



WEAVER CONSTRUCTION MANAGEMENT, INC.  
 3679 S. Huron St., Suite 404  
 Englewood, CO 80110  
 Phone: (303) 789-4111 FAX: (303) 789-4310

## SUBMITTAL TRANSMITTAL

August 19, 2011

WGC Submittal No: 08301-001

PROJECT: Harold Thompson Regional WRF  
 Birdsall Rd.  
 Fountain, CO 80817  
 Job No. 2908

ENGINEER: GMS, Inc.  
 611 No. Weber St., #300  
 Colorado Springs, CO 80903  
 719-475-2935 Roger Sams

OWNER: Lower Fountain Metropolitan  
 Sewage Disposal District  
 901 S. Santa Fe Ave.  
 Fountain, CO 80817  
 719-382-5303 James Heckman

CONTRACTOR: Front Range Raynor, Inc.  
 3847 South Mason Street  
 Fort Collins, CO 80525  
 970-567-5162 Merlin Kooiman

SUBJECT: Raynor ThermaSeal Insulated OH Door

SPEC SECTION: 08301 - Overhead Sectional Doors

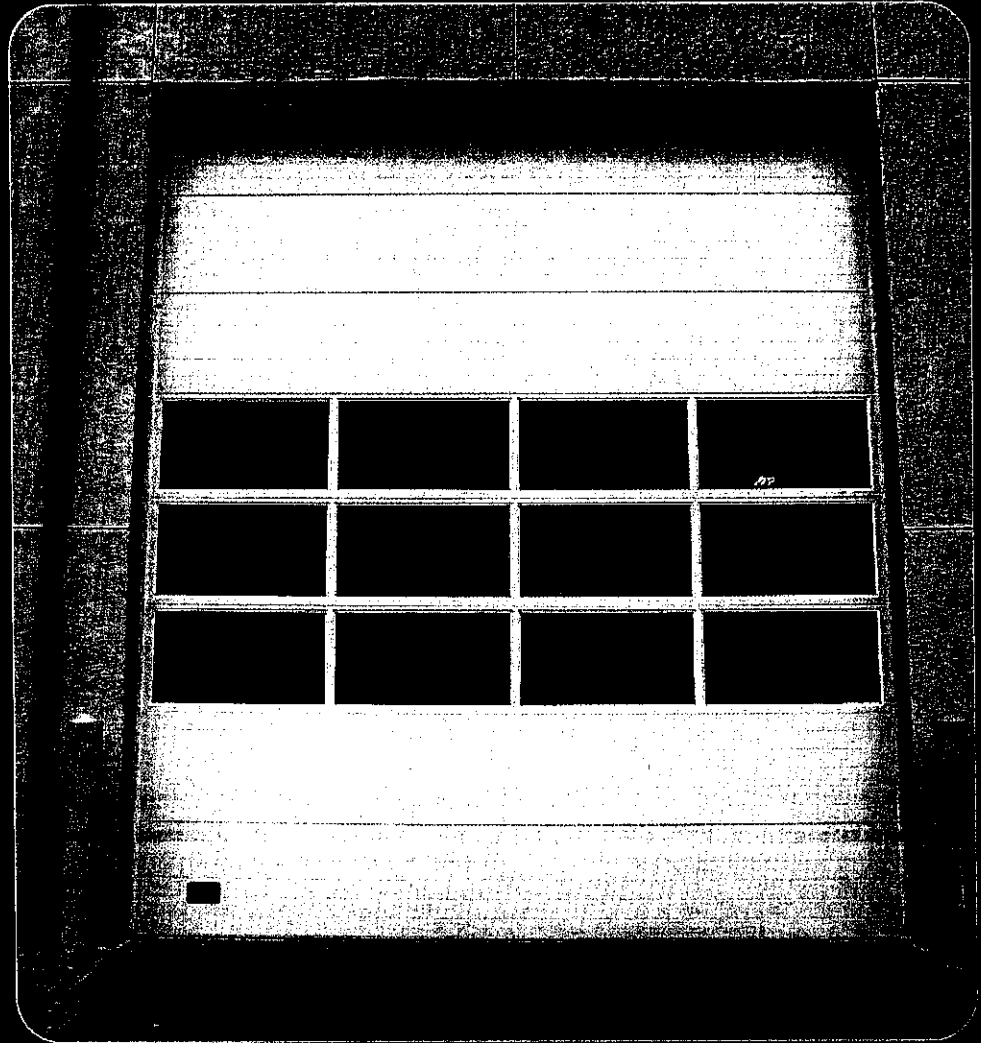
PREVIOUS SUBMISSION DATES:

DEVIATIONS FROM SPEC: \_\_\_ YES X NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver General Construction and approved with respect to the means, methods, techniques, & safety precautions & programs incidental thereto. Weaver General Construction also warrants that this submittal complies with contracted documents and comprises on deviations thereto:

<p>Contractor's Stamp:</p> <p>Date: 8/19/11          Reviewed by: H.C. Myers          ( X ) Reviewed Without Comments          ( ) Reviewed With Comments</p> <p>ENGINEER'S          COMMENTS:</p>	<p>Engineer's Stamp:</p>
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# THERMASEAL™



ThermaSeal STANDARD with full-view windows

M A X I M U M

T H E R M A L

P R O T E C T I O N

**RAYNOR**

VARIOUS TYPES WITH MAXIMUM THERMAL PROTECTION AVAILABLE THROUGH RAYNOR, INC. For more information, contact your local distributor or call 1-800-451-7273.

