

Project Name: UNIVERSITY OF CALIFORNIA, MERCED
LITTLE LAKE AMPHITHEATER UPGRADE
Project No.: 907075

ADDENDUM NO. 2
to the
CONTRACT DOCUMENTS
August 26, 2013

- I. Bidder acknowledges that it is the Bidder's responsibility to ascertain whether any Addenda have been issued and if so, to obtain copies of such Addenda. Bidder therefore agrees to be bound by all Addenda that have been issued for this bid.

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents. The following changes, additions, or deletions shall be made to the following documents as indicated and all other Contract Documents shall remain the same.

II. CLARIFICATIONS

- A. PRE-BID QUESTIONS – Questions received from bidders and responses are as follows:
1. Q. Please confirm Scholars Lane can be used for concrete trucks and pump access.
A. Scholars Lane maybe used for concrete truck and pump access only when placing concrete; including all traffic notification requirements and compliance with Division 1.
 2. Q. Identify the trees to be protected per specification section 01 56 39.
A. General Contractor shall be responsible for means and methods of construction and in doing so; shall protect all existing plant life in accordance with the specifications.
 3. Q. Please confirm SWPP, WDID & NOI by UC Merced.
A. University will implement, maintain and remove any and all requirements for SWPP, WDID & NOI.
 4. Q. Provide the specification for the area drain per detail 7.
A. Detail 7/C5.0 is revised to include the specifications for the area drain; 6" diameter area drain NDSH#918PB with 6" x 4" reducer to riser.
 5. Q. Please provide the detail for surface mounted fixture in concrete walk way.
A. Installation and technical information for light fixture type C is included in this Addendum.
 6. Q. Please clarify specification section 32 13 13; states concrete to be 3500 psi: drawings show walkway to be 2500 psi, and drive way to be 3500 psi.
A. All concrete shall be per the concrete specifications, 3500 psi @ 28 days.
 7. Q. Provide application location for damp proofing Tremproof 60 per specification section 32 23 23.
A. Detail 14/C5.0 is revised to indicate the location of the below grade waterproofing identified in the specifications.

8. Q. Please confirm metered BFP will be provided by UC Merced; and provide cost to be charged to contractor.
 - A. UCM will provide a Backflow Preventer with a water meter for contractor use. The Contract shall be charged \$5.77 per 1000 gals of water used.
9. Q. Provide soils report and recommendations for compaction.
 - A. Condor Nuclear Density Testing Field Reports included in this Addendum.
10. Q. Clarify location of joint sealants.
 - A. Expansion Joint sealant shall be in accordance with specification section 32 13 13 2.4E and 32 13 13 3.9C. Revise Detail 6/C5.0 to indicate joint sealant at expansion joints.
11. Q. Can the handrails be core drilled?
 - A. Core drilling of the concrete for the handrails is preferred over poured in anchors.
12. Q. Where can the concrete truck & pump washout after concrete placement?
 - A. Contractor is responsible for compliance with Concrete BMP's. Containment of concrete washout is required to be in place prior to concrete placement and location shall be submitted for University Representative's approval.
13. Q. Will the University provide an irrigation valve schedule?
 - A. University will work and coordinate with the Contractor when necessary to shut off irrigation and identify valves.

III. **BIDDING/CONTRACT DOCUMENTS AND DIVISION 1 SPECIFICATIONS – VOLUME 1 OF 2**

1. Specification Section 01011.01 Bid Form: DELETE Bid Form and replace with Bid Form included in this Addendum.
2. Specification Section 01 22 00 Unit Prices: ADD unit price for sod.
3. Specification Section 01 23 00 Alternate: ADD Alternate No. 6 - Add 6" of concrete over 6" of base at Stage Pad.
4. Specification Section 01 35 00 Special Requirements: Revise Site access in accordance with the Site Logistic Plan issued in Addendum 1.
5. Specification Section 01 51 00 Temporary Utilities: ADD unit price for construction water use.
6. Specification Section 01 91 00 Commissioning: REVISE footer to correct specification section.

IV. **DIVISION 2 – 33 SPECIFICATIONS – VOLUME 2 OF 2**

NONE

V. **DRAWINGS**

1. C3.0 Construction Plans & Stage Plans Revised
2. C5.0 Details Revised
3. E0.1 Light Fixture Revised

UNIVERSITY OF CALIFORNIA, MERCED

**By: University of California, Merced
University's Representative**

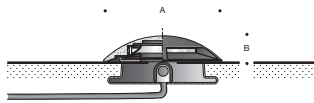
Min Jiang
Project Director

End of Addendum No. 2

Tools Required:

- 6mm hex key
- Phillips medium screwdriver

CSA certified to U.S. and Canadian standards. Suitable for wet locations.



Dimensions

- A: 10-1/2"
- B: 2-1/4"

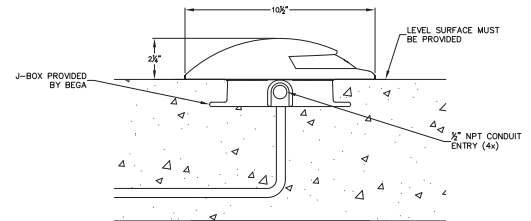


Weight: 6.4 lbs.

Notice to Installer for 7089LED:

1. This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.
2. BEGA luminaires may be damaged if connected to conduit systems containing water - Article 300-5G of National Electric Code requires that "Conduits or raceways through which moisture may contact energized live parts shall be sealed or plugged at either or both ends".
3. A separate wiring box suitable for outdoor locations provided by BEGA.
4. A level surface **MUST** be provided for proper installation (Fig. 1).
5. For vehicular loads, housing must be anchored to a suitable, load bearing foundation. In all other applications, foundation should be sufficient to support anticipated load onto fixture.
6. When installing fixture in organic mulch, surround installation housing with approximately 6" of sand or other non-organic material.

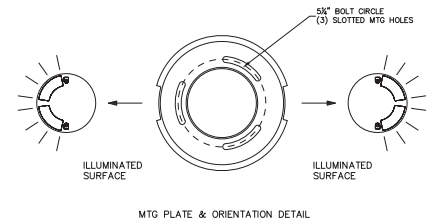
Figure 1



7089LED wiring box - installation:

1. Establish location of wiring box, and orient wiring box to accommodate for direction of anticipated illuminated surface (Fig. 2).
2. Connect conduit to wiring box using 1/2" NPT fitting with teflon tape on conduit or wiring box threads. Pull supply wiring into wiring box for later electrical connections.
3. Establish foundation for anchorage (by others).
NOTE: FOUNDATION NEEDS TO BE SUFFICIENT TO SUPPORT ANTICIPATED LOAD ON TO LUMINAIRE.
4. Use mounting holes provided on wiring box flange to anchor the wiring box to suitable foundation.
IMPORTANT: THE TOP EDGE OF THE WIRING BOX MUST BE FLUSH WITH THE FINISHED SURFACE FOR PROPER INSTALLATION.
5. Finish surface.

Figure 2



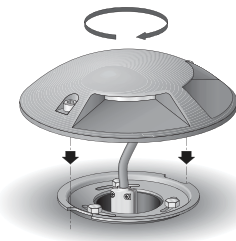
7089LED - installation:

1. Make luminaire and supply wiring connections and tuck back in the wiring box:
MAIN VOLTAGE SUPPLY WIRE TO BLACK LUMINAIRE WIRE
NEUTRAL (COMMON) SUPPLY WIRE TO WHITE LUMINAIRE WIRE
GREEN GROUND WIRE TO GREEN LUMINAIRE WIRE

Dimming (if applicable):

- DIMMING CONTROL WIRE (+) TO POSITIVE DRIVER DIM CONTROL WIRE
 - DIMMING CONTROL WIRE (-) TO NEGATIVE DRIVER DIM CONTROL WIRE
2. Loosen (2) 4mm hex screws on outer housing and remove the bottom cover plate.
 3. Attach bottom cover plate to wiring box using hardware provided.
 4. Attach outer housing to bottom cover plate and secure by tightening (2) screws.
NOTE: MAKE SURE TO ALIGN THE FIXTURE HOUSING SO THE FACEPLATE PORTS WILL BE ORIENTED PER DESIGN SPECS (FIG. 3).

Figure 3



Relamping/Maintenance

Clean glass using only solvent-free cleaners.

Accessories

Please refer to the appropriate accessory installation sheet for further instruction when applicable.

Replacement Parts

Description	Part No
Lens	112888
Lens gasket (2x)	831287
LED Driver (120-277V)	75929
LED module (3000K)	LED-0258/830
LED module (4000K)	LED-0258/840

Lamp: 6.7W LED Module

Drive-over surface-mounted luminaires to illuminate ground surfaces

Outer Housing: Constructed of high tensile strength, copper free die-cast aluminum alloy with two (2) light openings. Slotted, stainless steel base plate allows top casting to rotate to any orientation.

Enclosure: One piece heavy duty die cast aluminum body with clear borosilicate lens. Reflector of pure anodized aluminum. All aluminum used in the construction is marine grade and copper free. All fasteners are stainless steel. Two (2) molded, one piece, high temperature silicone gaskets on top and bottom of the lens.

Electrical: 6.7W LED luminaire, 9.3 total system watts, -40°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order.

Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

Mounting: Luminaire mounts directly to ground-mounted weathertight wiring box, by BEGA. Slotted holes in stainless steel luminaire base plate allow for up to 50° of base plate rotation. BEGA wiring box suitable for 1/2" side or bottom conduit entry.

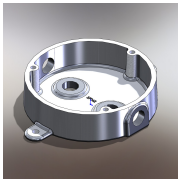
Note: The luminaires must not be installed in traffic lanes where they are subject to horizontal pressure from vehicles braking, accelerating and changing direction. A foundation must be supplied by the contractor designed to bear the static pressure loads from vehicles with pneumatic tires. The luminaires are designed to withstand a static load of 2,200 lbs.

Finish: Available in Graphite Grey.

CSA certified to U.S. and Canadian standards for wet locations. Protection class IP67

Weight: 6.4 lbs.

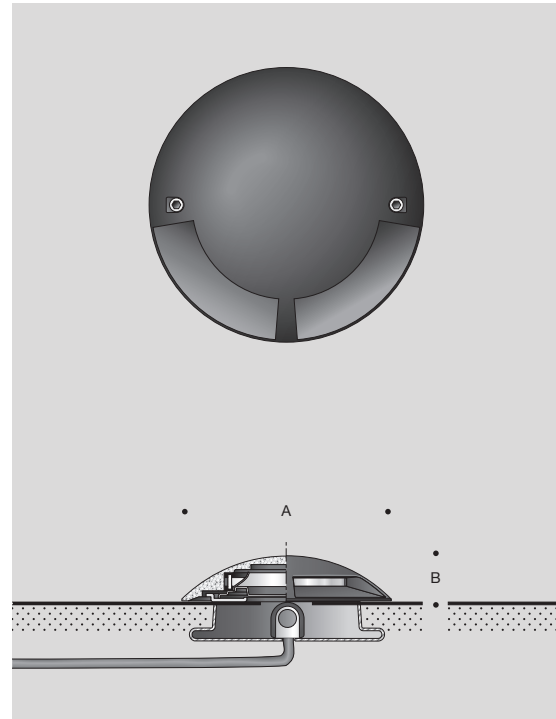
Luminaire Lumens: 101
Tested in accordance with LM-79-08

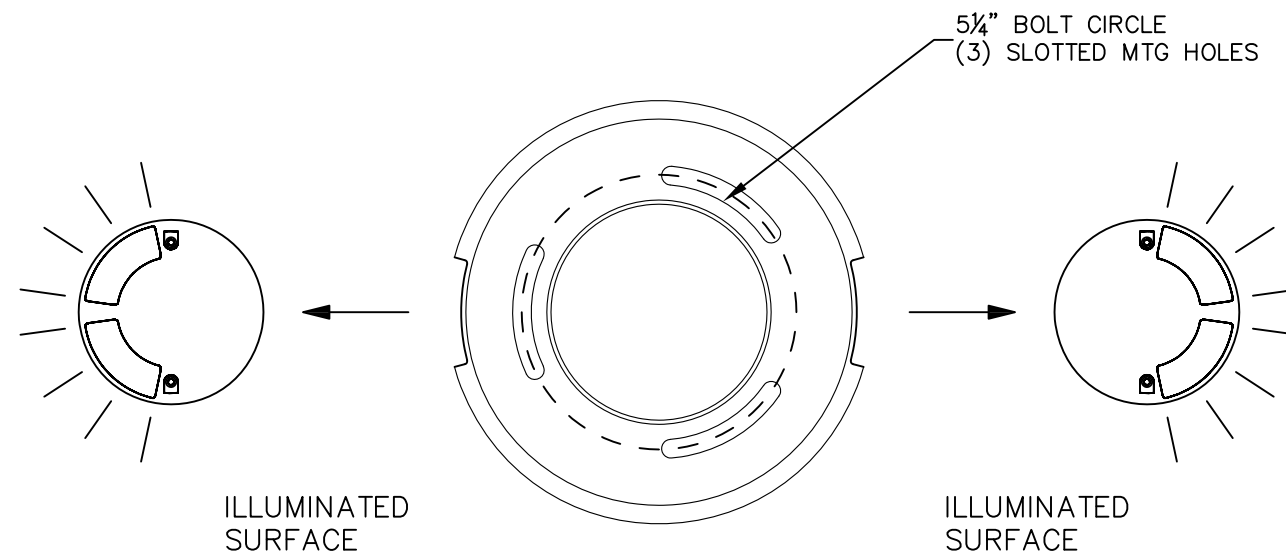
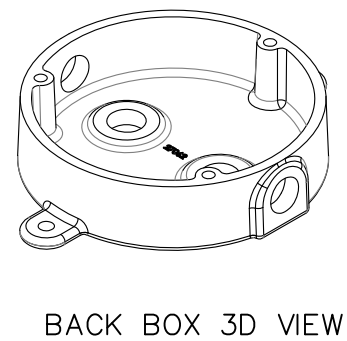
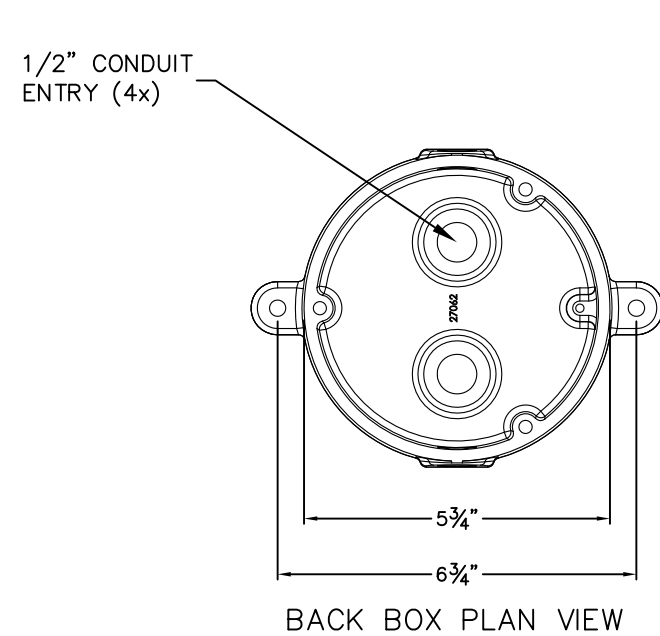
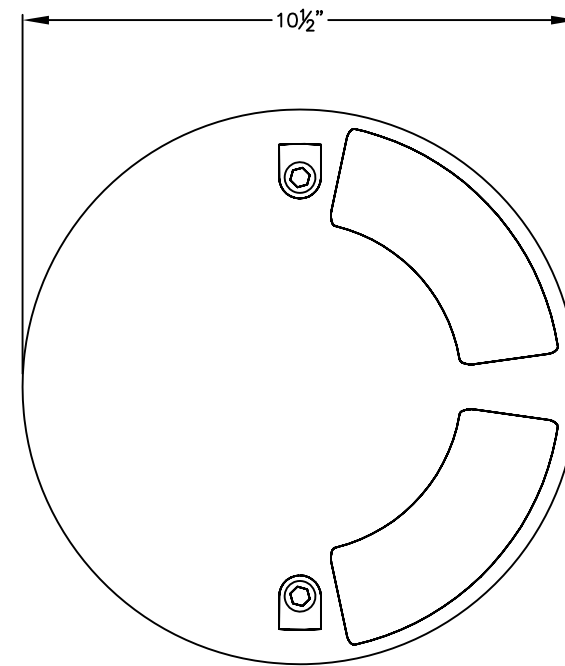
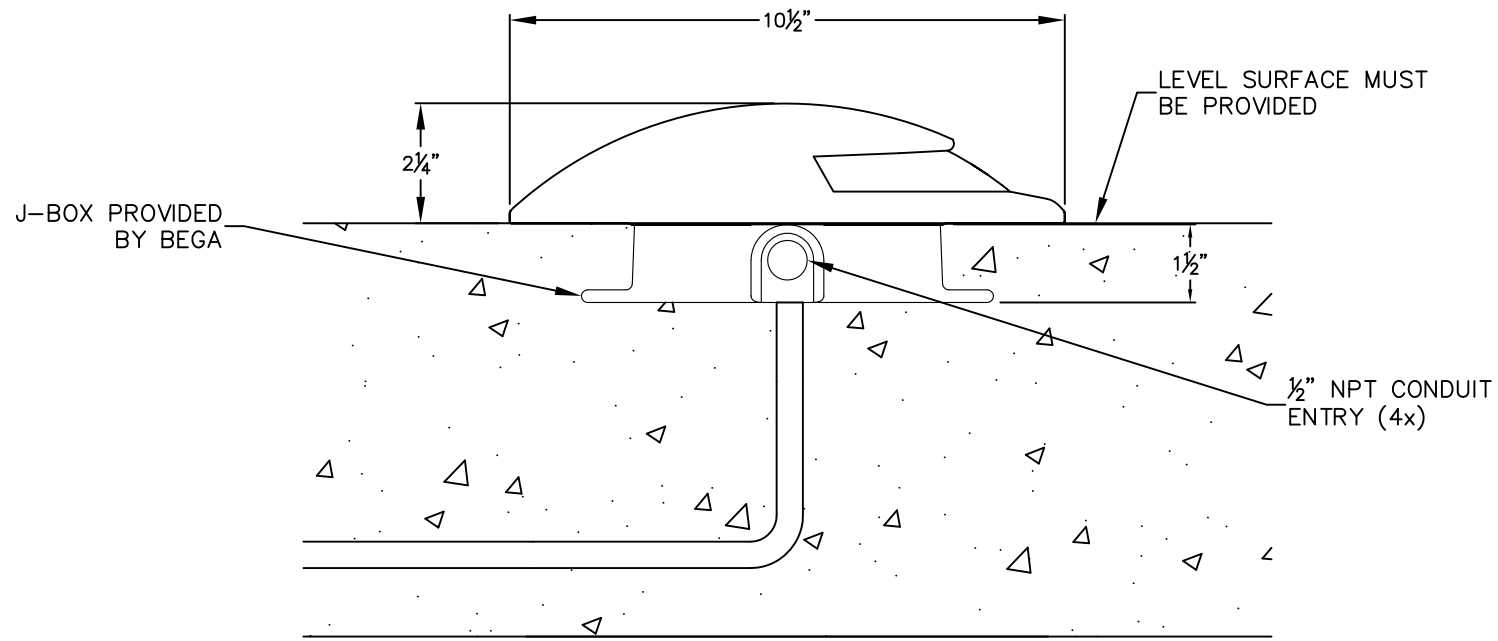


The ground-mounted luminaires mount directly to BEGA in-ground wiring box.

