



## 2024 UTILITY LICENSE APPLICATION LETTER

Dear Applicant:

We are pleased to offer the included Forms of Application for a Utility Crossing you recently requested. The Florida East Coast Railway Company has served the citizens of our State, on its current alignment, for more than 100 years. They have had the good fortune of experiencing both a growing need for an efficient goods transportation service, and a leadership with the foresight to properly manage the physical plant and real properties of the railroad business. No small part of that foresight is the need to accommodate the needs of individuals, partnerships, corporations and governmental entities, such as yours, in the service of your customers. After all, it is most likely that you or your customers are to some extent a customer of the FEC Railway directly, or indirectly.

The founders and their successors of the Railway were in a position to have acquired the right-of-way by Fee Simple instruments. The property is thus private, just as those things you own are private to you. To accommodate your needs we will consider granting a specific non-exclusive license for use of our property. We will accept an application package when submitted with two (2) copies of each of the following: current year application (completely and accurately filled out), ROE form, plan and profile drawings (11"x17" in U.S. Survey feet) and applicable fees. All applications for a jack and bore will require a certified dewatering plan. FECR Signalization must be shown on drawings. Commonly, we are able to offer a form of agreement in response to a complete and correct application package in 90 days. Each crossing is unique and the yearly license fee for an approved utility crossing or parallel is based on various criteria such as the type of facility being installed, size, length, location of the encroachment, etc... Applications not approved will be answered as quickly as possible, usually within 30-60 days.

Additionally, an application will not be processed if it is not completely and correctly filled out, is missing information, and/or is missing the non-refundable application fees. The fee information is listed at the bottom of the application page. The fees are non-refundable regardless of the outcome of the application. Multiple locations cannot be submitted on one application. We will request an additional fee if the scope of the project requires outsourcing for additional engineering consultant review, a re-submitted application reflects a significantly different project, and/or has numerous revisions. All applications pending a requested correction, update or fees without resolution beyond 60 days will be closed. A new application package, including fees will need to be re-submitted. A Modification Application, to existing facilities, must include a copy of the original approval permit or reference the original MP that was previously permitted and explain what additions or changes to the originally approved crossing is being done.

Sincerely,

Utility Licensing  
FEC ROW, LLC



COMMUNICATION CROSSINGS 2024  
FEC DEDICATED DUCT REQUIREMENT  
TELECOMMUNICATION CROSSING LICENSEE

Dear Applicant:

Reference is made to your recent application for a new communication utility crossing license.

In addition to the yearly crossing fees, we will require installation at each new crossing location a conduit of equal size, with two 1.25" innerducts, or a minimum of two 1.25" conduits, dedicated to FEC with terminating Quazite handholes equipped with EMS 1401 locators placed within the right of way. FEC handholes to be 24" below grade with EMS locators placed on top of handhole lid. Conduits to be extended 18" within handholes, and proofed to industry standards. A letter of completion with as-builts are to be provided to FEC upon final installation.

To guarantee "One Call Locate Protection" the FEC Ducts must be installed in the same Bore Profile as the communication ducts to be licensed, no exceptions.

FEC ROW, LLC will offer a \$5,000 one-time buyout for waiving the FEC Dedicated Duct requirement if the applicant is not able to comply or FEC determines the duct alignment is not suitable.

Please prepare your drawings accordingly or advise that you choose the buyout option.

Sincerely,

Utility Licensing  
FEC ROW, LLC

**2024 UTILITY LICENSE APPLICATION**

Date: \_\_\_\_\_

 New License Request

 Modification Request

**CONTACT DETAILS**

Applicant Name: _____	Phone: _____
Address: _____	City, St, ZIP: _____
Contact: _____	Email: _____
Licensee Name: _____	Phone: _____
Address: _____	City, St, ZIP: _____
Contact: _____	Email: _____
Emergency Contact Name: _____	Emergency Contact Phone: _____

**INSTALLATION LOCATION DETAILS**

Project No.: \_\_\_\_\_

Facility location mile post: _____ + _____ (ex. 299+1681)	Nearest Street Crossing FEC: _____
Branch: _____	GPS Exit: _____
GPS Entry: _____	GPS Exit: _____
Length of encroachment on FEC: _____ decimal format	FEC ROW Width: _____ decimal format

**FACILITY DETAILS**
 Crossing  Parallel

 All installations should be subgrade  
 Only 1 bore & facility type per application is allowed

FACILITY TYPE	CONSTRUCTION TYPE	CARRIER / CONDUIT	CASING
<input type="checkbox"/> Water (i), (vii)	<input type="checkbox"/> Jack & Bore (requires certified dewatering plans)	QTY (include spare): _____	Diameter size: _____
<input type="checkbox"/> Sewer (i), (vii)	<input type="checkbox"/> Directional Bore	Diameter size: _____	Material: _____
<input type="checkbox"/> Gas (i), (iv), (vii)	<input type="checkbox"/> Micro tunneling	Material: _____	Casing wall thickness: _____
<input type="checkbox"/> Electric (iv), (v), (vi), (vii)		Reamer Size: _____	Max. internal pressure: _____ <i>PSI</i>
<input type="checkbox"/> Communications (ii), (iii), (vii)			Reamer Size: _____
<input type="checkbox"/> Other: _____			

