

METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY DEPARTMENT OF PUBLIC WORKS

BROADWAY (US 431/SR 106) AND 21ST AVENUE SOUTH

CONSTRUCTION PLANS
ROADWAY, PAVING, DRAINAGE, LANDSCAPING,
TRAFFIC SIGNAL, LIGHTING, STRIPING, & SIGNING

INDEX OF SHEETS

SEE SHEET 1A.

FILE NO.	10-0606
DATE:	09/23/14
DESIGNED BY:	LEA, RPM
DRAWN BY:	LEA, RPM
CHECKED BY:	LEA, RPM

REVISION BLOCK	
DATE:	



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**Transportation
Consultants, LLC**
1101 17th Avenue South
Nashville, Tennessee 37212

PRELIMINARY PLANS
NOT FOR
CONSTRUCTION

ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES, ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES, PROPOSED RULE. PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

ACCEPTED BY : _____
DATE : _____

APPROVAL OF THIS TRAFFIC SIGNAL PLAN DESIGNATES APPROVAL OF THE DESIGN ONLY. APPROVAL OF THE DESIGN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO OBTAIN THE APPROPRIATE PERMITS IN ORDER TO INSTALL THE TRAFFIC SIGNAL.

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
INTERSECTION NO. 2345
2355, 2410

TITLE
SHEET

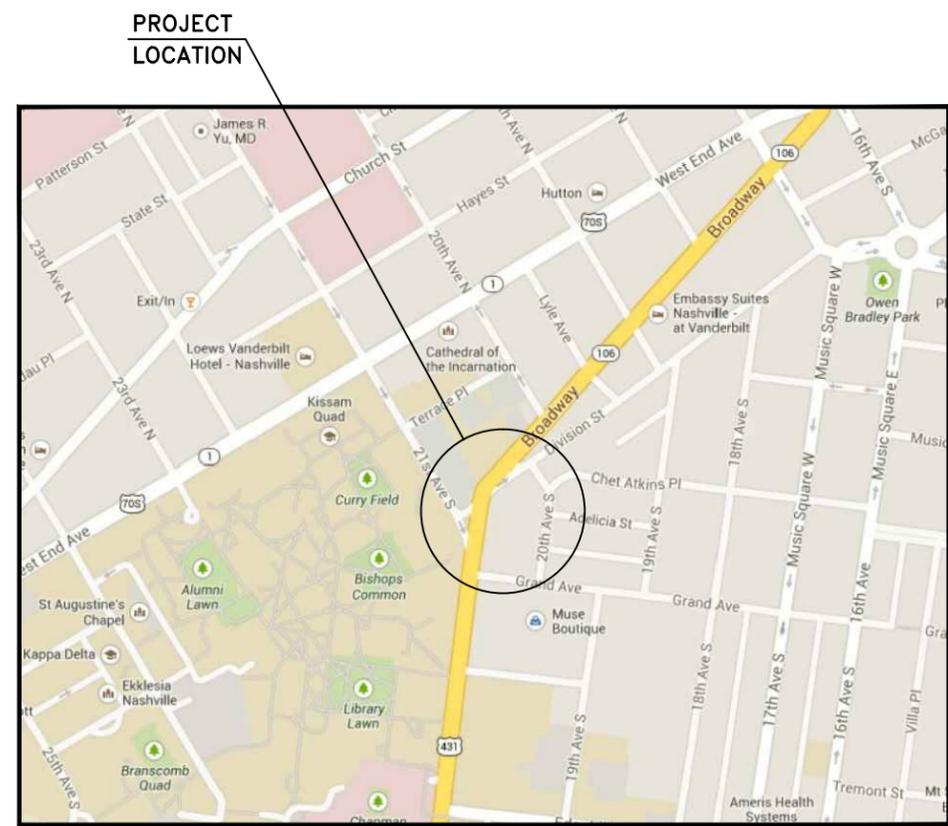
Broadway and 21st Avenue
Roadway Improvements

N.T.S.

SHEET 1



PROJECT LOCATION
DAVIDSON COUNTY



PROJECT
LOCATION



LOCATION MAP
NOT TO SCALE

SPECIAL NOTE

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED: MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND THE PROPOSAL CONTRACT.

DESIGNED BY RPM TRANSPORTATION CONSULTANTS, LLC; LITTLEJOHN ENGINEERING ASSOCIATES
DESIGNERS PHILLIP PIERCY, PE; DANIEL SPANN, PE
P.E. NO. N/A

INDEX OF SHEETS

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T-WZ-42	CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-55	SIDEWALK TRAFFIC CONTROL

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**INDEX AND
STANDARD DRAWING
SHEET**

Broadway and 21st Avenue
Roadway Improvements

N.T.S.

SHEET 1A

TRAFFIC CONTROL APPURTENANCES

- T-FAB-1 FLASHING YELLOW ARROW BOARD
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- T-L-1SA STANDARD LIGHTING DETAILS FOR SINGLE ARM SUPPORTS
- T-L-3 STANDARD LIGHTING DETAILS PULL BOXES
- T-L-4 STANDARD LIGHTING DETAILS CONDUIT, CABLE INSTALLATION
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- T-WZ-42 CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
- T-WZ-55 SIDEWALK TRAFFIC CONTROL

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INTERSECTION NO. 2345
 2355, 2410

**INDEX AND
 STANDARD DRAWING
 SHEET**

Broadway and 21st Avenue
 Roadway Improvements

N.T.S.

SHEET 1B

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
105-01.01	CONSTRUCTION STAKES, LINES, GRADES	HR	50
202-03.04	REMOVE SIDEWALK (CONCRETE)	SY	295
202-08.11	REMOVE CONC POST CURB (18-20)	LF	1925
202-08.15	REMOVE CONC CURB & GUTTER	LF	22
(7) 203-01	ROAD AND DRAINAGE EXC (UNCL)	CY	2280
209-03.21	FILTER SOCK	LF	165
209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	13
209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	2
303-01	MINERAL AGGREGATE, TYPE A, GRADING D	TON	1010
307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	365
307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	180
402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	1
403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	6
407-02.13	REMOVE & DISPOSE EXISTING ASPHALT	CY	310
407-20.05	SAW CUT ASPHALT PAVEMENT	LF	1690
411-01.11	ACS MIX (PG64-22) GRADING E	TON	110
(6) 411-33.35	STAMPED ASHPALT (CROSSWALKS)	SF	1270
(6) 411-33.35	STAMPED ASHPALT (BROADWAY AND 21ST AVE.)	SF	5555
(6) 411-33.35	STAMPED ASHPALT (ALLEY)	SF	6700
415-01.01	COLD PLANING BITUMINOUS PAVEMENT	TON	45
(6) 501-01.01	PORTLAND CEMENT CONCRETE PAVEMENT 8"	SF	2565
(8) 503.50	MILL MAINTENANCE OVERLAY	SY	225
604-01.01	CLASS A CONCRETE	CY	45
604-01.02	STEEL BAR REINFORCEMENT (RDWY)	LB	45
607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	LF	466
(1) 611-01.20	ADJUSTMENT OF EXISTING MANHOLE	EACH	4
(1) 611-01.23	ADJUSTMENT OF WATER VALVE	EACH	11
611-06.04	INLET, TYPE MERO STD. DWG. DR-105/106 (DEPTH 0-10')	EACH	6
(2) (8) 701-01.01	CONCRETE SIDEWALK (4")	SF	7660
(6) 701-01.03	CONCRETE SIDEWALK - COLOR	CY	11
701-02.01	CONCRETE CURB RAMP	SF	1025
701-02.02	CONCRETE DRIVEWAY 8" (W/WWM)	SF	1296
702-01	CONC POST CURB (ST-201)	LF	2125
702-03	CONCRETE CURB & GUTTER (ST-200)	LF	18
712-01	TRAFFIC CONTROL	LS	5
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	100
(3) 712-06	SIGNS (CONSTRUCTION)	SF	367
712-07.02	TEMPORARY BARRICADES, TYPE II	LF	4
712-07.03	TEMPORARY BARRICADES, TYPE III	LF	2
712-08.03	ARROW BOARD (TYPE C)	DAY	120
(9) 712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	LF	60
713-16.04	CHANGEABLE MESSAGE SIGN UNIT	DAY	120
(4) 713-16.22	SIGNS (R1-2, 36" X 36" x 36")	EACH	1
(4) 713-16.23	SIGNS (R3-8 MOD, 36"X30")	EACH	1
(4) 713-16.24	SIGNS (R1-2, 36"X36"X36")	EACH	1
717-01.04	MOBILIZATION	LS	5
(6) 802-10.01	SIDEWALK TREE GRATE	EACH	4
(1) 920-18.04	ADJUSTMENT OF WATER METER	EACH	7
(1) 920-19.04	ADJUSTMENT OF GAS VALVE BOX	EACH	6
PW-DW-001	DETECTABLE WARNINGS (SPECIFICATION 02523) (ST-329,ST-330)	SF	215

ESTIMATED PAVEMENT MARKING QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(5) 716-02.04	PLASTIC PAVEMENT MARKING (CHANNELIZATION STRIPING)	SY	20
(5) 716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	LF	320
(5) 716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	11
(5) 716-02.08	PLASTIC PAVEMENT MARKING (8' DOTTED LINE)	LF	230
(5) 716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSSWALK)	LF	240
(5) 716-03.01	PLASTIC WORD PAVEMENT MARKING (ONLY)	EACH	3
(5) 716-03.09	PLASTIC WORD PAVEMENT MARKING (YIELD PED XNG)	EACH	1
(5) 716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	1
(5) 716-04.02	PLASTIC PAVEMENT MARKING (DOUBLE TURNING ARROW)	EACH	1
(5) 716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	4
(5) 716-04.12	PLASTIC PAVEMENT MARKING (YIELD LINE)	SF	20
716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	LF	1.2
716-05.02	PAINTED PAVEMENT MARKING (8" BARRIER LINE)	LF	0.02
716-05.04	PAINTED PAVEMENT MARKING (CHANNELIZATION STRIPING)	SY	425
716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	SY	220
716-05.06	PAINTED PAVEMENT MARKING (TURN LANE ARROW)	EACH	13
716-05.09	PAINTED PAVEMENT MARKING (STRAIGHT-TURN LANE ARROW)	EACH	1
716-05.11	PAINTED PAVEMENT MARKING (STRAIGHT ARROW)	EACH	4
716-05.22	PAINTED PAVEMENT MARKING (LONGITUDINAL CROSSWALK)	LF	410
716-06.01	PAINTED WORD PAVEMENT MARKING (ONLY)	EACH	1
716-08.01	REMOVAL PAVEMENT MARKING (LINE)	LF	4240
716-08.03	REMOVAL PAVEMENT MARKING (CROSSWALK)	LF	175
716-08.04	REMOVAL PAVEMENT MARKING (CHANNELIZATION STRIPING)	SY	160
716-08.05	REMOVAL PAVEMENT MARKING (STOP LINE)	LF	120
716-12.01	ENHANCED FLAT THERMOPLASTIC 4" PAVEMENT MARKING	LM	0.85

FOOTNOTES:

- (1) ADJUSTMENT OF SANITARY MANHOLES, WATER VALVE COVERS, WATER METER COVERS, AND GAS VALVE COVERS AS NEEDED.
- (2) SEE LANDSCAPE SHEETS FOR DETAILS.
- (3) SEE SUMMARY OF ITEM 712-06 FOR DETAILS OF CONSTRUCTION SIGNS SHEET 2A.
- (4) TO BE INSTALLED BY METRO. ITEM INCLUDES MOUNTING OF SIGN, POST, AND INSTALLATION.
- (5) THE CONSTRUCTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THE THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
- (6) SEE LANDSCAPE SHEETS FOR SPECIFICATIONS AND DETAILS OF STAMPED ASPHALT AND COLORED CONCRETE SIDEWALK.
- (7) INCLUDES REMOVAL OF ASPHALT THROUGH ALLEY #447.
- (8) ITEM TO BE USED AS NEEDED FOR REPAIRS AFTER CONDUIT INSTALLATION.
- (9) TO BE USED TO PROTECT SIGNAL POLES DURING CONSTRUCTION.

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ESTIMATED
QUANTITIES

Broadway and 21st Avenue
Roadway Improvements

N.T.S.

SHEET 2

ESTIMATED SIGNAL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS 1
(1)	713-16.21	SIGNS (R3-27, 36"x36")	EACH 2
(1)	713-16.23	SIGNS (R3-2, 36"x36")	EACH 1
(1)	713-16.24	SIGNS (R3-1, 36"x36")	EACH 2
	714-05.02	PULL BOXES (TYPE A) (ELECTRIC)	EACH 2
	714-09.03	LUMINAIRES (250-WATT - WASHINGTON POST MOUNT)	EACH 10
	717-01	MOBILIZATION	LS 1
(2)	730-01.02	REMOVAL OF SIGNAL EQUIPMENT	EACH 4
(7)	730-02.07	SIGNAL HEAD ASSEMBLY (130)	EACH 1
(7)	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH 20
(7)	730-02.08	SIGNAL HEAD ASSEMBLY (130 POLE MOUNTED)	EACH 3
(7)	730-02.17	SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	EACH 4
	730-02.30	MAST ARM HARDWARE	EACH 25
	730-02.41	SIGNAL HEAD ADDER BLK PAINT	EACH 25
	730-03.12	OVER HEAD INTERCONNECT SPLICE ENCLOSURE	EACH 3
	730-03.21	INSTALL PULL BOX (TYPE B)	EACH 12
	730-03.224	INSTALL PULL BOX (FIBER OPTIC - TYPE B)	EACH 9
(3)	730-05.01	ELECTRICAL SERVICE CONNECTION	EACH 3
	730-05.03	SERVICE CABLE (2 CONDUCTOR, # 6 AWG)	L.F. 500
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F. 1850
	730-08.05	SIGNAL CABLE - 12 CONDUCTOR	L.F. 1250
	730-08.10	SIGNAL CABLE - LUMINAIRE AC	L.F. 1200
(4)	730-08.30	INTERCONNECT CABLE (COPPER-TWISTED PAIR) #19 25 PR	L.F. 1500
(4)	730-08.31	INTERCONNECT CABLE (COPPER-TWISTED PAIR) #19 6 PR	L.F. 125
	730-11.10	RISER ASSEMBLY (2" RGS)	EACH 6
	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F. 3225
	730-12.08	CONDUIT 2" DIAMETER (RGS)	L.F. 315
	730-12.30	TRENCHING (PAVEMENT)	L.F. 1000
	730-12.34	TRENCHING (SIDEWALK)	L.F. 500
(5)	730-13.02	VIDEO DETECTOR (VIDEO)	EACH 3
	730-13.03	VIDEO DETECTOR (4-CHANNEL, RACK MOUNT)	EACH 3
	730-14.01	SHIELDED DETECTOR CABLE	L.F. 2325
	730-14.02	SAW SLOT	L.F. 1400
	730-14.03	LOOP WIRE	L.F. 2600
(8)	730-15.11	MODIFY CABINET	EACH 3
	730-15.15	CONTROLLER CABINET ADDER BLK PAINT	EACH 3
(7)	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED - TS2 TYPE)	EACH 3
	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH 3
(6)	730-23.48	CANTILEVER SIGNAL SUPPORT (1 ARM @ 30' WITH LUMINAIRE)	EACH 5
(6)	730-23.64	CANTILEVER SIGNAL SUPPORT (1 ARM @ 30')	EACH 2
(6)	730-23.72	CANTILEVER SIGNAL SUPPORT (1 ARM @ 35')	EACH 2
(6)	730-23.96	CANTILEVER SIGNAL SUPPORT (1 ARM @ 40' WITH LUMINAIRE)	EACH 2
(6)	730-23.97	CANTILEVER SIGNAL SUPPORT (1 ARM @ 40')	EACH 1
	730-26.02	PEDESTRIAN PUSHBUTTON WITH 15" SIGN	EACH 10
(7)	730-26.05	COUNTDOWN PEDESTRIAN SIGNAL	EACH 22

FOOTNOTES:

- (1) ITEM INCLUDES MOUNTING OF SIGN OVERHEAD ON MAST ARM.
- (2) INCLUDES REMOVAL OF EXISTING TRAFFIC SIGNAL AT 21ST AVENUE SOUTH AND GRAND AVENUE AND THE REMOVAL OF THE PEDESTRIAN FLASHERS AT BROADWAY AND DIVISION STREET ONCE NEW SIGNALS ARE OPERATIONAL. ALSO INCLUDES THE REMOVAL OF THE TEMPORARY SIGNAL HEADS AT 21ST AND BROADWAY ONCE THE CRANES ARE REMOVED AND THE MAST ARM IS INSTALLED.
- (3) THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR ANY CHANGES BY THE UTILITY FOR PROVIDING ELECTRICAL SERVICE TO THE CONTROLLER. THESE CHARGES SHALL BE INCLUDED IN THE PRICE FOR ITEM NO. 730-05.01 FOR PAYMENT BY THE CONTRACTOR. ITEM TO INCLUDE 1-2C #6 CABLE FROM EXISTING ELECTRIC SERVICE TO CONTROLLER. INCLUDES A 50 AMP, 2 POLE WEATHER PROOF EXTERNAL DISCONNECT. ENCLOSURE SHALL BE METALLIC WITH A 50 AMP SINGLE POLE CIRCUIT BREAKER.
- (4) EXISTING COMMUNICATIONS FOR METRO PUBLIC WORKS TO BE MAINTAINED DURING CONSTRUCTION.
- (5) ITEM TO INCLUDE VIDEO CAMERA, MAST ARM HARDWARE, WIRING, AND ALL APPURTENANCES FOR A FULLY OPERATIONAL VIDEO DETECTION SYSTEM.
- (6) ITEM INCLUDES SUPPORT POLE, INSTALLATION OF SUPPORT POLE AND FOUNDATION. POLES TO BE BLACK CORE STYLE FATIGUE CATEGORY 2. SEE LIGHTING PLANS FOR LUMINAIRE INFORMATION.
- (7) ENTIRE SIGNAL HEAD/PEDESTRIAN HEAD SHALL BE BLACK IN COLOR.
- (8) INCLUDES SIGNAL TIMING MODIFICATIONS AS NEEDED FOR VARIOUS PHASES OF TRAFFIC CONTROL.

SEE SHEET U1 FOR LIGHTING QUANTITIES.

FILE NO.	10-0606
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PRELIMINARY PLANS
NOT FOR
CONSTRUCTION

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
INTERSECTION NO. 2345
2355, 2410

ESTIMATED
QUANTITIES

Broadway and 21st Avenue
Roadway Improvements

N.T.S.

SHEET 2A

SUMMARY OF QUANTITIES - ITEM NO. 712-06 *			
SIGN NO.	DESCRIPTION	SIZE (IN.)	NUMBER REQUIRED
G20-2	END ROAD WORK	48X24	4
M4-8a	END DETOUR	24X18	1
M4-9R	DETOUR	30X24	1
M4-9L	DETOUR	30X24	3
M4-9 (mod)	DETOUR	30X24	1
M4-9b	PEDESTRIAN DETOUR	30X24	1
M4-10R	DETOUR	48X18	1
R3-2	MOVEMENT PROHIBITION	36X36	1
R3-6	OPTIONAL MOVEMENT LANE CONTROL	30X36	1
R11-2	ROAD CLOSED	48X30	1
R3-5	MANDATORY MOVEMENT LANE CONTROL	30X36	1
S9-9	SIDEWALK CLOSED	24X12	4
W1-7	TWO DIRECTION LARGE ARROW	48X24	1
W4-2R	LANE ENDS	36X36	2
W4-2L	LANE ENDS	36X36	2
W16-8P	ADVANCE STREET NAME	30X8	1
W12-1	DOUBLE ARROW	48X48	1
W20-1	ROAD WORK AHEAD	48X48	4
W20-1	ROAD WORK 1500 FEET	48X48	2
W20-1	ROAD WORK 1000 FEET	48X48	2
W20-1	ROAD WORK 500 FEET	48X48	2
W20-5	CENTER LANE CLOSED 500 FEET	48X48	1
W20-5R	RIGHT LANE CLOSED 1000 FEET	48X48	1

*** NOTES:**

ITEM 712-06, SIGNS (CONSTRUCTION), INCLUDES SIGNS SHOWN AND IS ADDITIONAL SIGNS MAY BE REQUIRED BY THE ENGINEER AND WILL BE PAID PRICE BID FOR ITEM 712-06.

SIGNS SHALL BE LOCATED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER

CONSTRUCTION SIGNING AND TRAFFIC CONTROL SHALL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 712 OF THE TENNESSEE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE CONTRACTOR IS NOT RELIEVED OF ANY RESPONSIBILITY TO PROVIDE TRAFFIC CONTROL MEASURES BY THE ABOVE.

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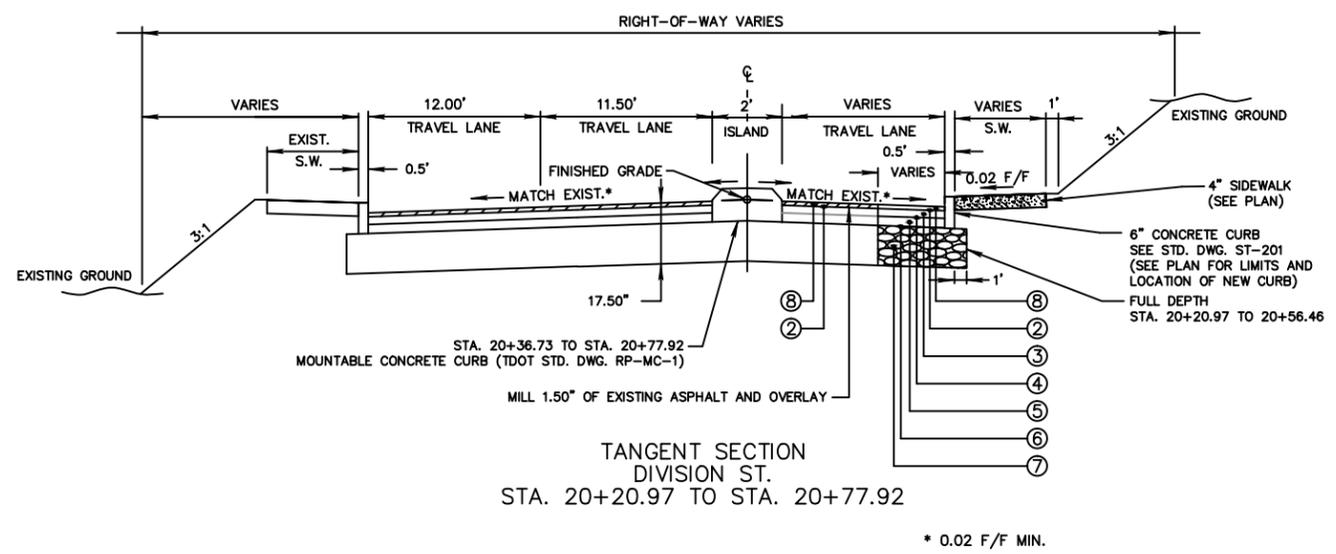
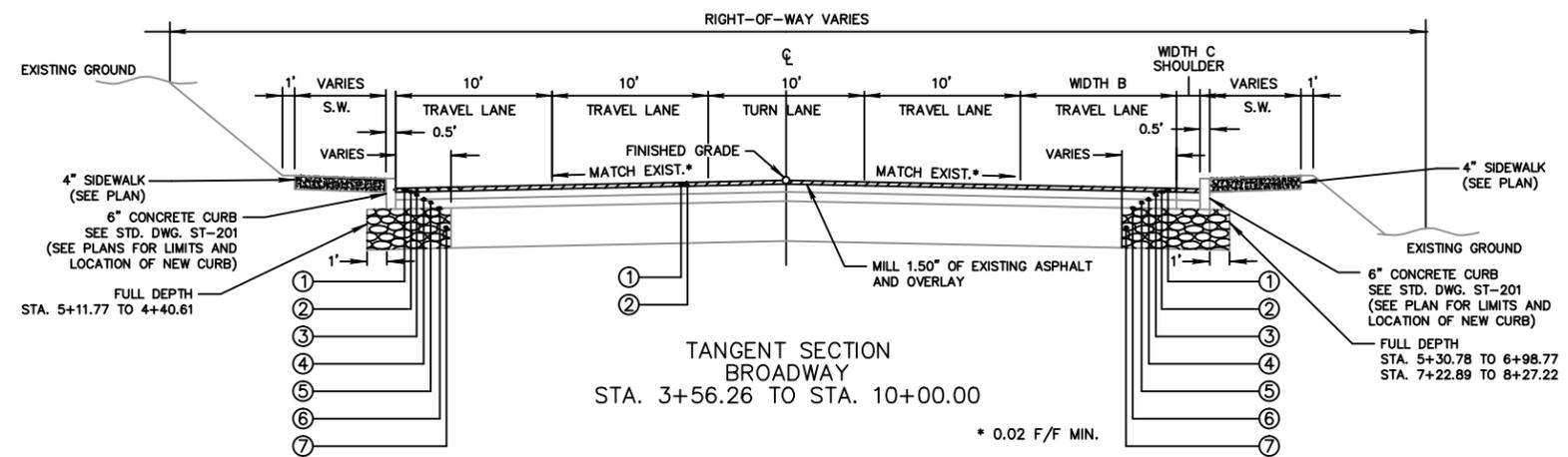
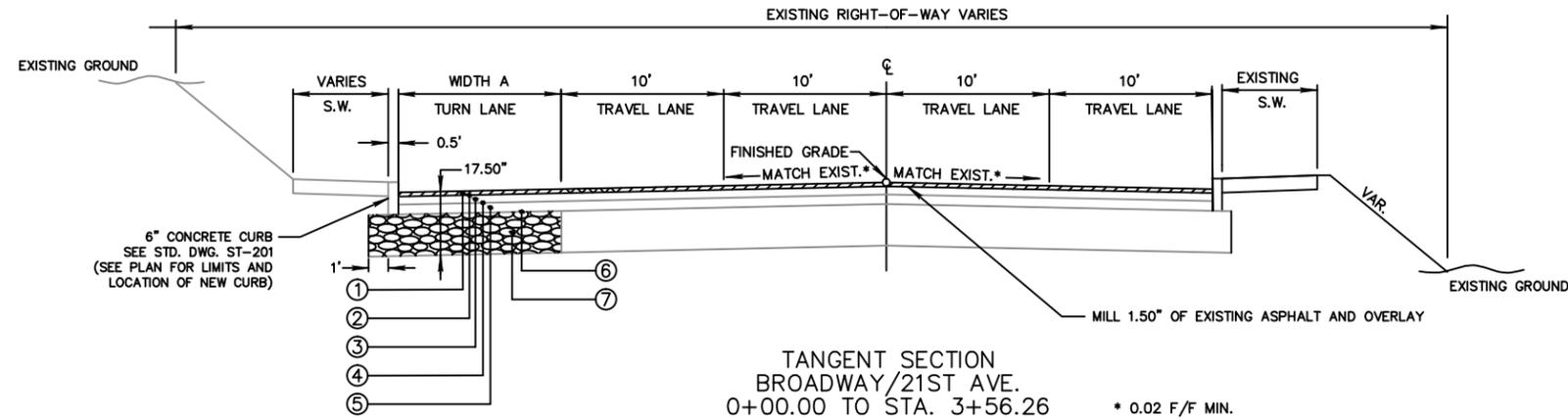
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2355, 2410

**ESTIMATED
QUANTITIES**

Broadway and 21st Avenue
Roadway Improvements

N.T.S.

SHEET 2B



NOTE: FOR LIMITS OF FULL DEPTH SECTIONS SEE SHEET 10.

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INTERSECTION NO. 2345
 2355, 2410

TYPICAL SECTIONS
 SHEET

Broadway and 21st Avenue
 Roadway Improvements

N.T.S.

SHEET 2C

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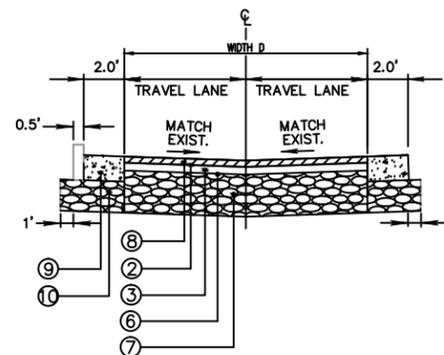
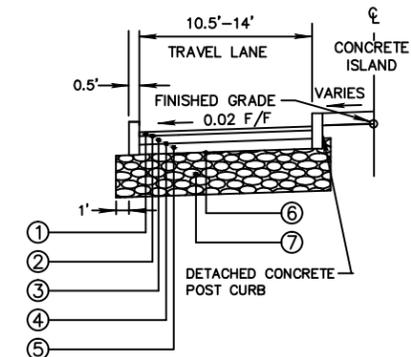
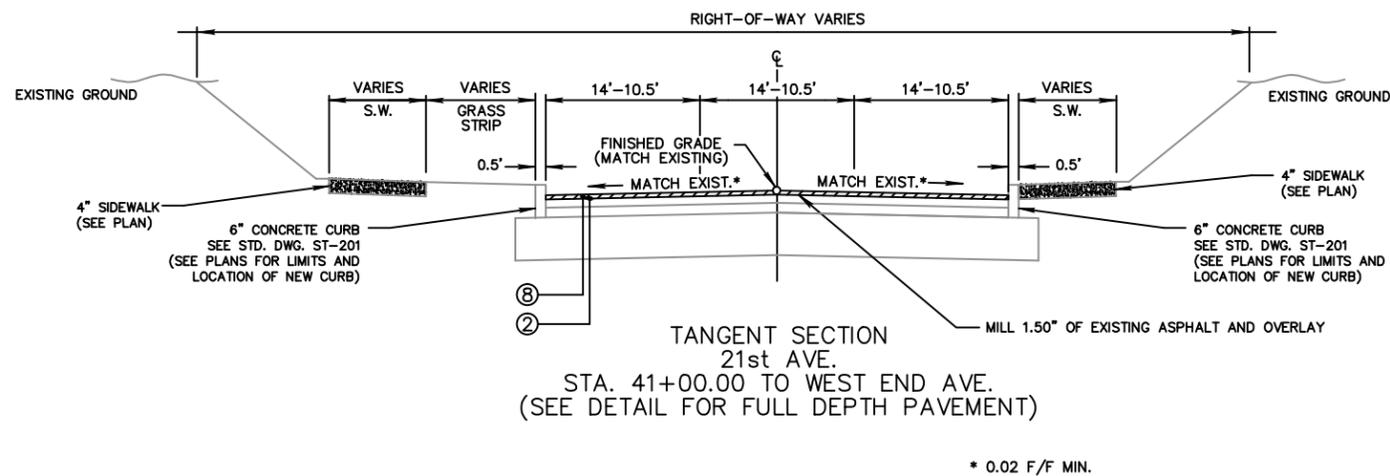
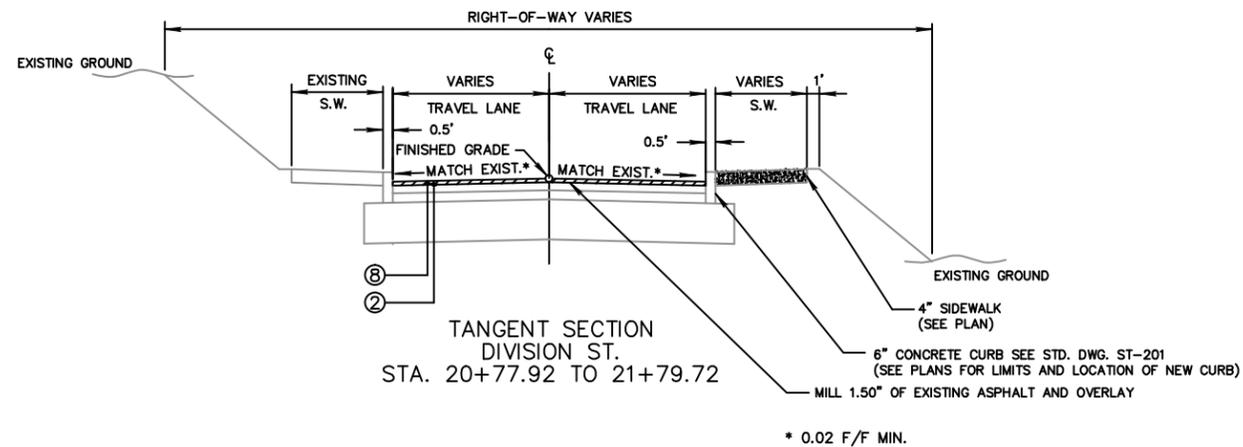
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PRELIMINARY PLANS
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STATION	WIDTH D
70+32.73 TO 74+70.91	13.5'
74+70.91 TO 74+87.03	13.5' TO 11.6'
74+70.03 TO 75+38.62	11.6'

PROPOSED PAVEMENT SCHEDULE	
① ACS MIX (PG64-22) GRADING D ROADWAY @ 1.50" 411-03.10	⑥ BITUMINOUS MATERIAL FOR PRIME COAT (RS-2) 402-01
② BITUMINOUS MATERIAL FOR TACK COAT (SS-1) 403-01	⑦ MINERAL AGGREGATE TYPE A BASE (GRADING D PUG MILL MIX) @ 10" 303-01
③ ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM GRADING B-M2) @ 2" 307-03.08	⑧ ACS MIX (PG64-22) GRADING E ROADWAY @ 1.50" 411-03.11
④ BITUMINOUS MATERIAL FOR TACK COAT (SS-1) 403-01	⑨ PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) @ 6" 501-01.30
⑤ ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A @ 4" 307-03.01	⑩ MINERAL AGGREGATE TYPE A BASE (GRADING D PUG MILL MIX) @ 7.5" 303-01

NOTE: FOR LIMITS OF FULL DEPTH SECTIONS SEE SHEET 10.