Lamps	180° port	
	A	B
7089LED 6.7W LED	10½"	2¼"

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:





MTG PLATE & ORIENTATION DETAIL

NOTE: 7089LED - SEE SPECIFICATIONS

This print contains confidential information which is the property of BEGA/US. By accepting this information, the borrower agrees that it will not be used for any other purpose other than that which is loaned.

Catalog No.: 7089LED

Description: IN-GROUND LUMINAIRE

Drawn by: MAP Date: 12/11/2012 File Name: 7089LED


SCALE: NONE - DO NOT SCALE DRAWING

BEGA

1000 Bega Way
Carpinteria, Ca. 93013
(805) 684-0533

Daily Field Report

Standard DSA/OSHPD

 <p style="text-align: center;"><u>Sonora</u> Ph: (209) 532-0361 Fax: (209) 532-0773</p> <p style="text-align: center;"><u>Jamestown</u> Ph: (209) 984-4593 Fax: (209) 984-4596</p>	<p style="text-align: center;"><u>Stockton</u> (209) 234-0518 (209) 234-0538</p> <p style="text-align: center;"><u>Merced</u> (209) 388-9601 (209) 722-2674</p>	<p>Project Name: UC Merced</p> <p>Date: July 30, 2009</p>	<p>Page 1 of 1</p>	
	<p>Unit #</p>	<p>Lot #</p>	<p>Project Location:</p>	<p>Project No.: 5616</p>
	<p>Client:</p>		<p>Contractor:</p>	<p>DSA/OSHPD File # N/A</p>
	<p>Requested by:</p>		<p>Met with:</p>	<p>DSA Application # N/A</p>
	<p>Weather:</p>		<p>Copies to:</p>	

TYPE OF WORK	SUBJECT AREAS	SPECIAL INSPECTION
<input type="checkbox"/> Observe & Test	<input type="checkbox"/> Building Pad/Retain Walls	<input type="checkbox"/> Soil Nails
<input type="checkbox"/> Observation	<input type="checkbox"/> Embankment	<input type="checkbox"/> Rock Bolts
<input type="checkbox"/> Moisture Penetration	<input type="checkbox"/> Parking/Roadway	<input type="checkbox"/> Pull Testing
<input type="checkbox"/> Footing Observation	<input type="checkbox"/> Trench Backfill	<input type="checkbox"/> Surface/Subsurface Drainage
	<input type="checkbox"/> T-Bar Ceiling	

Remarks:

Three (3) exploratory borings were drilled in the existing soil stockpile at the location of the proposed Amphitheater. The borings were drilled to depths ranging from approximately 11 to 13 feet below the top of the existing stockpile. The borings were drilled utilizing the solid-stem auger drilling method by West Coast Exploration, Inc. (C57 License No. 870767).

At the time of our investigation, the surface of the stockpile was covered with a moderate growth of dry grasses and weeds. Based on the exploratory borings, the soil encountered to depths ranging from approximately 4 to 5 feet below the top of the existing stockpile consisted of brown, sandy clay to clayey sand with varying amounts of gravel and trace cobbles. Underlying these upper brown clayey soils, the soil changed to dark gray to black, clay with some organic matter present. This dark gray to black clay had a very distinct smell of decayed organics and exhibited moderate to high plasticity. Two samples were taken in the dark gray to black clay layer using a 140-pound hammer falling 30 inches to drive the sampler. The field blow counts recorded for the final 12 inches on an 18-inch drive indicate that the clay is very stiff. Native soil was encountered at a depth of approximately 9 feet below the top of the existing stockpile in each of the exploratory borings.

Based on the soil cuttings visually observed and the drilling resistance noted by the driller, it does not appear that any significant lenses/layers of organic matter are present in the stockpile. The organics observed in the cuttings and samples collected appear to be thoroughly mixed with the clay soil. Based on our findings, I believe that the dark gray to black clay layer can be used as fill material during construction of the Amphitheater. To improve the characteristics of this material, the dark gray to black clay can be blended with the import fill material planned for construction. If this material will be placed without blending, I recommend that it be placed deeper to the fill areas and compacted as engineered fill. Due to the moderately to highly plastic nature of the dark gray to black clay, I recommend that this material not be present within 18 inches beneath any proposed site improvement (i.e., sidewalks, pavers, etc.). If exposed in the cut areas during grading operations, the dark gray to black clay should be overexcavated as necessary to provide at least 18 inches of compacted non-expansive soil (PI <4) beneath the proposed site improvement.

<p>Materials were:</p> <p><input type="checkbox"/> Sampled and Tested</p> <p><input type="checkbox"/> NOT Sampled and Tested</p> <p><input type="checkbox"/> Not Applicable</p> <p>in accordance with the requirements of the approved documents</p>	<p>All Test/Inspections were:</p> <p><input type="checkbox"/> In Compliance</p> <p><input type="checkbox"/> NOT in Compliance</p> <p><input type="checkbox"/> Not Applicable</p> <p>with the requirements of the approved documents</p>
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<p>Condor Field Rep (<i>Print Name</i>): Anthony P. Mazzei, P.E., G.E.</p>	<p>Signature:</p>
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<input type="checkbox"/> Fill placement intermittently observed and tested	<input type="checkbox"/> Fill placement previously completed – testing only	<input type="checkbox"/> Geotechnical design study performed <input type="checkbox"/> by us <input type="checkbox"/> by others <input type="checkbox"/> unknown
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<p>Onsite Arrival Time:</p>	<p>Onsite Departure Time:</p>	<p>Field Representative's Signature (<i>Sign Below</i>):</p>
<p>Total Onsite Hours:</p>	<p>Total Travel Time:</p>	

Earthwork Daily Field Report

APM

Standard DSA/OSHPD



Sonora

Ph: (209) 532-0361
Fax: (209) 532-0773

Stockton

(209) 234-0518
(209) 234-0538

Jamestown

Ph: (209) 984-4593
Fax: (209) 984-4596

Merced

(209) 388-9601
(209) 722-2674

Project Name: UC Merced Temporary Parking Facilities

Date: 8-26-09

Page 1 of 1

Lot/Parcel #

Project Location: Merced

Project # 5616

Client: UC Merced

Contractor: Hensley Paving

DSA/OSHPD File #

Requested by: **Gareth Beilby**

Met with: Gareth Beilby

DSA Application #

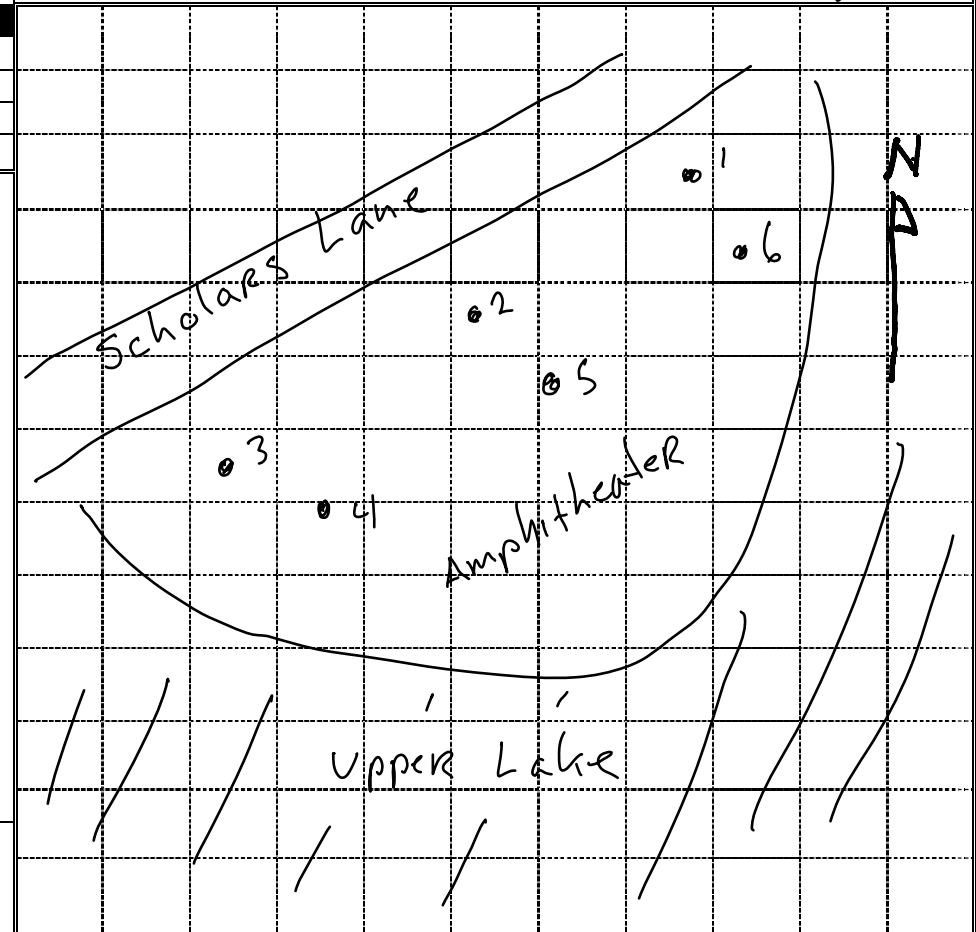
Weather: Clear

Distribution: Client Field Binder Lab Binder Other Tony Mazzei

TYPE OF WORK	SUBJECT AREAS	SPECIAL INSPECTION
<input type="checkbox"/> Observe & Test	<input type="checkbox"/> Building Pad/Retain Walls	<input type="checkbox"/> Soil Nails
<input checked="" type="checkbox"/> Observation	<input checked="" type="checkbox"/> Embankment	<input type="checkbox"/> Rock Bolts
<input type="checkbox"/> Moisture Penetration	<input type="checkbox"/> Parking/Roadway	<input type="checkbox"/> Pull Testing
<input type="checkbox"/> Footing Observation	<input type="checkbox"/> Trench Backfill	<input type="checkbox"/> Surface/Subsurface Drainage

Remarks

I arrived on site as requested by Gareth to perform NDTs on the fill that had been placed for the Little Lake Amphitheater. I met with Mark Maxwell while on site and he requested that I scrap off the base rock in several areas on Mammoth Dr. to determine how thick it is. I removed base rock down to the sub-grade in three areas (at the north end, in the middle and at the south end. The base rock was 1"-2" thick at the north end, 1"-2" thick at the middle section, and 6" – 8" at the south end



Materials were:
 Sampled and Tested
 NOT Sampled and Tested
in accordance with the requirements of the DSA approved documents

All Test/Inspections were:
 In Compliance
 NOT in Compliance
 Not Applicable
with the requirements of the DSA approved documents

Supplemental Field Notes Taken This Date? YES NO

Condor Field Rep (*Print Name*): Trent Fiorino

Signature:

Fill placement intermittently observed and tested Fill placement previously completed – testing only Geotechnical design study performed by us by others unknown

Onsite Arrival Time: 1:15 PM

Onsite Departure Time: 2:15 PM

Field Representative's Signature (*Sign Below*):


Total Onsite Hours: 1

Total Travel Time: .5

Not Available

Nuclear Density Testing Field Report

APM
 Standard DSA/OSHPD

	<u>Sonora</u> Ph: (209) 532-0361 Fax: (209) 532-0773	<u>Stockton</u> (209) 234-0518 (209) 234-0538	Project Name: UC Merced Temporary Parking Facilities				Project # 5616			
	<u>Jamestown</u> Ph: (209) 984-4593 Fax: (209) 984-4596		<u>Merced</u> (209) 388-9601 (209) 722-2674		Field Rep: Trent Fiorino		Date: 8-26-09		Page 2 of 2	
	Curve # CT-1			Material Description Reddish Brown Silty Clay with Rock			123.0 pcf @ 11%			
	Curve #			Material Description			pcf @ %			
STD Count:		M: 642		D: 2225		Copies to:				

Test	Location	Depth Below Grade	Probe Depth	Mode	Wet Density pcf	Moisture %	Dry Density pcf	Comp. %	Comp. % Required	Curve #
1	Little Lake Amphitheater NE Corner Upper Level	+10'	12"	N	127.5	13.8	112.0	91	85	CT-1
2	Little Lake Amphitheater Middle Upper Level	+10'	12"		126.5	14.2	110.8	90		
3	Little Lake Amphitheater NW Corner Upper Level	+10'	12"		128.7	13.8	113.1	92		
4	Little Lake Amphitheater NE Corner Lower Level	+3'	12"		127.5	13.6	112.2	91		
5	Little Lake Amphitheater Middle Lower Level	+3'	12"		130.4	14.0	114.4	93		
6	Little Lake Amphitheater NW Corner Lower Level	+3'	12"		129.4	14.2	113.3	92		

Materials were: <input checked="" type="checkbox"/> Sampled and Tested <input type="checkbox"/> NOT Sampled and Tested in accordance with the requirements of the DSA approved documents	All Test/Inspections were: <input checked="" type="checkbox"/> In Compliance <input type="checkbox"/> NOT in Compliance <input type="checkbox"/> Not Applicable with the requirements of the DSA approved documents
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Condor Field Rep (<i>Print Name</i>): Trent Fiorino	Signature: 
Onsite Arrival Time: 1:15 PM Onsite Departure Time: 2:15 PM Total Onsite Hours: 1 hr Total Travel Time: .5 hr	Field Representative's Signature (<i>Sign Below</i>):

<input type="checkbox"/> Fill placement intermittently observed and tested	<input checked="" type="checkbox"/> Fill placement previously completed – testing only	<input type="checkbox"/> Geotechnical design study performed <input type="checkbox"/> by us <input type="checkbox"/> by others <input type="checkbox"/> unknown
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LITTLE LAKE AMPHITHEATER UPGRADE
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 907075

BID FORM

FOR:

PROJECT NO. 907075

LITTLE LAKE AMPHITHEATER UPGRADE

UNIVERSITY OF CALIFORNIA
MERCED CAMPUS, MERCED COUNTY
MERCED CALIFORNIA

BID TO:

PHYSICAL PLANNING, DESIGN & CONSTRUCTION
UNIVERSITY OF CALIFORNIA, MERCED
767 E. YOSEMITE AVE., SUITE C
MERCED CALIFORNIA 95340
TELEPHONE: (209) 228-4479

**FOR THE
FOLLOWING
WORK:**

Little Lake Amphitheater Upgrade

BID FROM:

(Name of Firm Submitting Bid)

(Address)

(City)

(State)

(Zip Code)

(Telephone Number)

(Fax Number)

(Date Bid Submitted)

Note: All portions of this Bid Form must be completed and the Bid Form must be signed before the Bid is submitted. Failure to do so will result in the Bid being rejected as non-responsive.

June 6, 2011
Revision: 4
LF: BID-FORM

Bid Form
01011.01
Page 1 of 9

ADDENDUM 2

1.0 BIDDER'S REPRESENTATIONS

Bidder, represents that a) Bidder and all Subcontractors, regardless of tier, has the appropriate current and active Contractor's license required by the State of California and the Bidding Documents; b) it has carefully read and examined the Bidding Documents for the proposed Work on this Project; c) it has examined the site of the proposed Work and all Information Available to Bidders; d) it has become familiar with all the conditions related to the proposed Work, including the availability of labor, materials, and equipment. Bidder hereby offers to furnish all labor, materials, equipment, tools, transportation, and services necessary to complete the proposed Work on this Project in accordance with the Contract Documents for the sums quoted. Bidder further agrees that it will not withdraw its Bid within 60 days after the Bid Deadline, and that, if it is selected as the apparent lowest responsive and responsible Bidder, that it will, within 10 days after receipt of notice of selection, sign and deliver to University the Agreement in triplicate and furnish to University all items required by the Bidding Documents. If awarded the Contract, Bidder agrees to complete the Work within 95 calendar days after the date of commencement specified in the Notice to Proceed.

2.0 ADDENDA

Bidder acknowledges that it is Bidder's responsibility to ascertain whether any Addenda have been issued and if so, to obtain copies of such Addenda from University's Facility at the appropriate address stated on Page 1 of the Advertisement for Bids. Bidder therefore agrees to be bound by all Addenda that have been issued for this Bid.

3.0 (NOT USED)

4.0 LUMP SUM BASE BID

\$

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(Place figures in appropriate boxes.)

Bidder shall also include in the LUMP SUM BASE BID the following allowance:

NOT USED

5.0 SELECTION OF APPARENT LOW BIDDER

Refer to the Instructions to Bidders for selection of apparent low bidder.

6.0 UNIT PRICES

The quantities set forth in the Unit Prices are estimates. University does not represent that the actual quantity of any Unit Price item will equal Estimated Quantity stated below. University will perform the extension of the Unit Price time the respective Estimated Quantity.

Unit Price #1 – Placement of Sod as specified in Section 01 22 00 1.3A
Estimated Quantity of units: 100 sq/ft

\$

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 Per SQ/FT

7.0 DAILY RATE OF COMPENSATION FOR COMPENSABLE DELAYS

Bidder shall determine and provide in the space below, the daily rate of compensation for any compensable delay caused by University at any time during the performance of the Work:

(MINIMUM AMOUNT ALLOWED IS \$1.00. Failure to fill in a dollar figure for the daily rate for Compensable Delay at or greater than the Minimum Compensable Daily Rate shall rend the bid non-responsive.)

\$

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 x 10 multiplier
(Place figures in appropriate boxes.)

Failure to fill in a dollar figure for the daily rate for Compensable Delay shall render the bid non-responsive. University will perform the extension of the daily rate times the multiplier.

The daily rate shown above will be the total amount of Contractor entitlement for each day of Compensable Delay caused by University at any time during the performance of the Work and shall constitute payment in full for all delay costs, direct or indirect (including, without limitation, compensation for all extended home office overhead and extended general conditions), of the Contractor and all subcontractors, suppliers, persons, and entities under or claiming through Contractor on the Project. The number of days of Compensable Delay shown as a "multiplier" above is not intended as an estimate of the number of days of Compensable Delay anticipated by the University. The University will pay the daily rate of compensation only for the actual number of days of Compensable Delay, as defined in the General Conditions; the actual number of days of Compensable Delay may be greater or lesser than the "multiplier" shown above.

