

305



**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

**FROM:** Economic Development Agency

**SUBMITTAL DATE:**  
April 6, 2010

**SUBJECT:** Larry D. Smith Correctional Facility Expansion No. 3 - Change Order No. 14

**RECOMMENDED MOTION:** That the Board of Supervisors:

1. Authorize the payment of supplemental sewer fees for the City of Banning in the amount of \$1,316,636 for sewer connection fees;
2. Ratify change order No.14, line item 1 in the amount of \$194,698 to construct security ceiling modifications;
3. Ratify change order No. 14, line item 2 in the amount of \$243,585 to install a radio antenna system;
4. Authorize the Assistant Executive Officer/EDA or designee to execute the change order on behalf of the county; and

(Commences on Page 2)

Reviewed by  
CP TEAM  
*Christopher Hans*  
Christopher Hans

*Robert Field*  
Robert Field  
Assistant County Executive Officer/EDA

<b>FINANCIAL DATA</b>	<b>Current F.Y. Total Cost:</b>	\$ 1,754,919	<b>In Current Year Budget:</b>	Yes
	<b>Current F.Y. Net County Cost:</b>	\$ 1,754,919	<b>Budget Adjustment:</b>	No
	<b>Annual Net County Cost:</b>	\$ 0	<b>For Fiscal Year:</b>	09/10

**SOURCE OF FUNDS:** 1985 County of Riverside Projects bond issue (85 ACES) accumulated interest earnings.

<b>Positions To Be Deleted Per A-30</b>	<input type="checkbox"/>
<b>Requires 4/5 Vote</b>	<input checked="" type="checkbox"/>

**C.E.O. RECOMMENDATION:**

APPROVE

BY: *Jennifer L. Sargent*  
Jennifer L. Sargent

**County Executive Office Signature**

FORM APPROVED COUNTY COUNSEL  
BY: *Marsha L. Victor* 4/9/10  
MARSHA L. VICTOR DATE

Dep't Recomm.:  Consent  Policy

Per Exec. Ofc.:  Consent  Policy

Prev. Agn. Ref.: 3.19, 1/5/10; 3.21, 3/31/09 | District: 5 | Agenda Number:

ATTACHMENTS FILED  
WITH THE CLERK OF THE BOARD

3.37

**RECOMMENDED MOTION:** (Continued)

5. Approve a \$1,754,919 increase to the project budget.
6. Allocate the 1985 ACES bond issue accumulated interest earnings of \$2 million for the Smiths Correctional Facility project.

**BACKGROUND:**

On February 5, 2008 the Board of Supervisors approved the contract between Bernards Bros., Inc., and the County to construct a 582 bed expansion of the Larry D. Smith Correctional Facility in the City of Banning.

Before construction began on phase 3, an application was submitted to the City of Banning for sewer hookups. The city notified the county that sewer discharge fees for phases 1 and 2 had never been metered or paid. The city provided an estimate, in the amount of \$2,231,586, for all three phases. Based on projected use rates, the city and county determined that \$916,594 of the total amount would be attributable to phase 3 (\$1,316,636 attributable to phases 1 and 2) and would be paid immediately, with the balance due determined by actual metered flow rates.

Also, in Housing Unit No. 16, three dayrooms were designed for mental health inmates. Safety cages were planned with inmates' safety in mind at the stairway leading to the upper tier and at the upper tier railing. During construction, it was discovered that the ceilings above the stairway cages were not secure, posing safety and security risks. Housing Unit 16 ceiling modifications are required to prevent injury or escape.

Finally, communication between Sheriff's staff is critical; however, radio communication in the new construction is poor, due to the number of concrete walls and steel construction. The department proposes to install a radio antenna system to improve radio communication.

Change Order No. 14 exceeds \$150,000, so Board approval is required. The change order will compensate Bernards Bros., Inc., for security ceiling modifications and installation of a radio antenna system, in the amounts of \$194,698 and \$243,585, respectively. The total amount for work essential to make the facility secure and provide reliable communication throughout the new expansion is not to exceed \$438,283.

An increase in the project budget, in the amount of \$1,754,919, is needed to pay greater than anticipated sewer connection fees (\$916,594) and change order No. 14 (\$438,283).

Economic Development Agency  
Larry D. Smith Correctional Facility Expansion No. 3  
April 6, 2010  
Page 3

The approximate allocation of the budget increase is as follows:

Original Project Budget	\$78,867,500
Sewer Connection Fees	\$1,316,636
Additional Construction Fees	<u>\$438,283</u>
<b>Revised Total Project Budget:</b>	<b>\$80,622,419</b>

**Financial Impact:**

Additional funding is necessary to complete the Larry D. Smith Correctional Facility Expansion No. 3, therefore, '85 ACES interest earnings are requested.



# City of Banning

## Public Works Department

March 10, 2010

Certified Mail#  
7000 0520 0025 5839 0778

County of Riverside  
Economic Development Agency  
Tim Miller  
3403 Tenth Street, Suite 300  
Riverside, CA 92501

Subject: Larry D. Smith Correctional Facility Sewer Fees

Dear Mr. Miller,

The City is in receipt of your letter dated November 2, 2009 regarding Water and Sewer Fees for the Larry D. Smith Correctional Facility Industrial Wastewater Permit. To summarize the circumstances, Water and Sewer Fees for Phase 3 of the said facility were calculated by the City of Banning Water/Wastewater Department as described in the attached memorandum dated May 12, 2008.

In regard to the Water Fees, both parties agree that the County will pay the sum of \$233,593.60 to the City of Banning for water fees associated with the Phase 3 expansion of the facility. Payment for this portion of the fees was received by the City on April 15, 2009 in its entirety.

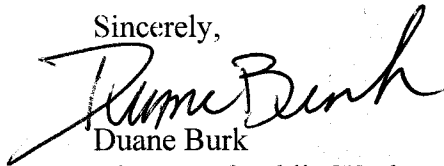
In regard to the Sewer Fees, the City's calculation for Phase 3 amounts to \$2,231,586.00. Both parties agree that the County will immediately pay a portion of this fee in the amount of \$916,594.00. Once the actual sewer flow can be established for the facility, the County will pay the remaining balance owed based on the actual flow.

At this time, both parties have reached an agreement on determining future sewer fees. As part of the Phase 3 construction, a sampling manhole with a flow meter will be installed. This installed meter will capture sewer flow from the expanded facility only. Once the expanded facility is fully operational, the City of Banning in coordination with the County of Riverside will take actual sewer flow measurements to determine final costs.

Further, our records indicate sewer discharge fees for Phase 1 and Phase 2 of the Larry D. Smith Facility, that were previously constructed, were not collected by the City of Banning. Consequently, during the construction of Phase 3, the County of Riverside will set a second sewer flow meter downstream of the entire Larry D. Smith Correctional Facility. Measurements of the actual sewage flow will be taken at the same time the Phase 3 measurements are taken. The Phase 3 flow rate will be deducted from the facilities total flow rate in order to determine the amount owed by the County to the City for sewer discharge fees related to this portion of the project.

Please accept this as the City's request for payment. If you have any question please contact me at (951) 922-3130.

Sincerely,

A handwritten signature in black ink, appearing to read "Duane Burk". The signature is written in a cursive style with a large initial "D".

Duane Burk

Director of Public Works

CC: Kirby Warner, Interim Finance Director  
Art Vela, Assistant Civil Engineer  
Jerome Bowen, Engineering Services Assistant

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# CITY OF BANNING

## MEMORANDUM



GT 5/12/08

### LARRY D. SMITH COORECTIONAL FACILITY PHASE III EXPANSION

	<u>Inmates</u>	<u>Staff</u>	<u>Total</u>
Existing	936	289	1,225
New	582	266	848
Total	1,518	555	2,073

$\frac{848 \text{ New}}{1225 \text{ Total Existing}} = 69.2\% \text{ Increase Population of Expansion}$

#### Water Fees

##### Water Connection Fees

New 6" Water Meter = 32.3 EDU

32.3 EDU x \$7,232.00 per EDU = \$233,593.60

Water Frontage Fee            Not Required (constructing a 10" water line)

6" water meter installation costs at Time and Materials during construction of water line.

#### Sewer Fees

##### Sewer Connection Fees

Present Discharge (Sept. 07) is 1,156.95 EDU

Future Discharge 1,157 EDU x 69.2% = 801 EDU

Our Mission as a City is to provide citizens a safe, pleasant and prosperous community in which to live, work and play. We will achieve this in a cost effective, citizen friendly and open manner.

801 EDU x \$2,786.00 per EDU = \$2,231, 586.00

A Sampling Manhole with flow meter will be required as part of the construction. This will save user fees in the future.

Water Fees	\$ 233,593.60
Sewer Fees	\$2,231,586.00
<b>Total</b>	<b>\$2,465,179.60</b>

Other Costs:           6" water meter Installation  
                               10" water line Installation  
                               Sampling Manhole with flow meter

Sewer EDU Formula:

$$\# \text{ EDUs} = \frac{Q}{225 \text{ gpp/day}} \left[ 0.50 + 0.25 \frac{\text{BOD}}{200 \text{ mg/l}} + 0.25 \frac{\text{SS}}{200 \text{ mg/l}} \right]$$

Q = Monthly Flows from Prison   320 mg/l BOD from Prison   290 mg/l SS from Prison

$$\# \text{ EDUs} = \frac{Q}{225 \text{ gpp/day}} \left[ 0.50 + 0.25 \frac{320}{200 \text{ mg/l}} + 0.25 \frac{290}{200 \text{ mg/l}} \right]$$

$$\# \text{ EDUs} = \frac{Q}{225 \text{ gpp/day}} [0.50 + 0.40 + 0.36] = \frac{Q}{225 \text{ gpp/day}} [1.26]$$

Monthly Water Consumption

Road Camp Meters

<u>Month</u>	<u>(Cu. Ft.)</u>			<u>Sum</u>	
	<u>8"</u>	<u>2"</u>	<u>1"</u>		
Sept	755,000	51,900	21,700	828,600	x 7.48 g/cu ft = 6,197,928 gal

Sept   EDUs =  $\frac{6,197,928 \text{ gal}}{225 \text{ gpp} \times 30 \text{ days}} [1.26] = 1,156.95 \text{ EDU}$



**PUBLIC WORKS DEPARTMENT**  
**INTEROFFICE CASH RECEIPT**  
 99 E. RAMSEY ST., P.O. BOX 998  
 BANNING, CA 92220-0998  
 PHONE: (909) 922-3130 • FAX: (909) 922-3141

NO.10467

PURPOSE		ACCOUNT NO.	AMOUNT
PUBLIC WORKS PERMIT NO.:	U2	001-30-00-311-16-16	\$ _____
OVERLOAD PERMIT NO.:	U2	001-30-00-311-16-16	\$ _____
EXCAVATION PERMIT NO.:	U4	001-30-00-311-16-18	\$ _____
ANNUAL EXCAVATION PERMIT NO.:	U4	001-30-00-311-16-18	\$ _____
OVERTIME INSPECTION	U2	001-30-00-311-16-16	\$ _____
RE-INSPECTION	U2	001-30-00-311-16-16	\$ _____
PENALTY FOR WORK WITHOUT PERMIT	U2	001-30-00-311-16-16	\$ _____
TENTATIVE TRACT MAP REVIEW NO.:	UF	001-30-00-351-35-58	\$ _____
FINAL TRACT MAP & IMPROVEMENT PLAN CHECKING/ SUBDIVISION INSPECTION TRACT NO.:	UB	001-30-00-351-35-55	\$ _____
CONSULTANT PLAN CHECK REVIEW TRACT NO.:	UD	001-30-00-351-35-61	\$ _____
MISC. IMPROVEMENT PLAN CHECKING	UA	001-30-00-351-35-54	\$ _____
TENTATIVE PARCEL MAP REVIEW NO.:	UE	001-30-00-351-35-57	\$ _____
FINAL PARCEL MAP PLAN CHECK NO.:	UE	001-30-00-351-35-57	\$ _____
RV/TRAILER/MOBILE HOME PARK REVIEW	UC	001-30-00-351-35-56	\$ _____
RECORD OF SURVEY/LOT LINE ADJUSTMENT REVIEW	U5	001-30-00-311-35-47	\$ _____
TEMPORARY WATER JUMPER FEE	JP	660-63-00-356-38-12	\$ _____
WATER METER	W1	660-63-00-366-44-03	\$ _____
WATER CONNECTION FEE	W6	661-63-00-366-44-04	\$ _____
WATER FRONTAGE FEE	WF	661-63-00-366-44-20	\$ _____
SEWER CONNECTION FEE	W9	681-80-00-366-44-04	\$ <u>916,594.<sup>00</sup></u>
SEWER FRONTAGE FEE	SF	681-80-00-366-44-20	\$ _____
PLAN STORAGE AND MICROFILM	U7	001-30-00-351-35-50	\$ _____
WILL SERVE/SERVICE LETTER	U6	001-30-00-351-35-48	\$ _____
ENCROACHMENT PERMIT APPLICATION	U1	001-30-00-311-16-15	\$ _____
SITE PLAN REVIEW	U3	001-30-00-311-16-17	\$ _____
STREET/ALLEY EASEMENT ABANDONMENT REVIEW	U8	001-30-00-351-35-52	\$ _____
R/W OR DEED PROCESSING	U9	001-30-00-351-35-53	\$ _____
MAPS/XEROX COPIES/SPECIFICATIONS:	UH	001-30-00-351-35-60	\$ _____
MISCELLANEOUS ENGINEERING FEES	UG	001-30-00-351-35-59	\$ _____
MISCELLANEOUS/DEPOSIT	MP		\$ _____

TOTAL: \$ 916,594.<sup>00</sup>

FOR: PHASE III LARRY D. SMITH CORRECTIONAL FACILITY  
SEWER FEES AS REQUESTED FOR THE CITY OF BANNING LETTER DATED  
MARCH 10, 2010

Payee: COUNTY OF RIVERSIDE  
 (Name/Company)

Address: 3403 TENTH STREET, SUITE 300  
RIVERSIDE, CA 92501

Distribution: Eng./White  
 Address Folder/Canary  
 Cashier/Pink  
 Payee/Gold

Telephone: ( ) \_\_\_\_\_ Fax: ( ) \_\_\_\_\_

Prepared By: J. BOWEN Date: 3-17-2010  
 Undersigned





April 1, 2009

City of Banning  
Attn: Duane Burke  
Director of Public Works  
99 E. Ramsey St.  
Banning, CA 92220-0998

RE: WATER AND SEWER FEES  
LARRY D. SMITH PHASE 3 EXPANSION

Dear Mr. Burke,

The purpose of this letter is to formalize an understanding reached between the City of Banning and County of Riverside concerning water and sewer fees for the above referenced project.

Water Fees: Both parties agree that the County will pay the sum of \$233,593.60 to the City of Banning for water fees for the project.

Sewer Fees: Both parties agree that the County will pay sewer capacity fees based on the Institutional Resident figure of 0.41 EDU (per person added to the facility as a result of the expansion—inmates and staff). Until actual sewer flow is measured for this project, the County will pay the sum of \$916,594 to the City of Banning for sewer fees for the above project. The calculations for the \$916,594 payment were determined per the data:

	<u>Inmates</u>	<u>Staff</u>	<u>Total</u>
Existing	936	289	1,225
New	<u>582</u>	<u>266</u>	<u>848</u>
Total	1,518	555	2,073

848 (new) X 0.41 EDU/person = 348 EDU increase

348 = 28.4 % EDU increase  
1,225

Sewer Connection Fees

Present Discharge (September 2007) is 1,156.95 EDU

Future Discharge =  $1,157 \times 28.4\% = 329$  EDU

$329 \text{ EDU} \times \$2,786.00 \text{ per EDU} = \$916,594$

**Final Resolution of Sewer Fees:** Since the EDU increase figures used in the above calculations are estimates, the parties have reached the following agreement to determine sewer fees. As part of the construction, a Sampling Manhole with flow meter will be installed (see attached drawing for proposed meter location marked by red star). This proposed meter location will capture actual sewer flow from the expanded facility only. Once the expanded facility is fully operational, the County in coordination with the City of Banning shall take actual sewer flow measurements at the location proposed. If these measurements show an actual discharge of less than 329 EDU, the City of Banning will issue a credit to the County of Riverside for the difference between the two measurements, times the sewer capacity charge of \$2,786 per EDU. If the measurements show an actual discharge of more than 329 EDU, the County of Riverside will pay the City of Banning for the difference between the two measurements, times the sewer capacity charge of \$2,786 per EDU.

Please confirm that this basis of agreement is consistent with the City of Banning's understanding on this matter. If you have any questions or concerns, please contact me at (951) 955-4897.

Sincerely,



Charles Waltman  
Deputy Director  
Design & Construction

Enclosure

Cc: Brian Nakamura, City Manager  
Jim Earhart, Public Utilities Director

COPY

COUNTY OF RIVERSIDE  
ECONOMIC DEVELOPMENT AGENCY

CHANGE ORDER NO. 14

Date: 3/17/2010

Project: Smith Correctional Facility Expansion #3

To Contractor:

Bernards Bros., Inc.  
23461 South Pointe Drive, Suite 300  
Laguna Hills, CA 92653

Project No.: FM08250003738  
Distribution:  
Project Manager Construction Manager  
Contractor Inspector  
Fiscal Architect/Engineer

You are directed to make the following changes. Changes shall include labor, material and equipment; each item to include all charges or indirect arising out of this work:

- 1) Ceiling Modifications at Dayrooms D, E and F at Building 16 per ASI#74R1  
PCO #130 ADD \$ 194,698.00
- 2) 800 MHz Public Safety Radio System (All Buildings) by TriPower  
PCO #138 ADD \$ 243,585.00

The specifications, where pertinent, shall apply to these changes.

This Change Order provides for a time extension of	<u>33</u>	calendar days.
Original Contract Duration (calendar days):	<u>730</u>	
Prior Authorized Time Extension (calendar days):	<u>17</u>	
Revised Construction Duration (calendar days):	<u>780</u>	
Original Contract Completion Date:	<u>2/25/2010</u>	
Revised Contract Completion Date:	<u>4/16/2010</u>	

NOTE: This change order is not effective until approved by the Chair, Board of Supervisors, Assistant County Executive Officer EDA or designee, as indicated.

The undersigned contractor has given careful consideration to the change proposed, including its effect on other work already contracted for, and hereby agrees, if this change order is approved, that he will provide all equipment, furnish all materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment for all costs related in any way thereto the prices shown above.

[Signature] 4/14/10  
Contractor Date

[Signature] 4/20/10  
Assistant County Executive Officer, EDA Date  
or Designee

Original Contract	\$	<u>62,608,000.00</u>
Prior Authorized <input checked="" type="checkbox"/> ADD <input type="checkbox"/> DED	\$	<u>258,635.00</u>
Total Contract Prior to this Change	\$	<u>62,866,635.00</u>

Authorized Changes on this C.O.:  
Addition \$ 438,283.00  
Deduction \$ \_\_\_\_\_

Architect \_\_\_\_\_ Date \_\_\_\_\_

[Signature] 4/15/10  
Project Manager Date

[Signature] 4/15/10  
Pursuant to:

NET: <input checked="" type="checkbox"/> Addition <input type="checkbox"/> Deduction	\$	<u>438,283.00</u>
Amount of Contract Authorized Including this Change Order	\$	<u>63,304,918.00</u>

Board Policy B-11  
 M.O. and Date

FORM APPROVED COUNTY COUNSEL  
BY: [Signature] 6/9/10  
MARSHAL VICTOR DATE



## PROPOSED CHANGE ORDER

To Contractor: Bernard's Bros., Inc. PCO No.: 130  
From: Vanir Construction Management, Inc. Date: January 20, 2010  
Owner: County of Riverside Project No.: 20063738  
Project: Larry D. Smith Correctional Facility Exp. #3 Contract No.:  
Subject: Ceiling Modifications at Dayrooms D, E and F at Building 16 per ASI#74-R1

*Please prepare and submit to the Construction Manager within 10 days an itemized proposal of cost and schedule impact for the following proposed change to the contract:*

**Proposed Change:**

1. A cost has been provide to include all labor, material and equipment necessary to complete the ceiling modifications above the enclosed stairs at Dayrooms D, E and F at Building 16 per Architectural Supplemental Instruction #74-R1.
  - a. Substantial Completion Date has been adjusted to March 31, 2010 for an additional 17 Calendar Days, without general conditions or liquidated damages assessed.
  - b. Contract Completion Date has been adjusted to April 16, 2010 to include compensation for extended general conditions for an additional 16 Calendar Days.