METROPOLITAN GOVERNMENT
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 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

INTERSECTION NO. 2345
 2355, 2410

TYPICAL SECTIONS
 SHEET

Broadway and 21st Avenue
 Roadway Improvements

N.T.S.

SHEET 2D

GENERAL NOTES

SEEDING AND SODDING

- (1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, TOPSOILED AND SEEDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. TOPSOIL, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEMS 203-04 AND/OR 203-07. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM 801-01.
- (2) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AND ALL DAMAGE/DISTURBED AREAS. TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.
- (3) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

DRAINAGE

- (1) EXCAVATION FOR ALL DRAINAGE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).
- (2) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).
- (3) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

UTILITIES

- (1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.
- (2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.
- (3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.
- (5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

MISCELLANEOUS

- (1) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE

RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA

ROAD CLOSURE

- (1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

RIGHT - OF - WAY

- (1) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.
- (2) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.
- (3) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

- (1) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.
- (2) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02, PAINTED PAVEMENT MARKING (8" BARRIER LINE), L.F.

FINAL PAVEMENT MARKING

- (1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.01, ENHANCED FLATLINE THERMO PVMT MRNG (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

PAVING

- (1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.
- (2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

RESURFACING

- (3) ON CURB AND GUTTER SECTIONS, PUBLIC ROAD INTERSECTIONS SHALL BE RESURFACED TO THE END OF RADIUS. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD SHALL BE PROVIDED.
- (4) ON URBAN TYPICAL SECTIONS, (CURB AND GUTTER), RESIDENTIAL DRIVEWAYS AND BUSINESS ENTRANCES SHALL HAVE A MINIMUM WIDTH OF MATERIAL NOT LESS THAN ONE FOOT USED IN THE TRANSITION TO FEATHER THE PAVEMENT EDGE.
- (5) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

SIGNING

- (1) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.
- (2) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.
- (3) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH LAYOUT DRAWINGS (3 SETS) OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMERALS, SHIELDS, AND ARROWS. THE LAYOUT

DRAWINGS SHALL BE SENT TO THE ROADWAY DESIGN DIVISION, SIGNING AND MARKING SECTION, SUITE 1300, J. K. POLK BUILDING, NASHVILLE, TN 37243-1402.

- (4) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.

- (5) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.

- (6) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND, OR BROWN BACKGROUND.

- (7) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

- (8) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.

SIGNALIZATION

- (1) EQUIPMENT AND INSTALLATION OF TRAFFIC SIGNALS SHALL COMPLY WITH TDOT STANDARD SPECIFICATIONS, SECTION 730.
- (2) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE (CITY OR COUNTY) AND SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY THE (CITY OR COUNTY).
- (3) IF RESURFACING IS INCLUDED IN THE PROJECT, SIGNAL DETECTION LOOPS SHALL BE INSTALLED BEFORE THE FINAL SURFACE IS APPLIED.
- (4) ANY SIGNAL HEADS, WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL, SHALL BE COMPLETELY COVERED.
- (5) THE CONTRACTOR SHALL CONTACT METRO NASHVILLE PUBLIC WORKS A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.
- (6) THE PROJECT ENGINEER SHALL NOTIFY THE LOCAL GOVERNMENTAL AGENCY RESPONSIBLE FOR TRAFFIC CONTROL MAINTENANCE AT LEAST ONE DAY IN ADVANCE OF THE COLD PLANING ACTIVITY AT SIGNALIZED INTERSECTIONS WHERE DETECTOR LOOPS ARE ON THE PAVEMENT. THE MAINTAINING AGENCY WILL THEN BE RESPONSIBLE FOR DISCONNECTING THE LOOP DETECTORS AND MAKING ANY NECESSARY TIMING ADJUSTMENTS IN THE SIGNAL CONTROLLER PRIOR TO THE CONSTRUCTION.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (5) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN

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GENERAL NOTES

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Roadway Improvements

N.T.S.

SHEET 2E

SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE.. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE VERTICAL PANELS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

LIGHTING

- (1) INSTALLATION AND MATERIALS SHALL COMPLY WITH SECTIONS 714 AND 917 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED MARCH 1, 2006 AND WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRIC CODE, NFPA 70.
- (2) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2-INCH SCHEDULE 40 PVC RIGID CONDUIT.
- (3) THE GROUND WIRE SHALL BE RUN INSIDE CONDUIT WITHIN STRUCTURES, SHALL BE COLORED GREEN AND HAVE THW INSULATION.
- (4) EXISTING FOUNDATIONS TO BE REMOVED A MINIMUM OF SIX INCHES BELOW GRADE.
- (5) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.
- (6) LIGHT STANDARDS SHALL BE ROUND TAPERED POLES. LENGTH SHALL BE DETERMINED BY REQUIRED MOUNTING HEIGHT.
- (7) STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.
- (8) ALL NEW ROADWAY LIGHT STANDARDS SHALL BE MOUNTED ON BASES WITH ACCESS DOOR. TRANSFORMER BASES SHALL MEET AASHTO SPECIFICATIONS AND HAVE FHWA APPROVAL. STANDARDS SHALL BE ALUMINUM WITH TRANSFORMER BASES.
- (9) BRACKET ARMS SHALL BE ROUND TAPERED TRUSS TYPE WITH STRAP MOUNTING AND LENGTHS AS SCHEDULED.
- (10) BRACKET ARM UPSWEEP SHALL BE THE SAME FOR ALL LIGHT STANDARDS OF THE SAME TYPE.

EROSION PREVENTION AND SEDIMENT CONTROL DISTURBED AREA

- (1) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
- (2) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.
- (3) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- (4) CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.
- (5) NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT. OFF-SITE BORROW OR WASTE AREAS ARE TO BE INCLUDED IN THE TOTAL DISTURBED AREA IF THE BORROW OR WASTE AREA IS EXCLUSIVE TO THE PROJECT PER TDOT'S WASTE AND BORROW MANUAL.

SEDIMENT CONTROL

- (6) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- (7) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- (8) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE

WITH MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL- VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.

- (9) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.
- (10) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.
- (11) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.
- (12) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- (13) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

INSPECTION, MAINTENANCE, REPAIR

- (14) EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.
- (15) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
- (16) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.
- (17) THE CONTRACTOR SHALL INSTALL A RAIN GAUGE EVERY LINEAR MILE AT ALL SITES WHERE CLEARING, GRUBBING, EXCAVATION, GRADING CUTTING OR FILLING IS BEING ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED. IF THE PROJECT LENGTH IS LESS THAN ONE LINEAR MILE, ONE RAIN GAUGE SHALL BE INSTALLED AT THE CENTER OF THE PROJECT OR AS INDICATED BY THE TDOT EPSC INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT EACH GAUGE IS MAINTAINED IN GOOD WORKING CONDITION, TDOT AND/OR THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION AND FORECASTED PERCENTAGE OF PRECIPITATION IN DETAILED RECORDS OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL PER GAUGE, THE ESTIMATED DURATION (OR STARTING AND ENDING TIMES), AND FORECASTED PERCENTAGE OF PRECIPITATION FOR THE PROJECT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER ON A MONTHLY BASIS. THE COST FOR THE RAIN GAUGES IS TO BE INCLUDED IN THE UNIT BID PRICES FOR OTHER ITEMS. RAIN GAUGES SHALL BE AS SPECIFIED IN THE APPROVED TDOT RAINFALL MONITORING PLAN.
- (18) INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE/QUALITY CONTROL SITE ASSESSMENT OF EPSC SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION'S COMPREHENSIVE INSPECTION OFFICE GUIDELINES.
- (19) OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- (20) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

MATERIALS

- (21) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

LITTER, DEBRIS, WASTE, PETROLEUM

- (22) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.
- (23) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

SPECIAL NOTES GRADING

- (1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.
- (2) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
- (3) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

PAVEMENT RESURFACING

- (1) TRAFFIC WILL BE ALLOWED TO TEMPORARILY DRIVE ON THE MILLED SURFACE OF THE ROADWAY UNDER THE FOLLOWING CONDITIONS ONLY:
 - A. THE MILLED SURFACE IS FINE TEXTURED. THE FINE TEXTURE SHALL BE OBTAINED BY A MILLING MACHINE UTILIZING A MILLING HEAD WITH TEETH SPACING 3/8" OR LESS OPERATING AT LESS THAN 80 FEET PER MINUTE.
 - B. THE SURFACE SHALL BE SWEEPED AND CLEANED OF ALL LOOSE MATERIALS.
 - C. THE DIFFERENCE IN ELEVATION BETWEEN THE MILLED SURFACE AND THE ADJACENT LANE SHALL NOT EXCEED 1 1/2 INCHES.
 - D. THE MILLED SURFACE SHALL BE PAVED WITHIN 48 HOURS.
 - E. RAIN OR INCLEMENT WEATHER IS NOT EXPECTED OR FORECASTED WITHIN 48 HOURS AFTER MILLING.
 - F. ALL APPLICABLE SIGNING IS INSTALLED IN ACCORDANCE WITH THE MUTCD SIGNING SHALL INCLUDE MOTORCYCLE WARNING SIGNS (TN-64) PLACED IN ADVANCE OF ANY MILLED AREAS.
 - G. IF RAVELING OR DETERIORATION OF THE MILLED SURFACE IS OCCURRING WHILE TRAFFIC IS DRIVING ON THE MILLED SURFACE, THEN THIS PRACTICE WILL NOT BE ALLOWED AND PAVING SHALL BE COMPLETED IMMEDIATELY AFTER MILLING.
 - H. ONLY ONE LANE IN EACH DIRECTION SHALL HAVE A MILLED SURFACE AT ONE TIME.

FILE NO.	10-0606
DATE:	09/23/14
DESIGNED BY:	LEA, RPM
DRAWN BY:	LEA, RPM
CHECKED BY:	LEA, RPM
REVISION BLOCK	
DATE:	



Littlejohn

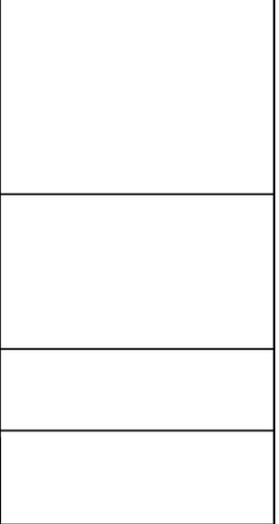
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Transportation Consultants, LLC
 1101 17th Avenue South
 Nashville, Tennessee 37212

**PRELIMINARY PLANS
NOT FOR
CONSTRUCTION**



METROPOLITAN GOVERNMENT
 OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

INTERSECTION NO. 2345
 2355, 2410

GENERAL NOTES

Broadway and 21st Avenue
 Roadway Improvements

N.T.S.

SHEET 2F

SIGNALIZATION

- (1) THE DESIGN OF TRAFFIC SIGNAL SUPPORT POLES, MAST ARMS, STRAIN POLES, ETC. SHALL BE IN CONFORMANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY 1.
- (2) THE TRAFFIC SIGNAL SUPPORT POLES SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS (CURRENT EDITION WITH ADDENDA). WIND LOADS SHALL BE BASED ON A BASIC WIND SPEED OF 90 MPH WITH A RECURRENCE INTERVAL OF 50 YEARS. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY I. FATIGUE LOADS ARE BASED ON THE REQUIREMENTS OF SECTION 11.7 OF THE SUBJECT AASHTO DOCUMENT AND THE FOLLOWING LOADS:
 GALLOPING - NO DESIGN NECESSARY. VIBRATION DAMPENERS SHALL BE USED ON ALL CANTILEVERED ARMS THAT ARE 50' OR LONGER.
 VORTEX SHEDDING - NOT APPLICABLE ON TRAFFIC SIGNAL SUPPORTS WITH A TAPER OF AT LEAST 0.14 IN/FT.
 NATURAL WIND GUSTS - THE YEARLY MEAN WIND SPEED FOR NATURAL WIND GUSTS SHALL BE 11.2 MPH.
 THE TRAFFIC SIGNAL SUPPORT POLES SHALL BE POLES WITH CURVED CANTILEVERED ARM(S) IN ACCORDANCE WITH METRO PUBLIC WORKS. FOR POLE AND ARM DETAILS, CONTACT MIKE HIRTZER AT 615-880-3261.

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

- (1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 8, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

SPECIAL PROJECT NOTES

- (1) ALL DRIVEWAY RAMPS TO BE CONSTRUCTED IN ACCORDANCE WITH METRO STANDARD DRAWING NO. 322 AND 324.
- (2) CONTRACTOR TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH LOCAL BUSINESS OWNERS.
- (3) CONSTRUCTOR TO CLEAN ALL EXISTING INLETS PRIOR TO CONNECTING TO THE EXISTING SYSTEM.

FILE NO.	10-0606
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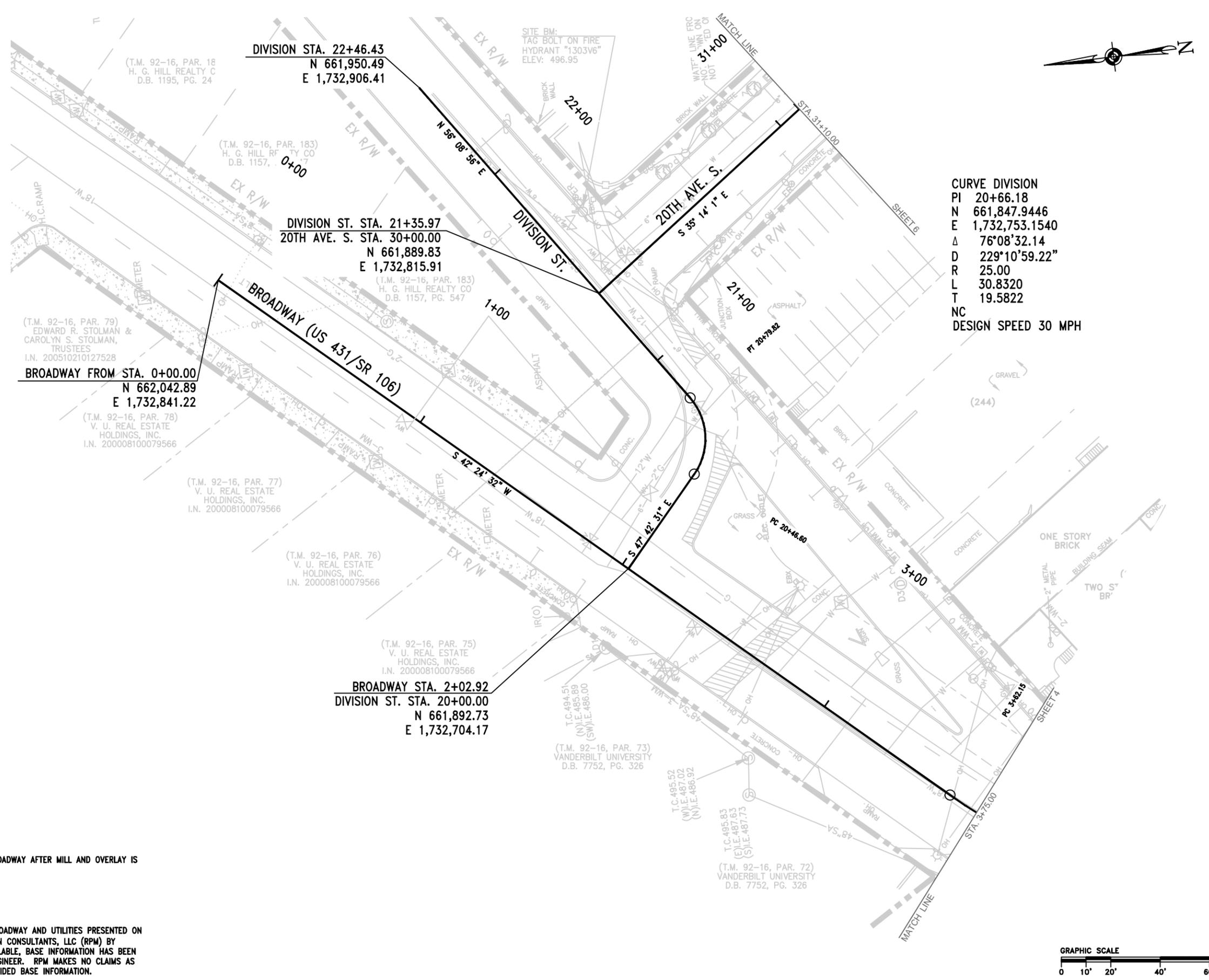
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 OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION
 INTERSECTION NO. 2345
 2355, 2410

GENERAL NOTES

Broadway and 21st Avenue
 Roadway Improvements

N.T.S.

SHEET 2G



CURVE DIVISION
 PI 20+66.18
 N 661,847.9446
 E 1,732,753.1540
 Δ 76°08'32.14
 D 229°10'59.22"
 R 25.00
 L 30.8320
 T 19.5822
 NC
 DESIGN SPEED 30 MPH

DIVISION STA. 22+46.43
 N 661,950.49
 E 1,732,906.41

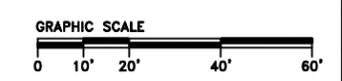
DIVISION ST. STA. 21+35.97
20TH AVE. S. STA. 30+00.00
 N 661,889.83
 E 1,732,815.91

BROADWAY FROM STA. 0+00.00
 N 662,042.89
 E 1,732,841.22

BROADWAY STA. 2+02.92
DIVISION ST. STA. 20+00.00
 N 661,892.73
 E 1,732,704.17

NOTES:
 1. ALL UTILITY COVERS NEED TO BE FLUSH WITH ROADWAY AFTER MILL AND OVERLAY IS COMPLETE.

SPECIAL NOTE:
 THE BASE SURVEY AND DESIGN INFORMATION FOR ROADWAY AND UTILITIES PRESENTED ON THIS PLAN WERE PROVIDED TO RPM TRANSPORTATION CONSULTANTS, LLC (RPM) BY LITTLEJOHN ENGINEERING ASSOCIATES. WHERE AVAILABLE, BASE INFORMATION HAS BEEN SUPPLEMENTED BY FIELD OBSERVATIONS BY THE ENGINEER. RPM MAKES NO CLAIMS AS TO THE COMPLETENESS OR ACCURACY OF THE PROVIDED BASE INFORMATION.



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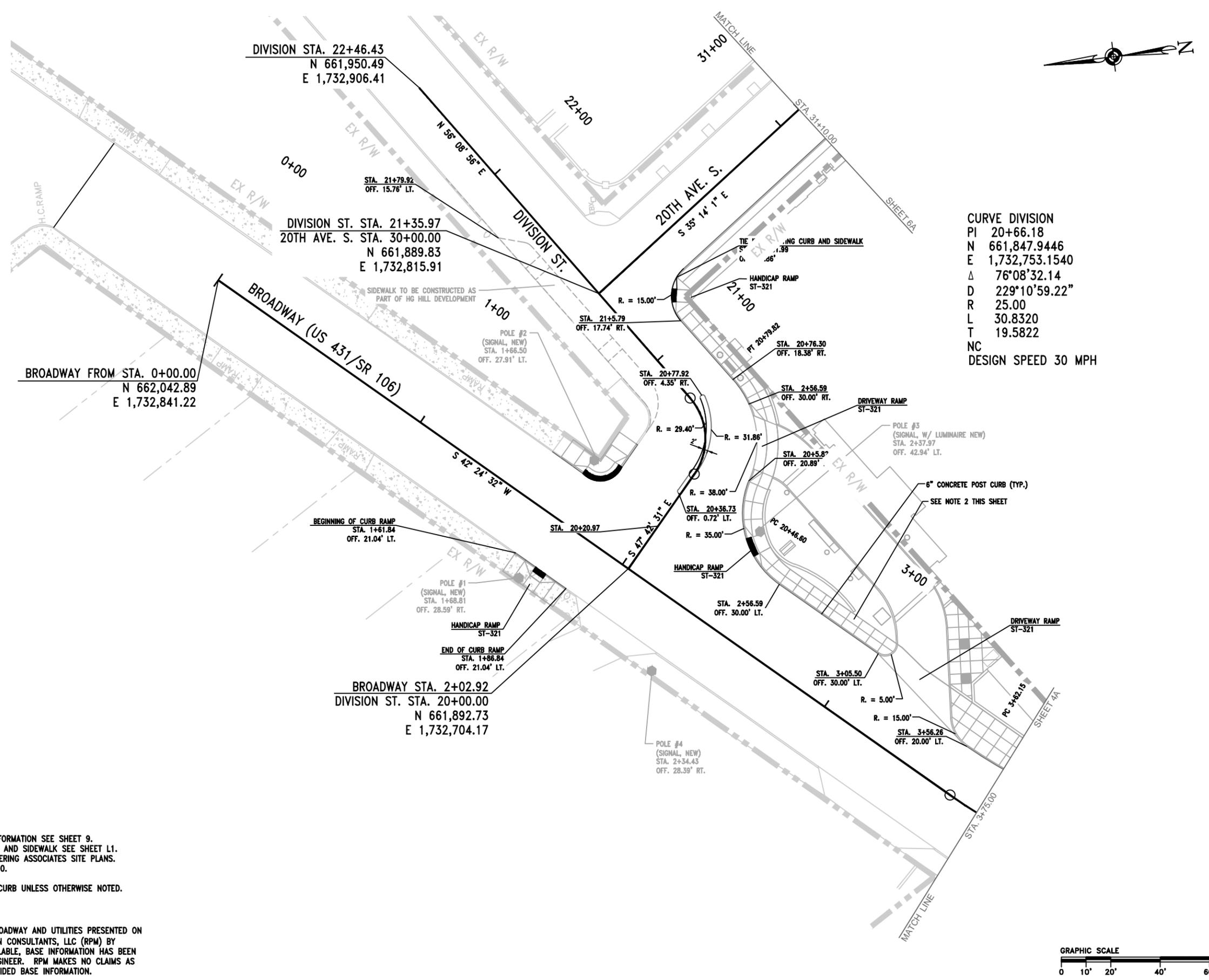
INTERSECTION NO. 2345

PRESENT LAYOUT

Broadway at Division Street

SCALE: 1"=20'

SHEET 3



CURVE DIVISION
 PI 20+66.18
 N 661,847.9446
 E 1,732,753.1540
 Δ 76°08'32.14
 D 229°10'59.22"
 R 25.00
 L 30.8320
 T 19.5822
 NC
 DESIGN SPEED 30 MPH

FILE NO.	10-0606
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 OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

INTERSECTION NO. 2345

PROPOSED LAYOUT

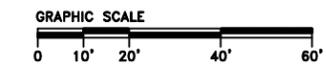
Broadway at Division Street

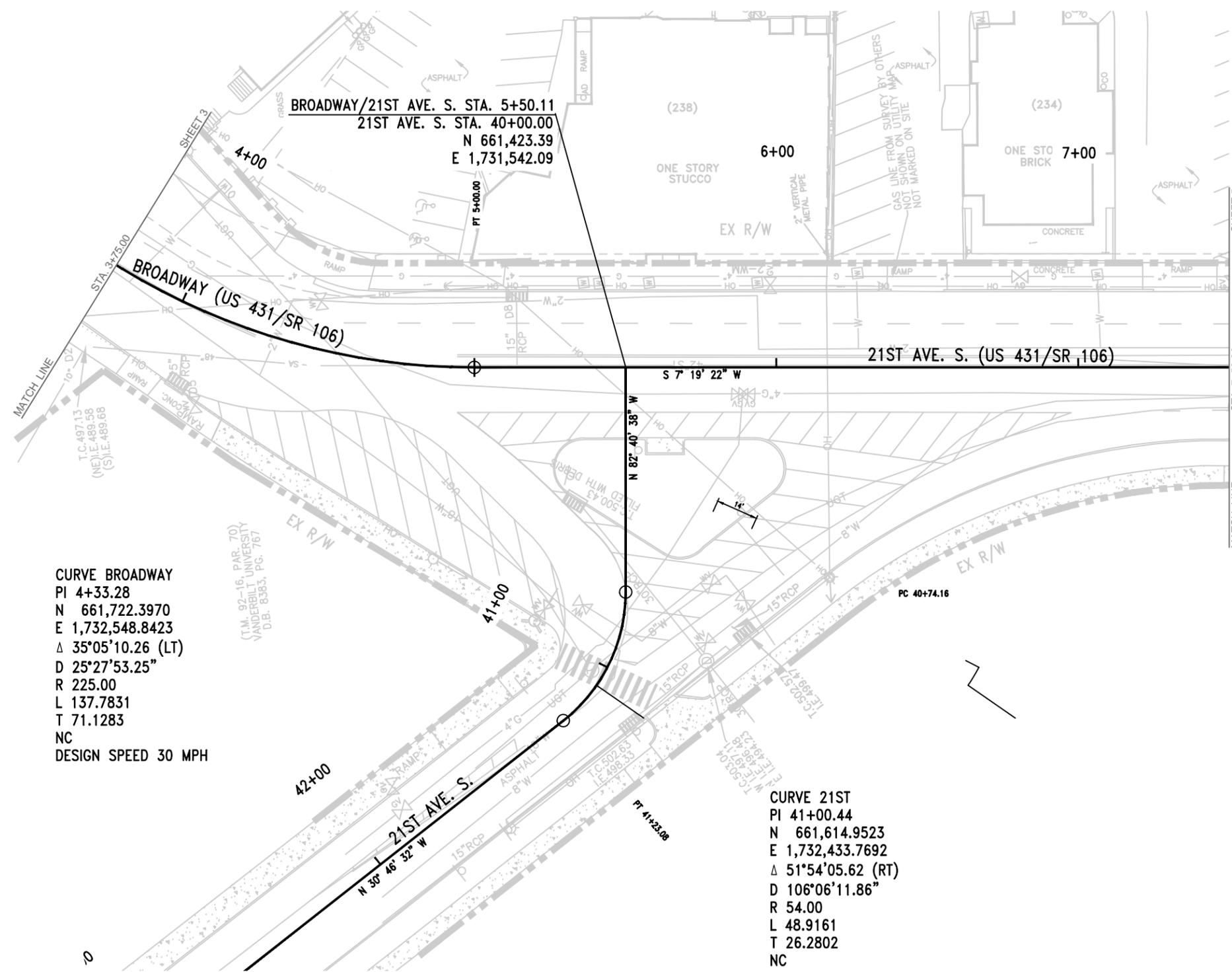
SCALE: 1"=20'

SHEET 3A

- NOTES:**
1. FOR DRAINAGE AND DEVELOPMENT SITE PLAN INFORMATION SEE SHEET 9.
 2. FOR LANDSCAPE PLANS, PAVEMENT TREATMENTS, AND SIDEWALK SEE SHEET L1.
 3. FOR SITE DEVELOPMENT SEE LITTLEJOHN ENGINEERING ASSOCIATES SITE PLANS.
 4. FOR LIMITS OF MILL AND OVERLAY SEE SHEET 10.
 5. FOR SIGNAL DESIGN, SEE SHEETS 13-15A.
 6. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

SPECIAL NOTE:
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CURVE BROADWAY
 PI 4+33.28
 N 661,722.3970
 E 1,732,548.8423
 Δ 35°05'10.26 (LT)
 D 25°27'53.25"
 R 225.00
 L 137.7831
 T 71.1283
 NC
 DESIGN SPEED 30 MPH

CURVE 21ST
 PI 41+00.44
 N 661,614.9523
 E 1,732,433.7692
 Δ 51°54'05.62 (RT)
 D 106°06'11.86"
 R 54.00
 L 48.9161
 T 26.2802
 NC



FILE NO.	10-0606
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**PRELIMINARY PLANS
 NOT FOR
 CONSTRUCTION**

METROPOLITAN GOVERNMENT
 OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

INTERSECTION NO. 2355

PRESENT LAYOUT

21st Avenue South at
 Broadway

SCALE: 1"=20'

SHEET 4

NOTES:
 1. ALL UTILITY COVERS NEED TO BE FLUSH WITH ROADWAY AFTER MILL AND OVERLAY IS COMPLETE.