8.0 ALTERNATES

In order for a Bid to be responsive, Bidder must submit a bid for Alternates listed below. The failure to do so shall result in the Bid being rejected as non-responsive. Alternates are identified in detail in Specification Section 01 23 00.

ALTERNATE #1 - DEDUCTIVE

DESCRIPTION: (N) 2" C.O. for shunt trip from (E) blue light. Provide 2" conduit only for data line to shunt trip. Work shown on drawing sheet E1.1 and E1.2 Numbered Notes 8.

Deduct

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(Place figures in appropriate boxes.)

ALTERNATE #2 - DEDUCTIVE

DESCRIPTION: Provide 2" conduit only for IT fiber optic. Work shown on drawing sheet E1.2 and Numbered Notes 7.

Deduct

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(Place figures in appropriate boxes.)

ALTERNATE #3 - DEDUCTIVE

DESCRIPTION: (N) 2" C.O. for fiber optic from blue. Work shown on drawing sheet E1.1.

Deduct

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(Place figures in appropriate boxes.)

ALTERNATE #4 - DEDUCTIVE

DESCRIPTION: Provide new NEMA 3R enclosure mounted to chain link fencepost for future spring wound timer switch to control fountain. 6" x 6" x 4" Hoffman A6R64HCR or equal. Verify exact location with University Representative. Work shown on drawing sheet E1.1 and Numbered Notes 3.

Deduct

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(Place figures in appropriate boxes.)

ALTERNATE #5 - DEDUCTIVE

DESCRIPTION: Provide 2" conduit only for future 120v power to future sound board. Stub conduit and cap watertight. Provide electronic marker at stub location. Numbered Notes 4. Provide 2" conduit only between stage and future sound board. Stub conduit and cap watertight. Provide electronic marker at stub location. Numbered Notes 5. Provide 2" conduit only for future 120v power to movie projector. Stub conduit and cap watertight. Provide electronic marker at stub location. Numbered Notes 6. Work shown on drawing sheet E1.2 and Numbered Notes 4, 5 & 6.

Deduct

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(Place figures in appropriate boxes.)

ALTERNATE #6 - ADD

DESCRIPTION: Provide 6" of concrete over 6" of base at Stage Pad

ADD

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(Place figures in appropriate boxes.)

9.0 LIST OF SUBCONTRACTORS

Bidder will use Subcontractors for the Work: (Yes or No) _____

If yes, provide in the spaces below (a) the name and the location of the place of business of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a subcontractor licensed by the state of California who, under subcontract to the prime contractor, specifically fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of 1/2 of 1 percent of the prime contractor's total bid, (b) the portion of the work which will be done by each subcontractor. The prime contractor shall list only one subcontractor for each such portion as is defined by the prime contractor in its bid.

Work Activity	Subcontractor	
	Name	Location (City)

(Note: Add additional pages if required.)

10. LIST OF CHANGES IN SUBCONTRACTORS DUE TO ALTERNATES

The information below must be provided for all changes in first-tier Subcontractors if University selects Alternates. List changes in Subcontractors only for those portions of the Work valued in excess of 1/2 of 1% of Bidder's Total Bid.

Alternate No.	Work Activity	Subcontractor	
		Name	Location (City)

(Note: Add additional pages if required.)

11.0 BIDDER INFORMATION

TYPE OF ORGANIZATION:

(Corporation, Partnership, Individual, Joint Venture, etc.)

If a corporation, corporation is organized under the laws of:
the State of _____

NAME OF PRESIDENT OF THE CORPORATION:

NAME OF SECRETARY OF THE CORPORATION:

IF A PARTNERSHIP, NAMES OF ALL GENERAL PARTNERS:

CALIFORNIA CONTRACTORS LICENSE(S):

(Name of Licensee)

(Classification)

(License Number)

(Expiration Date)

(For Joint Venture, list Joint Venture's license and licenses for all Joint Venture partners.)

12. REQUIRED COMPLETED ATTACHMENTS

The following documents are submitted with and made a condition of this Bid:

1. Bid Security in the form of _____
(Bid Bond or Certified Check)

13.0 DECLARATION

I, _____ (Printed name), hereby declare that I am the _____ (Title) of _____ (Name of bidder) submitting this Bid Form; that I am duly authorized to execute this Bid Form on behalf of Bidder; and that all information set forth in this Bid Form and all attachments hereto are, to the best of my knowledge, true, accurate, and complete as of its submission date.

I further declare that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidders to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding' that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure an advantage against the public body awarding the contract of anyone interested in the proposed contract' that all statements contained in the bid are true; an, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay any fee to any corporation, partnership, company association, organization, bid depository, or any member or agent thereof to effectuate a collusive or sham bid.

I declare, under penalty of perjury, that the foregoing is true and correct and that this declaration was subscribed at: _____ (Name of City if within a City, otherwise Name of County), in the State of _____, on _____ (Date).

(Signature)

**SECTION 01 22 00
UNIT PRICES**

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Unit Price quotations shall be inserted in the appropriate spaces in the Bid Form for each Unit Price item of Work described herein.
- B. Unit Prices stated in the Agreement shall be used to compute adjustments of the Contract Sum for approved Unit Price items of Work. Such adjustments shall be made by Change Order (Exhibit 9).
- C. Unit Prices shall include all labor, materials, tools, and equipment; all other direct and indirect costs necessary to complete the item of Work and to coordinate the Unit Price Work with adjacent Work; and shall include all overhead and profit. Contractor shall accept compensation computed in accordance with the Unit Prices for work installed in place as full compensation for furnishing such Work.
- D. Compensation will be paid for those items of Work described in below, Unit Prices.

1.2 SPECIFIED WORK

- A. Applicable Sections of the Specifications describe the materials and methods required under the various Unit Price items of Work.

1.3 UNIT PRICES *ADDENDUM 2*

- A. List of Unit Price Items and descriptions.

Unit Price No.	Description	Estimated Units
1	Provide and prepare soils for installation of sod at areas that have been disturbed during construction.	100 sq/ft

1.4 ADVANCED COORDINATION

- A. Immediately notify University's Representative when conditions require the use of Unit Price items of Work.
- B. The applicability of, measurement methods for, documentation of, and the final adjustment of the Contract Sum for Unit Price items of Work shall be determined by the University's Representative.
- C. After performing Unit Price items of Work as directed by University's Representative, Contractor shall take necessary measurements in the presence of University's Representative

and shall submit calculations of quantities to University's Representative for approval.
Contractor shall notify University's Representative 1 day in advance of taking measurements.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 22 00

**SECTION 01 23 00
ALTERNATES**

PART 1 - GENERAL

1.1 ALTERNATES REQUIREMENTS

- A. This Section identifies each Alternate and describes basic changes to the Work only when that Alternate is made a part of the Work by specific provision in the Agreement.
- B. The Lump Sum Base Bid and Alternates shall include the costs of all supporting elements required, so that the combination of the Lump Sum Base Bid and any Alternates shall be complete. The scope of Work for all Alternates shall be in accordance with applicable Drawings and Specifications.
- C. Except as otherwise specifically provided by University, the Work described in Alternates shall be completed with no increase in Contract Time.
- D. This Section includes only the non-technical descriptions of the Alternates. Refer to the specific Sections of Divisions 2-33 of the Specifications for technical descriptions of the Alternates.
- E. Coordinate related Work and modify surrounding Work as required to properly and completely integrate the Alternates into the Work.

1.2 DESCRIPTION OF ALTERNATES

- A. Deductive Alternate No. 1: (N) 2" C.O. for shunt trip from (E) blue light. Provide 2" conduit only for data line to shunt trip. Work shown on drawing sheet E1.1 and E1.2 Numbered Notes 8.
- B. Deductive Alternate No. 2: Provide 2" conduit only for IT fiber optic. Work shown on drawing sheet E1.2 and Numbered Notes 7.
- C. Deductive Alternate No. 3: (N) 2" C.O. for fiber optic from blue. Work shown on drawing sheet E1.1.
- D. Deductive Alternate No. 4: Provide new NEMA 3R enclosure mounted to chain link fencepost for future spring wound timer switch to control fountain. 6" x 6" x 4" Hoffman A6R64HCR or equal. Verify exact location with University Representative. Work shown on drawing sheet E1.1 and Numbered Notes 3.
- E. Deductive Alternate No. 5: Provide 2" conduit only for future 120v power to future sound board. Stub conduit and cap watertight. Provide electronic marker at stub location. Numbered Notes 4. Provide 2" conduit only between stage and future sound board. Stub conduit and cap watertight. Provide electronic marker at stub location. Numbered Notes 5. Provide 2" conduit only for future 120v power to movie projector. Stub conduit and cap watertight. Provide electronic marker at stub location. Numbered Notes 6. Work shown on drawing sheet E1.2 and Numbered Notes 4, 5 & 6.
- F. Add Alternate No. 6: Provide 6" concrete over 6" base at Stage Pad. (**ADDENDUM 2**)

LITTLE LAKE AMPHITHEATER UPGRADE
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 907075

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 23 00

November 1, 2004
Revision: 1
LF/SF:01 23 00

ALTERNATES
01 23 00 - 2
ADDENDUM 2

**SECTION 01 35 00
SPECIAL REQUIREMENTS**

PART 1 - GENERAL

1.1 DEFINITION OF PROJECT SITE

- A. Contractor's use of the Project site for the Work and storage is restricted to the areas designated on the Drawings.
- B. The Project site is located at University of California, Merced Campus, 5200 N. Lake Rd. Merced CA 95344.

1.2 WORK HOURS

- A. No Work shall be done outside of standard Monday through Friday 7:00 A.M. to 5:00 P.M. working hours, on holidays or weekends unless prior written approval has been obtained from the University's Representative.

1.3 *SITE INGRESS AND EGRESS (ADDENDUM 2)*

- A. All Contractors shall use the Project Access Road off of Lake Road at Scholars Lane as shown on the Site Logistics Plan issued in Addendum 1.
- B. The Contractor shall maintain temporary access roads and lay down areas as shown on the Site Logistics Plan. All temporary access roads shall comply with all applicable laws, regulations & permit requirements.

1.4 SITE RESTRICTIONS

A. OUT OF BOUNDS AREAS

- 1. Little Lake
 - a. The Contractor shall not permit any Contractor personnel or construction vehicle to approach within 50 feet of Little Lake except with the prior written approval of the University's Representative.
 - b. The Contractor shall ensure that no Contractor personnel shall use the Lake to fish, swim or for other non-construction activities.
 - c. The Contractor shall ensure that no run-off shall enter the Lake except as indicated on the Drawings.
 - d. The Contractor shall ensure that no construction garbage, detritus, waste or debris (whether solid or liquid) of any type shall enter the Lake.
- 2. Merced Irrigation District
 - a. The Contractor shall not permit any Contractor personnel or construction vehicle to approach within 50 feet of the Fairfield Canal and the penstock between Le Grand and Fairfield Canals except with the prior written approval of the University's Representative.

- b. The Contractor shall ensure that no Contractor personnel shall use the Fairfield Canal or the penstock between Le Grand and Fairfield Canals to fish, swim or for other non-construction activities.
- c. The Contractor shall ensure that no run-off shall enter the Fairfield Canal or the penstock between Le Grand and Fairfield Canals except as indicated in the Contract documents.
- d. The Contractor shall ensure that no construction garbage, detritus, waste or debris (whether solid or liquid) of any type shall enter the Fairfield Canal or the penstock between Le Grand and Fairfield Canals.

1.5 ROADS

- A. Existing roads and existing or planned construction roads shall be used for construction access within the limits defined herein.
- B. Contractor shall take all necessary precaution to insure the safety of University Students, Faculty and Visitors at all times.
- C. Contractor must obtain prior written approval from the University's Representative to block streets or parking areas at any time.
- D. The Contractor shall clear all roads (including Lake Road), parking areas and sidewalks affected by the Contractor's operations. This will include the immediate removal of dust, dirt, or any other debris or detritus so that roads and sidewalks are maintained in a safe and usable condition.

1.6 PARKING

- A. All parking locations and arrangements must be coordinated and approved by University's Transportation and Parking Services (TAPS) prior to the start of work.
- B. A parking permit and fee to utilize the University of California, Merced (UCM) parking facilities will be required for all areas. Parking permits can be purchased on a monthly basis at a fee of \$30 per month per vehicle. Contact Transportation and Parking Services (TAPS) at (209) 228-4548 or visit the Facilities modular behind Central Plant for information on obtaining permits. A valid permit must be displayed at all times by all vehicles while parking on campus, whether in fenced construction areas or not.
- C. The Contractor shall not permit any personnel to park within the construction site or construction yard. Parking will be limited to a maximum of one company insured vehicle on site or within the construction yard.
- D. On-street parking is not permitted in areas not designated for parking or construction.
- F. Vehicles found to be on university property without a valid permit, will be cited. Fines range from \$50.00 for no permit to \$445.00 for parking in a handicapped stall without a valid blue tag.

1.7 TRAFFIC CONTROL

- A. The Contractor shall adopt all practical means to minimize interference to traffic. Access to other facilities under construction shall be maintained at all times. The Contractor shall provide a schedule of any activity that will impact traffic, or any planned closing of the streets, for approval by the University's Representative and shall give a minimum of 14 working days notice before closing any street or access.
- B. Contractor shall furnish at Contractor's expense all barricades, lights, and other devices and means necessary to control traffic and shall maintain these devices at all times to protect the public and/or Work.
- C. It is the responsibility of the Contractor performing Work on or adjacent to a highway to install and maintain such devices as are necessary to provide safe passage for the traveling public through the Work, as well as for the safeguard of workers. Before Work begins, traffic control plans for handling traffic through a construction or maintenance Project shall be submitted to and approved by the University's Representative and public agency or authority having jurisdiction over the highway, in accordance with Chapter 5 of the CalTrans Traffic Manual.
- D. The Contractor shall comply with the provisions of 01 35 40 Environmental Mitigation.
- E. The Contractor shall ensure that all of the Contractor's activities that affect traffic control, road use, materials delivery, equipment delivery, rights of way and preservation of 3rd party access rights are coordinated with those of all Separate Contractors.

1.8 SURROUNDING SITE CONDITION SURVEY

- A. Prior to commencing the Work, Contractor, and University's Representative shall tour the Project site together to examine and record damage to existing adjacent buildings, campus streets and city streets, bicycle paths, sidewalks, and all other improvements. This record shall serve as a basis for determination of subsequent damage due to Contractor's operations and shall be signed by all parties making the tour. Any cracks, sags, or damage to the adjacent buildings and improvements not noted in the original survey, but subsequently discovered, shall be reported to the University's Representative.

1.9 INTERRUPTION OF BUILDING SERVICES

- A. Planned utility service shutdowns shall be accomplished during periods of minimum usage. In some cases this will require Work activities before 8:00 A.M. and after 5:00 P.M. and weekend Work, at no additional cost to the University. At least 7 working days advance notice shall be given to the University's Representative before interruptions to utility service (refer to Exhibit 18 Utility Service Interruption/Shut Down Request) and other interferences with use of existing buildings, surrounding hardscape and roads.
- B. Shutdowns critical to the completion of the project shall be listed as Milestones on the project schedule. The Contractor shall program Work so that service will be restored in the minimum possible time, and shall cooperate with the University in reducing shutdowns of utility systems.

- C. The University reserves the right to deny shutdown requests based on scheduled work load, research projects, and usage of surrounding buildings or other activities planned on campus.

1.10 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings show, if applicable, existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other utilities that are known to the University.
- B. Contractor shall locate all known existing installations before proceeding with construction operations that may cause damage to such installations. Existing installations shall be kept in service where possible and damage to them shall be repaired at no additional cost to the University.
- C. Existing underground structures and utilities shall be kept in service unless prior approval to interrupt or shutdown service is obtained from University's Representative. If damaged, they shall be repaired by the Contractor with no adjustment of Contract Sum or Contract Time.
- D. The Contractor shall coordinate all Work with the operations of separate Contractors as needed. This shall include, but not be limited to, the responsibility of the Contractor to coordinate with other contractors installing underground utilities. Such coordination should take place prior to any excavation or trenching operations by the Contractor.
- E. If any other structures or utilities are encountered, the Contractor shall request University's Representative to provide direction on how to proceed with the Work.
- F. If any structure or utility is damaged by the Contractor, the Contractor shall take appropriate action to ensure the safety of persons and property.
- G. No Work is to be performed on energized electrical equipment unless scheduled with the University's Representative. The University reserves the right to specify specific conditions for all Work involving energized high-voltage electrical equipment.
- H. Contractor shall uncover, prior to any earthwork for new construction, all existing piping where crossings, interferences or connections are shown on the Drawings, from 1 foot below proposed construction limit to the existing ground surface. Any variation in the actual elevations and the indicated elevations shall be brought to the University's Representative's attention. If the Contractor does not expose all existing utilities, Contractor shall not be entitled to additional compensation for Work necessary to avoid interferences.
- I. If interferences occur at locations other than the general locations shown on the Drawings, and such utilities are damaged before their locations have been established, or create an interference, the Contractor shall notify the University's Representative and a method for repairing the damage or correcting the interference shall be supplied by the University's Representative. Payment for additional Work due to interferences not shown on the Drawings shall be in accordance with the General Conditions.

- J. Care shall be exercised to prevent damage to adjacent facilities including walks, streets, curbs, and gutters; where equipment will pass over these obstructions suitable planking shall be placed. Damaged facilities, due to the Contractor operations, shall be removed and replaced at the Contractor's expense.
- 1.11 PROTECTION OF PERSONNEL
- A. Contractor shall take proper precautions to ensure the safety of all persons at all times during the construction period.
- 1.12 PROJECT SITE SECURITY
- A. Contractor shall provide job site security and management plan for the University's Representative approval. Contractor shall be responsible for keeping areas involved in this Work secure at all times when Work is not in progress.
 - B. All persons working on the Project site shall receive a site safety briefing and Natural Resource Awareness Training from the University prior to being allowed to start work.
- 1.13 CONSTRUCTION STAGING & MULTIPLE CONSTRUCTION CONTRACTS
- A. The following describes the scheduling of the Work and the coordination required for the Work done by Separate Contractors:
 - 1. The University reserves the right to let other construction contracts.
 - 2. The following projects may be in progress at times during this project:
 - a. Student Services Building
 - b. Science & Engineering 2
 - 3. Disagreements between the Contractor and other Separate Contractors about concurrent use of Work areas or access to the Project site which are not resolved by the participants shall be referred to the University's Representative and the Contractor agrees to abide by the University's Representative's determination as to concurrent use or priority of access and to perform its Work in compliance with the University's Representative's resolution at no additional cost to the University.
 - B. All material and equipment for construction operations shall be brought in and the Work so conducted as to avoid any interference with existing University facilities or their normal operations, and with concurrent construction Work by other separate Contractors.
- 1.14 FINAL EXAM SCHEDULE
- A. Contractor shall be advised that academic finals week takes place on the UC Merced campus during May, August and December of each year. During these periods of time, students are involved in intensive testing relative to their academic course work. During these periods of time, noise level generated as a result of construction activity must be kept to a minimum. Contractors will be expected to Work with the University's requirements to achieve a level of noise that is acceptable to the University. Actual

schedule for finals weeks during each year will be coordinated with Contractor following the issuance of the Notice to Proceed.

