

1. ALL STORM DRAINAGE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE APPROVED PLANS AND CITY STANDARDS AND SPECIFICATIONS. ANY DEVIATION FROM THESE PLANS WILL REQUIRE PRIOR APPROVAL FROM THE OWNER, THE CITY ENGINEER, AND OTHER APPROPRIATE PUBLIC AGENCIES.

2. ALL PIPE MATERIALS SHALL MEET THE REQUIREMENTS OF THE CITY STANDARDS AND SPECIFICATIONS. ACCEPTABLE STORM DRAINAGE PIPE MATERIALS INCLUDE CONCRETE, PVC, HDPE, AND DUCTILE IRON. CORRUGATED METAL PIPES (GALVANIZED ALUMINUM OR STEEL) ARE NOT ACCEPTED BY THE CITY. ALL PIPE JOINTS MUST HAVE GASKETS AND SHALL BE WATER TIGHT UNLESS OTHERWISE DIRECTED BY THE CITY.

3. PIPE BEDDING MATERIAL SHALL BE 3/8-INCH MINUS PEA GRAVEL FOR ALL PIPE TYPES, EXCEPT DUCTILE IRON. BEDDING MATERIAL FOR DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF THE CITY'S STANDARDS AND SPECIFICATIONS (CHAPTER 4).

4. ALL TRENCH BACKFILL IN AREAS OF PAVEMENT OR STRUCTURAL LOADING SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY. ALL OTHER AREAS SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DRY DENSITY.

5. ALL PIPE SHALL BE PLACED ON STABLE EARTH. IF IN THE OPINION OF THE CITY INSPECTOR, THE EXISTING TRENCH FOUNDATION IS UNSATISFACTORY, THEN IT SHALL BE EXCAVATED BELOW GRADE AND BACKFILLED WITH GRAVEL BEDDING MATERIAL TO SUPPORT THE PIPE.

6. LOT DRAINAGE SYSTEMS, STUB—OUTS AND ANY DRAINS BEHIND THE SIDEWALK MUST BE INSTALLED AS REQUIRED PRIOR TO SIDEWALK CONSTRUCTION. STUB—OUTS SHALL BE MARKED WITH A 2"X4" WITH 3 FEET VISIBLE ABOVE GRADE AND MARKED "STORM". LOCATION AND DEPTH OF THESE INSTALLATIONS SHALL BE SHOWN ON THE AS—BUILT PLANS SUBMITTED TO THE CITY.

6. ALL CATCH BASINS SHALL BE TYPE 1 UNLESS OTHERWISE SHOWN ON THE PLANS AND APPROVED BY THE CITY. THE USE AND INSTALLATION OF INLETS IS DISCOURAGED.

7. ALL CATCH BASINS WITH A DEPTH OF 5 FEET (RIM TO INVERT) OR GREATER SHALL BE TYPE 2 CATCH BASINS EQUIPPED WITH 3/4-INCH DIAMETER SAFETY MANHOLE STEPS OR A MANHOLE LADDER PER CITY STANDARD DETAILS.

8. ALL GRATES SHALL BE MARKED "OUTFALL TO STREAM — DUMP NO POLLUTANTS". ALL SOLID COVER SHALL BE MARKED "DRAIN". ALL CATCH BASINS AND MANHOLES SHALL BE EQUIPPED WITH LOCKING FRAMES AND LIDS OR GRATES PER CITY STANDARD DETAILS.

9. ALL GRATES LOCATED IN THE GUTTER FLOW LINE (INLET AND CATCH BASIN) SHALL BE DEPRESSED 0.1 FOOT BELOW PAVEMENT LEVEL.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL MANHOLE, INLET AND CATCH BASIN FRAMES AND GRATES/COVERS TO GRADE JUST PRIOR TO CURB INSTALLATION.

11. ALL RETENTION/DETENTION FACILITIES SHALL BE INSTALLED AND IN OPERATION PRIOR TO, OR IN CONJUNCTION WITH, ALL CONSTRUCTION ACTIVITY, UNLESS OTHERWISE APPROVED BY THE CITY.

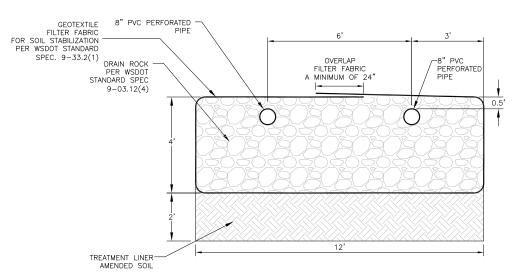
12. DETENTION/RETENTION PONDS WITH SIDE SLOPES STEEPER THAN 3:1 OR WITH A MAXIMUM WATER DEPTH GREATER THAN 3 FEET SHALL BE ENCLOSED WITH A VINYL COATED CHAIN LINK FENCE.

12. BIO-FILTRATION SWALES AND/OR FILTER STRIPS SHALL BE CONSTRUCTED, BEDDED OR SEEDED AND IN OPERATION PRIOR TO, OR SODDED IN CONJUNCTION WITH, ASPHALT PAVING. THE VEGETATION IN THE BIO-SWALE MUST BE WELL ESTABLISHED BEFORE PAVING BEGINS.

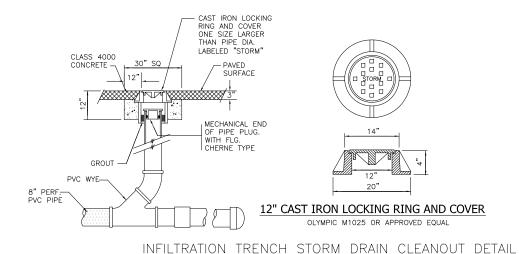
13. STORM WATER RETENTION/DETENTION FACILITIES, STORM DRAINAGE PIPE AND CATCH BASINS SHALL BE FLUSHED AND CLEANED BY THE DEVELOPER PRIOR TO THE CITY'S ACCEPTANCE OF THE PROJECT.

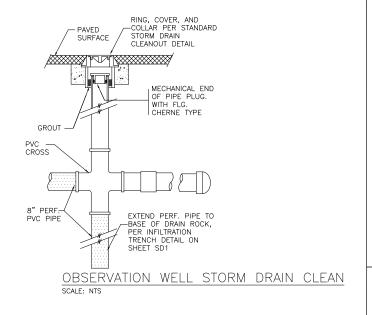
14. WHEN INFILTRATION FACILITIES ARE CONSTRUCTED, COMPACTION OF SOIL IS NOT ALLOWED, AS THE DESIGN IS BASED ON NATURAL SOIL IN THE ORIGINAL LOCATION. VEHICLES SHALL NOT BE DRIVEN OVER THE INFILTRATION AREA DURING CONSTRUCTION.

15. IF THE CONTRACTOR ENCOUNTERS GROUNDWATER OR SOIL CONDITIONS DIFFERENT FROM THAT SHOWN IN THE PLANS DURING INFILTRATION SYSTEM INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR

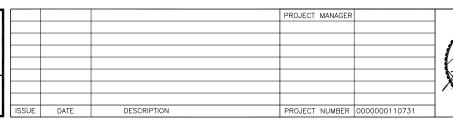


## INFILTRATION TRENCH DETAIL SCALE: NTS





HDR Engineering, Inc.





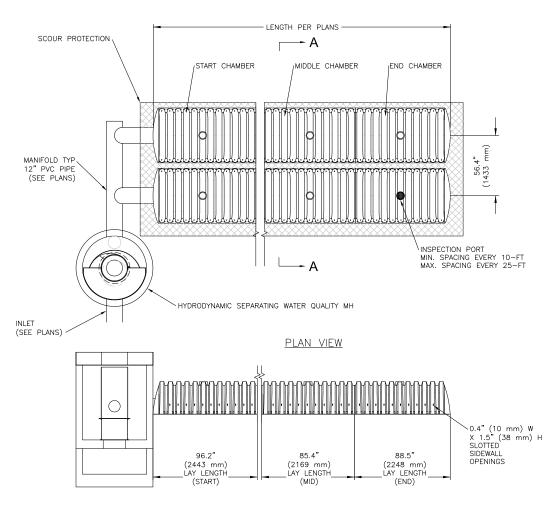


# CITY OF ARLINGTON 67th AVENUE PHASE III RECONSTRUCTION PROJECT

## STORM DETAILS

SD1 (1 OF 2)

0 ½	<u>"</u> 1 "	FILENAME	SD-00C-01.dwg	SHEET
		SCALE	N.T.S.	072

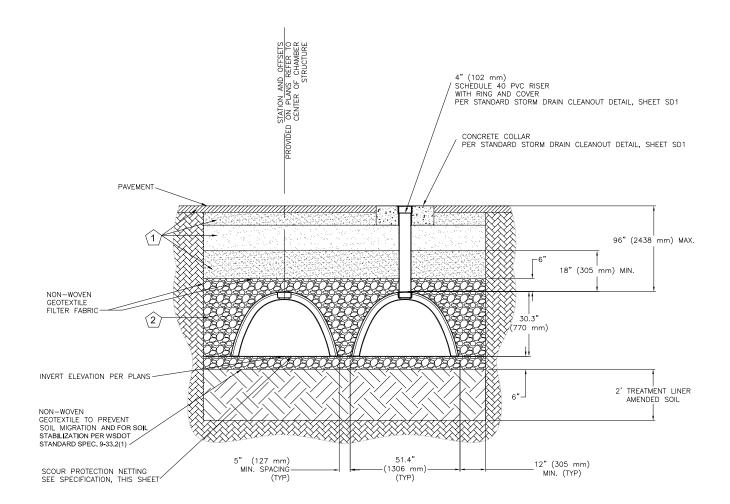


#### **ELEVATION VIEW**

#### TYPICAL LAYOUT

STRUCTURE TYPE	LIGHT WEIGHT - ORIENTED		
POLYMER TYPE	POLYPROPYLENE		
COLOR	BLACK		
ADDITIVES	MIN. 2% CARBON BLACK		
UNIT WEIGHT	28 LB./M FT²		
MD & TD MESH SIZE	.50" X .50" TARGET		
MD & TD TENSILE STRENGTH	90.0/81.0 MD/TD MIN. LBS./3 INCHES		

SCOUR PROTECTION NETTING SPECIFICATION



KEY ()

1. SEE SHEETS TS1-TS4 FOR PROPOSED PAVEMENT SECTION DETAILS

2. DRAIN ROCK PER WSOT STANDARD SPEC 9-03.12(4).
INSTALL TO MIN. 95% STANDARD DENSITY PER AASHTO T99.

#### GENERAL NOTES

- 1. ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS SHALL BE VERIFIED BY THE ENGINEER OF RECORD.
- ENGINEER OF RECORD.

  2. PRIOR TO INSTALLATION OF THE CHAMBER SYSTEM A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED. THOSE REQUIRED TO ATTEND ARE THE SUPPLIER OF THE SYSTEM, THE GENERAL CONTRACTOR, SUB-CONTRACTORS AND THE ENGINEER.

  3. CHAMBERS ARE MANUFACTURED FROM POLYPROPYLENE PLASTIC.

  4. CHAMBER SYSTEM TO MEET AASHTO HS20/HS25 LIVE LOADING, PER AASHTO LRFD SECTION 12.

- 5. ACCESS COVERS TO MEET AASHTO HS20/HS25 LIVE LOADING.
  6. MINIMUM COVER IS 18-INCHES (457 mm) AND MAXIMUM COVER IS 96-INCHES (2438 mm) TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR COVER HEIGHTS GREATER THAN 96-INCHES (2438 mm) CONTACT YOUR LOCAL REPRESENTATIVE. FOR COVER HEIGHTS GREATER

#### INSTALLATION NOTES

- 1. MANUFACTURER INSTALLATION GUIDE TO BE REVIEWED BY CONTRACTOR PRIOR TO INSTALLATION.

  2. PRIOR TO PLACING BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, A GEOGRID SHALL BE UTILIZED OR UNSUITABLE MATERIAL SHALL BE REMOVED AND BROUGHT BACK TO GRADE WITH FILL MATERIAL AS APPROVED BY THE ENGINEER OF RECORD. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE BEDDING MATERIAL CAN BE PLACED.

  3. THE SCOUR PROTECTION NETTING TO EXTEND 1'-O" (305 mm) BEYOND OUTSIDE EDGE OF CHAMBERS.

  4. COVER ANY OPEN VOID SPACES GREATER THAN ¾" (19 mm) ON CHAMBERS WITH A NON-WOVEN GEOTEXTILE TO PREVENT INFILITRATION OF BACKFILL MATERIAL.

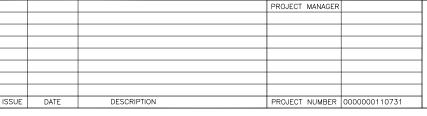
  5. STONE EMBEDMENT MATERIAL SHALL BE INSTALLED TO 95% STANDARD PROCTOR DENSITY AND PLACED IN 6-INCH (152 mm) TO 8-INCH (203 mm) LIFTS SUCH THAT THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANY TIME. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 90% SPD. BACKFILLING SHALL BE ADVANCED ALONG THE LENGTH OF THE CHAMBER ROWS AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING AND DISPLACEMENT OF THE CHAMBERS. THE MINIMUM CHAMBER SPACING MUST BE MAINTAINED.

