

CATLIN TEMP PORTABLE CLASSROOMS

404 LONG AVE
KELSO, WA 98626

KELSO SCHOOL DISTRICT #458

BID SET

INTEGRUS PROJECT NO. 21938.01

PROJECT TEAM

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SHEET INDEX

- COVER
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- ARCHITECTURAL
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- ELECTRICAL
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 - E300 ELECTRICAL DISTRIBUTION
 - E400 ELECTRICAL SPECIFICATIONS

STORM SEWER DATA:

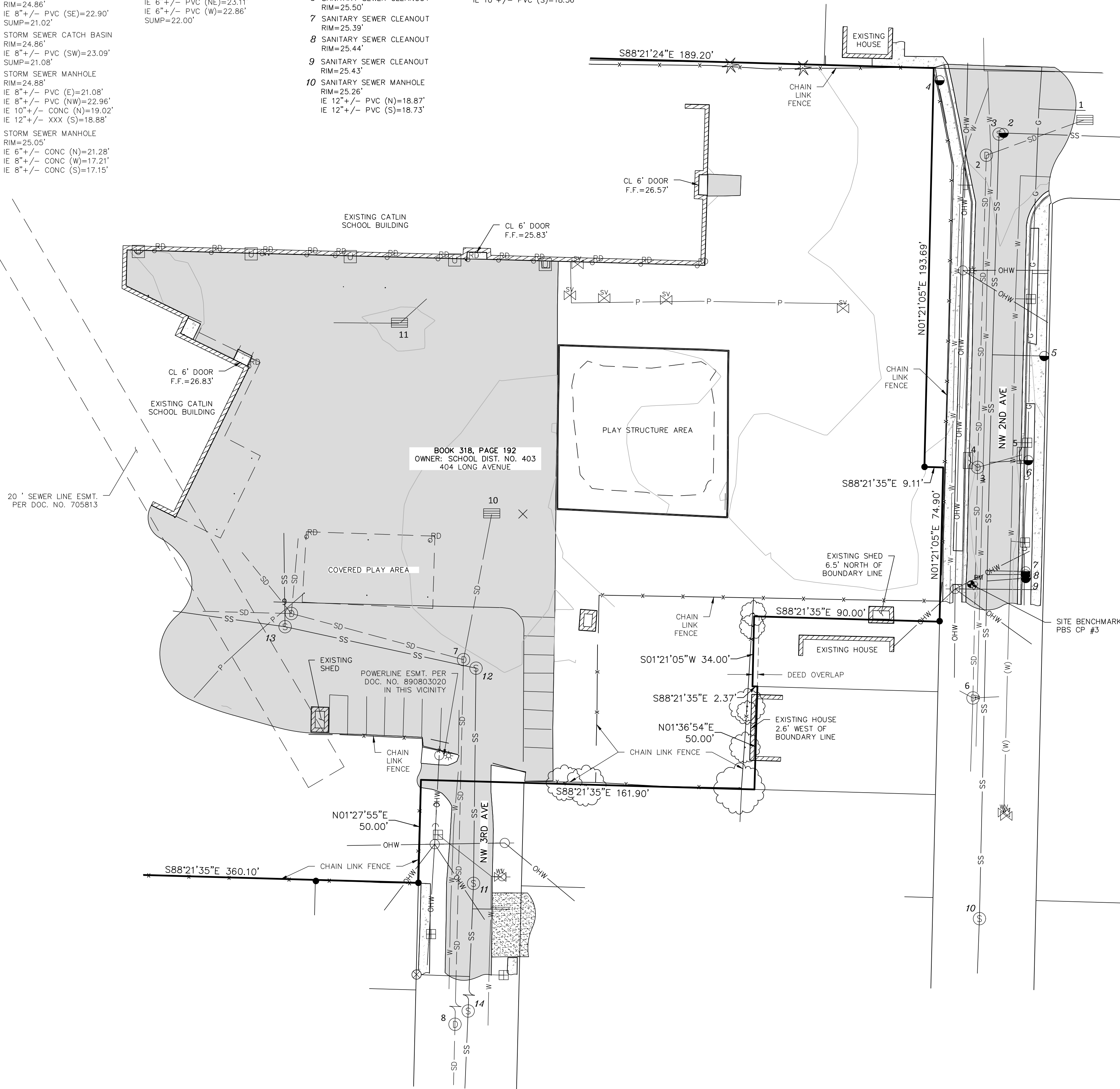
- 1 STORM SEWER CATCH BASIN
RIM=25.72'
IE 8"+/- PVC (SW)=22.20'
SUMP=20.74'
- 2 STORM SEWER MANHOLE
RIM=26.25'
IE 8"+/- PVC (NE)=21.75'
IE 10"+/- CONC (S)=21.70'
- 3 STORM SEWER MANHOLE
RIM=25.13'
*IE 8"+/- PVC (NW)=XXX.XX'
*IE 8"+/- PVC (NE)=XXX.XX'
IE 10"+/- CONC (NW)=19.57'
IE 10"+/- CONC (S)=19.45'
*PIPES TOO SHALLOW AND RECESSED TO MEASURE
- 4 STORM SEWER CATCH BASIN
RIM=24.86'
IE 8"+/- PVC (SE)=22.90'
SUMP=21.02'
- 5 STORM SEWER CATCH BASIN
RIM=24.86'
IE 8"+/- PVC (SW)=23.09'
SUMP=21.08'
- 6 STORM SEWER MANHOLE
RIM=24.88'
IE 8"+/- PVC (E)=21.08'
IE 8"+/- PVC (NW)=22.96'
IE 10"+/- CONC (N)=19.02'
IE 12"+/- XXX (S)=18.88'
- 7 STORM SEWER MANHOLE
RIM=25.05'
IE 6"+/- CONC (N)=21.28'
IE 8"+/- CONC (W)=17.21'
IE 8"+/- CONC (S)=17.15'