**Attachments:**

Architectural Supplemental Instruction #74-R1 (Modifications for Ceilings Above Stairs at Dayrooms D,E and F for Bldg. 16), Dated January 20, 2010  
Request for Information (RFI) - 529 (ASI#74R1 - Joist Attachment Details), dated 02/01/10  
Request for Information (RFI) - 530 (ASI#74R1 - Fastener Schedule), dated 02/03/10  
Request for Information (RFI) - 531 (ASI#74R1 - Closure Plate), dated 02/03/10  
Request for Information (RFI) - 531R1 (ASI#74R1 - Closure Plate), dated 02/04/10

**To Be Completed By Contractor:**

Proposed Cost: \$ 217,197.00 Requested Time Extension: 33 Calendar Days

Contractor: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature

**To Be Completed Jointly By Vanir CM And Contractor:**

Agreed Cost: \$ 194,698.00 Agreed Time Extension: 33 Calendar Days

Contractor: \_\_\_\_\_ Date: 3-17-10  
Signature

Construction Manager: \_\_\_\_\_ Date: 3-17-10  
Signature

*Signatures on this document do not constitute a change to the Contract or authorization to perform proposed work.*



# CHANGE ORDER REQUEST

COR No. 115-R001

Project: Larry D. Smith Correctional Facility

Date: 2/19/2010

## DESCRIPTION OF WORK

ASI #74R-1: Modified Dayroom Ceilings Above Stairs at Building 16

## SUMMARY OF COSTS

Item Description	Company	Amount Requested
<b>Subcontract Costs</b>		
Final Re-Cleaning - 48 hours x \$55.00/hour	CM Construction Clean Up	2,640 ✓
Drywall - Framing, drywall, and scaffolding Fireproofing to be performed separately on a Time and Material basis	Sierra Lathing Company Inc	<del>107,270</del> 93,967
Acoustical Ceilings - Demolition of ceiling and reconfiguration of ceiling grid runners	Commercial Interiors Acoustics Inc	3,764 ✓
Paint ceilings and touch up after scaffold removal	Pecoraro Inc	4,929 ✓
Detention Equipment - Provide and install new security access doors total of 5 doors at \$445.00 per door	Southern Folger Detention Equip Co	2,225 ✓
Fire Protection - Re-cutting of sprinkler drops	J.G. Tate Fire Protection Systems, Inc	2,857 ✓
HVAC - Remove and re-install HVAC registers and duct Re-adjusting air balance	Athena Engineering, Inc	5,645 ✓
Electrical - Removal and Relocation of Lights and FLS Equipment Order new fixtures	Champion Electric, Inc	14,110 ✓
Security Systems - Relocate Speakers	Engineered Control Systems	900 ✓
	Subtotal	<del>144,340</del> 131,037
<b>Contractual % Costs</b>		
1% Bond Mark-Up		<del>2,100</del> 1928
Field Implementation & Coordination -		<del>5,104</del> 5,929
<del>Warranty - 5%</del>		<del>8,652</del>
Extended General Conditions for 16 Calendar Days Past March 31st 2010 @ \$2,914.00 per day		46,624
5% OH & P Mark Up		<del>10,240</del> 9180
	Subtotal	<del>72,857</del> 63,661
<b>Total Change Order Request Amount:</b>		<del>247,197</del> 194,698

"NEGOTIATED SETTLEMENT VALUE = \$193,000" + TIME AND MATERIAL OF FIREPROOFING = \$1,698.00

GRAND TOTAL = \$194,698.00

**QUALIFICATIONS**

- Please note the exclusions by each subcontractor proposal included in the package.
- Please note that this scope will take 45 days to complete. The date of substantial completion will be changed to March 31st 2010. No extended general conditions or liquidated damages will be assessed. After March 31st 2010 Bernards will be compensated for extended general conditions for an additional 16 calendar days at \$2,914/day. This will take the date of Completion to April 16th 2010

~~The net impact of this Change Order Request will require an increase of 47 Calendar Day(s) to the Contract Time.~~

**APPROVAL**

(Please note that if this Change Order Request is not approved by 2/26/2010 additional costs and schedule impacts may result.)

Signature \_\_\_\_\_ Date \_\_\_\_\_

Company \_\_\_\_\_

ID	Task Name	Duration	Start	Finish	Predecessors
1	ASI #74R1	33 days?	Wed 2/24/10	Fri 4/9/10	
2	Remove MEP/AC Tile	2 days	Wed 2/24/10	Thu 2/25/10	
3	Scaffold	2 days	Mon 3/1/10	Tue 3/2/10	2
4	Layout/Remove Grid	1 day	Wed 3/3/10	Wed 3/3/10	3
5	Re-work HVAC	3 days	Thu 3/4/10	Mon 3/8/10	4
6	Frame Ceiling	5 days	Tue 3/9/10	Mon 3/15/10	5
7	Patch Fireproofing	1 day	Tue 3/16/10	Tue 3/16/10	6
8	Rough MEP	2 days	Wed 3/17/10	Thu 3/18/10	7
9	Inspection	1 day	Fri 3/19/10	Fri 3/19/10	8
10	Install Sec Mesh/Drywall	3 days	Mon 3/22/10	Wed 3/24/10	9
11	Inspection	1 day	Thu 3/25/10	Thu 3/25/10	10
12	Tape Drywall	5 days	Fri 3/26/10	Thu 4/1/10	11
13	Remove Scaffold	2 days	Fri 4/2/10	Mon 4/5/10	12
14	Install AC Grid/Tile	2 days	Tue 4/6/10	Wed 4/7/10	13
15	Paint	1 day	Thu 4/8/10	Thu 4/8/10	14
16	Finish MEP	2 days	Fri 4/9/10	Mon 4/12/10	15
17	Touch Up	1 day	Tue 4/13/10	Tue 4/13/10	16
18	Final Clean	3 days	Wed 4/14/10	Fri 4/16/10	17
19					
20					
21					
22	Long Lead Items	1 day?	Fri 10/27/06	Fri 10/27/06	
23	Light Fixtures	40 days	Fri 2/5/10	Thu 4/1/10	
	Access Doors	35 days	Wed 2/24/10	Tue 4/13/10	

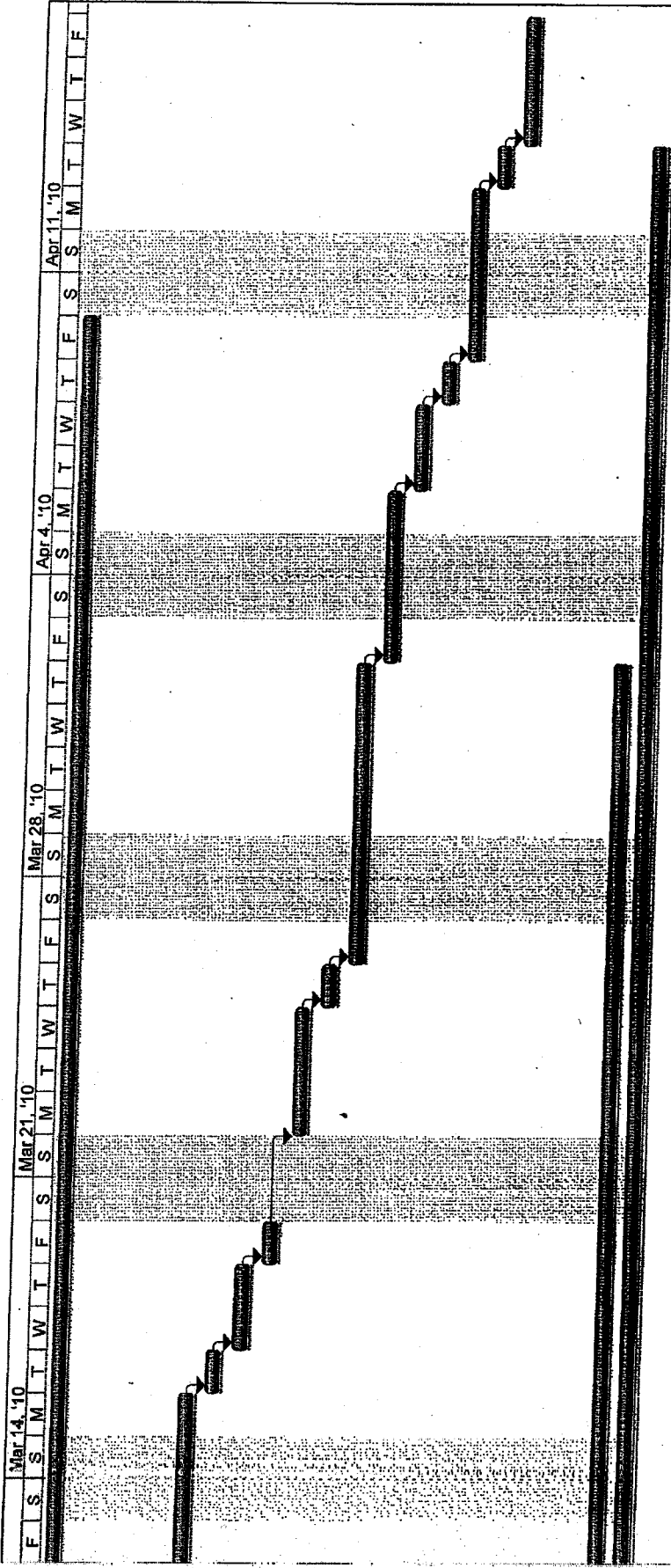


Project: IASProj11  
Date: Fri 2/28/10

Task Split Progress

Milestone Summary Project Summary

External Tasks External Milestone Deadline



Project: MSProl11  
 Date: Fri 2/26/10

Task  
 Split  
 Progress

Milestone  
 Summary  
 Project Summary

External Tasks  
 External Milestone  
 Deadline



EXTENDED GENERAL CONDITIONS COSTS  
 LARRY D. SMITH CORRECTIONAL FACILITY, EXPANSION #3

REVISED 3/1/78



SUMMARY OF COSTS	LABOR	MATERIAL & EXPENSE	EQUIP & TRANS	SUB	TOTAL	Cost per Week	Cost per Day
TOTAL JOB SUPERVISION	528,414	0	106,240	0	634,654	6,102	1,220.49
TOTAL TEMPORARY FACILITIES	0	544,916	12,480	0	557,396	5,360	1,071.92
TOTAL TEMPORARY ELECTRIC	0	0	0	31,096	31,096	299	59.80
TOTAL SAFETY AND FIRST AID	0	37,960	0	0	37,960	365	73.00
TOTAL CLEAN UP	39,000	0	0	0	39,000	375	75.00
TOTAL OTHER COSTS	0	99,869	79,820	15,600	195,289	1,878	375.56
SUBTOTAL	567,414	682,745	198,540	46,696	1,495,395	14,379	2,875.76
ESCALATIONS:							
SUPERVISOR & PROJ MGR	19,816	0	0	0	19,816	191	38.11
CLERK/ENGINEER	0	0	0	0	0	0	0.00
TOTAL ALL COSTS	587,230	682,745	198,540	46,696	1,495,211	191	38.11
GRAND TOTAL					1,515,211	14,569	2,914

JOB SUPERVISION	QUANTITY	UNIT	ADJ	Labor Unit	Matt'l & Exp. Unit	Equip & Trans Unit	Sub Unit	Total Labor	Total Matt'l & Exp.	Total Equip & Trans	Total Sub	Cost per Week TOTAL	Cost per Day TOTAL
Project Manager	62	WK	i	2,989.00				185,318	0	0	0	1,782	356.38
Assistant Project Manager	62	WK						0	0	0	0	0	0.00
Proj. Manager's Car	104	WK	2	3,299.00		320.00		0	0	39,680	0	382	76.31
General Superintendent	104	WK	i	3,299.00				343,096	0	0	0	3,299	659.80
Assistant Superintendent	0	WK						0	0	0	0	0	0.00
Project Engineer			i	2,836.00	150.00			0	0	0	0	0	0.00
Office Engineer								0	0	0	0	0	0.00
Project Safety Engineer								0	0	0	0	0	0.00
Carpenter Foreman								0	0	0	0	0	0.00
General Laborer								0	0	0	0	0	0.00
Timekeeper								0	0	0	0	0	0.00
Job Clerk / Secretary								0	0	0	0	0	0.00
Clerk (LEED & Waste Manage)								0	0	0	0	0	0.00
Supervisory Transportation	104	WK	2			320.00		0	0	0	0	640	128.00
<b>TOTAL JOB SUPERVISION</b>				<b>528,414</b>	<b>0</b>	<b>106,240</b>	<b>0</b>	<b>528,414</b>	<b>0</b>	<b>106,240</b>	<b>0</b>	<b>6,102</b>	<b>1,220.48</b>

TEMPORARY FACILITIES	QUANTITY	UNIT	ADJ	Labor Unit	Matt'l & Exp. Unit	Equip & Trans Unit	Sub Unit	Total Labor	Total Matt'l & Exp.	Total Equip & Trans	Total Sub	Cost per Week TOTAL	Cost per Day TOTAL
Temporary Field Offices	0	Wks	4					0	0	0	0	0	0.00
Relocate / Reset-up	LS		i					0	0	0	0	0	0.00
Temporary Owner Office	0	Wks	1.5					0	0	0	0	0	0.00
Desk, 2 Chairs, File, Plan Table & Rack	104	Wks	1			175.00		0	0	0	0	0	0.00
Conference Room Furniture	104	Wks	1			75.00		0	0	7,800	0	75	15.00
Telephone (Hardline)	104	Wks	i		82.00	45.00		0	8,528	4,680	0	45	9.00
Telephone & DSL Service For Owner	104	Wks	i		82.00			0	8,528	0	0	82	16.40
Telephones (Cellular)	750	Man-Wks	i		50.00			0	37,500	8,528	0	82	16.40
Copy Machine, Maint. & Supplies	104	Wks	2		120.00			0	24,960	37,500	0	361	72.12
Typewriters & Adding Machine	0	Wks	i		12.00			0	0	0	0	240	48.00
Technology	104	Wks	i		120.00			0	12,480	0	0	0	0.00
Computer/Supplies	104	Wks	i		220.00			0	22,880	0	0	120	24.00
Digital Cameras	104	Wks	1		12.00			0	1,248	0	0	220	44.00
Fax Machine	104	Wks	2		20.00			0	4,160	0	0	12	2.40
Janitor Service	0	Wks	2		60.00			0	0	0	0	40	8.00
Office Drinking Water	104	Wks	2		30.00			0	6,240	0	0	60	12.00
Field Drinking Water & Ice	0	Wks	i	45.00				0	0	0	0	0	0.00
Office Supplies	104	Wks	1		150.00			0	15,600	0	0	150	30.00
Owners Office Equipment	0	Wks	i		100.00			0	0	0	0	0	0.00
Copy Paper	104	Wks	1		26.00			0	2,704	0	0	26	5.20
Postage / Delivery Services	104	Wks	2		100.00			0	20,800	0	0	209	40.00
Temporary Electrical	104	Wks	3		1,089.00			0	339,768	0	0	3,267	653.40
Temporary Toilets	104	Wks	8		30.00			0	24,960	0	0	240	48.00

Item	104 Wks	4	35.00	150.00	0	14,560	0	14,560	0	14,560	28.00
Hand Wash Units	0 Wks	1	350.00	0	0	0	0	0	0	0	0.00
Maintain Temporary Road and Parking Area	0 Wks	1	450.00	150.00	0	0	0	0	0	0	0.00
Perimeter Fence Rental	0 Wks	1	2.50	1.75	0	0	0	0	0	0	0.00
Graffiti Control	0 Wks	1	3.61	1.75	0	0	0	0	0	0	0.00
<b>TOTAL TEMPORARY FACILITIES</b>					0	544,916	12,480	0	557,396	5,360	1,071.92

TEMPORARY ELECTRIC	QUANTITY	UNIT	ADJ	Labor Unit	Mat'l & Exp. Unit	Equip & Trans Unit	Sub Unit	Total Labor	Total Mat'l & Exp.	Total Equip & Trans	Total Sub	Cost per Week TOTAL	Cost per Day TOTAL
Main Service 400 Amp, Rental	104 Wks	1					177.00	0	0	0	18,408	177	35.40
Sub Panel (30,000 SF floor area each)	104 Wks	1					122.00	0	0	0	12,688	122	24.40
Temp Power Boxes and Cords	0 Wks	1			85.00			0	0	0	0	0	0.00
Temporary Lighting Rental	0 Wks	1					150.00	0	0	0	0	0	0.00
Relamp Lighting Maintenance	0 Wks	1		150.00	45.00			0	0	0	0	0	0.00
<b>TOTAL TEMPORARY ELECTRIC</b>								0	0	0	31,096	299	59.80

SAFETY AND FIRST AID	QUANTITY	UNIT	ADJ	Labor Unit	Mat'l & Exp. Unit	Equip & Trans Unit	Sub Unit	Total Labor	Total Mat'l & Exp.	Total Equip & Trans	Total Sub	Cost per Week TOTAL	Cost per Day TOTAL
Ladders, Stairs, Ranges	0 Wks	1		0.00	30.00	0.00		0	0	0	0	0	0.00
Stair Towers - Rental	0 Wks	1		0.00	75.00			0	0	0	0	0	0.00
First Aid and Safety	104 Wks	1			100.00			0	10,400	0	0	100	20.00
Fire Equipment	104 Wks	1			15.00			0	1,560	0	0	15	3.00
Bi-Weekly Safety Inspections	104 Wks	1			250.00			0	26,000	0	0	250	50.00
Traffic Barricades	0 Wks	1			25.00			0	0	0	0	0	0.00
Street Sweeping	0 Wks	1			25.00			0	0	0	0	0	0.00
Traffic Control	0 Wks	1		25.00	1.00	3.75		0	0	0	0	0	0.00
<b>TOTAL SAFETY AND FIRST AID</b>								0	37,960	0	0	365	73.00

CLEAN UP	QUANTITY	UNIT	ADJ	Labor Unit	Mat'l & Exp. Unit	Equip & Trans Unit	Sub Unit	Total Labor	Total Mat'l & Exp.	Total Equip & Trans	Total Sub	Cost per Week TOTAL	Cost per Day TOTAL
Progressive	104 WK	2.5		150.00				39,000	0	0	0	375	75.00
<b>TOTAL CLEAN UP</b>								39,000	0	0	0	375	75.00

MISCELLANEOUS COSTS	QUANTITY	UNIT	ADJ	Labor Unit	Matt & Exp. Unit	Equip & Trans Unit	Sub Unit	Total Labor	Total Matt & Exp.	Total Equip & Trans	Total Sub	TOTAL	Cost per Week TOTAL	Cost per Day TOTAL
Jobsite Radios	104	Wks	1			25.00		0	0	2,600	0	2,600	25	5.00
Equipment Rental Allowance	104	Wks	1		350.00			0	0	36,400	0	36,400	350	70.00
Small Tools	104	Wks	1		392.50			0	0	40,820	0	40,820	393	78.50
Trucks - Flatrack - Dump	0	WK	1	84.00				0	0	0	0	0	0	0.00
Forklift Rental	0	WK	1	84.00				0	0	0	0	0	0	0.00
Fuel and Maintenance	0	Wks	1		125.00			0	0	0	0	0	0	0.00
Water Protection & Diversion	104	Wks	1				150.00	0	0	0	15,600	15,600	150	30.00
Survey Equipment, Calibration	0	Wks	1		85.00			0	0	0	0	0	0	0.00
Dust Pallion	0	Wks	1				350.00	0	0	0	0	0	0	0.00
Shaker Plate @ Entry	0	Wks	1				85.00	0	0	0	0	0	0	0.00
Photographs	104	Wks	1		35.00			0	3,640	0	0	3,640	35	7.00
Corp. Yard Support	104	Wks	1		238.50			0	24,596	0	0	24,596	237	47.30
Main Office Support	104	Wks	1		138.78			0	14,433	0	0	14,433	139	27.76
Travel Expenses	104	Wks	1		550.00			0	57,200	0	0	57,200	550	110.00
<b>TOTAL MISCELLANEOUS COSTS</b>					<b>0</b>	<b>99,869</b>	<b>79,820</b>	<b>15,600</b>	<b>99,869</b>	<b>79,820</b>	<b>15,600</b>	<b>195,289</b>	<b>1,878</b>	<b>375.56</b>



**Sierra Lathing Company, Inc**  
 1189 West Leiske Drive  
 Rialto CA 92376  
 909-421-0211

License: 198103

# Change Order

Order#: 14

Order Date: 02/19/2010

**To: Bernards**  
 23461 So. Pointe Dr. #300  
 Laguna Hills CA 92653

**Project: 2803**  
 Larry D Smith Corr. Facility  
 350 Wesley Street  
 Banning CA 92220

The contractor agrees to perform and the owner agrees to pay for the following changes to this contract

Plans Attached

Ordered By: 41 Raymond Lytle

Customer Order: ASI#74R1

Specifications Attached

**Description of Work**

**Amount**

Added ceiling per ASI#74

~~122,129.48~~

**Notes**

PLEASE SEE ATTACHED WORKSHEET

Scaffold deduct < 21,000 >  
 Fireproof deduct < 8,859.00 >

LABOR =\$59,568.00  
 Material/Scaffold =46,631.55  
 15% OHP =15,929.93  
 total = \$122,129 48

\$ 92,270.00

**Qualify -**

No caulking - only 2 access panels(D,E,F) - scaffold up for 45 days(calendar) a cost of \$180.00 per CD after 45 days are used. - Our scope duration will need 21 calendar days per area (D,E,F) Any added detail not shown on ASI#74R1 will have added cost. Stock/clean-up in phases

Negative changes will lower the overall contract price requiring no additional payment by owner

**Requested Amount of Change**

~~122,129.48~~

The original Contract Sum was	1,052,000.00
Net change by previous Change Orders	157,351 00
The Contract Sum prior to this Change Order	1,209,351.00
The Contract Sum will be changed by this Change Order	122,129.48
The new Contract Sum including this Change Order will be	1,331,480 48
The Contract Time will be changed by	0 Days

Owner: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor: \_\_\_\_\_ Date: \_\_\_\_\_



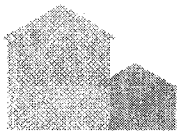
WORKSHEET  
ASI#74R1

Items per details 1&2	Qty	UNIT	MAN HR prod rate	MAT,UNIT COST	TOTAL HRS	LABOR COST	MAT COST
<b>Dayroom E</b>						\$ 58.40	
Scaffold							\$ 12,000.00
1- ledger	24 lf			\$ 1.20	8	\$ 467.20	\$ 28.80
6"x18gaxtrack anchor bolts 1/4"	8 pcs			\$ 1.50	4	\$ 233.60	\$ 12.00
2-Prerimeter	42 lf			\$ 1.20	16	\$ 934.40	\$ 50.40
6"x18gaxtrack	360 lf			\$ 1.40	32	\$ 1,868.80	\$ 504.00
3-Jolst	12 ea			\$ 1.40	24	\$ 1,401.60	\$ 100.80
6"x18ga std	12 ea			\$ 1.20	24	\$ 1,401.60	\$ 19.20
4-Drops	12 ea			\$ 25.00	48	\$ 2,803.20	\$ 150.00
6"x18ga std 72lf top connection	96 lf			\$ 0.40	8	\$ 467.20	\$ 38.40
3"x3"x16gax24" 16lf scrap/patch fire proof	24 lf			\$ 1.40	16	\$ 934.40	\$ 33.60
5-hat channel	320 sf			\$ 2.20	24	\$ 1,401.60	\$ 150.00
7/8" hatchannel x 20ga 6-head outs	320 sf			\$ 2.20	16	\$ 934.40	\$ 704.00
6"x18ga std	320 sf			\$ 0.80	24	\$ 1,401.60	\$ 256.00
7-stock/clean above work	320 sf			\$ 0.30	24	\$ 1,401.60	\$ 96.00
8-stock security mesh	2 ea				16	\$ 934.40	\$ 150.00
9-Amico Security .50-13F					8	\$ 467.20	
10-stock hi Impact					340 tax	\$ 19,856.00	\$ 1,250.65
11-Hi impact gyp						\$	\$ 15,543.85
5/8"							
12-finish tape							
13-clean-up prior to scaffold down							
14-Access Panels							

WORKSHEET  
ASI#74R1

Items per details 1&2		Qty	UNIT	MAN HR prod rate	MAT, UNIT COST	TOTAL HRS	LABOR COST	MAT COST
<b>Dayroom F</b>							\$ 58.40	
Scaffold								\$ 12,000.00
1- ledger	24 lf					8	\$ 467.20	\$ 28.80
6"x18gaxtrack	8 pcs					4	\$ 233.60	\$ 12.00
anchor bolts 1/4"								
2- Prerimeter	42 lf					16	\$ 934.40	\$ 50.40
6"x18gaxtrack								
3-Joist	360 lf					32	\$ 1,868.80	\$ 504.00
6"x18ga std								
4-Drops	12 ea					24	\$ 1,401.60	\$ 100.80
6"x18ga std 72lf								
top connection	12 ea					24	\$ 1,401.60	\$ 19.20
3"x3"x16gx24" 16lf	12 ea					48	\$ 2,803.20	\$ 150.00
scrap/patch fire proof								
5-hat channel	96 lf					8	\$ 467.20	\$ 38.40
7/8" hatchannel x 20ga								
6-head outs	24 lf					16	\$ 934.40	\$ 33.60
6"x18ga std						24	\$ 1,401.60	\$ 150.00
7-stock/clean above work						16	\$ 934.40	
8-stock security mesh	320 sf					32	\$ 1,868.80	\$ 704.00
9-Armico Security .50-13F						16	\$ 934.40	
10-stock hl impact						16	\$ 934.40	
11-HI impact gyp								
5/8"	320 sf					24	\$ 1,401.60	\$ 256.00
12- finish tape	320 sf					24	\$ 1,401.60	\$ 96.00
13- clean-up prior to scaffold down						16	\$ 934.40	\$ 150.00
14-Access Panels	2 ea					8	\$ 467.20	
						340 tax	\$	\$ 1,250.65
							\$ 19,856.00	\$ 15,543.85





**Sierra Lathing Company, Inc**

1189 West Leiske Drive  
Rialto CA 92376  
909-421-0211

License: 198103

**Change Order**

Order#: 15

Order Date: 03/16/2010

**To: Bernards**  
23461 So. Pointe Dr. #300  
Laguna Hills CA 92653

**Project: 2803**  
Larry D. Smith Corr. Facility  
350 Wesley Street  
Banning CA 92220

The contractor agrees to perform and the owner agrees to pay for the following changes to this contract.

