

## HISTORIC AND DESIGN REVIEW COMMISSION

September 21, 2016

Agenda Item No: 2

**HDRC CASE NO:** 2016-364  
**COMMON NAME:** Lackland Corridor  
**ZONING:** UZROW  
**CITY COUNCIL DIST.:** 4  
**APPLICANT:** Alma Nunez/City of San Antonio  
**OWNER:** Texas Dept. of Transportation, Joint Base San Antonio  
**TYPE OF WORK:** Park improvements  
**REQUEST:**

The applicant is requesting a Certificate of Appropriateness for approval to:

1. Construct 75' monument with lighting
2. Construct concrete wall with texture around monument
3. Construct storm water improvements
4. Plant 161 trees
5. Construct parking area with 19 spaces
6. Construct picnic shade canopy
7. Construct restroom building
8. Construct two truss bridges
9. Install plaza paving and trails

### APPLICABLE CITATIONS:

*UDC Sec. 35-641. - Design Considerations for Historic and Design Review Commission Recommendations.*

In reviewing an application, the historic and design review commission shall be aware of the importance of attempting to find a way to meet the current needs of the City of San Antonio, lessee or licensee of public property. The historic and design review commission shall also recognize the importance of recommending approval of plans that will be reasonable to implement. The best urban design standards possible can and should be employed with public property including buildings and facilities, parks and open spaces, and the public right-of-way. Design and construction on public property should employ such standards because the use of public monies for design and construction is a public trust. Public commitment to quality design should encourage better design by the private sector. Finally, using such design standards for public property improves the identity and the quality of life of the surrounding neighborhoods.

*UDC Sec 35-642. – New Construction of Buildings and Facilities:*

In considering whether to recommend approval or disapproval of a certificate, the historic and design review commission shall be guided by the following design considerations. These are not intended to restrict imagination, innovation or variety, but rather to assist in focusing on design principles, which can result in creative solutions that will enhance the city and its neighborhoods. Good and original design solutions that meet the individual requirements of a specific site or neighborhood are encouraged and welcomed.

#### (a) Site and Setting.

- (1) Building sites should be planned to take into consideration existing natural climatic and topographical features. The intrusive leveling of the site should be avoided. Climatic factors such as sun, wind, and temperature should become an integral part of the design to encourage design of site-specific facilities which reinforces the individual identity of a neighborhood and promotes energy efficient facilities.
- (2) Special consideration should be given to maintain existing urban design characteristics, such as setbacks, building heights, streetscapes, pedestrian movement, and traffic flow. Building placement should enhance or create focal points and views. Continuity of scale and orientation shall be emphasized.
- (3) Accessibility from streets should be designed to accommodate safe pedestrian movement as well as vehicular traffic. Where possible, parking areas should be screened from view from the public right-of-way by attractive fences, berms, plantings or other means.



(4) Historically significant aspects of the site shall be identified and if possible incorporated into the site design. Historic relationships between buildings, such as plazas or open spaces, boulevards or axial relationships should be maintained.

**(b) Building Design.**

(1) Buildings for the public should maintain the highest quality standards of design integrity. They should elicit a pride of ownership for all citizens. Public buildings should reflect the unique and diverse character of San Antonio and should be responsive to the time and place in which they were constructed.

(2) Buildings shall be in scale with their adjoining surroundings and shall be in harmonious conformance to the identifying quality and characteristics of the neighborhood. They shall be compatible in design, style and materials. Reproductions of styles and designs from a different time period are not encouraged, consistent with the secretary of the interior's standards. Major horizontal and vertical elements in adjoining sites should be respected.

(3) Materials shall be suitable to the type of building and design in which they are used. They shall be durable and easily maintained. Materials and designs at pedestrian level shall be at human scale, that is they shall be designed to be understood and appreciated by someone on foot. Materials should be selected that respect the historic character of the surrounding area in texture, size and color.

(4) Building components such as doors, windows, overhangs, awnings, roof shapes and decorative elements shall all be designed to contribute to the proportions and scale of their surrounding context. Established mass/void relationships shall be maintained. Patterns and rhythms in the streetscape shall be continued.

(5) Colors shall be harmonious with the surrounding environment, but should not be dull. Choice of color should reflect the local and regional character. Nearby historic colors shall be respected.

(6) Mechanical equipment or other utility hardware should be screened from public view with materials compatible with the building design. Where possible, rooftop mechanical equipment should be screened, even from above. Where feasible, overhead utilities should also be underground or attractively screened. Exterior lighting shall be an integral part of the design. Interior lighting shall be controlled so that the spillover lighting onto public walkways is not annoying to pedestrians.

(7) Signs which are out of keeping with the character of the environment in question should not be used. Excessive size and inappropriate placement on buildings results in visual clutter. Signs should be designed to relate harmoniously to exterior building materials and colors. Signs should express a simple clear message with wording kept to a minimum.

(8) Auxiliary design. The site should take into account the compatibility of landscaping, parking facilities, utility and service areas, walkways and appurtenances. These should be designed with the overall environment in mind and should be in visual keeping with related buildings, structures and places.

**FINDINGS:**

- a. The site at the corner of Highway 90 West and West Military Drive in the right of way is a vacant area. The applicant is proposing to make site enhancements to create the gateway into the Join Base San Antonio at Lackland.
- b. The applicant is proposing to install a 75' monument at the corner of two highways. The monument will be metal and designed by local artist George Schroder, lit at night with LED light fixtures and surrounded by brick paving and concrete textured site wall with varying height and 9' at its maximum. This monument is consistent with the UDC Sec 35-642(b)(7).
- c. The applicant is proposing to make storm water improvements, plant 161 trees, construct a parking area with 19 spaces, and install concrete trails around the site. These improvements are appropriate for its location and will allow accessibility to the park, consistent with UDC Sec 35-642(b)(3).
- d. The applicant is proposing to construct two pedestrian truss bridges over existing stream. The proposed bridges are appropriate for the location, compatible with the landscape, and improve accessibility to the park. This is consistent with UDC Sec 35-642(b).
- e. The San Antonio Arts Commission approved the public art installation October 2015.
- f. Staff visited the site September 12, 2016.
- g. **ARCHAEOLOGY-** The development project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology.



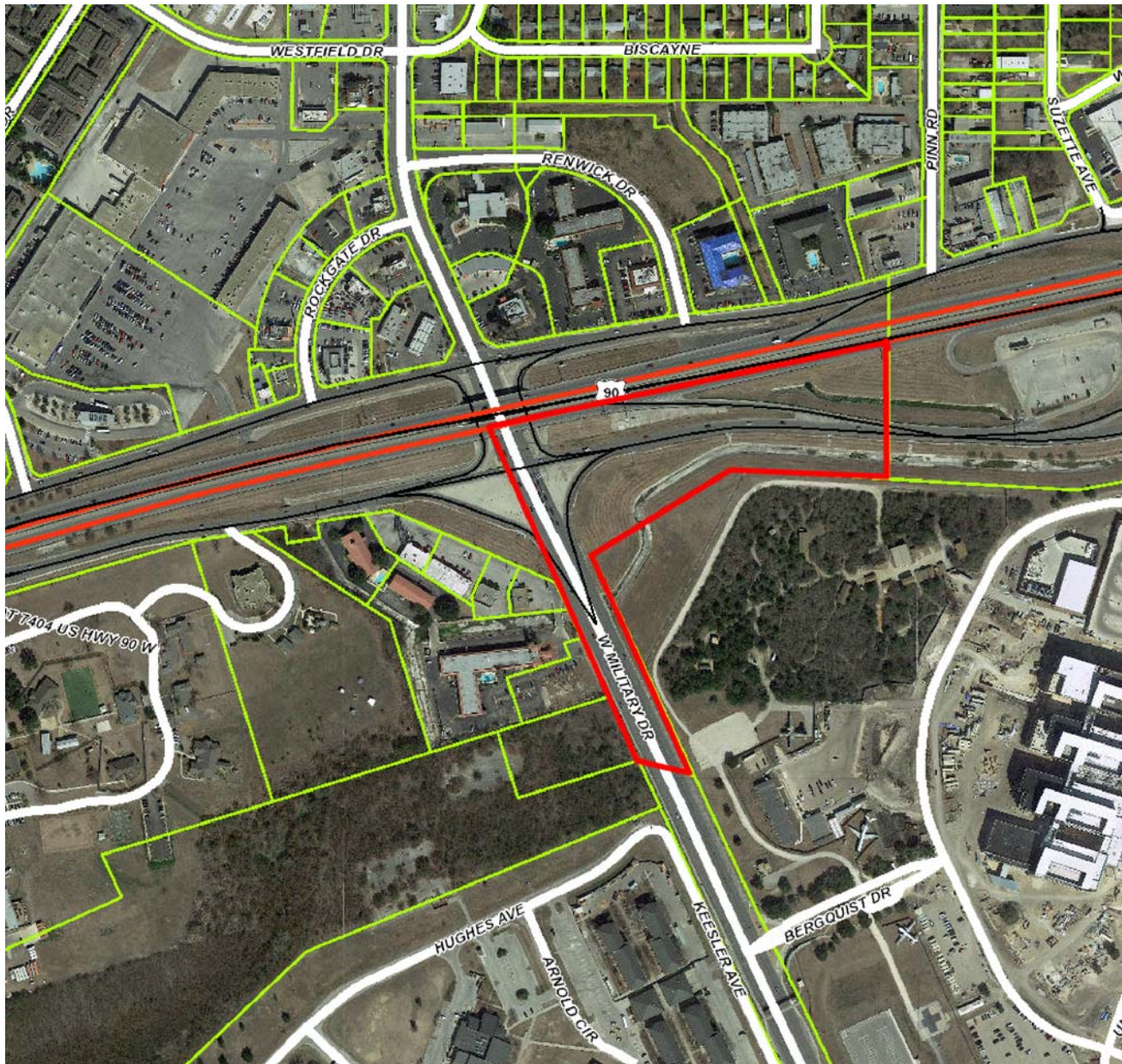
**RECOMMENDATION:**

Staff recommends approval based on findings a through g with the stipulation that the development project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology.

**CASE MANAGER:**

Lauren Sage





## Flex Viewer

Powered by ArcGIS Server

Printed: Sep 14, 2016

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# Lackland Corridor Project

## **Background**

- Project location corner of US HWY 90 and Loop 13 (SW Military Drive)
- Gateway into Joint Base San Antonio (JBSA)-Lackland
- JBSA-Lackland employs 52,000+ military and civilians and houses the Air Force's only basic military training center in the U.S.
- Instructs 35,000 men and women per year
- Attracts approximately 2,000 visitors each week and over 3,000 families for basic graduation ceremonies every year.



Monument at entrance

## **Site Enhancements**

Consistent with the Lackland Corridor Streetscape Conceptual Master Plan (2014 RVK) approved through Council in August 2014, TCI is requesting final HDRC approval for the development of the most visible location along the corridor known as the gateway project. A five acre parcel at the intersection of U.S. Highway 90 and SW Military Drive accepts and expresses drainage from a larger watershed west and north of the site and expresses the water from a paved channel bottom to full concrete channel southeast of the site and northeast of JBSA Lackland proper. Anticipated enhancements include but are not limited to the following:

- Storm water improvements to existing channel – stream naturalization
- Storm water runoff vegetation including area plantings for establishment of the LID feature in its final configuration
- 161 Trees with bubbler irrigation system
- Area Parking (19 spaces)
- Picnic unit with shade canopy
- Port a Unit with its enclosure
- 75' Monument (Tribute) by local artist George Schroeder, lit at night with LED light fixtures
- Two bridges
- Sidewalks
- Overlook nodes with interpretative graphic panel and seating area
- Wayfinding Sign

## **A lasting Impression**

The gateway projects takes an existing poor functioning concrete stormwater drainage channel and restores it back to its most natural state. The integration of native and site appropriate vegetation, LID strategies and BMP's (best management practice) enhance the ecosystem, and reduce the transportation of pollutants to the Leon Creek watershed. The proposed tree canopy consists of 161 native trees, carefully selected vegetation and also a





# Lackland Corridor Project

butterfly habitat. All of these features all provide the visual appeal and lasting impression of a well designed area. Along with these enhancements, a 75' monument envisioned in the Master Plan but enhanced by George Schroeder sits on a raised platform plaza. The monument consists of five forms. The arrangement creates a gathering space and an experience intended to be dynamic and interactive as it can be touched, and both walked within and around. Its aesthetic is that of an airplane. It replicates aircraft construction in riveting the aluminum cladding to the substructure. With the forms seemingly arising out of the ground, the monument captures light, sun and shadows.

The tallest element is an obelisk-type form reaching 75' high representing our incredible country. The narrowest edge of the obelisk representing our country and the community of San Antonio is aligned to our nation's capital paying homage to Washington, D.C. The three arched forms represent the arms of the military protecting our great Nation. Each arm displays one of the three Core Values of the United States Air Force. The fifth element serves as the direct reference to Lackland Air Force Base. The form representing a wing is intentionally placed at an angle to contrast with the other elements, contributing to the visual tension of the overall piece.

From dusk to dawn, the experience of the gateway is enhanced through the use of LED lighting. Six out of seven days of the week, white light will illuminate the sculpture. On Fridays to celebrate the weekly graduation of the over 500 new Airmen, United States Air Force blue will illuminate the interior space of the sculpture proclaiming the significance of this day to the City of San Antonio and to our Nation.

Access to the site includes a parking area with 19 parking spaces, site amenities such as a picnic area, with a portable restroom. The monument area is easily accessed via a 100' or a 90' foot bridge and sidewalks. Three overlook nodes offer a photo opportunity or respite from a long walk with the addition of a bench. A graphic panel offers the opportunity to learn about bioretention, the role of the military to San Antonio or about the monument. Site improvements complete the construction of the Low Impact Development (LID) systems, channel realignment and natural restoration that are part of the streetscape vision for the Lackland AFB Corridor.

## **MATERIALS SPECIFICATIONS**

Cast-in-Place Concrete; standard mix

Limestone boulder slab retaining wall

Shade Canopy – Polygal translucent structured polycarbonate panels (Selectogal [RFX] 5/8"; color – Blue) with aluminum glazing system, trim and fasteners.

Metal Fabrications – Steel / Painted

Paint Finishes – Tnemec Products; United States Air Force Official Colors (reference color samples) Brite Blue, Silver, and Cool Gray





# Lackland Corridor Project

## **ATTACHMENTS FOR PROJECT SCOPE**

- 1) Project rendering
- 2) Project Rendering – Project Ownership
- 3) Construction Documents
  - Cover – Index Sheet
  - C1.0 – Existing Conditions and Demolition Plan
  - C2.0 – Site Plan
  - C5.0 – Grading and Drainage Plan
  - C6.0 – Utility Plan
  - C29.0 – Stream Naturalization Plan and Profile
  - BR1.0 – Truss Bridge Drawings
  - ES1.0 – Overall Electric Site Plan (refer to PASA lighting submittal package)
  - L1.0 – Owner Hardscape Plan
    - L1.1 – Hardscape Plan Enlargements
    - L1.2 – Hardscape Plan Enlargements
    - L1.3 – Hardscape Plan Enlargements
    - L1.4 – Hardscape Plan Enlargements
    - L1.5 – Hardscape Plan Enlargements
  - L2.0 – Site Sections
    - L2.1 – Site Sections
  - L3.3 – Hardscape Details (Site Furniture)
  - L3.4 – Hardscape Details (Site Furniture)
  - L3.5 – Shade Structure Plans and Details
  - L4.0 – Overall Planting Plan
    - L4.1 – Seeding and Tree Planting Plans
  - LC1.1 – Materials Schedule & Legend
- 4) Paint Samples
- 5) 2016-06-09\_PASA light submittal





# Lackland Corridor Project

## ATTACHMENT 01 – Project Rendering





# Lackland Corridor Project

## ATTACHMENT 02 – Project Ownership Rendering





## ATTACHMENT 03 – Construction Documents







## **PROJECT NUMBER:**

WBS 23-01455

## **FUNDING**

\$6.1 MILLION  
FY 2015 STORM WATER  
STREET MAINTENANCE PROGRAM SAVINGS  
PROP. 2 PARKS DEVELOPMENT & EXPANSION VENUE  
FY 2014 STORM WATER

## **CITY COUNCIL**

### **MAYOR**

Ivy. R. Taylor

### **COUNCIL**

ROBERT TREVINO	DISTRICT 1
ALAN WARRICK II	DISTRICT 2
REBECCA J VIAGRAN	DISTRICT 3
REY SALDANA	DISTRICT 4
SHIRLEY GONZALES	DISTRICT 5
RAY LOPEZ	DISTRICT 6
CRIS MEDINA	DISTRICT 7
RON NIRENBERG	DISTRICT 8
JOE KRIER	DISTRICT 9
MIKE GALLAGHER	DISTRICT 10

## **CITY MANAGER**

SHERYL SCULLEY

## **DIRECTOR OF PARKS & RECREATION**

XAVIER URRUTIA

## **DIRECTOR OF TRANSPORTATION & CAPITAL IMPROVEMENTS MANAGEMENT SERVICES**

MIKE FRISBIE, PE

## **PROJECT MANAGER**

ALMA NUNEZ  
TRANSPORTATION & CAPITAL IMPROVEMENTS  
MANAGEMENT SERVICES DEPARTMENT  
Municipal Plaza Building  
114 W. Commerce, 4th floor  
PHONE: 210-207-2613  
FAX: 210-207-7196

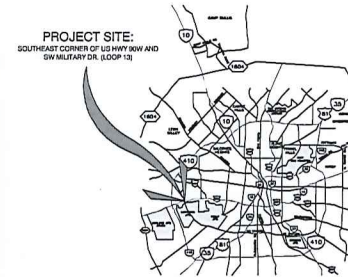
## **SPECIAL INSPECTIONS REQUIRED**

- ☐ STEEL CONSTRUCTION
- ☐ CONCRETE CONSTRUCTION
- ☐ SOILS
- ☐ CAST-IN-PLACE DEEP FOUNDATIONS
- ☐ FABRICATED ITEMS

\*Although it is not the responsibility of the City to provide sets of drawings and/or specifications to the successful Contractor for the construction of this project, the City may provide extra or returned sets that are available, if any from the bidding process. All other sets as deemed required by the Contractor, for the purposes of construction of this project, shall be obtained and paid by the Contractor.

# LACKLAND CORRIDOR GATEWAY

JULY 19, 2016



## **VICINITY MAP**

## **CONSULTANTS**

### **CIVIL ENGINEER**

CAMACHO-HERNANDEZ & ASSOCIATES, LLC  
415 EMBASSY OAKS, SUITE 205 SAN ANTONIO, TX 78216  
PHONE: (210) 341-6300 FAX: (210) 341-6300

### **LANDSCAPE ARCHITECT**

RVK ARCHITECTS, INC.  
745 E. MULBERRY AVE, STE 601 SAN ANTONIO, TX 78212  
PHONE: (210) 733-3535 FAX: (210) 733-3549

### **GEOTECHNICAL INVESTIGATION**

ARIAS GEOPROFESSIONALS  
142 CHULA VISTA SAN ANTONIO, TX 78232  
PHONE: (210) 308-5884 FAX: (210) 308-5886

### **LOW IMPACT DEVELOPMENT CONSULTATION**

TETRA TECH  
700 N. ST MARYS SAN ANTONIO, TX 78205  
PHONE: (210) 226-2058

### **STRUCTURAL ENGINEER**

LEHMANN ENGINEERING, INC.  
1006 BEKET SAN ANTONIO, TX 78213  
PHONE: (210) 348-8889

### **MEP ENGINEER**

ALDERSON & ASSOCIATES, INC.  
7700 TORINO, SUITE 101, SAN ANTONIO, TX 78229  
PHONE: (210) 614-1110

### **MONUMENT FABRICATION TECHNICAL TEAM**

MP STUDIO  
201 GROVETON STREET SAN ANTONIO, TEXAS 78210  
PHONE: 210-314-5582

### **MONUMENT ARTIST / SCULPTOR**

SCHROEDER ART STUDIOS  
257 W. TURBO, SAN ANTONIO, TX 78216  
PHONE: (210) 601-2508

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## **CITY OF SAN ANTONIO, TEXAS**

### **TRANSPORTATION & CAPITAL IMPROVEMENTS**

VERTICAL DIVISION

114 W. COMMERCE SAN ANTONIO, TX 78238 PHONE: (210) 207-2879 FAX: (210) 207-2720

**CH** CAMACHO-HERNANDEZ & ASSOCIATES, LLC  
Engineering - Planning - Transportation - Related Services 415  
EMBASSY OAKS - SUITE 205 SAN ANTONIO, TX 78216  
OFFICE: (210) 341-6200 FAX: (210) 341-6200  
FIRM NUMBER: P-0478

**RVK**

architecture interior design landscape architecture  
san antonio, texas

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## **SET NO.**

July 19, 2016 - Construction Documents







## GENERAL NOTES

1. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS (BOTH VERTICALLY AND HORIZONTALLY) AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF SAME DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
2. ALL EXISTING ITEMS NOT SPECIFICALLY NOTED TO BE REMOVED SHALL REMAIN. CONTRACTOR IS RESPONSIBLE FOR REPLACING EXISTING ITEMS REMOVED DURING DEMOLITION THAT WERE TO REMAIN.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL UTILITY COMPANIES REGARDING REMOVAL OF EXISTING SERVICES. VERIFYING UTILITIES ARE SHUT OFF OR DISCONNECTED, AND ALL POSSIBLE SAFETY PRECAUTIONS HAVE BEEN ENACTED TO ENSURE THE SAFEST ENVIRONMENT FOR ALL PERSONNEL.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS/APPROVALS BEFORE BEGINNING CONSTRUCTION.
5. DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, ACCESS TO GAS VALVES SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
6. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF UNDERGROUND OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
7. THE CONTRACTOR SHALL SAW CUT EXISTING SIDEWALK/PAVEMENT AT NEW SIDEWALK/PAVEMENT AND CURB JUNCTURES AT NEAREST CONTROL JOINT OF SAME. NO JAGGED OR IRREGULAR CUTS IN PAVEMENT WILL BE ACCEPTED.
8. ALL EXCAVATION IS UNCLASSIFIED.
9. ALL ITEMS TO BE REMOVED SHALL INCLUDE THE PROPER DISPOSAL OF SUCH ITEMS, UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL INCLUDE IN HIS BID ANY ADJUSTMENT/RELOCATION OF MANHOLE LIDS, VALVE COVERS, AND OR AIR RELIEF VALVES.

7/19/16



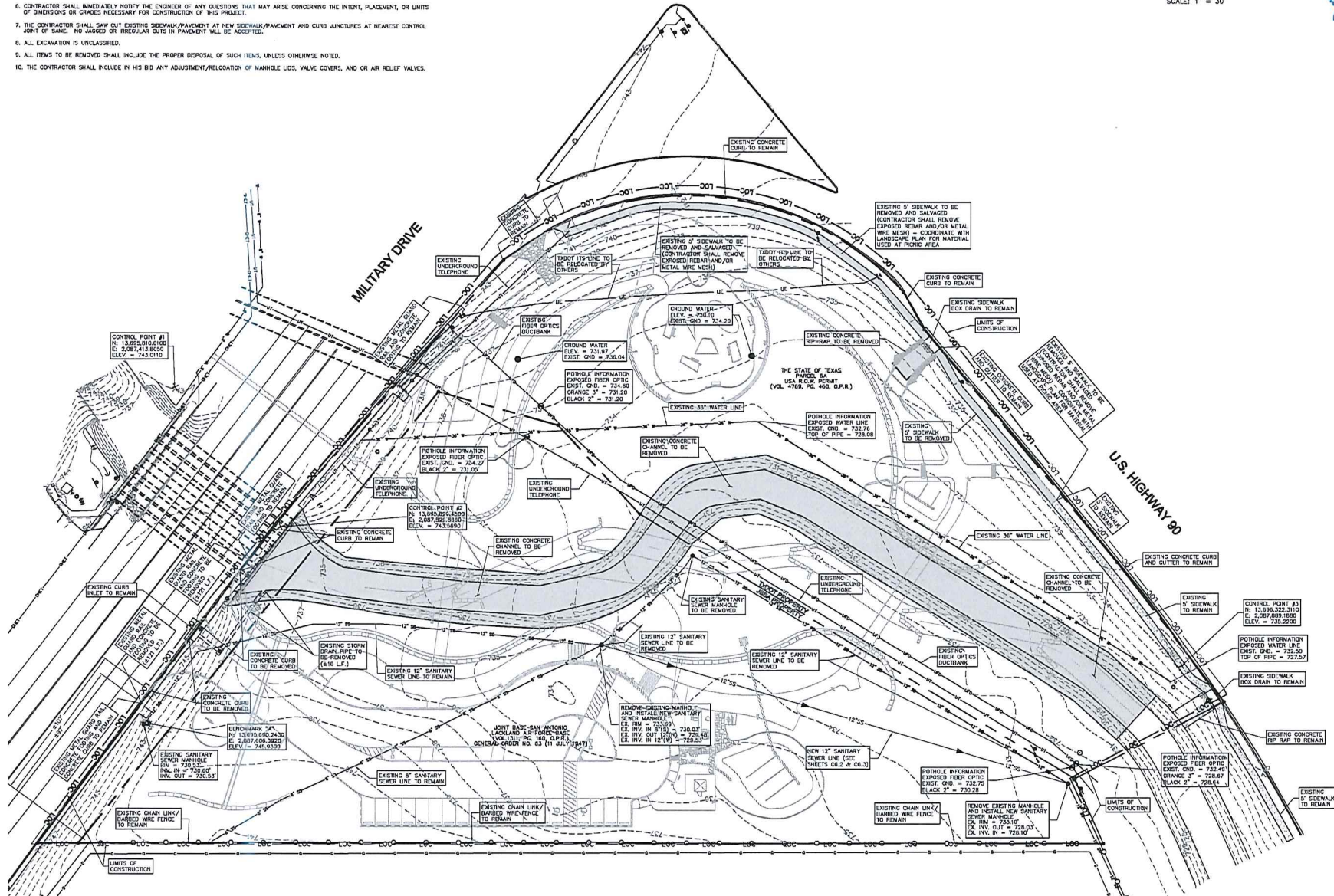
Date:	Revision/Description

**CITY OF SAN ANTONIO**  
 TRANSPORTATION & CAPITAL  
 IMPROVEMENTS  
 VERTICAL DIVISION  
 MUNICIPAL PLANNING & COMMERCIAL  
 P.O. BOX 58964  
 SAN ANTONIO, TX 78248-9646  
 TEL: (210) 307-2879 FAX: (210) 307-2197

**LACKLAND CORRIDOR GATEWAY**  
 SW MILITARY & US HWY 90  
 SAN ANTONIO, TEXAS  
 EXISTING CONDITIONS AND DEMOLITION PLAN



Designed by: A.C.  
 Drawn by: P.N.  
 Date: 07/19/16  
 Project No.: WBS 23-01455  
 Filename: EXISTING CONDITIONS AND DEMOLITION PLAN

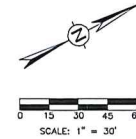




7/19/16



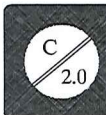
**CAMACHO-HERNANDEZ & ASSOCIATES, LLC**  
 Engineering - Planning - Transportation - Related Services 415  
 EMBASSY DAKS - SUITE 205 San Antonio, TX 78216  
 OFFICE: (210) 341-6200 FAX: (210) 341-6300  
 FIRM NUMBER: F-4478