  6. REFER TO MANUFACTURER INSTALLATION GUIDE FOR TEMPORARY CONSTRUCTION LOADING GUIDELINES.

  7. IT IS ALWAYS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

SECTIONAL CHAMBER INFILTRATION SYSTEM







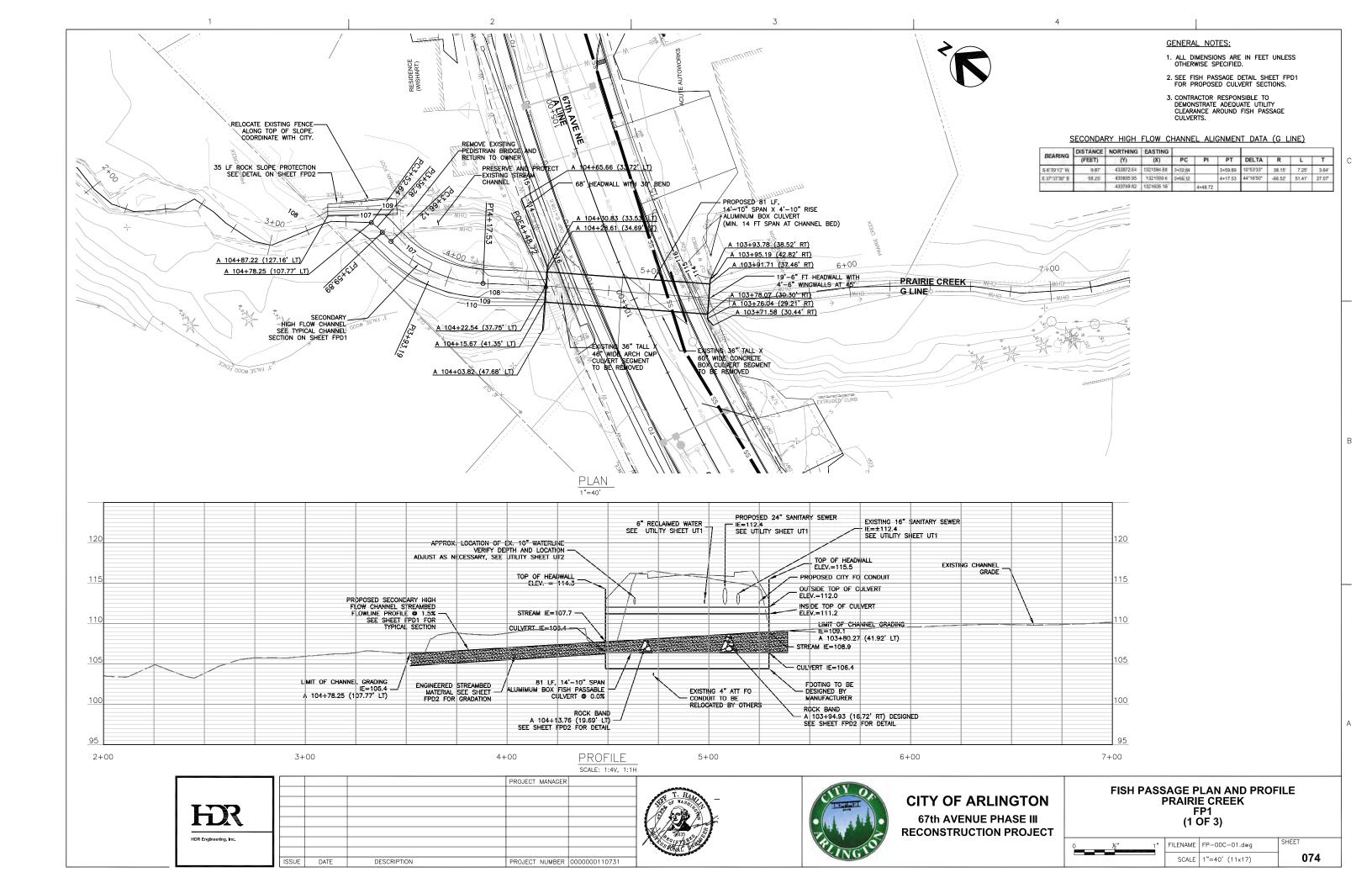


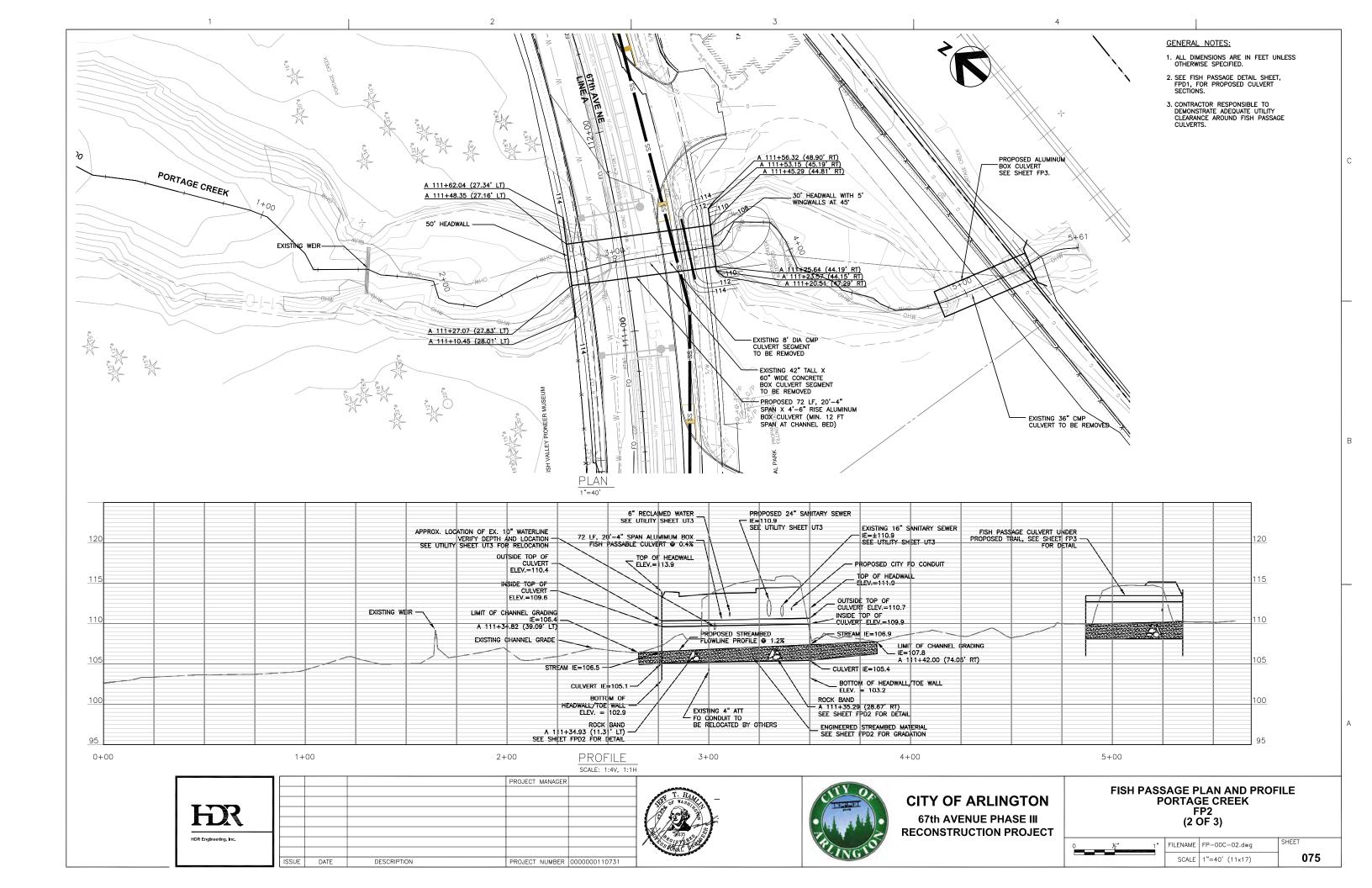
#### **CITY OF ARLINGTON 67th AVENUE PHASE III RECONSTRUCTION PROJECT**

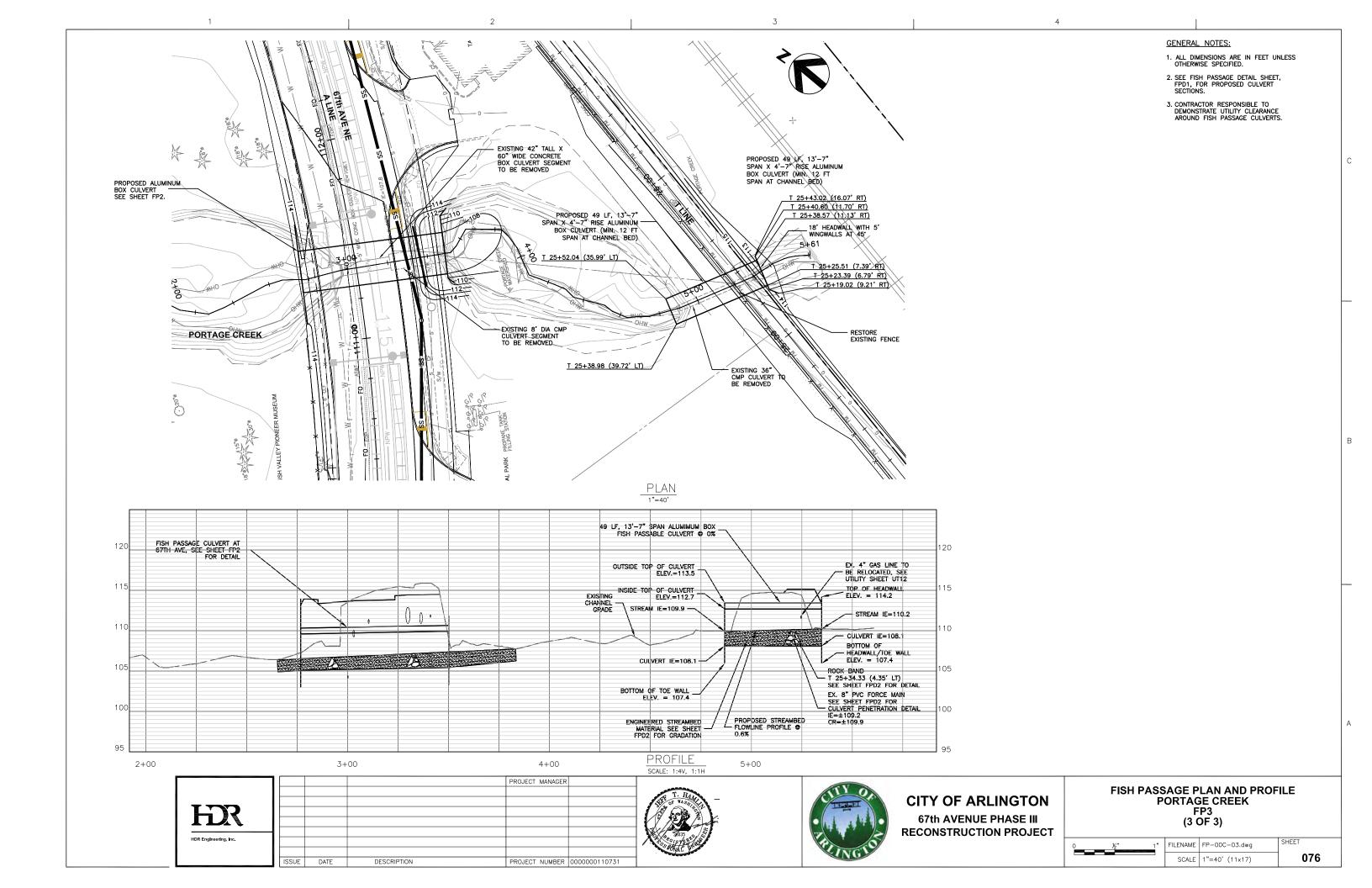
#### **STORM DETAILS**

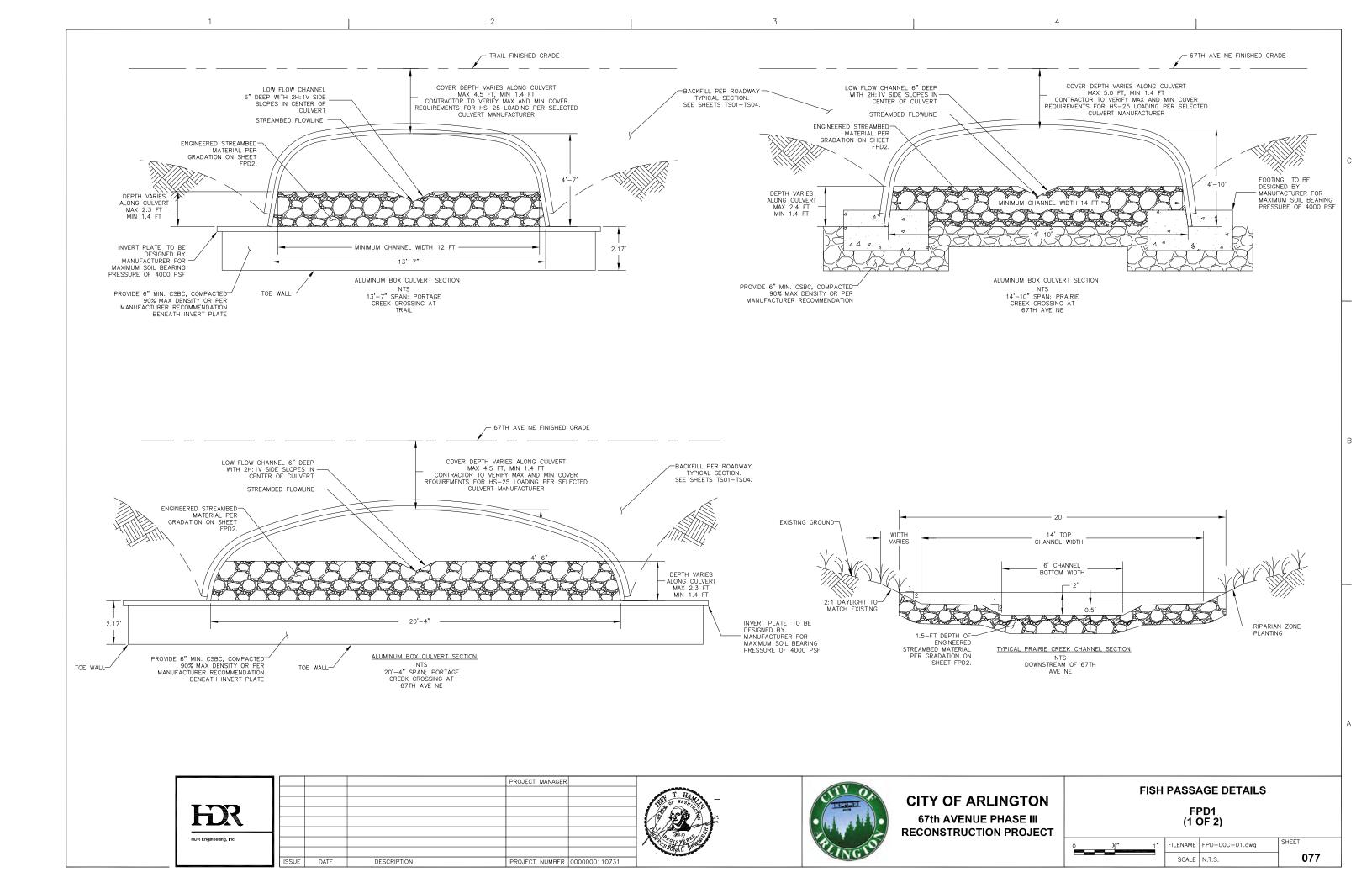
SD2 (2 OF 2)

½"  1"	FILENAME	SD-00C-02.dwg	SHEET
	SCALE	N.T.S.	073





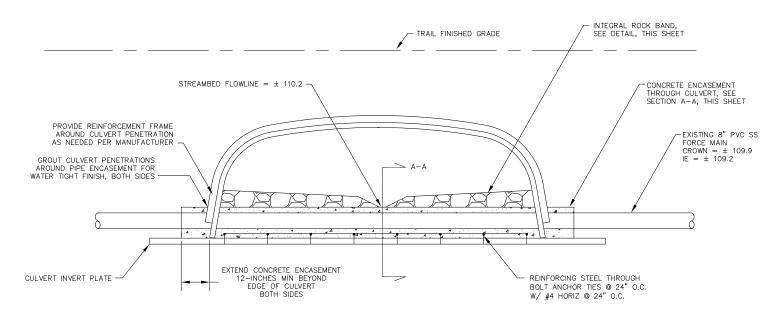




# +--±1-ft-VARIES ALONG CULVERT PROFILE ROCK BAND CONSTRUCTED -WITH 12" to 14" STREAMBED COBBLE VARIES-

#### ROCK BAND DETAIL

ROCK BAND SCHEDULE							
ALIGNMENT	ELEMENT	STATION	TOP ELEVATION	BOTTOM ELEVATION	BOTTOM WIDTH		
A LINE	ROCK BAND 1	A 104+13.76 (19.69' LT)	108.0'	106.4	6.6'		
A LINE	ROCK BAND 2	A 103+94.93 (16.72' RT)	108.7'	106.4'	9.0'		
A LINE	ROCK BAND 3	A 111+34.93 (11.31' LT)	106.7'	105.2'	7.0'		
A LINE	ROCK BAND 4	A 111+35.29 (28.67' RT)	107.2'	105.4'	8.2'		
T LINE	ROCK BAND 5	T 25+34.33 (4.35' LT)	SEE PENET	RATION DET	AIL BELOW		



#### ALUMINUM BOX CULVERT PENETRATION PORTAGE CREEK CROSSING AT TRAIL

#### ENGINEERED STREAMBED MATERIAL GRADATION

ENGINEERED STREAM MATERIAL (ESM) SHALL CONSIST OF A WELL-GRADED UNIFORM MIXTURE OF DIVERSIFIED PARTICLE SIZES DESIGNED TO BE IMMOBILE UP TO A STABLE BED DESIGN FLOW. ESM SHALL BE FILLED IN LIFTS WITH ONE PART BY VOLUME STREAMBED SEDIMENT AND TWO PARTS BY VOLUME OF STREAMBED COBBLES AS FOLLOWS:

a) STREAMBED SEDIMENT: FURNISH A WELL—GRADED MIX OF ROUNDED RIVER ROCK AND SEDIMENT WHICH IS FREE DRAINING AND FREE OF EXCESS MOISTURE, MUCK, FROZEN LUMPS, ROOTS, SOD OR OTHER DELETERIOUS MATERIAL CONFORMING TO THE FOLLOWING:

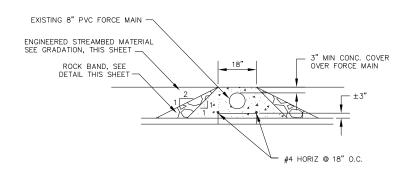
MAXIMUM PARTICLE SIZE 3 INCHES

MATERIAL PASSING NO. 200 SIEVE PER AASHTO T 27 AND T 11 10 to 15%

b) STREAMBED COBBLES: FURNISH A WELL—GRADED MIXTURE OF SOIL, GRAVEL AND ROUNDED RIVER COBBLES TO SIMULATE A NATURAL STREAMBED. THE SOIL, GRAVEL AND ROUNDED RIVER COBBLES SHOULD BE HARD AND DURABLE ROCK WITH SIMULAR COLOR AND CHARACTERISTICS AS PRESENT AT THE CONSTRUCTION SITE. SCREENED, ON SITE, NATIVE COBBLES MEETING GRADATION REQUIREMENTS MAY BE SUBSTITUTED UPON ENGINEER APPROVAL. GRADATION REQUIREMENTS FOR STREAMBED COBBLES, SHALL CONFORM TO BED CLASS 6 CLASSIFICATION AS FOLLOWS:

RELOCATE EXISTING FENCE TO	SIZE DIAMETER 14-INCH 6-INCH 2 1/2-INCH 3/4-INCH NO. 10	% PASSING 100 84 50 16	
	INSTALL ROCK TO TOP OF EMBANKMENT 2		
	1	EXTEND ROCK 24" BELOW STREAM	BED
QUARRY SPALLS PER WSDOT STD SPEC 9-13.6 —		STRE	FAMBED

ROCK SLOPE PROTECTION



SECTION A-A

CULVERT PENETRATION WITH INTEGRAL ROCK BAND (#5)

PORTAGE CREEK CROSSING AT TRAIL



			PROJECT MANAGER	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	0000000110731





12" ROCK THICKNESS

GEOTEXTILE FILTER FABRIC FOR SOIL STABILIZATION PER WSDOT

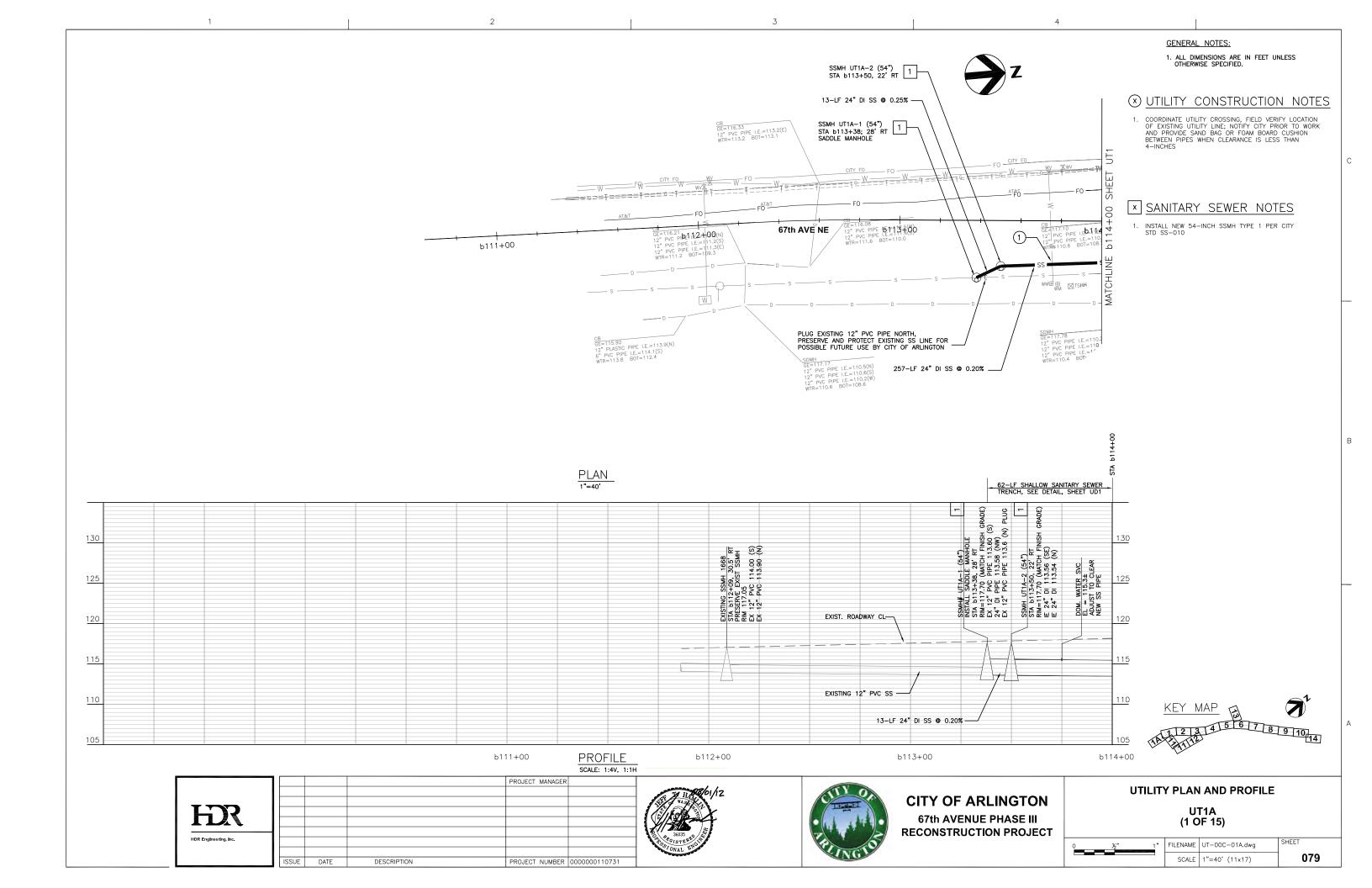
STANDARD SPEC. 9-33.2(1)

