

CITY OF RICHMOND, VIRGINIA

DEPARTMENT OF PUBLIC WORKS

ENGINEERING AND TECHNICAL SERVICES

OWNER:
 CITY OF RICHMOND
 DEPARTMENT OF PUBLIC WORKS
 900 E BROAD STREET 7TH FLOOR,
 RICHMOND, VA
 PROJECT MANAGER - Winston D. Phillips, PMP
 CONTACT # 804-646-5994

AGENT:

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
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HULL STREET STREETScape

CONTRACT NO. - 17000023008

UPC - 111703

CITY PROJECT NO. - 106374

DRAWING NO. - O-28933

STATE PROJECT NO. - U000-127-004, P101, C501

FEDERAL PROJECT NO. - NHPP-5A27(720)

THESE PLANS ARE UNFINISHED
 AND ARE NOT TO BE USED FOR
 ANY TYPE OF CONSTRUCTION.

CITY OF RICHMOND

APPROVED FOR CONSTRUCTION

DATE	SURVEY SUPERINTENDENT
DATE	PROJECT MANAGER
DATE	MAINTENANCE ENGINEER
DATE	CITY TRAFFIC ENGINEER
DATE	CAPITAL PROJECTS ADMINISTRATOR
DATE	CITY ENGINEER
DATE	DIRECTOR OF PUBLIC WORKS

REVISIONS

NO.	DATE	COMMENTS

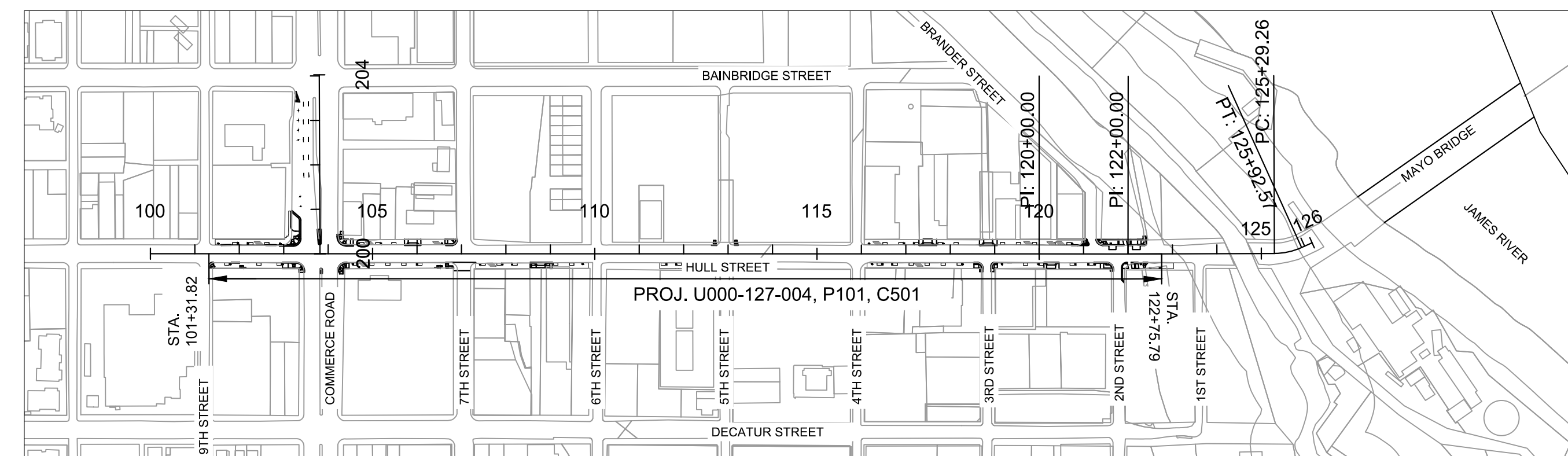
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF RICHMOND.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE CITY OF RICHMOND DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS, 2020 VDOT ROAD AND BRIDGE SPECIFICATIONS, 2016 VDOT ROAD AND BRIDGE STANDARDS, 2009 FHWA MUTCD, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL, AND ALL REVISIONS AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC VERSION OF THE PLAN ASSEMBLY INCLUDING ALL REVISIONS.

ALL WORK IS CONTAINED WITHIN EXISTING RIGHT-OF-WAY AND NO PROPOSED RIGHT-OF-WAY OR EASEMENTS ARE REQUIRED.

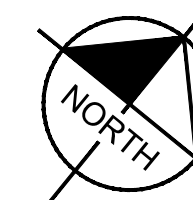
THE ORIGINAL SIGNED/APPROVED TITLE SHEET, INCLUDING ORIGINAL SIGNATURES, IS FILED IN THE CITY OF RICHMOND DEPARTMENT OF PUBLIC WORKS OFFICE.

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L3.01	MOT PHASE 1
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L4.00	DEMO AND E&S PLANS
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L5.00	LAYOUT AND MATERIALS PLANS
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L9.03	PLANTING PLAN
L9.04	PLANTING PLAN
L10.00	PLANTING NOTES & DETAILS
L11.00	SIGNING & MARKING PLAN
L11.01	SIGNING & MARKING PLAN
L11.02	SIGNING & MARKING PLAN
L11.03	SIGNING & MARKING PLAN
L11.04	SIGNING & MARKING PLAN
* L12.00	SIGN SCHEDULE
* L12.01	SIGNING & MARKING DETAILS
L13.00	LIGHTING PLAN
L13.01	LIGHTING PLAN
L13.02	LIGHTING PLAN
L13.03	LIGHTING PLAN
L13.04	LIGHTING PLAN
L14.00	PHOTOMETRIC PLAN
L14.01	PHOTOMETRIC PLAN
L14.02	PHOTOMETRIC PLAN
L14.03	PHOTOMETRIC PLAN
L14.04	PHOTOMETRIC PLAN
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L16.00	SIGNAL PLAN
L16.01	SIGNAL PLAN
L16.02	SIGNAL PLAN
L17.00	ITS CONDUIT PLAN
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L17.02	ITS CONDUIT PLAN
L17.03	ITS CONDUIT PLAN
L17.04	ITS CONDUIT PLAN
* L18.00	SIGNAL AND CONDUIT DETAILS
* L19.00	CROSS SECTIONS



VICINITY MAP

SCALE: 1"= 250'



60% PLANS
5-14-2021

* INDICATES SHEET IS NOT INCLUDED IN THIS SUBMITTAL

GENERAL NOTES

GENERAL

- THE CONTRACTOR SHALL PERFORM ALL WORK AND CONSTRUCT/INSTALL ALL ITEMS WITHIN EXISTING CITY OF RICHMOND RIGHT OF WAY. ANY AREA THAT IS DISTURBED OUTSIDE OF THE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE LATEST STATE CORPORATION COMMISSION (SCC) REQUIREMENTS, STANDARDS AND SPECIFICATIONS OF THE CITY OF RICHMOND, THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CITY OF RICHMOND'S RIGHT OF WAY EXCAVATION & RESTORATION MANUAL, AND THE VDOT SUPPLEMENT TO THE MUTCD EXCEPT WHERE NOTED ON THE PLANS. IF THERE IS CONFLICTING STANDARDS OR GUIDANCE THE MORE CONSERVATIVE OR RESTRICTIVE SHALL BE FOLLOWED. CERTIFICATION AND SOURCE OF MATERIALS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING/RECONSTRUCTING WITH MATCHING MATERIALS, ANY PAVEMENT, SIDEWALKS, ENTRANCES, CURB AND GUTTER, LANDSCAPING, DRIVEWAY PIPE, SIDEWALK, MAILBOXES, ETC. THAT ARE DAMAGED DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING AREAS WHERE PROPOSED CONSTRUCTION IS SHOWN.
- THE CONTRACTOR SHALL REMOVE AND REPLACE EXISTING AND PROPOSED SIDEWALKS DAMAGED OR OTHERWISE IMPACTED BY CONSTRUCTION IN FULL SECTIONS TO THE NEAREST JOINT. REPLACEMENT SIDEWALK MATERIAL SHALL MATCH THE EXISTING SIDEWALK UNLESS SHOWN OTHERWISE. THIS INCLUDES BRICK SIDEWALK AND CONCRETE SIDEWALK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF RICHMOND BEFORE BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE CITY TRANSPORTATION ENGINEER 72 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING WILL BE REQUIRED PRIOR TO THE START OF THE PROJECT.
- THE CONTRACTOR SHALL HAVE AT LEAST ONE (1) SET OF APPROVED PLANS WITH ALL APPROVED REVISIONS AT THE PROJECT SITE.
- THE CONTRACTOR SHALL COMPLY WITH THE SOUND CONTROL ORDINANCE OF THE CITY OF RICHMOND.
- IF A CONFLICT IS FOUND TO EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE ANY WORK IS STARTED IN ORDER TO COORDINATE THE REMAINDER OF THE WORK TO BE DONE.
- ANY DEVIATIONS FROM THE APPROVED PLANS AND/OR STANDARDS AND SPECIFICATIONS MUST BE APPROVED BY THE CITY TRANSPORTATION ENGINEER IN WRITING PRIOR TO START OF WORK. ANY REQUEST FOR A CHANGE OF SPECIFIED MATERIALS OR DESIGN FROM THE APPROVED PLANS SHALL BE SUBMITTED TO THE ENGINEER. A LETTER MUST ACCOMPANY THE PROPOSED CHANGES AND INCLUDE REVISED PLAN SHEETS AND/OR DESIGN CALCULATIONS FOR REVIEW AND APPROVAL BY THE ENGINEER. NOTE THAT A REQUEST DOES NOT NECESSARILY GUARANTEE AN APPROVAL.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" OF VIRGINIA, PHONE NUMBER 811, PRIOR TO THE START OF CONSTRUCTION FOR ALL AREAS OF PROPOSED EXCAVATION. THE LOCATION OF EXISTING SEWER, WATER OR GAS LINES, CONDUITS OR OTHER STRUCTURES ACROSS, UNDERNEATH, OR OTHERWISE ALONG THE LINE OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THESE PLANS, AND IF SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGE DONE TO ANY STRUCTURES OR PROPERTY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLAN IN AREAS OF EXCAVATION PRIOR TO STARTING WORK. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS, IF THERE APPEARS TO BE A CONFLICT, OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS.
 - IN CASE OF EMERGENCIES OF UTILITY BREAKAGE/CONFLICT CONTACT

UTILITY	TELEPHONE NUMBERS
a. GAS	XXX-XXXX
b. WATER	XXX-XXXX
c. SEWER	XXX-XXXX
d. POWER	XXX-XXXX
e. VERIZON	XXX-XXXX
f. AT&T	XXX-XXXX
g. COMCAST	XXX-XXXX
h. MCI	XXX-XXXX
i. LUMOS	XXX-XXXX
- THE CONTRACTOR SHALL NOTIFY THE APPLICABLE DEPARTMENT PRIOR TO MAKING ANY ADJUSTMENTS TO PUBLIC UTILITIES.
- THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO EXISTING RESIDENCES AND BUSINESSES DURING CONSTRUCTION. IF SERVICES ARE TO BE INTERRUPTED FOR CUT-INS, PLUGGING, OR ABANDONMENT, ETC., THE CONTRACTOR SHALL PROVIDE THE CITY WITH 72 HOURS NOTICE. THE AFFECTED PROPERTY OWNER, RESIDENCE, OR BUSINESS SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF SERVICE INTERRUPTIONS. ALL UTILITY SERVICE INTERRUPTIONS SHALL BE KEPT TO AN ABSOLUTE MINIMUM. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A DETAILED PLAN AND SCHEDULE FOR SERVICE INTERRUPTIONS A MINIMUM OF FIVE (5) WORKING DAYS IN ADVANCE OF SUCH WORK.
- IN ADVANCE OF ORDERING MATERIALS, ALL CATALOG CUTS/SHOP DRAWINGS FOR SIGNAL EQUIPMENT AND MATERIAL SHALL BE SUBMITTED TO THE CITY OF RICHMOND TRANSPORTATION ENGINEERING DIVISION FOR REVIEW.
- IN NO CASE SHALL THE CONTRACTOR REMOVE, DAMAGE, OR DESTROY ANY CITY STREET LIGHTS, UNLESS SPECIFIED ON THE PLANS AND APPROVED BY THE CITY OF RICHMOND DEPARTMENT OF PUBLIC UTILITIES.
- THE CONTRACTOR SHALL CEASE WORK IMMEDIATELY AND NOTIFY THE ENGINEER AND AFFECTED OWNERS IF DAMAGE TO EXISTING UTILITIES, CABLES, OR EQUIPMENT OCCURS AS A RESULT OF WORK PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL MAKE ALL REQUIRED REPAIRS AND REPLACEMENTS AT NO ADDITIONAL COST TO THE CITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES AND CLAIMS ARISING FROM SUCH INCIDENTS.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING DISPOSAL OF ALL SOLID OR LIQUID MATERIALS RESULTING FROM CONSTRUCTION IS DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS.
- THE CONTRACTOR SHALL NOTIFY THE SURVEYS DIVISION OF THE CITY OF RICHMOND DEPARTMENT OF PUBLIC WORKS AT 804-646-0436 OR 804-646-5404 AT LEAST 48 HOURS PRIOR TO ANY ACTIVITIES WHICH MAY DISTURB THE LOCATION OR THE STABILITY OF ANY RIGHT-OF-WAY CORNERSTONE OR MARKER. THE CONTRACTOR WILL COORDINATE HIS WORK WITH THE SURVEYS DIVISION REPRESENTATIVE REGARDING THE PLACEMENT OR REPLACEMENT OF RIGHT-OF-WAY CORNERSTONES OR MARKERS IN ANY AREAS BEING AFFECTED BY CONSTRUCTION. ALL PLACEMENT OR REPLACEMENT OF RIGHT-OF-WAY CORNERSTONES OR MARKERS WILL BE PERFORMED BY SURVEYS DIVISION. THE CONTRACTOR WILL BE RESPONSIBLE FOR REIMBURSING THE CITY FOR ANY COSTS ASSOCIATED WITH REPLACING ANY RIGHT-OF-WAY CORNERSTONES OR MARKERS THAT ARE DISTURBED WITHOUT GIVING PROPER NOTIFICATION AND RECEIVING PRIOR APPROVAL.
- THE CONTRACTOR SHALL CONTACT THE CITY OF RICHMOND DEPARTMENT OF PUBLIC UTILITIES (STREETLIGHTS DIVISION) AND COORDINATE 72 HOURS IN ADVANCE OF ENTERING LIGHTING SYSTEMS, MANHOLES. CONTRACTOR SHALL PROVIDE QUALIFIED PERSONNEL WHEN ENTERING INTO THE MANHOLES. ANY PERSONNEL ACCESSING THE VAULTS SHALL COMPLY WITH THE APPLICABLE SECTIONS OF OSHA 1926, SUBPART V, POWER TRANSMISSION AND DISTRIBUTION (STARTS WITH 29 CFR 1926.951); NFPA 70E, ELECTRICAL SAFETY WORKPLACE GUIDELINES; NATIONAL ELECTRIC CODE (NEC); AND NATIONAL ELECTRIC SAFETY CODE (NECS).
- OFF DUTY UNIFORMED POLICE MAY BE USED BY THE CONTRACTOR ONLY WHEN APPROVED BY THE PROJECT MANAGER. REQUEST FOR USE OF OFF DUTY POLICE MUST BE MADE TO THE PROJECT MANAGER AT LEAST 10 CALENDAR DAYS PRIOR TO THE ANTICIPATED REPORTING TIME FOR THE OFFICER(S).
- THE CONTRACTOR SHALL COORDINATE WITH ADJACENT BUSINESSES TO REQUEST EACH REMOVE THEIR ENCROACHMENTS, AWNINGS, PATIO SEATING, ETC. TO CLEAR WORK AREA. THE CONTRACTOR SHALL GIVE 30 DAYS NOTICE TO EACH BUSINESS WHEN REQUESTING REMOVAL. WHEN WORK IN THAT AREA IS COMPLETE THE CONTRACTOR SHALL, WITH APPROVAL OF THE ENGINEER, NOTIFY EACH BUSINESS THAT THEY MAY REINSTALL PERMITTED ENCROACHMENT(S).
- THE FINISHED GRADE OF SIDEWALK SHALL MATCH ELEVATION OF ALL SEWER AND STORMWATER CASTINGS THAT ARE TO REMAIN IN PLACE.
- THE CONTRACTOR SHALL REMOVE ALL EMPTY POSTS, POLES, AND FOUNDATIONS WITHIN PROJECT LIMITS.
- CONTRACTOR SHALL TAKE CARE WHEN REMOVING SIDEWALK AND/OR EXCAVATING AROUND EXISTING UTILITY POLE GUY ANCHORS TO NOT DISTURB ANCHOR FOUNDATION. CONTRACTOR SHALL COORDINATE WITH DOMINION ONCE EXISTING SIDEWALK IS REMOVED AROUND DOMINION-OWNED POLES TO HAVE DOMINION INSPECT ANCHOR SHAFTS PRIOR TO INSTALLING PROPOSED SIDEWALK.

INCIDENTALS

- THE COMPLETE PAPER COPY OF THE PLAN ASSEMBLY AS AWARDED INCLUDING ALL SUBSEQUENT REVISIONS WILL BE THE SOLE OFFICIAL CONSTRUCTION PLANS.
- SAW CUTS FOR DEMOLITION OF PAVEMENT (FLEXIBLE) SHALL BE INCIDENTAL TO OTHER PAY ITEMS WITH NO SEPARATE PAY ITEM THERETO. SAW CUTS FOR DEMOLITION OF PAVEMENT (RIGID) SHALL BE PAID FOR AS BID ITEM "SAW CUT HYDRAULIC CEMENT CONCRETE PAVEMENT (UP TO 12" DEPTH)" AND "SAW CUT HYDRAULIC CEMENT CONCRETE PAVEMENT (12" TO 18" DEPTH)."
- UNCLASSIFIED EXCAVATION WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD AND INCLUDE ALL WORK NECESSARY TO REMOVE ALL MATERIALS ENCOUNTERED NOT SPECIFICALLY PROVIDED FOR OR INCLUDED AS A PART OF OTHER BID ITEMS NECESSARY FOR PREPARING THE ROADBED FOR CONSTRUCTION OF PERMANENT ITEMS. BID PRICE WILL ALSO INCLUDE REMOVAL AND DISPOSAL OF ALL EXCESS MATERIAL. PROCEDURES SHALL COMPLY WITH VDOT ROAD AND BRIDGE SPECIFICATIONS SECTION 303.

EROSION AND SILTATION CONTROL

- IF THE REMOVAL OF BRUSH SILT BARRIER IS SPECIFIED BY THE PLANS OR REQUIRED BY THE PROJECT ENGINEER, THE COST OF REMOVAL AND DISPOSAL OF BRUSH SHALL BE IN ACCORDANCE WITH SECTION 109 OF THE APPLICABLE VDOT ROAD AND BRIDGE SPECIFICATIONS.
- ROCK FOR CHECK DAMS, INLET PROTECTION, EROSION CONTROL STONE AND RIPRAP SHALL BE IN ACCORDANCE WITH SECTION 203 AND SECTION 414 OF THE APPLICABLE VDOT ROAD AND BRIDGE SPECIFICATIONS.
- MODIFICATION TO EROSION AND SEDIMENT CONTROL ITEMS IN THE FIELD REQUIRES REVIEW AND APPROVAL BY THE CITY OF RICHMOND EROSION AND SEDIMENT CONTROL COORDINATOR.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND IN ACCORDANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. ALL EROSION CONTROL MEASURES WILL BE IN PLACE AND REVIEWED BY THE CONTRACTOR AT LEAST ONCE EVERY FIVE (5) BUSINESS DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT OR EVERY FOUR (4) BUSINESS DAYS TO ENSURE COMPLIANCE FOR THE CONTROL OF ANY EROSION AND SILTATION. ANY CORRECTIONS OR REPAIRS WILL BE MADE IMMEDIATELY BY THE CONTRACTOR AT THEIR OWN EXPENSE.

DETECTABLE WARNING SURFACE

- THE CONTRACTOR SHALL PROVIDE A SAMPLE OF THE TRUNCATED DOME (DETECTABLE WARNING STRIP) FINISH FOR APPROVAL BY THE CITY PRIOR TO PLACEMENT. THE SAMPLE SHALL BE AT LEAST 12 INCHES BY 12 INCHES AND APPROXIMATELY 2 INCHES IN DEPTH, AND THE TRUNCATED DOMES SHALL BE OF FEDERAL YELLOW COLOR. THE APPROVED SAMPLE SHALL BE KEPT AT THE WORK SITE FOR COMPARISON TO COMPLETED WORK. THE TOTAL DEPTH FOR THE DETECTABLE WARNING STRIP INCLUDING THE CONCRETE BASE, SETTING BED, TRUNCATED DOME, GEOSYNTHETIC FABRIC, WEEP HOLES, AND BASE MATERIAL SHALL BE APPROXIMATELY 12 INCHES.

PAVEMENT

- THE PAVEMENT MATERIAL FOR THIS PROJECT WILL BE PAID FOR ON A TONNAGE BASIS. THE WEIGHT WILL VARY IN ACCORDANCE WITH THE SPECIFIC GRAVITY OF THE AGGREGATES AND THE ASPHALTIC CONTENT OF THE MIX ACTUALLY USED TO SECURE THE DESIGN DEPTH. THE WEIGHT OF THE ASPHALT CONCRETE IS BASED ON 95% OF THE THEORETICAL MAXIMUM DENSITY.
 - IN AREAS THAT REQUIRE FULL DEPTH PAVEMENT, CONTRACTOR SHALL MATCH EXISTING PAVEMENT SECTION OR CITY STANDARD PAVEMENT SECTION, WHICHEVER IS GREATER. NON-RESIDENTIAL STREET PAVEMENT SECTIONS MUST MEET THE MINIMUM DESIGN THICKNESS OF 8 INCHES OF 21A BASE AGGREGATE, 6 INCHES BM-25 BASE COURSE ASPHALT AND 2 INCHES OF SM 9.5A SURFACE COURSE ASPHALT.
- PAVEMENT MARKING AND SIGNING**
- THE CONTRACTOR SHALL PREPARE THE PAVEMENT SURFACE FOR THE PROPER ADHESION. ANY SWEEPING OR REMOVAL OF DEBRIS, GRAVEL, DIRT OR OTHER FOREIGN MATERIALS SHALL BE CONSIDERED AS INCIDENTAL TO THE INSTALLATION. NO SEPARATE PAYMENT WILL BE MADE.
 - THE CONTRACTOR SHALL REMOVE COMPLETELY, ALL PREVIOUS PAVEMENT MARKINGS AND SIGNS WHICH IN THE OPINION OF THE ENGINEER CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS AND SIGNS.
 - UNLESS SPECIFIED OTHERWISE, THE BASIS OF MEASUREMENT SHALL BE ALONG THE LONGITUDINAL CENTERLINE OF PAVEMENT MARKINGS. MEASUREMENT FOR LEGENDS SHALL BE PER MESSAGE, COMPLETE AND IN PLACE.
 - ALL MARKINGS IMPROPERLY APPLIED OR LOCATED SHALL BE COMPLETELY REMOVED AND CORRECTLY REAPPLIED, AT THE SOLE EXPENSE OF THE CONTRACTOR.
 - COLORS SHALL CONFORM TO STANDARD HIGHWAY COLORS THROUGHOUT THE EXPECTED LIFE OF THE FILM.
 - TYPE B CLASS 1 MARKING MATERIAL SHALL BE APPLIED AT THE SPECIFIED DIMENSIONS AT A RATE TO RESULT IN A MARKING THICKNESS OF 90 MILS ± 5 MILS (NOT INCLUDING GLASS BEAD TOP DRESSING).
 - THE MARKING SHALL BE PROVIDED IN SPECIFIED WIDTHS AND SHAPES, PREFORMED WORKS, AND SYMBOLS SHALL CONFORM TO THE APPLICABLE SHAPES AND SIZES AS OUTLINED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" LATEST EDITION.
 - UNLESS OTHERWISE SPECIFIED ON THE PLANS OR IN THE CONTRACT DOCUMENTS, ALL PAVEMENT MARKINGS AND LEGENDS IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH VDOT SPECIFICATIONS.
 - ALL PROPOSED SIGN PANELS, POSTS, AND FOUNDATIONS SHALL COMPLY WITH VDOT STANDARDS AND SPECIFICATIONS AND AS SHOWN ON PLAN.
 - EXISTING SIGNS NOT NEEDED SHALL BE REMOVED AND TURNED OVER TO THE DEPARTMENT OF PUBLIC WORKS SIGN SHOP.
 - LADDER CROSSWALK MARKINGS SHALL CONSIST OF LONGITUDINAL SOLID WHITE LINES BEING 2 FT. WIDE WITH 3 FT. GAP SPACING. THE GAP SPACING MAY BE MODIFIED BETWEEN 2 FT. (MINIMUM) AND 4 FT. (MAXIMUM) TO PLACE MARKINGS OUT OF THE WHEEL PATH OF VEHICLES. LONGITUDINAL CROSSWALK LINES SHALL BE PARALLEL TO THE DIRECTION OF VEHICULAR TRAVEL AND WILL NOT NECESSARILY BE PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. (SEE PLANS FOR CROSSWALK WIDTHS).
 - CALLOUTS SHOWN ON PLAN ARE NOT SHOWN FOR EACH INDIVIDUAL YIELD MARKING, LONGITUDINAL MARKING, PAVEMENT MARKING DEVICE, ETC. IF THE CONTRACTOR IS UNCLEAR WHICH PAY ITEM IS DENOTED IN THE PLANS, THE CONTRACTOR SHALL VERIFY THE ITEM WITH THE ENGINEER OR THEIR DESIGNEE.
 - ALL EXISTING SIGNS WITHIN PROJECT LIMITS MOUNTED ON SIGN POLES NOT NOTED AS "TO BE REMOVED" SHALL BE REMOVED AND RESET. EXISTING SIGNS ON UTILITY AND/OR LIGHT POLES SHALL REMAIN IN PLACE UNLESS SHOWN OTHERWISE. REMOVE AND RESET SIGN WILL MEASURED IN UNITS OF EACH AND PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, WHICH PRICE SHALL BE FULL COMPENSATION FOR REMOVAL OF POST AND FOUNDATION TO AT LEAST TWO FEET BELOW EXISTING GROUND LINE, NEW FOUNDATION, NEW POST, MOUNTING EXISTING SIGN TO NEW POST, AND FOR ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE SIGN PANELS DURING REMOVAL. SIGN PANELS DAMAGED DURING REMOVAL WILL BE REPLACED AT NO ADDITIONAL COST TO THE CITY.
 - SIGN PANEL BID ITEM WILL BE MEASURED IN UNITS OF SQUARE FEET AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FEET. PRICE SHALL BE FULL COMPENSATION FOR NEW PROPOSED SIGN PANEL, FURBISHING FRAMING MEMBERS, FURNISHING AND INSTALLING NECESSARY BACK PANELS, ERECTING NEW SIGN PANEL TO NEW POSTS OR UTILITY POLES, AND FOR ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK
 - REMOVE SIGN BID ITEM WILL BE MEASURED IN UNITS OF EACH AND PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, WHICH PRICE SHALL BE FULL COMPENSATION FOR REMOVAL AND SALVAGE OF SIGN PANELS, POSTS AND FOUNDATIONS TO AT LEAST TWO FEET BELOW EXISTING GROUND LINE, BACKFILLING AND RESTORATION (TOPSOIL AND SEEDING OR CONCRETE), AND FOR ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
 - MARKINGS SHALL NOT BE APPLIED TO NON-PAVEMENT SURFACES, INCLUDING MANHOLES, VALUES, HANDHOLES, METERS, ETC. THE CONTRACTOR MAY LEAVE A GAP IN THE PROPOSED MARKINGS OR COVER THE APPURTENANCE DURING APPLICATION AND REMOVE ANY COVERING ONCE THE MARKING HAS BEEN APPLIED.
 - MARKINGS SHALL NOT BE APPLIED TO EXISTING CONCRETE GUTTER OR EXISTING COBBLESTONE PAVEMENTS.

REMOVAL OF TREES AND VEGETATION

- TREES THAT ARE REQUIRED TO BE REMOVED SHALL BE REMOVED IN SUCH A WAY THAT SURROUNDING TREES, VEGETATION, LANDSCAPING, STRUCTURES, AND SITE FEATURES ARE NOT DAMAGED.
- REMOVAL OF TREES, SHRUBS AND GRASS INCLUDES DIGGING OUT STUMPS AND ROOTS. DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS ARE TO BE FILLED TO SUBGRADE ELEVATION TO AVOID PONDING OF WATER.

- THE AREA OF GRUBBING SHALL BE MAINTAINED WITHIN THE CLEARING LIMITS SHOWN ON THE PLANS. REMOVE STUMPS AND MATTOR ROOTS TO A DEPTH OF 24 INCHES BELOW EXISTING GROUND SURFACE. REFILL EXCAVATIONS MADE BY REMOVAL OF STUMPS OR ROOTS TO SUBGRADE ELEVATION WITH MATERIALS SPECIFIED FOR STRUCTURAL BACKFILL IN SECTION 31000.
 - TREES THAT ARE REQUIRED TO BE REMOVED SHALL BE CUT DOWN BY HAND WITH A CHAIN SAW. THESE TREES SHALL BE CUT DOWN FLUSH WITH THE GROUND (WITHIN 2" OF THE SOIL) AND PROMPTLY REMOVED FROM THE WORK AREA. REMAINING STUMPS SHALL BE REMOVED OR GROUND DOWN WITH A STUMP GRINDER.
 - TREES BEING REMOVED SHALL NOT BE FELLED, PUSHED, OR PULLED INTO TREE PRESERVATION AREAS. EQUIPMENT OPERATORS SHALL NOT CLEAN ANY PART OF THEIR EQUIPMENT BY SLAMMING IT AGAINST THE TRUNKS OF TREES TO BE RETAINED.
- RAILROAD**
- THE CONTRACTOR WILL NOT BE PERMITTED TO STORE ANY EQUIPMENT ON NORFOLK SOUTHERN PROPERTY WITHOUT PERMISSION FROM THE NS RAILROAD ENGINEER IN ACCORDANCE WITH SECTION E.5.K.1 OF THE NS PUBLIC PROJECTS MANUAL.
 - IF ANY PORTION OF THE EXISTING RAILROAD STRUCTURE IS DAMAGED BY THE CONTRACTOR'S OPERATIONS DURING CONSTRUCTION, THE CONTRACTOR SHALL CEASE WORK, NOTIFY NS, AND PERFORM REPAIRS TO THE SATISFACTION OF NS AT THE CONTRACTOR'S SOLE EXPENSE.
 - THE CONTRACTOR SHALL SIGN A CONTRACTOR RIGHT OF ENTRY AGREEMENT WITH NORFOLK SOUTHERN.
 - ALL CONCRETE SIDEWALKS ON NORFOLK SOUTHERN RIGHT-OF-WAY SHALL BE 8" THICK AND REINFORCED WITH #4 WELDED WIRE FABRIC.
 - THE CONTRACTOR SHALL COORDINATE WITH THE NORFOLK SOUTHERN SIGNALS DEPARTMENT FOR ANY WORK INVOLVING THEIR FACILITIES BEING IMPACTED BY THE PROPOSED CONSTRUCTION.

EROSION AND SEDIMENT CONTROL NARRATIVE

SITE LOCATION: THE PROJECT SITE IS LOCATED ALONG HULL STREET, FROM 9TH STREET TO THE MAYO BRIDGE IN THE CITY OF RICHMOND. THE PROJECT SITE IS 0.72 ACRES.

PROJECT DESCRIPTION: THE PROJECT WILL CONSTRUCT NEW SIDEWALKS AND DRIVEWAYS, INSTALL NEW STREET TREES AND OTHER LANDSCAPE PLANTINGS, INSTALL NEW LIGHT FIXTURES, AND INSTALL SITE FURNISHINGS (BIKE RACKS, BENCHES, TRASH CANS).

EXISTING SITE CONDITIONS: THE EXISTING SITE CONSISTS OF AN ASPHALT-PAVED ROADWAY WITH CURB AND CLOSED DRAINAGE, CONCRETE SIDEWALKS, AND LIMITED EXISTING PLANTING AREAS.

ADJACENT SITE CONDITIONS: THE SITE IS ADJACENT TO BUSINESS, MULTI-UNIT RESIDENTIAL, AND EDUCATIONAL BUILDINGS. THE ADJACENT SITES ARE DEVELOPED AND CONSIST PRIMARILY OF PAVED PARKING AREAS AND BUILDINGS, WITH LIMITED PVIOUS AREA.

OFF-SITE AREAS: THERE WILL BE NO OFF-SITE GRADING ON THIS PROJECT. EXCESS SOIL, DEMOLISHED SIDEWALKS, AND DEMOLISHED ASPHALT WILL BE DISPOSED OF AT THE CITY LANDFILL.

SITE SOILS: THE PROJECT CORRIDOR CONSISTS OF ENTIRELY URBAN LAND/FILL SOILS.

CRITICAL AREAS: THERE ARE NO ADJACENT STREAMS OR WETLANDS. CRITICAL AREAS FOR EROSION AND SEDIMENT CONTROL CONSIST EXCLUSIVELY OF EXISTING DROP INLETS. DROP INLETS ARE TO BE PROTECTED AS SHOWN ON THE E&S PLANS.

EROSION AND SEDIMENT CONTROL MEASURES: EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN INCLUDED AND DETAIL PROPOSED MEASURES, CONSISTING MOSTLY OF INLET PROTECTION FOR EXISTING CURBSIDE DROP INLETS.

PERMANENT STABILIZATION: ALL DISTURBED AREAS WILL BE STABILIZED WITH PAVING (ASPHALT OR CONCRETE) OR LANDSCAPING WITH MULCH.

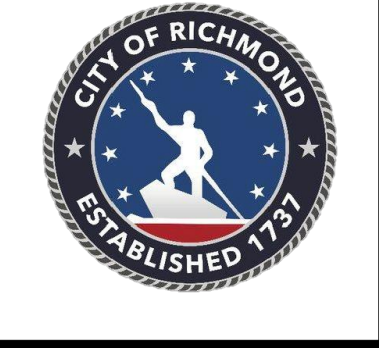
MAINTENANCE: DROP INLET PROTECTION SHALL BE CLEANED OUT BI-WEEKLY, AFTER RAINFALL > 0.5", OR MORE FREQUENTLY AS CLOGGING/PONDING TO THE ROADWAY OCCURS.

STORMWATER RUNOFF CALCULATIONS: THIS PROJECT WILL RESULT IN A NET DECREASE OF IMPERVIOUS AREA BY X.X ACRES BY THE CONSTRUCTION OF LARGER AND ADDITIONAL LANDSCAPING AREAS. THEREFORE THE TOTAL RUNOFF FROM THE PROJECT AREA WILL DECREASE AND NO STORMWATER RUNOFF CONTROL IS REQUIRED.

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No.	REVISIONS	DATE	BY

ABBREVIATIONS	
L.O.W.	- LIMIT OF WORK
P.O.B.	- POINT OF BEGINNING
B.O.C	- BACK OF CURB
P.L.	- PROPERTY LINE
R.O.W.	- RIGHT-OF-WAY



AUTHORITY: CITY OF RICHMOND				PROJECT 109306			
DESIGN BY:	AMB	REVIEWED BY:	JHO	SCALE:	DATE:	SHEET:	DRAWING NO.:
CHECKED BY:	JHO			N.S.	5-14-2021	L1.00	O-28933

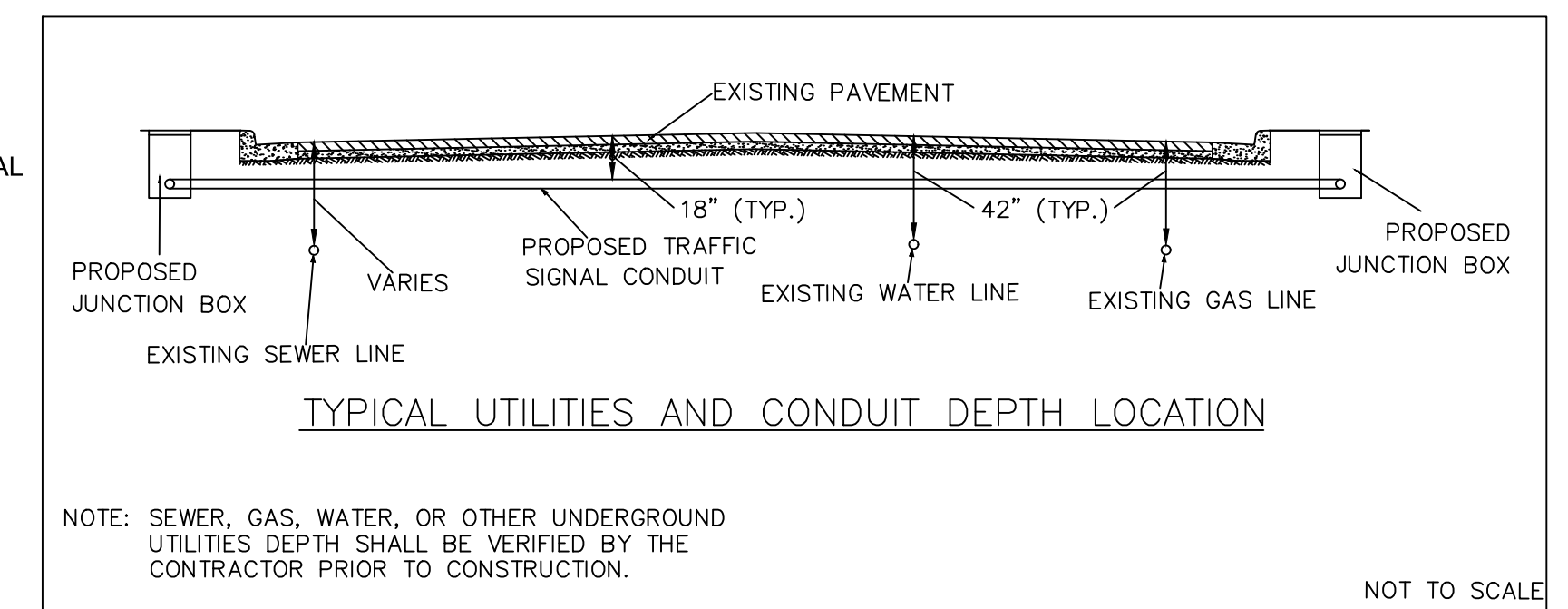
Drawing name: K:\RVC_IP\10113357_RIC_On_Call\028_Hull_St_StreetScope\CADD\Sheets\11_GENERAL NOTES.dwg
 GENERAL NOTES May 14, 2021 3:37pm by Alyssa Baird
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GENERAL NOTES CONT'D

TRAFFIC SIGNAL AND ITS CONDUIT NOTES

1. THE CONTRACTOR SHALL PERFORM ALL WORK AND CONSTRUCT/INSTALL ALL ITEMS WITHIN EXISTING CITY OF RICHMOND RIGHT OF WAY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING/RECONSTRUCTING WITH MATCHING MATERIALS, ANY PAVEMENT, SIDEWALKS, ENTRANCES, CURB AND GUTTER, LANDSCAPING, DRIVEWAY PIPE, SIDEWALK, MAILBOXES, ETC. THAT ARE DAMAGED DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING AREAS WHERE PROPOSED CONSTRUCTION IS SHOWN. ALL EXCAVATION AND RESTORATION SHALL BE IN ACCORDANCE WITH THE CITY OF RICHMOND'S RIGHT OF WAY EXCAVATION & RESTORATION MANUAL AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS; WHICHEVER IS MORE RESTRICTIVE TAKES PRECEDENCE.
3. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES TO BE CROSSED PRIOR TO THE INSTALLATION OF PROPOSED CONDUITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING REQUIRED SEPARATION FROM EXISTING UTILITIES IN ACCORDANCE WITH STATE CORPORATION COMMISSION (SCC) AND CITY OF RICHMOND REQUIREMENTS; WHICHEVER IS MORE RESTRICTIVE TAKES PRECEDENCE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE VIABILITY AND USABILITY OF EXISTING CONDUIT WHERE PROPOSED COMMUNICATIONS, SIGNAL, AND POWER CABLE WILL BE INSTALLED.
5. IF REQUIRED SEPARATION FROM EXISTING UTILITIES CANNOT BE MET, THE CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC UTILITIES (DPU) DISPATCH AT (804) 646-8426 AND WITH THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
6. WHEN TRENCHING, THE CONTRACTOR SHALL HAND DIG WHEN CROSSING WATER LINES, COMMUNICATIONS, GAS LINES, AND SEWER FORCE MAINS. ANY EXCAVATION WITHIN 18 INCHES OF GAS OR ELECTRIC LINES SHALL BE PERFORMED BY HAND.
7. ALL CONDUITS UNDER PAVEMENT, INCLUDING DRIVEWAYS, SHALL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES. ALL OTHER CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 24 INCHES.
8. THE CONTRACTOR SHALL COORDINATE WITH THE CITY TRANSPORTATION ENGINEERING DIVISION AND THE ENGINEER TO FIELD LOCATE ALL PROPOSED ITEMS ON THESE PLANS AND SHALL ENSURE ALL ITEMS ARE INSTALLED WITHIN EXISTING RIGHT OF WAY OR ON CITY-OWNED PROPERTY. THE LOCATION AND ORIENTATION OF ALL PROPOSED ITEMS SHALL BE FIELD VERIFIED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
9. ALL TRENCHES AND/OR HOLES SHALL BE FILLED OR COVERED IN ACCORDANCE WITH VDOT SPECIFICATIONS AND THE ROADWAY SHALL BE OPENED TO FULL TRAFFIC OPERATIONS BY THE END OF EACH WORKDAY DEFINED AS 3:30 PM MONDAY THROUGH FRIDAY.
10. ALL TRAFFIC SIGNALS SHALL BE FULLY OPERATIONAL AT THE END OF EACH WORKDAY, DEFINED AS 3:30 PM MONDAY THROUGH FRIDAY.
11. THE ENGINEER RESERVES THE RIGHT TO MAKE ANY CHANGES TO THESE PLANS AND TRAFFIC CONTROL AS DEEMED NECESSARY.
12. THE CONTRACTOR SHALL FURNISH THE CITY OF RICHMOND WITH AS-BUILT DRAWINGS, DETAILING THE EXACT LOCATION(S) OF ANY DIRECT BURIED ITEMS PRIOR TO FINAL PROJECT ACCEPTANCE. ONE (1) HARD COPY AND AN ELECTRONIC VERSION SHALL BE PROVIDED IN AUTOCAD OR GIS FORMAT AS APPROVED BY THE ENGINEER.
13. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF RICHMOND DEPARTMENT OF PUBLIC UTILITIES (DPU) FOR DEENERGIZING ALL CIRCUITS PRIOR TO BEGINNING WORK ON SHARED DEPARTMENT OF PUBLIC WORKS AND DEPARTMENT OF PUBLIC UTILITIES ASSETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE CIRCUITS HAVE BEEN DEENERGIZED PRIOR TO COMMENCING WORK. A DPU INSPECTOR SHALL BE ONSITE WHENEVER WORK IS BEING DONE BY THE CONTRACTOR WITHIN JOINT USE MANHOLES.
14. ANY TRAFFIC CONTROL DEVICES INCLUDING BUT NOT LIMITED TO PAVEMENT MARKINGS, SIGNS, AND TRAFFIC CONTROL SIGNAL EQUIPMENT DAMAGED OR DESTROYED BY THE CONTRACTOR MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE UNLESS THEIR REMOVAL OR DESTRUCTION IS CALLED FOR BY THE PLANS.
15. BEFORE BEGINNING THE SIGNAL WORK, THE CONTRACTOR SHALL VERIFY THAT ALL EXISTING SIGNAL EQUIPMENT IS IN SATISFACTORY WORKING ORDER. THE CONTRACTOR SHALL REPORT ALL DEFECTIVE SIGNAL EQUIPMENT TO THE ENGINEER SO AS NOT TO BE HELD RESPONSIBLE FOR DEFECTS.
16. THE CONTRACTOR SHALL LOCATE EXISTING CONDUIT, CABLE RUNS, INDUCTIVE LOOPS, LEAD-IN CABLES, JUNCTION BOXES, AND DETECTION EQUIPMENT BEFORE INSTALLING OR USING EQUIPMENT THAT CAN DAMAGE OR INTERFERE WITH SUCH FACILITIES.
17. THE CONTRACTOR SHALL NOT INSTALL PROPOSED JUNCTION BOXES WITHIN RAMPING SECTIONS OF CURB RAMPS OR WITHIN PRIVATE DRIVEWAYS. THE CONTRACTOR SHALL NOT INSTALL PROPOSED JUNCTION BOXES ABOVE EXISTING UTILITY LATERALS, WATER LINES, OR GAS LINES.
18. THE CONTRACTOR SHALL STAKE SIGNAL CABINET AND SIGNAL POLE LOCATIONS AND VERIFY WITH THE CITY OF RICHMOND TRANSPORTATION ENGINEER THE LOCATION OF ALL FIELD EQUIPMENT INCLUDING JUNCTION BOXES, POLES, AND CABINETS PRIOR TO DRILLING OR TRENCHING. CONTACT ENRIQUE BURGOS AT (804) 646-6337 FOR VERIFICATION.
19. ALL PROPOSED SIGNAL POLES, MAST ARMS, PEDESTAL POLES, AND CONTROLLER CABINETS INCLUDING THE UPS CABINET SHALL BE FEDERAL GREEN (COLOR #14077) IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.
20. THE CONTRACTOR SHALL VERIFY MAST ARM LENGTHS AND SIGNAL HEAD LANE COVERAGE PRIOR TO THE INSTALLATION OF SIGNAL POLE FOUNDATIONS.
21. MAST ARM SIGNAL POLE FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH VDOT STD PF-8 WITHOUT WINGS. MAST ARM SIGNAL POLES MAY BE INSTALLED WITH A 6 BOLT PATTERN IN AREAS WITH RESTRICTED RIGHT-OF-WAY.
22. MAST ARM SIGNAL POLE FOUNDATION DEPTHS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH VDOT PF-8 STANDARDS AFTER THE SIGNAL POLE SOIL TEST BORES ARE COMPLETED. ABOVE GROUND FOUNDATION PROJECTION SHOULD BE FLUSH. SIGNAL POLES AND FOUNDATIONS SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS INCLUDING MAXIMUM LOADING CONDITIONS. THE POLE SUPPLIER SHALL PROVIDE FOUNDATIONS DESIGNS AND SHOP DRAWINGS THAT ARE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER. THE TOP OF ALL SIGNAL POLE FOUNDATIONS SHALL BE INSTALLED 4" ABOVE THE HIGHEST POINT OF THE ROADWAY PAVEMENT OR FLUSH WITH THE EXISTING OR PROPOSED SIDEWALK.
23. ONCE THE SIGNAL WORK IS COMPLETED, FINAL INSPECTION OF WORK PERFORMED AND THE 30-DAY TEST PERIOD HAS BEEN SATISFIED FOR EACH INTERSECTION, THE CITY WILL ASSUME MAINTENANCE.
24. MAINTENANCE OF PERMANENT SIGNALIZATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY THE CITY.
25. CONTRACTOR SHALL COORDINATE PROPOSED ENTRIES INTO EXISTING TRAFFIC SIGNAL POLE AND CABINET FOUNDATIONS WITH THE CITY OF RICHMOND AND WILL GET APPROVAL FROM THE CITY PRIOR TO ANY EXCAVATION AROUND EXISTING FOUNDATIONS.
26. CONDUIT LOCATIONS SHALL BE MARKED ON ALL FOUNDATIONS PER THE VDOT SPECIFICATION FOR THE CONDUIT INSTALLED.
27. THE CONTRACTOR SHALL COMPLETELY REMOVE AND DISPOSE OF EXISTING TRAFFIC SIGNAL POLES AND EXISTING FOUNDATIONS WHERE SHOWN ON PLANS. FOUNDATIONS WHICH ARE TO BE REMOVED AND ARE IN CONCRETE AREAS SHALL HAVE THE FOUNDATION REMOVED FOR A DEPTH OF 4" AND SHALL HAVE THE SURFACE RESTORED IN KIND. SIDEWALK AND MEDIAN REPLACEMENT SHALL HAVE A ROUGH BROOM FINISH. FOUNDATIONS WHICH ARE IN EARTH AREAS SHALL HAVE THE FOUNDATIONS REMOVED FOR A DEPTH OF 24" AND AREA SHALL BE RESTORED IN KIND. FOUNDATIONS WHICH ARE IN BRICK AREAS SHALL HAVE THE FOUNDATIONS REMOVED FOR A DEPTH OF 12" AND RESTORED IN KIND.
28. CONTRACTOR SHALL MEET THE REQUIRED CLEARANCE BETWEEN THE MAST ARMS AND OVERHEAD LINES PER THE OVERHEAD HIGH VOLTAGE LINE SAFETY ACT AND CITY STANDARDS, WHICHEVER ARE MORE RESTRICTIVE TAKES PRECEDENCE.
29. ALL MEASUREMENTS FOR THE PLACEMENT OF SIGNAL HEADS AND SIGNS ON MAST ARE SHOWN FROM THE CENTER OF THE SIGNAL POLE TO THE CENTER OF THE SIGNAL HEAD AND SIGNS.
30. TRAFFIC SIGNAL HEADS AND MAST ARM SIGNS MAY BE FIELD ADJUSTED NO MORE THAN 2' IN EITHER DIRECTION ON THE MAST ARMS, PROVIDED THAT THEY REMAIN WITHIN THE DESIGNATED TRAVEL LANE ASSIGNMENTS.
31. THE CONTRACTOR SHALL INSTALL TRAFFIC SIGNAL HEADS SUCH THAT THE BOTTOM OF THE SIGNAL HOUSING IS AT A HEIGHT OF NO LESS THAN 15' ABOVE THE PAVEMENT AND THE TOP OF THE SIGNAL HOUSING IS AT A HEIGHT OF NO MORE THAN 25.6' ABOVE THE PAVEMENT IN ACCORDANCE WITH THE LATEST VERSION OF THE FHWA MUTCD.
32. WHEN TWO OR MORE THREE SECTION SIGNAL HEADS OF THE SAME PHASE ARE LOCATED ON THE SAME SIGNAL POLE MAST ARM, THE CABLES ARE TO BE "JUMPED" FROM BETWEEN SIGNALS AND SHARE THE SAME CABLE.
33. NEW TRAFFIC SIGNAL HEADS AND OVERHEAD TRAFFIC SIGNAL SIGNAGE SHALL BE COVERED WITH DURABLE NON-TRANSPARENT COVER UPON INSTALLATION. THE CONTRACTOR SHALL MAINTAIN THE COVERS UNTIL THE NEW TRAFFIC SIGNAL SYSTEM IS OPERATIONAL.
34. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING, ADJUSTING AND ALIGNING EQUIPMENT, INCLUDING SIGNAL HEADS, DURING EACH STAGE OF CONSTRUCTION UNTIL THE PERMANENT TRAFFIC SIGNAL IS CONSTRUCTED AND PLACED IN PERMANENT OPERATION.
35. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF RICHMOND TRAFFIC ENGINEERING/SIGNAL SHOP 48 HOURS IN ADVANCE OF REMOVING AN EXISTING CONTROLLER AND CABINET.
36. THE TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE NEMA TS-2 OR APPROVED EQUAL CAPABLE OF HANDLING VIDEO DETECTION EQUIPMENT. THE MATERIALS AND CONSTRUCTION FOR THE TS-2 CONTROLLER CABINET SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.
37. PRIOR TO INSTALLATION OF ALL CABINETS, SILICONE SEALANT MUST BE INTRODUCED TO THE BOTTOM OF THE CABINET. ONCE THE SILICONE HAS BEEN INTRODUCED, LOWER CABINET TO THE FOUNDATION TO PROVIDE AN APPROPRIATE SEAL. SILICONE SEALANT MUST BE INSTALLED AROUND ENTIRE INNER AND OUTER PERIMETER OF THE CABINET BASE AFTER CABINET HAS BEEN BOLTED IN PLACE.
38. THE CONTRACTOR SHALL UTILIZE IMSA LEVEL II TECHNICIANS TO PERFORM ALL CABINET PLACEMENT, CABINET WIRING, AND CONTROLLER PROGRAMMING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE CITY STANDARD SUPPLIER TO PROGRAM THE CONTROLLER PRIOR TO INSTALLATION.
39. THE PROPOSED TRAFFIC SIGNAL CONTROLLER(S) SHALL BE FULLY COMPATIBLE WITH THE CITY OF RICHMOND'S SIGNAL SYSTEM SOFTWARE (ECONOLITE CENTRACS).
40. ALL JUNCTION BOXES SHALL BE VDOT ST'D. JB-S2 UNLESS OTHERWISE NOTED.
41. ALL CITY OF RICHMOND DPW JUNCTION BOXES SHALL HAVE "TRAFFIC" CAST IN THE TOP SURFACE DEPRESSION FOR ALL TRAFFIC SIGNAL AND ITS CONDUIT RELATED JUNCTION BOXES CONTAINING CABLE WITH LESS THAN 50 VOLTS. THE COVER SHALL HAVE A NON-SKID SURFACE WITH 1" WIDE LETTERS.
42. ALL JUNCTION BOXES USED FOR ELECTRICAL SERVICE SHALL HAVE "ELECTRIC" CAST IN THE TOP SURFACE DEPRESSION OF THE COVER. THE COVER SHALL HAVE A NON-SKID SURFACE WITH 1" WIDE LETTERS.
43. JUNCTION BOXES MAY BE RELOCATED IN THE FIELD AS NECESSARY PROVIDED THEY REMAIN WITHIN THE RIGHT OF WAY, DO NOT CONFLICT WITH UTILITIES, AND REMAIN OUTSIDE THE PAVEMENT SECTION. THE CONTRACTOR SHALL FIELD LOCATE AND INSTALL EACH JUNCTION BOX, THAT IS LOCATED IN SIDEWALK, SUCH THAT NO MORE THAN ONE (1) SECTION OF SIDEWALK WILL REQUIRE REPLACEMENT AT EACH PROPOSED JUNCTION BOX LOCATION. ADDITIONAL DAMAGED SECTIONS OF SIDEWALK SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE. THE LOCATIONS OF ALL PROPOSED JUNCTION BOXES ARE TO BE FIELD VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
44. ALL TRAFFIC SIGNAL HEAD SECTIONS SHALL BE 12" LIGHT EMITTING DIODE (LED) AND PAINTED YELLOW. ALL SIGNAL HEADS SHALL BE MOUNTED IN ACCORDANCE WITH VDOT ST'D. SM-3, AND SHALL BE EQUIPPED WITH CAP VISORS AND HIGH VISIBILITY SIGNAL BACKPLATES. CAP VISORS SHALL BE PAINTED YELLOW.
45. SEE "TYPICAL UTILITIES AND CONDUIT DEPTH LOCATION" FIGURE ON THIS SHEET FOR TYPICAL DEPTHS OF DPU UTILITIES AND TRAFFIC AND ITS CONDUIT. THIS FIGURE IS FOR GRAPHICAL PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY THE DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
46. ALL TRENCHED UNDERGROUND CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH VDOT ST'D. ECI-1 OR ECI-2.
47. ALL PROPOSED CONDUITS SHALL BE INSTALLED IN A COMMON TRENCH, WHERE FEASIBLE. STANDARD MANUFACTURER'S CONDUIT SPACERS SHALL BE USED TO PROVIDE ADEQUATE SEPARATION.
48. CONTRACTOR SHALL USE EXISTING CONDUITS AS SHOWN. IF THE EXISTING SPARE CONDUITS CANNOT BE USED, PARALLEL CONDUIT WITH EXISTING SIGNAL WIRE SHALL BE USED PROVIDED INSTALLATION OF NEW WIRES DOES NOT VIOLATE NATIONAL ELECTRICAL CODE (NEC) REQUIREMENTS FOR CONDUIT FILL. IF EXISTING CONDUIT CANNOT BE USED, NEW CONDUIT SHALL BE TRENCHED OR DIRECTIONAL DRILLED AS APPROVED BY THE ENGINEER.
49. EXISTING CONDUIT SYSTEMS THAT WILL NOT BE REUSED AND HAVE NO ACTIVE CABLES SHALL BE ABANDONED IN PLACE. CABLE SHALL BE CUT AND CONDUIT SHALL BE CAPPED IN THE EXISTING JUNCTION BOXES AND MANHOLES.
50. CONTRACTOR SHALL USE WATER WHEN SAW CUTTING TO AVOID DUST AND PARTICULATE BUILD UP. WATER COMING OUT FROM THE SAW CUTTING OPERATION SHALL NOT ENTER DIRECTLY INTO THE CITY OF RICHMOND STORM WATER SYSTEM.
51. (S) DENOTES CABLE TO BE SHIELDED AND (VDC) DENOTES VIDEO DETECTION CABLE.
52. A #8 BARE SYSTEM BOND WIRE IS REQUIRED IN ALL NON-METALLIC CONDUIT.
53. ALL TRAFFIC SIGNAL POLES ARE TO BE GROUNDED BY #8 SIGNAL BOND WIRE.
54. PEDESTRIAN PEDESTAL POLES SHALL BE IN ACCORDANCE WITH VDOT ST'D PF-2. PEDESTRIAN SIGNALS SHALL BE ACTIVATED PER VDOT ST'D PA-2 UNLESS OTHERWISE NOTED ON THE PLANS.
55. PEDESTRIAN SIGNAL HEADS SHALL BE IN ACCORDANCE WITH VDOT ST'D. SP-8 (COUNTDOWN) WITH L.E.D. LAMPS.
56. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED IN ACCORDANCE WITH VDOT ST'D. SMB-3 AND PAINTED FLAT BLACK.
57. THE CONTRACTOR SHALL INSTALL PEDESTRIAN SIGNAL HEADS SUCH THAT THE BOTTOM OF THE SIGNAL HOUSING IS AT A HEIGHT OF NO LESS THAN 7' BUT NO MORE THAN 10' ABOVE SIDEWALK LEVEL IN ACCORDANCE WITH THE LATEST VERSION OF THE FHWA MUTCD.
58. ALL PROPOSED PEDESTRIAN PUSHBUTTONS SHALL BE POLARA "BULLDOG" BDL3-X OR APPROVED EQUAL WITH ARROW AND ORIENTED TO FACE THE CROSSWALK TO WHICH IT APPLIES AND BE VISIBLE TO A PEDESTRIAN STANDING AT THE BEGINNING OF THE CROSSWALK ON EACH CORNER.
59. ALL CONDUIT RISERS FOR ELECTRICAL SERVICE SHALL BE 3" DIA. MINIMUM AND GALVANIZED METAL CONFORMING TO SECTION 238 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.
60. MAST ARM SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH VDOT STANDARD SMD-2.
61. ALL STREET NAME SIGNS SHALL BE GREEN BACKGROUND, WITH WHITE LETTERING AND IN ACCORDANCE WITH CITY SPECIFICATIONS.
62. ALL EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND NOT DESIGNATED FOR DISPOSAL BY THE CONTRACTOR SHALL BE SALVAGED AND RETURNED TO THE CITY OF RICHMOND TRANSPORTATION ENGINEERING DIVISION SHOP AT 3522 N. HOPKINS ROAD. THE CONTRACTOR SHALL CALL THE SHOP (804) 646-1466 THREE (3) BUSINESS DAYS IN ADVANCE TO SCHEDULE AN APPOINTMENT TO DROP OFF MATERIALS. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE DISPOSAL OF ANY EXISTING EQUIPMENT REFUSED AT DELIVERY.

63. THE CONTRACTOR SHALL SUBMIT A SEPARATE INTERSECTION TRANSITION PLAN, TO THE ENGINEER FOR APPROVAL A MINIMUM OF 48 HOURS PRIOR TO COMMENCING INTERSECTION CONSTRUCTION. INCLUDED IN THIS PLAN SHALL BE SIGNAL POLE PREPARATION AND OVERCOAT PROCEDURES, SIGNAL HEAD CHANGE-OVER PROCEDURES, AND TRAFFIC MAINTENANCE PROCEDURES TO BE USED DURING CONSTRUCTION. SEE TRAFFIC MANAGEMENT PLAN AND NARRATIVE ON SHEETS L3.00 - .04.
64. FOR EACH ELECTRICAL SERVICE THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DOMINION ENERGY 4 WEEKS IN ADVANCE. THE CONTRACTOR IS RESPONSIBLE FOR CONNECTING THE POWER FROM ITS SOURCE TO THE CONTROLLER CABINET AS SHOWN ON THE PLAN.
65. WHEREVER A STOP BAR IS RELOCATED MORE THAN FIVE FEET AWAY FROM THE EXISTING STOP BAR ON AN APPROACH, THE CONTRACTOR SHALL REPLACE OR REPROGRAM VEHICLE DETECTION ON THAT APPROACH AS SHOWN ON THE PLANS.
66. ALL PROPOSED VEHICLE DETECTION WILL BE PLACED OR PROGRAMMED TO BEGIN 5 FEET IN FRONT OF THE STOP BAR.
67. ALL PROPOSED VIDEO DETECTION CAMERAS SHALL BE AUTOSCOPE VISION OR APPROVED EQUAL. ALL PROPOSED VIDEO DETECTION CAMERA ATTACHMENT POINTS AND MOUNTING ANGLES SHALL BE APPROVED BY THE ENGINEER. ALL PROPOSED OR MODIFIED VIDEO DETECTION CAMERA ZONES SHALL BE COORDINATED WITH THE CITY OF RICHMOND AND THE ENGINEER.



