBJECT PROPERTY)(AS SHOWN HEREON)

12. Rights of tenants in possession, as tenants only, under unrecorded leases.

TRACT 1 & 2 SURVEYOR LEGAL DESCRIPTION:

That certain parcel or tract of land situated, lying and being in the Township of Long Creek, City of Charlotte, County of Mecklenburg, State of North Carolina and being a portion of the lands as described in Deed Book 2747, Page 271 and Deed Book 9581, Page 386 and a portion of Lot 1 as shown on a Plat entitled "Plat showing a portion of the property of Mecklenburg Fair, LTD", recorded at Map Book 28, Page 854, all Deed and Map Books recorded in the Mecklenburg County Public Register of Deeds and being more particularly described as follows:

Commencing at an existing NGS monument "Spring" having NC NAD 83 grid coordinates of N:574,571.98, E:1,451,150.27; thence North 1°35'15" West a distance of 1657.81 feet to an existing iron rod, situated at the intersection of the easterly margin of Statesville Road (U.S. Highway 21)(a 150' public right-of-way) as shown on Map Book 28, Page 854 & Map Book 41, Page 925 with the southerly line of Lot 1 and shown on the aforesaid Map Book 41, Page 925 and being the Point of Beginning; thence along the aforesaid easterly margin for the following two (2) courses and distances; 1) North 14°53'145" West a distance of 407.05 feet to an existing capped iron rod; 2) North 14°51'48" West a distance of 305.19 feet to an existing concrete monument, situated on the southerly line of the lands of Bonded Distribution, Inc. as described in Deed Book 14412, Page 84; thence along the southerly and easterly line of the aforesaid lands for the following two (2) courses and distances; 1) North 86°02'26" East a distance of 546.98 feet to a new iron rod; 2) North 02°25'45" East a distance of 671.31 feet to an existing concrete monument, situated at the southeasterly corner of the lands of Wilson Trucking Corporation as described in Deed Book 4763, Page 177; thence along the easterly line of the aforesaid lands and along the easterly line of the lands of Beacon 7600 Statesville, LLC as described in Deed Book 27116, Page 225 for the following two (2) courses; 1) North 04°25'17" East a distance of 418.97 feet to an existing concrete monument; 2) North 00°09'40" East a distance of 532.90 feet to a new iron rod, situated on the southerly line of the lands of Bic Consumer Products Manufacturing Company Inc. as described in Deed Book 11016, Page 149 and being Lot 2 as shown on Map Book 40, Page 717; thence along the southerly line of the Lot 2 South 72°21'26" East a distance of 502.25 feet to an existing iron rod, situated at a common corner between Lot 2 and Lot 3 as shown on the aforesaid Map Book 40, Page 717; thence with the southerly line of the aforesaid Lot 3 and also being the lands of Icon IPV Allagash NC Owner Pool 5 NC/TN, LP as described in Deed Book 29816, Page 28, South 72°14'51" East a distance of 567.58 feet to an existing iron rod, situated at the southwesterly corner of Lot 13 as shown on Map Book 43, Page 133; thence along the southerly line of Lot 13 and Lot 12 as shown on the aforesaid Map Book 43, Page 133, South 68°49'14" East a distance of 308.81 feet to an existing iron rod, situated on the westerly line of Common Open Space as shown on Map Book 41, Page 339; thence with the westerly line of the aforesaid Common Open Space and with the westerly line of Map Book 4, Page 641 for the following two (2) courses and distances; 1) South 05°00'11" East passing an existing iron pipe at 155.32 feet for a total distance of 510.20 feet to an existing concrete monument; 2) South 06°44'15" West passing an existing iron pipe at 636.51 feet for a total distance of 636.51 feet to an existing iron rod, situated on the northerly line of the lands of KSS Charlotte, LLC as described in Deed Book 25481, Page 150; thence with the northerly, westerly and southerly line of the aforesaid lands for the following ten (10) courses and distances; 1) North 59°06'46" West a distance of 285.87 feet to an existing iron rod; 2) South 33°11'50" West a distance of 67.20 feet to an existing iron rod; 3) South 54°11'00" West a distance of 127.18 feet to an existing iron rod; 4) South 41°56'15" West a distance of 39.71 feet to an existing iron rod; 5) South 30°43'59" West a distance of 44.24 feet to an existing iron rod; 6) South 21°46'42" West a distance of 51.57 feet to an existing iron rod; 7) South 09°40'04" West a distance of 128.76 feet to an existing iron rod; 8) South 58°44'44" West a distance of 90.16 feet to an existing iron rod; 9) South 14°47'06" East a distance of 707.56 feet to an existing iron rod; 10) South 31°35'59" East a distance of 1460.89 feet to an existing iron rod, situated on the northwesterly margin of Old Statesville Road (NC Highway)(a variable width public right-of-way) as described in Deed Book 13421, Page 554 and Deed Book 13470, Page 99 & 103; thence along the aforesaid northwesterly margin South 39°34'30" West a distance of 142.21 feet to a new iron rod, situated on northerly line of the lands of Con-Way Southern Express, Inc. as described in Deed Book 7931, Page 974 & 982; thence along the northerly line of the aforesaid lands for the following two (2) courses and distances; 1) North 68°54'54" West a distance of 578.94 feet to a new iron rod; 2) North 70°21'14" West a distance of 576.76 feet to an existing capped iron rod, situated at the southeasterly corner of the Emile G. Crouch Family Realty, Inc. as described in Deed Book 29161, Page 56; thence along the easterly line of the aforesaid lands North 48°47'16" West a distance of 489.51 feet to an existing capped iron rod, situated at the southeasterly corner of the aforesaid Lot 1 as shown on Map Book 41, Page 925; thence along the easterly and northerly line of the aforesaid Lot 1 for the following five (5) courses and distances; 1) North 14°53'01" West a distance of 557.60 feet to a new iron rod; 2) North 69°12'55" West a distance of 390.31 feet to an existing iron rod; 3) North 13°56'52" West a distance of 102.78 feet to an existing iron rod; 4) North 45°42'56" West a distance of 115.13 feet to an existing iron rod; 5) South 80°40'21" West a distance of 241.85 feet to the Point of Beginning; Containing 3,981,656 square feet or 91.4063 acres, as shown on a survey prepared by R. B. Pharr & Associates, P.A. dated December 9, 2015 (Map File No. W-4939)(Project No. 84191).

NOTES:

1. THIS PLAT IS NOT FOR RECORDATION AS PER G.S. 47-30 AS AMENDED.

2. ALL CORNERS MONUMENTED AS SHOWN.

3. THE LOCATION OF ALL OVERHEAD UTILITIES SHOWN ON THIS MAP ARE APPROXIMATE, BASED ON INFORMATION PROVIDED BY OTHERS OF UTILITY LOCATION. UTILITY LOCATIONS AS SHOWN HEREON ARE INTENDED FOR CONTROL ONLY. ACTUAL LOCATIONS ARE DEPENDENT ON WHAT WOULD BE VERIFIED WITH TRACING INDIVIDUAL UTILITY COMPANY RECORDS PRIOR TO CONSTRUCTION.

4. BROKEN LINES INDICATE PROPERTY LINES NOT SURVEYED.

5. STATESVILLE ROAD AND OLD STATESVILLE ROAD ARE SHOWN AS A "MAJOR THOROUGHFARE" ON THE MECKLENBURG-UNION METROPOLITAN PLANNING ORGANIZATION THOROUGHFARE PLAN OF 2004 AND MAY BE SUBJECT TO A FUTURE RIGHT-OF-WAY OF 50' FROM CENTERLINE.

6. THE OFF-SITE RIGHT-OF-WAY SHOWN HEREON IS FOR ILLUSTRATIVE PURPOSES ONLY. THE UNDERSIGNED CERTIFIES ONLY TO THE RIGHT-OF-WAYS SURVEYED, AND DOES NOT CERTIFY TO THE RIGHT OF WAY WIDTH OF ANY ADJACENT PROPERTIES.

7. AT THE TIME OF THIS SURVEY, THERE WAS VISIBLE EVIDENCE OF ENCROACHMENTS OR VIOLATIONS, AS SHOWN HEREON AND BEING MISCELLANEOUS FENCES AROUND THE PERIMETER OF THE PROPERTY.

8. PER A LETTER BY THE CITY OF CHARLOTTE ZONING OFFICE, ENTITLED "CHARLOTTE CODE ENFORCEMENT" DATED DECEMBER 10, 2015, THE CITY IS UNAWARE OF ANY VARIANCES OR EXCEPTIONS THAT APPLY TO THIS PROPERTY AND THERE ARE NO ZONING VIOLATIONS ON THE SUBJECT PROPERTY AT THIS TIME.

9. SOME PHYSICAL FEATURES AND ALL CONTOURS OBTAINED FROM AERIAL PHOTOGRAPHY PROVIDE BY INDEPENDENT MAPPING CONSULTANTS, INC. JOB # 2015-141; CONTACT INFORMATION: 8037 CORPORATE CENTER DRIVE, SUITE 300, CHARLOTTE, NC 28226 (704) 540-0007.

PARKING:

PARKING REQUIREMENTS: .25 SPACES PER 1,000 SQUARE FEET PLUS 1 SPACE PER 400 SQUARE FEET FOR ANY ACCESSORY OFFICE USE.

REGULAR PARKING SPACES	*19*
HANDICAPPED PARKING SPACES	*0*
TOTAL PARKING SPACES	*19*

ALTA CERTIFICATION:

TO: BEACON DEVELOPMENT COMPANY;MYA AND CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS , AND INCLUDES ITEMS 1, 2, 3, 4, 7a, 7b(1), 7c, 8, 9, 11a, 13, 16, 17, AND 18 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 09, 2015.

JUSTIN F. CLONINGER *DATE*
NCPLS. L-4430
jcloninger@rbpharr.com

FLOOD CERTIFICATION

THIS IS TO CERTIFY THAT THE SUBJECT PROPERTY IS NOT *LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, DATED* SEPTEMBER 2, 2015
COMMUNITY PANEL NO: 370159 4557K (ZONE: X UNSHADED)

THIS IS TO CERTIFY THAT ON THE 9TH *DAY OF* DECEMBER *20* 15 *AN ACTUAL SURVEY WAS MADE UNDER MY SUPERVISION OF THE PROPERTY SHOWN ON THIS PLAT, AND THAT THE BOUNDARY LINES AND THE IMPROVEMENTS, IF ANY, ARE AS SHOWN HEREON. THIS PLAT MEETS THE MINIMUM STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA, BOARD RULE .1600 (21 NCAC 56) AND THE RATIO OF PRECISION DOES NOT EXCEED AN ERROR OF CLOSURE OF ONE (1) FOOT PER 10,000 FEET OF PERIMETER SURVEYED NOR 20 SECONDS TIMES THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.*

SIGNED _____

JUSTIN F. CLONINGER
L-4430
NORTH CAROLINA
PROFESSIONAL SEAL
PRELIMINARY PLAT
NOT FOR RECORDATION
CONVEYANCE OR SALE

LINE #	BEARING	DISTANCE
L1	N13°56'52"W	102.78'
L2	N45°42'56"W	115.13'
L3	N12°35'32"W	184.59'
L4	N45°45'28"W	287.26'
L5	S75°07'46"W	100.46'
L6	S33°11'50"W	67.20'
L7	S54°11'00"W	127.18'
L8	S41°56'15"W	39.71'
L9	S30°43'59"W	44.24'
L10	S21°46'42"W	51.57'
L11	S09°40'04"W	128.76'
L12	S58°44'44"W	90.16'
L13	S39°34'30"W	142.21'
L14	S08°58'03"E	361.47'
L15	S06°47'32"W	103.19'
L16	S13°01'10"W	197.10'
L17	S09°14'25"W	99.90'
L18	S72°16'05"E	300.68'
L19	S04°26'13"E	20.05'
L20	N44°38'41"E	37.25'
L21	N29°28'45"E	83.74'
L22	N48°45'14"W	18.57'

REVISIONS
12/31/15 – GENERAL CORRECTIONS.
01/26/16 – ADD AERIAL AND INVERT INFORMATION.
03/10/16 – ADD STORM INVERT & CONTOUR INFORMATION.
03/28/16 – ADD STORM INVERTS & STREAM.

ALTA/ACSM LAND TITLE SURVEY PREPARED FOR:
BEACON DEVELOPMENT COMPANY
7100 STATESVILLE RD & 7000 APACHE AVE.
LONG CREEK TOWNSHIP, CITY OF CHARLOTTE,
MECKLENBURG COUNTY, NC
DEED REFERENCE: 2747-271 & 9581-386
MAP REFERENCE: 28-854
TAX PARCEL #: 037-203-17 & 037-203-43

R.B. PHARR & ASSOCIATES, P.A.
SURVEYING & MAPPING
LICENSURE NO: C-1471
420 HAWTHORNE LANE CHARLOTTE, N.C. 28204 TEL: (704) 376-2186

CREW:	DRAWN:	REVISED:	SCALE:	DATE:	FILE NO. W-4939
LC	CW	CW	1" = 150'	DECEMBER 9, 2015	JOB NO. 84371

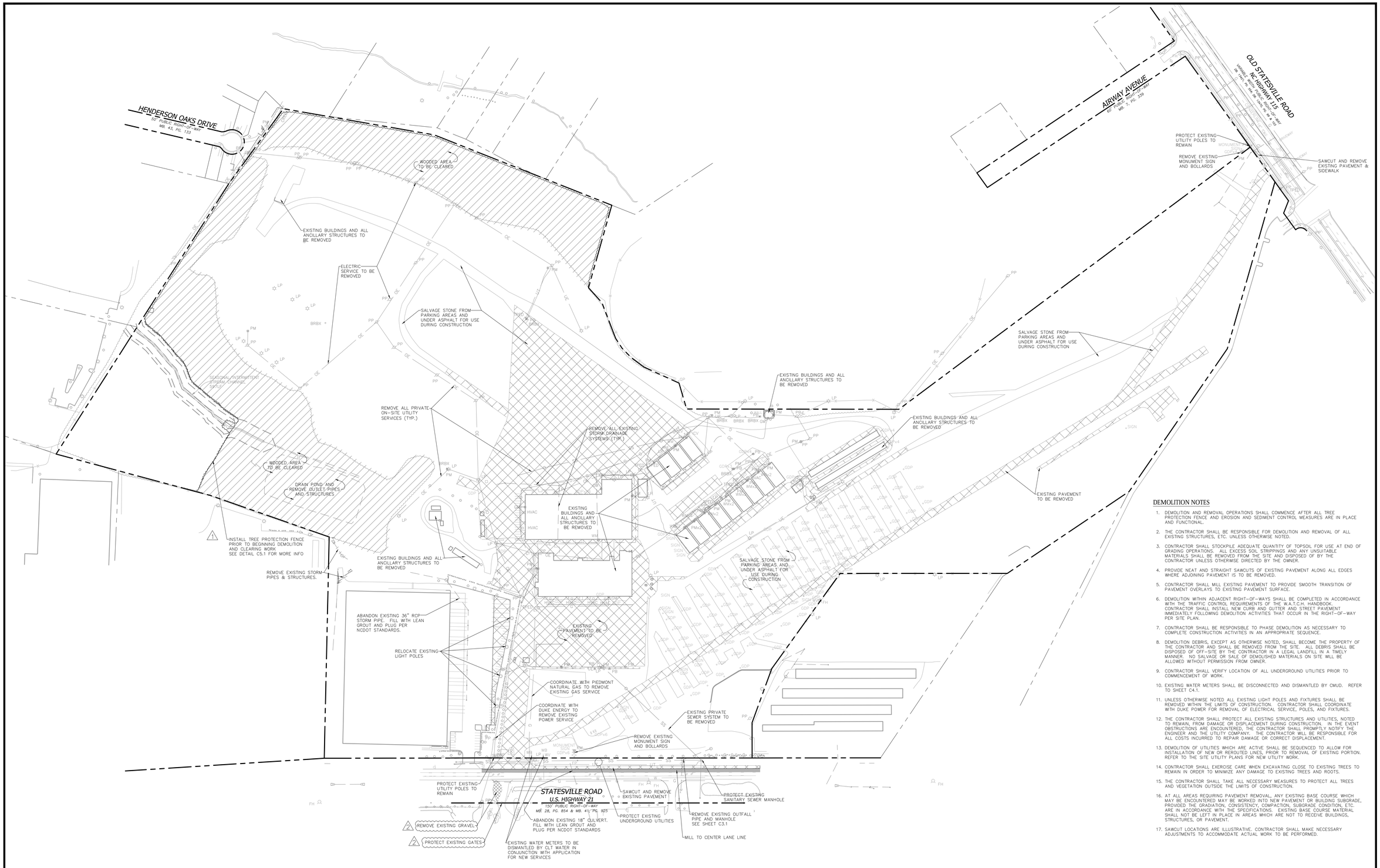
PLOTTED: 3/28/2016
C:\CARLSON PROJECTS\RB PHARR\84371\DWG\84371.DWG

REVISIONS
DATE

JOB #	15029
DATE:	04/01/16
SCALE:	1" = 150'
DRAWN BY:	JAW
APPROVED BY:	JCO

C1.1

July 15, 2016 - 11:23am By: bhraun
P:\15029 Project Runway\Dwg\15029-C1.1 EXCON.dwg



DEMOLITION NOTES

1. DEMOLITION AND REMOVAL OPERATIONS SHALL COMMENCE AFTER ALL TREE PROTECTION FENCE AND EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND FUNCTIONAL.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING STRUCTURES, ETC. UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL STOCKPILE ADEQUATE QUANTITY OF TOPSOIL FOR USE AT END OF GRADING OPERATIONS. ALL EXCESS SOIL STRIPPINGS AND ANY UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER.
4. PROVIDE NEAT AND STRAIGHT SAWCUTS OF EXISTING PAVEMENT ALONG ALL EDGES WHERE ADJOINING PAVEMENT IS TO BE REMOVED.
5. CONTRACTOR SHALL MILL EXISTING PAVEMENT TO PROVIDE SMOOTH TRANSITION OF PAVEMENT OVERLAYS TO EXISTING PAVEMENT SURFACE.
6. DEMOLITION WITHIN ADJACENT RIGHT-OF-WAYS SHALL BE COMPLETED IN ACCORDANCE WITH THE TRAFFIC CONTROL REQUIREMENTS OF THE W.A.T.C.H. HANDBOOK. CONTRACTOR SHALL INSTALL NEW CURB AND GUTTER AND STREET PAVEMENT IMMEDIATELY FOLLOWING DEMOLITION ACTIVITIES THAT OCCUR IN THE RIGHT-OF-WAY PER SITE PLAN.
7. CONTRACTOR SHALL BE RESPONSIBLE TO PHASE DEMOLITION AS NECESSARY TO COMPLETE CONSTRUCTION ACTIVITIES IN AN APPROPRIATE SEQUENCE.
8. DEMOLITION DEBRIS, EXCEPT AS OTHERWISE NOTED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ALL DEBRIS SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR IN A LEGAL LANDFILL IN A TIMELY MANNER. NO SALVAGE OR SALE OF DEMOLISHED MATERIALS ON SITE WILL BE ALLOWED WITHOUT PERMISSION FROM OWNER.
9. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF WORK.
10. EXISTING WATER METERS SHALL BE DISCONNECTED AND DISMANTLED BY CMUD. REFER TO SHEET C4.1.
11. UNLESS OTHERWISE NOTED ALL EXISTING LIGHT POLES AND FIXTURES SHALL BE REMOVED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH DUKE POWER FOR REMOVAL OF ELECTRICAL SERVICE, POLES, AND FIXTURES.
12. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND UTILITIES, NOTED TO REMAIN, FROM DAMAGE OR DISPLACEMENT DURING CONSTRUCTION. IN THE EVENT OBSTRUCTIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER AND THE UTILITY COMPANY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR DAMAGE OR CORRECT DISPLACEMENT.
13. DEMOLITION OF UTILITIES WHICH ARE ACTIVE SHALL BE SEQUENCED TO ALLOW FOR INSTALLATION OF NEW OR REROUTED LINES, PRIOR TO REMOVAL OF EXISTING PORTION. REFER TO THE SITE UTILITY PLANS FOR NEW UTILITY WORK.
14. CONTRACTOR SHALL EXERCISE CARE WHEN EXCAVATING CLOSE TO EXISTING TREES TO REMAIN IN ORDER TO MINIMIZE ANY DAMAGE TO EXISTING TREES AND ROOTS.
15. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL TREES AND VEGETATION OUTSIDE THE LIMITS OF CONSTRUCTION.
16. AT ALL AREAS REQUIRING PAVEMENT REMOVAL, ANY EXISTING BASE COURSE WHICH MAY BE ENCOUNTERED MAY BE WORKED INTO NEW PAVEMENT OR BUILDING SUBGRADE, PROVIDED THE GRADIATION, CONSISTENCY, COMPACTION, SUBGRADE CONDITION, ETC. ARE IN ACCORDANCE WITH THE SPECIFICATIONS. EXISTING BASE COURSE MATERIAL SHALL NOT BE LEFT IN PLACE IN AREAS WHICH ARE NOT TO RECEIVE BUILDINGS, STRUCTURES, OR PAVEMENT.
17. SAWCUT LOCATIONS ARE ILLUSTRATIVE. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS TO ACCOMMODATE ACTUAL WORK TO BE PERFORMED.

LEGEND

	PROPERTY LINE OR R/W
X	EXISTING CURB & GUTTER
	EXISTING FENCING
	EXISTING STORM PIPE
SS	EXISTING SANITARY SEWER PIPE
W	EXISTING WATER LINE
UE	EXISTING UNDERGROUND POWER LINE
OE	EXISTING OVERHEAD POWER LINE
FO	EXISTING COMMUNICATION LINE
G	EXISTING NATURAL GAS LINE
	EXISTING TREE LINE
855	EXISTING CONTOURS
854	
	EXISTING PAVEMENT TO BE REMOVED
	EXISTING ITEM TO BE DEMOLISHED
X	EXISTING TREE TO BE REMOVED

NORTH

GRAPHIC SCALE

120 0 60 120 240 480

(IN FEET)
1 inch = 120 ft.

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1433 • F: 704-749-1433

DEMOLITION PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

REGISTERED ENGINEERING FIRM C-3139

NORTH CAROLINA PROFESSIONAL SEAL 026780 ENGINEER JOHN CARLTON OSBORN

Jul 28 2016 9:38 AM

	DATE	REVISIONS
2	07/19/16	REVISED PER NCDOT COMMENTS
1	06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 120'
DRAWN BY:	JAW
APPROVED BY:	JCO

C1.2

July 19, 2016 - 11:34am By: JWinter
P:\15029 Project Runway\Dwg\15029-C1.2 DEMO.dwg

SITE NOTES

1. PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN ARE BASED ON A SURVEY PREPARED BY R.B. PHARR & ASSOCIATES, DATED DECEMBER 9, 2015
2. ALL ROAD IMPROVEMENTS AT STATESVILLE ROAD & OLD STATESVILLE ROAD ARE TO BE COORDINATED WITH THE CITY OF CHARLOTTE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
3. DEVELOPER WILL PROVIDE STREET SIGNS PER CLDSM# 50.05 (9" SIGNS ONLY)
4. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
5. 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.
6. THE PURPOSE OF THE STORM DRAINAGE EASEMENT (SDE) IS TO PROVIDE STORM WATER CONVEYANCE. BUILDINGS ARE NOT PERMITTED IN THE EASEMENT AREA. ANY OTHER OBJECTS WHICH IMPEDE STORM WATER FLOW OR SYSTEM MAINTENANCE ARE ALSO PROHIBITED.
7. 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.
8. NON-STANDARD 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. FOR CITY OF CHARLOTTE MAINTAINED STREETS, CONTACT CDOT AT (704) 336-3888.
9. 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.
10. CERTIFICATION AND STREET CUT PERMITS ARE REQUIRED FOR UTILITY CUTS ON CITY STREETS. ALLOW 7 DAYS PROCESSING FOR PERMIT. FOR INFORMATION CONTACT CHARLOTTE DEPARTMENT OF TRANSPORTATION (704-336-4025) OR VISIT http://www.charmeck.org/Departments/Transportation/Street+Maintenance/home.htm
11. SIDEWALK WITHIN THE CITY'S R/W THAT REQUIRES REPLACEMENT AS PART OF THE DEVELOPMENT AND/OR STREET IMPROVEMENTS SHOULD BE PHASED IN SUCH A WAY AS TO MINIMIZE THE DURATION OF THE SIDEWALK CLOSURE TO THE EXTENT FEASIBLE. THE DEVELOPER SHOULD MAKE EVERY ATTEMPT TO HAVE SIDEWALK REPAIRED AND REOPENED FOR PUBLIC USE WITHIN 30 DAYS OF REMOVAL.
12. ANY WORK WITHIN THE CITY'S R/W THAT REQUIRES CLOSURE OF THE SIDEWALK OR TRAVEL LANE FOR LESS THAN 30 DAYS REQUIRES A R/W USE PERMIT. TRAFFIC CONTROL PLANS FOR ANY SIDEWALK OR TRAVEL LANE CLOSURES MUST BE SUBMITTED AS PART OF THE R/W USE PERMIT REQUEST. TRAFFIC CONTROL PLANS MUST BE IN ACCORDANCE WITH CDOT'S WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH) AND MUST BE REVIEWED AND APPROVED. CONTRACTOR SHALL CONTACT CDOT AT LEAST 5 BUSINESS DAYS IN ADVANCE OF BEGINNING OF WORK AT (704) 432-1562.
13. CONSTRUCTION STAGING WITHIN CITY R/W LASTING MORE THAN 30 DAYS REQUIRES A R/W LEASE AGREEMENT. CONTRACTOR SHALL CONTACT CDOT AT (704) 336-2562.
14. RIGHT-OF-WAY CLOSURES LONGER THAN 30 DAYS REQUIRE A R/W LEASE AGREEMENT WHICH WILL INCLUDE THE SUBMITTAL OF A TRAFFIC CONTROL PLAN. TRAFFIC CONTROL PLANS REQUIRED THROUGH A LEASE AGREEMENT MAY BE DIFFERENT FROM THE ONE REQUIRED DURING THE LAND DEVELOPMENT PLAN REVIEW AND ARE SUBJECT TO REVISIONS. THE REVISED TRAFFIC CONTROL PLANS MUST BE SUBMITTED AS PART OF THE LEASE AGREEMENT PROCESS FOR APPROVAL PRIOR TO START OF R/W CLOSURES. CONTRACTOR SHALL CONTACT CDOT AT (704) 336-2562.
15. PER SECTION 18-175(c) OF CITY CODE AND SECTION 10.0 OF THE CITY'S POST CONSTRUCTION CONTROLS ADMINISTRATIVE MANUAL, ALL REQUIRED NATURAL AREAS AND/OR POST CONSTRUCTION CONTROLS EASEMENT (PCCEs) MUST BE RECORDED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
16. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING BENCHMARKS AND OTHER REFERENCE POINTS THROUGHOUT THE CONSTRUCTION PERIOD.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL CONSTRUCTION ELEMENTS. ALL DISCREPANCIES IN DIMENSIONING SHALL BE REPORTED TO THE ENGINEER AND OWNER IMMEDIATELY.
18. DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE SHOWN. REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
19. WHEN DETAILS ARE PROVIDED, CONTRACTOR SHALL CONSTRUCT JOB PER SPECIFIC DETAILS, AND NOT BY SCALING FROM THESE PLANS.
20. ALL IMPROVEMENTS AND WORK SHALL BE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE STATE AND LOCAL STANDARDS. IN THE ABSENCE OF SPECIFIC PRODUCT SPECIFICATIONS OR CONSTRUCTION PROCEDURE, CONTRACTOR SHALL REFER TO THE 2012 NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, AND SHALL SUBMIT THE DETAIL/SPECIFICATIONS TO THE ENGINEER FOR APPROVAL.
21. IF A CONFLICT EXISTS BETWEEN SPECIFICATIONS ON THESE PLANS AND SPECIFICATIONS REFERENCED ON THESE PLANS, CONTRACTOR WILL BE HELD TO THE STRICTER SPECIFICATION.
22. IF A CONFLICT EXISTS BETWEEN SPECIFICATIONS AND DETAILS ON THESE PLANS AND MANUFACTURERS RECOMMENDATIONS, THE CONTRACTOR WILL BE HELD TO THE STRICTER SPECIFICATION.
23. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SITE IN A MANNER SUCH THAT WORKERS, OWNER REPRESENTATIVES, AND THE GENERAL PUBLIC IS PROTECTED FROM HARM. CONTRACTOR MAY INSTALL TEMPORARY PERIMETER FENCING AS APPROVED BY OWNER. CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL NECESSARY PERMITS ARE OBTAINED PRIOR TO INSTALLATION OF FENCING.
24. ROADWAY MARKING, STRIPING, SIGNS AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD) AND SUBSEQUENT REVISIONS AND ADDENDUMS, AS PUBLISHED BY NCDOT AND CDOT.
25. UNLESS OTHERWISE INDICATED, ALL PAVEMENT MARKINGS SHALL BE PAINT INSTALLED PER NCDOT STD. SPEC. SECTION 1205.
26. UNLESS OTHERWISE INDICATED, PARKING STALLS SHALL BE 4" WHITE LINES.
27. CONTRACTOR SHALL VERIFY THAT ALL REQUIRED ENCROACHMENT PERMITS ARE IN PLACE BEFORE WORKING IN ANY EASEMENTS AND RIGHT-OF-WAYS. CONTRACTOR SHALL ADHERE TO ALL CONDITIONS AND PROVISIONS OF THE ENCROACHMENT DOCUMENTS. CONTRACTOR SHALL CONTACT BOB STALEY WITH CDOT AT 704-432-1562 PRIOR TO CONSTRUCTION TO OBTAIN THE NECESSARY PERMITS FOR ANY CONSTRUCTION ACTIVITIES WITHIN THE PUBLIC RIGHT OF WAY.
28. CONTRACTOR SHALL ADHERE TO ALL CONDITIONS AND PROVISIONS OF THE PROJECT PERMITS AND APPROVALS INCLUDING BUT NOT LIMITED TO DRIVEWAY PERMITS AND "APPROVED AS NOTED" COMMENTS. CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCIES BETWEEN CONDITIONS/PROVISIONS AND CONSTRUCTION DOCUMENTS TO ENGINEER AND OWNER.
29. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
30. CONTACT THE UTILITY COMPANY TO RELOCATE ANY EXISTING UTILITY POLES. ALL EXISTING FACILITIES WHICH CONFLICT WITH THE IMPROVEMENTS UNDER THE SCOPE OF THIS PROJECT MUST BE RELOCATED AT THE EXPENSE OF THE APPLICANT.
31. ALL DEVELOPMENT CREATING A TOTAL OF 20,000 SQUARE FEET OF IMPERVIOUS AREA SINCE SEPTEMBER 1978 WILL REQUIRE STORM DRAINAGE DETENTION.
32. TREES WITHIN THE STREET RIGHT OF WAY ARE PROTECTED BY LAW. A PERMIT IS REQUIRED FROM THE CITY ARBORIST AT (704) 336-5753 PRIOR TO THE REMOVAL OF ANY RIGHT OF WAY TREES. ALL TREES OVER 8" IN DIAMETER AS MEASURED 4.5' ABOVE GROUND AND LOCATED WITHIN THE SETBACK ARE PROTECTED BY LAW. CONTACT LAND DEVELOPMENT AT (704) 336-6692 FOR REQUIRED PERMITS.
33. BEFORE YOU DIG STOP. CALL THE NC ONE-CALL CENTER AT 1-800-632-4949. IT'S THE LAW.
34. CONTRACTOR SHALL INSTALL PVC SLEEVES UNDER PAVED AREAS FOR UTILITY AND IRRIGATION BEING INSTALLED AFTER PAVING OPERATIONS COMMENCE. COORDINATE WITH EACH UTILITY AND IRRIGATION INSTALLER FOR NUMBER OF SLEEVES, LOCATION, AND SIZE REQUIRED.
35. CONTRACTOR SHALL REVIEW COMPLETE SET OF PLANS FOR COORDINATION BETWEEN CIVIL, ARCHITECTURAL, LANDSCAPE, MEP, ETC. PRIOR TO CONSTRUCTION.
36. ALL WALKS AND OTHER PAVED AREAS SHALL COMPLY WITH ADA CODE FOR LONGITUDINAL SLOPE AND CROSS SLOPE. WALK SLOPES SHALL NOT EXCEED 5%, AND SHALL NOT EXCEED 2% CROSS SLOPE UNLESS OTHERWISE NOTED.

TREE SAVE AREA REQUIREMENTS:

15% OF SITE PRESERVED OR REPLANTED FOR TREE SAVE

101.36 ACRES x 15% = 15.20 ACRES REQUIRED (PARCEL 5 NOT INCLUDED)

PROVIDED: 15.49 ACRES IN 5 AREAS INCLUDES
4.15 ACRES PRESERVED
11.34 ACRES REPLANTED @ 36 TREES/AC = 408 TREES PROVIDED

ZONING CODE SUMMARY

PROJECT NAME: METROLINA PARK
PROJECT ADDRESS: STATESVILLE ROAD — TAX PARCEL: 03720317, 03720319, 03720343, 03720341
OWNER: BEACON PARTNERS — PHONE #: –
OWNER ADDRESS: 610 EAST MOREHEAD ST., CHARLOTTE, NC 28202
PLANS PREPARED BY: ORSBORN ENGINEERING GROUP — PHONE #: (704) 749-1432
ZONING: I-1 — JURISDICTION: CHARLOTTE
PROPOSED USE: INDUSTRIAL
AVERAGE BUILDING HEIGHT: <40 FEET — STORIES: 1
BUILDING COVERAGE: 1,563,205 SQ. FT. — GROSS FLOOR AREA: 1,563,205 SQ. FT.
OVERALL LOT SIZE: 95.67 SQ. FT./ACRES — NUMBER OF BUILDINGS: 1 EXISTING, 5 PROPOSED — RATIO: 0.38:1
NUMBER OF LOTS: 7

YARD REQUIREMENTS:
SETBACK (FRONT): 20 FT.
SETBACK (SIDE): 10 FT.
SIDE YARD: 5 FT.
REAR YARD: 10 FT.

