

# 2

## Existing Railyards

This chapter provides an overview of the two existing railyard facilities in located in Burlington and Rutland. The chapter begins with a general description of the function of a railyard. The infrastructure and operation of the two existing facilities are then summarized. A detailed description of the Burlington Yard is provided in Appendix A and the Rutland Yard in Appendix B.

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### Definition of a Railyard

According to Railway Age's Comprehensive Railroad Dictionary, a railyard "is a system of tracks within defined limits providing for the making up of trains, storing of cars, and other purposes"<sup>1</sup>. The function, size and location of the yard will vary depending upon the yard's primary uses. The railyard forms a hub between two forms of transport, rail and road, and functions as an interchange and distribution center.

To perform these various functions, the railyard has to be able to move or split the trains, known as "consists", into various sub-yards for loading, unloading or sorting. This is achieved via a series of tracks connected with turnouts. The turnouts and track allow the cars to be sorted while in the yard. Depending on its function, the railyard is split into various areas such as the receiving yard, the classification yard, and the departure yard. These various functional areas allow the cars to be organized within the yard based on their next use.

As mentioned above, a railyard may be considered a distribution center. The final destination for an article of freight however, may be in the railyard itself. Often, freight customers have large fixed facilities located on railroad property. These facilities are built by the customer and used exclusively for handling their own freight. The fixed facilities may be something as simple as a loading dock with a ramp or as complex as a petroleum tank farm and pipe network. Other rail customers may not be within the railyard at all. These customers are served by industrial

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<sup>1</sup> Railway Age's Comprehensive Railroad Dictionary, Simmons-Boardman Books, Inc., 1992, page 159.

tracks that connect the customers off site with the fixed facility with the railyard.

Railroad equipment maintenance is another important function performed in a typical railyard. Specifically, maintenance refers to the daily up keep of locomotives and freight cars. Equipment maintenance can be something simple and performed regularly like lubrication, or something more complex, such as a complete engine over haul. Equipment maintenance is performed in a building called an engine house or shop. This facility ensures protection from the elements as well as a place where expensive maintenance tools can be stored safely.

Another basic function of any railyard is storage which refers to the safe handling and temporary accommodation of trains. The stored trains can contain freight, like coal, or they may in fact be empty. Regardless of freight, the railyard may serve as a holding area for any piece of rolling stock operating on the railroad.

The operation of trains in a railyard is different than the operation of trains as they travel along a stretch of track. In a railyard, there is necessarily a higher concentration of trains and a higher level of interaction between humans and machinery. This combination lends itself to a need for higher safety standards including reduced running speeds.

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## Burlington Yard

The Burlington railyard is the northern terminus for VTR's operations. It is located on the western edge of the city adjacent to Lake Champlain. The yard extends approximately 2 miles from Home Avenue in the south to King Street in the north. The majority of the approximate 47-acre facility is located between the barge canal and King Street. The existing downtown Burlington railroad station, Union Station, is located immediately north of the yard between King Street and College Street. Figure 2-1 illustrates the general location of the yard within the city of Burlington. Approximately 50 people are employed by VTR at the Burlington railyard location.

A number of intermodal activities and functions occur at the Burlington Yard. Its primary function is to handle the freight traffic that terminates, originates, and passes through the yard each day. Traffic through the yard can vary significantly on a day to day basis. On the average, VTR receives 50 to 60 cars per day and generally has approximately 100 cars within the limits of the yard. Approximately 15 to 30 cars are



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Burlington Yard  
Location Map

Figure 2-1

interchanged daily with the NECR. The rest of the traffic comes from the south via the CLP and GMRC connections in Rutland. The rail traffic that terminates or originates at the yard is typically loaded from trucks or directly to the customer's facility that is located within or adjacent to the yard. Six facilities are currently serviced directly from the yard. Truck and train traffic is especially heavy during the months of April, October, and November. These months represent overlaps of high demand for salt, heating oil, and ballast businesses.