1.15 WORK SITE DECORUM

- A. Extreme care to limit noise and odors shall be taken at all times. Loud or unnecessary conversation shall be avoided. The playing of radios tapes, or compact discs shall be strictly prohibited.
- B. Contractor shall control the conduct of its employees and those of its subcontractors and suppliers so as to prevent interaction initiated by said employees with University of California Merced students, staff, or other individuals (except those associated with the Project), on or adjacent to the Project site. Without limitation, unwanted interaction by these employees includes whistling at, motioning toward, or initiating conversations with passersby. In the event that any employee initiates such unwanted interaction, or utilizes profanity, Contractor shall, either upon request of University's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the University.
- C. Smoking is prohibited in and within 20 feet of any entrance, window, or air intake of all University buildings and in enclosed areas. Smoking will not be allowed in the construction area. Smoking will be allowed in a designated area within the construction storage yard only.
- D. Firearms are prohibited on University property.
- E. Alcoholic beverages are prohibited on University property unless the prior written approval of the University's Representative is obtained.
- F. Pets are prohibited on the Project site.

1.16 PUBLICITY

- A. Contractor shall not release any information, story, photograph, plan or drawing relating to the Project to anyone, including press or other public communications medium, except as submitted and approved for release by the University's Representative.

1.17 PROJECT SIGN

- A. No signs or advertisements will be permitted on the Project site, except with express permission of University's Representative.

1.18 JOB OFFICE

- A. Space on the Project Site is limited. Trailer space must be requested and approved by the University's Representative. Storage and office trailers are to be located in the temporary laydown area selected by the University's Representative on campus within one (1) mile from the work area. Space will be allocated by the University's Representative. Contractor shall provide and maintain all temporary facilities as required for completion of the Project.

1.19 SALVAGE

- A. All material and equipment removed as part of this Project is the property of the Contractor and shall be removed from the Campus and legally disposed of, unless otherwise stated in the Contractor's "Scope of Work".

1.20 CLEANUP

- A. During the progress of the Work, the Contractor shall keep the Project site in a neat and clean condition that is free of debris to the satisfaction of the University's Representative. All materials and debris accumulated in conjunction with completing this Work shall be disposed of in the jobsite trash dumpsters provided by the Contractor and disposed of off campus. Contractor shall not use University refuse containers.

1.21 UNIVERSITY FURNISHED CONSTRUCTION DOCUMENTS

- A. University will furnish to the Contractor 1 set of Drawings and Specifications and 1 CD of the Drawings and Specifications upon an award of the Contract at no cost. If more than 1 set is required or if the Contractor wants the Drawings in another size other than the size issued with the Bidding Documents, the Contractor will pay the actual cost of reproduction for printing.

1.22 JOB CONDITIONS

- A. Protection: Where roof edge does not terminate in a parapet wall and/or where Work is in progress overhead and materials or objects could potentially fall, Contractor is required to construct temporary covered pedestrian walkways over each building entrance. Walkway covers shall extend out 12 feet in length for the first floor and an additional 4 feet for each additional floor of the building. Walkway covers shall extend from face of building. Contractor shall be required to place and maintain yellow safety construction flagging or ropes with signage to prevent pedestrians from coming within 25 feet of Work in progress overhead and to route pedestrians in and out of building entrances.
- B. Safety Precautions: Perform Work in such a manner as to prevent damage to existing facilities to remain or to be salvaged. Hazardous Work shall not be left standing or hanging, but shall be knocked or pulled down to avoid damage or injury to employees or the public.
- C. Crane Operation, Staging and Storage
 - 1. Operator Training and Crane Certification: Prior to starting crane operations, Contractor shall provide copies of operator's training and crane certification to the University's Representative.
 - 2. Crane Staging Area: Contractor shall be required to coordinate with the University's Representative a minimum of 5 working days in advance of loading and removal of materials from the roof. Contractor is responsible for providing necessary staging area for crane.

3. Storage: Contractor shall not be allowed on-site crane storage unless with the prior written approval of the University's Representative.

1.23 NOT USED

1.24 PROJECT SITE SUPERINTENDENT

- A. Contractor shall employ a competent Project Site Superintendent/Foreman satisfactory to the University's Representative. The Project Site Superintendent/Foreman shall be in attendance at the Project site at all times during the performance of the Work. Project Site Superintendent/Foreman shall represent the Contractor and communications given to and received from the Project Site Supervisor shall be binding on Contractor.
- B. The Contractor shall submit to the University's Representative the qualifications of the Project Site Superintendent/Foreman prior to commencement of the Work. The University's Representative shall approve the Project Site Superintendent/Foreman based on his/her experience with projects similar to type, scope, size, and complexity.
- C. The Project Site Superintendent/Foreman approved for the Project by the University's Representative, must be able to proficiently read, write and verbally communicate in English. The Project Site Superintendent/Foreman may not perform the Work of any trade, pick-up materials, or perform any Work not directly related to the supervision and coordination of the Work at the Project site while Work is in progress.
- D. Failure to maintain a Project Site Superintendent/Foreman on the Project site at all times Work is in progress shall be considered a material breach of this Contract, entitling University to terminate the Contract or alternatively, issue a stop Work order until the Project Site Superintendent/Foreman is on the Project site. If, by virtue of issuance of said stop Work order, Contractor fails to complete the Contract on time, Contractor will be assessed Liquidated Damages in accordance with the Agreement.
- E. If the Project Site Superintendent/Foreman fails to perform to the satisfaction of the University's Representative, the University's Representative may, upon 15 days written notice, require the Contractor to remove the Project Site Superintendent/Foreman from the Project and replace the Project Site Superintendent/Foreman with a replacement acceptable to the University's Representative.
- F. If the Contractor elects a replacement of the Project Site Superintendent/Foreman, such replacement shall be discussed with the University's Representative prior to actual replacement. The same criteria employed by the University's Representative to approve the initial Project Site Superintendent/Foreman shall also apply to the University's Representative's approval of any subsequent Project Site Superintendent/Foreman.

1.25 OTHER CONTRACTOR SITE PERSONNEL

- A. In addition to the Project Site Superintendent/Foreman, the Contractor shall provide site personnel of quality and quantity sufficient to carry out all of the on-site Contractor responsibilities described in the Contract Documents. See Instructions to Bidders for other site personnel requirements that may also be required.

LITTLE LAKE AMPHITHEATER UPGRADE
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 907075

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 35 00

SECTION 01 51 00
TEMPORARY UTILITIES

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. Contractor shall provide and maintain temporary utilities for construction operations and related necessary temporary structures. Remove them when they are no longer needed.
- B. Contractor shall pay for connections/disconnections of all temporary utilities; e.g., gas, water, power, and telephone.
- C. Contractor shall pay for connections for water and electricity to Project site sources.
- D. University does not guarantee amounts of water and electricity available from existing University's sources, nor will the University be responsible for interruptions in service.
- E. Contractor shall maintain and operate systems to provide continuous service.
- F. Contractor shall modify and extend systems as required.
- G. Materials may be new or used, but shall be adequate for the required purposes. Their use and methods of installation shall not create unsafe conditions or violate requirements of Applicable Codes Requirements.

1.2 REMOVAL AND RECONDITIONING

- A. Contractor shall remove all temporary services installed as a requirement of these Contract Documents. Restore utilities to their original condition at the completion of Work.
- B. Contractor shall legally and properly dispose of all debris resulting from removal and reconditioning operations.
- C. Contractor shall patch and repair building elements as required by temporary utility removals.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

- A. Contractor shall install and use temporary utilities in accordance with latest version of the following:
 - 1. California Electrical Code.
 - 2. Federal, State, and local codes and regulations.
 - 3. Utility company requirements.

1.4 TEMPORARY ELECTRICITY

- A. If adequate spare power source is available nearby, Contractor may use such power for construction. University will not provide electricity free of charge. Contractor shall meter temporary electricity and will be charged based on average UC Merced rates.

1.5 TEMPORARY FIRE PROTECTION

- A. Contractor shall conform to the rules, regulations, and instructions of the University and the Merced County Fire Department and such agencies having jurisdiction or identified by the University's Representative. Contractor shall:
1. Ensure that no burning shall be done on Project site.
 2. Provide and maintain fire protection equipment including extinguishers, fire hoses, and other equipment as necessary for proper fire protection during the course of the Work.
 3. Use fire protection equipment only for extinguishing fires.
 4. Locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings, and throughout the Project site.
- B. In the area under construction demolition, Contractor will provide at least 1 multi-purpose dry chemical fire extinguisher for each 3,000-square feet of building floor area. Locate fire extinguishers so that a person never has to walk more than 75 feet to obtain one. Fire extinguisher minimum size must be 4A:20BC (10 pound ABC). Use fire protection equipment only for fighting fires. Any additional fire extinguishers required for your scope of work are to be provided by Contractor.
- C. Contractor shall assigned a qualified person with authority to maintain fire protection equipment, institute fire prevention measures, be a liaison with the University's Representative, Merced County Fire Department and such agencies having jurisdiction or identified by the University's Representative, and direct the prompt removal of combustible and waste materials from the Project site. Prior to start of Work, Contractor shall organize a mandatory safety meeting. The attendees at this meeting shall at a minimum include the University's Representative, a representative of the Merced County Fire Department, the Contractor's Project Site Superintendent and the Contractor's Fire Liaison.
- D. Contractor shall instruct all subcontractors in the site fire prevention measures, the location of fire extinguishers and the procedures for dealing with fire on site.
- E. Call 9-1-1 and pull fire alarm box when applicable, for any emergency. Report the exact location (building name and street intersection) and nature of the emergency. Contractor is responsible for and will be billed for fire response charges (actual cost of personnel and equipment) for any false alarm and needless call.
- F. Refer to Section 01 41 00 Regulatory Requirements for permits required.
- G. Vehicles or storage of materials on Project site must not obstruct, block or damage or render useless any fire hydrants, fire department connection, fire alarm box or fire access roadway. Any necessary road closures or disruption to utilities shall be requested through the University's Representative as stated in Section 01 35 00 Special Requirements.
- H. Do not tamper with or work on any fire alarm or fire protection system without first gaining authorization from the University's Representative. System shutdown requests

shall require a minimum of 48 hours advance notice. Contact University's Representative for any such requests.

1.6 TEMPORARY HEAT, VENTILATION AND AIR CONDITIONING

- A. Contractor shall provide temporary heat and ventilation as required by the Instructions to Bidders and as required to maintain adequate environmental conditions to meet specified minimum conditions for installation of materials; and to protect equipment, materials, and finishes from damage due to temperature or humidity for all work. The use of temporary heating appliances will require a Hazardous Condition Permit as specified in Section 01 41 00 Regulatory Requirements.
- B. Contractor shall provide adequate forced ventilation of enclosed areas to cure installed materials, to prevent excessive humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases for their own work.

1.7 TEMPORARY SANITARY FACILITIES

- A. Portable Chemical Toilets and maintenance will be provided by Contractor.
- B. Permanent toilet facilities within an existing building shall not be used without written authorization of the University.

1.8 TEMPORARY TELEPHONE SERVICE

- A. Contractor shall provide a mobile radio system on-site at all times for effective University's Representative communications with the Contractors field personnel.

1.9 TEMPORARY WATER (ADDENDUM 2)

- A. University will not provide water free of charge. Contractor shall meter temporary water and will be charged based on average UC Merced rates. **Rates shall be \$5.77 per 1000 gals of water used. ADDENDUM 2**
- B. Water may be taken from University's systems in such quantities and at such times as they are available. If this is done, Contractor shall provide all equipment, including metering, connections, and other materials necessary for extending the utility lines to where they will be used. Coordinate the installation with University's Representative. Contractor shall pay for connections and removal of connections to the local water and power mains.
- C. If water is obtained from a campus fire hydrant, the hydrant valve shall not be used as a control valve. Use hydrant wrench; do not use pipe wrench. Contractor shall provide all valving necessary to control the flow of water.
- D. Contractor shall:
 - 1. Use a reduced pressure backflow preventer shall be used at any connection to University's system, including fire hydrants.
 - 2. Install according to California Administrative Code, Title 17, Section 7603(c), and test immediately after installation by a certified tester in accordance with Title 17, CAC, Section 7605(d).

3. Install piping with taps located so that water is available throughout the Project site by the use of hoses. Protect piping and fittings against freezing.
4. Provide water for human consumption in accordance with the regulatory requirements for potable water.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 51 00

**SECTION
01 91 00 COMMISSIONING**

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Work included in this section: Oversight, coordination, and documentation of the following:
 - 1. Commissioning of selected systems and equipment specified under Division 26 Electrical.
 - 2. Division 27 Communications
 - 3. Section 32 84 00 Landscape Irrigation
 - 4. Section 33 83 13 Ring Down Emergency Telephone

1.2 RELATED SECTIONS AND REQUIREMENTS

- A. Requirements of Division 1 General Requirements apply to all work in this section.
- B. Related Sections:
 - 1. Section 01 79 00 Training.

1.3 GENERAL

- A. Commissioning is a quality assurance process that has as its goal that all systems perform interactively and according to design intent under the full range of expected operating conditions. Contractor shall ensure that all systems are fully commissioned and that commissioning is fully documented as specified in this Section.
- B. Commissioning Team. The Commissioning Team for the construction and post-construction period shall include:
 - 1. Contractor Members:
 - a. Commissioning Coordinator (see paragraph 1.3C).
 - b. Division 23, and Division 26 subcontractors where appropriate, including the Test & Balance Subcontractor.
 - 2. University Members:
 - a. University's Representative.
 - b. University plant operator/engineer (during the functional testing and training phases only).
 - c. University's Design Professional.
- C. Commissioning Coordinator:

1. Contractor shall procure and provide the services of the Commissioning Coordinator.
2. Qualifications:
 - a. Cumulative of five or more years experience in one or more of the following for projects of similar size and complexity:
 - 1) Building mechanical or electrical system commissioning.
 - 2) Building mechanical or electrical system construction project management.
 - 3) Building mechanical or electrical system coordination services for a general Contractor.
 - 4) Building mechanical system test & balance project management.

1.4 SUBMITTALS

- A. See Section 01 33 23 Shop Drawings, product Data and Samples.
- B. Commissioning Coordinator Qualifications. Prior to any commissioning work taking place, submit Commissioning Coordinator's resume listing applicable experience for review and approval by the University's Representative.
- C. Equipment submittals and shop drawings:
 1. See Divisions 23 and 26.
- D. Commissioning Reports:
 1. Start-up and Factory Tests.
 - a. See Divisions 23 and 26 for requirements.
 - b. Compile after all equipment has been started and submit five copies to University's Representative for review and approval.
 2. Pre-functional Tests:
 - a. See Divisions 23 and 26 for checklists.
 - b. Compile after all equipment pre-functional forms have been completed and submit five copies to University's Representative for review and approval.
 3. Test and Balance Reports.
 - a. Include only those reports developed after spot checks and associated rebalancing have been completed.
 4. Functional Tests:
 - a. See Divisions 23 and 26 and for forms.
 - b. Compile after all tests have been completed and submit five copies to University's Representative for review and approval.
 5. Demonstration Tests:
 - a. Tests will be a subset of Functional Tests and will be identified one day prior to the Tests by the University's Representative. See Divisions 23 and 26 and for expected time required.
 - b. Compile after all tests have been completed and submit five copies to University's Representative for review and approval.

6. Trend Reviews:
 - a. Data to be provided to University's Representative in electronic format specified in Division.
7. Final Report:
 - a. Include the following completed documentation:
 - 1) System/Equipment Matrix (see Paragraph 3.1A.2).
 - 2) Start-up and Factory Tests.
 - 3) Test and Balance Reports.
 - 4) Pre-functional test documentation.
 - 5) Functional test documentation.
 - b. Format and Procedure:
 - 1) Submit two draft copies for review and comment by University's Representative, who will return one copy.
 - 2) Make changes noted on returned copy and compile final draft.
 - 3) Submit Final Report in the following format:
 - a) Five bound copies.
 - b) One electronic copy on CD in format readable by software on Operator's Workstation, as specified in Division 23. Reports may be scanned from paper copies but word-searchable electronic versions preferred.
 - c) One electronic copy as above copied onto the Operator's Workstation server.
8. Operations and Maintenance Manuals: See Divisions 23 and 26.
9. Training manuals: See Section 01 79 00 Training and Divisions 23 and 26.
10. Re-commissioning Management Manual
 - a. Prepare and submit 1 copy of a Re-commissioning Management Manual containing the following information organized into a 3-ring binder with tabbed sections as listed.
 - 1) Design Intent. (Material provided by the University's Representative)
 - a) Final version of the owner's requirements and design basis narratives, including brief descriptions of each system.
 - 2) Controls.
 - a) As-built sequences of operation for all equipment.
 - b) Controls drawings
 - c) A list of time of day schedules and a schedule to review them for relevance and efficiency.
 - d) A list of all user adjustable setpoints and reset schedules with rationale for their selection and range.
 - 3) Energy and Water Efficiency Measures. (Material provided by University Representative.)
 - a) A description and rationale for all energy and water saving features and strategies with operating and instructions.
 - b) Guidelines for establishing and tracking benchmarks for whole building energy use and equipment efficiencies of cooling, heating, and service hot water equipment.

- 4) Seasonal Issues. Not applicable to UC Merced projects.
- 5) Calibration.
 - a) Recommendations for recalibration frequency of sensors and devices by type and use.
- 6) Continuing Commissioning Plan (Material provided by University Representative.)
 - a) Recommended frequency for re-commissioning by equipment type or system, with reference to tests conducted during initial commissioning.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 COMMISSIONING COORDINATION

A. Commissioning Coordinator shall:

1. Prepare schedule of commissioning activities specified in Divisions 23 and 26 including:
 - a. Submission of equipment submittals and shop drawings
 - b. Equipment start-up and pre-functional tests
 - c. Factory start-up and inspection of equipment
 - d. Test and balance
 - e. EMCS calibration and start-up
 - f. Electrical system functional testing
 - g. EMCS system functional testing
 - h. EMCS demonstration tests (to University's Representative)
 - i. EMCS trending initiation
 - j. EMCS trend review data distribution (to University's Representative)
 - k. Submission of operations and maintenance manuals
 - l. Development and submission of record drawings
 - m. Training of University personnel
 - n. Preparation of Final Commissioning Report
2. Prepare a system and equipment commissioning matrix with a line item for each piece of equipment and each subsystem specified to be commissioned under Divisions 23 and 26. The System/Equipment matrix shall include for each line item:
 - a. Equipment tag or name.
 - b. Service.
 - c. Location.
 - d. Responsible subcontractor.
 - e. The due date and actual completion date for the following (where applicable):
 - 1) Submittals.
 - 2) Shop drawings.
 - 3) Factory test.
 - 4) Equipment set.