SPECIAL NOTE:
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FILE NO.	10-0606
DATE:	09/23/14
DESIGNED BY:	KDR
DRAWN BY:	DKC
CHECKED BY:	DJS

REVISION BLOCK

DATE:		



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METROPOLITAN GOVERNMENT
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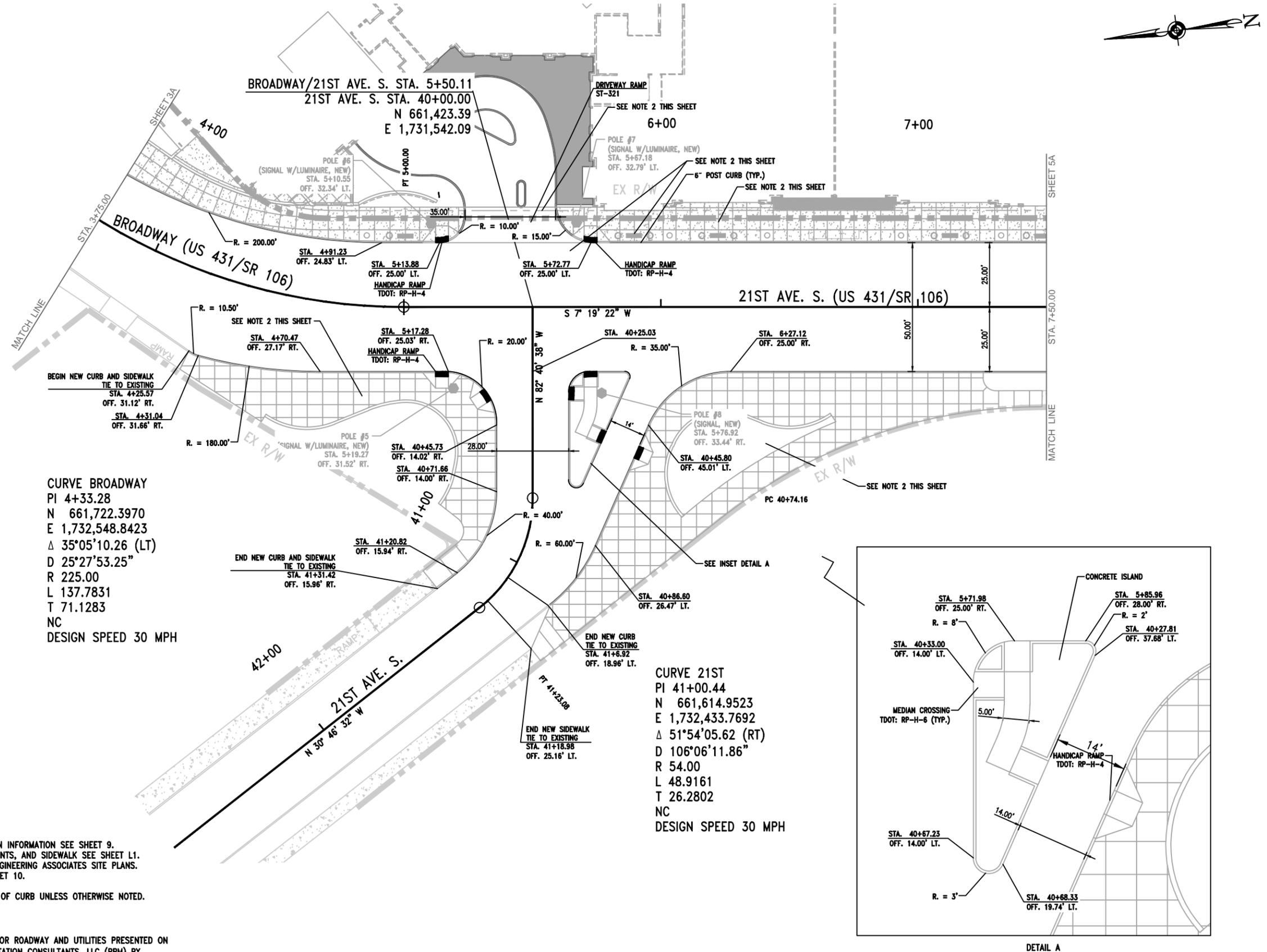
INTERSECTION NO. 2355

PROPOSED LAYOUT

21st Avenue South at
 Broadway

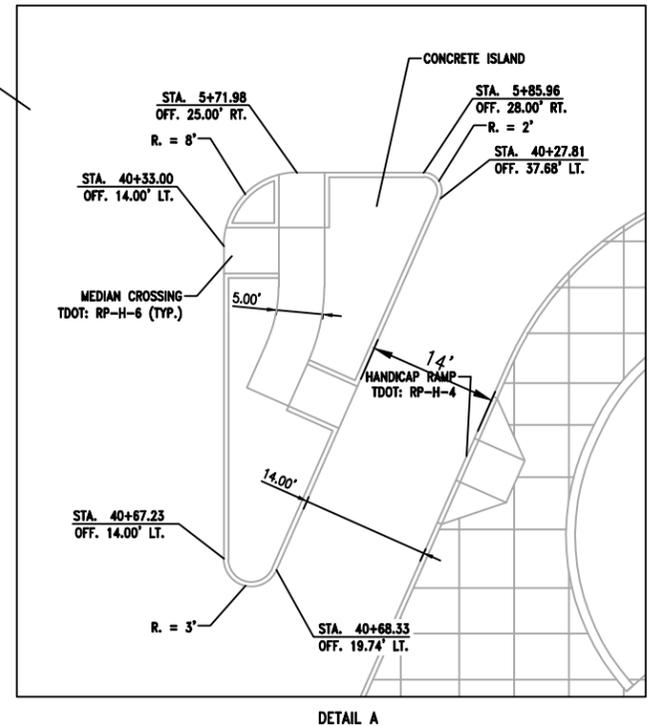
SCALE: 1"=20'

SHEET 4A



CURVE BROADWAY
 PI 4+33.28
 N 661,722.3970
 E 1,732,548.8423
 Δ 35°05'10.26 (LT)
 D 25°27'53.25"
 R 225.00
 L 137.7831
 T 71.1283
 NC
 DESIGN SPEED 30 MPH

CURVE 21ST
 PI 41+00.44
 N 661,614.9523
 E 1,732,433.7692
 Δ 51°54'05.62 (RT)
 D 106°06'11.86"
 R 54.00
 L 48.9161
 T 26.2802
 NC
 DESIGN SPEED 30 MPH



- NOTES:**
1. FOR DRAINAGE AND DEVELOPMENT SITE PLAN INFORMATION SEE SHEET 9.
 2. FOR LANDSCAPE PLANS, PAVEMENT TREATMENTS, AND SIDEWALK SEE SHEET L1.
 3. FOR SITE DEVELOPMENT SEE LITTLEJOHN ENGINEERING ASSOCIATES SITE PLANS.
 4. FOR LIMITS OF MILL AND OVERLAY SEE SHEET 10.
 5. FOR SIGNAL DESIGN, SEE SHEETS 13-15A.
 6. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

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 ENGINEERING DIVISION

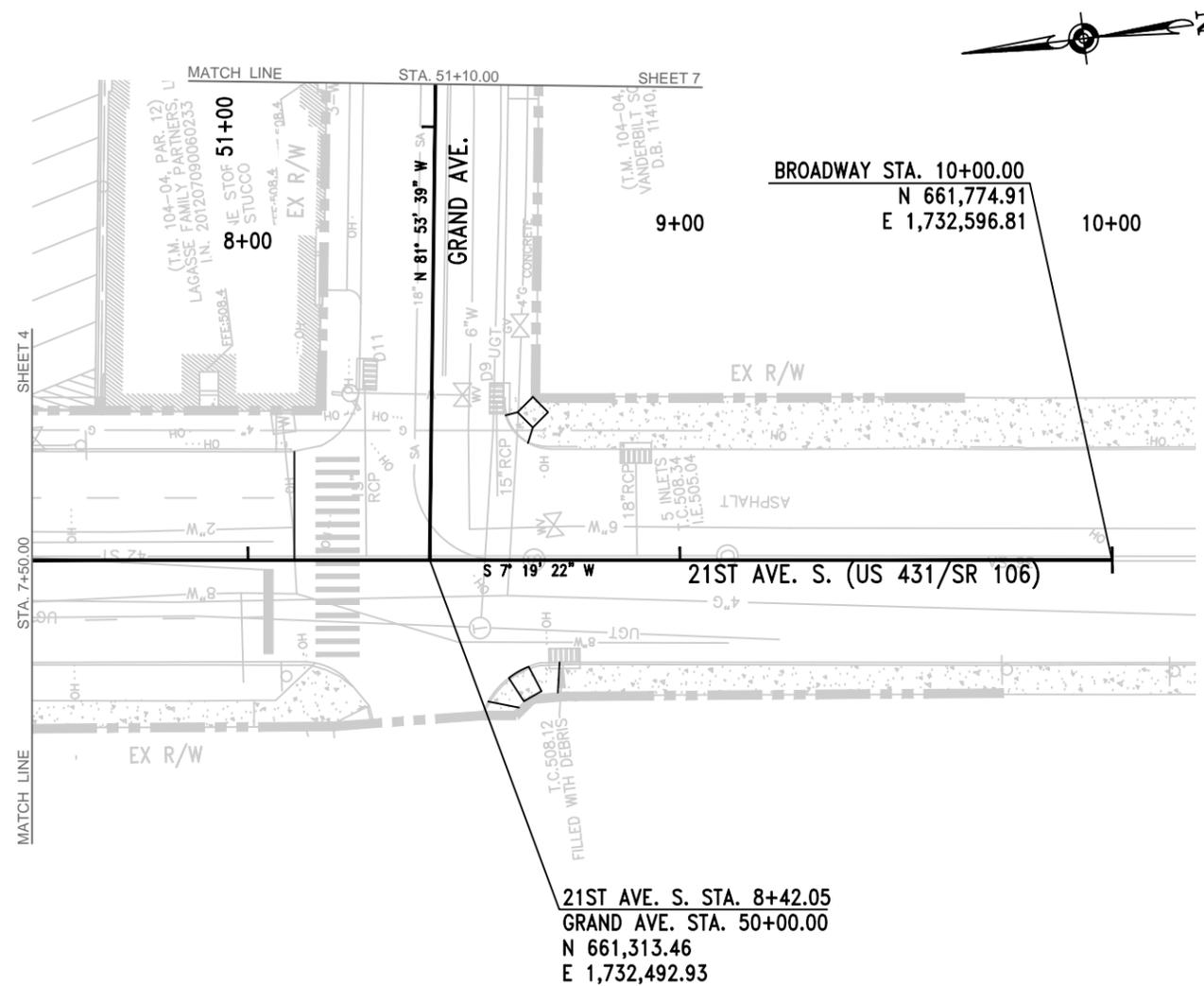
INTERSECTION NO. 2410

PRESENT LAYOUT

21st Avenue South at
 Grand Avenue

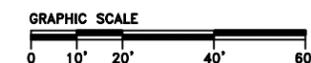
SCALE: 1"=20'

SHEET 5



NOTES:
 1. ALL UTILITY COVERS NEED TO BE FLUSH WITH ROADWAY AFTER MILL AND OVERLAY IS COMPLETE.

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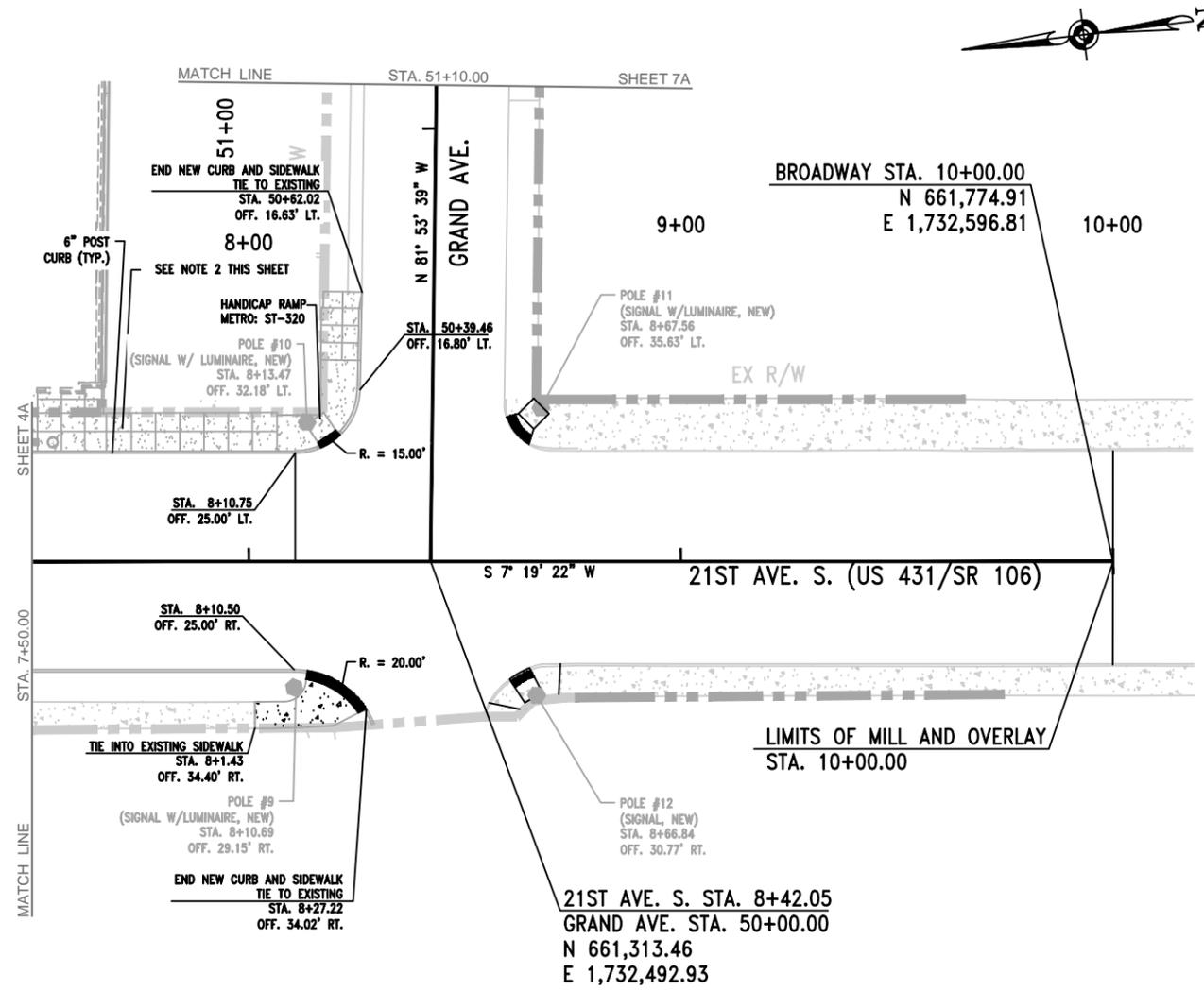
INTERSECTION NO. 2410

PROPOSED LAYOUT

21st Avenue South at
 Grand Avenue

SCALE: 1"=20'

SHEET 5A



- NOTES:**
1. FOR DRAINAGE AND DEVELOPMENT SITE PLAN INFORMATION SEE SHEET 9.
 2. FOR LANDSCAPE PLANS, PAVEMENT TREATMENTS, AND SIDEWALK SEE SHEET L1.
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PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

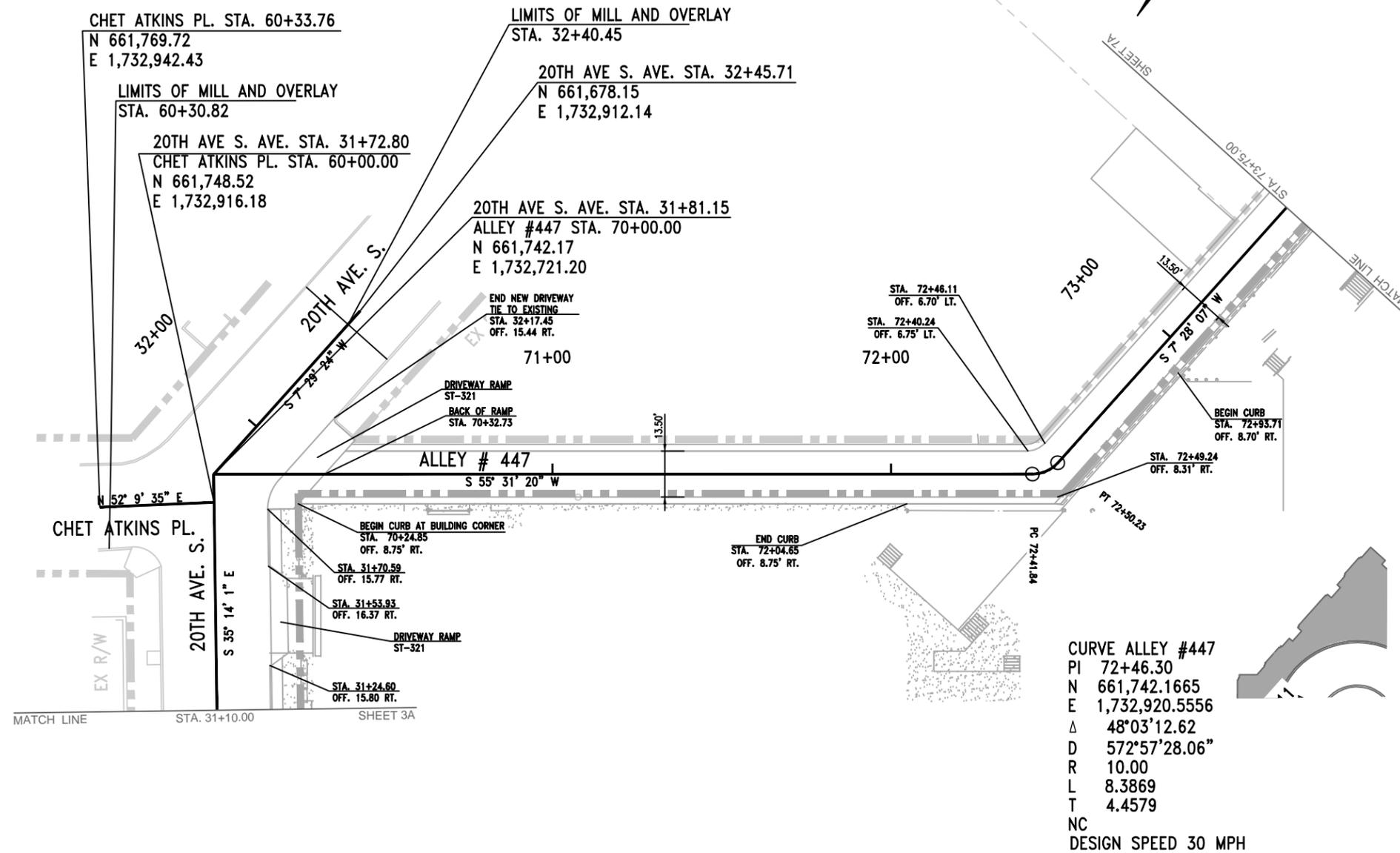
INTERSECTION NO. 2345

PROPOSED LAYOUT

Broadway at Division Street

SCALE: 1"=20'

SHEET 6A



- NOTES:**
1. FOR DRAINAGE AND DEVELOPMENT SITE PLAN INFORMATION SEE SHEET 9.
 2. FOR LANDSCAPE PLANS, PAVEMENT TREATMENTS, AND SIDEWALK SEE SHEET L1.
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 ENGINEERING DIVISION

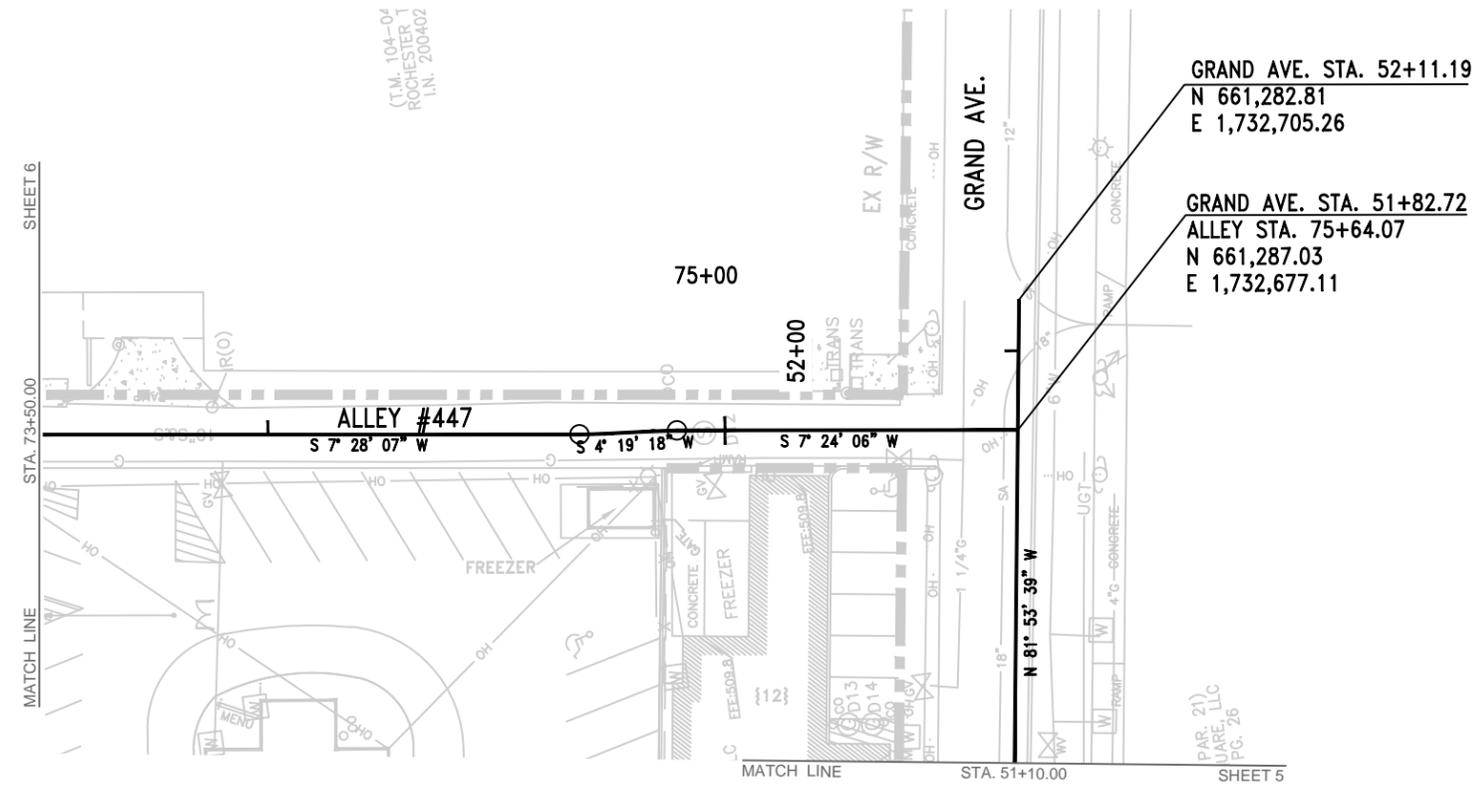
INTERSECTION NO. 2345

PRESENT LAYOUT

Broadway at Division Street

SCALE: 1"=20'

SHEET 7



NOTES:
 1. ALL UTILITY COVERS NEED TO BE FLUSH WITH ROADWAY AFTER MILL AND OVERLAY IS COMPLETE.

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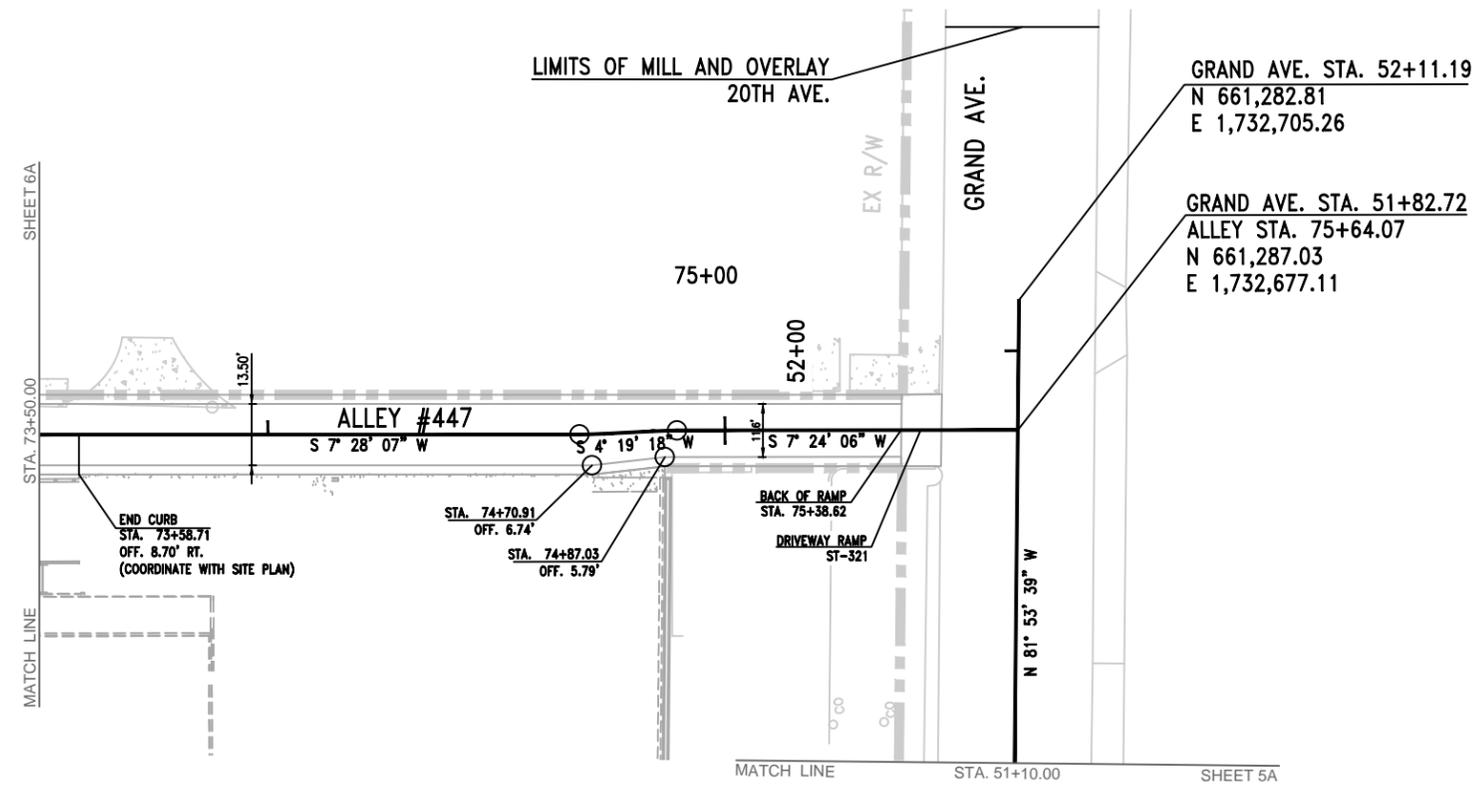
INTERSECTION NO. 2345

PROPOSED LAYOUT

Broadway at Division Street

SCALE: 1"=20'

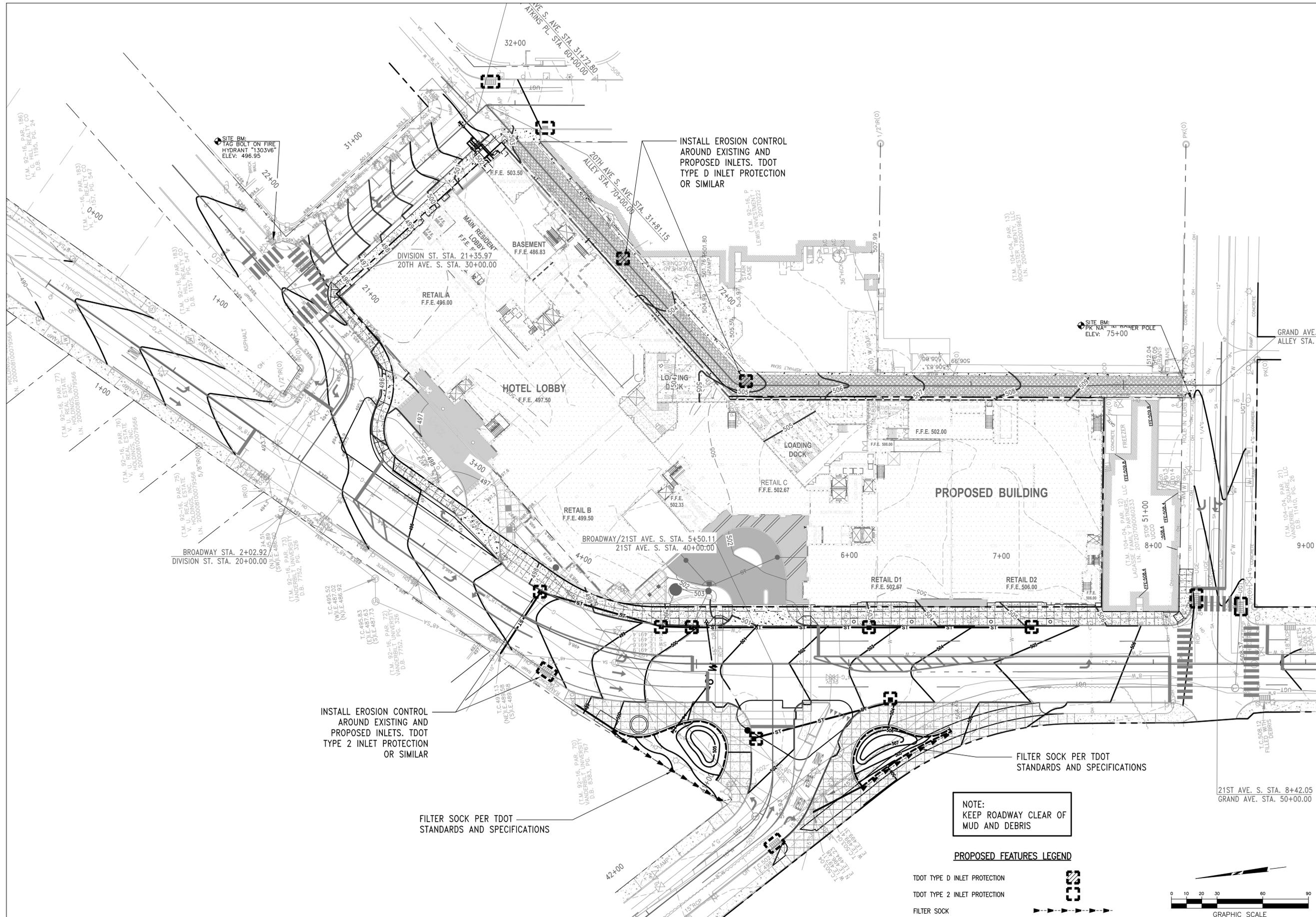
SHEET 7A



- NOTES:**
1. FOR DRAINAGE AND DEVELOPMENT SITE PLAN INFORMATION SEE SHEET 9.
 2. FOR LANDSCAPE PLANS, PAVEMENT TREATMENTS, AND SIDEWALK SEE SHEET L1.
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FILE NO.	10-0606
DATE:	08/21/2014
DESIGNED BY:	DPP
DRAWN BY:	EAH
CHECKED BY:	GBB

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ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES, ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES, PROPOSED RULE, PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

APPROVAL OF THIS TRAFFIC SIGNAL PLAN DESIGNATES APPROVAL OF THE DESIGN ONLY. APPROVAL OF THE DESIGN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO OBTAIN THE APPROPRIATE PERMITS IN ORDER TO INSTALL THE TRAFFIC SIGNAL.

METROPOLITAN GOVERNMENT
 OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

INTERSECTION NO. 2345
 2355, 2410

EROSION PREVENTION AND SEDIMENT CONTROL

Broadway at Division Street

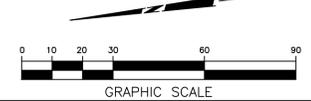
SCALE: 1"=30'

SHEET 8

NOTE:
 KEEP ROADWAY CLEAR OF
 MUD AND DEBRIS

PROPOSED FEATURES LEGEND

- TDOT TYPE D INLET PROTECTION 
- TDOT TYPE 2 INLET PROTECTION 
- FILTER SOCK 



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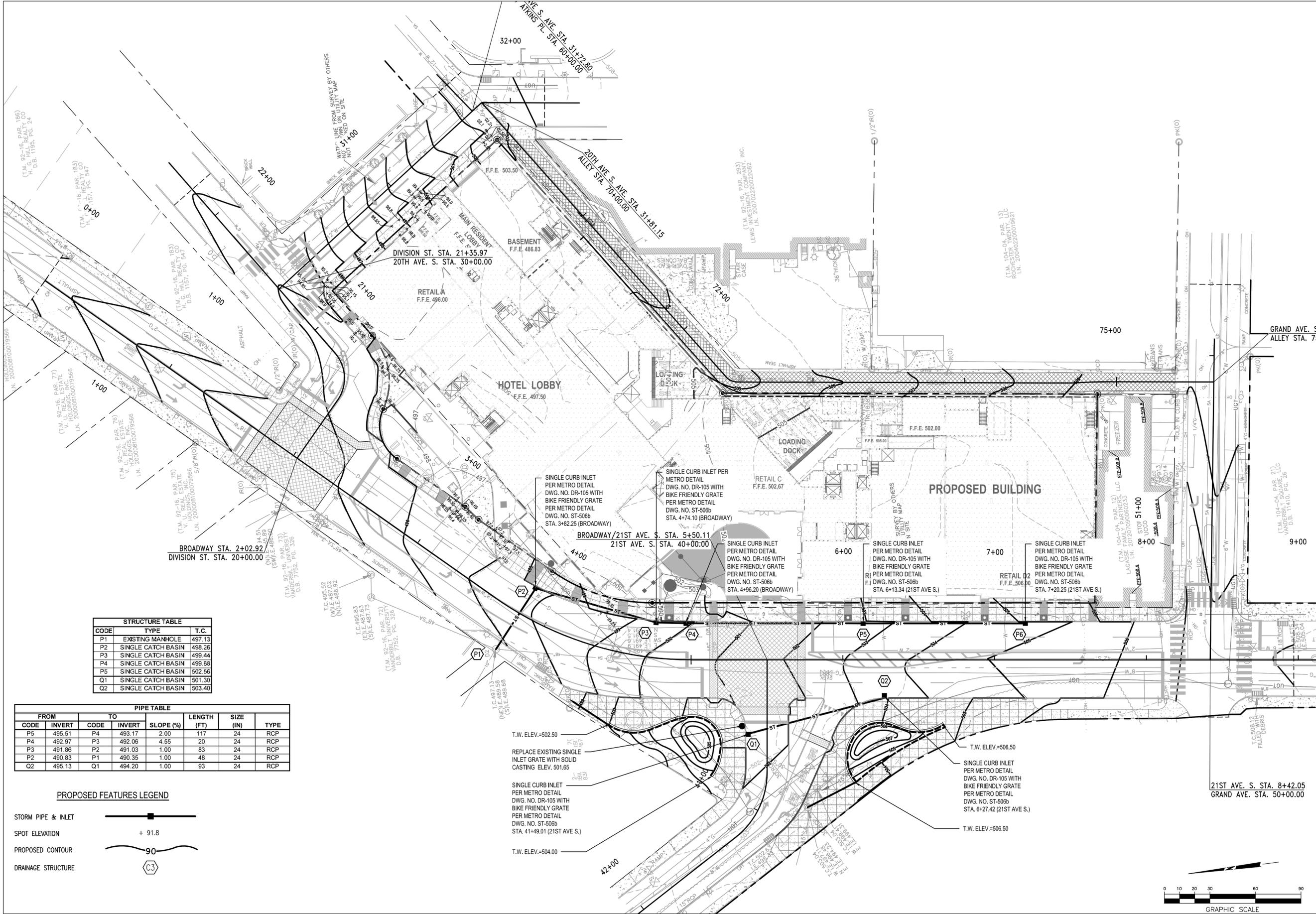
INTERSECTION NO. 2345
2355, 2410

**PROPOSED
GRADING AND
DRAINAGE**

Broadway at Division Street

SCALE: 1"=30'

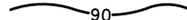
SHEET 9

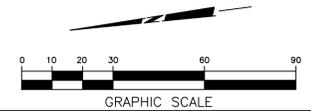


CODE	TYPE	T.C.
P1	EXISTING MANHOLE	497.13
P2	SINGLE CATCH BASIN	498.26
P3	SINGLE CATCH BASIN	499.44
P4	SINGLE CATCH BASIN	499.88
P5	SINGLE CATCH BASIN	502.56
Q1	SINGLE CATCH BASIN	501.30
Q2	SINGLE CATCH BASIN	503.40

FROM		TO		SLOPE (%)	LENGTH (FT)	SIZE (IN)	TYPE
CODE	INVERT	CODE	INVERT				
P5	495.51	P4	493.17	2.00	117	24	RCP
P4	492.97	P3	492.06	4.55	20	24	RCP
P3	491.86	P2	491.03	1.00	83	24	RCP
P2	490.83	P1	490.35	1.00	48	24	RCP
Q2	495.13	Q1	494.20	1.00	93	24	RCP

