

# TURNER ROAD WATER MAIN

## CSX CROSSING (JACK & BORE)



STRUCTURAL/CIVIL ENGINEERS

GTC Design Group  
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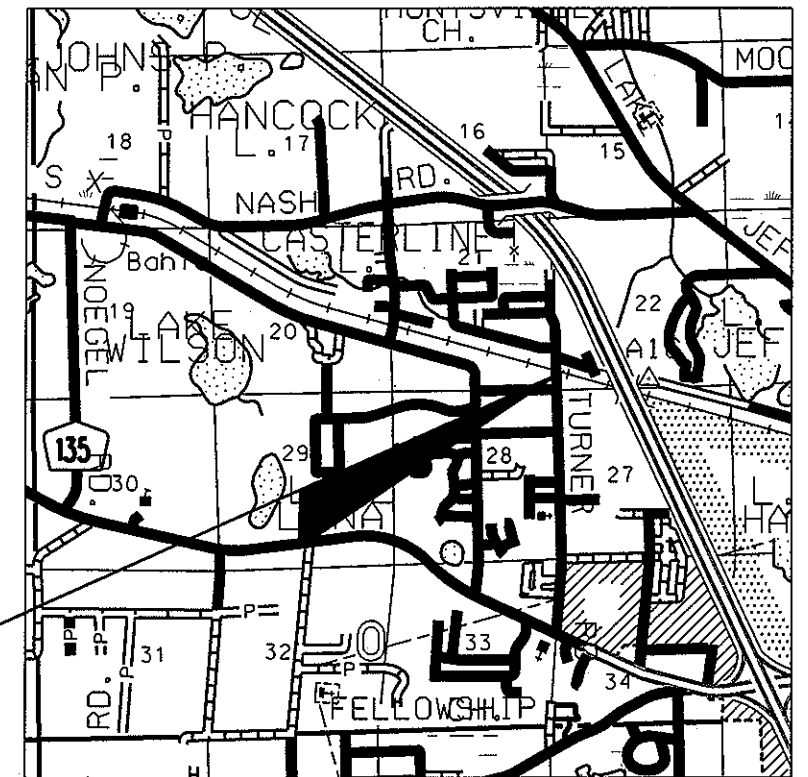
PROJECT NUMBER  
PF07-164

REVISIONS:  
11-15-07 PER CITY OF LAKE CITY  
3-12-08 PER CITY OF LAKE CITY

FOR:  
CITY OF LAKE CITY  
Richard Lee, Public Works Director  
P.O. Box 1687  
Lake City, FL 32056  
(386) 758-5401



PROJECT LOCATION



**LOCATION MAP**

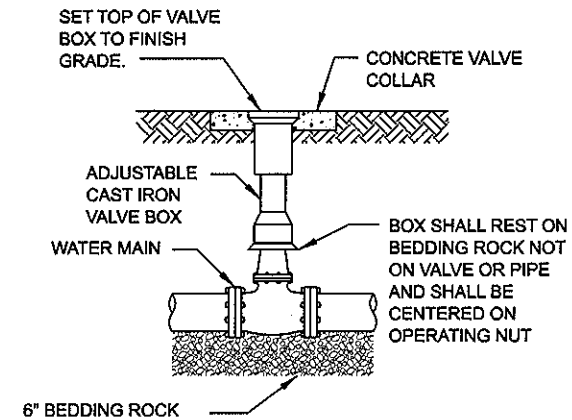
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- PP1 PLAN/PROFILE

