

REQUEST FOR QUOTATION	<p style="text-align: center;">TROY SCHOOL DISTRICT</p> <p style="text-align: center;">1140 RANKIN, TROY, MICHIGAN 48083</p> <p style="text-align: center;">248-823-4052</p> <p style="text-align: center;">FAX: 248-823-4077</p>	REQUISITION
No. 9443		
DUE DATE 7-24-07 NO LATER THAN 3 p.m.		DATE 7-6-07

REQUEST FOR QUOTE – NOT AN ORDER

THIS FORM MUST BE UTILIZED WHEN RESPONDING TO THIS REQUEST
 BID ENVELOPE ENCLOSED

THE RFQ NUMBER MUST APPEAR ON ALL QUOTATIONS AND RELATED CORRESPONDENCE, THIS IS NOT AN ORDER

Quantity	DESCRIPTION	UNIT PRICE	AMOUNT
	<p>Please supply us with your bid to furnish the Troy School District with electrical service for specified security cameras.</p> <p style="text-align: center;">Copies of the bid are available at: www.troy.k12.mi.us/purchasing/items_out_for_bid.htm</p> <p style="text-align: center;">Bid recaps will be available at: troy.k12.mi.us/purchasing/index.htm</p> <p style="text-align: center;"><u>FACSIMILE BID IS NOT ACCEPTABLE</u></p> <p>Bids will not be accepted if submitted after the deadline specified (local time) in the advertisement to bid or in the information to bidders. The late submission of a bid makes the bid nonrepsonsive and is a material defect which shall not be waived by the Board of Education. Delays in the mail will not be considered. All Late bids in the mail will be returned to the bidder unopened.</p> <p>Proposal for the submission of alternatives by vendors will be accepted and reviewed. However, if any substitution or departure is not clearly noted and described, it will be understood that the bid intends to exactly meet the specifications.</p> <p>The Board of Education shall be the sole judge as to whether the proposed goods are "equal" or "approved". Quotations must be mailed or delivered to the Purchasing Office, 1140 Rankin, Troy, MI 48083 no later than 3 p.m. on the date shown above. Michigan State Sales and Use Taxes and Federal Excise Taxes do not apply unless otherwise indicated. Exemption certificates will be furnished when necessary. This request imposes no obligations on the buyer. The Board of Education reserves the right to accept or reject any or all bids or to split awards by items or to accept bids, which will best serve the Board of Education.</p>		

THIS AREA MUST BE FILLED IN

DELIVERY TIME	PRICES FIRM FOR	NAME OF COMPANY	TELEPHONE NO.
TERMS		NO. & STREET	FAX #
FOB DELIVERED	ALL DELIVERY CHARGES MUST BE INCLUDED IN PRICES SHOWN	CITY, STATE & ZIP CODE	E-MAIL
CONTACT PERSON (PLEASE PRINT)		SIGNATURE	DATE

SECTION 00010 - TABLE OF CONTENTS

SECTION	TITLE	PAGES
BIDDING REQUIREMENTS, CONTRACT FORMS AND CONDITIONS OF THE CONTRACT		
00001	Title Page	1 only
00010	Table of Contents.....	1 only
00100	Advertisement for Bids	1 thru 2
00200	Instructions to Bidders.....	1 thru 5
PWRS	Prevailing Wage Rate Schedule	1 thru 26
00410	Bid Forms (3 Copies)	1 thru 7
SPECIFICATION DIVISIONS 1 THRU 15		
Not Applicable		
SPECIFICATION DIVISION 16 - ELECTRICAL		
16010	Electrical General Requirements	1 thru 10
16025	Electrical Systems	1 only
16060	Grounding	1 thru 2
16120	Conductors and Cables (0-600V)	1 thru 4
16130	Raceways and Boxes	1 thru 5
16140	Wiring Devices	1 thru 2

DRAWINGS

Not Applicable

END OF TABLE OF CONTENTS

SECTION 00100 - ADVERTISEMENT FOR BIDS

DATE: July 9, 2007

PROJECT: Troy School District
School Technology Systems
Security Camera Power
TSD Bid No. 9443
Troy, Michigan

OWNER: Troy School District
4400 Livernois
Troy, Michigan 48098

**ENGINEER/TECHNOLOGY
DESIGNER:** Integrated Design Solutions, LLC
Architecture, Engineering, Interiors & Technology
888 W. Big Beaver, Suite 200
Troy, MI 48084
(248) 823-2100
(248) 823-2200 fax

BIDS RECEIVED: Until 3:00 pm local time on July 24, 2007, the Owner will receive sealed Bids for the work as set forth in the Bidding Documents at:

Troy School District
Purchasing Department
1140 Rankin
Troy, Michigan 48083

ATTN: Frank Lams
Purchasing Supervisor

All Bids will be publicly opened and read aloud at 3:00 pm. A bid tabulation summary will be available.

The Bidding Documents will be on file on and after July 9, 2007 and may be examined at the following locations during regular business hours, Monday through Friday.

World Wide Web: Troy School District (Specifications Only)
http://www.troy.k12.mi.us/purchasing/items_out_for_bid.htm

The offices of: Integrated Design Solutions, LLC, 888 W. Big Beaver, Suite 200, Troy, Michigan 48084,
(248) 823-2100.

Construction Association of Michigan, 43636 Woodward Ave., Bloomfield Hills,
Michigan 48302, (248) 972-1000.

F. W. Dodge Corporation, 21415 Civic Center Drive, Suite 115, Southfield, Michigan,
48076, (248) 799-0450.

The Engineer/Technology Designer will furnish two (2) sets of documents to the bidders at no charge.

Each Bid shall be accompanied by a Bid Security in the form of a certified check, cashier's check, money order or bid bond made payable to Troy School District in an amount not less than five percent (5%) of the base bid as a Bid guarantee.

The successful Bidder shall provide a Performance Bond and a Labor and Material Payment Bond covering the faithful performance of the Contract and payment of all obligations arising there under, each in the amount of one hundred percent (100%) of the contract amount. The cost of such bonds shall be included in the Bid.

The bid security of Bidders under consideration will be returned immediately after execution of the Contract by the Owner. The amount of the bid security shall be forfeited to the Owner if the successful Bidder fails to enter into a contract and furnish required bonds and insurance certificates within ten (10) days after award of Contract.

Withdrawal of any Bid is prohibited for a period of sixty (60) days after the actual date of the opening thereof.

Each Bidder agrees to waive any claim it has or may have with the Owner, the Engineer/Technology Designer and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any bid.

The Owner reserves the right to reject any or all Bids, either in whole or in part, to reject a Bid not accompanied by the required bid security or by other data required by the Bidding Documents or to reject a Bid which is any way incomplete or irregular and to waive informality and irregularity in the bids and in the bidding.

The Owner reserves the right to accept Alternates in any order or combination and to determine the low Bidder on the basis of the sum of the base bid and the Alternates accepted.

END OF ADVERTISEMENT FOR BIDS

SECTION 00200 - INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

- A. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement for Bids, Instruction to Bidders, the Bid Form and other bidding and contract forms. The proposed Contract Documents consist of the form of an Agreement between Owner and Contractor, General Conditions of the Contract for Construction, Supplementary and other Conditions, Specifications, Drawings and Addenda issued prior to execution of the Contract.
- B. Addenda are written or graphic instruments issued by the Engineer/Technology Designer prior to the execution of the Contract, which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- C. A Bidder is a person or entity who submits a Bid.
- D. A Bid is a complete and properly signed proposal to do the work for the sums stipulated there in submitted in accordance with the Bidding Documents.
- E. The Base Bid is the amount stated in the Bid for which the Bidder offers to perform the work as described in the Bidding Documents as the base, to which work may be added to or deleted from, for the amounts stated in the Alternates.
- F. An Alternate is an amount stated in the Bid Form to be added to or deducted from the amount of the Base Bid if the described Alternate is accepted.
- G. A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the work as described in the Bidding Documents.

2. SECURING BIDDING DOCUMENTS

- A. Bidding is by public advertisement and invitation. Two (2) sets of Bidding Documents will be furnished to the Bidders at no charge by the Engineer/Technology Designer.
- B. Bid specifications can be found on the Troy School District web site as follows:
www.troy.k12.mi.us/purchasing/items_out_for_bid.htm
- C. Only complete sets of Bidding Documents will be furnished. The Owner or Engineer/Technology Designer assumes no responsibility for errors or misinterpretations resulting from use of incomplete sets of Bidding Documents.
- D. All copies of the Bidding Documents received for bidding purposes shall be returned in usable condition within ten (10) days of receipt of bids.
- E. Bidding Documents remain the property of the Engineer/Technology Designer.

3. PREPARATION AND SUBMISSION OF BIDS

- A. Copies of the Bidding Documents may be obtained from Integrated Design Solutions, LLC, upon conditions set forth in the Advertisement for Bids.
- B. Bids shall be submitted on forms bound in the Project Manual of the Bidding Documents.
- C. All blanks on the Bid Form must be filled in by typewriter or by hand in ink.
- D. Amounts shall be expressed in both words and figures. In case of a discrepancy the amount stated in words shall govern.
- E. Alterations by erasure or interlineations must be initialed by the Bidder.
- F. All Alternates must be bid. If no change in the Base Bid is required, enter "No Change."
- G. Submit the Bid, along with the bid security and any other documents required to be submitted with the Bid, to the Owner, and deliver to the address given in the Advertisement for Bids on or before the day and hour set for receipt of the Bids.
 - 1. Enclose each Bid in a sealed opaque envelope bearing the title of the work, Security Camera Power, TSD Bid No. 9443, the name of the Bidder, and the date and hour of the Bid opening, with the notation "SEALED BID ENCLOSED."
 - 2. Do not change the wording of the Bid Form, and do not add words to, or delete words from the Bid Form.
 - 3. Unauthorized conditions, limitations, or provisions attached to the Bid will be cause for rejection of the Bid.
 - 4. Submit only duplicate signed copies of the Bid.
 - 5. It is the sole responsibility of the Bidder to see that his bid is received on time.
 - 6. Telephonic, telegraphic, facsimile (fax), or e-mail Bids or telephonic, telegraphic, facsimile (fax) or e-mail modification of a Bid will not be considered.
 - 7. Bids received after the time fixed for receiving them will not be considered and will be returned to the Bidder unopened.
 - 8. Properly identified Bids received on time will be publicly opened and read aloud. A bid tabulation summary will be available.
 - 9. The "AFFIDAVIT OF BIDDER" found in the bid form must be completed.
- H. The Bidder in submitting a Bid represents that:
 - 1. The Bidder has read and understands the Bidding Documents, including the Drawings, Specifications and other proposed Contract Documents.
 - 2. The Bid is made in compliance with the Bidding Documents.
 - 3. The Bidder has visited the site of the Work and become informed as to existing conditions and limitations under which the Work is to be performed and included in their Bid a sum to cover the cost necessary to perform the Work as set forth in the Bidding Documents. No allowance will be made to a Bidder because of a lack of such examination or knowledge.
 - 4. The Bid is based upon materials, equipment and systems required by the Bidding Documents without exception and without substitutions.

4. BID SECURITY AND BONDS

- A. Each bid shall be accompanied by a certified check, cashier's check, money order or bid bond made payable to Troy School District in an amount not less than five percent (5%) of the Base Bid as a proposal guarantee. Bid Bond shall be provided by a company licensed to do business in the State of Michigan.
- B. The successful Bidder shall provide a Performance Bond and a Labor and Material Payment Bond, covering the faithful performance of the Contract and payment of all obligations arising there under, each in the amount of one hundred percent (100%) of the contract amount. Bonds shall be provided by a company licensed to do business in the State of Michigan. The cost of such bonds shall be included in the Bid.
- C. The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this paragraph.
- D. Should the Bidder refuse to enter into a Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
- E. The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either the Contract has been executed and bonds have been furnished or the specified time has elapsed so that the Bid may be withdrawn or all Bids have been rejected.

5. MODIFICATIONS AND WITHDRAWAL OF BIDS

- A. A Bidder may not modify, withdraw or cancel a Bid, for a period of sixty (60) days following the time and date designated for receipt of Bids, and by submitting a Bid each Bidder shall so agree.
- B. A Bidder may withdraw their Bid, either personally or by written request, at any time prior to the scheduled time for receipt of bids. A withdrawn Bid may be resubmitted up to the date and time designated for receipt of Bids.
- C. Prior to the time and date for receipt of Bids, a Bidder may modify a Bid by notice to the party receiving Bids, at the place designated for receipt of Bids. Such notice shall be in writing and signed by the Bidder. Written notice and the signature of the Bidder shall be received, and date and time stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be worded as not to reveal the amount of the original Bid.

6. CONSIDERATION OF BIDS

- A. The Owner reserves the right to reject any or all Bids submitted either in whole or part, to reject a bid not accompanied by the required Bid security or by other data required by the Bidding Documents or to reject a Bid which is any way incomplete or irregular and to waive informality and irregularity in the Bids and in the Bidding.

- B. The Owner reserves the right to accept alternates in any order or combination and to determine the low Bidder on the basis of the sum of the Base Bid and the alternates accepted.
- C. The Owner reserves the right to negotiate with any Bidder without rebidding the project in whole or in part.
- D. The Owner reserves the right to award the Contract to whom ever it may elect.

7. EXECUTION OF AGREEMENT

- A. The successful Bidder will be required to execute AIA Standard Form of Agreement between Owner and Contractor, AIA Document A101-1997 in conjunction with the General Conditions of the Contract for Construction, AIA Document A201-1997. The owner will issue an owner's Purchase Order for the owner's accounting purposes only.
- B. The Bidder to whom the Contract is awarded shall, within five (5) calendar days after notice of award and receipt of Agreement forms from the Owner, sign and deliver required copies to the Owner.
- C. At or prior to delivery of the signed Agreement, the Bidder to whom the Contract is awarded shall deliver to the Owner those Certificates of Insurance required by the Owner.
- D. The Owner shall approve Bonds and Certificates of Insurance before the successful Bidder may proceed with the Work. Failure or refusal to provide Bonds or Certificates of Insurance in a form satisfactory to the Owner shall subject the successful Bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.
- E. After award of the Contract and prior to the first payment request, the Bidder to whom the Contract is awarded shall deliver to the Owner a schedule of values on a building by building basis.

8. INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING

- A. Bidders shall study and compare the Bidding Documents with each other, shall examine the site and local conditions and if in doubt as to the true meaning of any part of the Bidding Documents, or finds discrepancies, inconsistencies, ambiguities or errors in or omissions from any part of the Bidding Documents, the Bidder may submit to the Engineer/Technology Designer a written request for interpretation thereof not later than seven days before bids will be opened. The person submitting the request shall be responsible for its prompt delivery.
- B. Interpretation, connection or changes to the proposed Contract Documents will be made only by Addendum. Explanations, interpretations, corrections or changes of the Bidding Documents by any other method will not be binding.

9. ADDENDA

- A. Addenda will be transmitted to all who are known by the Engineer/Technology Designer to have received a complete set of Bidding Documents.
- B. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file.