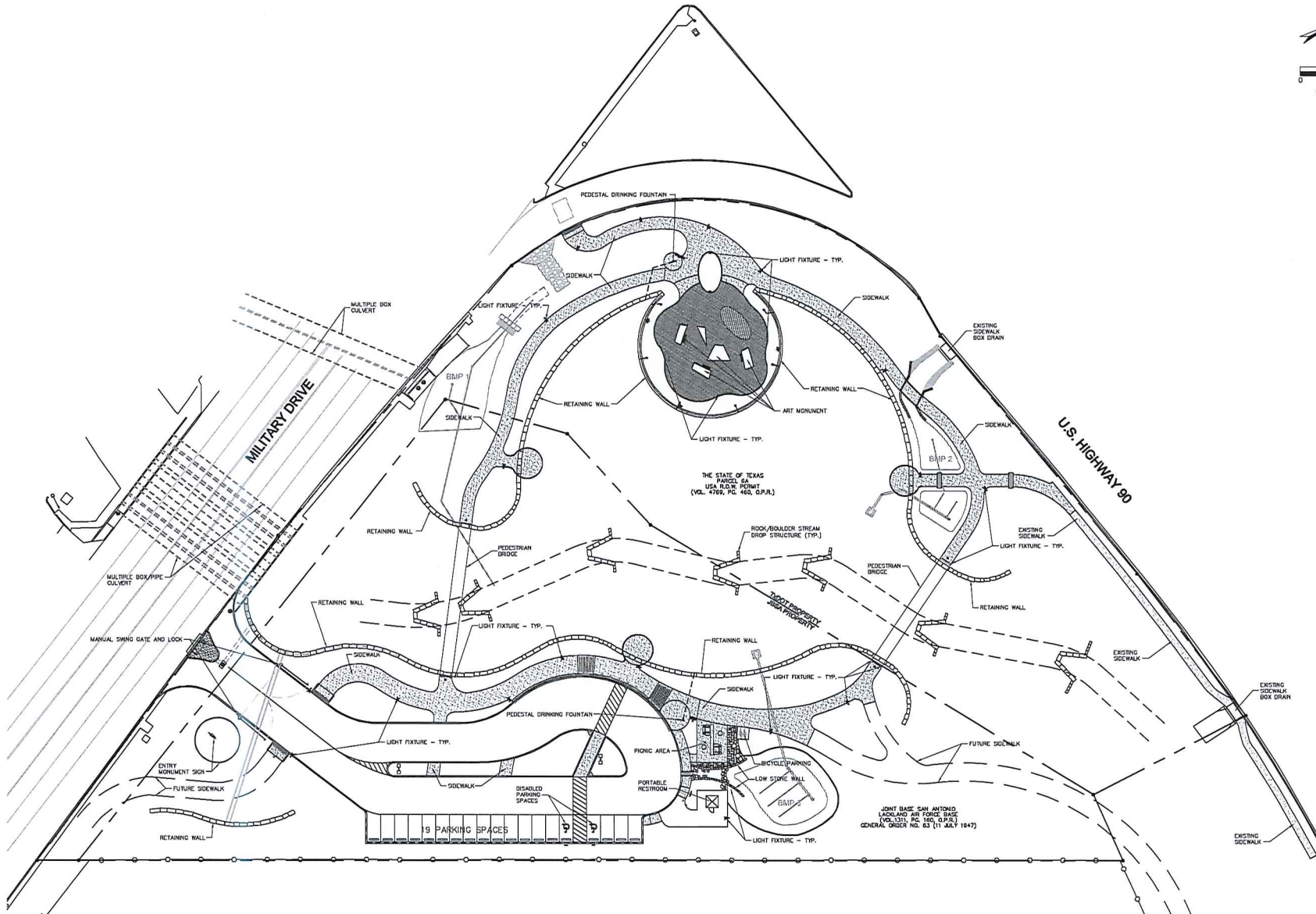
Date:	Revisions/Descriptions

**CITY OF SAN ANTONIO**  
 TRANSPORTATION & CAPITAL  
 IMPROVEMENTS  
 VERTICAL DIVISION  
 MUNICIPAL PLANNING & COMMUNITY DEVELOPMENT  
 P.O. BOX 39966 SAN ANTONIO, TX 78239-9666  
 TEL: (210) 207-2579 FAX: (210) 207-2197

**LACKLAND CORRIDOR GATEWAY**  
 SW MILITARY & US HWY 90  
 SAN ANTONIO, TEXAS  
 SITE PLAN



Designed By: A.C.  
 Drawn By: P.N.  
 Date: 07/19/16  
 Project No.: WBS 23-01455  
 Filename: SITE PLAN





# GRADING AND DRAINAGE PLAN GENERAL NOTES

1. ALL GRADES AND CONTOURS SHOWN ARE FINAL, TOP OF FINISHED SURFACE ELEVATIONS.
2. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHALL TAKE PRECAUTIONS NOT TO ALLOW PONDING OF WATER.
3. NO ABRUPT CHANGE OF GRADE SHALL OCCUR.
4. ALL DISTURBED AREAS SHALL BE REVEGETATED BY THE CONTRACTOR, IN ACCORDANCE WITH PROJECT SPECIFICATIONS, TREE SPOCKET AND LANDSCAPING PLANS.
5. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES BOTH VERTICALLY AND HORIZONTALLY WHEN SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY ELEVATION FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
6. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT MUST NOT SPECIFICALLY COVERED BY THE PROJECT SPECIFICATIONS SHALL CONFORM TO ALL APPLICABLE STANDARD SPECIFICATIONS, CITY OF SAN ANTONIO SPECIFICATIONS FOR CONSTRUCTION, AND TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST EDITION).
7. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL OR BETTER, CONDITION TO ANY DAMAGES DONE TO EXISTING BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, SIDEWALKS, OR DRIVEWAYS (NO SEPARATE PAY ITEM).
8. DUE TO FEDERAL REGULATION TITLE 49, PART 182.181, ACCESS TO GAS VALVES SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL NECESSARY UTILITY COMPANIES FOR PROVIDING TEMPORARY UTILITY SERVICES DURING CONSTRUCTION.
10. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
11. THE CONTRACTOR SHALL SAW OUT EXISTING PAVEMENT AT NEW PAVEMENT AND CURB JUNCTIONS. NO JAGGED OR IRREGULAR CUTS IN PAVEMENT WILL BE ACCEPTED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, TESTS, APPROVALS, AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
13. ALL EXCAVATION IS UNCLASSIFIED.
14. ALL CURBS ARE (8.5" 6" UNLESS OTHERWISE SPECIFIED).
15. SEE CIVIL DETAIL SHEETS FOR APPLICABLE DETAILS.
16. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL, MEP, LANDSCAPE/IRRIGATION, AND STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.

## GENERAL SPECIFICATIONS FOR SITE PREPARATION

### GENERAL DESCRIPTION

THE ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTOR TESTING AND PROTECTION OF THE FILL, AND ALL NECESSARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

### SCAFFERING THE AREA TO BE FILLED

ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND SURFACE SHALL THEN BE SLOPED OR SCARIFIED TO A MINIMUM DEPTH OF 24 INCHES (6"). ALL SURFACE ROOTS OR OTHER UNKNOW FEATURES WILL BE LEVELLED PRIOR TO FIELD DENSITY TESTING.

### COMPACTING THE AREA TO BE FILLED

FOLLOWING THE CLEARING AND SLOPING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE GLOBS. THE AREA SHALL BE BROUGHT TO THE ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO 10% LESS THAN WETTER PRESENT (WET) OR MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTOR PROCEDURE, OR 98% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT PRO-128-115-C COMPACTOR PROCEDURE. MOISTURE CONTENT TO BE WITHIN A TOLERANCE OF  $\pm 2\%$  OF OPTIMUM.

### FILL MATERIALS

THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH.

### DEPTH AND MINING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THE SPECULATED AGENC. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO INSURE UNIFORMITY OF MATERIAL. IN EACH LAYER, COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTOR EQUIPMENT OF THE DEMONSTRATED CAPABILITY. THE MAXIMUM LAYER DEPTH FOR ANY MATERIAL SHALL NOT EXCEED TWELVE INCHES (12"), AND MAXIMUM COMPACTED DEPTH OF EIGHT INCHES (8").

### ROCK

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO REST AND ALL Voids MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED. NO LARGE ROCKS WILL BE PERMITTED WITHIN EIGHTEEN INCHES (18") OF THE FINISHED GRADE.


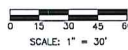

### COMPACTOR OF FILL LAYER

COMPACTOR EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTOR SHALL BE ACCOMPANIED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTOR OF EACH LAYER SHALL BE CONTIGUOUS OVER THE ENTIRE STRUCTURAL AREA (EXCEPT PROPOSED STRUCTURES).

### DENSITY TEST

FIELD DENSITY TESTS SHALL BE PERFORMED ON LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE ONE COMPACTED LIFT, NOT TO EXCEED EIGHT INCHES (8"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE TESTING LAB PERFORMS ALL TEST REQUIRED BY FHWA SPECIFICATION.



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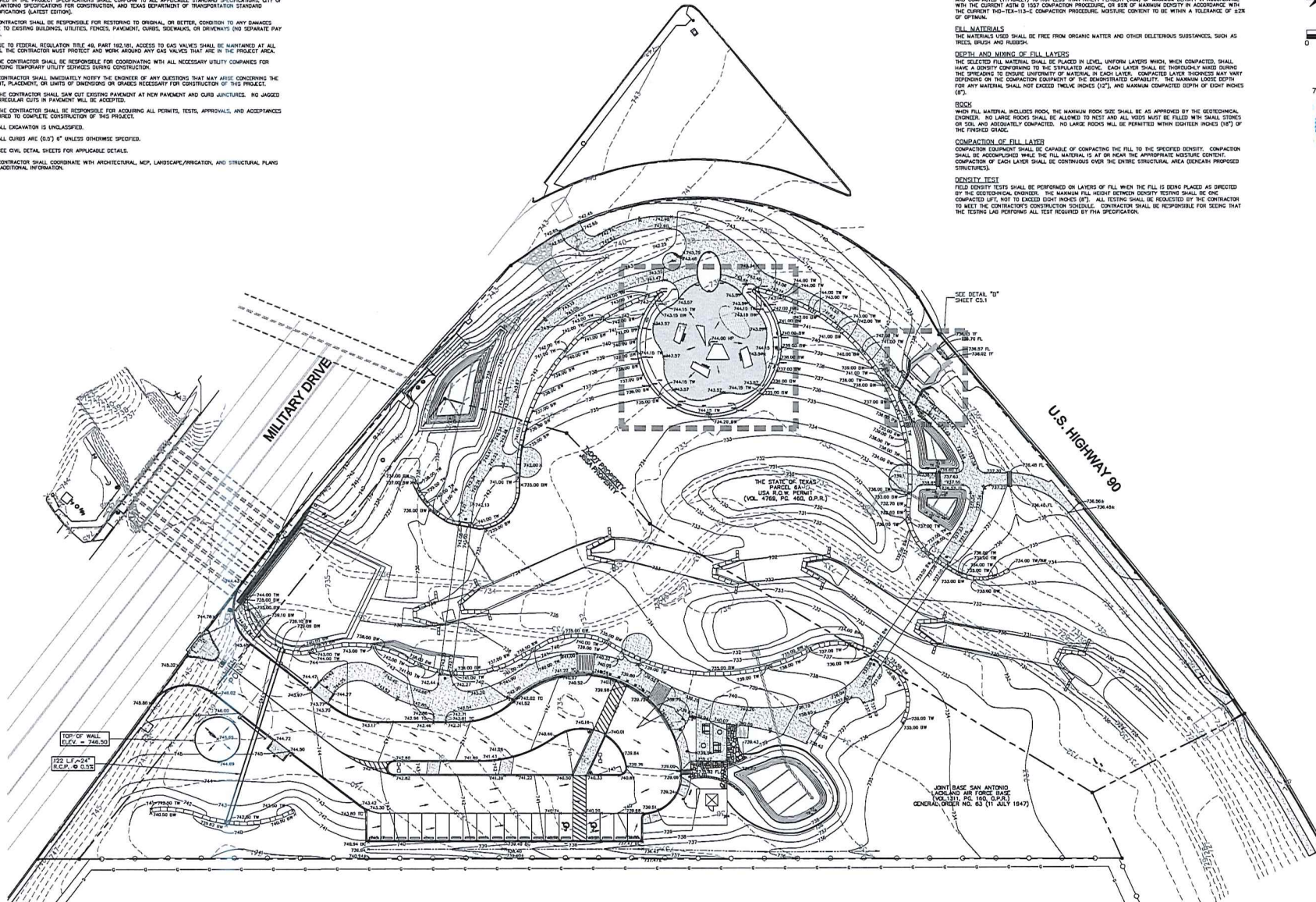
Date:	Revision/Submission

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**LACKLAND CORRIDOR GATEWAY**  
 SW MILITARY & US HWY 90  
 SAN ANTONIO, TEXAS  
**GRADING AND DRAINAGE PLAN**



Designed By:	A.C.
Drawn By:	P.N.
Date:	07/19/16
Project No.:	WBS 23-01455
Filename:	GRADING AND DRAINAGE PLAN





CALL BEFORE YOU DIG!

TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, (TOLL OR BLAST - STOP AND CALL.

TEXAS ONE CALL SYSTEM  
1-800-245-4545

AT&T LOCATE GROUP  
AT 1-800-828-5127

THE LONE STAR  
NOTIFICATION COMPANY  
AT 1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM  
1-800-344-8377

NOTE: SEE OTHER PLANS FOR CONDUIT (ELECTRICAL & IRRIGATION) AND PARKING LOT LIGHT LOCATIONS.

SEE SHEET C3.1, COORDINATE CONTROL PLAN, FOR BENCHMARK AND CONTROL POINT INFORMATION. SEE SHEET C1.0, EXISTING CONDITIONS AND DEMOLITION PLAN, FOR FIBER OPTIC AND WATER LINE POTHOLE INFORMATION.

# KEYED NOTES

- 4" CONDUITS - SCH 40 PVC (2 FOR IRRIGATION, 2 FOR ELECTRICAL) MAINTAIN MINIMUM 36" COVER BELOW FINISHED GRADE. (SEE DETAIL SHEET C7.1)
- CONDUITS SHALL BE PLACED FROM TOP OF WALL SIDE AND UNDER WALL FOOTINGS TO BOTTOM OF WALL SIDE

# C.P.S. LOCATOR

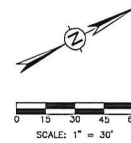
CALL C.P.S. LOCATOR AT 353-2800, 48 HOURS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.101, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

# TELEPHONE LOCATOR

NOTE: THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THIS PLAN ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-835-5123. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

# TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS CONCERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



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7/19/16



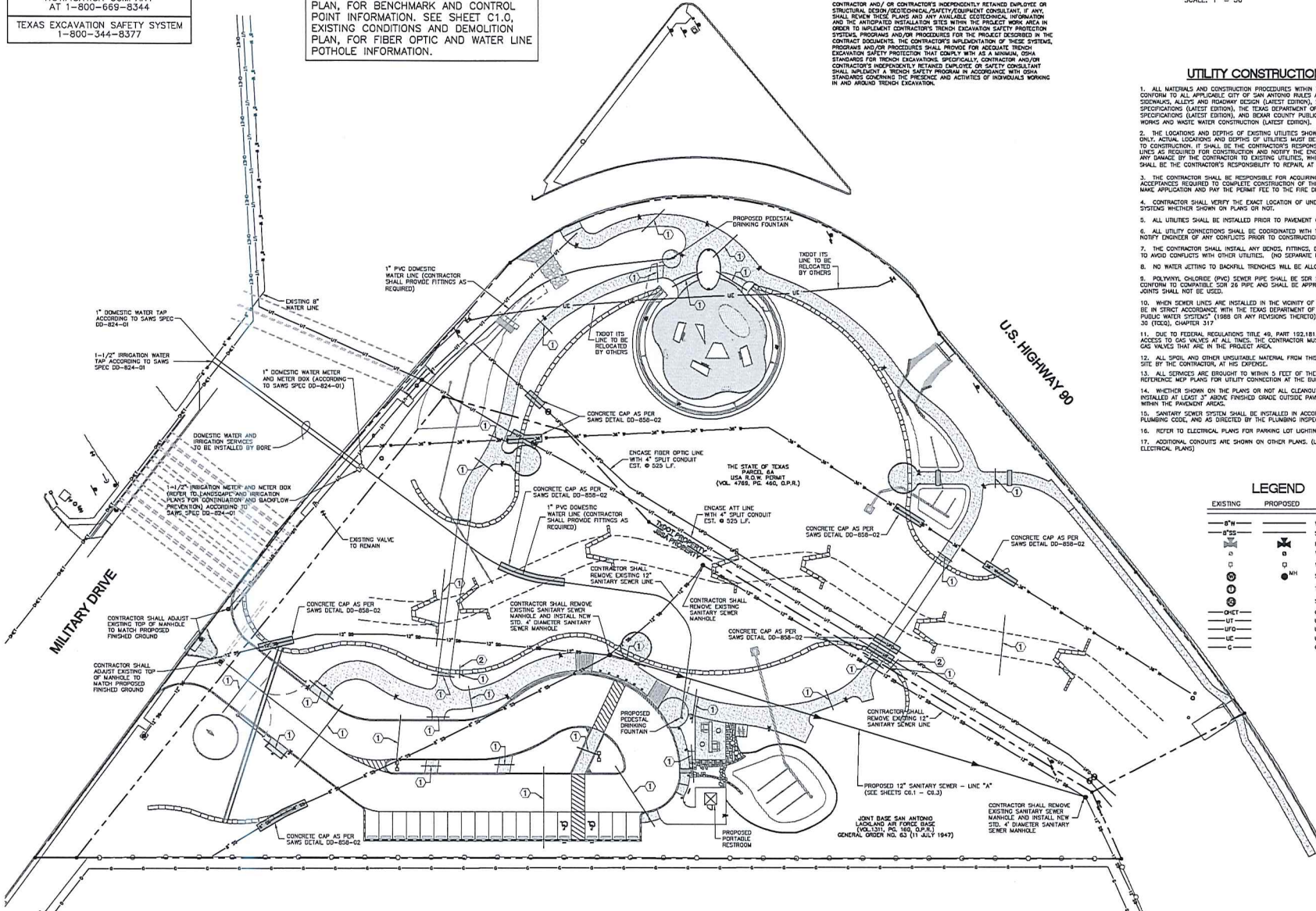
Date:	Revisions/Comments

# UTILITY CONSTRUCTION NOTES:

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL CONFORM TO ALL APPLICABLE CITY OF SAN ANTONIO RULES AND REQUIREMENTS FOR STREETS, SIDEWALKS, ALLEYS AND HIGHWAY DESIGN (LATEST EDITION), SAN ANTONIO WATER SYSTEM SPECIFICATIONS (LATEST EDITION), THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST EDITION), AND BROWN COUNTY PUBLIC WORKS SPECIFICATIONS FOR WATER WORKS AND WASTE WATER CONSTRUCTION (LATEST EDITION).
- THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS IMMEDIATELY. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AT HIS EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL MAKE APPLICATION AND PAY THE PERMIT FEE TO THE FIRE DEPARTMENT FOR THE FIRE LINE.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE SYSTEMS WHETHER SHOWN ON PLANS OR NOT.
- ALL UTILITIES SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION.
- ALL UTILITY CONNECTIONS SHALL BE COORDINATED WITH THE MECHANICAL AND ELECTRICAL PLANS. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ANY BONDS, FITTINGS, ETC. IN THE WATER LINE AS REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES. (NO SEPARATE PAY)
- NO WATER JETTING TO BACKFILL TRENCHES WILL BE ALLOWED ON THIS PROJECT.
- POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL BE SDR 26, FITTINGS AND JOINTS SHALL CONFORM TO COMPATIBLE SDR 26 PIPE AND SHALL BE APPROVED BY TCEC. SUGGEST EJECT JOINTS SHALL NOT BE USED.
- WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS DEPARTMENT OF HEALTH RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS (1988 OR ANY REVISIONS THEREOF), & REQUIREMENTS OF THE TAC, TITLE 30 (TCEC), CHAPTER 317.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.101, THE GAS COMPANY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- ALL SPILL AND OTHER UNDESIRABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT HIS EXPENSE.
- ALL SERVICES ARE BROUGHT TO WITHIN 5 FEET OF THE BUILDING UNLESS OTHERWISE NOTED. REFERENCE MAP PLANS FOR UTILITY CONNECTION AT THE BUILDING.
- WHETHER SHOWN ON THE PLANS OR NOT ALL CLEARTOP TOPPS AND MANHOLES SHALL BE INSTALLED AT LEAST 3" ABOVE FINISHED GRADE OUTSIDE PAVEMENT AND FLUSH WITH FINISHED GRADE WITHIN THE PAVEMENT AREAS.
- SANITARY SINKER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF SAN ANTONIO PLUMBING CODE, AND AS DIRECTED BY THE PLUMBING INSPECTOR.
- REFER TO ELECTRICAL PLANS FOR PARKING LOT LIGHTING AND SIGN LIGHTING.
- ADDITIONAL CONDUITS ARE SHOWN ON OTHER PLANS (LANDSCAPE, IRRIGATION, AND ELECTRICAL PLANS).

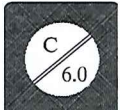
# LEGEND

EXISTING	PROPOSED	
— 8" —	— 8" —	WATER MAIN
— 12" —	— 12" —	SANITARY SINKER
— 18" —	— 18" —	FIRE HYDRANT
— 24" —	— 24" —	WATER VALVE
— 30" —	— 30" —	WATER METER
— 36" —	— 36" —	SANITARY SINKER MANHOLE
— 42" —	— 42" —	TELEPHONE MANHOLE
— 48" —	— 48" —	STORM DRAIN MANHOLE
— 54" —	— 54" —	OVERHEAD ELECTRICAL AND TELEPHONE
— 60" —	— 60" —	UNDERGROUND TELEPHONE
— 66" —	— 66" —	UNDERGROUND FIBER OPTIC
— 72" —	— 72" —	UNDERGROUND ELECTRICAL
— 78" —	— 78" —	GAS MAIN



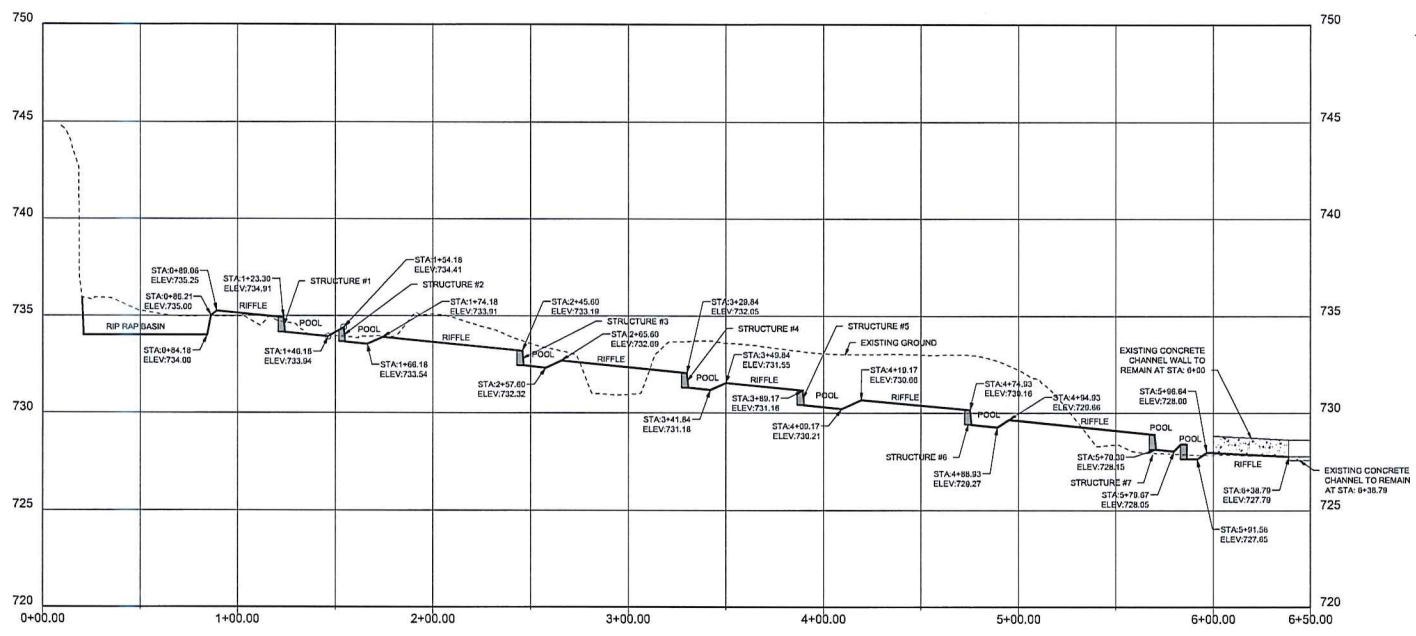
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**LACKLAND CORRIDOR GATEWAY**  
SANITARY & UTILITY 90  
SAN ANTONIO, TEXAS  
UTILITY PLAN



Designed by: A.C.  
Drawn by: P.N.  
Date: 07/19/16  
Project No.: WBS 23-01455  
Filename: UTILITY PLAN





PROFILE STREAM CENTERLINE - VERT SCALE 1" = 3'

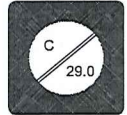
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 SW MILITARY & US HWY 90  
 SAN ANTONIO, TEXAS  
 STREAM NATURALIZATION PLAN & PROFILE



























Designed by:	TD/LOB
Drawn by:	RM
Date:	07/19/2016
Project No.:	WBS 23-01455
Filename:	



# ELECTRICAL SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT. REFER TO SPECIFICATIONS MANUAL FOR ADDITIONAL REQUIREMENTS.



## POWER SYMBOLS

	MOTOR, HP AS INDICATED
	CONTROLLER TO BE FURNISHED UNDER DESIGN 15
	DISCONNECT SWITCH
	MAGNETIC MOTOR STARTER
	COMBINATOR MOTOR STARTER
	CONNECTOR
	JUNCTION BOX, CEILING MOUNTED
	JUNCTION BOX, WALL MOUNTED
	RELAY
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	GFI-GROUND FAULT CIRCUIT INTERRUPTER
	W-WIREPROOF
	IC-ISOLATED GROUND
	DOUBLE DUPLEX (QUADRUPLX) RECEPTACLE
	FLOOR OUTLET DUPLEX RECEPTACLE
	FLOOR OUTLET SIMPLEX RECEPTACLE
	FLOOR OUTLET QUADRUPLX RECEPTACLE
	DISP CORD RECEPTACLE
	SPECIAL PURPOSE OUTLET AS DESIGNATED
	SINGLE FACE PEDISTAL
	DOUBLE FACE PEDISTAL RECEPTACLE
	EQUIPMENT CONNECTION
	CONNECT TO EXISTING
















## LIGHTING CONTROL SYMBOLS

$\mathbf{\nabla}_1$	SINGLE POLE SWITCH, SUBSCRIPT INDICATES ASSOCIATED CIRCUIT
$\mathbf{\nabla}_2$	DIMMABLE SWITCH
$\mathbf{\nabla}_3$	DOUBLE POLE SWITCH
$\mathbf{\nabla}_3$	THREE-WAY SWITCH
$\mathbf{\nabla}_4$	FOUR-WAY SWITCH
$\mathbf{\nabla}_5$	KEY OPERATED SWITCH
$\mathbf{\nabla}_6$	SWITCH WITH PULSE LIGHT IN HANDLE (ON=LIGHTED UNLESS OTHERWISE NOTED)
$\mathbf{\nabla}_{6P}$	HEADLAMP/PROOF SWITCH
$\mathbf{\nabla}_6$ $\mathbf{\nabla}_{6T}$	HANDAL, MOTOR SWITCH (T=TRIMMED, OVERLOAD, SUITED FOR MOTOR)
<b>DS</b>	DOOR SWITCH
$\mathbf{\nabla}_F$	FINE SWITCH
$\mathbf{\nabla}_{OC}$	SPEED CONTROL
$\mathbf{\nabla}_{PH}$	PUSH BUTTON
$\mathbf{\nabla}_{OIS}$	SWITCH, OCCUPANCY SENSOR, BELL, MOUNT
$\mathbf{\nabla}_{LV}$	VOLUNTARY CONTACT OVERVOLTAGE SWITCH










## LIGHTING CONTROL SYMBOLS (CONT.)

 OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED POWER PACKS  
 OCCUPANCY SENSOR WALL MOUNTED, DUAL TECHNOLOGY. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED POWER PACKS







## LIGHTING SYMBOLS

	INCANDESCENT OR HID FIXTURE, CEILING MOUNTED
	INCANDESCENT OR HID FIXTURE, WALL MOUNTED
	FLUORESCENT FIXTURE, RECESSED OR SURFACE MOUNTED
	EXIT SIGN - SINGLE FACE
	EXIT SIGN - SINGLE FACE WITH ONE-WAY DIRECTIONAL ARROW
	EXIT SIGN - SINGLE FACE WITH TWO-WAY DIRECTIONAL ARROWS
	EXIT SIGN - DOUBLE FACE
	EXIT SIGN - DOUBLE FACE WITH 2 ONE-WAY DIRECTIONAL ARROWS
	EMERGENCY LIGHT, BATTERY TYPE WITH CHARGER
	EXTERIOR FLOOD LIGHT
	POLE MOUNTED LUMINAIRE (SQUARE)
	POLE MOUNTED LUMINAIRE (ROUND)
	TRUCK LIGHT WITH HEADS AS INDICATED
	LIGHTING CONTACTOR
	POWER PAACK

## ELECTRICAL RACEWAYS

	CONDUIT CONCEALED IN WALL OR CEILING
	CONDUIT UNDER FLOOR OR UNDERGROUND
	SWITCH LEG
	SURFACE MOUNTED RACINARY WITH ALL REQUIRED FITTINGS AND HARDWARE. PROVIDE RECEPTABLES AS INDICATED.
	SURFACE MOUNTED RACINARY RISE SECTION WITH ALL REQUIRED FITTINGS AND HARDWARE
	BUS DUCT WITH TAP OFF DEVICE
	UNDERGROUND ELECTRICAL (APPROXIMATE LOCATION, CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD)
	UNDERGROUND TELEPHONE (APPROXIMATE LOCATION, CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD)
	BROWN ORIENTED HARDWOOD SUBFLOOR THAT INDICATES PANEL AND 2x4 INDICATES BEAMER POSITION