# THERMASeal™

## SECTIONAL THERMAL DOORS

For maximum thermal protection, choose ThermaSeal™, our durable, energy-efficient sectional door. Our exclusive process fills 100% of the door's interior space with energy-saving polyurethane foam insulation to deliver exceptional R-values. This process also provides superior foam density for excellent structural integrity.

### THERMASeal™ OPTIMA

The ultimate choice for durability and thermal efficiency in demanding environments is the ThermaSeal OPTIMA. With a heavy duty 20-gauge exterior and a 16.4 R-value, this 1-3/4" thick model has all the features you expect and options you need for a wide range of applications.

### THERMASeal™ STANDARD

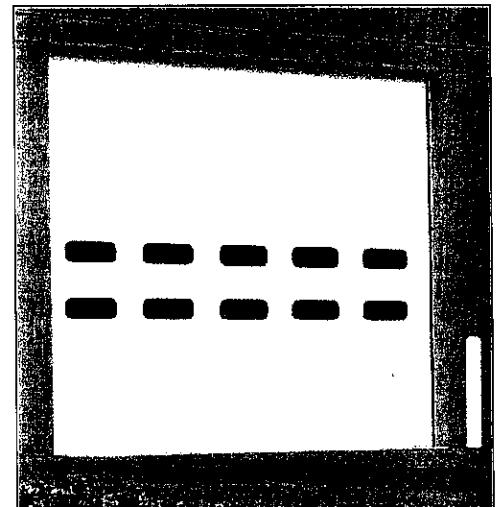
With a 16.4 R-value, this benchmark product provides proven Raynor reliability and durability to meet or exceed the requirements of daily use. This door is offered with the widest selection of quality features and options for the most common product applications.

### THERMASeal™ BASIC

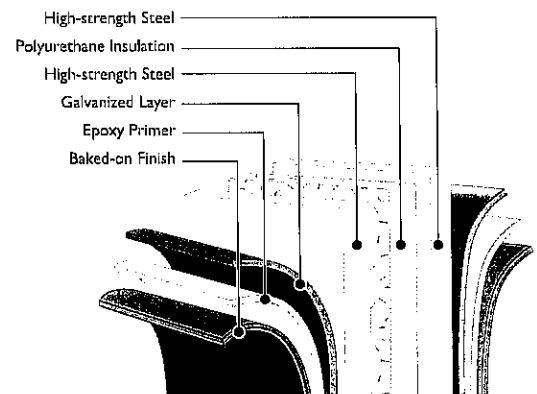
Practical when thermal performance is desired but cost is a consideration, this door is available in a limited selection of sizes, features and options.

## BUILT TOUGH.

Rust-resistant galvanized steel is finished with a two-coat, baked-on paint process for long life. The superior thermal bond between steel and polyurethane foam is warranted against delamination for 10 years.



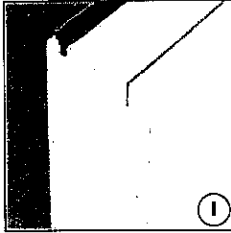
ThermaSeal BASIC, white, with oval windows



Series MODEL	Max. Opening Width	Max. Opening Height	Construction	Surface Texture	Section Thickness	Exterior/Interior Steel Thickness	End Stile Steel Thickness	Insulation (R-Value)	Thermal Break	Exterior Colors	Section Warranty
ThermaSeal OPTIMA	24' 2"	20'	Steel Sandwich	Stucco	1 3/4"	20-Gauge (.035" min.) / 26-Gauge (.013" min.)	16-Gauge (.055" min.)	Polyurethane Foam (16.4)	Yes	White	1-Year (Any Rust) / 10-Year (Delamination)
ThermaSeal STANDARD	28'	20'	Steel Sandwich	Stucco	1 3/4"	25-Gauge (.018" min.) / 26-Gauge (.013" min.)	16-Gauge (.055" min.)	Polyurethane Foam (16.4)	Yes	White, Dark Brown	1-Year (Any Rust) / 10-Year (Delamination)
ThermaSeal BASIC	16'	16'	Steel Sandwich	Stucco	1 1/2"	26-Gauge (.013" min.) / 26-Gauge (.013" min.)	16-Gauge (.055" min.)	Polyurethane Foam (14.5)	Yes	White	1-Year (Any Rust) / 10-Year (Delamination)

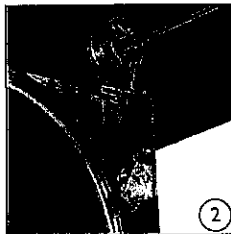
**WARRANTY** ThermaSeal door sections carry a 1-year limited warranty against any rust and a 10-year limited warranty against delamination (of the steel skins from the insulating foam). Hardware and springs are warranted for 1 year against defects in materials and workmanship. See your local Raynor Dealer for complete details.

