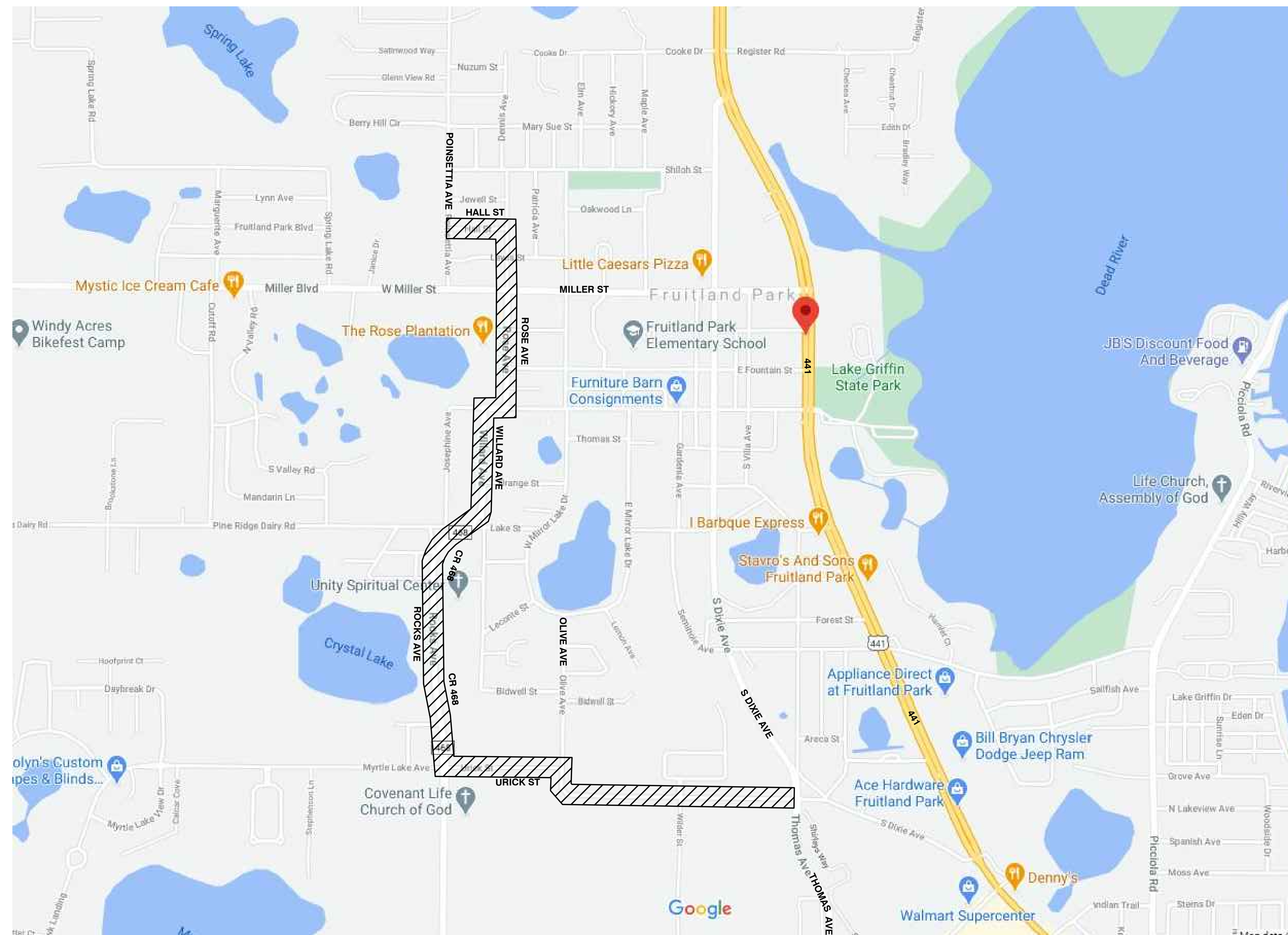


# CONSTRUCTION PLANS FOR CITY OF FRUITLAND PARK URICK STREET FORCE MAIN EXTENSION

DATE	ISSUE	BY
01-01-2021	60% REVIEW SET	
02-25-2021	FDEP PERMITTING SET	
03-23-2021	LAKE COUNTY R.O.W. PERMITTING SET	
06-09-2021	REVISED PER LAKE COUNTY COMMENTS (6/12/21)	
06-29-2021	BID SET	
08-16-2021	REVISED PER LAKE COUNTY COMMENTS	
09-14-2021	BID SET	



LAKE COUNTY, FLORIDA



VICINITY MAP  
NOT TO SCALE



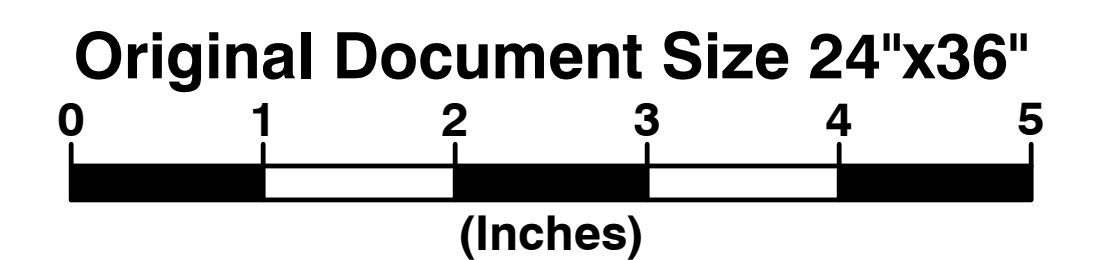
CONTRACTOR SHALL CALL  
SUNSHINE 811  
AT LEAST 48 HOURS PRIOR TO EXCAVATION  
1 (800) 432-4770

Index Of Sheets

- 1 Cover Sheet
- 2 Key Map
- 3 General Notes
- 4-12 Plan Sheets
- 13-15 Crossing Details
- 16-17 Details



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Tavares, Florida 32778  
Office: 352.343.8481  
Fax: 352.343.8495  
Certificate of Authorization Number: 33380



**CHRIS CHESHIRE**  
MAYOR  
DISTRICT 3

**PATRICK DEGRAVE**  
COMMISSIONER  
DISTRICT 1

**JOHN MOBILIAN**  
COMMISSIONER  
DISTRICT 2

**GARY LA VENIA**  
CITY MANAGER

**ESTHER B COULSON**  
CITY CLERK

**JOHN L. GUNTER JR**  
VICE MAYOR  
DISTRICT 4

**CHRIS BELL**  
COMMISSIONER  
DISTRICT 5

**ROBB DICUS**  
DIRECTOR OF PUBLIC WORKS

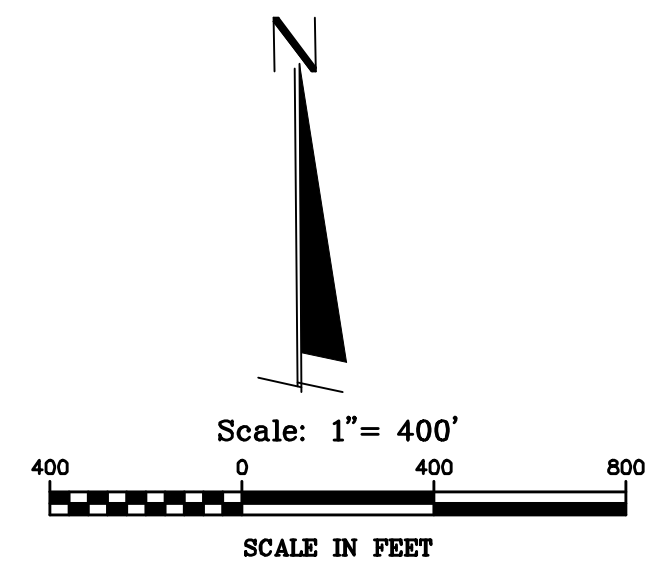
**ANITA GERACI-CARVER**  
CITY ATTORNEY

**CLIENT:**  
CITY OF FRUITLAND PARK, FLORIDA  
202 WEST BERCKMAN STREET  
FRUITLAND PARK, FLORIDA 34731  
ROBB DICUS, DIRECTOR OF PUBLIC WORKS  
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**ENGINEER:**  
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TROY MITCHELL, P.E., PROJECT ENGINEER  
(352) 343-8481

**SURVEYOR:**  
HALFF ASSOCIATES, INC.  
902 SINCLAIR AVENUE  
TAVARES, FL. 32778  
JOHN T. MCGLOHORN, PSM  
(352) 343-8481

SEPTEMBER 14, 2021, BID SET



DATE	REVISION

CITY OF FRUITLAND PARK  
**URICK STREET FORCEMAIN  
 EXTENSION**  
**KEY MAP**



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FILE NAME:	Sheet 2

Troy Mitchell, P.E.  
 Registered Eng 60190

# UTILITY GENERAL NOTES

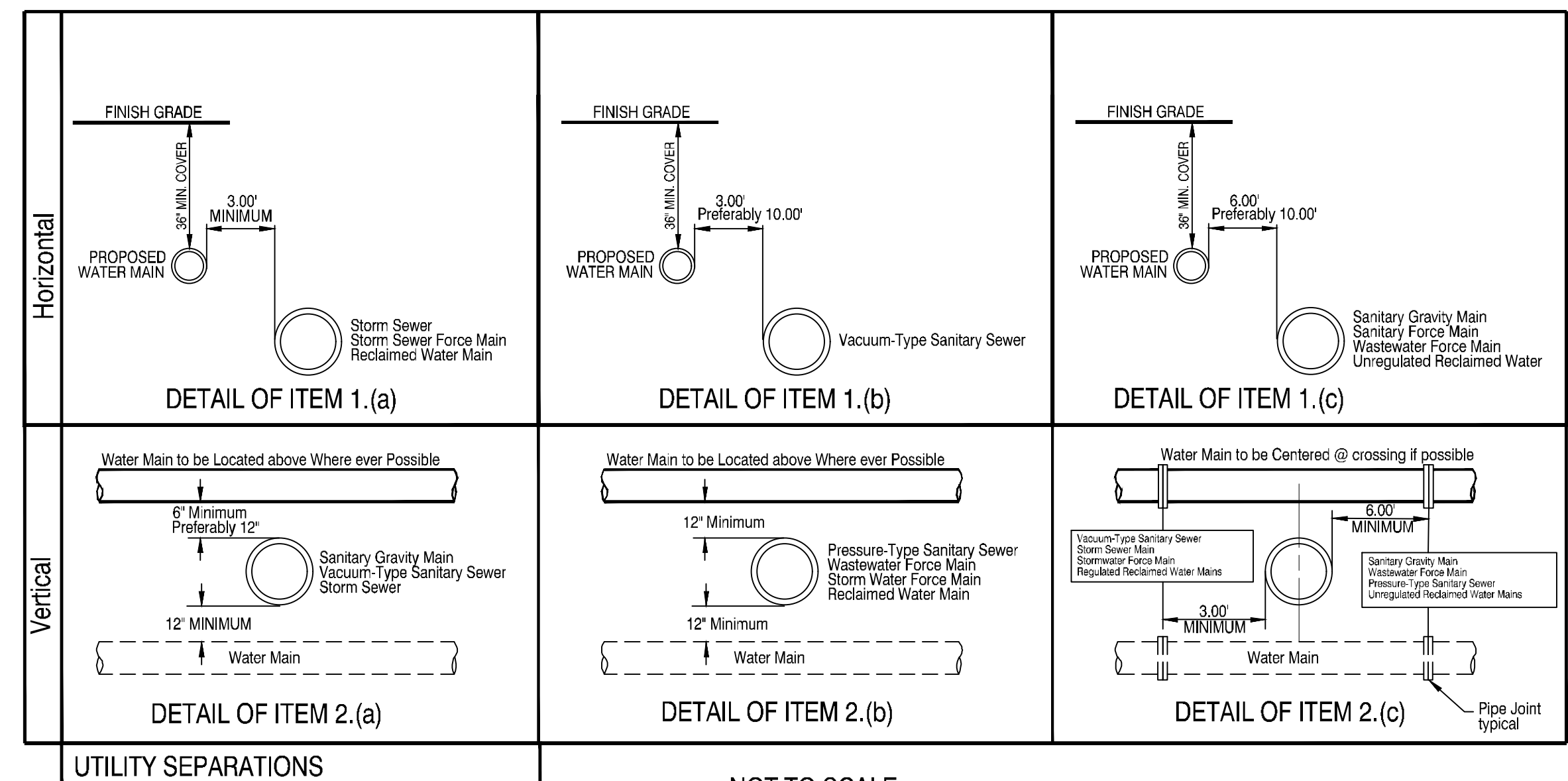
- ALL CONSTRUCTION SHALL CONFORM TO LAKE COUNTY AND THE CITY OF FRUITLAND PARK STANDARDS.
- THE CONTRACTOR SHALL ENSURE ALL NECESSARY PERMITS ARE IN HAND BEFORE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFYING ALL REQUIREMENTS OF REGULATORY AGENCY PERMITS IN REGARD TO CONSTRUCTION ACTIVITIES AND CONDITIONS STATED THEREIN.
- UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS, ALL ITEMS NOTED TO BE REMOVED SHALL REMAIN THE PROPERTY OF CITY OF FRUITLAND PARK (OWNER). ALL ITEMS REMOVED SHALL BE STORED BY THE CONTRACTOR ON-SITE AS DIRECTED BY THE OWNER OR ENGINEER.
- LIMITS OF CONSTRUCTION FOR THIS PROJECT SHALL BE THE AREA SHOWN WITHIN THE PROPERTY BOUNDS. IF PERMITTED BY THE OWNER, SPOIL AREAS SHALL BE AS INDICATED ON THE DRAWINGS. CONSTRUCTION STORAGE AREAS FOR THE CONTRACTOR ARE AS DESIGNATED ON THE SITE PLAN.
- THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL EXISTING UTILITIES SHOWN AND NOT SHOWN PRIOR TO ANY CONSTRUCTION. ANY CONFLICTS OR DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR POSSESSING ALL REQUIRED PERMITS PRIOR TO INITIATING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR HORIZONTAL AND VERTICAL CONTROL DATA.
- NO DEVIATIONS FROM THESE PLANS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- ALL PIPING ABOVE GRADE SHALL UTILIZE FLANGED CONNECTIONS.
- UTILITY SEPARATION SHALL BE AS REQUIRED IN CHAPTER 62-555.314 F.A.C.
- WHERE A CONNECTION IS TO BE MADE IN THE FIELD TO AN EXISTING PIPE, THE CONTRACTOR WILL EXCAVATE THE AREA TO VERIFY THE TYPE OF PIPE AND THE PIPE SIZE, AND OBTAIN THE OWNER'S APPROVAL OF THE PROPOSED METHOD OF CONNECTION PRIOR TO ORDERING AND INSTALLING MATERIALS.
- ALL WATER OR SEWER SERVICE CONNECTIONS, INTERRUPTIONS OR RELOCATION'S SHALL BE COORDINATED IN ADVANCE WITH FIELD REPRESENTATIVES OF THE CITY OF FRUITLAND PARK.
- CONTRACTOR SHALL PROVIDE TEMPORARY THRUST RESTRAINT, BRACING, TEST PLUGS AND/OR OTHER DEVICES NECESSARY TO SUCCESSFULLY COMPLETE PRESSURE TESTING OF ALL PRESSURE PIPING SYSTEMS.
- ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH RESTRAINING DEVICES AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED. SEE THRUST RESTRAINT SPECIFICATION DETAILS AND NOTES.
- ALL AREAS WHERE LANDSCAPING, SOD, OR IRRIGATION HAS BEEN REMOVED OR DISTURBED BY CONTRACTOR'S OPERATIONS SHALL BE RESODDED, LANDSCAPED, OR REPAIRED WITH LIKE KIND.
- ALL EXISTING PROPERTY, FENCING, DRIVEWAYS, PIPING, SIDEWALKS, SIGNS AND OTHER ITEMS SHALL BE RESTORED TO ORIGINAL LINE AND GRADE UNLESS APPROVED BY THE ENGINEER. ACCESS TO ADJOINING PROPERTY ALONG THE PROPOSED ROUTE SHALL BE MAINTAINED AT ALL TIMES.
- THE SHOWN LOCATIONS OF RIGHTS-OF-WAY AND UTILITIES ARE APPROXIMATE. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO EXACTLY LOCATE ALL RIGHTS-OF-WAY AND UTILITY LINES IN THE CONSTRUCTION AREA PRIOR TO EXCAVATION. ANY DAMAGE TO ANY EXISTING UTILITY, STRUCTURE OR SERVICE SHALL BE REPAIRED, AT THE CONTRACTOR'S EXPENSE, IN A MANNER APPROVED BY THE RESPECTIVE UTILITY OWNER.
- TRAFFIC SHALL BE MAINTAINED AT ALL TIMES AS PER FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ROADWAY AND TRAFFIC DESIGN STANDARDS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- REMOVAL OF TREES GREATER THEN 4-INCH BASAL DIAMETER SHALL BE ONLY AS DIRECTED BY THE OWNER/ENGINEER. CONTRACTOR SHALL LIMIT TO A MINIMUM THE AMOUNT OF TREE REMOVAL, CLEARING AND GRUBBING REQUIRED BY TRIMMING TREES WHEREVER POSSIBLE.
- CONTRACTOR SHALL NOTIFY AND COORDINATE WITH AFFECTED PROPERTY OWNERS AND OWNER/ENGINEER ONE WEEK IN ADVANCE OF TREE CLEARING AND GRUBBING. ALL DEBRIS FROM TREE CLEARING AND GRUBBING SHALL BE REMOVED.
- CONTRACTOR SHALL TAKE CARE TO PROVIDE PROPER GRADE, ELEVATIONS AND ALIGNMENT FOR FUTURE CONNECTIONS AS SHOWN ON THE DRAWINGS.
- WHERE MINIMUM SEPARATIONS BETWEEN UTILITIES IS REQUIRED, THE DISTANCE MEASURED IS FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
- ALL PIPING AND/OR APPURTENANCES CONNECTING TO ADJACENT CONSTRUCTION SHALL BE PLUGGED IF ADJACENT WORK HAS NOT BEEN COMPLETED.
- THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AT ALL INTERSECTIONS OF PROPOSED WORK AND EXISTING UTILITIES. THE EXPLORATORY EXCAVATIONS SHALL BE MADE 48 HOURS IN ADVANCE OF THE WORK. IF THERE IS A POTENTIAL CONFLICT, THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY. INFORMATION ON THE OBSTRUCTION TO BE FURNISHED BY THE CONTRACTOR SHALL INCLUDE: LOCATION, ELEVATION, UTILITY TYPE, MATERIAL AND SIZE.
- THE CONTRACTOR PRIOR TO EXCAVATING IN THE VICINITY OF A GAS PIPELINE SHALL NOTIFY THE GAS UTILITY OWNER IN ACCORDANCE WITH THE REQUIREMENTS OF FLORIDA STATUTES, PROTECTION OF UNDERGROUND PIPELINES, F.S. 553.851, CH. 77-143.
- FORCE MAIN SHALL HAVE A MINIMUM OF 36 INCHES COVER OVER TOP OF PIPE. COVER SHALL VARY TO PROVIDE UNIFORM GRADIENT OR SLOPE TO PIPE. WHERE THIS MINIMUM COVER CANNOT BE MAINTAINED BECAUSE OF EXISTING STRUCTURES OR CONDITIONS, D.I.P. CLASS 52 ENCASED IN CONCRETE SHALL BE USED UNTIL THE REQUIRED COVER IS REGAINED.
- CONTRACTOR TO COORDINATE OPEN CUTTING OF EXISTING DRIVEWAYS WITH PROPERTY OWNERS SO AS TO MINIMIZE IMPACTS AND MAINTAIN ACCESS AT ALL TIMES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING LANE/ROAD CLOSURE INFORMATION TO ALL LOCAL EMERGENCY SERVICE AGENCIES A MINIMUM OF 24 HOURS PRIOR TO SAID CLOSURES.
- THE SITE WORK BEING CONDUCTED ON THE PROPERTY WILL COMPLY WITH THE 2010 FLORIDA FIRE PREVENTION CODES.
- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE GIVEN TO THE CONTRACTOR AS A CONVENIENCE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS TO THOSE UTILITIES WITH THE UTILITY OWNERS. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED IN THE FIELD BY UTILITY COMPANY. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY OWNER DURING AN RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF SAID UTILITIES, SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION SHALL BE ALLOWED.
- ANY DIFFERING SITE CONDITIONS FROM THAT WHICH IS REPRESENTED HEREON, WHETHER ABOVE, ON OR BELOW THE SURFACE OF THE GROUND, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER IN WRITING, WITHIN 48 HOURS OF DISCOVERY. NO CLAIM FOR EXPENSES INCURRED BY THE CONTRACTOR DUE TO SUCH DIFFERING CONDITIONS WILL BE ALLOWED IF THEY FAIL TO PROVIDE WRITTEN NOTIFICATION.
- ALL WORK SHALL BE OPEN TO AND SUBJECT TO INSPECTION BY AUTHORIZED PERSONNEL OF THE OWNER, INVOLVED UTILITY COMPANIES, PROJECT ENGINEER AND REGULATORY AGENCIES. ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO REQUIRED INSPECTIONS.
- ALL RECOMMENDATIONS AND REQUIREMENTS OF INSPECTION PERSONNEL SHALL BE REPORTED TO THE ENGINEER/OWNER PRIOR TO IMPLEMENTATION. COMPENSATION WILL NOT BE ALLOWED FOR WORK WHICH IS NOT AUTHORIZED BY ENGINEER/OWNER.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEERING AND AGENCY APPROVAL PRIOR TO PROCUREMENT OF MATERIALS.
- CONTRACTOR TO SUBMIT COPIES OF ALL TESTING REPORTS TO THE OWNER AND ENGINEER FOR ACCEPTANCE AND CERTIFICATIONS.
- ANY PUBLIC LAND CORNER, WITHIN THE LIMITS OF CONSTRUCTION, IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT YET BEEN PROPERLY REFERENCED, THE CONTRACTOR SHALL NOTIFY THE OWNER/ENGINEER WITHOUT DELAY. DISTURBED MONUMENTATION SHALL BE RESTORED BY A FLORIDA LICENSED LAND SURVEYOR AT CONTRACTOR'S EXPENSE.
- ALL AREAS WHERE PAVEMENT, BUILDING SLABS, FOUNDATIONS, UTILITIES, CONDUITS, AND/OR UTILITY STRUCTURES HAVE BEEN REMOVED SHALL BE BACKFILLED WITH SELECT BACKFILL MATERIAL. ALL SELECT BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED PER THE REQUIREMENTS OF THE LOCAL JURISDICTION.
- DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PROVIDE ADEQUATE PROTECTION IN ORDER TO MINIMIZE DAMAGE TO VEGETATION, SURFACED AREAS, AND STRUCTURES WITHIN R/W. EASEMENTS, AND ADJOINING PROPERTIES, AND TAKE FULL RESPONSIBILITY FOR THE REPLACEMENT OR REPAIR THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL MAKE GOOD ALL DAMAGE TO PAVEMENT, BUILDINGS, TELEPHONE OR OTHER CABLES, SANITARY PIPES, OR OTHER STRUCTURES BEYOND THE LIMITS OF THIS PROJECT WHICH MAY BE ENCOUNTERED WHETHER OR NOT SHOWN ON THE DRAWINGS.
- TEMPORARY FACILITIES: THE CONTRACTOR SHALL FURNISH SANITARY SEWER, WATER AND ELECTRIC POWER AS REQUIRED FOR THE CONSTRUCTION ACTIVITIES SHOWN IN THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL TEMPORARY CONNECTIONS AND FOR REMOVING SAME CONNECTIONS AT COMPLETION OF THE PROJECT.
- ALL HYDROSTATIC TEST SHALL BE IN ACCORDANCE WITH AWWA C600 FOR DUCTILE IRON PIPE AND C605/M23 FOR PVC PIPE.
- ALL OFFSITE PIPING BELOW GRADE SHALL UTILIZE RESTRAINED MECHANICAL JOINT CONNECTIONS, AND BE RESTRAINED IN ACCORDANCE WITH THE ATTACHED THRUST RESTRAINT TABLE.
- ALL ONSITE PIPING BELOW GRADE SHALL BE RESTRAINED MECHANICAL JOINT.
- IN THE EVENT THAT THE POTABLE WATER SYSTEM IS CONTAMINATED (I.E., WATER DOES NOT MEET FEDERAL AND STATE REQUIREMENTS) DUE TO CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE, UNDER THE DIRECTION OF THE OWNER, OR STATE AND LOCAL REGULATORY AGENCY FOR CORRECTING ANY SUCH CONTAMINATION PROBLEM INCLUDING DISINFECTION, TESTING AND OTHER CORRECTIVE ACTION.
- THE PUBLIC WORKS DEPARTMENT MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO ANY WORK ON EXISTING CITY OF FRUITLAND PARK UTILITIES. THE CONTRACTOR MUST CONTACT, DALE BOGLE, COLLECTION AND DISTRIBUTION SUPERVISOR, AT HIS OFFICE (352) 308-5579.
- CONTRACTOR SHALL PROVIDE AN EMERGENCY CONTACT NUMBER LIST FOR KEY SITE PERSONNEL.
- ENGINEER OF RECORD REVIEWED SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ALL WATER/SEWER/ RECLAIMED AND STORMWATER SYSTEMS TO BE DEDICATED TO THE CITY OF FRUITLAND PARK. TWO SETS ARE REQUIRED FOR REVIEW. ONE SET WILL BE RETURNED TO THE ENGINEER OF RECORD.
- OFF-SITE OR ROADWAY RIGHT-OF-WAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CONDITIONS OF THE APPROVED R/W PERMIT(S). A COPY OF THE APPROVED R/W PERMIT MUST BE KEPT ON-SITE AND READILY AVAILABLE DURING ALL CONSTRUCTION ACTIVITIES WITH THE R/W.
- THE PUBLIC WORKS DEPARTMENT MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO UTILITY TESTING. THE CONTRACTOR MUST CONTACT ROBB DICUS, PUBLIC WORKS DIRECTOR, AT HIS OFFICE (352) 360-6795. HYDROSTATIC TESTING SHALL BE PER THE APPLICABLE PROVISIONS AS SET FORTH IN AWWA STANDARDS (MINIMUM 150 PSI @ 2 HOURS - POTABLE/ RECLAIMED AND MINIMUM 100 PSI @ 2 HOURS -- FORCE MAINS).
- EARTHWORK, PAVEMENT AND CONCRETE CONSTRUCTION NOT SPECIFICALLY ADDRESSED BY THE CITY LDC, SHALL BE CURRENT OR YEAR 2000 FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT. [HTTP://WWW.DOT.STATE.FL.US/SPECIFICATIONSOFFICE/LOCALARCHIVES.HTM](http://www.dot.state.fl.us/specificationsoffice/localarchives.htm)
- COPIES OF ALL MATERIALS AND COMPACTION TESTING PER THE YEAR 2000 FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION MUST BE PROVIDED PRIOR TO CLOSEOUT.
- THE PUBLIC SERVICES DEPARTMENT REQUIRES A PRE-CLOSEOUT FIELD REVIEW WITH THE CONTRACTOR. THE CONTRACTOR MUST CONTACT PUBLIC WORKS DEPARTMENT AT (352) 360-6795, TO COORDINATE. ALL ISSUES IDENTIFIED AT THE FIELD REVIEW MUST BE ADDRESSED PRIOR TO PUBLIC SERVICES FINAL CLOSE OUT APPROVAL.