SECTION 21, TOWNSHIP 3 SOUTH, RANGE 16 EAST  
COLUMBIA COUNTY, FLORIDA

**GENERAL NOTES**

1. The contractor shall verify all existing conditions and dimensions at the job site to insure that all new work will fit in the manner intended on the plans. Should any conditions exist that are contrary to those shown on the plans, the contractor shall notify the engineer of such differences immediately prior to proceeding with the work.
2. The contractor shall maintain the construction site at all times in a secure manner. All open trenches and excavated areas shall be protected from access by the general public.
3. Potable water to be supplied by the City of Lake City and Greater Lake City Regional Utility Authority (GLCRUA).
4. 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 been properly referenced, the contractor should notify the engineer.
5. The site is located in Section 21, Township 3 South, Range 16 East, Columbia County, Florida.
6. Contractors shall adhere to the Erosion Control Plan. All erosion control measures shall be implemented prior to construction and be continued until construction is complete.
7. All disturbed areas not sodded shall be seeded with a mixture of long-term vegetation and quick-growing short-term vegetation for the following conditions. For the months from September through March, the mix shall consist of 70 pounds per acre of long-term seed and 20 pounds per acre of winter rye. For the months of April through August, the mix shall consist of 70 pounds per acre of long-term seed and 20 pounds per acre of millet.
8. Contractor shall review and become familiar with all required utility connections prior to bidding. Contractor shall provide all work and materials required to complete connection to the existing utilities. This includes, but is not limited to, manhole coring, wet taps, pavement repairs and directional boring.
9. The location of the utilities shown in the plans is approximate only. The exact location shall be determined by the contractor during construction.
10. The contractor shall waste all excess earth on site as directed by the engineer.
11. All utility construction shall adhere to the City of Lake City and GLCRUA rules of guidelines.
12. Contractor shall coordinate all work with other contractors within project limits.
13. Construction to be performed by City of Lake City and GLCRUA personnel.

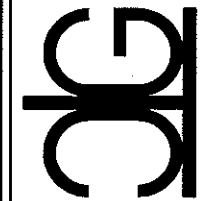


- NOTES:
1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
  2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO COME UP TO 4 FOOT DEPTH BELOW FINISHED GRADE.

**VALVE AND BOX DETAIL**

DATE	REVISION NOTES
11-15-07	DIRECTIONAL DRILL
3-12-08	JACK AND BORE

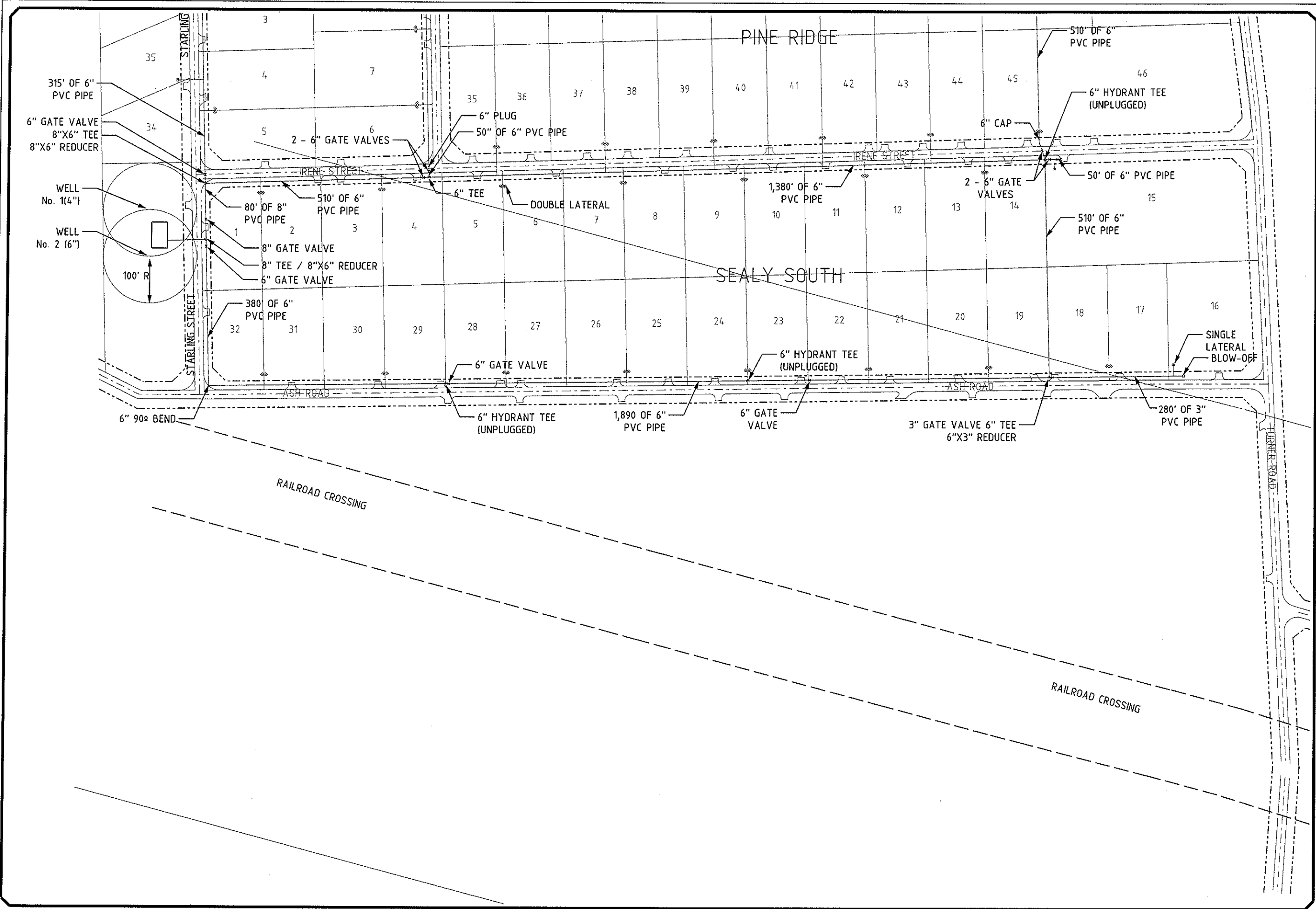
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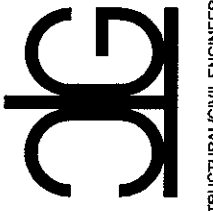
**CLC-TURNER ROAD  
 WATER MAIN  
 GENERAL NOTES & DETAILS**

