CITY OF RICHMOND FIRE STATION 21

2505 RICHMOND HIGHWAY

BROAD ROCK DISTRICT

CITY OF RICHMOND, VIRGINIA

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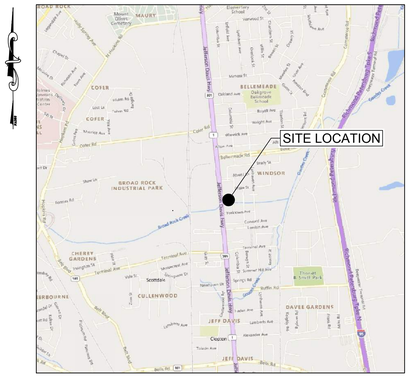

VICINITY MAP

SCALE: 1" = 2,000'

PROJECT SUMMARY

ADDRESSES:	2505 RICHMOND HIGHWAY
PARCEL ID's:	S0080275005
ZONING:	B-3 - Business (General Business)
SETBACK REQUIREMENTS:	FRONT YARD - 0 FT SIDE YARD - 0 FT REAR YARD - 20 FT [1]BASED ON CITY OF RICHMOND ZONING ORDINANCE ***Sec. 30-438.3***
DISTRICT:	BROAD ROCK
EXISTING USE:	FIRE STATION
EXISTING CONDITIONS:	CITY OF RICHMOND UTILITY MAPS; CITY OF RICHMOND GIS; ALTA/NSPS SURVEY BY TIMMONS GROUPED DATED MAY 13, 2015
DATUM:	HORIZONTAL DATUM: (NAD83) VIRGINIA STATE PLANE COORDINATE SYSTEM SOUTHZONE (1983)
PROPOSED USE:	FIRE STATION
COMBINED SITE / LOT AREA:	**0.505** ACRES (21,990 SQ.FT.)
AREA TO BE DISTURBED:	**0.505** ACRES
BUILDING HEIGHT | TOTAL GROSS FLOOR AREA:	3 FLOORS | TOTAL GROSS FLOOR AREA = ±17,897 SQ.FT.
USABLE OPEN SPACE:	USABLE OPEN SPACE RATIO = [USABLE OPEN SPACE] / [DWELLING USE AREA] [5] A USABLE OPEN SPACE RATIO OF NOT LESS THAN 0.25 SHALL BE PROVIDED USABLE OPEN SPACE RATIO = [4,437 SQ.FT.] / [10,836 SQ.FT.] = **0.41** [5] BASED ON CITY OF RICHMOND ZONING ORDINANCE ***Sec. 30-438.1:1***

LANDSCAPE
TIMMONS GROUP
1001 Boulders Pkwy, Suite 300
Richmond, VA 23225
CONTACT: Scott Wiley, PLA, ASLA
TELEPHONE: 804.200.6424
EMAIL: scott.wiley@timmons.com

ARCHITECT
RRMM ARCHITECTS
1317 Executive Blvd, Suite 200
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CIVIL ENGINEER
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1001 Boulders Pkwy, Suite 300
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UDC FINAL REVIEW SUBMITTAL

NOT FOR CONSTRUCTION

PLAN SET DATE - 07/19/2023

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YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

DATE

DATE: *07/19/2023*

DRAWN BY: *K. UNDERBERG*

DESIGNED BY: *C. NELSON*

CHECKED BY: *A. WEHUNT*

SCALE: *1" = 2000'*

City of Richmond: New Fire Station #21

TIMMONS GROUP

CITY OF RICHMOND FIRE STATION 21

BROAD ROCK DISTRICT - CITY OF RICHMOND - VIRGINIA

COVER SHEET

JOB NO. *60040*

SHEET NO. *C0.00*

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LEGEND

- = Deciduous Tree
- = Drainage Grate Inlet
- = Drainage Manhole
- = Electric Box
- = Electric Guy Wire
- = Electric Light Pole
- = Natural Gas Meter
- = Natural Gas Valve
- = Sanitary Sewer Manhole
- = Sign
- = Utility Pole
- = Water Fire Hydrant
- = Water Meter
- = Water Valve
- = Water Vault
- = Monitoring Well
- = Telephone Manhole
- = Roof Drain / Downspout
- = Bollard
- = Telephone Pedestal
- = Electric Meter
- = Flag Pole
- = Cleanout
- = Utility Manhole

— G — = Underground Natural Gas Line
— W — = Underground Water Line
— UGT — = Underground Communication Line
— UGP — = Underground Power Line
— UTL — = Underground Unknown Utility Line or Signal

EOI = End of Information For Underground Utility Line - Signal Ended At This Location.

OWNER INFORMATION
CITY OF RICHMOND GENERAL SERVICES
PARCEL ID: S0080275005
D.B. 89B, PG. 354
#2505 JEFFERSON DAVIS HWY.

TOPOGRAPHIC SURVEY NOTES:

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF M. DWAYNE DUNEVANT, LS FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE ORIGINAL DATA WAS OBTAINED ON THE FOLLOWING DATES: 05-13-2015, 05-18-2015 AND 05-20-2015. THIS PLAT, MAP AND DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

HORIZONTAL DATUM: NAD83 (VA South)

VERTICAL DATUM: NAVD88

DATUM ESTABLISHED BY RTK ON 05-13-2015 (CORRECTIONS FROM RTCM-REF 0577)

Underground Utility Location Notes:

1. There May Be Abandoned Underground Utility Lines In Project Limits.

2. All Sizes and Types of Underground Utility Lines Are Taken From Reference Mapping Or Pre-Existing Miss Utility Markings.

Underground Utility Owners :

Natural Gas - City Of Richmond

Waterline - City Of Richmond

Communication - AT&T
Verizon Communications

Power - Dominion Power

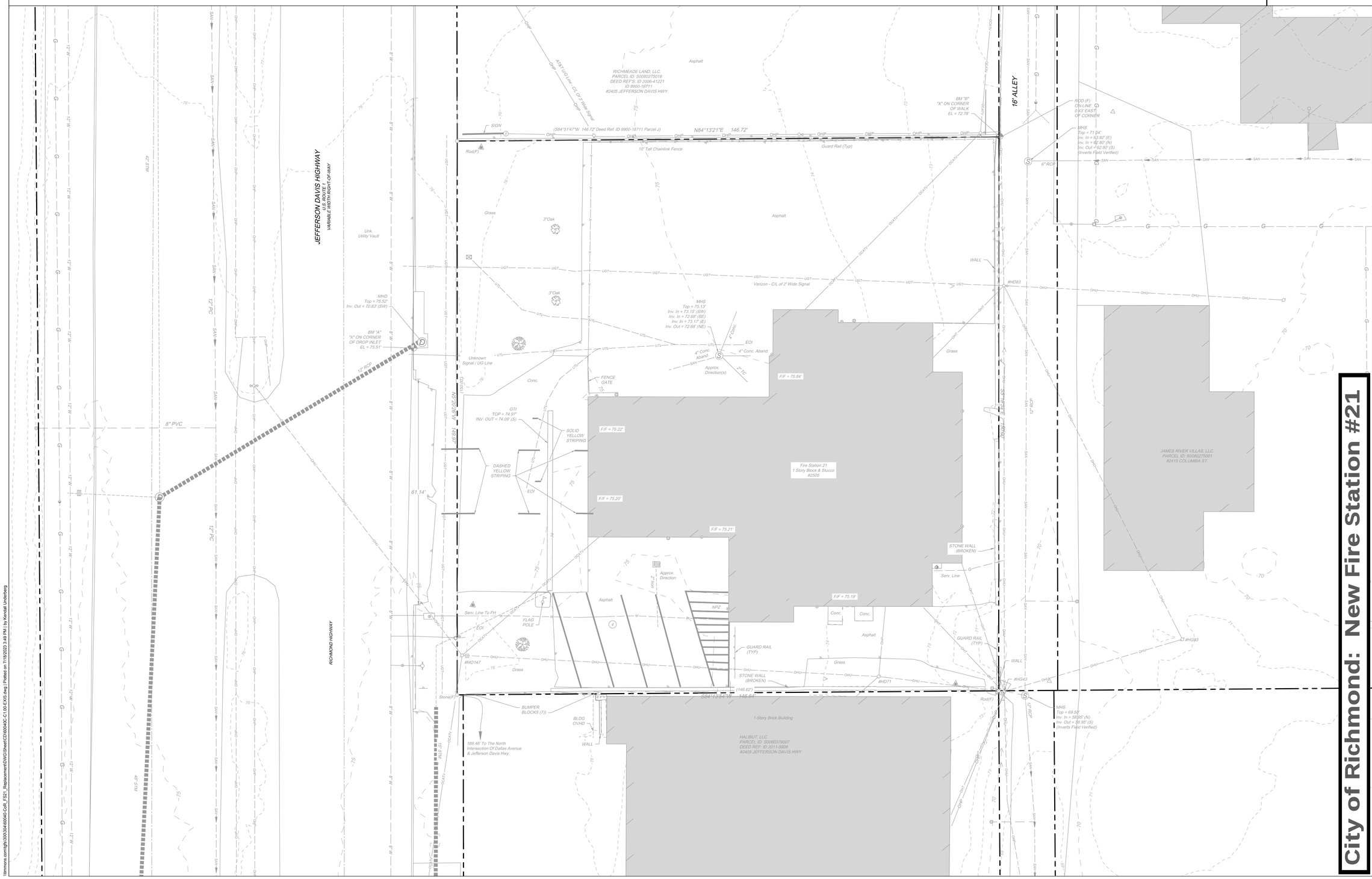
BOUNDARY NOTES:

(184.05' Plat) = Denotes Bearings And Distances Of Property Lines From Recorded Deeds and Plats.

No Title Report Was Provided For This Survey. Easements May Exist That Are Not Shown.

NAD 83

SCALE 1"=10'
0 10' 20'



City of Richmond: New Fire Station #21

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REVISION DESCRIPTION	DATE

DATE: 07/19/2023
DRAWN BY: K. UNDERBERG
DESIGNED BY: C. NELSON
CHECKED BY: A. WEHUNT
SCALE: 1" = 10'

TIMMONS GROUP

CITY OF RICHMOND FIRE STATION 21
BROAD ROCK DISTRICT - CITY OF RICHMOND - VIRGINIA
EXISTING CONDITIONS PLAN

JOB NO. 60040
SHEET NO. C1.00

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DEMOLITION LEGEND

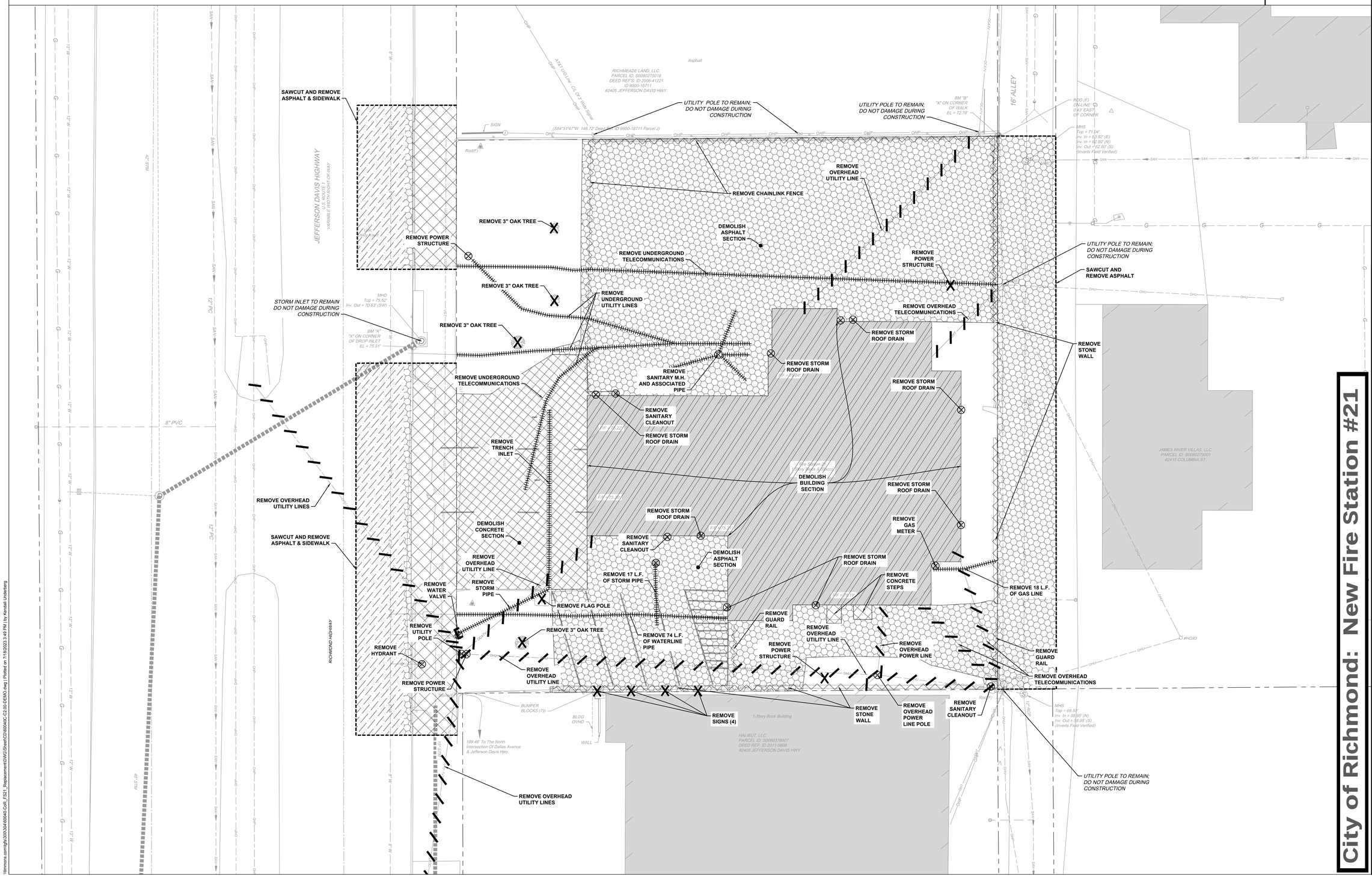
- REMOVE OVERHEAD UTILITY LINES
- DEMOLISH UTILITY STRUCTURES
- DEMOLISH SITE FEATURE
- CAP UTILITY LINE
- SAW-CUT PAVEMENT / CONCRETE
- DEMOLISH WALL / FENCE
- DEMOLISH UNDERGROUND UTILITY LINE / PIPE
- DEMOLISH CONCRETE SECTION
- DEMOLISH BUILDING SECTION
- DEMOLISH ASPHALT SECTION