REQUIRED BUFFERS:
FRONT: NO / YES
REAR: NO / YES 100 FT.
SIDE (L): NO / YES
SIDE (R): NO / YES

REQUIRED SCREENING:
REAR: NO / YES
REAR: NO / YES
SIDE (L): NO / YES
SIDE (R): NO / YES
PARKING ONLY: NO / YES

LANDSCAPING REQUIREMENTS:

	IMPERVIOUS COVERAGE	INTERIOR LANDSCAPING REQUIRED	INTERIOR LANDSCAPING PROVIDED
PARCEL 1:	200,594 SF	20,594 SF	129,684 SF
PARCEL 2:	929,247 SF	92,925 SF	846,461 SF
PARCEL 3:	485,041 SF	48,504 SF	189,586 SF
PARCEL 4:	604,663 SF	60,466 SF	184,460 SF
PARCEL 5:	268,822 SF	26,882 SF	74,914 SF
PARCEL 6:	0 SF	0 SF	100,097 SF
PARCEL 7:	0 SF	0 SF	58,549 SF

PARKING DATA:

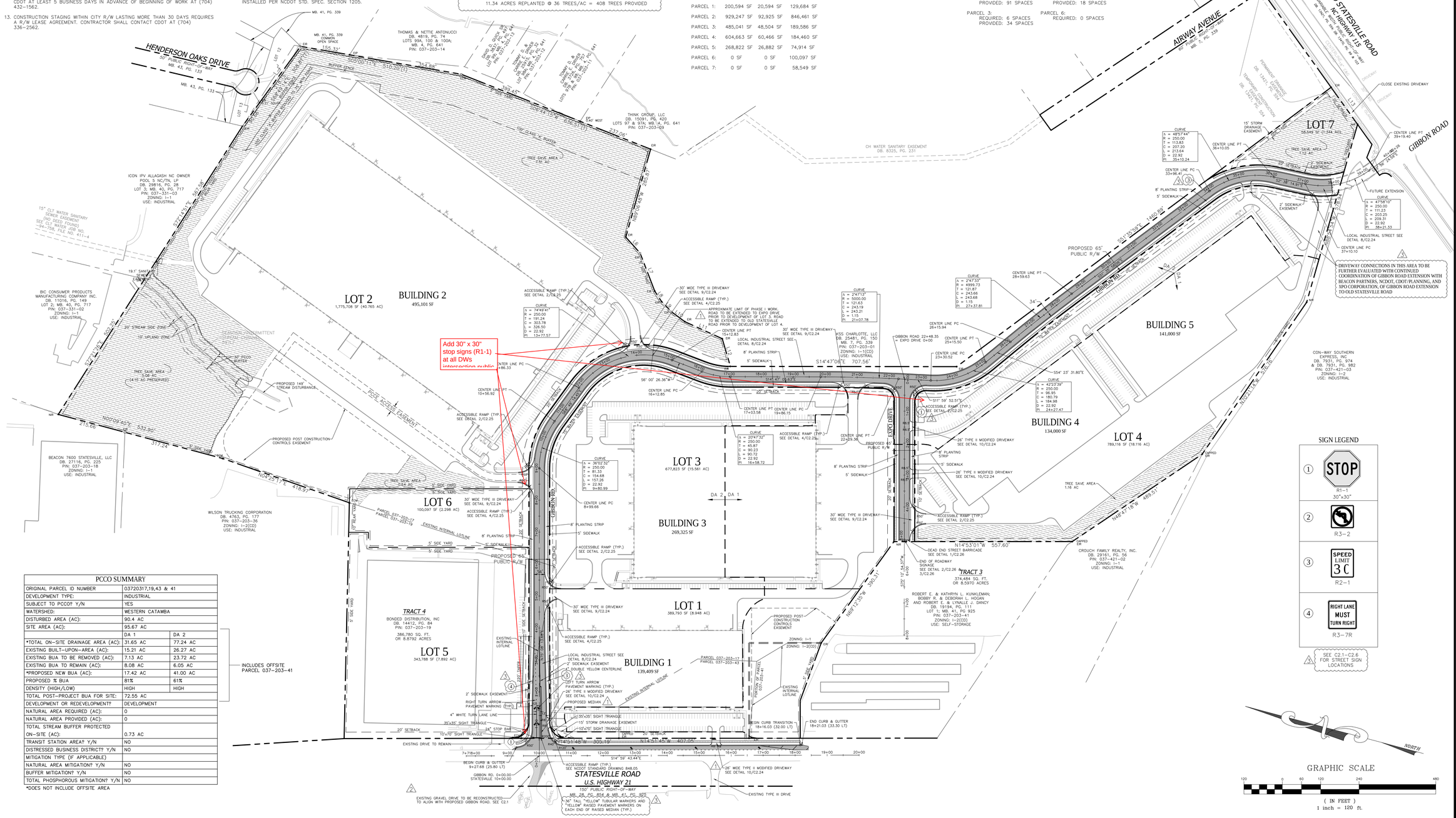
AUTOMOBILE:
REQUIRED: 1 SPACE/4000 SF OF WAREHOUSE USE + 1 SPACE/400 SF OF OFFICE USE

PARCEL 1: REQUIRED: 44 SPACES PROVIDED: 123 SPACES
PARCEL 2: REQUIRED: 142 SPACES PROVIDED: 165 SPACES
PARCEL 3: REQUIRED: 86 SPACES PROVIDED: 246 SPACES
PARCEL 4: REQUIRED: 54 SPACES PROVIDED: 406 SPACES
PARCEL 5: REQUIRED: 53 SPACES PROVIDED: 53 SPACES
PARCEL 6: REQUIRED: 0 SPACES
PARCEL 7: REQUIRED: 0 SPACES

BICYCLE:
REQUIRED (SHORT TERM) = 1% OF AUTO SPACES REQUIRED
REQUIRED (LONG TERM) = 1/40,000 SF

PARCEL 1: REQUIRED (SHORT TERM): 0 SPACES; PROVIDED (SHORT TERM): 0 SPACES; REQUIRED (LONG TERM): 3 SPACES; PROVIDED (LONG TERM): 3 SPACES INSIDE BUILDING
PARCEL 2: REQUIRED (SHORT TERM): 1 SPACES; PROVIDED (SHORT TERM): 2 SPACES; REQUIRED (LONG TERM): 12 SPACES; PROVIDED (LONG TERM): 12 SPACES INSIDE BUILDING
PARCEL 3: REQUIRED (SHORT TERM): 1 SPACES; PROVIDED (SHORT TERM): 2 SPACES; REQUIRED (LONG TERM): 7 SPACES; PROVIDED (LONG TERM): 7 SPACES INSIDE BUILDING
PARCEL 4: REQUIRED (SHORT TERM): 1 SPACES; PROVIDED (SHORT TERM): 2 SPACES; REQUIRED (LONG TERM): 7 SPACES; PROVIDED (LONG TERM): 7 SPACES INSIDE BUILDINGS
PARCEL 5: EXISTING BUILDING
PARCEL 6: REQUIRED (SHORT TERM): 0 SPACES; REQUIRED (LONG TERM): 0 SPACES
PARCEL 7: REQUIRED (SHORT TERM): 0 SPACES; REQUIRED (LONG TERM): 0 SPACES

LOADING:
PARCEL 1: REQUIRED: 5 SPACES PROVIDED: 26 SPACES
PARCEL 2: REQUIRED: 6 SPACES PROVIDED: 91 SPACES
PARCEL 3: REQUIRED: 6 SPACES PROVIDED: 34 SPACES
PARCEL 4: REQUIRED: 6 SPACES PROVIDED: 44 SPACES
PARCEL 5: REQUIRED: 6 SPACES PROVIDED: 18 SPACES
PARCEL 6: REQUIRED: 0 SPACES
PARCEL 7: REQUIRED: 0 SPACES



PCCO SUMMARY		
ORIGINAL PARCEL ID NUMBER	03720317,19,43 & 41	
DEVELOPMENT TYPE:	INDUSTRIAL	
SUBJECT TO PCCO? Y/N	YES	
WATERSHED:	WESTERN CATAWBA	
DISTURBED AREA (AC):	90.4 AC	
SITE AREA (AC):	95.67 AC	
	DA 1	DA 2
*TOTAL ON-SITE DRAINAGE AREA (AC):	31.65 AC	77.24 AC
EXISTING BUILT-UPON-AREA (AC):	15.21 AC	26.27 AC
EXISTING BUA TO BE REMOVED (AC):	7.13 AC	23.72 AC
EXISTING BUA TO REMAIN (AC):	8.08 AC	6.05 AC
*PROPOSED NEW BUA (AC):	17.42 AC	41.00 AC
PROPOSED % BUA	81%	61%
DENSITY (HIGH/LOW)	HIGH	HIGH
TOTAL POST-PROJECT BUA FOR SITE:	72.55 AC	
DEVELOPMENT OR REDEVELOPMENT?	DEVELOPMENT	
NATURAL AREA REQUIRED (AC):	0	
NATURAL AREA PROVIDED (AC):	0	
TOTAL STREAM BUFFER PROTECTED ON-SITE (AC):	0.73 AC	
TRANSIT STATION AREA? Y/N	NO	
DISTRESSED BUSINESS DISTRICT? Y/N	NO	
MITIGATION TYPE (IF APPLICABLE)		
NATURAL AREA MITIGATION? Y/N	NO	
BUFFER MITIGATION? Y/N	NO	
TOTAL PHOSPHOROUS MITIGATION? Y/N	NO	

*DOES NOT INCLUDE OFFSITE AREA

INCLUDES OFFSITE PARCEL 037-203-41

SIGN LEGEND

1. STOP — R1-1 30"x30"
2. R3-2
3. SPEED LIMIT 30 — R2-1
4. RIGHT LANE MUST TURN RIGHT — R3-7R

SEE C2.1-C2.6 FOR STREET SIGN LOCATIONS

GRAPHIC SCALE (IN FEET) 1 inch = 120 ft.

ORSBORN ENGINEERING GROUP
630 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

SUBDIVISION PLAN FOR METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

NORTH CAROLINA PROFESSIONAL ENGINEERING FIRM C-3139

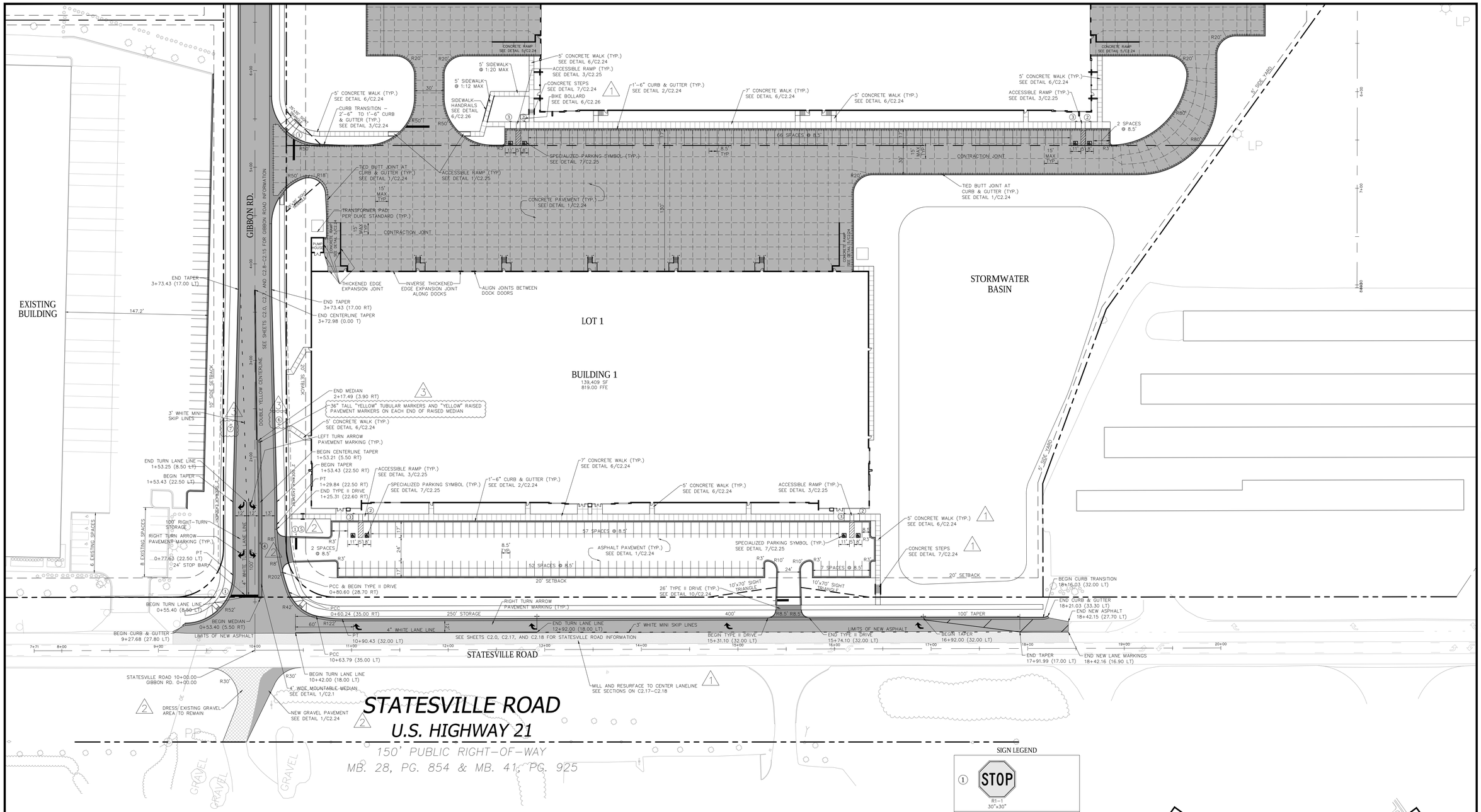
Jul 28 2016 9:28 AM CaSign

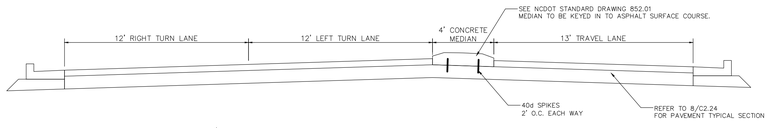
	DATE	REVISIONS
3	07/26/16	REVISED PER CDOT COMMENTS
2	07/19/16	REVISED PER NCDOT COMMENTS
1	06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 120'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.0

July 26, 2016 - 2:24pm By: Wessler
J:\15029 Project Runway\Dwg\15029 C2.0 OVSITE.dwg

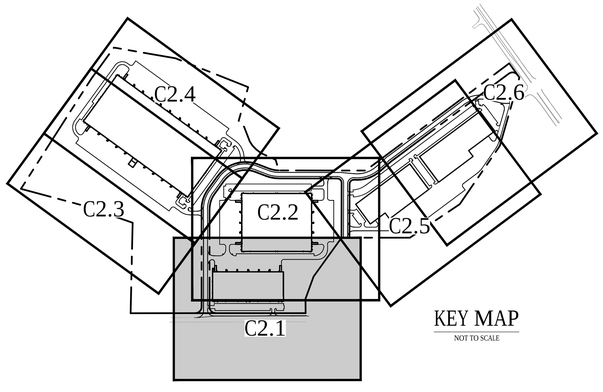




1 4' MOUNTABLE MEDIAN AT GIBBON ROAD AND STATESVILLE ROAD
NTS

SIGN LEGEND

	1	STOP R1-1 30"x30"	
	2	RESERVED PARKING R7-8 / VAN ACCESSIBLE PARKING R7-8a / ACCESSIBLE PARKING R7-8D	ACCESSIBLE PARKING SIGNAGE & STRIPING SEE DETAIL 11/C2.7
	3	VAN R7-8a / RESERVED PARKING R7-8 / VAN ACCESSIBLE PARKING R7-8D	ACCESSIBLE PARKING SIGNAGE & STRIPING SEE DETAIL 11/C2.7
2	4	ONE WAY R6-1R	
2	5	ONLY R3-5R	
3	6	SPEED LIMIT 30 R2-1	
3	7	RIGHT LANE MUST TURN RIGHT R3-7R	



KEY MAP
NOT TO SCALE

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

NORTH

ORSBORN ENGINEERING GROUP
630 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

ENLARGED SITE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

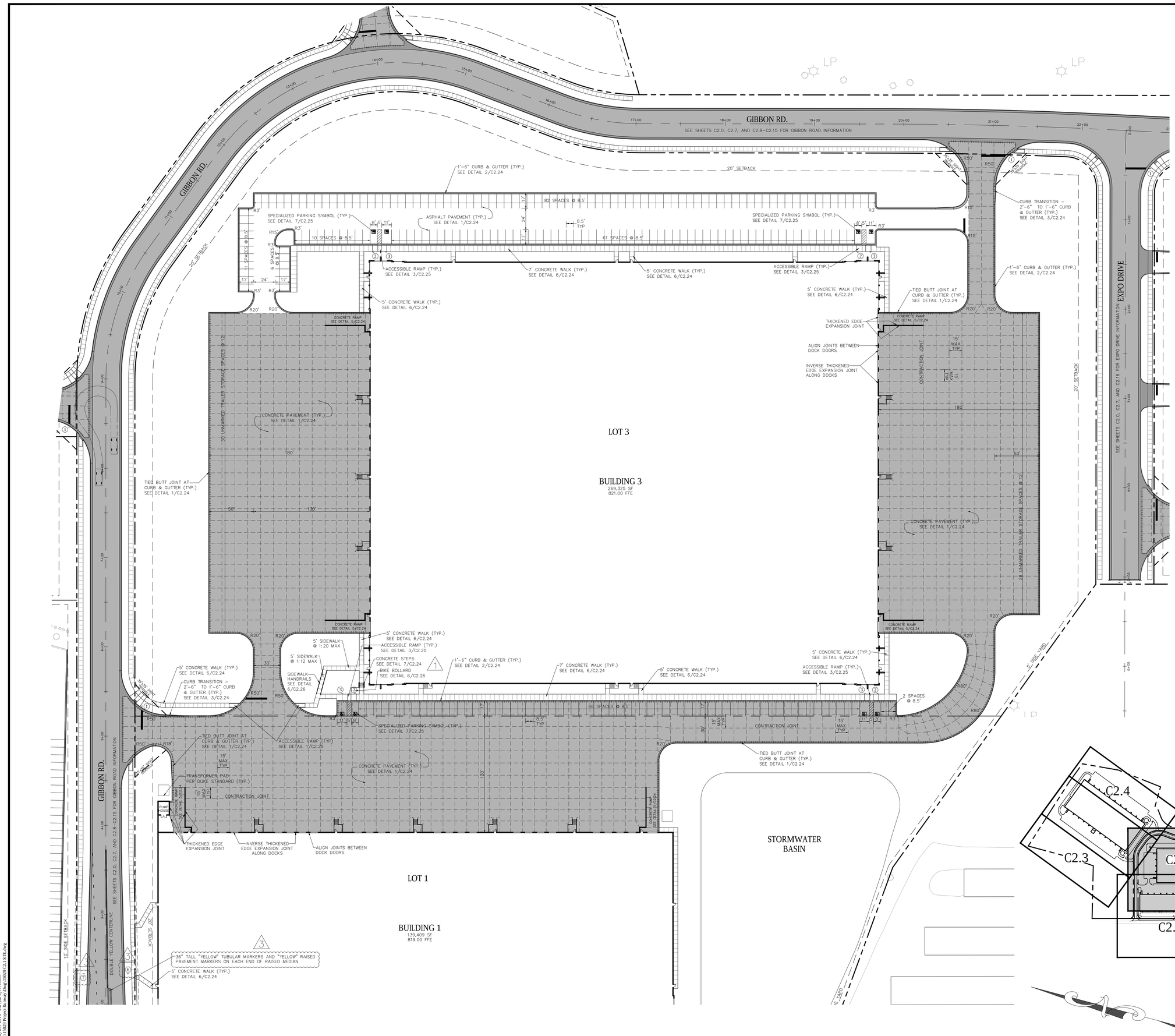
ORSBORN ENGINEERING GROUP C-3139
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 32876
Jul 28 2016 9:38 AM CoSign

REVISIONS		
3	07/26/16	REVISED PER COMMENTS
2	07/19/16	REVISED PER NCDOT COMMENTS
1	06/22/16	REVISED PER COMMENTS
	DATE:	

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

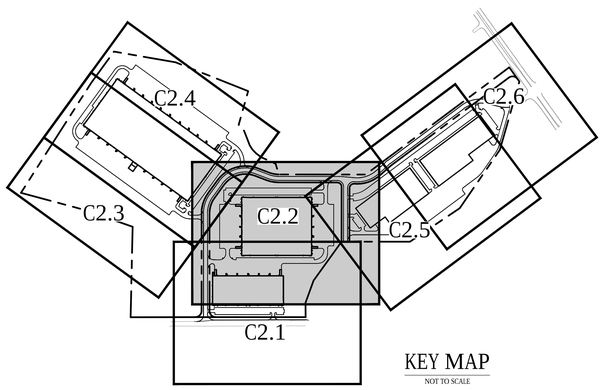
C2.1

July 26, 2016 - 2:24pm By: JWeisler
P:\15029 Project Runway\Dwg\15029 C2.1 SITE.dwg



SIGN LEGEND

1	STOP R1-1 30"x30"	
2	RESERVED PARKING R7-8 / VAN ACCESSIBLE R7-8a / MINIMUM $250 FINE R7-8b	ACCESSIBLE PARKING SIGNAGE & STRIPING SEE DETAIL 11/C2.7
3	VAN ACCESSIBLE R7-8a / RESERVED PARKING R7-8 / MINIMUM $250 FINE R7-8b	ACCESSIBLE PARKING SIGNAGE & STRIPING SEE DETAIL 11/C2.7
3 6	SPEED LIMIT 30 R2-1	
3 7	RIGHT LANE MUST TURN RIGHT R3-7R	



KEY MAP
NOT TO SCALE

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 306
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

ENLARGED SITE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. C-3139
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028720
Jul 28 2016 9:38 AM CuSign

DATE:	REVISIONS
07/26/16	REVISED PER COMMENTS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.2

July 26, 2016 - 2:24pm By: Webster
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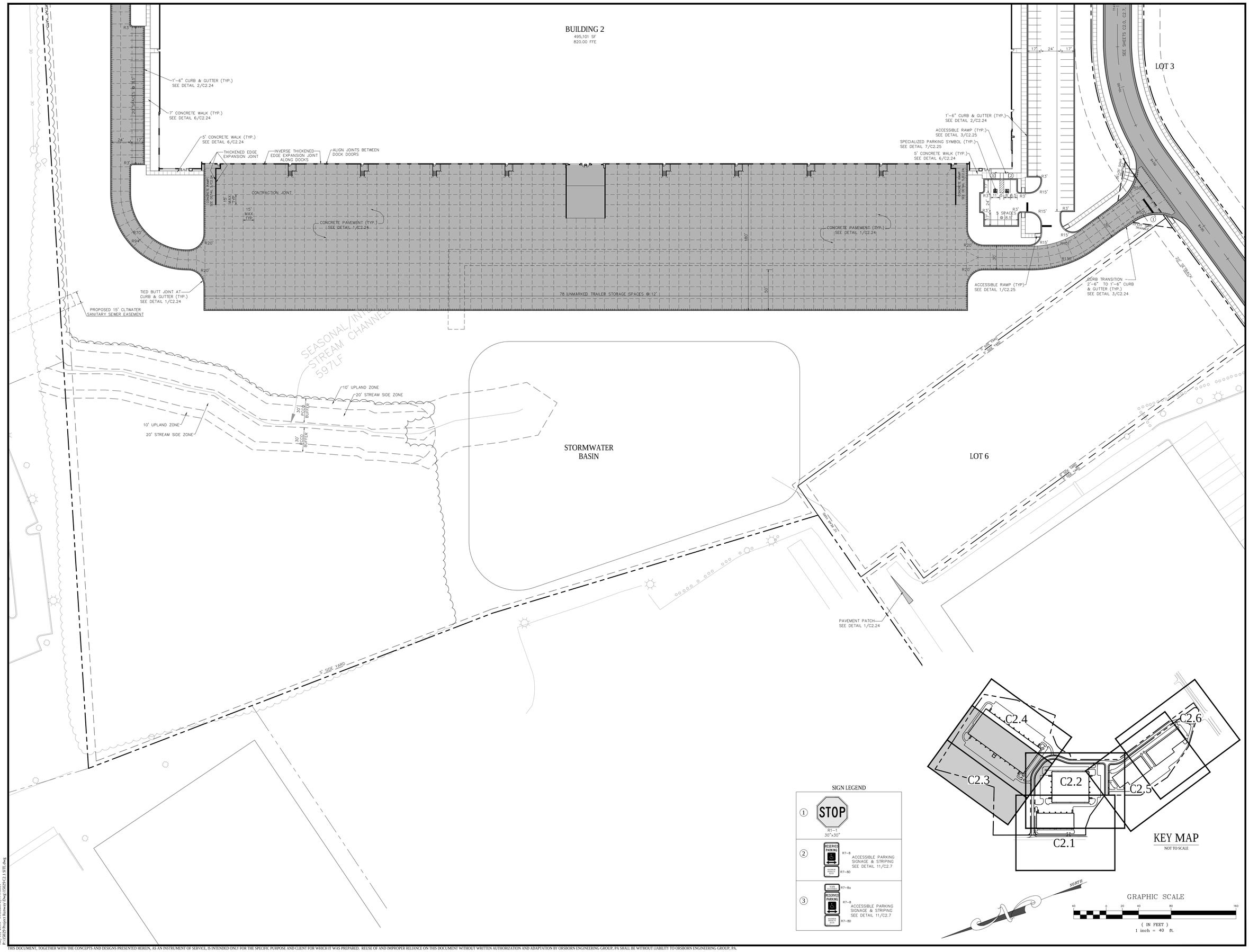

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

ENLARGED SITE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. — CHARLOTTE, MECKLENBURG COUNTY, NORTH CAROLINA — C-3139
NORTH CAROLINA PROFESSIONAL SEAL 028786 ENGINEER — JOHN C. ORSBORN III
Jul 28 2016 9:38 AM CoSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.3

July 19, 2016 - 11:25am By: JWinsler
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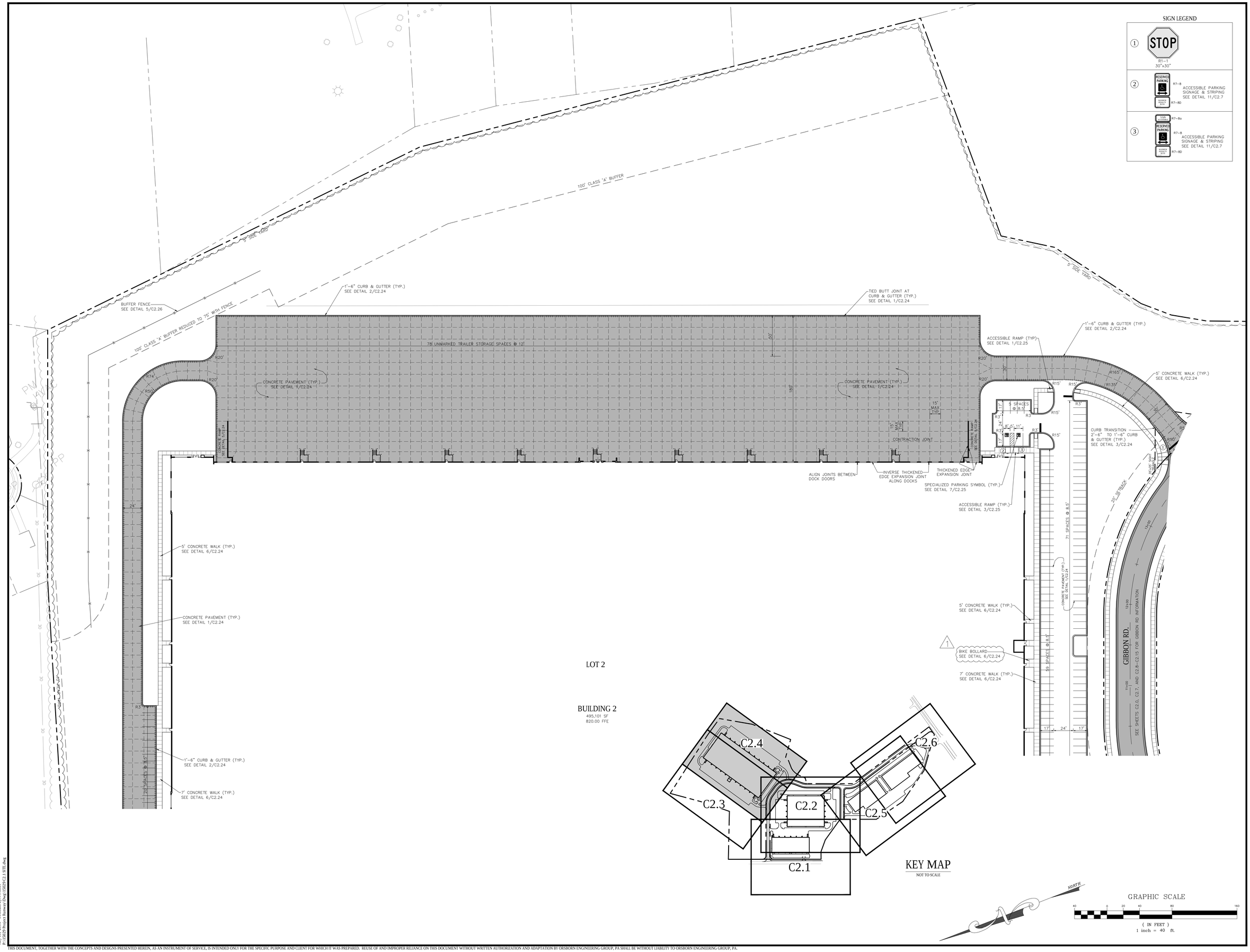

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

ENLARGED SITE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP P.A. C-3139

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028786 JAMES C. OSBORN

Jul 28 2016 9:39 AM

	DATE	REVISIONS
1	06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.4

July 19, 2016 - 11:35am By: JWeaver
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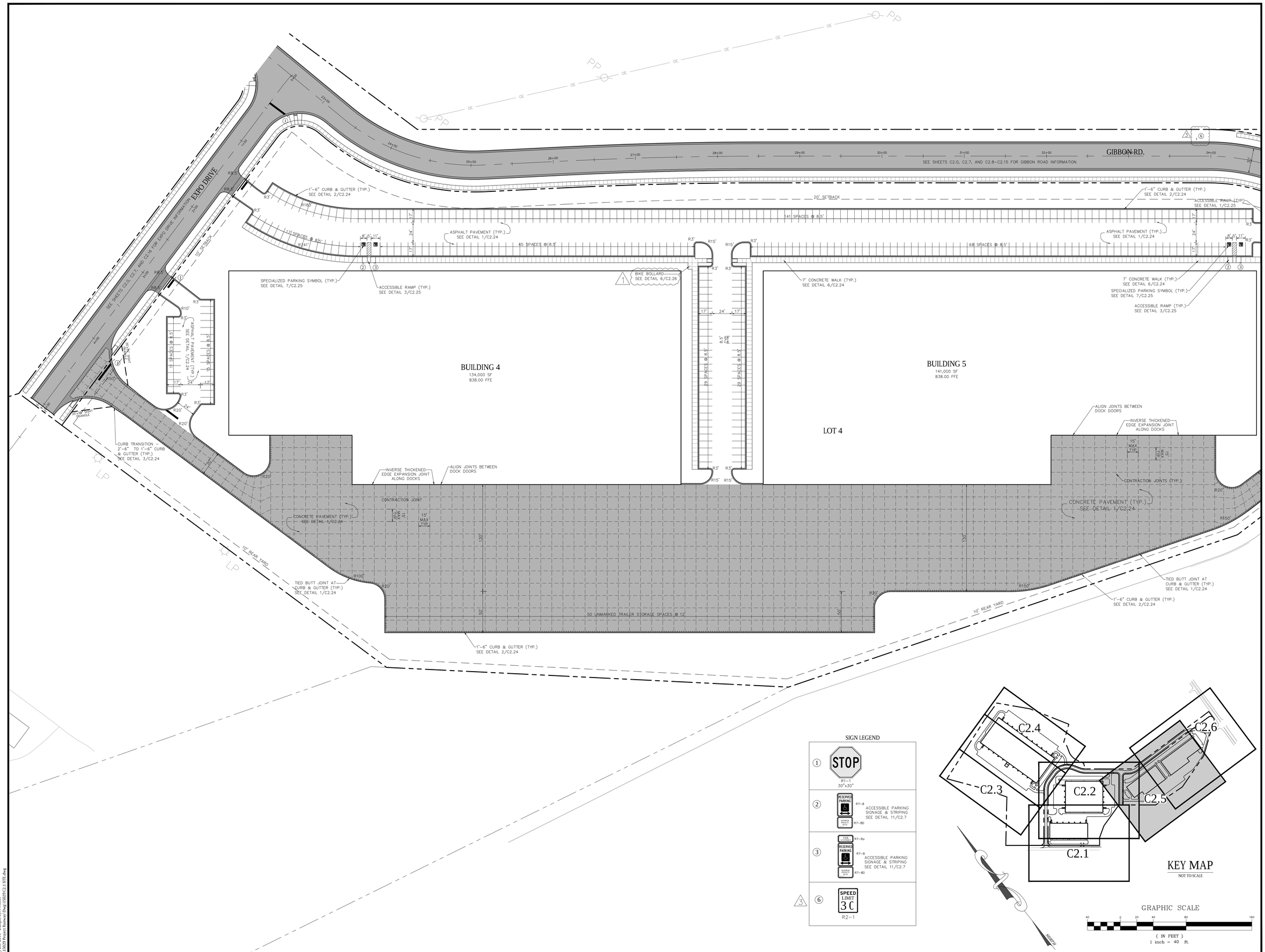


ORSBORN ENGINEERING GROUP
630 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

ENLARGED SITE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
CHARLOTTE, NORTH CAROLINA
C-3139
REGISTERED PROFESSIONAL ENGINEER
SEAL 02876
JAMES C. ORSBORN
Jul 28 2016 9:39 AM

REVISIONS		
3	07/26/16	REVISED PER COMMENTS
2	06/22/16	REVISED PER COMMENTS
DATE		

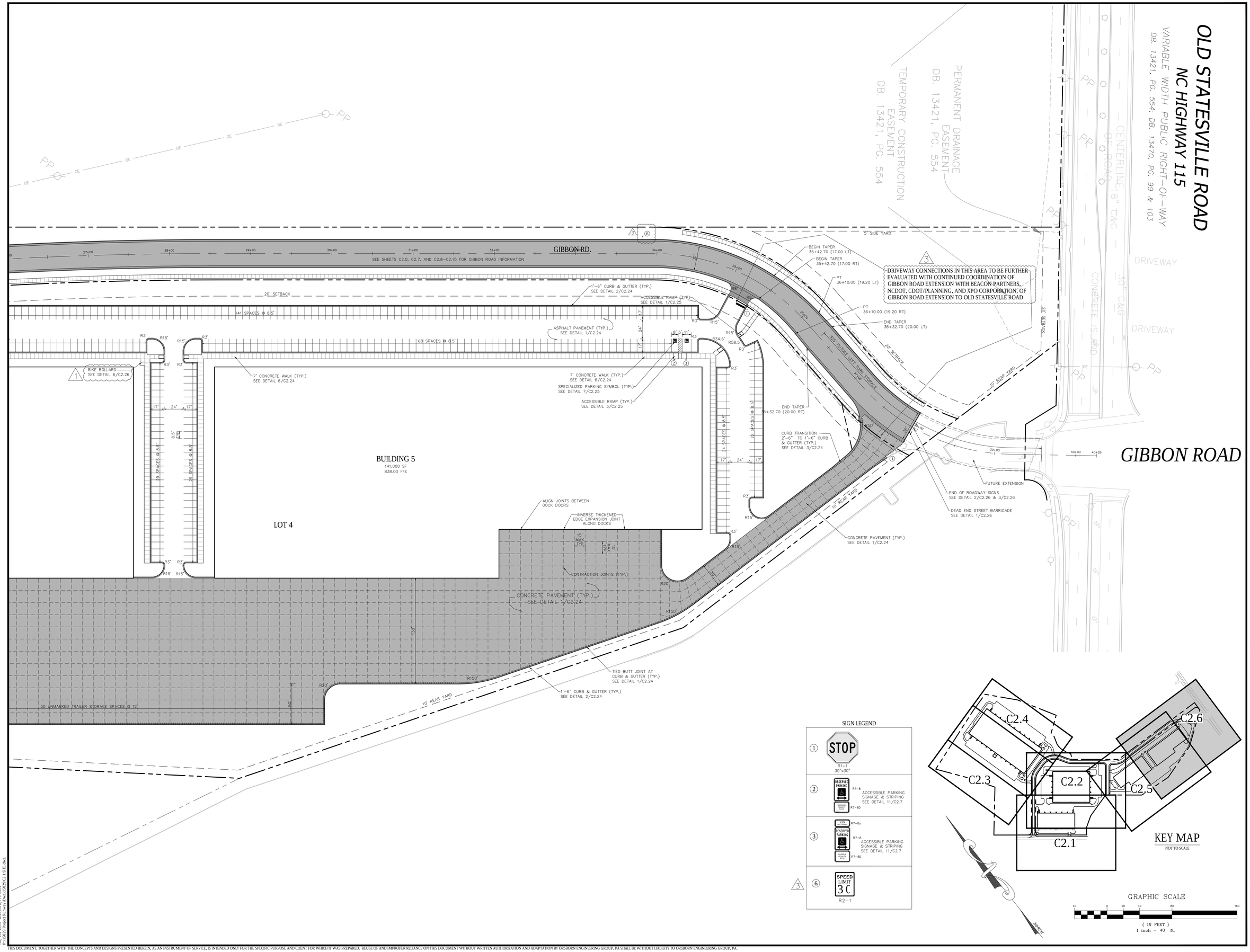
JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.5

July 26, 2016 - 2:25pm By: JWissler
P:\15029 Project Runway\Dwg\15029-C2.1-STE.dwg

OLD STATESVILLE ROAD
NC HIGHWAY 115

VARIABLE WIDTH PUBLIC RIGHT-OF-WAY
DB. 13421, PG. 554; DB. 13470, PG. 99 & 103



ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 306
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

ENLARGED SITE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. C-3139

JAMES W. CARR SEAL 028786 ENGINEER NORTH CAROLINA

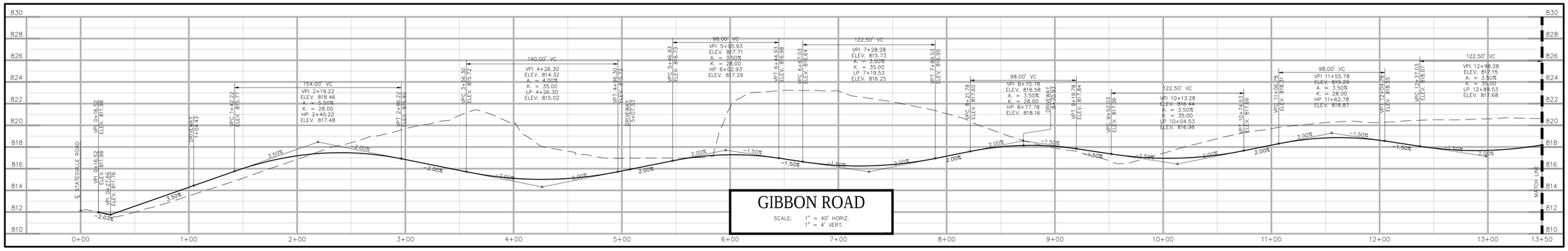
Jul 28 2016 9:59 AM CSSign

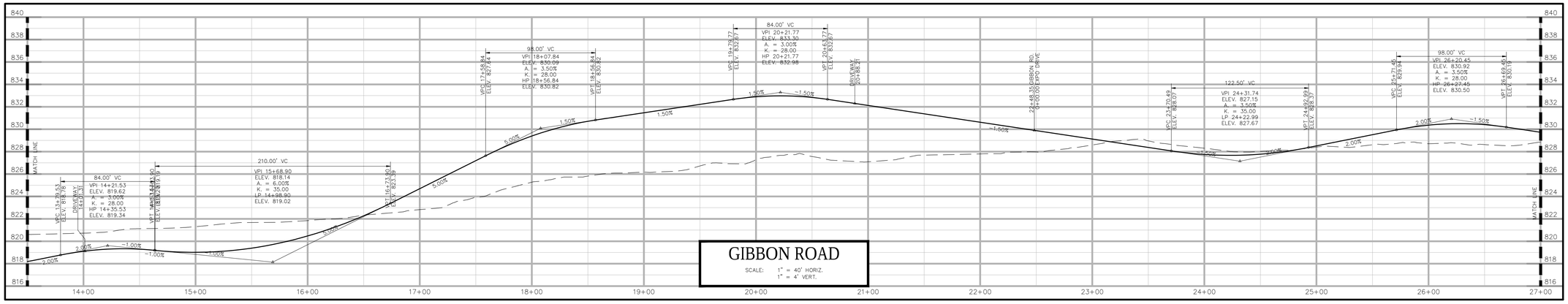
DATE	REVISIONS
06/22/16	REVISED PER COMMENTS
06/22/16	REVISED PER COMMENTS

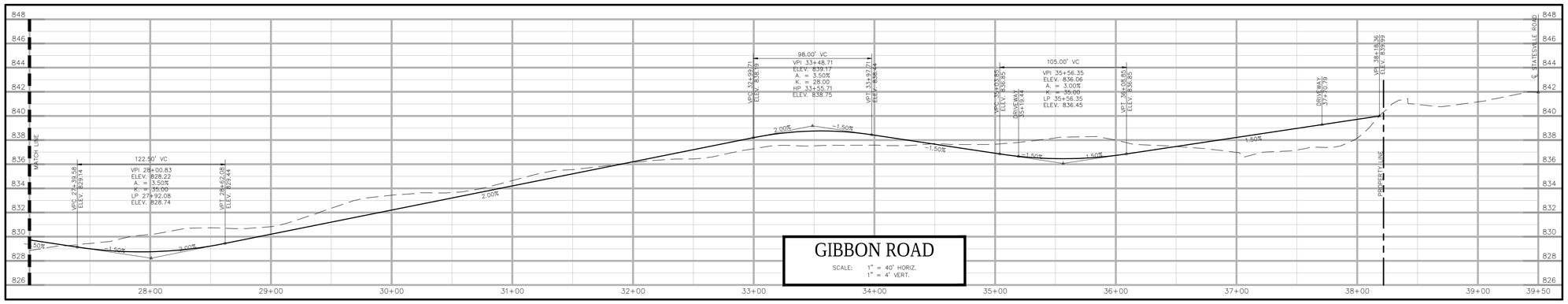
JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

