Guidelines for Obtaining a MTA LIRR Utility License Agreement

Step 1: Obtaining Utility Agreement:

Contact: **Mr. Joseph Holzapfel** **Tele: (347) 494-6487**
Manager - Engineering Compliance - Engineering Department **Email: jholzap@lirr.org**
Long Island Rail Road, Hillside Maintenance Complex
93-59 183rd Street, Dept. 3146
Hollis, NY 11423

Provide:
1) Request for Utility License Agreement on company letterhead which includes Company Name, Address, Principal of Company (President or VP), Contact Person's Name, Title, & Telephone #'s, full description of the work to be performed (detailed scope of work), as well as the amount of time necessary to complete the work and anticipated period of performance.
2) Aerial maps, site and location plan(s) of proposed installation, detailing the components and proposed method of the installation, and the location of the installation in relation to LIRR facilities, as well as including all dimensions, elevations, cross-sections, and identification of the LIRR Right-of-Way. If applicable, identify fence and / or retaining wall structure(s), and aerial utilities including poles / lines at or near the LIRR Right of Way (ROW).
3) If unable to submit request electronically via email (including all attachments), requestor must submit cover with copies of drawings, site plans, aerial maps, etc. to Mr. Holzapfel at the above address.

After reviewing the Step 1 submittal package for completeness, and the LIRR completes the internal evaluation / review process, one (1) original copy of the LIRR/MTA Utility License Agreement will be prepared, scanned, and forwarded via email, to the requestor for signature**. Upon receipt, the requestor must print out, have signed by appropriate company Principal or designee, have witnessed, scan, and email all required insurance documents a copy of the signed agreement and all required insurance documents, to the Manager - Engineering Compliance.**

Step 2: Initial Insurance Review:

Upon receipt, review, and approval of all insurance documents by the MTA Risk & Insurance Management Department, the Manager - Engineering Compliance will execute and forward a copy of the executed agreement to the requestor, and the requestor shall proceed to Step 3.

Step 3: LIRR Civil Design & Inspection

Contact: **Mr. Ulises Arteaga, PE** **Tele: (718) 558-3369**
LIRR Civil Design & Inspection **Fax: (718) 558-3298**
Engineer of Structures, Engineering Department **Email: uarteag@lirr.org**
Long Island Rail Road, Hillside Support Facility
93-59 183rd Street, Dept. 3143, Hollis, NY 11423

Provide:
1) A copy of the executed MTA LIRR Utility License Agreement (signed by LIRR and requestor)
2) **Original signed** copies of Evidence of Insurance - submitted in the **proper format**
3) Items 1 through 3 from Step 1

Upon review of all documents, and obtaining appropriate confirmation from MTARIM that all insurances have been reviewed and approved, a Field Inspector will be assigned to coordinate all activities associated with the project, including arranging for appropriate flag protection and RWP Training.

*** It should be noted that the requestor must not alter any of the documents or take exception to the LIRR Utility Terms and Conditions. Failure to follow the Guidelines described herein, may significantly delay the review / approval process.**

Long Island Rail Road

MINIMUM JACKING REQUIREMENTS FOR UNDERGROUND UTILITIES

All work must be in accordance with current American railway Engineering Association (A.R.E.A.) specifications Part 5, Pipelines and as referenced below.

1. All parties are notified that pipe jacking or directional boring under LIRR tracks without LIRR flagman present is a violation of Federal Law.

2. Jacking and Receiving pits located on LIRR property – Details and calculations of the jacking and receiving pits, sheathing and bracing to be submitted to the LIRR for review. All details and calculations must include original seal and signature of a Licensed Professional Engineer, Licensed in the State of New York.

   Jacking and receiving pits located off LIRR Property – Details of jacking and receiving pits, sheathing and bracing to the LIRR for review. The utility and/or the contractor is responsible to assure the design of all sheathing and bracing complies with the New York State Building codes and New York State Engineering Law.

3. The casing pipe shall not be less than 7’-0” from the base of the railroad tie to the top of the casing pipe at their closest point. Important note: All locations on the Port Jefferson branch require the casing pipe shall not be less than 10’-0” from the base of the railroad tie to the top of the casing pipe at their closest point.

4. When jacking operation is underway, the void from the soil material being removed shall not proceed in advance of the casing.

5. Once jacking operations has commenced, the jacking procedure shall be carried on continuously until it is completed.

6. Open excavation on/or adjacent to LIRR Right of Way (ROW) must be secured safely with fencing, barricades and flashing light or other methods as deemed necessary by the LIRR.

7. The contractor must comply with all applicable Maintenance and Protection of Traffic Control standards during construction.

8. The contractor must keep the LIRR ROW clean of all construction material, equipment and debris at all times.

9. The contractor shall satisfy LIRR Insurance requirements prior to commencement of work. Furthermore, the contractor shall satisfy the requirements of the Federal Law and LIRR requirements for Roadway Worker Protection training.

10. An Entry Permit or Force Account Agreement will be necessary to ensure the reimbursement of railroad costs associated with design review and construction monitoring.

11. The LIRR must be given two (2) weeks notice prior to the commencement of work. No work shall be performed with a representative of the Long Island Rail Road Engineering Department and LIRR flagman being present. Contact Managing Engineer – Civil Inspection at 718-558-3218 with two (2) week notification.

12. A utility markouts must be performed by LIRR utility departments and other agencies prior to any excavation on or adjacent to the LIRR Right of Way.

13. The cost incurred by the LIRR to correct settlement or upheaval of the railroad tracks resulting from jacking will be reimbursed to the LIRR directly by the permittee.

14. The cost incurred by the LIRR resulting from damage to LIRR facilities (grade crossing, overhead wires, signal systems, underground utilities, structures, etc.) caused by jacking operations will be reimbursed to the LIRR directly by the permittee.

15. All references and notes to jacking operations shall also apply to directional boring operations. The directional boring pipe shall not be less than 12'-0" from the base of the railroad tie to the top of the pipe at their closest point.

ISO information removed. Note 3 revised for Port Jefferson Branch. Must be updated in ISO procedures for 3rd Party group.

Procedure Number: 3rd Party – 3
Title: Jacking
Revision: 2
Date: 03/12/12
Saved Location: H:\Structures\3rd Party Contracting\Procedures\Minimum Jacking Requirements.doc

Long Island Rail Road

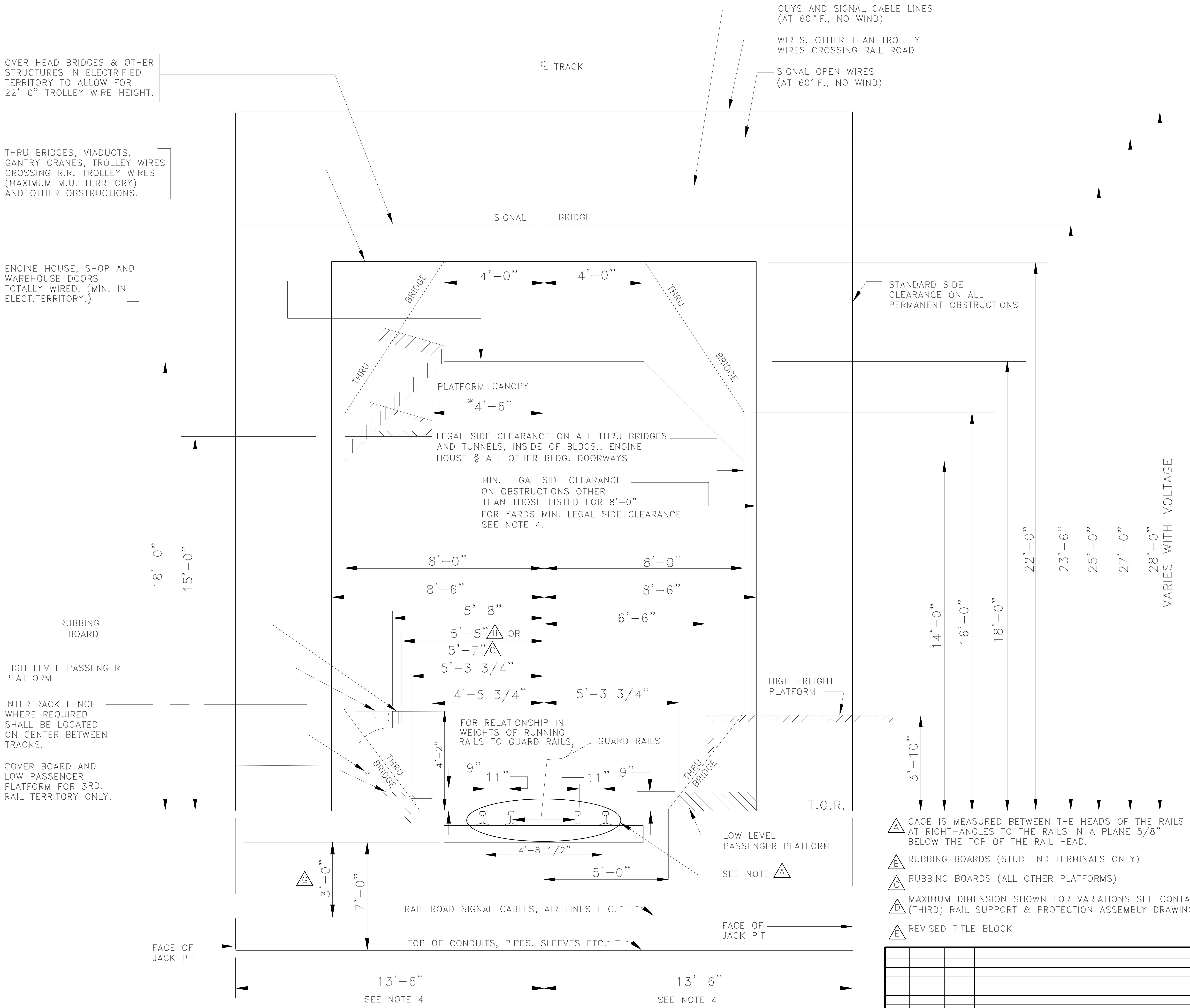
GENERAL REQUIREMENTS FOR PROJECTS ADJACENT TO LIRR PROPERTY WITH POTENTIAL TO IMPACT LIRR SAFETY AND OPERATIONS

