APPENDIX A – SECTION REFERENCE ATTACHMENTS

2025

01 02 00 ATTACHMENT A ELECTRONIC DRAWING SUBMITTAL REQUIREMENT

A. Wake County Public School System (WCPSS) requires all architectural and/or engineering design drawings to be submitted using the requirements outlined in this document. Failure to follow these guidelines may impact the final payment to the architectural or engineering firm. Any questions regarding this document are to be directed to the appropriate project manager.

B. Requirements:

1. All drawings are to be submitted in PDF and .dwg format. The acceptable AutoCAD versions will be the current version at the time the drawings are created or the previous version.

2. When BIM is utilized, all electronic drawings are to be generated from the BIM file maintained by the Designer. Changes to design drawings will be made at the source file level, and revised pdf/dwg files generated from the source.

3. Formatting and Delivery of drawings and spec files shall follow the guidelines indicated in Appendix A - 01 02 00 – Attachment D: Design Delivery and Formatting Guidelines and Appendix A - 01 02 00 – Attachment E: File Deliverable Requirements.

4. Each drawing will be a standalone drawing file completely matching the printed drawing submitted to WCPSS.

   a) Externally referenced design drawings are not acceptable.

   b) The only acceptable externally referenced information will be a photographic image. Images will be stored in the same directory as the AutoCAD drawing file: no paths will be saved when the image is inserted into the drawing. All images will be a standard JPEG format.

5. Any stamps on the printed drawings will be included in an electronic format on the drawing file. This includes PE, “For Construction Only”, “Record Drawing” and “Bid Document” stamps.

6. A copy of the Project Manual including all addendums shall be in PDF format and included with the Project Record Drawings submittal.

7. All drawing files will be submitted to WCPSS via electronic file transfer or other digital media transfer device. Please verify the information in the transfer prior to submittal. Drawings should be stored in a logical directory format with file names matching the printed version of the drawing.

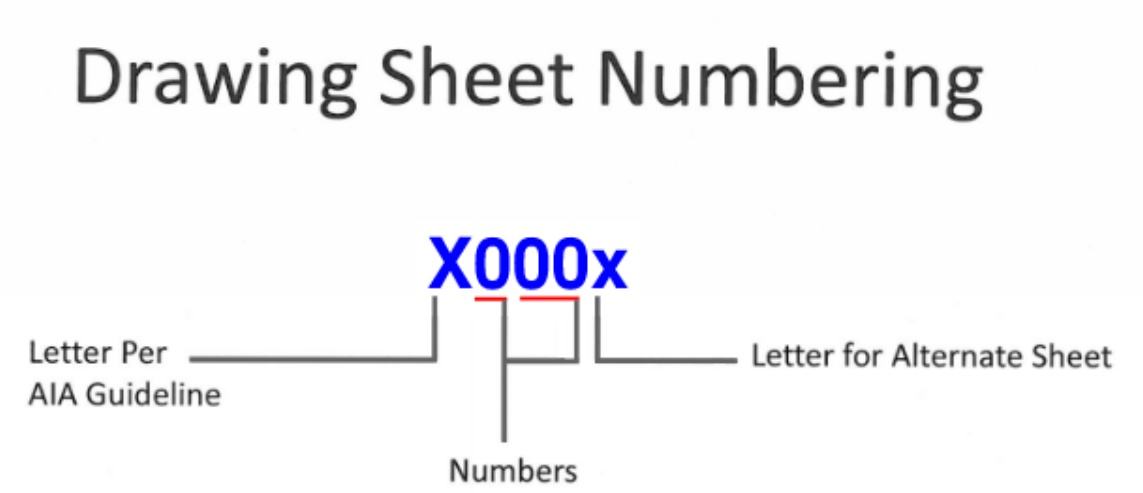
   a) Example: If the drawing title reads “A101 – Ground Floor Plan”, in the title block, creation of the PDF drawings file should read “A101 – Ground Floor Plan “(IN BLOCK LETTERING), sheet number and placed in a discipline folder Architecture, and so forth.

8. Electronic drawing files will be submitted to WCPSS at the following phases:

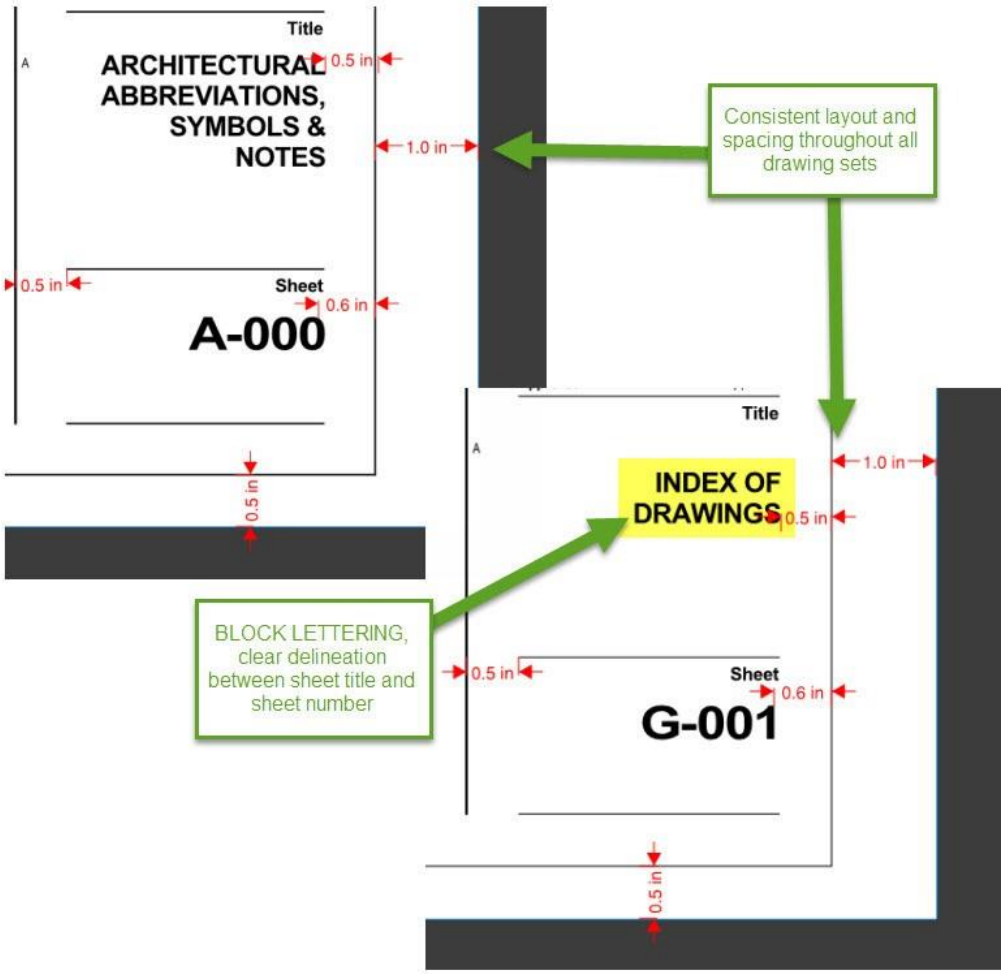
   a) Schematic Design
   b) Design Development
   c) 60% Construction Documents
   d) 100% Construction Documents
   e) Bid Set including all addenda (Conformance Set - signed and sealed)
   f) Record Drawings

9. Record Drawing files must have all building letters and rooms numbers verified in the field.

01 02 00 ATTACHMENT B DRAWING SHEET NUMBERING



01 02 00 ATTACHMENT C DRAWING SHEET FONT AND MARGINS



Drawing Sheet Block Guidelines

- Use BLOCK LETTERING and a sans serif typeface
- Allow 1" between drawing L/R border and edge of page
- Allow .5" between drawing Top/Bottom border and edge of page
- Allow .5" margin for Sheet Title and Sheet Number
- Allow at least .5" between top of Sheet Title/Sheet Number and any border or title
- Include a SOLID LINE between Sheet Title and Sheet Number

01 02 00 ATTACHMENT D – DESIGN REVIEW DELIVERY AND FORMATTING GUIDELINES

Design Review Delivery and Formatting Guidelines

1. Drawing Delivery:
   All required documents for WCPSS Design Phase review must:

   a. Be delivered electronically to WCPSS FD&C
   b. Be organized as follows:
      i. **Printed Drawings:**
         1. Bound by Volume - NOTE: Drawings must not exceed 20-25 lbs. in weight per bound volume. Divide volumes accordingly. Printed volumes that exceed this weight may be rejected.
      ii. **Digital Drawings:**
         1. Bound and named by individual Discipline (e.g. 01 - COVER AND INDEX; 02 - ARCHITECTURAL; etc.)
            a. If a Discipline-bound section exceeds 100MB, divide into volumes at a logical division point
         2. Bookmarked *and* labeled **per page** as follows: "Sheet #" - "Sheet Title" (e.g. A08.24 - Interior Elevations; A08.04 - Unit B - First Floor Finish Plan) and SHOWN IN BLOCK LETTERING.
         3. Include an Index of Drawings for each Discipline-bound drawings set (e.g. a separate index of drawings each for Architectural, Electrical, Plumbing, Mechanical, Theater, etc.)
2. Formatting for Digital Drawings:
   Drawing files must:

   a. Be text searchable (i.e. saved in a way that text can be highlighted or found in a search - no scans of drawings)
   b. Consist of commonly used typeface fonts, recognizable by Windows PCs with no additional fonts loaded
3. Formatting for Digital Specs:
   Digital specs must:

   a. Be text-searchable
   b. Include a footer at the bottom of each page, listing Section # and Section Title
   c. Be Bookmarked **per section** as: "Section #" - "Section Title" (e.g. 000105 - certifications page; 221125 - domestic water pumps), and SHOWN IN BLOCK LETTERING.
   d. Be formatted consistently with CSI Master Format 2004

01 02 00 ATTACHMENT F – SCHEMATIC DESIGNS AND EMERGENCY ACCESS TO SCHOOLS

File Deliverable Documents per Revision (includes As-Built)

	SD	DD	60%	100%	Bid	Conform	As-Built	Record
Drawings	x	x	x	x	x	x	x	x
Previous Revision Session Summary, with Incorporation Notes from Architect		x	x	x	x			
Design Phase Report	x	x	x	x	x			
Life Cycle Cost Analysis	x							
Sustainability Checklist	x	x	x	x	x			
Energy Status Report[2]	x	x	x	x	x			
Specs[3]			x	x	x	x	x[5]	x
Attestation that WCPSS Design Guidelines are followed	x	x	x	x				
Attestation that School design meets budget requirements	x	x	x	x				

File Formats

	SD	DD	60%	100%	Bid	Conform	As-Built	Record
.pdf	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
.dwg					**x**			**x**
Source File[4]								**x**
Full-Size Print Set (Drawings), Owner's Rep								
Half-Size Print Set (Drawings), Owner's Rep	**2**	**2**	**2**	**2**	**2**	**1**		**x**
Full-Size Print Set (Drawings), CM	**1**	**1**	**1**	**1**				
Printed Specs, Owner's Rep			**1**	**1**	**2**	**1**		**2**
Printed Specs, CM			**1**	**1**				

1. Digital files for design review must conform to specs listed in ExhibitD
2. Each revision requires a revision-specific Energy Status Report
3. Spec Manual arrives in CD 60% revision
4. Source File = the file which is readable and editable by the unique program used to create it (e.g. Revit)
5. As-Built Specs shall include all Addenda included in Construction Phase. As-built Specs are the final required Spec

LEGAL MEMORANDUM

THARRINGTON SMITH, LLP

EDUCATION SECTION

Jonathan Blumberg	**Adam Mitchell**
Eva DuBuisson	**Neal Ramee**
Rebecca Fleishman	**Stephen Rawson**
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Schematic Designs and Emergency Access to Schools

As you may be aware, the North Carolina legislature recently updated the emergency access and schematic design laws for all local school units. These changes were highlighted in both the NCSBA' s update on August 15, 2014 and our legislative update on October 6, 2014. We send this memo as an extra reminder and to single out a particular upcoming deadline.

One change, already in effect, requires all school districts to provide local law enforcement with emergency access to key storage devices for all school buildings. School districts must also update access for law enforcement when changes to storage devices are made.

The second change, which goes into effect on June 1, 2015, requires local boards to provide schematic diagrams of school buildings to local law enforcement agencies and to the Division of Emergency Management at the Department of Public Safety. In addition to a traditional format, these diagrams should also be provided in a digital format. This memo is a reminder that you should take the necessary steps to have schematic diagrams available in digital format by June 1, 2015. Further, be aware that when substantial modifications to school buildings are made, boards should provide updates to the schematic designs. It is important to note that the schematic designs are expressly excluded from the public record.

For your reference we are attaching the statutory language. Also attached are the particular regulations formulated by the Department of Public Instruction. These regulations will help guide you in creating and submitting your school diagrams. To provide context for these particular regulations, an entire copy of the "Safe Schools Facilities Planner"is included as well.

Tharrington Smith, LLP.
February 2015

SCHEMATIC DESIGNS/EMERGENCY ACCESS TO SCHOOLS

SECTION 8.20.(a) Section 8.39 of S.L. 2013-360 is repealed.

SECTION 8.20.(b) Article 8C of Chapter 115C of the General Statutes is amended by adding new sections to read:

"**§ 115C-105.53. Schematic diagrams and emergency access to school buildings for local law enforcement agencies.**

(a) Each local school administrative unit shall provide the following to local law enforcement agencies: (i) schematic diagrams, including digital schematic diagrams, and (ii) emergency access to key storage devices such as KNOX® boxes for all school buildings. Local school administrative units shall provide updates of the schematic diagrams to local law enforcement agencies when substantial modifications such as new facilities or modifications to doors and windows are made to school buildings. Local school administrative units shall also be responsible for providing local law enforcement agencies with updated access to school building key storage devices such as KNOX® boxes when changes are made to these boxes or devices.
(b) The Department of Public Instruction, in consultation with the Department of Public Safety, shall develop standards and guidelines for the preparation and content of schematic diagrams and necessary updates. Local school administrative units may use these standards and guidelines to assist in the preparation of their schematic diagrams.
(c) Schematic diagrams are not considered a public record as the term "public record" is defined under G.S. 132-1 and shall not be subject to inspection and examination under G.S. 132-6.

§ 115C-105.54. Schematic diagrams and emergency response information provided to Division of Emergency Management.

(a) Each local school administrative unit shall provide the following to the Division of Emergency Management (Division) at the Department of Public Safety: (i) schematic diagrams, including digital schematic diagrams, and (ii) emergency response information requested by the Division for the School Risk Management Plan (SRMP) and the School Emergency Response Plan (SERP). Local school administrative units shall also provide updated schematic diagrams and emergency response information to the Division when such updates are made. The Division shall ensure that the diagrams and emergency response information are securely stored and distributed as provided in the SRMP and SERP to first responders, emergency personnel, and school personnel and approved by the Department of Public Instruction.
(b) The schematic diagrams and emergency response information are not considered a public record as the term "public record" is defined under G.S. 132-1 and shall not be subject to inspection and examination under G.S. 132-6."

SECTION 8.20.(c) The schematic diagrams referenced in subsection (b) of this section shall be provided to local law enforcement agencies and the Division of Emergency Management at the Department of Public Safety by June 1, 2015.

RECOMMENDATION FOR PREPARATION OF EMERGENCY SCHOOL SCHEMATIC DIAGRAMS

As required by Session Law 2013-360 section 8.39, each LEA is to provide to local law enforcement a schematic diagram of the each school in its district. It is recommended that the diagrams consisting of site plan and floor plans are prepared in a digital drawing format for ease of updating when the plan may change due to renovations or additions.

All new schools and renovation construction documents are prepared by architects and engineers using a digital drawing format. The standard at this time is AutoCAD DWG format. LEA's should make part of their design agreements the providing of the completed plan with required information affixed to the drawings provided in both DWG format and PDF format. AutoCAD DWG format can be converted to a portable document format such as Adobe Acrobat for printing and transmitting.

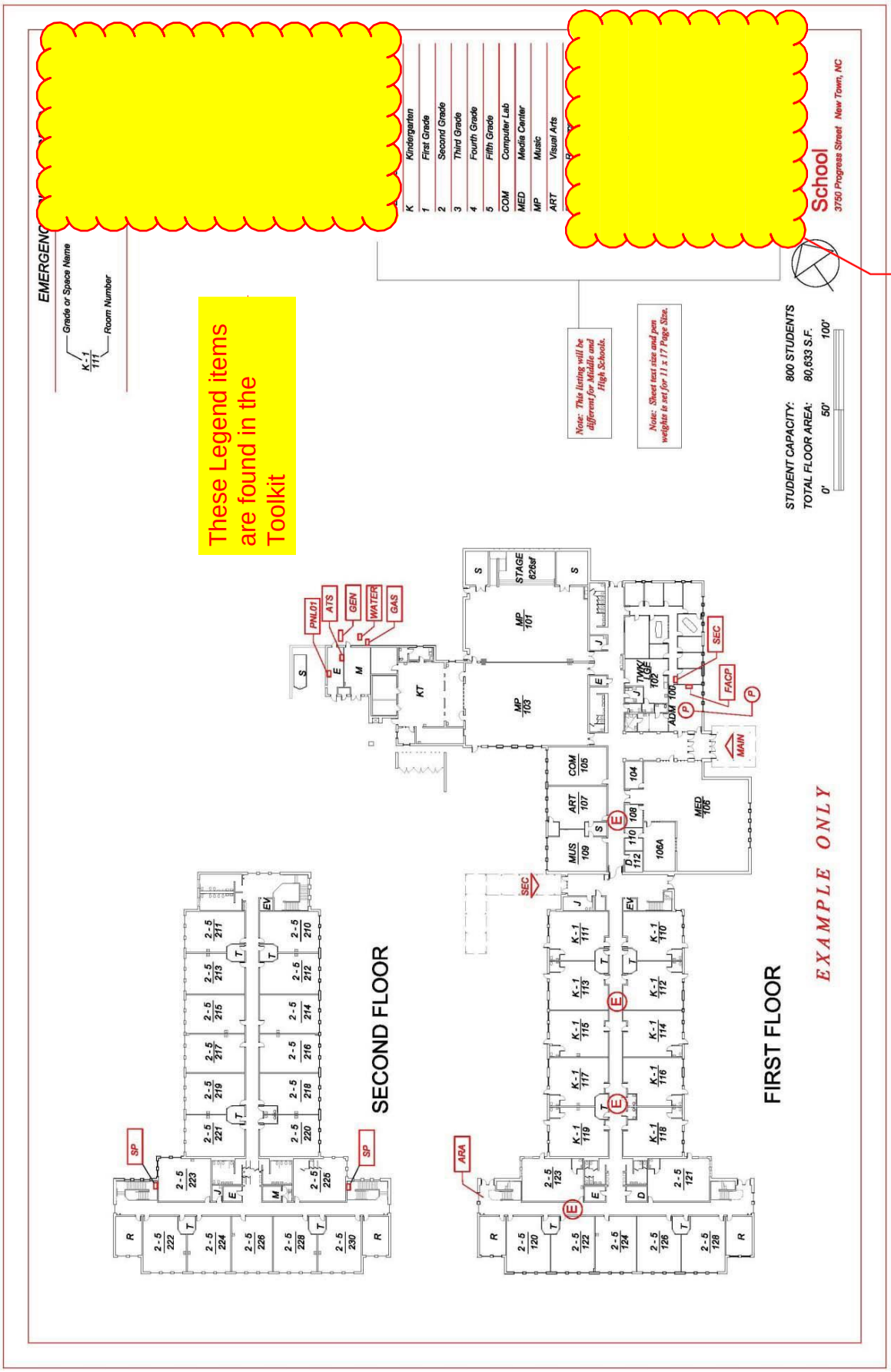
The following is a recommended standard for the preparation of these drawings.

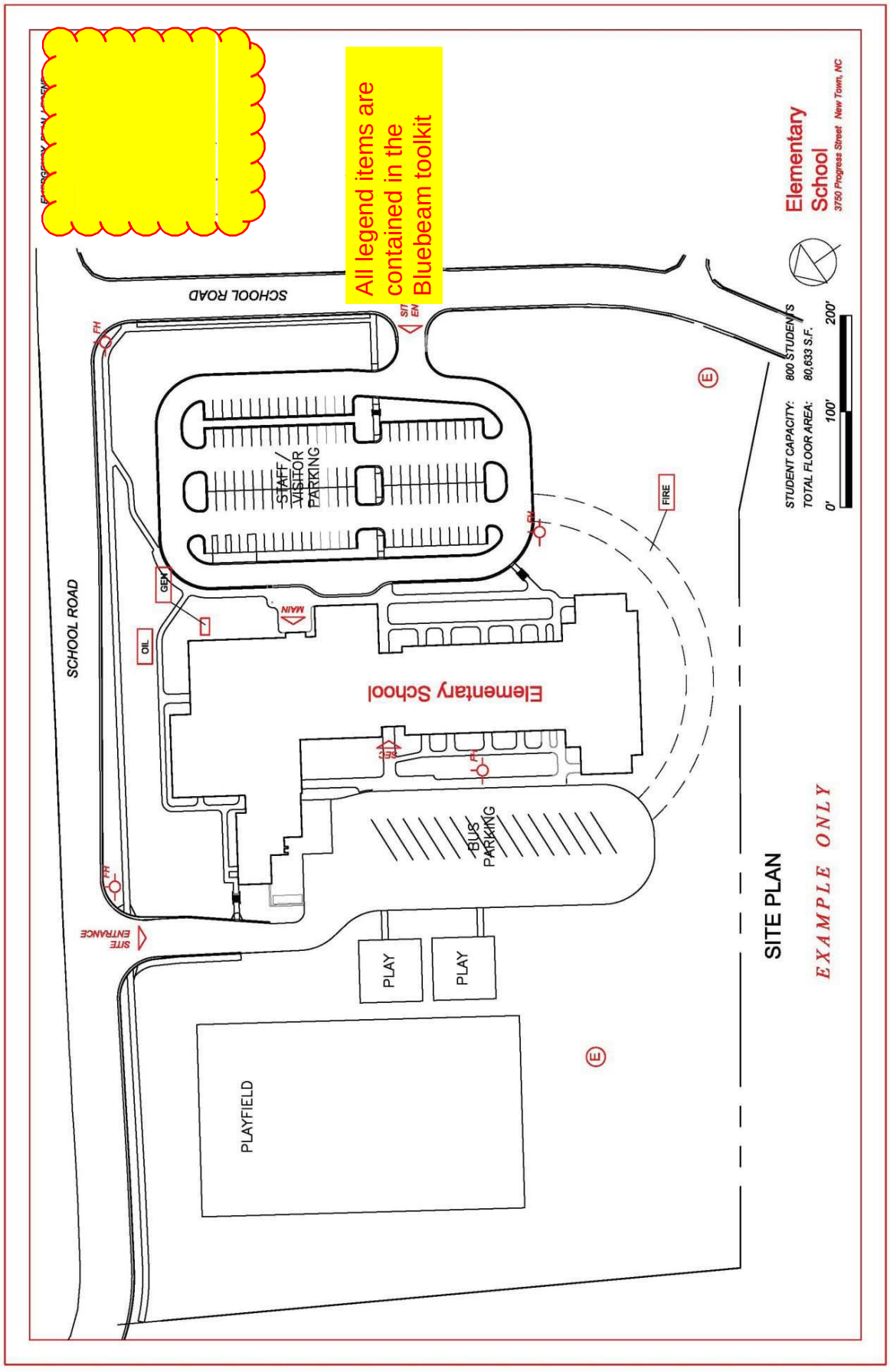
Digital drawings do not need to contain the designers seal or information as these plans serve a totally different purpose and are not considered a public record as the term "public record" as is defined under G.S. 132-1 and shall not be subject to inspection and examination under G.S. 132-6. The base digital drawings can also be used for property accounting drawings by the LEA.

The drawing can also be used for Property Accounting by turning off the emergency layer of the digital copy.

The following example is shown at a reduced scale. It is highly recommended that the print size should be at least 11" x 17" minimum for the clarity of reading the drawing.

SITE PLANS: Site plans should also be provided that will indicate the location of surrounding access streets, driveways, on-site parking areas, and the Main Entrance points to the building. In addition, there should be indication of Evacuation Areas that may be located on the site.


These Legend items are found in the Toolkit
Please point these out as well in your labeling. Classrooms are okay as-is.
EMERGENC
Grade or Space Name
Room Number
K-1
111
K Kindergarten
1 First Grade
2 Second Grade
3 Third Grade
4 Fourth Grade
5 Fifth Grade
COM Computer Lab
MED Media Center
MP Music
ART Visual Arts
School
3750 Progress Street New Town, NC
Note: This listing will be different for Middle and High Schools.
Note: Sheet text size and pen weights to set for 11 x 17 Page Size.
STUDENT CAPACITY: 800 STUDENTS
TOTAL FLOOR AREA: 80,633 S.F.
0' 50' 100'
SECOND FLOOR
FIRST FLOOR
EXAMPLE ONLY


All legend items are contained in the Bluebeam toolkit
Elementary School
3750 Progress Street New Town, NC
STUDENT CAPACITY: 800 STUDENTS
TOTAL FLOOR AREA: 80,633 S.F.
0' 100' 200'
SCHOOL ROAD
SCHOOL ROAD
STAFF / VISITOR PARKING
BUS PARKING
PLAY
PLAY
PLAYFIELD
SITE ENTRANCE
SITE EXIT
MAIN
GEN
OIL
FIRE
FH
SITE PLAN
EXAMPLE ONLY

PLOT SCALES AND TEXT SIZES:

It is recommended that the drawing plot size be 11” x 17” because of the ease of reading reduced size drawings. Font type should be legible and not clutter the readability of the drawing at the plot scale. Text style should be an open non-serif face such as Arial. Bolding the type should not be necessary.

SCHOOL	PLOT	SCALE	TEXT SIZES AT 11” X 17” PLOT SCALE		
			Room Names & Nos.	Emergency Building Names	Titles
Elementary & Middle Floor Plans	11” x 17”	1” = 50’	4’-0”	4’-0”	9’-0”
Elementary & Middle Site Plans	11” x 17”	1” = 100’	4’-0”	4’-0”	9’-0”
High School and Very Large Floor Plans	11” x 17”	1” = 60’	4’-0”	4’-0”	9’-0”
High School and Very Large Site Plans	11” x 17”	1” = 200’	4’-0”	4’-0”	9’-0”

DRAWING COLORS AND LINE WEIGHTS

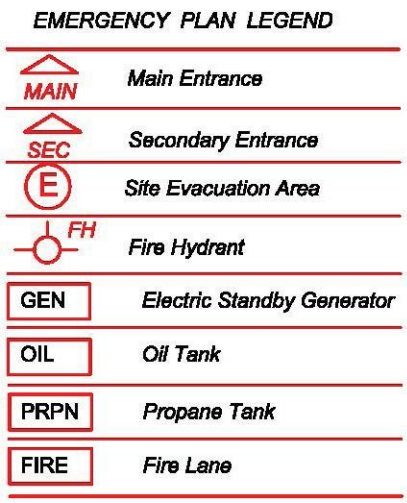
At reduced scales, floor plans and site plans can become “muddy” and not clearly readable. It is recommended that all line weights for the floor and site plans be set to those indicated in the table below. Extraneous information such as furniture, column lines, hatching, material indication in walls, and non-essential text should be removed. Show doors and windows in simplified form. Walls should be indicated without indication of cavities.

DRAWING COLORS AND LINE WEIGHTS			
LOCATIONS	COLOR	LINE WEIGHT	NOTES
Drawing	White/Black	0.09 mm	
Text	White/Black	0.15 mm	
Emergency Text	Red	0.30 mm	
Emergency Symbol	Red	0.30 mm	Size: 9’-6” x 22’

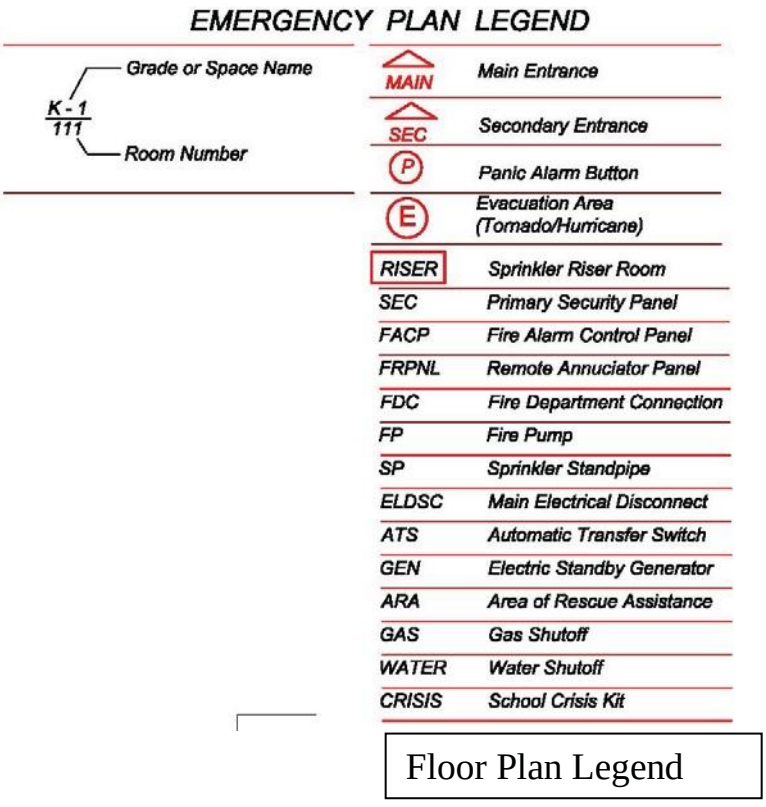
LAYERS

LAYERS – FLOOR PLANS		LAYERS – SITE PLANS	
Emergency Symbols and Text	A-FL-EMER	Emergency Symbols and Text	A-FL-EMER
Walls	A-FL-WL	Building Perimeter	A-ROOF / 1
Windows	A-FL-GL	Drives & Parking	C-PAVE / 2
Doors	A-FL-DR	Property Lines & Easements	C-PROP / 3
Stairs	A-FL-STR	Tree Lines & Major Planting Area	C-TREE / 4
Plumbing Fixtures	A-FL-FIX	Creeks, Ponds & Rivers	C-WATR / 5
Text 11 X 17 Plot	A-TXT-17	Playfields	C-PLAY / 6
Sheet 11 X 17 Plot	S-11X17	Text 11 X 17 Plot	A-TXT-17 / 41
		Sheet 11 x 17 Plot	S-1117 / 51

SYMBOLS AND ABBREVIATIONS



Site Plan Legend



Floor Plan Legend

GENERAL FLOOR PLAN - STANDARD ABBREVIATIONS			
Designation	Description	Designation	Description
DN	Cafeteria / Dining	COM	Computer Lab
KT	Kitchen	MED	Media Center
M	Mechanical	ART	Art Classroom
J	Janitor	MUS	General Purpose Music Room
T	Group Toilet	DD	Dance / Drama Room
ADM	Administrative Suite	AUD	Auditorium
GUI	Guidance Suite (when separate from ADM)	TWK	Teacher's Workroom
RES or R	Small Group Exceptional Children Resource Room	LGE	Teachers' Lounge
EXC	Self-Contained Exceptional Children Classroom	O	Office (Asst. Principal, Resource Officer when remote from ADM)

ELEMENTARY SCHOOL ABBREVIATIONS			
Designation	Description	Designation	Description
PK	Pre-Kindergarten	5	Fifth Grade
K	Kindergarten	4/5	Classroom for use by either grade (example)
1	First Grade	MUS	Music
2	Second Grade	MP	Multi-Purpose / Play
3	Third Grade	PRJ	Multi-Purpose Science or Project Room
4	Fourth Grade		

MIDDLE SCHOOL ABBREVIATIONS			
Designation	Description	Designation	Description
6	Sixth Grade Classroom	BND	Band Room
6SC	Sixth Grade Science Classroom	CHR	Chorus Room
7	Seventh Grade Classroom	MUS	Multi-Purpose Music Room
7SC	Seventh Grade Science Classroom	GYM	Gymnasium
8	Eighth Grade Classroom	WDV	Workforce Development
8SC	Eighth Grade Science Classroom	HL	Health Classroom

HIGH SCHOOL ABBREVIATIONS			
Designation	Description	Designation	Description
CR	Multi-Purpose Classroom	HL	Health Classroom
SC	Science Classroom Lab	AUX	Auxiliary Gym
WDV	Workforce Development	WT	Weight Room
BND	Band Room	WR	Wrestling Room
CHR	Chorus Room	LL	Foreign Language Lab
MUS	Multi-Purpose Music Room	FHSE	Field House
GYM	Gymnasium		

01 03 00 ATTACHMENT A - SPECIFICATION TITLE AND FOOTER GUIDELINES

1. TOC shall be based on CSI Master Format 2004
2. Footers shall be arranged as follows
    a. Footers shall be separated from body text by a horizontal line, with .5" vertical margin between line and text
    b. Section Title shall be Left Justified, with 1" left margin
    c. Section Number and Page shall be Right Justified, with 1" right margin, and shall be displayed as follows:

        [Section Number] - ##
        e.g.
        01 78 39 - 2
        22 10 01

01 07 00 ATTACHMENT A - ASSET INFORMATION

A. Information will be provided for all assets in Microsoft Excel format. Wake County Public School System will furnish this format electronically. “Assets” include all building or facility spaces and all mechanical and electrical equipment as specified in the schedules of mechanical and electrical drawings.

B. It is the Maintenance Department’s responsibility to collect all information concerning the structures within the facility (building, floor, and room information) and all Equipment Designations. It is the responsibility of the Maintenance Department to provide all specific equipment information, taken from the equipment as it is installed or removed and to record the label number provided by Wake County Public School System. The contractor shall be required to provide a minimum of 2 weeks prior notice to the Wake County Public School System Area Facility Manager (AFM) for all above ceiling inspections and final mechanical room inspections. The AFM shall be responsible for installing the asset inventory label on each piece of equipment. The contractor shall be responsible for furnishing access to all equipment located overhead and on roof.

C. All buildings and spaces within buildings will be classified as “Building Spaces” and will have a separate worksheet called ROOM. Information pertaining to floor coverings, ceiling materials, etc. will be recorded for all areas within the building that can be designated with a specific Room Number. The worksheet for Building Spaces will include the following columns.

1. Equipment Designation: Unit number or designation taken from mechanical / electrical drawings (Ex.: AHU-1, CWP-1, etc.). This column will not be used in recording building/facility spaces (rooms, corridors, buildings, etc). See Attachment 01060-B.
2. Description: Brief description of the asset (Assets include equipment and building/facility spaces).
3. Location: The location of the Asset. This may include an operating location for a piece of equipment or may be a building or facility space that will be tracked as an asset. All building or facility spaces (all rooms, closets, corridors, lobbies, etc.) will be entered in the above table as separate line items without Equipment Designations. Spaces containing equipment assets will also be entered with each equipment item. The location is broken down into the following six sections:
    a. School: The Cost Center for the facility (4 digits, Numeric, 1st digit is a zero in most cases).
    b. Building: The Building Code for the building in which the asset is located (1 digit, Alphanumeric, ex.: Bldg. “A”, Bldg. “B”, etc.).
    c. Floor: The floor of the building on which the asset is located. (1 digit, Alphanumeric, “G” to be used for assets outside a specific building, “R” to be used for assets located on the roof of a specific building).
    d. Wing: The Wing of the building. Usually corresponds to a series of room numbers (1 digit, Numeric, ex.: “1” for the “100” series of rooms).
    e. Room: The Room number corresponding to the location of the asset (up to 4 digits, Numeric).
    f. Sub-Part: The designation for the sub-partition of a room (1 digit, Alphanumeric, ex.: A closet inside Room 01 may be designated “01A”).
4. Equipment Number: Number of the label that the AFM will affix to the equipment.
5. Manufacturer: Manufacturer of the equipment. Care must be taken so that the same manufacturer is not entered more than once with a different name each time.
6. Serial Number: Serial Number of the equipment.
7. Vendor: Vendor from which the equipment was purchased. Care must be taken so that the same Vendor is not entered more than once with a different name each time.

a. Substantial Completion**:** Date on which the equipment was substantially completed**.**

8. Warranty Expiration Date: Date of expiration for the equipment's warranty.

D. Refer to Attachment 01 77 19-C for data collection sheets.

E. In addition to the above columns each asset classification worksheet will include the following asset attributes:

Asset Classification	**Asset Attributes**
Building Space	HVAC Room ID Room Use Primary Floor Covering Secondary Floor Covering Primary Wall Covering Primary Ceiling Material
Air Handling Unit	Unit Type (CHW Cool, CHW Cool/Elec Ht, CHW Cool/HHW Ht, CHW Cool/Steam Ht, Dual Temp Coil, Dual Temp/DX Coil, DX Cool, DX Cool/Elec Ht, DX Cool/HHW Ht, DX Cool/Steam Ht, Elec Ht, HHW Ht, Steam Ht) Model Drive (Belt / Direct) Belt Size Belt Quantity Primary Filter (Sizes and Quantities) Secondary Filter (Sizes and Quantities) Final Filter (Sizes and Quantities) Condenser Manufacturer Condenser Model Condenser S/N Supply Fan MFG Supply Fan Model Lube (Grease/Oil/Sealed) Supply Fan Type (Centrif / Axial) Motor Manufacturer Motor Model # Motor Serial # Motor HP Motor RPM Motor Voltage Motor Phase Motor Frequency Motor Amps Motor Frame Motor Rotation (CW/CCW) Motor Lube (Grease/Oil/Sealed) Disconnect Switch Fuse Amperage
	Disconnect Switch Fuse Voltage Starter Manufacturer

Asset Classification	Asset Attributes
	Starter Contact Cat.#
	Starter Contact Size
	Starter Heater/Overload Designation
	Compressor Manufacturer
	Compressor Model #
	Compressor Serial #
Chiller	Type (Centrifugal/ Reciprocating / Screw)
	Model
	Filter (Size and Quantity)
	Condenser Manufacturer
	Condenser Model
	Condenser S/N
	Refrigerant Type
	Purge Refrigerant
	Voltage
	Phase
	Frequency
	Disconnect Switch Fuse Amperage
	Disconnect Switch Fuse Voltage
	Starter Manufacturer
	Starter Contact Cat.#
	Starter Contact Size
	Starter Heater/Overload Designation
Cooling Tower	Model
	Drive (Direct / Coupling / Belt / Gear)
	Lube (Grease/Oil/Sealed)
	Belt Size
	Belt Quantity
	Cells
	Motor Manufacturer
	Motor Model #
	Motor Serial #
	Motor HP
	Motor RPM
	Motor Voltage
	Motor Phase
	Motor Frequency
	Motor Amps
	Motor Frame
	Motor Rotation (CW/CCW)
	Motor Lube (Grease/Oil/Sealed)
	Disconnect Switch Fuse Amperage
	Disconnect Switch Fuse Voltage

Asset Classification	Asset Attributes
	Starter Manufacturer
	Starter Contact Cat.#
	Starter Contact Size
	Starter Heater/Overload Designation
Emergency Generator	Model
	Serial #
	kW Rating
	Voltage
	Phase
	Amps
	Frequency
	RPM
	Frame
Emergency Gen. Engine	Model
	Fuel (Diesel / Gas / Nat Gas)
	HP
	CYL (Number)
	RPM
	Belt Size
	Belt Quantity
	Oil Filter
	Air Filter
	Fuel Filter
Fan/Blower	Application (Return / Exhaust / Make-up / Supply)
	Type (Centrif / Axial / Prop)
	Model
	Filters (Size and Quantity)
	Lube (Grease/Oil/Sealed)
	Max Capacity (CFM)
	Drive (Direct / Coupling / Belt)
	Belt Size
	Belt Quantity
	Motor Manufacturer
	Motor Model #
	Motor Serial #
	Motor HP
	Motor RPM
	Motor Voltage
	Motor Phase
	Motor Frequency
	Motor Amps
	Motor Frame
	Motor Rotation (CW/CCW)

Asset Classification	Asset Attributes
	Motor Lube (Grease/Oil/Sealed)
	Disconnect Switch Fuse Amperage
	Disconnect Switch Fuse Voltage
	Starter Manufacturer
	Starter Contact Cat.#
	Starter Contact Size
	Starter Heater/Overload Designation
Unit Heater	Type (HHW / Steam / Elect / Gas)
	Model
	kW Rating
	Voltage
	Phase
	Cycles
	Amps
Heat Exchanger	Type (Shell and Tube / Plate)
	Model
	Shell Press
	Shell Material
	Tube Press
Heat Exchanger (continued)	Tube Material
	Nat'l Board Number
	NC Certificate
Air Compressor	Model
	Drive (Direct / Coupling / Belt)
	Belt Size
	Belt Quantity
	Air Filter
	Oil Filter
	Receiver Nat'l Board Number
	Stages
	Pressure
	Motor Manufacturer
	Motor Model #
	Motor Serial #
	Motor HP
	Motor RPM
	Motor Voltage
	Motor Phase
	Motor Frequency
	Motor Amps
	Motor Frame
	Motor Rotation (CW/CCW)

Asset Classification	Asset Attributes
	Motor Lube (Grease/Oil/Sealed)
	Disconnect Switch Fuse Amperage
	Disconnect Switch Fuse Voltage
	Relief Valve
	Relief Valve Pressure
	Relief Valve Mfg.
Air Dryer	Model
	Type (Refrigerated / Desiccant)
	Cooling
	Filter (Size and Quantity)
	Voltage
	Horsepower
	Capacity (gallons)
	Compressor Manufacturer
	Compressor Model #
	Compressor Serial #
Motor	Model
	HP
	RPM
	Volts
	Phase
	Frequency
	Amps
	Frame
	Rotation (CW / CCW)
	Motor Lube (Grease/Oil/Sealed)
Motor (continued)	Disconnect Switch Fuse Amperage
	Disconnect Switch Fuse Voltage
	Starter Manufacturer
	Starter Contact Cat.#
	Starter Contact Size
	Starter Heater/Overload Designation
Electrical Distribution	Elec. Dist. Type (Main Dist. Panel, MCC, Main Switchboard)
	Model
	Volts
	Phase
	Frequency
	Amps
Pump	Type (Centrifugal / Diaphragm / Cartridge / Submersible Meter / Gear)
	Description (Chilled Water, Condensate Return, Cooling Tower, Domestic Hot Water, Dual Temperature, Glycol Water, Heating Hot Water, Loop Water, Oil, Sump)

Asset Classification	Asset Attributes
	Model
	Capacity
	TDH
	Lube (Grease/Oil/Sealed)
	Drive (Belt / Gear / Coupling / Direct)
	Suction Size
	Discharge Size
	Motor Manufacturer
	Motor Model #
	Motor Serial #
	Motor HP
	Motor RPM
	Motor Voltage
	Motor Phase
	Motor Frequency
	Motor Amps
	Motor Frame
	Motor Rotation (CW/CCW)
	Motor Lube (Grease/Oil/Sealed)
	Disconnect Switch Fuse Amperage
	Disconnect Switch Fuse Voltage
	Starter Manufacturer
	Starter Contact Cat.#
	Starter Contact Size
	Starter Heater/Overload Designation
Tank	Type (Expansion, HHW Storage, HW Storage, etc.)
	Model
	Capacity
	Date Mfg.
	Max Op Pressure
	Nat'l Board Number
	NC Certification
	Relief Valve
Tank (continued)	Relief Valve Pressure
	Relief Valve Mfg.
Boiler	Fuel (Gas / Oil / Elec)
	Type (Fire Tube / Water Tube)
	Model
	Size
	NC Certificate
	Burner Manufacturer
	Burner Model #
	Burner Serial #
	Input Max. (BTUH)

Asset Classification	Asset Attributes
	Input Min. (BTUH) Gas Pressure (Inches) Motor Manufacturer Motor Model # Motor Serial # Motor HP Motor RPM Motor Voltage Motor Phase Motor Frequency Motor Amps Motor Frame Motor Rotation (CW/CCW) Motor Lube (Grease/Oil/Sealed) Oil Nozzle Size Relief Valve Relief Valve Pressure Relief Valve Mfg.
Roof	System Type Slope Deck Type
Dehumidifier	Type (Refrigerated / Desiccant) Model Refrigerant Type Compressor Manufacturer Compressor Model # Compressor Serial #
Air Conditioning Unit, Ductless Mini-Split	Type (Ht Pump, Cool Only, Elec Ht/Elec Cool) Model Refrigerant Filter Condenser Manufacturer Condenser Model Condenser S/N Disconnect Switch Fuse Amperage Disconnect Switch Fuse Voltage
Air Conditioning Unit, Ductless Mini-Split (continued)	Compressor Manufacturer Compressor Model # Compressor Serial #
Air Conditioning Unit,	Type (Elec Ht/Elec Cool, Gas Ht/Elec Cool, Ht Pump, Oil Ht/Elec Cool,

Asset Classification	Asset Attributes
Split Central System	Water Souce Cool, Water Source Ht Pump) Model Drive (Belt/Direct/Coupling) Belt Size Belt Quantity Filter Condenser Manufacturer Condenser Model Condenser S/N Refrigerant Disconnect Switch Fuse Amperage Disconnect Switch Fuse Voltage Compressor Manufacturer Compressor Model # Compressor Serial #
Air Conditioning Unit, Packaged Unit	Type (Elec Ht/Elec Cool, Gas Ht/Elec Cool, Ht Pump, HHW Ht/Elec Cool, Steam Ht/Elec Cool, Water Souce Cool, Water Source Ht Pump) Model Refrigerant Drive (Belt/Direct/Coupling) Belt Size Belt Quantity Filter Fuel Motor Manufacturer Motor Model # Motor Serial # Motor HP Motor RPM Motor Voltage Motor Phase Motor Frequency Motor Amps Motor Frame Motor Rotation (CW/CCW) Motor Lube (Grease/Oil/Sealed) Disconnect Switch Fuse Amperage Disconnect Switch Fuse Voltage Starter Manufacturer Starter Contact Cat.# Starter Contact Size Starter Heater/Overload Designation Compressor Manufacturer Compressor Model # Compressor Serial #

Asset Classification	Asset Attributes
Air Conditioning Unit Packaged Self-Contained	Type (Air Cool, Ht Pump, Packaged Terminal Unit, Water Cool) Model Refrigerant Drive (Belt/Direct/Coupling) Belt Size Belt Quantity Filter Motor Manufacturer Motor Model # Motor Serial # Motor HP Motor RPM Motor Voltage Motor Phase Motor Frequency Motor Amps Motor Frame Motor Rotation (CW/CCW) Motor Lube (Grease/Oil/Sealed) Disconnect Switch Fuse Amperage Disconnect Switch Fuse Voltage Compressor Manufacturer Compressor Model # Compressor Serial #
Air Conditioning Unit, Computer Room Unit	Type (Air Cool DX, Water Cool, Water Cool w/ Glycol Cooler) Model Refrigerant Drive (Belt/Direct/Coupling) Belt Size Belt Quantity Filter Condenser Manufacturer Condenser Model Condenser S/N Disconnect Switch Fuse Amperage Disconnect Switch Fuse Voltage Compressor Manufacturer Compressor Model # Compressor Serial #
Air Conditioning Unit,	Model

Asset Classification	Asset Attributes
Window Unit	Refrigerant
	Filter
	Compressor Manufacturer
	Compressor Model #
	Compressor Serial #
Fan Coil Unit	Type (Console, Ducted, Horizontal, Vertical)
	Model
	Drive
	Belt Size
Fan Coil Unit (continued)	Belt Quantity
	Filter Size/Qty.
Water Heater	Type (Elec, Gas, Oil, Steam)
	Capacity (Gallons)
	Model
	Input Btu
	Volts
	Phase
	Frequency
	Amps
	Watts Upper
	Watts Lower
	NC Certificate #
	Relief Valve
	Relief Valve Pressure
	Relief Valve Mfg.
Refrigeration Equipment	Type (Walk-in, Reach-in, Ice Mach.)
	Ice Type (Cubed, Flaked)
	Model
	Refrigerant
	Condenser Manufacturer
	Condenser Model
	Condenser S/N
	Compressor Manufacturer
	Compressor Model #
	Compressor Serial #
Transformer	Kva
	Model
	Primary Voltage
	Secondary Voltage
	Type (Dry/Oil Filled)
	Oil Capacity
General Equipment	Equipment Description (Fire Alarm, Kitchen Hood, Backflow Preventer,

Asset Classification	Asset Attributes
	CCTV, Intercom, Security, Variable Frequency Drives, Folding Walls, Electronic Scoreboards, Overhead Door, Dust Collector, Dumbwaiter, Chair Lift,) Model Backflow Preventer Size Belongs To What Equipment Designation
Facility Site Equipment	Equipment Description (Lawn Sprinkler, Site Lighting, Outside Electronic Scoreboard) Model
Kitchen Equipment	Equipment Description (Cabinet Heated, Deep Fryer, Oven Braising Pan, Serving Line Cold, Serving Line Hot, Tilt Skillet, Slicer, Steamer Model Unit Type (Elec, Gas, Oil) Volts Phase Cycles Amps Watts
Mobile Unit	Property Control # Model # Primary Floor Covering Secondary Floor Covering Primary Wall Covering Primary Ceiling Material HVAC Room ID
ACU, Packaged Self Contained Unit (Belongs to Mobile Unit)	Unit Type Model Refrigerant Type Drive (Belt, Direct) Belt Size Belt Quantity Filter Size Compressor Mfg. Compressor Model Compressor Serial #

All buildings and spaces within buildings will be classified as “Building Spaces” and will have a separate worksheet. The worksheet for Building Spaces will include the following columns. Information pertaining to floor coverings, ceiling materials, etc. will be recorded for all areas within the building that can be designated with a specific Room Number.