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GENERAL NOTES - COND May 14, 2021 3:37pm by: Alyssa Baird
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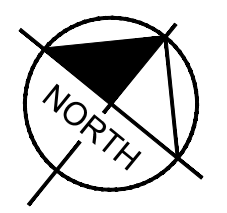
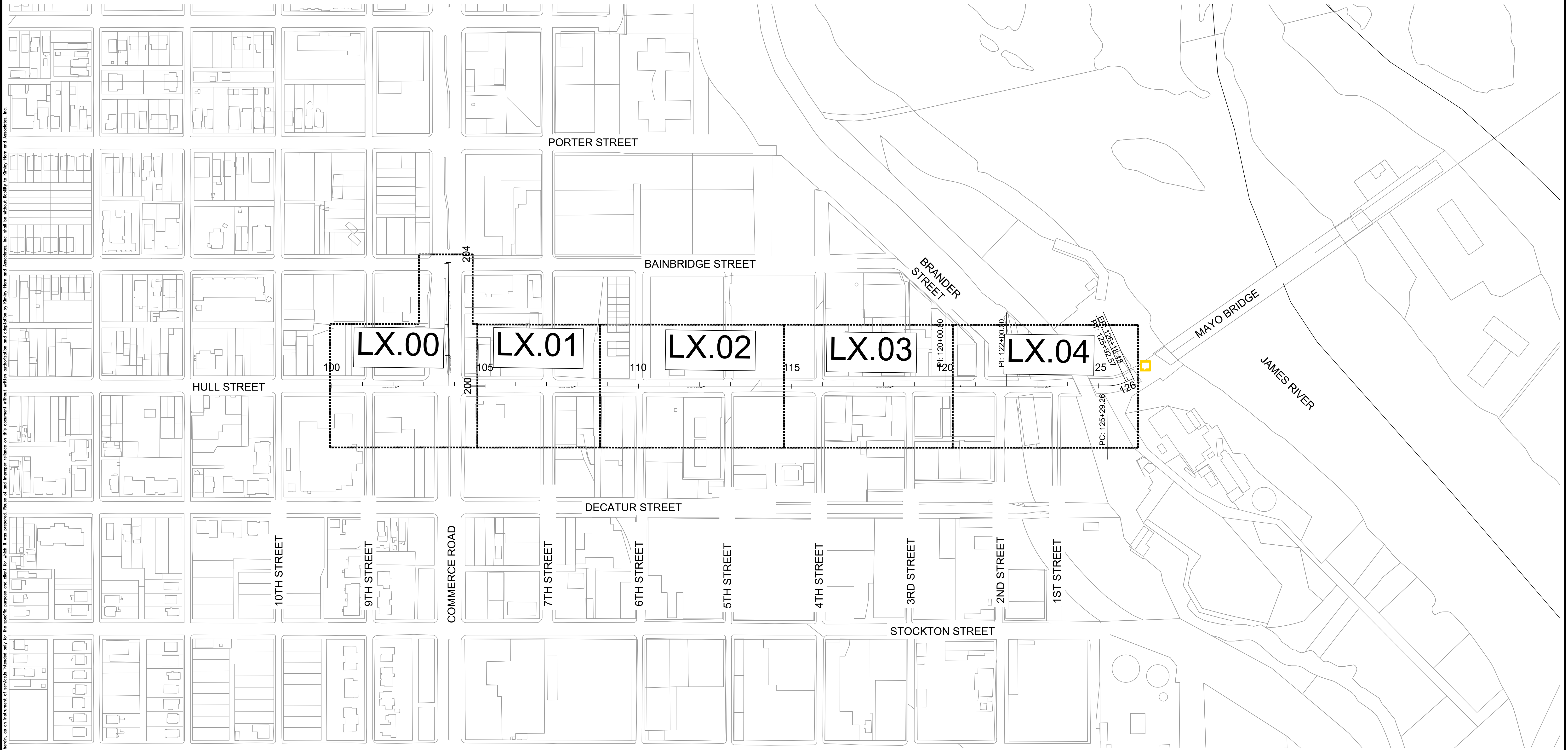
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1700 WILLOW LAWN DR., SUITE 200
RICHMOND, VIRGINIA 23230
Tel. 804-673-3882



AUTHORITY: CITY OF RICHMOND				PROJECT 109306	
DESIGN BY: JSB	REVIEWED BY: ACL	SCALE: N.S.	DATE: 5-14-2021	SHEET: L1.01	DRAWING NO: O-28933
DRAWN BY: JMI	CHECKED BY: ACL				

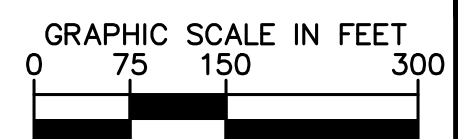
HULL STREET STREETScape GENERAL NOTES

Drawing name: K:\RICHMOND\113357_RIC_01\Call\028_Hull_Street\Streetscape\CADD\Sheets\L1.02 KEY PLAN.dwg L1.02 KEY PLAN May 14, 2021 3:37pm by AlysaBeird
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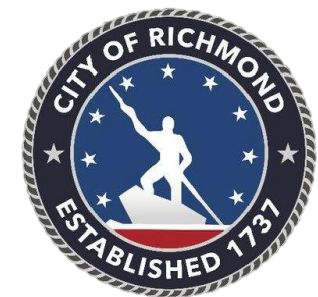


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HULL STREET STREETScape
KEY PLAN



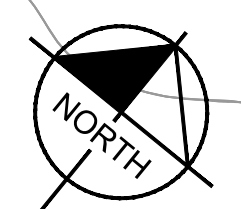
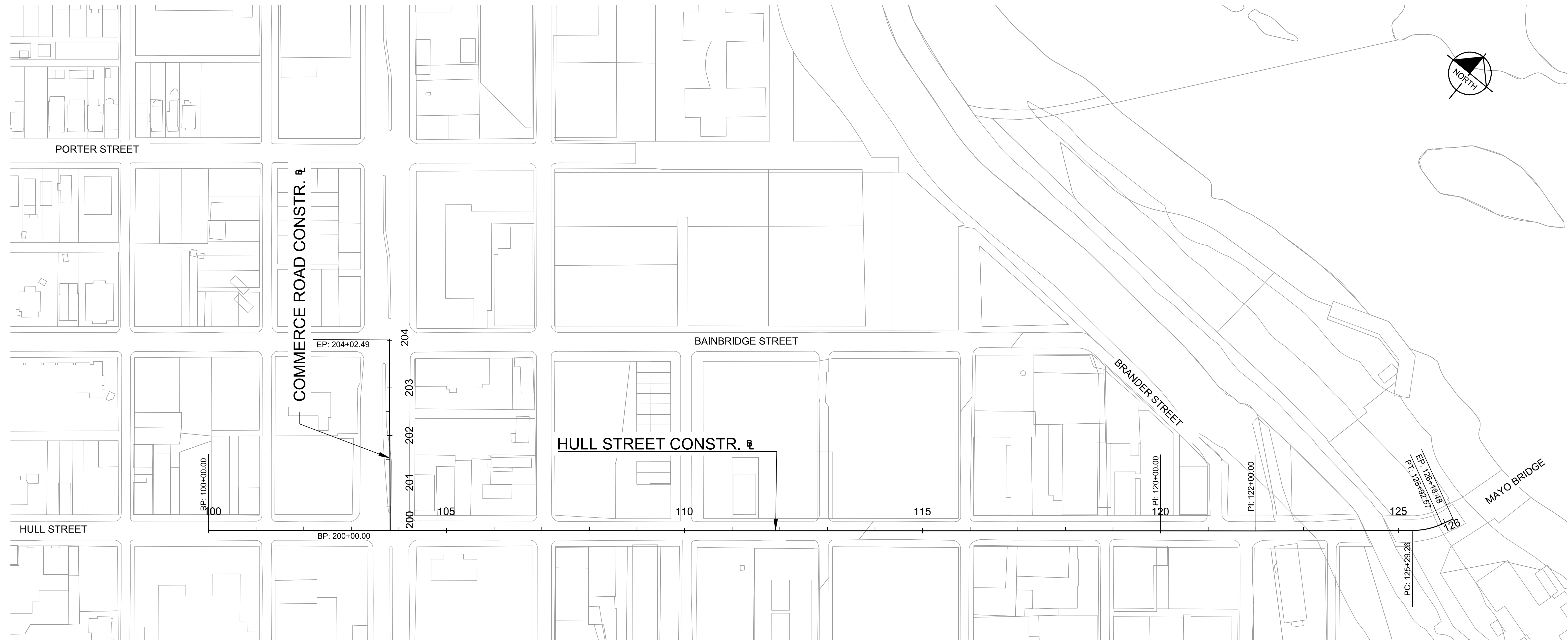
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 RICHMOND, VIRGINIA 23230
 Tel: 804-673-3882



AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE	DATE
CHECKED BY:		N.S.	5-14-2021
		SHEET	DRAWING NO.
		L1.02	O-28933

No.	REVISIONS	DATE	BY

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Alignment: Commerce Road

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Alignment: Hull Street

Description:

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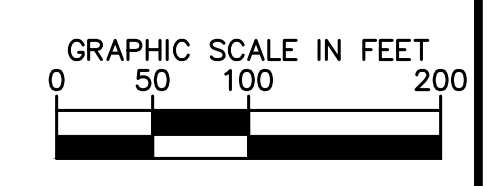
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Tangent Data
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 End: 126+18.477 3717106.578 11791749.1

Tangent Data
 Parameter Value Parameter Value
 Length: 25.908 Course: N 26° 25' 45.1917 E

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 Richmond, Virginia
 ROADWAY ENGINEER



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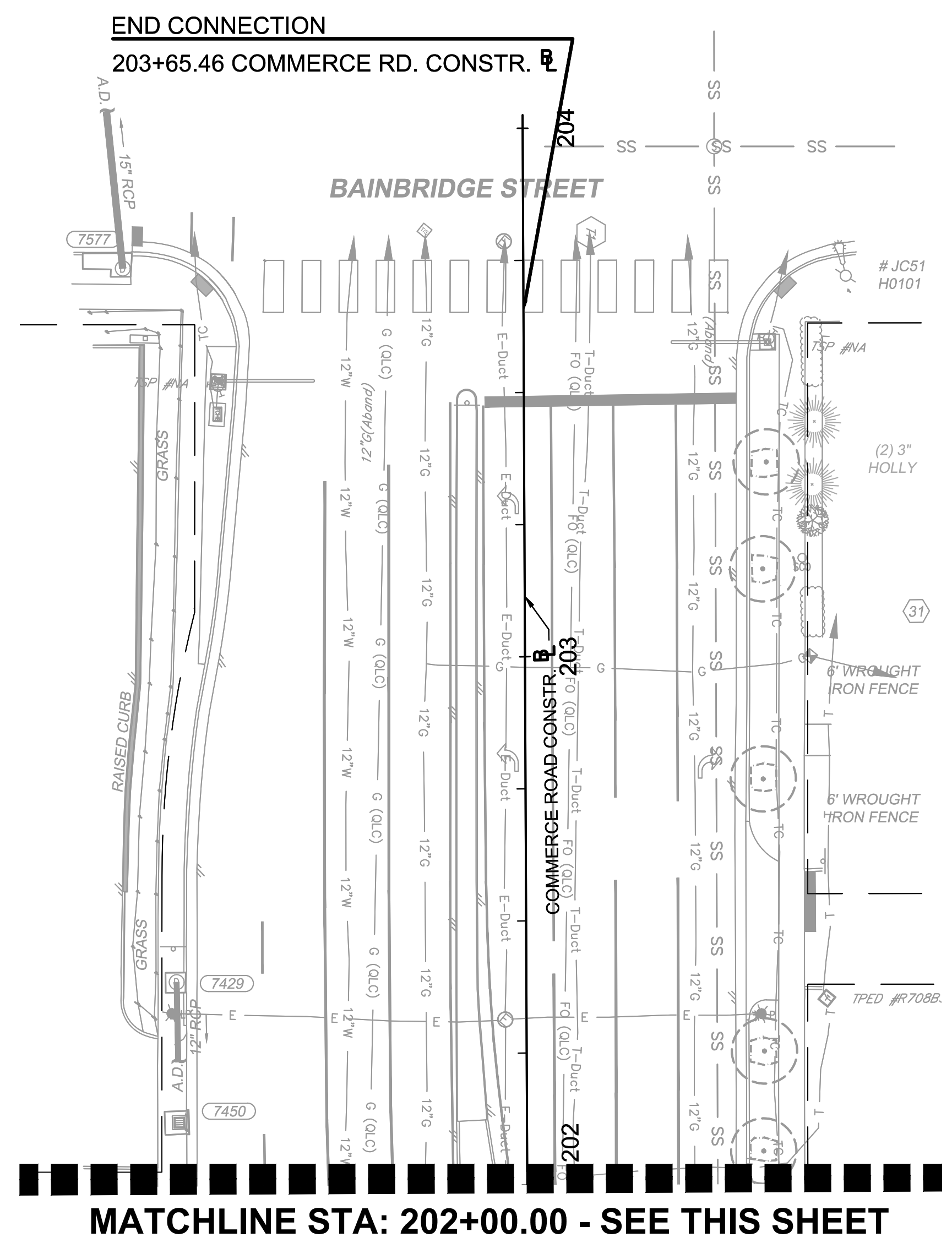
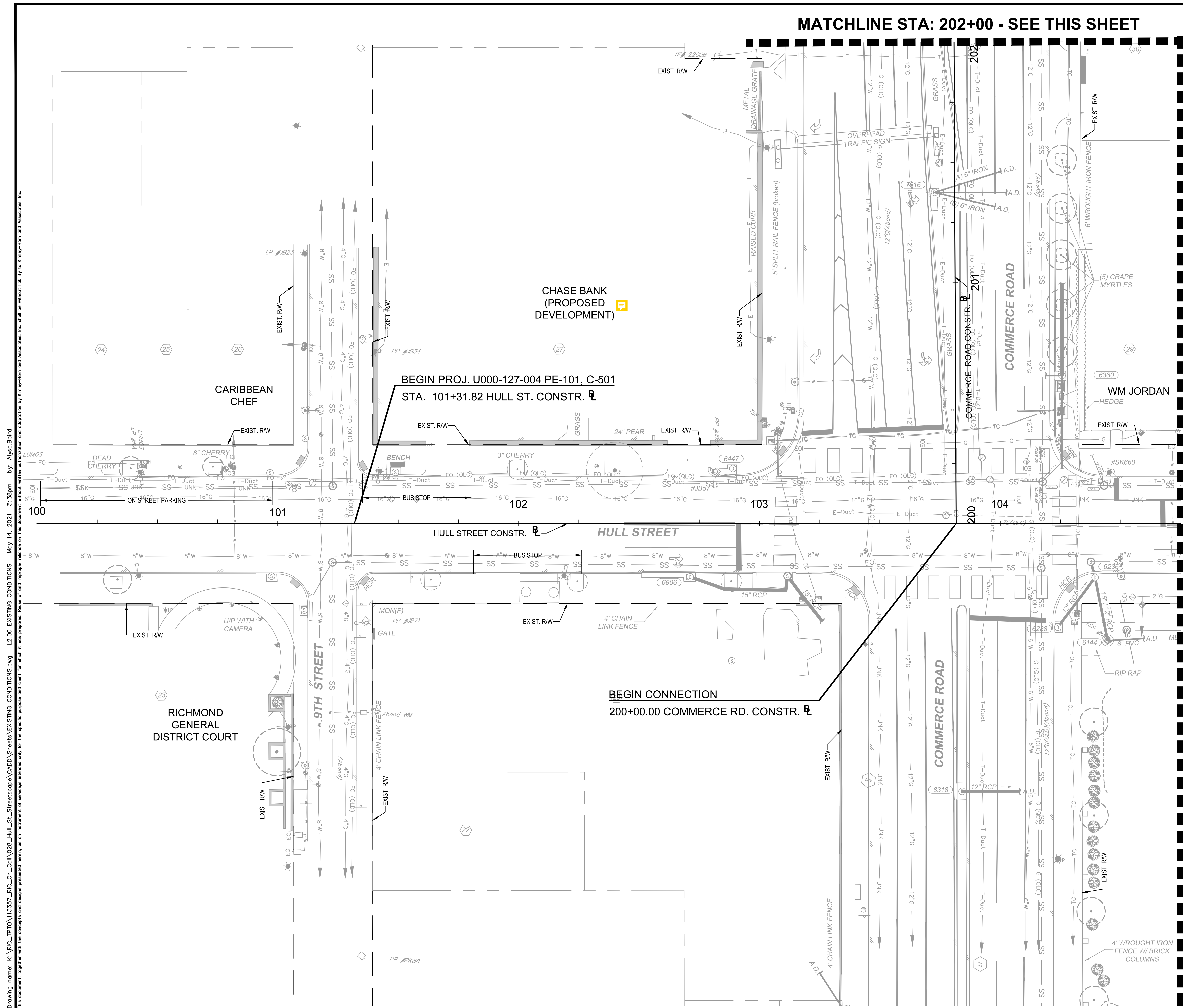
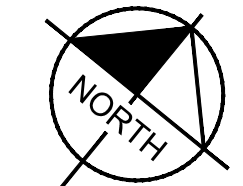


HULL STREET STREETSCAPE
 CONSTRUCTION ALIGNMENT DATA

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE	DATE
CHECKED BY:		1" = 100'	5-14-2021
		SHEET	DRAWING NO.
		L1.03	O-28933

No.	REVISIONS	DATE	BY

MATCHLINE STA: 202+00 - SEE THIS SHEET



MATCHLINE STA: 104+75 - SEE SHEET L2.01

MATCHLINE STA: 202+00.00 - SEE THIS SHEET

Drawing name: K:\RVC_IP\113357_RIC_Coll_V028_Hull_St_StreetScope\CADD\Sheets\EXISTING CONDITIONS.dwg May 14, 2021 3:38pm By: Alyssa Baird
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No.	REVISIONS	DATE	BY

<ul style="list-style-type: none"> ⊕ FIRE HYDRANT ⊕ GAS MANHOLE ⊕ GAS VALVE ⊕ LIGHT POLE ⊕ WATER VALVE ⊕ WATER METER ⊕ TELEPHONE MANHOLE ⊕ ELECTRIC MANHOLE ⊕ SANITARY MANHOLE ⊕ STORM MANHOLE 	<ul style="list-style-type: none"> ⊕ POWER POLE ⊕ POWER POLE W/LIGHT ⊕ SURVEY CONTROL POINT ⊕ SIGN (TWO POST) ⊕ SIGN (SINGLE POST) ⊕ TRASH CAN ⊕ TRASH CAN 	<ul style="list-style-type: none"> — E — ELECTRIC — E-Duct — ELECTRIC DUCT — TV — CABLE TV — TVFO — TV FIBER OPTIC — FO — FIBER OPTIC — FO-Duct — FIBER OPTIC DUCT — T — TELEPHONE — T-Duct — TELEPHONE DUCT — COMM — COMMUNICATIONS — C — GAS 	<ul style="list-style-type: none"> — S — SANITARY — SFM — SANITARY FORCE MAIN — SD — STORM DRAIN — W — WATER — TC — TRAFFIC CONDUIT — UNK — UNKNOWN UTILITY LINE
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GRAPHIC SCALE IN FEET
0 10 20 40

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RICHMOND, VIRGINIA 23230
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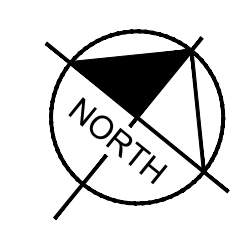
**HULL STREET STREETSCAPE
EXISTING CONDITIONS**

AUTHORITY: CITY OF RICHMOND PROJECT 109306

DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	DRAWING NO.:
CHECKED BY:		1" = 20'	5-14-2021	L2.00	O-28933

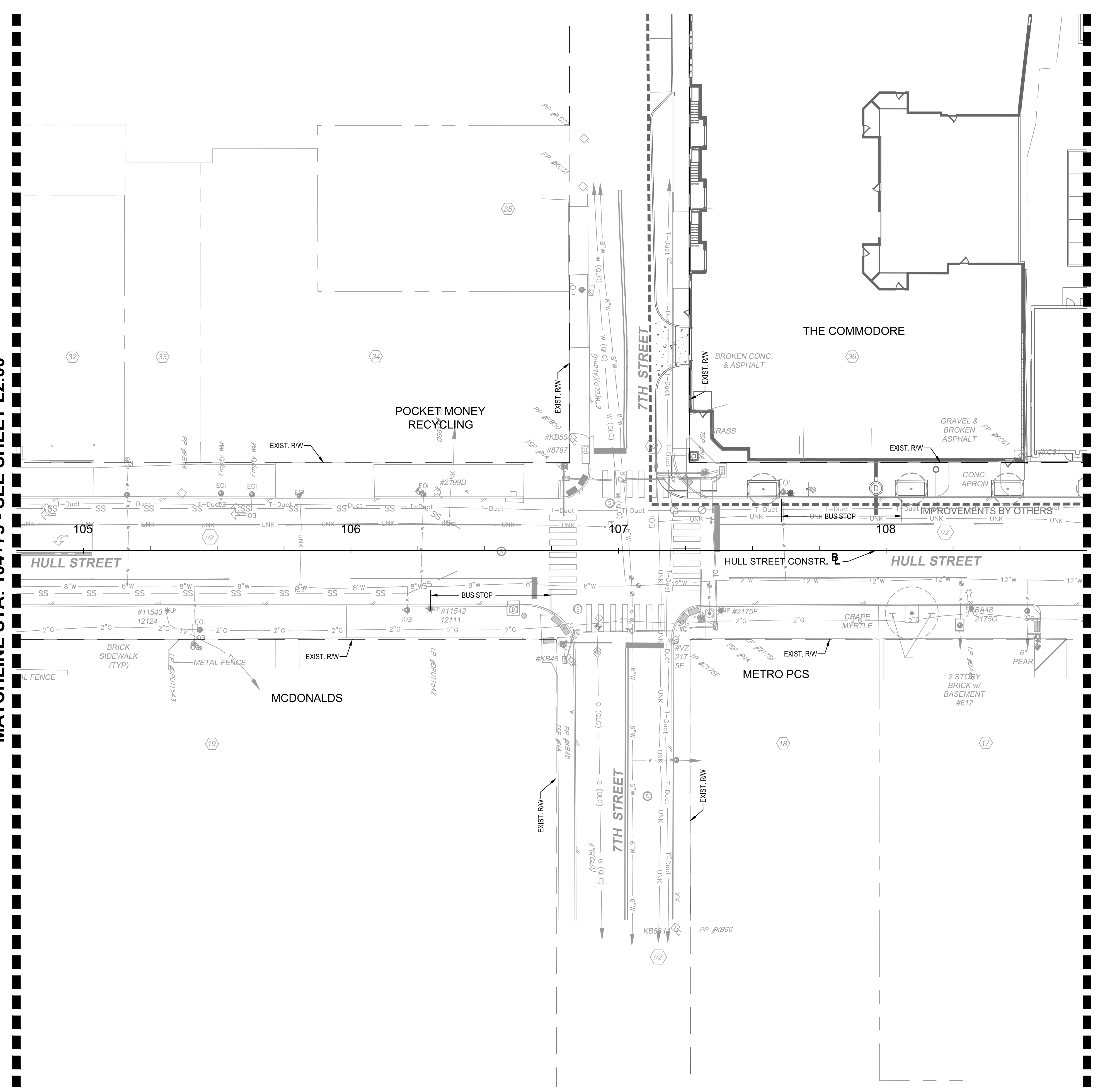
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Drawing name: K:\RICHMOND\113357_RIC_01\Call\028_Hull_St_StreetScope\CADD\Sheets\EXISTING CONDITIONS.dwg L2.01 EXISTING CONDITIONS May 14, 2021 3:38pm by: Alyssa Baird
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MATCHLINE STA: 108+75 - SEE SHEET L2.02



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<ul style="list-style-type: none"> ⊕ FIRE HYDRANT ⊙ GAS MANHOLE ⊙ GAS VALVE ⊙ LIGHT POLE ⊙ WATER VALVE ⊙ WATER METER ⊙ TELEPHONE MANHOLE ⊙ ELECTRIC MANHOLE ⊙ SANITARY MANHOLE ⊙ STORM MANHOLE 	<ul style="list-style-type: none"> ⊙ POWER POLE ⊙ POWER POLE W/LIGHT ⊙ SURVEY CONTROL POINT ⊙ SIGN (TWO POST) ⊙ SIGN (SINGLE POST) ⊙ TRASH CAN ⊙ TRASH CAN 	<ul style="list-style-type: none"> — E — ELECTRIC — E-Duct — ELECTRIC DUCT — TV — CABLE TV — TVFO — TV FIBER OPTIC — FO — FIBER OPTIC — FO-Duct — FIBER OPTIC DUCT — T — TELEPHONE — T-Duct — TELEPHONE DUCT — COMM — COMMUNICATIONS — C — GAS 	<ul style="list-style-type: none"> — S — SANITARY — SFM — SANITARY FORCE MAIN — SD — STORM DRAIN — W — WATER — TC — TRAFFIC CONDUIT — UNK — UNKNOWN UTILITY LINE
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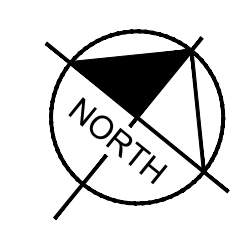
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 RICHMOND, VIRGINIA 23230
 Tel: 804-673-3882



**HULL STREET STREETSCAPE
EXISTING CONDITIONS**

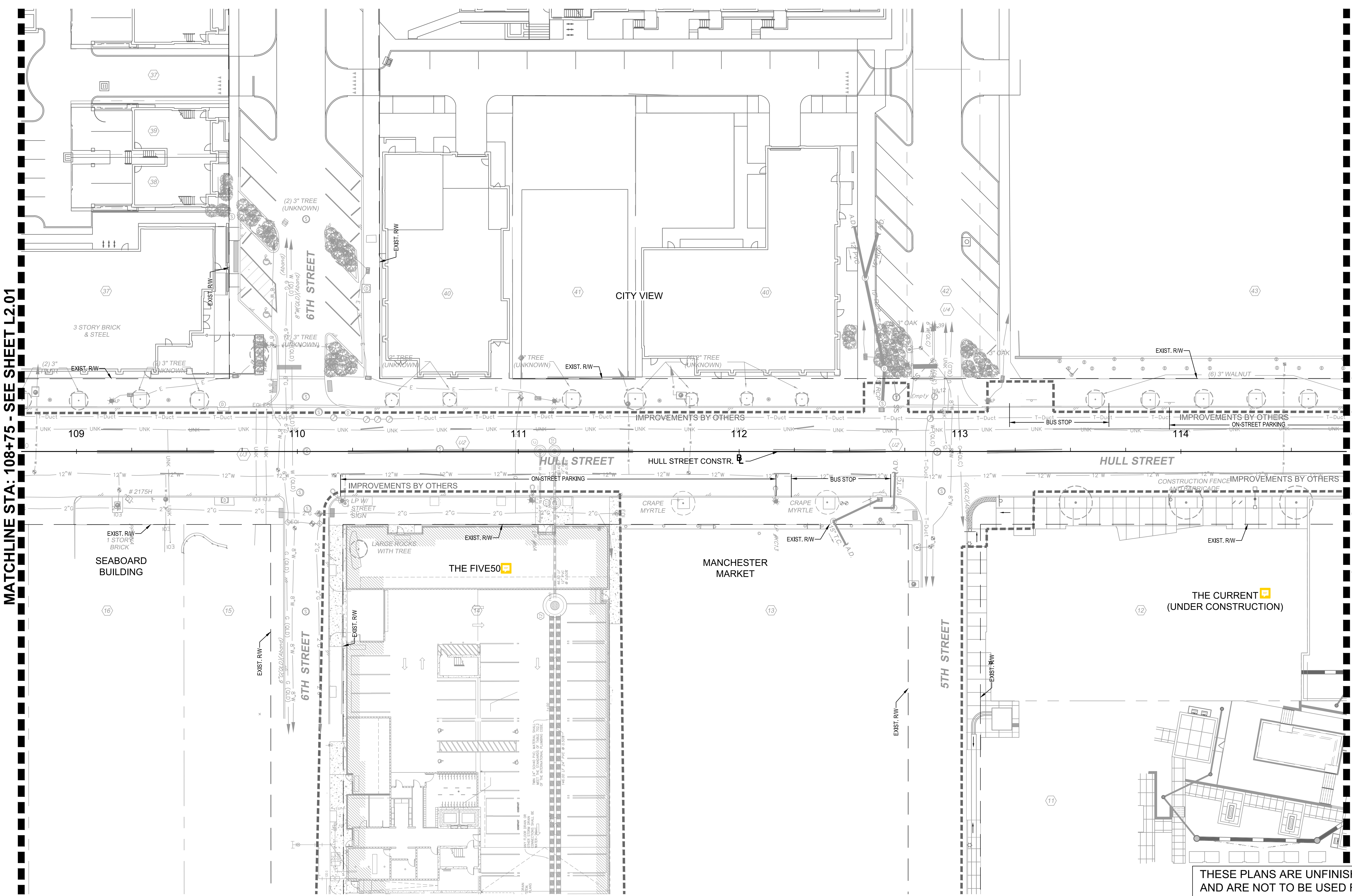
AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
		SHEET:	DRAWING NO.:
		L2.01	O-28933

Drawing name: K:\RVC_IP\10113357_RIC_01_Coll\028_Hull_St_StreetScope\CADD\Sheets\EXISTING CONDITIONS.dwg L2.02 EXISTING CONDITIONS May 14, 2021 3:38pm by: Alyssa Baird
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MATCHLINE STA: 108+75 - SEE SHEET L2.01

MATCHLINE STA: 114+75 - SEE SHEET L2.03



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No.	REVISIONS	DATE	BY

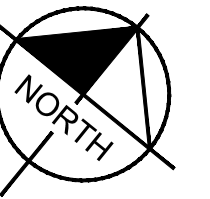
<ul style="list-style-type: none"> ⊕ FIRE HYDRANT ⊕ GAS MANHOLE ⊕ GAS VALVE ⊕ LIGHT POLE ⊕ WATER VALVE ⊕ WATER METER ⊕ TELEPHONE MANHOLE ⊕ ELECTRIC MANHOLE ⊕ SANITARY MANHOLE ⊕ STORM MANHOLE 	<ul style="list-style-type: none"> ⊕ POWER POLE ⊕ POWER POLE W/LIGHT ⊕ SURVEY CONTROL POINT ⊕ SIGN (TWO POST) ⊕ SIGN (SINGLE POST) ⊕ TRASH CAN ⊕ TRASH CAN 	<ul style="list-style-type: none"> — E — ELECTRIC — E-Duct — ELECTRIC DUCT — TV — CABLE TV — TVFO — TV FIBER OPTIC — FO — FIBER OPTIC — FO-Duct — FIBER OPTIC DUCT — T — TELEPHONE — T-Duct — TELEPHONE DUCT — COMM — COMMUNICATIONS — C — GAS 	<ul style="list-style-type: none"> — S — SANITARY — SFM — SANITARY FORCE MAIN — SD — STORM DRAIN — W — WATER — TC — TRAFFIC CONDUIT — UNK — UNKNOWN UTILITY LINE
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GRAPHIC SCALE IN FEET
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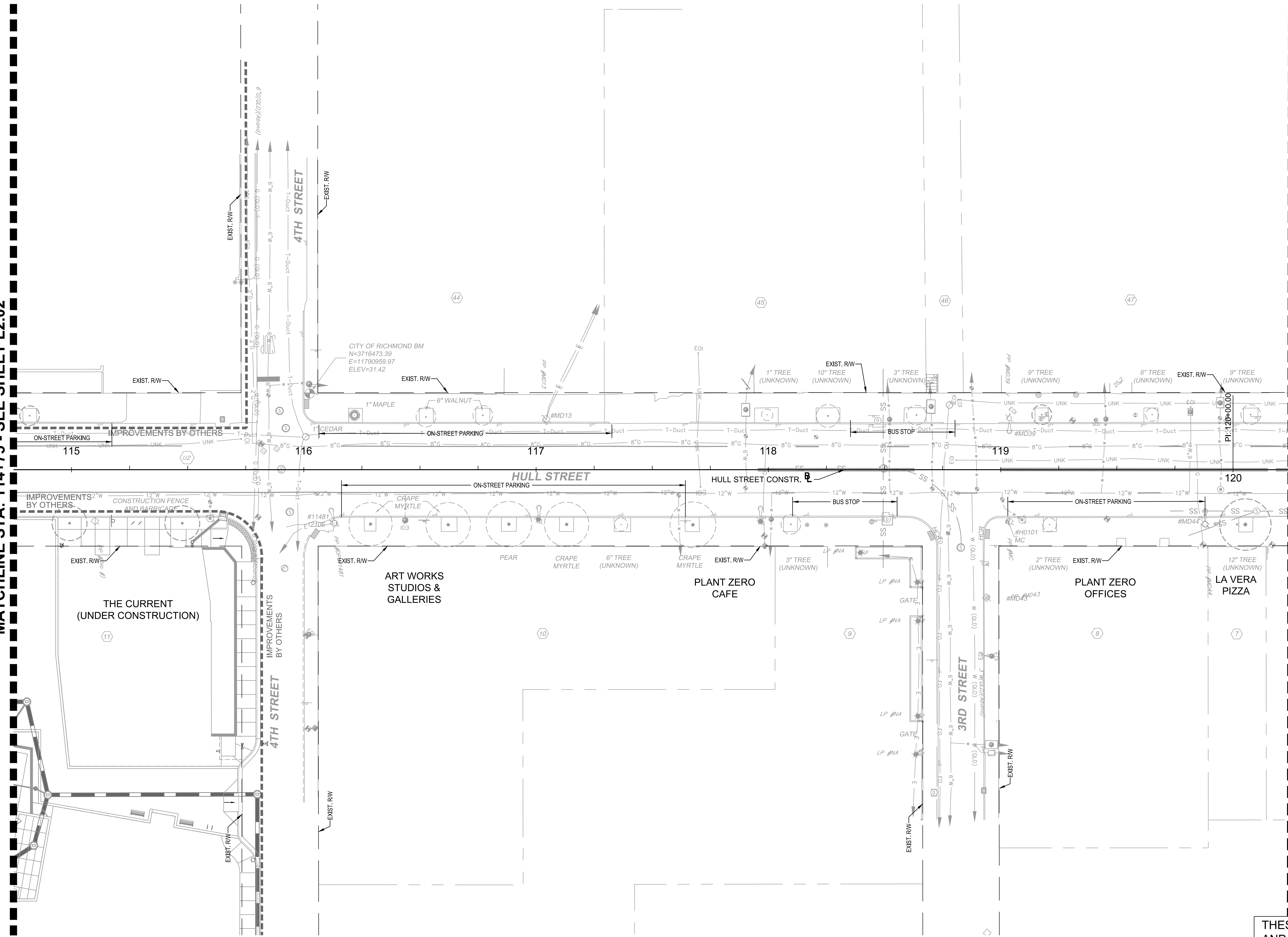
HULL STREET STREETSCAPE				EXISTING CONDITIONS			
AUTHORITY: CITY OF RICHMOND							
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	PROJECT 109306		DRAWING NO.:
CHECKED BY:		1" = 20'	5-14-2021	L2.02			O-28933



Drawing name: K:\RICHMOND\113357_RIC_04\Call\028_Hull_St_StreetScope\CADD\Sheets\EXISTING CONDITIONS.dwg L2.03 EXISTING CONDITIONS May 14, 2021 3:38pm by: Alyssa Baird
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MATCHLINE STA: 120+25 - SEE SHEET L2.04



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<ul style="list-style-type: none"> ⊕ FIRE HYDRANT ⊙ GAS MANHOLE ⊙ GAS VALVE ⊙ LIGHT POLE ⊙ WATER VALVE ⊙ WATER METER ⊙ TELEPHONE MANHOLE ⊙ ELECTRIC MANHOLE ⊙ SANITARY MANHOLE ⊙ STORM MANHOLE 	<ul style="list-style-type: none"> ⊙ POWER POLE ⊙ POWER POLE W/LIGHT ⊙ SURVEY CONTROL POINT ⊙ SIGN (TWO POST) ⊙ SIGN (SINGLE POST) ⊙ TRASH CAN ⊙ TRASH CAN 	<ul style="list-style-type: none"> — E — ELECTRIC — E-Duct — ELECTRIC DUCT — TV — CABLE TV — TVFO — TV FIBER OPTIC — FO — FIBER OPTIC — FO-Duct — FIBER OPTIC DUCT — T — TELEPHONE — T-Duct — TELEPHONE DUCT — COMM — COMMUNICATIONS — G — GAS 	<ul style="list-style-type: none"> — S — SANITARY — SFM — SANITARY FORCE MAIN — SD — STORM DRAIN — W — WATER — TC — TRAFFIC CONDUIT — UNK — UNKNOWN UTILITY LINE
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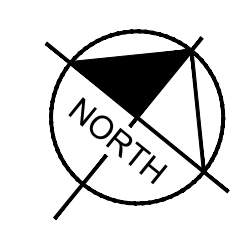
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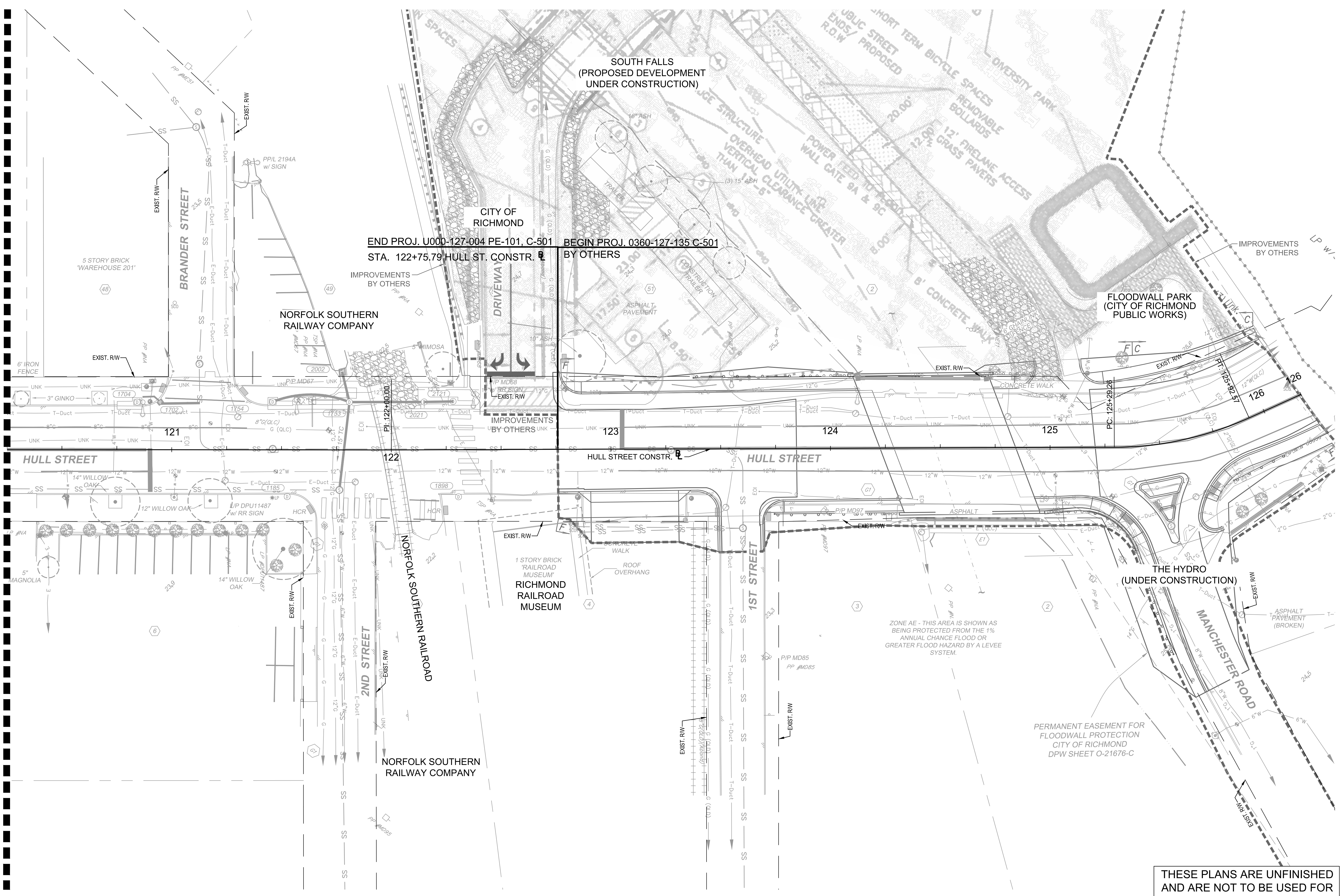
**HULL STREET STREETSCAPE
EXISTING CONDITIONS**

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
		SHEET:	DRAWING NO.:
		L2.03	O-28933

Drawing name: K:\RICHMOND\113357_RIC_01\Call_V028_Hull_St_StreetScope\CADD\Sheets\EXISTING CONDITIONS.dwg L2.04 EXISTING CONDITIONS May 14, 2021 3:38pm By: Alyssa Baird
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<ul style="list-style-type: none"> ⊕ FIRE HYDRANT ⊕ GAS MANHOLE ⊕ GAS VALVE ⊕ LIGHT POLE ⊕ WATER VALVE ⊕ WATER METER ⊕ TELEPHONE MANHOLE ⊕ ELECTRIC MANHOLE ⊕ SANITARY MANHOLE ⊕ STORM MANHOLE 	<ul style="list-style-type: none"> ⊕ POWER POLE ⊕ POWER POLE W/LIGHT ⊕ SURVEY CONTROL POINT ⊕ SIGN (TWO POST) ⊕ SIGN (SINGLE POST) ⊕ TRASH CAN ⊕ TRASH CAN 	<ul style="list-style-type: none"> — E — ELECTRIC — E-Duct — ELECTRIC DUCT — TV — CABLE TV — TVFO — TV FIBER OPTIC — FO — FIBER OPTIC — FO-Duct — FIBER OPTIC DUCT — T — TELEPHONE — T-Duct — TELEPHONE DUCT — COMM — COMMUNICATIONS — G — GAS 	<ul style="list-style-type: none"> — S — SANITARY — SFM — SANITARY FORCE MAIN — SD — STORM DRAIN — W — WATER — TC — TRAFFIC CONDUIT — UNK — UNKNOWN UTILITY LINE
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GRAPHIC SCALE IN FEET
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**HULL STREET STREETSCAPE
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AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
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CHECKED BY:		1" = 20'	5-14-2021
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		L2.04	O-28933

TRAFFIC MANAGEMENT PLAN (TMP)

HULL STREET STREETScape

INTRODUCTION

THIS PROJECT CONSISTS OF 0.5 MILES OF STREETScape IMPROVEMENTS ALONG HULL STREET FROM 9TH STREET TO MAYO BRIDGE. THE PROJECT INCLUDES SIDEWALK AND ENTRANCE REPLACEMENT, TRAFFIC SIGNAL IMPROVEMENTS, ADDITION OF SITE FURNITURE, LANDSCAPING, AND DRAINAGE IMPROVEMENTS.

TEMPORARY TRAFFIC CONTROL PLAN

GENERAL NOTES

- THE PROPOSED IMPROVEMENTS FOLLOW UNDER THE TMP TYPE A PROJECT.
- THE PROJECT LOCATION IS ALONG HULL STREET FROM THE INTERSECTION OF 9TH STREET TO THE MAYO BRIDGE.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TRAFFIC CONTROL DEVICES, SIGNAGE, EQUIPMENT, PERSONNEL, INCLUDING CERTIFIED TRAFFIC CONTROL PERSONNEL, ETC. TO CONTROL TRAFFIC DURING CONSTRUCTION WITHIN ROW. ALL TRAFFIC CONTROL SHALL BE IN STRICT ACCORDANCE WITH THE STANDARDS, GUIDELINES, POLICIES AND OBJECTIVES OF THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL, AND THE 2009 MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AREAS FOR EQUIPMENT STORAGE AND STAGING OF MATERIALS. THE WORK ZONE SHALL BE MAINTAINED ACCORDING TO THE TEMPORARY TRAFFIC CONTROL PLANS AS SHOWN IN THE CONTRACT DOCUMENTS.
- THE FOLLOWING TRAFFIC CONTROL SPECIFICATIONS FROM THE VIRGINIA WORK AREA PROTECTION MANUAL SHALL BE USED: TTC 5.2, TTC 28.2, TTC 35.1, TTC 36.2, TTC 53.0
- CHANNELIZING DEVICE SPACING SHALL BE AS FOLLOWS:
TRAVELWAY SPACING = 40', TRANSITION SPACING = 20'
- CONTRACTOR SHALL COORDINATE WITH BUSINESSES ALONG HULL STREET AFFECTED BY THE WORK ZONE TO MAINTAIN ACCESS DURING BUSINESS HOURS. IF NO BUSINESSES ARE LOCATED WITHIN A BLOCK, CONTRACTOR MAY CLOSE SIDEWALK FOR THE ENTIRE BLOCK TO COMPLETE WORK.
- TYPES OF TRAFFIC CONSIST OF COMMUTERS, SCHOOL BUSES, RESIDENTS, TRUCKS, PEDESTRIANS, AND BICYCLES.

PUBLIC COMMUNICATIONS PLAN

THE CONTRACTOR IS TO COORDINATE WITH THE CITY OF RICHMOND TO PUBLISH ANNOUNCEMENTS REGARDING WORK ACTIVITIES FOR THIS PROJECT. EACH ACTIVITY WILL BE GOVERNED BY THE TIMES ESTABLISHED BY THE CITY TRANSPORTATION ENGINEER. THE CONTRACTOR SHALL PROVIDE LANE CLOSURE INFORMATION A MINIMUM OF ONE WEEK IN ADVANCE OF WORK SO IT CAN BE PUBLISHED. ANY CHANGES TO THIS PUBLIC COMMUNICATION MUST BE APPROVED BY THE CITY TRANSPORTATION ENGINEER.

TRANSPORTATION OPERATIONS PLAN

- THE FOLLOWING IS A LIST OF LOCAL EMERGENCY CONTACT AGENCIES:
CITY OF RICHMOND POLICE DEPARTMENT: 804-646-5100 OR 911 (IN AN EMERGENCY)
- PROCEDURES TO RESPOND TO TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE:
 - CONTRACTOR TO NOTIFY INSPECTOR IN CHARGE. DEPENDING ON THE SEVERITY OF INCIDENT, THE CONTRACTOR MAY HAVE TO SHUT DOWN WORK.
 - UPON ARRIVAL ON SCENE, CITY OF RICHMOND POLICE DEPARTMENT STAFF TO DETERMINE RESPONSE NECESSARY TO ALLOW TRAVELING PUBLIC AROUND THE INCIDENT.
- PROCESS OF NOTIFICATION OF INCIDENT TO BE FOLLOWED IS:
CONTRACTOR TO CALL:
 - PROJECT MAINTENANCE OF TRAFFIC COORDINATOR (INSPECTOR): TO BE DETERMINED
 - PROJECT MANAGER (CONSTRUCTION ENGINEER): TO BE DETERMINED
 - THE CITY OF RICHMOND POLICE DEPARTMENT WILL TAKE CONTROL OF THE INCIDENT AND DIRECT ITS CLEARING AND RESTORATION TO NORMAL TRAFFIC OPERATIONS.
 - THE CITY OF RICHMOND POLICE OFFICE REPORT OF THE INCIDENT WILL BE REVIEWED TO DETERMINE IF ANY MODIFICATION OF THE TEMPORARY TRAFFIC CONTROL PLAN IS NECESSARY. IF IT IS DETERMINED THAT IT IS NECESSARY TO ALTER THE PLAN, THEN A MEETING WILL BE CALLED WITH THE CONTRACTOR, CITY OF RICHMOND POLICE DEPARTMENT AND CITY OF RICHMOND PUBLIC WORKS TO DISCUSS MODIFICATION AND IMPLEMENTATION OF AN IMPROVED TRAFFIC CONTROL PLAN.

TRAFFIC MANAGEMENT PLAN

MAINTENANCE OF TRAFFIC NOTES

- IT IS NOT THE INTENT OF THE SEQUENCE OF CONSTRUCTION PLAN TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN CONSTRUCTION OF EACH STAGE, BUT ONLY TO SUMMARIZE GENERAL TRAFFIC MANAGEMENT AND MAJOR CONSTRUCTION ITEM SEQUENCING.
- THE CONTRACTOR SHALL LIMIT LENGTH OF WORK ZONE SUCH THAT SIDEWALK EXCAVATION AND RESTORATION CAN BE COMPLETE IN ONE MONTH PER AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE SIGNING, DELINEATING PAVEMENT MARKINGS, AND ANY OTHER TRAFFIC CONTROL DEVICES NECESSARY TO PERFORM THE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL SUCH TEMPORARY DEVICES.
- ALL TRAFFIC MAINTENANCE AND CONTROL DEVICES, METHODS, AND APPLICATIONS SHALL CONFORM TO APPLICABLE PUBLICATIONS INCLUDING ALL CURRENT EDITIONS AND REVISIONS IDENTIFIED IN DIVISION VII "TRAFFIC CONTROL DEVICES" OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND THE LATEST VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM); WHICHEVER IS MORE RESTRICTIVE TAKES PRECEDENCE.
- LANE CLOSURES WILL NOT BE PERMITTED ON HOLIDAYS OR ON THE DAY BEFORE OR AFTER HOLIDAYS, UNLESS OTHERWISE APPROVED BY THE CITY TRANSPORTATION ENGINEER.
- ALONG ALL PROJECT ROADWAYS TEMPORARY LANE CLOSURES OR FLAGMAN OPERATIONS ARE NOT PERMITTED BETWEEN THE HOURS OF 6:00 AM AND 9:00 AM AND 3:30 PM TO 6:00 PM, MONDAY THROUGH FRIDAY OR AS APPROVED BY THE CITY TRANSPORTATION ENGINEER.
- WORK HOURS IN STREETS OPEN TO TRAFFIC AND/OR PEDESTRIAN AREAS:
MONDAY THROUGH FRIDAY: WORK SHALL BE COMPLETED BETWEEN 9:00 A.M. AND 3:30 P.M. ONLY.

HOLIDAYS: NO WORK SHALL BE COMPLETED IN THE ROADWAY OR PEDESTRIAN AREAS UNLESS OTHERWISE NOTED ON THE PLANS AND PROJECT SPECIAL PROVISIONS OR APPROVED IN WRITING BY THE ENGINEER.

ADDITIONAL RESTRICTIONS MAY APPLY BASED ON TRAFFIC CONDITIONS.

EXTENDED WORK HOURS AND WORK DAYS MAY BE REQUESTED WITH A WRITTEN REQUEST TO THE ENGINEER. THIS REQUEST SHALL BE SUBMITTED AT LEAST ONE WEEK PRIOR TO THE EXTENDED WORK PERIODS AND DOES NOT GUARANTEE APPROVAL.

- CONTRACTOR SHALL PROVIDE WARNING SIGNS, AND APPROVED PORTABLE/PERMANENT SIGN STANDS AND ENSURE AN UNRESTRICTED VIEW OF ADVANCE WARNING SIGN MESSAGES FOR SAFETY OF TRAFFIC. REFER TO 2011 VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM) AND ALL REVISIONS FOR SIGN AND STAND SPECIFICATIONS.
- ALL WORK SHALL BE SIGNED.
- GROUP 1 CONES/TUBULAR MARKERS MAY BE USED IN AREAS WHERE PERSONNEL WILL BE PRESENT TO ENSURE THEIR PROPER ALIGNMENT; GROUP II DRUMS SHALL BE REQUIRED WHEN THE WORK ZONE IS UNMANNED.
- A TRUCK WITH EITHER AN ARROW BOARD OPERATING IN THE CAUTION MODE, OR AT LEAST ONE ROTATING AMBER STROBE LIGHT SHALL BE PARKED 80'-120' IN ADVANCE OF THE FIRST WORK CREW WHEN LANE CLOSURES ARE IN PLACE.
- CONES, TUBULAR MARKERS, OR DRUMS TO BE USED AS CHANNELIZING DEVICES SHALL BE IN ACCORDANCE WITH THE GUIDELINES SET FORTH IN THE 2011 VWAPM AND ALL REVISIONS. ALL CONES OR TUBULAR MARKERS SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.
- FAILURE TO PROVIDE TEMPORARY TRAFFIC CONTROL IN ACCORDANCE WITH THE VWAPM AND THE PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS SHALL RESULT IN IMMEDIATE CORRECTIVE MEASURES BY THE CONTRACTOR AT NO ADDITIONAL COST TO CITY.
- LIMITS OF ROADWORK SIGN MESSAGES SHALL NOT BE EXPOSED TO TRAFFIC ON CITY STREETS UNTIL THE CONTRACTOR IS PREPARED TO CONTINUOUSLY PROSECUTE THE WORK.
- ALL TRAFFIC CONTROL EQUIPMENT SHALL MEET NCHRP 350 OR MASH CRITERIA.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING ROADWAY SIGNS WITHIN THE PROJECT LIMITS DURING ALL PHASES OF THIS PROJECT.
- THE CONTRACTOR SHALL CHECK ALL TRAFFIC MAINTENANCE AND CONTROL DEVICES AND WORK ZONES BEFORE, DURING, AND AFTER EACH WORK DAY TO ENSURE PROPER OPERATION.
- IF THERE IS AN APPROVAL FROM THE ENGINEER FOR A LANE CLOSURE OR A TEMPORARY STREET CLOSURE, ALL LANES OF TRAFFIC SHALL BE REOPENED TO TRAFFIC AT THE CONCLUSION OF EACH WORK DAY, UNLESS AN EXTENDED TEMPORARY STREET CLOSURE IS APPROVED AND IN EFFECT.
- AT NIGHT OR DURING NON-CONSTRUCTION HOURS, ALL EXCAVATED AREAS ARE TO BE BACKFILLED OR SECURED AND PROTECTED BY USING APPROVED SAFETY DEVICES OR MATERIALS.
- ALL WORKERS AND OTHERS WITHIN THE RIGHT OF WAY WHO ARE EITHER EXPOSED TO TRAFFIC OR TO WORK VEHICLES AND CONSTRUCTION EQUIPMENT SHALL WEAR HIGH-VISIBILITY SAFETY APPAREL THAT MEETS PERFORMANCE CLASS 3 REQUIREMENTS OF ANSI/ISEA 107-2010. FOR NIGHT WORK, ALL WORKERS SHALL WEAR CLASS E TROUSERS IN ADDITION TO THE STANDARD PERFORMANCE CLASS 3 REQUIREMENTS.
- PER CITY'S RESOLUTION NO. 2018-R025, IT IS CONTRACTOR'S RESPONSIBILITY TO ACQUIRE WORK-IN STREET PERMITS AND PROVIDE TEMPORARY SIDEWALKS FOR PEDESTRIAN WHENEVER A SIDEWALK IS CLOSED DUE TO CONSTRUCTION OR DEMOLITION

MAINTENANCE OF PEDESTRIAN TRAFFIC NOTES

- CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS ROUTE AT ALL TIMES, OR PROPERLY SIGN PEDESTRIAN DETOUR PER VWAPM TTC 35.1 AND 36.2.
- DURING CONSTRUCTION OF ADA RAMPS, AT LEAST ONE CROSSWALK ON HULL STREET (IF PRESENT) AND ONE CROSSWALK ON THE MINOR STREET PER INTERSECTION SHALL BE MAINTAINED AT ALL TIMES.
- DETECTABLE EDGE DEVICES SHALL BE USED ALONG ALL PEDESTRIAN PATHS.
 - TO PREVENT ANY TRIPPING HAZARD TO PEDESTRIANS, BALLAST SHALL BE LOCATED BEHIND OR INTERNAL TO THE DEVICE
 - DETECTABLE EDGES FOR LONG CANES SHALL BE CONTINUOUS, A MINIMUM WIDTH OF 6 INCHES, AND BE A CONTRASTING COLOR WITH THE WALKWAY SURFACE
 - DEVICES SHOULD NOT PREVENT THE DRAINAGE OF WATER FROM THE WALKWAY. AN OPENING WITH A 2 INCH MAXIMUM HEIGHT ABOVE THE WALKWAY SURFACE IS ALLOWED FOR DRAINAGE.
 - LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS SHALL HAVE A MINIMUM HEIGHT OF 32 INCHES. LONGITUDINAL CHANNELIZING DEVICES SHALL NOT BE INSTALLED WITH A HANDRAIL.
 - WHEN HAND GUIDANCE IS REQUIRED, THE TOP SURFACE OF THE DEVICE SHALL BE IN A VERTICAL PLANE PERPENDICULAR TO THE WALKWAY AND ABOVE THE DETECTABLE EDGE WITH A CONTINUOUS HEIGHT OF 36-38 INCHES.
 - ALL DEVICES SHOULD BE FREE OF SHARP OR ROUGH EDGES WITH ALL FASTENERS INSTALLED BELOW THE SURFACE AND CAPPED TO PREVENT HARM TO HANDS, ARMS OR CLOTHING OF PEDESTRIANS.
 - ALL DEVICES USED TO PROVIDE GUIDANCE FOR PEDESTRIANS SHALL INTERLOCK TO PREVENT GAPS BETWEEN DEVICES.
- TEMPORARY CURB RAMPS SHALL COMPLY WITH THE FOLLOWING:
 - CURB RAMPS SHOULD BE A MINIMUM OF 48 INCHES IN WIDTH FOR PERPENDICULAR RAMPS AND 60 INCHES IN WIDTH FOR PARALLEL RAMPS, WITH A FIRM, STABLE, NON-SLIP SURFACE.
 - DETECTABLE EDGES FOR LONG CANES SHALL BE CONTINUOUS AND A MINIMUM OF 6 INCHES ABOVE THE WALKWAY SURFACE AND BE A CONTRASTING COLOR WITH THE RAMP AND LANDING SURFACE. FOR PERPENDICULAR RAMPS, THE 6 INCH DETECTABLE EDGE MAY BE REPLACED WITH A 10:1 APRON/FLARED SIDE AND A 2 INCH WIDE MARKED WALKWAY EDGE LINE.
 - RAMPS SHALL HAVE A SLOPE NOT TO EXCEED A MAXIMUM OF 12% (8:1).
 - CURB RAMPS AND TURNING SPACES SHOULD HAVE A MAXIMUM OF 2% (48:1) CROSS-SLOPE.
 - A LEVEL CLEAR SPACE, 48 X 48 INCH FOR PERPENDICULAR RAMPS AND 60 X 60 INCH FOR PARALLEL RAMPS, SHOULD BE PROVIDED ABOVE AND BELOW THE RAMP.
 - CURB RAMPS SHOULD BE PLACED TO HAVE MINIMAL RESTRICTION TO WATER FLOW IN THE CURB/GUTTER DRAINAGE SYSTEM.
 - ALL JOINTS AND GAPS BETWEEN SURFACES SHOULD BE LESS THAN 0.5 INCHES.
 - VERTICAL CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 INCHES. VERTICAL EDGES CAN BE VERTICAL UP TO 0.25 INCHES. VERTICAL EDGES BETWEEN 0.25 AND 0.5 INCHES SHALL BE BEVELED AT 2:1.

STAGING NARRATIVE

THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTIES AND DRIVEWAYS AT ALL TIMES, UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER. THE FOLLOWING IS A GENERAL OUTLINE SUCH THAT PEDESTRIAN CONNECTIVITY AND ACCESS TO BUSINESSES IS MAINTAINED AT ALL TIMES. THE CONTRACTOR MAY DEVIATE FROM THIS SEQUENCE ONLY WITH WRITTEN APPROVAL FROM THE ENGINEER. A REQUEST FOR DOES NOT NECESSARILY IMPLY ENGINEER'S APPROVAL.

STAGE 1

INSTALL SIGNS AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM) AND AS DEPICTED IN THE PLANS. THE CONTRACTOR SHALL INSTALL CONCRETE SIDEWALK ADJACENT TO HULL STREET, MAINTAINING A MINIMUM 5' WIDE PEDESTRIAN WALKWAY UTILIZING THE EXISTING SIDEWALK. CONTRACTOR SHALL MAINTAIN A WORK ZONE ON ONLY ONE SIDE OF HULL STREET AT A TIME. CONTRACTOR SHALL MAINTAIN FULL WIDTH SIDEWALK ON ONE SIDE OF HULL STREET AT ALL TIMES.

STAGE 2

ONCE STAGE 1 OPERATIONS ARE COMPLETE, CONTRACTOR SHALL INSTALL SIGNS AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE VWAPM AND AS DEPICTED IN THE PLANS. THE CONTRACTOR SHALL OPEN UP CONCRETE SIDEWALK CONSTRUCTED IN STAGE 1 TO PEDESTRIANS WHILE CONSTRUCTING CONCRETE SIDEWALK UTILIZING LONGITUDINAL JOINTS. A MINIMUM 5' WIDE PEDESTRIAN WALKWAY SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR HAS THE OPTION TO UTILIZE A PEDESTRIAN DETOUR (OPTION B), BUT PROVIDING A CONTINUOUS PEDESTRIAN PATH VIA TEMPORARY RAMPS AND WALKING AREAS (OPTION A) IS PREFERRED. WHEN UTILIZING OPTION A, THE CONTRACTOR SHALL MAINTAIN THE SAME NUMBER OF TRAVEL LANES ON THE SIDE STREET, BUT MAY SHIFT TRAFFIC AND/OR UTILIZE THE PARKING LANE TO PROVIDE THE TEMPORARY PEDESTRIAN ROUTE.

UPON COMPLETION OF STAGE 2, THE CONTRACTOR SHALL OPEN UP THE FULL WIDTH SIDEWALK TO PEDESTRIANS AND REPEAT STAGE 1 AND STAGE 2 ON THE OPPOSITE SIDE OF HULL STREET.

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ROADWAY ENGINEER

Drawing name: K:\RVC_IP\10113357_RIC_Coal\0208_Hull_St_Streetscape\CADD\Sheets\L3.00 MAINTENANCE OF TRAFFIC PLAN.dwg L3.00 TRAFFIC MANAGEMENT PLAN May 14, 2021 3:39pm by: A\jacob@rd.com
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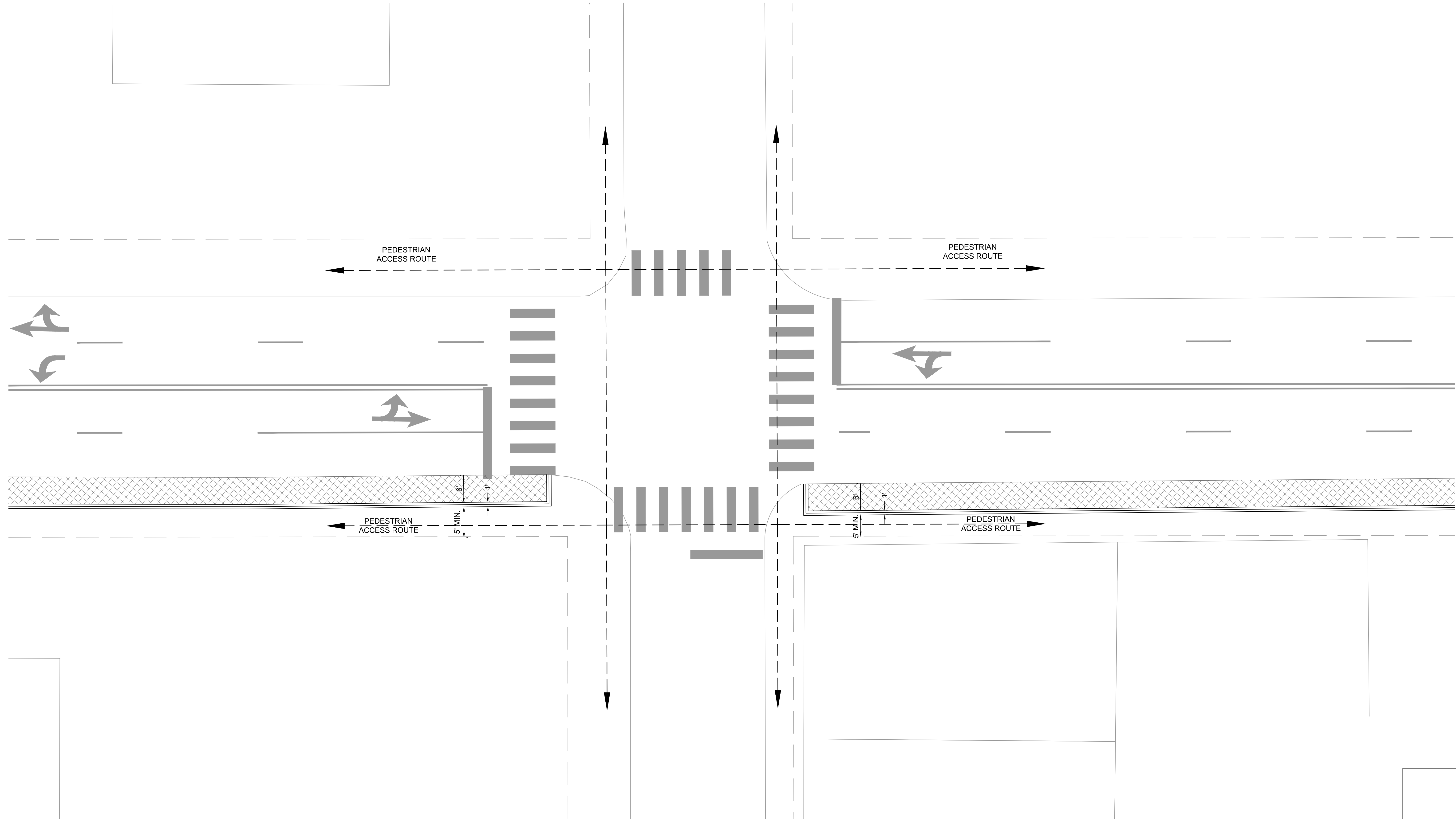


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CHECKED BY:			5-14-2021	L3.00	O-28933		

HULL STREET STREETScape
TRAFFIC MANAGEMENT PLAN

TRAFFIC MANAGEMENT PLAN - STAGE 1



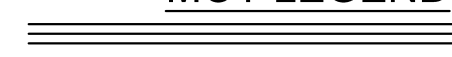



NOTE: SIDEWALK AND WORK-ZONE DIMENSIONS SHOWN ARE APPROXIMATE MINIMUMS. WHEN TOTAL WIDTH IS LIMITED, PEDESTRIAN ZONE MINIMUM SHALL TAKE PRECEDENCE.

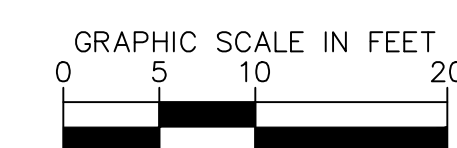
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MOT LEGEND

-  PROP. LONGITUDINAL CHANNELIZING DEVICE
-  PROP. PEDESTRIAN ACCESS ROUTE
-  PROP. WORK AREA
-  PROP. TY. III BARRICADE, 4'



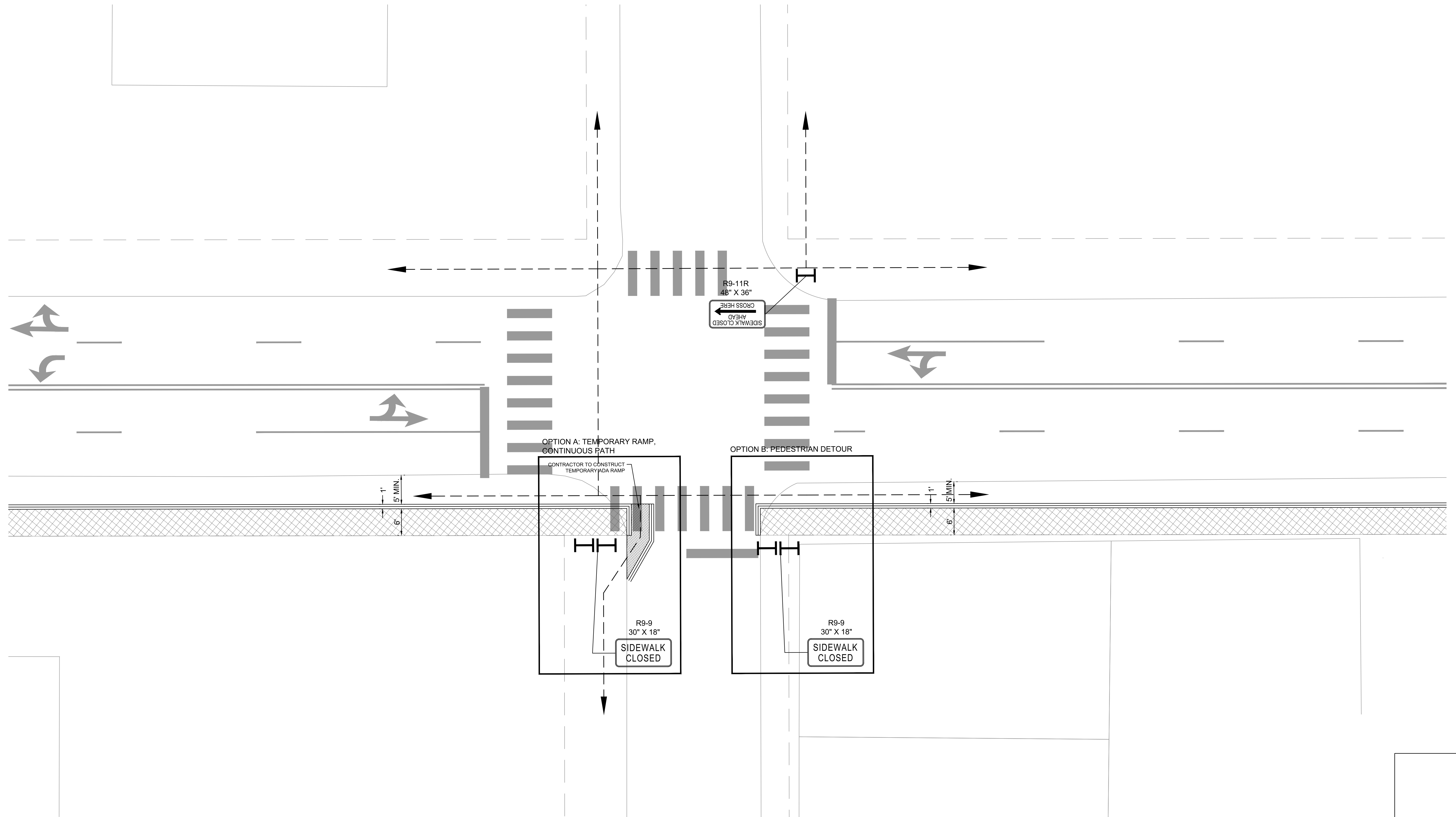
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HULL STREET STREETSCAPE MOT PHASE 1

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		L3.01	O-28933

TRAFFIC MANAGEMENT PLAN - STAGE 2



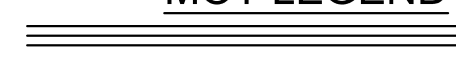



NOTE: SIDEWALK AND WORK-ZONE DIMENSIONS SHOWN ARE APPROXIMATE MINIMUMS. WHEN TOTAL WIDTH IS LIMITED, PEDESTRIAN ZONE MINIMUM SHALL TAKE PRECEDENCE.