## CABLE TRAY AND RELATED ITEMS

	CABLE TRAY - 90 DEGREE FITTING
	CABLE TRAY - TEE FITTING
	CABLE TRAY - X FITTING
	CABLE TRAY - 90 DEGREE VERTICAL BENDS IN & OUT FOR ELEVATION CHANGE
	CABLE TRAY - 90 DEGREE VERTICAL BENDS IN OR OUT FOR TRAY UP OR DOWN
	CABLE TRAY










## FIRE ALARM SYSTEM SYMBOLS

FIRE ALARM CONTROL PANEL		CONTROL SYSTEM SYMBOL	
	REMOTE ANNUNCIATOR PANEL		SECURITY MAIN CONTROL PANEL
	FIRE ALARM EXPANSION PANEL		DIRECT ALARM PUSHBUTTON
	MANUAL PULL STATION (C=VANDAL PROOF GUARD)		DIRECT SYSTEM WIRELESS RECEIVER/ANTENNA
	AUDIOVISUAL ANNUNCIATOR (C=VANDAL PROOF GUARD) <input type="checkbox"/> = WALL MOUNT <input type="radio"/> = CEILING MOUNT		FRUSH BUTTON
	VISUAL ANNUNCIATOR (C=VANDAL PROOF GUARD) <input type="checkbox"/> = WALL MOUNT <input type="radio"/> = CEILING MOUNT		EXPRESS PUSHBUTTON
	AUDIBLE ANNUNCIATOR (C=VANDAL PROOF GUARD) <input type="checkbox"/> = WALL MOUNT <input type="radio"/> = CEILING MOUNT		CARD READER
	SMOKE DETECTOR (C=VANDAL PROOF GUARD)		CLOSED CIRCUIT TELEVISION OUTLET
	SMOKE DETECTOR, DUCT MOUNTED		DOOR CONTACT
	HEAT DETECTOR (C=VANDAL PROOF GUARD)		MAGNETIC DOOR LOCK
	SMOKE FIRE DAMPER		MOTION DETECTOR, ROUGH-IN ONLY, 50' AFF. MAXIMUM 4' FROM NEAREST CORNER TO CENTER OF BOX, 1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING RUN BUSINESS AND PULL-STRING UNLESS INDICATED OTHERWISE.
	TEST SWITCH		GLASS BREAK SENSOR ROUGH-IN ONLY, 50' AFF. MAXIMUM 4' FROM NEAREST CORNER TO CENTER OF BOX, 1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING RUN BUSINESS AND PULL-STRING UNLESS INDICATED OTHERWISE.
	FLOW SWITCH		GLASS BREAK SENSOR ROUGH-IN ONLY, 50' AFF. MAXIMUM 4' FROM NEAREST CORNER TO CENTER OF BOX, 1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING RUN BUSINESS AND PULL-STRING UNLESS INDICATED OTHERWISE.
	TAMPER SWITCH		REQUEST TO EXIT SENSOR
	FIRE SPRINKLER PRESSURE SWITCH		ELECTRIC STRIKE
	FIRE ALARM SPEAKER ANNUNCIATOR		CAMERA (20°) OWNER FURNISHED, OWNER INSTALLED
	FIRE FIGHTERS PHONE JACK		CAMERA (20°) CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
	FIRE FIGHTERS TELEPHONE		DOMED CAMERA
	MAGNETIC DOOR HOLDER		
	WALL MOUNTED AUDIBLE ANNUNCIATOR (1000) (C=VANDAL PROOF GUARD, WP=WEATHERPROOF)		

## CLOCKS SYSTEM SYMBOLS

















	CEILING MOUNTED CLOCK
	WALL MOUNTED CLOCK HEIGHT AS DESIGNATED BY ARCHITECT
	WALL MOUNTED DOUBLE FACE HEIGHT AS DESIGNATED BY ARCHITECT

## INTERCOM SYSTEM SYMBOLS

	INTERCOM SPEAKER, CEILING MOUNTED (G-WALL/VAL PROOF GUARD)
	INTERCOM SPEAKER, WALL MOUNTED (G-WALL/VAL PROOF GUARD)
	INTERCOM CALL SWITCH (V-VOLUME CONTROL)
	INTERCOM SPEAKER, EXTERIOR HORN-TYPE (G-WALL/VAL PROOF GUARD, NO WEATHERPROOF)
	AMPLIFIER
	INTERCOM SYSTEM CABINET
	INTERCOM CALL-IN SWITCH
	ADMINISTRATIVE CONTROL SYSTEM
	INTERCOM PUSHMOUNT (V-VOLUME CONTROL)

## SECURITY & ACCESS

### CONTROL SYSTEM SYMBOLS

	SECURITY MAIN CONTROL PANEL
	DIRECT DIAL ALARM PUSHBUTTON
	DIRECT SYSTEM WIRELESS RECEIVER/ANTENNA
	PUSH BUTTON
	EXPRESS PUSHBUTTON
	CARD READER
	CLOSED CIRCUIT TELEVISION OUTLET
	DOOR CONTACT
	MAGNETIC DOOR LOCK
	MOIRIAN DETECTOR, ROUGH-IN ONLY, 90" AFF, MAXIMUM 4" FROM NEAREST CORNER TO CENTER OF BOX, 1/2" CONDUIT TO ABOVE. ACCESSIBLE CEILING RUN BUSINESS AND PULL-STRING UNLESS INDICATED OTHERWISE.
	GLASS BREAK SENSOR ROUGH-IN ONLY, 90" AFF, MAXIMUM 4" FROM NEAREST CORNER TO CENTER OF BOX, 1/2" CONDUIT TO ABOVE. ACCESSIBLE CEILING RUN BUSINESS AND PULL-STRING UNLESS INDICATED OTHERWISE.
	REQUEST TO EXIT SENSOR
	ELECTRIC STRIKE
	CAMERA (CFO)
	CAMERA (CFO) CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
	CAMERA (CFO) OWNER FURNISHED, OWNER INSTALLED

TELECOM. / TELEPHONE / DATA  
SYSTEM SYMBOLS

**FLYWOOD TELEPHONE BACKGROUND**

TELEPHONE OUTLET IN WALL, ROUGH-IN ONLY, 1" CONDUIT TO ARISE ACCESSIBLE CEILING WITH BUSINESHS AND PULL-STRING UNLESS INDICATED OTHERWISE.

2  
↓

PRESENTS QUANTITY OF THE OUTLET

2  
↓

DATA OUTLET IN WALL, ROUGH-IN ONLY, 1" CONDUIT TO ARISE ACCESSIBLE CEILING WITH BUSINESHS AND PULL-STRING UNLESS INDICATED OTHERWISE.

PHONE AND DATA OUTLET IN WALL, ROUGH-IN ONLY, 1" CONDUIT TO ARISE ACCESSIBLE CEILING WITH BUSINESHS AND PULL-STRING UNLESS INDICATED OTHERWISE.

FLOOR TELEPHONE OUTLET, PONE-THRU TYPE.

THIRDSWAGE

CABLE TELEVISION OUTLET, ROUGH-IN ONLY, 15" A.F.F., UNLESS INDICATED OTHERWISE.

FLOOR CABLE TELEVISION OUTLET





WIRELESS ACCESS POINT

ANTENNA

## ONE-LINE DIAGRAM SYMBOLS

	N-6-A SELECTOR SWITCH
	STOP/START PUSHBUTTON STATION
	LIGHTING INDICATOR AND SURGE CAPACITOR
	TRANSFORMER
	TRANSFORMER (SHIELDED)
	MOTOR STARTER RELAY AND CONTACTOR
	ELAPSED (RUNNING) TIME METER
	CONTROL POWER TRANSFORMER
	CIRCUIT BREAKER (MOTOR CIRCUIT PROTECTOR)
	DISCONNECT SWITCH
	BUS TIE
	CURRENT TRANSFORMER
	MOTOR RESISTANCE TYPE WINDING HEATER
	THERMAL OVERLOAD CIRCUIT
	BREAKER (THERMAL MAGNETIC TYPE)
	FUSE
	CONTACT (NORMALLY OPEN)
	CONTACT (NORMALLY CLOSED)
	PUSHBUTTON (NORMALLY OPEN)
	PUSHBUTTON (NORMALLY CLOSED)
	LIMIT SWITCH (NORMALLY OPEN)
	TIME DELAY CONTACT
	FLUO LIGHT W/COLOR INDICATED (A=AMBER G=GREEN R=RED)
	SOLENOID VALVE
	DIFFERENTIAL PRESSURE SWITCH
	AUTOMATIC TRANSFER SWITCH
	DISCONNECT SWITCH
	400 V/480V/PULS INDICATES
	FRAME SIZE (FEET)/FUSE AMPACITY (PENSIOLO)

## PANELS AND RELATED EQUIPMENT

	PANELBOARD SURFACE MOUNTED (REFER TO PANEL SCHEDULE)
	PANELBOARD FLUSH MOUNTED (REFER TO PANEL SCHEDULE)
	TRANSFORMER, WITH CONCRETE BASE/ENCLOSING PAD (REFER TO ONE-LINE DIAGRAM)
	AUTOMATIC TRANSFER SWITCH (REFER TO ONE-LINE DIAGRAM)

**Alderson & Associates, Inc.**  
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San Antonio, TX 78228  
Telephone: 210.614.1110  
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F-1006



## ABBREVIATIONS

A	AMPERE
AC	ACROSS COUNTER
AF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
INT	ABOVE INTERRUPTING CAPACITY
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
COT	CURRENT
CONS CT	CONNECT OR CONNECTION
	CORRECT TRANSFORMER
EA	EACH
EF	EXHAUST FAN
ELEC	ELECTRIC
EMER	EMERGENCY
FACP	FIRE ALARM CONTROL PANEL
FCL	FULL LOAD AMPS
FLEX	FLEXIBLE CONDUIT
GFZ	GROUND FAULT CHOCK INTERRUPT
GND	GROUNDING
HGA	HAND-OFF-AUTO
HP	HIGH PRESSURE
HPS	HIGH PRESSURE SODIUM
HEH	HEATER
J-BOX	JUNCTION BOX

Date:	Revisions/Submissions

**CITY OF SAN ANTONIO**  
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**LACKLAND CORRIDOR GATEWAY**  
SW MILITARY & US HWY 90  
SAN ANTONIO, TEXAS

**ELECTRICAL SYMBOLS &  
ABBREVIATIONS**



Designed by:	TJS
Drawn by:	KAK/MCD
Date:	06/24/2016
Project No. :	WBS 23-01455
Filename:	E0.0





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Date:	Revision/Submitted

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**LACKLAND CORRIDOR GATEWAY**  
 SW MILITARY & US HWY 90  
 SAN ANTONIO, TEXAS  
**OVERALL HARDSCAPE PLAN**

L  
1.0

Designed By:  
 LAH  
 Drawn By:  
 RJR / KJB  
 Date:  
 07/19/2016  
 Project No.:  
 WBS 23-01455  
 Filename:  
 14161\_L1-0  
 Landscape DWG



**2 PLAZA PAVING**  
 L1.0 CONCEPT IMAGE



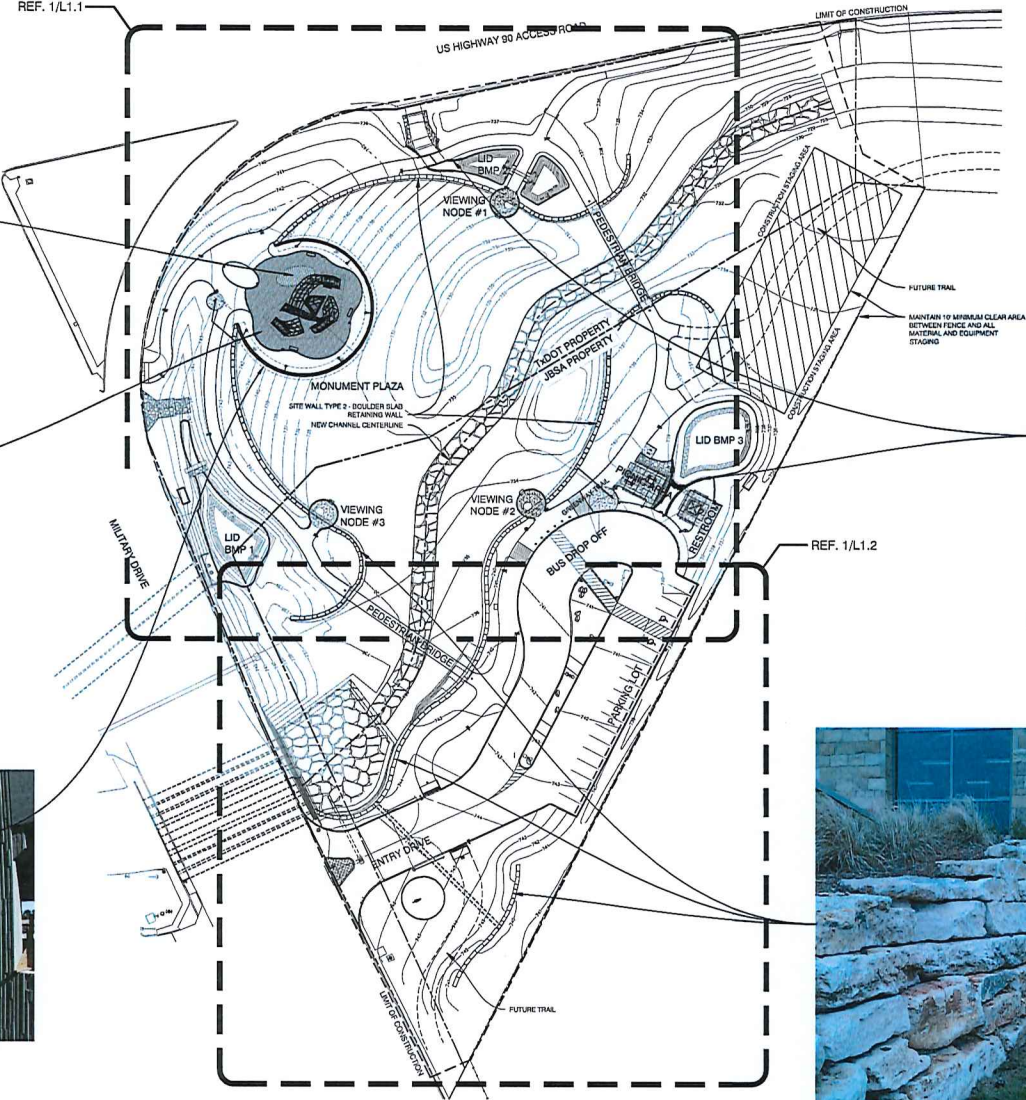
**3 PLAZA PAVING**  
 L1.0 CONCEPT IMAGE



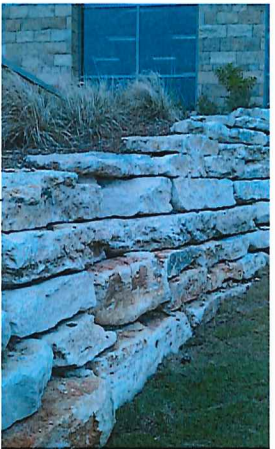
**4 SITE WALL TYPE 1**  
 L1.0 CONCEPT IMAGE - CONCRETE WALL W/ TEXTURE



**1 OVERALL HARDSCAPE PLAN**  
 L1.0 1" = 40'-0"



**5 LOW LANDSCAPE WALL**  
 L1.0 CONCEPT IMAGE - CHOPPED LIMESTONE

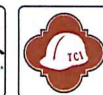


**6 SITE WALL TYPE 2**  
 L1.0 CONCEPT IMAGE - BOULDER SLAB RETAINING WALL

**HARDSCAPE GENERAL NOTES**

1. THE PROJECT MANUAL IS A LEGAL PART OF THE SET OF CONSTRUCTION DRAWINGS AND AS SUCH SHALL BE PRESENT WITH THE SET OF CONSTRUCTION DRAWINGS ON THE SITE AT ALL TIMES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH THE SPECIFICATIONS AND ALL SUBMITTAL REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LANDSCAPE ARCHITECT FOR SITE INSPECTIONS AS SPECIFIED IN THE SPECIFICATIONS. FAILURE TO NOTIFY THE LANDSCAPE ARCHITECT DOES NOT RELIEVE THE CONTRACTOR FROM INSPECTION APPROVAL AND WILL REQUIRE THE CONTRACTOR TO INSTALL/REPAIR WORK AS REQUIRED FOR APPROVAL AT THE COST OF THE CONTRACTOR. CONTRACTOR IS TO INFORM LANDSCAPE ARCHITECT OF THE START DATE OF WORK.
3. DO NOT WILLINGLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTION AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
5. IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR IS TO CONTACT LANDSCAPE ARCHITECT FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE THE MATERIALS.
6. SEE SPECIFICATIONS FOR REQUIREMENTS, MATERIALS AND EXECUTION.
7. REF. CIVIL PLANS FOR CONCRETE PAVING DIMENSIONAL CONTROLS, PAVEMENT, CURBS, PAVEMENT JOINTS, GRADING, UTILITIES AND PAVEMENT STRIPING.
8. GROUNDWATER MAYBE ENCOUNTERED DURING CONSTRUCTION. CONTRACTOR SHALL MAKE PROVISIONS TO ALLOW FOR CONTINUATION OF WORK AT NO ADDITIONAL COST TO THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO DIVERSION DITCHES, PIPE AND PUMPING. REFER TO GEOTECHNICAL ENGINEERING STUDY AND EXISTING CONDITIONS SHEET FOR APPROXIMATE LOCATION AND DEPTH OF GROUNDWATER.



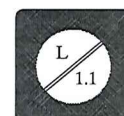


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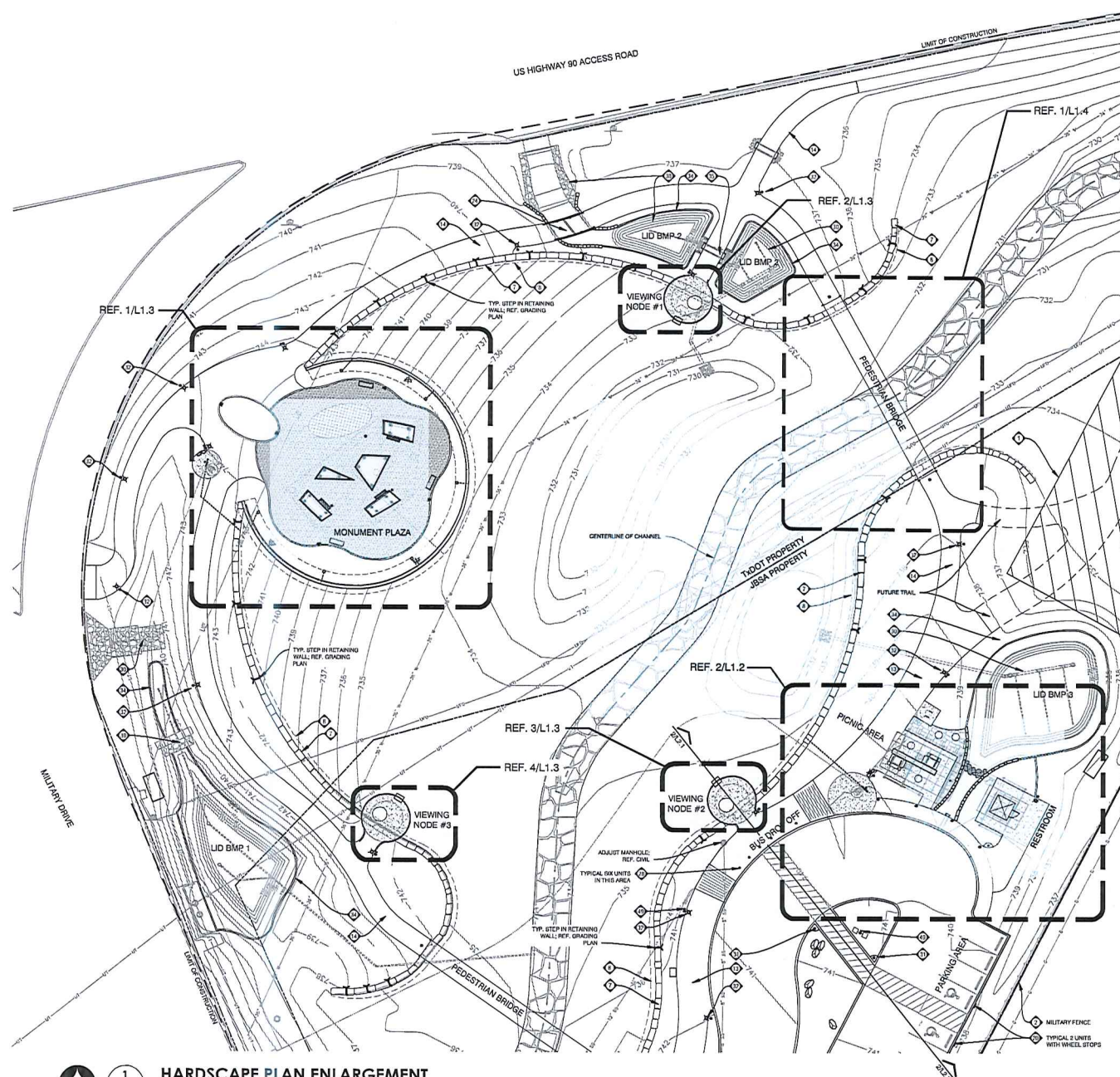
Date	Revisions/Comments

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**LACKLAND CORRIDOR GATEWAY**  
SW MILITARY & US HWY 90  
SAN ANTONIO, TEXAS  
**HARDSCAPE PLAN ENLARGEMENTS**



Designed By: LAH  
Drawn by: RJR / KJB  
Date: 07/19/2016  
Project No.: WBS 23-01455  
Filename: 14161\_L1-0  
Hardscape.DWG



# HARDSCAPE NOTES (Keyed on Plan)

- CONSTRUCTION STAGING AREA, COORDINATE WITH OWNER & CIVIL ENGINEER FOR FINAL LOCATION
- EXISTING SITE ELEMENT TO REMAIN, PROTECT IN PLACE
- MONUMENT FOUNDATION, REF. STRUCTURAL
- MONUMENT INSTALLED BY P.A.S.A. CONTRACT; COORDINATE EQUIPMENT STAGING REQUIREMENTS AND SCHEDULE
- CONCRETE PAVEMENT TYPE 1; REF. DETAIL 14.3.0
- SITE WALL TYPE 1 - TEXTURED CONCRETE, REF. DETAIL 14.3.1
- SITE WALL TYPE 2 - BOULDER SLAB RETAINING WALL, REF. DETAIL 14.3.1
- APPROXIMATE EDGE OF WALL FOOTING, REF. STRUCTURAL
- SITE WALL TYPE 3 - LOW STONE WALL, REF. DETAIL 14.3.1
- CONCRETE SEAT WALL - CAST IN PLACE WITH TEXTURED FORMLINER, REF. DETAIL 6.13.1
- CIRCULAR BENCH - CAST IN PLACE WITH TEXTURED FORMLINER, REF. DETAIL 7.13.1
- CONCRETE PAVEMENT TYPE 2; REF. DETAIL 14.3.0
- GREENWAY TRAIL: 12" WIDE WITH THICKENED EDGE BOTH SIDES, REF. CIVIL
- GATEWAY TRAIL: 8' WIDE WITH THICKENED EDGE BOTH SIDES, REF. CIVIL
- PEDESTRIAN BRIDGE W/ CONC. ABUTMENTS, LIGHTING, REF. BR 1.5, STRUCTURAL, CIVIL, ELECTRICAL
- BIKE HACK, REF. DETAIL 24.3.3
- CONCRETE EXPANSION JOINT, REF. CIVIL
- CONCRETE FLATWORK WITH SPECIAL FINISH (ROCK SALT), REF. CIVIL
- GUARDRAIL / HANDRAIL WITH LED, REF. DETAILS SHEET L3.7 & ELECTRICAL
- ACCESSIBLE PARKING SIGN, REF. DTL 24.5.0
- PEDESTAL DRINKING FOUNTAIN W/ DRAIN LINE AND CHECK VALVE, REF. DETAIL 14.3.2
- SALVAGED CONCRETE SLAB SURFACING, REF. DTL 34.3.0
- PICNIC AREA AND RESTROOM SHADE STRUCTURES, REF. SHEET L3.5
- CONCRETE SIDEWALK BRIDGE, REF. DETAIL 4.3.2
- PROTECTIVE RAIL AND HANDRAIL, REF. SHEET L3.8
- LITTER AND RECYCLING RECEPTACLES (ONE EACH), REF. DETAIL 34.3.3
- CONCRETE PICNIC TABLES, REF. DETAIL 14.3.3
- TYPE 1 FIXED BOLLARD, REF. DTL 24.3.4
- MANUAL SWING GATE & LOCK, REF. DTL 24.3.2
- LID BMP, REF. ENVIRONMENTAL CONSULTANT FOR DETAILS
- TYPE 2 BOLLARD W/ LIGHT FIXTURE, REF. DTL 44.3.4; REF. ELECTRICAL
- POLE TOP AREA LIGHT FIXTURE, REF. ELECTRICAL
- NATIVE BOULDER STEPPING STONES, REF. DTL 64.3.1
- CHOPPED LIMESTONE STONE EDGE, REF. DTL 74.4.4
- SIDEWALK BOX DRAIN, REF. CIVIL
- 10" NYLOPLAST IN-LINE DRAIN WITH DUCTILE IRON DOME GRATE, REF. DTL 34.3.2
- HIGH OUTPUT FLOODLIGHT FIXTURE, REF. DTL 24.6.2; REF. ELECTRICAL
- HIGH OUTPUT IN-GROUND FLOODLIGHT FIXTURE - ROOF, REF. DTL 34.6.2; REF. ELECTRICAL
- IN-GROUND LINEAR WALL LIGHT FIXTURE - ROOF, REF. DTL 14.6.2; REF. ELECTRICAL
- TYPE 3 BOLLARD - REMOVABLE, REF. DTL 34.3.4
- MUTT MITT, REF. DTL 14.3.4
- ASH URN, REF. DTL 54.3.4
- RECESSED POST LIGHT AT BRIDGE END, REF. DTL 40R1.0
- SIGN, REF. SIGNAGE PLAN L5.0 & L6.4 SHEETS
- OUTDOOR CHARGING STATION, REF. DTL 54.3.3
- MONUMENT PLAZA BENCH, REF. DTL 44.3.3
- CONCRETE PAVEMENT TYPE 3 - VEHICULAR, REF. DTL 64.3.0
- EMERGENCY TOWER, REF. DTL 64.3.4
- SECURITY CAMERA LOCATION (8 UNITS)
- RETAINING WALL - TYPE 4; REF. DTL 64.3.3
- BLANCO COBBLE BLEND, REF. DTL 14.3.1 & DTL 104.4.4 SIM.