Asset Classification	**Asset Attributes**
Building Space	HVAC Room ID
	Room Use
	Primary Floor Covering
	Secondary Floor Covering
	Primary Wall Covering
	Primary Ceiling Material

01 07 00 ATTACHMENT B EQUIPMENT DESIGNATIONS

EQUIPMENT	EQ DESIGNATION CODE
ACU-COMPUTER ROOM UNITS	ACU
ACU-DUCTLESS MINI-SPLIT	ACU or HP
ACU-PACKAGED SELF CONTAINED	ACU or HP
ACU-PACKAGED UNIT	ACU or HP
ACU-SPLIT CENTRAL	ACU or HP
ACU-WINDOW UNIT	ACU
AIR COMPRESSOR	AC
AIR DRYER	AD
AIR HANDLING UNITS	AHU
BACKFLOW PREVENTER	BFP
BOILER	B
BRAISING PAN	KE
CABINET HEATED	KE
CCTV	CCTV
CHILLER	CH
COOLING TOWER	CT
DEEP FRYER	KE
DEHUMIDIFIER	DHD
DUST COLLECTOR	DC
ED-MAIN DISTRIBUTION PANEL	MDP
ELECTRONIC SCOREBOARD	ES
EMERGENCY GENERATOR	EG
ENGINE, EMERGENCY GENERATOR	EEG
FAN, AIR CURTAIN	FC
FAN, EXHAUST	EF
FAN, RETURN	RF
FAN, SUPPLY	SF
FAN COIL UNIT	FCU
FIRE ALARM SYSTEM	FAS
FOLDING WALLS	FW
HEAT EXCHANGER	HX

EQUIPMENT	EQ DESIGNATION CODE
KITCHEN HOOD	KH
MOTOR	MTR
OVEN	KE
OVERHEAD DOOR	OHDR
PUMP, BOOSTER	BP
PUMP, CHILLED WATER	CWP
PUMP, CONDENSATE RETURN	CRP
PUMP, COOLING TOWER WATER	CTP
PUMP, DOMESTIC COLD WATER	DCWP
PUMP, DOMESTIC HOT WATER	DHWP
PUMP, DUAL TEMPERATURE WATER	DTWP
PUMP, GLYCOL WATER	GWP
PUMP, HEATING HOT WATER	HHWP
PUMP, LOOP	LP
PUMP, OIL	OP
PUMP, SUMP	SP
REACH-IN COOLER	RRU
REACH-IN FREEZER	RRU
SECURITY	SEC
SERVING LINE COLD	KE
SERVING LINE HOT	KE
SITE LIGHTING	SL
SLICER	KE
STEAMER	KE
TANK, CHW STORAGE	CHWST
TANK, DHW STORAGE	DHWST
TANK, EXPANSION	ET
TANK, HHW STORAGE	HHWST
TILT SKILLET	KE
UNIT HEATER	UH
VARIABLE FREQUENCY DRIVES	VFD

ICE MACHINE	IM
INTERCOM	IC
INVERTER SYSTEM	INV
IRRIGATION SYSTEM	IS

WALK-IN COOLER	WRU
WALK-IN FREEZER	WRU
WATER HEATER	WH

01 07 00 ATTACHMENT C ROOM DATA COLLECTION SHEETS

01 – Room Data Collection Sheets
02 – Roof Data Collection Sheets
03 – ACU Computer Room Unit Data Collection Sheets
04 – ACU Ductless Mini-split Unit Data Collection Sheets
05 – ACU Packaged Unit Data Collection Sheets
06 – ACU Packaged Self Contained Unit Data Collection Sheets
07 – ACU Split Central Data Collection Sheets
08 – ACU Window Unit Data Collection Sheets
09 – Air Compressor Data Collection Sheets
10 – Air Dryer Data Collection Sheets
11 – Air Handling Unit Data Collection Sheets
12 – Boiler Data Collection Sheets
13 – Chiller Data Collection Sheets
14 – Compressor Data Collection Sheets
15 – Cooling Tower Data Collection Sheets
16 – Dehumidifier Data Collection Sheets
17 – Electrical Distribution Data Collection Sheets
18 – Emergency Generator Data Collection Sheets
19 – Emergency Generator Engine Data Collection Sheets
20 – Facility Site Equipment Data Collection Sheets
21 – Fan Data Collection Sheets
22 – Fan Coil Unit Data Collection Sheets
23 – General Equipment Data Collection Sheets
24 – Heat Exchanger Data Collection Sheets
25 – Invert System Data Collection Sheets
26 – Kitchen Equipment Data Collection Sheets
27 – Mobile Units Data Collection Sheets
28 – Motor Data Collection Sheets
29 – Overhead Door Data Collection Sheets
30 – Pump Data Collection Sheets
31 – Refrigeration Equipment Data Collection Sheets
32 – Tank Data Collection Sheets
33 – Unit Heater Data Collection Sheets
34 – Variable Frequency Drive Data Collection Sheets
35 – Water Heater Data Collection Sheets

WAKE COUNTY PUBLICH SCHOOL SYSTEM MAINTENANCE AND OPERATIONS

ROOM DATA COLLECTION SHEET

DATE: ________________

LOCATION

SCHOOL	BUILDING	FLOOR	ROOM #	ROOM USE	HVAC ROOM ID	FLOOR 1	FLOOR 2	WALL	CEILING
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
				ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY		CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - PANELING - GLASS BLOCK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME:

CLASSIFICATION: **ROOF** **DEFAULT DESIGNATION: RF**

EQUIPMENT DESIGNATION	RF -	RF -	RF -	RF -	RF -	RF -	RF -	RF -	RF -
LOCATION ON ROOF/SITE	N - NE - E - SE- S - SW - W - NW	N - NE - E - SE- S - SW - W - NW	N - NE - E - SE- S - SW - W - NW	N - NE - E - SE- S - SW - W - NW	N - NE - E - SE- S - SW - W - NW	N - NE - E - SE- S - SW - W - NW	N - NE - E - SE- S - SW - W - NW	N - NE - E - SE- S - SW - W - NW	N - NE - E - SE- S - SW - W - NW
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
PRIORITY	3	3	3	3	3	3	3	3	3
ROOF TYPE									
ROOF SLOPE	LOW STEEP	LOW STEEP	LOW STEEP	LOW STEEP	LOW STEEP	LOW STEEP	LOW STEEP	LOW STEEP	LOW STEEP
DECK TYPE									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: AIR CONDITIONING UNIT
SUB-CLASSIFICATION: COMPUTER ROOM UNIT — **DEFAULT DESIGNATION: ACU**

EQUIPMENT DESIGNATION	ACU -	ACU -	ACU -	ACU -	ACU -	ACU -	ACU -	ACU -	ACU -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	AC - WC - GLYCOL	AC - WC - GLYCOL	AC - WC - GLYCOL	AC - WC - GLYCOL	AC - WC - GLYCOL	AC - WC - GLYCOL	AC - WC - GLYCOL	AC - WC - GLYCOL	AC - WC - GLYCOL
MODEL NUMBER									
REFRIGERANT TYPE									
DRIVE	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT
BELT SIZE									
BELT QUANTITY									
FILTER SIZE HXWXD(QTY)									
CONDENSER MFG.									
CONDENSER MODEL #									
CONDENSER SERIAL #									
COMPRESSOR MFG.									
COMPRESSOR MODEL #									
COMPRESSOR SERIAL #									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: AIR CONDITIONING UNIT
SUB-CLASSIFICATION: DUCTLESS MINI-SPLIT

DEFAULT DESIGNATION: HP (Heat Pumps), ACU (All others)

EQUIPMENT DESIGNATION									
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	CLG. ONLY ELEC. HTG/CLG HEAT PUMP	CLG. ONLY ELEC. HTG/CLG HEAT PUMP	CLG. ONLY ELEC. HTG/CLG HEAT PUMP	CLG. ONLY ELEC. HTG/CLG HEAT PUMP	CLG. ONLY ELEC. HTG/CLG HEAT PUMP	CLG. ONLY ELEC. HTG/CLG HEAT PUMP	CLG. ONLY ELEC. HTG/CLG HEAT PUMP	CLG. ONLY ELEC. HTG/CLG HEAT PUMP	CLG. ONLY ELEC. HTG/CLG HEAT PUMP
MODEL NUMBER									
REFRIGERANT TYPE									
FILTER SIZE HXWXD(QTY)									
CONDENSER MFG.									
CONDENSER MODEL #									
CONDENSER SERIAL #									
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
COMPRESSOR MFG.									
COMPRESSOR MODEL									
COMPRESSOR SERIAL#									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0
CLASSIFICATION: AIR CONDITIONING UNIT
SUB-CLASSIFICATION: PACKAGED UNIT

DEFAULT DESIGNATIONS: HP (Heat Pumps), ACU (All others)

EQUIPMENT DESIGNATION									
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - HHW HTG - STM HTG
MODEL NUMBER									
REFRIGERANT TYPE									
DRIVE	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT
BELT SIZE									
BELT QUANTITY									
FILTER SIZE HXWXD(QTY)									
FUEL	NATURAL GAS PROPANE	NATURAL GAS PROPANE	NATURAL GAS PROPANE	NATURAL GAS PROPANE	NATURAL GAS PROPANE	NATURAL GAS PROPANE	NATURAL GAS PROPANE	NATURAL GAS PROPANE	NATURAL GAS PROPANE
FAN MOTOR MFG.									
FAN MOTOR MODEL #									
FAN MOTOR SERIAL #									
FAN MOTOR HP									

SCHOOL CODE/NAME: **0**
CLASSIFICATION: **AIR CONDITIONING UNIT**
SUB-CLASSIFICATION: **PACKAGED UNIT** **DEFAULT DESIGNATIONS: HP (Heat Pumps), ACU (All others)**

FAN MOTOR RPM									
FAN MOTOR VOLTAGE									
FAN MOTOR PHASE									
FAN MOTOR FREQUENCY									
FAN MOTOR AMPS									
FAN MOTOR FRAME SIZE									
FAN MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
FAN MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
STARTER MFG.									
CONT. CAT.									
CONT. SIZE									
COMPRESSOR MFG.									
COMPRESSOR MODEL									
COMPRESSOR SERIAL#									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0
CLASSIFICATION: AIR CONDITIONING UNIT
SUB-CLASSIFICATION: PACKAGED SELF CONTAINED **DEFAULT DESIGNATIONS: HP (Heat Pumps), ACU (All others)**

EQUIPMENT DESIGNATION									
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED	AIR COOLED - HP - PACK. TERMINAL UNIT - WATER COOLED
MODEL NUMBER									
REFRIGERANT TYPE									
DRIVE	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT
BELT SIZE									
BELT QUANTITY									
FILTER SIZE HXWXD(QTY)									
FAN MOTOR MFG.									
FAN MOTOR MODEL #									
FAN MOTOR SERIAL #									
FAN MOTOR HP									
FAN MOTOR RPM									
FAN MOTOR VOLTAGE									

SCHOOL CODE/NAME: **0**
CLASSIFICATION: **AIR CONDITIONING UNIT**
SUB-CLASSIFICATION: **PACKAGED SELF CONTAINED** **DEFAULT DESIGNATIONS: HP (Heat Pumps), ACU (All others)**

FAN MOTOR PHASE									
FAN MOTOR FREQUENCY									
FAN MOTOR AMPS									
FAN MOTOR FRAME SIZE									
FAN MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
FAN MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
COMPRESSOR MFG.									
COMPRESSOR MODEL									
COMPRESSOR SERIAL#									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: AIR CONDITIONING UNIT
SUB-CLASSIFICATION: SPLIT CENTRAL

DEFAULT DESIGNATIONS: HP (Heat Pumps), ACU (All others)

EQUIPMENT DESIGNATION									
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG	DX AC - DX WC - HP - WSHP - ELEC HTG - GAS HTG - OIL HTG
MODEL NUMBER									
REFRIGERANT TYPE									
DRIVE	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT
BELT SIZE									
BELT QUANTITY									
FILTER SIZE HXWXD(QTY)									
CONDENSER MFG.									
CONDENSER MODEL #									
CONDENSER SERIAL #									
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
COMPRESSOR MFG.									
COMPRESSOR MODEL									
COMPRESSOR SERIAL#									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **AIR CONDITIONING UNIT**
SUB-CLASSIFICATION: **WINDOW UNIT** **DEFAULT DESIGNATION: ACU**

EQUIPMENT DESIGNATION	ACU -	ACU -	ACU -	ACU -	ACU -	ACU -	ACU -	ACU -	ACU -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
MODEL NUMBER									
REFRIGERANT TYPE									
FILTER SIZE HXWXD(QTY)									
COMPRESSOR MFG.									
COMPRESSOR MODEL									
COMPRESSOR SERIAL#									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **AIR COMPRESSOR** **DEFAULT DESIGNATION: AC**

EQUIPMENT DESIGNATION	AC -	AC -	AC -	AC -	AC -	AC -	AC -	AC -	AC -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
MODEL NO.									
DRIVE TYPE	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR
FAN BELT SIZE (QTY)									
AIR FILTER									
OIL FILTER									
NATIONAL BOARD NO.									
NO. OF STAGES									
PRESSURE (PSIG)									
MOTOR MFG.									
MOTOR MODEL #									
MOTOR SERIAL #									
MOTOR HORSEPOWER									

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **AIR COMPRESSOR** **DEFAULT DESIGNATION: AC**

MOTOR RPM									
MOTOR VOLTAGE									
MOTOR PHASE									
MOTOR FREQUENCY									
MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
MOTOR AMPS									
MOTOR FRAME									
MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
RELIEF VALVE									
RELIEF VALVE PRESSURE									
RELIEF VALVE MFG.									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **AIR DRYER** **DEFAULT DESIGNATION: AD**

EQUIPMENT DESIGNATION	AD -	AD -	AD -	AD -	AD -	AD -	AD -	AD -	AD -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
MODEL NO.									
UNIT TYPE	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED
COOLING									
FILTER									
VOLTS									
HP									
CAPACITY									
COMPRESSOR MFG									
COMPRESSOR MN									
COMPRESSOR SN									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **AIR HANDLING UNIT** **DEFAULT DESIGNATION: AHU**

EQUIPMENT DESIGNATION	AHU -	AHU -	AHU -	AHU -	AHU -	AHU -	AHU -	AHU -	AHU -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG	CHW - DX - DT - ELEC HTG - HHW HTG - STM HTG
MODEL NUMBER									
DRIVE	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT
BELT SIZE (QTY)									
PRIMARY FILTER HXWXD (QTY)									
SECONDARY FILTER HXWXD (QTY)									
FINAL FILTER HXWXD (QTY)									
CONDENSER MFG.									
CONDENSER MODEL #									
CONDENSER SERIAL #									
SUPPLY FAN MFG.									
SUPPLY FAN MODEL #									
SUPPLY FAN LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
SUPPLY FAN TYPE	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP
MOTOR MFG.									

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **AIR HANDLING UNIT** **DEFAULT DESIGNATION: AHU**

MOTOR MODEL #									
MOTOR SERIAL #									
MOTOR HORSEPOWER									
MOTOR RPM									
MOTOR VOLTAGE									
MOTOR PHASE									
MOTOR FREQUENCY									
MOTOR FRAME									
MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
MOTOR AMPS									
MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
STARTER MANUFACTURER									
STARTER CONTACT CAT. #									
STARTER CONTACT SIZE									
STARTER HEATER/ OVERLOAD DESIGNATION									
COMPRESSOR MFG.									
COMPRESSOR MODEL									
COMPRESSOR SERIAL#									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: BOILER   **DEFAULT DESIGNATIONS: B (Boilers), WH (Water Heaters)**

EQUIPMENT DESIGNATION									
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	4	4	4	4	4	4	4	4	4
HEATING FUEL	ELEC - OIL - GAS	ELEC - OIL - GAS	ELEC - OIL - GAS	ELEC - OIL - GAS	ELEC - OIL - GAS	ELEC - OIL - GAS	ELEC - OIL - GAS	ELEC - OIL - GAS	ELEC - OIL - GAS
TYPE	FIRETUBE - WATERTUBE	FIRETUBE - WATERTUBE	FIRETUBE - WATERTUBE	FIRETUBE - WATERTUBE	FIRETUBE - WATERTUBE	FIRETUBE - WATERTUBE	FIRETUBE - WATERTUBE	FIRETUBE - WATERTUBE	FIRETUBE - WATERTUBE
MODEL NO.									
BOILER SIZE (BTUH)									
N.C. CERTIFICATE #									
BURNER MANUFACTURER									
BURNER MODEL NUMBER									
BURNER SERIAL NUMBER									
INPUT MAX. (BTUH)									
INPUT MIN. (BTUH)									
GAS PRESSURE (INCHES)									
MOTOR MANUFACTURER									
MOTOR MODEL NUMBER									

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **BOILER** **DEFAULT DESIGNATIONS: B (Boilers), WH (Water Heaters)**

MOTOR SERIAL NUMBER									
MOTOR HORSEPOWER									
MOTOR RPM									
MOTOR VOLTAGE									
MOTOR PHASE									
MOTOR FREQUENCY									
MOTOR FRAME									
MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
MOTOR AMPS									
MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
RELIEF VALVE									
PRESSURE									
MANUFACTURER									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**
CLASSIFICATION: **CHILLER** **DEFAULT DESIGNATION: CH**

EQUIPMENT DESIGNATION	CH -	CH -	CH -	CH -	CH -	CH -	CH -	CH -	CH -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	4	4	4	4	4	4	4	4	4
UNIT TYPE	CENT - RECIP - SCREW	CENT - RECIP - SCREW	CENT - RECIP - SCREW	CENT - RECIP - SCREW	CENT - RECIP - SCREW	CENT - RECIP - SCREW	CENT - RECIP - SCREW	CENT - RECIP - SCREW	CENT - RECIP - SCREW
MODEL NO.									
FILTER									
CONDENSER MFG.									
CONDENSER MODEL #									
CONDENSER SERIAL #									
REFRIGERANT TYPE									
PURGE REFRIGERANT									
VOLTAGE									
PHASE									
FREQUENCY									
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
STARTER MANUFACTURER									
STARTER CONTACT CAT. #									
STARTER CONTACT SIZE									
STARTER HEATER/OVERLOAD DESIGNATION									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: COMPRESSOR **DEFAULT DESIGNATION: CMP**

EQUIPMENT DESIGNATION	CMP -	CMP -	CMP -	CMP -	CMP -	CMP -	CMP -	CMP -	CMP -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
BELONGS TO									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
COMPRESSOR MODEL #									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: **COOLING TOWER** **DEFAULT DESIGNATION: CT**

EQUIPMENT DESIGNATION	CT -	CT -	CT -	CT -	CT -	CT -	CT -	CT -	CT -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	4	4	4	4	4	4	4	4	4
MODEL NO.									
FAN DRIVE TYPE	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR
FAN LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
FAN BELT SIZE (QTY)									
NO. OF CELLS									
MOTOR MFG.									
MOTOR MODEL #									
MOTOR SERIAL #									
MOTOR HORSEPOWER									
MOTOR RPM									
MOTOR VOLTAGE									
MOTOR PHASE									
MOTOR FREQUENCY									

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **COOLING TOWER** **DEFAULT DESIGNATION: CT**

MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
MOTOR AMPS									
MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
MOTOR FRAME									
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
STARTER MANUFACTURER									
STARTER CONTACT CAT. #									
STARTER CONTACT SIZE									
STARTER HEATER/OVERLOAD DESIGNATION									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **DEHUMIDIFIER** **DEFAULT DESIGNATION: DHD**

EQUIPMENT DESIGNATION	DHD -	DHD -	DHD -	DHD -	DHD -	DHD -	DHD -	DHD -	DHD -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED	DESSICANT REFRIGERATED
MODEL NO.									
REFRIGERANT TYPE									
COMPRESSOR MFG.									
COMPRESSOR MODEL									
COMPRESSOR SERIAL#									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **ELECTRICAL DISTRIBUTION** **DEFAULT DESIGNATION: MDP**

EQUIPMENT DESIGNATION	MDP -	MDP -	MDP -	MDP -	MDP -	MDP -	MDP -	MDP -	MDP -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	4	4	4	4	4	4	4	4	4
UNIT TYPE	MAIN DIST PANEL	MAIN DIST PANEL	MAIN DIST PANEL	MAIN DIST PANEL	MAIN DIST PANEL	MAIN DIST PANEL	MAIN DIST PANEL	MAIN DIST PANEL	MAIN DIST PANEL
MODEL NO.									
VOLTAGE									
PHASE									
FREQUENCY									
AMP RATING									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **EMERGENCY GENERATOR** **DEFAULT DESIGNATION: EG**

EQUIPMENT DESIGNATION	EG -	EG -	EG -	EG -	EG -	EG -	EG -	EG -	EG -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	5	5	5	5	5	5	5	5	5
MODEL NO.									
KW RATING									
VOLTAGE									
PHASE									
FREQUENCY									
GENERATOR AMPS									
GENERATOR RPM									
GENERATOR FRAME SIZE									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: ENGINE, EMERGENCY GENERATOR

DEFAULT DESIGNATION: EEG

EQUIPMENT DESIGNATION	EEG -	EEG -	EEG -	EEG -	EEG -	EEG -	EEG -	EEG -	EEG -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	5	5	5	5	5	5	5	5	5
MODEL NO.									
ENGINE FUEL	DIESEL - GASOLINE - NAT. GAS - PROPANE	DIESEL - GASOLINE - NAT. GAS - PROPANE	DIESEL - GASOLINE - NAT. GAS - PROPANE	DIESEL - GASOLINE - NAT. GAS - PROPANE	DIESEL - GASOLINE - NAT. GAS - PROPANE	DIESEL - GASOLINE - NAT. GAS - PROPANE	DIESEL - GASOLINE - NAT. GAS - PROPANE	DIESEL - GASOLINE - NAT. GAS - PROPANE	DIESEL - GASOLINE - NAT. GAS - PROPANE
ENGINE HP									
ENGINE # CYLINDERS									
ENGINE RPM									
BELT SIZE (QTY)									
OIL FILTER									
AIR FILTER									
FUEL FILTER									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **FACILITY SITE EQUIPMENT** **DEFAULT DESIGNATION:**

EQUIPMENT DESIGNATION											
MAXIMO EQUIP. NUMBER											
MANUFACTURER											
SERIAL NUMBER											**Equipment Priority**
EQUIPMENT DESCRIPTION	**IS**	IRRIGATION SYSTEM	IRRIGATION SYSTEM	IRRIGATION SYSTEM	IRRIGATION SYSTEM	IRRIGATION SYSTEM	IRRIGATION SYSTEM	IRRIGATION SYSTEM	IRRIGATION SYSTEM	IRRIGATION SYSTEM	**2**
	SL	SITE LIGHTING	SITE LIGHTING	SITE LIGHTING	SITE LIGHTING	SITE LIGHTING	SITE LIGHTING	SITE LIGHTING	SITE LIGHTING	SITE LIGHTING	**5**
	DW	DUMBWAITER	DUMBWAITER	DUMBWAITER	DUMBWAITER	DUMBWAITER	DUMBWAITER	DUMBWAITER	DUMBWAITER	DUMBWAITER	**2**
	CHLFT	CHAIRLIFT	CHAIRLIFT	CHAIRLIFT	CHAIRLIFT	CHAIRLIFT	CHAIRLIFT	CHAIRLIFT	CHAIRLIFT	CHAIRLIFT	**4**
	ELV	ELEVATOR	ELEVATOR	ELEVATOR	ELEVATOR	ELEVATOR	ELEVATOR	ELEVATOR	ELEVATOR	ELEVATOR	**4**
	GT	GREASE TRAP	GREASE TRAP	GREASE TRAP	GREASE TRAP	GREASE TRAP	GREASE TRAP	GREASE TRAP	GREASE TRAP	GREASE TRAP	**4**
	LS	LIFT STATION	LIFT STATION	LIFT STATION	LIFT STATION	LIFT STATION	LIFT STATION	LIFT STATION	LIFT STATION	LIFT STATION	**5**
MODEL NUMBER											

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **FAN** **DEFAULT DESIGNATION: FC, EF, RF, or SF**

EQUIPMENT DESIGNATION										
SPACE DESCRIPTION		ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER										
LOCATION ON ROOF/SITE		N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)										
BLDG. CODE (A,B,C…)										
MAXIMO EQUIP. #										
MANUFACTURER										
SERIAL NUMBER										
PRIORITY		3	3	3	3	3	3	3	3	3
EQUIP. APPLICATION	FC	AIR CURTAIN	AIR CURTAIN	AIR CURTAIN	AIR CURTAIN	AIR CURTAIN	AIR CURTAIN	AIR CURTAIN	AIR CURTAIN	AIR CURTAIN
	EF	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST
	RF	RETURN	RETURN	RETURN	RETURN	RETURN	RETURN	RETURN	RETURN	RETURN
	SF	SUPPLY	SUPPLY	SUPPLY	SUPPLY	SUPPLY	SUPPLY	SUPPLY	SUPPLY	SUPPLY
UNIT TYPE		AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP	AXIAL - CENT - PROP
MODEL NUMBER										
FILTER SIZE HXWXD (QTY)										
FAN LUBRICATION		GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
DRIVE TYPE		BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR
BELT SIZE (QTY)										
FAN CAPACITY (CFM)										
MOTOR MFG.										
MOTOR MODEL #										
MOTOR SERIAL #										
MOTOR HORSEPOWER										
MOTOR RPM										

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **FAN** **DEFAULT DESIGNATION: FC, EF, RF, or SF**

MOTOR VOLTAGE									
MOTOR PHASE									
MOTOR FREQUENCY									
MOTOR FRAME									
MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
MOTOR AMPS									
MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
STARTER MANUFACTURER									
STARTER CONTACT CAT. #									
STARTER CONTACT SIZE									
STARTER HEATER/OVERLOAD DESIGNATION									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **FAN COIL UNIT**

DEFAULT DESIGNATION: FCU

EQUIPMENT DESIGNATION	FCU -	FCU -	FCU -	FCU -	FCU -	FCU -	FCU -	FCU -	FCU -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	CONSOLE - DUCTED - HORIZONTAL - VERTICAL	CONSOLE - DUCTED - HORIZONTAL - VERTICAL	CONSOLE - DUCTED - HORIZONTAL - VERTICAL	CONSOLE - DUCTED - HORIZONTAL - VERTICAL	CONSOLE - DUCTED - HORIZONTAL - VERTICAL	CONSOLE - DUCTED - HORIZONTAL - VERTICAL	CONSOLE - DUCTED - HORIZONTAL - VERTICAL	CONSOLE - DUCTED - HORIZONTAL - VERTICAL	CONSOLE - DUCTED - HORIZONTAL - VERTICAL
MODEL NUMBER									
DRIVE	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT
BELT SIZE									
BELT QUANTITY									
FILTER SIZE HXWXD (QTY)									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **GENERAL EQUIPMENT** **DEFAULT DESIGNATION:**

EQUIPMENT DESIGNATION											
SPACE DESCRIPTION		ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	
ROOM NUMBER											
LOCATION ON ROOF/SITE		N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	
BLDG. FLOOR (B,1,2,3…)											
BLDG. CODE (A,B,C…)											
MAXIMO EQUIP. #											
MANUFACTURER											
SERIAL NUMBER											**Equipment Priority**
EQUIP. DESCRIPTION	**FAS**	FIRE ALARM SYSTEM	FIRE ALARM SYSTEM	FIRE ALARM SYSTEM	FIRE ALARM SYSTEM	FIRE ALARM SYSTEM	FIRE ALARM SYSTEM	FIRE ALARM SYSTEM	FIRE ALARM SYSTEM	FIRE ALARM SYSTEM	**5**
	KH	KITCHEN HOOD	KITCHEN HOOD	KITCHEN HOOD	KITCHEN HOOD	KITCHEN HOOD	KITCHEN HOOD	KITCHEN HOOD	KITCHEN HOOD	KITCHEN HOOD	**3**
	BFP	BACKFLOW PREVENTER	BACKFLOW PREVENTER	BACKFLOW PREVENTER	BACKFLOW PREVENTER	BACKFLOW PREVENTER	BACKFLOW PREVENTER	BACKFLOW PREVENTER	BACKFLOW PREVENTER	BACKFLOW PREVENTER	**5**
	CCTV	CCTV	CCTV	CCTV	CCTV	CCTV	CCTV	CCTV	CCTV	CCTV	**4**
	IC	INTERCOM	INTERCOM	INTERCOM	INTERCOM	INTERCOM	INTERCOM	INTERCOM	INTERCOM	INTERCOM	**4**
	SEC	SECURITY	SECURITY	SECURITY	SECURITY	SECURITY	SECURITY	SECURITY	SECURITY	SECURITY	**5**
	FW	FOLDING WALLS	FOLDING WALLS	FOLDING WALLS	FOLDING WALLS	FOLDING WALLS	FOLDING WALLS	FOLDING WALLS	FOLDING WALLS	FOLDING WALLS	**2**
	ES	ELECTRONIC SCOREBOARDS	ELECTRONIC SCOREBOARDS	ELECTRONIC SCOREBOARDS	ELECTRONIC SCOREBOARDS	ELECTRONIC SCOREBOARDS	ELECTRONIC SCOREBOARDS	ELECTRONIC SCOREBOARDS	ELECTRONIC SCOREBOARDS	ELECTRONIC SCOREBOARDS	**2**
	DC	DUST COLLECTOR	DUST COLLECTOR	DUST COLLECTOR	DUST COLLECTOR	DUST COLLECTOR	DUST COLLECTOR	DUST COLLECTOR	DUST COLLECTOR	DUST COLLECTOR	**2**
MODEL NUMBER											
BACKFLOW PREVENTER SIZE (INCHES):											
****BELONGS TO**											

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **HEAT EXCHANGER** **DEFAULT DESIGNATION: HX**

EQUIPMENT DESIGNATION	HX -	HX -	HX -	HX -	HX -	HX -	HX -	HX -	HX -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	4	4	4	4	4	4	4	4	4
UNIT TYPE	PLATE - SHELL & TUBE	PLATE - SHELL & TUBE	PLATE - SHELL & TUBE	PLATE - SHELL & TUBE	PLATE - SHELL & TUBE	PLATE - SHELL & TUBE	PLATE - SHELL & TUBE	PLATE - SHELL & TUBE	PLATE - SHELL & TUBE
MODEL NUMBER									
SHELL PRESSURE (PSIG)									
SHELL MATERIAL									
TUBE PRESSURE (PSIG)									
TUBE MATERIAL									
NATIONAL BOARD NO.									
N.C. CERTIFICATE NO.									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME:

CLASSIFICATION: **INVERTER SYSTEM** **DEFAULT DESIGNATION: INV**

EQUIPMENT DESIGNATION	INV -	INV -	INV -	INV -	INV -	INV -	INV -	INV -	INV -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	5	5	5	5	5	5	5	5	5
MODEL NO.									
BATTERY MFG									
BATTERY MODEL NUMBER									
# BATTERY UNITS									
# CELLS									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: KITCHEN EQUIPMENT **DEFAULT DESIGNATION:**

EQUIPMENT DESIGNATION	KE -	KE -	KE -	KE -	KE -	KE -	KE -	KE -	KE -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
EQUIP. DESCRIPTION	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER	CABINET HEATED DEEP FRYER OVEN BRAISING PAN SERVING LINE COLD SERVING LINE HOT TILT SKILLET SLICER STEAMER
MODEL NO.									
UNIT TYPE	ELEC - GAS - OIL	ELEC - GAS - OIL	ELEC - GAS - OIL	ELEC - GAS - OIL	ELEC - GAS - OIL	ELEC - GAS - OIL	ELEC - GAS - OIL	ELEC - GAS - OIL	ELEC - GAS - OIL
VOLTS									
PHASE									
CYCLES									
AMPS									
WATTS									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME:

CLASSIFICATION: **MOBILE UNIT**

MOBILE UNIT INFORMATION

MAXIMO EQUIP. #						
MANUFACTURER						
SERIAL NUMBER						
PRIORITY	3	3	3	3	3	3
MOBILE UNIT TYPE	MOBILE COMPLEX - MOBILE UNIT - MOBILE UNIT, LEASED	MOBILE COMPLEX - MOBILE UNIT - MOBILE UNIT, LEASED	MOBILE COMPLEX - MOBILE UNIT - MOBILE UNIT, LEASED	MOBILE COMPLEX - MOBILE UNIT - MOBILE UNIT, LEASED	MOBILE COMPLEX - MOBILE UNIT - MOBILE UNIT, LEASED	MOBILE COMPLEX - MOBILE UNIT - MOBILE UNIT, LEASED
PROPERTY CONTROL #						
MODEL #						
PRIMARY FLOOR	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD
SECONDARY FLOOR	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD	CARPET - VAT - VCT - CER. TILE - SHEET VINYL - CONCRETE - QUARRY TILE - TERRAZO - HARDWOOD
PRIMARY WALL	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - WOOD PANELING - GLASS BLOCK	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - WOOD PANELING - GLASS BLOCK	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - WOOD PANELING - GLASS BLOCK	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - WOOD PANELING - GLASS BLOCK	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - WOOD PANELING - GLASS BLOCK	PNTD CMU - PNTD MASONRY - NAT MASONRY - PNTD SHEETROCK - VINYL SHEETROCK - CERAMIC TILE - PNTD PLASTER - WOOD PANELING - GLASS BLOCK
PRIMARY CEILING	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK	SHEETROCK - 2 X 2 TILE - 2 X 4 TILE - 12 X 12 T&G - PLASTER - EXPOSED DECK
HVAC ROOM ID						

ACU PACKAGED SELF CONTAINED, BELONGS TO THE MOBILE UNIT

MAXIMO EQUIP. #						
MANUFACTURER						
SERIAL NUMBER						
PRIORITY	3	3	3	3	3	3
UNIT TYPE	AIR COOLED HEAT PUMP PACK. TERMINAL UNIT WATER COOLED	AIR COOLED HEAT PUMP PACK. TERMINAL UNIT WATER COOLED	AIR COOLED HEAT PUMP PACK. TERMINAL UNIT WATER COOLED	AIR COOLED HEAT PUMP PACK. TERMINAL UNIT WATER COOLED	AIR COOLED HEAT PUMP PACK. TERMINAL UNIT WATER COOLED	AIR COOLED HEAT PUMP PACK. TERMINAL UNIT WATER COOLED
MODEL NUMBER						
REFRIGERANT TYPE						
DRIVE	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT	BELT - DIRECT
BELT SIZE						
BELT QUANTITY						
FILTER SIZE HXWXD(QTY)						

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **MOTOR** **DEFAULT DESIGNATION: MTR**

EQUIPMENT DESIGNATION	MTR -	MTR -	MTR -	MTR -	MTR -	MTR -	MTR -	MTR -	MTR -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
BELONGS TO									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY									
MOTOR MODEL NUMBER									
MOTOR HP									
MOTOR RPM									
MOTOR VOLTAGE									
MOTOR PHASE									
MOTOR FREQUENCY									
MOTOR AMPS									
MOTOR FRAME SIZE									
MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
STARTER MANUFACTURER									
STARTER CONTACT CAT. #									
STARTER CONTACT SIZE									
STARTER HEATER/OVERLOAD DESIGNATION									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **OVERHEAD DOOR** **DEFAULT DESIGNATION: OHDR**

EQUIPMENT DESIGNATION	OHDR -	OHDR -	OHDR -	OHDR -	OHDR -	OHDR -	OHDR -	OHDR -	OHDR -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
MODEL NO.									
MOTOR MFG.									
MOTOR MODEL #									
MOTOR SERIAL #									
MOTOR HORSEPOWER									
MOTOR RPM									
MOTOR VOLTAGE									
MOTOR PHASE									
MOTOR FREQUENCY									
MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
MOTOR AMPS									
MOTOR FRAME									
MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME:

CLASSIFICATION: **PUMP**

EQUIPMENT DESIGNATION											
SPACE DESCRIPTION		ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	
ROOM NUMBER											
LOCATION ON ROOF/SITE		N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	N - NE - E - SE- S - SW - W -NW	
BLDG. FLOOR (B,1,2,3…)											
BLDG. CODE (A,B,C…)											
MAXIMO EQUIP. #											
MANUFACTURER											
SERIAL NUMBER											
UNIT TYPE		CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	CARTRIDGE - GEAR - CENTRIFUGAL - DIAPHRAGM - METERING - SUBMERSIBLE	**Equipment Priority**
UNIT DESCRIPTION	**CWP**	CHILLED WATER	CHILLED WATER	CHILLED WATER	CHILLED WATER	CHILLED WATER	CHILLED WATER	CHILLED WATER	CHILLED WATER	CHILLED WATER	**4**
	CRP	CONDENSATE RETURN	CONDENSATE RETURN	CONDENSATE RETURN	CONDENSATE RETURN	CONDENSATE RETURN	CONDENSATE RETURN	CONDENSATE RETURN	CONDENSATE RETURN	CONDENSATE RETURN	**4**
	CTP	COOLING TOWER	COOLING TOWER	COOLING TOWER	COOLING TOWER	COOLING TOWER	COOLING TOWER	COOLING TOWER	COOLING TOWER	COOLING TOWER	**4**
	DHWP	DOMESTIC HOT WATER	DOMESTIC HOT WATER	DOMESTIC HOT WATER	DOMESTIC HOT WATER	DOMESTIC HOT WATER	DOMESTIC HOT WATER	DOMESTIC HOT WATER	DOMESTIC HOT WATER	DOMESTIC HOT WATER	**3**
	DTWP	DUAL TEMPERATURE	DUAL TEMPERATURE	DUAL TEMPERATURE	DUAL TEMPERATURE	DUAL TEMPERATURE	DUAL TEMPERATURE	DUAL TEMPERATURE	DUAL TEMPERATURE	DUAL TEMPERATURE	**4**
	GWP	GLYCOL WATER	GLYCOL WATER	GLYCOL WATER	GLYCOL WATER	GLYCOL WATER	GLYCOL WATER	GLYCOL WATER	GLYCOL WATER	GLYCOL WATER	**4**
	HHWP	HEATING HOT WATER	HEATING HOT WATER	HEATING HOT WATER	HEATING HOT WATER	HEATING HOT WATER	HEATING HOT WATER	HEATING HOT WATER	HEATING HOT WATER	HEATING HOT WATER	**4**
	LP	LOOP WATER	LOOP WATER	LOOP WATER	LOOP WATER	LOOP WATER	LOOP WATER	LOOP WATER	LOOP WATER	LOOP WATER	**4**
	OP	OIL	OIL	OIL	OIL	OIL	OIL	OIL	OIL	OIL	**4**
	SP	SUMP	SUMP	SUMP	SUMP	SUMP	SUMP	SUMP	SUMP	SUMP	**3**
MODEL NO.											
CAPACITY (GPM)											
TOTAL HEAD (FT)											
PUMP LUBRICATION		GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL -SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL -SEALED	
DRIVE TYPE		BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	BELT - CHAIN - CLUTCH - COUPLING - DIRECT - GEAR	
SUCTION SIZE (INCHES)											
DISCHARGE SIZE (INCHES)											
SEAL TYPE		MECHANICAL - PACKING	MECHANICAL - PACKING	MECHANICAL - PACKING	MECHANICAL - PACKING	MECHANICAL - PACKING	MECHANICAL - PACKING	MECHANICAL - PACKING	MECHANICAL - PACKING	MECHANICAL - PACKING	
MOTOR MFG.											
MOTOR MODEL #											
MOTOR SERIAL #											

SCHOOL CODE/NAME:

CLASSIFICATION: **PUMP**

MOTOR HORSEPOWER									
MOTOR RPM									
MOTOR VOLTAGE									
MOTOR PHASE									
MOTOR FREQUENCY									
MOTOR AMPS									
MOTOR FRAME									
MOTOR ROTATION	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW	CCW - CW
MOTOR LUBRICATION	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL - SEALED	GREASE - OIL -SEALED
DISCONNECT SWITCH FUSE AMPERAGE									
DISCONNECT SWITCH FUSE VOLTAGE									
STARTER MANUFACTURER									
STARTER CONTACT CAT. #									
STARTER CONTACT SIZE									
STARTER HEATER/OVERLOAD DESIGNATION									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **REFRIGERATION EQUIPMENT** **DEFAULT DESIGNATION:**

EQUIPMENT DESIGNATION										
SPACE DESCRIPTION		ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER										
LOCATION ON ROOF/SITE		N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)										
BLDG. CODE (A,B,C…)										
MAXIMO EQUIP. #										
MANUFACTURER										
SERIAL NUMBER										
PRIORITY		3	3	3	3	3	3	3	3	3
EQUIPMENT DESCRIPTION	**IM**	ICE MACHINE	ICE MACHINE	ICE MACHINE	ICE MACHINE	ICE MACHINE	ICE MACHINE	ICE MACHINE	ICE MACHINE	ICE MACHINE
	RRU	REACH-IN COOLER	REACH-IN COOLER	REACH-IN COOLER	REACH-IN COOLER	REACH-IN COOLER	REACH-IN COOLER	REACH-IN COOLER	REACH-IN COOLER	REACH-IN COOLER
	RRU	REACH-IN FREEZER	REACH-IN FREEZER	REACH-IN FREEZER	REACH-IN FREEZER	REACH-IN FREEZER	REACH-IN FREEZER	REACH-IN FREEZER	REACH-IN FREEZER	REACH-IN FREEZER
	WRU	WALK-IN COOLER	WALK-IN COOLER	WALK-IN COOLER	WALK-IN COOLER	WALK-IN COOLER	WALK-IN COOLER	WALK-IN COOLER	WALK-IN COOLER	WALK-IN COOLER
	WRU	WALK-IN FREEZER	WALK-IN FREEZER	WALK-IN FREEZER	WALK-IN FREEZER	WALK-IN FREEZER	WALK-IN FREEZER	WALK-IN FREEZER	WALK-IN FREEZER	WALK-IN FREEZER
ICE TYPE		CUBED - FLAKED	CUBED - FLAKED	CUBED - FLAKED	CUBED - FLAKED	CUBED - FLAKED	CUBED - FLAKED	CUBED - FLAKED	CUBED - FLAKED	CUBED - FLAKED
MODEL NO.										
REFRIGERANT TYPE										
CONDENSER MFG.										
CONDENSER MODEL #										
CONDENSER SERIAL #										
COMPRESSOR MFG.										
COMPRESSOR MODEL #										
COMPRESSOR SERIAL #										

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: 0

CLASSIFICATION: TANKS **DEFAULT DESIGNATION:**

EQUIPMENT DESIGNATION										
SPACE DESCRIPTION		ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER										
LOCATION ON ROOF/SITE		N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)										
BLDG. CODE (A,B,C…)										
MAXIMO EQUIP. #										
MANUFACTURER										
SERIAL NUMBER										
PRIORITY		4	4	4	4	4	4	4	4	4
UNIT TYPE	**DHWST**	DHW STORAGE	DHW STORAGE	DHW STORAGE	DHW STORAGE	DHW STORAGE	DHW STORAGE	DHW STORAGE	DHW STORAGE	DHW STORAGE
	ET	EXPANSION	EXPANSION	EXPANSION	EXPANSION	EXPANSION	EXPANSION	EXPANSION	EXPANSION	EXPANSION
	HHWST	HHW STORAGE	HHW STORAGE	HHW STORAGE	HHW STORAGE	HHW STORAGE	HHW STORAGE	HHW STORAGE	HHW STORAGE	HHW STORAGE
	CHWST	CHW STORAGE	CHW STORAGE	CHW STORAGE	CHW STORAGE	CHW STORAGE	CHW STORAGE	CHW STORAGE	CHW STORAGE	CHW STORAGE
MODEL #										
CAPACITY (GALLONS)										
MFG. DATE										
NATIONAL BOARD NO.										
N.C. CERTIFICATE NO.										
RELIEF VALVE										
RELIEF VALVE PRESSURE PSIG										
RELIEF VALVE MFG.										

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **UNIT HEATER** **DEFAULT DESIGNATION: UH**

EQUIPMENT DESIGNATION	UH -	UH -	UH -	UH -	UH -	UH -	UH -	UH -	UH -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	ELEC - GAS - HHW - STEAM	ELEC - GAS - HHW - STEAM	ELEC - GAS - HHW - STEAM	ELEC - GAS - HHW - STEAM	ELEC - GAS - HHW - STEAM	ELEC - GAS - HHW - STEAM	ELEC - GAS - HHW - STEAM	ELEC - GAS - HHW - STEAM	ELEC - GAS - HHW - STEAM
MODEL NO.									
HEATER KW RATING									
VOLTS									
PHASE									
CYCLES									
HEATER AMP RATING									
FILTER SIZE									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME:

CLASSIFICATION: **VARIABLE FREQUENCY DRIVE** **DEFAULT DESIGNATION: VFD**

EQUIPMENT DESIGNATION	VFD -	VFD -	VFD -	VFD -	VFD -	VFD -	VFD -	VFD -	VFD -
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
BELONGS TO									
PRIORITY	SAME AS PARENT	SAME AS PARENT	SAME AS PARENT	SAME AS PARENT	SAME AS PARENT	SAME AS PARENT	SAME AS PARENT	SAME AS PARENT	SAME AS PARENT
MODEL NO.									
HP									
RPM									
VOLTS									
PHASE									
FREQUENCY									
LINE VOLTAGE FUSE AMPS									

WAKE COUNTY PUBLIC SCHOOL SYSTEM MAINTENANCE AND OPERATIONS
EQUIPMENT DATA COLLECTION SHEET

SCHOOL CODE/NAME: **0**

CLASSIFICATION: **WATER HEATER** **DEFAULT DESIGNATION: WH**

EQUIPMENT DESIGNATION									
SPACE DESCRIPTION	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY	ROOM - LOBBY - CORRIDOR - MECH - ELEC - STAIRWAY
ROOM NUMBER									
LOCATION ON ROOF/SITE	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW	N - NE - E - SE - S - SW - W - NW
BLDG. FLOOR (B,1,2,3…)									
BLDG. CODE (A,B,C…)									
MAXIMO EQUIP. #									
MANUFACTURER									
SERIAL NUMBER									
PRIORITY	3	3	3	3	3	3	3	3	3
UNIT TYPE	ELEC - GAS - OIL - STEAM	ELEC - GAS - OIL - STEAM	ELEC - GAS - OIL - STEAM	ELEC - GAS - OIL - STEAM	ELEC - GAS - OIL - STEAM	ELEC - GAS - OIL - STEAM	ELEC - GAS - OIL - STEAM	ELEC - GAS - OIL - STEAM	ELEC - GAS - OIL - STEAM
CAPACITY (GALLONS)									
MODEL NO.									
INPUT BTUH									
VOLTAGE									
PHASE									
FREQUENCY									
AMPS									
WATTS UPPER									
WATTS LOWER									
N.C. CERTIFICATE NO.									
RELIEF VALVE									
RELIEF VALVE PRESSURE									
RELIEF VALVE MFG.									