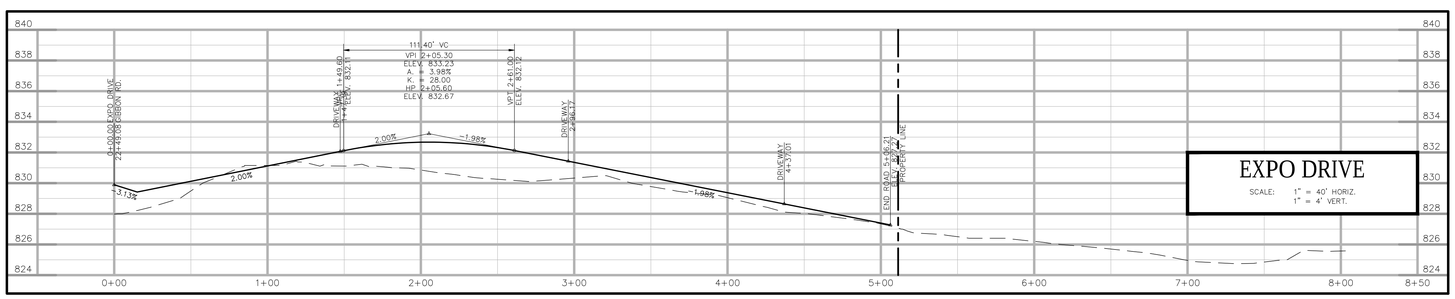
C2.6

July 26, 2016 - 2:25pm By: JWeisker
P:\15029 Project Runway\Dwg\15029C2.1 SITE.dwg









ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1433 • F: 704-749-1433

PUBLIC ROAD PROFILES
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
NORTH CAROLINA
C-3139
PROFESSIONAL ENGINEERING
SEAL 025780
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL
Jul 28 2016 9:39 AM

06/22/16	REVISED PER COMMENTS	
DATE:		REVISIONS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.7

July 19, 2016 - 11:36am By: JWisker
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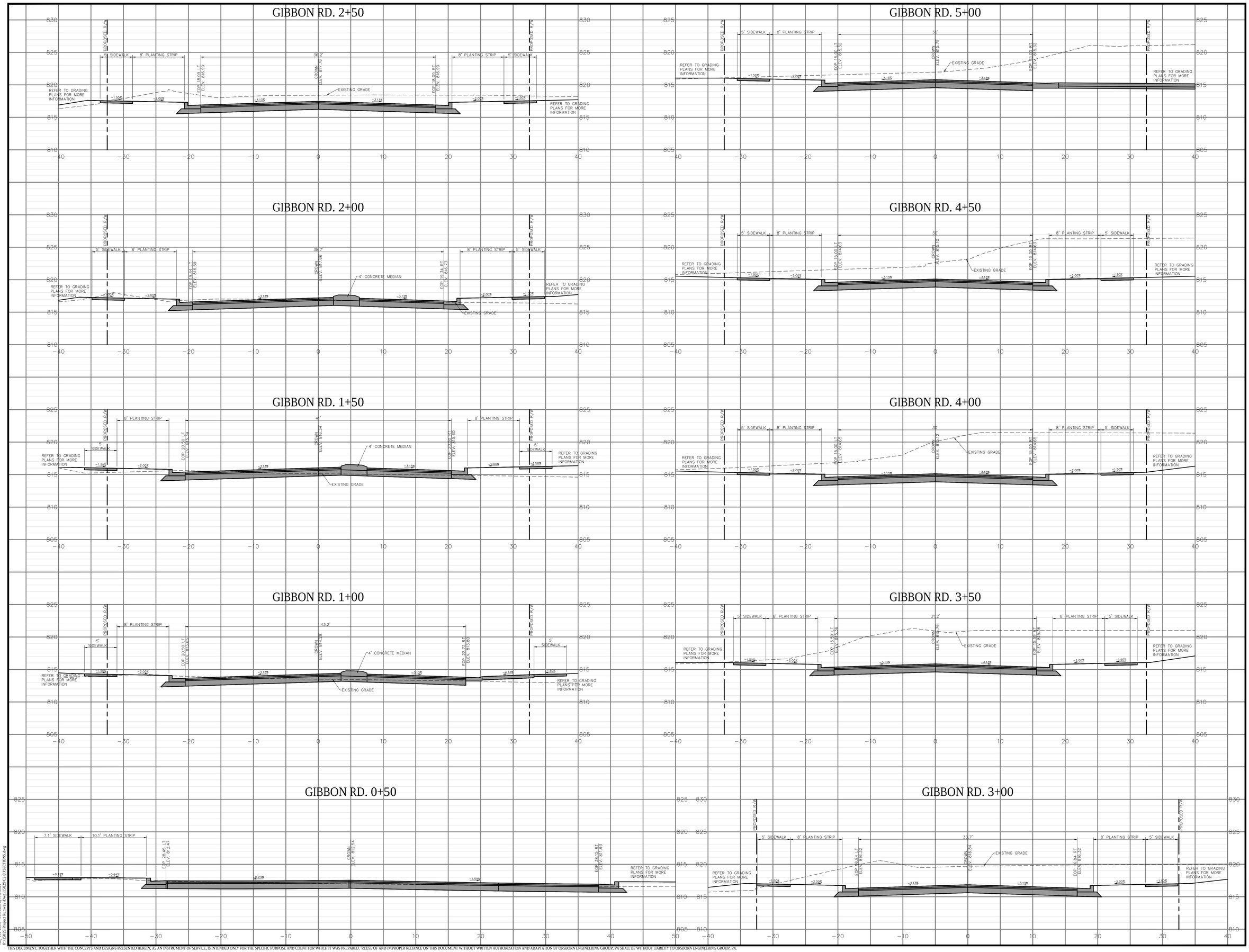

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GIBBON ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
NORTH CAROLINA
C-3139
NORTH CAROLINA
SEAL
026788
ENGINEERING
Jul 28 2016 9:30 AM

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.8

July 19, 2016 - 11:36am By: JWissler
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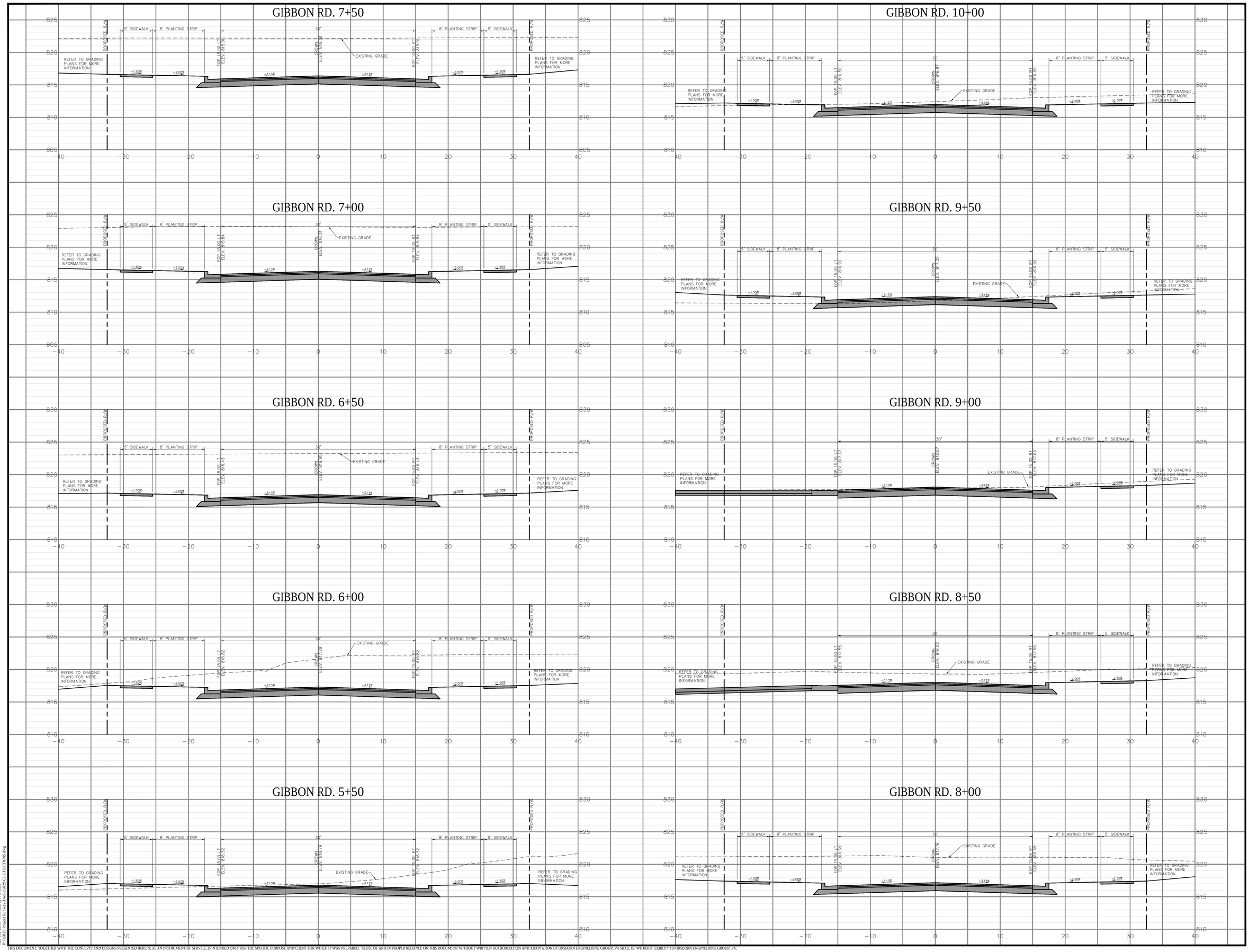


ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GIBBON ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. — NORTH CAROLINA CORPORATE ENGINEERING LICENSE C-3139

NORTH CAROLINA PROFESSIONAL SEAL 026788 ENGINEER JAMES C. OSBORN

Jul 28 2016 9:10 AM

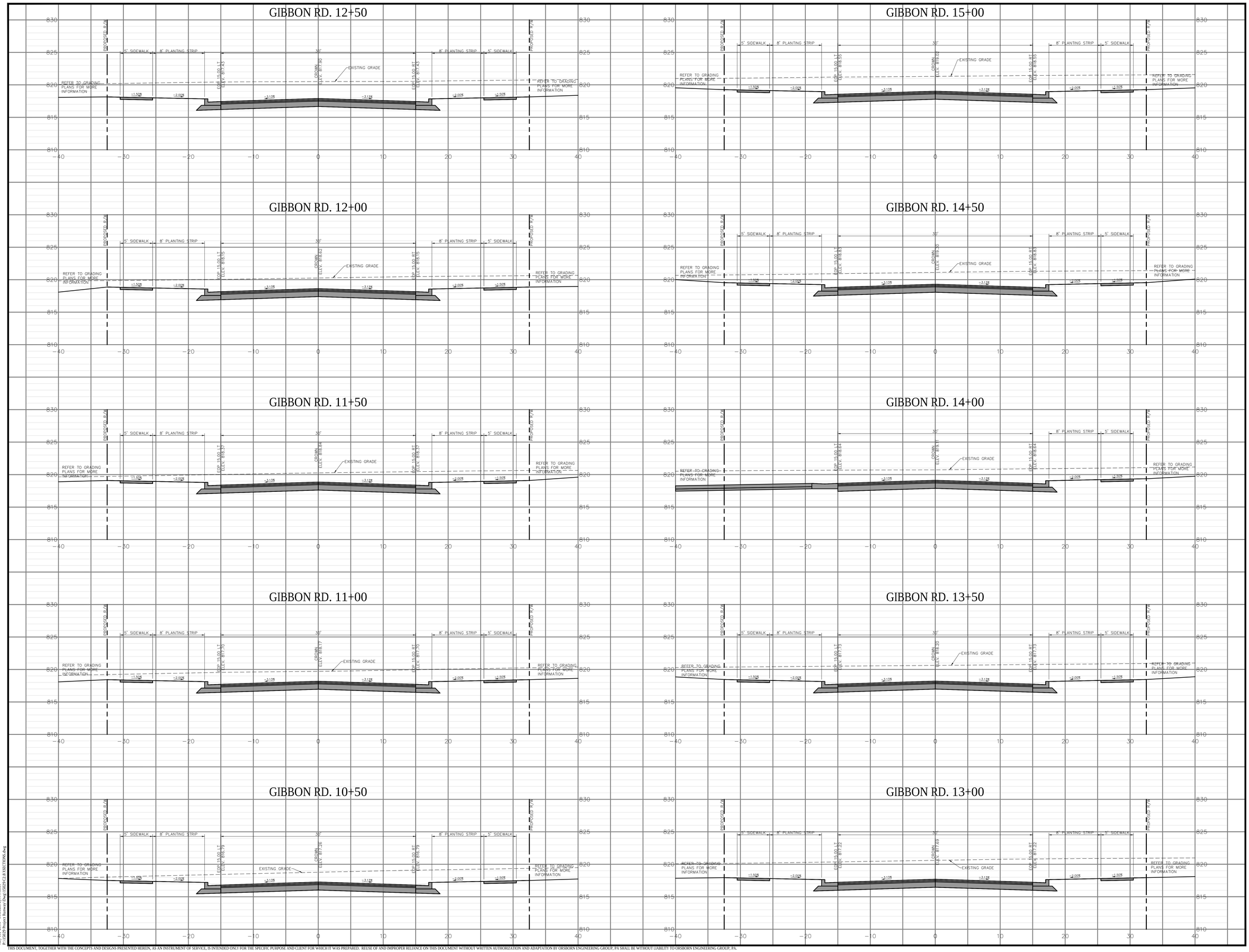
1	06/22/16	REVISED PER COMMENTS

REVISIONS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.9

July 19, 2016 - 11:36am By: JWissler
P:\15029 Project Runway\Dwgs\15029 C2.9 SECTIONS.dwg



ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GIBBON ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. — CERTIFICATE OF AUTHORIZATION NO. C-3139

NORTH CAROLINA PROFESSIONAL SEAL 026788 ENGINEER — JAMES C. OSBORN

Jul 28 2016 9:10 AM

REVISIONS		
1	06/22/16	REVISED PER COMMENTS

DATE

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.10

July 19, 2016 - 11:36am By: JWissler
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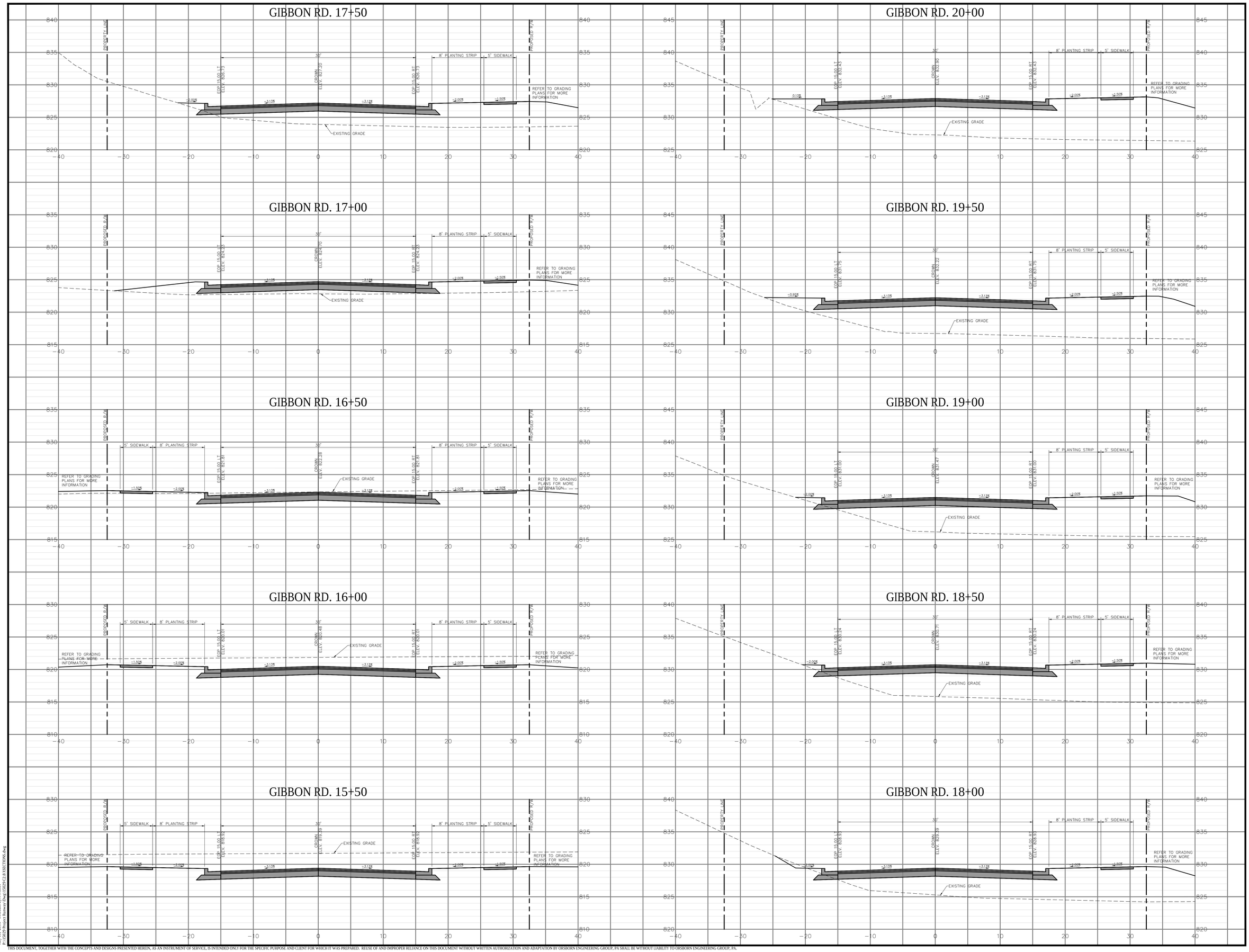

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GIBBON ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. CHARLOTTE, NORTH CAROLINA C-3139

JOHN CARLTON ORSBORN SEAL 026788 NORTH CAROLINA PROFESSIONAL ENGINEER

Jul 28 2016 9:10 AM

DATE	REVISED PER COMMENTS	REVISIONS
06/22/16	1	

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.11

July 19, 2016 - 11:36am By: JWissler
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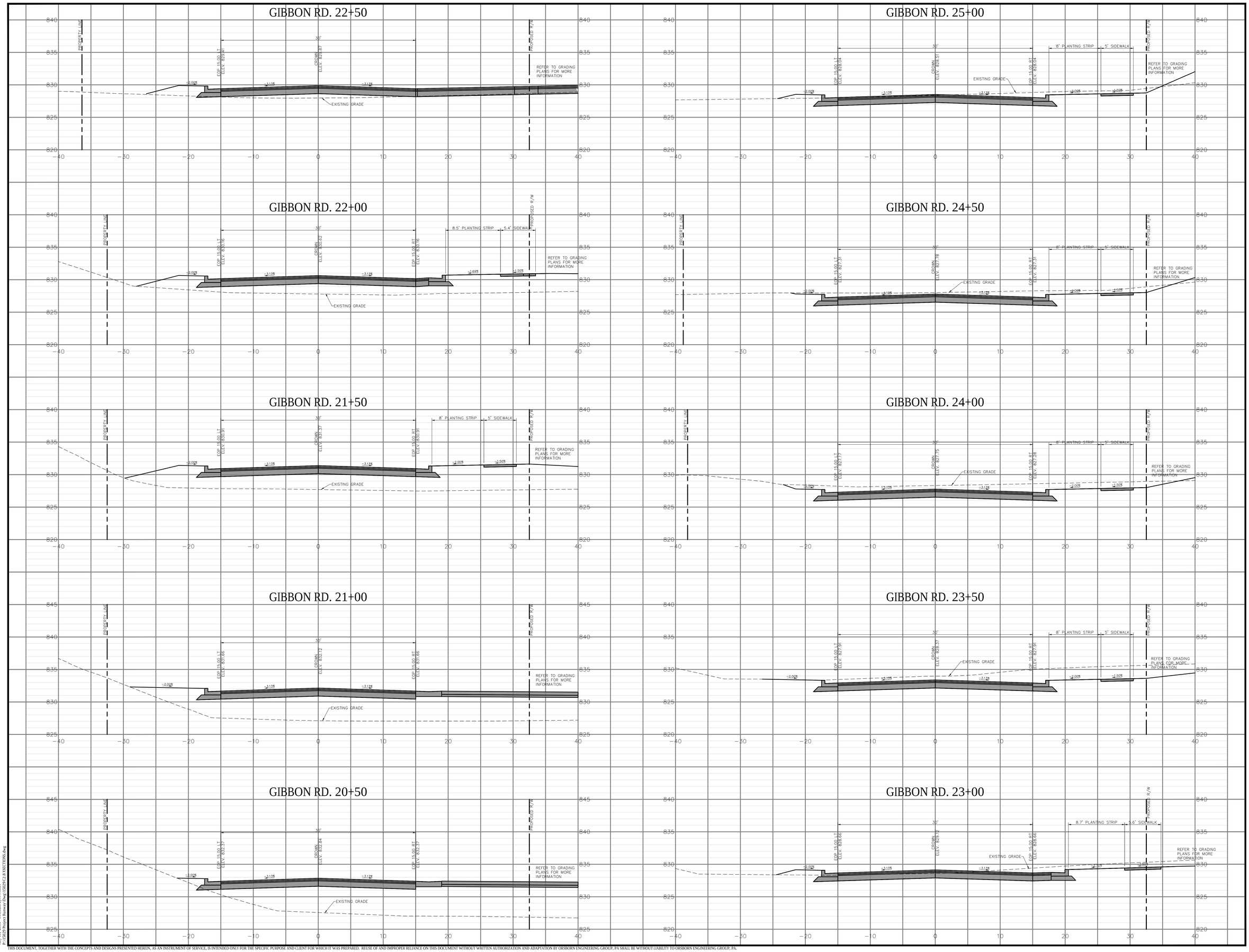


ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GIBBON ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

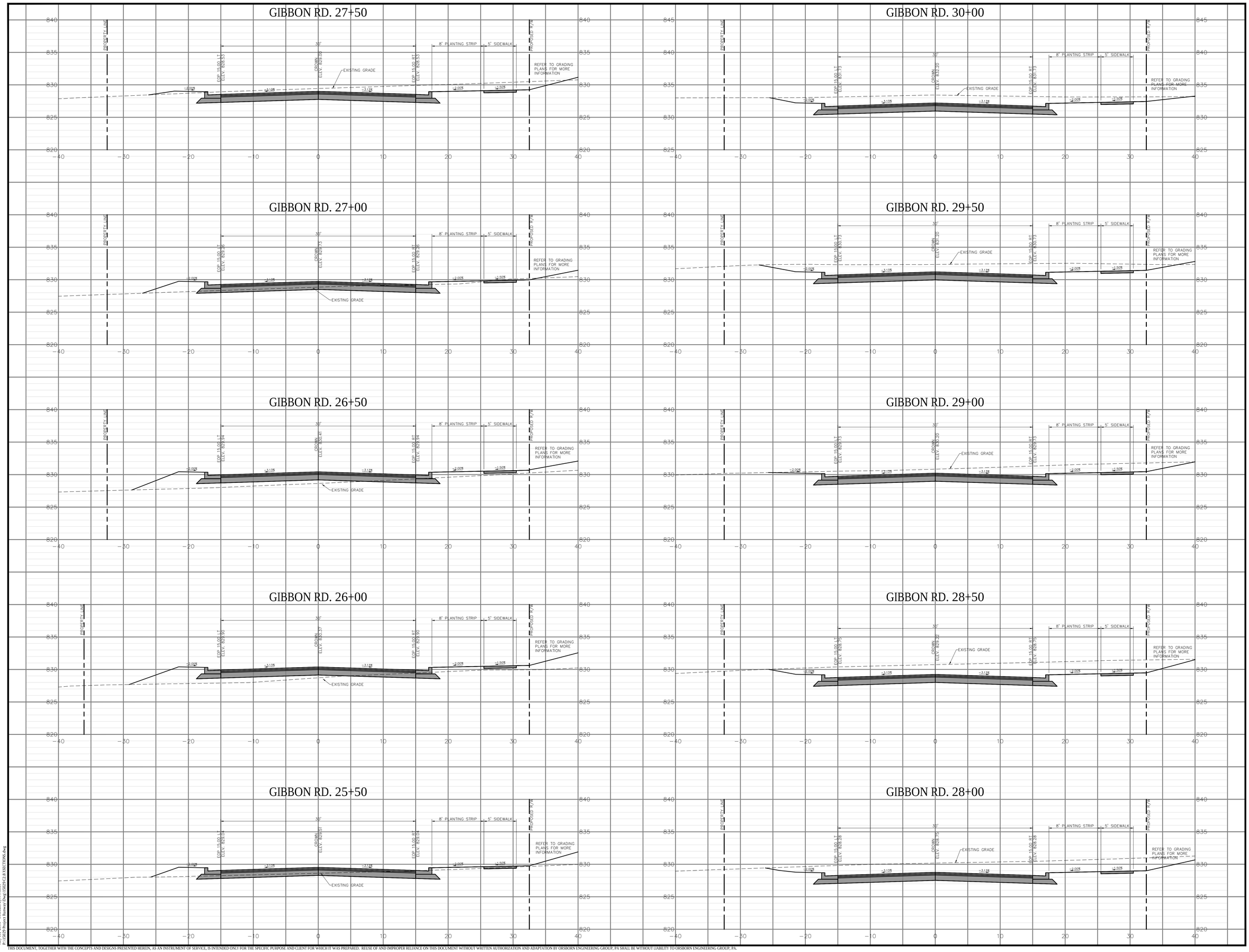
ORSBORN ENGINEERING GROUP, P.A.
NORTH CAROLINA
C-3139
NORTH CAROLINA PROFESSIONAL SEAL 026786 ENGINEER
Jul 28 2016 9:10 AM

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.12

July 19, 2016 - 11:36am By: JWissler
P:\15029 Project Runway\Dwgs\15029 C2.0 SECTIONS.dwg



ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GIBBON ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
NORTH CAROLINA
C-3139
NORTH CAROLINA
SEAL
026788
ENGINEERING
Jul 28 2016 9:10 AM

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.13

July 19, 2016 - 11:36am By: JWissler
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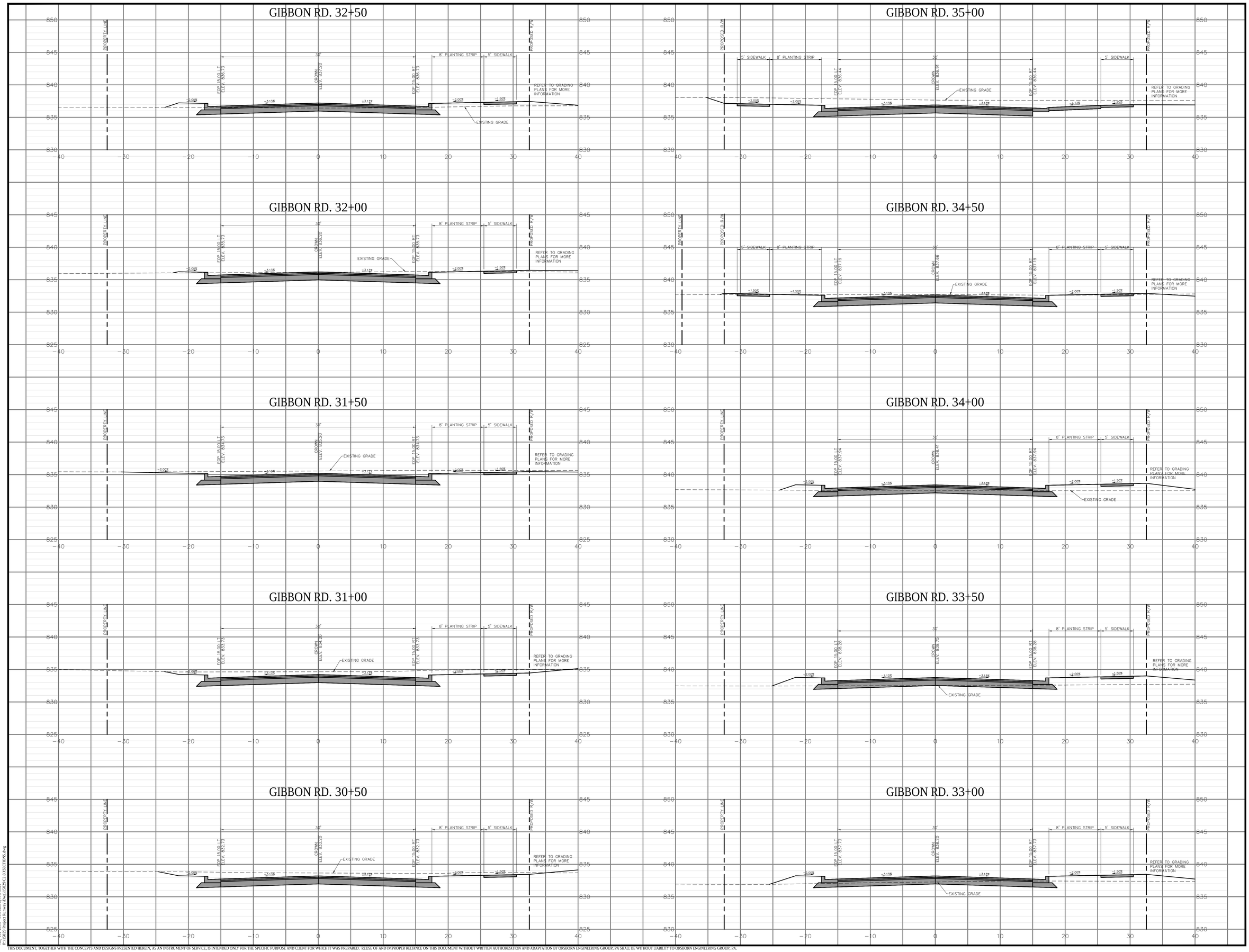


ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GIBBON ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. — CHARLOTTE, NORTH CAROLINA — C-3139

NORTH CAROLINA PROFESSIONAL ENGINEER — SEAL 026788 — JAMES CARTER OSBORN — ENGINEERING

Jul 28 2016 9:40 AM

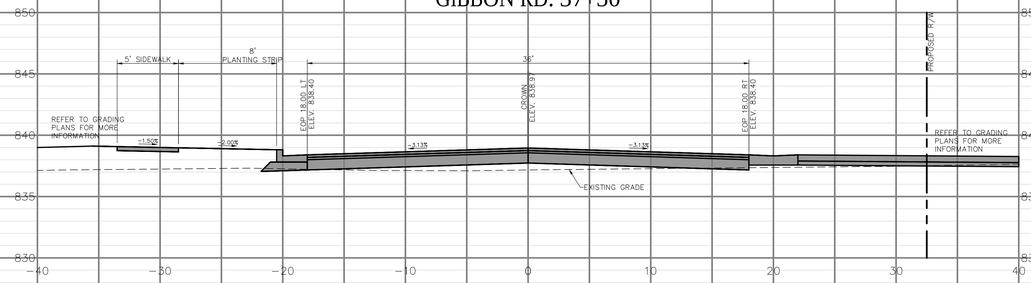
DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

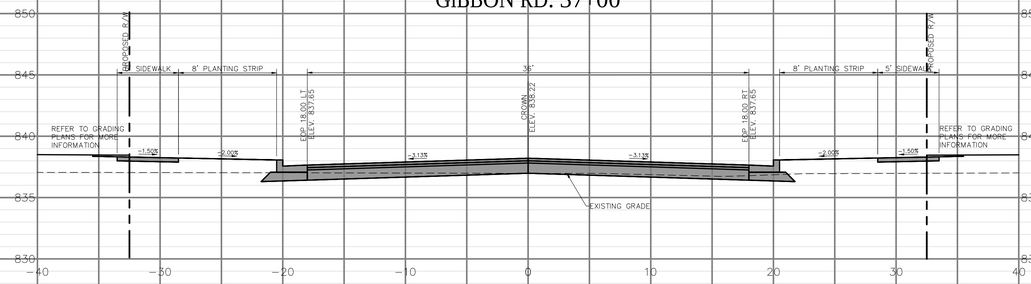
C2.14

July 19, 2016 - 11:36am By: JWissler
P:\15029 Project Runway\Dwgs\15029 C2.0 SECTIONS.dwg

GIBBON RD. 37+50

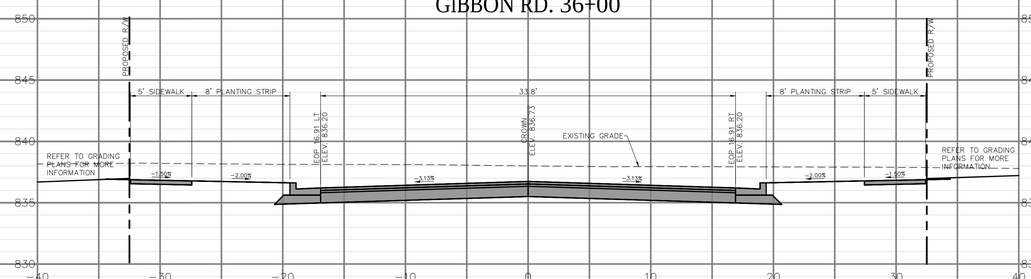


GIBBON RD. 37+00

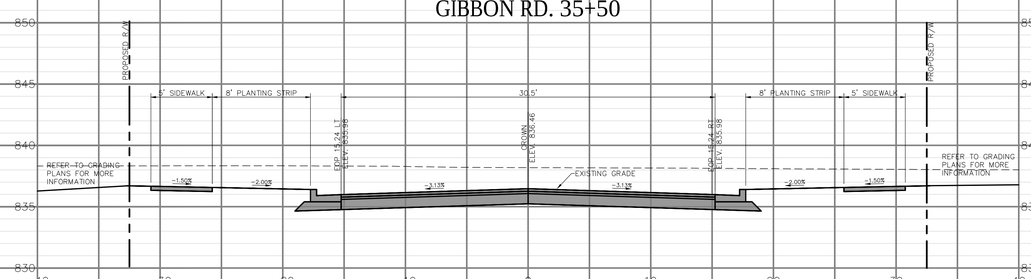


GIBBON RD. 36+50

GIBBON RD. 36+00



GIBBON RD. 35+50



ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GIBBON ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. CHARLOTTE, NORTH CAROLINA C-3139

NORTH CAROLINA PROFESSIONAL SEAL 026788 ENGINEER

Jul 28 2016 9:40 AM

REVISIONS		
1	06/22/16	REVISED PER COMMENTS
DATE		

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.15

July 19, 2016 - 11:37am By: JWissler
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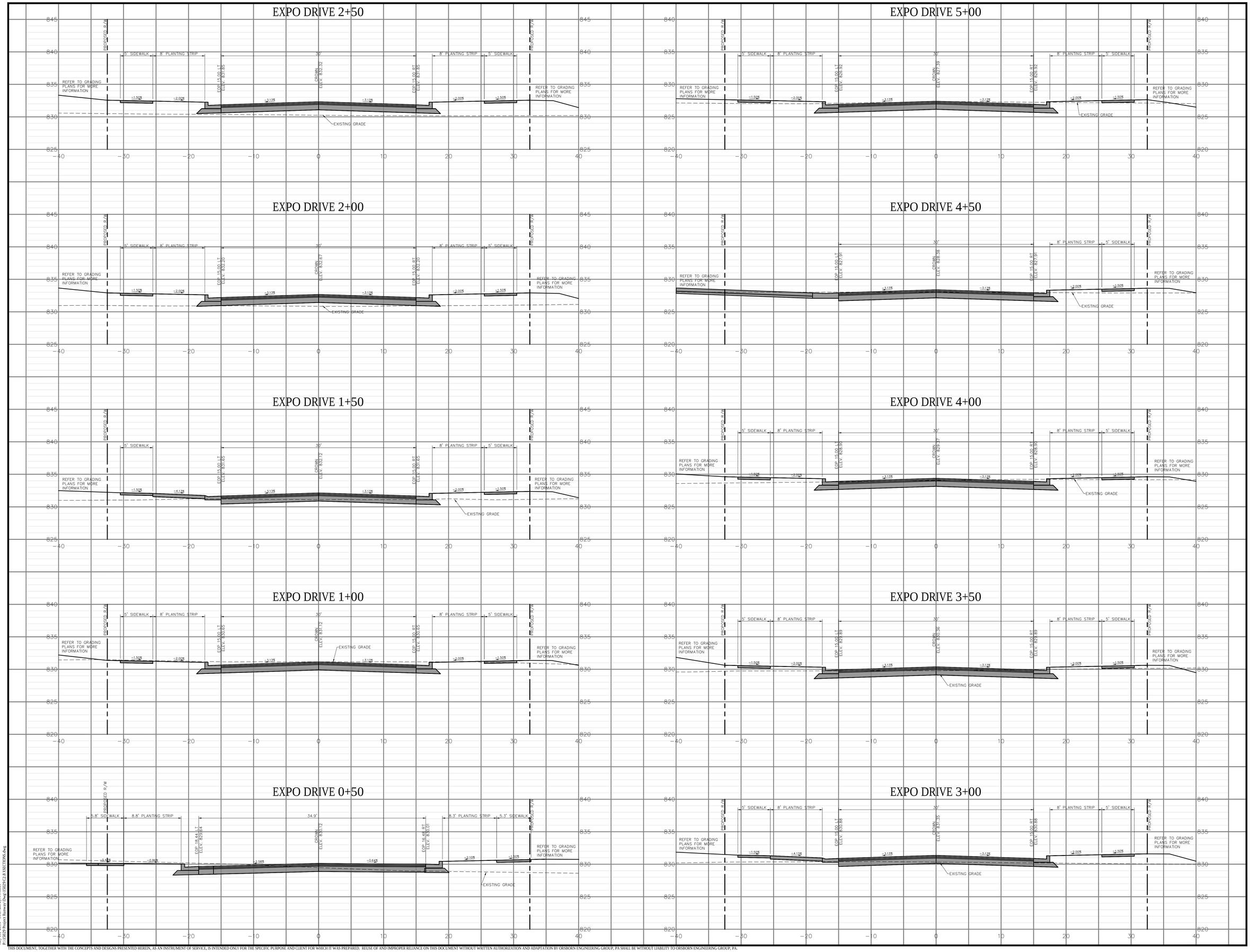