- 5) Preliminary operations and maintenance manuals indicating start-up procedures.
 - 6) Pre-start verification.
 - 7) Equipment start-up.
 - 8) Pre-functional test.
 - 9) Test and balance.
 - 10) Functional performance test.
 - 11) Operations and maintenance manuals.
 - 12) Record drawings.
 - 13) Training.
3. Complete the commissioning matrix as activities are completed, and distribute to Commissioning Team at least one day prior to each Team meeting or when requested by University's Representative.
 4. Schedule and chair meetings of Commissioning Team:
 - a. Commissioning Team shall be notified of all meeting times and locations at least two weeks prior to the meeting.
 - b. Contractor Members of Commissioning Team shall attend all scheduled meetings; University Members of Commissioning Team shall be invited to all meetings and attend where they feel their attendance is beneficial or where required to witness demonstration tests and training.
 - c. Prior to start of construction until 30 days prior to start-up of any equipment:
 - 1) One scoping meeting shall occur prior to any Division 23 and 26 submissions of equipment submittals or shop drawings. Meeting shall include a discussion of preliminary commissioning schedule and roles of each Team member.
 - 2) Bi-monthly progress meetings (more frequent if required in the judgment of the Commissioning Coordinator; less frequent if requested by the Commissioning Coordinator and approved by the University's Representative).
 - d. 30 days prior to start-up of any equipment through start of functional testing: Bi-weekly progress meetings (more frequent if required in the judgment of the Commissioning Coordinator; less frequent if requested by the Commissioning Coordinator and approved by the University's Representative).
 - e. During functional testing until their completion: Weekly progress meetings (more frequent if required in the judgment of the Commissioning Coordinator; less frequent if requested by the Commissioning Coordinator and approved by the University's Representative).
 - f. After functional testing until all commissioning documentation is complete: Meetings as required in the judgment of the Commissioning Coordinator.
 5. Supervise pre-functional and functional testing performed by Contractor's Members of Commissioning Team:
 - a. Coordinate tests among Team Members and schedule tests so that required work for each trade is complete prior to tests being performed.

- b. Ensure that tests are successfully completed by reviewing test forms for completeness and positive response, and ensuring forms have been signed by the Team Member who performed the work. (The Commissioning Coordinator is not required to perform or witness any pre-functional or functional tests.)
 - c. Compile test documentation and submit to the University's Representative for review and approval.
 - d. Coordinate and ensure resolution of punchlists from University's Representative.
 6. Supervise and witness demonstration tests performed by Contractor's Members of Commissioning Team, also witnessed by the University's Members of the Commissioning Team:
 - a. Compile test documentation and submit to the University's Representative for review and approval.
 - b. Coordinate and ensure resolution of punchlists from the University's Representative.
 - c. Coordinate retesting where required until tests are successfully completed.
 7. Coordinate EMCS post-construction and post-occupancy trend reviews with Contractor:
 - a. Ensure trends are initiated as specified in Division. The post-construction review will occur directly after functional testing is complete (see Division for exact time period). Two post-occupancy reviews will occur, one after approximately 6 months of operation, and one approximately two months prior to the end of the warranty period.
 - b. Ensure data is transmitted in required format to University's Representative.
 - c. Coordinate and ensure resolution of trend review punchlists from the University's Representative.
 - d. Coordinate retesting where required until tests are successfully completed.
 8. Maintain a master deficiency and resolution log developed from punchlists, including status and date of resolution of each deficiency. Provide the University's Representative with regular progress reports.
 9. Coordinate and confirm completion of training of University personnel as specified under Divisions 23 and 26.
 10. Compile and submit Final Commissioning Report.
 11. Compile and submit the Re-commissioning Management Manual.

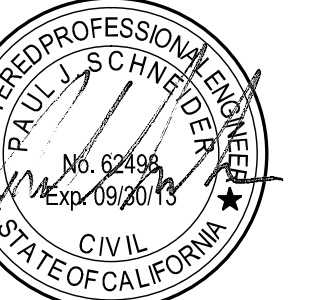
3.2 REMEDIAL WORK

- A. Remedial work shall be performed at no additional cost to the University.
- B. Remedial work shall include re-performing any commissioning or other tests related to remedial work once remediation is complete at no additional cost to the University.

3.3 SYSTEM ACCEPTANCE

- A. Specified Division, 23, 26, and systems shall be considered commissioned and substantially complete when the following have been submitted and approved by University Representative:
1. Final Commissioning Report.
 2. Post-construction trend review.
 3. Other completion documentation as defined in Divisions 23, 26, and, including University sign-off that training has been completed.
 4. All remedial action associated with punchlists developed by the University's Representative.
- B. Remedial action required to address deficiencies identified by post-occupancy trend reviews shall be covered by the system warranty at no additional cost to the University.

END OF SECTION 01 91 00



IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT

APPL 01-113344

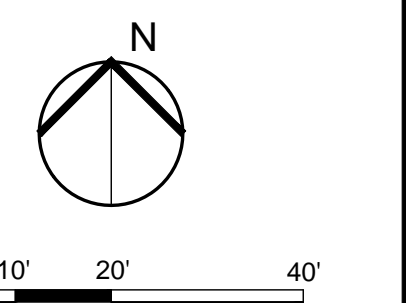
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2	DSA APPROVAL	05/10/2013
3	DSA APPROVAL	07/08/2013
4	CONFORM SET	07/15/2013
5	ADDENDUM 2	08/16/2013

Drawn By: DJA
Revision Date: 07/15/2013
Plot Date: 07/08/2013
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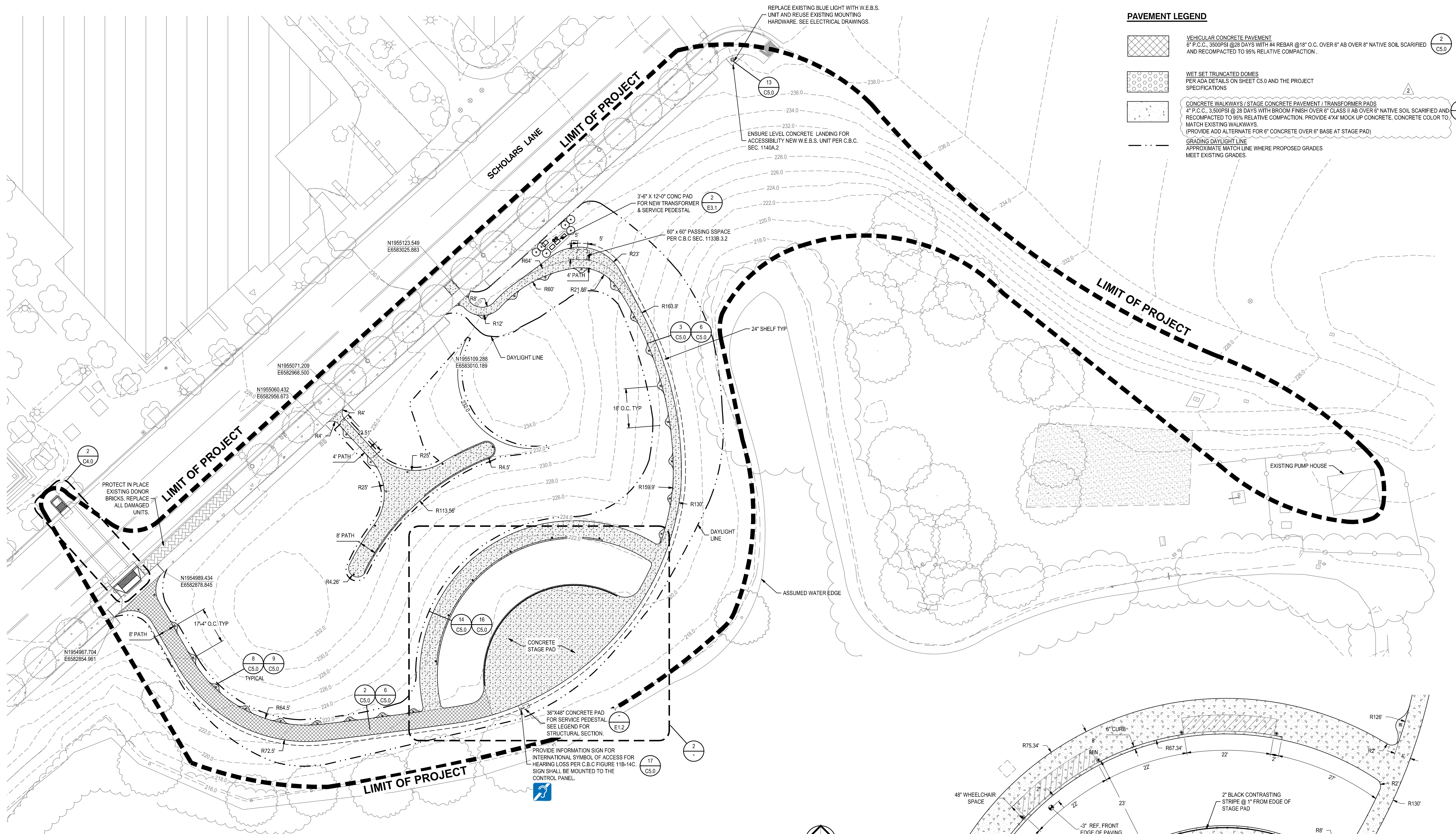


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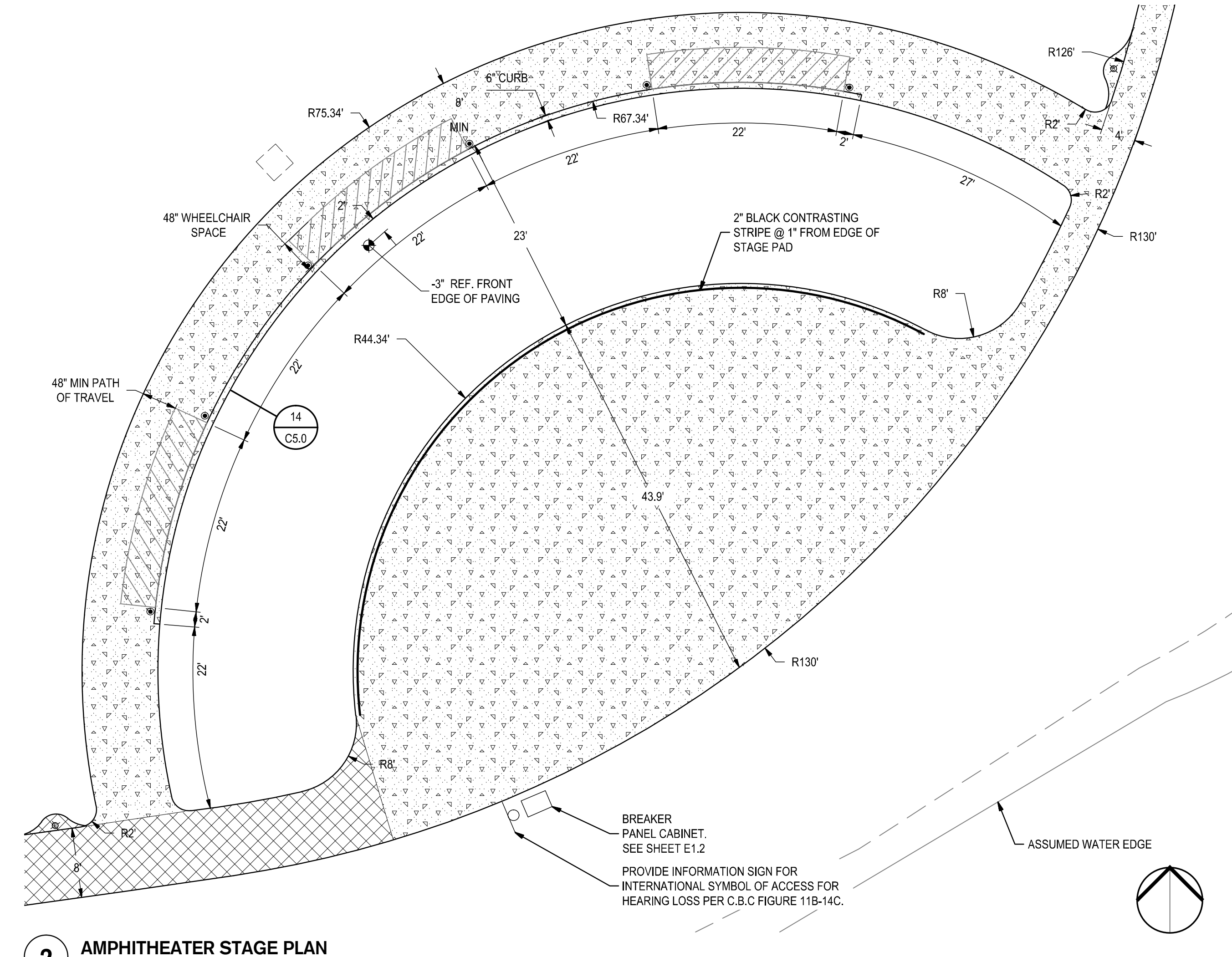
**CONSTRUCTION
PLAN &
STAGE PLANS**

