Submitted By the Board of Commissioners of the Port of New Orleans

PORT OF
NEW ORLEANS

DEBORAH KELLER, DIRECTOR OF PORT DEVELOPMENT
1350 PORT OF NEW ORLEANS PLACE
NEW ORLEANS, LOUISIANA 70130
(504) 538-3297

JUNE 13, 2006

DESIGN TEAM:

CH2MHill
Architectural, Electrical, and Mechanical Engineering
Carey Moulton
Project Manager
3001 PGA Blvd, Ste. 300
Palm Beach Gardens, FL 33410
(561) 904-7400

Morphy Makofsky, Inc.
Foundation Engineering
Donald Makofsky, P.E., Principal
336 N. Jefferson Davis Pkwy
New Orleans, LA70119
(504) 488-1317

Paragon Structural Engineering
Structural Engineering
Charles Mackey, P.E.
101 N. First Ave, Ste 2600
Phoenix, Arizona 85003
(602) 258-0011

Rich and Associates
Parking Consultants
Richard Kinnell
21800 West Ten Mile, Ste: 209
Southfield, Michigan 48075
(248) 353-5080

AAPA FACILITY ENGINEERING AWARD

TABLE OF CONTENTS

PROJECT DESCRIPTION

The Erato Street Cruise Terminal project in New Orleans, Louisiana, is a $37 million, four-level, 1000-car parking structure situated over a two-level cruise ship terminal. It is programmed to handle multiple cruise lines, ship sizes and passenger loads, in a City poised to increase its cruise ship industry in the near future. Issues of Homeland Security, traffic congestion, river bank stability and optimum site utilization had to be considered in the design. The original pre-Katrina construction schedule was a very ambitious fourteen months, based on the first scheduled ship call in December of 2005. The use of precast panels and beams, as opposed to cast-in-place construction, permitted an accelerated construction sequence, allowing electrical, mechanical, plumbing and interior finishes to closely follow the erection of precast members for the length of the building. There were actually electrical conduit and ductwork being installed in one end of the building while piles were still being driven at the other. Construction was interrupted by Hurricanes Katrina and Rita, delaying substantial completion until October 2006. However, the building was ready to be used for the return of the first homeported cruise ship when the Norwegian Sun sailed to New Orleans on Oct. 15, 2006 (see cover photo).

The design concept takes a utilitarian parking garage, and by incorporating the cruise line terminal functions, allows for the highly efficient use of a very narrow, underutilized site, while maintaining the character of the New Orleans riverfront. The project has met all operational and aesthetic goals, although there were delays and additional costs, primarily due to impact of Hurricane Katrina on the availability of materials, equipment, and labor in the aftermath of the storm.

PROJECT HIGHLIGHTS

Virtually the entire structure, 120’ wide by 750’ long, is precast concrete, which was used not only as a structural component, but also as an architectural element for both the interior and exterior of the building. The fabrication of the precast took the combined efforts of three manufacturing plants: Tindall Corp. of Biloxi, Mississippi, and two subcontractors: Jackson Precast and Gate Precast. Tindall’s portion of the work alone comprised over 7,250 cubic yards of concrete , with the heaviest piece weighing in at 97,000 pounds.

The aesthetics of the building were intended to complement the nearby New Orleans architecture, with a stylized “warehouse” motif to corresponding to the nearby Warehouse District. The façade of the building is punctuated intermittently by detailed cornices with towers projecting above the adjacent parapet. The colonnade is highlighted with selectively-applied brick-red concrete stain, reminiscent of early warehouses in the vicinity, patterned in such a way as to give the illusion of two-story archways the length of the building.

The foundation and first floor construction consists of steel-pile-supported system of pile caps supporting precast beams, with hollow core planks topped with a concrete cast-in-place slab. The upper levels are double-tee beams topped with a cast-in-place topping slab. Half of the building is situated over a cast-in-place cavity slab below, open to the river.

The facility incorporates many advanced features, from a multi-phase energy management system that is programmed to match the varying cruise schedules while optimizing energy use on a daily and hourly basis, to a custom-designed, automated pay-in parking system which minimizes long parking lines and can be programmed to accommodate a variety of cruise durations and varying parking costs. The challenges of incorporating the stringent security and access restriction requirements (imposed by Customs and Border Patrol as well as the Coast Guard) in a building that accommodates such a vast number of people on a daily basis, while at the same time meeting stringent Life Safety Code regulations, were accomplished by a number of innovative solutions. These included an integrated perimeter access system of card readers and fifteen-second release alarmed exit devices, and a passenger routing program which allows both debarking and embarking passengers to use the state-of-the-art pedestrian bridge from the ship to the second floor of the terminal.

GOALS AND OBJECTIVES

In Fiscal Year 2004, the Port handled 734,643 ocean cruise passengers, up from 36,000 in 1992. Prior to the construction of the Erato Terminal, the Port of New Orleans hosted two Carnival Cruise Line vessels with a combined total of 8,900 weekly passengers year round, Royal Carribean's 2,400-passenger Grandeur of the Seas called weekly on a seasonal basis, and Norwegian Cruise Lines' 2,400-passenger Norwegian Sun was expected in October 2005. The Port had spent approximately $15 million over the previous thirteen years to improve the Julia Cruise Terminal Complex, but the two terminals at Julia were too close together to be able to dock two mega-ships at the same time, while berthing space at the adjacent Erato Street wharf was under-utilized. Furthermore, the City of New Orleans owns the second floor of the Julia Street Cruise Terminal, as well as the land beneath the wharf, which made future expansion of the facility by the Port (a State agency) cumbersome.

The Julia Street Cruise Terminal was at capacity prior to the construction of the Erato Terminal and unable to accommodate an increase in the number of cruises on popular cruise days. It became apparent that the Port of New Orleans would need to provide a new terminal at another wharf site if it was to increase the number of cruises.

In addition, there were only 350 Port-owned parking spaces available in the immediate area, significantly fewer than required for even one ship. A number of remote parking facilities run by outside companies provided parking and shuttle services to the terminal, but the ensuing traffic problems, passenger delays and loss of revenue was undesirable. A survey of Carnival Cruise Line passengers in 2004 indicated that 57 percent traveled to New Orleans by personal car, so the parking deficit was evident. It was obvious that the Port of New Orleans was missing an opportunity to increase revenue through the capture of this parking business, and that this revenue would financially support construction of a new facility.