- C. Addenda will be issued no later than four (4) days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which postpones the date for receipt of Bids.
- D. Each Bidder shall ascertain prior to submitting his bid that he has received all Addenda issued and shall acknowledge their receipt on the Bid Form.

10. SUBSTITUTIONS

- A. No substitutions will be considered prior to receipt of Bids, unless a written request for approval has been received by the Engineer/Technology Designer at least ten (10) days prior to the date for receipt of Bids. Such request for substitutions shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, samples and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Engineer/Technology Designer's decision of approval or disapproval of a proposed substitution shall be final.
- B. If the Engineer/Technology Designer approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum.
- C. No substitutions will be considered after Contract award unless specifically provided for in the Contract Documents.

11. TAXES

- A. For the purposes of this bid, the Troy School District is tax exempt. Do not include Federal, State or local taxes in the Bid. The Owner's federal and state tax exempt number is B38.600.3099. Usage taxes shall be included in the base bid price.

12. PERMITS AND FEES

- A. All Bids shall include costs of all applicable permits and fees.

13. TIME OF COMPLETION

- A. The Bidder, if awarded the Contract, agrees to complete the Work on or before the Contract Completion Date stated in the Bid Form.

14. EQUAL OPPORTUNITY

- A. The Contractor and the Contractor's Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

- B. The Contractor and the Contractor's Subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.

15. PREVAILING WAGE LAW

- A. The wages and fringe benefits to be paid to each class of construction mechanics shall not be less than the wage and fringe benefit rates prevailing in the locality in which the work is to be performed, in accordance with Section 2 of Act 166 of the State of Michigan Public Acts of 1953 as amended.

END OF SECTION 00200

REQUIREMENTS OF

THE PREVAILING WAGES ON STATE PROJECTS ACT, PUBLIC ACT 166 OF 1965

The Michigan Department of Labor & Economic Growth determines prevailing rates pursuant to the Prevailing Wages on State Projects Act, Public Act 166 of 1965, as amended. The purpose of establishing prevailing rates is to provide minimum rates of pay that must be paid to workers on construction projects for which the state or a school district is the contracting agent and which is financed or financially supported by the state. By law, prevailing rates are compiled from the rates contained in collectively bargained agreements which cover the locations of the state projects. The attached prevailing rates provide an hourly rate which includes wage and fringe benefit totals for designated construction mechanic classifications. The overtime rates also include wage and fringe benefit totals. Please pay special attention to the overtime and premium pay requirements. Prevailing wage is satisfied when wages plus fringe benefits paid to a worker are equal to or greater than the required rate.

State of Michigan responsibilities under the law:

- The department establishes the prevailing rate for each classification of construction mechanic **requested by a contracting agent** prior to contracts being let out for bid on a state project.

Contracting agent responsibilities under the law:

- If a contract is not awarded or construction does not start within 90 days of the date of the issuance of rates, a re-determination of rates must be requested by the contracting agent.
- Rates for classifications needed but not provided on the Prevailing Rate Schedule, including rates for registered apprentices, **must** be obtained **prior** to contracts being let out for bid on a state project.
- The contracting agent, by written notice to the contractor and the sureties of the contractor known to the contracting agent, may terminate the contractor's right to proceed with that part of the contract, for which less than the prevailing rates of wages and fringe benefits have been or will be paid, and may proceed to complete the contract by separate agreement with another contractor or otherwise, and the original contractor and his sureties shall be liable to the contracting agent for any excess costs occasioned thereby.

Contractor responsibilities under the law:

- Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
- Every contractor and subcontractor shall keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each construction mechanic employed by him in connection with said contract. This record shall be available for reasonable inspection by the contracting agent or the department.
- Each contractor or subcontractor is separately liable for the payment of the prevailing rate to its employees.
- The prime contractor is responsible for advising all subcontractors of the requirement to pay the prevailing rate prior to commencement of work.
- The prime contractor is secondarily liable for payment of prevailing rates that are not paid by a subcontractor.
- A construction mechanic **shall only** be paid the apprentice rate if registered with the United States Department of Labor, Bureau of Apprenticeship and Training and the rate is included in the contract.

Enforcement:

A person who has information of an alleged prevailing wage violation on a state project may file a complaint with the Wage & Hour Division. The department will investigate and attempt to resolve the complaint informally. During the course of an investigation, if the requested records and posting certification are not made available in compliance with Section 5 of Act 166, the investigation will be concluded and a referral to the Office of Prosecuting Attorney for criminal action under Section 7 and/or the Office of Attorney General for civil action will be made. The Office of Attorney General will pursue costs and fees associated with a lawsuit if filing is necessary to obtain records.

A violation of Act 166 may result in the contractor's name being added to the Prevailing Wage Act Violators List published on the division's website, updated monthly. This list includes the names and addresses of contractors and subcontractors the division has found in violation of Act 166 based on complaints from individuals and third parties. The Prevailing Wage Act Violators List is intended to inform contracting agents of contractors that have violated Act 166 for use in determining who should receive state-funded projects.

State of Michigan
Department of Labor and Economic Growth

Wage and Hour Division
 6546 Mercantile Way, Suite 5
 PO Box 30476
 Lansing, MI 48909-7976
 Telephone: 517-335-0400
 Fax: 517-335-0077
 www.michigan.gov/wagehour

Official Request 864
Requestor: TROY SCHOOL DISTRICT

Project Description: SECURITY CAMERA POWER SUPPLY
Project Number: Baker-Boulan PK-Larson-Smith MS/Athens-Troy HS

Oakland County
Official 2007 Prevailing Wage Rates for State Funded Projects

Issue Date: 7/5/2007
Contract must be awarded by 10/3/2007
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<u>Classification</u>						
Name	Description		Straight Hourly	Time and a Half	Double Time	Overtime Provision
Asbestos & Lead Abatement Laborer						
Asbestos & Lead Abatement Laborer	MLDC		\$31.30	\$41.83	\$52.35	H H H X X X X D Y
Asbestos & Lead Abatement, Hazardous Material Handler						
Asbestos and Lead Abatement, Hazardous Material Handler	AS207		\$31.30	\$43.13	\$54.95	X X X X X X X D Y
Boilermaker						
Boilermaker	BO169		\$48.71	\$68.13	\$87.54	H H D H D D D D Y
Apprentice Rates:						
	1st 6 months		\$37.07	\$50.67	\$64.26	
	2nd 6 months		\$38.03	\$52.10	\$66.18	
	3rd 6 months		\$39.00	\$53.56	\$68.12	
	4th 6 months		\$39.97	\$55.02	\$70.06	
	5th 6 months		\$40.58	\$56.11	\$71.64	
	6th 6 months		\$42.88	\$59.38	\$75.88	
	7th 6 months		\$44.83	\$62.31	\$79.78	
	8th 6 months		\$46.77	\$65.21	\$83.66	
Bricklayer						
Bricklayer, stone mason, pointer, cleaner, caulker	BR1		\$47.76	\$71.64	\$95.52	H H D H D D D D N
Apprentice Rates:						
	First 6 months		\$30.33	\$45.50	\$60.66	
	2nd 6 months		\$32.21	\$48.32	\$64.42	
	3rd 6 months		\$34.10	\$51.15	\$68.20	
	4th 6 months		\$35.98	\$53.97	\$71.96	
	5th 6 months		\$37.86	\$56.79	\$75.72	
	6th 6 months		\$39.73	\$59.60	\$79.46	

Official Request #: 864
 Requestor: TROY SCHOOL DISTRICT
 Project Description: SECURITY CAMERA POWER SUPPLY
 Project Number: Baker-Boulan PK-Larson-Smith MS/Athens-Troy HS
 County: Oakland

Official Rate Schedule

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Official 2007 Prevailing Wage Rates for State Funded Projects

Issue Date: 7/5/2007

Contract must be awarded by 10/3/2007

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Classification	Name	Description	Straight Hourly	Time and a Half	Double Time	Overtime Provision
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Carpenter

Carpet and Resilient Floor Layer, (does not include installation of prefabricated formica & parquet flooring which is to be paid carpenter rate)	CA1045	\$40.22	\$56.42	\$72.61	H H H H D D D D N
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Apprentice Rates:

1st 6 months	\$20.93	\$25.25	\$31.05
2nd 6 months	\$24.02	\$31.26	\$39.07
3rd 6 months	\$25.64	\$33.59	\$42.17
4th 6 months	\$27.26	\$35.95	\$45.33
5th 6 months	\$28.87	\$38.28	\$48.43
6th 6 months	\$30.50	\$40.64	\$51.57
7th 6 months	\$32.11	\$42.96	\$54.67
8th 6 months	\$33.73	\$45.30	\$57.79

Carpenter, piledriver	CA687Z1	\$44.37	\$62.97	\$81.56	H H D H D D D D Y
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Apprentice Rates:

1st Year	\$27.63	\$37.85	\$48.08
3rd 6 months	\$29.49	\$40.65	\$51.80
4th 6 months	\$31.34	\$43.42	\$55.50
5th 6 months	\$33.21	\$46.23	\$59.24
6th 6 months	\$35.08	\$49.03	\$62.98
7th 6 months	\$36.92	\$51.79	\$66.66
8th 6 months	\$38.80	\$54.61	\$70.42

Cement Mason

Cement Mason	CE514	\$42.63	\$60.13	\$77.63	H H D H H H H D N
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Apprentice Rates:

1st 6 months	\$24.90	\$33.67	\$42.43
2nd 6 months	\$26.65	\$36.28	\$45.92
3rd 6 months	\$30.15	\$41.55	\$52.93
4th 6 months	\$33.66	\$46.80	\$59.94
5th 6 months	\$35.40	\$49.43	\$63.44
6th 6 months	\$38.92	\$54.70	\$70.47

Drywall

Drywall Taper	PT-22-D	\$38.45	\$50.90	\$63.35	H H D H D D D D N
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Apprentice Rates:

First 3 months	\$26.00	\$32.23	\$38.45
Second 3 months	\$28.49	\$35.96	\$43.43
Second 6 months	\$30.98	\$39.69	\$48.41
Third 6 months	\$33.47	\$43.43	\$53.39
4th 6 months	\$34.71	\$45.29	\$55.87

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Classification	Name	Description	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Electrician						
	Inside Wireman	EC-58-IW	\$46.88	\$64.00	\$81.13	H H H H H H H D N
		Apprentice Rates:				
		0-1000 hours	\$26.33	\$33.18	\$40.03	
		1000-2000 hours	\$28.04	\$35.75	\$43.45	
		2000-3500 hours	\$29.75	\$38.31	\$46.87	
		3500-5000 hours	\$31.47	\$40.90	\$50.31	
		5000-6500 hours	\$34.89	\$46.03	\$57.15	
		6500-8000 hours	\$38.32	\$51.17	\$64.01	
	Sound and Communication Installer/Technician	EC-58-SC	\$29.33	\$41.30	\$53.26	H H H H H H H D N
		Apprentice Rates:				
		Period 1	\$17.16	\$23.04	\$28.93	
		Period 2	\$18.38	\$24.88	\$31.37	
		Period 3	\$19.59	\$26.69	\$33.79	
		Period 4	\$20.81	\$28.53	\$36.23	
		Period 5	\$22.02	\$30.33	\$38.65	
		Period 6	\$23.24	\$32.17	\$41.09	
Elevator Constructor						
	Elevator Constructor	EL 36	\$47.71		\$81.45	D D D D D D D Y
	Elevator Constructor					
		Apprentice Rates:				
		1st Year Apprentice	\$31.14		\$49.70	
		2nd Year Apprentice	\$34.82		\$56.75	
		3rd Year Apprentice	\$36.66		\$60.28	
		4th Year Apprentice	\$40.34		\$67.33	
Glazier						
	Glazier	GL-357	\$41.56	\$55.41		H H H H H H H Y
		Apprentice Rates:				
		1st 6 months	\$28.36	\$35.29		
		2nd 6 months	\$29.82	\$37.44		
		3rd 6 months	\$32.72	\$41.72		
		4th 6 months	\$34.18	\$43.87		
		5th 6 months	\$35.64	\$46.03		
		6th 6 months	\$37.09	\$48.17		
		7th 6 months	\$38.54	\$50.31		
		8th 6 months	\$41.46	\$54.62		
Heat and Frost Insulator						
	Spray Insulation	AS25S	\$20.14	\$29.14		H H H H H H H N

Official Request #: 864
 Requestor: TROY SCHOOL DISTRICT
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Classification Name Description	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Heat and Frost Insulator and Asbestos Worker				
Heat and Frost Insulators and Asbestos Workers AS25	\$48.20	\$62.86	\$77.52	H H H H H H H D Y
Apprentice Rates:				
1st Year	\$29.59	\$37.66	\$45.72	
2nd Year	\$37.60	\$47.13	\$56.66	
3rd Year	\$39.40	\$49.66	\$59.92	
4th Year	\$42.34	\$54.07	\$65.80	
Ironworker				
Fence Erecting IR-25-F	\$39.87	\$59.58	\$79.29	H H D H H H D D Y
Glazing IR-25-GZ1	\$48.48	\$72.64	\$96.65	H H D H H H D D Y
Mesh Iron Work IR-25-MR	\$42.25	\$60.43	\$78.60	H H D H D D D D N
Pre-engineered Metal Work IR-25-PE-Z1-Z2	\$39.88	\$50.38	\$60.88	H H H X X X X D Y
Apprentice Rates:				
1st level	\$22.79	\$27.88	\$32.97	
2nd level	\$24.01	\$29.61	\$35.21	
3rd level	\$25.25	\$31.36	\$37.47	
4th level	\$26.47	\$33.08	\$39.70	
5th level	\$27.70	\$34.83	\$41.95	
6th level	\$28.93	\$36.56	\$44.20	
Reinforced Iron Work IR-25-RF	\$47.46	\$68.09	\$88.71	H H D H D D D D N
Rigging Work IR-25-RIG	\$52.48	\$78.56	\$104.64	H H H H H H H D N
Siding & Decking IR-25-SD	\$45.10	\$67.43	\$89.75	H H D H H H D D Y
Structural, ornamental, conveyor, welder and pre-cast Apprentice rates apply to structural, conveyer, fence, glazing, reinforced, rigging, & siding decking IR-25-STR	\$52.61	\$78.69	\$104.77	H H D H H H D D Y
Apprentice Rates:				
Level 1	\$26.51	\$39.54	\$52.57	
Level 2	\$29.12	\$43.46	\$57.79	
Level 3	\$31.73	\$47.37	\$63.01	
Level 4	\$34.34	\$51.29	\$68.23	
Level 5	\$36.94	\$55.19	\$73.43	
Level 6	\$39.57	\$59.13	\$78.69	
Level 7	\$42.16	\$63.02	\$83.87	
Level 8	\$44.78	\$66.95	\$89.11	