 (i) Check box to verify venting & all pits are located outside FEC Right-of-Way 

(ii) FOC count in each conduit, specify if one is a spare: \_\_\_\_\_

(iii) If applicable, identify what the spare will be used for?: \_\_\_\_\_

(iv) Identify if it is distribution, service or transmission: \_\_\_\_\_

(v) Provide total electric voltage and carrier specifications: \_\_\_\_\_

(vi) Provide quantity and type of pole(s), downguy(s), anchor(s), etc.: \_\_\_\_\_

(vii) Provide quantity &amp; size of handhole, manhole, junction box, etc.: \_\_\_\_\_

NOTE: All information on application must match information shown on drawings  
 Installations must conform to "General Specifications – Office of Chief Engineer" dated 1/1/2022  
 Copy of the original approval needs to be submitted with a modification application.

**REMITTANCE DETAILS**

Submit application package: Two (2) copies of each – Application, ROE, plan/profile drawings (11"x17" in U.S. Survey feet) and non-refundable application & ROE fees: \$7,500 payable to FEC ROW, LLC and \$1,500 Engineering Review Fee payable to Florida East Coast Railway, LLC. Modification application: \$3,750 and \$1,500 Engineering Review Fee. Expedite fee upon request.

Send to: **FEC ROW, LLC**  
**Attn: Utilities Licensing**  
**7150 Philips Highway**  
**Jacksonville, FL 32256**

2024 APPLICATION FOR CONTRACTOR OCCUPANCY ON FEC RAILWAY PROPERTY  
 RIGHT OF ENTRY (ROE) / INSPECTION FORM

**CONTACT INFORMATION**

Contractor Company Name:			
Contractor Corporate Name (if different from above):		State of Incorporation:	
Contractor Contact Name:			
Contractor Phone:		Contractor Email:	
Mailing Address:			
City, State, Zip Code:			
Name of Licensee:			
Licensee Contact Name:			
Licensee Phone:		Licensee Email:	

**PROPOSED FACILITY INSTALLATION LOCATION**

Nearest Street Crossing FEC:		County:	
City:		State:	
Facility location is at mile post:	___ + ___ (ex. 299+1681)	Branch:	

**INSTALLATION**

Provide scope of work on Railroad property (describe the existing and/or new facility installation details):


**REMITTANCE DETAILS**

Submit the application of proposed occupancy in duplicate with a non-refundable \$1,500 Right of Entry Fee (included in the \$7,500 application fee) made payable to FEC ROW, LLC. Send to:

**FEC ROW, LLC  
 Attn: Utilities Licensing  
 7150 Philips Highway  
 Jacksonville, FL 32256**

**AUTHORIZATION FROM LICENSEE**

Licensee Signature:		Date:	
Licensee Name:		Licensee Phone:	
Licensee Title:		Licensee Email:	

## 2024 UTILITY APPLICATION SUBMITTAL CHECKLIST

- Current year Utility Application
- Fill out the Utility Application form completely
- If you do not know the milepost ( \_\_\_ + \_\_\_\_\_ ex. 299+1681) the GPS coordinates will be used to identify the milepost location of the crossing
- A separate application package must be submitted for each crossing/bore
- One (1) spare or empty conduit for Licensee use only, may be requested per bore for like-kind maintenance, and must be installed in conjunction with a fiber optic cable installation. Spare conduit will be priced at the same rate of fiber optic cable and must be installed in the same bore
- Information on Utility Application form and drawings need to match
- (2) 11"x17" in U.S. Survey feet sets of the plan and profile drawings must be included in application package
- FECR Gate arms and Signalization must be shown on the drawings
- FECR Right-of-Way must be clearly identified on the drawings
- Distance of MP from crossing or utility installation/modification must be shown on the drawings
- All wording on drawings must be legible
- Venting and jacking pits must be located outside of FEC Right-of-Way
- Jack & Bores require certified dewatering plans to be submitted with application
- Fill out the Contractor Right of Entry completely and accurately
- All application fees must be included in the Utility Application package
- For a modification, maintenance, cancellation or abandonment request, a copy of the original Permitted Approval needs to be submitted as part of the application package

Application fee payable to: **FEC ROW, LLC**

Engineering Review fee payable to: **Florida East Coast Railway, LLC**

The checklist above is a guide and is not meant to be all-inclusive as each application is individual and additional information may be required.

For additional questions, you may contact the Real Estate Department at [fecrow@fecrwy.com](mailto:fecrow@fecrwy.com)

## CONTRACTOR'S INSURANCE REQUIREMENTS

### I. Liability Insurance

- Commercial General Liability: \$1,000,000 per occurrence \$2,000,000 aggregate for bodily injury and/or property damage combined, for damages arising out of bodily injuries to or death of all persons in each occurrence and for damage to or destruction of property, including the loss of use thereof, in each occurrence, including Federal Employers Liability Act claims ("FELA") against the FECR, or other liability arising out of or incidental to railroad operations.
- Automobile Liability: \$1,000,000 combined single limit, bodily injury and/or property damage combined, for damages to or destruction of property including the loss of use thereof, in any one occurrence.
- Worker's Compensation and Employer's Liability: \$1,000,000 each accident, \$1,000,000 disease policy limit, \$1,000,000 disease each employee. \$1,000,000 Employers Liability.
- Umbrella Liability: Excess of General Liability, Automobile Liability and Workers Compensation and Employers Liability: \$1,000,000 per occurrence \$2,000,000 aggregate.

