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CHARLOTTE
ENGINEERING & PROPERTY MANAGEMENT

Construction Plans of Proposed

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT
Project No. 512-07-026

Project Features:
Grading, Drainage, Concrete Curb & Gutter, Sidewalk, Erosion Control, Traffic Control

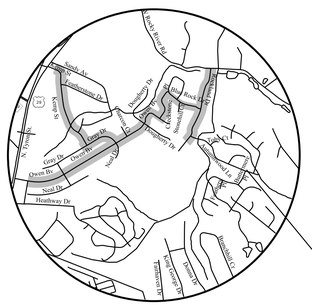
PE SEAL

ROADWAY	HYDRAULICS	TRAFFIC CONTROL
NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAN	NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODISON	NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER TODD BROOKS

RECORD DRAWINGS

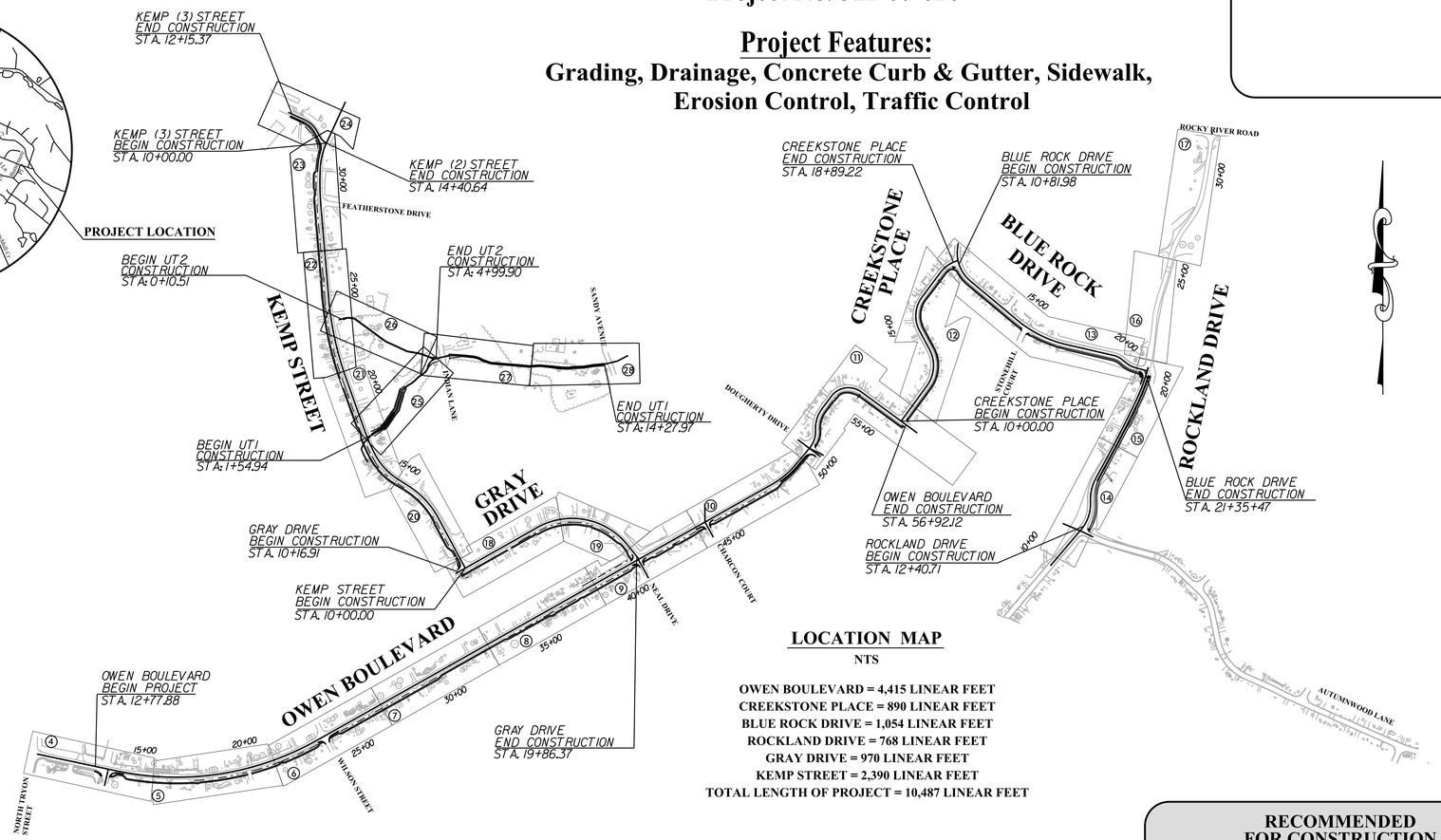
CONVENTIONAL SIGNS

- Proposed Property Line
- Existing Property Line
- Maintained as Apparent R/W Line
- Existing Structures
- Railroad Tracks
- Proposed Edge of Pavement
- Fence
- Slope Stake Line — C/F
- Temporary Construction Easement — e
- Sidewalk/Utility Easement — SUE
- Storm Drainage Easement — SDE
- Slope Easement — PSE
- Existing Gas Line — G
- Existing Water Line — W
- Existing Sanitary Sewer — SS
- Existing Underground Telecommunications — UT
- Existing Underground Electric — UE
- Existing Storm Drainage
- Proposed Storm Drainage
- Existing Tree
- Existing Water Meter — WM
- Existing Water Valve — WV
- Existing Gas Valve — GV
- Existing Sanitary Sewer Manhole
- Proposed Sanitary Sewer Manhole
- Existing Storm Drain Manhole
- Proposed Storm Drain Manhole
- Existing Telephone Manhole
- Proposed Telephone Manhole
- Existing Electric Manhole
- Proposed Electric Manhole
- Existing Catch Basin
- Proposed Catch Basin
- Existing Light Pole
- Proposed Light Pole
- Existing Utility Pole
- Guy Wire
- Proposed Utility Pole
- Iron Pin
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Existing Drop Inlet
- Proposed Drop Inlet
- Accessible Ramp — WCR
- Tree Protection
- Proposed Guardrail
- Silt Fence
- Proposed Curb & Gutter, Conc. Drive, Sidewalk
- Proposed Asphalt Pavement
- Proposed Rip Rap Ditch
- Proposed Gravel
- Proposed Pavement Removal
- Proposed Sidewalk Bridging Tree Roots
- Proposed Centerline of Ditch



PROJECT LOCATION

VICINITY MAP
NTS



LOCATION MAP
NTS

OWEN BOULEVARD = 4,415 LINEAR FEET
CREEKSTONE PLACE = 890 LINEAR FEET
BLUE ROCK DRIVE = 1,054 LINEAR FEET
ROCKLAND DRIVE = 768 LINEAR FEET
GRAY DRIVE = 970 LINEAR FEET
KEMP STREET = 2,390 LINEAR FEET
TOTAL LENGTH OF PROJECT = 10,487 LINEAR FEET

RECOMMENDED FOR CONSTRUCTION

Contract Administration	
Construction Administration	
Landscape Management	
Engineering Services	
Utility Coordinator	
CDOT- Design	
CDOT - Implementation	
CMU	
Planning Commission	
Storm Water Services	

PLANS PREPARED BY:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, NORTH CAROLINA 28217
PHONE: (704) 522-7275
FAX: (704) 525-2838
NCBELS # F-0326

The project shall be constructed in accordance with North Carolina Department of Transportation Standard Specifications for Roads and Structures dated January 2012, Work Area Traffic Control Handbook dated 2014, and as amended by the contract provisions and these plans.

2012 STANDARD SPECIFICATIONS

GRAPHIC SCALES

- Plan View: 20 40 60
- Horz. Profile: 20 40 60
- Vert. Profile: 4 8 12
- Cross Section: 5 10 15

CHARLOTTE
ENGINEERING & PROPERTY MANAGEMENT

Bid Set No. _____

APPROVED _____ CITY ENGINEER _____ DATE

Project Number: 512-07-026

Project Name: NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

GENERAL NOTES

PROPOSED CURB ELEVATIONS:

THE CONTRACTOR SHALL SET AND ADJUST PROPOSED CURB ELEVATIONS AS NECESSARY TO ENSURE PROPER LONGITUDINAL GRADE FOR DRAINAGE. THE CONTRACTOR SHALL RETAIN EXISTING PAVEMENT, UNLESS OTHERWISE NOTED.

DRIVEWAYS AND SIDEWALKS:

PROPOSED DRIVEWAY ENTRANCE DIMENSIONS ARE FROM EXPANSION JOINT TO EXPANSION JOINT. MATCH REPLACEMENT MATERIALS TO THE EXISTING SURFACE ACCORDINGLY:

- CONCRETE - SIX INCH PORTLAND CEMENT CONCRETE (3600 PSI).
  - OWEN BOULEVARD
    STA. 14+89.35 RT. STA. 16+30.44 RT. STA. 17+33.49 RT. STA. 18+18.52 RT. STA. 19+51.56 RT. STA. 19+95.60 RT.
    STA. 22+20.92 RT. STA. 22+75.76 RT. STA. 26+30.18 RT. STA. 27+44.28 RT. STA. 27+63.27 RT. STA. 35+22.17 RT.
    STA. 36+09.73 RT. STA. 36+50.98 RT. STA. 47+40.27 RT. STA. 51+56.86 RT. STA. 52+42.15 RT. STA. 55+06.04 RT.
    STA. 56+04.97 RT.
  - CREEKSTONE PLACE
    STA. 11+30.63 RT. STA. 12+08.60 RT. STA. 12+69.32 RT. STA. 13+29.99 RT. STA. 14+04.32 RT.
    STA. 15+98.41RT
  - BLUE ROCK DRIVE
    STA. 11+41.95 RT. STA. 12+73.02 RT. STA. 13+58.74 RT. STA. 16+51.23 RT.
  - ROCKLAND DRIVE
    STA. 16+63.92 RT. STA. 17+73.46 RT. STA. 18+19.20 RT.
  - GRAY DRIVE
    STA. 11+05.21 RT. STA. 11+90.85 RT. STA. 12+74.59 RT. STA. 17+29.69 RT.
  - KEMP (1)
    STA. 10+66.77 LT. STA. 12+71.78 LT. STA. 13+89.70 LT. STA. 15+51.84 LT. STA. 16+09.11 LT. STA. 21+68.06 LT.
    STA. 22+58.38 LT. STA. 23+50.63 LT. STA. 26+53.05 LT. STA. 27+38.02 LT. STA. 28+95.29 LT. STA. 29+40.39 LT.
  - KEMP (2)
    STA. 13+98.77 LT.
  - KEMP (3)
    STA. 11+61.00 LT.
- ASPHALT - (COMMERCIAL) TWO INCH SF9.5C COURSE AND FOUR INCH I19.0C INTERMEDIATE COURSE.
  (RESIDENTAL) TWO INCH SF9.5C COURSE AND FOUR INCH AGGREGATE BASE COURSE (ABC).
  - OWEN BOULEVARD
    STA. 32+23.42 RT. STA. 43+70.88 RT.
  - ROCKLAND DRIVE
    STA. 15+13.25 RT.
  - KEMP (1)
    STA. 18+10.58 LT.
- GRAVEL - SIX INCH INCIDENTAL STONE
  - OWEN BOULEVARD
    STA. 29+12.32 RT.
  - GRAY DRIVE
    STA. 10+39.53 RT. STA. 15+66.02 RT.
  - KEMP (1)
    STA. 19+03.82 LT. STA. 20+85.57 LT. STA. 23+73.44 RT.

SIDEWALK SHALL BE FOUR INCHES THICK, AND SIX INCHES THICK AT DRIVEWAY CROSSINGS, PER CITY STD. NO. 10.22.

DRAINAGE STRUCTURES:

GRADES, ELEVATIONS AND LOCATIONS SHOWN ARE APPROXIMATE. AS DIRECTED BY THE ENGINEER, THEY MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN CONDITIONS. STATIONS, OFFSETS AND ELEVATIONS REFER TO THE CENTER OF DROP INLETS, MANHOLES AND JUNCTION BOXES, AND THE MIDPOINT OF THE LIP FOR CATCH BASINS. ALL PIPES SHALL BE RCP CLASS III, UNLESS OTHERWISE NOTED.
WEEPHOLES ARE TO BE CONSTRUCTED IN ALL DRAINAGE STRUCTURES, A MINIMUM OF 1 WEEPHOLE PER STRUCTURE. WEEPHOLES ARE TO BE CONSTRUCTED IN THE BOTTOM 1/3 OF STRUCTURE AND COVERED ON THE OUTSIDE OF THE STRUCTURE BY A BAG MADE OF FILTER FABRIC AND FILLED W/#78 STONE. THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK.

UTILITIES:

UTILITIES ARE ILLUSTRATED FOR INFORMATION PURPOSES ONLY. THE CITY WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF UTILITY LOCATIONS, SIZES, DEPTHS, OR FOR COMPLETENESS OF UTILITY INFORMATION.
PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY AND MEET WITH ALL UTILITY OWNERS, THE CITY UTILITY COORDINATOR AND CITY INSPECTOR WHOSE FACILITIES WILL BE AFFECTED TO DETERMINE UTILITY LOCATIONS. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY HIS OPERATIONS OR THOSE OF HIS AGENTS. THE CONTRACTOR SHALL HOLD THE CITY HARMLESS FOR ANY THIRD-PARTY INCONVENIENCE CREATED BY WORK OF HIS OWN FORCES OR THAT OF HIS AGENTS. ANY DAMAGES INCURRED SHALL BE THE CONTRACTORS FINANCIAL RESPONSIBILITY.
AS NEEDED, THE CONTRACTOR SHALL ADJUST/RELOCATE THE SANITARY SEWER AND WATER LINES ONLY. ALL OTHER ADJUSTMENTS/RELOCATIONS WILL BE PERFORMED BY THE VARIOUS UTILITY OWNERS. THE CONTRACTOR SHALL COORDINATE AND PROVIDE AGREED SCHEDULES TO THE CITY INSPECTOR AND CITY UTILITY COORDINATOR FOR WORK WITH UTILITY OWNERS SO AS NOT TO ADVERSELY AFFECT THE PROJECT SCHEDULE. THE CITY WILL NOT BE HELD RESPONSIBLE FOR ANY DELAYS OR DISRUPTIONS TO THE WORK SCHEDULE OF OTHER UTILITY OWNERS.

- FOR UTILITY LOCATES CALL NORTH CAROLINA ONE-CALL @ 1-800-632-4949.
- FOR LOCATES OF UTILITIES NOT MEMBERS OF NORTH CAROLINA ONE-CALL CONTACT PROJECT MANAGER & UTILITY COORDINATOR.

THE CONTRACTOR SHALL ADJUST ALL WATER VALVES, WATER METER BOXES AND WATER VAULTS TO FINISHED GRADE. WATER METERS LOCATED IN SIDEWALKS OR CONCRETE DRIVEWAYS SHALL BE INSTALLED WITHIN CONCRETE BOXES.

GAS LINES WILL BE ADJUSTED/RELOCATED AS NEEDED BY PIEDMONT NATURAL GAS. THE CONTRACTOR SHALL CONTACT PIEDMONT NATURAL GAS AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION.

EXISTING SANITARY SEWER AND WATER LINE:

PRIOR TO THE BEGINNING OF ANY WATER AND/OR SANITARY SEWER WORK, CONTACT THE CMU PROJECT MANAGER, FRED HUNTER, AT 704-391-5124, AND AN INSPECTOR WILL BE PROVIDED FOR WORK OVERSIGHT.

WHERE SANITARY SEWERS AND WATER LINES ARE ENCOUNTERED, THE CONTRACTOR SHALL USE CARE IN WORKING AROUND OR NEAR THEM. IF AN EXISTING SEWER OR WATER LINE IS DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY REPORT THE PROBLEM TO CHARMECK 311 AND THE CMU PROJECT MANAGER, AND REPLACE THE SEWER OR WATER LINE WITH CLASS 350 DUCTILE IRON PIPE. THE CONTRACTOR SHALL REPLACE A MINIMUM OF 18 FEET OF SANITARY SEWER AND/OR WATER LINE WITH CLASS 350 DUCTILE IRON PIPE WHEN ANY OF THE MINIMUM SEPARATION DISTANCES OUTLINED IN THE SPECIAL PROVISIONS FOR THIS PROJECT ARE NOT MET. ALL WATER VALVES, WATER METER BOXES, AND WATER VAULTS AFFECTED BY THIS CONSTRUCTION ARE TO BE ADJUSTED TO THE FINISHED GRADE BY THE CONTRACTOR.

WATER AND SEWER MAINS ARE TO REMAIN ACTIVE DURING CONSTRUCTION. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL FOLLOW CMU PROCEDURES AS OUTLINED IN THE DESIGN MANUAL AND SPECIAL PROVISIONS REGARDING OUTAGES, TEMPORARY WATER SERVICE AND BYPASS SEWER PUMPING.

SANITARY SEWER AND WATER SERVICE LATERALS ARE NOT SHOWN ON THESE PLANS AND WILL BE ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH CMU PERSONNEL TO ENSURE THAT ALL EXISTING SERVICES ARE RELOCATED AND KEPT IN SERVICE. THIS WORK IS INCIDENATL TO ALL CONSTRUCTION ACTIVITIES.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR MAY MAKE HIS OWN INVESTIGATION TO DETERMINE SUBSURFACE CONDITIONS.

MAIL BOXES:

THE CONTRACTOR SHALL RELOCATE ALL MAIL BOXES AS REQUIRED BY SECTION 107-12 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. COORDINATE THIS WORK WITH THE U.S. POSTAL SERVICE.

FENCES:

THE CONTRACTOR SHALL REMOVE AND RESET FENCES AS NOTED ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

TREES, SHRUBS, AND HEDGES:

THE CONTRACTOR IS REQUIRED TO REMOVE TREES, SHRUBS, AND HEDGES WITHIN THE EASEMENT LINES UNLESS SHOWN ON THE PLANS TO BE PROTECTED. THE CONTRACTOR SHALL ALSO PROTECT TREES AND SHRUBS OUTSIDE OF CUT/ FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREES/ SHRUB PROTECTION BARRIERS. WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER IN ACCORDANCE WITH SECTION 01000 OF THE CITY OF CHARLOTTE LANDSCAPE CONSTRUCTION STANDARDS. PRUNING SHALL BE PER THE LATEST STANDARD OF THE LANDSCAPE CONSTRUCTION STANDARDS MANUAL (TYP.) USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK. USE CLD STD. 40.11 FOR BRIDGING TREE ROOTS. TREES SPECIFIED BY THE PLANS TO HAVE ASPHALT CURBING MUST USE CLD STD. 40.13. TREE PROTECTION SHALL BE IN ACCORDANCE WITH CLD STD. 40.02. WHEN THE TREE IS CLOSE TO THE WORK AREA, TREE PROTECTION CLD STD. 40.12 SHALL BE USED.

GENERAL NOTES

SIDE SLOPES:

LIMITS OF PROPOSED SLOPES ARE INDICATED IN THE PLANS, DETAILS AND STANDARD DRAWINGS. THE MAXIMUM SLOPE SHALL NOT EXCEED A 3:1 (HORIZONTAL TO VERTICAL) UNLESS DESIGNATED BY THE ENGINEER. A CUT SLOPE OF 2:1 MAXIMUM WILL BE USED ONLY AS DIRECTED BY THE ENGINEER.

EROSION CONTROL:

THE CONTRACTOR SHALL MAINTAIN EROSION CONTROL DEVICES IN ACCORDANCE WITH THE APPROPRIATE CITY AND STATE EROSION AND SEDIMENT CONTROL ORDINANCES. THE CONTRACTOR SHALL PREVENT STANDING WATER DUE TO CONSTRUCTION. DISTURBED AREAS SHALL BE SEEDED AND MULCHED AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR SHALL FOLLOW THE EROSION CONTROL MEASURES SHOWN ON SHEETS EC-1 THRU EC-17.

ACCESSIBLE RAMPS AND DEPRESSED CURB:

THE CONTRACTOR SHALL CONSTRUCT 6-INCH THICK CONCRETE ACCESSIBLE RAMPS AT INTERSECTIONS IN ACCORDANCE WITH THE LATEST REVISIONS FOR ACCESSIBLE RAMP DETAILS, CONSTRUCTION PLANS & NCDOT STANDARD DRAWINGS.

SAWCUTS:

THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT AND/OR CONCRETE SURFACES PRIOR TO REMOVAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SAW CUT WIDTH SHALL BE 1 FOOT MINIMUM FROM THE EXISTING EDGE OF PAVEMENT. SAW CUT PAVEMENT SHALL BE REPLACED AS WELL AS ADDITIONAL PAVEMENT REQUIRED TO TIE-IN TO FACE OF PROPOSED CURB AND GUTTER.

PAVEMENT DEGRADATION FEE:

CDOT HAS DETERMINED THAT NO PAVEMENT DEGRADATION FEE IS TO BE ASSESSED.

TRAFFIC CONTROL:

TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE "WORK AREA TRAFFIC CONTROL HANDBOOK" (WATCH) AND THE TRAFFIC CONTROL PLANS ON SHEETS TCP-1 THRU TCP-14.

BENCH MARK:

CONTROL FOR THIS PROJECT SHALL BE ESTABLISHED FROM THE CITY OF CHARLOTTE POINT GPS #1. SEE PLAN SHEET NO. 4 FOR DATUM DESCRIPTION. ALL OTHER TEMPORARY BENCH MARK STATION/OFFSETS ARE APPROXIMATE.

UTILITY OWNERS

DUKE ENERGY COMPANY
6325 WILKINSON BLVD
CHARLOTTE, NC 28214

PIEDMONT NATURAL GAS COMPANY
P.O. BOX 33068
CHARLOTTE, NC 28233

TIME WARNER CABLE
4606 MARGARET WALLACE RD
MATTHEWS, NC 28105

CHARLOTTE DEPARTMENT OF TRANSPORTATION
600 EAST FOURTH ST
CHARLOTTE, NC 28202-2844

CHARLOTTE MECKLENBURG UTILITY
5100 BROOKSHIRE BLVD
CHARLOTTE, NC 28216

TELICS (AT&T AND TIME WARNER REPRESENTATIVE)
4100 SOUTH STREAM BLVD
ROOM 340
CHARLOTTE, NC 28217

ICG TELECOM GROUP, INC
230 SOUTH TRYON STREET
CHARLOTTE, NC 28202

PIEDMONT NATURAL GAS COMPANY SPECIAL PROVISIONS:

1. A PIEDMONT NATURAL GAS COMPANY (PNG) REPRESENTATIVE SHALL BE PRESENT AT ALL TIMES WHEN THE CONTRACTOR IS WORKING NEAR A PNG GAS TRANSMISSION LINE WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOTIFY PNG BY WAY OF CITY INSPECTOR AT LEAST 48 HOURS PRIOR TO UNDERTAKING ANY PHASE OF THE WORK WHICH ENCROACHES NEAR A GAS TRANSMISSION LINE.
2. PRIOR TO UNDERTAKING ANY DIGGING WITHIN THE PROJECT LIMITS, THE CONTRACTOR SHALL VERIFY THE DEPTH OF THE GAS TRANSMISSION LINE. IF A LINE IS FOUND TO BE IN CONFLICT WITH ANY PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. NO FURTHER WORK MAY BE UNDERTAKEN UNTIL SUCH CONFLICTS ARE RESOLVED.
3. THE CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT ON TOP OF A GAS TRANSMISSION LINE.
4. WHERE HEAVY EQUIPMENT MUST OPERATE ON TOP OF A GAS TRANSMISSION LINE, THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THAT DAMAGE TO THE LINE IS PREVENTED. SHOULD ANY DAMAGE OCCUR, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY PNG OF SUCH DAMAGE. THE CONTRACTOR SHALL COOPERATE FULLY WITH PNG AND THE CITY IN REPAIRING SUCH DAMAGE.

ABBREVIATIONS

ABAND	ABANDONED	N	NORTH/NORTHING
A.D.	ALGEBRAIC DIFFERENCE	NTS	NOT TO SCALE
ASPH	ASPHALT	OC	ON CENTER
APPROX	APPROXIMATELY	O/H	OVERHEAD
B/C	BACK OF CURB	PAVT	PAVEMENT
BIT	BITUMINOUS	PC	POINT OF CURVATURE
BM	BENCH MARK	PERM	PERMANENT
BRG	BEARING	PG	PAGE
CB	CATCH BASIN	PI	POINT OF INT
C&G	CURB AND GUTTER	PK	PK NAIL SET
CL	CLEARANCE	PP	POWER POLE
FENCE	CHAIN LINK FENCE	PROP	PROPOSED
CMP	CORRUGATED MTL PIPE	PSE	PERM SW ESMT
PIPE CONC	CONCRETE	PT	POINT OF TANGENCY
CONST	CONSTRUCTION	PVI	POINT OF VERT INT
DB	DEED BOOK	PUE	PERM UTILITY ESMT
DCB	DOUBLE CB	r	RADIUS
DI	DROP INLET	RT	RIGHT
DIA	DIAMETER	RCP	REINFORCED CONC
DW	DRIVEWAY	PIPE RELOC	RELOCATE
DIM	DIMENSION	R/W	RIGHT OF WAY
E	EAST/EASTING	S	SOUTH
EA	EACH	SD	STORM DRAIN
ELEV	ELEVATION	SF	SQUARE FOOT
EOP	EDGE OF PAVEMENT	FENCE	SPLIT RAIL FENCE
ESMT	EASEMENT	SS	SANITARY SEWER
EVC	END VC	STA	STATION
EXIST	EXISTING	STD	STANDARD
F/C	FACE OF CURB	SW	SIDEWALK
FES	FLARED END SECTION	TAN	TANGENT
FH	FIRE HYDRANT	TCE	TEMP CONST ESMT
FOC	FIBER OPTIC CABLE	TEMP	TEMPORARY
GV	GAS VALVE	TP	TRAVERSE POINT
HORIZ	HORIZONTAL	T/W	TEST WIRE
INT	INTERSECTION	TYP	TYPICAL
INV	INVERT	U/G	UNDERGROUND
IP	IRON PIN SET	VC	VERTICAL CURVE
L	LENGTH	VERT	VERTICAL
LF	LINEAR FOOTAGE	W	WEST
LT	LEFT	W/	WITH
lb	POUND	WM	WATER METER
LP	LIGHT POLE	VAULT	WATER VAULT
MAX	MAXIMUM	WV	WATER VALVE
MIN	MINIMUM	60p	SIXTY PENNY NAIL SET
MONO	MONOLITHIC	'	FOOT
mph	MILES PER HOUR	"	INCH
MTL	METAL		

STANDARDS

THE FOLLOWING STANDARDS AND THE LATEST REVISION THERETO ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE ARE CONSIDERED A PART OF THESE PLANS. NCDOT STANDARDS SHALL BE USED. CHARLOTTE LAND DEVELOPMENT STANDARDS MAY BE USED IF THERE IS NOT AN APPLICABLE NCDOT STANDARD.