- 8 STORM SEWER MANHOLE
RIM=25.33'
IE 8"+/- CONC (N)=16.86'
IE 8"+/- CONC (S)=16.75'
- 9 STORM SEWER MANHOLE
RIM=25.40'
IE 4"+/- PVC (N)=22.09'
IE 6"+/- CONC (W)=18.67'
IE 6"+/- CONC (NW)=18.63'
IE 8"+/- CONC (E)=18.59'
- 10 STORM SEWER CATCH BASIN
RIM=24.36'
IE 6"+/- CMP (S)=22.61'
SUMP=21.08'
- 11 STORM SEWER CATCH BASIN
RIM=24.47'
IE 6"+/- PVC (NE)=23.11'
IE 6"+/- PVC (W)=22.86'
SUMP=22.00'

SANITARY SEWER DATA:

- 1 SANITARY SEWER MANHOLE
RIM=26.89'
IE 8"+/- PVC (N)=21.12'
IE 8"+/- PVC (W)=20.99'
CL CHANNEL=21.06'
- 2 SANITARY SEWER CLEANOUT
RIM=26.37'
IE 12"+/- PVC (S)=19.92'
CL CHANNEL=19.98'
- 3 SANITARY SEWER MANHOLE
RIM=26.36'
IE 8"+/- PVC (E)=20.03'
IE 12"+/- PVC (S)=19.92'
CL CHANNEL=19.98'
- 4 SANITARY SEWER CLEANOUT
RIM=26.66'
- 5 SANITARY SEWER CLEANOUT
RIM=26.40'
- 6 SANITARY SEWER CLEANOUT
RIM=25.50'
- 7 SANITARY SEWER CLEANOUT
RIM=25.39'
- 8 SANITARY SEWER CLEANOUT
RIM=25.44'
- 9 SANITARY SEWER CLEANOUT
RIM=25.43'
- 10 SANITARY SEWER MANHOLE
RIM=25.26'
IE 12"+/- PVC (N)=18.87'
IE 12"+/- PVC (S)=18.73'