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

EXPO DRIVE CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
NORTH CAROLINA
C-3139
PROFESSIONAL ENGINEER
SEAL 026782
NORTH CAROLINA
PROFESSIONAL ENGINEER
SEAL 026782

Jul 28 2016 9:40 AM CaSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.16

July 19, 2016 - 11:37am By: JWeister
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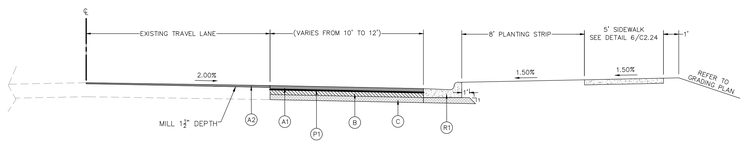
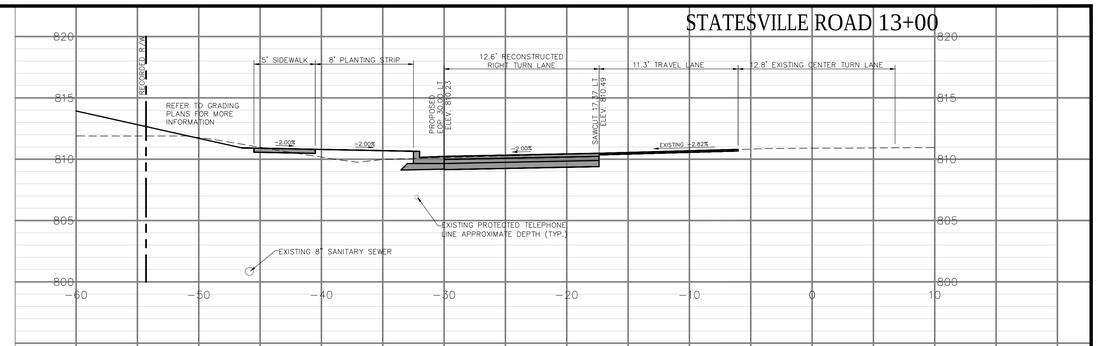


A STATESVILLE ROAD TYPICAL SECTION
NTS

TYPICAL MINIMUM PAVEMENT SCHEDULE

- (A1) SURFACE COURSE
  PROPOSED 3" (TWO 1½" LIFTS) ASPHALT CONCRETE SURFACE COURSE S9.5B. REFER TO N.C.D.O.T. SPECIFICATION SECTION 610 FOR MORE INFORMATION.
- (A2) SURFACE COURSE OVERLAY
  PROPOSED 1½" ASPHALT CONCRETE SURFACE COURSE S9.5B. REFER TO N.C.D.O.T. SPECIFICATION SECTION 610 FOR MORE INFORMATION.
- (B) INTERMEDIATE COURSE
  PROPOSED 4" ASPHALT CONCRETE INTERMEDIATE COURSE I19.0B. REFER TO N.C.D.O.T. SPECIFICATION SECTION 610 FOR MORE INFORMATION.
- (C) BASE COURSE
  PROPOSED 6" ASPHALT CONCRETE BASE COURSE B25.0B. REFER TO N.C.D.O.T. SPECIFICATIONS SECTION 610 FOR MORE INFORMATION
- (P1) ASPHALT TACK COAT (IF NECESSARY)
  REFER TO N.C.D.O.T. STANDARD SPECIFICATION SECTION 605
- (R1) 2'-6" CURB & GUTTER
  REFER TO N.C.D.O.T. STANDARD DETAIL 846.01

STATESVILLE ROAD 13+00



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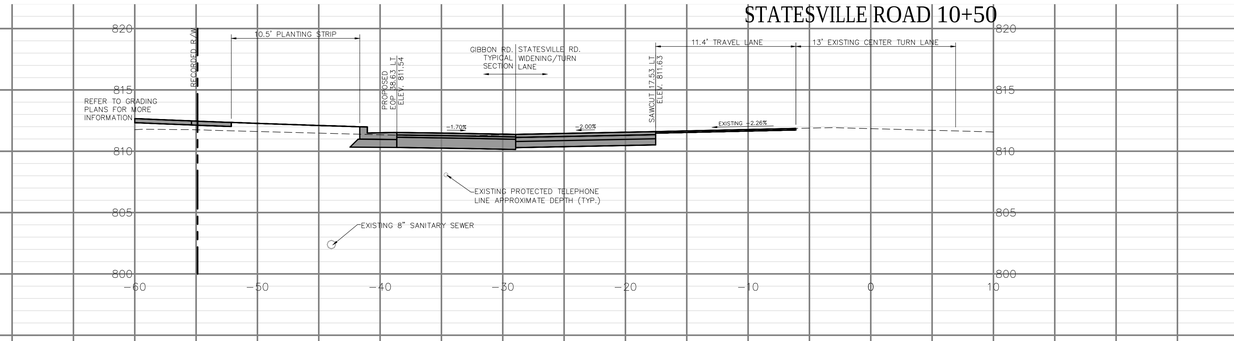

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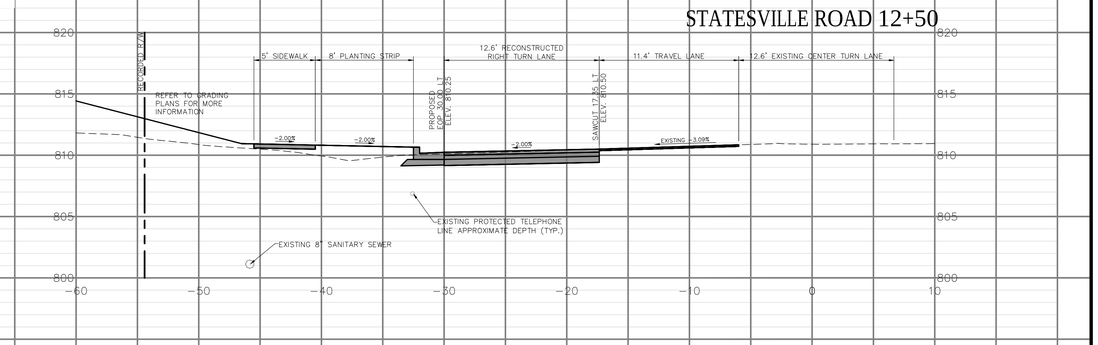

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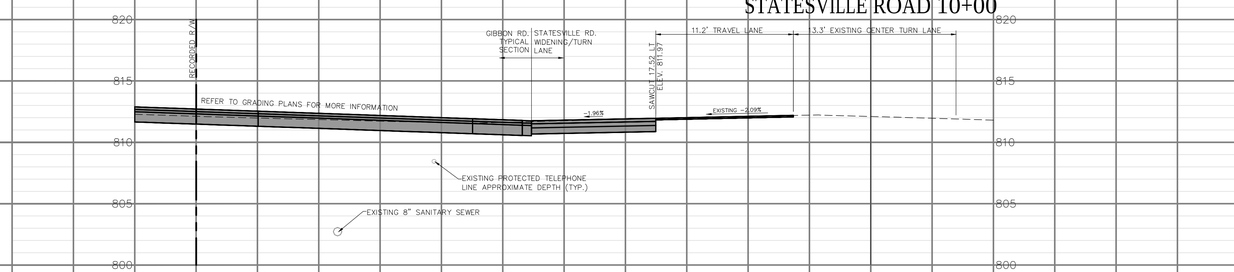

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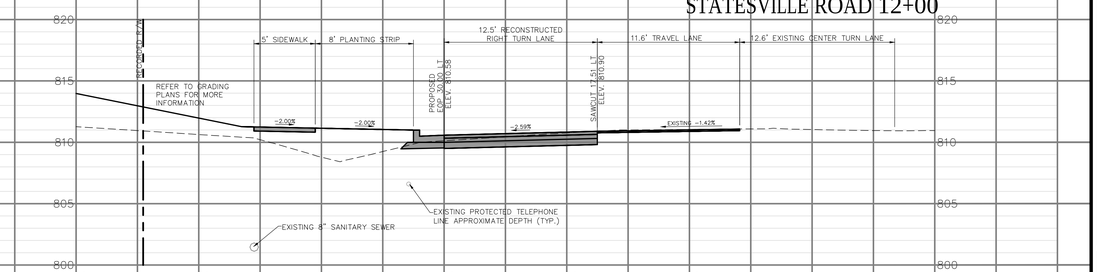

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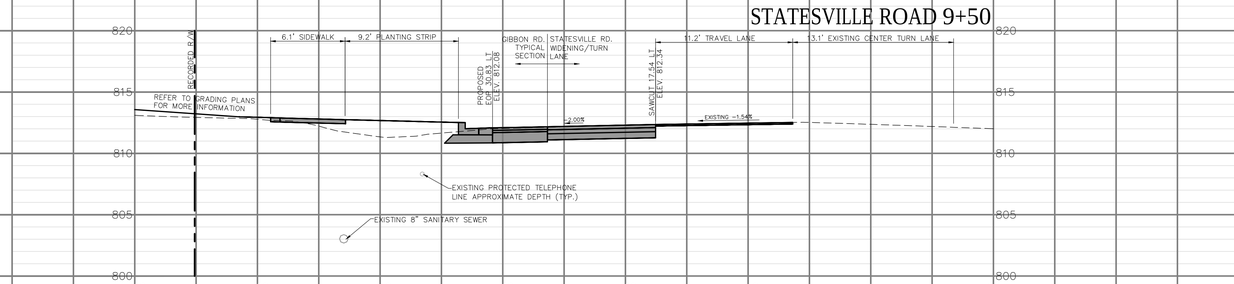

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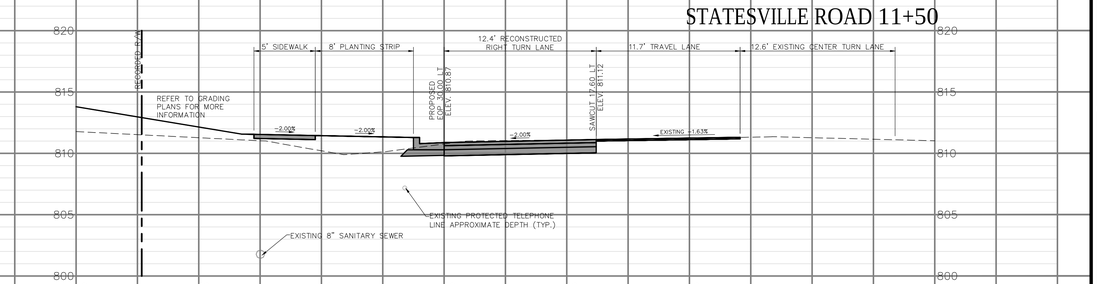

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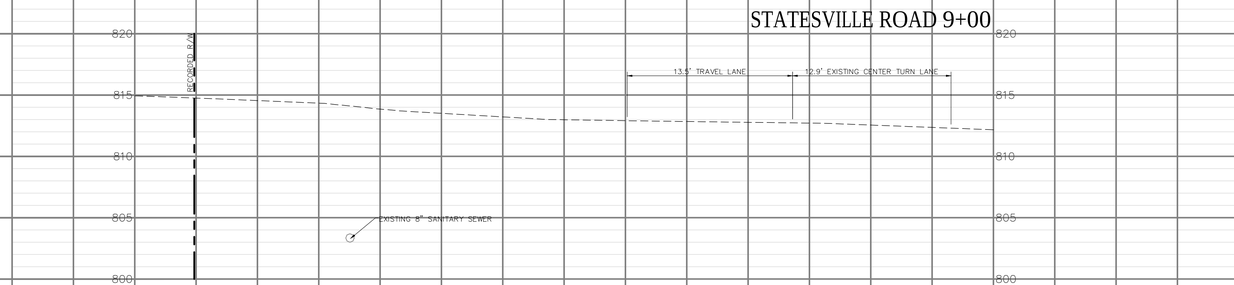

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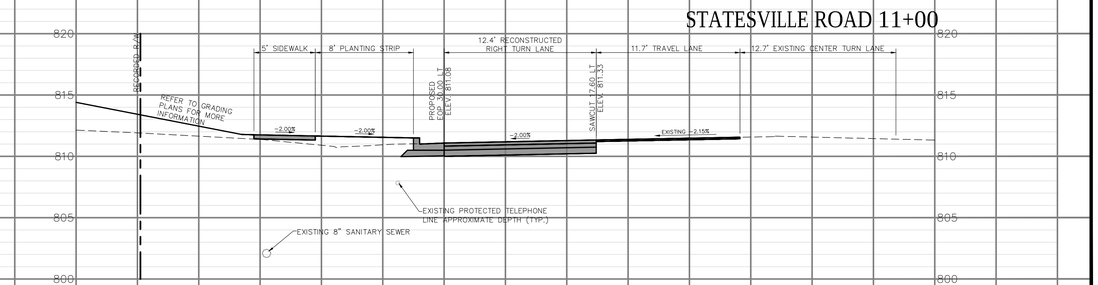

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

STATESVILLE ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. NORTH CAROLINA PROFESSIONAL ENGINEERING CORPORATION C-3139

NORTH CAROLINA PROFESSIONAL SEAL 026767 ENGINEER JAMES C. OWSLEY

Jul 28 2016 9:40 AM CoSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.17

July 19, 2016- 11:37am By: Webster
P:\15029 Project Runway\Dwg\15029-C2.0 SECTIONS.dwg

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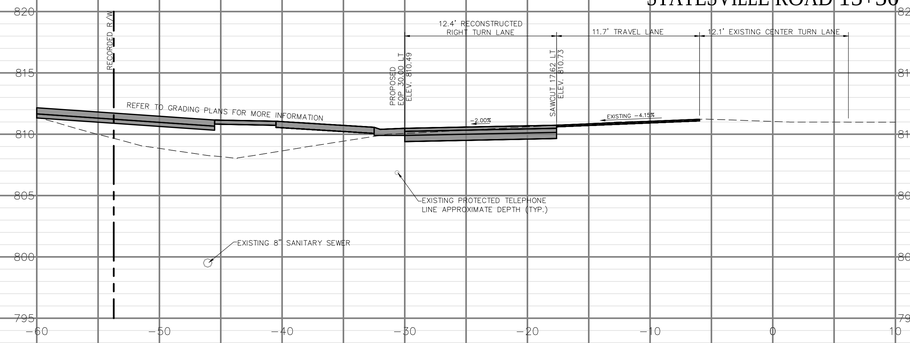

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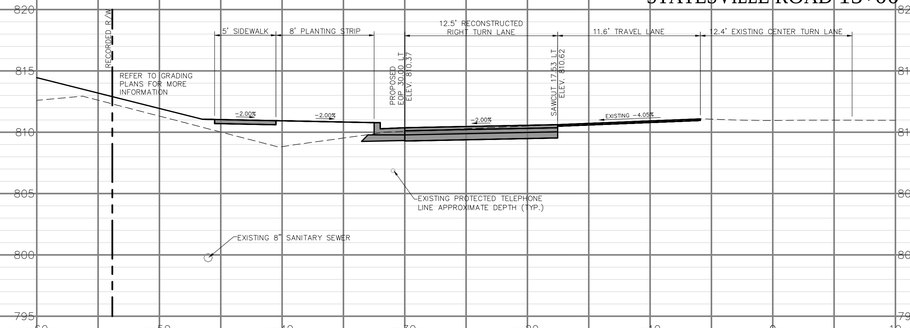

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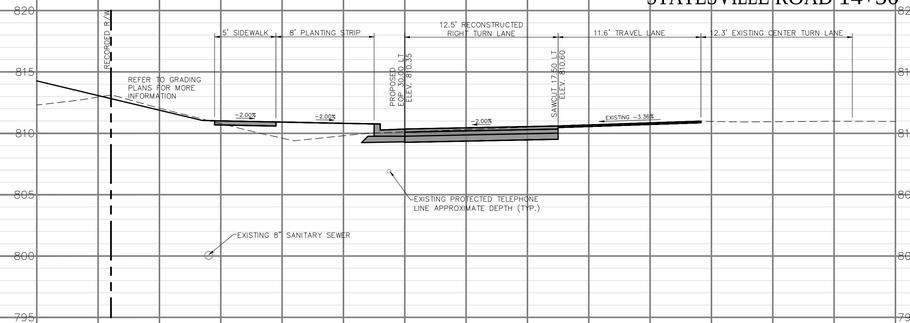

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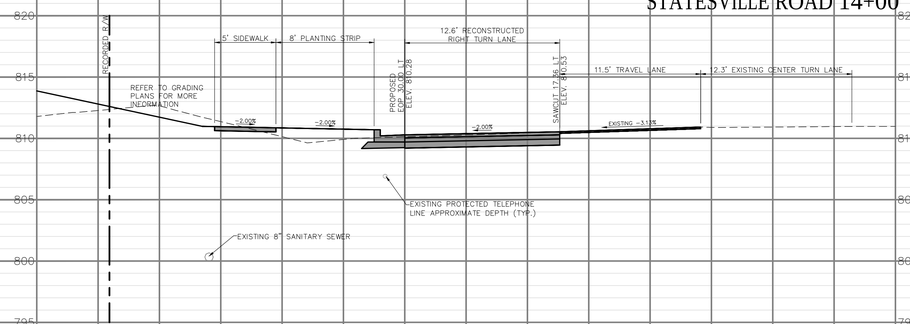

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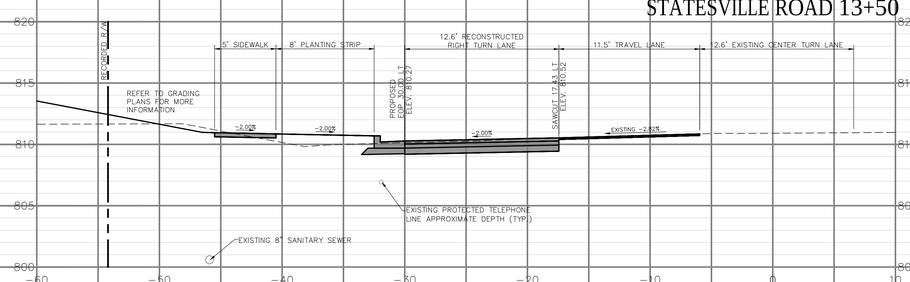

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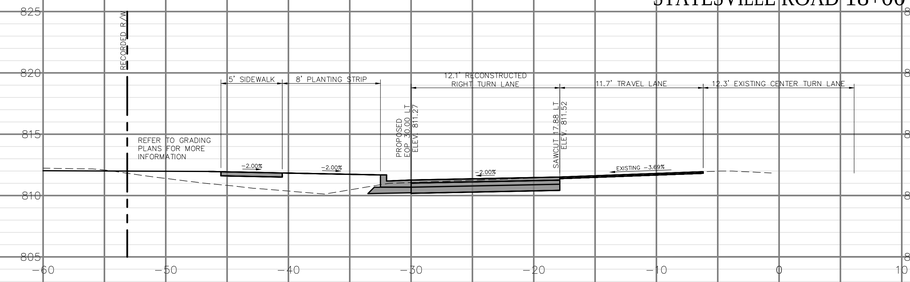

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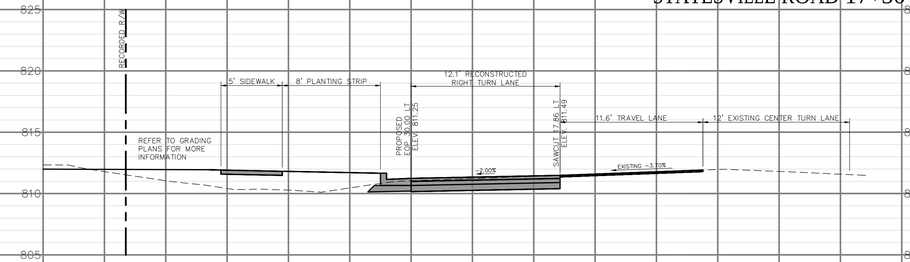

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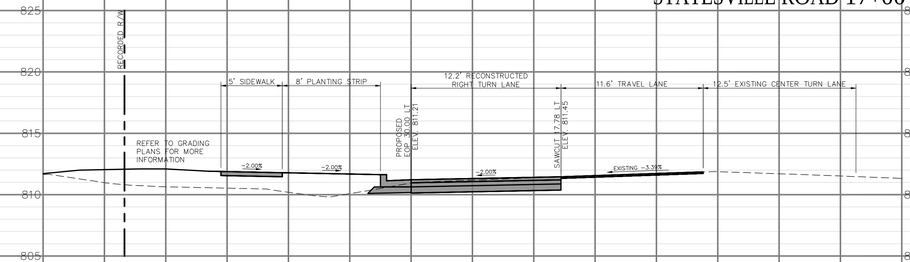

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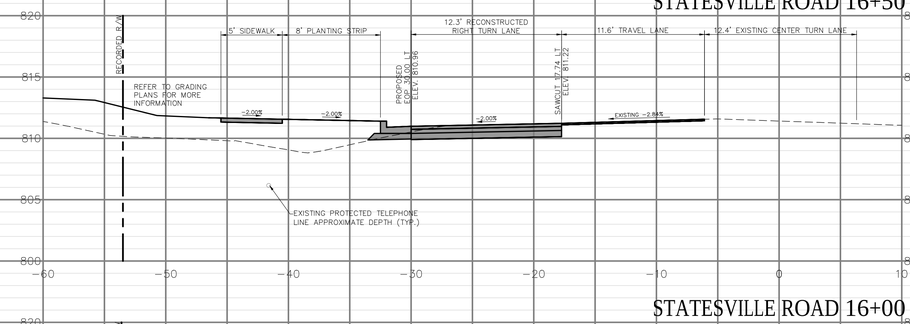

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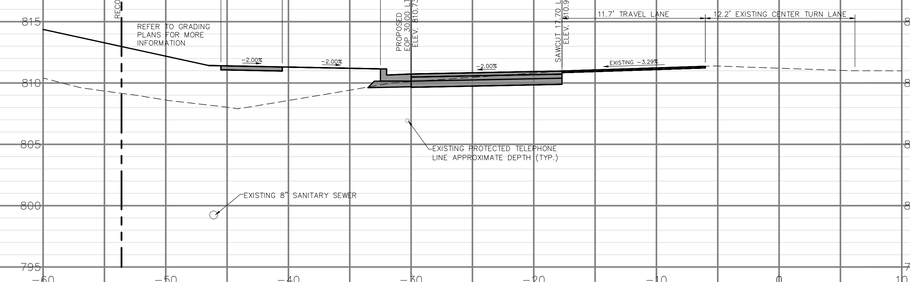

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

STATESVILLE ROAD CROSS SECTIONS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. C-3139

NORTH CAROLINA PROFESSIONAL SEAL 026782 ENGINEER

Jul 28 2016 9:40 AM

DATE:	REVISED PER COMMENTS	REVISIONS
06/22/16		

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 5'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.18

July 19, 2016 - 11:37am By: JWisler
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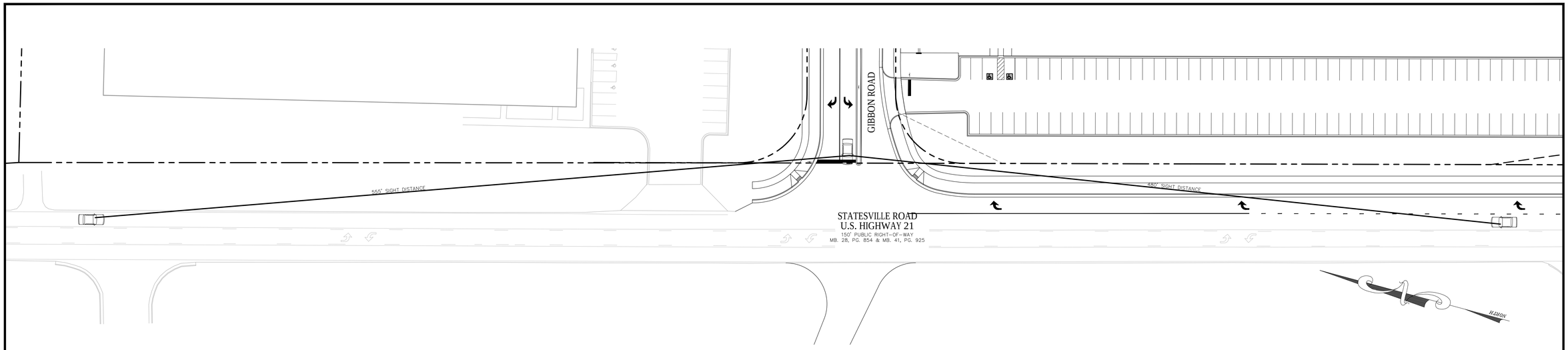
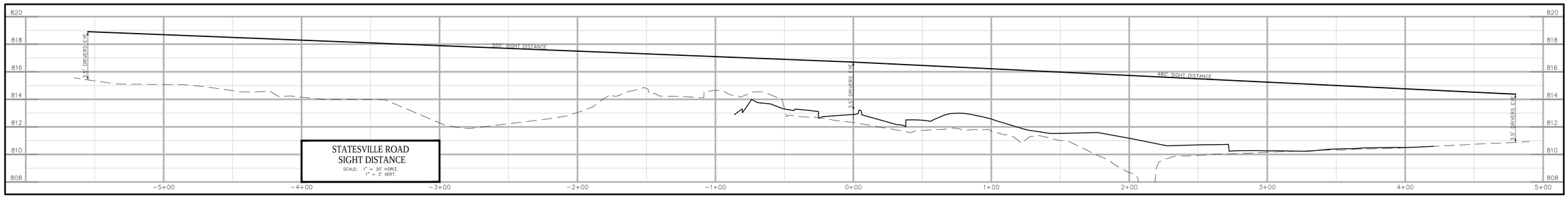
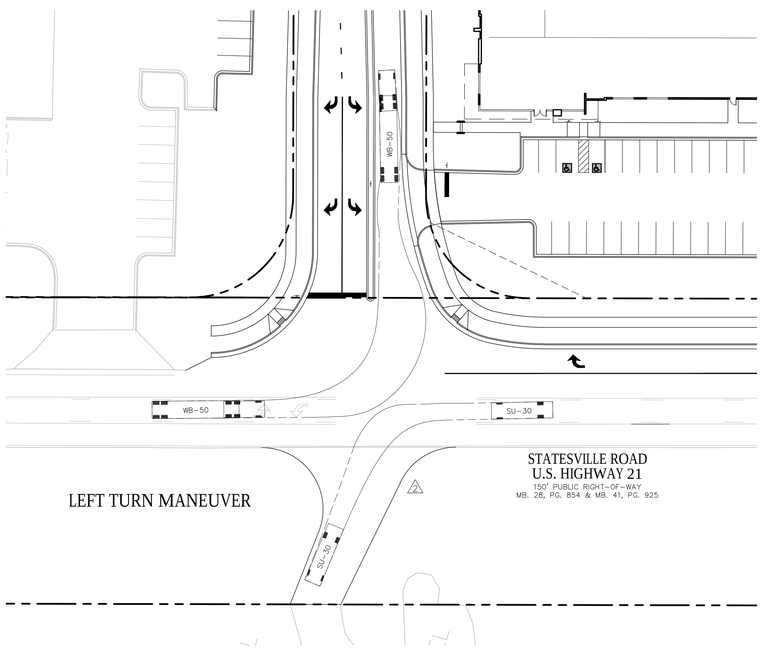
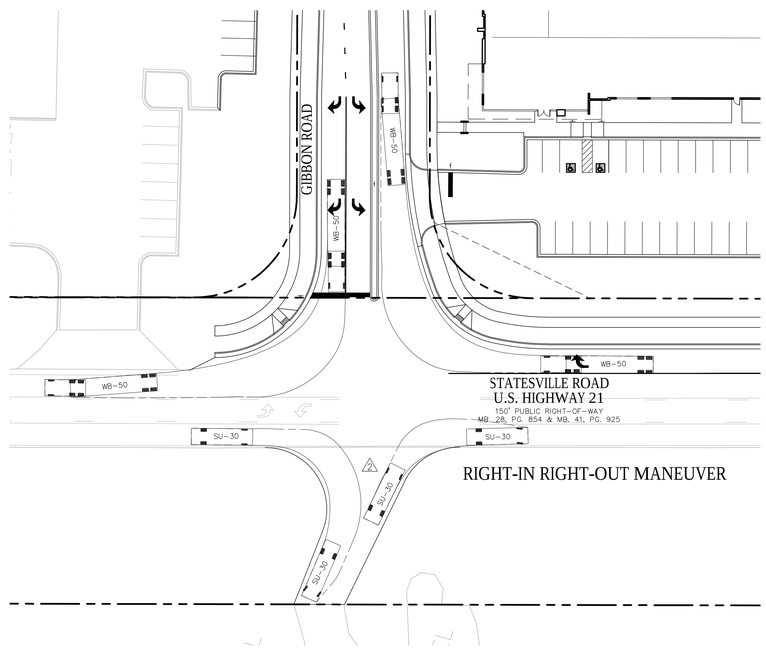


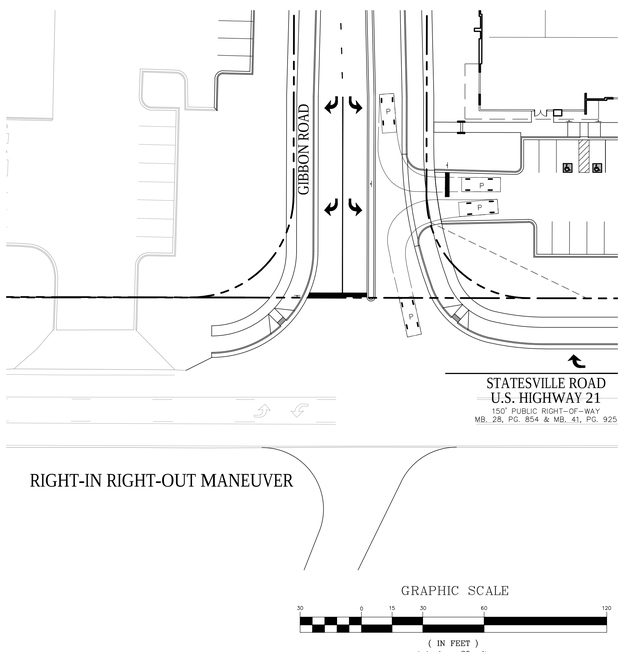




LEFT TURN MANEUVER



RIGHT-IN RIGHT-OUT MANEUVER



RIGHT-IN RIGHT-OUT MANEUVER

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

ORSBORN ENGINEERING GROUP
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CHARLOTTE, NC 28202
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SIGHT DISTANCE
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A.
CHARLOTTE, NORTH CAROLINA
C-3139

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028788

Jul 28 2016 9:40 AM CaSign

	DATE	REVISIONS
2	07/19/16	REVISED PER NCDOT COMMENTS
1	06/22/16	REVISED PER COMMENT

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 30'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.21

July 19, 2016 - 11:27am By: JWissler
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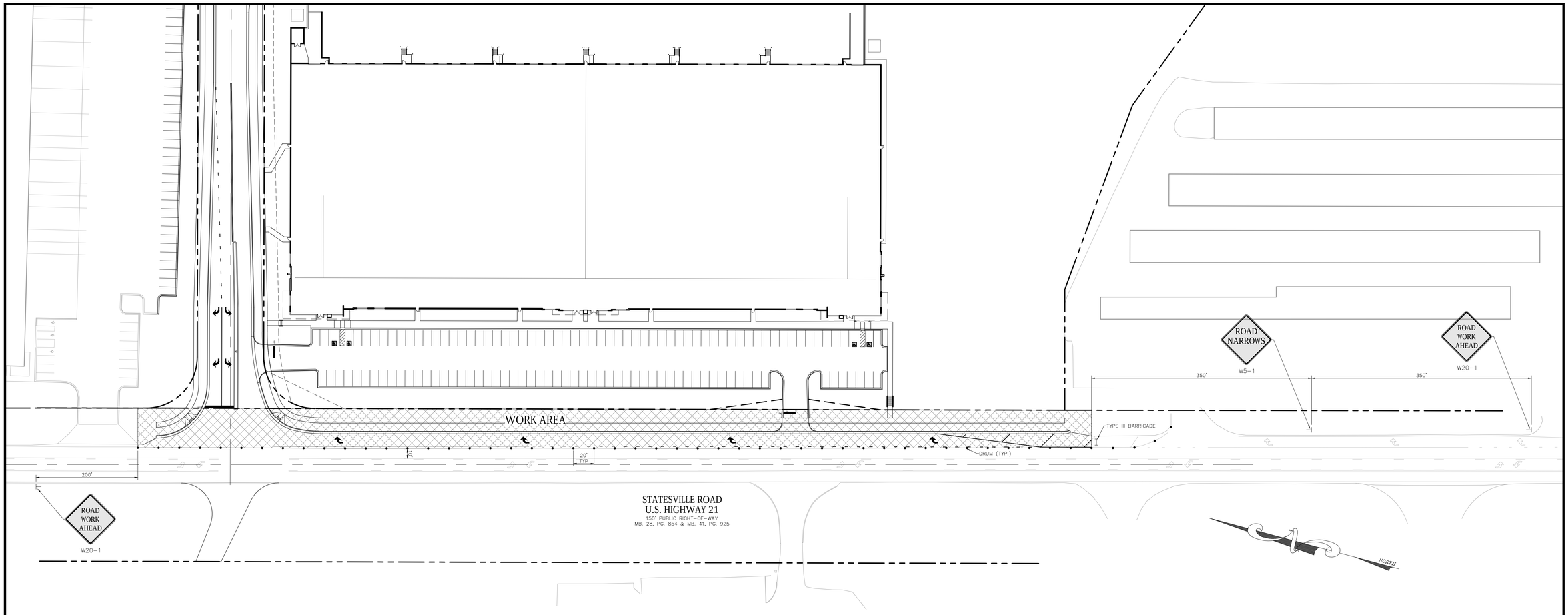

TRAFFIC CONTROL GENERAL NOTES

A) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE REQUIREMENTS OF THE MOST CURRENT EDITIONS OF THE CHARLOTTE DEPT. OF TRANSPORTATION(CDOT) WORK AREA TRAFFIC CONTROL HANDBOOK(W.A.T.C.H.), THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES(M.U.T.C.D.), THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION(NCDOT) SUPPLEMENT TO THE M.U.T.C.D., THE NCDOT ROADWAY STANDARD DRAWINGS AND THE CURRENT EDITION OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.

B) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH, INSTALL, RELOCATE, AND MAINTAIN ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES, WARNING AND/OR CHANNELIZING DEVICES FOR WORK SITES AND DETOUR ROUTES AS SHOWN IN TRAFFIC CONTROL PLANS AS REQUIRED BY THE INSPECTOR.

C) CONTRACTOR SHOULD BE AWARE THAT WHEN THE CONSTRUCTION AREA IS IN OR NEAR A VERTICAL CREST OR HORIZONTAL CURVE, THE WORK AREA SHALL BE EXTENDED SO THAT LANE CLOSURE BEGINS IN ADVANCE OF THE CURVE AND MINIMUM STOPPING SIGHT DISTANCE IS MET.

D) THE CONTRACTOR SHALL MARK ALL HAZARDS WITHIN THE LIMITS OF THE PROJECT WITH WELL-MAINTAINED SIGNS, BARRICADES, WARNING AND/OR CHANNELIZING DEVICES. ON CONNECTING ROADS, ALL BARRICADES, SIGNS, WARNING, AND/OR CHANNELIZING DEVICES SHALL BE MOVED, SUPPLEMENTED, CHANGED, OR REMOVED AS REQUIRED DURING THE PROGRESS OF CONSTRUCTION AS APPROVED BY THE ENGINEER.

E) WORK ON THE PROJECT OR ANY SEPARATE ACTIVITY THEREIN SHALL NOT START UNTIL ALL OF THE REQUIRED SIGNS, BARRICADES, WARNING, AND/OR CHANNELIZING DEVICES ARE INSTALLED AND APPROVED BY THE ENGINEER.

F) THE CONTRACTOR MUST MAINTAIN DURING ALL PERIODS OF CONSTRUCTION ACTIVITY THE ABILITY TO FLAG TRAFFIC USING QUALIFIED FLAGGERS WHEN NECESSARY OR REQUIRED

G) THE CONTRACTOR SHALL MAINTAIN TWO WAY TRAFFIC ON ALL PORTIONS OF THIS PROJECT UNLESS OTHERWISE SPECIFIED IN THE PLANS, PROJECT NOTES, OR BY THE ENGINEER.

H) CONTRACTOR WILL BE REQUIRED TO PROVIDE PROPERTY OWNERS AND TENANTS ACCESS TO THEIR PROPERTY THROUGHOUT THE PROJECT LIMITS, INCLUDING REASONABLE INGRESS AND EGRESS FOR BUSINESSES. SPECIAL ATTENTION SHALL BE PAID TO FIRE HYDRANTS.

I) THE CONTRACTOR SHALL PATROL THE WORK SITE AT THE BEGINNING AND END OF EACH WORK DAY (AT A MINIMUM) TO ENSURE THAT ALL TRAFFIC CONTROL DEVICES ARE IN PLACE AND FUNCTIONING PROPERLY. CONTRACTOR SHALL ENSURE THAT ALL TRAFFIC CONTROL DEVICES ARE IN PLACE AND FUNCTIONING AT ALL TIMES DURING PERIODS OF CONSTRUCTION INACTIVITY.