DEMOLITION PLAN NOTES:

1. A PRE-CONSTRUCTION MEETING IS MANDATORY BEFORE ANY WORK IS DONE AT THE SITE. CONTACT THE CITY OF RICHMOND ENGINEER AND INSPECTOR, AS WELL AS THE PROJECT ENGINEER. COORDINATE WITH THE EROSION AND SEDIMENT CONTROL PLAN AND ITS RESPECTIVE SEQUENCING.
2. THE CONTRACTOR MUST VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. NOTIFY "MISS UTILITY" AT 1-800-552-7001 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES. ALSO NOTIFY THE ENGINEER IF THERE IS A CONFLICT.
3. CONTRACTOR TO COORDINATE WORK AROUND EXISTING UTILITIES WITH THE CORRESPONDING UTILITY COMPANIES.
4. CONTRACTOR TO COORDINATE OVERHEAD UTILITY POLE AND LINE RELOCATIONS WITH THE APPROPRIATE UTILITY PROVIDER.
5. ANY EXISTING GAS, SANITARY SEWER, AND WATER LATERALS TO BE ABANDONED SHALL BE DONE IN ACCORDANCE WITH CITY'S STANDARD SPECIFICATIONS.
6. COORDINATE WITH THE EROSION AND SEDIMENT CONTROL PLAN FOR INSTALLATION OF STONE FOR CONSTRUCTION ACCESS AND STAGING AREAS, SILT FENCING, TREE PROTECTION, AND INLET PROTECTION AS SHOWN ON THE E&S PLAN.
7. NO LAND DISTURBANCE OUTSIDE THE LIMITS OF CONSTRUCTION IS TO TAKE PLACE UNTIL AUTHORIZED BY THE CITY OF RICHMOND INSPECTOR .
8. EXISTING FEATURES TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR MUST BE RESTORED / REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
9. IF EXISTING GAS AND WATER METERS ARE DISCOVERED THAT ARE NOT TO BE RE-USED, CONTACT DPU TO COORDINATE THE ABANDONMENT OF THE METER AND / OR VAULT.
10. EXISTING HYDRANTS SCHEDULED FOR REMOVAL ARE TO BE SALVAGED AND RETURNED TO CITY DPU. COORDINATE WITH CITY DPU.
11. IF EXISTING SEWER LATERALS ARE DISCOVERED WHICH ARE NOT TO BE RE-USED, THE LATERAL SHALL BE PLUGGED AT BOTH ENDS USING A TRENCHLESS METHOD AND THEN FILLED.
12. IF EXISTING GAS AND WATER SERVICE LINES ARE DISCOVERED WHICH ARE NOT TO BE RE-USED, THE PIPES SHALL BE PLUGGED AT BOTH ENDS USING A TRENCHLESS METHOD AND THEN FILLED. COORDINATE WITH CITY DPU.
13. CONTRACTOR SHALL TAKE SPECIAL CARE WHEN WORKING AROUND SEWERS THAT ARE TO REMAIN TO AVOID DAMAGING THE UTILITY.
14. WHEN CURBING IS DEMOLISHED, THE EXISTING ASPHALT WITHIN THE WHOLE ADJACENT STREET LANE SHALL BE REMOVED AND REPLACED.
15. A WISP/SEWER PERMIT WILL BE REQUIRED FOR SEWER LATERAL ABANDONMENT TO ENSURE DPU INSPECTION.
16. IF ANY UTILITIES ARE DISCOVERED THAT ARE NOT SHOWN ON THE DRAWINGS, CONFIRM THE UTILITY IS NOT ACTIVE PRIOR TO ABANDONMENT / REMOVAL. NOTIFY THE ENGINEER IF THERE IS A CONFLICT.

NAD 83

SCALE 1"=10'
0 10' 20'



City of Richmond: New Fire Station #21

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PLAN SET DATE - 07/19/2023

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REVISION DESCRIPTION	DATE

DATE	07/19/2023
DRAWN BY	K. UNDERBERG
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CHECKED BY	A. WEHUNT
SCALE	1" = 10'

TIMMONS GROUP

CITY OF RICHMOND FIRE STATION 21

BROAD ROCK DISTRICT - CITY OF RICHMOND - VIRGINIA

DEMOLITION PLAN

JOB NO.	SHEET NO.
60040	C2.00

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GENERAL SITE NOTES:

1. REFER TO SITE NOTES AND DETAILS DRAWING C4.10 FOR SITE DETAILS.
2. DIMENSIONS ARE TO FACE OF CURB, UNLESS OTHERWISE NOTED ON PLANS. SIDEWALKS DIRECTLY ADJACENT TO CURB AND GUTTER ARE TO BE MEASURED FROM BACK OF CURB.
3. RESTORE ANY DAMAGED PROPERTY NOT INCLUDED IN DEMOLITION OR REMOVAL TO PRECONSTRUCTION CONDITION OR BETTER.
4. REFER TO ARCHITECTURAL DRAWINGS FOR DESIGN AND DETAILS OF PATIOS AND CONCRETE SIDEWALKS COVERED BY ARCHITECTURAL OVERHANGS.
5. ALL PAVEMENT SAW CUTS ARE TO BE IN NEAT, STRAIGHT LINES. SAW CUTS ARE REQUIRED AT ANY LOCATION WHERE NEW PAVEMENT ADJOINS EXISTING PAVEMENT.
6. ADA AREAS SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION.
7. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER OR GREATER QUALITY OF WORK.
8. ALL BUILDING DIMENSIONS SHOWN ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR ACTUAL BUILDING DIMENSIONS.
9. SIGNAGE IS SHOWN FOR REFERENCE ONLY. ANY SIGN IN EXCESS OF EIGHT (8) SQUARE FEET REQUIRES A PERMIT. PERMIT MUST BE OBTAINED THROUGH BUILDING INSPECTION DEPARTMENT. SIGNAGE CONTINGENT UPON APPROVAL THROUGH SIGN PERMIT REVIEW PROCESS.
10. ALL VDOT STD CG-2 CURB SHALL HAVE AN EXTRUDED FOOTER.
11. ALL CURB SHOULD BE DOWELED TO ADJACENT CONCRETE SLAB AND CONCRETE TRAVELWAY, AS APPLICABLE.

LAYOUT HATCH LEGEND

- HEAVY DUTY CONCRETE SECTION
- CONCRETE SECTION
- EXTENTS OF BUILDING **AT GRADE**
- EXTENTS OF BUILDING **OVERHEAD**
- MILL & OVERLAY SECTION
- LIGHT DUTY ASPHALT PAVEMENT SECTION
- HEAVY DUTY ASPHALT PAVEMENT SECTION

NAD 83

SCALE 1"=10'

0 10' 20'

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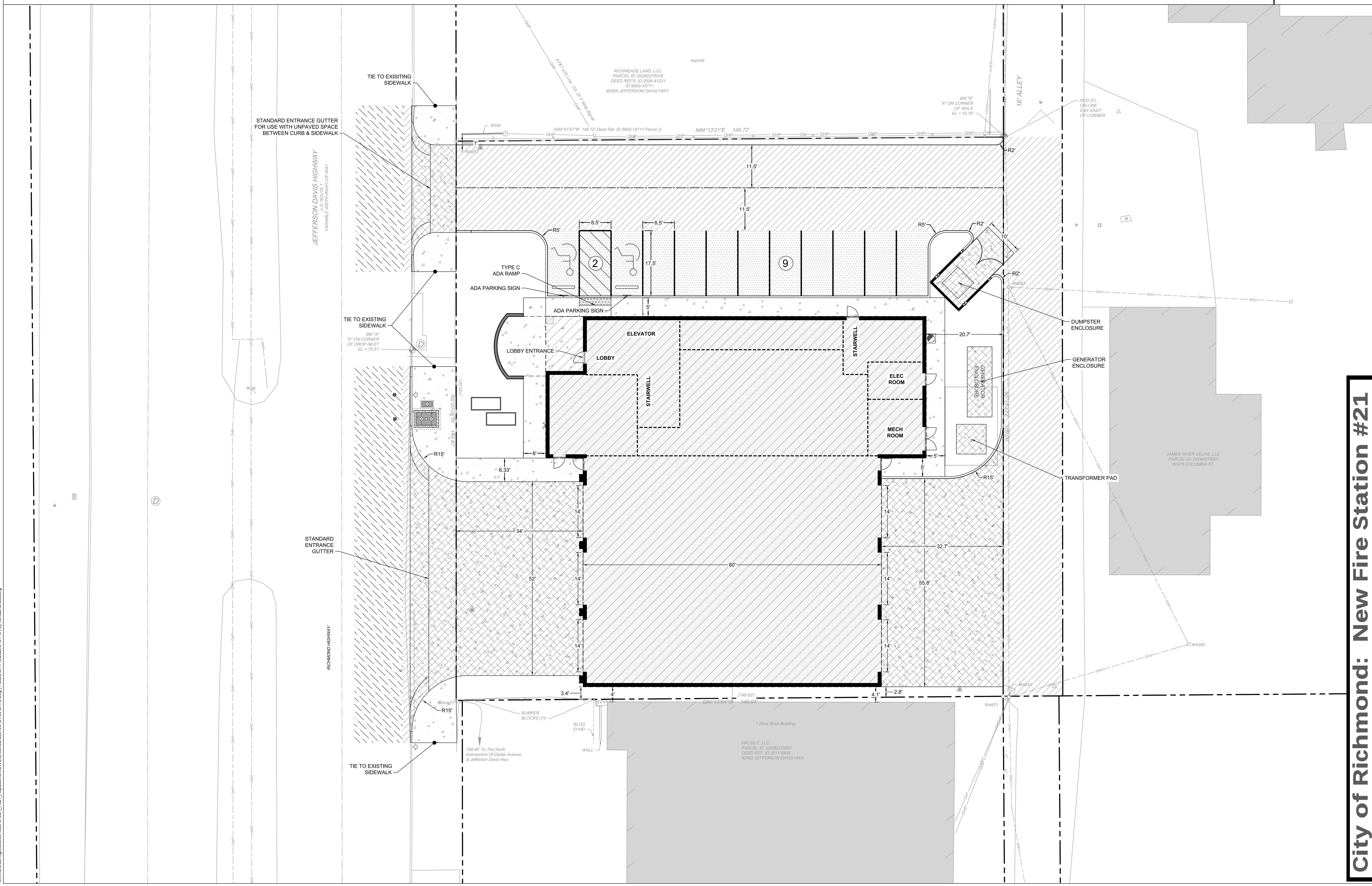

DATE

07/19/2023

DRAWN BY

K. UNDERBERG

DESIGNED BY

C. NELSON

CHECKED BY

A. WEHUNT

SCALE

1" = 10'

REVISION DESCRIPTION

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City of Richmond: New Fire Station #21

CITY OF RICHMOND FIRE STATION 21

BROAD ROCK DISTRICT - CITY OF RICHMOND - VIRGINIA

SITE LAYOUT PLAN

JOB NO.