## THERMASEAL FEATURES



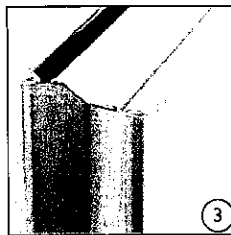
### Maximum thermal protection.

Energy-saving polyurethane foam insulation is used to deliver exceptional R-values.



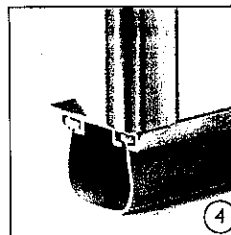
### Rugged hardware and springs.

Your ThermaSeal door comes packaged with the right combination of long-lasting hardware, track and springs to precisely match your door's size and application.



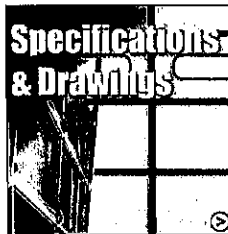
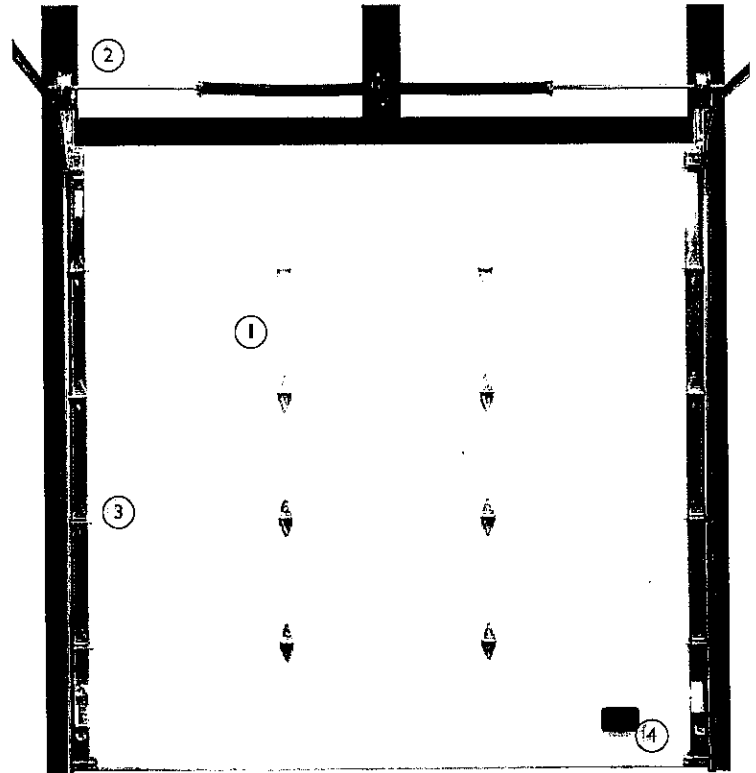
### Reduced airflow.

Dual vinyl barriers dramatically reduce air infiltration. A true thermal break prevents heat loss and eliminates any metal-to-metal contact between surfaces.



### Decreased energy costs.

ThermaSeal doors help you reduce energy costs with a U-shaped, vinyl bottom weatherseal and sturdy aluminum retainer.



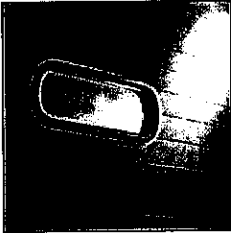
VISIT US AT [WWW.RAYNOR.COM](http://WWW.RAYNOR.COM) FOR  
CSI MASTER FORMAT™ SPECIFICATIONS,  
RAYNOR QUICK SPECS  
AND STANDARD DRAWINGS

## APPLICATION GUIDE

	ThermaSeal OPTIMA	ThermaSeal STANDARD	ThermaSeal BASIC
Agricultural Buildings	●	●	○
Car Wash/Corrosive Environments	○	○	○
Commercial/Multi-Tenant	●	●	●
Fire Station/Ambulance	●	●	○
High Security	●	○	○
Large Opening Size	●	●	○
Mining, Pulp & Paper	●	○	○
Non-Insulated Storage	○	○	○
Service Station	●	○	○
Thermal Environments	●	●	●
Transit Facility/Truck Terminal	●	●	○
Underground Parking	○	○	○
Warehouse/Manufacturing	●	●	●

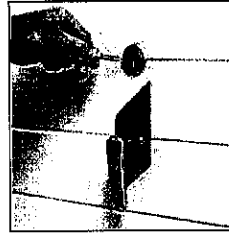
● Best Choice    ○ Good Solution    ○ Applicable

## MODEL OPTIONS AND UPGRADE



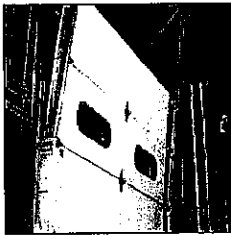
### Choice of windows.

Select either 24" x 8" oval (shown), 34" x 16" rectangle or aluminum full-view window sections. Choose from a variety of insulated glass, acrylic and polycarbonate styles to suit any application.



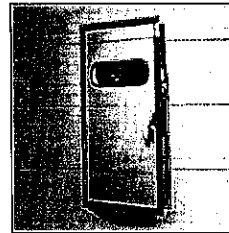
### Locks.

