



## Application for URBAN DESIGN COMMITTEE Review

Department of Planning and Development Review  
Planning & Preservation Division  
900 E. Broad Street, Room 510  
Richmond, Virginia 23219  
(804) 646-6335

<http://www.richmondgov.com/CommitteeUrbanDesign>

### Application Type

- Addition/Alteration to Existing Structure  
 New Construction  
 Streetscape  
 Site Amenity

- Encroachment  
 Master Plan  
 Sign  
 Other

### Review Type

- Conceptual  
 Final

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Brief Project Description (this is not a replacement for the required detailed narrative) : \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Applicant Information

(on all applications other than encroachments, a City agency representative must be the applicant)

Name: \_\_\_\_\_ Email: \_\_\_\_\_

City Agency: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Main Contact (if different from Applicant): \_\_\_\_\_

Company: \_\_\_\_\_ Phone: \_\_\_\_\_

Email: \_\_\_\_\_

### Submittal Deadlines

All applications and support materials must be filed no later than 21 days prior to the scheduled meeting of the Urban Design Committee (UDC). Please see the schedule on page 3 as actual deadlines are adjusted due to City holidays. **Late or incomplete submissions will be deferred to the next meeting.**

### Filing

Applications can be mailed or delivered to the attention of "Urban Design Committee" at the address listed at the top of this page. **It is important that the applicant discuss the proposal with appropriate City agencies, Zoning Administration staff, and area civic associations and residents prior to filing the application with the UDC.**

### UDC Background

The UDC is a ten member committee created by City Council in 1968 whose purpose is to advise the City Planning Commission on the design of projects on City property or right-of-way. The UDC provides advice of an aesthetic nature in connection with the performance of the duties of the Commission under Sections 17.05, 17.06 and 17.07 of the City Charter. The UDC also advises the Department of Public Works in regards to private encroachments in the public right-of-way.

Date: October 2015

## Deepwater Terminal Road Extension to Goodes Street

City of Richmond Department of Public Works

City Award # 500473 & 500491

VDOT UPC # 104281

\*\*\*\*\*

### LOCATION:

**From:** Missing Section from Deepwater Terminal Road "South End"

**To:** Deepwater Terminal Road North End "by Goodes Street"

### ESTIMATED CONSTRUCTION COST:

\$3,300,000 (Based on 60% Plans)

### FUNDING SOURCE:

Current Fund: (\$2,250,000 City GO and State Revenue Sharing funds), for Engineering, Right -of - Way and Partial construction.

### Project Schedule:

Design Completion Date: Anticipated January 2016

Construction: TBD pending on Right -of -way acquisition and full construction fund appropriation.

### PROJECT DESCRIPTION:

This project will extend Deepwater Terminal Road 0.7 miles north to Goodes Street. The project will consist of a 2-lane roadway with curb & gutter on both sides, lighting and drainage improvements. The roadway extension will require utility relocations and right -of -way acquisitions. This proposed two lane roadway will facilitate and provide access road for taller trucks and equipment entering the Port of Richmond.

**Note:** CPC at the conceptual meeting on March 2015 approved the 30% conceptual plan with the two conditions below:

1. That the applicant consider including sharrows on the new section of roadway.
2. That the proposed cobra head lighting fixtures are to be full-cutoff.

### Concerning note 1 above:

Pedestrian, Bicycle / Trails City Coordinator and City Traffic Division recommending to eliminate Sharrows.

The following are the supporting rationale for that decision:

- The road is being developed for industrial truck access
- Traffic volumes are very low, largely limited to accessing those industrial sites
- Because it is a very isolated corridor It does not provide any significant degree of bike connectivity or access
- It is not in a corridor (or near a corridor) that the Bike Master Plan (BMP) has identified as needing bike connectivity
- Following development of the BMP, sharrows were determined to be targeted at situations where there is a need to fill short gaps between dedicated bike infrastructure, or in conjunction with wider measures such as traffic calming, to create a bike route where dedicated bike infrastructure wasn't feasible.

### Concerning note 2 above:

The City of Richmond Department of Public Utilities (DPU) wants their standard lights be consistent with other lights in the corridor and elsewhere. Standard light that is to be used is Semi-Cutoff but not Full-Cutoff.

# CITY OF RICHMOND, VIRGINIA

## DEPARTMENT OF PUBLIC WORKS

### ENGINEERING & TECHNICAL SERVICES

FHWA 534 DATA XXXXX			
FHWA REGION	STATE	FEDERAL PROJECT NUMBER	STATE PROJECT NUMBER
	VA.	N/A	U000-127-R52

**60% PRELIMINARY RIGHT OF WAY PLANS**

NOT FOR RIGHT OF WAY OR CONSTRUCTION



CITY OF RICHMOND

APPROVED FOR RIGHT OF WAY ACQUISITION

DATE	PROJECT MANAGER
DATE	SURVEYS SUPERINTENDENT
DATE	CAPITAL PROJECTS ADMINISTRATOR
DATE	CITY ENGINEER
DATE	DIRECTOR OF PUBLIC WORKS

CITY OF RICHMOND

APPROVED FOR CONSTRUCTION

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

# DEEPWATER TERMINAL ROAD EXTENSION

(PROJECT LIMITS FROM CURRENT TERMINUS to GOODES ST)

UPC: 104281

RAPID PROJECT: 102186

INDEX OF SHEETS

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OVERALL LAYOUT PLAN	1A
ALIGNMENT & SURVEY DATA SHEET	1B
PRELIMINARY RIGHT OF WAY DATA SHEET	1C
TYPICAL SECTIONS	2
GENERAL NOTES & MAINTENANCE OF TRAFFIC	2A
PAVEMENT MARKING & SIGNING SHEET	2B(1) - 2B(3)
PRELIMINARY STREET LIGHT PLAN SHEET	2C
PLAN SHEETS	3 - 8
PROFILE SHEETS	3A - 8A
DRAINAGE DESCRIPTIONS	9
DRAINAGE AREA MAPS	9A - 9C
CROSS SECTIONS	XS-1 - XS-11

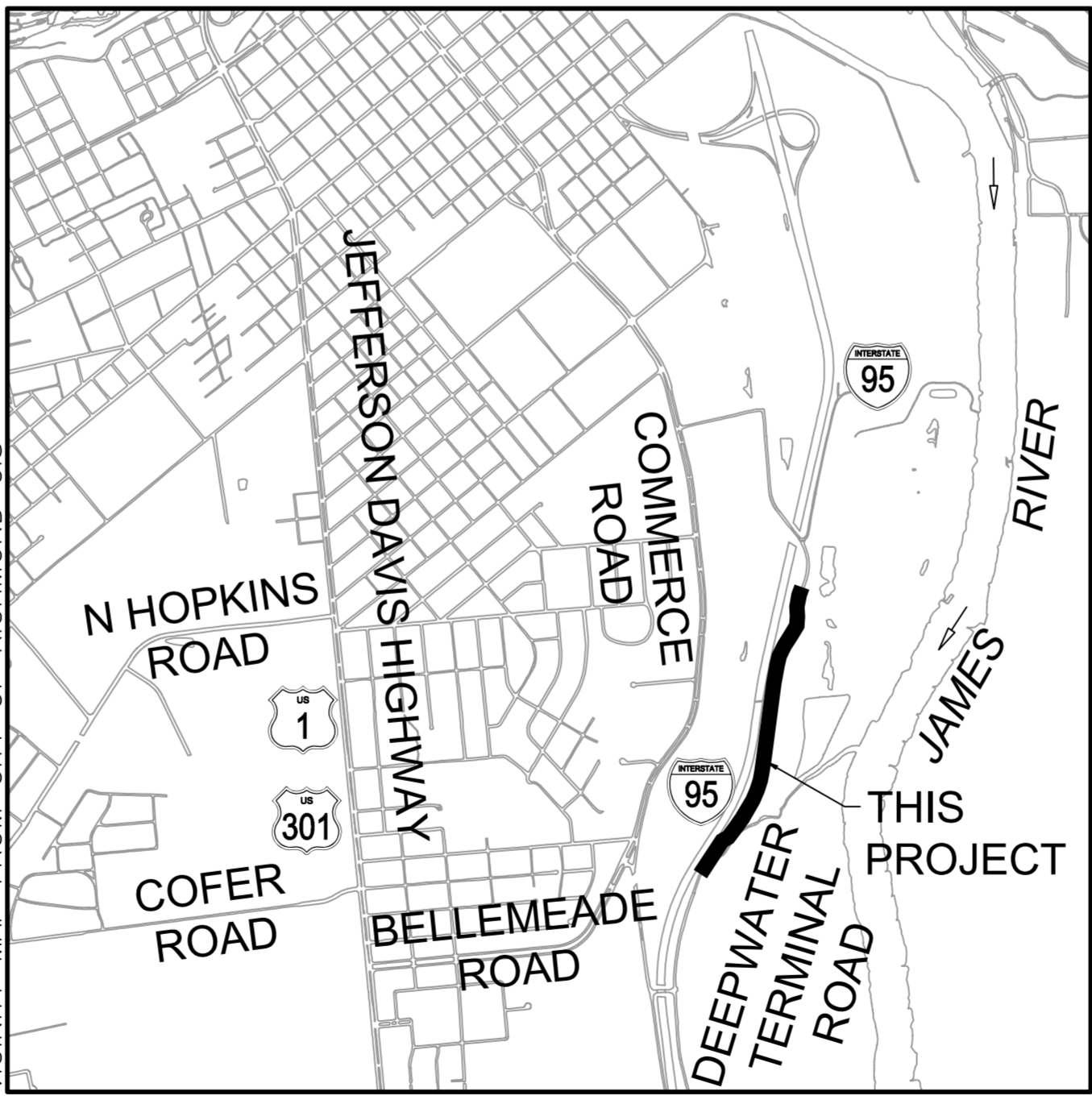
REVISIONS

NO.	DATE	COMMENTS

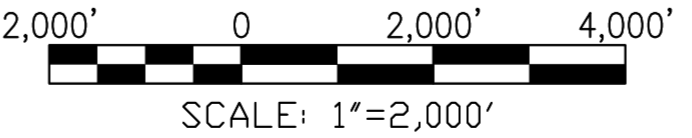
**DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF RICHMOND.**

**THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE VDOT'S 2007 ROAD AND BRIDGE SPECIFICATIONS, 2008 ROAD AND BRIDGE STANDARDS, 2011 WORK AREA PROTECTION MANUAL, REV. 1, 2009 MUTCD AND AS AMENDED BY THE CONTRACT PROVISIONS.**

**35 MPH DESIGN SPEED**



**VICINITY MAP & PLAN SHEET LAYOUT**



**OWNER:**  
 CITY OF RICHMOND  
 DEPT. OF PUBLIC WORKS  
 CITY HALL, RM 603, RICHMOND, VA  
 PROJECT MANAGER- MANOUCHEHR NOSRATI  
 CONTACT # 804-646-6319

REVISIONS:

**TIMMONS GROUP**

YOUR VISION ACHIEVED THROUGH OURS.

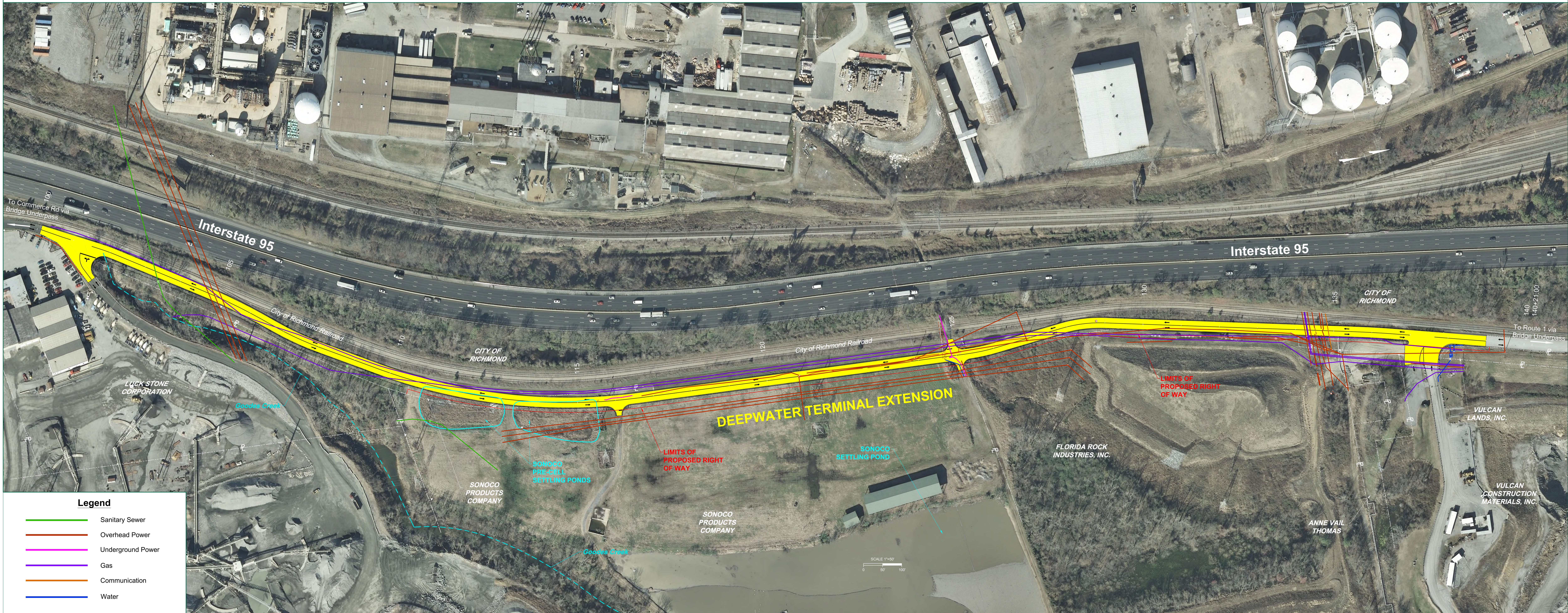
117 S. 14th Street, Suite 303 | Richmond, VA 23219  
 TEL 804.200.6975 FAX 804.225.8551 www.timmons.com

JOB# 33948.008

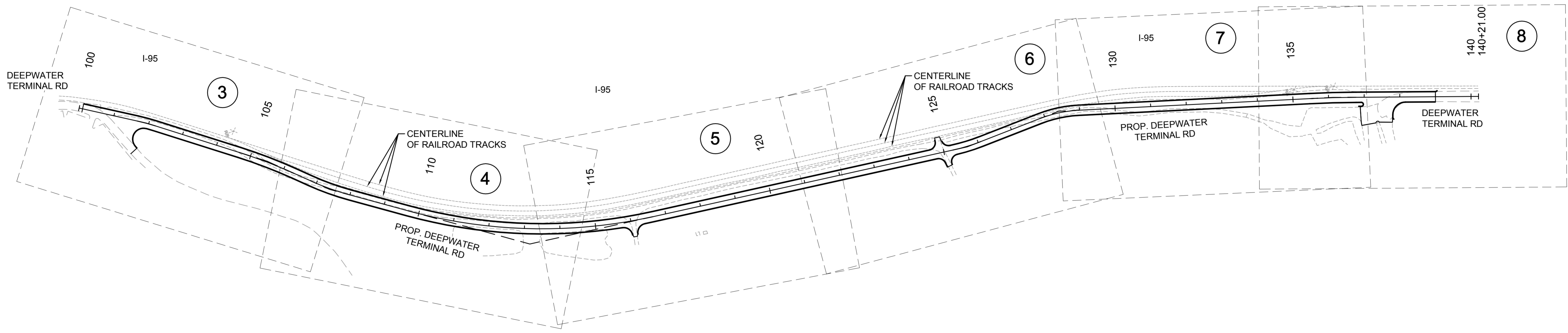
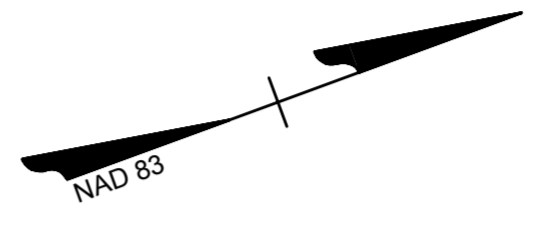
**06/19/2015**

**DRAWING NO.: O-28602**

# DEEPWATER TERMINAL ROAD EXTENSION TO GOODES STREET

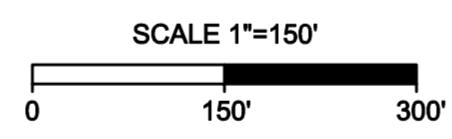


SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING



# SHEET LAYOUT PLAN

③ = SHEET NUMBER



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NOTES	
1. Lot dimensions in parentheses are from deed.	
2. Property owners correct as of April, 2014	
3. Ordinance Number <u>N/A</u>	
4. Adopted <u>N/A</u>	
5. Accepted <u>N/A</u>	

Existing Curb	Existing Curb Cut Ramp	Proposed Conc. Sidewalk
<ul style="list-style-type: none"> <li>Curb &amp; Gutter</li> <li>Sidewalk</li> <li>Basin</li> <li>Storm Sewer</li> <li>Sewer Manhole</li> <li>Sanitary Sewer (small)</li> <li>Sanitary Sewer (large)</li> <li>Gas Line</li> <li>Electric Line</li> <li>Telephone/Telegraph</li> <li>TV Cable</li> <li>Water Line</li> <li>Tree / Exist. Tree To Be Removed</li> <li>Property Line</li> </ul>	<ul style="list-style-type: none"> <li>Coping</li> <li>Alley Crossing/Driveway</li> <li>Fire Hydrant</li> <li>Edge of Pavement</li> <li>Fence</li> <li>Cornerstone</li> <li>Property Pin</li> <li>Utility Pole</li> <li>Proposed Sewer</li> <li>Manhole</li> <li>Basin</li> <li>Curb &amp; Gutter</li> <li>Asphalt</li> </ul>	<ul style="list-style-type: none"> <li>Brick Sidewalk</li> <li>Castings: Water Valve</li> <li>Water Meter</li> <li>Gas Drip</li> <li>Gas Valve</li> <li>Telephone Manhole</li> <li>Electric Manhole</li> <li>Proposed Curb Cut Ramp</li> <li>Decorative Light</li> <li>Conduit</li> <li>Conduit (Conc. Encased)</li> <li>Retaining Wall</li> </ul>



Technical	Administrative
Surveys Superintendent	
Project Engineer	Capital Project Administrator
Maintenance Engineer	Deputy Director for Transportation / Public Works
City Traffic Engineer	Director of Public Works

DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

DEEPWATER TERMINAL ROAD EXTENSION OVERALL LAYOUT PLAN					
DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-XX, pp XX-XX	SCALE: HORIZ. 1" = 150'	DATE: 06/19/2015	SHEET: 1A
DRAWN BY: M. FLEMING	CHECKED BY: C. KIEFER		VERT. N/A		DRAWING NO. 0-28602

SURVEYED BY: TIMMONS, GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

PARCEL NO.	LANDOWNER	TAX PARCEL ID	SQ. FT (DO NOT USE)	SHEET NO.	AREA										PROFFERS		
					TOTAL	FEE TAKING	PRESCRIPTIVE R/W	FEE REMAINDER	EASEMENTS								
									PERMANENT				TEMPORARY				
									DRAINAGE	DRAINAGE & SLOPE	SLOPE	SIGHT DISTANCE	ENTRANCE RECONSTRUCTION	CONSTRUCTION			
ACRES	ACRES	ACRES	ACRES	ACRES	ACRES	ACRES	ACRES	ACRES	ACRES	ACRES	ACRES	YES/NO					
001	LUCK STONE CORPORATION	S0080211005		03, 04	128.570	0.000	0.000	128.570	0.240	-	0.296	-	-	-	-	NO	
002	SONOCO PRODUCTS COMPANY	S008211022		04, 05, 06	0.440	0.400	0.000	0.040	-	-	0.039	-	-	-	NO		
003	SONOCO PRODUCTS COMPANY	S0080211007		04, 05	25.960	0.905	0.000	25.055	0.012	-	0.306	-	-	0.005	NO		
004	FLORIDA ROCK INDUSTRIES, INC.	S0071042007		03G	30.450	0.456	0.000	29.994	0.038	0.325	0.046	-	-	0.001	NO		
005	VULCAN LANDS, INC.	S0071042019		08	0.290	0.113	0.000	0.177	-	-	0.077	-	-	0.021	NO		
006	VULCAN LANDS, INC.	S0071042018		08	1.950	0.024	0.000	1.926	-	-	0.013	-	-	0.008	NO		
007	VULCAN CONSTRUCTION MATERIALS, INC.	S0071042008		08	57.800	0.000	0.000	57.800	0.021	-	-	-	-	0.084	NO		

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**NOTES**

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

**REFERENCES**  
 EC: 37 HW, 37 SW

**REVISIONS**

**Existing Curb**

- Curb & Gutter
- Sidewalk
- Basin
- Storm Sewer
- Sewer Manhole
- Sanitary Sewer (sewer)
- Sanitary Sewer (flow line)
- Gas Line
- Electric Line
- Telephone/Telegraph
- TV Cable
- Water Line
- Tree / Exist. Tree To Be Removed
- Property Line