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<u>Classification</u>						
Name	Description		Straight Hourly	Time and a Half	Double Time	Overtime Provision
=====						
Industrial Door erection & construction	IR-25-STR-D		\$34.69	\$46.09	\$57.48	H H D H H D D Y
Laborer						
Construction Laborer, Mason Tender, Carpenter Tender, Drywall Handler, Cement Finisher tender, concrete chute and concrete Bucket Handler, Concrete Laborer, Demolition Laborer	L1076-A-A		\$37.62	\$53.35	\$69.07	H H D H D D D D Y
Apprentice Rates:						
	0-1,000 work hours		\$31.98	\$44.89	\$57.79	
	1,001-2,000 work hours		\$33.11	\$46.58	\$60.05	
	2,001-3,000 work hours		\$34.24	\$48.28	\$62.31	
	3,001-4,000 work hours		\$36.49	\$51.66	\$66.81	
Signal man (on sewer & caisson work); air,electric or gasoline tool operator (including concrete vibrator operator,acetylene torch & air hammer operator); scaffold builder, caisson worker	L1076-A-B		\$37.88	\$53.74	\$69.59	H H D H D D D D Y
Lansing Burner, Blaster & Powder Man	L1076-A-C		\$38.37	\$54.47	\$70.57	H H D H D D D D Y
Furnance battery heater tender, burning bar & oxy-acetylene gun, expediter man, top man and/or bottom man (blast furnace work)	L1076-A-D		\$38.12	\$54.10	\$70.07	H H D H D D D D Y
Cleaner/ sweeper laborer, furniture laborer	L1076-A-E		\$32.17	\$45.17	\$58.17	H H D H D D D D Y
Demolition Laborer	L1076-D		\$37.62	\$53.35	\$69.07	H H D H D D D D Y
Plasterer Tender, Plastering Machine Operator	LPT-1		\$39.00	\$55.42	\$71.83	H H D H D D D D N
Apprentice Rates:						
	0 - 1,000 hours		\$31.99	\$44.90	\$57.81	
	1,001 - 2,000 hours		\$33.11	\$46.58	\$60.05	
	2,001 - 3,000 hours		\$34.24	\$48.28	\$62.31	
	3,001 - 4,000 hours		\$36.49	\$51.66	\$66.81	

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Classification Name Description	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Laborer - Hazardous				
Class A Laborer - performing work in conjunction with site preparation and other preliminary work prior to actual removal, handling, or containment of hazardous waste substances not requiring use of personal protective equipment required by state or federal regulations; or a laborer performing work in conjunction with the removal, handling, or containment of hazardous waste substances when used of personal protective equipment level "D" is required.	LHAZ-Z2-A \$36.48	\$51.89	\$67.29	H H H H H H H D Y
Apprentice Rates:				
0-1,000 work hours	\$30.91	\$43.53	\$56.15	
1,001-2,000 work hours	\$32.02	\$45.20	\$58.37	
2,001-3,000 work hours	\$33.14	\$46.88	\$60.61	
3,001-4,000 work hours	\$35.37	\$50.23	\$65.07	
Class B Laborer - performing work in conjunction with the removal, handling, or containment of hazardous waste substances when the use of personal protective equipment levels "A", "B" or "C" is required.	LHAZ-Z2-B \$37.48	\$53.39	\$69.29	H H H H H H H D Y
Apprentice Rates:				
0-1,000 work hours	\$31.66	\$44.66	\$57.65	
1,001-2,000 work hours	\$32.82	\$46.40	\$59.97	
2,001-3,000 work hours	\$33.99	\$48.15	\$62.31	
3,001-4,000 work hours	\$36.32	\$51.65	\$66.97	
Laborer Underground - Tunnel, Shaft & Caisson				
Class I - Tunnel, shaft and caisson laborer, dump man, shanty man, hog house tender, testing man (on gas), and watchman.	LAUCT-Z1-1 \$32.54	\$43.21	\$53.88	H H H H H H H D Y
Apprentice Rates:				
0-1,000 work hours	\$27.70	\$35.95	\$44.20	
1,001-2,000 work hours	\$28.67	\$37.40	\$46.14	
2,001-3,000 work hours	\$29.64	\$38.86	\$48.08	
3,001-4,000 work hours	\$31.57	\$41.76	\$51.94	
Class II - Manhole, headwall, catch basin builder, bricklayer tender, mortar man, material mixer, fence erector, and guard rail builder.	LAUCT-Z1-2 \$32.65	\$43.38	\$54.10	H H H H H H H D Y
Apprentice Rates:				
0-1,000 work hours	\$27.79	\$36.08	\$44.38	
1,001-2,000 work hours	\$28.76	\$37.54	\$46.32	
2,001-3,000 work hours	\$29.73	\$39.00	\$48.26	
3,001-4,000 work hours	\$31.68	\$41.92	\$52.16	

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Classification						
Name	Description		Straight Hourly	Time and a Half	Double Time	Overtime Provision
=====						
Class III - Air tool operator (jack hammer man, bush hammer man and grinding man), first bottom man, second bottom man, cage tender, car pusher, carrier man, concrete man, concrete form man, concrete repair man, cement invert laborer, cement finisher, concrete shoveler, conveyor man, floor man, gasoline and electric tool operator, gunnite man, grout operator, welder, heading dinky man, inside lock tender, pea gravel operator, pump man, outside lock tender, scaffold man, top signal man, switch man, track man, tugger man, utility man, vibrator man, winch operator, pipe jacking man, wagon drill and air track operator and concrete saw operator (under 40 h.p.).	LAUCT-Z1-3		\$32.71	\$43.47	\$54.22	H H H H H H H D Y
Apprentice Rates:						
			0-1,000 work hours	\$27.83	\$36.14	\$44.46
			1,001-2,000 work hours	\$28.81	\$37.62	\$46.42
			2,001-3,000 work hours	\$29.78	\$39.07	\$48.36
			3,001-4,000 work hours	\$31.73	\$42.00	\$52.26
Class IV - Tunnel, shaft and caisson mucker, bracer man, liner plate man, long haul dinky driver and well point man.	LAUCT-Z1-4		\$32.89	\$43.74	\$54.58	H H H H H H H D Y
Apprentice Rates:						
			0-1,000 work hours	\$27.97	\$36.36	\$44.74
			1,001-2,000 work hours	\$28.95	\$37.82	\$46.70
			2,001-3,000 work hours	\$29.94	\$39.31	\$48.68
			3,001-4,000 work hours	\$31.91	\$42.26	\$52.62
Class V - Tunnel, shaft and caisson miner, drill runner, keyboard operator, power knife operator, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars)	LAUCT-Z1-5		\$33.14	\$44.11	\$55.08	H H H H H H H D Y
Apprentice Rates:						
			0-1,000 work hours	\$28.16	\$36.64	\$45.12
			1,001-2,000 work hours	\$29.15	\$38.12	\$47.10
			2,001-3,000 work hours	\$30.15	\$39.62	\$49.10
			3,001-4,000 work hours	\$32.14	\$42.61	\$53.08
Class VI - Dynamite man and powder man.	LAUCT-Z1-6		\$33.47	\$44.61	\$55.74	H H H H H H H D Y
Apprentice Rates:						
			0-1,000 work hours	\$28.40	\$37.00	\$45.60
			1,001-2,000 work hours	\$29.42	\$38.53	\$47.64
			2,001-3,000 work hours	\$30.43	\$40.04	\$49.66
			3,001-4,000 work hours	\$32.46	\$43.09	\$53.72

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Classification Name Description	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Class VII - Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes and flagstones. LAUCT-Z1-7	\$26.75	\$34.53	\$42.30	H H H H H H D Y
Apprentice Rates:				
0-1,000 work hours	\$23.36	\$29.44	\$35.52	
1,001-2,000 work hours	\$24.04	\$30.46	\$36.88	
2,001-3,000 work hours	\$24.72	\$31.48	\$38.24	
3,001-4,000 work hours	\$26.07	\$33.50	\$40.94	
Landscape Laborer				
Landscape Specialist includes air, gas, and diesel equipment operator, lawn sprinkler installer on landscaping work where seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintenance of landscape LLAN-Z1-A	\$24.38	\$33.81	\$43.24	X X H X X X H D Y
All work pertaining to landscaping where seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintaining of landscape projects occurs which may include small power tool operator, lawn sprinkler installer helper, material mover, & truck driver. LLAN-Z1-B	\$20.16	\$27.48	\$34.80	X X H X X X H D Y
Marble Finisher				
Marble Finisher TT32-MF	\$38.37	\$48.46	\$58.54	H H D H D D D D N
Apprentice Rates:				
Level 1	\$18.73	\$24.22	\$29.71	
Level 2	\$19.79	\$25.81	\$31.83	
Level 3	\$23.93	\$30.38	\$36.83	
Level 4	\$25.23	\$32.33	\$39.43	
Level 5	\$26.56	\$33.85	\$41.14	
Level 6	\$27.99	\$35.64	\$43.28	
Level 7	\$29.48	\$37.17	\$44.85	
Level 8	\$30.80	\$38.73	\$46.65	
Marble Mason				
Marble Mason TT32-MM	\$44.26	\$57.29	\$70.32	H H D H D D D D N
Apprentice Rates:				
Level 1	\$24.21	\$31.14	\$38.06	
Level 2	\$26.93	\$34.56	\$42.20	
Level 3	\$29.70	\$37.59	\$45.48	
Level 4	\$32.10	\$40.83	\$49.56	
Level 5	\$34.18	\$43.17	\$52.16	
Level 6	\$37.52	\$48.11	\$58.71	
Level 7	\$38.55	\$49.53	\$60.51	
Level 8	\$39.18	\$50.47	\$61.77	

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Classification Name Description		Straight Hourly	Time and a Half	Double Time	Overtime Provision
Operating Engineer					
Crane with boom & jib or leads 120' or longer	EN-324-A120	\$49.26	\$65.97	\$82.68	H H D H D D D D Y
Crane with boom & jib or leads 140' or longer	EN-324-A140	\$50.08	\$67.20	\$84.32	H H D H D D D D Y
Crane with boom & jib or leads 220' or longer	EN-324-A220	\$50.38	\$67.65	\$84.92	H H D H D D D D Y
Crane with boom & jib or leads 300' or longer	EN-324-A300	\$51.88	\$69.90	\$87.92	H H D H D D D D Y
Crane with boom & jib or leads 400' or longer	EN-324-A400	\$53.38	\$72.15	\$90.92	H H D H D D D D Y
Compressor or welding machine	EN-324-CW	\$38.41	\$49.70	\$60.98	H H D H D D D D Y
Forklift, lull, extend-a-boom forklift	EN-324-FL	\$45.72	\$60.66	\$75.60	H H D H D D D D Y
Fireman or oiler	EN-324-FO	\$37.38	\$48.15	\$58.92	H H D H D D D D Y
Regular crane, job mechanic, concrete pump	EN-324-RC	\$48.40	\$64.68	\$80.96	H H D H D D D D Y
Regular engineer, hydro-excavator, remote controlled concrete breaker	EN-324-RE	\$47.43	\$63.23	\$79.02	H H D H D D D D Y

Apprentice Rates:

Period 1	\$37.85	\$48.90	\$59.96
Period 2	\$39.43	\$51.28	\$63.12
Period 3	\$41.02	\$53.66	\$66.30
Period 4	\$42.59	\$56.01	\$69.44
Period 5	\$44.17	\$58.39	\$72.60
Period 6	\$45.76	\$60.77	\$75.78

Operating Engineer - Marine Construction

Diver/Wet Tender, Engineer (hydraulic dredge)	GLF-1	\$49.29	\$64.74	\$80.19	X X H H H H H D Y
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Holidays paid at \$95.64 per hour

Subdivision of county all Great Lakes, islands therein, & connecting & tributary waters

Crane/Backhoe Operator, Mechanic/Welder, Assistant Engineer (hydraulic dredge), Leverman (hydraulic dredge), Diver Tender	GLF-2	\$47.79	\$62.49	\$77.19	X X H H H H H D Y
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Holidays paid \$91.89 per hour

Subdivision of county All Great Lakes, islands therein, & connecting & tributary waters

Official Request #: 864

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Classification Name Description		Straight Hourly	Time and a Half	Double Time	Overtime Provision
Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more), Tug/Launch Operator, Loader, Dozer and like equipment on Barge, Breakwater Wall, Slip/Doc or Scow, Deck Machinery	GLF-3	\$44.59	\$57.69	\$70.79	X X H H H H H D Y
Holidays paid at \$83.89 per hour					
<u>Subdivision of county</u> All Great Lakes, islands therein, & connecting & tributary waters					
Deck Equipment Operator, (Machineryman/Fireman), (4 equipment units or more), Deck Hand, Deck Engineer, & Crane Maintenance 50 ton capacity and under or Backhoe weighing 115,000 lbs or less, Assistant Tug Operator	GLF-4	\$40.19	\$51.09	\$61.99	X X H H H H H D Y
Holidays paid at \$72.89 per hour					
<u>Subdivision of county</u> All Great Lakes, islands therein, & connecting & tributary waters					
Operating Engineer Hazardous Waste Class I					
Level A - Fully encapsulating chemical resistant suit w/ pressure demand, full face piece SCBA or pressure demand supplied air respirator w/ escape SCBA. The highest available level of respiratory, skin and eye protection.	EN-324-HWCI-Z1A	\$46.22	\$61.89	\$77.55	H H H H H H H D Y
Apprentice Rates:					
	1st 6 months	\$36.62	\$47.58	\$58.55	
	2nd 6 months	\$38.18	\$49.92	\$61.67	
	3rd 6 months	\$39.75	\$52.28	\$64.81	
	4th 6 months	\$41.31	\$54.62	\$67.93	
	5th 6 months	\$42.89	\$56.99	\$71.09	
	6th 6 months	\$44.45	\$59.33	\$74.21	
Level B & C protection. B - Pressure demand, full face SCBA or pressure demand supplied air respirator w/ escape SCBA w/chemical resistant clothing. C - Full face piece, air purifying canister-equipped respirator w/chemical resistant clothing.	EN-324-HWCI-Z1B	\$45.27	\$60.46	\$75.65	H H H H H H H D Y
Apprentice Rates:					
	1st 6 months	\$35.95	\$46.59	\$57.21	
	2nd 6 months	\$37.48	\$48.88	\$60.27	
	3rd 6 months	\$39.00	\$51.16	\$63.31	
	4th 6 months	\$40.52	\$53.44	\$66.35	
	5th 6 months	\$42.04	\$55.72	\$69.39	
	6th 6 months	\$43.56	\$58.00	\$72.43	