Other functions of the Burlington yard include:

- ™ Equipment Maintenance – Burlington serves as a base for all VTR locomotives and rolling stock. The facilities in the yard are used for both running (daily), servicing, and heavy maintenance (major repairs and overhauls). The yard also serves as a base for maintenance of way. Both track maintenance equipment and supplies such as ties, rail, ballast, and other track items are stored within the yard.
- ™ Storage of Equipment - Four to five locomotives are stored daily at the facility. Off-season storage (late spring and summer) for a customer's fleet of 24 to 36 oil tank cars is provided. There are usually 15 grain cars stored within the yard. The VTR also stores approximately 30 to 35 cars on the old Rutland Main (CLV Track) north of the yard.
- ™ Administrative Base - The main administration building for VTR is located on the west side of the yard. All of the administrative aspects of the railroad are handled in this building.

In the immediate future, another function will be introduced to the railyard. It will serve as the operational base for the Burlington to Charlotte commuter rail service. Storage capacity will be provided for the layover of passenger trains. All of the train's daily servicing will also be based out this facility.

The following paragraphs summarize the general layout of the yard, the facilities, and the railroad dependent customers located within or adjacent to the yard. The functions described in the preceding paragraphs are integrated into the following sections to further describe the function of the facility.

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## Yard Layout

There are a number of tracks with varying functions located in the existing Burlington railyard. Figure 2-2 depicts the general layout of the yard. As shown in the figure, a single main line track roughly splits the yard in half. Even though it is considered the main or through track, VTR uses approximately 7,900 feet of it for train consist assembly, staging, and storage. This track will need to be kept clear of rail equipment once commuter rail service between Charlotte and Burlington commences.

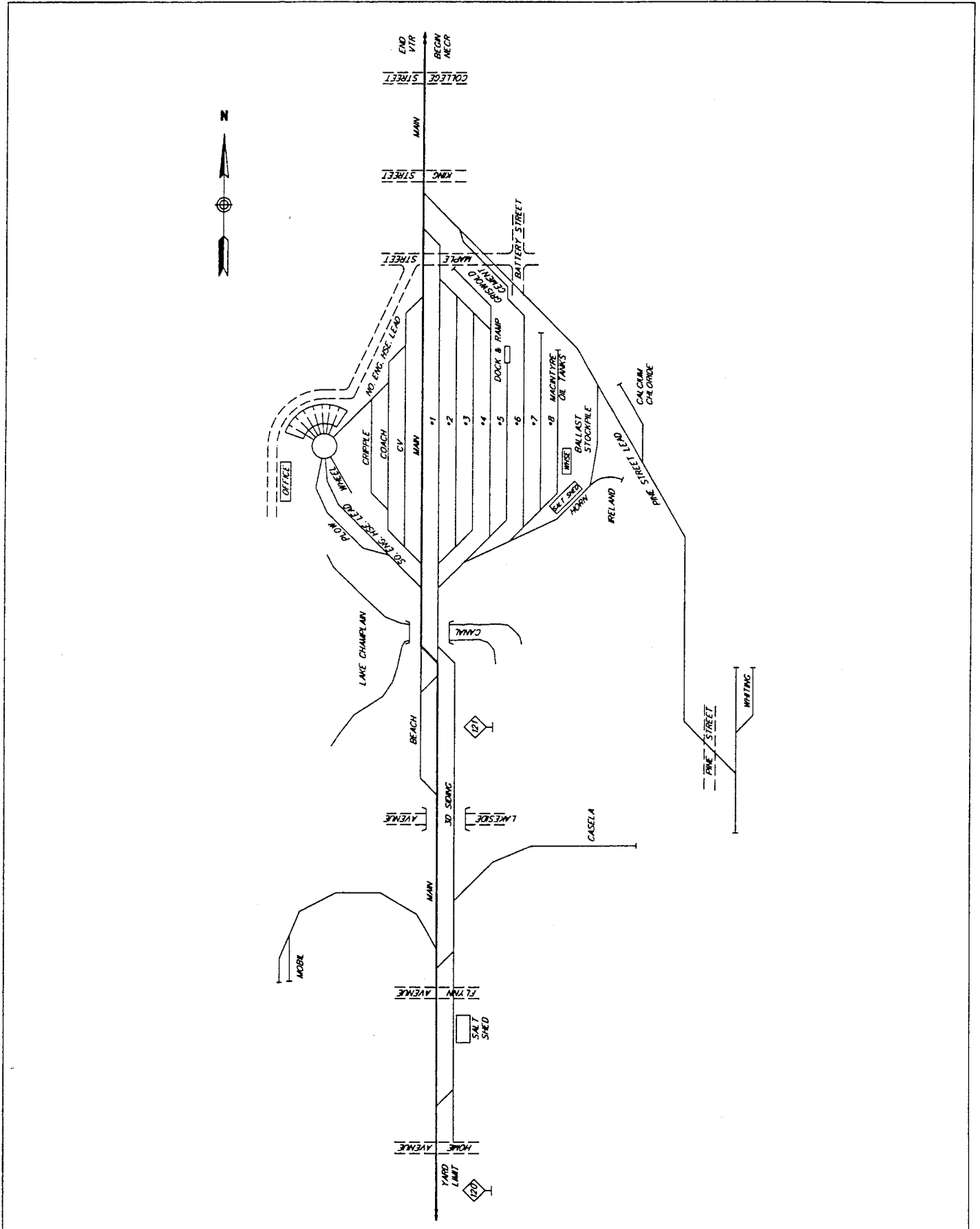
East of the main line track there are nine active yard tracks. VTR uses the four tracks closest to the main track for staging and switching. The total length of these four tracks is approximately 4,750 feet. A fifth track provides access to a loading dock and ramp facility owned and operated by the VTR. Three tracks are primarily used for tank car storage and staging. One of these three tracks (Track 8) is also used to access VTR's salt shed and ballast storage area. The last track in this complex is the Pine Street Lead Track. The Pine Street Lead Track is used to service an off-site rail customer.

