



# Universal Defense Military Equipments

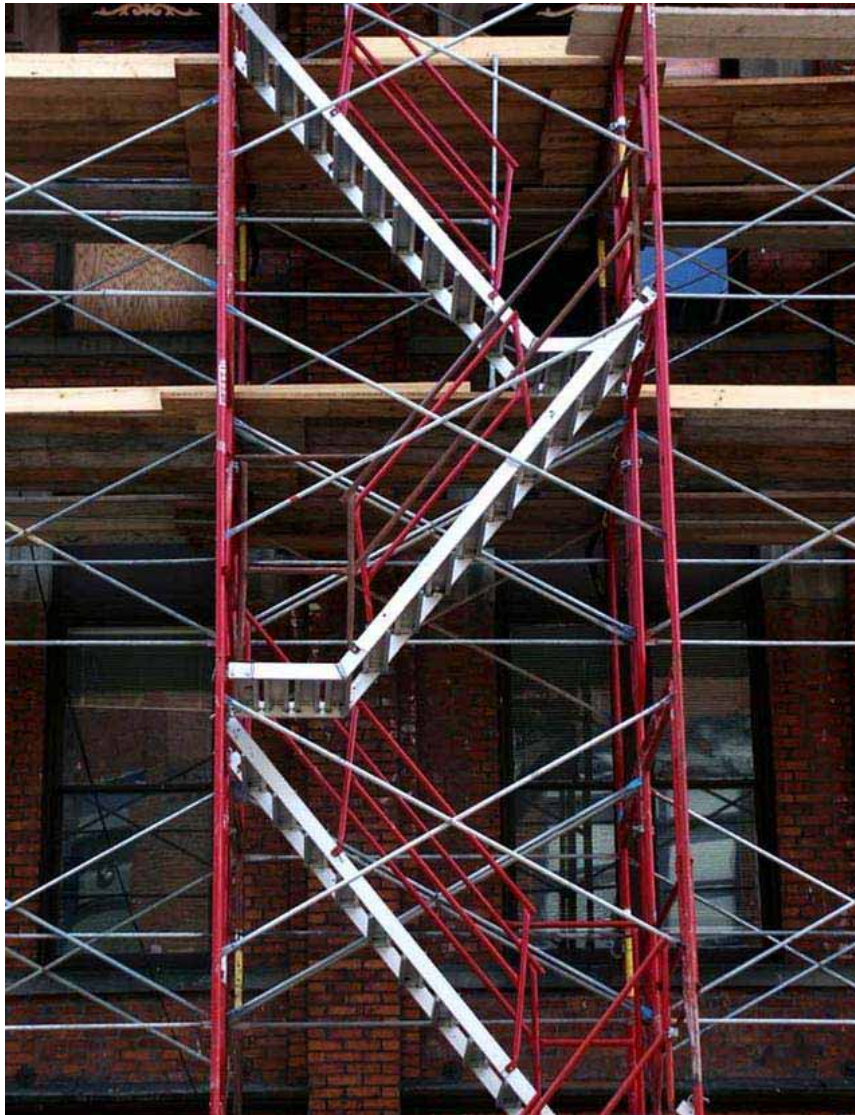
Christopher Trading  
USA P.O. Box: # 1372 Claremont, CA 91711  
Jordan P.O. Box: # 850706, Amman, Jordan, 11185

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## Universal Defense for Military Equipment