01 07 00 ATTACHMENT D ATTIC STOCK

Guideline Section	Description	Quantity	Note
Fire Protection	Sprinkler Head Escutheon Rings	10	Match Installed
Flooring	VCT	1 box of each style/color	
	Carpet Tile	1 box of each style/color	
Mechanical	Air Filters	1 additional set for each piece of equiment	Match Size and MERV Rating
	Drive Belts	1 additional set for each piece of belt driven equipment	Match Size and Quantity
Paint	Paint	1 additional gallon for each color	Provide paint color chart and paint color swatches for matching paint colors

01 08 10 ATTACHMENT A SUSTAINABILITY DESIGN CHECKLIST

LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name:
Date:

Y	?	N			
			Credit	Integrative Process	1

Y	?	N			
0	0	0	**Location and Transportation**		16
			Credit	LEED for Neighborhood Development Location	16
			Credit	Sensitive Land Protection	1
			Credit	High Priority Site	2
			Credit	Surrounding Density and Diverse Uses	5
			Credit	Access to Quality Transit	5
			Credit	Bicycle Facilities	1
			Credit	Reduced Parking Footprint	1
			Credit	Green Vehicles	1
0	0	0	**Sustainable Sites**		10
Y			Prereq	Construction Activity Pollution Prevention	Required
			Credit	Site Assessment	1
			Credit	Site Development - Protect or Restore Habitat	2
			Credit	Open Space	1
			Credit	Rainwater Management	3
			Credit	Heat Island Reduction	2
			Credit	Light Pollution Reduction	1
0	0	0	**Water Efficiency**		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
			Credit	Outdoor Water Use Reduction	2
			Credit	Indoor Water Use Reduction	6
			Credit	Cooling Tower Water Use	2
			Credit	Water Metering	1
0	0	0	**Energy and Atmosphere**		33
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
			Credit	Enhanced Commissioning	6
			Credit	Optimize Energy Performance	18
			Credit	Advanced Energy Metering	1
			Credit	Demand Response	2
			Credit	Renewable Energy Production	3
			Credit	Enhanced Refrigerant Management	1
			Credit	Green Power and Carbon Offsets	2

Y	?	N			
0	0	0	**Materials and Resources**		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
			Credit	Building Life-Cycle Impact Reduction	5
			Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
			Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
			Credit	Building Product Disclosure and Optimization - Material Ingredients	2
			Credit	Construction and Demolition Waste Management	2
0	0	0	**Indoor Environmental Quality**		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
			Credit	Enhanced Indoor Air Quality Strategies	2
			Credit	Low-Emitting Materials	3
			Credit	Construction Indoor Air Quality Management Plan	1
			Credit	Indoor Air Quality Assessment	2
			Credit	Thermal Comfort	1
			Credit	Interior Lighting	2
			Credit	Daylight	3
			Credit	Quality Views	1
			Credit	Acoustic Performance	1
0	0	0	**Innovation**		6
			Credit	Innovation	5
			Credit	LEED Accredited Professional	1
0	0	0	**Regional Priority**		4
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1

0	0	0	**TOTALS**	Possible Points:	**110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

02 41 00 ATTACHMENT A

NOTICE TO CONTRACTORS, SUBCONTRACTORS & SHORT TERM WORKERS

RE: ASBESTOS-CONTAINING BUILDING MATERIALS IN SCHOOL FACILITIES

A. GENERAL

1. This notice is to advise you that asbestos-containing building materials must not be disturbed if encountered during repairs, renovations, and other construction and installation activities in buildings owned by the Wake County Public School System. A management plan manual is located in the main office of each facility which specifies the location(s), if any, of asbestos-containing building materials. Copies of the manuals are also available for reference in Raleigh at the school system's Maintenance and Operations Department (Environmental and Grounds) at 1551 Rock Quarry Road. Contractors shall review the appropriate manual prior to beginning any construction activity to determine if that activity has the potential for disturbing asbestos-containing building material.
2. If disturbance of these materials cannot be reasonably avoided, no work shall begin until the AHERA Designee of the Wake County Public School System has been notified and has issued specific instructions on the proper procedures for the activity in accordance with federal, state and local regulation.
3. The Contractor Certification Form (Attachment B) must be signed and returned to the AHERA Designee prior to the start of work.
4. Contractors, subcontractors, and short-term workers shall also be responsible for determining, prior to the start of work, the location(s) of any areas of restricted or prohibited access on the site where the work is to be performed. **Such areas shall not be entered, for any reason, without prior authorization of the AHERA Designee.** The Wake County Public School System will not be responsible for claims of any kind from contractors, subcontractors or short-term workers who fail to comply with provisions of this notice.
5. For renovation projects, WCPSS shall perform asbestos and lead based paint surveys of the affected areas of the facility. This survey shall be shared with designers and contractors. The Owner may elect to contract to perform the necessary abatements or request the CMAR to bid the work.

Director of Environmental and Grounds, AHERA Designee
Wake County Public School System
Environmental Management
1551 Rock Quarry Road, Facilities Building
Raleigh, NC 27610
(919) 856-8120

02 41 00 ATTACHMENT B

CONTRACTOR CERTIFICATION FORM

B. GENERAL

1. The undersigned certify that they have received and read the "Notice to Contractors, Subcontractors and Short-Term Workers" issued by the Wake County Public School System regarding asbestos-containing building materials that may be present in school buildings.
2. The Undersigned further certify the following:
   a. That they have informed their workers and/or subcontractors of this notice and the proper procedures to follow.
   b. That they will contact the AHERA Designee for the Wake County Public School System to determine if there are restricted access areas at the facility where work is planned and, if there are such areas, that they will notify their workers and subcontractors accordingly.
   c. That they will be responsible for proper notification of these conditions to all subcontractors and for obtaining the signature(s) of the authorized representatives of those subcontractors in the spaces provided below.
   d. That this form will be properly completed, signed, and returned to the AHERA Designee for the Wake County Public School System prior to the start of work.

Project/School/Facility: _____

Project Number: _____

Prime Contractor: _____

President/Manager/Owner _____ Date: _____

Subcontractor: _____

President/Manager/Owner _____ Date: _____

Subcontractor: _____

President/Manager/Owner _____ Date: _____

Subcontractor: _____

President/Manager/Owner _____ Date: _____

Remit to: Director of Environmental and Grounds, AHERA Designee
Wake County Public School System
1551 Rock Quarry Road
Raleigh, NC 27610

08 71 00 DOOR HARDWARE ATTACHMENT A

A. LOCKSETS FOR SCHOOLS

1. Classroom shall be 45 H 7 INL X LEVER/TRIM X FINISH X HAND.
2. Offices shall be 45 H 7 A X LEVER/TRIM X FINISH X HAND.
3. Staff Toilets shall be 45 H 7 HJ X LEVER/TRIM X FINISH X HAND.
4. Custodial and Mechanical Rooms shall be 45 H 7 D X LEVER/TRIM X FINISH X HAND.
5. Doors shall have at least one cylinder for every pair of exterior doors.
6. 4400-series Knox Box shall be dual lock type. Top shall be keyed to local Fire Department and bottom keyed to WCPSS school key.
7. KNOX Box forms for ordering the units from KNOX shall be provided by WCPSS

10 11 00 ATTACHMENT A – DRY ERASE BOARDS AND TACKBOARDS

A. GENERAL

1. This Attachment includes requirements for Porcelain Steel Dry Erase Boards and Tackboards.
2. Warranty: Lifetime Guarantee under conditions of normal use. Should not exhibit excessive fading of color, crazing, cracking or flaking.

B. MANUFACTURERS

1. Acceptable manufacturers shall be per below:
    a. American Chalkboard Co.
    b. Best Rite Manufacturing (MooreCo, Inc.)
    c. Claridge Products and Equipment
    d. ADP Lemco, Inc.
    e. Nelson/Adams (NACO)

C. MATERIALS

1. Porcelain Steel Dry Erase Board: Provide balanced, high pressure-laminated porcelain enamel dry erase boards of 3-ply construction consisting of face sheet, core material and backing

    a. Face sheet: shall be 24 gauge porcelain, enamel steel with magnetic, non-porous surface. Should wipe clean with an eraser or dry cloth. Also:
        1. Deposition coat of 2.0 to 2.5 mils on front of steel.
        2. Deposition coat of 1.5 to 2.0 mils on back of steel.
        3. Porcelain enamel steel writing and erasing coat system, totaling 3.5 to 4.5 mils over front surface.
        4. Firing temperature must be no less than 1500 deg. F.
        5. Hardness of writing surface shall be uniform in color and texture.
        6. Reflectance factor shall be no more than 20% or less than 15%, nor vary as a result of wear.
        7. Writing surface shall be no less than 6.5 MOH's scale.
        8. Color: White.

    b. Core: Provide 1/2 in. thick, industrial grade, particle-board or fiberboard core material with zero VOC's. (Fiberboard is lighter in weight and preferable.)

    c. Backing Sheet: (.015 in. aluminum sheet vapor barrier.) Moisture retardant, laminated with suitable, low VOC emitting adhesive to prevent delamination. Lamination of all materials to be factory type only, with special formulated adhesives. Hand lamination is not acceptable.

2. Tackboard: Seamless sheet, 1/4 in. thick ground natural cork compressed with linseed oil and integral color throughout, laminated to burlap backing. Factory laminate cork face sheet under pressure to 1/4 in. thick hardboard in extruded aluminum frame.

D. ACCESSORIES

1. Metal Trim and Accessories: Fabricate frames and trim of not less than 0.062 in. thick aluminum alloy, size and shape as indicated, to suite type of installation. Provide straight factory-applied trim, single-length units whenever possible. Keep joints to a minimum. Miter corners to a neat, hairline closure.
2. Markertray: Furnish manufacturer's standard snap-on, continuous box-type, extruded aluminum chalktray with end caps and angled bottom support. 1-3/4 in. to 2 in. frame.
3. Map Rail: Where specified on drawings furnish map rail at top of each unit, complete with the following accessories:
    1. Display Rail: Provide continuous cork display rail approximately 1 to 2 in. wide, integral with map rail at top of board.
    2. End Stops: Provide one end stop at each end of map rail.
    3. Map Hooks: Provide two (2) map hooks with flexible metal clips for each 4 ft. of map rail or fraction thereof.
    4. Flag Holders: Provide two (2) per room.

10 14 00 ATTACHMENT A – INTERIOR SIGNAGE

A. GENERAL OBJECTIVES

1. To provide uniformity in signage on each campus to aide in utilization of sign information.
2. To establish consistency in signage guidelines among all WCPSS campuses.
3. To demonstrate sensitivity to the wide range of ages and sizes found among school building users and create a signage system that will be effective for all building users.

B. SIGNAGE TYPES

1. Wayfinding: Even when a building is clearly and logically organized, it can be difficult for the unfamiliar user to perceive the most straightforward route to a destination. Directional signs help students, staff and visitors find their way.
   a. Building Directory:
      1. Locate in an area immediately visible from the primary building entry.
      2. Directory should be recessed, rather than projecting.
      3. Letters and numbers should be simple in style and easy to change.
   b. “You Are Here” Maps:
      1. “You are here" maps are a useful orientation and wayfinding device. They should be located at all areas where a building user is likely to need help deciding how to proceed.
      2. Orient the drawing correctly in relation to the building and the viewer.
      3. A simple drawing is more useful than one that is too cluttered with graphic symbols and complex color coding. Target the complexity of the drawing to the age level of the users. Possibly use a copy of the Property & Accounting drawings or fire exit route drawings with room numbers added.
   c. Directions to a particular destination:
      1. Directional signs may be wall-mounted, floor-mounted or professionally executed graphics directly applied to the wall surface.
      2. If projected pedestrian traffic is heavy in an area, locate signs so pedestrian flow does not obstruct viewing.
   d. Exit Route Map inside each classroom
      1. Provide exit route maps, with placard holders, located by door exiting classroom as required by the Wake County Fire Marshal.

2. Identification: Schools are typically organized into grouped areas such as grade-level wings or teams. These student areas, as well as shared spaces such as the media center and food service area, must be identified with signage. Within each area, rooms and personnel also require individual identification. Examples are:
   a. Room numbers and names.
   b. Restrooms.
   c. Stairs.
   d. Mechanical.
   e. Electrical.
   f. Custodial.
3. Emergency and Regulatory: Various codes require signage that informs the user population of prohibited activities or safety requirements. Examples are: Fire exits, Handicapped accessibility, Environmental health and safety.

a. Provide the following signs in the same color and style as room identification signs:
    1. Stair Signage: Sign indicating stair number and floor level on corridor side of stair and inside stair also as requested by the Fire Marshal
    2. Roof Access: At each roof access point, provide a sign indicating “Roof Access-Authorized Personnel Only”, 10” h x 12”w.
    3. “Elevator #_” at each floor level of each elevator.
    4. “#_Floor Evacuation Plan” at the top with a clear opening below for a paper insert., and “In Case of Emergency call 911” at the bottom.
    5. Occupancy limit placard holder in assembly spaces.
    6. Signs for available assisted listening devices in Auditoriums and Multi-Purpose rooms.
b. Provide the following signs with white reflective lettering on red background:
    1. “Sprinkler Riser Room” 10” h x 12” w.
    2. “Boiler Room” 10” h x 12” w.
    3. “FACP” 10” h x 12” w at location of fire alarm control panel.
    4. “PIV” 10” h x 12” w, on galvanized sign post with a height so sign is visible from the fire lane access over any parked vehicle.

C. STANDARDS

1. All signage shall comply with current applicable editions of the North Carolina State Building Code, ICC ANSI A117.1, and ADA. Changes in legal requirements subsequent to release of this document by WCPSS are the responsibility of consultants.
2. Additional Requirements:
    a. Size:
        1. Signs shall be of consistent size and proportion and must be large enough to convey necessary information.
        2. Signs with numbers only shall be 2" x 6".
        3. For signs where room name or additional information is required, use a 6" x 6" format.
        4. When additional information needs to be added to a room that only has a 2" x 6" number sign, a 4" x 6" sign can be added to achieve a consistent 6" x 6" module.
    b. Construction:
        1. The sign plaque should be manufactured with integral raised features.
        2. For economy, general purpose sign plaques should be frameless and one piece construction. Avoid any add-on features that peel off, slide out or pop off.
        3. For Administration and Student Support Services, use signs with fixed numbers and removable inserts for name and title.
    c. Methods of Attachment:
        1. Signs must be securely attached. Double-sided adhesive tape is not acceptable.
        2. Use concealed fasteners or vandal-proof exposed fasteners.
3. Nomenclature:
    a. Room Designation:
        1. All spaces shall receive a number. On signs that also require a name, the number should appear first.
        2. If a single space has multiple doors, all doors should receive the same number.
4. Allowance: Provide an allowance in the budget for signs to be prepared at the principal's direction. For example, signs are used to designate corridors that are off-limits during lunch.
5. Room Names: All individual toilet rooms are unisex.

Elementary School:

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
1. General Classrooms		
Kindergarten	Yes	-----
Kindergarten toilet	Yes	Toilet
Kindergarten outdoor storage	Yes	Storage
First grade	Yes	-----
First grade toilet	Yes	Toilet
Second grade	Yes	-----
Third grade	Yes	-----
Fourth grade	Yes	-----
Fifth grade	Yes	-----
3. Special Education		
Self-contained classroom	Yes	-----
Instructional kitchen	Yes	-----
Toilets	Yes	Toilet
Adaptive Curriculum classroom	Yes	-----
		-----
4. Pre-Kindergarten		
Pre-kindergarten classroom	Yes	-----
Toilet	Yes	Toilet
Pre-K Observation	Yes	-----
Pre-K Outdoor Storage	Yes	Storage
6. Visual Arts	Yes	
Art room	Yes	Art
Art storage	Yes	-----
Kiln room	Yes	
7. Music	Yes	
Music room	Yes	Music
Music storage	Yes	
10. Media Center	Yes	Media Center
RLV area	Yes	-----
Digital Learning area	Yes	-----
Storage	Yes	-----
Group Instruction area	Yes	-----
Media Workroom/Office	Yes	
Toilet	Yes	Toilet
	Yes	

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
11. Physical Education		
Multipurpose (Play) area	Yes	Multi-Purpose Room
Platform (Stage)	Yes	-----
Office	Yes	-----
Chair storage/dressing	Yes	-----
PE equipment storage/dressing	Yes	-----
Outdoor PE storage	Yes	Storage
13. Staff Requirements		
Lounge/kitchen	Yes	-----
Toilets	Yes	Toilet
Teacher workroom	Yes	-----
Teacher storage	Yes	-----
Satellite Toilets	Yes	Toilet
Year-round Cart Storage	Yes	Storage
Leveled Book Storage	Yes	Storage
14. Administration	(Inserts to be determined by principal)	
Reception area	Yes	Administration
Principal's office	Yes	-----
Asst. Principal's office	Yes	-----
Secretary's office	Yes	-----
Locked storage	Yes	-----
SIDM office	Yes	-----
Examination Suite/Health Room	Yes	-----
Health room toilet	Yes	Toilet
Records room	Yes	
Conference room	Yes	-----
PTA office/storage	Yes	-----
Lead teacher office	Yes	-----
Office workroom	Yes	-----
Toilet	Yes	Toilet
Supply/storage	Yes	Storage
15. Student Support Services	Yes	Student Support Services
Student Support Services corridor	Yes-Inserts to be determined by principal	
Guidance room	Yes	Guidance
Human Services room	Yes	
Psychologist, Social Worker office	Yes	-----
Speech Therapy/Audiology	Yes	-----
OT/PT	Yes	-----
Supply/Storage	Yes	Storage
Toilet	Yes	Toilet

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
16. Child Nutrition Services		
Dining Area	Yes	Dining
Food Preparation (Kitchen)	Yes	Kitchen (locate on loading dock)
Serving line	No	-----
Office	Yes	-----
Dry storage	Yes	-----
Office	Yes	
Recycling	Yes	
Dry Storage	Yes	Storage
Cooler/Freezer	Yes	-----
Staff locker room	Yes	-----
Toilet	Yes	Toilet
Custodial	Yes	Custodial
17. Plant Operations		
Custodial	Yes	Custodial
General storage/receiving/custodial lockers	Yes	Receiving (locate on loading dock) Number only in corridor
Custodial office	Yes	-----
Toilet	Yes	Toilet
Lawn equipment storage	Yes	Storage
18. Technology		
Head End Room	Yes	Communications
IDF Room	Yes	Communications
19. Non-Assignable		
Mechanical	Yes	Mechanical
Electrical	Yes	Electrical
Group Toilets (boys)	Yes	Boys
Group Toilets (girls)	Yes	Girls
Stairways	Yes	Stair
Can Wash	Yes	
20. Ready To Learn Center		
Reception	Yes	Ready To Learn
Examination/consultation	Yes	-----
Health services/provider staff office	Yes	-----
Storage	Yes	-----
Toilet	Yes	Toilet

Middle School

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
1. General Classrooms		
Regular classrooms	Yes	-----
Foreign Language Classroom	Yes	-----
Gen. Ed. Support Classroom	Yes	-----
3. Special Education		
Self-contained classroom	Yes	-----
Instructional kitchen	Yes	-----
Toilets	Yes	Toilet
CCR Classroom	Yes	-----
5. Science Classrooms		
Science Classroom/Lab	Yes	
Preparation Room	Yes	
Chemical Storage	Yes	Storage
Outdoor Storage	Yes	Storage
6. Visual Arts		
Art room	Yes	Art
Kiln room	Yes	-----
Supply & Equip. storage	Yes	Storage
7. Music		
Choral room	Yes	Chorus
Band/Instrument room	Yes	Band
Practice rooms	Yes	-----
Office/library	Yes	-----
Instrument storage	Yes	Storage
8. Theater Arts/Auditorium		
Theater seating/	Yes	Theater
Stage	Yes	-----
Control room	Yes	-----
Dressing Rooms	Yes	Boys,Girls
Chair/Table Storage	Yes	-----
Dance/Drama Room	Yes	
9.01 FACS Education		
Family and Consumer Sciences lab	Yes	Family and Consumer Sciences
Family and Consumer Sciences storage	Yes	-----
9.02 Technology or Biotech. Ed.		
Technology Education lab	Yes	Technology
Material storage	Yes	-----

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
9.03 Business & Info Tech. Educ.		
Business lab	Yes	Computer
Business office	Yes	-----
10. Media Center		
RLV area (Reading, Listening & Viewing)	Yes	Media Center
Group Instruction	Yes	
AV equipment storage	Yes	Storage
Toilet	Yes	Toilet
Media Workroom/Office	Yes	-----
11. Physical Education		
Main gym	Yes	Gymnasium
Auxiliary Gym	Yes	Gymnasium
Health education classroom (Multi-purpose)	Yes	-----
Coaches office, male	Yes	-----
Coaches office, female	Yes	-----
Boys Locker Room	Yes	Boys' Locker Room
Showers/restrooms, boys	Yes	Boys
Girls locker room	Yes	Girls' Locker Room
Showers/restrooms, girls	Yes	Girls
Training room/first aid	Yes	Training
Equipment storage room	Yes	Storage
Laundry	Yes	-----
Uniform storage	Yes	Storage
Miscellaneous storage	Yes	Storage
Outdoor PE storage	Yes	Storage
Lobby area/commons	Yes	-----
Ticket booth	Yes	-----
Concession area	Yes	-----
13. Staff Requirements		
Lounge/kitchen	Yes	-----
Toilets	Yes	Toilet
Teachers' Workroom/office-teaming	Yes	-----
Satellite toilets	Yes	Toilet
Year-round Cart Storage	Yes	Storage

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
14. Administration	(Inserts to be determined by principal)	
Reception area	Yes	Administration
Principals' office	Yes	-----
Asst. principal's office	Yes	-----
Secretary's office	Yes	-----
SIMS office	Yes	-----
Records room	Yes	-----
Conference room	Yes	
Locked Storage	Yes	Storage
Workroom, mail, copy, storage	Yes	-----
Toilets	Yes	Toilet
ISS	Yes	-----
ISS office	Yes	-----
ISS toilet	Yes	Toilet
Supply/general storage	Yes	Storage
Material/Book storage room	Yes	Storage
15. Student Support Services	Inserts to be determined by principal	
Receptionist/secretary	Yes	Student Support Services
Counselor office	Yes	-----
Conference room/career center (occupational info.)	Yes	-----
Closet	Yes	-----
Human services room	Yes	-----
Health Room	Yes	-----
Health Room Toilet	Yes	Toilet
Psychologist/social worker office	Yes	-----
Speech/Audiologist office	Yes	-----
OT / PT therapy room	Yes	-----
Supply/Storage	Yes	Storage
Commons/lockers	Yes	-----
16. Child Nutrition Services		
Dining	Yes	Dining
Food Preparation (Kitchen)	Yes	Kitchen (locate on loading dock)
Serving line	No	-----
Office	Yes	-----
Recycling	Yes	-----
Dry storage	Yes	Storage
Cooler/freezer	Yes	-----
Staff locker room/toilet/WD	Yes	
Staff Toilet	Yes	Toilet
Custodial	Yes	-----

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
17. Plant Operations		
General storage/receiving/custodial lockers	Yes	Receiving (locate on loading dock) Number only in corridor
Toilet	Yes	Toilet
Custodial Office/Storage	Yes	-----
Lawn Equipment Storage	Yes	Storage
18. Technology		
Head End Room	Yes	Communications
IDF Room	Yes	Communications
19. Non-Assignable		
Group Toilets (Boys)	Yes	
Group Toilets (Girls)	Yes	
Stairways	Yes	Stair
Mechanical	Yes	Mechanical
Electrical	Yes	Electrical
Custodial Closets	Yes	
Can Wash	Yes	
20. Maintenance Cluster		
Shop Area	Yes	
AFM Office	Yes	
Unconditioned Storage	Yes	Storage

High School

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
1. General Classrooms		
Classrooms	Yes	-----
Student government	Yes	-----
Gen. Ed. Support Classrooms	Yes	
Multipurpose Room	Yes	
3. Special Education		
Self-contained classroom	Yes	-----
Instructional kitchen	Yes	-----
Toilets	Yes	Toilet
CCR Classrooms	Yes	-----
5. Science Classrooms		
Science Labs/CR	Yes	
Prep Room	Yes	
Chemical Storage Room	Yes	Chemical Storage
6. Visual Arts		
Art Classroom	Yes	Art
Auxiliary Art Classroom	Yes	Art
Kiln	Yes	-----
Supply & Equipment storage	Yes	-----
7. Music		
Choral room	Yes	Chorus
Choral Storage/library	Yes	-----
Band room	Yes	Band
Ensemble Practice Rooms	Yes	-----
Band Workroom	Yes	-----
Uniform storage	Yes	-----
Instrument storage	Yes	-----
Band storage/library	Yes	-----
8. Theater Arts/Auditorium		
Theater seating/orchestra area	Yes	Theater
Stage	Yes	-----
Control room	Yes	-----
Dressing Rooms	Yes	Men and Women Dressing
Spot Deck	Yes	-----
Dance/Drama Room	Yes	-----
Cat walk	Yes	-----
Workroom	Yes	-----
Storage	Yes	-----
Chair Storage	Yes	-----

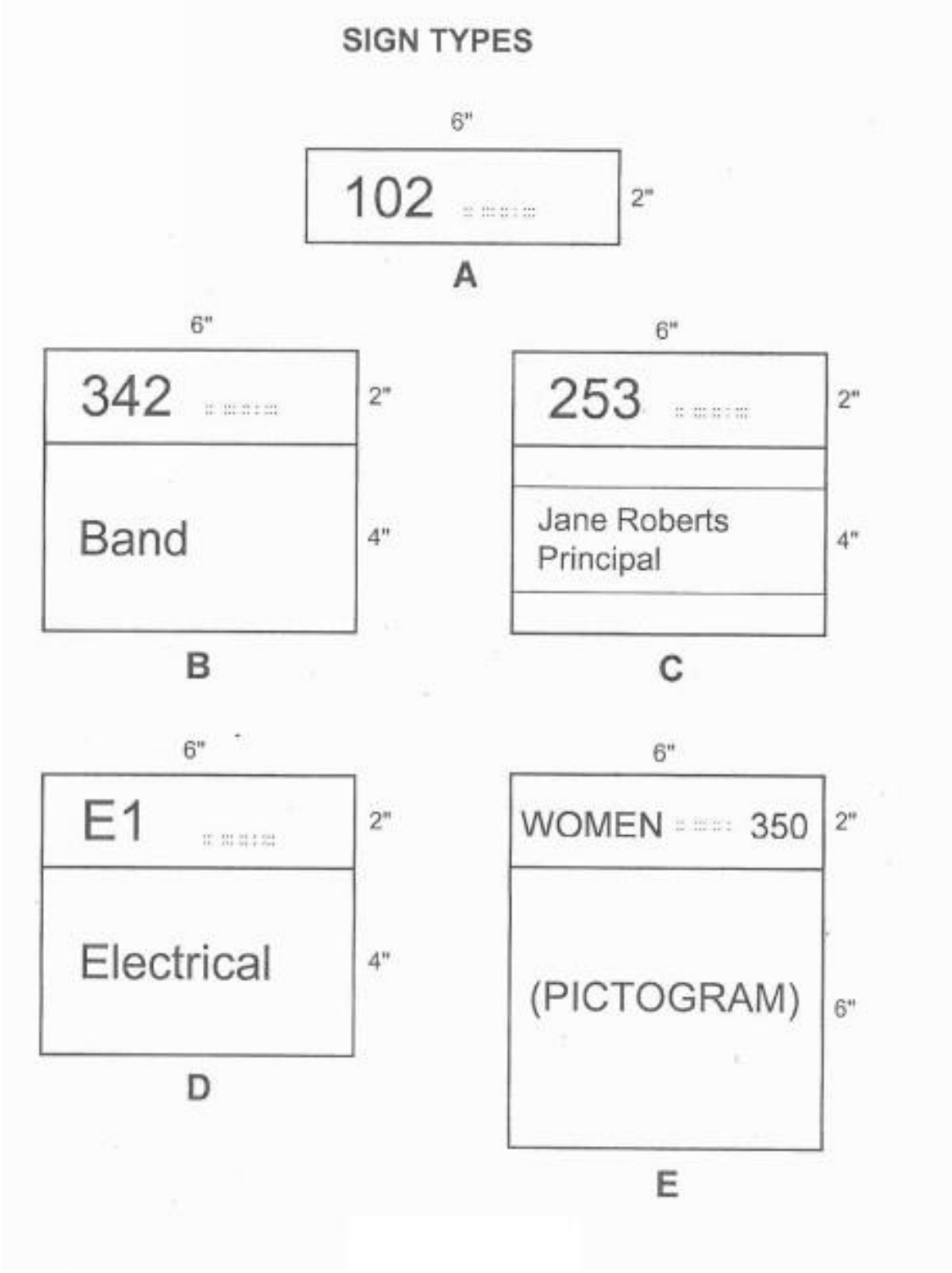
SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
9.01 Family and Consumer Sciences		
Family and Consumer Sciences Lab	Yes	Family and Consumer Sciences
FACS Food Lab Storage	Yes	-----
FACS Design Classroom	Yes	Family and Consumer Sciences
Dressing/Storage Room	Yes	-----
FACS Classroom	Yes	Family and Consumer Sciences
FACS CR Storage	Yes	
9.02 TE&D and Comp/Network Eng.		
Tech. Eng. & Design CR	Yes	Technical Engineering & Design
TE&D Storage	Yes	-----
Computer/Network Eng. CR	Yes	Computer/Network Engineering
CNE Storage	Yes	-----
9.03 Business, Finance & Info Tech, Marketing Education		
Business Computer Lab	Yes	Computer
Marketing Education Lab	Yes	-----
WBL Rooms	Yes	-----
9.04 Trade & Ind. Ed. or Ag. Educ. or Culinary Lab		
T&I Educ. or Ag. Educ. or Cul. Lab	Yes	
Material Storage	Yes	
Tool Storage	Yes	
9.05 Digital Media or Tech Course		
Digital Media or Tech Course CR	Yes	
Storage	Yes	
9.06 Health Science or Bio Tech. or FACS or Public Safety		
Classroom / Lab	Yes	
Storage	Yes	
9.07 CADD Drafting		
CADD Drafting CR	Yes	
Storage	Yes	
9.08 Sci. & Tech. Vis & Game Art or Tech Course TBD		
S&TV and Game Art or Tech. Lab	Yes	

SPACE STADARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
10. Media Center		
Main Use Area (Reading, Listening & Viewing)	Yes	Media Center
A/V Equipment Storage	Yes	-----
Media Workroom/Office	Yes	
Toilets	Yes	Toilet
11. Health/Physical Education/Athletics		
Main gym	Yes	Gymnasium
Auxiliary gym	Yes	Auxiliary Gymnasium
Health Education CR	Yes	-----
Weight/training room (large)	Yes	Weight Room
Weight/training room (small)	Yes	Weight Room
Athletic Directors Office	Yes	-----
Boys' team locker room	Yes	Men's Team Lockers
Boys' class locker room	Yes	Men's Lockers
Showers/restrooms, boys class	Yes	-----
Showers/restrooms, boys team	Yes	
Girls' team locker room	Yes	Women's Team Lockers
Girls' class locker room	Yes	Women's Lockers
Showers/restrooms, girls class	Yes	-----
Showers/restrooms, girls team	Yes	
Training room/first aid	Yes	Training
Training Office	Yes	
Laundry area	Yes	-----
PE equip. storage room	Yes	-----
Team general storage	Yes	-----
Outdoor equipment	Yes	Storage
Lobby area/commons	Yes	-----
Ticket booth	Yes	-----
Concession area	Yes	-----
Faculty Dress/Shower/Toilet	Yes	Staff Toilet

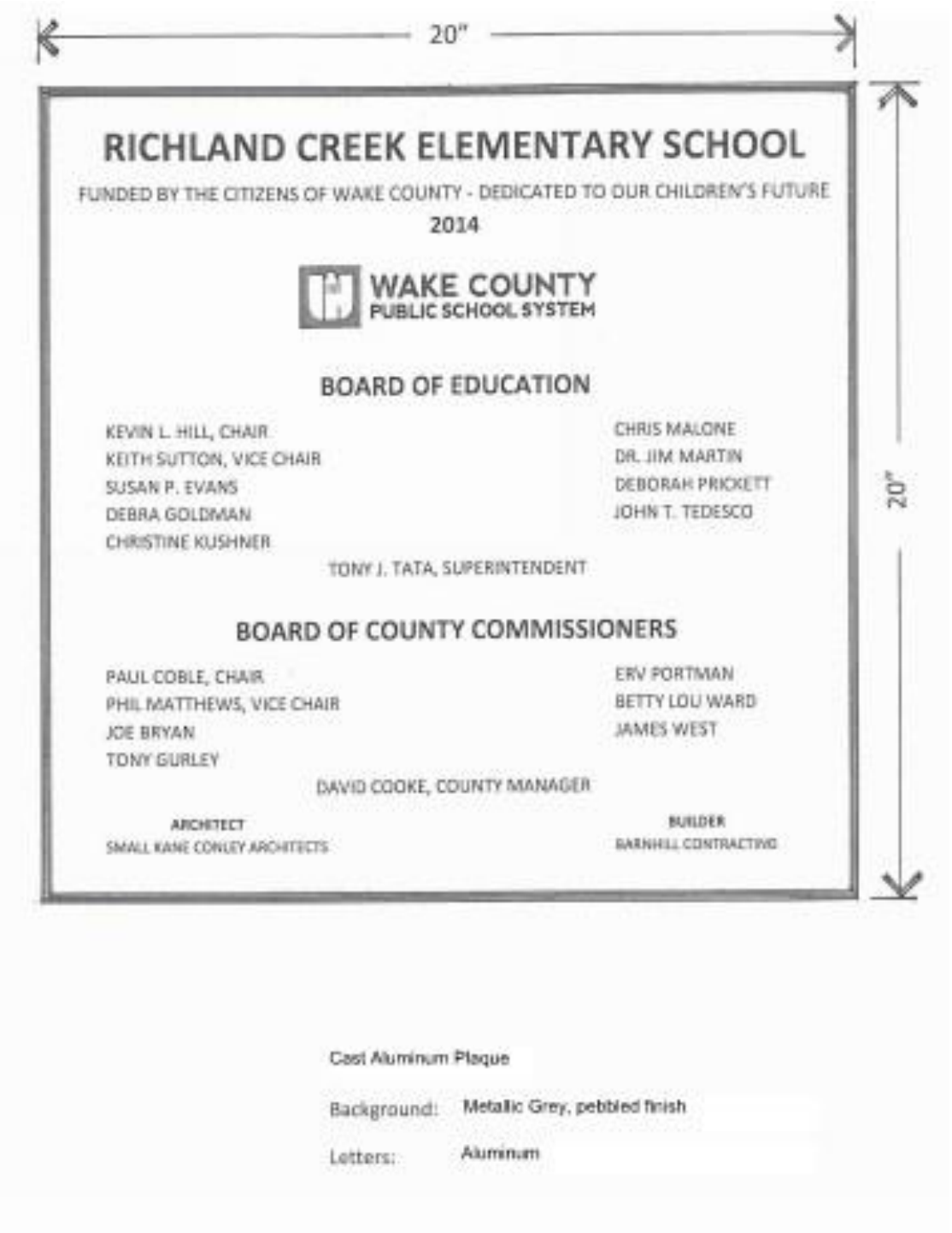
SPACE STADARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
12. Auxiliary Athletics		
Stadium	Yes	
Concession Stand	Yes	
Concession Storage	Yes	
Press Box	Yes	
Ticket Booth	Yes	
Equipment Storage	Yes	
Team Storage	Yes	
Public Toilets	Yes	Men and Women
13. Staff Requirements		
Faculty Lounge/Work Area	Yes	Faculty
Faculty conference	Yes	-----
Faculty toilets	Yes	Toilet
Faculty dressing rooms	Yes	Toilet
14. Administration	Inserts to be determined by principal	
Reception area/receptionist	Yes	Administration
Principal's office	Yes	-----
Asst. Principal's office	Yes	-----
Secretary's office	Yes	-----
SDIM Office	Yes	-----
Bookkeeping	Yes	-----
Attendance office	Yes	-----
Conference room	Yes	-----
Locked storage	Yes	-----
Workroom, mail, copy, storage & copy room	Yes	-----
Toilets	Yes	Toilet
Bus supervisor/secretary office	Yes	-----
General Office	Yes	
Mail Room	Yes	
Toilet	Yes	Toilet
Break	Yes	
Storage	Yes	
Book material storage room	Yes	-----
Cooperative Education Room	Yes	-----
15. Student Support Services	Inserts to be determined by principal	
Receptionist/secretary	Yes	Student Support Services
Secretary	Yes	
Counselor office	Yes	-----
Conference room	Yes	-----
Coat closet	Yes	-----
Intervention Coord. / AIG Office	Yes	-----
Human services/ Nurse Office	Yes	-----

SPACE STANDARD DESIGNATION	NUMBER	NAME (Also include pictograms as required by ADA)
15. Student Support Services (continued)		
Health Exam Room / Toilet	Yes	-----
Toilet	Yes	Toilet
Psychologist, social worker office	Yes	-----
Speech Therapy/Audiology	Yes	-----
OT/PT room	Yes	-----
Technicians office	Yes	-----
Industrial Educ. Coord. Office/ Conf.	Yes	-----
Records	Yes	-----
SAP Office	Yes	-----
Student Lockers		
16. Child Nutrition Services		
Dining Area	Yes	Dining
Food Preparation	Yes	Kitchen (locate on loading dock)
Serving line	No	-----
Office	Yes	-----
Recycling	Yes	-----
Dry storage	Yes	-----
Cooler/Freezer	Yes	-----
Staff locker room/Toilet/WD	Yes	Toilet
Custodial	Yes	-----
17. Plant Operations		
General storage/receiving/custodial lockers	Yes	Receiving (locate on loading dock) Number only in corridor
Toilet	Yes	Toilet
Bldg. Manager Office/Storage	Yes	-----
Lawn Equipment Storage	Yes	-----
18. Technology		
Head End Room	Yes	Communications
IDF Room	Yes	Communications
19. Non-Assignable		
Corridors/Lobbies		
Group Toilets	Yes	Men and Women
Stairways	Yes	Stair
Elevators	Yes	Elevator
Mechanical Rooms	Yes	Mechanical
Electrical Rooms	Yes	
Custodial Closets	Yes	Custodial
Loading Dock / Can Wash	Yes	
20. Maintenance Cluster		
Shop Area	Yes	
AFM Office	Yes	
Storage	Yes	

10 14 00 – ATTACHMENT A – SIGN TYPES



10 14 13 – ATTACHMENT A – DEDICATION PLAQUE



Cast Aluminum Plaque

Background: Metallic Grey, pebbled finish

Letters: Aluminum

11 40 00 – ATTACHMENT A – Food Preparation Equipment Schedule

Reference:

ES=Elementary, MS=Middle, HS = High

Plan Identifier	Quantity ES	MS	HS	Item	Acceptable Products	Comments
1	2	2	2	Single-Stack Combi Oven w/ backflow preventer and table.	Rational Model B628206.19E	
2	1	1	1	Mixer, 10 qt. with attachments.	Globe SP10 10-qt.	
					Hobart HL120 12-qt.	
					Vollrath 40756	
3	1	1	1	Table, stainless steel, 2'-0" X 2'-0" with rolled edges. No castors.	Triad Stainless Model #6SU-24 with 2 drawers and undershelf	
4	1	1	1	Food Processor	Robot Coupe CL50E	Preferred Alternate
5	1	1	1	Mobile heat /proof cabinet	Intermetro Metro C5 3 Series	
					Winston HA4522	
					CresCor H-137-WSUA-12D	
6	1	1	1	Ice machine (400-lb. cap.) with water filter and 400-lb capacity storage bin, w/backflow preventer	Manitowac RF-0300A	
					Hoshizaki	
7	5	5	5	Mobile end-load pan rack	Metro RD3N	
8				(not used)		
9	1	1	1	Single convection oven w/ stainless-steel back panel	Blodgett Mark V	Preferred Alternate
10				(not used)		
11	1	1	1	Clean Pan Rack 60"x24"x68"	Metro	
12	1	1	1	Single Reach-in Refrigerator	True Mfg. Co. Model STR1R-1S	
13	1	2	2	Double Roll-Thru Heated Cabinet	Delfield SSHRT2-S	
14	1	2	2	Roll-Thru Refrigerated Cabinet	Delfield Model SMRRT1-S	
					Victory RIS-2D-S1-PT	
15	1	1	1	Slicer	Globe 3850P	
					Hobart 2912	
					Vollrath 40800	

16	4	4	6	Worktable, 2’-6” x 6’-0” with 2 drawers and one undershelf each end)	Custom-manufactured	
17	1	1	1	Three-Compartment Sink, 2’-6” x 12'-0” (3 - 30”W sinks, with drain boards and undershelf at each end)	Custom-manufactured	
18	1	1	1	Four-Compartment Sink, 2’-6” x 15'-0” (4 - 28”W sinks, with drain boards and undershelf at each end)	Custom-manufactured	
19	2	2	2	Wall shelf, 8’-0”L (1 above each sink at 5’-1” A.F.F.)	Custom-manufactured	
20	1	1	1	Microwave Oven, Double Stack	(2) Amana Model MS035	
21	2	2	2	Drying Rack	Metro Model # PR48VX3	
22	3	3	3	Handwash sink	(See WCPSS Design Guidelines)	
23	1	1	1	Tackboard, 4’-0” X 4’-0”	(See WCPSS Design Guidelines)	
24	2	2	2	Washdown station	(See WCPSS Design Guidelines)	
25	1	1	1	Barrier-free eyewash station	(See WCPSS Design Guidelines)	
26	1	1	1	Utility Distribution System (UDS) w/ digital controls and (2) extra 208v/1p outlets	(See WCPSS Design Guidelines)	
27	1	1	1	Silver and tray caddy/stand w/ plexiglass sides	LTI Colorpoint K36-RTS	Preferred Alternate
28	1	2	0	Milk cooler, double-sided, mobile, 12- crate capacity	Norlake AR124SSS	
					MasterBuilt OCC-1211-SS	
					Beverage Air Coldwall ST Series	
					True Mfg. Co Model TMC-58-S	
28A	0	0	4	Pass-Thru Merchanidising Unit	True Mfg. Co. Model GDM-33CPT-54-LD	
29	1	4	4	Hot foot counter, w/ 5 recessed wells, dual service, adj. buffet shield, SS door w drain valve behind door; LED lights	LTI Colorpoint EF5-CPA	Preferred Alternate
30	1	4	4	Cold food counter, 4-well, dual service, SS door w drain valve behind door; buffet shield; LED lights, dual-service buffet	LTI Colorpoint 60CFMA	Preferred Alternate
31				(not used)		
32	1	4	0	Ice cream dispenser w/ hinged lid, line up lock	LTI Colorpoint 50-ST w/ DI2222IC merchandise drop-in	Preferred Alternate
32A	0	0	4	Fiberglass Hot Top	Colorpoint Model 50-CPS-F	

33	1	4	4	Cashier stands w full-length SS tray slides	LTI Colorpoint 50-CSE	Preferred Alternate
34	1	4	4	Condiment station	LTI Colorpoint 36-ST-EB	Preferred Alternate

11 61 00 ATTACHMENT A – ELEMENTARY SCHOOL PLATFORM EQUIPMENT

A. GENERAL

1. Front Platform Curtain and Valance: Flame resistant 25 oz. Velour (color to be selected). Curtains to be manufactured with 50% fullness. Panel headings shall be box-pleated and constructed with 2 in. heavy jute webbing with a pleat control system consisting of 16 gauge flame resistant virgin vinyl pleat control strips with 4 in. brass grommets placed every 12 in. on center.
    a. Front curtain panels shall have 12 in. leading and 2 in. trailing hems. Bottom hems of the front curtain panel shall be 6 in. Valance hems shall be 2 in. on the sides and 3 in. on the bottom.
    b. Valance shall be constructed with hidden vertical seams i.e. the seams are to fall behind the pleats.
    c. Panel headings shall be box-pleated and constructed with 2 in. heavy jute webbing with a pleat control system as noted in specification for Front Platform Curtain above.
    d. Side and rear panels shall have 2 in. side hems and 4 in. bottom hems. Overhead borders shall have 2 in. side hems and 3 in. bottom hems.
    e. Borders shall be constructed with hidden vertical seams as noted in specification for valance above.
2. Front Curtain Track: ADC 170, or approved equal.
3. Side Curtain Tracks: Sturdi-Bilt 390 (Walk-Draw), or approved equal.
4. Two side panels: Left and Right of Platform on ADC or equivalent 280 walkalong track – black with compatible hardware.
5. Rear Bi-part curtain with ADC or equivalent track complete with Floor Mounted Pulley System.
6. Rear border to be tied to 1½" schedule 40 pipe suspended from ceiling truss to hang in front of rear traveller
7. Valance Pipe: If required, shall be 3/4 in. I.D. black steel TC pipe.
8. Overhead Border Pipes: shall be 3/4 in. I.D. black steel TC pipe.
9. Track and Pipe Hardware: shall be supported from structure and of adequate design and strength to support curtains. All track and pipe hardware shall be installed by the General Contractor.

11 61 00 ATTACHMENT B – MIDDLE SCHOOL STAGE EQUIPMENT

A. GENERAL

1. Front Stage Curtain and Valance: Flame resistant 25 oz. Velour (color to be selected). Curtains to be manufactured with 60% fullness. Panel headings shall be box-pleated and constructed with 2 in. heavy jute webbing with a pleat control system consisting of 16 gauge flame resistant virgin vinyl pleat control strips with 4 in. brass grommets placed every 12 in. on center.
    a. Front curtain panels shall have 12 in. leading and 2 in. trailing hems. Only full widths shall be allowed. Bottom hems of the front curtain panels shall be 6 in., with #8 jack chain encased in flame resistant Repp chain pockets.
    b. Valance hems shall be 2 in. on the sides and 3 in. on the bottom, with Kirsch #1602 weighted tape in the bottom hem.
    c. Valance shall be constructed with hidden vertical seams i.e. the seams are to fall behind the pleats.
2. Stage Curtain System: shall consist of back traveler, two (2) rear curtain panels, two (2), four (4) or six (6) side leg panels and two (2), three (3) or four (4) overhead borders, depending on stage depth and sight-line situation. Curtains shall be manufactured with 60% fullness from flame-retardant, black Atlas Oxford fabric or similar fabric by another approved manufacturer.
    a. Borders shall be box-pleated and constructed with 2 in. heavy jute webbing with a pleat control system as noted in specification for Front Stage Curtain above.
    b. Side legs and rear curtain panels shall have 2 in. side hems and 4 in. bottom hems with #8 jack chain encased in flame resistant Repp chain pockets.
    c. Overhead borders shall be constructed with hidden vertical seams as noted in specification for valance above.
3. Mid Stage Curtain: shall consist of two (2) panels manufactured with 60% fullness from flame retardant, black Atlas Oxford fabric or similar fabric by another approved manufacturer.
    a. Panel headings shall be box-pleated and constructed with 2 in. heavy jute webbing with a pleat control system as noted in specification for Front Stage Curtain above.
    b. Side legs and rear curtain panels shall have 2 in. side hems and 4 in. bottom hems with #8 jack chain encased in flame resistant Repp chain pockets.
4. Front Curtain Track: ADC 170, or approved equal.
5. Side Leg Tracks: Rotodraper Pivot Arms #17 with #400 clamp, or approved equal.
6. Rear Curtain Track: Sturdi-Bilt 390 (Walk-Draw), or ADC 170 (Rope-Operated), or approved equal.
7. Mid-Stage Curtain Track: ADC 170, or approved equal.
8. Valance Pipe: If required, shall be 3/4 in. I.D. black steel TC pipe.
9. Overhead Border Pipes: shall be 3/4 in. I.D. black steel TC pipe.
10. Track and Pipe Hardware: shall be supported from structure and of adequate design and strength to support curtains. All track and pipe hardware shall be installed by the General Contractor.