- 11 SANITARY SEWER MANHOLE
RIM=25.88'
IE 10"+/- PVC (N)=20.01'
IE 10"+/- PVC (S)=19.89'
- 12 SANITARY SEWER MANHOLE
RIM=24.98'
IE 8"+/- CONC (W)=20.60'
IE 8"+/- CONC (S)=20.52'
- 13 SANITARY SEWER MANHOLE
RIM=25.41'
IE 6"+/- CONC (W)=20.82'
IE 6"+/- CONC (N)=20.80'
IE 8"+/- CONC (E)=20.73'
- 14 SANITARY SEWER MANHOLE
RIM=25.48'
IE 10"+/- PVC (N)=18.44'
IE 10"+/- PVC (S)=18.36'



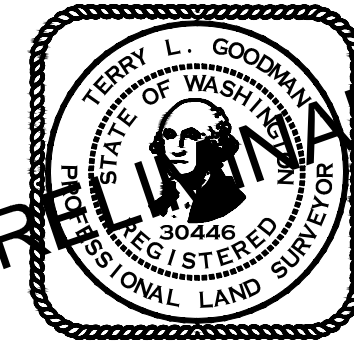
LEGEND:

- BM - DENOTES SITE BENCHMARK
- - DENOTES FOUND MONUMENT
- ▨ - DENOTES ASPHALT SURFACE
- ▩ - DENOTES CONCRETE SURFACE
- ▩ - DENOTES GRAVEL SURFACE
- ▩ - DENOTES EXISTING BUILDING AS NOTED
- X—X— - DENOTES FENCE LINE AS NOTED
- G— - DENOTES OVERHEAD WIRE
- (G)— - DENOTES GAS LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- P— - DENOTES GAS LINE PER ASBUILT DATA
- SD— - DENOTES POWER/SIGNAL LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- (SD)— - DENOTES STORM DRAINAGE LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- SS - DENOTES STORM DRAINAGE LINE PER ASBUILT DATA
- SS - DENOTES SANITARY SEWER LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- SS - DENOTES SANITARY SEWER LINE PER ASBUILT DATA
- W - DENOTES WATER LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- W - DENOTES WATER LINE PER ASBUILT DATA
- W - DENOTES STORM DRAINAGE AREA DRAIN
- ▩ - DENOTES STORM DRAINAGE CATCH BASIN
- ▩ - DENOTES STORM DRAINAGE MANHOLE
- ▩ - DENOTES ROOF DRAIN
- ⊙ - DENOTES SANITARY SEWER MANHOLE
- ⊙ - DENOTES SANITARY SEWER CLEANOUT
- ⊙ - DENOTES WATER METER
- ⊙ - DENOTES WATER VALVE
- ⊙ - DENOTES FIRE HYDRANT
- ⊙ - DENOTES SPRINKLER VALVE
- ⊙ - DENOTES POWER POLE
- ⊙ - DENOTES POWER POLE W/ LIGHT
- ⊙ - DENOTES GUY WIRE/ANCHOR
- ⊙ - DENOTES UNKNOWN UTILITY VAULT
- ⊙ - DENOTES UNKNOWN UTILITY CLEANOUT
- ⊙ - DENOTES SIGN
- ⊙ - DENOTES BUILDING/OVERHANG COLUMN
- ⊙ - DENOTES GATE POST
- ⊙ - DENOTES CONIFEROUS TREE
- ⊙ - DENOTES DECIDUOUS TREE

NOTES:

- THE VERTICAL DATUM FOR THIS SURVEY IS NAVD88
SITE BENCHMARK: PBS CP #3
ELEVATION=24.90'
N: 306764.08'
E: 1028013.70'
THE VERTICAL BENCHMARK IS A MAG NAIL SET IN ASPHALT LOCATED AT THE WEST SIDE OF NW 2ND AVENUE, 8' NORTHEAST OF A POWER POLE, 27' WEST OF A SANITARY SEWER 3-CLEANOUT CLUSTER AND 3.8' EAST OF THE FACE OF CURB/CL. (ELEVATION=37.096') THROUGH DIFFERENTIAL LEVELS.
*ELEVATION WAS TRANSFERRED FROM WSDOT/NGS BENCHMARK "A202 RESET" (ELEVATION=37.096') THROUGH DIFFERENTIAL LEVELS.
- THE BASIS OF BEARINGS FOR THIS SURVEY IS BASED ON OBSERVATIONS USING THE WASHINGTON STATE REFERENCE NETWORK (WSRN)
HORIZONTAL DATUM: NAD 83_2011 (EPOCH 2010.00)
STATE PLANE COORDINATES (WASHINGTON SOUTH ZONE 4602)
- THIS TOPOGRAPHIC SURVEY WAS PERFORMED FOR THE PURPOSE OF DESIGNING SITE IMPROVEMENTS.
- CONTOURS DERIVED BY DIRECT FIELD OBSERVATIONS. ELEVATION AND CONTOUR ACCURACY IS ONE-HALF THE CONTOUR INTERVAL.
- THIS MAP HAS BEEN PRODUCED FOR DESIGN PURPOSES AND SHOWS AN ACCURATE BOUNDARY DEPICTION.
- BOUNDARIES SHOWN HEREON HAVE BEEN DETERMINED BY HOLDING FOUND SURVEY MONUMENTS AND ANALYZING AVAILABLE SURVEY/PROPERTY/TITLE RECORDS.
- THE UNDERGROUND UTILITIES SHOWN HEREON WERE BASED ON FIELD MEASUREMENT OF UTILITY LOCATE PAINT MARKS SUPPLIED BY THE WASHINGTON UTILITY NOTIFICATION CENTER (PRE-SURVEY TICKET REQUESTS SUBMITTED ON 11/5/2020 AND PROCESSED AS TICKET NUMBERS 20478502 AND 20478538) AS WELL AS SURFACE EVIDENCE AND PRIVATE ASBUILT RECORDS. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY. ADDITIONALLY, CERTAIN UTILITIES ONSITE (WATER, SANITARY, STORM, GAS, ETC.) MAY NOT HAVE CONDUCTIBLE OR TRACEABLE LINES AND MAY BE PRESENT.
*PRIVATE ON-SITE CONDUCTIBLE UTILITY LOCATES WERE PERFORMED BY MT. VIEW LOCATING SERVICES IN NOVEMBER 2020.
- FINISH FLOOR ELEVATIONS WERE OBTAINED AT THE EXTERIOR DOOR OPENING OF EACH BUILDING. NOT ALL DOORS WERE OPEN TO ALLOW ACCESS FOR TRUE FINISH FLOOR ELEVATIONS ON THE INTERIOR OF THE BUILDING.

PBS Engineering and
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Vancouver, WA 98660
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TOPOGRAPHIC SURVEY
FOR: INTEGRUS ARCHITECTURE
KELSO, WASHINGTON 98626