60040

SHEET NO.

C4.00

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STANDARD REQUIREMENTS FOR REPAVING UTILITY REPAIRS

1. Street cuts in City right away are required to follow the following steps to repair all patches in accordance with the following requirements and as shown in attachment PAV-2, PAV-2-A, PAV- 2- B, and PAV-2-C for the following utility cuts: water/wastewater/sewer/gas/communication &electrical trenches.

a. All sides shall be saw cut to neat straight line and an approved tack coat shall be applied at a rate of 0.1 gallon per square yard before placing the plant mix.

b. PAV-2 requirements are as follows (See Attached)

- Install PB-1 Pipe Bedding No 25, 26, or 57 stone per VDOT standard or an approved equal.
- Backfill remaining trench with Type I, Size 21-A or 21-B stone compacted to 95% theoretical maximum density (Standard Proctor).
- Eight (8") inches BM-25 minimum or install per typical road section if greater, with a minimum of a one (1) foot bench on each side of trench. The 21-A stone sub-base shall be installed from the bottom of the repair to within 10" of final restoration. *If an existing road surface has less than two (2") inches with no sub-base, the standard for restoring the roadway shall apply to all city streets.*
- For Transverse Cuts, **for Arterial Street** mill two (2) inches in depth from center line of trench twenty five (25) feet in both directions and overlay area with two (2) inches of SM-9.5D type asphalt to match existing cross section. For **Local and Collector Streets** mill a total of fifteen (15') feet with the trench located in the middle of the milled area.
- *The 25' in both directions of the trench for **Arterial Streets** and the fifteen (15') feet for **Local and Collector Streets** allows the City to create a smooth transition along the roadway. The 5000 ADT (Average Daily Traffic) is a VDOT standard for their roadways and 25% of the City of Richmond roadways meet these VDOT standards. This requirement shall apply to all of City of Richmond roadways to insure a smooth riding surface.*
- In the event of multiple cuts and the distance between milled areas being twenty (20') feet or less, this area is to be included with restoration of the utility repair.
- For Longitudinal Cuts, mill two (2) inches in depth from edge of pavement or edge of travel lane to center line of roadway and overlay with two (2) inches of SM-9.5D for the entire length of cut. *(This is referencing the travel lane that the cut was made in)*
- When Longitudinal cuts are within two (2) feet of center line of roadway, entire roadway will be milled two (2) inches in depth from edge of pavement to edge of pavement or from edge of travel lane to edge of travel lane for the entire length of cut and overlay with two (2) inches of SM- 9.5D. *(This is referencing the travel lane the cut was made in.)*
- *In the event when the 2" milling is performed to create the smooth transition on the existing roadway and the roadway has insufficient asphalt depth. The segment with insufficient asphalt depth will be milled a total of (4") four inches and install (2.5") two and half inches of BM-25 asphalt and (1 ½") one and half inches of SM-9.5D asphalt. This would apply to all insufficient areas including all transverse cuts and longitudinal cuts*
- *Attachment 1A : Shows in detail what is to be expected for the repair of Transverse Utility Cuts and Longitudinal Utility Cuts*

All asphalt repairs will be checked with a twelve (12) foot straight edge to assure a smooth transition from existing pavement to new pavement.

c. All backfilling, compacting, and inspection reporting shall comply with the SOP labeled Backfill and Compaction of Utility Trenches within the Public Right of Way.

d. The responsible party for any street cuts in City right away will be responsible for any depression greater than (1 1/4") that occurs within the one (1) to three (3) year of completion of patching. Correction shall consist of milling and replacing two (2") inches of surface course mix (SM) for the entire area of repair. In the event any depression is greater than one and half inches, the failure will be evaluated by the Paving Engineer for the proper repair.

(The City streets that have documented compaction testing performed would have the one-year warranty period requirement, and the City streets without documented compaction test would require a three-year warranty period)

If the depression occurs, the entire area will have to be repaired and repaved to provide a smooth riding surface.

e. Replacement of all asphalt shall be rolled where possible, with a vibratory roller having a manufacturer's rating of five (5) tons and rolled until the aggregate is keyed into the bitumen. Where rolling is not possible, a mechanical tamp will be used. If the application of the bituminous layer is delayed for adverse weather conditions, the contractor shall provide and maintain a base course that is acceptable to the City of Richmond, Department of Public Works, until such time as the appropriate pavement patch can be applied and completion of the installation of the gas, water, sewer, electric, and communication lines. Contractor shall restore pavement in the manner prescribed within 10 calendar days, weather permitting.

f. When final two (2) inch layer of SM-9.5D is to be placed on roadway which has been milled, the contractor shall use a bituminous paver with electronically controlled screed to insure a smooth riding surface. Once final surface is installed, the grade will be checked with a twelve (12) foot straight edge on the finished paved surface. When grade is out of tolerance one quarter (1/4) of an inch or more, the final surface will be corrected to meet Department of Public Works' Paving and Restoration Standards for all underground utility cuts.

g. Final compaction of the top two (2) inches of SM-9.5 D will be performed using a five (5) ton vibratory roller at a minimum.

h. All damages to existing road(s) caused by the responsible party will be restored to the satisfaction of the City of Richmond's Paving Engineer.

i. Permitting shall notify the City of Richmond, DPW Inspector, a minimum of 72 hours prior to open cutting any streets in the City of Richmond. *(This does not apply to emergency repairs. Department of Public Works needs to be notified within 24 hours of the location of all emergency utility repairs)*

j. At no time shall the contractor park equipment to protect the excavation. Protection of an excavation is either by backfilling the hole or the use of steel plates.

k. All Excavations or Open Cuts shall comply with OSHA Technical Manual, Chapter 2, Titled Excavations: Hazard Recognition in Trenching and Shoring.

2. Cuts for manhole adjustments:

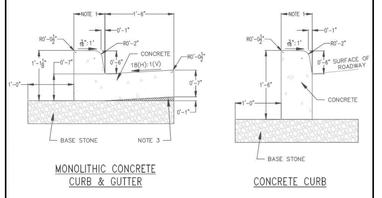
a. Minimum cut for Manhole Casting adjustment will be a five (5) foot by five (5) foot cut and adjust manhole to +/- one quarter (1/4) inch of final pavement grade.

- Eight (6) inches BM-25 minimum or install per typical road section if greater, with a minimum of a one (1) foot bench on each side of trench with two (2) inches of SM material to meet existing final grade. Once final course is installed, grade will be checked with a twelve foot straight edge for smoothness. *(The 1 foot bench is referencing milling around the street cut one (1') foot on the outside edge of the street cut to prevent the infiltration of water at the joint)*

3. Cuts for valve boxes

a. Minimum cut for Valve Box adjustment will be a three (3) foot by three (3) foot cut and adjust valve box to +/- one quarter (1/4) inch of final pavement grade.

- Six (6) inches BM-25 minimum or install per typical road section if greater, with a minimum of a one (1) foot bench on each side of trench with two (2)inches of SM material to meet existing final grade. Once final course is installed, grade will be checked with a twelve foot straight edge for smoothness.

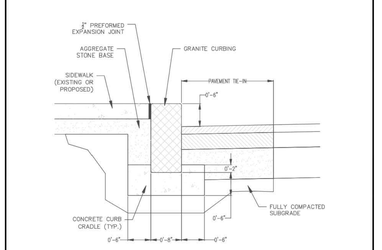


MONOLITHIC CONCRETE CURB & GUTTER

CONCRETE CURB

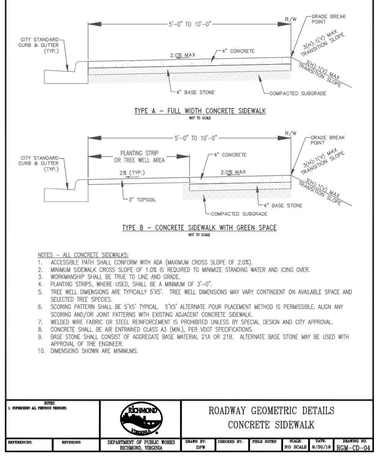
NOTES:
1. CURB THICKNESS SHALL BE 8" IN COMMERCIAL, CENTRAL BUSINESS DISTRICT, INDUSTRIAL, THE FAN, HIGH DENSITY AND MULTI-FAMILY AREAS. CURB THICKNESS SHALL BE 6" IN SINGLE-FAMILY RESIDENTIAL AREAS.
2. BASE STONE SHALL MATCH ROADWAY PAVEMENT SECTION OR BE 6" COMPACTED THICKNESS, WHICHEVER IS THICKER. BASE STONE SHALL CONSIST OF AGGREGATE BASE MATERIAL 21A OR 21B.
3. THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUB-BASE COURSE, PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.
4. CONCRETE SHALL BE CLASS A3 (MIN.).

NOTES: 1. REFERENCED ALL PREVIOUS VERSIONS.		ROADWAY GEOMETRIC DETAILS MONOLITHIC CURB AND CURB & GUTTER					
REFERENCES:	REVISIONS:	DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA	DRAWN BY: DPW	CHECKED BY:	FIELD NOTES:	SCALE: NO SCALE	DATE: 8/30/18	DRAWING NO.: RGM-CD-01



NOTES:
1. BRACE AND SUPPORT GRANITE CURB ON FINAL GRADE PRIOR TO POURING OF GRANITE CURB CRADLE.
2. GRANITE CURB REVEAL TO BE 6" OR TO MATCH ADJACENT EXISTING REVEAL.
3. GRANITE CURB WIDTH MAY VARY. GRANITE CURB TO MATCH ADJACENT EXISTING GRANITE CURB TO THE EXTENT PRACTICABLE. CONTRACTOR SHALL PROVIDE A SAMPLE FOR CITY REVIEW AND APPROVAL PRIOR TO INSTALLATION.
4. CONCRETE CURB CRADLE SHALL NOT EXCEED 2" UP THE SIDES OF THE GRANITE CURB.
5. CONCRETE SHALL CLASS A3 (MIN.), PER VDOT SPECIFICATIONS.
6. BASE STONE SHALL CONSIST OF AGGREGATE BASE MATERIAL 21A OR 21B. ALTERNATE BASE STONE MAY BE USED WITH APPROVAL OF THE ENGINEER.
7. PAVEMENT TIE-IN SHALL TO MEET MINIMUM CITY STANDARDS OR EXISTING PAVEMENT SECTION.

NOTES: 1. REFERENCED ALL PREVIOUS VERSIONS.		ROADWAY GEOMETRIC DETAILS GRANITE CURB DETAIL					
REFERENCES:	REVISIONS:	DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA	DRAWN BY: DPW	CHECKED BY:	FIELD NOTES:	SCALE: NO SCALE	DATE: 8/30/18	DRAWING NO.: RGM-CD-07

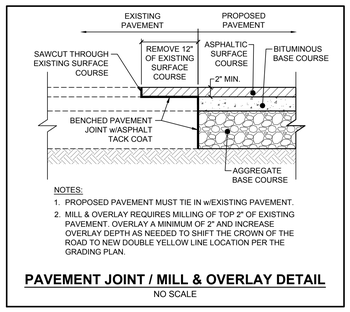


TYPE A – FULL WIDTH CONCRETE SIDEWALK
NOT TO SCALE

TYPE B – CONCRETE SIDEWALK WITH GREEN SPACE
NOT TO SCALE

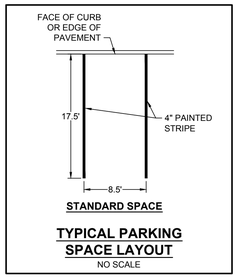
NOTES – ALL CONCRETE SIDEWALKS:
1. ACCESSIBLE PATH SHALL CONFORM WITH ADA (MAXIMUM CROSS SLOPE OF 2.0%).
2. MINIMUM SIDEWALK CROSS SLOPE OF 1.0% IS REQUIRED TO MINIMIZE STANDING WATER AND ICING OVER.
3. WORKMANSHIP SHALL BE TRUE TO LINE AND GRADE.
4. PLANTING STRIPS, WHERE USED, SHALL BE A MINIMUM OF 3'-0".
5. TREE WELL DIMENSIONS ARE TYPICALLY 5'X5'. TREE WELL DIMENSIONS MAY VARY CONTINGENT ON AVAILABLE SPACE AND SELECTED TREE SPECIES.
6. SCORING PATTERN SHALL BE 5'X5' TYPICAL. 5'X5' ALTERNATE POUR PLACEMENT METHOD IS PERMISSIBLE, ALIGN ANY SCORING AND/OR JOINT PATTERNS WITH EXISTING ADJACENT CONCRETE SIDEWALK.
7. WELDED WIRE FABRIC OR STEEL REINFORCEMENT IS PROHIBITED UNLESS BY SPECIAL DESIGN AND CITY APPROVAL.
8. CONCRETE SHALL BE AIR ENTRAINED CLASS A3 (MIN.), PER VDOT SPECIFICATIONS.
9. BASE STONE SHALL CONSIST OF AGGREGATE BASE MATERIAL 21A OR 21B. ALTERNATE BASE STONE MAY BE USED WITH APPROVAL OF THE ENGINEER.
10. DIMENSIONS SHOWN ARE MINIMUMS.