## Utility Construction Notes (DEP)

- 62-555.314 Location of Public Water System Mains:  
For the purpose of this section, the phrase "Water Mains" shall mean Mains, including treatment plant process piping, conveying either raw, partially treated, or treated drinking water, Fire Hydrant leads, and service lines that are under the control of a Public Water System and that have an inside diameter of three (3) inches or greater.
- (1) Horizontal Separation Between Underground Water Mains and Sanitary or Storm Sewers, Wastewater or Storm Water Force Mains, Reclaimed Water Pipelines, and On-site Sewage Treatment and Disposal Systems:  
(a) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) Three Feet between the outside of the WATER MAIN and the outside of any existing or proposed Storm Sewer, Storm Water Force Main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.  
(b) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) three feet, and preferably (10) Ten Feet, between the outside of the WATER MAIN and the outside of any existing or proposed vacuum-type Sanitary Sewer.  
(c) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (10) Ten Feet between the outside of the WATER MAIN and all parts of any existing or proposed "On-site Sewage Treatment and Disposal System" as defined in Section 381.0055(2), F.S. and Rule 64E-6.002, F.A.C.
- (2) Vertical Separation Between Underground WATER MAINS and Sanitary or Storm Sewers, Wastewater or Storm Water Force Mains, and Reclaimed Water Pipelines:  
(a) New or relocated underground WATER MAINS crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the WATER MAIN is at least (6) Six inches, and preferably 12 inches above, or at least 12 inches below the outside of the other pipeline. However, it is preferable to lay the WATER MAIN "ABOVE" the other pipeline.  
(b) New or relocated, Underground WATER MAINS crossing any existing or proposed pressure-type sanitary sewer, wastewater or stormwater Force Main, or Pipeline conveying reclaimed water shall be laid so the outside of the WATER MAIN is at least (12) inches ABOVE or BELOW the Outside of the other pipeline. However, it is preferable to lay the WATER MAIN above the other pipeline.  
(c) At the Utility crossings described in paragraphs (a) & (b) Above, one full length of Water Main Pipe shall be centered above or below the other pipeline so the WATER MAIN Joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all WATER MAIN Joints are at least (3) Three feet from all joints in Vacuum-type Sanitary Sewers, Storm Sewers, Stormwater Force Mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least (6) Six Feet from all Joints in Gravity- or Pressure-type Sanitary Sewers, Wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.
- (3) Separation Between WATER MAINS and Sanitary or Storm Sewer Manholes:  
(a) No WATER MAIN shall pass thru, or come into contact with any part of a Sanitary Manhole or a Storm Sewer Manhole.
- (4) Separation Between Fire Hydrant Drains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, Reclaimed Water Pipelines, and On-site Sewage Treatment and Disposal Systems: New or relocated Fire Hydrants with underground Drains shall be located so that the drains are at least (3) Three Feet from any existing or proposed storm sewer, Stormwater force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., at least (3) Three Feet, and preferably (10) Ten Feet, from any existing or proposed gravity- or Pressure-type Sanitary Sewer, Wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C., and at least (10) Ten Feet from any existing or proposed "on-site sewage treatment and disposal system" as defined in Section 381.0055(2), F.S. and Rule 64E-6.002, F.A.C.
- (5) Exceptions/Mitigation:  
Adherence to the above Constraints and Separations in Items 1 through 4 shall be Complied with, "WITHOUT EXCEPTION", if for some reason where it is not technically feasible or Economically Sensible that Items 1 through 4 cannot be complied with, Contractor will Stop Work and Notify the Engineer of record for the appropriate solution, which will be submitted to "The Department of Environmental Protection" for APPROVAL, prior to work commencement.

### NOTE:

ALL PROPOSED PIPE UNDER ASPHALT ROADWAY SHALL BE DUCTILE IRON, EXCEPT DIRECTIONAL BORES, WHICH SHALL BE PE 3408, SDR - 11 HDPE



NOT TO SCALE

## PIPE CLEARANCE

REVISION									
DATE									

CITY OF FRUITLAND PARK  
**URICK STREET FORCEMAIN  
EXTENSION**  
GENERAL NOTES

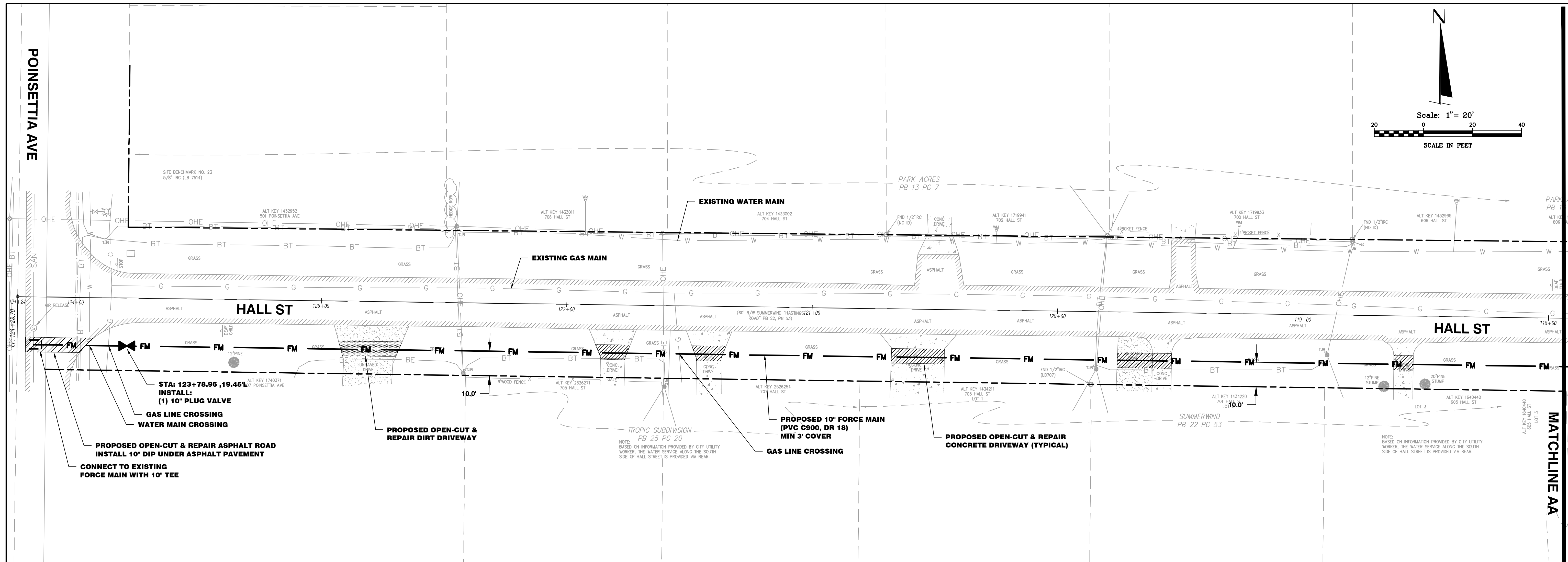


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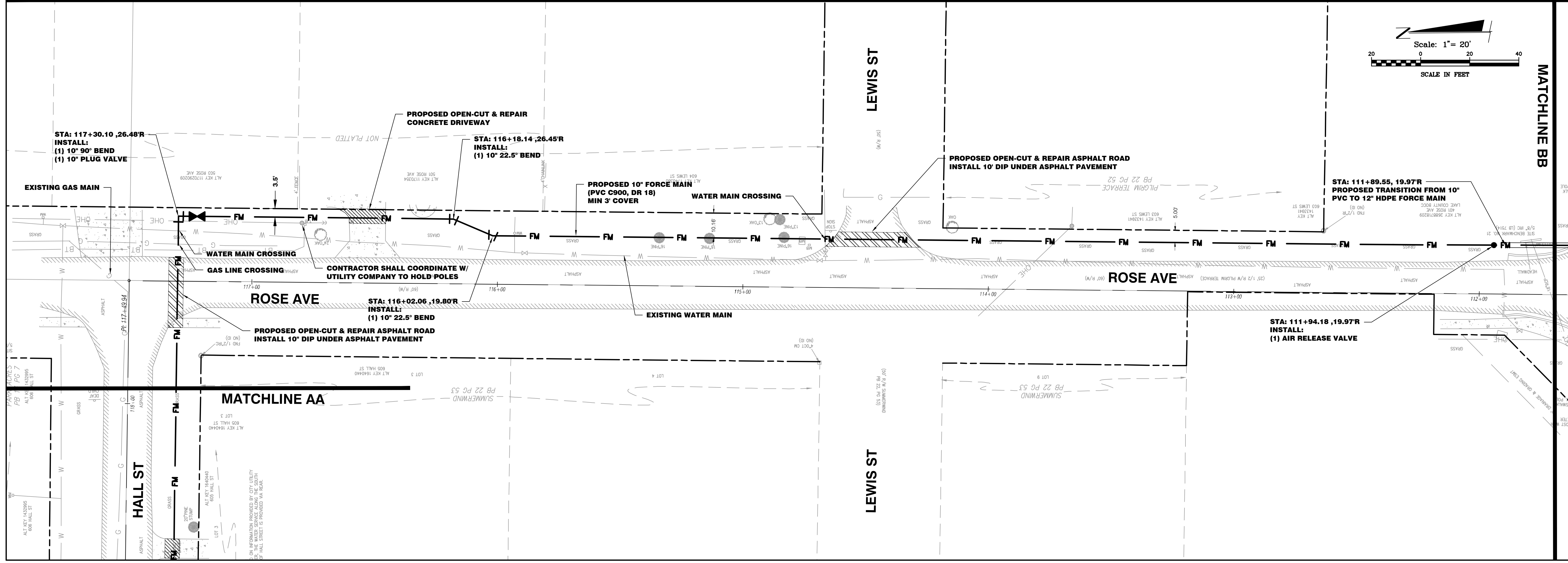
Sheet 3

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REVISION	DATE

**CITY OF FRUITLAND PARK  
URICK STREET FORCE MAIN  
EXTENSION  
PLAN SHEET  
HALL STREET & ROSE AVENUE**

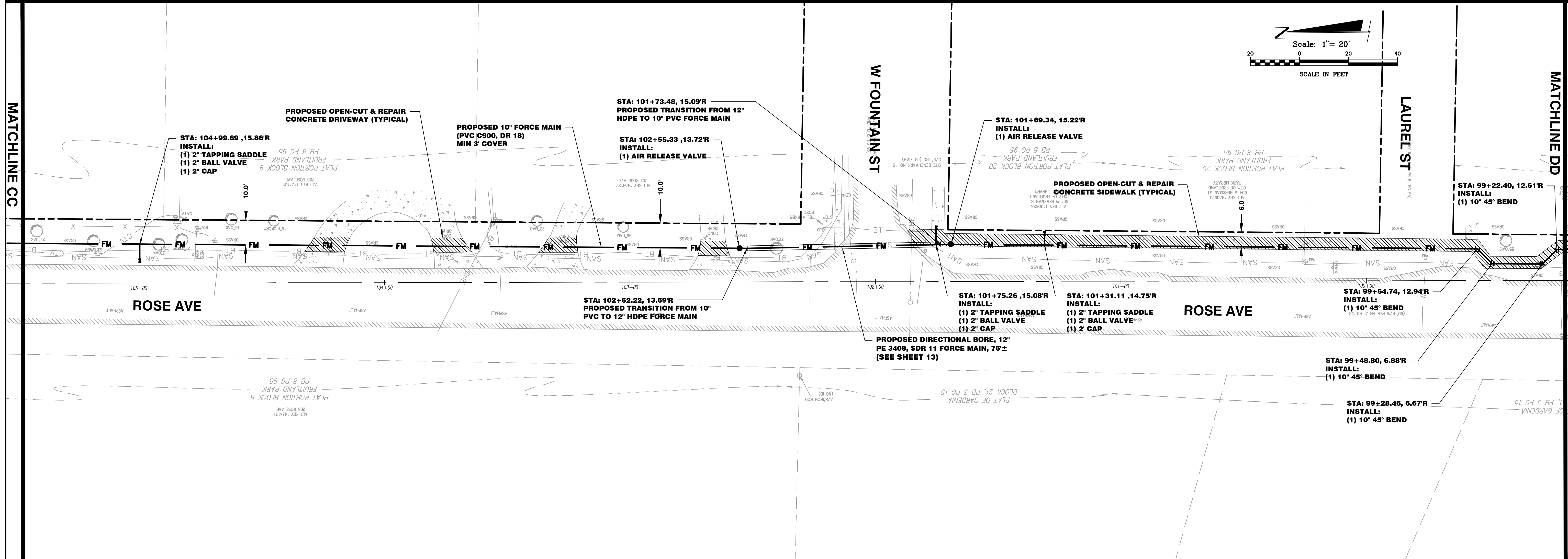
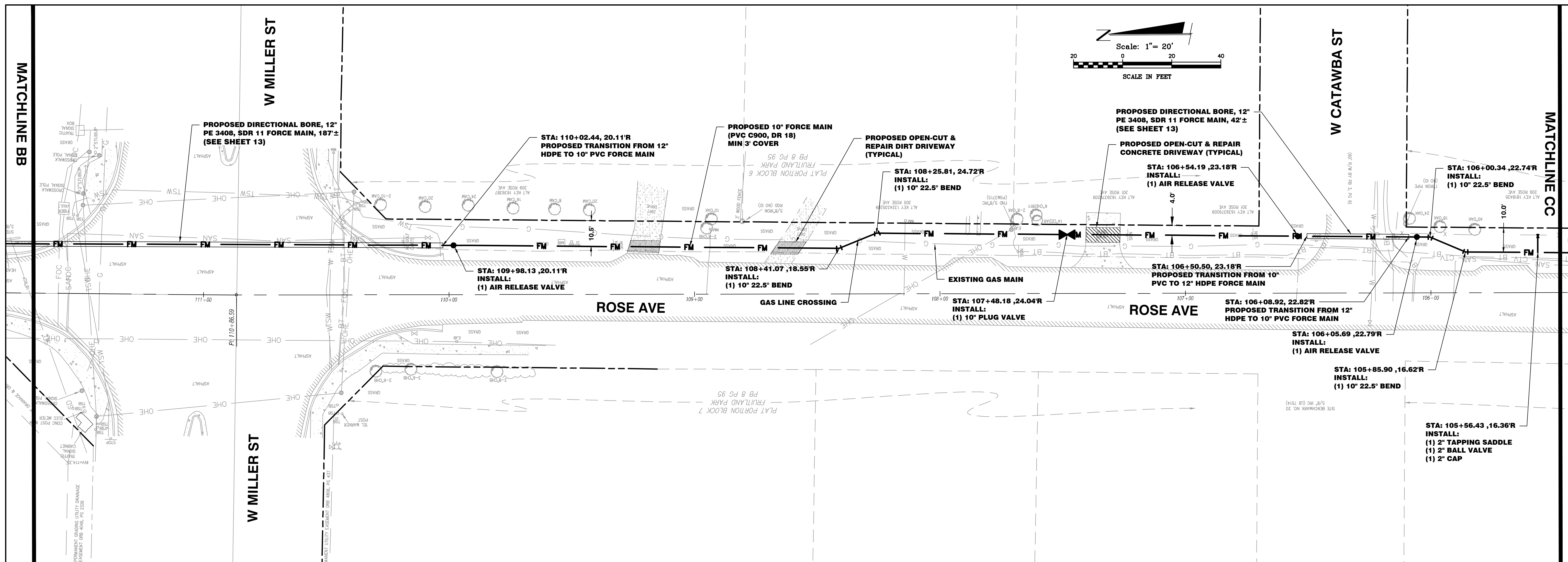