### II. Policy Requirements

- Contractor's liability insurance policies shall name FECR, its parent, affiliates and subsidiaries as additional insureds and will not have any exclusion for liability relating to railroad operations or contractual liability for construction demolition within fifty (50) feet of FECR's tracks by endorsement.
- The workers' compensation policy and property insurance shall include waivers of subrogation rights endorsements in favor of FECR
- All policies shall contain a provision for thirty (30) days' written notice to FECR prior to any expiration or termination or any change in, the coverage provided. Contractor shall provide FECR with at least thirty (30) days' written notice to FECR prior to any expiration, termination or any change in any insurance coverage.
- Insurance Company must be issued by a casualty company/insurance company authorized to do business in the State of Florida that has a "Best's" rating of A or A- and a financial category size of Class VII or higher.
- Prior to any entry upon FECR property pursuant to this Contract and upon FECR's request, thereafter, Contractor shall provide or shall cause its insurer or insurance agent to provide FECR with a certificate of insurance certifying the liability insurance policies in effect for the Term of Contract. The liability assumed by Contractor under this Contract, including, but not limited to, Contractor's indemnification obligations, shall not be limited to the insurance coverage stipulated therein.

**OFFICE OF CHIEF ENGINEER**  
**General Specifications for Sub-grade and Above Grade Utility Crossings of**  
**Railway's Right-of-Way**

**I. General Provisions**

- A. A plan and profile drawing containing all pertinent details measured in U. S. lineal feet for the proposed crossing shall be submitted to the Engineering Department for approval prior to the preparation of any agreement. (Metric Units, not accepted). All crossings (above grade/sub-grade) shall be substantially perpendicular to the Railroad Main Line and location of crossing shall be limited to crossing as few tracks as possible.
- B. The plan will show all information for the proposed crossing installation with reference to the nearest Railroad Mile Post or centerline of nearest street intersection.
- C. Request for installation shall be accompanied with a letter signed by the owner, company officer, or government agent.
- D. The lessee will be responsible for any and all costs of repairs or maintenance of the Railroad's property and structures disturbed or damaged due to the installation or construction aftereffects.
- E. The lessee of an installation approved by agreement will be required to provide proof of protective insurance for and during construction.
- F. As-built drawing of the installation shall be submitted with the completion report, which will include exact location referenced to nearest Railroad milepost or centerline of nearest street intersection of installation, exact profile showing subgrade elevations, and cross-sections.
- G. ALL new Utilities permits granted will be designed as UNDERGROUND Utilities, unless previously authorized and approved by FEC Railway.

**II. Subgrade Pipelines and Cables**

- A. All subgrade carrier pipelines and electrical wirelines shall be installed within a casing pipe, except for telecommunication wirelines that may be installed without casings.
  - 1. All casing pipes will extend from right-of-way line to right-of-way line and shall be equipped with shut-off valves each side, protecting the entire R/W crossing.
  - 2. The Railroad will not permit casing installation by open-cut method through the track(s) roadbed.
  - 3. All gas pipelines shall be encased with steel pipe in accordance with Section II(C).

B. Application will be accompanied with plans showing profile in relation to actual ground, track, and other facilities at the project site.

1. The method of installation will be detailed, including the location of jacking pit as measured from centerline of nearest track.
2. The casing pipe must be installed at least 5.5 feet below bottom of crosstie or a minimum of 5' from natural ground grade (whichever is greater).
3. Jacking pit locations must be outside of Railroad right-of-way lines. No open-cut lateral crossings will be allowed. The pit will be protected with adequate sheeting, bulkheads, and sidewalls to protect the Railroad's roadbed. Proper barricades and lights, if necessary will be set around the pit for positive protection.

C. Casing pipe specifications are as follows.

1. Metal casing pipe shall have a minimum diameter of 2.0 inches. Size 2.0 through 8.0-inch diameters, must be galvanized, and meet standard weight ASTM Specification A53, Grade B. Thread coupling is allowed.
2. Casing pipe 8.0 inches and larger in diameter may be used, complying with section C-3. All joints or couplings, supports, insulators or centering devices for the carrier pipe shall be considered in the selection of the casing diameter.
3. Casing pipe shall have a minimum cover of 5 ½ ft. below bottom of tie (see Section II, Item B2), and shall have a **minimum** wall thickness as shown in the table provided below, unless computations indicate that a thicker wall is required (see section C-4). All casing pipe exterior and field welds shall be protected with a protective **Fusion Bonded** type coating for protection against corrosion. Fusion Bonded coatings shall be equivalent to 3M Skotchkote - Fusion Bonded Epoxy Coating 6233, or 3M Skotchkote - Abrasive Resistant Epoxy Coating 328 (PE Certified Documentation of coating type used, and proof of equivalent material must be submitted to FEC prior to use).
4. All Casing thickness calculations will meet or exceed design calculation of live load based on Cooper E-80 Railway Loading, using applicable formulas and computations performed by a registered professional engineer, State of Florida. The (Signed/Sealed) computation results will accompany the plans for review by the Engineering Department. Wall thickness designations for steel casing or HDPE casing pipes for Cooper E-80 loading, including impact, are as follows:

Dia m e t e r (I n c h)	S T E E L Thi c k n e s s I n c h / ( D e c i m a l)	H D P E Thi c k n e s s ( D e c i m a l)
8 – 16	9/32 (0.281)	(1.582)
18 – 20	11/32 (0.344)	(1.964)
22 – 24	3/8 (0.375)	(2.345)
26 – 28	7/16 (0.438)	(2.500)
30 – 34*	17/32 (0.531)	n/ a
36 – 38*	9/16 (0.563)	n/ a
40 – 48*	11/16 (0.688)	n/ a



<b>Dia m e t e r (I n c h)</b>	<b>STEEL Thi c k n e s s I n c h / (D e c i m a l)</b>	<b>HDPE Thi c k n e s s (D e c i m a l)</b>
<b>52 – 56*</b>	<b>13/ 16 (0.813)</b>	<b>n/ a</b>
<b>60 – 66*</b>	<b>15/ 16 (0.938)</b>	<b>n/ a</b>
<b>72 – 78*</b>	<b>1- 1/ 16 (1.063)</b>	<b>n/ a</b>
<b>84 – 90*</b>	<b>1- 3/ 32 (1.094)</b>	<b>n/ a</b>
<b>96 – 102*</b>	<b>1- 1/ 8 (1.125)</b>	<b>n/ a</b>
<b>108 – 114*</b>	<b>1- 5/ 16 (1.313)</b>	<b>n/ a</b>
<b>120*</b>	<b>1- 1/ 2 (1.500)</b>	<b>n/ a</b>
<i>(*) i. HDPE casing pipe diameters exceeding 28 inches require full specifications and calculations submitted for review and approval from Railroad Chief Engineer</i>		
<i>ii. Steel casing pipe diameters exceeding 72 inches require full specifications and calculations submitted for review and approval from Railroad Chief Engineer</i>		
<i>Note 1: Corrugated (C HDPE) is prohibited from use and will not be approved.</i>		
<i>Note 2: All HDPE joints will be adjoined according to the butt fusion standard ASTM International F2620</i>		

5. All casing pipe joints will be welded in accordance with AISC Specifications, Section 1-7-2. All joint welds will be full penetration.
6. At no time will construction interfere with the normal and safe operation of the Railroad. No construction, manpower, or equipment will enter or operate right-of-way within a safety clearance of 25.0 feet from the centerline of near track.
7. All steel casing pipe installations, where the diameter is greater than 48 inches, and all HDPE casing pipe installations, where the diameter is greater than 30 inches, will require a pre-construction conference with all parties, at the project location.
8. Pre-construction arrangements will be made with the Engineering Department at least one week prior to construction. A Railroad inspector must be present during the entire construction of the casing pipe. The inspector will have complete authority over the project on the Railroad's right-of-way.
9. All Safety Inspection Costs will be borne by the lessee.

D. Tunnel liner requirements are as follows.

1. All applicable preceding sections will govern tunnel liner usage.
2. Tunnel liner plate will be 12-gauge, galvanized, and all bolts and nuts will be galvanized.
3. Live load will be based on Cooper E-80 Railway Loading, using applicable formulas and computations performed by a registered professional engineer, State of Florida. The

(signed/Sealed) computation results will accompany the plans for review by the Engineering Department.

4. Grout holes, if required will be provided at 10-foot intervals along the roof and sides.
5. The tunnel liner-jacking shield will protect 180 degrees of the upper section and material removed to allow for a minimum 1:1 slope, with a minimum 2.0 feet of undisturbed soil supporting the overburden.
6. The tunnel liner installation will progress with sufficient manpower and supervision for around-the-clock construction until the liner is completed, through the limits of the right-of-way.

E. Carrier pipeline specifications are as follows.

1. Reinforced concrete pipe:

- a. Materials: Modified bell and spigot or tongue and groove in accordance with current ASTM Specification C76 Class V for Railway strength pipe or current specification for prestressed concrete pipe.
- b. Joints: Rubber and steel joint for prestressed pipe in accordance with current Lock Joint Pipe Company Specification on SP5, or equivalent. Joints for bell and spigot and tongue and groove pipe to be in accordance with current standard practice. Joints may be made using confined continuous rubber gasket.

2. Cast iron pipe:

- a. Materials: Pipe must conform to current ASTM Specification A142 for "Standard Pipe."
- b. Joints: Bell and spigot, caulked with lead and oakum, or approved mechanical type joint.

3. Polyethylene pipe (HDPE):

- a. Materials: Pipe must conform to current ASTM Specifications D2104, Schedule 40, for standard pipe.

