

LOVE FIELD AIRPORT RE-ROOFING

2002 GOLDEN HAMMER AWARDS





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Main Airport Entrance



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THE GOLDEN HAMMER AWARDS

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ENTRY FORM



Southwest Airlines "Wing"

2002 NTRCA GOLDEN HAMMER AWARDS



Official Entry Form



(Check one of the below) Outstanding Commerce	cial Roofing Project
☐ Outstanding Residential Project☐ Community Service Project	
4854 Olson Drive Dallas, TX 752	
Name of Project: Leve Field	Airport
Project Owner: City of Dalla	as
List the NTRCA associate m	er, or architect (if any): Conlet Design Group Tembers involved: DFW Roofing Supply. Conley Design Group Todustries & Olympic Manufacturing Group
Date of commencement: <u>08</u>	
	describe the project. Include information concerning straints, difficulty factors, and/or problems you may
	nowing the project form different angles and in variaterials become the property of NTRCA.
Project must have been co	mpleted between 12-01-00 and 11-30-01
Submitted by: \ Rodolfo Rodrigu	nez
Title: President	Date: 12/14/2001



DESCRIPTION



Paver Pattern At Red Deck



LOVE FIELD AIRPORT RE-ROOFING

THE GOLDEN HAMMER AWARDS

Project Owner's Name/Address:

City of Dallas/Love Field Airport 1500 Marilla Dallas, Texas

Architect:

Conley Design Group

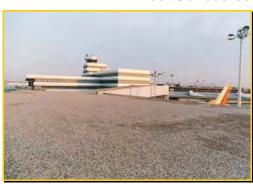
System Types:

- ➤ 4-Ply TC Coal Tar Pitch BUR with gravel surface
- ➤ Full 1/8" per foot tapered System
- ➤ Polyisocyanurate and Perlite board insulation
- > Stainless steel sheet metal trim
- ➤ New roof drain and drain line system
- ➤ Asbestos Abatement on entire roof system
- Window Restoration
- ➤ Fall protection for Skylight System
- ➤ Plaza Deck (Red Deck) restoration
- ➤ Thermoplastic Membrane Waterproofing and Pavers
- ➤ Pipe hangers and supports
- ➤ Wood blocking

Size of Project:

BUR = 180,000 square feet PVC with Pavers = 25,350 square feet

West Concourse





North Concourse

Length of project:

270 calendar days

Percentage of self performed work: 75%

The North and West Concourse buildings are composed of 205,350 square feet of roof area, 6 stories tall, 15 roof elevations,



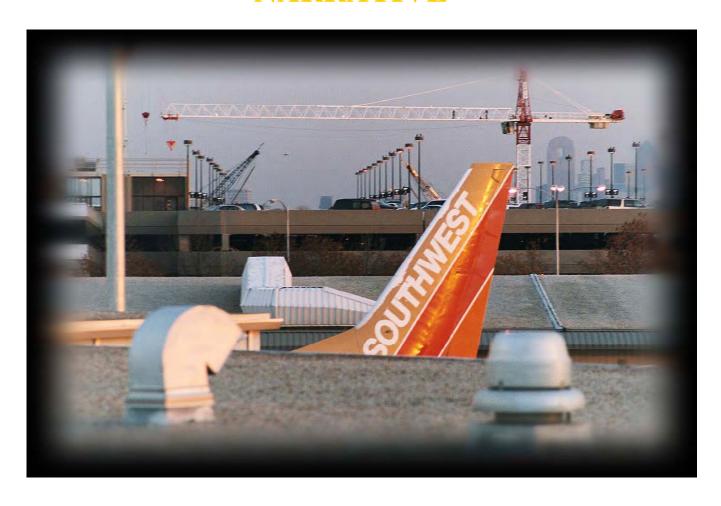
and two different roof systems (Coal-tar Pitch with a 1/8" full tapered system and Thermoplastic Membrane Waterproofing and Pavers). The existing roof aggregate was vacuumed to eliminate dust hazards. The roof drainage system was upgraded with 40 new drains and 2,500' new cast iron drain lines. The existing roof membrane containing ACM had to be abated per the City of Dallas stringent requirements. The existing windows were wet glazed; installation of new stairs, handrails, railings, and infill panels were part of the renovation work at the "Red Deck".

The owner required that the building be maintained in full operation during the construction period. Due to the high pedestrian traffic during normal business hours, the project had to be done in the cloak of darkness. This fact added additional difficulty and safety concerns to the already complicated project.

These and other challenges were overcome due to focusing on the customer's expectations and needs. The project was completed on time and on budget. But more importantly, the customer, architect and customer's representatives were satisfied with all phases of our scope of work.