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Classification Name Description		Straight Hourly	Time and a Half	Double Time	Overtime Provision
Level D - Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWCI-Z1D	\$43.97	\$58.51	\$73.05	H H H H H H D Y
Apprentice Rates:					
	1st 6 months	\$35.05	\$45.23	\$55.41	
	2nd 6 months	\$36.51	\$47.43	\$58.33	
	3rd 6 months	\$37.95	\$49.58	\$61.21	
	4th 6 months	\$39.42	\$51.79	\$64.15	
	5th 6 months	\$40.86	\$53.95	\$67.03	
	6th 6 months	\$42.32	\$56.13	\$69.95	
Level D When Capping Landfill Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWCI-Z1DCL	\$43.72	\$58.14	\$72.55	H H H H H H D Y
Apprentice Rates:					
	1st 6 months	\$34.87	\$44.96	\$55.05	
	2nd 6 months	\$36.31	\$47.12	\$57.93	
	3rd 6 months	\$37.76	\$49.30	\$60.83	
	4th 6 months	\$39.20	\$51.45	\$63.71	
	5th 6 months	\$40.63	\$53.60	\$66.57	
	6th 6 months	\$42.08	\$55.78	\$69.47	
Operating Engineer Hazardous Waste Class II					
Level A - Fully encapsulating chemical resistant suit w/ pressure demand, full face piece SCBA or pressure demand supplied air respirator w/ escape SCBA. The highest available level of respiratory, skin and eye protection.	EN-324-HWCII-Z1A	\$41.99	\$55.54	\$69.09	H H H H H H D Y
Level B & C protection. B - Pressure demand, full face SCBA or pressure demand supplied air respirator w/ escape SCBA w/chemical resistant clothing. C - Full face piece, air purifying canister-equipped respirator w/chemical resistant clothing.	EN-324-HWCII-Z1B	\$41.04	\$54.12	\$67.19	H H H H H H D Y
Level D - Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWCII-Z1D	\$39.74	\$52.17	\$64.59	H H H H H H D Y
Level D When Capping Landfill Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWCII-Z1DCL	\$39.49	\$51.79	\$64.09	H H H H H H D Y
Operating Engineer Hazardous Waste Crane w/ Boom & Jib leads 140' or longer					
Level A - Fully encapsulating chemical resistant suit w/ pressure demand, full face piece SCBA or pressure demand supplied air respirator w/ escape SCBA. The highest available level of respiratory, skin and eye protection.	EN-324-HW140-Z1A	\$48.87	\$65.86	\$82.85	H H H H H H D Y

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Classification Name Description		Straight Hourly	Time and a Half	Double Time	Overtime Provision
Level B & C protection. B - Pressure demand, full face SCBA or pressure demand supplied air respirator w/ escape SCBA w/chemical resistant clothing. C - Full face piece, air purifying canister-equipped respirator w/chemical resistant clothing.	EN-324-HW140-Z1B	\$47.92	\$64.44	\$80.95	H H H H H H H D Y
Level D Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HW140-Z1D	\$46.62	\$62.49	\$78.35	H H H H H H H D Y
Level D When Capping Landfill Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HW140-Z1DCL	\$46.37	\$62.11	\$77.85	H H H H H H H D Y
Operating Engineer Hazardous Waste Crane w/ Boom & Jib leads 220' or longer					
Level A - Fully encapsulating chemical resistant suit w/ pressure demand, full face piece SCBA or pressure demand supplied air respirator w/ escape SCBA. The highest available level of respiratory, skin and eye protection.	EN-324-HW220-Z1A	\$49.17	\$66.31	\$83.45	H H H H H H H D Y
Level B & C protection. B - Pressure demand, full face SCBA or pressure demand supplied air respirator w/ escape SCBA w/chemical resistant clothing. C - Full face piece, air purifying canister-equipped respirator w/chemical resistant clothing.	EN-324-HW220-Z1B	\$48.22	\$64.89	\$81.55	H H H H H H H D Y
Level D Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HW220-Z1D	\$46.92	\$62.94	\$78.95	H H H H H H H D Y
Level D When Capping Landfill Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HW220-Z1DCL	\$46.67	\$62.56	\$78.45	H H H H H H H D Y
Operating Engineer Hazardous Waste Regular Crane, Job Mechanic, Dragline Operator, Boom Truck Operator, and Concrete Pump with Boom Operator					
Level D - Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWRC-Z1D	\$44.94	\$59.97	\$74.99	H H H H H H H D Y
Operating Engineer Hazardous Waste Regular Crane, Job Mechanic, Dragline Operator, Boom Truck Operator, Power Shovel Operator and Concrete Pump with boom					
Level D When Capping Landfill Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWRC-Z1DCL	\$44.07	\$58.66	\$73.25	H H H H H H H D Y

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Classification			Straight	Time and	Double		
Name	Description		Hourly	a Half	Time	Overtime Provision	
Operating Engineer Hazardous Waste Regular Crane, Job Mechanic, Dragline Operator, Boom Truck Operator, Power Shovel Operator and Concrete Pump with booms							
	Level B & C protection. B - Pressure demand, full face SCBA or pressure demand supplied air respirator w/ escape SCBA w/chemical resistant clothing. C - Full face piece, air purifying canister-equipped respirator w/chemical resistant clothing.	EN-324-HWRC-Z1B	\$46.24	\$61.92	\$77.59	H H H H H H H D	Y
Operating Engineer Hazardous Waste Regular Crane, Job Mechanic, Dragline Operator, Boom Truck Operator, Power Shovel Operators and Concrete Pump with booms							
	Level A - Fully encapsulating chemical resistant suit w/ pressure demand, full face piece SCBA or pressure demand supplied air respirator w/ escape SCBA. The highest available level of respiratory, skin and eye protection.	EN-324-HWRC-Z1A	\$47.19	\$63.34	\$79.49	H H H H H H H D	Y
Operating Engineer Steel Work							
	Crane w/ 120' boom or longer	EN-324-SW120	\$51.51	\$69.80	\$88.08	H H D H H H D D	Y
	Crane w/ 120' boom or longer w/ Oiler	EN-324-SW120-O	\$52.51	\$71.30	\$90.08	H H D H H H D D	Y
	Crane w/ 140' boom or longer	EN-324-SW140	\$52.69	\$71.57	\$90.44	H H D H H H D D	Y
	Crane w/ 140' boom or longer W/ Oiler	EN-324-SW140-O	\$53.69	\$73.07	\$92.44	H H D H H H D D	Y
	Boom & Jib 220' or longer	EN-324-SW220	\$52.96	\$71.97	\$90.98	H H D H H H D D	Y
	Crane w/ 220' boom or longer w/ Oiler	EN-324-SW220-O	\$53.96	\$73.47	\$92.98	H H D H H H D D	Y
	Boom & Jib 300' or longer	EN-324-SW300	\$54.46	\$74.22	\$93.98	H H D H H H D D	Y
	Crane w/ 300' boom or longer w/ Oiler	EN-324-SW300-O	\$55.46	\$75.72	\$95.98	H H D H H H D D	Y
	Boom & Jib 400' or longer	EN-324-SW400	\$55.96	\$76.47	\$96.98	H H D H H H D D	Y
	Crane w/ 400' boom or longer w/ Oiler	EN-324-SW400-O	\$56.96	\$77.97	\$98.98	H H D H H H D D	Y

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Classification Name Description		Straight Hourly	Time and a Half	Double Time	Overtime Provision
Crane Operator & Job Mechanic	EN-324-SWCO	\$51.15	\$69.26	\$87.36	H H D H H H D D Y
	Apprentice Rates:				
	0-999 hours	\$40.04	\$52.72	\$65.39	
	1,000-1,999 hours	\$41.85	\$55.43	\$69.01	
	2,000-2,999 hours	\$43.66	\$58.14	\$72.63	
	3,000-3,999 hours	\$45.48	\$60.88	\$76.27	
	4,000-4,999 hours	\$47.28	\$63.58	\$79.87	
	5,000 hours	\$49.10	\$66.31	\$83.51	
Crane w/ Oiler	EN-324-SWCO-O	\$52.15	\$70.76	\$89.36	H H D H H H D D Y
Compressor or Welder Operator	EN-324-SWCW	\$43.70	\$58.08	\$72.46	H H D H H H D D Y
Hoisting Operator	EN-324-SWHO	\$50.51	\$68.30	\$86.08	H H D H H H D D Y
Oiler	EN-324-SWO	\$42.29	\$55.97	\$69.64	H H D H H H D D Y
Tower Crane & Derrick where work is 50' or more above first level	EN-324-SWTD50	\$52.24	\$70.89	\$89.54	H H D H H H D D Y
Tower Crane & Derrick 50' or more w/ Oiler where work station is 50' or more above first level	EN-324-SWTD50-O	\$53.24	\$72.39	\$91.54	H H D H H H D D Y
Operating Engineer Underground					
Class I Equipment	EN-324A1-UC1	\$43.72	\$58.11	\$72.50	H H H H H H H D Y
	Apprentice Rates:				
	0-999 hours	\$34.89	\$44.97	\$55.04	
	1,000-1,999 hours	\$36.33	\$47.13	\$57.92	
	2,000-2,999 hours	\$37.76	\$49.27	\$60.78	
	3,000-3,999 hours	\$39.21	\$51.45	\$63.68	
	4,000-4,999 hours	\$40.65	\$53.61	\$66.56	
	5,000-5,999 hours	\$42.09	\$55.77	\$69.44	
Class II Equipment	EN-324A1-UC2	\$38.99	\$51.02	\$63.04	H H H H H H H D Y
Class III Equipment	EN-324A1-UC3	\$38.26	\$49.92	\$61.58	H H H H H H H D Y
Class IV Equipment	EN-324A1-UC4	\$37.69	\$49.07	\$60.44	H H H H H H H D Y
Master Mechanic	EN-324A1-UMM	\$43.97	\$58.49	\$73.00	H H H H H H H D Y

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Classification		Straight	Time and	Double	Overtime	Provision
Name	Description	Hourly	a Half	Time		
Painter						
Painter	(8 hours of repaint work performed on Sunday shall be paid time & one half rate) PT-22-P	\$38.01	\$50.24	\$62.47	H H D H D D D D N	
	Apprentice Rates:					
	First 6 months	\$25.78	\$31.89	\$38.01		
	Second 6 months	\$29.45	\$37.40	\$45.35		
	Third 6 months	\$30.67	\$39.23	\$47.79		
	Fourth 6 months	\$31.89	\$41.06	\$50.23		
	Fifth 6 months	\$33.12	\$42.91	\$52.69		
	Final 6 months	\$34.34	\$44.73	\$55.13		
Sandblasting & spraywork performed, overpases, tanks or steel, OR spraywork & sandblasting done with a scaffold height of 40' above the floor level	PT-22-S	\$38.81	\$51.44	\$64.07	H H D H D D D D N	
Pipefitter						
Pipefitter	PF-636	\$55.06	\$74.14	\$89.96	H H D H D D D D N	
	Apprentice Rates:					
	1st & 2nd periods	\$26.28	\$34.63	\$41.63		
	3rd period	\$28.28	\$37.63	\$45.63		
	4th period	\$29.53	\$39.51	\$48.13		
	5th period	\$30.78	\$41.38	\$50.63		
	6th period	\$32.03	\$43.25	\$53.13		
	7th period	\$33.28	\$45.13	\$55.63		
	8th period	\$34.28	\$46.63	\$57.63		
	9th period	\$35.28	\$48.13	\$59.63		
	10th period	\$36.71	\$50.27	\$62.49		
Plasterer						
Plasterer	BR1P	\$41.92	\$62.88	\$83.84	H H H H H H H D N	
	Apprentice Rates:					
	1st 6 months	\$21.61	\$32.41	\$43.22		
	2nd 6 months	\$25.00	\$37.50	\$50.00		
	3rd 6 months	\$28.39	\$42.59	\$56.78		
	4th 6 months	\$31.83	\$47.75	\$63.66		
	5th 6 months	\$35.16	\$50.94	\$67.92		
	6th 6 months	\$38.53	\$57.80	\$77.06		

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Classification	Name	Description	Straight Hourly	Time and a Half	Double Time	Overtime Provision
	Plasterer	PL67	\$42.87	\$58.16	\$73.45	H H H X D D D D N
		Apprentice Rates:				
		1st 6 months	\$24.52	\$30.63	\$36.75	
		2nd 6 months	\$27.58	\$35.23	\$42.87	
		3rd 6 months	\$30.64	\$39.81	\$48.99	
		4th 6 months	\$33.70	\$44.41	\$55.11	
		5th 6 months	\$36.75	\$48.98	\$61.21	
		6th 6 months	\$39.81	\$53.57	\$67.33	
	Plumber					
	Plumber	PL-98	\$53.68	\$71.45	\$87.21	H H D H D D D D Y
		Apprentice Rates:				
		Period 1	\$17.11	\$23.41	\$29.71	
		Period 2	\$17.11	\$23.41	\$29.71	
		Period 3	\$26.78	\$35.13	\$43.47	
		Period 4	\$27.41	\$36.07	\$44.73	
		Period 5	\$28.57	\$37.81	\$47.05	
		Period 6	\$29.72	\$39.53	\$49.35	
		Period 7	\$30.87	\$41.26	\$51.65	
		Period 8	\$32.04	\$43.01	\$53.99	
		Period 9	\$33.19	\$44.74	\$56.29	
		Period 10	\$34.35	\$46.48	\$58.61	
	Roofer					
	Commercial Roofer	RO-149-WOM	\$45.01	\$58.72	\$72.42	H H D H H H D D N
	Straight time is not to exceed ten (10) hours per day or forty (40) hours per week.					
		Apprentice Rates:				
		Apprentice 1	\$29.78	\$36.88	\$44.64	
		Apprentice 2	\$33.80	\$41.54	\$49.52	
		Apprentice 3	\$35.16	\$43.50	\$52.14	
		Apprentice 4	\$36.15	\$44.94	\$54.06	
		Apprentice 5	\$37.33	\$46.64	\$56.32	
		Apprentice 6	\$38.67	\$48.58	\$58.90	
	Sheet Metal Worker					
	Sheet Metal Worker	SHM-80	\$51.82	\$69.04	\$86.25	H H D H D D D D Y
		Apprentice Rates:				
		First Year	\$34.61	\$43.22	\$51.83	
		Second Year	\$35.98	\$45.27	\$54.57	
		Third Year	\$37.36	\$47.34	\$57.33	
		Fourth Year	\$40.11	\$51.47	\$62.83	
		Fifth Year	\$42.86	\$55.59	\$68.33	

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Classification Name Description	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Siding & Decking	SHM-80-SD	\$34.58	\$46.03	\$57.48 H H H H H H D Y
Sprinkler Fitter				
Sprinkler Fitter	SP 704	\$54.02	\$72.89	\$91.75 H H D H D D D D Y
	Apprentice Rates:			
	1st Period	\$31.38	\$38.93	\$46.47
	2nd Period	\$33.27	\$41.76	\$50.25
	3rd Period	\$35.15	\$44.58	\$54.01
	4th Period	\$37.04	\$47.41	\$57.79
	5th Period	\$38.93	\$50.25	\$61.57
	6th Period	\$40.81	\$53.07	\$65.33
	7th Period	\$42.70	\$55.91	\$69.11
	8th Period	\$44.59	\$58.74	\$72.89
	9th Period	\$46.47	\$61.56	\$76.65
	10th Period	\$48.36	\$64.39	\$80.43
Terrazzo				
Terrazzo Finisher	TT32-TRF	\$38.77	\$49.06	\$59.34 H H D H D D D D N
	Apprentice Rates:			
	Level 1	\$19.72	\$25.71	\$31.69
	Level 2	\$20.39	\$26.71	\$33.03
	Level 3	\$23.86	\$30.27	\$36.69
	Level 4	\$25.16	\$32.23	\$39.29
	Level 5	\$26.49	\$33.74	\$41.00
	Level 6	\$27.92	\$35.33	\$42.74
	Level 7	\$29.41	\$37.18	\$44.96
	Level 8	\$30.73	\$38.74	\$46.76
Terrazzo Worker	TT32-TRW	\$43.79	\$56.59	\$69.38 H H D H D D D D N
	Apprentice Rates:			
	Level 1	\$24.11	\$30.98	\$37.86
	Level 2	\$26.83	\$34.42	\$42.00
	Level 3	\$29.60	\$37.44	\$45.28
	Level 4	\$32.00	\$40.68	\$49.36
	Level 5	\$34.08	\$43.15	\$52.21
	Level 6	\$37.34	\$47.85	\$58.35
	Level 7	\$38.42	\$49.33	\$60.25
	Level 8	\$39.25	\$50.58	\$61.91