PROJECT NUMBER	PF07-164
SHEET	1



DATE	REVISION NOTES
11-15-07	DIRECTIONAL DRILL
3-12-08	JACK AND BORE

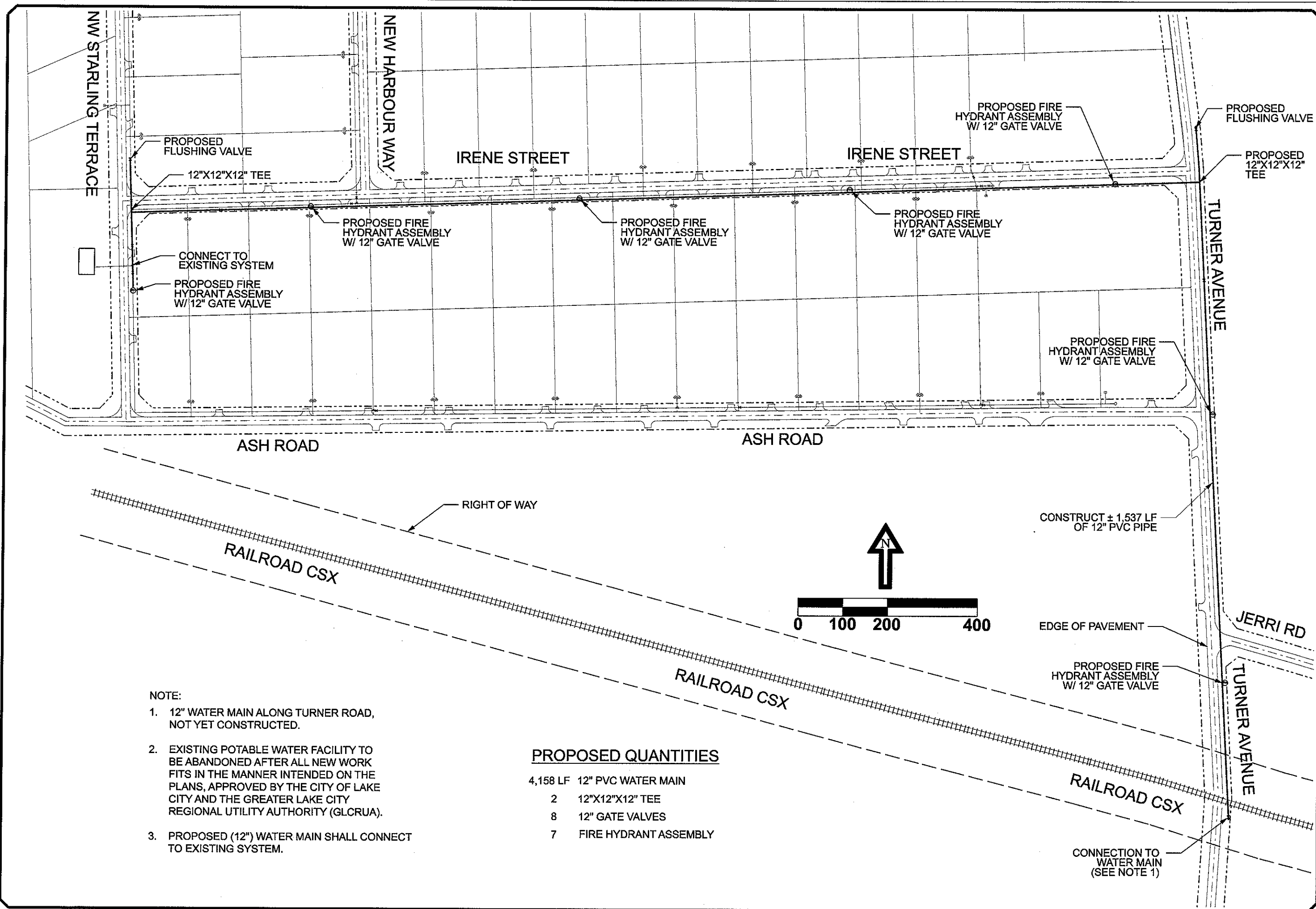
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**TURNER ROAD  
 WATER MAIN  
 EXISTING CONDITIONS**