PROPOSED FEATURES LEGEND

- STORM PIPE & INLET 
- SPOT ELEVATION  + 91.8
- PROPOSED CONTOUR  90
- DRAINAGE STRUCTURE  C3



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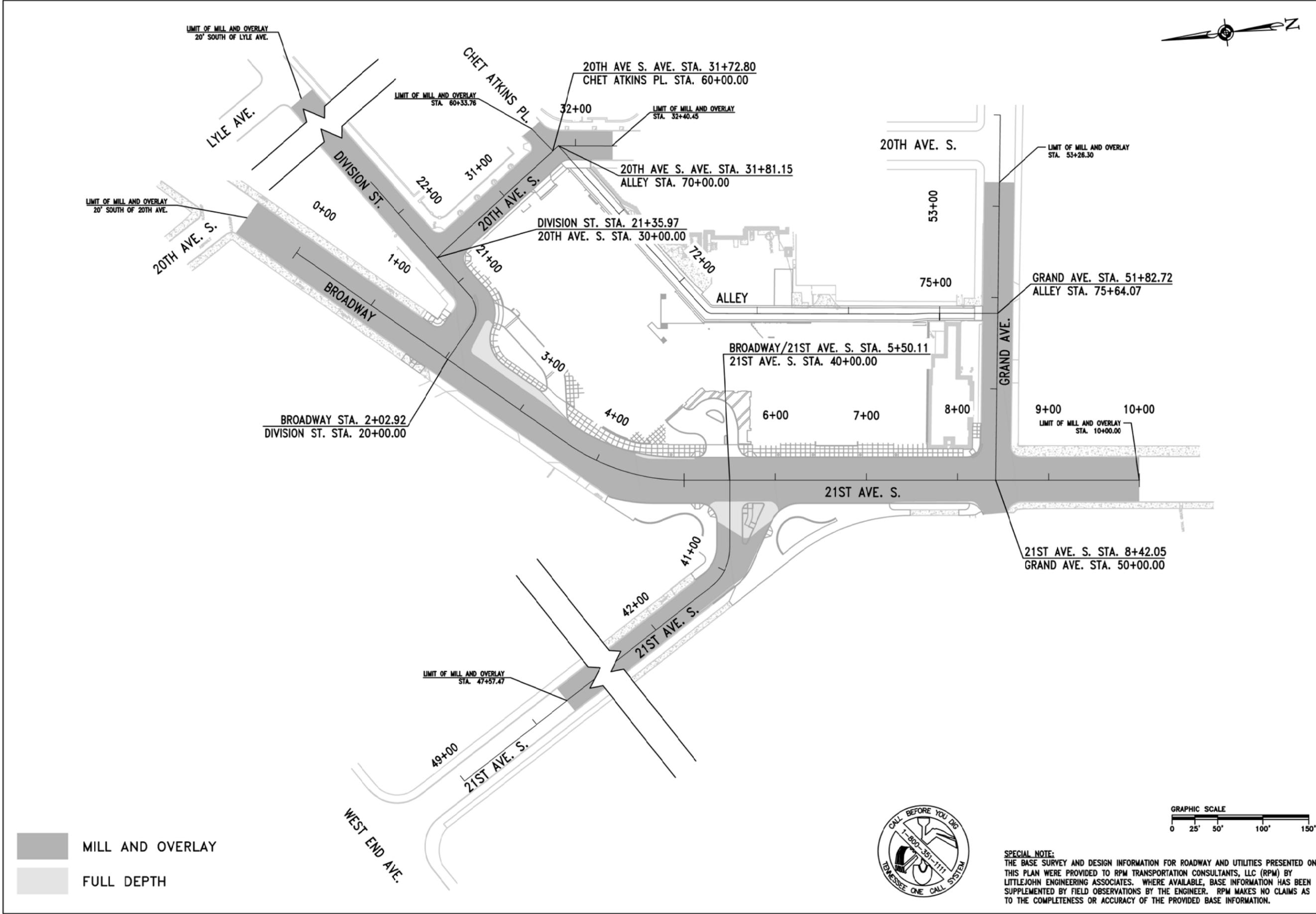
INTERSECTION NO. 2345,
 2355, 2410

**MILLING AND
 OVERLAY PLAN**

Buckingham Development

SCALE: 1"=50'

SHEET 10



 MILL AND OVERLAY
 FULL DEPTH



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INTERSECTION NO. 2345,
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TRAFFIC CONTROL
 VEHICULAR TRAFFIC
 PHASE 2 PLAN

Buckingham Development

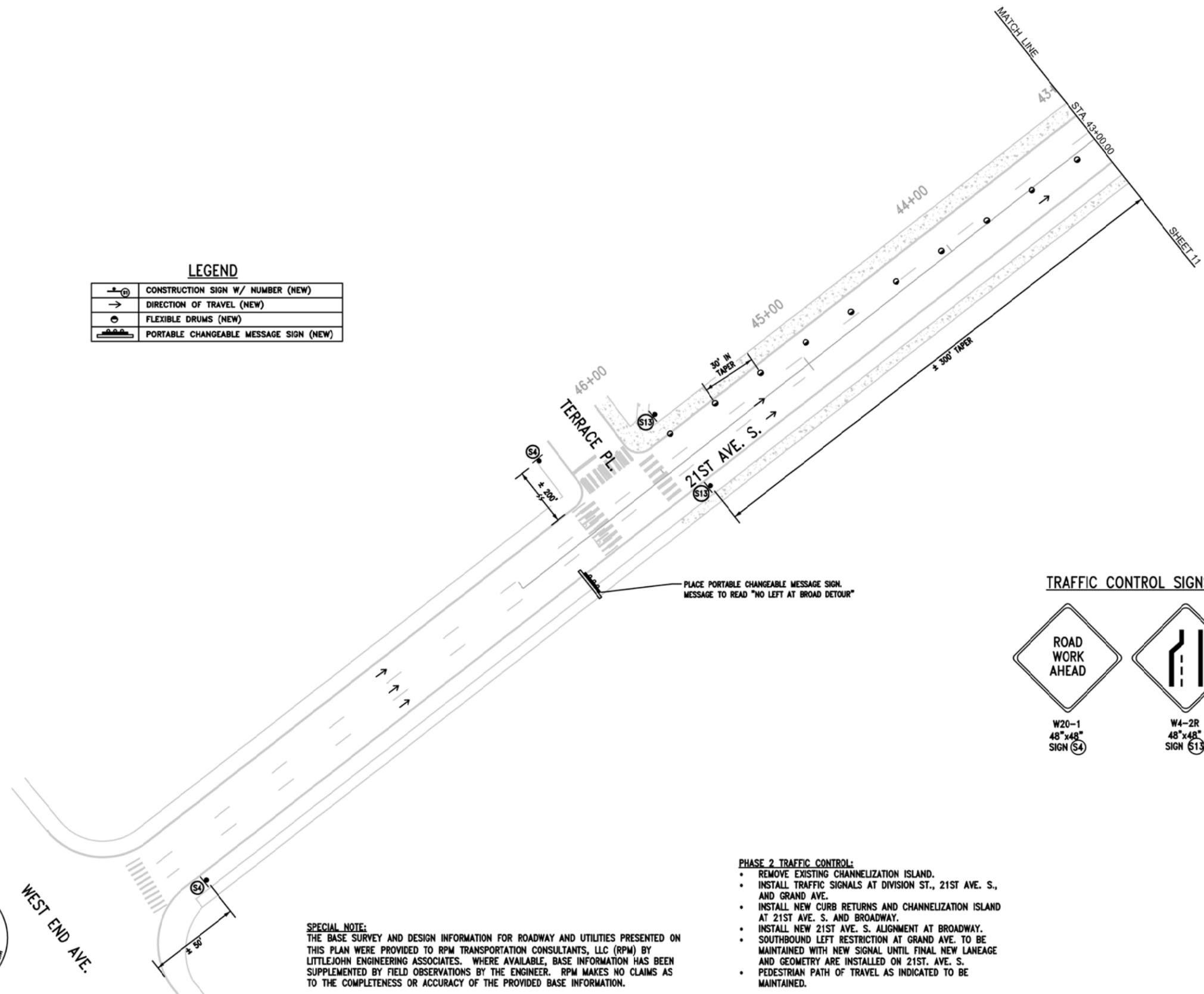
SCALE: 1"=30'

SHEET 11A



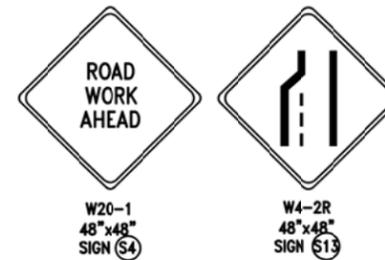
LEGEND

	CONSTRUCTION SIGN W/ NUMBER (NEW)
	DIRECTION OF TRAVEL (NEW)
	FLEXIBLE DRUMS (NEW)
	PORTABLE CHANGEABLE MESSAGE SIGN (NEW)



PLACE PORTABLE CHANGEABLE MESSAGE SIGN.
 MESSAGE TO READ "NO LEFT AT BROAD DETOUR"

TRAFFIC CONTROL SIGNS



PHASE 2 TRAFFIC CONTROL:

- REMOVE EXISTING CHANNELIZATION ISLAND.
- INSTALL TRAFFIC SIGNALS AT DIVISION ST., 21ST AVE. S., AND GRAND AVE.
- INSTALL NEW CURB RETURNS AND CHANNELIZATION ISLAND AT 21ST AVE. S. AND BROADWAY.
- INSTALL NEW 21ST AVE. S. ALIGNMENT AT BROADWAY.
- SOUTHBOUND LEFT RESTRICTION AT GRAND AVE. TO BE MAINTAINED WITH NEW SIGNAL UNTIL FINAL NEW LANEAGE AND GEOMETRY ARE INSTALLED ON 21ST AVE. S.
- PEDESTRIAN PATH OF TRAVEL AS INDICATED TO BE MAINTAINED.

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WEST END AVE.

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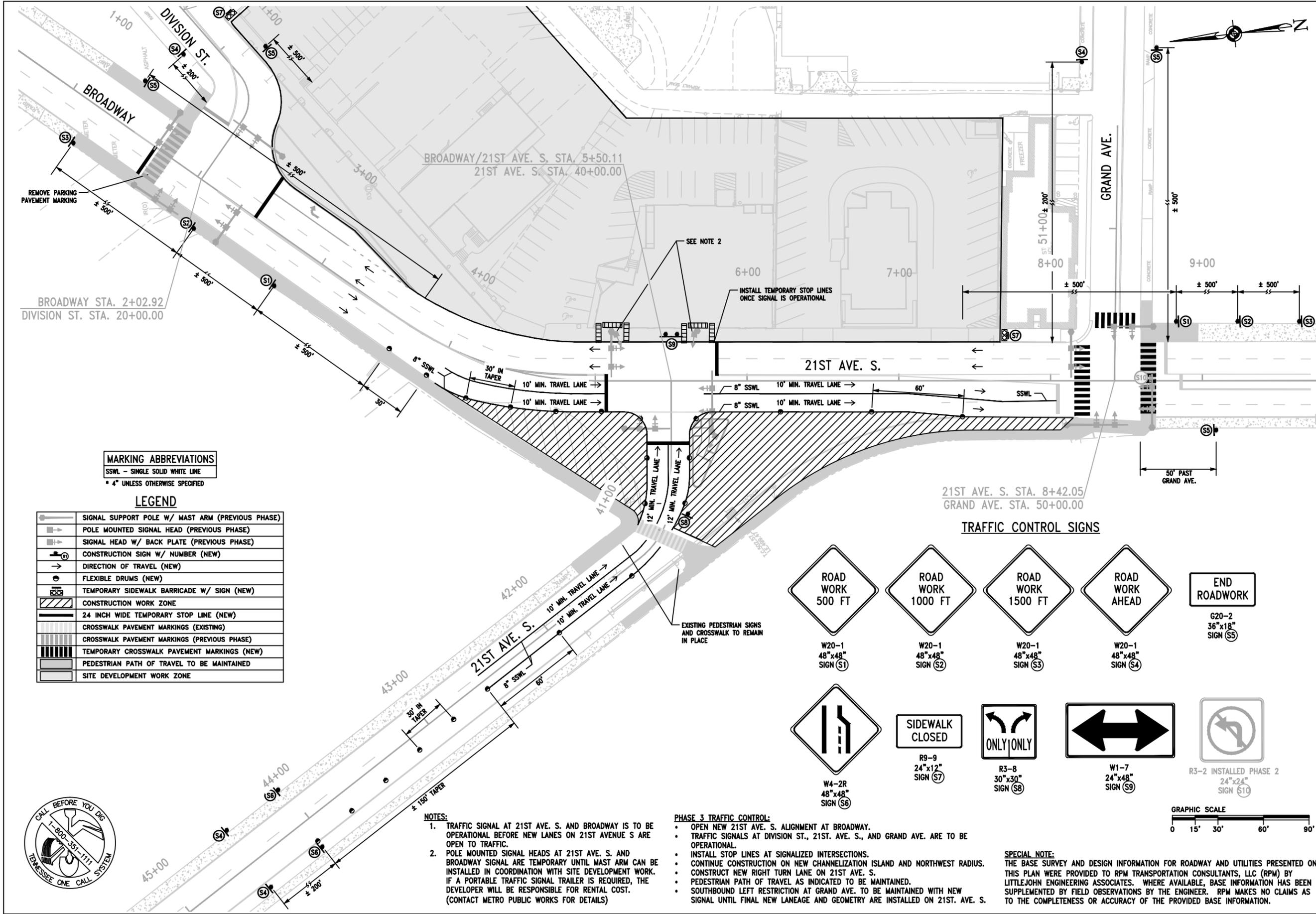
INTERSECTION NO. 2345,
2355, 2410

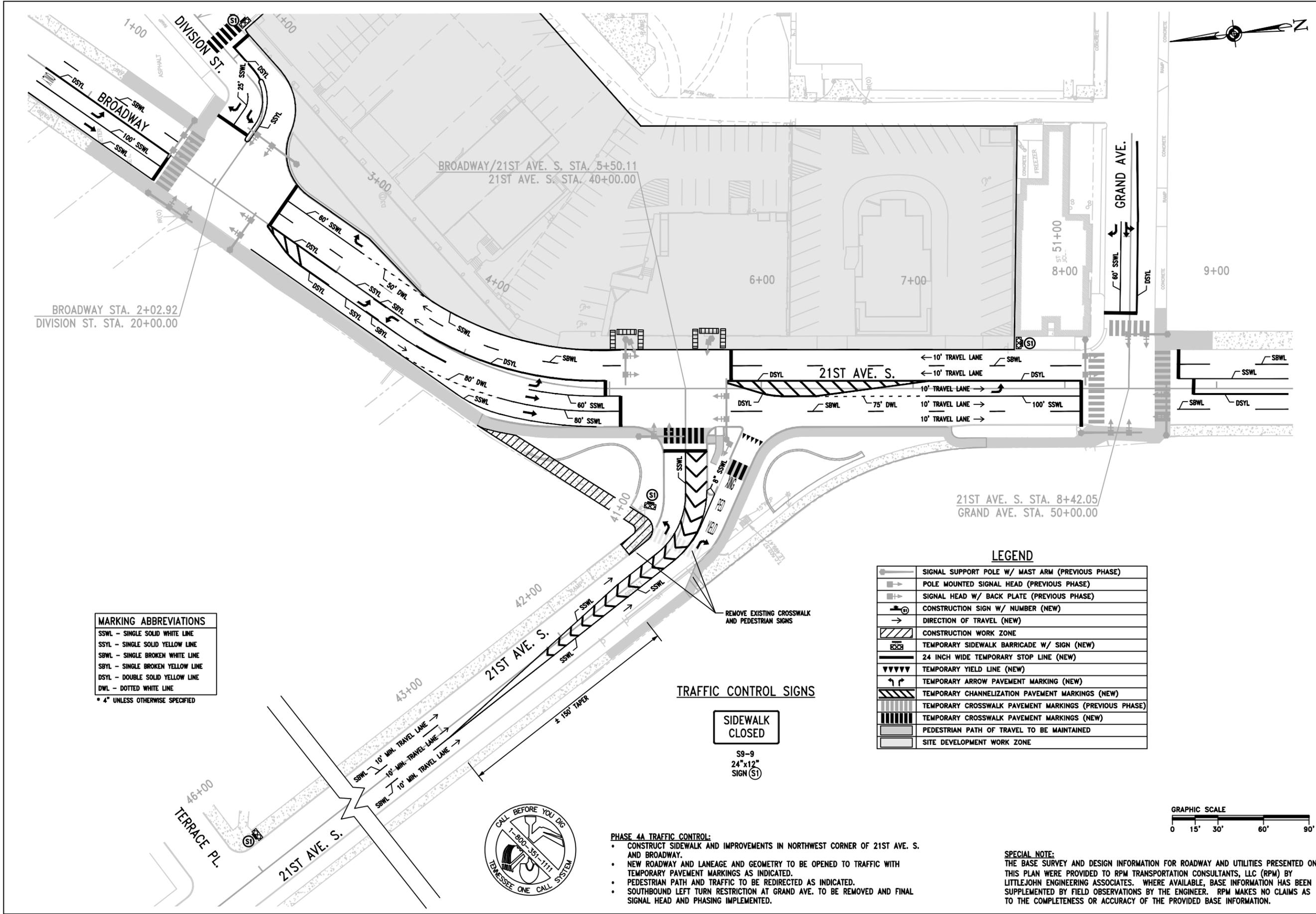
TRAFFIC CONTROL
VEHICULAR TRAFFIC
PHASE 3 PLAN

Buckingham Development

SCALE: 1"=30'

SHEET 11B





MARKING ABBREVIATIONS

SSWL - SINGLE SOLID WHITE LINE
 SSYL - SINGLE SOLID YELLOW LINE
 SBWL - SINGLE BROKEN WHITE LINE
 SBYL - SINGLE BROKEN YELLOW LINE
 DSYL - DOUBLE SOLID YELLOW LINE
 DWL - DOTTED WHITE LINE

* 4" UNLESS OTHERWISE SPECIFIED

LEGEND

[Symbol]	SIGNAL SUPPORT POLE W/ MAST ARM (PREVIOUS PHASE)
[Symbol]	POLE MOUNTED SIGNAL HEAD (PREVIOUS PHASE)
[Symbol]	SIGNAL HEAD W/ BACK PLATE (PREVIOUS PHASE)
[Symbol]	CONSTRUCTION SIGN W/ NUMBER (NEW)
[Symbol]	DIRECTION OF TRAVEL (NEW)
[Symbol]	CONSTRUCTION WORK ZONE
[Symbol]	TEMPORARY SIDEWALK BARRICADE W/ SIGN (NEW)
[Symbol]	24 INCH WIDE TEMPORARY STOP LINE (NEW)
[Symbol]	TEMPORARY YIELD LINE (NEW)
[Symbol]	TEMPORARY ARROW PAVEMENT MARKING (NEW)
[Symbol]	TEMPORARY CHANNELIZATION PAVEMENT MARKINGS (NEW)
[Symbol]	TEMPORARY CROSSWALK PAVEMENT MARKINGS (PREVIOUS PHASE)
[Symbol]	TEMPORARY CROSSWALK PAVEMENT MARKINGS (NEW)
[Symbol]	PEDESTRIAN PATH OF TRAVEL TO BE MAINTAINED
[Symbol]	SITE DEVELOPMENT WORK ZONE

- PHASE 4A TRAFFIC CONTROL:**
- CONSTRUCT SIDEWALK AND IMPROVEMENTS IN NORTHWEST CORNER OF 21ST AVE. S. AND BROADWAY.
 - NEW ROADWAY AND LANEAGE AND GEOMETRY TO BE OPENED TO TRAFFIC WITH TEMPORARY PAVEMENT MARKINGS AS INDICATED.
 - PEDESTRIAN PATH AND TRAFFIC TO BE REDIRECTED AS INDICATED.
 - SOUTHBOUND LEFT TURN RESTRICTION AT GRAND AVE. TO BE REMOVED AND FINAL SIGNAL HEAD AND PHASING IMPLEMENTED.

SPECIAL NOTE:
 THE BASE SURVEY AND DESIGN INFORMATION FOR ROADWAY AND UTILITIES PRESENTED ON THIS PLAN WERE PROVIDED TO RPM TRANSPORTATION CONSULTANTS, LLC (RPM) BY LITTLEJOHN ENGINEERING ASSOCIATES. WHERE AVAILABLE, BASE INFORMATION HAS BEEN SUPPLEMENTED BY FIELD OBSERVATIONS BY THE ENGINEER. RPM MAKES NO CLAIMS AS TO THE COMPLETENESS OR ACCURACY OF THE PROVIDED BASE INFORMATION.

FILE NO.	10-0606
DATE:	09/23/14
DESIGNED BY:	KDR
DRAWN BY:	DKC
CHECKED BY:	DJS

REVISION BLOCK

DATE:	

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**PRELIMINARY PLANS
 NOT FOR
 CONSTRUCTION**

METROPOLITAN GOVERNMENT
 OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

INTERSECTION NO. 2345,
 2355, 2410

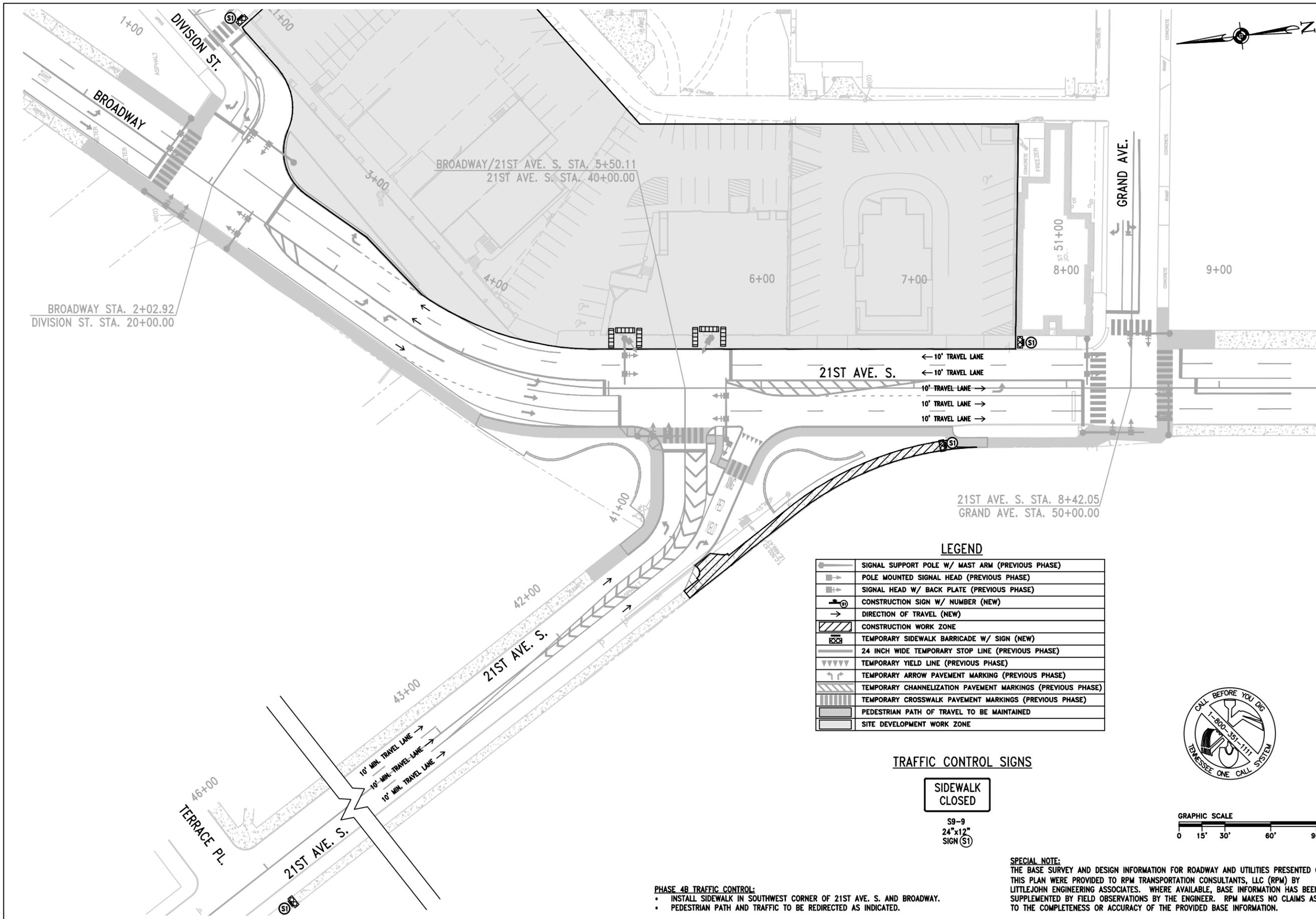
**TRAFFIC CONTROL
 VEHICULAR TRAFFIC
 PHASE 4A PLAN**

Buckingham Development

SCALE: 1"=30'

SHEET 11C





FILE NO.	10-0606
DATE:	09/23/14
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LEGEND

	SIGNAL SUPPORT POLE W/ MAST ARM (PREVIOUS PHASE)
	POLE MOUNTED SIGNAL HEAD (PREVIOUS PHASE)
	SIGNAL HEAD W/ BACK PLATE (PREVIOUS PHASE)
	CONSTRUCTION SIGN W/ NUMBER (NEW)
	DIRECTION OF TRAVEL (NEW)
	CONSTRUCTION WORK ZONE
	TEMPORARY SIDEWALK BARRICADE W/ SIGN (NEW)
	24 INCH WIDE TEMPORARY STOP LINE (PREVIOUS PHASE)
	TEMPORARY YIELD LINE (PREVIOUS PHASE)
	TEMPORARY ARROW PAVEMENT MARKING (PREVIOUS PHASE)
	TEMPORARY CHANNELIZATION PAVEMENT MARKINGS (PREVIOUS PHASE)
	TEMPORARY CROSSWALK PAVEMENT MARKINGS (PREVIOUS PHASE)
	PEDESTRIAN PATH OF TRAVEL TO BE MAINTAINED
	SITE DEVELOPMENT WORK ZONE

TRAFFIC CONTROL SIGNS



- PHASE 4B TRAFFIC CONTROL:**
- INSTALL SIDEWALK IN SOUTHWEST CORNER OF 21ST AVE. S. AND BROADWAY.
 - PEDESTRIAN PATH AND TRAFFIC TO BE REDIRECTED AS INDICATED.

SPECIAL NOTE:
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METROPOLITAN GOVERNMENT
 OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
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 ENGINEERING DIVISION

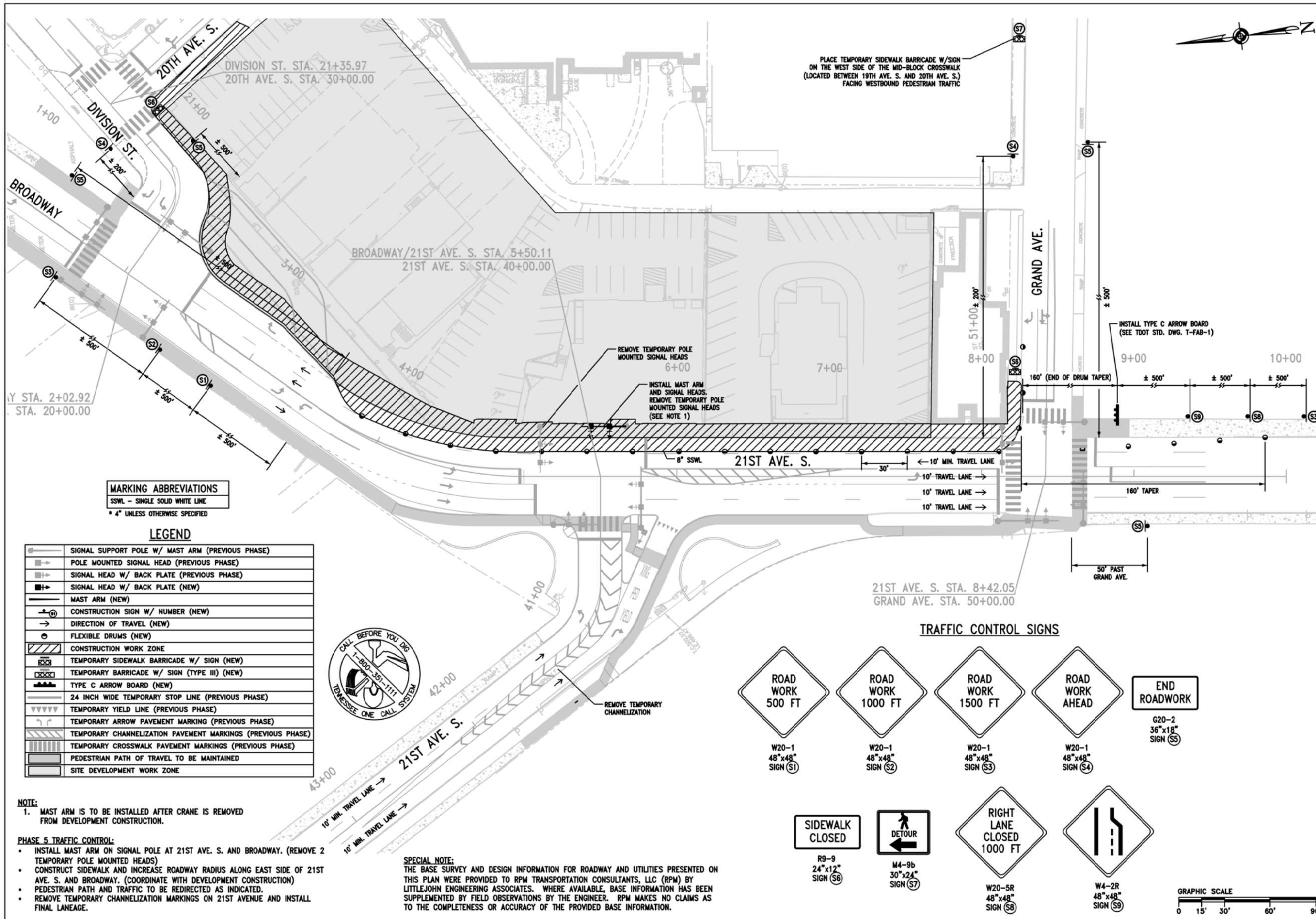
INTERSECTION NO. 2345,
 2355, 2410

**TRAFFIC CONTROL
 VEHICULAR TRAFFIC
 PHASE 4B PLAN**

Buckingham Development

SCALE: 1"=30'

SHEET 11D



FILE NO.	10-0606
DATE:	09/23/14
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PRELIMINARY PLANS
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MARKING ABBREVIATIONS

SSWL	- SINGLE SOLID WHITE LINE
* 4" UNLESS OTHERWISE SPECIFIED	

LEGEND

	SIGNAL SUPPORT POLE W/ MAST ARM (PREVIOUS PHASE)
	POLE MOUNTED SIGNAL HEAD (PREVIOUS PHASE)
	SIGNAL HEAD W/ BACK PLATE (PREVIOUS PHASE)
	SIGNAL HEAD W/ BACK PLATE (NEW)
	MAST ARM (NEW)
	CONSTRUCTION SIGN W/ NUMBER (NEW)
	DIRECTION OF TRAVEL (NEW)
	FLEXIBLE DRUMS (NEW)
	CONSTRUCTION WORK ZONE
	TEMPORARY SIDEWALK BARRICADE W/ SIGN (NEW)
	TEMPORARY BARRICADE W/ SIGN (TYPE III) (NEW)
	TYPE C ARROW BOARD (NEW)
	24 INCH WIDE TEMPORARY STOP LINE (PREVIOUS PHASE)
	TEMPORARY YIELD LINE (PREVIOUS PHASE)
	TEMPORARY ARROW PAVEMENT MARKING (PREVIOUS PHASE)
	TEMPORARY CHANNELIZATION PAVEMENT MARKINGS (PREVIOUS PHASE)
	TEMPORARY CROSSWALK PAVEMENT MARKINGS (PREVIOUS PHASE)
	PEDESTRIAN PATH OF TRAVEL TO BE MAINTAINED
	SITE DEVELOPMENT WORK ZONE



TRAFFIC CONTROL SIGNS

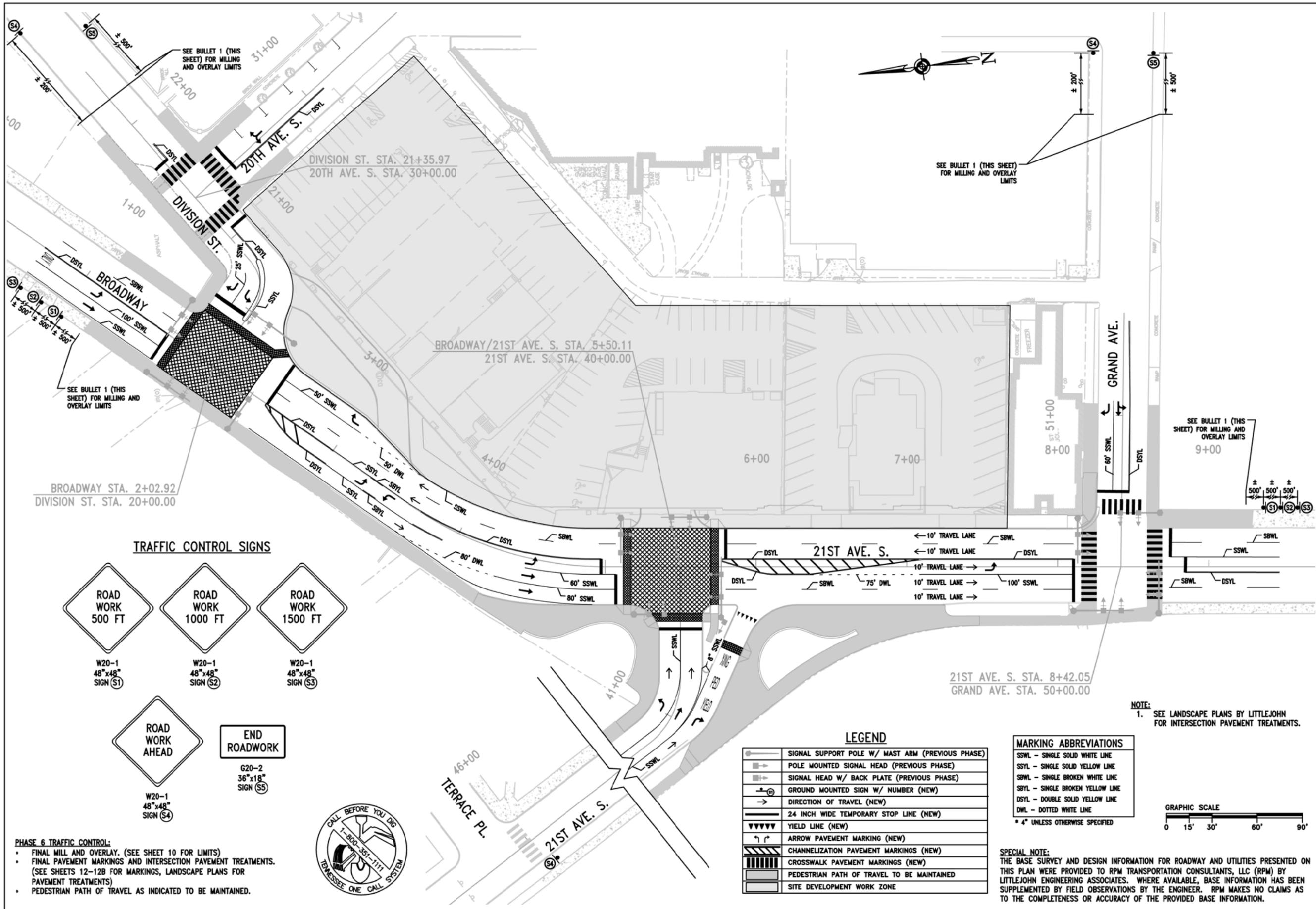
W20-1 48"x48" SIGN (S1)	W20-1 48"x48" SIGN (S2)	W20-1 48"x48" SIGN (S3)	W20-1 48"x48" SIGN (S4)	G20-2 36"x18" SIGN (S5)
R9-9 24"x12" SIGN (S6)	M4-9b 30"x24" SIGN (S7)	W20-5R 48"x48" SIGN (S8)	W4-2R 48"x48" SIGN (S9)	



- NOTE:**
- MAST ARM IS TO BE INSTALLED AFTER CRANE IS REMOVED FROM DEVELOPMENT CONSTRUCTION.
- PHASE 5 TRAFFIC CONTROL:**
- INSTALL MAST ARM ON SIGNAL POLE AT 21ST AVE. S. AND BROADWAY. (REMOVE 2 TEMPORARY POLE MOUNTED HEADS)
 - CONSTRUCT SIDEWALK AND INCREASE ROADWAY RADIUS ALONG EAST SIDE OF 21ST AVE. S. AND BROADWAY. (COORDINATE WITH DEVELOPMENT CONSTRUCTION)
 - PEDESTRIAN PATH AND TRAFFIC TO BE REDIRECTED AS INDICATED.
 - REMOVE TEMPORARY CHANNELIZATION MARKINGS ON 21ST AVENUE AND INSTALL FINAL LANEAAGE.

