

# PLAN OF ACTION - CITY CENTER, HARMON BUILDING

## ABATEMENT PLAN

LVI Environmental Services of Nevada, Inc., (LVI) has prepared the enclosed abatement plan in response to Clark County Director/Building Official Ronald L. Lynn's letter, dated July 12, 2011, requiring a plan of action to abate the potential for structural collapse of the Harmon Tower and to protect neighboring impacted uses and occupancies, including Crystals Shopping Center and the adjacent pedestrian bridge.

LVI's abatement plan approach provides for the engineered demolition and complete removal of the Harmon Tower and portions of the associated podium structure.

In order to ensure the most responsive and expedient method of abatement and removal of potential structural hazards, LVI's proposed technical approach uses implosive demolition means for the removal of the Harmon Tower.

LVI proposes removing portions of the adjacent, steel-framed, podium structure via conventional demolition methods in order to protect surrounding businesses, including public and private facilities located within the Crystals Shopping Center.

## **TEAM OVERVIEW**

The nation's largest demolition and environmental company, with a 24-year history of outstanding safety and performance excellence, LVI was chosen by CityCenter to formulate an abatement and removal plan for the Harmon Tower.

LVI's team of experienced experts assembled for this project includes Mr. Mark Loizeaux, President of Controlled Demolition, Inc. (CDI), the nation's most recognized implosion experts, and Sigma Engineering Solutions, Inc., (Sigma Engineering) a local consulting firm composed of the foremost experts in engineered demolition projects. The LVI Team has successfully completed dozens of implosions and multiple other demolition projects throughout Las Vegas and along the Las Vegas Strip. Notable projects include the Sands Hotel, Stardust, Castaways, Desert Inn, Aladdin Hotel, Tropicana, and El Rancho. An organizational chart which outlines the key team members and their respective responsibilities is attached to this letter.

The LVI Team will engage specialty sub-trades as necessary to execute the engineered demolition plan scope of work, including fire life safety, electrical, sprinkler isolation, scaffolding and shoring, and security.

The LVI Team will retain licensed engineers for all specialty trades. Preference will be given to architectural and engineering firms involved in the original building design, since they are more likely to be able to identify and protect critical infrastructure elements.



## PROTECTIVE MEASURES

The LVI Team considers protection of the public and surrounding infrastructure paramount to the demolition and removal strategy. Safety will be the primary driver in the formulation of project implementation plan components, including timelines, phasing, and detailed removal strategies.

The engineered demolition plan incorporates the use of existing structure elements and infrastructure specified to remain. Such elements will be strategically used to act as structural barriers against the effects of the planned implosion. They will serve as both a structural barrier, as well as provide dust and safe zone protection to the public and surrounding infrastructure.

The LVI Team will conduct pre-implosion removal of portions of the steel podium to provide a physical separation between the existing commercial businesses and pedestrian uses at the Crystals Shopping Center.

In addition, the LVI Team will provide for the re-routing of pedestrian traffic during the implosion preparatory phases in order to protect the public during the project period. Protective screening and barriers/scaffolding will be implemented to provide both dust control and physical protection of adjacent properties and public facilities against implosion effects.

Vehicular, pedestrian, and patron traffic will be controlled throughout the preparation and postimplosion removal phases of the project in such a manner as to minimize impacts to traffic and to provide protection of the public.

## SCHEDULE

The main phases of the demolition plan include: engineering design and development; isolation and construction of temporary facilities; pre-demolition preparatory work; implementation of protection elements for the surrounding public; and, structure implosion and removal of debris.

Initial schedule development includes a very aggressive 6-month goal for building preparation and implosion demolition, followed by another 4 months of debris removal, then a final month of site clean-up and restoration.

The LVI Team understands that time is of the essence. Therefore, we have been working closely with the project team to facilitate the execution of these plans as quickly, and as safely, as possible. Close coordination and cooperation with State and local agencies will play a critical role in the successful implementation of the demolition plan. LVI has assembled this expert demolition team with vast experience in the coordination and implementation of implosion plans with these agencies so as to facilitate a smooth and cooperative coordination process with these vital project partners.