NCDOT:

STD. NO.:	TITLE:
200.02	STANDARD METHOD OF CLEARING, METHOD II
225.02	GUIDE FOR GRADING SUBGRADE - SECONDARY & LOCAL
225.04	METHOD OF OBTAINING SUPERELEVATIONS - TWO LANE PAVEMENT
300.01	METHOD OF PIPE INSTALLATION - METHOD 'A'
654.01	PAVEMENT REPAIRS
840.01	BRICK CATCH BASIN
840.15	BRICK DROP INLET
840.03	FRAME, GRATES, AND HOOD
840.51	BRICK MANHOLE
840.52	PRE-CAST MANHOLE
840.66	DRAINAGE STRUCTURE STEPS
848.01	CONCRETE SIDEWALK
876.02	GUIDE FOR RIP RAP AT PIPE OUTLETS
901.50	ARROWS AND SHIELDS
1101.02	TEMPORARY LANE CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS
1605.01	TEMPORARY SILT FENCE
1606.01	SPECIAL SEDIMENT CONTROL FENCE
1632.02	ROCK INLET SEDIMENT TRAP TYPE 'B'
1632.03	ROCK INLET SEDIMENT TRAP TYPE 'C'
1633.02	TEMPORARY ROCK SILT CHECK 'TYPE B'

CHARLOTTE

STD. NO.:	TITLE:
10.17A	STANDARD CURB AND GUTTER
10.17B	CURB AND GUTTER
10.19	CURB TRANSITION 2'-6" CURB AND GUTTER TO 2'-0" VALLEY GUTTER
10.22	CONCRETE SIDEWALKS
10.24A	COMMERCIAL TYPE II RESIDENTAL DROP CURB TYPE I DRIVEWAY WITH SIDEWALK ABUTTING CURB (2'-6" CURB & GUTTER)
10.25A	RESIDENTAL DROP CURB TYPE I DRIVEWAY WITH PLANTING STRIP (2'-6" CURB AND GUTTER)
10.26	DROP CURB DRIVEWAY - MONOLITHIC CURB AND SIDEWALK
10.27A	RESIDENTAL DRIVEWAY (TYPE I) FOR 2'-0" VALLEY GUTTER
10.31A	ACCESSIBLE RAMP STANDARD WITH PLANTING STRIP 2'-6" CURB AND GUTTER
10.32A	ACCESSILBE RAMP STANDARD WITHOUT PLANTING STRIP 2'-6" CURB AND GUTTER
10.31B	ACCESSIBLE RAMP SECTIONS WITH PLANTING STRIP 2'-6" CURB AND GUTTER
10.33A	ACCESSIBLE RAMP STANDARD 2'-0" CURB AND GUTTER
10.35A	STANDARD PLACEMENT OF ACCESSIBLE RAMP AND GENERAL NOTES
10.39	MODULAR RETAINING WALL USING GEOGRID IN THE RIGHT-OF-WAY
10.40A	DIRECTIONAL ACCESSIBLE RAMP WITH SMALL/MEDIUM CURB RADII
10.40B	DIRECTIONAL ACCESSIBLE RAMP WITH LARGE CURB RADIUS
20.00A	NCDOT STANDARDS APPROVED FOR USE IN THE CITY OF CHARLOTTE AND CHARLOTTE ETJ
20.00B	NCDOT STANDARDS APPROVED FOR USE IN THE CITY OF CHARLOTTE AND CHARLOTTE ETJ
20.03	DOUBLE CATCH BASIN 15"-36" PIPE
20.22	FLARED END SECTIONS 12" TO 72"
20.23	RIP RAP APRONS AT OUTFALLS
30.06A	TEMPORARY SILT FENCE
40.02	TREE PROTECTION DETAIL
40.11	REINFORCED CONCRETE SIDEWALK (BRIDGING TREE ROOTS)
40.12	TEMPORARY TREE PROTECTION DETAIL
40.14	ROCK CHIMNEY
50.04A	SAFETY HANDRAIL

N.C. SEDIMENTATION CONTROL COMMISSION STANDARD DRAWINGS:

THE FOLLOWING STANDARD PRACTICES AND SPECIFICATIONS, AS PRESENTED IN THE "EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL," BY THE N.C. SEDIMENTATION CONTROL COMMISSION, N.C. DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT, AND DIVISION OF LAND RESOURCES LAND QUALITY SECTION, DATED JUNE 1, 2006, WITH THE LATEST REVISIONS DATED MARCH 2009, ARE INCLUDED AS REFERENCE FOR THE CONSTRUCTION OF THIS PROJECT.

PRACTICE NO.:	DESCRIPTION:
6.11	PERMANENT SEEDING
6.14	MULCHING
6.51	HARDWARE CLOTH AND GRATE INLET PROTECTION
6.52	BLOCK AND GRAVEL INLET PROTECTION
6.62	SEDIMENT FENCE
6.83	CHECK DAM

CHARLOTTE

Plans Prepared By:
ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

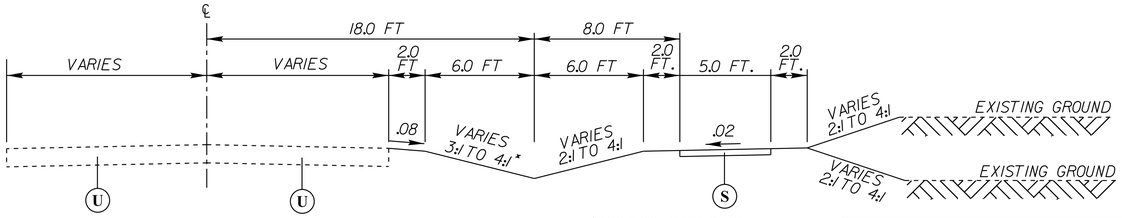
NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAAR

NTS — SCALE
512-07-026 — JOB NO.
19-NOV-2015 11:31 G:\Trans\Cdot\Neighborhood\NewellSouth\Sheets\Misc\ns_gennote_02.dgn — CAD FILE PATH
CJM — CHECKED BY
SEM — PREPARED BY
NOVEMBER 2015 — DATE
VTS — APPROVED BY

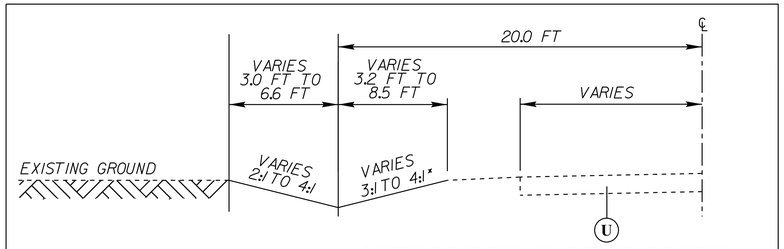
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

GENERAL NOTES



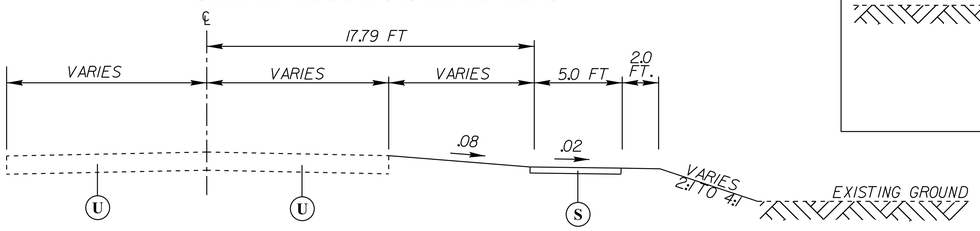
*UNLESS NOTED IN CROSS SECTIONS

TYPICAL SECTION 1
OWEN BOULEVARD
STA. 14+34.47 TO STA. 30+00.51
STA. 33+28.32 TO 48+05.24
GRAY DRIVE
STA. 14+27.92 TO STA. 18+52.49

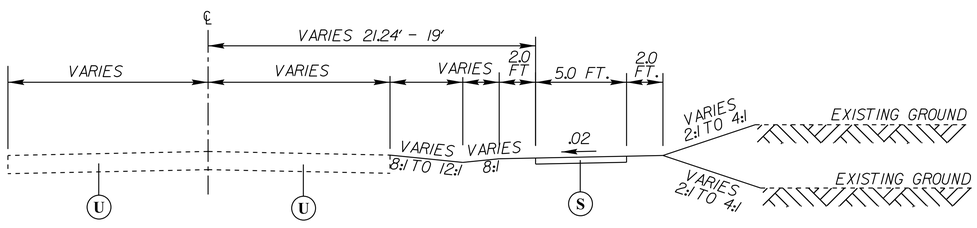


*UNLESS NOTED IN CROSS SECTIONS

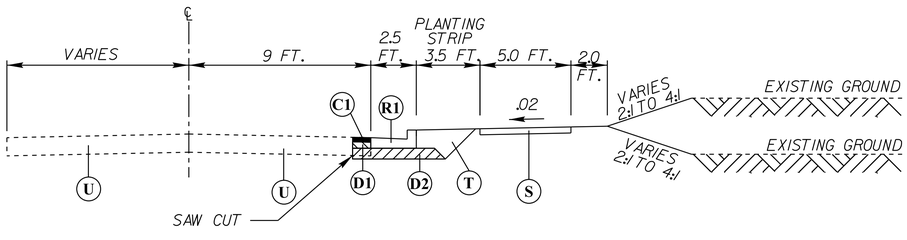
OWEN BOULEVARD DITCH (LT SIDE)
STA. 37+67.00 TO 40+09.00



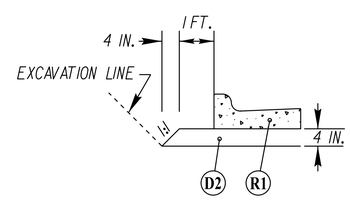
TYPICAL SECTION 2
OWEN BOULEVARD
STA. 30+00.51 TO STA. 33+28.32



TYPICAL SECTION 3
GRAY DRIVE
STA. 10+20.41 TO STA. 14+08.99
STA. 18+52.49 TO STA. 19+18.71

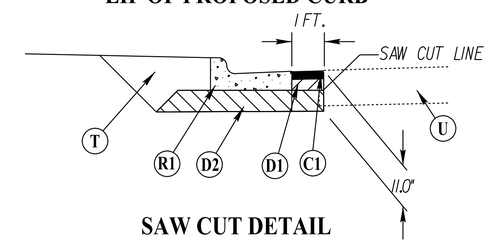


TYPICAL SECTION 4
OWEN BOULEVARD
STA. 48+05.24 TO STA. 49+81.26

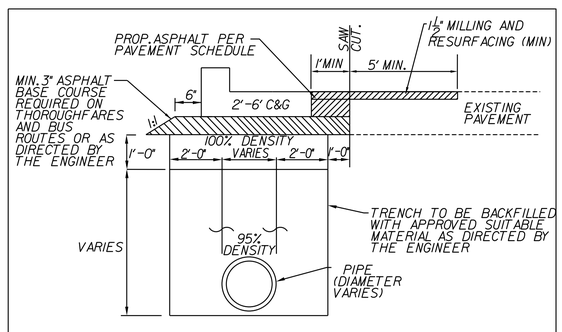


CONCRETE CURB & GUTTER, ASPHALT CONC. INTERMEDIATE COURSE DETAIL

SAW CUT TO BE MADE 1.0 FT. FROM LIP OF PROPOSED CURB



SAW CUT DETAIL

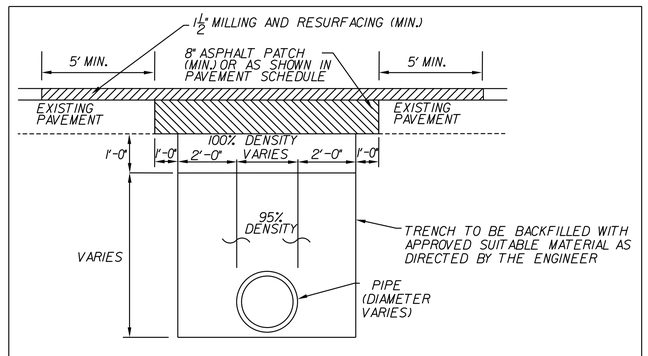


PAVEMENT REPAIR WITH MILLING AT CURB AND GUTTER WITH STORM DRAINAGE

Not to scale

DETAIL 3

No Degradation Fee



PAVEMENT REPAIR WITH MILLING

Not to scale

DETAIL 2

No Degradation Fee

PAVEMENT SCHEDULE

ITEM	DESCRIPTION
C1	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE. TYPE S 9.5 C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. IN EACH OF 2-1.5" LAYERS.
D1	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 119.0 C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD. IN EACH OF 1-4" LAYERS.
D2	BITUMINOUS CONC. INTERMEDIATE COURSE (SEE DETAIL - THIS SHEET)
R	EXISTING CONCRETE VALLEY GUTTER TO REMAIN
R1	2'-6" CONCRETE CURB AND GUTTER. NCDOT STD. 846.01
S	4" CONCRETE SIDEWALK. NCDOT STD. 848.01
T	EARTH MATERIAL
U	EXISTING PAVEMENT TO REMAIN

CHARLOTTE.

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

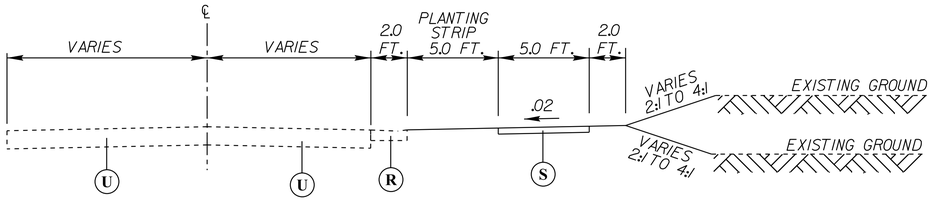
NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR

512-07-026 JOB NO.	NTS SCALE
11-NOV-2015 14:58 G:\Trees\Cdot\Neighborhood\Newell South\Sheets\TIS\newell south_typ.dgn CAD FILE PATH	CJM CHECKED BY
SEM PREPARED BY	NOVEMBER 2015 DATE
VTS APPROVED BY	

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

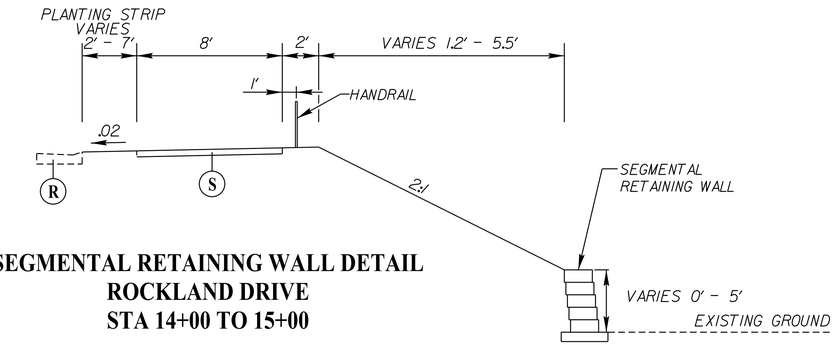
TYPICAL SECTIONS

SHEET 3 OF 29

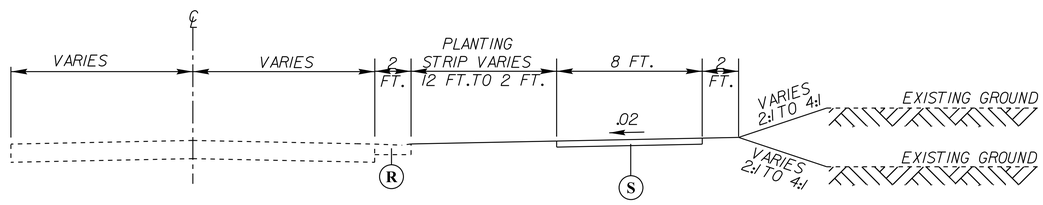


TYPICAL SECTION 5

OWEN BOULEVARD
STA. 50+31.31 TO STA. 56+88.13
CREEKSTONE PLACE
STA. 10+18.83 TO STA. 18+52.20
BLUE ROCK DRIVE
STA. 11+09.56 TO STA. 15+67.55

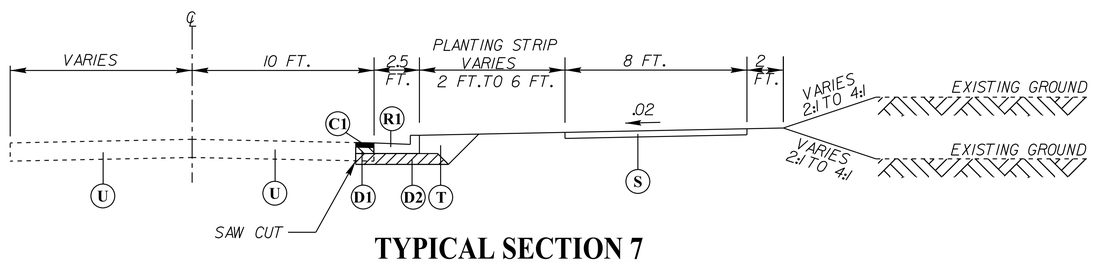


SEGMENTAL RETAINING WALL DETAIL
ROCKLAND DRIVE
STA 14+00 TO 15+00



TYPICAL SECTION 6

ROCKLAND DRIVE
STA. 12+37.35 TO STA. 14+65.00

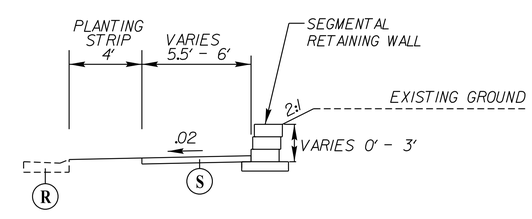


TYPICAL SECTION 7

ROCKLAND DRIVE
STA. 14+65.00 TO STA. 20+08.27

ABBREVIATED PAVEMENT SCHEDULE

ITEM	DESCRIPTION
C1	3" ASPHALT CONC.SURFACE COURSE,TYPE S 9.5 C
D1	4" ASPHALT CONC.INTERMEDIATE COURSE,TYPE I19.0 C
D2	BITUMINOUS CONC.INTERMEDIATE COURSE
R	EXISTING VALLEY CURB TO REMAIN
R1	2'-6" CURB AND GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT TO REMAIN



SEGMENTAL RETAINING WALL DETAIL
BLUE ROCK DRIVE
STA 15+83 TO STA 16+33
STA 17+35 TO STA 21+10

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NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHWAR

NTS SCALE	
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512-07-026 JOB NO.	
CJM CHECKED BY	NOVEMBER 2015 DATE
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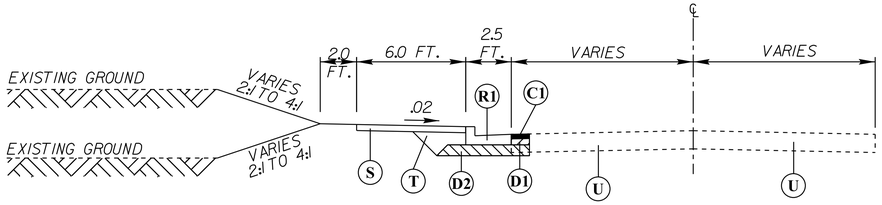
VTS APPROVED BY	

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

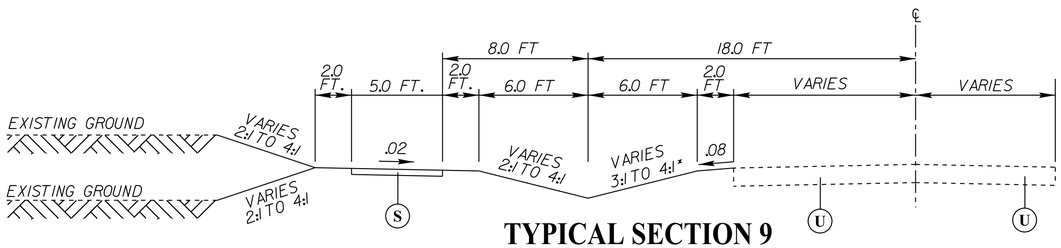
TYPICAL SECTIONS

SHEET 3A OF 29



TYPICAL SECTION 8

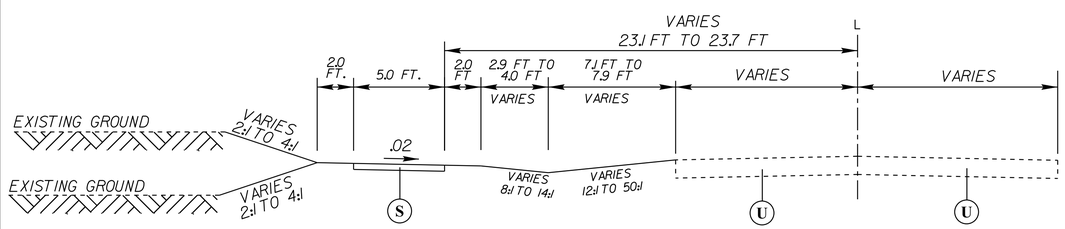
KEMP (1)
STA. 10+38.83 TO STA. 11+00.02
STA. 30+37.81 TO STA. 30+55.70
KEMP (2)
STA. 13+22.33 TO STA. 14+31.97



*UNLESS NOTED IN CROSS SECTIONS

TYPICAL SECTION 9

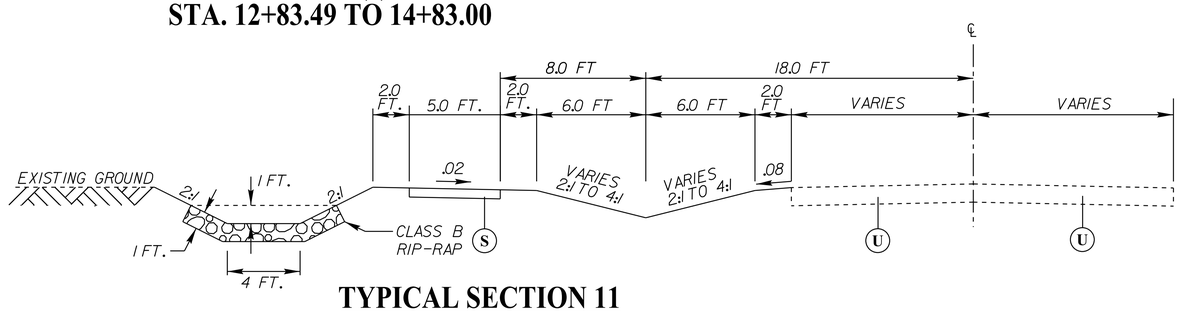
KEMP (1)
STA. 11+29.45 TO STA. 12+83.49
STA. 14+83.00 TO STA. 16+72.00
STA. 17+35.00 TO STA. 30+20.34



TYPICAL SECTION 10

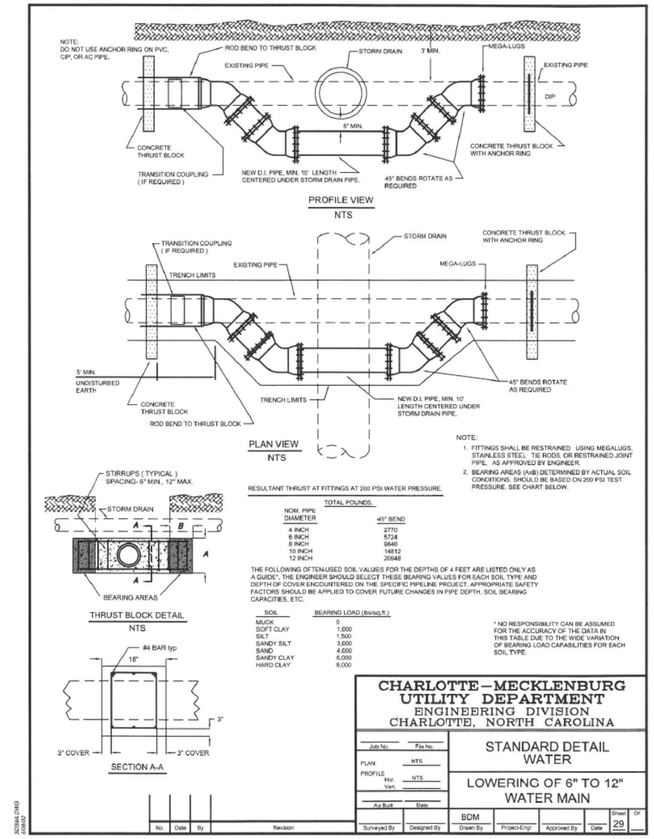
KEMP (1)
STA. 12+83.49 TO STA. 14+83.00

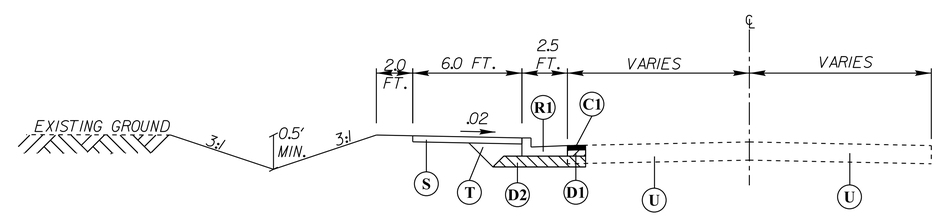
ITEM	DESCRIPTION
C1	3" ASPHALT CONC.SURFACE COURSE,TYPE S 9.5 C
D1	4" ASPHALT CONC.INTERMEDIATE COURSE,TYPE 19.0 C
D2	BITUMINOUS CONC.INTERMEDIATE COURSE
R	EXISTING VALLEY CURB TO REMAIN
R1	2'-6" CURB AND GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT TO REMAIN



TYPICAL SECTION 11

KEMP (1)
STA. 16+72.00 TO STA. 17+35.00





TYPICAL SECTION 12

KEMP (3)
STA. 10+23.84 TO STA. 11+77.34

CHARLOTTE

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NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 28235 VIRGINIA T. SCHIAR

NTS — SCALE
CJM — CHECKED BY
NOVEMBER 2015 — DATE
512-07-026 — JOB NO.
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NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

TYPICAL SECTIONS

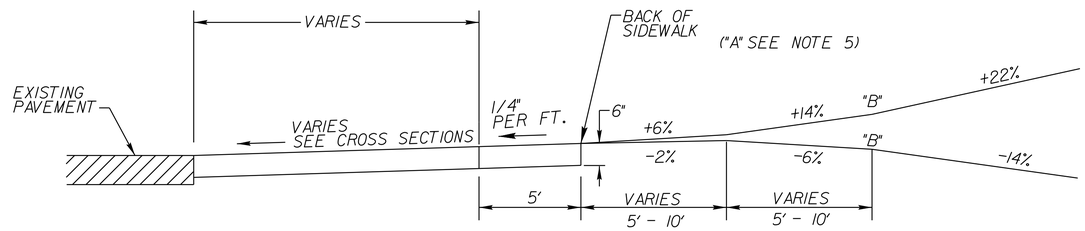
SHEET 3B OF 29

NOTES

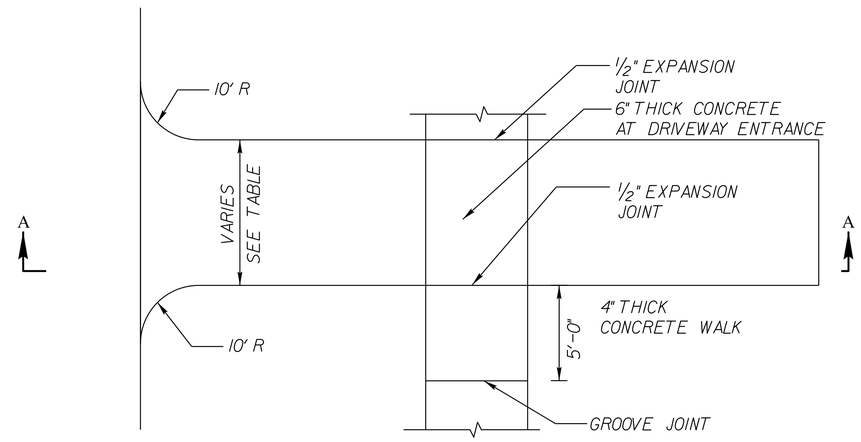
1. THE ELEVATION O FTHE SIDEWALK SHALL BE NOT LESS THAN SIX INCHES OR MORE THAN EIGHTEEN INCHES ABOVE THE ROADWAY CROWN. THIS ELEVATION DIFFERENTIAL SHALL BE CONSISTENT WITHIN EACH BLOCK.
2. ALL CONCRETE TO BE 3600 PSI IN STRENGTH.
3. ALL CONSTRUCTION PRACTICES INCLUDING COMPACTION, CURING FINISHING, ETC. SHALL BE IN ACCORDANCE WITH THE CHARLOTTE LAND DEVELOPMENT STANDARDS.
4. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS, INCLUDING BUT NOT LIMITED TO SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
5. "A" BREAKOVER SHALL BE 8% OR LESS (A=ALGEBRAIC DIFFERENCE).
6. PRIOR APPROVAL IS REQUIRED BY CDOT ON GRADES EXCEEDING WHAT ARE SHOWN.
7. FOR DRIVEWAY CONSTRUCTION AFTER THE SIDEWALK REFER TO THE GENERAL NOTE SHEET AND PLAN SHEET FOR MATERIAL. IF THE DRIVEWAY MATERIAL IS GRAVEL ADD A 5' CONC SECTION BEHIND THE SIDEWALK.