NOTES: 1. REFERENCED ALL PREVIOUS VERSIONS.		ROADWAY GEOMETRIC DETAILS CONCRETE SIDEWALK					
REFERENCES:	REVISIONS:	DEPARTMENT OF PUBLIC WORKS RICHMOND, VIRGINIA	DRAWN BY: DPW	CHECKED BY:	FIELD NOTES:	SCALE: NO SCALE	DATE: 8/30/18	DRAWING NO.: RGM-CD-04



NOTES:
1. PROPOSED PAVEMENT MUST TIE IN w/EXISTING PAVEMENT.
2. MILL & OVERLAY REQUIRES MILLING OF TOP 2" OF EXISTING PAVEMENT. OVERLAY A MINIMUM OF 2" AND INCREASE OVERLAY DEPTH AS NEEDED TO SHIFT THE CROWN OF THE ROAD TO NEW DOUBLE YELLOW LINE LOCATION PER THE GRADING PLAN.

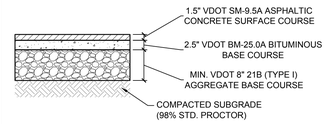
PAVEMENT JOINT / MILL & OVERLAY DETAIL
NO SCALE



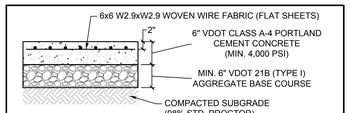
STANDARD SPACE

TYPICAL PARKING SPACE LAYOUT
NO SCALE

PAVEMENT SECTIONS



HEAVY DUTY ASPHALT PAVEMENT SECTION
NO SCALE



HEAVY DUTY CONCRETE PAVEMENT SECTION
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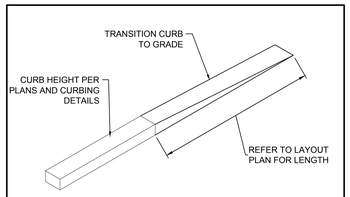
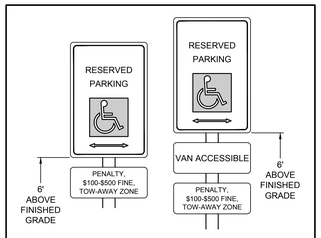
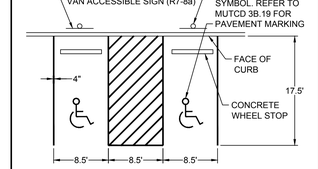


CURB WIPE-DOWN DETAIL
NO SCALE

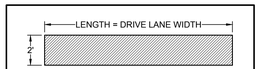


PARKING SIGN FOR THE DISABLED
NO SCALE

ADA NOTES: ACCESSIBLE SPACES SHALL BE IDENTIFIED BY ABOVE GRADE SIGNS AS RESERVED FOR PHYSICALLY DISABLED PERSONS. PROVIDE ONE (1) R-7-8 SIGN AT EACH ACCESSIBLE PARKING SPACE INDICATED ON SITE PLAN. THE SIGN WILL BE ALUMINUM (PAINTED WHITE) WITH GREEN LETTERS AND THE INTERNATIONAL WHEELCHAIR SYMBOL. THE SIGN WILL INCLUDE THE LANGUAGE "PENALTY, $100-500 FINE, TOW-AWAY ZONE". THE CENTER OF SIGN SHALL BE AT LEAST FIVE (5) FEET ABOVE GRADE, BUT NO HIGHER THAN SEVEN (7) FEET ABOVE GRADE. THE SIGN SHALL BE PLACED ON A 1-1/2" DIAMETER STEEL POST, PAINTED BLACK, AND SET IN 12" OF CONCRETE. TYPICAL ACCESSIBLE SIGNS SHALL CONFORM TO ADA REQUIREMENTS.



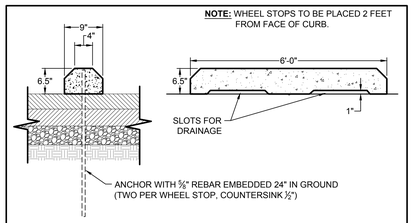
TYPICAL VAN ACCESSIBLE SPACE LAYOUT
NO SCALE



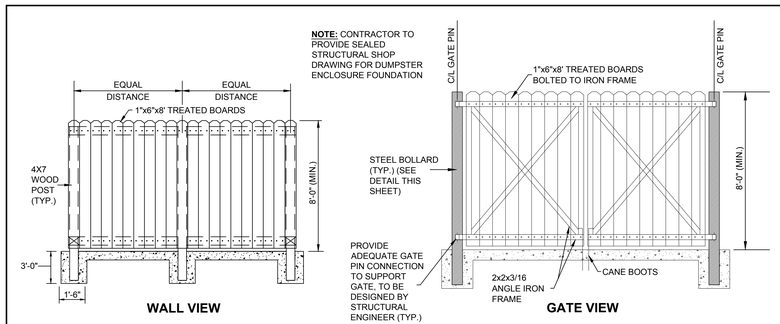
STOP BAR DETAIL
NO SCALE

STOP BAR NOTE:
24" WHITE STOP BARS ARE TO BE THERMOPLASTIC MATERIAL AND MUST MEET ALL REQUIREMENTS LISTED IN THE VIRGINIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

NOTE: WHEEL STOPS TO BE PLACED 2 FEET FROM FACE OF CURB.



CONCRETE WHEEL STOP DETAIL
NO SCALE



DUMPSTER ENCLOSURE BASIS OF DESIGN
NO SCALE

UDC FINAL REVIEW SUBMITTAL

NOT FOR CONSTRUCTION

PLAN SET DATE - 07/19/2023

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REVISION DESCRIPTION	DATE

DATE 07/19/2023
DRAWN BY K. UNDERBERG
DESIGNED BY C. NELSON
CHECKED BY A. WEHUNT
SCALE N.T.S

City of Richmond: New Fire Station #21

TIMMONS GROUP

CITY OF RICHMOND FIRE STATION 21
BROAD ROCK DISTRICT - CITY OF RICHMOND - VIRGINIA
SITE NOTES & DETAILS

JOB NO. 60040
SHEET NO. C4.10

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GENERAL UTILITY NOTES:

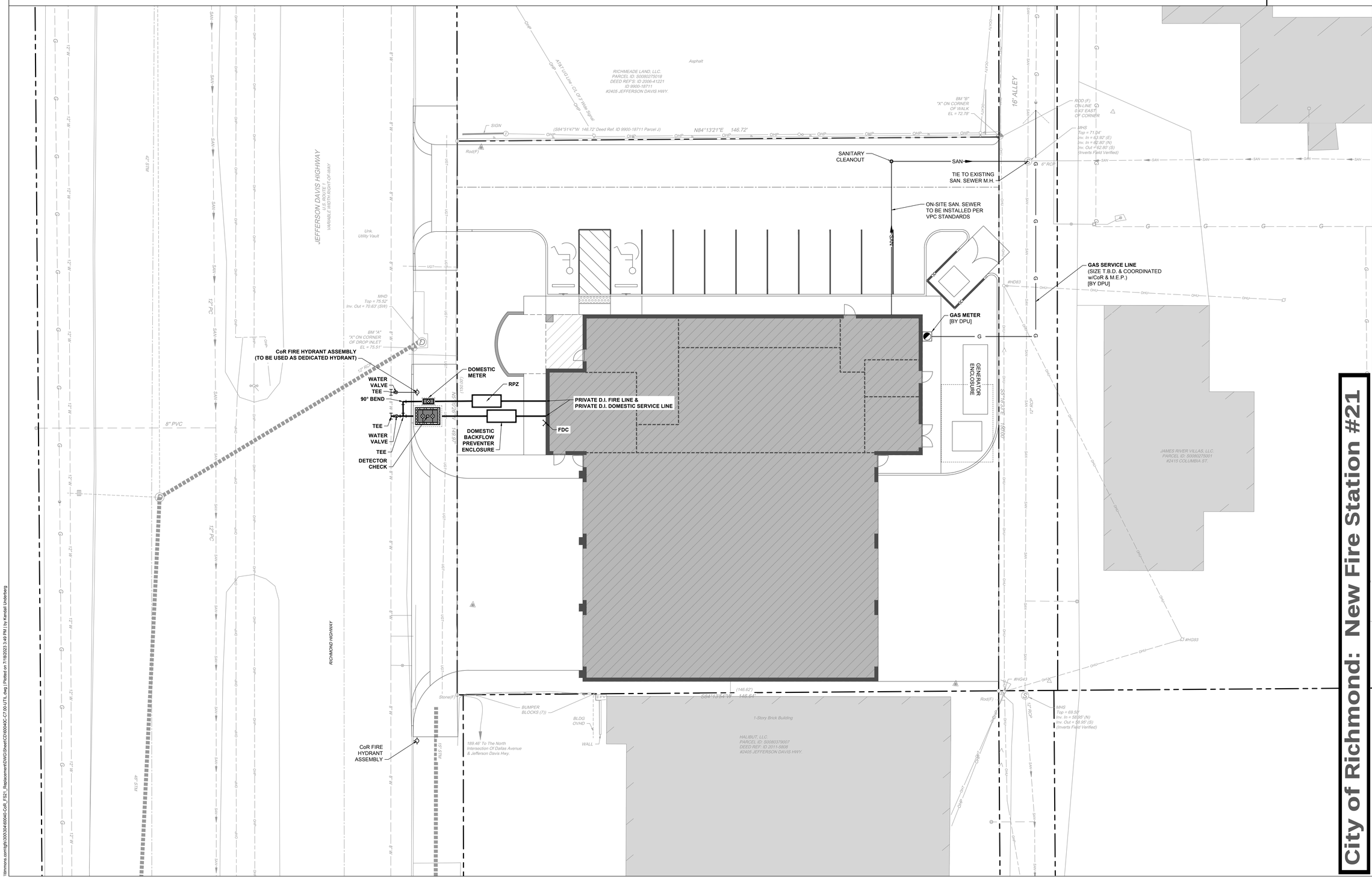
1. ALL WORK IN THE RIGHT-OF-WAY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT CITY OF RICHMOND STANDARDS FOR EXCAVATION AND RESTORATION.
2. CONTRACTOR SHALL NOTIFY THE DPU INSPECTOR A MINIMUM OF 48 HOURS PRIOR TO THE START OF WORK.
3. ALL UTILITY INSTALLATIONS IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE TO THE MOST RECENT CITY OF RICHMOND WATER DISTRIBUTION SYSTEM AND SANITARY SEWER SYSTEM DESIGN GUIDELINES AND STANDARD SPECIFICATIONS AND DETAILS.
4. ALL UTILITY INSTALLATION ON PRIVATE PROPERTY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE.
5. CONTRACTOR MUST MAINTAIN GOOD EROSION CONTROL AND FLUSHING PROCEDURES.
6. CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO ANY EXISTING UTILITIES THAT ARE TO REMAIN.
7. VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF THERE IS A CONFLICT.
8. CONTACT "MISS UTILITY" OF CENTRAL VIRGINIA PRIOR TO THE START OF ANY EXCAVATION TO LOCATE EXISTING UTILITIES. 1-800-552-3120.
9. WATER SERVICE INSTALLATIONS MUST ADHERE TO THE CITY OF RICHMOND CROSS CONNECTION CONTROL AND BACKFLOW PREVENTION PROGRAM.
10. A BACKWATER VALVE SHALL BE INSTALLED ON FIXTURES LOCATED ON A FLOOR LEVEL BELOW THE TOP OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER. IF A FLOOR LEVEL IS ABOVE THE TOP OF THE NEXT UPSTREAM MANHOLE, A BACKWATER VALVE IS NOT REQUIRED. A BACKWATER VALVE SHALL NOT BE INSTALLED ON THE LATERAL UNLESS ALL FLOORS IN THE BUILDING ARE BELOW THE TOP OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER.
11. BACKFLOW PREVENTION ADEQUATE TO PROTECT THE PROPOSED IMPROVEMENTS SHALL BE PROVIDED ON ALL CONNECTIONS TO THE EXISTING PUBLIC SEWER SYSTEMS.
12. EXISTING WATER MAIN MUST REMAIN IN SERVICE TO SERVE ALL EXISTING CITY WATER CUSTOMERS .
13. IF EXISTING WATER OR SEWER LATERALS ARE DISCOVERED DURING CONSTRUCTION THEY MUST BE REMOVED.
14. WATER TAP, SERVICE LATERAL, METER AND VAULT TO BE INSTALLED BY CITY DPU.
15. MAINTAIN A MINIMUM OF 3.5' COVER ON ALL WATER SERVICE AND 5.5' MINIMUM ON SANITARY SERVICE LATERALS IN THE RIGHT OF WAY.
16. EXISTING SEWER MAIN MUST BE FREE OF CRACKS, MAJOR DEFECTS, CLOGS OR SEDIMENT BUILDUP AND BE FREE FLOWING PRIOR TO LATERAL TAPS. VERIFY PRIOR TO CONSTRUCTION.
17. RESTORATION OF UTILITY CUTS SHALL BE PER THE CURRENT DPW EXCAVATION AND RESTORATION MANUAL AND ANY UPDATES.
18. ANY DAMAGE OR DEGRADATION TO CITY STREETS AS A RESULT OF DEMOLITION OF CONSTRUCTION WILL REQUIRE THAT THE DEVELOPER REPAIR THE DAMAGE OR REPAVE DAMAGED AREAS IN THEIR ENTIRETY TO DPW STANDARDS.