SPECIAL NOTE:
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METROPOLITAN GOVERNMENT OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
INTERSECTION NO. 2345, 2355, 2410
TRAFFIC CONTROL VEHICULAR TRAFFIC PHASE 5 PLAN
Buckingham Development
SCALE: 1"=30'
SHEET 11E



FILE NO.	10-0606
DATE:	09/23/14
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PRELIMINARY PLANS
NOT FOR
CONSTRUCTION

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

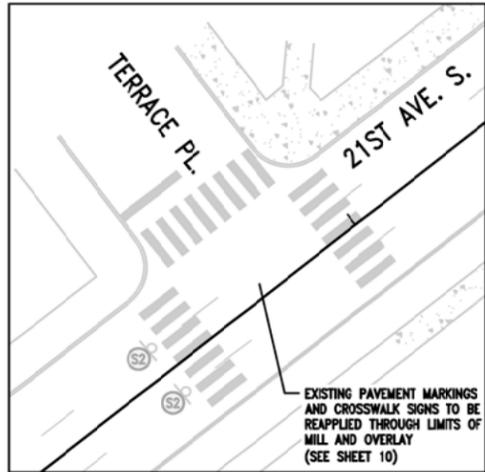
INTERSECTION NO. 2345,
2355, 2410

TRAFFIC CONTROL
VEHICULAR TRAFFIC
PHASE 6 PLAN

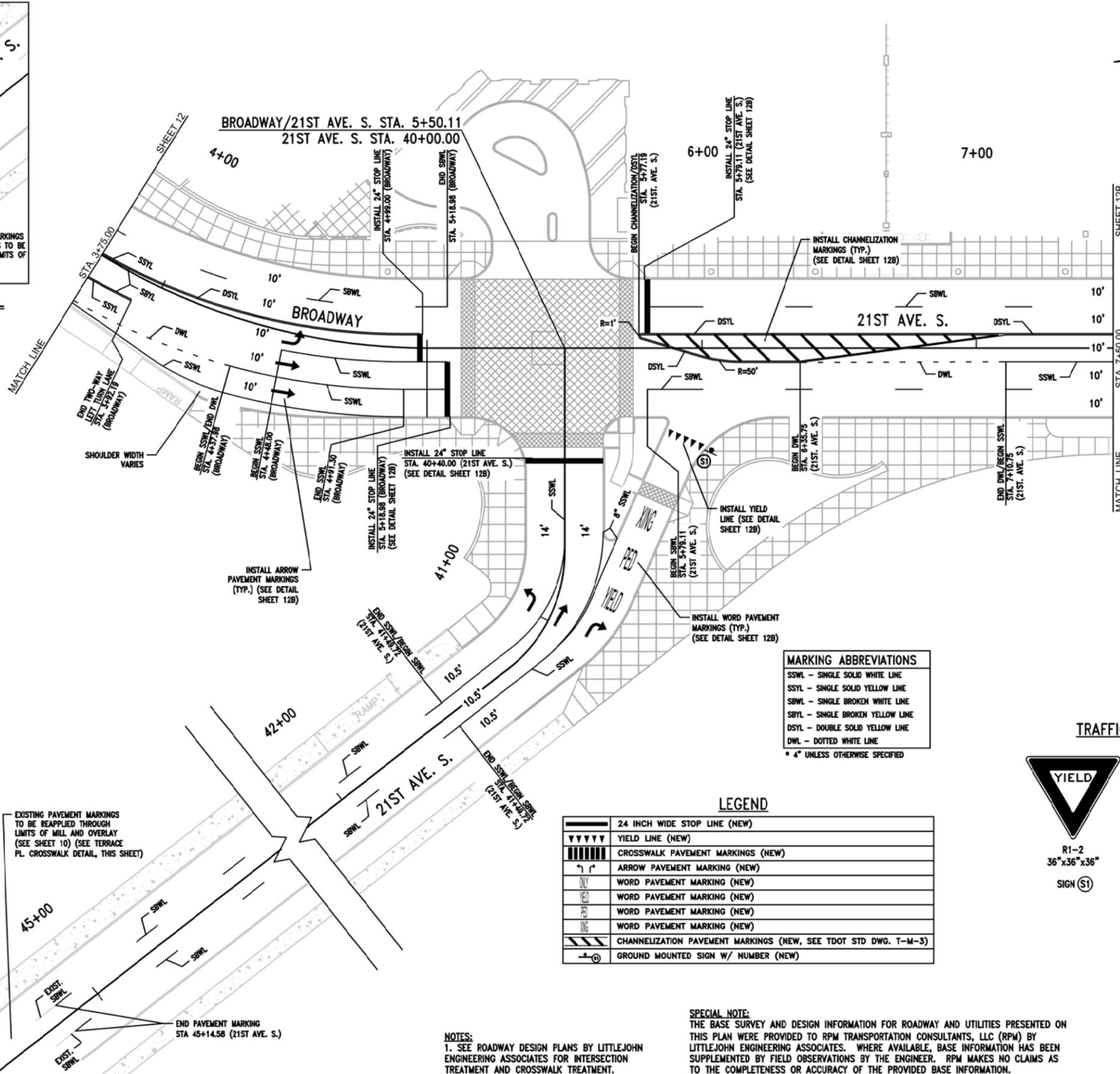
Buckingham Development

SCALE: 1"=30'

SHEET 11F



TERRACE PL. CROSSWALK DETAIL
SCALE: 1"=20'



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PRELIMINARY PLANS
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TRAFFIC SIGNS

R1-2
36"x36"x36"
SIGN (S1)

R1-6 (EXISTING)
12"x36"
SIGN (S2)



METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

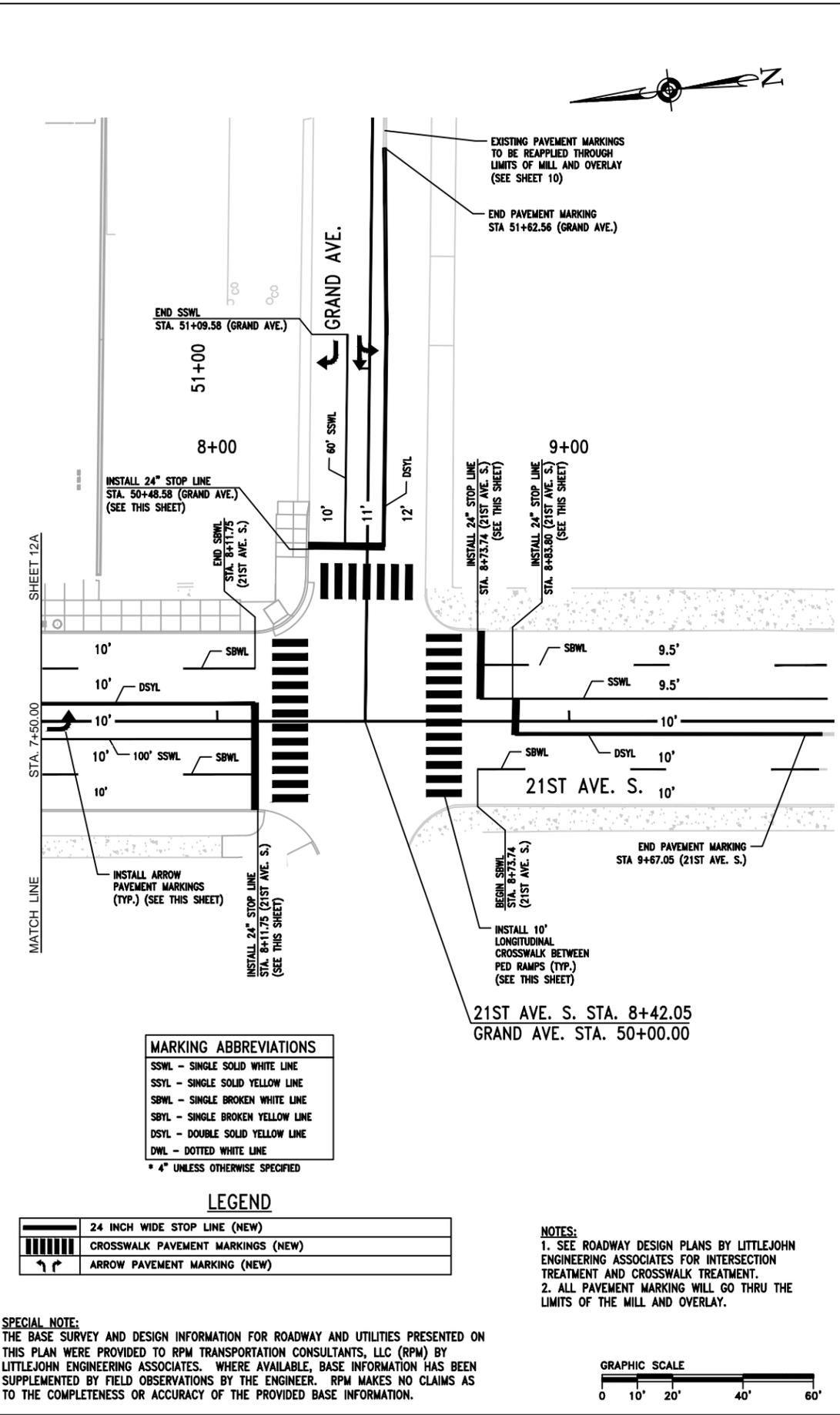
INTERSECTION NO. 2355

PAVEMENT MARKING PLAN

21st Avenue South at Broadway

SCALE: 1"=20'

SHEET 12A



MARKING ABBREVIATIONS

SSWL	- SINGLE SOLID WHITE LINE
SSYL	- SINGLE SOLID YELLOW LINE
SBWL	- SINGLE BROKEN WHITE LINE
SBYL	- SINGLE BROKEN YELLOW LINE
DSYL	- DOUBLE SOLID YELLOW LINE
DWL	- DOTTED WHITE LINE

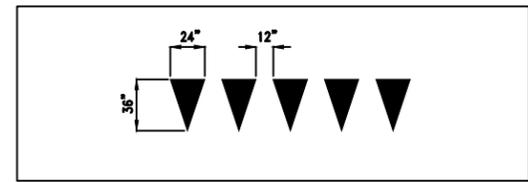
* 4" UNLESS OTHERWISE SPECIFIED

LEGEND

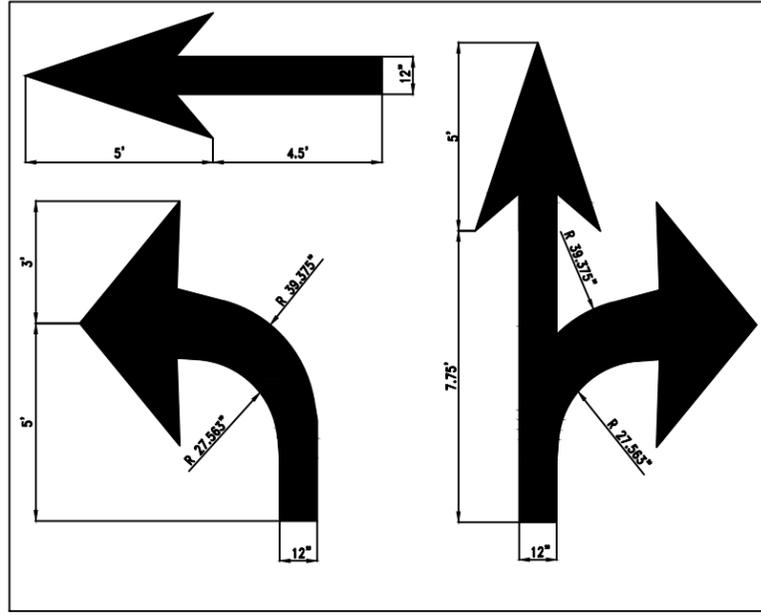
	24 INCH WIDE STOP LINE (NEW)
	CROSSWALK PAVEMENT MARKINGS (NEW)
	ARROW PAVEMENT MARKING (NEW)

SPECIAL NOTE:
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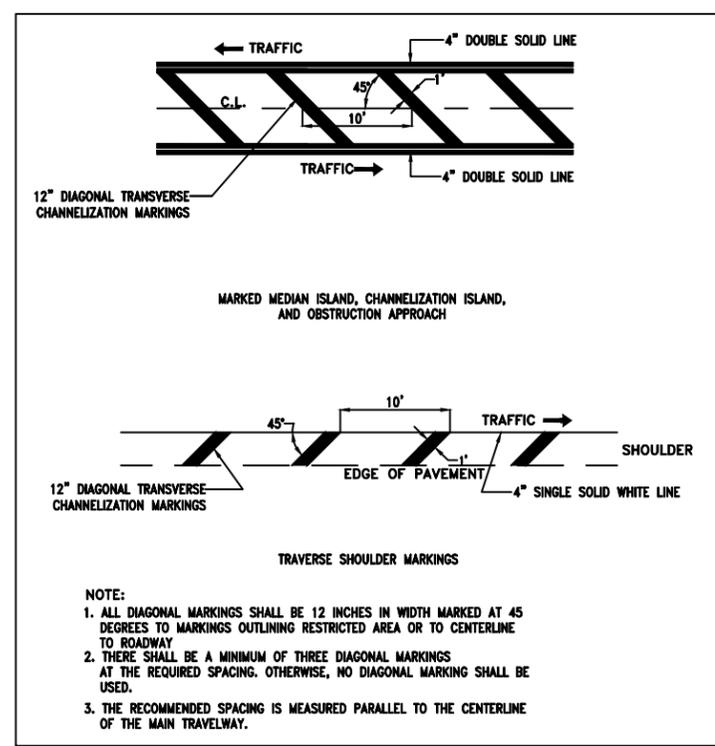
- NOTES:**
- SEE ROADWAY DESIGN PLANS BY LITTLEJOHN ENGINEERING ASSOCIATES FOR INTERSECTION TREATMENT AND CROSSWALK TREATMENT.
 - ALL PAVEMENT MARKING WILL GO THRU THE LIMITS OF THE MILL AND OVERLAY.



YIELD LINE PAVEMENT MARKINGS
N.T.S.

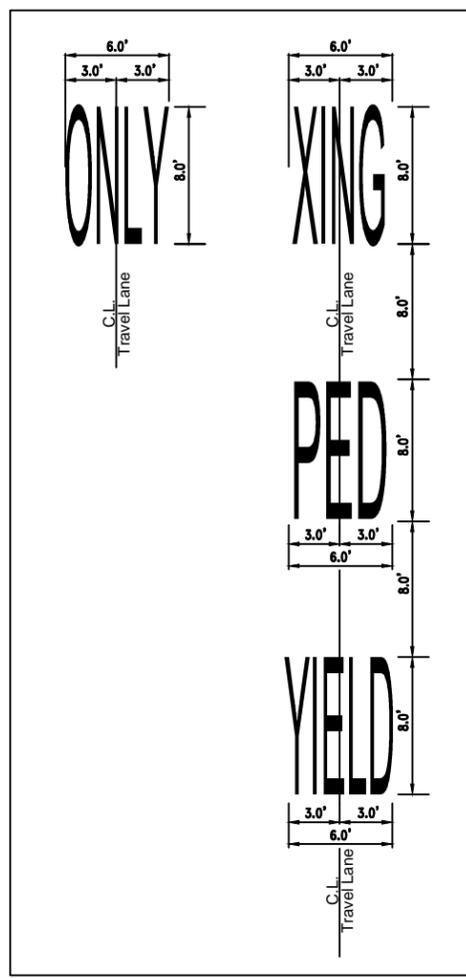


STANDARD ARROW PAVEMENT MARKINGS
N.T.S.

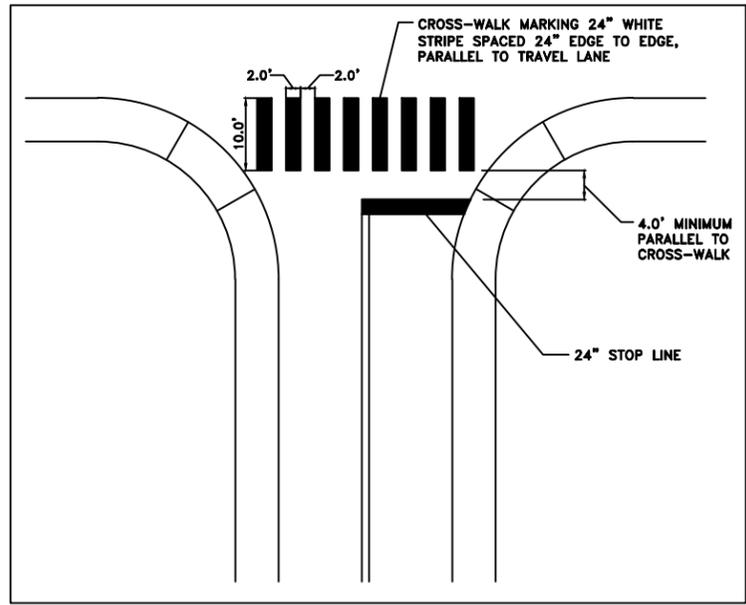


CHANNELIZATION MARKINGS
N.T.S.

- NOTES:**
- ALL DIAGONAL MARKINGS SHALL BE 12 INCHES IN WIDTH MARKED AT 45 DEGREES TO MARKINGS OUTLINING RESTRICTED AREA OR TO CENTERLINE TO ROADWAY.
 - THERE SHALL BE A MINIMUM OF THREE DIAGONAL MARKINGS AT THE REQUIRED SPACING. OTHERWISE, NO DIAGONAL MARKING SHALL BE USED.
 - THE RECOMMENDED SPACING IS MEASURED PARALLEL TO THE CENTERLINE OF THE MAIN TRAVELWAY.



WORD PAVEMENT MARKINGS
N.T.S.



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METROPOLITAN GOVERNMENT
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PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2410

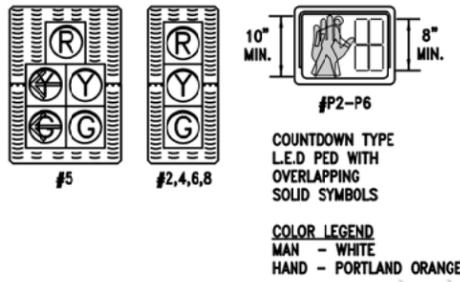
PAVEMENT MARKING
PLAN AND DETAILS

21st Avenue South at
Grand Avenue

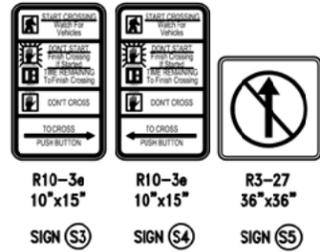
SCALE: 1"=20'

SHEET 12B

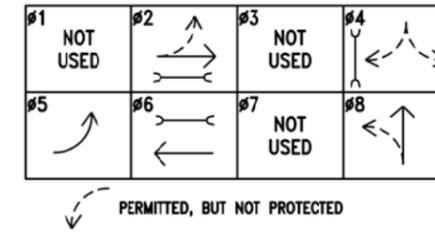
SIGNAL HEAD DISPLAYS



TRAFFIC SIGNS



PHASING DIAGRAM



FILE NO.	10-0606
DATE:	09/23/14
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REVISION BLOCK	
DATE:	
6/18/14	REMOVED PEDESTRIAN CROSSING & REVISED STREET LIGHTING

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PRELIMINARY PLANS
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ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES, ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES, PROPOSED RULE. PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

APPROVAL OF THIS TRAFFIC SIGNAL PLAN DESIGNATES APPROVAL OF THE DESIGN ONLY. APPROVAL OF THE DESIGN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO OBTAIN THE APPROPRIATE PERMITS IN ORDER TO INSTALL THE TRAFFIC SIGNAL.

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2345

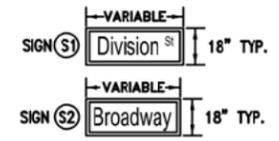
TRAFFIC SIGNAL
PLAN

Broadway at Division Street

SCALE: 1"=20'

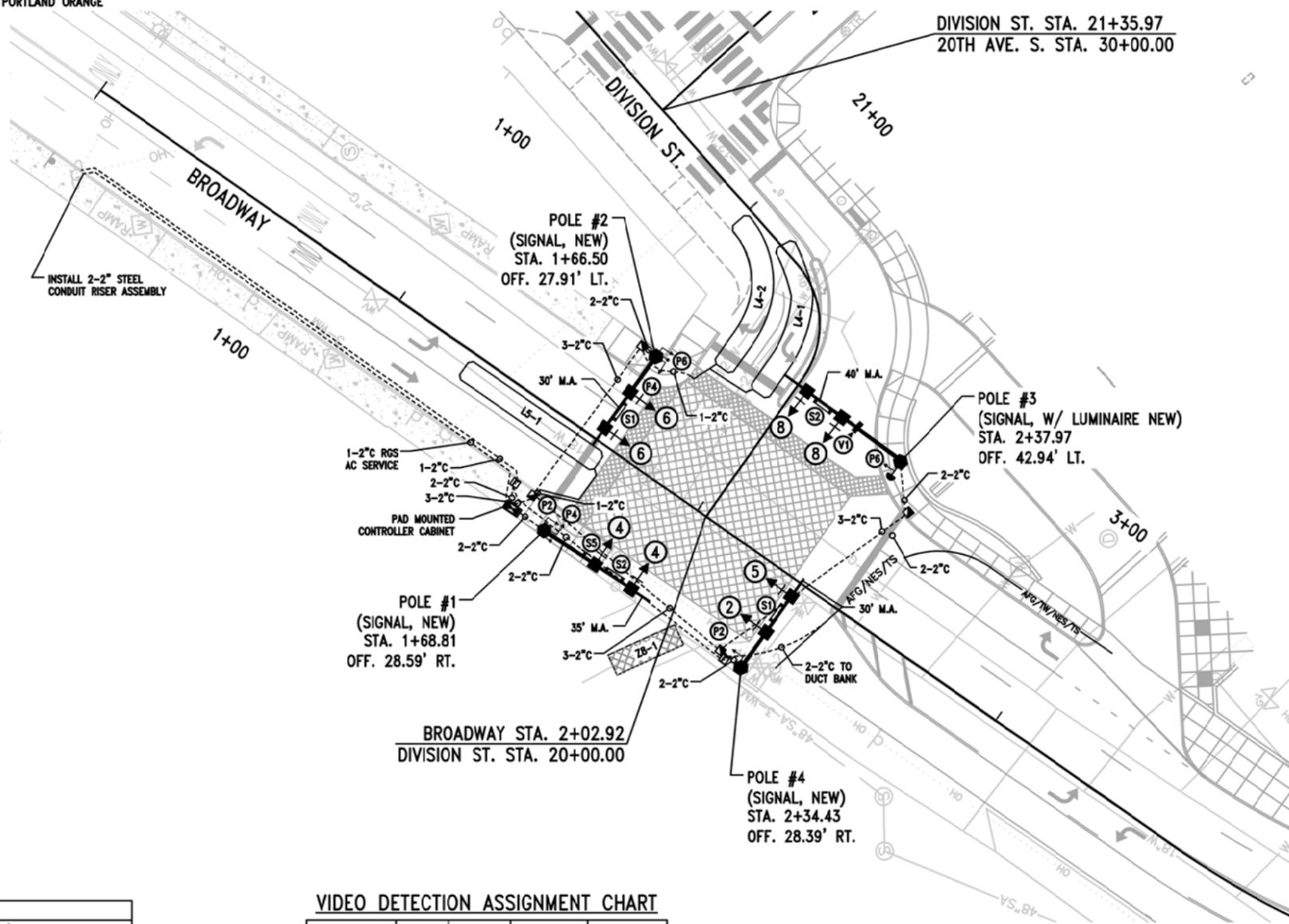
SHEET 13

OVERHEAD STREET NAME SIGNS (SNS)

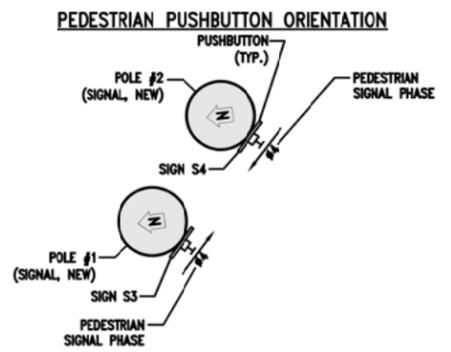


- NOTE:
- 8" U.C. LETTERS (MINIMUM)
 - 6" L.C. LETTERS (MINIMUM)
 - HIGH INTENSITY REFLECTIVE SHEETING
 - REFLECTIVE WHITE COPY
 - GREEN BACKGROUND
 - PROVIDED BY MPW

NOTE:
SNS LETTERING SHOWN FOR REFERENCE ONLY. SNS SIZE AND LETTERING TO BE COORDINATED AND DETERMINED BY METRO PUBLIC WORKS PRIOR TO FABRICATION AND INSTALLATION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE CITY, FABRICATIONS, AND INSTALLATION OF SNS'S.



STREET LIGHTING CONDUIT AND PULLBOXES
NOT SHOWN. SEE LIGHTING PLANS.



LEGEND

	SIGNAL SUPPORT POLE W/ MAST ARM (NEW)
	SIGNAL HEAD W/ NUMBER & BACK PLATE (NEW)
	PEDESTRIAN SIGNAL HEAD W/ NUMBER (NEW)
	PEDESTRIAN PUSH BUTTON W/ SIGN (NEW)
	PAD MOUNTED TRAFFIC SIGNAL CONTROLLER (NEW)
	PULL BOX (TYPE B, NEW)
	FIBER PULL BOX (TYPE B, NEW)
	UNDERGROUND CONDUIT (NEW)
	6'X45' LOOP DETECTOR (NEW)
	OVERHEAD SIGN W/ NUMBER (NEW)
	WASHINGTON POSTLIGHT LUMINAIRE (250W HPS AT 20 FT MH) (NEW)
	VIDEO DETECTION CAMERA W/ NUMBER (NEW)
	VEHICLE DETECTION ZONE (NEW)

VIDEO DETECTION ASSIGNMENT CHART

ZONE ASSIGNMENT	SIZE	CAMERA	MODE	DISTANCE FROM STOP LINE
Z8-1	6'x20'	V1	PRESENCE	-5'

LOOP DETECTOR ASSIGNMENT CHART

LOOP	SIZE	PHASE	MODE	NUMBER OF TURNS	DISTANCE FROM STOP BAR	STATUS
L4-1	6'X45'	4	PRESENCE	2	-3'	NEW
L4-2	6'X45'	4	PRESENCE	2	-3'	NEW
L5-1	6'X45'	5	PRESENCE	2	-3'	NEW

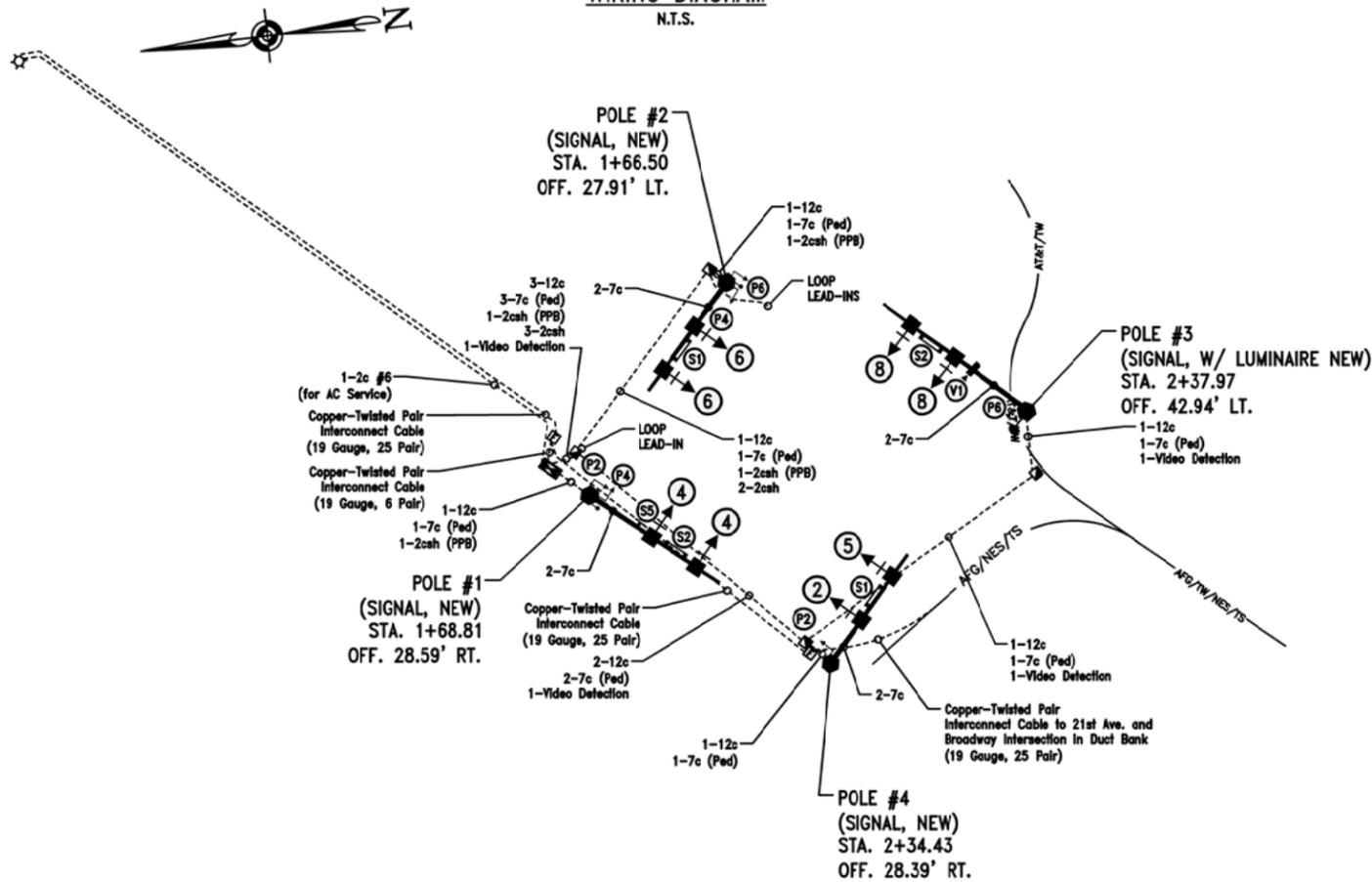
- NOTES:
- EXISTING COMMUNICATIONS FOR METRO PUBLIC WORKS TO BE MAINTAINED DURING CONSTRUCTION.
 - CONTRACTOR TO COORDINATE WITH METRO PUBLIC WORKS AND NES FOR ELECTRICAL SERVICE.
 - A PULL BOX LABELED 'STREET LIGHTING' SHALL BE INSTALLED AT THE BASE OF THE SIGNAL POLES WITH LUMINAIRES. SEE LIGHTING PLANS FOR LIGHTING CONDUIT, WIRING & PULL BOXES.