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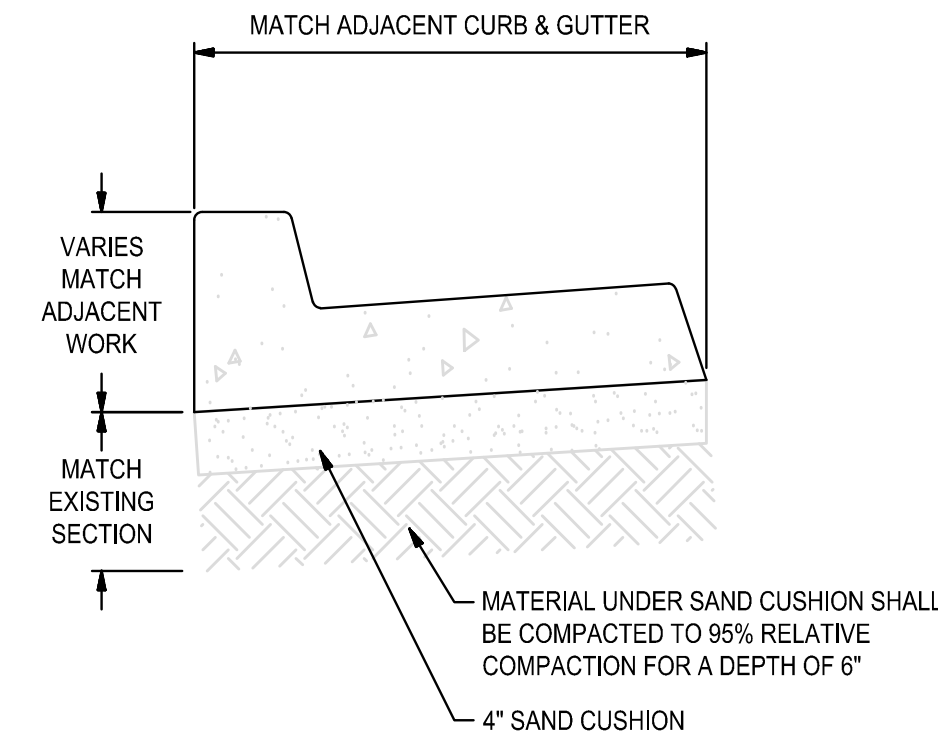
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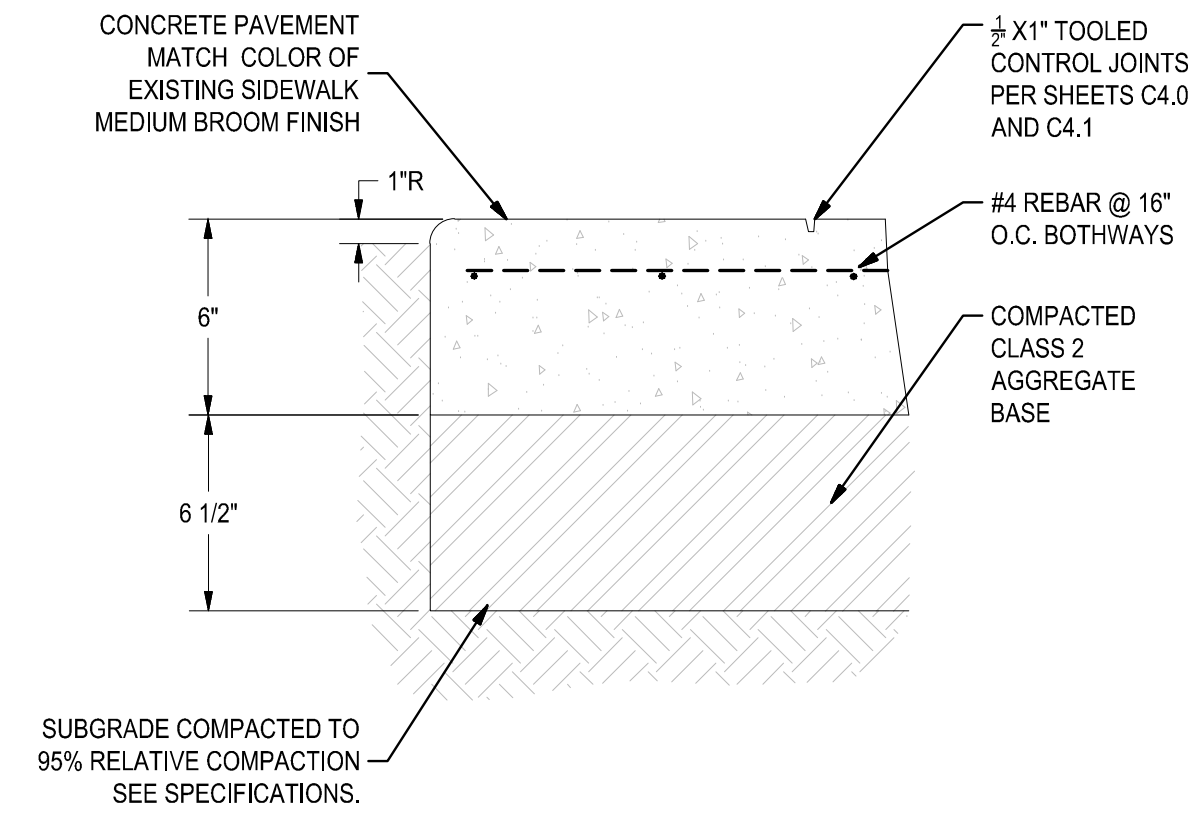
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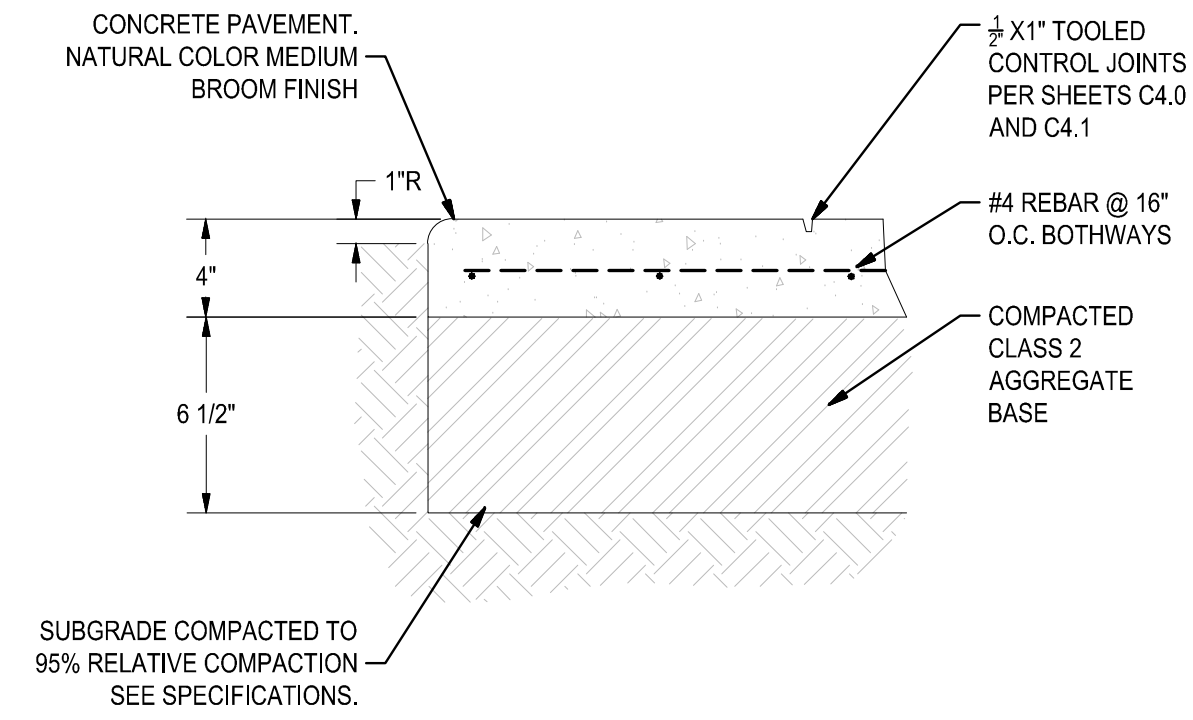
2 AMPHITHEATER STAGE PLAN
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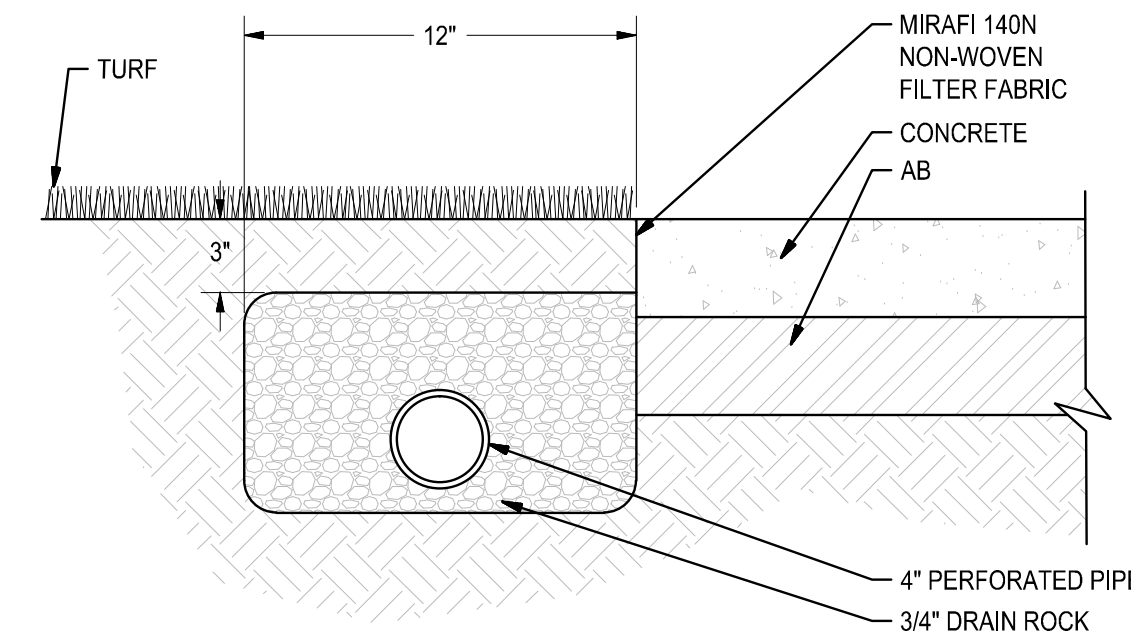
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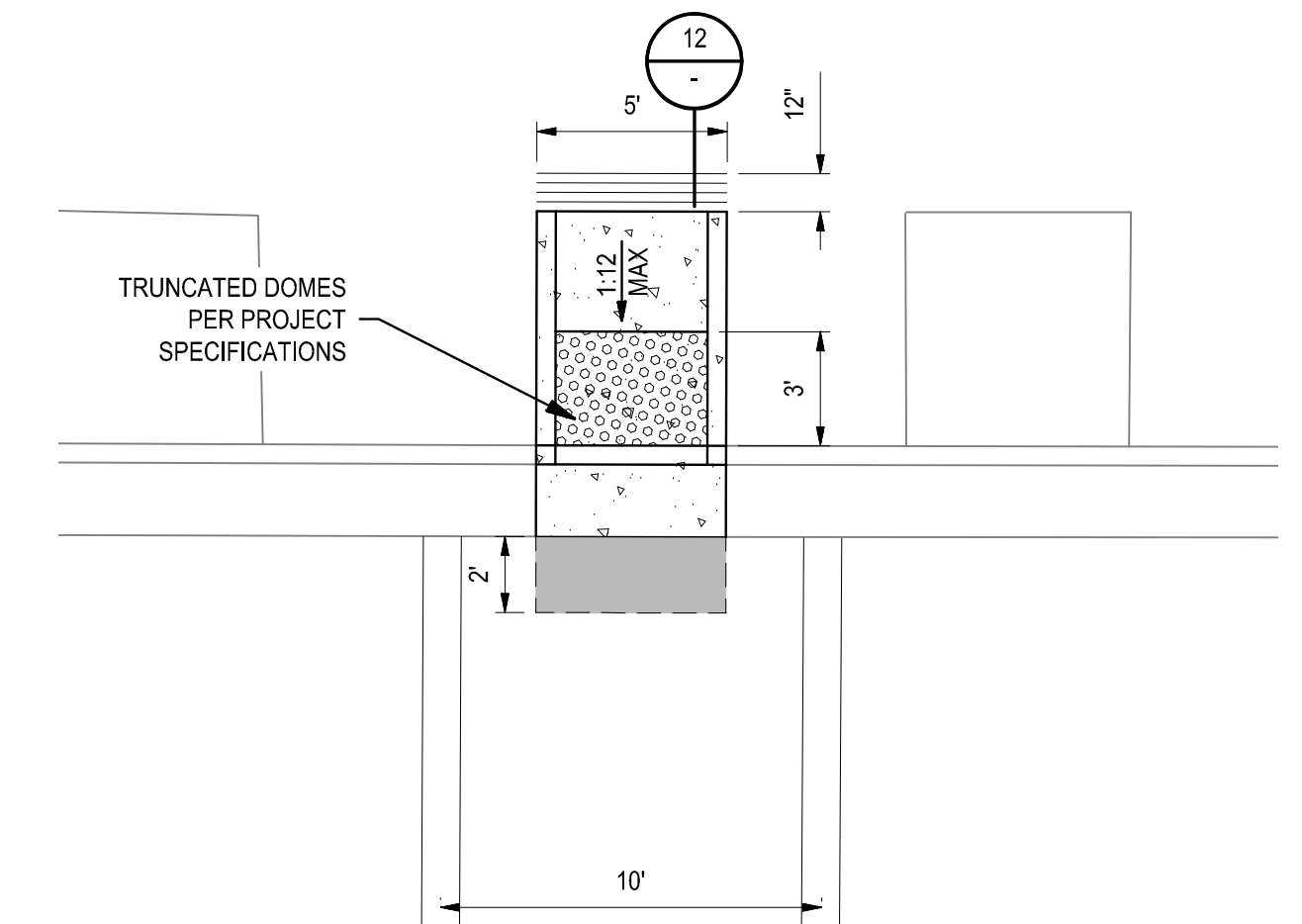
2 VEHICLE CONCRETE PAVEMENT (WEST PATH)
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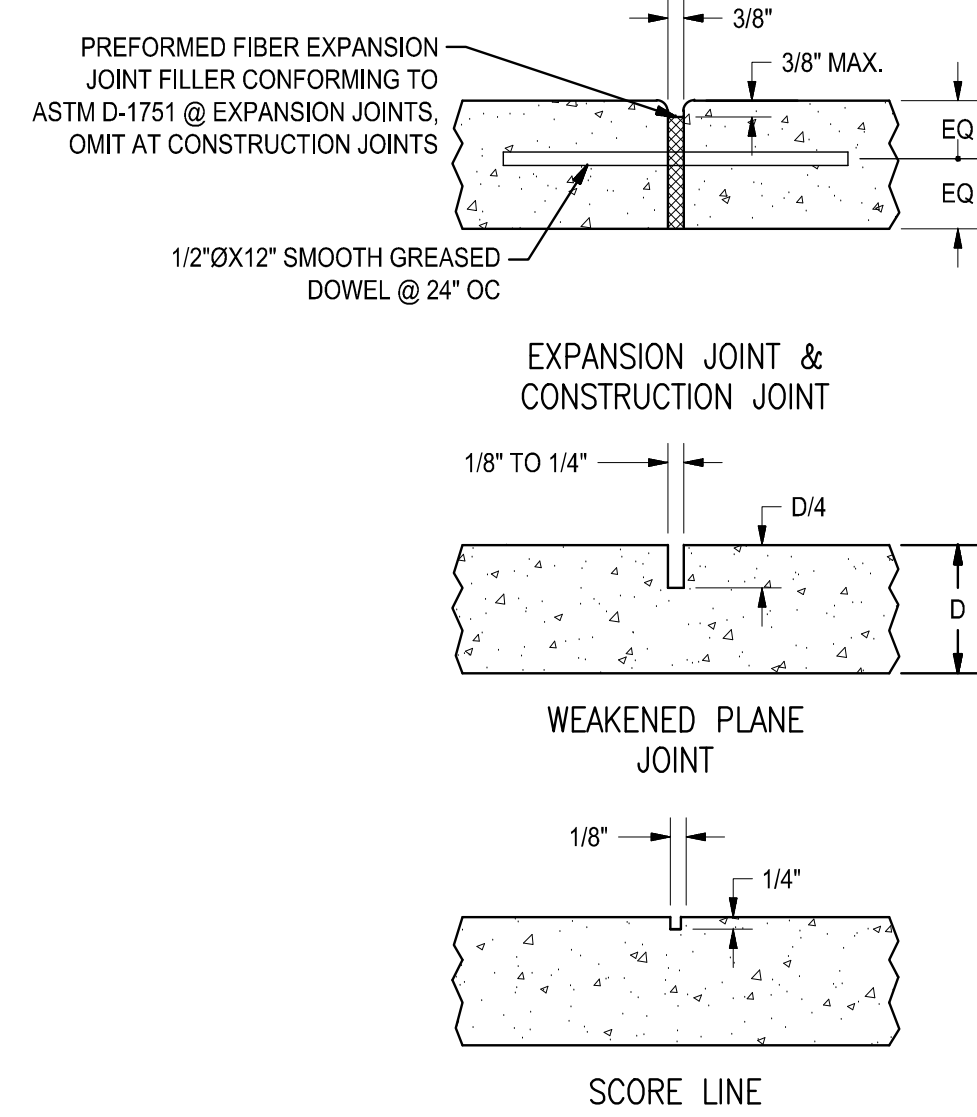
3 PEDESTRIAN CONCRETE PAVING (EAST PATH & STAGE PAD)
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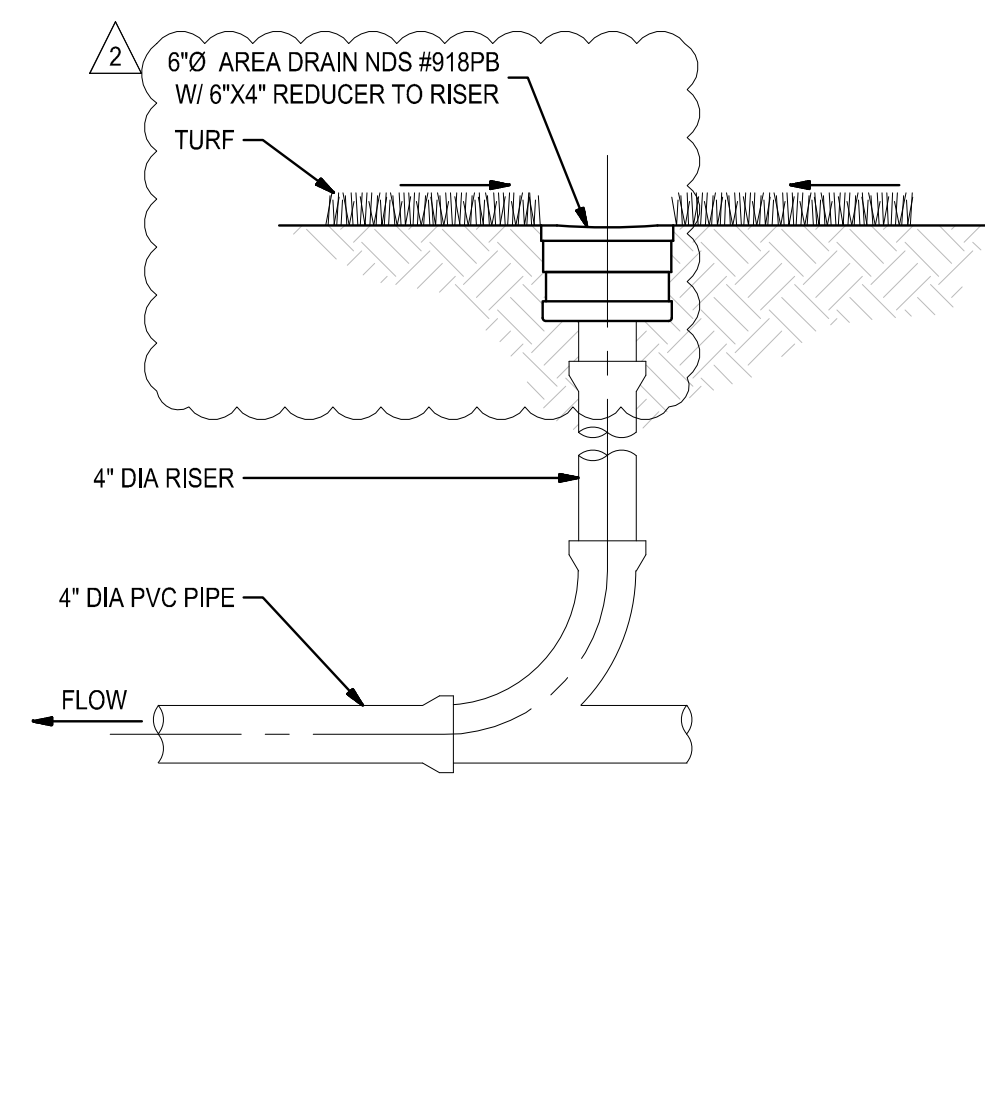
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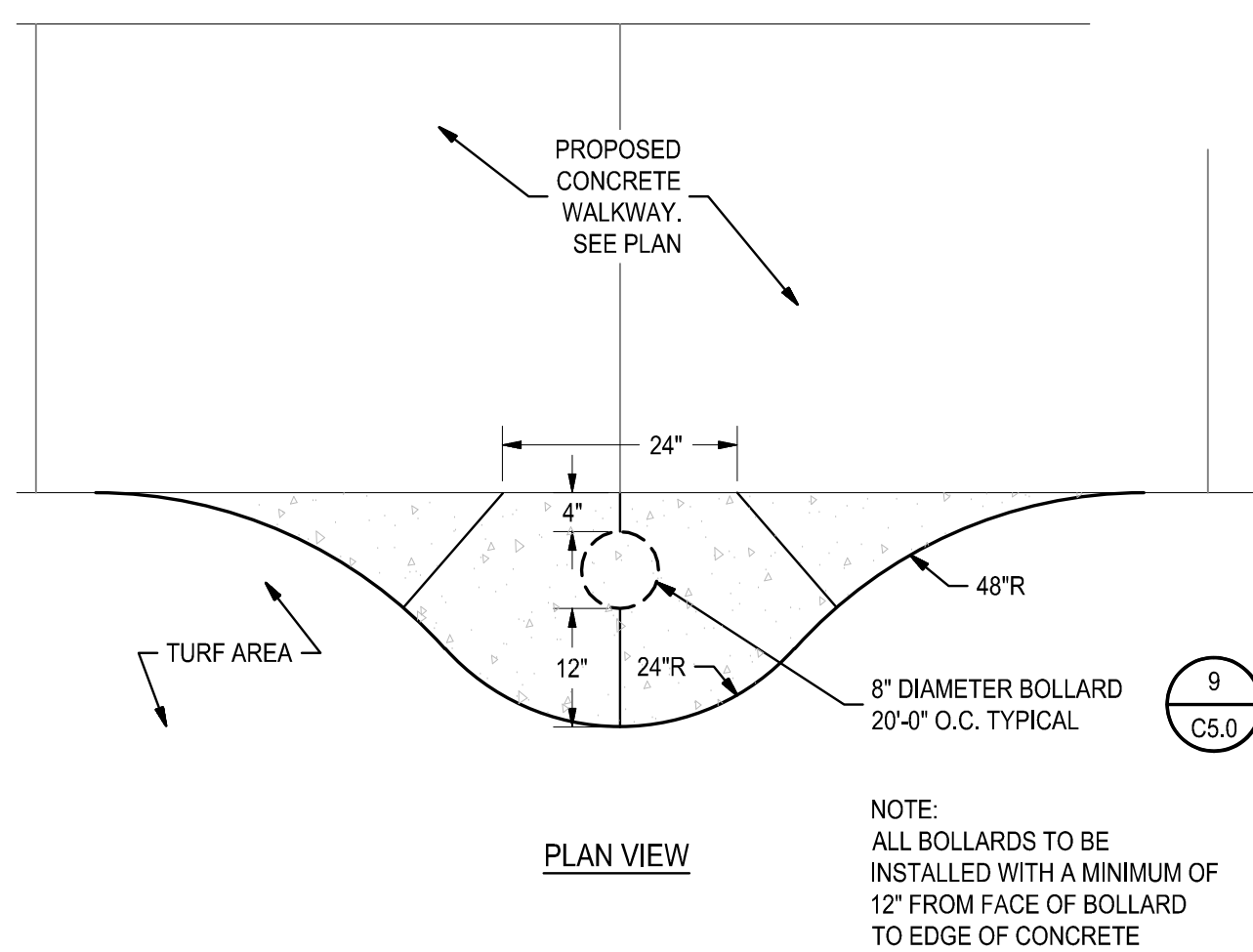
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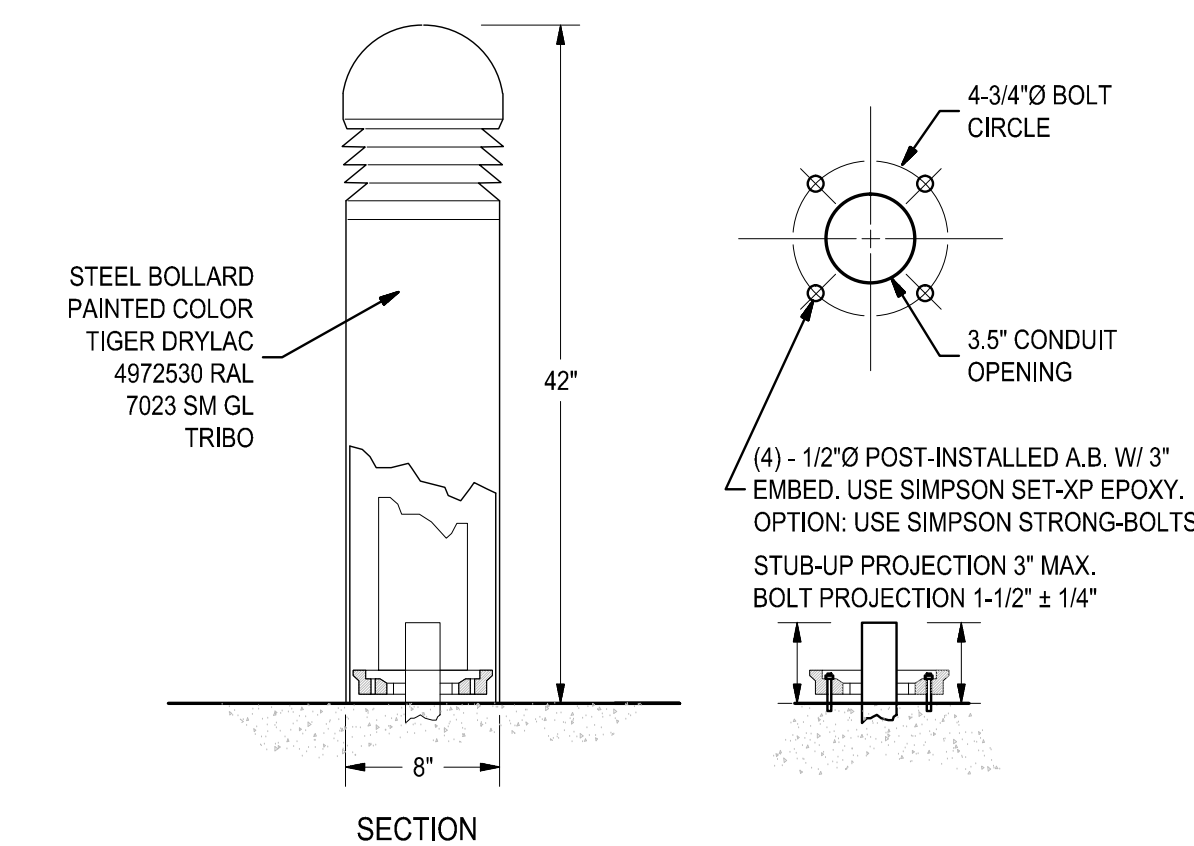
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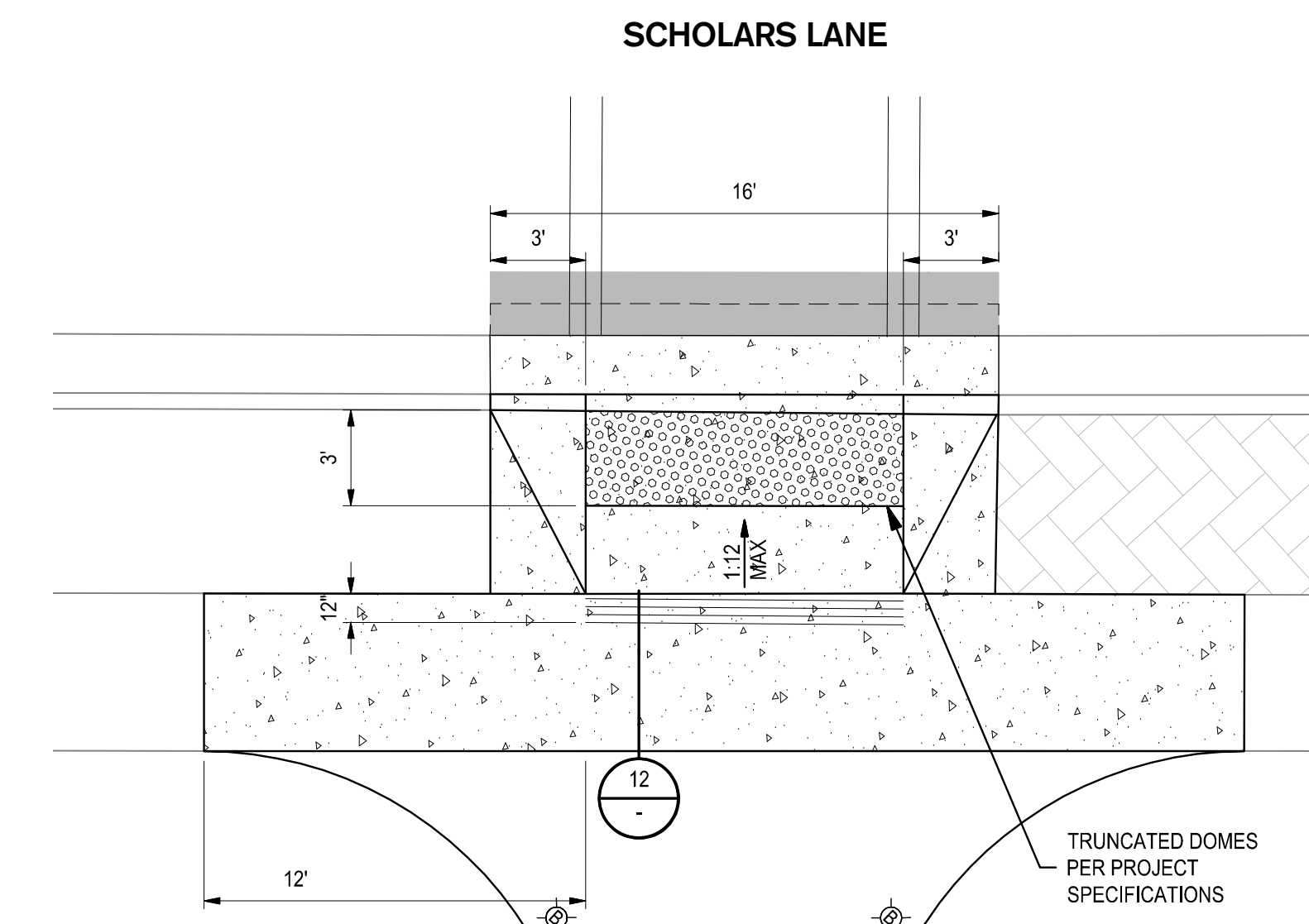
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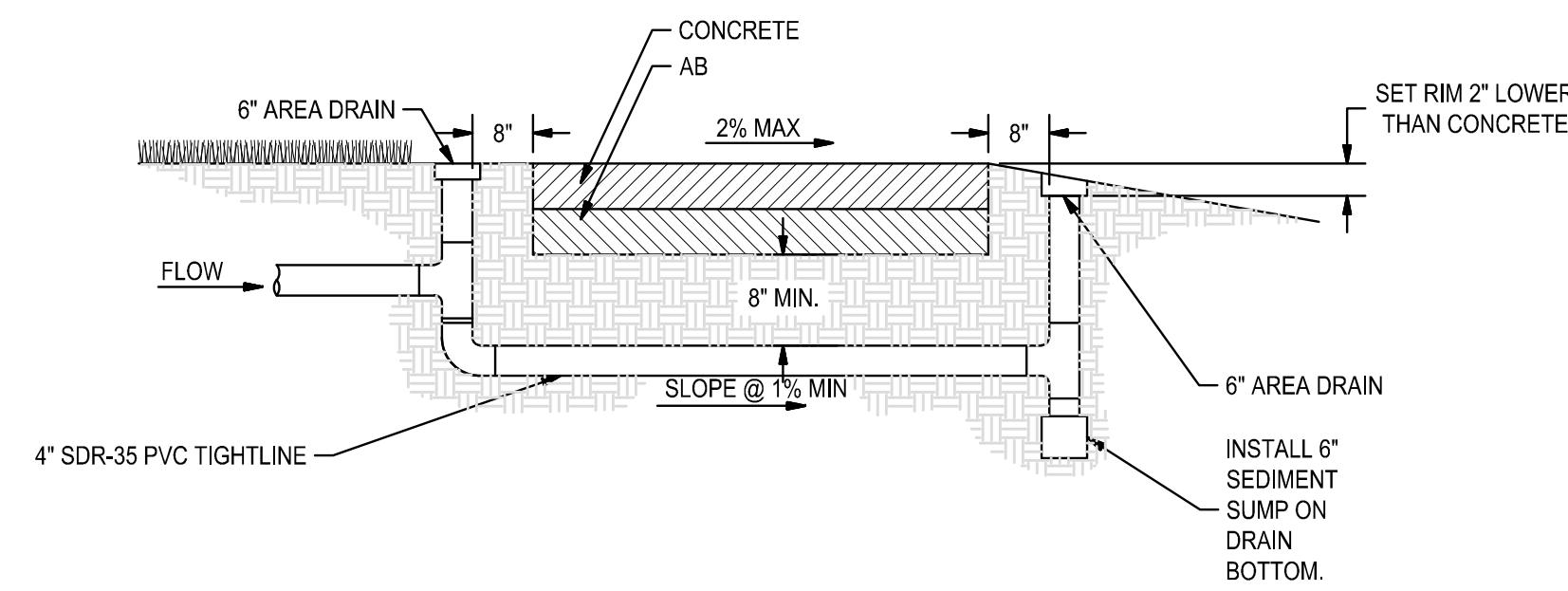
8 BOLLARD CONCRETE FLARE
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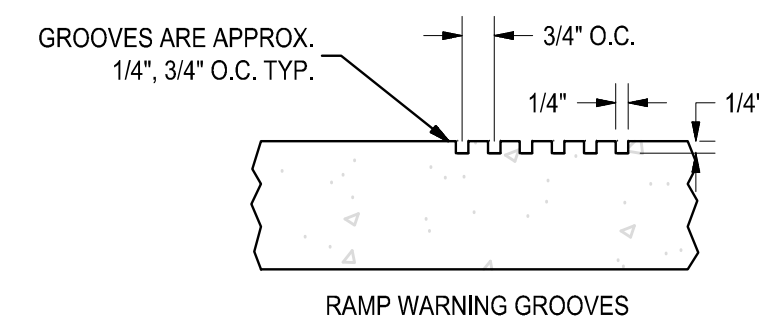
9 BOLLARD
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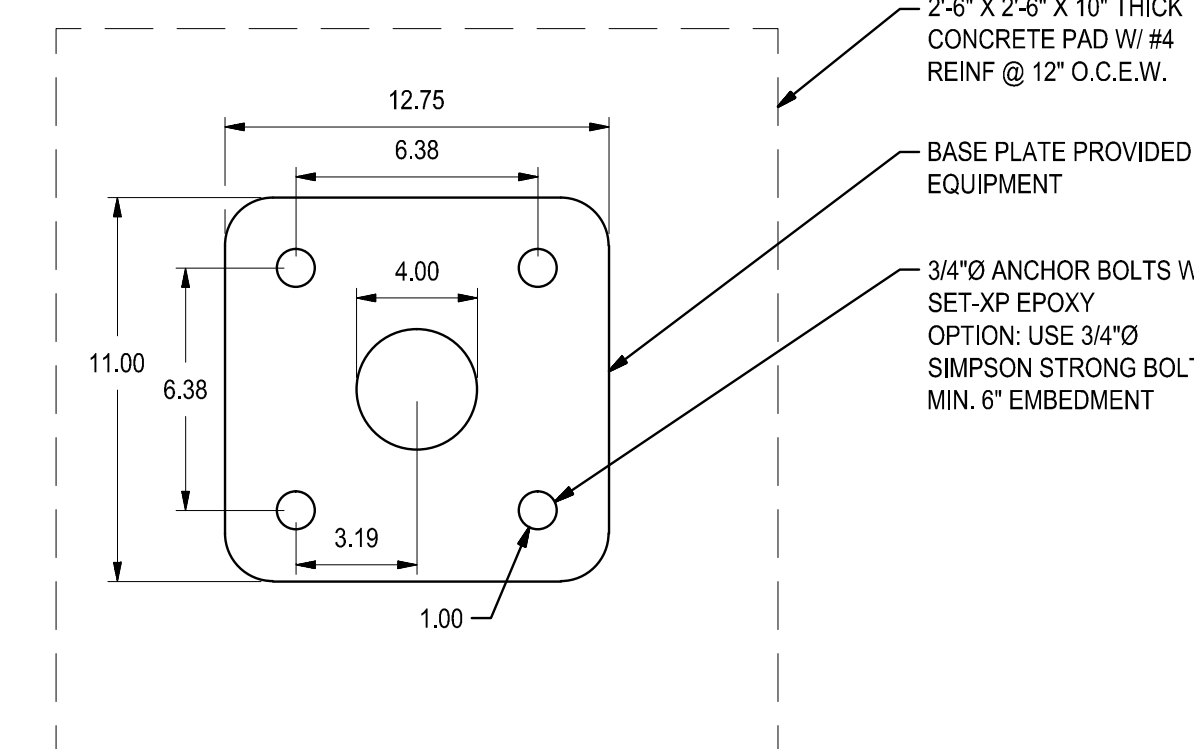
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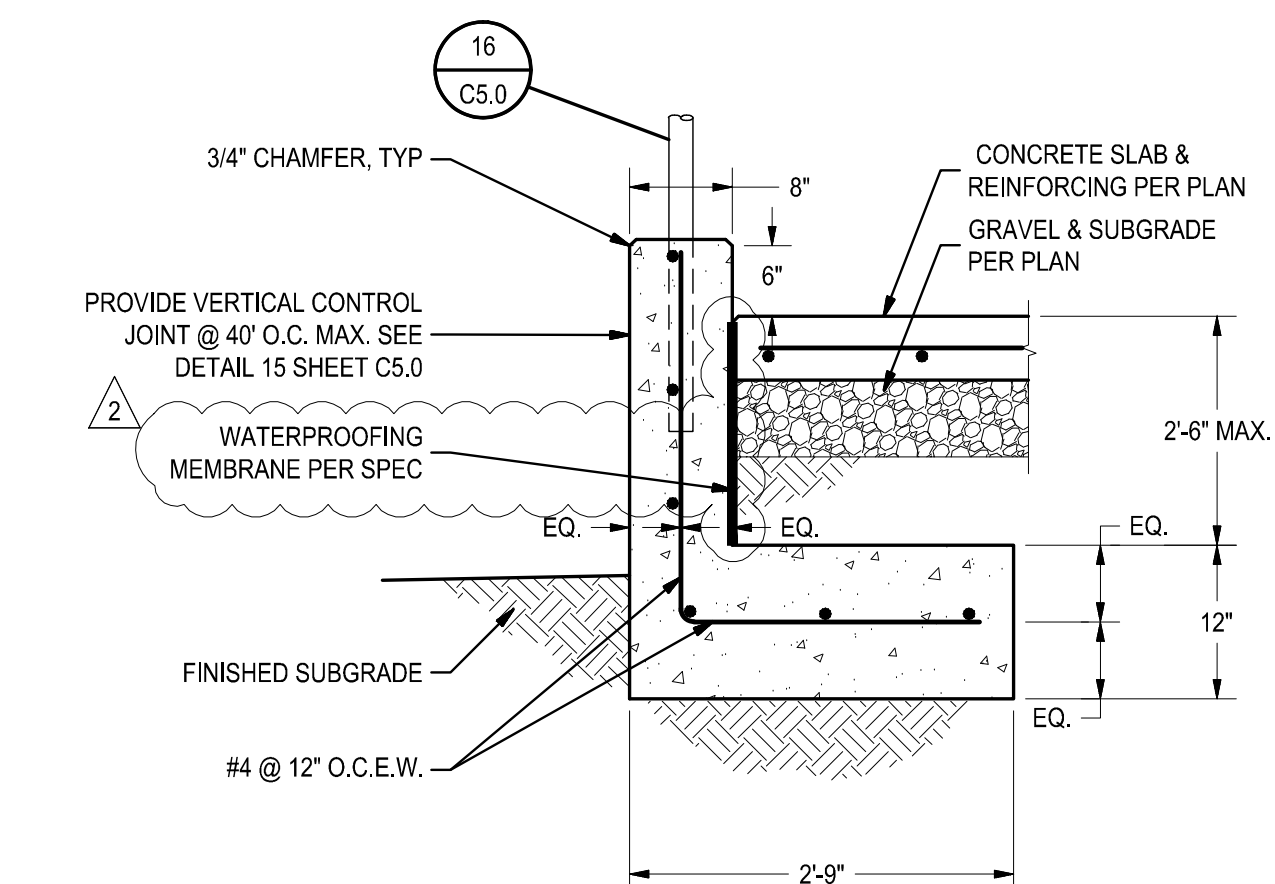
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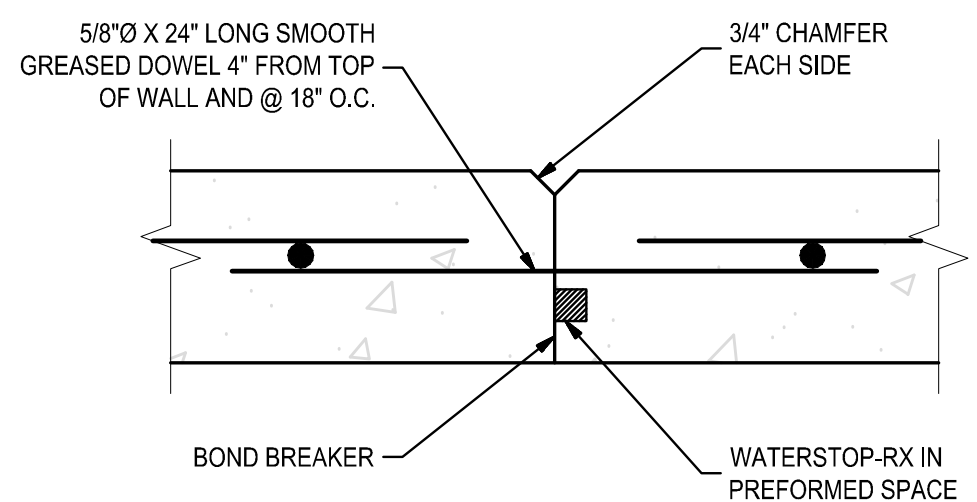
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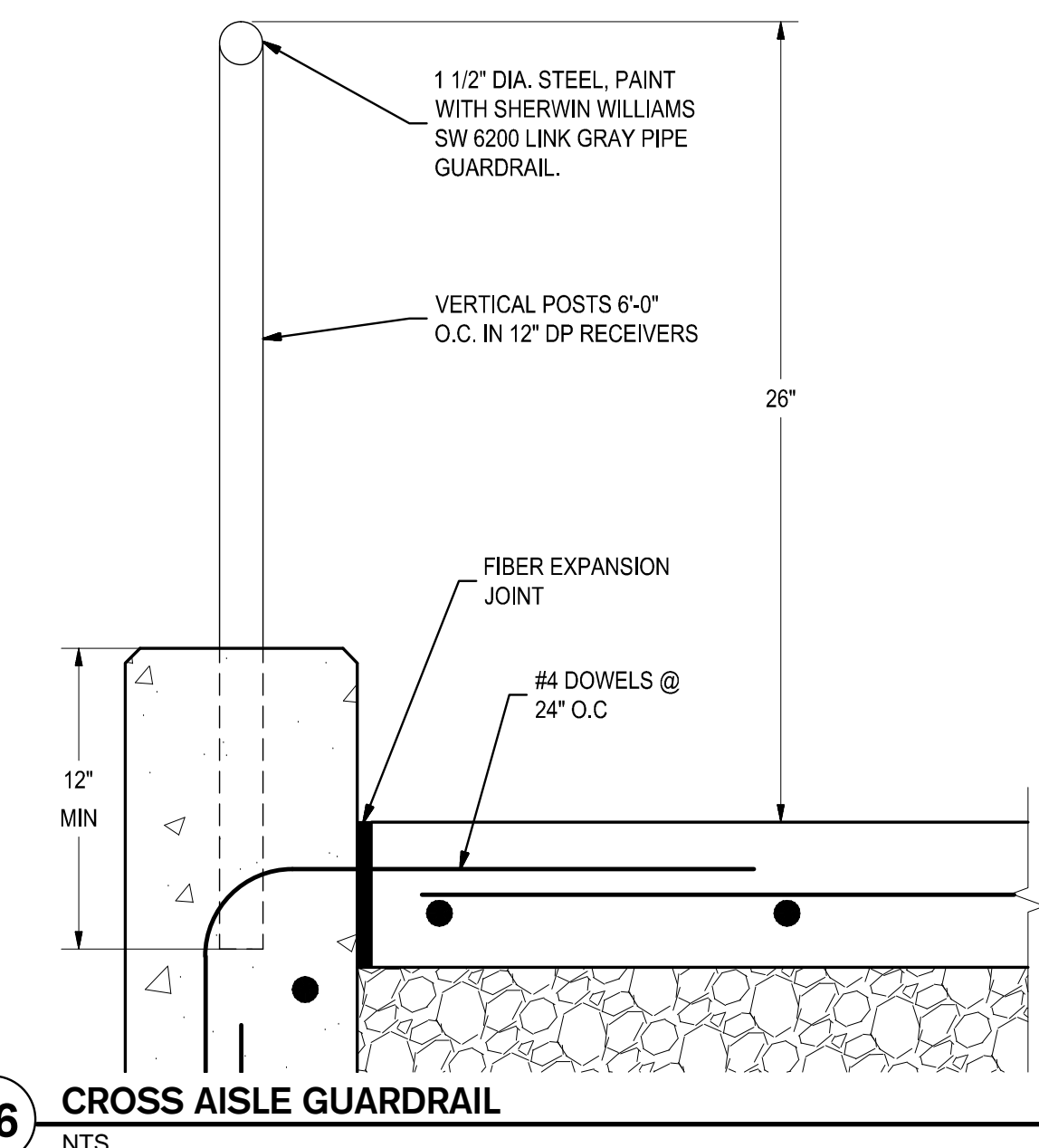
13 BLUE LIGHT MOUNTING
NTS