NARRATIVE



Working Near Aircraft



The Challenge

The Love Field Airport Re-Roof was a challenging project, not only to bid but also to execute. From cramped quarters to debris removal, this project required creative solutions from planning through completion.

A large interest is always shown in a high profile project such as Love Field Airport, as evident by over 30 specialty contractors in attendance at the pre bid meeting. As the bid date approached we analyzed the various phases and the requirements set forth in the Bid Documents to properly clarify details in the scope of work to our production team and to our various subcontractors to insure proper quotes. We reviewed the scope of work and with multiple job site visits were able to analyze all the client's special requirements such as atypical insurance requirements, site restrictions, work hour restrictions, construction safety issues, environmental concerns and public safety interest. Several bids were submitted to the City of Dallas but only three bids were considered responsive and Castro Roofing of Texas was the successful bidder and was awarded the project.

We knew from the beginning this project would be one of the most challenging to date. For several years Castro Roofing has worked on various projects for the City of Dallas. Due to the high profile of this project the City utilized several entities, including internal and external consultants to comanage the construction.

High Profile

This project is special due to many factors but above all it is by far one of the highest profile-roofing projects in the City of Dallas. With tenants like Southwest Airlines, we knew this project would be scrutinized closely and owner expectations would be high.

Castro Roofing's unique combination of equipment utilized, from cranes to an aggregate vacuum system provided tremendous productivity gains and



enabled us to meet the client needs. Our client's special requirements were as follows:

Restricted Work Hours

To meet the Owner's requirements the construction phase would be primarily performed after dark. This created special challenges. Our operating hours would be 10:00pm through 5:00am. Specifically designed lighting system was utilized; removal of the existing roof system was difficult with the use of motorized equipment. Special care had to be taken while installing the black membrane portion of the roof. Raising of all material and equipment also had to be executed during these hours. Additional safety was also an issue in all aspects of the project due to inherent vision dangers. However, the materials had to be delivered during the day and the delivery trucks had to be coordinated and escorted near aircraft that were landing, taking off, taxiing, or parked at the gates.

Staging Restrictions

A very narrow staging area with access to the building held all materials, subcontractor containers, cranes, forklifts, aggregate vacuum machine and other equipment. This all had to be contained within a fencing system. The gate access was also very limited. Access to the roof was permitted only through an exterior of the building. The debris removal would challenge the creativity of our field crew. The work would be performed near airplanes and the roof debris was not to damage the airplane's engines or interrupt schedule flights.

What's that Smell?

Not Us! A special concern of the owner was the odor and fumes produced by products incorporated in the roof system. To combat this problem a



specially designed Fume Recovery System was utilized to reduce fumes up to 80% outside and inside the building.

Subcontractor Coordination

Coordination between our company, subcontractor and another primary contractor was a creative scheduling challenge in itself. The project had work performed in a 24-hour shift schedule. The asbestos abatement subcontractors had to remove the entire ACRM and flashing material to permit our company enough time in the same shift to install the full tapered insulation, wood blocking and TC felts to maintain a watertight condition.

The existing drain system was updated by installing new roof drains, overflow drains and new drain lines. The existing attic space was extremely restrictive and made the installation of the new roof drain line a challenge. This required constant communication with multiple nightly site visits by the subcontractor.

The "Red Deck" area required the demolition of the existing 4" thick concrete slab, installation of a new PVC roof membrane with a paver system. The paver system was installed with a pattern specified by the Owner. This had to be rescheduled various time due to unfavorable weather conditions.

Technical Challenges

Within these three buildings there were 14 different roof areas with multiple elevations. One of these areas was a control tower. These areas also included drains and windows. Modifications to the existing metal wall panel were required to permit proper flashing height. This included cutting the existing panel and fabricating new wood curbs to correct previous design issue.



The existing drain system had to be upgraded due to the insufficient amount of roof drains. In addition to replacement of old drains, 40 new roof drains and overflow roof drains would be installed. This meant coring through the existing deck and running 2,500 linear feet of new cast iron roof drain lines.

The new drain lines had to be installed in crawl space that was divided in sections and had a vertical height of 3 feet with a maze of interior obstructions that required the drain lines to make many changes in direction.

This project came in a considerable amount under our estimated budget due to the commitment from all levels of our organization. This high profile project was a reflection on the entire community and we're proud to have been involved in maintaining this City Landmark.



Work During The Night

Delivery During The Day



SAFETY



Warning Lines For Safety And Walk Way Protection



Safety: There is No Compromise!

When it comes to safety at Castro Roofing of Texas, Inc. there is no compromise!