**Construction**  
Projects and Power





# Universal Defense

Military Equipments

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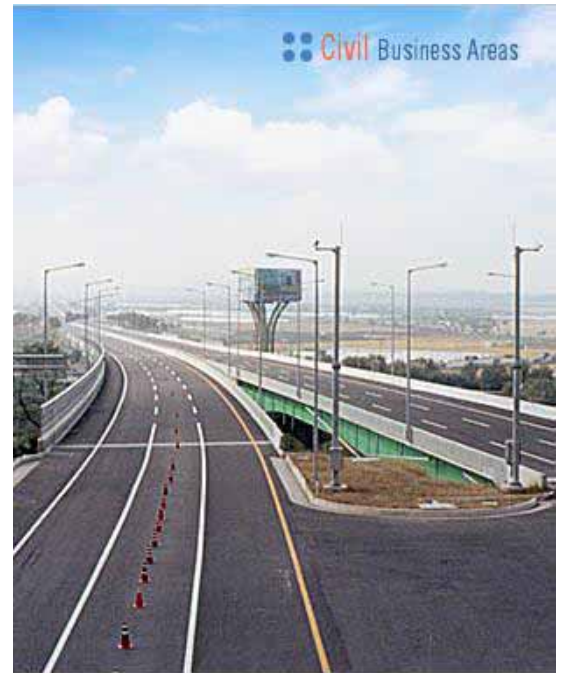
## Civil

Universal Defense for Military Equipment (UDME) and its associates are geared into designing a more convenient living environment to live, and develop a nation based on the idea of Harmonizing human activities and nature.

Through the land reclamation and ground work of Youngil Bay and Kwangyang Bay, UDME and its associates rewritten one of the chapters of Korean and the Middle East history by changing the shape of the Korean map.

Also, UDME and its associates are actively participating in SOC projects such as the highway construction of Incheon International Airport, inland highway construction of central part of the country, and the new port facility of Youngil bay. UDME and its associates successfully constructed the followings; loading/unloading port facilities in Pohang and Kwangyang Plant, a product-shipping port, an all-weather port, and distribution facilities in Masan and Pyungtaek Port.

UDME and its associates are actively taking part in large-scale construction projects in order to enhance the competitiveness of the nation, based upon UDME and it's associate's abundant experience through various civil construction projects.

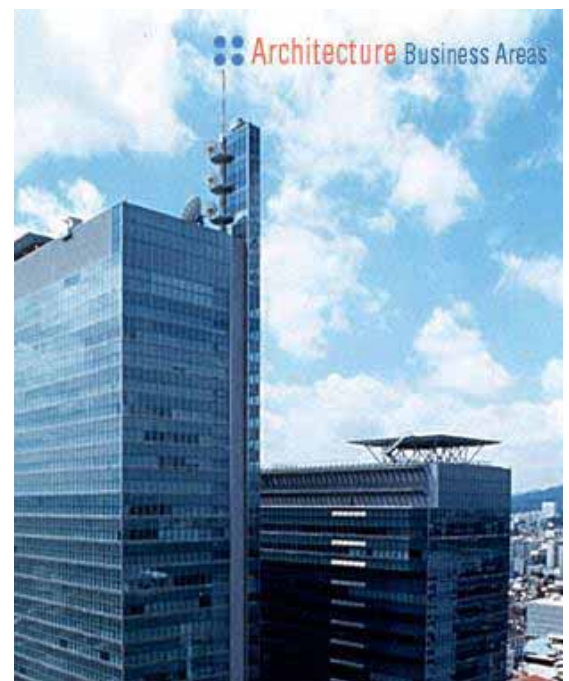


## Architecture

Universal Defense for Military Equipment (UDME) and its associates are one of the most preferred leaders in construction of skyscrapers and advanced architectural structures.

Based on its state-of-the-art construction technologies and abundant resources, UDME and its associates engineers and constructs not only intelligent buildings but also brings to life a new concept of educational and sports facilities.

It boasts an array of award winning architectural constructions. In 1995, the UDME and its associates Center, the headquarters of UDME and its associates, the world's largest steel works, received the Grand Award for Korean Architecture. Also, the first steel-structured building in Vietnam, the Diamond Plaza, erected by UDME and its associates, received the Golden Quality Medal from the Vietnamese government. In China UDME and its associates constructed the POS-Plaza which won the Golden Medal for Construction from the city government of Shanghai.







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UDME and its associates will continue to lead the construction industry by creating the most convenient and beautiful buildings with precision construction technologies and methods.