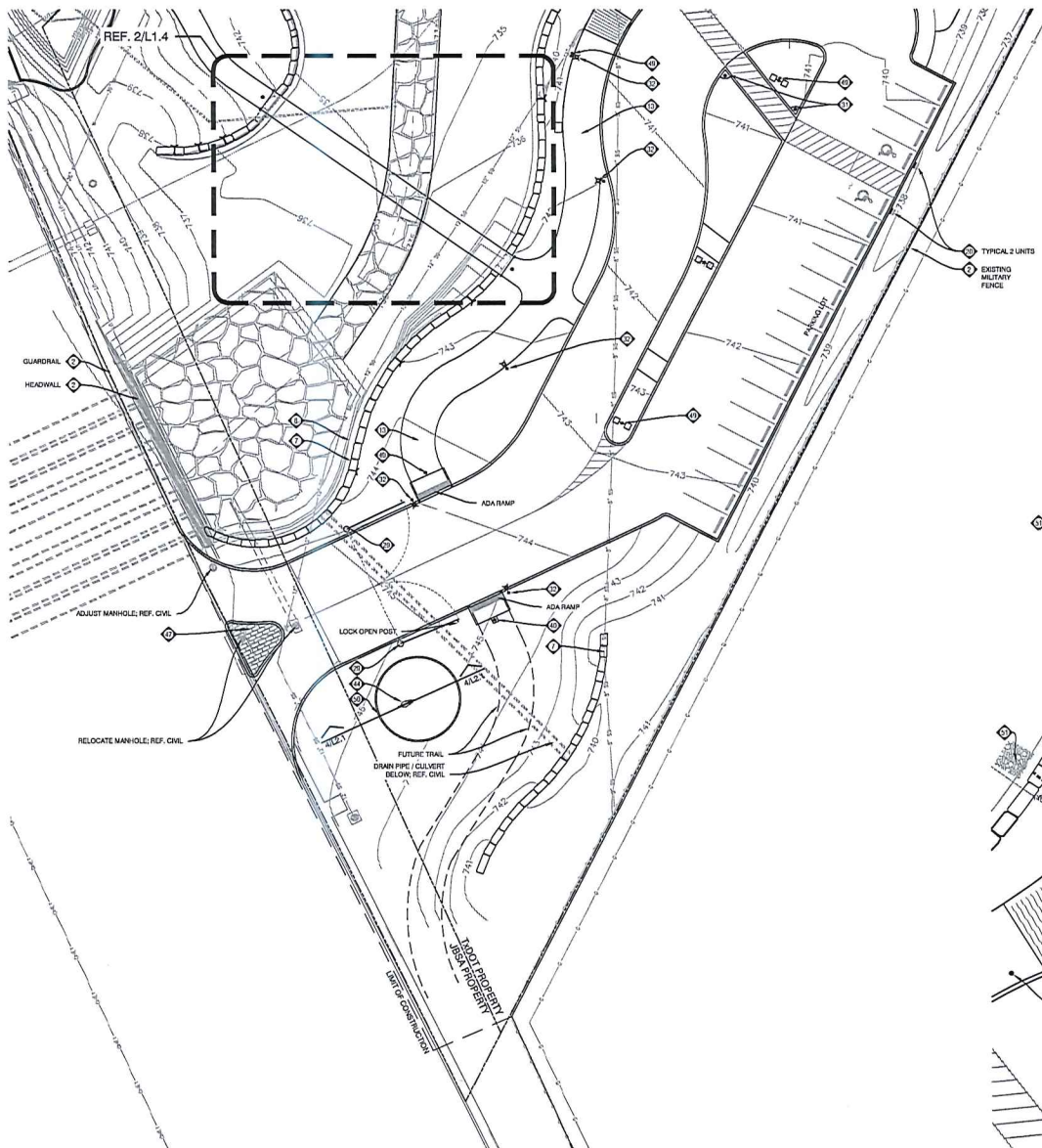


1  
L1.1

## HARDSCAPE PLAN ENLARGEMENT

1" = 20'-0"





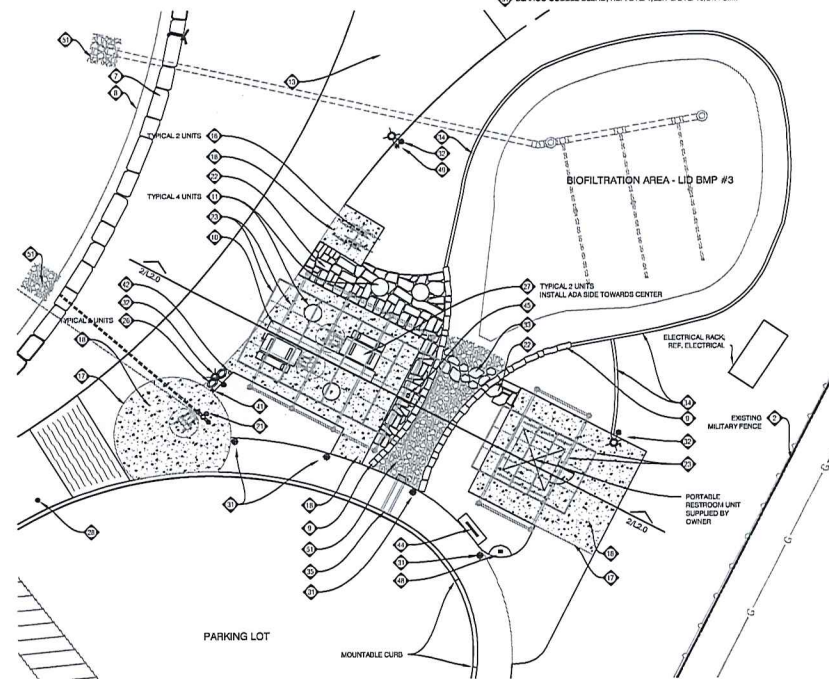
1  
L1.2

## HARDSCAPE PLAN ENLARGEMENT

1" = 20'-0"

## HARDSCAPE NOTES (Keyed on Plan)

- 1. CONSTRUCTION STAGING AREA COORDINATE WITH OWNER & CIVIL ENGINEER FOR FINAL LOCATION
- 2. EXISTING SITE ELEMENT TO REMAIN, PROTECT IN PLACE
- 3. MONUMENT FOUNDATION; REF. STRUCTURAL
- 4. MONUMENT INSTALLED BY P.A.S.A CONTRACT; COORDINATE EQUIPMENT STAGING REQUIREMENTS AND SCHEDULE
- 5. CONCRETE PAVEMENT TYPE 1; REF. DETAIL 1.5.0
- 6. SITE WALL TYPE 1 - TEXTURED CONCRETE; REF. DETAIL 1.5.1
- 7. SITE WALL TYPE 2 - BOULDER SLAB RETAINING WALL; REF. DETAIL 2.5.1
- 8. APPROXIMATE EDGE OF WALL FOOTING; REF. STRUCTURAL
- 9. SITE WALL TYPE 3 - LOW STONE WALL; REF. DETAIL 5.5.1
- 10. CONCRETE SEAT WALL - CAST IN PLACE WITH TEXTURED FORMLINER; REF. DETAIL 6.5.1
- 11. CIRCULAR BENCH - CAST IN PLACE WITH TEXTURED FORMLINER; REF. DETAIL 7.5.1
- 12. CONCRETE PAVEMENT TYPE 2; REF. DETAIL 1.5.0
- 13. GREENWAY TRAIL - 12" WIDE WITH THICKENED EDGE BOTH SIDES; REF. CIVIL
- 14. GATEWAY TRAIL - 8" WIDE WITH THICKENED EDGE BOTH SIDES; REF. CIVIL
- 15. PEDESTRIAN BRIDGE W/ CONC. ADJUSTMENTS, LIGHTING; REF. OR 1.5, STRUCTURAL, CIVIL, ELECTRICAL
- 16. BIKE RACK; REF. DETAIL 2.5.3
- 17. CONCRETE EXPANSION JOINT; REF. CIVIL
- 18. CONCRETE FLATWORK WITH SPECIAL FINISH (ROCK SALT); REF. CIVIL
- 19. GUARDRAIL / HANDRAIL WITH LED; REF. DETAILS SHEET L3.7 & ELECTRICAL
- 20. ACCESSIBLE PARKING SIGN; REF. DTL 2.5.0
- 21. PEDESTAL DRINKING FOUNTAIN W/ DRAIN LINE AND CHECK VALVE; REF. DETAIL 1.5.2
- 22. SALVAGED CONCRETE SLAB SURFACING; REF. DTL 3.1.0
- 23. PICNIC AREA AND RESTROOM SHADE STRUCTURES; REF. SHEET L3.5
- 24. CONCRETE SIDEWALK BRIDGE; REF. DETAIL 4.5.2
- 25. PROTECTIVE RAIL (NO HANDRAIL); REF. SHEET L3.8
- 26. LITTER AND RECYCLING RECEPTACLES (ONE EACH); REF. DETAIL 3.1.3
- 27. CONCRETE PICNIC TABLES; REF. DETAIL 1.5.3
- 28. TYPE 1 FIXED BOLLARD; REF. DTL 2.1.3
- 29. MANUAL SWING GATE & LOCK; REF. DTL 2.5.2
- 30. LID BMP; REF. ENVIRONMENTAL CONSULTANT FOR DETAILS
- 31. TYPE 2 BOLLARD W/ LIGHT FIXTURE; REF. DTL 4.1.3 & DTL 10.5.4.2
- 32. POLE TOP AREA LIGHT FIXTURE; REF. ELECTRICAL
- 33. NATIVE BOULDER STEPPING STONES; REF. DTL 8.1.3
- 34. CHOPPED LIMESTONE STONE EDGE; REF. DTL 7.4.4
- 35. SIDEWALK DOX DRAIN; REF. CIVIL
- 36. 10" NYOPLAST IN-LINE DRAIN WITH DUCTILE IRON DOME GRATE; REF. DTL 5.1.3.2
- 37. HIGH OUTPUT FLOODLIGHT FIXTURE; REF. DTL 2.1.8.2; REF. ELECTRICAL
- 38. HIGH OUTPUT IN-GROUND FLOODLIGHT FIXTURE - RGBW; REF. DTL 3.5.2; REF. ELECTRICAL
- 39. IN-GROUND LINEAR WALL LIGHT FIXTURE - RGBW; REF. DTL 1.5.8.2; REF. ELECTRICAL
- 40. TYPE 2 BOLLARD - REMOVABLE; REF. DTL 3.1.3.4
- 41. MUTT METT; REF. DTL 1.1.3.4
- 42. ASH URN; REF. DTL 5.1.3.4
- 43. RECESSED POST LIGHT AT BRIDGE END; REF. DTL 4.5.1.0
- 44. SIGN; REF. SIGNAGE PLAN L3.8 & LOCAL SHEETS
- 45. OUTDOOR CHAIRING STATION; REF. DTL 5.1.3.3
- 46. MONUMENT PLAZA BENCH; REF. DTL 4.1.3
- 47. CONCRETE PAVEMENT TYPE 3 - VEHICULAR; REF. DTL 6.1.3.0
- 48. EMERGENCY TOWER; REF. DTL 6.1.3.4
- 49. SECURITY CAMERA LOCATION (8 UNITS)
- 50. RETAINING WALL - TYPE 4; REF. DTL 6.1.3
- 51. BLANCO COBBLE BLEND; REF. DTL 1.5.1 & DTL 10.5.4.2



2  
L1.2

## HARDSCAPE PLAN ENLARGEMENT

1" = 10'-0"



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Date	Revision/Description

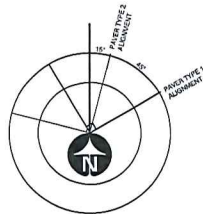
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SAN ANTONIO, TX 78203-3966  
TEL (210) 207-2879

**LACKLAND CORRIDOR GATEWAY**  
SW MILITARY & US HWY 90  
SAN ANTONIO, TEXAS  
**HARDSCAPE PLAN ENLARGEMENTS**

Designed by:  
LAH  
Drawn by:  
RJR / KJB  
Date:  
07/19/2016  
Project No.:  
WBS 23-01455  
Filename:  
14161\_L1-4  
Hardscape.DWG

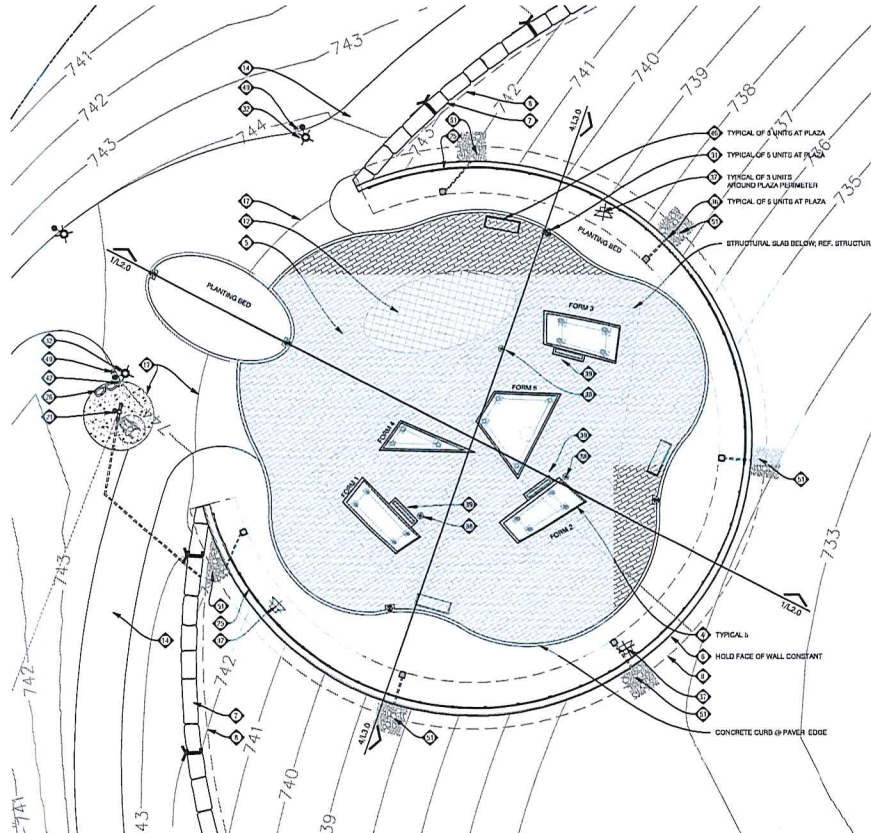


# PAVER LAYOUT ORIENTATION

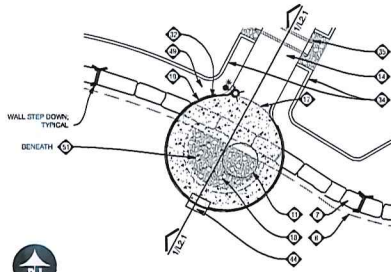


## NOTES:

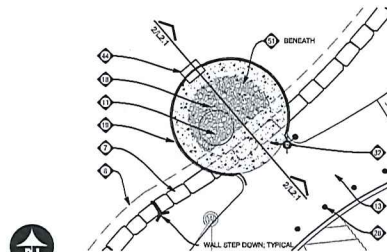
1. USE DIAGRAM ABOVE FOR PAVER ALIGNMENT ANGLES.
2. THERE IS A 45° DIFFERENCE BETWEEN THE TWO MONUMENT PAVER TYPES.
3. MONUMENT PLAZA PAVER ALIGNMENT IS RELATED TO ORIENTATION OF SCULPTURE.



**1 HARDSCAPE PLAN ENLARGEMENT**  
1" = 10'-0"



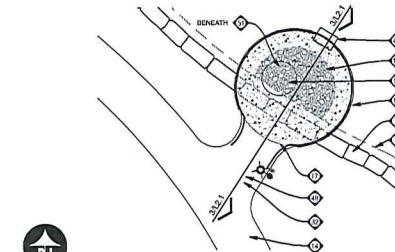
**2 HARDSCAPE PLAN ENLARGEMENT**  
1" = 10'-0" VIEWING NODE 1



**3 HARDSCAPE PLAN ENLARGEMENT**  
1" = 10'-0" VIEWING NODE 2

## HARDSCAPE NOTES (Keyed on Plan)

1. CONSTRUCTION STAGING AREA; COORDINATE WITH OWNER & CIVIL ENGINEER FOR FINAL LOCATION
2. EXISTING SITE ELEMENT TO REMAIN, PROTECT IN PLACE
3. MONUMENT FOUNDATION; REF. STRUCTURAL
4. MONUMENT INSTALLED BY P.A.S.A CONTRACT; COORDINATE EQUIPMENT STAGING REQUIREMENTS AND SCHEDULE
5. CONCRETE PAVER TYPE 1; REF. DETAIL 1A.3.0
6. SITE WALL TYPE 1 - TEXTURED CONCRETE; REF. DETAIL 1A.3.1
7. SITE WALL TYPE 2 - BOULDER GLASS RETAINING WALL; REF. DETAIL 2A.3.1
8. APPROXIMATE EDGE OF WALL FOOTING; REF. STRUCTURAL
9. SITE WALL TYPE 3 - LOW STONE WALL; REF. DETAIL 5A.3.1
10. CONCRETE SEAT WALL - CAST IN PLACE WITH TEXTURED FORMLINER; REF. DETAIL 6A.3.1
11. CIRCULAR BENCH - CAST IN PLACE WITH TEXTURED FORMLINER; REF. DETAIL 7A.3.1
12. CONCRETE PAVER TYPE 2; REF. DETAIL 1A.3.0
13. GREENWAY TRAIL: 12' WIDE WITH THICKENED EDGE BOTH SIDES; REF. CIVIL
14. GATEWAY TRAIL: 8' WIDE WITH THICKENED EDGE BOTH SIDES; REF. CIVIL
15. PEDESTRIAN BRIDGE W/ CONC. ABUTMENTS, LIGHTING; REF. BR 1.0, STRUCTURAL, CIVIL, ELECTRICAL
16. BIKE RACK; REF. DETAIL 2A.3.3
17. CONCRETE EXPANSION JOINT; REF. CIVIL
18. CONCRETE PLATWORK WITH SPECIAL FINISH (POCK SALT); REF. CIVIL
19. GUARDRAIL / HANDRAIL WITH LED; REF. DETAILS SHEET L3.7 & ELECTRICAL
20. ACCESSIBLE PARKING SIGN; REF. DTL 2A.3.0
21. PEDESTAL DRINKING FOUNTAIN W/ DRAIN LINE AND CHECK VALVE; REF. DETAIL 1A.3.2
22. SALVAGED CONCRETE SLAB SURFACING; REF. DTL 3A.3.0
23. PICNIC AREA AND RESTROOM SHADE STRUCTURES; REF. SHEET L3.5
24. CONCRETE SIDEWALK BRIDGE; REF. DETAIL 4A.3.2
25. PROTECTIVE RAIL (NO HANDRAIL); REF. SHEET L3.8
26. LITTER AND RECYCLING RECEPTACLES (ONE EACH); REF. DETAIL 3A.3.3
27. CONCRETE PICNIC TABLES; REF. DETAIL 1A.3.3
28. TYPE 1 FIXED BOLLARD; REF. DTL 2A.3.4
29. MANUAL OWING GATE & LOCK; REF. DTL 2A.3.2
30. LED BMP; REF. ENVIRONMENTAL CONSULTANT FOR DETAILS
31. TYPE 2 BOLLARD W/ LIGHT FIXTURE; REF. DTL 4A.3.4; REF. ELECTRICAL
32. POLE TOP AREA LIGHT FIXTURE; REF. ELECTRICAL
33. NATIVE BOULDER STEPPING STONES; REF. DTL 6A.3.1
34. CHOPPED LIMESTONE STONE EDGE; REF. DTL 7A.4.4
35. SIDEWALK BOX DRAIN; REF. CIVIL
36. 18" NYOPLAST IN-LINE DRAIN WITH DUCTILE IRON DOME GRATE; REF. DTL 3A.3.2
37. HIGH OUTPUT FLOODLIGHT FIXTURE; REF. DTL 2A.6.2; REF. ELECTRICAL
38. HIGH OUTPUT IN-GROUND FLOODLIGHT FIXTURE - ROWW; REF. DTL 3A.6.2; REF. ELECTRICAL
39. IN-GROUND LINEAR WALL LIGHT FIXTURE - ROWW; REF. DTL 1A.6.2; REF. ELECTRICAL
40. TYPE 2 BOLLARD - REMOVABLE; REF. DTL 3A.3.4
41. MUTT MATT; REF. DTL 1A.3.4
42. ASH URN; REF. DTL 5A.3.4
43. RECESSED POST LIGHT AT BRIDGE END; REF. DTL 4BR1.0
44. SIGN; REF. SIGNAGE PLAN L3.0 & LCLW SHEETS
45. OUTDOOR CHARGING STATION; REF. DTL 5A.3.3
46. MONUMENT PLAZA BENCH; REF. DTL 4A.3.3
47. CONCRETE PAVER TYPE 3 - VEHICULAR; REF. DTL 6A.3.0
48. EMERGENCY TOWER; REF. DTL 6B.3.4
49. SECURITY CAMERA LOCATION (8 UNITS)
50. RETAINING WALL - TYPE 4; REF. DTL 6A.3.3
51. BLANCO COBBLE BLEND; REF. DTL 1A.3.1 & DTL 15A.4.4 SIM.



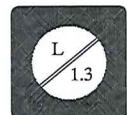
**4 HARDSCAPE PLAN ENLARGEMENT**  
1" = 10'-0" VIEWING NODE 3



Date:	Revision/Submitted:

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**VERTICAL DIVISION**  
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SAN ANTONIO, TX 78203-3966  
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**LACKLAND CORRIDOR GATEWAY**  
SW MILITARY & US HWY 90  
SAN ANTONIO, TEXAS  
**HARDSCAPE PLAN ENLARGEMENT**

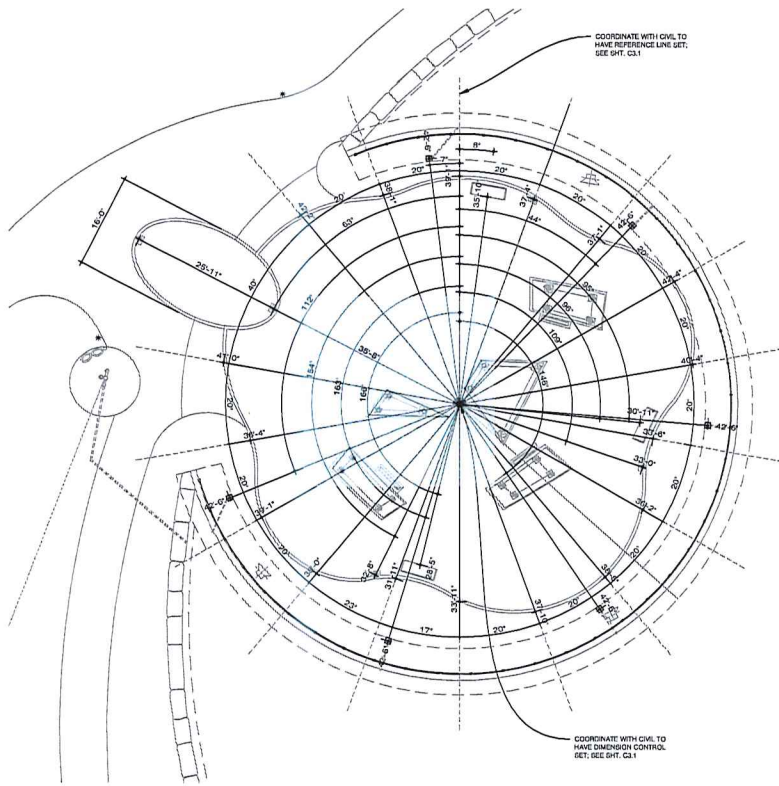


Designed by:	LAH
Drawn by:	RJR / KJB
Date:	07/19/2016
Project No.:	WBS 23-01455
Filename:	14181_L1-0
Hardware:	DWG







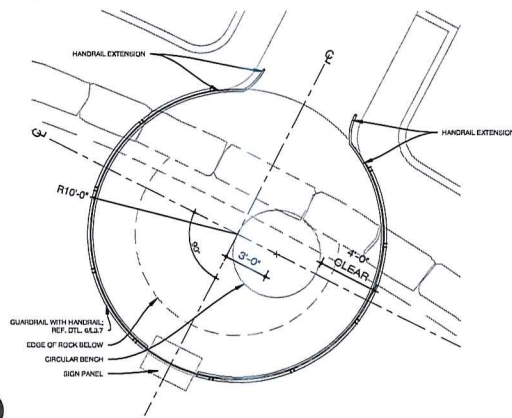


**1 MONUMENT PLAZA LAYOUT PLAN**  
L1.5 1" = 10'-0"

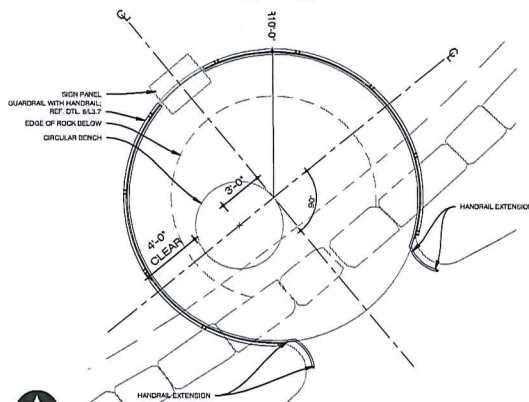


**NOTES:**  
1. DIMENSIONS TO COLUMNS ARE TAKEN FROM THE CENTER OF THE COLUMN  
2. REFER TO SHEET L3.5 FOR DIMENSIONAL CONTROL OF STRUCTURE  
3. CONFIRM SPOT ELEVATIONS OF WALLS & PAVILION WITH LANDSCAPE ARCHITECT

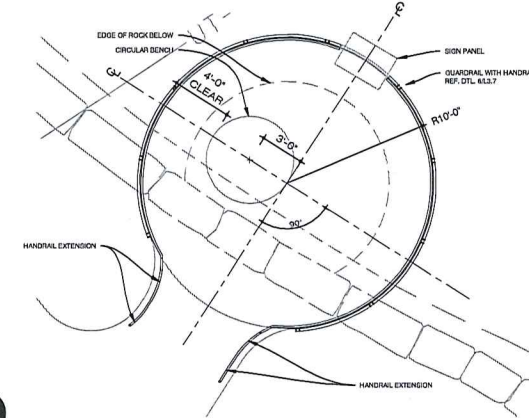
**2 PICNIC AREA LAYOUT PLAN**  
L1.5 3/16" = 1'-0"



**3 NODE 1 LAYOUT PLAN**  
L1.5 1/4" = 1'-0"



**4 NODE 2 LAYOUT PLAN**  
L1.5 1/4" = 1'-0"



**5 NODE 3 LAYOUT PLAN**  
L1.5 1/4" = 1'-0"

**CH CAMACHO-HERNANDEZ & ASSOCIATES, LLC**  
Engineering - Planning - Transportation - Related Services 410  
EMBASSY OAKS - SUITE 205 SAN ANTONIO, TX 78216  
OFFICE: (210) 341-4200 FAX: (210) 341-6300  
FIRM NUMBER: F-4478



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Date	Revision/Description

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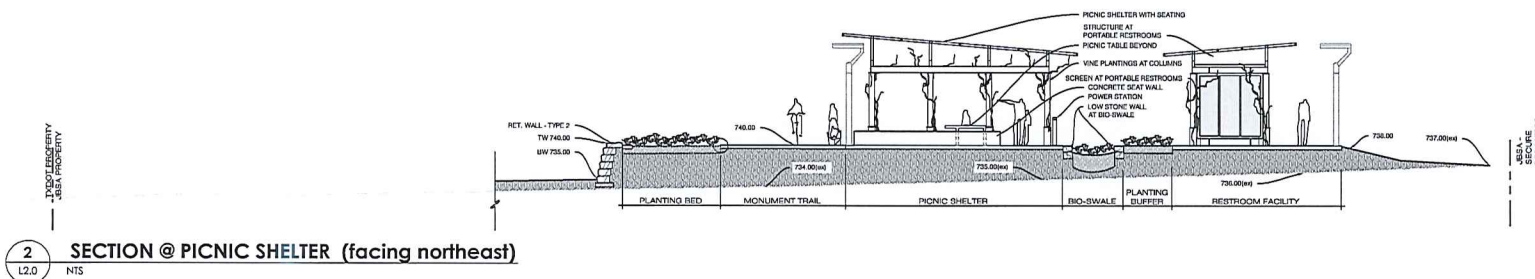
**LACKLAND CORRIDOR GATEWAY**  
SW MILITARY & US HWY 90  
SAN ANTONIO, TEXAS

**L 1.5**

Designed by:  
LAH  
Drawn by:  
RJR / KJB  
Date:  
07/19/2016  
Project No.:  
WBS 23-01455  
Filename:  
14161\_L1-0  
Hardcopy DWG

**HARDSCAPE LAYOUT PLANS**



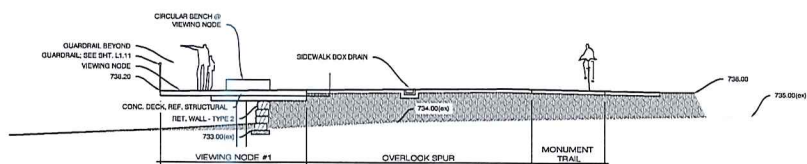




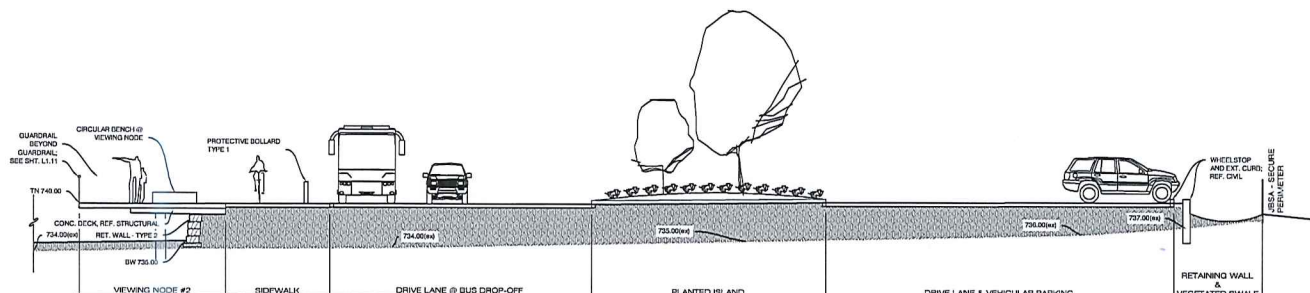


Date:	Revisions/Descriptions

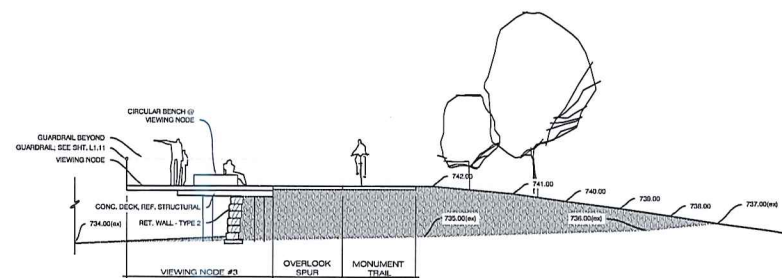
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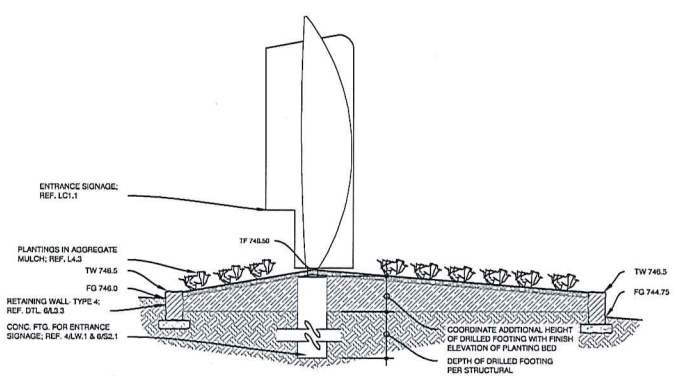
**1 SECTION @ VIEWING NODE #1 (facing northwest)**  
 L2.1 NTS



**2 SECTION @ VIEWING NODE #2 (facing northeast)**  
 L2.1 NTS

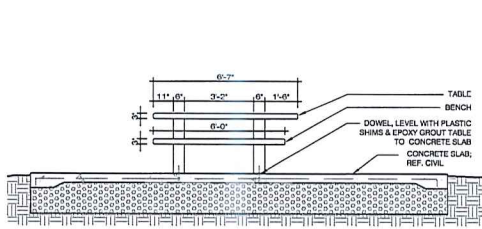
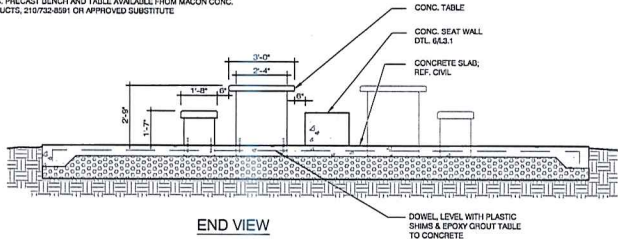


**3 SECTION @ VIEWING NODE #3 (facing southeast)**  
 L2.1 NTS





CONC. PRECAST BENCH AND TABLE AVAILABLE FROM MACON CONC. PRODUCTS, 210732-0391 OR APPROVED SUBSTITUTE.