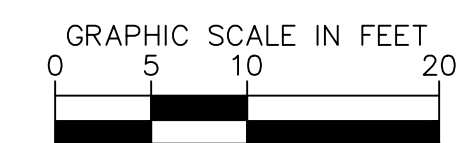
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MOT LEGEND

-  PROP. LONGITUDINAL CHANNELIZING DEVICE
-  PROP. PEDESTRIAN ACCESS ROUTE
-  PROP. WORK AREA
-  PROP. TY. III BARRICADE, 4'



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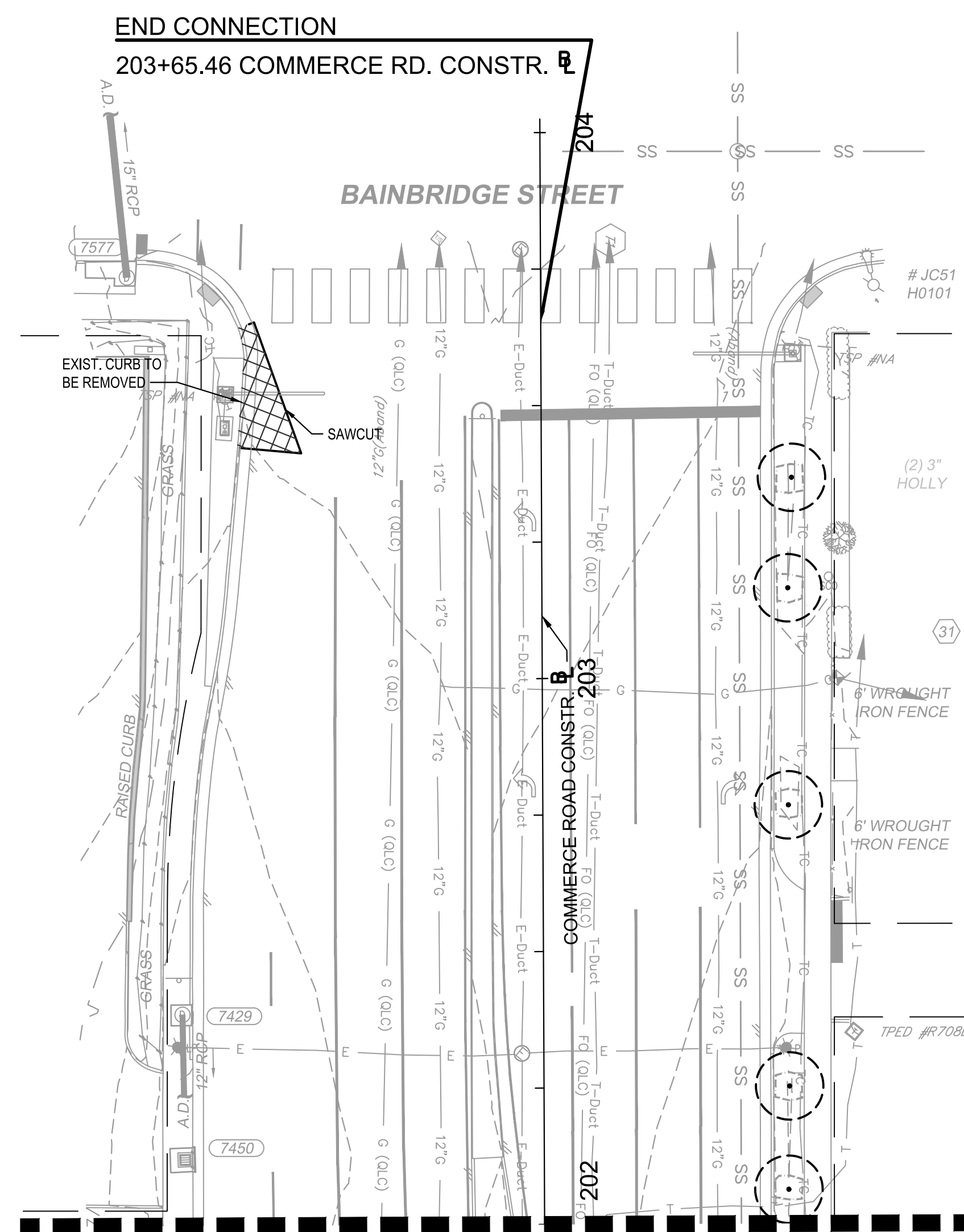
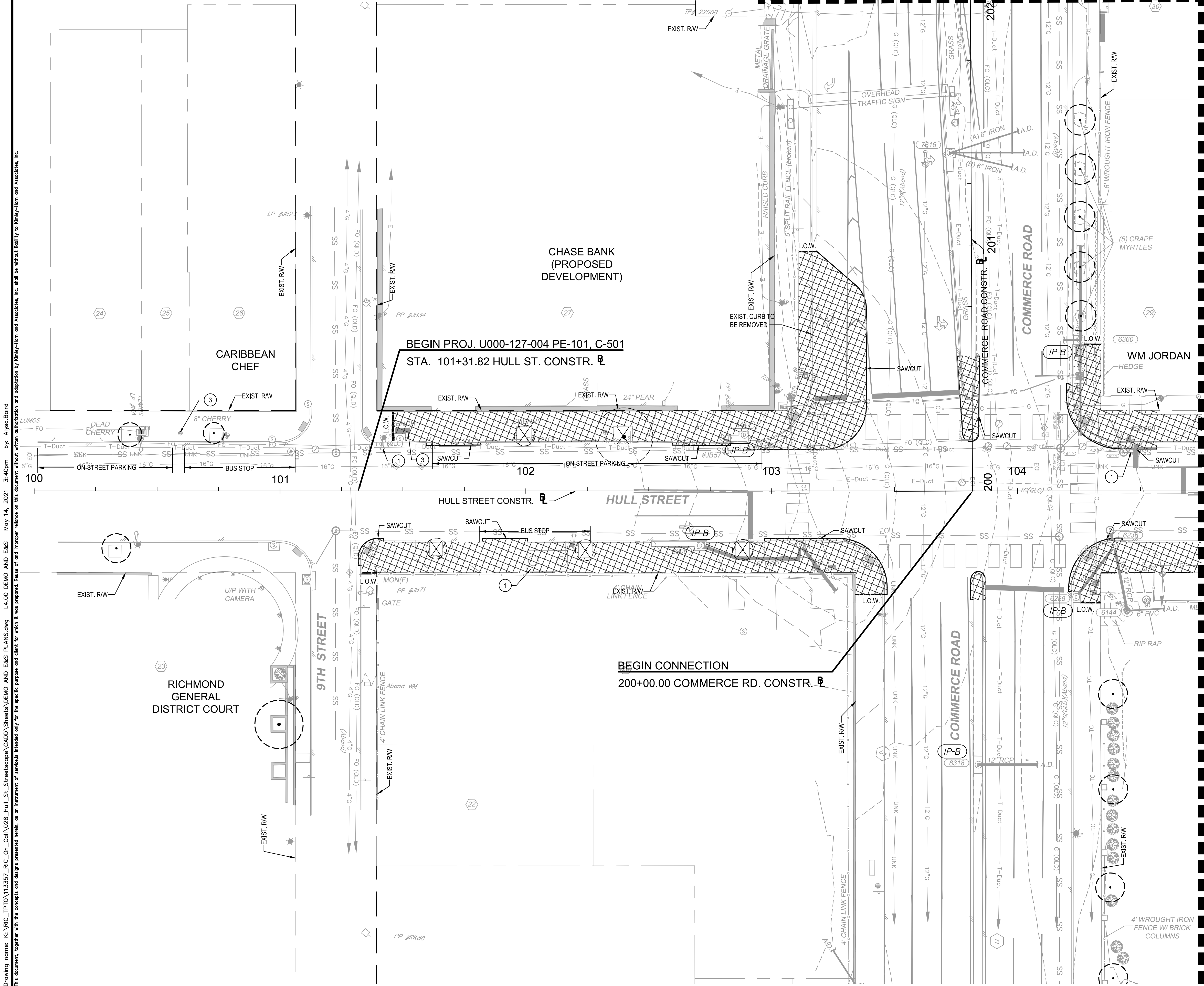
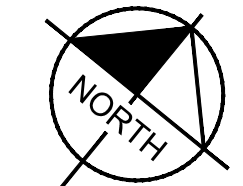
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HULL STREET STREETSCAPE MOT PHASE 2

PROJECT 109306

REVIEWED BY:	SCALE:	DATE:	SHEET:	DRAWING NO.:
	1"=10'	5-14-2021	L3.02	O-28933

MATCHLINE STA: 202+00 - SEE THIS SHEET



MATCHLINE STA: 104+75 - SEE SHEET L4.01

MATCHLINE STA: 202+00 - SEE THIS SHEET

- NOTES:
1. ALL EXISTING STORM SEWER MANHOLES AND DROP INLETS ARE TO REMAIN IN PLACE UNLESS NOTED OTHERWISE
 2. ALL EXISTING COBRA HEAD LIGHTS TO BE REMOVED FROM WOOD POLES.

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ROADWAY ENGINEER

No.	REVISIONS	DATE	BY

LEGEND

	DEMOLITION OF PAVEMENT / SIDEWALK / CONCRETE		1 TO BE REMOVED
	PROPOSED PAVEMENT OVERLAY		2 TO BE REMOVED AND RESET BY PROPERTY OWNER - SEE NOTE 20, SHEET L1.00
	TREE PROTECTION FENCE - SEE DETAIL 5, SHEET L7.01		3 TO BE REMOVED AND SALVAGED
	INLET PROTECTION TYPE A - SEE DETAIL 7, SHEET L7.01		4 TO BE RELOCATED
	INLET PROTECTION TYPE B - SEE DETAIL 7, SHEET L7.01		5 TO BE REMOVED AND RESET BY CONTRACTOR
			6 TO BE ABANDONED

	EXISTING TREE TO REMAIN		FIRE HYDRANT		POWER POLE		ELECTRIC		SANITARY
	TREE TO BE REMOVED - SEE NOTES 31-35, SHEET L1.00		GAS VALVE		POWER POLE W/LIGHT		ELECTRIC DUCT		SANITARY FORCE MAIN
	LIGHT POLE		WATER VALVE		SIGN (SINGLE POST)		CABLE TV		STORM DRAIN
	WATER METER		WATER METER		SIGN (TWO POST)		TV FIBER OPTIC		WATER
	TELEPHONE MANHOLE		WATER METER		SIGN (SINGLE POST)		FIBER OPTIC		TRAFFIC CONDUIT
	ELECTRIC MANHOLE		WATER METER		TRASH CAN		FIBER OPTIC DUCT		UNKNOWN UTILITY LINE
	SANITARY MANHOLE		WATER METER		TRASH CAN		TELEPHONE		
	STORM MANHOLE		WATER METER		TRASH CAN		TELEPHONE DUCT		
			WATER METER		TRASH CAN		COMMUNICATIONS		
			WATER METER		TRASH CAN		GAS		

GRAPHIC SCALE IN FEET
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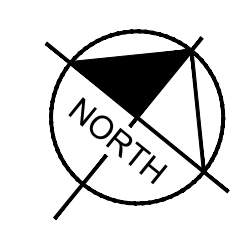
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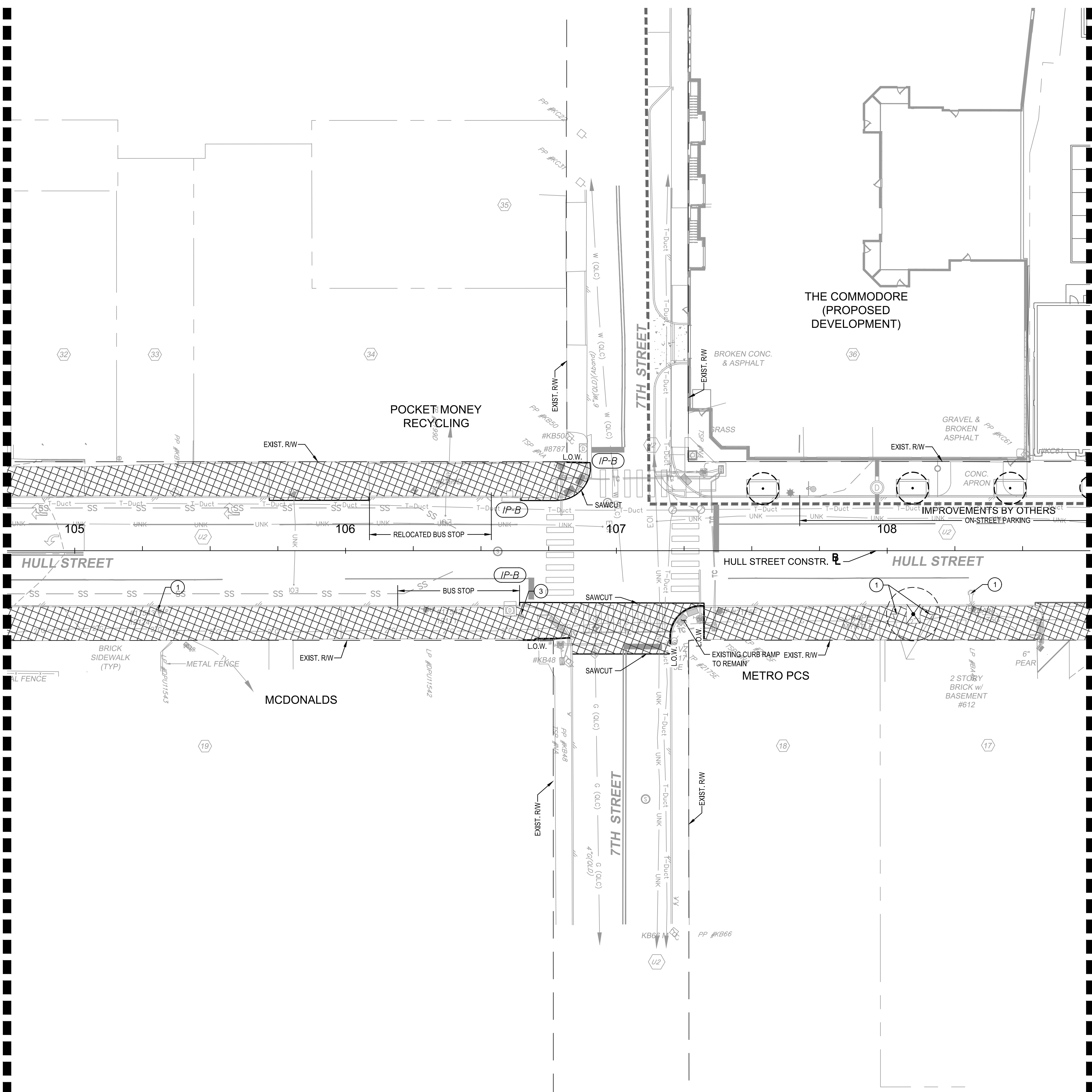
HULL STREET STREETSCAPE
DEMO AND E&S PLANS

Drawing name: K:\RICHMOND\113357_RIC_OH_Coll\028_Hull_St_StreetScope\CADD\Sheets\DEMO AND E&S PLANS.dwg L4.01 DEMO AND E&S May 14, 2021 3:40pm by AlyssaBoird
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LEGEND

DEMOLITION OF PAVEMENT / SIDEWALK / CONCRETE	TO BE REMOVED	EXISTING TREE TO REMAIN	FIRE HYDRANT	POWER POLE	ELECTRIC	SANITARY
PROPOSED PAVEMENT OVERLAY	TO BE REMOVED AND RESET BY PROPERTY OWNER -SEE NOTE 20, SHEET L1.00	TREE TO BE REMOVED -SEE NOTES 31-35, SHEET L1.00	GAS VALVE	POWER POLE W/LIGHT	ELECTRIC DUCT	SANITARY FORCE MAIN
TREE PROTECTION FENCE -SEE DETAIL 5, SHEET L7.01	TO BE REMOVED AND SALVAGED		LIGHT POLE	SIGN (TWO POST)	CABLE TV	STORM DRAIN
INLET PROTECTION TYPE A -SEE DETAIL 7, SHEET L7.01	TO BE RELOCATED		WATER VALVE	SIGN (SINGLE POST)	TV FIBER OPTIC	WATER
INLET PROTECTION TYPE B -SEE DETAIL 7, SHEET L7.01	TO BE REMOVED AND RESET BY CONTRACTOR		WATER METER	TRASH CAN	FIBER OPTIC DUCT	TRAFFIC CONDUIT
	TO BE ABANDONED		TELEPHONE MANHOLE	TRASH CAN	TELEPHONE	UNKNOWN UTILITY LINE
			ELECTRIC MANHOLE	TELEPHONE DUCT	COMMUNICATIONS	
			SANITARY MANHOLE	GAS		
			STORM MANHOLE			



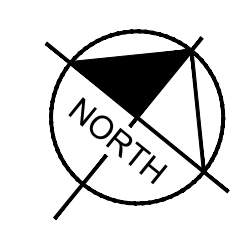
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**HULL STREET STREETSCAPE
DEMO AND E&S PLANS**

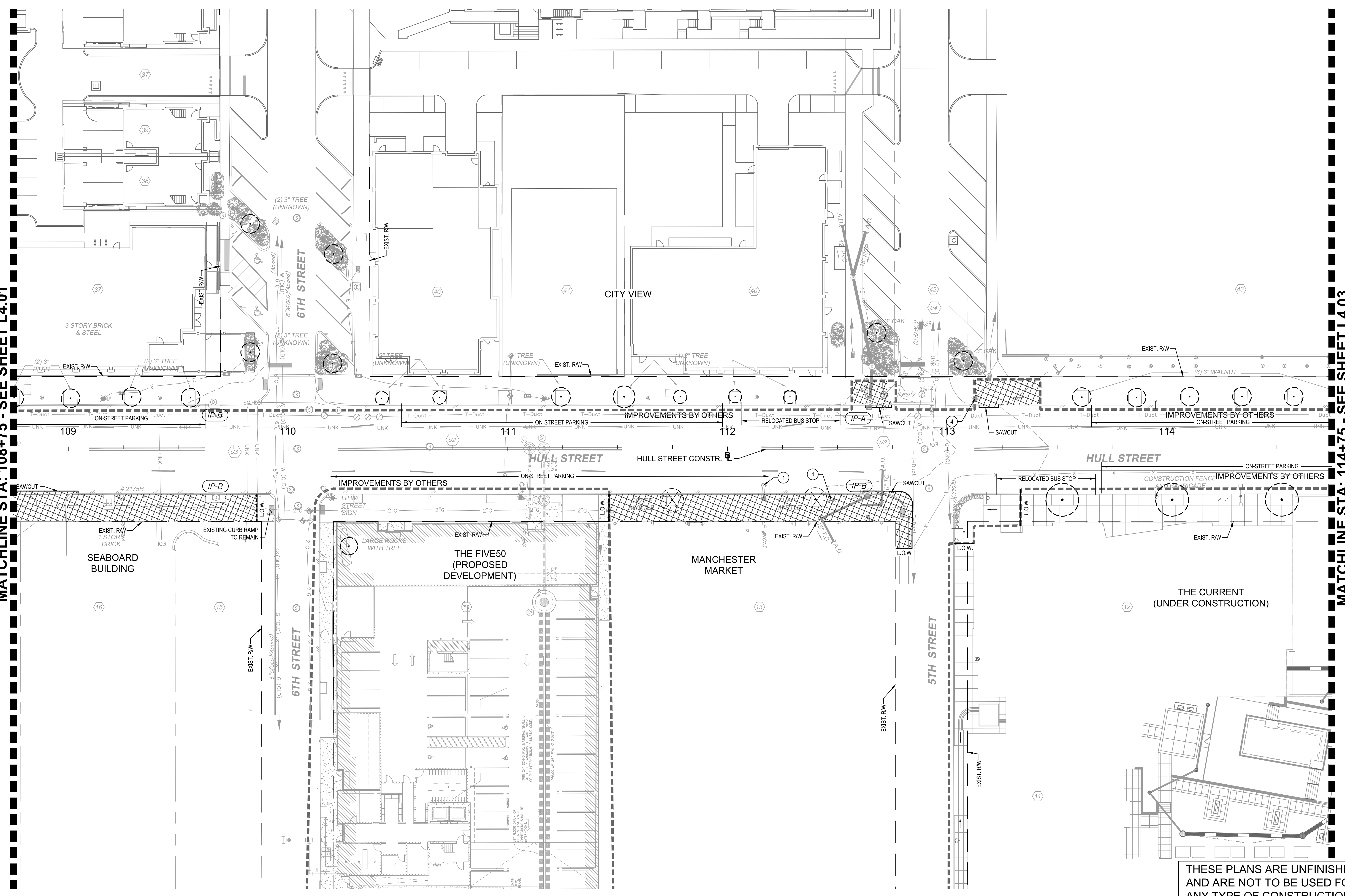
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DRAWN BY:	CHECKED BY:	1" = 20'	5-14-2021
SHEET: L4.01		DRAWING NO.: O-28933	

Drawing name: K:\RVC_IP\10113357_RIC_01_Coll\028_Hull_St_StreetScope\CADD\Sheets\DEMO AND E&S PLANS.dwg L4.02 DEMO AND E&S May 14, 2021 3:40pm by: Alyssa Baird
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MATCHLINE STA: 114+75 - SEE SHEET L4.03



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No.	REVISIONS	DATE	BY

- LEGEND**
- DEMOLITION OF PAVEMENT / SIDEWALK / CONCRETE
 - PROPOSED PAVEMENT OVERLAY
 - TREE PROTECTION FENCE - SEE DETAIL 5, SHEET L7.01
 - INLET PROTECTION TYPE A - SEE DETAIL 7, SHEET L7.01
 - INLET PROTECTION TYPE B - SEE DETAIL 7, SHEET L7.01
 - 1 TO BE REMOVED
 - 2 TO BE REMOVED AND RESET BY PROPERTY OWNER - SEE NOTE 20, SHEET L1.00
 - 3 TO BE REMOVED AND SALVAGED
 - 4 TO BE RELOCATED
 - 5 TO BE REMOVED AND RESET BY CONTRACTOR
 - 6 TO BE ABANDONED
 - EXISTING TREE TO REMAIN
 - TREE TO BE REMOVED - SEE NOTES 31-35, SHEET L1.00

- FIRE HYDRANT
- GAS MANHOLE
- LIGHT POLE
- WATER VALVE
- WATER METER
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- SANITARY MANHOLE
- STORM MANHOLE
- POWER POLE
- POWER POLE W/LIGHT
- SIGN (TWO POST)
- SIGN (SINGLE POST)
- TRASH CAN
- TRASH CAN
- ELECTRIC
- ELECTRIC DUCT
- CABLE TV
- TV FIBER OPTIC
- FIBER OPTIC
- FIBER OPTIC DUCT
- TELEPHONE
- TELEPHONE DUCT
- COMMUNICATIONS
- GAS
- SANITARY
- SANITARY FORCE MAIN
- STORM DRAIN
- WATER
- TRAFFIC CONDUIT
- UNKNOWN UTILITY LINE

GRAPHIC SCALE IN FEET
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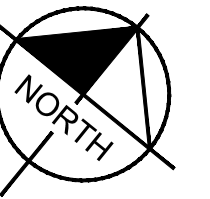
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HULL STREET STREETScape
DEMO AND E&S PLANS

AUTHORITY: CITY OF RICHMOND

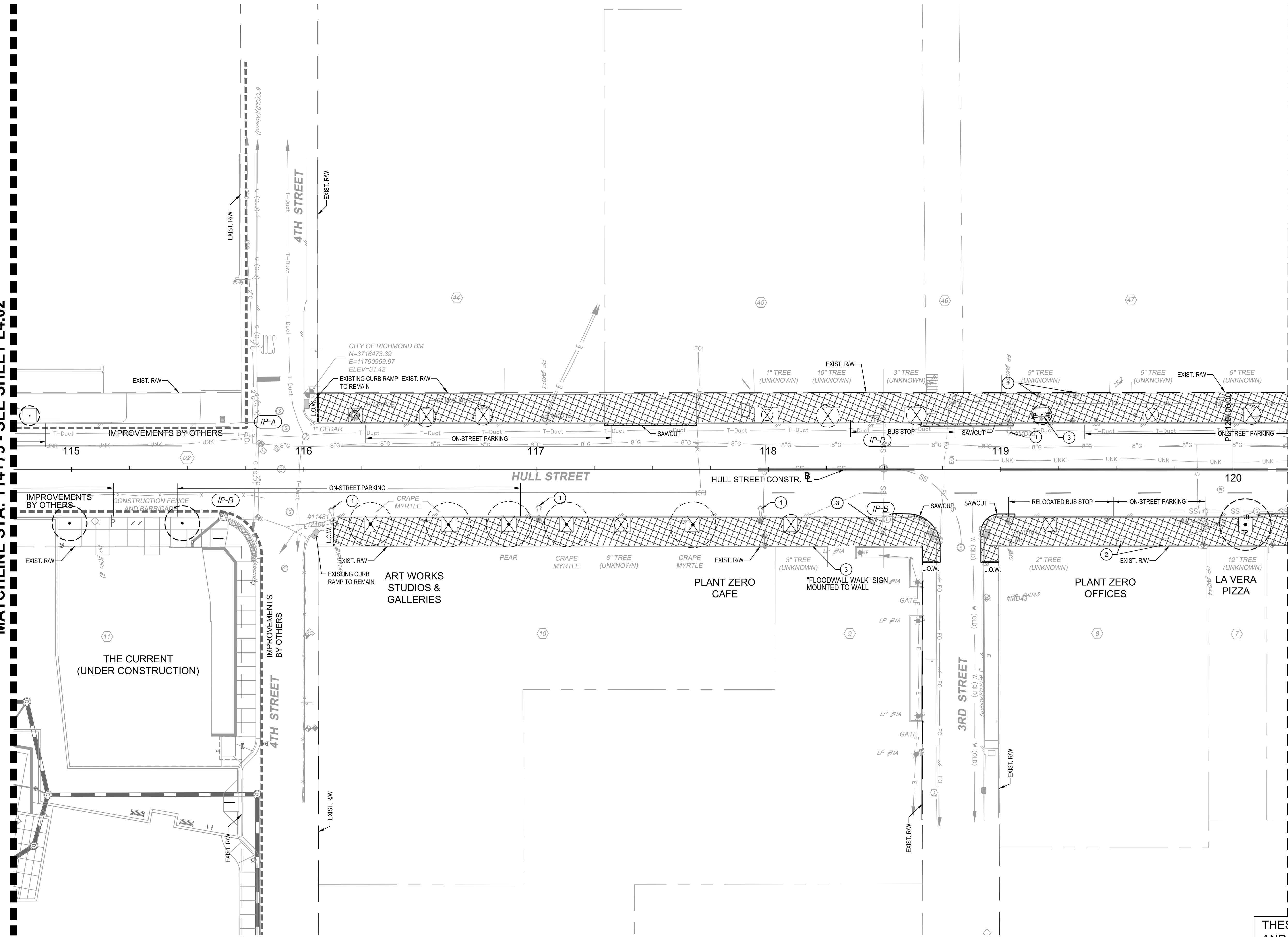
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No.	REVISIONS	DATE	BY

LEGEND	
	DEMOLITION OF PAVEMENT / SIDEWALK / CONCRETE
	PROPOSED PAVEMENT OVERLAY
	TREE PROTECTION FENCE - SEE DETAIL 5, SHEET L7.01
	INLET PROTECTION TYPE A - SEE DETAIL 7, SHEET L7.01
	INLET PROTECTION TYPE B - SEE DETAIL 7, SHEET L7.01
1	TO BE REMOVED
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3	TO BE REMOVED AND SALVAGED
4	TO BE RELOCATED
5	TO BE REMOVED AND RESET BY CONTRACTOR
6	TO BE ABANDONED

	EXISTING TREE TO REMAIN		TREE TO BE REMOVED - SEE NOTES 31-35, SHEET L1.00
	FIRE HYDRANT		POWER POLE
	GAS MANHOLE		POWER POLE W/LIGHT
	GAS VALVE		SURVEY CONTROL POINT
	LIGHT POLE		SIGN (TWO POST)
	WATER VALVE		SIGN (SINGLE POST)
	WATER METER		TRASH CAN
	TELEPHONE MANHOLE		TRASH CAN
	ELECTRIC MANHOLE		— E — ELECTRIC
	SANITARY MANHOLE		— E-Duct — ELECTRIC DUCT
	STORM MANHOLE		— TV — CABLE TV
			— TVFO — TV FIBER OPTIC
			— FO — FIBER OPTIC
			— FO-Duct — FIBER OPTIC DUCT
			— T — TELEPHONE
			— T-Duct — TELEPHONE DUCT
			— COMM — COMMUNICATIONS
			— G — GAS
			— S — SANITARY
			— SFM — SANITARY FORCE MAIN
			— SD — STORM DRAIN
			— W — WATER
			— TC — TRAFFIC CONDUIT
			— UNK — UNKNOWN UTILITY LINE

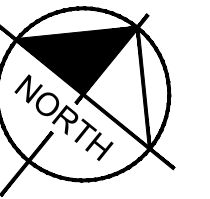
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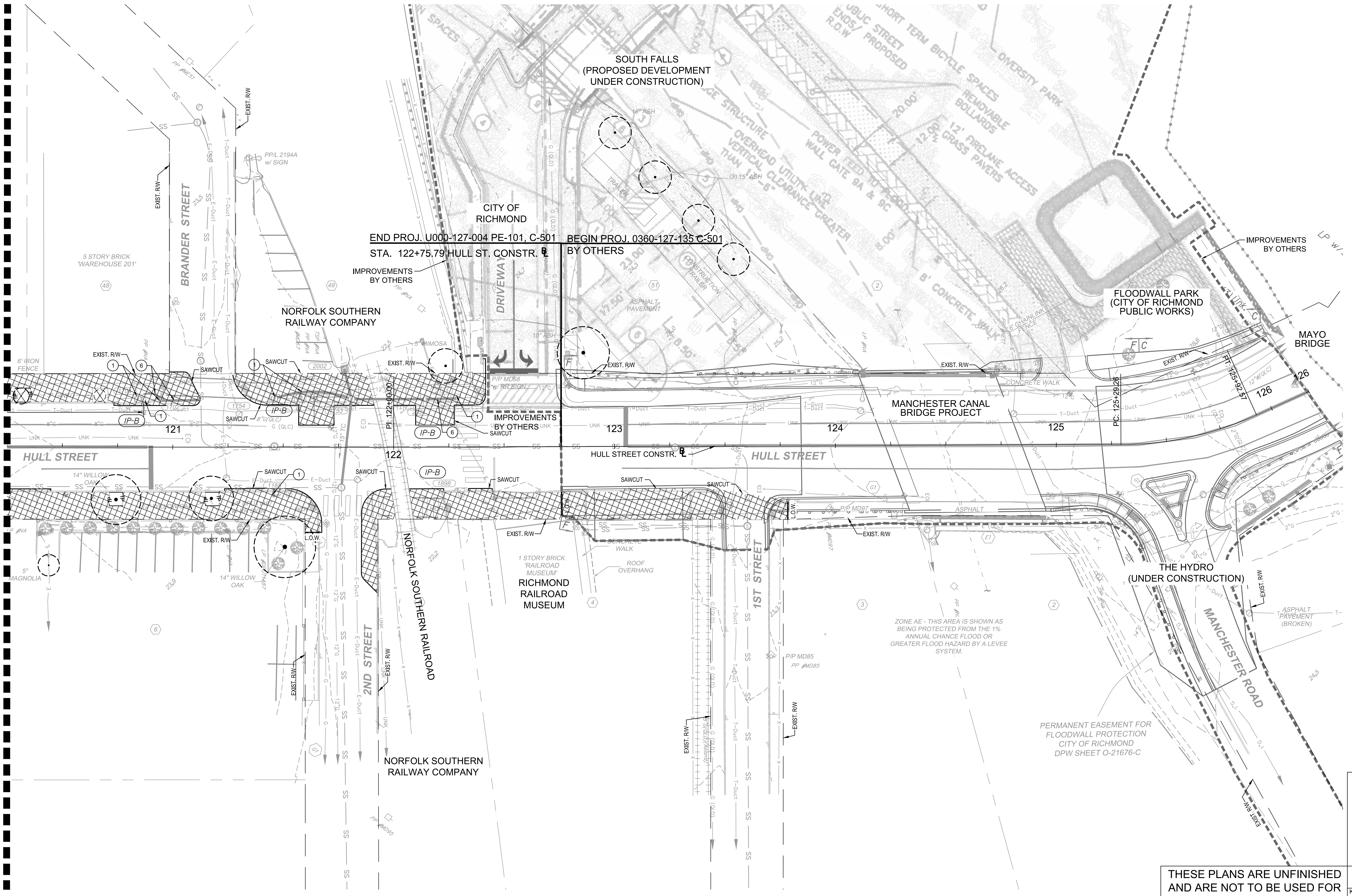


HULL STREET STREETScape				DEM0 AND E&S PLANS			
AUTHORITY: CITY OF RICHMOND							
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No.	REVISIONS	DATE	BY

LEGEND	
	DEMOLITION OF PAVEMENT / SIDEWALK / CONCRETE
	PROPOSED PAVEMENT OVERLAY
	TREE PROTECTION FENCE - SEE DETAIL 5, SHEET L7.01
	INLET PROTECTION TYPE A - SEE DETAIL 7, SHEET L7.01
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	TO BE REMOVED
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	TO BE REMOVED AND SALVAGED
	TO BE RELOCATED
	TO BE REMOVED AND RESET BY CONTRACTOR
	TO BE ABANDONED

	EXISTING TREE TO REMAIN		TREE TO BE REMOVED - SEE NOTES 31-35, SHEET L1.00
	FIRE HYDRANT		POWER POLE
	GAS VALVE		WATER VALVE
	LIGHT POLE		WATER METER
	WATER VALVE		ELECTRIC MANHOLE
	WATER METER		SANITARY MANHOLE
	ELECTRIC MANHOLE		COMMUNICATIONS
	SANITARY MANHOLE		STORM MANHOLE
	POWER POLE		ELECTRIC DUCT
	WATER VALVE		SANITARY FORCE MAIN
	WATER METER		STORM DRAIN
	ELECTRIC MANHOLE		WATER
	SANITARY MANHOLE		TRAFFIC CONDUIT
	COMMUNICATIONS		UNKNOWN UTILITY LINE
	STORM MANHOLE		

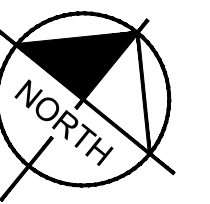
GRAPHIC SCALE IN FEET
0 10 20 40

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RICHMOND, VIRGINIA 23230
Tel. 804-673-3882

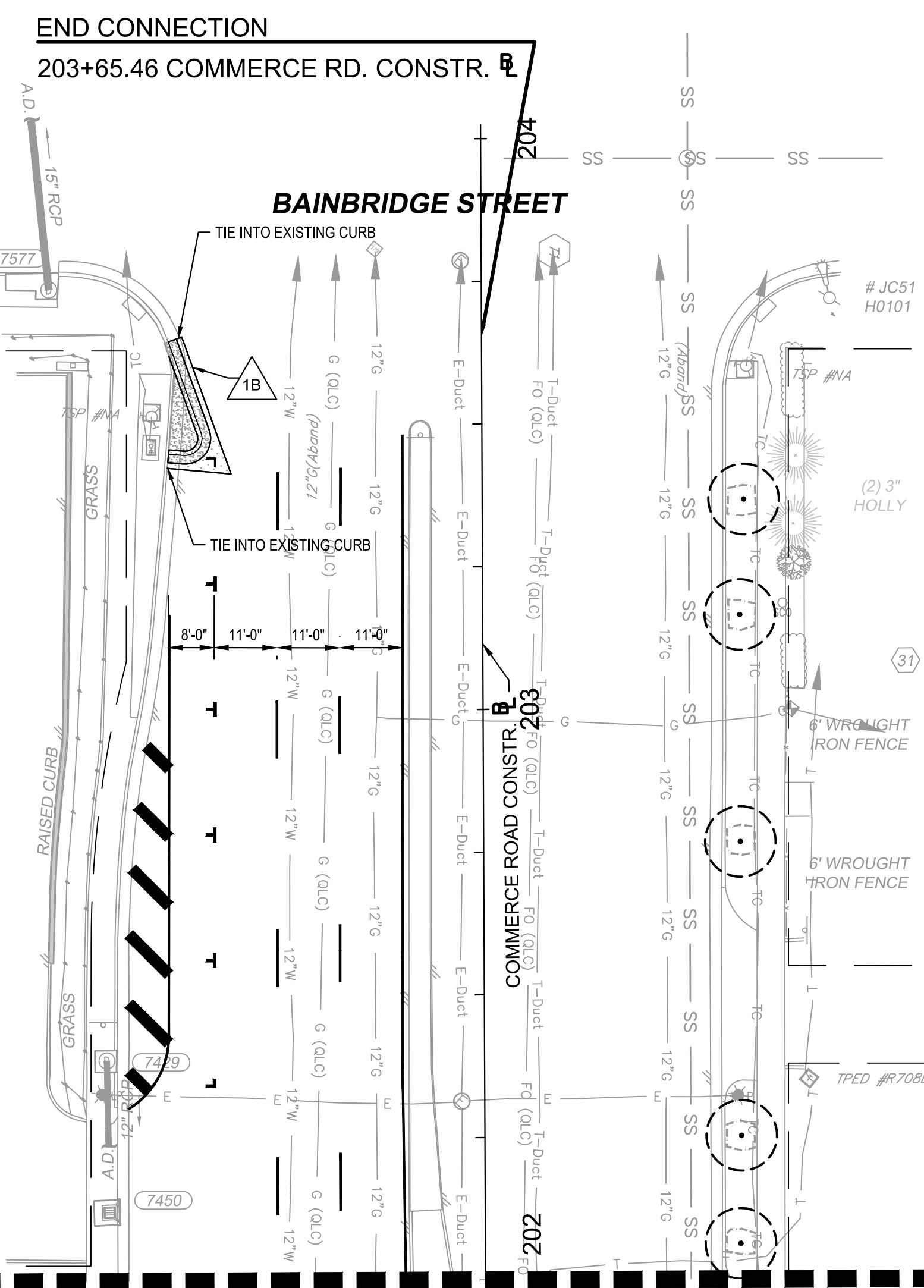
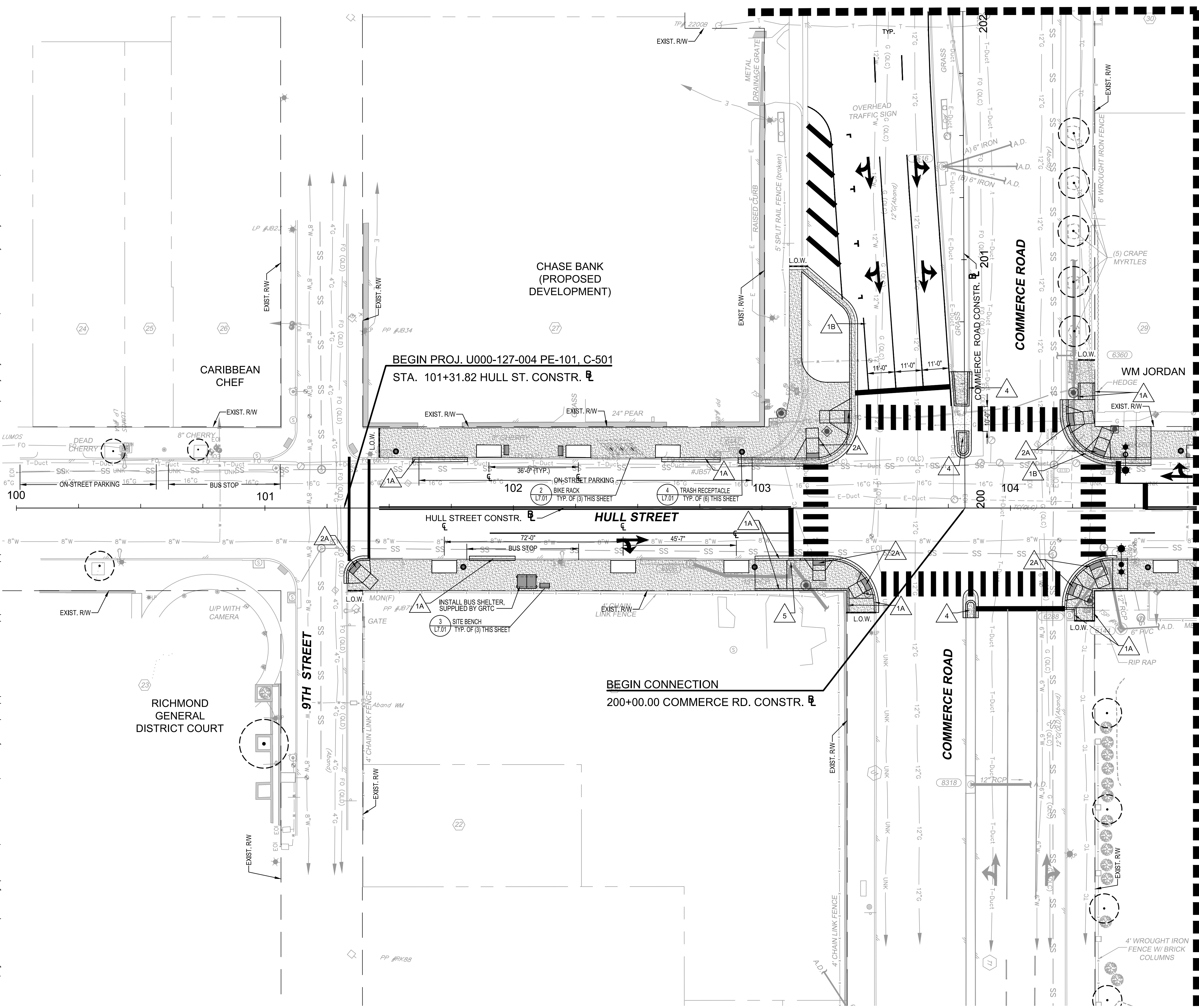


HULL STREET STREETScape				DEMO AND E&S PLANS			
AUTHORITY: CITY OF RICHMOND		PROJECT 109306		SCALE		DATE	
DESIGN BY:	REVIEWED BY:	1" = 20'	5-14-2021	SHEET	L4.04		DRAWING NO.
CHECKED BY:							O-28933

MATCHLINE STA: 202+00 - SEE THIS SHEET



Drawing name: K:\RVC\1710\113357_RIC_01_Hull_St_StreetScope\CADD\Sheets\L5.00_LAYOUT AND MATERIALS PLANS.dwg May 14, 2021 3:41pm by: Alysa Baird
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MATCHLINE STA: 104+75 - SEE SHEET L5.01

MATCHLINE STA: 202+00 - SEE THIS SHEET

- NOTES:**
- ALL EXISTING MANHOLES, VALVES, METERS, AND OTHER UTILITY APPARATUS SHALL BE RESET TO PROPOSED GRADE TO BE FLUSH WITH SIDEWALK WHEN THE SIDEWALK ELEVATION IS MODIFIED
 - ALL EXISTING STORM SEWER MANHOLES AND DROP INLETS ARE TO REMAIN IN PLACE UNLESS NOTED OTHERWISE

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

LEGEND

	CITY OF RICHMOND STD. CURB SEE DETAIL 7, SHEET L7.00
	CITY OF RICHMOND STD. CURB & GUTTER SEE DETAIL 7, SHEET L7.00
	STD. CG-12 TYPE A REQ'D SEE DETAIL 11, SHEET L7.00
	MOD. CG-12 TYPE B REQ'D SEE DETAIL 12, SHEET L7.00
	MOD. CG-12 TYPE C REQ'D
	CITY OF RICHMOND GRANITE CURB STD. MS-1 REQ'D SEE DETAIL 8, SHEET L7.00

	ADJUST UTILITIES TO PROPOSED GRADE
	PROPOSED CONCRETE SIDEWALK SEE DETAIL 1, SHEET L7.00
	PROPOSED DRIVEWAY PAVEMENT SEE DETAIL 10, SHEET L7.00
	PROPOSED PAVEMENT OVERLAY
	PROPOSED FULL DEPTH PAVEMENT SEE SHEET X FOR PAVEMENT SECTION

	PROPOSED DETECTABLE WARNING SURFACE
	PROPOSED TRASH RECEPTACLE SEE DETAIL 4, SHEET L7.01
	PROPOSED BENCH SEE DETAIL 3, SHEET L7.01
	PROPOSED BIKE RACK (GROUP OF 3) SEE DETAIL 2, SHEET L7.01
	LIMIT OF WORK

	PROP. LIGHT ON PROP. METAL POLE SEE DETAIL ESPF08 SHEET L15.00
	PROP. LIGHT ON EXIST. WOOD POLE SEE DETAIL ESAF17 & ESAF20, SHEET L15.00
	PROP. LIGHT BY OTHERS
	EXIST. LIGHT ON EXIST. POLE
	PROPOSED TREE PLANTER SEE DETAIL 6, SHEET L7.01
	EXISTING TREE TO REMAIN

GRAPHIC SCALE IN FEET
0 10 20 40

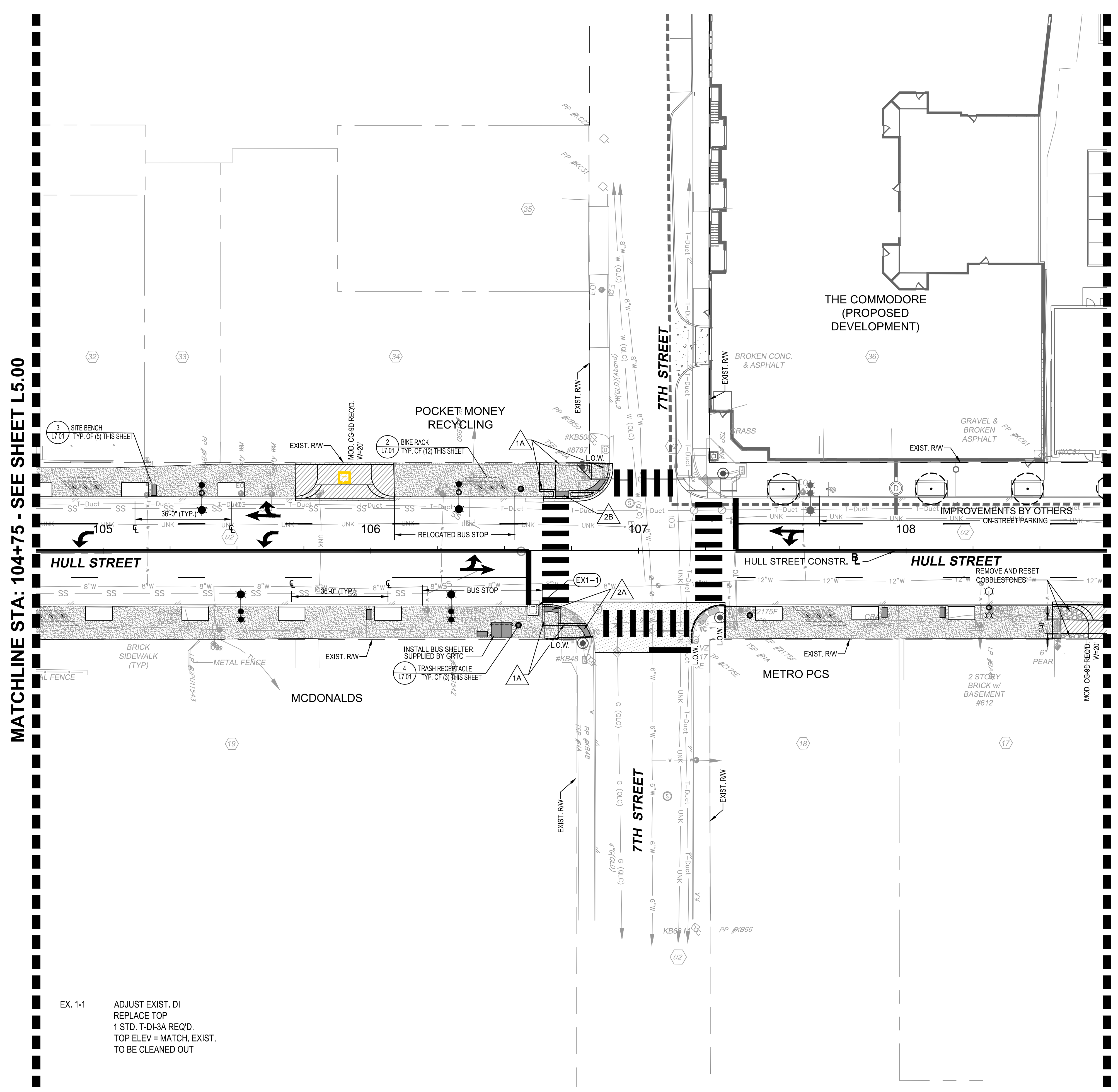
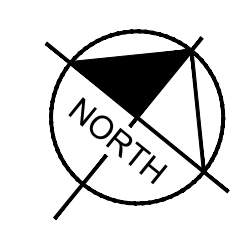
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Tel. 804-673-3882



HULL STREET STREETSCAPE
LAYOUT AND MATERIALS PLANS

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
		SHEET:	DRAWING NO.:
		L5.00	O-28933

Drawing name: K:\RICHMOND\113357_RIC_OH_Coal\028_Hull_St_StreetScope\CADD\Sheets\L5.00_LAYOUT AND MATERIALS PLANS.dwg L5.01 LAYOUT AND MATERIALS PLANS May 14, 2021 3:41pm by: Alyssa Baird
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MATCHLINE STA: 104+75 - SEE SHEET L5.00

MATCHLINE STA: 108+75 - SEE SHEET L5.02

EX. 1-1 ADJUST EXIST. DI
REPLACE TOP
1 STD. T-DI-3A REQ'D.
TOP ELEV = MATCH. EXIST.
TO BE CLEANED OUT

NOTES:

1. ALL EXISTING MANHOLES, VALVES, METERS, AND OTHER UTILITY APPARATUS SHALL BE RESET TO PROPOSED GRADE TO BE FLUSH WITH SIDEWALK WHEN THE SIDEWALK ELEVATION IS MODIFIED
2. ALL EXISTING STORM SEWER MANHOLES AND DROP INLETS ARE TO REMAIN IN PLACE UNLESS NOTED OTHERWISE

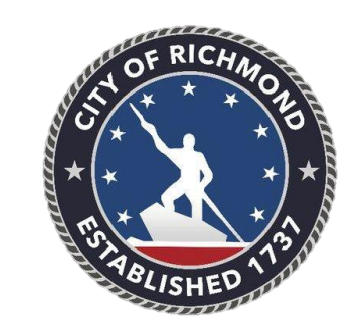
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ANY TYPE OF CONSTRUCTION.

Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

LEGEND		PROPOSED CONCRETE SIDEWALK		PROPOSED DETECTABLE WARNING SURFACE		PROP. LIGHT ON PROP. METAL POLE	
1A	CITY OF RICHMOND STD. CURB -SEE DETAIL 7, SHEET L7.00	5	ADJUST UTILITIES TO PROPOSED GRADE	●	PROPOSED TRASH RECEPTACLE -SEE DETAIL 4, SHEET L7.01	●	PROP. LIGHT ON PROP. METAL POLE -SEE DETAIL ESPF08 SHEET L15.00
1B	CITY OF RICHMOND STD. CURB & GUTTER -SEE DETAIL 7, SHEET L7.00	6	PROPOSED DRIVEWAY PAVEMENT -SEE DETAIL 10, SHEET L7.00	■	PROPOSED BENCH -SEE DETAIL 3, SHEET L7.01	●	PROP. LIGHT ON EXIST. WOOD POLE -SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
2A	STD. CG-12 TYPE A REQ'D. -SEE DETAIL 11, SHEET L7.00	7	PROPOSED PAVEMENT OVERLAY	■	PROPOSED BIKE RACK (GROUP OF 3) -SEE DETAIL 2, SHEET L7.01	●	PROP. LIGHT BY OTHERS
2B	MOD. CG-12 TYPE B REQ'D. -SEE DETAIL 12, SHEET L7.00	8	PROPOSED FULL DEPTH PAVEMENT -SEE SHEET X FOR PAVEMENT SECTION	■	PROPOSED BIKE RACK (GROUP OF 3) -SEE DETAIL 2, SHEET L7.01	●	EXIST. LIGHT ON EXIST. POLE
2C	MOD. CG-12 TYPE C REQ'D.			■	LIMIT OF WORK	○	PROPOSED TREE PLANTER -SEE DETAIL 6, SHEET L7.01
3	CITY OF RICHMOND GRANITE CURB STD. MS-1 REQ'D. -SEE DETAIL 8, SHEET L7.00					○	EXISTING TREE TO REMAIN

GRAPHIC SCALE IN FEET
0 10 20 40

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Tel. 804-673-3882



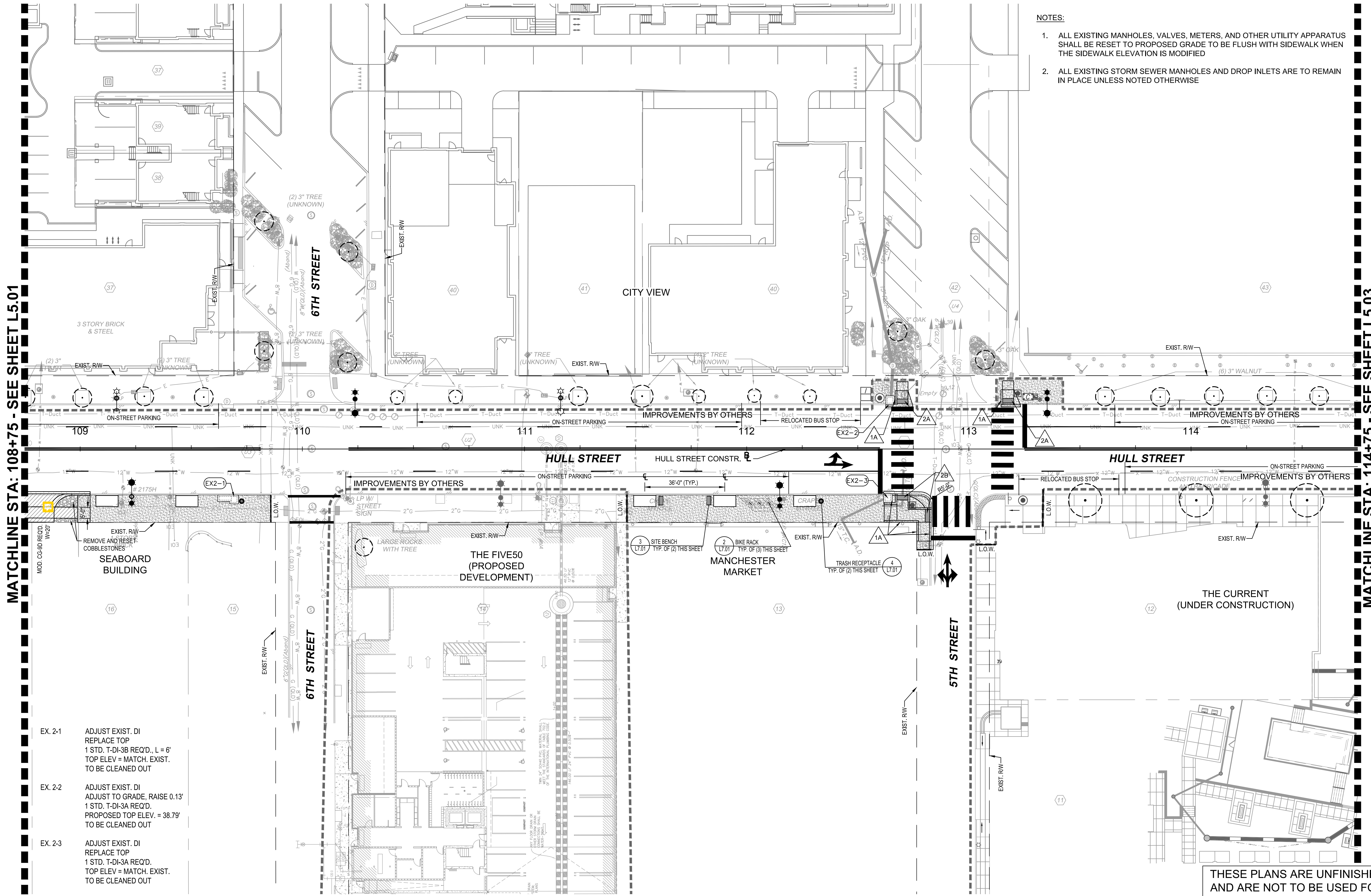
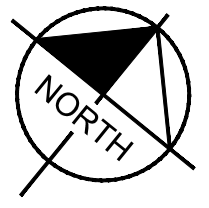
HULL STREET STREETSCAPE					
LAYOUT AND MATERIALS PLANS					
AUTHORITY: CITY OF RICHMOND					
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	PROJECT 109306
CHECKED BY:		1" = 20'	5-14-2021	L5.01	DRAWING NO. O-28933

Drawing name: K:\RVC\1710\113357_RIC_Civil\028_Hull_St_StreetScope\CADD\Sheets\L5.02_LAYOUT AND MATERIALS PLANS.dwg May 14, 2021 4:20pm by: A/Joel.Baird
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MATCHLINE STA: 108+75 - SEE SHEET L5.01

MATCHLINE STA: 114+75 - SEE SHEET L5.03

- NOTES:**
- ALL EXISTING MANHOLES, VALVES, METERS, AND OTHER UTILITY APPARATUS SHALL BE RESET TO PROPOSED GRADE TO BE FLUSH WITH SIDEWALK WHEN THE SIDEWALK ELEVATION IS MODIFIED
 - ALL EXISTING STORM SEWER MANHOLES AND DROP INLETS ARE TO REMAIN IN PLACE UNLESS NOTED OTHERWISE



- EX. 2-1 ADJUST EXIST. DI
REPLACE TOP
1 STD. T-DI-3B REQ'D., L = 6'
TOP ELEV = MATCH. EXIST.
TO BE CLEANED OUT
- EX. 2-2 ADJUST EXIST. DI
ADJUST TO GRADE, RAISE 0.13'
1 STD. T-DI-3A REQ'D.
PROPOSED TOP ELEV. = 38.79'
TO BE CLEANED OUT
- EX. 2-3 ADJUST EXIST. DI
REPLACE TOP
1 STD. T-DI-3A REQ'D.
TOP ELEV = MATCH. EXIST.
TO BE CLEANED OUT

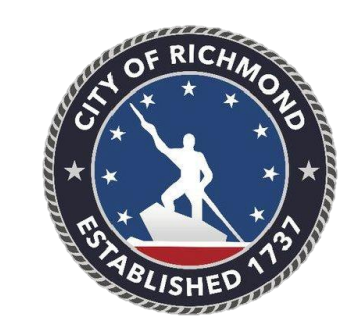
THESE PLANS ARE UNFINISHED
AND ARE NOT TO BE USED FOR
ANY TYPE OF CONSTRUCTION.

Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

LEGEND	
	CITY OF RICHMOND STD. CURB -SEE DETAIL 7, SHEET L7.00
	CITY OF RICHMOND STD. CURB & GUTTER -SEE DETAIL 7, SHEET L7.00
	STD. CG-12 TYPE A REQ'D. -SEE DETAIL 11, SHEET L7.00
	MOD. CG-12 TYPE B REQ'D. -SEE DETAIL 12, SHEET L7.00
	MOD. CG-12 TYPE C REQ'D.
	CITY OF RICHMOND GRANITE CURB STD. MS-1 REQ'D. -SEE DETAIL 8, SHEET L7.00
	ADJUST UTILITIES TO PROPOSED GRADE
	PROPOSED CONCRETE SIDEWALK -SEE DETAIL 1, SHEET L7.00
	PROPOSED DRIVEWAY PAVEMENT -SEE DETAIL 10, SHEET L7.00
	PROPOSED PAVEMENT OVERLAY
	PROPOSED FULL DEPTH PAVEMENT -SEE SHEET X FOR PAVEMENT SECTION
	PROPOSED DETECTABLE WARNING SURFACE
	PROPOSED TRASH RECEPTACLE -SEE DETAIL 4, SHEET L7.01
	PROPOSED BENCH -SEE DETAIL 3, SHEET L7.01
	PROPOSED BIKE RACK (GROUP OF 3) -SEE DETAIL 2, SHEET L7.01
	LIMIT OF WORK
	PROP. LIGHT ON PROP. METAL POLE -SEE DETAIL ESPF08 SHEET L15.00
	PROP. LIGHT ON EXIST. WOOD POLE -SEE DETAIL ESHA17 & ESA24, SHEET L15.00
	PROP. LIGHT BY OTHERS
	EXIST. LIGHT ON EXIST. POLE
	PROPOSED TREE PLANTER -SEE DETAIL 6, SHEET L7.01
	EXISTING TREE TO REMAIN

GRAPHIC SCALE IN FEET
0 10 20 40

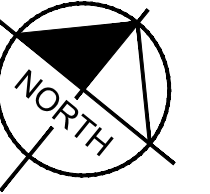
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RICHMOND, VIRGINIA 23230
Tel. 804-673-3882



HULL STREET STREETSCAPE
LAYOUT AND MATERIALS PLANS

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
		SHEET:	DRAWING NO.:
		L5.02	O-28933

Drawing name: K:\RICHMOND\113357_RIC_04\028_Hull_St_StreetScope\CADD\Sheets\L5.00_LAYOUT AND MATERIALS PLANS May 14, 2021 3:41pm by: Alysa Baird
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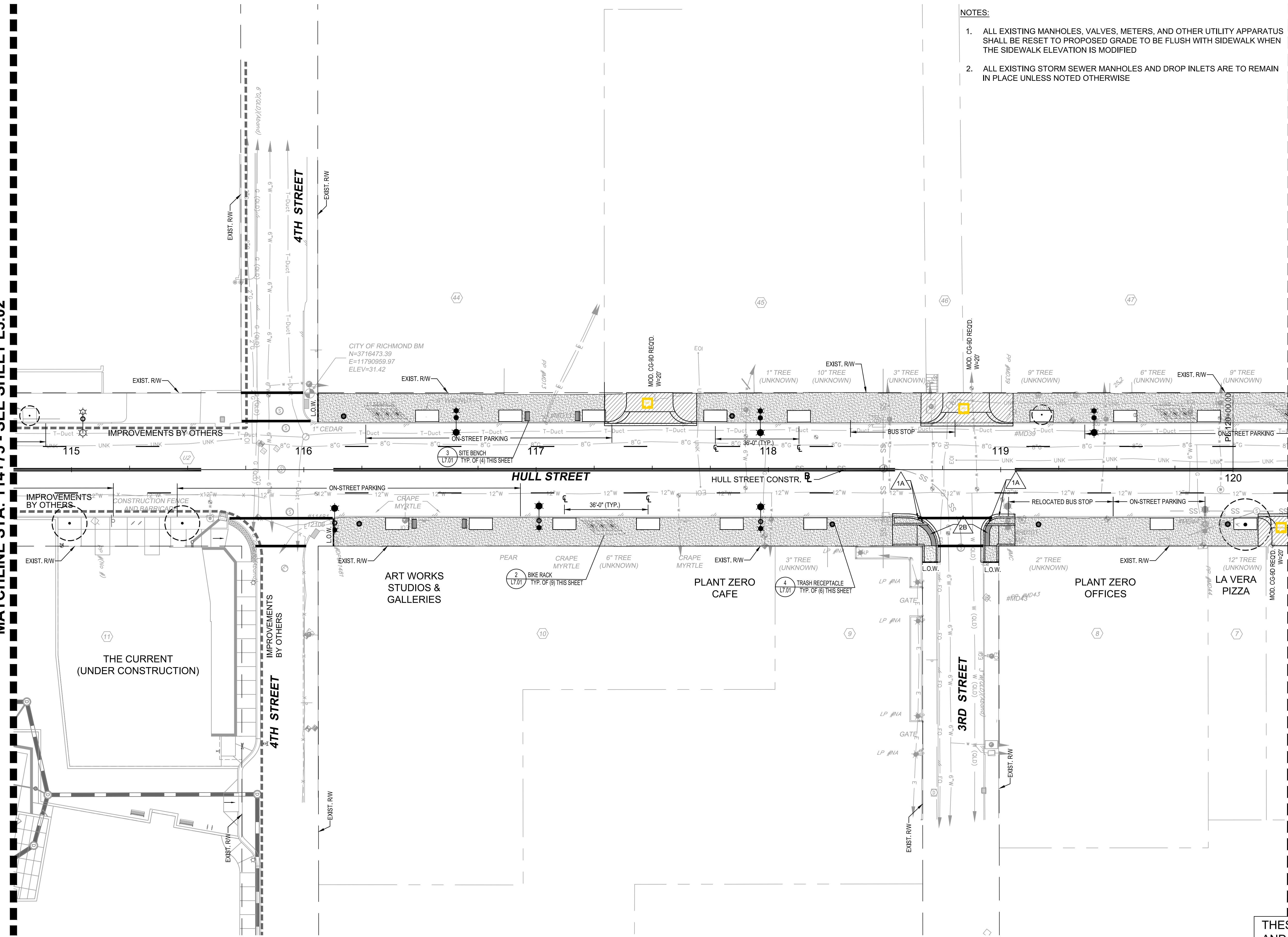


NOTES:

1. ALL EXISTING MANHOLES, VALVES, METERS, AND OTHER UTILITY APPARATUS SHALL BE RESET TO PROPOSED GRADE TO BE FLUSH WITH SIDEWALK WHEN THE SIDEWALK ELEVATION IS MODIFIED
2. ALL EXISTING STORM SEWER MANHOLES AND DROP INLETS ARE TO REMAIN IN PLACE UNLESS NOTED OTHERWISE

MATCHLINE STA: 114+75 - SEE SHEET L5.02

MATCHLINE STA: 120+25 - SEE SHEET L5.04



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Richmond, Virginia
LANDSCAPE ARCHITECT

LEGEND

	CITY OF RICHMOND STD. CURB -SEE DETAIL 7, SHEET L7.00
	CITY OF RICHMOND STD. CURB & GUTTER -SEE DETAIL 7, SHEET L7.00
	STD. CG-12 TYPE A REQ'D -SEE DETAIL 11, SHEET L7.00
	MOD. CG-12 TYPE B REQ'D -SEE DETAIL 12, SHEET L7.00
	MOD. CG-12 TYPE C REQ'D
	CITY OF RICHMOND GRANITE CURB STD. MS-1 REQ'D -SEE DETAIL 8, SHEET L7.00

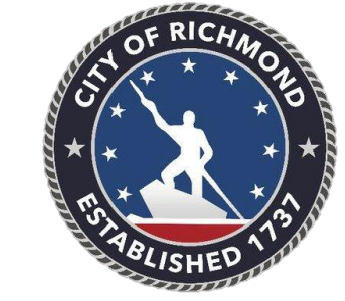
	ADJUST UTILITIES TO PROPOSED GRADE
	PROPOSED CONCRETE SIDEWALK -SEE DETAIL 1, SHEET L7.00
	PROPOSED DRIVEWAY PAVEMENT -SEE DETAIL 10, SHEET L7.00
	PROPOSED PAVEMENT OVERLAY
	PROPOSED FULL DEPTH PAVEMENT -SEE SHEET X FOR PAVEMENT SECTION

	PROPOSED DETECTABLE WARNING SURFACE
	PROPOSED TRASH RECEPTACLE -SEE DETAIL 4, SHEET L7.01
	PROPOSED BENCH -SEE DETAIL 3, SHEET L7.01
	PROPOSED BIKE RACK (GROUP OF 3) -SEE DETAIL 2, SHEET L7.01
	LIMIT OF WORK

	PROP. LIGHT ON PROP. METAL POLE -SEE DETAIL ESPF09, SHEET L15.00
	PROP. LIGHT ON EXIST. WOOD POLE -SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
	PROP. LIGHT BY OTHERS
	EXIST. LIGHT ON EXIST. POLE
	PROPOSED TREE PLANTER -SEE DETAIL 6, SHEET L7.01
	EXISTING TREE TO REMAIN

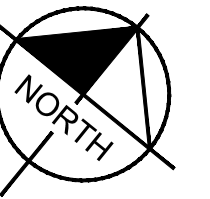
GRAPHIC SCALE IN FEET
0 10 20 40

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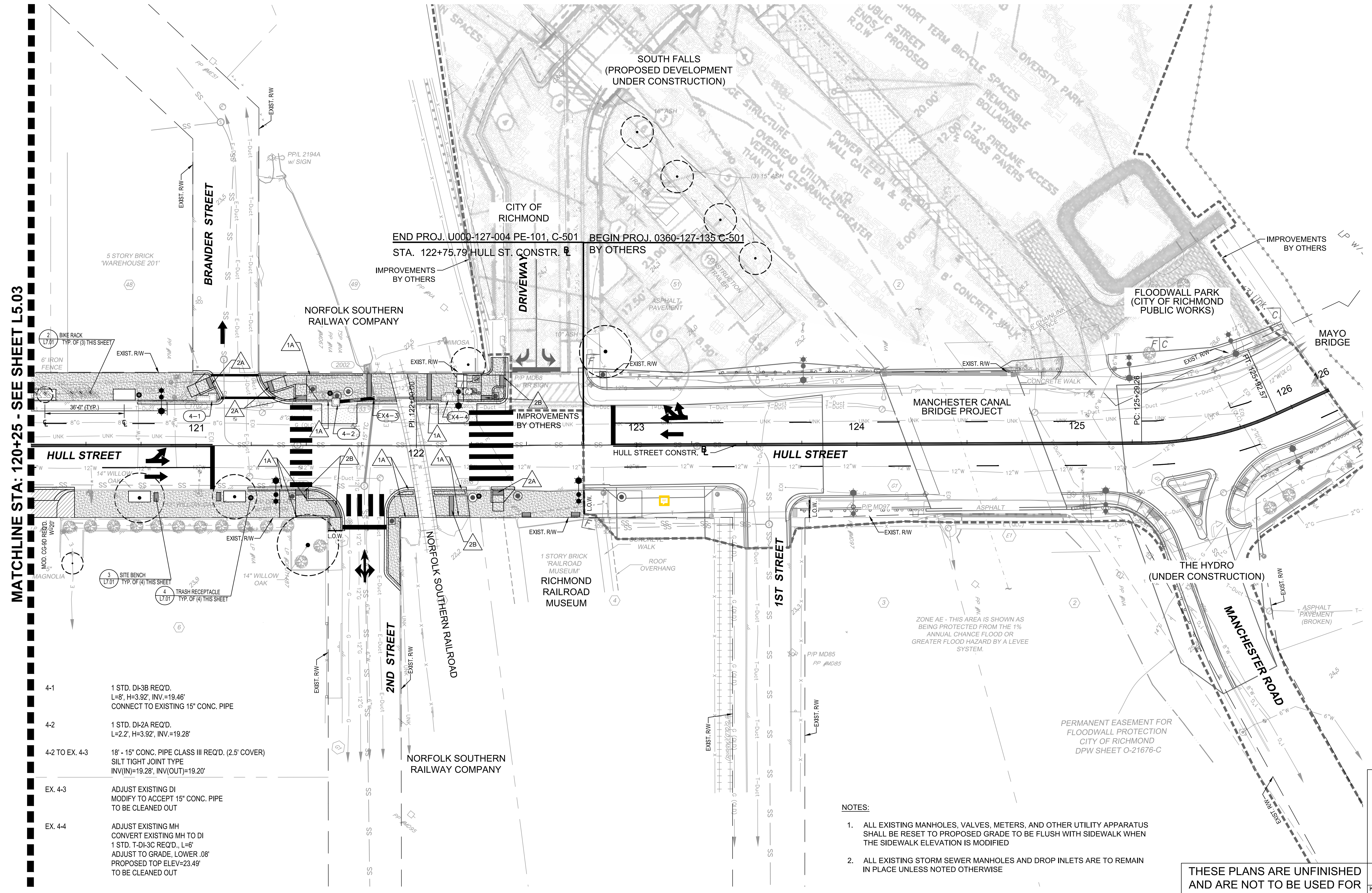
AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE	DATE
CHECKED BY:		1" = 20'	5-14-2021
SHEET		DRAWING NO.	
L5.03		O-28933	

HULL STREET STREETScape
LAYOUT AND MATERIALS PLANS



MATCHLINE STA: 120+25 - SEE SHEET L5.03

Drawing name: K:\RVC_1P10\113357_RIC_01_Call\028_Hull_St_StreetScope\CADD\Sheets\L5.00_LAYOUT AND MATERIALS PLANS.dwg May 14, 2021 3:42pm by: Alyssa Baird
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- 4-1 1 STD. DI-3B REQ'D.
L=8', H=3.92', INV.=19.46'
CONNECT TO EXISTING 15" CONC. PIPE
- 4-2 1 STD. DI-2A REQ'D.
L=2.2', H=3.92', INV.=19.28'
- 4-2 TO EX. 4-3 18" - 15" CONC. PIPE CLASS III REQ'D. (2.5' COVER)
SILT TIGHT JOINT TYPE
INV(IN)=19.28', INV(OUT)=19.20'
- EX. 4-3 ADJUST EXISTING DI
MODIFY TO ACCEPT 15" CONC. PIPE
TO BE CLEANED OUT
- EX. 4-4 ADJUST EXISTING MH
CONVERT EXISTING MH TO DI
1 STD. T-DI-3C REQ'D. L=6'
ADJUST TO GRADE. LOWER .08'
PROPOSED TOP ELEV.=23.49'
TO BE CLEANED OUT

NOTES:

1. ALL EXISTING MANHOLES, VALVES, METERS, AND OTHER UTILITY APPARATUS SHALL BE RESET TO PROPOSED GRADE TO BE FLUSH WITH SIDEWALK WHEN THE SIDEWALK ELEVATION IS MODIFIED
2. ALL EXISTING STORM SEWER MANHOLES AND DROP INLETS ARE TO REMAIN IN PLACE UNLESS NOTED OTHERWISE

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Richmond, Virginia
LANDSCAPE ARCHITECT

LEGEND

	CITY OF RICHMOND STD. CURB -SEE DETAIL 7, SHEET L7.00
	CITY OF RICHMOND STD. CURB & GUTTER -SEE DETAIL 7, SHEET L7.00
	STD. CG-12 TYPE A REQ'D. -SEE DETAIL 11, SHEET L7.00
	MOD. CG-12 TYPE B REQ'D. -SEE DETAIL 12, SHEET L7.00
	MOD. CG-12 TYPE C REQ'D.
	CITY OF RICHMOND GRANITE CURB STD. MS-1 REQ'D. -SEE DETAIL 8, SHEET L7.00

	ADJUST UTILITIES TO PROPOSED GRADE
	PROPOSED CONCRETE SIDEWALK -SEE DETAIL 1, SHEET L7.00
	PROPOSED DRIVEWAY PAVEMENT -SEE DETAIL 10, SHEET L7.00
	PROPOSED PAVEMENT OVERLAY
	PROPOSED FULL DEPTH PAVEMENT -SEE SHEET X FOR PAVEMENT SECTION

	PROPOSED DETECTABLE WARNING SURFACE
	PROPOSED TRASH RECEPTACLE -SEE DETAIL 4, SHEET L7.01
	PROPOSED BENCH -SEE DETAIL 3, SHEET L7.01
	PROPOSED BIKE RACK (GROUP OF 3) -SEE DETAIL 2, SHEET L7.01
	LIMIT OF WORK

	PROP. LIGHT ON PROP. METAL POLE -SEE DETAIL ESPF08 SHEET L15.00
	PROP. LIGHT ON EXIST. WOOD POLE -SEE DETAIL ESAF17 & ESAF24, SHEET L15.00
	PROP. LIGHT BY OTHERS
	EXIST. LIGHT ON EXIST. POLE
	PROPOSED TREE PLANTER -SEE DETAIL 6, SHEET L7.01
	EXISTING TREE TO REMAIN

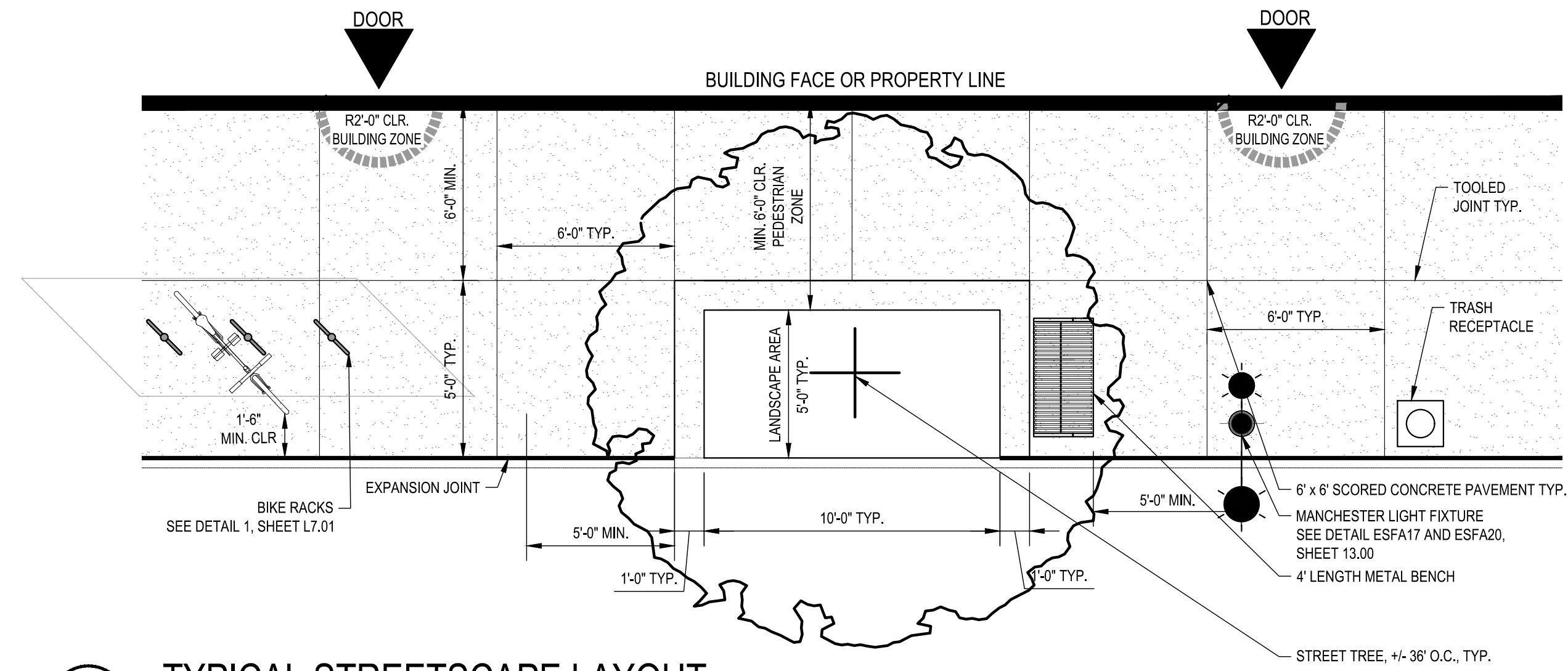
GRAPHIC SCALE IN FEET
0 10 20 40

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RICHMOND, VIRGINIA 23230
Tel. 804-673-3882



HULL STREET STREETSCAPE		LAYOUT AND MATERIALS PLANS	
AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DRAWN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
		SHEET:	DRAWING NO.:
		L5.04	O-28933

Drawing name: K:\RICHMOND\113357_RIC_OH_Coll\028_Hull_St_Streetscape\CADD\Sheets\L6.00_LAYOUT & MATERIALS.dwg L10.00_LAYOUT & MATERIALS ENLARGMENTS May 14, 2021 4:31pm by: Alyssa Bard
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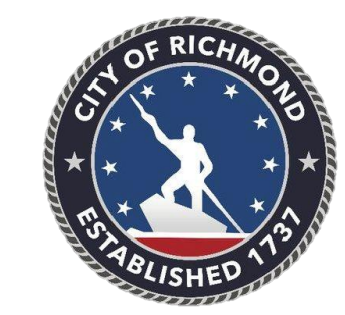
A TYPICAL STREETSCAPE LAYOUT
SCALE: 1/4" = 1'-0"

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Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

No.	REVISIONS	DATE	BY

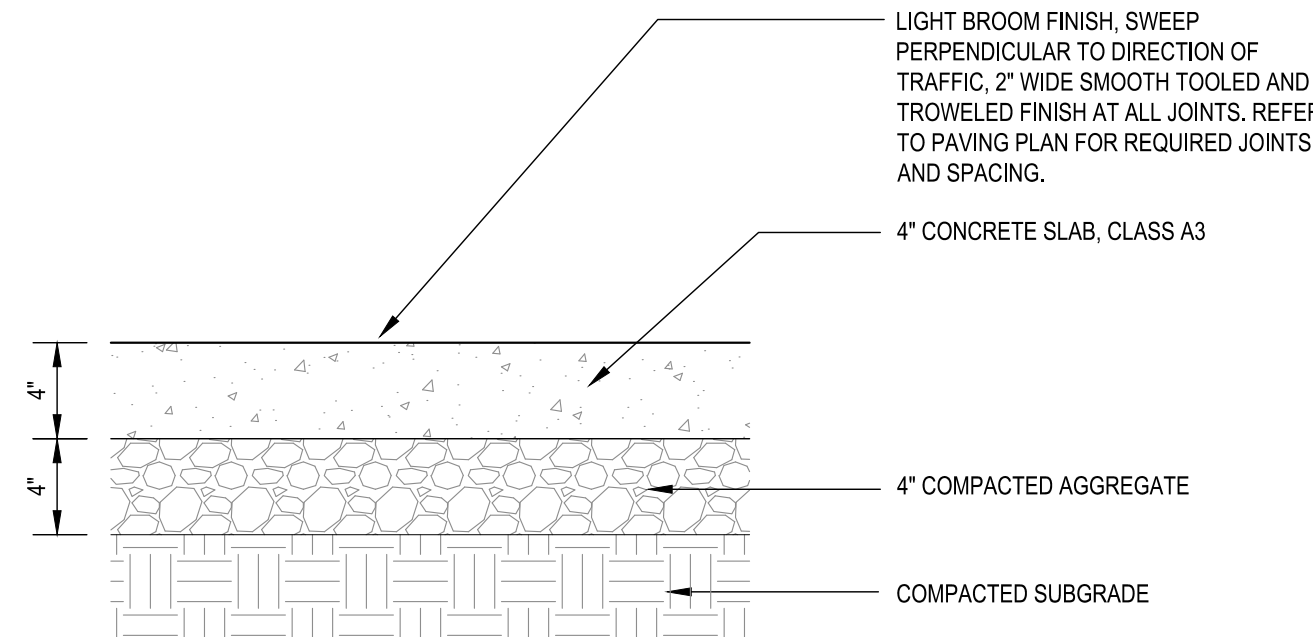
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 1700 WILLOW LAWN DR, SUITE 200
 RICHMOND, VIRGINIA 23230
 Tel. 804-673-3882



HULL STREET STREETSCAPE
LAYOUT & MATERIALS ENLARGMENTS

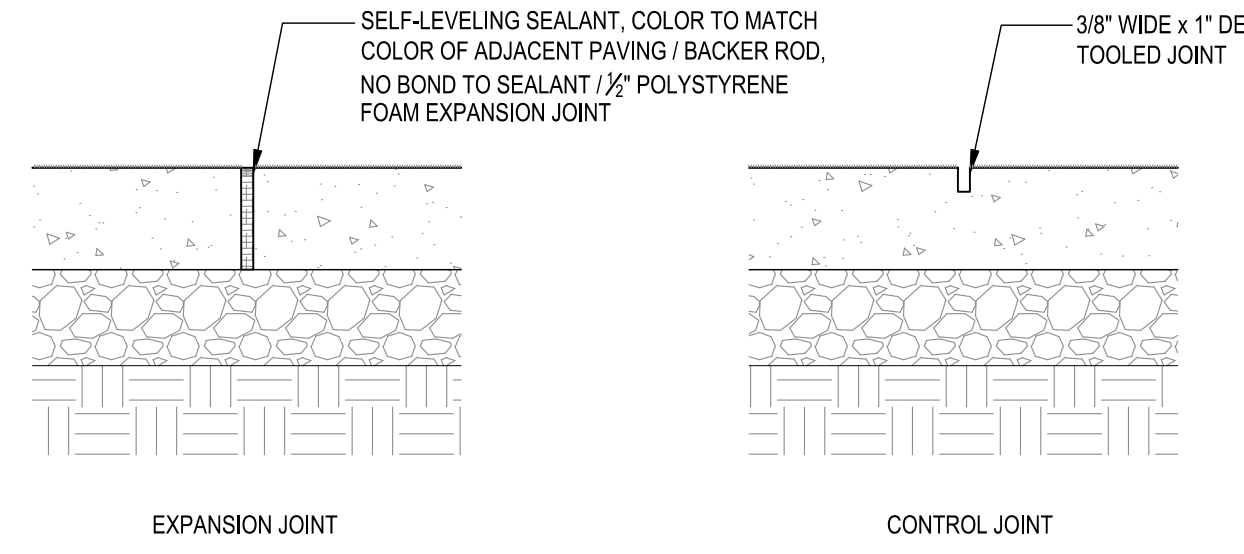
AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:			5-14-2021
		SHEET	DRAWING NO.
		L6.00	O-28933

Drawing name: K:\RVC_1P10\113357_RIC_01_Coll\028_Hull_Si_StreetScope\CADD\Sheets\7.0 SITE DETAILS.dwg L7.00 SITE DETAILS May 14, 2021 4:31pm by: Alyssa.Baird
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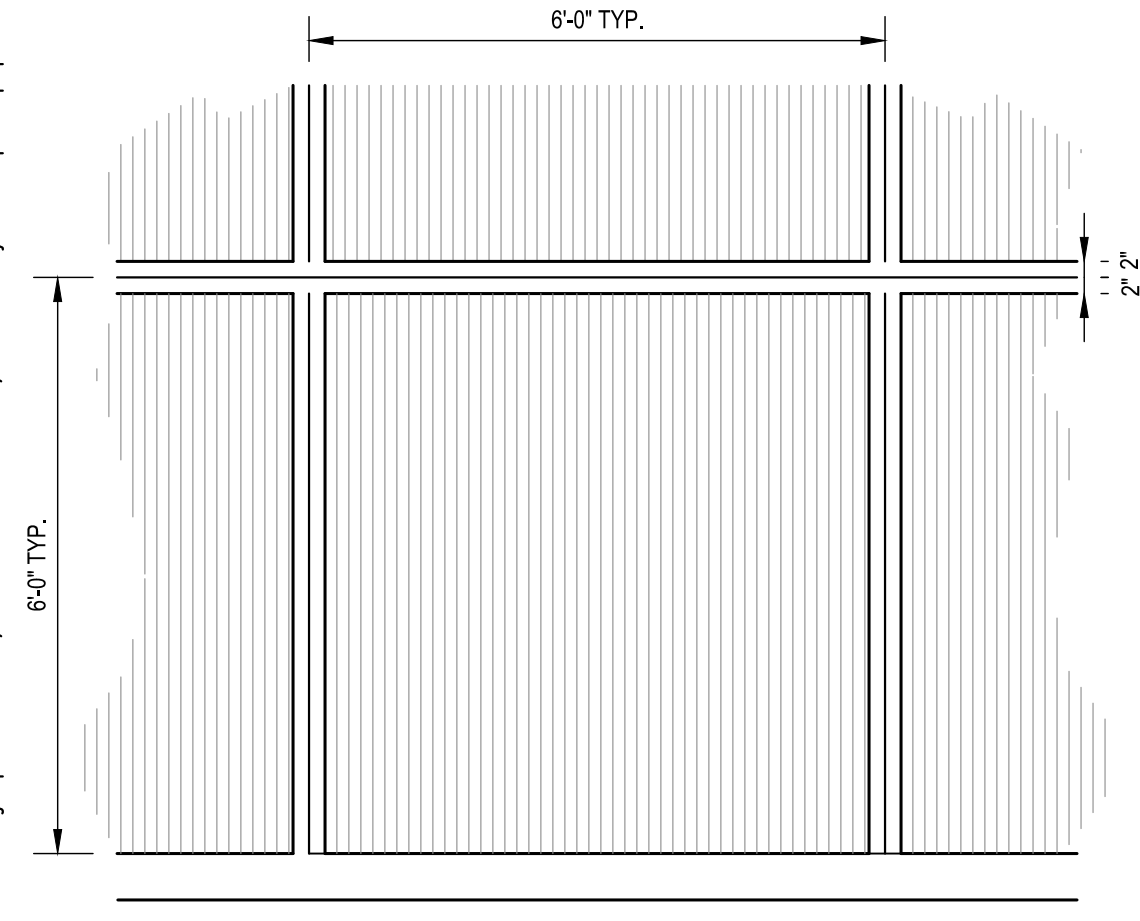
NOTE:
1. SEE DETAILS 4, 5 & 6 ON THIS SHEET FOR EDGE CONDITIONS
2. CONTRACTOR MAY UTILIZE EXISTING AGGREGATE BASE BELOW EXISTING CONCRETE. AGGREGATE SHALL BE LEVEL AND COMPACT PRIOR TO POURING PROPOSED CONCRETE.

1 CONCRETE PAVEMENT
Scale: 1 1/2"=1'-0"

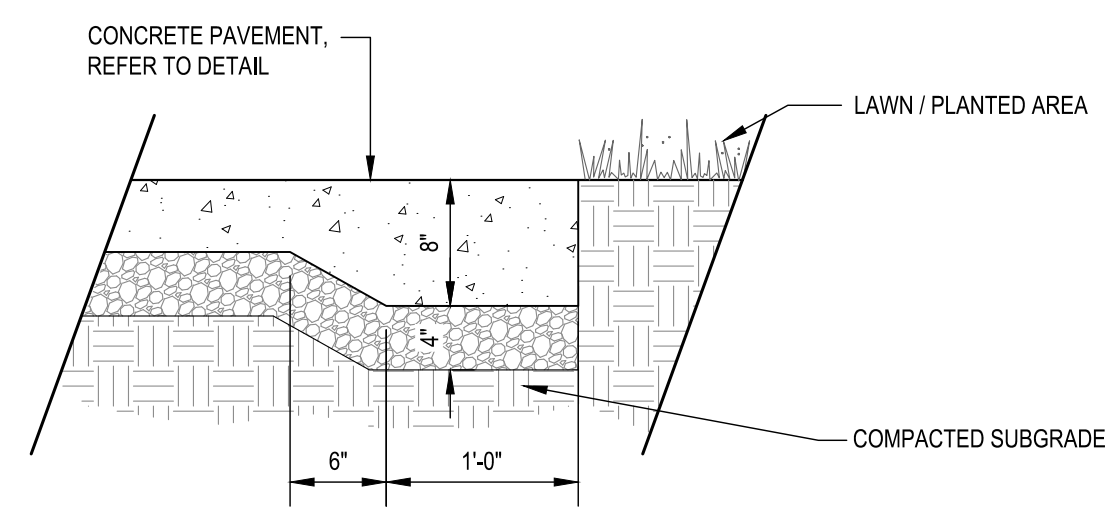


NOTES:
1. CONTROL JOINTS SHALL BE PROVIDED APPROX. 6'-0" O.C.
2. EXPANSION JOINTS 1/2" WIDTH SHALL BE PROVIDED @ 30' INTERVALS MAX. AND AT MEETING OF ALL PAVEMENTS, WALLS, STEPS, VERTICAL SURFACES, ETC...
3. 1/4" RADIUS ON ALL TOOLED EDGES.
4. EXPANSION JOINTS FLUSH WITH FINISH GRADE OF WALK.
5. SMOOTH TROVELED FINISH AT ALL EDGES AND JOINTS

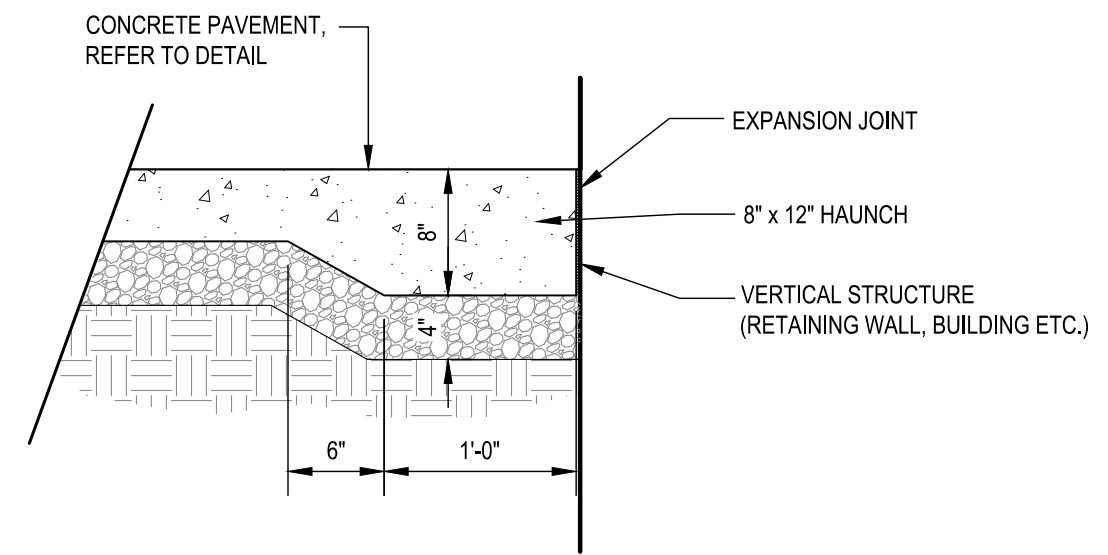
2 CONCRETE PAVING JOINTS
Scale: 1 1/2"=1'-0"



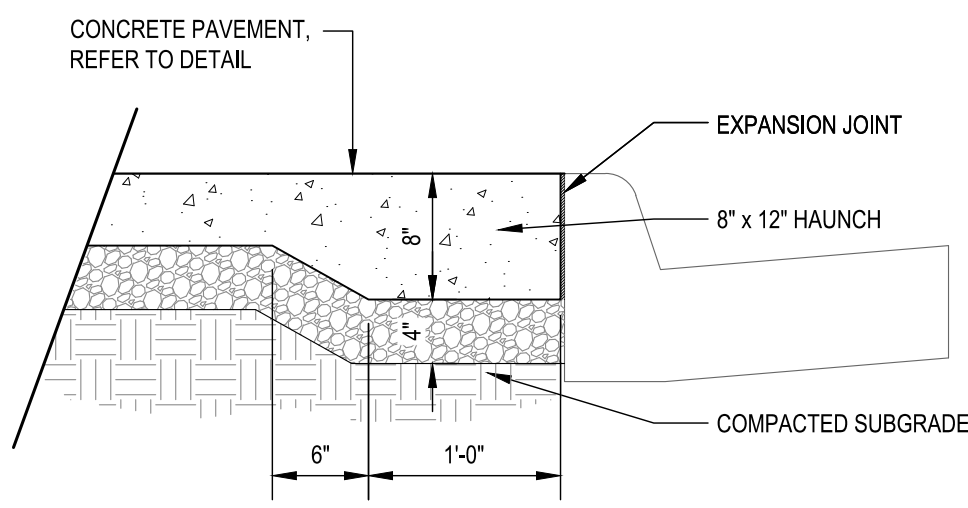
3 TYPICAL TOOLING DETAIL
1/2"=1'-0"



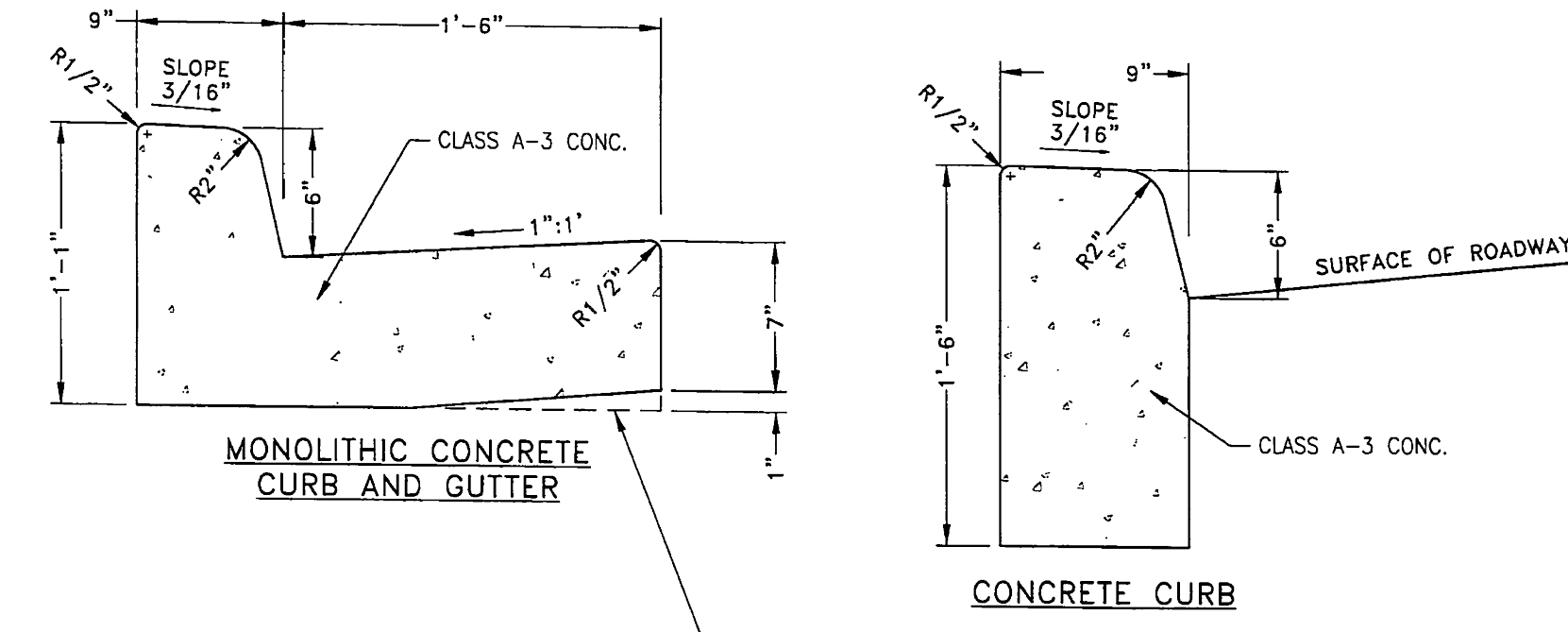
4 CONCRETE EDGE AT LAWN
1"=1'-0"



5 CONCRETE EDGE AT VERTICAL STRUCTURE
1"=1'-0"

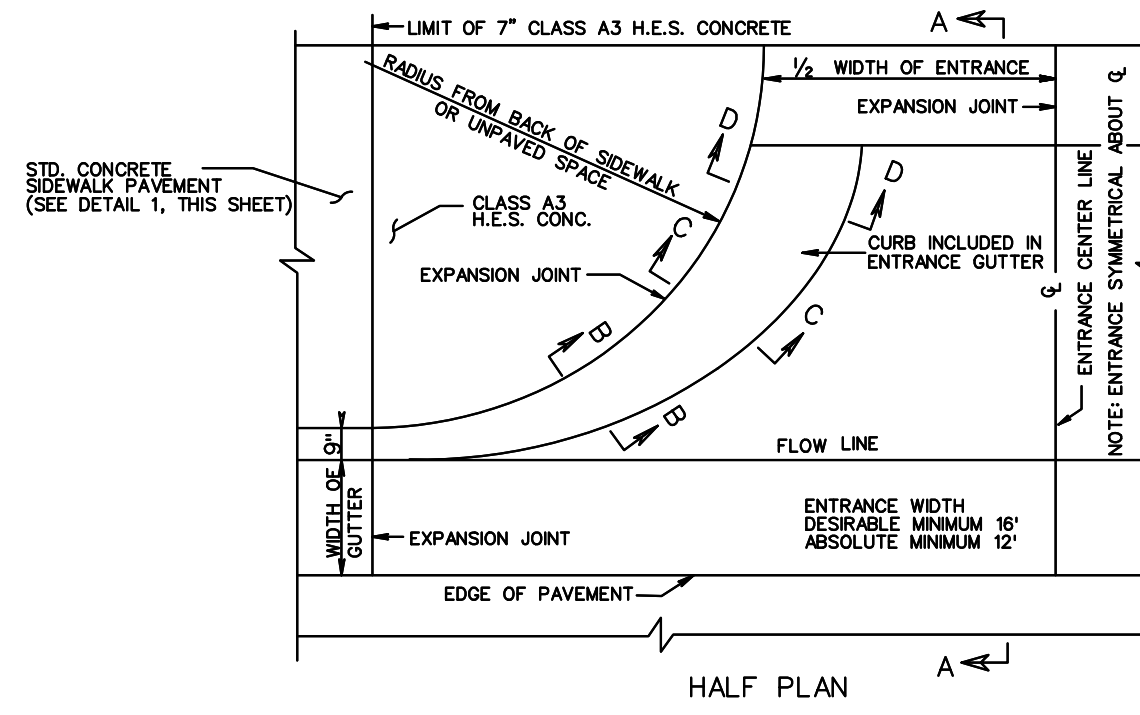


6 CONCRETE EDGE AT CURB
1"=1'-0"

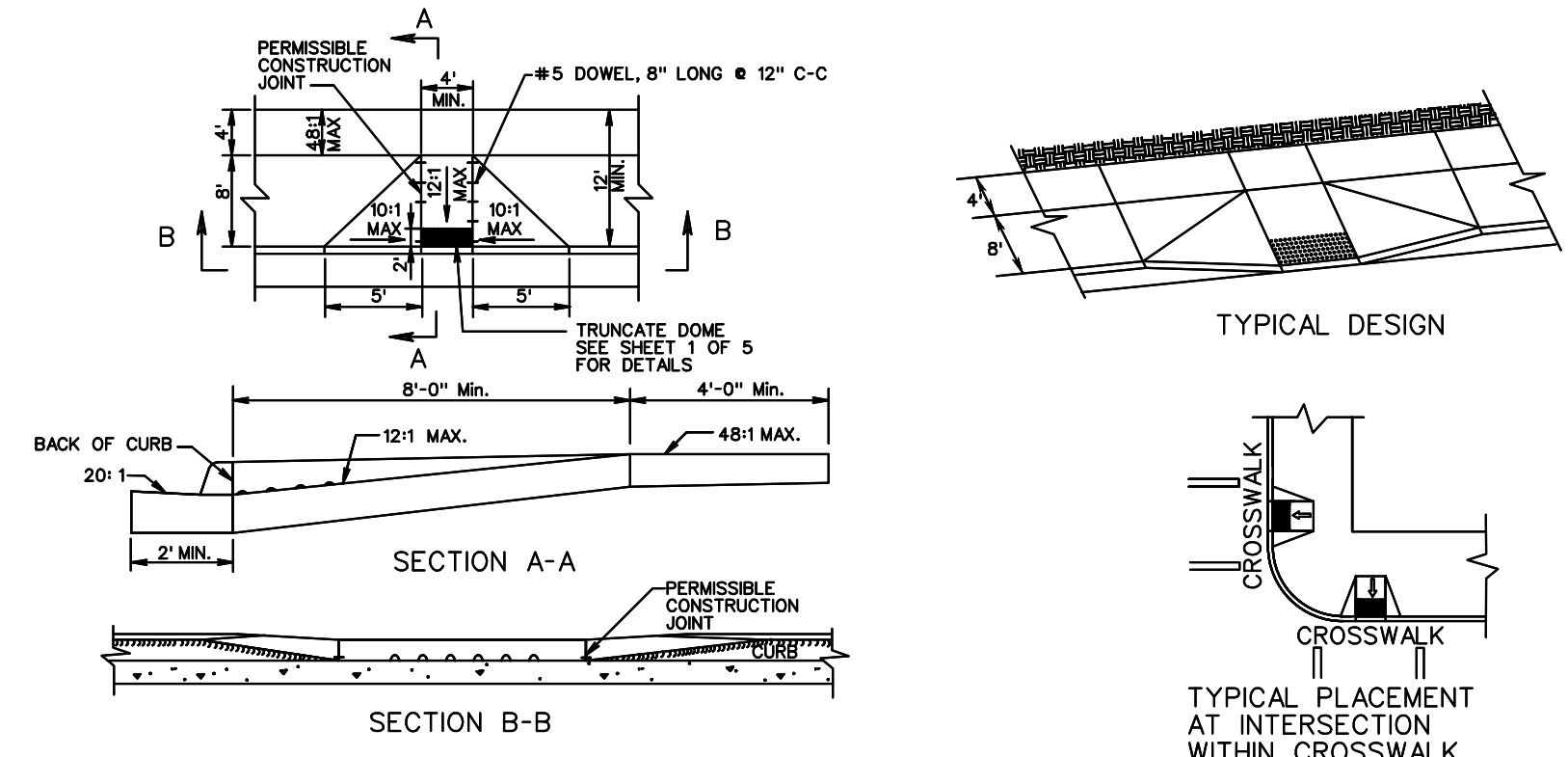


7 CITY OF RICHMOND STANDARD CURB
1"=1'-0"

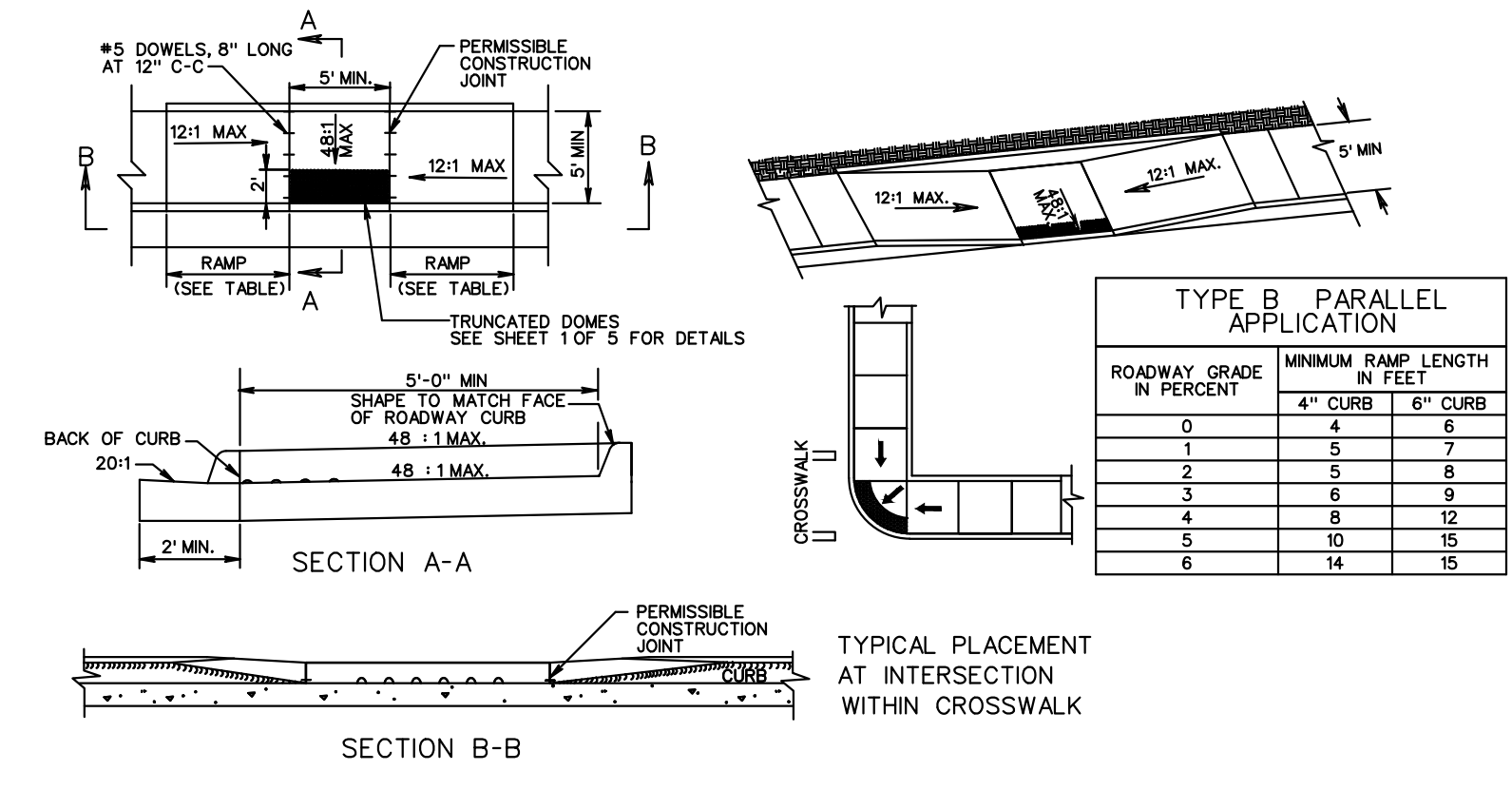
THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.



8 MODIFIED ENTRANCE GUTTER (CG-9D)
N/A

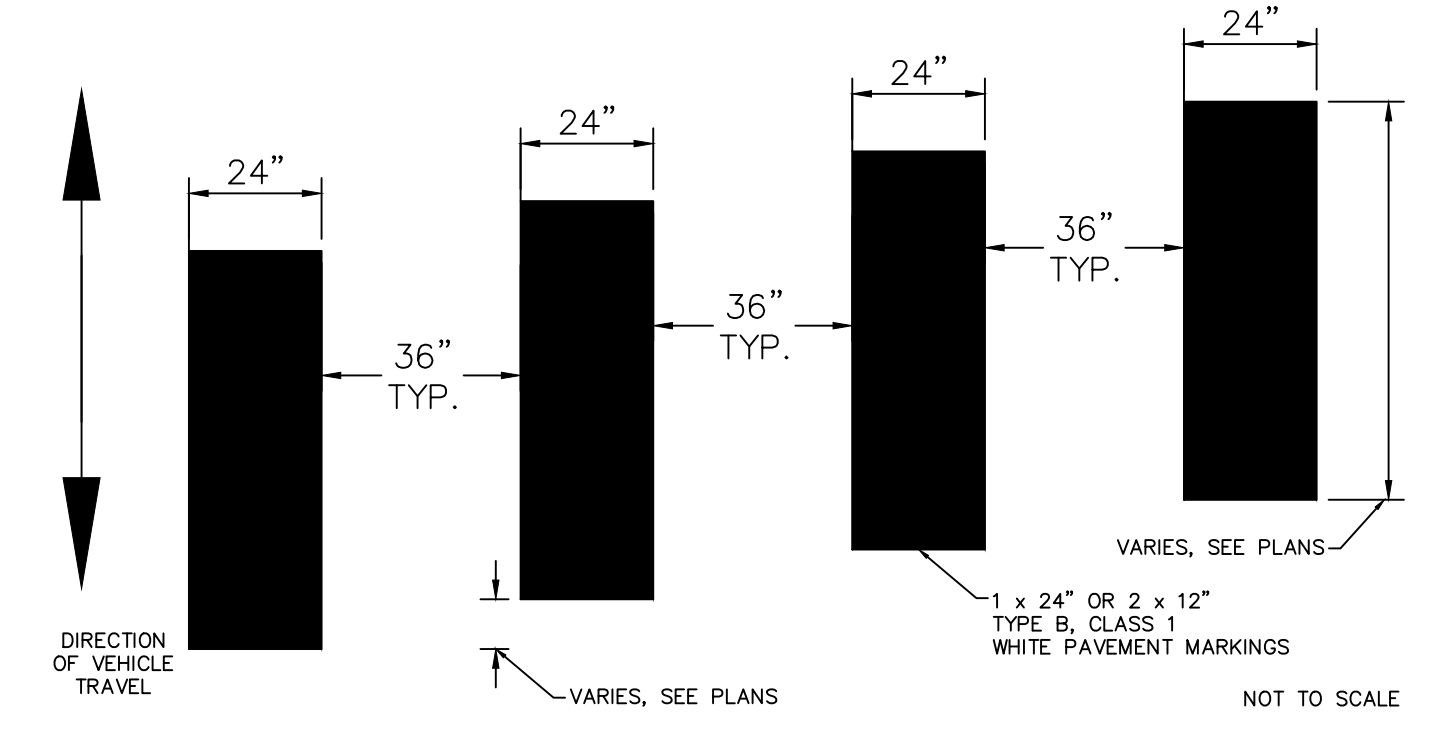


9 CURB RAMP - TYPE A (CG-12)
N/A



10 CURB RAMP - TYPE B (CG-12)
N/A

PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
* IF PEDESTRIAN ACCESS ROUTES ARE BEING PROVIDED A MINIMUM 4' TRAVERSABLE WIDTH IS REQUIRED WITH A MAX. 2% CROSS SLOPE.
WHEN USED IN CONJUNCTION WITH STANDARD CG-2 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE ADJUSTABLE CURB CONSTRUCTION.



11 HIGH VISIBILITY CROSSWALK
N/A

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No.	REVISIONS	DATE	BY

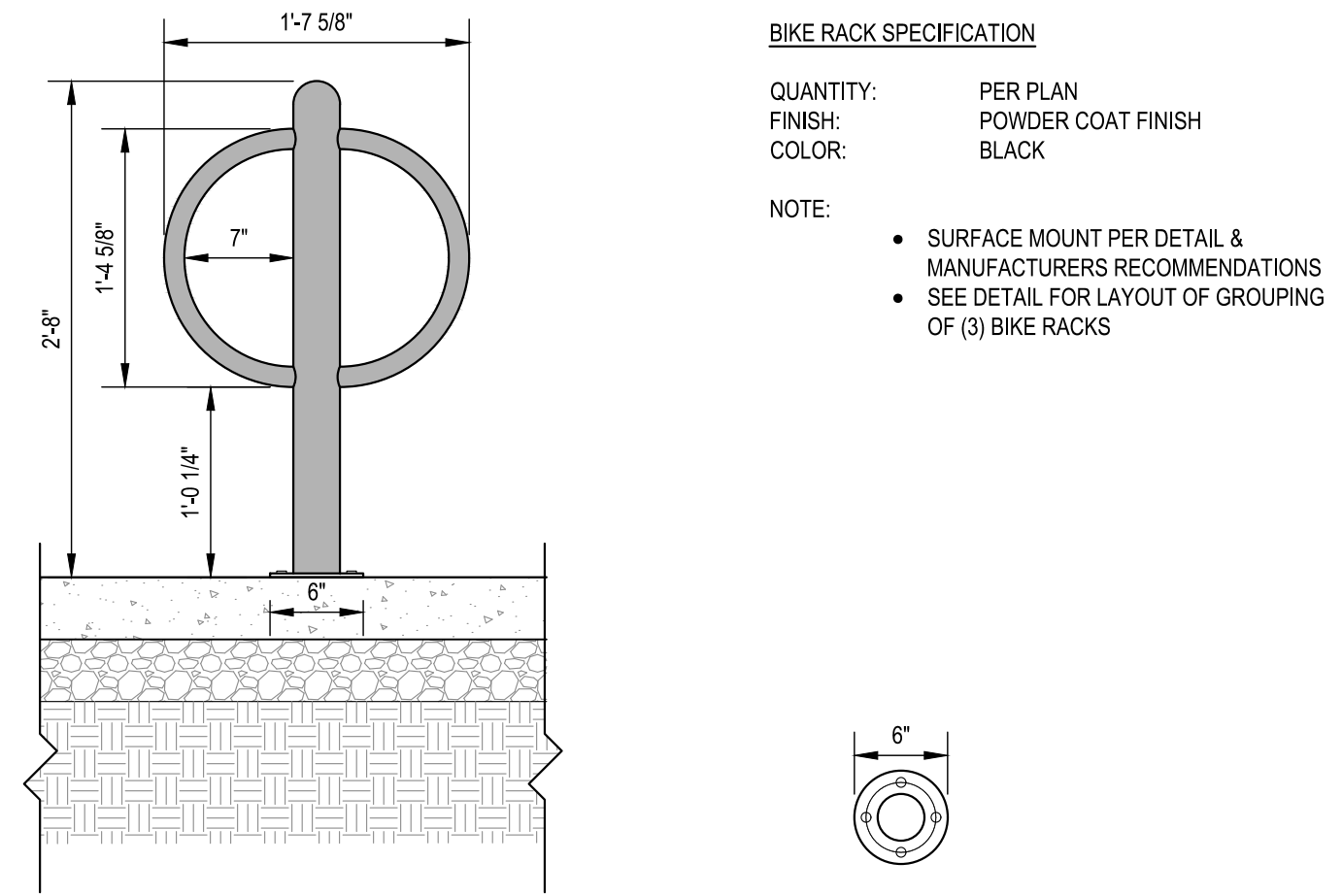
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1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel. 804-673-3882



AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE
CHECKED BY:			5-14-2021
		SHEET	L7.00
		DRAWING NO.	O-28933

HULL STREET STREETSCAPE
SITE DETAILS

Drawing name: K:\RVC\1710\113357_RIC_Coll\028_Hull_St_StreetScope\CADD\Sheets\L7.0 SITE DETAILS.dwg L7.01 SITE DETAILS May 14, 2021 4:23pm by: Alysa.Balard
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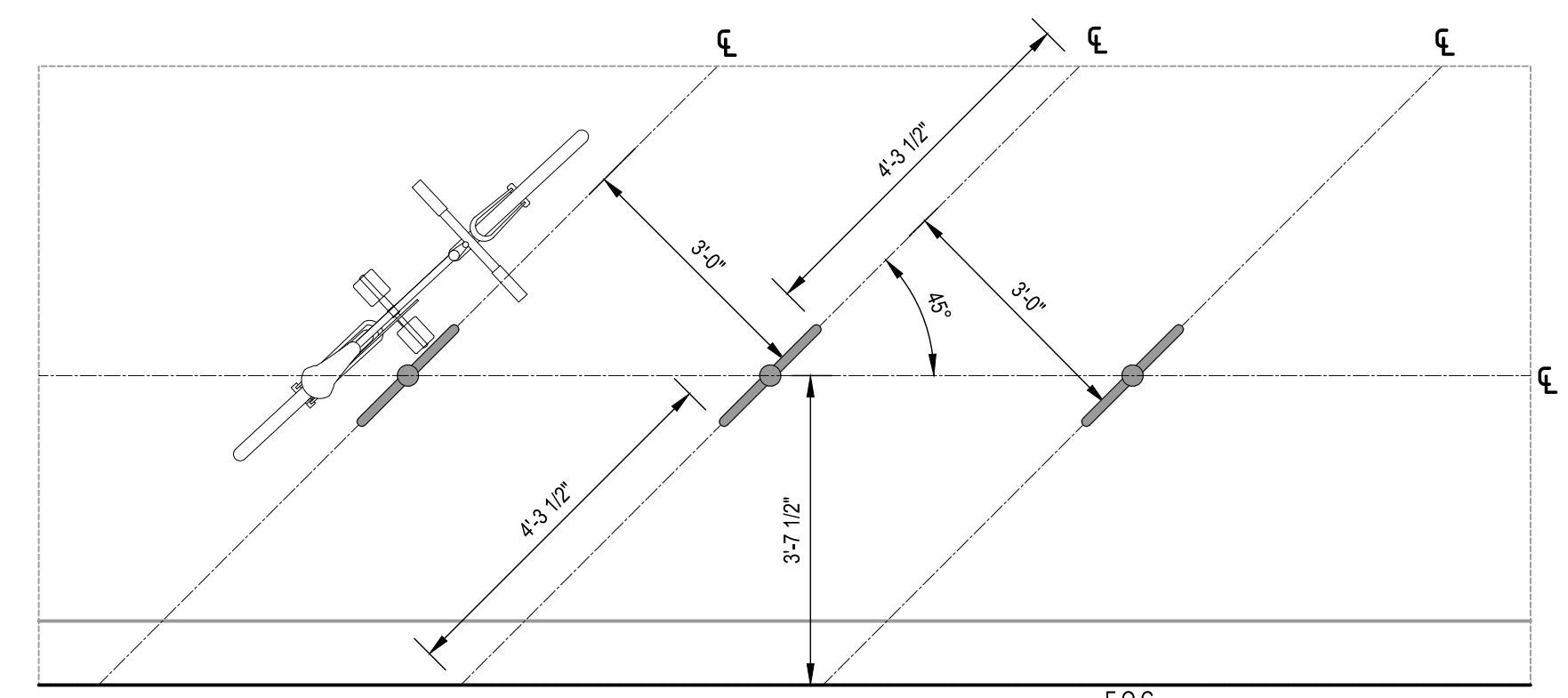
BIKE RACK SPECIFICATION

QUANTITY: PER PLAN
 FINISH: POWDER COAT FINISH
 COLOR: BLACK

NOTE:

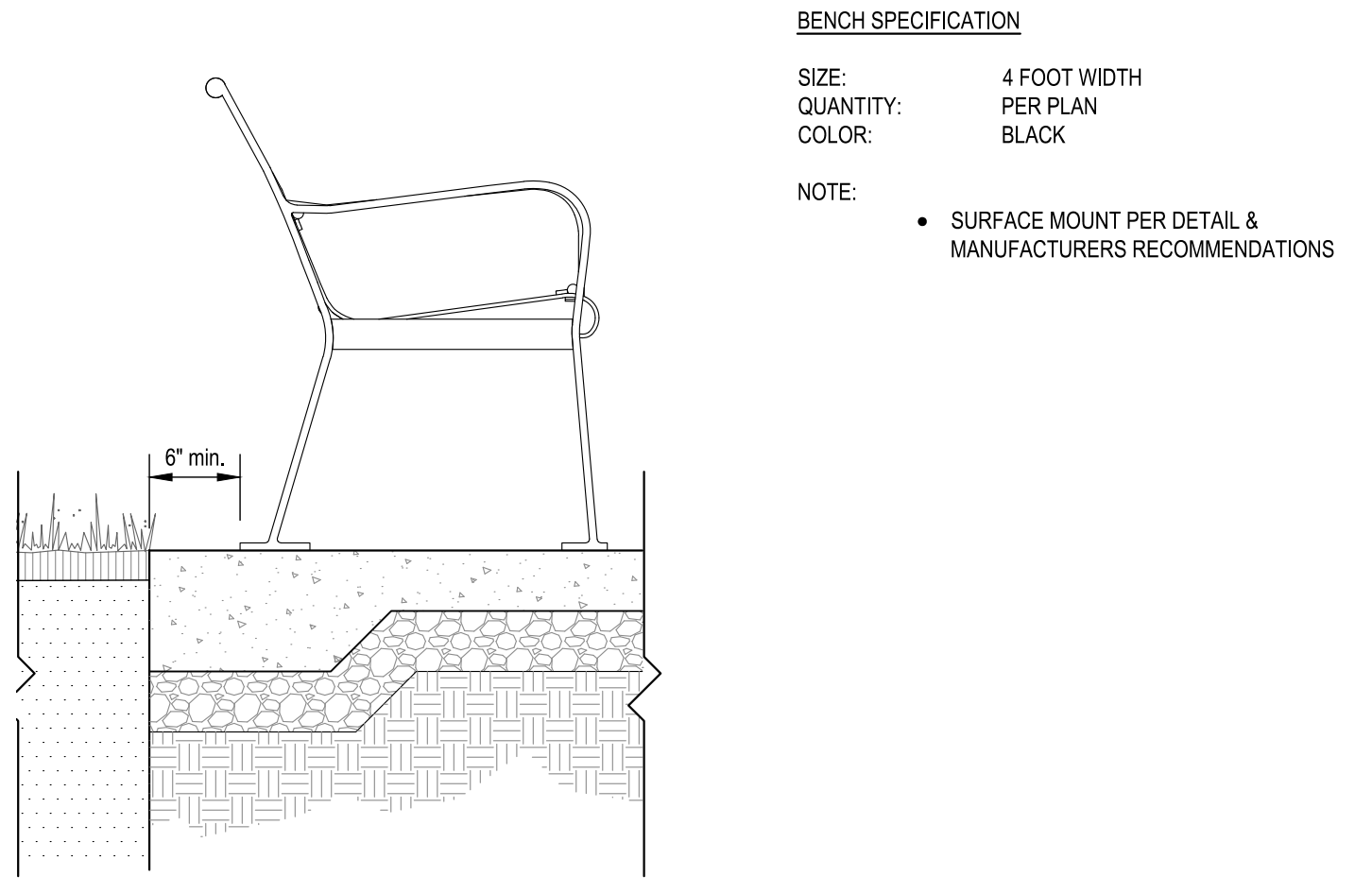
- SURFACE MOUNT PER DETAIL & MANUFACTURERS RECOMMENDATIONS
- SEE DETAIL FOR LAYOUT OF GROUPING OF (3) BIKE RACKS

1 BIKE RACK
1"=1'-0"



NOTE:
 1. CENTER OF BIKE RACK TO BE PLACED A 3' 7 1/2" FROM FACE OF CURB AND NO CLOSER THAN 5' FROM EDGE OF ANY TREE PIT. SEE PLAN FOR LOCATION.