J) DURING PERIODS OF INACTIVITY OR AT NIGHT, EQUIPMENT SHALL NOT BE PARKED IN SUCH A MANNER AS TO BLOCK SIDEWALKS, TRAFFIC CONTROL DEVICES, OR THE MOTORISTS' VIEW OF TRAFFIC. EQUIPMENT SHALL BE AT LEAST 10 FEET AWAY FROM THE TRAVEL LANE.

K) WHENEVER TRAFFIC MUST BE ROUTED ACROSS THE CENTERLINE DURING CONSTRUCTION ACTIVITY, THE TWO OPPOSING DIRECTIONS MUST BE PHYSICALLY SEPARATED. TRAFFIC CONES CAN BE USED FOR THIS PURPOSE DURING DAYLIGHT HOURS; REFLECTORIZED CONES OR DRUMS MUST BE USED AT NIGHT. TRAFFIC SHALL NOT BE ROUTED ACROSS THE CENTERLINE DURING CONSTRUCTION INACTIVITY UNLESS PAVEMENT MARKING CONFLICTS ARE APPROPRIATELY ADDRESSED AND AGREEMENT ON REMOVAL OR NOT IS WORKED OUT WITH THE ENGINEER IN ACCORDANCE WITH SECTION 16 OF THE W.A.T.C.H. HANDBOOK. IF THE ENGINEER APPROVES TRAFFIC TO CROSS THE CENTER LINE DURING CONSTRUCTION INACTIVITY, ONLY REFLECTORIZED DRUMS MUST BE USED.

L) ADJACENT LANES TO CONSTRUCTION ZONES MAY REMAIN OPEN IF LATERAL CLEARANCE BETWEEN EDGE OF TRAVEL LANE AND EQUIPMENT IS EQUAL TO OR GREATER THAN 2 FEET (INCLUDING WIDTH OF DRUM).

M) THE CONTRACTOR SHALL NOT BE ALLOWED TO STOP TRAFFIC FOR MORE THAN 5 MINUTES AT A TIME IN ANY ONE DIRECTION.

N) CONTRACTOR SHALL NOT BE ALLOWED TO WORK ON BOTH SIDES OF THE ROAD SIMULTANEOUSLY WITHIN THE SAME AREA EXCEPT WHERE THE ROADWAY IS DIVIDED BY A RAISED MEDIAN. IT WILL BE ACCEPTABLE TO CONSTRUCT BORE PITS ON EACH SIDE OF A ROADWAY FOR BORING UTILITIES UNDER THE ROADWAY UNLESS SUPERCEDED BY ENGINEER TO COMPLY WITH PEDESTRIAN REQUIREMENTS OR LATERAL CLEARANCE FROM TRAVEL LANES.

PROJECT NOTES

1. DURING THE HOURS OF 7:00 AM-9:00 AM AND 4:30 PM-6:30 PM MONDAY THRU FRIDAY CONSTRUCTION OR MAINTENANCE WORK WHICH INVOLVES CLOSURE OF A TRAVEL LANE WILL NOT BE ALLOWED ON THOROUGHFARE STREETS EXCEPT FOR EMERGENCY SITUATIONS OR WITH APPROVAL FROM NCDOT.

TRAFFIC CONTROL LEGEND

- ● DRUM (REFER TO NCDOT STANDARD DRAWING 1130.01)
- ⊢ STATIONARY SIGN (REFER TO NCDOT STANDARD DRAWINGS 1110.01 & 1110.02)
- I TYPE III BARRICADE (REFER TO NCDOT STANDARD DRAWING 1145.01)

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
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TRAFFIC CONTROL PLANS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. C-3139

NORTH CAROLINA PROFESSIONAL SEAL 026756 ENGINEER

Jul 28 2016 9:40 AM

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.22

REVISIONS

DATE:	
06/22/16	REVISED PER COMMENTS

July 19, 2016 - 11:38am By bbraun
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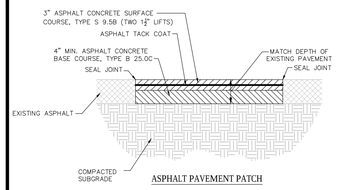
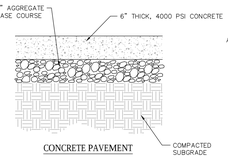
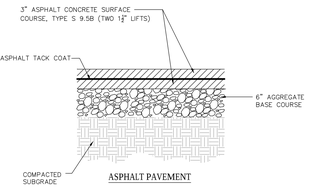


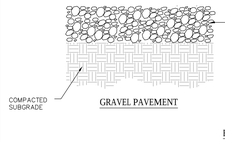
ASPHALT PAVEMENT PATCH



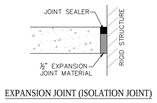
CONCRETE PAVEMENT



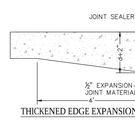
ASPHALT PAVEMENT



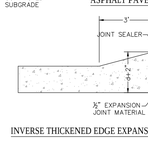
GRAVEL PAVEMENT



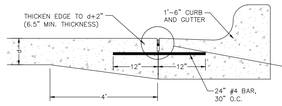
EXPANSION JOINT (ISOLATION JOINT)



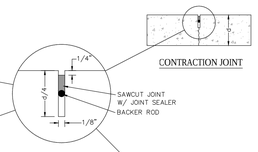
THICKENED EDGE EXPANSION JOINT



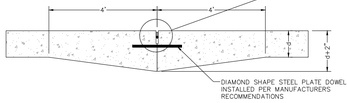
INVERSE THICKENED EDGE EXPANSION JOINT



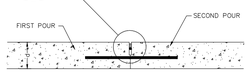
TIED BUTT JOINT AT CURB AND GUTTER



CONTRACTION JOINT



THICKENED EDGE CONSTRUCTION JOINT



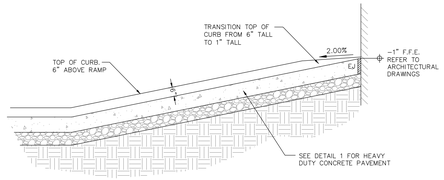
BUTT JOINT

NOTE

1. REFER TO NCDOT SPECIFICATION SECTION 500 FOR SUBGRADE PREPARATIONS.
2. REFER TO NCDOT SPECIFICATION SECTION 520 FOR AGGREGATE BASE COURSE.
3. REFER TO NCDOT SPECIFICATION SECTION 605 FOR ASPHALT TACK COAT.
4. REFER TO NCDOT SPECIFICATION SECTION 610 FOR ASPHALT CONCRETE PLANT MIX PAVEMENT.
5. REFER TO ACI 330.1-03 FOR CONCRETE PAVEMENT

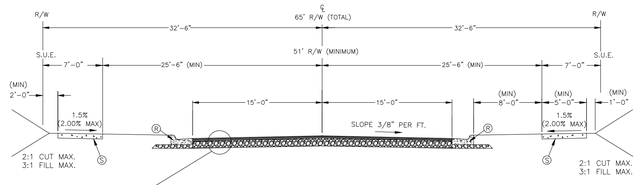
1 STANDARD PAVEMENTS

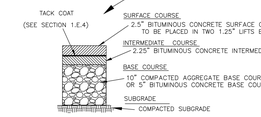
NTS



5 CONCRETE RAMP

NTS





TYPICAL MINIMUM PAVEMENT SECTION

NOTES:

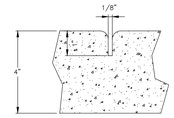
1. USE OF VALLEY GUTTER IS PROHIBITED.
2. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT DESIGN TO CITY ENGINEER.
3. AN ALTERNATIVE PAVEMENT DESIGN MAY BE REQUIRED BY CDOT/NCDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.
4. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).
5. ZONING SETBACKS MEASURED FROM TOTAL R/W

KEY

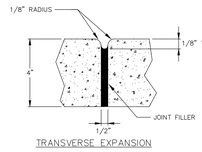
(R) 2'-6" STANDARD CURB AND GUTTER
(S) 4" CONCRETE SIDEWALK

8 LOCAL INDUSTRIAL STREET - TYPICAL SECTION

NTS — CLDSM STD. DTL. U-06



GROOVE JOINT IN SIDEWALK



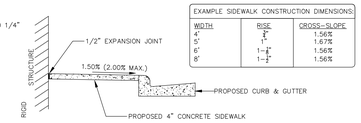
TRANSVERSE EXPANSION JOINT IN SIDEWALK

GENERAL NOTES:

1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 45' INTERVALS NOT TO EXCEED 50' AND MATCHING EXPANSION/CONSTRUCTION JOINT IN ADJACENT CURB. A SEALED 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
2. SIDEWALK AT DRIVEWAY ENTRANCES TO BE 6" THICK.
3. WIDTH OF SIDEWALK ON THOROUGHFARE STREETS SHALL BE A MINIMUM OF 6'. WIDTH OF SIDEWALKS IN THE CENTRAL BUSINESS DISTRICT WILL BE DETERMINED BY THE CDOT.
4. WIDTH OF SIDEWALKS ON NON-THOROUGHFARE STREETS SHALL BE BASED ON TYPICAL STREET SECTION, A MINIMUM OF 5' SIDEWALK TO BE POURED TO END OF RADIUS AT INTERSECTING STREETS.
5. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI. IN 28 DAYS.
6. ZONING CONDITIONS MAY REQUIRE ADDITIONAL WIDTH SIDEWALKS WHICH SHALL SUPERSEDE THESE STANDARD DIMENSIONS SHOWN.
7. LIDS FOR JUNCTION BOXES AND UTILITY VAULTS SHALL BE NON-SKID AS SPECIFIED BY ENGINEER.
8. JOINT MATERIALS SHALL LIMIT SHRINK/SWELL SO POST CONSTRUCTION INSTALLATION RESULTS IN A MAXIMUM OF 1/4" FROM FLUSH.

EXAMPLE SIDEWALK CONSTRUCTION DIMENSIONS:

WIDTH	RISE	CROSS-SLOPE
4'	1"	1.56%
5'	1"	1.67%
6'	1-1/8"	1.56%
8'	1-1/2"	1.56%



DETAILS SHOWING EXPANSION JOINTS IN CONCRETE SIDEWALK

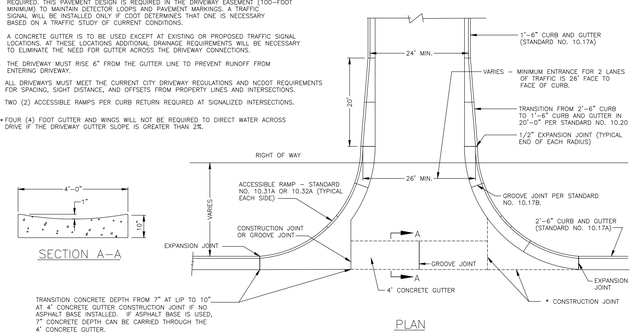
6 CONCRETE SIDEWALKS

NTS — CLDSM STD. DTL. 10.22 (REV 13)

NOTES:

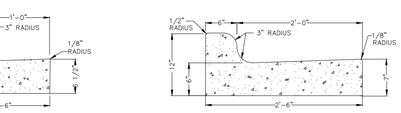
1. WHERE A TYPE III DRIVEWAY IS APPROVED BY THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (CDOT) THAT CONNECTS TO AN EXISTING SIGNALIZED INTERSECTION, OR AT A LOCATION WHERE A TRAFFIC SIGNAL INSTALLATION IS PROPOSED BY CDOT BASED ON A TRAFFIC IMPACT/SIGNAL WARRANT STUDY, A FULL DEPTH ASPHALT PAVEMENT (2-1/2" S-9.5 B/C AND 6" B-25.0 B/C) IS REQUIRED. THIS PAVEMENT DESIGN IS REQUIRED IN THE DRIVEWAY EASEMENT (100-FOOT MINIMUM) TO MAINTAIN DETECTOR LOOPS AND PAVEMENT MARKINGS. A TRAFFIC SIGNAL WILL BE INSTALLED ONLY IF CDOT DETERMINES THAT ONE IS NECESSARY BASED ON A TRAFFIC STUDY OF CURRENT CONDITIONS.
2. A CONCRETE GUTTER IS TO BE USED EXCEPT AT EXISTING OR PROPOSED TRAFFIC SIGNAL LOCATIONS. AT THESE LOCATIONS ADDITIONAL DRAINAGE REQUIREMENTS WILL BE NECESSARY TO ELIMINATE THE NEED FOR GUTTER ACROSS THE DRIVEWAY CONNECTIONS.
3. THE DRIVEWAY MUST RISE 6" FROM THE GUTTER LINE TO PREVENT RUNOFF FROM ENTERING DRIVEWAY.
4. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
5. TWO (2) ACCESSIBLE RAMPS PER CURB RETURN REQUIRED AT SIGNALIZED INTERSECTIONS.

* FOUR (4) FOOT GUTTER AND WINGS WILL NOT BE REQUIRED TO DIRECT WATER ACROSS DRIVE IF THE DRIVEWAY GUTTER SLOPE IS GREATER THAN 2%.



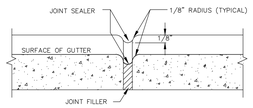
9 TYPE III DRIVEWAY ENTRANCE

NTS — CLDSM STD. DTL. 10.28 (REV 13)



1'-6" STANDARD CURB AND GUTTER

STANDARD 2'-6" CURB AND GUTTER



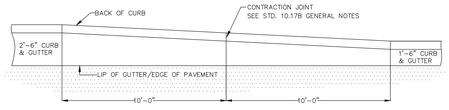
TRANSVERSE EXPANSION JOINT

NOTES:

1. CONTRACTION JOINTS SHALL BE SPACED AT 10-FOOT INTERVALS. FOR VALLEY GUTTER, A 10-FOOT SPACING MAY BE USED WHEN A MACHINE IS USED. JOINT SPACING MAY BE ALTERED BY THE CITY ENGINEER TO PREVENT UNCONTROLLED CRACKING.
2. CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1 1/2" SHALL BE OBTAINED.
3. ALL EXPANSION JOINTS SHALL BE SPACED AT 90-FOOT INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS WITH JOINTS IN ABUTTING SIDEWALK.
4. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 P.S.I. IN 28 DAYS.
5. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
6. TOP 6" OF SUBGRADE BENEATH THE CURB AND GUTTER SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY.

2 STANDARD CURB AND GUTTER

NTS — CLDSM STD. DTL. 10.37



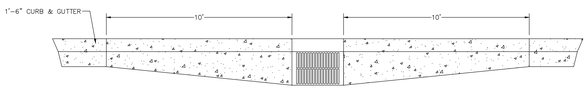
PLAN VIEW

NOTES:

1. TRANSITION TO BE ALONG BACK OF CURB.

3 CURB TRANSITION - 2'-6" CURB & GUTTER TO 1'-6" CURB & GUTTER

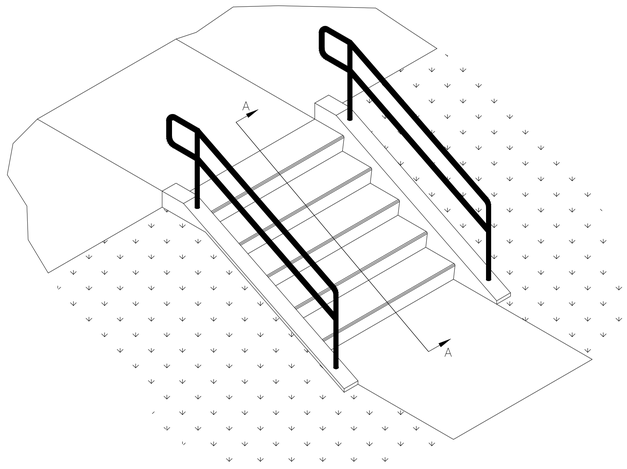
NTS — CLDSM STD. DTL. 10.20

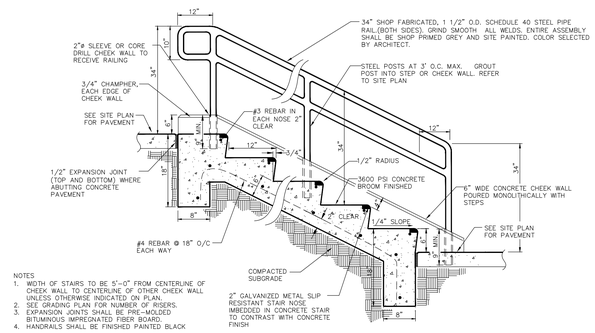


CATCH BASIN IN PARKING AREAS

4 CATCH BASIN FRAME IN 1'-6" CURB & GUTTER

NTS





NOTES

1. WIDTH OF STAIRS TO BE 5'-0" FROM CENTERLINE OF CHEEK WALL TO CENTERLINE OF OTHER CHEEK WALL UNLESS OTHERWISE INDICATED ON PLAN.
2. SEE GRADING PLAN FOR NUMBER OF RISERS.
3. EXPANSION JOINTS SHALL BE PRE-MOLDED BITUMINOUS IMPREGNATED FIBER BOARD.
4. HANDRAILS SHALL BE FINISHED PAINTED BLACK

SECTION A-A

7 SIDEWALK STEPS

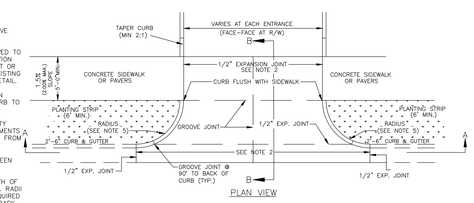
NTS

NOTES:

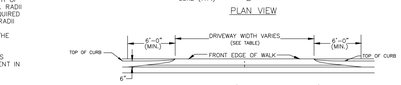
1. ALL CONCRETE TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.
2. AT ALL DRIVEWAYS, SIDEWALKS TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION OR CUT WITH A SAW AND REMOVED. SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXISTING PAVEMENT. SEE STD. NO. 10.17 FOR JOINT DETAIL. PAY LIMITS FOR WORK DONE UNDER CITY OF CHARLOTTE CONTRACTS ARE FROM EXPANSION JOINT TO EXPANSION JOINT, FROM LIP OF CURB TO BACK OF SIDEWALK.
3. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
4. ALGEBRAIC DIFFERENCE IN GRADE ("A") BETWEEN SLOPES SHALL BE 8% OR LESS.
5. RADII MUST BE MINIMUM 6 FEET OR THE WIDTH OF THE PLANTING STRIP, WHICHEVER IS GREATER. RADII GREATER THAN THESE MINIMUMS MAY BE REQUIRED BY CDOT ON A CASE-BY-CASE BASIS. FOR RADII GREATER THAN 6 FEET, THE RADII ARE TO CONTINUE AS A BAND AT-GRADE THROUGH THE SIDEWALK.
6. PER NC IFC SECTION D103.2, FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
7. PAVERS USED IN DRIVEWAY MUST HAVE A THICKNESS OF 3 INCHES.
8. JOINT MATERIAL SHOULD BE PLACED FLUSH WITH CONCRETE.

DRIVEWAY DIMENSIONS

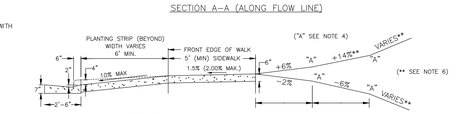
OPERATION/RADIUS	MINIMUM	MAXIMUM
ONE-WAY WITH 6-12 FT. RADII	20'	30'
ONE-WAY WITH 13+ FT. RADII	15'	25'
TWO-WAY WITH 6-12 FT. RADII	26'	50'
TWO-WAY WITH 13+ FT. RADII	22'	40'



PLAN VIEW



SECTION A-A (ALONG FLOW LINE)



SECTION B-B

10 TYPE II-MODIFIED DRIVEWAY DETAIL WITH WIDE PLANTING STRIP AND STANDARD CURB

NTS — CLDSM STD. DTL. 10.25E (REV 13)

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1433 • F: 704-749-1433

SITE DETAILS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, PA — C-3139 — NORTH CAROLINA

CARL A. ROSE — SEAL 22678 — ENGINEER — NORTH CAROLINA

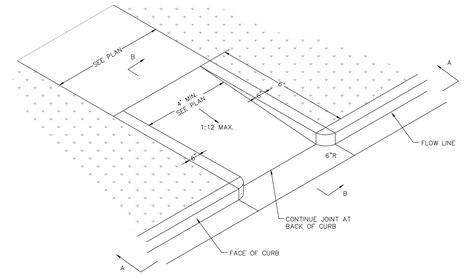
Jul 28 2016 9:40 AM

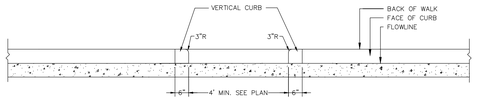
REVISIONS

DATE:	
06/22/16	REVISED PER COMMENTS
07/19/16	REVISED PER NCDOT COMMENTS

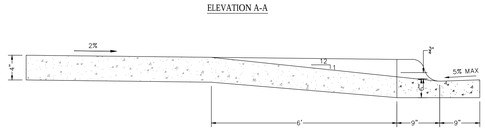
JOB #	15029
DATE:	04/29/16
SCALE:	NTS
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.24





ELEVATION A-A

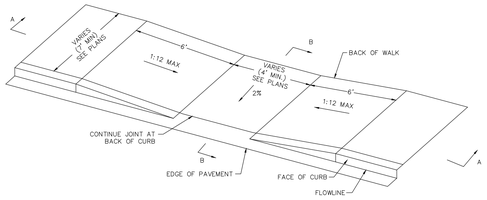


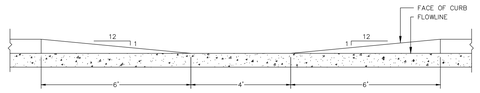
TYPICAL RAMP ℄ SECTION B-B

NOTE

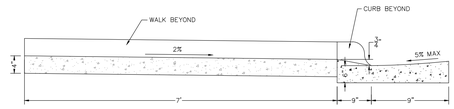
1. REFER TO CONCRETE SIDEWALK DETAIL FOR MORE INFORMATION.
2. CURB RAMPS SHALL BE ISOLATED FROM ALL OTHER CONCRETE BY EXPANSION JOINTS.
3. A GROOVE JOINT SHALL BE 1" DEEP WITH ¼" RADII. A SEALED ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
4. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI. IN 28 DAYS.

1 ACCESSIBLE RAMP
NTS





ELEVATION A-A



TYPICAL RAMP ℄ SECTION B-B

NOTE

1. REFER TO CONCRETE SIDEWALK DETAIL FOR MORE INFORMATION.
2. CURB RAMPS SHALL BE ISOLATED FROM ALL OTHER CONCRETE BY EXPANSION JOINTS.
3. A GROOVE JOINT SHALL BE 1" DEEP WITH ¼" RADII. A SEALED ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
4. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI. IN 28 DAYS.

3 ACCESSIBLE RAMP ADJACENT TO PARKING WITH LANDING
NTS

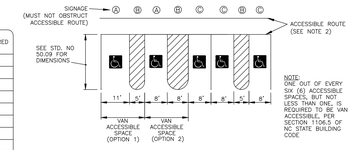
ACCESSIBLE PARKING REQUIREMENTS

TOTAL PARKING SPACES PROVIDED	MINIMUM NUMBER OF ACCESSIBLE SPACES SPACES REQUIRED	MINIMUM NUMBER OF ACCESSIBLE SPACES REQUIRED TO BE VAN ACCESSIBLE
1 TO 25	1	1
26 TO 50	2	1
51 TO 75	3	1
76 TO 100	4	1
101 TO 150	5	1
151 TO 200	6	1
201 TO 300	7	2
301 TO 400	8	2
401 TO 500	9	2
501 TO 1000	2% OF TOTAL	1 IN EVERY 6 ACCESSIBLE SPACES
1001 AND OVER	20 PLUS 1 FOR EACH 100 OVER 1000	1 IN EVERY 6 ACCESSIBLE SPACES
REFERENCE: SECTION 1106 OF NC BUILDING CODE		

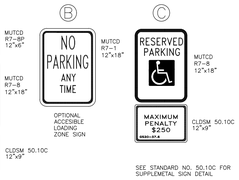
NOTES:

1. ALL 12"x18" ACCESSIBLE SIGNS (R7-8 & R7-1) SHALL BE MOUNTED AT 7 FEET FROM GRADE TO BOTTOM EDGE OF SIGN FACE (MUTCD). MOUNTING HEIGHT CAN BE REDUCED TO 5 FEET IF PLACED IN AN AREA BETWEEN SIDEWALK AND BUILDING FACE IN WHICH PEDESTRIANS ARE NOT EXPECTED TO USE.
2. IF ACCESSIBLE ROUTE IS A RAISED SIDEWALK AREA, THEN RAMPS ARE REQUIRED AT LOADING ZONE AREA. MAINTAIN MIN. 4' WIDE CONTINUOUS PASSAGE.
3. VERTICAL CLEARANCE FOR VANS MUST BE GREATER THAN 98-INCHES.
4. THIS DETAIL IS TO PROVIDE GENERAL GUIDANCE FOR PARKING LAYOUT AND DESIGN; REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) U.S. DEPARTMENT OF TRANSPORTATION AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SUPPLEMENT AND NC BUILDING CODE FOR ADDITIONAL INFORMATION.

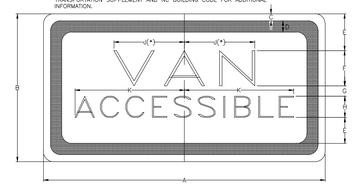
PARKING SPACE PAVEMENT MARKINGS



NOTE:
ONE OUT OF EVERY SIX (6) ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE, PER SECTION 1106.5 OF NC STATE BUILDING CODE



SEE STANDARD NO. 50.10C FOR SUPPLEMENTAL SIGN DETAIL



R7-8P

DIMENSIONS (INCHES)										
A	B	C	D	E	F	G	H	J	K	L
12	6	3/8	3/8	1-1/2*	1-1/2*	1/2	1D	2-1/2	4	1-1/2

*INCREASE SPACING 50%
D-FHWA (FEDERAL HIGHWAY ADMINISTRATION/USDOT) SERIES D LETTERS

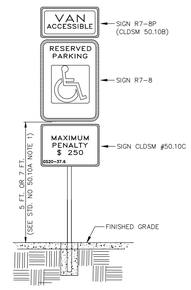
NOTE:

SUPPLEMENTAL VAN ACCESSIBLE SIGN (R7-8P) USED IF THERE IS ONLY ONE REQUIRED ACCESSIBLE PARKING SPACE (MUST BE VAN ACCESSIBLE) AND AT EACH ADDITIONAL REQUIRED VAN ACCESSIBLE SPACE. (SEE STD. NO. 50.10B)

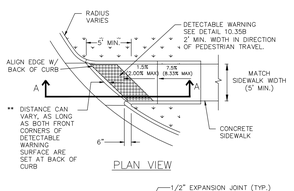
LEGEND AND BORDER – GREEN
BACKGROUND – WHITE

SIGN APPROVED FOR USE UNDER GENERAL STATUTE 20-37.6

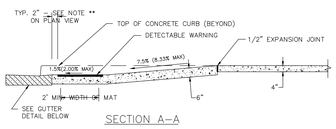
THIS PENALTY SIGN IS REQUIRED TO ACCOMPANY ALL R7-8 PARKING SIGNS ERECTED AFTER DECEMBER 31,1990



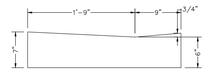
6 ACCESSIBLE PARKING & SIGNAGE STANDARDS
NTS
CLDSM STD. DTL. 50.10 MOD (REV 13)



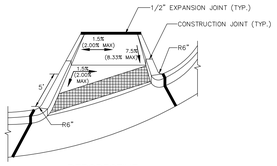
PLAN VIEW



SECTION A–A



GUTTER DETAIL



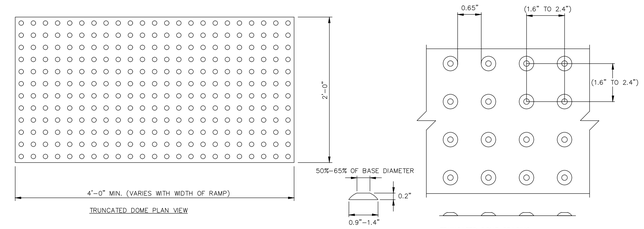
PERSPECTIVE

NOTES:

1. USE THIS DETAIL ONLY UNDER THE FOLLOWING CIRCUMSTANCES:
   - 5-FOOT SIDEWALKS WITH CURB RADII GREATER THAN 35 FEET
   - 6-FOOT SIDEWALKS WITH CURB RADII GREATER THAN 30 FEET
   - 8-FOOT SIDEWALKS WITH CURB RADII GREATER THAN 25 FEET
2. DIRECTIONAL RAMPS MAY BE USED WHEN A MIN. 8-FOOT PLANTING STRIP IS PROVIDED. DO NOT USE THIS DETAIL IF THERE IS HARDSCAPE INSTEAD OF A PLANTING STRIP.
3. ALL CONCRETE SHALL BE AT LEAST 3600 PSI.

THIS DETAIL IS NOT FOR USE IN ETJ, OR ON NCDOT-MAINTAINED STREETS.

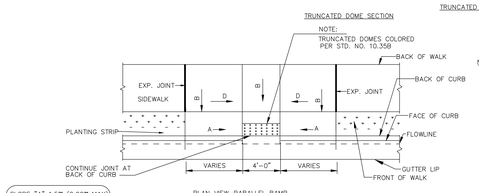
4 DIRECTIONAL ACCESS RAMP WITH LARGE CURB RADIUS
NTS
CLDSM STD. DTL. 10.408 (REV 13)



TRUNCATED DOME PLAN VIEW

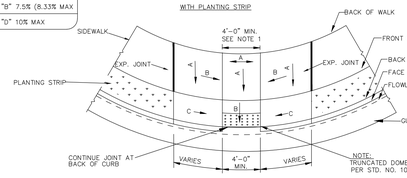
TRUNCATED DOME SPACING

TRUNCATED DOME SECTION

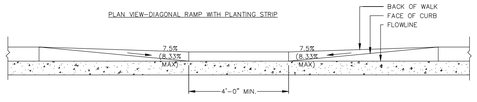


PLAN VIEW–PARALLEL RAMP WITH PLANTING STRIP

SLOPE "A" 1.5% (2.00% MAX)
SLOPE "B" 7.5% (8.33% MAX
SLOPE "D" 10% MAX



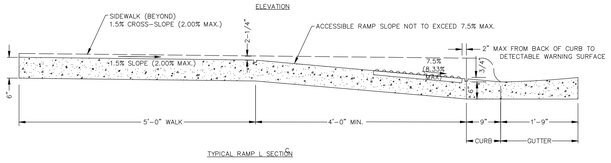
PLAN VIEW–DIAGONAL RAMP WITH PLANTING STRIP



ELEVATION

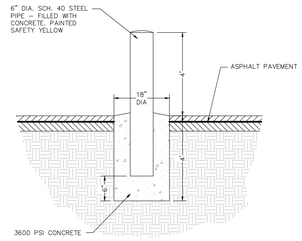
NOTES

1. ALL DETECTABLE WARNING DEVICES USED IN NEW CONSTRUCTION SHALL BE OF A RIGID PRECAST OR EMBEDDED PRODUCT APPROVED BY THE CITY ENGINEER. RETRO FIT MATS WILL ONLY BE ALLOWED ON EXISTING RAMPS WITH PRIOR APPROVAL OF THE CITY ENGINEER FOR MATERIAL TYPE AND INSTALLATION (IE. RESURFACING).
2. WIDTH OF DETECTABLE WARNING AREA SHALL BE A MINIMUM OF 4 FEET AND VARY WITH WIDTH OF RAMP.
3. LENGTH OF DETECTABLE WARNING AREA SHALL BE 2 FEET REGARDLESS OF SECTION WIDTH.
4. DETECTABLE WARNING AREA CAN BE SQUARE WHERE USED IN A CURB RADIUS.
5. DETECTABLE WARNING DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
6. DECTECTABLE WARNING AREA SHALL BE COLORED BLACK IN ALL LOCATIONS EXCEPT ON TRYON STREET MALL, WHERE FRENCH GRAY IS TO BE USED.
7. IF PAVERS ARE TO BE USED, PAVERS SHALL BE 6" THICK AND CAST FROM 5000 psi CONCRETE.
8. MATS ARE TO BE RIGID WITH TURN DOWN EDGES EMBEDDED IN CONCRETE TO ELIMINATE TRIP HAZARD.
9. DIMENSIONS PER NCDOT 848.06
10. IF TURNING SPACE IS CONFINED BY CURB OR VERTICAL SURFACE AT BACK OF THE TURNING SPACE, THE MINIMUM WIDTH MUST INCREASE TO 5'-0" MIN.
11. ENSURE FLUSH CONDITIONS AT CURB RAMP TO GUTTER TRANSITION.

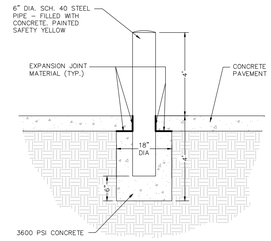


TYPICAL RAMP ℄ SECTION

2 ACCESSIBLE RAMP WITH PLANTING STRIP 2'-6" CURB & GUTTER
NTS
CLDSM STD. DTL. 10.31 (REV 13)

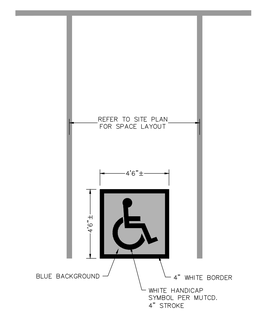


IN ASPHALT AND LAWN AREAS



IN CONCRETE AREA

5 PIPE BOLLARDS
NTS



7 SPECIALIZED PARKING SYMBOL DETAIL
NTS

O·E·G
ORSBORN ENGINEERING GROUP
630 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1433 • F: 704-749-1433

SITE DETAILS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

REGISTERED ENGINEERING FIRM C-3139 PA
NORTH CAROLINA PROFESSIONAL SEAL 026780 ENGINEER JAMES A. WEBSTER
Jul 28 2016 9:40 AM CSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

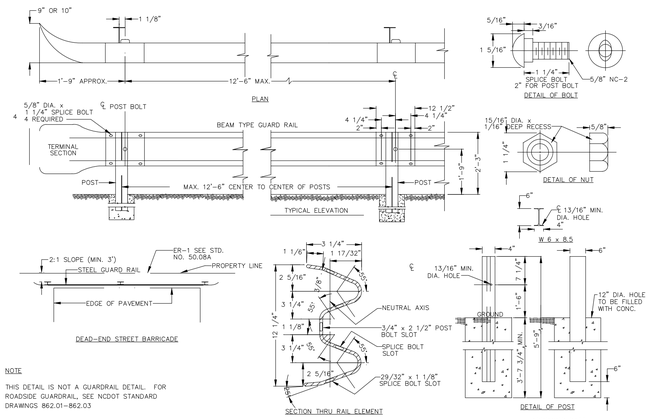
JOB #	15029
DATE:	04/29/16
SCALE:	NTS
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.25

July 19, 2016 - 11:38am By: JWebster
P:\15029 Project Runway\Dwg\15029-C2.24 SITE DETAILS.dwg

GENERAL NOTES:

1. STEEL BEAM TYPE GUARD RAILS SHALL BE INSTALLED AT THE END OF ALL DEAD-END STREETS, EXCEPT CUL-DE-SAC STREETS WHICH HAVE BEEN IMPROVED WITH A PERMANENT TURN-AROUND.
2. FOR STREETS 26' IN WIDTH THE GUARD RAIL SHALL CONSIST OF TWO(2) 12'-6" SECTIONS OR ONE(1) 25' SECTION, THREE (3) STEEL POSTS, AND TWO (2) TERMINAL SECTIONS. FOR STREETS GREATER THAN 25' IN WIDTH THE GUARD RAIL SHALL SPAN THE ENTIRE WIDTH OF THE STREET.
3. GUARD RAIL SHALL CONSIST OF RAIL ELEMENTS FABRICATED TO DEVELOP CONTINUOUS BEAM STRENGTH AND INSTALLED AS SHOWN.
4. MINIMUM THICKNESS OF GUARD RAIL SHALL BE 12 GAGE U.S. STANDARD. THE RAIL ELEMENT INCLUDING SPLICES, SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH OF 80,000 LBS. GUARD RAIL PARTS FURNISHED SHALL BE INTERCHANGEABLE WITH SIMILAR PARTS REGARDLESS OF THE SOURCE OF MANUFACTURER. THE HOLES FOR CONNECTING BOLTS SHALL BE PUNCHED OF DRILLED, BURNING WILL NOT BE PERMITTED.
5. THE GUARD, BOLTS, NUTS, STEEL POSTS. AND ALL OTHER METAL PARTS SHALL BE GALVANIZED TO CONFORM TO THE REQUIREMENTS FOR THE COATING CLASS, (2.50 OUNCES PER SQUARE FOOT) OF THE CURRENT SPECIFICATIONS FOR ZINC-COATED (GALVANIZED) IRON, AND STEEL SHEETS, COILS, AND CUT LENGTHS, IN ACCORDANCE WITH ASTM 123A.
6. IF THE AVERAGE SPELTER COATING AS DETERMINED FROM THE REQUIRED SAMPLES IS LESS THAN TWO (2) OUNCES OF SPELTER PER SQUARE FOOT, OR IF ANY ONE SPECIMEN HAS LESS THAN 1.8 ONCES OF SPELTER PER SQUARE FOOT OF DOUBLE EXPOSED SURFACE, THE LOT SAMPLED SHALL BE REJECTED, THE FINISHED SHEETS SHALL BE OF FIRST CLASS COMMERCIAL QUALITY, FREE FROM INJURIOUS DEFECTS, SUCH AS BLISTERS, FLUX, AND UNCOATED SPOTS.
7. THE GUARD RAIL SHALL BE INSPECTED TO DETERMINE THAT THE MATERIAL, DIMENSIONS, AND WORKMANSHIP ARE IN ACCORDANCE WITH THIS PLAN.
8. WHERE A DEAD-END STREET REQUIRES GUARD RAIL, END OF ROADWAY MARKER SIGNS SHALL ALSO BE REQUIRED. (SEE STD. 50.08A & 50.08B) (ER-1).