- Attached are "General Requirements for Outside Contractors Working on LIRR Property". These requirements apply to this project. Entry Permit requires an outside agency or contractor to reimburse the LIRR for all project costs (i.e. Flag Protection, Project engineers, Inspectors, etc.)
- Shop drawings and calculations detailing sheeting must be submitted prior to excavation, which may impact the stability of adjacent embankment supporting our tracks. Shop drawings and calculations to include the original seal and signature of a NYS Licensed Professional Engineer. Sheeting to be designed for Cooper E-80 Axel Loading as per the American Railway Engineering Associates.
- Fouling of LIRR Track includes work within 15 ft. of or along LIRR tracks. This also includes operation of equipment or any part of equipment (i.e. crane booms) which could fall onto or within six (6) feet of LIRR tracks.
- All parties are notified that fouling LIRR track without LIRR flag protection being present is a violation of Federal Law.
- <u>CRANES</u>
    - Crane operation must maintain at least fifteen (15) feet vertical and horizontal separation from overhead LIRR High Tension Lines. If overhead power lines from outside agencies are supported from LIRR High tension poles, a letter from that agency must be submitted to the LIRR stating their vertical and horizontal separation requirements.
    - The following conditions apply for operating cranes with booms of sufficient length to fall onto or within six (6) feet of LIRR tracks.
        - Crane information must be submitted to the LIRR for review, including proposed location of crane, proposed boom angle and loading diagram indicating that the crane is capable of supporting 150% of load to be lifted. Loading diagram to include original seal and signature of NYS Licensed Professional engineer.
        - LIRR flag protection must be on site. Crane operations will generally be restricted to 10:00 am to 3:00 pm daily.
        - Crane operator or one (1) construction supervisor who will be on the site full time must be trained and verified in Roadway Worker Protection.
        - Crane operations must follow the direction of LIRR flagmen and face boom parallel to our track when ordered to do so.

Long Island Rail Road

GENERAL REQUIREMENTS FOR OUTSIDE CONTRACTORS WORKING ON LIRR PROPERTY

- Obtain Entry Permits. Call LIRR Manager – Engineering Compliance at 347-494-6487.
- Obtain required Railroad Protective Liability Insurance and submit original signed insurance documents to the MTA Risk and Insurance Management, call 646-252-1429.
- All contractor personnel whose duties include working on, within fifteen (15) feet of or above railroad tracks or operating equipment (i.e. cranes) on or near railroad tracks shall attend annual Roadway Worker Protection (RWP). Call LIRR Training Department at 718-558-3100 to schedule.
- Two (2) weeks prior to start of construction call Managing Engineer – Civil Inspection at 718-558-3218.



NOTES:

1. STRUCTURES MUST NOT BE LOCATED NEARER TO TRACK THAN THE MINIMUM CLEARANCE LIMITS PRESCRIBED BY THIS PLAN AND THESE DISTANCES SHOULD BE EXCEEDED WHERE POSSIBLE.

   MINIMUM CLEARANCES:

   FOR TANGENT TRACK SHALL BE SHOWN ON THIS PLAN.

   FOR CURVED TRACK ABOVE TOP OF RAIL } ARE THE SAME AS SHOWN FOR TANGENT TRACK MEASURED VERTICALLY FROM TOP OF HIGH RAIL. EXCEPT PASSENGER AND FREIGHT PLATFORMS. THE HEIGHT OF WHICH SHALL BE MEASURED FROM TOP OF NEAREST RAIL.

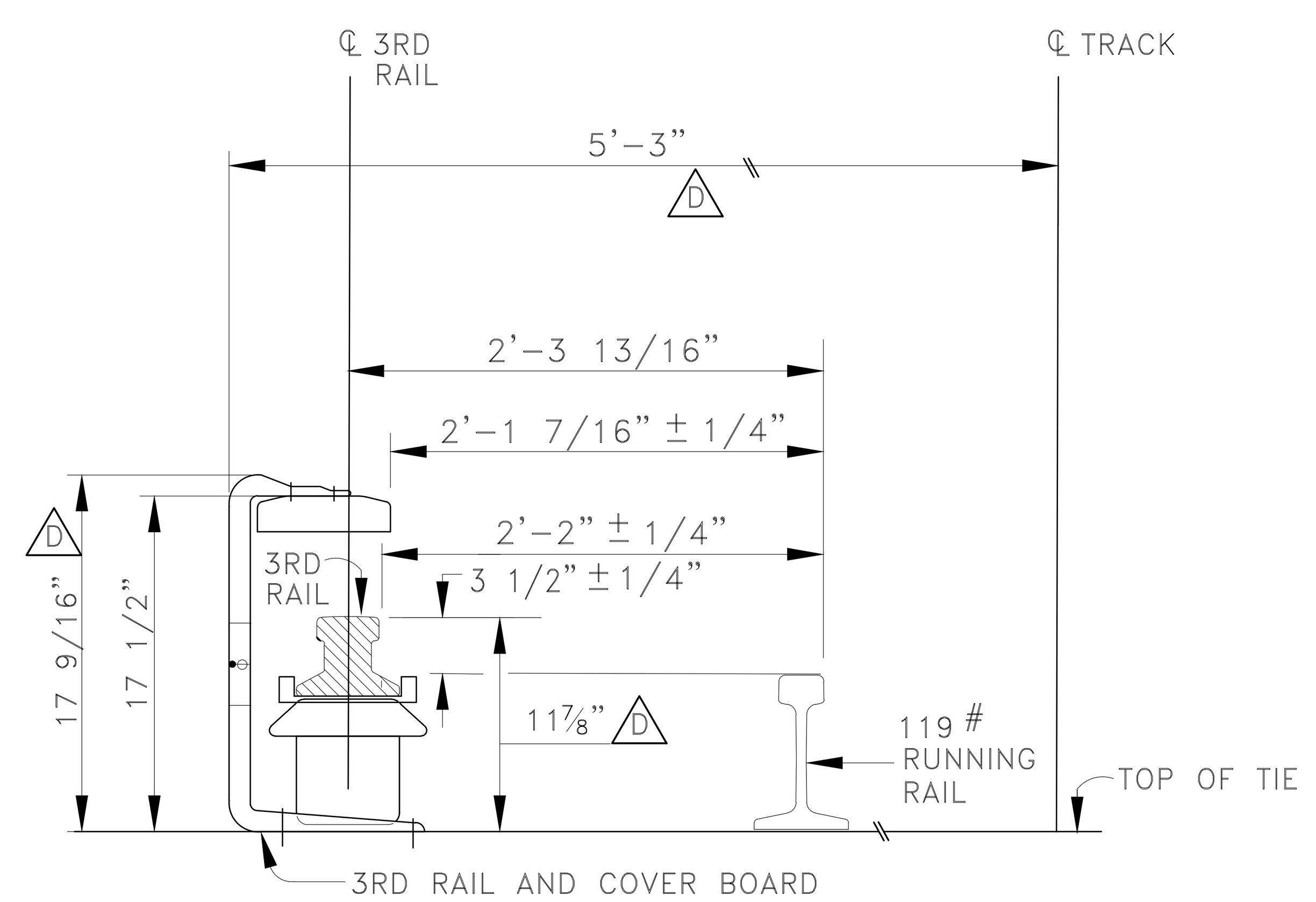
   SIDE CLEARANCE (MEASURED RADIALLY)
   - OUTSIDE: ON THE OUTSIDE OF CURVED TRACK. SIDE CLEARANCES SHALL BE MEASURED HORIZONTALLY FROM THE GAGE OF NEAREST RAIL AND BE INCREASED BY 1 INCH PER DEGREE OF CURVATURE; OVER THAT SHOWN FOR TANGENT TRACK.
   - INSIDE: ON THE INSIDE OF CURVED TRACK SIDE CLEARANCES SHALL BE MEASURED HORIZONTALLY FROM THE GAGE OF NEAREST RAIL AND BE INCREASED BY 1 INCH PER DEGREE OF CURVATURE, OVER THAT SHOWN FOR TANGENT TRACK TO WHICH MUST ALSO BE ADDED TO THE AMOUNT OF SUPER ELEVATION OF THE HIGH RAIL ABOVE THE LOW RAIL.