2 ANGLED BIKE RACK LAYOUT
1/2"=1'-0"



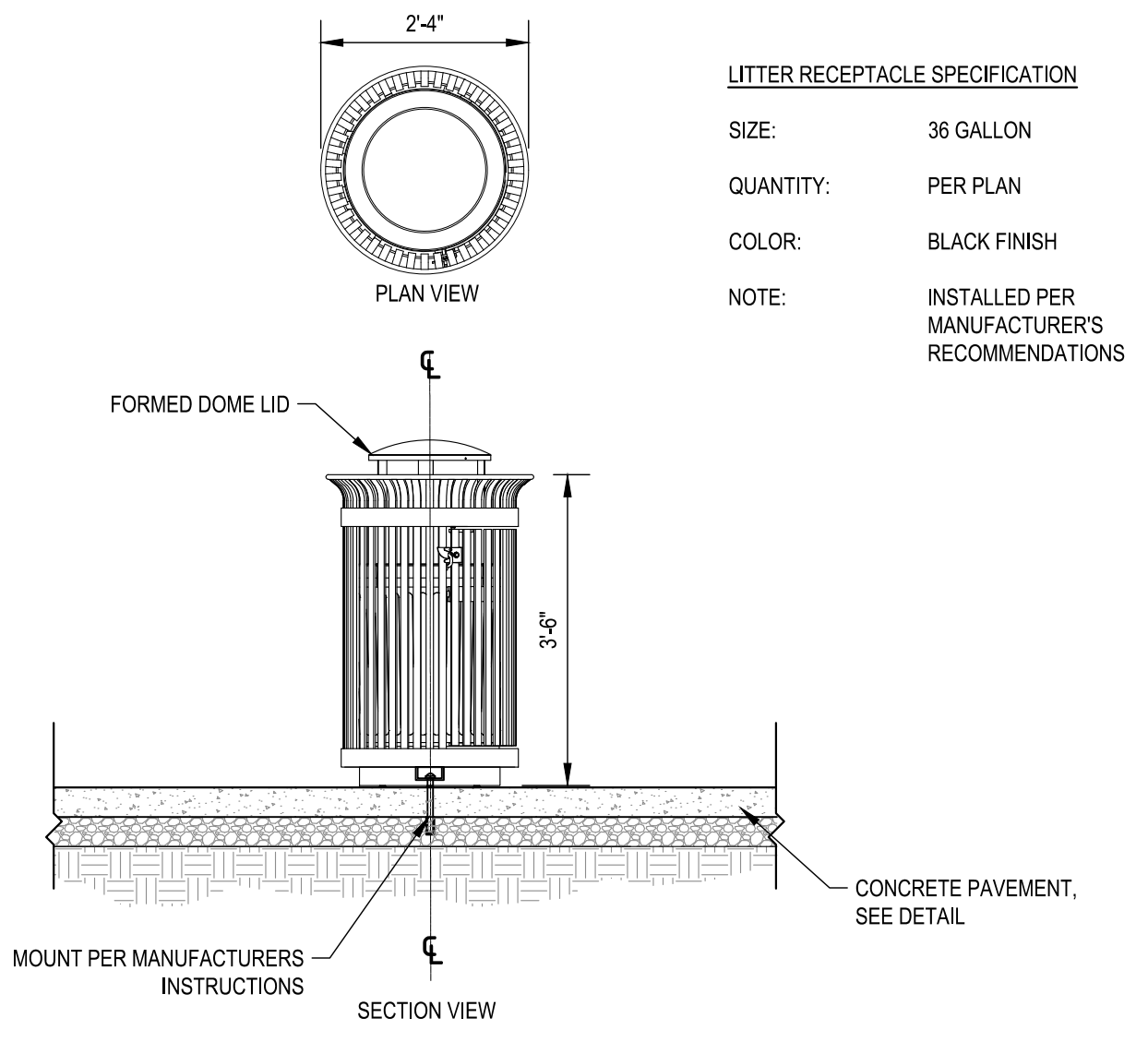
BENCH SPECIFICATION

SIZE: 4 FOOT WIDTH
 QUANTITY: PER PLAN
 COLOR: BLACK

NOTE:

- SURFACE MOUNT PER DETAIL & MANUFACTURERS RECOMMENDATIONS

3 BENCH
1"=1'-0"



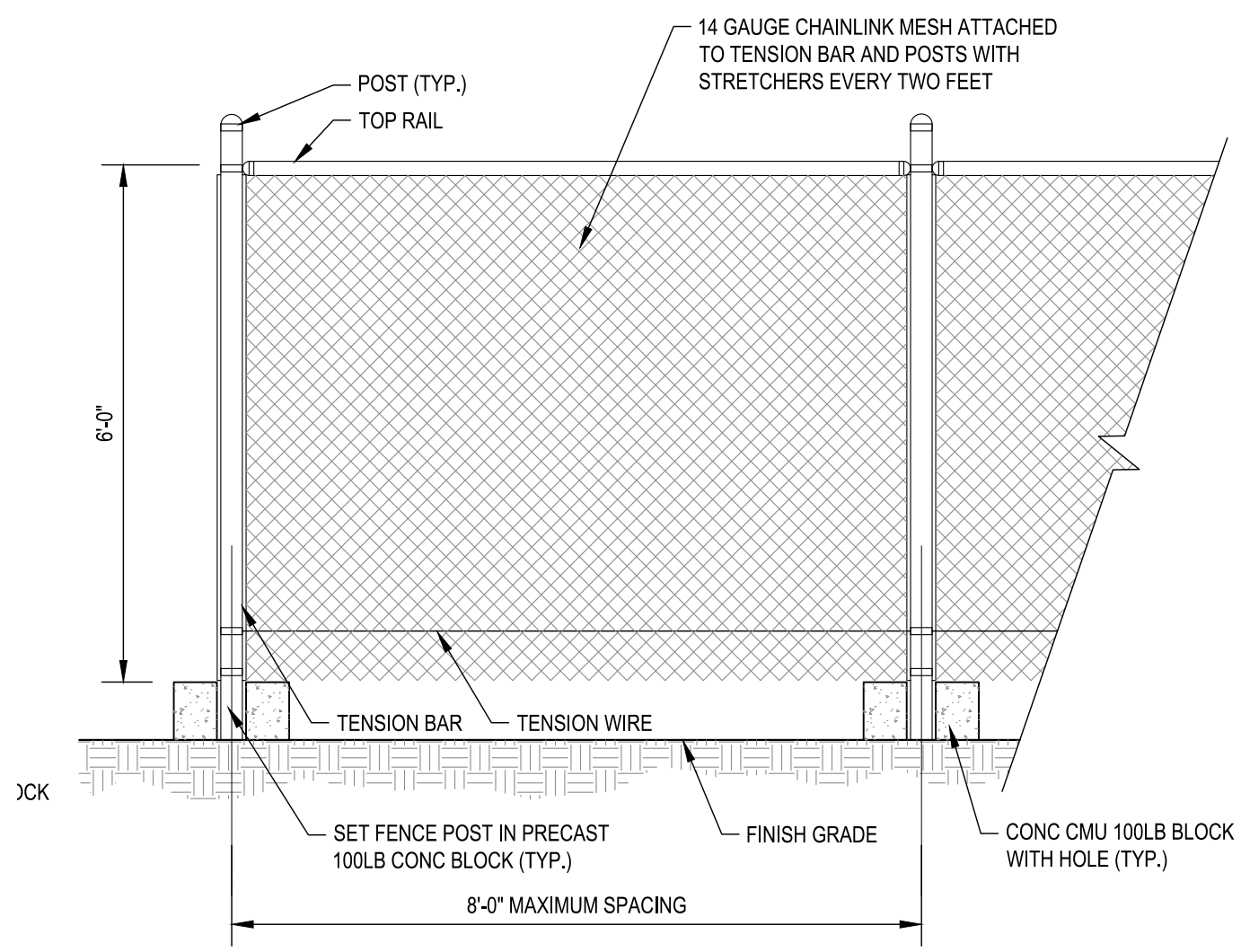
LITTER RECEPTACLE SPECIFICATION

SIZE: 36 GALLON
 QUANTITY: PER PLAN
 COLOR: BLACK FINISH

NOTE:

- INSTALLED PER MANUFACTURERS RECOMMENDATIONS

4 TRASH RECEPTACLE
1/2"=1'-0"



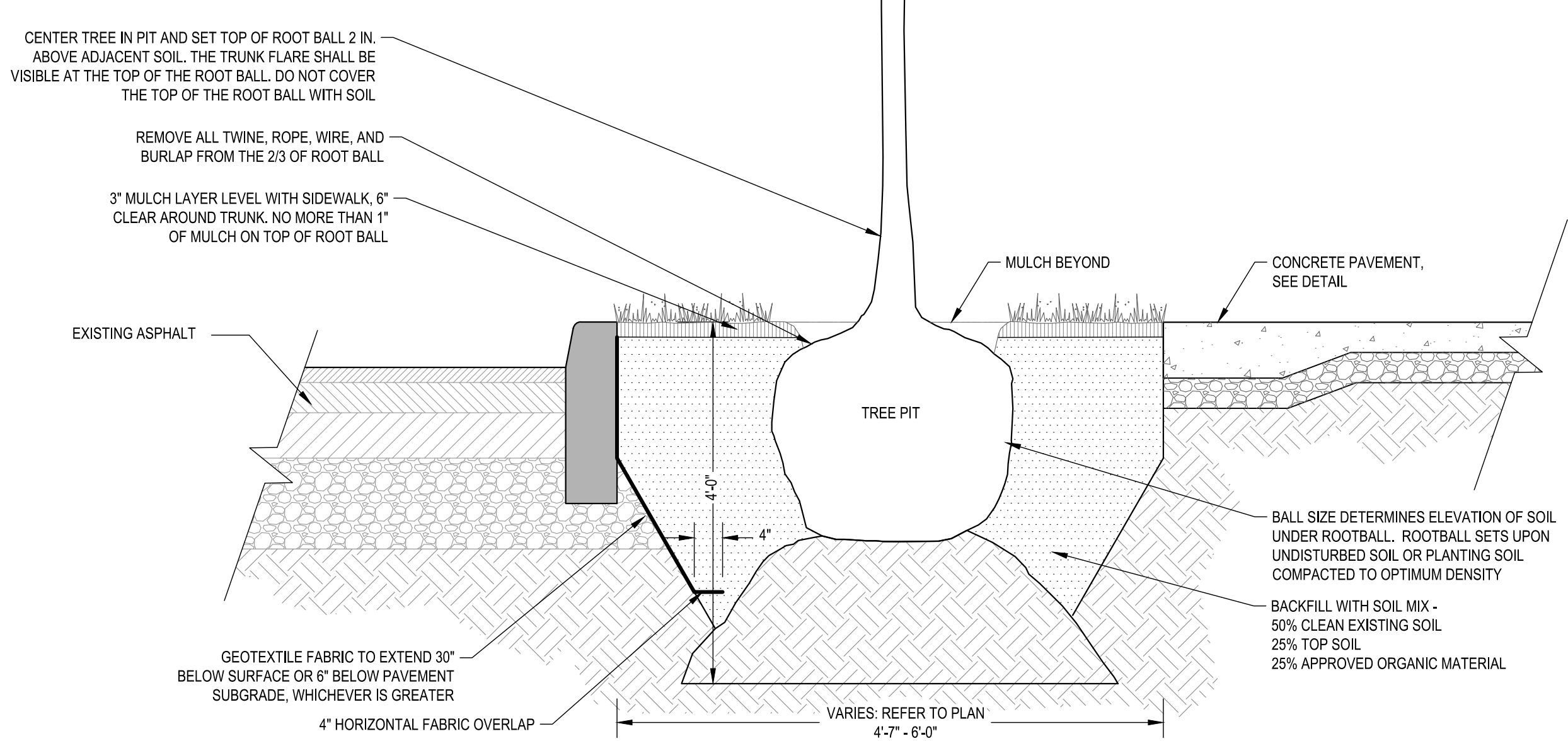
SIGN SPECIFICATIONS:

- DIMENSIONS: WIDTH: 11 INCHES MINIMUM HEIGHT: 8 INCHES MINIMUM
- BACKGROUND COLOR: YELLOW
- LETTER COLOR: BLACK
- LETTER SIZE: LARGE: 0.50 INCHES MINIMUM SMALL: 0.25 INCHES MINIMUM
- SIGNS TO BE MOUNTED TO THE FENCE MATERIAL AND SHOULD BE LOCATED AT EACH OF THE TREES CALLED OUT TO BE PRESERVED.

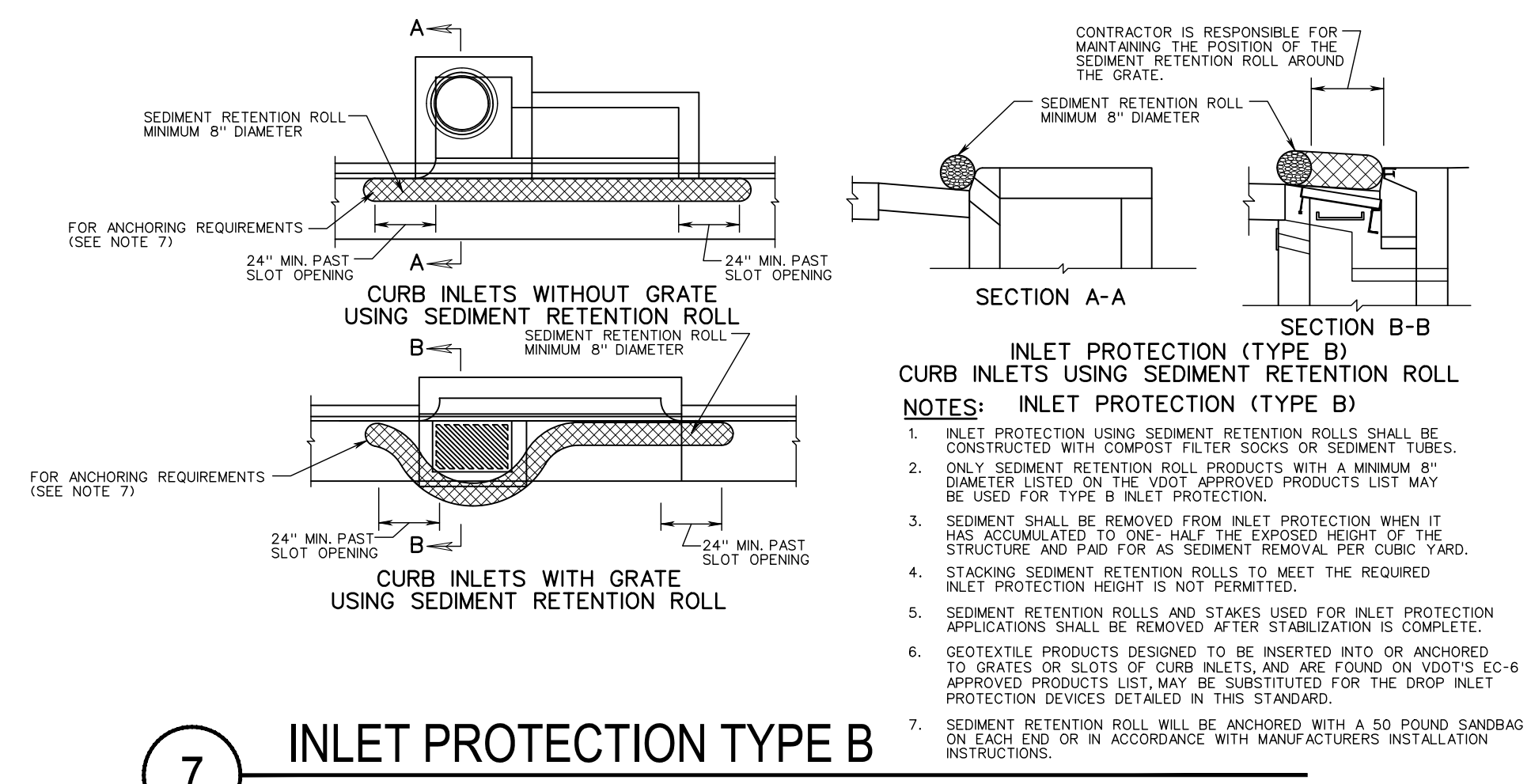
NOTE:

- ALL FENCE MATERIALS SHALL BE GALVANIZED STEEL.
- CONCRETE BLOCKS SHALL BE 3000 PSI CONCRETE WITH GALVANIZED STEEL SLEEVE FOR POST EMBEDMENT
- LOCATIONS OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING
- COORDINATE ALL FENCING WITH ROOT PRUNING
- SMALLER ROOTS SHOULD BE SEVERED BY TRENCHER, VIBRATORY PLOW OR EQUIVALENT. ROOTS OVER 1.5" DIAMETER SHALL BE CUT CLEANLY BY A CERTIFIED ARBORIST

5 TREE PROTECTION FENCE AND SIGN
N.T.S.



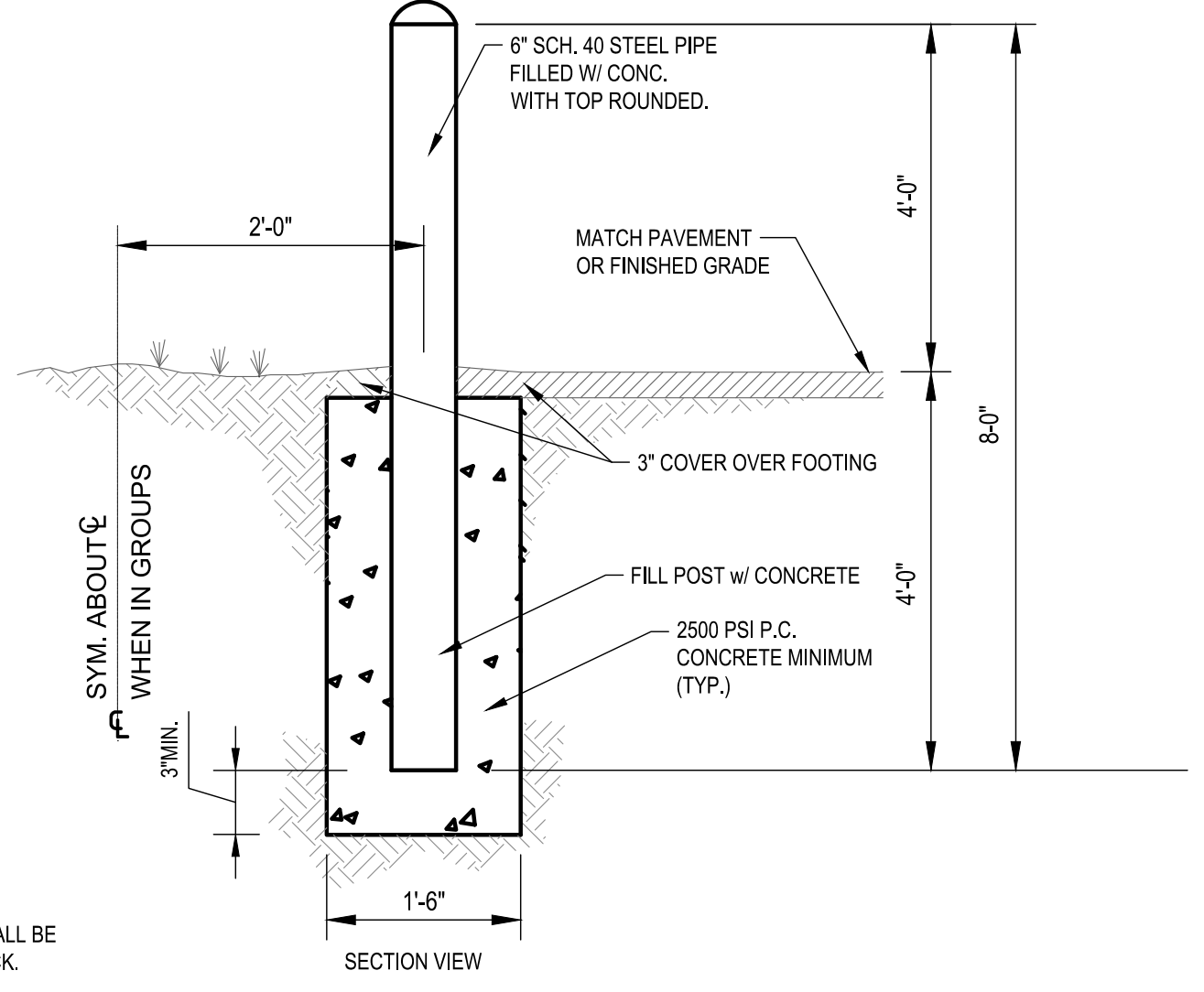
6 STREET TREE PLANTING - TREE PIT
Scale: 3/4"=1'-0"



7 INLET PROTECTION TYPE B
N.T.S.

INLET PROTECTION (TYPE B) CURB INLETS USING SEDIMENT RETENTION ROLL NOTES:

- INLET PROTECTION USING SEDIMENT RETENTION ROLLS SHALL BE CONSTRUCTED WITH COMPOST FILTER SOCKS OR SEDIMENT TUBES.
- ONLY SEDIMENT RETENTION ROLL PRODUCTS WITH A MINIMUM 8" DIAMETER LISTED ON THE VDOT APPROVED PRODUCTS LIST MAY BE USED FOR TYPE B INLET PROTECTION.
- SEDIMENT SHALL BE REMOVED FROM INLET PROTECTION WHEN IT HAS ACCUMULATED TO ONE-HALF THE EXPOSED HEIGHT OF THE STRUCTURE AND PAD FOR AS-SEMENT REMOVAL PER CUBIC YARD.
- STAKING SEDIMENT RETENTION ROLLS TO MEET THE REQUIRED INLET PROTECTION HEIGHT IS NOT PERMITTED.
- SEDIMENT RETENTION ROLLS AND STAKES USED FOR INLET PROTECTION APPLICATIONS SHALL BE REMOVED AFTER STABILIZATION IS COMPLETE.
- GEOTEXTILE PRODUCTS DESIGNED TO BE INSERTED INTO OR ANCHORED TO GRATES OR SLOTS OF CURB INLETS, AND ARE FOUND ON VDOT'S EC-6 APPROVED PRODUCTS LIST, MAY BE SUBSTITUTED FOR THE DROP INLET PROTECTION DEVICES DETAILED IN THIS STANDARD.
- SEDIMENT RETENTION ROLL WILL BE ANCHORED WITH A 50 POUND SANDBAG ON EACH END OR IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.

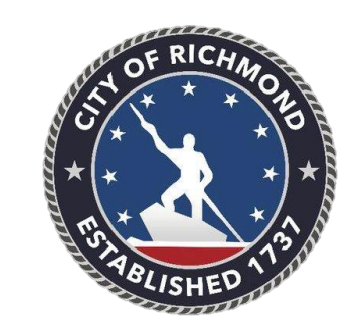


8 PIPE BOLLARD
N.T.S.

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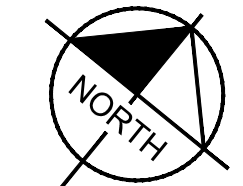
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 RICHMOND, VIRGINIA 23230
 Tel. 804-673-3882



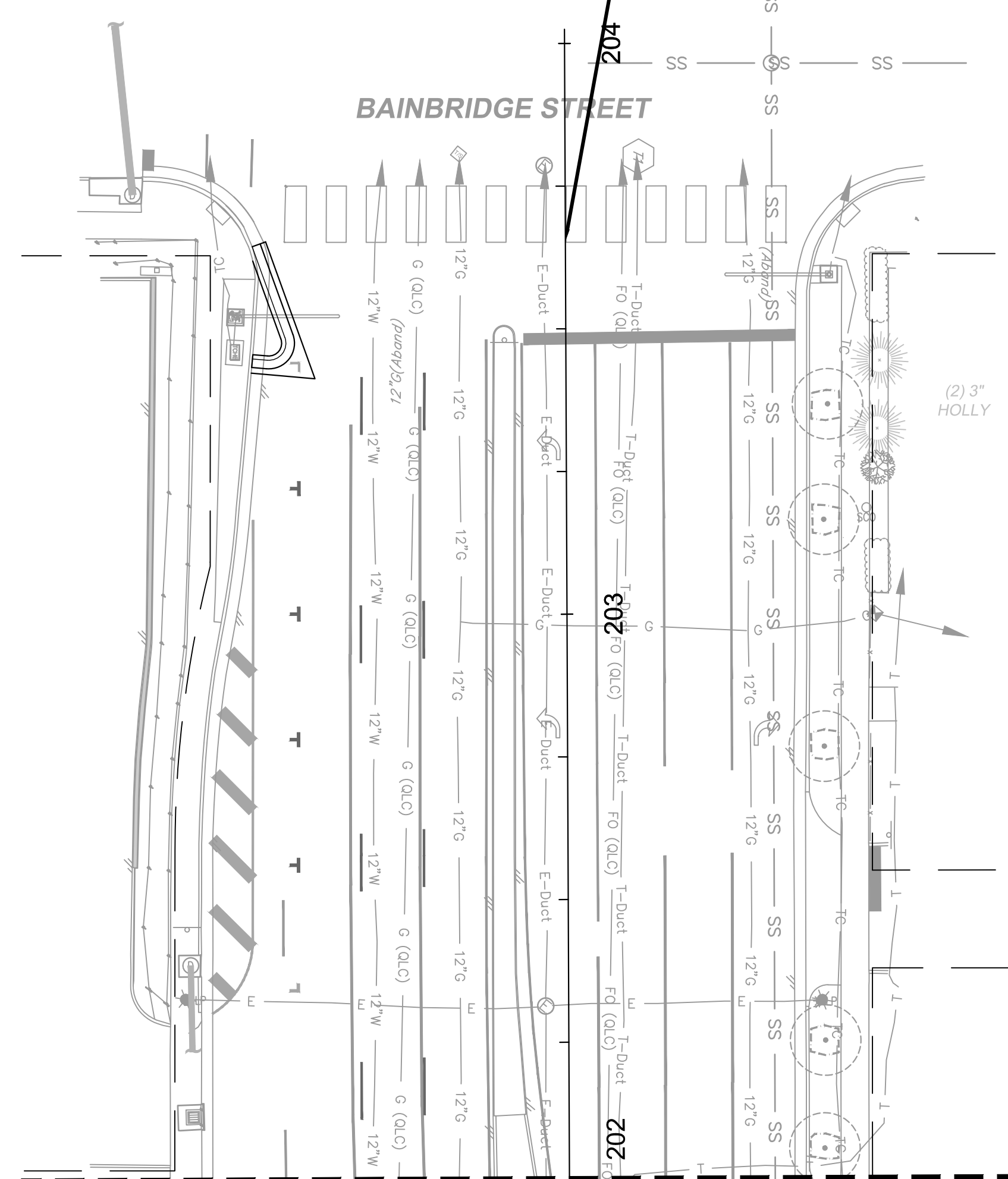
AUTHORITY: CITY OF RICHMOND				PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	DRAWING NO.:
CHECKED BY:			5-14-2021	L7.01	O-28933

HULL STREET STREETSCAPE
 SITE DETAILS

MATCHLINE STA: 202+00 - SEE THIS SHEET

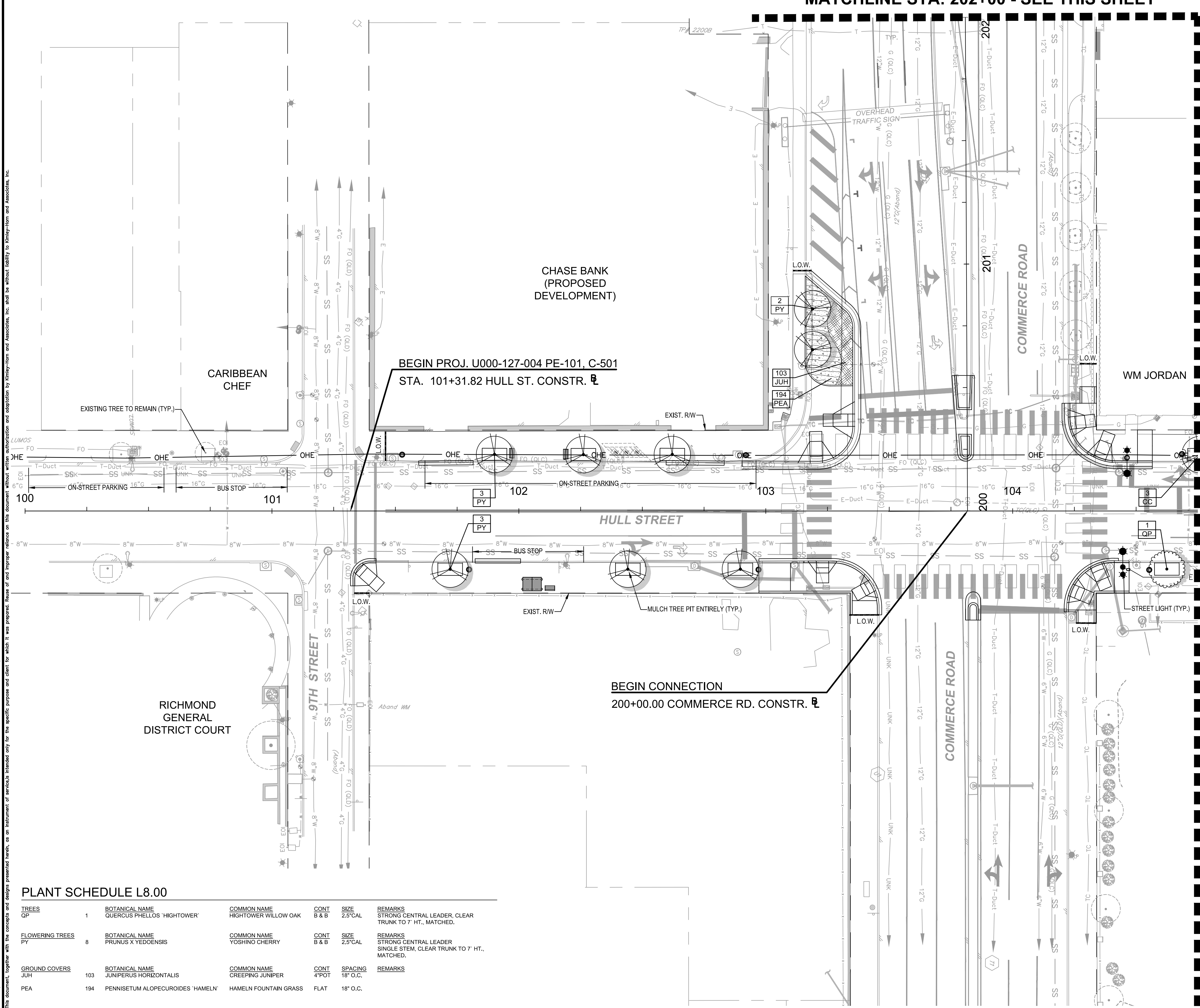


END CONNECTION
203+65.46 COMMERCE RD. CONSTR.



MATCHLINE STA: 202+00 - SEE THIS SHEET

MATCHLINE STA: 104+75 - SEE SHEET L9.01



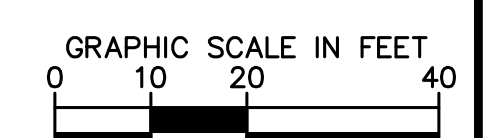
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STA. 101+31.82 HULL ST. CONSTR.

BEGIN CONNECTION
200+00.00 COMMERCE RD. CONSTR.

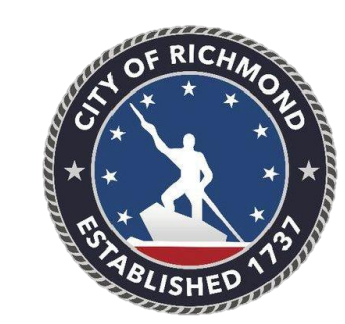
PLANT SCHEDULE L8.00

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
OP	1	QUERCUS PHELLOS 'HIGHTOWER'	HIGHTOWER WILLOW OAK	B & B	2.5" CAL	STRONG CENTRAL LEADER, CLEAR TRUNK TO 7' HT., MATCHED.
FLOWERING TREES	8	PRUNUS X YEDOENSIS	YOSHINO CHERRY	B & B	2.5" CAL	STRONG CENTRAL LEADER, SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
JUH	103	JUNIPERUS HORIZONTALIS	CREeping JUNIPER	4" POT	18" O.C.	
PEA	194	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	FLAT	18" O.C.	

LEGEND	
	EXISTING TREE TO REMAIN
	OVERHEAD ELECTRIC
	PROPOSED TREE PLANTER
	EXISTING TREE PLANTER
	PROP. LIGHT ON PROP. METAL POLE SEE DETAIL ESPF08 SHEET L15.00
	PROP. LIGHT ON EXIST. WOOD POLE SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
	PROP. LIGHT BY OTHERS
	EXIST. LIGHT ON EXIST. POLE



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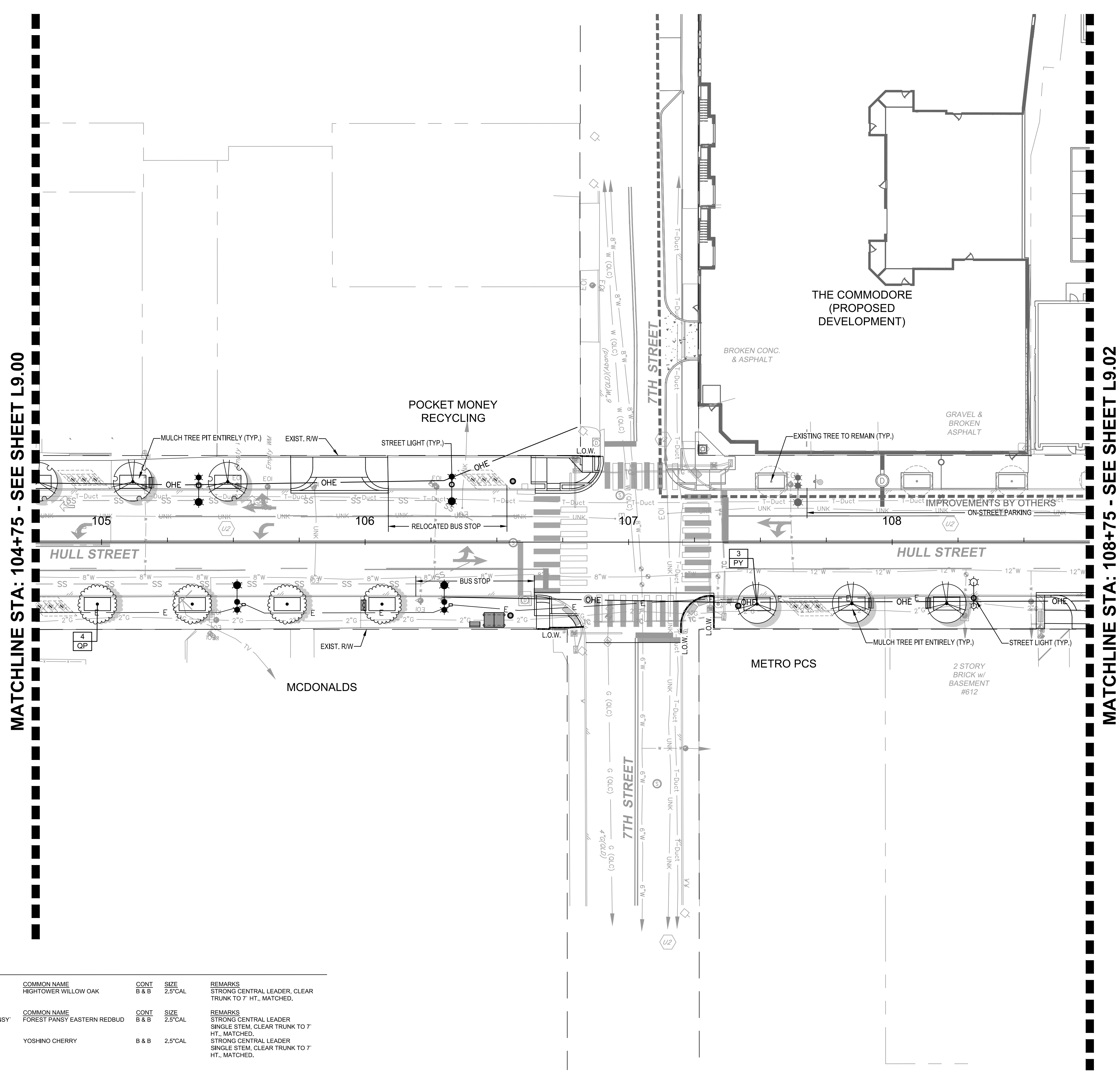
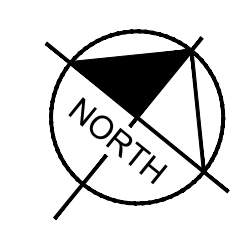
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Richmond, Virginia
LANDSCAPE ARCHITECT

HULL STREET STREETSCAPE
PLANTING PLAN

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE	DATE
CHECKED BY:		1" = 20'	5-14-2021
		SHEET	DRAWING NO.
		L9.00	O-28933

Drawing name: K:\RVC\PROJECTS\113357_RIC_OH_Coal\028_Hull_St_StreetScope\CADD\Sheets\PLANTING PLANS.dwg L9.00 PLANTING PLAN May 14, 2021 3:43pm By: Alyssa Baird
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Drawing name: K:\RVC_TPT\113357_RIC_01_Coll\0208_Hull_St_StreetScope\CADD\Sheets\PLANTING PLANS.dwg L9.01 PLANTING PLAN May 14, 2021 3:43pm by Alyssa Baird
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PLANT SCHEDULE L8.01

TREES	CONT	SIZE	REMARKS
QP	4	2.5" CAL	STRONG CENTRAL LEADER, CLEAR TRUNK TO 7' HT., MATCHED.
BOTANICAL NAME	COMMON NAME		
QUERCUS PHELLOS 'HIGHTOWER'	HIGHTOWER WILLOW OAK		
FLOWERING TREES	CONT	SIZE	REMARKS
CC	3	2.5" CAL	STRONG CENTRAL LEADER, SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.
BOTANICAL NAME	COMMON NAME		
CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY EASTERN REDBUD		
PY	3	2.5" CAL	STRONG CENTRAL LEADER, SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.
BOTANICAL NAME	COMMON NAME		
PRUNUS X YEDOENSIS	YOSHINO CHERRY		

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Richmond, Virginia
LANDSCAPE ARCHITECT

No.	REVISIONS	DATE	BY

LEGEND

- EXISTING TREE TO REMAIN
- OVERHEAD ELECTRIC
- PROPOSED TREE PLANTER
- EXISTING TREE PLANTER
- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE

GRAPHIC SCALE IN FEET
0 10 20 40

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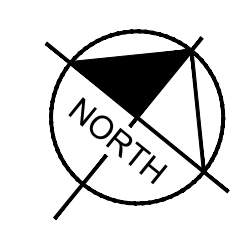


HULL STREET STREETSCAPE PLANTING PLAN

AUTHORITY: CITY OF RICHMOND

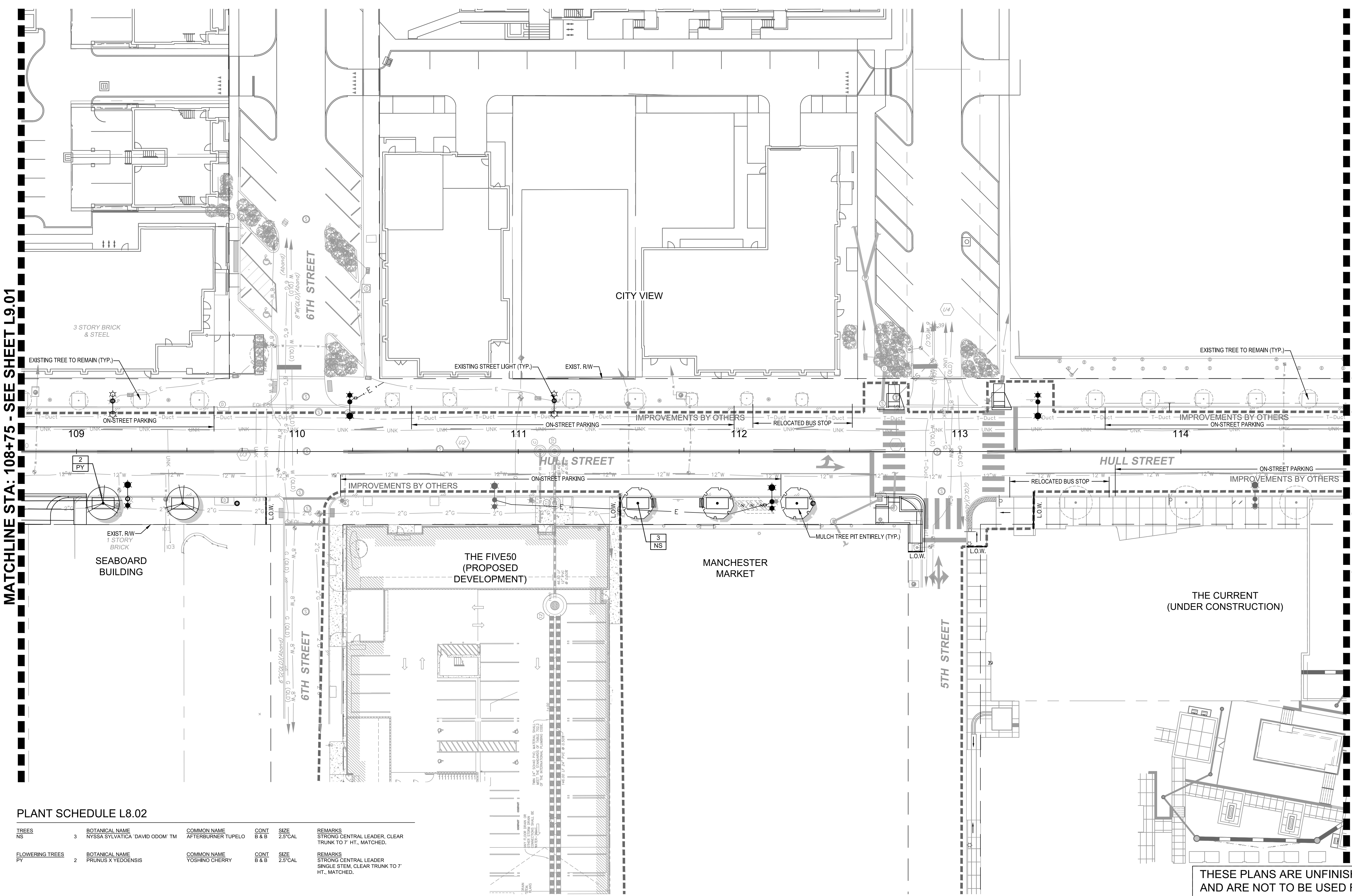
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	PROJECT 109306
CHECKED BY:		1" = 20'	5-14-2021	L9.01	DRAWING NO. O-28933

Drawing name: K:\RVC\113357_RIC_01_Coll\028_Hull_St_StreetScope\CADD\Sheets\PLANTING PLANS.dwg L9.02 PLANTING PLAN May 14, 2021 4:20pm by Alyssa Baird
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MATCHLINE STA: 108+75 - SEE SHEET L9.01

MATCHLINE STA: 114+75 - SEE SHEET L9.03

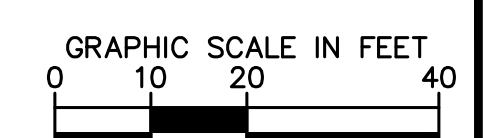


PLANT SCHEDULE L8.02

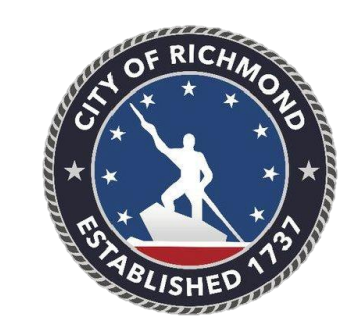
TREES	NS	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
	3	NYSSA SYLVATICA 'DAVID ODOM' TM	AFTERBURNER TUPELO	B & B	2.5" CAL	STRONG CENTRAL LEADER, CLEAR TRUNK TO 7' HT., MATCHED.
FLOWERING TREES	PY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
	2	PRUNUS X YEDOENSIS	YOSHINO CHERRY	B & B	2.5" CAL	STRONG CENTRAL LEADER, SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.

LEGEND

- EXISTING TREE TO REMAIN
- OVERHEAD ELECTRIC
- PROPOSED TREE PLANTER
- EXISTING TREE PLANTER
- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESPA17 & ESPA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE



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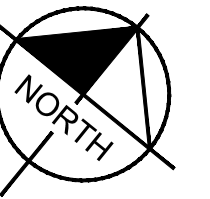


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DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
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		L9.02	O-28933

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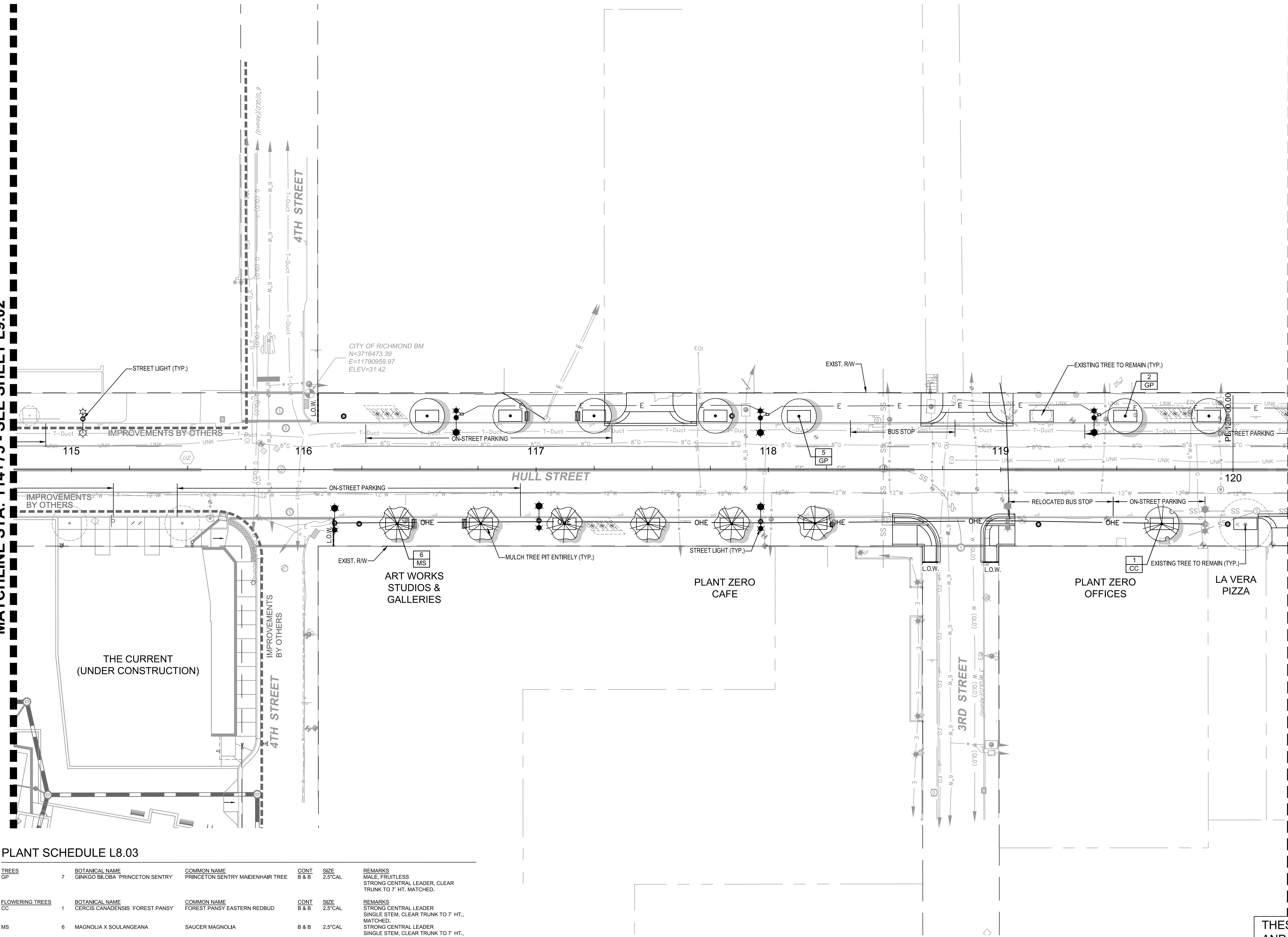
**HULL STREET STREETSCAPE
 PLANTING PLAN**



Drawing name: K:\RVC_TPT\113357_RIC_Coll\028_Hull_St_StreetScope\CADD\Sheets\PLANTING PLANS.dwg L9.03 PLANTING PLAN May 14, 2021 3:43pm By: Alyssa Baird
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MATCHLINE STA: 114+75 - SEE SHEET L9.02

MATCHLINE STA: 120+25 - SEE SHEET L9.04



PLANT SCHEDULE L8.03

TREES	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
GP	7 GINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY MAIDENHAIR TREE	B & B	2.5" CAL	MALE, FRUITLESS STRONG CENTRAL LEADER, CLEAR TRUNK TO 7' HT. MATCHED.
FLOWERING TREES					
CC	1 CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY EASTERN REDBUD	B & B	2.5" CAL	STRONG CENTRAL LEADER SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.
MS	6 MAGNOLIA X SOULANGEANA	SAUCER MAGNOLIA	B & B	2.5" CAL	STRONG CENTRAL LEADER SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.

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LANDSCAPE ARCHITECT

No.	REVISIONS	DATE	BY

LEGEND

- EXISTING TREE TO REMAIN
- OVERHEAD ELECTRIC
- PROPOSED TREE PLANTER
- EXISTING TREE PLANTER
- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE

GRAPHIC SCALE IN FEET
0 10 20 40

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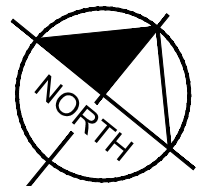
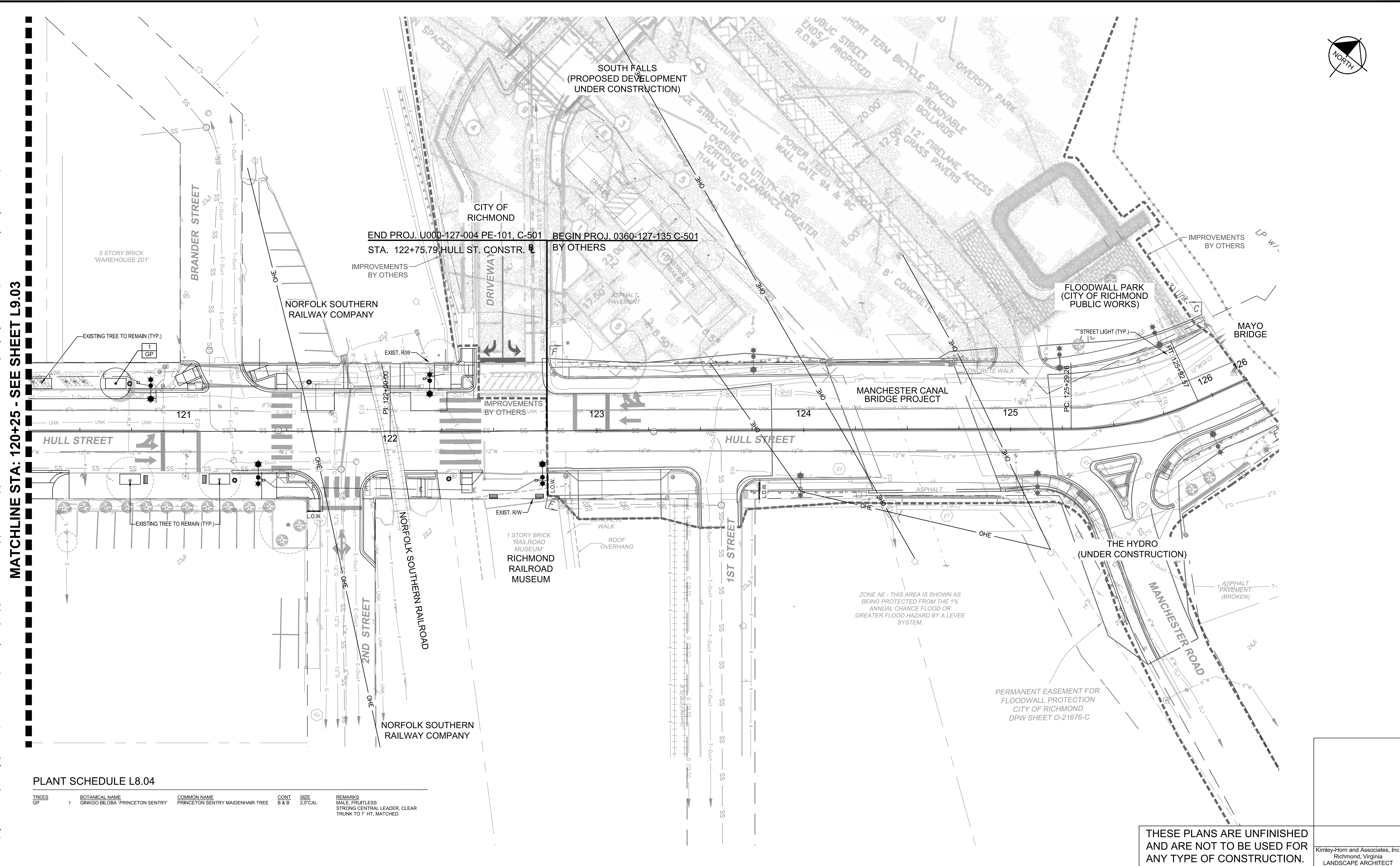


HULL STREET STREETSCAPE PLANTING PLAN

AUTHORITY: CITY OF RICHMOND

DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	PROJECT 109306
CHECKED BY:		1" = 20'	5-14-2021	L9.03	DRAWING NO. O-28933

Drawing name: K:\RVC_TPTO\113357_RIC_OH_Coll\028_Hull_St_StreetScope\CADD\Sheets\PLANTING PLANS.dwg L9.04 PLANTING PLAN May 14, 2021 4:34pm by Alyssa Baird
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MATCHLINE STA: 120+25 - SEE SHEET L9.03

PLANT SCHEDULE L8.04

TREES	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
GP	GINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY MAIDENHAIR TREE	B & B	2.5' CAL	MALE, FRUITLESS STRONG CENTRAL LEADER, CLEAR TRUNK TO 7' HT. MATCHED.

LEGEND

- EXISTING TREE TO REMAIN
- OVERHEAD ELECTRIC
- PROPOSED TREE PLANTER
- EXISTING TREE PLANTER
- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE



Kimley-Horn
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 RICHMOND, VIRGINIA 23230
 Tel. 804-673-3882

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Kimley-Horn and Associates, Inc.
 Richmond, Virginia
 LANDSCAPE ARCHITECT

**HULL STREET STREETSCAPE
 PLANTING PLAN**

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE	DATE
DRAWN BY:	CHECKED BY:	1" = 20'	5-14-2021
SHEET		DRAWING NO.	
L9.04		O-28933	

Drawing name: K:\RVC\1710\113357_RIC_Coll_V02B_Hull_St_StreetScope\CADD\Sheets\L10.00 PLANTING NOTES & DETAILS.dwg L10.00 PLANTING NOTES & DETAILS May 14, 2021 4:36pm by Alyssa Baird
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GENERAL NOTES

- Plants shall be healthy, vigorous material, free of pests and diseases and are subject to approval/rejection of the Landscape Architect prior to, during and after installation.
- Contractor shall identify all materials at growing location prior to purchase and submit digital photographs, and source list to the Landscape Architect for approval at a minimum of six (6) calendar weeks prior to installation. Plants not approved shall be resourced and resubmitted.
- Planting beds and individual tree plantings shall be mulched continuously as specified.
- Prior to construction the contractor shall be responsible for locating underground utilities and execute work in a manner that avoids damage to utilities during the course of work. Contractor shall be responsible or remedy of any damage to utilities, structures, site appurtenances that occur as a result of landscape related work.
- Contractor is responsible for verifying quantities shown on documents. Field adjustments shall be approved by Landscape Architect prior to installation. Quantities indicated on drawings are for reference-it is the Contractor's responsibility to ensure full coverage of plants at the indicated spacing.
- Contractor is responsible for maintenance of all plantings including, but not limited to watering, mowing, edging, spraying, mulching, fertilizing, of plantings and turf areas for one (1) calendar year from date of final acceptance. Contractor is responsible for warranty of all plant material for a period of one (1) calendar year from date of certificate of occupancy. Warranty replacement planting shall meet or exceed the original specification identified on drawings. Replacement planting shall extend the same warranty as originally installed materials. Plantings and grass areas shall be flourishing and fully thriving at end of warranty period.
- Plants identified for replacement by Owner, Landscape Architect shall be replaced immediately by the Contractor unless otherwise agreed upon. Landscapes (trees, shrubs, groundcover) subject to replacement by warranty shall exhibit characteristics of 30% dead-per individual plant, non-contributing or disease compromised. Grass areas suitable for acceptance shall demonstrate 85% sustained/consistent and continuous, densely established coverage. Contractor shall perform a site review at end of warranty period and provide the Owner with written documentation of the site, including plant health, warranty replacement items, and conditions that may be influencing plant health. Contractor shall remove from plants and site, all staking and guying material at end of warranty period.
- Contractor shall comply with all local, state and federal requirements, codes and regulations related to the work undertaken.
- All material including planting operation appurtenances shall be of domestic origin manufacture and sourced within 100 miles of the project site.
- Contractor is responsible for coordination among trades operating on site. Coordination and if necessary resulting modifications to schedules are responsibility of the Contractor.

PERFORMANCE SPECIFICATION

I. PLANTS

A. General

- Live healthy plants free of dead branches and parts
- Free of disease, insect, injury and damage
- Unbroken, intact, dense and solid rootballs and containers, without cracks, flat sides or previously repaired damage.
- Free of girdling roots or rootbound/circling container conditions
- Plants of consistent in growth habit and healthy character
- Free of compromising growth conditions such as weak crook connections, crossed branches, snags and scars
- Point of origin growing location within 100 miles of project site
- Graded, standards, caliper, sizes and stock consistent with ANSI Z60.1, American Standard for Nursery Stock most current edition
- Species identified consistent with Hortus Third, Concise Dictionary of Plants Cultivated in the United States and Canada, most current edition and Manual of Woody Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, most current edition
- All disturbed areas shall be grass seed unless otherwise identified on landscape plans

B. Trees:

- Deciduous Single Trunk
 - Full, straight and upright with consistent symmetrical natural branching pattern throughout
 - Branching Height-seven (7) feet to lowest branch in two years unless otherwise required by local jurisdiction
- Deciduous Multi-Trunk
 - Full and upright with straight consistent symmetrical natural branching pattern throughout
 - Canes evenly spaced and of similar growth habit
 - Free of suckers and extraneous branching
- Evergreen Single-Trunk
 - Full and upright with continuous symmetrical dense natural habit
 - Clear branching height twelve (12) inches above top of rootball
 - Free of suckers and extraneous branching
 - Do not shear or otherwise prune to shape plantings

C. Evergreen and Deciduous Shrubs

- Full, dense and naturally symmetrical.
- Consistent with container and/or balled and burlapped size
- Free of suckers and extraneous branching
- Do not shear or otherwise prune or shape plantings

D. Evergreen and Deciduous Groundcover

- Full and dense in pots or flats

E. Perennials and Seasonal Color

- Full and dense in pots or flats

F. Turf Grass

- Subgrade
 - Soil Mix-10% Compost, 90% topsoil by volume
 - Preparation-loosen subgrade to a minimum depth of four (4) inches. Remove all non-natural materials including litter, stones, sticks and all items greater than 1/4 inch in any dimension
 - Preparation-spread soil mix at a depth of four (4) inches continuously to meet grade elevations shown on drawings. Allow for thickness of sod when applicable

2. Grass Sod

- Install not longer than twenty-four (24) hours from harvest
- Grass bed not less than two (2) inches in continuous thickness
- 100% continuous live sod coverage after first growing season and at end of warranty period.
- Of uniform non-varying density and continuous texture quality capable of growth and development immediately upon installation. Weed and noxious plant free
- Stagger installation rows and place aligned parallel to contours
- Fill joints solidly with planting bed preparation soil
- Provide anchor pins at twenty-four (24) inches on center for slopes greater than 4:1

3. Grass Seed

- Mix approved by the Landscape Architect
- Provide first and new of year seed crops in mix free of weed seeds and deleterious matter
- Provide seed mix not greater than 15% annual or perennial rye
- Coverage 85% continuous coverage live stand after first growing season and at end of warranty
- Replacement or overseeding mixes consistent with original application/installation
- Provide erosion blankets or other slope retention methods as noted on drawings

II. Materials and Appurtenances

A. Testing

- Materials testing information/certificates/dated labels shall be current to the project and performed/certified not greater than 120 calendar previous days from current date of submittal for review

B. Top Soil

- Neutral Ph balance 5.5 -7.5. Friable and containing 2.0-5.0% organic matter by dry weight. Continuously free of non-soil items such as stones, debris, sticks, trash, and deleterious matter greater than 3/4 inch in any direction. Clay content shall not exceed 25%. Gravel content shall not exceed 10%. Silt shall not exceed 25%

C. Use of Existing Topsoil

- Existing topsoil on-site may be repurposed with prior Owner approval. Contractor shall provide soil testing and additive program that demonstrates consistent performance and characteristics and composition as identified herein. Owner shall approve soil testing and soil amendment/additive methods and procedures

D. Shredded Hardwood Mulch

- 100% organic shredded first year hardwood free of deleterious matter, rock, gravel and weed seed. Neutral Ph balance 5.5-7.5

E. Composted Pine Bark Fines

- 100% organic ground pine bark with no particle dimension greater than 3/4-inch and no greater than 10% wood content

F. Compost Ph

- Balanced 5.0-8.5 mature, stable and weed free produced by natural aerobic decomposition. Free of visible contaminants and toxic substances. Not greater than 5% sand, silt, clay or rock by dry weight. Consistent with US-EPA CFR Title 40 Part 503 Standards for Class A biosolids

G. Compost Testing

- Prior to delivery on-site, the following items are required for approval by Owner: Feedstock percentage in final compost product; statement that the products meets federal, state and local health safety requirements
- Provide copy of lab analysis less than 120 calendar days old verifying that the product meets described physical requirements; chemical contaminants; Ph; physical contaminants; biological contaminants (including a statement that fecal coliform and salmonella testing and results comply with requirements of the US Composting Council Seal of Testing approval programs

H. Planting Mix

- 85% topsoil and 15% Compost

I. Fertilizer

- Granular 10% nitrogen, 6% Phosphorus, 4% Potassium granular form with 50% Nitrogen in organic form. Product and Material Safety Data as approved by Owner

J. Herbicide

- Product and Material Safety Data as approved by Owner

K. Water

- Potable only unless otherwise approved by Owner

L. Hardwood Stakes

- 2 x 2 x 48 inch square of sound hardwood, painted flat black on all sides

M. Tree Ties

- Villa Non-Abrasive Rubber Tree Ties or approved equal

N. Filter Fabric

- Mirafi 140-N or approved equal

O. Steel Edging

- 1/8-inch x 4-inch in full sections. Ryerson, Timec or approved equal with integral stakes. No open corners. Corners shall be formed and trued to compliant angle or welded closed

P. River Stone

- Locally sourced, river rounded, unfaceted river stone/cobbles.
- Size shall not exceed 3 total inches in any dimension.
- Color and texture approved by Owner
- When placed in concrete or mortar setting bed, tamp to secure and brush clear joints.
- Concrete or mortar as approved by owner.

III. Execution

A. Site Conditions

- Inspect site and notify Owner in writing of acceptance with indication that project conditions are acceptable are suitable to proceed with work. Notify Owner of any existing damage and/or other conflicting conditions.
- Do not proceed with work until unsatisfactory conditions have been satisfactorily remedied. Notify Owner of acceptance prior to commencement of work.
- Notify Owner in writing of any conditions that may preclude successful completion of work including items such as coordination with other trades, incomplete work, drainage, soil temperature and/or composition, access to storage/work areas, damage to conditions, etc.
- Notify Owner in writing immediately of any items that may influence work schedule, timing of tasks, materials delivery and/or installation and warranty responsibilities.
- Coordinate and cooperate with other trades working in and adjacent to work areas. Examine drawings of other trades which show development of the entire project and become familiar with the scope of required work by others.

B. Planting Seasons

Recommended seasons are a general guide based on historical climatic data and typical performance of plantings, and which vary dependent on project-specific environmental conditions. Due to construction schedules, recommended planting seasons may/may not coincide with request(s) for certificate of occupancy for projects. Coordination of planting installation and seasons shall be reviewed with Owner on an individual project basis.

1. Deciduous and Evergreen Trees

- Do not install/plant the following trees between September 15 and March 15
 - Oaks (Quercus Sp., Such as Q. rubra, Q. alba, Q. phellos, Q. coccinea)
 - Dogwood (Cornus Sp.)
 - Sweetgum (Liquidambar Sp.)
 - All Conifers and Evergreens except White Pine (Pinus strobus Sp.)