Visiting New Orleans is consistently cited in surveys as being one of the main reasons that passengers decide to take a cruise originating here; in fact, 81 percent of the passengers in the 2004 survey stated that they visited in New Orleans prior to or following their cruise, and of those, 96 percent said that they were satisfied with their visit to New Orleans, with 78 percent stating that they were "extremely" satisfied. Therefore, it is anticipated that the number of cruises embarking and disembarking from New Orleans will continue to increase as the City further recovers from Hurricane Katrina. In fact, 2006 saw the return of three of the four cruise ships utilizing New Orleans prior to the hurricane.

DISCUSSION

BACKGROUND

In March, 2003, the Board of Commissioners of the Port of New Orleans awarded the design contract for the Erato Street Cruise Terminal Complex to CH2MHill, a design firm with substantial direct experience dealing with major cruise line operators at other facilities. Multiple building systems, including cast-in-place concrete and precast concrete, were first investigated in order to optimize budget and schedule, while still allowing construction deliveries, equipment and staging on the restricted site. Ultimately, precast construction was chosen as the most efficient way of managing site congestion, and meeting the ambitious project schedule, which, prior to hurricane season, had the first ship call scheduled for December of 2005. The construction of the facility began in October 2004, with the demolition and excavation of the site. Foundation work alone accounted for almost one-quarter of the project budget, due to the challenges presented by erecting a building of this size on the steep banks of the Mississippi River, where the river level fluctuates up to fourteen feet seasonally.

OBJECTIVES AND METHODOLOGY

In order to keep costs at a minimum, the exterior precast panels of the building were used as architectural elements, with a higher finish level than those elements interior to the parking garage and the terminal itself. Similarly, the interior aesthetics attempt to incorporate the exposed precast as a design element, to eliminate the need for expensive architectural finishes. The second through sixth floor levels are double-tee beams topped with a cast-in-place topping slab, and the spacing of the double-tee's was used as a design element throughout the project, from the placement of the openings and window mullions, to the floor finish patterns within the terminal space. The double tee's were left exposed overhead in most of the facility, except in office spaces, and alternating bays house lighting and mechanical systems hidden behind acoustical panels in the public spaces.

The structural design approach is a precast system of un-topped double tee beams with concrete topping cast in place, spanning from a center row of precast columns to a load-bearing skin of architectural precast panels on the parking levels. Double-tee clear spans on the upper levels are over 60 feet. This allows wide lanes with adequate turning radii for parking operations, despite the narrow footprint of the building. Shear walls extending the entire six levels are incorporated into the design to resist wind and seismic loads.

PROJECT COST

A rigorous Value Engineering exercise was performed by the Port and the CH2MHill design team prior to the release of the documents for bid. A substantial increase in the worldwide price of steel and other building materials, coupled with the foundation requirements, had caused the estimated cost of the building to rise by almost 30 percent during the design phase, and several design alternates were proposed for consideration by the Port. These included such options as decreasing the footprint by one bay and decreasing the number of parking floors. Ultimately, less drastic changes, in architectural finishes and other details, were made that decreased the estimated costs to an acceptable number.

In addition, after award of the construction contract to the low bidder, Broadmoor Construction, LLC, of New Orleans, Louisiana, the design team, the Port and the contractor and subcontractors constantly reviewed the project for Value Engineering opportunities during the construction phase. The contractor waived the traditional percentage usually taken on Value Engineering proposals in order to help the owner with the budget. One example of contractor-proposed savings, a reduction of the thickness of structural precast panels recommended by the precast fabricator's engineer, resulted in a significant savings. A proposal by the electrical contractor to embed the lighting conduits in the topping slabs, as opposed to hanging them exposed under the double-tees, resulted in additional savings.

An alternate lighting fixture package, simplification of decorative metal fabrications, and a curtailed interior finish schedule also added to the savings brought to the table by the contractor. In all, this partnering approach to overcoming the budget problem resulted in a total savings of almost $500,000 in Value Engineering changes suggested by the team. This is an excellent example of the advantages of using a partnering approach during the construction phase of a project.

PERFORMANCE MEASURES

The two most important measurable criteria considered in evaluating the success of the project are vehicular parking utilization and passenger waiting times, as these were cited as two of the weaknesses of the New Orleans cruise experience by passengers in the past. The Port is now capturing an estimated 100 percent of the current passenger parking volume. The garage is consistently over 75 percent filled, despite the temporary decrease in number of ship calls post-Katrina. This represents an increase in parking patrons at Port facilities of 215 percent over previous levels, and this is expected to increase to 100 percent occupancy with the return of ship calls to pre-Katrina frequency.

The design of the terminal site included the addition of two traffic lanes at the first level under the parking structure, to augment the four lanes along Port of New Orleans Place. With the improvements in vehicular circulation around the terminal, the duration of the total debarkation process has decreased from over 3 ½ hours on average to approximately two hours total, a decrease of 43 percent. This improved check-out experience will likely result in an increase in return passengers to this particular port.

Being purpose-built and to specifications for a mega-ship of 4,000 passengers, the new terminal meets the size criteria for future larger ships, and frees up space for two 1000-foot ships simultaneously. It is also a marketing tool which will attract more cruise ship operators, and has greatly helped to rejuvenate the tourist traffic in New Orleans post-Katrina.

HOW THE PROJECT FULFILLS THE AWARD CRITERIA

The Erato Cruise Terminal Complex project fulfills the Award Criteria of the AAPA through innovation in design, engineering and construction methods, through budget success, and through the adoption of a teamwork approach between owner, designer and contractor during the construction phase, which resulted in overcoming the challenges presented in a post-Katrina environment.

The building is situated on top of the box levee along the Mississippi River. A number of approaches to resolution of the aforementioned foundation issues were considered. The design which was ultimately adopted required that, in order to maintain bank stability for the site and to offset the additional weight of the new building, a new sheet pile wall be installed approximately 70 feet inland from the original wall. The soils to the river-side of the new sheet pile were removed for the entire 900-foot length of the site, and the old sheet pile and foundation of the former 1920's wharf removed, to develop a cavity under the outer half of the building. The top of the new sheet pile wall is embedded in the concrete first floor construction, with the installation of a cast in place cap beam. The first floor construction then transfers the horizontal thrust from the sheet pile wall into the horizontal load-resisting piles and pile caps. The sequence of excavation, sheet pile removal and tieback installation was critical so as to maintain the integrity of the soils remaining beneath the building footprint.