11 61 00 ATTACHMENT C – HIGH SCHOOL STAGE EQUIPMENT

A. GENERAL

1. Note: Size, design and use of High School stage prevents provision of specifics as to quantity of any type of curtain to be used. Therefore, these guide specifications provide for each type of curtain that might be used only.
2. Front Stage Curtain and Valance: Flame resistant 25 oz. Velour (color to be selected). Curtains to be manufactured with 60% fullness. Panel headings shall be box-pleated and constructed with 2 in. heavy jute webbing with a pleat control system consisting of 16 gauge flame resistant virgin vinyl pleat control strips with 4 in. brass grommets placed every 12 in. on center.
    a. Front curtain panels shall have 12 in. leading and 2 in. trailing hems. Only full widths shall be allowed. Bottom hems of the front curtain panels shall be 6 in., with #8 jack chain encased in flame resistant Repp chain pockets. Valance hems shall be 2 in. on the sides and 3 in. on the bottom, with Kirsch #1602 weighted tape in the bottom hem.
    b. All curtains with fullness shade (with hidden vertical seams).
3. Stage Curtain System: shall consist of back traveler, midstage traveler, two (2) rear curtain panels two (2), four (4) or six (6) side leg panels and two (2), three (3) or four (4) overhead borders, depending on stage depth and sight-line situation. Curtains shall be manufactured with 60% fullness from flame retardant, black Atlas Oxford fabric or similar fabric by another approved manufacturer.
    a. Borders shall be box-pleated and constructed with 2 in. heavy jute webbing with a pleat control system as noted in specification for Front Stage Curtain above.
    b. Legs and panels shall have 2 in. side hems and 4 in. bottom hems with #8 jack chain encased in flame-resistant Repp chain pockets. Overhead borders shall have 2 in. side hems. Bottom hems shall be 3 in. with Kirsch #1602 weighted tape inside the hems.
    c. Overhead borders shall be constructed with hidden vertical seams as noted in specification for valance above.
    d. Back and mid-stage travelers shall consist of two (2) panels manufactured with 60% fullness from flame retardant, black color Atlas Oxford fabric or similar fabric by another approved manufacturer.
    e. Panel headings shall be box-pleated and constructed with 2 in. heavy jute webbing with a pleat control system as noted in specification for Front Stage Curtain above.
    f. Panels shall have 2 in. side hems and 4 in. bottom hems with #8 jack chain encased in flame resistant Repp chain pockets.
4. Cyclorama: shall be manufactured from flame resistant seamless Muslin fabric (color to be white). There shall be no fullness to this curtain. Panels shall have a heading constructed with 2 in. heavy jute webbing with 16 gauge flame resistant virgin vinyl control strips with #2 brass grommets placed every 12 in. on center. The side hems shall be 2 in. and the bottom hem shall be 4 in. with 2 in. heavy jute webbing attached at the top of this hem on the back side of the panel. This webbing to have #2 brass grommets and tie lines at approximately every 12 in. on center used to fasten a 3/4 in. I.D. black steel TC pipe to the bottom of the panel.
5. Front Curtain Track: ADC 280A, or approved equal.
6. Back and Mid-Stage Traveler Tracks: ADC 170 or ADC 280A, depending on width and height of panels, or approved equal.
7. Leg Tracks: Rotordraper pivot arm #17 with #400C clamp or approved equal.
8. Legs: Install on 3/4 in. I.D. black TC pipe.
9. Valance and Overhead Borders: Install on 3/4 in. I.D. black steel TC pipe.
10. Cyclorama: Install single track.
11. Track and Pipe Hardware: Shall be supported from structure, and installed by the General Contractor, of adequate design and strength to support curtains.

12 20 00 WINDOW TREATMENTS – 1 INCH MINI-BLINDS – ATTACHMENT A

A. GENERAL

1. Type III blinds shall be manufactured in accordance with the standards quality supplied for commercial use.

B. HEADRAIL

1. The headrail to be sheet steel .019 in. (0.483 MM) thick after painting, zinc plated, electro galvanized, or primed and painted with baked on enamel finish. Headrail to be nominal 1 in. x 1 in., 1 in. x 1 1/2 in., 1 in. x 1 1/8 in.
2. All hardware to be enclosed in the metal headrail. When the blind is in the closed position, the tip slat shall barely make contact with the underside of the headrail for its full length. Adjustable end braces shall be provided for a snug fit in brackets.

C. BOTTOM RAIL

1. The bottom rail shall be a minimum of 0.020 in. (0.508 MM) corrosion resistant sheet steel for channel section or 0.018 in. (0.457 MM) for oval or lock seam, zzinc plated, electro galvanized, or primed and painted, with baked on enamel finish.

D. HARDWARE

1. In blinds over 60 inches or over 50 square feet, the tilt rod shall be of soled cross-section and manufactured from corrosion resistant steel with either metal or low friction thermoplastic at each tape drum. In blinds under 60 inches or 50 square feet, the tilt rod shall be solid cross-section or u-shaped cross-section and manufactured from corrosion resistant steel. All tilt rods shall provide acceptance torsional rigidity during operation. Tilt rod supports shall have minimal friction and be manufactured from abrasive resistant polymer or corrosion resistant steel. Tilter mechanism shall be of a corrosion resistant steel or plastic housing that may be of the open or enclosed lubricated type. Gears shall be nylon or die-cast metal or equivalent, and approximately 3/8 in. (9.525 MM) to 3/4 in. (19.05 MM) diameter.
2. Tilt want to be transparent plastic with a diameter (measured across smallest dimension on non-circular cross-sections) of 0.20 in. (5.08 MM) or greater, and must provide acceptable torsional rigidity during operation.

E. SLATS

1. The slats shall be special flexible or tempered aluminum alloy, width 1 in. (25.00 MM) plus/minus 0.003 in. (0.0762 MM). Slat thickness shall be a minimum of 0.0072 in. (0.1829 MM) before painting and a minimum of 0.0082 in. (0.083 MM) after painting. Slats shall have rounded corners with a 1/8 in. (93.175 MM) to 3/16 in. (4.7625 MM) radius.
2. Slats shall have baked colorfast enamel coating of sufficient hardness to resist surface abrasion for the expected life of the blind.

F. TAPES AND TAPE SPACING

1. One-inch blinds shall have braided ladders of polyester yarn supporting slats. Their horizontal components or rungs to consist of two threads interbraided with the verticals. Maximum allowable ladder spacing to be 20.0 MM.

2. Maximum spacing for 1 in. blinds shall be 24 in. (914.4 MM) from center of tape, with a maximum of 6 1/2 in. (165.1 MM) from rout hole to the end of the slat on each end of the slat. The number of tapes for various blind widths shall be as shown below:

BLIND WIDTH	NO. OF TAPES
0 in. – 36 in. (0.0mm – 914.4 MM)	2
Over 36 in. – 60 in. (914.4 MM – 1,524 MM)	3
Over 60 in. – 84 in. (1,524 MM – 2,133.6 MM)	4
Over 89 in. – 108 in. (2,133.6 MM – 2,743.2 MM)	5
Over 108 in. – 132 in. (2,743.2 MM – 3,352.8 MM)	6

G. CORDS

1. Cord for 1 in. (25.4 MM) blinds to be braided polyester fiber, minimum of 1.4 MM diameter with or without polyester or rayon core and a minimum breaking strength of 130 lbs.

H. CORD LOCKS

1. A proper number of crash-proof cord locks shall be provided. The cord lock should have the ability to lock the slats at desired heights upon release of the cord.

I. STRINGING

1. Blinds shall be strung in such a way that the pounds of pull force (required to raise the last 6 in. (152.4 MM) to a fully open position when measured with an extension scale) shall not be greater than the result computed in accordance with the following formula:

$$\text{Lbs. Pull Force} = 45 \times \frac{\text{blind width (inches)} \times \text{blind length (inches)}}{14{,}400}$$

Data based on specification that maximum force to lift a 120 in.x 120 in. blind is 45 lbs.

J. ACCESORIES

1. Blinds shall have properly attached good quality tassels and equalizers. A minimum of two screws or bolts per bracket (except hold down brackets) shall be provided. Hold down brackets for Type I and II blinds shall be at the option of the purchaser.

2. All door blinds, except Type II, with side and sill channels shall have hold down brackets.

K. INSTALLATION

1. If installation by the contractor is called for in the invitation for bids, the following requirements shall apply.

2. Blinds in excess of 60 inches (1,524 MM) width or 45 sq. ft. (4.18 Sq. M) in area shall have intermediate supports which shall not be over 48 inches apart at any point.

3. When possible, blinds shall be installed between jambs with head member against soffit. Clearance between slat ends and jambs shall be 1/16 in. (1.588 MM) to 1/4 in. on each side

of blind. Bottom rail with no clips, staples, or tape in contact with the sill at underside, bottom rail to be 1/4 in. (6.35 MM) maximum above sill on level slat position.

4. All blinds installed in windows with air conditioner units shall have cut-outs to appropriately fit around the unit. No bunching of slats on the top of the unit or unsightly gaps on either side of the unit shall be allowed.

L. IDENTIFICATION

1. All blinds shall be marked or labeled inside the headrail with the contractor's name, date of assembly, and date or month and year of shipment. If installation is made by the contractor, the date of installation shall be substituted for date of shipment.

M. TEST PROCEDURES

1. Certified copies of test results applicable to the model(s) offered and a certificate of compliance completed by an officer of the company must be provided to the Division of Purchase and Contract. The test results must comply with Document 1029 of the American Window Covering Manufacturers Association latest requirements and must cover all required tests:

    1. Durability

        (a) Lifting
        (b) Tilting

    2. Pull Force Test

    3. Salt-Spray, Humidity and Weathering Test

    4. Pull Apart Test
        (a) Shrinkage of Stretch Test

    5. Rigidity Test

    6. Flexibility

7. All Cord and Tapes Tests as specified in Document 1029

12 30 00 LAMINATE CASEWORK FEATURES – ATTACHMENT A

	CORE	SURFACE	EDGE	CONSTRUCTION/ JOINERY	HARDWARE
Cabinet Boxes - Base & Wall (Maximum width: 36")					
•Exposed vertical surfaces	All front & sides: 3/4" Base bottom: 3/4"	GP28	Finish all exposed edges (including wall cabinet top and bottom). 3mm PVC.	Doweled, glued under pressure. Full sub-top is required on base cabinets.	
•Semi-exposed parts (interior of open cabinets, not including drawer bodies)	Wall top & bottom: 1" Back: entrapped - 1/4" Back: onset - 1/2"	CL20 or melamine			
•Concealed surfaces	Full sub-top	CL20 or melamine			
•Panel ends		GP28			
Countertops & Backsplash **(wet areas)**	1" exterior grade veneer core plywood or phenolic resin particleboard	GP50 balanced with backing sheet	3mm PVC	Apply silicone sealant to joint between HPL top and backsplash. Field joints >48" apart and >48" from end of top.	
Countertops & Backsplash	1" particleboard	GP50 balanced with backing sheet	3mm PVC	Apply silicone sealant to joint between HPL top and backsplash. Field joints >48" apart and >48" from end of top.	

Cabinet Doors	3/4" particleboard	GP28 with CL20 liner on back.	3mm PVC	Door width: ≤18".	Heavy duty, 5-knuckle, 2-3/4" institutional type hinge (**no** concealed hinges). Brushed chrome finish. Disc tumbler locks. Roller catches.
Drawer Fronts	3/4" particleboard	GP28 with CL20 liner on back.	3mm PVC	Doweled, glued under pressure.	Wire design pulls. Brushed chrome finish.
Drawer Sides and Backs	1/2" particleboard or 5/8" medium density fiberboard	Melamine on all visible surfaces with drawer in normal open position.			Combination epoxy coated steel and nylon roller bearing drawer slides. Self-closing. Full extension for file drawers. ¾ Extension for all other drawers.
Drawer Bottoms	Fully captured construction - minimum thickness: 1/4". Platform construction – minimum thickness: 1/2".	Melamine panel product or particleboard.			Platform construction: must use wrap-around drawer slide
Shelves (Maximum span: 36", except for 48" span above K-5 cubby units). (Any span over 30" should have additional support).	3/4" particleboard ≤ 30"W. 1" particleboard > 30"W.	GP28 or melamine	3mm PVC	Multiple holes (minimum 5mm diam. @ 1-1/4" OC).	Supports to be polycarbonate or steel twin pin design with anti tip-up shelf restraints.

NOTES:

1 – Dimensions given are minimum and actual (not nominal).

2 – Balanced construction is required on all components.

3 – All hardware (latches, hinges and pulls) must be ADA compliant.

4 – All PVC edges must be machine applied with hot melt adhesive. All PVC edges must be machine radiused.

5 – Toe kick should be separate, and of plywood construction.

6 – Warranty should be 3 years.

7 – At the owner/architect's request, AWI certification may be required, paid for by the manufacturer.

8 – Reference AWI 7th edition, Section 1600 as guide for engineered product. **Do not** reference Section 400.

9 – Pre-approved manufacturers are: TMI, Interior Wood Specialties and Stevens. All others must be approved by addenda.

10 – All particleboard is to be medium density, 45 – 50 lb. industrial grade fir or pine, meeting or exceeding ANSI A 208.1-1993, M-3 requirements.

14 24 00 ATTACHMENT A – NON-PROPREITARY EQUIPMENT AFFADAVIT

A. GENERAL

1. The elevator control equipment proposed for the project identified below shall be Non-Proprietary. The following provisions comprise a warranty representing compliance with the established standards for Universal Serviceability and Maintainability.
2. Equipment Purchase Unrestricted: Any elevator company shall be allowed to purchase and install this equipment.
3. Spare Parts: Spare parts shall be available for sale or replacement or stock to be maintained at the building site, or the offices of any elevator contractor designated by the building owner to maintain their equipment.
   a) No exchange-only provisions shall limit any parts purchase.
   b) No building owner approval shall be required to processing any parts order.
   c) A published price list shall establish reasonable list pricing for parts.
4. Diagnostics: The control system shall be provided together with all diagnostic tool functions, either onboard or in a separate device.
   a) Such maintenance, adjustment and troubleshooting device or system shall provide unrestricted access to all parameters, levels of adjustment, and flags necessary for maintenance of equipment.
   b) No expiring software, degrading operation, or key shall be accepted. Any lost or damaged tool shall be replaced or repaired at a reasonable cost.
5. Training: Factory and/or on-site training shall be available from the original equipment manufacturer for enrollment by anyone who wishes to learn about the installation, adjustment, maintenance, and troubleshooting the equipment. Training fees shall be reasonable and appropriate.
6. Technical Support Hotline: A technical support hotline shall be provided by the original equipment manufacturer whereby anyone designated by the building owner shall be able to obtain assistance for installation, adjustment, maintenance or troubleshooting.
7. Engineering Support: The original equipment manufacturer shall provide engineering support to any maintaining contractor so designated by the building owner.
8. Documentation: Manuals, engineering drawings, circuit diagrams, and prints shall be provided with the equipment at time of delivery. All documentation shall be available for replacement purchase, at a reasonable cost, by any installing or maintaining elevator contractor or persons so designated by the building owner

B. AFFADAVIT

The undersigned swears and affirms that the conditions described above are hereby made a part of the equipment proposal. The building owner, elevator contractor, and/or consultant shall reasonably rely upon these provisions.

Project	Installing Company Officer Signature Date
Controller Manufacturer	Printed Name and Title

22 05 50 – ATTACHMENT A – CEILING GRID LABELING

Ceiling grid markers shall be the color as indicated below. Beside all colored grid markers, a printed label shall be used to specify what the color marker is locating. Labels shall be no more than 1-inch in height. Lettering shall be minimum 18-point font. Lettering shall be black on white tape.

Sample	Color	Item Marker is Identifying
	Neon Red	Electrical – Pull Box/Future/Disconnects, etc.
	Neon Yellow	Mechanical-Equipment/Fan/Dampers, etc.
	Neon Green	Camera Drops
	Neon Orange	Wireless Access Point
	Blue	Domestic Cold Water-Valves/Arrestor, etc. Chilled Water-Valves, tc.
	Yellow	Gas – Valves/Regulators, etc.
	Green	Domestic Hot Water-Valves, etc. Heating Hot Water-Valves, etc.
	Red	Fire Alarm/Sprinklers/Life Safety

22 40 00 – ATTACHMENT A – PLUMBING FIXTURE MOUNTING HEIGHTS

WATER CLOSETS

FIXTURE	REGULAR	HANDICAPPED	REMARKS
Pre K	10 in.	12 in.	Top of Seat
K-5	15 in.	15 in.	Top of Seat
6-8	15 in.	16-1/2 in.-19-1/2 in.	Top of Seat
9-12	15 in.	16-1/2 in.-19-1/2 in.	Top of Seat
Adult	15 in.	16-1/2 in.-19-1/2 in.	Top of Seat

URINALS

FIXTURE	REGULAR	HANDICAPPED	REMARKS
K-5	20 in.	14 in.	To Rim
6-8	20 in.	17 in.	To Rim
9-12	24 in.	17 in.	To Rim
Adult	24 in.	17 in.	To Rim

LAVATORIES

FIXTURE	REGULAR	HANDICAPPED	REMARKS
Pre K	23 in.	23 in.	To Rim
K-5	27 in.	30 in.	To Rim
6-8	31 in.	34 in.	To Rim
9-12	31 in.	34 in.	To Rim
Adult	31 in.	34 in.	To Rim

WATER COOLERS

FIXTURE	REGULAR	HANDICAPPED	REMARKS
Pre K-3	24 in.	30 in.	To Rim
4-5	28 in.	30 in.	To Rim
6-8	34 in.	34 in.	To Rim
9-12	34 in.	34 in.	To Rim
Adult	34 in.	34 in.	To Rim

SHOWERS

FIXTURE	REGULAR	HANDICAPPED	REMARKS
6-8 boys	72 in.	see note 2	Bottom of Showerhead
6-8 girls	66 in.	see note 2	Bottom of Showerhead
9-12 boys	72 in.	see note 2	Bottom of Showerhead
9-12 girls	66 in.	see note 2	Bottom of Showerhead
Adult	72 in.	see note 2	Bottom of Showerhead

NOTES:

1. Handicapped heights shall comply with the NC Building Code and all ADA requirements.
2. Top of shower controls not more than 48 in.

23 06 00 – ATTACHMENT A – CEILING GRID LABELING

Ceiling grid markers shall be the color as indicated below. Beside all colored grid markers, a printed label shall be used to specify what the color marker is locating. Labels shall be no more than 1-inch in height. Lettering shall be minimum 18-point font. Lettering shall be black on white tape.

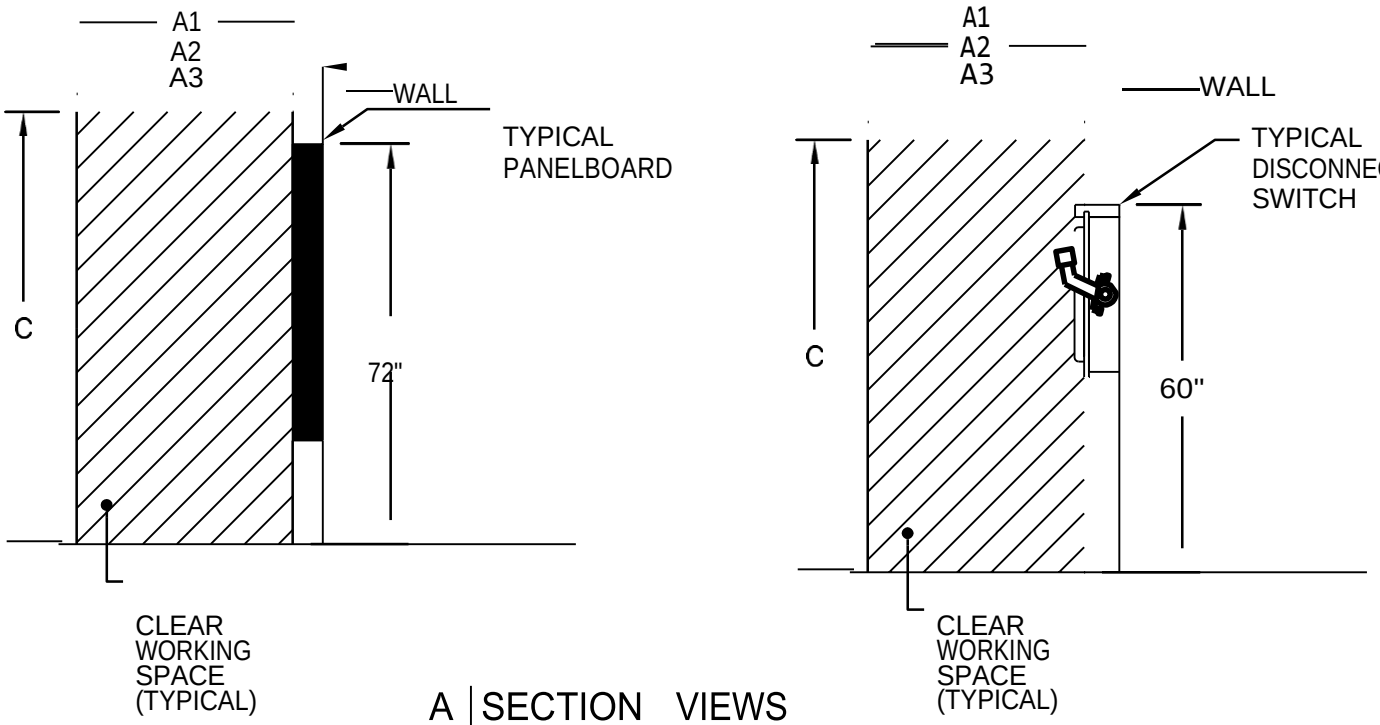
Sample	Color	Item Marker is Identifying
	Neon Red	Electrical – Pull Box/Future/Disconnects, etc.
	Neon Yellow	Mechanical-Equipment/Fan/Dampers, etc.
	Neon Green	Camera Drops
	Neon Orange	Wireless Access Point
	Blue	Domestic Cold Water-Valves/Arrestor, etc. Chilled Water-Valves, tc.
	Yellow	Gas – Valves/Regulators, etc.
	Green	Domestic Hot Water-Valves, etc. Heating Hot Water-Valves, etc.
	Red	Fire Alarm/Sprinklers/Life Safety

26 05 33 – ATTACHMENT A – CEILING GRID LABELING

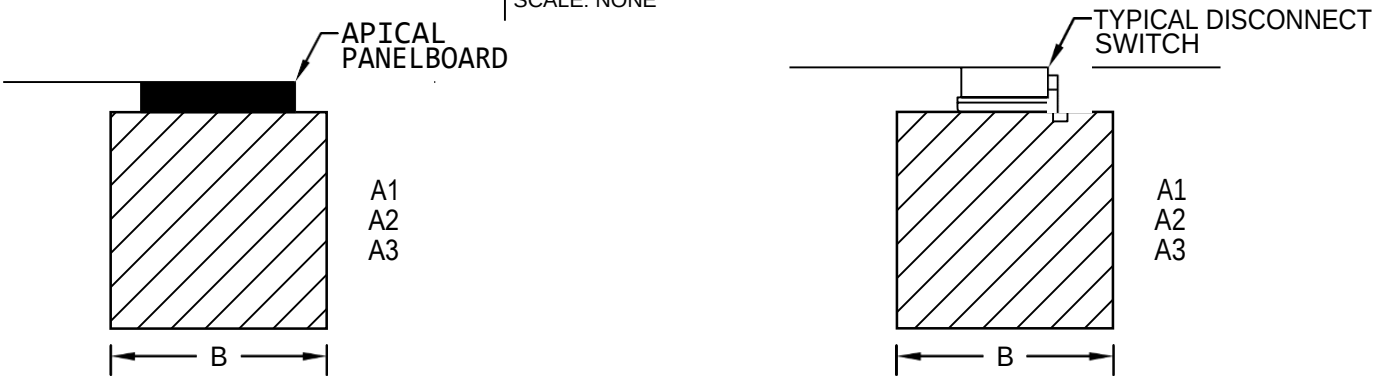
Ceiling grid markers shall be the color as indicated below. Beside all colored grid markers, a printed label shall be used to specify what the color marker is locating. Labels shall be no more than 1-inch in height. Lettering shall be minimum 18-point font. Lettering shall be black on white tape.

Sample	Color	Item Marker is Identifying
	Neon Red	Electrical – Pull Box/Future/Disconnects, etc.
	Neon Yellow	Mechanical-Equipment/Fan/Dampers, etc.
	Neon Green	Camera Drops
	Neon Orange	Wireless Access Point
	Blue	Domestic Cold Water-Valves/Arrestor, etc. Chilled Water-Valves, tc.
	Yellow	Gas – Valves/Regulators, etc.
	Green	Domestic Hot Water-Valves, etc. Heating Hot Water-Valves, etc.
	Red	Fire Alarm/Sprinklers/Life Safety

26 24 00 - ATTACHMENT A – PANEL BOARD WORKING SPACE REQUIREMENTS



A | SECTION VIEWS
SCALE: NONE



B | PLAN VIEWS
SCALE: NONE

WORKING SPACE DISTANCES—MINIMUM REQUIREMENTS			
DIM	DISTANCE	VOLTS—GND	REMARKS
A1	3'—0"	0—600	NO LIVE/GROUNDED PARTS OPPOSITE EQUIPMENT
A2	3'—6"	151—600	GROUNDED PARTS OPPOSITE EQUIPMENT
A3	4'—0"	151—600	LIVE PARTS OPPOSITE EQUIPMENT
8	2'—6"	0—600	2'—6" OR WIDTH OF EQUIPMENT, WHICHEVER IS GREATER
C	6'—6"	0—600	6'—6" OR HEIGHT OF EQUIPMENT, WHICHEVER IS GREATER

GENERAL NOTES:

1. REFER TO NEC 110—26 FOR ADDITIONAL WORKING SPACE REQUIREMENTS.
2. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE WORKING SPACE DISTANCE REQUIREMENTS ARE MET. COORDINATE EQUIPMENT LOCATIONS WITH ALL TRADES.

26 50 00 ATTACHMENT A - LIGHTING LEVEL TABLE

Type of Interior Areas	Recommended Initial Design Level, Foot-candles	Remarks
Administrative Offices	50 fc	
Auditorium	30 – 50 fc	Auditorium stages need 70 fc at full bright dimmer settings
Bathrooms	30 fc	
Cafeterias – Dining	30 fc	
Cafeterias - Kitchen	50 fc	
Classrooms	50 fc	
Computer Lab	50 fc	
Drafting Classroom	75 fc	
Gymnasium – general exercise	30 fc	
Gymnasium – HS basketball	75 fc	
Hallways	30 fc	
Media – Support/Admin Areas	30 fc	
Media – Open Study Areas	50 fc	
Locker Rooms	10 fc	
Mechanical Rooms	30 fc	
Science Labs	50 fc	
Technology Labs	50 fc	

*Lighting levels per IES standards

27 00 00 Area of Refuge Communication Device

RATH

Command System Call Box
2400-808SSPC2

Part #: 2400-808SSPC2

Specifications:	
Dimensions:	Face Plate: 10" H x 6-17/25" W Back Box: 9-7/8" H x 6-1/2" W x 3" D Cover: 9-3/4" H x 6-1/2" W x 1-1/4" D
Mounting:	Flush Mount
Design:	Brushed Stainless Steel
Warranty:	2 Years

Code Compliance:

- International Building Code (IBC)
- National Fire Protection Association (NFPA)
- Americans Disabilities Act (ADA)

Power Requirements:

- Designed to be powered from the Distribution Module and requires a single pair from the Distribution Module

Programming Features:

- Programmable with up to 2 emergency phone numbers
- On-site programming
- Recordable location message (25 seconds)
- On-site programming capability with numeric programming

Phone Capabilities:

- Recordable location message (25 seconds)
- Automatic dialer (31 digit programmable memory)
- Automatic answer feature with audible ring

N56 W24720 N. Corporate Circle • Sussex, WI 53089
800-451-1460 • www.rathcommunications.com

27 00 00 Area of Refuge Communication Device

General Specifications

	ETP-120 SERIES
Construction:	0.09" (2.2mm) #4 brushed 304 stainless steel faceplate
Weight:	6 lbs (2.7kg)
Mounting:	Flush and surface mounts
Communication:	2-way hands-free communication
Digital Capacity:	Up to 20-digits, including 4-second pause, for each of five (5) phone numbers
Power Source:	Phone line powered (requires 20mA at 24 V off-hook)
Connection:	Parallel tip and ring flying leads for field installation
Programming:	Non-volatile EEPROM programming can be done from any telephone No battery backup is needed.
"On Time":	Programmable for no limit or from 1 to 9 minutes in 1-minute increments
Wiring Requirements:	1 twisted-shielded pair
Operating Temperature:	320F to +1580F (00C to +700C)
Relative Humidity:	Up to 95% non-condensing
Optional Relay Output (for models configured with -1RO):	Contact Voltage (Max.): 200 VDC Contact Current (Max.): 500 mA Contact Power (Max.): 10 W Resistive*
Warranty:	2-year limited warranty

ETP-120E with FM-110
Flush Mounting Box and Call Station

ETP-120E with SM-110
Surface Mounting Box and Call Station

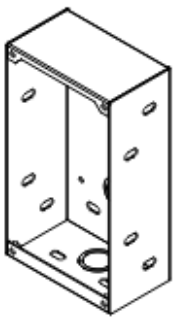
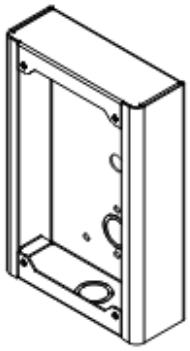
*** Note: If driving an inductive load a protection device must be used.**

ORDERING INFORMATION

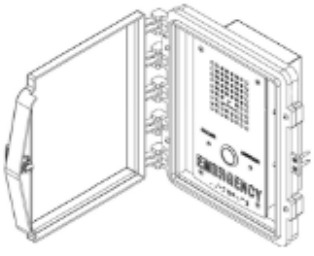
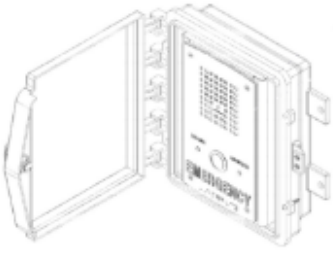
Base Model	Verbiage	Relay
ETP-120	*E* "EMERGENCY" verbiage *H* "HELP" verbiage *SB* No verbiage, black pushbutton *SR* No verbiage, red pushbutton	*[Leave Blank]* Built-in relay output not included *X* One (1) built-in relay output
Example	ETP-120	E	X

All specifications are subject to change without notice.

MOUNTS

Flush Mount Model Number: **FM-110**	Surface Mount Model Number: **SM-110**
	

PROTECTIVE COVERS

Protective Cover for Flush Mounted Call Station Model Number: **PC-110-F**	Protective Cover for Surface Mounted Call Station Model Number: **PC-110-S**
	

27 00 00 - ATTACHMENT A – MDF ROOM RACK LAYOUT

MDF RM1115 VOICE RACK
2 Rack Unit Wire manager
48 port patch panel DEMARC FEEDER 1-48
48 port patch panel DEMARC FEEDER 49-96
2 Rack Unit Wire manager
2 Rack Unit Wire manager
48 port PP Voice Feeder IDF 1526 1-48
48 port PP Voice Feeder IDF 1303 49-96
2 Rack Unit Wire manager
1 rack unit wire manager
24 port PP Voice Feeder IDF 1205A 97-121
2 Rack Unit Wire manager
48 port PP Voice Feeder IDF 2205A 122-171
1 rack unit wire manager
24 port PP Voice Feeder IDF 3205A 172-196
1 rack unit wire manager
24 port PP Voice Feeder IDF 4205A 197-221
1 rack unit wire manager
24 port PP Voice Feeder IDF 829 222-246
1 rack unit wire manager
24 port PP Voice Feeder IDF 861 247-271
1 rack unit wire manager
24 port PP Voice Feeder IDF 839 272-296
2 Rack Unit Wire manager
48 port PP Voice Local Voice Cables 1-48
48 port PP Voice Local Voice Cables 49-96
2 Rack Unit Wire manager

MDF RM1115 DATA RACK
4 rack unit 72 port fiber tray fiber feeders 1-72
2 Rack Unit Wire manager
4 rack unit 72 port fiber tray fiber feeders 73-144
2 Rack Unit Wire manager
4 rack unit 72 port fiber tray fiber feeders 145-216
2 Rack Unit Wire manager
2 rack unit 24 port fiber tray fiber feeders 217-228
2 Rack Unit Wire manager
Customer **Provided** **Network** **Electronics**

MDF RM1115 DATA RACK
24 port PP Camera Cables 1-24
1 rack unit wire manager
24 port PP WAP Cables 25-48
1 rack unit wire manager
48 port patch panel Local Data Cables 49-96
2 Rack Unit Wire manager
48 port patch panel Local Data Cables 96-143
2 Rack Unit Wire manager
Customer **Provided** **Network** **Electronics**

27 00 00 - ATTACHMENT B – IDF ROOM RACK LAYOUT

27 00 01 - ATTACHMENT A – SAMPLE MDF SCHEDULE

SAMPLE MDF

Fiber Station Cable Records - MDF-XXX
(School Name)
Strands 1-48

NOTE: FIBER CABLES FROM FDE TO MDF

From Room	Fiber Strand	To Room	Fiber Strand	To Room
MDF-127	1	FDE-200	1	ROOM 201
MDF-127	2	FDE-200	2	ROOM 201
MDF-127	3	FDE-200	3	ROOM 202
MDF-127	4	FDE-200	4	ROOM 202
MDF-127	5	FDE-200	5	ROOM 203
MDF-127	6	FDE-200	6	ROOM 203
MDF-127	7	FDE-200	7	ROOM 204
MDF-127	8	FDE-200	8	ROOM 204
MDF-127	9	FDE-200	9	ROOM 205
MDF-127	10	FDE-200	10	ROOM 205
MDF-127	11	FDE-200	11	ROOM 206
MDF-127	12	FDE-200	12	ROOM 206
MDF-127	13	FDE-200	13	ROOM 207
MDF-127	14	FDE-200	14	ROOM 207
MDF-127	15	FDE-200	15	ROOM 208
MDF-127	16	FDE-200	16	ROOM 208
MDF-127	17	FDE-200	17	ROOM 209
MDF-127	18	FDE-200	18	ROOM 209
MDF-127	19	FDE-200	19	ROOM 210
MDF-127	20	FDE-200	20	ROOM 210
MDF-127	21	FDE-200	21	ROOM 211
MDF-127	22	FDE-200	22	ROOM 211
MDF-127	23	FDE-200	23	ROOM 212
MDF-127	24	FDE-200	24	ROOM 212
MDF-127	25	FDE-200	25	ROOM 213
MDF-127	26	FDE-200	26	ROOM 213
MDF-127	27	FDE-200	27	ROOM 214
MDF-127	28	FDE-200	28	ROOM 214
MDF-127	29	FDE-200	29	ROOM 215
MDF-127	30	FDE-200	30	ROOM 215
MDF-127	31	FDE-200	31	ROOM 216
MDF-127	32	FDE-200	32	ROOM 216
MDF-127	33	FDE-200	33	ROOM 217
MDF-127	34	FDE-200	34	ROOM 217
MDF-127	35	FDE-200	35	SPARE
MDF-127	36	FDE-200	36	SPARE
MDF-127	37	FDE-200	37	SPARE
MDF-127	38	FDE-200	38	SPARE
MDF-127	39	FDE-200	39	SPARE
MDF-127	40	FDE-200	40	SPARE
MDF-127	41	FDE-200	41	SPARE
MDF-127	42	FDE-200	42	SPARE
MDF-127	43	FDE-200	43	SPARE
MDF-127	44	FDE-200	44	SPARE
MDF-127	45	FDE-200	45	SPARE
MDF-127	46	FDE-200	46	SPARE
MDF-127	47	FDE-200	47	SPARE
MDF-127	48	FDE-200	48	SPARE

27 00 01 - ATTACHMENT B – SAMPLE MDF SCHEDULE

SAMPLE MDF

Fiber Feeder Cable Records - FDE-XXX
(School Name)
Strands 1-48

NOTE: FIBER CABLES FROM FDE TO MDF

To Room	Fiber Strand	From Room	Fiber Strand	To Room
MDF-127	1	FDE-200	1	ROOM 201
MDF-127	2	FDE-200	2	ROOM 201
MDF-127	3	FDE-200	3	ROOM 202
MDF-127	4	FDE-200	4	ROOM 202
MDF-127	5	FDE-200	5	ROOM 203
MDF-127	6	FDE-200	6	ROOM 203
MDF-127	7	FDE-200	7	ROOM 204
MDF-127	8	FDE-200	8	ROOM 204
MDF-127	9	FDE-200	9	ROOM 205
MDF-127	10	FDE-200	10	ROOM 205
MDF-127	11	FDE-200	11	ROOM 206
MDF-127	12	FDE-200	12	ROOM 206
MDF-127	13	FDE-200	13	ROOM 207
MDF-127	14	FDE-200	14	ROOM 207
MDF-127	15	FDE-200	15	ROOM 208
MDF-127	16	FDE-200	16	ROOM 208
MDF-127	17	FDE-200	17	ROOM 209
MDF-127	18	FDE-200	18	ROOM 209
MDF-127	19	FDE-200	19	ROOM 210
MDF-127	20	FDE-200	20	ROOM 210
MDF-127	21	FDE-200	21	ROOM 211
MDF-127	22	FDE-200	22	ROOM 211
MDF-127	23	FDE-200	23	ROOM 212
MDF-127	24	FDE-200	24	ROOM 212
MDF-127	25	FDE-200	25	ROOM 213
MDF-127	26	FDE-200	26	ROOM 213
MDF-127	27	FDE-200	27	ROOM 214
MDF-127	28	FDE-200	28	ROOM 214
MDF-127	29	FDE-200	29	ROOM 215
MDF-127	30	FDE-200	30	ROOM 215
MDF-127	31	FDE-200	31	ROOM 216
MDF-127	32	FDE-200	32	ROOM 216
MDF-127	33	FDE-200	33	ROOM 217
MDF-127	34	FDE-200	34	ROOM 217
MDF-127	35	FDE-200	35	SPARE
MDF-127	36	FDE-200	36	SPARE
MDF-127	37	FDE-200	37	SPARE
MDF-127	38	FDE-200	38	SPARE
MDF-127	39	FDE-200	39	SPARE
MDF-127	40	FDE-200	40	SPARE
MDF-127	41	FDE-200	41	SPARE
MDF-127	42	FDE-200	42	SPARE
MDF-127	43	FDE-200	43	SPARE
MDF-127	44	FDE-200	44	SPARE
MDF-127	45	FDE-200	45	SPARE
MDF-127	46	FDE-200	46	SPARE
MDF-127	47	FDE-200	47	SPARE
MDF-127	48	FDE-200	48	SPARE

27 00 01 - ATTACHMENT C – SAMPLE MDF SCHEDULE

SAMPLE MDF

vo›ce sta tion sabie uecords - u LI\4/\x -mx

(School Name)

Voice Station Cable

From Room	Fiber Strand	To Room
MUF-1z7		RmmM ı u1
MUF-1z7	V5	
		105 ROOM
MUF-1z7	Va	
MUF-1z7	V11	
t*1Ul-•ı z	V1 8	
MUF-1 Z7	V14	
t*1Ul••ı z	V1o	
MUF-1 Z7	V17	
MLJF-1 <I /	V1d	
MU F-1 z/		
MU F-1 z/		
MU F-1 z/		
MU F-1 z/		
MU F-1 z/		R>>M ı 11
MU F-1 z/	VJ 5	SPAF:E
MU F-1 z/		SPAF:E
MU F-1 z/	V41	SPAF:E
MU F-1 z/		SPAF:E
k1Ul• -ı z /		
MUF-1 Z7	V47	SPAF:E

27 00 01 - ATTACHMENT D – SAMPLE MDF SCHEDULE

SAMPLE MDF

Voice Feeder Records • MDF/DEMA lk-XXX
fsrhool Name)
Pads 4 96

From Room	Voice Pair	ToRoom
MDF/DEMARC-127	49	tD£•20u
MDF/DEMARC-127		
MDF/DEMARC-127		
MDF/DEMARC-127	sz	tD£•20u
MDF/DEMARC-127		
MDF/DEMARC-127		
MDF/DEMARC-127	55	tD£•z0u
MDF/DEMARC-127		
MDF/DEMARC-127		
MDF/DEMARC-127	sa	tD£•z0u
MDF/DEMARC-127		
MDF/DEMARC-127		
MDF/DEMARC-127	8t	tD£•z0u
MDF/DEMARC-127		
MDF/DEMARC-127		
MDF/DEMARC-127		tD£•z0u
MDF/DEMARC-127		
MDF/DEMARC-127	ob	
MDF/DEMARC-127		tD£•z0u
MDF/DEMARC-127	oa	
MDF/DEMARC-127		
MDF/DEMARC-127	70	tD£•z0u
MDF/DEMARC-127		
MDF/DEMARC-127		
MDF/DEMARC-127	73	tDF-20U
MDF/DEMARC-127		
MDF/DEMARC-127		
MDF/DEMARC-127	76	
MDF/DEMARC-127		
MDF/DEMARC-127		!L'F-2Ut'
MDF/DEMARC-127	79	ur-eu
MDF/DEMARC-127		
MDF/DEMARC-127		!L'F-2Ut'
MDF/DEMARC-127	az	ur-eu
MDF/DEMARC-127		
MDF/DEMARC-127		tL't••ZUt'
MDF/DEMARC-127	as	tuF-zflu
MDF/DEMARC-127		
MDF/DEMARC-127		tL't••ZUt'
MDF/DEMARC-127	ad	tuF-zflu
MDF/DEMARC-127		
MDF/DEMARC-127		tL't••ZUt'
MDF/DEMARC-127	91	tuF-zflu
MDF/DEMARC-127	uz	
MDF/DEMARC-127		tL't••ZUt'
MDF/DEMARC-127	94	tuF-zou
FlUkiL'tMPF'.•1f1	8b	tL't••ZUt'

27 00 01 - ATTACHMENT E – SAMPLE MDF SCHEDULE

SAMPLE MDF

Voice Feeder Records - IDF-XXX
(School Name)
Paris 49-96

To Room	Voice Pair	From Room
DEMARC-127	49	IDF-200
DEMARC-127	50	IDF-200
DEMARC-127	51	IDF-200
DEMARC-127	52	IDF-200
DEMARC-127	53	IDF-200
DEMARC-127	54	IDF-200
DEMARC-127	55	IDF-200
DEMARC-127	56	IDF-200
DEMARC-127	57	IDF-200
DEMARC-127	58	IDF-200
DEMARC-127	59	IDF-200
DEMARC-127	60	IDF-200
DEMARC-127	61	IDF-200
DEMARC-127	62	IDF-200
DEMARC-127	63	IDF-200
DEMARC-127	64	IDF-200
DEMARC-127	65	IDF-200
DEMARC-127	66	IDF-200
DEMARC-127	67	IDF-200
DEMARC-127	68	IDF-200
DEMARC-127	69	IDF-200
DEMARC-127	70	IDF-200
DEMARC-127	71	IDF-200
DEMARC-127	72	IDF-200
DEMARC-127	73	IDF-200
DEMARC-127	74	IDF-200
DEMARC-127	75	IDF-200
DEMARC-127	76	IDF-200
DEMARC-127	77	IDF-200
DEMARC-127	78	IDF-200
DEMARC-127	79	IDF-200
DEMARC-127	80	IDF-200
DEMARC-127	81	IDF-200
DEMARC-127	82	IDF-200
DEMARC-127	83	IDF-200
DEMARC-127	84	IDF-200
DEMARC-127	85	IDF-200
DEMARC-127	86	IDF-200
DEMARC-127	87	IDF-200
DEMARC-127	88	IDF-200
DEMARC-127	89	IDF-200
DEMARC-127	90	IDF-200
DEMARC-127	91	IDF-200
DEMARC-127	92	IDF-200
DEMARC-127	93	IDF-200
DEMARC-127	94	IDF-200
DEMARC-127	95	IDF-200
DEMARC-127	96	IDF-200

27 00 01 - ATTACHMENT F – SAMPLE MDF SCHEDULE

SAMPLE MDF

uatse uaia :>tation ueconJs - MUI--xw fSChogl Name4 Data Station Cable		
F rom Room	oata uaole Nuniber	To Room
		ROOM 101
MUF-1z7	Dz	ROOM 102
		105 ROOM
	ua	
		RUUM 110
		ROOM 111
MUF-1z7	D11	ROOM 112
MUF-127	LJ J X	ROOM 113
MDF-127	U1 a	ROOM 114
MUF-127	DJN	ROOM 115
	U J5	
MUT--1 Z		
MDF-127	LJ J tl	ROOM 117
MDF-127	U21	I4UUM 4 W
MDF-127	D24	ROOM 123
MDF-127	UWf	ROOM 126
MDF-127	D30	ROOM 129
MDF-127	D33	ROOM 132
MUF-1z7	041	+PARE
	D44	
MUF-1z7	D46	+PARE
	n	
MUT-•1 ?		
MUF-1z7		+PARE

27 00 01 - ATTACHMENT G – SAMPLE TECHNOLOGY SCHEDULE

Technology Schedule

Date: _____
School Name: _____
Building Name and/or
Phase Number: _____

FUNCTION	START DATE	COMPLETE DATE	ACTUAL COMP
Install conduits from street to building for telephones			
Install switch enclosures			
Install pathways			
Install copper station cables			
Complete MDF room (backboards, grounding, pull strings)			
Install copper feeder cables (includes patch panels)			
Install innerduct			
Install surface raceway			
Install fiber station cable			
Install cabinets in MDFs/FDEs			
Install fiber feeder cables			
Terminate copper cables			
Terminate fiber cables			
Test copper cables			
Test fiber cables			
Labeling			
Provide Contractor punch list			
Provide documentation to Owner for walk thru			

28 00 00 – ACCESS CONTROL DESIGN FOR ENTRY VESTIBULE – ATTACHMENT A

Employee

1. Present credentials at card reader near door #1. Door #1 unlocks.
2. Present credentials at card reader near door #2. Door #2 & #3 unlocks.

Handicapped Employee

1. Present credentials at card reader near door #1. Door #1 unlocks.
2. Press the handicap actuator to open Door #1.
3. Present credentials at card reader near door #2. Door #2 & #3 unlocks. If the handicapped employee desires to enter Door #2 and visit the office then they may require assistance from office personnel to gain entry.
4. Press the handicap actuator to open Door #3 only.

Visitor

1. Active Aiphone at Door #1. School receptionist grants entry and Door #1 unlocks.
2. Walks over to door #2 and awaits receptionist to unlock Door #2 to enter and conduct their business. The button that receptionist uses to unlock Door #2 will be located on the receptionist's desk next to the Aiphone master station.