## Housing

Since 1970, Universal Defense for Military Equipment (UDME) and its associates has strived to create a comfortable and convenient living environment.

It started out with the construction of large apartment complexes in Pohang and today it continues to construct sophisticated housing facilities.

Based on its transparent management policies, UDME and its associates has established itself as one of the most trustworthy companies by acquiring the highest credibility rating in finance among market competitors. With their valuable projects in the hands of UDME and its associates, customers are assured of success.

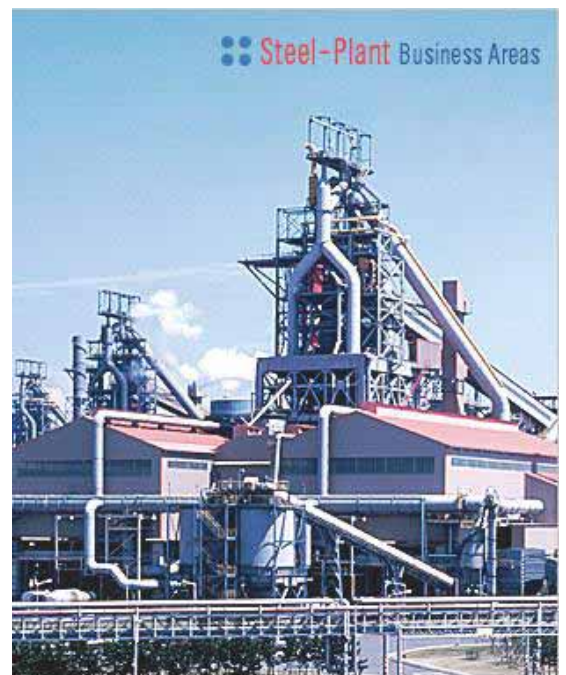
UDME and its associates gear itself towards becoming an international leader in the construction field. It works for customer satisfaction and continues to sharpen its technologies and services for creating convenient and comfortable living environments. UDME and its associates keeps powerful brand values, excellent planning capabilities and superb engineering and construction skills, all ready to meet the needs of its customers and bring the highest values for them.



## Steel Plant

Universal Defense for Military Equipment (UDME) and its associates keeps their competitiveness to the cutting edge by acquiring a variety of experiences and technical know-how's in the integrated process of steel-making plants, such as Blast Furnace, Smelting Facility, Finex, Continuous Casting, Electric Furnace, Bar/Wire Rod Mill, Surface Treatment, etc.

For the first time in 30 years of steel-making history in Korea, UDME and its associates received a world-wide recognition of its technology by obtaining an oversea project in Iran through an international bid. UDME and its associates are to build a steel-making plant, including blast furnace, sintering facility (annual production of 2.4 million tons), auxiliary facilities (Raw material treatment and transportation system) and iron-making plant. The plant is capable of producing 1.4 million tons of steel annually.





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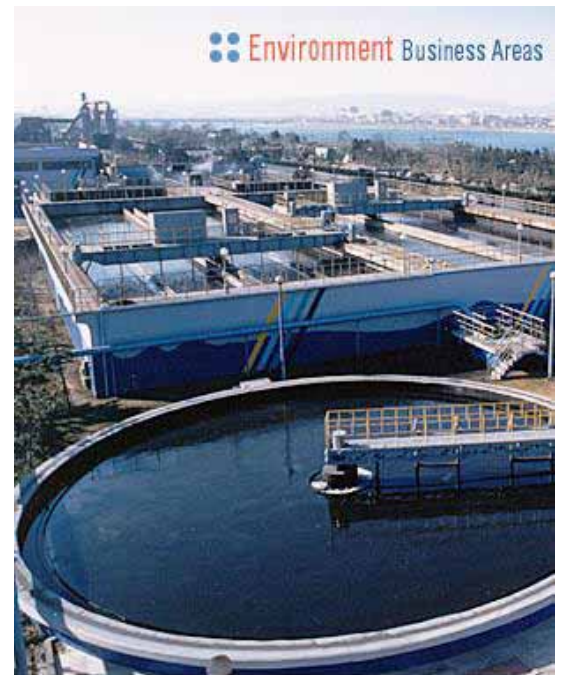
## Environment Plant

Universal Defense for Military Equipment (UDME) and its associates shows its potential in the environmental area by applying technology and experience attained by executing various projects such as building facilities for water treatment, air pollution treatment, and waste material treatment, and keeps its leading role in helping to preserve the earth ecosystem.