Another innovative design solution incorporated into the project is the mobile gangway from the second floor of the terminal to the vessel. Due to the 14-foot fluctuations in river elevation, and the differing heights and locations of passenger doors on the variety of vessels to be berthing here, considerable adjustments in height must be accommodated in the segments of the bridge, and ADA requirements restricting slope must be met regardless of river stage. A fixed walkway with a 80-foot wide sliding door opening and an articulating gangway accommodate the various lateral adjustments due to door location, and the rolling portion has five hydraulically controlled sections which can be adjusted to accommodate the door elevation differences from ship-to-ship, and various river elevations. The articulating gangway and the fixed walkway were manufactured and assembled in Sweden, disassembled and shipped in pre-fabricated flat sections, and re-assembled at the site.

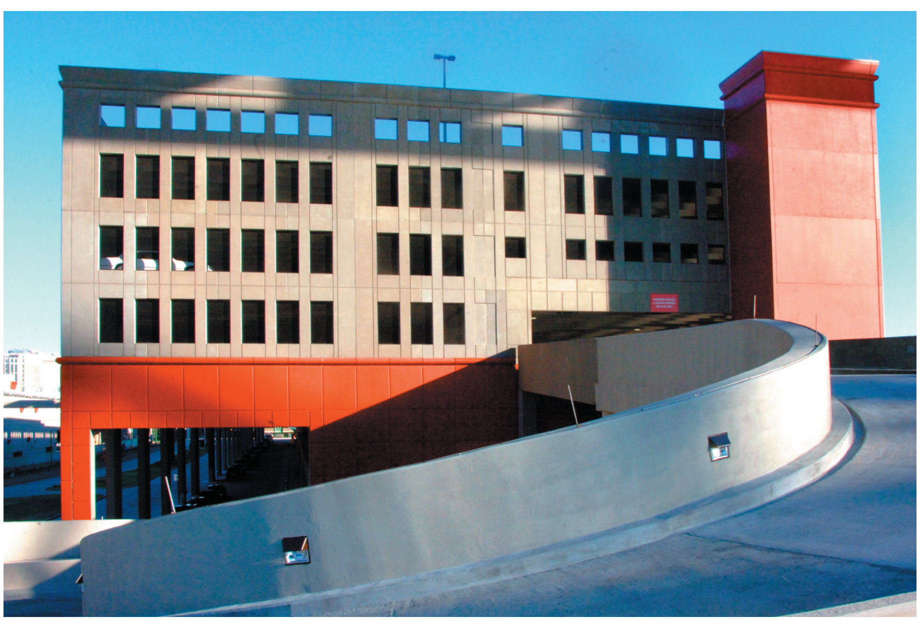
The volume of precast required for a project this size required that three different fabricators work simultaneously to provide the elements of the building, and in an orchestrated sequence to keep the erection moving in the proper order. The building was erected in sections, first through sixth floor, and starting at either end in order to keep the roadway through the middle of the site open for as long as possible. Therefore, it was critical that the different pieces showed up at the site in the correct order – storage space was limited, and all fabricated pieces could not be delivered at the same time. Tindall fabricated the structural components including the double-tees and shear walls; Jackson Precast fabricated the architectural structural components, mainly exterior wall panels, beams and columns; and Gate Precast fabricated the hollow core planks used for the first floor/wharf area. The total number of architectural and structural precast pieces in the job was 1,770, excluding the hollow core planks. Tindall subcontracted the erection work to Precast Erectors. By having one fabricator in charge of all precast work, coordination was improved and field problems were minimized.

To further complicate the construction on the already restricted site, the Port was still handling cruise ships at the adjacent Julia Street Cruise Terminal, prior to Hurricane Katrina. The only access to the operating terminal and the construction site is via a two-lane roadway parallel to the river, accessed through one of two floodwall gates several hundred yards upriver and downriver of the site. Each of the two lanes of the roadway would have to be closed during a portion of the construction time, due to utility and repair work in the lanes. On cruise days (up to four per week) the security was heightened by order of the U.S. Coast Guard and U.S. Customs and Border Protection and, due to traffic constraints, no deliveries could be made to the site, and personnel access to the site was restricted. The Port required the contractor to leave a truck access road open through the middle of the site in order for deliveries to the ships to be maintained, until adjacent roadway work was completed. The construction site was divided into 10 different zones, and each one had separate restrictions on work schedule and duration, in order to keep the traffic flowing on the access road to the operating terminal and the adjacent shopping areas and condominium tower.

However, the biggest construction problem faced was after Hurricane Katrina, which devastated the Gulf Coast and the New Orleans area on August 29, 2005. One-third of the precast had been erected at the site and sustained no damage. Tindall's Biloxi, Mississippi plant, across the beach road from the Gulf of Mexico, sustained major damage, with one of the large, barge-mounted casinos landing in the yard. The fabricated pieces stockpiled at the plant and the molds for the project sustained heavy damage as well. The Tindall employees went back to work living in tents at the plant. Delivery of the product from Biloxi to New Orleans was also a major issue due to the bridge and road damage in the Biloxi area. However, with much coordination and cooperation, the terminal was able to open in time to support the first cruise ship arriving back in New Orleans October 15, 2006.

CONCLUSION

The Erato Street Cruise Terminal Complex has proven to be a successful endeavor for the Port of New Orleans, and has also rejuvenated the tourist industry for the City by bringing back visitors to the cruises embarking from here. With the partnering approach taken during construction by the contractor, the designers, and the owner, the project moved ahead and was completed according to the revised post-Katrina schedule, despite the significant physical setbacks caused by the hurricane, and the continuing problems with labor and materials in the area. It is anticipated that the cruise business in New Orleans will continue to recover as the City rebounds from the devastation of the hurricane, and that soon the Port will be meeting its design ambitions of hosting two mega-ships simultaneously.



Erato Cruise Terminal

Top- View of the Terminal from the Julia Street Cruise Terminal, located downriver from Erato.

Left-
View of the Terminal from the Upriver side, featuring the helix which allows automobiles to enter the parking garage.

Operations

Top- The terminal features a FMT Gangway that allows passengers to board the ship confortably.