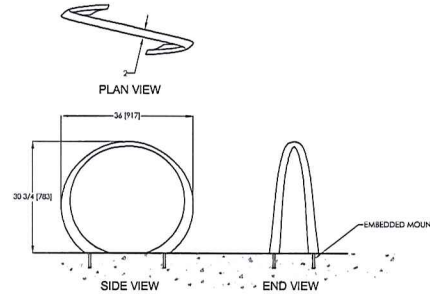


SIDE VIEW

# 1 CONCRETE PICNIC TABLE AND BENCH

L3.3 3/8" = 1'-0"

Loop Bike Rack, Embedded



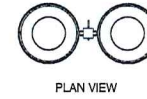
landscapiforms Drawing: AE100-02  
Dimensions are in inches [mm]  
Patent Pending  
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# 2 BIKE RACK (2 UNITS)

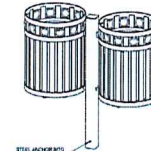
L3.3 NTS



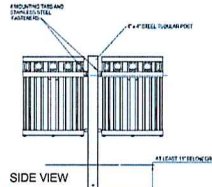
THOMAS STILL DIVISION  
THOMAS STILL  
10000 W. 100TH AVE.  
BENTLEY, NE 68901  
WWW.THOMASSTILL.COM & WWW.LANDSCAPEFORMS.COM



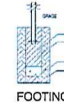
PLAN VIEW



ISOMETRIC VIEW



SIDE VIEW



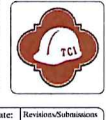
FOOTING

PRODUCT CODES: 307-742  
RECYCLING RECEPTACLE: 30 GALLON  
POST MOUNT COURSE  
SINK: 4-2-15  
ENCLOSURE  
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# 3 LITTER & RECYCLING RECEPTACLES

L3.3 NOT TO SCALE

NOTE:  
1. TWO (2) RECYCLING & LITTER UNITS  
2. REFER TO SPEC. FOR UNIT COLORS

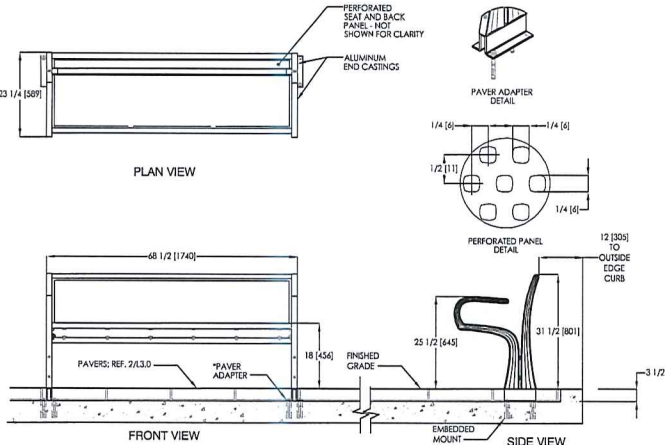


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Stay™ Bench, Backed, Paver Mount, with Arms  
Product Drawing

www.landscapiforms.com Date: 5/24/2010  
Ph: 800.521.254



PLAN VIEW

FRONT VIEW

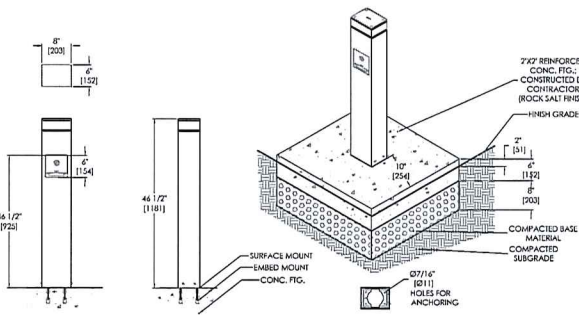
SIDE VIEW

landscapiforms Drawing: SA477-16  
Dimensions are in inches [mm]  
L3.3 Patent No. 7,016,633  
NOTE: INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTION.

# 4 BENCH (3 UNITS)

L3.3 NOT TO SCALE

Outdoor charging station with accent light



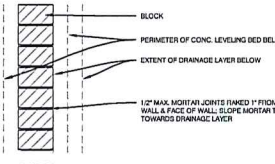
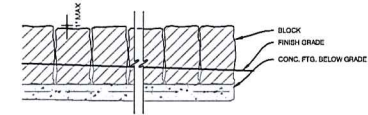
AVAILABLE WITH:  
2-GANG, TWO 4-POLE USB OUTLETS

landscapiforms Drawing: BM002  
Dimensions are in inches [mm]  
Patent No.

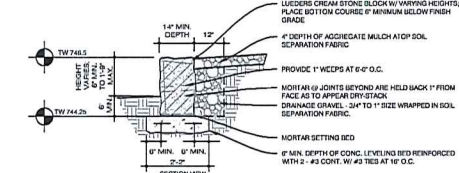
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# 5 OUTDOOR CHARGING STATION (1 UNIT)

L3.3 NOT TO SCALE



PLAN VIEW

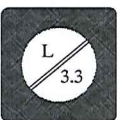


NOTES:  
1. BLOCK SIZE SHALL BE 14\"/>

# 6 RETAINING WALL - TYPE 4

L3.3 1/2\"/>

LACKLAND CORRIDOR GATEWAY  
SW MILITARY & US HWY 90  
SAN ANTONIO, TEXAS  
HARDSCAPE DETAILS



Designed by:  
LAH  
Drawn by:  
RJR / KJB  
Date:  
07/19/2016  
Project No.:  
WBS 23-01455  
Filename:  
14161\_L3-0\_Details.DWG



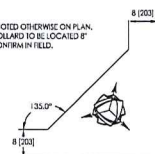


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Bollard, surface mount, lighted

\*BOLLARD TO BE INSTALLED ON THICKENED CONCRETE PAVEMENT EDGE AS SHOWN BELOW UNLESS NOTED OTHERWISE ON PLAN. THICKENED EDGE TO EXTEND 12" BEYOND SIDEWALK EDGE, TAPERED AT ANGLE NOTED. CENTER OF BOLLARD TO BE LOCATED 8" FROM EDGE OF PAVEMENT. DIRECT LIGHT PANELS AS SHOWN BELOW - LANDSCAPE ARCHITECT TO CONFIRM IN FIELD.



TYPICAL PLAN DETAIL -  
CONTINUOUS SIDEWALK EDGE

TYPICAL PLAN DETAIL -  
INSIDE CORNER OF SIDEWALK



SECTION - SIDE

ISOMETRIC

landscapetforms Drawing: AE200-02  
Dimensions are in inches [mm]  
U.S. Patent No. 3,401,178

**4 BOLLARD W/ LED (9 UNITS)**  
L3.4 NTS

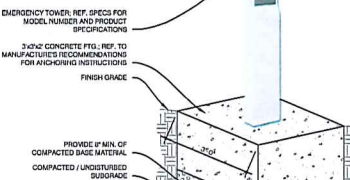
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**5** **ASH URN (2 UNITS)**



6 EMERGENCY TOWER (1 UNIT)  
13.4 NTS

**LACKLAND CORRIDOR GATEWAY**  
SW MILITARY & US HWY 90  
SAN ANTONIO, TEXAS

## HARDSCAPE DETAILS

**L** 3.4

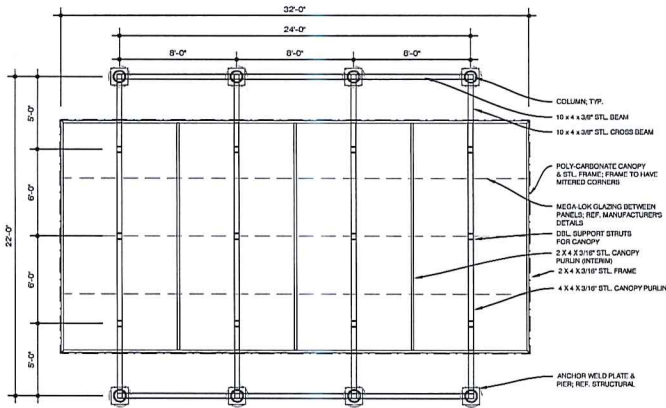
Designed By: <b>LAH</b>
Drawn By: <b>RJR / KJB</b>
Date: <b>07/19/2016</b>
Project No.: <b>WBS 23-01455</b>
Filename: <b>14161_13-0_Details.DWG</b>



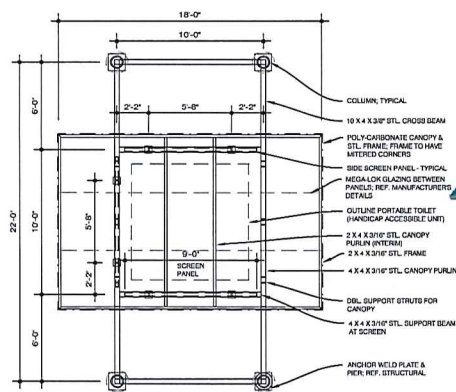


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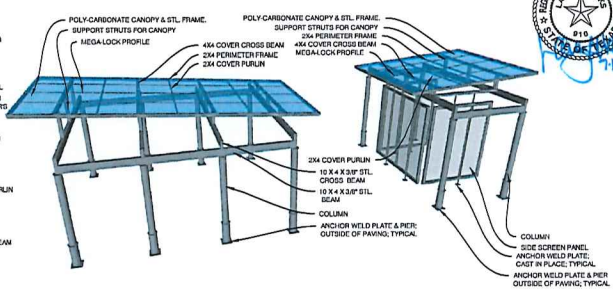
Date	Revisions/Submitted



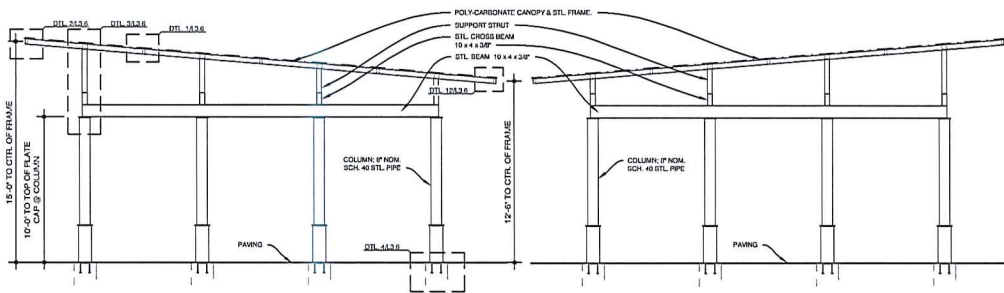
**1 PICNIC SHADE STRUCTURE - PLAN**  
 L3.5 1/4" = 1'-0"



**2 RESTROOM ENCLOSURE - PLAN**  
 L3.5 1/4" = 1'-0"

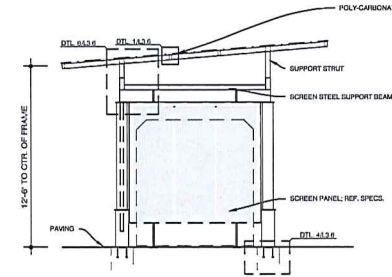


**3 SHADE STRUCTURE MODEL CONCEPT**  
 L3.5 NTS

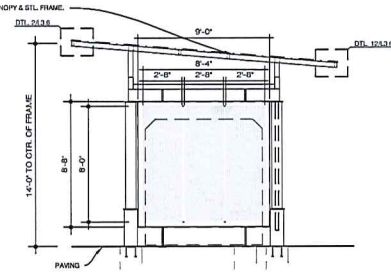


**4 PICNIC - WEST ELEVATION**  
 L3.5 1/4" = 1'-0"

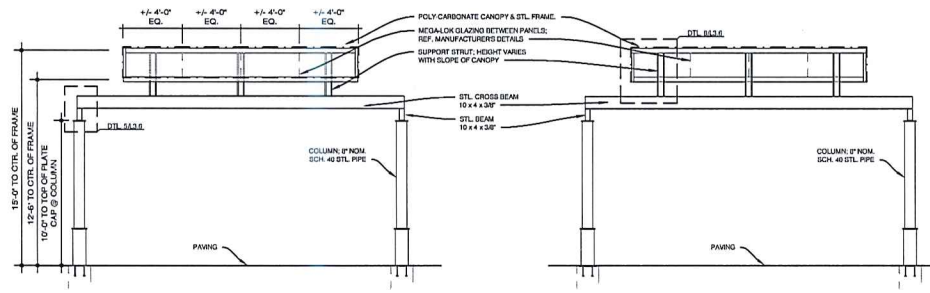
**5 PICNIC - EAST ELEVATION**  
 L3.5 1/4" = 1'-0"



**6 RESTROOM - WEST ELEVATION**  
 L3.5 1/4" = 1'-0"

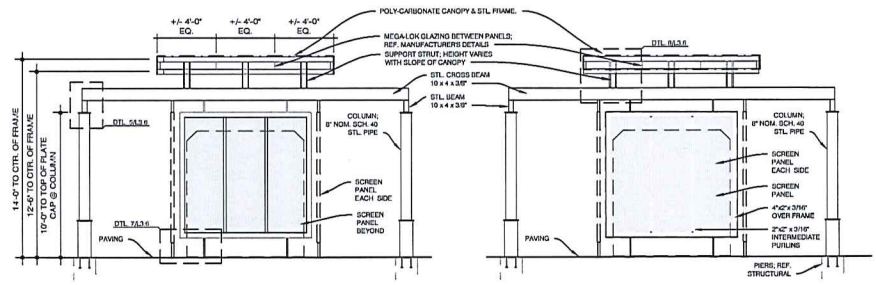


**7 RESTROOM - EAST ELEVATION**  
 L3.5 1/4" = 1'-0"



**8 PICNIC - SOUTH ELEVATION**  
 L3.5 1/4" = 1'-0"

**9 PICNIC - NORTH ELEVATION**  
 L3.5 1/4" = 1'-0"

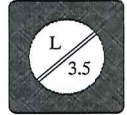


**10 RESTROOM - SOUTH ELEVATION**  
 L3.5 1/4" = 1'-0"

**11 RESTROOM - NORTH ELEVATION**  
 L3.5 1/4" = 1'-0"

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**LACKLAND CORRIDOR GATEWAY**  
 SW MILITARY & US HWY 90  
 SAN ANTONIO, TEXAS  
 SHADE STRUCTURE PLANS  
 AND DETAILS

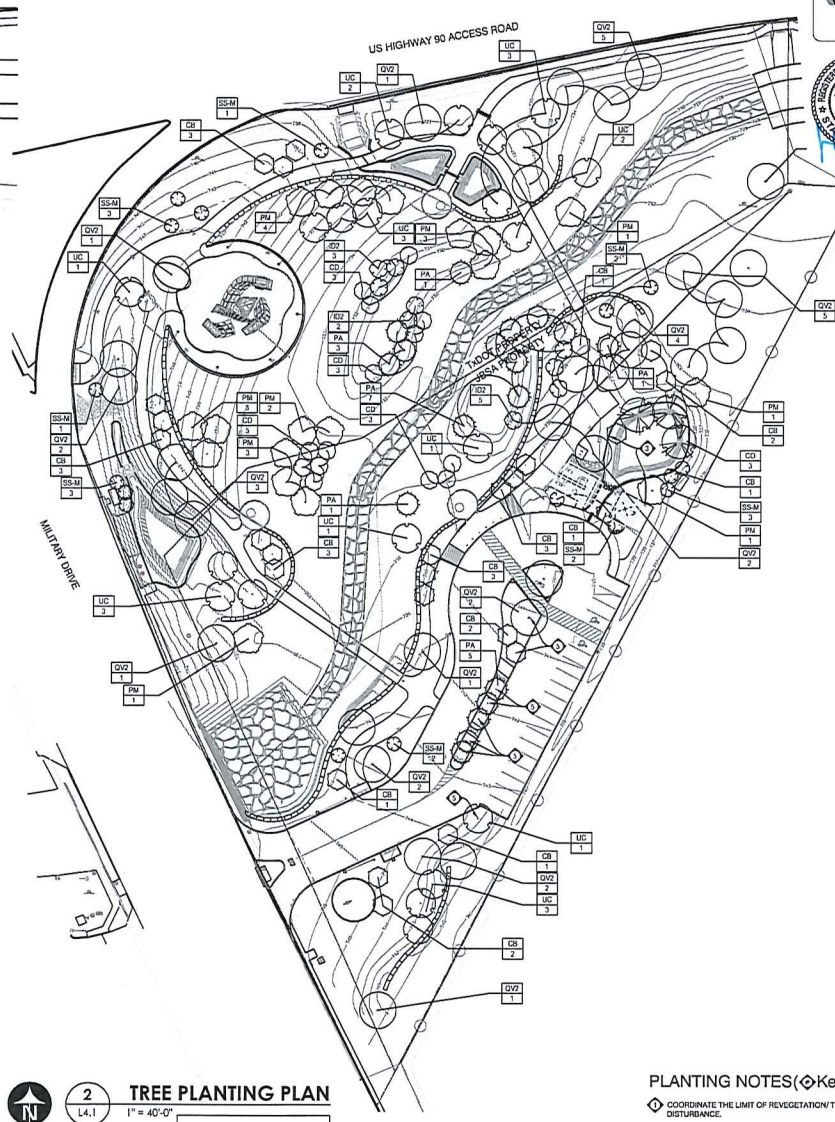
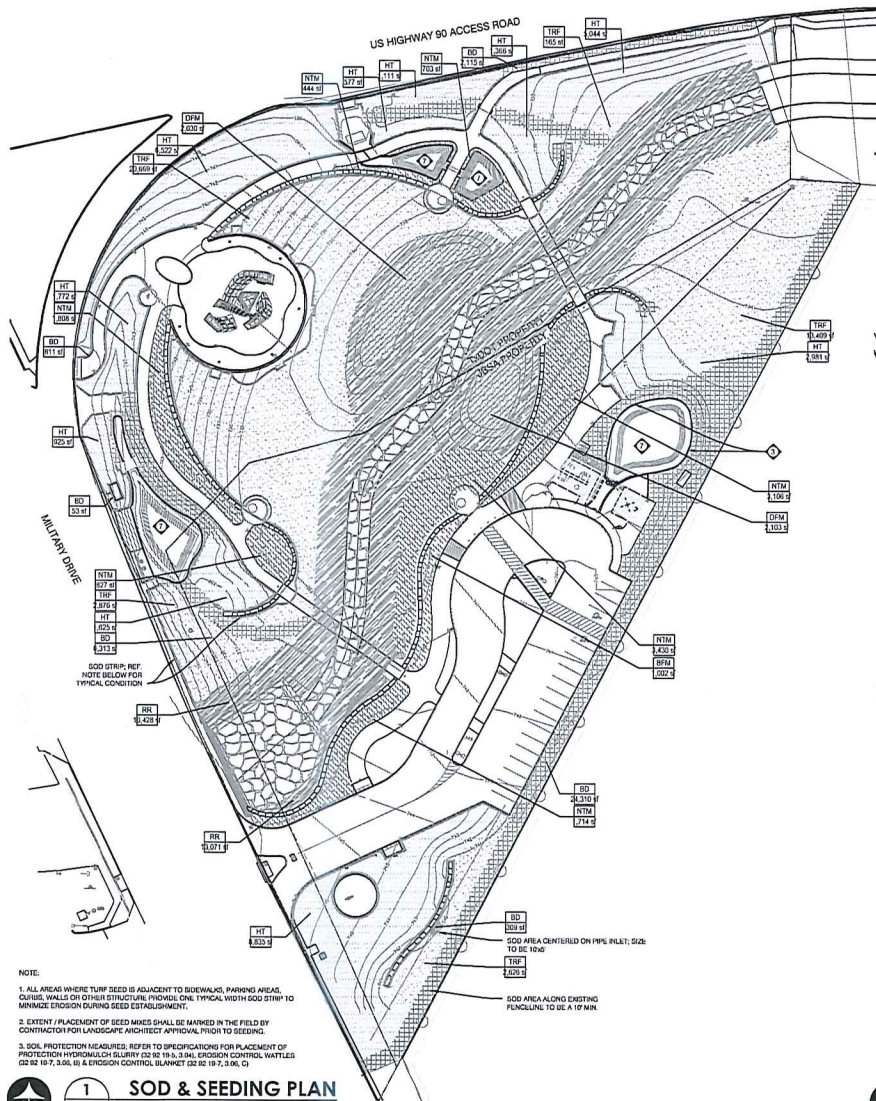


Designed by: LAH  
 Drawn by: RJR / KJB  
 Date: 07/19/2016  
 Project No.: WBS 23-01455  
 Filename: 14161\_L3-5\_Details.DWG









- PLANTING NOTES (Keyed on Plan)**
- COORDINATE THE LIMIT OF REVEGETATION/TURF WITH LIMIT OF GRADING/DISTURBANCE.
  - COBBLE WITHIN LANDSCAPE; REF. DTL. 10&4.4
  - CHOPPED LIMESTONE EDGER; REF. DTL. 7&4.4
  - TRAIN VINE TO SCULPTURE COLUMNS
  - TREES TO BE UTILIZED TOWARDS PARKING LOT SHADING
  - 2'x2' LIMESTONE ACCENT BOULDER; REF. DTL. 6&4.4 FOR PLACEMENT
  - COMPLETE PLACEMENT OF EROSION CONTROL WATTLES AT BMP-1, BMP-2 & BMP-3; REF. SPEC. SECTION 22 02 19.4, 3.06, 6.

**CAMACHO-HERNANDEZ & ASSOCIATES, LLC**  
Engineering - Planning - Transportation - Related Services 415  
EMBASSY OAKS - SUITE 205 SAN ANTONIO, TX. 78210  
OFFICE: (210) 341-6200 FAX: (210) 341-6300  
FIRM NUMBER: F-5478



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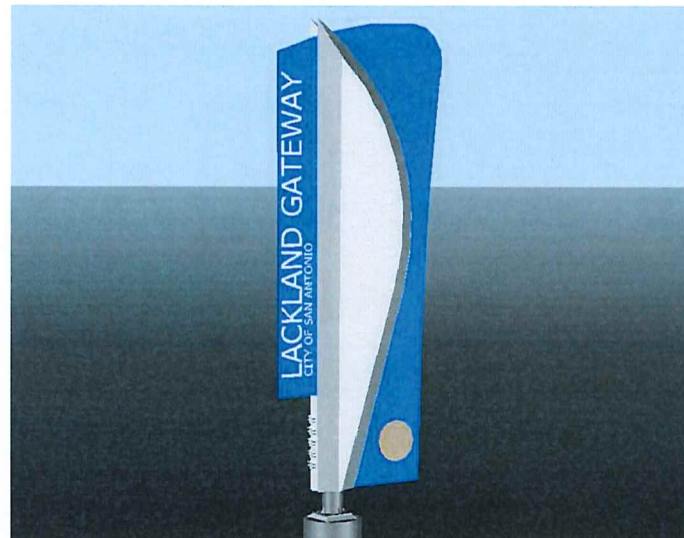
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TEL: (210) 207-2879 FAX: (210) 207-2107

**LACKLAND CORRIDOR GATEWAY**  
SV MILITARY & US HWY 90  
SAN ANTONIO, TEXAS  
**SEEDING AND TREE PLANTING PLANS**

**Designed By:**  
LAH  
**Drawn By:**  
RJR / KJB  
**Date:**  
07/19/2016  
**Project No.:**  
WBS 23-01455  
**Filename:**  
14161\_L4-L4.DWG