SPECIAL NOTE:
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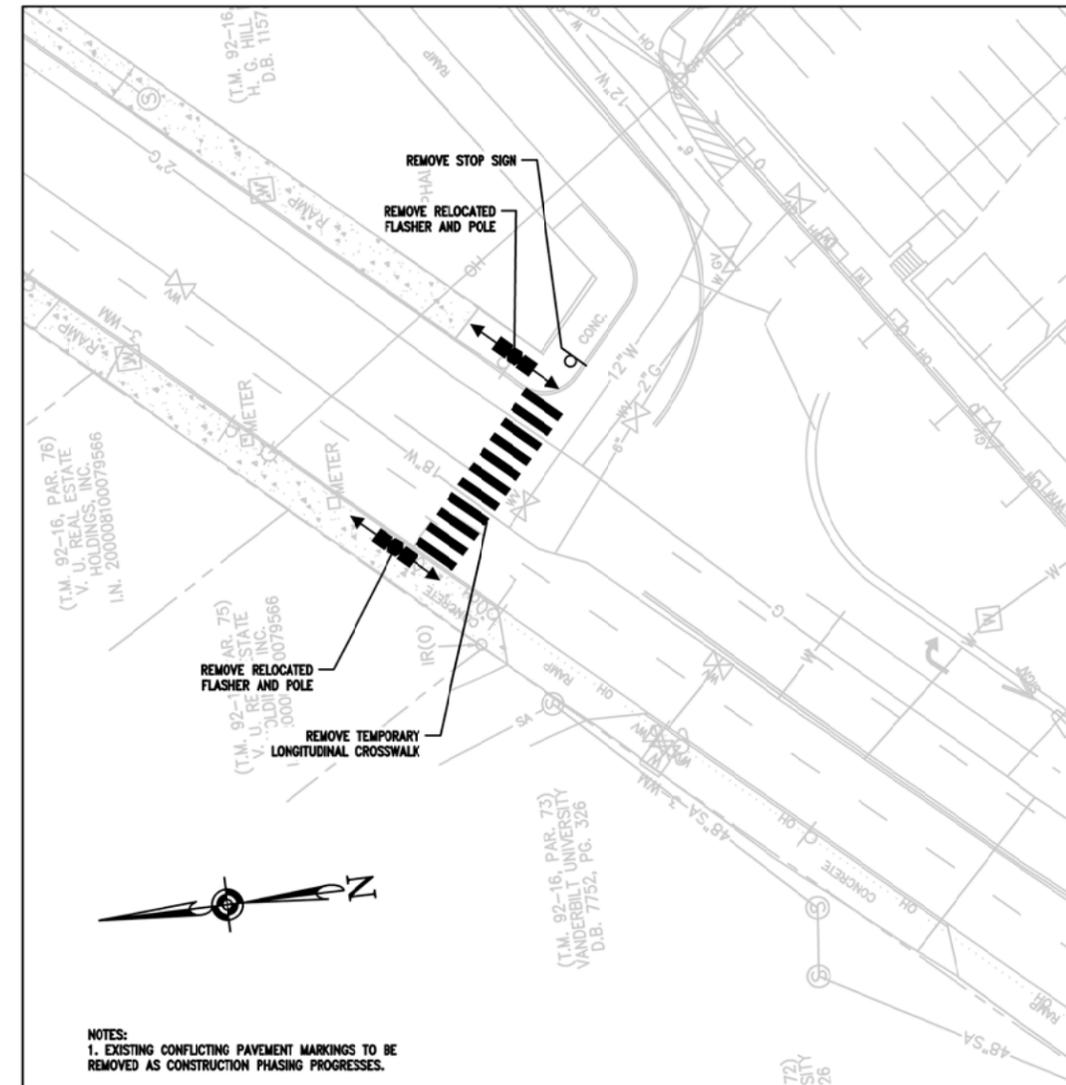
CALL BEFORE YOU DIG
1-800-351-1111
TENNESSEE ONE CALL SYSTEM

GRAPHIC SCALE
0 10' 20' 40' 60'

WIRING DIAGRAM
N.T.S.

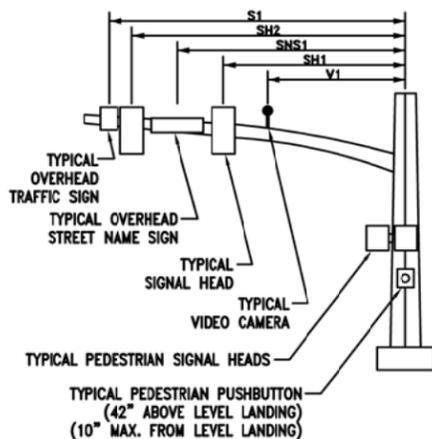


REMOVAL DIAGRAM
N.T.S.



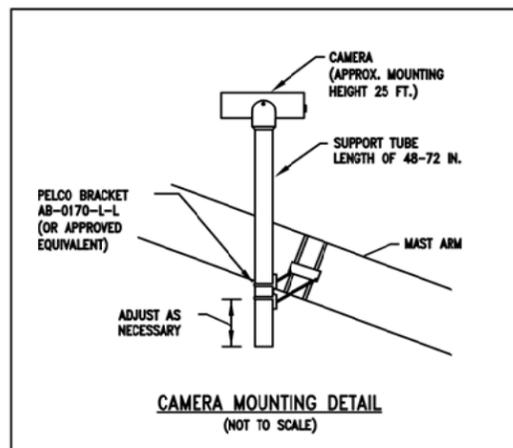
NOTES:
1. EXISTING CONFLICTING PAVEMENT MARKINGS TO BE REMOVED AS CONSTRUCTION PHASING PROGRESSES.

MAST ARM DETAILS
N.T.S.



POLE	SH1	SH2	SNS1	S1	V1
#1	16'-9"	28'-9"	22'-9"	12'-9"	-
#2	12'-0"	24'-0"	18'-0"	-	-
#3	20'-0"	32'-0"	26'-0"	-	15'-3"
#4	12'-0"	24'-0"	18'-0"	-	-

NOTE: DISTANCES BASED ON SIGNAL POLE LOCATIONS INDICATED ON PLAN. IF FIELD ADJUSTMENTS TO SIGNAL POLE LOCATIONS ARE MADE, SIGNAL HEADS ARE TO BE PLACED IN RELATION TO TRAVEL LANES ACCORDING TO MUTCD AND TDOT STANDARDS.



SIGNAL SUPPORT POLE DATA*

POLE NO.	POLE TYPE	HEIGHT	MAST ARM LENGTH	ATTACHMENT HEIGHT **	FOOTING DEPTH ***
1	CANTILEVER	20'-0"	35'-0"	16'-0"	15'-0"
2	CANTILEVER	20'-0"	30'-0"	16'-0"	15'-0"
3	CANTILEVER	20'-0"	40'-0"	16'-0"	15'-0"
4	CANTILEVER	20'-0"	30'-0"	16'-0"	15'-0"

* NEW SIGNAL SUPPORT POLES TO BE BLACK CORE STYLE POLES FATIGUE CATEGORY 2. POLE 3 TO HAVE WASHINGTON POSTLIGHT LUMINAIRE. (SEE LIGHTING PLANS)

** CONTACT M. HIRTZER AT MPW (615)880-3261 PRIOR TO MAKING ATTACHMENT. A MINIMUM OF 17 FEET CLEARANCE MUST BE ACHIEVED TO THE BOTTOM OF ALL SIGNAL HEADS.

*** PROVIDED FOR ESTIMATION PURPOSES ONLY. CONTRACTOR SHALL SUBMIT SIGNAL POLE FOOTING DESIGN CALCULATIONS ALONG WITH SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. DESIGN SHALL BE BASED UPON AASHTO LOADING AND DESIGN CRITERIA PUBLISHED IN THE LATEST EDITION OF "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

FILE NO.	10-0606
DATE:	09/23/14
DESIGNED BY:	KDR
DRAWN BY:	DKC
CHECKED BY:	DJS

REVISION BLOCK	
DATE:	
6/18/14	REMOVED PEDESTRIAN CROSSING & REVISED STREET LIGHTING

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Transportation Consultants, LLC

1101 17th Avenue South
Nashville, Tennessee 37212

PRELIMINARY PLANS
NOT FOR
CONSTRUCTION

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METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2345

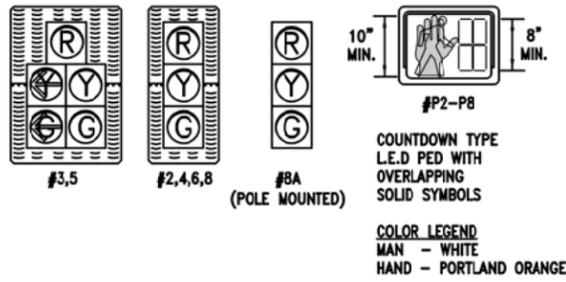
TRAFFIC SIGNAL
DETAILS

Broadway at Division Street

N.T.S.

SHEET 13A

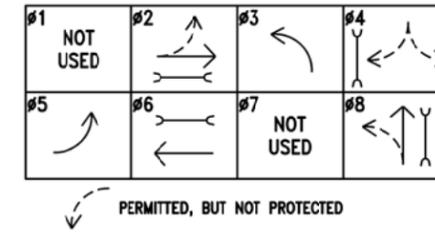
SIGNAL HEAD DISPLAYS



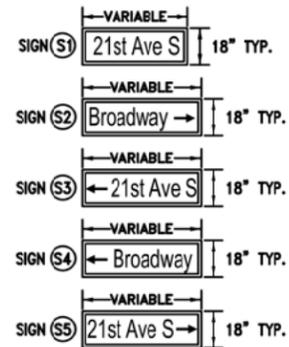
TRAFFIC SIGNS



PHASING DIAGRAM



OVERHEAD STREET NAME SIGNS (SNS)

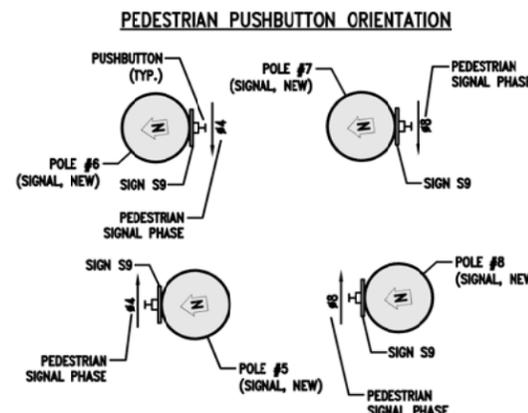
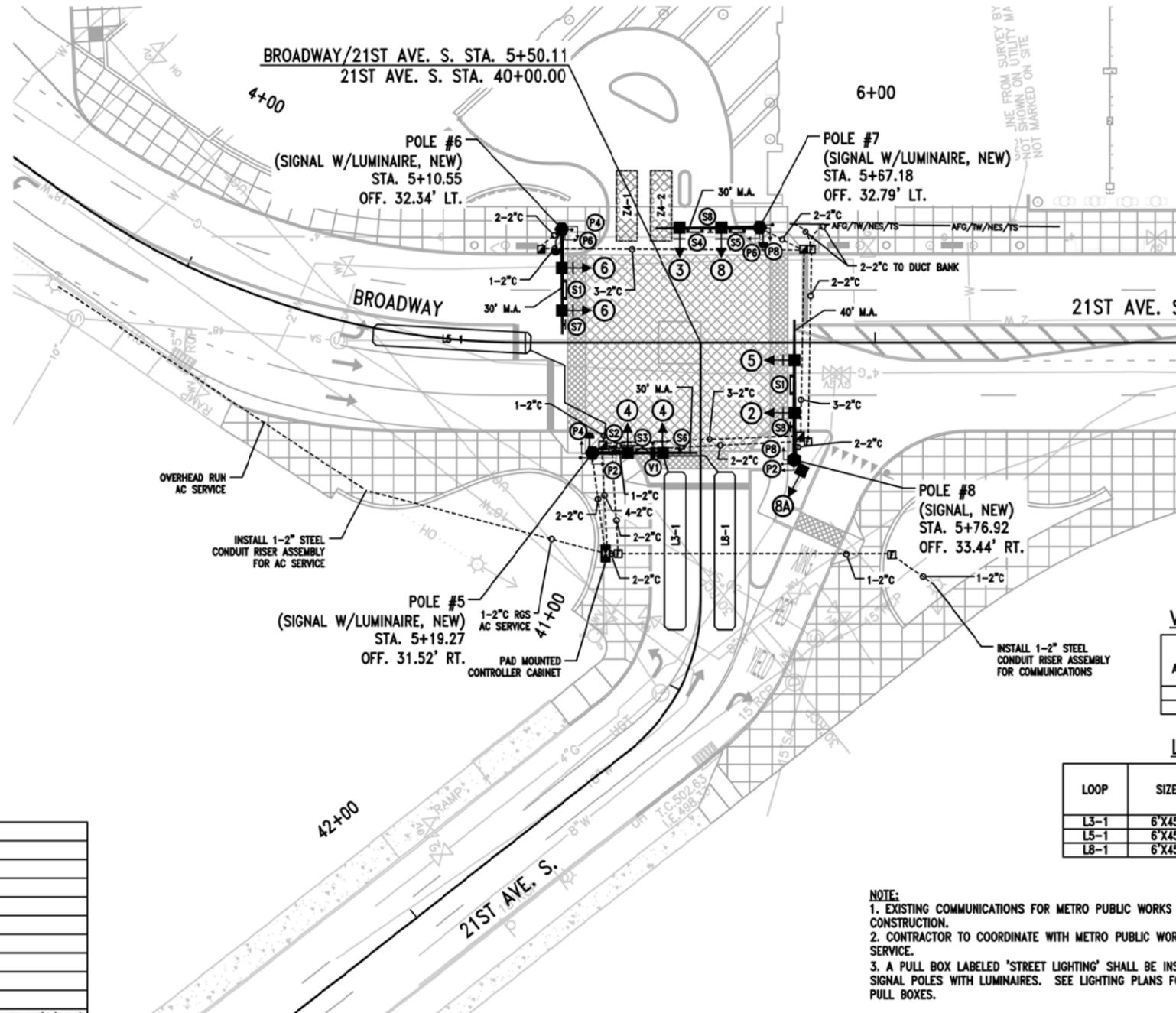


- NOTE:
- 8" U.C. LETTERS (MINIMUM)
- 6" L.C. LETTERS (MINIMUM)
- HIGH INTENSITY REFLECTIVE SHEETING
- REFLECTIVE WHITE COPY
- GREEN BACKGROUND
- PROVIDED BY MPW

NOTE:
SNS LETTERING SHOWN FOR REFERENCE ONLY. SNS SIZE AND LETTERING TO BE COORDINATED AND DETERMINED BY METRO PUBLIC WORKS PRIOR TO FABRICATION AND INSTALLATION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE CITY, FABRICATIONS, AND INSTALLATION OF SNS'S.

LEGEND

	SIGNAL SUPPORT POLE W/ MAST ARM (NEW)
	SIGNAL HEAD W/ NUMBER & BACK PLATE (NEW)
	SIGNAL HEAD W/ NUMBER (NEW)
	PEDESTRIAN SIGNAL HEAD W/ NUMBER (NEW)
	PEDESTRIAN PUSH BUTTON W/ SIGN (NEW)
	PAD MOUNTED TRAFFIC SIGNAL CONTROLLER (NEW)
	PULL BOX (TYPE B, NEW)
	UNDERGROUND CONDUIT (NEW)
	6'X45' LOOP DETECTOR (NEW)
	OVERHEAD SIGN W/ NUMBER (NEW)
	WASHINGTON POSTLIGHT LUMINAIRE (250W HPS AT 20 FT MH) (NEW)
	VIDEO DETECTION CAMERA W/ NUMBER (NEW)
	FIBER PULL BOX (TYPE B, NEW)
	VEHICLE DETECTION ZONE (NEW)



STREET LIGHTING CONDUIT AND PULLBOXES NOT SHOWN. SEE LIGHTING PLANS.

VIDEO DETECTION ASSIGNMENT CHART

ZONE ASSIGNMENT	SIZE	CAMERA	MODE	DISTANCE FROM STOP LINE
Z4-1	6'x20'	V1	PRESENCE	-5'
Z4-2	6'x20'	V1	PRESENCE	-5'

LOOP DETECTOR ASSIGNMENT CHART

LOOP	SIZE	PHASE	MODE	NUMBER OF TURNS	DISTANCE FROM STOP BAR	STATUS
L3-1	6'x45'	3	PRESENCE	2	-3'	NEW
L5-1	6'x45'	5	PRESENCE	2	-3'	NEW
L8-1	6'x45'	8	PRESENCE	2	-3'	NEW

- NOTE:
1. EXISTING COMMUNICATIONS FOR METRO PUBLIC WORKS TO BE MAINTAINED DURING CONSTRUCTION.
2. CONTRACTOR TO COORDINATE WITH METRO PUBLIC WORKS AND NES FOR ELECTRICAL SERVICE.
3. A PULL BOX LABELED 'STREET LIGHTING' SHALL BE INSTALLED AT THE BASE OF THE SIGNAL POLES WITH LUMINAIRES. SEE LIGHTING PLANS FOR LIGHTING CONDUIT, WIRING & PULL BOXES.

SPECIAL NOTE:
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DATE:	09/23/14
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DRAWN BY:	DKC
CHECKED BY:	DJS
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DATE:	
6/18/14	REVISED STREET LIGHTING

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METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2355

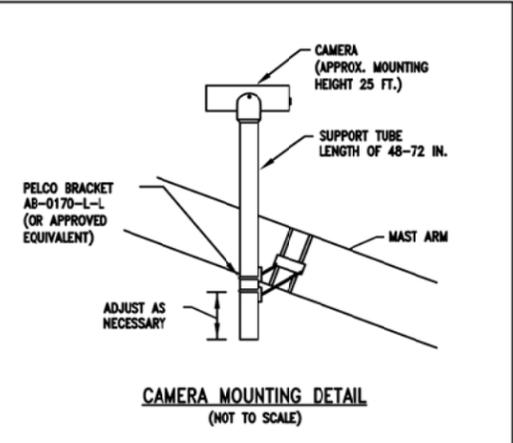
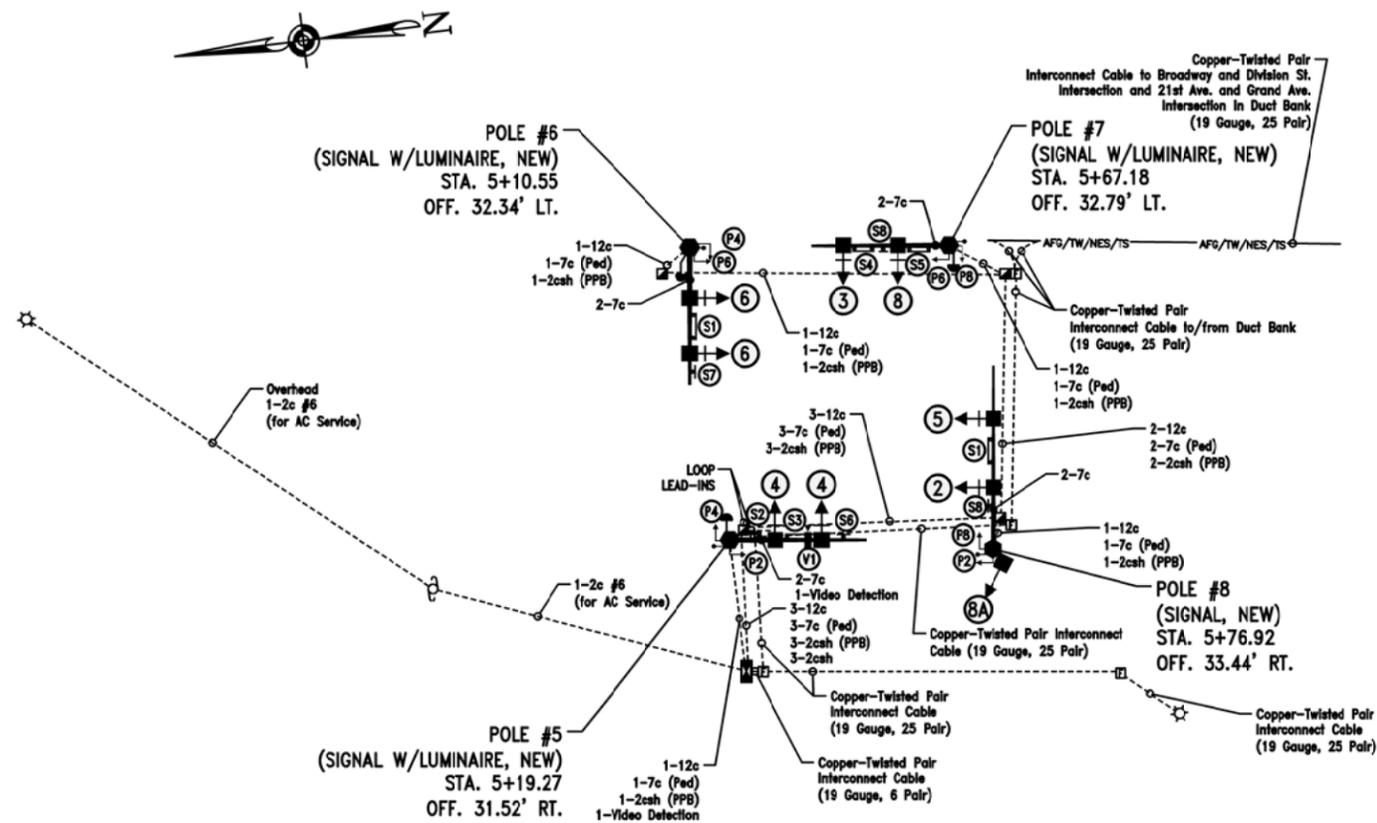
TRAFFIC SIGNAL PLAN

21st Avenue South at
Broadway

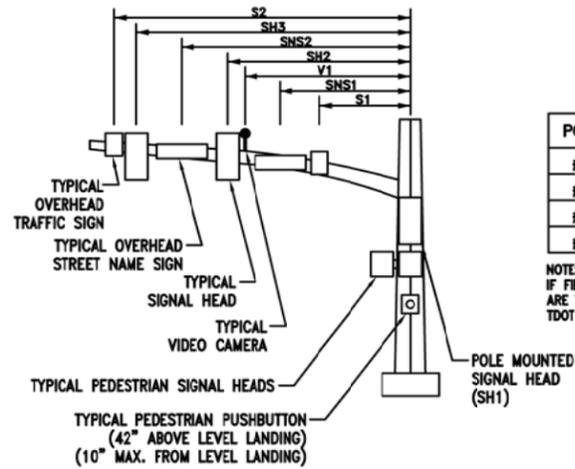
SCALE: 1"=20'

SHEET 14

WIRING DIAGRAM
N.T.S.



MAST ARM DETAILS
N.T.S.



POLE	SH1	SH2	SH3	SNS1	SNS2	S1	V1
#5	-	10'-0"	20'-0"	5'-0"	15'-0"	24'-0"	18'-0"
#6	-	11'-0"	23'-0"	17'-0"	-	27'-0"	-
#7	-	11'-0"	23'-0"	6'-0"	18'-6"	14'-0"	-
#8	0'-0"	13'-6"	28'-6"	21'-0"	-	9'-6"	-

NOTE: DISTANCES BASED ON SIGNAL POLE LOCATIONS INDICATED ON PLAN. IF FIELD ADJUSTMENTS TO SIGNAL POLE LOCATIONS ARE MADE, SIGNAL HEADS ARE TO BE PLACED IN RELATION TO TRAVEL LANES ACCORDING TO MUTCD AND TDOT STANDARDS.

SIGNAL SUPPORT POLE DATA*

POLE NO.	POLE TYPE	HEIGHT	MAST ARM LENGTH	ATTACHMENT HEIGHT **	FOOTING DEPTH ***
5	CANTILEVER	20'-0"	30'-0"	16'-0"	15'-0"
6	CANTILEVER	20'-0"	30'-0"	16'-0"	15'-0"
7	CANTILEVER	20'-0"	30'-0"	16'-0"	15'-0"
8	CANTILEVER	20'-0"	40'-0"	16'-0"	15'-0"

* NEW SIGNAL SUPPORT POLES TO BE BLACK CORE STYLE POLES FATIGUE CATEGORY 2. POLES 5, 6, AND 7 TO HAVE WASHINGTON POSTLIGHT LUMINAIRES. (SEE LIGHTING PLANS)

** CONTACT M. HIRTZER AT MPW (615)880-3261 PRIOR TO MAKING ATTACHMENT. A MINIMUM OF 17 FEET CLEARANCE MUST BE ACHIEVED TO THE BOTTOM OF ALL SIGNAL HEADS.

*** PROVIDED FOR ESTIMATION PURPOSES ONLY. CONTRACTOR SHALL SUBMIT SIGNAL POLE FOOTING DESIGN CALCULATIONS ALONG WITH SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. DESIGN SHALL BE BASED UPON AASHTO LOADING AND DESIGN CRITERIA PUBLISHED IN THE LATEST EDITION OF "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

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CHECKED BY:	DJS

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PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2355

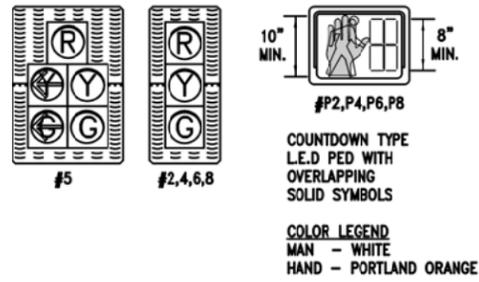
TRAFFIC SIGNAL
DETAILS

21st Avenue South at
Broadway

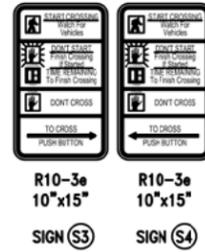
N.T.S.

SHEET 14A

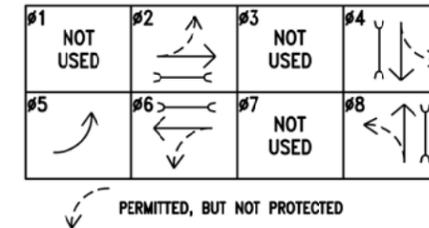
SIGNAL HEAD DISPLAYS



TRAFFIC SIGNS



PHASING DIAGRAM

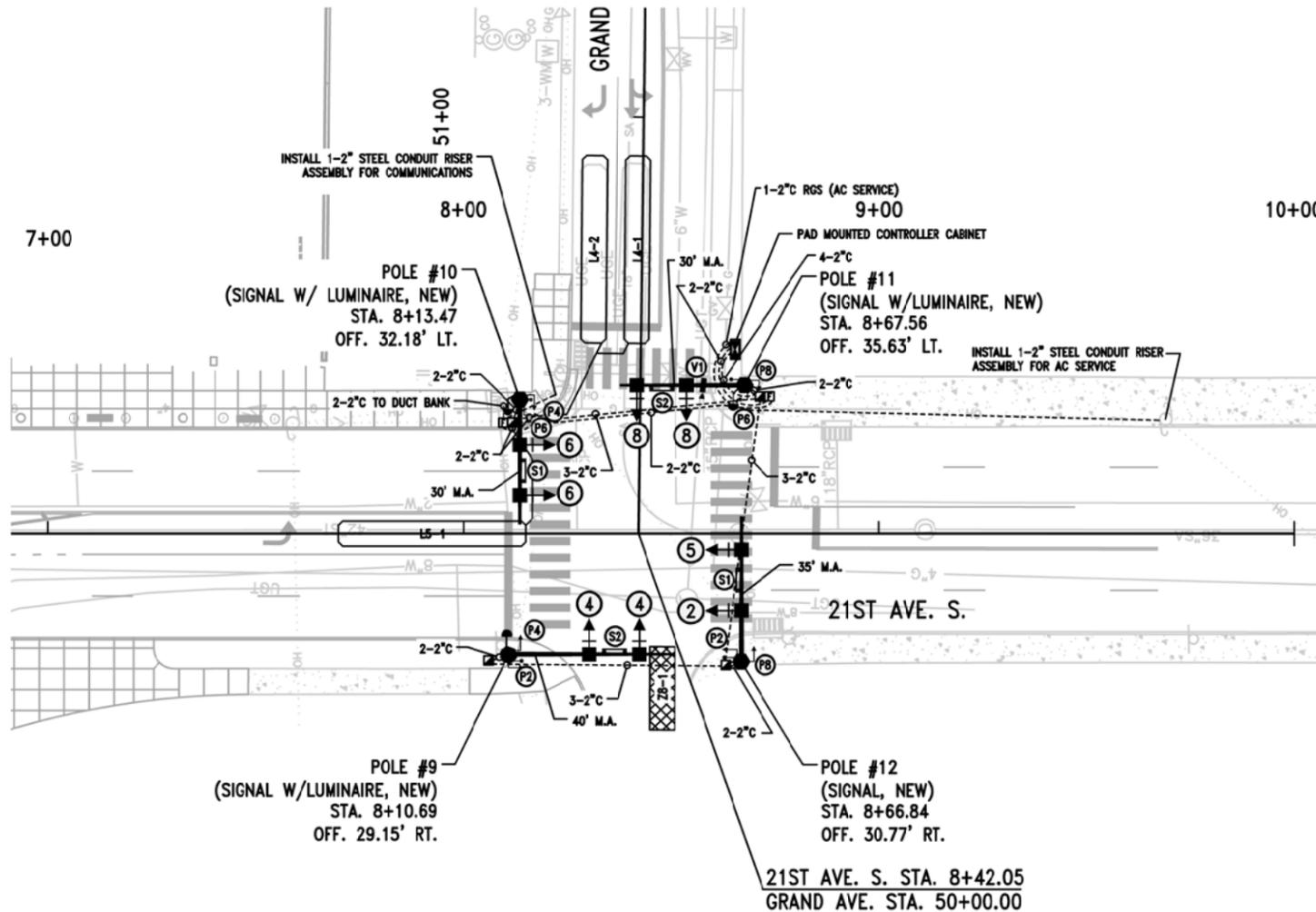


OVERHEAD STREET NAME SIGNS (SNS)

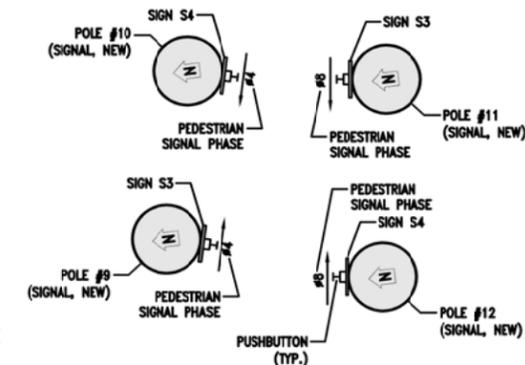


- NOTE:
- 8" U.C. LETTERS (MINIMUM)
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 - HIGH INTENSITY REFLECTIVE SHEETING
 - REFLECTIVE WHITE COPY
 - GREEN BACKGROUND
 - PROVIDED BY MPW

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PEDESTRIAN PUSHBUTTON ORIENTATION



STREET LIGHTING CONDUIT AND PULLBOXES NOT SHOWN. SEE LIGHTING PLANS.