PROJECT NUMBER	PF07-164
SHEET	2



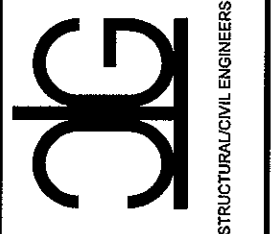
- NOTE:
1. 12" WATER MAIN ALONG TURNER ROAD, NOT YET CONSTRUCTED.
  2. EXISTING POTABLE WATER FACILITY TO BE ABANDONED AFTER ALL NEW WORK FITS IN THE MANNER INTENDED ON THE PLANS, APPROVED BY THE CITY OF LAKE CITY AND THE GREATER LAKE CITY REGIONAL UTILITY AUTHORITY (GLCRUA).
  3. PROPOSED (12") WATER MAIN SHALL CONNECT TO EXISTING SYSTEM.

**PROPOSED QUANTITIES**

- 4,158 LF 12" PVC WATER MAIN
- 2 12"X12"X12" TEE
- 8 12" GATE VALVES
- 7 FIRE HYDRANT ASSEMBLY

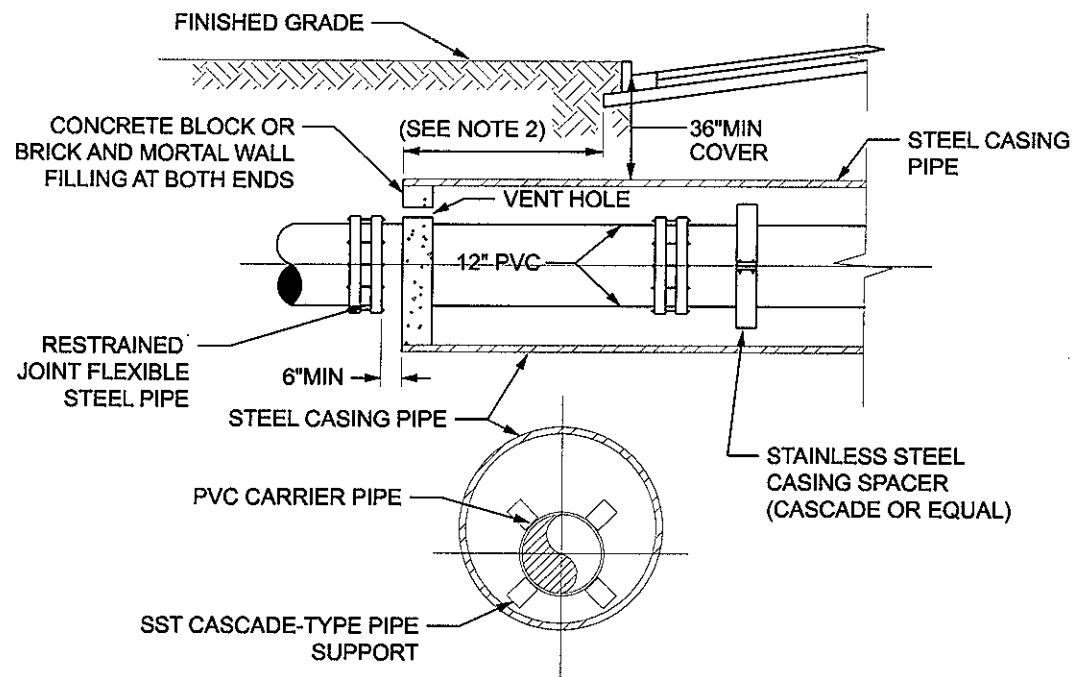
REVISION NOTES	DIRECTIONAL DRILL	JACK AND BORE
DATE	11-15-07	3-12-08

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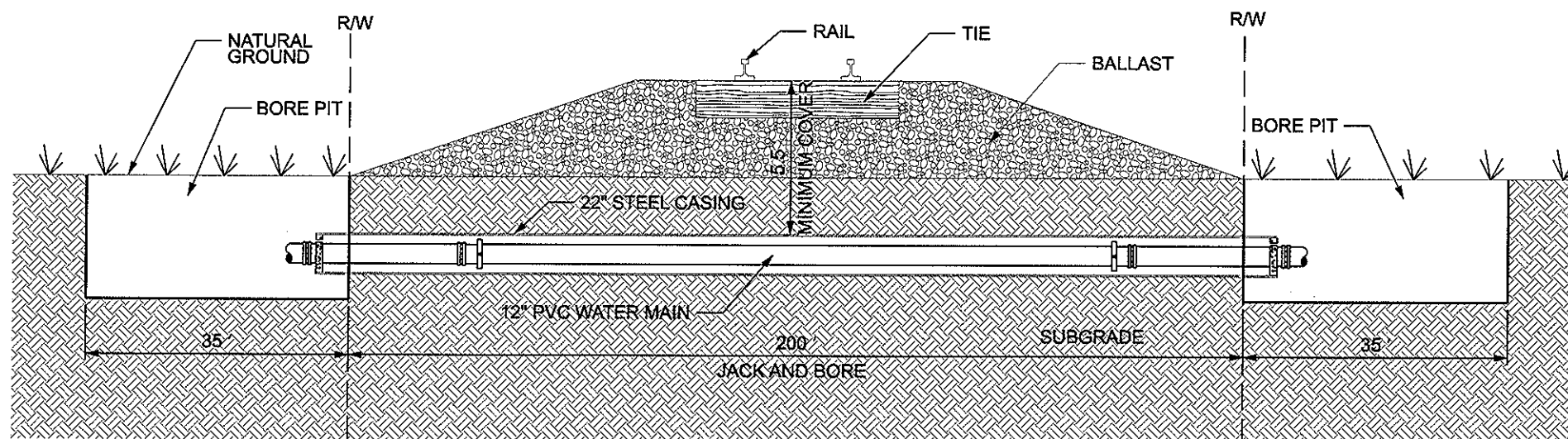
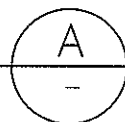


**CLC TURNER ROAD  
 WATER MAIN  
 SITE PLAN**

PROJECT NUMBER	PF07-164
SHEET	3



UTILITY CROSSING, BORE AND JACK DETAIL



NOTE:

1. TEST BORINGS OR OTHER SOIL INVESTIGATIONS, APPROVED BY CSXT'S CHIEF ENGINEER, SHALL BE MADE TO DETERMINE THE NATURE OF THE UNDERLYING MATERIAL FOR ALL PIPE CROSSINGS WITH CASING PIPE SIZES GREATER OR EQUAL TO 48 INCHES IN DIAMETER OR LARGER UNDER TRACK(S).
2. TEST BORINGS OR OTHER SOIL INVESTIGATIONS, APPROVED BY CSXT'S CHIEF ENGINEER, MAY BE REQUIRED WHEN, IN THE JUDGEMENT OF CSXT, THEY ARE NECESSARY TO DETERMINE THE ADEQUACY OF THE DESIGN AND CONSTRUCTION OF PIPE CROSSINGS WITH CASINGS LESS THAN 48 INCHES IN DIAMETER AND FOR OTHER FACILITIES LOCATED ON THE RIGHT OF WAY.