PROPOSED UTILITY NOTES:

21. ALL SANITARY SEWER LATERALS ARE TO BE INSTALLED AT 2.08% MINIMUM, UNLESS OTHERWISE NOTED.
22. ALL BUILDING FIRE CONNECTIONS SHALL BE DUCTILE IRON PIPE.
23. ALL BUILDING DOMESTIC WATER CONNECTIONS SHALL BE PVC PIPE ASTM D2241/SDR-21 PRESSURE RATED OR APPROVED LISTED IN THE INTERNATIONAL PLUMBING CODE (IPC 2015) TABLE 605.3.
24. ALL DOMESTIC WATER SERVICE LINES SHALL BE PVC PIPE ASTM D2241/SDR-21 PRESSURE RATED OR APPROVED LISTED IN THE INTERNATIONAL PLUMBING CODE (IPC 2015) TABLE 605.3.
25. ALL PROPOSED HYDRANTS SHALL BE A MINIMUM OF 18" ABOVE EXISTING AND PROPOSED CURBING.

NAD 83

SCALE 1"=10'
0 10' 20'



City of Richmond: New Fire Station #21

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PLAN SET DATE - 07/19/2023

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REVISION DESCRIPTION	DATE

DATE: 07/19/2023
DRAWN BY: K. UNDERBERG
DESIGNED BY: C. NELSON
CHECKED BY: A. WEHUNT
SCALE: N.T.S.

TIMMONS GROUP

CITY OF RICHMOND FIRE STATION 21
BROAD ROCK DISTRICT - CITY OF RICHMOND - VIRGINIA
UTILITY PLAN

JOB NO. 60040
SHEET NO. C7.00

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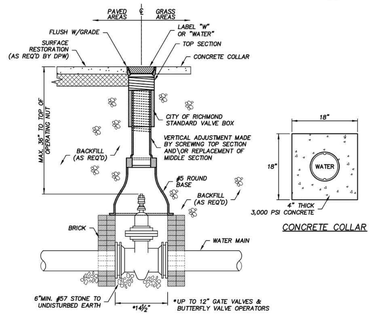
CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES



NOTES:

1. PROVIDE EXTENSION STEM IF TOP OF VALVE OPERATING NUT IS GREATER THAN 36" BELOW GROUND SURFACE.
2. PROVIDE MIDDLE SECTION TO EXTEND FOR DEEP BOXES.
3. ADJUST BOX TOP FOR STREET PAVEMENT OVERLAY, IF OVERLAY IS PERFORMED.
4. IN GRASS AREAS PROVIDE 18"x18"x4" CONCRETE COLLAR AROUND TOP OF VALVE BOX.

REVISION		DPU DWG. NO.
04/29/2020	**SMALL VALVE BOX INSTALLATION**	**W-24**

A:\WATER DISTRIBUTION STANDARDS UPDATE\DETAILS – 2016\W-24 – SMALL VALVE BOX INSTALLATION.DWG

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES

HORIZ. BENDS

PIPE DIAMETER	RESTRAINED LENGTH 11¼°	22½°	45°	90°
3" OR 4"	2'	4'	8'	19'
6"	3'	6'	11'	27'
8"	4'	7'	15'	35'
12"	5'	10'	21'	50'
16"	7'	13'	27'	70'
24"	10'	18'	42'	91'

DEAD ENDS

PIPE DIAMETER	RESTRAINED LENGTH
3" OR 4"	42'
6"	59'
8"	79'
12"	113'
16"	147'
24"	213'

TEES, WYES, CROSSES

BRANCH DIAMETER	*RESTRAINED LENGTH EACH BRANCH
3" OR 4"	42'
6"	59'
8"	79'
12"	113'
16"	147'
24"	213'

VERT. BENDS (DOWN)

PIPE DIAMETER	RESTRAINED LENGTH 11¼°	22½°	45°	90°
3" OR 4"	6'	12'	25'	61'
6"	9'	17'	36'	86'
8"	12'	23'	47'	113'
12"	16'	32'	67'	161'
16"	21'	42'	87'	209'
24"	30'	60'	125'	301'

VERT. BENDS (UP)

PIPE DIAMETER	RESTRAINED LENGTH 11¼°	22½°	45°	90°
3" OR 4"	2'	4'	8'	19'
6"	3'	6'	11'	27'
8"	4'	7'	15'	35'
12"	5'	10'	21'	50'
16"	7'	13'	27'	64'
24"	9'	18'	38'	91'

REDUCERS

PIPE DIAMETER LARGE END	SMALL END	RESTRAINED LENGTH*
4"	3"	14'
6"	3" OR 4"	40'
8"	3" OR 4"	64'
8"	6"	33'
12"	3" OR 4"	103'
12"	6"	82'
12"	8"	60'
16"	3" OR 4"	139'
16"	6"	124'
16"	8"	107'
16"	12"	63'
24"	3" OR 4"	208'
24"	6"	198'
24"	8"	187'
24"	12"	157'
24"	16"	116'

*RESTRAINED LENGTH ALONG LARGER PIPE.

NOTES:

1. RESTRAINED JOINT LENGTHS BASED ON THE FOLLOWING CONDITIONS: (LAYING CONDITION BASED ON DPU STD. TRENCH & PIPE BEDDING DETAIL, DEVIATION FROM THIS STANDARD MAY REQUIRE ADDITIONAL JOINT RESTRAINT)

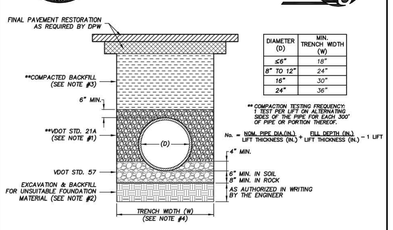
   LAYING CONDITION: TYPE 5
   SOIL DESIGNATION: COH–GRAN
   DEPTH OF COVER: 3.5 FT.
   DESIGN PRESSURE: 250 PSI
   SAFETY FACTOR: 1.5

2. RESTRAINED JOINT LENGTHS MUST BE VERIFIED BY A LICENSED ENGINEER BASED ON SPECIFIC PROJECT CONDITIONS.
3. FOR PIPE 30" DIAMETER AND GREATER OR OF A MATERIAL OTHER THAN DUCTILE IRON, RESTRAINED JOINT LENGTHS SHALL BE MADE ON A PROJECT SPECIFIC BASIS.
4. LIMITS OF JOINT RESTRAINT SHALL BE SHOWN IN PROFILE FOR ALL PROPOSED WATER MAIN PROJECTS.
5. THE MINIMUM RESTRAINED LENGTH BASED ON A DEAD END CONFIGURATION ASSUMING EACH BRANCH HAS A VALVE RESTRAINED TO THE FITTING.
6. IF SUFFICIENT PIPE LENGTH IS NOT AVAILABLE FOR JOINT RESTRAINT, THRUST BLOCKING MUST BE PROVIDED.

REVISION		DPU DWG. NO.
04/02/20	**JOINT RESTRAINT TABLES**	**W-10**

A:\WATER DISTRIBUTION STANDARDS UPDATE\DETAILS – 2016\W-10 – JOINT RESTRAINT TABLES.DWG

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES



DIAMETER (D)	MIN. TRENCH WIDTH (W)
≤6"	18"
8" TO 12"	24"
16"	30"
24"	36"

** COMPACTION TESTING FREQUENCY: TEST PER LIFT OF 6" OR LESS AT A MINIMUM OF 1 TEST PER 300' OF PIPE OR PORTION THEREOF.

No. = NOM. PIPE DIA.(IN.) ÷ 2 − FILL DEPTH (IN.) ÷ LIFT THICKNESS (IN.)* + LIFT THICKNESS (IN.) = 1 LIFT

NOTES:

1. COMPACTED GRANULAR MATERIAL IN MAXIMUM 8" LIFTS (APPROX. 95% STD. PROCTOR, AASHTO T–99).
2. WHEN STANDING WATER IS IN PIPE FOUNDATION AREA, VDOT STD. #57 TO BE USED (COMPACTION TESTING NOT REQUIRED WHEN #57 STONE IS USED).
3. BACKFILL SHALL BE IN ACCORDANCE WITH THE CITY OF RICHMOND DEPARTMENT OF PUBLIC WORKS STANDARD REQUIREMENTS FOR TRENCH RESTORATION, GENERALLY DESCRIBED AS FOLLOWS:
   a) PAVED AREAS: VDOT STD. 21A IN MAXIMUM 8" LIFTS (COMPACTED TO 95% STD. PROCTOR) TO PAVEMENT SECTION.
   b) OPEN AREAS: COMPACTED GRANULAR OR SELECT MATERIALS (COMPACTED TO 90% STD. PROCTOR). SELECT MATERIAL SHALL BE NATIVE SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS OR DELETERIOUS MATERIAL. GRANULAR MATERIAL AS DEFINED BY AASHTO SOIL CLASSIFICATION SYSTEM.
4. THE MINIMUM TRENCH WIDTH IN SOIL FOR WATER PIPE SHALL BE THE NOMINAL PIPE DIAMETER PLUS 12". PROVIDED THAT IF THE SUM IS NOT A WHOLE MULTIPLE OF SIX (6") INCHES, THE TRENCH WIDTH SHALL BE INCREASED TO THE NEXT GREATER WHOLE MULTIPLE OF SIX INCHES ABOVE THE SUM.
5. FOR PIPE 30" DIAMETER AND GREATER OR OF A MATERIAL OTHER THAN DUCTILE IRON, TRENCH SPECIFICATIONS SHALL BE MADE ON A PROJECT SPECIFIC BASIS.