LEGEND

	SIGNAL SUPPORT POLE W/ MAST ARM (NEW)
	SIGNAL HEAD W/ NUMBER & BACK PLATE (NEW)
	SIGNAL HEAD W/ NUMBER (NEW)
	PEDESTRIAN SIGNAL HEAD W/ NUMBER (NEW)
	PEDESTRIAN PUSH BUTTON W/ SIGN (NEW)
	PAD MOUNTED TRAFFIC SIGNAL CONTROLLER (NEW)
	PULL BOX (TYPE B, NEW)
	UNDERGROUND CONDUIT (NEW)
	6'X45' LOOP DETECTOR (NEW)
	OVERHEAD SIGN W/ NUMBER (NEW)
	WASHINGTON POSTLIGHT LUMINAIRE (250W HPS AT 20 FT MH) (NEW)
	VIDEO DETECTION CAMERA W/ NUMBER (NEW)
	FIBER PULL BOX (TYPE B, NEW)
	ELECTRICAL PULL BOX (SEE LIGHTING PLANS)
	VEHICLE DETECTION ZONE (NEW)

VIDEO DETECTION ASSIGNMENT CHART

ZONE ASSIGNMENT	SIZE	CAMERA	MODE	DISTANCE FROM STOP LINE
ZB-1	6'x20'	V1	PRESENCE	-5'

LOOP DETECTOR ASSIGNMENT CHART

LOOP	SIZE	PHASE	MODE	NUMBER OF TURNS	DISTANCE FROM STOP BAR	STATUS
L4-1	6'X45'	4	PRESENCE	2	-3'	NEW
L4-2	6'X45'	4	PRESENCE	2	-3'	NEW
L5-1	6'X45'	5	PRESENCE	2	-3'	NEW

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CHECKED BY:	DJS
REVISION BLOCK	
DATE:	
6/18/14	REVISED STREET LIGHTING
6/23/14	REVISED POWER SUPPLY

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 ENGINEERING DIVISION

INTERSECTION NO. 2410

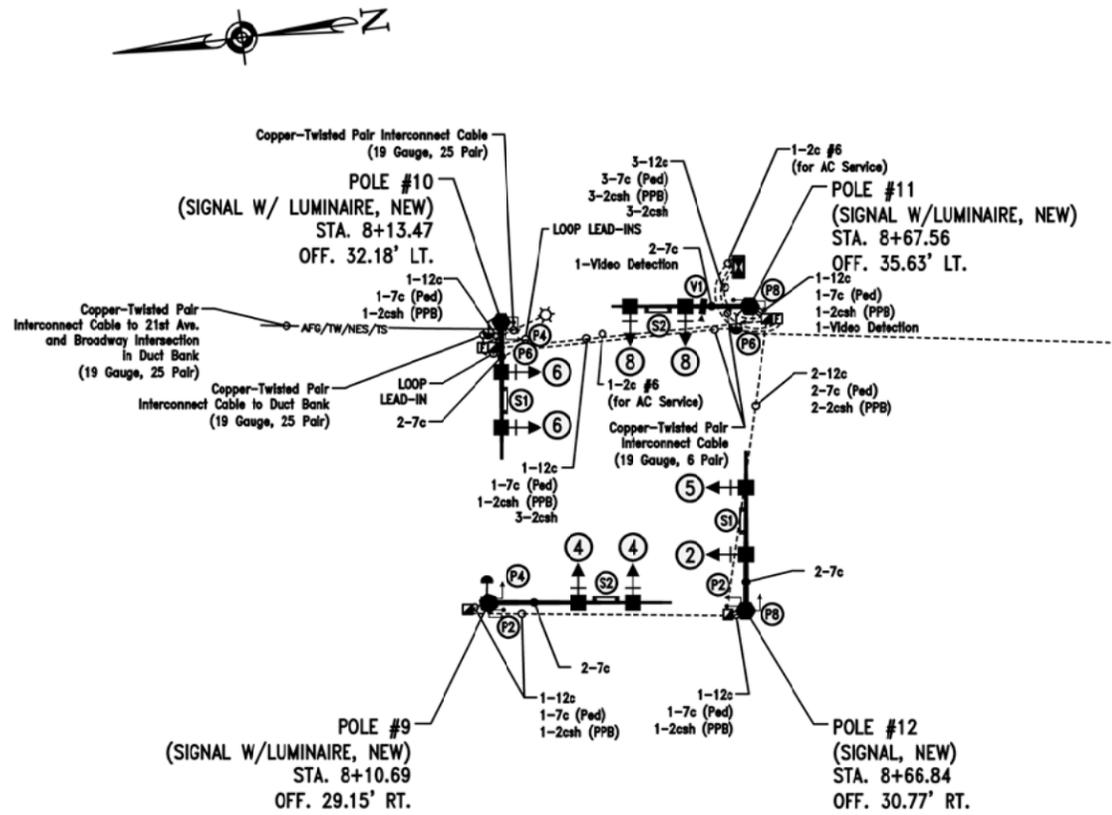
TRAFFIC SIGNAL
 PLAN

21st Avenue South at
 Grand Avenue

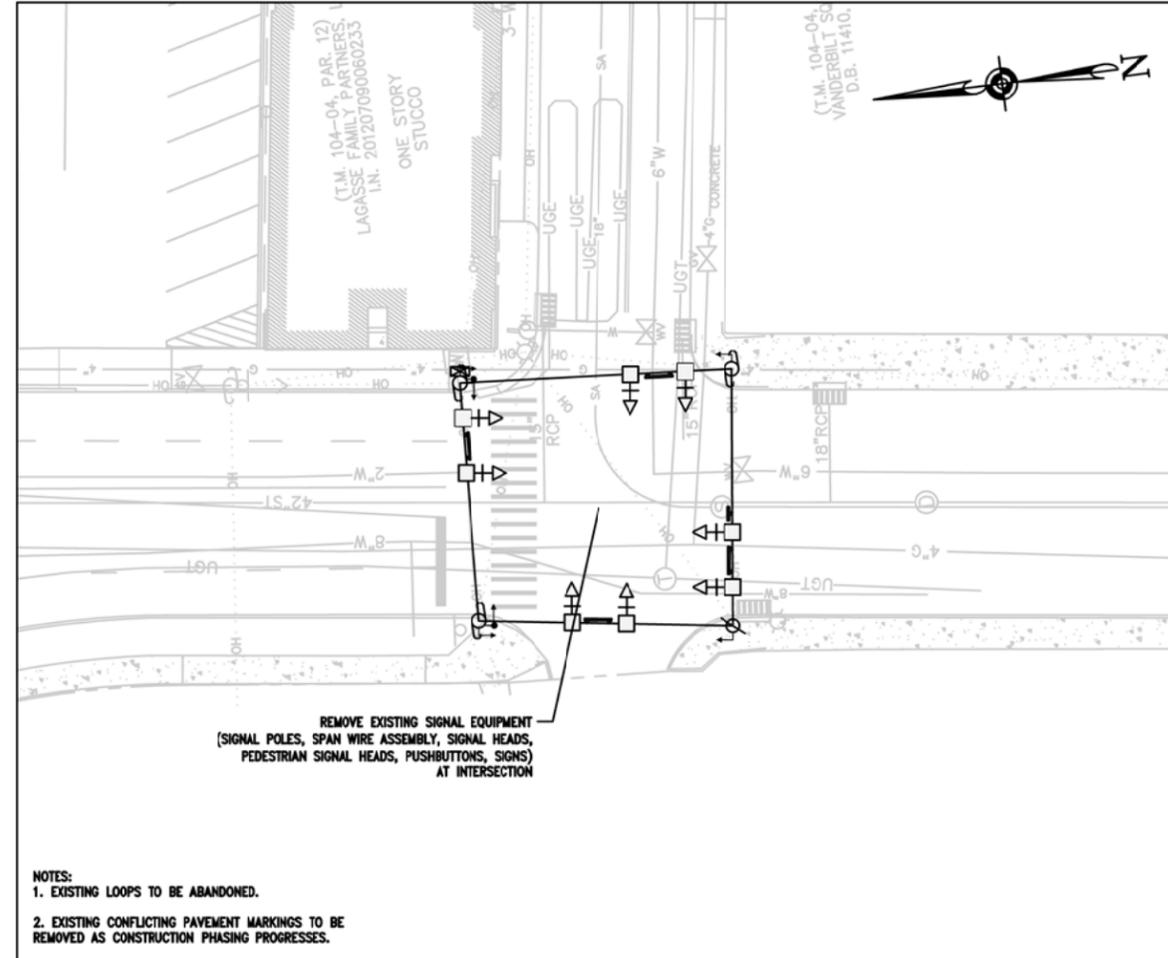
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SHEET 15

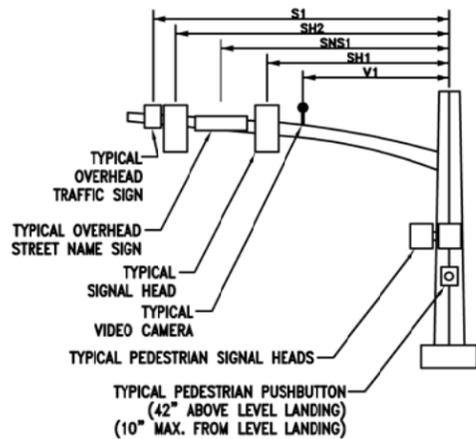
WIRING DIAGRAM
N.T.S.



REMOVAL DIAGRAM
N.T.S.

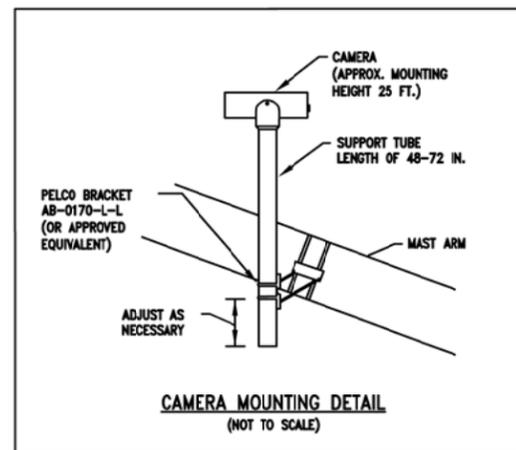


MAST ARM DETAILS
N.T.S.



POLE	SH1	SH2	SNS1	V1
#9	19'-9"	31'-9"	25'-9"	-
#10	10'-9"	22'-9"	16'-9"	-
#11	14'-0"	26'-0"	20'-0"	10'-0"
#12	12'-3"	27'-0"	19'-6"	-

NOTE: DISTANCES BASED ON SIGNAL POLE LOCATIONS INDICATED ON PLAN. IF FIELD ADJUSTMENTS TO SIGNAL POLE LOCATIONS ARE MADE, SIGNAL HEADS ARE TO BE PLACED IN RELATION TO TRAVEL LANES ACCORDING TO MUTCD AND DOT STANDARDS.



SIGNAL SUPPORT POLE DATA*

POLE NO.	POLE TYPE	HEIGHT	MAST ARM LENGTH	ATTACHMENT HEIGHT **	FOOTING DEPTH ***
9	CANTILEVER	20'-0"	40'-0"	16'-0"	15'-0"
10	CANTILEVER	20'-0"	30'-0"	16'-0"	15'-0"
11	CANTILEVER	20'-0"	30'-0"	16'-0"	15'-0"
12	CANTILEVER	20'-0"	35'-0"	16'-0"	15'-0"

* NEW SIGNAL SUPPORT POLES TO BE BLACK CORE STYLE POLES FATIGUE CATEGORY 2. POLES 9, 10, AND 11 TO HAVE WASHINGTON POSTLIGHT LUMINAIRES. (SEE LIGHTING PLANS)

** CONTACT M. HIRTZER AT MPW (615)880-3261 PRIOR TO MAKING ATTACHMENT. A MINIMUM OF 17 FEET CLEARANCE MUST BE ACHIEVED TO THE BOTTOM OF ALL SIGNAL HEADS.

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PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2410

**TRAFFIC SIGNAL
DETAILS**

21st Avenue South at
Grand Avenue

N.T.S.

SHEET 15A

SIGNAL NOTES

1. ALL CONSTRUCTION, EQUIPMENT, AND INSTALLATION PROCEDURES SHALL COMPLY WITH THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. SIGNAL INSTALLATION AND EQUIPMENT SHALL COMPLY WITH SECTION 730N-TRAFFIC SIGNALS (MARCH 1, 2011). ALL PAVEMENT MARKINGS SHALL COMPLY WITH SECTION 716-PAVEMENT MARKINGS.
2. THE CONTRACTOR SHALL SUBMIT A MATERIALS LIST TO MDPW FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION (CONTACT: MIKE HIRTZER, METRO TRAFFIC ENGINEERING, 615-880-3261).
3. INITIAL SIGNAL TIMINGS ARE TO BE PROVIDED BY MDPW. THE CONTRACTOR SHALL NOTIFY MDPW A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL.
4. CONSTRUCT THE CONTROLLER CABINET AND FOUNDATION IN ACCORDANCE WITH TDOT STANDARD DRAWINGS. AN APPROPRIATE CABINET AND FOUNDATION SHALL BE INSTALLED PER MDPW SPECIFICATIONS:
TYPE IV 55" X 44" X 26" ALUMINUM
~~TYPE IV 60" X 50" X 36" X 17 1/2"~~ ELECTROSTATIC PAINTED BLACK.
5. THE CONTRACTOR SHALL CONNECT THE EXISTING SIGNAL COMMUNICATIONS CABLE TO THE NEW TRAFFIC SIGNAL CONTROLLER CABINET. THE CONNECTION SHALL BE MADE BY SPLICING THE EXISTING CABLE IN A MANNER ACCEPTABLE TO MDPW. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH MDPW AND RECEIVE MDPW APPROVAL PRIOR TO SPLICING THE EXISTING CABLE.
6. ALL UTILITY LOCATIONS, AS SHOWN, ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ELECTRICAL SERVICE TO THE SITE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL UTILITIES FOR ANY "MAKE READY" WORK REQUIRED. MDPW SHALL BE RESPONSIBLE FOR THE ACTUAL COST OF "MAKE READY" WORK.
- 9.A CONTRACTOR SHALL INSTALL A 50 AMP, 2 POLE WEATHERPROOF EXTERNAL DISCONNECT ON THE POLE WITH A/C SERVICE CONNECTION. ENCLOSURE SHALL BE METALLIC WITH A 50 AMP SINGLE POLE CIRCUIT BREAKER.
- 9.B CONTRACTOR SHALL INSTALL UNDERGROUND ELECTRIC SERVICE CONNECTION IN A TYPE B PULL BOX LABELED "TRAFFIC SIGNAL". PULL BOX SHALL HAVE A 30 AMP KTK FUSE AND WATER PROOF FUSE HOLDER WITH #6 AWG WIRES COLOR CODED BLACK, WHITE, AND GREEN. POWER SERVICE SHOULD BE INSTALLED IN A 2" CONDUIT FROM NES VAULT TO CONTROLLER CABINET.
10. VEHICLE DETECTION LOOPS SHALL MEASURE 6' X 45' WITH TWO TURNS OF WIRE, UNLESS SPECIFIED OTHERWISE. LOOPS SHALL BE CENTERED IN THE TRAVEL LANES. LOOPS SHALL BE INSTALLED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND MDPW LOOP SPECIFICATIONS, UNLESS OTHERWISE NOTED.
11. ALL EQUIPMENT NECESSARY FOR VIDEO DETECTION SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED IN THE CABINET. MOUNTING HARDWARE SHALL BE OF THE ASTRO BRACKET TYPE WITH A MINIMUM HEIGHT ADJUSTMENT OF 6 FT.
12. ALL FOUNDATIONS SHALL HAVE A SPARE 2-INCH STUBOUT PARALLEL TO THE ROAD (POLES AND CONTROLLER).
13. THE PROPOSED LOCATIONS FOR THE SIGNAL SUPPORT POLES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE. SOME FIELD ADJUSTMENT MAY BE REQUIRED IN ORDER TO AVOID CONFLICT WITH EITHER OVERHEAD OR UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND STAKING THE OPTIMUM LOCATIONS FOR THESE POLES AND FOR RECEIVING APPROVAL FROM THE ENGINEER AND THE APPROPRIATE UTILITIES BEFORE INSTALLATION BEGINS. PROPER ROADSIDE CLEAR ZONES SHALL BE OBSERVED.
14. SHAFTS FOR FOOTINGS SHALL BE DRILLED THROUGH FIRM, UNDISTURBED, UNSATURATED SOIL AND SHALL BE VISUALLY

- INSPECTED BY THE ENGINEER OR ENGINEERING REPRESENTATIVE PRIOR TO PLACEMENT OF REINFORCEMENT. THE ENGINEER OR ENGINEERING REPRESENTATIVE SHALL BE ADVISED BY THE CONTRACTOR OF ANY GROUND WATER OR LOOSE SOIL ENCOUNTERED DURING DRILLING. FOOTINGS SHALL COMPLY WITH TDOT STANDARD DRAWINGS.
15. SIGNAL HEADS VISIBLE TO DRIVERS BUT NOT OPERATIONAL SHALL BE COMPLETELY COVERED.
 16. SIGNAL HEADS SHALL FLASH A MINIMUM OF SEVEN (7) DAYS PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL, UNLESS OTHERWISE SPECIFIED BY MDPW TRAFFIC ENGINEER.
 17. IF FIELD ADJUSTMENTS RESULT IN CHANGES TO SIGNAL HEAD PLACEMENT, ATTACHMENT HEIGHTS, OR SPAN WIRE/MAST ARM LENGTH, THE ENGINEER SHALL BE ADVISED AND SHOP DRAWINGS SHALL BE RE-EVALUATED TO VERIFY THAT THE CHANGES ARE STRUCTURALLY ACCEPTABLE.
 18. ALL STOP LINES, CROSSWALK LINES, LANE LINES, AND PAVEMENT ARROWS SHALL BE THERMOPLASTIC. STOP LINES SHALL BE 24 INCHES WIDE. ALL CONFLICTING MARKINGS SHALL BE REMOVED USING AN ACCEPTABLE METHOD AS SPECIFIED BY TDOT SPECIFICATION SECTION 712-TEMPORARY TRAFFIC CONTROL. EXISTING PAVEMENT MARKINGS SHALL BE REAPPLIED AS NECESSARY.
 19. STREET NAME SIGNS ARE TO BE PROVIDED BY MDPW AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. CONTACT MDPW SIGN SHOP A MINIMUM OF THIRTY (30) DAYS PRIOR TO EXPECTED SIGN INSTALLATION DATE FOR SIGN PREPARATION.
 20. ALL ITEMS INSTALLED WITHIN THE PEDESTRIAN PATH OF TRAVEL (I.E. SIDEWALK) SHALL MEET THE METRO PUBLIC WORKS STANDARD DETAILS. THIS INCLUDES A MINIMUM PATH OF TRAVEL WIDTH OF 60" AND A PROTRUDING OBJECT LIMIT OF 4" IF MOUNTED AT A HEIGHT BETWEEN 27" AND 80" AND WITHIN THE PATH OF TRAVEL. VARIANCES MUST BE APPROVED BY MDPW.
 21. EXISTING SIGNAL EQUIPMENT TO BE REMOVED BY THE CONTRACTOR. ALL SALVAGED EQUIPMENT TO BE RETURNED TO MDPW.
 22. EXISTING SIGNAL EQUIPMENT SHALL REMAIN IN OPERATION UNTIL NEW SIGNAL EQUIPMENT IS COMPLETE AND IN FULL OPERATION.
 23. ALL NEW SIGNAL HEADS SHALL BE FABRICATED FROM ALUMINUM. ALL NEW SIGNAL HEADS SHALL BE LED TYPE, GELCORE OR METRO APPROVED ALTERNATE. SIGNAL HEAD EQUIPMENT (I.E. FRAME AND ILLUMINATION TYPE) SHALL BE APPROVED BY MDPW PRIOR TO INSTALLATION (CONTACT: DICKIE LAIN, METRO TRAFFIC SPECIAL OPERATIONS, 615-862-8766). ATTACHMENT TO BE WITH "ASTRO" BRACKETS.
 24. ~~CABINET AND CONTROLLER MUST HAVE ALL EQUIPMENT NECESSARY TO PROVIDE SIGNAL COMMUNICATION VIA PHONE DROP. THIS INCLUDES APPROVED MODEM AND 1" RISER WITH PULL LINE. THIS DOES NOT INCLUDE THE INSTALLATION OF THE PHONE LINE ITSELF.~~
 25. CABINET/CONTROLLER TO INCLUDE COORDINATION MODULE, ETHERNET PORT, COMMUNICATIONS PANEL AND OTHER CABINET WIRING AS REQUIRED FOR SYSTEM OPERATION. CONTROLLER TO BE COMPATIBLE WITH EXISTING MDPW CLOSED LOOP SOFTWARE MATS OR AIRES UNLESS OTHERWISE SPECIFIED.
 26. ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES; ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES; PROPOSED RULE, PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.
 27. TRAFFIC SIGNAL SUPPORT POLES SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES, AND TRAFFIC SIGNALS (CURRENT EDITION WITH ADDENDA). WIND LOADS SHALL BE BASED ON A BASIC WIND SPEED OF 90MPH WITH A RECURRENCE INTERVAL OF 50YRS. USE THE FATIGUE CATEGORY AS NOTED ON EACH PROPOSED SIGNAL LAYOUT. FATIGUE LOADS ARE BASED ON THE REQUIREMENTS OF SECTION 11.7 AND THE FOLLOWING LOADS:
GALLOPING - NO DESIGN NECESSARY. VIBRATION DAMPENERS SHALL BE USED ON ALL MAST ARMS 50' OR GREATER.
VORTEX SHEDDING - NOT APPLICABLE ON TRAFFIC SIGNAL SUPPORTS WITH A TAPER OF AT LEAST 0.14 IN/FT.
NATURAL WIND GUST - THE YEARLY MEAN WIND SPEED FOR

- NATURAL WIND GUSTS SHALL BE 11.2MPH.
TRUCK INDUCED GUST - NO DESIGN NECESSARY.
THE TRAFFIC SIGNAL SUPPORT POLES SHALL BE POLES WITH CURVED MAST ARMS IN ACCORDANCE WITH MDPW 730-N POLE AND LIGHTING SPECIFICATIONS MARCH 1, 2013. FOR POLE AND ARM DETAILS, AND TO CONFIRM DESIGN CRITERIA, CONTACT MIKE HIRTZER, METRO TRAFFIC ENGINEERING, 615-880-3261.
28. ALL OPEN CUTS AND TRENCH REPAIRS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CURRENT MDPW STANDARD DRAWINGS.
 29. ALL SIDEWALK AND RAMP REPAIRS SHALL COMPLY WITH CURRENT MDPW STANDARD DRAWINGS.
 30. ALL CONDUITS SHALL BE SCHEDULE 80 PVC UNLESS OTHERWISE NOTED. CONDUIT SHALL BE LAID AT A MINIMUM DEPTH OF 24 INCHES BELOW FINISHED GRADE AND SHALL COMPLY WITH TDOT TRENCHING DETAILS AND CONDUIT PLACEMENT. THE CONTRACTOR SHALL SEAL ALL OPEN CONDUIT ENTRANCE HOLES, WITH OR WITHOUT CABLES, WITH CONDUIT DUCT SEAL PUTTY OR CONDUIT PLUGS. WHERE CABLE ENTER THE CONDUIT, THE SEALANT SHALL BE APPLIED AFTER INSTALLING THE CABLE. THESE LOCATIONS SHALL CONSIST OF CONDUIT ENDS AND PULL BOXES, CABINET BASES AND WEATHER-HEADS.
 31. THE PLAN SHEETS HAVE BEEN DEVELOPED WITH EXISTING DATA AVAILABLE FROM MULTIPLE SURVEYS AND FIELD VISITS. ALL ITEMS INCLUDED AND SHOWN HEREIN ARE BELIEVED TO REFLECT EXISTING CONDITIONS TO A REASONABLE DEGREE OF ACCURACY. HOWEVER, THE CONTRACTOR HAS FINAL RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO, UNDERGROUND UTILITIES, PROPERTY LINES AND DRAINAGE STRUCTURES.
 32. ~~OPERATION OF EACH INTERNALLY ILLUMINATED STREET NAME SIGN SHALL BE CONTROLLED THROUGH THE USE OF A SINGLE PHOTO GELL (GRAINGER PART #K-4021 OR EQUIVALENT) LOCATED IN THE TOP OF THE CONTROLLER CABINET. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE WIRED TO A SEPARATE 6 POSITION TERMINAL BLOCK AND A SEPARATE 6 POSITION GROUND BAR LOCATED IN THE CONTROLLER CABINET.~~

FILE NO.	10-0606
DATE:	09/23/14
DESIGNED BY:	KDR
DRAWN BY:	DKC
CHECKED BY:	DJS

REVISION BLOCK	
DATE:	
6/18/14	REMOVED PEDESTRIAN CROSSING AT DIVISION ST.
6/23/14	REVISED LIGHTING & POWER



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Nashville, Tennessee 37212

PRELIMINARY PLANS
NOT FOR
CONSTRUCTION

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METROPOLITAN GOVERNMENT
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PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
INTERSECTION NO.
2345, 2355, 2410

TRAFFIC SIGNAL
NOTES

Buckingham Development

N.T.S.

SHEET 16

ESTIMATED LIGHTING QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
714-03.01	DIRECT BURIAL CONDUIT (2" PVC, SCHEDULE 40)	L.F.	1040
714-05.05	PULL BOXES (24" X 13")	EACH	10
714-06.06	CABLE (1/C # 4 AWG)	L.F.	3300
714-06.08	CABLE (# 6 COPPER SOFT DRAWN BARE) (GROUND)	L.F.	1100
714-08.09	LIGHT STANDARDS (23')	EACH	4
714-08.20	FOUNDATION (ONLY) FOR LIGHT STANDARD	EACH	4
714-09.09	LUMINAIRES (250W CRYSTALITE TEARDROP)	EACH	4
714-09.10	LUMINAIRES (250W WASHINGTON POSTLITE)	EACH	8
714-25	ELECTRICAL CONNECTION	EACH	1
714-25.22	INSTALL SVC RISER	EACH	2

PAY ITEM FOOTNOTES:

- (1) SHALL BE NES STOCK #060020500. INCLUDES 8 FOR USE AT THE SIGNAL POLES (1-ELECTRICAL PULL BOX AT THE BASE OF EACH SIGNAL POLE).
- (2) SHALL BE 23 FT ROUND TAPERED FLUTED ALUMINUM POLE, DESIGNED FOR 90 MPH WIND PRESSURE AND SHALL SUPPORT ONE 55-POUND LUMINAIRE ON A 30-POUND ARM. USE VALMONT POLE, CATALOGUE NO. DB00794D-NASHVILLE-TYPE A, WITH RENNAISSANCE BASE. INCLUDES THE COST OF THE BANNER ARMS, HOLOPHANE CATALOGUE NO. NASH-BBA, AND SLIP FITTER, HOLOPHANE CATALOGUE NO. BALF-200-S-CA-BK. POLE, BASE AND ARMS SHALL BE BLACK. ALSO, INCLUDES THE COST OF THE GFI RECEPTACLE.
- (3) TOTAL LUMENS = 20,700. OPERATING VOLTAGE = 120 VOLTS. SHALL BE CRYSTALITE TEARDROP LUMINAIRE, HOLOPHANE CATALOGUE NO. CRU-250HP-MA-B-4-PS-R G-11785, TEST NUMBER 47254, WITH GLASS DOOR, BLACK FINISH, AND PROTECTED STARTER. INCLUDES THE COST OF THE OREM ARM, HOLOPHANE CATALOGUE NO. OUC45/1-CA/BKH, AND BOSTON HARBOR SLIP FITTER, HOLOPHANE CATALOGUE NO. BALF-200-S-CA-BK. ALSO INCLUDES THE COST OF THE LAMP, SYLVANIA CATALOGUE NO. LU250/ECO, 250 WATT COLOR CORRECTED HIGH PRESSURE SODIUM WITH TYPE IV DISTRIBUTION AND CLEAR MOGUL, BLACK FINISH BASE. ALSO, INCLUDES THE COST OF THE SHORTING CAP.
- (4) TOTAL LUMENS = 20,700. OPERATING VOLTAGE = 120 VOLTS. SHALL BE ENHANCED WASHINGTON POSTLITE LUMINAIRE, HOLOPHANE CATALOGUE NO. WE250-HP-MA-B-3-B-6-H-PS G-11785, TEST NO. 47135.IES, WITH BAND, RIBS, SPIKE FINIAL AND PROTECTED STARTER. ALSO INCLUDES THE COST OF THE LAMP, SYLVANIA CATALOGUE NO. LU 250/DX, 250 WATT COLOR CORRECTED HIGH PRESSURE SODIUM WITH TYPE III DISTRIBUTION AND CLEAR MOGUL, BLACK FINISH BASE. ALSO, INCLUDES THE COST OF THE TENON ARM TO BE SUPPLIED BY CONTRACTOR. ALSO, INCLUDES THE COST OF THE SHORTING CAP.
- (5) THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR ANY CHARGES BY THE UTILITY FOR PROVIDING ELECTRICAL SERVICE AND THE CONTROL RELAY(S). THESE CHARGES SHALL BE INCLUDED IN THE BID FOR THIS ITEM. ALSO, INCLUDES THE COST OF ALL APPURTENANCES FOR A COMPLETE SERVICE INSTALLATION, INCLUDING TRANSFORMERS, AS REQUIRED.

LIGHTING NOTES

- (1) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.
- (2) ALL WORK SHALL BE IN ACCORDANCE WITH THE NES STREET GUIDELINES, VERSION 3, AND THE TDOT SPECIAL PROVISION 714-N.
- (3) NES SHALL PROVIDE 2-120V TO GROUND SERVICE AT POWER SOURCE PSA AND PSB FOR THE LIGHTING AND RECEPTACLE.
- (4) THE LIGHTING AND THE RECEPTACLES SHALL BE WIRED INDEPENDENT OF EACH OTHER. THE LIGHTING SHALL BE WIRED TO 1 OF THE 120V SERVICES AND THE RECEPTACLES TO THE OTHER. THE LIGHTING AND RECEPTACLES SHALL SHARE THE SAME NEUTRAL.
- (5) FOR POWER SOURCE UTILITY POLES (PSA AND PSB), REFER TO NES STREET LIGHT DESIGN MANUAL, FIGURE 4. CONTRACTOR SHALL ENSURE THAT THE FIRST 10' SECTION OF CONDUIT GOING UP THE POLES IS 2" RGS. ALL ELBOWS USED MUST BE 2" SCH 80 PVC WITH 24" RADIUS.
- (6) REFER TO NES STREET LIGHT DESIGN MANUAL FOR:
 - A. TRENCHING REQUIREMENTS, SEE FIGURE 1.
 - B. UNDERGROUND STREET LIGHTING SERVICE FROM RISER, FIGURE 4.
 - C. MAXIMUM DISTANCE BETWEEN PULL BOXES, SEE FIGURE 5.
 - D. FOOTING DETAILS, SEE FIGURE 6.
 - E. INSTALLATION AND MATERIALS.
 - F. WIRING SPECIFICATIONS.
- (7) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2" SCHEDULE 40 PVC CONDUIT, UNLESS OTHERWISE NOTED IN PLANS.
- (8) ELECTRICAL LIGHTING PULL BOXES SHALL BE LABELED 'NES STREET LIGHTING'.
- (9) NO MORE THAN 2-2" CONDUIT SHALL BE ROUTED TO EACH LIGHT POLE FOUNDATION (1-2" CONDUIT ENTERING AND 1-2" CONDUIT EXITING).
- (10) NO MORE THAN 4-2" CONDUIT SHALL BE ROUTED TO EACH LIGHTING PULL BOX (2-2" CONDUIT ENTERING, AND 2-2" CONDUIT EXITING).
- (11) CABLES FOR LIGHTING AND RECEPTACLES SERVICING THE SAME POLES SHALL BE RUN IN THE SAME CONDUIT.
- (12) CABLES FOR THE STREET LIGHTING SYSTEM AND RECEPTACLES SHALL BE INSTALLED IN CONDUIT AND BOXES INDEPENDENT OF ANY OTHER SYSTEM.
- (13) CONDUIT SERVICING VARIOUS ELECTRICAL DISTRIBUTIONS MAY BE RUN IN THE SAME TRENCH.
- (14) CONDUIT CROSSINGS AT ROADWAYS SHALL NOT BE LOCATED WITHIN A CROSSWALK.
- (15) FOR STREET LIGHT POLES:
 - A. MAINTAIN MIN. 3' WORKING CLEARANCE AROUND POLE.
 - B. MAINTAIN MIN. 10' CLEARANCE TO ALL FIRE HYDRANTS PER FIRE MARSHALL REQUIREMENTS.
 - C. MAINTAIN MIN. 10' CLEARANCE TO ALL NES LIGHT POLES AND NES OVERHEAD POWER LINES. ALSO MAINTAIN MIN. 4.5' VERTICAL CLEARANCE BETWEEN OVERHEAD CABLES.
 - D. BOND ALL GROUNDED ITEMS WITHIN 10' OF POLE TO POLE GROUND ROD.
- (16) HARDSCAPE FURNISHINGS SHALL NOT BLOCK THE POLE HANDHOLE. FINAL LOCTION OF HARDSCAPE FURNISHINGS WITH RESPECT TO LIGHT POLES SHALL BE APPROVED BY THE ENGINEER.
- (17) LIGHT STANDARDS SHALL BE SETBACK 3 FEET FROM THE FRONT FACE OF CURB TO CENTER OF POLE/BOLT PATTERN. OR, LIGHT STANDARD SHALL BE SETBACK 3 FEET FROM THE EDGE OF PAVEMENT OR CONCRETE GUTTER. AT LP 5, THE POLE SHALL BE SET BACK 2'-6" TO MAINTAIN MIN. 36" ADA CLEARANCE. SEE DETAIL ON SHEET U6.
- (18) LUMINAIRES MAY BE MOVED 5 FEET TO AVOID UTILITY CONFLICTS. ANY ADJUSTMENTS GREATER THAN 5 FEET SHALL BE APPROVED BY THE ENGINEER.
- (19) NES WILL PROVIDE CONSTRUCTION INSPECTION. CONTACT BRAD MCKELVEY, NES, (615) 747-3542, FOR ELECTRICAL CONNECTION AND CONSTRUCTION INSPECTION.
- (20) FINAL LOCATION OF POWER SOURCES WILL BE CONFIRMED PRIOR TO CONSTRUCTION.