2. PLATFORM CANOPY CLEARANCE OF 4'–6" MAY BE USED ONLY IF RESTRICTIONS AGAINST RIDING ON THE SIDE OR TOP OF CARS AT THE LOCATION OF THE CANOPY ARE LISTED IN THE CURRENT TIME-TABLE UNDER SPECIAL INSTRUCTIONS.
3. CLEARANCE REQUIREMENTS SET FORTH ON THIS PLAN SHALL
4. MINIMUM YARD CLEARANCE REQUIREMENTS SHALL BE AS SPECIFIED ON MESOP 14.9.F OPERATING PROCEDURE

△F APPLY FOR TRACK MAINTENANCE ONLY (FOR NEW CONSTRUCTION SEE LATEST LIRR MW2000)
STRUCTURES AND TRACKS CONSTRUCTED PRIOR TO APRIL 1st. 1961. MAY BE MAINTAINED AND EXTENDED AT THE EXISTING CLEARANCE.
THE FOLLOWING SIDE CLEARANCE ARE INCLUDED IN SECTION 51–A OF THE RAIL ROAD LAW EFFECTIVE APRIL 1st. 1961.

MIN. C TO C DISTANCE FOR PARALLEL MAIN TRACKS	13'–6" C TO C
C TO C DISTANCE YARD AND SIDE TRACKS	13'–6" C TO C
ALL TRACKS PARALLEL TO MAIN OR PASSING TRACKS	15'–0" C TO C
LADDER TRACKS TO ADJACENT TRACKS	18'–0" C TO C
PARALLEL LADDER TRACKS	19'–0" C TO C
PARALLEL TEAM TRACKS AND HOUSE TRACKS	13'–6" C TO C

△G CLEARANCE IS MEASURED FROM THE BOTTOM OF TIE



△A GAGE IS MEASURED BETWEEN THE HEADS OF THE RAILS AT RIGHT-ANGLES TO THE RAILS IN A PLANE 5/8" BELOW THE TOP OF THE RAIL HEAD.

△B RUBBING BOARDS (STUB END TERMINALS ONLY)

△C RUBBING BOARDS (ALL OTHER PLATFORMS)

△D MAXIMUM DIMENSION SHOWN FOR VARIATIONS SEE CONTACT (THIRD) RAIL SUPPORT & PROTECTION ASSEMBLY DRAWING.

△E REVISED TITLE BLOCK

REFERENCES:
THIS DRAWING IS A REDRAFTING OF DWG. NO. 820–10. DATED: 6–30–72

Rev. No.	Drawn by	Chk by	Description	Date
8	MS	UA	REVISED WIRES CLEARANCE NOTE 4	7/9/19
8	MS	UA	REVISED RR SIGNAL CABLES, AIR LINES ETC. CLEARANCE △G	5/2/19
7	TRACK DEPT	EC	REVISED NEW TRACK CLEARANCE △F	8/17/18
6	BCF	RS/PH	REVISED TITLE BLOCK △E	1–26–10
5	UA	HN/PH	REVISED 3RD RAIL DIMENSIONS △D	12–18–08
5	ALV	HN/PH	REVISED PLATFORM CLEARANCE DIMENSION △C	1–22–08
4	RC	HN	ADDED RUBBING BOARDS △B	2–26–07
3	ALV	JS	REVISED DIMENSION AND DEFINED GAGE △A	
2	ALV	MP/VAM	REDRAFTED IN AUTOCAD FORMAT	1–26–99

project:
LONG ISLAND RAIL ROAD

Metropolitan Transportation Authority — Structures Department
THE LONG ISLAND RAIL ROAD — Office of the Chief Engineer, Jamaica NY. 11435, 718–990–7400

drawing title:
△E MINIMUM RAILWAY CLEARANCES

P.E.

designed by:	SEE NOTE
checked by:	VAM/MP
in charge:	FJS
branch:	STANDARD
drawn by:	ALV
scale:	NONE
date:	1–26–99
drawing no:	820–10
sheet no:	CE–1

LIRR SPECIFICATIONS FOR PIPELINES OCCUPANCIES

1.0 Scope

1.1. This specification shall apply to the design and construction of pipelines carrying flammable or non-flammable substances and casings containing wires, cables, and carrier pipes across and along LIRR property and facilities. This specification shall also apply to tracks owned by others (sidings, industry tracks, etc.) over which LIRR operates its equipment.

1.2. It is to be clearly understood that LIRR owns its right-of-way for the primary purpose of operating a railroad. All occupancies shall therefore be designed and constructed so that rail operations and facilities are not interfered with, interrupted, or endangered. In addition, the proposed facility shall be located to minimize encumbrance to the right-of-way so that the railroad will have unrestricted use of its property for current and future operations.

1.3. Specifications, as appropriate, covering material and assembly shall meet the requirement of the:

- LIRR Standards and Specifications as required
- AREMA (American Railway Engineering Maintenance-of-way Association) Manual for Railway Engineering (Current Edition)
- ASTM (American Society for Testing and Materials)
- ANSI (American National Standards Institute)
- AWWA (American Water Works Association)

2.0 Definitions

2.1. Definitions: wherever in these specifications the following terms in place of them are used, the intent and meaning shall be interpreted as specified herein.

A. LIRR – MTA Long Island Rail Road Co.
B. Contract Administration – LIRR's Contract Administration Department.
C. Owner (Applicant) -- Individual, Corporation, or Municipality desiring occupancy of LIRR property.
D. Professional Engineer – Engineer licensed in the State of New York of where the facilities are to be constructed.
E. Carrier Pipe – Pipe used to transport the product.
F. Casing Pipe – Pipe through which the carrier pipe is installed under main tracks.
G. Sidings or Industry Tracks – Tracks located off of LIRR's right-of-way, serving an industry.

3.0 Application for Occupancy

3.1. Owner (Applicant) desiring occupancy of LIRR property by pipeline occupations must agree upon the following: Approval by LIRR of all engineering and construction details, execution of an appropriate LIRR occupational agreement, and payment of any required fees and/or rentals specified therein.

3.2. Occupancy applications shall be completed in full with all of the required information requested in order for the application to be processed. Review the entire application package, as well as the engineering specifications, before completing the application.

3.3. Applications may be secured in writing from:

Mr. Edward Maines
Managing Engineer – Contracts & Agreements
MTA Long Island Rail Road
Hillside Maintenance Complex
93-59 183rd Street, Dept. 3146
Hollis, NY 11423

4.0 Right of Entry

4.1. Entry upon LIRR property for the purpose of conducting surveys, field inspections, obtaining soils information, or any other purposes associated with the design and construction for the proposed occupancy, will not be permitted without a proper entry permit prepared by LIRR. The applicant must pay the associated fees and execute the entry permit.

4.2. The issuance of an entry permit does not constitute authority to proceed with any construction. Construction cannot begin until a formal agreement is executed by LIRR and the Owner receives permission, from the designated inspection department of LIRR, to proceed with the work.

5.0 Site Inspections

5.1. For longitudinal occupancy of LIRR property, a site inspection along the proposed pipeline route may be required before final design plans are prepared. When a site inspection is required, the applicant and/or the engineer must meet with a LIRR Field Representative to view the entire length of the proposed occupancy; the applicant will be informed of the need for a meeting during application processing.

5.2. Prior to the site inspection the applicant must submit the following information:

5.2.1. A plan view of the proposed route showing all tracks, both LIRR right-of-way lines, and all other facilities located on the right-of-way. The distance from the proposed pipeline to the adjacent track and to the right-of-way lines must be shown.

5.2.2. A complete application for site visit.

5.2.3. Typical cross sections along the proposed route. (See Plate V).

5.3. Site inspections for pipe crossings are not required unless, in the opinion of LIRR, the size and location of the facility warrant an inspection.

6.0 Information Required for Submission

6.1. Plans and Computations

6.1.1. Plans for proposed pipeline occupancies shall be submitted to and approved by the Chief Engineer prior to LIRR's issuance of an agreement and start of construction.

6.1.2. Plans are to be prepared in sizes as small as practical and shall be folded, individually, by the applicant to an 8 1/2 inch by 11 inch size, as shown on Plate X, prior to submission. Where more than one plan is involved, the folded plans shall be assembled into complete sets by the applicant before submission. Failure of the applicant to comply with these requirements may be sufficient cause for rejection of the application.

6.1.3. Plans shall be drawn to scale and shall include the following (See Plates I to VII):

6.1.3.1. Plan view of proposed pipeline in relation to all LIRR facilities and facilities immediately adjacent to LIRR including, but not limited to, tracks, buildings, signals, polelines, other utilities and all other facilities that may affect or influence the pipeline design and construction. (See Plate II)

6.1.3.2. The location, in feet, of the pipe crossing from the nearest LIRR Milepost and/or from the centerline of a LIRR bridge, giving the LIRR bridge number. If the above is not available, provide distance to the nearest highway grade crossing of the railroad.

6.1.3.3. In all cases, the name of the State and County in which the proposed facilities are located must be shown.

6.1.3.4. The profile of the ground above the centerline of the pipe, from field survey, showing relationship of the pipeline and/or casing pipe to the ground levels, the tracks and other facilities, (See Plate III). For longitudinal occupations, the top of rail profile of the adjacent track shall be shown on the pipeline profile, (See Plate IV).