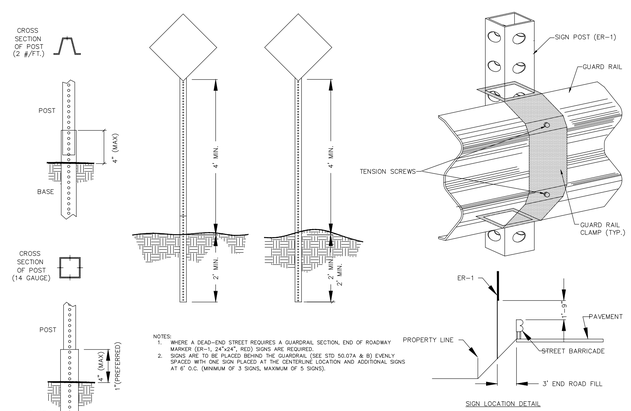


NOTE

THIS DETAIL IS NOT A GUARDRAIL DETAIL. FOR ROADSIDE GUARDRAIL, SEE NCDOT STANDARD DRAWINGS 862.01-862.03

1 DEAD END STREET BARRICADE

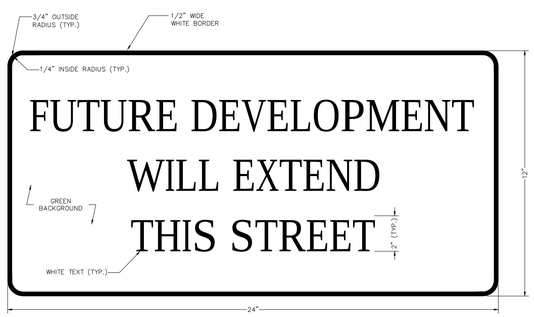
NTS — CLDSM STD. DTL. 50.07



NOTES:
1. WHERE A DEAD-END STREET REQUIRES A GUARDRAIL SECTION, END OF ROADWAY MARKER (ER-1, 24"x24", RED) SIGNS ARE REQUIRED.
2. SIGNS ARE TO BE PLACED BEHIND THE GUARDRAIL (SEE STD 50.07A & B) EVENLY SPACED WITH ONE SIGN PLACED AT THE CENTERLINE LOCATION AND ADDITIONAL SIGNS AT 6' O.C. (MINIMUM OF 3 SIGNS, MAXIMUM OF 5 SIGNS).

2 END OF ROADWAY MARKER

NTS — CLDSM STD. DTL. 50.08 (REV 4)

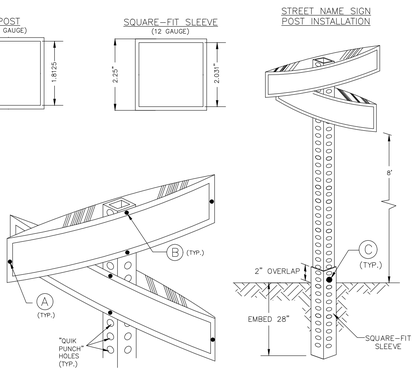


NOTES:

1. SIGN SHALL MEET OR EXCEED MUTCD STANDARDS FOR RETROREFLECTIVITY
2. SIGN MATERIAL SHALL BE 0.080" THICK ALUMINUM
3. ALL LETTERS SHALL BE SERIES B-2000 FROM THE 2004 STANDARD HIGHWAY SIGNS MANUAL (AND ANY REVISION THERETO) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.

3 STREET CONNECTIVITY SIGN END OF ROAD BARRICADE

NTS — CLDSM STD. DTL. 50.08C (REV 4)



KEY TO FASTENERS:

(A) #10-24 x 3/8" HEX HEAD MACHINE, ZINC- DEAD END
#10-24 FLANGE NUT, ZINC- DEAD END

(B) 5/16" #16 X 3" CARRIAGE BOLT, ZINC
5/16" #16 HEX NUT, STEEL

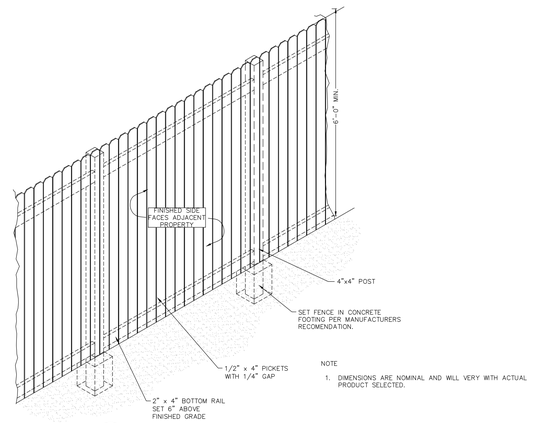
(C) 5/16" #16 X 2-3/4" CORNER BOLT (BREAKAWAY), ZINC
5/16" #16 HEX NUT, STEEL

NOTES:

1. POST SHALL BE 14-GAUGE GALVANIZED STEEL, QUIK-PUNCH, 5/8" HOLES, 1" ON CENTER, ALIGNED ON ALL SIDES, AND 2" SQUARE, 10 FEET IN LENGTH.
2. THE SLEEVE SHALL BE 12-GAUGE GALVANIZED STEEL, 5/8" HOLES, 1" ON CENTER, ALIGNED ON ALL SIDES, AND 2.25" SQUARE, 30" IN LENGTH.
3. ALL STREET NAME SIGNS ARE SUBJECT TO THE APPROVAL OF THE DIRECTOR OF THE CHARLOTTE DEPARTMENT OF TRANSPORTATION AND THE CITY ENGINEER.

4 STREET NAME SIGN

NTS — CLDSM STD. DTL. 50.05A (REV 9)

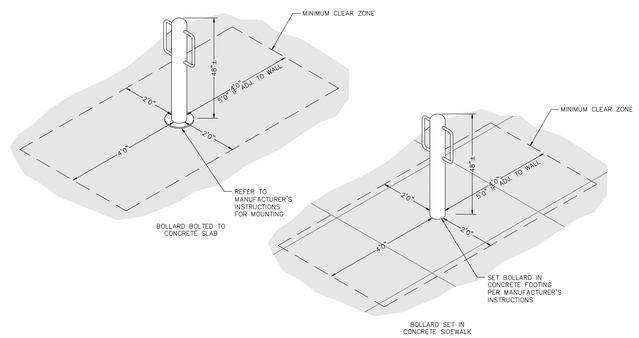


NOTE

1. DIMENSIONS ARE NOMINAL AND WILL VERY WITH ACTUAL PRODUCT SELECTED.

5 BUFFER FENCE

NTS



NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY ENGINEER
2. BOLLARD SHALL BE 4" SCH. 40 STEEL PIPE W/ 3/4" STEEL ROUND ATTACHMENT BARS
3. POWDER COATING: BLACK

6 BIKE BOLLARDS

NTS

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1433 • F: 704-749-1433

SITE DETAILS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. — CHARLOTTE COUNTY, NORTH CAROLINA — C-3139

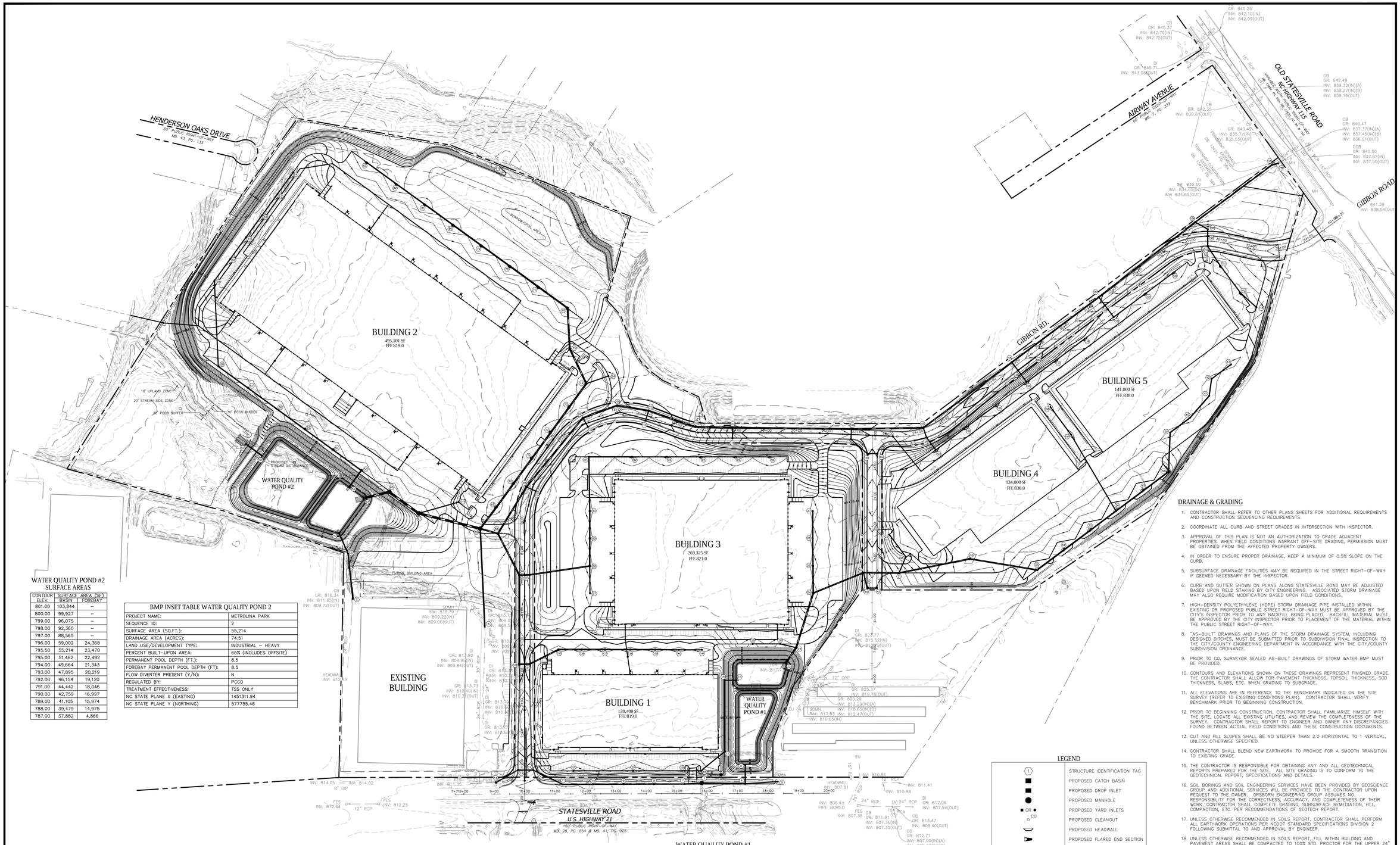
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028786 — JAMES A. WISNIEWSKI

Jul 28 2016 9:40 AM CoSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	NTS
DRAWN BY:	JAW
APPROVED BY:	JCO

C2.26



WATER QUALITY POND #2 SURFACE AREAS

CONTOUR ELEV.	SURFACE AREA (SF) BASIN	FOREBAY
801.00	103,844	–
800.00	99,927	–
799.00	96,075	–
798.00	92,360	–
797.00	88,565	–
796.00	59,002	24,368
795.50	55,214	23,470
795.00	51,462	22,492
794.00	49,664	21,343
793.00	47,895	20,219
792.00	46,154	19,120
791.00	44,442	18,046
790.00	42,759	16,997
789.00	41,105	15,974
788.00	39,479	14,975
787.00	37,882	4,866

BMP INSET TABLE WATER QUALITY POND 2

PROJECT NAME:	METROLINA PARK
SEQUENCE ID:	2
SURFACE AREA (SQ.FT.):	55,214
DRAINAGE AREA (ACRES):	74.51
LAND USE/DEVELOPMENT TYPE:	INDUSTRIAL – HEAVY
PERCENT BUILT-UPON AREA:	65% (INCLUDES OFFSITE)
PERMANENT POOL DEPTH (FT.):	8.5
FOREBAY PERMANENT POOL DEPTH (FT):	8.5
FLOW DIVERTER PRESENT (Y/N):	N
REGULATED BY:	PCCO
TREATMENT EFFECTIVENESS:	TSS ONLY
NC STATE PLANE X (EASTING)	1451311.94
NC STATE PLANE Y (NORTHING)	577755.46

WATER QUAILITY POND #1 SURFACE AREAS

CONTOUR ELEV.	SURFACE AREA (SF) BASIN	FOREBAY
812.00	70,158	–
811.00	66,824	–
810.00	63,379	–
809.00	60,017	–
808.00	56,750	–
807.00	53,559	–
806.00	31,666	18,071
805.50	28,515	17,302
805.00	25,298	16,555
804.00	23,946	15,544
803.00	22,620	14,558
802.00	21,319	13,597
801.00	20,043	12,661
800.00	18,792	11,751
799.00	17,566	10,866
798.00	16,363	10,006
797.00	15,188	2,317

BMP INSET TABLE WATER QUALITY POND 1

PROJECT NAME:	METROLINA PARK
SEQUENCE ID:	1
SURFACE AREA (SQ.FT.):	28,515
DRAINAGE AREA (ACRES):	31.15
LAND USE/DEVELOPMENT TYPE:	INDUSTRIAL – HEAVY
PERCENT BUILT-UPON AREA:	81% (INCLUDES OFFSITE)
PERMANENT POOL DEPTH (FT.):	8.5
FOREBAY PERMANENT POOL DEPTH (FT):	8.5
FLOW DIVERTER PRESENT (Y/N):	N
REGULATED BY:	PCCO
TREATMENT EFFECTIVENESS:	TSS ONLY
NC STATE PLANE X (EASTING)	1451023.27
NC STATE PLANE Y (NORTHING)	576150.85

LEGEND

1	STRUCTURE IDENTIFICATION TAG
	PROPOSED CATCH BASIN
	PROPOSED DROP INLET
	PROPOSED MANHOLE
OR	PROPOSED YARD INLETS
CO	PROPOSED CLEANOUT
	PROPOSED HEADWALL
	PROPOSED FLARED END SECTION
	PROPOSED SWALE/DITCH ℄
	PROPOSED STORM PIPE
RD	PROPOSED ROOF DRAIN PIPE
	EXISTING STORM PIPE
855	PROPOSED CONTOURS
854	
855	EXISTING CONTOURS
854	

NORTH

GRAPHIC SCALE

120 0 60 120 240 480

(IN FEET)
1 inch = 120 ft.

DRAINAGE & GRADING

1. CONTRACTOR SHALL REFER TO OTHER PLANS SHEETS FOR ADDITIONAL REQUIREMENTS AND CONSTRUCTION SEQUENCING REQUIREMENTS.
2. COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR.
3. 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 OWNERS.
4. IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB.
5. SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED NECESSARY BY THE INSPECTOR.
6. CURB AND GUTTER SHOWN ON PLANS ALONG STATESVILLE ROAD MAY BE ADJUSTED BASED UPON FIELD STAKING BY CITY ENGINEERING. ASSOCIATED STORM DRAINAGE MAY ALSO REQUIRE MODIFICATION BASED UPON FIELD CONDITIONS.
7. 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.
8. "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.
9. PRIOR TO CO, SURVEYOR SEALED AS-BUILT DRAWINGS OF STORM WATER BMP MUST BE PROVIDED.
10. CONTOURS AND ELEVATIONS SHOWN ON THESE DRAWINGS REPRESENT FINISHED GRADE. THE CONTRACTOR SHALL ALLOW FOR PAVEMENT THICKNESS, TOPSOIL THICKNESS, SOD THICKNESS, SLABS, ETC. WHEN GRADING TO SUBGRADE.
11. ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK INDICATED ON THE SITE SURVEY (REFER TO EXISTING CONDITIONS PLAN). CONTRACTOR SHALL VERIFY BENCHMARK PRIOR TO BEGINNING CONSTRUCTION.
12. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE, LOCATE ALL EXISTING UTILITIES, AND REVIEW THE COMPLETENESS OF THE SURVEY. CONTRACTOR SHALL REPORT TO ENGINEER AND OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND THESE CONSTRUCTION DOCUMENTS.
13. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2.0 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE SPECIFIED.
14. CONTRACTOR SHALL BLEND NEW EARTHWORK TO PROVIDE FOR A SMOOTH TRANSITION TO EXISTING GRADE.
15. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL GEOTECHNICAL REPORTS PREPARED FOR THE SITE. ALL SITE GRADING IS TO CONFORM TO THE GEOTECHNICAL REPORT, SPECIFICATIONS AND DETAILS.
16. SOIL BORINGS AND SOIL ENGINEERING SERVICES HAVE BEEN PROVIDED BY GEOSCIENCE GROUP AND ADDITIONAL SERVICES WILL BE PROVIDED TO THE CONTRACTOR UPON REQUEST TO THE OWNER. ORSBORN ENGINEERING GROUP ASSUMES NO RESPONSIBILITY FOR THE CORRECTNESS, ACCURACY, AND COMPLETENESS OF THEIR WORK. CONTRACTOR SHALL COMPLETE GRADING, SUBSURFACE REMEDIATION, FILL, COMPACTION, ETC. PER RECOMMENDATIONS OF GEOTECH REPORT.
17. UNLESS OTHERWISE RECOMMENDED IN SOILS REPORT, CONTRACTOR SHALL PERFORM ALL EARTHWORK OPERATIONS PER NCDOT STANDARD SPECIFICATIONS DIVISION 2 FOLLOWING SUBMITTAL TO AND APPROVAL BY ENGINEER.
18. UNLESS OTHERWISE RECOMMENDED IN SOILS REPORT, FILL WITHIN BUILDING AND PAVEMENT AREAS SHALL BE COMPACTED TO 100% STD. PROCTOR FOR THE UPPER 24"
19. FILL WITHIN LAWN AND LANDSCAPE AREAS SHALL BE COMPACTED TO AT LEAST 90% STD. PROCTOR.
20. REQUIRED IMPORTED FILL MATERIAL SHALL MEET THE REQUIREMENTS OF THE SPECIFICATIONS. FILL MATERIAL MUST BE OBTAINED FROM OFF-SITE.
21. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE AND PROPER SOIL AND EROSION CONTROL MEASURES FOR PROTECTION OF ALL DRAINAGE AND SEWER STRUCTURES AND AT ALL ADJACENT LANDS AND ROADS. CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENT CONTROL DURING THE CONSTRUCTION PHASE PER CLDMS AND NCDENR REQUIREMENTS AND THESE CONTRACT DOCUMENTS.
22. PORTIONS OF THIS PROJECT MAY REQUIRE SLOPES ACROSS PAVED AREAS AND LAWNS LESS THAN 2%. CONTRACTOR SHALL TAKE CARE IN THESE AREAS TO PROVIDE POSITIVE DRAINAGE TO ENSURE RUNOFF SHEETS ACROSS NEW PAVEMENT OR LAWN AREAS TO PROPOSED OR EXISTING STORM INLETS.
23. EXCAVATION, PAVING, AND STORM SEWER WORK SHALL BE IN ACCORDANCE WITH CLDMS AND CDOT REQUIREMENTS.
24. ALL DISTURBED AREAS BEYOND LIMITS OF PAVEMENT AND BUILDING NOT IMPROVED WITH LANDSCAPE BEDS PER THE LANDSCAPE PLANS SHALL BE IMPROVED WITH A NEW LAWN SEEDED OR SODDED AS DIRECTED BY OWNER. CONTRACTOR SHALL MAINTAIN NEW SEEDED LAWN AREAS UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS, RETENTION, AND DETENTION FACILITIES, EASEMENTS, ETC. UNTIL THE WORK HAS BEEN ACCEPTED BY THE OWNER. ALL DISRUPTED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
26. ORSBORN ENGINEERING GROUP HAS NOT REVIEWED THE STRUCTURAL STABILITY OF ANY EXISTING RETAINING WALLS NOTED TO REMAIN.
27. ALL STORM PIPE, RCP, HDPE, ETC., SHALL CONFORM TO NCDOT STD. SPEC. SECTION 1032. PIPE SHALL BE INSTALLED PER NCDOT STD. SPEC. SECTION 300.

ORSBORN ENGINEERING GROUP
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CHARLOTTE, NC 28202
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OVERALL GRADING PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
C-3139
NORTH CAROLINA
SEAL 026780
ENGINEER
Jul 28 2016 9:44 AM CoSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 120'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.0

July 19, 2016 - 11:39am By: bbraun
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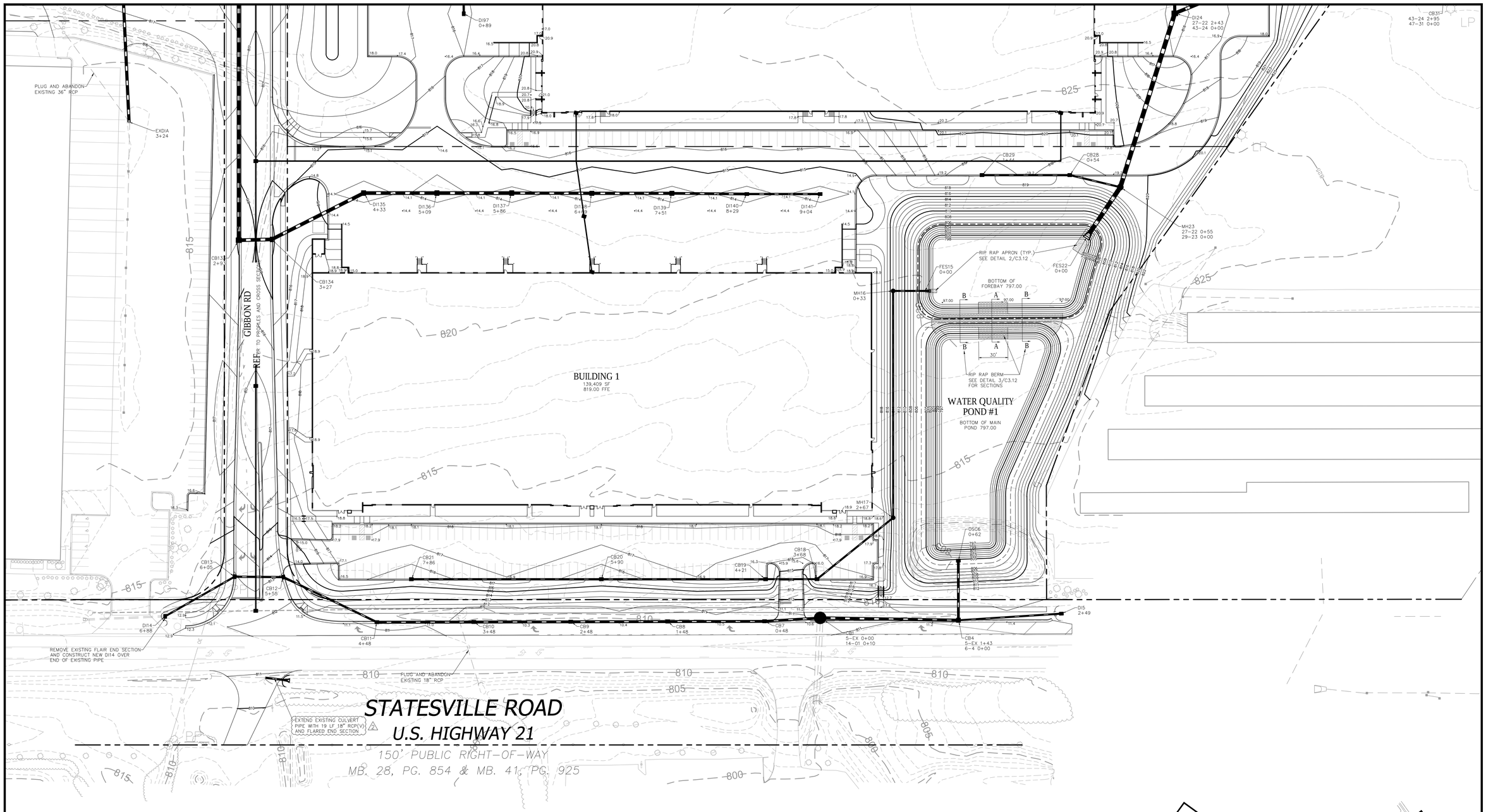
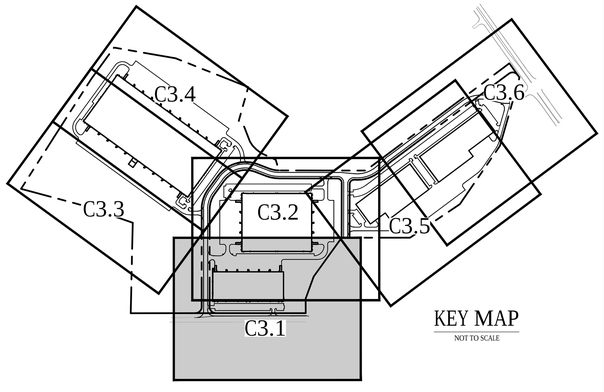


LEGEND

1	STRUCTURE IDENTIFICATION TAG
	PROPOSED CATCH BASIN
	PROPOSED DROP INLET
	PROPOSED MANHOLE
OR	PROPOSED YARD INLETS
CO	PROPOSED CLEANOUT
	PROPOSED HEADWALL
	PROPOSED FLARED END SECTION
	PROPOSED SWALE/DITCH ℄
	PROPOSED STORM PIPE
RD	PROPOSED ROOF DRAIN PIPE
	EXISTING STORM PIPE
855 854	PROPOSED CONTOURS
855 854	EXISTING CONTOURS



KEY MAP
NOT TO SCALE

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

NORTH

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CHARLOTTE, NC 28202
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ENLARGED GRADING & DRAINAGE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
NORTH CAROLINA
C-3139
SEAL 028782
PROFESSIONAL ENGINEER
JOHN C. OSBORN III

Jul 28 2016 9:41 AM CoSign

DATE	REVISIONS
07/19/16	REVISED PER NCDOT COMMENTS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.1

July 19, 2016- 11:40am By: JWoster
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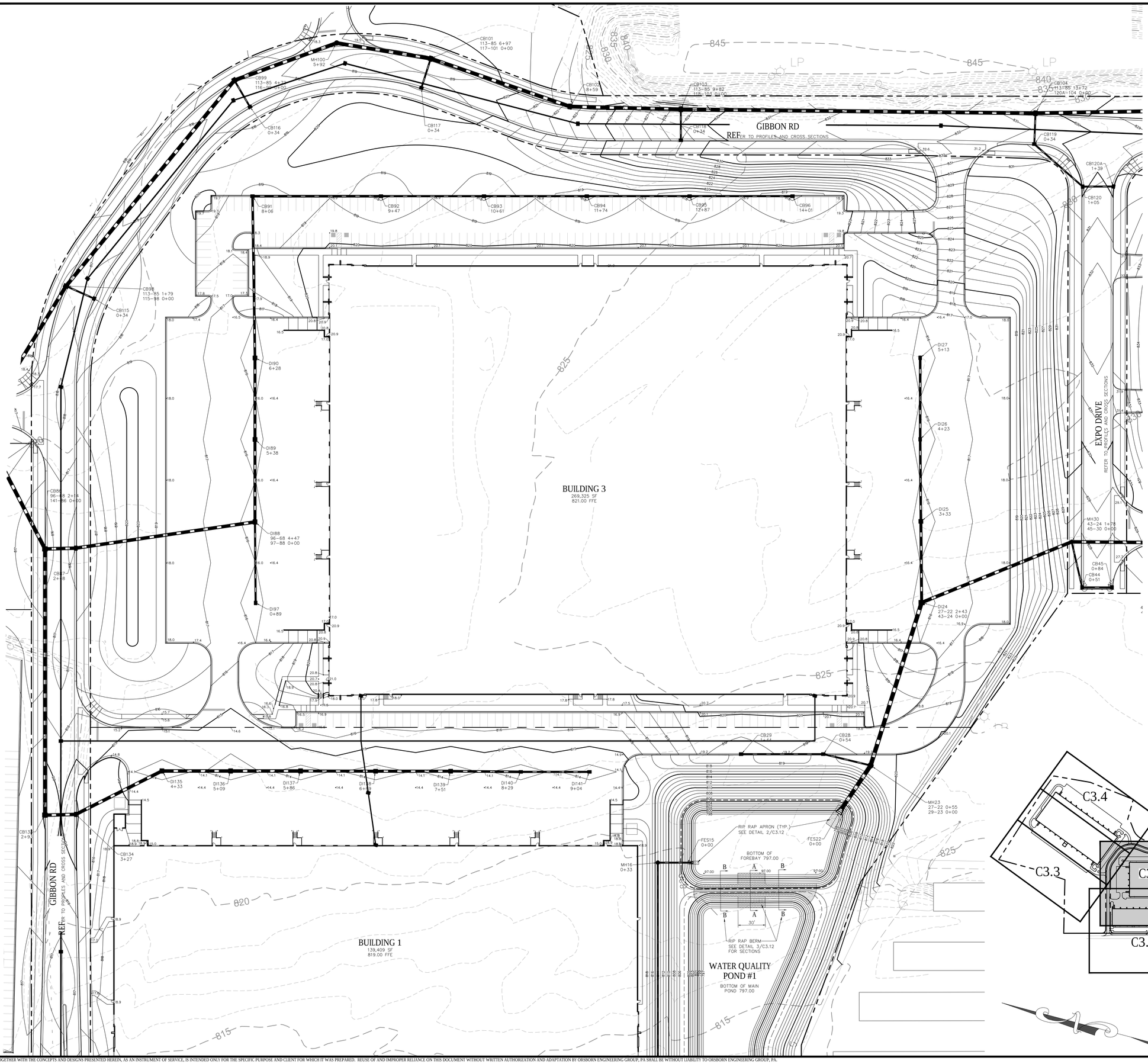

LEGEND

1	STRUCTURE IDENTIFICATION TAG
	PROPOSED CATCH BASIN
	PROPOSED DROP INLET
	PROPOSED MANHOLE
OR	PROPOSED YARD INLETS
CO	PROPOSED CLEANOUT
	PROPOSED HEADWALL
	PROPOSED FLARED END SECTION
	PROPOSED SWALE/DITCH ℄
	PROPOSED STORM PIPE
RD	PROPOSED ROOF DRAIN PIPE
	EXISTING STORM PIPE
855	PROPOSED CONTOURS
855	EXISTING CONTOURS

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ENLARGED GRADING & DRAINAGE PLAN
FOR
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CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
CERTIFICATE OF AUTHORIZATION
C-3139

PROFESSIONAL ENGINEER
SEAL 028786
JAMES A. WORSTER
NORTH CAROLINA

Jul 28 2016 9:11 AM CoSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.2

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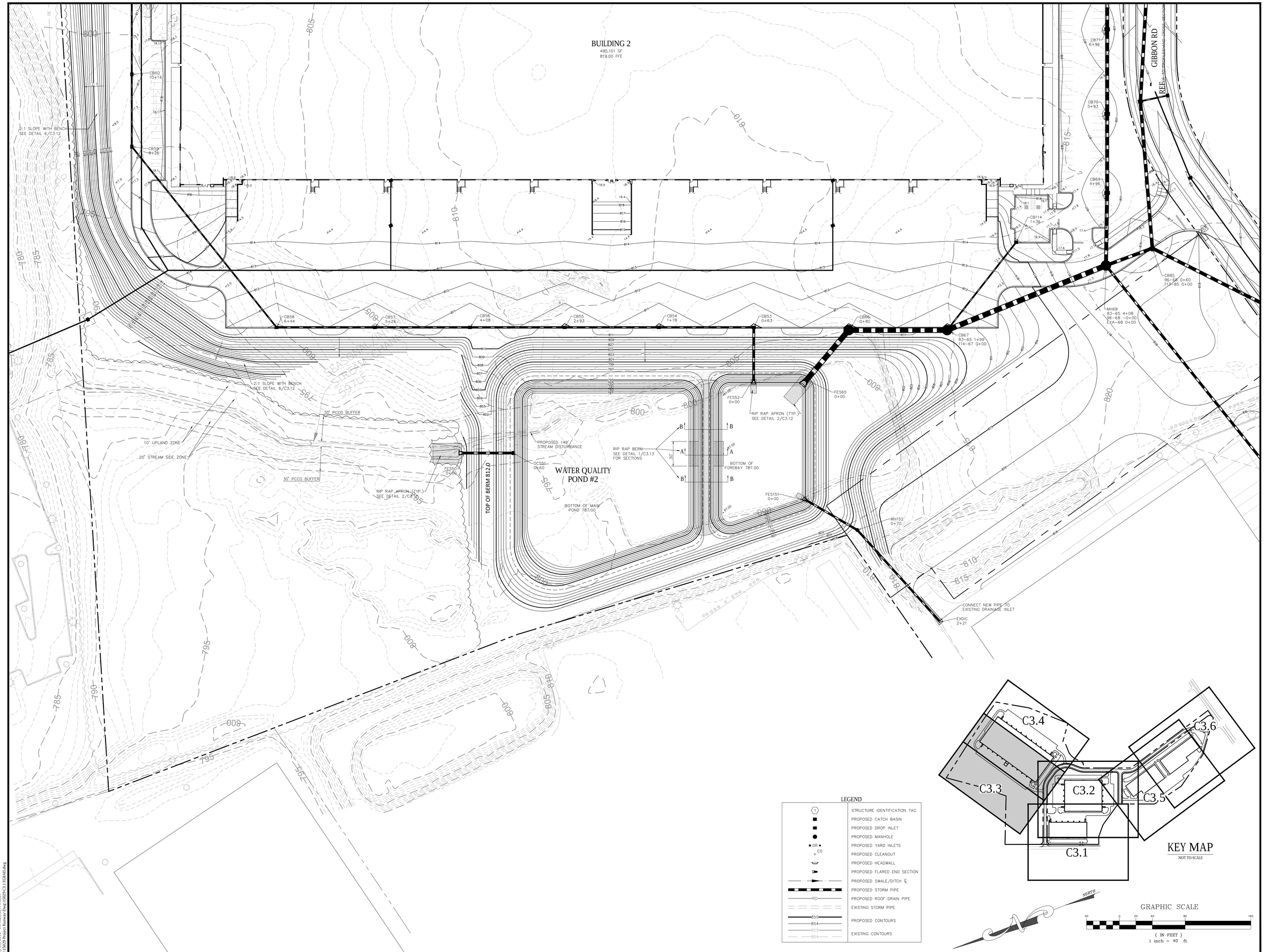

LEGEND

1	STRUCTURE IDENTIFICATION TAG
	PROPOSED CATCH BASIN
	PROPOSED DROP INLET
	PROPOSED MANHOLE
OR	PROPOSED YARD INLETS
CO	PROPOSED CLEANOUT
	PROPOSED HEADWALL
	PROPOSED FLARED END SECTION
	PROPOSED SWALE/DITCH ℄
	PROPOSED STORM PIPE
RD	PROPOSED ROOF DRAIN PIPE
	EXISTING STORM PIPE
855, 854	PROPOSED CONTOURS
855, 854	EXISTING CONTOURS

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ENLARGED GRADING & DRAINAGE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. C-3139

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028786 JOHN C. ORSBORN

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REVISIONS		
06/22/16	REVISED PER COMMENTS	
DATE		

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.3

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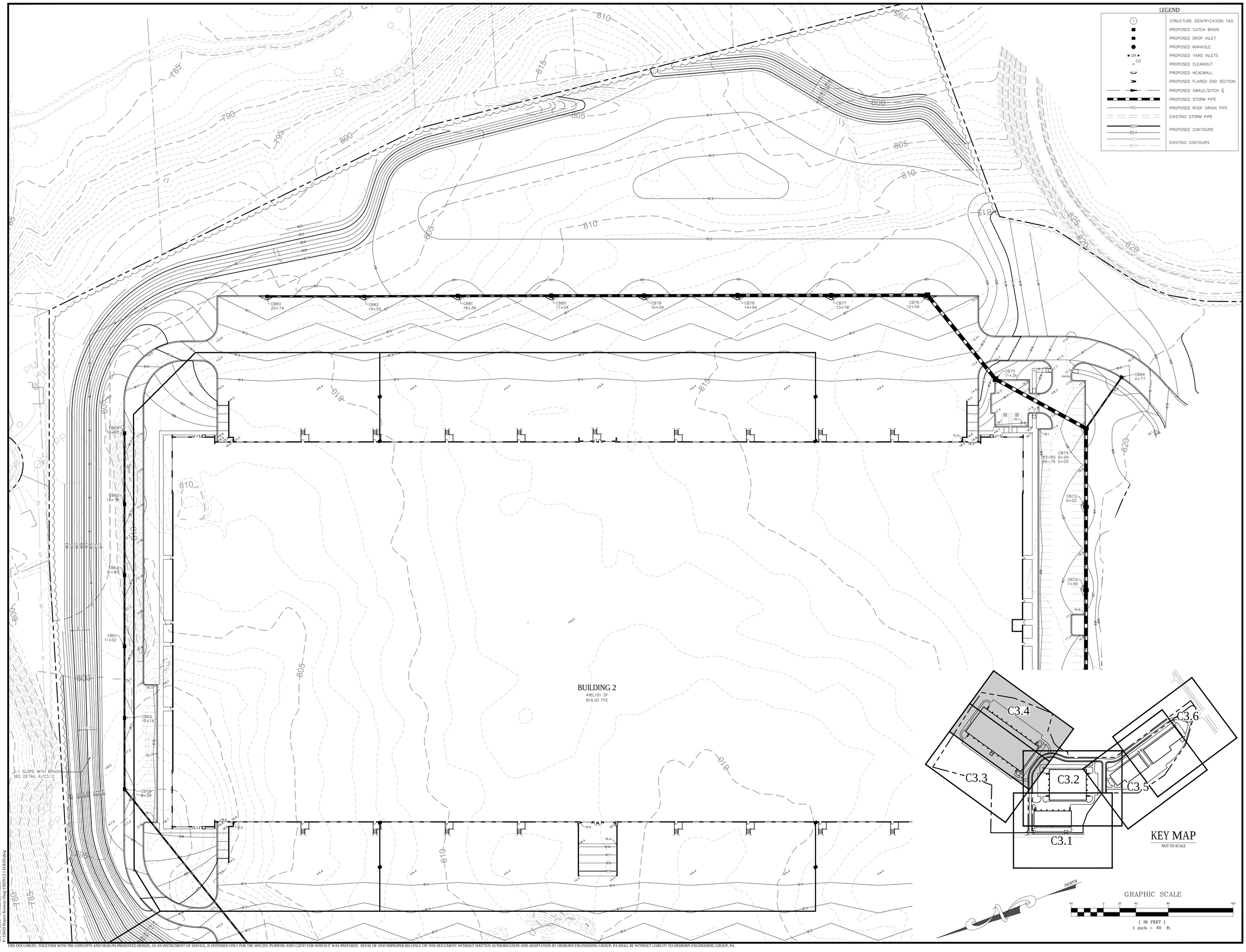