1. Deciduous and Evergreen Shrubs

- Install/plant between March 15 and June 15 and/or September 15 and November 30

3. Perennials

- Install/plant between March 15 and June 15 and/or September 15 and November 30

4. Spring Flowering Bulbs

- Install/plant between September 15 and December 15

5. Seasonal Annuals

- Install/plant in season per approved schedule

6. Turf Grass

- Install/plant between March 15 and May 15 and/or September 15 and November 30
- Do not install/plant seed or sod turf grass areas when ambient air temperature is below forty (40) degrees Fahrenheit, or forecast for a twelve (12) hour period after completion of work

7. No Plant Installation

- Do not install plantings or turf grass between June 15 and September 15, without approval by

Owner

C. Positioning & Location of Plantings

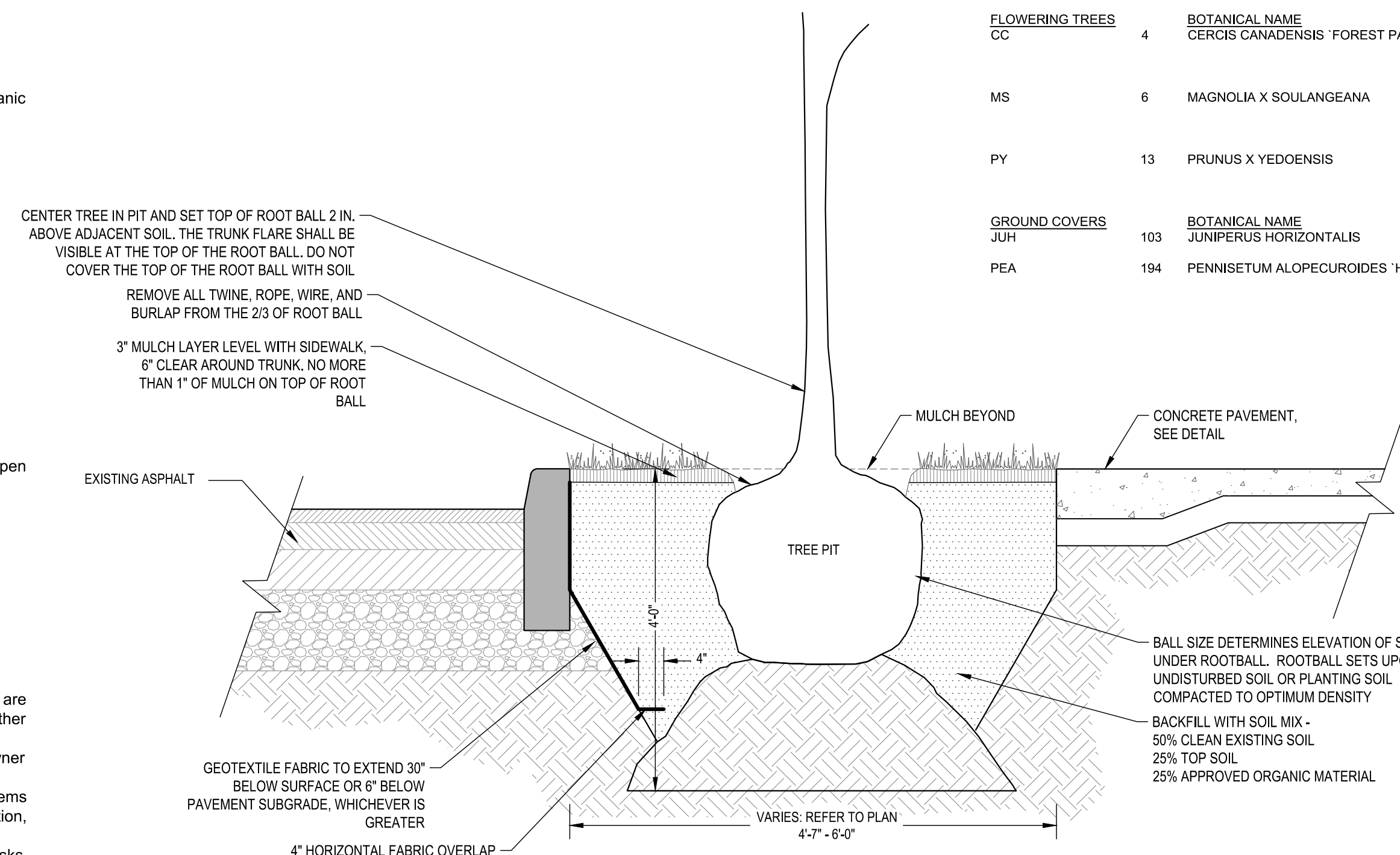
- Position plants to show the most-prominent and well-formed face to most-public view
- Field locate plants and location/spacing/dimension of planting beds on project site prior to beginning installation
- Verify location of individual plants and plant beds prior to beginning installation. Do not proceed without Owner approval

D. Implementation

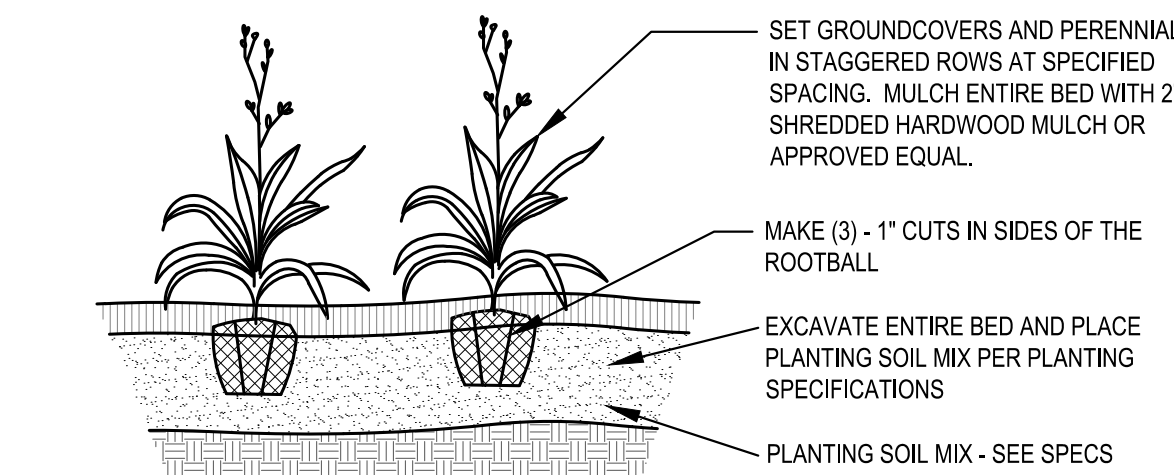
- Pursue work continuously without delay or interruption until completion unless notified otherwise by Owner
- Provide project submittals ahead of commencement of work. Landscape Architect requires a minimum of ten (10) working days from date of receipt for review of submittals and response to Owner and Contractor. Plan accordingly for procurement of materials
- Continuously update implementation schedule and notify Owner of progress. Delays related to material availability are not cause for non-completion of scheduled delivery of work
- Report delays due to weather or site conditions immediately upon finding. Provide recommendation for remedy of schedule delays. Do not work, place or modify frozen soil
- Report delays due to extraordinary natural or other conditions beyond control of Contractor

E. Clean Up

- Remove trash, debris and work materials from site prior to request for substantial completion. Thoroughly clean surfaces impacted by work including building, parking areas, roadways, sidewalks, signs, lights, site furnishings, etc.
- Repair any damage to existing conditions that occurred during execution of work.
- All clean-up and demobilization procedures shall be performed to satisfaction of the Owner and Landscape Architect.



A TREE PIT
NOT TO SCALE



B GROUND COVER PLANTING
NOT TO SCALE

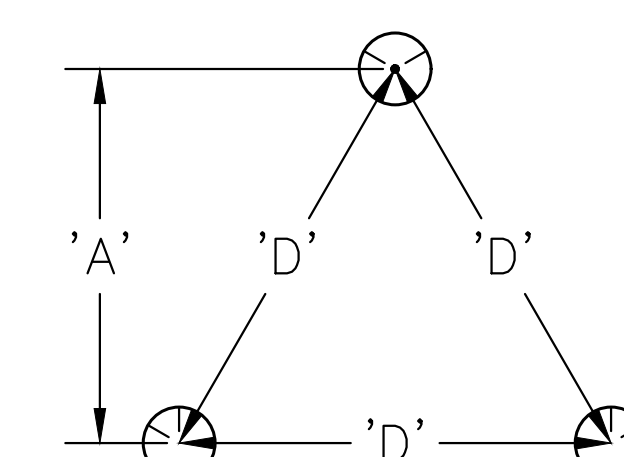
TREE PRESERVATION NOTES

- All work performed shall meet or exceed industry standards as most recently published by the International Society of Arboriculture (ISA), American National Standards Institute (ANSI), or the Tree Care Industry Association (TCIA).
- Prior to construction, contractor shall coordinate all work with city arborist to ensure the proper implementation of the tree preservation plan.
- All construction activity beyond the limits of disturbance shown on plans shall be prohibited unless previously approved. The storage of equipment, materials, chemicals, and debris as well as vehicular traffic or the parking of vehicles shall not be permitted within tree preservation areas. No equipment or materials are to be stored under the dripline of existing trees.
- Prior to the pre-construction meeting with the project engineer and the city arborist, the contractor shall have the limits of clearing and grading marked with a continuous line of flagging. During the pre-construction meeting, possible adjustments to the limits of clearing and grading may be identified in order to increase the area of tree preservation and/or increase the survivability of trees at the edge of the limits of clearing and grading as determined by the city arborist. Sidewalks may need ramping due to adjacent tree root systems.
- A certified arborist shall be present when all root pruning and tree protection fence is installed.
- A certified arborist shall monitor all tree preservation efforts and construction work in order to ensure conformance with all tree preservation proffers.
- All tree roots 2" or larger shall be cut by a certified arborist.

MASTER PLANT SCHEDULE

TREES	GP	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
	8	GINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY MAIDENHAIR TREE	B & B	2.5" CAL	MALE, FRUITLESS STRONG CENTRAL LEADER, CLEAR TRUNK TO 7' HT., MATCHED.
	3	NYSSA SYLVATICA 'DAVID ODOM' TM	AFTERBURNER TUPELO	B & B	2.5" CAL	STRONG CENTRAL LEADER, CLEAR TRUNK TO 7' HT., MATCHED.
	5	QUERCUS PHELLOS 'HIGHTOWER'	HIGHTOWER WILLOW OAK	B & B	2.5" CAL	STRONG CENTRAL LEADER, CLEAR TRUNK TO 7' HT., MATCHED.
FLOWERING TREES	CC	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
	4	CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY EASTERN REDBUD	B & B	2.5" CAL	STRONG CENTRAL LEADER, SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.
	6	MAGNOLIA X SOULANGEANA	SAUCER MAGNOLIA	B & B	2.5" CAL	STRONG CENTRAL LEADER, SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.
	13	PRUNUS X YEDOENSIS	YOSHINO CHERRY	B & B	2.5" CAL	STRONG CENTRAL LEADER, SINGLE STEM, CLEAR TRUNK TO 7' HT., MATCHED.
GROUND COVERS	JUH	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
	103	JUNIPERUS HORIZONTALIS	CREeping JUNIPER	4" POT	18" O.C.	
	194	PENNISETUM ALOPECUROIDES 'HA MELN'	HA MELN FOUNTAIN GRASS	FLAT	18" O.C.	

NOTE: GROUNDCOVERS AND PERENNIALS TO BE INSTALLED WITH TRIANGULAR SPACING

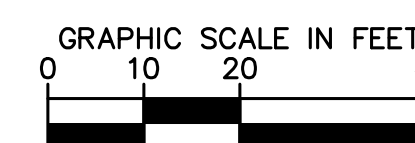


B GROUND COVER SPACING
NOT TO SCALE

PLANT SPACING 'D'	ROW 'A'
8" O.C.	6.93" O.C.
10" O.C.	8.66" O.C.
12" O.C.	10.4" O.C.
18" O.C.	15.6" O.C.
24" O.C.	20.8" O.C.
36" O.C.	30.0" O.C.
48" O.C.	31.5" O.C.

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No.	REVISIONS	DATE	BY



Kimley»Horn

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RICHMOND, VIRGINIA 23230
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AUTHORITY: CITY OF RICHMOND

DESIGN BY:
DRAWN BY:
CHECKED BY:

REVIEWED BY:

SCALE

DATE

SHEET

L10.00

PROJECT 109306

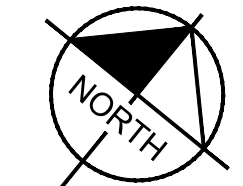
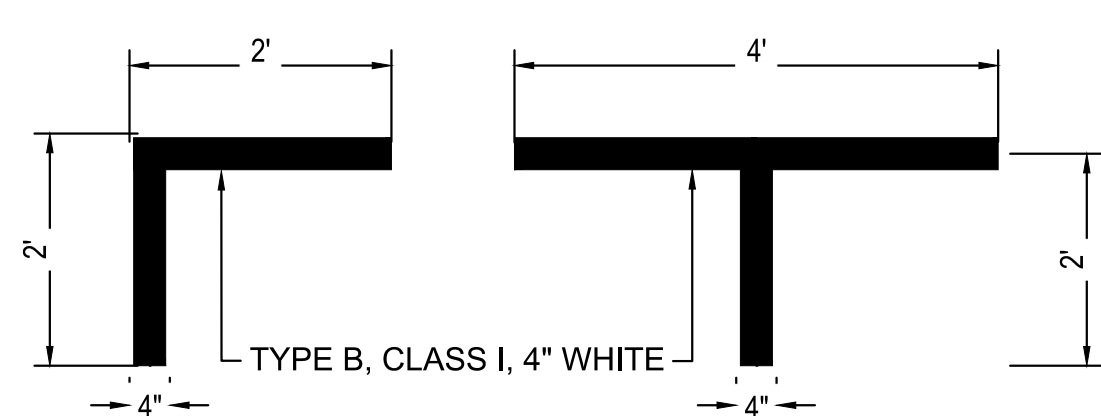
DRAWING NO.

O-28933

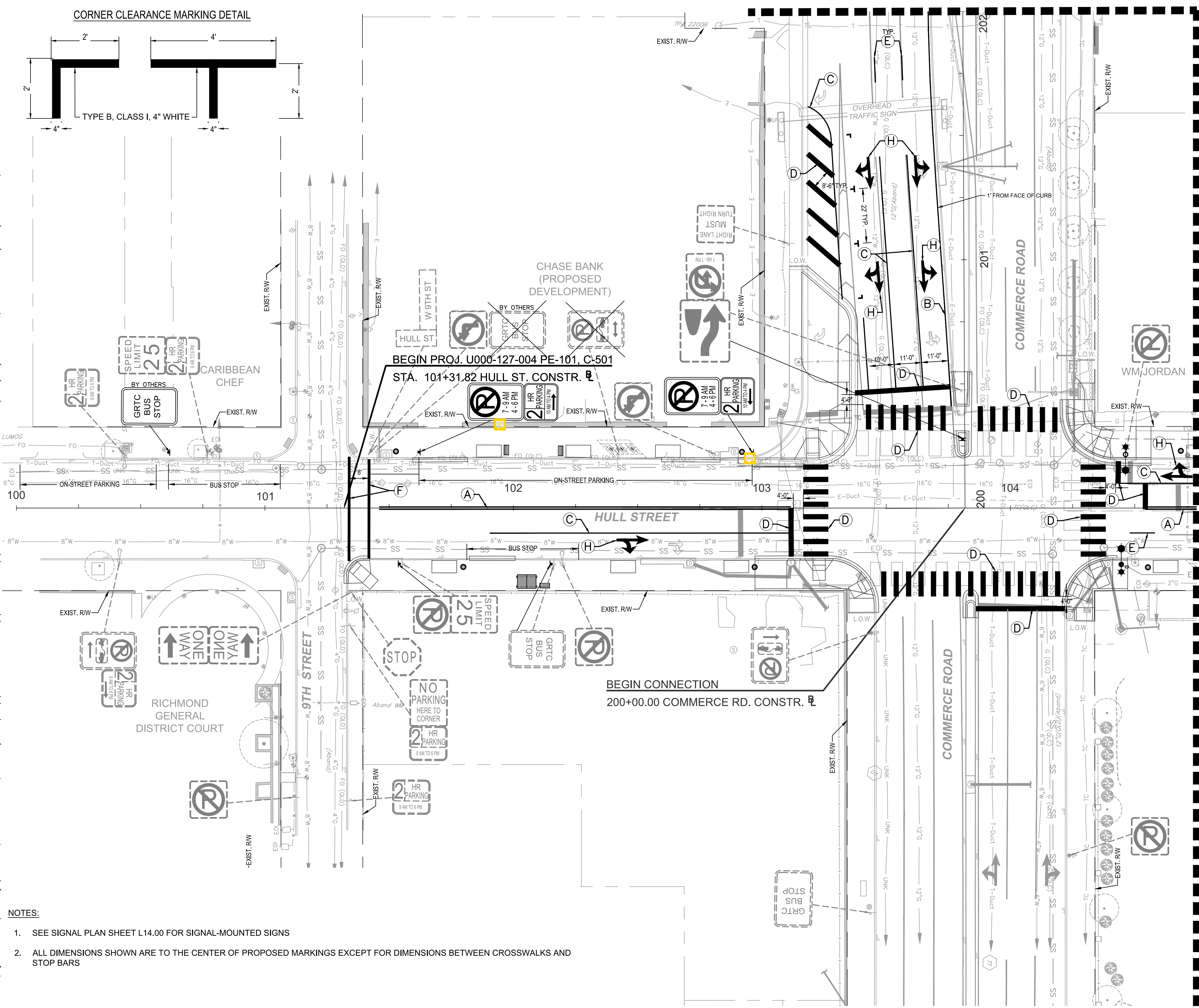
HULL STREET STREETSCAPE PLANTING NOTES & DETAILS

MATCHLINE STA: 202+00 - SEE THIS SHEET

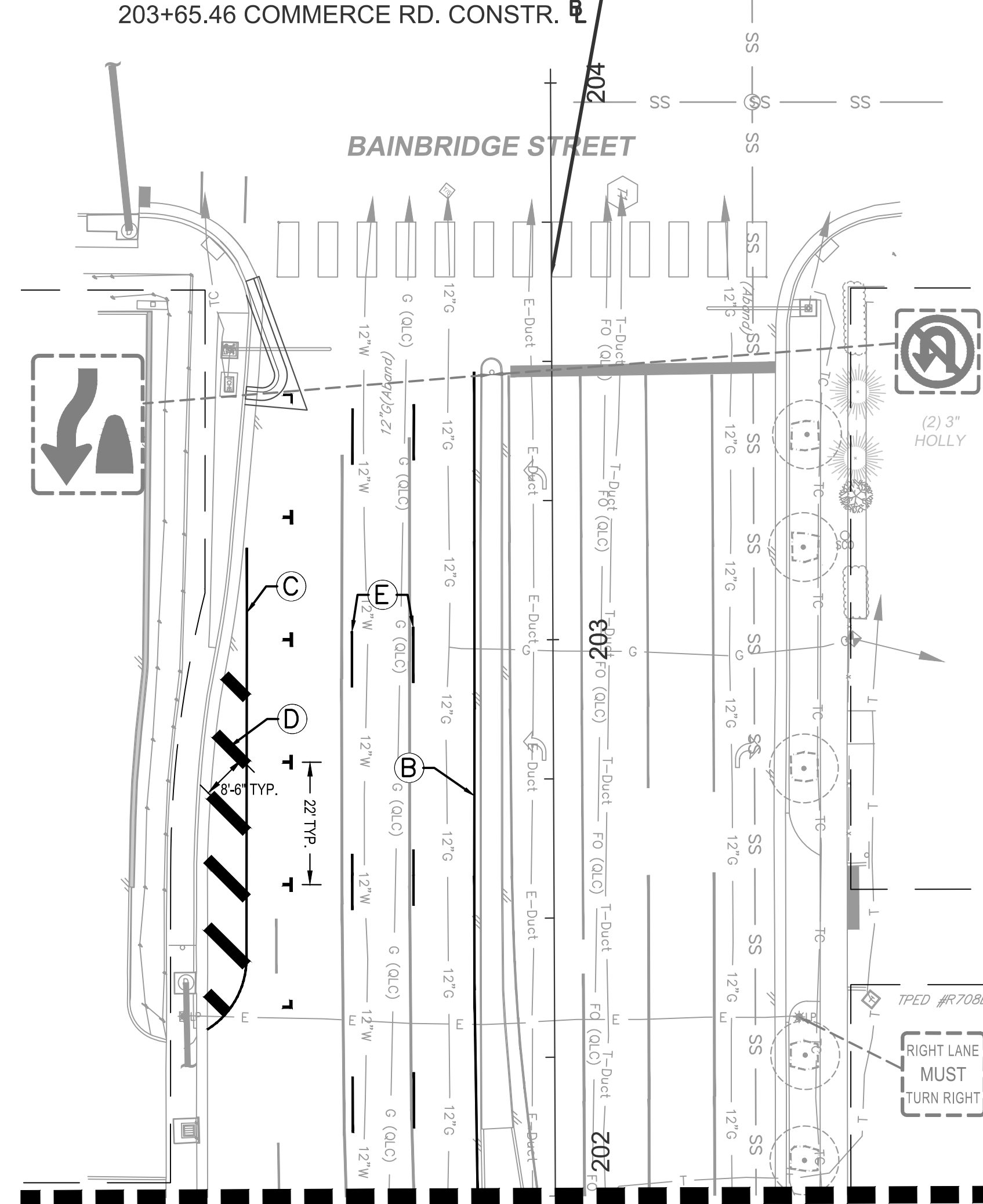
CORNER CLEARANCE MARKING DETAIL



Drawing name: K:\RVC\PROJECTS\113357_RIC_Coal\028_Hull_St_StreetScope\CADD\Sheets\SIGNING AND MARKING PLANS.dwg L11.00 SIGNING & MARKING PLAN May 14, 2021 3:46pm By: Alyssa Baird
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END CONNECTION
203+65.46 COMMERCE RD. CONSTR.



MATCHLINE STA: 202+00 - SEE THIS SHEET

MATCHLINE STA: 104+75 - SEE SHEET L11.01

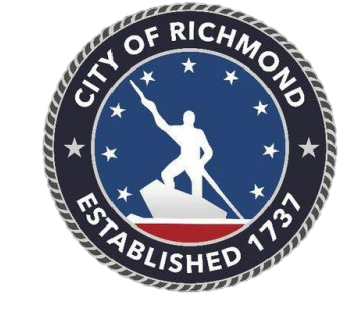
STANDARD SIGN LEGEND

PLAN ITEM	PLAN SYMBOL	
	PROPOSED	EXISTING
Single Post Sign Support		
SIGN CALL-OUTS		
Existing Sign to Remain or to be Relocated		
Existing Sign to be Removed		
Proposed Sign Panel		

- NOTES:
- SEE SIGNAL PLAN SHEET L14.00 FOR SIGNAL-MOUNTED SIGNS
 - ALL DIMENSIONS SHOWN ARE TO THE CENTER OF PROPOSED MARKINGS EXCEPT FOR DIMENSIONS BETWEEN CROSSWALKS AND STOP BARS

PAVEMENT MARKING LEGEND

- | | |
|--|--|
| (A) TYPE B, CLASS I, DOUBLE YELLOW, 4" WIDTH WITH 4" SPACE BETWEEN LINES | (F) TYPE B, CLASS I, WHITE, 12" WIDTH |
| (B) TYPE B, CLASS I, YELLOW, 4" WIDTH | (G) TYPE B, CLASS I, WHITE SINGLE TURN ARROW |
| (C) TYPE B, CLASS I, WHITE, 4" WIDTH | (H) TYPE B, CLASS I, WHITE DOUBLE TURN ARROW |
| (D) TYPE B, CLASS I, WHITE, 24" WIDTH | (J) TYPE B, CLASS I, WHITE TRIPLE TURN ARROW |
| (E) TYPE B, CLASS I, WHITE, 4" WIDTH, 10' LINE WITH 30' SPACING | |



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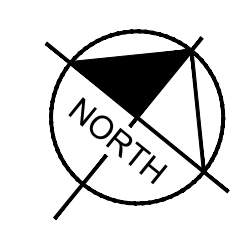
HULL STREET STREETSCAPE
SIGNING & MARKING PLAN

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
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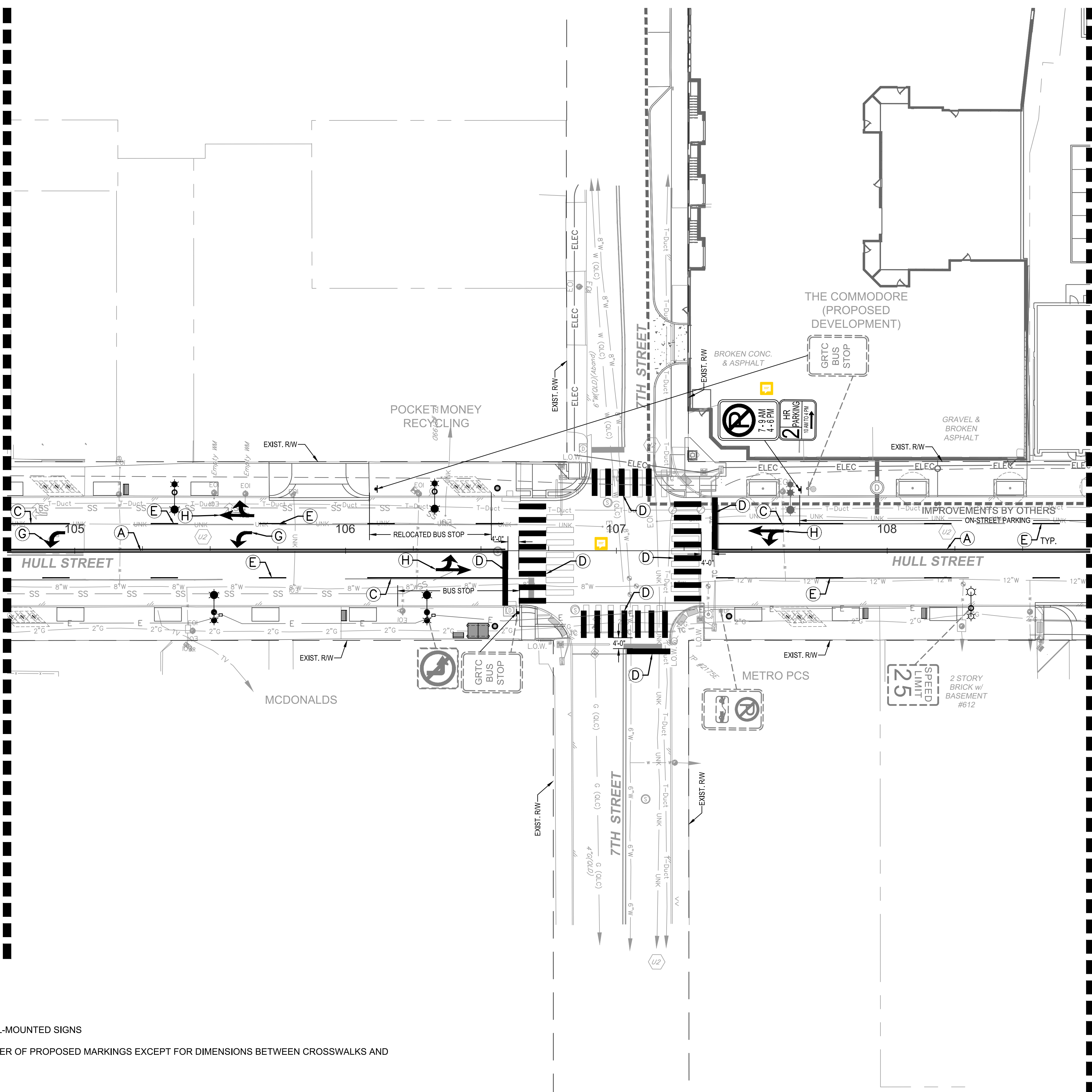
Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

Drawing name: K:\RICHMOND\113357_RIC_RIC_Coal\028_Hull_St_StreetScope\CADD\Sheets\SIGNING AND MARKING PLANS.dwg L11.01 SIGNING & MARKING PLAN May 14, 2021 3:45pm By: Alyssa Baird
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MATCHLINE STA: 104+75 - SEE SHEET L11.00

MATCHLINE STA: 108+75 - SEE SHEET L11.02



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Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

No.	REVISIONS	DATE	BY

PAVEMENT MARKING LEGEND	
(A) TYPE B, CLASS 1, DOUBLE YELLOW, 4" WIDTH WITH 4" SPACE BETWEEN LINES	(F) TYPE B, CLASS 1, WHITE, 12" WIDTH
(B) TYPE B, CLASS 1, YELLOW, 4" WIDTH	(G) TYPE B, CLASS 1, WHITE SINGLE TURN ARROW
(C) TYPE B, CLASS 1, WHITE, 4" WIDTH	(H) TYPE B, CLASS 1, WHITE DOUBLE TURN ARROW
(D) TYPE B, CLASS 1, WHITE, 24" WIDTH	(J) TYPE B, CLASS 1, WHITE TRIPLE TURN ARROW
(E) TYPE B, CLASS 1, WHITE, 4" WIDTH, 10' LINE WITH 30' SPACING	

GRAPHIC SCALE IN FEET
0 10 20 40

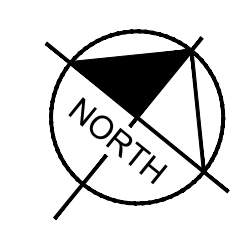
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Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel: 804-673-3882



**HULL STREET STREETSCAPE
SIGNING & MARKING PLAN**

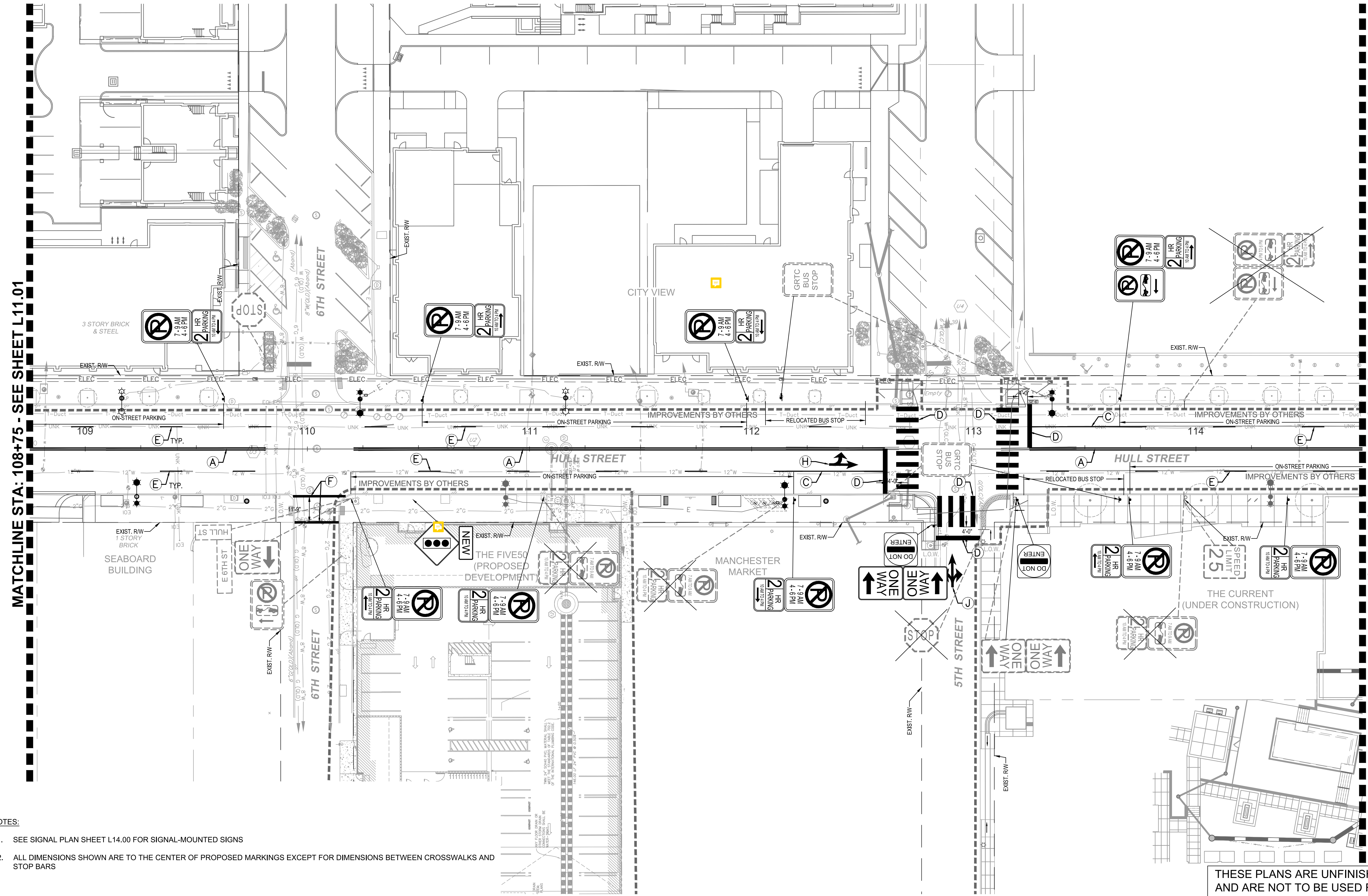
AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
SHEET		DRAWING NO.	
L11.01		O-28933	

Drawing name: K:\RVC_IP\10113357_RIC_Coll_V028_Hull_St_StreetScope\CADD\Sheets\SIGNING AND MARKING PLANS.dwg L11.02 SIGNING & MARKING PLAN May 14, 2021 4:21pm By: Alyssa Baird
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MATCHLINE STA: 108+75 - SEE SHEET L11.01

MATCHLINE STA: 114+75 - SEE SHEET L11.03



- NOTES:**
- SEE SIGNAL PLAN SHEET L14.00 FOR SIGNAL-MOUNTED SIGNS
 - ALL DIMENSIONS SHOWN ARE TO THE CENTER OF PROPOSED MARKINGS EXCEPT FOR DIMENSIONS BETWEEN CROSSWALKS AND STOP BARS

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Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

No.	REVISIONS	DATE	BY

PAVEMENT MARKING LEGEND			
(A)	TYPE B, CLASS I, DOUBLE YELLOW, 4" WIDTH WITH 4" SPACE BETWEEN LINES	(F)	TYPE B, CLASS I, WHITE, 12" WIDTH
(B)	TYPE B, CLASS I, YELLOW, 4" WIDTH	(G)	TYPE B, CLASS I, WHITE SINGLE TURN ARROW
(C)	TYPE B, CLASS I, WHITE, 4" WIDTH	(H)	TYPE B, CLASS I, WHITE DOUBLE TURN ARROW
(D)	TYPE B, CLASS I, WHITE, 24" WIDTH	(J)	TYPE B, CLASS I, WHITE TRIPLE TURN ARROW
(E)	TYPE B, CLASS I, WHITE, 4" WIDTH, 10' LINE WITH 30' SPACING		

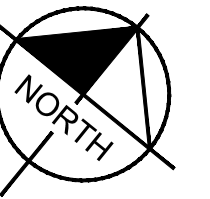
GRAPHIC SCALE IN FEET
0 10 20 40

Kimley-Horn
Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel: 804-673-3882



**HULL STREET STREETSCAPE
SIGNING & MARKING PLAN**

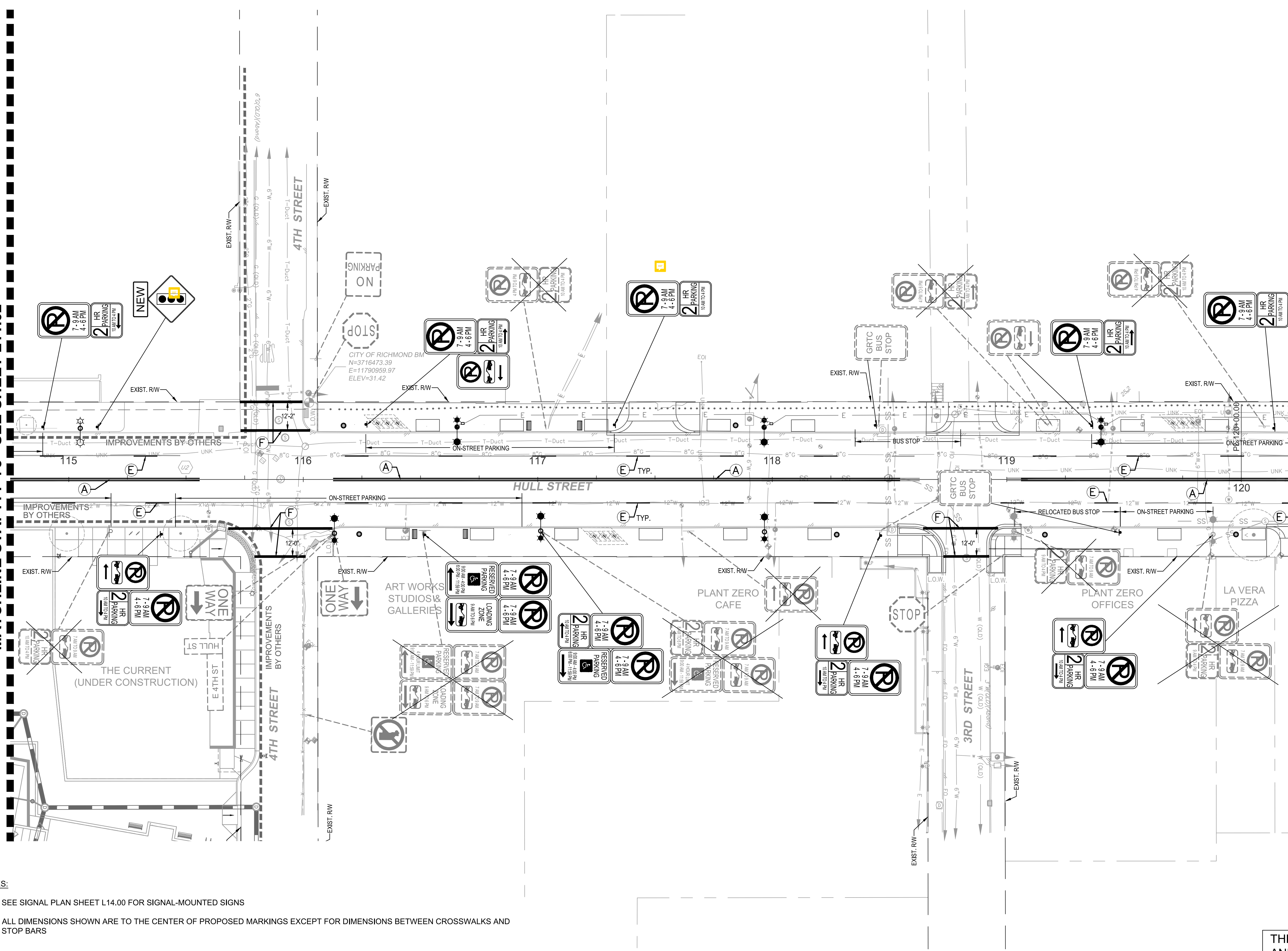
AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
SHEET:		DRAWING NO.:	
L11.02		O-28933	



Drawing name: K:\RICHMOND\113357_RIC_OH_Coll\028_Hull_St_StreetScope\CADD\Sheets\SIGNING AND MARKING PLANS.dwg May 14, 2021 3:45pm By: Alyssa Baird
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MATCHLINE STA: 114+75 - SEE SHEET L11.02

MATCHLINE STA: 120+25 - SEE SHEET L11.04



NOTES:

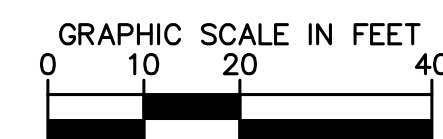
1. SEE SIGNAL PLAN SHEET L14.00 FOR SIGNAL-MOUNTED SIGNS
2. ALL DIMENSIONS SHOWN ARE TO THE CENTER OF PROPOSED MARKINGS EXCEPT FOR DIMENSIONS BETWEEN CROSSWALKS AND STOP BARS

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

PAVEMENT MARKING LEGEND

- | | |
|--|--|
| (A) TYPE B, CLASS 1, DOUBLE YELLOW, 4" WIDTH WITH 4" SPACE BETWEEN LINES | (F) TYPE B, CLASS 1, WHITE, 12" WIDTH |
| (B) TYPE B, CLASS 1, YELLOW, 4" WIDTH | (G) TYPE B, CLASS 1, WHITE SINGLE TURN ARROW |
| (C) TYPE B, CLASS 1, WHITE, 4" WIDTH | (H) TYPE B, CLASS 1, WHITE DOUBLE TURN ARROW |
| (D) TYPE B, CLASS 1, WHITE, 24" WIDTH | (J) TYPE B, CLASS 1, WHITE TRIPLE TURN ARROW |
| (E) TYPE B, CLASS 1, WHITE, 4" WIDTH, 10' LINE WITH 30' SPACING | |

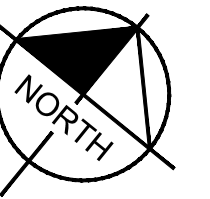


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RICHMOND, VIRGINIA 23230
Tel: 804-673-3882

HULL STREET STREETSCAPE
SIGNING & MARKING PLAN

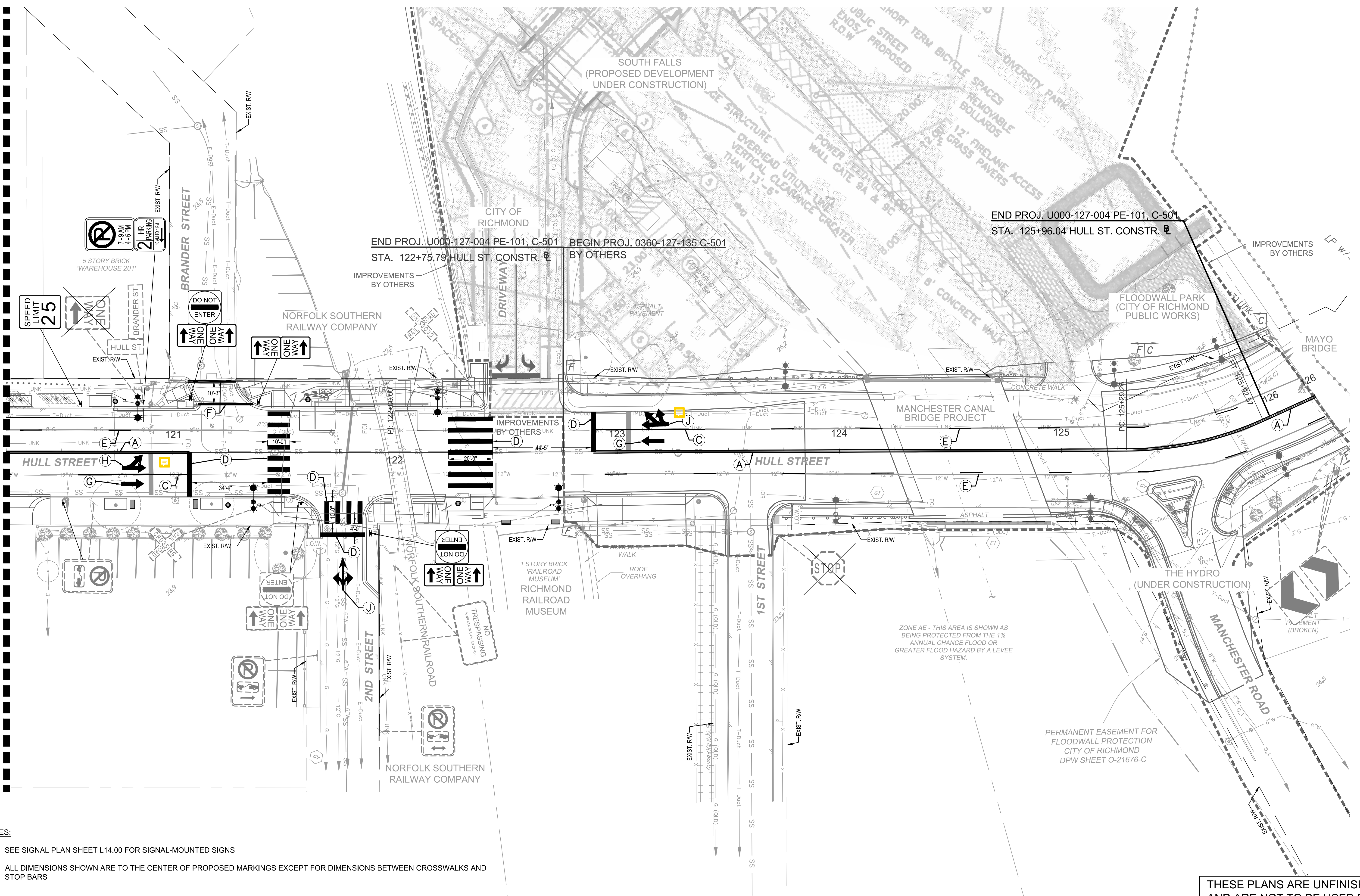
AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
		SHEET:	DRAWING NO.:
		L11.03	O-28933

No.	REVISIONS	DATE	BY



Drawing name: K:\RICHMOND\113357_RIC_OH_Coll\028_Hull_St_StreetScope\CADD\Sheets\SIGNING AND MARKING PLANS.dwg May 14, 2021 3:46pm By: Alyssa Baird
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MATCHLINE STA: 120+25 - SEE SHEET L11.03



- NOTES:
- SEE SIGNAL PLAN SHEET L14.00 FOR SIGNAL-MOUNTED SIGNS
 - ALL DIMENSIONS SHOWN ARE TO THE CENTER OF PROPOSED MARKINGS EXCEPT FOR DIMENSIONS BETWEEN CROSSWALKS AND STOP BARS

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Kimley-Horn and Associates, Inc.
Richmond, Virginia
LANDSCAPE ARCHITECT

PAVEMENT MARKING LEGEND	
(A)	TYPE B, CLASS 1, DOUBLE YELLOW, 4" WIDTH WITH 4" SPACE BETWEEN LINES
(B)	TYPE B, CLASS 1, YELLOW, 4" WIDTH
(C)	TYPE B, CLASS 1, WHITE, 4" WIDTH
(D)	TYPE B, CLASS 1, WHITE, 24" WIDTH
(E)	TYPE B, CLASS 1, WHITE, 4" WIDTH, 10' LINE WITH 30' SPACING
(F)	TYPE B, CLASS 1, WHITE, 12" WIDTH
(G)	TYPE B, CLASS 1, WHITE SINGLE TURN ARROW
(H)	TYPE B, CLASS 1, WHITE DOUBLE TURN ARROW
(J)	TYPE B, CLASS 1, WHITE TRIPLE TURN ARROW

GRAPHIC SCALE IN FEET
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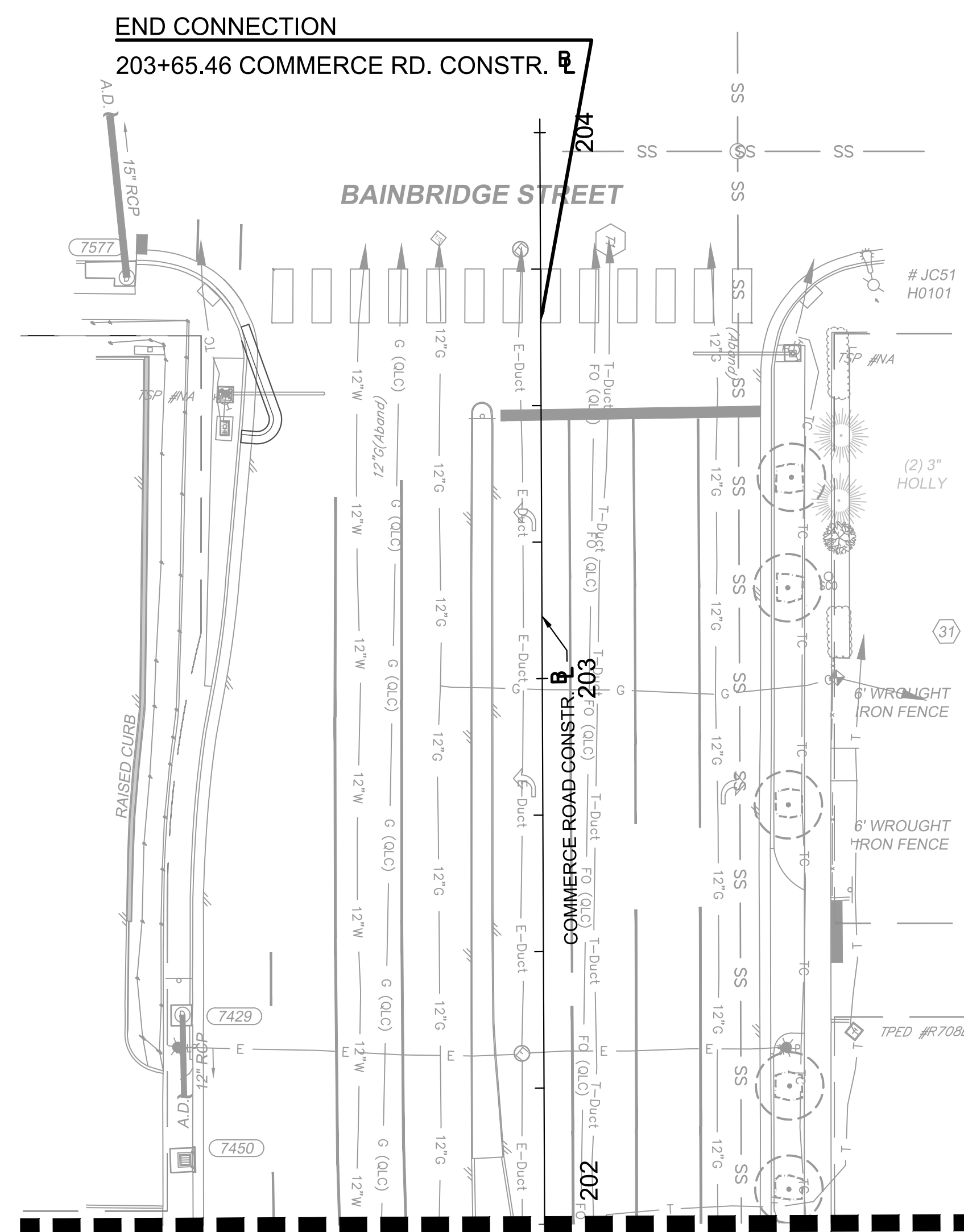
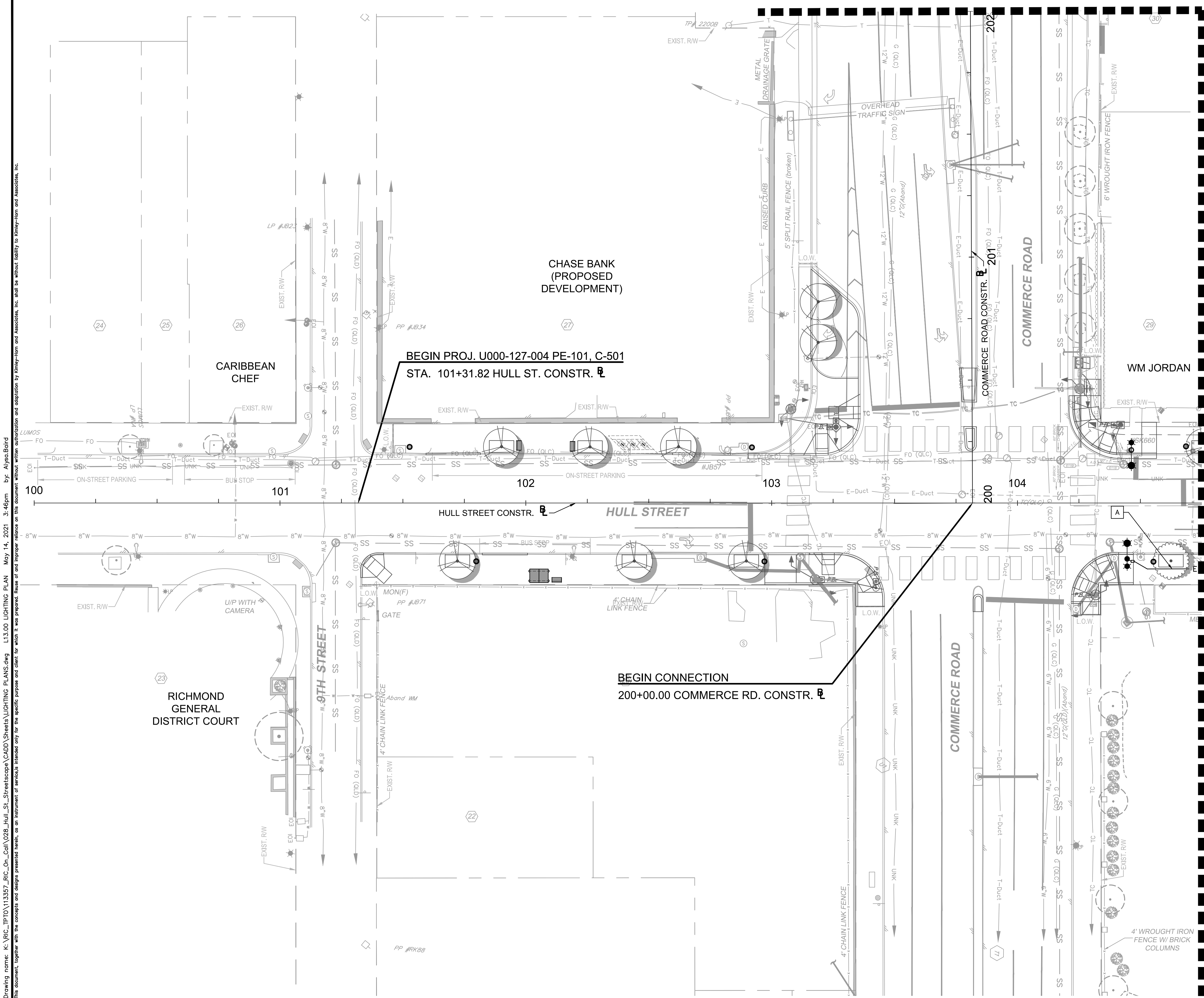
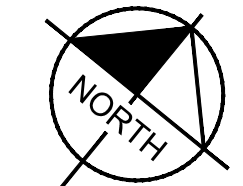
Kimley-Horn
Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel: 804-673-3882



**HULL STREET STREETScape
SIGNING & MARKING PLAN**

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE	DATE
CHECKED BY:		1" = 20'	5-14-2021
		SHEET	DRAWING NO.
		L11.04	O-28933

MATCHLINE STA: 202+00 - SEE THIS SHEET



MATCHLINE STA: 104+75 - SEE SHEET L13.01

MATCHLINE STA: 202+00 - SEE THIS SHEET

- NOTES:
- ALL PROPOSED LIGHT POLE FOUNDATIONS SHALL BE INSTALLED MINIMUM 18" FROM FACE OF CURB

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

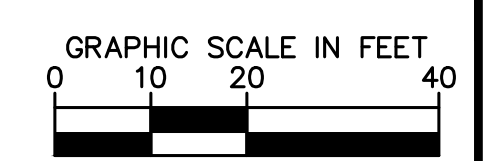
Kimley-Horn and Associates, Inc.
Richmond, Virginia
ELECTRICAL ENGINEER

Drawing name: K:\RVC_TPT\113357_RIC_Coll\028_Hull_St_StreetScope\CADD\Sheets\LIGHTING PLANS.dwg L13.00 LIGHTING PLAN May 14, 2021 3:46pm
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No.	REVISIONS	DATE	BY

- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE
- PROP. JUNCTION BOX
SEE DETAIL ESPF08, NOTE 11 SHEET L15.00

A INSTALL 2" CONDUIT MINIMUM OF 2' FROM EXISTING GAS CONDUIT. HAND TRENCH ELECTRICAL CONDUIT.



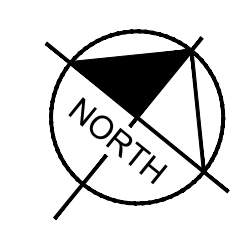
Kimley-Horn
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RICHMOND, VIRGINIA 23230
Tel: 804-673-3882



AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE	DATE
CHECKED BY:		1" = 20'	5-14-2021
SHEET		DRAWING NO.	
L13.00		O-28933	

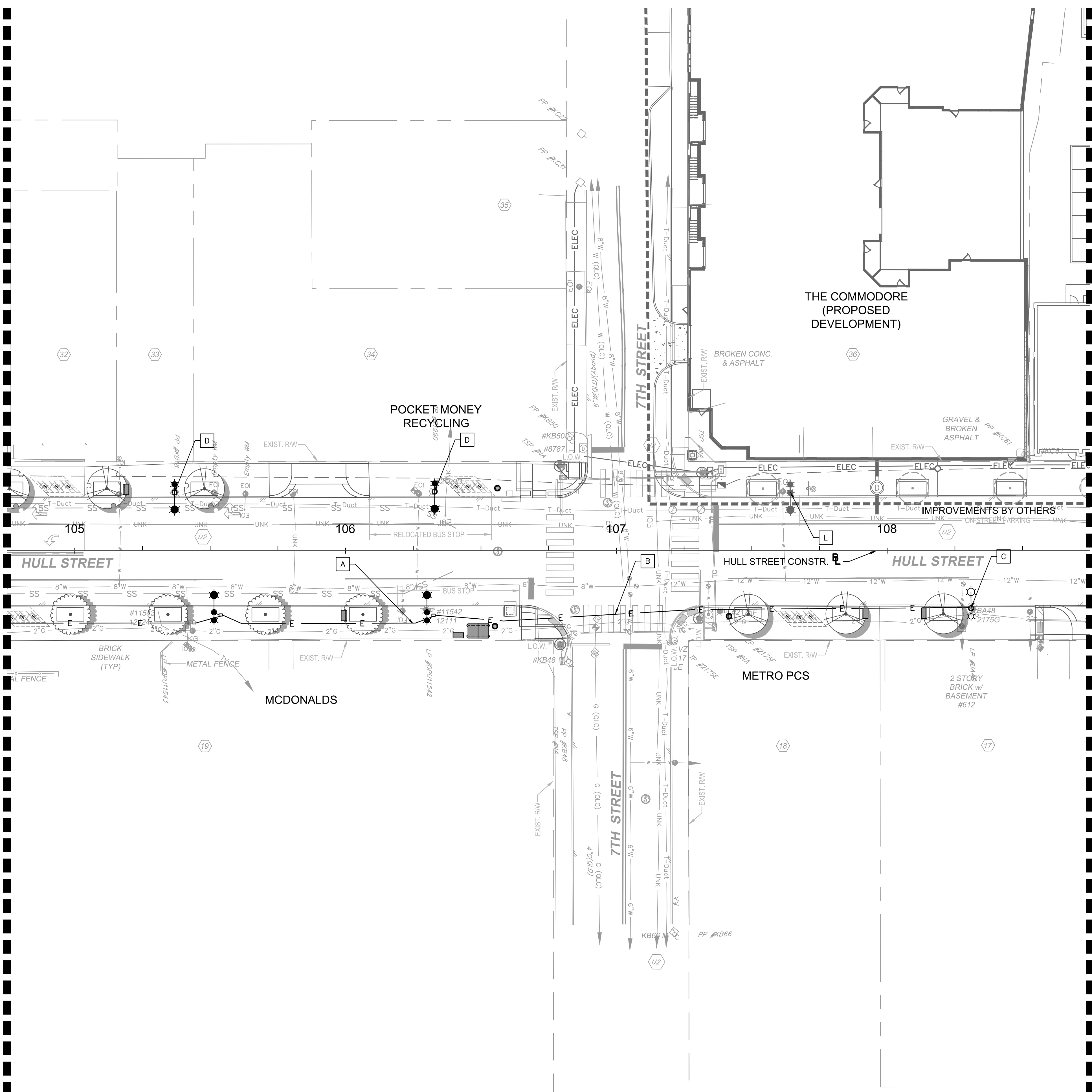
HULL STREET STREETSCAPE
LIGHTING PLAN

Drawing name: K:\RIC_T\10113357_RIC_01\028_Hull_St_StreetScope\CADD\Sheets\LIGHTING PLANS.dwg L13.01 LIGHTING PLAN May 14, 2021 3:46pm By: Alyssa Baird
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MATCHLINE STA: 104+75 - SEE SHEET L5.00

MATCHLINE STA: 108+75 - SEE SHEET L13.02



NOTES:

- ALL PROPOSED LIGHT POLE FOUNDATIONS SHALL BE INSTALLED MINIMUM 18" FROM FACE OF CURB

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Kimley-Horn and Associates, Inc.
Richmond, Virginia
ELECTRICAL ENGINEER

No.	REVISIONS	DATE	BY

- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE
- PROP. JUNCTION BOX
SEE DETAIL ESPF08, NOTE 11 SHEET L15.00

- A** INSTALL 2" CONDUIT MINIMUM OF 2' FROM EXISTING GAS CONDUIT. HAND TRENCH ELECTRICAL CONDUIT.
- B** INSTALL (2) 2" CONDUIT ENCASED IN CONCRETE UNDER DRIVABLE SURFACES PER DPU STANDARDS. MAINTAIN 2" SEPARATION FROM GAS.
- C** EXISTING OVERHEAD POWER TO TRANSITION TO UNDERGROUND. COORDINATE TRANSITION WITH DPU. HAND TRENCH CONDUIT LAST 10' TO POLE DUE TO PROXIMITY TO GAS LINE.

- D** CONTRACTOR TO INSTALL NEW LIGHT FIXTURE ON EXISTING POLE. DPU TO PROVIDE OVERHEAD POWER.
- L** LIGHT TO BE PROVIDED BY OTHERS

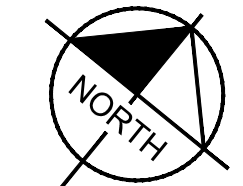
GRAPHIC SCALE IN FEET
0 10 20 40

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Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel: 804-673-3882



HULL STREET STREETSCAPE LIGHTING PLAN				PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	DRAWING NO.:
CHECKED BY:		1" = 20'	5-14-2021	L13.01	O-28933

Drawing name: K:\RVC_IP\10113357_RIC_01_Coll\028_Hull_St_StreetScope\CADD\Sheets\LIGHTING PLANS.dwg L13.02 LIGHTING PLAN May 14, 2021 4:21pm By: Alyssa Beard
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NOTES:

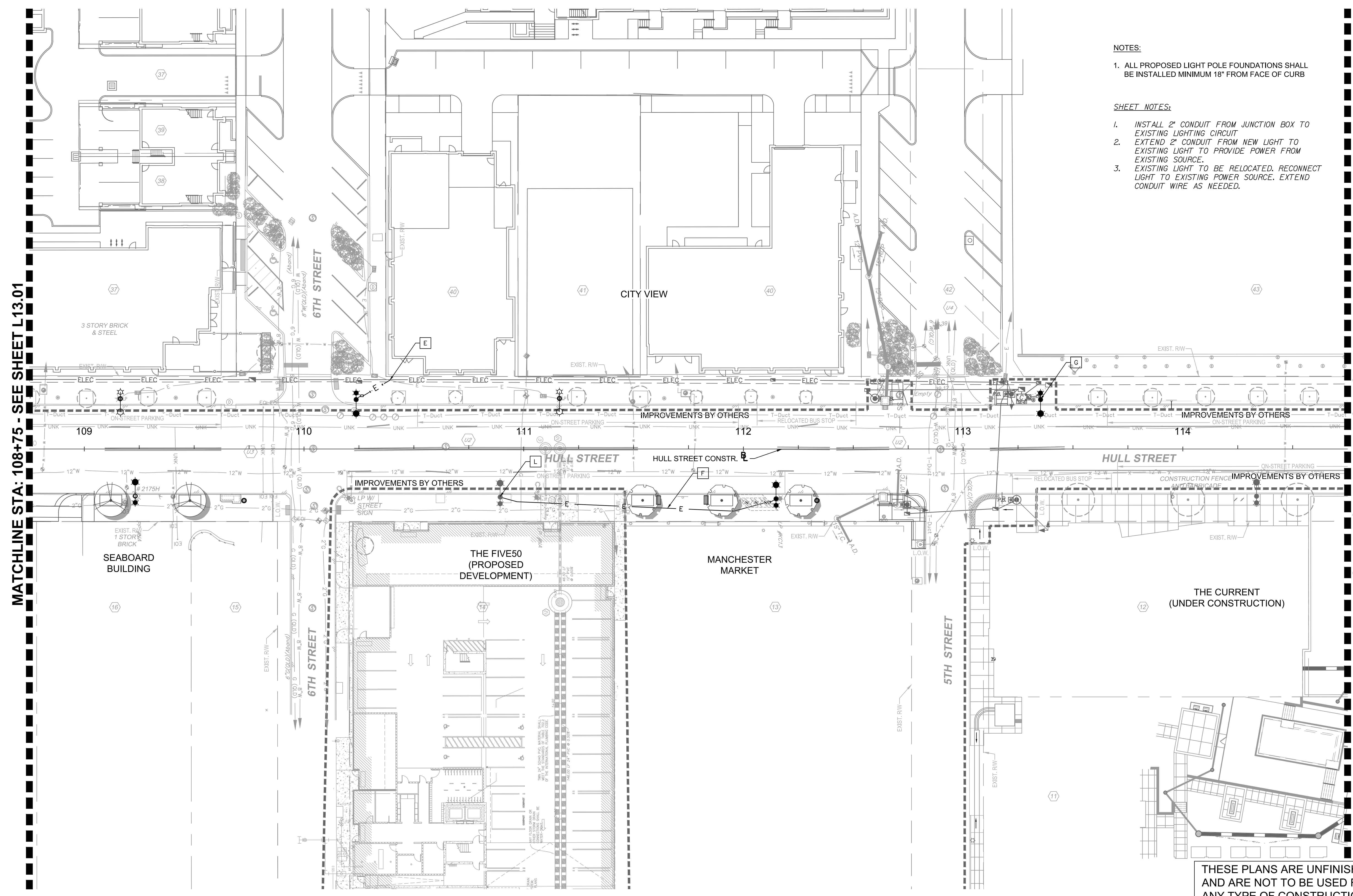
1. ALL PROPOSED LIGHT POLE FOUNDATIONS SHALL BE INSTALLED MINIMUM 18" FROM FACE OF CURB

SHEET NOTES:

1. INSTALL 2" CONDUIT FROM JUNCTION BOX TO EXISTING LIGHTING CIRCUIT
2. EXTEND 2" CONDUIT FROM NEW LIGHT TO EXISTING LIGHT TO PROVIDE POWER FROM EXISTING SOURCE.
3. EXISTING LIGHT TO BE RELOCATED. RECONNECT LIGHT TO EXISTING POWER SOURCE. EXTEND CONDUIT WIRE AS NEEDED.