Regarding the area of water treatment, UDME and its associates built various water treatment facilities in Pohang and Kwangyang plant. And UDME and its associates are now implementing several projects for building sewerage treatment facilities in Uljin, Munkyeong, Heunghae, and Ansan.

In regard to air pollution treatment system, UDME and its associates contributed to make a greener Pohang and Kwangyang by employing highly efficient dust collecting system.

Finally in the area of waste material treatment, UDME and its associates have a great deal of technical know-how in designing and building incinerators and sludge recycling systems.



## Energy Plant

Universal Defense for Military Equipment (UDME) and its associates are actively participating in the Energy plant area, based upon its experience and technology, which were essential in building an oxygen plant, various energy systems, and power plants in Pohang and Gwangyang.

UDME and its associates built LNG Thermal Power Plants in Pohang and Gwangyang, and has gained recognition by proving its engineering abilities in building a LNG Storage Facility in Gwangyang





# UNIVERSAL DEFENSE



Construction

# Organization



## Staff

- Strategic Planning & Accounting Department
- General Administration Department
- Human Resources Management Department
- Procurement Department
- Business Department
- Auditing Department



## R&D

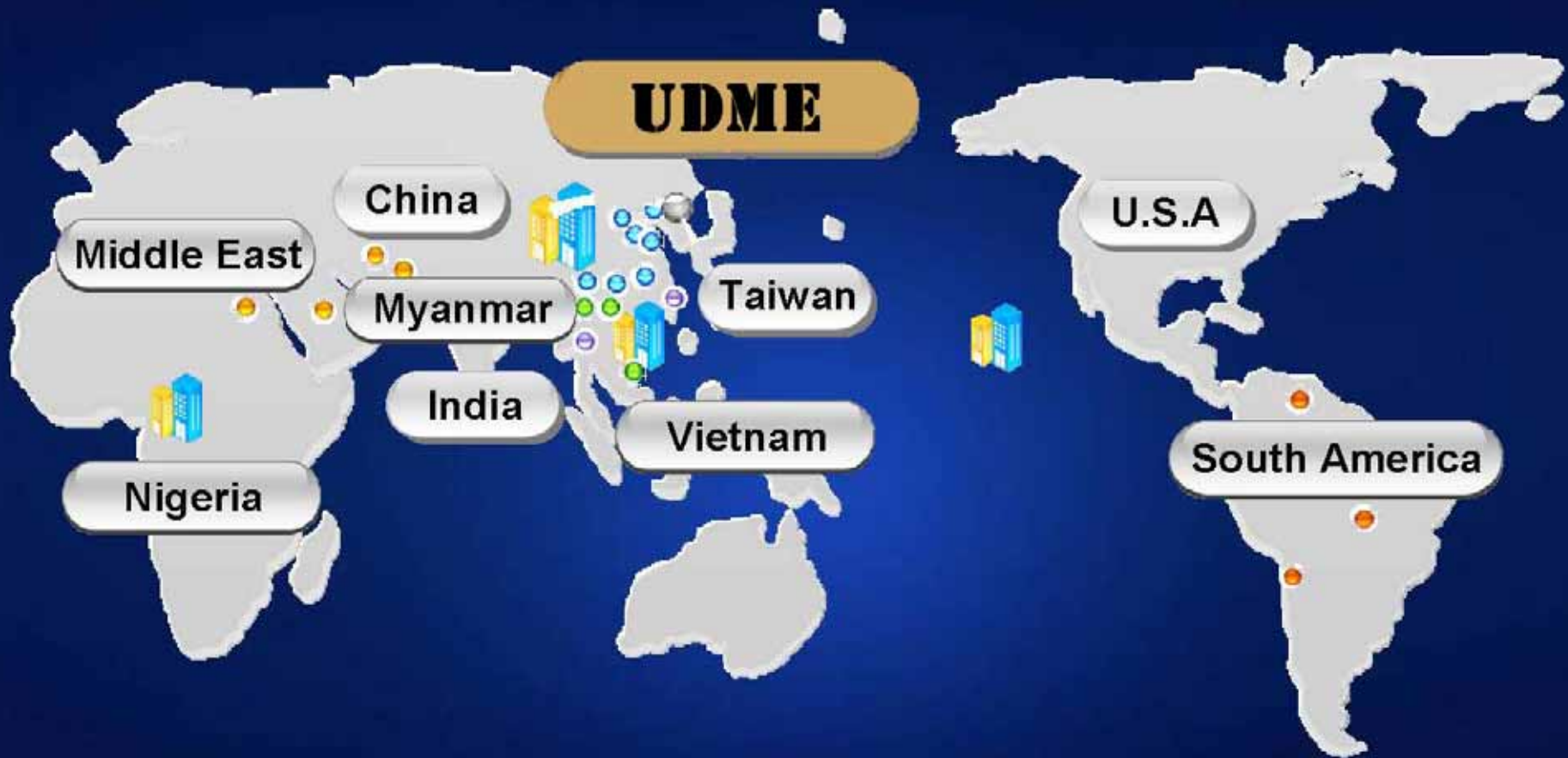
- R & D Center