In applications where control and access are important, choose from a variety of locking options to help keep your building secure. Locks come in both inside and outside variations.



### Customized track and hardware systems.

Track systems are supplied to fit special clearances, inclines or contour applications. Hardware and track systems can be designed to fit any need.\* Additional trussing is available for special windloading applications.



### Pedestrian doors.

Pedestrian doors are designed for convenient entry and to help minimize energy loss.\*



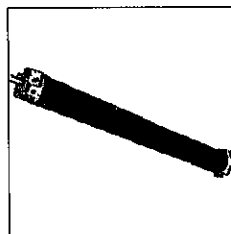
### Removable center posts.

Carry-away and swing-up options are available for extra-wide openings. Ideal for agricultural or airplane hangar applications.



### Carbon monoxide vent.

Allows you to channel fumes to the outside when door is closed. Available in a variety of sizes.



### High-cycle counterbalance systems.

For reliable operation in high-traffic areas, choose high-cycle torsion springs with 25,000, 50,000 or 100,000-cycle life.\* For reduced maintenance and ultra-smooth operation in heavy-use applications, choose a weight counterbalance system.

\* Some options may be limited to door size or model. Contact your local Raynor Dealer regarding availability for your application.



P.O. Box 448, 1101 EAST RIVER ROAD, DIXON, IL 61021



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FAX

1-815-299-7142

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JOB NAME: HAROLD THOMPSON WASTE WATER  
 DISTRIBUTOR: FRONT RANGE RAYNOR DR CO.  
 CONTRACTOR:  
 ARCHITECT:

ALL SPRING MOUNTING PADS MUST BE FLUSH WITH JAMBS. FIELD CHECK AND VERIFY ALL DETAILS AND DIMENSIONS, JAMBS, HEADER, JAMB EXTENSIONS AND PADS (AS SHOWN) BY OTHER THAN DOOR CONTRACTOR. THIS DRAWING WAS AS COMPLETE AND FACTUAL AS POSSIBLE AT THE TIME IT WAS PRINTED. WE DO HOWEVER, RESERVE THE RIGHT TO MAKE PRODUCT CHANGES IN SPECIFICATIONS AND AVAILABILITY WITHOUT NOTICE.

CHECKED BY: Mery Delgado  
 DATE: 7/5/2011

DRAWING(S) MUST BE APPROVED AND RETURNED TO DOOR DISTRIBUTOR AND FORWARDED TO RAYNOR GARAGE DOORS BEFORE ORDER WILL BE ENTERED INTO PRODUCTION.  
 SHOP DRAWING FAX NUMBER 800/835-5483.

SHEET 1 OF 4  
 DRAWING NUMBER 415257 A  
 REVISION A NOTES

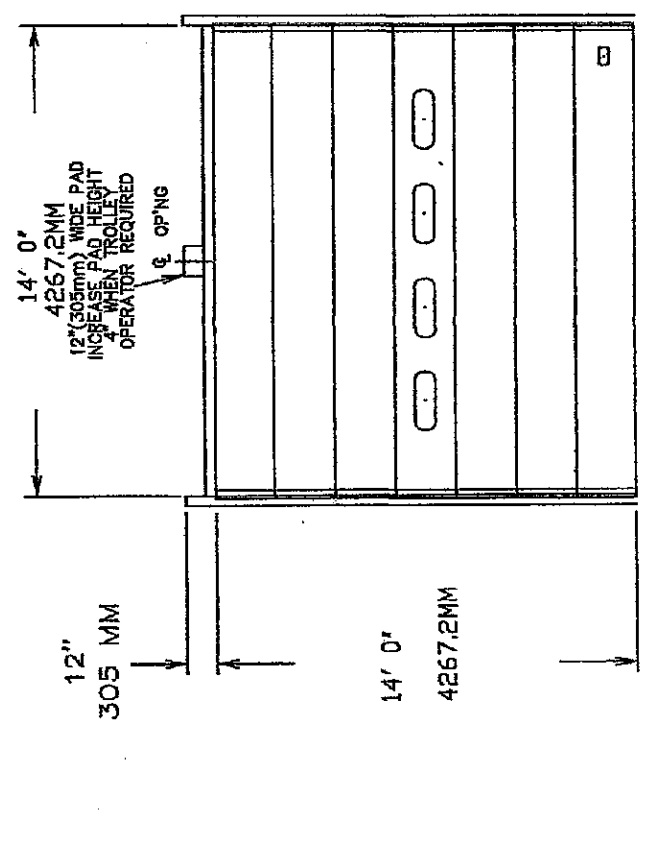
DOOR NUMBER	QTY	OPENING		ACTUAL		JAMB		MOUNTING LOCK	
		WIDTH	HEIGHT	WIDTH	HEIGHT	W	S	M	ANGLE/BRKT
1	1	14' 0"	14' 0"	14' 2"	14' 0 3/4"	150	X	X	OML
		4267.2MM	4267.2MM	4318 MM	4286.25MM				