**Existing Curb Cut Ramp**

- Coping
- Alley Crossing/Driveway
- Fire Hydrant
- Edge of Pavement
- Fence
- Cornerstone
- Property Pin
- Utility Pole

**Proposed Curb Cut Ramp**

- Manhole
- Basin
- Curb & Gutter
- Asphalt

**Proposed Conc. Sidewalk**

- Brick Sidewalk

**Castings:**


- Water Valve
- Water Meter
- Gas Drip
- Gas Valve
- Telephone Manhole
- Electric Manhole

**Proposed Sewer**

- Manhole
- Basin
- Curb & Gutter
- Asphalt

**Proposed Conc. Sidewalk**

- Decorative Light
- Conduit
- Conduit (Conc. Encased)
- Retaining Wall



**DEPARTMENT OF PUBLIC WORKS**  
 RICHMOND, VIRGINIA

Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Engineer	Deputy Director for Transportation / Public Works
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

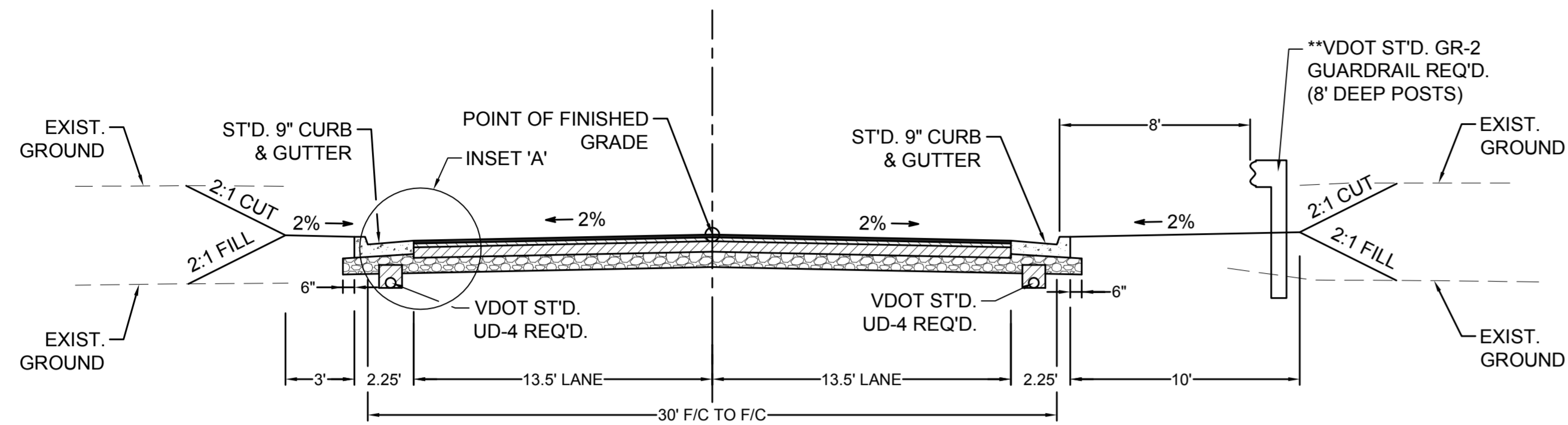
DEEPWATER TERMINAL ROAD EXTENSION

# RIGHT OF WAY DATA SHEET

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-KK pp XX-KK	SCALE: HORIZ. 1" = 10'	DATE: 06/19/2015	SHEET: 01C	DRAWING NO: 0-28602
DRAWN BY: M. FLEMING	CHECKED BY: C. KIEFER		VERT.:			

### DEEPWATER TERMINAL ROAD

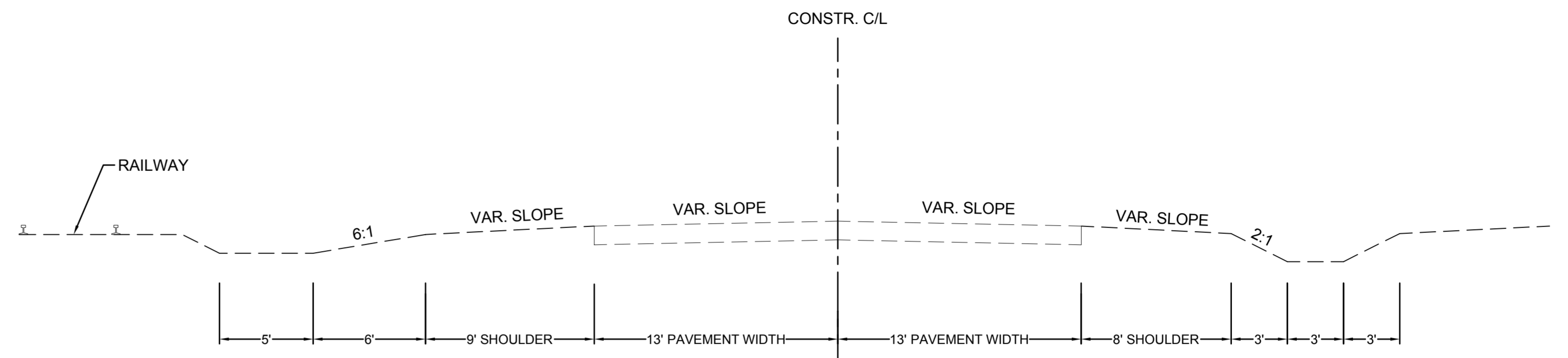
STA. 101+92.00 TO STA. 136+92.00 &  
138+17.00 TO STA. 139+00.00  
CITY OF RICHMOND LOCAL ROAD  
CONSTR. C/L



\*\* GUARDRAIL TO BE PLACED SUCH THAT THE FACE OF THE RAIL IS 8' OFF THE FACE OF CURB. SEE PLANS FOR GUARDRAIL LOCATION

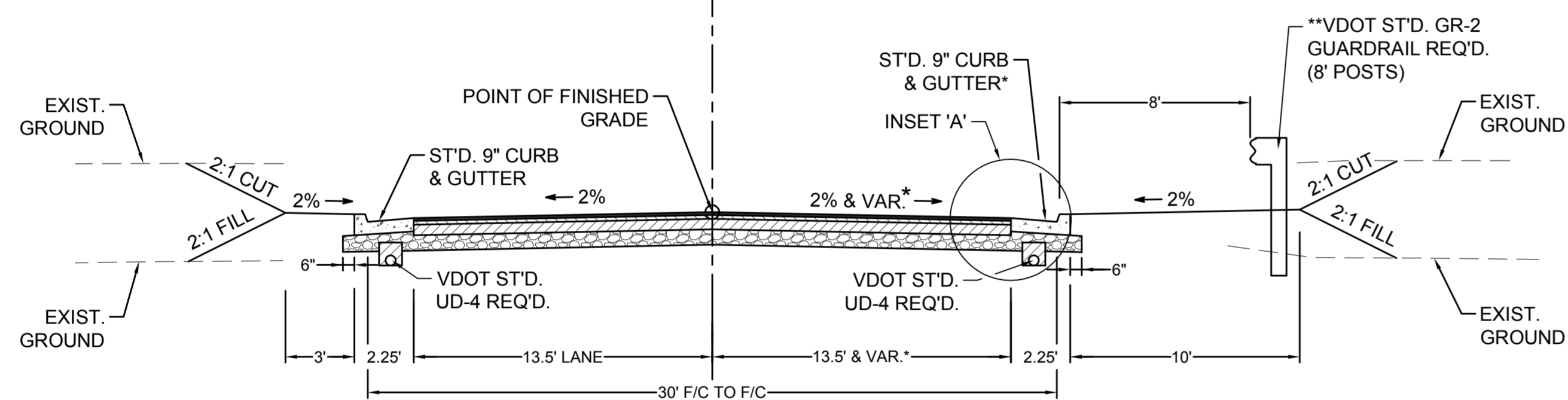
### DEEPWATER TERMINAL ROAD

EXISTING ROADWAY AT SOUTHERN PROJECT TERMINUS



### DEEPWATER TERMINAL ROAD

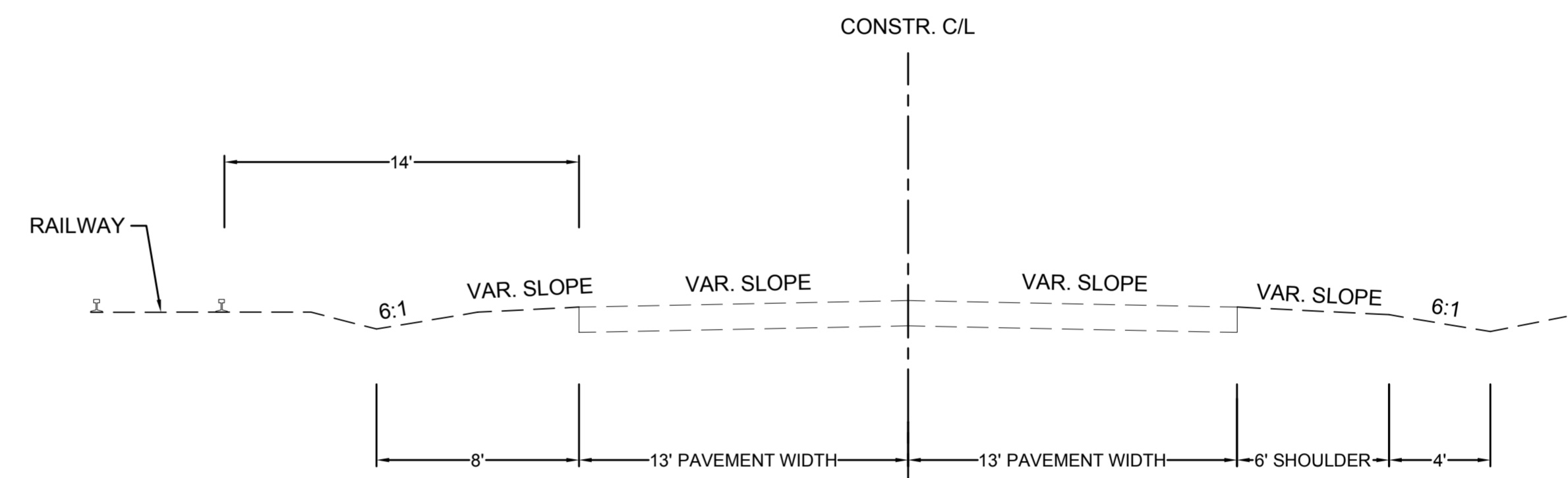
STA. 100+21.64 TO STA. 101+92.00 &  
136+92.00 TO STA. 138+17.00  
CITY OF RICHMOND LOCAL ROAD  
CONSTR. C/L



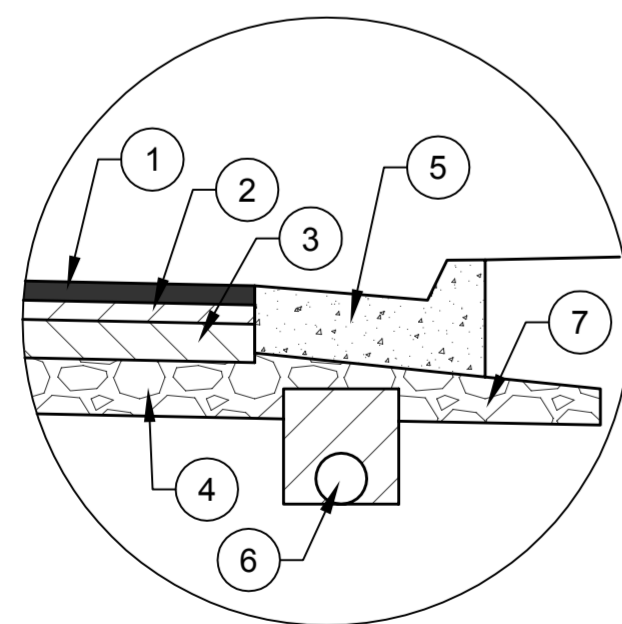
\* SEE PLANS AND CROSS SECTIONS FOR PAVEMENT WIDTHS, CROSS SLOPE AND CURB LOCATION. EACH VARIES TO TIE TO EXISTING PAVEMENT SECTIONS AND INTERSECTIONS.

### DEEPWATER TERMINAL ROAD

EXISTING ROADWAY AT NORTHERN PROJECT TERMINUS



### INSET A



- ① 1.5" ASPHALT CONCRETE SURFACE COURSE (SM-12.5D)
- ② 2.0" ASPHALT CONCRETE INTERMEDIATE COURSE (IM-19.0D)
- ③ 6.0" ASPHALT CONCRETE BASE COURSE (BM-25.0D)
- ④ 8.0" AGGREGATE BASE MATERIAL (VDOT TYPE 1, NO. 21B)
- ⑤ CITY STD. 9" MONOLITHIC CONCRETE CURB AND GUTTER
- ⑥ VDOT STD. UD-4 UNDERDRAIN
- ⑦ VARIABLE DEPTH AGGREGATE BASE MATERIAL (VDOT TYPE 1, NO. 21B) - 4" MIN.

#### NOTES

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

#### REVISIONS

- | NO. | DESCRIPTION | DATE |
|-----|-------------|------|
|     |             |      |

#### LEGEND

- | Existing                         | Proposed                |
|----------------------------------|-------------------------|
| Curb & Gutter                    | Proposed Conc. Sidewalk |
| Sidewalk                         | Brick Sidewalk          |
| Basin                            | Castings: Water Valve   |
| Storm Sewer                      | Water Meter             |
| Sewer Manhole                    | Gas Drip                |
| Sanitary Sewer (small)           | Gas Valve               |
| Sanitary Sewer (large)           | Telephone Manhole       |
| Gas Line                         | Electric Manhole        |
| Telephone/Telegraph              | Utility Pole            |
| TV Cable                         | Proposed Curb Cut Ramp  |
| Water Line                       | Decorative Light        |
| Tree / Exist. Tree To Be Removed | Conduit                 |
| Property Line                    | Conduit (Conc. Encased) |
|                                  | Retaining Wall          |



#### Technical

- Surveys Superintendent
- Project Engineer
- Maintenance Engineer
- City Traffic Engineer

#### Administrative

- Capital Project Administrator
- Deputy Director for Transportation / Public Works
- Director of Public Works

DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

### DEEPWATER TERMINAL ROAD EXTENSION TYPICAL SECTION

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-XX, pp XX-XX	SCALE: HORIZ. 1" = 5'	DATE: 06/19/2015	SHEET: 2	DRAWING NO.: 0-28602
DRAWN BY: M. FLEMING	CHECKED BY: C. KIEFER		VERT. N/A			

SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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## GENERAL NOTES

- ALL UTILITY CLEARANCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE OBTAINED PRIOR TO CONSTRUCTION. EXCAVATION WITHIN 1.5' OF GAS OR ELECTRIC LINES SHALL BE PERFORMED BY HAND.
- THE CONTRACTOR SHALL ADEQUATELY SUPPORT, AND BE RESPONSIBLE FOR, ALL UTILITY LINES EXPOSED AS A RESULT OF CONSTRUCTION ACTIVITY SHOWN ON THE PLANS.
- ALL PERMANENT STOP BARS, CROSS WALKS, ARROWS, MESSAGES, AND LANE LANES SHALL BE THERMOPLASTIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING PAVEMENT MARKINGS INCLUDING STOP BARS AND SOLID LINES ON ALL APPROACHES. MARKINGS SHALL BE LOCATED IN THE FIELD AS DIRECTED BY THE ENGINEER. EXISTING MARKINGS SHALL BE ERADICATED AS REQUIRED BY THE SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE SURVEYS DIVISION OF THE CITY OF RICHMOND'S DEPARTMENT OF PUBLIC WORKS (646-0436 OR 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 R/W CORNERSTONES OR MARKERS IN ANY AREAS BEING AFFECTED BY CONSTRUCTION. ALL PLACEMENT OR REPLACEMENT OF R/W 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 R/W CORNERSTONES OR MARKERS THAT ARE DISTURBED WITHOUT GIVING PROPER NOTIFICATION.
- ALL CONSTRUCTION AND MATERIALS TO CONFORM WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS DATED 2008, AND ROAD AND BRIDGE STANDARDS, DATED FEBRUARY 2007, AS AMENDED BY CONTRACT PROVISIONS AND THESE PLANS, AND CITY OF RICHMOND RIGHT-OF-WAY EXCAVATION AND RESTORATION MANUAL.
- IF THE ELEVATIONS SHOWN ON THESE PLANS ARE FOUND TO BE DIFFERENT THAN FIELD CONDITIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR SHALL ACQUIRE ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION, UNLESS OTHERWISE STATED. CONTRACTOR TO PAY ALL PERMIT FEES, UNLESS OTHERWISE STATED.
- EXISTING CONDITIONS SHOWN HEREON COMPILED FROM CITY OF RICHMOND GIS INFORMATION AND FIELD SURVEY DATA BY TIMMONS GROUP.

### DRAINAGE NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S ROAD AND BRIDGE SPECIFICATIONS DATED 2008, AND ROAD AND BRIDGE STANDARDS, DATED FEBRUARY 2007, AS AMENDED BY CONTRACT PROVISIONS AND THESE PLANS. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH CITY OF RICHMOND STANDARDS AND SPECIFICATIONS, IF MORE STRINGENT.
- ALL CONCRETE PIPE JOINTS ARE TO BE SEALED ACCORDING TO VDOT STANDARDS AND SPECIFICATIONS.
- ALL STORM SEWERS SHALL BE ASTM, C-76, CLASS III, UNLESS NOTED OTHERWISE.
- ALL STORM SEWERS AND STRUCTURES SHALL HAVE A MINIMUM OF 4" PLUS 1/10 DIAMETER OF AGGREGATE BEDDING.
- ALL MANHOLE AND INLET INVERTS SHALL BE SHAPED IN ACCORDANCE WITH VDOT STANDARD IS-1, UNLESS OTHERWISE SPECIFIED.
- IF DURING CONSTRUCTION THE EXISTING CULVERT OR DITCH INVERT ELEVATIONS SHOWN ON THESE PLANS ARE FOUND TO DIFFER SIGNIFICANTLY FROM THE ELEVATIONS IN THE FIELD, NOTIFY THE ENGINEER IMMEDIATELY FOR AN ADJUSTMENT IN ELEVATIONS.
- ALL PIPE LENGTHS SHOWN ON PLANS ARE FROM CENTER OF CHAMBER TO CENTER OF CHAMBER, UNLESS NOTED OTHERWISE.
- TRENCH BOXES SHALL BE USED WHERE EXCAVATIONS EXCEED 5 FEET DEEP.

### CONSTRUCTION NOTES

- ALL WORK IS SUBJECT TO INSPECTION BY DPU INSPECTOR. NOTIFY APPROPRIATE CITY OFFICIALS 72 HOURS PRIOR TO START OF WORK.
- CALL "MISS UTILITY" OF CENTRAL VIRGINIA 1-800-552-7001 (TOLL FREE) PRIOR TO CONSTRUCTION. VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN, IF THERE APPEARS TO BE A CONFLICT, OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS.
- TAKE ALL NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN UNINTERRUPTED UTILITY SERVICE AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO EXISTING STRUCTURES SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE CITY UTILITY INSPECTOR, AT THE CONTRACTOR'S EXPENSE.
- DEVELOP A UTILITIES RELOCATION PLAN AS NECESSARY. SEQUENCE RELOCATION FOR THE MOST EFFICIENT CONSTRUCTION AND TO AVOID DELAYS. DECIDE IF RELOCATION SHOULD TAKE PLACE PRIOR TO, DURING, OR AFTER COMPLETION OF STORM SEWER AND PROCEED ACCORDINGLY.
- MAINTAIN SAFE VEHICULAR AND PEDESTRIAN ACCESS TO ALL PROPERTIES THROUGHOUT CONSTRUCTION AND PREPARE A TRAFFIC MAINTENANCE PLAN IF REQUIRED BY THE CITY. ANY DEVIATIONS FROM THIS PLAN SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER PRIOR TO IMPLEMENTATION.
- REMOVE UNSUITABLE MATERIAL IF ENCOUNTERED AND REPLACE WITH SUITABLE MATERIAL TO THE SPECIFICATION OF THE CITY INSPECTOR.
- IF TREES DESIGNATED "TO REMAIN" ARE LOCATED WITHIN 10' OF CONSTRUCTION LIMITS, CONTACT DPW URBAN FORESTRY 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- PROVIDE TEMPORARY DRAINAGE WITHIN THE PROJECT LIMITS DURING CONSTRUCTION OR TO RELIEVE AREAS THAT MAY CAUSE DAMAGE TO ROADWAYS OR IMPEDE TRAFFIC AS DIRECTED BY THE CITY OF RICHMOND INSPECTOR.
- CLEAN ALL DRAINAGE PIPES AND STRUCTURES OF DEBRIS AND ERODED MATERIAL AT ALL STAGES OF CONSTRUCTION TO THE SATISFACTION OF THE CITY OF RICHMOND INSPECTOR.
- REFER TO THE LATEST VERSION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS.
- PERFORM ALL CUTS IN THE STREETS UNDER A WORK IN STREET PERMIT. WORK SHALL BE MONITORED BY THE PERMIT INSPECTOR.
- DO NOT BEGIN WORK UNTIL THE PERMIT INSPECTOR HAS BEEN NOTIFIED, A PRE-CONSTRUCTION CONFERENCE HAS BEEN HELD AND MISS UTILITY HAS MARKED ALL UTILITIES.
- ASPHALT PAVEMENT CUTS SHALL BE AS CLEAN AND STRAIGHT AS POSSIBLE, WITH NO OUTLINE DIMENSIONS LESS THAN 3 FEET WITHOUT SPECIAL APPROVAL OF THE PERMIT INSPECTOR. REFER TO DETAIL ON THIS SHEET FOR PAVEMENT RESTORATION.
- FINAL ACCEPTANCE BY THE CITY SHALL NOT BE MADE UNTIL ALL WORK SHOWN ON THE APPROVED PLANS IS COMPLETE.