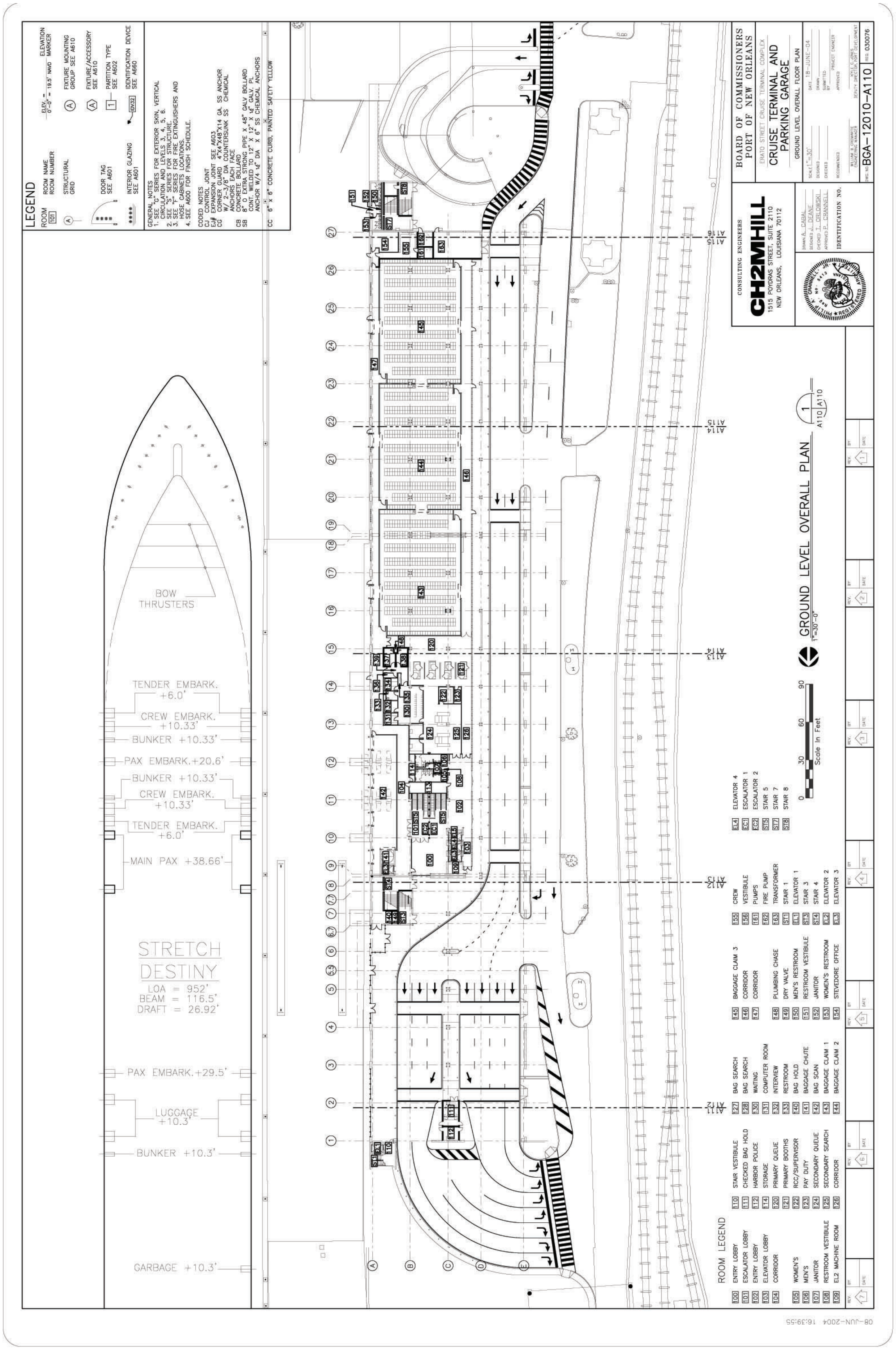
Left- Ample room for check in eases ship boardings.

Bottom- A covered roadway keeps passengers arriving by bus or taxi out of the elements and organizes traffic flow.

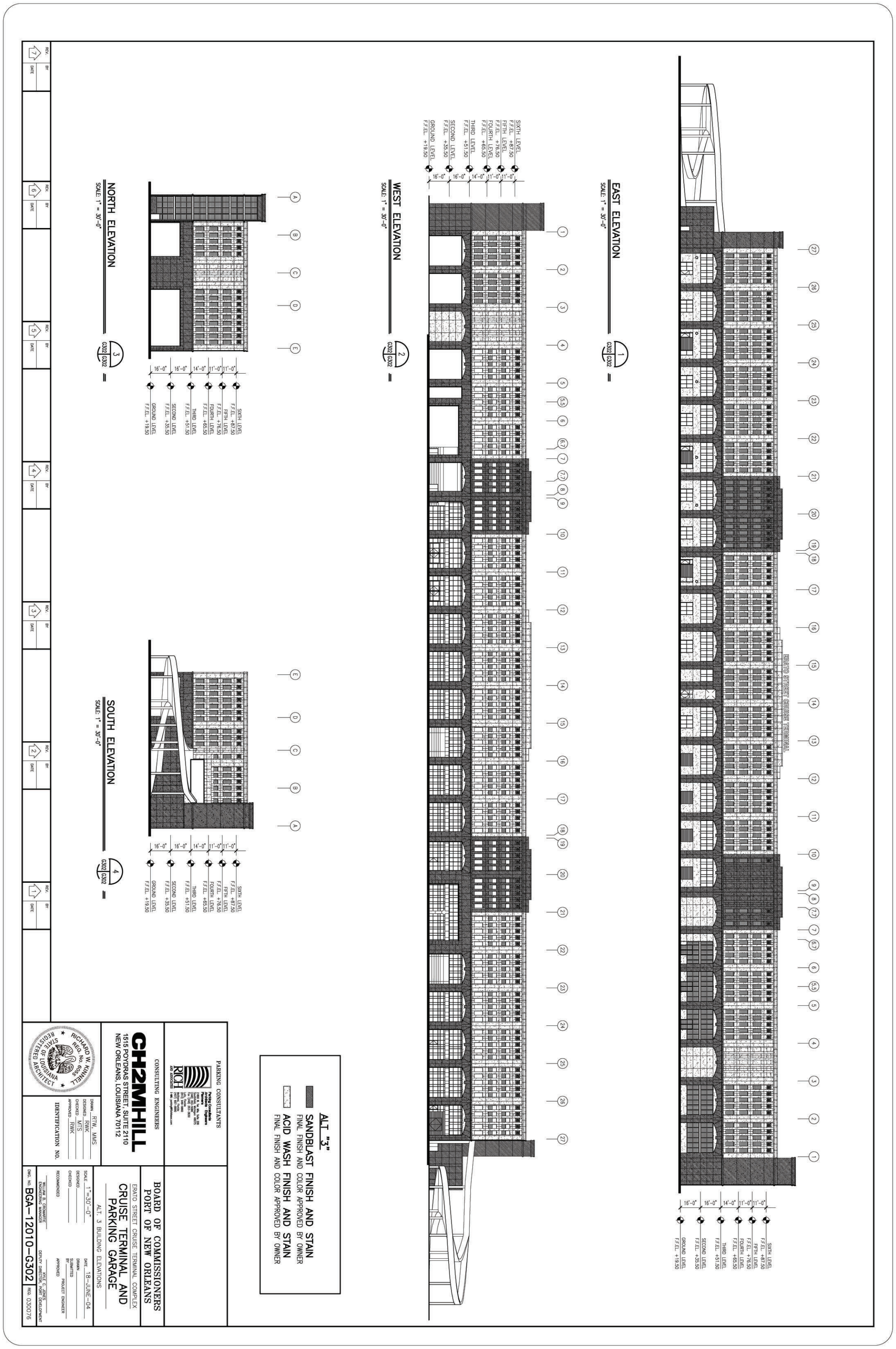
Construction-
Top- Views of the construction of the foundation.