DRIVEWAY WIDTH		
TYPE DRIVEWAY	MINIMUM	MAXIMUM
TYPE I - RESIDENTIAL:		
LOCAL/COLLECTOR	10'	30'
THOROUGHFARE*	15'	30'

* MUST PROVIDE ON-SITE TURNAROUND



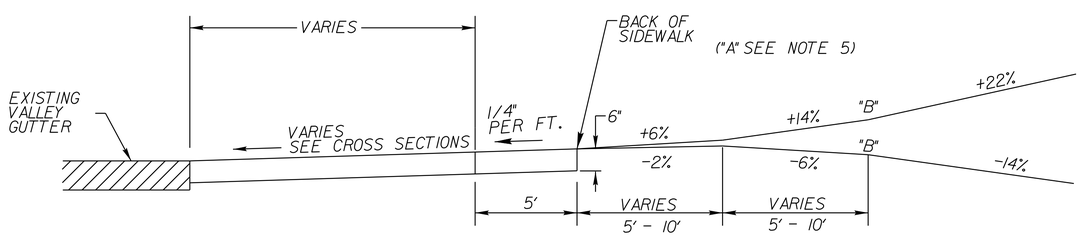
SECTION A-A



PLAN

RESIDENTIAL DRIVEWAY (TYPE I) WITH NO CURB

Not To Scale



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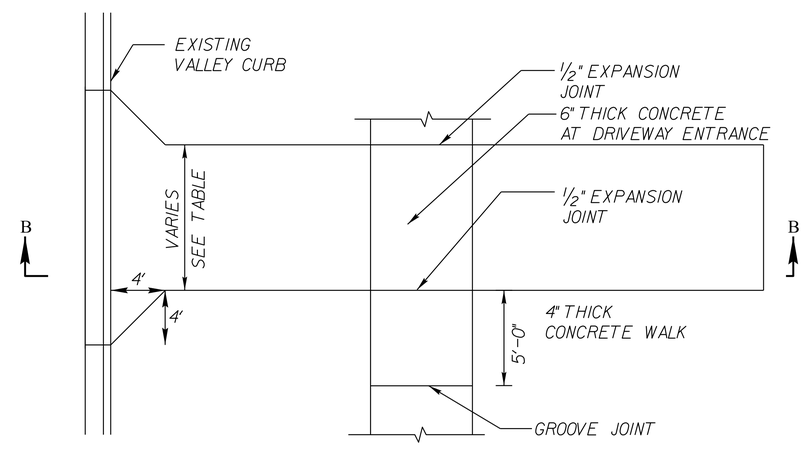

PLAN

RESIDENTIAL DRIVEWAY (TYPE I) WITH 2'0" VALLEY CURB

Not To Scale

CHARLOTTE

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NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 28235 VIRGINIA T. SCHAAK

NTS SCALE	
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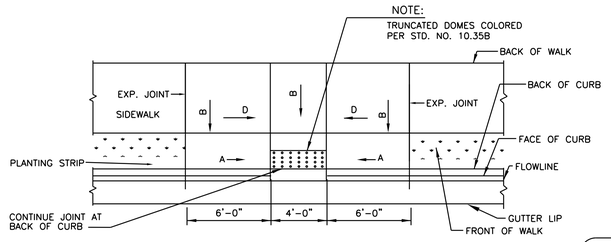
VTS APPROVED BY	

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

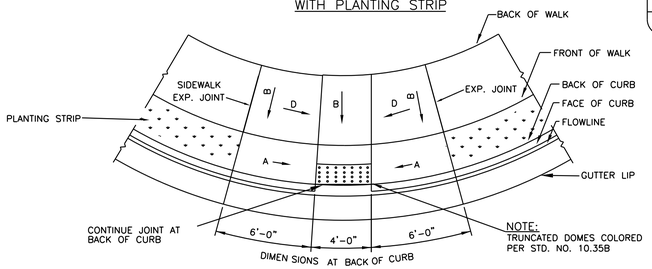
DRIVEWAY DETAIL

SHEET 3C OF 29



PLAN VIEW–PARALLEL RAMP
WITH PLANTING STRIP

SLOPE "A"	12:1
SLOPE "B"	1/4"/FT
SLOPE "D"	3/8"/FT



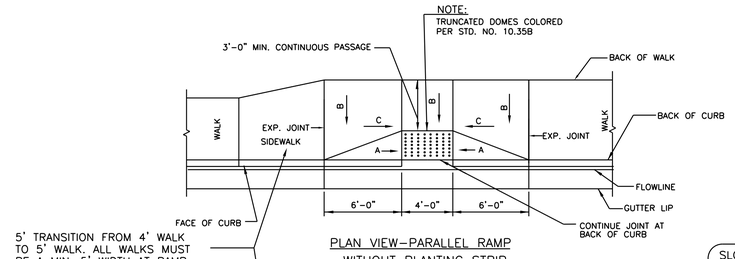
PLAN VIEW–DIAGONAL RAMP WITH PLANTING STRIP

CHARLOTTE.

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

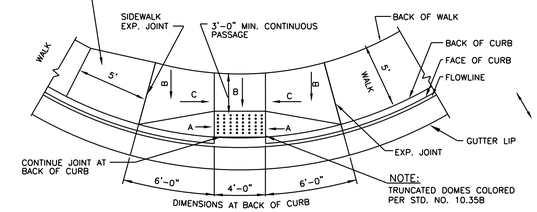
ACCESSIBLE RAMP STANDARD WITH PLANTING STRIP 2'-6" CURB AND GUTTER

STD. NO. 10.31A | REV.



PLAN VIEW–PARALLEL RAMP
WITHOUT PLANTING STRIP

SLOPE "A"	12:1
SLOPE "B"	1/4"/FT
SLOPE "C"	5/8"/FT



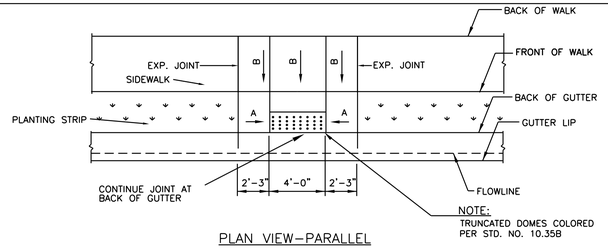
PLAN VIEW–DIAGONAL RAMP WITHOUT PLANTING STRIP

CHARLOTTE.

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

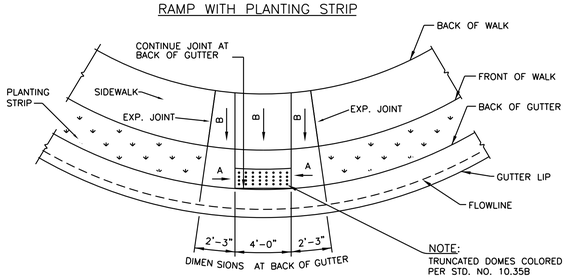
ACCESSIBLE RAMP STANDARD WITHOUT PLANTING STRIP 2'-6" CURB AND GUTTER

STD. NO. 10.32A | REV.



PLAN VIEW–PARALLEL
RAMP WITH PLANTING STRIP

SLOPE "A"	12:1
SLOPE "B"	1/4"/FT



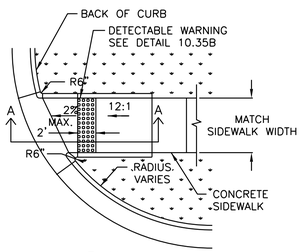
PLAN VIEW–DIAGONAL RAMP
WITH PLANTING STRIP

CHARLOTTE.

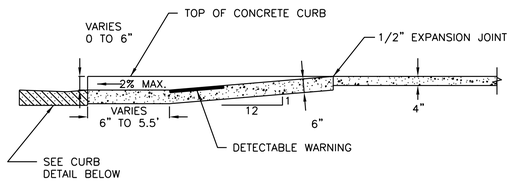
CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

ACCESSIBLE RAMP STANDARD
2'-0" VALLEY GUTTER

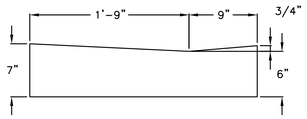
STD. NO. 10.33A | REV.



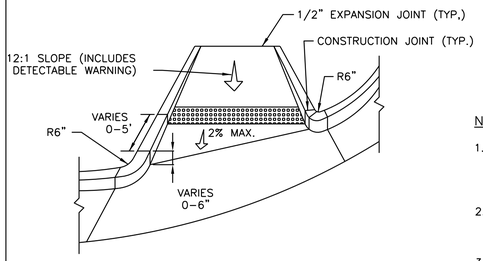
PLAN



SECTION A–A



CURB DETAIL



PERSPECTIVE

NOTES:

1. USE THIS DETAIL ONLY UNDER THE FOLLOWING CIRCUMSTANCES:
   - 5-FOOT SIDEWALKS WITH CURB RADII OF 35 FEET OR LESS
   - 6-FOOT SIDEWALKS WITH CURB RADII OF 30 FEET OR LESS
   - 8-FOOT SIDEWALKS WITH CURB RADII OF 25 FEET OR LESS
2. DIRECTIONAL RAMPS MAY BE USED WHEN AN 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.

CHARLOTTE.

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

DIRECTIONAL ACCESSIBLE RAMP
WITH SMALL/MEDIUM CURB RADII

STD. NO. 10.40A | REV. 4

CHARLOTTE

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NO.	DATE	BY	DESCRIPTION

NTS — SCALE
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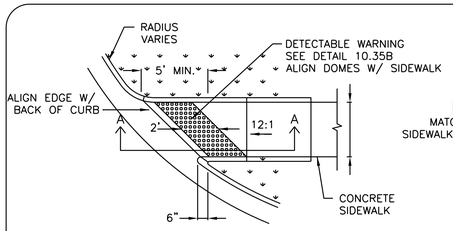
VTS — APPROVED BY

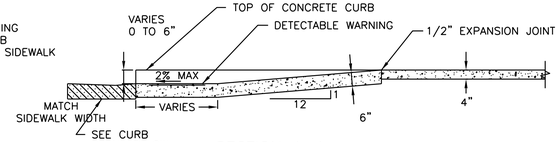
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

ACCESSIBLE RAMP DETAILS

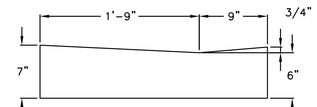
SHEET 3D OF 29



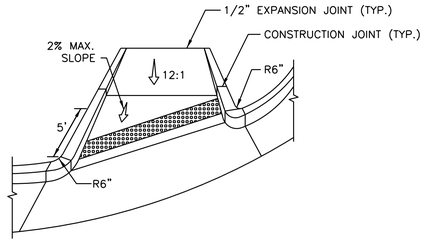
PLAN



SECTION A–A



CURB 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.
4. THE ANGLES ON THE DETECTABLE WARNING WILL VARY WITH THE CURB RADIUS AND SIDEWALK WIDTH. IN THE CONFIGURATION SHOWN IN PLAN VIEW, ONE SIDE OF THE DETECTABLE WARNING TRAPEZOID SHALL BE LOCATED AT THE TOE OF THE 12:1 SLOPE, AND THE OTHER SIDE SHALL BE ALIGNED WITH THE CURB ON THE ACCESSIBLE RAMP.
5. THE TRUNCATED DOME PATTERN MUST ALIGN WITH THE SIDEWALK TO ALLOW WHEELCHAIRS TO PASS FREELY. DO NOT ALIGN DOME PATTERN WITH THE CURB RADIUS.

CHARLOTTE.

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

DIRECTIONAL ACCESSIBLE RAMP
WITH LARGE CURB RADIUS

STD. NO.	REV.
10.40B	4

CHARLOTTE

Plans Prepared By:

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5200 77 CENTER DRIVE, SUITE 500
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NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

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CJM
CHECKED BY

VTS
APPROVED BY

NOVEMBER 2015
DATE

NEWELL-SOUTH
NEIGHBORHOOD
IMPROVEMENT PROJECT

ACCESSIBLE RAMP
DETAILS

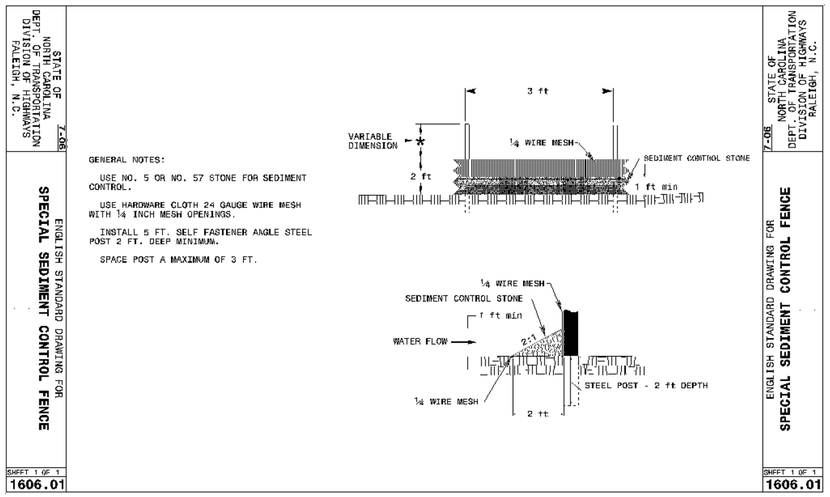
SHEET
3E

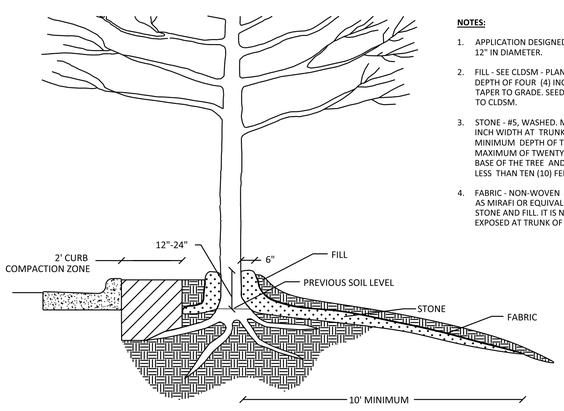
OF
29

GENERAL NOTES:

TREES, SHRUBS AND HEDGES

THE CONTRACTOR IS REQUIRED TO REMOVE TREES, SHRUBS, AND HEDGES WITHIN THE EASEMENT LINES UNLESS SHOWN ON THE PLANS TO BE PROTECTED. THE CONTRACTOR SHALL ALSO PROTECT TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREES/SHRUB PROTECTION BARRIERS. WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER IN ACCORDANCE WITH SECTION 01000 OF THE CITY OF CHARLOTTE LANDSCAPE CONSTRUCTION STANDARDS. PRUNING SHALL BE PER THE LATEST STANDARD OF THE LANDSCAPE CONSTRUCTION STANDARDS MANUAL (TYP.) USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK. USE CLD STD. 40.11 FOR BRIDGING TREE ROOTS. TREES SPECIFIED BY THE PLANS TO HAVE ASPHALT CURBING MUST USE CLD STD. 40.13 TREE PROTECTION SHALL BE IN ACCORDANCE WITH CLD STD. 40.02. WHEN THE TREE IS CLOSE TO THE WORK AREA TREE PROTECTION CLD STD. 40.12 SHALL BE USED.



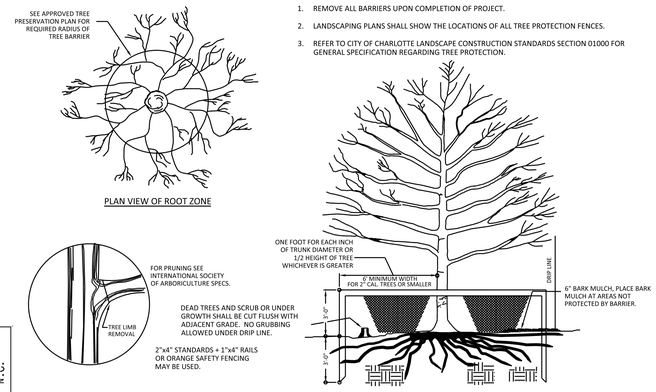


NOTES:

1. APPLICATION DESIGNED FOR TREES NO LESS THAN 12" IN DIAMETER.
2. FILL - SEE CLDSM - PLANTING MIX. APPLY TO A DEPTH OF FOUR (4) INCHES AT BASE OF TREE, TAPER TO GRADE. SEED AND MULCH ACCORDING TO CLDSM.
3. STONE - #5, WASHED. MAINTAIN EXPOSED SIX (6) INCH WIDTH AT TRUNK OF TREE. PLACE TO MINIMUM DEPTH OF TWELVE (12) INCHES AND A MAXIMUM OF TWENTY-FOUR (24) INCHES AT THE BASE OF THE TREE AND TAPER OUTWARD TO NO LESS THAN TEN (10) FEET.
4. FABRIC - NON-WOVEN GEOTEXTILE FABRIC, SUCH AS MIRAFI OR EQUIVALENT, PLACED BETWEEN STONE AND FILL. IT IS NOT TO COVER STONE EXPOSED AT TRUNK OF TREE.

ROCK CHIMNEY

N.T.S. CLDSM STD. DTL. 40.14



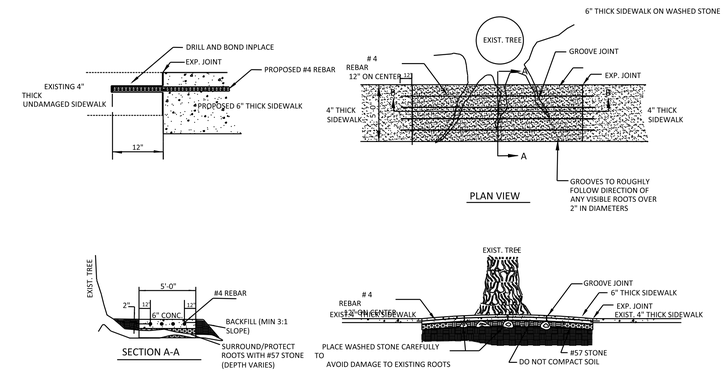
NOTES:

1. REMOVE ALL BARRIERS UPON COMPLETION OF PROJECT.
2. LANDSCAPING PLANS SHALL SHOW THE LOCATIONS OF ALL TREE PROTECTION FENCES.
3. REFER TO CITY OF CHARLOTTE LANDSCAPE CONSTRUCTION STANDARDS SECTION 01000 FOR GENERAL SPECIFICATION REGARDING TREE PROTECTION.

TEMPORARY TREE PROTECTION DETAIL

N.T.S. CLDSM STD. DTL. 40.02

DETAIL 40.02 -TREE PROTECTION DETAIL, SPECIFIES A CIRCULAR RADIUS FOR TREE PROTECTION BARRIER; HOWEVER, IF APPROVED BY THE ENGINEER, CHARLOTTE LANDSCAPE CONSTRUCTION STANDARD SECTION 01000 -TREE PRESERVATION, PART 03, D. ALLOWS FOR AN ASYMMETRICAL TREE PROTECTION BARRIER WHICH REMAINS A MINIMUM OF FOUR FEET FROM THE TRUNK AT ANY POINT AND ENCLOSES A UNDISTURBED CRITICAL ROOT ZONE AREA OF THE SAME AREA AS CALCULATED FOR THE SYMMETRICAL TREE PROTECTION BARRIER.



BRIDGING TREE ROOTS

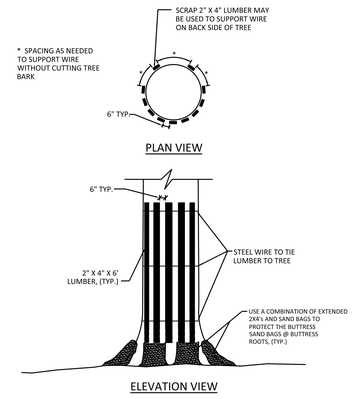
N.T.S. CLDSM STD. DTL. 40.11

NOTES:

1. INSTALL ANCHOR CHAIRS.

NOTES:

1. THIS TREE BUMPER DETAIL SHALL BE USED WHEN WORKING WITHIN 10' OF AN EXISTING TREE TO BE PROTECTED.
2. ALL TREES SHALL BE SAVED UNLESS NOTED OTHERWISE ON THE PLANS OR DIRECTED BY THE ENGINEER.
3. LUMBER, WIRE, AND SANDBAGS MAY BE REUSED AT OTHER TREES.
4. THE INTENT OF THIS DETAIL IS TO PROTECT EXISTING TREES FROM DAMAGE DURING CONSTRUCTION, ESPECIALLY FROM BACKHOE ARM SWING. AN ALTERNATE APPROACH MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER AFTER CONSULTATION WITH THE CITY ARBORIST OR HIS DULY AUTHORIZED REPRESENTATIVE.

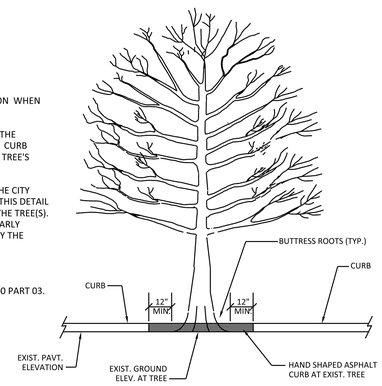


TEMPORARY TREE PROTECTION DETAIL

N.T.S. CLDSM STD. DTL. 40.12

NOTES:

1. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR EXISTING TREES.
2. WHERE EXISTING TREES ARE WITHIN 4' OF THE PROPOSED BACK OF CURB, THE PROPOSED CURB SHALL END A MINIMUM OF 12" FROM THE TREE'S BUTTRESS ROOTS.
3. CONTRACTOR SHALL COORDINATE WITH THE CITY ARBORIST TO IDENTIFY TREES FOR WHICH THIS DETAIL APPLIES PRIOR TO CONSTRUCTION NEAR THE TREE(S). NO TREES SHALL BE REMOVED UNLESS CLEARLY SPECIFIED ON THE PLANS OR IDENTIFIED BY THE ENGINEER.
4. AVOID FILL PLACEMENT NEAR TREE.
5. FOR ADDITIONAL SPECS., SEE SECTION 1000 PART 03. B AND C



ASPHALT CURB PLACEMENT AT EXISTING TREES

N.T.S. CLDSM STD. DTL. 40.13

CITY OF CHARLOTTE TREE PROTECTION

Revision: February 2011

CHARLOTTE

Plans Prepared By:

ATKINS

5200 77 CENTER DRIVE, SUITE 500
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PHONE: (704) 522-7275
NCBELS #F-0326

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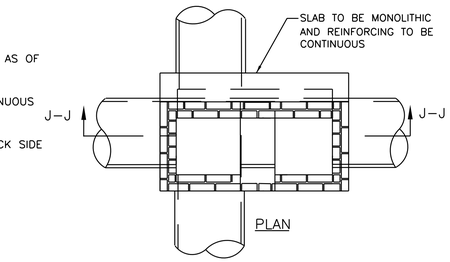
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

TREE PROTECTION & BRIDGING DETAILS

SHEET 3F OF 29

GENERAL NOTES:

1. SEE NCDOT STANDARD 840.01 FOR DETAILS BASED ON PIPE SIZE PER CROSS SECTION.
2. CONSTRUCT TWO SINGLE BASINS PER NCDOT STANDARD WITH DOUBLE INTERIOR WALL.
3. ALL CONCRETE TO BE 3600 P.S.I COMPRESSIVE STRENGTH.
4. BASE SLAB SHALL BE MONOLITHIC.
5. PIPE SECTION D2 CONNECTING CATCH BASINS SHALL HAVE A MINIMUM DIAMETER SAME AS OF OUTLET PIPE D3.
6. ALL REINFORCING STEEL SHOWN ON NCDOT STANDARDS IS TO BE PROVIDED AS CONTINUOUS MEMBERS. (NO LAPS, USED AS A SINGLE CONTINUOUS BAR IN THE SLAB)
7. WEEP HOLES SHALL BE PLACED IN BACK WALL WITH FILTER FABRIC OR STONE ON BACK SIDE
8. MANHOLE RING AND COVER REQUIRED IN TOP SLAB PER CLDS: 20.05B



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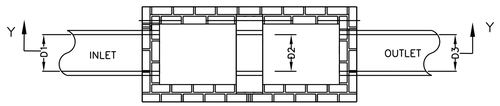

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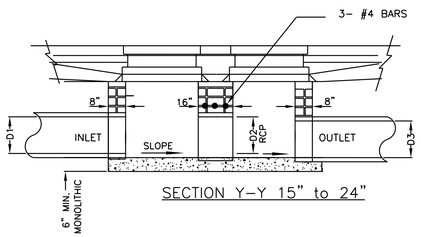
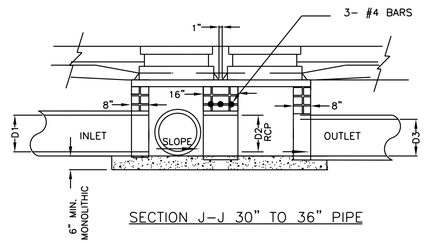


SECTION Y–Y 15" to 24"

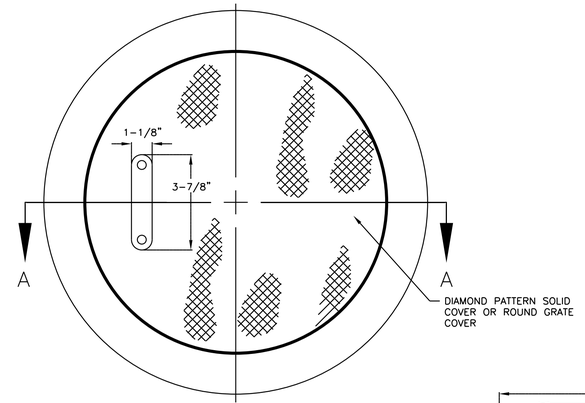


SECTION J–J 30" TO 36" PIPE

NOT TO SCALE

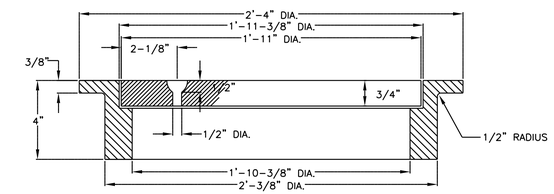
BRICK DOUBLE CATCH BASIN
15" THRU 36" PIPE

STD. NO.	REV.
20.03	8



PLAN VIEW

MINIMUM WEIGHT	
RING	96 LBS
COVER	86 LBS



SECTION A–A

CHARLOTTE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

MANHOLE RING AND COVER
FOR SLAB TYPE CATCH BASIN

STD. NO.	REV.
20.05B	5

CHARLOTTE

Plans Prepared By:

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NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER BRIAN ROBERT GOODSON

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DRG	APPROVED BY
512-07-026	JOB NO.