## TRAFFIC MANAGEMENT PLAN NARRATIVE

- CONSTRUCTION FOR THIS PROJECT WILL TAKE PLACE PRIMARILY ALONG A GRAVEL ACCESS ROAD WITH NO SIGNIFICANT TRAFFIC. A FULL CLOSURE OF THE ACCESS ROAD IS PLANNED FROM THE BEGINNING OF THE PROJECT TO THE ULTIMATE CONNECTION AT THE NORTHERN PROJECT TERMINUS. THE CLOSURE AND ACCESS TO INDUSTRIAL USE PARCELS ALONG THE ACCESS ROAD SHALL BE COORDINATED WITH THE APPROPRIATE LAND OWNERS AND THE CITY DPW (SUNOCO PRODUCTS MUST HAVE ACCESS THROUGHOUT CONSTRUCTION). ACCESS TO THE VULCAN PROPERTY AT THE NORTH END OF THE PROJECT AT GOODES STREET SHALL BE MAINTAINED TO THE FULL EXTENT PRACTICAL. INTERSECTION IMPROVEMENTS AT BOTH ENDS OF THE PROJECT REQUIRING LANE CLOSURES SHALL BE IN ACCORDANCE WITH THIS PLAN. A MAJORITY OF THE CONSTRUCTION WILL BE COMPLETED WITH NO IMPACT TO THE TRAVELING PUBLIC. THE PROJECT SHALL BE COMPLETE WITH FINAL STRIPING AND SIGNING IN PLACE PRIOR TO OPENING OF THE ROAD.
- THE WORK ZONE SHALL BE MAINTAINED ACCORDING TO THE CITY'S DEPARTMENT OF PUBLIC WORKS SPECIAL PROVISIONS AND THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL. SPECIFICALLY, THE FOLLOWING 2011 VA WAPM TRAFFIC CONTROL SPECIFICATIONS OR A COMBINATION OF SUCH WILL BE USED REGULARLY:
  - TYPICAL TRAFFIC CONTROL (TTC) STATIONARY OPERATION ON SHOULDER (FIGURE TTC-4.0)
  - TTC SHOULDER OPERATION WITH MINOR ENCROACHMENT (FIGURE TTC-5.0)
  - TTC ROAD CLOSURE OPERATION WITH A DETOUR (FIGURE TTC-48.0)
  - TTC SIGNING FOR PROJECT LIMITS (FIGURE TTC-53.0)

NOTE: THIS OPERATION IS IN A LOW-TRAFFIC, INDUSTRIAL SETTING, THE TTC FIGURES ABOVE ARE FOR REFERENCE ONLY. ANY COMBINATION OF THE ABOVE OR TTC'S NOT LISTED ABOVE MAY BE NECESSARY. DETOUR SIGNS AS SHOWN IN FIGURE TTC-48.0 MAY BE OMITTED AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR SHALL INSTALL ALL NECESSARY SIGNS, MARKINGS, DELINEATORS OR OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CITY'S DPU SPECIAL PROVISIONS AND THE 2011 VA WAPM.

- THE CONTRACTOR WILL MAKE ARRANGEMENTS TO STORE EQUIPMENT AND MATERIALS ON-SITE.
- A PUBLIC COMMUNICATIONS PLAN IS NOT APPLICABLE TO THIS PROJECT ALTHOUGH PLANNED LANE CLOSURES SHALL BE ANNOUNCED TO THE ADJACENT LAND OWNERS.

### TRANSPORTATION OPERATIONS PLAN

- THE CONTRACTOR MUST ADVISE EMERGENCY COMMUNICATIONS AT 646-5700 OF THE CITY ON ALL PLANNED LANE CLOSURES 24 HOURS IN ADVANCE.
- TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE:
  - INSPECTOR SHALL NOTIFY ENGINEER OF THE TRAFFIC INCIDENT AND TAKE PICTURES OF THE WORK ZONE SETUP.
  - CONTRACTOR MAY HAVE TO SHUT DOWN THE WORK DEPENDING UPON THE INCIDENT SEVERITY.
  - THE CITY POLICE WILL DETERMINE THE RESPONSE NECESSARY TO ALLOW TRAVELING PUBLIC AROUND INCIDENT, TAKE CONTROL OF THE INCIDENT, AND DIRECT ITS CLEARING AND RESTORATION TO NORMAL TRAFFIC CONDITIONS.
- THE CITY POLICE INCIDENT REPORT WILL BE REVIEWED BY THE ENGINEER TO DETERMINE ANY NEEDED MODIFICATIONS TO THE WORK ZONE LAYOUT. IF CHANGES ARE NECESSARY THEN A MEETING WILL BE CALLED WITH THE CONTRACTOR, CITY INSPECTOR AND THE ENGINEER TO DISCUSS MODIFICATION AND IMPLEMENTATION OF AN IMPROVED TRAFFIC CONTROL PLAN.
- ALL LANE CLOSURES AND STOPPING OF TRAFFIC FOR LONGER THAN FIVE MINUTES SHALL BE COORDINATED WITH THE ENGINEER, CITY OF RICHMOND DEPARTMENT OF PUBLIC WORKS AND IMPACTED PROPERTY OWNERS.
- ALL AREAS EXCAVATED DEEPER THAN 2" BELOW EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE, AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACK FILLED TO FORM AN APPROXIMATE 6:1 WEDGE AGAINST THE PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC. ALL COST OF PLACING, MAINTAINING AND REMOVING THE 6:1 WEDGE SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS IN THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THIS APPLIES ONLY TO THE CONNECTION POINTS AT DEEPWATER TERMINAL ROAD AND GOODES STREET WHERE TRAFFIC IS PRESENT.
- LANE CLOSURES WILL NOT BE PERMITTED ON HOLIDAYS OR WEEKENDS UNLESS OTHERWISE APPROVED IN ADVANCE BY THE CITY OF RICHMOND DEPARTMENT OF PUBLIC WORKS.

TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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NOTES	LEGEND	LEGEND	LEGEND	LEGEND	LEGEND
1. Lot dimensions in parentheses are from deed. 2. Property owners correct as of April, 2014 3. Ordinance Number <u>N/A</u> 4. Adopted <u>N/A</u> 5. Accepted <u>N/A</u>	Existing Curb • Curb & Gutter • Sidewalk • Base • Storm Sewer • Sewer Manhole • Sanitary Sewer (Swag) • Sanitary Sewer (Pave Man) • Gas Line • Electric Line • Telephone/Telegraph • TV Cable • Water Line • Tree / Exist. Tree To Be Removed • Property Line	Existing Curb Cut Ramp • Coping • Alley Crossing/Driveway • Fire Hydrant • Edge of Pavement • Fence • Cornerstone • Property Pin • Utility Pole Proposed Sewer • Manhole • Basin • Curb & Gutter • Asphalt	Proposed Conc. Sidewalk • Brick Sidewalk Castings: Water Valve • Water Meter • Gas Drip • Gas Valve • Telephone Manhole • Electric Manhole Proposed Curb Cut Ramp • Decorative Light • Conduit • Conduit (Conc. Encased) • Retaining Wall		Technical Surveys Superintendent Project Engineer Maintenance Engineer City Traffic Engineer

Administrative	Administrative
Capital Project Administrator	Deputy Director for Transportation / Public Works
Director of Public Works	

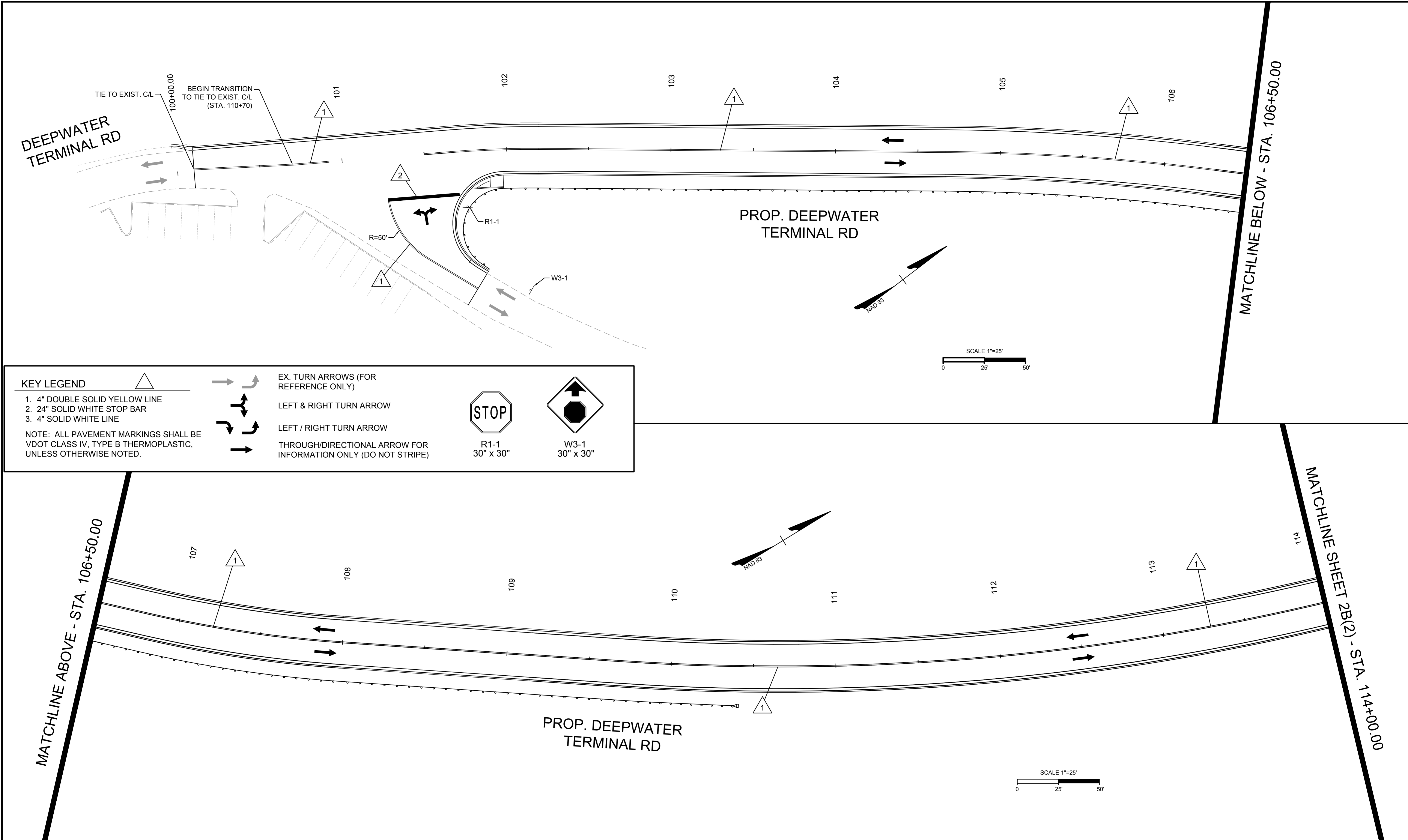
DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

DEEPWATER TERMINAL ROAD EXTENSION <b>GENERAL NOTES &amp; MAINTENANCE OF TRAFFIC</b>					
DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: TB-KK, pp 12-KK	SCALE: HORIZ. N/A VERT. N/A	DATE: 06/19/2015	SHEET: 2A
DRAWN BY: M. FLEMING	CHECKED BY: C. KIEFER	DRAWING NO. 0-28602			



SURVEYED BY: .....  
 SUPERVISED BY: .....  
 DESIGNED BY: .....

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**KEY LEGEND**

1. 4" DOUBLE SOLID YELLOW LINE		EX. TURN ARROWS (FOR REFERENCE ONLY)		
2. 24" SOLID WHITE STOP BAR		LEFT & RIGHT TURN ARROW	R1-1 30" x 30"	W3-1 30" x 30"
3. 4" SOLID WHITE LINE		LEFT / RIGHT TURN ARROW		
NOTE: ALL PAVEMENT MARKINGS SHALL BE VDOT CLASS IV, TYPE B THERMOPLASTIC, UNLESS OTHERWISE NOTED.				
		THROUGH/DIRECTIONAL ARROW FOR INFORMATION ONLY (DO NOT STRIPE)		

**NOTES**

- Lot dimensions in parentheses are from deed.
- Property owners correct as of April, 2014
- Ordinance Number N/A
- Adopted N/A
- Accepted N/A

Existing Curb	Existing	Proposed
Curb & Gutter	Existing Curb Cut Ramp	Proposed Conc. Sidewalk
Sidewalk	Coping	Brick Sidewalk
Basin	Alley Crossing/Driveway	Castings: Water Valve
Storm Sewer	Fire Hydrant	Water Meter
Sewer Manhole	Edge of Pavement	Gas Drip
Sanitary Sewer (sewer)	Fence	Gas Valve
Sanitary Sewer (sewer man)	Cornerstone	Telephone Manhole
Gas Line	Property Pin	Electric Manhole
Electric Line	Utility Pole	Proposed Curb Cut Ramp
Telephone/Telegraph	Proposed Sewer	Decorative Light
TV Cable	Manhole	Conduit
Water Line	Basin	Conduit (Conc. Encased)
Tree / Exist. Tree To Be Removed	Curb & Gutter	Retaining Wall
Property Line	Asphalt	



Technical	Administrative
Surveys Superintendent	
Project Engineer	Capital Project Administrator
Maintenance Engineer	Deputy Director for Transportation / Public Works
City Traffic Engineer	Director of Public Works

DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

**DEEPWATER TERMINAL ROAD EXTENSION  
PAVEMENT MARKING &  
SIGNING PLAN**

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-XX, pp XX-XX	SCALE: HORIZ. 1" = 25'	DATE: 06/19/2015	SHEET: 2B(1)	DRAWING NO.: 0-28602
DRAWN BY: M. FLEMING			VERT. N/A			
CHECKED BY: C. KIEFER						

SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

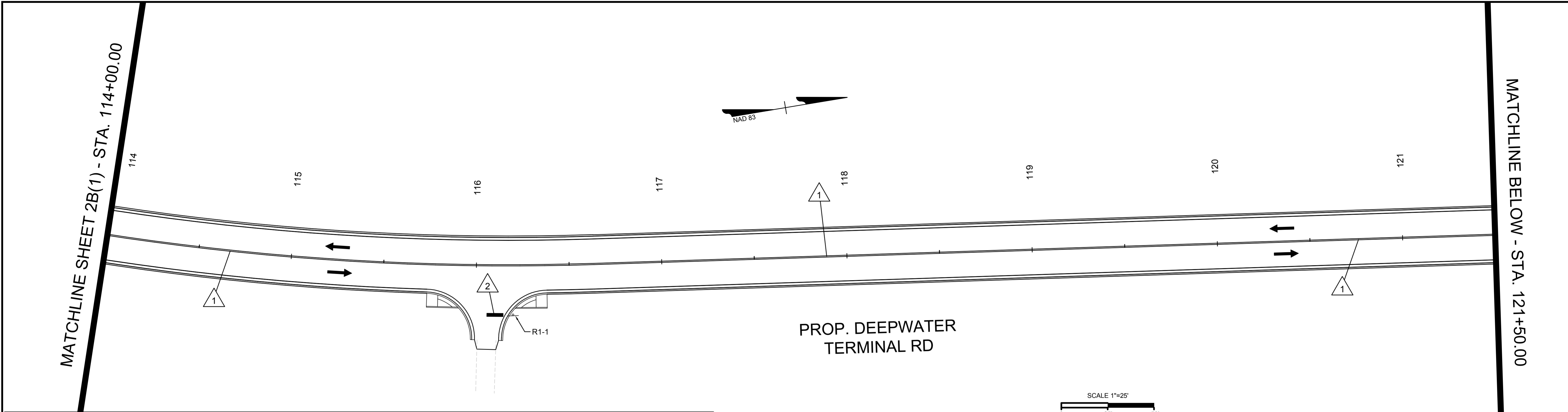
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MATCHLINE SHEET 2B(1) - STA. 114+00.00

MATCHLINE BELOW - STA. 121+50.00

MATCHLINE ABOVE - STA. 121+50.00

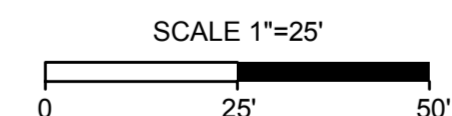
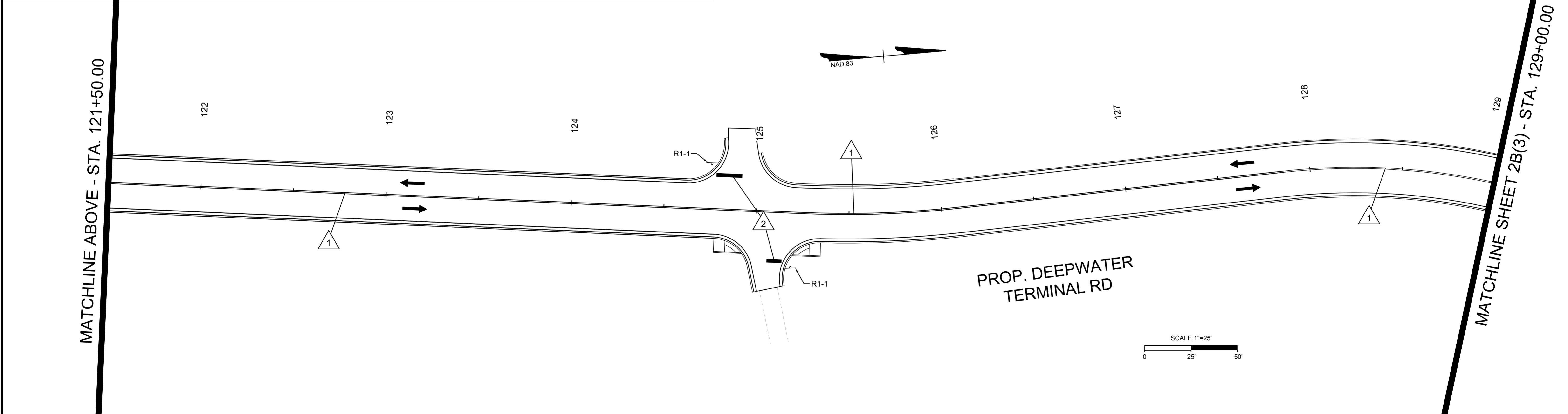
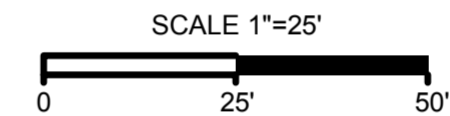
MATCHLINE SHEET 2B(3) - STA. 129+00.00



**KEY LEGEND**

	EX. TURN ARROWS (FOR REFERENCE ONLY)		
1. 4" DOUBLE SOLID YELLOW LINE	LEFT & RIGHT TURN ARROW	R1-1 30" x 30"	W3-1 30" x 30"
2. 24" SOLID WHITE STOP BAR	LEFT / RIGHT TURN ARROW		
3. 4" SOLID WHITE LINE	THROUGH/DIRECTIONAL ARROW FOR INFORMATION ONLY (DO NOT STRIPE)		

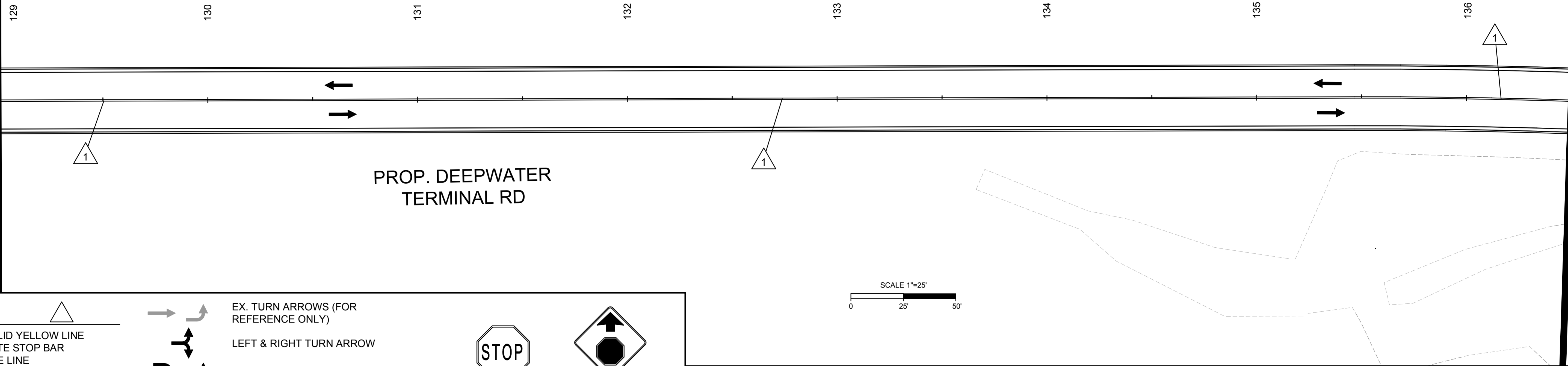
NOTE: ALL PAVEMENT MARKINGS SHALL BE VDOT CLASS IV, TYPE B THERMOPLASTIC, UNLESS OTHERWISE NOTED.