| REVIEWS | |
|---------|--------------|
| REV. | DESCRIPTION: |
| | |
| | |
| | |
| | |

| | |
|----------|------------|
| DATE | 11/17/2020 |
| DRAWN | RF5 |
| SURVEYED | TRG |
| CHECKED | TLG |

JOB NO.:
71500.001

DRAWING NAME:
71500.001.TOP0

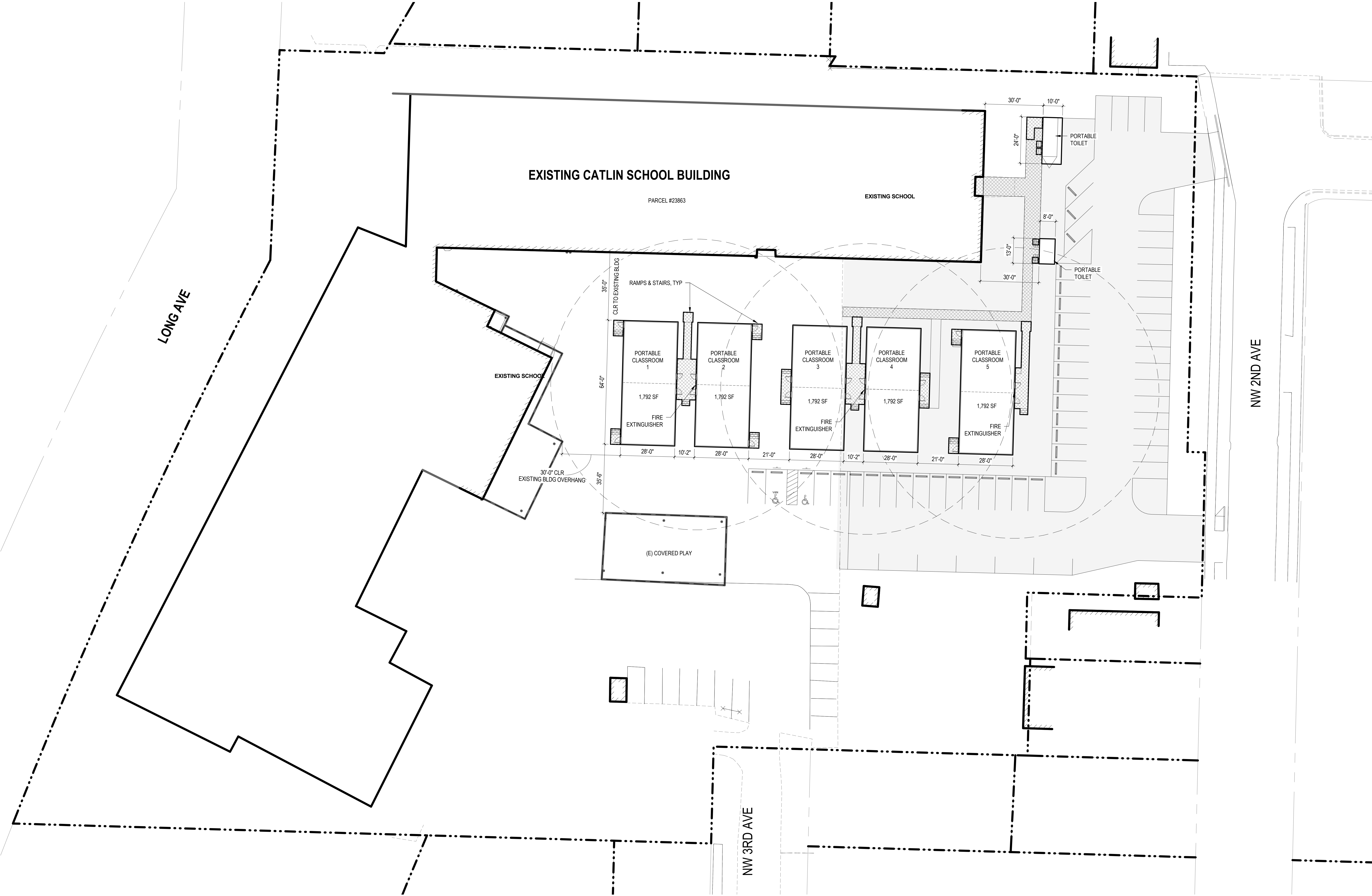
SHEET NO.
1/1

ARCH GENERAL PLAN NOTES

- 1. PORTABLE CLASSROOMS BUILDINGS ARE PLANNED FOR FUTURE TEMP HOUSING OF HUNTINGTON MIDDLE SCHOOL.
- 2. UTILITY CONNECTIONS (ELECTRICAL) TO BE DONE UNDER SEPARATE PERMIT AT LATER DATE.
- 3. FIRE EXTINGUISHERS RATED AT A MIN OF 2A 10BC
- 4. EXTERIOR LIGHTING WITH DAYLIGHTING SENSOR AND EMERGENCY BATTERY BACKUP LOCATED AT EACH DOOR OF PORTABLE CLASSROOMS