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

DRAINAGE DETAILS

SHEET 3G OF 29

DRAINAGE STRUCTURE TABLE

STRUCTURE NO.	STRUCTURE TYPE	STATION	OFFSET	GRATE/RIM ELEV.	INVERT IN	INVERT OUT	DEPTH	STRUCTURE STD. NO.	CASTING STD. NO.	GRATE TYPE	PIPE INFORMATION	SHEET NO.
1	CB	13+60.87 OWEN	15.9' RT	792.40	790.25 E 790.19 S	790.19	2.21	NCDOT STD. 840.01	NCDOT STD. 840.03	E	EXISTING RCP	4
–	FES	10+41.90 McGILL	21.2' RT	–	–	790.35	–	CLDS 20.22	–	–	20' OF 15" RCP @ 0.8%	4
–	FES	17+43.40 OWEN	17.7' RT	–	792.54	--	–	CLDS 20.22	–	–	25' OF 15" RCP @ 0.72% CLASS IV	5
–	FES	23+36.38 OWEN	18.6' RT	–	778.00	--	–	CLDS 20.22	–	–	26' OF 18" RCP @ 6.7%	6
2	DI	23+60.49 OWEN	28.6' RT	778.75	776.25	776.25	2.50	NCDOT STD. 840.15	NCDOT STD. 840.16	–	38' OF 18" RCP @ 6.2% CLASS IV	6
3	DI	23+98.59 OWEN	28.5' RT	776.40	773.90	773.90	2.50	NCDOT STD. 840.15	NCDOT STD. 840.16	–	17' OF 18" RCP @ 3.53%	6
4	MH	24+13.14 OWEN	19.8' RT	777.50	773.30	773.30	4.20	NCDOT STD. 840.51	NCDOT STD. 840.54	–	43' OF 18" RCP @ 0.7%	6
--	FES	28+56.76 OWEN	21.9' LT	—	749.15	—	—	CLDS 20.22	–	—	44' OF 24" RCP @ 7.61%	7
4A	MH	28+61.77 OWEN	23.6' RT	750.60	745.80 N 746.30 E 747.80 W	745.25	5.35	NCDOT STD. 840.51	NCDOT STD. 840.54	–	RETAIN EXISTING 18" RCP	7
–	FES	29+50.00 OWEN	18.3' RT	–	748.91	--	–	CLDS 20.22	–	–	14' OF 18" RCP @ 10.92%	7
–	FES	29+25.55 OWEN	19.7' RT	–	751.90	--	–	CLDS 20.22	–	–	62' OF 18" RCP @ 9.03%	7
–	FES	37+32.16 OWEN	18.0' RT	–	743.50	--	–	CLDS 20.22	–	–	34' OF 15" RCP @ 9.47%	8
5	MH	37+67.37 OWEN	23.0' RT	744.50	739.03 N 740.28 W 740.28 E	738.14	6.36	NCDOT STD. 840.32	NCDOT STD. 840.54		14' OF 30" RCP @ 1.00%	8
–	HW	37+65.64 OWEN	16.0' LT	–	741.23	--	–	NCDOT STD. 838.80	–	–	38' OF 30" RCP @ 5.79%	8
–	FES	37+82.85 OWEN	18.0' RT	–	742.20	--	–	CLDS 20.22	–	–	14' OF 15" RCP @ 13.70%	8
6A	DI	19+43.68 GRAY	17.9' RT	750.6	747.40	747.40	3.20	NCDOT STD. 840.15	NCDOT STD. 840.16	–	14' OF 15" RCP @ 0.71%	9
6	MH	19+59.74 GRAY	23.4' RT	751.45	747.30 N 746.55 W	746.55	4.90	NCDOT STD. 840.32	NCDOT STD. 840.54	–	18' OF 24" RCP @ 0.66%	9
6B	DI	19+67.77 GRAY	26.2' LT	750.20	–	746.81	3.39	NCDOT STD. 840.15	NCDOT STD. 840.16	–	48' OF 24" RCP @ 0.54%	9
–	FES	47+26.00 OWEN	17.0' RT	–	748.62	--	–	CLDS 20.22	–	–	63' OF 15" RCP @ 2.95% CLASS IV	10
7	DI	47+88.56 OWEN	17.8' RT	749.00	746.75	746.75	2.25	NCDOT STD. 840.15	NCDOT STD. 840.16	–	126' OF 15" RCP @ 0.52%	10
8	CB	49+09.80 OWEN	8.0' RT	749.65	746.10	746.10	3.55	NCDOT STD. 840.01	NCDOT STD. 840.03	E	53' OF 15" RCP @ 0.57%	10
9	CB	49+63.20 OWEN	9.0' RT	749.85	745.80	745.80	4.05	NCDOT STD. 840.01	NCDOT STD. 840.03	F	58' OF 15" RCP @ 1.19% CLASS IV	11
10	CB	14+85.87 ROCK	10.0' RT	676.80	672.35 663.20	663.20	13.60	NCDOT STD. 840.01	NCDOT STD. 840.03	E	EXISTING RCP	14
10A	MH	14+86.03 ROCK	37.0' RT	669.50	662.45	662.45	7.05	NCDOT STD. 840.51	NCDOT STD. 840.54	–	8' OF 36" RCP @ 3.13%	14
11	DCB	15+26.24 ROCK	10.0' RT	675.75	–	672.75	3.00	CLDS 20.03	NCDOT STD. 840.03	G	40' OF 15" RCP @ 1.02% CLASS IV	14

STRUCTURE NO.	STRUCTURE TYPE	STATION	OFFSET	GRATE/RIM ELEV.	INVERT IN	INVERT OUT	DEPTH	STRUCTURE STD. NO.	CASTING STD. NO.	GRATE TYPE	PIPE INFORMATION	SHEET NO.
12	CB	19+89.75 ROCK	10.0' LT	681.36	678.30	678.20	3.16	NCDOT STD. 840.01	NCDOT STD. 840.03	C	7' OF 15" RCP @ 2.43%	15
13	CB	19+89.75 ROCK	10.0' RT	682.00	–	678.70	3.30	NCDOT STD. 840.01	NCDOT STD. 840.03	F	22' OF 15" RCP @ 1.86%	15
–	FES	10+21.00 GRAY	16.5' RT	–	777.50	–	–	CLDS 20.22	--	–	67' OF 15" RCP @ 4.39% CLASS IV	18
19	DI	10+89.00 GRAY	14.0' RT	777.00	774.56	774.46	2.54	NCDOT STD. 840.15	NCDOT STD. 840.16	–	79' OF 15" RCP @ 4.89% CLASS IV	18
19A	DI	11+68.00 GRAY	14.0' RT	773.00	770.60	770.50	2.50	NCDOT STD. 840.15	NCDOT STD. 840.16	–	88' OF 15" RCP @ 4.26% CLASS IV	18
19B	DI	12+56.00 GRAY	17.5' RT	769.00	766.75	766.65	2.35	NCDOT STD. 840.15	NCDOT STD. 840.16	–	68' OF 15" RCP @ 2.09% CLASS IV	18
–	FES	18+50.00 GRAY	18.0' RT	–	750.80	–	–	CLDS 20.22	--	–	90' OF 15" RCP @ 3.78%	19
–	FES	12+60.00 KEMP	18.0' LT	–	772.00	–	–	CLDS 20.22	--	–	105' OF 15" RCP @ 3.21% CLASS IV	20
19C	DI	13+73.00 KEMP	18.0' LT	770.9	768.65	768.55	2.35	NCDOT STD. 840.15	NCDOT STD. 840.16	–	104' OF 15" RCP @ 3.86% CLASS IV	20
–	HW	17+40.87 KEMP	42.2' LT	–	746.75	–	–	NCDOT STD. 838.21	--	–	78' of 54" RCP @ 0.64%	21
20	DI	17+28.93 KEMP	17.5' LT	752.70	–	749.20	3.50	NCDOT STD. 840.15	NCDOT STD. 840.16	–	28' OF 15" RCP @ 4.04%	21
–	HW	17+74.86 KEMP	26.80 RT	–	–	746.25	–	NCDOT STD. 838.21	--	–	--	21
21A	DI	23+40.00 KEMP	18.0' LT	753.66	750.03	749.78	3.88	NCDOT STD. 840.15	NCDOT STD. 840.16	–	56' OF 15" RCP @5.86% O-ring gaskets required at all joints	22
	HW	24+21.40 KEMP	38.6' LT		748.87			NCDOT STD. 838.01			42' OF 42" RCP @ 0.74% CLASS IV	22
21	DI	23+95.00 KEMP	17.7' LT	753.64	–	750.30	3.34	NCDOT STD. 840.15	NCDOT STD. 840.16	–	54' OF 15" RCP @ 0.50%	22
21B	WYE	23+95.00 KEMP	9.1' LT	–	748.56 NW 749.56 W	748.56	–	SEE SHEET 3G	--	–	68' OF 42" RCP @ 0.74% CLASS IV	22
22	DI	24+00.00 KEMP	26.6' RT	753.25	–	750.00	3.25	NCDOT STD. 840.15	NCDOT STD. 840.16	–	54' OF 15" RCP @ 8.44%	22
22A	MH	23+41.20 KEMP	38.9' RT	754.07	748.06 NW 745.44 N 746.50 W	745.44	8.63	NCDOT STD. 840.52	NCDOT STD. 840.54	–	8' OF 48" RCP @ 0.50%	22
–	HW	23+42.86 KEMP	48.2' RT	–	–	745.40	–	NCDOT STD. 838.01	--	–	--	22
–	FES	11+55.00 KEMP (3)	26.3' LT	–	—	771.75	–	CLDS 20.22	--	–	12' OF 15" RCP @ 2.27%	24
24	CB	11+80.18 KEMP (3)	10.14' LT	774.50	771.50	771.50	3.00	NCDOT STD. 840.01	NCDOT STD. 840.03	G	34' OF 15" RCP @ 2.65%	24
25	CB	12+15.37 KEMP (3)	10.87' LT	772.72	770.60	769.28	3.44	NCDOT STD. 840.01	NCDOT STD. 840.03	G	EXIST. SYSTEM	24
–	HW	6+40.22 UT1	0.0'	–	738.08	737.15	–	SEE SHEETS S1 & S2	--	–	57' OF 48" RCP @ 1.63%	25
–	HW	6+96.40 UT1	0.0'	–	–	737.15	–	SEE SHEETS S1 & S2	--	–	--	27

DRAINAGE ITEM TOTALS

SHEET NO.	STRUCTURE STD. #										CASTING STD. #			GRATE TYPE			PIPE (LINEAR FEET)											COMMENTS
	838.01	838.21	838.80	840.01	840.15	840.51	840.52	20.03	20.22	20.05B	840.03	840.16	840.54	E	F	G	15" RCP	15" RCP CLASS IV	18" RCP	18" RCP CLASS IV	24" RCP	30" RCP	36" RCP	42" RCP CLASS IV	48" RCP	54" RCP	PIPE REMOVAL	
4				1					1		1			1			20											
5									3									44									20	
6					2	1			6			2	1					50	86	38							37	
7						1			5				1					50	74		44						40	
8	1		1			1			8				1				52	75				52						
9					2	1			3			2	1				41	136			66							
10				1	1				1		1	1		1			162	64										
11				1					1		1				1		12	60										
12																												
13																												
14	1			1		1		1			3		1	1		2		40					9				28	
15				2							2				1	1	30										30	
16																												
17																												
18					3				3			3						302										
19									4								67	87									37	
20					1				2			1						209									25	
21		2			1				11	2		1					28	114		32						78	168	
22	1				3		1		2	4			1				164	24						110	8		184	
23									4									98									34	
24				2					3		2					2	35	33									27	
27																									57			
TOTALS	3	2	1	8	13	5	1	1	57	8	10	10	6	3	2	5	811	1386	160	70	110	52	9	110	65	78	630	

KEY: CLDS - CHARLOTTE LAND DEVELOPMENT STANDARDS
NCDOT - NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS

NOTE: ALL PIPES ARE CLASS III UNLESS OTHERWISE NOTED.

CHARLOTTE

Plans Prepared By:
ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER BRIAN ROBERT GOODSON

NTS SCALE
17-NOV-2015 15:00 G:\Trans\Clot\Neighborhood\NewellSouth\Sheets\Misc\drn_summary.dgn CAD FILE PATH
JFO CHECKED BY
NOVEMBER 2015 DATE
512-01-026 JOB NO.
MPB PREPARED BY
DRG APPROVED BY

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

STORM DRAINAGE STRUCTURE SUMMARY

SHEET 3H OF 29

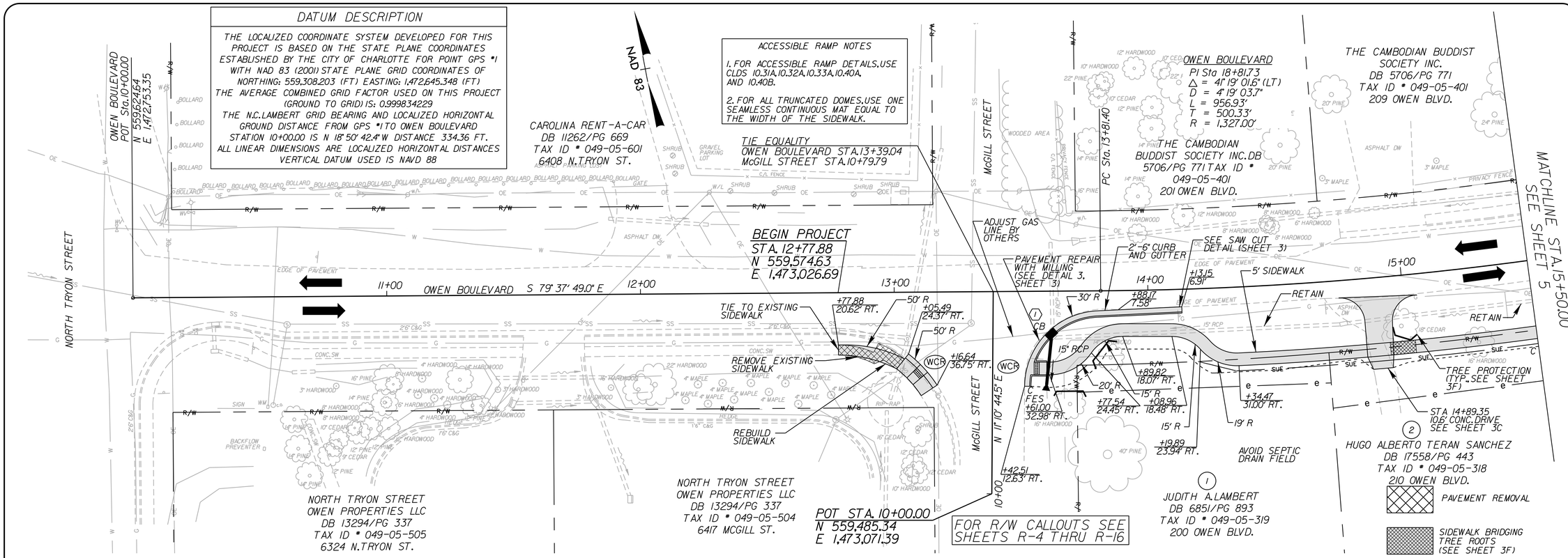
DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY THE CITY OF CHARLOTTE FOR POINT GPS #1 WITH NAD 83 (2001) STATE PLANE GRID COORDINATES OF NORTHING: 559,308.203 (FT) EASTING: 1,472,645.348 (FT)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999834229
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM GPS #1 TO OWEN BOULEVARD STATION 10+00.00 IS N 18° 50' 42.4" W DISTANCE 334.36 FT.
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, AND 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARF

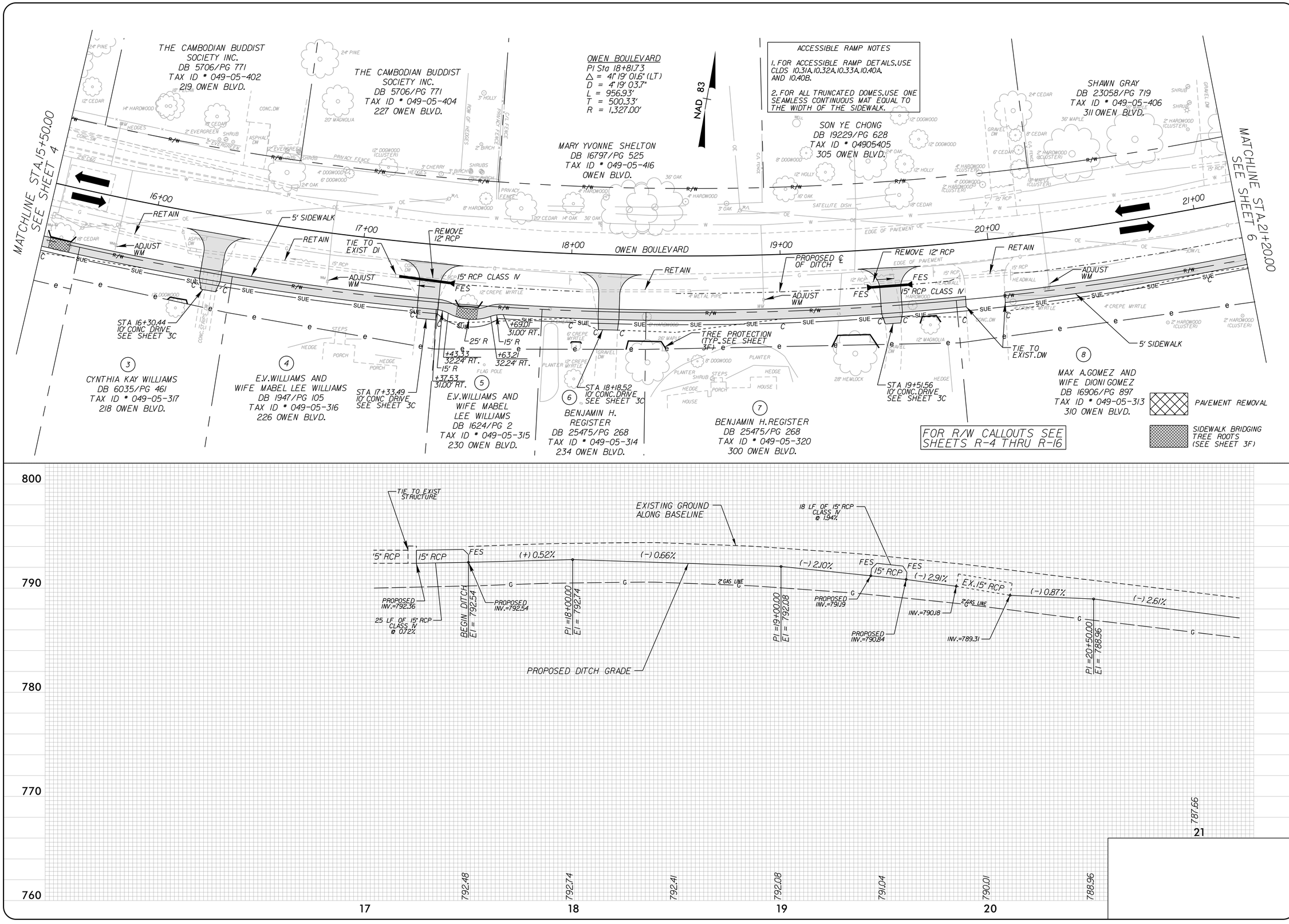
NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

512-07-026 JOB NO.	1"=20' SCALE
17-NOV-2015 15:24 g:\Trans\Ucdot\Neighborhood\NewellSouth\Sheets\Plan\NEWELL_SOUTH_P360.dgn CAD FILE PATH	
MPB PREPARED BY	CJM CHECKED BY
VTS APPROVED BY	NOVEMBER 2015 DATE

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

OWEN BOULEVARD STATION 10+00. TO 15+50.00

SHEET 4 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER ZEBIN ROBERT GOODSON

1=20' SCALE	C.M. CHECKED BY
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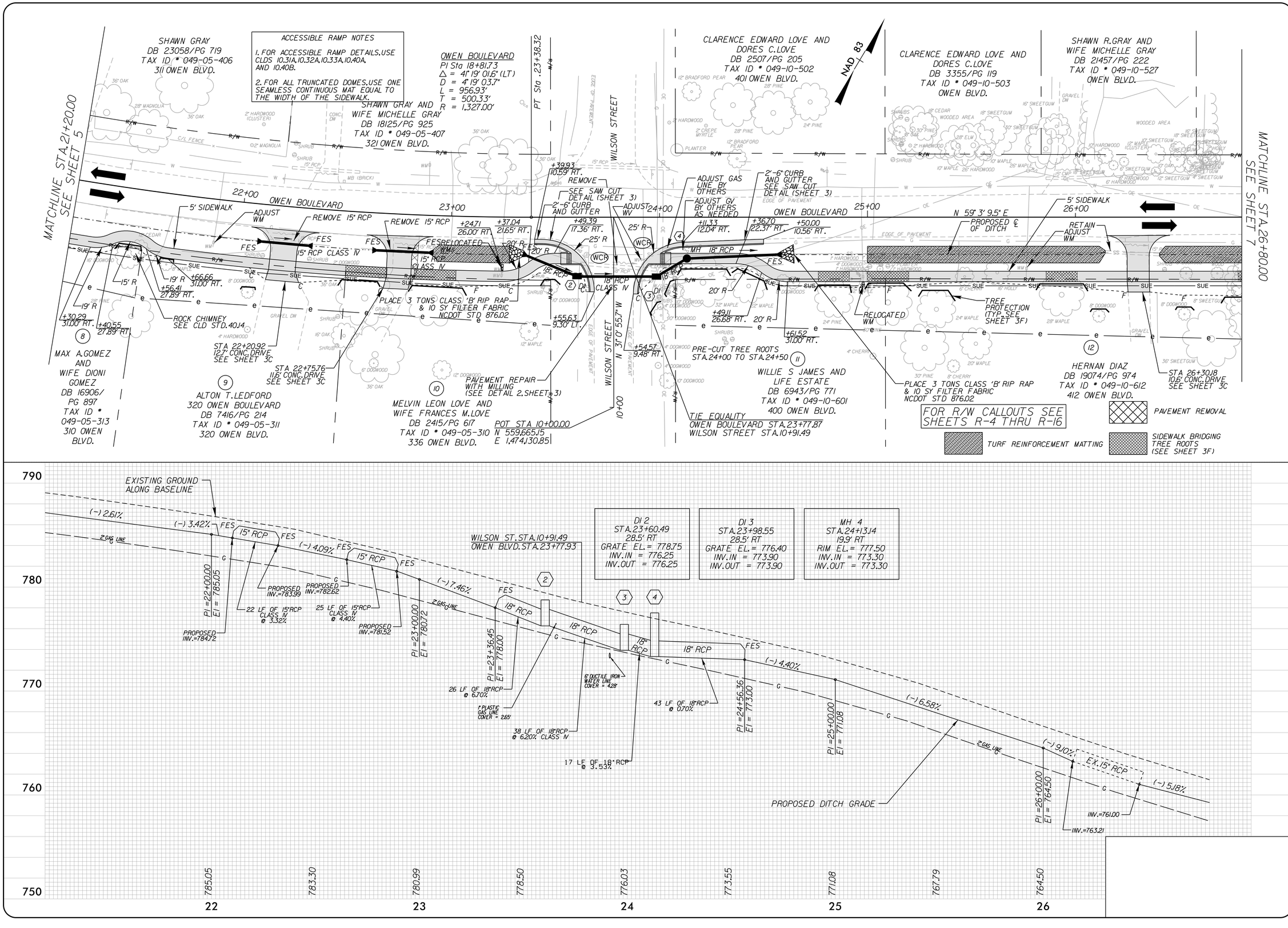
512-07-026 JOB NO.	MPB PREPARED BY
	VTS APPROVED BY

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

OWEN BOULEVARD STATION 15+50.00 TO 21+20.00

SHEET 5 OF 29



CHARLOTTE

Plans Prepared By:

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CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

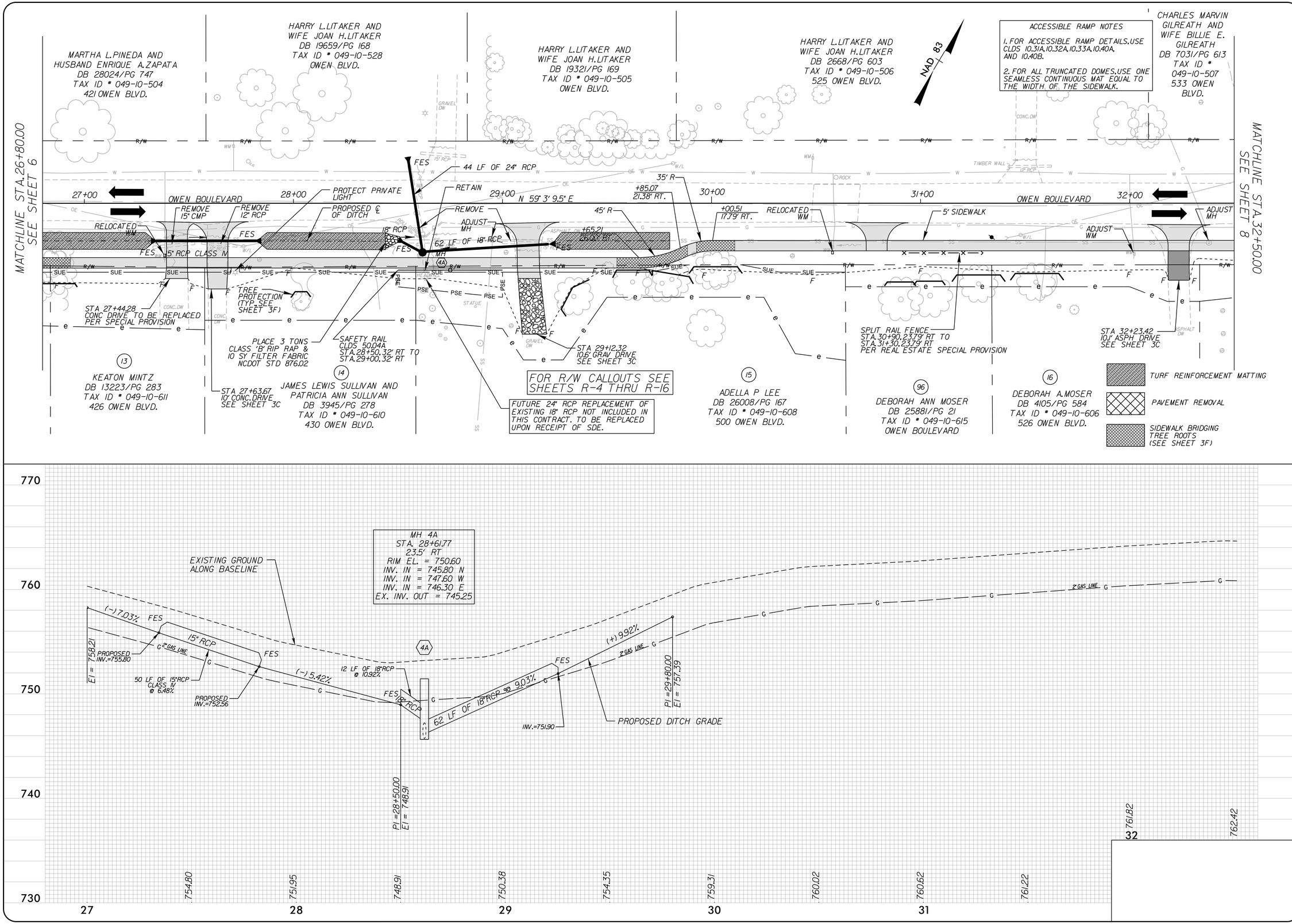
NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER ZEBIN ROBERT GOODSON

1"=20' SCALE	C:\Users\Cory.Mellinger.hood\Newell South\Sheets\Plans\NEWELL-SOUTH_PS06.dgn 17-NOV-2015 15:24 CAD FILE: PA114
CJM CHECKED BY	NOVEMBER 2015 DATE
512-07-026 JOB NO.	
MPB PREPARED BY	VTS APPROVED BY

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

OWEN BOULEVARD STATION 21+20.00 TO 26+80.00

SHEET 6 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

1"=20' SCALE	
17-NOV-2015 15:24 CAD FILE PATH	C:\Users\Coor\Neighborhood\NewellSouth\Sheets\Plan\NEWELL_SOUTH_PS07.dgn
CJM CHECKED BY	NOVEMBER 2015 DATE
MPB PREPARED BY	VTS APPROVED BY
512-01-026 JOB NO.	