<p><b>NOTES</b></p> <ol style="list-style-type: none"> <li>Lot dimensions in parentheses are from deed.</li> <li>Property owners correct as of April, 2014</li> <li>Ordinance Number <u>N/A</u></li> <li>Adopted <u>N/A</u></li> <li>Accepted <u>N/A</u></li> </ol>		<p><b>LEGEND</b></p> <table border="0" style="font-size: small;"> <tr> <td><b>Existing Curb</b></td> <td></td> <td><b>Existing Curb Cut Ramp</b></td> <td></td> </tr> <tr> <td><b>Existing Sidewalk</b></td> <td></td> <td><b>Proposed Conc. Sidewalk</b></td> <td></td> </tr> <tr> <td><b>Basin</b></td> <td></td> <td><b>Castings</b></td> <td></td> </tr> <tr> <td><b>Storm Sewer</b></td> <td></td> <td><b>Water Valve</b></td> <td></td> </tr> <tr> <td><b>Sewer Manhole</b></td> <td></td> <td><b>Water Meter</b></td> <td></td> </tr> <tr> <td><b>Sanitary Sewer (sewer)</b></td> <td></td> <td><b>Gas Drip</b></td> <td></td> </tr> <tr> <td><b>Sanitary Sewer (sewer) Manhole</b></td> <td></td> <td><b>Gas Valve</b></td> <td></td> </tr> <tr> <td><b>Gas Line</b></td> <td></td> <td><b>Telephone Manhole</b></td> <td></td> </tr> <tr> <td><b>Electric Line</b></td> <td></td> <td><b>Electric Manhole</b></td> <td></td> </tr> <tr> <td><b>Telephone/Telegraph</b></td> <td></td> <td><b>Proposed Curb Cut Ramp</b></td> <td></td> </tr> <tr> <td><b>TV Cable</b></td> <td></td> <td><b>Decorative Light</b></td> <td></td> </tr> <tr> <td><b>Water Line</b></td> <td></td> <td><b>Conduit</b></td> <td></td> </tr> <tr> <td><b>Tree / Exist. Tree To Be Removed</b></td> <td></td> <td><b>Conduit (Conc. Encased)</b></td> <td></td> </tr> <tr> <td><b>Property Line</b></td> <td></td> <td><b>Retaining Wall</b></td> <td></td> </tr> </table>		<b>Existing Curb</b>		<b>Existing Curb Cut Ramp</b>		<b>Existing Sidewalk</b>		<b>Proposed Conc. Sidewalk</b>		<b>Basin</b>		<b>Castings</b>		<b>Storm Sewer</b>		<b>Water Valve</b>		<b>Sewer Manhole</b>		<b>Water Meter</b>		<b>Sanitary Sewer (sewer)</b>		<b>Gas Drip</b>		<b>Sanitary Sewer (sewer) Manhole</b>		<b>Gas Valve</b>		<b>Gas Line</b>		<b>Telephone Manhole</b>		<b>Electric Line</b>		<b>Electric Manhole</b>		<b>Telephone/Telegraph</b>		<b>Proposed Curb Cut Ramp</b>		<b>TV Cable</b>		<b>Decorative Light</b>		<b>Water Line</b>		<b>Conduit</b>		<b>Tree / Exist. Tree To Be Removed</b>		<b>Conduit (Conc. Encased)</b>		<b>Property Line</b>		<b>Retaining Wall</b>		<p><b>DEPARTMENT OF PUBLIC WORKS</b> RICHMOND, VIRGINIA</p>		<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <th colspan="2">Technical</th> <th colspan="2">Administrative</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		Technical		Administrative																										<p>DEEPWATER TERMINAL ROAD EXTENSION <b>PAVEMENT MARKING &amp; SIGNING PLAN</b></p>			
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MATCHLINE SHEET 2B(2) - STA. 129+00.00

MATCHLINE BELOW - STA. 136+50.00



**KEY LEGEND**

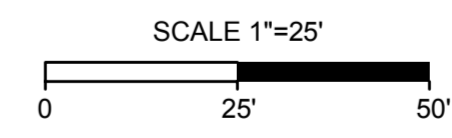
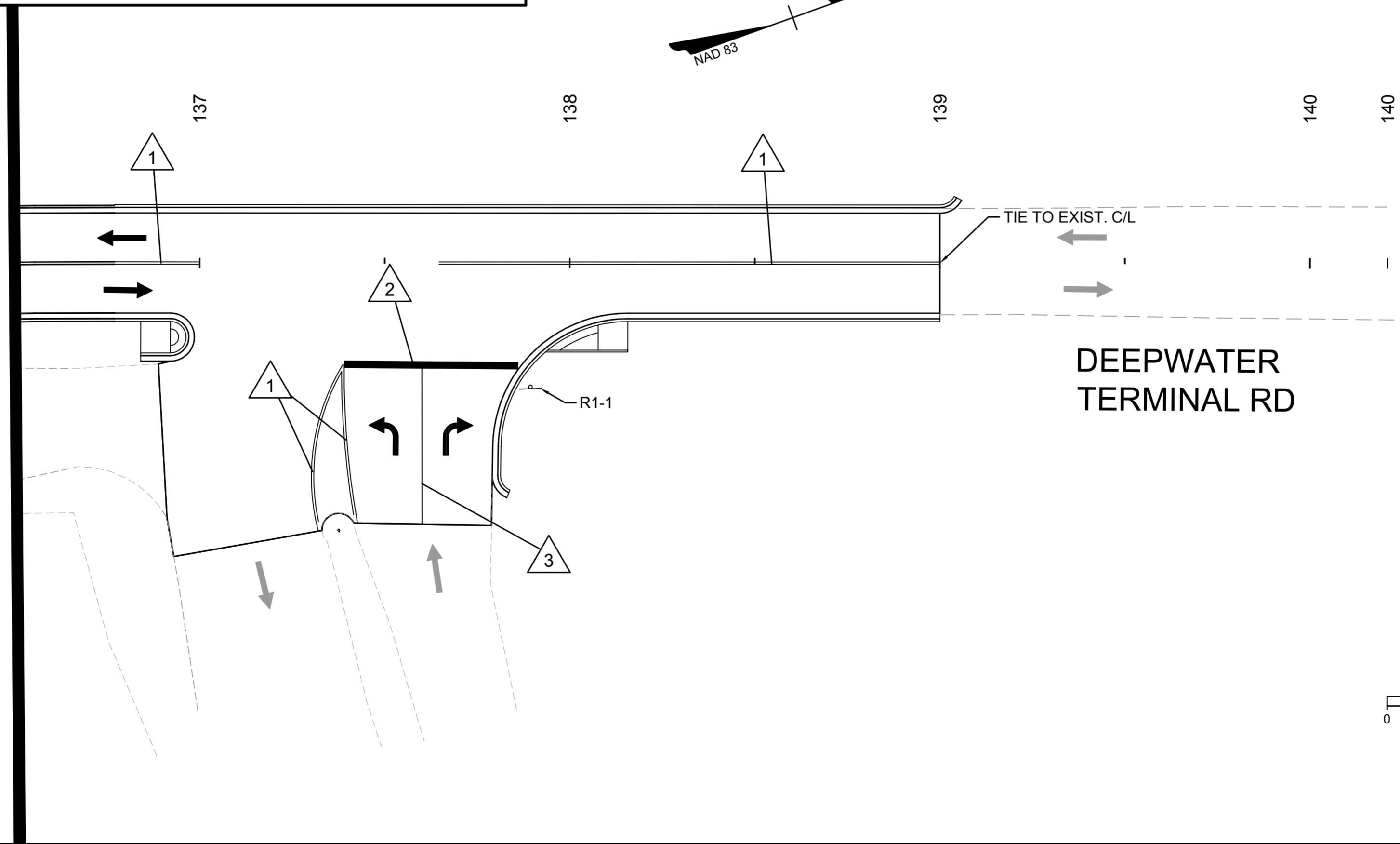
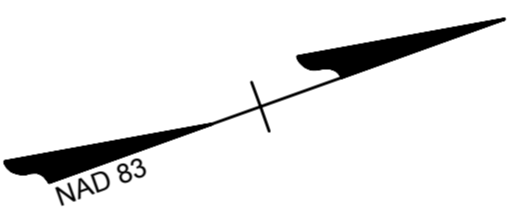
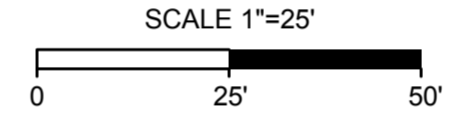
- 1. 4" DOUBLE SOLID YELLOW LINE
- 2. 24" SOLID WHITE STOP BAR
- 3. 4" SOLID WHITE LINE

NOTE: ALL PAVEMENT MARKINGS SHALL BE VDOT CLASS IV, TYPE B THERMOPLASTIC, UNLESS OTHERWISE NOTED.

- EX. TURN ARROWS (FOR REFERENCE ONLY)
- LEFT & RIGHT TURN ARROW
- LEFT / RIGHT TURN ARROW
- THROUGH/DIRECTIONAL ARROW FOR INFORMATION ONLY (DO NOT STRIPE)

R1-1  
30" x 30"

W3-1  
30" x 30"



**NOTES**

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

Existing Curb	Existing	Proposed
Curb & Gutter	Curb Cut Ramp	Proposed Conc. Sidewalk
Sidewalk	Coping	Brick Sidewalk
Basin	Alley Crossing/Driveway	Castings: Water Valve
Storm Sewer	Fire Hydrant	Water Meter
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TV Cable	Basin	Conduit
Water Line	Curb & Gutter	Conduit (Conc. Encased)
Tree / Exist. Tree To Be Removed	Asphalt	Retaining Wall
Property Line		



Technical	Administrative
Surveys Superintendent	
Project Engineer	Capital Project Administrator
Maintenance Engineer	Deputy Director for Transportation / Public Works
City Traffic Engineer	Director of Public Works

DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

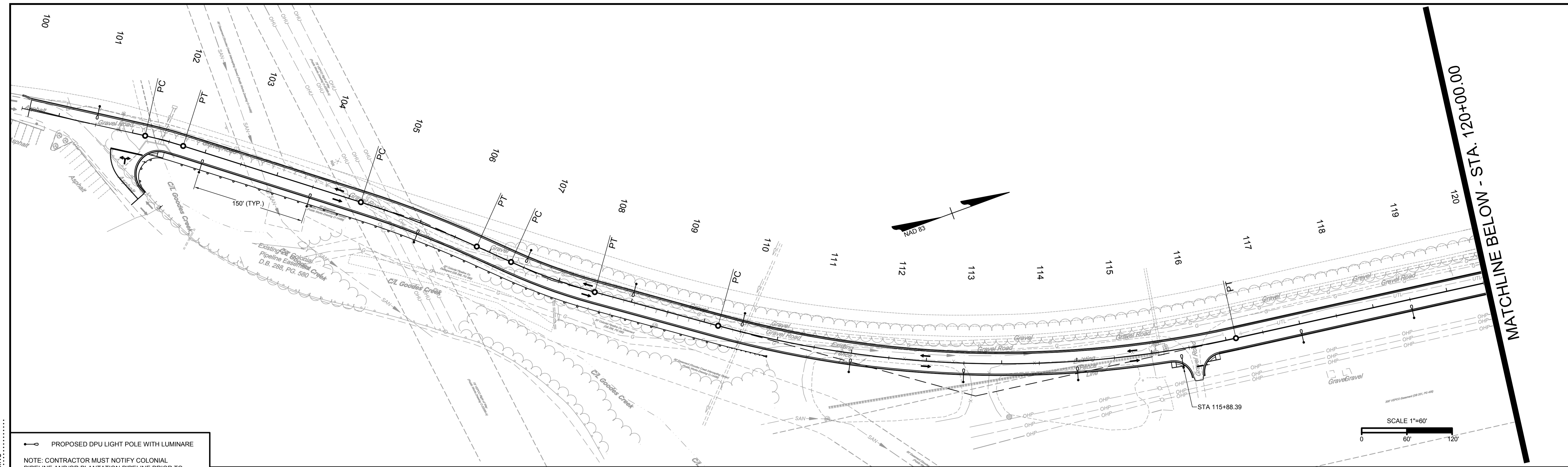
DEEPWATER TERMINAL ROAD EXTENSION  
**PAVEMENT MARKING & SIGNING PLAN**

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-XX, pp XX-XX	SCALE: HORIZ. 1" = 25'	DATE: 06/19/2015	SHEET: 2B(3)	DRAWING NO.: 0-28602
DRAWN BY: M. FLEMING			VERT. N/A			
CHECKED BY: C. KIEFFER						

SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFFER  
 DESIGNED BY: M. FLEMING

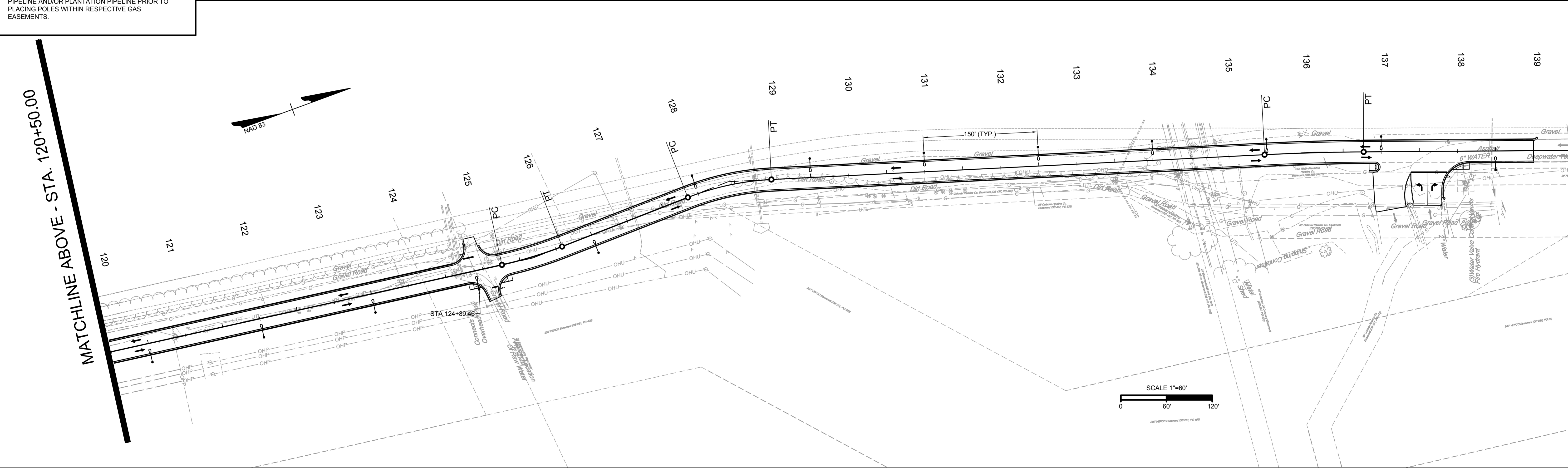
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SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING



○ PROPOSED DPU LIGHT POLE WITH LUMINAIRE  
 NOTE: CONTRACTOR MUST NOTIFY COLONIAL PIPELINE AND/OR PLANTATION PIPELINE PRIOR TO PLACING POLES WITHIN RESPECTIVE GAS EASEMENTS.

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**NOTES**

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

Existing Curb		-LEGEND-	
• Curb & Gutter	▬	Existing Curb Cut Ramp	▬
• Sidewalk	▬	• Coping	▬
• Basin	▬	• Alley Crossing/Driveway	▬
• Storm Sewer	▬	• Fire Hydrant	▬
• Sewer Manhole	▬	• Edge of Pavement	▬
• Sanitary Sewer (small)	SAN	• Fence	▬
• Sanitary Sewer (large)	SM	• Cornerstone	▬
• Gas Line	G	• Property Pin	▬
• Electric Line	UGP	• Utility Pole	▬
• Telephone/Telegaph	UGT	Proposed Sewer	▬
• TV Cable	UCATV	• Manhole	▬
• Water Line	UV	• Basin	▬
• Tree / Exist. Tree To Be Removed	T	• Curb & Gutter	▬
• Property Line	P	• Asphalt	▬



Technical	Administrative
	Surveys Superintendent
	Project Engineer
	Maintenance Engineer
	City Traffic Engineer
	Capital Project Administrator
	Deputy Director for Transportation / Public Works
	Director of Public Works

DEPARTMENT OF PUBLIC WORKS  
 RICHMOND, VIRGINIA

DEEPWATER TERMINAL ROAD EXTENSION  
**PRELIMINARY STREET LIGHT PLAN**

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-KK, pp 12-14	SCALE: HORIZ. 1" = 60'	DATE: 06/19/2015	SHEET: 2C	DRAWING NO.: 0-28602
DRAWN BY: M. FLEMING			VERT. -			
CHECKED BY: C. KIEFER						

**UTILITY OWNERSHIP LIST**

**PHONE / FIBER OPTIC**

VERIZON  
CONTACT: VERIZON  
2600 BRITTON HILL RD.  
RICHMOND, VA 23230  
PHONE: (804)-772-4207

COMCAST CORPORATION  
CONTACT: COMCAST  
5401 STAPLES MILL ROAD  
RICHMOND, VA 23228  
BRAD ALLEN, DESIGN TECHNICIAN  
PHONE: (804)-915-5383  
FAX: (804)-915-5356  
CELL: (804)-816-0598  
BRADALLEN@CABLE.COMCAST.COM

**GAS PIPELINE**

COLONIAL PIPELINE COMPANY  
CONTACT: CHRISTOPHER J. GIBSON, INSPECTOR  
1400 GOODIES STREET  
RICHMOND, VA 23224  
PHONE: (804)-233-4347 (DIRECT)  
CELL: (804)-334-0640  
FAX: (804)-232-3561  
CGIBSON@COLPIPE.COM

KINDER MORGAN - PLANTATION PIPELINE COMPANY  
CONTACT: JESSIE W. CARTLIDGE, SUPERVISOR OPERATIONS AND MAINTENANCE  
1800 TRENTON AVE.  
RICHMOND, VA 23234  
PHONE: (804)-275-5441  
PHONE: (804)-690-6757  
JESSIE\_CARTLIDGE@KINDERMORGAN.COM

**OIL**

DOMINION SITE SERVICES  
CONTACT: WILLIAM R. THOMAS, OWNER  
(OWNER OF LOT WHERE THERE IS ABANDONED OIL LINE)  
1750 DEEPWATER TERMINAL ROAD  
RICHMOND, VA 23224  
PHONE: (804)-929-7209  
THOMASWRT@GMAIL.COM

**POWER**

DOMINION POWER  
CONTACT: DOMINION VIRGINIA POWER  
7500 WEST BROAD STREET  
RICHMOND, VA 23294  
(RECORDS REQUEST REQUIRED TO BE SUBMITTED ELECTRONICALLY)  
FACILITY.LOCATE.REQUEST@DOM.COM