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Classification			Straight	Time and	Double	Overtime	Provision
Name	Description		Hourly	a Half	Time		
Tile							
Tile Finisher	TT32-TF		\$38.39	\$48.49	\$58.58	H H D H D D D D N	
	Apprentice Rates:						
	Level 1		\$18.63	\$24.07	\$29.51		
	Level 2		\$19.69	\$25.66	\$31.63		
	Level 3		\$23.83	\$30.23	\$36.63		
	Level 4		\$25.13	\$32.18	\$39.23		
	Level 5		\$26.46	\$33.70	\$40.94		
	Level 6		\$27.89	\$35.48	\$43.08		
	Level 7		\$29.38	\$37.01	\$44.65		
	Level 8		\$30.70	\$38.57	\$46.45		
Tile Layer	TT32-TL		\$43.69	\$56.44	\$69.18	H H D H D D D D N	
	Apprentice Rates:						
	Level 1		\$24.11	\$30.98	\$37.86		
	Level 2		\$26.83	\$34.42	\$42.00		
	Level 3		\$29.60	\$37.44	\$45.28		
	Level 4		\$32.00	\$40.68	\$49.36		
	Level 5		\$34.03	\$42.94	\$51.86		
	Level 6		\$37.29	\$47.77	\$58.25		
	Level 7		\$37.87	\$48.51	\$59.15		
	Level 8		\$38.70	\$49.75	\$60.81		
Truck Driver							
on all trucks of 8 cubic yard capacity or less	TM-RB1		\$33.66	\$35.99		H H H H H H H H Y	
of all trucks of 8 cubic yard capacity or over	TM-RB1A		\$33.76	\$36.14		H H H H H H H H Y	
on euclid type equipment	TM-RB1B		\$33.91	\$36.36		H H H H H H H H Y	
Underground Laborer Open Cut, Class I							
Construction Laborer	LAUC-Z1-1		\$32.39	\$42.99	\$53.58	H H H H H H H D Y	
	Apprentice Rates:						
	0-1,000 work hours		\$27.59	\$35.78	\$43.98		
	1,001-2,000 work hours		\$28.55	\$37.22	\$45.90		
	2,001-3,000 work hours		\$29.51	\$38.66	\$47.82		
	3,001-4,000 work hours		\$31.43	\$41.54	\$51.66		

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Name	Description	Hourly	a Half	Time	
Underground Laborer Open Cut, Class II					
	Mortar and material mixer, concrete form man, signal man, well point man, manhole, headwall and catch basin builder, guard rail builders, headwall, seawall, breakwall, dock builder and fence erector.	\$32.50	\$43.15	\$53.80	H H H H H H H D Y
	LAUC-Z1-2				
	Apprentice Rates:				
	0-1,000 work hours	\$27.68	\$35.92	\$44.16	
	1,001-2,000 work hours	\$28.64	\$37.36	\$46.08	
	2,001-3,000 work hours	\$29.60	\$38.80	\$48.00	
	3,001-4,000 work hours	\$31.54	\$41.71	\$51.88	
Underground Laborer Open Cut, Class III					
	Air, gasoline and electric tool operator, vibrator operator, drillers, pump man, tar kettle operator, bracers, rodder, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars, etc.), cement finisher, welder, pipe jacking and boring man, wagon drill and air track operator and concrete saw operator (under 40 h.p.), windlass and tugger man, and directional boring man.	\$32.55	\$43.23	\$53.90	H H H H H H H D Y
	LAUC-Z1-3				
	Apprentice Rates:				
	0-1,000 work hours	\$27.71	\$35.96	\$44.22	
	1,001-2,000 work hours	\$28.68	\$37.42	\$46.16	
	2,001-3,000 work hours	\$29.65	\$38.88	\$48.10	
	3,001-4,000 work hours	\$31.58	\$41.77	\$51.96	
Underground Laborer Open Cut, Class IV					
	Trench or excavating grade man.	\$32.63	\$43.35	\$54.06	H H H H H H H D Y
	LAUC-Z1-4				
	Apprentice Rates:				
	0-1,000 work hours	\$27.77	\$36.06	\$44.34	
	1,001-2,000 work hours	\$28.74	\$37.51	\$46.28	
	2,001-3,000 work hours	\$29.72	\$38.98	\$48.24	
	3,001-4,000 work hours	\$31.66	\$41.89	\$52.12	
Underground Laborer Open Cut, Class V					
	Pipe Layer	\$32.69	\$43.44	\$54.18	H H H H H H H D Y
	LAUC-Z1-5				
	Apprentice Rates:				
	0-1,000 work hours	\$27.82	\$36.13	\$44.44	
	1,001-2,000 work hours	\$28.79	\$37.58	\$46.38	
	2,001-3,000 work hours	\$29.77	\$39.06	\$48.34	
	3,001-4,000 work hours	\$31.72	\$41.98	\$52.24	

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Issue Date: 7/5/2007

Contract must be awarded by 10/3/2007

Page 20 of 20

Classification	Name	Description	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Underground Laborer Open Cut, Class VI						
	Grouting man, top man assistant, audio visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work.	LAUC-Z1-6	\$30.14	\$39.61	\$49.08	H H H H H H H D Y
Apprentice Rates:						
		0-1,000 work hours	\$25.90	\$33.25	\$40.60	
		1,001-2,000 work hours	\$26.75	\$34.52	\$42.30	
		2,001-3,000 work hours	\$27.60	\$35.80	\$44.00	
		3,001-4,000 work hours	\$29.29	\$38.34	\$47.38	
Underground Laborer Open Cut, Class VII						
	Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes, flagstones etc.	LAUC-Z1-7	\$26.76	\$34.54	\$42.32	H H H H H H H D Y
Apprentice Rates:						
		0-1,000 work hours	\$23.37	\$29.46	\$35.54	
		1,001-2,000 work hours	\$24.05	\$30.48	\$36.90	
		2,001-3,000 work hours	\$24.73	\$31.50	\$38.26	
		3,001-4,000 work hours	\$26.08	\$33.52	\$40.96	

Official Request #: 864

Requestor: TROY SCHOOL DISTRICT

Project Description: SECURITY CAMERA POWER SUPPLY

Project Number: Baker-Boulan PK-Larson-Smith MS/Athens-Troy HS

County: Oakland

Official Rate Schedule

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

ENGINEERS - CLASSES OF EQUIPMENT LIST

UNDERGROUND ENGINEERS
<p>CLASS I</p> <p>Backfiller Tamper, Backhoe, Batch Plant Operator, Clam-Shell, Concrete Paver (2 drums or larger), Conveyor Loader (Euclid type), Crane (crawler, truck type or pile driving), Dozer, Dragline, Elevating Grader, End Loader, Gradall (and similar type machine), Grader, Power Shovel, Roller (asphalt), Scraper (self propelled or tractor drawn), Side Broom Tractor (type D-4 or larger), Slope Paver, Trencher (over 8' digging capacity), Well Drilling Rig, Mechanic, Slip Form Paver.</p>
<p>CLASS II</p> <p>Boom Truck (power swing type boom), Crusher, Hoist, Pump (1 or more 6" discharge or larger gas or diesel powered by generator of 300 amps or more, inclusive of generator), Side Boom Tractor (smaller than type D-4 or equivalent), Sweeper (Wayne type and similar equipment), Tractor (pneu-tired, other than backhoe or front end loader), Trencher (8' digging capacity and smaller).</p>
<p>CLASS III</p> <p>Air Compressors (600 cfm or larger), Air Compressors (2 or more less than 600 cfm), Boom Truck (non-swinging, non-powered type boom), Concrete Breaker (self-propelled or truck mounted, includes compressor), Concrete Paver (1 drum, ½ yard or larger), Elevator (other than passenger), Maintenance Man, Mechanic Helper, Pump (2 or more 4" up to 6" discharge, gas or diesel powered, excluding submersible pump), Pumpcrete Machine (and similar equipment), Wagon Drill Machine, Welding Machine</p>

HAZARDOUS WASTE ABATEMENT ENGINEERS
<p>CLASS I</p> <p>Backhoe, Batch Plant Operator, Clamshell, Concrete Breaker when attached to hoe, Concrete Cleaning Decontamination Machine Operator, Concrete Pump, Concrete Paver, Crusher, Dozer, Elevating Grader, Endloader, Farm Tractor (90 h.p. and higher), Gradall, Grader, Heavy Equipment Robotics Operator, Loader, Pug Mill, Pumpcrete Machines, Pump Trucks, Roller, Scraper (self-propelled or tractor drawn), Side Boom Tractor, Slip Form Paver, Slop Paver, Trencher, Ultra High Pressure Waterjet Cutting Tool System Operator, Vactors, Vacuum Blasting Machine Operator, Vertical Lifting Hoist, Vibrating Compaction Equipment (self-propelled), and Well Drilling Rig.</p>
<p>CLASS II</p> <p>Air Compressor, Concrete Breaker when not attached to hoe, Elevator, End Dumps, Equipment Decontamination Operator, Farm Tractor (less than 90 h.p.), Forklift, Generator, Heater, Mulcher, Pigs (Portable Reagent Storage Tanks), Power Screens, Pumps (water), Stationary Compressed Air Plant, Sweeper, and Welding Machine.</p> <p>Regular Crane Operators rate shall include: Mechanics, Crane Operators, Dragline Operators, Boom Truck Operators, Power Shovel Operators and Concrete Pumps with booms.</p>

or Generator (2 or more 300 amp or larger, gas or diesel powered).

CLASS IV

Boiler, Concrete Saw (40HP or over), Curing Machine (self-propelled), Farm Tractor (w/attachment), Finishing Machine (concrete), Firemen, Hydraulic Pipe Pushing Machine, Mulching Equipment, Oiler (2 or more up to 4", exclude submersible), Pumps (2 or more up to 4" discharge if used 3 hrs or more a day-gas or diesel powered, excluding submersible pumps), Roller (other than asphalt), Stump Remover, Vibrating Compaction Equipment (6' wide or over), Trencher (service).

Revised: 09/07/06



MICHIGAN DEPARTMENT OF LABOR & ECONOMIC GROWTH

WAGE & HOUR DIVISION

OVERTIME PROVISIONS for MICHIGAN PREVAILING WAGE RATE SCHEDULE

- Overtime is represented as a nine character code. Each character represents a certain period of time after the first 8 hours Monday thru Friday.

	Monday thru Friday	Saturday	Sunday & Holidays
First 8 Hours		4	8
9th Hour	1	5	
10th Hour	2	6	
Over 10 hours	3	7	

Overtime for Monday thru Friday after 8 hours:

- the 1st character is for time worked in the 9th hour (8.1 - 9 hours)
- the 2nd character is for time worked in the 10th hour (9.1 - 10 hours)
- the 3rd character is for time worked beyond the 10th hour (10.1 and beyond)

Overtime on Saturday:

- the 4th character is for time worked in the first 8 hours on Saturday (0 - 8 hours)
- the 5th character is for time worked in the 9th hour on Saturday (8.1 - 9 hours)
- the 6th character is for time worked in the 10th hour (9.1 - 10 hours)
- the 7th character is for time worked beyond the 10th hour (10.01 and beyond)

Overtime on Sundays & Holidays

The 8th character is for time worked on Sunday or on a holiday

The last character indicates if an optional 4-day 10-hour per day workweek can be worked without paying overtime after 8 hours worked.

- Overtime Indicators Used in the Overtime Provision:

- H - means TIME AND ONE-HALF due
- X - means TIME AND ONE-HALF due after 40 HOURS worked
- D - means DOUBLE PAY due
- Y - means YES an optional 4-day 10-hour per day workweek can be worked without

paying overtime after 8 hours worked
N - means NO an optional 4-day 10-hour per day workweek *can not* be worked
without
paying overtime after 8 hours worked

3. EXAMPLES:

HHHHHHDN - This example shows that the 1½ rate must be used for time worked after 8 hours Monday thru Friday (*characters 1 - 3*); for all hours worked on Saturday, 1½ rate is due (*characters 4 - 7*). Work done on Sundays or holidays must be paid double time (*character 8*). The N (*character 9*) indicates that 4 ten-hour days is not an acceptable workweek at regular pay.

XXXHHHDY - This example shows that the 1½ rate must be used for time worked after 40 hours are worked Monday thru Friday (*characters 1-3*); for hours worked on Saturday, 1½ rate is due (*characters 4 - 7*). Work done on Sundays or holidays must be paid double time (*character 8*). The Y (*character 9*) indicates that 4 ten-hour days is an acceptable alternative workweek.

(REV 05/07/04)

Troy School District
School Technology Systems
Security Camera Power
TSD Bid No. 9443
Troy, Michigan

IDS Project No. 03234-2002

SECTION 00410 - BID FORM

OWNER: Troy School District
4400 Livernois
Troy, Michigan 48098

PROJECT: Troy School District
School Technology Systems
Security Camera Power
TSD Bid No. 9443
Troy, Michigan

ENGINEER/TECHNOLOGY DESIGNER:

Integrated Design Solutions, LLC
Architecture, Engineering, Interiors & Technology
888 W. Big Beaver Road, Suite 200
Troy, Michigan 48084
(248) 823-2100
(248) 823-2200 fax

NAME OF BIDDER: _____

ADDRESS: _____

TELEPHONE: _____

BID

Pursuant to and in compliance with your Advertisement for Bids Instructions to Bidders and other documents relating thereto, the undersigned proposes and agrees to furnish equipment, materials, and labor and perform all work necessary to complete the Troy School District Contract for Security Camera Power, TSD Bid No. 9443 Project in accordance with the Drawings and Specifications prepared by Integrated Design Solutions, LLC dated July 9, 2007, and agrees to accept payment as herein provided.

BASE BID

Electrical Trades

Lump sum bid for all work specified and shown on the Drawings as indicated for base bid

_____ Dollars (\$_____).

NOTE: The amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

BASE BID BREAKDOWN

Electrical Trades

This Contractor shall provide separate prices as hereinafter specified.

None required.

MANDATORY ALTERNATES

The foregoing Base Bid may be increased or decreased by the amounts herein quoted for Alternates. The following alternate prices shall include all charges for labor, material, and equipment, bonds, overhead and profit, general conditions, supervision, insurance, taxes, and incidental expenses.

Electrical Trades

No mandatory alternates required.