**RAYNOR**  
 PROPOSAL  
 DRAWING

1) DOORS SHALL BE THERMASEAL SECTIONAL OVERHEAD TYPE RAYNOR SERIES OF 16 GAUGE GALVANIZED STEEL. ALL SECTIONS SHALL BE MANUFACTURED BY RAYNOR. ALL SECTIONS SHALL BE MANUFACTURED FROM COMMERCIAL QUALITY HOT DIPPED GALVANIZED STEEL PER ASTM-A242 AND A-833. DOOR SECTIONS CONSTRUCTED OF 20 GAUGE EXTERIOR AND 28 GAUGE INTERIOR STUCCO-EMBOSSED, PENICIL GROOVED SKINS. THERMAL BONDING TO POLYURETHANE CORE. EXTERIOR AND INTERIOR SKINS TO BE STRENGTHENED BY A COMBINATION OF EXTENDED COILS AND AN HEAVY-DUTY LITE SEAL ALONG THE ENTIRE SECTION JOINTS. END STILES TO BE 16" GAUGE. SECTIONS TO HAVE CONTINUOUS 20 GA. HARDWARE STRIPS. THERMASEAL HAS THE FOLLOWING ENERGY VALUES: R-VALUE: 16.4 AND U-FACTOR: 0.25. FINISH: EXTERIOR/INTERIOR OF DOOR SKINS TO BE PAINTED ON POLYESTER FINISH. FINISHING AND COAT: PRIMER, WHITE EXTERIOR AND WHITE INTERIOR. OVER EPOXY PRIMER.

- 2) LOCKING - OMIT LOCK.
- 3) GLAZING- LITE INSERTS TO BE 24" (610MM) X 6" (152MM) THERMAL TYPE CLASS, DSB INTERIOR, DSB EXTERIOR. (BREATHER TUBE)

5) HEAD SEAL AND JAMB SEAL REQUIRED.



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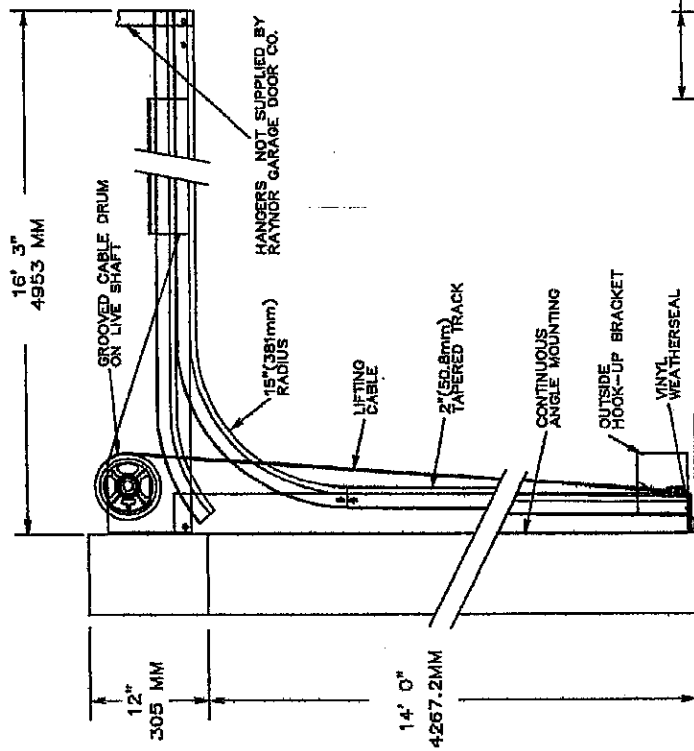
JOB NAME: HAROLD THOMPSON WASTE WATER  
 DISTRIBUTOR: FRONT RANGE RAYNOR DR. CO.  
 CONTRACTOR:  
 ARCHITECT:  
 CHECKED BY: Mary Delgado  
 DATE: 7/5/2011

SHEET 2 OF 4  
 DRAWING NUMBER 415257 A

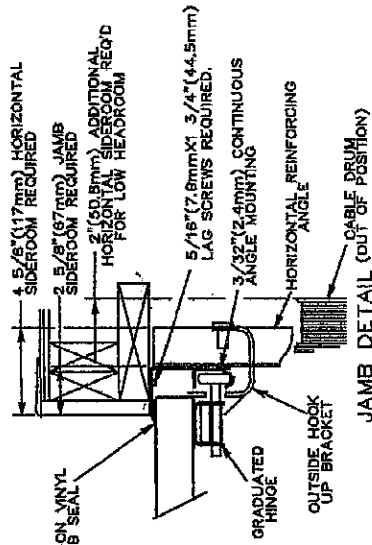
PROPOSAL  
 DRAWING

REVISION A NOTES

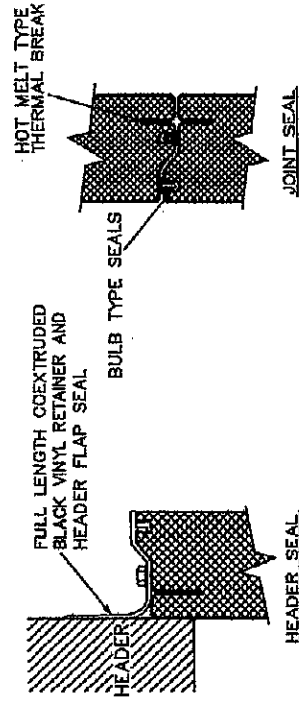
DOOR NUMBER	QTY	OPENING		ACTUAL		JAMB		MOUNTING	LOCK
		WIDTH	HEIGHT	WIDTH	HEIGHT	W	H		
1	1	14' 0"	14' 0"	14' 2"	14' 0 3/4"	TSO	X	X	OML
		4267.2MM	4267.2MM	4318 MM	4286.25MM				