MATERIALS SCHEDULE					
SIGN ELEMENTS					
KEY	DESCRIPTION / MODEL NUMBER	COLOR	FINISH	CONTACT	REMARKS
S.1	1" THICK STEEL PLATE SIGN PANEL	BLUE	TO BE DETERMINED	COMPANY: SCHROEDER ART CONTACT: GEORGE SCHROEDER PHONE: 210-691-2508 EMAIL: george@schroederart.com	• REFERENCE STRUCTURAL DRAWINGS FOR STEEL NOTES & SPECIFICATIONS • FINAL COLOR SELECTION TO BE MADE FROM ACTUAL COLOR SAMPLES
S.2	1/2" THICK PIN MOUNTED GRAPHICS W/ 1/4" STANDOFF FROM SIGN PANEL NOTE: ADDRESS NUMBERS ARE 1" THICK W/ 1/2" STANDOFF FROM PROP. BLADES	ALUMINUM	POLISHED	COMPANY: SCHROEDER ART CONTACT: GEORGE SCHROEDER PHONE: 210-691-2508 EMAIL: george@schroederart.com	• CNC WATER JET OR LASER CUT LETTERS • TAHOMA REGULAR FONT AT TEXT HEIGHTS SPECIFIED ON PLANS
S.3	STEEL PROPELLER BLADE MONUMENT 1/4 GAUGE STANDARD SHEET METAL	SILVER	TO BE DETERMINED	COMPANY: SCHROEDER ART CONTACT: GEORGE SCHROEDER PHONE: 210-691-2508 EMAIL: george@schroederart.com	• REFERENCE STRUCTURAL DRAWINGS FOR STEEL NOTES & SPECIFICATIONS • FINAL COLOR SELECTION TO BE MADE FROM ACTUAL COLOR SAMPLES
S.4	8 5/8" HDSS PIPE	N/A	N/A	N/A	• REFERENCE STRUCTURAL DRAWINGS FOR STEEL NOTES, SPECIFICATIONS & STRUCTURAL FRAMING DETAILS
S.5	1/4" THICK STEEL PLATE PIPE CAP	N/A	N/A	N/A	• REFERENCE STRUCTURAL DRAWINGS FOR STEEL NOTES, SPECIFICATIONS & STRUCTURAL FRAMING DETAILS
S.6	PL 12"x12"x3/4" BEARING PLATE	N/A	N/A	N/A	• REFERENCE STRUCTURAL DRAWINGS FOR STEEL NOTES, SPECIFICATIONS & STRUCTURAL FRAMING DETAILS
S.7	3/8" THICK STEEL PLATE STIFFENING WEBS AT BEARING PLATE	N/A	N/A	N/A	• REFERENCE STRUCTURAL DRAWINGS FOR STEEL NOTES, SPECIFICATIONS & STRUCTURAL FRAMING DETAILS
S.8	INTERNAL WAFFLE STRUCTURE FOR PROPELLER BLADE MONUMENT 1/4 GAUGE STANDARD SHEET METAL	N/A	N/A	COMPANY: SCHROEDER ART CONTACT: GEORGE SCHROEDER PHONE: 210-691-2508 EMAIL: george@schroederart.com	• REFERENCE STRUCTURAL DRAWINGS FOR STEEL NOTES & SPECIFICATIONS • WAFFLE STRUCTURE RIBS SHALL BE NOTCHED AT INTERLOCKING INTERSECTIONS
S.9	HOWARD W. PEAK GREENWAY TRAILS SYSTEM MEDALLION	TO BE DETERMINED	TO BE DETERMINED	CITY OF SAN ANTONIO	• ZONE PANEL TO BE PROVIDED BY OTHERS • ADDED AT A LATER DATE WHEN TRAIL SYSTEM IS TIED INTO LACKLAND GATEWAY
CORROSION PROTECTION					
KEY	DESCRIPTION / MODEL NUMBER	COLOR	FINISH	CONTACT	REMARKS
CP.1	METAL SURFACE PREPARATION SSPC-SP9 COMMERCIAL BLAST CLEANING	N/A	N/A	COMPANY: CCC GROUP, INC. CONTACT: LLOYD RESPONDER PHONE: 210-662-1616 EMAIL: lloyd@cccgroupinc.com	• ANCHOR PROFILE SHALL BE ANGULAR WITH A 1.5 TO 2.0 MILS AS PER ASTM D 4417, METHOD C OR NACE STANDARD RP0287
CP.2	PRIME COAT Tnemec SERIES 800-1007 Tnemec-ZINC APPLIED AT 2.5 TO 3.5 DRY MILS	GREENISH-GRAY	N/A	COMPANY: CCC GROUP, INC. CONTACT: LLOYD RESPONDER PHONE: 210-662-1616 EMAIL: lloyd@cccgroupinc.com	• PROVIDE MOCK UP OF CORROSION PROTECTION SYSTEM FOR APPROVAL BY LANDSCAPE ARCHITECT
PAINT					
KEY	DESCRIPTION / MODEL NUMBER	COLOR	FINISH	CONTACT	REMARKS
P.1	FIRST COAT Tnemec SERIES 73 ENDURA-SHIELD APPLIED AT 0.8 TO 1.0 DRY MILS	REFER TO Tnemec COLOR GUIDE	SEMI-GLOSS	COMPANY: SCHROEDER ART CONTACT: GEORGE SCHROEDER PHONE: 210-691-2508 EMAIL: george@schroederart.com	• REFER TO Tnemec COLOR GUIDE USING COLOR SELECTIONS STATED ABOVE FOR SIGN PANEL & PROPELLER BLADE MONUMENT
P.2	SECOND COAT Tnemec SERIES 1070 FLUORONAR APPLIED AT 2.0 TO 3.0 DRY MILS	REFER TO Tnemec COLOR GUIDE	GLOSS	COMPANY: SCHROEDER ART CONTACT: GEORGE SCHROEDER PHONE: 210-691-2508 EMAIL: george@schroederart.com	• REFER TO Tnemec COLOR GUIDE USING COLOR SELECTIONS STATED ABOVE FOR SIGN PANEL & PROPELLER BLADE MONUMENT • PROVIDE MOCK UP OF SELECTED COLORS FOR APPROVAL BY LANDSCAPE ARCHITECT
CONCRETE					
KEY	DESCRIPTION / MODEL NUMBER	COLOR	FINISH	CONTACT	REMARKS
C.1	24"Ø REINF. CONCRETE DRILLED PIER	N/A	N/A	N/A	• REFERENCE STRUCTURAL DRAWINGS FOR REINFORCED CONCRETE DRILLED PIER NOTES, DETAILS & SPECIFICATIONS



1 LACKLAND CORRIDOR GATEWAY - WAYFINDING SIGN RENDERING  
LC 1.1 NO SCALE

GENERAL LEGEND	
ABBREVIATIONS	
SYMBOL	DESCRIPTION
B.C.	BOTTOM OF CURB
B.P.	BOTTOM OF PIPE
B.C.C.	BACK OF CURB
L.C.C.	LIMITS OF CONSTRUCTION
B.W.	BOTTOM OF WALL
C.L.	CENTER LINE
E.J.	EXPANSION JOINT
H.P.	HIGH POINT
E.O.P.	EDGE OF PAVEMENT
N.I.C.	NOT IN CONTRACT
O.C.	ON CENTER
O.C.E.W.	ON CENTER EACH WAY
P.A.	PLANTING AREA
ESMT.	EASEMENT
P.O.B.	POINT OF BEGINNING
P.O.T.	POINT OF TANGENCY
R.O.W.	RIGHT OF WAY
T.D.	TOP OF DRAIN
F.H.	FIRE HYDRANT
T.C.	TOP OF CURB
T.F.	TOP OF FOOTING
S.S.	SANITARY SEWER
T.W.	TOP OF WALL
W.D.	WATER DEPTH
W.L.	WATER LEVEL
U.N.O.	UNLESS NOTED OTHERWISE
F.O.F.	FACE OF FINISH
C.L.P.	CENTER LINE OF PIPE
SYMBOLS & LINE TYPES	
SYMBOL	DESCRIPTION
REF:	ENLARGEMENT AREA W/ CALLOUT
	DETAIL CALLOUT
	MATERIALS & FINISHES CALLOUT
	SECTION CALLOUT
	ELEVATION CALLOUT
XXXXX	SITEWORK LABEL
CITY:XXX	PLANTING LABEL
---	EXISTING TOPOGRAPHY-MINOR
---	EXISTING TOPOGRAPHY-MAJOR
---	PROPOSED TOPOGRAPHY-MINOR
---	PROPOSED TOPOGRAPHY-MAJOR
XXXXXX	PROPOSED SPOT ELEVATION
T.O. XXXX	PROPOSED DATUM ELEVATION
---	PIPE SIZE
---	WATER FLOW / SWALE DIRECTION
M	ELECTRICAL METER
J	JUNCTION BOX
---	CONDUIT
---	HOME RUN
---	SIGN LIGHT
---	TREE OR SIGN BULLET UPLIGHT
---	POLE LIGHT
---	GFI ELECTRICAL OUTLET

**CAMACHO-HERNANDEZ & ASSOCIATES, LLC**  
Engineering - Planning - Transportation - Related Services 415  
EMAGDY OAKS - SUITE 205 SAN ANTONIO, TX. 78216  
OFFICE: (210) 341-4289 FAX: (210) 341-6300  
FIRM NUMBER: F-5478



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Date:	Revisions/Submitted

**CITY OF SAN ANTONIO**  
TRANSPORTATION & CAPITAL IMPROVEMENTS  
VERTICAL DIVISION  
MUNICIPAL PLAZA BUILDING 1414 W. COMMERCE  
SAN ANTONIO, TX 78203-3966  
TEL (210) 207-2879 FAX (210) 207-2197

**LACKLAND CORRIDOR GATEWAY**  
SW MILITARY & US HWY 90  
SAN ANTONIO, TEXAS  
**MATERIALS SCHEDULE & LEGEND**

Designed by:  
LAH  
Drawn by:  
MDL  
Date:  
07/19/2016  
Project No.:  
WBS 23-01-455  
Filename:  
16043-LC1-01.DWG



## ATTACHMENT 04 – Paint Samples







**TNEMEC**

**TNEMEC COMPANY INCORPORATED**

tnemec.com 800-TNEMEC1

**1071B2447**  
**287C BRITE BLUE**  
**FLUORONAR SEMI-GLOSS**  
**REF: LACKLAND AFB**

This custom display sample was produced under laboratory conditions  
and may not always represent the appearance of field applications.







**TNEMEC COMPANY INCORPORATED**  
tnemec.com 800-TNEMEC1

**1071A2663**  
**7C COOL GRAY**  
**FLUORONAR SEMI-GLOSS**  
**REF: LACKLAND AFB**

This custom display sample was produced under laboratory conditions  
and may not always represent the appearance of field applications.







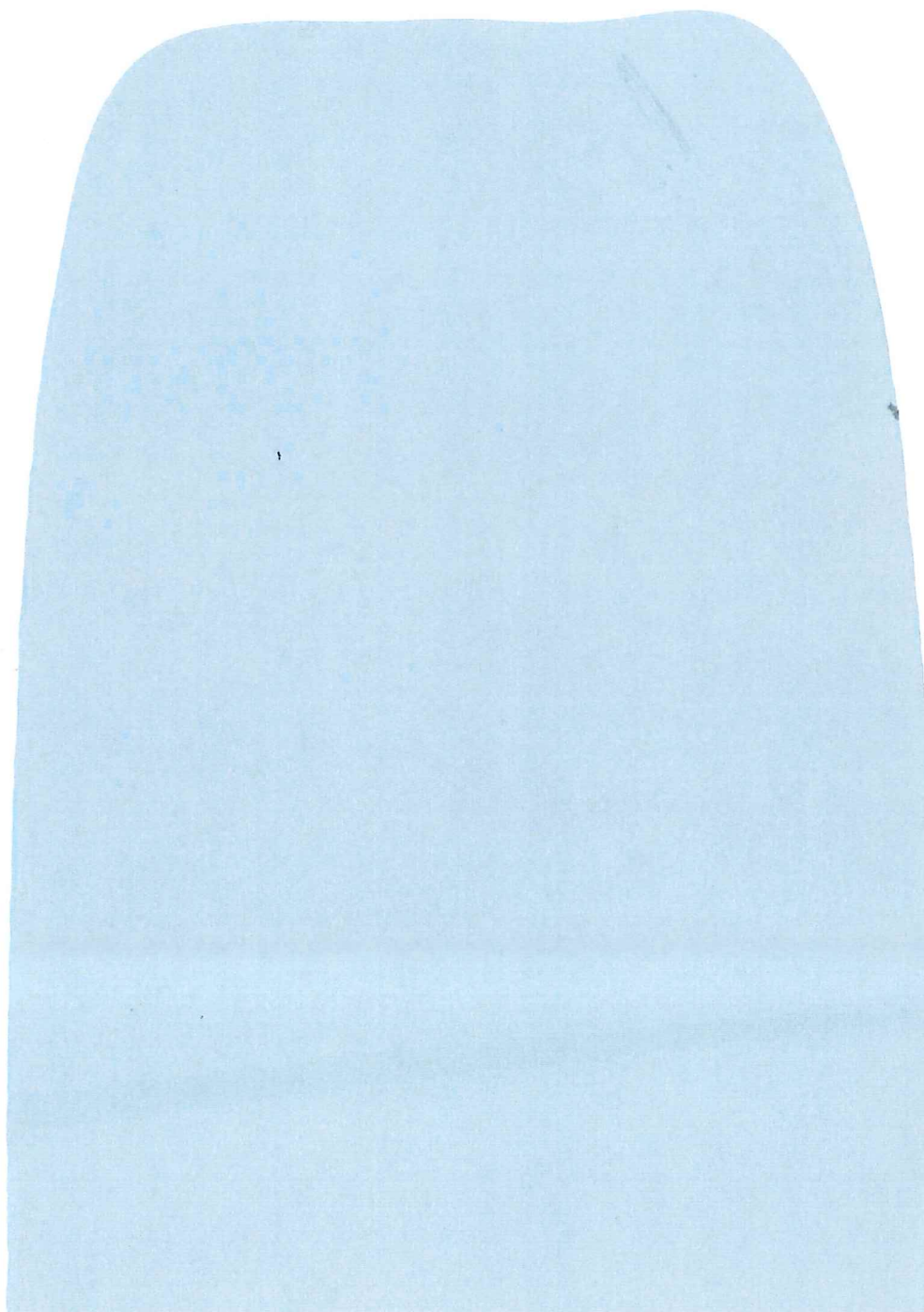
**TNEMEC**

**TNEMEC COMPANY INCORPORATED**

tnemec.com 800-TNEMEC1

**1071A2028**  
**877C SILVER**  
**FLUORONAR SEMI-GLOSS**  
**REF: LACKLAND AFB**

This custom display sample was produced under laboratory conditions  
and may not always represent the appearance of field applications.



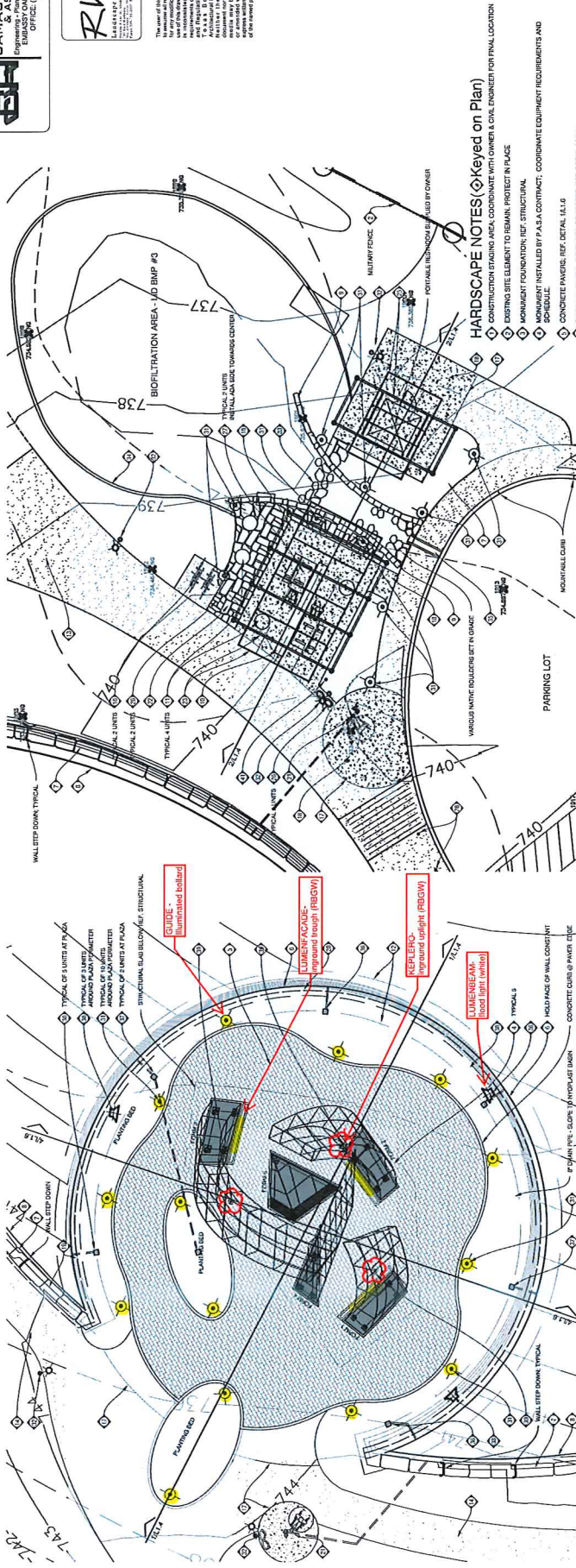


## ATTACHMENT 05 – 2016-06-09 PASA light submittal





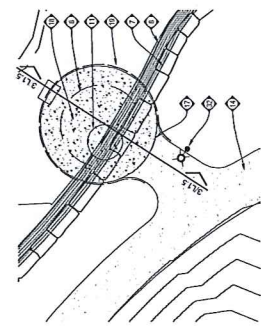
**95% Progress Review Set**



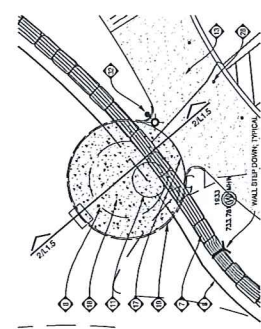
**HARDSCAPE NOTES (Keyed on Plan)**

1. CONSTRUCTION STAGING AREA, COORDINATE WITH OWNER & CIVIL ENGINEER FOR FINAL LOCATION
2. DISTINGUISH SITE ELEMENT TO REMAIN, PROTECT IN PLACE
3. MONUMENT FOUNDATION; REF. STRUCTURAL
4. MONUMENT INSTALLED BY P.A.A. CONTRACT, COORDINATE EQUIPMENT REQUIREMENTS AND SCHEDULE
5. CONCRETE PAVEMENT; REF. DETAIL L1.6
6. SITE WALL TYPE 1 - TEXTURED CONCRETE; REF. DETAIL L1.7
7. SITE WALL TYPE 2 - SOLID BRICK RETAINING WALL; REF. DETAIL L1.7
8. APPROXIMATE TOP OF WALL
9. LOW STONE WALL; REF. DETAIL L1.7
10. CONCRETE SEAT WALL - CAST IN PLACE WITH TEXTURED FORMLINER; REF. DETAIL L1.7
11. CIRCULAR BENCH - CAST IN PLACE WITH TEXTURED FORMLINER; REF. DETAIL L1.7
12. SITE WALL TYPE 1 - APPROXIMATE EDGE OF WALL FOOTING; REF. STRUCTURAL
13. SIDEWALK TRAIL - 12" WIDE WITH THICKENED EDGE BOTH SIDES; REF. CIVIL
14. SIDEWALK TRAIL - 8" WIDE WITH THICKENED EDGE BOTH SIDES; REF. CIVIL
15. PEDESTAL BRIDGE IN CONC. ABUTMENTS; REF. STRUCTURAL FOR FOUNDATION; REF. CIVIL
16. LINE BACK; REF. DETAIL L1.9
17. CONCRETE EXPANSION JOINT; REF. CIVIL
18. CONCRETE LAYOUT WITH SPECIAL FINISH (ROCK MAT); REF. CIVIL
19. GUARDRAIL / HANDRAIL WITH LED; REF. DETAILS SHEET L1.11, ELECTRICAL
20. ACCESSIBLE PARKING SIGN; REF. DETAIL L1.9
21. PEDESTAL DRINKING FOUNTAIN IN DRINK LINE AND CHECK VALVE; REF. DETAIL L1.9
22. MANHOLE CONCRETE SLAB SURFACING; REF. DETAIL L1.6
23. PLANTING AREA AND RESTROOM SHADE STRUCTURES; REF. SHEET L1.10
24. SUSPENDED SLAB / SIDEWALK BRIDGE; REF. DETAIL L1.10
25. PROTECTIVE RAIL (NO HANDRAIL); REF. SHEET L1.2
26. LITTER AND RECYCLING RECEPTACLES (ONE EACH); REF. DETAIL L1.9
27. CONCRETE PAVING TABLES EMBEDDED IN THICKENED PAD; REF. DETAIL L1.9
28. TYPE 1 DOLLARD; REF. DET. L1.9
29. MANUAL SWING GATE & LOCK; REF. DET. L1.9
30. LG BMP; REF. LOW IMPACT DEVELOPMENT CONSULTANT
31. TYPE 3 DOLLARD W/ LIGHT FIXTURE; REF. DET. L1.9, REF. ELECTRICAL
32. AREA POLE TOP LIGHT FIXTURE; REF. ELECTRICAL
33. NATIVE ISLAND STEPPING STONE; REF. DET. L1.7
34. CHOPPED LIMESTONE STEPPING STONE; REF. DET. L1.7
35. SIDEWALK KIOSK; REF. CIVIL
36. 2" NYLOPLAST IN LINE DRAIN WITH DUCTILE IRON DOME GATE; REF. DET. L1.9
37. 2" NYLOPLAST DRAIN DRAIN WITH DUCTILE IRON DOME GATE; REF. DET. L1.9
38. HIGH OUTPUT FLOODLIGHT FLOODLIGHT; REF. ELECTRICAL
39. HIGH OUTPUT FLOODLIGHT FLOODLIGHT FLOODLIGHT; REF. ELECTRICAL
40. TYPE 3 DOLLARD - REMOVABLE; REF. DET. L1.9
41. MOUNT MTR; REF. DET. L1.9
42. 6" H. LAMP; REF. DET. L1.9

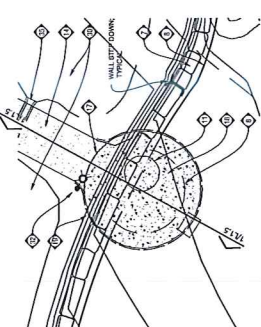
**2 HARDSCAPE PLAN ENLARGEMENT**  
 1" = 10'-0"  
 L1.2



**5 HARDSCAPE PLAN ENLARGEMENT**  
 1" = 10'-0" VIEWING NODE 3  
 L1.2



**4 HARDSCAPE PLAN ENLARGEMENT**  
 1" = 10'-0" VIEWING NODE 2  
 L1.2



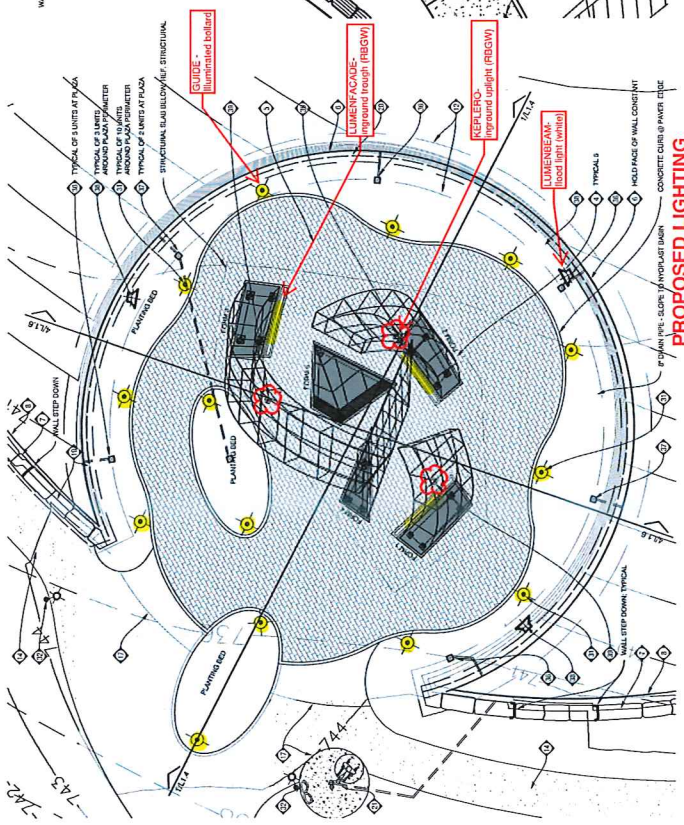
**3 HARDSCAPE PLAN ENLARGEMENT**  
 1" = 10'-0" VIEWING NODE 1  
 L1.2



**1 HARDSCAPE PLAN ENLARGEMENT**  
 1" = 10'-0"  
 L1.2



**PROPOSED LIGHTING**









Client \_\_\_\_\_ Project name \_\_\_\_\_

Order# \_\_\_\_\_ Type \_\_\_\_\_ Qty \_\_\_\_\_

## FEATURES AND BENEFITS

### Physical :

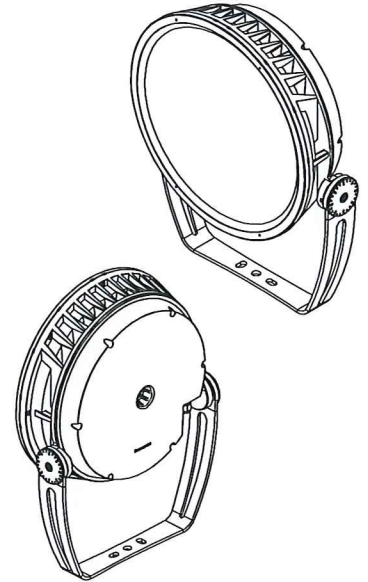
- low copper content high pressure die-cast aluminum housing
- Heavy aluminum formed yoke (standard yoke included)
- Stainless steel hardware
- Silicone sealing devices
- Clear tempered glass
- Patent pending dual chamber design for heat management and ease of maintenance
- Electro-statically applied polyester powder coat finish
- 16.33 kg / 36 lbs
- EPA: Front = 2.75 sq. ft./ 0.26 sq. m. Side = 1.17 sq. ft./ 0.12 sq. m.
- IP66
- IK09 rated
- Meets 3G ANSI C136.31 Vibration standard for bridge applications
- Corrosion-resistant coating for hostile environments\*

### Performance :

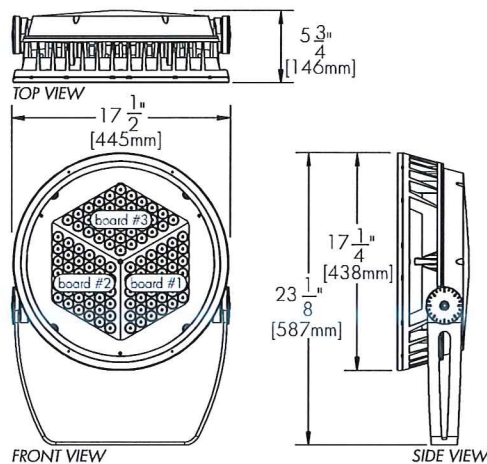
- Minimum 1fc (10,7 lux) @ 462 feet (140m) distance (RGB full white, 6° optic, RO version)
- Color mixing options: RGB (3 channels) or RGBW (4 channels)
- 6°, 10°, 20°, 40° or 60° optics available
- lumen maintenance 120,000 hrs [L70 @ 25°C] (RO and HO RGB versions, RO RGBW version)
- lumen maintenance 60,000 hrs [L70 @ 25°C] (HO RGBW version)
- RGB color mixing option: 108 LEDs (12x Red, 12x Green, 12x Blue per board)
- RGBW color mixing option: 72 LEDs (6x Red, 6x Green, 6x Blue, 6x White 4000K per board)
- Resolution per board or per fixture (configured with LumenID V3 software & DMX/RDM)
- lumen measurements comply with LM - 79 - 08 standard
- Operating temperatures: -25° C to 50° C [-13F to 122F]

### Electrical :

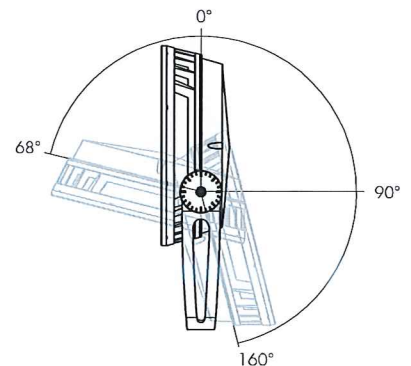
- Line voltage luminaire for 100 to 277V
- Power and data in 1 cable, 3ft/1 m cord (#16-5)
- Regular Output version: 140 watts / High Output version: 205 watts
- DMX/RDM enabled



	6° Optic (VN) (tested full white)	Delivered Output [lm]	Intensity [peak cd]
RO	RGB	5,185	213,484
	RGBW	5,033	292,725
HO	RGB	5,730	224,394
	RGBW	6,842	352,034



Standard Yoke (as shown, included)

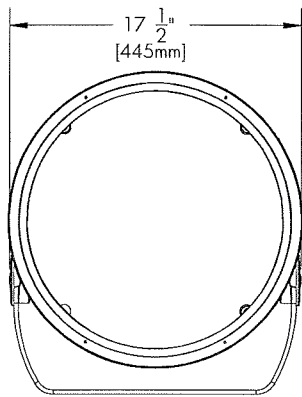
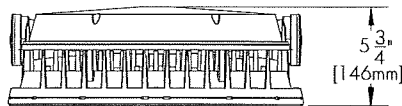


Standard Yoke Mounting  
Adjustable Pivot Limits  
(Adjustable in 6 degree increments)

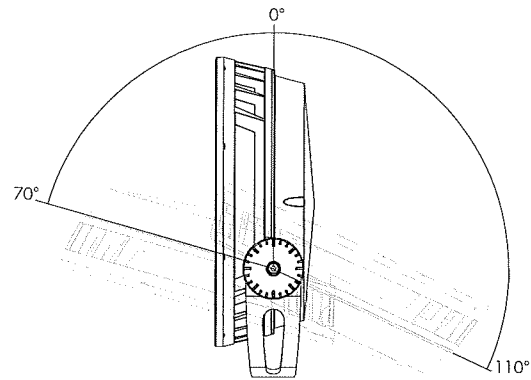
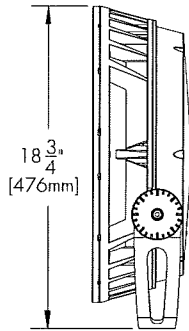
\* Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure!