**WATER, CITY ELECTRIC, GAS, SANITARY SEWER AND STORM SEWER**

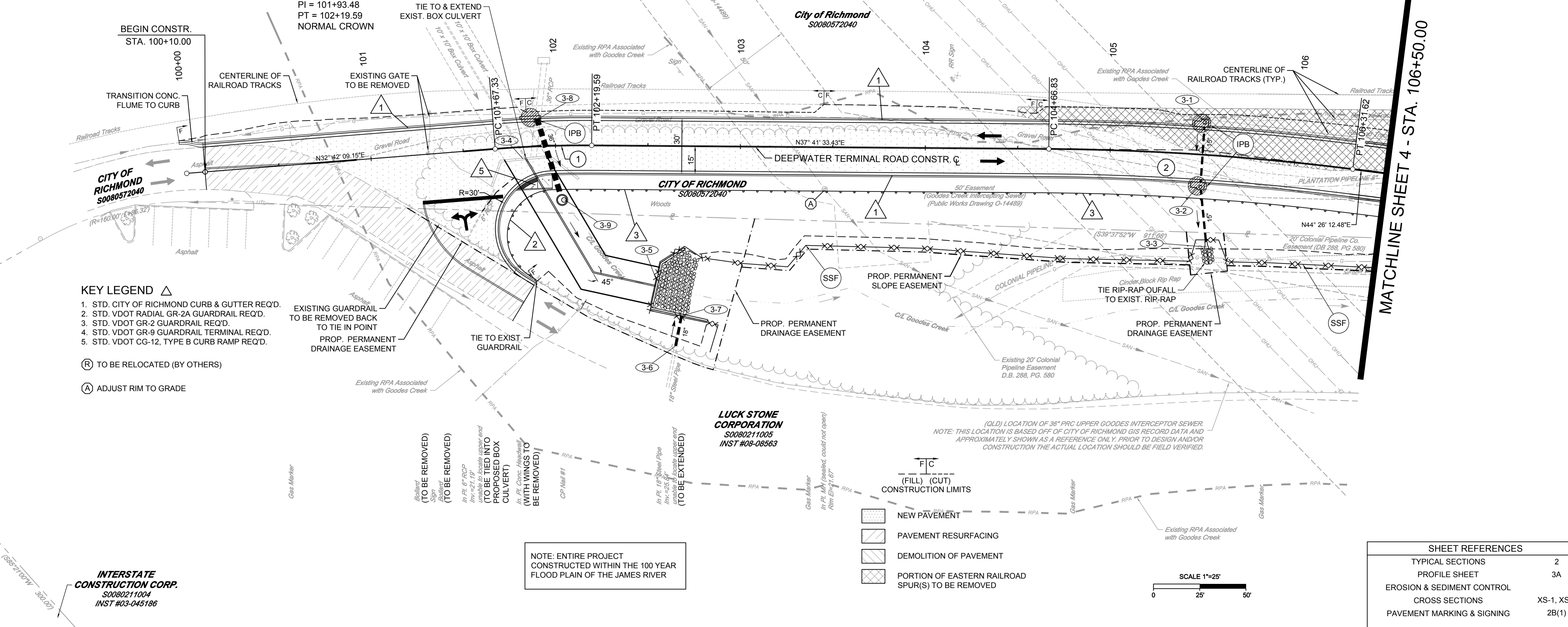
CITY OF RICHMOND, DPJ  
CONTACT: CITY OF RICHMOND  
DEPARTMENT OF PUBLIC UTILITIES  
MICHELLE FORD, GIS TECHNICIAN WATER DATA OFFICER  
400 JEFFERSON DAVIS HIGHWAY  
RICHMOND, VA 23224  
PHONE: (804)-646-8415  
MOBILE: (804)-646-8502  
FAX: (804)-646-8545  
MICHELLE.FORD@RICHMONDGOV.COM

**DEEPWATER TERMINAL ROAD CURVE ①**

$\Delta = 4^{\circ}59'24''$   
R = 600.00  
T = 26.14  
L = 52.26  
C = 52.24  
PC = 101+67.33  
PI = 101+93.48  
PT = 102+19.59  
NORMAL CROWN

**DEEPWATER TERMINAL ROAD CURVE ②**

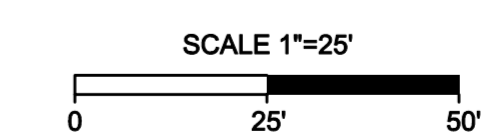
$\Delta = 6^{\circ}44'39''$   
R = 1400.00  
T = 82.49  
L = 164.79  
C = 164.70  
PC = 104+66.83  
PI = 105+49.32  
PT = 106+31.62  
NORMAL CROWN



- KEY LEGEND**  $\Delta$
- STD. CITY OF RICHMOND CURB & GUTTER REQ'D.
  - STD. VDOT RADIAL GR-2A GUARDRAIL REQ'D.
  - STD. VDOT GR-2 GUARDRAIL REQ'D.
  - STD. VDOT GR-9 GUARDRAIL TERMINAL REQ'D.
  - STD. VDOT CG-12, TYPE B CURB RAMP REQ'D.
- (R)** TO BE RELOCATED (BY OTHERS)
- (A)** ADJUST RIM TO GRADE

NOTE: ENTIRE PROJECT CONSTRUCTED WITHIN THE 100 YEAR FLOOD PLAIN OF THE JAMES RIVER

- NEW PAVEMENT
- PAVEMENT RESURFACING
- DEMOLITION OF PAVEMENT
- PORTION OF EASTERN RAILROAD SPUR(S) TO BE REMOVED



SHEET REFERENCES	
TYPICAL SECTIONS	2
PROFILE SHEET	3A
EROSION & SEDIMENT CONTROL	XS-1, XS-3
CROSS SECTIONS	XS-1, XS-3
PAVEMENT MARKING & SIGNING	2B(1)

**NOTES**

- Lot dimensions in parentheses are from deed.
- Property owners correct as of April, 2014
- Ordinance Number N/A
- Adopted N/A
- Accepted N/A

**INTERSTATE CONSTRUCTION CORP.**  
S0080211004  
INST #03-045186

Existing	Proposed	Legend
Curb & Gutter	Curb & Gutter	Existing Curb Cut Ramp
Sidewalk	Sidewalk	Coping
Base	Base	Alley Crossing/Driveway
Storm Sewer	Storm Sewer	Fire Hydrant
Sewer Manhole	Sewer Manhole	Edge of Pavement
Sanitary Sewer (small)	Sanitary Sewer (small)	Fence
Sanitary Sewer (large)	Sanitary Sewer (large)	Cornerstone
Gas Line	Gas Line	Property Pin
Electric Line	Electric Line	Utility Pole
Telephone/Telegraph	Telephone/Telegraph	Proposed Sewer
TV Cable	TV Cable	Manhole
Water Line	Water Line	Basin
Tree / Exist. Tree To Be Removed	Tree / Exist. Tree To Be Removed	Curb & Gutter
Property Line	Property Line	Asphalt



Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Engineer	Deputy Director for Transportation / Public Works
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

DEEPWATER TERMINAL ROAD EXTENSION PLAN SHEET	
DESIGN BY: M. FLEMING	REVIEWED BY: M. FLEMING
DRAWN BY: C. KIEFER	CHECKED BY: C. KIEFER
FIELD NOTES: FB-KK, pp XX-XX	SCALE: HORIZ. 1" = 25'
DATE: 06/19/2015	SHEET: 3
DRAWING NO: 0-28602	

SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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SHEET REFERENCES	
TYPICAL SECTIONS	2
PROFILE SHEET	4A
EROSION & SEDIMENT CONTROL	
CROSS SECTIONS	XS-3, XS-5
PAVEMENT MARKING & SIGNING	2B(1)

**UTILITY OWNERSHIP LIST**

**PHONE / FIBER OPTIC**

**VERIZON**  
CONTACT: VERIZON  
2600 BRITTON HILL RD.  
RICHMOND, VA. 23230  
PHONE: (804)-772-4207

**COMCAST CORPORATION**  
CONTACT: COMCAST  
5401 STAPLES MILL ROAD  
RICHMOND, VA 23228  
BRAD ALLEN, DESIGN TECHNICIAN  
PHONE: (804)-915-5363  
FAX: (804)-915-5356  
CELL: (804)-816-0598  
BRADALLEN@CABLE.COMCAST.COM

**POWER**

**DOMINION POWER**  
CONTACT: DOMINION VIRGINIA POWER  
7500 WEST BROAD STREET  
RICHMOND, VA 23294  
(RECORDS REQUEST REQUIRED TO BE SUBMITTED ELECTRONICALLY)  
FACILITY.LOCATE.REQUEST@DOM.COM

**WATER, CITY ELECTRIC, GAS, SANITARY SEWER AND STORM SEWER**

**CITY OF RICHMOND, DPU**  
CONTACT: CITY OF RICHMOND  
DEPARTMENT OF PUBLIC UTILITIES  
MICHELLE FORD, GIS TECHNICIAN WATER DATA OFFICER  
400 JEFFERSON DAVIS HIGHWAY  
RICHMOND, VA 23224  
PHONE: (804)-646-8415  
MOBILE: (804)-646-8502  
FAX: (804)-646-8545  
MICHELLE.FORD@RICHMONDGOV.COM

**GAS PIPELINE**

**COLONIAL PIPELINE COMPANY**  
CONTACT: CHRISTOPHER J. GIBSON, INSPECTOR  
1400 GOODES STREET  
RICHMOND, VA 23224  
PHONE: (804)-233-4347 (DIRECT)  
CELL: (804)-334-0640  
FAX: (804)-232-3561  
CGIBSON@COLPIPE.COM

**KINDER MORGAN - PLANTATION PIPELINE COMPANY**  
CONTACT: JESSIE W. CARTLIDGE, SUPERVISOR OPERATIONS AND MAINTENANCE  
1800 TRENTON AVE.  
RICHMOND, VA 23234  
PHONE: (804)-275-5441  
PHONE: (804)-690-6757  
JESSIE\_CARTLIDGE@KINDERMORGAN.COM

**OIL**

**DOMINION SITE SERVICES**  
CONTACT: WILLIAM R. THOMAS, OWNER  
(OWNER OF LOT WHERE THERE IS ABANDONED OIL LINE)  
1750 DEEPWATER TERMINAL ROAD  
RICHMOND, VA 23224  
PHONE: (804)-929-7209  
THOMASWR@GMAIL.COM

**DEEPWATER TERMINAL ROAD**

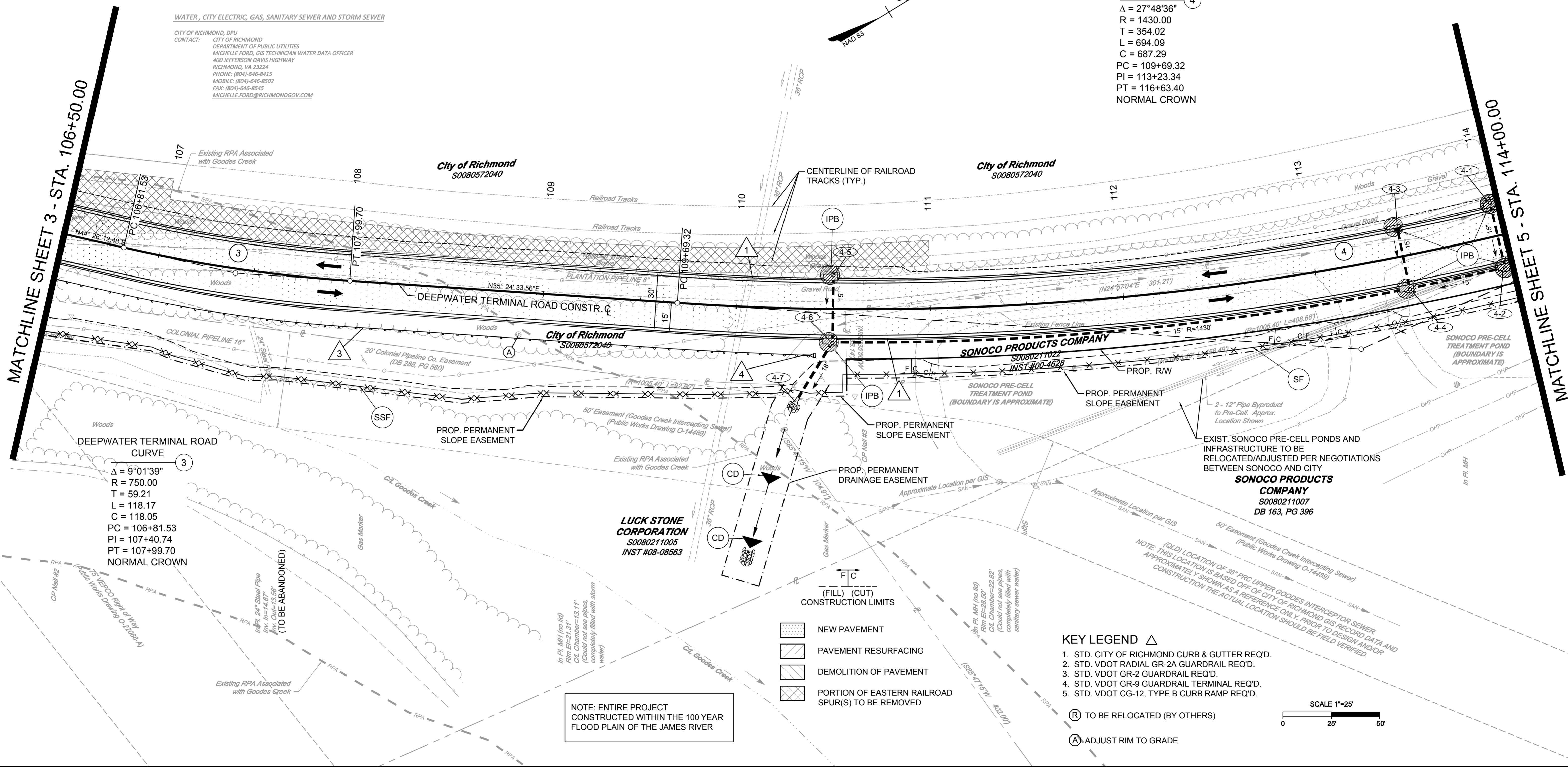
**CURVE 4**  
Δ = 27°48'36"  
R = 1430.00  
T = 354.02  
L = 694.09  
C = 687.29  
PC = 109+69.32  
PI = 113+23.34  
PT = 116+63.40  
NORMAL CROWN

**DEEPWATER TERMINAL ROAD**

**CURVE 3**  
Δ = 9°01'39"  
R = 750.00  
T = 59.21  
L = 118.17  
C = 118.05  
PC = 106+81.53  
PI = 107+40.74  
PT = 107+99.70  
NORMAL CROWN

SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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**NOTE: ENTIRE PROJECT CONSTRUCTED WITHIN THE 100 YEAR FLOOD PLAIN OF THE JAMES RIVER**

- NEW PAVEMENT
- PAVEMENT RESURFACING
- DEMOLITION OF PAVEMENT
- PORTION OF EASTERN RAILROAD SPUR(S) TO BE REMOVED

**KEY LEGEND**

1. STD. CITY OF RICHMOND CURB & GUTTER REQ'D.
  2. STD. VDOT RADIAL GR-2A GUARDRAIL REQ'D.
  3. STD. VDOT GR-2 GUARDRAIL REQ'D.
  4. STD. VDOT GR-9 GUARDRAIL TERMINAL REQ'D.
  5. STD. VDOT CG-12, TYPE B CURB RAMP REQ'D.
- (R) TO BE RELOCATED (BY OTHERS)
- (A) ADJUST RIM TO GRADE



**NOTES**

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

Existing	Proposed	Legend
Curb & Gutter	Curb & Gutter	Manhole
Sidewalk	Sidewalk	Basin
Base	Base	Curb & Gutter
Storm Sewer	Storm Sewer	Asphalt
Sewer Manhole	Sewer Manhole	
Sanitary Sewer (small)	Sanitary Sewer (small)	
Sanitary Sewer (large)	Sanitary Sewer (large)	
Gas Line	Gas Line	
Electric Line	Electric Line	
Telephone/Polegraph	Telephone/Polegraph	
TV Cable	TV Cable	
Water Line	Water Line	
Tree / Exist. Tree To Be Removed	Tree / Exist. Tree To Be Removed	
Property Line	Property Line	



Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Engineer	Deputy Director for Transportation / Public Works
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

**DEEPWATER TERMINAL ROAD EXTENSION PLAN SHEET**

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-KX, pp 12-KX	SCALE: HORIZ. 1" = 25'	DATE: 06/19/2015	SHEET: 4	DRAWING NO.: 0-28602
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**UTILITY OWNERSHIP LIST**

**PHONE / FIBER OPTIC**

**VERIZON**  
 CONTACT: VERIZON  
 2600 BRITTON HILL RD.  
 RICHMOND, VA. 23230  
 PHONE: (804)-772-4207

**COMCAST CORPORATION**  
 CONTACT: COMCAST  
 5401 STAPLES MILL ROAD  
 RICHMOND, VA 23228  
 BRAD ALLEN, DESIGN TECHNICIAN  
 PHONE: (804)-915-5363  
 FAX: (804)-915-5356  
 CELL: (804)-815-0598  
 BRADALLEN@CABLE.COMCAST.COM

**POWER**

**DOMINION POWER**  
 CONTACT: DOMINION VIRGINIA POWER  
 7500 WEST BROAD STREET  
 RICHMOND, VA 23294  
 (RECORDS REQUEST REQUIRED TO BE SUBMITTED ELECTRONICALLY)  
 FACILITY.LOCATE.REQUEST@DOM.COM

**WATER, CITY ELECTRIC, GAS, SANITARY SEWER AND STORM SEWER**

**CITY OF RICHMOND, DPU**  
 CONTACT: CITY OF RICHMOND  
 DEPARTMENT OF PUBLIC UTILITIES  
 MICHELLE FORD, GIS TECHNICIAN WATER DATA OFFICER  
 400 JEFFERSON DAVIS HIGHWAY  
 RICHMOND, VA 23224  
 PHONE: (804)-646-8415  
 MOBILE: (804)-646-8502  
 FAX: (804)-646-8545  
 MICHELLE.FORD@RICHMONDGOV.COM

**GAS PIPELINE**

**COLONIAL PIPELINE COMPANY**  
 CONTACT: CHRISTOPHER J. GIBSON, INSPECTOR  
 1400 GOODIES STREET  
 RICHMOND, VA 23224  
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 CELL: (804)-334-0640  
 FAX: (804)-232-3561  
 CGIBSON@COLPIPE.COM

**KINDER MORGAN - PLANTATION PIPELINE COMPANY**  
 CONTACT: JESSIE W. CARTLIDGE, SUPERVISOR OPERATIONS AND MAINTENANCE  
 1800 TRENTON AVE.  
 RICHMOND, VA 23234  
 PHONE: (804)-375-5441  
 PHONE: (804)-690-6757  
 JESSIE\_CARTLIDGE@KINDERMORGAN.COM

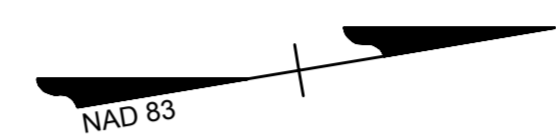
**OIL**

**DOMINION SITE SERVICES**  
 CONTACT: WILLIAM R. THOMAS, OWNER  
 (OWNER OF LOT WHERE THERE IS ABANDONED OIL LINE)  
 1750 DEEPWATER TERMINAL ROAD  
 RICHMOND, VA 23224  
 PHONE: (804)-929-7209  
 THOMASWRT@GMAIL.COM

**DEEPWATER TERMINAL ROAD**

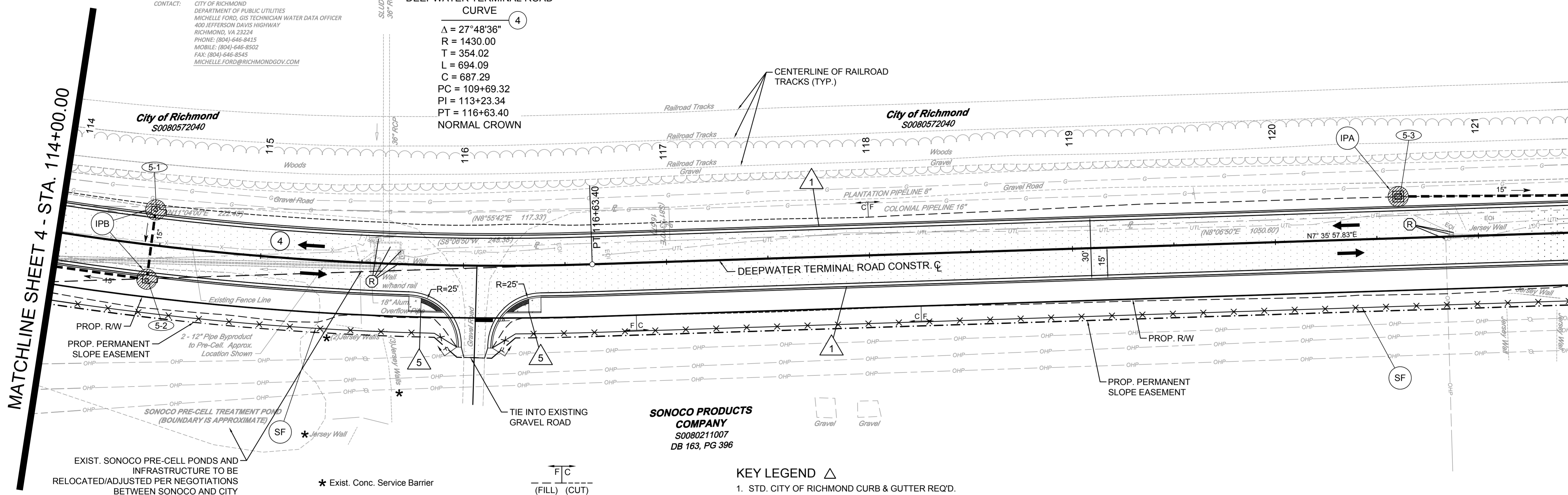
**CURVE**

$\Delta = 27^\circ 48' 36"$   
 $R = 1430.00$   
 $T = 354.02$   
 $L = 694.09$   
 $C = 687.29$   
 $PC = 109+69.32$   
 $PI = 113+23.34$   
 $PT = 116+63.40$   
 NORMAL CROWN