SECTION THRU OPENING



JAMB DETAIL (OUT OF POSITION)



# LOW-HEADROOM FRONT MOUNT TRACK

- Track Assembly:
- 12 Ga. 304 Stainless Steel 3" - Full Angle Mount
  - 11 Ga. Galvanized Steel 3" - Clip Angle Mount
  - 14 Ga. Galvanized Steel 2" - Clip Angle Mount
  - 14 Ga. 304 Stainless Steel 2" - Clip Angle Mount

Track Mounting Angles:

- Inside Angle for Wood, Steel or Aluminum
- Outside Angle for Wood
- Outside Angle for Masonry

Shaft: Solid Keyed

- 304 Stainless Steel
- Galvanized Steel

Drums:

- Cast Aluminum
- Specialty Coated

Bearings: Sealed Greasable

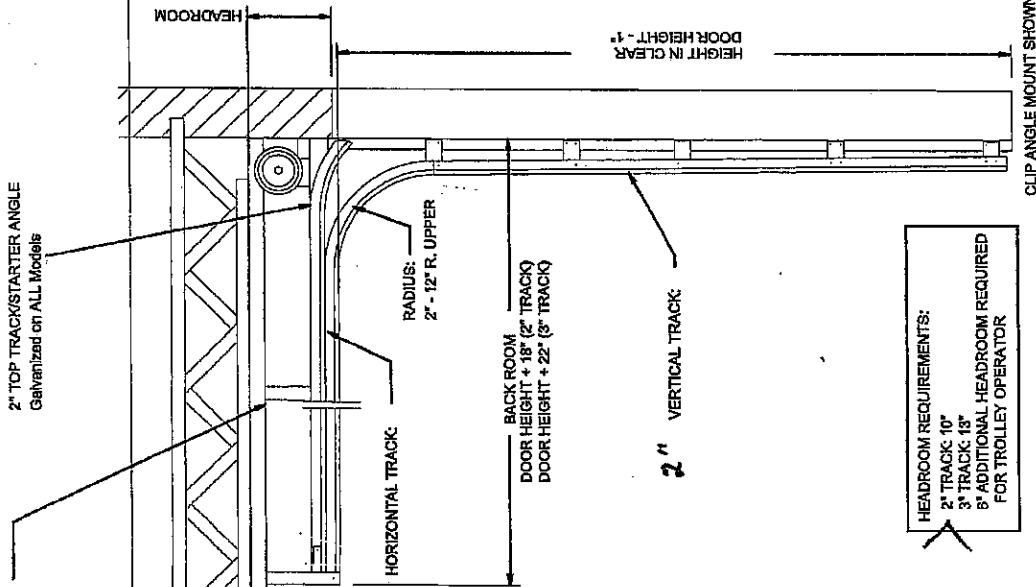
- Stainless Steel
- Painted Cast Iron

Torsion Springs:

- 304 Stainless Steel
- Galvanized Steel

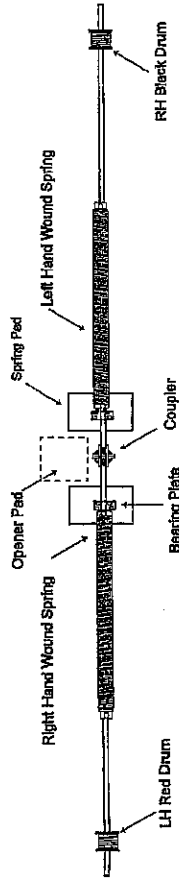
NOTE:

Spring size and configuration individually calculated to counterbalance door load. An exact spring layout can be furnished upon approval of bid. Some doors may require more than 2 springs



- TROLLEY OPERATOR:
- No MAX
  - Mega MAX
  - Electric Trolley

HEADROOM REQUIREMENTS:  
2" TRACK: 10"  
3" TRACK: 18"  
8" ADDITIONAL HEADROOM REQUIRED FOR TROLLEY OPERATOR



- RECOMMENDED MINIMUMS
- Spring Pad - By Others:  
(Pads must be flush with jambs)  
 Metal - 8"W x 12"H x 1/4"  
For use with Metal Jambs  
 Wood - 2" x 8" LUMBER x 12"  
For use with wood jambs
- TORSION SPRINGS:
- 10,000 cycle
  - 25,000 cycle
  - 50,000 cycle
  - 100,000 cycle
  - OTHER \_\_\_\_\_