6.1.3.5. All LIRR property lines indicated by dimensions, in feet, to the centerline of adjacent track, as well as the overall width of the LIRR right-of-way. If the pipeline is in a public highway, the limits of the dedicated highway right-of-way, as well as the limits of any paving, sidewalks etc., shall be defined, by dimensions in feet, from the centerline of the dedicated right-of-way.

6.1.3.6. The angle of the crossing in relation to the centerline of the track(s). (See Plate II)

6.1.3.7. On pipelines having valves, the distance in feet along the pipeline from the crossing

to the nearest valves and/or control stations.

6.1.3.8. A separate "Pipe Data Sheet" (See Plate I) shall be submitted on an 8 1/2 inch by 11 inch sheet, for each crossing.

6.1.4. The plan shall be specific on LIRR property and under tracks that are not on LIRR property, as to the:

A. Method of installation.
B. Size and material of the casing pipe.
C. Size and material of the carrier pipe.

These items **cannot** have an alternative and any application that is received that indicates options in any of the above items **will not be processed**.

6.1.5. Once the application has been approved by the Chief Engineer, no variance from the plans, specifications, method of installation, construction, etc., as approved in the occupancy document, will be considered or permitted without the payment to LIRR of additional fees for the re-processing of the application.

6.1.6. All plans and computations associated with the work under the agreement shall be prepared by, and bear the seal of, a Professional Engineer licensed in the State of New York. If not so imprinted, the application will be given no further consideration. This requirement also applies to all data submitted by the Owner's contractor. Contractor's plans and computations that are not stamped will be returned and construction will not be permitted to proceed.

6.2. Specifications

6.2.1. Project specifications, for all work on and affecting the railroad right-of-way, shall be included with the submission. All pertinent requirements of this document shall be included.

7.0 Notification to Proceed with Construction

7.1. After approval of the engineering plans and specifications and execution of the occupational agreement, the Owner will be notified by the LIRR. The LIRR at its sole discretion, may provide inspection of the project and coordinate all other construction aspects of the project that relate to LIRR (flagging, track work, protection of signal cables, etc.)

8.0 General Requirements

8.1. Use of Casing Pipe:

8.1.1. A casing pipe will be required for all pipeline crossings carrying liquid or gaseous substances.

8.1.2. For non-pressure sewer or drainage crossings, where the installation can be made by open cut (see Construction Requirements Section) or reinforced concrete pipe can be jacked under the railroad (see Construction Requirements Section), the casing pipe may be omitted.

8.1.3. Pressure pipelines that are located within 25 feet of the centerline of any track shall be encased.

8.1.4. At proposed pipe crossing the casing pipe shall be laid across the entire width of the right-of-way, except where a greater length is required to comply with the Design Requirements-Casing Pipe Section of this specification, even though such extension is beyond the right-of-way.

8.1.5. At the discretion of LIRR a casing pipe may be required for any application regardless of the commodity carried.

8.2. Location of Pipeline on the Right-of-Way:

8.2.1. Pipelines laid longitudinally on LIRR's right-of-way shall be located as far as practicable from any tracks or other important structures and as close to the railroad property line as possible. Longitudinal pipelines must not be located in earth embankments or within ditches located on the right-of-way.

8.2.2. Pipelines shall be located, where practicable, to cross tracks at approximate right angles to the track, but preferably at not less than 45 degrees.

8.2.3. Pipelines shall not be placed within a culvert, under railroad bridges, nor closer than 45 feet to any portion of any railroad bridge, building, or other important structure, except in special cases, and then by special design, as approved by LIRR's Chief Engineer.

8.2.4. Pipelines shall not be located within the limits of a turnout (switch) when crossing the track. The limits of the turnout extend from the point of the switch to 15 feet beyond the last long timber.

8.2.5. Pipeline installations shall not be designed as an open cut installation where the pipeline is to be located within the limits of a grade crossing. If it is shown that no other method of installation is possible, the owner will be responsible for reimbursing LIRR for all costs associated with the removal and reconstruction of the grade crossing.

8.3. Depth of Installation:

8.3.1. Pipelines conveying non-flammable substances:

8.3.1.1. Casing/carrier pipes placed under LIRR track(s) shall be not less than seven (7'-0") feet from the base of railroad tie to top of the casing pipe at their closest and/or shallowest point whichever most stringent shall apply. **Important note: All locations on the Port Jefferson branch require the casing pipe shall not less than ten (10'-0") feet from the base of railroad tie to top of the casing**

pipe at their closest and/or shallowest point whichever most stringent shall apply.

8.3.1.2. Pipelines laid longitudinally on LIRR's right-of-way, 50 feet or less from centerline track shall be buried not less than four (4'-0") feet from ground surface to top of pipe. Where the pipeline is laid more than 50 feet from centerline of track, the minimum cover shall be at least three (3'-0") feet.

8.3.2. Pipelines conveying flammable substances:

8.3.2.1. Casing/carrier pipes placed under LIRR track(s) shall be not less than seven (7'-0") feet from the base of railroad tie to top of the casing pipe at their closest and/or shallowest point whichever most stringent shall apply. **Important note: All locations on the Port Jefferson branch require the casing pipe shall not less than ten (10'-0") feet from the base of railroad tie to top of the casing pipe at their closest and/or shallowest point whichever most stringent shall apply.** On other portions of the right-of-way, where the pipe is not directly beneath any track, the depth from ground surface or from bottom of ditch to top of pipe shall not be less than three (3'-0") feet. Where three (3'-0") feet of cover cannot be provided from bottom of ditch, a six (6") inch thick reinforced concrete slab shall be provided over the pipeline for protection.

8.3.2.2. Pipelines laid longitudinally on LIRR's right-of-way, 50 feet or less from centerline track shall be buried not less than six (6'-0") feet from ground surface to top of pipe. Where the pipeline is laid more than 50 feet from centerline of track, the minimum cover shall be at least five (5'-0") feet.

8.4. Pipelines within Limits of a Dedicated Highway:

8.4.1. Pipelines within the limits of a dedicated highway are subject to all the requirements of this specification and must be designed and installed in accordance with this specification.

8.4.2. The limits of the dedicated highway (right-of-way) must be clearly shown on the plans.

8.5. Modification of Existing Facilities:

8.5.1. Any replacement or modification of an existing carrier pipe and/or casing shall be considered as a new installation, subject to the requirements of this specification.

8.6. Abandoned Facilities:

8.6.1. The owner of all pipe crossings proposed for abandonment shall notify LIRR, in writing, of the intention to abandon.

8.6.2. Abandoned pipelines shall be removed or completely filled with cement grout, compacted sand, or other methods, as approved by LIRR.

8.6.3. Abandoned manholes and other structures shall be removed to a minimum depth of 2 feet

below finished grade and completely filled with cement grout, compacted sand, or other methods as approved by LIRR.

8.7. Conflict of Specifications:

8.7.1. Where laws or orders of public authority prescribe a higher degree of protection than specified herein, then the higher degree so prescribed shall be deemed a part of this specification.

8.8. Insulation:

8.8.1. Pipelines and casings shall be suitably insulated from underground conduits carrying electric wires on LIRR property.

8.9. Corrosion Protection and Petroleum Leak Prevention:

8.9.1. Pipelines on LIRR property that carry petroleum products or hazardous liquids shall be designed in accordance with current federal, state, and/or local regulations that mandate leak detection automatic shutoff, leak monitoring, sacrificial anodes, and/or exterior coatings to minimize corrosion and prevent petroleum releases.

8.10. Plastic Carrier Pipe Materials:

8.10.1. Plastic carrier pipe materials include, but are not limited to thermoplastic and thermoset plastic pipes, Thermoplastic types include Polyvinyl Chloride (PVC), Acrylonitrile Butadiene Styrene (ABS), High Density Polyethylene (HDPE), Polyethylene (PE), Polybutylene (PB), Cellulose Acetate Butyrate (CAB), and Styrene Rubber (SR), Thermoset types include Reinforced Plastic Mortar (RPM), Reinforced Thermosetting Resin (FRP) and Fiberglass Reinforce Plastic (FRP).

8.10.2. Plastic carrier pipelines shall be encased according to AREMA Chapter 1 Section 5.1.5.

8.10.3. Plastic pipe material shall not be used to convey liquid flammable substances.

8.10.4. Plastic pipe material shall be resistant to the chemicals with which contact can be anticipated. Plastic carrier pipe shall not be utilized where there is potential for contact with petroleum contaminated soils or other non-polar organic compounds that may be present in surrounding soils.

8.10.5. Plastic carrier pipe can be utilized to convey flammable gas products provided the pipe material is compatible with the type of product conveyed and the maximum allowable operating pressure is less than 100 PSI. Carrier pipe materials, design, and installation shall conform to Code of Federal Regulation 49CFR§178 to §199, specifically §192 and American National Standards Institute ASME B31.8 and ASTM D2513.Codes, specifications, and regulations current at time of construction of the pipeline shall govern the installation of the facility within the railway right-of-way. The proof testing of the strength of carrier pipe shall be in accordance with ANSI requirements. Plastic carrier pipes will be encased according to AREMA Chapter 1 Section 5.1.5.