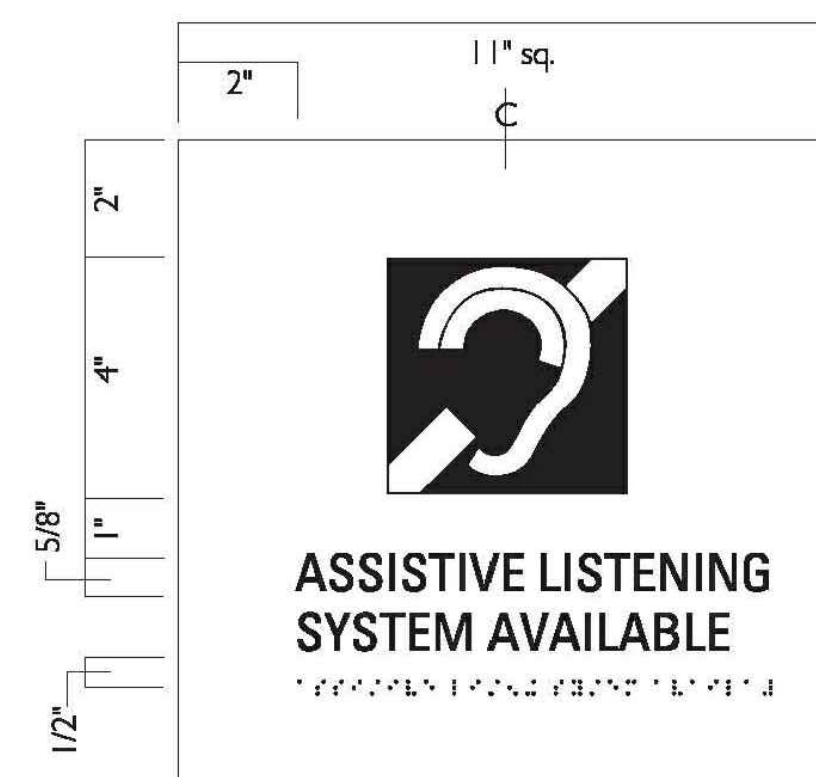
14 RETAINING WALL DETAIL
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15 WALL CONTROL JOINT DETAIL
NTS