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**American**

CLUST: *WEAVER*

JOB #: *Arnold Thompson LFT*

ARCH: \_\_\_\_\_

CONT: \_\_\_\_\_

LOW-HEADROOM FRONT MOUNT

OPENING SIZE: *14'* W x *14'* H

DOOR SIZE: *14'* W x *14'* H

OPERATOR MODEL: \_\_\_\_\_

AVAILABLE HEADROOM: \_\_\_\_\_

HEIGHT IN CLEAR:  DOOR ONLY  DOOR WITH OPENER

LH Front

DATE: \_\_\_\_\_

BID #: \_\_\_\_\_

PAGE \_\_\_\_\_ of \_\_\_\_\_





JOB NAME: HAROLD THOMPSON WASTE WATER  
 DISTRIBUTOR: FRONT RANGE RAYNOR DR CO.  
 CONTRACTOR:  
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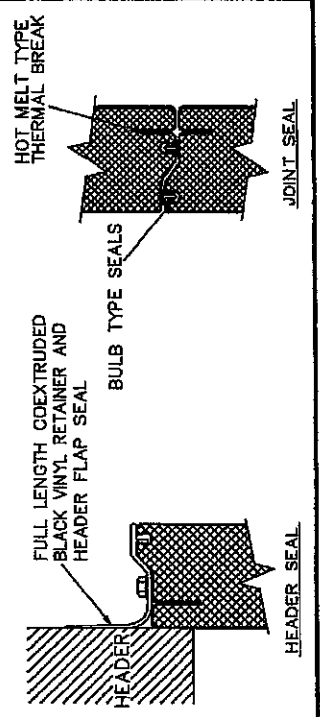
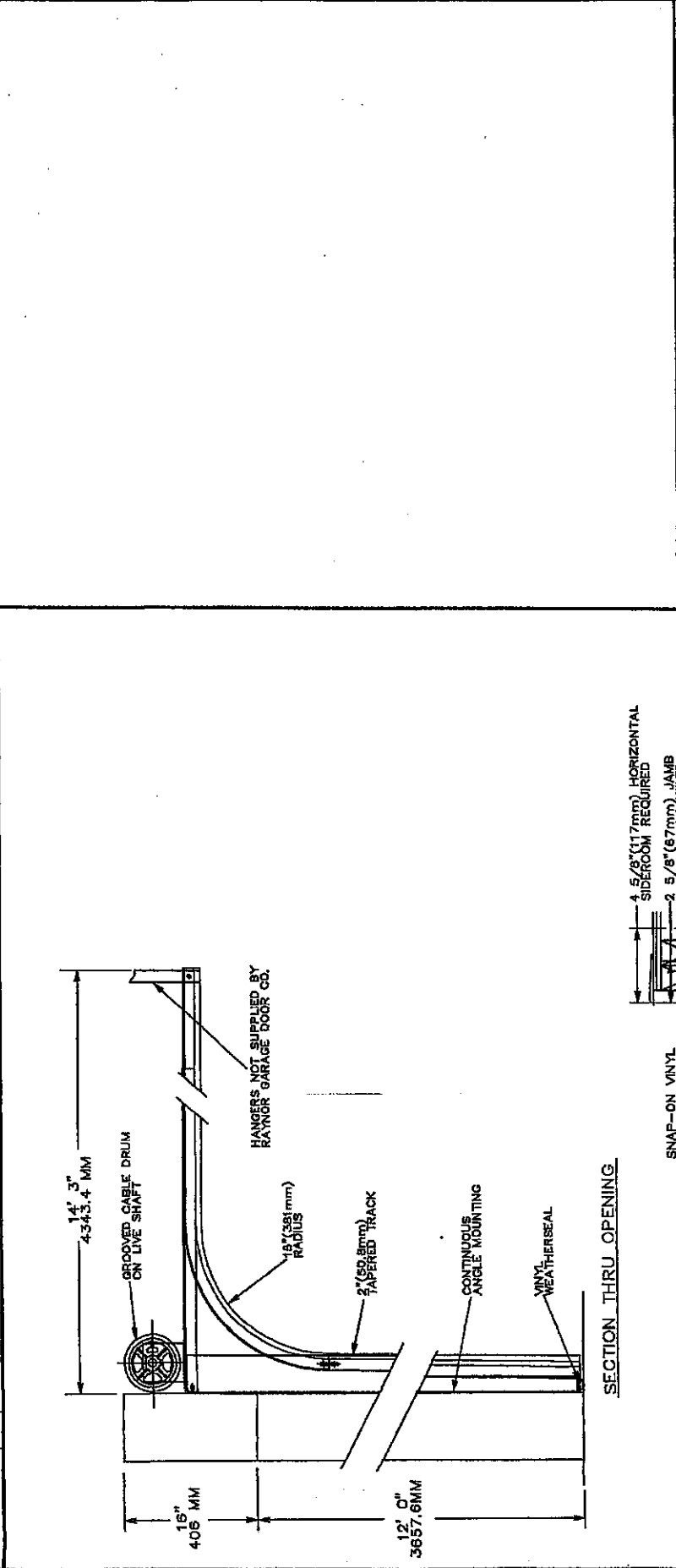
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SHEET 4 OF 4  
 DRAWING NUMBER 415257 A  
 REVISION A NOTES

DOOR NUMBER	QTY	OPENING		ACTUAL		JAMB		MOUNTING LOCK	
		WIDTH	HEIGHT	WIDTH	HEIGHT	W	S	M	ANGLE
2	1	12' 0"	12' 0"	12' 2"	12' 0 3/4"	TSD	X	X	OML
		3657.6MM	3657.6MM	3708.4 MM	3676.65MM				