## Operation Division

- Overseas Business Division
- Plant Engineering & Construction Division
- Energy Engineering & Construction Division
- Civil & Environment Division
- Architecture Division
- Song-do Business Division

# Overseas Expansion





# Business Proposal

- New City Development
- High Rise Building
- Port
- Railway
- Road
- Mini Mill Plant
- Strip Surface Treatment (CGL,CCL)
- Cement Plant
- Power Plant



# High Rise Building

## Star City / Residential Complex



- Location: Seoul
- Total Floor Area
  - 418,415 m<sup>2</sup>
- Total Floor Area
  - 3 Basement Floor
  - 58 Above Ground Floor
- Contract Value
  - US\$ 448 Million

## Adelis / Officetel



- Location: Busan
- Total Floor Area
  - 161,973 m<sup>2</sup>
- Total Floor Area
  - 3 Basement Floor
  - 47 Above Ground Floor
- Contract Value
  - US\$ 175 Million

## Centum Park / Apartment



- Location: Busan
- Total Floor Area
  - 663,666 m<sup>2</sup>
- Total Floor Area
  - 2 Basement Floor
  - 51 Above Ground Floor
- Contract Value
  - US\$ 568 Million

## Metapolis / Mixed Use



- Location: Dongtan
- Total Floor Area
  - 426,813 m<sup>2</sup>
- Total Floor Area
  - 4 Basement Floor
  - 66 Above Ground Floor
- Contract Value
  - US\$ 424 Million



# Mini Mill Plant

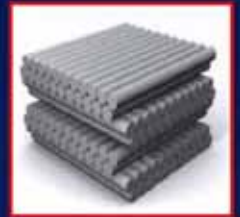


## ■ Plant Capacity

- 300,000 ton / year
- 500,000 ton / year

## ■ Product

- Deformed & Round Bar (D10 ~ D32)



## ■ Application

- Construction for Building, Road, Port, etc.