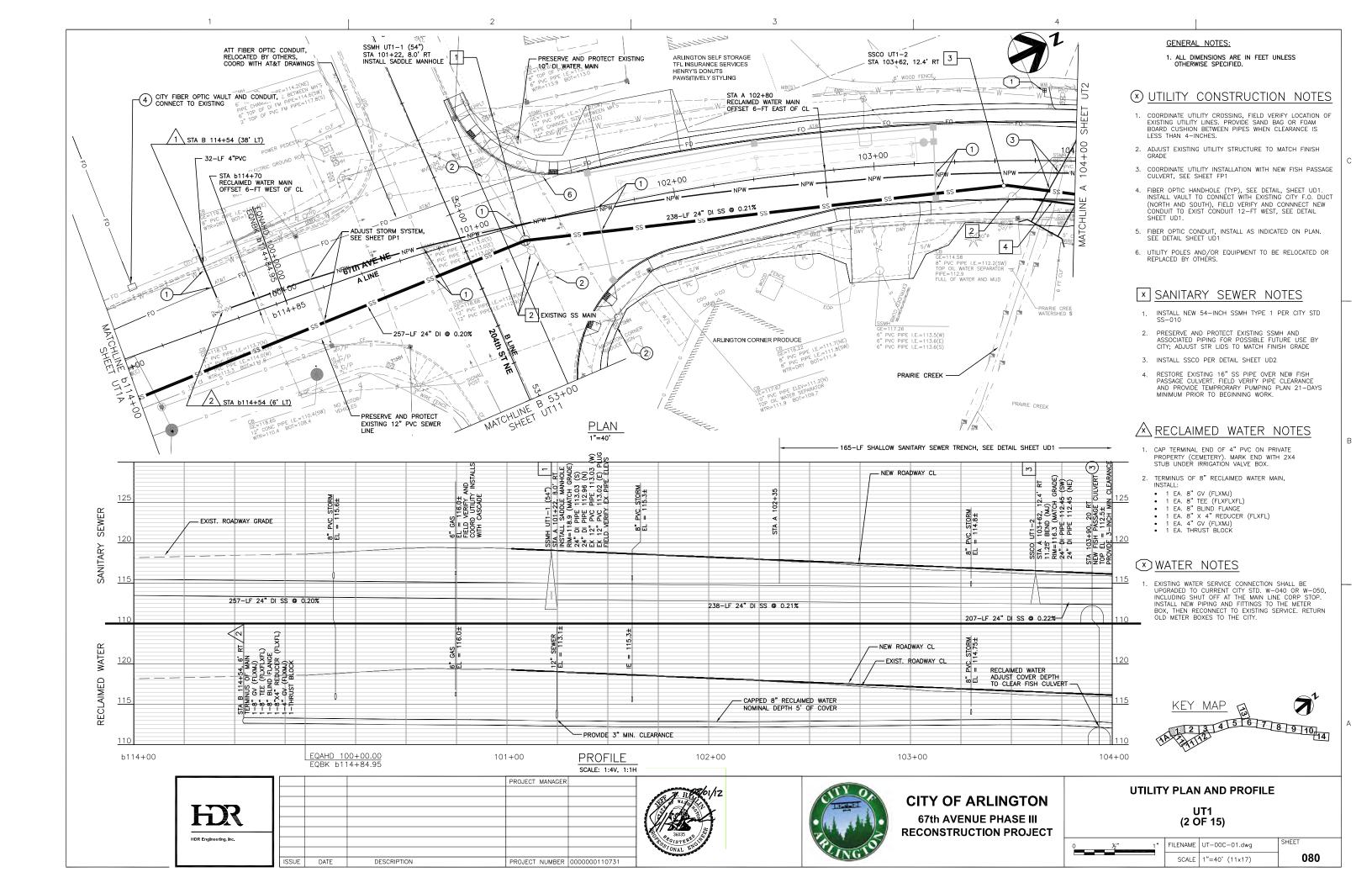
### **CITY OF ARLINGTON 67th AVENUE PHASE III RECONSTRUCTION PROJECT**

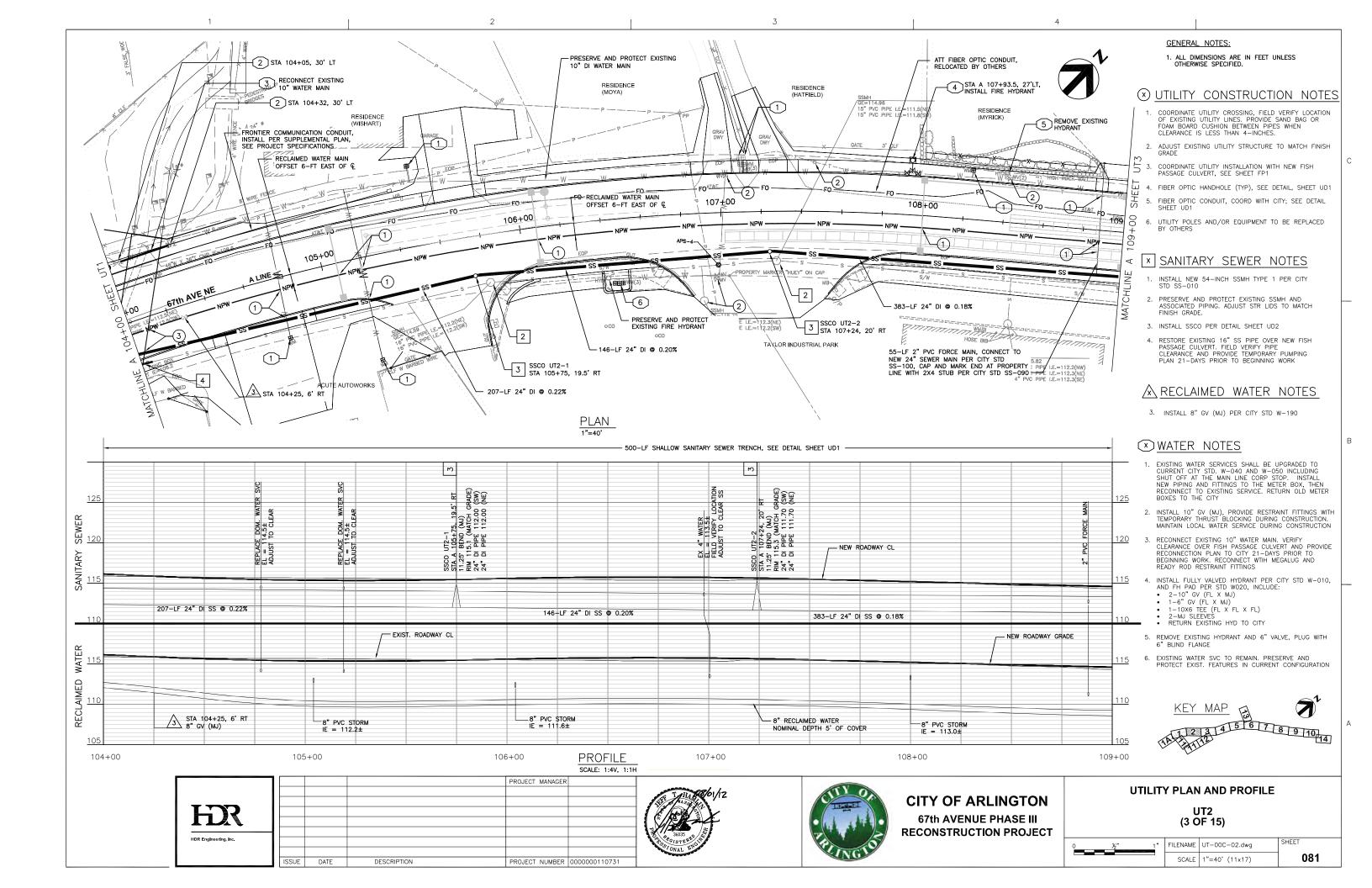
#### **FISH PASSAGE DETAILS**

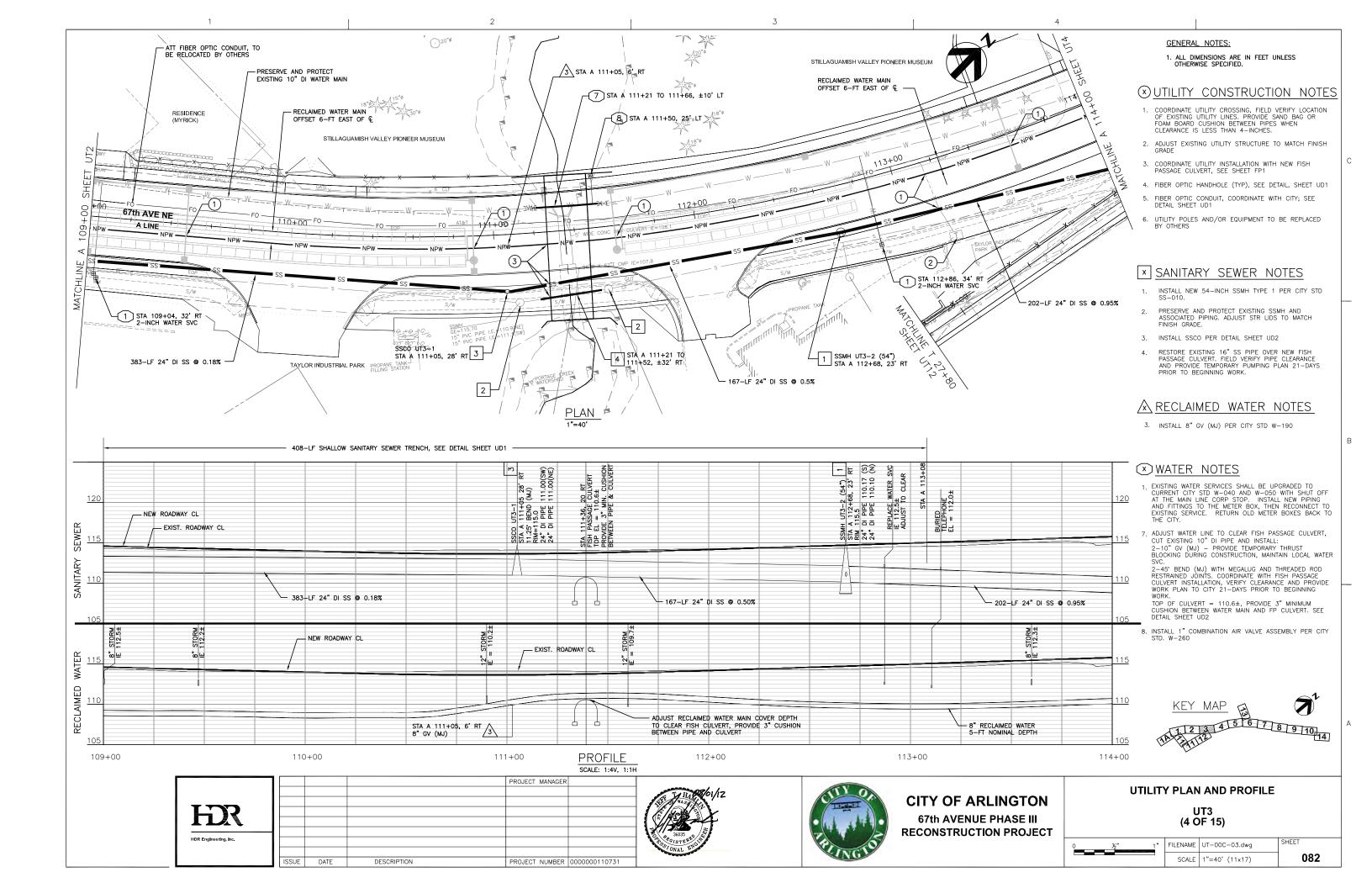
FPD2 (2 OF 2)

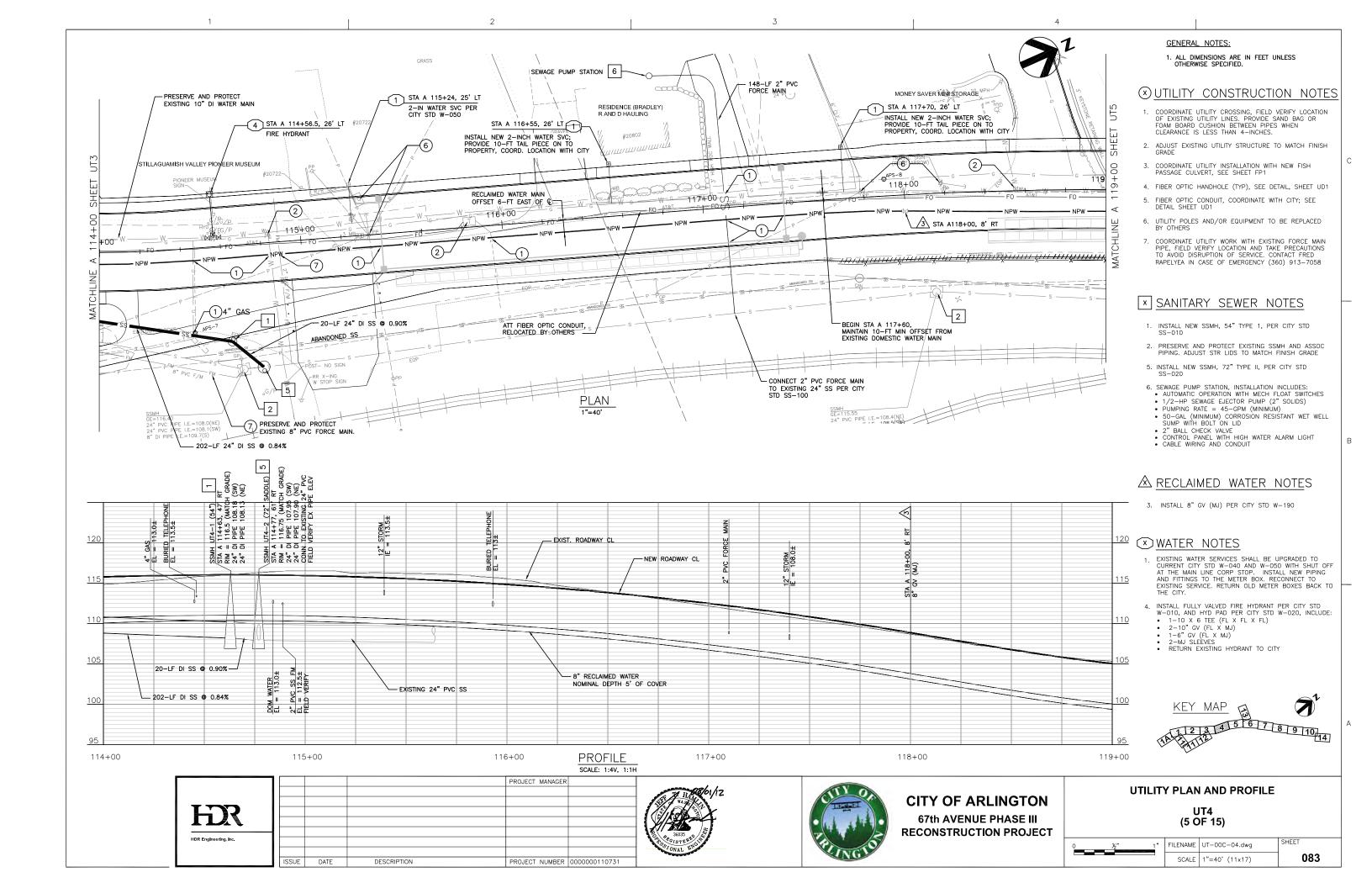
½" 1"	FILENAME	FPD-00C-02.dwg	SHEET
	SCALE	N.T.S.	078