VOLUNTARY ALTERNATES - ELECTRICAL TRADES AND TECHNOLOGY TRADES

Alternate No. 1: _

Add/Deduct ___

_____ Dollars (\$_____).

Alternate No. 2: _

Add/Deduct ___

_____ Dollars (\$_____).

Alternate No. 3: _

Add/Deduct ___

_____ Dollars (\$_____).

UNIT PRICES

The Bidder proposes unit prices in accordance with the following schedule. Said unit prices shall include all charges for labor, materials and equipment, overhead and profit, general conditions, supervision, insurance, taxes and incidental expenses.

Said unit prices shall be applicable to the pricing of additions to, or deletions from, the work indicated in the Contract Documents.

Electrical Trades

EUP-1:	Unit price to provide outlet box, 120-volt TVSS receptacle, terminations, complete.	\$ _____
EUP-2:	Unit price per linear foot for 2#12, 1#12 GRD. - 3/4"C.	\$ _____
EUP-3:	Unit price per 120 volt, 20 amp, 1 pole circuit breaker.	\$ _____

TAXES

For the purposes of this bid, the Troy School District is tax exempt. Do not include Federal, State or local taxes in the Bid. The Owner's federal and state tax-exempt number is B38.600.3099. Usage taxes shall be included in the base bid price.

BID SECURITY

Accompanying this Bid is a certified check, cashier's check, money order or bid bond (cross out those not applicable) made payable to Troy School District in the amount of five percent (5%), of Base Bid, which shall be retained by the Owner as liquidated damages, if the undersigned fails to execute the contract within ten (10) days of award of the Contract.

ADDENDA

The undersigned acknowledges the receipt of the following addenda:

Addendum No. _____	Dated _____	Addendum No. _____	Dated _____
Addendum No. _____	Dated _____	Addendum No. _____	Dated _____
Addendum No. _____	Dated _____	Addendum No. _____	Dated _____

TIME OF COMPLETION

Electrical Trades

The undersigned agrees to substantially complete the Project by August 24, 2007.

WITHDRAWAL OF BIDS

The undersigned agrees that his Bid shall not be withdrawn for a period of sixty (60) days after the date set for receipt of Bids.

NON-COLLUSION

The undersigned certifies that the bid has not been prepared in collusion with any other bidder and that the prices, discounts, terms and conditions thereof have not been directly or indirectly communicated by or on behalf of the Bidder to any such person other than the recipient of such bid, and will not be communicated to any such person prior to the official opening of said bid. The undersigned fully understands that no premiums, rebates, or gratuities are permitted either with, prior to or after signing the Contract.

This certification may be treated as if it were a sworn statement made under oath, and is made subject to the provisions of 18 U. S. C., 1001, relating to the making of false statements.

SIGNATURE AND LEGAL STATUS OF BIDDER

Signed and sealed this _____ day of _____, 20_____.

(Individual, Partnership, Corporation)

State of Incorporation

Affix Corporate Seal

By: _____
(Authorized Signature of Bidder)

(Print or Type Name of Bidder)

Title

Business Address

Instructions: Three (3) copies of this form are supplied for the use of Bidders. Submit two (2) copies to Owner and retain one (1) copy.

AFFIDAVIT OF BIDDER

The undersigned, the owner or authorized officer of _____ (the "Bidder"), pursuant to the familial disclosure requirement provided in the _____ (the "School District") advertisement for construction bids, hereby represent and warrant, except as provided below, that no familial relationships exist between the owner(s) or any employee of _____ and any member of the Board of Education of the School District or the Superintendent of the School District.

List any Familial Relationships:

BIDDER:

By: _____

Its: _____

STATE OF MICHIGAN)
)ss.
COUNTY OF _____)

This instrument was acknowledged before me on the ____ day of _____, 2005, by _____.

_____, Notary Public
_____ County, Michigan
My Commission Expires: _____
Acting in the County of : _____

END OF BID FORM

SECTION 16010 - ELECTRICAL GENERAL REQUIREMENTS

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

SUMMARY

This Section includes general administrative and procedural requirements for electrical installations. The following administrative and procedural requirements are included in this Section to expand the requirements specified in Division 1 Sections.

- Design requirements.
- Performance requirements.
- Substitutions.
- Permits and fees.
- Examination of drawings and premises.
- Changes involving Electrical Work.
- Submittals.
- Project record documents.
- Operation and maintenance manuals and equipment.
- Quality assurance.
- Delivery, storage and handling.
- Warranty.

This Section includes basic requirements for materials and installations for electrical work, including but not limited to:

- Sealing of openings.
- Sleeves.
- Expansion fittings.
- Directories.
- Electrical demolition work.
- Cutting and patching.
- Coordination with other trades.
- Phasing.
- Field Quality Control.

REFERENCES

The electrical and physical properties of all materials, and the design, performance characteristics, and methods of construction of all items of equipment, shall be in accordance with the latest issue of the various, applicable Standard Specifications of the following recognized authorities:

- ANSI - American National Standards Institute
- ASTM - American Society for Testing Materials
- BICSI - Building Industry Consulting Service International
- FCC - Federal Communication Commission

ICEA - Insulated Cable Engineers Association
IEEE - Institute of Electrical and Electronics Engineers
NEC - National Electrical Code
NETA - International Electrical Testing Association
NEMA - National Electrical Manufacturer's Association
NFPA - National Fire Protection Association
UL - Underwriters' Laboratories, Inc.

SYSTEM DESCRIPTION

Design Requirements: Furnish all labor, materials, equipment, technical supervision, and incidental services required to complete, test and leave ready for operation the electrical systems as specified in the Division 16 Sections and as indicated on Drawings.

The Electrical Drawings indicate the general design and extent of the electrical system. Comply to the Drawings as closely as actual construction of the building and the work of other Trades permit.

Performance Requirements: Perform all work in a first class and workmanlike manner, in accordance with the latest accepted standards and practices for the Trades involved.

All equipment of the same or similar systems shall be by the same manufacturer.

Substitutions: Base Bid must be in accordance with materials or products specified. Any exceptions to this must be approved in writing by the Architect/Engineer ten (10) days or more prior to bidding.

Voluntary alternates may be submitted for consideration, with listed addition or deduction to the Bid, but will not affect the awarding of the Contract.

Permits and Fees: Obtain all permits, licenses, inspections and test required. Upon completion of the Work, obtain and send certificates of inspections and approvals to the Architect/Engineer.

Pay all fees and expenses for permits, licenses, tests and inspections.

Examination of Drawings and Premises: Before submitting Bids, examine the site, architectural, mechanical and other trades' drawings and specifications.

Notify Architect/Engineer should any discrepancies occur between them and the electrical work. No additional charges will be allowed because of failure to make this examination, or to include all materials and labor required for the Work.

Before submitting Bids, examine the premises to determine existing conditions for performing the Work. No additional charges will be allowed because of failure to make this examination or to include all materials and labor to complete the Work.

The Architectural Drawings take precedence in all matters pertaining to the building structure, Mechanical drawings in all matters pertaining to Mechanical trades and Electrical drawings in all matters pertaining to Electrical trades installation. However, where there are conflicts or differences between the Drawings for the various trades, report such conflicts or differences to the Architect/Engineer who shall determine the course of action to be taken.

Changes Involving Electrical Work: The design of the electrical systems is based on the mechanical and building equipment specified and scheduled on the Drawings.

Where equipment changes are made that involve additional electrical work (increased motor horsepower or increased unit full load amperes, requirements for a disconnect switch scheduled to be part of the equipment, requirements for a starter scheduled to be part of the equipment, additional wiring of equipment, etc.) the Mechanical or respective trades involved shall compensate the electrical trades for the cost of the additional work required.

SUBMITTALS

The following is in addition to the requirements for submittals in Division 1.

Material List: Submit a complete list of all materials, equipment, and their manufacturers, for approval by the Architect/Engineer within 15 days after award of contract and prior to submittal of shop drawings.

Provide equipment submittals in the form of letters of intent, product data catalog sheets or shop drawings as hereinafter specified for all materials provided on the project.

Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

Provide a space approximately 4" x 5" on the label or beside the title block on shop drawings to record the Contractor's review and approval markings and the action taken. Include the following information on the label for processing and recording action taken.

- Project Name
- Date
- Name and address of Architect/Engineer
- Name and address of Contractor
- Name and address of Subcontractor
- Name and address of Supplier
- Name of Manufacturer
- Number and title of appropriate Specification Section
- Drawing number, identification mark, fixture type, panelboard number, specification section number, and detail references, or as noted on the electrical drawings.

Equipment submittals shall be reviewed by the Electrical Contractor for completeness and accuracy and prior to submitting to the Architect/Engineer for review. Submittals shall be dated and signed by the Electrical Contractor.

Partial submittals for equipment shall not be permitted. Where partial submittals are transmitted to the Architect/Engineer, they will be returned "Rejected".

Where the equipment submittals consist of manufacturer's standard detail drawing or schedules and contain data for a variety of similar equipment, indicate the data pertinent to the equipment furnished for this project only. Standard detail drawings and schedules not clearly indicating which data is associated with this Project shall be returned "Rejected".

Where accessories and/or options are specified and do not appear as part of manufacturer's standard detail drawings, state each accessory that is to be provided with the equipment on the standard detail drawings.

Letter of Intent shall state that the product is exactly as specified with no exceptions, and that the product is being manufactured by one of the specified manufacturers. The Letter of Intent shall include the specification section number, the product description, the name of the selected manufacturer and the catalog number of the product. The aforementioned information shall be typed on the Electrical Contractor's letterhead and submitted with one (1) product data sheet for each product itemized in the Letter of Intent for record.

Shop Drawings: Prepare layout shop drawings drawn to scale and submit one (1) transparency copy and two (2) prints of each to the Architect/Engineer for review, together with required number of additional copies as required by the General Conditions. After the shop drawings are reviewed, the transparency copy will be stamped and returned for printing and distribution. Refer to Division 1 for submittals and quantities.

Layout shop drawings shall show building floor plans to scale and shall include lighting and power distribution systems, all details of electrical construction, routing of conduits, wiring, circuiting and related information necessary for the installation and future maintenance of the electrical wiring systems.

No apparatus or equipment shall be shipped from stock or fabricated until equipment submittals for them have been reviewed and approved by the Architect/Engineer. By the review of shop drawings, the Architect/Engineer does not assume responsibility for actual dimensions or for the fit of completed work in position, nor does such review relieve Electrical Trades of full responsibility for the proper and correct execution of the work required.

Submittals shall be provided on all major electrical systems and/or equipment, including the following:

REMARKS LEGEND

In addition to the previously specified, provide the following where indicated:

- | | |
|---------------------------------------|--|
| 1. Factory Test Report | 8. Points List |
| 2. Field Testing Report | 9. Sequence of Operation |
| 3. Record Drawings | 10. Certificate of Inspection |
| 4. Mock-Up | 11. Installer Certificate & Master Label |
| 5. Material & Equip. List/Certificate | 12. Fire Marshal Approval |
| 6. Operation & Maintenance Manuals | 13. Tools/Spare Parts |
| 7. Construction Schedule | 14. _____ |

Section Number	Section Title	Shop Dwgs.	Product Data	Letter of Intent	Samples	Warranty	Remarks
16010	General Requirements					X	6, 7, 10
	Layout Shop Drawings	X					3, 5, 13
	Materials List			X			5
16025	Electrical Systems						

Section Number	Section Title	Shop Dwgs.	Product Data	Letter of Intent	Samples	Warranty	Remarks
16060	Grounding						
	Grounding Cable			X			
	Grounding Connections/fittings			X			
16120	Conductors and Cables (0-600V)						
	Cable			X			1
	Splicing Connectors			X			
	Termination Lugs			X			
16130	Raceways and Boxes						
	EMT Conduit and Fittings			X			
	Outlet Boxes			X			
	Pull Boxes			X			
16140	Wiring Devices						
	Receptacles		X				2
	Device Plates		X				

PROJECT RECORD DOCUMENTS

Project Record Documents: Revise layout shop drawings as required during construction to indicate the as-built condition.

At the completion of the Project, resubmit to the Owner's Representative the revised sepias, and one set of prints indicating "as-built" conditions for Owner's record. The Drawings shall contain all title block information as originally issued by the Architect/Engineer with the addition of the electrical contractor's company name, address, telephone number, company's project number, date of issuance by the electrical contractor, and issued for "as-built" conditions in title.

Furnish and deliver to the Owner's Representative a manual of all shop drawings and product data upon substantial completion. The manual shall consist of a standard hard cardboard, vinyl covered, 3-ring binder, letterhead size, 8-1/2" x 11". Shop drawings shall be folded and punched. All items and pages shall be numbered with typewritten index inserted at front of manual.

Submit final project record documents as described in Division 1.

OPERATION AND MAINTENANCE MANUALS AND EQUIPMENT

Operation and Maintenance Manuals: The manuals shall contain operating instructions, service instructions, parts lists, etc., which are shipped with electrical equipment. On completion of the work, transmit these items to the Architect/Engineer, for the Owner's use. If this information is not shipped with the equipment, obtain from the manufacturer.

Maintenance Materials: Retain all portable and detachable portions of the installation such as keys, tools, manuals, etc., until the completion of the work and then transmit them to the Owner and obtain itemized receipt. This receipt shall be attached to the "Final Application" for payment.

Furnish three (3) sets of bound operation and maintenance manuals to the Architect/Engineer. Each set shall include:

- One (1) copy of all shop drawings.
- Operation and maintenance instructions and manuals.
- One (1) copy of all electrical testing.
- As-built drawings.

QUALITY ASSURANCE

Regulatory Requirements:

Ordinances and Codes: Perform all work in accordance with applicable Federal, State and local ordinances and regulations, the Rules and Regulations of the National Board of Fire Underwriters, the National Electric Code, and the latest accepted practices of IEEE and NEMA.

Notify the Architect/Engineer before submitting his proposal should any changes in Drawings or Specifications be required to conform to the above codes, rules or regulations. After entering into Contract, make all changes required to conform to above ordinances, rules and regulations without additional expense to the Owner.

Barrier-Free Regulations: All materials and installations shall comply with the requirements of the State of Michigan Handicapped Barrier-Free Regulations and with the Americans With Disabilities Act (ADA).

Rules of Local Utility Companies:

Perform work in accordance with the rules of local utility companies. Before submitting the bid check with each utility supplying services to this Project. Determine from them all equipment and charges which they will require and include the cost in the bid.

Field Measurements:

Drawings are not intended to be scaled for roughing-in or to serve as shop drawings. Take all field measurements required for fitting the installation to the building.

Sequencing and Scheduling: Sequence and schedule work so as to avoid interference with the work of other Trades. Be responsible for removing and relocating any work which in the opinion of the Owner's Representatives causes interference.

DELIVERY, STORAGE AND HANDLING

Storage and Protection: Provide adequate storage space for all electrical equipment, conduit and materials delivered to the job site under a weather protected enclosure. Location of the space will be designated by the Owner's Field Representative. Equipment set in place in unprotected areas must be provided with temporary protection.

Be responsible for the care and protection of electrical equipment until it has been fully tested and accepted.

Protect materials with permanent factory finish from damage by covering.

Protect conduit openings with temporary plugs or caps.

WARRANTY

Warranty: Provide a one year parts and labor warranty for all equipment and installation. Comply with requirements of the General Conditions.