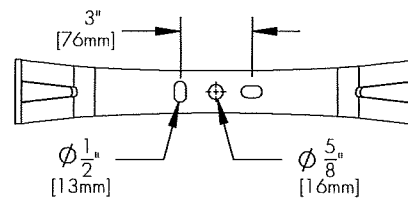
## MOUNTING OPTION



**SY**  
Short Yoke Mounting



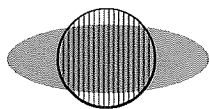
Short Yoke mounting  
adjustable pivot limits  
(Adjustable in 6 degree increments)



Standard and Short Yoke mounting  
holes Pattern

## OPTICAL OPTIONS

**\*Factory installed**



**LSLH**  
Linear Spread Lens  
Horizontal distribution  
(not adjustable on site)



**LSLV**  
Linear Spread Lens  
Vertical distribution  
(not adjustable on site)

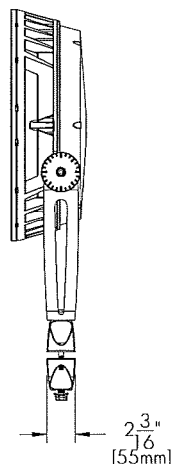
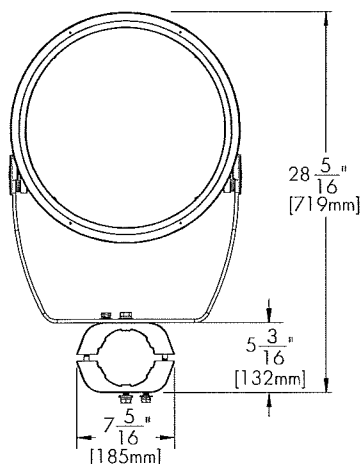
Factory installed, available for 6° to 40° optics.  
See Optical Accessories for field adjustable spread lens.



## ACCESSORIES

Order separately

## Mounting Accessories



**PM4-1, PM4.5-1, PM5-1**  
Round Pole Mounting accessory  
single fixture

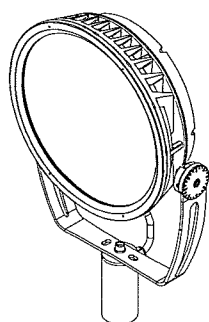


**PM4-2, PM4.5-2, PM5-2**  
Round Pole Mounting accessory  
twin fixtures

When **PM4-2, PM4.5-2 or PM5-2** are specified,  
one bracket assembly is supplied per 2 fixtures unless  
otherwise specified.

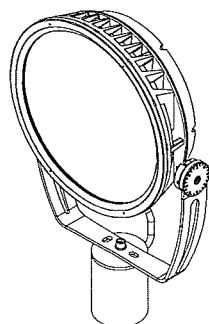
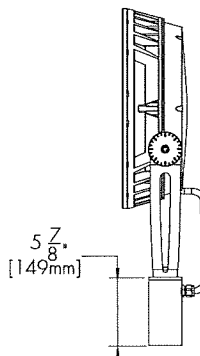
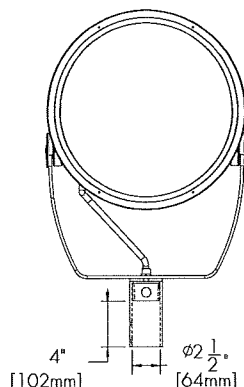
PM4 Round Pole Mounting Accessory Shown

\*Consult factory for square pole section



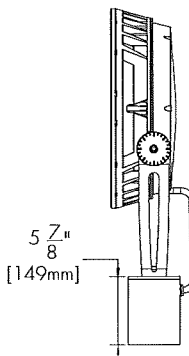
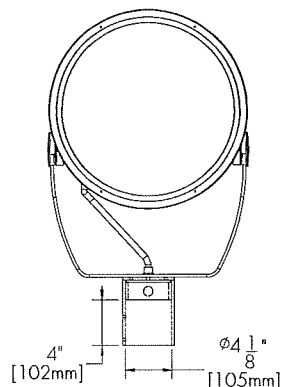
**TN2**

Tenon adapter  
to fit on 2 3/8" O.D. tenon



**TN4**

Tenon adapter  
to fit on 4" O.D. tenon





## ACCESSORIES - continued

Order separately

### Optical Accessories:

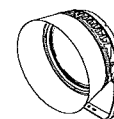
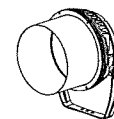
**LBX-SN-\_\_\_-BK** Snoot accessory. Please specify desired exterior finish from the list below.  
Interior surface painted black.

**LBX-SNW-\_\_\_-BK** Snoot Wide accessory. Please specify desired exterior finish from the list below.  
Interior surface painted black.

**LBX-VS-\_\_\_-BK** Visor accessory. Please specify desired exterior finish from the list below.  
Interior surface painted black.

**LBX-WG-\_\_\_** Wire Guard accessory. Please specify desired exterior finish from the list below.

**LBX-LSLA-\_\_\_** Linear Spread Lens Adjustable accessory. Please specify desired exterior finish from the list below.



#### Available finishes:

- BK** - Black Sandtex
- BRZ** - Bronze Sandtex
- SI** - Silver Sandtex
- WH** - Smooth white, low gloss
- BKTX** - Textured black
- BRZTX** - Textured bronze, non-metallic
- GRATX** - Textured medium gray
- GRNTX** - Textured green
- WHTX** - Textured white
- CC** - Custom color and finish (please specify RAL color)<sup>1</sup>

### Accessory combinations:

+	Snoot	Snoot Wide	Visor	Wire Guard
Snoot	NO	NO	NO	YES
Visor	NO	NO	NO	YES
Linear Spread Lens Adjustable	YES	YES	YES	NO

Accessory combinations must be ordered together on a single line.

Ex: A Snoot + Wire Guard combination order code is **LBX-SNWG-BK-BK**.

#### Notes:

<sup>1</sup> North American RAL colors specified with RAL number only are provided with a smooth/high-gloss finish. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.



## ACCESSORIES - continued

Order separately

### Control Systems:

- LTO2** Lumentouch is a wall mount DMX 512 controller keypad.
- LCU** Lumencue is a USB / mini SD DMX 512 controller.
- LID** LumenID is a diagnostic and addressing DMX 512 controller.  
It must be specified on all DMX applications.  
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller  
with a push button rotary dial and live feedback.

### Control Boxes:

- CBX** DMX/RDM control box.  
Up to six power and data outputs to fixtures or fixture runs.  
Ethernet enabled option.  
Refer to CBX specification sheet for details.

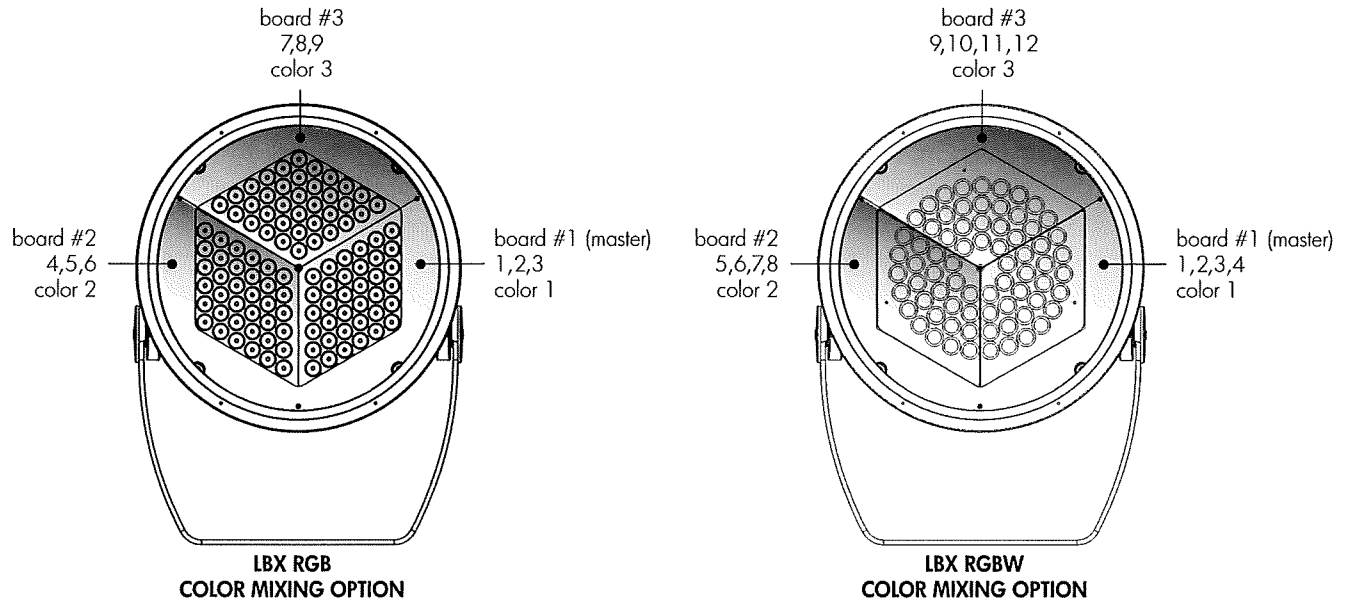


## RESOLUTION DETAILS

Fixture resolution can be configured on-site within the LumenID V3 software. A DMX/RDM enabled CBX is required.

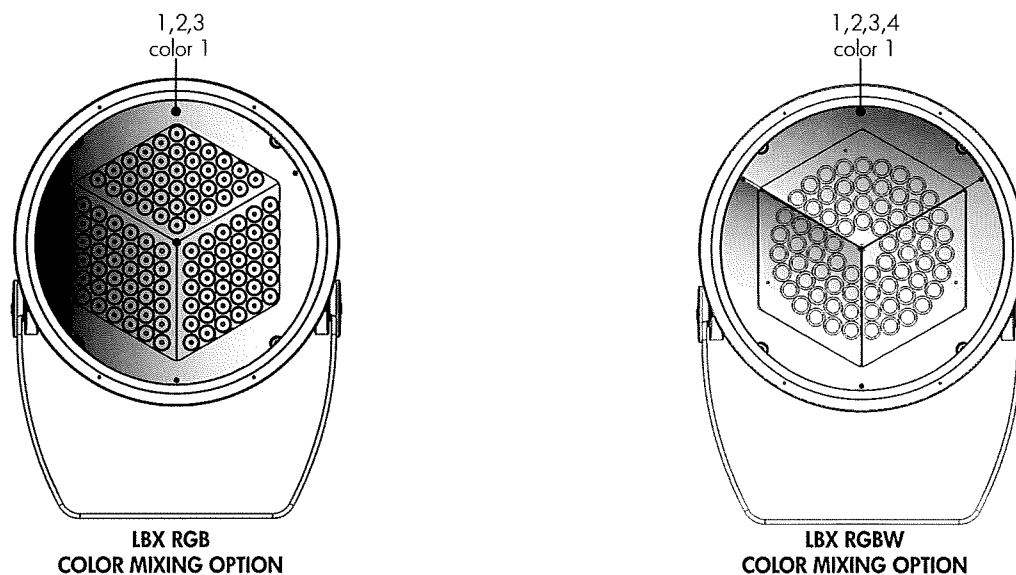
Resolution per board: each board is addressed independently

DMX ADDRESSES:



Resolution per fixture: each fixture is addressed independently

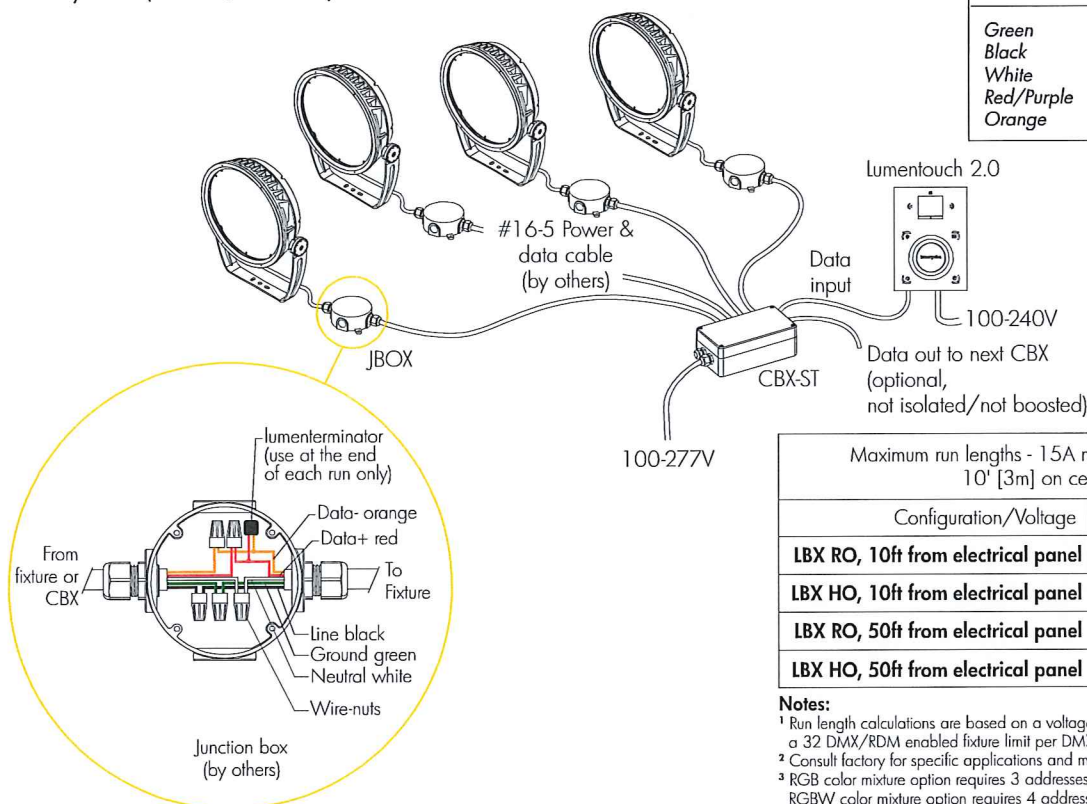
DMX ADDRESSES:





## TYPICAL WIRING DIAGRAMS

### Star Layout (DMX/RDM)



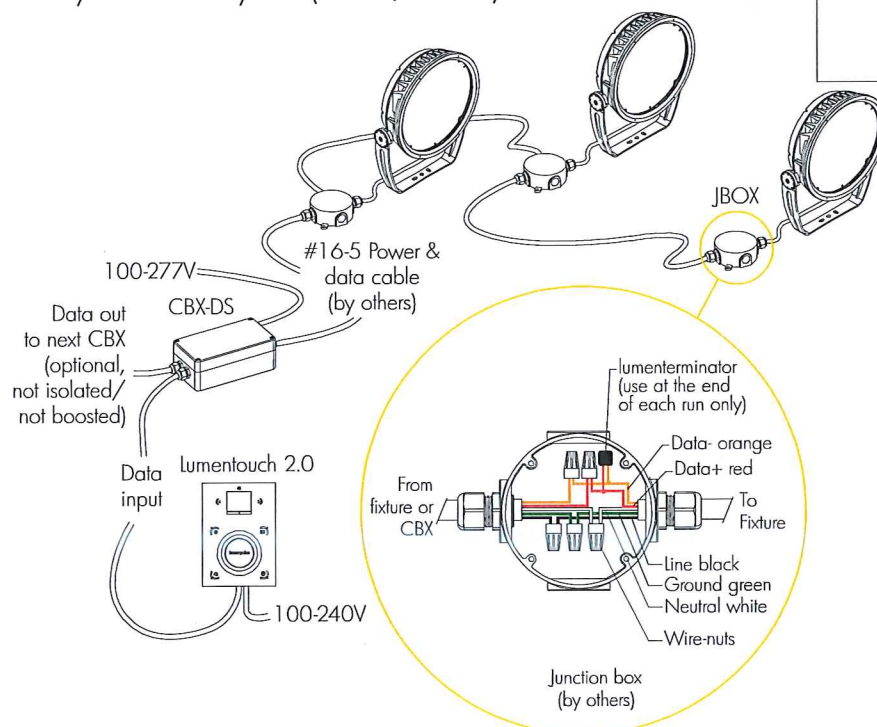
American Color Code	CE Color Code	USE
Green	Yellow/Green	Ground
Black	Brown	Live 100-277V
White	Blue	Neutral
Red/Purple	Black	0-10V / Data +
Orange	Grey	0-10V / Data -

Maximum run lengths - 15A maximum, 16AWG cable, 10' [3m] on center spacing				
Configuration/Voltage	120V	208V	240V	277V
LBX RO, 10ft from electrical panel	9	16	17	19
LBX HO, 10ft from electrical panel	6	12	13	15
LBX RO, 50ft from electrical panel	8	12	14	16
LBX HO, 50ft from electrical panel	5	9	10	11

#### Notes:

- <sup>1</sup> Run length calculations are based on a voltage drop of no more than 25V and a 32 DMX/RDM enabled fixture limit per DMX/RDM run.
- <sup>2</sup> Consult factory for specific applications and max. cable length recommendations.
- <sup>3</sup> RGB color mixture option requires 3 addresses. RGBW color mixture option requires 4 addresses.
- <sup>4</sup> 6 outputs max. per CBX-ST, 1 output max. per CBX-DS.

### Daisy Chain Layout (DMX/RDM)



DMX terminator is required at the end of each run to maintain data integrity.  
(2x) DMX lumenterminator included per CBX-DS  
(6x) DMX lumenterminator included per CBX-ST  
See installation instructions for details.



## HOW TO ORDER

<b>LBX Select:</b>	<b>Select:</b>	<b>Select:</b>	<b>Select:</b>	<b>Select:</b>	<b>Select:</b>	<b>DMX/RDM</b>	<b>Select:</b>
1	2	3	Board 1/ Board 2/ Board 3 4	5	6	7	8

### 1 Housing:

**LBX RO** - lumenbeam™ Xlarge, Regular Output, 140W  
**LBX HO** - lumenbeam™ Xlarge, High Output, 205W

### 2 Voltage:

**100** - 100 volts      **220** - 220 volts  
**120** - 120 volts      **240** - 240 volts  
**208** - 208 volts      **277** - 277 volts

### 3 Colors and Color temperatures:

**RGB** - Additive red, green and blue  
**RGBW** - Additive red, green, blue and white 4000K

### 4 Optic (Please specify for each board):

**VN** - Very Narrow 6°



**NS** - Narrow Spot 10°



**NF** - Narrow Flood 20°



**FL** - Flood 40°



**WFL** - Wide Flood 60°  
 (cannot be combined with other optics)



### 5 Optical Option:

**LSLH** - Linear Spread Lens Horizontal distribution<sup>1</sup>  
**LSLV** - Linear Spread Lens Vertical distribution<sup>1</sup>

### 6 Finish:

**BK** - Black Sandtex  
**BRZ** - Bronze Sandtex  
**SI** - Silver Sandtex  
**WH** - Smooth white, low gloss  
**BKTX** - Textured black  
**BRZTX** - Textured bronze, non-metallic  
**GRATX** - Textured medium gray  
**GRNTX** - Textured green  
**WHTX** - Textured white  
**CC** - Custom color and finish (please specify RAL color)<sup>2</sup>

### 7 Control:

**DMX/RDM** - DMX/RDM enabled<sup>3</sup>

### 8 Option:

**SY** - Short Yoke  
**3GV** - 3G ANSI C136.31 Vibration Rating  
**CRC** - Corrosion-resistant coating for hostile environments  
**CE** - CE (certification covers European Economic Area)

### Notes:

<sup>1</sup> Factory installed, available for 6° to 40° optics. See Optical Accessories for field adjustable spread lens. <sup>2</sup> North American RAL colors specified with RAL number only are provided with a smooth/high-gloss finish. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary. <sup>3</sup> Fixtures set to by fixture resolution (consult the Resolution Details page for the number of DMX addresses).



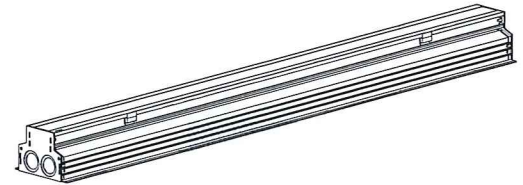
Client \_\_\_\_\_ Project name \_\_\_\_\_

Order# \_\_\_\_\_ Type \_\_\_\_\_ Qty \_\_\_\_\_

## FEATURES AND BENEFITS

### Physical :

- Aluminum optical chamber housing
- Anodized aluminum flush trim
- Polymer recycled PVC blackout housing
- Available in 1', 2', 3' or 4' sections
- Die cast aluminum end caps
- Stainless steel hardware
- Tempered glass lens
- Asymmetric wallwash, 10° x 10°, 10° x 60°, 30° x 60° or 60° x 60° optics
- 0°, 2.5°, 5° or 20° factory-set optical aiming options (not available for asymmetric wallwash)
- IP68 rated for up to 1' (30cm), not suitable for permanent immersion applications
- IK10 rated
- 1000kg max load, walk over only\*



**IK10**

### Performance summary

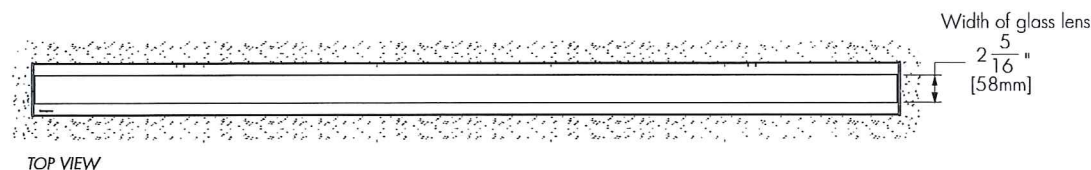
### Performance :

- Color mixing options: RGB (3 channels) or RGBW (4 channels)
- Lumen maintenance 80,000 hrs [L70 @ 25°C]
- Lumen maintenance 60,000 hrs [L70 @ 50°C]
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per foot or per fixture (configured with LumenID V3 software & DMX/RDM)
- Operating temperatures: -40° C to 50° C [-40F to 122F]

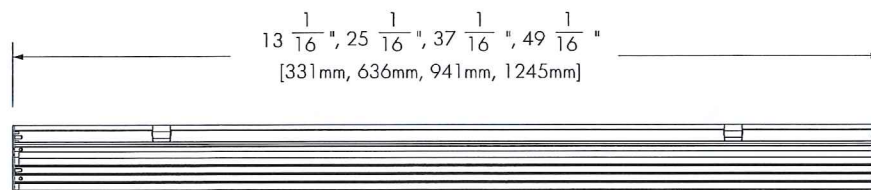
		Delivered Output [lm]	Intensity [peak cd]
2ft full white, WW, 0° tilt setting	RGB	767	1,159
	RGBW	1,024	1,560
4ft, 10°x60°, 2.5° tilt setting	RGB	1,435	4,525
	RGBW	1,775	4,477

### Electrical :

- Line voltage luminaire for 100 to 277V
- Power and data in 1 cable (#16-5)
- IP68 push-lock connectors
- 17.25W/ft
- DMX/RDM enabled

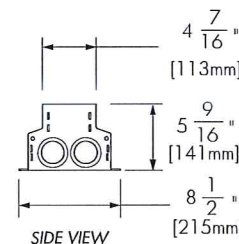


TOP VIEW

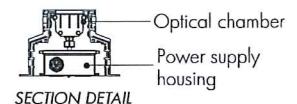


FRONT VIEW

\*All dimensions are preliminary



SIDE VIEW

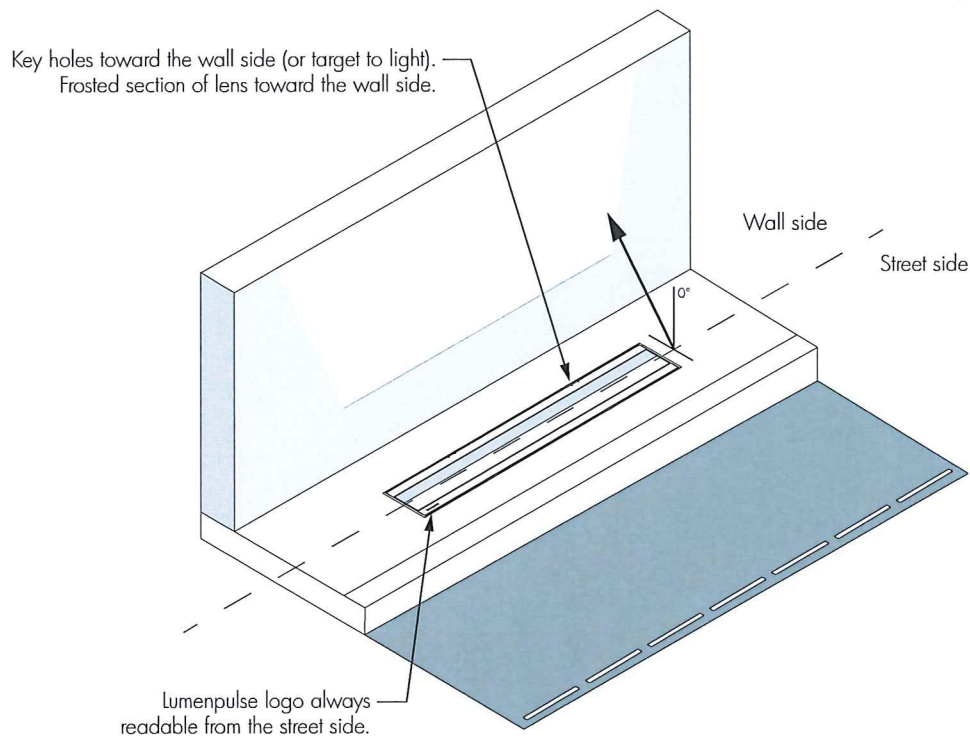


SECTION DETAIL

\*To meet 1000kg walk over resistance requirements, cement must support 100% of the exterior surfaces of the blackout.



## OPTICAL CHAMBER ORIENTATION





## ACCESSORIES

Order separately, refer to each item's specification sheet for ordering information

### Control Systems:

- LTO2** Lumentouch is a wall mount DMX 512 controller keypad.
- LCU** Lumencue is a USB / mini SD DMX 512 controller.
- LID** LumenID is a diagnostic and addressing DMX 512 controller.  
It must be specified on all DMX applications.  
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller  
with a push button rotary dial and live feedback.

### Control Boxes:

- CBX** DMX/RDM control box.  
Up to six power and data outputs to fixtures or fixture runs.  
Ethernet enabled option.  
Refer to CBX specification sheet for details.