Because our crews consist of 100% Hispanic workers, we provide for better comprehension all "Tool Box Talks" in Spanish. Below is a sample translated of a few accident prevention talks:

- ➤ Scaffolding
- ➤ Hand Tools
- Flammable Liquids and Combustibles
- > Eye Protection
- ➤ Protective Wear

(Gloves, Clothes and Shoes)

- ➤ Hard Hat
- ➤ Hot Asphalt Security
- ➤ Operating the Kettle
- ➤ Back Injury Prevention
- ➤ Heat Exhaustion
- > Practical Jokes on the Job Site

Wearing Safety Protection From Coal Pitch Fumes



Air Operations Area Construction (AOL) Rules:

In response to the Federal Aviation Regulations regarding airport security, The Airport Security Plan for Dallas Love Field imposed stringent requirements for personnel identification and access to secure areas of the airport.

To meet these stringent requirements, employees had to attend special safety classes and training to work in the Air Operations Area (AOL) restrictive areas, which included the majority of the re-roofing project.

While construction was underway, Castro Roofing of Texas, Inc.'s safety personnel kept a close eye over the entire project team. Because Castro's team was working around ACM and over and around aircraft, constant safety meetings and inspections were performed.

Castro Roofing of Texas, Inc. is extremely proud to announce that no accidents and no lost days were experienced on the Love Field Airport project!



PREPARED BY THE SAFETY AND HEALTH COMMITTEE OF THE ASSOCIATED GENERAL CONTRACTORS

Some of the hazardous substances commonly found on construction projects*

Acetone Lead

Acetylene gas Lime (calcium oxide)
Adhesives Limestone
Aluminum etching agent Lubricating oils

Ammonia Lye (sodium hydroxide, potassium hydroxide)

Anti-freeze Magnesium

Arsenic Compounds Metals (aluminum, nickel, copper, zinc, cadium, iron, etc.)

Asbestos Methanol (methyl alcohol)
Asphalt (Petroleum) fumes Methyl ethyl ketone (2-butanone)

Asphalt (Petroleum) tumes Methyl ethyl ketone (2-butanone)
Benzene (and derivatives) Motor oil additives

Bleaching agents Muriatic acid (hydrochloric acid)

Carbon black Naptha (coal tar)

Carbon monoxide (in cylinders)

Caulking sealant agents

Caustic soda (sodium hydroxide)

Chromate salts

Chromium

Paint remover

Chromium

Paint stringer

Chromium Paint stripper
Cleaners Paint/lacquers
Cleaning agents Particle board
Coal tar pitch Pentachlorophenol

Coatings Photographic developers and fixers
Cobalt Photogravure ink (copy machine)

Concrete curing compounds Plastics

Cresol Polishes for metal floors

Cutting oil (oil mist) Propanol
De-emulsifier for oil Putty

Diesel gas, diesel oil Resins, epoxy/synthetics Drywall Sealers

Dusts (brick, cement block)

Enamel

Solder, flux (zinc chloride, flourides, etc.)

Enamel Solder, flux (zinc chloride, flourides, etc.)
Etching agents Solder, soft (lead, tin)

Ethyl alcohol Solvents

Ethylacohol Solvents

Fiberglass, mineral wool Sulfuric acid

Foam insulation Thinner, paint/lacquer Freon 20, R20 (and others) Tin

Gasoline (petrol, ethyl)

Glues

Transite

Turpentine, gum spirit, oil of turpentine

Graphite Varnishes

Greases Waterproofing agents

Helium (in cylinders) Waxes Hydraulic brake fluid Welding rods

Hydrochloric acid Wood alcohol (methanol) Hydrogen (in cylinders) Wood preservative

Inks Xylene
Insulations Zinc

Iron Kerosene

^{*} No representation is made that these are the only hazardous substances found on construction projects for which a contractor must have MSDS's, initiate training, etc.

Philes de Herrementes

NATIONAL ROOFING CONTRACTORS ASSOCIATION - CNA COMMERCIAL INSURANCE

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REFERENCES



Red Deck With PVC Membrane and Paver System



December 14, 2001

Mr. Juan Rodriquez Castro Roofing of Texas Inc. 4854 Olson Drive Dallas, Texas 75227

Re: Dallas Love Field Roof Replacement Project

Dear Mr. Rodriquez:

It was a pleasure indeed to work with you and see the Dallas Love Field project completed. Once again Castro Roofing was challenged to meet very strict demands by the City of Dallas/Love Field personell to insure the successful completion of this project. Once again Castro Roofing met the challenge. It is because of professionals like you and your staff that success can be achieved even under very difficult circumstances.

Everybody wins when we can walk away from a project of this scope and look back to see an exceptional finished product. Keep up the good work! I look forward to working with Castro Roofing of Texas, Inc. in the years to come.