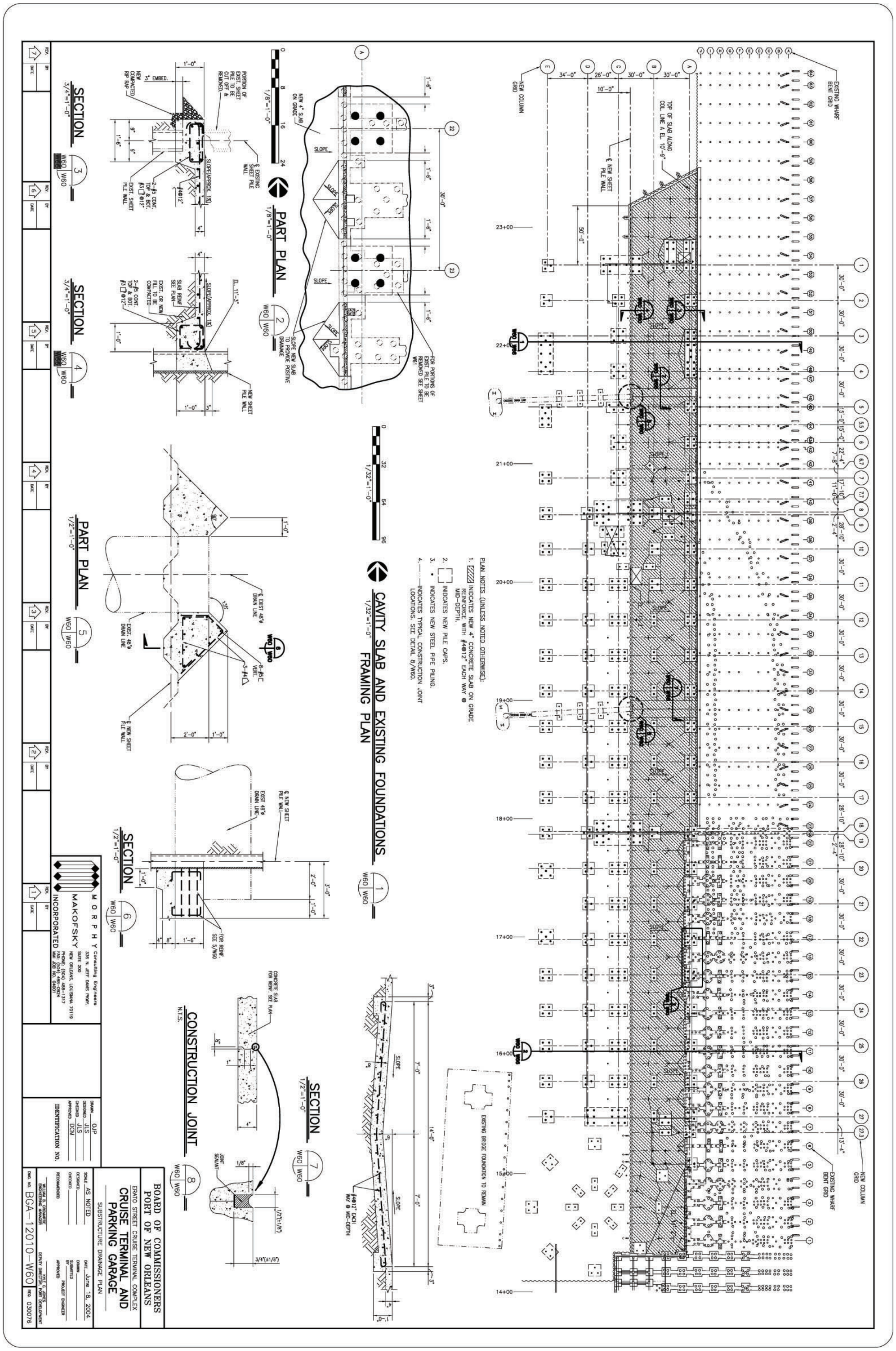
Left- The use of precast concrete helped counter the difficulties of working in a confined space. The P&O Arcadia is docked at the adjacent Julia Street Cruise Terminal.