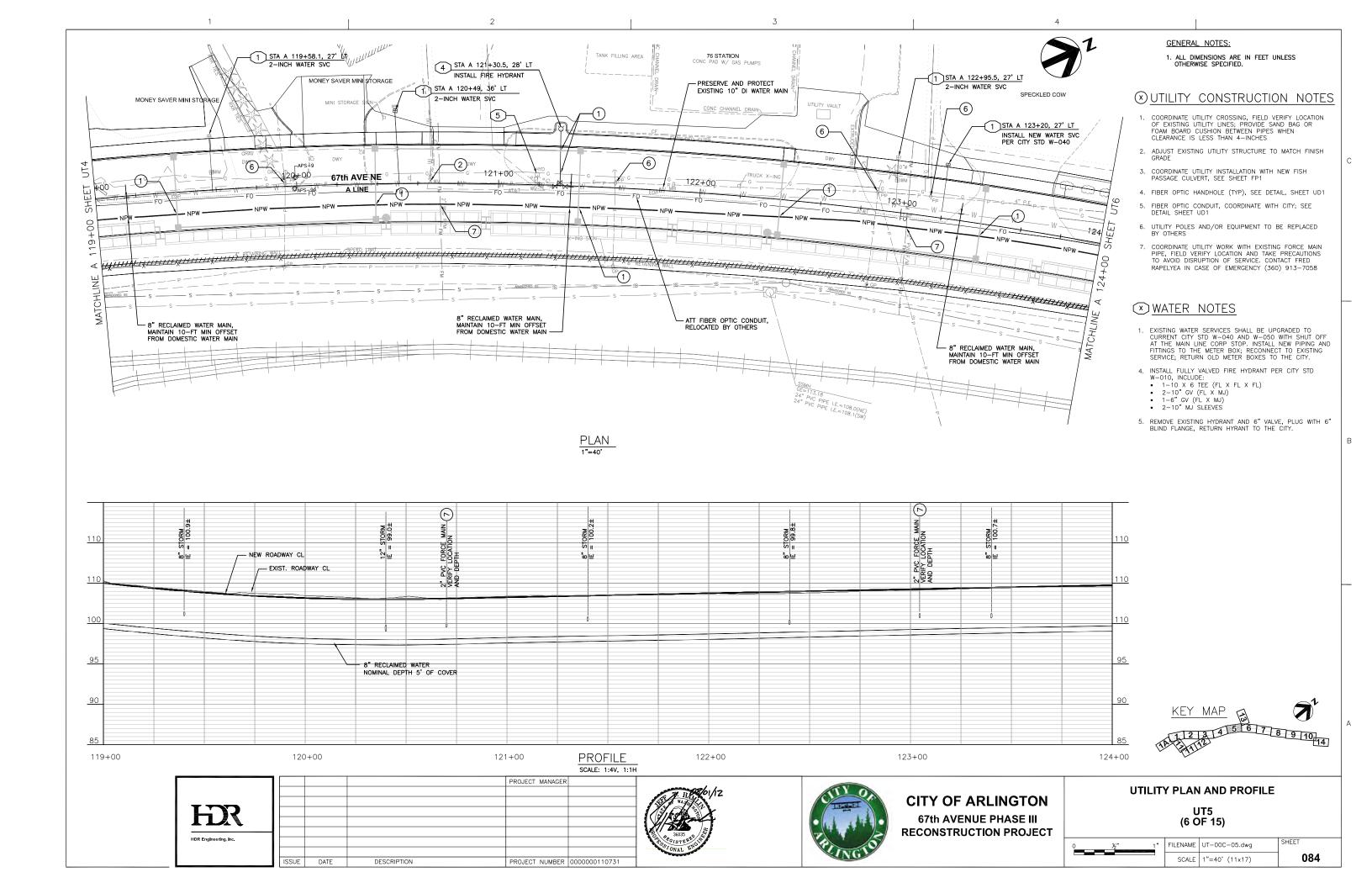


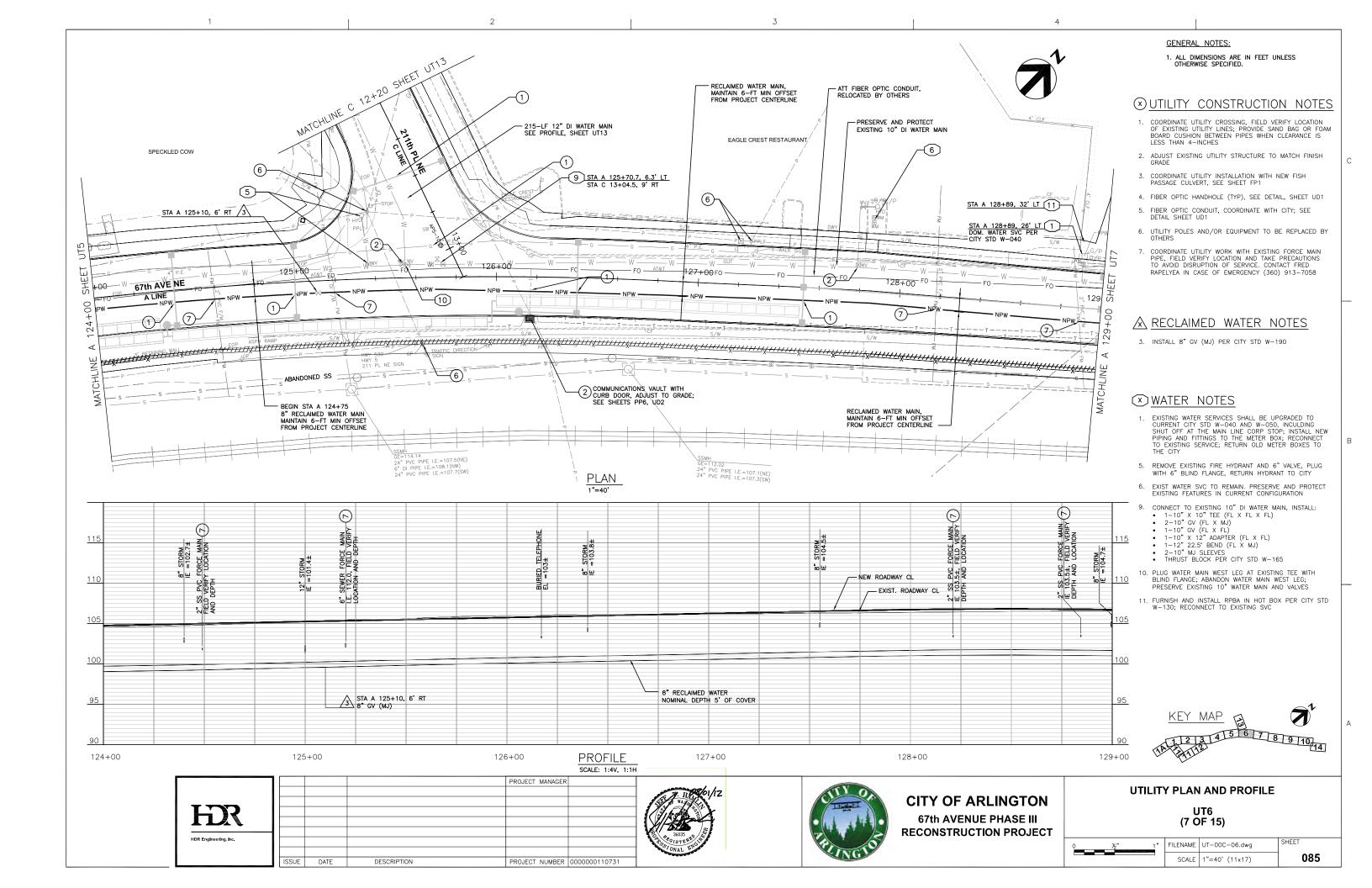


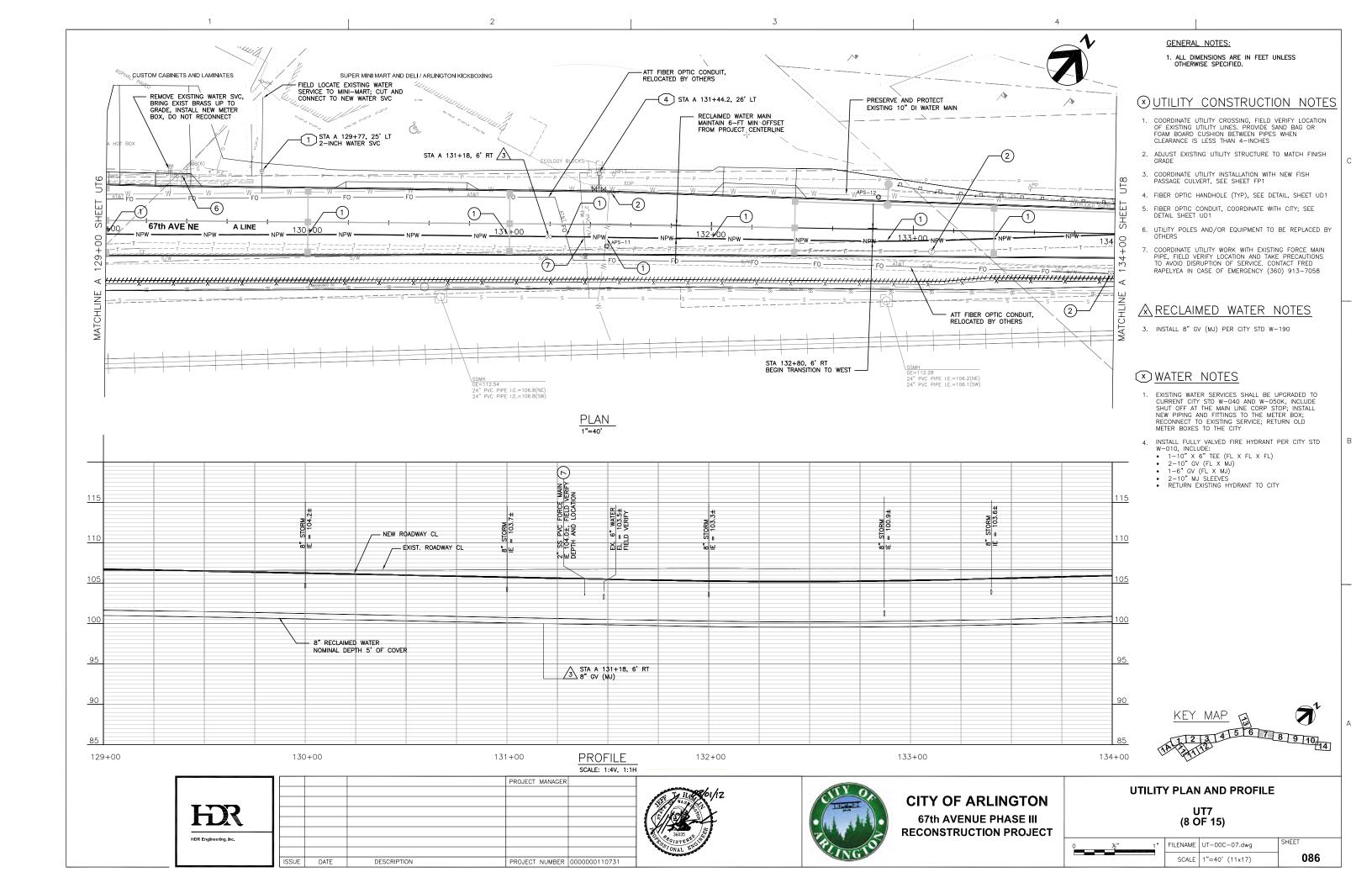


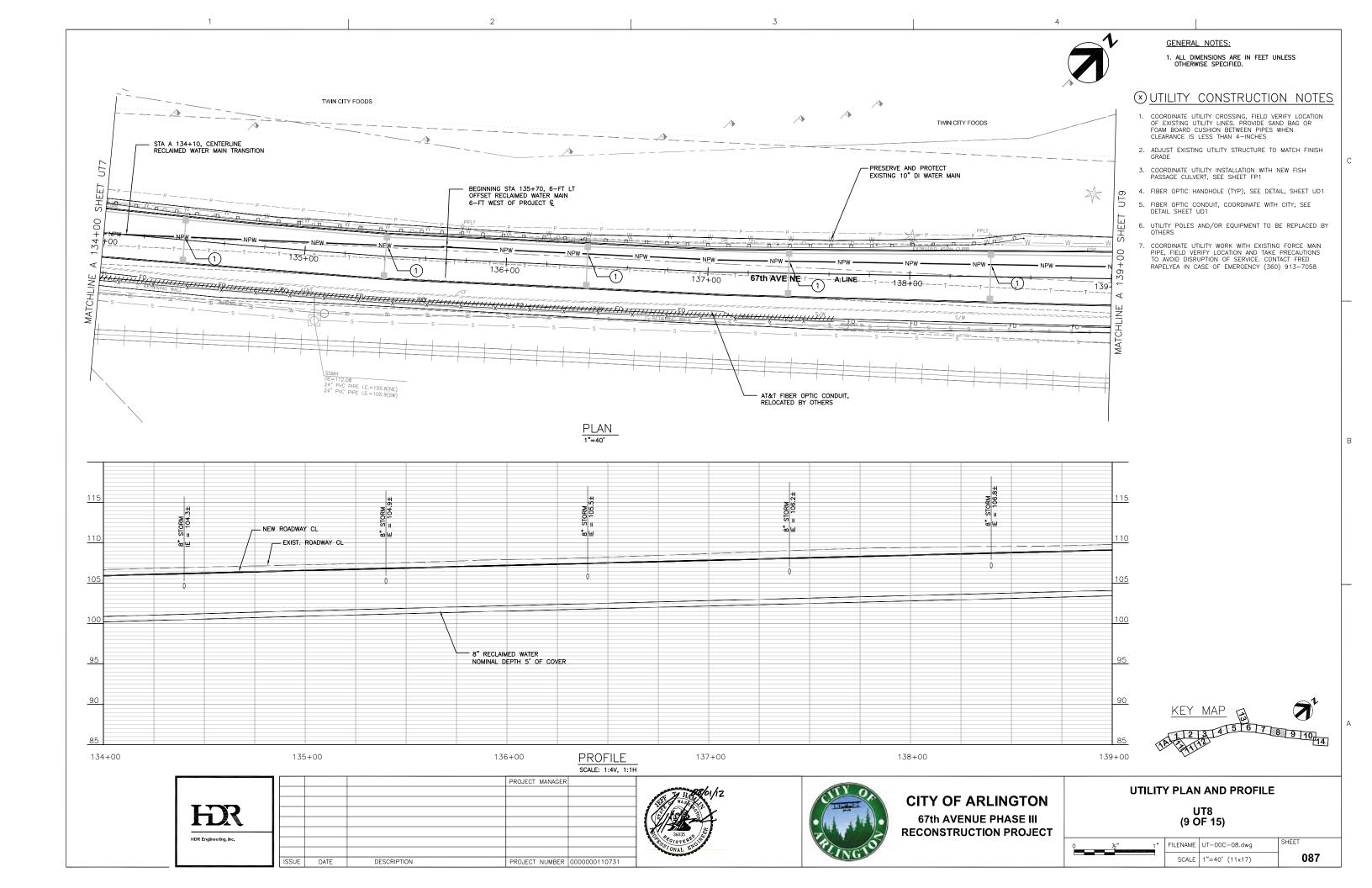


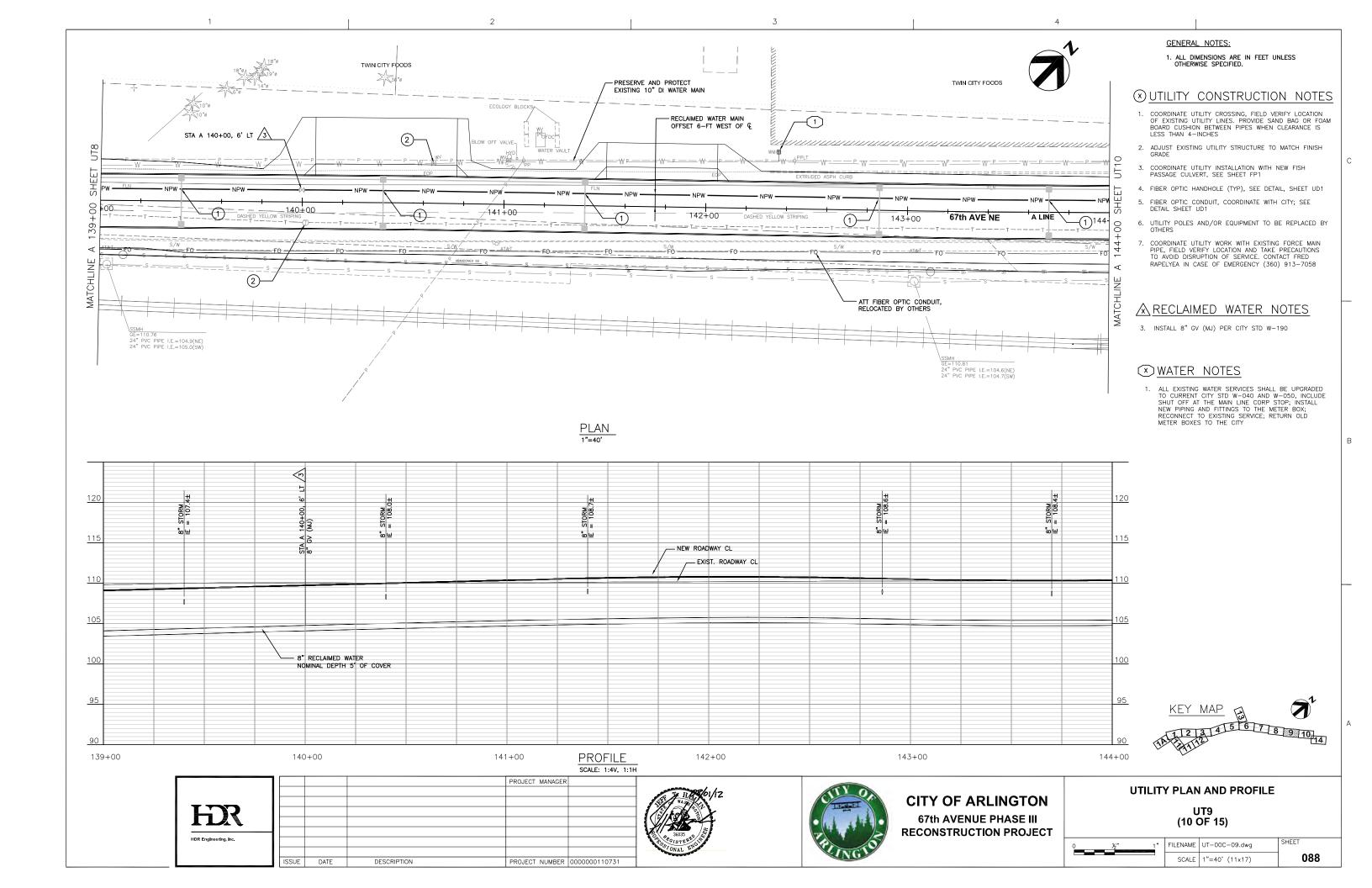


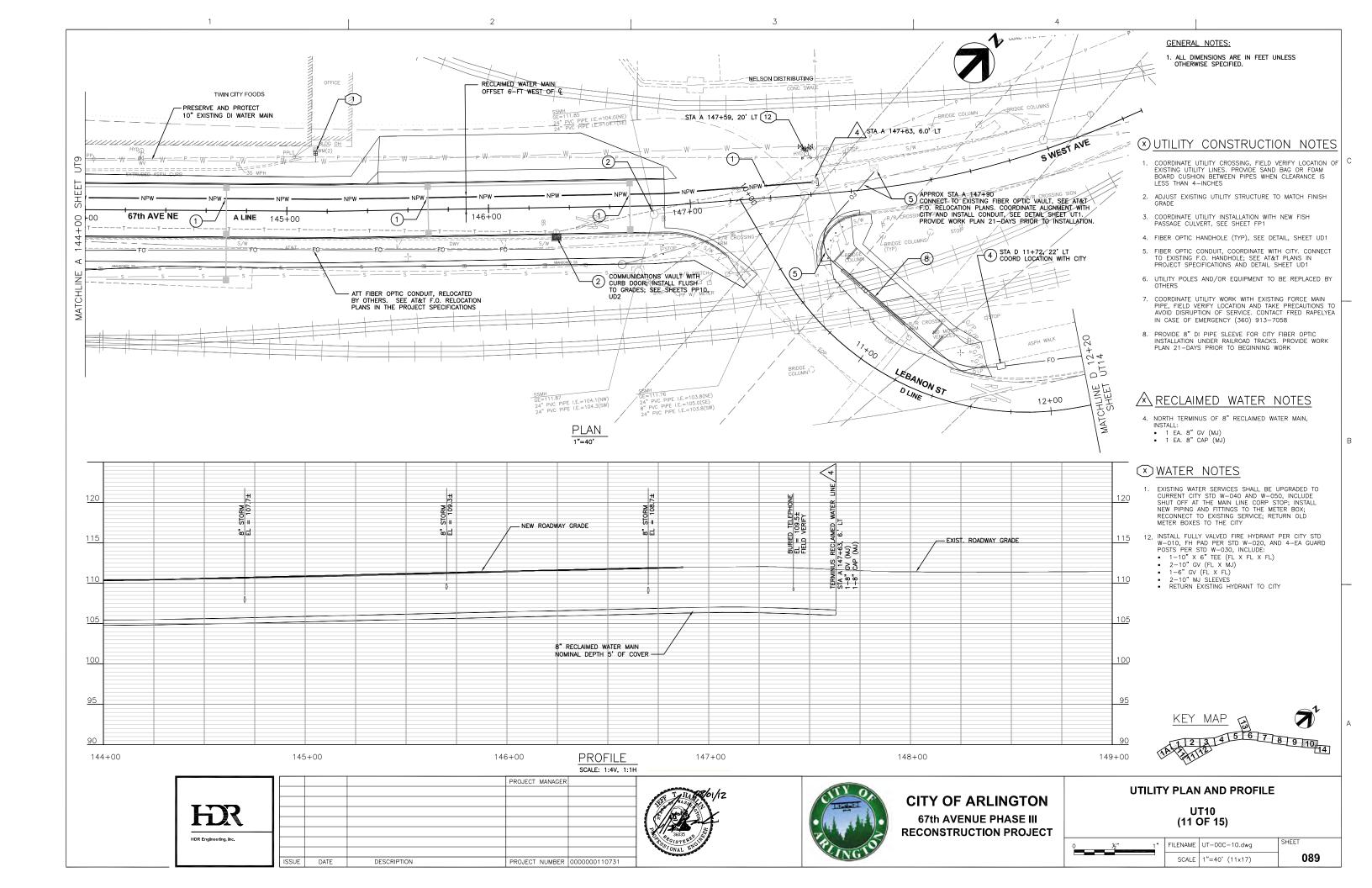


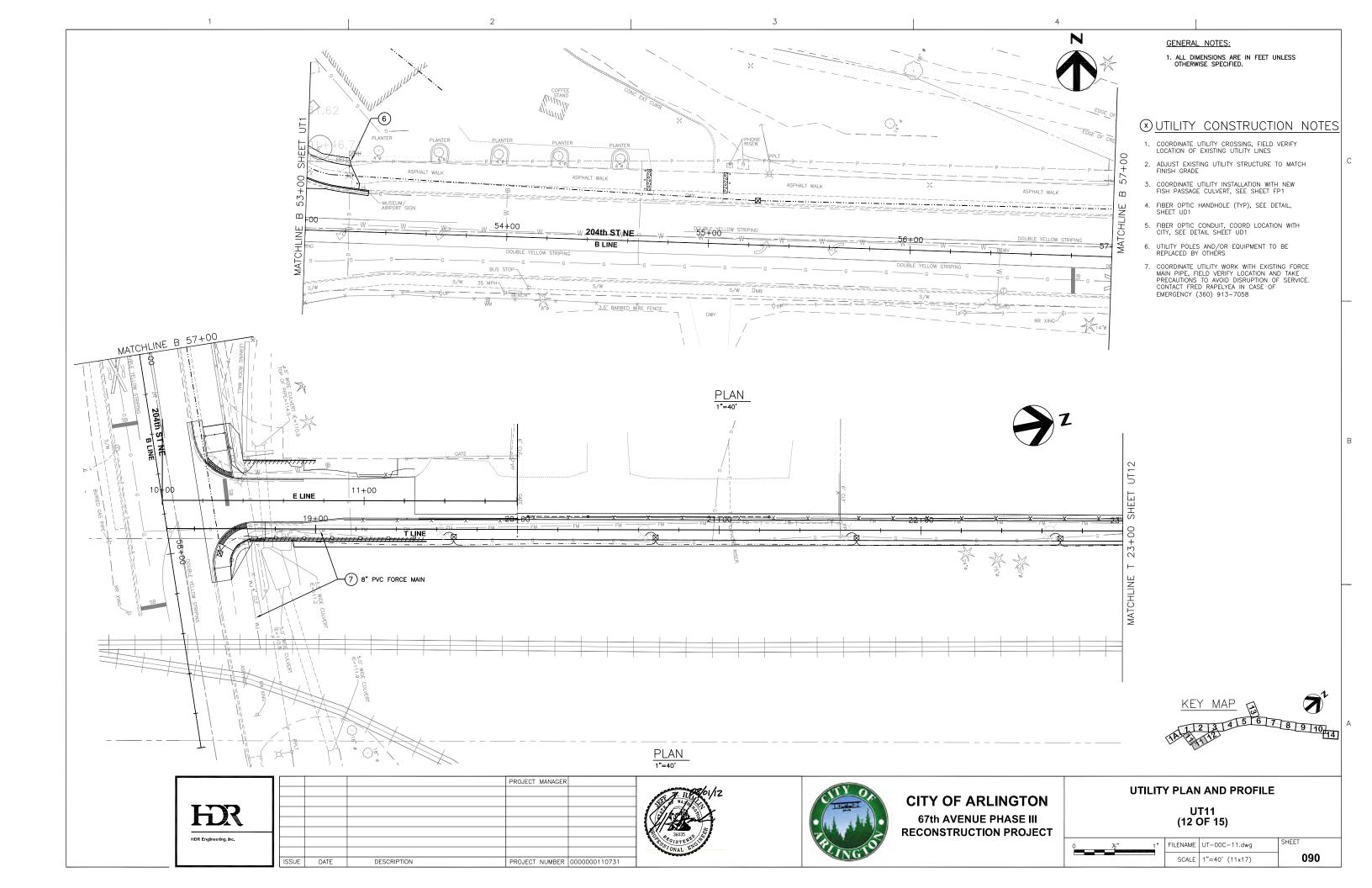


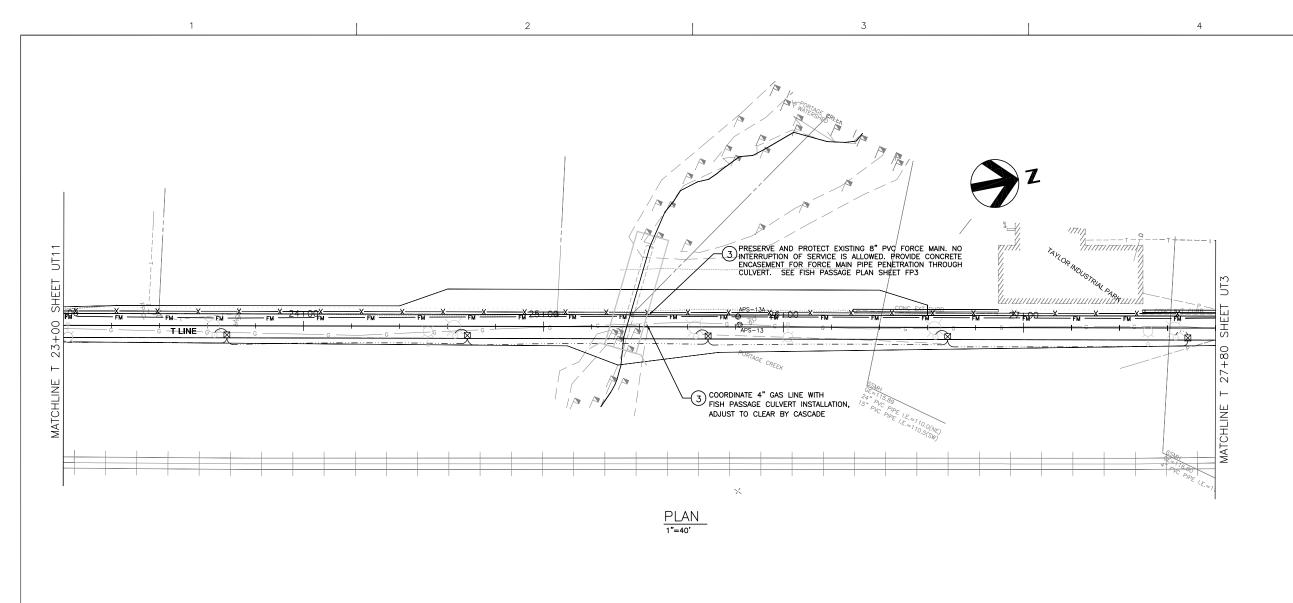












#### **GENERAL NOTES:**

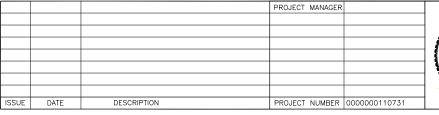
 ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SPECIFIED.

#### **WUTILITY CONSTRUCTION NOTES**

- COORDINATE UTILITY CROSSING, FIELD VERIFY LOCATION OF EXISTING UTILITY LINES. PROVIDE SAND BAG OR FOAM BOARD CUSHION BETWEEN PIPE FEATURES WHEN CLEARANCE IS LESS THAN 4—INCHES
- 2. ADJUST EXISTING UTILITY STRUCTURE TO MATCH FINISH GRADE
- COORDINATE EXISTING UTILITIES WITH NEW FISH PASSAGE CULVERT, SEE SHEET FP3
- 4. FIBER OPTIC HANDHOLE (TYP), SEE DETAIL, SHEET UD1
- 5. FIBER OPTIC CONDUIT, COORD WITH CITY
- 6. UTILITY POLES AND/OR EQUIPMENT TO BE REPLACED BY OTHERS
- 7. COORDINATE UTILITY WORK WITH EXISTING FORCE MAIN PIPE, FIELD VERIFY LOCATION AND TAKE PRECAUTIONS TO AVOID DISRUPTION OF SERVICE. CONTACT FRED RAPELYEA IN CASE OF EMERGENCY (360) 913-7058



HDR Engineering, Inc.