MATCHLINE STA: 108+75 - SEE SHEET L13.01

MATCHLINE STA: 114+75 - SEE SHEET L13.03



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Kimley-Horn and Associates, Inc.
Richmond, Virginia
ELECTRICAL ENGINEER

- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE
- PROP. JUNCTION BOX
SEE DETAIL ESPF08, NOTE 11 SHEET L15.00
- E INSTALL 2" CONDUIT FROM JUNCTION BOX TO EXISTING LIGHTING CIRCUIT. MAINTAIN 2' FROM EXISTING GAS LINE. HAND TRENCH ELECTRICAL CONDUIT.
- F EXTEND 2" CONDUIT FROM NEW LIGHT TO EXISTING LIGHT TO PROVIDE POWER FROM EXISTING SOURCE.
- G EXISTING LIGHT TO BE RELOCATED. RECONNECT LIGHT TO EXISTING POWER SOURCE. EXTEND CONDUIT WIRE AS NEEDED.
- L LIGHT PROVIDED BY OTHERS

GRAPHIC SCALE IN FEET
0 10 20 40

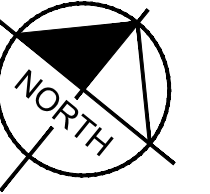
Kimley-Horn
Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel: 804-673-3882



HULL STREET STREETSCAPE				LIGHTING PLAN	
AUTHORITY: CITY OF RICHMOND		PROJECT 109306			
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	DRAWING NO.:
CHECKED BY:		1" = 20'	5-14-2021	L13.02	O-28933

No.	REVISIONS	DATE	BY

Drawing name: K:\RICHMOND\113357_RIC_OH_Coll\028_Hull_St_StreetScope\CADD\Sheets\LIGHTING PLANS.dwg L13.03 LIGHTING PLAN May 14, 2021 3:47pm by: Alysa Baird
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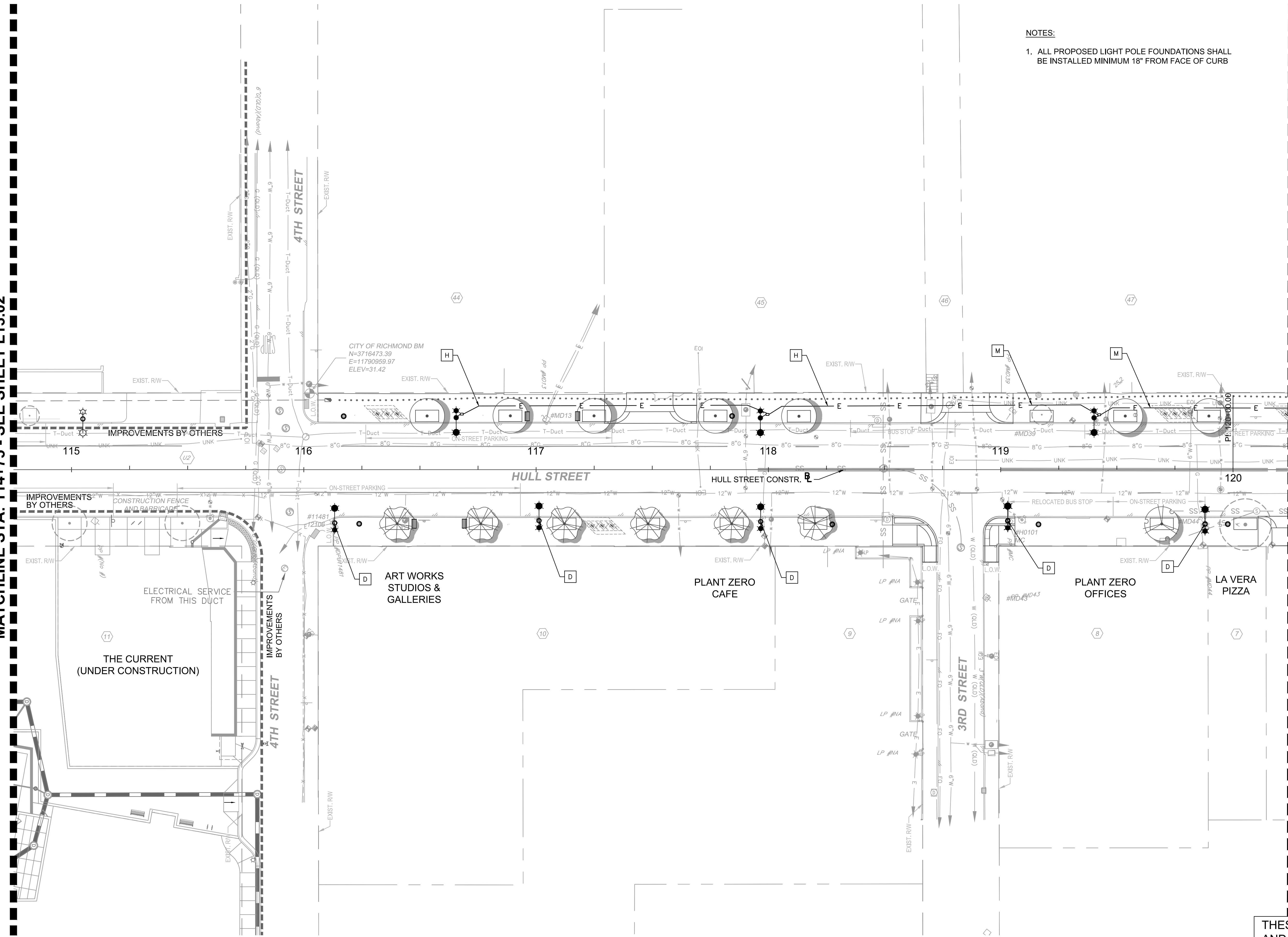


NOTES:

1. ALL PROPOSED LIGHT POLE FOUNDATIONS SHALL BE INSTALLED MINIMUM 18" FROM FACE OF CURB

MATCHLINE STA: 114+75 - SEE SHEET L13.02

MATCHLINE STA: 120+25 - SEE SHEET L13.04



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Richmond, Virginia
ELECTRICAL ENGINEER

No.	REVISIONS	DATE	BY

- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE
- PROP. JUNCTION BOX
SEE DETAIL ESPF08, NOTE 11 SHEET L15.00

- D DPU TO PROVIDE OVERHEAD POWER TO NEW LIGHTS ON EXISTING POLE
- M INSTALL 2" CONDUIT TRENCHED TO EACH LIGHT POLE. KEEP MINIMUM 2" SEPARATION FROM UNKNOWN UTILITY.

GRAPHIC SCALE IN FEET
0 10 20 40

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Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel: 804-673-3882



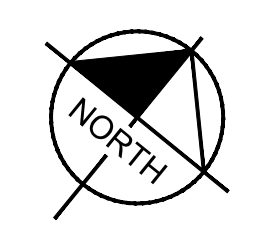
AUTHORITY: CITY OF RICHMOND
DESIGN BY: _____
DRAWN BY: _____
CHECKED BY: _____

**HULL STREET STREETSCAPE
LIGHTING PLAN**

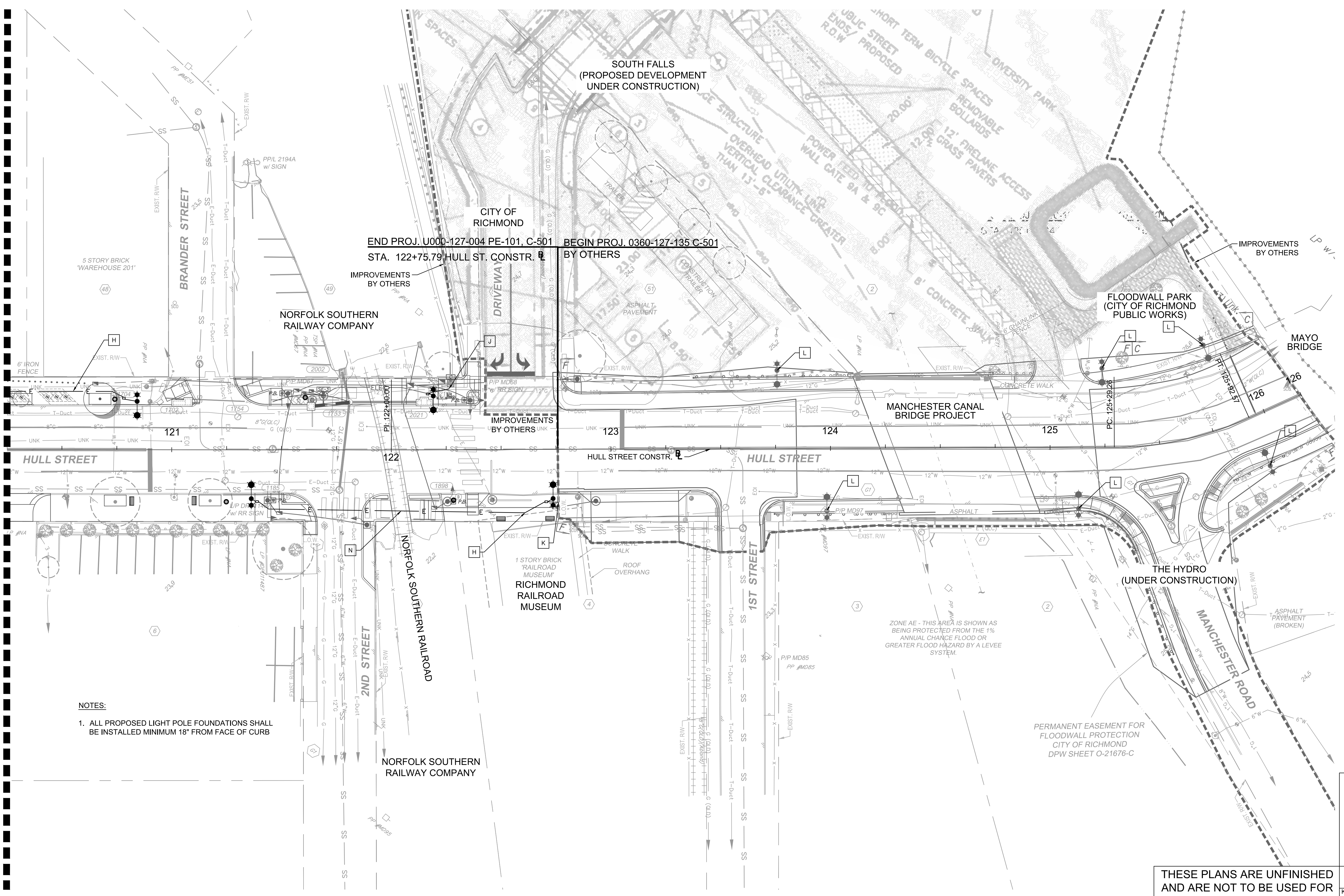
PROJECT 109306

SCALE	DATE	SHEET	DRAWING NO.
1" = 20'	5-14-2021	L13.03	O-28933

Drawing name: K:\RICHMOND\113357_RIC_OH_Coll\028_Hull_St_StreetScope\CADD\Sheets\LIGHTING PLANS.dwg L13.04 LIGHTING PLAN May 14, 2021 3:47pm by: Alysa Baird
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MATCHLINE STA: 120+25 - SEE SHEET L13.03



NOTES:
1. ALL PROPOSED LIGHT POLE FOUNDATIONS SHALL BE INSTALLED MINIMUM 18" FROM FACE OF CURB

END PROJ. U000-127-004 PE-101, C-501
STA. 122+75.79 HULL ST. CONSTR. BY OTHERS
BEGIN PROJ. 0360-127-135 C-501
BY OTHERS

ZONE AE - THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD OR GREATER FLOOD HAZARD BY A LEVEE SYSTEM.

PERMANENT EASEMENT FOR FLOODWALL PROTECTION
CITY OF RICHMOND
DPW SHEET O-21676-C

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Kimley-Horn and Associates, Inc.
Richmond, Virginia
ELECTRICAL ENGINEER

No.	REVISIONS	DATE	BY

- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE
- PROP. JUNCTION BOX
SEE DETAIL ESPF08, NOTE 11 SHEET L15.00
- INSTALL 2" CONDUIT TRENCHED TO EACH LIGHT POLE.
- INSTALL 2" CONDUIT TO TIE IN WITH OVERHEAD POWER. COORDINATE TRANSITION FROM OVERHEAD TO UNDERGROUND WITH DPU.
- TIE 2" CONDUIT INTO EXISTING STUB PROVIDED BY OTHERS. CONTRACTOR TO DETERMINE EXACT TIE IN LOCATION IN FIELD.
- LIGHT PROVIDED BY OTHERS.
- CONTRACTOR TO DIRECTION DRILL (2) 2" CONDUIT UNDER RAILROAD LINE.

GRAPHIC SCALE IN FEET
0 10 20 40

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Kimley-Horn and Associates, Inc.
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RICHMOND, VIRGINIA 23230
Tel. 804-673-3882

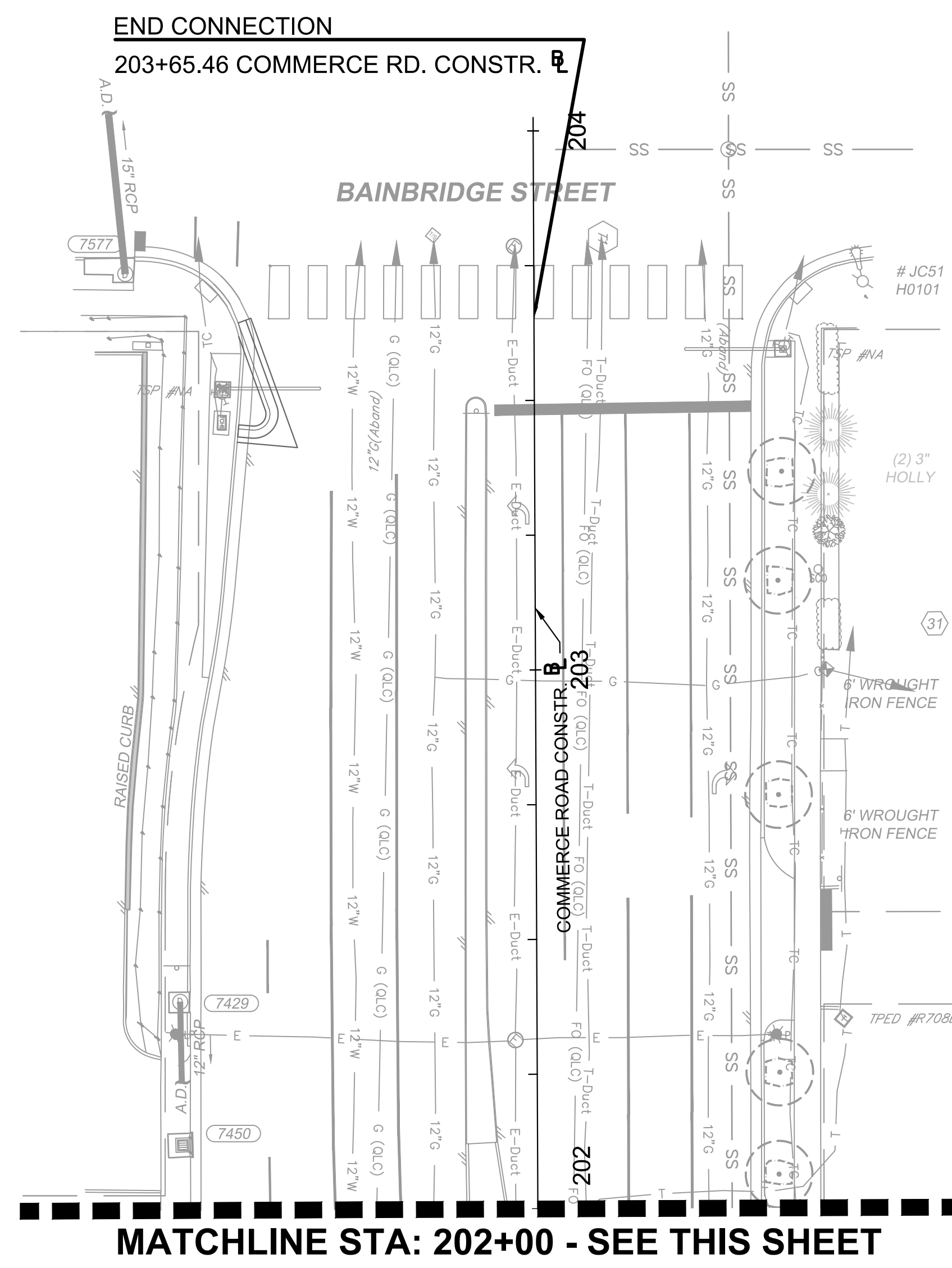
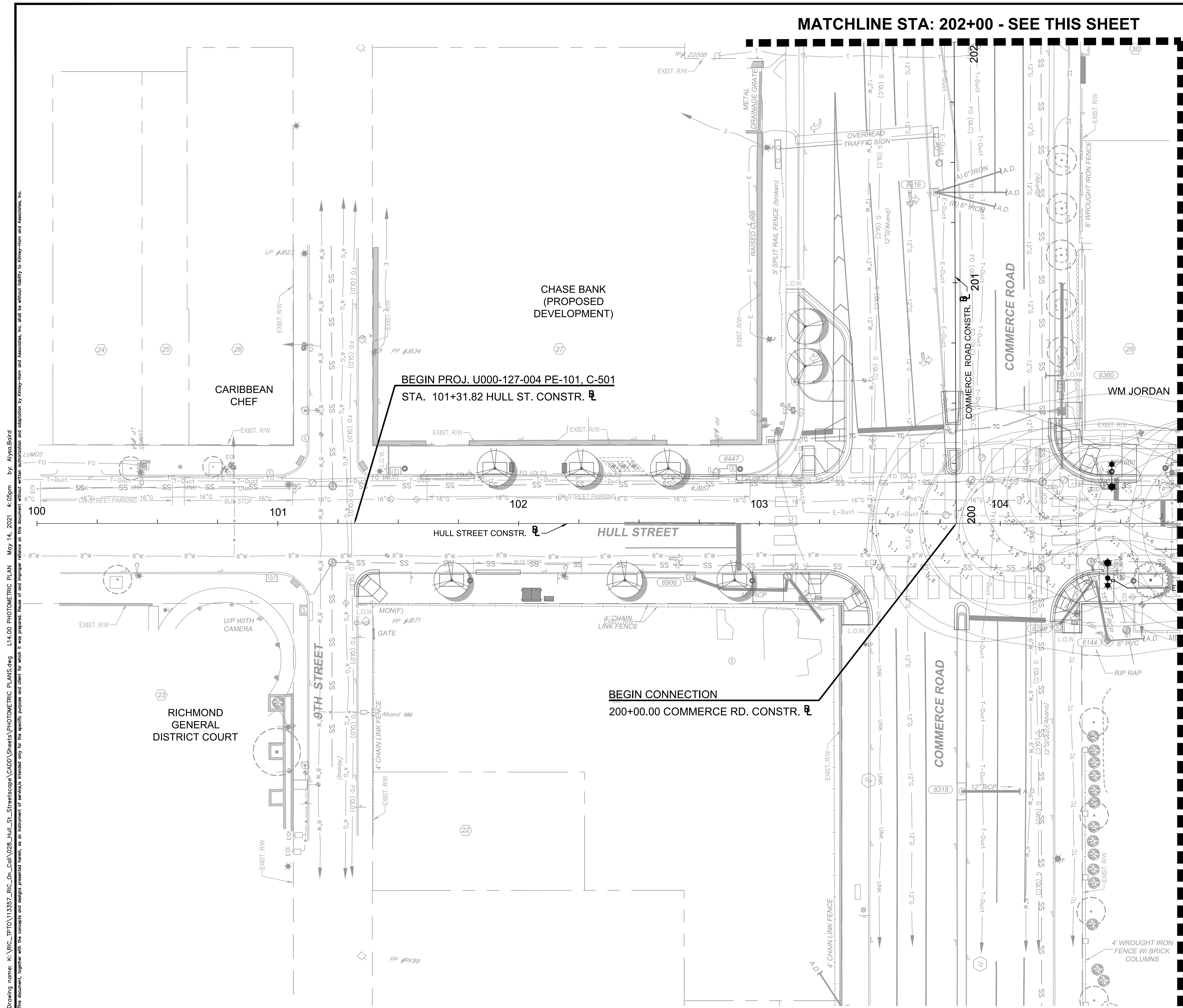
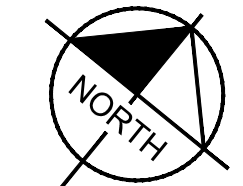


HULL STREET STREETSCAPE LIGHTING PLAN

AUTHORITY: CITY OF RICHMOND

DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	PROJECT 109306
CHECKED BY:		1" = 20'	5-14-2021	L13.04	DRAWING NO. O-28933

MATCHLINE STA: 202+00 - SEE THIS SHEET



MATCHLINE STA: 104+75 - SEE SHEET L14.01

MATCHLINE STA: 202+00 - SEE THIS SHEET

Drawing name: K:\RVC_IP\113357_RIC_Coll\028_Hull_St_StreetScope\CADD\Sheets\PHOTOMETRIC PLANS.dwg L14.00 PHOTOMETRIC PLAN May 14, 2021 4:05pm
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RICHMOND
GENERAL
DISTRICT COURT

CHASE BANK
(PROPOSED
DEVELOPMENT)

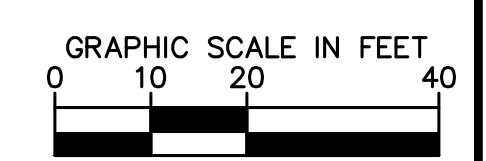
BEGIN PROJ. U000-127-004 PE-101, C-501
STA. 101+31.82 HULL ST. CONSTR.

BEGIN CONNECTION
200+00.00 COMMERCE RD. CONSTR.

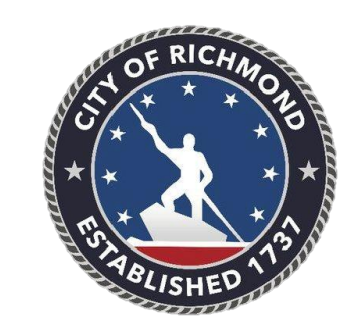
THESE PLANS ARE UNFINISHED
AND ARE NOT TO BE USED FOR
ANY TYPE OF CONSTRUCTION.

Kimley-Horn and Associates, Inc.
Richmond, Virginia
ELECTRICAL ENGINEER

- PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE



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Kimley-Horn and Associates, Inc.
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RICHMOND, VIRGINIA 23230
Tel: 804-673-3882

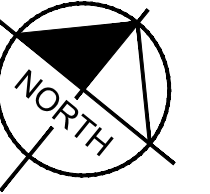


HULL STREET STREETSCAPE
PHOTOMETRIC PLAN

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
CHECKED BY:		1" = 20'	5-14-2021
		SHEET:	DRAWING NO.:
		L14.00	O-28933

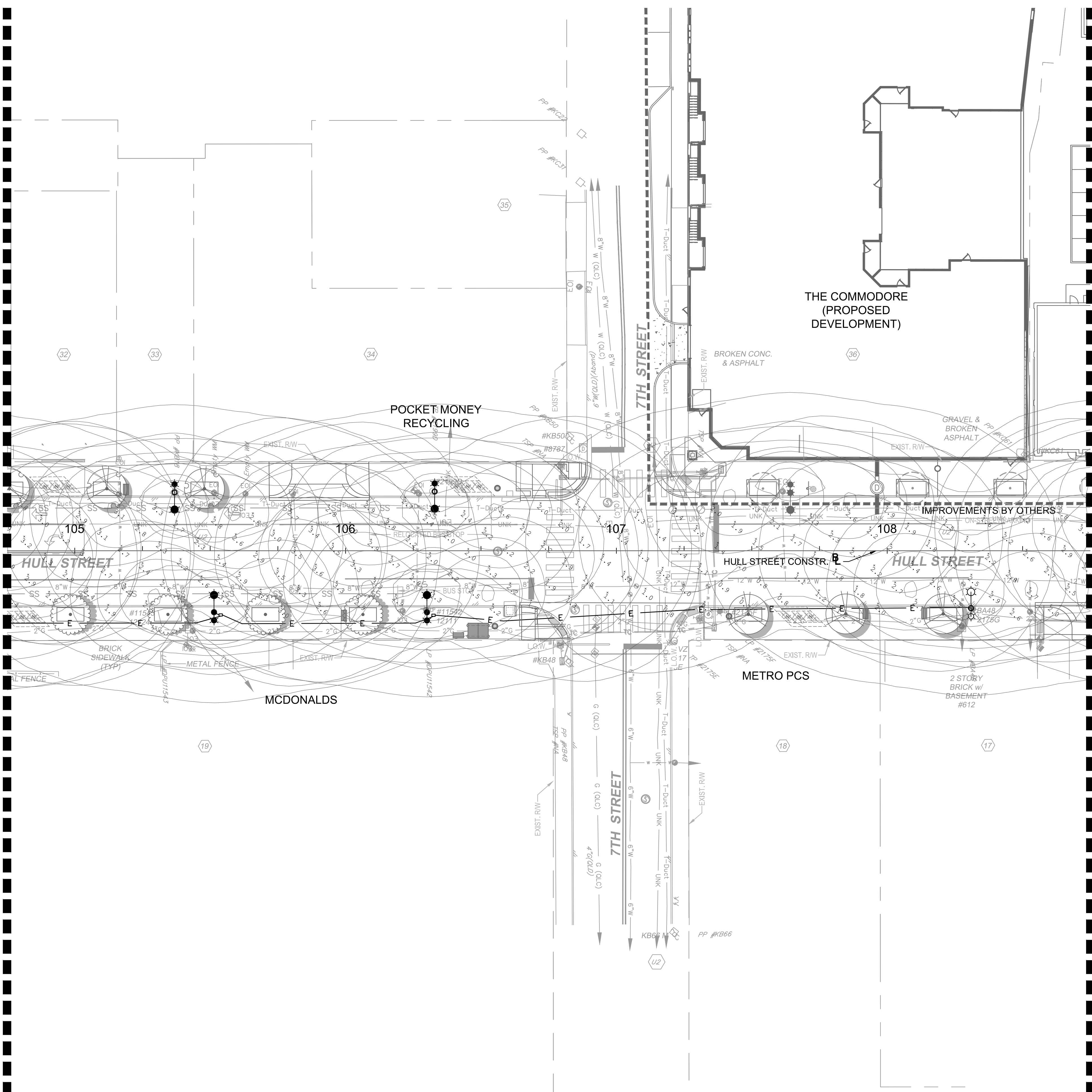
No.	REVISIONS	DATE	BY

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MATCHLINE STA: 104+75 - SEE SHEET L14.00

MATCHLINE STA: 108+75 - SEE SHEET L14.02

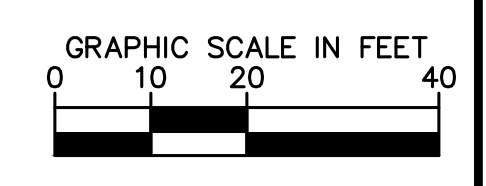


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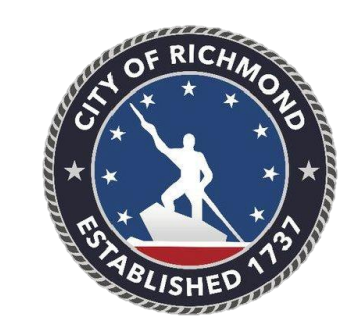
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ELECTRICAL ENGINEER

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- ○ PROP. LIGHT ON PROP. METAL POLE
SEE DETAIL ESPF08 SHEET L15.00
- ○ PROP. LIGHT ON EXIST. WOOD POLE
SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- ○ PROP. LIGHT BY OTHERS
- ○ EXIST. LIGHT ON EXIST. POLE

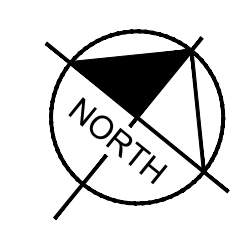


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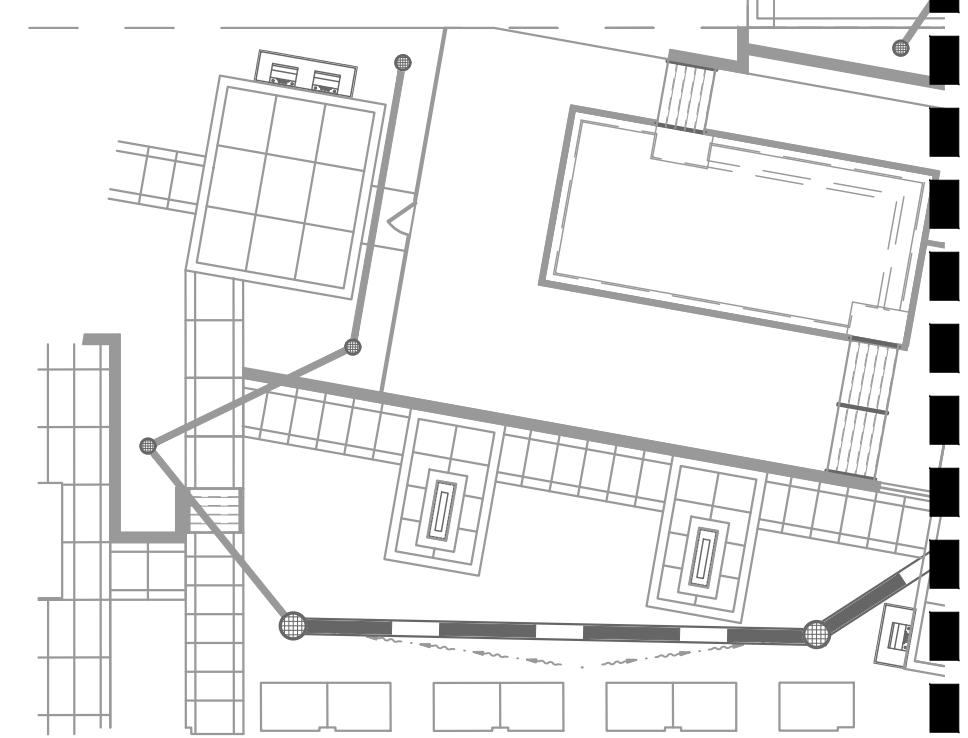
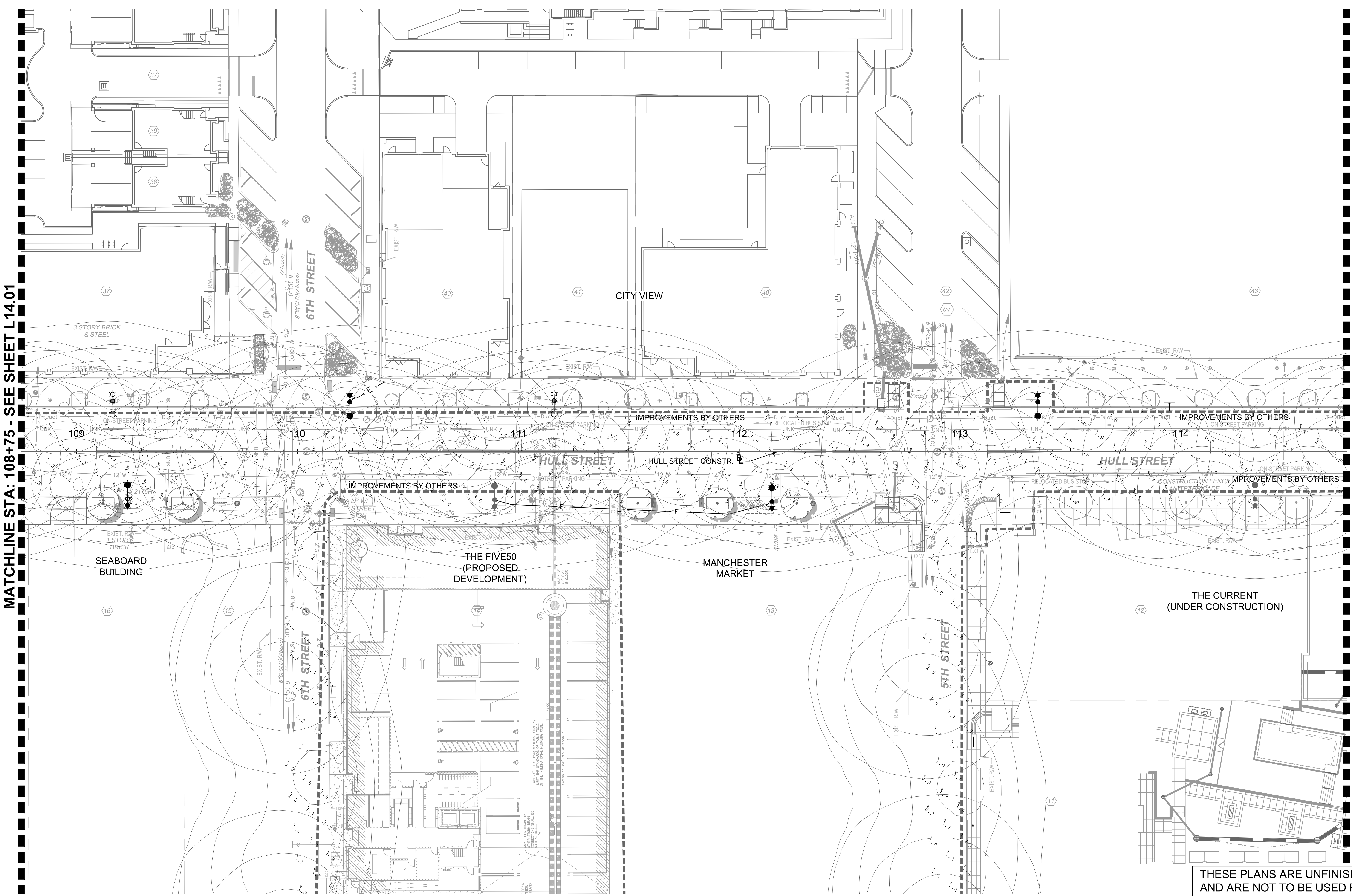
HULL STREET STREETScape				PHOTOMETRIC PLAN			
AUTHORITY: CITY OF RICHMOND							
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:	SHEET:	PROJECT 109306	DRAWING NO.:	
CHECKED BY:		1" = 20'	5-14-2021	L14.01		O-28933	

Drawing name: K:\RICHMOND\113357_RIC_01\Call\028_Hull_St_StreetScope\CADD\Sheets\PHOTOMETRIC PLANS.dwg L14.02 PHOTOMETRIC PLAN May 14, 2021 4:22pm by Alyssa Baird
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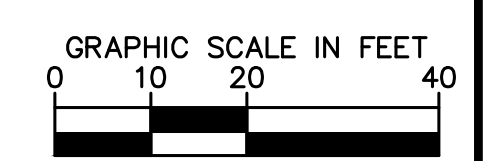
MATCHLINE STA: 114+75 - SEE SHEET L14.03



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SEE DETAIL ESFA17 & ESFA20, SHEET L15.00
- ○ PROP. LIGHT BY OTHERS
- ○ EXIST. LIGHT ON EXIST. POLE



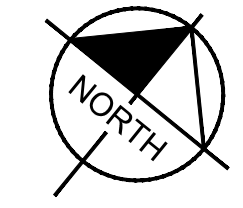
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HULL STREET STREETSCAPE PHOTOMETRIC PLAN

AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
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		SHEET:	DRAWING NO.:
		L14.02	O-28933

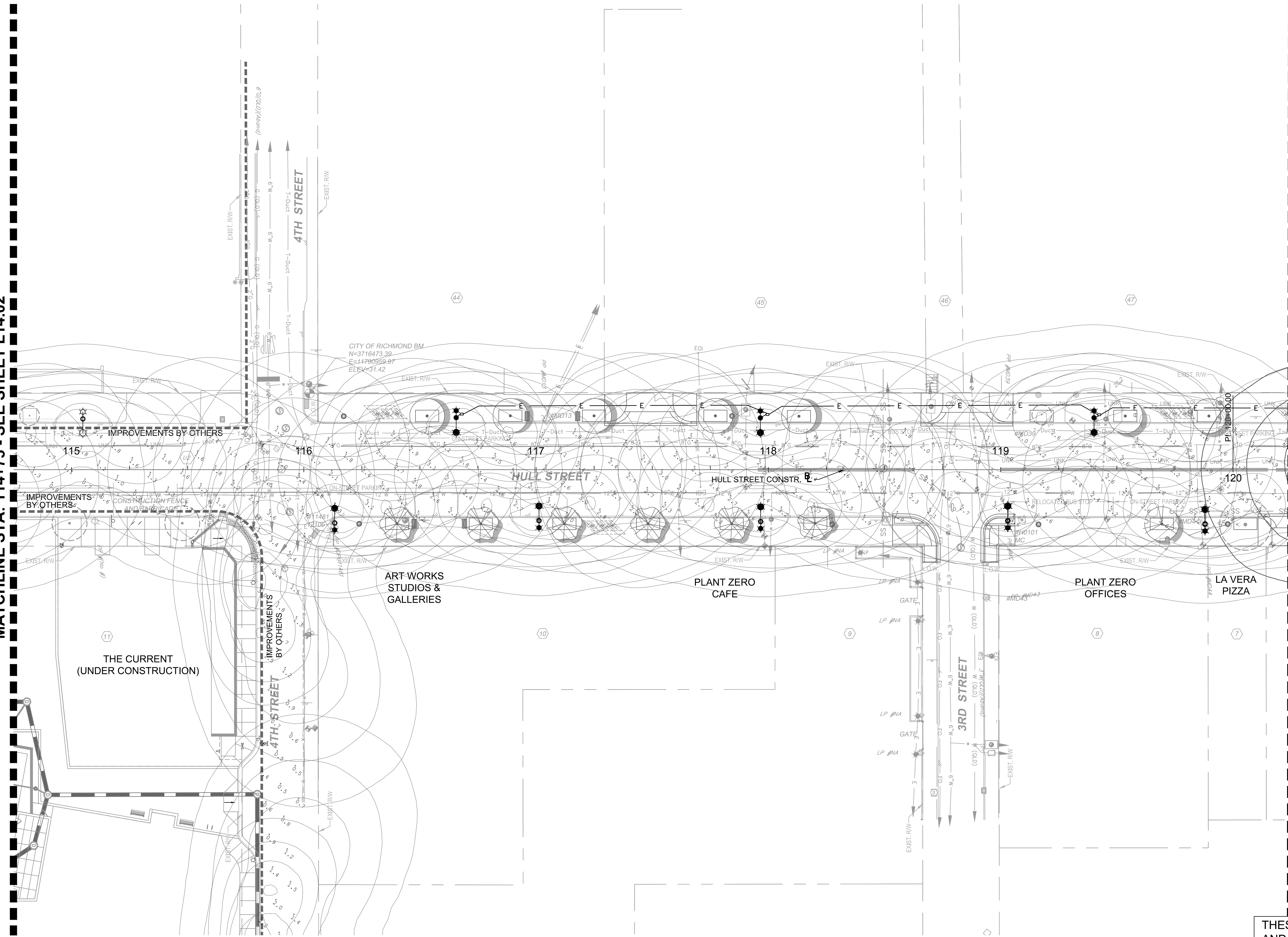
No.	REVISIONS	DATE	BY

Drawing name: K:\RIC_T\10\113357_RIC_OH_Coll\028_Hull_St_StreetScope\CADD\Sheets\PHOTOMETRIC PLANS.dwg L14.03 PHOTOMETRIC PLAN May 14, 2021 4:05pm by Alyssa Baird
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MATCHLINE STA: 120+25 - SEE SHEET L14.04

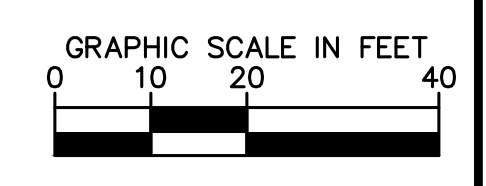


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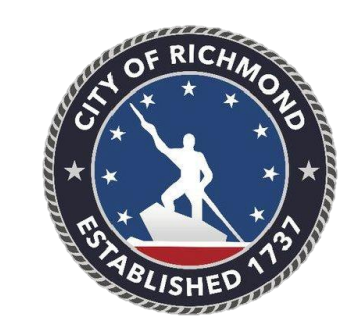
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ELECTRICAL ENGINEER

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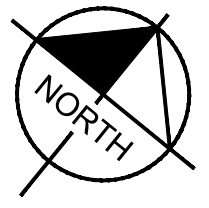
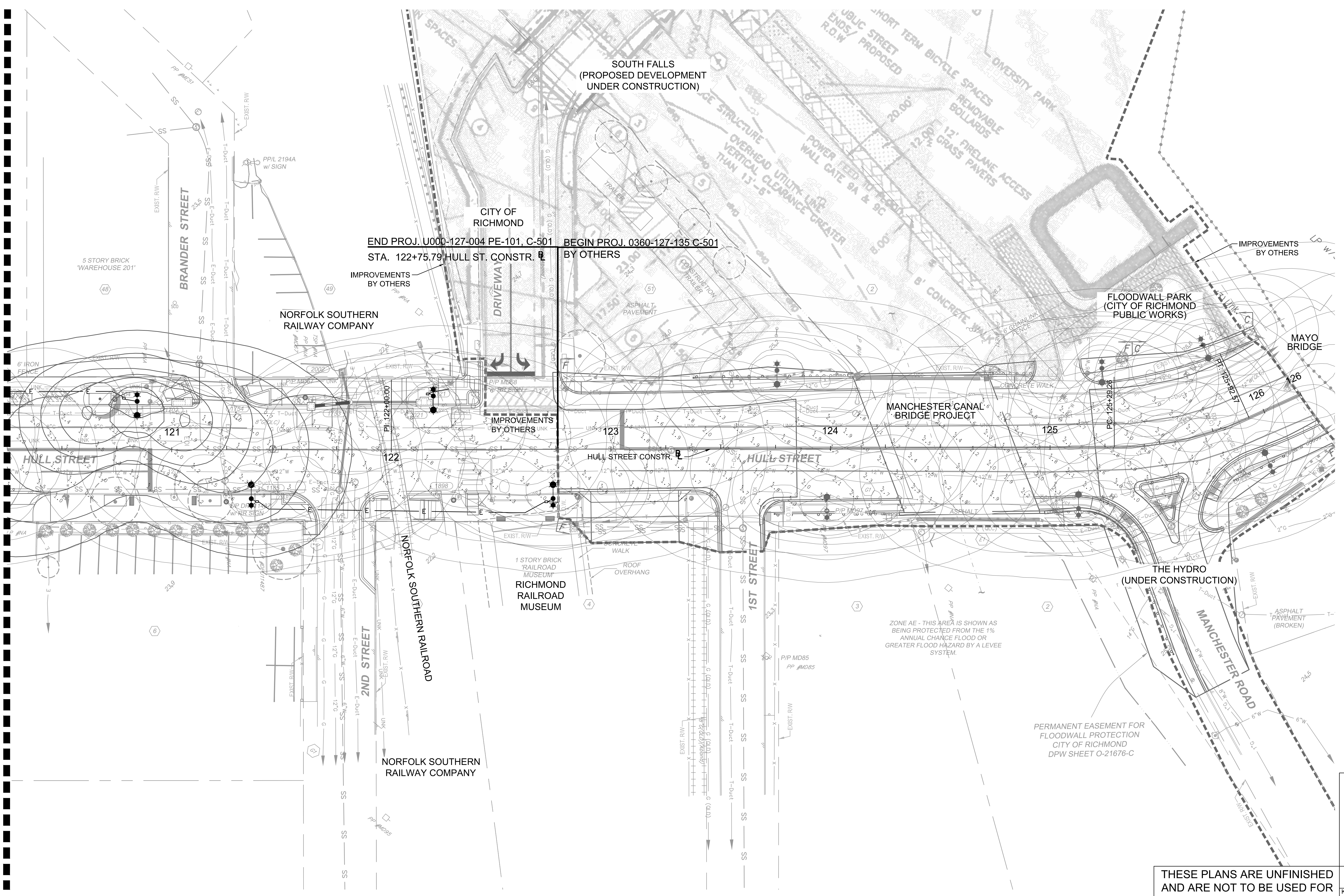


AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY:	REVIEWED BY:	SCALE:	DATE:
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SHEET:		DRAWING NO.:	
L14.03		O-28933	

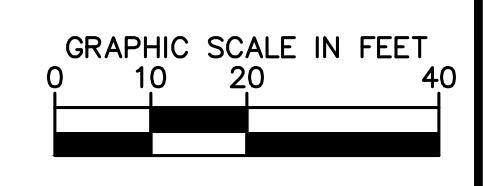
HULL STREET STREETSCAPE
PHOTOMETRIC PLAN

Drawing name: K:\RICHMOND\113357_RIC_01_Coll\028_Hull_St_StreetScope\CADD\Sheets\PHOTOMETRIC PLANS.dwg L14.04 PHOTOMETRIC PLAN May 14, 2021 4:06pm by Alyssa Baird
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MATCHLINE STA: 120+25 - SEE SHEET L14.03



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- PROP. LIGHT ON EXIST. WOOD POLE
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- PROP. LIGHT BY OTHERS
- EXIST. LIGHT ON EXIST. POLE



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HULL STREET STREETSCAPE PHOTOMETRIC PLAN

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		L14.04	O-28933

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Drawing name: K:\RVC_TPT0111337_RIC_On_Call\028_Hull_St_StreetScope\CADD\Sheets\LIGHTING DETAILS.dwg May 14, 2021 3:48pm By: Alyssa Baird
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FOUNDATION TOP VIEW

FOUNDATION DETAILS

GENERAL NOTES:

- CONCRETE ELEMENTS SHALL HAVE FACTORY W/ BENDS. THE BEND RADIUS SHALL BE IN ACCORDANCE WITH THE REINFORCING BAR MANUFACTURER'S RECOMMENDATIONS (1" = 5.7" MIN RADIUS; 2" = 3.5" MIN RADIUS).
- THE ACTUAL BOLT CIRCLE SHALL BE VERIFIED BY THE CONTRACTOR. A BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY THE SUPPLIER OF THE POLE OR THE MANUFACTURER.
- THE NUMBER, ORIENTATION AND SIZE OF CONDUITS, EXTENDING AND EXITS THE FOUNDATION SHALL BE AS SHOWN ON PLANS.
- CONCRETE PLACEMENT SHALL BE A CONTINUOUS POUR WITH 5000 PSI (MIN) CONCRETE. NO COLD JOINTS WILL BE ALLOWED. INTERNAL CONCRETE VIBRATION REQUIRED DURING PLACEMENT.
- NO MOTOR, GROUT, OR CONCRETE SHALL BE PLACED FOR LIFTING. BETWEEN THE BOTTOM OF THE POLE AND THE TOP OF THE FINISHED FOUNDATION FEEDELS.
- ALL ANCHOR BOLTS SHALL BE 1" x 30" x 4", 1" TYPE, NOT SPOT GALVANIZED, AND SHALL BE INSTALLED WITH THEIR "L" ORIENTED TOWARDS THE CENTER OF THE FOUNDATION.
- THE ANCHOR BOLTS WILL PROJECT A MINIMUM OF 3", AS SHOWN AND NOT TO EXCEED 4".
- THE HORIZONTAL REINFORCING BARS SHALL BE INSTALLED 4" ABOVE THE BOTTOM OF THE CONCRETE AND 4" BELOW TOP OF FINISHED CONCRETE.
- THE VERTICAL REINFORCING BARS SHALL HAVE A MINIMUM OF 4" OF CONCRETE COVER.
- THE CONCRETE OF THE POLE FOUNDATION SHALL BE A MINIMUM OF 30" FROM THE BACK OF CURB. WHEN NO CURB IS PROVIDED, PLACEMENT SHALL BE A MINIMUM OF 30" FROM THE EDGE OF FINISHED ROAD.
- AN ALTERNATE GROUND INSTALLATION METHOD MAY BE USED TO MAKE TRENCHINGS OF LAMP CABLE AND SECONDARY CABLE FOR THE POLE FOR DESIGN.
- AN ALTERNATE GROUND INSTALLATION METHOD MAY BE USED ONLY WITH APPROVAL OF THE DEPARTMENT OF PUBLIC UTILITIES ENGINEER, AND ONLY IF THE GROUND RODS ARE NOT BE INSTALLED WITHIN THE FOUNDATION AS SHOWN.

FOR ALTERNATE GROUNDING METHODS: CONTACT DPU STREET LIGHTING ENGINEER.

REVISIONS: ESM01, ESM03

CITY OF RICHMOND PUBLIC UTILITIES STREET LIGHT STANDARDS

REVISION DATE: 09/2019 SHEET 1 OF 1 ESM08

SECTION "A-A"

BOX DETAILS - SIDE VIEW

BOX DETAILS - TOP VIEW

TOP BOLTING DETAILS

SPECIFICATIONS:

- BOX IS TO BE DESIGNED AND RATED FOR TIER 15 (22,500 LBS).
- PULL BOX BASE SHALL BE OF THE DIMENSIONS 23" WIDTH BY 32" LENGTH BY 12" DEPTH.
- BOX MUST BE NON-CONDUCTIVE AND CONSTRUCTED OF FIRE RESISTANT MATERIALS.
- BOX TO BE CONSTRUCTED OF FIBERGLASS.
- BOX RING AND COVER TO BE CONSTRUCTED OF COMPOSITE POLYMER CONCRETE.
- BOX COVER SHALL BE FACTORY EMBOSSED WITH "ELECTRIC".
- COVER SHALL BE SECURED WITH (2) 3/8"-16 BOLTS.
- NUTS IN BOX COVER MUST BE FIELD REPLACEABLE.
- CURRENT STANDARD IS: HIGHLINE PRODUCTS MODEL CH132412, OR EQUAL.

REVISIONS: ESM01, ESM03

CITY OF RICHMOND PUBLIC UTILITIES STREET LIGHT STANDARDS

REVISION DATE: 07/2020 SHEET 1 OF 2 ESM07

TYPICAL HAND HOLE INSTALLATION DETAILS

GENERAL NOTES - INSTALLATION:

- IT IS RECOMMENDED THAT THE EXCAVATION FOR THE HAND HOLE BE 4" LARGER ON ALL SIDES THAN THE BASE DIMENSIONS.
- GEOTEXTILE FABRIC IS RECOMMENDED UNDER BASE STONE TO MINIMIZE STONE LOSS TO THE SUBGRADE.
- A MINIMUM OF 6" OF #21A OR #57 STONE LEVELLED AND COMPACTED TO 90% SHALL BE PLACED BELOW THE BASE.
- A SINGLE GROUND ROD IS REQUIRED.
- GROUND ROD SHALL BE HOT-DIP GALVANIZED SOLID STEEL, 0.625" DIA X96" LG.
- GROUND ROD IS TO BE DRIVEN INTO UNDISTURBED EARTH AND SHALL BE A MINIMUM OF 90" IN THE GROUND.
- BACKFILL AND COMPACTION WILL BE DONE AS PRESCRIBED.
- SURFACE RESTORATION WILL BE AS PRESCRIBED, BUT MAY BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF RICHMOND DEPARTMENT OF PUBLIC WORKS STANDARDS FOR TRENCH AND SURFACE RESTORATION WHEN APPLICABLE.
- IT IS REQUIRED TO HAVE THE COVER IN PLACE DURING INSTALLATION TO MINIMIZE COLLAPSE DUE TO COMPACTION.

MATERIAL LIST

QTY	DESCRIPTION
1 EA	HAND HOLE, COMPOSITE, 23 X 32 X 12
1 EA	GROUND ROD, 0.625" X 96" SOLID STEEL, HOT-DIP GALVANIZED
1 EA	GROUNDING CLAMP, COMPRESSION BOLT STYLE
1 EA	WIRE, #6 COPPER X 18'
1 EA	STONE, #21A OR #57, X 8 CU. FT.
1 EA	GEOTEXTILE FABRIC X 11 SQ. FT. (OPTIONAL)

REVISIONS: ESM01, ESM03

CITY OF RICHMOND PUBLIC UTILITIES STREET LIGHT STANDARDS

REVISION DATE: 07/2020 SHEET 2 OF 2 ESM07

LUMINAIRE BRACKET MOUNTING DETAIL

SPECIFICATIONS:

- LUMINAIRE: 28.44" TALL X 3.37" DIAMETER, POWDER COATED, CAST ALUMINUM ALLOY HOUSING, 110 STIPPLED GLASS GLOBE, WITH VERTICAL ALIGNMENT COUPLING, SPRING CITY ELECTRICAL MANUFACTURING CO. LECHMERE SERIES, #ALMCH-LE120/DVA/12-27-140-5010-1400-01, OR EQUAL.
- DETAILS: LED LUMINAIRE, 2700K WARM WHITE, TYPE II, ASYMMETRIC, MEDIUM TRANSMISSION, FROSTED REFRACTIVE OPTICS.
- LAMP: 120 WATT LED (2700K).
- BALLAST/DRIVER: ELECTRONIC, WIRED FOR 120-277 VOLTS.
- WIRING: 14/2 WITH GROUND (TYPE UF-8) WIRE LEADS TO BE PROVIDED, BRACKET AND LUMINAIRE TO BE PRE-WIRED.
- CROSSARM (BRACKET): FABRICATED ALUMINUM PLATE AND 2" DIA PIPE, FOR 72" PROJECTION, 2" NPT X 1" LG NIPPLE TENON FOR VERTICAL ALIGNMENT COUPLING, POWDER COATED MATE ALUMINUM, SPRING CITY ELECTRICAL MANUFACTURING, "TIMBER" CROSSARM MODEL # ARTIMB-M1-15-72-102.30/1.00-01, OR EQUAL.

NOTE: IN ALLEYS, DPU WILL INSTALL 36" BRACKETS WITH THE SAME 23" PHOTO-METRIC CENTER AS THE 72" BRACKET.

REVISIONS: ESM01, ESM04, ESM08

CITY OF RICHMOND PUBLIC UTILITIES STREET LIGHT STANDARDS

REVISION DATE: 10/2018 SHEET 1 OF 1 ESM17

LUMINAIRE BRACKET MOUNTING DETAIL

SPECIFICATIONS:

- LUMINAIRE: 28.44" TALL X 3.37" DIAMETER, POWDER COATED - MATE PLATINUM ALLOY HOUSING, 110 STIPPLED GLASS GLOBE WITH VERTICAL ALIGNMENT COUPLING, SPRING CITY ELECTRICAL MANUFACTURING CO. LECHMERE SERIES, #ALMCH-LE120/DVA/12-27-140-5010-1400-01, OR EQUAL.
- DETAILS: LED LUMINAIRE, 2700K WARM WHITE, TYPE II, ASYMMETRIC, MEDIUM TRANSMISSION, FROSTED REFRACTIVE OPTICS.
- LAMP: 40 WATT LED (2700K).
- BALLAST/DRIVER: ELECTRONIC, WIRED FOR 120-277 VOLTS.
- WIRING: 14/2 WITH GROUND (TYPE UF-8) WIRE LEADS TO BE PROVIDED, BRACKET AND LUMINAIRE TO BE PRE-WIRED.
- CROSSARM (BRACKET): FABRICATED ALUMINUM PLATE AND 2" DIA PIPE, FOR 36" PROJECTION, 2" NPT X 1" LG NIPPLE TENON FOR VERTICAL ALIGNMENT COUPLING, POWDER COATED MATE ALUMINUM, SPRING CITY ELECTRICAL MANUFACTURING, "TIMBER" CROSSARM MODEL # ARTIMB-M1-15-36-102.30/1.00-01, OR EQUAL.

NOTE: 36" BRACKETS ARE ALSO INSTALLED IN ALLEYS, BUT WITH A 23" PHOTO-METRIC CENTER AND A 33" DIA LIGHTING FIXTURE.

REVISIONS: ESM01, ESM03

CITY OF RICHMOND PUBLIC UTILITIES STREET LIGHT STANDARDS

REVISION DATE: 10/2018 SHEET 1 OF 1 ESM20

NON-ENCASED CONDUIT REQUIREMENTS

GENERAL NOTES:

- PRIMARY CIRCUIT CONDUIT IS TO BE STUNNED BUT NOT TO EXCEED 4" SCH 40 PVC OR COLLABE HOPE, UL LISTED.
- SECONDARY CIRCUIT CONDUIT IS TO BE 2" SCH 40 PVC OR COLLABE HOPE, UL LISTED.
- ALL NON-ENCASED DIRECT BURY CONDUIT WILL HAVE A MINIMUM OF 36" OF COVER.
- ALL HORIZONTALLY DIRECTIONALLY DRILLED CONDUIT WILL BE IN UNDISTURBED EARTH AND HAVE A MINIMUM OF 48" OF COVER.
- FOR NON-ENCASED DIRECT BURY CONDUITS, THE WARNING TAPE SHOULD BE PLACED AT A MINIMUM OF 12" ABOVE THE CONDUIT.
- NO MORE THAN TWO (2) 90° BENDS ALLOWED PER SINGLE RUN. RISERS INCLUDED, WITHOUT THE ADDITION OF A SECONDARY ENCLOSURE OR PULL-BOX.
- NO RUNS OVER 300' WITHOUT THE ADDITION OF A HANDHOLE.
- POLE BASE TO POLE BASE RUNS ARE SINGLE 2" SCH 40 PVC OR COLLABE HOPE, UNLESS OTHERWISE NOTED.
- CONDUITS RUNNING PARALLEL TO OTHER UTILITY LINES, MUST HAVE A MINIMUM OF 30" OF HORIZONTAL SEPARATION.
- ALL OTHER UTILITY CROSSINGS MUST MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
- BACKFILL, COMPACTION, AND SURFACE RESTORATION WILL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF RICHMOND DEPARTMENT OF PUBLIC WORKS STANDARDS FOR TRENCH AND SURFACE RESTORATION.

CONDUIT CONFIGURATIONS WILL VARY:
 - 2" SCH 40 PVC OR COLLABE HOPE CONDUIT, UL LISTED, REQUIRED FOR SECONDARIES
 - 3"(MIN) NOT TO EXCEED 4" SCH 40 PVC OR COLLABE HOPE CONDUIT, UL LISTED, REQUIRED FOR PRIMARIES

REVISIONS: V001 2016 ROAD AND BRIDGE STANDARDS

CITY OF RICHMOND PUBLIC UTILITIES STREET LIGHT STANDARDS

REVISION DATE: 10/2020 SHEET 1 OF 2 ESM05

MINIMUM ENCASED CONDUIT REQUIREMENTS

GENERAL NOTES:

(ENCASED CONDUITS)

- ALL STREET, DRIVEWAY, OR ALLEY CROSSINGS (VEHICULAR SURFACES) ARE TO BE A MINIMUM OF TWO (2) CONDUITS. CONCRETE ENCASED WITH 36" MINIMUM COVER ON THE CONCRETE, 4" MINIMUM CONCRETE COVER ON THE TOP AND 2" MINIMUM CONCRETE ON THE SIDES AND BOTTOM OF THE ENCASUREMENT.
- HANDHOLES ARE REQUIRED ON BOTH ENDS OF ENCASED CONDUITS, AT ALL STREET, DRIVEWAY, OR ALLEY CROSSINGS.
- ELECTRICAL WARNING TAPE IS TO BE PLACED DIRECTLY OVER AND A MINIMUM OF 12" ABOVE THE CONCRETE ENCASUREMENT.
- PLASTIC CONDUIT SPACERS BE USED, AS REQUIRED TO MAINTAIN A 3" SPACING BETWEEN CONDUITS AND CONDUIT RUN ALIGNMENT. SUBSTITUTIONS MAY BE ALLOWED AT THE DISCRETION OF THE INSPECTOR OR THE ENGINEER.
- PLASTIC SPACERS TO BE SECURED TO CONDUIT TO PREVENT DISPLACEMENT DURING ENCASMENT OR REGULAR PLACEMENT.
- CONDUITS MUST BE SUPPORTED AT REGULAR INTERVALS, NOT TO EXCEED SEVEN (7) FEET.
- CONCRETE PLACEMENT SHALL BE A CONTINUOUS POUR WITH 5000 PSI (MIN) CONCRETE. NO COLD JOINTS WILL BE ALLOWED. INTERNAL CONCRETE VIBRATION REQUIRED DURING PLACEMENT.
- GEOTEXTILE FABRIC IN BOTTOM OF TRENCH IS RECOMMENDED BUT NOT REQUIRED, TO REDUCE STONE LOSS INTO THE SUBGRADE.

REVISIONS: N/A

CITY OF RICHMOND PUBLIC UTILITIES STREET LIGHT STANDARDS

REVISION DATE: 10/2020 SHEET 2 OF 2 ESM05

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HULL STREET STREETSCAPE LIGHTING DETAILS

Kimley-Horn

AUTHORITY: CITY OF RICHMOND

DESIGN BY: [Blank] **REVIEWED BY:** [Blank] **SCALE:** N.S. **DATE:** 5-14-2021 **SHEET:** L15.00 **DRAWING NO.:** O-28933

CHECKED BY: [Blank] **PROJECT:** 109306

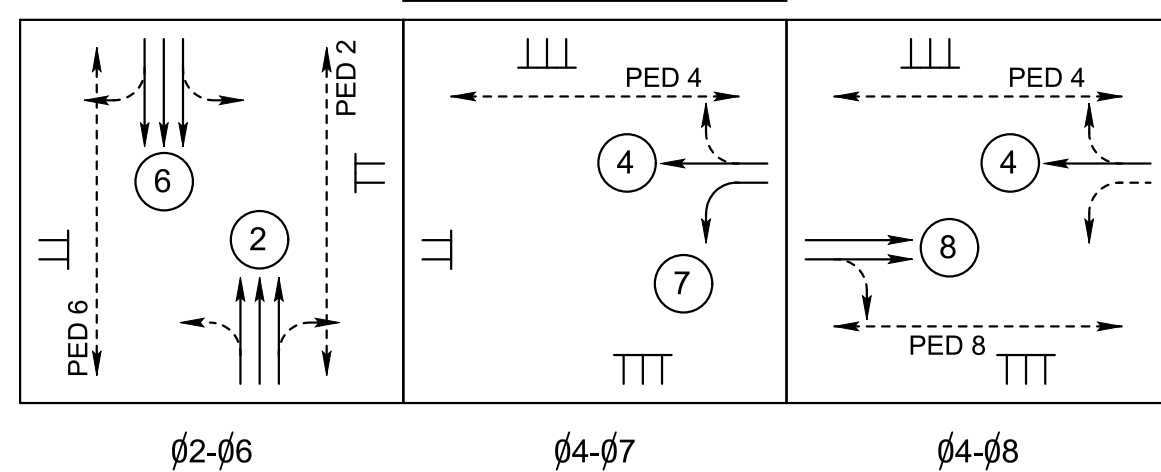
Drawing name: K:\RVC\1710\113357_RIC_Coll\028_Hull_St_StreetScope\CADD\Sheets\SIGNAL PLAN.dwg L14.00 SIGNAL PLAN May 14, 2021 4:22pm by: Alyssa Baird
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SIGNAL POLE & SIGNAL CABINET LEGEND

(ALL DIMENSIONS ARE TO CENTER OF POLE)

- | | |
|---|--|
| ① EXISTING GROUND MOUNTED NEMA TS-1 TRAFFIC SIGNAL CABINET WITH TRAFFIC SIGNAL CONTROLLER | ⑥ PROPOSED PEDESTAL POLE PF-2 12' 31.7' LT. OF HULL ST CONSTRUCTION @ STA.104+41.9 |
| ② EXISTING MAST ARM POLE 40' ARM | ⑦ PROPOSED PEDESTRIAN ACTUATION PA-3 6' 34.5' RT. OF HULL ST CONSTRUCTION @ STA.103+42.4 |
| ③ EXISTING MAST ARM POLE 40' ARM | ⑧ PROPOSED PEDESTAL POLE PF-2 12' 30.9' LT. OF HULL ST CONSTRUCTION @ STA.103+26.2 |
| ④ EXISTING MAST ARM POLE 60' ARM | |

PHASING DIAGRAM



NOTE:
PHASE 6 SOUTHBOUND LEFT TURN PROHIBITED 7AM - 7PM

→ = PROTECTED MOVEMENT
- - - = PERMISSIVE MOVEMENT

CONDUIT & CABLE LEGEND

- | | |
|---|--|
| △ 3-3" CONDUIT (EX.)
5-14/7c CABLE
8-14/3c CABLE
4-14/2c CABLE
3-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-COAXIAL CABLE (SPREAD SPECTRUM)
2-8/1c ELECTRIC SERVICE CABLE
1-#8 GROUNDING WIRE
3-14/3c FOR HEADS P2, P4, P6 (NEW)
6-14/2c FOR PB-2, PB-4, PB-6, PB-8 (NEW) | △ 1-3" CONDUIT (EX.)
3-14/7c CABLE
4-14/3c CABLE
2-14/2c CABLE
1-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-#8 GROUNDING WIRE
1-2" PVC CONDUIT (TRENCH) (NEW)
2-14/3c FOR HEADS P4, P6 (NEW)
2-14/2c FOR PB-4, PB-6 (NEW)
1-#8 GROUNDING WIRE (NEW)
1-2" SPARE PVC CONDUIT (TRENCH) (NEW)
4-14/2c FOR PB-4, PB-6, PB-8 (NEW) |
| △ 2-3" CONDUIT (EX.)
4-14/7c CABLE
6-14/3c CABLE
3-14/2c CABLE
1-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-COAXIAL CABLE (SPREAD SPECTRUM)
2-8/1c ELECTRIC SERVICE CABLE
1-#8 GROUNDING WIRE
2-14/3c FOR HEADS P4, P6 (NEW)
4-14/2c FOR PB-4, PB-6, PB-8 (NEW) | △ 1-3" CONDUIT (EX.)
1-14/7c CABLE
2-14/3c CABLE
1-14/2c CABLE
2-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-14/2c FOR PB-2 (NEW) |
| △ 1-2" PVC CONDUIT (TRENCH) (NEW)
1-14/3c FOR HEAD P2 (NEW)
1-14/2c FOR PB-2 (NEW)
1-#8 GROUNDING WIRE (NEW)
1-2" SPARE PVC CONDUIT (TRENCH) (NEW)
1-#8 GROUNDING WIRE (NEW) | △ 1-3" CONDUIT (EX.)
1-14/7c CABLE
2-14/3c CABLE
1-14/2c CABLE
2-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-14/2c FOR PB-2 (NEW) |
| △ 1-3" CONDUIT (EX.)
1-14/7c CABLE
2-14/3c CABLE
1-14/2c CABLE
2-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-14/2c FOR PB-2 (NEW) | △ 2-3" CONDUIT (EX.)
1-14/7c CABLE
2-14/3c CABLE
1-14/2c CABLE
2-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-14/2c FOR PB-2 (NEW) |
| △ 1-3" CONDUIT (EX.)
1-14/7c CABLE
2-14/3c CABLE
1-14/2c CABLE
2-16/3c(S) W/COAXIAL CABLE (CAMERA)
1-14/2c FOR PB-2 (NEW) | △ 1-2" CONDUIT (TRENCH) (NEW)
1-14/2c FOR PB-8 (NEW)
1-#8 GROUNDING WIRE (NEW) |
- VDC - VIDEO DETECTION CABLE
S - SHIELDED CABLE

NOTES:
1. ALL CABLE AND CONDUIT IS EXISTING UNLESS OTHERWISE NOTED.
2. EXISTING CABLES AND CONDUITS LISTED ARE BASED ON AVAILABLE INFORMATION AND MAY DIFFER IN FIELD. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING PRIOR TO BEGINNING WORK. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER IF CONTRACTOR DETERMINES THAT EXISTING CONDUIT IS NOT VIABLE.