### Cables (required):

- LOILC** Leader Cable for Lumenfacade Inground; 10', 25' or 50' [3m, 7.6m or 15.2m] standard lengths
- LOIJC** Jumper Cable for Lumenfacade Inground; 2', 4' or 10' [0.6m, 1.2m or 3m] standard lengths

### Inground Junction Box (optional):

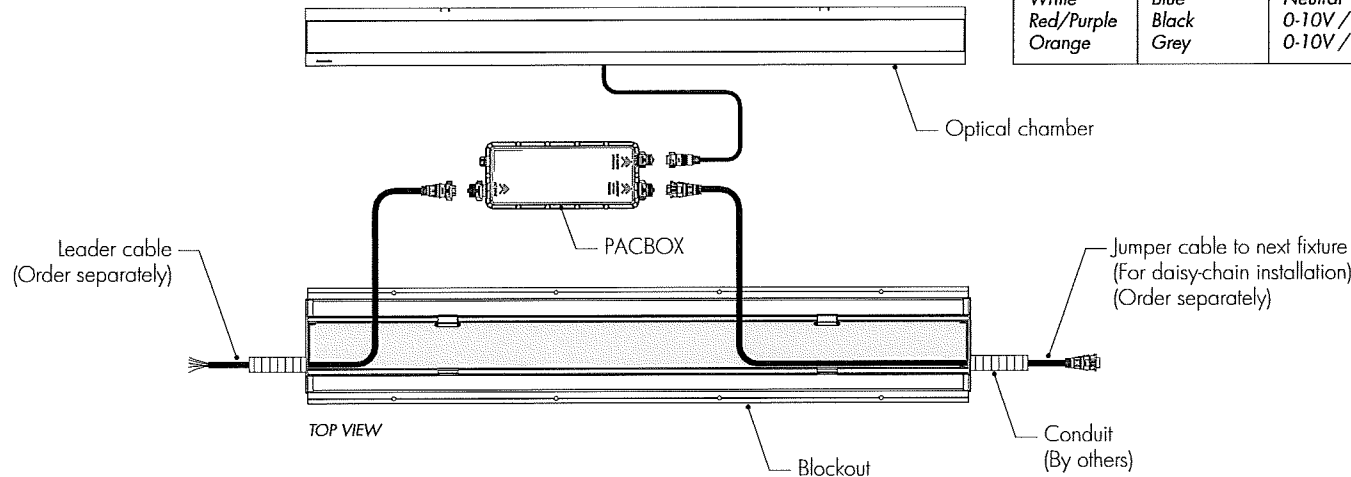
Lumenfacade Inground IP68 sealed junction box starter kit - **LOI-JBOX** order code.  
\*Use for stand alone fixtures and/or first of run fixtures



TYPICAL WIRING DIAGRAMS

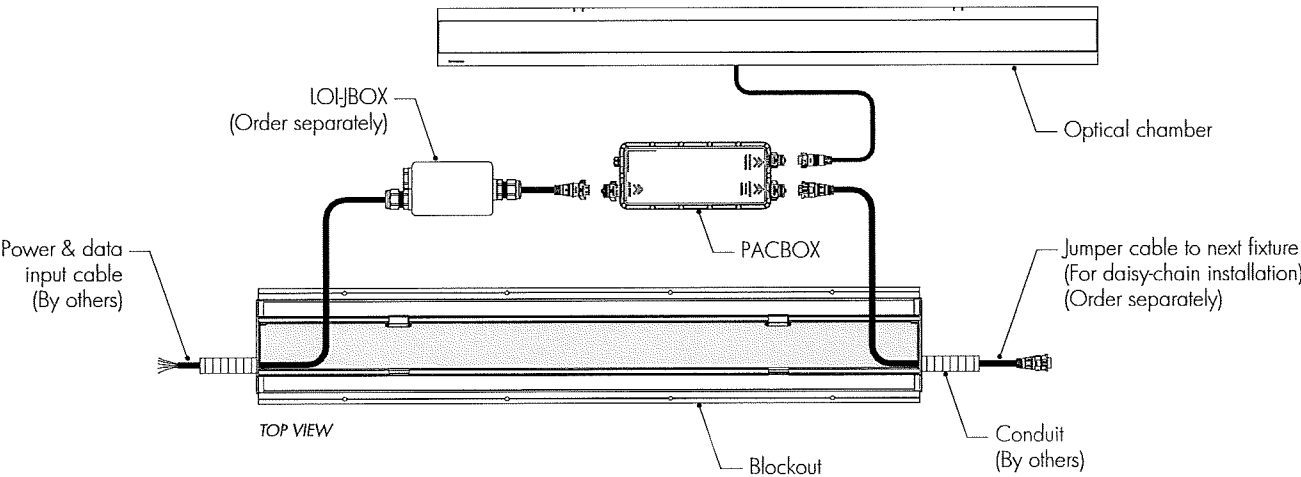
Typical Installation with Leader Cable

American Color Code	CE Color Code	USE
Green	Yellow/Green	Ground
Black	Brown	Live 100-277V
White	Blue	Neutral
Red/Purple	Black	0-10V / Data +
Orange	Grey	0-10V / Data -



Typical Installation with IP68 LOI-JBOX Accessory

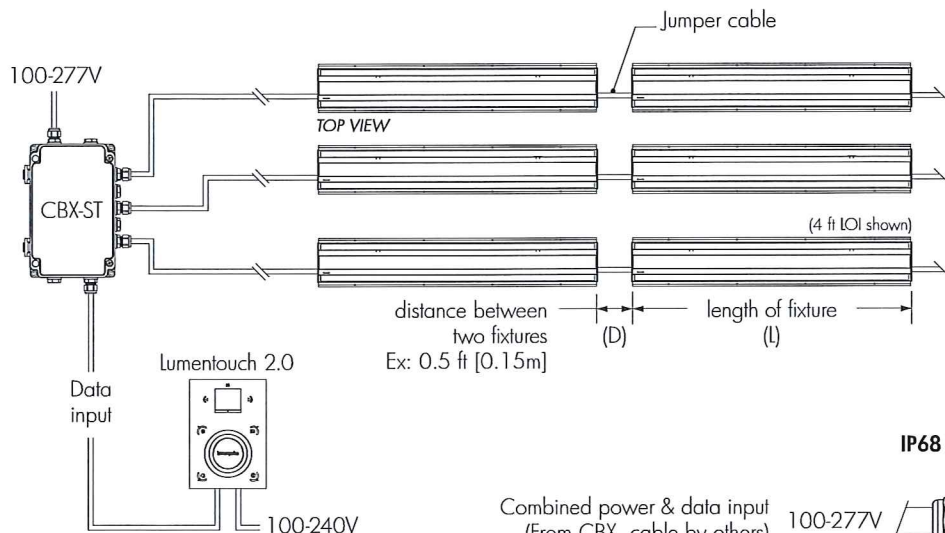
Cannot be used with 1ft LOI fixture





## TYPICAL WIRING DIAGRAMS - continued

### Star Layout (DMX/RDM)



#### Jumper Cable Length Selection

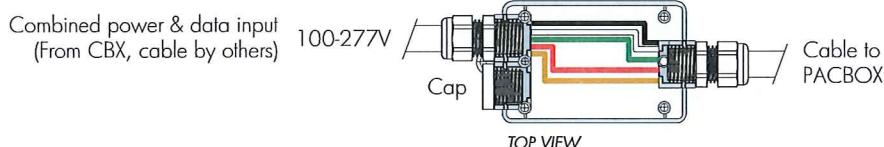
Add the length of one fixture to the distance between two fixtures:  $L + D$ .

Order the next longest jumper cable available: **2', 4' or 10'**  
**[0.6m, 1.2m or 3m]**

Ex:  $L + D = 4.5\text{ft}$  [1.4m]

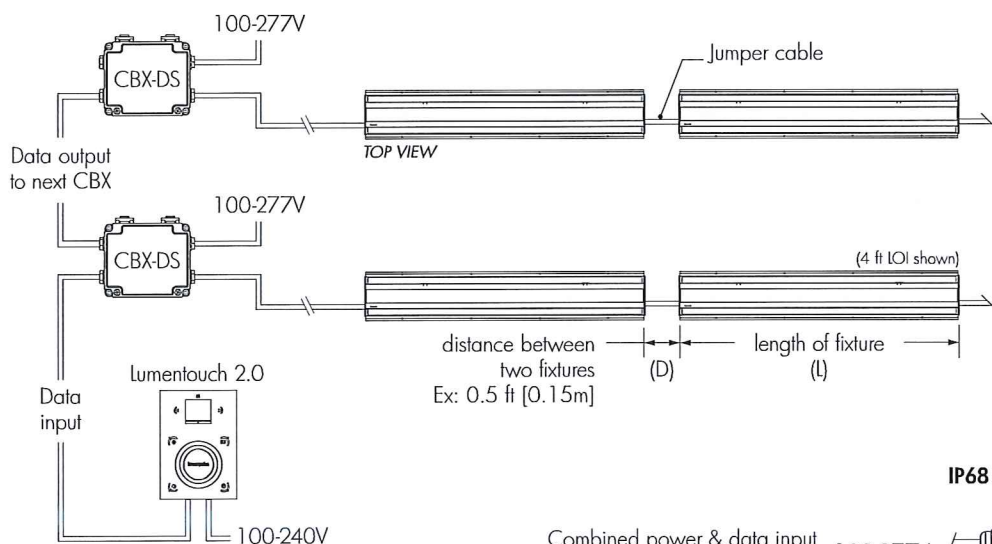
Therefore 10' [3m]  
jumper cable required

#### IP68 LOI-JBOX Accessory - Wiring Detail



Maximum 32 DMX/RDM enabled fixtures per DMX/RDM run.

### Daisy Chain layout (DMX/RDM)



#### Jumper Cable Length Selection

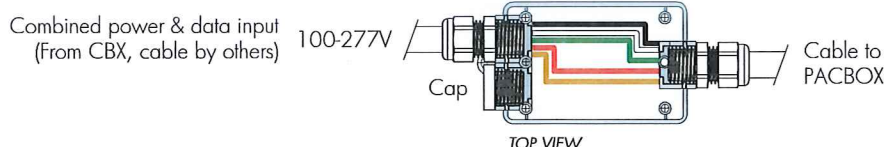
Add the length of one fixture to the distance between two fixtures:  $L + D$ .

Order the next longest jumper cable available: **2', 4' or 10'**  
**[0.6m, 1.2m or 3m]**

Ex:  $L + D = 4.5\text{ft}$  [1.4m]

Therefore 10' [3m]  
jumper cable required

#### IP68 LOI-JBOX Accessory - Wiring Detail



Maximum 32 DMX/RDM enabled fixtures per DMX/RDM run.



## HOW TO ORDER

LOI	100/277	Select:	Select:	Select:	Select:	Select:	DMX/RDM	Select:
1	2	3	4	5	6	7	8	9

1

### Housing:

LOI - lumenfacade™ Inground

A lumenfacade Inground fixture includes 1x optical chamber (LOIC), 1x power and control box (PACBOX) and 1x recessed blockout (RBO). The LOIC, PACBOX and RBO are provided according to the output/color, length and control configuration.

2

### Voltage:

100/277 - 100-277 volts

3

### Length:

12 - 13 1/16 inches (331mm) (2.44 kg/5.38 lbs)  
24 - 25 1/16 inches (636mm) (5.23 kg/11.53 lbs)  
36 - 37 1/16 inches (941mm) (7.03 kg/15.50 lbs)  
48 - 49 1/16 inches (1245mm) (8.84 kg/19.49 lbs)

4

### Colors and Color temperatures:

RGB - Additive red, green and blue

RGBW - Additive red, green, blue and white 4000K

5

### Optics:

WW - Asymmetric Wallwash optic

10x10 - 10° x 10°

10x60 - 10° x 60°

30x60 - 30° x 60°

60x60 - 60° x 60°

6

### Tilt Setting:

Note: asymmetric wallwash optic is factory set with a 2.5 degree tilt.

TS0 - 0 degrees

TS2.5 - 2.5 degrees

TS5 - 5 degrees

TS20 - 20 degrees

Factory set. Cannot be adjusted in the field. Consider ground level when selecting a tilt setting for your application.

7

### Optical Option:

INTL - Internal Louver

8

### Control:

DMX/RDM - DMX/RDM enabled<sup>1</sup>

9

### Option:

ASL - Anti-slip lens

### Notes:

<sup>1</sup> Fixtures set to by fixture resolution. 3 DMX addresses per RGB fixture, 4 DMX addresses per RGBW fixture.



## KEPLERO RGBW PROFESSIONAL INGROUND LED FIXTURE

**Concept:** Professional single source RGBW LED COB fully adjustable inground recessed LED fixture.

**Housing:** Black anodized aluminum body. Extra clear flat glass, (Anti-slip available).

**Materials:** Anodized black die-cast aluminium heat sink. PVC installation sleeve.

**Trim:** Stainless steel (AISI316L) ultra flat round decorative ring, with straight edge in brushed natural or bronze finishes. Features tamper-proof Torx screws.

**Optic:** Zoom optical system which slides and locks on vertical axis according to four different positions to provide four different beam spreads; 17°, 26°, 42° and 62° beam spreads. Light beam can be adjusted 20° on the vertical plane and 359° on the horizontal plane with integral locking system.

**Mounting:** Flush and semi-flush installation sleeves with stainless steel extension sleeve or optional raised installation tube for landscape. Drive-over rated (to 20kN), installation sleeve required. (Sold separately).

**Driver:** Integrated IP68 electronic driver (universal voltage, 0-10V) complete with watertight IP68 connector cable.

**Installation:** Direct burial brass ingrade jbox with 6ft IP68 connector cable required. (Sold separately).

**Wattage:** Max 48W with full color operation.

**Color Temperature:** RGBW

**Lumens:** At full RGBW color

Spot 17° = 780Lm

Flood 26° = 1012Lm

Medium Wide Flood 42° = 1239Lm

Wide Flood 62° = 1237Lm

**Voltage:** Universal Voltage 120-277V AC 50/60Hz

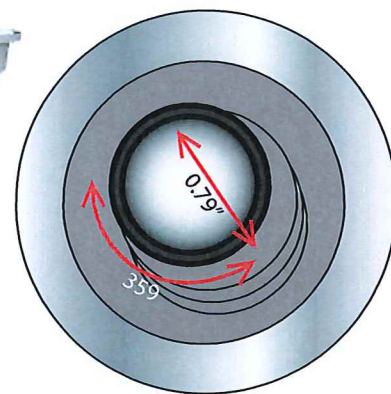
**IP:** IP67 rated (Tested and passed at IP66, IP67, IP68 and IP69)

**Certifications:** cULus listed Wet Location

**Warranty:** 5 year limited warranty

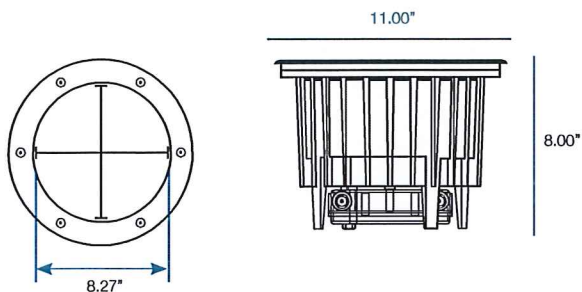


KEPLERO® RGBW with Clear Lens



PRODUCT CODE	TYPE	WATTAGE	COLOR TEMPERATURE
KPL - Keplero	ZM - Zoom	L1 - 48W	RGBW - RGBW

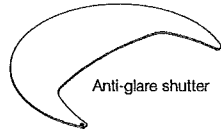
### Views





## Accessories

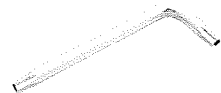
FILTERS	
Blade of light	1T1696
Honeycomb Louver	1T1699
Anti-glare shutter	1E2402



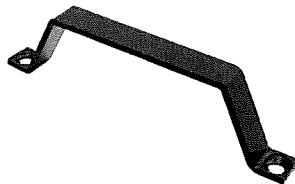
RING OPTION	
Brushed stainless steel ring	1E2325
Bronze trim ring option	1DU2325B

ANTI-SLIP	
Anti-slip glass	1DU4900

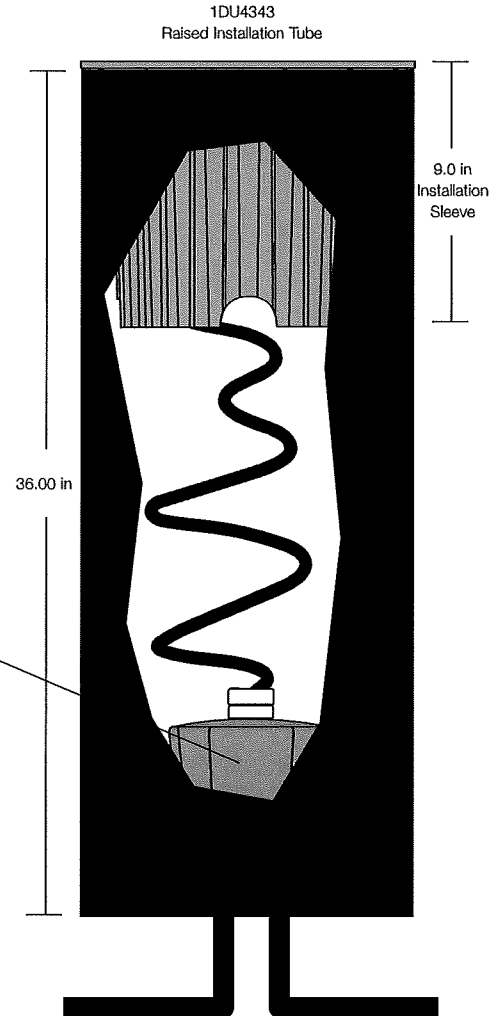
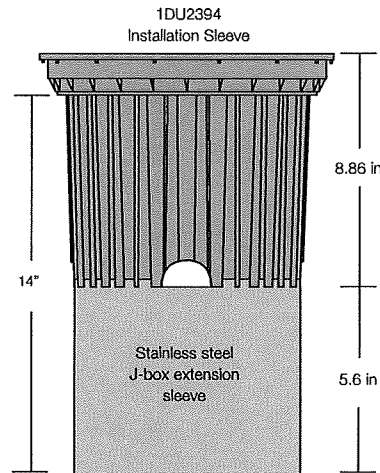
INSTALLATION	
Installation sleeve with 5.6" stainless steel extension sleeve	1E2394
Stainless steel raised installation sleeve 36" - Black (Field cuttable to 23" above ground) with 9" installation sleeve	1DU4343
Direct burial brass ingrade jbox with 6ft IP68 connector cable	1DU2530
Anti-vandal torx key	1E2495
Fixture maintenance removal handle	1E2496
Glass removal tool	1E0388



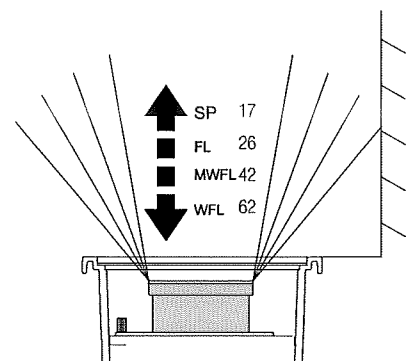
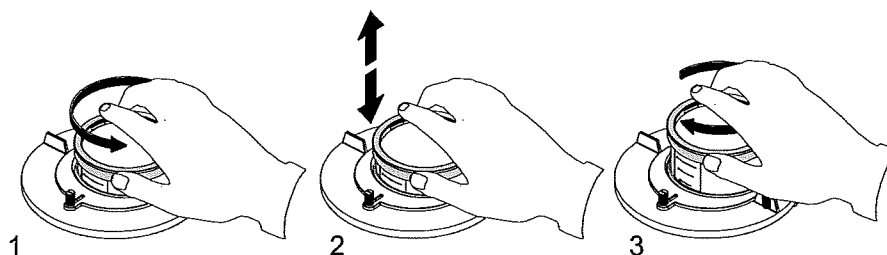
1E2495 Anti-vandal torx key



1E2496 Fixture maintenance removal handle

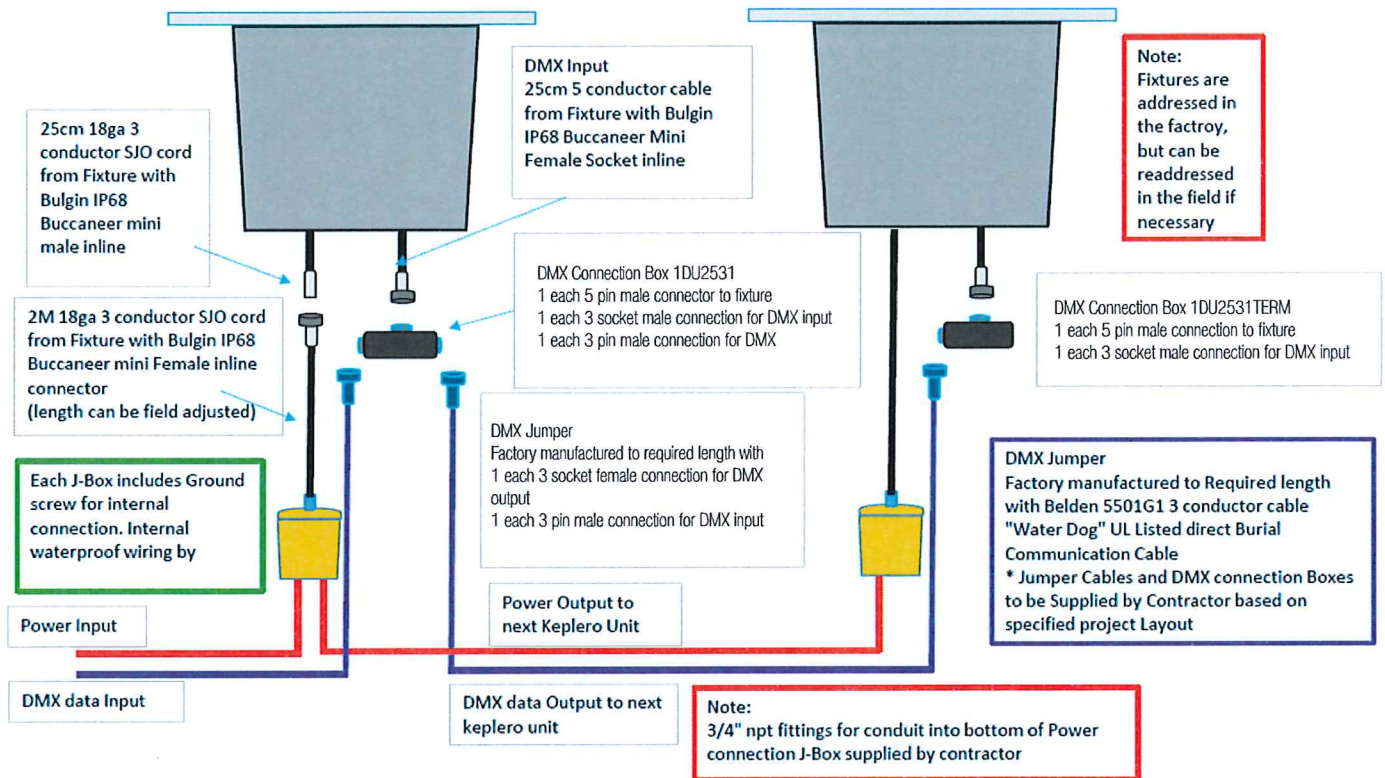


1DU2530 Brass junction box features (2) 3/4" bottom holes and (2) side 3/4" side holes.





## RGBW Wiring diagram



CONNECTION BOXES	
DMX IP68 I-connector standard 1½" x 3" x 1½" box with 3" IP68 female 5-pin connector cord (to fixture) IP68 male 3-pin connector (DMX In) IP68 female 3-pin connector (DMX Out) 1 per fixture assuming no series of more than 20 fixtures.	1DU2531
DMX IP68 T-connector (buffered). 1½" x 3" x 1½" box with 3" IP68 female 5-pin connector cord (to fixture) IP68 male 3-pin connector (DMX In) IP68 female 3-pin connector (DMX Out). Required for fixtures in series of more than 30 fixtures.	1DU2531BUFF
DMX IP68 End connect for 1½" x 3" x 1½" box with 3" IP68 female 5-pin connector cord (to fixture) IP68 male 3-pin connector (DMX In). Required for end of run fixtures.	1DU2531TERM

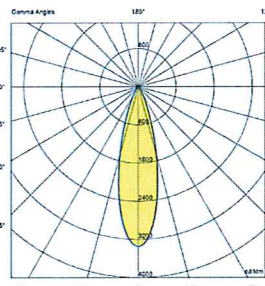
CONNECTION CABLES	
DMX IP68 Connector lead, 20ft direct burial cable for fixture to controller lead wire connection with IP68 female 3 socket connector (DMX out) bare wire at opposite end for DMX in controller connection. * Lead wires up to 120 feet available upon request.	1DU2533-LEAD
DMX IP68 Connector cord, 5ft direct burial Belden cable for fixture to fixture DMX data connection with IP68 male 3 socket connector (DMX In) and IP68 female 3-pin connector (DMX Out).	1DU2533-05
DMX IP68 Connector cord, 10ft direct burial Belden cable for fixture to fixture DMX data connection with IP68 male 3 socket connector (DMX In) and IP68 female 3-pin connector (DMX Out).	1DU2533-10

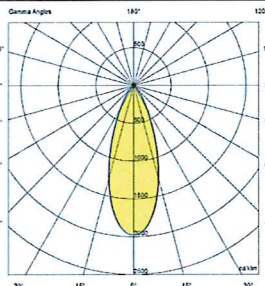
\* Connector cords sold in 5foot increments from 5 foot (1DU2533-05) to 50 foot (1DU2533-50).

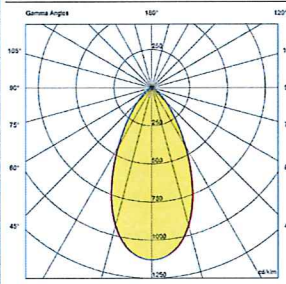
\*\* For longer cord increments from 50 foot (1DU2533-50) to 120 foot (1DU2533-120) sold in 10 foot increments.

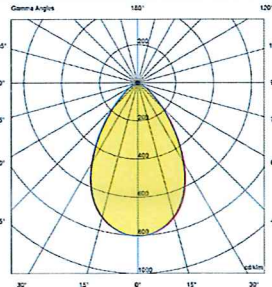


## Photometrics

Spot		POLAR GRAPH	CONE OF LIGHT					
Fixture Power	48W		(M)	Alpha=13.5°×13.5°	G=0.5°	Beta=13.7°×13.7°	Max	Med
Fixture Output	780Lm						lux	lux
Kelvin Temp	RGBW		1.00				2612	1614
Beam Spread	SP 17		2.00				653	404
IMax	3349cd/klm		3.00				290	179
Efficacy	16 Lm/W		4.00				163	101
		5.00				104	65	

Flood		POLAR GRAPH	CONE OF LIGHT					
Fixture Power	48W		(M)	Alpha=15.0°×15.0°	G=0.5°	Beta=15.0°×15.0°	Max	Med
Fixture Output	1012Lm						lux	lux
Kelvin Temp	RGBW		1.00				2001	1168
Beam Spread	FL 26		2.00				500	297
IMax	1977cd/klm		3.00				222	132
Efficacy	21 Lm/W		4.00				125	74
			5.00				80	48

MEDIUM WIDE FLOOD		POLAR GRAPH	CONE OF LIGHT					
Fixture Power	48W		(M)	Alpha=28.5°×28.5°	G=0.5°	Beta=28.5°×28.5°	Max	Med
Fixture Output	1239Lm						lux	lux
Kelvin Temp	RGBW		1.00				1400	766
Beam Spread	MFL 42		2.00				350	192
IMax	1130cd/klm		3.00				156	85
Efficacy	26 Lm/W		4.00				87	48
			5.00				56	31

Wide Flood		POLAR GRAPH	CONE OF LIGHT					
Fixture Power	48W		(M)	Alpha=33.0°×33.0°	G=0.5°	Beta=33.0°×33.0°	Max	Med
Fixture Output	1237Lm						lux	lux
Kelvin Temp	RGBW		1.00				993	487
Beam Spread	WFL 62		2.00				248	122
IMax	803cd/klm		3.00				110	54
Efficacy	26 Lm/W		4.00				62	30
			5.00				40	19



# GUIDE

Product Data Sheet



Guide is an illuminated bollard that can serve as a marker separating vehicular and pedestrian flows, a wayfinder and a pathway light. Designed in collaboration with frog design, its striking sculptural form makes it a defining element in the landscape. Guide's optical core with curved lens provides uniform diffused light. Vertical LED arrays emit light between panels at 120° angles, illuminating the pathway with overlapping swathes of light. Available as an unlit version with removable option, Guide offers unusual flexibility for multiple applications.

## General Description

- Cast aluminum sub-structure with cast aluminum exterior panels
- Available with or without lighting
- Surface mounted
- Removable option available without lighting
- Ships fully assembled
- LEDs must be hardwired when installed

## Electrical

Surge protected 100V-277V 50/60 Hz, Class 2 LED driver is standard. LED cartridges with weatherproof quick disconnect provides ease of serviceability. Internal wiring connections completed at the factory.

## Finish

Pangard II®, offered exclusively by Landscape Forms, is a 19 step program of cleaning, priming, and powdercoating that resists rusting, chipping, peeling and fading to produce the finest metal finish available for site furniture. In addition, Pangard II® contains no heavy metals and is free of Hazardous Air Pollutants.

## To Order

- Specify Guide bollard and powdercoat color.
- Specify surface mount or removable.
- For surface mount option, specify with or without LED lighting.
- Specify color temperature for LEDs.

## Warranty

LED lighting products are warranted for six years.

## Other

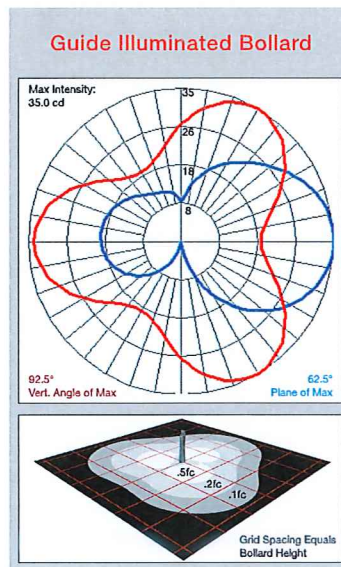
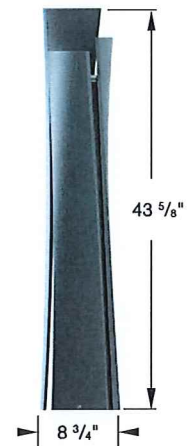
UL Listed, RoHS  
US Patent D740,478



Designed by frog design

## Guide Illuminated Bollard

Lamp: Nichia Linear LEDs  
CCT: 3000K, 3500K, 4000K  
L70: 60,000 hrs  
Drive Current: 700mA  
Lens: Diffused Acrylite®  
Power Supply: 100V-277V  
LED Driver: TRP LED 12W-016  
Total Lumen Output: 270 Lumens  
Power Consumption: 9 watts  
CRI: 85 Typical  
IP Rating: IP67 for LED Cartridges  
Weight: 50 lbs



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