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METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2345, 2355 & 2410

**LIGHTING ESTIMATED
QUANTITIES, NOTES
AND SCOPE OF
SERVICES**

**21ST AVENUE SOUTH AT
BROADWAY**

1" = 20'

SHEET U1

FILE NO.	10-0606
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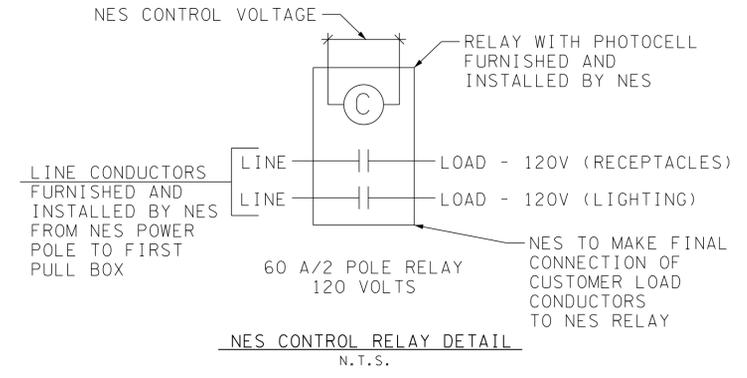
ROADWAY LIGHT POLE SCHEDULE											
LIGHT POLE NO.	SHEET NO.	LAMP WATTAGE (HPS)	VOLTAGE	LUMINAIRE TYPE	NO. OF LAMPS	CONTROL RELAY	MOUNTING HEIGHT (FT)	BASELINE	STATION	OFFSET (FT)	SIDE
LP 1	U3	250	120	B	1	CR1	20	BROADWAY	1+68.81	28.59	RT
LP 2	U3	250	120	A	1	CR1	20	BROADWAY	3+06.00	24.14	RT
LP 3	U4	250	120	A	1	CR2	25.5	21ST AVE S	41+69.00	27.36	LT
LP 4	U4	250	120	A	1	CR2	25.5	21ST AVE S	40+76.50	34.18	LT
LP 5	U4	250	120	A	1	CR2	25.5	BROADWAY	6+26.00	26.64	RT
LP 6	U4	250	120	A	1	CR2	25.5	BROADWAY	7+18.00	26.64	RT
LP 7	U4	250	120	B	1	CR2	20	BROADWAY	8+10.69	29.15	RT
LP 8	U3	250	120	B	1	CR1	20	BROADWAY	2+37.99	43.01	LT
LP 9	U4	250	120	B	1	CR1	20	BROADWAY	5+10.55	32.34	LT
LP 10	U4	250	120	B	1	CR1	20	BROADWAY	5+67.18	32.79	LT
LP 11	U4	250	120	B	1	CR2	20	BROADWAY	8+13.47	32.18	LT
LP 12	U4	250	120	B	1	CR2	20	BROADWAY	8+67.56	35.63	LT

A = CRYSTALITE TEARDROP LUMINAIRE ON LIGHT STANDARD
B = WASHINGTON POSTLITE LUMINAIRE ON SIGNAL POLE

WIRING AND CONDUIT SCHEDULE											
RUN NO.	POLE NO. TO POLE NO.			TRENCHED CONDUIT LENGTH (FT)	CABLE LENGTH (FT)	CONTROL RELAY	TOTAL AMPS	LINE TYPE	SPECIAL NOTES	NO. OF 2" SCH. 40 PVC CONDUIT ⁽¹⁾	NO. & SIZE OF WIRE
	PSA	TO	PBA								
1	PSA	TO	PBA	15	15	CR1			(2)	1	2 @ #4 AWG
	PSB	TO	PBB	15	15	CR2			(2)		
2	PBA	TO	LP 1 THRU LP 6 LP 12 THRU LP 14	505	505	CR1	20	LIGHTING	(3)	1	3 @ #4 AWG 1 @ #6 GROUND
						20	RECEPTACLES				
	PBB	TO	LP 4 THRU LP 7 LP 11 AND LP 12	520	520	CR2	25	LIGHTING			
						20	RECEPTACLES				

- (1) MAX ALLOWABLE FILL = 40%
(2) NES SHALL PROVIDE CABLE FROM POWER SOURCE TO PULL BOX.
(3) INCLUDES 1-HOT FOR THE LIGHTING AND 1-HOT FOR THE RECEPTACLES. THE LIGHTING & RECEPTACLES SHALL SHARE THE NEUTRAL.

CR = CONTROL RELAY
PSA = POWER SOURCE (TYP)
PBA = PULL BOX (TYP)



- POWER DISTRIBUTION NOTES:
- FOR STREET LIGHTING SERVICES, CONTACT BRAD McKELVEY, NES, (615) 747-3542.
 - THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF THE PULL BOX (PBA AND PBB) AND THE STEEL RISER AT THE PROPOSED POWER SOURCE LOCATIONS (PSA AND PSB).
 - NES IS RESPONSIBLE FOR INSTALLATION OF THE CONTROL RELAY WITH PHOTOCELL, AND THE CABLE FROM THE PROPOSED POWER SOURCE (PSA AND PSB) TO THE FIRST PULL BOX ADJACENT THE POWER SOURCE POLE (PBA AND PBB).
 - THE PHOTOCELL SHALL BE LOCATED AT THE CONTROL RELAY.

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**LIGHT POLE
SCHEDULE**

21ST AVENUE SOUTH AT
BROADWAY

1" = 20'
SHEET U2

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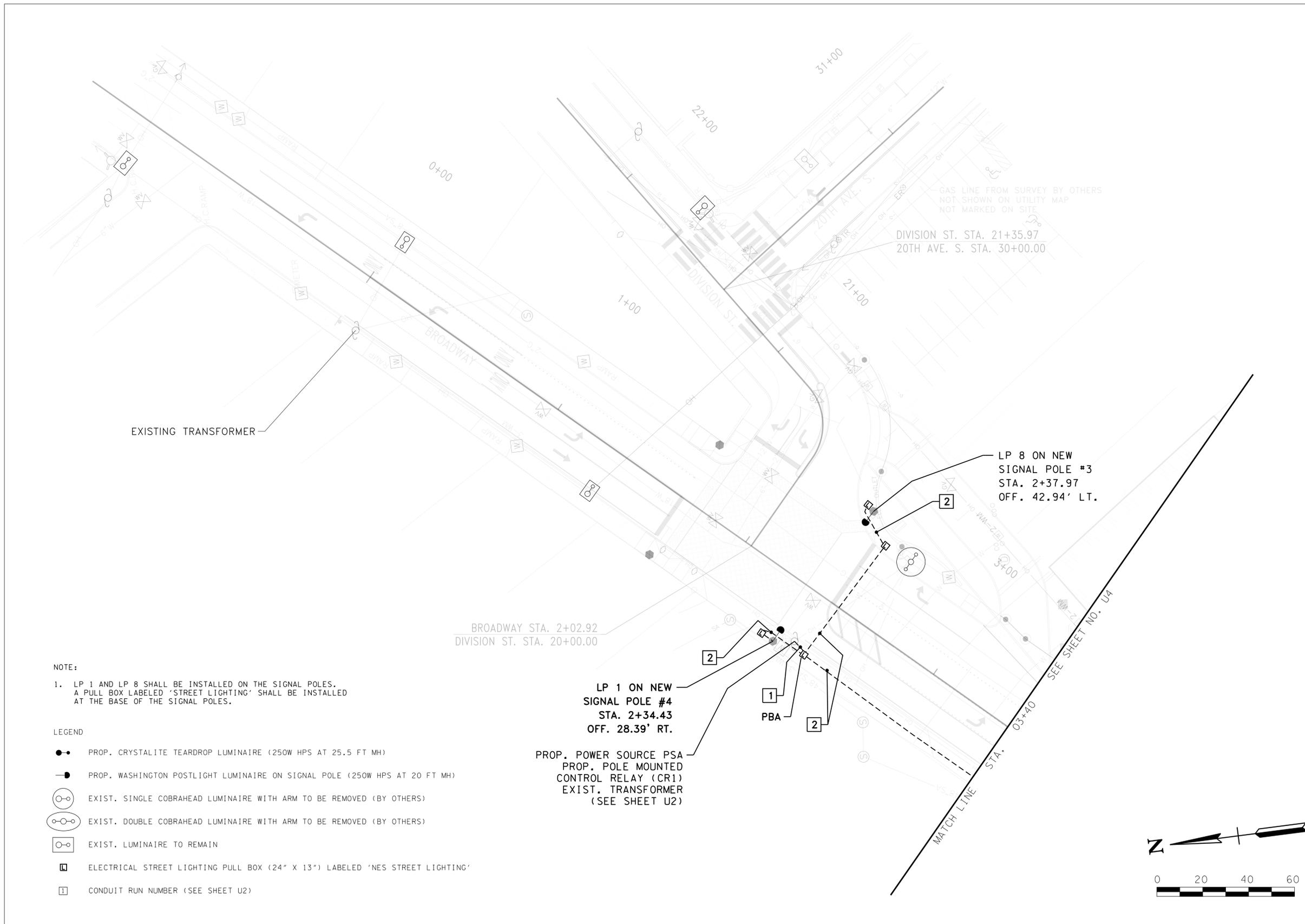
METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2345

**PROPOSED
LIGHTING**

**21ST AVENUE SOUTH AT
BROADWAY**

1" = 20'
SHEET U3



EXISTING TRANSFORMER

GAS LINE FROM SURVEY BY OTHERS
NOT SHOWN ON UTILITY MAP
NOT MARKED ON SITE

DIVISION ST. STA. 21+35.97
20TH AVE. S. STA. 30+00.00

BROADWAY STA. 2+02.92
DIVISION ST. STA. 20+00.00

LP 8 ON NEW
SIGNAL POLE #3
STA. 2+37.97
OFF. 42.94' LT.

LP 1 ON NEW
SIGNAL POLE #4
STA. 2+34.43
OFF. 28.39' RT.

PROP. POWER SOURCE PSA
PROP. POLE MOUNTED
CONTROL RELAY (CR1)
EXIST. TRANSFORMER
(SEE SHEET U2)

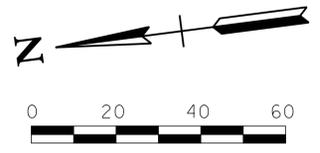
MATCH LINE
STA. 03+40
SEE SHEET NO. U4

NOTE:

- LP 1 AND LP 8 SHALL BE INSTALLED ON THE SIGNAL POLES. A PULL BOX LABELED 'STREET LIGHTING' SHALL BE INSTALLED AT THE BASE OF THE SIGNAL POLES.

LEGEND

- PROP. CRYSTALITE TEARDROP LUMINAIRE (250W HPS AT 25.5 FT MH)
- PROP. WASHINGTON POSTLIGHT LUMINAIRE ON SIGNAL POLE (250W HPS AT 20 FT MH)
- EXIST. SINGLE COBRAHEAD LUMINAIRE WITH ARM TO BE REMOVED (BY OTHERS)
- EXIST. DOUBLE COBRAHEAD LUMINAIRE WITH ARM TO BE REMOVED (BY OTHERS)
- EXIST. LUMINAIRE TO REMAIN
- ELECTRICAL STREET LIGHTING PULL BOX (24" X 13") LABELED 'NES STREET LIGHTING'
- CONDUIT RUN NUMBER (SEE SHEET U2)



FILE NO.	10-0606
DATE:	06/17/14
DESIGNED BY:	BR
DRAWN BY:	BR
CHECKED BY:	BB

REVISION BLOCK

DATE:	



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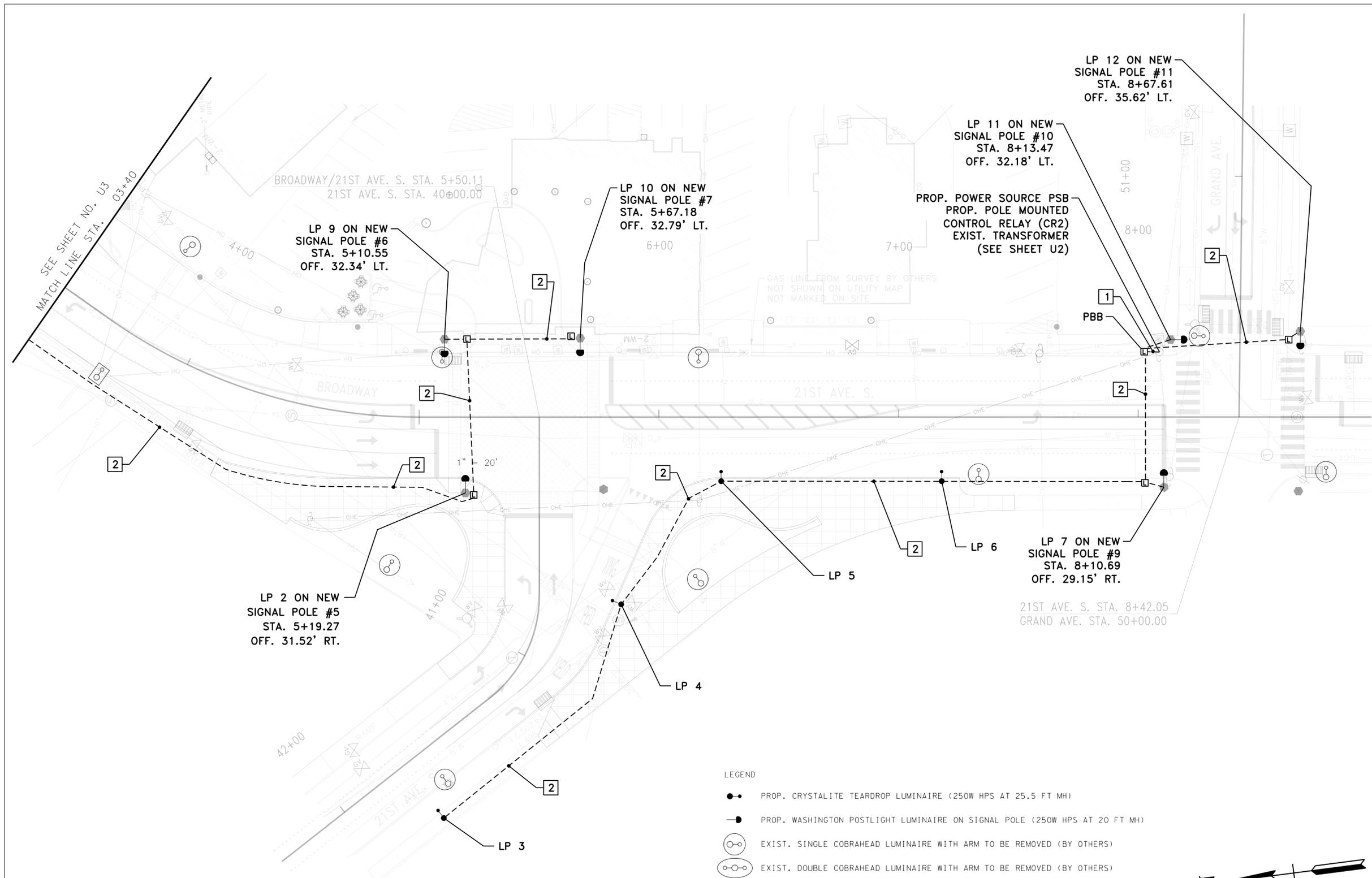
METROPOLITAN GOVERNMENT
 OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

INTERSECTION NO. 2355 & 2410

PROPOSED LIGHTING

21ST AVENUE SOUTH AT BROADWAY

1" = 20'
 SHEET U4

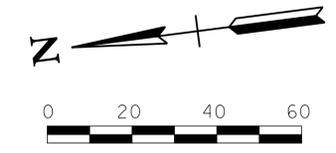


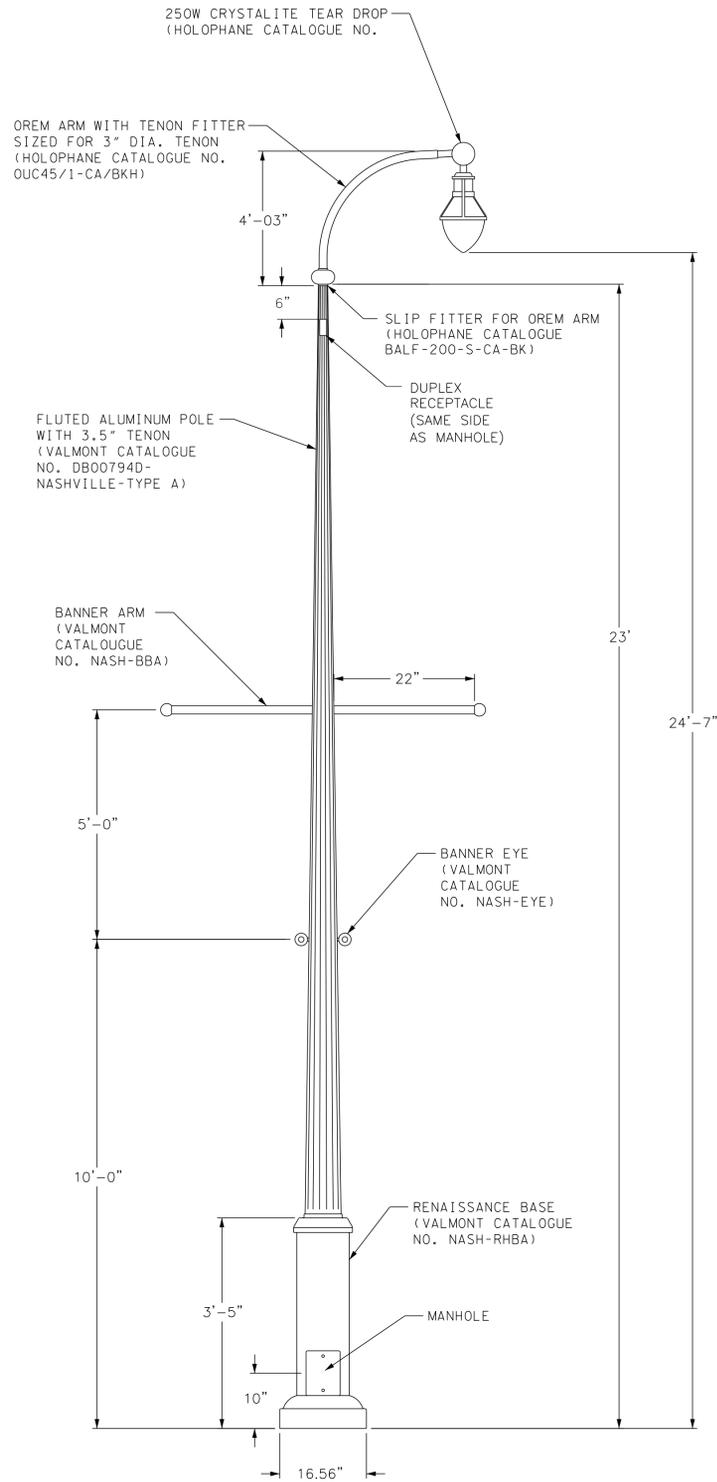
NOTE:

- LP 2, LP 7, LP 9 THRU LP 12 SHALL BE INSTALLED ON THE SIGNAL POLES. A PULL BOX LABELED 'STREET LIGHTING' SHALL BE INSTALLED AT THE BASE OF THE SIGNAL POLES.

LEGEND

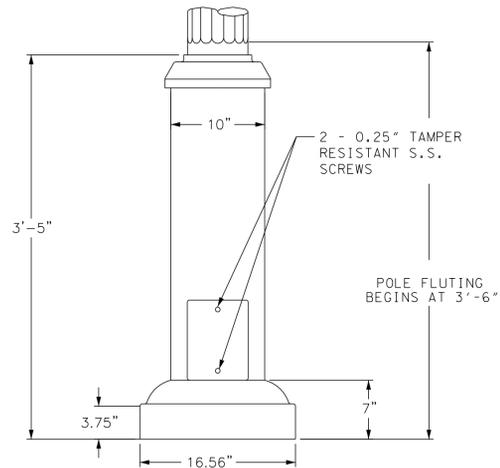
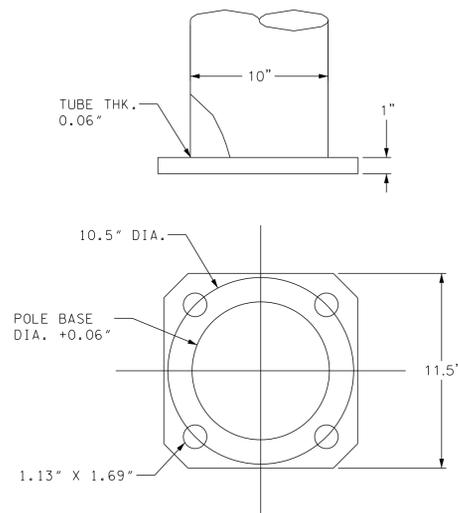
- PROP. CRYSTALITE TEARDROP LUMINAIRE (250W HPS AT 25.5 FT MH)
- PROP. WASHINGTON POSTLIGHT LUMINAIRE ON SIGNAL POLE (250W HPS AT 20 FT MH)
- EXIST. SINGLE COBRAHEAD LUMINAIRE WITH ARM TO BE REMOVED (BY OTHERS)
- EXIST. DOUBLE COBRAHEAD LUMINAIRE WITH ARM TO BE REMOVED (BY OTHERS)
- EXIST. LUMINAIRE TO REMAIN
- ELECTRICAL STREET LIGHTING PULL BOX (24" X 13") LABELED 'NES STREET LIGHTING'
- ① CONDUIT RUN NUMBER (SEE SHEET U2)





CRYSTALITE TEAR DROP
LIGHTING POLE AND LUMINAIRE DETAIL
N.T.S.

DRAWING FOR REFERENCE ONLY

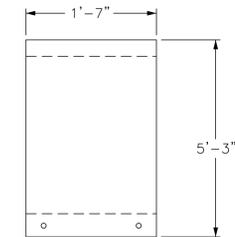


NOTES

1. IF USING GROUTING TO CONCEAL GAP BETWEEN BASE AND FOUNDATION, ALLOW FOR WATER DRAINAGE.
2. POLE MANUFACTURER SHALL SUPPLY TEMPLATE FOR BOLT PATTERN.
3. POLE INSTALLATION AS PER POLE MANUFACTURER RECOMMENDATION.

(4) - ANCHOR BOLTS WITH (2) HEX NUTS, (2) WASHERS AND (1) LOCK WASHER PER BOLT WITH THREADED END GALVANIZED AT LEAST 12".

BASE AND BOLT CIRCLE DETAIL,
RENNESSAINCE BASE DETAIL,
AND ANCHOR BOLT DETAIL
N.T.S.



BANNER NOTES

1. OBTAIN APPLICATION FOR BANNER INSTALLATION AND THE BANNER PROGRAM RESOURCE GUIDE FROM THE MAYOR'S OFFICE OF ECONOMIC AND COMMUNITY DEVELOPMENT, 117 UNION STREET, NASHVILLE, TN 37206.
2. BANNER APPLICATION SHALL BE FILED WITH THE MAYOR'S OFFICE OF ECONOMIC AND COMMUNITY DEVELOPMENT, 222 2ND AVE. NORTH, NASHVILLE, TN 37201, PHONE (615) 862-6024, FAX (615) 862-6025. OFFICE OF ECONOMIC AND COMMUNITY DEVELOPMENT WILL TAKE RESERVATIONS FOR BANNER PLACEMENT UP TO ONE (1) YEAR IN ADVANCE OF THE PROPOSED DATE DEVELOPER WISHES BANNER TO BE HUNG.
3. FOR BANNER DESIGN CONTACT BILL BARKLEY, ARMISTEAD BARKLEY, (615) 254-1875, AND MISSY PHILLIPS, NUD, (615) 742-3656.
4. THE SIZE OF THE BANNER, NOT INCLUDING THE TOP AND BOTTOM SLEEVE, IS 20 INCHES BY 56 INCHES. THE SIZE INCLUDING THE SLEEVE IS 20 INCHES BY 63 INCHES. THE TOP BANNER SLEEVE MUST HAVE A MINIMUM OPENING OF FOUR (4) INCHES. THE BOTTOM BANNER SLEEVE MUST HAVE A MINIMUM OPENING OF THREE (3) INCHES.
5. USE VALMONT BANNER ARM, CATALOGUE NO. NASH-BBA.

BANNER DETAIL
N.T.S.

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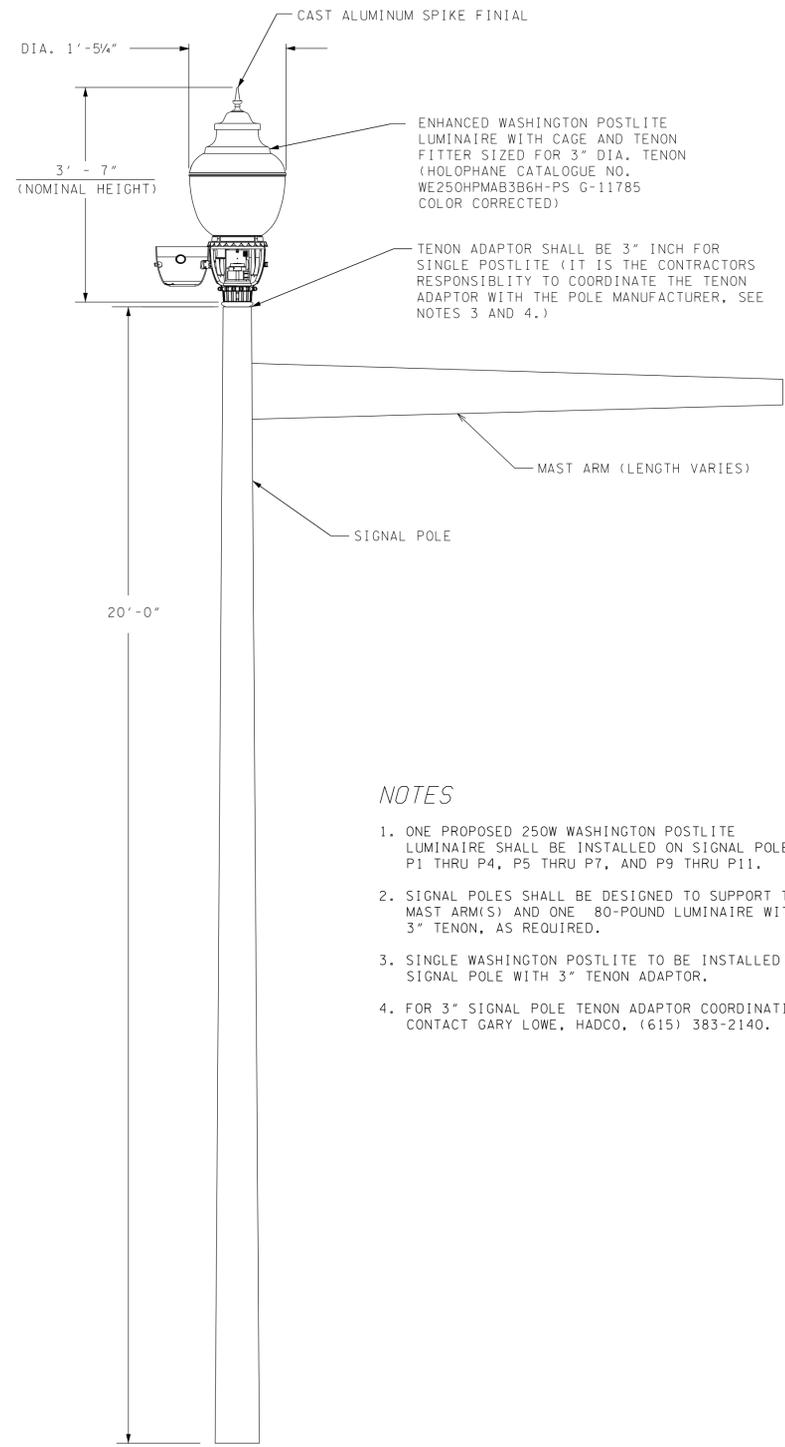
INTERSECTION NO. 2345, 2355 & 2410

**LUMINAIRE AND
LIGHT STANDARD
DETAILS**

**21ST AVENUE SOUTH AT
BROADWAY**

N.T.S.

SHEET U5

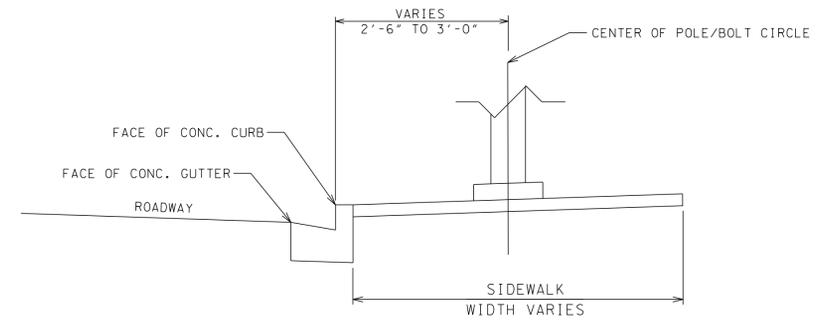


NOTES

1. ONE PROPOSED 250W WASHINGTON POSTLITE LUMINAIRE SHALL BE INSTALLED ON SIGNAL POLES P1 THRU P4, P5 THRU P7, AND P9 THRU P11.
2. SIGNAL POLES SHALL BE DESIGNED TO SUPPORT THE MAST ARM(S) AND ONE 80-POUND LUMINAIRE WITH A 3" TENON, AS REQUIRED.
3. SINGLE WASHINGTON POSTLITE TO BE INSTALLED ON SIGNAL POLE WITH 3" TENON ADAPTOR.
4. FOR 3" SIGNAL POLE TENON ADAPTOR COORDINATION, CONTACT GARY LOWE, HADCO, (615) 383-2140.

ENHANCED WASHINGTON POSTLITE (250W)
ON SIGNAL POLE DETAIL
N.T.S.

DRAWING FOR REFERENCE ONLY



DETAIL OF LIGHT STANDARD LOCATION
N.T.S.

NOTE

1. LP 5 SHALL BE INSTALLED 2'-6" FROM THE FACE OF THE CURB TO MEET THE MINIMUM ADA CLEARANCE OF 32".

*CONDUCTOR COLOR CODE

•NES APPROVED MATERIALS

DESCRIPTION	COLOR
LIGHTING PHASE CONDUCTOR	BLACK
SPARE PHASE CONDUCTOR	RED
RECEPTACLE PHASE CONDUCTOR	BLUE
FULL SIZED NEUTRAL	WHITE
GROUND - IN CONDUIT	GREEN
GROUND - IN TRENCH AS NEEDED	#6 COPPER SOFT DRAWN BARE

•REFER TO PG 7 OF THE NES STREET LIGHTING GUIDELINES V2.0.

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**LUMINAIRE ON
SIGNAL POLE
DETAILS**

**21ST AVENUE SOUTH AT
BROADWAY**

N.T.S.

SHEET U6