Plans Attached

Ordered By: 41 Raymond Lytle

Customer Order: PCO#298

Specifications Attached

**Description of Work** **Amount**

Fireproof patch hanger attachment at deck 1,600.01

**Notes**

ADDED FIREPROOF WORK PER pco#298 -WORK PERFORMED ON T&M

SEE ATTACHED T&M WORKSHEETS

**LABOR =**

FORMAN @ 61.40 - 11 HRS = \$675.40

JY @ 58.40 - 9 HRS =\$525.60

MATERIAL = 190.31

15% OHP =\$ 208.70

TOTAL =\$1,600.00

Negative changes will lower the overall contract price requiring no additional payment by owner.

**Requested Amount of Change**

**1,600.01**

The original Contract Sum was .....	1,052,000.00
Net change by previous Change Orders .....	309,493.00
The Contract Sum prior to this Change Order .....	1,361,493.00
The Contract Sum will be changed by this Change Order .....	1,600.01
The new Contract Sum including this Change Order will be .....	1,363,093.01
The Contract Time will be changed by .....	0 Days

Owner: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor: \_\_\_\_\_ Date: \_\_\_\_\_



Time & Material

Job No. 2803

Job Name Larry D. Smith

Work Direction Per (RFI, PCO, CO, FL, ?) PCO # 298

BLDG / Location of work Blk # 16 F @ ceiling

AUTHORIZED BY: Company Bernards

SIGN & Date

Print Name

DESCRIPTION OF WORK PERFORMED: patching DECK where  
Hanger attachment is connected-

THIS SIGNATURE VERIFIES TIME AND MATERIAL ONLY  
THIS VERIFICATION IN NO WAY CONSTITUTES AN AGREEMENT  
THAT THIS WORK IS ADDITIONAL CONTRACT SCOPE AND  
IN NO WAY IS TO BE CONSTRUED AS AN ENTITLEMENT  
FOR ADDITIONAL COMPENSATION.  
BERNARDS: END 3-4-10

Scope Of Work ( frame -Drywall-Taping-Clean-up)

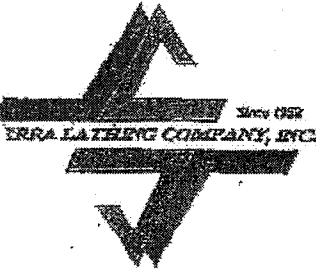
Material	QTY	HOURS	MEN	TOTAL	Scope
blaze II	1 bag	Foreman	1	2 hrs	blaze patching
		JY	1	2 hrs	

Equipment

Ray M. Bernards  
3/4/10

Work performed on (DATE) 3-4-10

Circle - WORK - Completed Ongoing



Time & Material

Job No. 2803

Job Name Larry D Smith

Work Direction Per (RFLPCO, CO, FL?) PCO #298

BLDG / Location of work H 16 Dayroom F

AUTHORIZED BY: Company Bernards

SIGN & Date \_\_\_\_\_ Print Name Dick Whitman

DESCRIPTION OF WORK PERFORMED: Fire proofing patch at deck where strut is connected.

THIS SIGNATURE VERIFIES TIME AND MATERIAL ONLY  
 THIS VERIFICATION IN NO WAY CONSTITUTES AN AGREEMENT  
 THAT THIS WORK IS ADDITIONAL CONTRACT SCOPE AND  
 IN NO WAY IS TO BE CONSTRUED AS AN ENTITLEMENT  
 FOR ADDITIONAL COMPENSATION  
 BERNARDS: RWA 3-5-10

Scope Of Work ( frame-Drywall-Taping-Clean-up)						
Material	QTY	HOURS	MBN	TOTAL	Scope	
Blaze II	2 bags	Foreman	1	2 hrs	fire proof	
		JY	1	2 hrs	fire proof	
BERNARDS:						
-OR ADDITIONAL COMPENSATION						
IN NO WAY IS TO BE CONSTRUED AS AN ENTITLEMENT						
FOR ADDITIONAL CONTRACT SCOPE AND						
THIS VERIFICATION IN NO WAY CONSTITUTES AN AGREEMENT						
FOR ADDITIONAL COMPENSATION						

Equipment:

Work performed on (DATE) 3 5 10

Circle - WORK - Completed Ongoing

VERIFIED TIME [Signature] 3/5/10



Time & Material

Job No. 2803

Job Name Larry D Smith

Work Direction Per (RFL, PCO, CO, FL, ?) PCO # 298

BLDG / Location of work H16 Dayroom E

AUTHORIZED BY: Company Bernards

SIGN & Date

Print Name

DESCRIPTION OF WORK PERFORMED: fire proof patching where studs are attached to deck

Scope Of Work ( frame -Drywall-Taping-Clean-up)						
Material	QTY	HOURS	MEN	TOTAL	Scope	
<u>Blaze II</u>	<u>4 bags</u>	<u>Foreman</u>	<u>1</u>	<u>5 HRS</u>	<u>fire proof patching</u>	
		<u>JY</u>		<u>5 HRS</u>	<u>fire proof patching</u>	
<small>THIS SIGNATURE VERIFIES TIME AND MATERIAL ONLY            THIS VERIFICATION IN NO WAY CONSTITUTES AN AGREEMENT            THAT THIS WORK IS ADDITIONAL CONTRACT SCOPE AND            IN NO WAY IS TO BE CONSTRUED AS AN ENTITLEMENT            FOR ADDITIONAL COMPENSATION.</small>						

Equipment: RW 3-8-10

Work performed on (DATE) 3-8-10

Circle - WORK - Completed / Ongoing

*[Signature]*  
 3/8/10  
 VERNIE COB



Time & Material

Job No. 2803

Job Name Larry D Smith

Work Direction Per (REL, PCO, CO, FL, ?) PCO 298

BLDG / Location of work H16 Dayroom D

AUTHORIZED BY: Company Bernards

SIGN & Date

Print Name

DESCRIPTION OF WORK PERFORMED: fire proof patching where strut is connected to the deck.

Vance: [Signature] 3/10/10

Material	QTY	Scope Of Work ( frame -Drywall-Taping-Clean-up)			
		HOURS	MEN	TOTAL	Scope
<u>Blaze II</u>	<u>1 Bag</u>	<u>Foreman</u>	<u>1</u>	<u>2 hrs</u>	<u>fire proof patching</u>
		<u>TY</u>			
THIS SIGNATURE VERIFIES TIME AND MATERIAL ONLY. THIS VERIFICATION IN NO WAY CONSTITUTES AN AGREEMENT THAT THIS WORK IS ADDITIONAL CONTRACT SCOPE AND IN NO WAY IS TO BE CONSIDERED AS AN ENTITLEMENT FOR ADDITIONAL COMPENSATION <u>BERNARDS</u> <u>[Signature]</u> <u>3-11-10</u>					

Equipment:

Work performed on (DATE) 3-9-10

Circle - WORK Completed / Ongoing

## ACOUSTICAL CEILING

**Ann Mitchell**


---

**From:** tatecia@aol.com  
**Sent:** Tuesday, February 16, 2010 3:44 PM  
**To:** Ann Mitchell  
**Subject:** Re: ASI #74-R1 - Modifications to ceilings above stairs in Day Rooms

The estimate for this work is as follows:

48 hours to demo and install @ 54.65	\$2623.20
misc materials at installation	\$200.00
lift rental 1 week	\$450.00
15% MU	\$490.98
<b>Total</b>	<b>\$3764.18</b>

-----Original Message-----

**From:** Ann Mitchell <amitchell@bernards.com>  
**To:** rlytle@sierralathing.com; tatecia@aol.com; estimating@lawsteel.com; engineering@lawsteel.com; rgonzales@southernfolger.com; Shawn Tromp, Robert Reeves <rreevesco@aol.com>  
**Sent:** Tue, Feb 16, 2010 10:19 am  
**Subject:** FW: ASI #74-R1 - Modifications to ceilings above stairs in Day Rooms

My records indicate we have not received your response to ASI #74-R1. Please forward your response to my attention via fax or email by end of day today.

If you have any questions please call Ryan Hernandez at Bernards jobsite office.

Thank you,

**Ann Mitchell**  
Project Administrator | BERNARDS

---

**From:** Ann Mitchell  
**Sent:** Friday, January 22, 2010 2:23 PM  
**To:** Ray Lytle (rlytle@sierralathing.com); 'tatecia@aol.com'; Kevin Shearer, Champion Electric; 'tshafer@championelec.com'; Rick Larsen (Rick.larsen@jgtate.com); 'estimating'; 'engineering@lawsteel.com'; Richard Chiera (richardc@athenaengineering.net); Shawn Tromp, Robert Reeves; 'Onofrio Pecoraro'  
**Subject:** RE: ASI #74-R1 - Modifications to ceilings above stairs in Day Rooms

Please see the attached revised ASI #74-R1. (The Owner added one picture)

**Ann Mitchell**  
Project Administrator | BERNARDS

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**From:** Ann Mitchell  
**Sent:** Thursday, January 21, 2010 9:49 AM  
**To:** Ray Lytle (rlytle@sierralathing.com); 'tatecia@aol.com'; Kevin Shearer, Champion Electric; 'tshafer@championelec.com'; Rick Larsen (Rick.larsen@jgtate.com)  
**Cc:** Sal Nol; Ryan Hernandez; Steven Chase; Richard Whiteman  
**Subject:** ASI #74 - Modifications to ceilings above stairs in Day Rooms  
**Importance:** High

2/16/2010

# PECORARO, INC.

PAINTING CONTRACTORS

January 29, 2010

**BERNARDS**  
350 Wesley St  
Banning, CA 92220

Attn: Ann Mitchell

Re: Larry D. Smith Correctional Facility  
ASI#74

Dear Ann,

As requested is our proposal for ASI#74.

Labor	<sup>90</sup> <del>104</del> hr @ \$ 47.51	\$ 3,991.00	9,941.00	<del>\$2,280.00</del>	2756-
Material	20 <del>52</del> 35 Gal @ \$ 19.00	\$ 665.00	<del>750.00</del>	\$ 190.00	380-
	Misc Masking L.S	\$ 450.00	650.00	→	650-
	Equipment Scissor Lift L.S	\$ <del>500.00</del>	500	→	500-
	Break down of labor		<u>7041.00</u>	\$ 3,120	4286-
	- Set up 1 hr 15%	\$ 841.00	<u>1,056.00</u>	\$ 468	643-
	- Masking 2 hrs				
	- Paint 2 hrs				
	- Clean up 2 hrs x 2 (with Helper) = 16 hrs/day room	\$ 6,447.00	<u>\$8,097</u>	<del>\$3,588</del>	<span style="border: 1px solid black; padding: 2px;">4,929</span>

Please call with any questions

~~4,929~~  
Rev →

Sincerely,  
PECORARO, INC.

Onofrio Pecoraro  
CEO

*Evendira Maldonado Ex*

501 W. Broadway Suite A PMB #398 • San Diego, CA 92101  
P. (619) 236-1730 • F. (619) 236-8105  
CA Lic # 868925 • AZ Lic # 223538

# J.G. TATE FIRE PROTECTION SYSTEMS, INC.

C10 C16 License #800609

## **Commercial & Residential Fire Sprinkler Systems**

13691 Danielson Street, Suite C Poway, CA 92064

Phone (858) 486-0900

Fax (858) 486-0950

2/18/2010

**Ryan Hernandez**

Bernards

Larry D Smith Correctional Facility

350 Wesley Street

Banning, CA 92220

Phone: (951) 849-2589

Fax: (951) 849-9605

Email: rhernandez@bernards.com

**Reference: Larry D. Smith Correctional Facility Expansion #3  
(C80523)**

**Subject: Change Order 005**

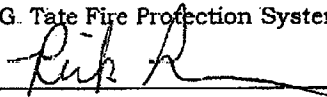
Below is a breakdown of the changes incurred at the above referenced project:

Change order description:

*Per ASI 74-R1. Note price includes recutting drops not relocating the drops. It affects a total of 6 heads (two per room). Scaffolding to be provided by Bernards, no lifts are included in price.*

Material (including tax):	\$	240.00
Labor (32 hrs @ \$68.00):	\$	2,176.00
Design (1 hrs @ \$68.00):	\$	68.00
<b>Subtotal:</b>	<b>\$</b>	<b>2,484.00</b>
Overhead & Profit (15%)	\$	372.60
<b>Total:</b>	<b>\$</b>	<b>2856.60</b>

J.G. Tate Fire Protection Systems, Inc

  
Rick Larsen

Bernards

\_\_\_\_\_  
Name, Title



JOB#: 1801

Change Estimate#: 15.1

DATE: 2/24/10

PROJECT: Larry D. Smith Correctional Institute  
Architect Project# 60021802

RFI Ref: ASI#74r1

Customer Ref: ASI#74r1

TO: Sal Nol  
Bernards Construction  
350 Wesley street  
Banning , CA 92220

Ph: (951) 849-2489  
Fax: (951) 849-9605  
Email: [snol@bernards.com](mailto:snol@bernards.com)

FROM: ATHENA ENGINEERING INC.  
456 East Foothill blvd.  
San Dimas , CA. 91773

P.M: Richard D. Chiera  
Ph: (909)599-0947 Ext. 501  
Fax: (909)599-5018  
Email: [richardc@athenaengineering.net](mailto:richardc@athenaengineering.net)

DESCRIPTION OF WORK:

Move registers and ductwork to accommodate ceiling changes 3 locations for dayrooms. Preliminarily provide for 4 access door locations. The cost of the access doors or installation is not under our scope or pricing. The cost for providing a lift is not included in our pricing. the HVAC work needs access approximately 8' from the edge of the area of ceiling modification. Scaffold/lifts will be provided by others to allow safe working areas for the HVAC work. Re-balance of HVAC system is not included in this work and will not be provided. Ceiling work or repair is not included in this work and will not be provided. Paint/patching is not included in this work and will not be provided. Labor is required for set up removal and set up again for final positioning.





CHANGE ESTIMATE SUMMARY

LABOR	RATE	HOURS	TOTALS
General foreman	75.07	2.00	150.14
Foreman	72.76	8.00	582.08
Journeyman	66.31	48.00	3,182.88
Detailer	72.76	-	-
	-	-	-

Sub Total Labor	3,915.10
Labor Overhead	10.00%
Labor Profit	5.00%
Grand Total Labor Cost:	4,521.94

Material and Charges Cost:	924.38
Material and Charges Overhead	10.00%
Material and Charges Profit	5.00%
Grand Total Material and Charges Cost:	1,067.65

Sub-Contractor Cost:	-
Sub-Contractor Overhead	0.00%
Sub-Contractor Profit	5.00%
Grand Total Sub-Contractor Cost:	-

Total this Change Estimate: 5,589.59

Insurance 0.00% -

SubTotal this Change Estimate: 5,589.59

Bond 1.00% 55.90

Total Cost: 5,645.49

PROJECT: Larry D. Smith Correctional Institute  
Architect Project# 60021802

Grand Total Change Estimate# 15.1 \$ 5,645.49

The total cost of this Change Estimate is a  Add  Deduct To the Contract amount

This Change Estimate will add 10 days to the project completion time.

THE SIGNATURE BELOW AUTHORIZES THE PERFORMANCE OF THE ABOVE STATED WORK AND PRICE  
ADJUSTMENT TO THE CONTRACT, BILLABLE AND PAYABLE IMMEDIATELY BASED UPON % OF COMPLETION.

Accepted By:

Print Name:

Title:

Signature:

Date:



**CHAMPION ELECTRIC INC.**

3950 GARNER ROAD  
RIVERSIDE, CA 92501  
Telephone: 951-276-9619  
Fax: 951-276-1460  
Contact: Kevin Sheater  
E-mail: kshearer@championelec.com

**Bernards Builders, Management Services**

23461 South Pointe Dr. suite 300  
Laguna Hills, CA 92653  
Telephone: 949.461.3650  
Fax: 949.461.3965  
Contact: Ryan Hernandez  
E-mail: rhernandez@bernards.com

**COST PROPOSAL**

REF #: PCO 040-ASI # 74 R-1  
Date: 2/4/2018  
Project Name: Larry Smith Correctional Fa  
Page Number: 1

*Revised*

**DETAILS OF PROPOSAL**

**Description of Change:**

Provide price for Changes found in ASI #74 R-1

Price will not be adjusted after work is completed.

Demo will not start until all ceiling tiles are removed Rough will not start until all of the framing is complete  
Finish will not start until all paint and drywall is complete

Fire Alarm cost is for Pryo-Comm to remove and replace smoke detectors.

~~Contract extension will be determined by the completion dates of the other trades.~~

Type C fixtures are \$575.00 each

**Qualifications:**

Upon review of the above stated direction we have identified cost impacts that must be addressed. We are submitting this proposal for your acceptance in response to this direction. This proposal is valid for a period of thirty (30) days upon receipt. As part of this proposal a time extension of ten (10) working days are required to be added to our contract to mitigate impacts to the original contract schedule. If a time extension is not acceptable we reserve the right to void this proposal and resubmit a new cost that accounts for acceleration, trade stacking, delays and other issues as may be required. This proposal is based upon information provided by the owner to accomplish completion of this change and we accept no responsibility for inadequate engineering or incomplete information. Excluded from this quote is any demo, patching, repairing, and or painting of finished surfaces unless specifically stated otherwise. We reserve the right to re-evaluate this pricing if conditions or information changes from time of submission to notice to proceed. Upon acceptance of this proposal please expedite our notice to proceed so work may begin as soon as possible. Please contact the undersigned if there are any questions in regards to this proposal.