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

OWEN BOULEVARD STATION 26+80.00 TO 32+50.00

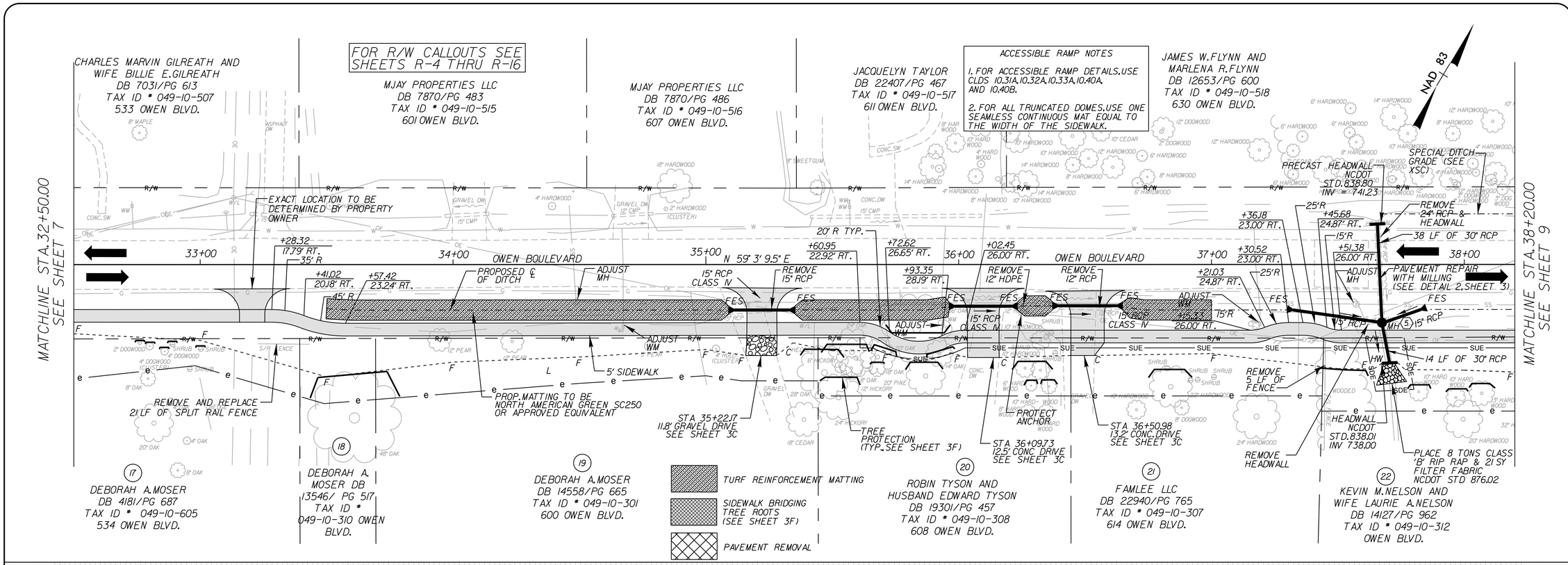
SHEET 7 OF 29

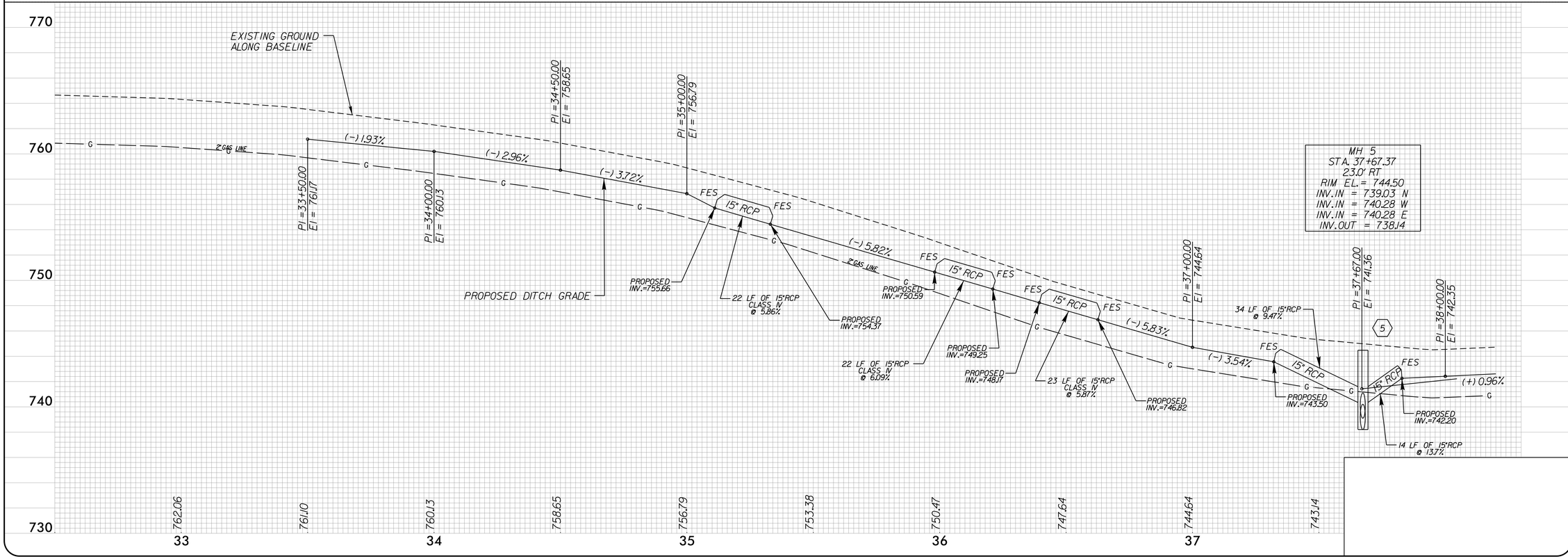
FOR R/W CALLOUTS SEE SHEETS R-4 THRU R-16

ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, AND 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.





CHARLOTTE

Plans Prepared By:

ATKINS

5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER ZEBIN ROBERT GOODSON

1"=20' SCALE

17-NOV-2015 15:24
A:\Trans\Cast\Neighborhood\NewellSouth\Sheets\Plan\NEWELL-SOUTH_PS08.dgn
CAD FILE: PA114

CJM CHECKED BY

NOVEMBER 2015 DATE

512-07-026 JOB NO.

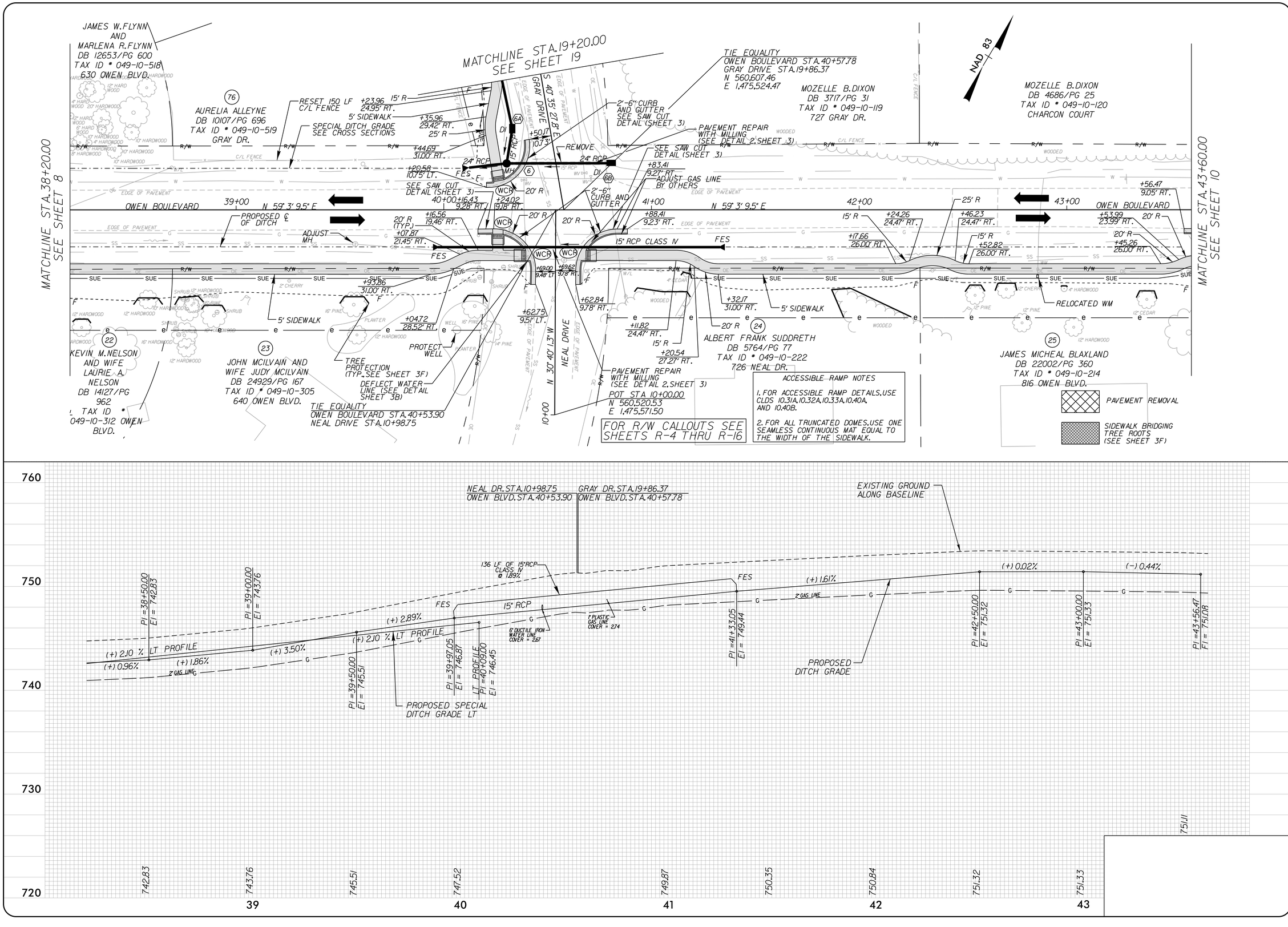
MPB PREPARED BY

VTS APPROVED BY

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

OWEN BOULEVARD STATION 32+50.00 TO 38+20.00

SHEET 8 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

SEAL 28235 NORTH CAROLINA PROFESSIONAL ENGINEER VIRGINIA T. SCHANK

SEAL 041957 NORTH CAROLINA PROFESSIONAL ENGINEER JOHN ROBERT GOODSON

1"=20' SCALE	
17-NOV-2015 15:24 a:\Trans\Cart\Neighborhood\NewellSouth\Sheets\Plan\NEWELL-SOUTH_PS09.dgn CAD FILE: PA114	C.J.M. CHECKED BY
512-07-026 JOB NO.	NOVEMBER 2015 DATE
MPB PREPARED BY	
VTS APPROVED BY	

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

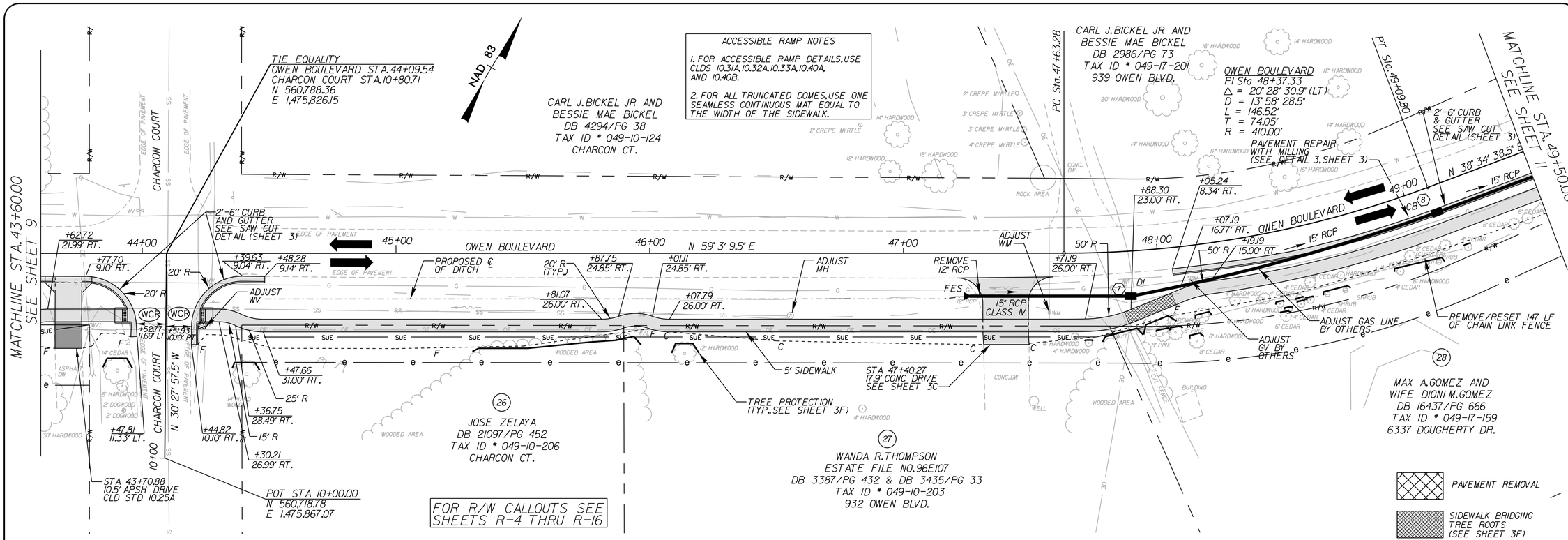
OWEN BOULEVARD STATION 38+20.00 TO 43+60.00

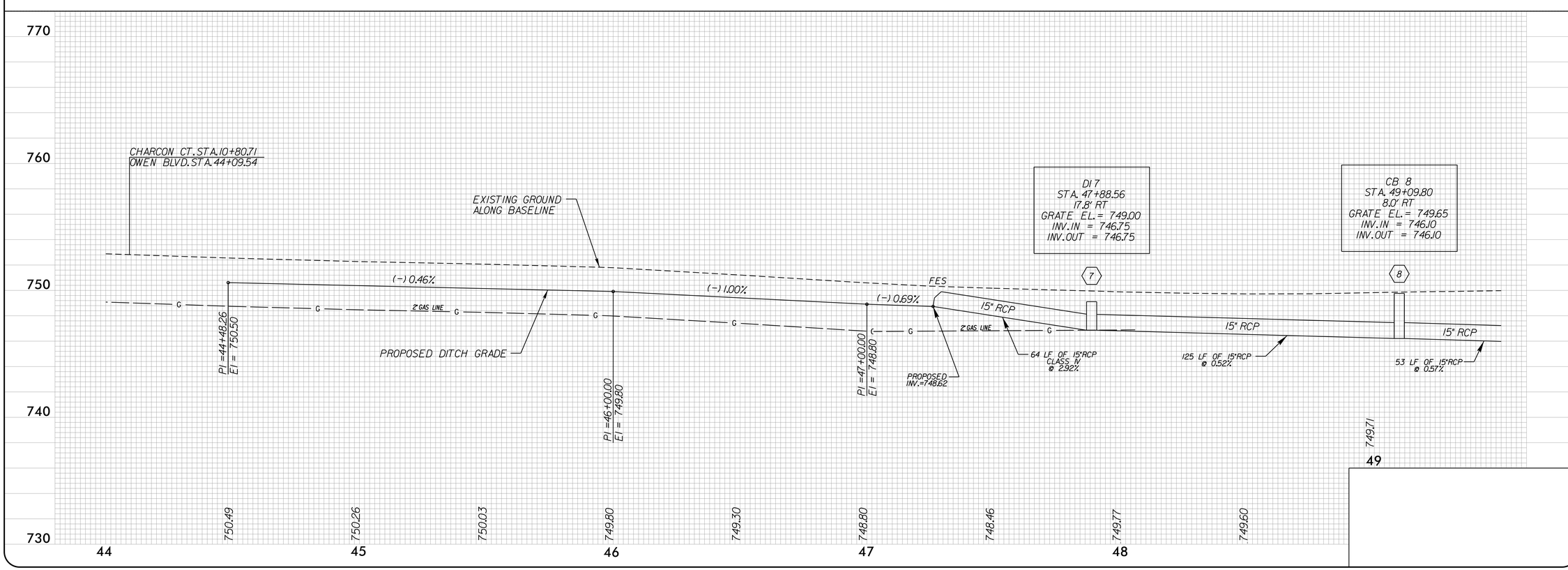
SHEET 9 OF 29

ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, AND 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.





CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

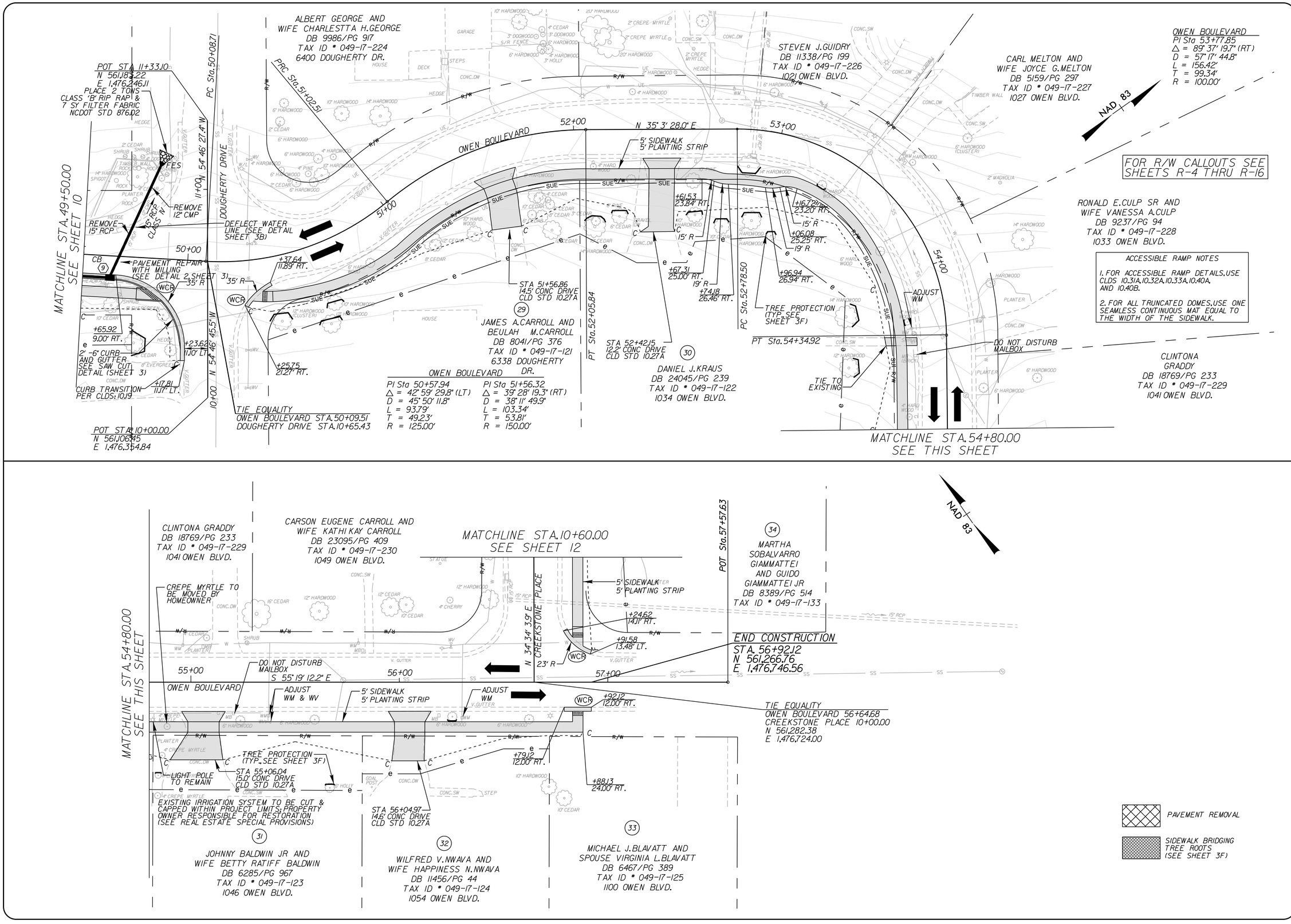
NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

1"=20' SCALE	
17-NOV-2015 15:24 CAD FILE PATH	G:\Trans\Con\Neighborhood\NewellSouth\Sheets\Plan\NEWELL_SOUTH_P580.dgn
CJM CHECKED BY	NOVEMBER 2015 DATE
MPB PREPARED BY	VTS APPROVED BY
512-01-026 JOB NO.	

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

OWEN BOULEVARD STATION 43+60.00 TO 49+50.00

SHEET 10 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DAN W. ROBERT GOODISON

1=20' SCALE	C.M. CHECKED BY
11-NOV-2015 15:24 CAD FILE: PA114	NOVEMBER 2015 DATE
512-07-026 JOB NO.	SEM PREPARED BY
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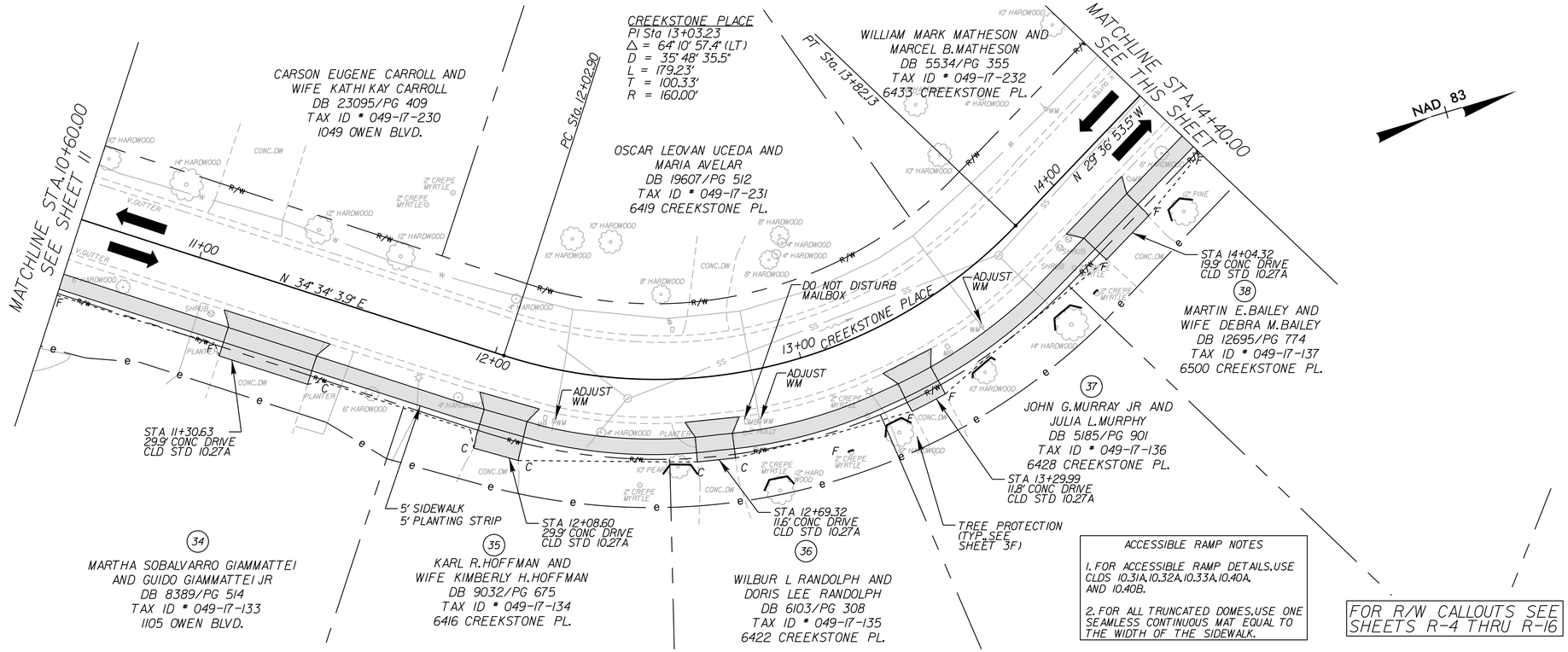
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

OWEN BOULEVARD STATION 49+50.00 TO 56+92.12

SHEET 11 OF 29

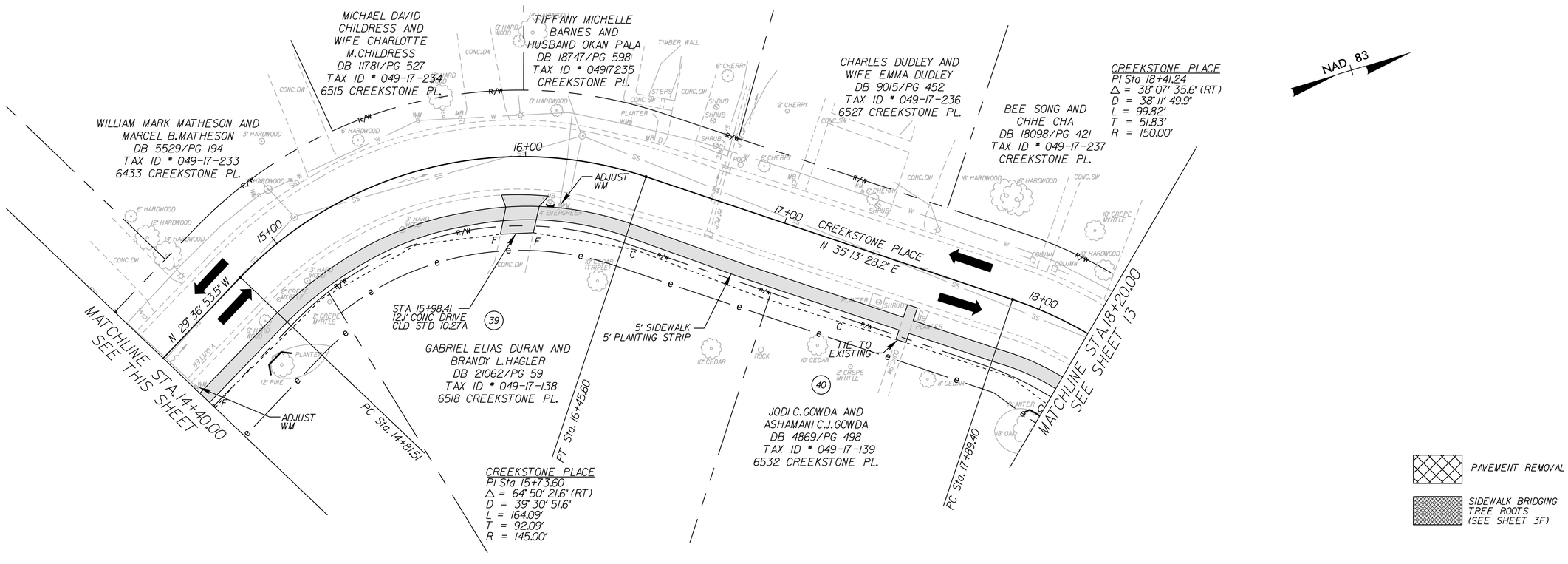


ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, AND 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.