MATCHLINE SHEET 4 - STA. 114+00.00

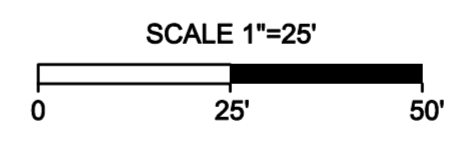
MATCHLINE SHEET 6 - STA. 121+50.00



**SONOCO PRODUCTS COMPANY**  
 50080211007  
 DB 163, PG 396

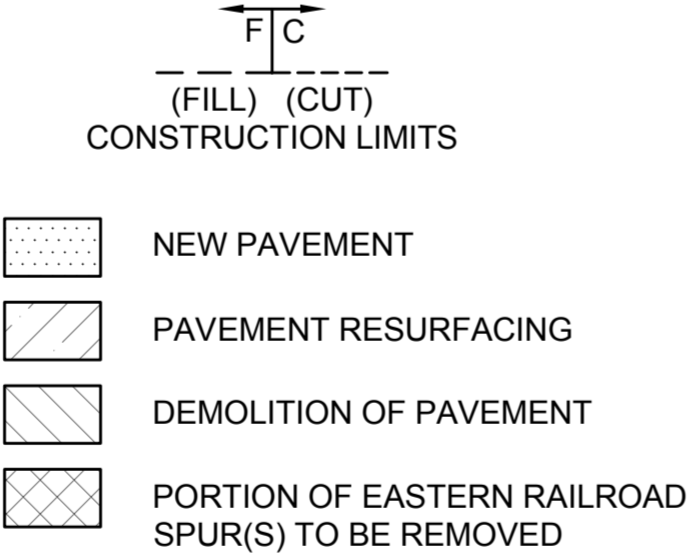
**KEY LEGEND**

- 1. STD. CITY OF RICHMOND CURB & GUTTER REQ'D.
  - 2. STD. VDOT RADIAL GR-2A GUARDRAIL REQ'D.
  - 3. STD. VDOT GR-2 GUARDRAIL REQ'D.
  - 4. STD. VDOT GR-9 GUARDRAIL TERMINAL REQ'D.
  - 5. STD. VDOT CG-12, TYPE B CURB RAMP REQ'D.
- (R) TO BE RELOCATED (BY OTHERS)  
 (A) ADJUST RIM TO GRADE



NOTE: ENTIRE PROJECT CONSTRUCTED WITHIN THE 100 YEAR FLOOD PLAIN OF THE JAMES RIVER

\* Exist. Conc. Service Barrier



SHEET REFERENCES	
TYPICAL SECTIONS	2
PROFILE SHEET	5A
EROSION & SEDIMENT CONTROL	
CROSS SECTIONS	XS-5, XS-6
PAVEMENT MARKING & SIGNING	2B(2)

NOTES	LEGEND																												
1. Lot dimensions in parentheses are from deed. 2. Property owners correct as of April, 2014 3. Ordinance Number N/A 4. Adopted N/A 5. Accepted N/A	<table border="0"> <tr> <td>Existing Curb &amp; Gutter</td> <td>Existing Curb Cut Ramp</td> </tr> <tr> <td>• Sidewalk</td> <td>• Coping</td> </tr> <tr> <td>• Base</td> <td>• Alley Crossing/Driveway</td> </tr> <tr> <td>• Storm Sewer</td> <td>• Fire Hydrant</td> </tr> <tr> <td>• Sewer Manhole</td> <td>• Edge of Pavement</td> </tr> <tr> <td>• Sanitary Sewer (small)</td> <td>• Fence</td> </tr> <tr> <td>• Sanitary Sewer (large)</td> <td>• Cornerstone</td> </tr> <tr> <td>• Gas Line</td> <td>• Property Pin</td> </tr> <tr> <td>• Electric Line</td> <td>• Utility Pole</td> </tr> <tr> <td>• Telephone/Polegraph</td> <td>• Proposed Sewer</td> </tr> <tr> <td>• TV Cable</td> <td>• Manhole</td> </tr> <tr> <td>• Water Line</td> <td>• Basin</td> </tr> <tr> <td>• Tree / Exist. Tree To Be Removed</td> <td>• Curb &amp; Gutter</td> </tr> <tr> <td>• Property Line</td> <td>• Asphalt</td> </tr> </table>	Existing Curb & Gutter	Existing Curb Cut Ramp	• Sidewalk	• Coping	• Base	• Alley Crossing/Driveway	• Storm Sewer	• Fire Hydrant	• Sewer Manhole	• Edge of Pavement	• Sanitary Sewer (small)	• Fence	• Sanitary Sewer (large)	• Cornerstone	• Gas Line	• Property Pin	• Electric Line	• Utility Pole	• Telephone/Polegraph	• Proposed Sewer	• TV Cable	• Manhole	• Water Line	• Basin	• Tree / Exist. Tree To Be Removed	• Curb & Gutter	• Property Line	• Asphalt
Existing Curb & Gutter	Existing Curb Cut Ramp																												
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**DEPARTMENT OF PUBLIC WORKS**  
RICHMOND, VIRGINIA

Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Engineer	Deputy Director for Transportation / Public Works
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-KK, pp 12-KK	SCALE: HORIZ. 1" = 25'	DATE: 06/19/2015	SHEET: 5	DRAWING NO.: 0-28602
DRAWN BY: M. FLEMING	CHECKED BY: C. KIEFER		VERT. N/A			

SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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**UTILITY OWNERSHIP LIST**

**PHONE / FIBER OPTIC**

**VERIZON**  
CONTACT: VERIZON  
2600 BRITTON HILL RD.  
RICHMOND, VA. 23230  
PHONE: (804)-772-4207

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5401 STAPLES MILL ROAD  
RICHMOND, VA 23228  
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FAX: (804)-915-5356  
CELL: (804)-815-0598  
BRADALLEN@CABLE.COMCAST.COM

**POWER**

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7500 WEST BROAD STREET  
RICHMOND, VA 23294  
(RECORDS REQUEST REQUIRED TO BE SUBMITTED ELECTRONICALLY)  
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**WATER, CITY ELECTRIC, GAS, SANITARY SEWER AND STORM SEWER**

**CITY OF RICHMOND, DPU**  
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MICHELLE FORD, GIS TECHNICIAN WATER DATA OFFICER  
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(OWNER OF LOT WHERE THERE IS ABANDONED OIL LINE)  
1750 DEEPWATER TERMINAL ROAD  
RICHMOND, VA 23224  
PHONE: (804)-929-7209  
THOMASWR@GMAIL.COM

Overhead Metal Truss (Top=60.35)  
Overhead 18" Metal Pipe (Top=62.82)  
Overhead Metal Truss (Top=60.44)

**DEEPWATER TERMINAL ROAD CURVE 5**

$\Delta = 8^{\circ}47'48''$   
R = 538.00  
T = 41.38  
L = 82.60  
C = 82.52  
PC = 125+25.72  
PI = 125+67.10  
PT = 126+08.32  
NORMAL CROWN

**DEEPWATER TERMINAL ROAD CURVE 6**

$\Delta = 18^{\circ}26'58''$   
R = 350.00  
T = 56.84  
L = 112.70  
C = 112.21  
PC = 127+85.60  
PI = 128+42.44  
PT = 128+98.30  
NORMAL CROWN

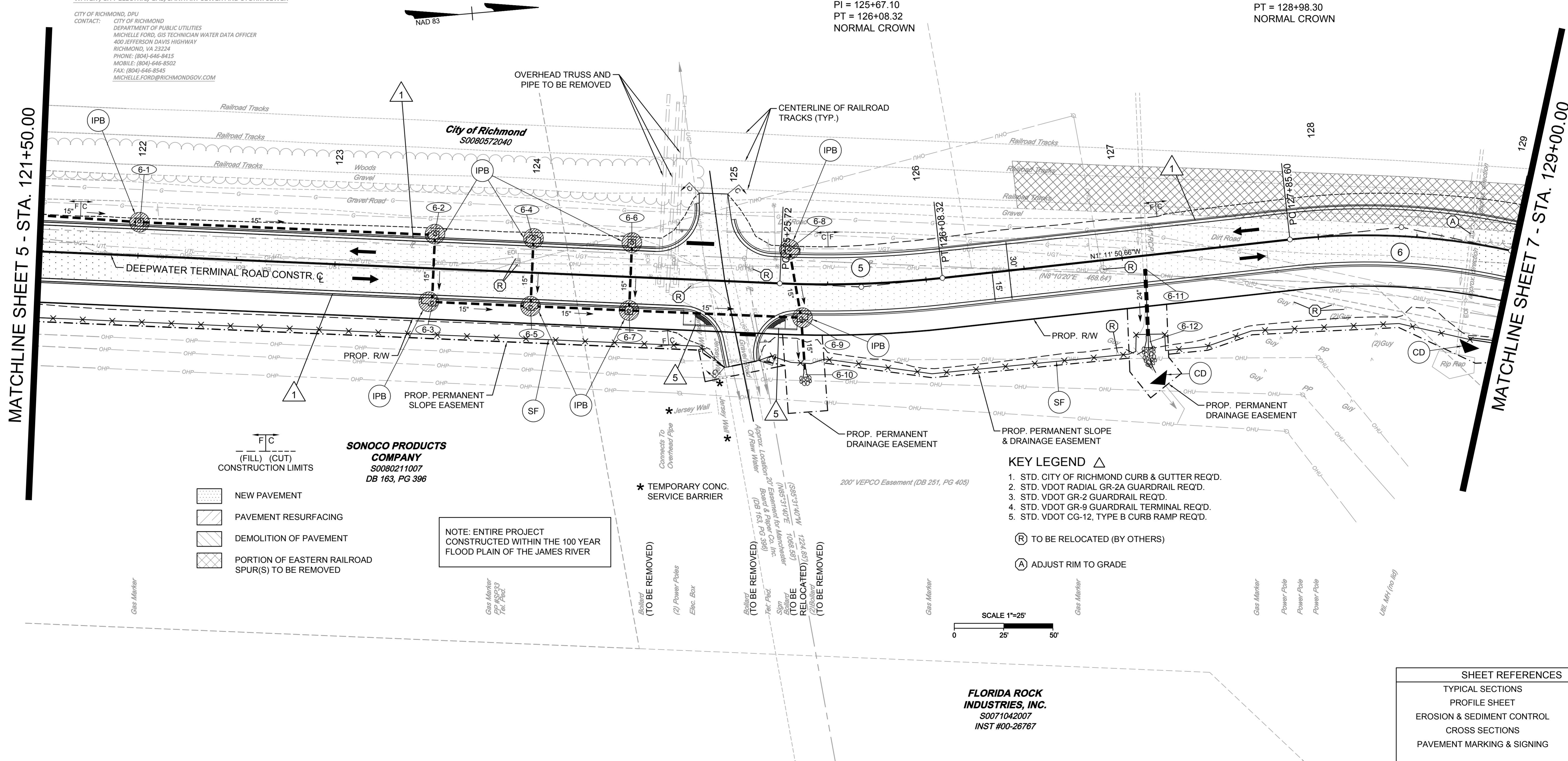
In Pt. 24' RCP  
In Pt. 15' 08"  
unable to locate upper end  
(TO BE CLEANED OUT)

In Pt. MHD (no lid)  
Rim Elev=26.67'  
C/L Chamber = +22.67'  
filled with dirt to the top of  
the pipes.  
(TO BE CLEANED OUT)

SURVEYED BY: TIMMONS GROUP  
SUPERVISED BY: C. KIEFER  
DESIGNED BY: M. FLEMING

MATCHLINE SHEET 5 - STA. 121+50.00

MATCHLINE SHEET 7 - STA. 129+00.00



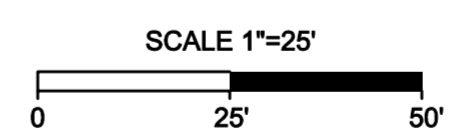
**SONOCO PRODUCTS COMPANY**  
S0080211007  
DB 163, PG 396

(FILL) (CUT)  
CONSTRUCTION LIMITS

- NEW PAVEMENT
- PAVEMENT RESURFACING
- DEMOLITION OF PAVEMENT
- PORTION OF EASTERN RAILROAD SPUR(S) TO BE REMOVED

NOTE: ENTIRE PROJECT CONSTRUCTED WITHIN THE 100 YEAR FLOOD PLAIN OF THE JAMES RIVER

- KEY LEGEND**
- STD. CITY OF RICHMOND CURB & GUTTER REQ'D.
  - STD. VDOT RADIAL GR-2A GUARDRAIL REQ'D.
  - STD. VDOT GR-2 GUARDRAIL REQ'D.
  - STD. VDOT GR-9 GUARDRAIL TERMINAL REQ'D.
  - STD. VDOT CG-12, TYPE B CURB RAMP REQ'D.
- (R) TO BE RELOCATED (BY OTHERS)  
(A) ADJUST RIM TO GRADE



**FLORIDA ROCK INDUSTRIES, INC.**  
S0071042007  
INST #00-26767

SHEET REFERENCES	
TYPICAL SECTIONS	2
PROFILE SHEET	6A
EROSION & SEDIMENT CONTROL	
CROSS SECTIONS	XS-6, XS-8
PAVEMENT MARKING & SIGNING	2B(2)

**NOTES**

- Lot dimensions in parentheses are from deed.
- Property owners correct as of April, 2014
- Ordinance Number N/A
- Adopted N/A
- Accepted N/A

Existing	Proposed
Curb & Gutter	Proposed Conc. Sidewalk
Sidewalk	Brick Sidewalk
Basin	Castings: Water Valve
Storm Sewer	Water Meter
Sewer Manhole	Gas Drip
Sanitary Sewer (small)	Gas Valve
Sanitary Sewer (large)	Telephone Manhole
Gas Line	Electric Manhole
Electric Line	Utility Pole
Telephone/Telegraph	Proposed Curb Cut Ramp
TV Cable	Decorative Light
Water Line	Conduit
Tree / Exist. Tree To Be Removed	Conduit (Conc. Encased)
Property Line	Retaining Wall

**RICHMOND VIRGINIA**

Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Engineer	Deputy Director for Transportation / Public Works
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

DESIGN BY:	REVIEWED BY:	FIELD NOTES:	SCALE:	DATE:	SHEET:	DRAWING NO.:
M. FLEMING	M. FLEMING	FB-X, pp XX-XX	HORIZ. 1" = 25' VERT. N/A	06/19/2015	6	0-28602

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UTILITY OWNERSHIP LIST

PHONE / FIBER OPTIC

VERIZON CONTACT: VERIZON 2600 BRITTON HILL RD. RICHMOND, VA, 23230 PHONE: (804)-772-4207

POWER

DOMINION POWER CONTACT: DOMINION VIRGINIA POWER 7500 WEST BROAD STREET RICHMOND, VA 23294

WATER, CITY ELECTRIC, GAS, SANITARY SEWER AND STORM SEWER

CITY OF RICHMOND, DPJ CONTACT: CITY OF RICHMOND DEPARTMENT OF PUBLIC UTILITIES

GAS PIPELINE

COLONIAL PIPELINE COMPANY CONTACT: CHRISTOPHER J. GIBSON, INSPECTOR 1400 GOODES STREET RICHMOND, VA 23224

KINDER MORGAN - PLANTATION PIPELINE COMPANY CONTACT: JESSIE W. CARTLIDGE, SUPERVISOR OPERATIONS AND MAINTENANCE

OIL

DOMINION SITE SERVICES CONTACT: WILLIAM R. THOMAS, OWNER (OWNER OF LOT WHERE THERE IS ABANDONED OIL LINE)

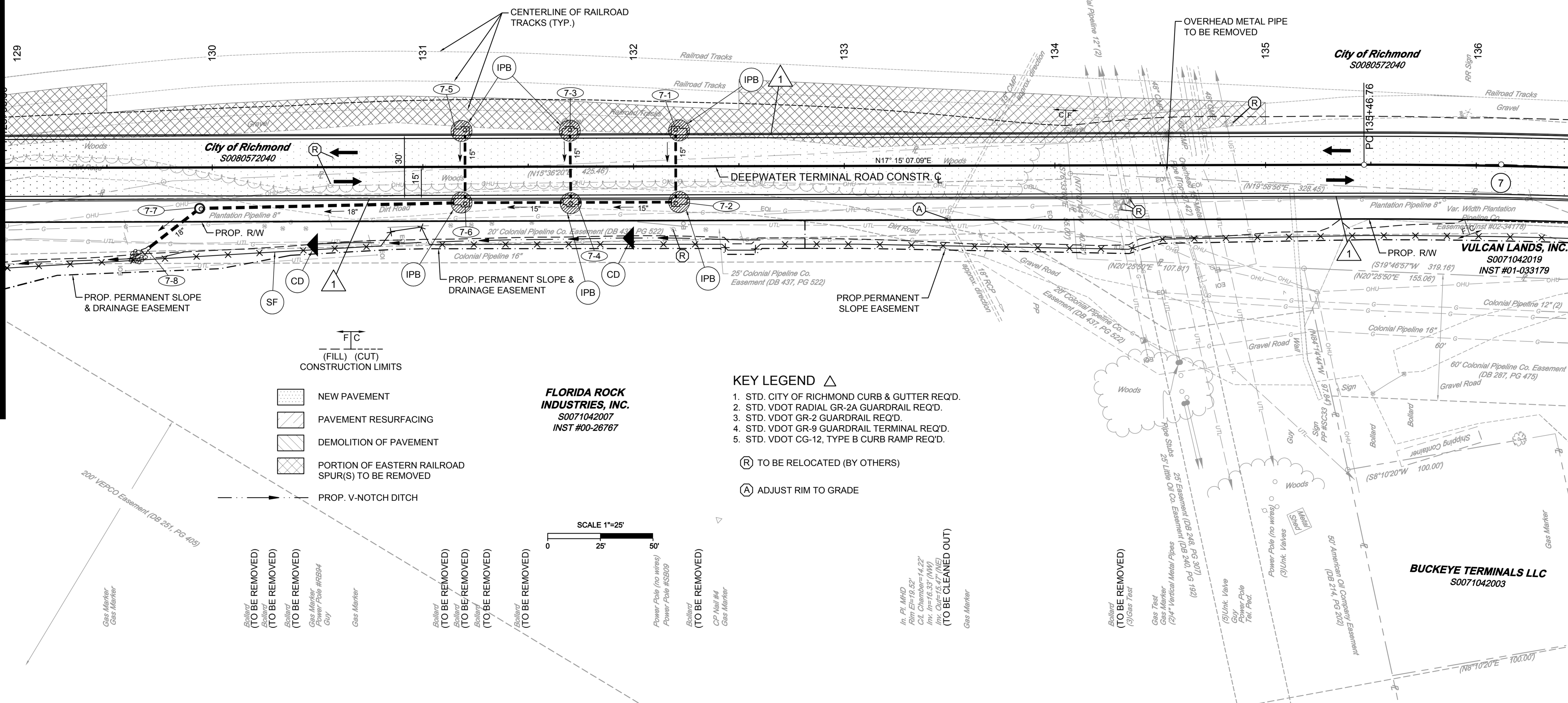
NOTE: ENTIRE PROJECT CONSTRUCTED WITHIN THE 100 YEAR FLOOD PLAIN OF THE JAMES RIVER

Table with 2 columns: SHEET REFERENCES, TYPICAL SECTIONS. Includes entries for PROFILE SHEET, EROSION & SEDIMENT CONTROL, CROSS SECTIONS, and PAVEMENT MARKING & SIGNING.

DEEPWATER TERMINAL ROAD CURVE 7
Delta = 2°29'15"
R = 3000.00
T = 65.13
L = 130.24
C = 130.23
PC = 135+46.76
PI = 136+11.89
PT = 136+77.00
NORMAL CROWN

MATCHLINE SHEET 6 - STA. 129+00.00

MATCHLINE SHEET 8 - STA. 136+50.00



F/C (FILL) (CUT) CONSTRUCTION LIMITS

- NEW PAVEMENT
PAVEMENT RESURFACING
DEMOLITION OF PAVEMENT
PORTION OF EASTERN RAILROAD SPUR(S) TO BE REMOVED
PROP. V-NOTCH DITCH

FLORIDA ROCK INDUSTRIES, INC. S0071042007 INST #00-26767

KEY LEGEND

- 1. STD. CITY OF RICHMOND CURB & GUTTER REQ'D.
2. STD. VDOT RADIAL GR-2A GUARDRAIL REQ'D.
3. STD. VDOT GR-2 GUARDRAIL REQ'D.
4. STD. VDOT GR-9 GUARDRAIL TERMINAL REQ'D.
5. STD. VDOT CG-12, TYPE B CURB RAMP REQ'D.
(R) TO BE RELOCATED (BY OTHERS)
(A) ADJUST RIM TO GRADE

SCALE 1"=25'

- (TO BE REMOVED)
Ball-and-Crest Sign
Gas Marker
Gas Valve

NOTES

- 1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

Table with 2 columns: REFERENCES, REVISIONS

Table with 2 columns: Existing Curb & Gutter, Proposed Sewer

Table with 2 columns: Existing Curb Cut Ramp, Proposed Sewer

Table with 2 columns: Proposed Conc. Sidewalk, Proposed Curb Cut Ramp



Administrative table with roles like Surveys Superintendent, Project Engineer, City Traffic Engineer, Capital Project Administrator, Deputy Director for Transportation / Public Works, Director of Public Works.