4. Steel pipe:

- a. Materials: Pipe must conform to current ASTM Specification A120.
- b. Joints: All joints must be welded or of an approved mechanical type.

F. Carrier Pipe Shut-Off Valves - Carrier pipe under pressure shall have a sufficient shut-off valve(s) at each end outside of Railroad's right-of-way limits. The Utility Owner shall install accessible emergency shut-off valves within effective distances on each side of the Railroad. Valves shall not be located within the Railroad right of way. The carrier pipe must be installed within a steel casing.

G. Casing Pipe Vents - All casing pipes shall be properly vented. Vent pipes shall be of sufficient diameter, but in no case less than four (4) inches in diameter and shall be attached near each end

of casing, projecting through ground surface and located outside of Railroad property limits. Where possible, they shall be marked and located at the vent location. The markers shall display the Railroad Milepost location, the name and address of the utility owner, and a phone number contact in case of emergency. Vent pipes shall extend not less than four (4) feet above ground surface. Top of vent pipes shall be fitted with a down-turned elbow, properly screened; or a relief valve installed.

- H. The inside diameter of the casing pipe shall be such as to allow the carrier pipe to be removed subsequently without disturbing the casing or the roadbed. For steel pipe casings, the inside diameter of the casing pipe shall be:
  - 1. For carrier pipe less than 6 inches in diameter, the interior diameter of the casing pipe will be at least 2 inches greater than the largest outside diameter of the carrier pipe joints or couplings.
  - 2. For carrier pipe 6 inches in diameter and over, the interior diameter of the casing pipe will be at least 4 inches greater than the largest outside diameter of the carrier pipe joints or couplings.
- I. All Casing pipe ends shall be sufficiently constructed as to prevent leakage of any substance from the casing throughout its length. Each end of the casing shall require a sufficient permanent seal to prevent the potential from leakage of any substance from the casing pipe. Grout fill is an acceptable method installed by pressure grouting. If used, the grout material should consist of non-shrink sand cement slurry or Railroad approved equivalent, and sufficiently seal the casing pipe ends to the satisfaction of the Railroad. If deemed necessary, and at the sole discretion of the Chief Engineer, the entire void between the carrier pipe and casing pipe throughout the entire length of the casing pipe may be required to be filled upon notification from the Railroad.
- J. For directional bore installations:
  - 1. Minimum cover within 25.0 feet centerline any track, 10-foot from bottom of the crosstie to top of pipe or casing.
  - 2. Minimum cover outside 25.0 feet centerline near track, 5-foot from natural ground to top of pipe or casing.

### **III. Above Grade Structures**

- A. Standard overhead clearances for fixed structures, such as bridges and other overhead fixed structures shall provide a minimum of 23.5 feet vertical clearance above top of rail (T/R).
- B. Pre-design conference with the Engineering Department will set forth horizontal clearance of subgrade, grade, and above grade construction and structural limits.

### **IV. Above Grade Wirelines**

- A. All installation of aerial lines and cables will provide a minimum clearance above top of rail (T/R) of highest track (communication facilities must be installed subgrade). Standard overhead clearance for all aerial line crossings, both power and non-power line crossings, shall provide the following clearances:

1. 43 feet above T/R for lines 0 to 75,000 volts.
  2. For lines over 75,000 volts, review and approval from Chief Engineer required.
- B. For installation of aerial line and cable crossings at or near other fixed facilities, such as automated crossing gate arms at highway grade crossings and any other facility that the Railroad might deem additional clearance requirements necessary, aerial lines and cables must provide a minimum 43' vertical clearance above top of rail (T/R) of highest track, except as otherwise noted in Section IV(C).
- C. Exceptions: At Roadway Grade Crossings, provide safe clearances between warning device and electrical transmission, distribution cables (including messenger and neutral wires), and all communication lines. All overhead utility crossings shall provide a minimum 43' vertical clearance from top of rail (T/R) of highest track, or additional clearances necessary to obtain operational clearances from crossing warning device assemblies as follows (clearances must be identified on drawings):
1. 43' Minimum or 6'0" vertical clearance from Gate tip in vertical position or structure mast (whichever is greater).
  2. 43' Minimum or 13'-6" vertical clearance from Cantilever arm or structure mast (whichever is greater).
- D. Should the Railroad add or modify existing crossing warning devices of facilities at any highway grade crossing, existing wire lines or cables shall be raised or relocated immediately on notice from Railroad to lessee and at the sole cost and expense of the lessee.
- E. All parallel electrical lines will require an electromagnetic compatibility (EMC) study to determine the effects the facility may have on railroad and signal communication systems. The Railway requires the cost of the EMC study to be paid in full by the potential lessee prior to the field study being conducted.