**PROPOSAL TOTAL**

**\$14,110.00**

Signature:

**ITEMIZED BREAKDOWN**

Area	Material(\$)	Mat(%)	Labor Hrs	Lab(%)
DAYROOM D	1,813.76	33.33	20.90	33.07
DAYROOM E	1,813.76	33.33	20.90	33.07
DAYROOM F	1,813.76	33.33	21.40	33.86
<b>Total</b>	<b>5,441.28</b>	<b>100.00</b>	<b>63.20</b>	<b>100.00</b>

**DAYROOM D**

System	Material(\$)	Mat(%)	Labor Hrs	Lab(%)
DEMO	13.08	0.72	9.57	45.79
ROUGH	72.51	4.00	3.27	15.65
FINISH	1,728.17	95.28	8.06	38.56
<b>Total</b>	<b>1,813.76</b>	<b>100.00</b>	<b>20.90</b>	<b>100.00</b>

**DAYROOM D / DEMO**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
3/4" STEEL FLEX	10.00	971.00 M	5.00 C	9.71	0.50
3/4" FLEX TO 3/4" FLEX CPLG	1.00	336.53 C	16.88 C	3.37	0.17
REMOVE TYPE D FIXTURES	5.00	0.00 E	1.00 E	0.00	5.00
REMOVE SMOKE DETECTORS	3.00	0.00 E	0.75 E	0.00	2.25
REMOVE DUCT DETECTOR LED	1.00	0.00 E	0.65 E	0.00	0.65
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00
<b>Totals</b>				<b>13.08</b>	<b>9.57</b>

**DAYROOM D / ROUGH**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
4S DEEP BOX 3/4" KO	3.00	1,252.95 C	30.38 C	37.59	0.91
4" SQ 1G PL-RING 3/4" RISE	3.00	518.18 C	15.02 C	15.55	0.45
#10x 3/4" S-TAP SCREW P/H	28.00	9.24 C	2.50 C	2.59	0.70
TSGB16 ADJ BOX MTG BRKT	7.00	239.68 C	3.00 C	16.78	0.21
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00
<b>Totals</b>				<b>72.50</b>	<b>3.27</b>

**DAYROOM D / FINISH**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
#14x1-1/2" S-TAP SCREW P/H	18.00	17.60 C	4.50 C	3.17	0.81
INSTALL TYPE C FIXTURE	3.00	575.00 E	1.25 E	1,725.00	3.75
INSTALL TYPE D FIXTURE	2.00	0.00 E	1.25 E	0.00	2.50
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00
<b>Totals</b>				<b>1,728.17</b>	<b>8.06</b>

**DAYROOM E**

System	Material(\$)	Mat(%)	Labor Hrs	Lab(%)
DEMO	13.08	0.72	9.57	45.79
ROUGH	72.51	4.00	3.27	15.65
FINISH	1,728.17	95.28	8.06	38.56
<b>Total</b>	<b>1,813.76</b>	<b>100.00</b>	<b>20.90</b>	<b>100.00</b>

**DAYROOM E / DEMO**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
3/4" STEEL FLEX	10.00	971.00 M	5.00 C	9.71	0.50
3/4" FLEX TO 3/4" FLEX CPLG	1.00	336.53 C	16.88 C	3.37	0.17
REMOVE TYPE D FIXTURES	5.00	0.00 E	1.00 E	0.00	5.00

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
REMOVE SMOKE DETECTORS	3.00	0.00 E	0.75 E	0.00	2.25
REMOVE DUCT DETECTOR LED	1.00	0.00 E	0.65 E	0.00	0.65
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00
<b>Totals</b>				<b>13.08</b>	<b>9.57</b>

**DAYROOM E / ROUGH**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
4S DEEP BOX 3/4" KO	3.00	1,252.95 C	30.36 C	37.59	0.91
4" SQ 1G PL-RING 3/4" RISE	3.00	518.18 C	15.02 C	15.55	0.45
#10x 3/4" S-TAP SCREW P/H	28.00	9.24 C	2.50 C	2.59	0.70
TSGB16 ADJ BOX MTG BRKT	7.00	239.68 C	3.00 C	16.78	0.21
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00
<b>Totals</b>				<b>72.50</b>	<b>3.27</b>

**DAYROOM E / FINISH**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
#14x1-1/2" S-TAP SCREW P/H	18.00	17.60 C	4.50 C	3.17	0.81
INSTALL TYPE C FIXTURE	3.00	575.00 E	1.25 E	1,725.00	3.75
INSTALL TYPE D FIXTURE	2.00	0.00 E	1.25 E	0.00	2.50
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00
<b>Totals</b>				<b>1,728.17</b>	<b>8.06</b>

**DAYROOM F**

System	Material(\$)	Mat(%)	Labor Hrs	Lab(%)
DEMO	13.08	0.72	8.82	41.21
ROUGH	72.51	4.00	3.27	15.28
FINISH	1,728.17	95.28	9.31	43.50
<b>Total</b>	<b>1,813.76</b>	<b>100.00</b>	<b>21.40</b>	<b>100.00</b>

**DAYROOM F / DEMO**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
3/4" STEEL FLEX	10.00	971.00 M	5.00 C	9.71	0.50
3/4" FLEX TO 3/4" FLEX CPLG	1.00	336.53 C	16.88 C	3.37	0.17
REMOVE TYPE D FIXTURES	5.00	0.00 E	1.00 E	0.00	5.00
REMOVE SMOKE DETECTORS	2.00	0.00 E	0.75 E	0.00	1.50
REMOVE DUCT DETECTOR LED	1.00	0.00 E	0.65 E	0.00	0.65
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00
<b>Totals</b>				<b>13.08</b>	<b>8.82</b>

**DAYROOM F / ROUGH**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
4S DEEP BOX 3/4" KO	3.00	1,252.95 C	30.36 C	37.59	0.91
4" SQ 1G PL-RING 3/4" RISE	3.00	518.18 C	15.02 C	15.55	0.45
#10x 3/4" S-TAP SCREW P/H	28.00	9.24 C	2.50 C	2.59	0.70
TSGB16 ADJ BOX MTG BRKT	7.00	239.68 C	3.00 C	16.78	0.21
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00
<b>Totals</b>				<b>72.50</b>	<b>3.27</b>

**DAYROOM F / FINISH**

Description	Qty	Net Price Unit	Labor Unit	Total Mat(\$)	Total Hours
#14x1-1/2" S-TAP SCREW P/H	18.00	17.60 C	4.50 C	3.17	0.81
INSTALL TYPE C FIXTURE	3.00	575.00 E	1.25 E	1,725.00	3.75
INSTALL TYPE D FIXTURE	3.00	0.00 E	1.25 E	0.00	3.75
MOBILIZATION	1.00	0.00 E	1.00 E	0.00	1.00



REF: PCO 040 ASI # 74 R-1  
 Date: 2/1/2010  
 Project Name: Larry Smith Correctional Facility  
 Page Number: 4

Description Qty Net Price Unit Labor Unit Total Mat(\$) Total Hours  
 Totals 1,728.17 9.31

**SUMMARY**

General Materials		5,441.23
MATERIAL TAX	(@ 8.750 %)	476.11
<b>TOTAL MATERIAL</b>		<b>5,917.34</b>
JM-RIV 1ST SHIFT	(63.20 Hrs @ \$67.00)	4,234.40
<b>TOTAL LABOR</b>		<b>4,234.40</b>
SCISSOR LIFT		700.00
<b>TOTAL GENERAL EXPENSES</b>		<b>700.00</b>
MARKUP	(@ 15.000 %)	1,627.76
<b>TOTAL MARKUP</b>		<b>1,627.76</b>
<b>SUB-TOTAL</b>		<b>12,479.50</b>
FA SYSTEM	(\$1,500.00 + 0.000 % + 0.000 % + 0.000 %)	1,500.00
<b>TOTAL SUBCONTRACTORS</b>		<b>1,500.00</b>
<b>SUBTOTAL</b>		<b>13,979.50</b>
BOND	(@ 1.000 %)	139.80
FINAL ADJUSTMENT		-9.30
<b>FINAL AMOUNT</b>		<b>\$14,110.00</b>



999 Town & Country Rd.  
 Orange, CA 92868  
 (714) 567-2400 Fax: (714) 567-2729

# ARCHITECT'S

## SUPPLEMENTAL INSTRUCTIONS

**DISTRIBUTION:**

Owner:	<input type="checkbox"/>	Contractor	<input type="checkbox"/>
Architect:	<input type="checkbox"/>	Field	<input type="checkbox"/>
Construction Mgr.:	<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>

<b>PROJECT:</b>	Larry D. Smith Correctional Facility Expansion #3	<b>ARCHITECT'S SUPPLEMENTAL INSTRUCTION NO:</b>	74-R1
<b>OWNER:</b>	County of Riverside	<b>DATE OF ISSUANCE:</b>	20-Jan-10
<b>TO:</b>	Jon Aldana Vanir Construction Management, Inc. 980 Ninth Street, Suite 900 Sacramento, CA 95814	<b>ARCHITECT'S PROJECT NO:</b>	60021802

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Prior to proceeding with these instructions, indicate your acceptance of these instructions for minor change to the Work as consistent with the Contract Documents and return a copy to the Architect.

**Description:** Modifications to ceilings above stairs in Dayrooms H16-D, H-16-E and H-16-F. Change from suspended acoustical tile ceilings to high impact gypsum board over security mesh and steel framing system.

**Reference:** Photos Dayroom D, E, and F and Drawings 1 and 2.

**Clarification:** Modify ceiling areas as identified in the attached photos and drawings as follows:

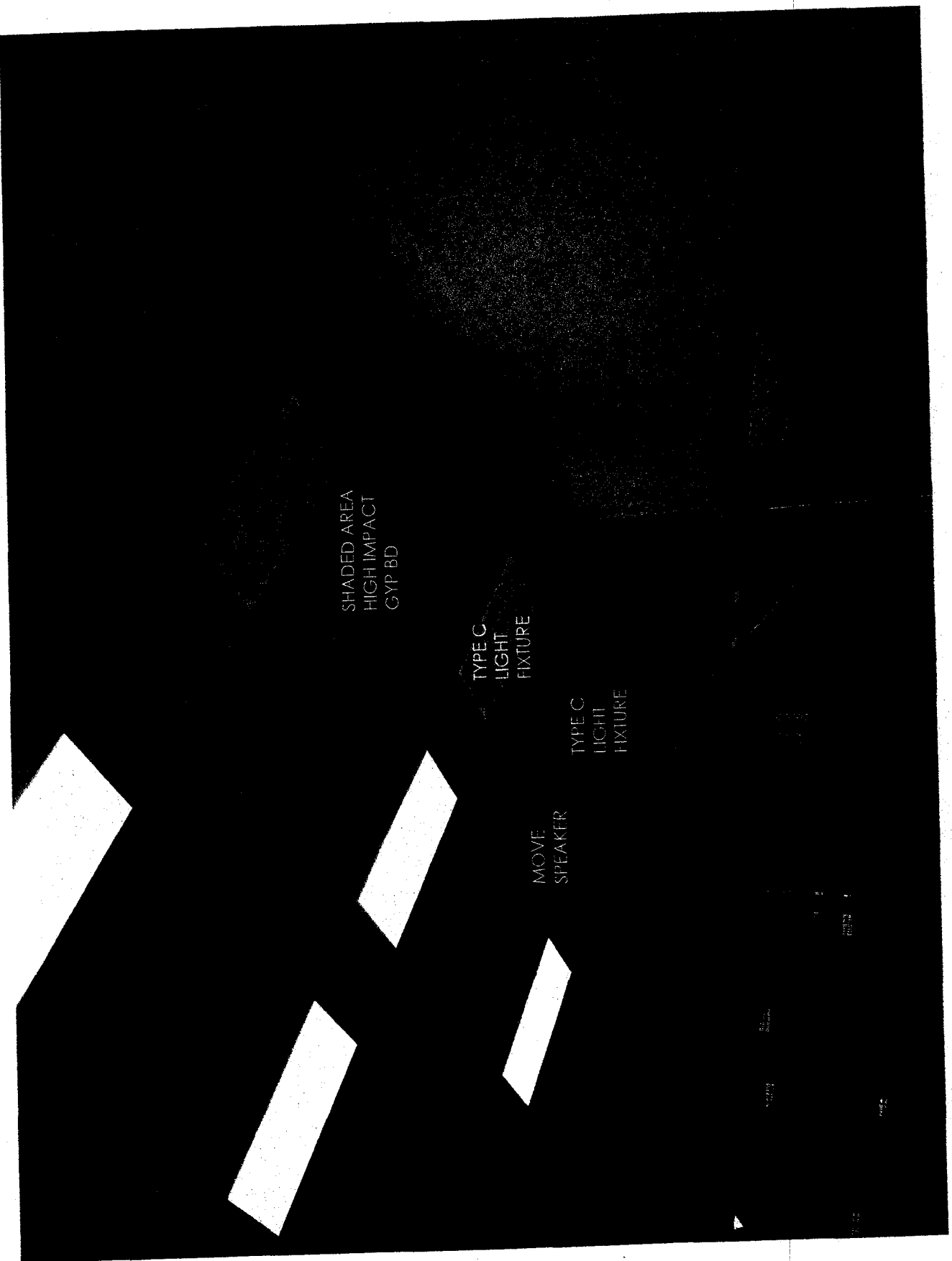
1. Remove and replace suspended acoustical ceiling and Type D light fixtures.
2. Install new high impact ceiling consisting of 5/8" National Gypsum Hi-Impact XP board over Amico Security Mesh ASM .50-13F and steel framing system. Framing and ceiling edge details shown in Drawings 1 and 2.
3. Paint gypsum board per the requirements of Section 09910. Finish to be Level 4.
4. If the new hard ceiling restricts necessary access to existing dampers or other devices requiring adjustment, include lockable high-security access doors per Section 08315 Access Doors And Frames.
5. Install new Type C light fixtures at the same location as Type D light fixtures. (Re-use 2 surplus Type C light fixtures).
6. All other ceiling devices are to be maintained.