There are five tracks located on the west side of the main track. The track immediately west of the main is the primary track used for the interchange of freight cars between VTR and NECR. Adjacent to this track are two tracks used for passenger coach storage, as well as layover and storage of broken or damaged equipment destined for repair in the engine house maintenance facility. The last two tracks are used for access into the engine house and maintenance unit storage respectively.

In addition to these tracks, there are several yard tracks located south of the barge canal. Located east of the main is a 4,500 foot long siding. An industrial spur diverges from this siding to the east serving a rail customer. Further south of the siding is a track that serves a VTR salt shed. West of the main line is a 2,000 foot siding which, as part of the commuter rail project, will become the main track. The Mobil facility is also connected to the Main line.

There is a runaround track proposed as part of the Burlington to Charlotte Commuter Rail Project. This track will be constructed to allow commuter rail trains to bypass the central portion of the yard.

Figure 2-2 Burlington Yard Layout



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## Yard Facilities

The Burlington Yard contains several fixed facilities related to the operation of the railroad. As noted previously, there is an administration building on the west side between the western limit of the yard and Lake Champlain. The building was constructed in 1985 as part of the Southern Connector Project and houses Vermont Railway's administrative offices.

Located adjacent to the administration building is a roundhouse (engine house) that contains seven bays. All locomotive maintenance and heavy repairs for the VTR are performed in this facility. An above ground fuel tank used to store the diesel fuel for the locomotives is located adjacent to the roundhouse. The roundhouse is accessed via a turntable that is used to turn trains upon entry or exit from the engine house. It should be noted that both the turntable and the engine house have the potential of being classified as historic structures.

VTR also operates several facilities that handle a variety of freight within the yard. These facilities are included as part of the following discussion of yard customers.

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## Yard Customers

The VTR has several freight customers within or adjacent to the limits of the Burlington Yard. Each of these customers has different needs and facilities. Several of these customers have fixed facilities located on railroad property. The VTR leases the land for the facility to the customers. The leases are based on a guaranteed delivery of freight cars per year. If the customer generates the number of deliveries specified in the lease, the annual lease payment is waived. Table 2-1 provides a summary of the Burlington Yard customers.

As shown in the Table 2-1, there are 11 customers within and adjacent to the Burlington Yard. These rail customers account for a majority of the locally generated freight activity. The Mobil Oil Company facility is a major tank farm in northern Vermont and serves virtually all of the gas stations and heating oil customers in the region. VTR owns two salt sheds within the limits of the yard. The two sheds have a combined capacity of 61,000 tons. The salt sheds are used to store the salt for winter roadway salting. The loading dock operated by VTR is used to handle

plywood, lumber, bricks and other carload materials for off-site freight customers.