David Walker

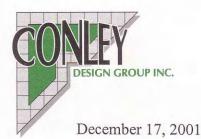
Roofing Manager

Design and Construction

Equipment and Building Services

c: Zaida Hagar, Program Manager

File



Corporate Office 8113 Ridgepoint Drive Suite 200 Irving, Texas 75063 Phone (972) 444-9020 Fax (972) 444-9737

Mr. Rudy Rodriguez Castro Roofing of Texas, Inc. 4854 Olson Drive Dallas, TX 75227

RE: L

Letter of Reference for

Love Field Roof Replacement Project

Dallas, Texas

Dear Mr. Rodriguez:

I feel it is appropriate to compliment Castro Roofing of Texas for the excellent job performance at Love Field Airport, Dallas, Texas.

It has been a pleasure working with Castro Roofing of Texas and I assure you that your company has been and will be recommended for future projects. I look forward to working with you on our next project.

Regards,

CONLEY DESIGN GROUP, INC.

Ken Paar, RA AIA Vice President

dallas\01-5842\corr\castrorecommend.doc



December 14, 2001

Mr. Rodolfo Rodriquez Castro Roofing of Texas Inc. 4854 Olson Drive Dallas, Texas 75227

Re: Dallas Love Field Roof Replacement Project

The Love Field project was very challenging, to say the least. Working at night, security measures, numerous subcontractors, material deliveries, etc... made this a very unique project as well.

I want to take this opportunity, now that the project is complete to commend you and the entire Castro Roofing Company staff for your professionalism, responsiveness to our concerns, eagerness to meet the demands of the airport personnel and most importantly your patience and diligence to finish the project on schedule.

It was a pleasure working with you on this project. The finished product looks great! My role as project manager for the City of Dallas was made a lot easier because of your efforts. I look forward to working with you on future projects with the City of Dallas.