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**Sheet 4**

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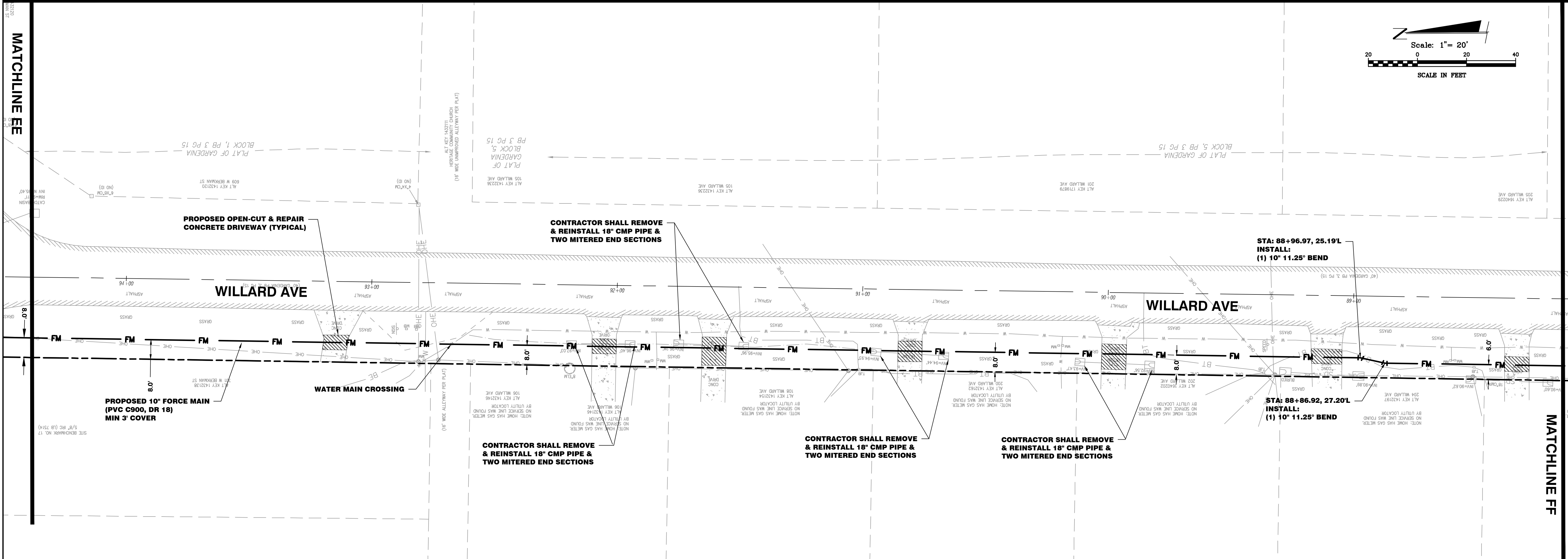
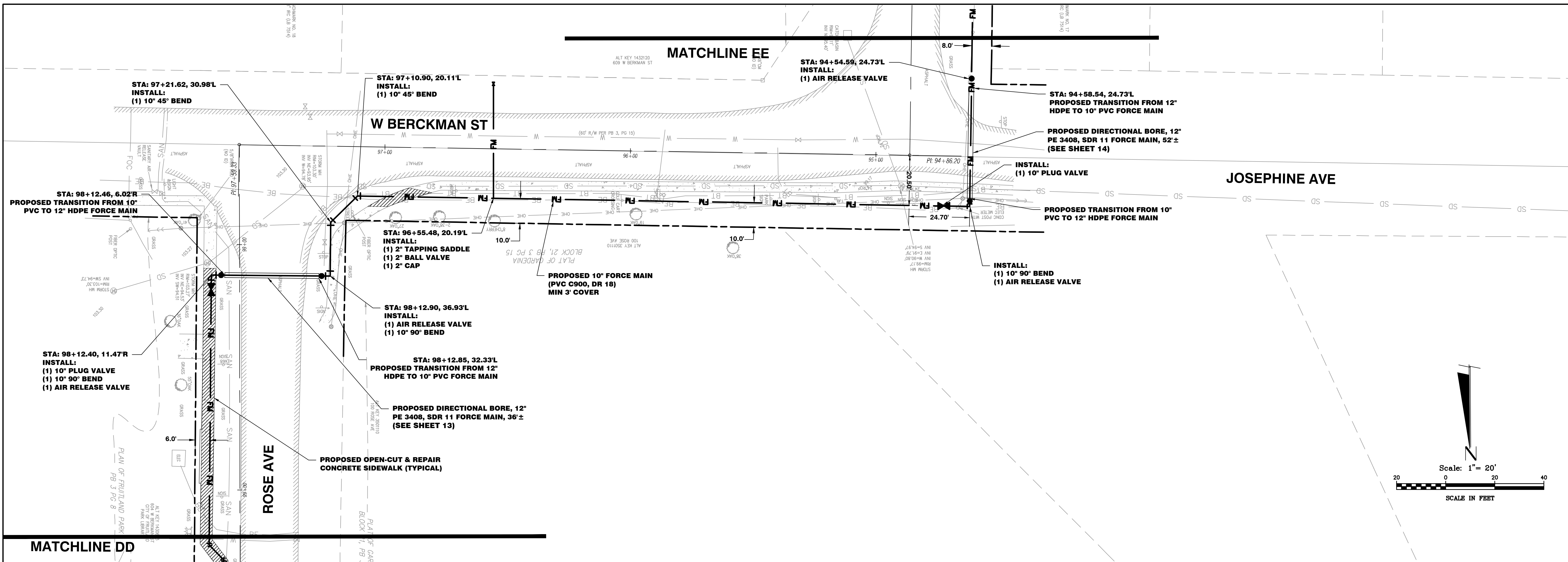
REVISION	DATE

CITY OF FRUITLAND PARK  
**URICK STREET FORCE MAIN  
 EXTENSION**  
**PLAN SHEET  
 ROSE AVENUE**



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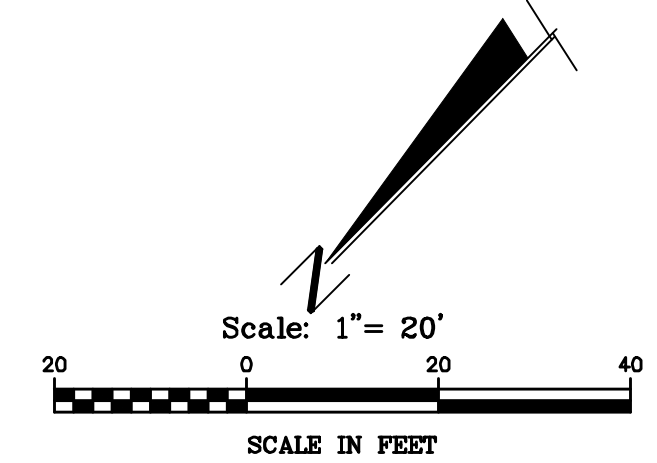
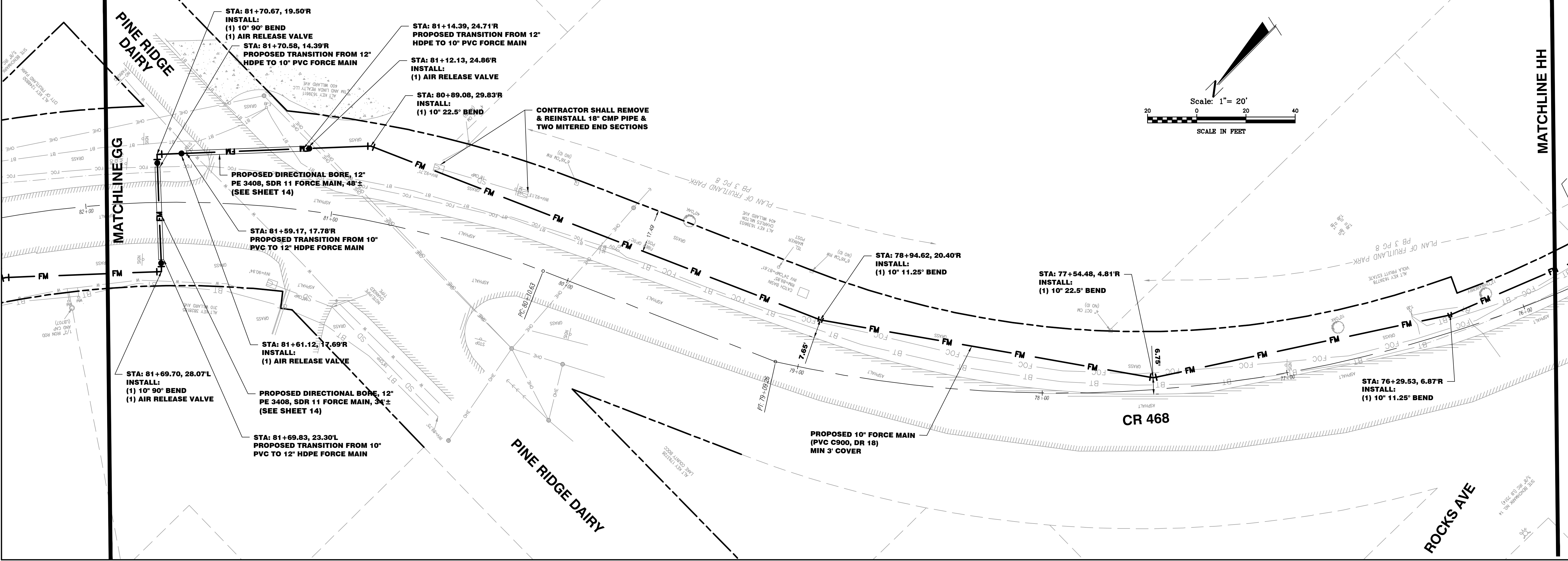
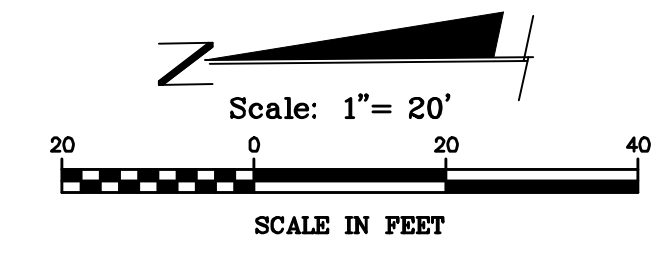
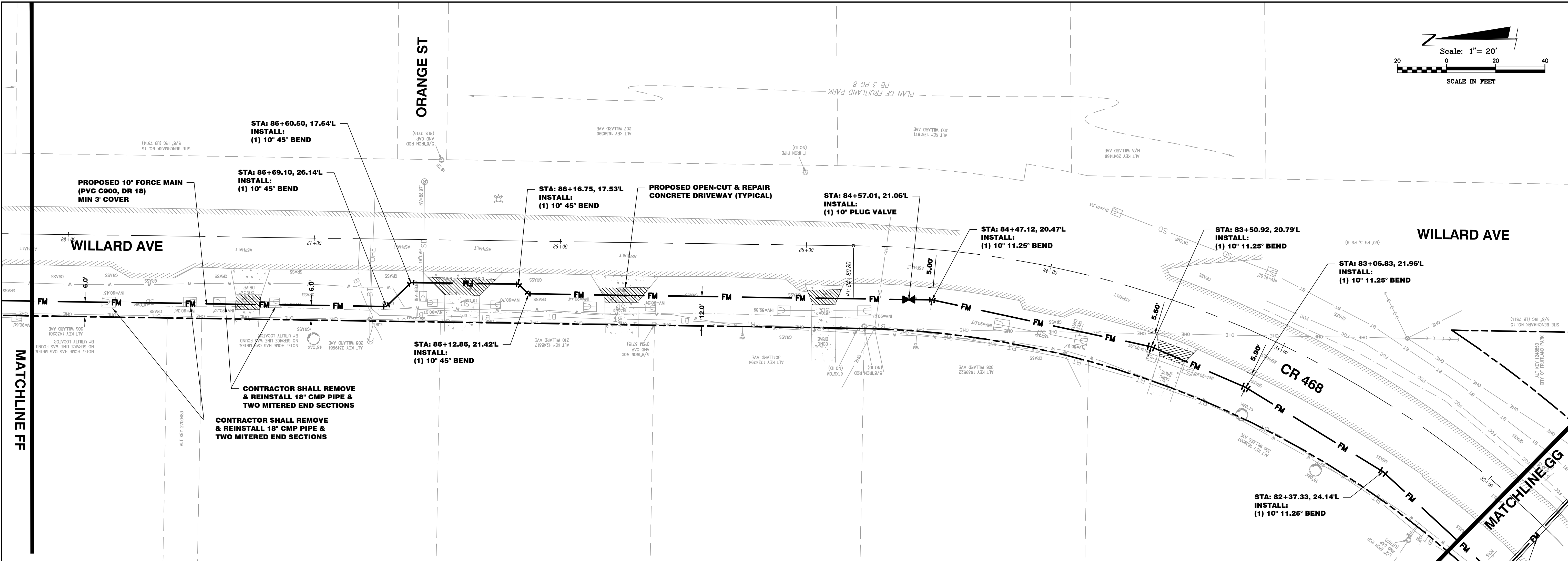
CITY OF FRUITLAND PARK  
**URICK STREET FORCE MAIN  
 EXTENSION**  
 PLAN SHEET  
**BERCKMAN ST & WILLARD AVE**



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<b>Sheet 6</b>	

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REVISION	DATE

CITY OF FRUITLAND PARK  
**URICK STREET FORCE MAIN  
 EXTENSION**  
**PLAN SHEET  
 WILLARD AVE & CR 468**

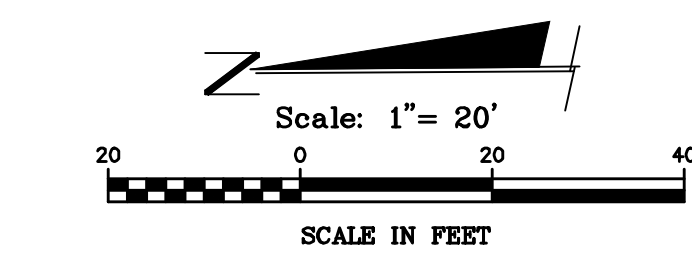
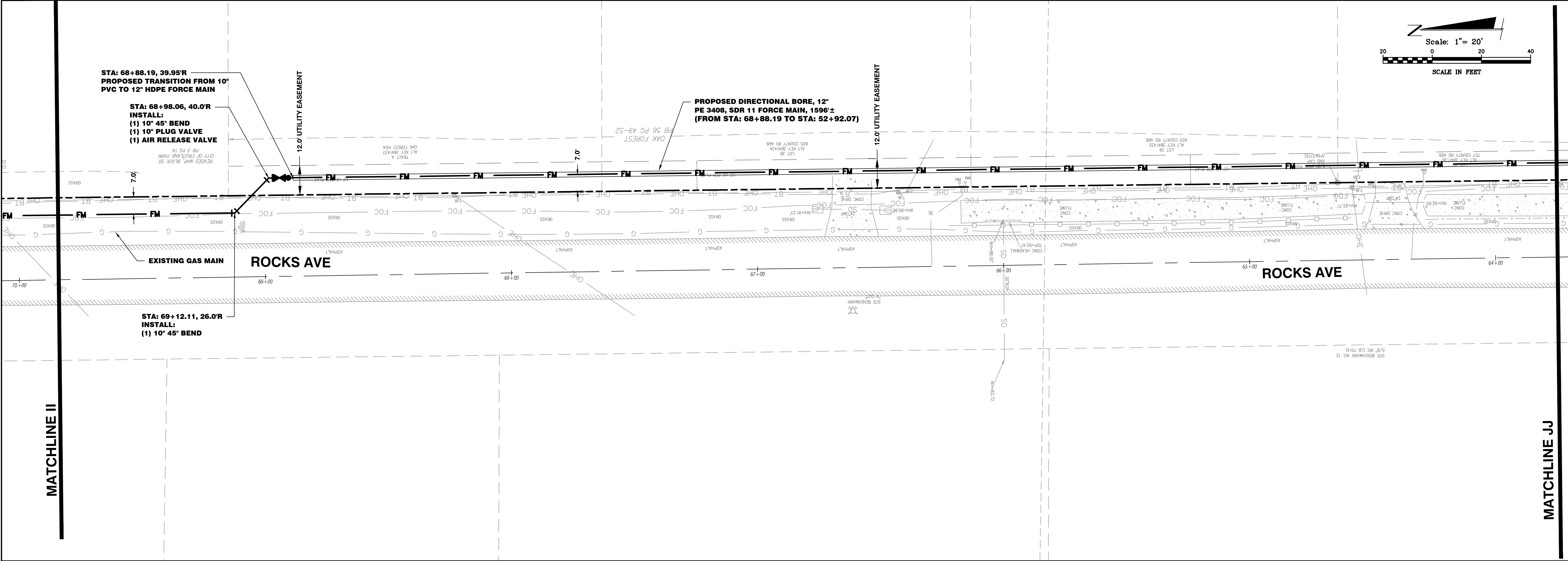
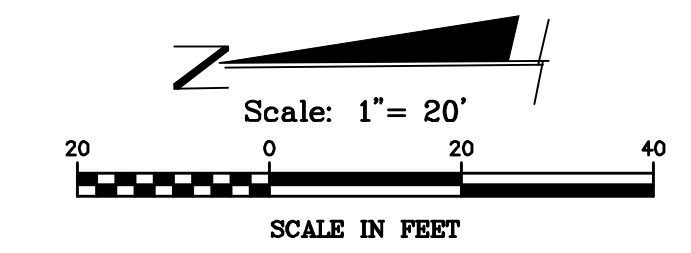
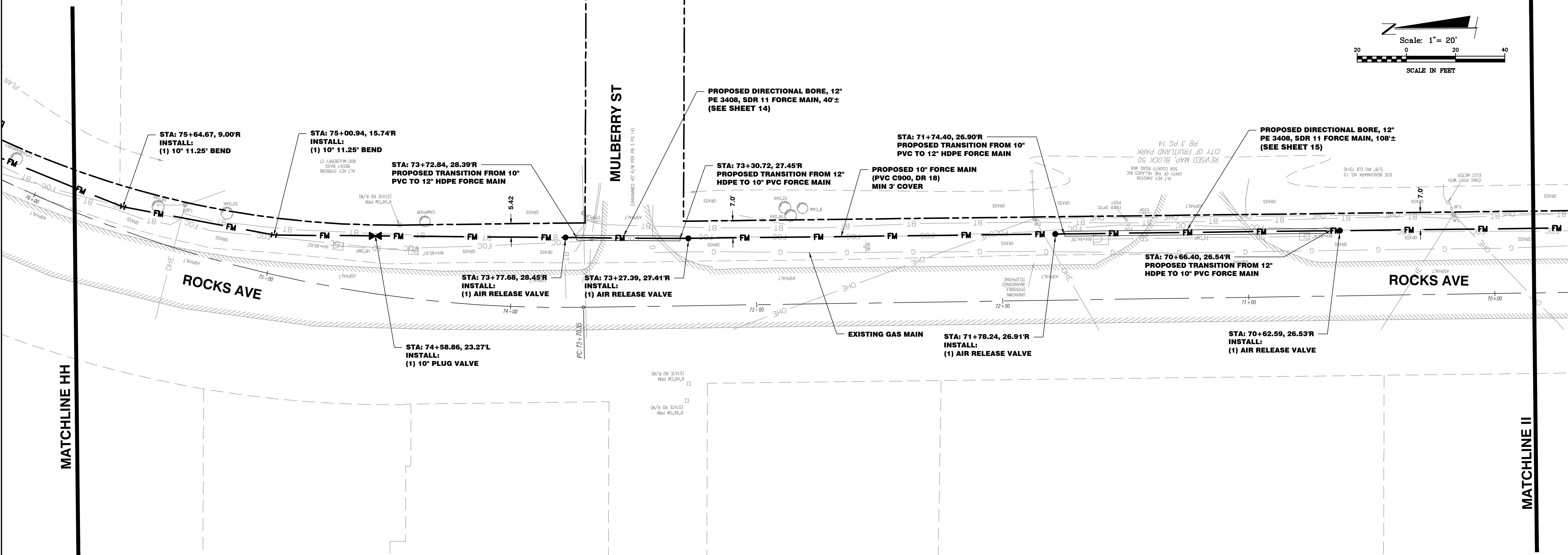


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 Certificate of Authorization Number: 33380

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DRAWN BY:	BJ
CHECKED BY:	TEM
JOB NO.:	081040.0077
FILE NAME:	