FOR R/W CALLOUTS SEE SHEETS R-4 THRU R-16



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DAN ROBERT GOODISON

1"=20' SCALE	
512-07-026 JOB NO.	17-NOV-2015 15:24 c:\Users\Ceor\Neighborhood\NewellSouth\Sheets\Plan\NEWELL-SOUTH_PSH12.dgn CAD FILE PATH
CJM CHECKED BY	SEM PREPARED BY
NOVEMBER 2015 DATE	VTS APPROVED BY

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

CREEKSTONE PLACE STATION 10+60.00 TO 18+20.00

SHEET 12 OF 29

END CONSTRUCTION
TIE EQUALITY
CREEKSTONE PLACE 18+89.22
BLUE ROCK DRIVE 10+81.98
N 562,035.65
E 1,476,967.46

POT Sta. 10+00.00
S 7° 40' 3.0" W
PC Sta. 10+18.84

JOSEPH L.McDOWELL AND
WIFE BRENDA B.McDOWELL
DB 8065/PG 804
TAX ID # 049-17-507
609 BLUE ROCK DR.

BLUE ROCK DRIVE
PI Sta 11+15.86
Δ = 59° 25' 42.6" (LT)
D = 3° 42' 12.2"
L = 176.33'
T = 97.02'
R = 170.00'

FOR R/W CALLOUTS SEE
SHEETS R-4 THRU R-16

JENS C.MUELLER AND
WIFE CARA C.MUELLER
DB 15608/PG 41
TAX ID # 049-17-508
619 BLUE ROCK DR.

ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, AND 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.

BLUE ROCK DRIVE
PI Sta 16+10.24
Δ = 26° 51' 28.9" (LT)
D = 10° 30' 46.8"
L = 255.47'
T = 130.13'
R = 545.00'

BRIAN L.HOLLINGWORTH
DB 21333/PG 328
TAX ID # 049-17-251
701 BLUE ROCK DR.

NAD 83

PT Sta. 11+95.17
PC Sta. 14+80.01
11+00
12+00
13+00
14+00
15+00
BLUE ROCK DRIVE
S 51° 45' 39.6" E

30' R
+07.59
19.32' RT.
+51.38
15.90' RT
WCR
ADJUST WM
5' SIDEWALK
5' PLANTING STRIP
RELOCATED WM
RELOCATED WM
5.5' SIDEWALK
4' PLANTING STRIP
+13.62
15.12' RT.
+47.69
30.65' RT.
23' R
23' R
+55.00
17.59' RT.
+83.66
18.03' RT.
ADJUST WV
MATCHLINE STA.16+00.00
SEE THIS SHEET
MATCHLINE STA.18+20.00
SEE SHEET 12

STA 11+41.95
22.2' CONC DRIVE
CLD STD 10.27A

STA 12+73.02
15.4' CONC DRIVE
CLD STD 10.27A

TREE PROTECTION
(TYP. SEE SHEET 3F)

STA 13+58.74
12.7' CONC DRIVE
CLD STD 10.27A

+23.80
28.52' RT.

BEGIN
RETAINING
WALL
STA.15+83

+76.77
24.79' RT.

20' R
(TYP.)

+67.55
26.47' RT.

STONEHILL COURT

(40)
JODI C.GOWDA AND
ASHAMANI C.J.GOWDA
DB 4869/PG 498
TAX ID # 049-17-139
6532 CREEKSTONE PL.

(41)
ETHEL G.KATAPODIS AND
ARISTIDIS KATAPODIS
DB 17750/PG 660
TAX ID # 049-17-140
616 BLUE ROCK DR.

(42)
BERNICE M.BRADLEY
DB 10437/PG 506
TAX ID # 049-17-141
626 BLUE ROCK DR.

(43)
ELMER J.DRYDEN AND
DELORIS P.DRYDEN
DB 6188/PG 517
TAX ID # 049-17-142
6525 STONEHILL CT.

BILLY C.FLEMING AND
WIFE MARGIE J.FLEMING
DB 7565/PG 231
TAX ID # 049-17-252
711 BLUE ROCK DR.

PT Sta. 17+35.59

BLUE ROCK DRIVE

PI Sta 19+82.82	PI Sta 20+56.43
Δ = 25° 21' 36.9" (RT)	Δ = 23° 02' 38.1" (LT)
D = 57° 17' 44.8"	D = 57° 17' 44.8"
L = 44.26'	L = 40.22'
T = 22.50'	T = 20.39'
R = 100.00'	R = 100.00'

(51)
TIMOTHY NEAL WALLACE
DB 12852/PG 919
TAX ID # 049-17-253
ROCKLAND DR.

NAD 83

MATCHLINE STA.16+00.00
SEE THIS SHEET

END RETAINING
WALL STA.16+33

+90.01
18.74' RT.
+85.37
18.14' RT.
17+00
+99.96
18.73' RT.
20' R
(TYP.)
+04.60
18.12' RT.
BLUE ROCK DRIVE
18+00
S 78° 37' 08.5" E
19+00
6' SIDEWALK
4' PLANTING STRIP
20+00
S 53° 15' 31.6" E
PC Sta. 20+36.04

STA 16+51.23
30.5' CONC DRIVE
CLD STD 10.27A

(44)
5' SIDEWALK
4' PLANTING STRIP

LARRY D.CREED AND
WIFE GRACE L.CREED
DB 6430/PG 565
TAX ID # 049-17-149
6522 STONEHILL CT.

DISASSEMBLE ROCK PLANTER
AND STOCK PILE ROCKS PER
PROPERTY OWNER'S INSTRUCTION

BEGIN RETAINING
WALL
STA.17+35

(45)
HILDEGARDE AUSTIN RICCIARDI AND JOHN RICCIARDI
DB 24174/PG 700
TAX ID # 049-17-150
7229 ROCKLAND DR.

* SEE REAL ESTATE SPECIAL PROVISIONS
FOR INSTRUCTIONS WITH REGARDS TO CONSTRUCTION ACTIVITIES

PC Sta. 19+60.32
PT Sta. 20+04.58
PT Sta. 20+76.26
MATCHLINE STA.20+80.00
SEE SHEET 15

PAVEMENT REMOVAL

SIDEWALK BRIDGING
TREE ROOTS
(SEE SHEET 3F)

CHARLOTTE

Plans Prepared By:
ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DAN ROBERT GOODISON

1=20' SCALE	
17-NOV-2015 15:24 C:\Users\Ceart\Neighborhood\NewellSouth\Sheets\Plan\NEWELL-SOUTH_PSH13.dgn CAD FILE PA1H	
C.J.M. CHECKED BY	
NOVEMBER 2015 DATE	
512-07-026 JOB NO.	
SEM PREPARED BY	
VTS APPROVED BY	

NEWELL-SOUTH
NEIGHBORHOOD
IMPROVEMENT PROJECT

BLUE ROCK DRIVE
STATION 10+00.00 TO
20+80.00

SHEET 13 OF 29

FOR R/W CALLOUTS SEE SHEETS R-4 THRU R-16

STEPHANIE MILLER
DB 11048/PG 432
TAX ID # 049-17-154
7045 ROCKLAND DR.

TIE EQUALITY
ROCKLAND DRIVE 12+13.17
AUTUMNWOOD LANE 10+00.00
N 560,796.36
E 1,477,569.58

ROCKLAND DRIVE

PI Sta 12+88.17
Δ = 40° 47' 25.2" (LT)
D = 31° 49' 51.6"
L = 128.15'
T = 66.92'
R = 185.00'

PI Sta 14+21.57
Δ = 28° 45' 58.5" (RT)
D = 28° 38' 52.4"
L = 100.41'
T = 51.29'
R = 200.00'

NAD 83

ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, AND 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.

PC Sta. 12+21.25

PT Sta. 13+49.40

CONSTRUCTION LIMIT
STA. 12+37.35

PROPOSED CMU WATER MAIN PROJECT NO. 538-07-051 SEE SHT. W1 FOR ADDITIONAL INFORMATION

STA. 14+65.00, 10' RT.
CURB TRANSITION
SEE CLDS DETAIL 10.19

RETAIN

+86.44
14.50' RT.

PAVEMENT REPAIR WITH MILLING (SEE DETAIL 3, SHEET 3)

2'-6" CURB & GUTTER
SEE SAW CUT DETAIL (SHEET 3)

+75.00
10.00' RT.

HEADWALL
NCDOT STD. 838.01

ADJUST GAS LINE BY OTHERS

15" RCP
CLASS IV

ROCKLAND DRIVE
N 26° 44' 12.9" E

CB 10

DCB 11

193' R

N 2° 01' 45.6" W

+56.56
22.01' RT.

+44.57
26.24' RT.

+40.71
20.85' RT.

212' R

ADJUST WV

32.5' R

WCR

N 66° 15' 30.9" W
AUTUMNWOOD LANE

+43.30
12.73' LT.

POT Sta. 10+67.06

8' SIDEWALK

BEGIN RETAINING WALL CLDS 10.39
STA. 14+00.32' RT.

BEGIN SAFETY RAIL CLDS 50.04A
STA. 13+70.28, 31.33' RT.
END SAFETY RAIL
STA. 15+07.43, 23.62' RT.

PC Sta. 13+70.28

PT Sta. 14+70.69

10A
MH

INV. 662.20

END RETAINING WALL CLDS 10.39
STA. 15+00.30' RT.

STA. 15+13.25
10' APSH DRIVE
CLD STD 10.25A

REMOVE

36" RCP

PLACE 11 TONS CLASS 'B' RIP RAP & 28 SY FILTER FABRIC
NCDOT STD 876.02

TREE PROTECTION (TYP., SEE SHEET 3F)

10' CONC DRIVE
CLD STD 10.25A
(LOCATION TO BE DETERMINED BY PROPERTY OWNER)

8' SIDEWALK
2' PLANTING STRIP

PC Sta. 16+46.83

MATCHLINE STA. 16+50.00
SEE SHEET 15

11+00 12+00 13+00 14+00 15+00 16+00

JEFFREY L. MURPHY AND HEATHER D. FREEMAN
DB 22571/PG 500
TAX ID # 049-16-203
AUTUMNWOOD LN.

46 TERRY F. KEITH AND WIFE AMY K. KEITH
DB 8624/PG 498
TAX ID # 049-16-106
801 AUTUMNWOOD LN.

47 ALTON T. LEDFORD AND WIFE MEERA S. RAO
DB 11240/PG 280
TAX ID # 049-16-103
7124 ROCKLAND DR.

48 ALTON T. LEDFORD AND WIFE MEERA S. RAO
DB 17110/PG 399
TAX ID # 049-16-159
7212 ROCKLAND DR.

PAVEMENT REMOVAL

SIDEWALK BRIDGING TREE ROOTS (SEE SHEET 3F)

690 680 670 660

MH 10A
STA. 14+86.03
37.0' RT
GRATE EL. = 669.50
INV. IN = 662.45
INV. OUT = 662.45

CB 10
STA. 14+85.87
10.0' RT
GRATE EL. = 676.80
INV. IN = 672.35
INV. OUT = 663.20

DCB 11
STA. 15+25.24
10.0' RT
GRATE EL. = 675.75
INV. OUT = 672.75

EXISTING GROUND ALONG BASELINE

2" GAS LINE

15" RCP

40 LF OF 15" RCP CLASS IV @ 1.02%

14 15 16

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARF

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT DODDS

HORZ: 1"=20' VERT: 1"=10'
SCALE

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CAD FILE PATH

CJM
CHECKED BY

OCTOBER 2014
DATE

512-07-026
JOB NO.

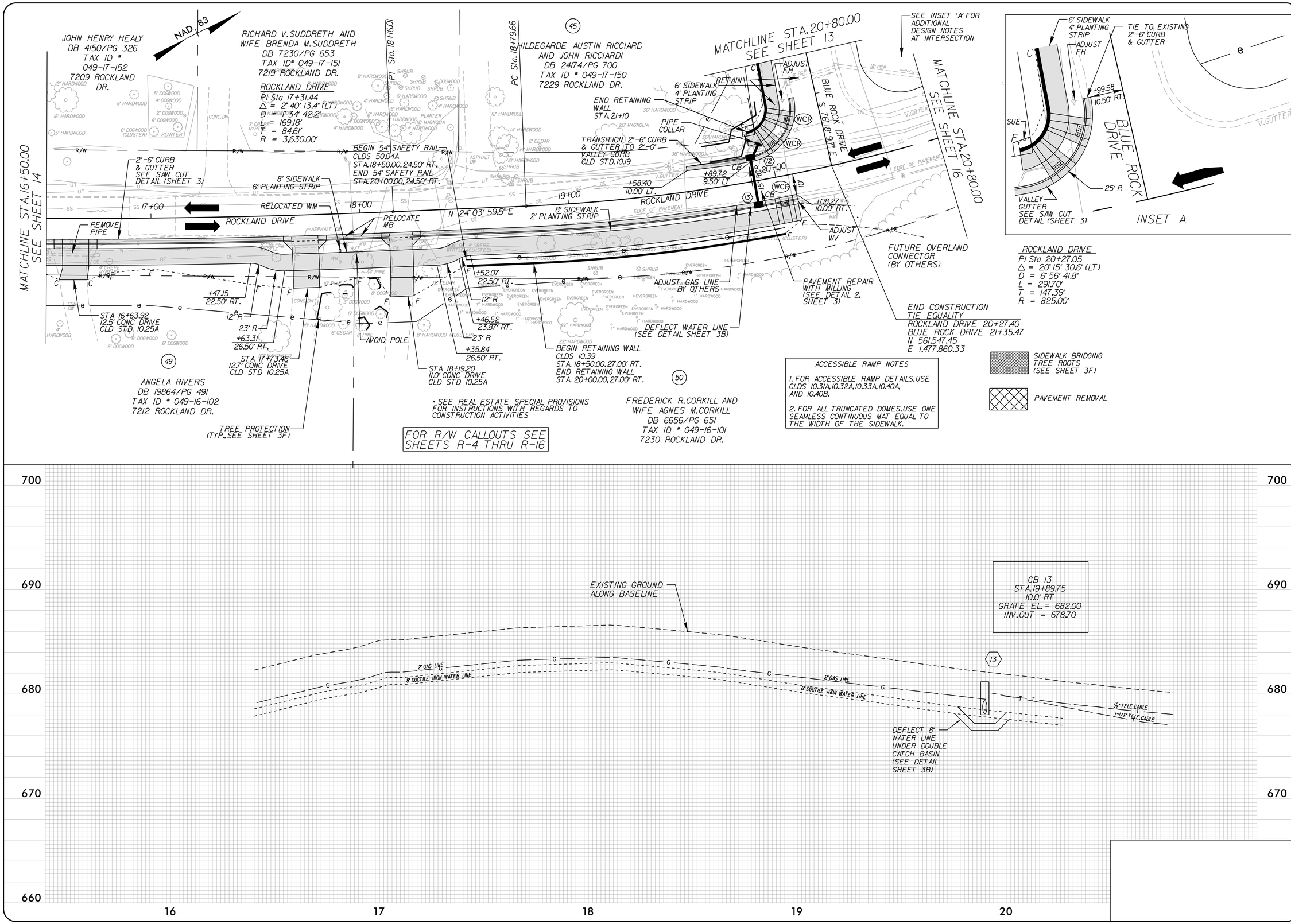
SEM
PREPARED BY

VTS
APPROVED BY

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

ROCKLAND DRIVE
STATION 11+00.00 TO STATION 16+50.00

SHEET 14 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS

5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

1"=20' SCALE

512-01-026 JOB NO.

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MPB PREPARED BY

VTS APPROVED BY

CJM CHECKED BY

NOVEMBER 2015 DATE

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

ROCKLAND DRIVE STATION 16+50.00 TO STATION 20+80.00

SHEET 15 OF 29

NOT IN CONTRACT

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.

NAD 83

(51) TIMOTHY NEAL WALLACE
DB 12852/ PG 919
TAX ID # 049-17-253
ROCKLAND DR.

(52) TIMOTHY NEAL WALLACE
DB 11608/PG 345
TAX ID # 049-17-254
7401 ROCKLAND DR.

MECKLENBURG COUNTY
DB 18543/PG 614
TAX ID # 049-20-101

MATCHLINE STA. 20+80.00 SEE SHEET 15

MATCHLINE STA. 25+60.00 SEE SHEET 17

BEGIN RETAINING WALL STA. 21+82

PT Sta. 21+71.36

PC Sta. 22+57.36

PT Sta. 23+67.89

PC Sta. 24+85.37

PT Sta. 25+48.30

+11.19 19.50' LT.
+15.63 19.01' LT.
+57.69 19.92' LT.
+20.29 18.50' LT.
+49.05 18.50' LT.
+75.68 19.50' RT.
+81.91 20.50' RT.

21+00
22+00
23+00
24+00
25+00

N 3° 48' 29.0" E

N 15° 25' 37.5" E

6' SIDEWALK

5' SIDEWALK (6" THICK) STA. 21+11 TO STA. 21+58

20' R (TYP.)

RETAIN

PAVEMENT REPAIR WITH MILLING (SEE DETAIL 3, SHEET 3)

6.5' SIDEWALK 8" PLANTING STRIP

PLUG AND ABANDON

CB (16) 24+00

2'-6" CURB & GUTTER SEE SAW CUT DETAIL (SHEET 3)

ROCKLAND DRIVE

WOODED AREA

ROCKLAND DRIVE
PI Sta 20+27.05
Δ = 20° 15' 30.6" (LT)
D = 6° 56' 41.8"
L = 291.70'
T = 147.39'
R = 825.00'

PI Sta 23+12.82
Δ = 11° 37' 08.6" (RT)
D = 10° 30' 46.8"
L = 110.52'
T = 55.45'
R = 545.00'

ROCKLAND DRIVE
PI Sta 25+16.85
Δ = 3° 26' 02.7" (LT)
D = 5° 27' 24.3"
L = 62.93'
T = 31.48'
R = 1,050.00'

PAVEMENT REMOVAL

SIDEWALK BRIDGING TREE ROOTS (SEE SHEET 3F)

DCB 15
STA. 21+01.22
11.0' LT
GRATE EL. = 679.84
INV. IN = 671.20
INV. OUT = 671.10

CB 16
STA. 23+92.47
11.0' LT
GRATE EL. = 678.75
INV. OUT = 675.30

EXISTING GROUND ALONG BASELINE

1.5" TELE. CABLE

1/4" TELE. CABLE

680
670
660
650

679.84 680.90 682.00 682.63 681.83 680.53 678.70 676.42 673.72 669.32

21 22 23 24 25

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

1"=20' SCALE	
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VTS APPROVED BY	

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

ROCKLAND DRIVE STATION 20+80.00 TO 25+60.00

SHEET 16 OF 29

NOT IN CONTRACT

NAD 83

PAVEMENT REMOVAL

SIDEWALK BRIDGING TREE ROOTS (SEE SHEET 3F)

ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, AND 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.

MATCHLINE STA. 25+60.00 SEE SHEET 16

END RETAINING WALL STA. 25+75.00

STA 25+92.68 15' APSH DRIVE CLD STD 10.25A

PEDESTAL TO BE RELOCATED BY OTHERS

5' SIDEWALK 8' PLANTING STRIP

BEGIN RETAINING WALL STA. 27+25

PC Sta. 25+68.48

PT Sta. 27+24.56

PC Sta. 27+69.37

D = 14° 19' 26.2"
L = 156.07'
T = 79.04'
R = 400.00'

D = 17° 54' 17.8"
L = 140.59'
T = 71.45'
R = 320.00'

D = 2° 39' 53.7"
L = 89.84'
T = 44.93'
R = 2,150.00'

(53)
KAO VANG AND WIFE HOUA VANG
DB 18084/PG 879
TAX ID # 049-17-255
724 W. ROCKY RIVER RD.

PT Sta. 29+09.96

PC Sta. 29+46.37

PT Sta. 30+36.22

N 11° 59' 34.8" E

N 3° 20' 55.9" E

N 9° 10' 32.7" E

N 6° 46' 53.5" E

26+00 27+00 28+00 29+00 30+00 31+00

RETAIN

MECKLENBURG COUNTY
DB 18543/PG 614
TAX ID # 049-20-101

6.5' SIDEWALK 8' PLANTING STRIP

END RETAINING WALL STA. 29+50

STA 30+29.80 13.2' CONC DRIVE CLD STD 10.25A

TREE PROTECTION (TYP. SEE SHEET 3F)

PEDESTAL TO BE RELOCATED BY OTHERS

5' SIDEWALK 8' PLANTING STRIP

ROCKY RIVER ROAD

ROCKLAND DRIVE

30' R

2'-6" CURB AND GUTTER SEE SAW CUT DETAIL (SHEET 3)

PAVEMENT REPAIR WITH MILLING (SEE DETAIL 2, SHEET 3)

DEFLECT WATER LINE (SEE DETAIL SHEET 3B)

PAVEMENT REPAIR WITH MILLING (SEE DETAIL 3, SHEET 3)

ADJUST GAS LINE BY OTHERS

SEE NOTE, SHEET U-9

FOR R/W CALLOUTS SEE SHEETS R-4 THRU R-16

END CONSTRUCTION
STA. 31+66.88
N 562,642.02
E 1,478,128.57

670 660 650 640 630

26 27 28 29 30

662.81 655.44 650.12 646.69 644.12 642.37 641.24 640.24 639.44

EXISTING GROUND ALONG BASELINE

CB 17
STA. 30+86.50
11.0' LT
GRATE EL. = 639.25
INV. IN = 635.50
INV. OUT = 635.50

CB 18
STA. 30+43.57
11.0' LT
GRATE EL. = 638.70
INV. OUT = 635.70

38 LF OF 15" RCP CLASS IV @ 0.50%

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

1"=20' SCALE

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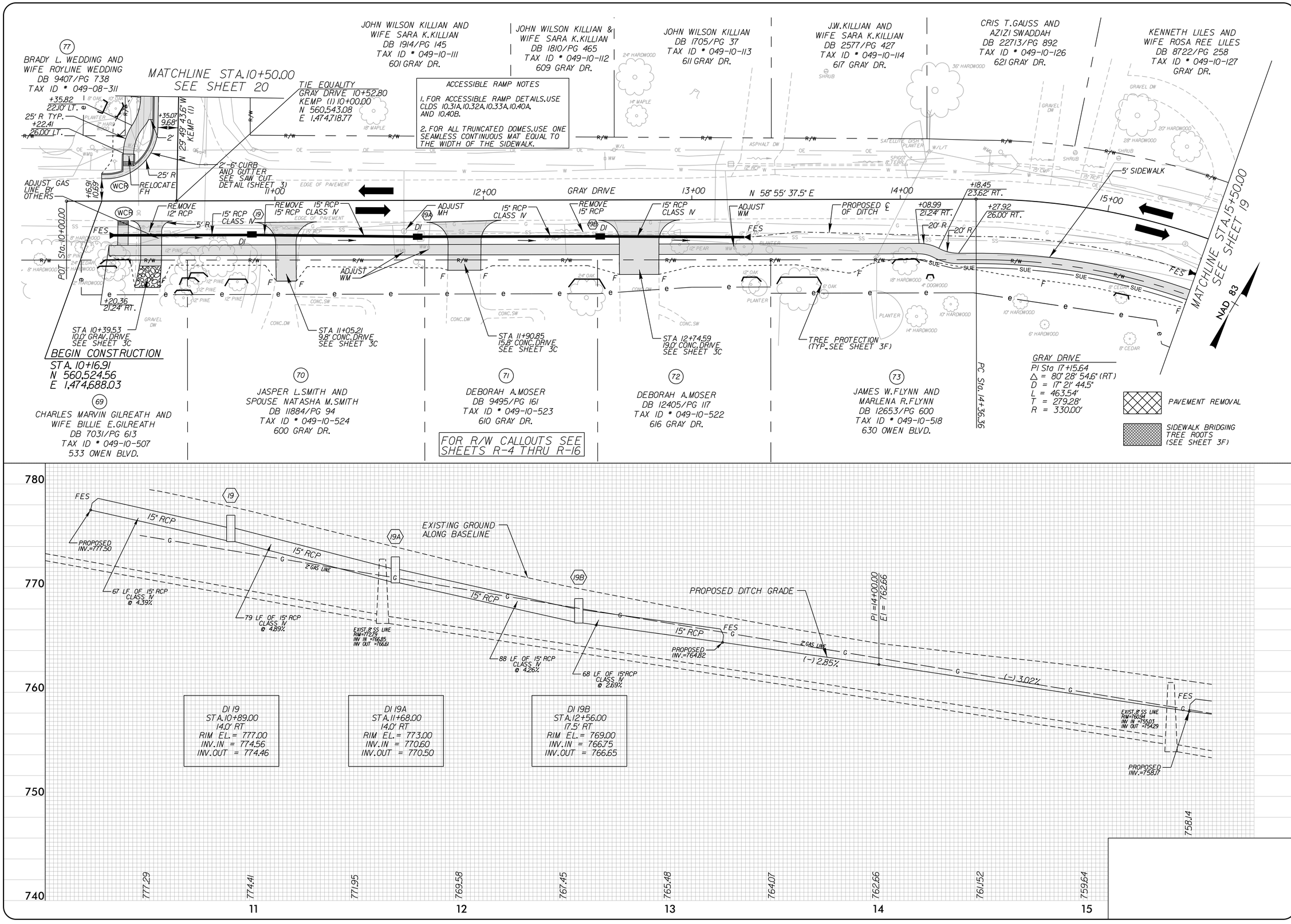
NOVEMBER 2015 DATE