# CITY OF ARLINGTON 67th AVENUE PHASE III RECONSTRUCTION PROJECT

#### **UTILITY PLAN AND PROFILE**

UT12 (13 OF 15)

0 ½" 1"	FILENAME	UT-00C-12.dwg	SHEET
	SCALE	1"=40' (11x17)	091

**GENERAL NOTES:** 1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SPECIFIED. ABANDON EXISTING 6" WATER MAIN IN PLACE 215-LF 12" DI WATER MAIN 2. ADJUST EXISTING UTILITY STRUCTURE TO MATCH FINISH GRADE 3. COORDINATE UTILITY INSTALLATION WITH NEW FISH PASSAGE CULVERT, SEE SHEET FP1 STA C 10+89, 11' RT 14 4. FIBER OPTIC HANDHOLE (TYP), SEE DETAIL, SHEET UD1 5-LF 6" DI WATER MAIN 5. FIBER OPTIC CONDUIT, COORDINATE WITH CITY (15) 7 11+00 12+00 6. UTILITY POLES AND/OR EQUIPMENT TO BE REPLACED BY OTHERS 10+00 STA C 10+84, 15' RT (13)-211th PL NE C LINE OF EMERGENCY (360) 913-7058  $\circ$ 2" GAS 1)-**WATER NOTES**  EXISTING WATER SERVICES SHALL BE UPGRADED TO CURRENT CITY STD W-040 AND W-050, INCLUDE SHUT OFF AT THE MAIN LINE CORP STOP; INSTALL NEW PIPING AND FITTINGS TO THE METER BOX; RECONNECT TO EXISTING SERVICE; RETURN OLD METER BOXES TO THE CITY STA C 11+88, 31' RT (1)-STA C 12+10, 32' RT 4 INSTALL FULLY VALVED FIRE HYDRANT PER CITY STD W-010, WITH FH PAD PER W-020, INCLUDE:

• 1-12" X 6" TEE (FL X FL X FL X FL)

• 2-12" BV (FL X MJ)