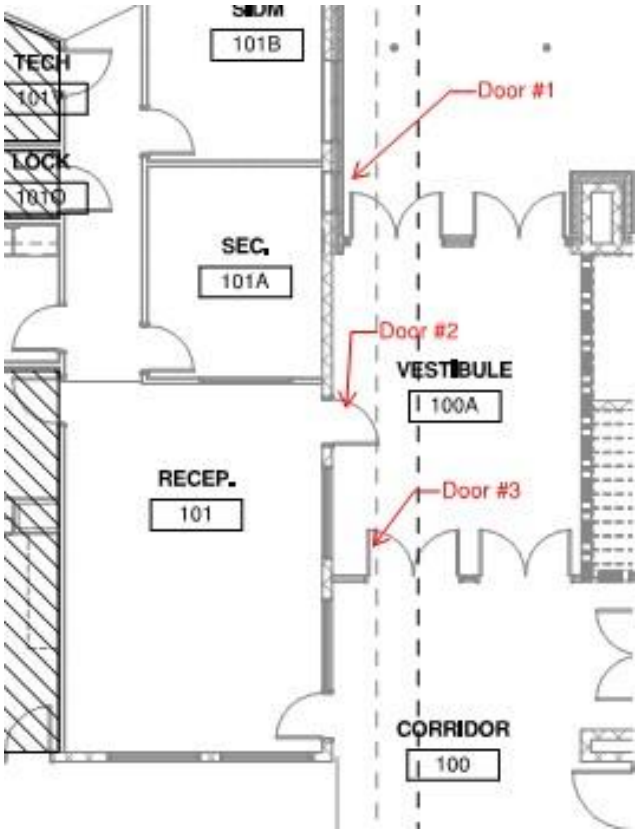
Handicapped Visitor

1. Active Aiphone at Door #1. School receptionist grants entry and door #1 unlocks.
2. After verbal notification from the receptionist visitor presses the handicap actuator and Door #1 opens.
3. Walks over to door #2 and awaits receptionist to unlock Door #2 to enter and conduct their business. The handicapped visitor may require assistance from office personnel to gain entry. The button that receptionist uses to unlock Door #2 will be located on the receptionist's desk next to the Aiphone master station.

Leaving The Building

There is no access control involved in the egress from the building. Non-handicapped individuals can exit via the panic hardware while handicapped individuals can exit with the provided actuators.

28 00 00 – ACCESS CONTROL ENTRY VESTIBULE FLOOR PLAN EXAMPLE – ATTACHMENT B



Mission Statement

Successfully Plan Security Camera & Access Control Systems

Contractor Pre-Requisites

An active network and the following items need to be completed by the system integrator before access control or the security surveillance cameras can be completed and accepted:

I. Contractor needs to have the following completed for the Video Surveillance

- ✓ All cameras installed
- ✓ All cameras addressed
- ✓ All cameras aimed
- ✓ All IP Addresses for each camera location located on a set of as-built

** IIS will then populate, configure, name and train

II. Contractor needs to have the following completed for S2 Security Door Access

- ✓ All Door Hardware installed wired and Tested
- ✓ Controller wired and connected to the doors and network
- ✓ Nodes to be addressed as .26 controllers as .25
- ✓ Door named in S2
- ✓ Left powered on and tested

**WCPSS will make the access badges for school employees

III. Contractor needs to have the following completed for Aiphone

- ✓ Door and Master Stations Installed
- ✓ Configured and tested
- ✓ Aiphones to be addressed at .40 for Master Station and .41 for door station etc.

**We need any and all configuration and as built documentation from contractors

NOTE:

In the future, if the contractors need the IP's, WCPSS (Ricky Horne) can help with that. They still will need to contact Bill Otstot about setting up network ports. Also, for your info this is our IP scheme. The second byte will be different at each location so that's why I left it blank.

IV. Example Beaverdam .194

- Card Access Controller 10. .251.25
- Card Access Node 1 10. .251.26
- Card Access Node 2 10. .251.27 ect . . .

- Security System NL-Mod 10. .251.35
- Aiphone 10. .251.40
- Aiphone 10. .251.41 ect . . .

- CCTV 10. .251.101
- CCTV 10. .251.102 ect . . .

28 10 00 ATTACHMENT A – SECURITY SYSTEM PRODUCT DATA

Gemini **X255** is the expansive hardwire/wireless control offering **255 fully-programmable zones**, 195 users, **fuseless operation** & supports the full line of top performing Gemini Wireless.

Gemini keypads compatible with the GEMP9600

	K1CA	K2AS	K3DGTL	K4RF	K4	RP1CAe2	RP2ASe2	RP3DGTL	RP8LCD	RP8/K800
GEMX255	•					•				

Gemini

NAPCO

Manufacturing great security products is all we do. It's that simple.™

Ge mini ™ X2 55 28 10 00 - A 2 zone hybrid control

Control panel fraturas

8 to 255 zones, hardwira or wireless zones from GEM EZM8 zona• expansion modules and RP1/K1 4-zone keypads or wireless points using Gemini receivers

- Including up to 8 2-wire fire zones
- Up to 195 individually coded users, each with a programmable authort$y level
- Exdusive R5232 panal•port supports PC homa automation/ networking integration for 9600 baud comprehensive communications
- Puseless maint•nance-froe operatíon
- 8 fnd-of-line-resistor bvr9Íaiy zones programmable for area, extt7entry delay, intenor, follower, day zone, chlme, fire opÓon, sensor watch, swinger shutdown, zone anding and a vanety of other features
- 3 on-board relay outputs, expandable to 99
- Three keypad panics: fire, police & auxiliary
- Up to 8 independent area partitions
- Up to 8 separate access stations for up to 195 users

to ó4 separately-addressable X-10 devices with the GEM-X10KIT

English-language prompts & systam status messages from keypad (GEM-RP1CAe2 InstalJed "wrlft 255 support" only)

User-customized zone descr ptions, reprogrammable as required

Supports 2-wira *and* 4-wire smoka detectors

Reports alam›s, reatores and troubles by zone

255 event schedule

- **800** event log
- Overview mode permits monitoring and control of toJal system from one kaypad

Supports up to 4 RF receivers

Guard-tour programmable for start time, tour Íength, and check poinB (tour stationg)

- 2 programmable antry delay times
- 2 Interior-bypass groups

Dynamic batteiy test interrupts charging and places battery under load every four hours

Sh*meby zone; programmable duration

- Non-volatile RAM retains memory dunng powar losses

PCD-Windows programmable

Auto-download log

- Exc)usfve V.A LI.D. FEATURE (Verjfyíng Automatic Line Integnty Diagnosttc) reduces false alarms *due* to changes in line resistanco

Communlcator features

- Compatible with all major feceiver fórmats, includlng BFSK, 472, Modern 2, SIA, 4/3/1, 4 + 2 Express and Pofnt ID

Rotary dia] and TouchTone"*' w‹th rotaty backup

- 3 20-digit telephone numbeis

Bact‹up repoAing; double reponing; split reporting 195 User *podes* wlth opening/cTosing reporting by user

- AC failure repotting with programmable report delay

Supervised telephone Jine cut with programmable detay

- Pagar capabilrty

Specificatlons

Oparating temperature: 0-49°C (32-12O°F)
Input power: 1ô.5Vac vJa Class 2 Plug-In 40VA Transformer, suppJied
Loop voltage: 10-13VAC
Loop current: 2.5mA with 2.2ohm end-of-line resistor (model EOL2.2K); 5mA far 2-wire smoke-detector zones
Loop resistanca: 300W max. : SOW for 2-wire smoke detector zones
Relay outputs (burglary; reset; aux): wet, 12Vdc, 1.2 A max ; dry (cut related jumper for dry contacto), SPDT contacto 24Vdc, 2A
Auxiliary power output: 12 Vdc regulated
Remote power outpub 12Vdc regulated (for keypads) 750 mA combined Standby Current (Remote Power + Aux. Power + Reset ReJay Power)
Standby time: ResidentiaT fire/burglary & commercial burglary, 4 hours minimum
EZM Module: GEM-EZM8: input. 50mA (includlng PGM Output) PGM output: 5mA, t2V special applt-cation
Keypad current:
GEM-RP1CAe2, GEM K1CA: 100mA; 35mA if back lightlng Is disabled (cut Wt. W2 & W3) PGM output: 5mA, 12a special applJcation
Maximum number of keypads: 15 maximum wirIng length for each run (#22AWG): 1000' dívided by total number ofkeypads & EZMs on run
Keypad Dímeneions: 4 3/8" x 5 7/8" x 1 1/6" (HWD); 11.tem x 14.Rem x 2.7cm (HWD)

Opcional ac<essories and periphorals

GEM•EZM8: 8-Zone expansion zone modula (see models labeled "GEM-XZSS Support"}
VERI-PHONE‹ Two-way voice/ll5ten In system
GEH•RECV8: Wireless receiver, 8 poinM
GEM-RECV1ó: Wfmless receiver, 1ó points
GEM-RECV9Ó: Wireless receiver, 96 polnD
GEM-RECVZ55:Wireless receiver, 255 poinm'
GEM•YRAN52: Window/door transmitter, 2-point
GEM tTRANS: Recessed wireless window/door transmitter, 1-point
GEM•K5YF: Keyfob transmttter
GEM-SMK: Wireless smoke detectar
GEM•P1R: Wireless PIR, S0x5i0'
GEM•PtRPET. Wifeless 40)b. pet immunity PIR
GEM-DT. Wireless Adaptive@ Dual Technology sen• sor, 4Dx40'
GEM•GB- Witeless giass break detector
GEM-WP PANIC: Waterproof panic button pendant

GEM-HEATf Rate of nse heat detectar
2 WAYUNIYKFKIT: 2 Way LCD keyfob & receiver

Home/facflitles autontatlon:

GEM•RS232KfT: Alarm-to-PC interface for 100% 2-way imercommunicatíons with a growing number of leadirig PC automation software packages (including, but not limited to, IBM Home D\rector , Savoy Cyberhouse , Crestron, Phast, etc.)
GEM-DEVELOPER: System development professionals protocol for custom programming ssamless integration with Gemint RS232 port communicadons.
GEM•X10 tnterfáce Module: Providos programming & schedular-integrated X-1O device support.
RM3008: relay module
M278: Line-revenal module
PS3002: Power-supply module, 13.2Vdc, 1.9A
EOL130: 2-Wire fire zone resistor, 130ohm, 3ohm
EOL2.2K: End-of-line resistor assembly, 2.2ohm for fire circuit
FTZ200: EOL relay/resistor supervisory module
RBt600+ Relay board
RBAT4: Rechargeable battery, 12Vdc. 4AH
RBATH1‹ DuaJ battery harness
RPB-3• Universal]Unctlon box
TRF11: Transformer, 1ó Vac/40VA, Class 2
WL1: Wire assembly w›th lug connector

*Consult panel documentation for UL ustnction• which may app'ïy to UL nstallations using upwards of 200 wireless-only points

Orderfng informatlon

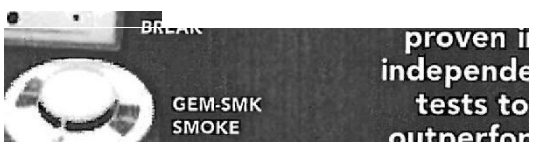
- **GEM-X255:** Super Expandable Hybrid Control Panel & Transformer

  GEM-RP1CAe2: 32-Character EZ-Read Backlit LCD Keypad with 4 EOL Zone Expansion Module built-in (See models labeled "GEM-X255 Support"!)

- QEMK1CA: K d same as above with Stay & Away hflúcbonm'
- **StarLink SL-1:** Backup wireless receiver for all alarm panel brands

  NAPCO NETLINK™ Intranet/!ntémet Alarm Reporting Componenls dor specs ser uehsae , or literature # A482).

  GeminiAccess™ economically add up to 8 doors of access control to Gemini Panels. Sev4'fal palc6 aró avaflab1e gor specs see webs'4o, or ltteractre..JfA4B1},



Compatibíe with these standard Gemini keypads

GEMK1CA
4 built in zones

RP1CAe2
4 built in zones

In North America 1-800-645-9445 • 631-842-9400
333 Bayview Avenue, Amityville, New York 11701 USA • www.napcosecu 'rfiy

International 224 Europa Blvd, Gemini Business Park Warrington WAS 7TN

NAPCO

England UK 44 (0) 1925242428

Gemini, Wizard, 5tarLink, Adaptive and EVA are *tradenatks of* Napco. A446A

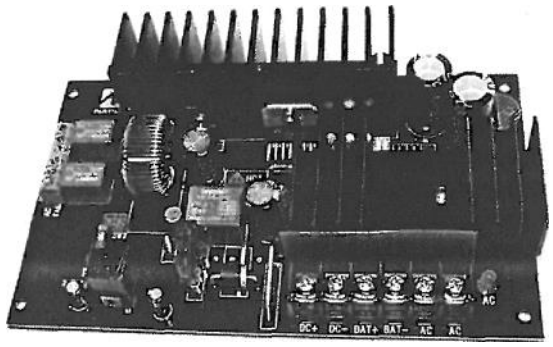
0

333 Bayview Avenue
Amityville, New York 11701
For Sales and Repairs, (800) 645-9445
For Technical Service, (800) 645-9440

NP-P5ASUP
5 AMP SUPERVISED POWER SUPPLY / CHARGER

C› NAPCO 2005

WI1340B 12/05



DESCRIPTION

The NP-P5ASUP is both a charger and supervised power limited supply that converts a low voltage AC input into a 12VDC or 24VDC power limited output, with SA of continuous supply current.

FEATURES

- 12VDC or 24VDC selectable output.
- » Maximum charge current .5 amps.
- 5 amps continuous supply current at 12VDC-24VDC.
- Filtered and electronically regulated outputs.
- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC falls
- AC input and DC output LED indicators.
- AC fail supervision (form "C" contacts).
- Low battery supervision (form "C" contacts).
- Short circuit and thermal overload protection.
- Includes battery laads.

Board Dimensions: 179.3mm(L) x 108.7mm(W) x 45mm(H)
Specified at 25° C ambient.

INSTALLATIONINSTRUCTIONS

The NP-P5ASUP should be installed in accordance with The National Electrical Code and all applicable Local Regulations.

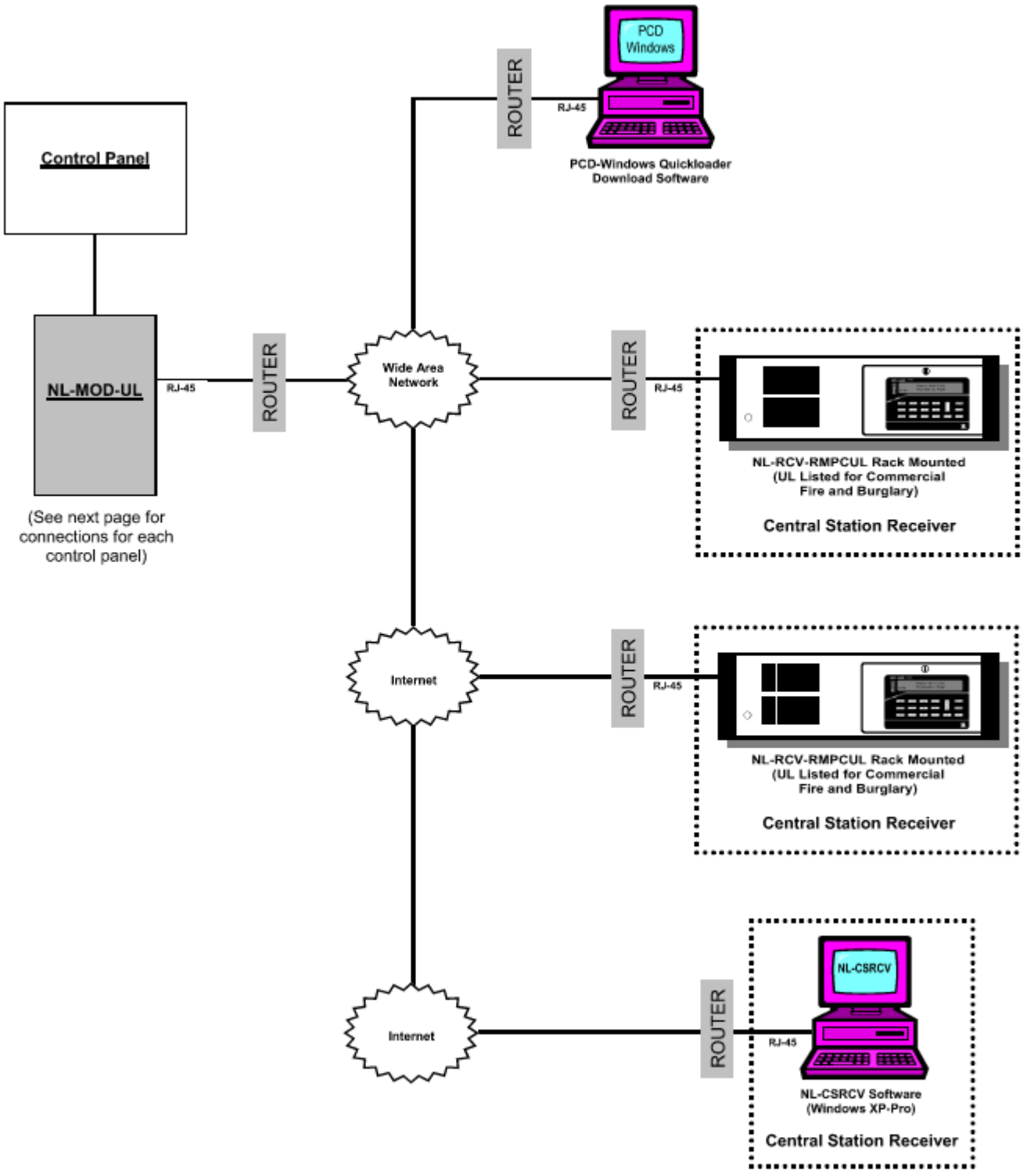
1. Mount the NP-P5ASUP in desired location.
2. Set the NP-P5ASUP to desired DC output voltage via SW1 (see Voltage Output/Transformer Selection Table).
3. Connect proper transformer to terminals marked [AC] (see Voltage Output/Transformer Selection Table). Use 18 AWG or larger for all power connections (Battery, DC output). Use 22 AWG to 18 AWG for power limited circuits (AC Fail/Low Battery reporting).
4. Connect devices to be powered to terminals marked [+ DC -]. Note: It is important to measure output voltage before connecting devices. This helps avoid potential damage.
5. When the use of stand-by batteries are desired, they must be lead acid or gel type. Connect battery to terminals marked [+ BAT -] on the board (battery leads included). Use two (2) 12VDC batteries connected in series for 24VDC operation. Note: When batteries are not used, a loss of AC will result in the loss of output voltage.
6. Connect appropriate signaling notification devices to AC Fail & Low battery supervisory reJay outputs marked [N. C., C, N.O.).

LED DIAGNOSTICS		
Red (DC)	Green {AC)	Power Supply Status
ON	ON	Normal operating condition.
ON	OFF	Loss of AC. S and-by batery supplying power.
OFF	ON	No DC output.
OFF	OFF	No DC output. Loss of AC. Oischarged or no battery.

VOLTAGE OUTPUT/TRANSFORMER SELECTION TABLE		
Output VDC	Switch Position	Transformer Requirements
12VDC @ ii amps continuous supply current	1, ON 2. OFF	NP-TRF28100
24VDC @ 5 amps continuous supply current	1. ON 2. ON	NP-TRF28175
hlote: Transformers with higher VA ratings may be used for all output voltages above as long as you do not exceed 28VAC.		

TERMINAL IDENTIFICATION	
Terminal Legend	Function/Description
AC/AC	Low vologe AC input (see voltage output/transfomer selector table). *8a* 12V0C outgut use 2BVAC or higner with 100 VA power rating or higher. For 24VDC output use 28VAC with 175VA power rating or higher. Caution: Do not apply voltages above 28VAC (28 VAC is maximum input rating)
***DG−**	12VDC/24V0C @ 5 amps continuous power limited output.
AC FAIL n.c., c, u.o.	Used to notify loss of AC power, e.g. connect to audible device or alarm NC, C, NO panel. Relay nomally energized when AC power is present. Contact raDng 1 amp @ 120VAC / 2BVDC
Low Battery N.C„ C, N.O.	Used to indicafe low battery condition, e.g. connect to alam panel, NC, NO, C Relay norma€y energized when DC power is present. Contact rating 1 amp @ 120VAC / 2BVDC. Low battery threshold: 12VIIC output Ifreshola set @ approximately 10.SVDC, 24VDC output threshold set @ approximately 21VDC,
+ BAA -	Stand-by battery connectons. Maximum cnarge rate .5 amo.

NL-MOD-UL Configuration Overview



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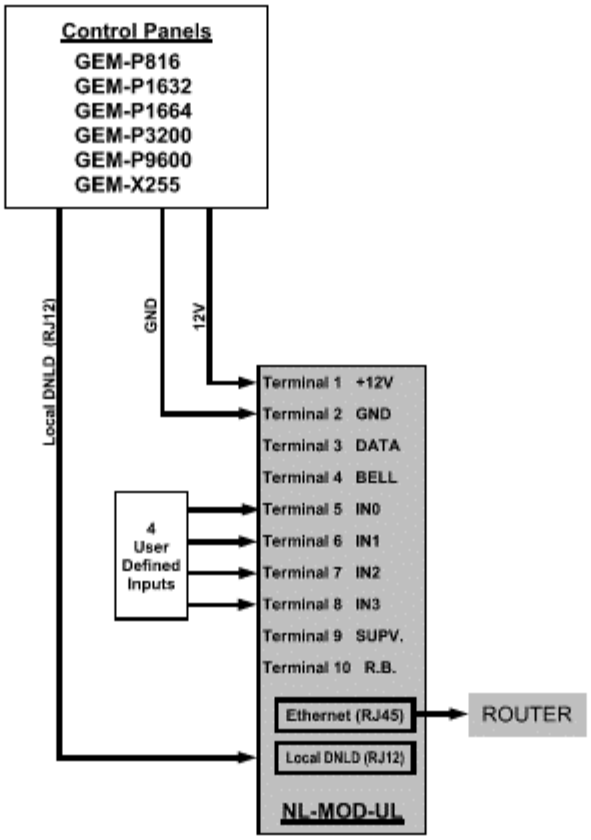
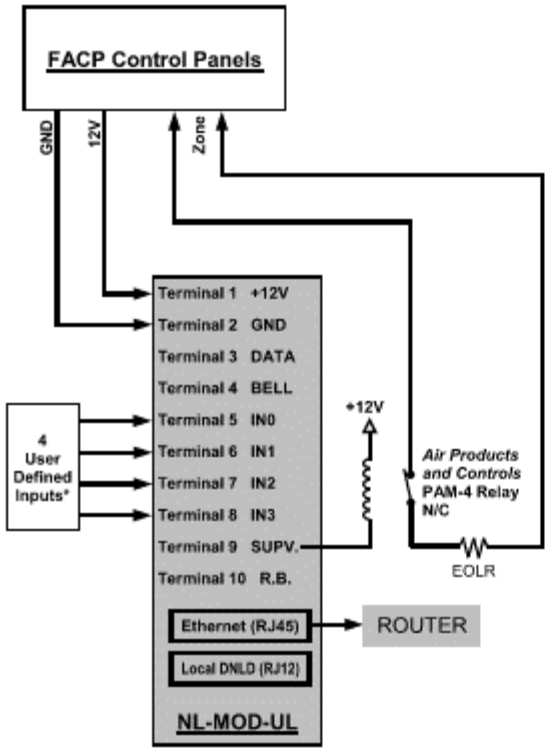
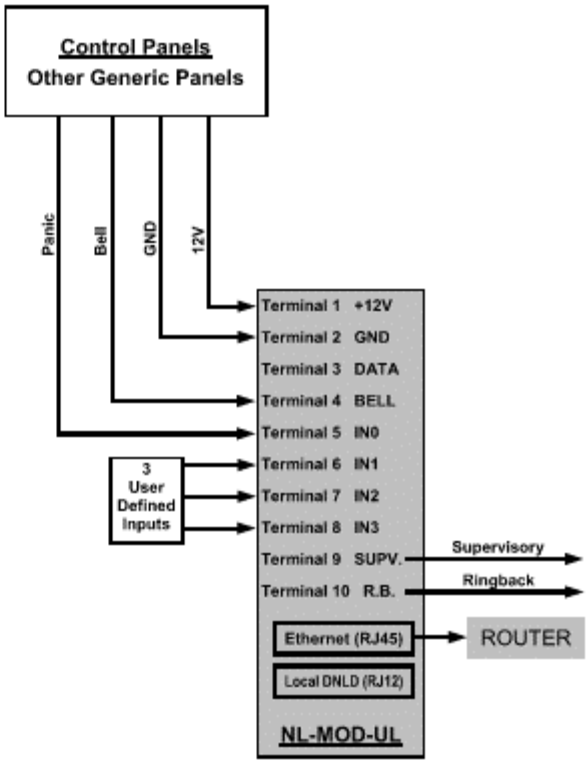
Other products, product names and services described in this manual are for identification purposes only and may be trademarks of their respective companies.

Detailed NL-MOD-UL Connections



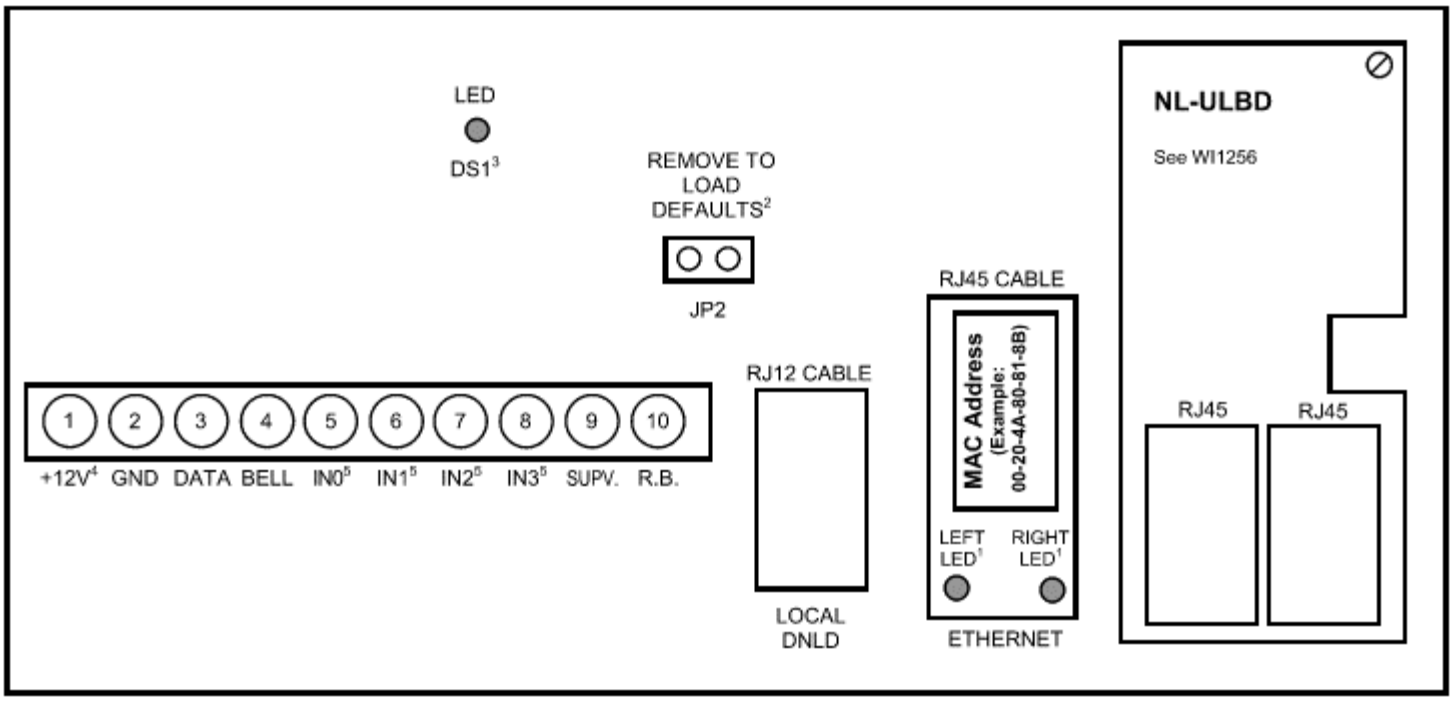


*See **Reporting Code** on page 8 for more information regarding IN3 reporting delays.



NL-MOD-UL WIRING DIAGRAM

REFER TO WI1523



NL-MOD-UL Wiring Diagram Notes:

1. See table below for description of right and left Ethernet Connection LED Functions.
2. Normal operation requires this shunt connector to be placed on top of JP2.
3. See pages 4, 6 and 7 for DS1 LED operation.
4. **Voltage Input**: 12VDC **Input Current**: 85mA.
5. **Rated Current**: 6.5mA **Rated Voltage**: 12VDC.

NL-MOD-UL TERMINAL DESCRIPTIONS	
TERMINAL NUMBER	**DESCRIPTION**
1	**Positive 12 Volts**
2	**Ground**
3	**Data (not currently used)**
4	**Bell**
5	**User Defined Parallel Input 0.** Configured by the **Optional Input Setup** screen.
6	**User Defined Parallel Input 1.** Configured by the **Optional Input Setup** screen.
7	**User Defined Parallel Input 2.** Configured by the **Optional Input Setup** screen.
8	**User Defined Parallel Input 3.** Configured by the **Optional Input Setup** screen.
9	**Supervisory (Active Low)**
10	**Ringback (Active Low)**

ETHERNET CONNECTION LED FUNCTIONS				
LEFT LED			**RIGHT LED**	
COLOR	**MEANING**		**COLOR**	**MEANING**
OFF	NO LINK		OFF	NO ACTIVITY
SOLID AMBER	10 MBPS		MOMENTARY AMBER	HALF DUPLEX
SOLID GREEN	100 MBPS		MOMENTARY GREEN	FULL DUPLEX

LenelS2 Access Control Application Blade

Overview

LenelS2™ Access Control Application Blade is a two-reader interface board with reader, input and output points to support a wide range of devices. Of the four types of LenelS2 Application Blades, the Access Control Application Blade offers the largest variety of connections.

Each Access Control Application Blade supports up to two doors or other access points, interfacing with OSDP™, Wiegand, magnetic stripe and keypad technologies. Compatible devices include REX, DSM, door controllers, alarms, card readers and more. Four inputs support normally open, normally closed, supervised and non-supervised circuits. Four outputs can be configured for locks or auxiliary devices.

Up to seven LenelS2 Application Blades in any combination can be supported by a Network Node. LenelS2 Application Blades are easy to install – Network Nodes automatically recognize and address them without jumpers or switches. Power and communications are delivered to every LenelS2 Application Blade via a ribbon cable bus, and the blade supplies 12VDC, up to 250mA, per card reader.

Up to seven LenelS2 Application Blades in any combination can be supported by a Network Node.

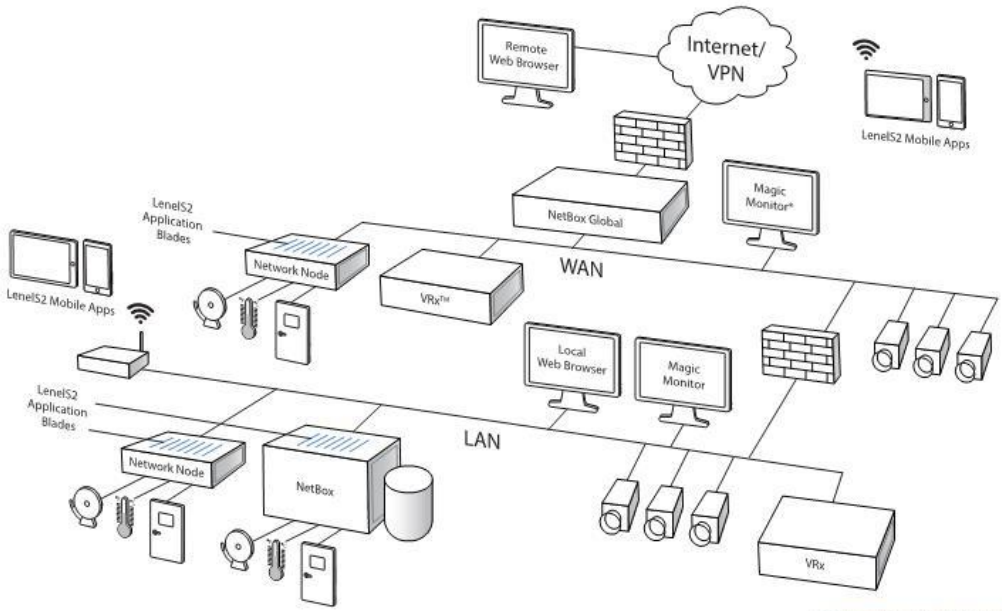
Key Features

Access Control

- Portals: Provides connections for up to two doors or other access points
- Device Support: Supports REX, DSM, door controllers, alarms, card readers and other devices
- Reader Support: Interfaces with OSDP, Wiegand, magnetic stripe and keypad reader technologies
- Input Configuration: Includes four inputs configurable to normally open, normally closed, supervised and non-supervised circuits
- Output Configuration: Four outputs can be configured for locks or auxiliary devices.

System

- Automatic Discovery: Automatically connects to Network Node without jumpers or switches
- Hardware Compatibility: Fits available blade slots in NetBox™, NetBox VRx™ Quatro, NetBox VR Quatro, Network Node, Network Node VRx and Network Node VR hardware



Schematic only. Not a network diagram.

Specifications – LenelS2 Access Control Application Blade

Access Control	
Readers	2
Reader Compatibility	OSDP (RS485) Wiegand (Data0/Data1)
Supervised Inputs	4
Input Supervision	Quad State (Open / Short / Normal / Alarm) Resistors value = 1K
Selection per Input	Dual Resistor / Single Series Resistor / Single Parallel Resistor / Unsupervised
Input Circuit Types	2-pin supervised, dry contact only
Outputs	4
Output Description	Dry, Form C, single-pole double-throw (C / NO / NC) contacts for load switching
Relay Contact Rating	30VDC/AC, 2.5A inductive or 5.0A non-inductive

General	
Power Input	Powered via ribbon cable connection from Network Node Blade
Reader Power	12VDC, 250mA/reader maximum
Dimensions (H, W, D)	7.5in x 4.0in x 0.83in (191mm x 102mm x 21mm)

General (continued)	
Weight	6.77 oz (192 g)
Operating Temperature	32°F – 95°F (0°C – 35°C)
Storage Temperature	-4° – 158°F (-20° – 70°C)
Operating Environment	Humidity 85%, non-condensing 35° C
Regulatory Approvals	UL, CE, RoHS
Warranty	2 years hardware

Cabling Requirements	
Reader Cable	Refer to reader manufacturer's installation guide/specifications
Max Reader Cable Distance	Refer to reader manufacturer's installation guide/specifications
Supervised Input Cable	Twisted, shielded 22 AWG Belden #9462 (or similar)
Max Supervised Input Cable Distance	2000ft (610m)
Relayed Output Cable	Refer to output device manufacturer's installation guide/specifications
Max Relayed Output Cable Distance	Refer to output device manufacturer's installation guide/specifications

Part Numbers	
S2-ACM	Access control application blade with support for 2 readers, 4 inputs and 4 outputs

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LenelS2 Relayed Output Blade

Overview

LenelS2™ Relayed Output Application Blade is an interface board with eight Form C relay output points to support a wide range of devices. The eight programmable output relays can be configured for locks or auxiliary devices. Relay status is activated by card reader operation, event triggers and manual activation. Compatible devices include alarm annunciation devices, indicator lights, elevator control circuits, alarm panels and more.

Up to seven LenelS2 Application Blades in any combination can be supported by an Network Node. LenelS2 Application Blades are easy to install – Nodes automatically recognize and address them without jumpers or switches. Power and communications are delivered to every LenelS2 Application Blade via a ribbon cable bus.

Up to seven LenelS2 Application Blades in any combination can be supported by a Network Node.

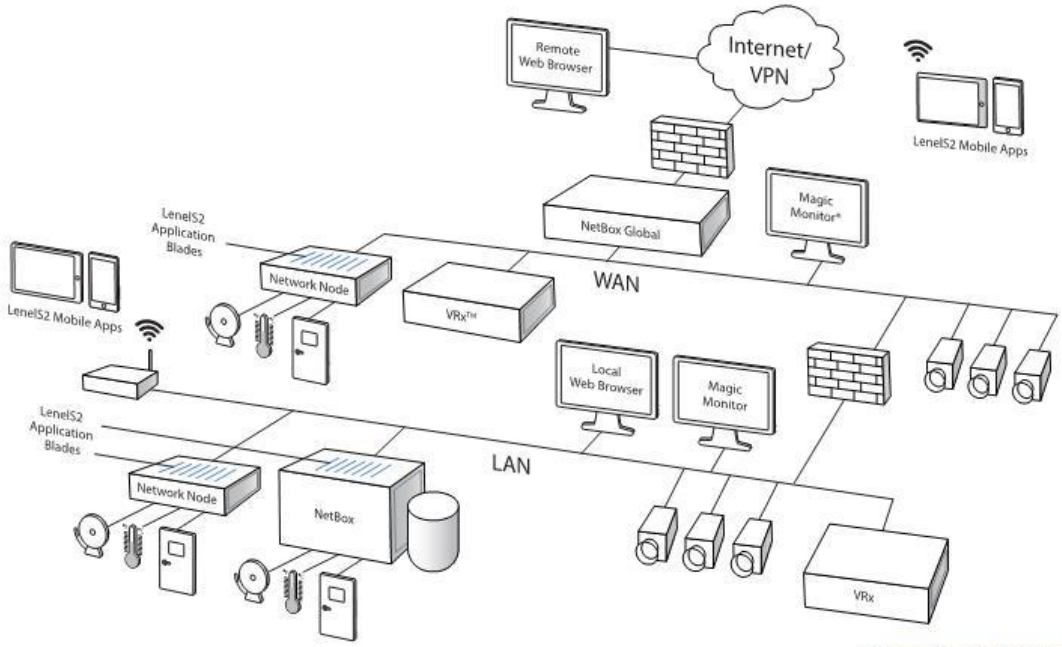
Key Features

Inputs

- Device Support: Supports alarm annunciation devices, indicator lights, elevator control circuits, alarm panels and and more
- Output Configuration: Includes eight outputs that can be configured for locks or auxiliary devices

System

- Automatic Discovery: Automatically connects to Network Node without jumpers or switches
- Hardware Compatibility: Fits available blade slots in NetBox™, NetBox VRx™ Quatro, NetBox VR Quatro, Network Node, Network Node VRx and Network Node VR hardware



Schematic only. Not a network diagram.

Specifications – LenelS2 Relayed Output Blade

Access Control	
Relay Outputs	8, Form C
Output Description	Dry, Form C, single-pole double-throw (C / NO / NC) contacts for load switching

General	
Relay Contact Rating	30VDC/AC, 2.5A inductive or 5.0A non-inductive
Dimensions (H, W, D)	7.5 in x 4.0 in x 0.83 in (191 mm x 102 mm x 21.1 mm)
Weight	7.0 oz (198 g)
Operating Temperature	32°F – 95°F (0°C – 35°C)
Storage Temperature	-4° – 158°F (-20° – 70°C)
Operating Environment	Humidity 85%, non-condensing 35° C
BTU Maximum	20 per hour
Regulatory Approvals	UL, CE, RoHS
Warranty	2 years, hardware

Cabling Requirements	
Relayed Output Cable	Twisted, shielded 22 AWG Belden #9462 or equivalent
Max Relayed Output Cable Distance	Determined by the peripheral device

Part Numbers	
S2-OUTP	Relay controlled output application extension blade with 8 outputs

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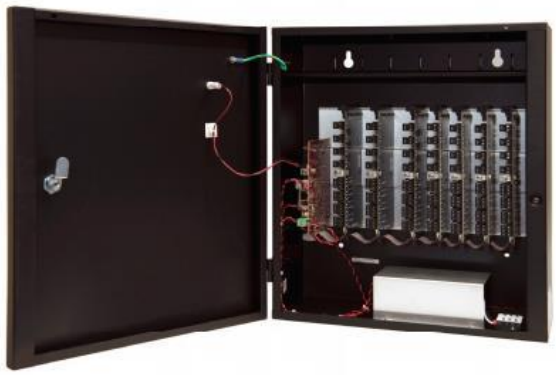
LenelS2 Supervised Input Application Blade

Overview

LenelS2™ Supervised Input Application Blade is an interface board with eight input points to support a wide range of devices. The inputs support normally open, normally closed, supervised and non-supervised circuits. Compatible devices include buttons, door contacts, motion detectors, beam detectors, power supply monitoring points, burglar and alarm panel points and more.

Up to seven LenelS2 Application Blades in any combination can be supported by an Network Node. LenelS2 Application Blades are easy to install – Nodes automatically recognize and address them without jumpers or switches. Power and communications are delivered to every LenelS2 Application Blade via a ribbon cable bus.



Up to seven LenelS2 Application Blades in any combination can be supported by an Network Node.

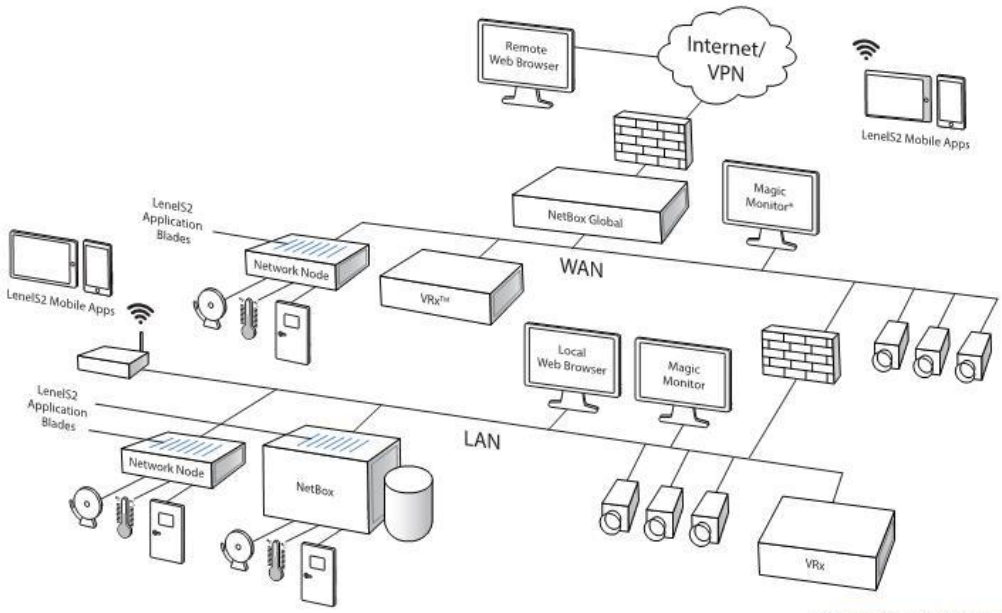
Key Features

Inputs

- Device Support: Supports buttons, door contacts, motion detectors, beam detectors, power supply monitoring points, burglar and alarm panel points and more
- Input Configuration: Includes eight inputs configurable to normally open, normally closed, supervised and non-supervised circuits

System

- Automatic Discovery: Automatically connects to Network Node without jumpers or switches
- Hardware Compatibility: Fits available blade slots in NetBox™, NetBox VRx Quatro, NetBox VR Quatro, Network Node, Network Node VRx and Network Node VR hardware



Schematic only. Not a network diagram.

Specifications – LenelS2 Supervised Input Application Blade

Access Control	
Supervised Inputs	8
Input Supervision	Quad State (Open / Short / Normal / Alarm) Resistors value = 1K
Selection per Input	Dual Resistor / Single Series Resistor / Single Parallel Resistor / Unsupervised
Input Circuit Types	C / NO / NC

General	
Dimensions (H, W, D)	7.5 in x 4.0 in x 0.83 in (191 mm x 102 mm x 21.1 mm)
Weight	4.5 oz (127 g)
Operating Temperature	32°F – 95°F (0°C – 35°C)
Storage Temperature	-4° – 158°F (-20° – 70°C)
Operating Environment	Humidity 85%, non-condensing 35° C
BTU Maximum	20 per hour
Regulatory Approvals	UL, CE, RoHS
Warranty	2 years, hardware

Cabling Requirements	
Supervised Input Cable	Twisted, shielded 22 AWG Belden #9462
Max Supervised Input Cable Distance	2000 ft (610 m)

Part Numbers	
S2-INP	Supervised input application extension blade with 8 inputs

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MicroNode Plus

Overview

The MicroNode™ Plus compact, intelligent field panel handles distributed processing for NetBox™ access control and event monitoring systems. Access control and events from connected devices are aggregated to the NetBox browser-based interface for centralized system management.

The MicroNode Plus panel supports up to two portals, four relay outputs with wet/dry selection, four inputs with programmable levels of supervision, and one temperature sensor input. The 12VDC auxiliary output can power devices such as a Request to Exit device or an alarm sounder.

Designed for localized access control and event monitoring, the MicroNode Plus panel is also an ideal retrofit solution. The seamless upgrade from legacy two-reader panels to the MicroNode Plus panel can be made without replacing readers, inputs or lock outputs.

Access control and event monitoring for connected devices are aggregated to the LenelS2 Magic Monitor® unified client.

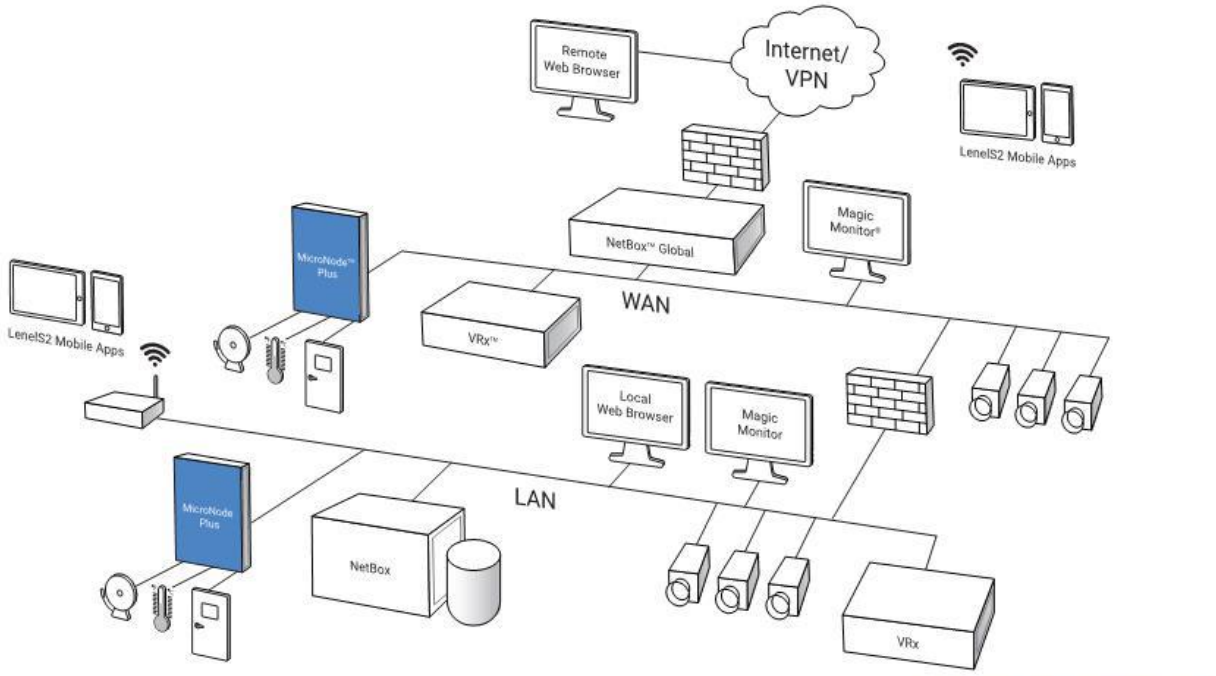
Key Features

Access Control

- Reader Support: Interfaces with Wiegand and keypad reader technologies
- Input/Output Assignment: Enables assignment of four input and four output relays to control doors and other end point devices
- Temperature Input: Includes one analog temperature sensor input
- Retrofit Solution: Replaces legacy two-reader panels without requiring new readers, inputs or lock outputs

System

- LenelS2 System Node: Handles distributed access control and event monitoring
- Offline Availability: Maintains access control capabilities even when connectivity to the NetBox controller is lost
- Intuitive Configuration: Utilizes embedded web interface for initial setup
- Automatic Discovery: Automatically connects to and authenticates with the NetBox controller upon configuration
- Power Options: Offers PoE Plus, PoE or 12VDC 5A power



Schematic only. Not a network diagram.