VICINITY MAP



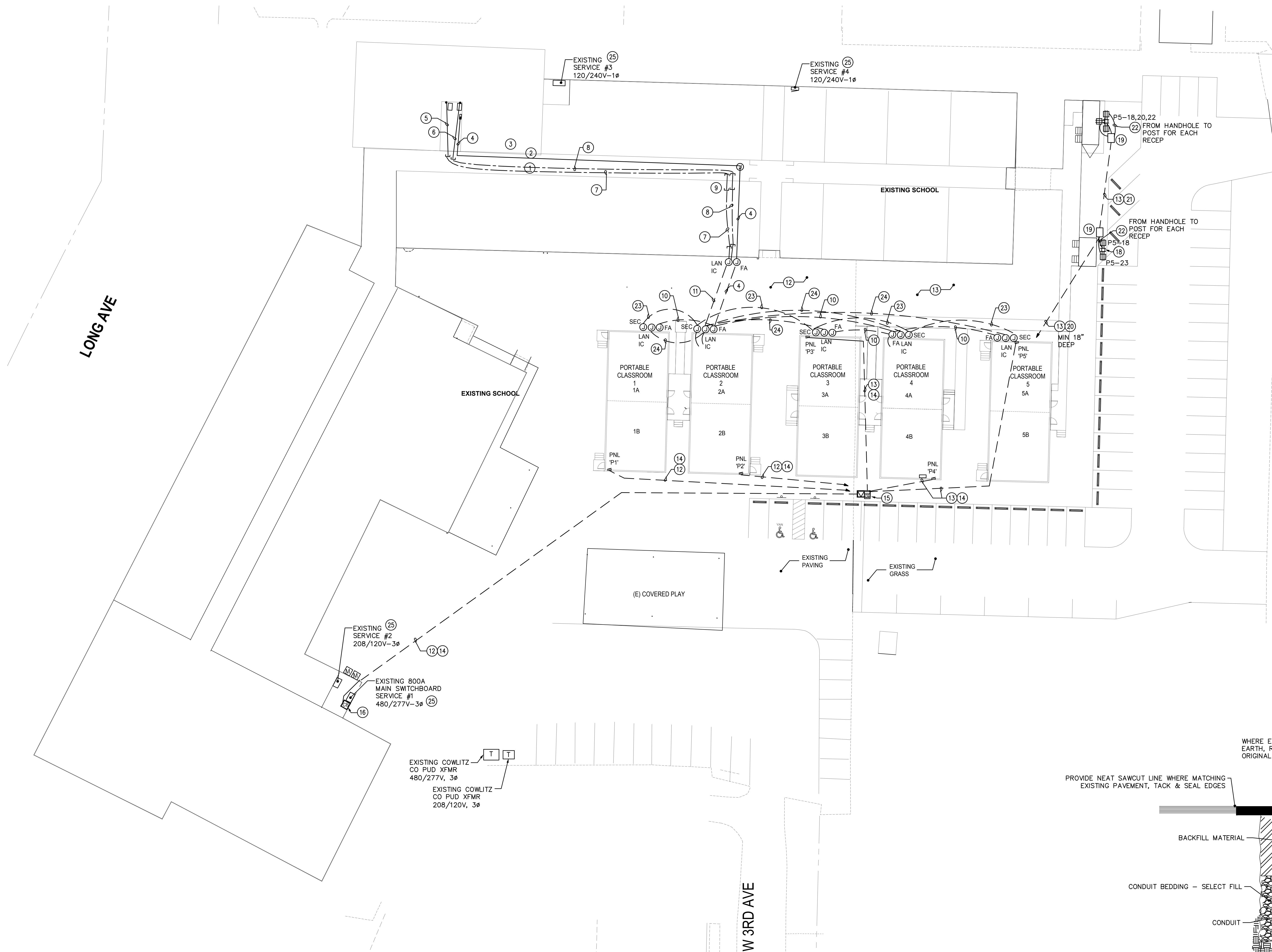
KELSO SCHOOL DISTRICT #458
CATLIN TEMP PORTABLE CLASSROOMS

404 LONG AVE
KELSO, WA 98626

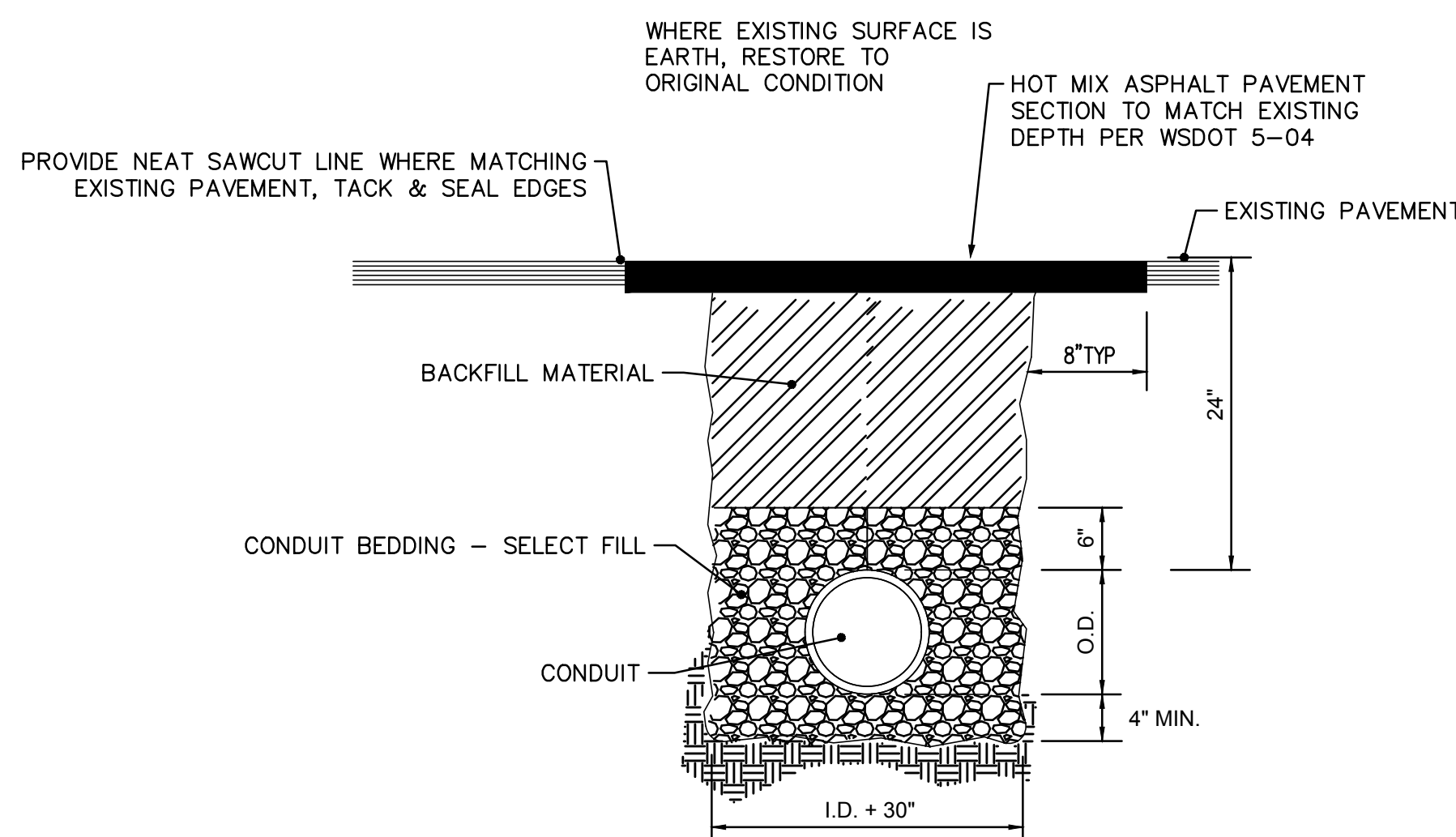
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|-------------|------------------|
| Date: | 5/21/2021 |
| Job No.: | 21938.01 |
| Drawn By: | SS |
| Checked by: | |
| Revisions | |
| # | Date Description |