**Revised Text:**

**Attachments:** Drawing1.pdf, Drawing2.pdf, DayroomD.pdf, DayroomE.pdf, DayroomF.pdf

<b>ISSUED:</b>	<b>ACCEPTED:</b>	<b>ACCEPTED:</b>	<b>ACCEPTED:</b>
BY	BY	BY	BY

Henry Chang  
 Designer  
 AECOM



SHADED AREA  
HIGH IMPACT  
GYP BD

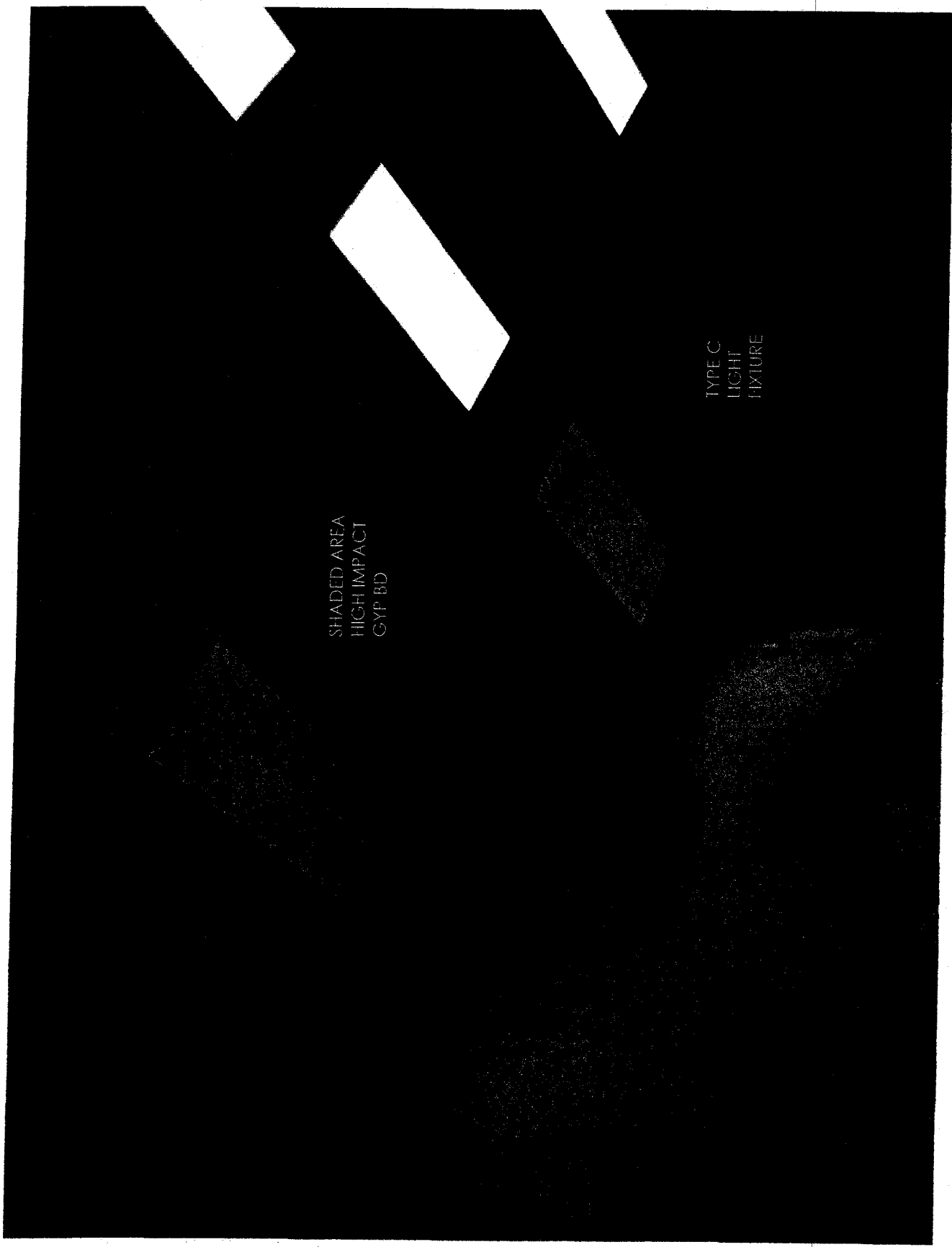
TYPE C  
LIGHT  
FIXTURE

TYPE C  
LIGHT  
FIXTURE

MOVE  
SPEAKER

DAYROOM D

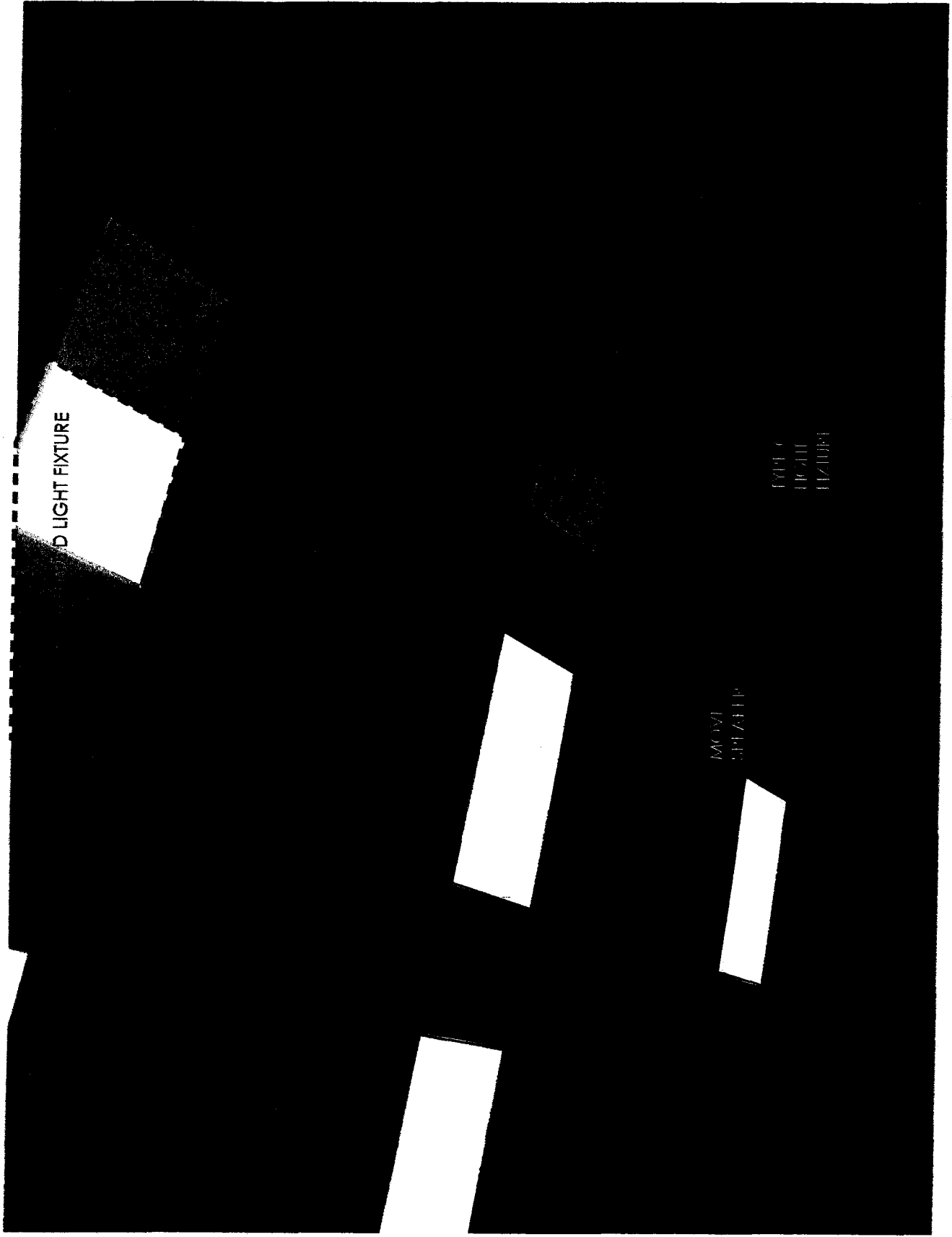




SHADED AREA  
HIGH IMPACT  
GYP BD

TYPE C  
LIGHT  
FIXTURE

DAYROOME

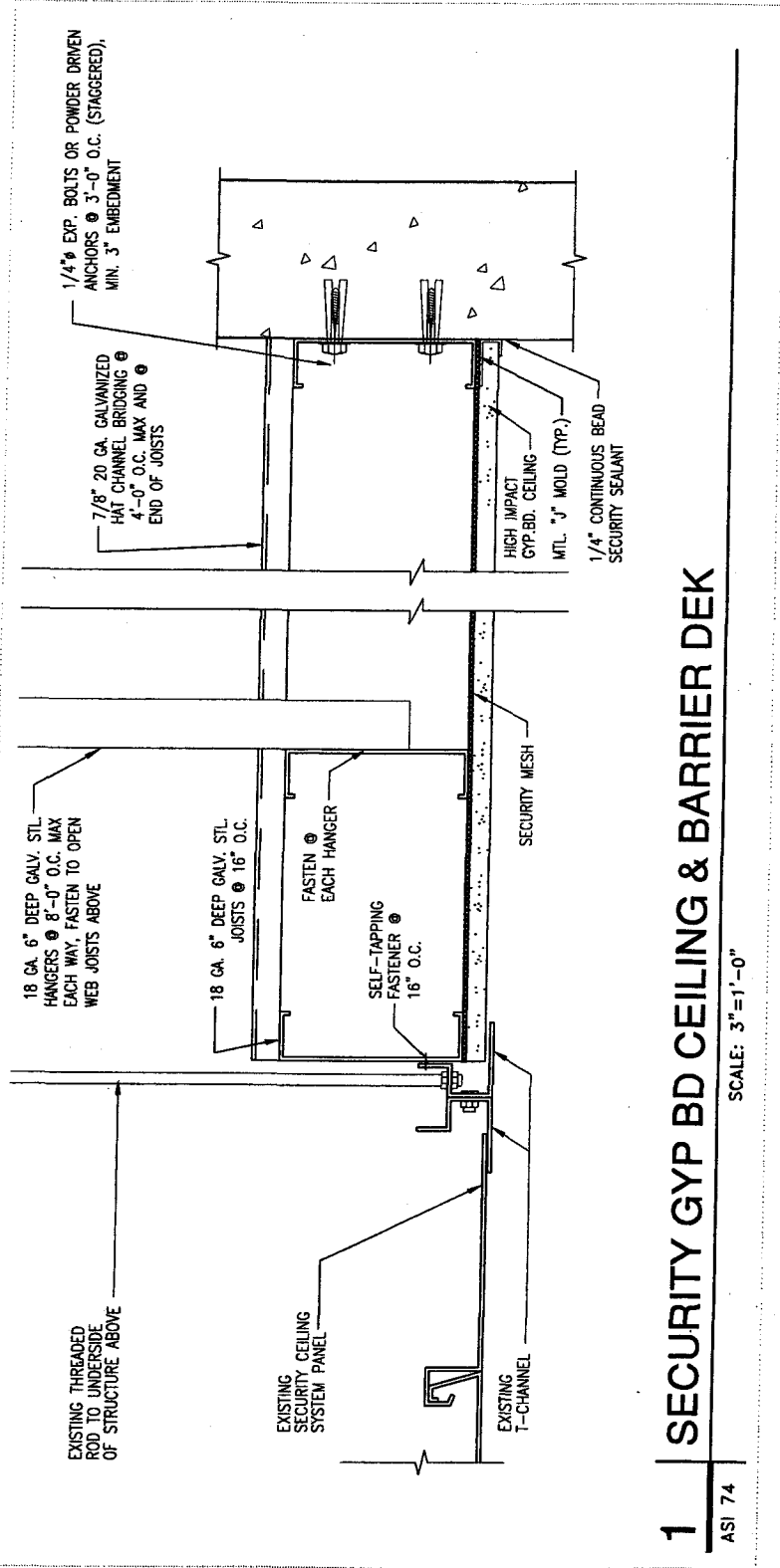


D LIGHT FIXTURE

LIGHT  
FIXTURE

LIGHT  
FIXTURE

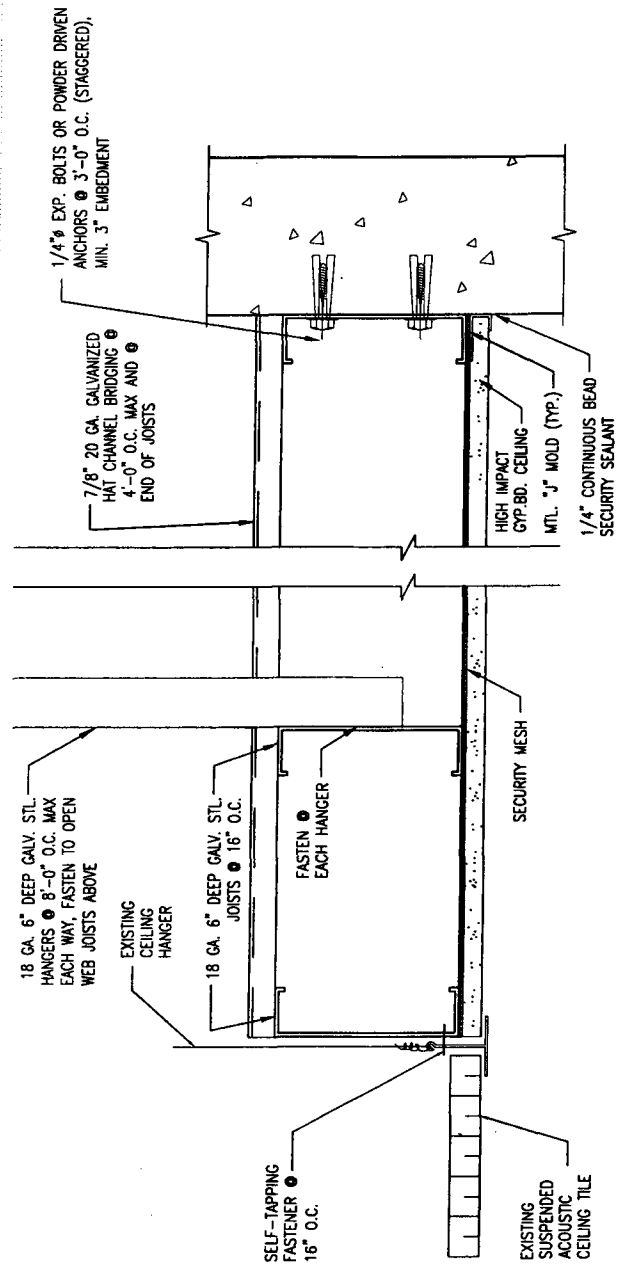
DAYROOM F



**1 SECURITY GYP BD CEILING & BARRIER DEK**

ASI 74

SCALE: 3"=1'-0"



## 2 SECURITY GYP BD CEILING & ACT

ASI 74

SCALE: 3"=1'-0"





**REQUEST FOR INFORMATION  
FOR DESIGNER REVIEW**

**RFI No.:** 531 -R1

**To:** Jon Aldana  
**Company:** Vanir Construction Management Inc.  
**Project:** Larry D. Smith Correctional Facility

**Date:** January 28, 2010  
**Discipline:** Structural  
**Importance:** 3 - Normal

**Subject: ASI# 74R1 - Closure Plate**

**Response Requested By:** February 04, 2010

**DRAWING & SPECIFICATION REFERENCES**

Drawing Sheet / Specification	Detail / Sub Section	Comments
-------------------------------	----------------------	----------

**QUESTION**

Is a closure plate required at the open ends of the joist? If so, what is required.

**ANSWER**

Clarification:

Frame entire perimeter of the hard ceilings with track, joist or angle.

**Response Provided By:**

D. Voda/M. Gerardot 2/4/10  
Name

AECOM  
Company

**QUESTION INITIATED BY:** Steve Chase with Bernards - Author Number: As noted above.



**REQUEST FOR INFORMATION  
FOR DESIGNER REVIEW**

**RFI No.: 531**

**To:** Jon Aldana  
**Company:** Vanir Construction Management Inc.  
**Project:** Larry D. Smith Correctional Facility

**Date:** January 28, 2010  
**Discipline:** Structural  
**Importance:** 3 - Normal

**Subject: ASI# 74R1 - Closure Plate**

**Response Requested By:** February 04, 2010

**DRAWING & SPECIFICATION REFERENCES**

Drawing Sheet / Specification	Detail / Sub Section	Comments
-------------------------------	----------------------	----------

**QUESTION**

Is a closure plate required at the open ends of the joist? If so, what is required.

**ANSWER**

Clarification:

Steel framing is at 16" O.C., as well as framing the perimeter of the hard ceilings. No closure plate required.

**Response Provided By:**

D. Voda/M. Gerardot 2/3/10  
Name

AECOM  
Company

**QUESTION INITIATED BY:** Steve Chase with Bernards - Author Number: As noted above.



**REQUEST FOR INFORMATION  
FOR DESIGNER REVIEW**

**RFI No.: 530**

**To:** Jon Aldana  
**Company:** Vanir Construction Management Inc.  
**Project:** Larry D. Smith Correctional Facility

**Date:** January 28, 2010  
**Discipline:** Structural  
**Importance:** 3 - Normal

**Subject: ASI# 74R1 - Fastener Schedule**

**Response Requested By:** February 04, 2010

**DRAWING & SPECIFICATION REFERENCES**

Drawing Sheet / Specification	Detail / Sub Section	Comments
-------------------------------	----------------------	----------

**QUESTION**

Please provide a fastener schedule for all fastener types, sizes, spacing and quantities for all connections.

**ANSWER**

Clarification:

Use 2 #10 SMS, staggered at the bottom of each vertical steel hanger.

Use 2 #10 SMS, 1 top and 1 bottom at steel joist to perimeter framing.

All other fasteners shown to be #10 SMS.

**Response Provided By:**

D. Voda/M. Gerardot 2/3/10  
Name

AECOM  
Company

**QUESTION INITIATED BY:** Steve Chase with Bernards - Author Number: As noted above.



**REQUEST FOR INFORMATION  
FOR DESIGNER REVIEW**

**RFI No.: 529**

To: Jon Aldana  
Company: Vanir Construction Management Inc.  
Project: Larry D. Smith Correctional Facility

Date: January 28, 2010  
Discipline: Structural  
Importance: 1 - Urgent

**Subject: ASI# 74R1 - Joist Attachment  
Details**

**Response Requested By: February 04, 2010**

**DRAWING & SPECIFICATION REFERENCES**

Drawing Sheet / Specification	Detail / Sub Section	Comments
-------------------------------	----------------------	----------

**QUESTION**

Please furnish attachment details of steel stud ceiling supports to open web joist. Inclusive but not limited to type and quantity of fasteners, location on joist, and reinforcement of joist if necessary.

**ANSWER**

See attached Drawing 1. Hangers can be attached to deck to ease installation of ceiling framing.

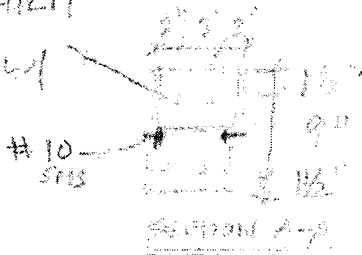
Response Provided By:

Henry Chang      2/1/10  
Name

AECOM  
Company

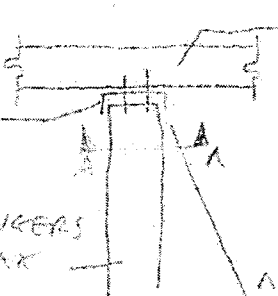
QUESTION INITIATED BY: Steve Chase with Bernards - Author Number: As noted above.

FOUR 0.118  
SHANK DIA HILTI  
X-GN  
FASTENER W/  
1" EMBED



1'-0" LONG  
600S162-33  
GALV. STL.  
CHANNEL  
AT HANGER  
600S102-33  
GALV. STL. HANGERS  
@ 4'-0" O.C. MAX  
EACH WAY

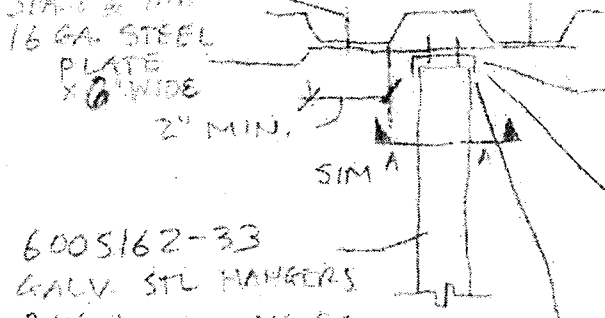
EXISTING CONG  
FILLED METL DECK



ATTACH HANGER TO  
CHANNEL W/ #10  
SMS, 1 ON EA. SIDE

WALL PERPENDICULAR TO RIBS

2 EA SIDE (FOUR  
TOTAL) 0.118 SHANK  
DIA HILTI X-GN  
FASTENER W/  
2" EMBED  
SPACE 2" APART



EXISTING CONG  
FILLED METL DECK

600S162-33 GALV.  
STL CHANNEL, 1'-0"  
LONG, @ HANGER

ATTACH CHANNEL TO PLATE  
W/ 4 #10 SMS, SPACING AS  
SHOWN IN SECTION A-A

600S162-33  
GALV. STL HANGERS  
@ 4'-0" O.C. MAX EA.  
WAY

ATTACH HANGER TO  
CHANNEL W/ #10  
SMS, 1 ON EA. SIDE

WALL PARALLEL TO DECK RIBS

DRAWING 1





Construction Management, Inc.

# PROPOSED CHANGE ORDER

To Contractor: Bernards Builders Management Services      PCO No.: 138  
 From: Vanir Construction Management, Inc.      Date: February 22, 2010  
 Owner: County of Riverside      Project No.: 20063738  
 Project: Larry D. Smith Correctional Facility Exp. #3      Contract No.:  
 Subject: 800 MHz Public Safety Radio System (All Buildings) by TRI POWER

Please prepare and submit to the Project Manager within 10 days an itemized proposal of cost and schedule impact for the following proposed change to the contract:

**Proposed Change:**

1. Provide a cost to include all design, labor, material and equipment necessary to turn up an in building system that will re-amplify and distribute the 800MHz County of Riverside system and the on campus 800MHz repeated channel radio signals throughout the interior of the Larry D. Smith Correctional Facility Expansion #3.

The project coverage area includes: Buildings 15/16/17 - Complete Building Coverage for both floors including:

1. Cells
2. Dayroom Areas
3. Recreation Yard Areas
4. Control Rooms (and Control Room Corridors)
5. Outer Perimeter Corridors ("Chases")
6. "Inter-pod" Connection Corridors
7. Visitation Areas

The project coverage area includes: Support Building - Complete Building Coverage for both floors including:

1. Holding Cells
2. Offices
3. Inmate Examination and Consultation Rooms
4. Storage/Property Rooms and Areas
5. Utility/Equipment Rooms
6. Stairwells and Elevators

**Attachments:**

- Tri Power Project Pricing and Plan Proposal Cost for Complete Design and Installation of 800 MHz Public Safety Radio System at LDS#3, Dated, March 15, 2010

**To Be Completed By Contractor:**

Proposed Cost: \$ 243,585.00      Requested Time Extension: 0

Contractor: \_\_\_\_\_ Date: \_\_\_\_\_  
 Signature

**To Be Completed Jointly By Vanir CM And Contractor:**

Agreed Cost: \$ 243,585.00      Agreed Time Extension: 0

Contractor: \_\_\_\_\_ Date: 3-18-10  
 Signature

Project Manager: \_\_\_\_\_ Date: 3-17-10  
 Signature

Signatures on this document do not constitute a change to the Contract or authorization to perform proposed work.







# CHANGE ORDER REQUEST

Project: Larry D. Smith Correctional Facility

**COR No. 124**  
Date: 3/17/2010

## DESCRIPTION OF WORK

VCM CCD #26 – 800 MHz Public Safety Radio Systems

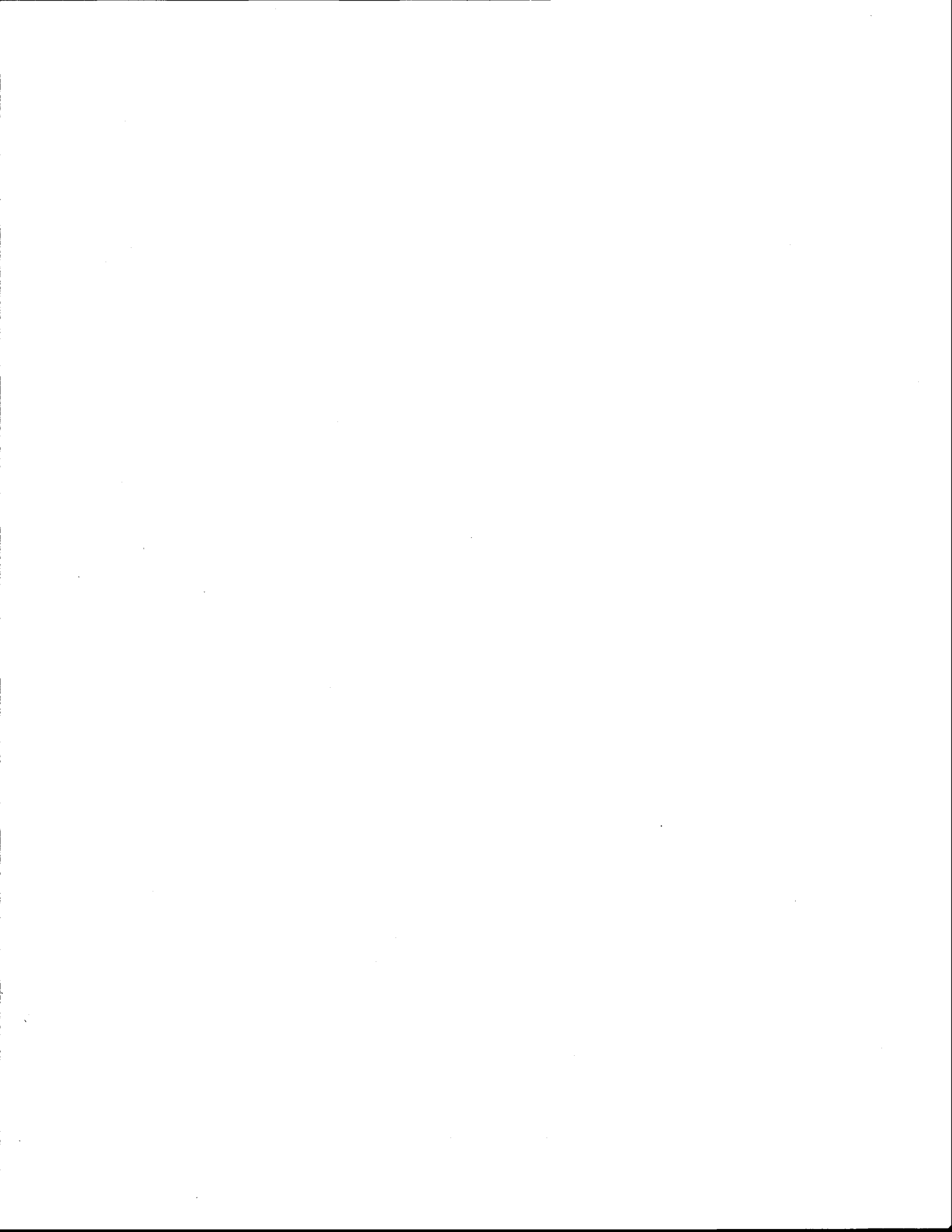
## SUMMARY OF COSTS

Item Description	Company	Amount Requested
<b>Subcontract Costs</b>		
Construction Change Directive #26 – 800 MHz Public Safety Radio Systems		225,189
	Subtotal	225,189
<b>Direct Work Cost</b>		
Field Implementation/Coordination		4,500
	Subtotal	4,500
<b>Contractual % Costs</b>		
1% Bond Mark-Up		2,412
5% OH & P Mark Up		11,484
	Subtotal	13,896
<b>Total Change Order Request Amount:</b>		<b>243,585</b>

## APPROVAL

(Please note that if this Change Order Request is not approved by 3/24/2010, additional costs and schedule impacts may result.)

Signature \_\_\_\_\_ Date \_\_\_\_\_  
Company \_\_\_\_\_





**Construction Management, Inc.**

350 Wesley Street  
Banning, CA 92220  
TEL 951-849-5358  
FAX 951-849-8978  
www.vanir.com

March 15, 2010

Ryan Hernandez  
Bernards Builders Management Services  
350 Wesley Street  
Banning, CA 92250

**PROJECT: LARRY D. SMITH CORRECTIONAL FACILITY EXPANSION #3**

**SUBJECT: Construction Change Directive #26 – 800 MHz Public Safety Radio Systems**

Ryan,

In an effort to advance the project in the most timely and efficient manner, regarding the installation of a new 800 MHz Public Safety Radio System installed throughout the Expansion #3 buildings. Bernards is hereby directed to proceed with the Scope of Work as described in Tri Power's Initial Conceptual Design and Proposal dated March 15, 2010. The Total amount for this Scope of Work (Work) is \$225,189.00, not including Bernards' allowable mark-up, the cost for electrical requirements and cored holes necessary for a complete system.

As previously discussed between Bernards, the Riverside County Economic Development Agency (EDA) and Vanir, Bernards will be granted an exemption from Liquidated Damages and the County of Riverside shall be exempt from any General Conditions relating to any extension of time beyond the established completion date of April 16, 2010 for this Work.

Bernards is relieved of liability relating to the aforementioned Work as self-performed by Tri Power. The County of Riverside has eliminated the requirement for Tri Power to provide a Bond to cover the Work identified above with the exception of Tri Power's subcontractor Teldata. Teldata will be required to provide a Bond for their installation of the infrastructure required for the new radio system.

The new 800 MHz radio system will be included within the next Contract Change Order for final approval. Vanir and the EDA will incorporate any additional mutually approved terms of liability at that time.

We trust that this is the information you require to start and complete the aforementioned Scope of Work. If there are questions regarding this matter, please call me.

Yours truly,  
Vanir Construction Management, Inc.

*Jon Aldana*

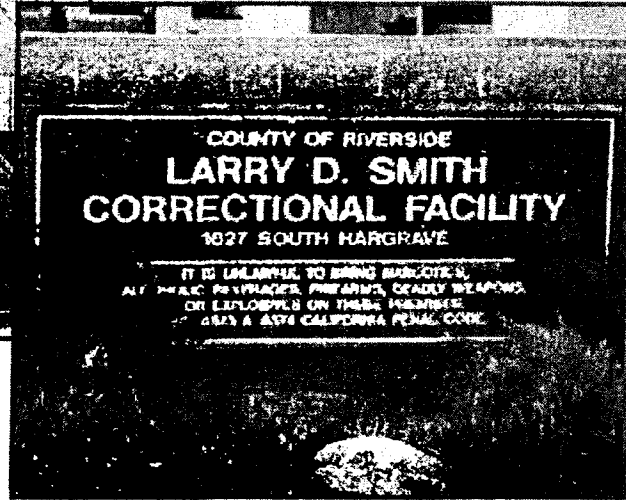
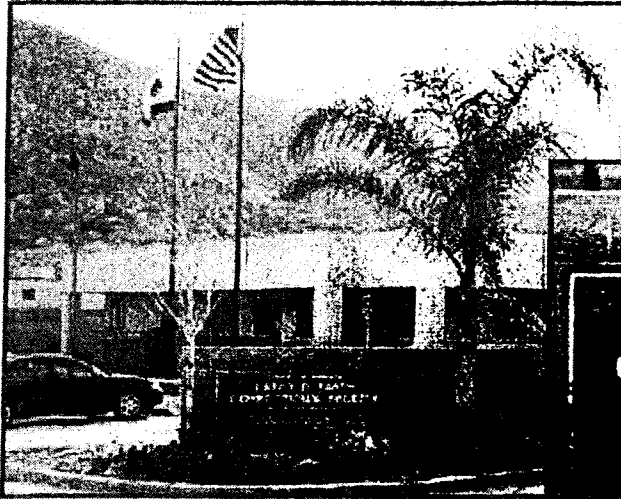
Jon Aldana,  
Construction Manager

Enclosures:

- Tri Power Project Pricing and Plan for 800 MHz County Wide Radio DAS for Smith Correctional Facility Expansion #3, Dated March 15, 2010

Cc: C. Waltman (EDA), F. Gonzales (EDA), M. Gerardot (AECOM), P. Watts (Vanir), D. Henry (TriPower), File

Bellevue / Denver / Los Vegas / Los Angeles / Oakland / San Bernardino / San Diego /  
Sacramento / San Francisco / San Jose / San Luis Obispo / Tempe / Tucson / Texas / Virginia



## ***Project Pricing and Plan***

**800MHz County Wide Radio DAS  
for Smith Correctional Facility  
(600 Bed Expansion)  
Banning, CA**

**March 15, 2010**

**Prepared for:**

**Lt. Jennifer McConville – Riverside County Sheriff's Department**

**Howard Newton – Riverside County IT**

**Moe Raissdana – Riverside County IT**

**POWER**  
CORPORATION

March 15, 2010

Lieutenant Jennifer McConville – Riverside County Sheriff's Department  
Mr. Howard Newton – Riverside County IT  
Mr. Moe Raissdana - Riverside County IT

Subject: PROJECT PRICING for:

**Smith Correctional Facility - 1627 South Hargrave Street Banning, CA 92220**

- 800MHz Riverside county wide and on-campus radio in-building coverage enhancement system for 600 bed expansion new facility

Thank you for the opportunity to provide in building coverage for the SCF new expansion facility.