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ENLARGED GRADING & DRAINAGE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP P.A. C-3139
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028780
Jul 28 2016 9:41 AM

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.4

July 19, 2016 - 11:40am By: Jwissler
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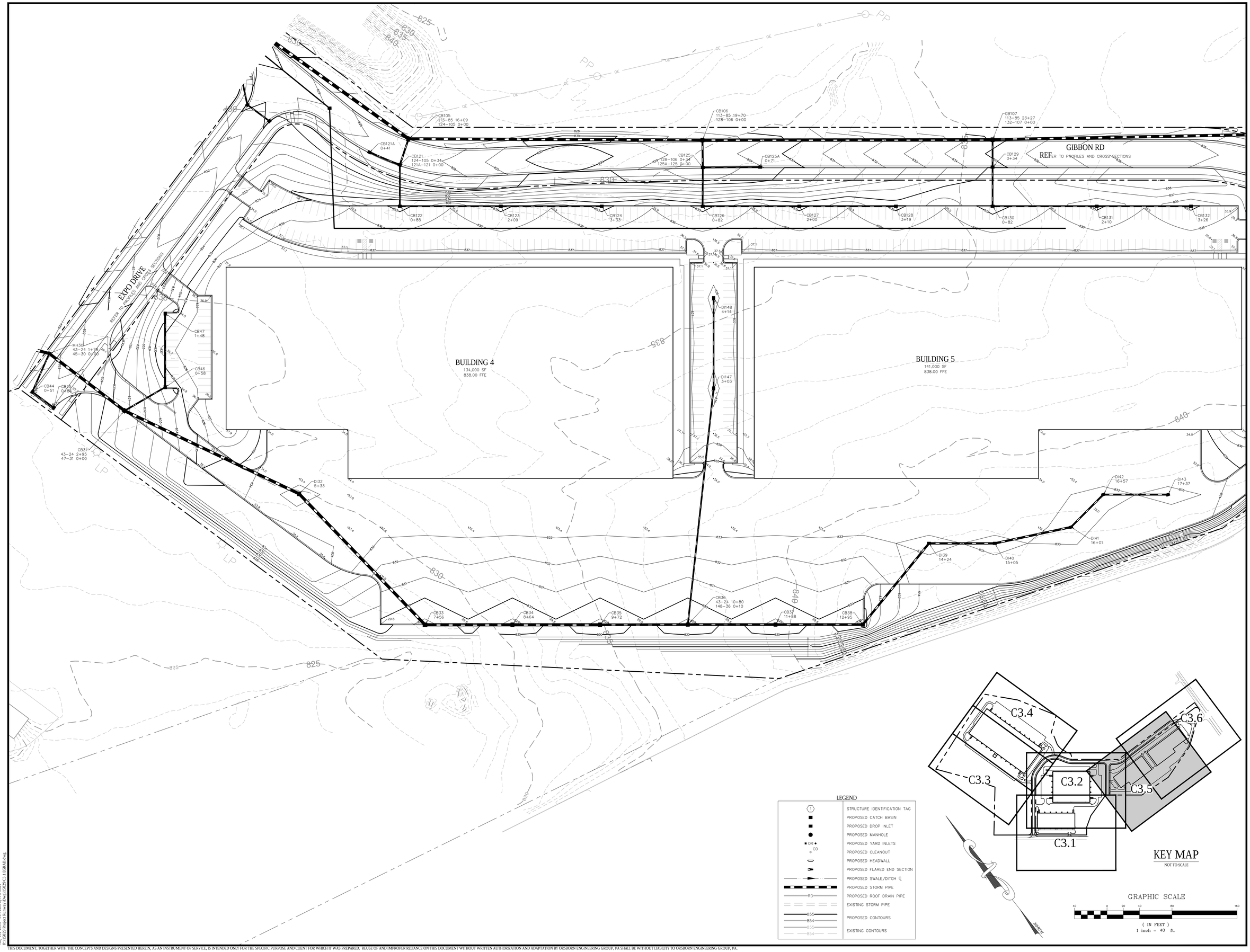

KEY MAP

NOT TO SCALE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

1	STRUCTURE IDENTIFICATION TAG
	PROPOSED CATCH BASIN
	PROPOSED DROP INLET
	PROPOSED MANHOLE
OR CO	PROPOSED YARD INLETS
	PROPOSED CLEANOUT
	PROPOSED HEADWALL
	PROPOSED FLARED END SECTION
	PROPOSED SWALE/DITCH ℄
	PROPOSED STORM PIPE
RD	PROPOSED ROOF DRAIN PIPE
	EXISTING STORM PIPE
855	PROPOSED CONTOURS
854	
855	EXISTING CONTOURS
854	

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ENLARGED GRADING & DRAINAGE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
NORTH CAROLINA
C-3139
CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
SEAL
029796
JAMES C. WEAVER

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DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.5

July 19, 2016 - 11:41am By: JWoster
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OLD STATESVILLE ROAD
NC HIGHWAY 115

VARIABLE WIDTH PUBLIC RIGHT-OF-WAY
DB. 13421, PG. 554; DB. 13470, PG. 99 & 103

GIBBON RD
REFER TO PROFILES AND CROSS SECTIONS

BUILDING 5
141,000 SF
838.00 FFE

GIBBON ROAD

CONNECT NEW PIPE TO EXISTING DRAINAGE INLET

DRIVEWAY

DRIVEWAY

CENTERLINE OF ROAD

18' CONCRETE ISLAND

30' CURB

CB106 113-85 19+70 128-106 0+00
CB107 113-85 23+27 132-107 0+00
MH108 113-85 27+29 146-108 0+00
CB125 128-106 0+34 125A-125 0+00
CB125A 0+71
CB129 0+34
MH145 3+13
EXDIB 3+38
CB108A 27+76
CB109 27+98
CB110 28+32
CB124 3+33
CB126 0+82
CB127 2+00
CB128 3+19
CB130 0+82
CB131 2+10
CB132 3+26
CB111 29+09
CB112 30+20
CB113 30+90
DI148 4+14
DI147 3+03
DI42 16+57
DI43 17+37
DI41 16+01
DI39 14+24
DI40 15+05
CB36 43-24 10+80 148-36 0+10
CB37 11+88
CB38 12+95
CB35 9+72

LEGEND

1	STRUCTURE IDENTIFICATION TAG
	PROPOSED CATCH BASIN
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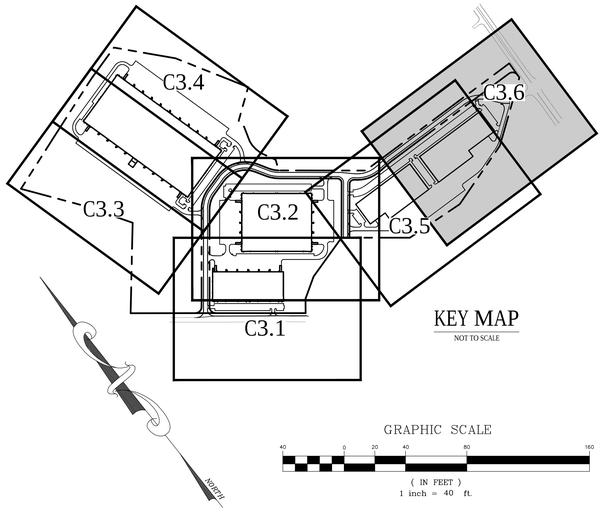
	PROPOSED STORM PIPE
RD	PROPOSED ROOF DRAIN PIPE
	EXISTING STORM PIPE
855	PROPOSED CONTOURS
854	
855	EXISTING CONTOURS
854	



KEY MAP
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GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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CHARLOTTE, NC 28202
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ENLARGED GRADING & DRAINAGE PLAN
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP P.A. C-3139

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028786 JAMES C. OSBORN

Jul 28 2016 9:41 AM

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.6

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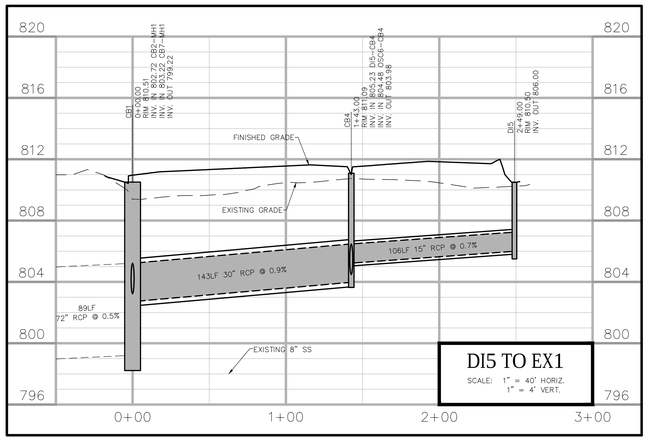

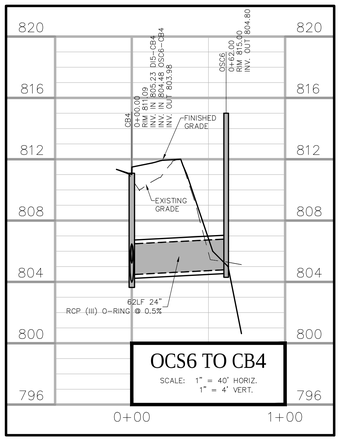

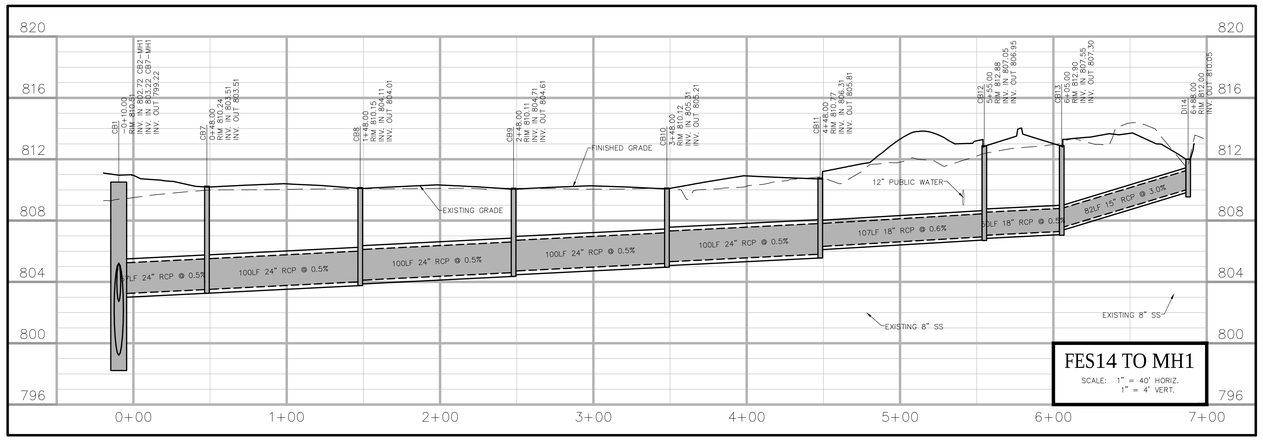

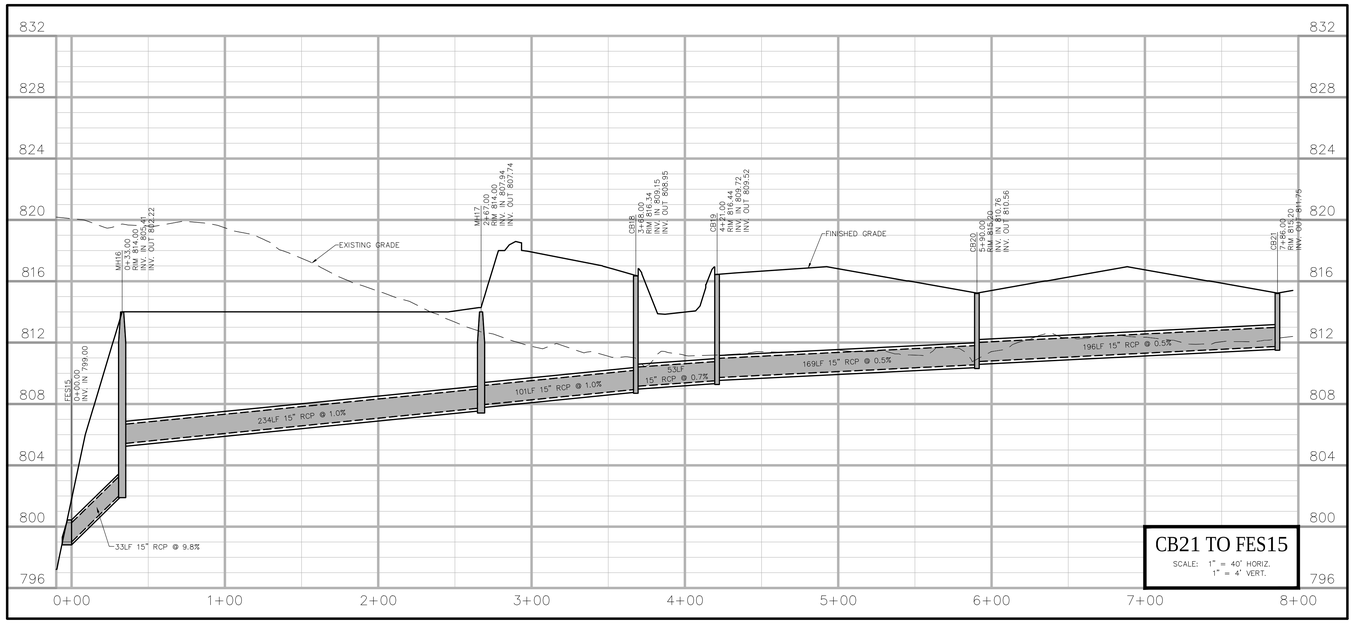

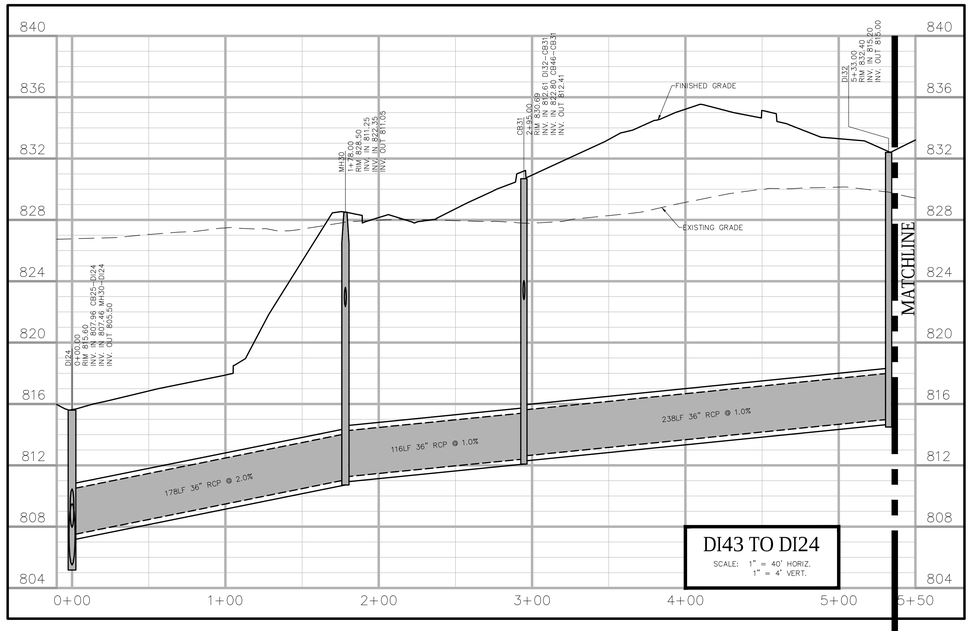

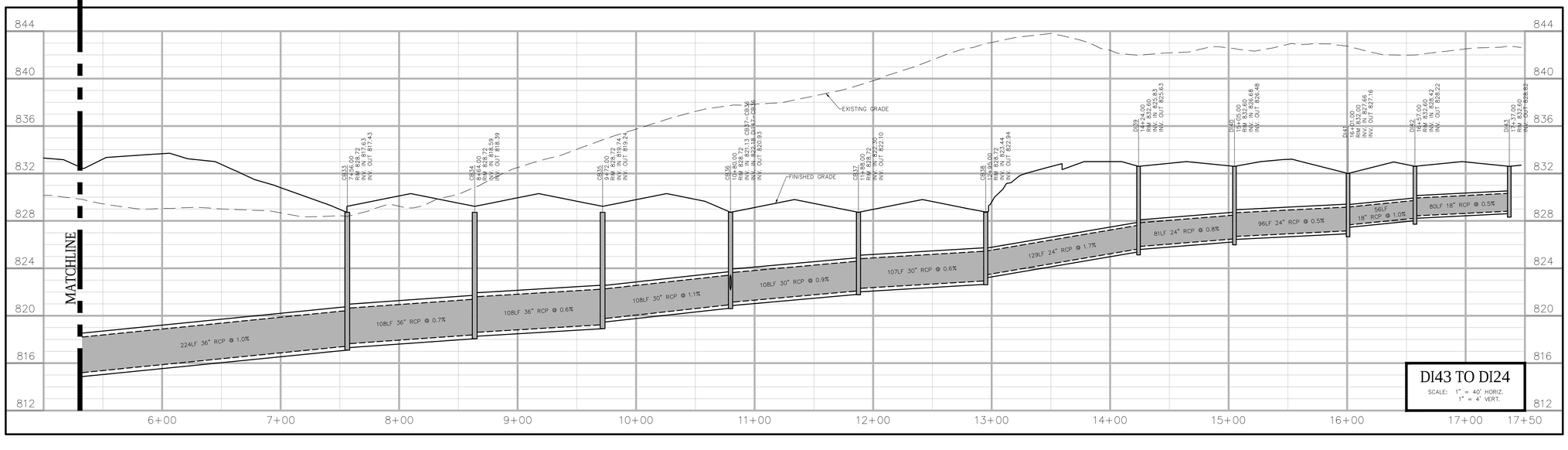

ORSBORN ENGINEERING GROUP
630 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
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STORM PROFILES
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
NORTH CAROLINA
C-3139
NORTH CAROLINA
SEAL
026788
ENGINEER
Jul 28 2016 9:41 AM

3	06/22/16	REVISED PER COMMENTS
DATE		REVISIONS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.7

July 19, 2016 - 11:42am By: bhuran
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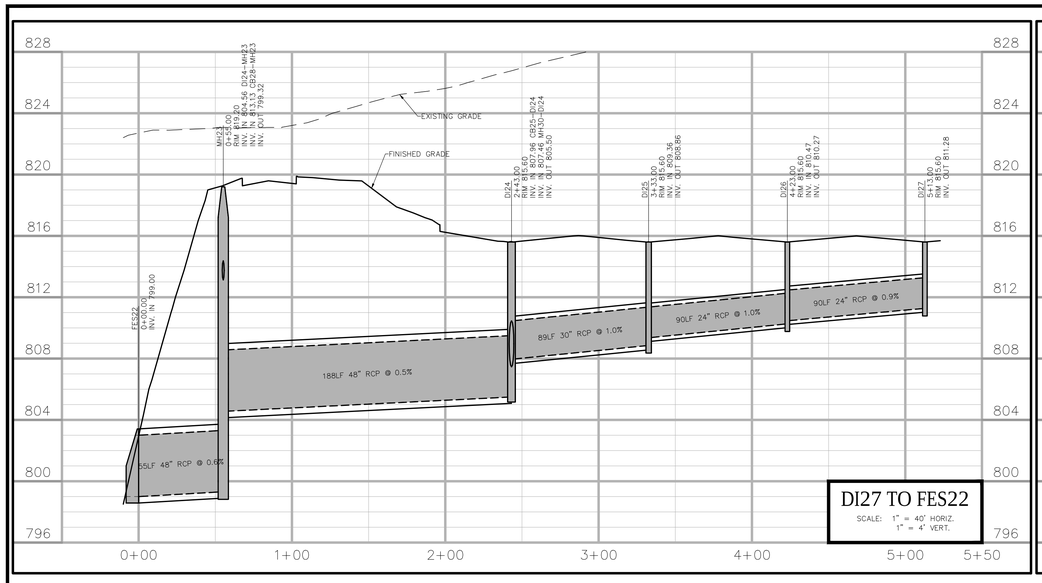

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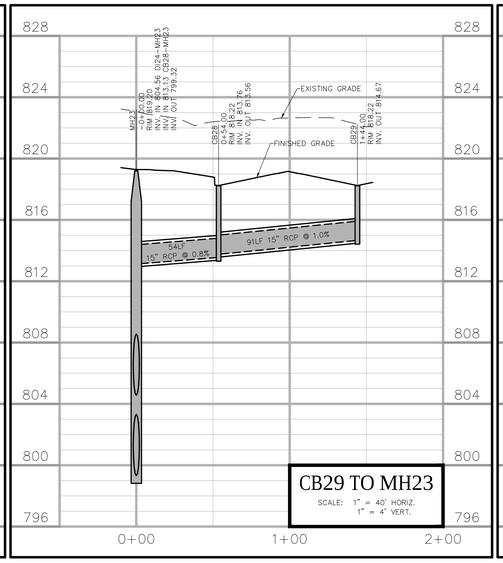

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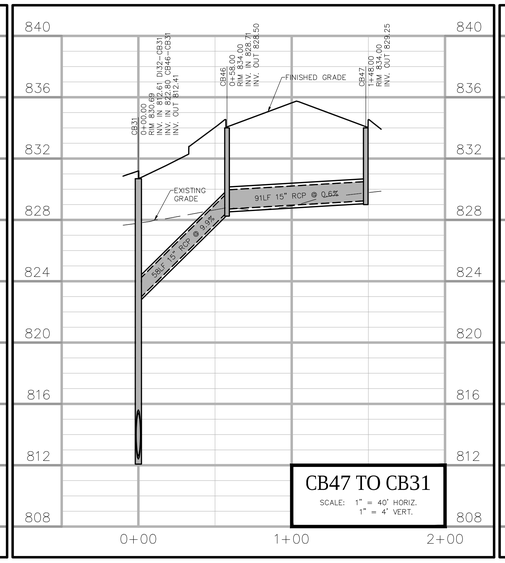

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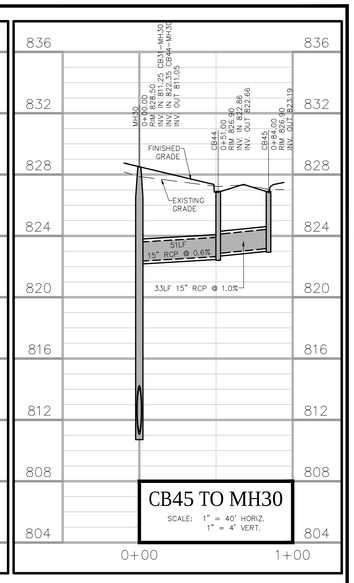

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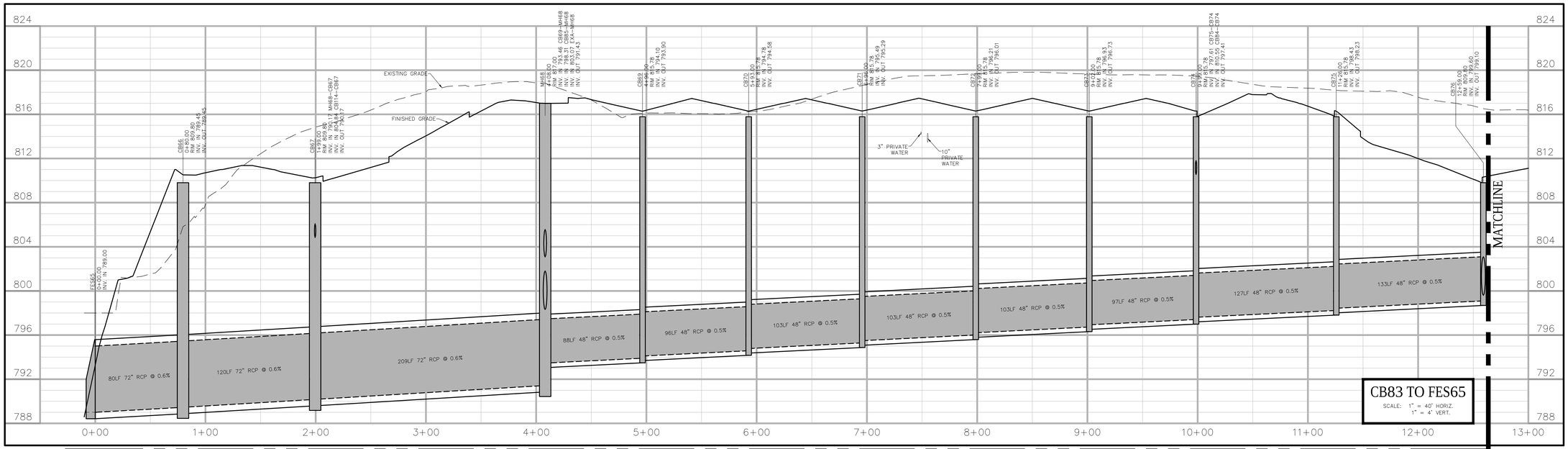

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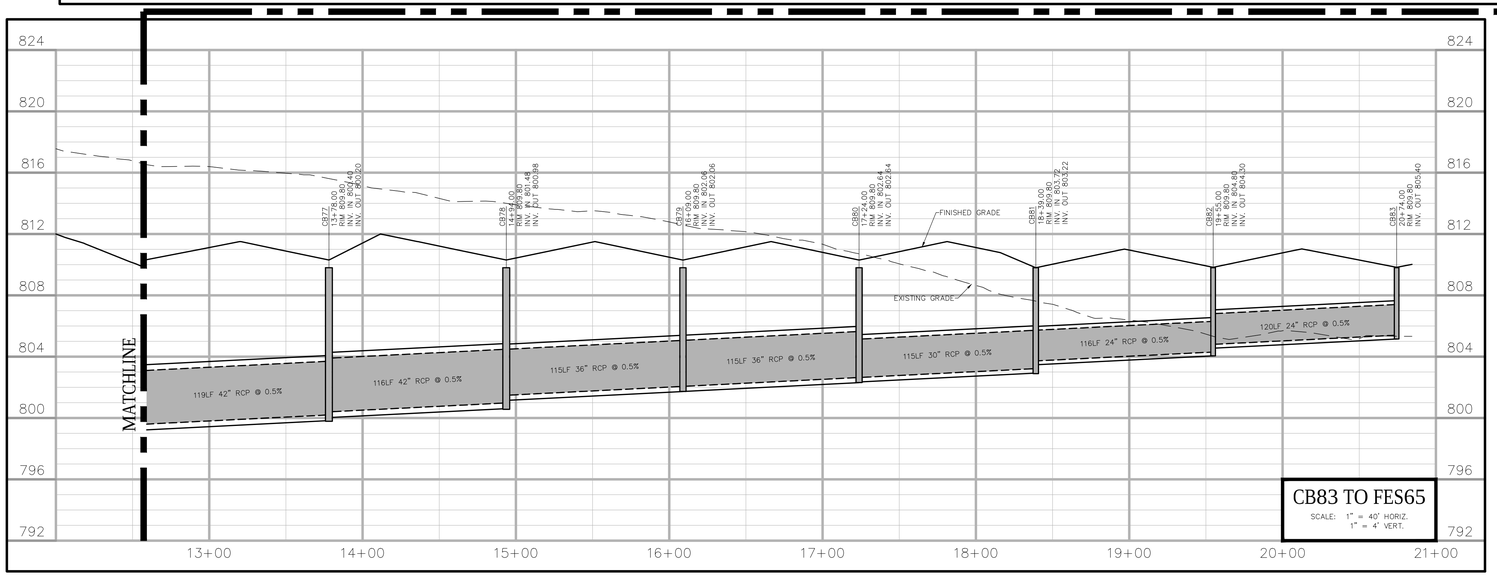

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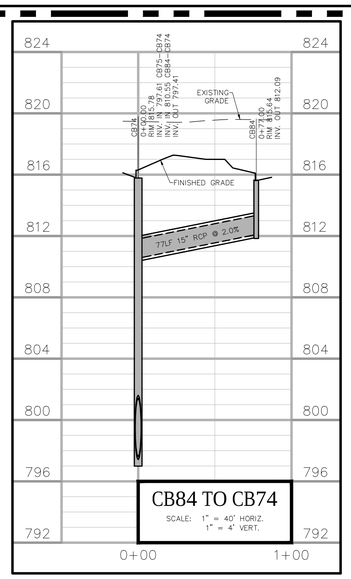

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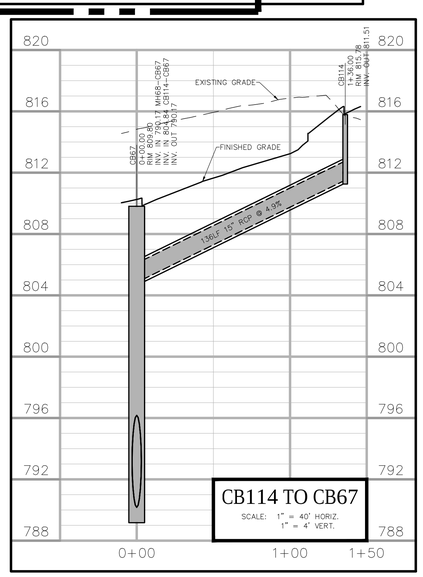

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CHARLOTTE, NC 28202
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STORM PROFILES
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

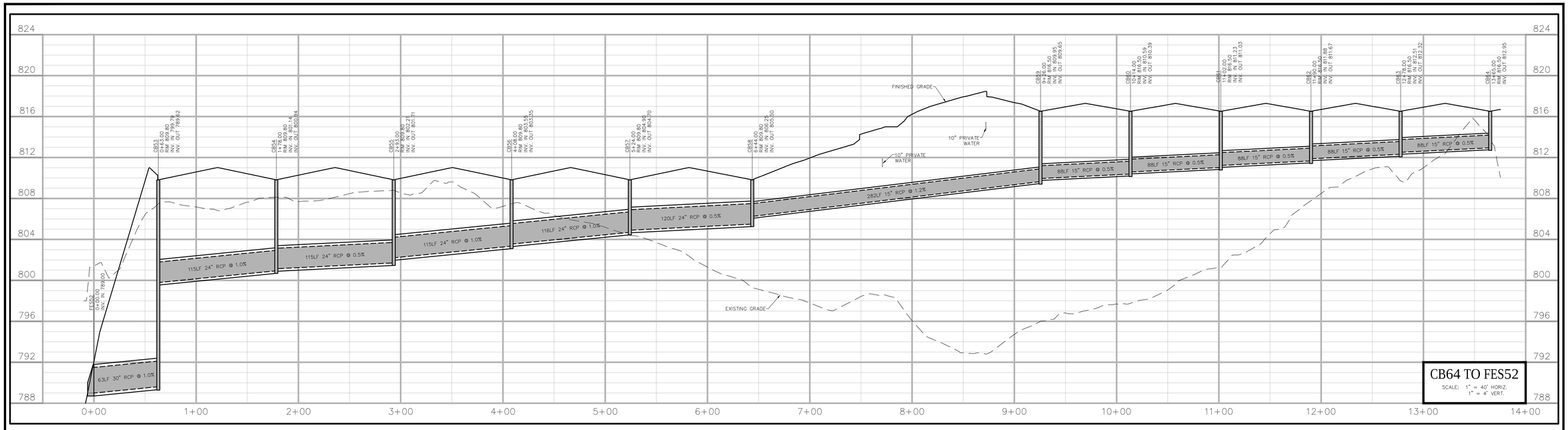
ORSBORN ENGINEERING GROUP
NORTH CAROLINA
C-3139
NORTH CAROLINA
SEAL
026782
PROFESSIONAL ENGINEER
Jul 28 2016 9:44 AM CoSign

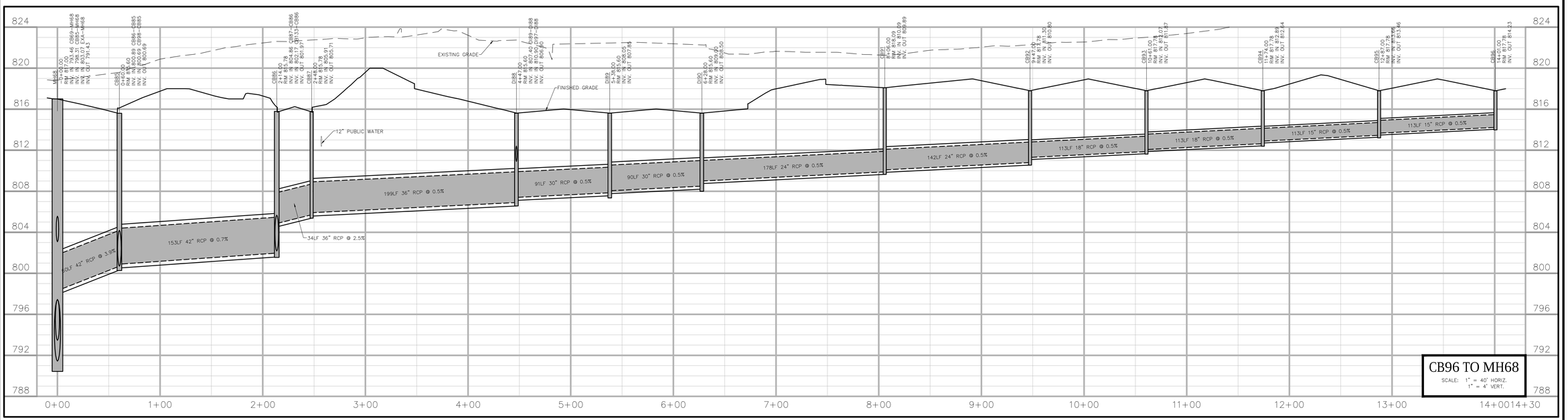
DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

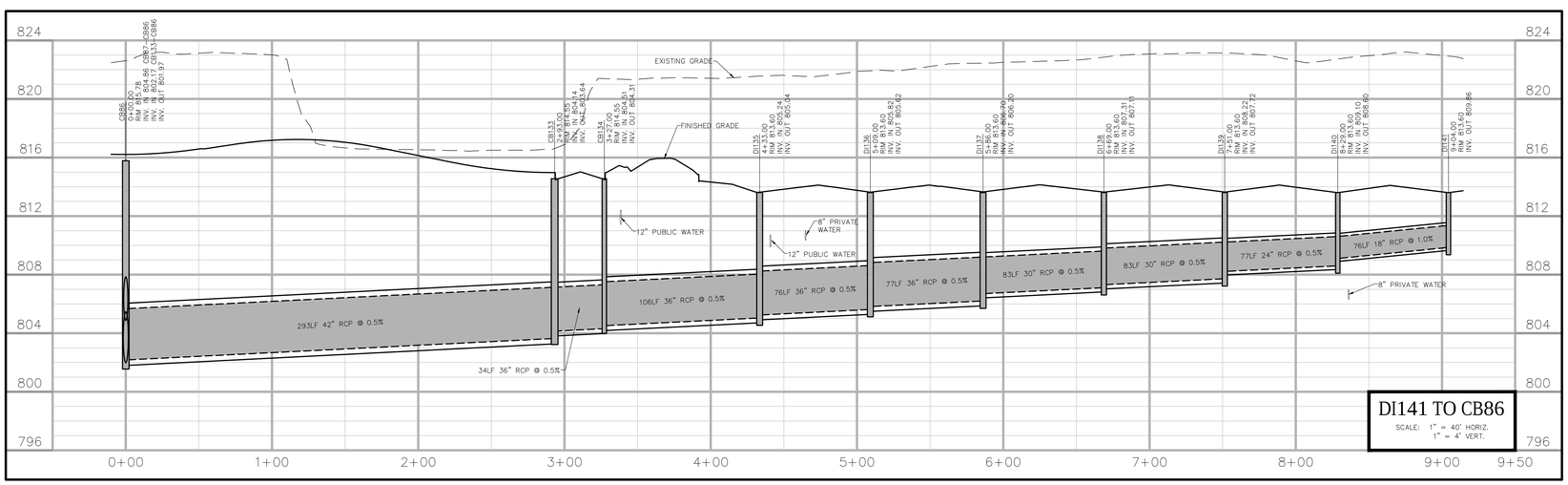
JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

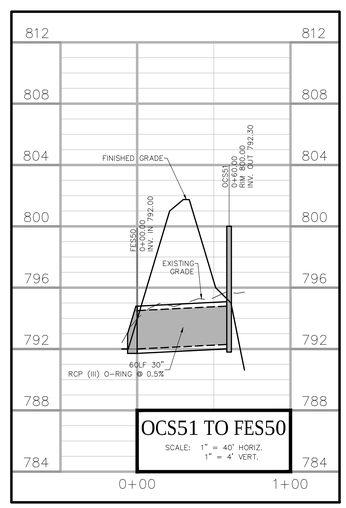
C3.8

July 19, 2016- 11:42am By: bhraun
p:\15029 Project Runway\Dwg\15029 C3.7 storm prof.dwg









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CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