## PROJECT MANAGEMENT

The LVI Team understands that effective project management and smooth execution of this plan is critical to the success of this project. To this end, the LVI Team has carefully chosen to implement the best mix of project managers with the necessary technical expertise in their respective fields.

The assembled project management team will be responsible for the execution of the demolition plan from start to finish. This includes handling of specialty contractors, managing the large work crews and special operators, as well as providing site security and protection. All members of the management team will be actively involved in the development and design of the implosion plan. Each will play a key role in ensuring the feasibility and efficiency of the plan with regard to on-site implementation and effectiveness.

LVI's president, Joe Catania, will be dedicated to overseeing the management and leadership of the demolition team. Mr. Catania brings more than 20 year's demolition industry experience to this effort.

Joe Farré, president of Sigma Engineering Solutions, a licensed professional engineer in the State of Nevada, will serve as the director of engineering for the project. Mr. Farré will be responsible for the design of the demolition plan, as well as the coordination of all engineering sub-consultants, their respective staff, and field representatives. He will work closely with Mr. Mark Loizeaux of CDI, the primary subcontractor, to develop a safe and effective implosion plan for the building that ensures the protection of the public and commercial infrastructure.

A dedicated LVI health and safety manager will ensure strict adherence to LVI safety policies and the site specific safety plan.

LVI's senior manager Mr. Chad Maddock will be responsible for jobsite implementation of the approved engineered demolition plan, and will work closely with CDI, as well as the engineering field team.

#### **ENVIRONMENTAL CONTROLS**

LVI will plan and conduct all work for this project in a manner that will facilitate achieving U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver certification upon completion.

Calling upon our vast experience in implosion demolition and debris removal, the LVI Team will maintain dust control on a day-to-day basis. Meticulous efforts will be undertaken to prevent dust, a natural byproduct of the implosion process, from leaving the footprint of the demolition site during daily operations.

LVI will perform the following critical steps related to post-implosion dust control and clean-up (listed in order of importance).



- 1. Clean all dust from Las Vegas Blvd., the primary focus for traffic flow.
- 2. Clean all dust from Harmon Blvd., the second most important access route.
- 3. Clean neighboring sites, including Cosmopolitan, Planet Hollywood, and other adjacent properties.
- 4. Clean CityCenter Campus and facilities.

LVI will review production information data related to installed building products to ensure identification and removal of any material requiring special handling or processing prior to demolition.

LVI will prepare a Storm Water Pollution Prevention Plan to provide for the necessary protection and procedures for control of surface waters. The Storm Water Pollution Prevention Plan will address the control of water run-off before, during, and after demolition activities. Upon completion, the report will be provided to the appropriate governing agencies.

#### PERMITTING

LVI's design team will prepare the planning, engineering, and explosive use plans to be submitted to the proper jurisdictional agencies for review and approval prior to commencement of work.

Permitting agencies include, but are not limited to, the following.

- Clark County Development Services, Building Division
- Clark County Development Services, Traffic Department
- Clark County Public Works
- Clark County Fire Department
- Clark County Air Quality Control Board
- Las Vegas Metropolitan Police Department
- Southwest Gas
- Nevada Highway Patrol
- U.S. Department of Alcohol, Tobacco and Firearms
- U.S. Department of Transportation



## **SECURITY**

LVI's Team will provide security and protection of the demolition site, public areas, and surrounding infrastructure. Site security and protective measures encompass the following three main functions: 1) demolition site protection; 2) implosion zone control and protection; and, 3) explosives transportation and on-site protection.

Demolition site protection will include use of fencing and separation barriers to isolate the site from the day-to-day pedestrian and vehicular traffic. In addition, 24-hour security personnel will provide site safety and protection of both the public and on-site resources and personnel.

The LVI Team will provide for 24-hour armed security protection of explosive devices from the minute that the materials arrive on site, until the successful detonation and disposal of any remaining blasting ordinances.