**Sheet 7**

Troy Mitchell, P.E.  
 Registered Eng 60190



REVISION	DATE

CITY OF FRUITLAND PARK  
**URICK STREET FORCE MAIN  
 EXTENSION**  
 PLAN SHEET  
**ROCKS AVENUE**

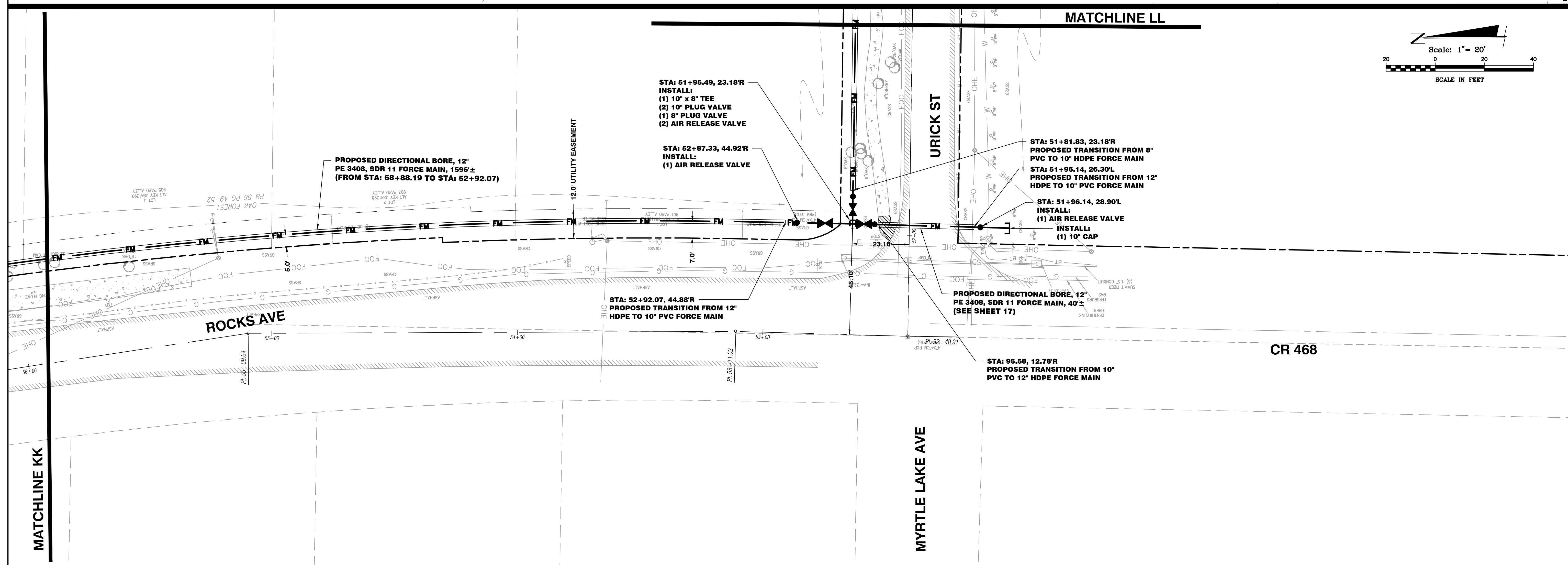
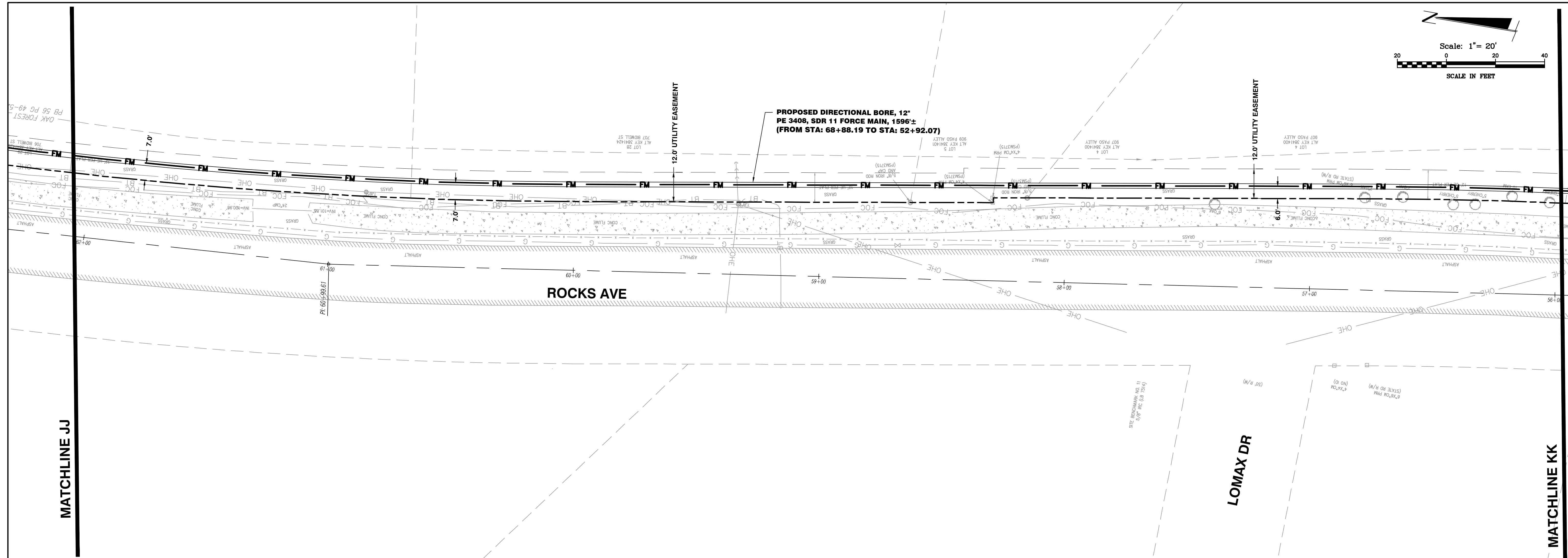


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REVISION	DATE

**CITY OF FRUITLAND PARK**  
**URICK STREET FORCE MAIN**  
**EXTENSION**

**PLAN SHEET**  
**ROCKS AVE & URICK ST**

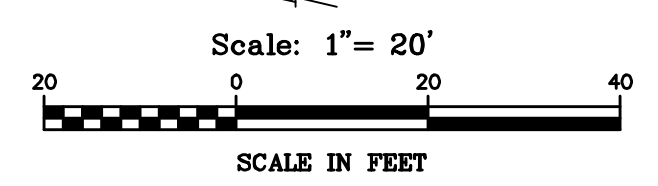
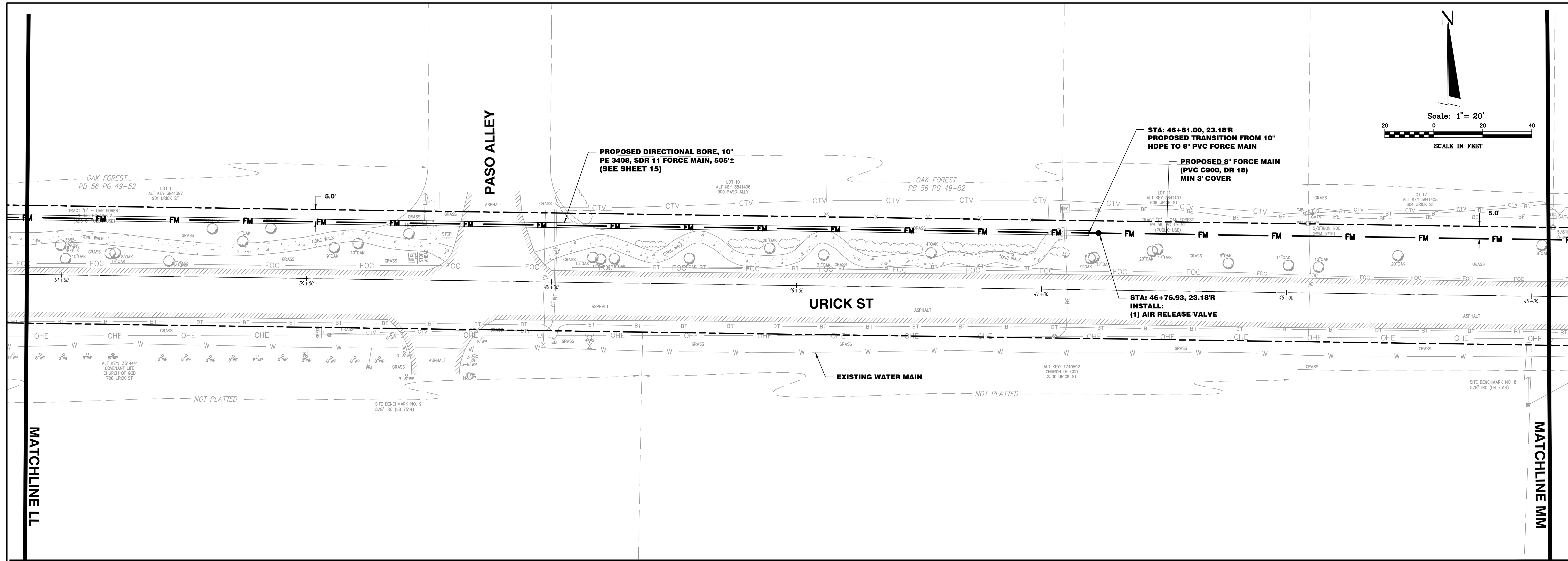


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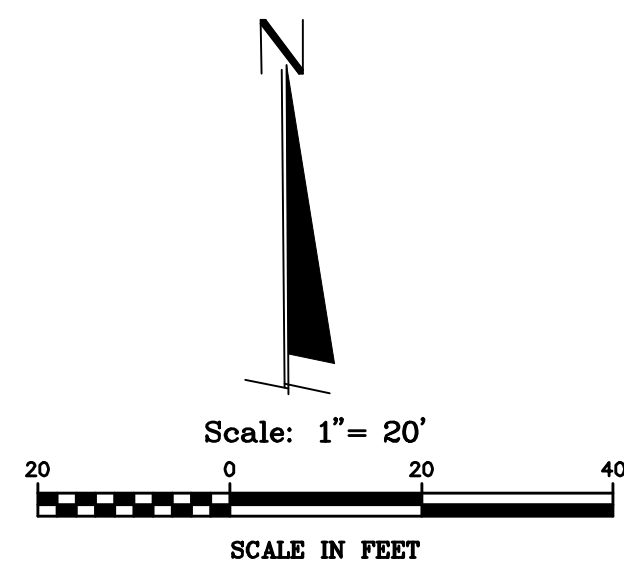
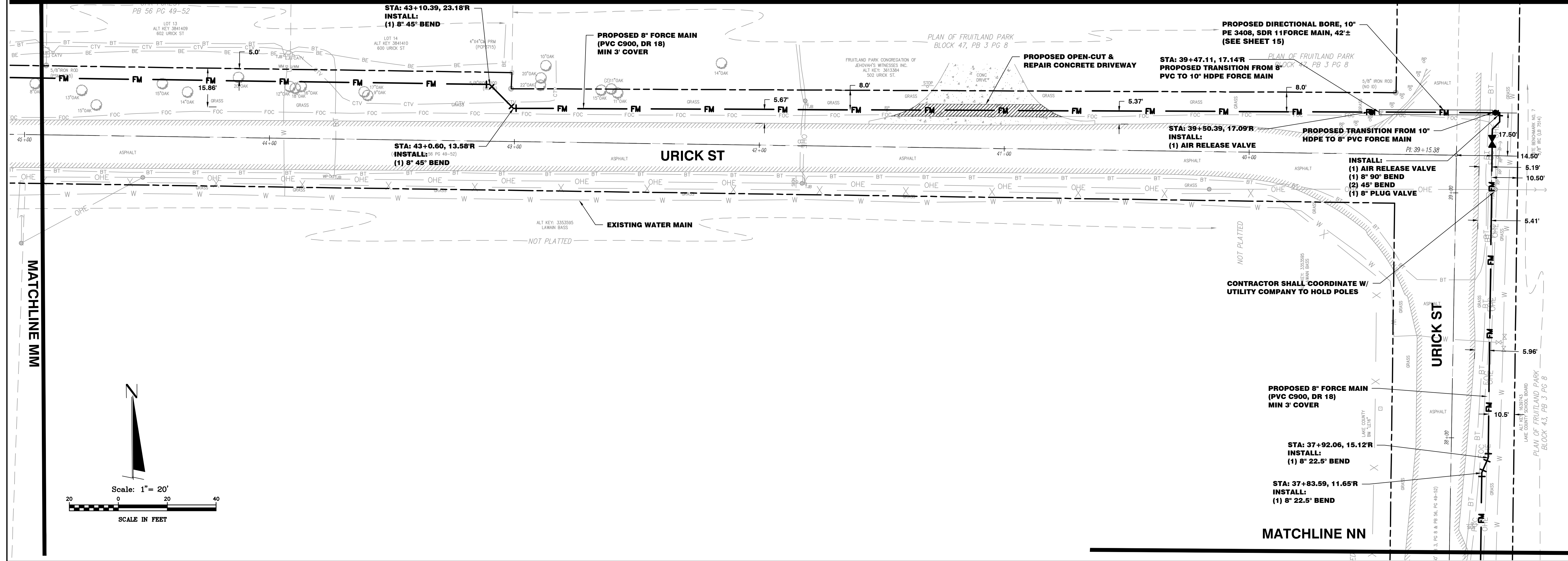
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MATCHLINE LL

MATCHLINE MM



MATCHLINE MM

MATCHLINE NN

DATE	REVISION

CITY OF FRUITLAND PARK  
**URICK STREET FORCE MAIN  
EXTENSION**  
PLAN SHEET  
**URICK ST**

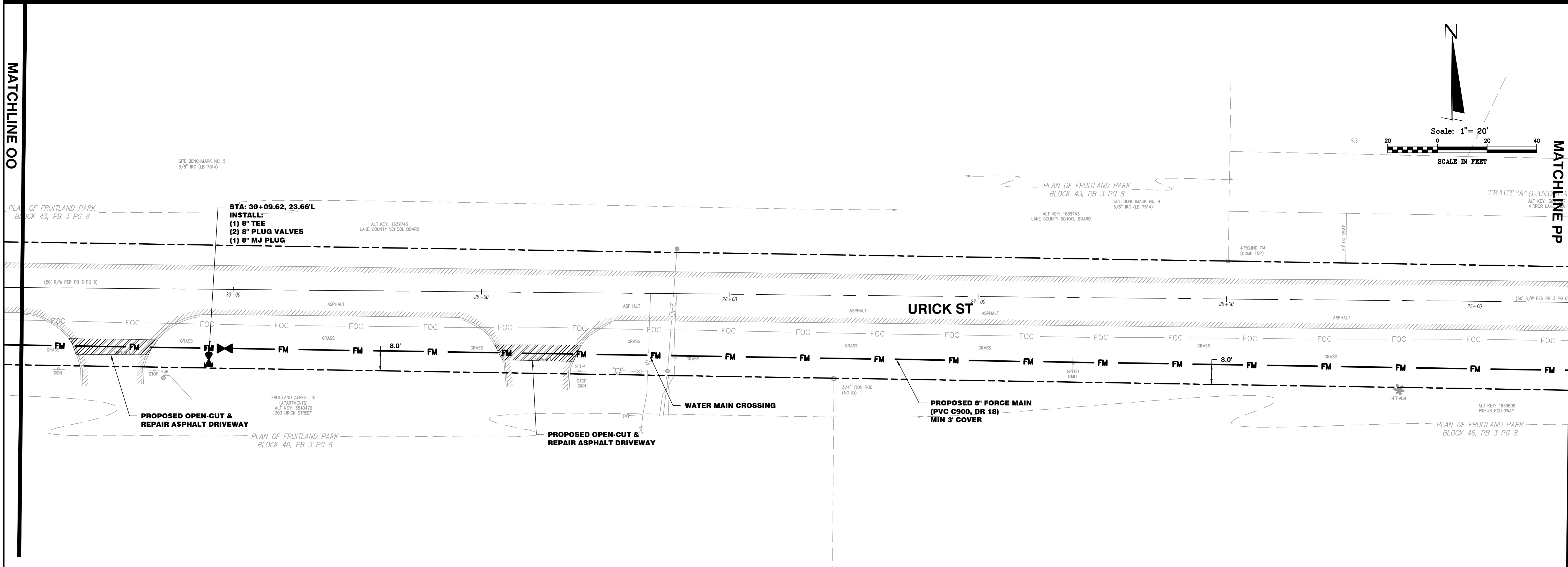
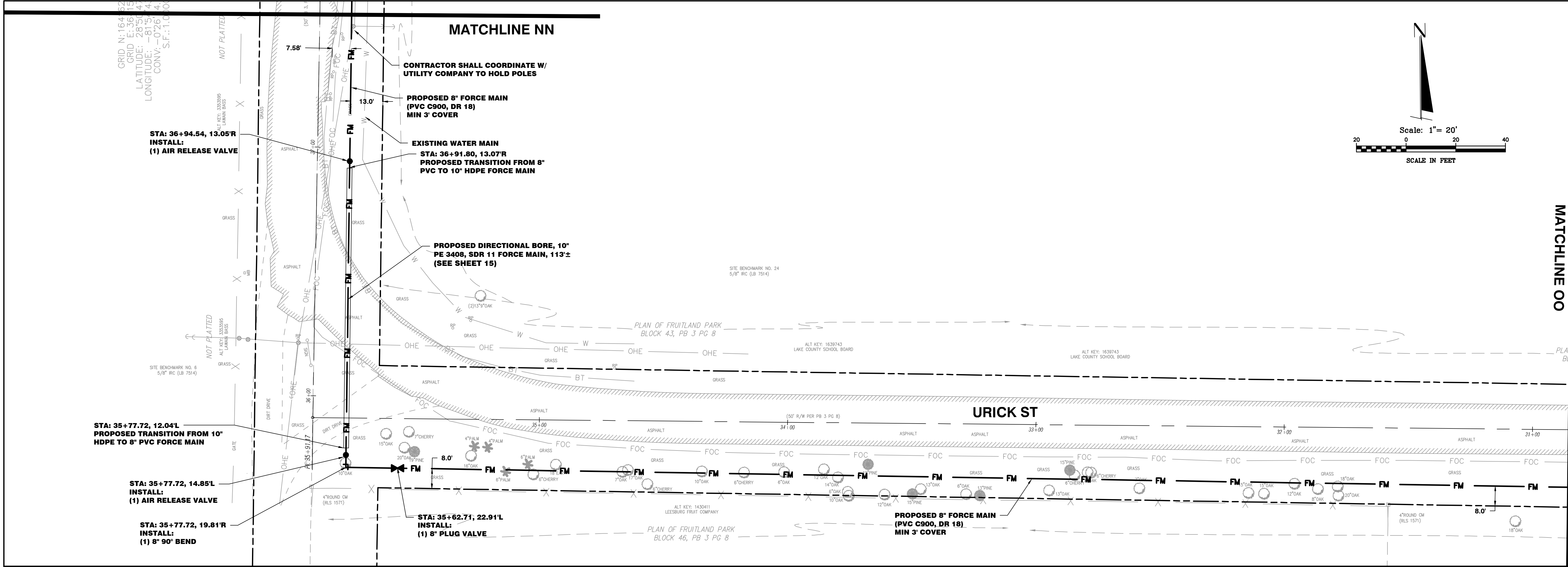


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 Fax: 352.343.8485  
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Sheet 10