RAILROAD CROSSING WITH FLEXIBLE STEEL AND CASING PIPE DETAIL

N.T.S

NOTES:

1. WHEN CONSTRUCTION IS WITHIN FDOT JURISDICTION OR RAILWAY, ADDITIONAL REQUIREMENTS OF THE UTILITY ACCOMODATION MANUAL SHALL BE MET.
2. CASING SHALL BE OF SUFFICIENT LENGTH TO EXTEND UNDER ALL PAVEMENTS AND IN NO CASE SHALL THE END OF THE CASING BE CLOSER THAN EIGHT (8) FEET FROM THE PAVEMENT EDGE INCLUDING PAVED SHOULDERS PLUS ADDITIONAL LENGTH AS NECESSARY TO EXTEND TO THE EXCAVATED SLOPES OF THE JACKING AND RECEIVING PITS.
3. CONTRACTOR SHALL MAINTAIN A MINIMUM OF A 2:1 SLOPE (ANY STEEPER AND PIT MUST BE SHEETED AND SHORED) BEGINNING EIGHT (8) FEET FROM EDGE OF PAVEMENT.
4. THE CONTRACTOR SHALL PROVIDE A 4-INCH DIP CASING VENT AS SHOWN ON THE DRAWINGS FOR RAILWAY CROSSINGS, IN LIEU OF VENT HOLE AS SHOWN ABOVE.

GENERAL REQUIREMENTS FOR CASING PIPE:

1. CASING SHALL BE INSTALLED SO AS TO PREVENT THE FORMATION OF A WATERGATE UNDER THE RAILROAD, AND WITH AN EVEN BEARING THROUGHOUT ITS LENGTH, AND SHALL SLOPE TO ONE END.
2. THE CASING PIPE AND JOINTS SHALL BE OF STEEL AND OF LEAKPROOF CONSTRUCTION WHEN THE PIPELINE IS CARRYING LIQUID FLAMMABLE PRODUCTS OR HIGHLY VOLATILE SUBSTANCES UNDER PRESSURE.
3. FOR STEEL PIPE CASINGS, THE INSIDE DIAMETER OF THE CASING SHALL BE AT LEAST 2 INCHES GREATER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE JOINTS OR COUPLINGS, FOR CARRIER PIPE LESS THAN 6 INCHES IN DIAMETER; AND AT LEAST 4 INCHES GREATER FOR CARRIER PIPE 6 INCHES AND OVER IN DIAMETER.
4. FOR FLEXIBLE CASING PIPE, A MAXIMUM VERTICAL DEFLECTION OF THE CASING PIPE OF 3 PERCENT OF ITS DIAMETER, PLUS 1/2 INCH (13 mm) CLEARANCE SHALL BE PROVIDED.
5. IN NO EVENT SHALL THE CASING PIPE DIAMETER BE LARGER THAN IS NECESSARY TO PERMIT THE INSERTION OF THE CARRIER PIPE.
6. CASING PIPE UNDER RAILROAD TRACKS AND ACROSS CSXT'S RIGHT OF WAY SHALL EXTEND THE GREATER OF THE FOLLOWING DISTANCES, MEASURED AT RIGHT ANGLE TO CENTER OF TRACK:

- ACROSS THE ENTIRE WIDTH OF THE CSXT RIGHT OF WAY.
- 3 FEET BEYOND DITCH LINE.
- 2 FEET BEYOND TOE OF SLOPE.
- A MINIMUM DISTANCE OF 25 FEET FROM EACH SIDE OF CENTERLINE OF OUTSIDE TRACK WHEN CASING IS SEALED AT BOTH ENDS.
- A MINIMUM DISTANCE OF 45 FEET FROM CENTERLINE OF OUTSIDE TRACK WHEN CASING IS OPEN AT BOTH ENDS.
- BEYOND THE THEORETICAL RAILROAD EMBANKMENT LINE. THIS LINE BEGINS AT A POINT, ON EXISTING GRADE, 10 FEET HORIZONTALLY FROM CENTERLINE TRACK AND EXTENDS DOWNWARD ON A 1 1/2 (H) TO 1 (V) SLOPE.