## **V. Miscellaneous**

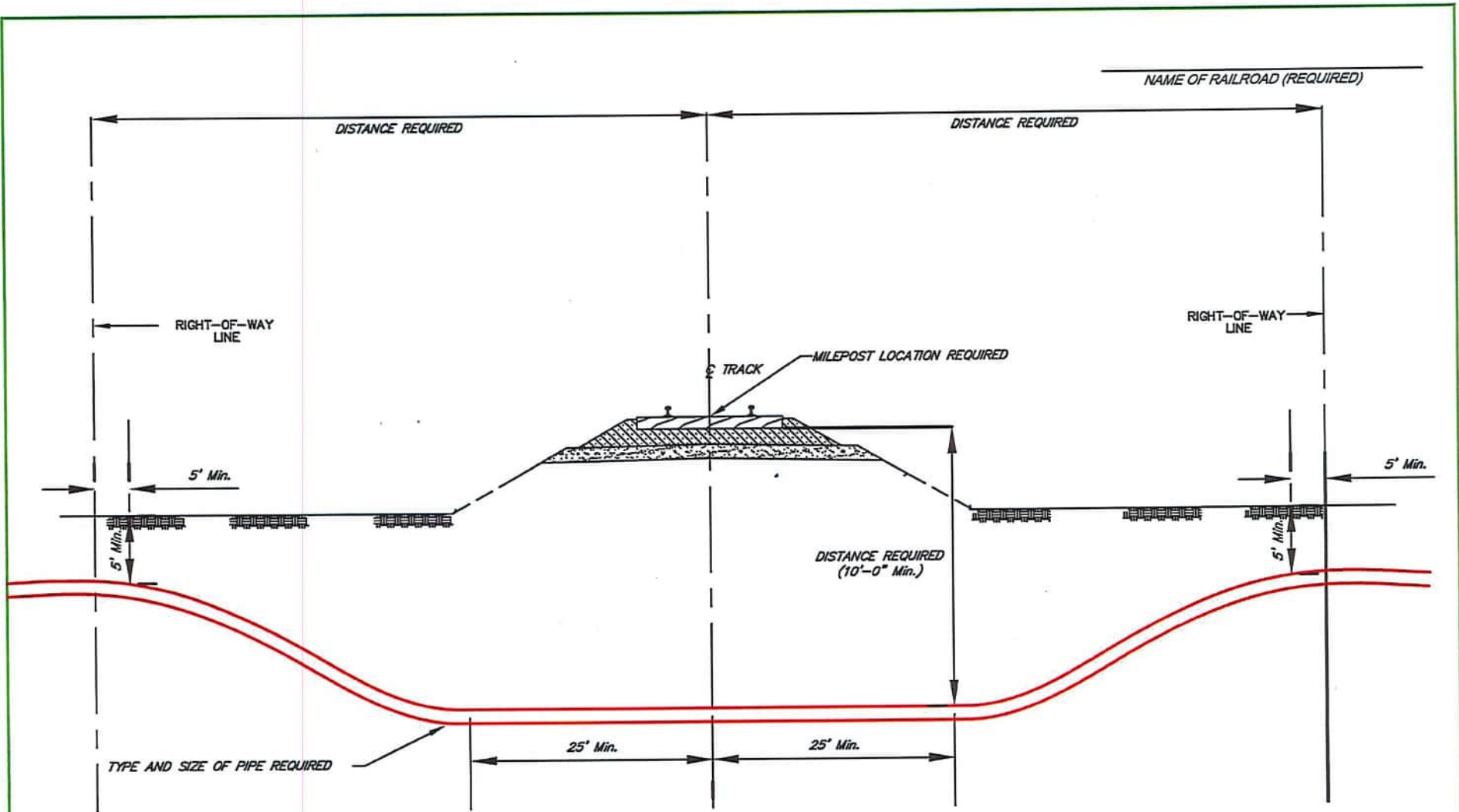
- A. Cathodic protection of pipelines, cables, or casings:
1. When cathodic protection is provided, it shall be installed so as not to induce currents, which will interfere with the signal apparatus of the Railroad. Any change required in the manner, method, or location of such cathodic protection shall be made at the sole cost and expense of the lessee and to the satisfaction of the Engineering Department of the Railroad.
- B. Proposed structures must maintain a minimum 10-foot horizontal clearance to the face of any signal, post, crossing gate or other above grade obstruction.

## **VI. Design Submittal Drawings**

A. Drawings for carrier and casing pipes should contain the following:

- Contents to be carried
- Inside diameter
- Pipe Material
- Specifications and grade of pipe material
- Wall thickness of pipe
- Actual working pressure
- Type of joints
- Longitudinal joint factor
- Coating
- Method of installation
- Vents: Number, size, location and height above ground
- Seals: both ends
- Cover (top of tie to top of pipe casing)
- Cover (other than under tracks)
- Cover (at ditches)
- Cathodic protection
- Type, size, and spacing of insulator or supports
- Railroad Mile Post, crossing gates, cantilevers, and any railroad signal equipment (huts, boxes, poles, etc.)
- All topography of Facilities and utilities within 150 feet in all directions of the proposed utility crossing through the Railway Corridor MUST be shown on the design plans for clarity and reference. Profile Drawing must also be included.