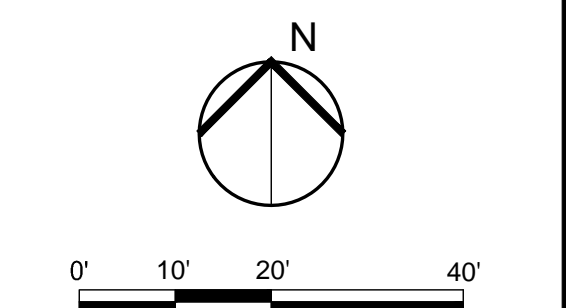


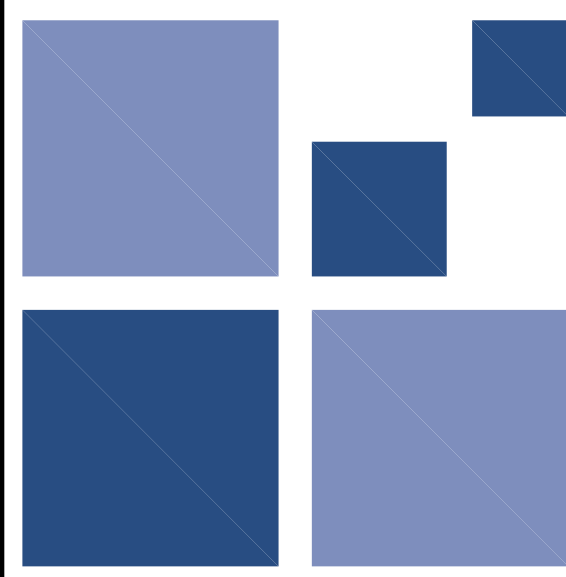
16 CROSS AISLE GUARDRAIL
NTS



17 CBC 11B-14C SIGNAGE
NTS

NOTES:
1. SURFACE PAINT FACE AND EDGES, RAISED COPY TO BE SCREEN PRINTED, BRAILLE 1/2\"/>





ELECTRICAL SHEET INDEX		
No. OF SHEETS	DRAWING No.	DRAWING DESCRIPTIONS
1	E0.1	ELECTRICAL SHEET INDEX, SYMBOL LIST, ABBREVIATIONS, LUMINAIRE SCHEDULE, AND UNDERGROUND DIGGING CAUTION
2	E1.1	PARTIAL SITE PLAN - ELECTRICAL
3	E1.2	PARTIAL ENLARGED SITE PLAN - ELECTRICAL
4	E2.1	PARTIAL ONE LINE POWER DIAGRAM, PANEL SCHEDULES, LOAD CALCULATION, AND DETAILS
5	T-24	TITLE 24 - OUTDOOR LIGHTING COMPLIANCE FORMS

LUMINAIRE SCHEDULE						
TYPE	MANUFACTURER	VOLTAGE	LAMPS (IN CROSS SECTION)		MOUNTING	REMARK NOTE No.
			QTY	TYPE		
A	GARCO BRN8342-DR-CNW-180 277-OC-RAL 7023 TALK A PHONE	277 VOLT 42" BOLLARD W/ DEMAND RESPONSE, 29 TOTAL	--	22W LED	TENON	① ②
B	WEBS-MT/R	120 VOLT 10' EMERGENCY PHONE TOWER, 1 TOTAL	--	LED	TOWER	③
C	BEGA 7089LED	277 VOLT 12" ROUND SURFACE PATHWAY LT, 10 TOTAL	--	9.3W LED	GROUND	

LUMINAIRE SCHEDULE REMARK NOTES:

① COLOR INFORMATION: MANUFACTURER: TIGER DRYLAC
 DRYLAC: 49/72539
 COLOR: RAL 7023 SM GL TRIBO

② SEE CIVIL PLANS FOR BOLLARD MOUNTING DETAIL.

③ REMOVE EXISTING AND DELIVER TO UCM FACILITIES STAFF.

TOWER CONFIGURATION:
 TOWER COLOR - BLUE
 REFLECTIVE LETTERING TEXT - EMERGENCY
 REFLECTIVE LETTERING COLOR - WHITE
 TOWER HEIGHT - STANDARD (10'-3")

PHONE CONFIGURATION: ONE BUTTON: "EMERGENCY" (ETP-400)

GENERAL NOTE:
 REFER TO PLAN FOR LOCATION, QUANTITIES, AND SWITCH FUNCTION.

EGRESS LIGHTING

EXTERIOR EGRESS LIGHTING TO BE PROVIDED BY CENTRAL LIGHTING INVERTER, SEE "1/E1.2".

**** UNDERGROUND DIGGING CAUTION ****

USE EXTREME CAUTION WHEN DIGGING TO AVOID BURIED UTILITY CABLES, CONDUITS, AND PIPING. CALL "UNDERGROUND SERVICE ALERT" (U.S.A.).

1-800-642-2444

TWO WORKING DAYS BEFORE DIGGING TO VERIFY UNDERGROUND UTILITIES.

ABBREVIATIONS			
A	AMPERES	(N)	NEW
AC	ALTERNATING CURRENT	NA	NOT AVAILABLE, NOT APPLICABLE
A.F.F.	ABOVE FINISHED FLOOR	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
A.I.C.	AMPERE INTERRUPTING CAPACITY	NL	NIGHT LIGHT
AMP	AMPERE	OC	ON CENTER
AWG	AMERICAN WIRE GAUGE	PFB	PROVISIONS FOR FUTURE CIRCUIT BREAKER
BKR	BREAKER	PH	PHASE
C	CONDUIT	PVC	POLYVINYL CHLORIDE
C.B.	CIRCUIT BREAKER	(R)	REMOVE
CKT	CIRCUIT	(RE)	RELOCATE EXISTING
C.O.	CONDUIT ONLY, WITH PULL WIRE	RCPT.	RECEPTACLE
(E)	EXISTING	S.F.	SQUARE FOOT
EL	EVENING LIGHT	S.M.S	SHEET METAL SCREW
EM	EMERGENCY	SQ.	SQUARE
(ER)	EXISTING RELOCATED	SPDT	SINGLE POLE, DOUBLE THROW
EMT	ELECTRICAL METALLIC CONDUIT	SPST	SINGLE POLE, SINGLE THROW
(F)	FUTURE	S.S.	STAINLESS STEEL
F.C.	FOOTCANDLES	SWBD	SWITCHBOARD
GA.	GAUGE	SYS	SYSTEM
GND	GROUND	THW	INSULATED STRAND WIRE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	THHN	NYLON JACKETED WIRE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	TYP.	TYPICAL
HZ.	HERTZ (CYCLES/SEC)	UG	UNDERGROUND
IMC	INTERMEDIATE METAL CONDUIT	UGPS	UNDERGROUND PULL SECTION
Isc	SHORT CIRCUIT AMPERES	UL	UNDERWRITERS LABORATORY
ISO	ISOLATED	V	VOLT
K	THOUSAND	VA	VOLT-AMPERES
KV	KILO VOLT	W	WIRE, WATT
KVA	KILO VOLT AMPERE	WP	WEATHER PROTECTED
KW	KILO WATT	XFMR	TRANSFORMER
KWH	KILO WATT HOUR	XHHW	CROSS-LINKED POLYETHYLENE WIRE INSULATED
LV	LOW VOLTAGE	Y	WYE
MAX.	MAXIMUM		
MIN.	MINIMUM		
N	NEUTRAL		

ELECTRICAL SYMBOL LIST	
	BOLLARD LUMINAIRE, WITH BASE
	12" ROUND GROUND LUMINAIRE
	LUMINAIRE DESIGNATION WITH LAMP QUANTITY AND WATTAGE. SEE LUMINAIRE SCHEDULE.
	JUNCTION BOX - SIZE AS REQUIRED BY CODE
	DUPLEX CONVENIENCE OUTLET - NEMA 5-20R *18" A.F.F. TYPICAL FOR ALL CONVENIENCE OUTLETS, UNLESS NOTED OTHERWISE (LETTER "X" SHOWN ADJACENT TO OUTLET DESIGNATES MOUNTED HORIZONTALLY ABOVE COUNTER).
	QUADPLEX CONVENIENCE OUTLET - NEMA 5-20R SPECIAL RECEPTACLE AS SHOWN ON PLANS
	CONDUIT RUN CONCEALED IN CEILINGS OR WALLS. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" CONDUIT. TYPICAL FOR ALL CONDUITS.
	FLEXIBLE CONDUIT CONCEALED. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" MINIMUM DIAMETER CONDUIT.
	CONDUIT RUN UNDERFLOOR OR UNDERGROUND MINIMUM 1" DIAMETER.
	CONDUIT HOMERUN TO PANELBOARD, SWITCHBOARD OR TERMINAL CABINET
	CONDUIT TURNED AND RAISED UP
	CONDUIT TURNED AND DROPPED DOWN Revise Light Fixture Addendum 2
	CONDUIT WITH CAP
	CONDUIT STUB WITH INSULATED BUSHING
	EXISTING CONDUIT RUN CONCEALED IN CEILINGS OR WALLS. NUMBER OF HASH MARKS DENOTES QUANTITY OF EXISTING WIRES. CURVED HASH MARK DENOTES QUANTITY OF EXISTING GROUND WIRES.
	EXISTING CONDUIT AND WIRING
	EXISTING CONDUIT TO BE REMOVED OR ABANDONED, REMOVE WIRES. COORDINATE WITH OWNER.
	PANELBOARD - SURFACE MOUNTED
	PANELBOARD - FLUSH MOUNTED
	EXISTING PANELBOARD - SURFACE MOUNTED
	EXISTING PANELBOARD - FLUSH MOUNTED
	TERMINAL CABINET
	SWITCHBOARD, DISTRIBUTION PANEL, OR MOTOR CONTROL CENTER
	DRAWING SHEET NUMBERED NOTE DESIGNATION - APPLIES TO NUMBERED NOTE ON SAME SHEET
	DRAWING PLAN OR DETAIL DESIGNATION - "1" OR "A" DENOTES PLAN OR DETAIL NUMBER, "E-1" DENOTES SHEET NUMBER

SYMBOL LIST NOTES:

- EXISTING ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE SHOWN THE SAME AS NEW, EXCEPT LIGHTLY AND ACCOMPANIED BY (E). SUCH ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE TO REMAIN AS IS, UNLESS OTHERWISE NOTED ON PLAN OR SPECIFICATION.
- VERIFY ON SITE THAT ALL PANELBOARDS HAVE MINIMUM WORKING SPACES PER CODE AND THAT THE DEDICATED PANELBOARD SPACES ARE CLEAR OF ALL DUCTS, PIPING AND EQUIPMENT FOREIGN TO THE PANEL BOARDS. NOTIFY THE ENGINEER FOR CORRECTIVE ACTION IN THE EVENT THAT FOREIGN OBJECTS IMPEDE THE DEDICATED PANELBOARD AREAS.
- WHERE CONDUIT STUB IS INDICATED, PROVIDE CONDUIT WITH BUSHING AT THE END OF CONDUIT AND PULL ROPE INTO ACCESSIBLE CEILING AREA.



UNAUTHORIZED CHANGES & USES: M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc. Aug 12, 13 - 12:32pm