8.10.6. Plastic carrier pipe conveying flammable substances shall be encased the entire limits of the right-of-way. If special conditions exist which prevent encasement within the entire limits of the right-of-way, the Chief Engineer must approve the minimum encased length.

8.10.7. Plastic carrier pipe must be encased under all tracks, including sidings and industrial tracks within the limits of the right-of-way.

8.10.8. Longitudinal carrier pipeline shall be steel or ductile iron. Plastic carrier pipe may be utilized for longitudinal installation with approval by the Chief Engineer, but shall be fully encased within the limits of the right-of-way.

8.10.9. Codes, specifications, and regulations current at the time of construction the pipeline shall govern the installation of the facility within the railway rights-of-way. The proof testing of the strength of carrier pipe shall be in accordance with ANSI requirements.

Specification Number / Carrier Pipe Properties

8.10.9.1.	ANSI/AWWA C900	PVC pressure pipe 4" through 12".
8.10.9.2.	ANSI/AWWA C901	PE pressure pipe and tubing ½" through 3" for water.
8.10.9.3.	ANSI/AWWA C902	PE pressure pipe and tubing ½" through 3" for water
8.10.9.4.	ANSI/AWWA C905	PVC water pipe, 14" through 36"
8.10.9.5.	ANSI/AWWA C906	PE pressure pipe and fittings 4" –63" for water
8.10.9.6.	ANSI/AWWA C907	PVC pressure fittings 4" -8"
8.10.9.7.	ANSI/AWWA C950	Fiberglass pressure pipe

9.0 Soil Investigation

9.1. General:

9.1.1. Test borings or other soil investigations, approved by LIRR'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 and larger under track(s).

9.1.2. Test borings or other soil investigations, approved by LIRR's Chief Engineer, may be required when, in the judgment of LIRR, 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. **Note: the applicant shall be responsible for the notification of all LIRR underground utilities including signal cables, communication cables, third rail traction cables, substation and high tension power and electrical cables, track negative return cables, high pressure airlines, etc.**

9.2. Location:

9.2.1. Borings shall be made on each side of the track(s), on the centerline of the pipe crossing, and as close to the track(s) as practicable.

9.2.2. Test boring logs shall be accompanied with a plan, drawn to scale, showing the location of the borings in relation to the track(s) and the proposed pipe.

9.3. Sampling:

9.3.1. Test borings shall be made in accordance with current ASTM Designation D1586 except that sampling must be continuous from the ground surface to 5 feet below the proposed invert unless rock is encountered before this depth. Where rock is encountered, it is to be cored using a Series "M" Double Tube Core Barrel, with a diamond bit, capable of retrieving a rock core at least 1 5/8" in diameter. Individual core runs are not to exceed 5 feet in length.

9.3.2. All borings shall be sealed; for their full depth, with a 4-3-1 bentonite-cement-sand grout after accurate ground water readings have been taken and recorded.

9.3.3. Soil samples taken from auger vanes or return wash water are not acceptable.

9.4. Boring Logs:

9.4.1. Test boring logs shall clearly indicate all of the following:

A. Boring number as shown on the required boring location plan.
B. Ground elevation at each boring using same datum as the pipeline construction plans.
C. Engineering description of soils or rock encountered.
D. Depth and percent recovery of all soil samples.
E. Depth from surface for each change in strata.
F. Blows for each 6 inches of penetration for the standard penetration test described in ASTM D 1586. Blows for lesser penetrations should be recorded.
G. Percent recovery and Rock Quality Designation (RQD) for all rock cores.
H. Depth to ground water while sampling and when it has stabilized in the bore hole.

9.4.2. The location of the carrier pipe and/or casing pipe shall be superimposed on the boring logs before submission to LIRR.

9.5. Additional Information:

9.5.1. When directed by LIRR, additional borings may be required for the purpose of taking undisturbed thin-wall piston samples or Dennison type samples for laboratory testing to determine the index and engineering properties of certain soil strata.

10.0 Horizontal Directional Drilling (HDD)

10.1. Horizontal Directional Drilling (HDD) should follow the recommendations and specifications as detailed in current edition of AREMA Manual for Railway Engineering Vol. 1 Track, Chapter 1 – Roadway and Ballast, Part 5 Pipelines, Section 5.6 Specifications for Horizontal Directional Drilling (HDD) Construction on Railroad Right-of-Way.

10.2. Submit all design and plans as required to LIRR for approval as detailed in current edition of AREMA Manual for Railway Engineering Vol. 1 Track, Chapter 1 – Roadway and Ballast, Part 5 Pipelines, Section 5.6 Specifications for Horizontal Directional Drilling (HDD) Construction on Railroad Right-of-Way.

PLATES

(TABLES AND FIGURES)

Attached for Reference Only

Must be redrawn to LIRR format

PLATE I

PLATE I

PIPE DATA SHEET

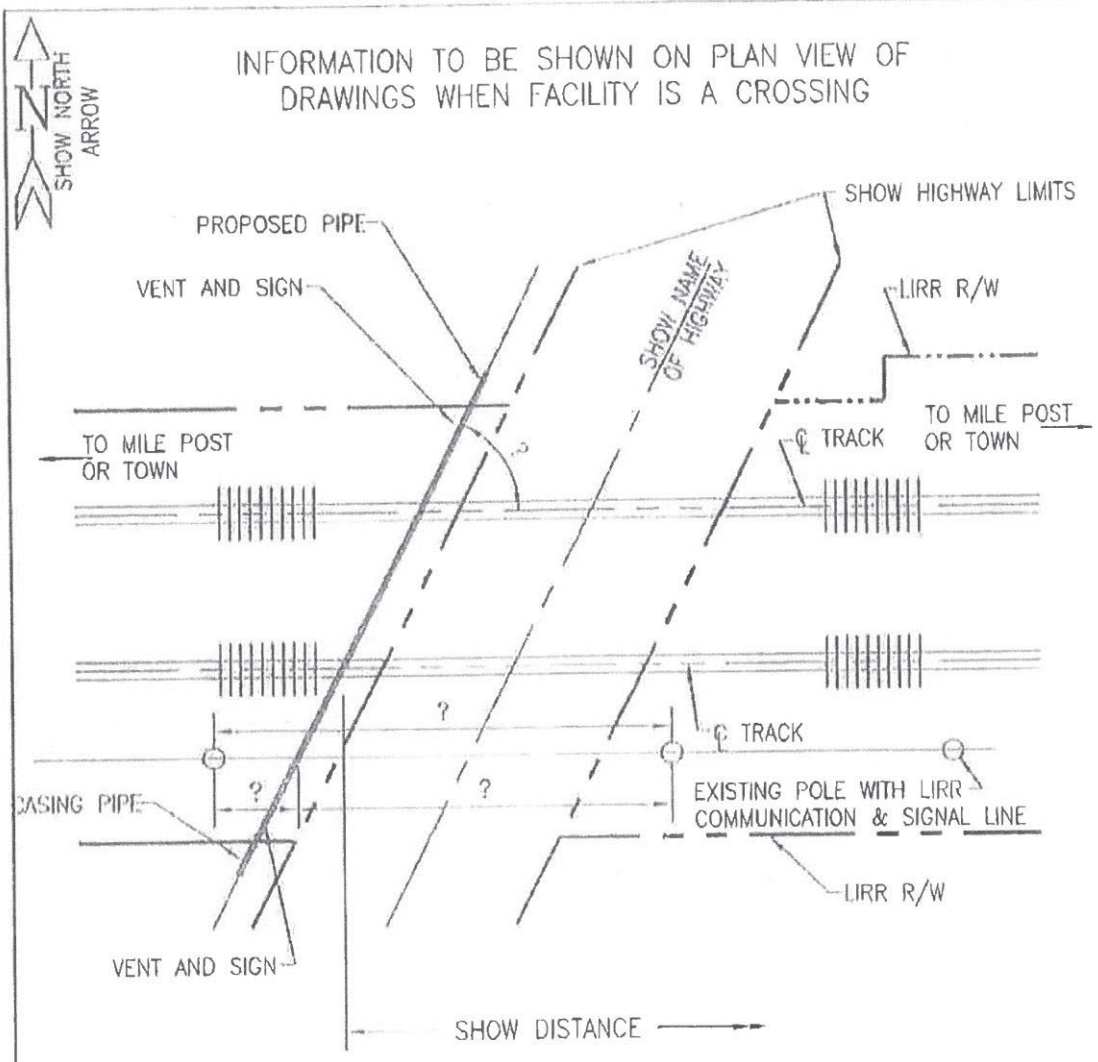
(For crossings and longitudinal occupancy)

	PIPE DATA	
	CARRIER PIPE	CASING PIPE
CONTENTS TO BE HANDLED		
NORMAL OPERATING PRESSURE		
NOMINAL SIZE OF PIPE		
OUTSIDE DIAMETER		
INSIDE DIAMETER		
WALL THICKNESS		
WEIGHT PER FOOT		
MATERIAL		
PROCESS OF MANUFACTURE		
SPECIFICATION		
GRADE OR CLASS		
TEST PRESSURE		
TYPE OF JOINT		
TYPE OF COATING		
DETAILS OF CATHODIC PROTECTION		
DETAILS OF SEALS OR PROTECTION AT ENDS OF CASING		
METHOD OF INSTALLATION		
CHARACTER OF SUBSURFACE MATERIAL AT THE CROSSING LOCATION		
APPROXIMATE GROUND WATER LEVEL		
SOURCE OF INFORMATION ON SUBSURFACE CONDITIONS (BORINGS, TEST PITS OR OTHER)		