Specifications – MicroNode Plus

Access Control	
Portals	2
Access Levels	512
Supervised Inputs	4
Relay Outputs	4; 2 wet / dry selectable
Temperature Inputs	1
Credential Storage	150,000
Buffered Transactions	800,000

Hardware	
Processor	TI AM3352 ARM
Memory (RAM)	512MB SDRAM
Operating System	Linux
Ethernet Ports	1
MTBF	297,000 hrs
Chassis	Wall or ceiling mount
Dimensions (H, W, D)	11.34in x 8.0in x 2.57in (288mm x 203mm x 65mm)
Weight	3.2 lbs (1.45 kg)
Operating Temperature	32° – 95° F (0° – 35° C)
Storage Temperature	-4° – 158°F (-20° – 70°C)

Hardware (continued)	
Input Power	PoE Plus, PoE, 12VDC 5A
Output Power	*PoE Plus*: 1000mA (12 watts) @ 12VDC *PoE*: 500mA (6 watts) @ 12VDC *12VDC 5A*: 2000mA (24 watts) @ 12VDC
BTU Maximum	204 per hour
Commissioning	Web configuration utility
Regulatory Approvals	UL, CE, FCC, RoHS
Warranty	2 years, hardware; 1 year, software

Client Requirements	
Operating System	Any
Browser	Chrome™, Internet Explorer®, Firefox® and Safari®*
Processor	Intel® Core™ i3 or higher
Memory (RAM)	4GB
Hard Drive	100GB minimum

Part Numbers	
S2-MNP	MicroNode Plus panel
S2-MNP-MP	MicroNode Plus panel with mounting plate

* Refer to the latest Release Notes for browser version compatibility.

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Network Node

Overview

The Network Node intelligent field panel handles distributed processing for NetBox™ access control and event monitoring systems. Access control and events from connected devices are aggregated to the NetBox browser-based interface for centralized system management.

The Network Node panel supports up to seven modular LenelS2 application blades for access control, inputs, outputs and temperature probes. Any LenelS2 application blades can be combined to fit deployment requirements. Blades are automatically recognized and addressed without jumpers or switches. External devices such as 12VDC card readers can be powered from the LenelS2 access control application blade.

A highly flexible component of any NetBox system, the Network Node panel enables customization and expansion of the system's capabilities.

Access control and event monitoring for connected devices are aggregated to the LenelS2 Magic Monitor® unified client.

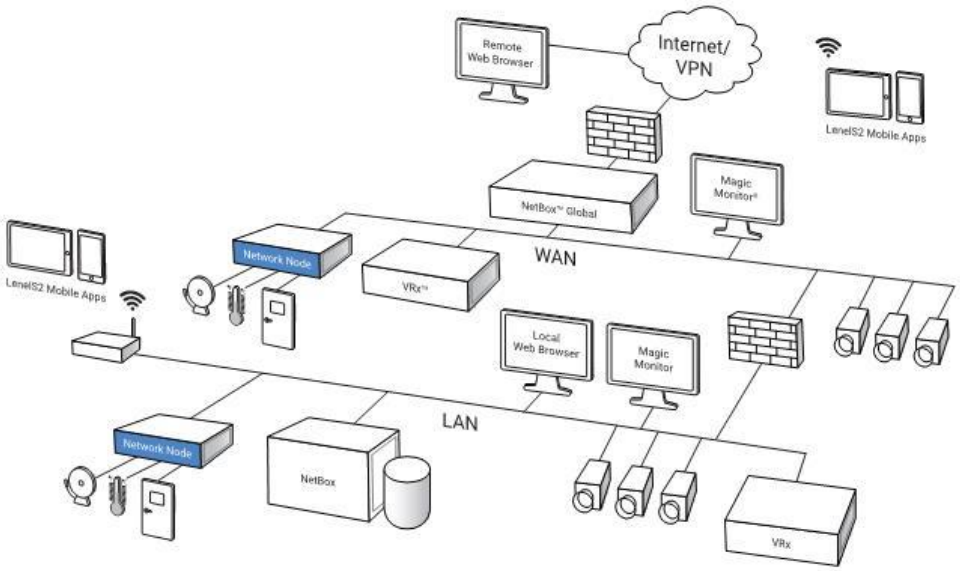
Key Features

Access Control

- **Blade Support:** Houses up to seven LenelS2 application blades for access control, inputs, outputs and temperature probes
- **Portals:** Supports up to fourteen doors or other access points
- **Reader Support:** Interfaces with OSDP™, Wiegand and keypad reader technologies
- **Input Assignment:** Enables assignment of up to 56 supervised inputs
- **Output Assignment:** Enables assignment of up to 56 form C output relays
- **Temperature Inputs:** Monitors up to 56 analog temperature points

System

- **LenelS2 System Node:** Handles distributed access control and event monitoring
- **Solid State Design:** Extends product lifecycle, lowering total cost of ownership
- **Offline Availability:** Maintains access control capabilities even when connectivity to the NetBox controller is lost
- **Intuitive Configuration:** Utilizes embedded web interface for initial setup
- **Automatic Discovery:** Automatically connects to and authenticates with the NetBox controller upon configuration



Schematic only. Not a network diagram.

Specifications – Network Node

Access Control	
NetBox Software	Version 4.1.02 and later
Network Node Blade	M1-3200
Application Blades / SIOs	7
Portals	14
Access Levels	512
Supervised Inputs	56
Relay Outputs	56
Temperature Inputs	56
Credential Storage	150,000
Buffered Transactions	800,000

Hardware	
Storage	2GB Flash
Processor	TI AM3352 ARM
Memory (RAM)	512MB SDRAM
Operating System	Linux
Ethernet Ports	1
MTBF	297,000 hrs
Chassis	Wall mount or standard 4U rack mount
Dimensions (H, W, D)	*Wall Mount:* 17.0in x 15.0in x 6.75in (432mm x 381mm x 172mm) *Rack Mount:* 7.0in x 19.0in x 15.0in (178mm x 483mm x 381mm)
Weight	*Wall Mount:* 18 lbs (8.6 kg) *Rack Mount:* 17 lbs (7.7 kg)

Hardware (continued)	
Operating Temperature	32° – 95°F (0° – 35°C)
Storage Temperature	-4° – 158°F (-20° – 70°C)
Input Power	100 - 240 VAC, 50/60 Hz, 2.3A
Reader Output Power	12VDC, 250 mA/reader
BTU Maximum	184 per hour
Commissioning	Web configuration utility
Regulatory Approvals	UL, CE, FCC, RoHS
Warranty	2 years, hardware; 1 year, software

Client Requirements	
Operating System	Any
Browser	Chrome™, Internet Explorer®, Firefox® and Safari®*
Processor	Intel® Core™ i3 or higher
Memory (RAM)	4GB
Hard Drive	100GB minimum

Part Numbers	
S2-NN-E-WM	Supports up to 7 LenelS2 application blades, wall mount
S2-NN-E-RM	Supports up to 7 LenelS2 application blades, rack mount
S2-NN-E2R-WM	Includes 1 LenelS2 access control application blade with 6 available expansion slots, wall mount
S2-NN-E2R-RM	Includes 1 LenelS2 access control application blade with 6 available expansion slots, rack mount

*Refer to the latest Release Notes for browser version compatibility.

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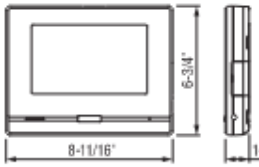
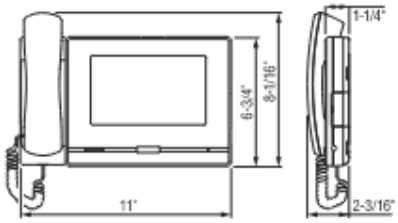
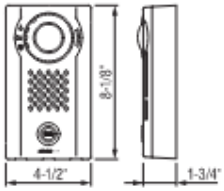
IX-MV7 & IX-MV7-H Master Station

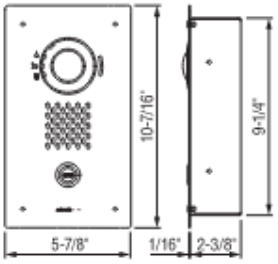


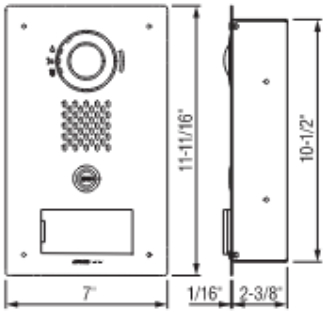


Power Source	PoE (IEEE 802.3af class 0)
Power Draw	4.32W
Camera	⅓" CMOS, 720p
Min. Illumination	5 Lux
Audio Codec	G.711 (μ-law, A law), G.722
Video Codec	H.264/AVC, Motion JPEG
Trigger Inputs	4
Contact Outputs	2 (24V AC/DC, 1A)
Speaker Output	8Ω, ½ Watt
Port Security	IEEE 802.1X
Protocols	IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP, RTCP, IGMP, MLD, SMTP, FTP, DHCP, NTP, DNS
UL/cUL Listing	62368-1
Operating Temperature	32° ~ 104°F (0° ~ 40°C)
Dimensions: IX-MV7 IX-MV7-H	6-¾" H x 8-¹¹⁄₁₆" W x 1-¼" D 8-¹⁄₁₆" H x 11" W x 2-³⁄₁₆" D

IX-DV, IX-DVF, & IX-DVF-P Video Door Station





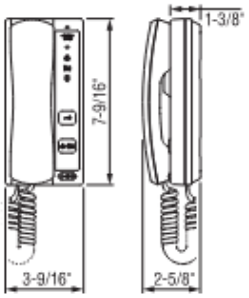


Power Source	PoE (IEEE 802.3af class 0) with PoE pass-through
Power Draw	5.28W
Camera	⅓" CMOS, 1.2 megapixel
Min. Illumination	5 Lux
Audio Codec	G.711 (μ-law, A law), G.722
Video Codec	H.264/AVC, Motion JPEG
Trigger Inputs	6
Contact Outputs	2 (24V AC/DC, 1A)
Port Security	IEEE 802.1X
Protocols	IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP, RTCP, IGMP, MLD, SMTP, FTP, DHCP, NTP, DNS
UL/cUL Listing	62368-1 (excl. IX-DVF-P)
Operating Temperature	-40° ~ 140°F (-40° ~ 60°C)
Ingress Protection	IX-DV: IP54 IX-DVF, IX-DVF-P: IP65
Impact Protection	IK08
Dimensions: IX-DV IX-DVF IX-DVF-P	8-¹⁄₁₆" H x 4-½" W x 2-¹⁄₁₆" D 10-⁷⁄₁₆" H x 5-⅞" W x 2-⅜" D 11-¹¹⁄₁₆" H x 7" W x 2-⅜" D

Card Reader	HID multiCLASS SE RP10

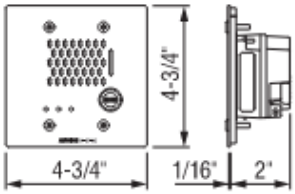
AIPHONE

IX-RS Sub Station



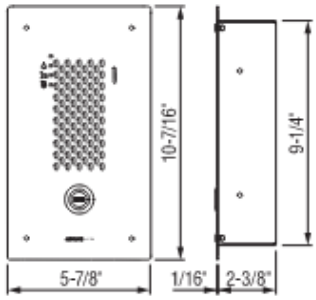
Power Source	PoE (IEEE 802.3af class 0)
Power Draw	4.32W
Audio Codec	G.711 (μ-law, A law), G.722
Trigger Inputs	1
Contact Outputs	1 (24V AC/DC, 1A)
Speaker Output	8Ω, 2 Watt
Port Security	IEEE 802.1X
Protocols	IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP, RTCP, IGMP, MLD, SMTP, FTP, DHCP, NTP, DNS
UL/cUL Listing	62368-1
Operating Temperature	32° ~ 104°F (0° ~ 40°C)
Dimensions	7-9/16" H x 3-9/16" W x 2-5/8" D

IX-SS-2G 2-Gang Audio Door Station



Power Source	PoE (IEEE 802.3af class 0)
Power Draw	3.36W
Audio Codec	G.711 (μ-law, A law), G.722
Trigger Inputs	1
Contact Outputs	1 (24V AC/DC, 1A)
Port Security	IEEE 802.1X
Protocols	IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP, RTCP, IGMP, MLD, SMTP, FTP, DHCP, NTP, DNS
UL/cUL Listing	62368-1
Operating Temperature	-40° ~ 140°F (-40° ~ 60°C)
Ingress Protection	IP65
Impact Protection	IK08
Dimensions	4-¾" H x 4-¾" W x 2" D

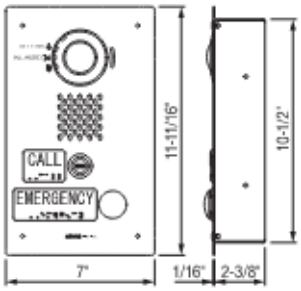
IX-SSA Audio Door Station

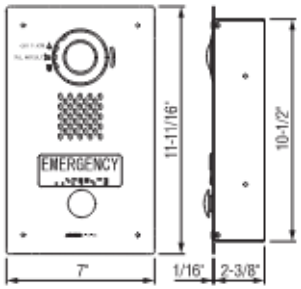


Power Source	PoE (IEEE 802.3af class 0) with PoE pass through
Power Draw	3.36W
Audio Codec	G.711 (μ-law, A law), G.722
Trigger Inputs	6
Contact Outputs	2 (24V AC/DC, 1A)
Port Security	IEEE 802.1X
Protocols	IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP, RTCP, IGMP, MLD, SMTP, FTP, DHCP, NTP, DNS
UL/cUL Listing	62368-1
Operating Temperature	-40° ~ 140°F (-40° ~ 60°C)
Ingress Protection	IP65
Impact Protection	IK08
Dimensions	10-7/16" H x 5-7/8" W x 2-3/8" D

AIPHONE

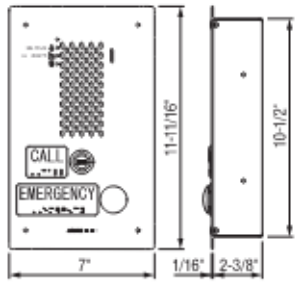
IX-DVF-2RA & IX-DVF-RA Video Emergency Station

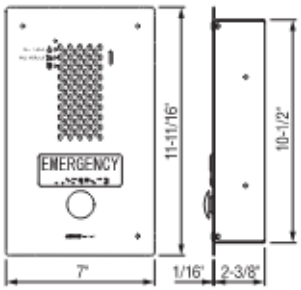




Power Source	PoE (IEEE 802.3af class 0) with PoE pass through
Power Draw	5.28W
Camera	⅓" CMOS, 1.2 megapixel
Min. Illumination	5 Lux
Audio Codec	G.711 (μ-law, A law), G.722
Video Codec	H.264/AVC, Motion JPEG
Trigger Inputs	6
Contact Outputs	2 (24V AC/DC, 1A)
Port Security	IEEE 802.1X
Protocols	IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP, RTCP, IGMP, MLD, SMTP, FTP, DHCP, NTP, DNS
UL/cUL Listing	62368-1
Operating Temperature	-40° ~ 140°F (-40° ~ 60°C)
Ingress Protection	IP65
Impact Protection	IK08
Dimensions	11-1/16" H x 7" W x 2-3/8" D

IX-SSA-2RA & IX-SSA-RA Audio Emergency Station





Power Source	PoE (IEEE 802.3af class 0) with PoE pass through
Power Draw	3.36W
Audio Codec	G.711 (μ-law, A law), G.722
Trigger Inputs	6
Contact Outputs	2 (24V AC/DC, 1A)
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Ingress Protection	IP65
Impact Protection	IK08
Dimensions	11-1/16" H x 7" W x 2-3/8" D

AIPHONE

Network Requirements Summary

The Aiphone IX Series is an IP network intercom system. IP enabled video door stations include the IX-DV, IX-DVF, IX-DVF-P, IX-DVF-2RA, and IX-DVF-RA. IP enabled audio only door stations include the IX-SS-2G, IX-SSA, IX-SSA-2RA, and IX-SSA-RA. The IP enabled master station is the IX-MV7(H), and the official app is called “IX Mobile”.

IX Series stations require a wired connection to a network (with the exception of IX Mobile), with some flexibility on choice of hardware and media. The following are requirements to keep in mind:

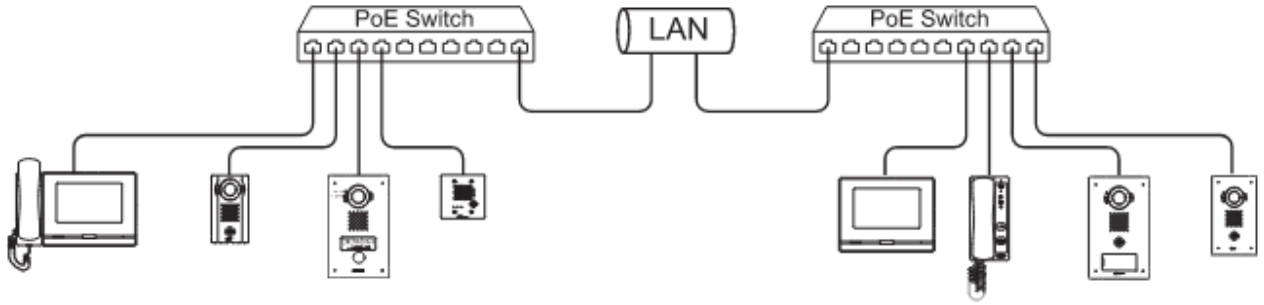
• A Class 0 PoE connection is required for all IX Series stations.
  - Class 0: 15.4 watts at PoE port; .44 to 12.95 watts at station

• All IX Series stations and mobile devices using the IX Mobile app are required to be on the same logical network. NAT routing is not possible on the IX Series, meaning public IP addresses cannot be used to reach external networks. A VPN connection is one way to enable multiple sites using the IX Series to communicate with one another.

• The IX Series can utilize either Unicast or Multicast for video broadcasting across the network.
  - When Multicast is the desired method of transmission: Any Layer 3 routing must include IGMP between switches and routers, including VPNs, to properly broadcast video between devices.

Network Layout

A network design can be as simple as a single PoE switch or as complicated as utilizing multiple switches, routers and VPN’s. The only requirement is the entire system exists on the same logical network.



Unicast and Multicast

The IX Series can utilize either Unicast (default) or Multicast to efficiently send video and paging announcements to group members. Multicast is required when paging 50 or more stations in a single group. Networks using multiple subnets will often require additional work beyond setting up subnets, VLANs, and routing between subnets if using Multicast. Unicast uses a more direct method of communication between IX Series stations, circumventing most network restrictions seen when using Multicast. Multicasts are capable of being routed, but are not routed by default on any typical Layer 3 switch or router. Multicast packets can be routed using PIM (Protocol Independent Multicast). Deciding which protocol and which method to use for a particular network layout and configuring that method is beyond the scope of this document. Please refer to the documentation of the Layer 3 switch or router for instructions.

AIPHONE

IX-MV7-HB

Touchscreen Master Station with Handset for the IX Series

DESCRIPTION

The IX-MV7-HB is an IP handset master station with a 7" touchscreen. It can be wall or desk mounted (desk stand included). It connects to a network using Cat-5e/6 cable and is SIP compliant. Audio and video of active conversations can be captured and stored on a microSD™ card. Each master station has an address book of 500 stations and can monitor a single station or scan monitor several stations with-in the address book. The master station offers line supervision and a scheduled device check of stations in its address book. It has the ability to page all units or groups of units and offers bell scheduling with 50 events per day. The master station has eight speed dial buttons that can be used to call, page, monitor, or control a contact closure. It has a built-in camera with privacy shutter. The master station can view a selected intercom's camera as well as an associated ONVIF® Profile S camera by using the picture-in-picture function. It has the ability to release the door that is associated with the station that it is communicating with. Stations can be called by using the directory or by direct dialing the station's number.

FEATURES

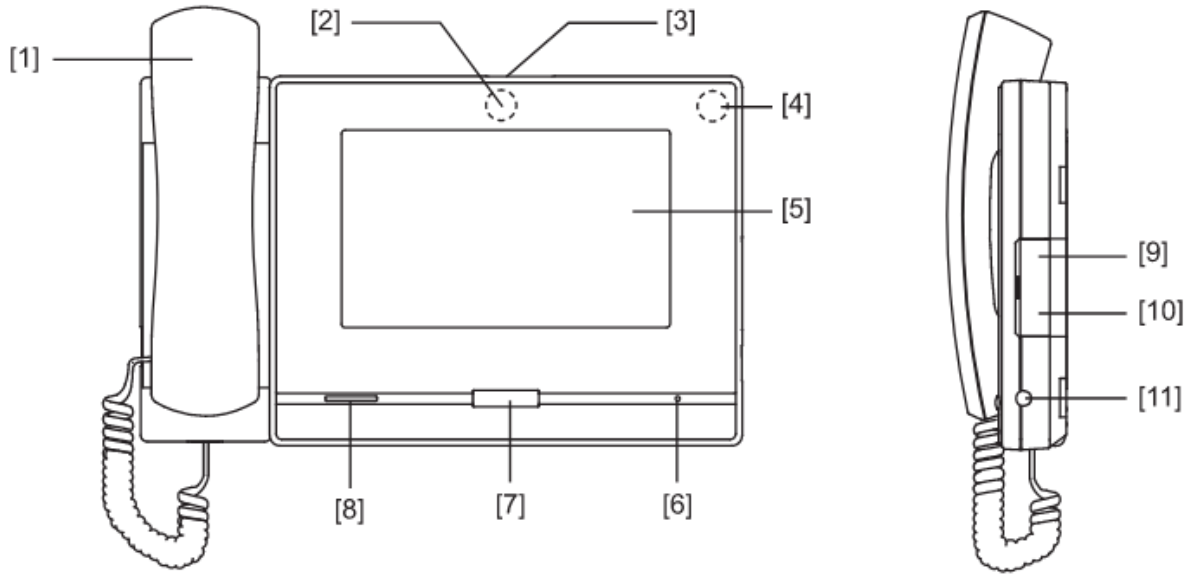
- 7" TFT touchscreen
- Fixed video camera with privacy shutter
- SIP compliant
- 500 station address book
- ONVIF® Profile S compliant
- Multi-angled desk stand (30°, 45°, 60°)
- Slot for microSD™ card
- 802.3af PoE
- Two contact outputs, Four trigger inputs
- 8Ω 0.5W speaker output
- 600Ω audio input

Aiphone Corporation
www.aiphone.com
(800) 692-0200

IX-MV7-HB

Touchscreen Master Station with Handset for the IX Series

FEATURE CALL-OUT:



FEATURE CALL-OUT DEFINITIONS

[1] Handset

[2] Camera

[3] Privacy mask cover (on top)

[4] Status indicator light (orange / blue)

[5] 7" Touchscreen (LCD)

[6] Microphone

[7] Home button

[8] Speaker

[9] Reset button (under door)

[10] Slot for microSD card (under door)

[11] 3.5mm stereo mini jack

SPECIFICATIONS

Power Source:	PoE (IEEE 802.3af class 0)
Power Draw:	4.32W
Camera:	1/3" CMOS 480p
Min. illumination:	5 Lux
Audio Codec:	G.711 (μ-law, A law), G.722
Video Codec:	H.264/AVC, Motion JPEG
Protocols:	IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP, RTCP, IGMP, MLD, SMTP, SFTP, DHCP, NTP, DNS
Port Security:	IEEE 802.1X
UL Listed:	UL 62368-1 cUL 62368-1
Operating Temp:	32° ~ 104°F (0° ~ 40°C)
Dimensions:	8-1/16" H x 11" W x 2-3/16" D

Aiphone Corporation
www.aiphone.com
(800) 692-0200

28 10 00 ATTACHMENT C – CLOSED CIRCUIT TV OVER FIBER OPTICS

OPERATION AND MAINTENANCE MANUAL
MODEL 9002/9002D RACK-MOUNTED CHASSIS

October 17, 2003

OPTELECOM, INC.
12920 Cloverleaf Center Drive
Germantown, MD 20874
Phone: 1.800.29.FIBER (1.800.293.4237)
Fax: 301.444.2299

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MSTOF FIGURES

1.2 GENERAL DRSCRIPT!OfI

The Model 9002 is a 19" rack-mountable chassis that is the mounting frame for Optelecom's line of fiber optic interfaces for voice, video and data signals. The chassis has room for eighteen 0.8" wide interface cards and one plug-in power supply. Alternately, if two supplies are used for redundancy, there is room for fifteen such cards. Three status lights on the chassis give quick indication of the Power, System, and Network operating conditions. Movable mounting ears are provided and facilitate front or rear mounting configurations.

All units contain a power and control distribution bus along tne rear of the chassis. DC power from the power supplies is distributed to the individual interface cards. The Model 9030 or 9D50 power supplies provide the 6VDC required by the interface cards.

The Model 9911 DF Q 9941 X›oc‹ Alarm, Diagnostic, and Control Card monitors the condition of the installed interface cards and provides reporting and control capability via a PC's serial communication port or the external.

Model 9002D is physically and electrically identical to the 9002, except for additional signal paths an the motherboard for operation with the Optelecom Series 9000 MPEG cards, 9923, and 9933. The 9002D may be used with any Optelecom Series 9000 card; however, the 9002 cannot be used in systems where the 9923 or 9933 MPEG cards are in use. All references in this manual for 9002 also apply to the 9002D.

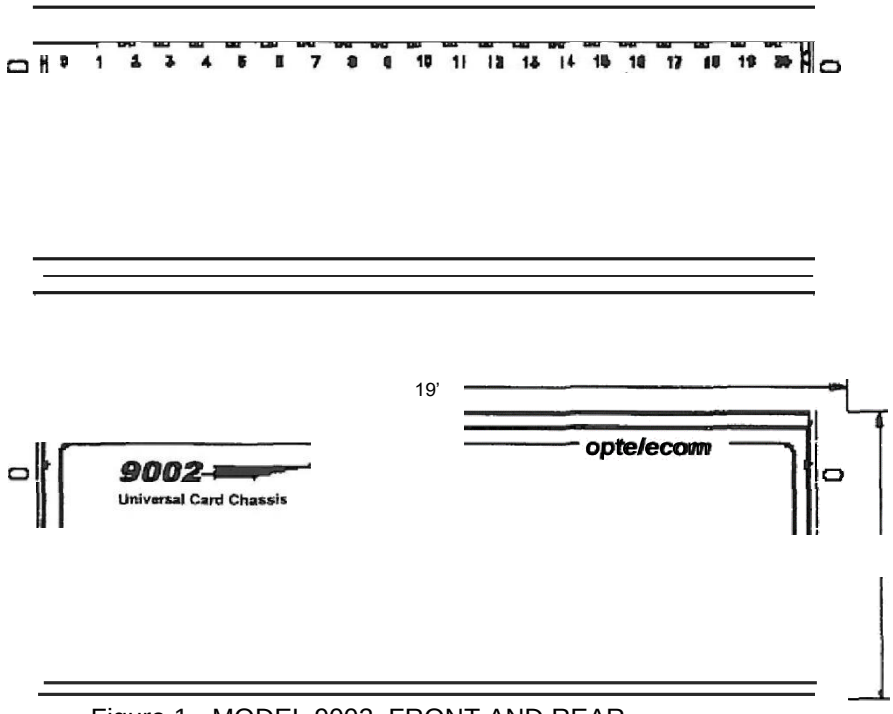

Figure 1 - MODEL 9002, FRONT AND REAR

1.2 GENERAL DESCRPTION

The Model 9002 is a 19" rack-mountable chassis that is the mounting frame for Optelecom's line of fiber optic interfaces for voice, video and data signals. The chassis has room for eighteen 0.8” wide interface cards and one plug-in power supply. Alternately, if two supplies are used for redundancy, there is room IDF fifteen such cards. Three status lights on the chassis give quick indication of the Power, System, and Network operating conditions. Movable mounting ears are provided and facilitate front or rear mounting configurations.

All units contain a power arid control distribution bus along tne rear of the chassis. DC power from the power supplies is distributed to the individual interface cards. The Model 9030 or 9050 power supplies provide the 6VDC required by the interface cards.

The Model 9911 or a 9941 xxxv Alarm, Diagnostic, and Control Card monitors the condition of the installed interface cards and provides reporting and control capability via a PC’s serial communication port or the external.

Model 9002D is physically and electrically identical to the 9002, except for additional signal paths on the motherboard for operation with the Optelecom Series 9000 MPEG cards, 9923, and 9933. The 9002D may be used with any Optelecom Series 9000 card; however, the 9002 cannot be used in systems where the 9923 or 9933 MPEG cards are in use. All references in this manual for 9002 also apply to the 9002D.

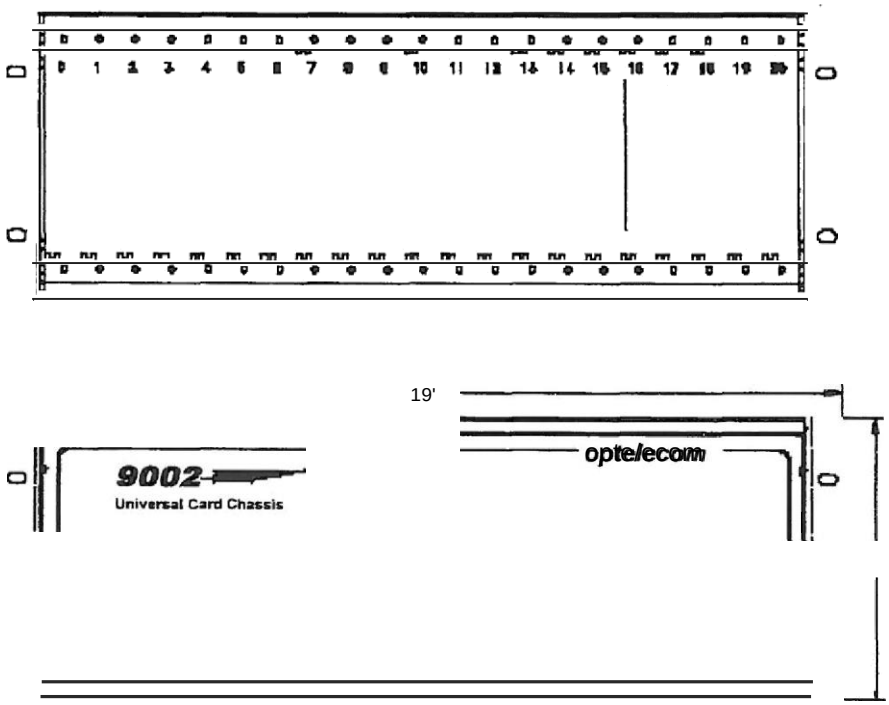

Figure 1 - MODEL 9002, FRONT AND REAR

3 MAINTENANCE

3.1 lNTRODUCTiON

This section provides preventive and corrective maintenance procedures for the System 9002 Rack Mountable Chassis. The procedure includes instructions for cleaning, troubleshooting, and repairing the unit.

3.2 PREVENTIVE MAIMTEMANCE

The following paragraphs contain the preventive maintenance information and procedures necessary to detect potential malfunctions and prevent failures that could degmde equipment performance. Refer to the instructions on MOUNTING to minimize heat build-up in the chassis.

3.3 CORRECTIVE MAINTENANCE

Corrective maintenance consists of notipg front panel indicators (LEDs), analyzing these indicators, performing the troubleshooting procedures to isolate a malfunction to an interface card or other component, and then repairing or replacing the defective card.

3.3.1 TROiJBLESHOOTING PROCEDURES

There are three indicator LEDs ort the front of the chassis.

POWER	Off	No AC input power or all power supplies failed.
	Green	Ail power supplies in the chassis are operating OK. Output DC voltage in tolerance.
	Red	One power supply (in a two power supply chassis) has an alarm condition.
SYSTEM	Green	All interface cards in the system are operating OK (or are not designed with alarms).
	Red	At least one *card* in the chassis is in an alarm condition.
NETWORK	Green	A Model 9911 Alarm, Diagnostic and Control card is in the chassis. The LED will blink when the 9911 is communicating with a remote PC.

There are no special procedures to be followed in troubleshooting the Model 9002. Stanc!ard troubleshooting procedures in accordance with good =nginesring practices should be used. The DC voltage output of each power supply can be checked with a standard voltmeter with a DC voltage scale of approx. 10 VDC.

3.3.2 REPAIR AND REPLACEMENT

There are no special procedures or techniques to be followed in repairing or replacing the Model 9002. A good practice is to move cards into the replacement 9002 before removal of the defective 9002 from the rack marking each fiber as to its location and not disconnecting the electrical cables if at all possible.

1.3 PHYSICAL DESCRIPTION

1.3.1 CHASSIS

Dimensions	Height	Width	Depth
Inches	7.0	19	8
Centimeters	178	483	203
Weight	6 lb. (13.2 kg.)		
Construction	Painted aluminum sheet metal and extrusions		

1.3.2 CAPACITIES

One power supply	18 single-wide card slots	24 Amps, 144 Watts
Two power supplies	15 single-wide card slots	48 Amps, 288 Watts

1.3.3 INDICATORS POWER, SYSTEM, AND NETWORK

1.3.4 SPECIFICATIONS Based on use of 9030A, 9030AF, 9050A, and 9050AF Power Supplies

AC PDwer lnpUt 110-240 VAC, 50-60 Hz @ 2.5 amps max. per power supply/600 watts max. per chassis

DC Power to Backplane 9050A(F) 6VDC @ 24 amps maximum per supply the 9030A(F) 6VDC @ 14 amps maximum per supply Up to two power supplies may be installed in each chassis.

Compliant with NEMA TS-1 1989 edition.

Installation af this equipment must be done in accordance with all local and national electrical codes and requirements.

2.1 MOUNTiNG

2 INSTALLATION

All chassis come with two mounting ears for bolting into a standard EIA 19" rack or equipment cabinet. The ears can be located at the front,. in the middle, or at the rear of the chassis depending on the needs of the specific installation.

There are four screw holes in the two mounting brackets by which to ”secure the chassis into the cabinet or rack.

The cards slide into the rear of the chassis. They electrically .connect to the power bus and alarm and control bus via the 36-pin, 64-pin, or 96-pin connector at the back of the card slot.

The top and bottom of the chassis are perforated for convection cooling. Do not mount (or operate) the chassis with these perforations blocked. Power supplies pan. be mounted in any card slot. When many chassis are stacked one above the other it is good to stagger the locations of the power supplies so they are not lined up vertically.

2.2 CABMNG

2.2.1 AC Power Cabling

The 110 VAC power is connected to the IEC-3 prong socket on the front of the power supply modules. A retaining clip is provided to prevent the power cable from ”accidentally being pulled out of the IEC socket. Mating AC power cords with a standard 3-prong plug on the other end are provided with the Power Supplies.

2.2.2 Alarm, Diagnostic, and Control Signal Connection

All the power supplies and many of the interface cards that UI the 9002 chassis can be remote accessed with a PC via the Model 9911 Alarm, Diagnostic, and Control card and associated software. Refer to the User’s Manual for the Model 9911 for more information.

Optełesom-nkf

9000 Series
Installation and Operation Manual

Model 9003-2
Model 9003-3/-3D
Model 9003-6/-60

-, 8-, and 6-Slot
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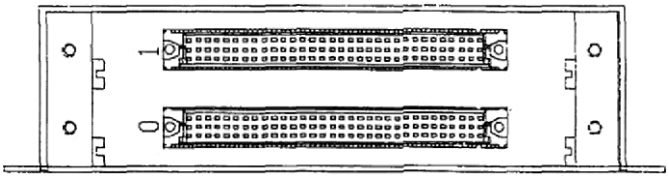
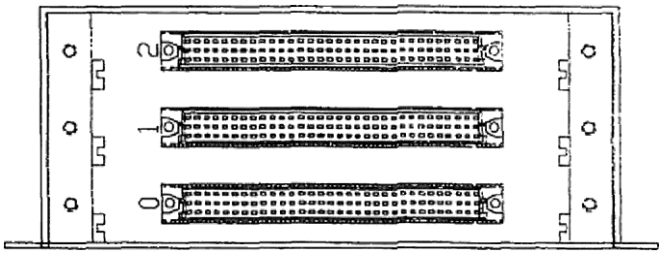
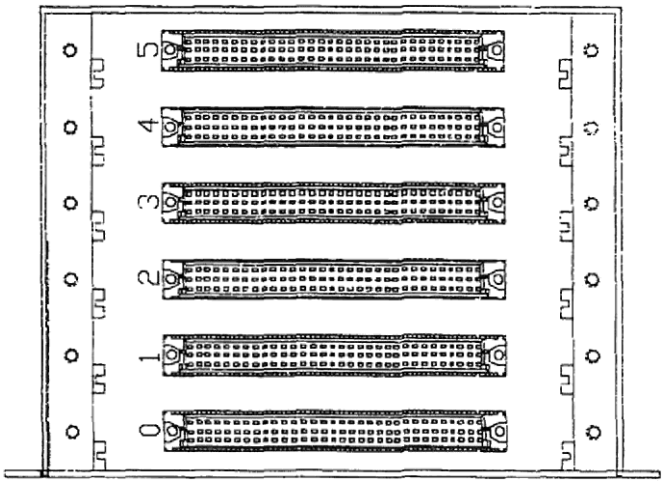


9003-2



9003-3/-3D



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Functional Description

The 9003 series of mini-chassis are designed to house all versions of Series 9000 rack-mount cards. The model numbers designate different card capacities. Table 1 below provides a model number and capacity guide.

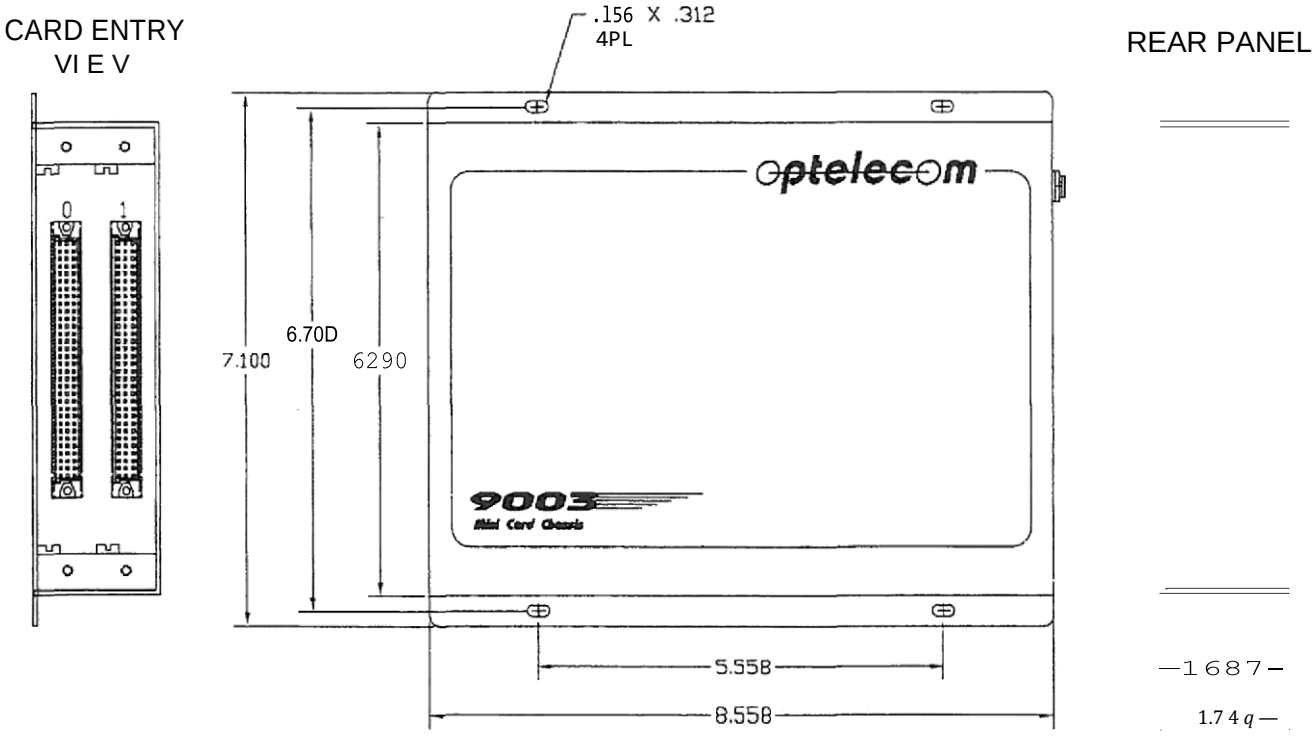
Series 9000 cards install in these mini-chassis in exactly the same manner as they do in the larger rack-mount 9002 and 9008 chassis. In addition, two of the 9003 mini-chassis models are available in the "D" model for support of the Series 9000 MPEG over IP cards.

These units are approximately 4 RU high (7 inches) and are designed to mount to a vertical surface. The chassis rely on natural convection airflow via ventilation holes in the top and bottom of the chassis. Installing the chassis horizontally defeats this functionality and may reduce the operating temperature ranpe of installed cards and/or derate the MTBF due to increased card operating temperatures. If norizontal mounting is required, an optional base is available to support the chassis. Refer to Table 1 below for the part numbers of the optional bases.

Note: It is important that the chassis be mounted vertically to assure adequate airflow for cooling.

TABLE 1 — MODEL LISTING

Model Number	Dig"ital Version	Number of Cards Supported	Optional Horizontal Mounting Base P/N	Recommended Power Supply(ies)
9003-2	N/A	2	23324-1	90J0 (to 4 Amps)
9003-3	9003-3D	3	23324-2	90J0 (to 4 Amps)
9003-6	9003-6D	6	N/A	9010 (to 4 Amps) 9020 (to 9 Amps)



FIaURE 1 — 9003-Z/2D

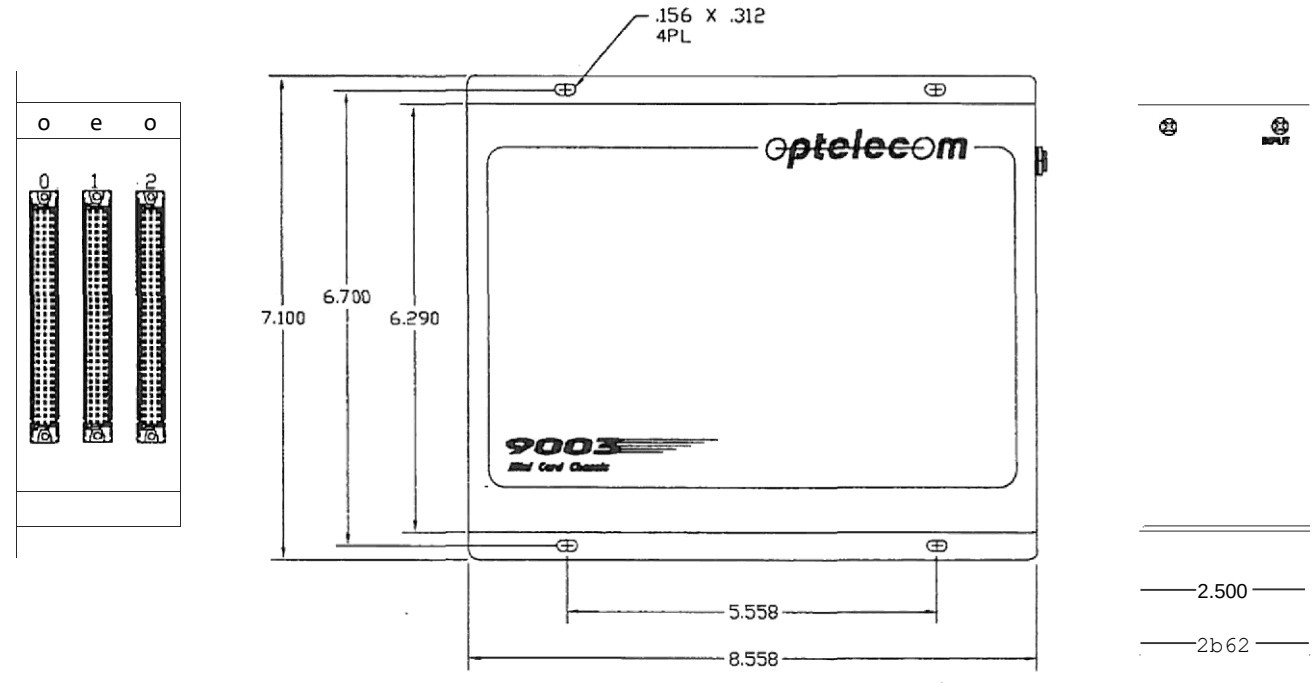


FiGURE 2 — 9003-3/30

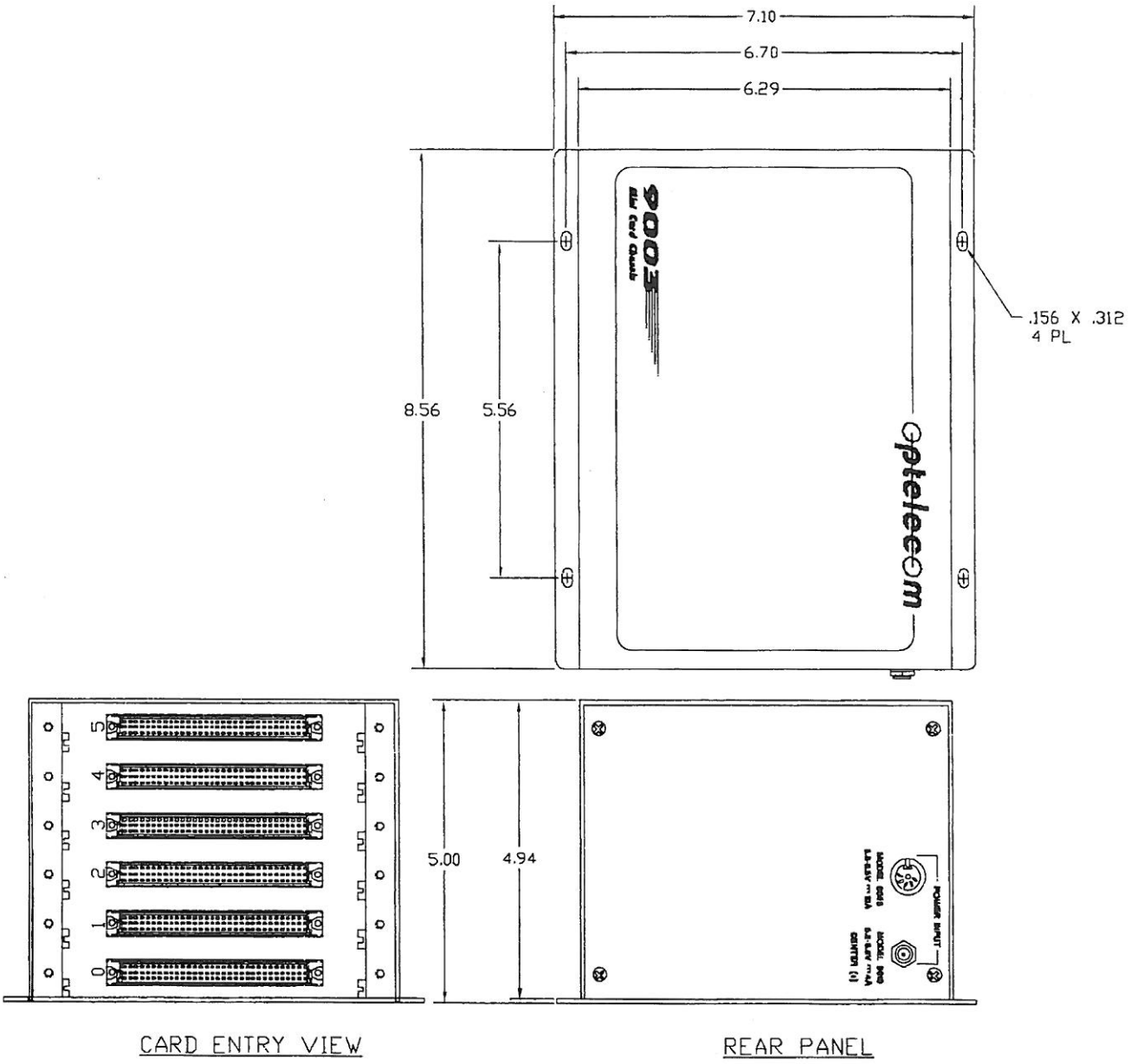


FIGURE 3 — 9003-6/6D

TABLE 1 — CHASSIS CARD CAPACITY	
Model Number	Card Slots
9002-2	2
9003-3 and 9003-3D	3
9003-6 and look-6D	6

For all chassis, the slot numbering convention is s/of I is on *the left* when facing the card insertion side of the chassis.