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DATE									

CITY OF FRUITLAND PARK  
**URICK STREET FORCE MAIN  
EXTENSION**  
PLAN SHEET  
**URICK ST**



**HALFF**

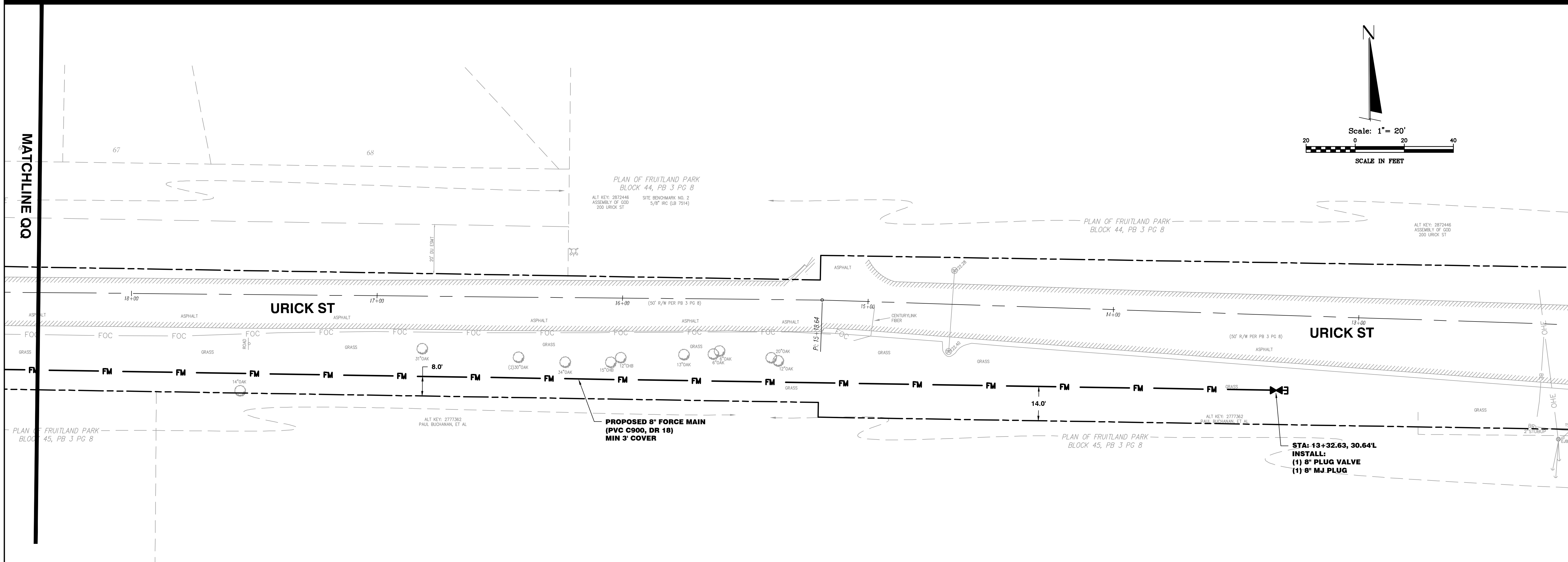
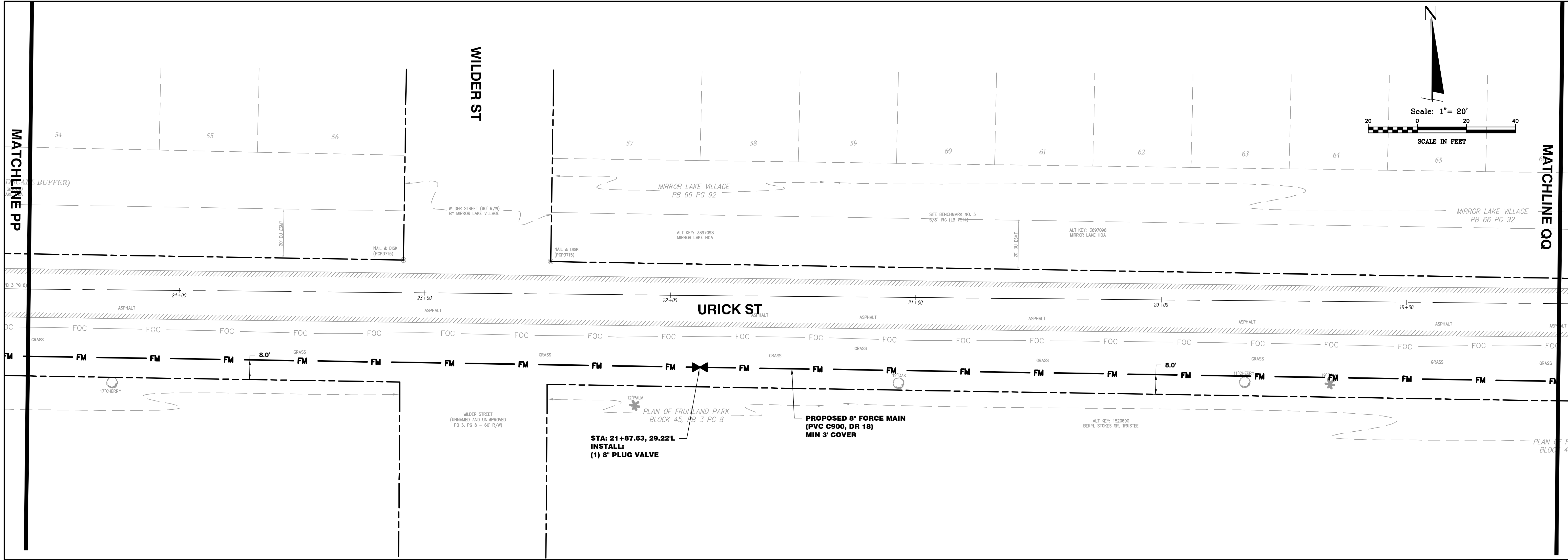
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902 North Sinclair Ave.  
Tavares, Florida 32778  
Fax: 352.343.8495  
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DATE:	AUGUST, 2021
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Troy Mitchell, P.E.  
Registered Eng 60190

MATCHLINE PP

MATCHLINE QQ



REVISION	DATE	BY	APP

CITY OF FRUITLAND PARK  
 URICK STREET FORCE MAIN  
 EXTENSION  
 PLAN SHEET  
 URICK ST



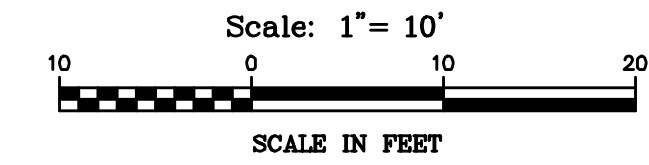
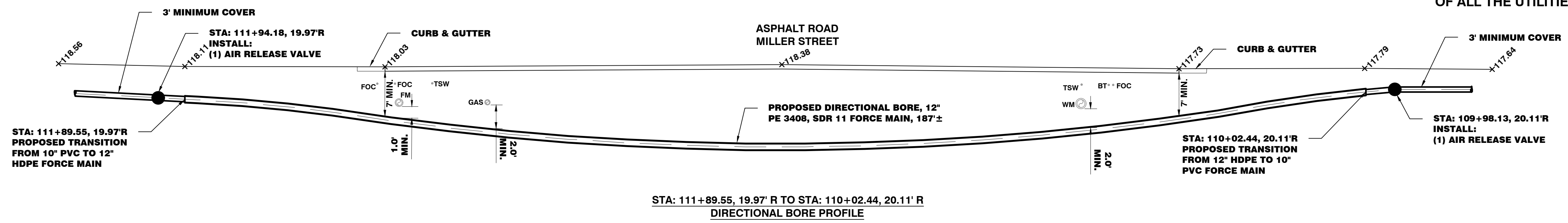
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Sheet 12  
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 Registered Eng 60190

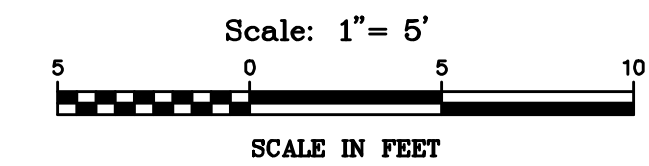
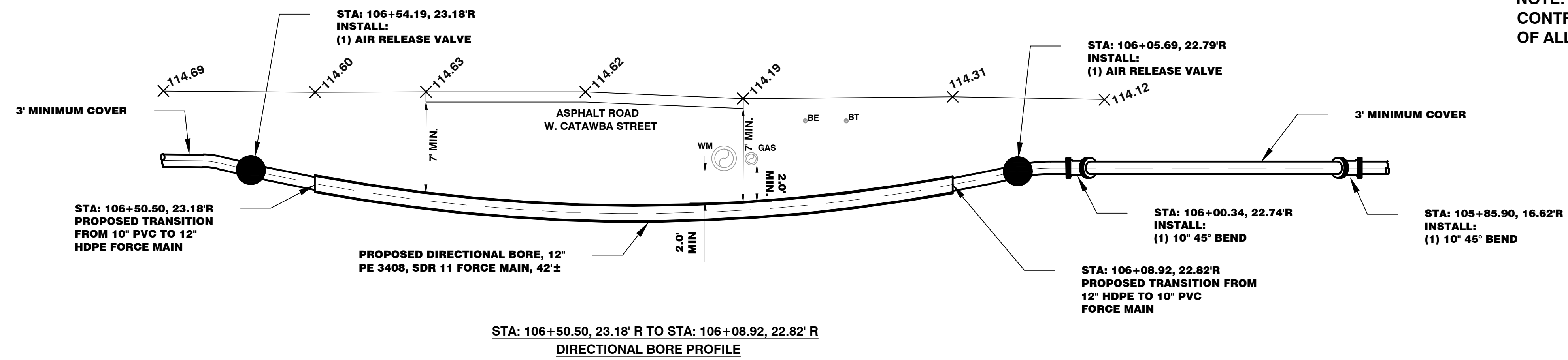
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 TSW = TRAFFIC CONTROL CONDUITS  
 BT = BURIED TELEPHONE  
 BE = BURIED ELECTRIC  
 UNK = UNKNOWN UTILITY  
 FM = FORCE MAIN  
 WM = WATER MAIN

NOTE:  
 CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL THE UTILITIES PRIOR TO THE CONSTRUCTION.



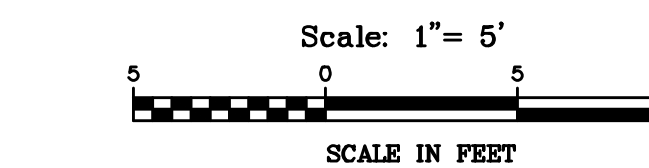
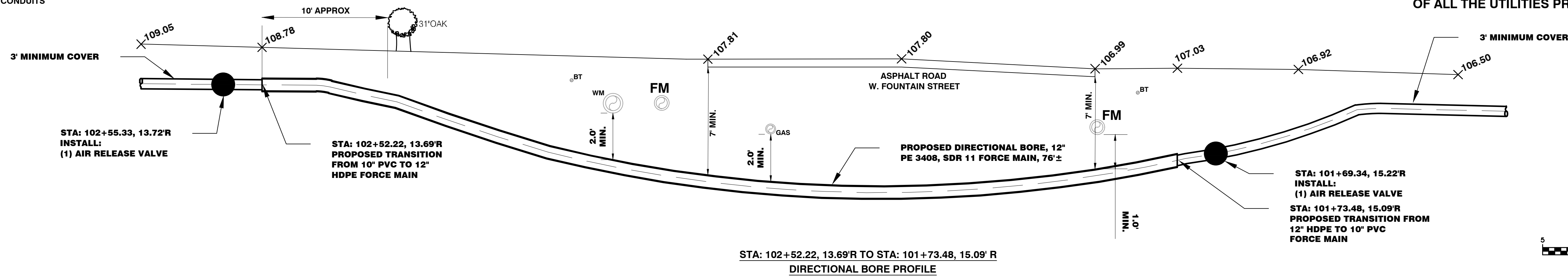
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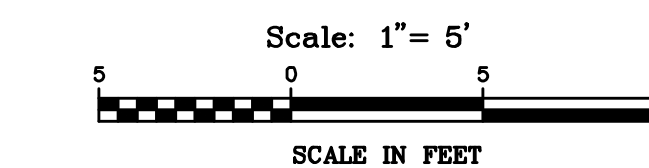
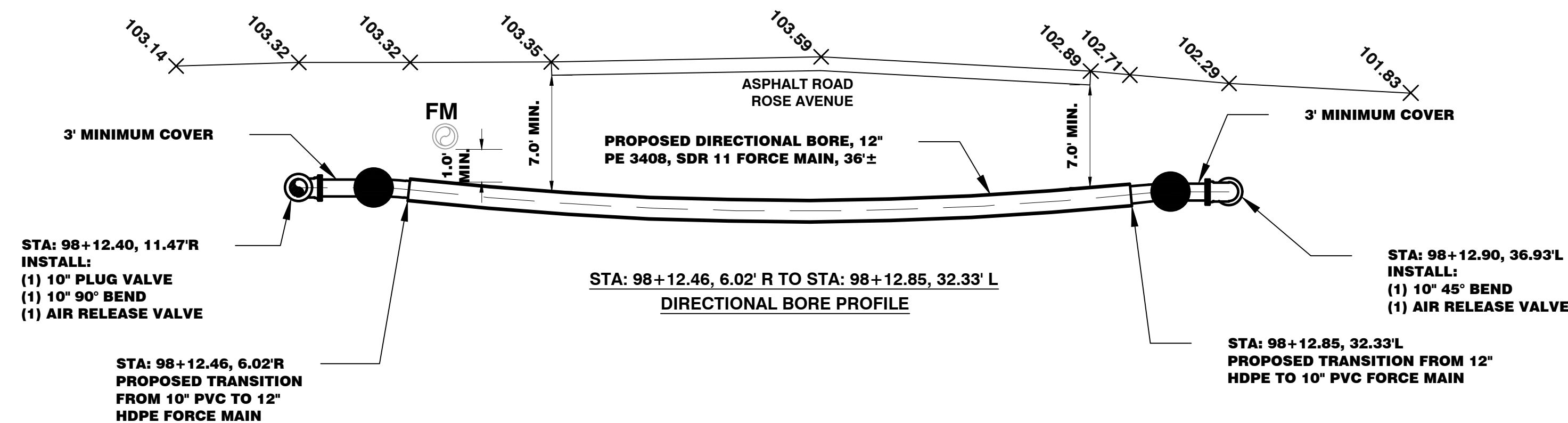
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DATE							

CITY OF FRUITLAND PARK  
 URICK STREET FORCE MAIN  
 EXTENSION  
 DIRECTIONAL BORE  
 PROFILES



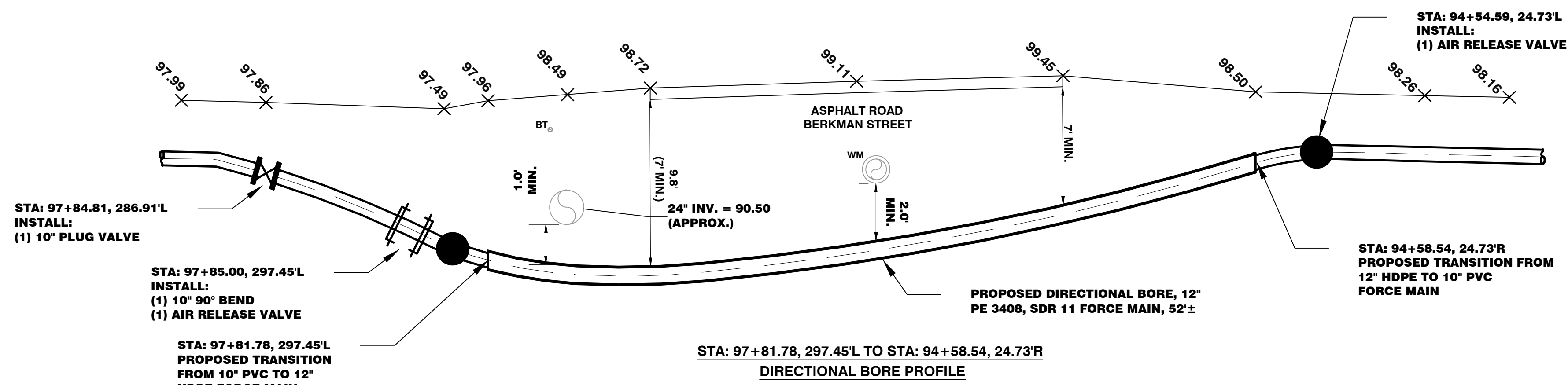
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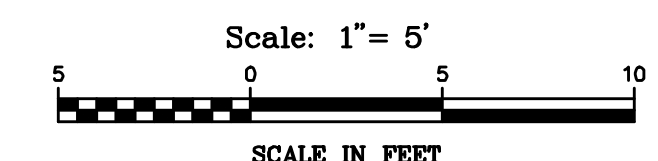
Sheet 13

Troy Mitchell, P.E.  
 Registered Eng 60190

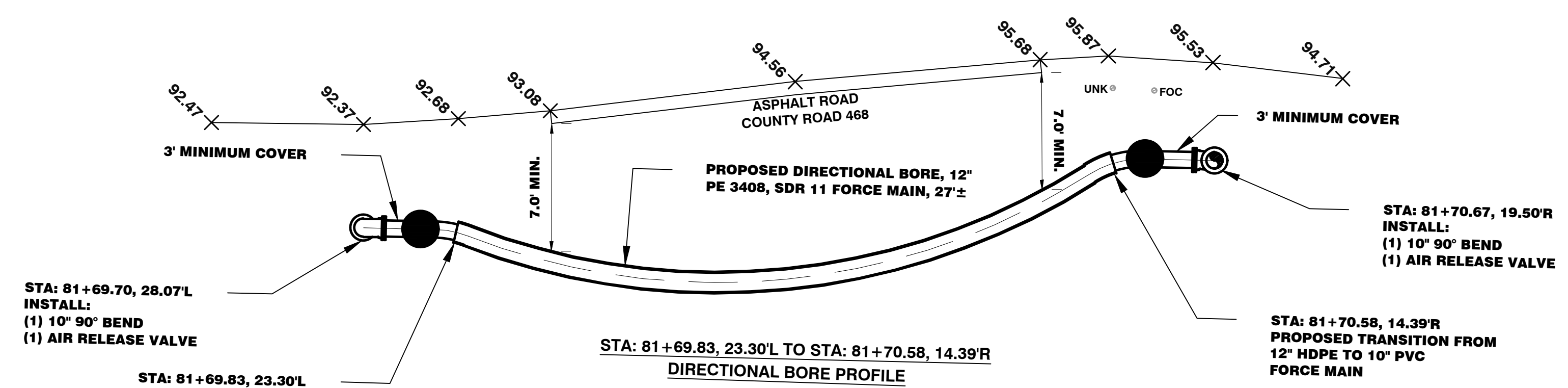
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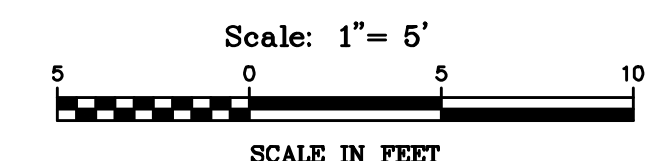
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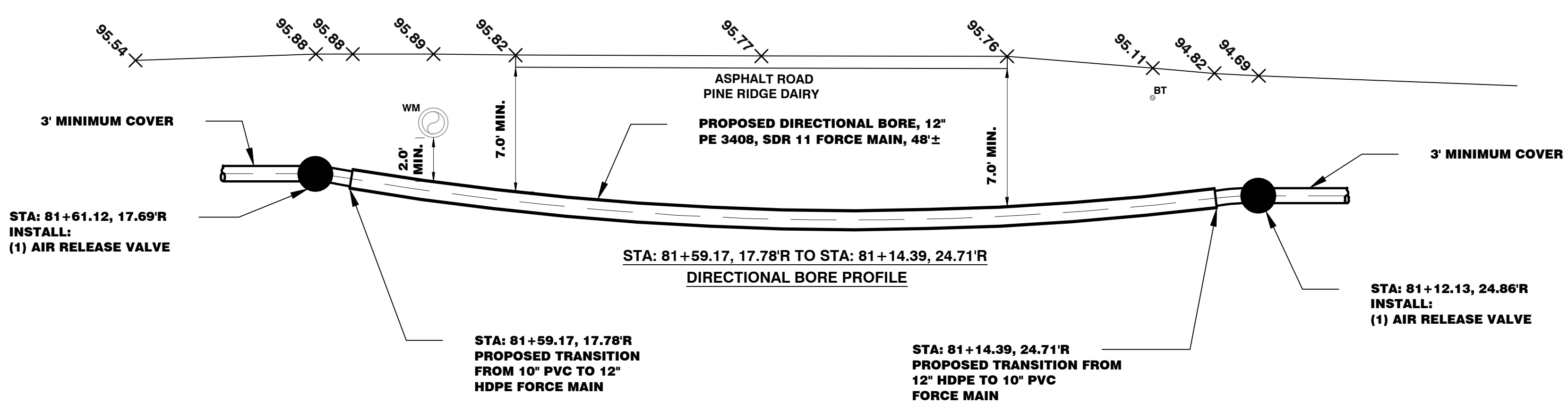
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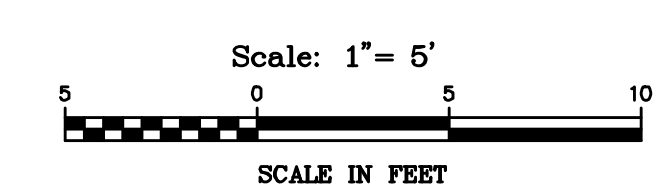
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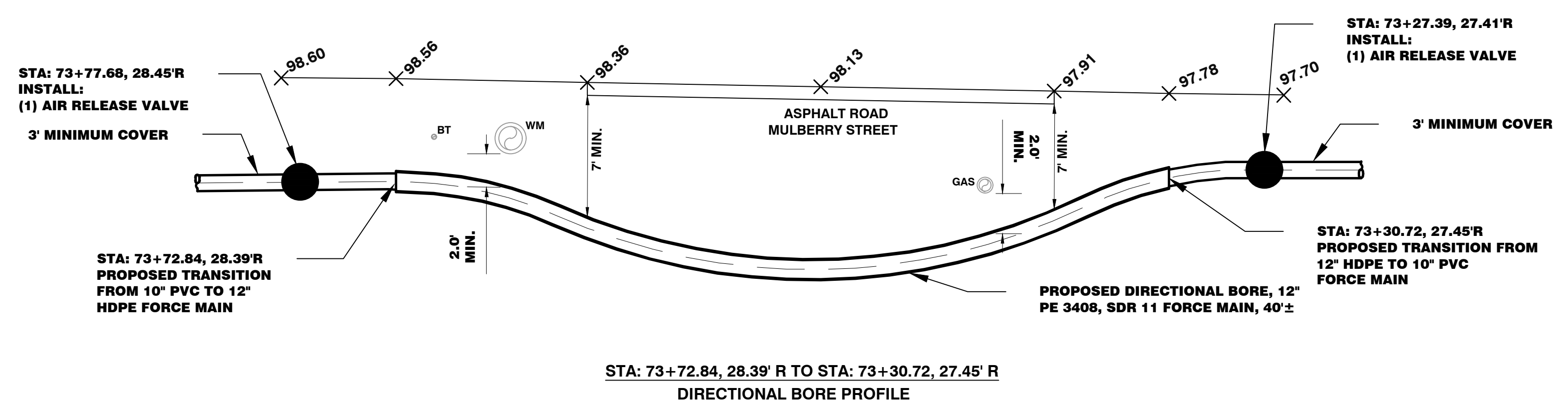
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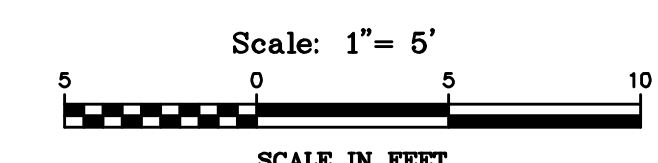
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CITY OF FRUITLAND PARK  
 URICK STREET FORCE MAIN  
 EXTENSION  
 DIRECTIONAL BORE  
 PROFILES