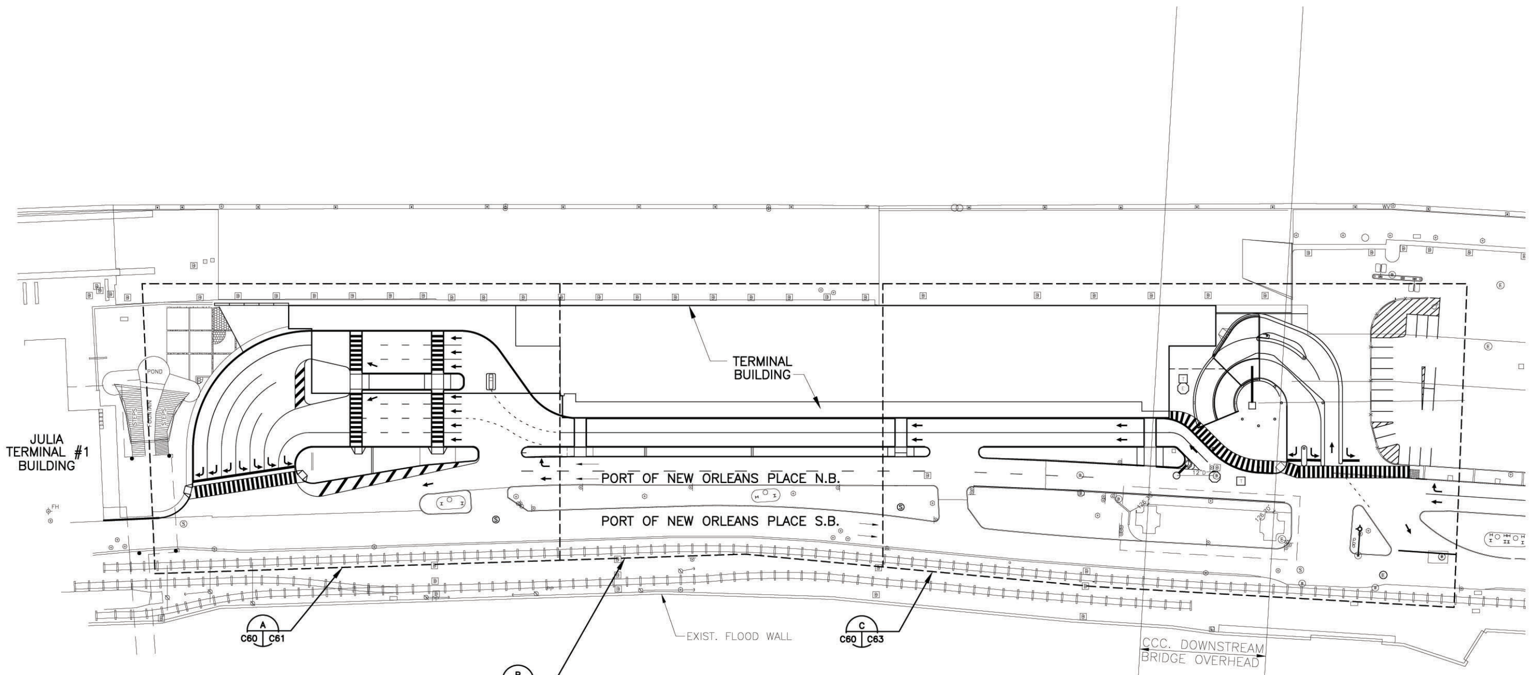
Lower Left and Right- Finishing the interior and exterior of the building.



BOARD OF COMMISSIONERS
PORT OF NEW ORLEANS
ERATO STREET CRUISE TERMINAL COMPLEX
CRUISE TERMINAL AND
PARKING GARAGE
GROUND LEVEL OVERALL FLOOR PLAN
BGA-12010-A110
CH2MHILL
1515 POYDRAS STREET, SUITE 2110
NEW ORLEANS, LOUISIANA 70112
GROUND LEVEL OVERALL PLAN
Scale In Feet
LEGEND
ROOM LEGEND
STRETCH
DESTINY
LOA = 952'
BEAM = 116.5'
DRAFT = 26.92'
BOW
THRUSTERS
TENDER EMBARK. +6.0'
CREW EMBARK. +10.33'
BUNKER +10.33'
PAX EMBARK.+20.6'
MAIN PAX +38.66'
PAX EMBARK.+29.5'
LUGGAGE +10.3'
BUNKER +10.3'
GARBAGE +10.3'
08-JUN-2004 16:39:55


EAST ELEVATION
SCALE: 1" = 30'-0"
WEST ELEVATION
SCALE: 1" = 30'-0"
NORTH ELEVATION
SCALE: 1" = 30'-0"
SOUTH ELEVATION
SCALE: 1" = 30'-0"
ALT "3"
SANDBLAST FINISH AND STAIN
FINAL FINISH AND COLOR APPROVED BY OWNER
ACID WASH FINISH AND STAIN
FINAL FINISH AND COLOR APPROVED BY OWNER
PARKING CONSULTANTS
CONSULTING ENGINEERS
CH2MHILL
1515 POYDRAS STREET, SUITE 2110
NEW ORLEANS, LOUISIANA 70112
BOARD OF COMMISSIONERS
PORT OF NEW ORLEANS
ERATO STREET CRUISE TERMINAL COMPLEX
CRUISE TERMINAL AND PARKING GARAGE
ALT. 3 BUILDING ELEVATIONS
BGA-12010-G302


CAVITY SLAB AND EXISTING FOUNDATIONS FRAMING PLAN
PART PLAN
SECTION
CONSTRUCTION JOINT
BOARD OF COMMISSIONERS PORT OF NEW ORLEANS
ERATO STREET CRUISE TERMINAL COMPLEX
CRUISE TERMINAL AND PARKING GARAGE
SUBSTRUCTURE DRAINAGE PLAN
MORPHY MAKOFSKY INCORPORATED
BGA-12010-W60



STRIPING AND SIGN PLAN

SCALE: 1"= 40'

NOTES:

1. ALL STRIPING PAINT SHALL BE ACRYLIC ENAMEL. NO THERMOPLASTIC PAINT ALLOWED.
2. ALL 4" DIAGONAL STRIPING SHALL BE SPACED 4 FEET CENTERLINE TO CENTERLINE, UNLESS OTHERWISE NOTED.
3. ALL STRIPING ALONG CURBS SHALL BE SPACED 12" FROM THE EDGE OF THE CURB TO THE CENTERLINE OF THE STRIPE.
4. THE SHEET AND ITS CORRESPONDING DETAILS SHOW ONLY PAVEMENT MARKINGS REQUIRED FOR TRAFFIC AND SAFETY. ANY ARCHITECTURAL MARKINGS CAN BE FOUND ON THE ARCHITECTURAL SHEETS.
5. UNLESS OTHERWISE NOTED, ALL EXISTING SIGNAGE SHALL REMAIN.
6. ALL TRAFFIC SIGNS AND STRIPING SHALL CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
7. ALL EXISTING SIGNS SHOWN ON SHEET C61–C63 SHALL REMAIN, UNLESS OTHERWISE NOTED.
8. ANY EXISTING SIGNS THAT ARE NO LONGER REQUIRED SHALL BE REMOVED BY THE CONTRACTOR. SIGNS TO BE REMOVED NOT IDENTIFIED HERE WILL BE IDENTIFIED BY THE PROJECT ENGINEER.

LEGEND

4" W	SOLID WHITE STRIPE
4" Y	SOLID YELLOW STRIPE
4" WB1	4" BROKEN WHITE STRIPE 6' LONG AT 18' SPACING
4" WB2	4" BROKEN WHITE STRIPE 2' LONG AT 6' SPACING
4" WB3	4" BROKEN WHITE STRIPE 10' LONG AT 30' SPACING
12" W	SOLID WHITE STRIPE
24" W	STOP BAR
24" WC	24" WHITE CROSSWALK BARS W 8" STRIPES

REV.	BY	DATE
7		
6		
5		
4		
3		
2		
1		

CONSULTING ENGINEERS
CH2MHILL
1515 POYDRAS STREET, SUITE 2110
NEW ORLEANS, LOUISIANA 70112

PHILIP A. CRANNELL, JR. Reg. No. 5413 STATE OF LOUISIANA REGISTERED ARCHITECT

DRAWN JLS
DESIGNED JRS
CHECKED GK
APPROVED JRS

IDENTIFICATION NO.