Sincerely, David Walker

David Walker

Roofing Manager

Design and Construction

Equipment and Building Services

c: Zaida Hagar, AlA Program Manager



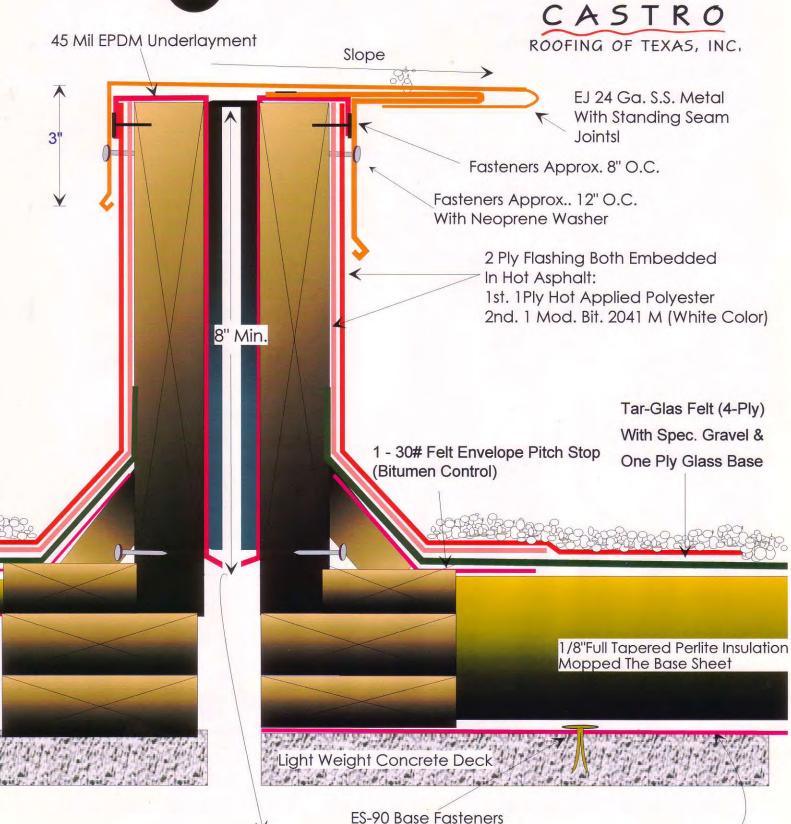
MISCELLANEOUS

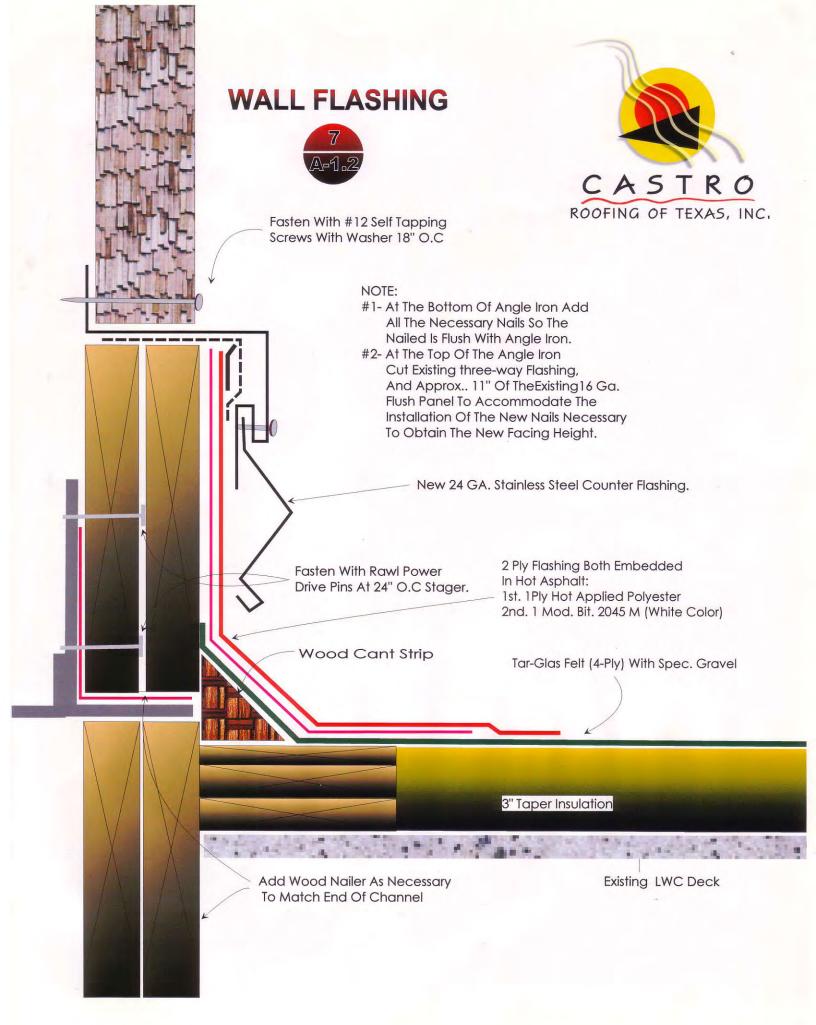


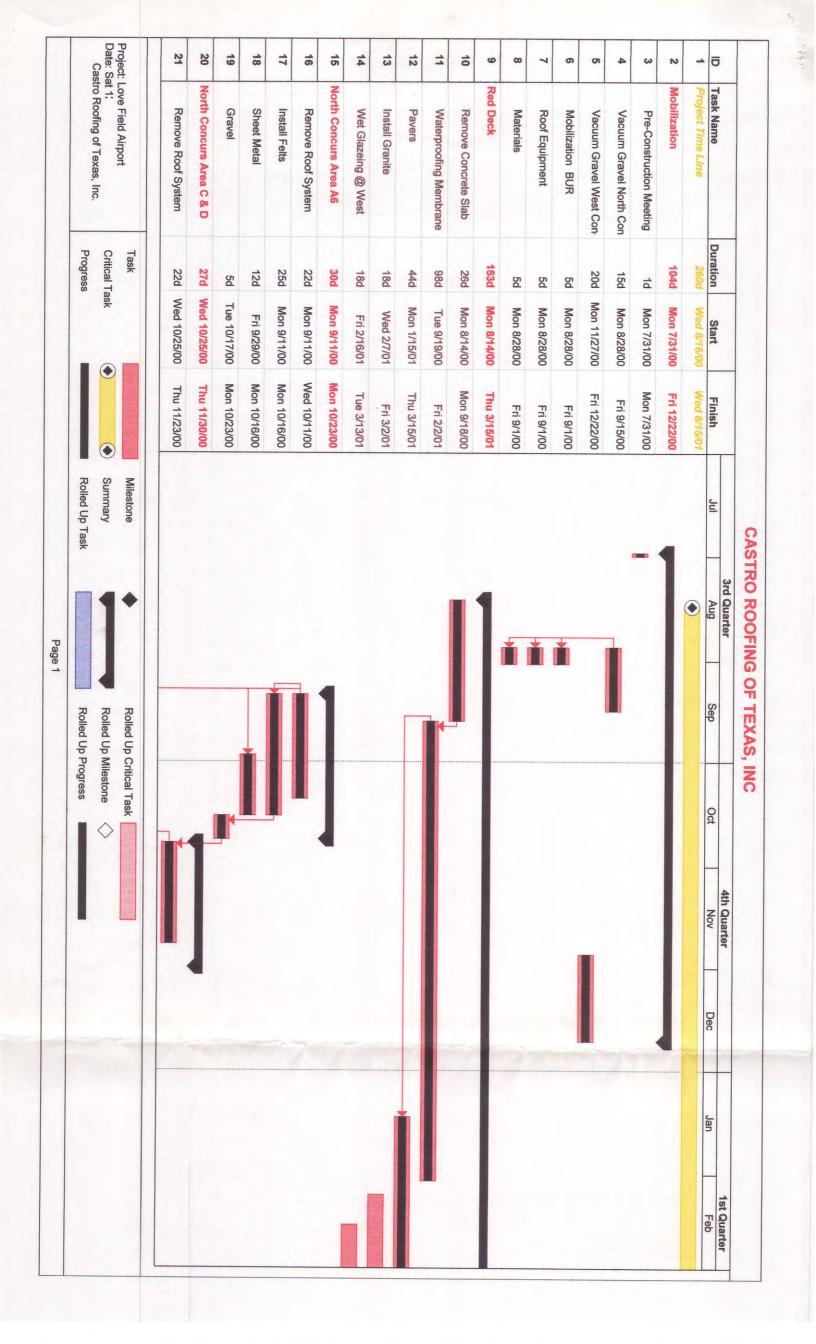
Beginning Of The Night's Work Schedule