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 Certificate of Authorization Number: 33390

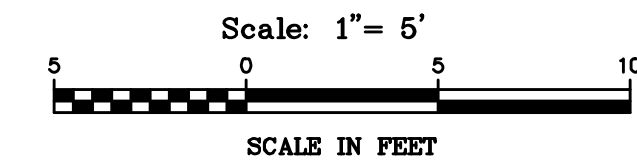
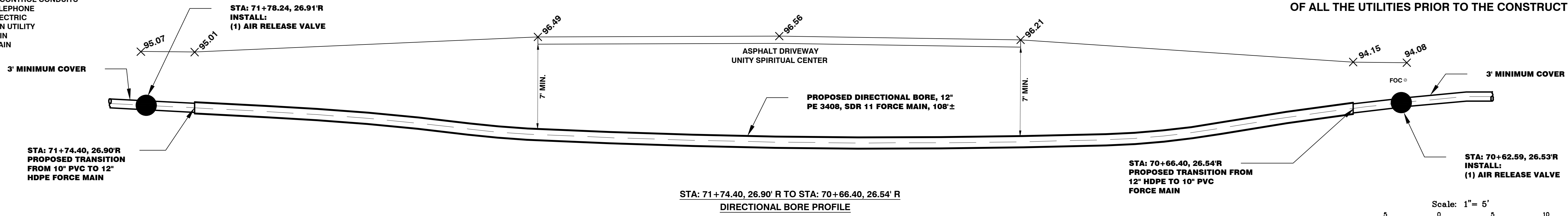
DATE:	AUGUST, 2021
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FILE NAME:	

Sheet 14

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 Registered Eng 60190

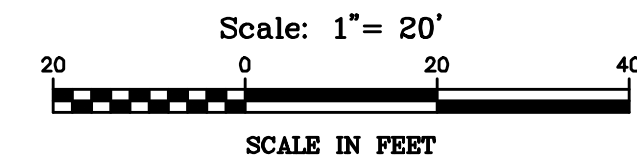
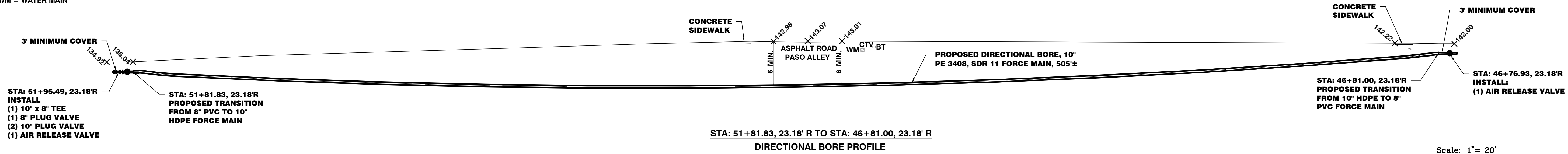
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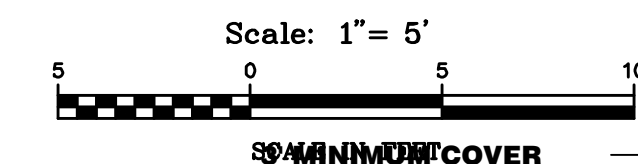
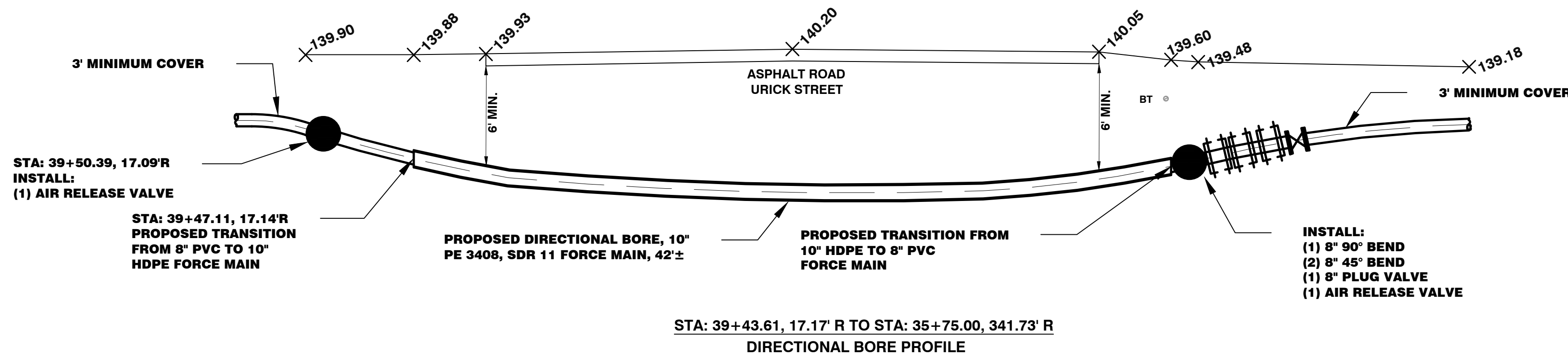
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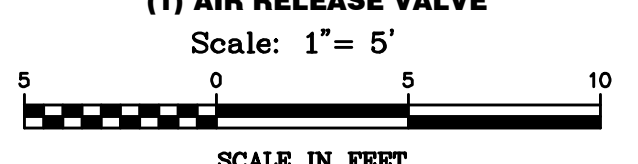
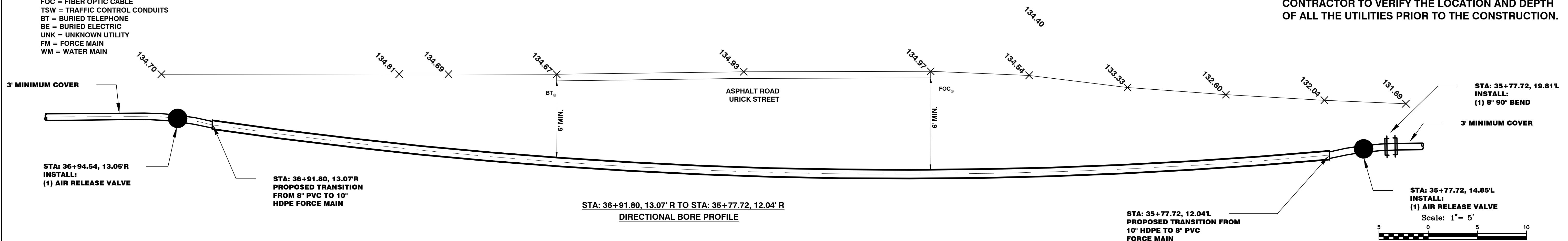
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CITY OF FRUITLAND PARK  
 URICK STREET FORCE MAIN  
 EXTENSION  
 DIRECTIONAL BORE  
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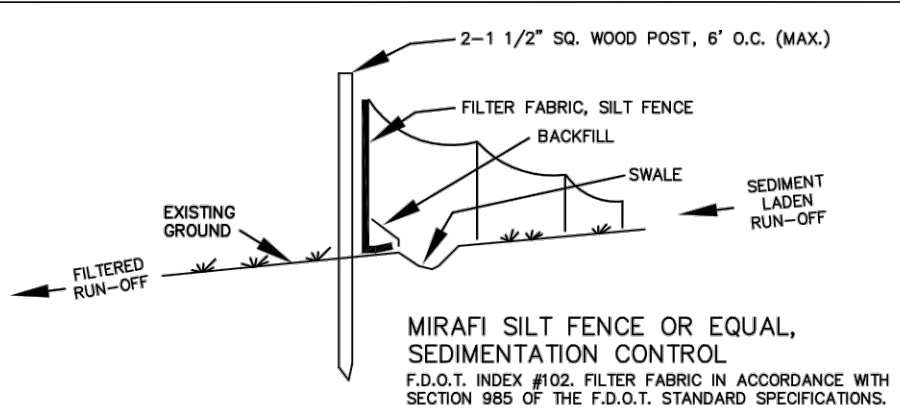


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 902 North Sinclair Ave.  
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Sheet 15

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**EROSION CONTROL STRUCTURE**  
NOT TO SCALE

THE FOLLOWING LIST REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF-SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT.

PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES.

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICALLY EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDITIOUS IN LIEU OF PERMANENT MEASURES.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT.

NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

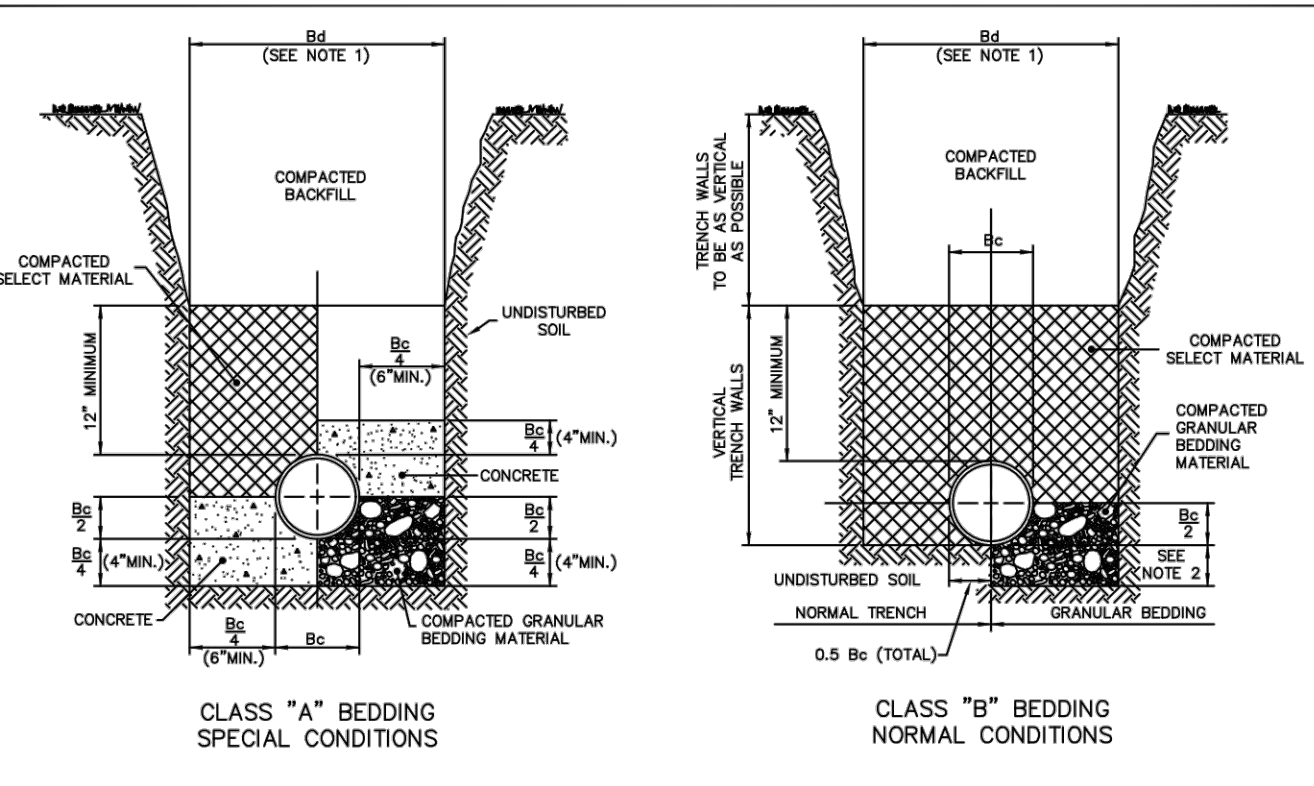
MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEED.

City of Fruitland Park  
Standard Details

JANUARY 2020

Detail G-1



**BEDDING DETAILS**  
NOT TO SCALE

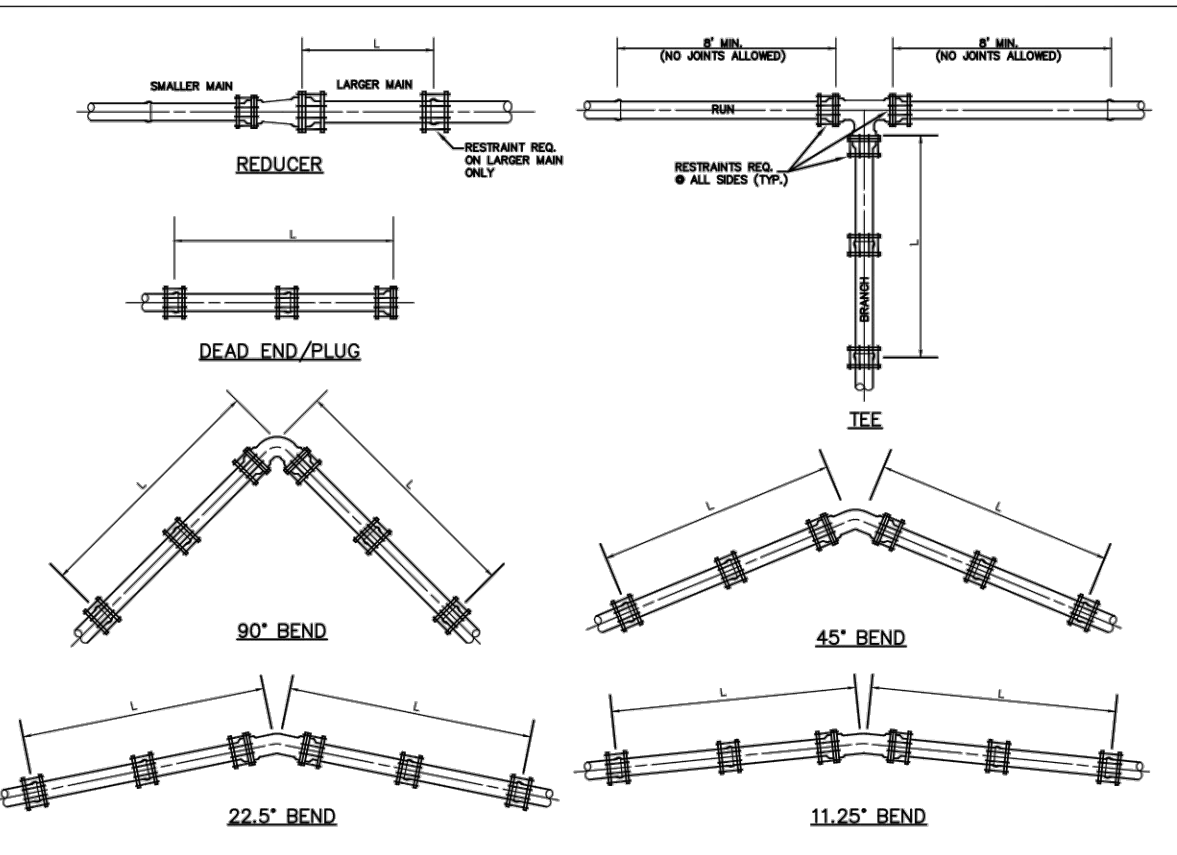
NOTES: FOR BEDDING AND TRENCHING

- Dimension Bc = Pipe O.D.  
Dimension Bt = Trench Width at Top of Pipe  
Minimum Bt = Bc + 10"  
Minimum Bt = Maximum Dimension of Bell + 6" (Unheated Trench)
- Depth for removal for unsuitable material shall be as required to reach suitable foundation. For rock or other non-cushioning material, depth shall be 6" below bottom of utility.
- All backfill and select material under all roadways, drives (including dirt drives), and parking areas shall be compacted to 98% of the modified proctor maximum dry density (ASTM D-1557). Backfill and select material under all other areas shall be compacted as follows: From bottom of trench to 12" above top of pipe - 95% of modified proctor maximum dry density (ASTM D-1557); From 12" above top of pipe to top of backfill - 90% of modified proctor maximum dry density (ASTM D-1557).

City of Fruitland Park  
Standard Details

JANUARY 2020

Detail G-3



**THRUST RESTRAINT DETAILS**  
NOT TO SCALE

TABLE OF THRUST RESTRAINT LENGTHS

PIPE SIZE (INCH)	REDUCER	TEE	BEND
4	20"	18"	12"
6	28"	22"	16"
8	36"	28"	20"
10	43"	34"	24"
12	50"	40"	28"
16	63"	50"	36"
18	70"	56"	40"
20	78"	62"	44"
24	94"	74"	52"

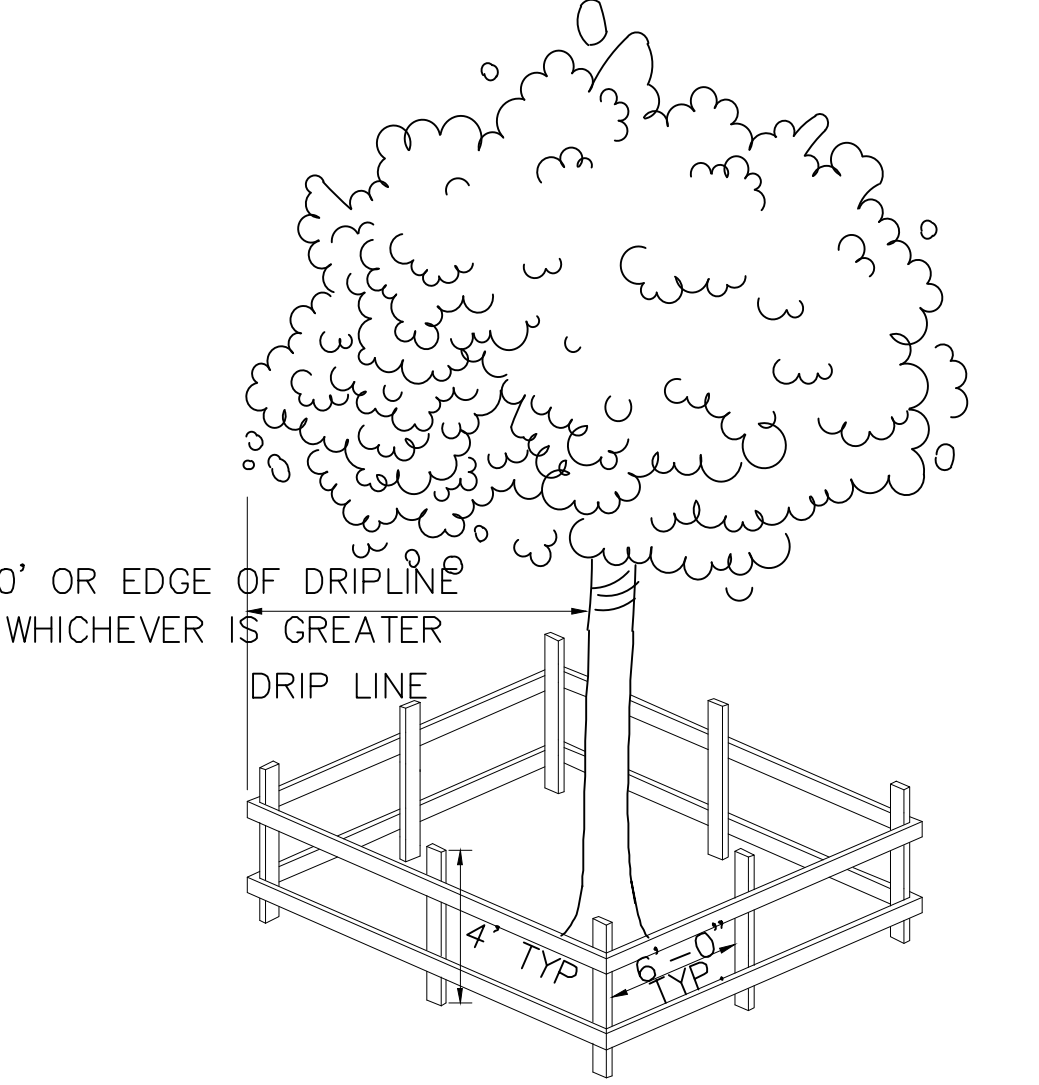
THRUST RESTRAINT DESIGN NOTES

- RESTRAINT JOINTS, FITTINGS, & VALVE REQUIREMENTS CALCULATED BY THE THRUST RESTRAINT DESIGN PROGRAM PROVIDED BY LHM-FRANCE, THE FOOD METER BOX COMPANY, INC.
- DATA BASED ON MAX. PRESSURE OF 100 P.S.I. THE LIMITED SOIL CLASSIFICATION SYSTEM (SOIL TYPE SP), THE PIPE BEDDED IN NATIVE SOIL & A MINIMUM OF 2" COMPACTED FILL OVER THE PIPE, AND USING A SAFETY FACTOR OF 1.5 FOR THE DATA.
- ALL FITTINGS & VALVES SHALL HAVE RESTRAINT JOINTS PER SPECIFICATIONS. ALL BELL & SPIGOT JOINTS TO BE RESTRAINED WITH A RESTRAINING MANHOLE WITH THE REQUIRED LENGTH OF RESTRAINED PIPE (L). AND USING A SAFETY FACTOR OF 1.5 FOR THE DATA.
- THRUST BLOCKS SHALL BE USED ONLY AS SPECIFIED BY PRODUCT ENGINEER.