**Table 2-1 Burlington Yard Rail Customers**

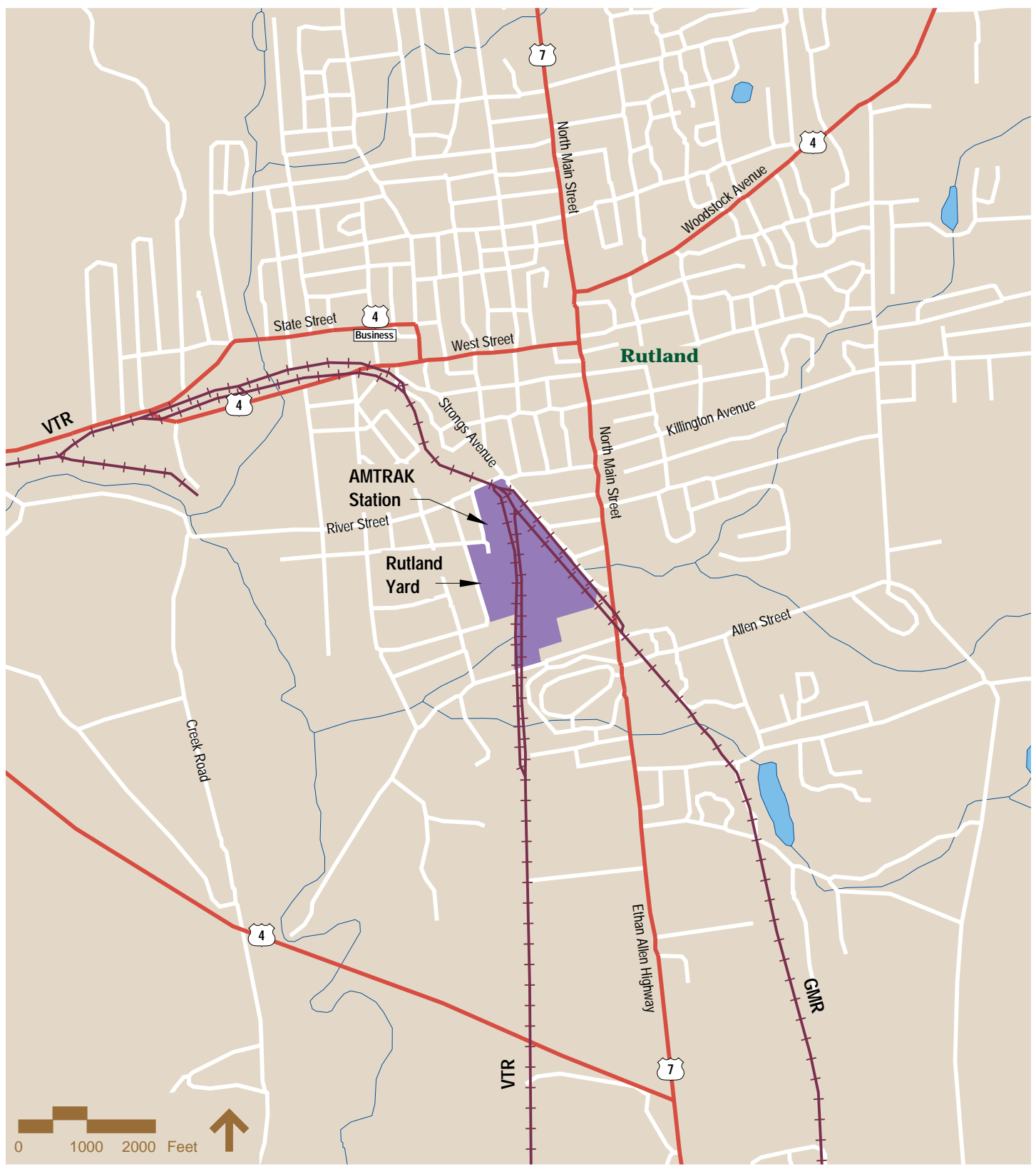
Customer	Type of Facility	Location	Carloads (Approx)
Mobil Oil Corporation	Tank Farm	Adjacent	100/week
Griswold Cement	Concrete	Yard	6/week
Ultramar Petroleum	Tank Farm	Yard	2,000/Year
Alstate	Calcium Chloride	Yard	
Specialty Filaments	Plastic Pellets	Adjacent	10/week
Casella	Recycled Materials	Adjacent	
Farrell Distributors	Wine Warehouse	Adjacent	
Barrett's Trucking	Freight Transfer	Adjacent	
VTR Salt Barns	Salt Storage	Yard	Seasonal
VTR Ballast Stockpile	Stone Storage	Yard	30 – 70/day: Seasonal
VTR Loading Dock/Ramp	Freight Transfer	Yard	