CONSTRUCTION NOTES

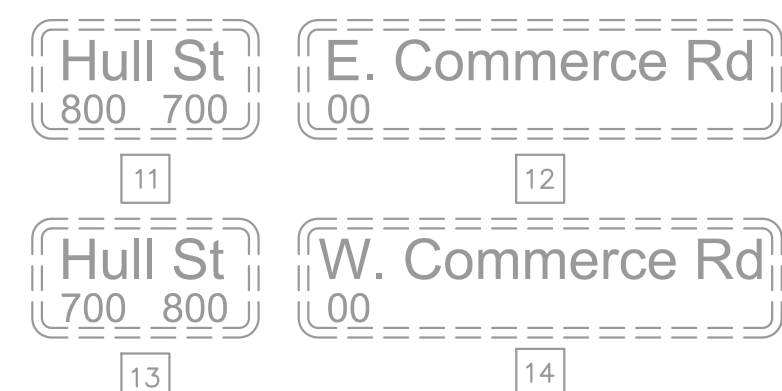
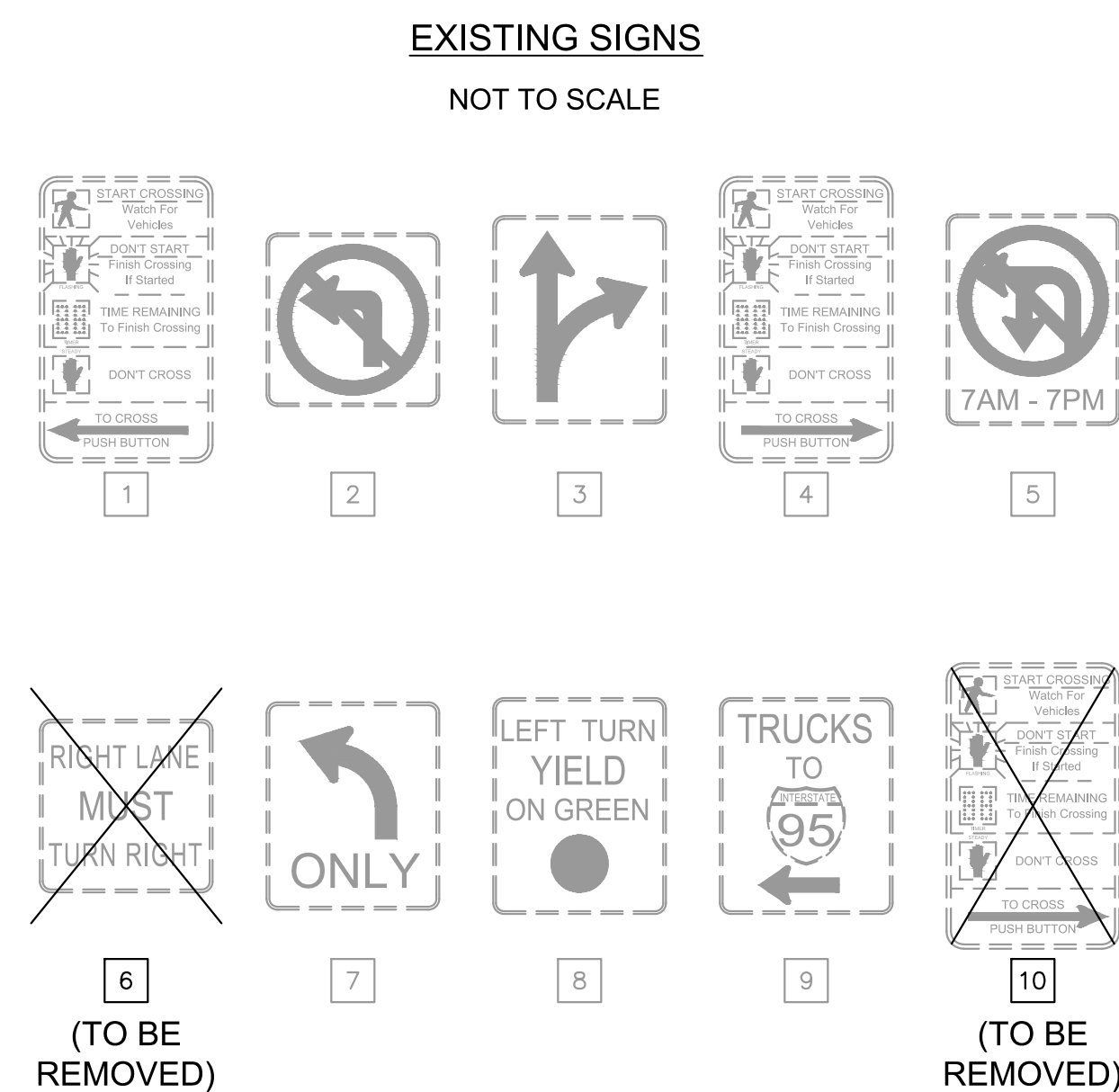
- REMOVE EXISTING PEDESTRIAN SIGNAL HEAD.
- REMOVE EXISTING VEHICULAR SIGNAL HEAD.
- REMOVE EXISTING SIGN.
- REMOVE EXISTING PEDESTRIAN PUSH BUTTON.
- ALL EXISTING EQUIPMENT TO REMAIN UNLESS OTHERWISE SPECIFIED ON THE PLAN.

THE CONTRACTOR SHALL CONTACT "MISS UTILITY OF VIRGINIA" (811) PRIOR TO BEGINNING EXCAVATION WORK IN ORDER TO DETERMINE THE LOCATION AND EXTENT OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT THE CONTRACTOR'S EXPENSE, ANY EXISTING TRAFFIC SIGNAL EQUIPMENT, UTILITIES, PAVEMENT, CONCRETE ITEMS, PIPES, ETC. THAT ARE DAMAGED DURING CONSTRUCTION.

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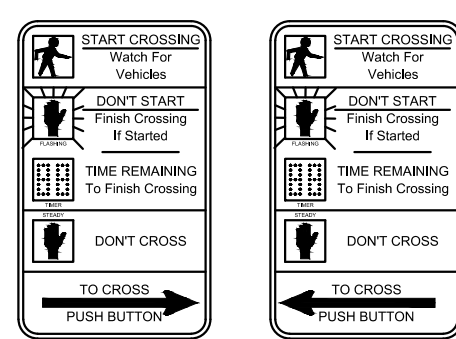
THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

Kimley-Horn and Associates, Inc.
Richmond, Virginia
TRAFFIC ENGINEER



PROPOSED SIGNS

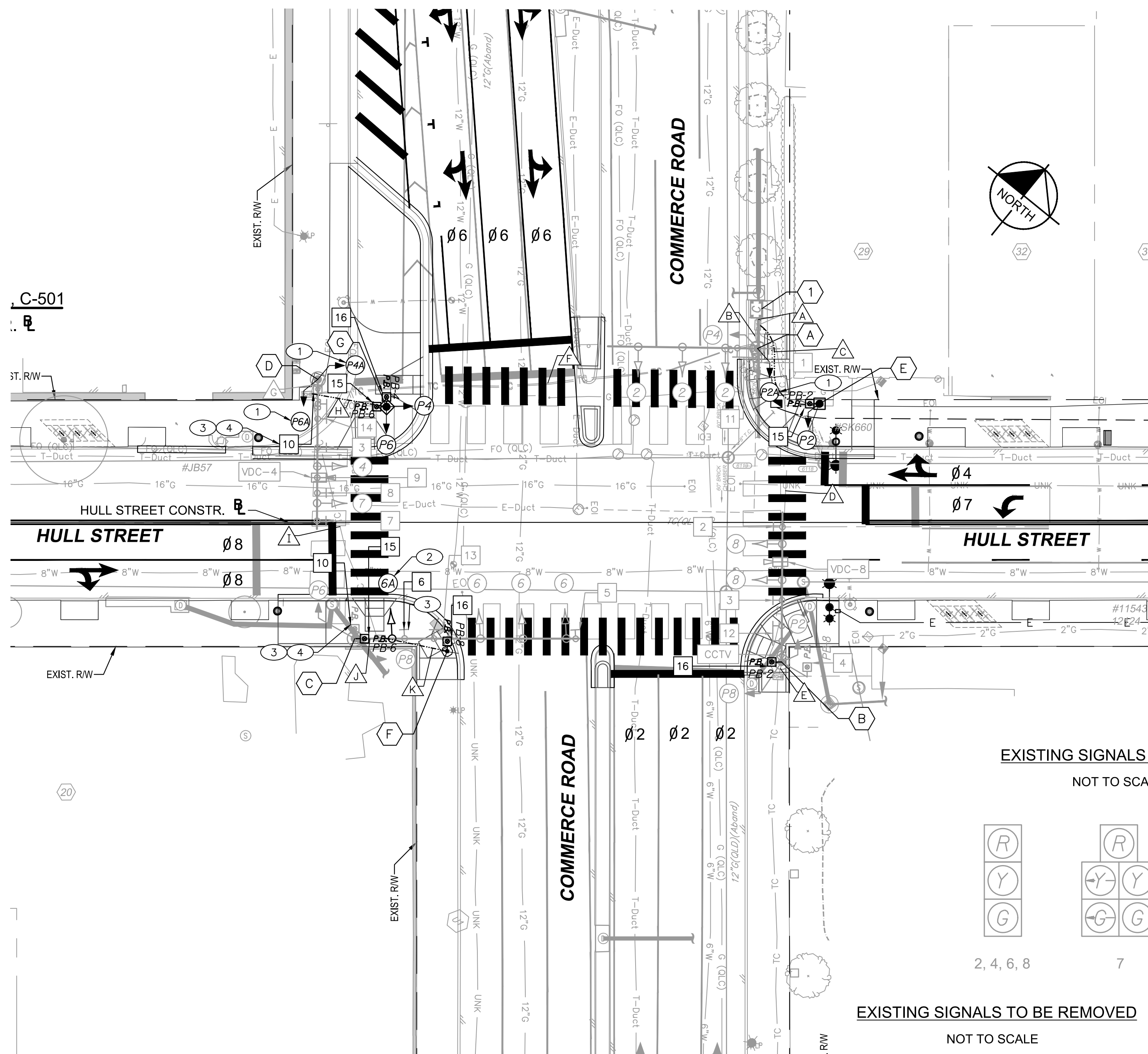
NOT TO SCALE



R3-10E (R) 9" X 15"
R3-10E (L) 9" X 15"

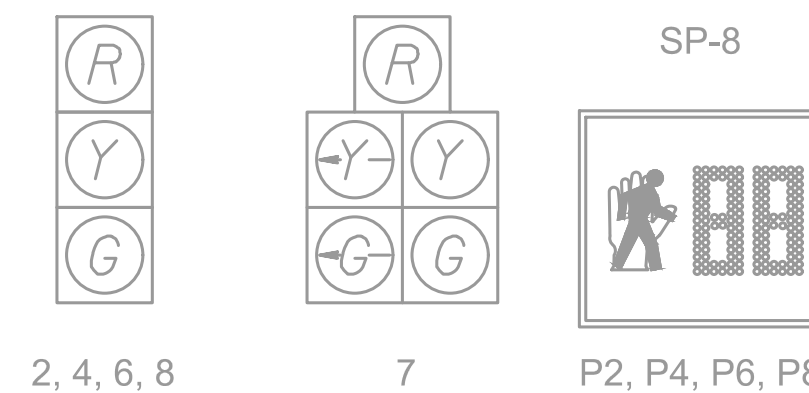
VIDEO DETECTION

- VDC-4 EXISTING DIRECTIONAL VIDEO CAMERA
- VDC-8 EXISTING DIRECTIONAL VIDEO CAMERA
- CCTV EXISTING CLOSED-CIRCUIT TELEVISION (CCTV) CAMERA



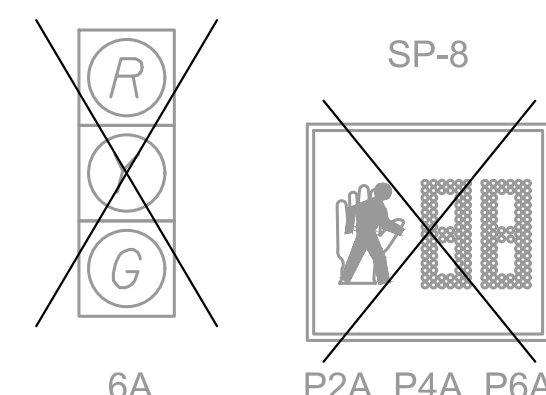
EXISTING SIGNALS TO REMAIN

NOT TO SCALE



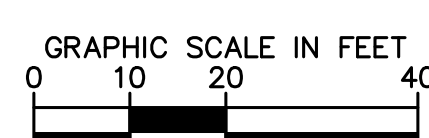
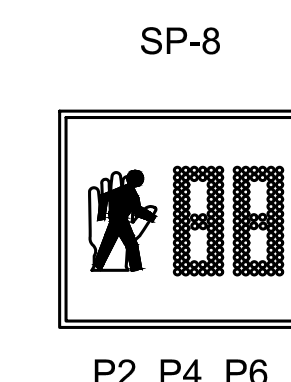
EXISTING SIGNALS TO BE REMOVED

NOT TO SCALE



PROPOSED SIGNALS

NOT TO SCALE



Kimley-Horn
Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel: 804-673-3882



HULL STREET STREETSCAPE TRAFFIC SIGNAL PLAN HULL STREET AND COMMERCE ROAD

DESIGN BY: JSB	REVIEWED BY: ACL	SCALE: 1" = 20'	DATE: 5-14-2021	SHEET: L16.00	PROJECT 109306
CHECKED BY: JMI	DATE: 5-14-2021	DRAWING NO: O-28933			

No.	REVISIONS	DATE	BY

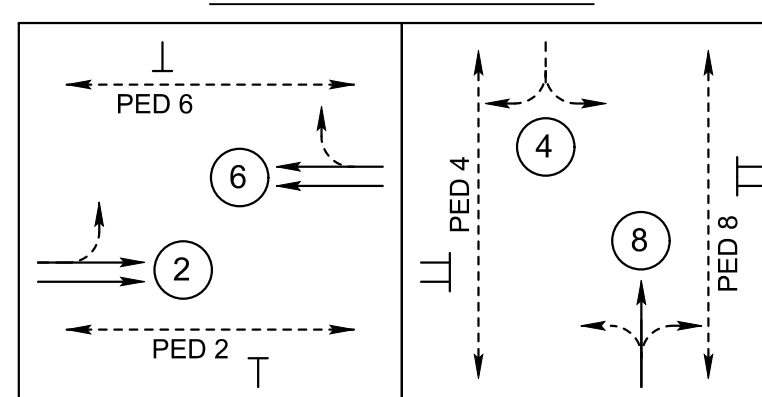
EXISTING	PROPOSED	DESCRIPTION
○	○	JUNCTION BOX
○	○	MAST ARM SIGNAL POLE AND FOUNDATION
○	○	PEDESTAL POLE AND FOUNDATION (VDOT STD. PF-2)
○	○	PEDESTRIAN ACTUATION (VDOT STD. PA-3)
○	○	GROUND MOUNTED SIGNAL CABINET
○	○	POLE MOUNTED SIGNAL CABINET
○	○	RADIO ANTENNA
○	○	VIDEO DETECTION ZONE (SIZE AS NOTED ON PLANS)
○	○	VIDEO DETECTION CAMERA
○	○	ELECTRICAL SERVICE SAFETY SWITCH
○	○	CCTV CAMERA ASSEMBLY
○	○	OVERHEAD SIGN
○	○	POLE MOUNTED SIGN
○	○	TRAFFIC SIGNAL HEAD
○	○	TRAFFIC SIGNAL HEAD WITH BACKPLATE
○	○	PEDESTRIAN SIGNAL HEAD
○	○	PEDESTRIAN PUSH BUTTON
○	○	TRAFFIC SIGNAL CONDUIT
○	○	PHASE MOVEMENT
○	○	BOLLARD
○	○	UNDERGROUND ELECTRIC (SIGNAL)
○	○	UNDERGROUND ELECTRIC (STREETLIGHT)
○	○	STREETLIGHT

SIGNAL POLE & SIGNAL CABINET LEGEND

(ALL DIMENSIONS ARE TO CENTER OF POLE)

- 1 PROPOSED CITY STANDARD GROUND MOUNTED NEMA TS-2 TRAFFIC SIGNAL CABINET WITH PROPOSED CITY STANDARD TRAFFIC SIGNAL CONTROLLER AND UNINTERRUPTED POWER SUPPLY
23.5' LT. OF HULL ST CONSTRUCTION @ STA.113+26.1
- A PROPOSED DUAL MAST ARM POLE
25' ARM FACING HULL STREET
40' ARM FACING 5TH STREET
23.0' LT. OF HULL ST CONSTRUCTION @ STA.112+59.9
- B PROPOSED DUAL MAST ARM POLE
25' ARM FACING HULL STREET
45' ARM FACING 5TH STREET
23.2' RT. OF HULL ST CONSTRUCTION @ STA.113+24.3
- C PROPOSED PEDESTAL POLE PF-2 12' 25.0' LT. OF HULL ST CONSTRUCTION @ STA.113+22.1
- D PROPOSED PEDESTAL POLE PF-2 12' 25.3' RT. OF HULL ST CONSTRUCTION @ STA.112+74.6

PHASING DIAGRAM



NOTE:
PHASE 2 EASTBOUND LEFT TURN
PROHIBITED BY LED BLANK-OUT SIGN
BY TIME OF DAY

JUNCTION BOX LEGEND

ALL JUNCTION BOXES SHALL CONFORM TO VDOT STD. JB-S2 UNLESS OTHERWISE NOTED ON THE PLANS.

- S1 DENOTES VDOT STD. JB-S1
- S3 DENOTES VDOT STD. JB-S3

VIDEO DETECTION

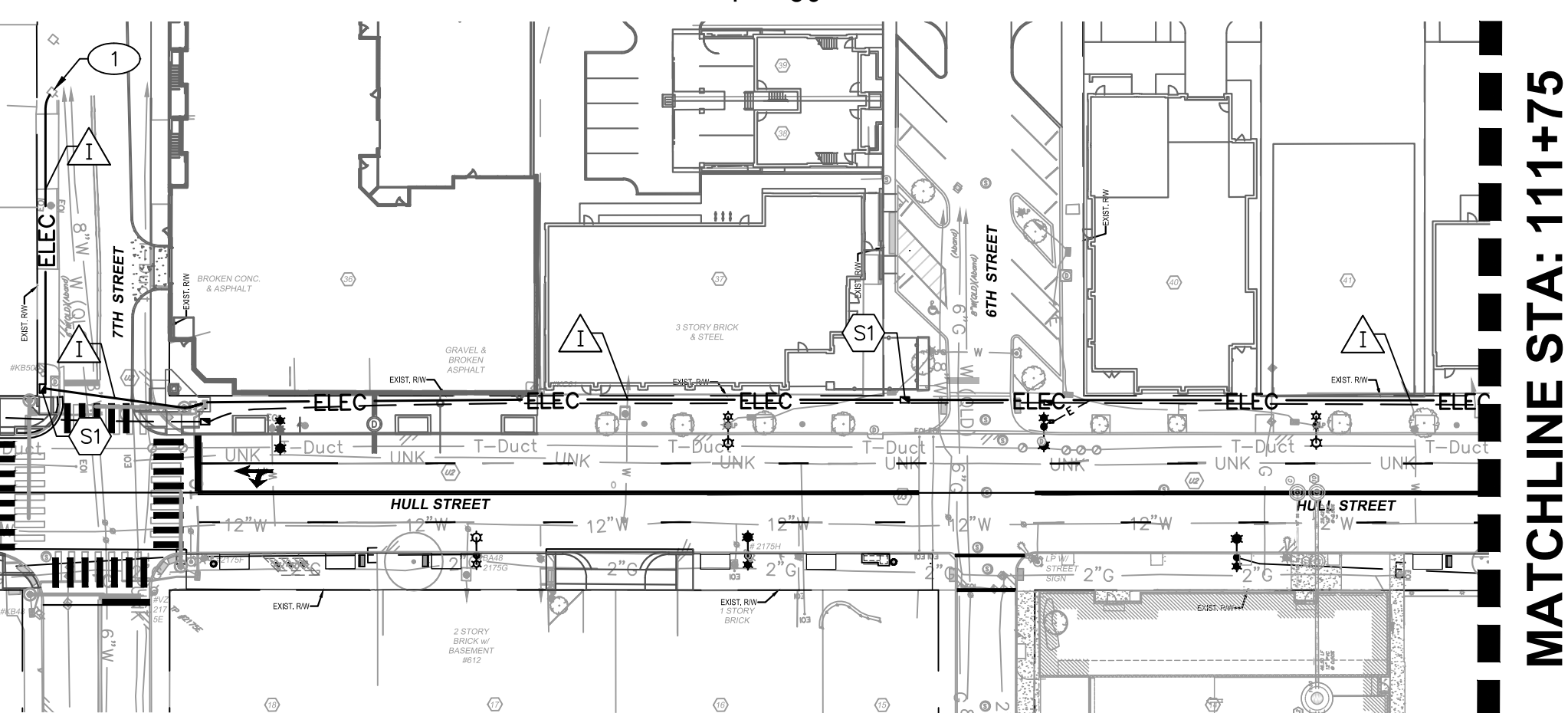
- VDC-4 PROPOSED DIRECTIONAL VIDEO CAMERA
- VDC-8 PROPOSED DIRECTIONAL VIDEO CAMERA

CONDUIT & CABLE LEGEND

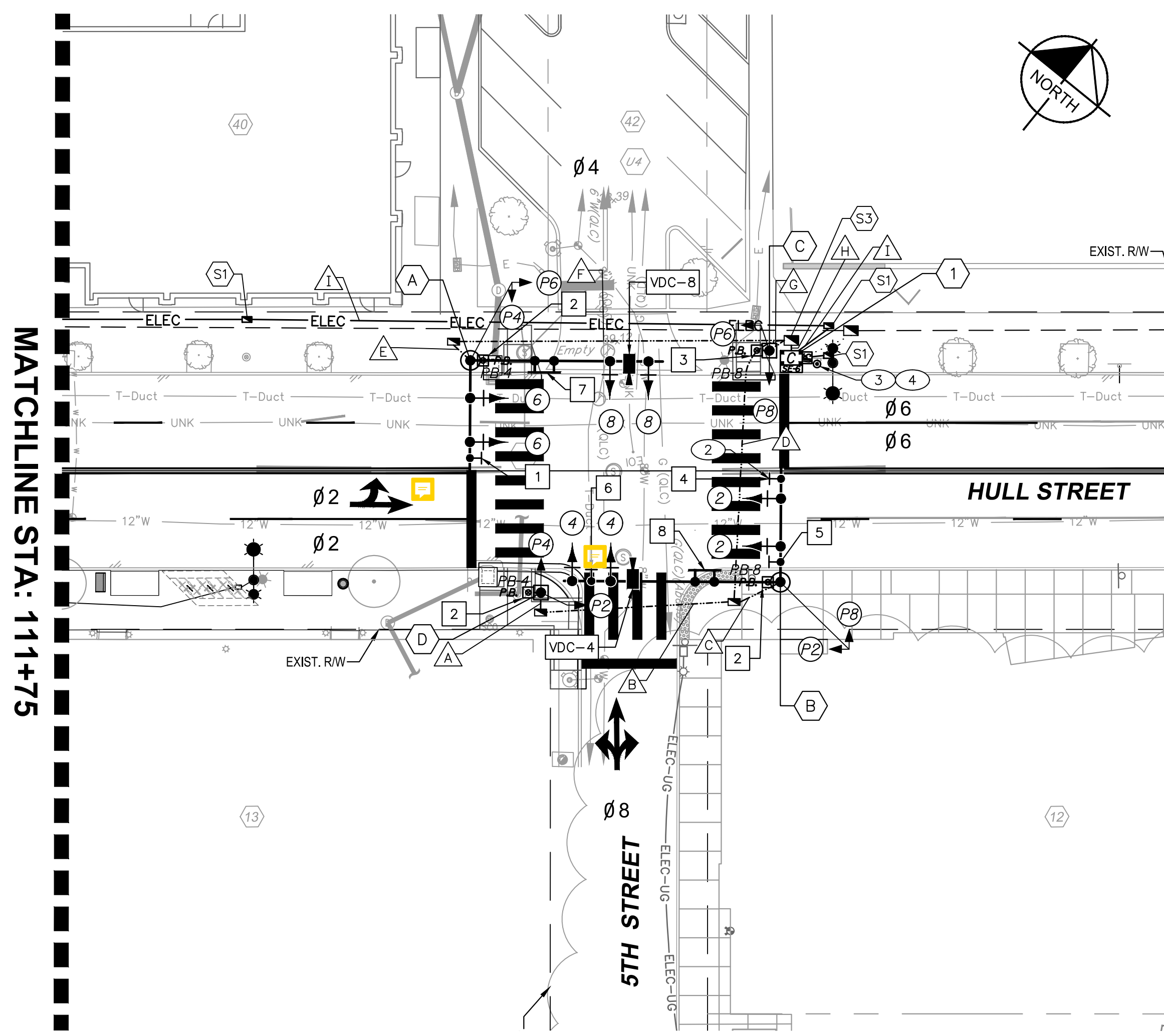
- A 1-2" PVC CONDUIT (TRENCH)
2-14/3c FOR HEADS P2, P4
2-14/3c FOR PB-4
1-#8 GROUNDING WIRE
1-2" SPARE PVC CONDUIT (TRENCH)
1-#8 GROUNDING WIRE
 - B 1-3" HDPE CONDUIT (DIRECTIONAL DRILL)
3-14/7c FOR HEADS P2, P4
1-14/2c FOR PB-4
1-#8 GROUNDING WIRE
1-3" SPARE HDPE CONDUIT (DIRECTIONAL DRILL)
1-#8 GROUNDING WIRE
 - C 1-3" PVC CONDUIT (TRENCH)
3-14/7c FOR HEADS 2, 4, AND LED SIGN 4
2-14/3c FOR HEADS P2, P8
1-14/2c FOR PB-8
1-VDC FOR VDC-4
1-#8 GROUNDING WIRE
1-3" SPARE PVC CONDUIT (TRENCH)
1-#8 GROUNDING WIRE
 - D 1-3" HDPE CONDUIT (DIRECTIONAL DRILL)
3-14/7c FOR HEADS 2, 4, AND LED SIGN 4
4-14/3c FOR HEADS P2, P4, P8
1-VDC FOR VDC-4
1-#8 GROUNDING WIRE
1-3" SPARE HDPE CONDUIT (DIRECTIONAL DRILL)
1-#8 GROUNDING WIRE
 - E 1-3" PVC CONDUIT (TRENCH)
2-14/7c FOR HEADS 6, 8
2-14/3c FOR HEADS P4, P6
1-14/2c FOR PB-4
1-VDC FOR VDC-8
1-#8 GROUNDING WIRE
1-3" SPARE PVC CONDUIT (TRENCH)
1-#8 GROUNDING WIRE
 - F 1-3" HDPE CONDUIT (DIRECTIONAL DRILL)
2-14/7c FOR HEADS 6, 8
2-14/3c FOR HEADS P4, P6
1-14/2c FOR PB-4
1-VDC FOR VDC-8
1-#8 GROUNDING WIRE
1-3" SPARE HDPE CONDUIT (DIRECTIONAL DRILL)
1-#8 GROUNDING WIRE
 - G 1-2" PVC CONDUIT (TRENCH)
5-14/7c FOR HEADS 2, 4, 6, 8, AND LED SIGN 4
8-14/3c FOR HEADS P2, P4, P6, P8
4-14/2c FOR PB-4, PB-8
2-VDC FOR VDC-4, VDC-8
1-#8 GROUNDING WIRE
1-3" SPARE PVC CONDUIT (TRENCH)
1-#8 GROUNDING WIRE
 - H 2-3" PVC CONDUIT (TRENCH)
5-14/7c FOR HEADS 2, 4, 6, 8, AND LED SIGN 4
8-14/3c FOR HEADS P2, P4, P6, P8
4-14/2c FOR PB-4, PB-8
2-VDC FOR VDC-4, VDC-8
1-#8 GROUNDING WIRE
1-3" SPARE PVC CONDUIT (TRENCH)
1-#8 GROUNDING WIRE
 - I 1-2" HDPE CONDUIT (DIRECTIONAL DRILL)
1-8/2c FOR ELECTRICAL SERVICE
1-#8 GROUNDING WIRE
1-2" SPARE HDPE CONDUIT (DIRECTIONAL DRILL)
1-#8 GROUNDING WIRE
- VDC - VIDEO DETECTION CABLE
- NOTES:
1. ALL CABLE AND CONDUIT IS PROPOSED UNLESS OTHERWISE NOTED.

INSET A - PROPOSED POWER CONNECTION

1" = 50'



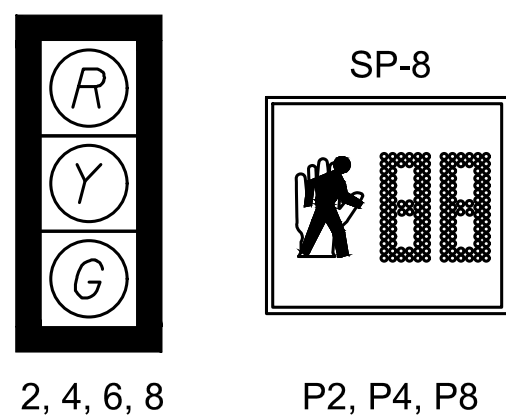
MATCHLINE STA: 111+75



MATCHLINE STA: 111+75

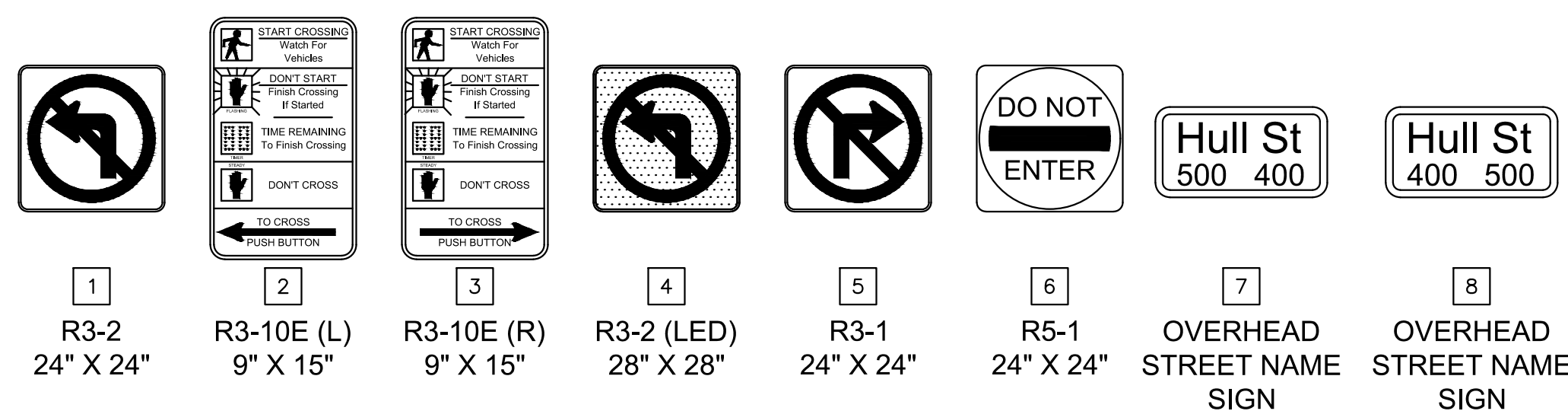
PROPOSED SIGNALS

NOT TO SCALE



PROPOSED SIGNS

NOT TO SCALE



CONSTRUCTION NOTES

- 1 USE EXISTING POLE #KC31 FOR PROPOSED VDOT STANDARD SE-6 ELECTRICAL SERVICE. PROPOSED ELECTRICAL SERVICE SHALL BE INSTALLED IN SEPARATE CONDUIT FROM THE ITS CONDUIT. CONTRACTOR TO COORDINATE WITH POWER COMPANY.
- 2 INSTALL PROPOSED LED BLANK-OUT SIGN AS SHOWN ON PLANS.
- 3 INSTALL PROPOSED BOLLARD PER DETAIL ON SHEET L7.01.
- 4 PROPOSED BOLLARD SHALL BE FIELD LOCATED BY THE CONTRACTOR. 48 HOURS PRIOR TO ANY EXCAVATION FOR THE PROPOSED BOLLARD, THE CONTRACTOR SHALL CONTACT SETH GILLEY, CITY OF RICHMOND - TRAFFIC ENGINEERING DIVISION, AT (804)646-1065 TO RECEIVE FIELD CONFIRMATION OF THE PROPOSED BOLLARD LOCATION.

THE CONTRACTOR SHALL CONTACT "MISS UTILITY OF VIRGINIA" (811) PRIOR TO BEGINNING EXCAVATION WORK IN ORDER TO DETERMINE THE LOCATION AND EXTENT OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT THE CONTRACTOR'S EXPENSE, ANY EXISTING TRAFFIC SIGNAL EQUIPMENT, UTILITIES, PAVEMENT, CONCRETE ITEMS, PIPES, ETC. THAT ARE DAMAGED DURING CONSTRUCTION.

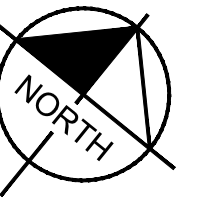
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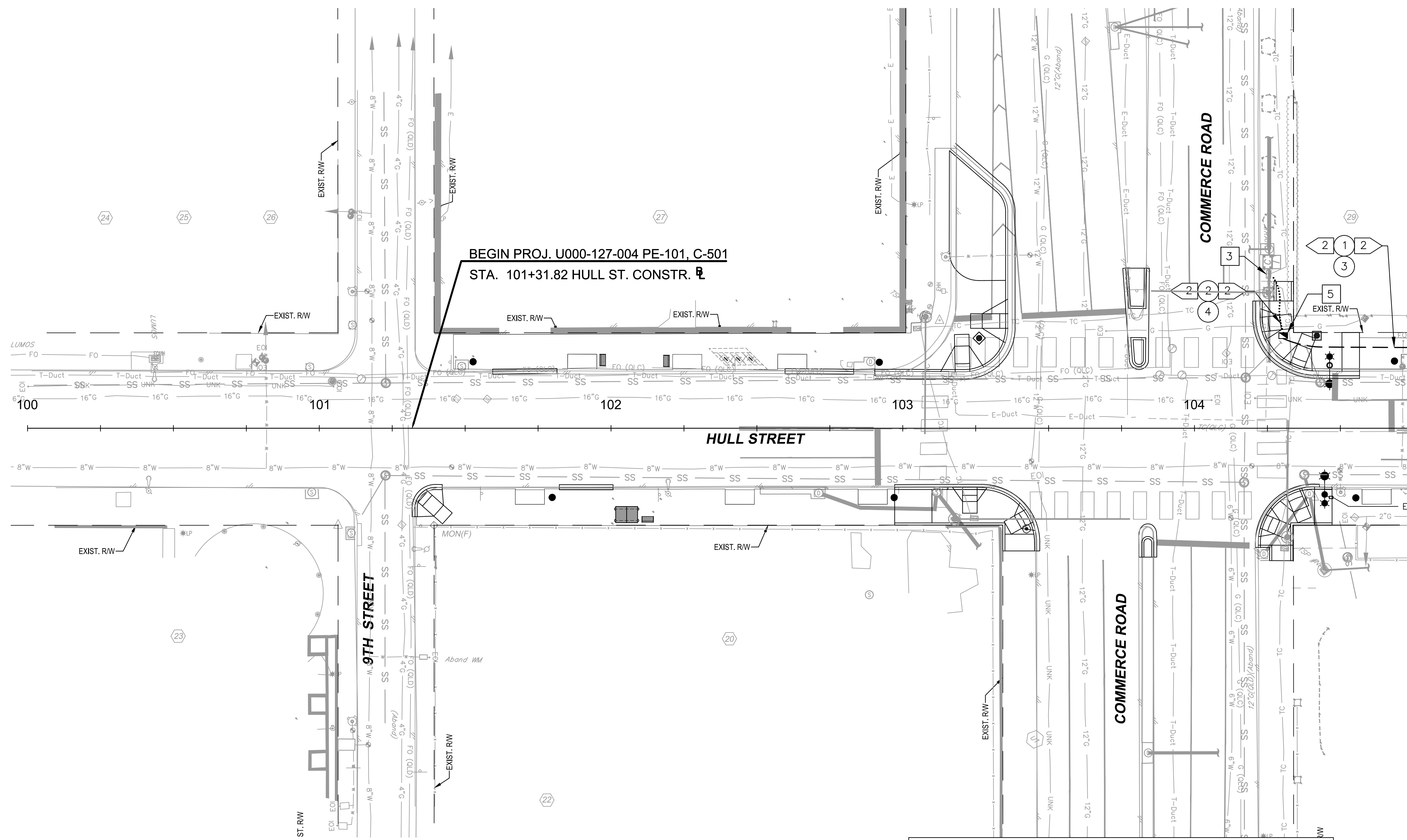
Kimley-Horn and Associates, Inc.
Richmond, Virginia
TRAFFIC ENGINEER

Drawing name: K:\RICHMOND\113357_RIC_Coll\028_Hull_St_StreetScope\CADD\Sheets\SIGNAL PLAN.dwg L14.02 SIGNAL PLAN May 14, 2021 4:23pm by: Alyssa Baird
This document, together with the concepts and designs presented herein, is an instrument of service intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

<p>LEGEND</p> <table border="0"> <tr> <td>EXISTING</td> <td>PROPOSED</td> <td>EXISTING</td> <td>PROPOSED</td> <td>EXISTING</td> <td>PROPOSED</td> </tr> <tr> <td>JUNCTION BOX</td> <td>MAST ARM SIGNAL POLE AND FOUNDATION</td> <td>PEDESTAL POLE AND FOUNDATION (VDOT STD. PF-2)</td> <td>PEDESTRIAN ACTUATION (VDOT STD. PA-3)</td> <td>GROUND MOUNTED SIGNAL CABINET</td> <td>POLE MOUNTED SIGNAL CABINET</td> </tr> <tr> <td>RADIO ANTENNA</td> <td>VIDEO DETECTION ZONE (SIZE AS NOTED ON PLANS)</td> <td>VIDEO DETECTION CAMERA</td> <td>ELECTRICAL SERVICE SAFETY SWITCH</td> <td>CCTV CAMERA ASSEMBLY</td> <td>OVERHEAD SIGN</td> </tr> <tr> <td>POLE MOUNTED SIGN</td> <td>TRAFFIC SIGNAL HEAD</td> <td>TRAFFIC SIGNAL HEAD WITH BACKPLATE</td> <td>PEDESTRIAN SIGNAL HEAD</td> <td>PEDESTRIAN PUSH BUTTON</td> <td>TRAFFIC SIGNAL CONDUIT</td> </tr> <tr> <td>PHASE MOVEMENT</td> <td>BOLLARD</td> <td>UNDERGROUND ELECTRIC (SIGNAL)</td> <td>UNDERGROUND ELECTRIC (STREETLIGHT)</td> <td>STREETLIGHT</td> <td></td> </tr> </table>		EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	JUNCTION BOX	MAST ARM SIGNAL POLE AND FOUNDATION	PEDESTAL POLE AND FOUNDATION (VDOT STD. PF-2)	PEDESTRIAN ACTUATION (VDOT STD. PA-3)	GROUND MOUNTED SIGNAL CABINET	POLE MOUNTED SIGNAL CABINET	RADIO ANTENNA	VIDEO DETECTION ZONE (SIZE AS NOTED ON PLANS)	VIDEO DETECTION CAMERA	ELECTRICAL SERVICE SAFETY SWITCH	CCTV CAMERA ASSEMBLY	OVERHEAD SIGN	POLE MOUNTED SIGN	TRAFFIC SIGNAL HEAD	TRAFFIC SIGNAL HEAD WITH BACKPLATE	PEDESTRIAN SIGNAL HEAD	PEDESTRIAN PUSH BUTTON	TRAFFIC SIGNAL CONDUIT	PHASE MOVEMENT	BOLLARD	UNDERGROUND ELECTRIC (SIGNAL)	UNDERGROUND ELECTRIC (STREETLIGHT)	STREETLIGHT		<p>GRAPHIC SCALE IN FEET</p> <p>Kimley-Horn Kimley-Horn and Associates, Inc. 1700 WILLOW LAWN DR, SUITE 200 RICHMOND, VIRGINIA 23230 Tel. 804-673-3882</p>	<p>CITY OF RICHMOND ESTABLISHED 1776</p>	<p>HULL STREET STREETSCAPE TRAFFIC SIGNAL PLAN HULL STREET AND 5TH STREET</p> <p>AUTHORITY: CITY OF RICHMOND PROJECT 109306</p> <table border="1"> <tr> <td>DESIGN BY: JSB</td> <td>REVIEWED BY: ACL</td> <td>SCALE: 1" = 20'</td> <td>DATE: 5-14-2021</td> <td>SHEET: L16.01</td> <td>DRAWING NO.: O-28933</td> </tr> <tr> <td>DRAWN BY: JMI</td> <td>CHECKED BY: ACL</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	DESIGN BY: JSB	REVIEWED BY: ACL	SCALE: 1" = 20'	DATE: 5-14-2021	SHEET: L16.01	DRAWING NO.: O-28933	DRAWN BY: JMI	CHECKED BY: ACL				
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Drawing name: K:\RVC_IP\10113357_RIC_01_Coal\028_Hull_St_StreetScope\CADD\Sheets\ITS CONDUIT PLAN.dwg L17.00 ITS CONDUIT PLAN May 14, 2021 3:49pm by Alysa Baird
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MATCHLINE STA: 104+75 - SEE SHEET L17.01

- | | | | |
|----------|---|-----------|--|
| | INDICATES NUMBER OF CONDUIT(S) | 1A | CABINET CONDUIT ENTRY MODIFICATION (SEE SHEET L15.01 FOR DETAIL) |
| | INDICATES DIAMETER OF CONDUIT(S) (INCH) | 1B | CABINET CONDUIT ENTRY VIA PROPOSED CABINET FOUNDATION |
| 1 | INSTALL HDPE CONDUIT | 2 | MODIFY EXISTING CABINET FOUNDATION (SEE SHEET LX.# FOR INSTALLATION DETAILS) |
| 2 | INSTALL PVC CONDUIT | 3 | MODIFY EXISTING JUNCTION BOX |
| 3 | DIRECTIONAL DRILL CONDUIT | 4 | INSTALL NEW VDOT STANDARD JB-S2 JUNCTION BOX |
| 4 | TRENCH CONDUIT | 5 | INSTALL NEW VDOT STANDARD JB-S3 JUNCTION BOX |

THE CONTRACTOR SHALL MODIFY EXISTING JUNCTION BOXES TO ACCOMMODATE ADDITIONAL CONDUIT ENTRIES AS INDICATED ON THE PLANS USING A METHOD TO ENTER AND SEAL EXISTING JUNCTION BOXES AS APPROVED BY THE ENGINEER.

CONTRACTOR SHALL ENSURE THAT NO OTHER CONDUITS OR CABLES ARE DAMAGED IN THE PROCESS OF MODIFYING EXISTING JUNCTION BOXES. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY CONDUITS OR CABLES THAT MAY BE DAMAGED DURING WORK ON THE EXISTING JUNCTION BOXES AT NO COST TO THE CITY.

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Richmond, Virginia
TRAFFIC ENGINEER

No.	REVISIONS	DATE	BY

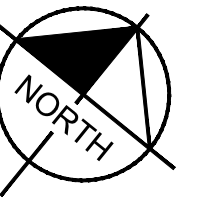
EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
CONDUIT	TRENCHED CONDUIT	FIRE HYDRANT	GAS VALVE	POWER POLE	POWER POLE W/LIGHT	ELECTRIC	ELECTRIC DUCT	SANITARY	SANITARY FORCE MAIN
DIRECTIONAL DRILLED POINT	JUNCTION BOX	GAS VALVE	LIGHT POLE	SURVEY CONTROL POINT	SIGN (TWO POST)	CABLE TV	TV FIBER OPTIC	SFM	STORM DRAIN
SIGNAL POLE AND FOUNDATION	PEDESTAL POLE	WATER VALVE	WATER METER	SIGN (SINGLE POST)	TRASH CAN	TV FIBER OPTIC	FIBER OPTIC	W	WATER
GROUND MOUNTED SIGNAL CONTROLLER CABINET	PEDESTRIAN PUSH BUTTON	TELEPHONE MANHOLE	ELECTRIC MANHOLE	TRASH CAN	TRASH CAN	FIBER OPTIC DUCT	TELEPHONE	TC	TRAFFIC CONDUIT
BOLLARD	STREETLIGHT	SANITARY MANHOLE	STORM MANHOLE			TELEPHONE DUCT	COMMUNICATIONS	UNK	UNKNOWN UTILITY LINE
		STORM MANHOLE							

GRAPHIC SCALE IN FEET
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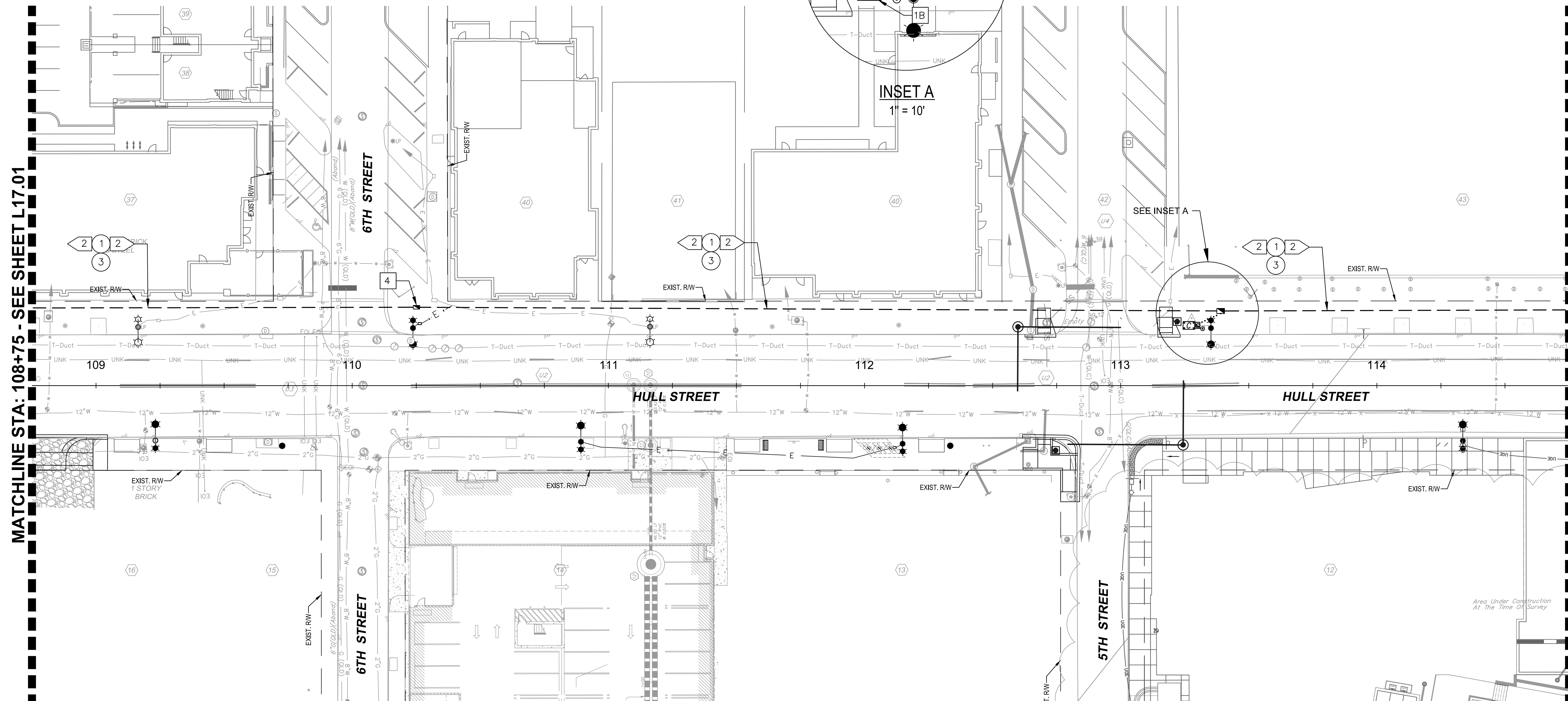
Kimley-Horn
Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel. 804-673-3882



HULL STREET STREETSCAPE ITS CONDUIT PLAN HULL STREET			
AUTHORITY: CITY OF RICHMOND		PROJECT 109306	
DESIGN BY: JMI / TTY	REVIEWED BY: ACL	SCALE: 1" = 20'	DATE: 5-14-2021
DRAWN BY: JMI	CHECKED BY: ACL	SHEET: L17.00	DRAWING NO.: O-28933



Drawing name: K:\RVC_IP\10113357_RIC_01_Coll_V028_Hull_St_StreetScope\CADD\Sheets\ITS CONDUIT PLAN.dwg L17.02 ITS CONDUIT PLAN May 14, 2021 4:23pm by Alyssa Baird
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| | INDICATES NUMBER OF CONDUIT(S) |
| | INDICATES DIAMETER OF CONDUIT(S) (INCH) |
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- | | | | |
|---|----------------------|---|---------------------------|
| ① | INSTALL HDPE CONDUIT | ③ | DIRECTIONAL DRILL CONDUIT |
| ② | INSTALL PVC CONDUIT | ④ | TRENCH CONDUIT |
-
- | | |
|----|--|
| 1A | CABINET CONDUIT ENTRY MODIFICATION (SEE SHEET L15.01 FOR DETAIL) |
| 1B | CABINET CONDUIT ENTRY VIA PROPOSED CABINET FOUNDATION |
| 2 | MODIFY EXISTING CABINET FOUNDATION (SEE SHEET LX.# FOR INSTALLATION DETAILS) |
| 3 | MODIFY EXISTING JUNCTION BOX |
| 4 | INSTALL NEW VDOT STANDARD JB-S2 JUNCTION BOX |
| 5 | INSTALL NEW VDOT STANDARD JB-S3 JUNCTION BOX |

THE CONTRACTOR SHALL MODIFY EXISTING JUNCTION BOXES TO ACCOMMODATE ADDITIONAL CONDUIT ENTRIES AS INDICATED ON THE PLANS USING A METHOD TO ENTER AND SEAL EXISTING JUNCTION BOXES AS APPROVED BY THE ENGINEER.

CONTRACTOR SHALL ENSURE THAT NO OTHER CONDUITS OR CABLES ARE DAMAGED IN THE PROCESS OF MODIFYING EXISTING JUNCTION BOXES. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY CONDUITS OR CABLES THAT MAY BE DAMAGED DURING WORK ON THE EXISTING JUNCTION BOXES AT NO COST TO THE CITY.

THE CONTRACTOR SHALL CONTACT "MISS UTILITY OF VIRGINIA" (811) PRIOR TO BEGINNING EXCAVATION WORK IN ORDER TO DETERMINE THE LOCATION AND EXTENT OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT THE CONTRACTOR'S EXPENSE, ANY EXISTING TRAFFIC SIGNAL EQUIPMENT, UTILITIES, PAVEMENT, CONCRETE ITEMS, PIPES, ETC. THAT ARE DAMAGED DURING CONSTRUCTION.

ALL EXISTING ITEMS SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO FIELD LOCATE ALL PROPOSED ITEMS ON THESE PLANS AND SHALL ENSURE ALL ITEMS ARE INSTALLED WITHIN EXISTING RIGHT OF WAY, PROPOSED RIGHT OF WAY OR EASEMENT, OR ON CITY-OWNED PROPERTY. THE LOCATION AND ORIENTATION OF ALL PROPOSED ITEMS SHALL BE FIELD VERIFIED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

Kimley-Horn and Associates, Inc.
Richmond, Virginia
TRAFFIC ENGINEER

No.	REVISIONS	DATE	BY

EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED

GRAPHIC SCALE IN FEET
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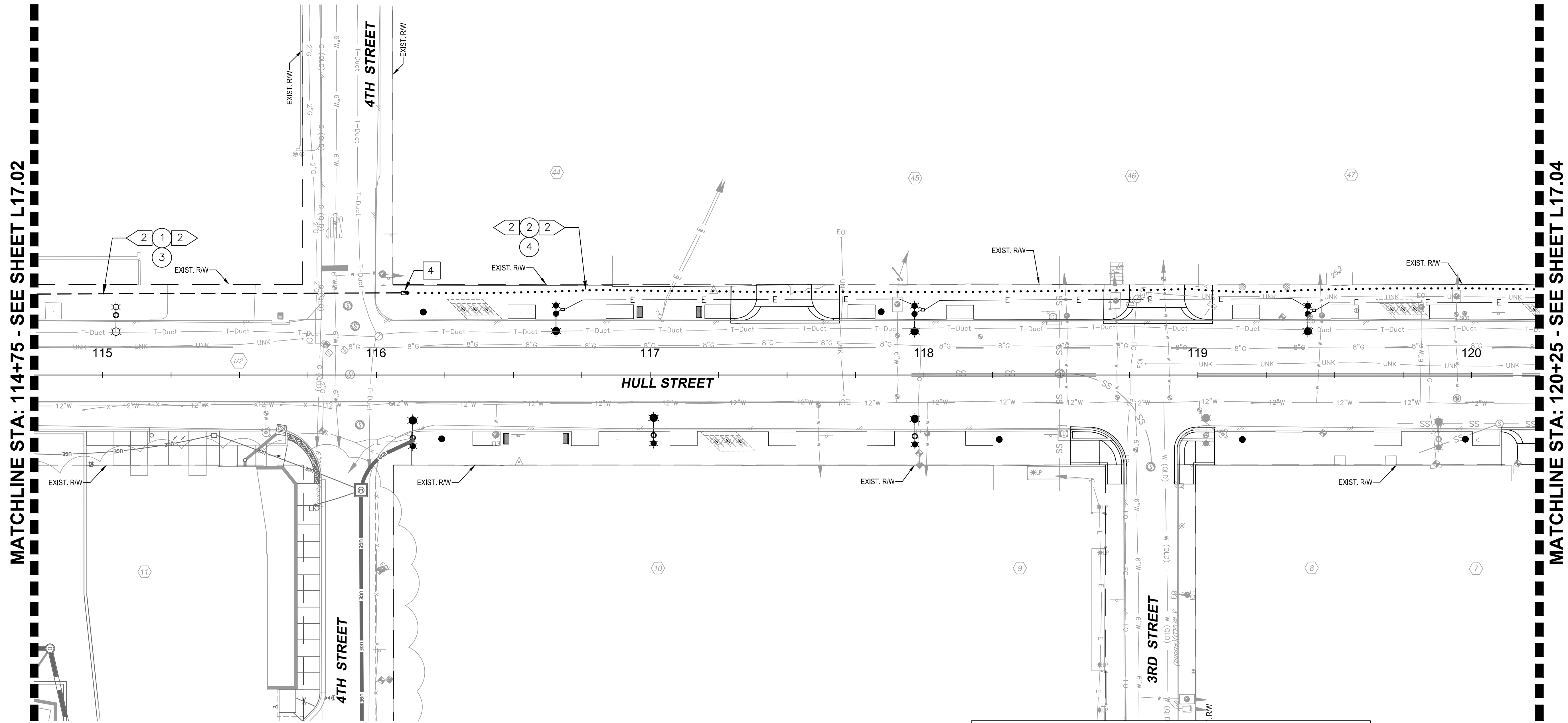
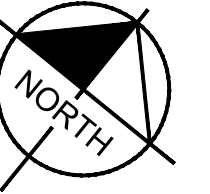
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Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel. 804-673-3882



**HULL STREET STREETSCAPE
ITS CONDUIT PLAN
HULL STREET**

AUTHORITY: CITY OF RICHMOND

DESIGN BY: JMI / TTY	REVIEWED BY: ACL	SCALE: 1" = 20'	DATE: 5-14-2021	SHEET: L17.02	PROJECT 109306
DRAWN BY: JMI	CHECKED BY: ACL			DRAWING NO: O-28933	



Drawing name: K:\RVC_IP\10113357_RIC_04_Coll\028_Hull_St_StreetScope\CADD\Sheets\ITS CONDUIT PLAN.dwg L17.03 ITS CONDUIT PLAN May 14, 2021 3:50pm by Alyssa Baird
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| | INDICATES NUMBER OF CONDUIT(S) | | CABINET CONDUIT ENTRY MODIFICATION (SEE SHEET L15.01 FOR DETAIL) |
| | INDICATES DIAMETER OF CONDUIT(S) (INCH) | | CABINET CONDUIT ENTRY VIA PROPOSED CABINET FOUNDATION |
| | INSTALL HDPE CONDUIT | | MODIFY EXISTING CABINET FOUNDATION (SEE SHEET LX.# FOR INSTALLATION DETAILS) |
| | INSTALL PVC CONDUIT | | MODIFY EXISTING JUNCTION BOX |
| | DIRECTIONAL DRILL CONDUIT | | INSTALL NEW VDOT STANDARD JB-S2 JUNCTION BOX |
| | TRENCH CONDUIT | | INSTALL NEW VDOT STANDARD JB-S3 JUNCTION BOX |

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Kimley-Horn and Associates, Inc.
Richmond, Virginia
TRAFFIC ENGINEER

No.	REVISIONS	DATE	BY

EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED

GRAPHIC SCALE IN FEET
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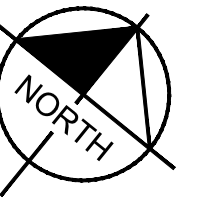
Kimley-Horn
Kimley-Horn and Associates, Inc.
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Tel: 804-673-3882



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ITS CONDUIT PLAN
HULL STREET**

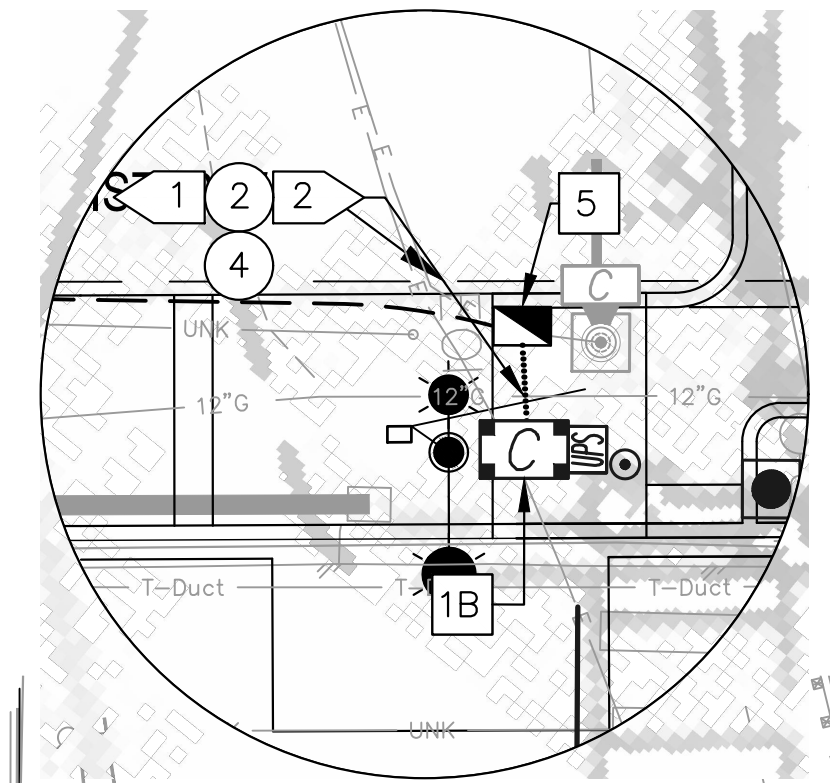
AUTHORITY: CITY OF RICHMOND

DESIGN BY: JMI / TTV	REVIEWED BY: ACL	SCALE: 1" = 20'	DATE: 5-14-2021	SHEET: L17.03	PROJECT 109306
CHECKED BY: JMI					DRAWING NO. O-28933



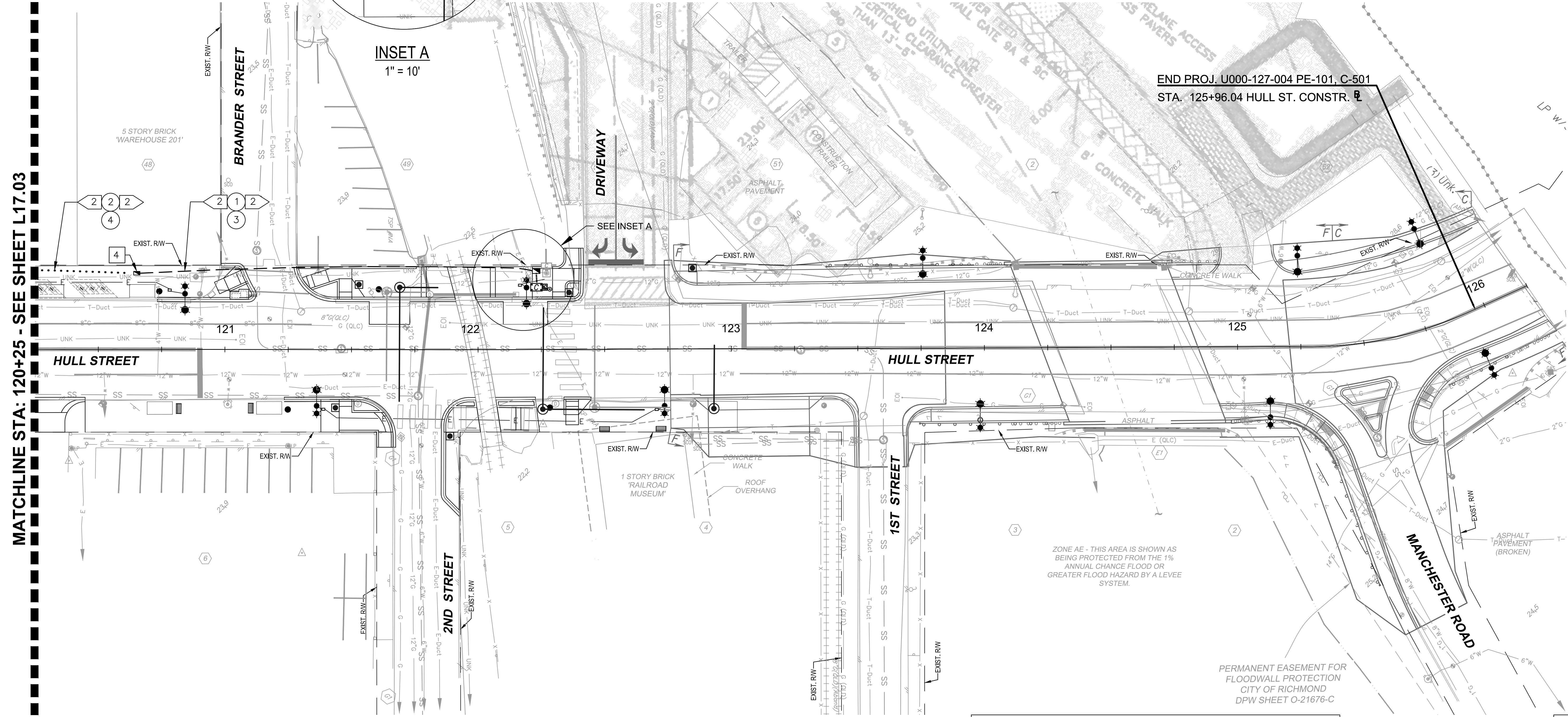
Drawing name: K:\RVC_1P10\113357_RIC_01_Coll\028_Hull_St_StreetScope\CADD\Sheets\ITS CONDUIT PLAN.dwg L17.04 ITS CONDUIT PLAN May 14, 2021 3:50pm by Alyssa Bird
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MATCHLINE STA: 120+25 - SEE SHEET L17.03



INSET A
1" = 10'

END PROJ. U000-127-004 PE-101, C-501
STA. 125+96.04 HULL ST. CONSTR. R



ZONE AE - THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD OR GREATER FLOOD HAZARD BY A LEVEE SYSTEM.

PERMANENT EASEMENT FOR FLOODWALL PROTECTION
CITY OF RICHMOND
DPW SHEET O-21676-C

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| | INDICATES NUMBER OF CONDUIT(S) |
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- | | | | |
|---|----------------------|---|---------------------------|
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- | | |
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EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
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DIRECTIONAL DRILLED POINT	JUNCTION BOX	GAS MANHOLE	SIGN (TWO POST)	TV	TV FIBER OPTIC	SANITARY	SANITARY FORCE MAIN
PEDESTAL POLE	GROUND MOUNTED SIGNAL CONTROLLER CABINET	WATER VALVE	SIGN (SINGLE POST)	TRASH CAN	TRASH CAN	SD	STORM DRAIN
BOLLARD	STREETLIGHT	WATER METER	TELEPHONE MANHOLE			W	WATER
		ELECTRIC MANHOLE				TC	TRAFFIC CONDUIT
		SANITARY MANHOLE				UNK	UNKNOWN UTILITY LINE
		STORM MANHOLE					

GRAPHIC SCALE IN FEET
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