RAYNOR  
 PROPOSAL  
 DRAWING



SECTION THRU OPENING

JAMB DETAIL

# STANDARD LIFT TRACK

- Track Assembly:
- 14 Ga. 304 Stainless Steel - Clip Angle Mount
  - 14 Ga. Galvanized Steel - Clip Angle Mount

- Track Mounting Angle:
- Inside-Angle for Wood-Steel or Aluminum
  - Outside Angle for Wood
  - Outside Angle for Masonry

- Shaft: Solid Keyed
- 304 Stainless Steel
  - Galvanized Steel

- Drums:
- Cast Aluminum
  - Specialty Coated
  - Stainless Steel
  - Painted Cast Iron

- Bearings: Sealed Greaseable
- Stainless Steel
  - 304 Stainless Steel
  - Galvanized Steel

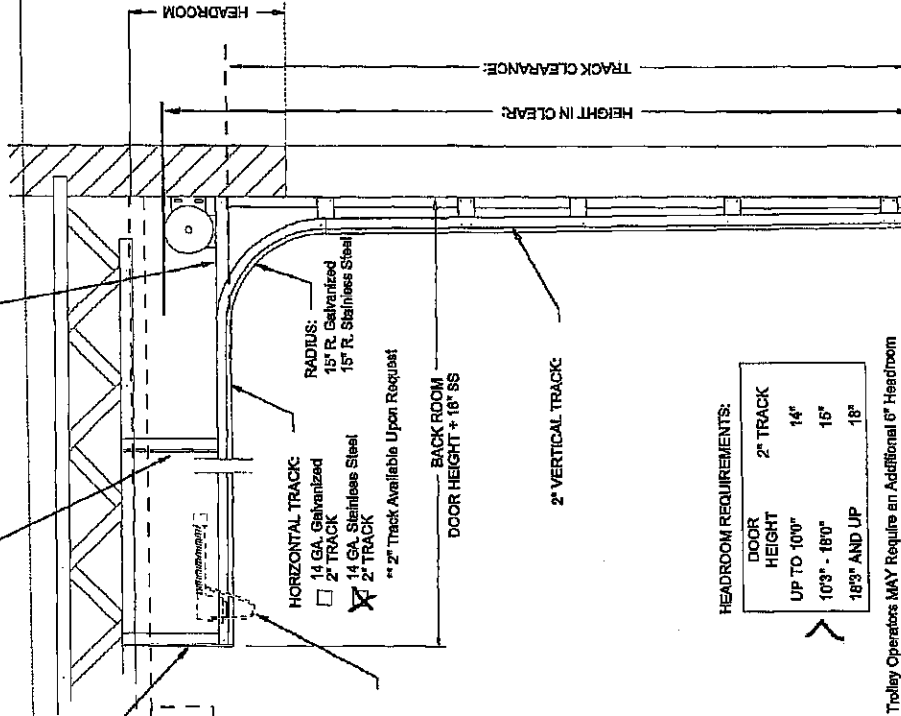
- Torsion Springs:
- 304 Stainless Steel
  - Galvanized Steel

- TROLLEY OPERATOR:  
(18" Required from)
- Nu/Max
  - MegaMax
  - Electric
  - Supralift

BACK HANG:  
(BY INSTALLER)

INTERMEDIATE HORIZONTAL  
TRACK SUPPORT: (BY INSTALLER)  
\*For Doors Over 12' High or 144 sq/ft

HORIZONTAL ANGLE:



HEADROOM REQUIREMENTS:

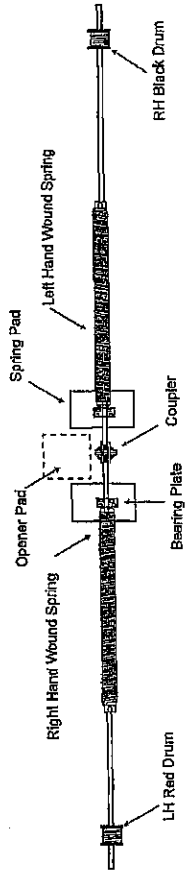
DOOR HEIGHT	2" TRACK
UP TO 100"	14"
103" - 180"	15"
183" AND UP	18"

Trolley Operators MAY Require an Additional 6" Headroom

PUSHER SPRING OR  
SPRING BUMPER:  
(OPTIONAL)

## NOTE:

Spring size and configuration individually calculated to counterbalance door load. An exact spring layout can be furnished upon approval of bid. Some doors may require more than 2 springs.



## RECOMMENDED MINIMUMS

Spring Pad - By Others:

(Pads must be flush with jambs)

Metal - 8"W x 12"H x 1/4"

For use with metal jambs

Wood - 2" x 6" LUMBER x 12"

For use with wood jambs

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CUST: **WEAVER**

JOB #: **HAROLD THOMPSON WFT**

ARCH:

CONT:

STANDARD LIFT

OPENING SIZE: 12' 2" W x 12' 12" H

DOOR SIZE: 12' 2" W x 12' 12" H

HEIGHT IN CLEAR:

DOOR ONLY

DOOR WITH OPENER

Standard Lift

DATE:

BID #:

PAGE

of