# EXAMPLE PROFILE DRAWING



### GENERAL NOTES

1. DIRECTIONAL BORES, 10' BELOW BOTTOM OF TIE MAY BE HDPE SCH. 40 CASING.
2. CARRIER PIPE MAY BE HDPE. (NO PVC PERMITTED)
3. JACKING PIT LOCATIONS MUST BE OUTSIDE OF RAILROAD RIGHT-OF-WAY LINES. NO OPEN CUT LATERAL CROSSING WILL BE ALLOWED. THE PIT WILL BE PROTECTED WITH ADEQUATE SHEETING, BULKHEADS AND SIDEWALKS TO PROTECT THE RAILROAD'S ROADBED. PROPER BARRICADES AND LIGHTS, IF NECESSARY, WILL BE SET AROUND THE PIT FOR POSITIVE PROTECTION.
4. NO WORK WILL BE PERMITTED ON RAILROAD RIGHT-OF-WAY WITHOUT A FLAGMAN.
5. CARRIER PIPE, UNDER PRESSURE, WILL REQUIRE CASING.

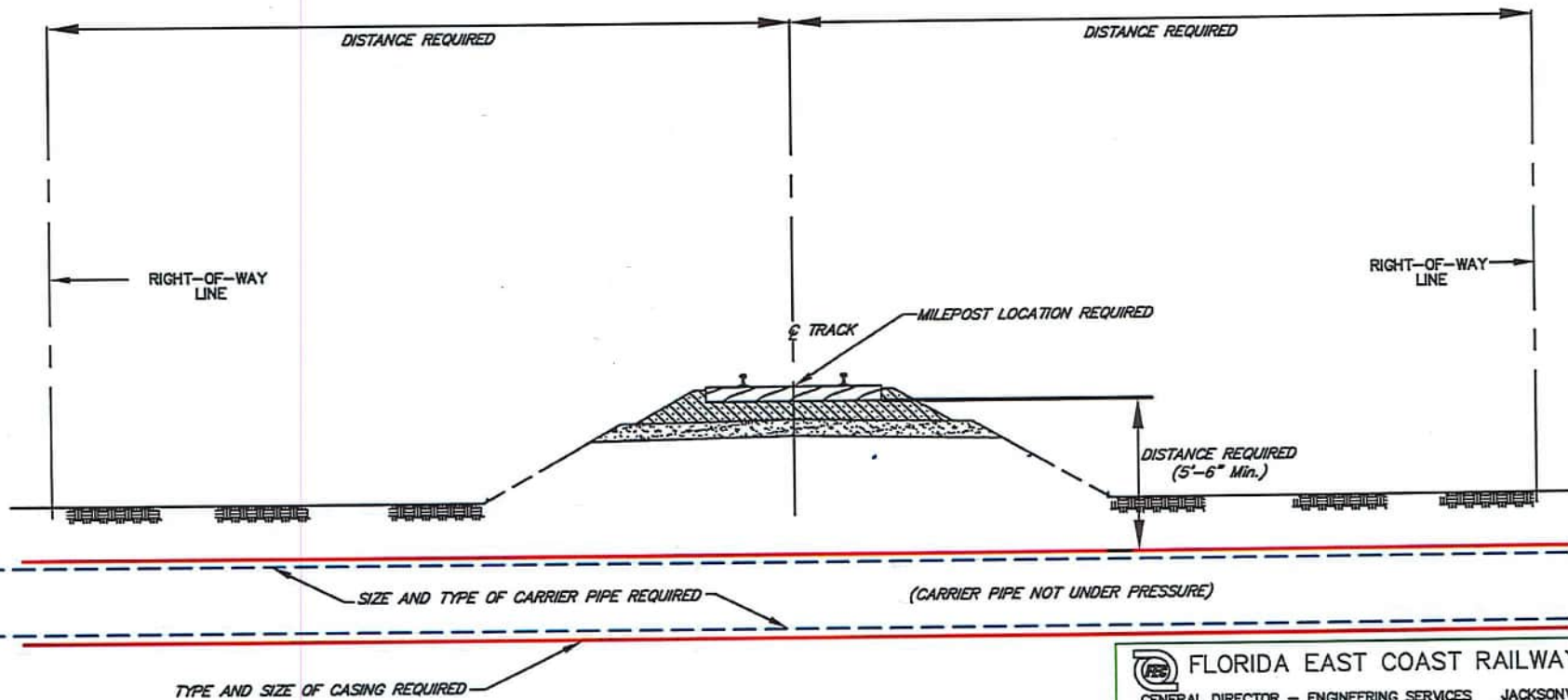
 FLORIDA EAST COAST RAILWAY CO.  
GENERAL DIRECTOR - ENGINEERING SERVICES JACKSONVILLE, FLORIDA

### INFORMATION REQUIRED FOR TYPICAL DIRECTIONAL BORE


DRAWN BY	M. P. LOC	SCALE	NONE
CHECKED BY	VNL MAP	DATE	10/14/08
DWG OR FILE NO		DWG NO	

# EXAMPLE PROFILE DRAWING

NAME OF RAILROAD (REQUIRED)