GENERAL REQUIREMENTS FOR STEEL PIPE:

1. STEEL PIPE SHALL HAVE A SPECIFIED MINIMUM YIELD STRENGTH OF AT LEAST 35,000 PSI.
2. JOINTS BETWEEN SECTIONS OF PIPE SHALL BE FULLY WELDED AROUND THE COMPLETE CIRCUMFERENCE OF THE PIPE.

REVISION NOTES	DATE
DIRECTIONAL DRILL	11-15-07
JACK AND BORE	3-12-08
MODIFIED CASING PIPE	8-12-08

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STRUCTURAL CIVIL ENGINEERS

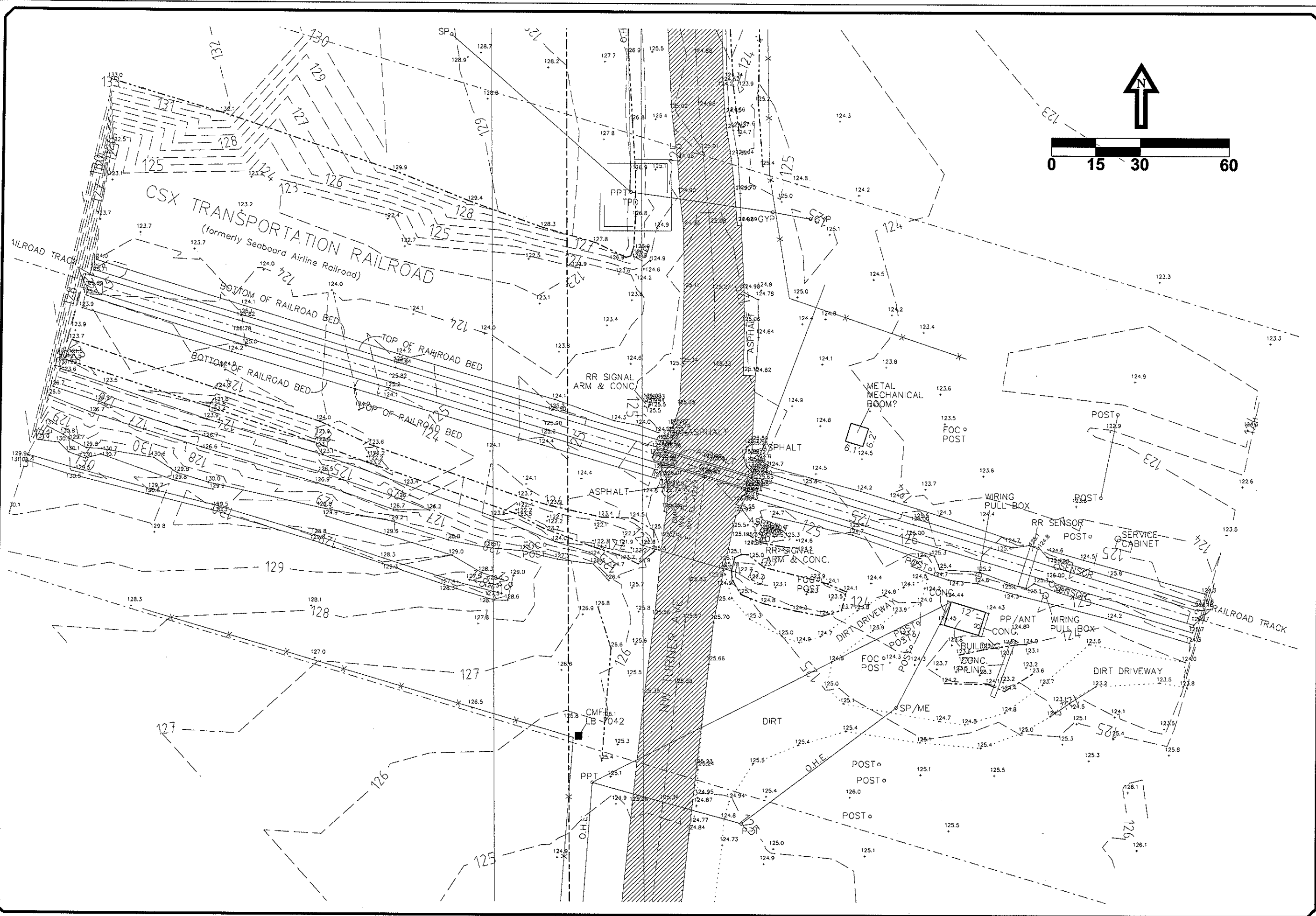
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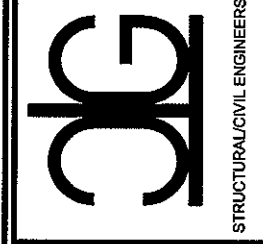
SHEET