This document defines our understanding of the project, the scope of work to be performed and presents our pricing calculations for the project. This Scope of Work and Pricing is based upon the information given to us to date, the results of our on-site examinations of the property, and our experience and our understanding of the necessary deliverables to provide a turn-key, guaranteed coverage Distributed Antenna System.

TriPower has an extensive history and track record in helping developers and building owners in meeting their in-building coverage requirements. Some of our directly relevant projects in California include:

- LAPD Metro Detention Center (UHF)
- Athens Sheriff's Station (UHF)
- Los Angeles Port Police Administration Building (UHF)
- Regency Tower Riverside DA headquarters (UHF and 700/800MHz)
- Alameda County Jail (800MHz)
- Santa Rita County Jail (800MHz)
- San Bruno County Jail (800MHz)

In addition, TriPower has designed and installed Public Safety DAS systems at Avalon Bay at Anaheim, Hyatt Classic Residence in La Jolla, Americana at Brand in Glendale, Worldmark Towers in Anaheim, and the Plaza in Irvine. In addition, TriPower has provided in building coverage for Avalon Bay Meydenbauer and has completed very large scale projects on multiple Kaiser Permanente hospitals, and Kemper Development's Lincoln Square in Bellevue, Washington. *(Reference account lists are attached to this proposal package.)*

## 1. Project Scope

Design, install, and turn up an in building system that will re-amplify and distribute the 800MHz county of Riverside system and the on campus 800MHz repeated channel radio signals throughout the interior of the 600 bed expansion new facility.

The project coverage area includes:

- Prisoner housing buildings ("pods") 15, 16 and 17 - complete building coverage for both floors including:
  - ✓ Cells
  - ✓ Dayroom areas
  - ✓ Recreation yard areas
  - ✓ Control rooms (and control room corridors)
  - ✓ Outer perimeter corridors ("chases")
  - ✓ "Inter-pod" connecting corridors
- Support building – complete building coverage for both floors including:
  - ✓ Holding cells
  - ✓ Offices
  - ✓ Inmate examination and consultation rooms
  - ✓ Storage/property rooms and areas
  - ✓ Currently shelled areas
  - ✓ Utility/equipment rooms
  - ✓ Stairwells and elevators

(NOTE: see attached DAS Proposal and Pricing document for complete Scope and Bill of Materials)

## 2. Pricing Proposal

Upon approval and notice to proceed, TriPower will conduct a full system design, including propagation predictions, and build out plan.

DAS Proposal and Pricing documents attached to this proposal package.

## 3. Assumptions/Qualification/Exclusions/Terms

Please refer to the attached DAS Proposal and Pricing document for detailed list of Assumptions, Qualifications, Exclusions, and Terms.

## 4. TriPower "Guaranteed Coverage / Guaranteed Cost" Protection Plan

Even after full engineering analysis and full system design, and an agreed upon contract price - once installation begins there is a chance that difficulties could be encountered that would result in increased equipment and material costs, and/or installation costs. In addition, there is also the chance that, upon final testing, additional components may be needed to provide the required coverage

This Tri-Power Protection Plan guarantees you in that in the event there are additional costs incurred (that are not a result of requested changes of scope of work), these costs are fully covered by TriPower – there would be no change order or other add on charges to Riverside county.

Lt. McConville, Howard and Moe – we thank you very much for this opportunity. We look forward to working with your team. Please give me a call if you have any questions concerning our approach to meet your Public Safety requirements.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Henry", with a stylized flourish at the end.

Don Henry  
TriPower Account Manager – Southwest US

Attachments: DAS Proposal and Pricing  
Single line drawings; conceptual design antenna placement diagrams  
Product specification sheets  
TriPower Reference Accounts

# Smith Correctional Facility Expansion 800 MHz DAS



<b>Client:</b>	Bernard Brothers Construction	<b>Date:</b>	March 15, 2010
<b>Prepared For:</b>	Ryan Hernandez	<b>Prepared By:</b>	Don Henry
<b>Project Name:</b>	Smith Correctional Facility - 800 Bed Expansion	<b>Job #:</b>	TBD
<b>Project Location:</b>	Banning, CA	<b>Start Date Estimate:</b>	March 22, 2010
<b>Coverage Scope:</b>	FULL FACILITY - ALL AREAS		

Item #	Description	Price	Total
<b>800 MHz County Wide Public Safety In Building Distributed Antenna System</b>			
1	Propagation Study and Full Design; Construction Drawings; Pre-con site walk	\$31,862.00	\$31,862.00
2	Equipment and Materials	\$121,821.19	\$121,821.00
3	Shipping charges	\$2,006.30	\$2,006.00
4	Sales tax	\$10,659.35	\$10,660.00
5	System Installation	\$46,170.21	\$46,170.00
6	System Commissioning and Acceptance Testing; Deliver CAD As-builts and close out package	\$12,670.00	\$12,670.00
		<b>Project Subtotal:</b>	<b>\$225,189.00</b>
7	OCIP credit		\$4,891.00
		<b>PROJECT TOTAL:</b>	<b>\$220,298.00</b>

**COMMENTS:**

- 1 See attached Proposal Summary
- 2 Equipment and Materials = Active components (TX/RX BDA, SOLID Technologies Fiber Distribution equipment, APC UPS power supplies, coax, donor antenna, distribution antennas, splitter/couplers, etc.
- 3 Pricing includes performance bond costs for Low Voltage installation work.

**Approved By:** \_\_\_\_\_ **Name:** \_\_\_\_\_



# Smith Correctional Facility Expansion 800 MHz DAS

**TRIPower**  
CORPORATION

<b>Client:</b>	Bernard Brothers Construction	<b>Date:</b>	March 15, 2010
<b>Prepared For:</b>	Ryan Hernandez	<b>Prepared By:</b>	JMC - Sale Eng
<b>Project Name:</b>	Smith Correctional Facility - 600 Bed Expansion	<b>Job #:</b>	TBD
<b>Project Location:</b>	Banning, CA	<b>Start Date Estimate:</b>	March 22, 2010
<b>Coverage Scope:</b>	FULL FACILITY - ALL AREAS		

## Scope of Work

- 1 Summary - Provide materials, equipment and professional services for a 800 MHz Public Safety radio system.**  
800 MHz radio and SOLID headend located in Support Bldg - supporting both Riverside county wide and on campus services.
- 2 Project physical summary**  
2 story facility housing criminal inmates.  
Approximately 120,000 square feet.  
4 interconnected buildings, comprising of a Support Building that connects/joins three detention buildings.  
Detention buildings have a perimeter corridor (both levels) that requires PS radio service also.
- 3 Wireless Services Scope**  
Public Safety - 800MHz (=>-95 RSSI at 95% Coverage)
- 4 Professional Services**  
Provide all installation and professional services for the installation.  
Provide project management for the DAS installation from design to project close out.  
Provide TX/RX 800 MHz radio and donor antenna.  
Provide SOLID Technologies fiber based DAS equipment, coaxial cable and antennas to support 800 MHz public safety.  
Battery backup (UPS) included for headend (BDA and SOLID equipment) and SOLID remote equipment. 30 minute runtime.  
Provide optimization service of 800 MHz public safety signals (county wide and on campus).  
Provide final test results and warranty documentation on the system and its components.  
Provide final drawings (As-Builts) based off the red-line drawings developed during the DAS construction.  
Perform site survey and data collection of existing RF environment for propagation predicctions, final DAS design and IM study.  
Provide final test results from ATP to Riverside IT Dept.

## Assumptions & Qualifications

- 1 Target date for completion of system installation and optimization is April 9, 2010
- 2 TriPower assumes all project related on-site work shall be conducted Mon-Fri (0800-1600 hours).
- 3 Utilize existing equipment mounting boards or install as necessary.
- 4 Assume remote closet DAS components can be wall mounted.
- 5 Assume BDA/headend location to be located in Support Bldg, Level 2, Room 202.
- 6 Assume 800 MHz cable run to donor signal source 200' until formal site survey conducted.
- 7 Assumes -75 dBm or better Public Safety donor signal available at donor antenna rooftop location.
- 8 Assumes Line of Site (LOS) exists between donor site and macro site.
- 9 Assumes in-building vertical cable path exists between headend and rooftop.
- 10 Assumes multimode fiber is present from IT Room 202 to each Guard Tower telco closet on Level 2.
- 9 Assumes power will be readily available at BDA/headend/remote location(s).
- 12 Assume asbestos abatement has been completed.
- 13 TriPower will not be responsible for lack of coverage in areas outside of the specifically targeted locations.
- 14 DAS components and infrastructure damaged after installation are not the responsibility of TriPower.
- 15 Assume that the 800MHz on campus and 800MHz simulcast services will be optimized simultaneously.
- 16 Assume space for secure storage will be made available in mutually agreed upon location.
- 17 Assume electrical power will be provided.
- 18 Shipping costs for equipment and materials listed.
- 19 Amplifier Delivery can take as long as 6-8 weeks ARO.

## Exclusions

- 1 Raceways, grounding bars and cable trays.
- 2 Conduit/innerduct (any conduit/innerduct provided by the client will include pull-string).
- 3 Fiber Optic; cable, patch panels, terminations.
- 4 Coring is excluded.
- 5 Premium labor / union labor, overtime, weekends and holidays.
- 6 Power outlets and all electrical work.
- 7 Inspection, permit or review fees as required by code or other Authority Having Jurisdiction.

## Terms

- 1 Net 30 days for each change order billing
- 2 Past due accounts will incur interest charges at 1.5% per month. (annual rate of 18%)
- 3 In the event of collection activity, all related fees, including legal and collection costs, shall be the responsibility of the client.
- 4 Proposal valid for 90 days from date listed above.

# Smith Correctional Facility Expansion 800 MHz DAS

TRIPPOWER

## PRELIMINARY BILL OF MATERIALS

Client: Bernard Brothers Construction  
 Prepared For: Ryan Hernandez  
 Project Name: Smith Correctional Facility - 600 Bed Expansion  
 Project Location: Banning, CA  
 Coverage Scope: FULL FACILITY - ALL AREAS

Date: March 15, 2010  
 Prepared By: Don Henry  
 Job #: TBD  
 Estimated Start Date: March 22, 2010

Line Item #	Part Number	Description	Qty
1	BIU_C	Base Interface Unit - Chassis	1
2	BIU_Bik	Base Interface Unit - Blank Module	3
3	MDBU_800PS	MDBU 800PS	1
4	ODU_C	Optical Distribution Unit - Chassis	1
5	ODU_OM_4	Optical Distribution Unit - 4 Port Optic Module	1
6	ODU_B (Blank Module)	ODU - 4 Port Blank Module	1
8	ROU_C	Remote Optic Unit - Chassis	4
9	RDU_800PS	RDU - 800PS	4
10	ROU_B (Blank Module)	RDU - Blank module - ROU	8
11	800MHz BDA	TXRX 800MHz Signal Booster	1
12	LDF4RN-50	Coax, 50ohm - 1/2" Black Riser	200
13	AL-4RPV-50	Coax 50 Ohm - 1/2" Plenum 1MHz-8.8GHz	3,925
14	NMP01250	50 Ohm - 1/2" N-Type Coaxial Connectors	142
15	RG142	Jumper - 3' NM-NM	32
17	Non-Pen Antenna Roof Mount + Bricks/Mat	Antenna Mount, Cement Blocks, and Rubberized Roof Mats	1
18	221213	Weatherproofing Kit	1
19	Polyphaser USXL-D	700/800MHz Polyphaser	1
20	CSI-AY746-896/11	746-896 MHz Yagi	1
21	Grounding Kit	Grounding Kit - coaxial cable	1
22	D2-68FN	2:1 Power Divider	1
23	D3-68FN	3:1 Power Divider	16
24	D4-68FN	4:1 Power Divider	1
25	812-4-1.500V	12:1 Power Divider	3
26	CK16-N	6dB Coupler 700-2700MHz	6
27	CK17-N	10dB Coupler 700-2700MHz	4
28	CK19-N	30dB Coupler 700-2700MHz	4
28	HRA019-00 SC/APC-03M	3m fiber jumper, simplex MMF	1
29	AP 698_2.5_7-10	Directional panel antenna 698-894 / 1700-2200 MHz / 3dBI	8
30	A0-700-2.5_3	Omnidirectional antenna 700-860 / 1710-2500 MHz / 3dBI	30
31	APC - SUA1500RM2U	Uninterruptible Power Supply - Remote	38
32	APC - SMT750	Uninterruptible Power Supply - UPS - Headend	1
33			4
34			

Spare not included in BOM at this time



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**Smart-UPS**  
**APC Smart-UPS 1500VA USB & Serial RM 2U 120V**

**SUA1500RM2U**  
 Price: **\$719.00**  
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APC Smart-UPS, 980 Watts / 1440 VA, Input 120V / Output 120V, Interface Port DB-9 RS-232, SmartSlot, USB, Rack Height 2 U

**Includes:** CD with software, Rack Mounting brackets, Rack Mounting support rails, Smart UPS signalling RS-232 cable, USB cable, User Manual

**Standard Lead Time:** Usually in Stock

**Average Customer Review** ★★★★★ **4.5**

2 of 2 (100%) customers would recommend this product to a friend.

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**Technical Specifications**

- **Product Overview**
- Documentation
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- Ratings and

## Reviews

### Output

Output Power Capacity  
980 Watts / 1440 VA  
Max Configurable Power  
980 Watts / 1440 VA  
Nominal Output Voltage  
120V  
Efficiency at Full Load  
95%  
Output Voltage Distortion  
Less than 5% at full load  
Output Frequency (sync to mains)  
47 - 53 Hz for 50 Hz nominal, 57 - 63 Hz for 60 Hz nominal  
Crest Factor  
up to 5 : 1  
Waveform Type  
Sine wave  
Output Connections  
(6) NEMA 5-15R



### Input

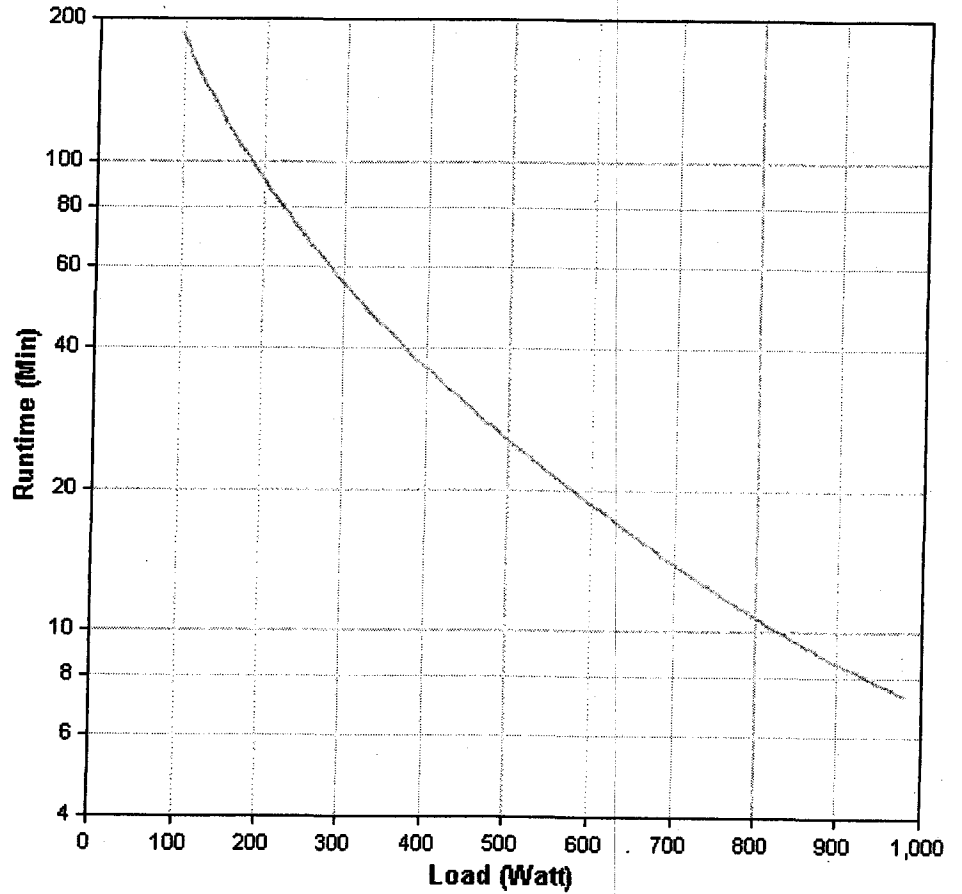
Nominal Input Voltage  
120V  
Input Frequency  
50/60 Hz +/- 3 Hz (auto sensing)  
Input Connections  
NEMA 5-15P



Cord Length  
8 feet (2.44 meters)  
Input voltage range for main operations  
82 - 144V  
Input voltage adjustable range for mains operation  
75 - 154V

### Batteries & Runtime

Battery Type  
Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof  
Typical recharge time  
3 hour(s)  
Replacement Battery  
RBC24  
RBC™ Quantity  
1  
Runtime Graph

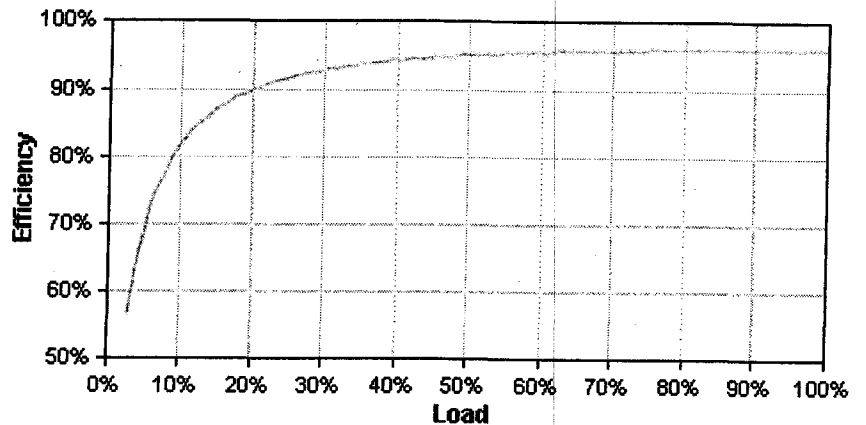


Hover over the line on the graph above to view the runtime at any desired load

Curve fit to measured runtime data. All measurements taken with new, fully charged batteries, at typical environmental conditions, with no electrical input and balanced resistive load (PF = 1.0) output.

[View Enlarged Runtime Graph Chart](#)

### Energy Use/Efficiency



Hover over the line on the graph above to view the efficiency at any desired load

Curve fit to measured runtime data. All measurements taken with new, fully charged batteries, at typical environmental conditions, with no electrical input and balanced resistive load (PF = 1.0) output.

[View Enlarged Chart](#)

### Communications & Management Interface Port(s)

DB-9 RS-232, SmartSlot, USB  
Available SmartSlot™ Interface Quantity

1

Control panel

LED status display with load and battery bar-graphs and On Line : On Battery : Replace Battery : and Overload Indicators

Audible Alarm

Alarm when on battery : distinctive low battery alarm : configurable delays

Emergency Power Off (EPO)

Optional

### Surge Protection and Filtering

Surge energy rating

459 Joules

Filtering

Full time multi-pole noise filtering : 0.3% IEEE surge let-through : zero clamping response time : meets UL 1449

### Physical

Maximum Height

3.50 inches (89 mm)

Maximum Width

17.00 inches (432 mm)

Maximum Depth

18.00 inches (457 mm)

Rack Height

2U

Net Weight

63.00 lbs. (28.64 kg)

Shipping Weight

70.20 lbs. (31.91 kg)

Shipping Height

9.88 inches (251 mm)

Shipping Width

23.38 inches (594 mm)

Shipping Depth

23.75 inches (603 mm)

Color

Black

Units per Pallet

16.00

### Environmental

Operating Environment

32 - 104 °F (0 - 40 °C)

Operating Relative Humidity

0 - 95%

Operating Elevation

0-10000 feet (0-3000 meters)

Storage Temperature

5 - 113 °F (-15 - 45 °C)

Storage Relative Humidity

0 - 95%

Storage Elevation

0-50000 feet (0-15000 meters)

Audible noise at 1 meter from surface of unit

46.00 dBA

Online Thermal Dissipation

171.00 BTU/hr

### Conformance

Regulatory Approvals

CSA, FCC Part 15 Class A, UL 1778

Standard Warranty

2 years repair or replace

Equipment protection policy

Lifetime : \$150000

\*Except where noted, all prices are Estimated Resale Price (ERP) - Without Tax/VAT. Pricing in other locations and sites may vary.

\*\*The time to recharge to 90% of full battery capacity following a discharge to shutdown using a load rated for 1/2 the full load rating of the UPS.