REVISION		DPU DWG. NO.
04/02/2020	**TRENCH & PIPE BEDDING**	**W-6**

A:\WATER DISTRIBUTION STANDARDS UPDATE\DETAILS – 2016\W-6 – TRENCH & PIPE BEDDING.DWG

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES

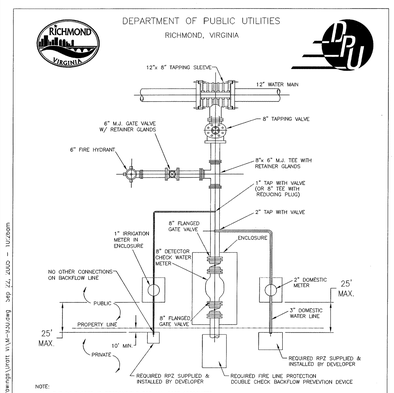
1. ALL WATER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF RICHMOND WATER DISTRIBUTION SYSTEM DESIGN GUIDELINES AND STANDARD SPECIFICATIONS AND DETAILS.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THE WORK. WATER UTILITY PERMITS MAY BE OBTAINED THROUGH THE DEPARTMENT OF PUBLIC UTILITIES DEVELOPMENT SERVICES OFFICE LOCATED IN ROOM 115 IN CITY HALL.
3. ONCE ALL PERMITS AND FEES HAVE BEEN SUBMITTED AND APPROVED THROUGH THE DPU DEVELOPMENT SERVICES DEPARTMENT, THE CONTRACTOR SHALL CONTACT THE DPU CONSTRUCTION INSPECTOR AT (804) 646–6337 TO SCHEDULE A PRE–CONSTRUCTION MEETING AT LEAST 72 HOURS PRIOR TO BEGINNING ANY WATER RELATED CONSTRUCTION ACTIVITY.
4. FINAL ACCEPTANCE OF THE WATER UTILITY IMPROVEMENTS BY THE CITY OF RICHMOND DEPARTMENT OF PUBLIC UTILITIES SHALL NOT BE MADE UNTIL ALL WORK SHOWN ON THE APPROVED UTILITY PLANS IS COMPLETE, INCLUDING ALL PIPELINE WORK, PAVING, GRADING, AND ANY NECESSARY ADJUSTMENTS.
5. THE CONTRACTOR MUST PROVIDE AS–BUILTS WITH REQUISITE INFORMATION DEPICTING THE HORIZONTAL AND VERTICAL LOCATION OF ALL PROPOSED MAINS, SERVICES, AND APPURTENANCES WITH TIES TO RIGHT–OF–WAY, CURB/PAVEMENT LINES, OR ALTERNATE OBJECTS AS NEEDED TO LOCATE THE MAINS IN THE FIELD. THE IMPROVEMENTS WILL NOT BE ACCEPTED UNTIL THE AS–BUILT INFORMATION HAS BEEN REVIEWED AND ACCEPTED BY THE CITY WATER UTILITY INSPECTOR.
6. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES AND MUST REQUEST VALVE OPERATION BY CITY FORCES NO LESS THAN 48 HOURS IN ADVANCE OF ANY PLANNED WORK.
7. UNLESS OTHERWISE NOTED ON THE PLANS, THE MINIMUM COVER FOR WATER MAINS IS 42 INCHES.
8. WATER FOR USE BY THE CONTRACTOR FROM A PUBLIC WATER MAIN OR HYDRANT WITHIN THE CITY OF RICHMOND SHALL REQUIRE A CITY ISSUED PORTABLE WATER METER WITH BACKFLOW DEVICE. THE CONTRACTOR SHOULD CONTACT THE UTILITY CROSS CONNECTION SPECIALIST LOCATED AT 400 JEFFERSON DAVIS HIGHWAY (RM. 143), TUESDAY THROUGH FRIDAY (9 A.M. TO 11 A.M.) TO MAKE AN APPLICATION. THE CONTRACTOR MAY CALL (804) 646–8502 FOR ANY QUESTIONS RELATED TO THIS PROGRAM.
9. ALL WATER PIPE USED WITHIN THE CITY'S DISTRIBUTION SYSTEM SHALL BE DUCTILE–IRON, MEETING THE REQUIREMENTS OF AWWA C151 – LATEST REVISION, WITH MECHANICAL OR PUSH–ON JOINTS. THE PIPE SHALL BE ASPHALTIC COAT OUTSIDE AND CEMENT–LINED AND SEAL–COATED INSIDE IN ACCORDANCE WITH AWWA C104. PIPES SHALL BE FURNISHED IN NOMINAL LENGTHS OF 18 OR 20 FEET AND SHALL INCLUDE ALL JOINTING MATERIALS. ALL PIPE MUST MEET THE MINIMUM THICKNESS CLASS AS NOTED BELOW:

DIAMETER (IN)	MIN. THICKNESS CLASS
3	54
4	53
6	54
8	54
12 & LARGER	51

REVISION		DPU DWG. NO.
03/18/2020	**GENERAL WATER CONSTRUCTION NOTES**	**W-4**

A:\WATER DISTRIBUTION STANDARDS UPDATE\DETAILS – 2016\W-4 – GENERAL CONSTRUCTION NOTES.DWG

DEPARTMENT OF PUBLIC UTILITIES
RICHMOND, VIRGINIA



NOTE:

1. THE DEVELOPER IS RESPONSIBLE FOR ALL COST ASSOCIATED WITH THE REQUIRED CITY APPURTENANCES AND THE INSTALLATION OF THE SAME APPURTENANCES WITHIN THE PUBLIC RIGHT OF WAY.
2. THE DEVELOPER IS REQUIRED TO MAKE THE RECOMMENDATIONS OF THE APPROPRIATE METER SIZES AND STUB OFF LINES.
3. THE DEVELOPER IS REQUIRED TO SUBMIT FLOW DEMANDS TO THE DEPT. OF PUBLIC UTILITIES.
4. THE DEVELOPER IS REQUIRED TO VERIFY PIPELINE FLOWS AND PRESSURES TO THE DEPT. OF PUBLIC UTILITIES.

DRAWN X.
DATE 8/22/04
SCALE NOT TO SCALE
CHK'D X.

CITY OF RICHMOND, VIRGINIA
TYPICAL 8" COMMERCIAL WATER SERVICE DETAILS

DPU DWG. NUMBER: M–930

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL INSTALLATION PROCEDURES

1. REFER TO ALL APPLICABLE CODES AND MANUALS DURING DESIGN.
2. THE BFP ASSEMBLY'S SHUTOFF VALVES SHALL BE THE ONES APPROVED BY THE MANUFACTURER FOR THAT BFP ASSEMBLY.
3. SUBMIT PLANS SEALED AND SIGNED BY A PROFESSIONAL ENGINEER TO CROSS CONNECTION DEPT.
4. APPLY FOR A PLUMBING PERMIT FROM BUILDING INSPECTIONS OFFICE.
5. APPLY FOR A WATER SERVICE PERMIT FROM DPU DEVELOPMENT OFFICE.
6. INSTALL PIPING AND BACKFLOW PREVENTER, INCLUDING TEST COCKS ADAPTERS – (4) STRAIGHT HOSE ADAPTER FITTINGS, 1/4" SAE, 45° FLARE TUBE X 1/4" NPT, FOR CONNECTION TO TEST DEVICE. BACKFLOW PREVENTION DEVICES WILL BE INSTALLED OUTSIDE (OR INSIDE OF A BUILDING WITH APPROVAL OF THE CROSS CONNECTION CONTROL SPECIALIST). REFER TO PLANS FOR TYPICAL INSTALLATION DETAILS. NO TAP–INS WILL BE PERMITTED FOR ANY PURPOSE UPSTREAM OF THE BACKFLOW PREVENTION DEVICE.
7. CALL CROSS CONNECTION CONTROL SPECIALIST FOR INSPECTION OF THE BACKFLOW PREVENTER. INSPECTION AND APPROVAL IS REQUIRED BEFORE ANY METER WILL BE INSTALLED. [804–646–8544]
8. CALL PLUMBING INSPECTOR FOR INSPECTION OF ALL PIPING AND PLUMBING WORK DOWNSTREAM OF THE METER. CALL MECHANICAL INSPECTOR FOR INSPECTION OF ALL WORK DOWNSTREAM OF THE DETECTOR CHECK METER.

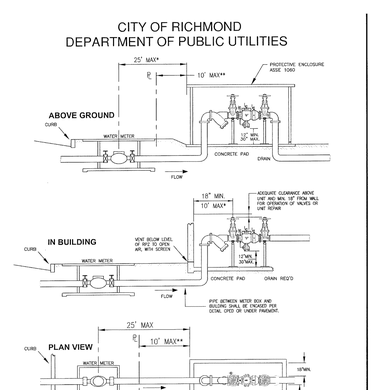
DATE
APR. 2006
REVISIONS
SEP. 2014

TYPICAL INSTALLATION PROCEDURES

DWG. NO. RPZ-IP

64

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES



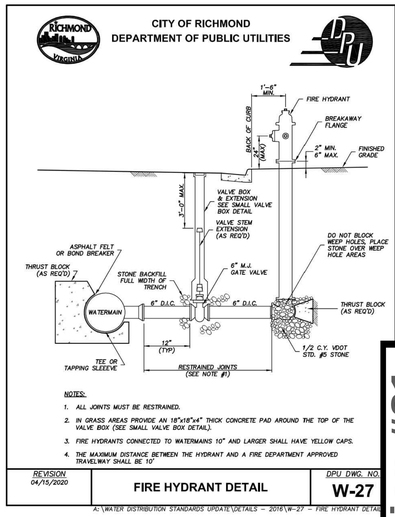
DATE
APR. 2006
REVISIONS
SEP. 2014

DOMESTIC REDUCED PRESSURE ZONE ASSEMBLIES - ALTERNATE INSTALLATIONS*

DWG. NO. RPZ-A

63

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES



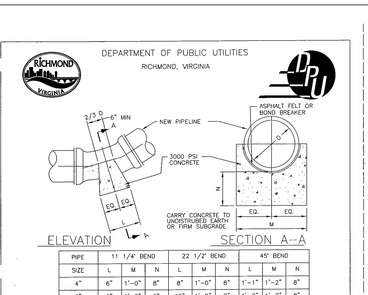
NOTES:

1. ALL JOINTS MUST BE RESTRAINED.
2. IN GRASS AREAS PROVIDE AN 18"x18"x4" THICK CONCRETE PAD AROUND THE TOP OF THE VALVE BOX (SEE SMALL VALVE BOX DETAIL).
3. FIRE HYDRANTS CONNECTED TO WATERMAINS 10" AND LARGER SHALL HAVE YELLOW CAPS.
4. THE MAXIMUM DISTANCE BETWEEN THE HYDRANT AND A FIRE DEPARTMENT APPROVED TRAVELWAY SHALL BE 10'.

REVISION		DPU DWG. NO.
04/15/2020	**FIRE HYDRANT DETAIL**	**W-27**

A:\WATER DISTRIBUTION STANDARDS UPDATE\DETAILS – 2016\W-27 – FIRE HYDRANT DETAIL

DEPARTMENT OF PUBLIC UTILITIES
RICHMOND, VIRGINIA



PIPE SIZE	11 1/4° BEND L	M	N	22 1/2° BEND L	M	N	45° BEND L	M	N
4"	6"	1'–0"	8"	8"	1'–0"	8"	1'–1"	1'–2"	8"
6"	6"	1'–2"	8"	10"	1'–2"	8"	1'–2"	1'–2"	8"
8"	8"	1'–4"	8"	11"	1'–4"	8"	1'–9"	1'–4"	8"
10"	8"	1'–6"	8"	1'–3"	1'–6"	9"	2'–5"	1'–6"	1'–0"
12"	8"	2'–0"	8"	1'–4"	2'–0"	9"	2'–8"	2'–0"	1'–2"
16"	1'–1"	2'–4"	9"	2'–1"	2'–4"	1'–0"	4'–0"	2'–4"	1'–6"
18"	1'–5"	2'–8"	10"	2'–9"	2'–8"	1'–2"	5'–6"	2'–8"	2'–0"
20"	1'–5"	2'–8"	10"	2'–9"	2'–8"	1'–2"	5'–6"	2'–8"	2'–0"
24"	1'–10"	3'–0"	1'–0"	3'–7"	3'–0"	1'–4"	6'–0"	3'–6"	2'–6"

NOTES:

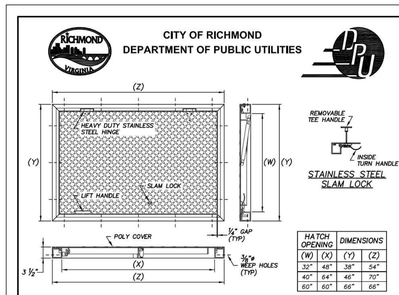
1. BLOCKING DIMENSIONS SHOWN ARE MINIMUMS.
2. BLOCKING DIMENSIONS ARE BASED ON A STATIC PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF.
3. WHERE SOIL BEARING CAPACITY IS LESS THAN 2000 PSF, SUBMIT BLOCKING DESIGN CALCULATIONS.
4. THRUST BLOCKS FOR LOWER VERTICAL BENDS MAY BE DELETED WITH RESTRAINED JOINTS. THE ENGINEER SHALL CALCULATE LENGTH OF RESTRAINED SECTION.

DRAWN X.
DATE 8/29/04
SCALE NOT TO SCALE
CHK'D X.