STORM PROFILES
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. — CORPORATE CERTIFICATE OF AUTHORIZATION — C-3139

NORTH CAROLINA PROFESSIONAL SEAL 026788 ENGINEER — JAMES A. WEAVER

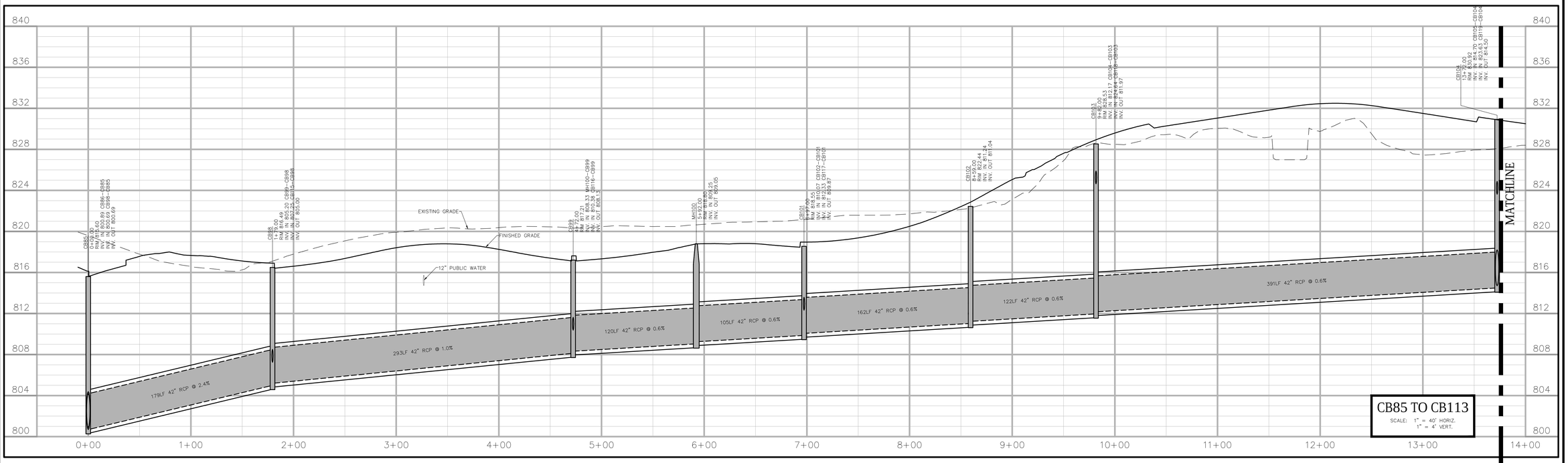
Jul 28 2016 9:40 AM CoSign

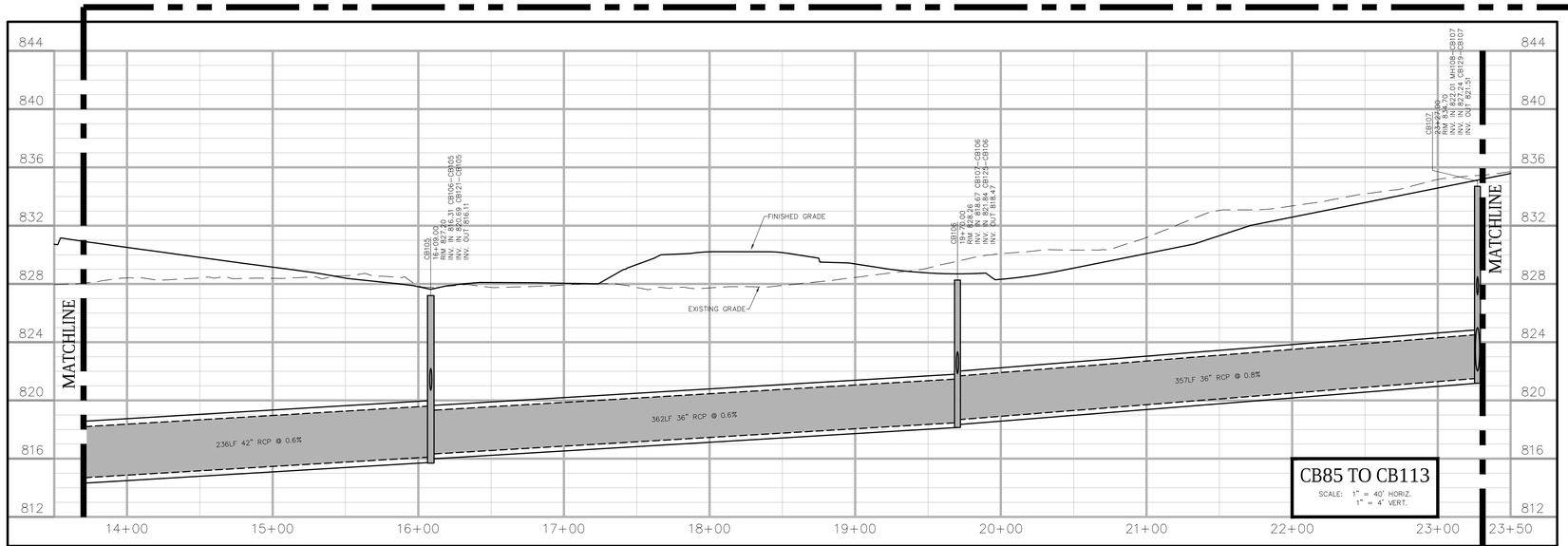
1	06/22/16	REVISED PER COMMENTS
	DATE:	REVISIONS

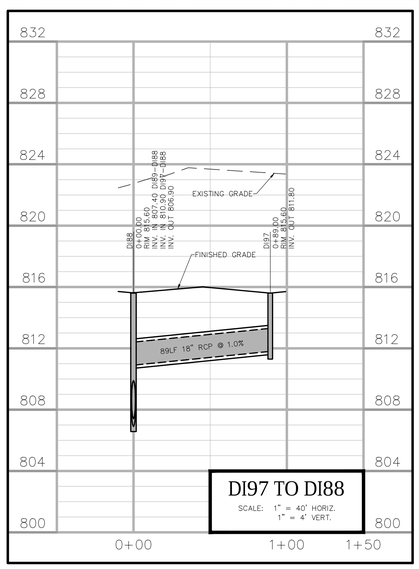
JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

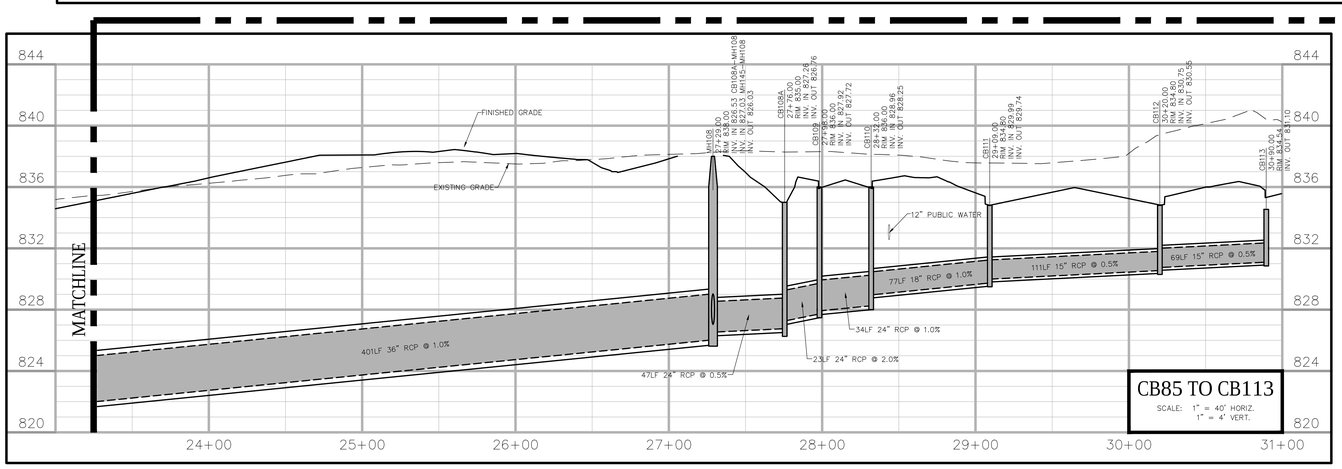
C3.9

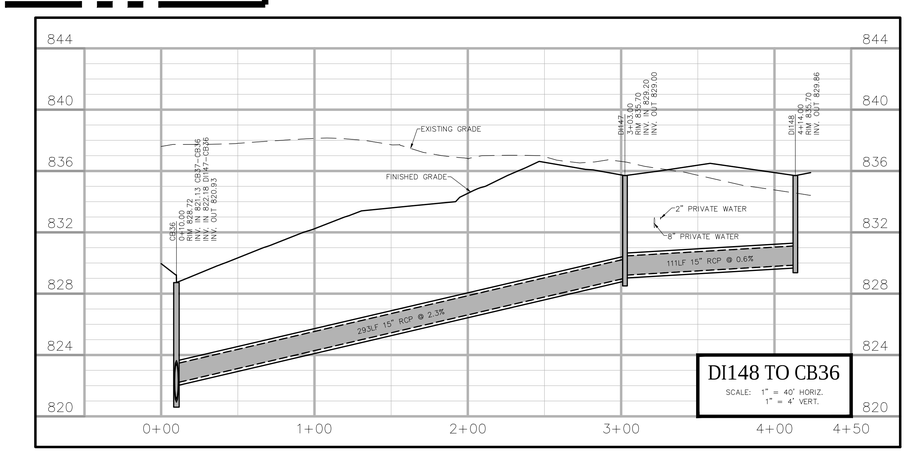
July 19, 2016 - 11:42am By: bhouan
P:\15029 Project Runway\Dwg\15029 C3.7 storm prof.dwg











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STORM PROFILES
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ORSBORN ENGINEERING GROUP
CHARLOTTE, NORTH CAROLINA
C-3139

NORTH CAROLINA
SEAL
026782
PROFESSIONAL ENGINEER
JOHN C. ORSBORN

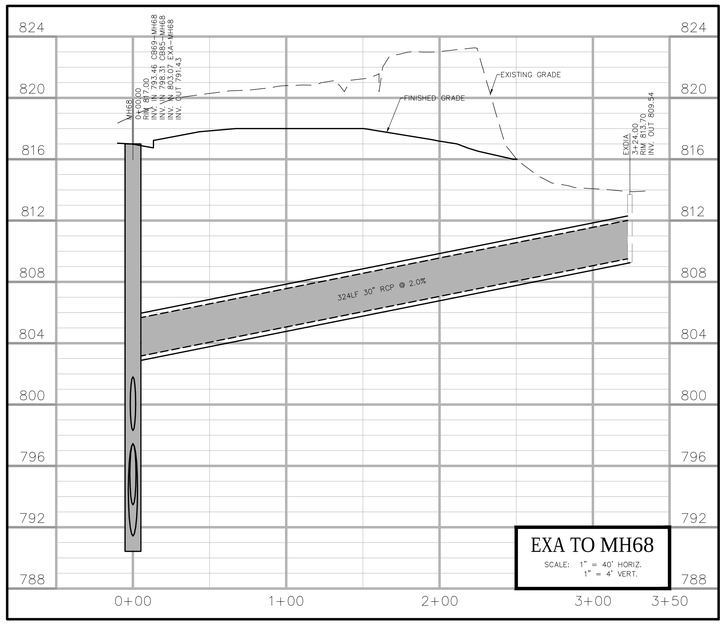
Jul 28 2016 9:40 AM CaSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.10

July 19, 2016 - 11:42am By: bbraun
P:\15029 Project Runway\Dwg\15029-C3.7-storm prof.dwg



EXA TO MH68
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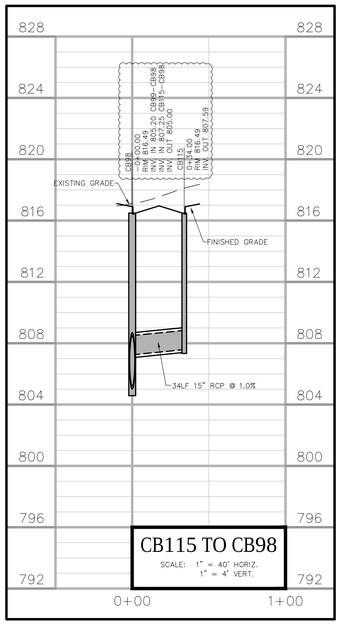

CB115 TO CB98
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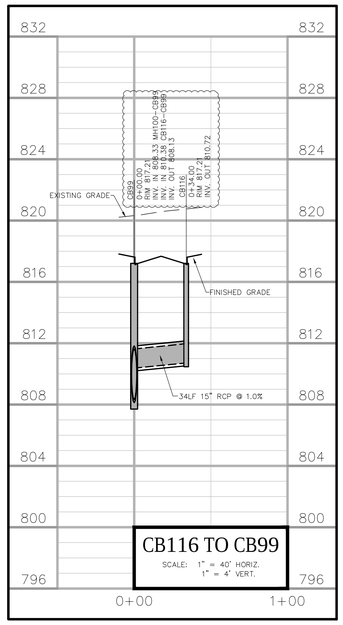

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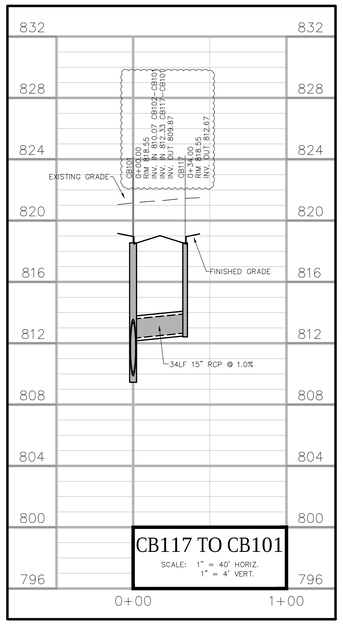

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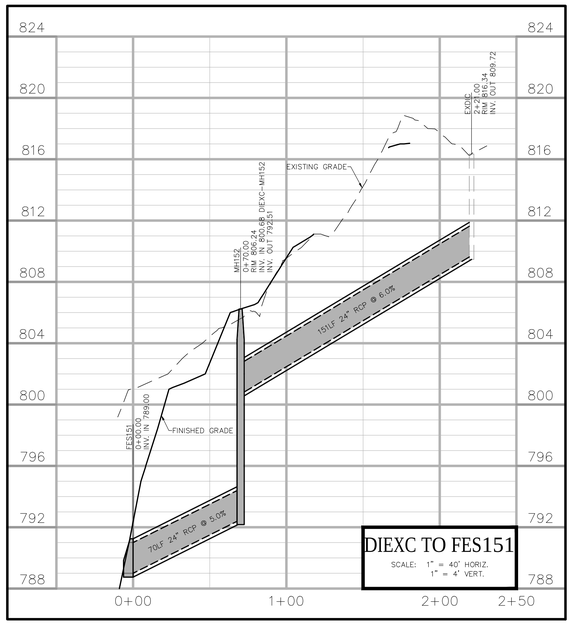

DIEXC TO FES151
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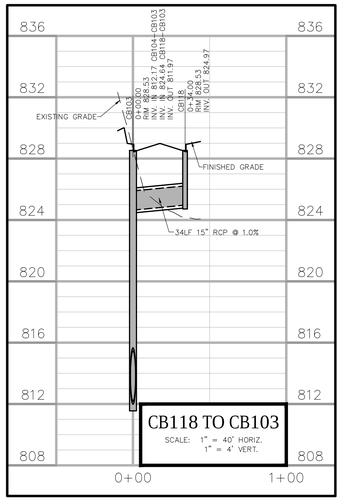

CB118 TO CB103
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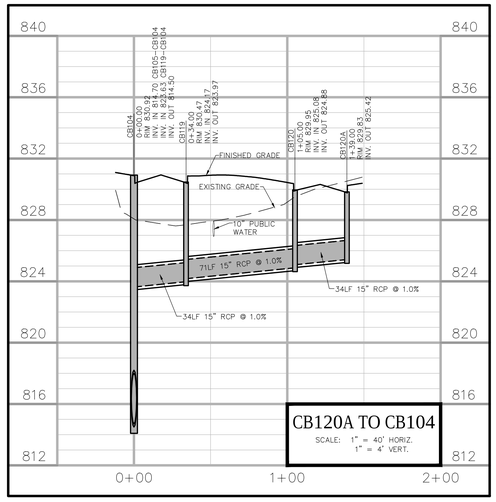

CB120A TO CB104
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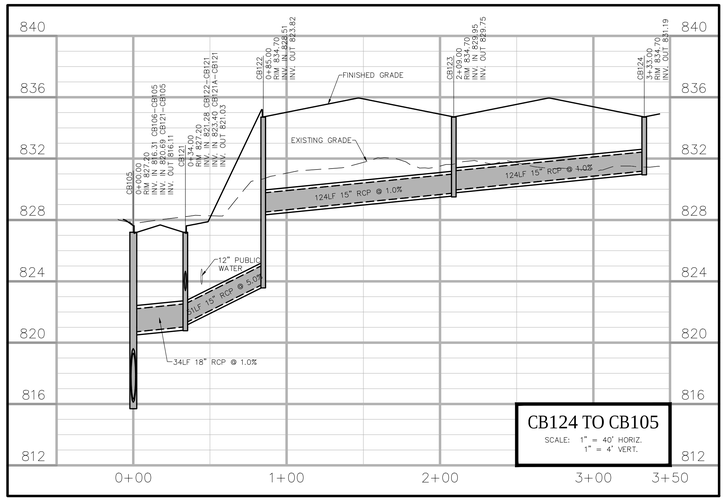

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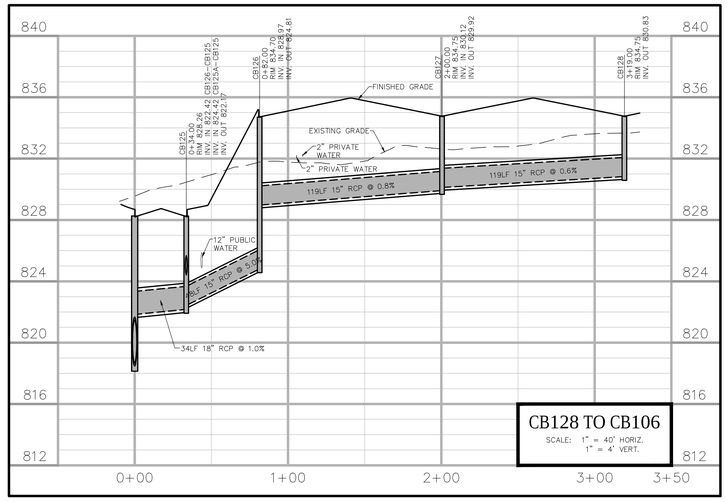

CB128 TO CB106
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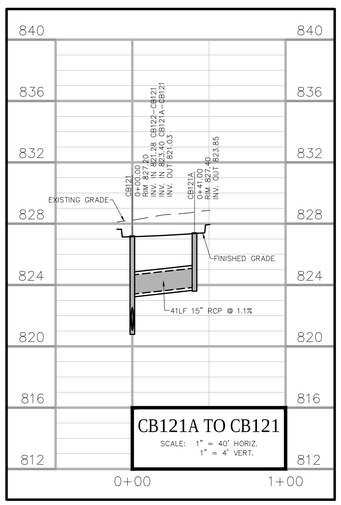

CB121A TO CB121
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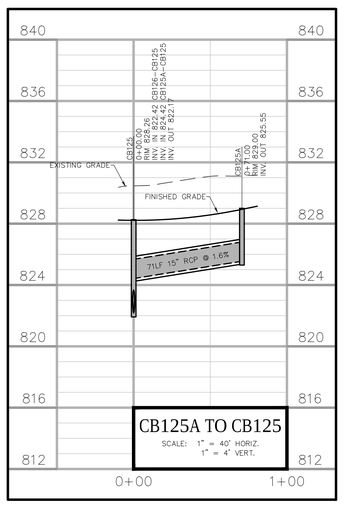

CB125A TO CB125
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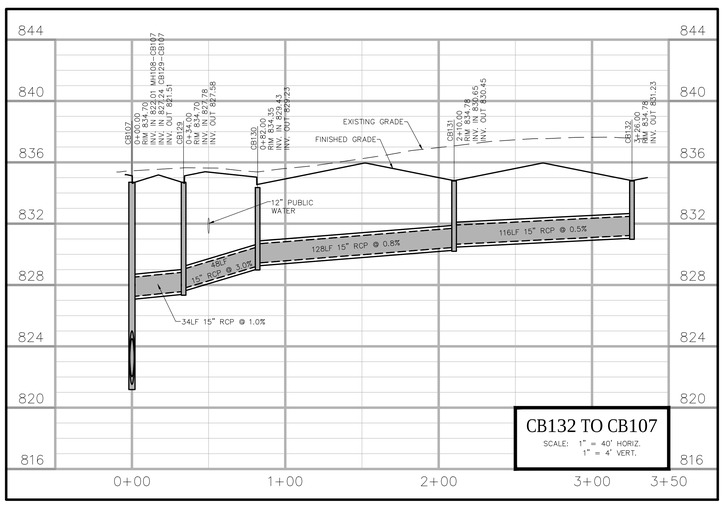
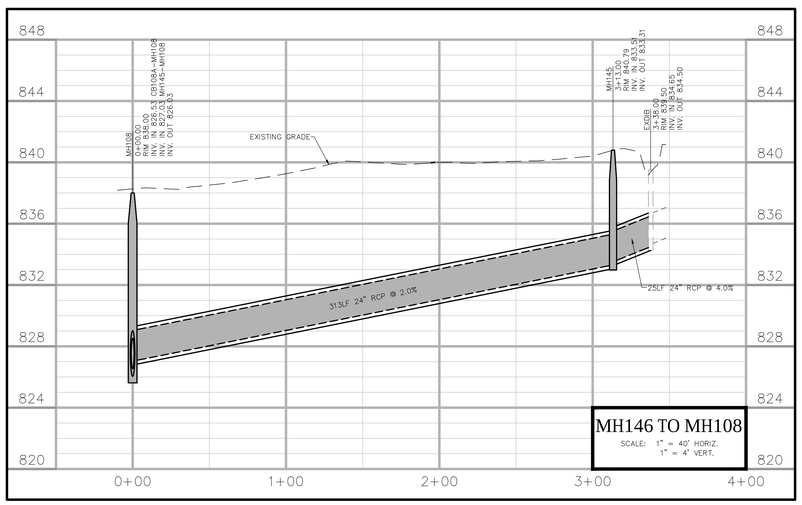


CB132 TO CB107
SCALE: 1" = 40' HORIZ. 1" = 4' VERT.



MH146 TO MH108
SCALE: 1" = 40' HORIZ. 1" = 4' VERT.

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STORM PROFILES
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BEACON PARTNERS
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CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP, P.A. C-3139

JAMES A. CARROLL, JR. SEAL 26788 NORTH CAROLINA PROFESSIONAL ENGINEER

Jul 28 2016 9:40 AM

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15029
DATE:	04/29/16
SCALE:	1" = 40'
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.11

July 19, 2016 - 11:42am By: bhouan
P:\15029 Project Runway\Dwg\15029-C3.7-storm prof.dwg

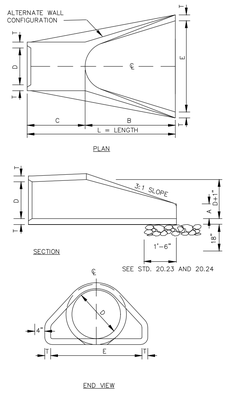
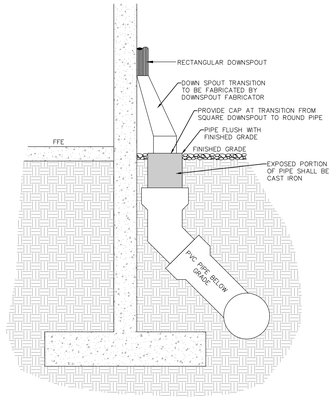


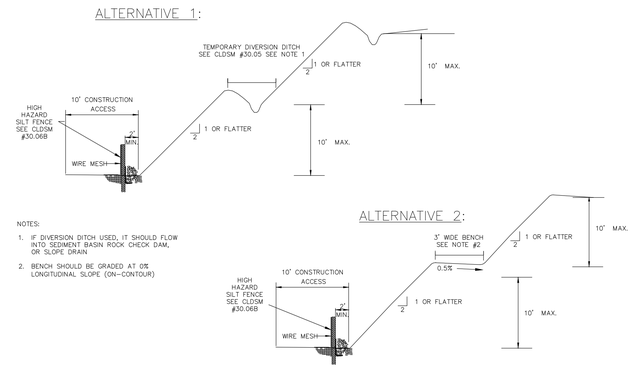
TABLE OF DIMENSIONS							
D	T	A	B	C	E	L	WT.
12"	2-1/4"	4"	2'-0"	4'-1"	2'-0"	6'-1"	730
15"	2-1/4"	6"	2'-3"	3'-10"	2'-0"	6'-1"	730
18"	2-1/2"	9"	2'-3"	3'-10"	3'-0"	6'-1"	1190
24"	3"	10"	3'-8"	2'-6"	4'-0"	6'-2"	1770
30"	3-1/2"	1'-0"	4'-6"	1'-8"	5'-0"	6'-2"	2380
36"	4"	1'-3"	5'-3"	2'-11"	6'-0"	8'-2"	5320
42"	4-1/2"	1'-9"	5'-3"	2'-11"	6'-6"	8'-2"	5920
48"	5"	2'-0"	6'-0"	2'-2"	7'-0"	8'-2"	7470
54"	5-1/2"	2'-3"	5'-6"	2'-10"	7'-6"	8'-4"	8810
60"	6"	2'-6"	5'-0"	3'-3"	8'-0"	8'-3"	11180
66"	6-1/2"	3'-0"	6'-0"	2'-3"	8'-3"	8'-3"	12530
72"	7"	3'-0"	6'-6"	1'-9"	9'-0"	8'-3"	13980

GENERAL NOTES:
1. SEE FORMER NCDOT STANDARD 310.01 FOR DETAILS.
2. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMETER PER AASHTO M170, TABLE 2, WALL B.
3. ALL CONCRETE TO BE 3600 P.S.I COMPRESSIVE STRENGTH.
4. PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
5. PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
6. THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD FORMS AND TEMPLATES.
7. NOT TO BE USED IN NCDOT MAINTAINED RIGHT OF WAY.

1 FLARED END SECTION 12" THRU 72" PIPE
NTS



4 DOWNSPOUT CONNECTION
NTS



NOTES:
1. IF DIVERSION DITCH USED, IT SHOULD FLOW INTO SEDIMENT BASIN ROCK CHECK DAM, OR SLOPE DRAIN
2. BENCH SHOULD BE GRADED AT 0% LONGITUDINAL SLOPE (ON-CONTOUR)

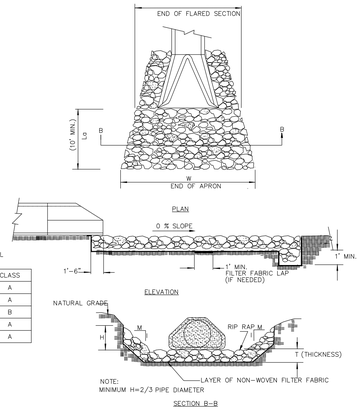
6 SLOPE STABILITY
NTS
CLDSM STD. DTL. 30.16 (REV 12)

NOTES:
1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
2. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
3. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
4. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1.
5. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
6. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
7. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
8. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
9. ANY DISTURBED AREA FROM END OF APRON TO RECIEVING CHANNEL MUST BE STABILIZED.

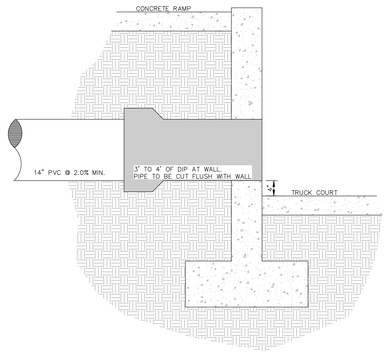
USE USDA NOMOGRAPH FROM NC SEDIMENT AND EROSION CONTROL MANUAL FOR DESIGN DATA.

OUTLET	PIPE ø	dw	dwe	THK.	Lo	W	M	H	CLASS
FES 15	15"	4"	6"	9"	6'	3.65'	2'	2'	A
FES 22	48"	4"	6"	9"	17'	10.8'	2'	2'	A
FES 50	30"	8"	12"	18"	35'	24'	3'	2'	B
FES 52	30"	4"	6"	9"	11'	6.9'	2'	2'	A
FES 65	72"	4"	6"	9"	25'	16'	2'	2'	A

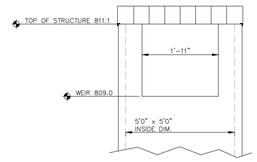
* d50 (see fig 8.06 o&b "NC SEDIMENT AND EROSION CONTROL MANUAL"
dmax = 1.5 x d50
T = 1.5 X dmax.



2 RIPRAP APRON AT PIPE OUTFALLS
NTS

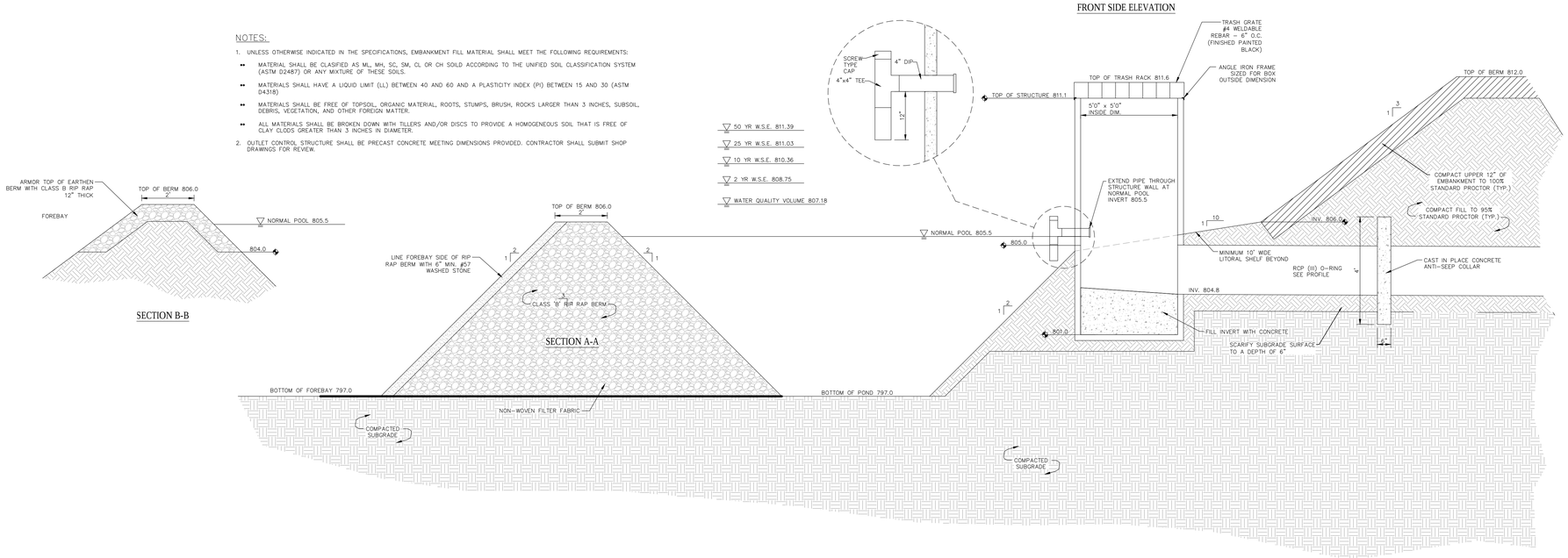


5 HEADER PIPE THROUGH WALL
NTS



FRONT SIDE ELEVATION

NOTES:
1. UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS, EMBANKMENT FILL MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:
   - MATERIAL SHALL BE CLASIFIED AS ML, MH, SC, SM, CL OR CH SOILD ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) OR ANY MIXTURE OF THESE SOILS.
   - MATERIALS SHALL HAVE A LIQUID LIMIT (LL) BETWEEN 40 AND 60 AND A PLASTICITY INDEX (PI) BETWEEN 15 AND 30 (ASTM D4318)
   - MATERIALS SHALL BE FREE OF TOPSOIL, ORGANIC MATERIAL, ROOTS, STUMPS, BRUSH, ROCKS LARGER THAN 3 INCHES, SUBSOIL, DEBRIS, VEGETATION, AND OTHER FOREIGN MATTER.
   - ALL MATERIALS SHALL BE BROKEN DOWN WITH TILLERS AND/OR DISCS TO PROVIDE A HOMOGENEOUS SOIL THAT IS FREE OF CLAY CLODS GREATER THAN 3 INCHES IN DIAMETER.
2. OUTLET CONTROL STRUCTURE SHALL BE PRECAST CONCRETE MEETING DIMENSIONS PROVIDED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW.



3 OUTLET CONTROL STRUCTURE 6 (WET POND 1)
NTS

ORSBORN ENGINEERING GROUP
630 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1433 • F: 704-749-1433

GRADING & DRAINAGE DETAILS
FOR
METROLINA PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

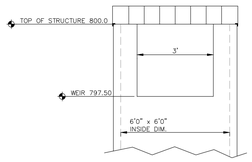
ORSBORN ENGINEERING GROUP, P.A. C-3139 NORTH CAROLINA
SEAL 026767 PROFESSIONAL ENGINEER
Jul 28 2016 9:40 AM CoSign

DATE	REVISIONS
06/22/16	REVISED PER COMMENTS

JOB #	15020
DATE:	04/29/16
SCALE:	NTS
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.12

July 19, 2016 - 11:42am By: JWeisler
P:\15020 Project Runway\Dwg\15020-C3.12 GRADE DETAILS.dwg



FRONT SIDE ELEVATION

NOTES:

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   - MATERIALS SHALL HAVE A LIQUID LIMIT (LL) BETWEEN 40 AND 60 AND A PLASTICITY INDEX (PI) BETWEEN 15 AND 30 (ASTM D4318)
   - MATERIALS SHALL BE FREE OF TOPSOIL, ORGANIC MATERIAL, ROOTS, STUMPS, BRUSH, ROCKS LARGER THAN 3 INCHES, SUBSOIL, DEBRIS, VEGETATION, AND OTHER FOREIGN MATTER.
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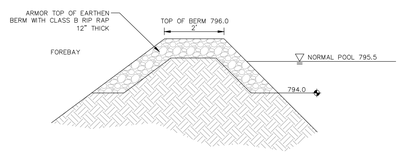
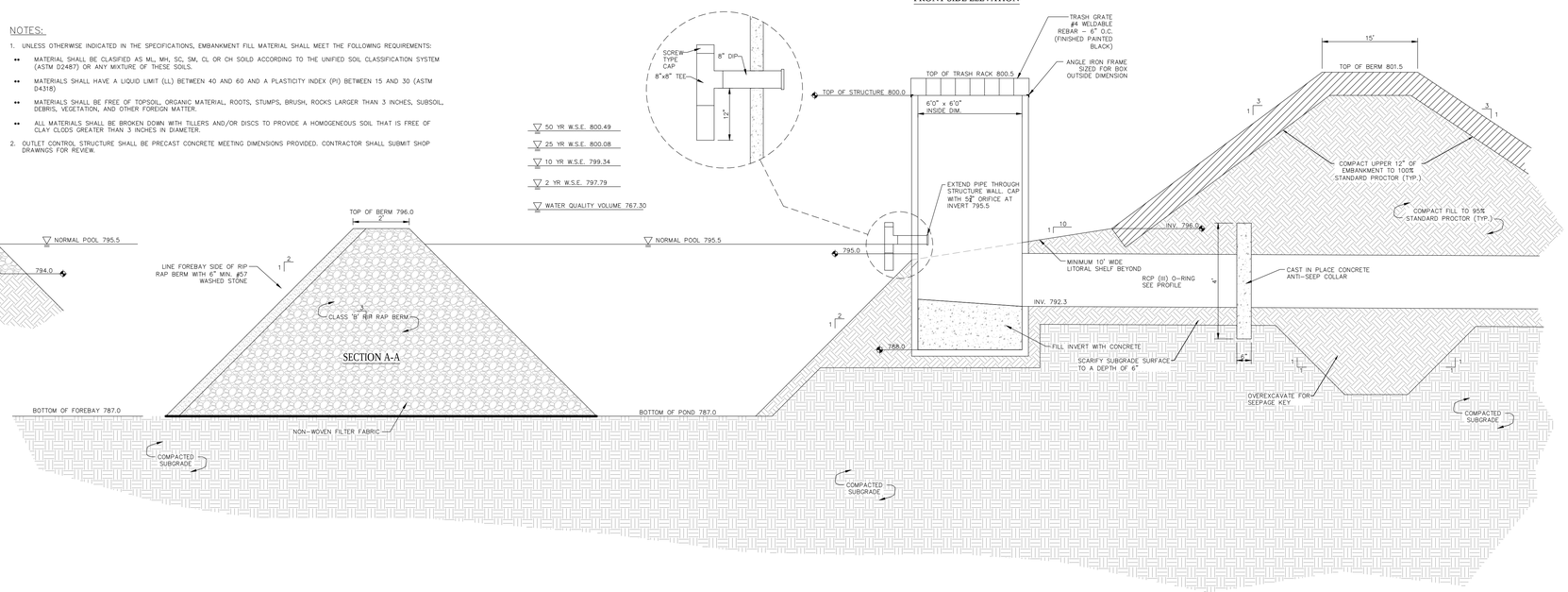


SECTION B-B

SECTION A-A



1 OUTLET CONTROL STRUCTURE 51 (WET POND 2)
NTS

ORSBORN ENGINEERING GROUP
610 EAST MOREHEAD STREET, SUITE 106
CHARLOTTE, NC 28202
P: 704-749-1432 • F: 704-749-1433

GRADING & DRAINAGE DETAILS
FOR
METROLINA LOGISTICS PARK
CHARLOTTE, NORTH CAROLINA

BEACON PARTNERS
610 E. MOREHEAD ST.
CHARLOTTE, NC 28202

ORSBORN ENGINEERING GROUP
NORTH CAROLINA ENGINEERING CORPORATE CERTIFICATE OF AUTHORIZATION
C-3139

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 026780
JOHN CHRISTOPHER OSBORN
Jul 28 2016 9:42 AM

DATE	REVISIONS
06-22-16	REVISED PER COMMENTS

JOB #	15020
DATE:	04/29/16
SCALE:	NTS
DRAWN BY:	JAW
APPROVED BY:	JCO

C3.13

July 19, 2016 - 11:42am By: JWoster
P:\15020 Project Runway\Dwg\15020-C3.12 GRADE DETAILS.dwg