PRODUCTS

SEALING OF OPENINGS

Seal openings around electrical materials (Conduit, raceways, cable trays, panels, etc.) where floors, fire rated walls and smoke barriers are penetrated. (Fiberglass is not acceptable.) Fire and/or smoke barriers shall be UL Listed fire and smoke stop fittings and shall have fire rating equal to or greater than the penetrated barrier.

SLEEVES

Provide conduit sleeves where conduits pass through concrete floors, walls, beams and ceilings.

Sleeves shall be galvanized rigid steel conduit. Do not use aluminum conduit. Where specific sizes are not indicated on the Drawings, sleeves shall be sized to provide one-half (1/2) inch clearance around the outside surface of the item for which they were installed. They shall be cut flush with wall surfaces, and shall extend one inch, or as directed through floor. Sleeves shall be packed with approved non-combustible packing material and sealed with sealant to prevent passage of air, liquid or fumes from one area to another. The filler and sealant materials used shall be rated at least equal in fire resistance to the construction material being penetrated. Floor sleeves shall be sealed between floor and sleeve with concrete grout.

EXPANSION FITTINGS

Provide expansion fittings in all conduits, cable trays, and feeder bus duct runs that cross building expansion joints, both in concrete slabs and where exposed.

DIRECTORIES

Provide new typed, updated panel directories at all existing panels affected by the scope of the project. Ring out all existing branch circuits as required to update the existing panel directories.

EXECUTION

ELECTRICAL DEMOLITION WORK

General: Perform electrical demolition work in a systematic manner. Use such methods as outlined below to complete Work indicated on the Drawings.

Obtain approval from the Owner prior to interrupting existing services. All service interruptions shall be at a time suitable to the Owner. Where the Owner approves service interruptions at times resulting in premium time work to this Contractor, this Contractor shall include the premium time in his Base Bid.

The associated conduit, wire, junction boxes, supports, etc., of demolished equipment shall be removed from the utilization equipment back to the source panel and the associated circuit breaker or fused switch shall be relabeled as "spare", unless otherwise noted. All associated wiring shall be removed back to the "sources" as noted below:

Power: Remove conduit and wire back to the panel. When the circuit continues on to the other existing loads remove conduit and wire back to the first junction box.

Telephone: Remove wiring back to communication room or other source.

Data system or other special wirings: Remove wiring back to communication room or other source.

Conduit in walls to remain: Abandon in place. Install blank coverplates.

Conduit accessible above ceilings and/or other location: Remove conduit.

Ring out circuits prior to deactivating feeders and branch circuits to insure maintaining electrical power in adjacent unrenovated area. Where removal of conduit and wire affects "downstream" circuits, refeed downstream circuits.

Conduit in floor slabs shall be cut 1/2 inch below the floor and patched.

Where applicable, existing in-place conduit may be reused for new work providing that the installation is in accordance requirements for new work found in Section 16000.

Where equipment or fixtures are removed, outlets shall be properly blanked-off, and conduits capped. After alterations are completed, the entire installation shall present a "finished" look, as approved by the Architect/Engineer. The original function of the present electrical work to be modified shall not be changed unless required by the specific revisions to the system as specified or as indicated.

Materials salvaged from this work shall not be reused except where reuse is specifically indicated.

Existing fixtures and electrical equipment removed, not reused and not specifically indicated to be turned over to the Owner, shall be legally and properly disposed of off Owner's property.

Existing fixtures and electrical equipment specifically indicated to be turned over to the Owner shall be disconnected, removed and turned over to the Owner in an undamaged condition to an on sight storage area as directed by the Owner.

CUTTING AND PATCHING

Refer to Division 1 for requirements for cutting, patching and refinishing work necessary for the installation of Electrical Work.

Direct miscellaneous cutting and patching of the existing building construction for the installation of the Electrical Work.

The cutting of holes through the existing building construction shall only be done by the use of abrasive saws and rotary coring machines. The use of hammer and drill points will not be permitted. The openings shall not be cut larger than necessary for the installation of the electrical work. Openings shall then be grouted in. Where existing piping, etc. is removed, the unused openings shall be grouted in.

The drilling or punching of structural members, such as holes through beams or columns, shall not be done without the specific permission of the Architect/Engineer.

Cutting of holes through floors and walls shall be done only at such locations as may be directed by the Architect/Engineer.

Cooperate with the other Contractors so that all cutting and repairing in any given area will be done simultaneously.

Electrical work which may interfere with changes in piping, ducts or other mechanical equipment, as well as conduits and outlets that may be uncovered by the cutting of new openings in present building, shall be removed at the direction of the Architect/Engineer.

EQUIPMENT FOUNDATIONS AND SUPPORTS

Furnish foundations and supports for electrical equipment and materials as required by codes, as listed hereinafter and shown or noted on the Drawings.

Provide necessary inserts, rod, structural steel frames, brackets, platforms, etc., for equipment suspended from ceilings or walls, such as conduits, transformers, panels, etc.

Inserts for equipment support shall be lead shield anchors for small work and expansion shields for large work. Wooden plugs will not be allowed. Do not use metal roof decking and cellular floors for supporting equipment.

COORDINATION WITH OTHER TRADES

Install Work so as to avoid interferences with the Work of other trades. Be responsible for removing and relocating any work which, in the opinion of the Owner's Representative, causes interferences.

Should construction conditions prevent the installation of switches, conduit, outlet boxes, junction boxes, conductors, lighting fixtures and/or other related equipment at locations shown on the drawings, minor deviations may be permitted and shall be as directed by the Architect/Engineer, and shall be made without additional cost to Owner.

The Electrical Trades will be responsible for all damage to other Work caused by their Work or through the neglect of their workers.

All patching and repairing of any such damaged Work shall be performed by the trades which installed the Work, but the cost shall be paid by the Electrical Trades.

PHASING

Identify general power and lighting feeder and branch circuits with a visual color code as an integral part of the outer jacket or as a printed color coding the entire length of the insulation in accordance with the NEC.

FIELD QUALITY CONTROL

Tests and Inspection:

When the systems are completed, operate equipment as directed by Architect/Engineer. Replace all faulty equipment. Make necessary adjustments before final acceptance.

Tests shall include but not be limited to panels, lighting fixtures, receptacles, fire alarm system, generator transfer, sound systems, emergency lighting, branch circuits, etc.

Perform all tests required by State, City, County and/or other agencies having jurisdiction.

Provide all materials, equipment, etc., and labor required for tests.

Cleaning:

Keep premises free from accumulation of waste materials and rubbish. At completion of work remove all rubbish from and about the building and leave the electrical systems clean and ready for use.

Final clean-up shall include washing of fixture lenses, switchboards, substations, transformers, motor control centers, distribution panels, lighting panels, etc., to remove shipping and/or construction dust and debris. Fixture reflectors and/or lenses with water marks or cleaning streaks will not be accepted.

Painting:

In general, no painting is required by Electrical Trades other than touch-up of factory-finished electrical equipment.

All factory finished electrical equipment shall be cleaned at completion of the job. Equipment showing rust or mars shall be thoroughly cleaned and sanded, prime coated and touched up with enamel of color to match original finish.

END OF SECTION 16010

SECTION 16025 – ELECTRICAL SYSTEMS

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to work of this Section.

SUMMARY

Description of Systems:

Small Power System: 208/120 volts, 3 phase, 4 wire, 60 hertz, solidly grounded neutral.

WORK SPECIFIED IN DIVISION 16 SECTIONS

Furnish all labor, materials, equipment, technical supervision, and incidental services required to complete, test and leave ready for operation the electrical systems as specified in the Division 16 Sections.

The principal items of electrical work to be furnished and installed shall include but not necessarily be limited to the following items:

Wiring devices including receptacles, plates, etc.

Branch circuit wiring to security cameras, including receptacles and equipment.

Remove ceiling tile to accommodate installation of raceway systems and outlet boxes. Reinstall ceiling tile subsequent to installation of raceway systems. Provide new ceiling tile of the same manufacture and style where ceiling tile is damaged by this contractor.

All items incidental to and/or required to complete the installation.

WORK DESCRIPTION

Provide sixteen (16) transient voltage surge suppression (TVSS) duplex receptacles and associated conduit and wire at six (6) Troy School District buildings as follows:

Provide a dedicated 120 volt circuit with one (1) TVSS duplex receptacle in divided surface metal raceway (i.e. Wiremold V4000) from an existing spare 20A, 1 pole circuit breaker in nearest computer grade receptacle panel for the security equipment rack at each of the following locations:

Troy High School
Athens High School
Niles Community High School
Smith Middle School
Boulan Middle School
Larson Middle School

Extend nearest existing 120 volt computer branch circuit with adequate capacity and provide one (1) TVSS receptacle flush mounted in ceiling or in surface mounted raceway (i.e. Wiremold V500) on wall for security cameras as follows:

<u>Location</u>	<u>Quantity</u>
Troy High School	5
Athens High School	3
Niles Community High School	0
Smith Middle School	2
Boulan middle School	0
Larson Middle School	0

Security cameras will be furnished and installed by others and shall be mounted within 18 inches below finished ceiling.

Base bid shall include a total of 2,400 linear feet of conduit (3/4" EMT) and wire (2#12 & 1#12 GRD.).

Adjustment (addition or deduction) to base bid price for actual materials used will be based on unit pricing provided.

PRODUCTS

See specific sections for requirements.

EXECUTION

See specific sections for requirements.

END OF SECTION 16025

SECTION 16060 - GROUNDING

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

SUMMARY

This Section includes the following:

Grounding Conductors:

For General Use Above and Below Grade: Insulated.
In Conduit with Phase Conductors: Insulated.

Grounding connections.

QUALITY ASSURANCE

Regulatory Requirements: Ground electrical system neutrals and non-current carrying parts of electrical equipment per the minimum requirements of the National Electrical Code, except where additional requirements are indicated or specified.

SUBMITTALS

General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.

Submit shop drawings and complete product data on each item. Coordinate the items, as they relate to the work, prior to submittal. Shop drawings shall include:

Grounding connections and fittings

PRODUCTS

GROUNDING CONDUCTORS

Insulated Grounding Conductors: Stranded annealed copper insulated with a heat and moisture resistant polyvinyl chloride compound and meeting UL Requirements for Type (THWN) (XHHW), 75 degC, rated 600 volts, color-coded green. Conductor No. 10 AWG and smaller may be solid in lieu of stranded. Refer to Section 16120 for manufacturers.

GROUNDING CONNECTIONS

Copper Compression Grounding

Manufacturer: Provide products of one of the following:

- Anderson
- Burndy
- IlSCO
- Panduit
- Penn Union
- Thomas & Betts

Grounding Fittings for Bonding a Ground Conductor to Its Own Conduit.

Manufacturer: Provide products of one of the following:

- Appleton Type GIB
- Burndy Type NE
- Penn Union Type BD
- O-Z Type GB
- Thomas & Betts Type TIG or 3800 Series

EXECUTION

INSTALLATION

Install conductors of size required by the NEC. except that where sizes are otherwise indicated, provide these sizes.

Thoroughly clean all bonding surfaces of non-conducting materials. Where bolted connections are used, treat surfaces with a corrosion-inhibiting compound.

Where insulated conductors are used, thoroughly tape all exposed splices and connections.

Where metallic conduit is used for mechanical protection of a ground conductor, bond conductor to the conduit at each end.

Provide an equipment grounding conductor, within the raceway along with phase conductors, for all feeders and branch circuits.

The metallic enclosures and exposed noncurrent-carrying metal parts of all electrical equipment shall be grounded by connection with an equipment grounding conductor. This includes boxes, panels, lighting fixtures, ballasts and poles, receptacles, etc.

END OF SECTION 16060

SECTION 16120 - CONDUCTORS AND CABLES (0-600V)

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

SUMMARY

This Section includes the following:

Wire and cable systems as required, and all material and equipment, including wire cable, connectors and lugs, fittings, and wire and cable identification, as indicated or specified.

PERFORMANCE REQUIREMENTS

Furnish wire and cable on which standard factory tests established by ASTM, ANSI, IPCEA and NEMA have been performed.

SUBMITTALS

General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.

Product Data: Submit product data for each type and size of wire and cable. Identify material, construction data, insulation thickness, and jacket thickness. Submit color coding schemes for branch circuit wiring. Submit cable identifications.

Samples: Submit samples on request of the Architect-Engineer.

Submit test data for wire and cable upon request of the Architect-Engineer. Do not install wire and cable for which test data has been requested until test data is approved.

REGULATORY REQUIREMENTS

Wire and Cable: Listed by Underwriters' Laboratories as meeting National Electrical Code requirements and be so labeled.

DELIVERY, STORAGE AND HANDLING

Deliver all wire and cable to the site on reels or in coils, plainly marked for complete identification, including the wire or cable size, the number of conductors, type of wire or cable, length, weight, thickness and character of the insulation and the name of the manufacturer. Furnish 600 volt wires and cables on coils and reels carrying original date perforated inspection labels of the Underwriters' Laboratories showing the number of feet and type of wire contained.

PRODUCTS

WIRE AND CABLE

General Requirements: Furnish wire and cable per standard specifications established for such material and construction by ASTM, ANSI, IPCEA and NEMA, where applicable. Furnish copper conductors unless otherwise specified, not less than No. 12 AWG, except control conductors which may be No. 14 AWG. Furnish conductor sizes as indicated. Furnish solid or stranded conductors for sizes No. 10 AWG and smaller, and stranded conductors for sizes No. 8 AWG and larger.

Manufacturer: Provide products of one of the following:

- American Insulated Wire Corp.
- Cablec Corp.
- Okonite
- Pirelli Cable Corp.
- Southwire.
- Triangle.

Wire for General Interior and Exterior Use: Single conductor, annealed copper, NEC Type XHHW or THHN/THWN rated 90 degC in dry locations and 75 degC in wet locations, 600 volts, or NEC Type RHW rated 75 degC, 600 volts, or Type THWN rated 75 degC, 600 volts.

Wire for General Interior and Exterior Use, Sizes No. 10 AWG and Smaller: Single conductor, annealed copper, NEC Type THW rated 75 degC, 600 volts.

Wire for General Interior and Exterior Use, Sizes No. 8 AWG Through No. 4/0 AWG: Single conductor, annealed copper, NEC Type RHW rated 75 degC, 600 volts; NEC Type THHN-THWN rated 90 degC in dry locations and 75 degC in wet locations, 600 volts.

CONNECTORS FOR SPLICING COPPER CONDUCTORS

Connectors for Straight Splicing Conductors Up To and Including No. 8 AWG: Solderless compression type.

Manufacture: Provide one of the following:

- Burndy "Hylink"
- Panduit
- Thomas & Betts "Sta-Kon"

Connectors for Pigtail Splicing Conductors Up To and Including No. 8 AWG: Solderless type; with a metallic insert connector within a plastic insulating cover having a temperature rating of 105 degC, 600 volts.

Manufacture: Provide one of the following:

- Buchanan
- Ideal
- Scotchlok

LUGS FOR TERMINATING COPPER CONDUCTORS

Lugs for Terminating Power Conductors Up To and Including No. 8 AWG: Solderless type, manufacturer's standard, unless otherwise specified.