CITY OF RICHMOND, VIRGINIA
BLOCKING DETAIL

DPU DWG. NUMBER: M–8

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES



HATCH OPENING (W)	(X)	DIMENSIONS (Y)	(Z)
32"	48"	38"	54"
40"	64"	46"	70"
60"	60"	66"	66"

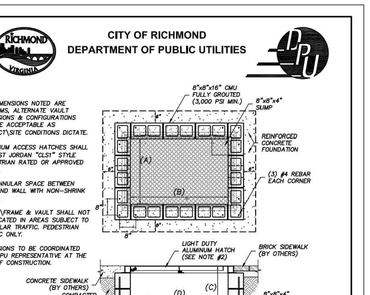
NOTES:

1. ALUMINUM ACCESS HATCHES SHALL BE EAST JORDAN "CLSI" OR "CLSS" STYLE PEDESTRIAN RATED OR APPROVED EQUAL.
2. MATERIAL SHALL BE 6061–T6 ALUMINUM FOR BARS, ANGLES, AND EXTRUSIONS. ¼" DIAMOND PLATE SHALL BE 5086 ALUMINUM.
3. UNIT DESIGNED PEDESTRIAN RATED, FOR A MINIMUM LIVE LOAD OF 300 LBS./SQ.FT. DEFLECTION SHALL NOT EXCEED 1/150 OF THE SPAN.
4. HINGES SHALL BE STAINLESS STEEL HEAVY DUTY DESIGN.
5. EACH DOOR SHALL BE EQUIPPED WITH A STAINLESS STEEL HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION.
6. ALL HARDWARE SHALL BE STAINLESS STEEL.
7. EACH HATCH SHALL BE EQUIPPED WITH AN ALUMINUM LIFT HANDLE. THE LIFT HANDLE SHALL BE FLUSH WITH THE TOP OF THE PLATE.
8. EACH DOOR SHALL BE SUPPLIED WITH A HEAVY DUTY STAINLESS STEEL PNEUMATIC SPRING OR APPROVED EQUAL. COVER SHALL BE COUNTERBALANCED, SO ONE PERSON CAN EASILY OPEN THE HATCH DOOR.
9. EACH HATCH SHALL BE SUPPLIED WITH A GRADE 316 STAINLESS STEEL SLAM LOCK, WITH KEY MAY PROTECTED BY A THREADED PLUG. PLUG SHALL BE FLUSH WITH THE TOP OF THE ¾" DIAMOND PLATE. SLAM LOCK SHALL BE FASTENED WITH FOUR GRADE 316 STAINLESS STEEL BOLTS AND WASHERS.
10. HATCH SHALL BE SUPPLIED WITH COVER OVER DIAMOND PLATE TO PROTECT FROM SPLATTER WHEN CASTING INTO CONCRETE.
11. EACH HATCH WILL BE SUPPLIED WITH WEEP HOLES IN THE SIDE OF THE CHANNEL FRAME.

REVISION		DPU DWG. NO.
05/27/2020	**LARGE METER VAULT HATCH (PEDESTRIAN RATED)**	**W-42**

A:\WATER DISTRIBUTION STANDARDS UPDATE\DETAILS – 2016\W-42 – LARGE METER VAULT HATCH (PEDESTRIAN RATED).DWG

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES

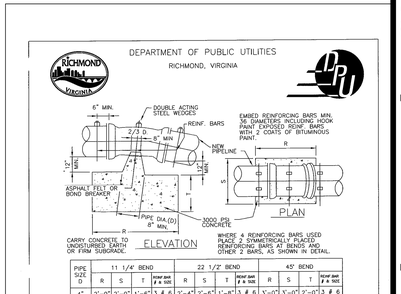


DIMENSION	DOMESTIC METER 3" or 4"	6" or 8"	DETECTOR CHECK 3"	4"	6"	8"	COMBINED 1" or 1½" DOM. & 3" or 4" DETECTOR
WIDTH (A)	3'–4"	3'–4"	2'–8"	3'–4"			5'–4"
LENGTH (B)	5'–4"	6'–2"	4'–0"	5'–4"			5'–4"
DEPTH VAULT (C)	4'–4"	4'–8"	4'–4"	4'–8"			4'–4"
FLANGE TO FLANGE (D)	(5)	(5)	33"	38"	42"	48"	(5)
HATCH OPENING	40"x64"	40"x64"	32"x48"	40"x64"			60"x80"

REVISION		DPU DWG. NO.
05/27/2020	**LARGE METER VAULT (PEDESTRIAN RATED)**	**W-41**

A:\WATER DISTRIBUTION STANDARDS UPDATE\DETAILS – 2016\W-41 – LARGE METER VAULT (PEDESTRIAN RATED).DWG

DEPARTMENT OF PUBLIC UTILITIES
RICHMOND, VIRGINIA



PIPE SIZE D	11 1/4° BEND R	S	T	REINF. BAR # & NO.	22 1/2° BEND R	S	T	REINF. BAR # & NO.	45° BEND R	S	T	REINF. BAR # & NO.
4"	2'–0"	2'–0"	1'–6"	# 6	2'–4"	2'–6"	1'–8"	# 6	3'–0"	3'–0"	2'–0"	# 6
6"	2'–6"	2'–0"	1'–6"	# 7	3'–0"	2'–6"	2'–0"	# 7	4'–0"	3'–0"	2'–0"	# 7
8"	3'–0"	2'–3"	2'–0"	# 8	4'–0"	3'–0"	2'–3"	# 8	5'–0"	3'–6"	2'–6"	# 8
10"	3'–6"	2'–9"	2'–0"	# 8	4'–6"	3'–6"	2'–6"	# 8	5'–0"	4'–0"	3'–0"	# 8
12"	4'–0"	3'–0"	2'–3"	# 8	5'–0"	4'–0"	3'–0"	# 8	6'–0"	4'–6"	3'–6"	# 8
16"	4'–6"	3'–6"	2'–6"	# 8	6'–0"	4'–6"	3'–6"	# 8	7'–0"	5'–6"	4'–0"	# 10
18"	5'–0"	4'–0"	3'–0"	# 10	6'–6"	5'–6"	4'–0"	# 10	8'–0"	6'–0"	4'–6"	# 10
20"	5'–6"	4'–0"	3'–2"	# 10	7'–0"	5'–6"	4'–0"	# 10	8'–6"	7'–6"	5'–0"	# 10
24"	6'–0"	4'–6"	3'–6"	# 10	8'–0"	6'–0"	4'–6"	# 10	9'–0"	8'–6"	5'–6"	# 10

NOTES:

1. BLOCKING DIMENSIONS SHOWN ARE MINIMUMS.
2. BLOCKING DIMENSIONS ARE BASED ON A STATIC PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF.
3. WHERE SOIL BEARING CAPACITY IS LESS THAN 2000 PSF, SUBMIT BLOCKING DESIGN CALCULATIONS.
4. THRUST BLOCKS FOR UPPER VERTICAL BENDS MAY BE DELETED WITH RESTRAINED JOINTS. THE ENGINEER SHALL CALCULATE LENGTH OF RESTRAINED SECTION.

DRAWN X.
DATE 8/29/04
SCALE NOT TO SCALE
CHK'D X.

CITY OF RICHMOND, VIRGINIA
ANCHORAGE DETAIL

DPU DWG. NUMBER: M–9

UDC FINAL REVIEW SUBMITTAL

NOT FOR CONSTRUCTION

PLAN SET DATE - 07/19/2023

THIS DRAWING PREPARED AT THE
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1001 Boulders Parkway, Suite 300 | Richmond, VA 23225
TEL 804.200.6500 FAX 804.560.1016 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE
07/19/2023
DRAWN BY
K. UNDERBERG
DESIGNED BY
C. NELSON
CHECKED BY
A. WEHUNT
SCALE
N.T.S.

City of Richmond: New Fire Station #21

CITY OF RICHMOND FIRE STATION 21
BROAD ROCK DISTRICT - CITY OF RICHMOND - VIRGINIA
UTILITY NOTES & DETAILS

JOB NO.
60040
SHEET NO.
C7.20

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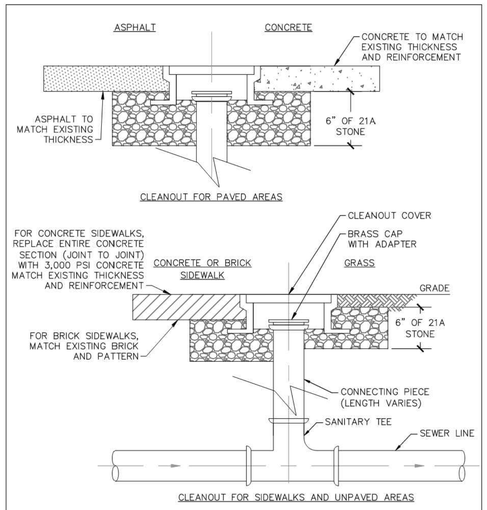
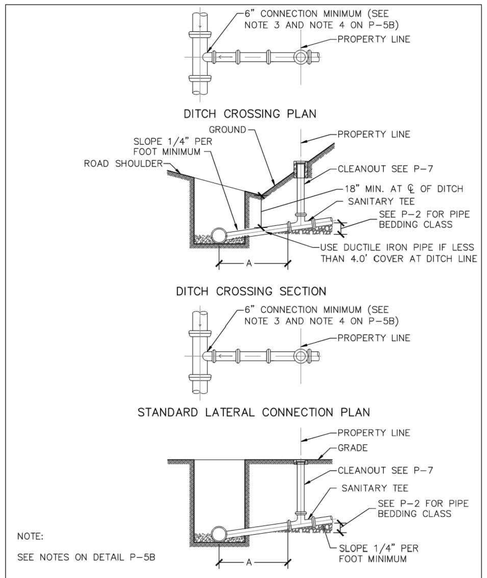
\\timmons.com\gh\300\304\60040-CoR_FS21_Replacement\DWG\Sheet\D\60040C-C7.20-UTND.dwg | Plotted on 7/19/2023 3:50 PM | by Kendall Underberg



NOTES:

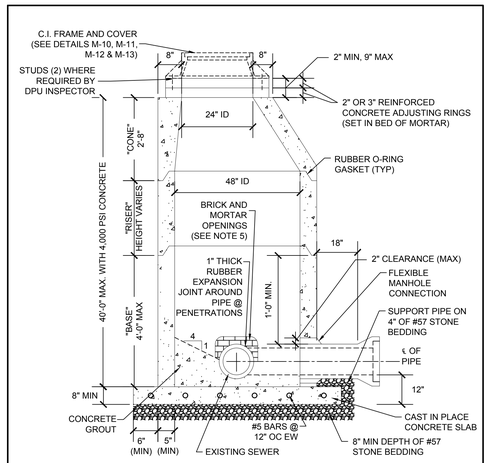
1. CLEANOUT CAP SHALL BE BRASS.
2. CLEANOUT SHALL BE 6" OR LARGER UNLESS OTHERWISE APPROVED BY DPU DEPUTY DIRECTOR OR DESIGNEE.
3. IF CLEANOUT IS IN RIGHT-OF-WAY , PROVIDE A TRAFFIC RATED CLEANOUT FRAME AND COVER
4. ENSURE PIPE IS NOT ENCASED IN CONCRETE.

DEPARTMENT OF PUBLIC UTILITIES	CITY OF RICHMOND, VIRGINIA CLEANOUT NOT TO SCALE	REV. 02/18 P-7



NOTE:
SEE NOTES ON DETAIL P-5B

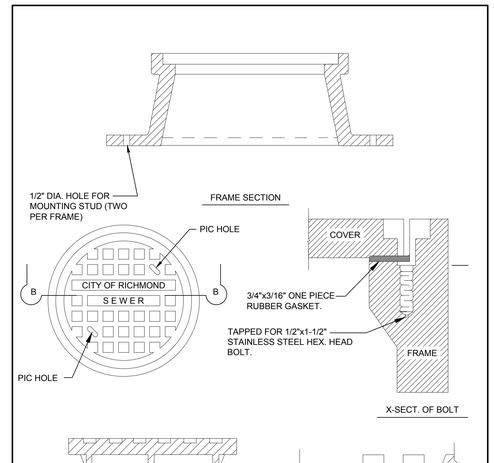
DEPARTMENT OF PUBLIC UTILITIES	CITY OF RICHMOND, VIRGINIA SEWER LATERAL CONNECTIONS NOT TO SCALE	REV. 02/18 P-5A



NOTES:

1. STONE BEDDING SHALL EXTEND TO THE OUTER BOUNDARY OF ALL UNDISTURBED AREAS SURROUNDING THE MANHOLE
2. EXCAVATION PAYLINE EXTENDS 6" OUTSIDE THE LARGEST DIAMETER OF THE MANHOLE, ALL AROUND.
3. CONTACT MANHOLE MANUFACTURER FOR ADDITIONAL WALL THICKNESS REQUIRED AT MANHOLE DEPTHS GREATER THAN 15'-0".
4. MANHOLE SHALL BE RATED FOR H20 LOADING IN PAVEMENT OR AREAS SUBJECT TO VEHICULAR TRAFFIC.
5. BRICK SHALL BE CONCRETE OR CINDER BRICK.