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

ROCKLAND DRIVE STATION 25+60.00 TO 31+66.88

SHEET 17 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER ZEBIN ROBERT GOODSON

1"=20' SCALE

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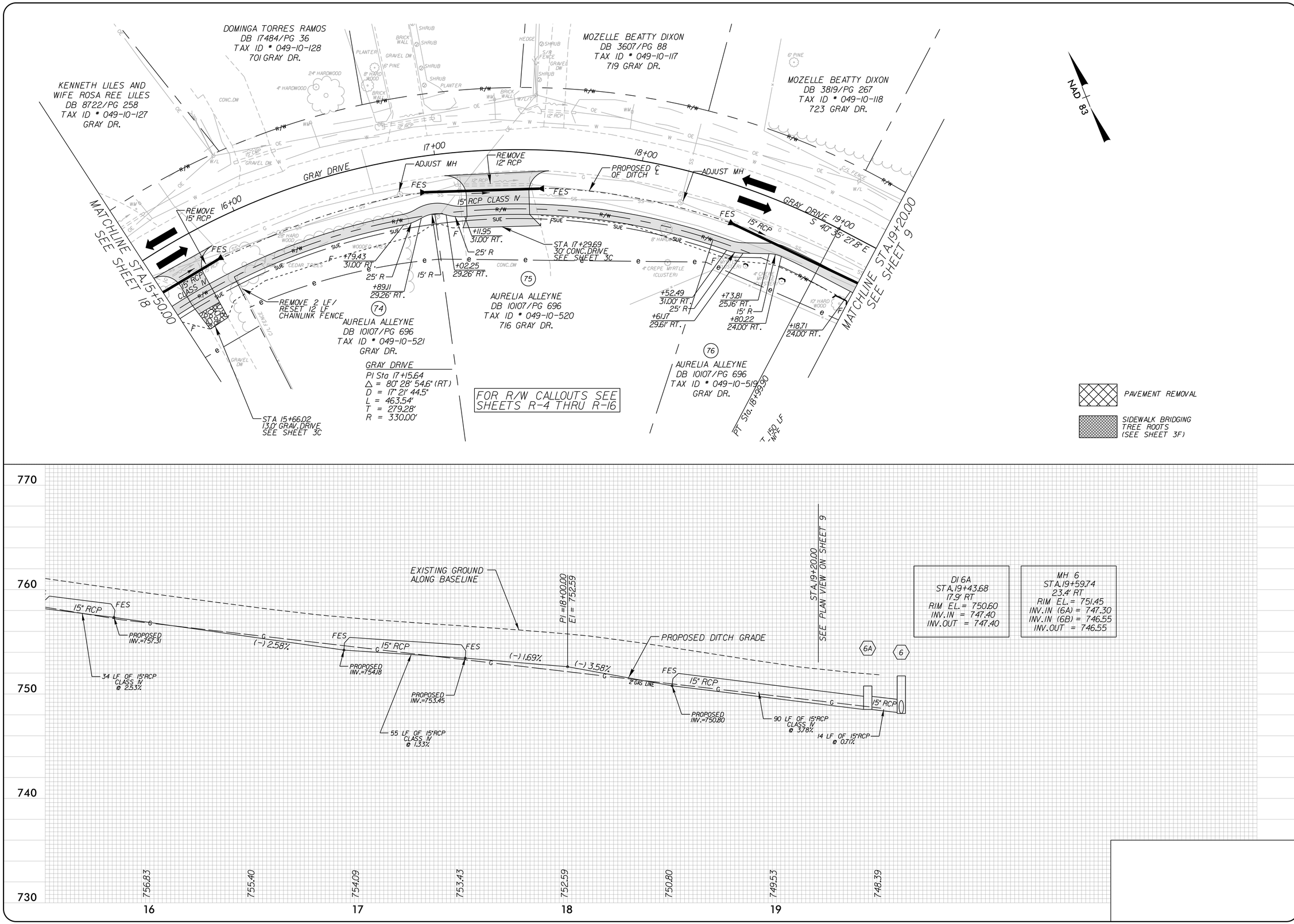
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

GRAY DRIVE STATION 10+00.00 TO 15+50.00

SHEET 18 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

1"=20' SCALE

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NOVEMBER 2015 DATE

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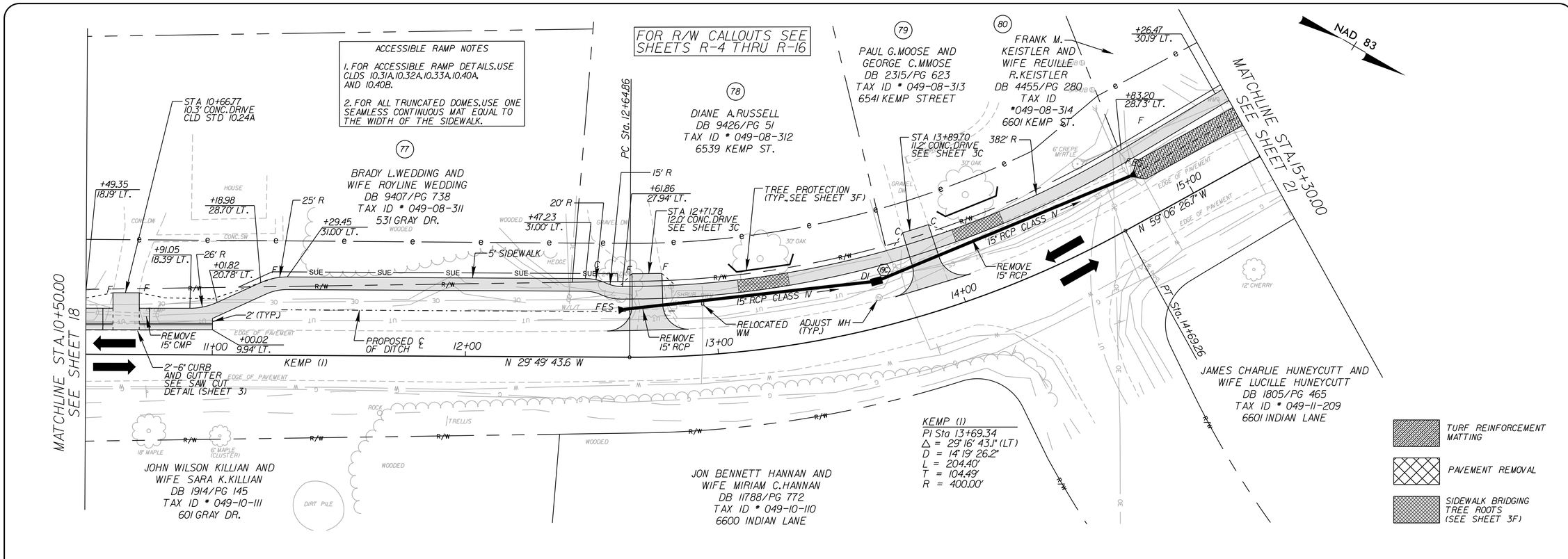
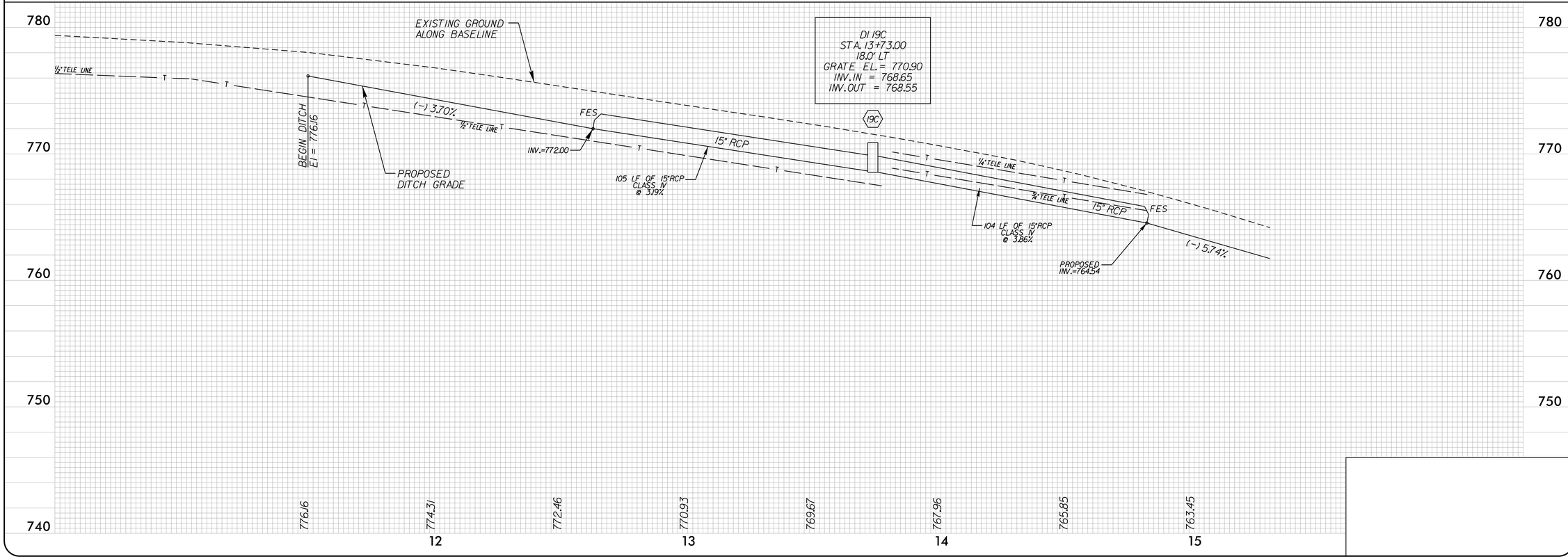
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

GRAY DRIVE STATION 15+50.00 TO 19+20.00

SHEET 19 OF 29





CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER ZEBIN ROBERT GOODSON

1"=20' SCALE

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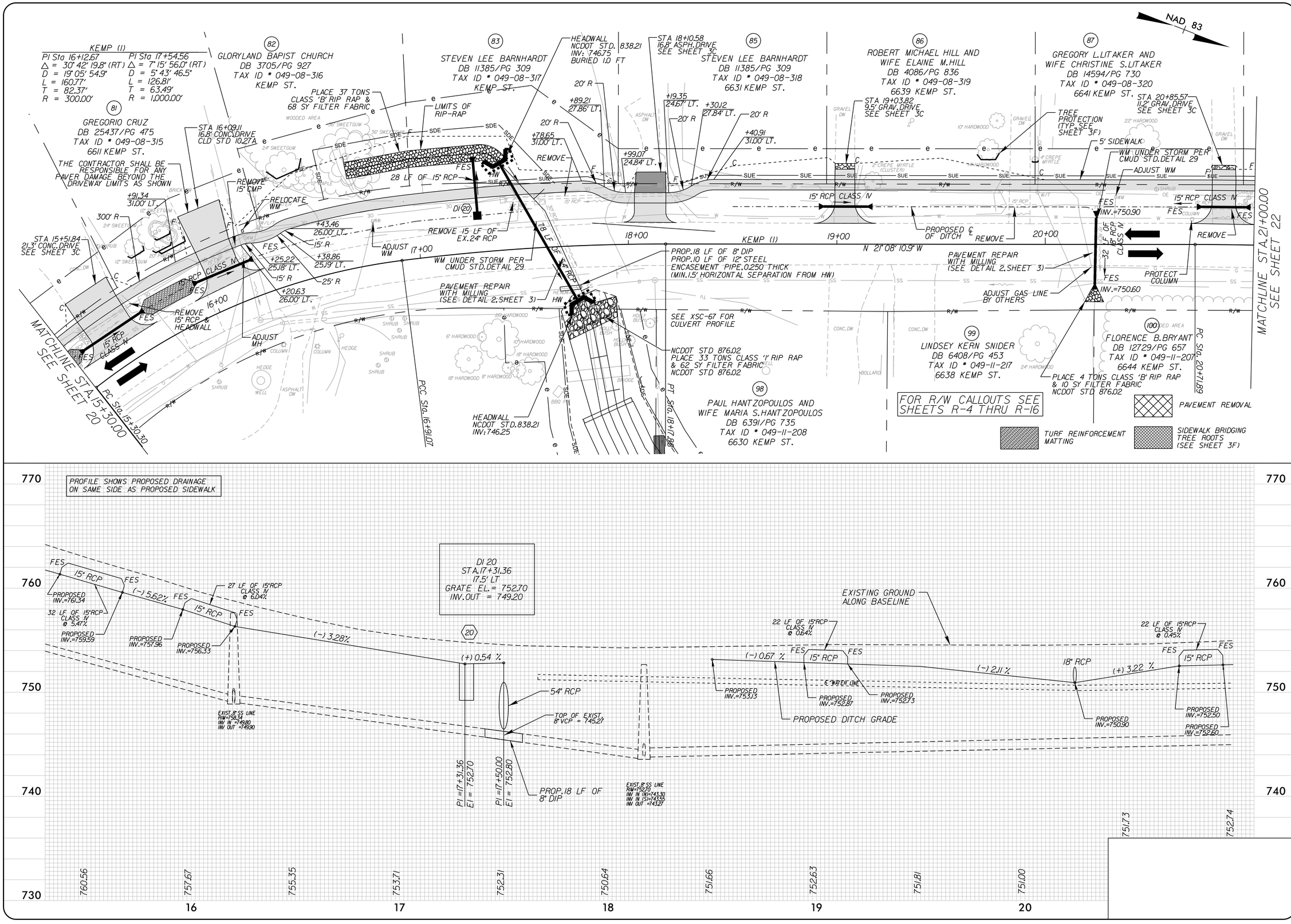
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

KEMP (1)
STATION 10+50.00 TO STATION 15+30.00

SHEET 20 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHANK

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER ZEBIN ROBERT GOODSON

1"=20' SCALE

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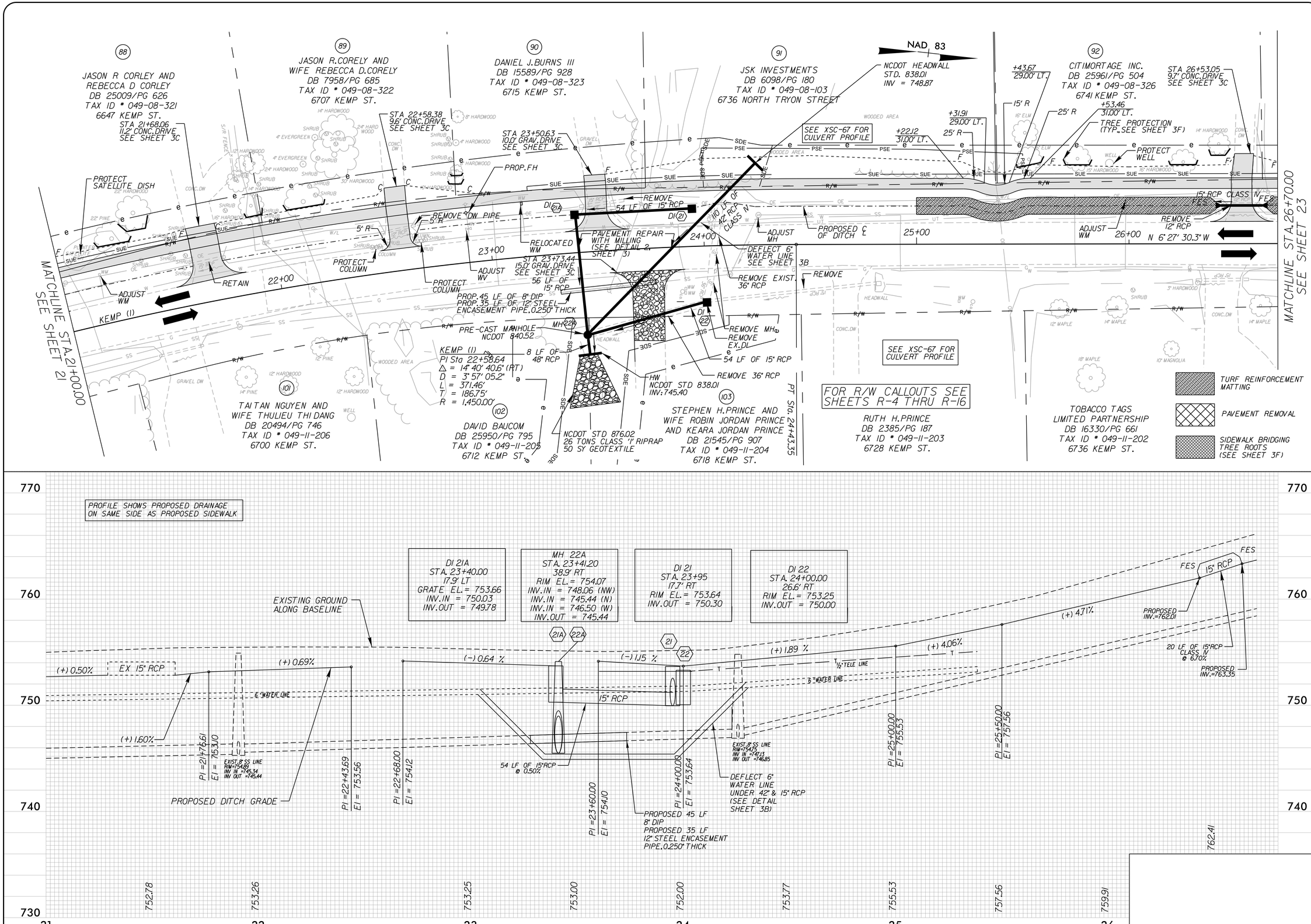
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

KEMP (1)
STATION 15+30.00 TO 21+00.00

SHEET 21 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

SEAL 28235 NORTH CAROLINA PROFESSIONAL ENGINEER VIRGINIA T. SCHANK

SEAL 041957 NORTH CAROLINA PROFESSIONAL ENGINEER DREW ROBERT GOODSON

1"=20' SCALE	17-NOV-2015 15:25 A:\Trans\Corr\Neighborhood\NewellSouth\Sheets\Plan\NEWELL-SOUTH_PS22.dgn CAD FILE PATH
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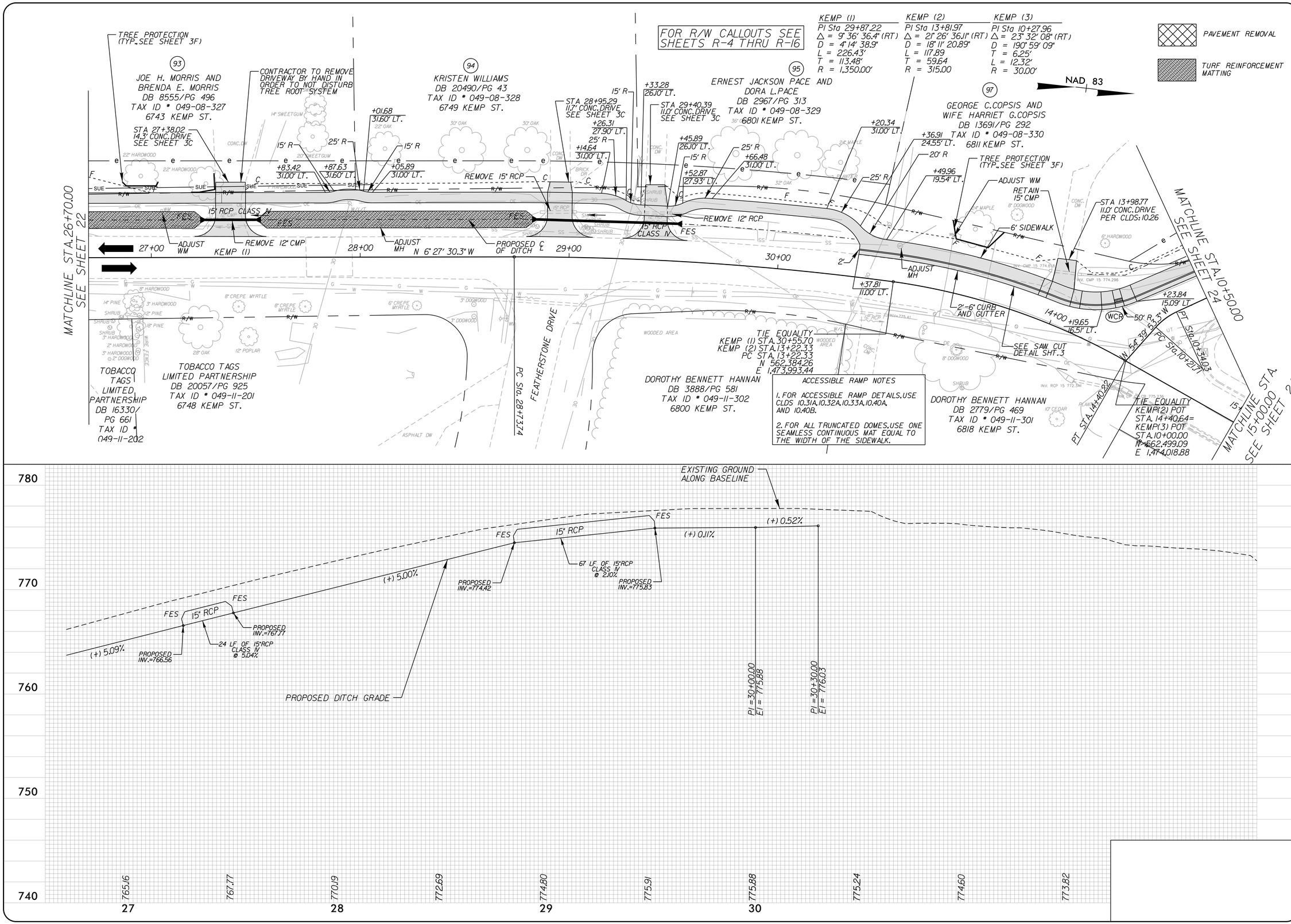
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

KEMP (1) STATION 21+00.00 TO 26+70.00

SHEET 22 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARF

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

SCALE	1"=20'
DATE	17-NOV-2015 15:25
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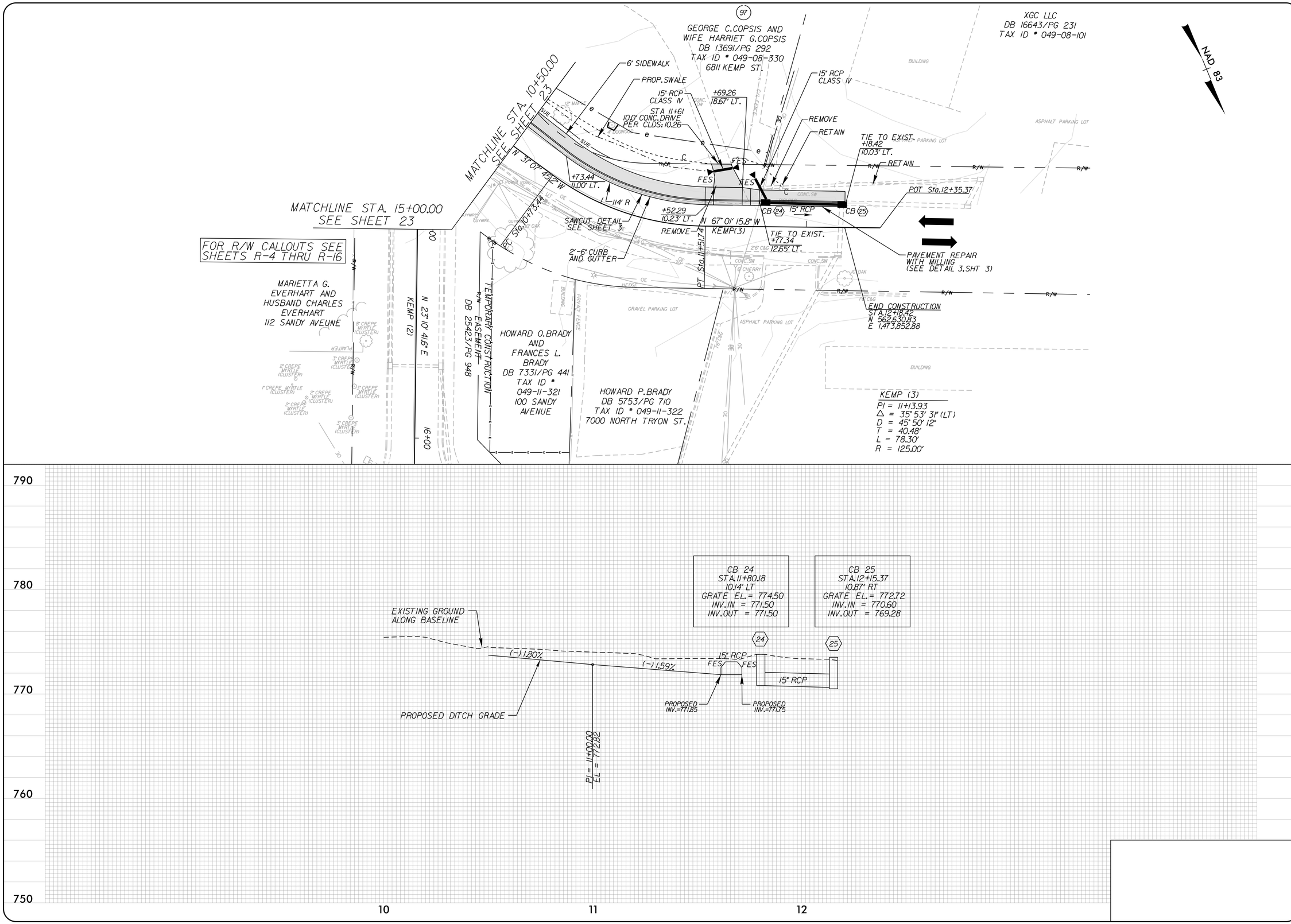
CHECKED BY	CJM
DATE	NOVEMBER 2015
JOB NO.	512-01-026
PREPARED BY	MPB
APPROVED BY	VTS