WIRE LABELS

Wire Labels for Identification of Conductors.

Manufacture: Provide products of one of the following:

Brady
Westline

INSULATING TAPE

General Use Tape:

Manufacture: Provide one of the following:

Okonite Type CLF Catalog Series 602-20
Scotch 33 Plus

High Temperature Area Tape:

Manufacture: Provide products of one of the following:

Plymouth/Bishop Insulating Products "77 Plyglas"
Scotch 27

MISCELLANEOUS

Lubricating Compound:

Manufacture: Provide products of one of the following:

American Polywater Corp.
Ideal 77 Yellow or Wire Lube

Aluminum Joint Compound:

Manufacture: Provide products of one of the following:

Burndy "Penetrox A"
IlSCO "DE-OX"
Thomas & Betts No. 21059

EXECUTION

GENERAL

Install wiring in raceway systems, as indicated and as specified. Install wiring only in completed raceway systems and when systems are protected from the weather. Install conductors continuous, without splices, between equipments, where possible. Where splices are required, make up splices in boxes; do not use fittings for same.

Install phase and neutral conductors of each branch or feeder circuit in a single conduit except where paralleling circuits are indicated. Install paralleling circuits of identical makeup and length as the paralleled circuit, and terminate conductors at the same location, mechanically and electrically, at both ends, to ensure equal division of the total current between conductors.

Continuously lubricate all non-armored cables of the larger sizes at the pull-in point of conduit systems with an approved compound compatible with conductor insulation or jacket.

Install conductors in such a manner that the bending radius of any wire or cable is not less than the minimum recommended by IPCEA and/or the manufacturer. Do not exceed manufacturer's recommended values for maximum pulling tension applied to any wire or cable.

COLOR CODING AND CONDUCTOR IDENTIFICATION

Identify individual phase conductors of branch power and lighting circuits as to phase and system voltage by means of color coding in conformance with Section 210-5 of the NEC. Develop a unique color scheme for each different voltage system. Match existing schemes where such exist. Submit color schemes for approval of the Architect-Engineer prior to implementation. Provide conductor color coding by means of colored insulating materials or by means of colored wire labels attached to individual conductors in all outlet, pull or junction boxes and at all terminations.

SPLICES AND TERMINATIONS

Splice and terminate conductors with connectors and lugs as specified for the specific size and type of conductor. Indent all compression type connectors and lugs with tools as recommended by the connector or lug manufacturer.

Thoroughly clean wire ends before connectors or lugs are applied.

Whenever aluminum or copper lugs are terminated on aluminum bus, use a Belleville washer and two tin or cadmium plated washers, one on each side in combination with aluminum joint compound on all contacting surfaces. Tighten bolts until Belleville washer is flat.

Insulate all bare surfaces of conductors with a minimum of four layers (half lap in two directions) of electrical insulating tape. On larger splices and terminals, build up connection with electrical insulating putty before applying tape, to eliminate both sharp edges and voids.

END OF SECTION 16120

SECTION 16130 - RACEWAYS AND BOXES

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

SUMMARY

Raceway systems as required, and all equipment and material, including conduit, fittings, boxes, wireways, and cable trays, as indicated or specified.

SUBMITTALS

Product Data: Submit complete data on each item. Coordinate the items, as they relate to the work, prior to submittal. Shop drawings shall include:

Conduit and fittings
Boxes

Submit Owner's Operation and Maintenance Manuals for systems and equipment as follows:

QUALITY ASSURANCE

Regulatory Requirements: Work in Hazardous Areas in accordance with Article 500 of the National Electrical Code.

PRODUCTS

CONDUIT

Electrical Metallic Tubing: Zinc-coated steel per ANSI C80.3-1977 "Specification for Electrical Metallic Tubing, Zinc-Coated".

Manufacturer: Provide products of one of the following:

Allied
ETP
Republic
Triangle

Flexible Steel Conduit: Per UL-1, "Flexible Steel Conduit".

Manufacturer: Provide products of one of the following:

Allied
ETP
Triangle

CONDUIT FITTINGS

Couplings and Connectors for EMT: Zinc-plated steel, set screw type.

Manufacturer: Provide products of one of the following:

- Appleton
- ETP
- Midwest
- Steel City
- Thomas & Betts

Conduit Unions, On Continuous Run:

Manufacturer: Provide products of one of the following:

- Erickson

Fittings for Flexible Steel Conduit: Malleable iron or steel, zinc or cadmium plated, securing the conduit by clamping action around the periphery of the conduit. Do not furnish fittings that anchor the conduit by means of set screws.

Manufacturer: Provide products of one of the following:

- Appleton
- ETP
- Steel City

OUTLET BOXES

Sheet Steel Boxes: Galvanized or sherardized stock not less than No. 14 gage, with knockout openings, single or multiple gang, with extensions, adapters, plaster rings, tile covers, fixture studs and cover plates. Furnish accessories with same gage and finish as specified for boxes, except where special finishes are specified for covers and device plates in Section 16121. Provide sizes per NEC requirements for wiring space, except where minimum sizes are specified under Part 3.

Manufacturer: Provide products of one of the following:

- Appleton
- RACO
- Steel City

Cast or Malleable Iron Boxes: Galvanized or cadmium plated, single or multiple gang, with taper threaded hubs, adapters and cover plates. Furnish cast metal, galvanized or cadmium plated accessories, except where special device plates are specified in Section 16121. Furnish gaskets when located in areas requiring gaskets as specified in Part 3. Provide sizes per NEC requirements for wiring space, except where minimum sizes are specified under Part 3.

Manufacturer: Provide products of one of the following:

Appleton
Crouse-Hinds
Pyle-National
Russelstoll

PULL AND JUNCTION BOXES

Boxes Less than 5 Inches by 5 Inches: Conform to requirements specified for Outlet Boxes.

Sheet Metal Boxes: Code gage, full seam welded with bent-in flanges seam welded at corner joints, screw fastened cover of same gage as box. Fasten cover with brass machine screws. Galvanize box and cover after fabrication. Provide sizes conforming to NEC requirements for wiring space, except where boxes of larger size are indicated. Furnish gaskets when located in areas requiring gaskets as specified in Part 3.

Cast or Malleable Iron Boxes: Code gage, with threaded hubs or conduit bosses for field drilling and tapping, screw fastened cover of same gage as box. Fasten cover with brass machine screws. Galvanize box and cover after fabrication. Provide sizes conforming to NEC requirements for wiring space, except where boxes of larger size are indicated. Furnish gaskets when located in areas requiring gaskets as specified in Part 3.

Manufacturer: Provide products of one of the following:

Hoffman
O-Z

MISCELLANEOUS

Trapeze Hangers

Manufacturer: Provide products of one of the following:

Kindorf
Powerstrut
Unistrut

Shielding Paint

Manufacturer: Provide products of one of the following:

Thomas & Betts "KopR-Shield"

Sealant: Single component, non-sage urethane:

Manufacturer: Provide products of one of the following:

Sika Corp. "Sikaflex 1a"
Pecora Corp. "Dynatrol 1"
Sonneborn "Sonolastic NP-1"
Tremco "Dymonic"

EXECUTION

CONDUIT SYSTEMS

Install flexible conduit in lieu of EMT for final connection to distribution transformers and other equipment subject to vibration or movement.

Install conduit systems as indicated, as required by the NEC, and as specified. Install conduit sizes as indicated. Where conduit sizes are not indicated, install sizes per NEC requirements, except do not use conduit sizes smaller than 3/4 inch unless otherwise specified.

Install conduit concealed in office and similar finished areas, and exposed in all other areas unless otherwise indicated or specified.

Install exposed conduit runs parallel or perpendicular to walls, structural members, or intersections of vertical planes and ceilings. Keep conduit at least six inches away from parallel runs of high temperature surfaces, such as steam or hot water pipes and do not run conduit directly under cold water lines.

Group conduit for common support, where indicated and elsewhere as directed by the Architect-Engineer.

Do not install crushed or deformed conduits and avoid trapped runs in damp or wet locations. Take care to prevent the entrance of water and the lodging of concrete, plaster, dirt or trash in conduit, boxes, fittings and equipment during the course of construction. Free conduit of obstructions or replace the conduits. Where conduit joints occur in concrete slabs, or in damp or wet locations, make joints watertight by applying an approved compound on the entire thread area before assembling. Draw up all conduit joints as tightly as possible. Cap exposed empty conduits which do not terminate in outlets, panels, cabinets, etc. with standard galvanized plumbers pipe caps. Plug empty conduits which terminate flush with floors or walls with flush coupling and brass plug.

Install conduit sleeves for all exposed conduits and cables passing through walls, ceilings or floors, and fill the void between sleeve and conduit with sealant flush with the end of the sleeve to seal the opening.

Make changes in direction of runs with symmetrical bends, fittings or pull boxes. Do not use bends around outside corners; use fittings for same. Install elbows, bends and offsets having a minimum radius of curvature of 24 inches for 2 inch and 2-1/2 inch conduit, and 36 inches for 3 inch and larger conduit. Except where conduit runs are shown in exact detail, install pull points at not greater than 200 foot intervals in straight runs. Where bends are included between pull points, reduce this maximum permissible 200 foot separation between pull points by 50 feet for each 90 degree bend and 25 feet for each 45 degree bend. Figure deductions for all other angle bends on a similar basis. When bends are made in the field, make bends with an approved hickey or conduit bending machine. Make bends in 1-1/4 inch and larger conduits with standard conduit ells where possible.

Provide conduit nipples with two independent sets of threads. Do not use running threads on any part of the conduit system. Where conditions require joining two fixed conduits into a continuous run, use a conduit union, in place of running threads and coupling.

Install expansion fittings in exposed conduit runs of excessive length, crossing building expansion joints, and elsewhere as indicated.

Use one hole malleable iron galvanized pipe straps for support of single conduits, or clevis type hangers. Support groups of conduit on trapeze hangers. Use threaded rod or pipe for hanger support. Do not use perforated strap or wire for conduit or hanger support. Use beam clamps or malleable iron or wrought steel with hook rods to grip the beam flange for conduit or hanger support; do not use C-clamp type fittings. Support exposed conduit at least every 8 feet if smaller than 2 inch, and every 10 feet if 2 inch and larger unless otherwise noted.

All wiring shall be installed in raceways.

Remove ceiling tile to accommodate installation of raceway systems and outlet boxes. Reinstall ceiling tiles subsequent to raceway and outlet box installation. Provide new ceiling tiles of the same manufacture and style, where this contractor damages the existing tiles.

OUTLET, SWITCH, JUNCTION AND PULL BOXES

Outlet Boxes for Use with Electrical Metallic Tubing: Sheet steel for flush or concealed work; cast or malleable iron for exposed locations.

Flush Mounted Boxes: For single outlets, use boxes not less than 4 inches square and 2-1/8 inches deep. For multiple outlets, use gang type boxes not less than 2-1/4 inches deep. Furnish plaster rings not less than 1-1/8 inches deep.

Pull and Junction Boxes for Use with Each Type of Conduit: As specified for outlet boxes for each conduit type under above paragraphs.

Install boxes in the wiring or raceway systems as required for pulling of wires, making connections, and mounting of devices and fixtures.

Install extension rings, adapters, raised covers and plaster rings on flush mounted boxes as required. Equip flush mounted boxes in masonry block or tile walls with tile covers.

Locate outlets in offices and other finished areas with due regard for the finish and interior architectural treatment so that outlets are centered with respect to panels, joints or moldings, and so that plaster rings, frames and tile covers are properly located with respect to the finished surface.

Support boxes independent of conduit and secure rigidly in place.

Above suspended ceilings, support boxes independent of the ceiling; fasten boxes to the ceiling support system by bar hanger or other approved support.

END OF SECTION 16130

SECTION 16140 - WIRING DEVICES

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

SUMMARY

This Section includes the following:

Receptacle services as required, and all materials and equipment, including receptacles, device plates, as indicated or specified.

SUBMITTALS

General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.

Product Data: Submit product data on each item. Coordinate the items, as they relate to the work, prior to submittal. Include the following:

All receptacles including device plates.

PRODUCTS

SPECIAL RECEPTACLES

20 Ampere Duplex Surge Suppression Receptacles for 120 Volt, Single Phase Service to Electronic Equipment: Integrally mounted surge protection, power on indicator light, visual or audible failure alarm, feed through for "downstream" protection, UL Listed for 1449 and 498 Standards, orange color, and rated as follows:

Transient Suppression Peak Energy - 140 Joules minimum.

Transient Suppression Peak Current - 13,000 amperes.

Clamping Voltage UL Portable - 310 volts.

Clamping Voltage UL Permanently Wired - 420 volts.

RFI Rejection - 10dB @ 4Mhz.

Response Time - 5 nanno seconds.

Straight blade, 2 pole, 3 wire NEMA configuration 5-20R rectangular face, specification grade, pigtail wiring, grey color.

Cooper 5362GYS

Hubbell 5362GYS

Leviton 5380-GY

Pass & Seymour 5362-GRYSP

15 Ampere Duplex Convenience Receptacles for 120 Volt Single Phase Service Located "Downstream" of Surge Protection Type Receptacles and for Service to Electronic Equipment: Straight blade, 2 pole, 3 wire, NEMA configuration 5-15R, rectangular face, specification grade, for back and side wiring, grey color:

Cooper 5262
Hubbell 2152
Leviton 262
Pass & Seymour 26252

DEVICE PLATES

Device Plates in Offices and Other Finished Areas: Stainless steel No. 302 finish.

Screws: Provide screws having a finish matching the plate.

EXECUTION

INSTALLATION

Mount equipment at locations indicated.

Install receptacles in outlet boxes as specified in Section 16050 "Basic Materials and Methods" unless otherwise specified in this Section. Mount receptacles at uniform heights above the floor for various areas as indicated.

Install plates on flush mounted outlets with all four edges in continuous contact with finished wall surfaces without the use of plaster mats or similar devices. Do not use plaster or similar fillings. Install plates vertically, unless otherwise noted, with an alignment tolerance of 1/16 inch.

END OF SECTION 16140



BID TABULATION FORM

Project Name: Troy School District
 School Technology Systems
 Security Camera Power
 TSD Bid No. 9443
 IDS Project No.: 03234-2002

Date: July 24, 2007

Estimate: \$17,000.00

	Scott Electric	J.B. Electrical	Bidder 3	Bidder 4	Bidder 5	Bidder 6
Bid Bond	No	Yes				
Addendum	n/a	n/a				
Familiar Disclosure	No	Yes				
Base Bid Electrical Trades	No Bid	\$16,136.00				

Voluntary Alternates

V1. Voluntary Alternate No. 1	n/a	n/a				
V2. Voluntary Alternate No. 2	n/a	n/a				
V3. Voluntary Alternate No. 3	n/a	n/a				

Unit Prices

EUP-1 Unit Price No. 1	n/a	\$54.00				
EUP-2 Unit Price No. 2	n/a	\$6.00				
EUP-3 Unit Price No. 3	n/a	\$12.50				

cc: File

ec: M. Adamczak, TSD S. Bryan, TSD
 F. Lams, TSD R. Killips, ids
 R. Bracci, ids S. Smith, ids

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