Project information table including DEPARTMENT OF PUBLIC WORKS, RICHMOND, VIRGINIA, PROJECT SHEET, and drawing number 0-28602.

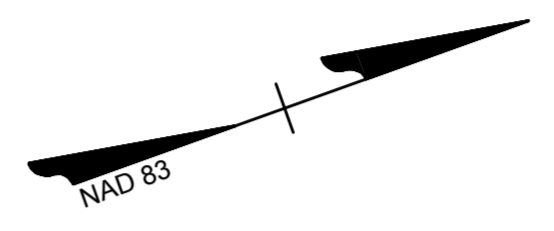
SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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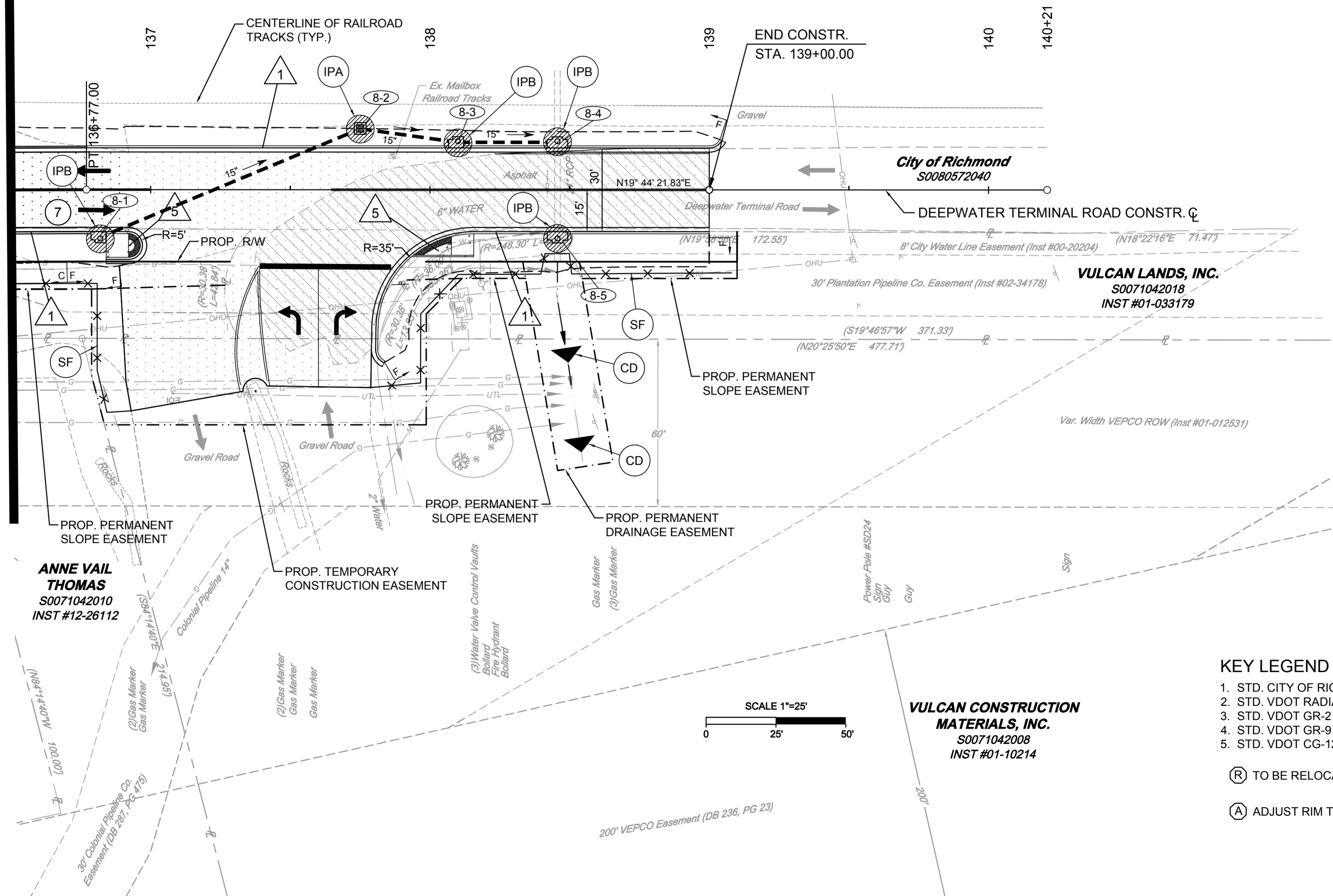
DEEPWATER TERMINAL ROAD CURVE

$\Delta = 2^{\circ}29'15''$   
 $R = 3000.00$   
 $T = 65.13$   
 $C = 130.24$   
 $PC = 135+46.76$   
 $PI = 136+11.89$   
 $PT = 136+77.00$   
 NORMAL CROWN

TO BE CLEANED OUT  
 Exist. 24" RCP  
 Approx. Inv. (In)=21'  
 Approx. Inv. (Out)=20.5'



MATCHLINE SHEET 7 - STA. 136+50.00



**UTILITY OWNERSHIP LIST**

**PHONE / FIBER OPTIC**

**VERIZON**  
 CONTACT: VERIZON  
 2600 BRITTON HILL RD.  
 RICHMOND, VA, 23230  
 PHONE: (804)-772-4207

**COMCAST CORPORATION**  
 CONTACT: COMCAST  
 5401 STAPLES MILL ROAD  
 RICHMOND, VA 23228  
 BRAD ALLEN, DESIGN TECHNICIAN  
 PHONE: (804)-915-5363  
 FAX: (804)-915-5356  
 CELL: (804)-816-0598  
 BRADALLEN@CABLE.COMCAST.COM

**POWER**

**DOMINION POWER**  
 CONTACT: DOMINION VIRGINIA POWER  
 7500 WEST BROAD STREET  
 RICHMOND, VA 23294  
 (RECORDS REQUEST REQUIRED TO BE SUBMITTED ELECTRONICALLY)  
 FACILITY.LOCATE.REQUEST@DOM.COM

**WATER, CITY ELECTRIC, GAS, SANITARY SEWER AND STORM SEWER**

**CITY OF RICHMOND, DPI**  
 CONTACT: CITY OF RICHMOND  
 DEPARTMENT OF PUBLIC UTILITIES  
 MICHELLE FORD, GIS TECHNICIAN WATER DATA OFFICER  
 400 JEFFERSON DAVIS HIGHWAY  
 RICHMOND, VA 23224  
 PHONE: (804)-646-8415  
 MOBILE: (804)-646-8502  
 FAX: (804)-646-8545  
 MICHELLE.FORD@RICHMONDGOV.COM

**GAS PIPELINE**

**COLONIAL PIPELINE COMPANY**  
 CONTACT: CHRISTOPHER, J. GIBSON, INSPECTOR  
 3400 GOODES STREET  
 RICHMOND, VA 23224  
 PHONE: (804)-233-4347 (DIRECT)  
 CELL: (804)-334-0640  
 FAX: (804)-232-3561  
 CGIBSON@COLPIPE.COM

**KINDER MORGAN - PLANTATION PIPELINE COMPANY**  
 CONTACT: JESSIE W. CARTLIDGE, SUPERVISOR OPERATIONS AND MAINTENANCE  
 1800 TRENTON AVE.  
 RICHMOND, VA 23224  
 PHONE: (804)-275-5441  
 PHONE: (804)-690-6757  
 JESSIE\_CARTLIDGE@KINDERMORGAN.COM

**OIL**

**DOMINION SITE SERVICES**  
 CONTACT: WILLIAM R. THOMAS, OWNER  
 (OWNER OF LOT WHERE THERE IS ABANDONED OIL LINE)  
 1750 DEEPWATER TERMINAL ROAD  
 RICHMOND, VA 23224  
 PHONE: (804)-929-7209  
 THOMASWRT@GMAIL.COM

F/C  
 (FILL) (CUT)  
 CONSTRUCTION LIMITS

- NEW PAVEMENT
- PAVEMENT RESURFACING
- DEMOLITION OF PAVEMENT
- PORTION OF EASTERN RAILROAD SPUR(S) TO BE REMOVED

SHEET REFERENCES	
TYPICAL SECTIONS	2
PROFILE SHEET	8A
EROSION & SEDIMENT CONTROL	
CROSS SECTIONS	XS-10, XS-11
PAVEMENT MARKING & SIGNING	2B(3)

NOTE: ENTIRE PROJECT CONSTRUCTED WITHIN THE 100 YEAR FLOOD PLAIN OF THE JAMES RIVER

**KEY LEGEND**

1. STD. CITY OF RICHMOND CURB & GUTTER REQ'D.
  2. STD. VDOT RADIAL GR-2A GUARDRAIL REQ'D.
  3. STD. VDOT GR-2 GUARDRAIL REQ'D.
  4. STD. VDOT GR-9 GUARDRAIL TERMINAL REQ'D.
  5. STD. VDOT CG-12, TYPE B CURB RAMP REQ'D.
- (R) TO BE RELOCATED (BY OTHERS)  
 (A) ADJUST RIM TO GRADE

**NOTES**

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

**REFERENCES**  
EC: 37 HW, 37 SW

**REVISIONS**

Existing	Proposed
Curb & Gutter	Proposed Conc. Sidewalk
Sidewalk	Brick Sidewalk
Basin	Castings: Water Valve
Storm Sewer	Water Meter
Sewer Manhole	Gas Drip
Sanitary Sewer (small)	Gas Valve
Sanitary Sewer (large)	Telephone Manhole
Gas Line	Electric Manhole
Electric Line	Proposed Curb Cut Ramp
Telephone/Telegraph	Decorative Light
TV Cable	Conduit
Water Line	Conduit (Conc. Encased)
Tree / Exist. Tree To Be Removed	Retaining Wall
Property Line	



Technical	Administrative
Surveys Superintendent	Capital Project Administrator
Project Engineer	Deputy Director for Transportation / Public Works
Maintenance Engineer	Director of Public Works
City Traffic Engineer	

DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-KK, pp XX-XX	SCALE: HORIZ. 1" = 25'	DATE: 06/19/2015	SHEET: 8	DRAWING NO.: 0-28602
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SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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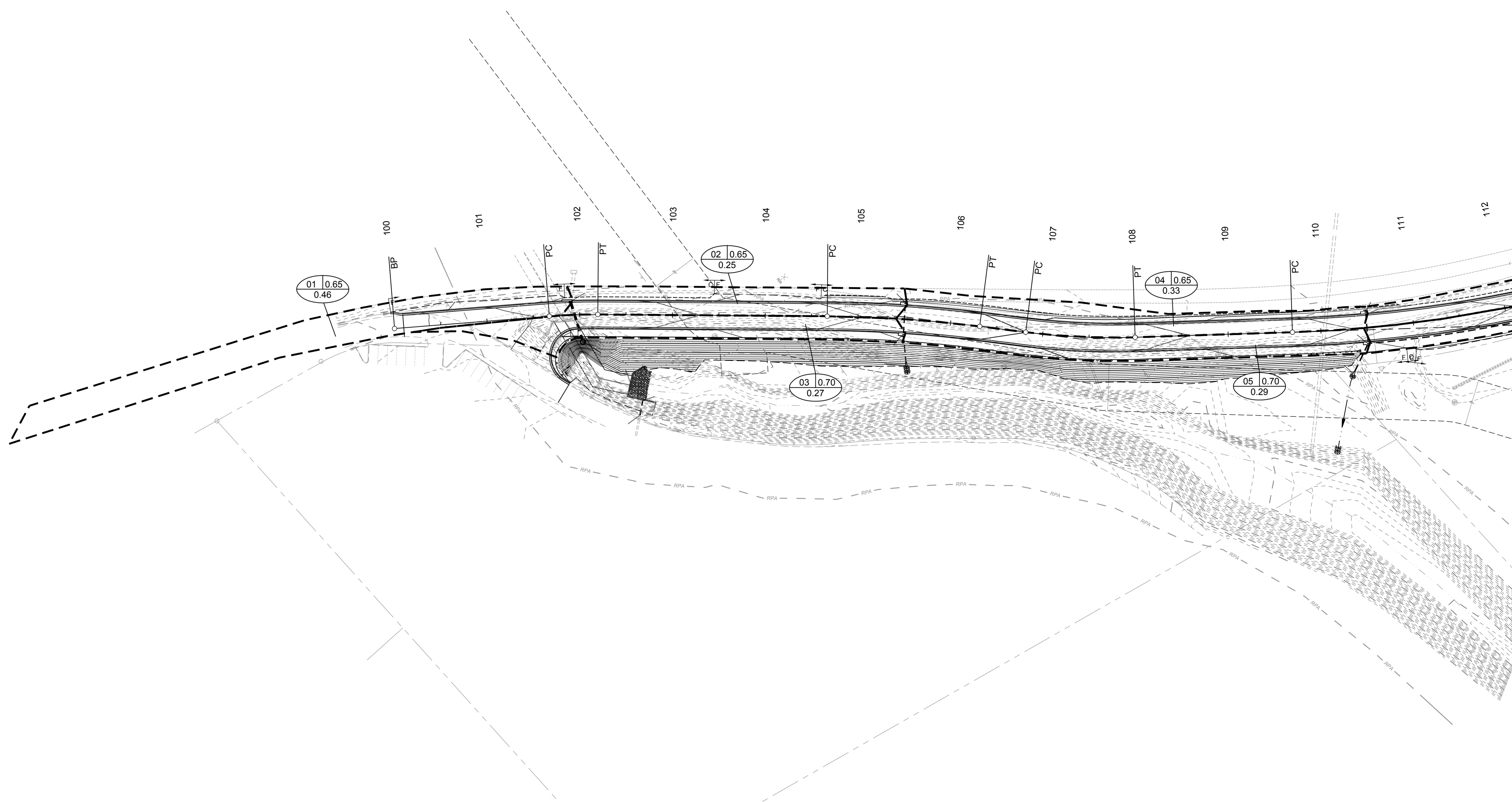
- |  |  |  |  |
|--|--|--|--|
| <p>3-1 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 26.85', H = 4.0', L = 6'</p> <p>3-1 3-2 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 26.85', INV. (OUT) = 26.55'</p> <p>3-2 1 - VDOT ST'D. DI-3BB REQ'D.<br/>INV. = 18.5', H = 12.35', L = 6', ST'D. IS-1 REQ'D.</p> <p>3-2 3-3 30' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 18.50', INV. (OUT) = 17.50'</p> <p>3-3 1 - 15" VDOT ST'D. ES-1 REQ'D.<br/>INV. = 17.5', 5 TONS CL. I RIP-RAP REQ'D.</p> <p>3-4 REMOVE EXIST. HEADWALL AND TIE PROP. BOX<br/>CULVERT TO EXIST. CONNECTION TO BE MADE<br/>BY DOWELING INTO EXIST. STRUCTURE OR BY<br/>OTHER CITY APPROVED METHODS</p> <p>3-4 3-5 108' - DOUBLE 10' x 10' BOX CULVERT REQ'D. (VDOT ST'D. BCD-20)<br/>45° BEND TO BE SHOWN AND DESIGN DETAILS AND<br/>SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL<br/>INV. (IN) = 12.0' APPROX. (TIE TO EXIST),<br/>INV. (OUT) = 11.0' APPROX.<br/>50 TONS CL. II RIP-RAP REQ'D.</p> <p>3-5 SPECIAL DESIGN HEADWALL AND WINGWALLS - CONTRACTOR<br/>SHALL SUBMIT DESIGN DETAILS AND SHOP DRAWINGS FOR<br/>APPROVAL</p> <p>3-6 3-7 16' - 18" STEEL PIPE REQ'D. - TIE TO EXIST. PIPE &amp; MATCH SLOPE<br/>INV. (IN) = 25.8' (APPROX. - MATCH EXIST.)<br/>INV. (OUT) = TO BE SET PER SLOPE</p> <p>3-7 TIE PROP. PIPE TO SPECIAL DESIGN WING-WALL<br/>DESIGN DETAILS AND SHOP DRAWINGS SHALL BE<br/>SUBMITTED FOR APPROVAL</p> <p>3-8 1 - VDOT MOD. DI-2B REQ'D. (GUTTER WIDTH = 18")<br/>INV. = 28.0' (APPROX. - TIE TO EXIST. 36" PIPE INVERT)<br/>H = 6.9' APPROX., L = 10'</p> <p>3-8 3-9 44' - 36" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 28.0', INV. (OUT) = 25.0'</p> <p>3-9 1 - VDOT MOD. MH-1 REQ'D.<br/>SET RISER STRUCTURE ON PROP. BOX CULVERT WITH<br/>OPENING TO ALLOW FLOW TO DROP INTO BOX<br/>SET ST'D. MH-1 FRAME AND COVER TO PROP. GRADE<br/>DESIGN DETAILS AND SHOP DRAWINGS TO BE SUBMITTED<br/>FOR APPROVAL</p> | <p>4-1 1 - VDOT ST'D. DI-3C REQ'D.<br/>INV. = 22.35', H = 4.0', L = 6'</p> <p>4-1 4-2 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 22.35', INV. (OUT) = 21.50'</p> <p>4-2 1 - VDOT ST'D. DI-3C REQ'D.<br/>INV. = 21.4', H = 4.95', L = 6', ST'D. IS-1 REQ'D.</p> <p>4-2 4-4 50' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 21.40', INV. (OUT) = 20.90'</p> <p>4-3 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 22.4', H = 4.0', L = 6'</p> <p>4-3 4-4 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 22.40', INV. (OUT) = 21.60'</p> <p>4-4 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 20.8', H = 5.6', L = 6', ST'D. IS-1 REQ'D.</p> <p>4-4 4-6 300' - 15" STORM SEWER PIPE REQ'D. (RADIUS = 1430')<br/>INV. (IN) = 20.80', INV. (OUT) = 17.60'</p> <p>4-5 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 24.0', H = 4.0', L = 6'</p> <p>4-5 4-6 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 24.00', INV. (OUT) = 23.20'</p> <p>4-6 1 - VDOT ST'D. DI-3BB REQ'D.<br/>INV. = 17.5', H = 10.5', L = 6', ST'D. IS-1 REQ'D.</p> <p>4-6 4-7 34' - 18" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 17.50', INV. (OUT) = 17.10'</p> <p>4-7 1 - 18" VDOT ST'D. ES-1 REQ'D.<br/>INV. = 17.1', 5 TONS CL. A1 RIP-RAP REQ'D.<br/>GRADE DITCH TO DAYLIGHT TO GOODES CREEK<br/>&amp; PLACE 8 TONS CL. A1 RIP-RAP AT OUTFALL</p> <p>5-1 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 22.4', H = 4.0', L = 6'</p> <p>5-1 5-2 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 22.40', INV. (OUT) = 22.10'</p> <p>5-2 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 22.0', H = 4.4', L = 6', ST'D. IS-1 REQ'D.</p> <p>5-2 4-2 50' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 22.00', INV. (OUT) = 21.50'</p> <p>5-3 1 - VDOT ST'D. DI-5 REQ'D. (GRATE TY. A I)<br/>INV. = 24.5', H = 3.0', DITCH INV. = 27.1'</p> <p>5-3 6-1 140' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 24.50', INV. (OUT) = 23.10'</p> | <p>6-1 1 - VDOT ST'D. DI-3A REQ'D.<br/>INV. = 23.0', H = 4.2', ST'D. IS-1 REQ'D.</p> <p>6-1 6-2 150' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 23.00', INV. (OUT) = 21.50'</p> <p>6-2 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 21.4', H = 5.1', L = 4', ST'D. IS-1 REQ'D.</p> <p>6-2 6-3 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 21.40', INV. (OUT) = 21.10'</p> <p>6-3 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 21.0', H = 4.2', L = 6', ST'D. IS-1 REQ'D.</p> <p>6-3 6-5 50' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 21.00', INV. (OUT) = 20.50'</p> <p>6-4 1 - VDOT ST'D. DI-3C REQ'D.<br/>INV. = 22.45', H = 4.0', L = 6'</p> <p>6-4 6-5 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 22.45', INV. (OUT) = 21.60'</p> <p>6-5 1 - VDOT ST'D. DI-3C REQ'D.<br/>INV. = 20.4', H = 6.05', L = 6', ST'D. IS-1 REQ'D.</p> <p>6-5 6-7 50' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 20.40', INV. (OUT) = 19.90'</p> <p>6-6 1 - VDOT ST'D. DI-3A REQ'D.<br/>INV. = 22.5', H = 4.0'</p> <p>6-6 6-7 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 22.50', INV. (OUT) = 21.70'</p> <p>6-7 1 - VDOT ST'D. DI-3A REQ'D.<br/>INV. = 19.8', H = 6.6', ST'D. IS-1 REQ'D.</p> <p>6-7 6-9 88' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 19.80', INV. (OUT) = 18.90'</p> <p>6-8 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 22.9', H = 4.0', L = 6'</p> <p>6-8 6-9 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 22.90', INV. (OUT) = 22.10'</p> <p>6-9 1 - VDOT ST'D. DI-3BB REQ'D.<br/>INV. = 18.8', H = 8.1', L = 4', ST'D. IS-1 REQ'D.</p> <p>6-9 6-10 26' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 18.80', INV. (OUT) = 18.40'</p> <p>6-10 1 - 15" VDOT ST'D. ES-1 REQ'D.<br/>INV. = 18.4', 5 TONS CL. A1 RIP-RAP REQ'D.</p> <p>6-11 6-12 34' - 24" RCP REQ'D. - TIE TO EXIST. PIPE &amp; MATCH SLOPE<br/>INV. (IN) = 15.08' (APPROX.), INV. (OUT) = TO BE SET PER SLOPE</p> <p>6-12 1 - 24" VDOT ST'D. ES-1 REQ'D.<br/>INV. = TO BE SET PER EXIST. PIPE SLOPE<br/>5 TONS CL. A1 RIP-RAP REQ'D. &amp; GRADE TO DAYLIGHT TO<br/>EXIST. CHANNEL</p> | <p>7-1 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 18.4', H = 3.5', L = 6'</p> <p>7-1 7-2 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 18.40', INV. (OUT) = 18.20'</p> <p>7-2 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 18.1', H = 3.8', L = 6', ST'D. IS-1 REQ'D.</p> <p>7-2 7-4 50' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 18.10', INV. (OUT) = 17.80'</p> <p>7-3 1 - VDOT ST'D. DI-3C REQ'D.<br/>INV. = 18.1', H = 3.6', L = 6'</p> <p>7-3 7-4 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 18.10', INV. (OUT) = 17.80'</p> <p>7-4 1 - VDOT ST'D. DI-3C REQ'D.<br/>INV. = 17.7', H = 4.0', L = 6', ST'D. IS-1 REQ'D.</p> <p>7-4 7-6 50' - 18" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 17.70', INV. (OUT) = 17.45'</p> <p>7-5 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 18.0', H = 4.0', L = 6'</p> <p>7-5 7-6 34' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 18.00', INV. (OUT) = 17.45'</p> <p>7-6 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 17.35', H = 4.65', L = 6', ST'D. IS-1 REQ'D.</p> <p>7-6 7-7 126' - 18" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 17.35', INV. (OUT) = 16.70'</p> <p>7-7 6.8 L.F. - VDOT ST'D. MH-1 OR 2 MANHOLE REQ'D.<br/>ST'D. MH-1 FRAME &amp; COVER REQ'D. (8" TALL)<br/>INV. = 16.7', TOTAL HEIGHT = 7.5', ST'D. IS-1 REQ'D.</p> <p>7-7 7-8 30' - 18" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 16.70', INV. (OUT) = 16.50'</p> <p>7-8 1 - 18" VDOT ST'D. ES-1 REQ'D.<br/>INV. = 16.50', 5 TONS CL. A1 RIP-RAP REQ'D.</p> <p>8-1 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 22.5', H = 3.5', L = 4'</p> <p>8-1 8-2 100' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 22.50', INV. (OUT) = 21.60'</p> <p>8-2 1 - VDOT ST'D. DI-5 REQ'D. (GRATE TY. A I)<br/>INV. = 21.5', H = 3.4', DITCH INV. = 23.9', ST'D. IS-1 REQ'D.</p> <p>8-2 8-3 36' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 21.50', INV. (OUT) = 21.30'</p> <p>8-3 1 - VDOT ST'D. DI-3B REQ'D.<br/>INV. = 21.2', H = 4.2', L = 4', ST'D. IS-1 REQ'D.</p> <p>8-3 8-4 36' - 15" STORM SEWER PIPE REQ'D.<br/>INV. (IN) = 21.20', INV. (OUT) = 20.90'</p> <p>8-4 1 - VDOT ST'D. DI-3C REQ'D.<br/>INV. = 20.8', H = 4.5', L = 6', ST'D. IS-1 REQ'D.<br/>INV. IS APPROX. - TIE TO EXIST. 24" RCP PIPE INV.</p> <p>8-5 1 - VDOT ST'D. DI-3C REQ'D.<br/>INV. = 20.6', H = 4.7', L = 6', ST'D. IS-1 REQ'D.<br/>INV. IS APPROX. - TIE TO EXIST. 24" RCP PIPE INV.</p> |
|--|--|--|--|