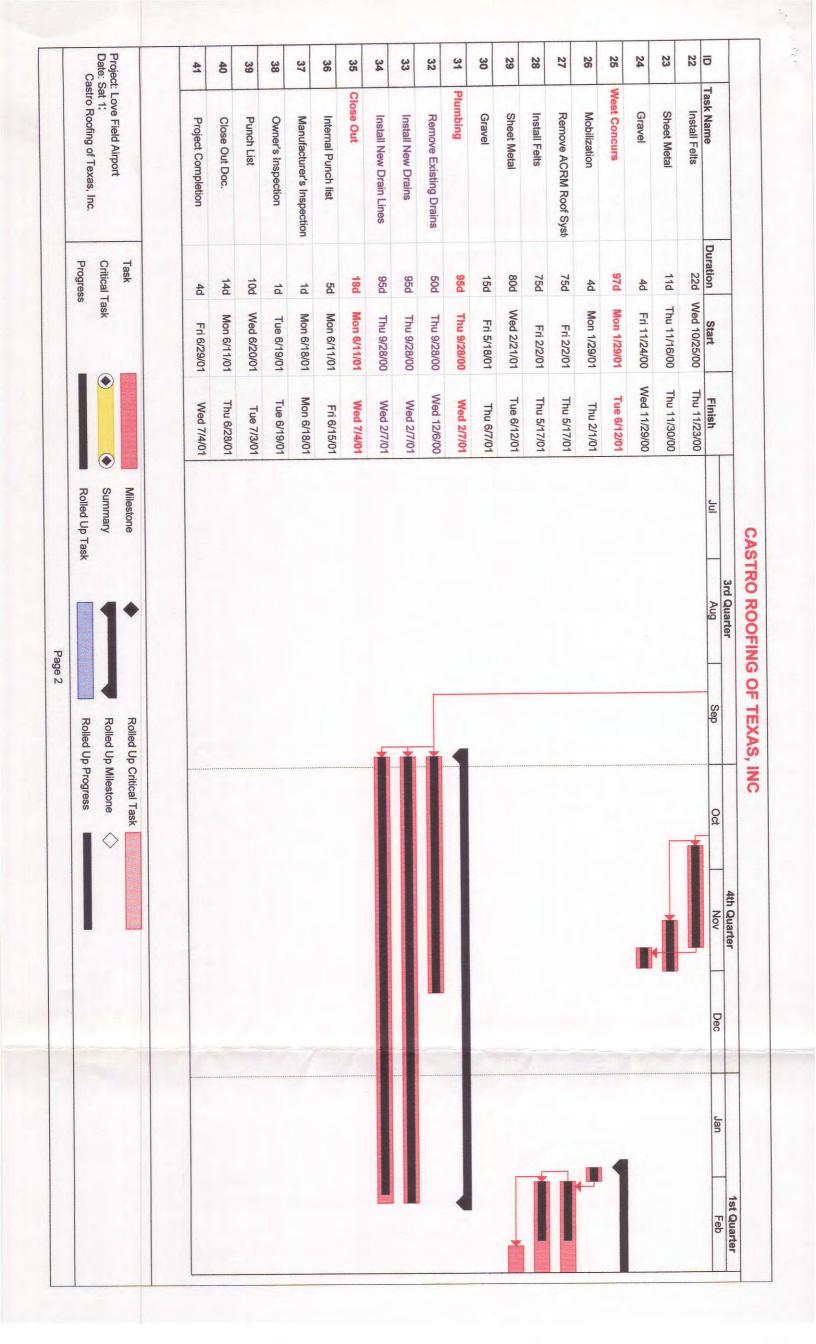
EXPANSION JOINT

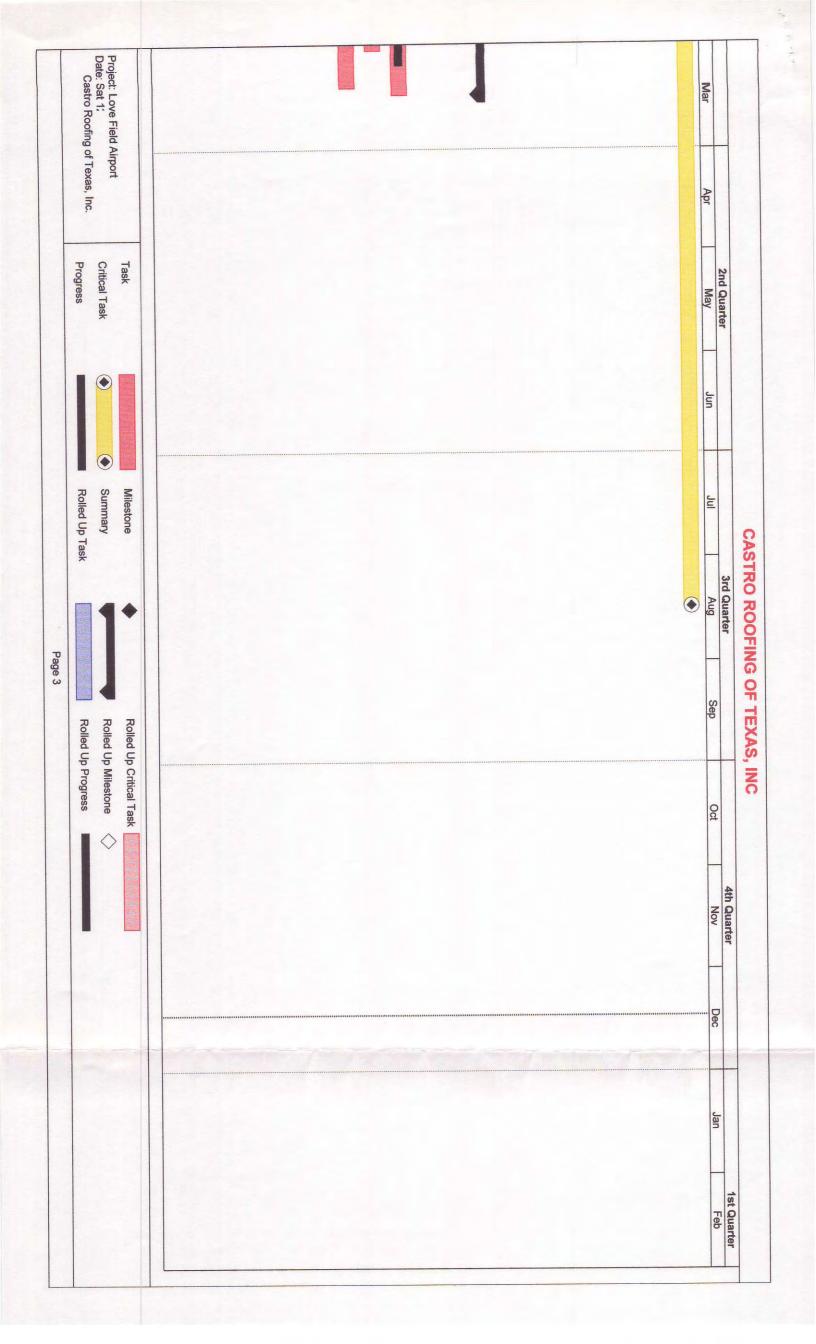


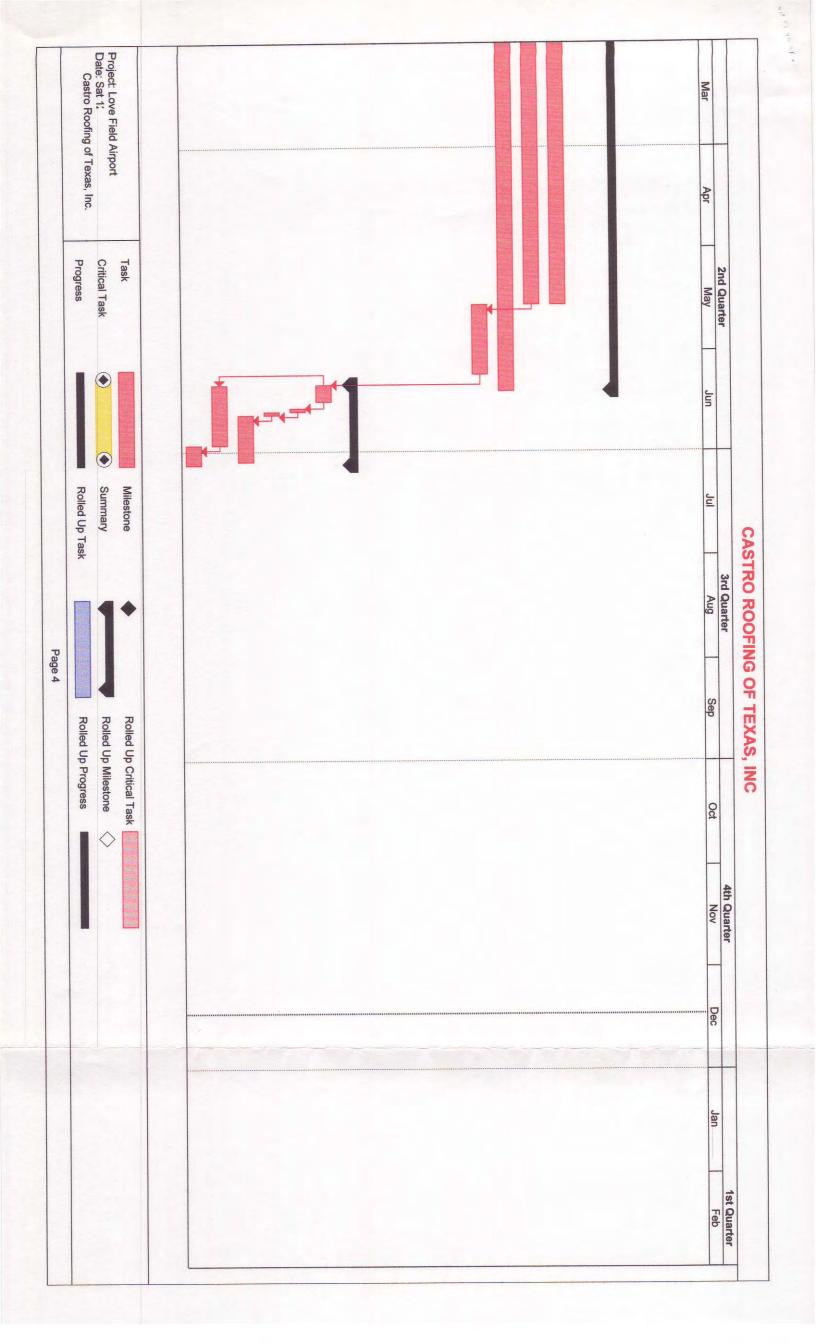








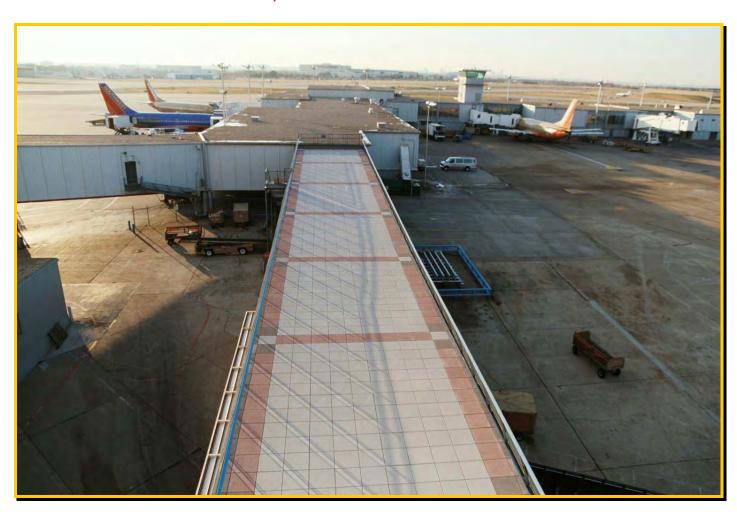






THE GOLDEN HAMMER AWARDS

Parked Airplanes @ The West Concourse





THE GOLDEN HAMMER AWARDS

North Concourse





THE GOLDEN HAMMER AWARDS

Paver System "Red Deck" and North Concourse





THE GOLDEN HAMMER AWARDS

Upper Roof @ The West Concourse





THE GOLDEN HAMMER AWARDS



























MEMBERS



Planes Parked At The West Concourse Completed BUR



NTRCA MEMBER INVOLVEMENT

THE GOLDEN HAMMER AWARDS

This project was largely self-performed by Castro Roofing of Texas, Inc. with its own forces.

Under Castro Roofing of Texas, Inc. contractor's scope of work, the following NTRCA members contributed to the success of this project:

- ➤ Conley Design Group, Inc.
- ➤ Dallas Fort Worth Roofing Supply
- > Keystone Insurance
- ➤ Koppers Industries
- ➤ Olympic Manufacturing Group