NOTE: Any soil investigation made on railroad property or adjacent to tracks shall be carried on under the supervision of Conrail's Chief Engineer. (See Section 1.4)

PLATE II

INFORMATION TO BE SHOWN ON PLAN VIEW OF DRAWINGS WHEN FACILITY IS A CROSSING



PLAN

SCALE OF DRAWING TO BE SHOWN

NOTES:

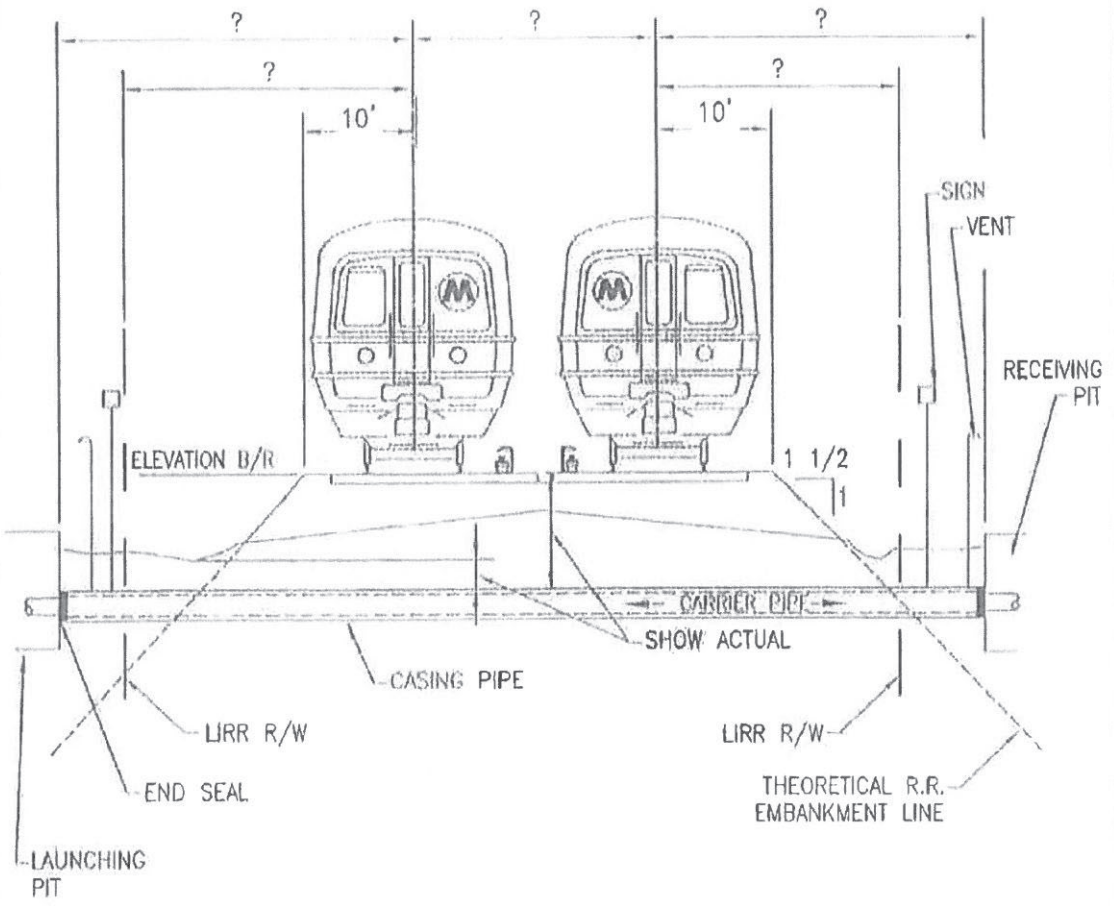
IF THE PROPOSED PIPELINE IS WITHIN HIGHWAY LIMITS, THE SAME INFORMATION IS REQUIRED AS SHOWN ON THIS PLATE.

IF THE PROPOSED PIPE ID TO SERVE A NEW DEVELOPMENT, A MAP SHOWING THE AREA IN RELATION TO ESTABLISHED AREAS AND ROADS IS TO BE SENT WITH THE REQUEST.