City of Fruitland Park  
Standard Details

JANUARY 2020

Detail G-6



**TREE PROTECTION DETAIL**  
NOT TO SCALE

10' OR EDGE OF DRIPLINE WHICHEVER IS GREATER

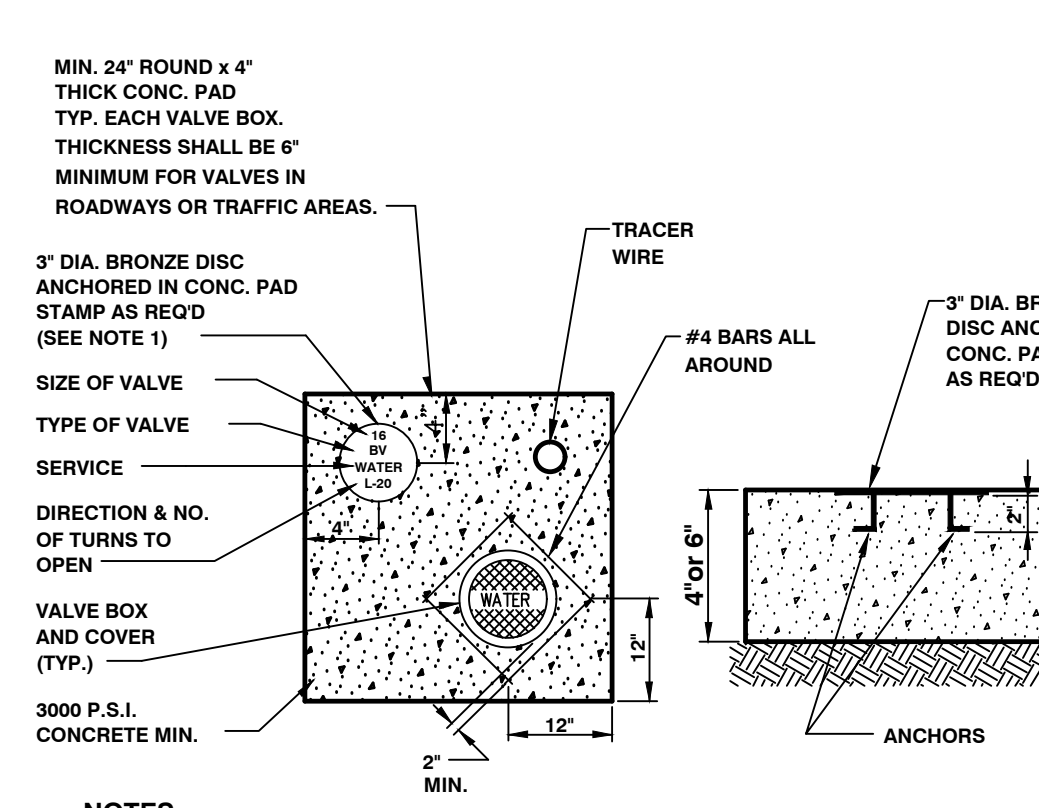
DRIP LINE

4' TYP.

4' TYP.

BARRIER SHOULD BE EITHER 10 FEET FROM THE TRUNK OF THE TREE OR AT THE EDGE OF THE DRIPLINE, WHICHEVER IS GREATER.

FOR THE BARRIER, THE CITY RECOMMENDS SAFETY BARRICADE FENCING. IF NOT AVAILABLE, 1X2 STRINGERS AND 2X4 POSTS ARE ACCEPTABLE.



**VALVE COLLAR**  
NOT TO SCALE

MIN. 24" ROUND x 4" THICK CONC. PAD TYP. EACH VALVE BOX. THICKNESS SHALL BE 6" MINIMUM FOR VALVES IN ROADWAYS OR TRAFFIC AREAS.

3" DIA. BRONZE DISC ANCHORED IN CONC. PAD STAMP AS REQ'D. (SEE NOTE 1)

TRACER WIRE

#4 BARS ALL AROUND

3" DIA. BRONZE DISC ANCHORED IN CONC. PAD STAMP AS REQ'D.

SIZE OF VALVE

TYPE OF VALVE

SERVICE

DIRECTION & NO. OF TURNS TO OPEN

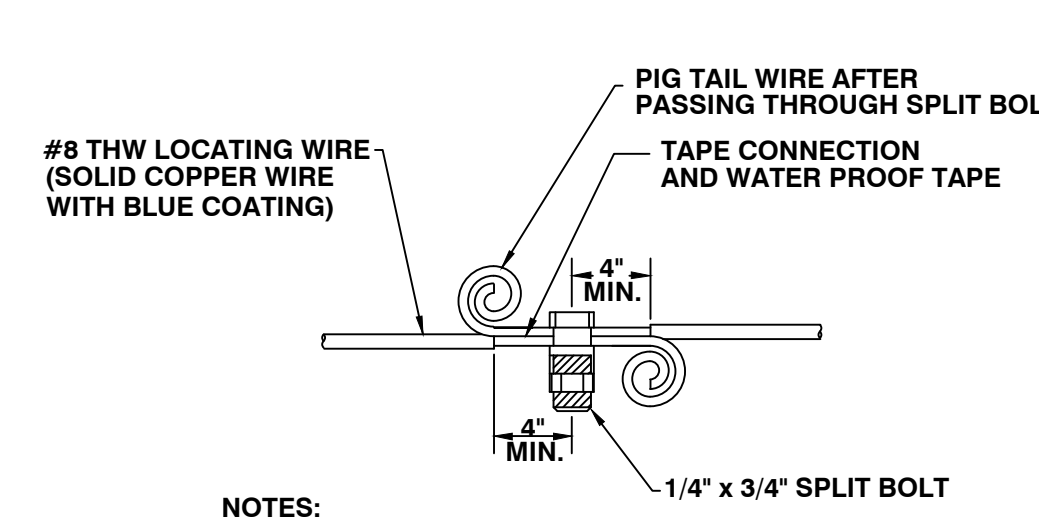
VALVE BOX AND COVER (TYP.)

3000 P.S.I. CONCRETE MIN.

ANCHORS

NOTES:

- BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES



**LOCATING WIRE SPLICING**  
NOT TO SCALE

#8 THW LOCATING WIRE (SOLID COPPER WIRE WITH BLUE COATING)

PIG TAIL WIRE AFTER PASSING THROUGH SPLIT BOLT

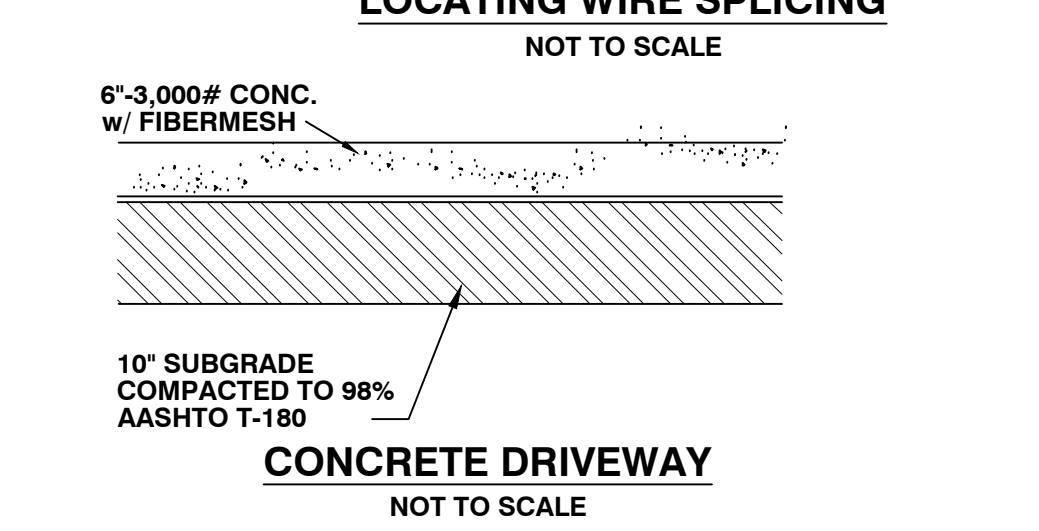
TAPE CONNECTION AND WATER PROOF TAPE

4" MIN.

1/4" x 3/4" SPLIT BOLT

NOTES:

- THE ENDS OF ALL LOCATING WIRES, WHETHER THEY ARE SPLICED, CONNECTED, OR TERMINATED, SHALL HAVE THE LAST THREE INCHES PIG TAILED AS DETAILED HEREON.
- AFTER INSTALLATION OF THE LOCATING WIRE THE SYSTEM SHALL BE SUBJECT TO TESTING, IN THE PRESENCE OF CITY UTILITIES STAFF PRIOR TO BACKFILL, IN ORDER TO THAT THE SYSTEM IS FUNCTIONAL.

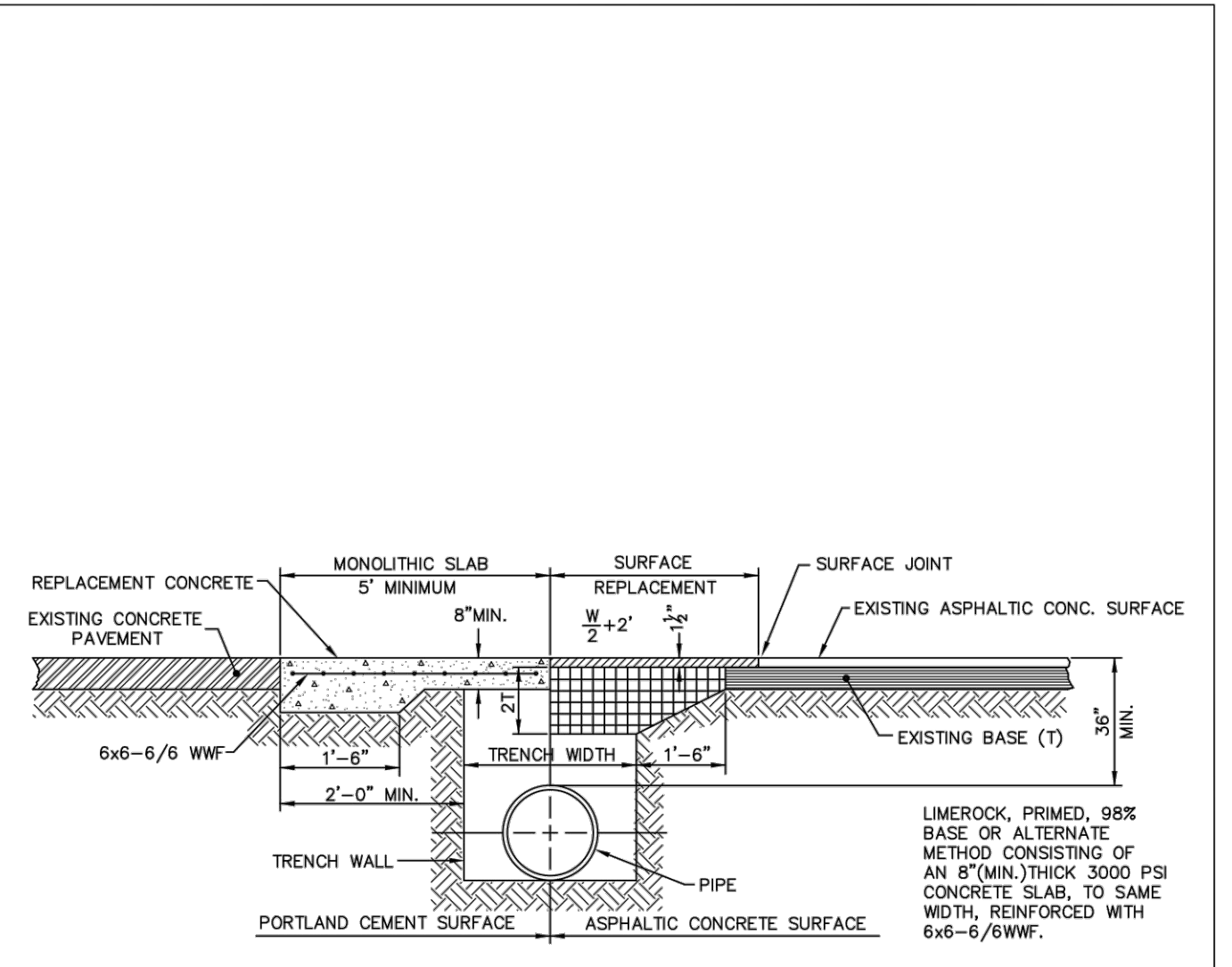


**CONCRETE DRIVEWAY**  
NOT TO SCALE

6"-3,000# CONC. w/ FIBERMESH

10" SUBGRADE COMPACTED TO 98% AASHTO T-180

EXPANSION JOINT NOTE:  
1/2" BITUMINOUS COATED EXPANSION JOINT MATERIAL TO BE USED AT ALL CURBS AND SIDEWALKS.  
LONGITUDINAL CENTER JOINT @ 10' O.C., AND TRANSVERSE CONTRACTION JOINTS @ 20' O.C.  
1/2" EXPANSION JOINTS 60' O.C. OR EVERY 3RD. TRANSVERSE JOINT TO BE AN EXPANSION JOINT.



**OPEN CUT AND REPAIR DETAIL**  
NOT TO SCALE

REPLACEMENT CONCRETE

MONOLITHIC SLAB

5" MINIMUM

SURFACE REPLACEMENT

8" MIN.

W + 2"

EXISTING ASPHALTIC CONC. SURFACE

EXISTING BASE (1)

30" MIN.

6x6-6/8 WWF

TRENCH WIDTH

1'-6"

2'-0" MIN.

TRENCH WALL

PORTLAND CEMENT SURFACE

PIPE

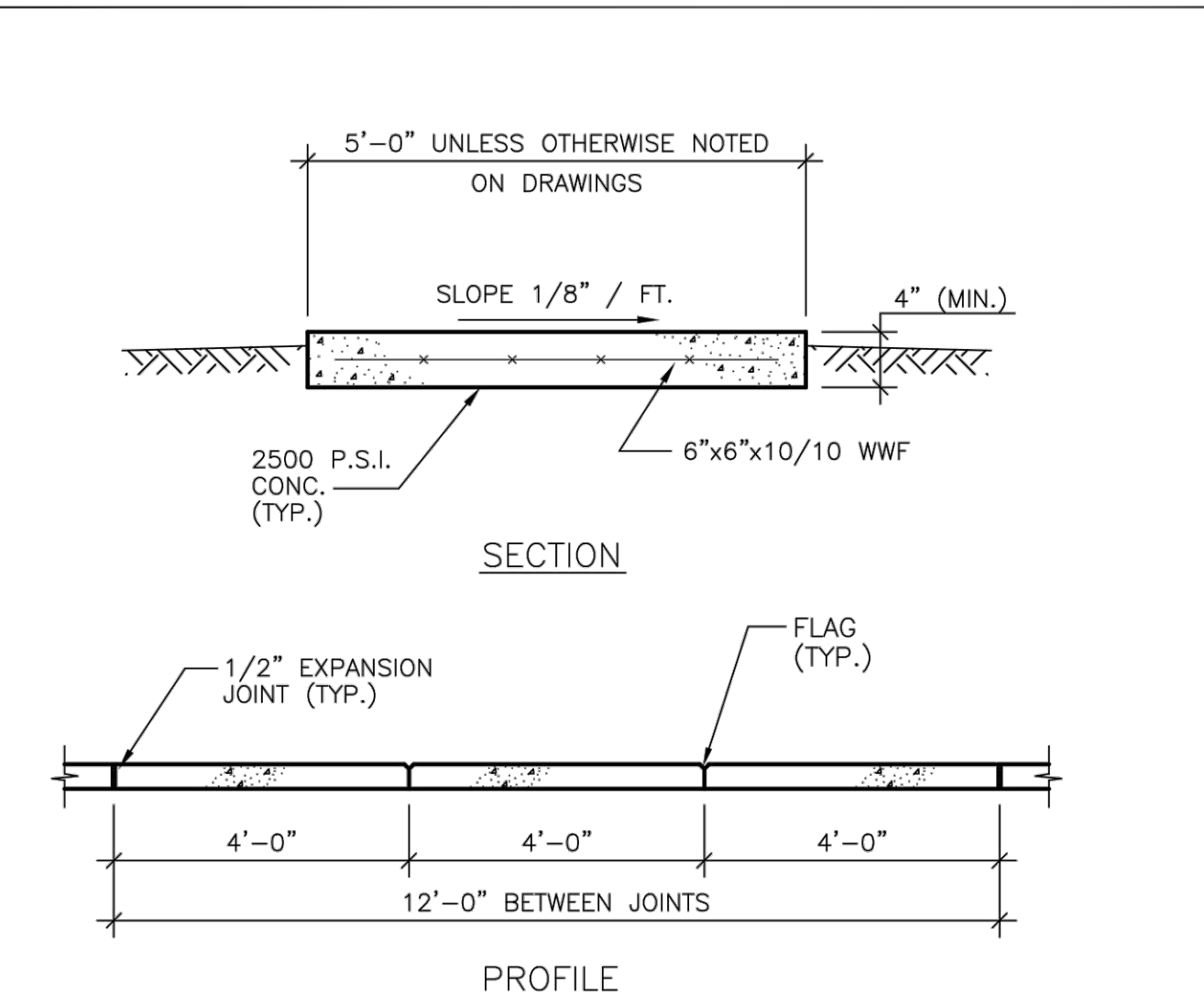
ASPHALTIC CONCRETE SURFACE

LIMEROCK, PRIMED, 98% BASE OR ALTERNATE METHOD CONSISTING OF AN 8" (MIN.) THICK 3000 PSI CONCRETE SLAB, TO SAME WIDTH, REINFORCED WITH 6x6-6/8 WWF.

City of Fruitland Park  
Standard Details

JANUARY 2020

Detail G-9



**CONCRETE WALKWAY DETAIL**  
NOT TO SCALE

5'-0" UNLESS OTHERWISE NOTED ON DRAWINGS

SLOPE 1/8" / FT.

4" (MIN.)

2500 P.S.I. CONC. (TYP.)

6"x6"x10/10 WWF

SECTION

1/2" EXPANSION JOINT (TYP.)

FLAG (TYP.)

4'-0"

4'-0"

4'-0"