• 1-6" GV (FL X MJ) 222 PLAN 1"=40' RETURN EXISTING HYDRANT TO CITY SEE SHEET UT6 FOR CONN TO 10" WATER MAIN CONNECT TO EXISTING 6" DI WATER MAIN, INCLUDE: • 1-6" 45" BEND (MJ)
• 1-6" MJ SLEEVE
• JOINTS SHALL BE MEGALUG • 1-12" X 6" REDUCER (FL X MJ) 1-6" 45" BEND (FL X MJ)
 JOINTS SHALL BE MEGALUG 115 115

#### STA C 10+84, 15' RT CONNECT TO EXISTING 6" WATER MAIN STA C 10+89, 11' R 1-12"X6" REDUCER ( 1-12" 45' BEND (FL DI FOR 102.5± VERIFY 110 EXISTING CL GRADE-110 PROPOSED EE 6. CL GRADE-105 <u>105</u> - PROPOSED SURFACE AT 67TH AVE NE 100 100 EXISTING 6 WATER MAIN --215-LF 12" DI WATER MAIN 95 90 90 11+00 14+00 10+00 12+00 13+00 PROFILE

SCALE: 1:4V, 1:1H

PROJECT MANAGER

PROJECT NUMBER 0000000110731

HOR

HDR Engineering, Inc.

ISSUE DATE

DESCRIPTION

#### **\*** UTILITY CONSTRUCTION NOTES

- 1. COORDINATE UTILITY CROSSING, FIELD VERIFY LOCATION OF EXISTING UTILITY LINES, PROVIDE SAND BAG OR FOAM BOARD CUSHION BETWEEN PIPES WHEN CLEARANCE IS LESS THAN 4-INCHES

- 7. COORDINATE UTILITY WORK WITH EXISTING FORCE MAIN PIPE, FIELD VERIFY LOCATION AND TAKE PRECAUTIONS TO AVOID DISRUPTION OF SERVICE. CONTACT FRED RAPELYEA IN CASE

LOCATE FORCE MAIN (HORIZ AND VERT), SUBMIT LOCATION AND PLAN 21 DAYS PRIOR TO BEGINNING WORK



# **UTILITY PLAN AND PROFILE**

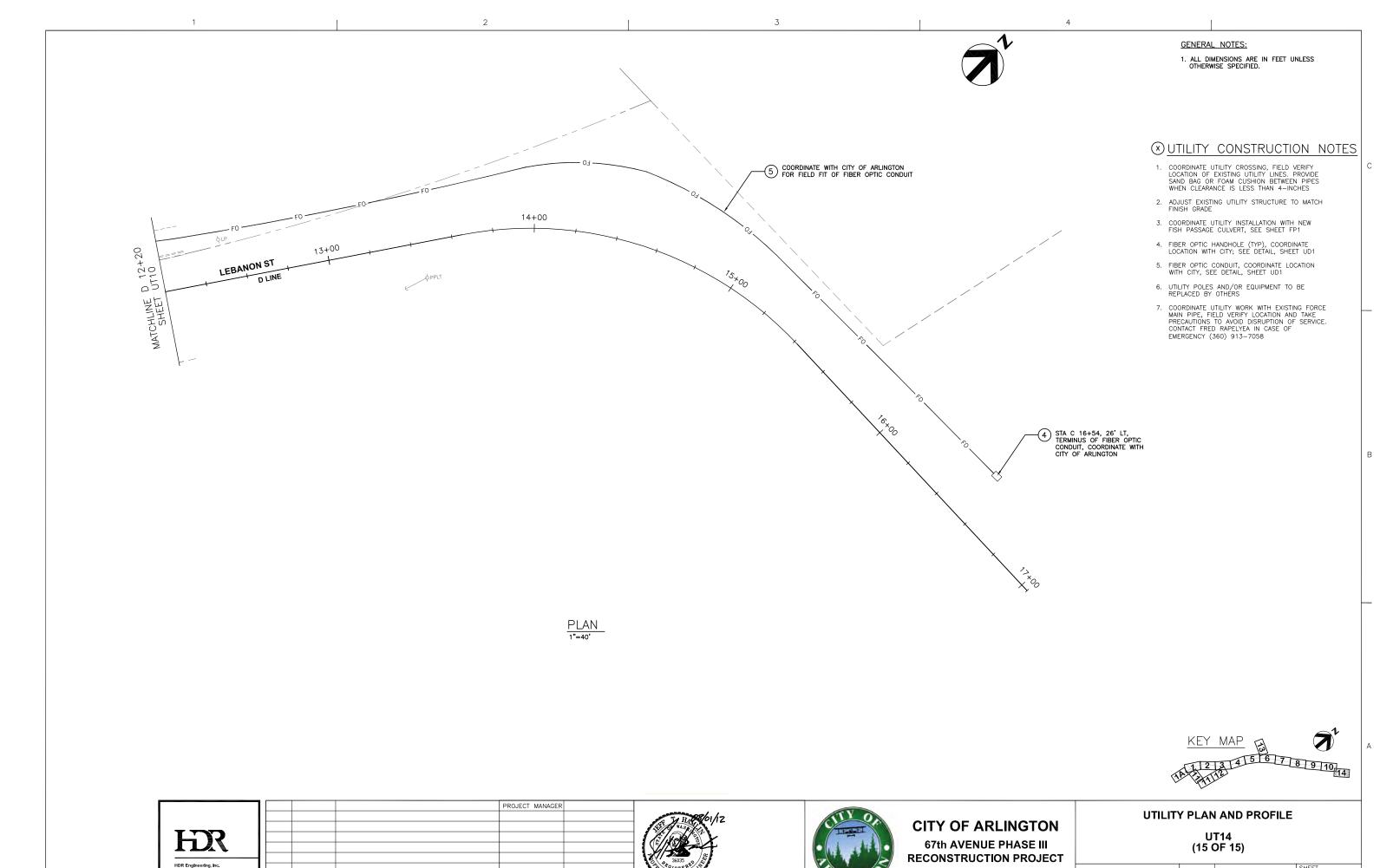
UT13 (14 OF 15)