## ■ Scope of Work

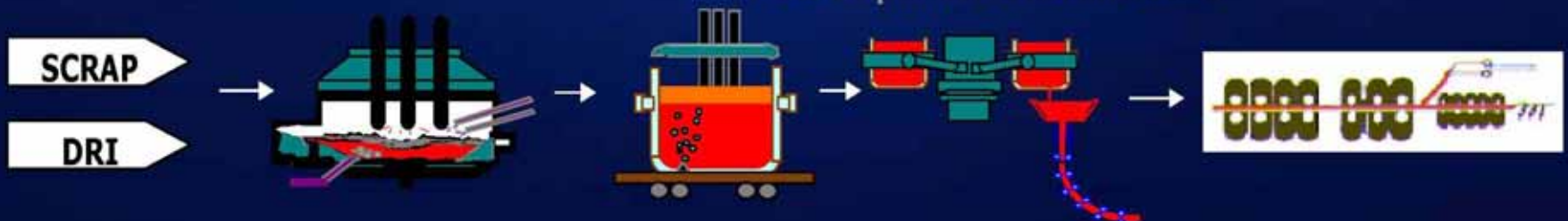
- Engineering / Procurement (EP)
- Engineering / Procurement / Construction (EPC)

## ■ Investment Cost (EPC)

- 300,000 TPY : Approx. US\$ 153 million
- 500,000 TPY : Approx. US\$ 230 million

\* Subject to site condition, equipment supplier, etc

\* FOB as per INCOTERMS 2000





# Continuous Galvanizing Line (CGL)

## Line layout



## Capacity & investment cost

Capacity	Application	Investment cost (EPC)
100,000 ton/yr	Construction	US 45 Mil.
200,000 ton/yr	Construction, Appliance	US 55 Mil.
300,000 ton/yr	Construction, Appliance	US 65 Mil.
400,000 ton/yr	Construction, Appliance, Automobile	US 80 Mil.

## Application





# Color Coating Line (CCL)

## ■ Line layout



## ■ Capacity & investment cost

Capacity	Application	Investment cost (EPC)
50,000 ton/yr	Construction, Appliance	US 10 Mil.
100,000 ton/yr	Construction, Appliance	US 22 Mil.
150,000 ton/yr	Construction, Appliance	US 30 Mil.

## ■ Application





# Cement Plant



## ■ Scope of Work

- Engineering/Procurement (EP)
- Engineering/Procurement/Construction (EPC)

## ■ Investment Price (EPC)

- 4000TPD Clinker Basis: Approx. US\$ 220 Million
- 5000TPD Clinker Basis: Approx. US\$ 250 Million
- 6000TPD Clinker Basis: Approx. US\$ 280 Million
- \* Excluding Quarry Development (Crusher)
- \* Subject to site condition, equipment supplier, etc

## ■ Plant Capacity

- 4000TPD (Clinker), 1.31 Mil.TPY (Cement)
- 5000TPD (Clinker), 1.63 Mil.TPY (Cement)
- 6000TPD (Clinket), 1.96 Mil.TPY (Cement)

## ■ Product

- OPC (Ordinary Portland Cement)
- SRC (Sulfur Resistant Portland Cement)
- \* According to ASTM C 150 standards

## ■ Application

- Construction for Building, Road, Port, etc



# Combined Cycle Power Plant (CCPP)



- **Location** : Kwangyang Steel Works, South Korea
- **Plant Capacity** : 500MW x 1
- **Fuel** : LNG / Diesel Oil
- **Major Equipment**
  - Gas Turbines : GE (Model : PG7241FA)
  - HRSG : Hyundai Heavy Ind (3 Pressure-HP/IP/LP)  
(Heat Recovery Steam Generator)
  - Steam Turbine : GE (type : Condensing, Reheat)
- **Investment Cost** : Approx. US\$ 350 million  
(Subject to site condition, equipment supplier, etc)



# Thermal Power Plant



- Location : Nueva Ventanas, Chile
- Plant Capacity : 270MW x 1
- Fuel : Coal
- Construction : 2006. 12.01~ 2009.12.30
- Major Equipment
  - Steam Turbine : Ansaldo
  - Boiler : Doosan Heavy Industry
- Investment Cost : Approx. US\$ 370 million  
(Subject to site condition, equipment supplier, etc)

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***Thank you  
for Working with  
Universal Defense***