LIRR SPECIFICATIONS FOR PIPELINES OCCUPANCIES

PLATE III

PIPELINE CROSSING



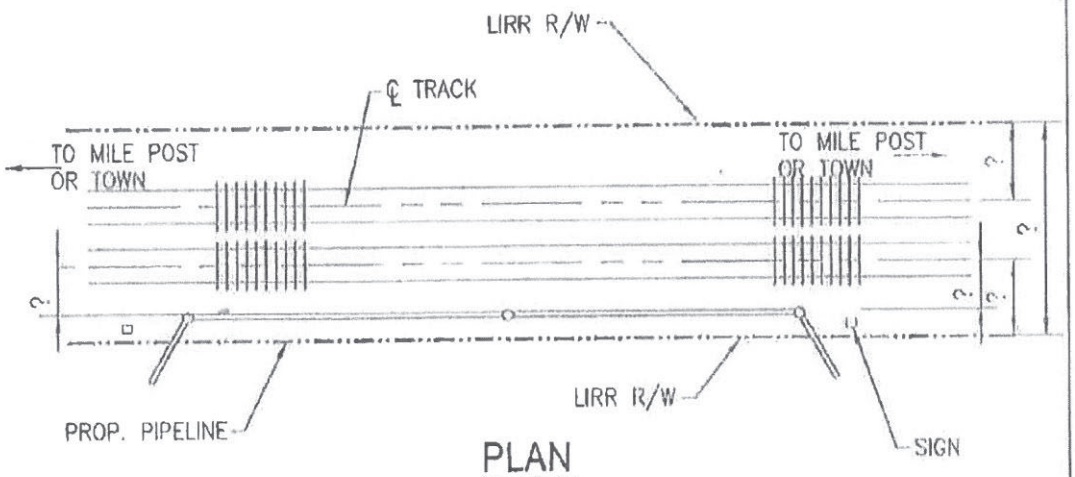
PROFILE

SCALE OF DRAWING TO BE SHOWN

LIRR SPECIFICATIONS FOR
PIPELINES OCCUPANCIES

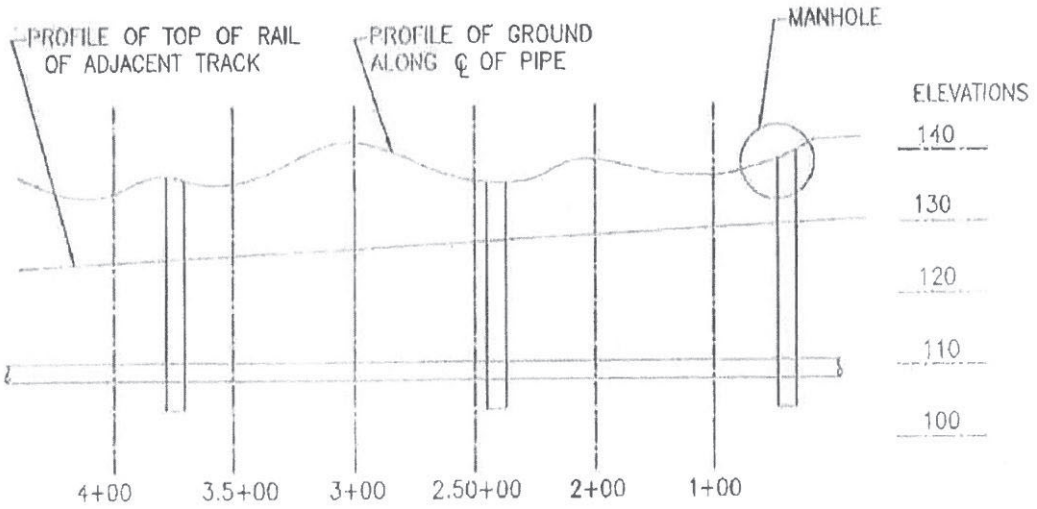
PLATE IV

LONGITUDINAL OCCUPANY



PLAN

SCALE OF DRAWING TO BE SHOWN



PROFILE

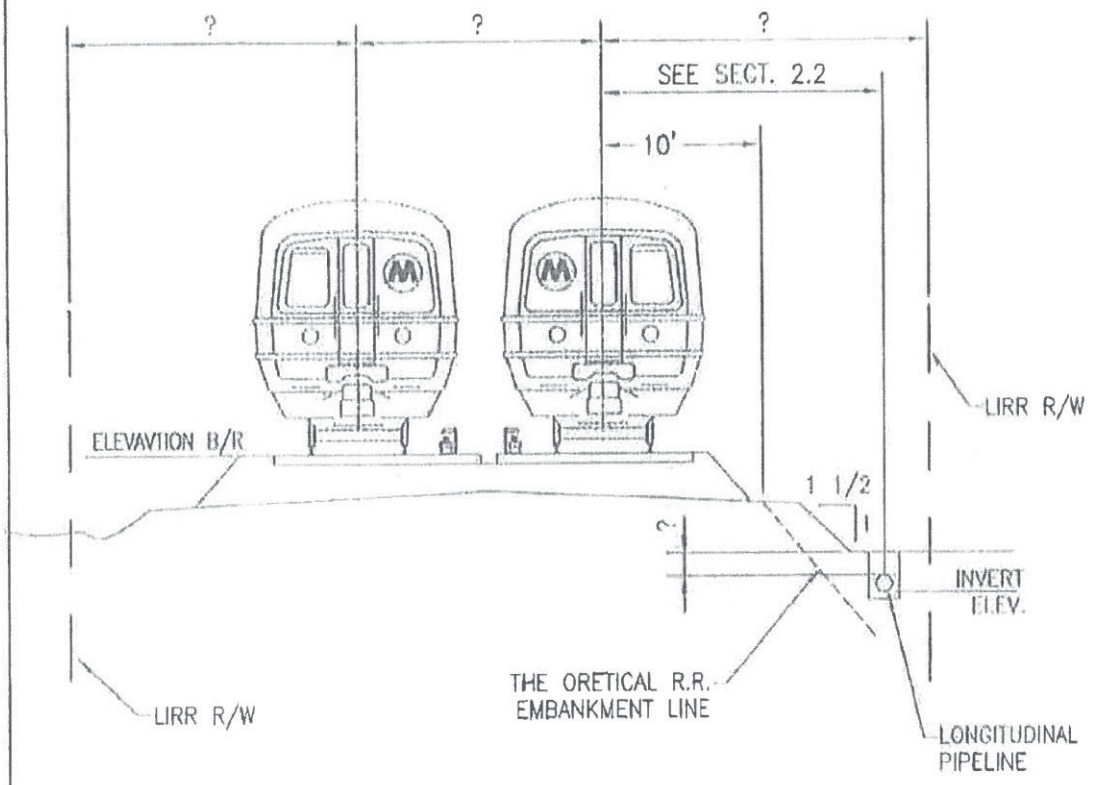
SCALE: HORIZ.:_____

VERT.: _____

LIRR SPECIFICATIONS FOR PIPELINES OCCUPANCIES

PLATE V

LONGITUDINAL OCCUPANCY



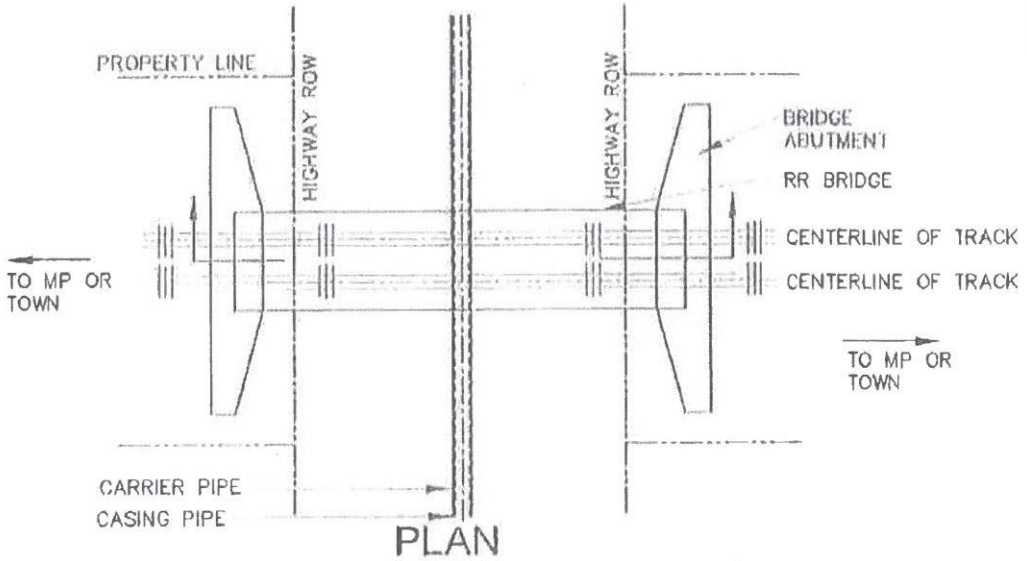
SECTION

SCALE OF DRAWING TO BE SHOWN

NOTE: SECTIONS TO BE TAKEN EVERY 500 FT. MAXIMUM

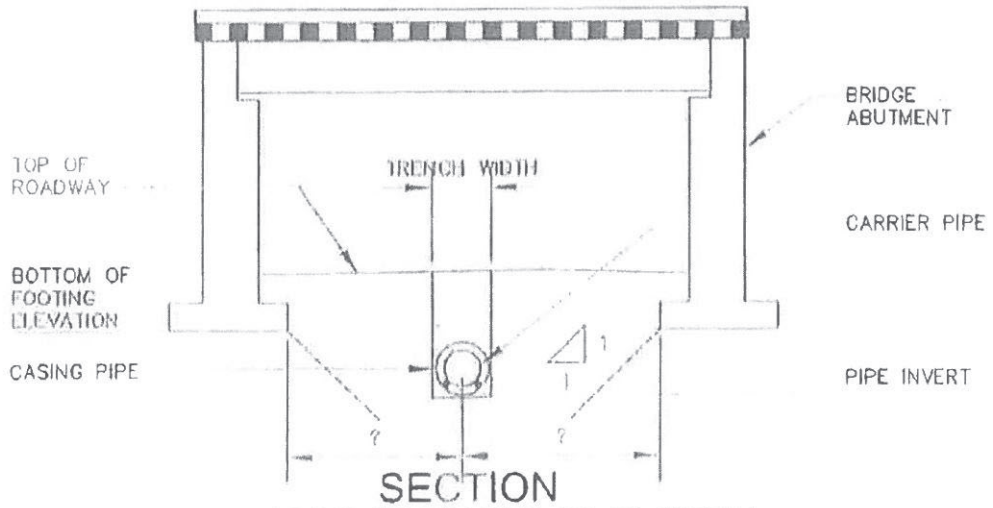
LIRR SPECIFICATIONS FOR
PIPELINES OCCUPANCIES

PLATE VI



PLAN

SCALE OF DRAWING TO BE SHOWN



SECTION

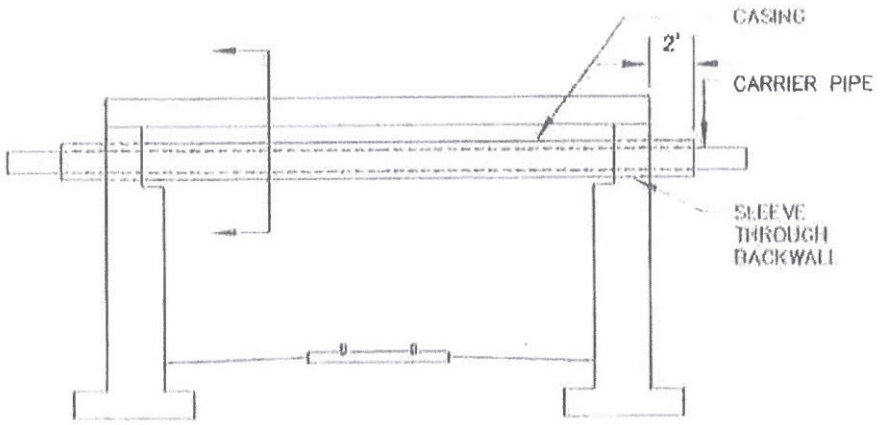
SCALE OF DRAWING TO BE SHOWN

NOTE: PIPE OR ESCAVATION MUST NOT BE WITHIN THE 1:1 SLOPE LINE THAT EXTENDS FROM THE BOTTOM OF THE FOOTING

LIRR SPECIFICATIONS FOR PIPELINES OCCUPANCIES

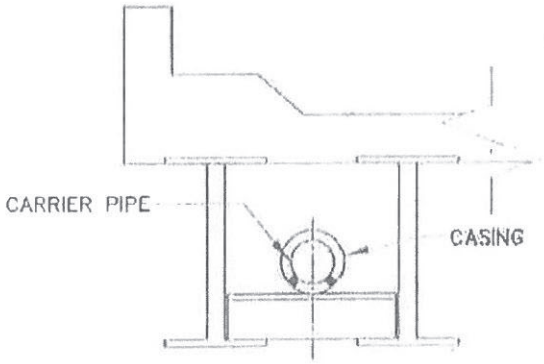
PLATE VII

PIPELINE ON HIGHWAY BRIDGE OVER RAIL ROAD



ELEVATION

SCALE OF DRAWING TO BE SHOWN



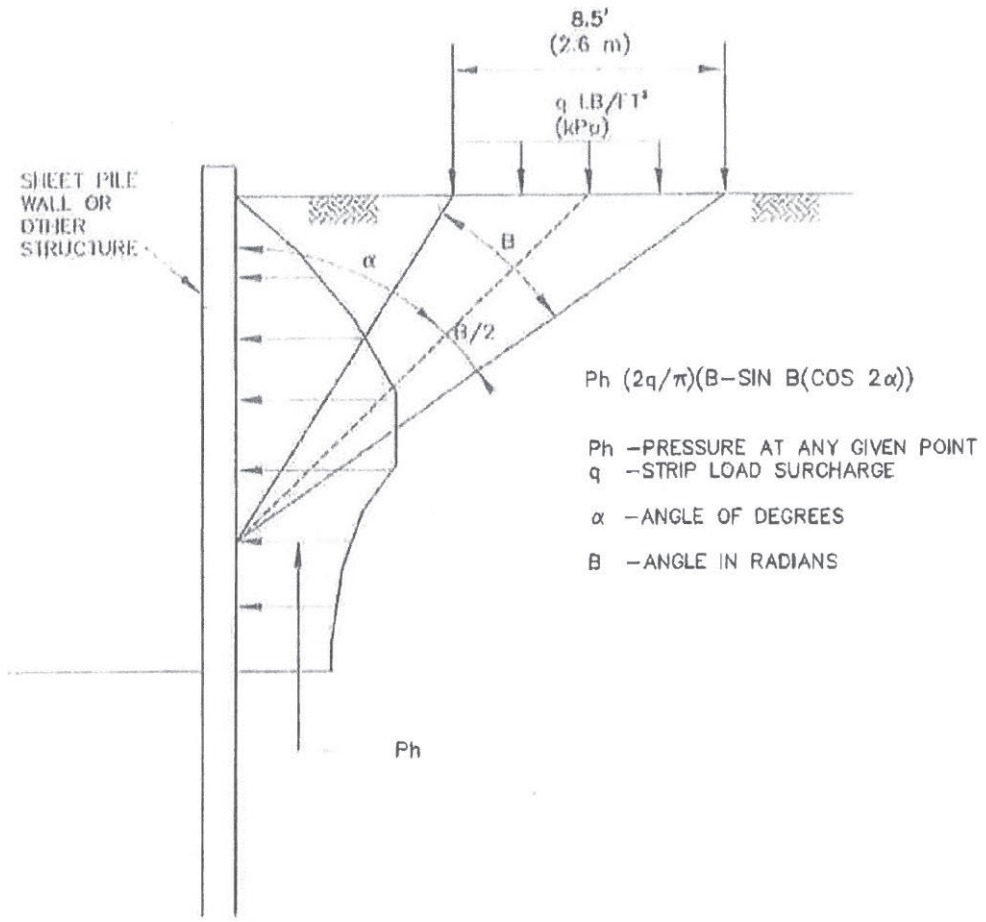
SECTION

SCALE OF DRAWING TO BE SHOWN

LIRR SPECIFICATIONS FOR
PIPELINES OCCUPANCIES

PLATE VIII

LATERAL PRESSURE DIAGRAM



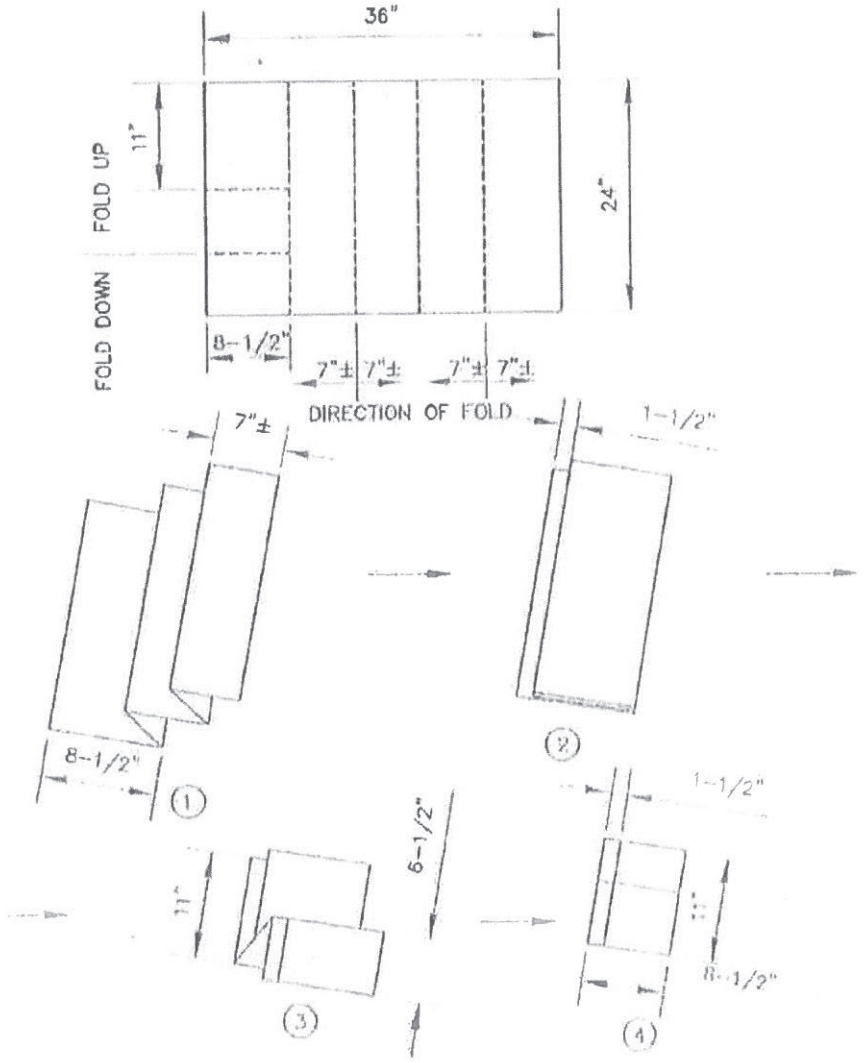
ELEVATION

LATERAL PRESSURE DUE TO STRIP LOAD

LIRR SPECIFICATIONS FOR
PIPELINES OCCUPANCIES

PLATE X

FOLDING OF PLANS



LIRR SPECIFICATIONS FOR
PIPELINES OCCUPANCIES

Metropolitan Transportation Authority

GUIDELINES FOR SUBMISSION OF INSURANCE

1. **INSURANCE REQUIREMENTS:**
   Refer to your contract for required insurance coverages, limits, and endorsements and review with your authorized insurance broker for compliance

2. **ACCEPTABLE FORMS OF INSURANCE:**
   - ACORD 25: Certificate of Insurance
   - ACORD 855: NY Construction Certificate of Liability Addendum
   - ACORD 28: Certificate of Commercial Property Insurance
   - ACORD Binder or Insurance Policy
   - Workers' Compensation*:*
     - C-105.2 – Certificate of Workers' Compensation Insurance; or
     - U-26.3 – Certificate of Workers' Compensation from the State Insurance Fund; or
     - GSI-105/SI-12 – Certificate of Workers' Compensation Self Insurance; or
     - CE-200 – Attestation of Exemption when Contractor meets the requirements (e.g.) Sole Proprietor