DEPARTMENT OF PUBLIC UTILITIES	CITY OF RICHMOND, VIRGINIA STANDARD DOG-HOUSE MANHOLE NOT TO SCALE	REV. 12/09 M-6



NOTE: INSTALL (4) FOUR 1/2" X 1 1/2" STAINLESS STEEL 3/4" HEXAGONAL HEAD BOLTS AT 90 DEGREES. COUNTERBORE THE COVER SO THAT THE HEAD OF THE BOLT IS FLUSH OR JUST BELOW THE TOP OF THE COVER.

DEPARTMENT OF PUBLIC UTILITIES	CITY OF RICHMOND, VIRGINIA WATERTIGHT FRAME AND COVER NOT TO SCALE	REV. 12/09 M-13

CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES

____ *PROJECT NAME*

____ *NAME, ADDRESS, AND PHONE NUMBER OF OWNER\DEVELOPER*

____ *VIRGINIA REGISTERED PROFESSIONAL ENGINEERS SEAL, SIGNATURE & DATE, AND CONTACT INFORMATION.*

____ *VICINITY MAP (SCALE: 1"=2,000' OR LESS).*

____ *WATER SYSTEM IS DESIGNED TO PROVIDE ADEQUATE DOMESTIC SERVICE AND FIRE PROTECTION TO THE OWNER'S PROPERTY. ____ DIAMETER LINE IS REQUIRED TO ADEQUATELY SERVE THIS PROJECT IN ACCORDANCE WITH CITY STANDARDS.*

A. AVERAGE DOMESTIC DESIGN FLOW	_____ *GPM*
B. MAXIMUM DAILY DESIGN FLOW	_____ *GPM*
C. DESIGN I.S.O. FIRE FLOW	_____ *GPM*
D. DESIGN FLOW (MAX. DAY + FIRE)	_____ *GPM*
E. LOWEST RESIDUAL PRESSURE @ DESIGN FLOW	_____ *PSI*

____ *DOMESTIC WATER METER CALCULATIONS (AWWA M-22) & I.S.O. FIRE FLOW CALCULATIONS ARE SHOWN ON PLANS (WHERE APPLICABLE).*

____ *MODELING\CALCULATIONS PROVIDED DEMONSTRATING ADEQUACY OF EXISTING WATER SYSTEM AND PROPOSED IMPROVEMENTS TO SERVE PROJECT BASED ON DPU FLOW AND PRESSURE REQUIREMENTS.*

____ *WATER UTILITY PLAN WITH APPROPRIATE APPURTENANCES, CALLOUTS, EXISTING & PROPOSED WATERLINE SIZES\MATERIALS NOTED INCLUDING DIMENSIONS TO RIGHT-OF-WAY AND\OR CURB LINES.*

____ *ALL WATER MAINS 6-INCHES AND LARGER ARE PROFILED WITH MINIMUM RESTRAINED JOINT LENGTHS, MINIMUM COVER, AND CLEARANCES NOTED. WHERE WATER MAINS OF ANY SIZE CROSS OTHER UTILITIES, THE CROSSINGS ARE PROFILED, AND THE MEANS FOR CROSSING AND RESOLVING CONFLICTS ARE CLEARLY SHOWN.*

____ *ANY AND ALL EXISTING WATER AND SEWER CONNECTIONS TO THE PROPERTY ARE SHOWN ON PLANS.*

____ *ADEQUATE PUBLIC RIGHT-OF-WAY OR PUBLIC UTILITY EASEMENTS IDENTIFIED. ALL OFFSITE EASEMENTS OR RIGHT-OF-WAY MUST BE OBTAINED PRIOR TO PLAN APPROVAL WITH DEED BOOK AND PAGE REFERENCES SHOWN ON THE PLANS.*

____ *DEMOLITION PLAN WITH DPU DEMOLITION RESPONSIBILITY NOTED.*

____ *PROJECT SPECIFIC DPU DETAILS.*

____ *A BACKFLOW PREVENTION DEVICE IS PROVIDED ON DOMESTIC AND FIRE SERVICE CONNECTIONS IN ACCORDANCE WITH PART II, ARTICLE 3 OF THE COMMONWEALTH OF VIRGINIA, STATE BOARD OF HEALTH WATER WORKS REGULATIONS AND THE CITY OF RICHMOND DEPARTMENT OF PUBLIC UTILITIES CROSS CONNECTION CONTROL AND BACKFLOW PREVENTION PROGRAM.*

____ *A LIST OF MATERIAL QUANTITIES USED ON THE PROJECT.*

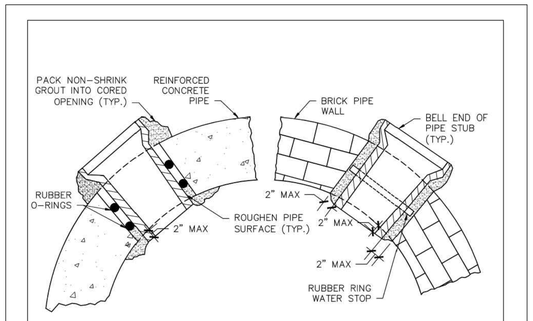
____ *ALL FIRE HYDRANT LOCATIONS COORDINATED AND APPROVED BY CITY OF RICHMOND FIRE DEPARTMENT.*

____ *DPU CONSTRUCTION NOTES PROVIDED ON PLANS.*

____ *A CONSPICUOUS NOTE STATING "PLANS ARE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, & FEDERAL REGULATIONS".*

REVISION 04/02/2020	**WATER UTILITY PLAN CHECKLIST**	*DPU DWG. NO.* **W-3**

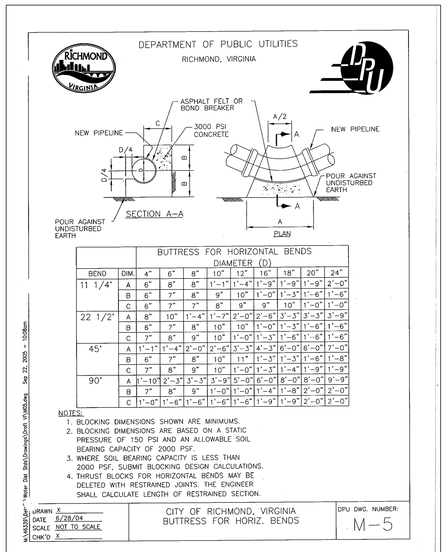
A:\WATER DISTRIBUTION STANDARDS UPDATE\DETAILS – 2016\W-3 – WATER UTILITY PLAN CHECKLIST.DWG



NOTES:

1. STUB CONNECTION TO EXISTING SEWER IS APPLICABLE FOR REINFORCED CONCRETE OR BRICK.
2. OPENING SHALL BE FORMED BY CORE DRILL, UNLESS APPROVED OTHERWISE BY RICHMOND DPU PERSONNEL.
3. FOR BRICK PIPE, MAX OPENING SHALL BE O.D. PLUS 4" IF CUT IN FIELD.

DEPARTMENT OF PUBLIC UTILITIES	CITY OF RICHMOND, VIRGINIA STUB CONNECTION TO EXISTING SEWER NOT TO SCALE	REV. 02/18 P-8

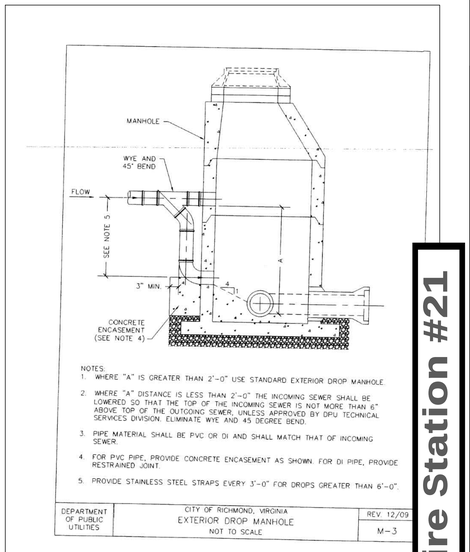


BUTTRESS FOR HORIZONTAL BENDS

		DIAMETER (D)							
BEND	DIM.	4"	6"	8"	10"	12"	16"	18"	20"	24"
11 1/4°	A	6"	8"	8"	1'-1"	1'-4"	1'-9"	1'-9"	1'-9"	2'-0"
	B	6"	7"	8"	9"	10"	1'-0"	1'-3"	1'-6"	1'-6"
	C	6"	7"	7"	8"	9"	9"	10"	1'-0"	1'-0"
22 1/2°	A	8"	10"	1'-4"	1'-7"	2'-0"	2'-6"	3'-3"	3'-3"	3'-9"
	B	6"	7"	8"	10"	10"	1'-0"	1'-3"	1'-6"	1'-6"
	C	7"	8"	9"	10"	1'-0"	1'-3"	1'-6"	1'-6"	1'-6"
45°	A	1'-1"	1'-4"	2'-0"	2'-6"	3'-3"	4'-3"	6'-0"	6'-0"	7'-0"
	B	6"	7"	8"	10"	11"	1'-3"	1'-3"	1'-6"	1'-8"
	C	7"	8"	9"	10"	1'-0"	1'-3"	1'-4"	1'-9"	1'-9"
90°	A	1'-10"	2'-3"	3'-3"	3'-9"	5'-0"	6'-0"	8'-0"	8'-0"	9'-9"
	B	7"	8"	9"	1'-0"	1'-0"	1'-4"	1'-8"	2'-0"	2'-0"
	C	1'-0"	1'-6"	1'-6"	1'-6"	1'-6"	1'-9"	1'-9"	2'-0"	2'-0"

NOTES:
1. BLOCKING DIMENSIONS SHOWN ARE MINIMUMS.
2. BLOCKING DIMENSIONS ARE BASED ON A STATIC PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF.
3. WHERE SOIL BEARING CAPACITY IS LESS THAN 2000 PSF, SUBMIT BLOCKING DESIGN CALCULATIONS.
4. THRUST BLOCKS FOR HORIZONTAL BENDS MAY BE DELETED WITH RESTRAINED JOINTS. THE ENGINEER SHALL CALCULATE LENGTH OF RESTRAINED SECTION.

DRAWN X DATE 5/28/04 SCALE NOT TO SCALE CHK'D X	CITY OF RICHMOND, VIRGINIA BUTTRESS FOR HORIZ. BENDS	DPU DWG. NUMBER: M-5



NOTES:
1. WHERE "A" IS GREATER THAN 2'-0" USE STANDARD EXTERIOR DROP MANHOLE.
2. WHERE "A" DISTANCE IS LESS THAN 2'-0" THE INCOMING SEWER SHALL BE LOWERED SO THAT THE TOP OF THE INCOMING SEWER IS NOT MORE THAN 6" ABOVE TOP OF THE OUTGOING SEWER, UNLESS APPROVED BY DPU TECHNICAL SERVICES DIVISION. ELIMINATE WYE AND 45 DEGREE BEND.
3. PIPE MATERIAL SHALL BE PVC OR DI AND SHALL MATCH THAT OF INCOMING SEWER.
4. FOR PVC PIPE, PROVIDE CONCRETE ENCASEMENT AS SHOWN. FOR DI PIPE, PROVIDE RESTRAINED JOINT.
5. PROVIDE STAINLESS STEEL STRAPS EVERY 3'-0" FOR DROPS GREATER THAN 6'-0".

DEPARTMENT OF PUBLIC UTILITIES	CITY OF RICHMOND, VIRGINIA EXTERIOR DROP MANHOLE NOT TO SCALE	REV. 12/09 M-3

UDC FINAL REVIEW SUBMITTAL

NOT FOR CONSTRUCTION

PLAN SET DATE - 07/19/2023

THIS DRAWING PREPARED AT THE
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YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE

DATE *07/19/2023*
DRAWN BY *K. UNDERBERG*
DESIGNED BY *C. NELSON*
CHECKED BY *A. WEHUNT*
SCALE *N.T.S.*

City of Richmond: New Fire Station #21

TIMMONS GROUP

CITY OF RICHMOND FIRE STATION 21
BROAD ROCK DISTRICT - CITY OF RICHMOND - VIRGINIA
UTILITY NOTES & DETAILS

JOB NO. *60040*
SHEET NO. *C7.21*

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