4



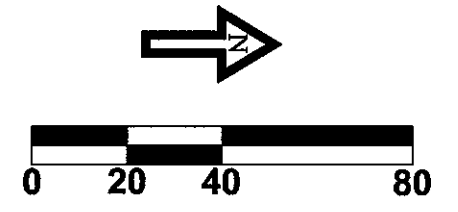
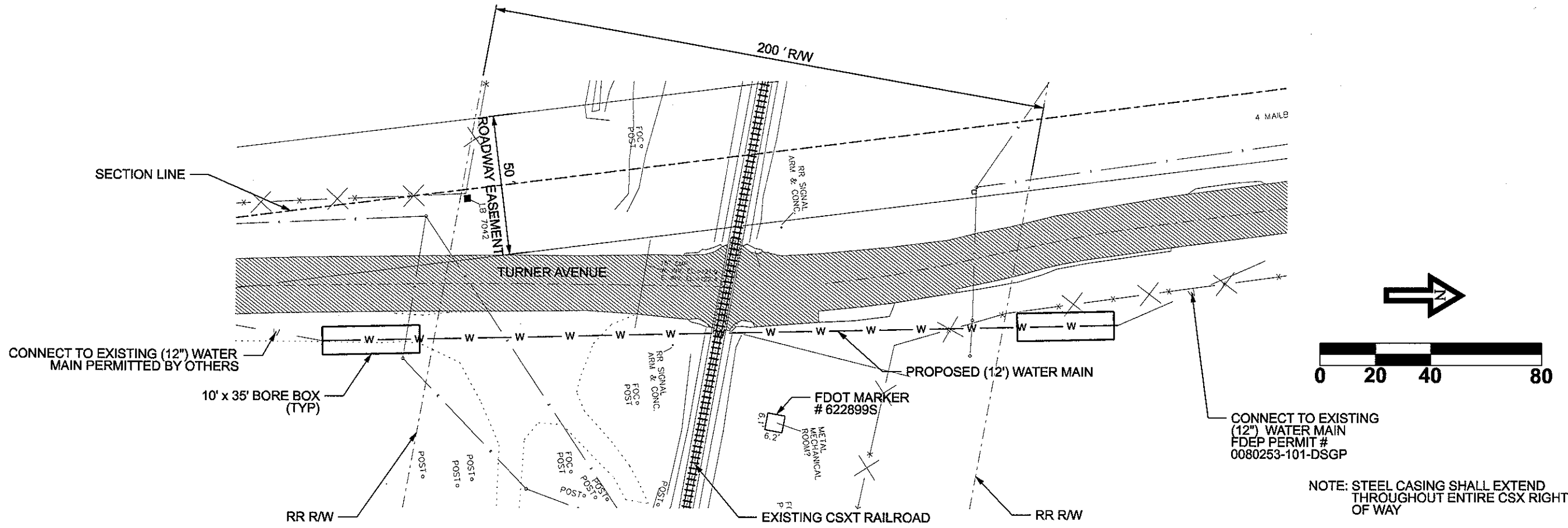
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**CLC-TURNER ROAD  
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 RR EXISTING CONDITIONS**

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SHEET	5



NOTE: STEEL CASING SHALL EXTEND THROUGHOUT ENTIRE CSX RIGHT OF WAY

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11-15-07	DIRECTIONAL DRILL
3-12-08	JACK AND BORE
8-12-08	MODIFIED CASING PIPE

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STRUCTURAL/CIVIL ENGINEERS

**CLC-TURNER ROAD  
 WATER MAIN  
 PLAN/PROFILE**

PROJECT NUMBER  
**PF07-164**  
 SHEET  
**PP1**