VTR anticipates Ireland Cement will have their new fixed facility online in the spring of 2000. Ireland will have a new dedicated track within the yard. It is estimated that Ireland will be able to spot four cars at their new facility and will store at least six cars within the yard.

## Rutland Yard

Located in downtown Rutland near the fairgrounds, the Rutland City railyard is utilized by several railroads including members of the Vermont Rail System (VTR, CLP, GMRR), Amtrak and Delaware & Hudson (DH). The 48-acre yard is bordered by Strongs Avenue to the east, Depot Lane to the north, Spruce Street to the west, and Park Street to the south-west. The existing downtown Rutland railroad station is located at the north end of the yard just north of River Street. This station serves as the northern terminus for Amtrak intercity passenger service from New York City. Figure 2-3 illustrates the general location of the yard within the city of Rutland.

Similar to the yard in Burlington, the Rutland railyard also provides a number of functions. The primary purpose of this railyard is to facilitate the through movement of freight. As a result of its location and the number of railroads accessing the facility, Rutland Yard serves as an interconnecting hub. Freight cars are cut and shuffled here such that



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Rutland Yard  
Location Map

Figure 2-3

they can be sent on to their ultimate destination. There are approximately 200 cars per day which run through Rutland Yard.

A second function of the yard is as an equipment and maintenance base. On average, four or five of the VTR's thirteen locomotives are assigned to the Rutland Yard. The yard is used to perform light to moderate maintenance and repairs on locomotives and cars. In addition, the yard serves as a maintenance-of-way base. Maintenance crews work from this facility to maintain the infrastructure of the railroad.

Storage of equipment is a third function of the yard. There are typically 60 to 70 cars stored in the yard including covered hoppers, boxcars, and tank cars (seasonally). Maintenance-of-way equipment is also stored in the yard. Typically there are 10 to 12 units of maintenance equipment in the yard. Additionally, between four and five locomotives are stored daily.

Lastly, the yard also serves an administrative function. There are approximately 20 to 40 employees based in the Rutland Yard. This number varies depending on time of year and maintenance schedules.

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## Yard Layout

There are a number of tracks with varying functions located within the existing Rutland Yard. Figure 2-4 depicts the general layout of the yard. As the figure illustrates, the existing yard is difficult to describe. The yard is split into two sections called Rutland Proper and Center Rutland. Rutland Proper is the portion of the yard south of the West Street crossing. Everything north of West Street and the northern yard limit is considered Center Rutland. The Rutland Proper section is actually two physically separate facilities that join just south of River Street. The majority of the tracks and facilities are located on the west side of the yard adjacent to the VTR main line to Bennington. On the east side, there are two yard tracks adjacent to the GMRR main line to Bellows Falls.

On the VTR side (west) of the Rutland Proper section of the yard, there are a variety of tracks. East of the VTR main line are two tracks which provide the access to an engine house. On the west side of the main line, there are three through tracks. These tracks are used for the sorting of cars and making of trains. Connecting to the westerly most through track is a wye track. The wye track is a key piece of track infrastructure. It is used by Amtrak to turn their equipment so that the locomotive is always on the front end of the consist in-line with the direction of travel.



Within the triangle formed by the wye and the westerly most through track, there are two other tracks. These tracks service several of the businesses located within the yard. There are several other industrial sidings leading from the three through tracks.

The VTR and GMRR main lines converge into a single track just south of River Street. Two tracks extend from the Rutland Proper to Center Rutland section of the yard. One is the combined main line. Several sidings are located in the Center Rutland section. These sidings service industrial customers. There is a 4,500 foot long siding located between East Creek and Ripley Road. A siding which houses a train weigh scale is located just north of Ripley Road. The CLP main track diverges to the west just north of the weigh siding and heads towards Whitehall, NY.