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

KEMP (1) STATION 26+70.00 TO KEMP (3) STA: 10+50.00

SHEET 23 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

1"=20' SCALE	
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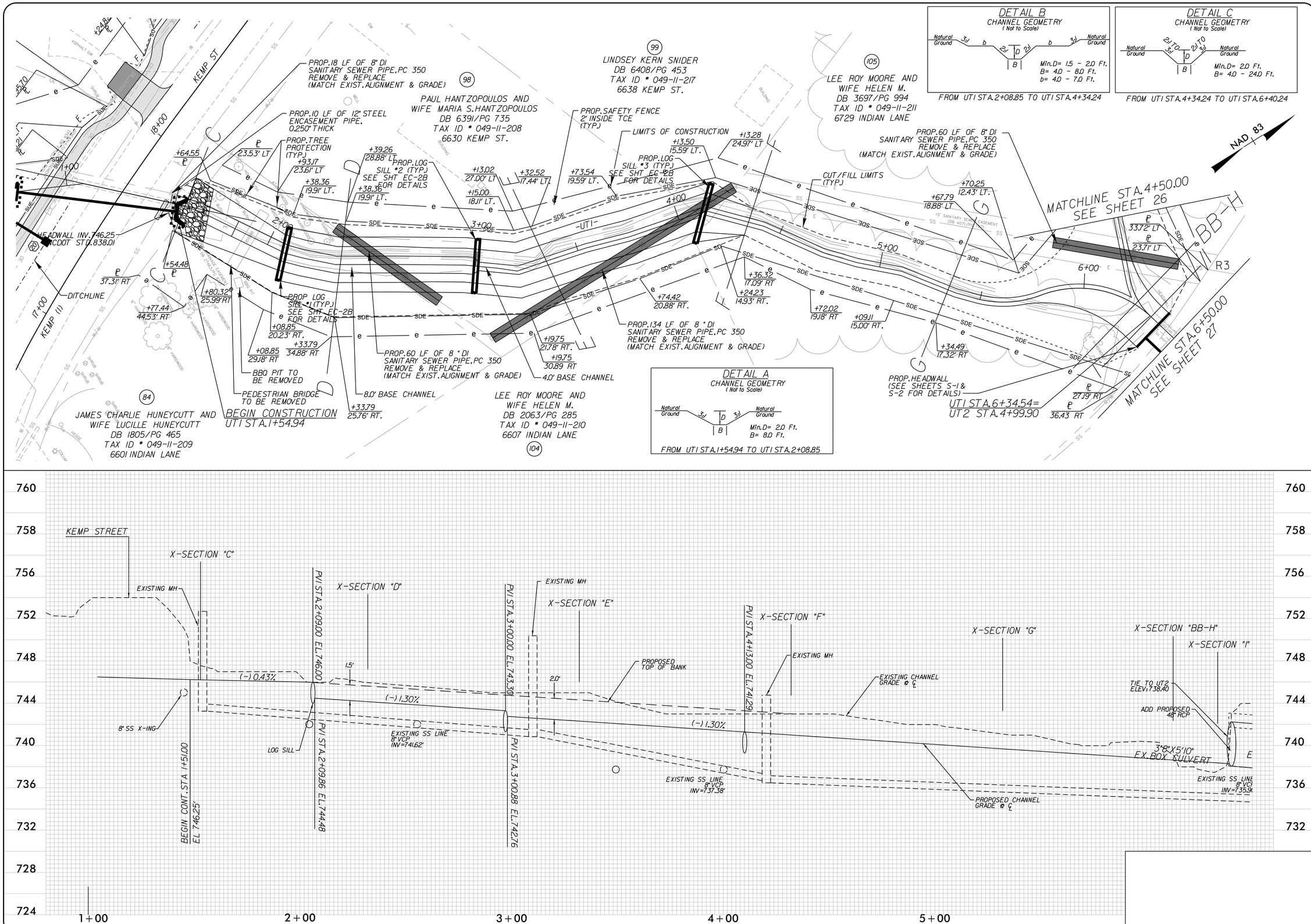
MPB PREPARED BY	CJM CHECKED BY
VTS APPROVED BY	NOVEMBER 2015 DATE

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

KEMP (3)
STATION 10+50.00 TO END OF PROJECT

SHEET 24 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041957 DEAN ROBERT GOODSON

H: 1"=20' V: 1"=4' SCALE	
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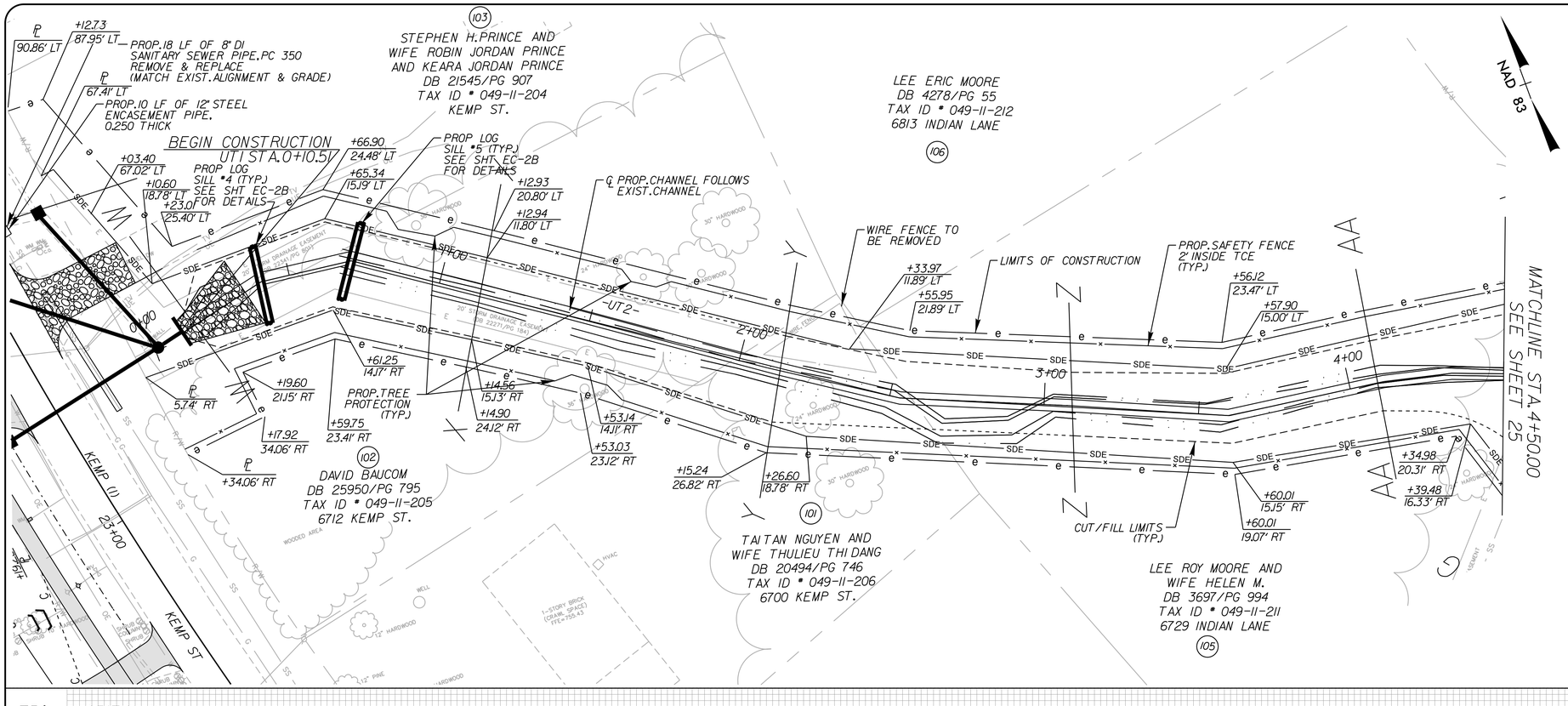
	NOVEMBER 2015 DATE
512-01-026 JOB NO.	MPB PREPARED BY
	DRG APPROVED BY

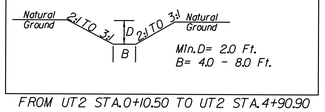
NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

CHANNEL UT1 (1) STA: 0+00 TO STA: 6+50

SHEET 25 OF 29

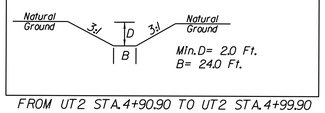


DETAIL D
CHANNEL GEOMETRY
(Not to Scale)

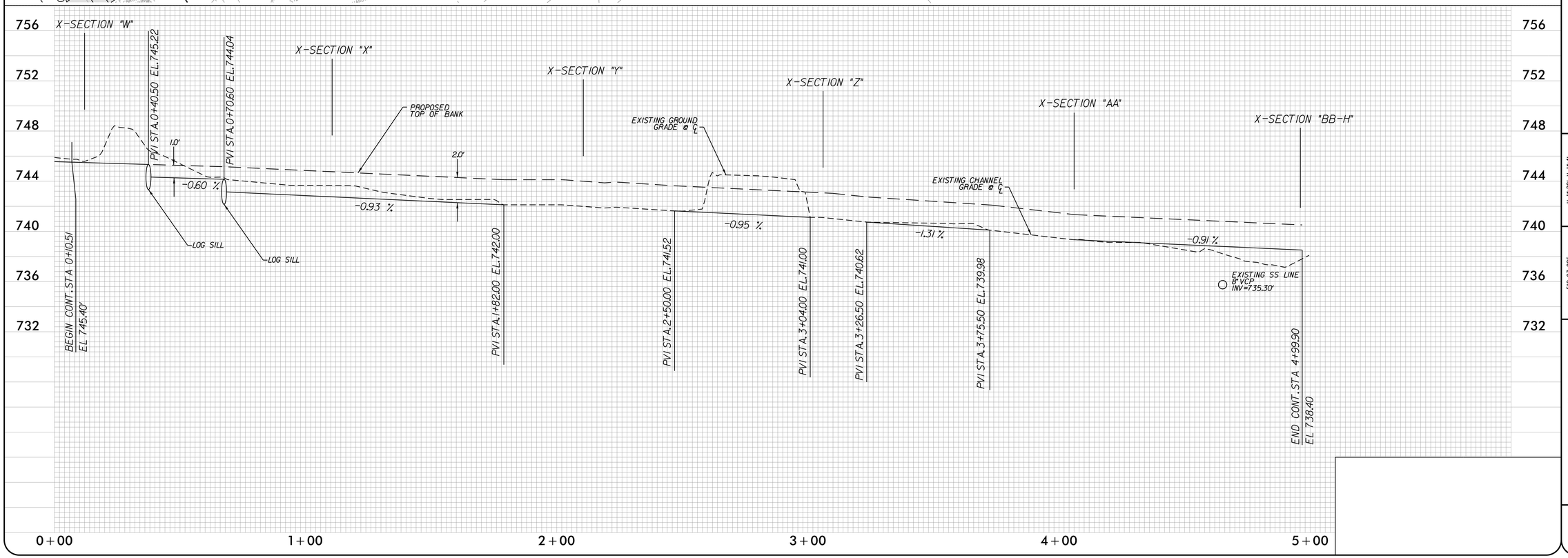


FROM UT2 STA.0+10.50 TO UT2 STA.4+90.90

DETAIL E
CHANNEL GEOMETRY
(Not to Scale)



FROM UT2 STA.4+90.90 TO UT2 STA.4+99.90



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

H_s 1"=20' V_s 1"=4' SCALE	
17-NOV-2015 15:50 G:\Trees\Cad\Neighborhood\NewellSouth\Sheets\Plan\NEWELL-SOUTH_PS6.dgn CAD FILE PATH	JFO CHECKED BY
512-01-026 JOB NO.	NOVEMBER 2015 DATE
MPB PREPARED BY	
DRG APPROVED BY	

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

CHANNEL UT2 STA: 0+00 TO STA: 4+50

SHEET 26 OF 29

MARIA INES AGUIRRE & LUIS ALFONSO DELGADO
DB 12516/PG 273
TAX ID # 049-11-118
6728 INDIAN LANE
(115)

MAURICE L.TURNER & CHINA M.TURNER
DB 9470/PG 866
TAX ID # 049-11-107
324 FEATHERSTONE DRIVE
(114)

JUAN A FUENTES & ANTONIA FUENTES
DB 20484/PG 77
TAX ID # 049-11-112
344 FEATHERSTONE DRIVE
(113)

MARTHA NORA RIOS & NASTER LEON
DB 9879/PG 384
TAX ID # 049-11-119
6718 INDIAN LANE
(107)

B&M PROPERTY MANAGEMENT,LLC
DB 24254/PG 789
TAX ID # 049-11-105
700 FLOWE DRIVE
(108)

SMC GROUP HOME II,INC.
DB 5062/PG 633
TAX ID # 049-11-106
628 FLOWE DRIVE
(109)

MATCHLINE STA.6+50.00 SEE SHEET 25

MATCHLINE STA.12+00.00 SEE SHEET 28

INDIAN LN

NAD 83

PROP.LOG SILL #9 (TYP.) SEE SHT EC-2B FOR DETAILS

GROUT & RE-SEAL PIPE JOINTS IN THE EXIST.BOX CULVERT

PROP.LOG SILL #6 (TYP.) SEE SHT EC-2B FOR DETAILS

LIMITS OF CONSTRUCTION

EXIST.3'-8" X 5'-10" BOX CULVERT

PROP.57' OF 48" RCP

PROPOSED CHANNEL FOLLOWS EX.CHANNEL

DEFLECT EXIST.WM UNDER PROP.CHANNEL

PROP.57' TONS OF CLASS I RIP RAP AND 104 SY OF GEOTEXTILE

PROP.HEADWALL (SEE SHEETS S-1 & S-2 FOR DETAILS)

PROP.18 LF OF DIP
PROP.10 LF OF 12" STEEL ENCASEMENT PIPE,0.250" THICK

8.0' BASE CHANNEL

PROP.VARIABLE WIDTH SDE

PROP.SAFETY FENCE 2' INSIDE TCE (TYP.)

VARIABLE WIDTH TCE

TOP OF BANK

PROP.LOG SILL #7 (TYP.)

PROP.52 LF OF 8" DI SANITARY SEWER PIPE.PC 350 REMOVE & REPLACE (MATCH EXIST.ALIGNMENT & GRADE)

CUT/FILL LIMITS (TYP.)

P 27.56' LT	+59.41 26.98' LT
+58.03 18.16' LT	+09.33 24.61' LT
+42.85 27.04' LT	+24.05 16.70' LT
P 18.23' LT	8+00
+45.08 20.41' LT	+45.18 29.41' LT
+03.12 29.44' LT	+02.07 20.44' LT
+44.94 18.06' LT	+79.24 26.39' LT
+44.27 30.95' LT	+44.83 21.91' LT
9+00	10+00
11+00	
+44.71 23.00' RT	+99.38 18.31' RT
+06.47 26.41' RT	+43.16 26.69' RT
P 28.50' RT	+46.04 29.91' RT
P 52.60' RT	+46.76 48.05' RT
+97.72 18.67' RT	+97.72 27.73' RT
+44.89 26.54' RT	+76.77 18.26' RT
+76.77 27.29' RT	+45.76 25.97' RT

DETAIL F
CHANNEL GEOMETRY
(Not to Scale)

Natural Ground — 2:1 TO 3:1 — D — 2:1 TO 3:1 — Natural Ground
B

Min.D= 2.5 Ft.
B= 8.0 - 24.0 Ft.

FROM UT1 STA.6+97.53 TO UT1 STA.14+27.09

752 748 744 740 736 732 728 724 720 716 712

INDIAN LANE

X-SECTION "J"

X-SECTION "K"

X-SECTION "L"

X-SECTION "M"

X-SECTION "N"

X-SECTION "O"

PVI STA.7+25.50 EL.736.88

PVI STA.7+26.45 EL.736.19

PVI STA.10+16.18 EL.733.30

48" RCP/ 3'8"X5'10" EX.BOX CULVERT

SS LINE 8"VCP =735.90'

-1.00 %

-1.00 %

PROPOSED TOP OF BANK

EXISTING MH

LOG SILL

EXISTING CHANNEL GRADE @ ℄

EXISTING MH

EXISTING MH

EXISTING MH

2.0'

EXISTING SS LINE 8"VCP INV=732.76'

LOG SILL

7+00 8+00 9+00 10+00 11+00

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

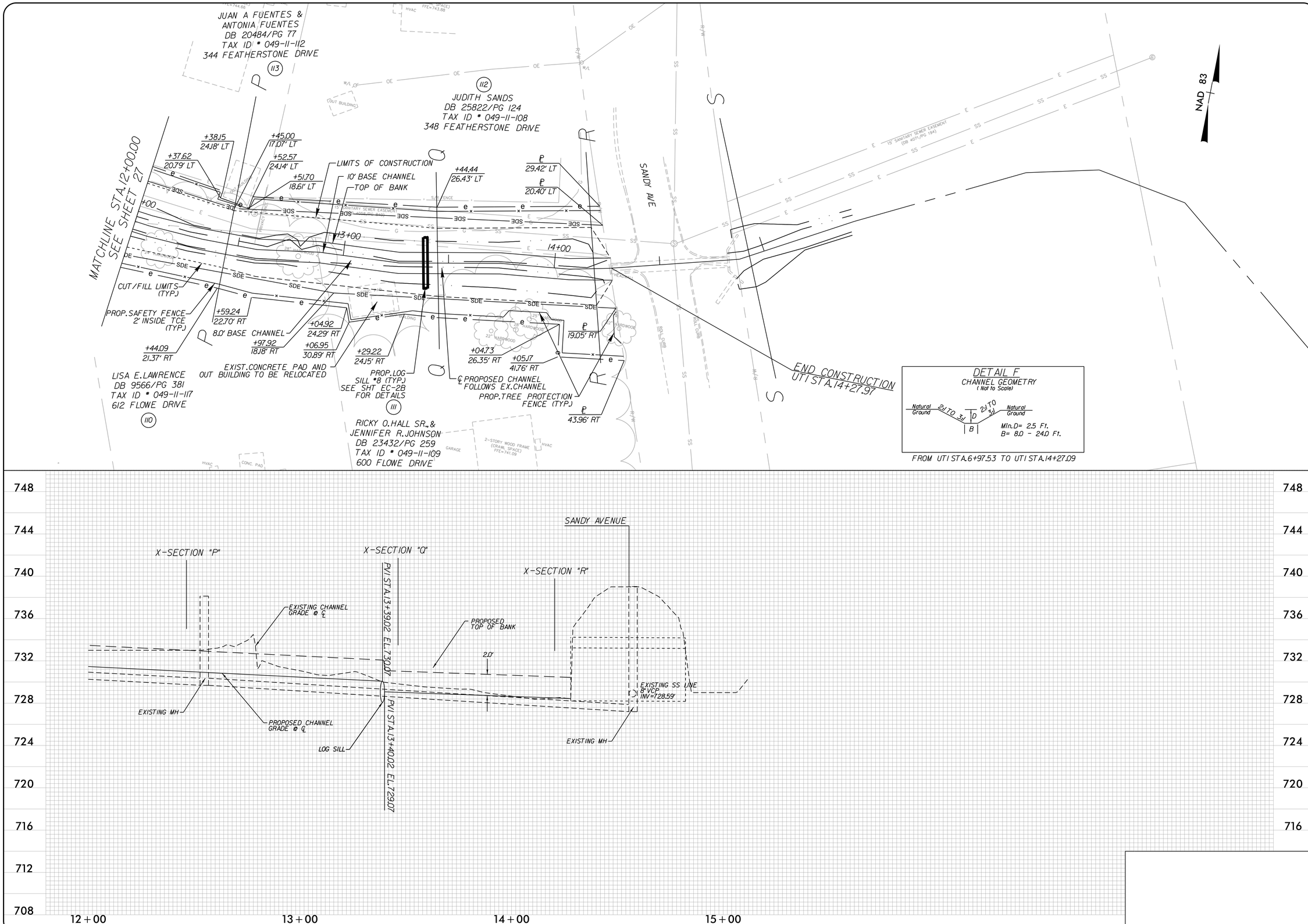
NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

H: 1"=20' V: 1"=4' SCALE	JFG CHECKED BY
11-NOV-2015 15:50 G:\Trans\Cast\Neighborhood\NewellSouth\Sheets\Plan\NEWELL-SOUTH_PS6.dgn CAD FILE PATH	NOVEMBER 2015 DATE
512-01-026 JOB NO.	MPB PREPARED BY
	DRG APPROVED BY

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

CHANNEL UT1 (2) STA: 6+50 TO STA: 12+00

SHEET 27 OF 29



CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

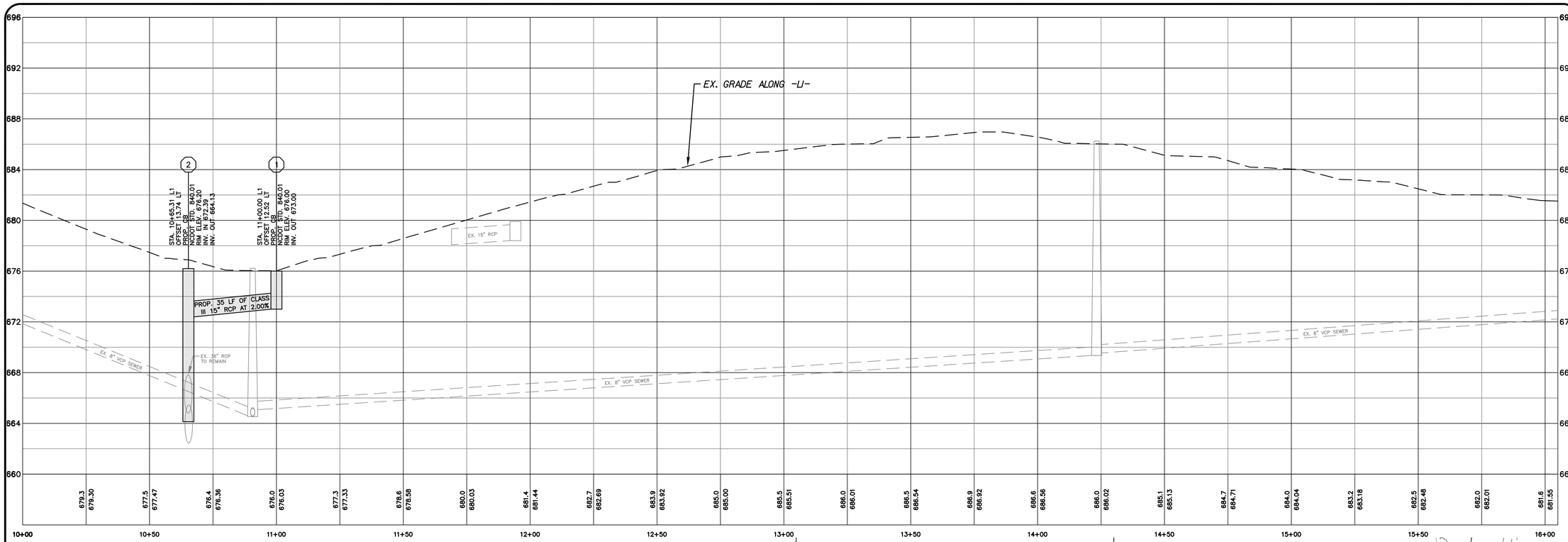
NORTH CAROLINA PROFESSIONAL SEAL 041957 ENGINEER DEAN ROBERT GOODSON

H: 1"=20' V: 1"=4' SCALE	
17-NOV-2015 15:50 G:\Trans\Cast\Neighborhood\NewellSouth\Sheets\Plan\NEWELL-SOUTH_PS0_dgn+Cdp CAD FILE PATH	
JFO CHECKED BY	NOVEMBER 2015 DATE
512-07-026 JOB NO.	
MPB PREPARED BY	DRG APPROVED BY

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

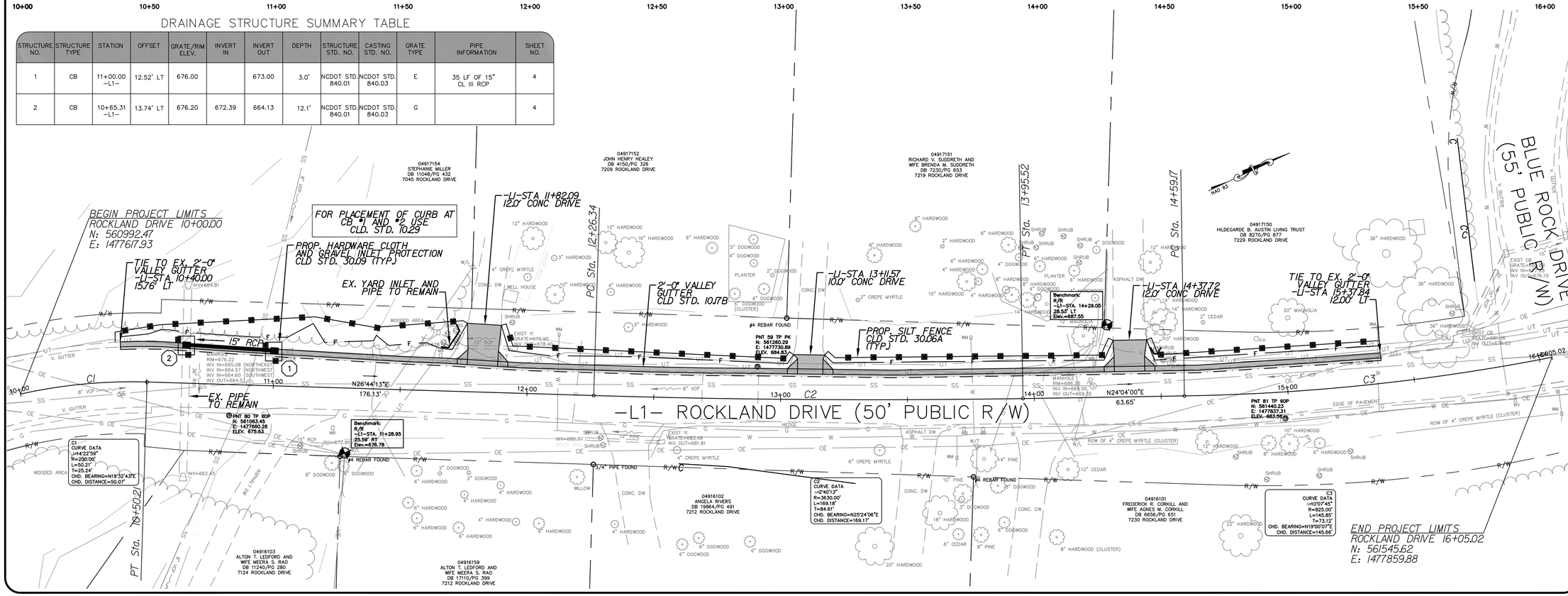
CHANNEL UT1 (3) STA: 12+00 TO STA: 14+27.97

SHEET 28 OF 29



DRAINAGE STRUCTURE SUMMARY TABLE

STRUCTURE NO.	STRUCTURE TYPE	STATION	OFFSET	GRATE/RIM ELEV.	INVERT IN	INVERT OUT	DEPTH	STRUCTURE STD. NO.	CASTING STD. NO.	GRATE TYPE	PIPE INFORMATION	SHEET NO.
1	CB	11+00.00 -L1-	12.52' LT	676.00		673.00	3.0'	NCDOT STD. 840.01	NCDOT STD. 840.03	E	35 LF OF 15" CL III RCP	4
2	CB	10+65.31 -L1-	13.74' LT	676.20	672.39	664.13	12.1'	NCDOT STD. 840.01	NCDOT STD. 840.03	G		4



CHARLOTTE

Plans Prepared By:

BUILDING

600 East Fourth Street
Charlotte, North Carolina 28202
Phone: (704) 336-4291
Fax: (704) 336-4586

FOR CHARLOTTE
CITY OF CHARLOTTE
ENGINEERING & PROPERTY MANAGEMENT
PLANNING & DESIGN GROUP

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 030941 ENGINEER ELIZABETH H. HASSENRITZ

H: 1" = 20' V: 1"=4"	SCALE
IN-HOUSE\JBETH\ROCKLAND\PLOTSHEETS\SHEET 4	CAD FILE PATH
512-07-026	JOB NO.
EHH	PREPARED BY
EHH	APPROVED BY
NW	CHECKED BY
03/2014	DATE

NEWELL-SOUTH NEIGHBORHOOD IMPROVEMENT PROJECT

PLAN/PROFILE SHEET
STA. 10+00 - STA. 16+05.02

SHEET 29 OF 29