**NOTES:**  
 ALL DRAINAGE STRUCTURES WITH H = 4' & GREATER  
 SHALL HAVE STEPS PER VDOT ST'D. ST-1  
 ALL PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE  
 SPECIFIED

<p><b>NOTES</b></p> <ol style="list-style-type: none"> <li>Lot dimensions in parentheses are from deed.</li> <li>Property owners correct as of April, 2014</li> <li>Ordinance Number <u>N/A</u></li> <li>Adopted <u>N/A</u></li> <li>Accepted <u>N/A</u></li> </ol>	<p><b>REVISIONS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>	NO.	DESCRIPTION			<p><b>LEGEND</b></p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <p><b>Existing</b></p> <ul style="list-style-type: none"> <li>Curb &amp; Gutter</li> <li>Sidewalk</li> <li>Basin</li> <li>Storm Sewer</li> <li>Sewer Manhole</li> <li>Sanitary Sewer (sewer)</li> <li>Sanitary Sewer (flow line)</li> <li>Gas Line</li> <li>Electric Line</li> <li>Telephone/Telegraph</li> <li>TV Cable</li> <li>Water Line</li> <li>Tree / Exist. Tree To Be Removed</li> <li>Property Line</li> </ul> </td> <td style="vertical-align: top;"> <p><b>Proposed</b></p> <ul style="list-style-type: none"> <li>Curb Cut Ramp</li> <li>Coping</li> <li>Alley Crossing/Driveway</li> <li>Fire Hydrant</li> <li>Edge of Pavement</li> <li>Fence</li> <li>Cornerstone</li> <li>Property Pin</li> <li>Utility Pole</li> <li>Proposed Sewer</li> <li>Manhole</li> <li>Basin</li> <li>Curb &amp; Gutter</li> <li>Asphalt</li> </ul> </td> <td style="vertical-align: top;"> <p><b>Proposed Conc. Sidewalk</b></p> <ul style="list-style-type: none"> <li>Brick Sidewalk</li> <li>Castings: Water Valve</li> <li>Water Meter</li> <li>Gas Drip</li> <li>Gas Valve</li> <li>Telephone Manhole</li> <li>Electric Manhole</li> <li>Proposed Curb Cut Ramp</li> <li>Decorative Light</li> <li>Conduit</li> <li>Conduit (Conc. Encased)</li> <li>Retaining Wall</li> </ul> </td> </tr> </table>	<p><b>Existing</b></p> <ul style="list-style-type: none"> <li>Curb &amp; Gutter</li> <li>Sidewalk</li> <li>Basin</li> <li>Storm Sewer</li> <li>Sewer Manhole</li> <li>Sanitary Sewer (sewer)</li> <li>Sanitary Sewer (flow line)</li> <li>Gas Line</li> <li>Electric Line</li> <li>Telephone/Telegraph</li> <li>TV Cable</li> <li>Water Line</li> <li>Tree / Exist. Tree To Be Removed</li> <li>Property Line</li> </ul>	<p><b>Proposed</b></p> <ul style="list-style-type: none"> <li>Curb Cut Ramp</li> <li>Coping</li> <li>Alley Crossing/Driveway</li> <li>Fire Hydrant</li> <li>Edge of Pavement</li> <li>Fence</li> <li>Cornerstone</li> <li>Property Pin</li> <li>Utility Pole</li> <li>Proposed Sewer</li> <li>Manhole</li> <li>Basin</li> <li>Curb &amp; Gutter</li> <li>Asphalt</li> </ul>	<p><b>Proposed Conc. Sidewalk</b></p> <ul style="list-style-type: none"> <li>Brick Sidewalk</li> <li>Castings: Water Valve</li> <li>Water Meter</li> <li>Gas Drip</li> <li>Gas Valve</li> <li>Telephone Manhole</li> <li>Electric Manhole</li> <li>Proposed Curb Cut Ramp</li> <li>Decorative Light</li> <li>Conduit</li> <li>Conduit (Conc. Encased)</li> <li>Retaining Wall</li> </ul>	<div style="text-align: center;"> <p><b>RICHMOND VIRGINIA</b></p> </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Technical</th> <th colspan="2">Administrative</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	Technical		Administrative																																						<div style="text-align: center;"> <p><b>DEPARTMENT OF PUBLIC WORKS</b></p> <p><b>RICHMOND, VIRGINIA</b></p> </div>	<p style="text-align: center;"><b>DEEPWATER TERMINAL ROAD EXTENSION</b></p> <p style="text-align: center; font-size: 2em;"><b>DRAINAGE DESCRIPTIONS</b></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">DESIGN BY: M. FLEMING</td> <td style="font-size: 8px;">REVIEWED BY:</td> <td style="font-size: 8px;">FIELD NOTES: FB-XX, pp XX-XX</td> <td style="font-size: 8px;">SCALE: HORIZ. N/A</td> <td style="font-size: 8px;">DATE: 06/19/2015</td> <td style="font-size: 8px;">SHEET: 09</td> <td style="font-size: 8px;">DRAWING NO.: 0-28602</td> </tr> <tr> <td style="font-size: 8px;">DRAWN BY: M. FLEMING</td> <td> </td> <td> </td> <td style="font-size: 8px;">VERT. -</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td style="font-size: 8px;">CHECKED BY: C. KIEFER</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-XX, pp XX-XX	SCALE: HORIZ. N/A	DATE: 06/19/2015	SHEET: 09	DRAWING NO.: 0-28602	DRAWN BY: M. FLEMING			VERT. -				CHECKED BY: C. KIEFER						
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SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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**NOTES**

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

Existing Curb	
• Curb & Gutter	=====
• Sidewalk	=====
• Basin	=====
• Storm Sewer	=====
• Sewer Manhole	=====
• Sanitary Sewer (small)	SAN-=====
• Sanitary Sewer (large)	FM-=====
• Gas Line	UGP-=====
• Electric Line	UGT-=====
• Telephone/Telegraph	UCATV-=====
• TV Cable	=====
• Water Line	=====
• Tree / Exist. Tree To Be Removed	⊗ / ⊗
• Property Line	⊗

-LEGEND-	
• Existing Curb Cut Ramp	=====
• Coping	=====
• Alley Crossing/Driveway	=====
• Fire Hydrant	=====
• Edge of Pavement	=====
• Fence	=====
• Cornerstone	=====
• Property Pin	=====
• Utility Pole	=====
• Proposed Sewer	=====
• Manhole	=====
• Basin	=====
• Curb & Gutter	=====
• Asphalt	=====

• Proposed Conc. Sidewalk	=====
• Brick Sidewalk	=====
• Castings: Water Valve	=====
• Water Meter	=====
• Gas Drip	=====
• Gas Valve	=====
• Telephone Manhole	=====
• Electric Manhole	=====
• Proposed Curb Cut Ramp	=====
• Decorative Light	=====
• Conduit	=====
• Conduit (Conc. Encased)	=====
• Retaining Wall	=====



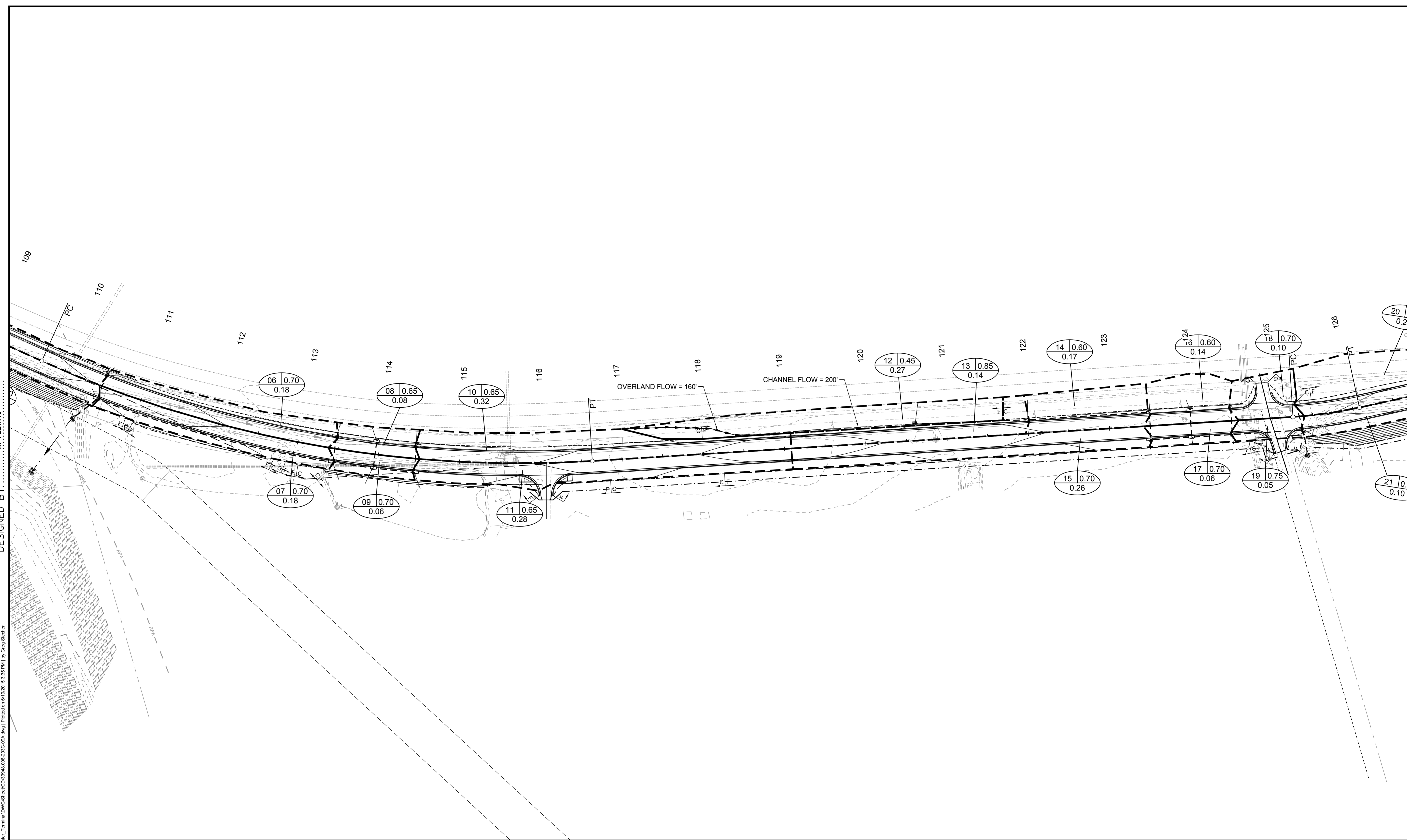
Technical	Administrative
Surveys Superintendent	
Project Engineer	Capital Project Administrator
Maintenance Engineer	Deputy Director for Transportation / Public Works
City Traffic Engineer	Director of Public Works

DEPARTMENT OF PUBLIC WORKS  
 RICHMOND, VIRGINIA

DEEPWATER TERMINAL ROAD EXTENSION  
**DRAINAGE AREA MAP**

DESIGN BY: M. FLEMING	REVIEWED BY:	FIELD NOTES: FB-XX, pp XX-XX	SCALE: HORIZ. 1" = 50'	DATE: 06/19/2015	SHEET: 09A	DRAWING NO.: 0-28602
DRAWN BY: M. FLEMING	CHECKED BY: C. KIEFER		VERT. -			

SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING



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**NOTES**

1. Lot dimensions in parentheses are from deed.
2. Property owners correct as of April, 2014
3. Ordinance Number N/A
4. Adopted N/A
5. Accepted N/A

Existing Curb	
• Curb & Gutter	=====
• Sidewalk	=====
• Basin	=====
• Storm Sewer	=====
• Sewer Manhole	=====
• Sanitary Sewer (small)	=====
• Sanitary Sewer (large)	=====
• Gas Line	=====
• Electric Line	=====
• Telephone/Telegaph	=====
• TV Cable	=====
• Water Line	=====
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• Property Line	=====

--LEGEND--	
• Existing Curb Cut Ramp	=====
• Coping	=====
• Alley Crossing/Driveway	=====
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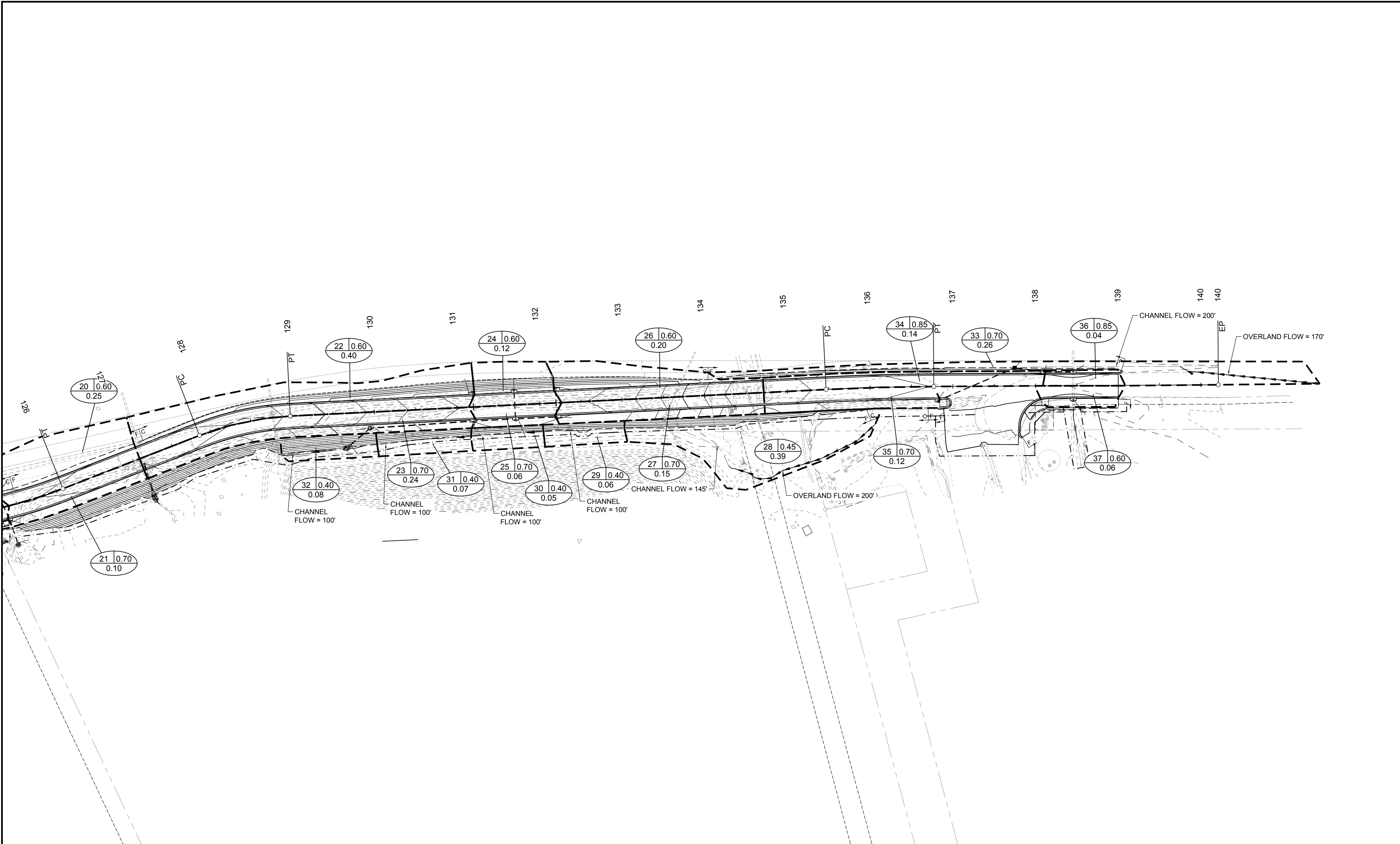
DEPARTMENT OF PUBLIC WORKS  
 RICHMOND, VIRGINIA

DEEPWATER TERMINAL ROAD EXTENSION  
**DRAINAGE AREA MAP**

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DRAWN BY: M. FLEMING	CHECKED BY: C. KIEFER		VERT. -			

SURVEYED BY: TIMMONS GROUP  
 SUPERVISED BY: C. KIEFER  
 DESIGNED BY: M. FLEMING

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DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

DEEPWATER TERMINAL ROAD EXTENSION  
DRAINAGE AREA MAP

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