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## Yard Facilities

The Rutland Yard contains several fixed facilities related to the operation of the railroad. VTR has recently relocated their administrative offices to a building on Post Street southwest of River Street. The old administration building at Park Street will be used as a crew quarters and shop office facility for VTR personnel.

The engine house is adjacent to the old administration building. It contains two stalls each of which can handle two pieces of equipment. Minor maintenance and inspection work is performed in this shop. As previously discussed, all heavy equipment maintenance is done in the Burlington Yard. Although not contained within the yard proper, there is a train scale located north of Ripley Road on a siding parallel to the CLP main line.

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## Yard Customers

The VTR has several freight customers within or adjacent to the limits of the Rutland Yard. Each of these customers has different needs and facilities. Several of these customers have fixed facilities located on railroad property. The VTR leases the land for the facility to the customers. Similar to the Burlington operations, the leases are based on a guaranteed delivery of freight cars per year. Table 2-2 provides a summary of the Rutland Yard customers.

**Table 2-2 Rutland Yard Rail Customers**

Customer	Type of Facility	Location	Carloads
McIntyre Oil	Tank Farm	Yard	2/day summer; 7-8/day winter
Carris Reels	Wire Spools	Adjacent	50/Year
Himolene	Plastics	Adjacent	36/Year
Mintzer Brothers	Lumber	Yard	
CVPS	Utility Poles	Adjacent	
Rutland Solid Waste/Cassella	Recycled Materials	Adjacent	
General Electric	Heavy Machinery	Yard	
Rutland Plywood	Plywood	Adjacent	
VTR Salt Barn	Salt Storage	Yard	Seasonal
VTR Bulk Transfer	Freight Transfer	Yard	

As shown in the table, there are 10 customers within or adjacent to the Rutland Yard. These customers account for a significant level of the locally generated freight activity. The VTR salt shed has a capacity of approximately 26,000 to 32,000 tons. The salt shed is used to store salt for use during the winter. There are also several nearby customers including Suburban Propane, Baker Beer distributors and Qualitad (plastics) that receive and ship materials via rail. In the spring of 2000, VTR expects to add Westminster Cracker as a customer. They will be receiving shipments of flour.

## Potential Relocation Benefits

While a cost-benefit analysis is not within the scope of this study, several significant benefits have been identified related to the relocation of the existing Rutland City and Burlington Railroad yards. These potential benefits include:

- Relief from existing and projected traffic congestion
- Improved circulation and access within town centers
- Increased potential for new economic development
- Increased opportunity for expansion of existing Vermont businesses
- Improved railroad operations
- Improved safety
- Improved quality of life and economic vitality of the region
- Attraction of new rail customers

The current locations of the Rutland City and Burlington railyards are constrained so that future expansion and economic opportunities for the railroad are limited. The relocation of these railyards will allow for increased industrial development and the expansion of the railroad. Relocation of the railroads will also allow Rutland City and Burlington to develop these areas in accordance to higher and better land use goals based on their existing land use plans.

Additionally, the relocation of the railyards may improve the efficiency of railroad operations. For example, due to the location of a wye near the Rutland City yard, a large number of trains must be routed through Rutland City to change direction to the north. If a new wye is constructed as part of this relocation, some northern bound trains will be able to circumvent the city entirely improving transportation in and around Rutland.

The relocation of the existing Burlington and Rutland City railyards could also potentially improve safety by minimizing interaction between pedestrians, cars and trains. By moving the railyards out of the densely populated commercial districts of Burlington and Rutland City and relocating these facilities to sites in less obtrusive locations the potential for safety incidents will decrease.

The relocation of a railyard, however, can also have some disadvantages both at its current and future location. These aspects must be fully understood and mitigated prior to the relocation of the Burlington and Rutland City railyards. Due to the nature of railroads, it is anticipated that the existing sites may require significant clean up/mediation prior to site reuse. Additionally, the travel patterns of the trains will continue to require access through the parcel after the railyards are relocated requiring subsequent plans for these parcels to respect these ongoing uses. Finally, while several of the proposed locations provide room for expansion for new customers, each of the new railyard locations will impact the efficiency of the existing network of railroad customers. Given these factors, it is necessary that any proposed railyard relocation be fully analyzed to determine costs, benefits and impacts to the community and the railroad.