**CITY OF ARLINGTON** 

**67th AVENUE PHASE III** 

**RECONSTRUCTION PROJECT** 

0 ½" 1"	FILENAME	UT-00C-13.dwg	SHEET
	SCALE	1"=40' (11x17)	092



ISSUE DATE

DESCRIPTION

PROJECT NUMBER 0000000110731

FILENAME UT-00C-14.dwg SHEET

SCALE 1"=40' (11x17) 093

NOTES:

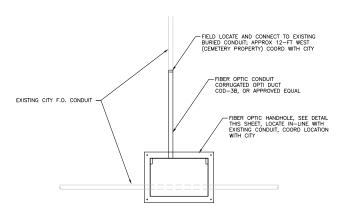
1. TRENCH BACKFILL SHALL BE:

\* PAVED AREA: GRANULAR BACKFILL AS APPROVED BY LOCAL AGENCY, OR PER WSDOT 9-03.9(3), OR CDF, OR 5/8" MINUS CRUSHED SURFACING, OR APPROVED NATIVE MATERIAL COMPACTED TO 95% OF MAXIMUM DENSITY.

\* UNPAYED AREA: SELECTED GRANULAR MATERIAL WITH MAXIMUM DIMENSION OF 6" PER WSDOT 9-03.15, COMPACTED TO 90% OF MAXIMUM DENSITY.

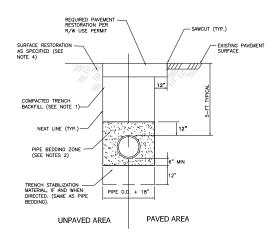
- CONDUIT MAY BE ADJUSTED UP OR DOWN TO CLEAR CONFLICTING UTILITIES. MINIMUM BURY DEPTH IS 24-INCHES.

TYPICAL FIBER OPTIC TRENCH SECTION SCALE: NTS



- CAREFULLY COORDINATE PLACEMENT OF VAULT WITH NEARBY BURIED WATER AND GAS FACILITIES.
- COORDINATE WITH CITY TO DETERMINE LOCATION OF BURIED CONDUIT AT CEMETERY PROPERTY AND PROVIDE CONSTRUCTION PLAN 7-DAYS PRIOR TO INSTALLATION.

FIBER OPTIC HANDHOLE - CEMETERY LOCATION SCALE: NTS

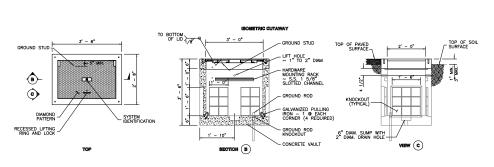


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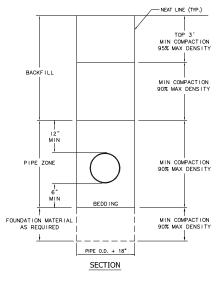
1. TRENCH BACKFILL SHALL BE:

- \* PAVED AREA: GRANULAR BACKFILL AS APPROVED BY LOCAL AGENCY, OR PER WSDOT 9-03.9(3), OR COF, OR 5/8" MINUS CRUSHED SURFACING, OR APPROVED NATIVE MATERIAL COMPACTED TO 95% OF MAXIMUM DENSITY.
- GRAVEL BACKFILL FOR PIPE ZONE BEDDING SHALL BE SELECTED GRANULAR MATERIAL PER WSD0T 9-03.12(3), WASHED SAND, OR APPROVED SUTFABLE EXCHANED MATERIAL WITH MAXMUM DIMENSION OF 1-1/2" COMPACTED TO 95% OF MAXMUM DENSITY BY APPROVED HAND-HELD TOOLS.
- UNPAVED AREA SHALL BE RESTORED WITH 4" TOP SOIL, FERTILIZER AND SEED, OR AS SPECIFIED. PAVEMENT RESTORATION SHALL BE DONE PER RIGHT-OF-WAY USE PERMIT, OR AS SPECIFIED.

TYPICAL RECLAIMED WATER MAIN TRENCH SECTION SCALE: NTS



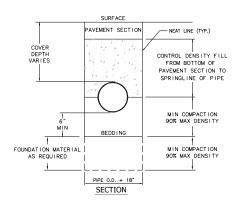
FIBER OPTIC HANDHOLE DETAIL SCALE: NTS



#### NOTES:

- I. ALL BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES BEFORE COMPACTION UNLESS AUTHORIZED BY THE CITY PRIGNEER DUE TO THE CHARACTER OF THE MATERIAL AND THE COMPACTING EQUIPMENT.
- 2. MECHANICAL COMPACTION OF BACK FILL MATERIAL SHALL NOT BEGIN UNTIL THE DEPTH OF COMPACTED BACKFILL MATERIAL IS 2 FEET ABOVE THE TOP OF PIPE.
- 4. COMPACTION TESTS SHALL BE AS REQUIRED BY THE CITY ENGINEER, BUT IN NO CASE LESS THAN 2 TESTS EVERY 200 FEET OF TRENCH (ONE AT SUBGRADE AND ONE AT 50% OF TRENCH DEPTH).
- LABORATORY MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT WILL BE DETERMINED USING THE MODIFIED PROCTOR METHOD IN ACCORDANCE WITH ASTM D-1557.
- 7. BEDDING MATERIAL SHALL BE ¾" MINUS.

TYPICAL SANITARY SEWER TRENCH SECTION



#### NOTES:

- . SHALLOW TRENCH SECTION SHALL BE USED FOR ALL SANITARY SEWER PIPE IN PAWED AREAS WHERE TOTAL DEPTH OF COVER IS 3-FEET OR LESS.
- 2. ALL BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES BEFORE COMPACTION UNLESS AUTHORIZED BY THE CITY PROINTER DUE TO THE CHARACTER OF THE MATERIAL AND THE COMPACTING EQUIPMENT.
- 4. COMPACTION TESTS SHALL BE AS REQUIRED BY THE CITY ENGINEER, BUT IN NO CASE LESS THAN 2 TESTS EVERY 200 FEET OF TRENCH (ONE AT SUBGRADE AND ONE AT 50% OF TRENCH DEPTH).
- LABORATORY MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT WILL BE DETERMINED USING THE MODIFIED PROCTOR METHOD IN ACCORDANCE WITH ASTM D-1557.
- 7. BEDDING MATERIAL SHALL BE %" MINUS GRAVEL.
- MINIMUM WIDTH FOR SHALLOW SANITARY SEWER TRENCH SHALL BE 4-FT AT TRENCH BOTTOM.

SHALLOW SANITARY SEWER TRENCH SECTION SCALE: NTS

HR HDR Engineering, Inc.

			PROJECT	MANAGER	
ISSUE	DATE	DESCRIPTION	PROJECT	NUMBER	0000000110731



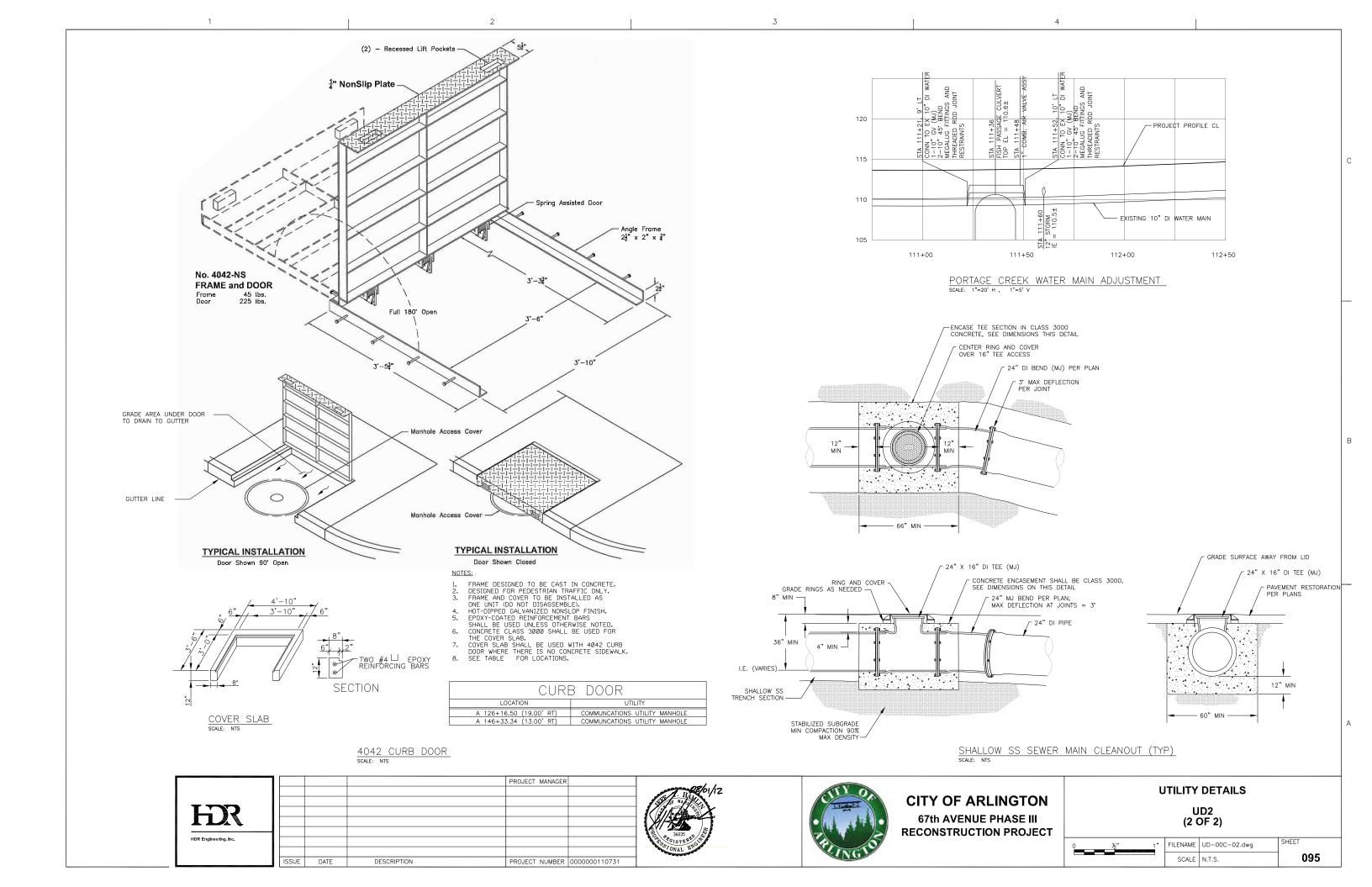
### **CITY OF ARLINGTON 67th AVENUE PHASE III RECONSTRUCTION PROJECT**

## **UTILITY DETAILS** UD1

SHEET FILENAME UD-00C-01.dwg SCALE N.T.S.

(1 OF 2)

094



**GENERAL NOTES:** 1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SPECIFIED. 2. SEE WD1 FOR WALL DETAILS AND TYPICAL SECTIONS. MONEY SAVER MINISTORAGE RESIDENCE (BRADLEY) R AND D HAULING -<del>©</del>APS-8 G -119400 67th AVE NE 13+00  $\frac{A\ 117+64.85\ (30.62'\ RT)\ =\ }{W\ 12+66.91\ (0.00'\ RT)}$  BEGIN WALL PROPOSED -GROUND AT BACK OF TRAIL <u>110</u> PROPOSED = BOTTOM OF WALL KEY MAP 12+00 13+00 14+00 15+00 11+00 PROFILE REFLECTED DEVELOPED ELEVATION SCALE: 1:4V, 1:1H PROJECT MANAGER **WALL PLAN AND PROFILE CITY OF ARLINGTON** HR WA1 67th AVENUE PHASE III (1 OF 6) **RECONSTRUCTION PROJECT** HDR Engineering, Inc. FILENAME WA-00C-01.dwg 096 SCALE 1"=40' (11x17) ISSUE DATE PROJECT NUMBER 0000000110731