NOTE: Only an approved external SELV source capable of providing 6VDC at 4 amps or 6VDC at 9 amps may be used to power tnis equipment. The SELV source used must provide einforced insulation from the mains for the chassis. Furthermore, the approved SELV source must contain an AC power disconnect device for the equipment that is positioned within easy reach of the operator's position for the chassis.

Power Requirements

The table below lists the power requirements for each of the Chassis.

Chassis	Voltage	Current*	Connector
9003-2	6VDC	4 amps max.	Coaxial
9003-3 and 9003-3D	6VDC	4 ampsmax	COaXial
9003-6 and 9003-6D	6VDC	4 amps max.	LObxibl
		9 dMDs max.	6-pin DIN

“Maximum current @ 50° C

Power Supplies

Optelecom offers power supplies for all products; the recommended supplies are selected to match normal operational conditions that are specified in individual data sheets. Special applications may require a different recommendation; in those instances, contact the factory for assistance.

In-Line or Wall Module Supplies

These units are connected to standalone communication modules. AU wall-mounted supplies plug directly› into a standard 1J0 VAC/60 Hz wall outlet, convert the AC vol:age to DC, and connect to the communication module through a pigtail wire that is terminated in a snecific connector selected to match a specific module connector. In-line suDplies will accept input power from a 110 to 240 VAC/50-60 Hz source and are equipped with a standard IEC power input cable that is selecteo to match the specific power source plug configuration.

Configuration and Connection Guide

Cazd Insertion

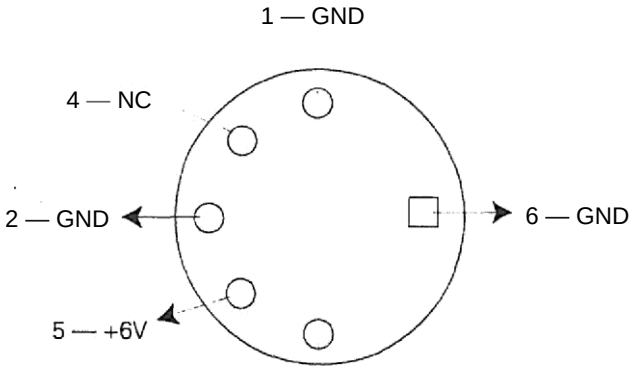
All pluggable cards can be insened in any slot of the chassis without affecting their functiona City and can alsa be "hot swapped" (insened and removed without turning off the chassis power) without affecting the operation of other cards in the chassis. After the card is fully seated, the top and bottom retaining screws should be hand-tightened to secure the card. Open slots should be covered with the 9996 one-slot or 9998 three-slot blank covers to maintain emission and safey approvals.

Power Connection

Model 9003 versions are connected to their in-line power supplies at the rear of the chassis. The Model 9010 oower moduJe uses a miniature, right-angle, coaxial female power plug; the Model 9020 uses a Spin DIN female plug for chassis connection. The 110-240 VAC/50-60 Hz main power s connected through a standard IEC AC line power cord. Various power cords are available for non-U.S. applications; please consult the factory.

A. 9010 Power Supply Connection
   6VDC coaxial input connection
   Center +
   Outside —

B. 9020 Power Supply Connection
   6VDC 6-pin DIN input connection



3 — +6V

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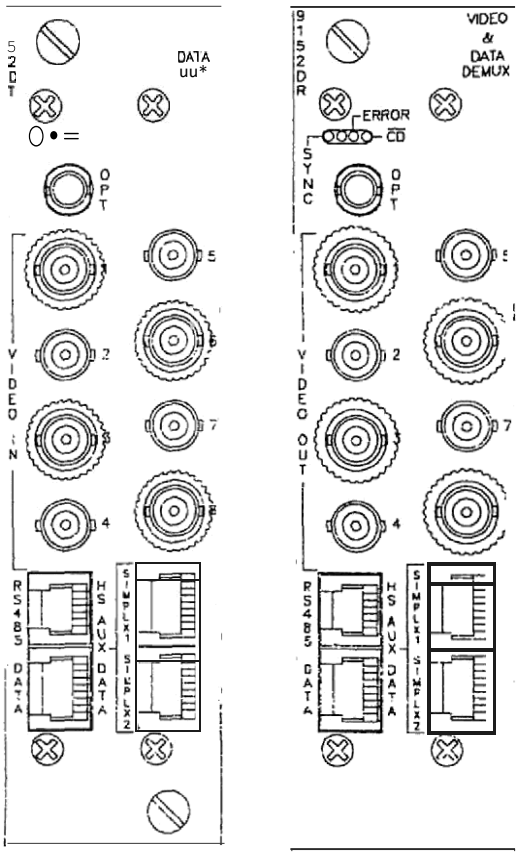
Optelecom-nkf

9000 Series
Installation and !Uperation Manual

Model 9152DT
@odel 9352DR

Digital Eight channel Vicieo/Five Channel Data 1'!ultipIexer/Transmitter anJ Receiver/Demultiplexer Cards

For I = high quality transmission of eight channels of composite baseband video and tive channels of data in one direc iGn over one optical fiber



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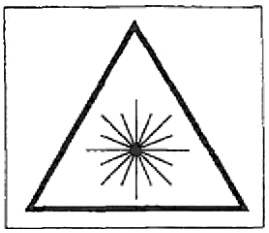
Note 1 This product contains a Class l!Ib laser or LED fiber optic emitter. The foIJowing safety precautions apply.

Warning: Do not disconnect the fiber optiE connector while the unit is powered up. Exposure to Class IIIb invisible optical radiation is possible when the fiber optic connector is disconnected while the unit is powered up.

All laser versions have one of two DANGER labels, shown below, found either on the front panel and/or on the edge of the circuit card containing the laser, near the fiber optic connector.

DANGER
Invisible Laser Radiation
When Open AVOID DIRECT
EXPOSURE TO BEAM



Caution: Using c.ontrols, making adjustments, or performing operations other tnan those specified rriay result in hazardous radiation exposures. Exposure for only second5 may cause perman=nt eye damage as well as other injuries.

Note 2 This assembly contains parts sensitive to damage by electrostatic discharge (ESD). Use ESD precautionary procedures when touching, removing, or inserting parts or assemblies.

Functional Description

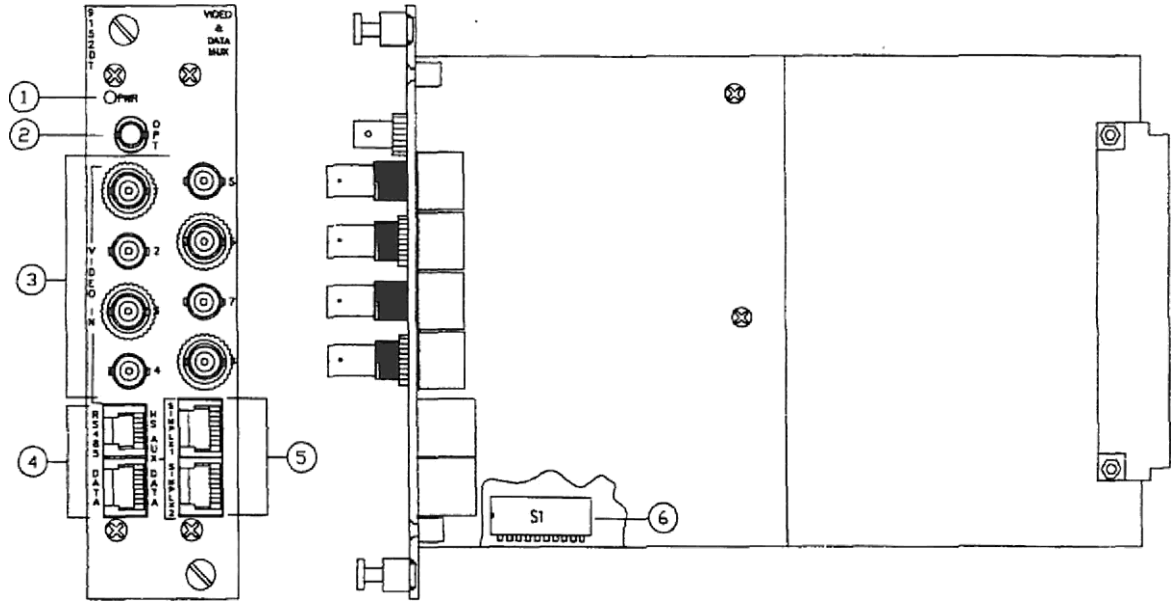
The Model 9152DT Multiplexer/Transmitter combines eignt composite video baseband signals by implementing a 10-bit linear analog-to-digital conversion on each signal at a 15 MHz rate, combining the sag nals with five input data signals using Time Division Mu!t‹plexing FDM) techniques and transmitting the data via one optical fiber.

The Model 9152DR receives the optical signal from the transmitter, separates the composite data into eight digital video data streams and five data streams, does an digital-to-analo 9 conversion of the eight video data streams yielding eight composite video outputs and five data oUtputs.

The 9152DT and 9152DR are compatible with the 9000 series card chassis, occupies two card slots each. and operate on 6 VDC from the appropriate chassis power supply.

9152DT Indicator, Connector, and Dipswitch Locations and Function

FiGURE 1



1. POWER INDICATOR
   When illuminated, The green LED indicates that the card :s receiving power from the power supply.

2. OPTICAL OUTPUT PORT
   The optical fibe cable connector is connected to this port for transmission of the optical signal to the 9152DR receiver/demux.

3. VIDEO INPUT CONNECTORS (EIGHT)
   Compatible with BNC connected coaxial cables, these connectors accept the eight video input signals.

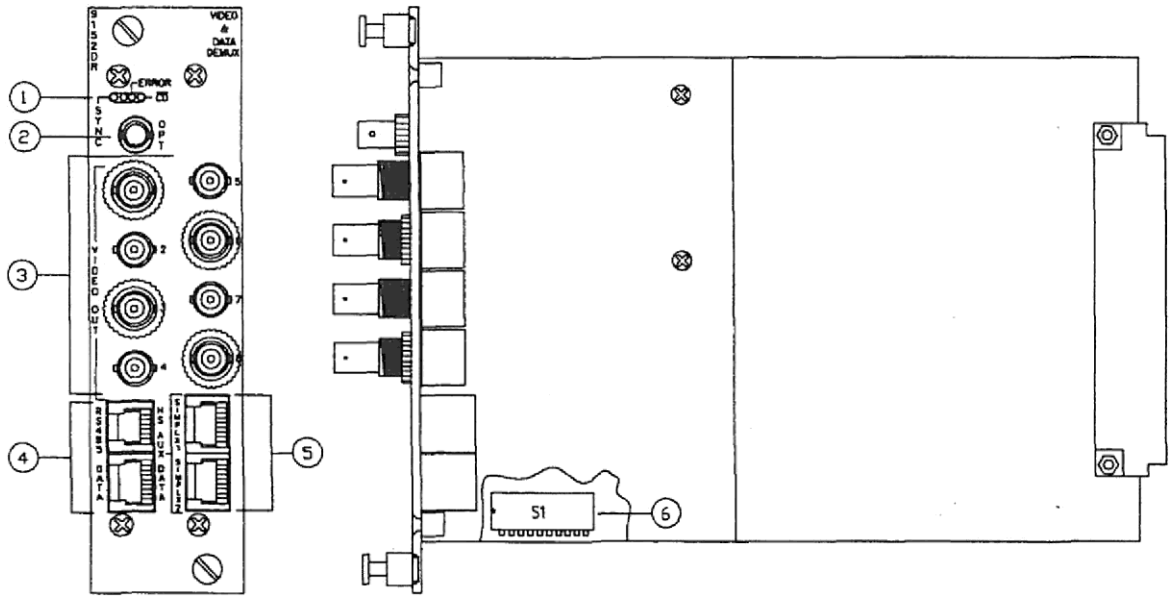
4. SIMPLEX DATA INPUT CONNECTORS (TWO)
   A. The RJ45 "DATA" port accepts two input data signals, one RS232 and one switch-selectable RS422, RS48 , or Manchester (biphaset signal.
   B. The RJlZ "RS485" ponaccepisiheinputoTan RS485-compaflb!e data signal

5. SIMPLEX HS AUX DATA INPUT PORTS
   Each of these two RJ45 ports interface with a Model 9g6i-C or 9962-C ODtion Module Mux/Demux, providing for the transmission of its composite data output signal via the 9152DT to the 9152DR. By using up to two Mode! 9962-C Option Modules connected via the HS ports, up to 32 channels of audio or up to 16 channels of data may be transmitted in addition to the 8 video channels over the same optical fiber. The shielded Cat5/6e cable connecting the two HS Aux Data ports should not exceed 4 feet t1.3 m).

6. DATA INTERFACE CONFIGURATION DIPSWITCH
   This ten-position dipswiich allows the user to select the desired data interface compatibility of the configurable input Dn the "DATA" pop.

9152DR Indicator. Connector, and Dipswitch Locations and Function

FIGURE 2



1. STATUS INDICATORS

a. SYNC — When illuminated, this preen LED indicates that the data demultiplexer is receiving a good signal and is synchronized with the multiplexer.

b. ERR — When illuminated this ye/low LED indicates that there are errors being detected in the eceived optical data stream.

c. CD — When illuminated, this *red* LED indicates that the receiver is not receiving sufficient optical power to operate. (The optical carrier is not being displayed.) For the LHS version, this LED is not functional.

2. OPTICAL INPUT PORT

The optical fiber cable connector is connected to this pDrt to receive the optical signal from the 9152DT mux/transm itter.

3. VIDEO OUTPUT CONNECTORS (EIGHT)

Compatible with BNC connectors, these connectors output the eight received video signals.

4. SIMPLEX DATA OUTPUT CONNECTORS.(TWO)

A. The RJ45 “DATA" port outputs two data signals, one RS232 and one switch-selectable RS422, RS485, or Manchester (biphase) signal.

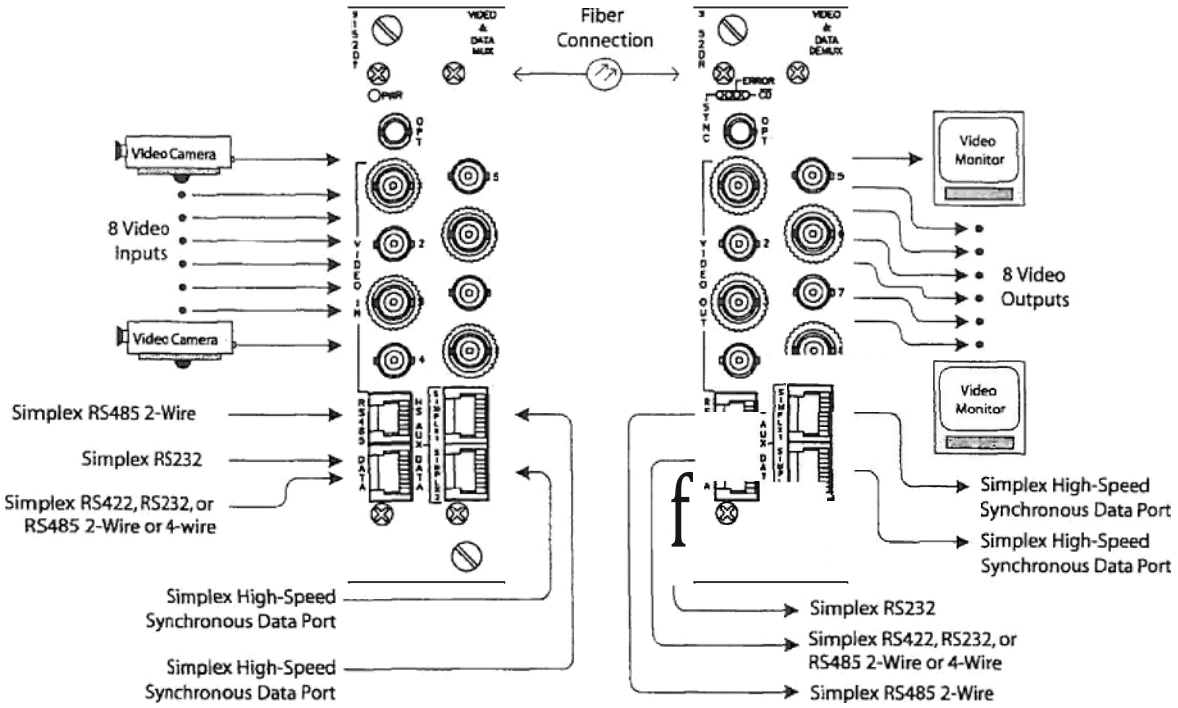
B. The RJ12 “RS485” port outputs an RS485-compatible data signal.

5. SIMPLEX HS AUX DATA OUTPUT PORTS
   Each of these two RJ45 ports on the 9152DR interface with a Model 9961-C or 9962-C AtJxil/ary Audio/Data Mux/Demux cards to transport the multiplexed composite data transmitted via the 9152DT from the HS AUX Data Input Ports. These high-speed ports greatly expand the transmission capability of the 9152DT/9152DR pair. The shielded Cat5/6e cable connecting the two HS Aux Daia ports should not exceed 4 feel (1.3m).

6. DATA INTERFACE SELECT DIPSWITCH
   This ten-position dipswitch allows the user to select tne desired data inierface compatibility oJ the configurable data output on the “DATA” pop.

9152DT/9152DR Configuration and ConneNion Guide

QGURE$



To install, connect the video inputs to the 9152DT, connect the video monitors or other video receptors to the 9152DR, and connect an approoriate optical fiber between the 9152DT and 9152DR optical ports. Connect data signal sources or destinations, as required, to ‹he ”DATA” and “RS485" pons per the following Built-In Data Connection section. If the Mode! 9961-C or 9962-C add-on option interface module mux/demux host units are to be used, ptug the CAT-5/6e data cabJe from the unit(st into the HS AUX data port(s) as required. The shielded Cat5/6e cable connecting the HS Data pons to accessory cards should not exceed 4 feet (1.3m) in length.

Built-In Data Connection and Configuration

DATA ANO RS48S PORTS

There are four data interface Dorts on the 9152 DT and 9152DR. Two of them are the "DATA" port and the "RS485" port that are primarily used for the transmission of RS232, RS422, RS485 or Manchester (biphase) PTZ data.

The "DATA" port supports two data channels, one a full-time RS232 channel and the other a configurable data channel that is dipswitch programmable for RS422, RS485 2- or 4-wire, or Manchester operation. Both channels are implemented via the RJ45 connector marked "data'The RS232 channel is a dedicated channel. There are no dipswitch settings associated with or required for operation of this channel. The configurable channel must be programmed by setting dipswitch 81 on the board for proper operation. Refer to Table 1 for switch settings and tD Table 2 and Figures 4, 5, 6, and 7 for connection and pinout information. Refer to the section on termination to determine when the terminations should be ei1abled ION) and when it should be disabled (OFF).

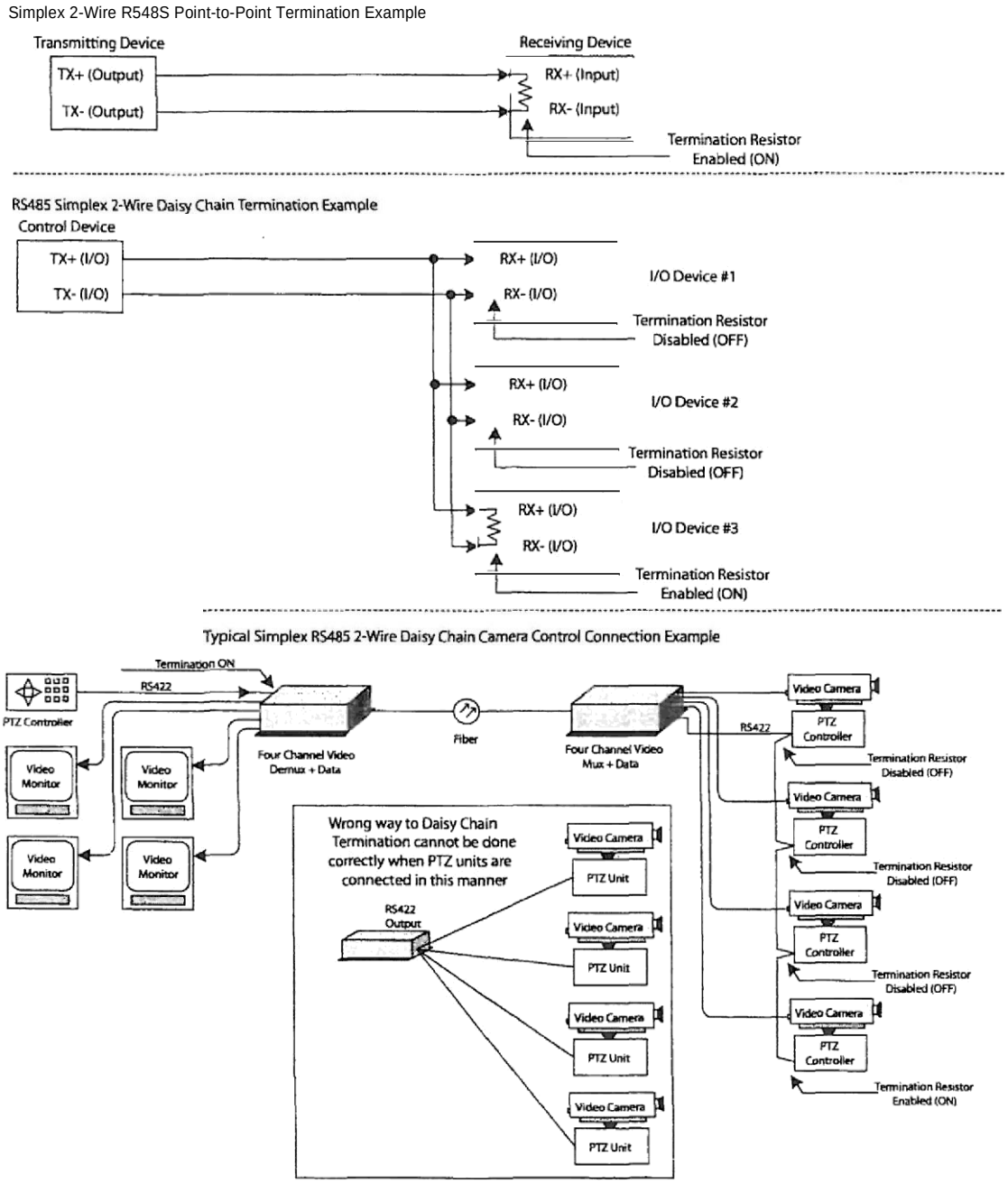
The "RS4B3" port suDports a dedicated 2-wire RS485 channe!. Tne only dipswltch setting equired for this port is the termination setup. Tables 1 (above) and 3 contain switch setting and pinout information. Connection information is found in Figures 8 and 9. Refer to the next section on Termination Rules to determine when the terminations should be enabled ION) and when it should be disabled TOFF).

TABLE 1 — SwrFcu SETTINGS

Port	Data Type	Te<>oioa iun applies to 91S2DT only	Dipsw"ftch 1	2	3	4	5	6	7	8	9	10
DATA Port (RJ45)	RS422	Terminated			On	On	On	On	On	Off	4U	I OP
		Unterminsted			Off	On	On	Off	Off	Off	Off	Ofi
	RS485 4-Wire	Terminated			On	On	On	On	On	Off	On	Off
		Unterminated			Off	On	On	Off	Off	Off	On	Off
	RS485 2-Wire	Terminated			On	On	On	On	On	Off	On	On
		Unterminated			Off	On	On	Off	OSl	Off	On	On
	Manchester			On	Oft	Off	On	On	On	Off	Off	
RS485 Part (RJ12l	RS485 2-Wire	Terminated	On	n								
		Unterminated	Off	Off								

FIGURE 7

Terminating RS485 Connections

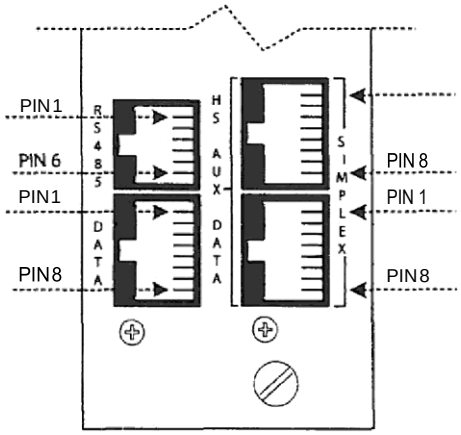


HS AUX DATA PORTS

in addition to the "DATA' and "RS485" ports on both the DT and DR units, there are two HS AUX DATA INPUT ports on the 9152DT and two HS AUX DATA OUTPUT ports on the 9152DR. Each of these ports is capable of carrying asynchfonous RS422 data at rates from DC to 1.5 Mbps (10X oversampled) in one directiDn from the trar\smiaer t9152DT) to the receiver (9152DR). These ports can carry synchronous data utilizing the 15 MHz Transmit Clock and Receive Clock outputs provided.

Although these pons can be used for general purpose RS422 applications, they are primarily configured to support the Model 9961-C Four Channel and 9962-C Eight Channel Auxiiiary Data/Audio Mux/Demux Cards. Wneri mated with the host Model 9152D units, these cards operate in simplex mode supporting either four or eight Data/Audio Option Modules. To install, connect a straight through Category 5 jumper cable (provided with the 996X-C) from the 996a-C or 9962-C to either of the HS AUX DATA PORTS on both the 9J52DT and 9J52DR. This provides the separate mux/demux card access to the significant data transmission capability of the 9152DT/DR to transpon its data without using extra optical fibers. The shielded Cat5/6e cable used should not exceed 4 feet (1.3m).

FIGURE g



RS485, Data, and
High-Speed Simplex Ports

OPTICAL

TxTypa	LDS	LD	LD	LDH	LDH	LD3	L03	LD3(X)'	LD3(X)'
Tx Wavelength	850	13t0	1310	1310	1310	4S5D	1560	1270-J610	1270-1610
Mating RxType	S	L	LHS	L	LHS	L	LHS	L	LHS
Power Out — 50 }tm	–5	–4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Power Out — B2.B jam	–5	–4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Power Out - 9 km	N/A	–4	–4	0	0	0	0	0	0
Rx Optical Input Sens. - 60 km	—19	-24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rx Optical Input Sens. — 62.5 pm	-19	-24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rx Optical Input Sena. - 9 km	N/A	-Z4	–32	-14	–32	—24	-32	-24	-32
Rx Maximum Optical Input		-3	—10	—3	-)0	–3	—10	–3	—10
Link Budget - 50 km	14	20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Link Budgat - 62.6 km	14	20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Link Budgat - 9 km	N/A	20	28	24	32	24	32	24	32
Estimated Distance — 50 pm••	1.0	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Estimated Distance - 62.5 pm' °	0.8	0.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Estimated Distance - 9 pm'	N/A	48	71	60	82	84	IN6	48-B4	71-116

' Replace X with A through W to rapresenr *CWDM wevelangths par the tabla below*
' Range based on lo9ses ot 3. D dB/km B 850 nm or 1.0 dB/km @ J3 IO nm far 62.5/)25 triuttimade fiber. 0.35 dB/km ¥ t3l0 nm or 0. !5 dB/m 0 *t5S0 nm tor singlamode* fidsr, *and Includes a 3 dB satety factar*
° Range limited by hber bandwidth on multimade liber vars/ons; estimates 6arsd *on 300 MHz/km* /76ar specification.

CWDM Letter Code	Wavelength	CWDM Letter Code	Wavelength
A	1470	N	1290
B	1490	P	1310
C	1510	Q	330
D	1530	R	1350
E	1550	S	1370
F	1570	T	1390
G	1590	U	1410
H	1610	V	1430
M	1270	W	J450

VIDEO

Video Format	NTSC, PAL, SECAM
Voltage	1V p-p, 75a
Bandwidth	2Hz to 6.5 MHz
Differential Gain	10.7% typ.
Differential Phase	<0.7° typ.
Video SNR	?67 dB over usable fiber ranpe lweighted per RS250 standards
E¥fCDding	10 bit Linear PCM
Sampling Rate	15 MHz
Bit Rate Over Fiber	1.44 GBps

DATATRANSMISSION BY PORT

Data Port	
Connector	RJ45
Function	Simplex RS232 plus switch-selectable RS422 or RS485
Data Rate	DC to 115.2 kbps
RS485 Port	
Connector	RR 12
Function	Simplex RS485
Data Rate	DC \o 1J 5.2 kbps
HS AUX DATA Port (2)	
Connector	RJ45
Function	Simplex RS422
Data Rate	DC to 1.5 MBps, asynchronous 15 MBps, synchronous

POWER

Requirements	1.4A @ 6VDC
Source	Chassis backplane

PHYSICAL

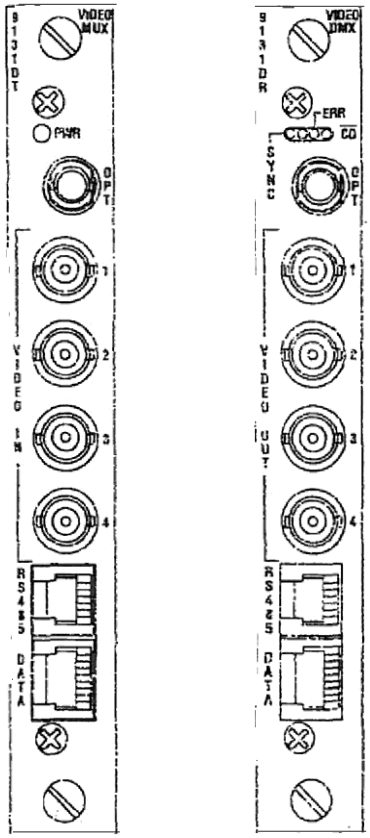
Dimensions (in inches)	6.15 H x J.6 W x 8.6 D
Weight (in pounds)	1.01

Optelecom-nkf

9000 8eries
Installation and Operation IVlanual

bi«del 9131DT
@odel 9181DR

P@ Four Chanr›e Video/Three Channe
"3al Mait.iixer/Trarsmiemnc
R.eceiver emukiDtexer Caros



For the= :nigh quality transmission of four channels of cnm;ocsi*.a baseband video and three channels of ciata in one direction cover one cpticat fiber

UM50245. f6nus! 913\DT/DR. SCO 21935, Rev. C

Note 1 This product contains a Class lJlb laser or LED fiber optic emitter. The following safezy precautions appiy.

Warning: Do not disconnect the fiber optic connector 'wh:Ie the unit is powered up. EXDGSUF° to Class Illb invisible optical rdcliatiDn is pDSSible when the fiber optic connector is disconnected while the unit is powerecl up.

All laser versions have one of two DANGER labels, shown beIo'a', found either on the front panel and/or on the edge of the circuit card containing the laser, near the fiber optic conn=ctor.

DANGER
In\•isible Laser Radiation
When ODen AV?>tD DIRECT
EXPLJSURE TO f3EAIVi

Caution: Using controls, making adjustments, or performing operations other than those specified may result in hazardous radiation exposure. Exposure for only seconds may cause permanent eye damage as well as other injuries.

Note 2 ! nis assembly contains par's sensitive° to ôamage b\ electrostazic d‹scharge (ESD!. Use ESD precautionary orocedurr°s when touching, remr›v ng, or ins°n.mg parts or assemblées.

Table of Contents

Functional Description

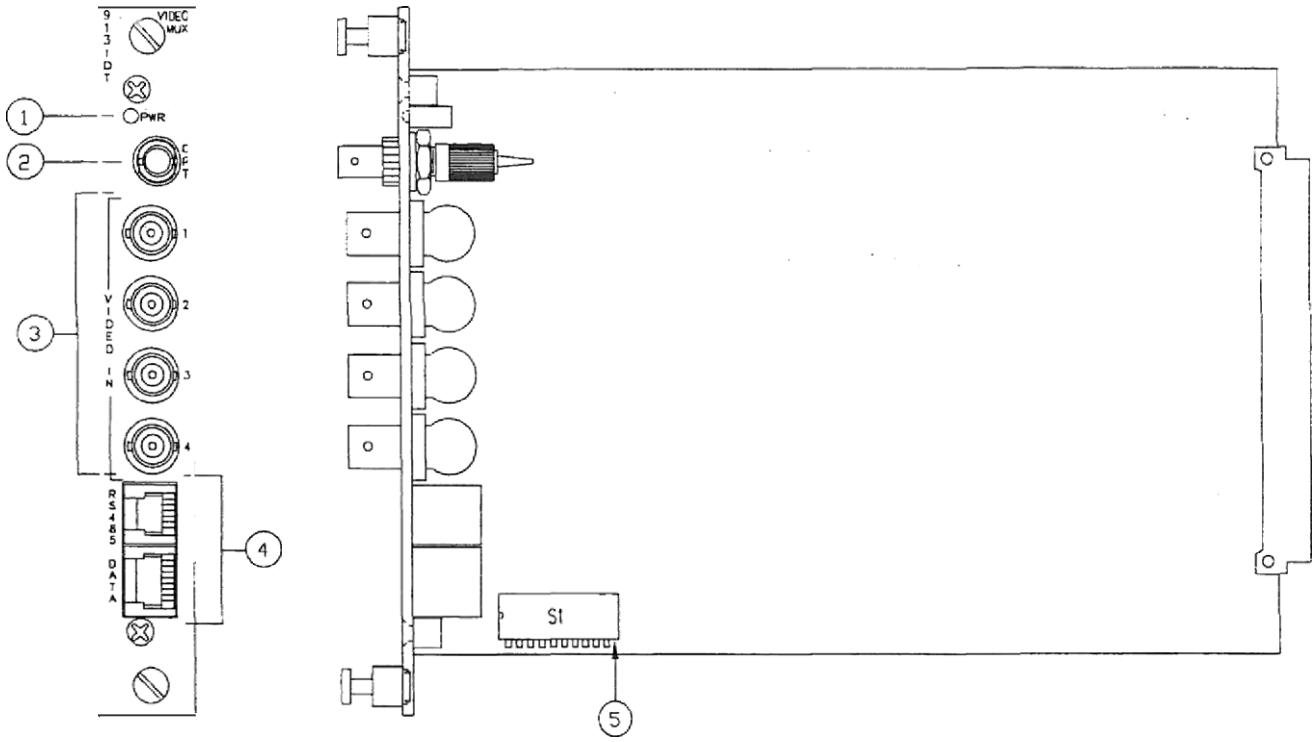
The Model 9131DT Must pleXer/Transmitter combines four composite video baseband signals by implementing a 10-bit linear analog-to-digital conversion on each video signal at a 15 MHz rate, combining the signals with three input data signals using time Division Multipiexing (TDM) techniques and transmitting the data via on= optical fiber.

The Mode! 9131DR receives the optical signal from the iransmitter, separates the composite data into faur digi1al video data streams and three data streams, does an digital-to-analog conversion of the four video data streams yielding four composite video outputs and three data outputs.

Tne 9131DT and 913a DR are compatible with the 9000 series card chassis, occupy one card slot each, and operate on 6 VDC from the appropriate chassis power supply.

9131DT Indicator, Connector, and Dipswitch Łocations and Function

FiGURE 1



1. POWER INDICATOR
   When illuminated, the gzeen LED indicates that the card is receiving power from the power supply,

2. OPTICAL OUTPUT PORT
   The optical fiber cable connector is connected to this port for transmission of the optical signal to the 9131 DR receiver/demux.

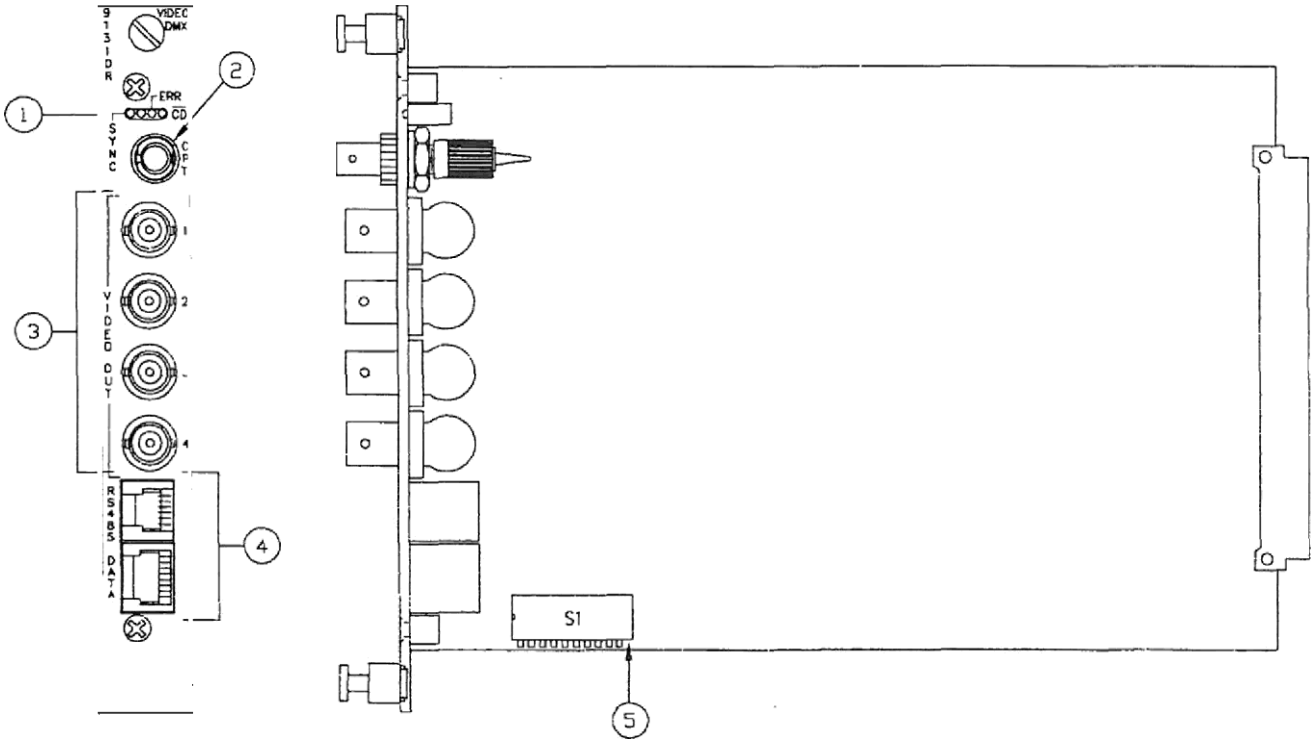
3. VIDEO iN uT conNzCTORS (FOUR) (75a)
   Compatible with BNC connected coaxial cables, these connectors accept the four video input signals.

4. DATA INPUT CONNECTORS (TWO)
   a, The RJ45 "DATA" pos accepts two input data signals, one RS232 and one switch-selectable RS422, RS485, or Manchester (biphase) signal.
   b. The RJ12 "RS4B5" port accepts the input of an RS485-compatible data signal.

5. DATA INTERFACE CONFIGURATION DIPSWITCH
   This ten-position dipswitch allows the user to select the desired data Interface compatibility of the configurable input on the "DATA" port.

9131DR Indicator. Connector, and Dipswitch Locations and Function

FIGURE 2



1. STATUS INDICATORS
   a. SYNC — When illuminated, this yzeen LED indicates thai the data demultiplexer is receiving a guod signal and is synchronized with the multiplexer.
   b. ERR — When illuminated, this yefiow LED indicates that there are errors being detected in the received optical data stream.
   c. CD — When illuminated, this *red* LED indicates that the optical receiver Is not receiving sufficient optical power to operate. (The optical carrier is not detected.)

2. OPTICAL INPUT PORT
   The optica! fiber cable connector is connected to this port to receive the optical signal from the 9131DT mux/transmitter.

3. VIDEO OUTPUT CONNECTORS (FOUR) (75U)
   Compatible with BNC connectors, these connectors output the four received video signals.

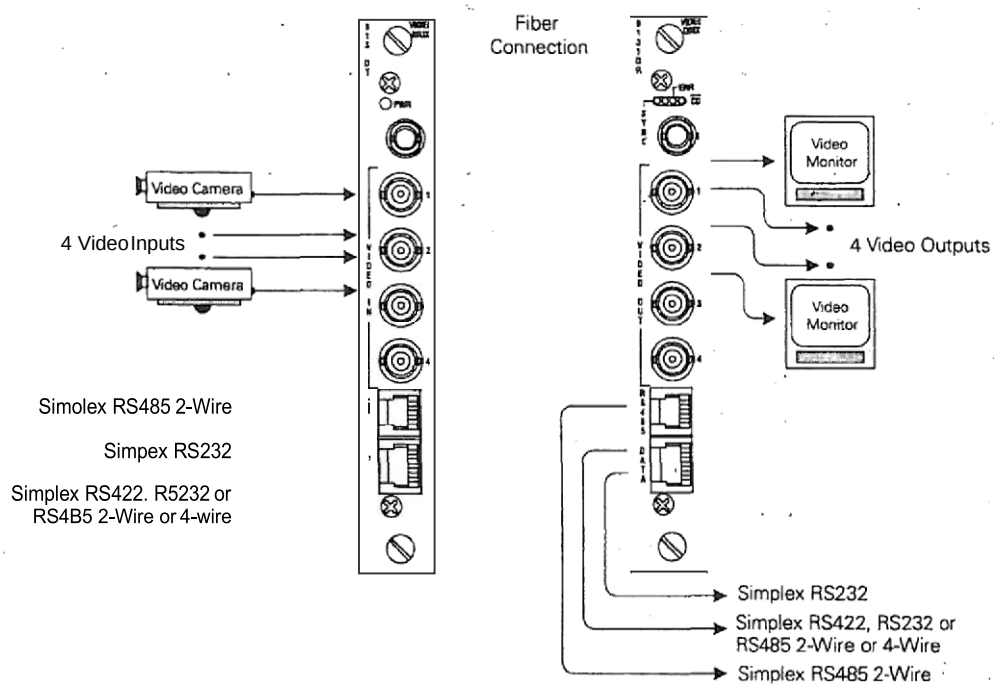
4. DATA OUTPUT CONNECTORS (TWO)
   a. Tne RJ45 ”DATA“ port outputs 1wo data signals, one RS232 and one switch-selectable RS422, RS485, or Manchester fbiphase) signal.
   b. Tne RJ12 “RS485“ port outputs an RS485-compatible data signal.

5. DATA INTERFACE SELECT DIPSWITCH
   This ten-position dipswitch allows the user tD selecl the desired data interface compatibility of the configurable data output on the ”DATA" pot.

9131DT/9131DR Configuration and Connection Guide

To install, connect the videD inputs to the 9131DT, connect the video monitors or other videD receptors to the 9 31DR, and connect an appropriate optical fiber between tne 9131DT and 9131DR optical ports. Connect data signal sources or destinatiDFIS, as required, to the “DATA" and "RS485“ ports per the following Built-In Data Connection section.

FIGURE 3



Built-In Data Connection and Configuration

There are two port inteJaces on the 9131DT and 9131 DR, me "DATA" port and the "RS485" port.

The "DATA" port supports two data Channels, one a fuJ!-time RS232 channel and the other a configurable data channel that is dipswitch programmable for RS422, RS485 2- or 4-wire. or Manchester operation. Both channels are implemented via the RJ45 connector marked ”data The RS232 channel is a dedicated channet. There are no dipswitch settings associated with or required for operation of this channel. The configurable channel must be Drogiammed by setting dipswitch SJ on tne board for prooer operation. Refer to Table 1 for switch settings and to Table 2 and Figures 4, 5, 6, and 7 for connection and pinout information. Refer to the section on termination to determine when the terminations should be enabled ION) and when it shcu'cl be disabJed (UFF).

TABLE 1 — SWITCH SETTINGS

Port	Data Type	Termination	Dipswitch 1	2	3	4	E	S	7	8	9	10
DATA Pnrt (RJ45)	RS422	Terminated			On	On	On	On	On	Off	Off	Off
		Un'errninated			Oft	On	On	Off	Off	OSl	Ofi	Cft
	FS4P5 -Wire	terminated			On	On	in	Un	On	Off	"On	Off
		Untermina eo			Off	On	On	Off	Off	Ofi	On	Off
	RS485 2-Wire	Terminated			On	On	On	On	On	Oh	On	On
		Un‹erminated			Oft	On	On	Off	Off	Off	On	On
	Manchester				On	Off	Off	On	On	On	OF	OF
RS485 PDF (RJJ2)	RS485 2-Wire	ierminated	On	On								
		Unte*minated	Off	Ofi								

Operation with PixelVue PC/Windows System Management Software

The 9131DT and 913\ DR permit alarm and diagnostic management via the PfxelVue PC/Windows System Management Software. To do this requires the installation of a ModeJ 9911 IRS232/RS485) Network Interface Card in the same chassis with the 9131DT or 9131DR.

The 9131 s supply the following information via the management system:

9131DT

1. Video Input PresenVNot Present at each oJ the four video inputs
2. Optical Emitter Drive Current

9131DR

1. Video Output Present/Not Present at each of the four video outputs
2. Received Optical Power
3. Dem\Jx In/Not In Sync

Specifications for the 9J3JDT and 9131DR

CIPTlCAL

TransmitterVersion	Fiber Size	LDS	LDL	LD	LDH	LD3	LD3X[1]
Wavelength (nm)		850	1310	1310	1310	1550	1470-1610
Receiver Version		S	LM	L	L	L	L
Tx Optical Power Output (dB) minimum	50/125	N/A	–4	–4	N/A	N/A	N/A
	62.5/ 25	–6	–4	–4	N/A	N/A	N/A
	09/125	N/A	N/A	–4	0	0	0
Rx Optical Input Sens. (dB) for propel" operation	50/125	-20	N/A	—29	N/A	N/A	N/A
	62.5/125	-20	—29	—29		N/A	N/A
	09/125	N/A	N/A	—29	-29	—29	—29
Rx Max. Optical Input		–3	1	1	1	1.	1
L.ink Budget	50/125	14	N/A	25	N/A	N/A	N/A
	62.5/125	14	25	25	N/A	N/A	N/A
	09/125	N/A	N/A	25	29	29	29
Estlmateo Range (km)' °	5C,'12fi	FT/A	8	1.B	N/A	N/A	N/A
	62.5/125	1.2	B	1.B	N/A	N/A	N/A
	09/125	N/A	N/A	62	74	J04	74—104

Sfep/ace A *with A* rhro‹Jgf› H *to i=aresent CA\CDM Wavelengths por the table below.*

" **9 bhSRd OTi IOSSOS ol 3.D dB/km @ 850 nm or 1 IN d8fxm B i.*10 nm for 62.5/l25 multi"mode fiber,* 0.fi'S *dB/km !3I0 nm or 0.25 dB/km @ !550 nm for singlemaae fiber,* and inc/ocfes a J *dB* sa/stf' /acrsr

' estima dwidt

CWDI¿i Letter Code	Wavelength
A	1470
B	1490
C	510
D	1¿30
E	1550
F	1570
G	1590
H	1610
M	1270

CWDM Letter Code	Wavelength
N	1290
P	1310
Q	330
R	1350
S	1370
T	1390
U	1410
V	1430
W	1450

Video Fofmat	NTSC, PAL, SECAM
Voltage	1V p-p, 75 I
Bandwidth	2 Hz to 6.5 MHz
Differential Gain	<0.7% Typ.
Differential Phase	¿0.7° 6P
Video SNR	>67 dB over usable fiber range (weighted per RS250 standard)
Encoding	10 bn Linear PCM
Sampling Rate	15 MHz
Bit Rate Over Fiber	720 MBps

DATATRANSMIS+1ON BY PORT

Data Pon	
Connector	RJ45
Function	Simplex RS232 plus switch-selectable RS422 or RS485 IDC to 115.2 kbps)
RS485 Port	
Connector	RJ12
Function	Simplex FtS485 (DC to 115.2 kbps)

POWER

Requirements	1A @ 6 VDC
Source	Chassis backplane.