BOARD OF COMMISSIONERS PORT OF NEW ORLEANS

ERATO STREET CRUISE TERMINAL COMPLEX

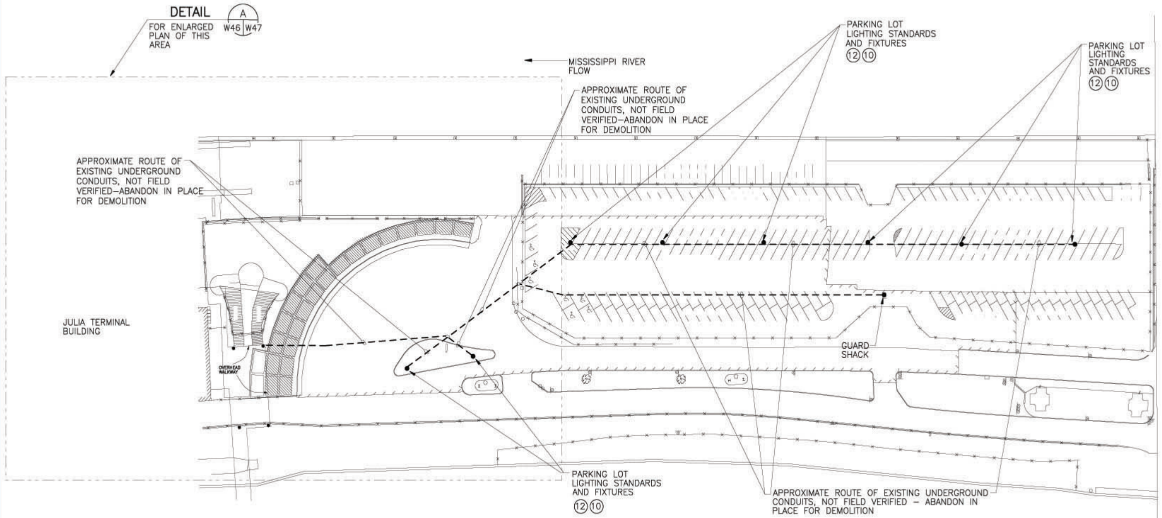
CRUISE TERMINAL AND PARKING GARAGE

STRIPING AND SIGNAGE PLAN

SCALE 1" = 40'
DATE 18–JUNE–04
DESIGNED
DRAWN
CHECKED
SUBMITTED BY
PROJECT ENGINEER
RECOMMENDED
APPROVED
WILLIAM B. CROMARTIE, ENGINEERING MANAGER
KYLE C. JONES, DEPUTY DIRECTOR, PORT DEVELOPMENT

DWG. NO. BGA–12010–C60
REQ. 030076

07-JUN-2004 13:42:38



PARTIAL PLAN
1"=50'

PHASE 1
ELECTRICAL DEMOLITION NOTES
REFERENCE SHEET W47

(1) SIX 1-INCH NOMINAL CONDUITS EXIT THE WALL OF JULIA TERMINAL VIA A PULL BOX 8 INCHES SQUARE X 18 INCHES LONG APPROXIMATELY 14 FEET ABOVE FINISHED FLOOR AT THIS LOCATION. ONE CONDUIT AND ITS WIRES WILL BE REMOVED, FIVE OF THESE CONDUITS WILL REMAIN. ALL CIRCUITS ORIGINATE AT LP1 AND LP2 INSIDE THE JULIA TERMINAL ELECTRICAL ROOM. CONNECTED LOADS ARE SHOWN ON ELEVATION 1/W47|W47. ALL CONDUITS AND WIRING ARE 1"C–3#12&1#12G UNLESS NOTED OTHERWISE. ALL CONDUITS ABOVE GRADE ARE EXPOSED.

(2) DE-ENERGIZE CIRCUITS LP1–1,2,3,4,5,6 TO PARKING LOT LIGHTS AND LP2–23,25,30,32 TO CANOPY FANS AND LIGHTS. VERIFY CIRCUITS TO BE WORKED ON HAVE BEEN DE-ENERGIZED. REMOVE PARKING LOT LIGHTING CONDUIT ON LOAD SIDE OF PULL BOX ABOVE WITH JUNCTION BOXES AND FITTINGS TO VERTICAL RIGID GALVANIZED STEEL (RGS) CONDUIT RUN IN NOTE 3. CUT 4#8&4#10 THWN APPROXIMATELY 24 INCHES FROM PULL BOX. LABEL ALL SIX CIRCUITS WITH THEIR PANELBOARD AND CIRCUIT NUMBERS, INSULATE ENDS AND COIL SEPARATELY AND NEATLY INSIDE PULL BOX. PROVIDE GASKETED CLOSURES FOR ALL HOLES IN PULL BOX. PROVIDE NEW INDEXES IN PANELBOARD LP1 WITH THE SIX DISCONNECTED CIRCUIT BREAKERS LABELED "DO NOT ENERGIZE – IN BOX ON SOUTH WALL"

(3) AT THIS LOCATION RGS CONDUIT TO PARKING LOT LIGHTING DROPS VERTICALLY ALONG THE COLUMN TO RUN UNDERGROUND TO HAND HOLE AT ILLUMINATED SIGN. SEVER 4#8&4#10 IN HAND HOLE AT LOCATION 9 AND REMOVE BACK TO CUT ENDS IN 1 ABOVE. REMOVE CONDUIT ON COLUMN AND ALL CONDUIT AND JUNCTION BOX. REMOVE ALL HARDWARE SECURING CONDUIT TO COLUMN BUT DO NOT DAMAGE COLUMN. CUT OFF RGS FLUSH WITH FINISHED SLAB, GROUT CLOSED FLUSH WITH SLAB. ABANDON UNDERGROUND CONDUIT IN PLACE FOR DEMOLITION.

(4) AT THIS LOCATION FOUR CONDUITS FROM TWO OF THE LIGHTS TO REMAIN AND TWO OF THE FANS TO REMAIN EXTEND TO FANS AND LIGHTS TO BE REMOVED. DISCONNECT WIRE AND CONDUIT AT JUNCTION BOXES TO REMAIN AND CLOSE HOLES IN JUNCTION BOXES WITH SEALS UL LISTED FOR THE PURPOSE.