3. **CERTIFICATE OF INSURANCE MUST INCLUDE:**
   - Policy coverage details (e.g.) policy term, per occurrence/per project; limits/sub-limits, aggregate limits, deductibles, self-insured retentions, and insurance carrier name and corresponding NAIC #
   - Contract Identifier (e.g.) Contract #, Request for Proposal #, or Entry Permit #
   - Location and Description of Work
   - Reference indemnified parties as additional insureds, primary and noncontributory coverage, and waiver of subrogation in favor of the MTA Agency
   - Certificate Holder must list the MTA Agency
   - Certificate of Insurance must be signed by an authorized insurance representative

4. **INSURANCE BINDER MUST INCLUDE:**
   [Applicable for Railroad Protective Liability (RRPL) and Builder's Risk/Installation Floater (BR)]
   - Policy coverages and details (e.g.) policy term, limits/sub-limits, aggregate limits, deductibles, self-insured retentions, insurance carrier name and applicable NAIC #
   - Contract Number or Entry Permit Number; Designated Contractor; Location and Description of Work
   - Reference Indemnified parties as Named Insureds (RRPL) or Additional Named Insureds (BR)
   - Binder must be issued and signed by the authorized insurance company or their authorized insurance agent
   - Policy must be submitted within 30 days from binder effective date.

5. **SUBMISSION OF INSURANCE:**
   [Initial evidence of all required insurance must be sent to the MTA Agency/Procurement Representative]
   - ACORD Certificate of Insurance
   - Additional Insured Endorsements (e.g.) CG 20 10/CG 20 26/CG 20 38 and CG 20 37
   - Primary and Non-Contributory Endorsements
   - Environmental Endorsements (e.g.) MCS 90 and CA 99 48, and Non-Owned Disposal Site (NODS), when applicable
   - Insurance Policy - A Binder may be accepted pending issuance of the policy.
   - Joint Venture:
     - General Liability Insurance must be procured in the name of the Joint Venture; or
     - General Liability Insurance may be endorsed to add the Joint Venture as Additional Named Insured

6. **INSURANCE COMPLIANCE:**
   - **Initial Insurance:** A "compliant message" will be sent to the Contractor via the MTA Certificate of Insurance Management System (CIMS), the Complianz™.
   - **Renewal Insurance:** Each contract will have a "designated" email address for submission of renewal insurance.