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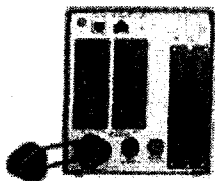
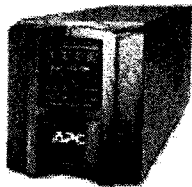
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**Smart-UPS**  
**APC Smart-UPS 750VA LCD 120V**

**SMT750**  
 Price  
**\$319.99**  
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APC Smart-UPS, 500 Watts / 750 VA, Input 120V / Output 120V, Interface Port DB-9 RS-232, Smart-Slot, USB

**Includes:** CD with software, Documentation CD, Smart UPS signalling RS-232 cable, USB cable

**Standard Lead Time:** Usually Ships within 2 Weeks

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**Output**

Output Power Capacity  
500 Watts / 750 VA  
Max Configurable Power  
500 Watts / 750 VA  
Nominal Output Voltage  
120V  
Output Voltage Distortion  
Less than 5% at full load  
Output Frequency (sync to mains)  
47 - 53 Hz for 50 Hz nominal, 57 - 63 Hz for 60 Hz nominal  
Crest Factor  
up to 5 : 1  
Waveform Type  
Sine wave  
Output Connections  
(6) NEMA 5-15R



**Input**

Nominal Input Voltage  
120V  
Input Frequency  
50/60 Hz +/- 3 Hz (auto sensing)  
Input Connections  
NEMA 5-15P

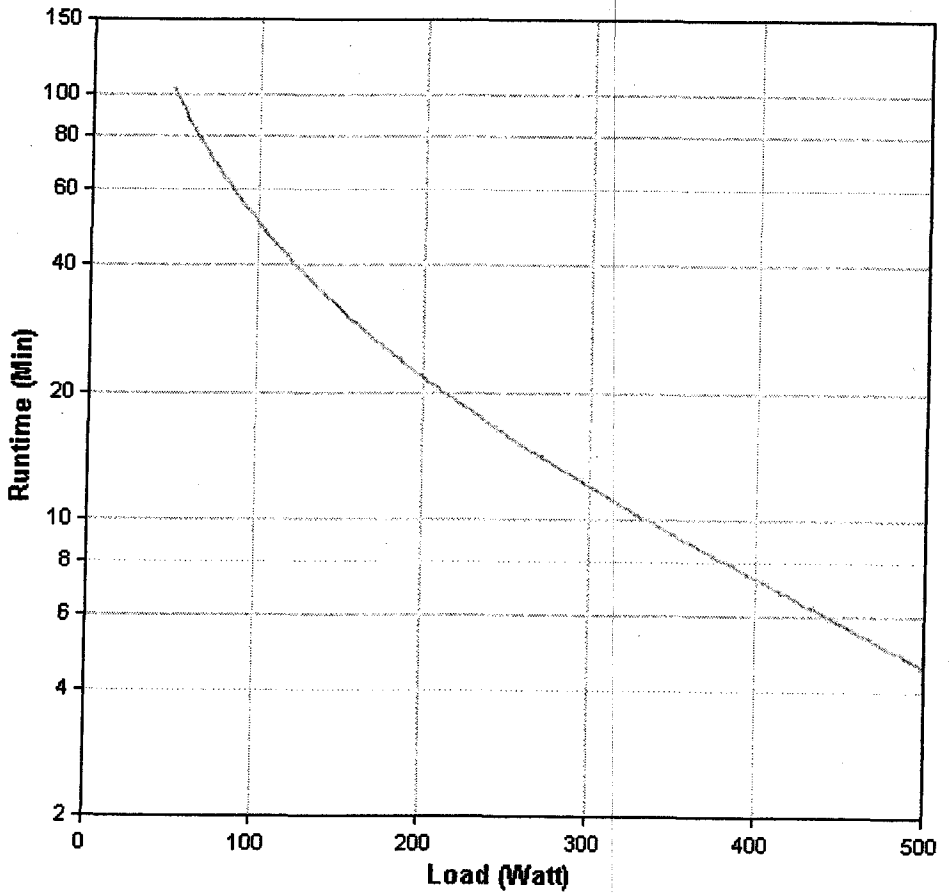


Cord Length  
6 feet (1.83 meters)  
Input voltage range for main operations  
82 - 144V  
Input voltage adjustable range for mains operation  
75 - 154V

**Batteries & Runtime**

Battery Type  
Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof  
Typical recharge time  
3 hour(s)  
Replacement Battery  
RBC48  
RBC™ Quantity  
1  
Runtime Graph



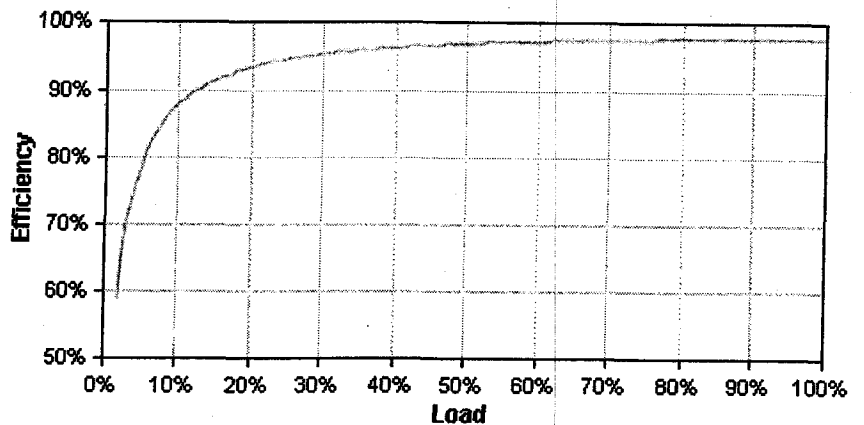


Hover over the line on the graph above to view the runtime at any desired load

Curve fit to measured runtime data. All measurements taken with new, fully charged batteries, at typical environmental conditions, with no electrical input and balanced resistive load (PF = 1.0) output.

[View Enlarged Runtime Graph](#) [View Runtime Chart](#)

### Energy Use/Efficiency



Hover over the line on the graph above to view the efficiency at any desired load

Curve fit to measured runtime data. All measurements taken with new, fully charged batteries, at typical environmental conditions, with no electrical input and balanced resistive load (PF = 1.0) output.

[View Enlarged Chart](#)

### Communications & Management Interface Port(s)

DB-9 RS-232, Smart-Slot, USB  
Available SmartSlot™ Interface Quantity

1  
Control panel  
Multi-function LCD status and control console  
Audible Alarm  
Alarm when on battery : distinctive low battery alarm : configurable delays  
Emergency Power Off (EPO)  
Optional

### Surge Protection and Filtering

Surge energy rating  
540 Joules  
Filtering  
Full time multi-pole noise filtering : 0.3% IEEE surge let-through : zero clamping response time : meets UL 1449

### Physical

Maximum Height  
6.20 inches (157 mm)  
Maximum Width  
5.40 inches (137 mm)  
Maximum Depth  
14.10 inches (358 mm)  
Net Weight  
29.00 lbs. (13.18 kg)  
Shipping Weight  
32.00 lbs. (14.55 kg)  
Shipping Height  
11.42 inches (290 mm)  
Shipping Width  
10.63 inches (270 mm)  
Shipping Depth  
19.69 inches (500 mm)  
Color  
Black  
Units per Pallet  
40.00

### Environmental

Operating Environment  
32 - 104 °F (0 - 40 °C)  
Operating Relative Humidity  
0 - 95%  
Operating Elevation  
0-10000 feet (0-3000 meters)  
Storage Temperature  
5 - 113 °F (-15 - 45 °C)  
Storage Relative Humidity  
0 - 95%  
Storage Elevation  
0-50000 feet (0-15000 meters)  
Audible noise at 1 meter from surface of unit  
55.00 dBA  
Online Thermal Dissipation  
90.00 BTU/hr

### Conformance

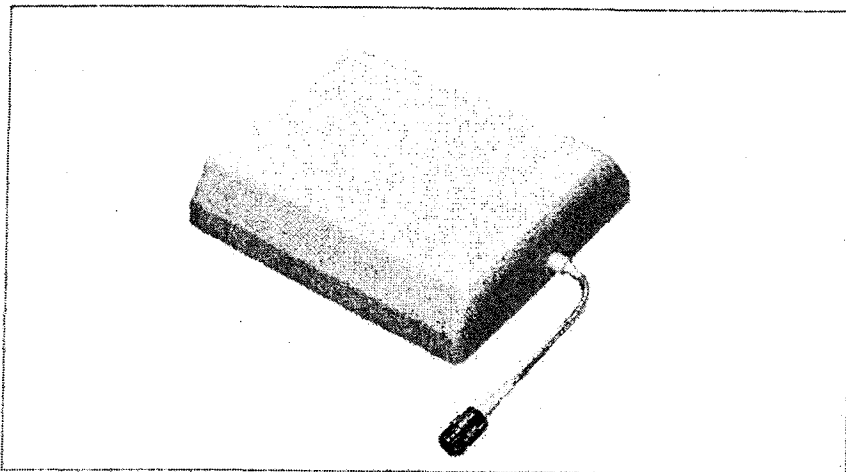
Regulatory Approvals  
UL 1778  
Standard Warranty  
3 years repair or replace (excluding battery) and 2 year for battery  
Equipment protection policy  
Lifetime : \$150000  
Environmental Compliance  
RoHS 7b Exemption

\*Except where noted, all prices are Estimated Resale Price (ERP) - Without Tax/VAT. Pricing in other locations and sites may vary.

\*\*The time to recharge to 90% of full battery capacity following a discharge to shutdown using a load rated for 1/2 the full load rating of the UPS.

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## >> INDOOR / OUTDOOR QUAD BAND PANEL ANTENNA

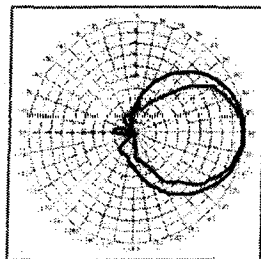
### Mechanical Specifications

Materials	
Case	Aluminum Alloy
Installation Kits	Stainless Steel
Operation Temperature	-55°C to +65°C
Dimensions	8.19" x 7.00" x 1.73" (208.01 x 177.8 x 43.9 mm)
Antenna Weight	1.32 lbs (0.599 Kg)
Mounting Hardware Weight	1.3 lbs (0.589 Kg)
Connectors	N-Female

### Electrical Specifications

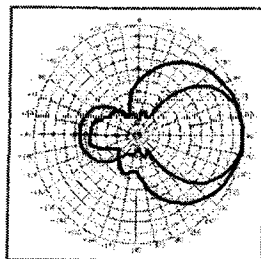
Horizontal Beamwidth	70° (698-894 MHz); 60° (1700-2200 MHz)
Vertical Beamwidth	50° (698-894 MHz); 45° (1700-2200 MHz)
Gain	7 dBi (698-894 MHz); 10 dBi (1700-2200 MHz)
Polarization	Vertical
Electrical Downtilt	0°
Passband Ripple	<0.3 dB
Impedance	50 Ohm
VSWR	<1.5: 1
Maximum Input Power	100 Watts
Lightning Protection	Direct Ground

### Radiation Patterns



Vertical

698-894 MHz  
1700-2200 MHz



Horizontal

### MODEL NUMBER

>> CSI-AP/698/2.2K/7-10

### FREQUENCY RANGES

>> 698-894 MHz

>> 1700-2200 MHz

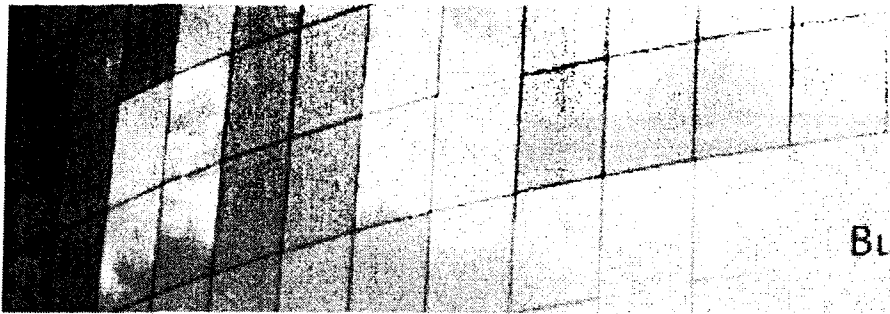
### FEATURES & BENEFITS

- >> Gain 7dBi (698-894 MHz)  
Gain 10 dBi (1700-2200 MHz)
- >> Multi-Band Design
- >> Wall or Pole Mount Bracket Included
- >> Flat Low Profile Enclosure
- >> Clean Pattern
- >> Weather Resistant Radome

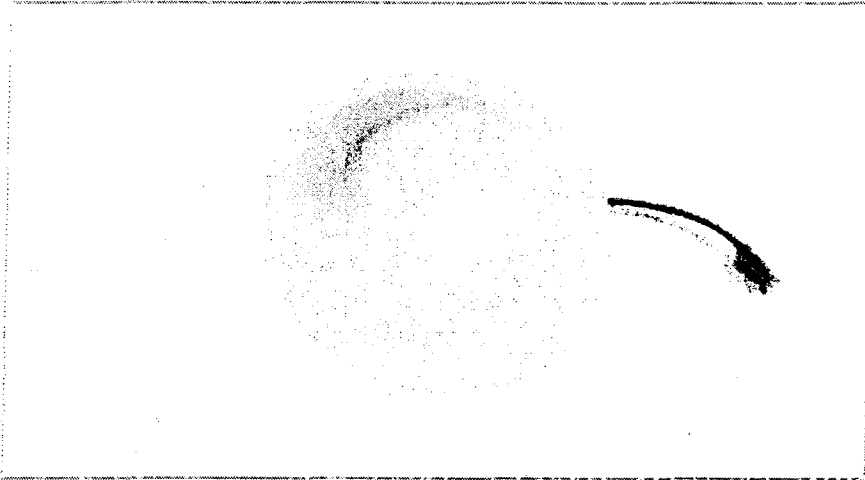


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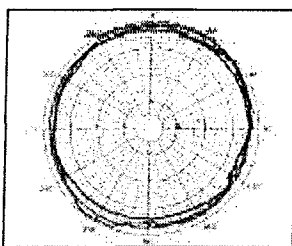


## >> OMNIDIRECTIONAL ANTENNA / Quad-Band

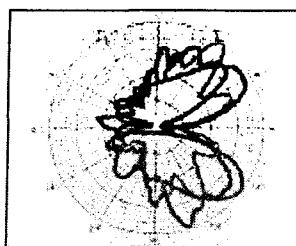
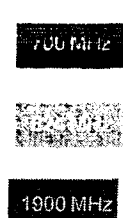
### Specifications

Gain	3 dBi
VSWR (700-960MHz)	<2.0 : 1
VSWR (1710-2500MHz)	<1.5 : 1
E-Plane (3 dB beamwidth)	30°
H-Plane (3 dB beamwidth)	Omnidirectional
Polarization	Vertical
Power	50 Watts
Dimensions	8.13"D x 5.34"H / (206.38mm x 135.62mm)
Weight	.33 lb. / ( 0.15 Kg)
Connector	N-Female
Standard Mounting Style	Ceiling
Enclosure	ABS
IM 3RD Order(2X43dBm)	< -150 dBc
Lighting Protection	Direct Ground
Universal L-bracket included for additional mounting options (U-bolt compatible)	

### Radiation Patterns



Horizontal



Vertical

Date represents a ceiling mounted antenna

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### MODEL NUMBER

>> CSI-AO/700/2.5K/3

### FREQUENCY RANGES

>> 700-960 MHz

>> 1710-2500 MHz

### FEATURES & BENEFITS

>> 3 dBi Gain

>> Clean Pattern

>> Ceiling or Wall Mountable

>> Paintable Housing



cellular specialties, inc.

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International: +1.504.635.6677  
Fax: 504.635.6642

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# SOLID FIBER DAS PLATFORM SPECIFICATIONS

## 1900MHz PCS

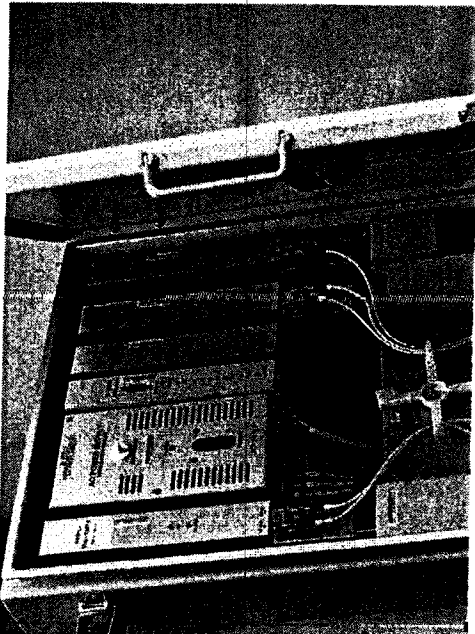
REQ	DESCRIPTION	REMARKS
1	Frequency Range	TX 1885-1930MHz RX 1850-1910MHz
2	Output Power	TX 20W RX 20W
3	Input Power	TX 20W RX 20W
4	Gain	TX 20dB RX 20dB
5	Gain Control Range / Step	TX 20dB to 0dB RX 20dB to 0dB
6	Gain Step Accuracy	TX 0.5dB RX 0.5dB
7	System Delay	TX 10ms RX 10ms
8	Frequency Error	TX 0.1ppm RX 0.1ppm
9	Spurious Emission	TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset
10	Residual Spillover	TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset
11	Spurious Emission	TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset
12	Modem Signals	TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset
13	AGC Function	TX 20dB RX 20dB
14	Optical Link Loss	TX 20dB RX 20dB
15	Optical Connectors	TX SC/APC RX SC/APC
16	Optical Wavelength (nm)	TX 1550nm RX 1550nm

## 1700 & 2100 MHz AWS-1

REQ	DESCRIPTION	REMARKS
1	Frequency Range	TX 1710-1755MHz RX 1755-1800MHz
2	Output Power	TX 20W RX 20W
3	Input Power	TX 20W RX 20W
4	Gain	TX 20dB RX 20dB
5	Gain Control Range / Step	TX 20dB to 0dB RX 20dB to 0dB
6	Gain Step Accuracy	TX 0.5dB RX 0.5dB
7	System Delay	TX 10ms RX 10ms
8	Frequency Error	TX 0.1ppm RX 0.1ppm
9	Spurious Emission	TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset
10	Residual Spillover	TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset
11	Spurious Emission Mask	TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset
12	Modem Signals	TX -30dBm @ 100kHz offset TX -30dBm @ 1MHz offset TX -30dBm @ 10MHz offset
13	AGC Function	TX 20dB RX 20dB
14	Optical Link Loss	TX 20dB RX 20dB
15	Optical Connectors	TX SC/APC RX SC/APC
16	Optical Wavelength (nm)	TX 1550nm RX 1550nm

## ROU (Remote Unit)

- Supports multi-band/multi-carrier solutions
- Additional Ports for VHF and UHF Land Mobile Radio (LMR)
- Detachable door hinge for ease of maintenance.
- 19" W x 26.6" H x 10.16" D
- Maximum Weight: 78 lbs.



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# SOLID FIBER DAS PLATFORM SPECIFICATIONS

Now offering Public Safety, 3G, 4G and WiFi on a converged platform in any sequence or combination - SOLID Technologies presents the most comprehensive Fiber DAS Platform ever built.

SOLID's Fiber DAS Platform has a number of beneficial features:

- Modular design permits easy, cost-effective expansion
- Up to 1 watt of output power
- All cellular and public safety frequencies supported including 700 MHz and AWS
- Requires only 1 strand of fiber to each remote
- Advanced filtering technology for precise frequency control
- Waterproof, dust proof NEMA 4 compliant remote enclosure
- Sophisticated Operation and Monitoring System for precise control
- Very competitively priced

Contact us to learn more about how SOLID Technologies is setting the new standard for in-building wireless coverage solution.



**DAS** DISTRIBUTED ANTENNA SYSTEM

SOLID Technologies

**SOLID**  
TECHNOLOGIES  
"The New Standard"

# SOLID FIBER DAS PLATFORM SPECIFICATIONS

## 700MHz

NO	ITEM	SPECIFICATION		REMARKS
		TX	RX	
1	Frequency Range	TX	TX	800-1100MHz
2	Output Power	TX	TX	
3	Input Power	TX	TX	
4	Gain	TX	TX	
5	Gain Control Range / Step	TX	TX	
6	Gain Step Accuracy	TX	TX	
7	System Delay	TX	TX	
8	Frequency Error	TX	TX	
9	Spurious Emission	TX	TX	
10	IMD	TX	TX	
11	Preload Ripple	TX	TX	
12	Out of Band Attenuation	TX	TX	
13	Modulation	TX	TX	
14	AGC Function	TX	TX	
15	Optic Link Loss	TX	TX	
16	Optical Connectors	TX	TX	
17	Optic Wavelength (nm)	TX	TX	

## 800MHz

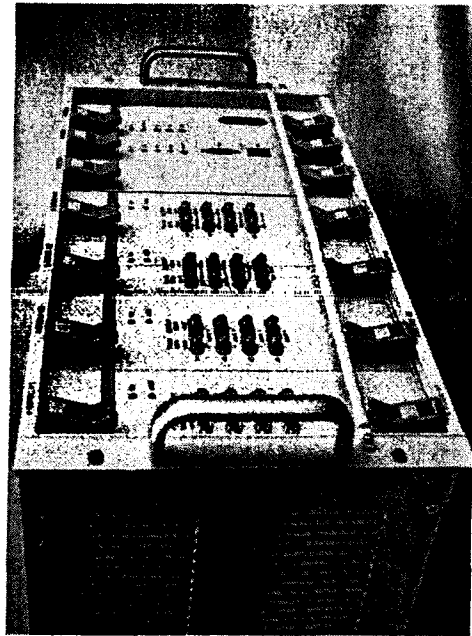
NO	ITEM	SPECIFICATION		REMARKS
		TX	RX	
1	Frequency Range	TX	TX	800-1100MHz
2	Output Power	TX	TX	
3	Input Power	TX	TX	
4	Gain	TX	TX	
5	Gain Control Range / Step	TX	TX	
6	Gain Step Accuracy	TX	TX	
7	System Delay	TX	TX	
8	Frequency Error	TX	TX	
9	Spurious Emission	TX	TX	
10	IMD	TX	TX	
11	Preload Ripple	TX	TX	
12	Out of Band Attenuation	TX	TX	
13	Modulation	TX	TX	
14	AGC Function	TX	TX	
15	Optic Link Loss	TX	TX	
16	Optical Connectors	TX	TX	
17	Optic Wavelength (nm)	TX	TX	

## 850MHz

NO	ITEM	SPECIFICATION		REMARKS
		TX	RX	
1	Frequency Range	TX	TX	850-1200MHz
2	Output Power	TX	TX	
3	Input Power	TX	TX	
4	Gain	TX	TX	
5	Gain Control Range / Step	TX	TX	
6	Gain Step Accuracy	TX	TX	
7	System Delay	TX	TX	
8	Frequency Error	TX	TX	
9	Spurious Emission	TX	TX	
10	IMD	TX	TX	
11	Preload Ripple	TX	TX	
12	Out of Band Attenuation	TX	TX	
13	Modulation	TX	TX	
14	AGC Function	TX	TX	
15	Optic Link Loss	TX	TX	
16	Optical Connectors	TX	TX	
17	Optic Wavelength (nm)	TX	TX	

## 900MHz IDEN + Paging

NO	ITEM	SPECIFICATION		REMARKS
		TX	RX	
1	Frequency Range	TX	TX	900-1100MHz IS-54/IS-63
2	Output Power	TX	TX	
3	Input Power	TX	TX	
4	Gain	TX	TX	
5	Gain Control Range / Step	TX	TX	
6	Gain Step Accuracy	TX	TX	
7	System Delay	TX	TX	
8	Frequency Error	TX	TX	
9	Spurious Emission	TX	TX	
10	IMD	TX	TX	
11	Preload Ripple	TX	TX	
12	Out of Band Attenuation	TX	TX	
13	Modulation	TX	TX	
14	AGC Function	TX	TX	
15	Optic Link Loss	TX	TX	
16	Optical Connectors	TX	TX	
17	Optic Wavelength (nm)	TX	TX	

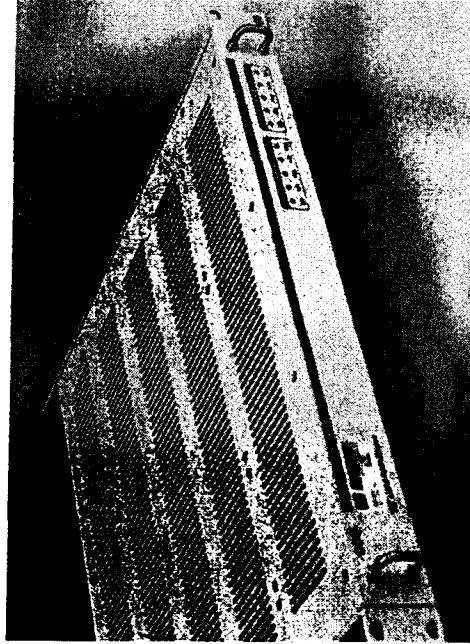


### BIU (Base Interface Unit)

- BTS/SDA interface for multi-band support
- Signal distribution to 35 remote units
- Full system alarming
- 19" W x 8.75" H x 17.7" D
- Maximum Weight 49 lbs.