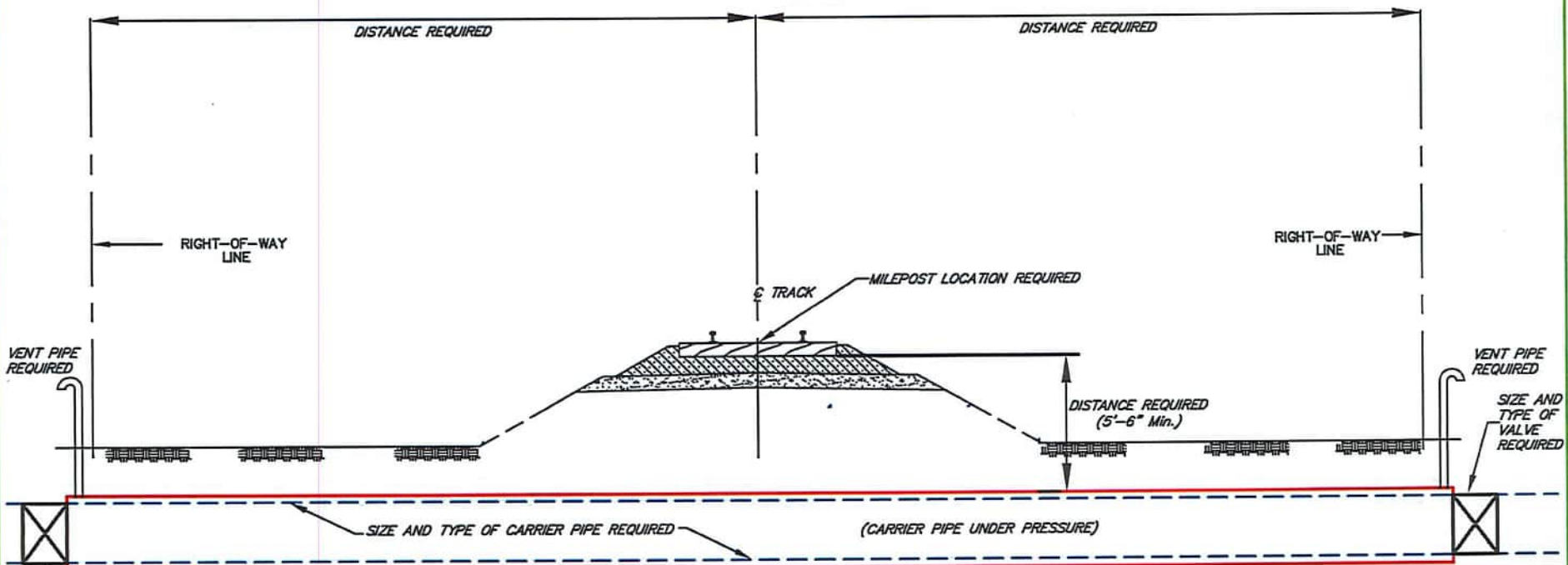


- GENERAL NOTES**
1. PVC WILL NOT BE PERMITTED AS CASING OR CARRIER PIPE ON RAILROAD RIGHT-OF-WAY
  2. CITY, COUNTY, STATE AND RAILROAD MILEPOST LOCATION REQUIRED.
  3. IF HDPE PIPE IS USED, IT MUST BE SCHEDULE 40 AND MAY ONLY BE USED FOR DIRECTIONAL BORE. A DISTANCE OF 10' MEASURED FROM BOTTOM OF TIE TO TOP OF PIPE IS REQUIRED.
  4. NO WORK WILL BE PERMITTED ON RAILROAD RIGHT-OF-WAY WITHOUT A FLAGMAN.

 <b>FLORIDA EAST COAST RAILWAY CO.</b> GENERAL DIRECTOR - ENGINEERING SERVICES JACKSONVILLE, FLORIDA		
<b>INFORMATION REQUIRED FOR          TYPICAL JACK AND BORE          (CARRIER PIPE NOT UNDER PRESSURE)</b>		
DRAWN BY	M. P. LOC	SCALE NONE
CHECKED BY	VNL MAP	DATE 9/12/08
DWG OR FILE NO	DWG NO	

# EXAMPLE PROFILE DRAWING

NAME OF RAILROAD (REQUIRED)



**GENERAL NOTES**

1. PVC WILL NOT BE PERMITTED AS CASING OR CARRIER PIPE ON RAILROAD RIGHT-OF-WAY
2. CITY, COUNTY, STATE AND RAILROAD MILEPOST LOCATION REQUIRED.
3. IF HDPE PIPE IS USED, IT MUST BE SCHEDULE 40 AND MAY ONLY BE USED FOR DIRECTIONAL BORE. A DISTANCE OF 10' MEASURED FROM BOTTOM OF TIE TO TOP OF PIPE IS REQUIRED.
4. NO WORK WILL BE PERMITTED ON RAILROAD RIGHT-OF-WAY WITHOUT A FLAGMAN.

**FLORIDA EAST COAST RAILWAY CO.**  
 GENERAL DIRECTOR - ENGINEERING SERVICES JACKSONVILLE, FLORIDA

INFORMATION REQUIRED FOR  
 TYPICAL JACK AND BORE  
 (CARRIER PIPE UNDER PRESSURE)

DRAWN BY	M P LOC	SCALE	NONE
CHECKED BY	VNL MAP	DATE	9/12/08
DWG OR FILE NO	DWG NO		