Implosion zone control and protection security measures will include coordination with on-site security staff, as well as the City of Las Vegas Metropolitan Police Department, the Nevada Highway Patrol, and in-house Casino security to assure proper evacuation, control, and safety of the implosion zone. The LVI Team will call upon our extensive prior local and national experience to safely and efficiently orchestrate demolition implosion efforts.

Transportation, handling, loading and detonation of all explosives will be controlled by the specialty subcontractor CDI. CDI will coordinate with all regulatory agencies to assure the safe and proper shipping, handling, and storage of all explosives material on site.

## **SAFETY**

The LVI Team considers the health and safety of the public and all team member employees of primary importance to this project. At LVI, we make safety a condition of employment.

LVI, the prime contractor for this project, clearly demonstrates its leadership and commitment to health and safety through its outstanding health and safety record as clearly shown in its insurance safety statistics listed below:

- Experience Modification Rate (EMR) = 0.53
- Lost Time Incident Rate (LTIR) = 0.10
- OSHA Recordable Incident Rate (RIR) = 1.90

LVI's positive safety record is the result of our impeccable Health and Safety leadership management strategy. This management approach implements a "TARGET ZERO" objective under the philosophy that every accident can and will be prevented. LVI management considers people to be our most important asset. With this in mind, LVI implements an employee safety incentive reward program that shares the benefits of cost savings with our staff.



Safety objectives are achieved via the following methods:

- Provide a safe and healthy work environment for all employees
- Employee health and safety orientations
- Job site hazard analyses for all tasks performed on a daily basis
- Full-time line of site supervision for all tasks
- Full-time dedicated project health and safety officer
- Necessary training including, but not limited to:
  - 1. Fall hazard safety
  - 2. Confined space awareness
  - 3. Lift operator
  - 4. Asbestos/hazardous materials training

## **Policy**

It is the policy of LVI Services to provide a safe and healthy place of employment, free of recognizable hazards, for all of its employees and for the public in each of its operations, and to voluntarily abide by all safety regulations as they pertain to our industry. Safety and health will always take precedence over more expedient unsafe operations. Every attempt will be made to provide equipment and create conditions that will make for a safe and healthy work place. We will provide safety and health education and training to each of our employees, all of whom are expected to read and understand the Rules of Safety that are provided on each job site. Any employee who willfully disregards known safety and health practices will be subjected to strong disciplinary action. In the case of subcontractors, they will be required to abide by the provisions of this policy.

## Safety Accountability

It is the policy of LVI to provide a safe and healthy workplace, free of recognized hazards, for each of its employees. At a minimum, LVI will comply with all accepted work practices, health and safety regulations, standards and codes, and will provide training to its employees to assist them in performing their jobs safely.

Implementation of this policy is further defined in the health and safety policies, procedures, and guidelines which make up LVI's Corporate Safety Manual. It is the responsibility of all levels of LVI management to be knowledgeable of the contents of these procedures and to implement these procedures, as applicable to their individual operations.

The providing of safe and healthy working conditions is the direct responsibility of line management. Each manager and supervisor is responsible for the implementation of this program within his sphere of operation. All levels of LVI management must know the information contained within this Corporate Safety Manual and implement these procedures, as applicable.



Each Branch within LVI shares responsibility for compliance with the Corporate Safety Manual. Branches are responsible for supplementing the program developed by Corporate Safety as required by individual operations.

## SITE SPECIFIC PROTECTION PLAN

Critical facilities such as, the Crystal Shopping Center, PRADA, PUCCI, and the nearby pedestrian bridge will receive site specific protective measures to protect against the effects of the implosion process. Detailed protective measures, including items such as protective structural barriers, separation zones, supplemental blast walls, dust protection, and supplemental screening measures will be used to separate and protect these important facilities during the implosion process.

Detailed demolition plans will provide the proximity, size, and type of protective measures used to protect these valuable project elements, as well as the public and other critical infrastructure elements.

## **CLOSING**

In summary, this plan of action provides the removal of the Harmon Tower structure through use of implosive demolition. This approach minimizes the abatement period, provides a safe and reliable method of removal through the execution of an engineered demolition plan, and is supported by a team of experts with unparalleled, and proven, experience on similar projects on the Las Vegas Strip.