PHYSICAL

Dimensions (in inches)	6.15 H x 0.8 W x 8.6 D
Weight (in pounds)	0.6

ENVIRONMENTAL

Operating Temperature	--40° Cto +74“ C
Storage Temperature	—55° Cto +B5° C
Relative Humidity	0 tO 95'/ noncondensing

QUALITY/CERTIFiCATIONS

Compliance	CE, FCC Pait 15, Class A
MTTF	Consult factory

28 23 00 ATTACHMENT A – CCTV PRODUCT DATA

Datasheet

AXIS M3066-V Network Camera

4 MP fixed mini dome with HDMI

AXIS M3066-V features day/night functionality and WDR for sharp video even when there's both dark and light areas in the scene. This ultra-compact camera comes factory-focused, can easily be leveled and directed in any direction, plus offers HDMI support enabling streaming to a public view monitor. It supports intelligent analytics and thanks to the memory card slot, you can optionally record at the edge. Furthermore, Zipstream with support for H.264 and H.265 reduces bandwidth and storage requirements. The camera is made with 52% recycled plastics and is PVC/BFR/CFR free. And, its impact- and dust-resistant casing simply snaps on without visible screws.

- > 4 MP video quality
- > WDR and day/night functionality
- > Zipstream supporting H.264 and H.265
- > HDMI output for streaming to a monitor
- > Environmentally friendly

AXIS M3066-V Network Camera

Camera	
Image sensor	1/2.5" progressive scan RGB CMOS
Lens	2.4 mm, F2.1 Horizontal field of view: 131° Vertical field of view: 97° Fixed iris, IR corrected
Day and night	Automatically removable infrared-cut filter
Light sensitivity	**Color:** 0.23 lux at 50 IRE, F2.1 **B/W:** 0.05 lux at 50 IRE, F2.1
Shutter speed	1/32500 s to 1/5 s
Camera angle adjustment	Pan: ±175° Tilt: ±80° Rotation: ±175° Can be directed in any direction and see the wall/ceiling
System on chip (SoC)	
Model	S5L
Memory	1 GB RAM, 512 MB Flash
Video	
Video compression	H.264 (MPEG-4 Part 10/AVC), Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
Resolution	2304x1728 (4 MP) to 320x240
Frame rate	25/30 fps with power line frequency 50/60 Hz
Video streaming	Multiple, individually configurable streams in H.264, H.265 and Motion JPEG Axis Zipstream technology in H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265 HDMI
Multi-view streaming	2 individually cropped out view areas
Pan/Tilt/Zoom	Digital PTZ
HDMI output	HDMI 1080p (16:9) @25/30 fps (50/60 Hz) HDMI 720p (16:9) @50/60 fps (50/60 Hz)
Image settings	Compression, color saturation, brightness, sharpness, contrast, white balance, day/night threshold, exposure control (including automatic gain control), WDR up to 115 dB depending on scene, fine tuning of low-light behavior, text and image overlay, polygon privacy masks, mirroring, rotation: 0°, 90°, 180°, 270°, including Corridor Format, dynamic text and image overlay
Audio	
Audio input/output	Two-way audio connectivity via the optional AXIS T61 Audio and I/O Interfaces with portcast technology
Network	
Security	Password protection, IP address filtering, HTTPS[a] encryption, IEEE 802.1x (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware
Supported protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[a], SSL/TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, SIP, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)
System integration	
Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* One-Click Cloud Connection ONVIF® Profile G, ONVIF® Profile S, and ONVIF® Profile T, specification at *onvif.org* Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX.
Event triggers	Analytics, edge storage events MQTT subscribe Virtual inputs through API
Event actions	Record video: SD card and network share MQTT publish Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email Pre- and post-alarm video or image buffering for recording or upload Notification: email, HTTP, HTTPS, TCP, and SNMP trap Overlay text
Data streaming	Event data
Built-in installation aids	Pixel counter
Analytics	
Applications	**Included** AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard AXIS Video Motion Detection, active tampering alarm **Supported** Autotracking, AXIS People Counter, AXIS Queue Monitor, AXIS Occupancy Estimator, AXIS Direction Detector, AXIS Tailgating Detector, AXIS Random Selector Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
General	
Casing	IP42 water- and dust-resistant (to comply with IP42, follow Installation Guide), IK08 impact-resistant, polycarbonate/ABS casing Encapsulated electronics Color: white NCS S 1002-B For repainting instructions, contact your Axis partner.
Sustainability	52% recycled plastics, PVC-free, BFR/CFR free
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 1 Typical 2.5 W, max 3.0 W
Connectors	RJ45 10BASE-T/100BASE-TX PoE[b] HDMI Type D[b] Audio and I/O connectivity via optional AXIS T61 Audio and I/O Interfaces with portcast technology
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit) Recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	0 °C to 45 °C (32 °F to 113 °F) Humidity 10–85% RH (non-condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
Approvals	**EMC** ICES-3(A)/NMB-3(A), EN 55024, EN 55035, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A **Safety** IEC/EN/UL 62368-1, IS 13252 **Environment** EN 60068-2-1, EN 60068-2-2, EN 60068-2-6, EN 60068-2-14, EN 60068-2-27, EN 60068-2-78, IEC/EN 60529 IP42, IEC/EN 62262 Class IK08, RoHS, WEEE **Network** NIST SP500-267
Dimensions	Height: 56 mm (2.2 in) ø 101 mm (4.0 in)
Weight	150 g (0.33 lb)
Included accessories	Installation Guide, Windows® decoder 1-user license
Optional accessories	AXIS T94B02D Pendant kit AXIS TM3201 Recessed mount AXIS TM3101 Pendant Wall Mount AXIS T94B01P Conduit back box AXIS T94B02M J-Box/Gang box plate AXIS T6101 Audio and I/O Interface AXIS T6112 Audio and I/O Interface Black casing Smoked dome Axis Mounts AXIS Surveillance microSDXC™ Card

T10140025/EN/M14.2/2110

	For more accessories see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*
b. *Make sure that the cable has a slim connector plug*

Environmental responsibility:

axis.com/environmental-responsibility

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Datasheet

AXIS M3077-PLVE Network Camera

6 MP outdoor-ready with 360° panoramic view and audio capture

With its 6 MP sensor, AXIS M3077-PLVE offers excellent image quality and a complete 180° or 360° overview, indoors or out, around the clock. It features two built-in microphones allowing for audio surveillance and detection. This compact mini dome offers dewarped views such as panorama, quad, corner, and corridor views directly from the camera. It includes Axis Lightfinder and Axis Forensic WDR for true colors and great details in challenging light or near darkness. And, Axis OptimizedIR for surveillance in pitch darkness.

> Complete 180° and 360° overview

> Lightfinder, Forensic WDR and Optimized IR

> Digital PTZ and dewarped views

> Built-in microphones

> Enhanced security features

AXIS M3077-PLVE Network Camera

Camera	
Image sensor	1/1.8" progressive scan RGB CMOS
Lens	1.56 mm, F2.0 Horizontal field of view: 183° Vertical field of view: 183° Fixed iris, fixed focus, IR corrected
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**Color:** 0.16 lux at 50 IRE, F2.0 **B/W:** 0.03 lux at 50 IRE, F2.0 0 lux with IR illumination on
Shutter speed	1/16000 s to 1 s
Camera angle adjustment	Digital roll: ± 180°
System on chip (SoC)	
Model	ARTPEC-7
Memory	1024 MB RAM, 512 MB Flash
Video	
Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
Resolution	Overview: 2016x2016 to 160x160 Panorama: 2560x1440 to 192x72 Double Panorama: 2560x1920 to 384x288 Quad view: 2560x1920 to 384x288 View area 1–4: 1920x1440 to 256x144 Corner right/left: 2368x1184 to 384x288 Double corner: 2016x2016 to 384x288 Corridor: 2560x1920 to 256x144
Frame rate	360° overview only, up to 2016x2016 without WDR: 50/60 fps @ 50/60 Hz 360° overview and dewarped views up to max resolution with WDR: up to 25/30 fps @ 50/60 Hz
Video streaming	Multiple, individually configurable streams in H.264, H.265 and Motion JPEG Axis Zipstream technology in H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265
Multi-view streaming	360° overview, dewarped panorama, corridor, corner left/right and quad views. Up to 4 individually cropped out and dewarped view areas. All different views can be streamed simultaneously. When streaming 4 dewarped view areas and one 360° overview in max resolution: up to 19 fps per stream.
Image settings	Compression, color saturation, brightness, sharpness, contrast, local contrast, white balance, day/night threshold, tone mapping, exposure control (including automatic gain control), exposure zones, Forensic WDR: up to 120 dB depending on scene, fine tuning of low-light behavior, dynamic text and image overlay, mirroring, digital roll, polygon privacy masks
Pan/Tilt/Zoom	Digital PTZ of view areas, digital PT of panorama, corner, corridor and quad views, preset positions, guard tours
Audio	
Audio streaming	One-way, simplex, mono or stereo. Noise reduction
Audio encoding	LPCM 48 kHz, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz Configurable bit rate
Audio input/output	Built-in microphone (can be disabled) Two-way audio connectivity via the optional AXIS T61 Audio and I/O interfaces with portcast technology
Network	
Security	Password protection, IP address filtering, HTTPS[a] encryption, IEEE 802.1x (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware, secure boot, Axis Edge Vault with Axis device ID
Supported protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS[a], HTTP/2, SSL/TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMP, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, SIP, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)
System integration	
Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* AXIS Guardian with One-Click Connection ONVIF® Profile G, ONVIF® Profile S, ONVIF® Profile T specification at *onvif.org* Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX
Onscreen controls	Day/night shift Wide dynamic range Video streaming indicator IR illumination
Event conditions	Analytics, edge storage events, virtual inputs through API, supervised external inputs, open casing, audio detection MQTT subscribe
Event actions	Record video/audio: SD card and network share MQTT publish Upload of images or video/audio clips: FTP, SFTP, HTTP, HTTPS, network share and email Pre- and post-alarm video or image buffering for recording or upload Notification: email, HTTP, HTTPS, TCP and SNMP trap PTZ: PTZ preset, start/stop guard tour Overlay text, external output activation, play audio clip, zoom preset, day/night mode
Data streaming	Event data
Built-in installation aids	Pixel counter, digital roll, repositioning of quad views, digital PTZ of view areas, digital PT of panorama, corner, corridor and quad views
Analytics	
Applications	**Included** AXIS Video Motion Detection, active tampering alarm, audio detection **Supported** AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
General	
Casing	IP66-, NEMA 4X- and IK10-rated Polycarbonate hard coated dome Aluminum Color: white NCS S 1002-B For repainting instructions of skin cover or casing and impact on warranty, contact your Axis partner.
Sustainability	PVC free
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3 Typical 8.0 W, max 11.9 W
Connectors	Shielded RJ45 10BASE-T/100BASE-TX PoE Terminal block for 1 supervised alarm input and 1 output (12 V DC output, max. load 25 mA)
IR illumination	OptimizedIR with with power-efficient, long-life 850 nm IR LEDs Range of reach 20 m (66 ft) or more depending on scene
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit) Recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	-40 °C to 50 °C (-40 °F to 122 °F) Start-up temperature: -30 °C to 50 °C (-22 °F to 122 °F) Maximum temperature (intermittent): 55 °C (131 °F) Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F) Humidity 10–100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)

Approvals	**EMC** EN 55032 Class A, EN 55035, EN 61000-6-1, EN 61000-6-2, EN 55024, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), VCCI Class A, RCM AS/NZS CISPR 32 Class A, KC KN32 Class A, KC KN35 **Safety** IEC/EN/UL 60950-22, IEC/EN/UL 62368-1, IEC/EN 62471, IS 13252 **Environment** IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, 60068-2-78, IEC/EN 60529 IP66, IEC/EN 62262 IK10, IEC 60721-3-5 Class 5M3 (vibration and shock), NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9) **Network** NIST SP500-267
Dimensions	Height: 66 mm (2.5 in) ø 149 mm (5.8 in)
Weight	700 g (1.5 lb)
Included accessories	Installation guide, Windows® decoder 1-user license, drill hole template, cable gaskets, connector guard, I/O connector, RESISTORX® TR20 bit, mounting bracket, cable hole lid, view protector
Optional accessories	AXIS T94T02D Pendant kit with weathershield AXIS Surveillance Cards AXIS TM3808-E Skin Cover Black AXIS Mounts & Cabinets AXIS T6101 Audio and I/O Interface AXIS T6112 Audio and I/O Interface For more accessories, see *axis.com*
Video management software	AXIS Device Manager, AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese
Warranty	5-year warranty, see axis.com/warranty

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

Environmental responsibility:

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Datasheet

AXIS P3247-LV Network Camera

Streamlined 5 MP dome for any light

AXIS P3247-LV offers excellent image quality in 5 MP resolution. This IK10-rated camera features Axis Lightfinder 2.0 and Axis Forensic WDR to deliver true colors and great detail in challenging light or near darkness. It includes OptimizedIR for surveillance in complete darkness and motion-adaptive exposure significantly reduces motion blur from approaching or nearby objects. AXIS Object Analytics lets you detect and classify humans and vehicles. And, thanks to two-way audio and I/O connectivity, you can add audio analytics and integrate peripheral equipment. Furthermore, Axis Edge Vault protects your Axis device ID and simplifies authorization of Axis products on your network.

- > 5 MP resolution at 30 fps
- > Lightfinder 2.0 and Motion-adaptive exposure
- > Zipstream supporting H.264 and H.265
- > AXIS Object Analytics
- > Enhanced security features

AXIS P3247-LV Network Camera

Camera	
Image sensor	1/2.7" progressive scan RGB CMOS
Lens	Varifocal, 3–8 mm, F1.3 Horizontal field of view: 104°–40° Vertical field of view: 74°–29° Remote zoom and focus, P-Iris control, IR corrected
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**With Forensic WDR and Lightfinder 2.0:** **Color:** 0.13 lux at 50 IRE, F1.3 **B/W:** 0 lux at 50 IRE, F1.3
Shutter speed	1/33500 s to 1/5 s
Camera angle adjustment	Pan ±180°, tilt ±75°, rotation ±175°
System on chip (SoC)	
Model	ARTPEC-7
Memory	1024 MB RAM, 512 MB Flash
Compute capabilities	Machine learning processing unit (MLPU)
Video	
Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
Resolution	2592x1944 to 160x90
Frame rate	25/30 fps with power line frequency 50/60 Hz
Video streaming	Multiple, individually configurable streams in H.264, H.265, and Motion JPEG Axis Zipstream technology for H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265
Multi-view streaming	Up to 2 individually cropped out view areas in full frame rate
Image settings	Compression, color saturation, brightness, sharpness, contrast, local contrast, white balance, day/night threshold, tone mapping, exposure control (including automatic gain control), motion-adaptive exposure, exposure zones, defogging, Forensic WDR: up to 120 dB depending on scene, barrel distortion correction, fine tuning of low-light behavior, dynamic text and image overlay, privacy masks, mirroring, rotation: 0°, 90°, 180°, 270°, including Corridor Format
Pan/Tilt/Zoom	Digital PTZ, preset positions
Audio	
Audio streaming	Full duplex
Audio encoding	24bit LPCM, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz Configurable bit rate
Audio input/output	External microphone input, line input, digital input with ring power, line output, automatic gain control Two-way audio connectivity via optional AXIS T61 Audio and I/O Interfaces with portcast technology
Network	
Security	Password protection, IP address filtering, HTTPS[a] encryption, IEEE 802.1X (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware, secure boot, Axis Edge Vault with Axis device ID
Supported protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[a], SSL/TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMP, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, SIP, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)
System integration	
Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specification at *onvif.org*
	Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX
Event conditions	Analytics, external input, supervision of input, edge storage events, virtual inputs through API MQTT subscribe
Event actions	Record video: SD card and network share Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email Pre- and post-alarm video or image buffering for recording or upload Notification: email, HTTP, HTTPS, TCP, and SNMP trap MQTT publish Overlay text, external output activation, play audio clip, make call
Data streaming	Event data
Built-in installation aids	Pixel counter, remote focus, remote zoom OptimizedIR with adjustable IR illumination intensity
Analytics	
AXIS Object Analytics	**Object classes:** humans, vehicles **Trigger conditions:** line crossing, object in area Up to 10 scenarios Metadata visualized with color-coded bounding boxes Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
Applications	**Included** AXIS Object Analytics AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard AXIS Video Motion Detection, active tampering alarm Audio detection **Supported** AXIS Live Privacy Shield Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
General	
Casing	IP52-rated, IK10 impact-resistant polycarbonate casing with hard-coated dome and dehumidifying membrane Encapsulated electronics and captive screws Color: white NCS S 1002-B For repainting instructions and impact on warranty, contact your Axis partner.
Mounting	Mounting bracket with holes for junction box (double-gang, single-gang, and 4" octagon) and for wall or ceiling mount ¼"-20 UNC tripod screw thread
Sustainability	PVC free
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3 Typical 6.5 W, max 10.5 W
Connectors	RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE I/O: 4-pin 2.5 mm (0.098 in) terminal block for 1 supervised digital input and 1 digital output (12 V DC output, max. load 25 mA) Audio: 4-pin 2.5 mm (0.098 in) terminal block for audio in and out Audio and I/O connectivity via AXIS T61 Audio and I/O Interfaces with portcast technology
IR illumination	OptimizedIR with power-efficient, long-life 850 nm IR LEDs Range of reach 40 m (130 ft) or more depending on the scene
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit) Recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	0 °C to 50 °C (32 °F to 122 °F) Humidity 10–85% RH (non-condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
Approvals	EMC EN 55032 Class A, EN 55035, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), VCCI Class A, RCM AS/NZS CISPR 32 Class A, KC KN32 Class A, KC KN35

	Safety IEC/EN/UL 62368-1, IS 13252, IEC/EN 62471 **Environment** IEC 60068-2-1, IEC 60068-2-14, IEC 60068-2-2, IEC 60068-2-27, IEC 60068-2-6, IEC 60068-2-78 IEC/EN 60529 IP52, IEC/EN 62262 IK10 **Network** NIST SP500-267
Dimensions	Height: 103 mm (4.06 in) ø 149 mm (5.87 in)
Weight	720 g (1.6 lb)
Included accessories	Installation guide, Windows® decoder 1-user license, drill template, Resistorx® T20 L-key, terminal block connectors, cable gaskets, connector guard
Optional accessories	AXIS TP3201 Recessed Mount, optionally with AXIS Device Microphone B, AXIS T94K01D Pendant Kit, AXIS Dome Intrusion Switch C, AXIS T6101 Audio and I/O Interface, AXIS T6112 Audio and I/O Interface, AXIS TP3901 Microphone Kit, AXIS ACI Conduit Adapters, Axis mounts and microphones, smoked dome, black casing For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

Environmental responsibility:

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Datasheet

AXIS P3247-LVE Network Camera

Streamlined 5 MP outdoor-ready dome for any light

AXIS P3247-LVE offers excellent image quality in 5 MP resolution. This IK10-rated outdoor-ready camera features Axis Lightfinder 2.0 and Axis Forensic WDR for true colors and great detail in challenging light or near darkness. It includes OptimizedIR for surveillance in complete darkness and motion-adaptive exposure significantly reduces motion blur from approaching or nearby objects. AXIS Object Analytics lets you detect and classify humans and vehicles. And, thanks to two-way audio and I/O connectivity, you can add audio analytics and integrate peripheral equipment. Furthermore, Axis Edge Vault protects your Axis device ID and simplifies authorization of Axis products on your network.

- > 5 MP resolution at 30 fps
- > Lightfinder 2.0 and Motion-adaptive exposure
- > Zipstream supporting H.264 and H.265
- > AXIS Object Analytics
- > Enhanced security features

AXIS P3247-LVE Network Camera

Camera	
Image sensor	1/2.7" progressive scan RGB CMOS
Lens	Varifocal, 3–8 mm, F1.3 Horizontal field of view: 104°–40° Vertical field of view: 74°–29° Remote zoom and focus, P-Iris control, IR corrected
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**With Forensic WDR and Lightfinder 2.0:** **Color:** 0.13 lux at 50 IRE, F1.3 **B/W:** 0 lux at 50 IRE, F1.3
Shutter speed	1/33500 s to 1/5 s
Camera angle adjustment	Pan ±180°, tilt ±75°, rotation ±175°
System on chip (SoC)	
Model	ARTPEC-7
Memory	1024 MB RAM, 512 MB Flash
Compute capabilities	Machine learning processing unit (MLPU)
Video	
Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
Resolution	2592x1944 to 160x90
Frame rate	25/30 fps with power line frequency 50/60 Hz
Video streaming	Multiple, individually configurable streams in H.264, H.265, and Motion JPEG Axis Zipstream technology for H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265
Multi-view streaming	Up to 2 individually cropped out view areas in full frame rate
Image settings	Compression, color saturation, brightness, sharpness, contrast, local contrast, white balance, day/night threshold, tone mapping, exposure control (including automatic gain control), motion-adaptive exposure, exposure zones, defogging, Forensic WDR: up to 120 dB depending on scene, barrel distortion correction, fine tuning of low-light behavior, dynamic text and image overlay, privacy masks, mirroring, rotation: 0°, 90°, 180°, 270°, including Corridor Format
Pan/Tilt/Zoom	Digital PTZ, preset positions
Audio	
Audio streaming	Full duplex
Audio encoding	24bit LPCM, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz Configurable bit rate
Audio input/output	External microphone input, line input, digital input with ring power, line output, automatic gain control Two-way audio connectivity via optional AXIS T61 Audio and I/O Interfaces with portcast technology
Network	
Security	Password protection, IP address filtering, HTTPS[a] encryption, IEEE 802.1X (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware, secure boot, Axis Edge Vault with Axis device ID
Supported protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[a], SSL/TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMP, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, SIP, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)
System integration	
Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specification at *onvif.org*
	Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX
Event conditions	Analytics, external input, supervision of input, edge storage events, virtual inputs through API MQTT subscribe
Event actions	Record video: SD card and network share Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email Pre- and post-alarm video or image buffering for recording or upload Notification: email, HTTP, HTTPS, TCP, and SNMP trap MQTT publish Overlay text, external output activation, play audio clip, make call
Data streaming	Event data
Built-in installation aids	Pixel counter, remote focus, remote zoom OptimizedIR with adjustable IR illumination intensity
Analytics	
AXIS Object Analytics	**Object classes:** humans, vehicles **Trigger conditions:** line crossing, object in area Up to 10 scenarios Metadata visualized with color-coded bounding boxes Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
Applications	**Included** AXIS Object Analytics AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard AXIS Video Motion Detection, active tampering alarm Audio detection **Supported** AXIS Perimeter Defender Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
General	
Casing	IP66- and NEMA 4X-rated, IK10 impact-resistant polycarbonate casing with hard-coated dome and dehumidifying membrane Encapsulated electronics and captive screws Color: white NCS S 1002-B For repainting instructions and impact on warranty, contact your Axis partner.
Mounting	Mounting bracket with holes for junction box (double-gang, single-gang, and 4" octagon) and for wall or ceiling mount ¼"-20 UNC tripod screw thread
Sustainability	PVC free
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3 Typical 8.6 W, max 11.1 W
Connectors	RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE I/O: 4-pin 2.5 mm (0.098 in) terminal block for 1 supervised digital input and 1 digital output (12 V DC output, max. load 25 mA) Audio: 4-pin 2.5 mm (0.098 in) terminal block for audio in and out Audio and I/O connectivity via AXIS T61 Audio and I/O Interfaces with portcast technology
IR illumination	OptimizedIR with power-efficient, long-life 850 nm IR LEDs Range of reach 40 m (130 ft) or more depending on the scene
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit) Recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	-40 °C to 50 °C (-40 °F to 122 °F) Maximum temperature (intermittent): 55 °C (131 °F) Absolute maximum temperature: 74 °C (165 °F) according to NEMA TS2 2016, 2.2.7 Start-up temperature: -30 °C to 50 °C (-22 °F to 122 °F) Humidity 10–100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)

Approvals	**EMC** EN 55032 Class A, EN 55035, EN 50121-4, IEC 62236-4, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), VCCI Class A, RCM AS/NZS CISPR 32 Class A, KC KN32 Class A, KC KN35 **Safety** IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, IS 13252, IEC/EN 62471 **Environment** IEC 60068-2-1, IEC 60068-2-14, IEC 60068-2-2, IEC 60068-2-27, IEC 60068-2-6, IEC 60068-2-78 IEC/EN 60529 IP66, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS2 (2.2.7-2.2.9) **Network** NIST SP500-267
Dimensions	**Without weathershield:** Height: 104 mm (4.09 in) ø 149 mm (5.87 in)
Weight	**With weathershield:** 800 g (1.8 lb)
Included accessories	Installation guide, Windows® decoder 1-user license, drill template, Resistorx® T20 L-key, terminal block connectors, cable gaskets, connector guard
	Weathershield
Optional accessories	AXIS T94M02L Recessed Mount, AXIS T94T01D Pendant Kit, AXIS T94M01D Pendant Kit, AXIS Dome Intrusion Switch C, AXIS TP3804-E Metal Casing White, AXIS T6101 Audio and I/O Interface, AXIS T6112 Audio and I/O Interface, AXIS ACI Conduit Adapters, Axis mounts and microphones, smoked dome, black casing For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

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Datasheet

AXIS P3375-V Network Camera

Classic HDTV 1080p fixed dome

AXIS P3375-V Network Camera is an indoor fixed dome that provides HDTV 1080p video. Equipped with WDR – Forensic Capture to handle scenes with strong variations in light, and Lightfinder technology for exceptional light sensitivity, this camera delivers outstanding video quality in any light conditions. It supports Axis Zipstream technology which significantly reduces bandwidth and storage requirements. AXIS P3375-V is a discreet, IK10-rated vandal-resistant camera equipped with I/O ports and support for two-way audio. It comes with a varifocal lens and remote zoom and focus, which facilitates installation and fine tuning.

- > HDTV 1080p video quality
- > Zipstream technology
- > WDR – Forensic Capture
- > Lightfinder technology
- > Two-way audio and I/O ports

AXIS P3375-V Network Camera

Camera	
Image sensor	Progressive scan RGB CMOS 1/3"
Lens	Varifocal, 3–10 mm, F1.4 Horizontal field of view: 90°–34° Vertical field of view: 50°–20° Remote focus and zoom, P-Iris control, IR corrected
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**HDTV 1080p 25/30 fps with WDR – forensic capture and Lightfinder:** Color: 0.15 lux, F1.4 B/W: 0.03 lux, F1.4 **HDTV 1080p 50/60 fps:** Color: 0.30 lux, F1.4 B/W: 0.06 lux, F1.4
Shutter speed	1/66500 s to 1 s
Camera angle adjustment	Pan ±180°, tilt -20° to +80°, rotation ±90°
Video	
Video compression	H.264 Baseline, Main and High Profiles (MPEG-4 Part 10/AVC) Motion JPEG
Resolution	1920x1080 to 160x90
Frame rate	**With WDR:** 25/30 fps with power line frequency 50/60 Hz **Without WDR:** 50/60 fps with power line frequency 50/60 Hz
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Axis Zipstream technology in H.264 Controllable frame rate and bandwidth VBR/ABR/MBR H.264
Multi-view streaming	2 individually cropped out view areas
Pan/Tilt/Zoom	Digital PTZ, preset positions
Image settings	Compression, color, brightness, sharpness, contrast, local contrast, white balance, Exposure control (including automatic gain control), exposure zones, fine tuning of behavior at different light levels, WDR - forensic capture: Up to 120 dB depending on scene, text and image overlay, mirroring of images, privacy masks Rotation: 0°, 90°, 180°, 270°, including Corridor Format
Audio	
Audio streaming	Two-way
Audio encoding	AAC LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz, LPCM 48 kHz Configurable bit rate
Network	
Security	Password protection, IP address filtering, HTTPS[a] encryption, IEEE 802.1X (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware
Supported protocols	IPv4, IPv6 USGv6, HTTP, HTTPS[a], SSL/TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCP, ARP, SOCKS, SSH, LLDP, MQTT v3.1.1
System integration	
Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* AXIS Video Hosting System (AVHS) with One-Click Connection One-click cloud connection ONVIF® Profile G, ONVIF® Profile S, and ONVIF® Profile T, specification at *onvif.org*
Event triggers	Analytics, supervised external input, virtual inputs through API, edge storage events
Event actions	Record video: SD card and network share Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email Pre- and post-alarm video or image buffering for recording or upload Notification: email, HTTP, HTTPS, TCP and SNMP trap Overlay text, external output activation, play audio clip
Data streaming	Event data
Built-in installation aids	Remote zoom, remote focus, pixel counter
Analytics	
Applications	**Included** AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard AXIS Video Motion Detection, active tampering alarm, audio detection **Supported** AXIS Digital Autotracking, AXIS Cross Line Detection Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
General	
Casing	IK10 impact-resistant casing with polycarbonate hard-coated dome and aluminum base Encapsulated electronics, Captive screws Color: White NCS S 1002-B For repainting instructions and impact on warranty, contact your Axis partner.
Sustainability	PVC free
Mounting	¼"-20 UNC tripod screw thread
Memory	512 MB RAM, 256 MB Flash
Power	Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 2 Typical: 2.8 W, Max 3.9 W
Connectors	RJ45 10BASE-T/100BASE-TX PoE Terminal block for 1 supervised alarm input and 1 digital output (12 V DC output, max load 50 mA) 3.5 mm mic/line in, 3.5 mm line out
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption Support for recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	0 °C to 50 °C (32 °F to 122 °F) Humidity 10–85% RH (non-condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
Approvals	**EMC** EN 55032 Class A, EN 61000-6-1, EN 61000-6-2, EN 55024, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 32 Class A, KCC KN32 Class A, KN35 **Safety** IEC/EN/UL 62368-1, IS 13252 **Environment** IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-6, IEC 60068-2-78, EN 50581, IEC 62262 IK10 **Network** NIST SP500-267
Weight	0.7 kg (1.5 lb)
Dimensions	Ø 148 x 99 mm (Ø 5 13/16 x 3 7/8 in)
Included accessories	Installation guide, Windows decoder 1-user license, drill hole template, Resistorx® T20 L-key, I/O connector
Optional accessories	AXIS T94K02L Recessed Mount Kit AXIS P33 Pendant Kit AXIS T94H01P Conduit Back Box Indoor Axis P33 Mounting Bracket Axis Mounts AXIS T83 Microphones Black casing Smoked dome For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis' Application Development Partners available on *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

T10109797/EN/M18.4/2102

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

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Datasheet

AXIS P3727-PLE Panoramic Camera

4x2 MP multidirectional camera with IR for 360° coverage

AXIS P3727-PLE offers four channels with 2MP per channel at 30 fps. This multidirectional camera allows for flexible positioning of four varifocal camera heads. Each head can be controlled individually to capture scenes in four directions in wide-angle or zoomed-in views. It includes 360° IR illumination with individually controllable LEDs and an automatic IR cut filter. Plus, remote zoom and focus capabilities ensure fast and accurate installation. AXIS Edge Vault protects your Axis device ID and simplifies authorization of Axis products on your network. Furthermore, AXIS Object Analytics offers highly nuanced object classification and reliable detection with fewer false positives.

- > 4*2 MP at 30 fps per channel
- > 360° IR illumination with individually controlled LEDs
- > AXIS Edge Vault and TPM module
- > AXIS Object Analytics on one channel
- > Edge storage with 2* microSD card slots

AXIS P3727-PLE Panoramic Camera

Camera	
Image sensor	4 x 1/2.8" progressive scan RGB CMOS
Lens	Varifocal, 3–6 mm, F1.8–2.6 **4x1080p capture mode:** Horizontal field of view: 96°–49° Vertical field of view: 53°–27° Diagonal field of view: 113°–55° Fixed iris, IR corrected, remote zoom and focus
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**Color:** 0.17 lux at 50 IRE, F1.8 **B/W:** 0 lux at 50 IRE, F1.8
Shutter speed	1/32500 s to 2 s with 50 Hz 1/32500 s to 2 s with 60 Hz
Camera angle adjustment	Pan ±90°, tilt +25 to +95°, rotation –5 to +95°, twist ±20°
System on chip (SoC)	
Model	ARTPEC-7
Memory	1024 MB RAM, 512 MB Flash
Compute capabilities	Machine learning processing unit (MLPU)
Video	
Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
Resolution	4 x 1920x1080 (4 x HDTV 1080p) to 160x90
Frame rate	Up to 25/30 fps (50/60 Hz)
Video streaming	Multiple, individually configurable streams in H.264, H.265 and Motion JPEG Axis Zipstream technology in H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265
Image settings	Saturation, contrast, brightness, sharpness, Forensic WDR, white balance, day/night threshold, tone mapping , exposure mode, exposure zones, compression, rotation: 0°, 90°, 180°, 270° including Corridor Format, mirroring, dynamic text and image overlay, polygon privacy masks
Audio	
Audio input/output	Two-way audio connectivity via optional AXIS T61 Audio and I/O Interfaces with portcast technology. A 30 W midspan or higher is required between AXIS T61 Audio and I/O Interfaces and AXIS P3727-PLE.
Network	
IP address	One IP address for all channels
Security	Password protection, IP address filtering, HTTPS[a] encryption, IEEE 802.1x (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware, secure boot, protection of cryptographic keys with FIPS 140-2 certified TPM 2.0 module, Axis Edge Vault with Axis device ID
Supported protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS[a], HTTP/2, SSL/TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, DHCPv4/v6, SOCKS, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)
System integration	
Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* One-click cloud connection ONVIF® Profile G, ONVIF® Profile S and ONVIF® Profile T, specification at *onvif.org*
Onscreen controls	IR illumination Autofocus Privacy mask
Event conditions	Audio: audio clip playing Device status: above operating temperature, above or below operating temperature, below operating temperature, casing open, IP address removed, network lost, new IP address,storage failure, system ready, within operating temperature Edge storage: recording ongoing, storage disruption, storage health issues detected I/O: manual trigger, virtual input MQTT subscribe Scheduled and recurring: scheduled event Video: average bitrate degradation, day-night mode, live stream open, tampering
Event actions	Record video: SD card and network share MQTT publish Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email Notification: email, HTTP, HTTPS, TCP, and SNMP trap Overlay text, play audio clip, day/night mode, status LED, IR illumination, MQTT
Data streaming	Event data
Built-in installation aids	Pixel counter, remote focus, remote zoom
Analytics	
AXIS Object Analytics	**Object classes:** humans, vehicles **Trigger conditions:** line crossing, object in area Up to 10 scenarios Metadata visualized with color-coded bounding boxes Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event Available for one channel
Applications	**Included** AXIS Object Analytics AXIS Video Motion Detection, active tampering alarm Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
General	
Casing	IP66-, IP67-, NEMA 4X- and IK09-rated impact-resistant, aluminum and plastic casing with polycarbonate hard-coated dome Color: white NCS S 1002-B Dome intrusion switch For repainting instructions of skin cover or casing and impact on warranty, contact your Axis partner.
Mounting	Mounting bracket with junction box holes (double-gang, single-gang, 4" square, and 4" octagon) ½" (M20) conduit side entry
Sustainability	PVC free
Power	Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4 Typical 9.35 W, max 21.7 W
Connectors	Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE Audio and I/O connectivity via AXIS T61 Audio and I/O Interfaces with portcast technology
IR illumination	Four individually controllable IR with power-efficient, long-life 850 nm IR LEDs Range of reach 15 m (50 ft) or more depending on the scene
Storage	Support for microSD/microSDHC/microSDXC card Dual SD cards Support for SD card encryption (AES-XTS-Plain64 256bit) Recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	-30 °C to 50 °C (-22 °F to 122 °F) Humidity 10–100% RH (non-condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Approvals	**EMC** EN 50121-4, EN 55032 Class A, EN 55035, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), IEC 62236-4, KC KN32 Class A, KC KN35, RCM AS/NZS CISPR 32 Class A, VCCI Class A **Safety** CAN/CSA-C22.2 No. 60950-22, CAN/CSA C22.2 No. 62368-1, IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, IEC 62471, IS 13252 **Environment**

	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66/IP67, IEC/EN 62262 IK09, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9) Network NIST SP500-267
Dimensions	Height: 92 mm (3.6 in) ø 255 mm (10.0 in)
Weight	2.0 kg (4.4 lb)
Included accessories	Installation guide, Windows® decoder 1-user license, connector guard, screw bit T20
Optional accessories	AXIS T94N01D Pendant Kit, AXIS T94N01L Recessed Mount, AXIS TP3814-E Black Casing, AXIS TP3815-E Smoked Dome, Axis cabinets AXIS Surveillance Cards For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

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Datasheet

AXIS T91A64 Corner Bracket

For external corners

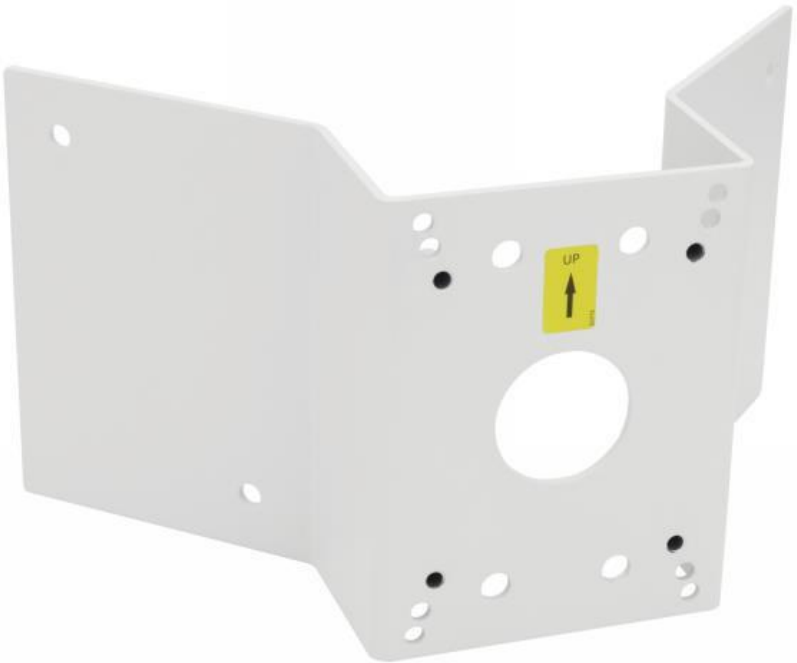
AXIS T91A64 Corner Bracket is an aluminum bracket for mounting Axis network cameras on external corners. A wall mount is required for the installation.

> Robust and safe installation

> Indoor and outdoor

> Support for Axis network cameras

> Ease of installation



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AXIS T91A64 Corner Bracket

General	
Maximum load	25 kg (55 lb)
Weight	1250 g (2.8 lb)
Environment	Indoor Outdoor
Approvals	IEC 62262 IK10, EN 50581
Included accessories	Installation Guide
Optional accessories	AXIS T91H61 Wall Mount, AXIS T91L61 Wall-and-Pole Mount, AXIS T91G61 Wall Mount, AXIS T91D61 Wall Mount 1.5" NPS For more accessories, see *www.axis.com*
Warranty	3-year warranty, see *axis.com/warranty*

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Datasheet

AXIS T91D61 Wall Mount 1.5" NPS

For selected fixed dome cameras

AXIS T91D61 is an aluminum wall mount with a 1.5" NPS thread. It is compatible with Axis fixed dome pendant kits and Axis ACI 3/4" conduit adapters. The cables can be routed through the back hole, or from the side by using a conduit connection. The wall mount includes AXIS T91A6 Pipe Seal.

- > Indoor and outdoor
- > Robust and safe installation
- > Ease of installation
- > Vandal resistance with IK10

T10112541/EN/M3.2/2010

AXIS T91D61 Wall Mount 1.5" NPS

General	
Supported products	AXIS P32 Series (requires camera-specific pendant kit) AXIS P33 Series (requires camera-specific pendant kit) AXIS P3707-PE (requires AXIS T94M02D Pendant Kit) AXIS Q35 Series (requires camera-specific pendant kit) AXIS Q36 Series (requires camera-specific pendant kit)
Dimensions	140 x 268 x 196 mm (5 1/2 x 10 1/2 x 7 3/4 in)
Weight	1.4 kg (3.1 lb)
Maximum load	15 kg (33 lb)
Cable routing	Back: Cable hole Side: Cable conduit holes M20 (3/4")
Environment	Indoor Outdoor
Approvals	IEC/EN/UL 60950-1 IEC/EN/UL 60950-22 EN 50581 IEC 62262 IK10
Included accessories	Installation Guide AXIS T91A6 Pipe Seal
Optional accessories	Axis network cable couplers, AXIS Conduit Adapter U-shape 30 mm A For more accessories, see *www.axis.com*
Warranty	3-year warranty, see *axis.com/warranty*

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28 23 00 – SECURITY CAMERA MODEL and APPLICATION CHART – ATTACHMENT B

AXIS Cameras Based on Application

Interior Entry Ways, Lobbies, Doors, and High Glass Vestibules (Built-in Microphones)

MARK	PART #	MODEL #	RESOLUTION	MIC/NO MIC	FOV DEGREE	BEST USE
A	01060-001	P3375-V	1080P	YES MIC	90	High Light Glass, Doors, Entries, Office Camera with MIc
A1	01595-001	P3247-LV	5MP	NO MIC	104	Indoor Extreme High Light Capable and IR for Low Light Applications to 100'

Long Hallways, Wide Views, and 4 way Intersections – Perfect in Normal Lighting Conditions (No High Glass Vestibules or entry ways) No Microphone

MARK	PART #	MODEL #	RESOLUTION	MIC/NO MIC	FOV DEGREE	BEST USE
B	01708-001	M3066-V	4MP	NO MIC	131	131 degree Wide shot – Corridors and short halls effective with natural light, face toward door
C	02218-001	P3727-PLE	4x2MP	NO MIC	360	4 way intersections, corners, large areas
D	02018-001	M3077-PLVE	6MP	NO MIC	180/360	360 degree Wide shot, NOT effective if point at natural light, face away from door

Outdoor Wide Area Coverage 180/360 or Small Area in Normal or Low Light IR included (Not recommended for High Glass Vestibules, Entry Ways, Microphone Applications)

MARK	PART #	MODEL #	RESOLUTION	MIC/NO MIC	FOV DEGREE	BEST USE
E	02018-001	M3077-PLVE	6MP	NO MIC	180/360	Outdoor under awnings, Parking Deck, 180 Degree
F	02218-001	P3727-PLE	4x2MP	NO MIC	360	Corners, large open areas

Outside Cameras High Resolution, or Low Light Areas Like Parking, Playgrounds, Boiler Areas, Doors

MARK	PART #	MODEL #	RESOLUTION	MIC/NO MIC	FOV DEGREE	BEST USE
G	01596-001	P3247-LVE	5MP	NO MIC	104	WDR – Forensic Capture – High Light and Low Light Application

Mounts for exterior cameras

MARK	PART #	MODEL #	BEST USE
H	WCPS5504-821	T91D61	WALL MOUNT, USE WITH ALL EXTERIOR CAMERAS
I	5017-641	T91A64	Corner Bracket, use with corner-mounted cameras (particularly 360's)
J	5505-871	T94T01D	Pendant Kit, use with P3247-LVE for mounting to T91D61
K	01513-001	T94N01D	Pendant Kit, for use with P3727-PLE for mounting to T91D61

Gymnasium Camera:

CHANGING THE CAMERA MODE

Pixellot
AUTOMATIC PRODUCTION

S2 CAMERA MODE SETUP

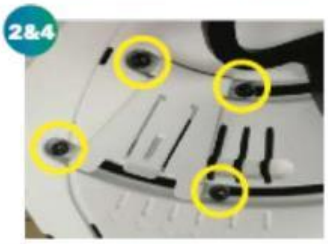
The Pixellot S2 Camera was designed to be easily installed at any venue. The following easy steps will enable you to quickly perform the setup correctly so that the cameras will function optimally, and cover the entire playing area at all types of installation sites, both indoor and outdoor.

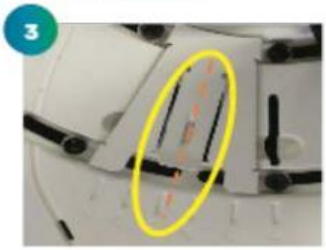
Adjusting the S2 Camera Mode

The Pixellot S2 camera head contains two cameras. These need to be calibrated so that they will cover the entire playing surface. There are two mode selectors that need to be adjusted, one on the top side of the camera housing and the other on the bottom.

Prior to mounting the camera head, follow these steps:

1. Determined the distance and height of the camera installation and select the right Camera Mode using the indoor or outdoor settings tables (see next page).
2. Loosen the 4 bolts on the top camera (about 2 full turns). Warning: Do not overly loosen or remove the bolts!
3. Lift the mode selector tab and slide it to the proper slot number. The middle marker should align with the selected mode.
4. Re-tighten the 4 bolts.
5. Carefully turn the camera over. Perform the same procedure on the bottom camera using the same settings as the top camera.





YOUR ORDER WILL INCLUDE:

You will get several packages with your order. These will include a **VPU** (Video Processing Unit), the camera, mounting hardware, cables, and a scoring device.

WHAT'S IN EACH BOX?

BOX 1 (with the straps):

- Camera head[1]
- Angle Bracket[2]
- Handle[3]
- Locking Ethernet Connectors[4]
- Safety wire[5]

BOX 2 (HP Workstation):

- VPU (Computer)[1]
- Power cable[2]
- Mouse[3]
- Pole Mount kit[4]
- White Arm mount[5]

BOX 3:

- Ethernet Cables for Camera head[1]
- *Sportzcast Kit:
  - Sportzcast Device[3]
  - Data cable(s)[2]
  - USB cable[4]
  - Serial adapter[5]
- *OCR Kit:
  - OCR Camera[6]
  - Camera mount[7]
  - OCR cable[8]

*You will receive either the Sportzcast Kit or OCR Kit (depending on your venue)

CHECKING THE CAMERA MODE

Pixellot
AUTOMATIC PRODUCTION

1 MODE SETTINGS TABLES

INDOOR INSTALLATION

*All measurements are in feet

Mode	Distance from field	Min Height	Max Height
1	7-9	10	16
1	10-12	10	20
2	13-15	13	23
2	16-19	13	26
3	20-22	16	30
4	23-25	16	33
4	26-29	16	36
5	30-32	20	39
5	33-35	20	22
6	33-35	23	43
6	36+	23	49

OUTDOOR INSTALLATION

*All measurements are in feet

Mode	Distance from field	Min Height	Max Height
1	Under 30	12	30
2	30-32	21	35
2	33-45	23	46
3	46-61	26	35
3	62-65	30	38
4	62-90	39	82
5	91-102	30	90
5	103-131	30	105
6	131+	36	105

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32 10 00 - ATTACHMENT A – WESTERN WAKE COUNTY TRIASSIC BOUNDRY MAP