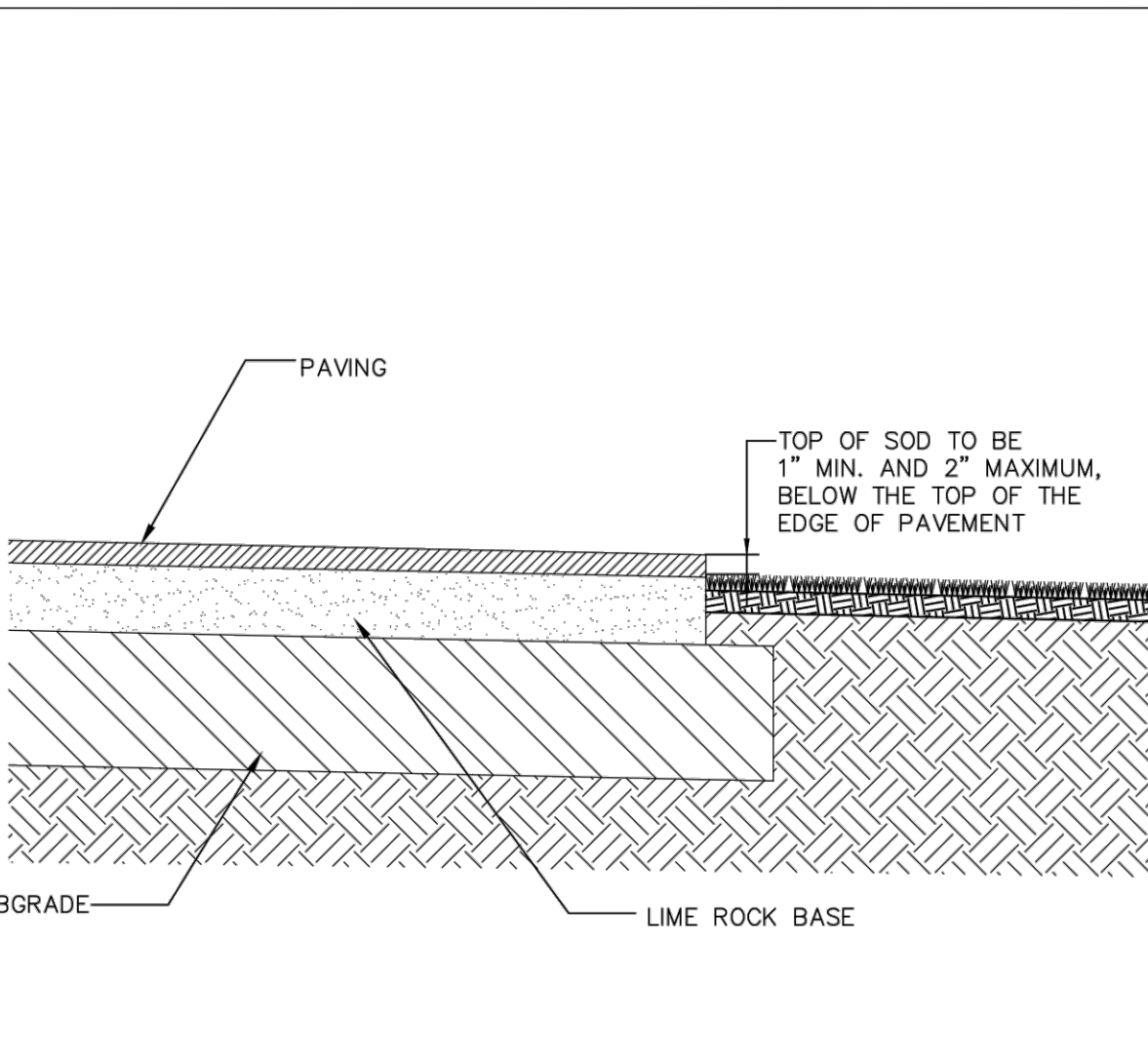
12'-0" BETWEEN JOINTS

PROFILE

City of Fruitland Park  
Standard Details

JANUARY 2020

Detail G-10



**SOD PLANTING**  
NOT TO SCALE

PAVING

TOP OF SOD TO BE 1" MIN. AND 2" MAXIMUM, BELOW THE TOP OF THE EDGE OF PAVEMENT

SUBGRADE

LIME ROCK BASE

City of Fruitland Park  
Standard Details

JANUARY 2020

Detail G-11

REVISION									
DATE									

CITY OF FRUITLAND PARK  
URICK STREET FORCEMAIN  
EXTENSION  
DETAILS



**HALFF**

902 North Shields Ave.  
Tavares, Florida 32778

Office: 352.343.8481  
Fax: 352.343.8485

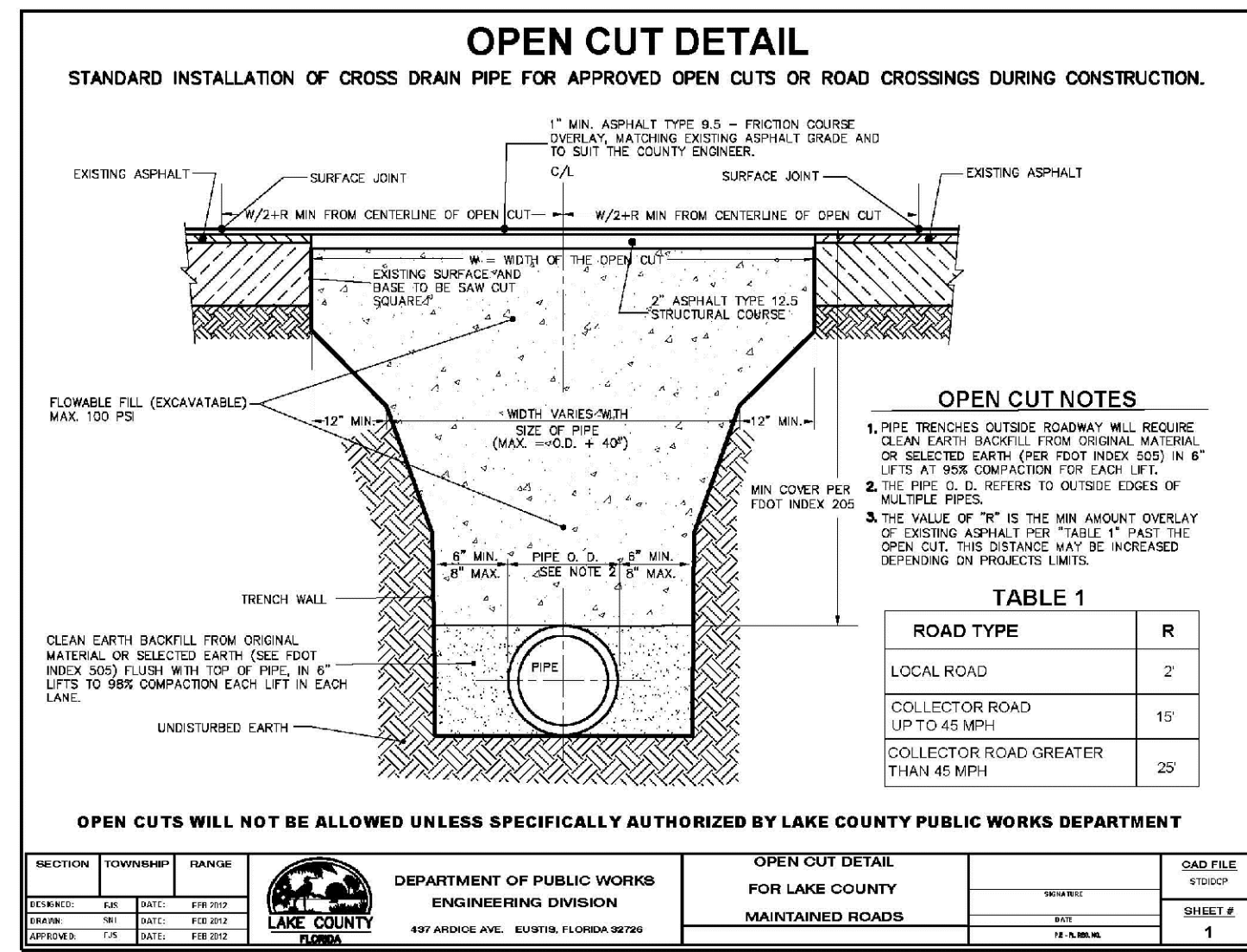
Certificate of Authorization Number: 35380

DATE:	AUGUST, 2021
DESIGNED BY:	BJ
DRAWN BY:	BJ
CHECKED BY:	TEM
JOB NO.:	081040.0077
FILE NAME:	

Sheet 16

Troy Mitchell, P.E.  
Registered Eng 60190

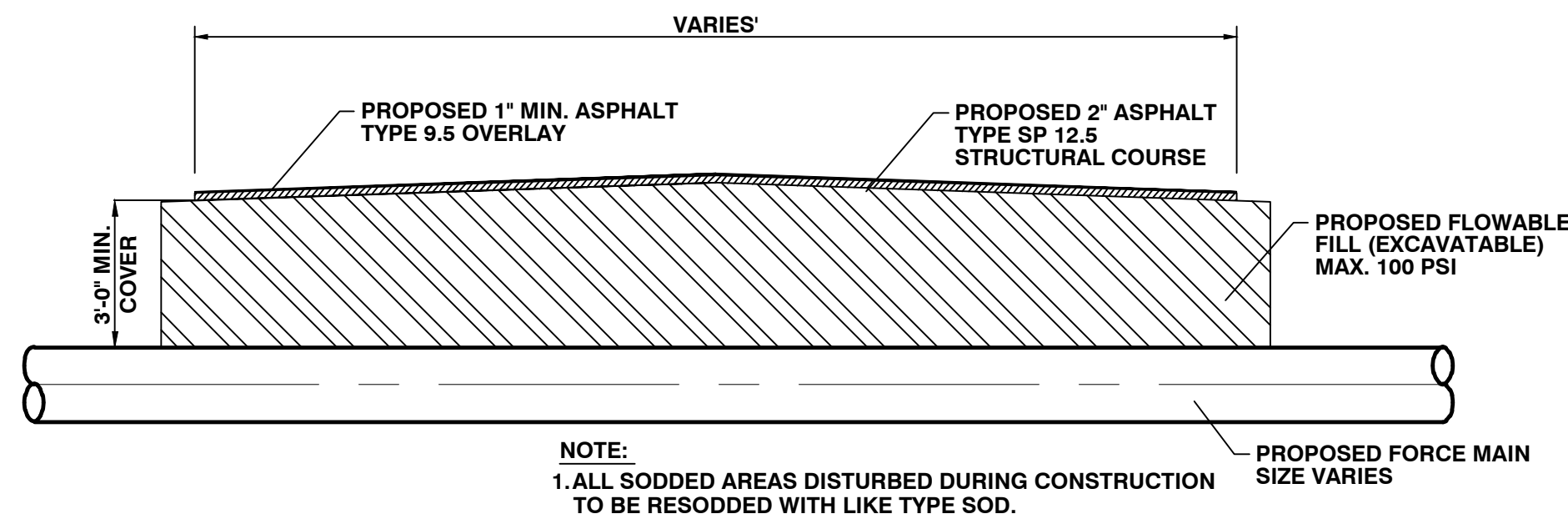




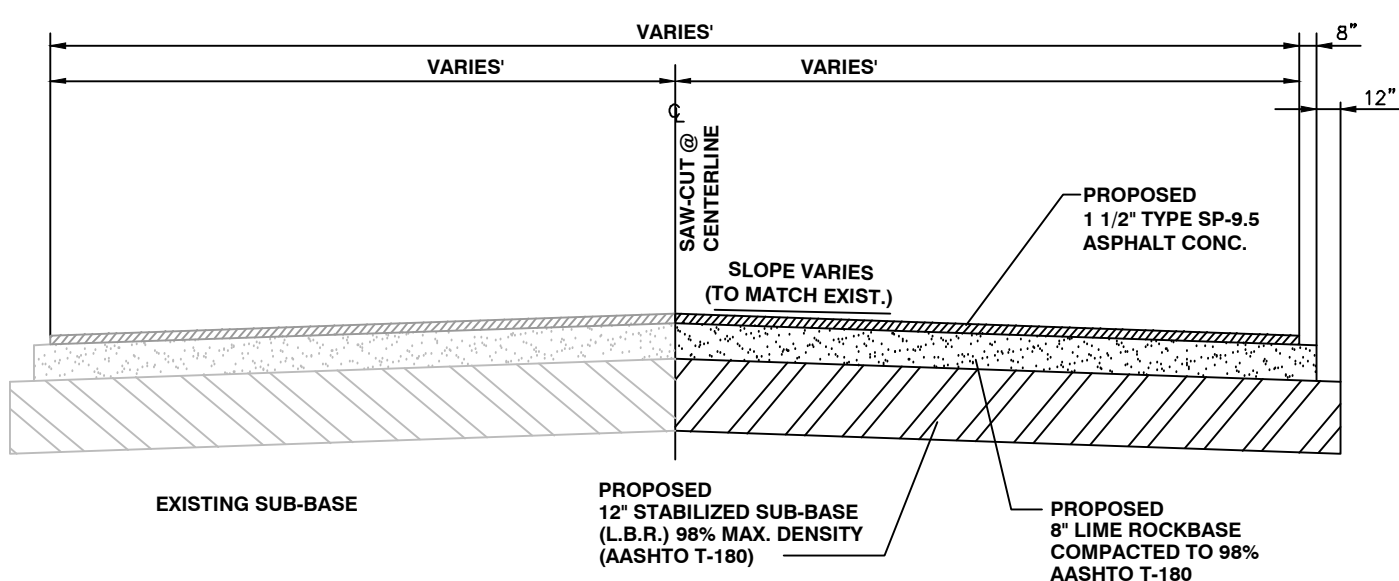
**NOTES, PER LAKE COUNTY:**

- CONTRACTOR SHALL BE ALLOWED TO UTILIZE STANDARD BACKFILL IN LIEU OF FLOWABLE FILL FOR OPEN CUT AREAS. HOWEVER, BACKFILL SHALL BE REPLACED IN LIFTS AND PROPERTY DENSITY TESTING COMPLETED FOR EACH LIFT AS PER LAKE COUNTY STANDARD SPECIFICATIONS.
- SHOULD FLOWABLE FILL BE UTILIZED, CONTRACTOR SHALL PROVIDE APPROPRIATE STEEL SHEETS OVER EXCAVATION, RECESSED INTO THE EXISTING ASPHALT, AS NECESSARY TO RE-OPEN ROADWAY TO ALLOW FLOWABLE FILL TO SUFFICIENTLY CURE WHILE ALLOWING PASSAGE OF TRAFFIC.
- IF OPEN CUTTING THE INTERSECTING ROADS WHICH ONE WAY LIME ROCK REBUILD MAY BE USED VERSUS FLOWABLE FILL, INCLUDE CLEAN FILL WITH A MINIMUM OF 10" LIMERACK BAS AND A MINIMUM OF 1 1/2" THICK STRUCTURAL ASPHALT.

**OPEN CUT AND REPAIR DETAIL**  
**ALL ROAD CROSSINGS**  
NOT TO SCALE



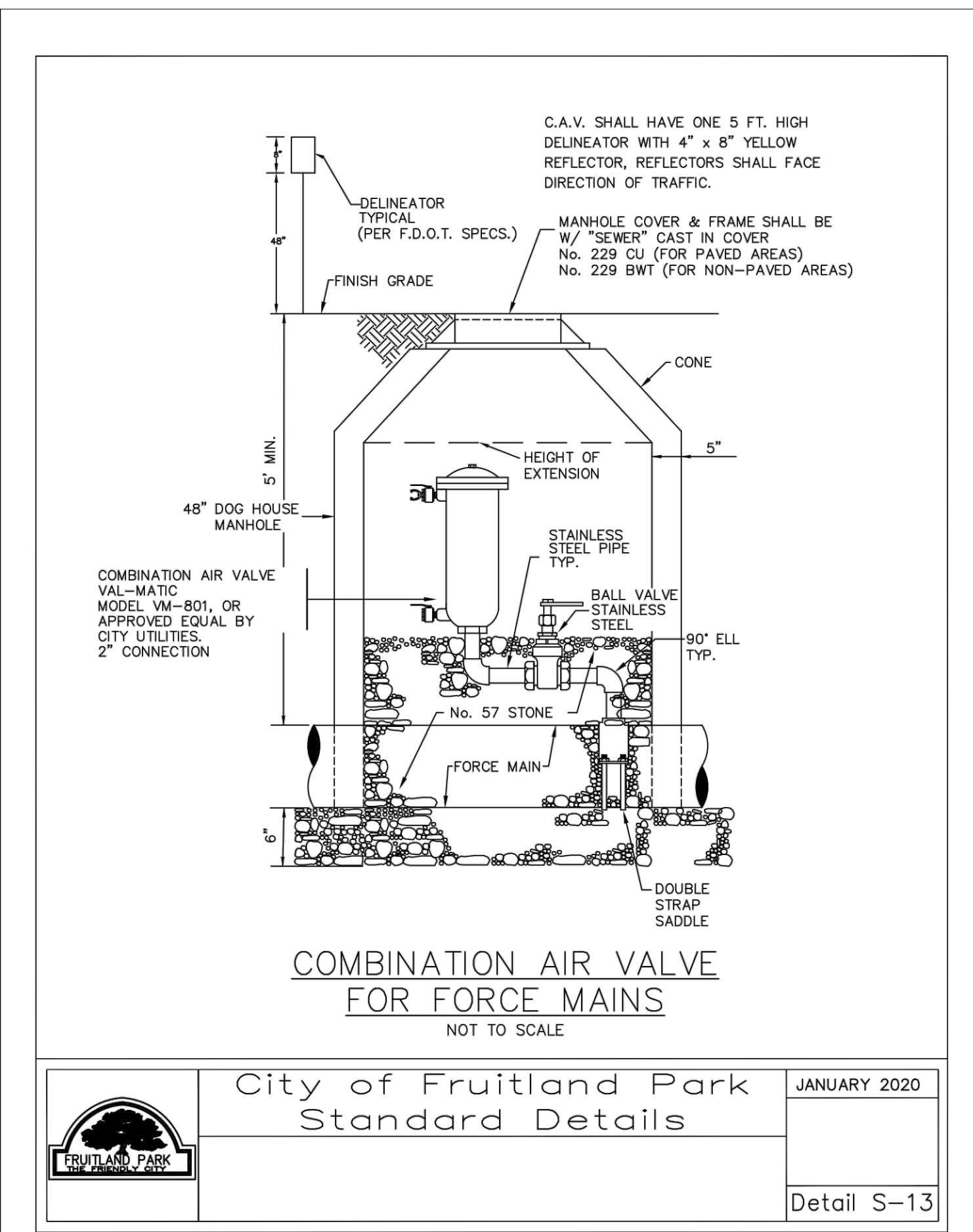
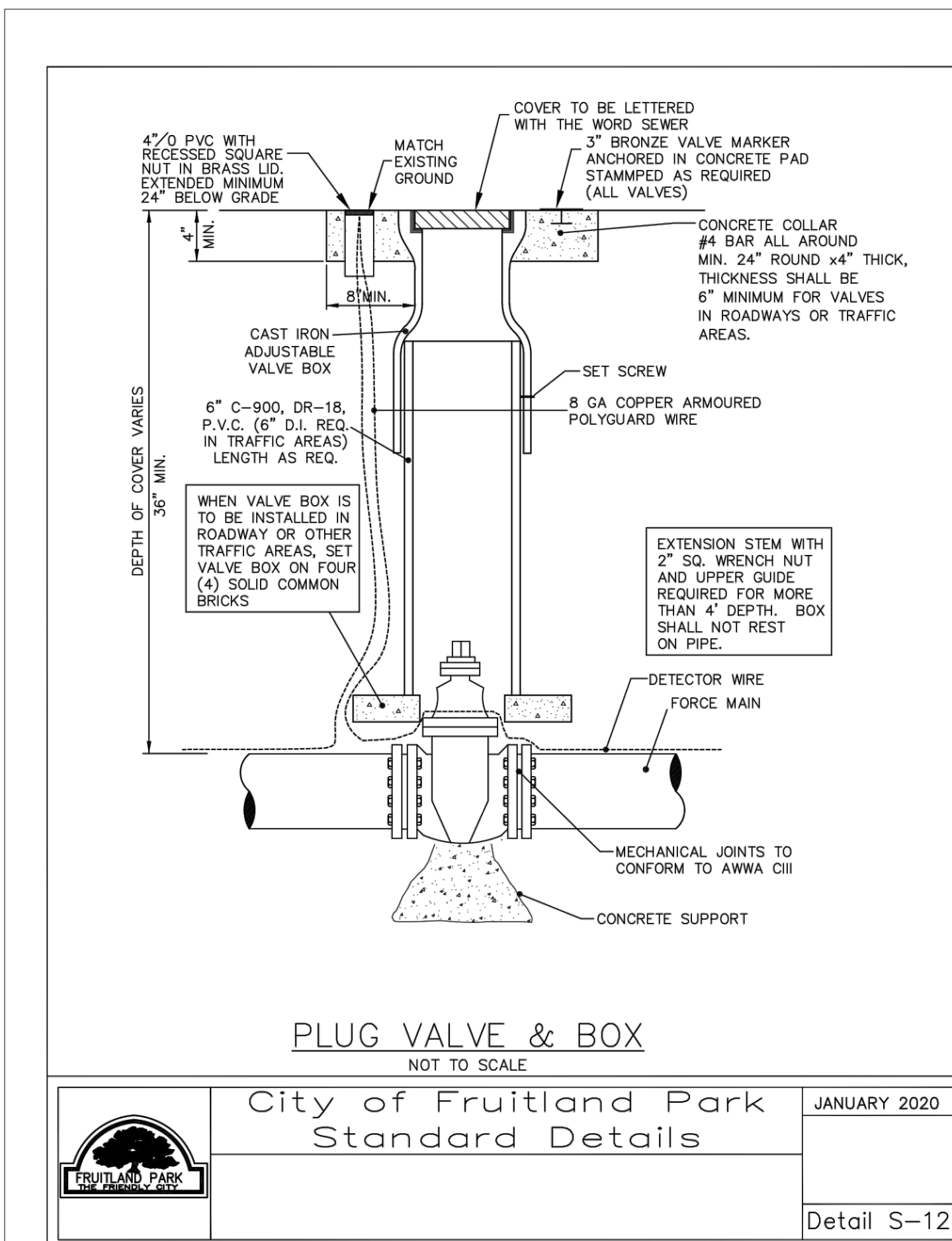
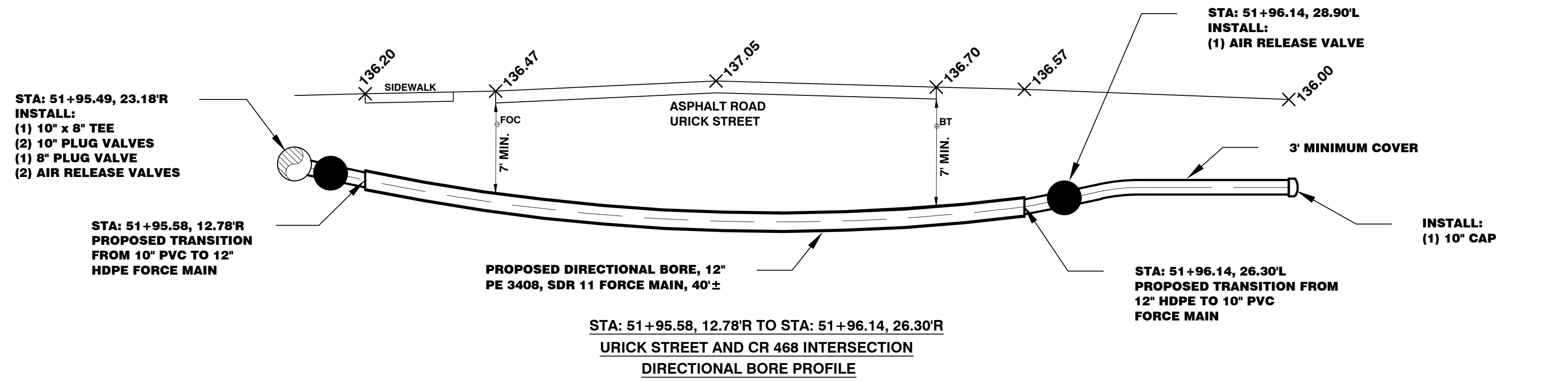
**TYPICAL LAKE COUNTY ROAD CROSSING - CROSS SECTION**  
NOT TO SCALE



**MILL AND RESURFACE PAVING SECTION (POINSETTIA AVE.)**  
NOT TO SCALE

**LEGEND:**  
FOC = FIBER OPTIC CABLE  
BT = BURIED TELEPHONE

**NOTE:**  
CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL THE UTILITIES PRIOR TO THE CONSTRUCTION.



REVISION	
DATE	

CITY OF FRUITLAND PARK  
**URICK STREET FORCE MAIN EXTENSION**  
**DETAILS**



**HALFF**  
Office: 352.343.8481  
Tavares, Florida 32778  
Fax: 352.343.8495  
Certificate of Authorization Number: 33380

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<b>Sheet 17</b>	

Troy Mitchell, P.E.  
Registered Eng 60190