(5) REMOVE WIRING, CONDUITS, JUNCTION BOXES, FANS AND LIGHTING FIXTURES UNDER CANOPY. DO NOT DAMAGE FANS AND LIGHTING FIXTURES; DELIVER TO OWNER FOR FUTURE RE-USE. THERE ARE TWO JUNCTION BOXES AT EACH FAN AND AT EACH LIGHT. DO NOT REMOVE FANS, LIGHTS AND ELECTRICAL WORK.

(6) RE-ENERGIZE ALL REMAINING ELECTRICALS WHICH WERE DE-ENERGIZED FOR THIS WORK, VERIFY PROPER OPERATION AND DEMONSTRATE TO ENGINEER.

(7) NOT USED

(8) NOT USED

(9) AT THIS LOCATION WIRES EXTEND IN UNDERGROUND CONDUIT TO TWO PARKING LOT LIGHTING STANDARDS AND FIXTURES AND THE ILLUMINATED SIGN ON THE TRAFFIC ISLAND, AND TO THE PARKING LOT LIGHTING PANELBOARD. DISCONNECT ALL COMPONENTS, REMOVE ALL WIRING, ABANDON UNDERGROUND CONDUITS IN PLACE FOR DEMOLITION. WIRING TO PARKING LOT LIGHTING PANELBOARD IS 4#8. WIRING TO SIGN AND TWO FIXTURES ON ISLAND IS 4#10.

(10) REMOVE PARKING LOT PANEL BOARD (100 AMP), PARKING LOT LIGHTING CONTROLS, GUARD SHACK TRANSFORMER (15 KVA) AND GUARD SHACK PANELBOARD (60 AMP), PROTECTING ALL FROM DAMAGE. REMOVE ALL WIRING AND CONDUITS BETWEEN THEM, REMOVE ALL CONDUITS DOWN TO GRADE AND REMOVE ALL WIRING TO ALL PARKING LOT LIGHTING STANDARDS AND FIXTURES AND TO GUARD SHACK. ABANDON ALL UNDERGROUND CONDUIT IN PLACE FOR DEMOLITION. REMOVE C8 STEEL CHANNEL FRAMING.

(11) DISPOSE OF PANELBOARDS, TRANSFORMER AND CONTROLS AS INSTRUCTED BY ENGINEER, WHICH MAY INCLUDE DELIVERY TO OWNER FOR FUTURE RE-USE.

(12) REMOVE PARKING LOT LIGHTING STANDARDS AND FIXTURES, PROTECT FROM DAMAGE. DISPOSE OF AS INSTRUCTED BY ENGINEER, WHICH MAY INCLUDE DELIVERY TO OWNER FOR FUTURE RE-USE. REMOVE CONCRETE BASES, ABANDON ALL UNDERGROUND CONDUIT IN PLACE FOR DEMOLITION.

(13) MAINTAIN PROPER OPERATION OF ALL SYSTEMS NOT SPECIFICALLY IDENTIFIED FOR DEMOLITION.

(14) OTHER SYSTEMS MAY EXIST IN THE WORK AREA WHICH ARE NOT SHOWN ON THESE DOCUMENTS AND ACTUAL CONFIGURATION OF SYSTEMS MAY DIFFER FROM THAT SHOWN. THESE DOCUMENTS ARE PROVIDED FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL PERFORM FIELD INVESTIGATIONS AND OBTAIN INFORMATION FROM UTILITIES, OWNER AND OTHERS AS NECESSARY TO COMPLETE WORK DESCRIBED WITHOUT DAMAGE TO, OR SHUTDOWN OF, OTHER SYSTEMS.

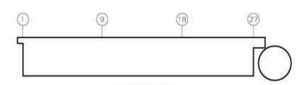
(15) DAMAGE TO OR SHUT DOWN OF SYSTEMS TO REMAIN SHALL BE REPORTED TO OWNER AND ENGINEER AT ONCE AND CORRECTED TO ORIGINAL CONDITION TO THE SATISFACTION OF OWNER AND ENGINEER WITHOUT CHANGE IN CONTRACT.

(16) ALL EXISTING SYSTEMS TO REMAIN WHICH ARE AFFECTED BY CONTRACTOR'S WORK SHALL BE MAINTAINED IN SATISFACTORY OPERATION AND IN COMPLIANCE WITH THE NEC DURING AND AT COMPLETION OF CONTRACTOR'S WORK. ALL MATERIALS PROVIDED BY CONTRACTOR SHALL BE APPROVED BY UL, INSTALLED IN COMPLIANCE WITH THE NEC AND SHALL NOT BE PROVIDED UNTIL WRITTEN APPROVAL IS RECEIVED FROM ENGINEER TO DO SO.

PHASE 2
ELECTRICAL DEMOLITION NOTES

(17) USING SAME PROCEDURES DESCRIBED UNDER PHASE 1, REMOVE LIGHTS, FANS WIRING AND RACEWAY SHOWN FOR PHASE 2 DEMOLITION ON SHEET W47 AND DISPOSE OF AS DIRECTED BY ENGINEER.

(18) RE-ENERGIZE ALL REMAINING ELECTRICALS WHICH WERE DE-ENERGIZED FOR THIS WORK, VERIFY PROPER OPERATION AND DEMONSTRATE TO ENGINEER.



KEYPLAN

CONSULTING ENGINEERS
CH2MHILL
1515 POYDRAS STREET, SUITE 2110
NEW ORLEANS, LOUISIANA 70112

STATE OF LOUISIANA — MARTIN J. WAYNE — License No. 30626 — PROFESSIONAL ENGINEER IN ELECTRICAL ENGINEERING

DRAWN J. PEUSER
DESIGNED M. WAYNE
CHECKED J. JONES
APPROVED M. WAYNE

IDENTIFICATION NO.

BOARD OF COMMISSIONERS
PORT OF NEW ORLEANS

ERATO STREET CRUISE TERMINAL COMPLEX
CRUISE TERMINAL AND PARKING GARAGE
SITE ELECTRICAL DEMOLITION – OVERALL

SCALE 1"=50'
DATE 18-JUNE-04
DESIGNED
DRAWN
CHECKED
SUBMITTED BY
PROJECT ENGINEER
RECOMMENDED
APPROVED
WILLIAM B. CROMARTIE, ENGINEERING MANAGER
KYLE C. JONES, DEPUTY DIRECTOR, PORT DEVELOPMENT

DWG. NO. BGA-12010-W46
REQ. 030076

REV.	BY	DATE
7		
6		
5		
4		
3		
2		
1		