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### ODU (Optical Distribution Unit)

- Range of 100 MHz to 2.4 GHz on a single strand of fiber
- RF to Optic conversion
- Connects BIU with 8 ROUS
- 19" W x 1.72" H x 17.7" D
- Maximum Weight 12.5 lbs.

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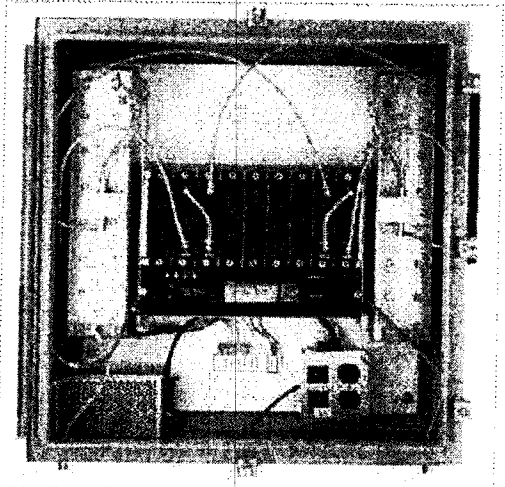
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## SIGNAL BOOSTER II 800 MHz SERIES

### Mission Critical Reliability for In-building Coverage . . .

The New Signal Booster II provides Public Safety grade reliability and coverage in disadvantaged RF locations for First Responders, Public Safety/Governmental agencies and Private System Users. Reliable RF coverage is gained in basements, parking garages, correctional facilities, courthouses, hospitals, malls and schools. Other challenging environments covered by the Signal Booster II product include subways and rapid transit systems, airports, stadiums/ arenas, high-rise buildings and large private enterprise facilities and campuses.



Whether you are on the front line and depend on a reliable communication system or you are the systems integrator responsible for implementing a dependable system, this new compact design facilitates installation and system optimization for rock solid operation via a simple man-machine interface. Imbedded features for ease of initial setup include decoupled test points for signal level detection, menu driven gain setting, front panel LED monitors for amplifier and power status, and an at-a-glance LED bar graph to indicate relative level of Output Level Control (OLC). Additionally, this product offers a unique on-board OLC DataLog feature that archives a User Signal Profile to facilitate optimum system configuration and performance.

### Output Level Control (OLC) Circuit Monitors and Controls RF Output Power

- Maintains maximum required output power while preventing damage and excessive emissions per FCC requirements
- Easy-to-read LED bar graph
- Unique OLC DataLog feature facilitates system maintenance and optimization

### Decoupled RF Test Points For Simplified Service

- Allow fast system measurements in both uplink and downlink directions
- Monitor signals for performance optimization
- Integrated design facilitates non-intrusive measurements

### Secure, Non-Vented NEMA Enclosure Suitable for Extreme Indoor and Outdoor Environments

### Simple Setup is Achieved Via an Integral, Man-Machine Interface

- No Tools Required

### Optional Features Available

- Comm Card II for remote communications and control
- Fiber optic link interface
- Redundant PA configuration
- -48 VDC input

### DC Backup Interface Accepts +24 to +27 VDC and optional -48 VDC

### Microprocessor Controlled Fault Monitoring and Alarming Ensures Reliable Operation and Flexible Configuration

- Control system continuously monitors parameters including voltage, current, temperature and OLC activity
- LEDs on each module quickly annunciate source of fault
- Simple, back-lit liquid crystal display (LCD) and switch control
- Fault triggers annunciation on panel, alarm contact closure and internal recording of failed subsystem

### Card Cage Modularity

- Easy "slide-in" replacement process
- Facilitates ease of service and system configuration

### High Performance Bandpass Filters

- Configured to customer requirements and addresses many specifications requiring custom passbands
- Models available with passbands that range from 3 MHz (NPSAC with excellent out-of-band rejection) to 18 MHz for full band coverage

### Programmable Gain Setting

- Ease of initial configuration via front panel
- When used in conjunction with OLC DataLog, simplifies post installation adjustments

### Three Major Gain Ranges Available

Low: + 45 dB, Medium: + 60 dB, High: + 80 dB



## RF Measurement and Management in Your World



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398-SBII800-DS0602008

# SIGNAL BOOSTER

## SPECIFICATIONS 806 - 869 MHz

	Low Gain (In-Line) Booster	Medium Gain Booster	High Gain (Head-End) Booster
Minimum Gain***	+45 dB	+60 dB	+80 dB
Gain Adjustment	Programmable attenuation, 0-30 dB, 0.5 dB steps	Programmable attenuation, 0-30 dB, 0.5 dB steps	Programmable attenuation, 0-30 dB, 0.5 dB steps
3rd Order Output Intercept Point	+55 dBm minimum, with no attenuation	+55 dBm minimum, with no attenuation	+55dBm minimum,with no attenuation
Maximum Input Level	0 dBm	0 dBm	0 dBm
Maximum Output Power	+30 dBm (single carrier)	+30 dBm (single carrier)	+30 dBm (single carrier)
RF Sampler	PA Output sampler ports	PA Output sampler ports	PA Output sampler ports
Noise Figure (without attenuation)***	6.5 dB maximum,	3.5 dB maximum,	3.5 dB maximum,
Propagation Delay***	<1 $\mu$ s	<1 $\mu$ s	<1 $\mu$ s
Operating Temperature Range	-30°C to +50° C	-30°C to +50° C	-30°C to +50° C
Nominal impedance	50 ohms, <1.5:1 VSWR	50 ohms, <1.5:1 VSWR	50 ohms, <1.5:1 VSWR
Input/Output connectors	N female	N female	N female
RF Sampler Connectors	BNC female.	BNC female	BNC female
AC Power Input	100-240 VAC; 50-60 Hz	100-240 VAC; 50-60 Hz	100-240 VAC; 50-60 Hz
DC Input Voltage	+24 to +27 VDC, -48 VDC optional	+24 to +27 VDC -48 VDC optional	+24 to +27 VDC -48 VDC optional
Unit Power Consumption (AC/DC)	<100 VA	<100 VA	<100 VA
Housing*	See Model Matrix Below	See Model Matrix Below	See Model Matrix Below
Nominal size	24" x 24" x 8"	24" x 24" x 8"	24" x 24" x 8"
Net weight	< 85 lbs.	< 85 lbs.	< 85 lbs.
FCC Certification****	EZZ5PI031202	EZZ5PI031202	EZZ5PI031202
Industry Canada Certification****	1940A-PI031202	1940A-PI031202	1940A-PI031202

\*\*\* For NPSpac unit: Propagation delay: <1.5  $\mu$ s; Gain: +77 dB for High Gain unit; Max NF: 10 dB for low gain units, 8 dB for High and Mid Gain unit

\*\*\*\* Class B Type Booster. Certification under FCC Rules Part 90 and Industry Canada Certification Part RSS-131.

### 800 MHz Signal Booster II Model Matrix

Model Number*	Passbands	Gain
61-89A-50-A03-XX	**NPSpac 3MHz BW (Customer defined)	77 dB
61-89A-50-B03-XX	**NPSpac 3MHz BW (Customer defined)	60 dB
61-89A-50-C03-XX	**NPSpac 3MHz BW (Customer defined)	45 dB
61-89A-50-A05-XX	5 MHz BW (Customer defined)	80 dB
61-89A-50-B05-XX	5 MHz BW (Customer defined)	60 dB
61-89A-50-C05-XX	5 MHz BW (Customer defined)	45 dB
61-89A-50-A06-XX	6 MHz BW (Customer defined)	80 dB
61-89A-50-B06-XX	6 MHz BW (Customer defined)	60 dB
61-89A-50-C06-XX	6 MHz BW (Customer defined)	45 dB
61-89A-50-A10-XX	10 MHz BW (Customer defined)	80 dB
61-89A-50-B10-XX	10 MHz BW (Customer defined)	60 dB
61-89A-50-C10-XX	10 MHz BW (Customer defined)	45 dB
61-89A-50-A15-XX	15 MHz BW (Customer defined)	80 dB
61-89A-50-B15-XX	15 MHz BW (Customer defined)	60 dB
61-89A-50-C15-XX	15 MHz BW (Customer defined)	45 dB
61-89A-50-A18-XX	18 MHz BW (806-824 / 851-869 MHz)	80 dB
61-89A-50-B18-XX	18 MHz BW (806-824 / 851-869 MHz)	60 dB
61-89A-50-C18-XX	18 MHz BW (806-824 / 851-869 MHz)	45 dB

\* Housing Options = XX: G1:Painted Steel NEMA 4, G2:Stainless Steel NEMA 4X, RM:19 inch Rack Mount (Frequencies MUST be provided with order.)

\*\*NPSpac downlink filter provides >38 dB of rejection  $\pm$ 1 MHz from the passband edge (either side).

Please consult factory 716.549.4700 for non-standard configurations with custom frequency windows, bandwidths or enclosures.



## RF Measurement and Management in Your World



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**Southern California Public Safety REFERENCE ACCOUNTS****450MHz projects:**

**Americana at Brand** – Glendale, CA  
Contact: Peter Hayden (Caruso Affiliated)  
Telephone: (323) 900-8100

**Athen's Sheriff Station** – Los Angeles, CA  
Contact: Ted Pao (Los Angeles County Communications)  
Telephone: (323) 821-0189

**LAPD Metro Detention Center** - Los Angeles, CA (in progress)

**LA Port Authority Harbor Police Administration Building** – San Pedro, CA (in progress)

**LAPD West 77<sup>th</sup> Street Jail** – Los Angeles, CA (in progress)

**800MHz projects:**

**Wyndham Vacation Resorts, Inc.** – Redmond, WA  
**Wyndham Resort and Hotel** - Oceanside, CA  
Contact: Josh Frantz (Davis Reed Construction)  
Telephone: 760-802-3103

**Classic Residence by Hyatt** – Chicago, IL  
**La Jolla Towers** - San Diego, CA  
Contacts: Jas Podgurski - Director of Engineering  
Telephone: 858-646-3465  
Corporate Contact: Akanni Salaka - Senior IT systems manager  
Telephone: 312-404-9592

**Hanover West, Inc.** – Burbank, CA  
**Platinum Centre Project** - Anaheim, CA  
Contact: Jorge Morales - Superintendent  
Telephone: 714-448-1674

**Lennar** – Aliso Viejo, CA  
**Central Park West - Belvedere and Lennox** – Irvine, CA  
Contact: Gary Hildabrand - Director of Urban Development  
Telephone: 949-349-8158

**Avalon Bay Communities** – Newport Beach, CA  
**Anaheim Stadium** – Anaheim, CA  
Contact: John Severino - Sr. Project Manager  
Telephone: 949-955-6211

**OWR Construction** – Irvine, CA  
**The Plaza at Irvine I and II** – Opus West – Irvine, CA  
Contact: Brian Knochenhauer – Project Manager  
Telephone: 949-250-0147

**Swinerton Builders** – Irvine, CA  
**Worldmark Tower** – Anaheim, CA  
Contact: Sumesh Behl – Project Manager  
Telephone: 949-622-7000

**Regency Tower** (Riverside County District Attorney headquarters) – Riverside, CA  
(450MHz, 700MHz and 800MHz)  
Contact: Jason Rich – Senior Project Manager (Snyder-Langston Construction)  
Telephone: (951) 683-6331



## REFERENCE PROJECTS

Tri-Power has installed more than 800 Distributed Antenna Systems (DAS) providing over 200 million square feet of extended wireless coverage to indoor environments insufficiently serviced by existing networks. We work with public safety officials, building owners, businesses and wireless carriers to create seamless coverage for cellular, PCS, 802.11a/b/g and Public Safety where it's needed most.

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### **Kemper Development Company**

*Lincoln Square (Bellevue, WA)*  
800 MHz Public Safety, Sprint-Nextel & WiFi  
1.5 million sq. ft.

### **Peace Health**

*Sacred Heart Medical Center (Eugene, OR)*  
800 MHz Public Safety, Cellular/PCS & WiFi  
1.4 million sq. ft.

### **Dept. of Veteran Affairs Hospitals**

*Sacramento, Reno, Fresno and Travis AFB*  
800 MHz Nextel  
1.0 million sq. ft.

### **City and County of San Francisco**

*County Jail #3 (San Bruno, CA)*  
800 MHz Public Safety  
350,000 sq. ft.

### **John Muir Medical**

*Hospital Buildings (Walnut Creek, CA)*  
800 MHz Nextel and Sprint  
300,000 sq. ft.

### **Bay Area Regional Transit**

*BART Stations & Tunnels (San Francisco, CA)*  
Cellular/PCS coverage  
1.0 million sq. ft.

### **State of Utah**

*The Capitol Building (Salt Lake City, UT)*  
Public Safety, Cellular/PCS & WiFi (802.11 b/g)  
150,000 sq. ft.

### **Washoe School District**

*Six Middle and High Schools (Reno, NV)*  
800 MHz Public Safety  
550,000 sq. ft.

### **UC Davis**

*Veterinary Hospital and Vet Med 2 (Davis, CA)*  
800 MHz Nextel & WiFi  
150,000 sq. ft.

### **Alameda County Medical Center**

*Emergency Area (Oakland, CA)*  
800 MHz Nextel  
400,000 sq. ft.

### **Laguna Honda Hospital**

*San Francisco, CA*  
Outdoor Channelized Repeater  
800 MHz Nextel

### **Santa Clara Valley Medical Center**

*San Jose, CA*  
800 MHz Nextel coverage  
75,000 sq. ft.

### **Kaiser Permanente**

*1550 Edgemont Facility (Los Angeles, CA)*  
800 MHz Nextel, Sprint, Verizon and  
450MHz Public Safety  
250,000 sq. ft.

### **Kaiser Permanente**

*100 S Los Robles Facility (Pasadena, CA)*  
800 MHz Nextel  
50,000 sq. ft.

### **Kaiser Permanente**

*700 Lawrence Expressway (Santa Clara, CA)*  
Nextel, Sprint, Verizon, paging and 1<sup>st</sup>  
Responder  
650,000 sq. ft.

### **Kaiser Permanente**

*501 Sand Creek Road (Antioch, CA)*  
VHF Public Safety, Nextel, Sprint and  
Verizon  
570,000 sq. ft.

### **Americana at Brand**

*Glendale, CA*  
450MHz Public Safety  
178,000 sq. ft.

### **Worldmark**

*Anaheim, CA*  
800 MHz Public Safety  
280,000 sq. ft.

### **Hyatt Classic Residence**

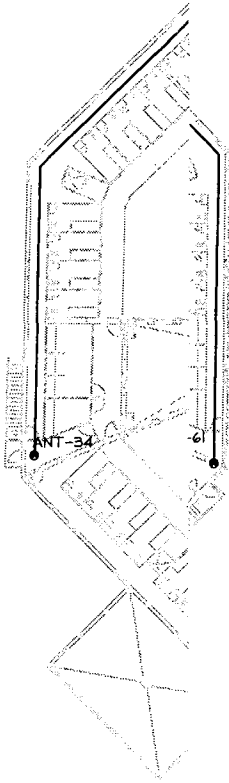
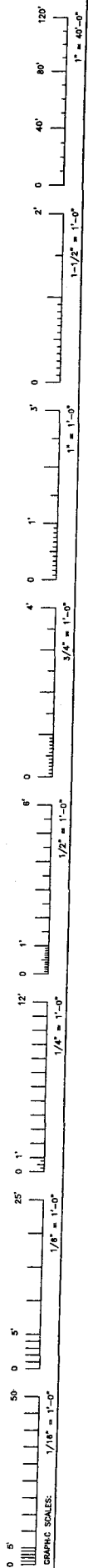
*La Jolla, CA*  
800MHz Public Safety, Sprint-Nextel, T-Mobile,  
Verizon, AT&T, and WiFi  
439,000 sq. Ft.

### **The Plaza (Opus)**

*Irvine, CA*  
800MHz Public Safety  
240,000 sq. ft.

### **Pacific Life**

*Aliso Viejo, CA*  
800MHz Public Safety  
5,000 sq. ft.



Revisions

No.	Revision	Date
1	Pre-Design	00/00/00


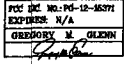
**TRIPOWER**  
REAL ESTATE WIRELESS SOLUTIONS

2301 ARMSTRONG ST SUITE 101  
 LIVERMORE CA 94551

MAIN: 925.583.8200  
 FAX: 925.583.8222  
 WEB: www.tripower.com  
 FTP: www.tripower.com/login

Username: \_\_\_\_\_  
 Password: \_\_\_\_\_

Stamps

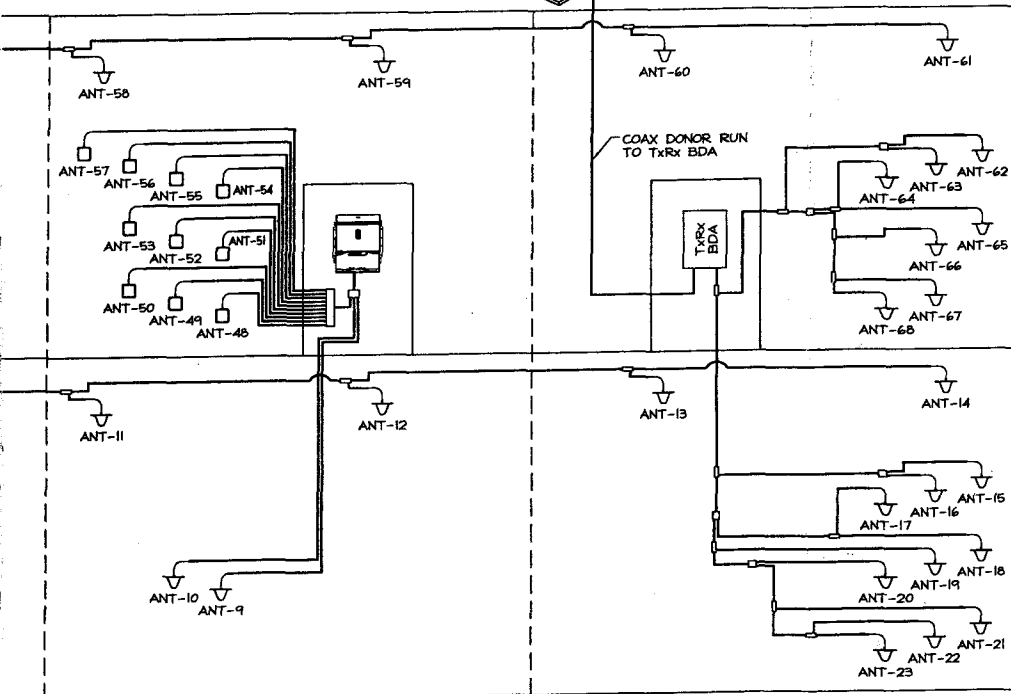
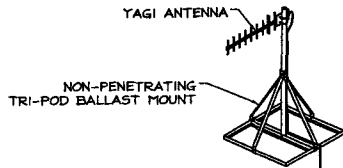
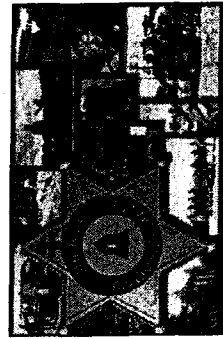
Facility  
 Larry D. Smith  
 Correctional Facility  
 1627 S. Hargrave Street  
 Banning, CA 92220

Project  
 Larry D. Smith  
 600 Bed Expansion  
 Distributed Antenna System

Sheet Title  
 Second Floor  
 Overall

Scale	1" = 10'-0"	Tri-Power Job No.:	
Drawn By		Sheet	
Checked By		DAS-201	
Plot Date	2/23/2010	4 of 4 Sheets	

IF THIS SHEET IS NOT 30"x42", IT IS A REDUCED PRINT - SCALE ACCORDINGLY



BLDG. 17

SUPPORT BLDG.

Revisions

No.	Revision	Date
	Pre-Design	00/00/000

**TRIPower**  
ESTABLISHED 1998 WIRELESS SOLUTIONS

2301 ARMSTRONG ST SUITE 101  
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MAIN: 925.583.8200  
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Username: \_\_\_\_\_  
Password: \_\_\_\_\_

Stamps



POC LIC. NO.: PG-12-58371  
EXPIRES: N/A  
GREGORY W. GLENN

Facility

Larry D. Smith  
Correctional Facility  
1627 S. Hargrave Street  
Banning, CA 92220

Project

Larry D. Smith  
600 Bed Expansion  
Distributed Antenna System

Sheet Title

Coaxial Riser Diagram

Scale	1" = 15'-0"	Titled/Printed Job No.	
Drawn By		Sheet	
Chkd By		DAS-100	
Plot Date	2/23/2010	2 of 2 Sheets	