ARCH SITE PLAN

A100



- BUBBLE NOTES:**
- 1 EXISTING EST-3 FIRE ALARM PANEL
 - 2 EXISTING RAULAND ICS INTERCOM HEAD END
 - 3 EXISTING MDF
 - 4 1.25" C - FIRE ALARM
 - 5 2" C - FIBER IN 1" INNERDUCT
 - 6 1.5" C - INTERCOM CABLE
 - 7 FIBER IN 1" INNERDUCT ABOVE CEILING
 - 8 INTERCOM CABLE ABOVE CEILING
 - 9 CONDUIT SLEEVES
 - 10 1.25" PVC - FIRE ALARM
 - 11 2" PVC - FIBER + INTERCOM
 - 12 PROVIDE TRENCHING & BACKFILL, CUT & PATCH PAVING, SEE DETAIL 1, THIS SHEET
 - 13 PROVIDE TRENCHING & BACKFILL, UNPAVED AREA, SEE DETAIL 1, THIS SHEET
 - 14 NEW FEEDER, SEE DISTRIBUTION DIAGRAM
 - 15 NEW TRANSFORMER 'TP', ENCLOSED CIRCUIT BREAKER 'CB-P' & ENCLOSURE ON PAD, SEE DISTRIBUTION DIAGRAM
 - 16 NEW ENCLOSED CIRCUIT BREAKER 'CB-TP', SEE DISTRIBUTION DIAGRAM
 - 17 PROVIDE 4" SQUARE TIMBER POST EMBEDDED IN GROUND WITH (3) GFCI RECEPTACLES WITH WEATHERPROOF IN USE LOCKABLE COVERS
 - 18 PROVIDE 4" SQUARE TIMBER POST EMBEDDED IN GROUND WITH (2) GFCI RECEPTACLES WITH WEATHERPROOF IN USE LOCKABLE COVERS
 - 19 IN-GROUND PLASTIC HANDHOLE WITH LID STAMPED "ELECTRIC", NOMINAL 14"x19"x12"D OLD CASTLE PRECAST OR EQUAL
 - 20 1.25" PVC - 6#10+1#10G (CKTS P5-18,20,22,23)
 - 21 1.25" PVC - 4#10+1#10G (CKTS P5-18,20,22)
 - 22 1/2" PVC - 2#10+1#10G
 - 23 3/4" PVC - SECURITY
 - 24 1.75" PVC - (1) INTERCOM + (6) CAT INDOOR/OUTDOOR RATED CABLE
 - 25 PROVIDE LABELING PER NEC 230.2(E) INDICATING BUILDING HAS MULTIPLE SERVICES



ELECTRICAL SERVICE PLAN
SCALE: 1" = 20'-0"
0' 10' 20' 40'

1 CONDUIT BEDDING & TRENCH BACKFILL
E100 NOT TO SCALE

integrus

ARCHITECTURE

117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA 98104
TELEPHONE: (206) 422-3137 FAX: (206) 422-3138

Seal of the State of Washington
Professional Engineer
No. 10000
Name: HULTZ & BHU
SIGNED: 02-21-2021

HULTZ & BHU

engineers inc

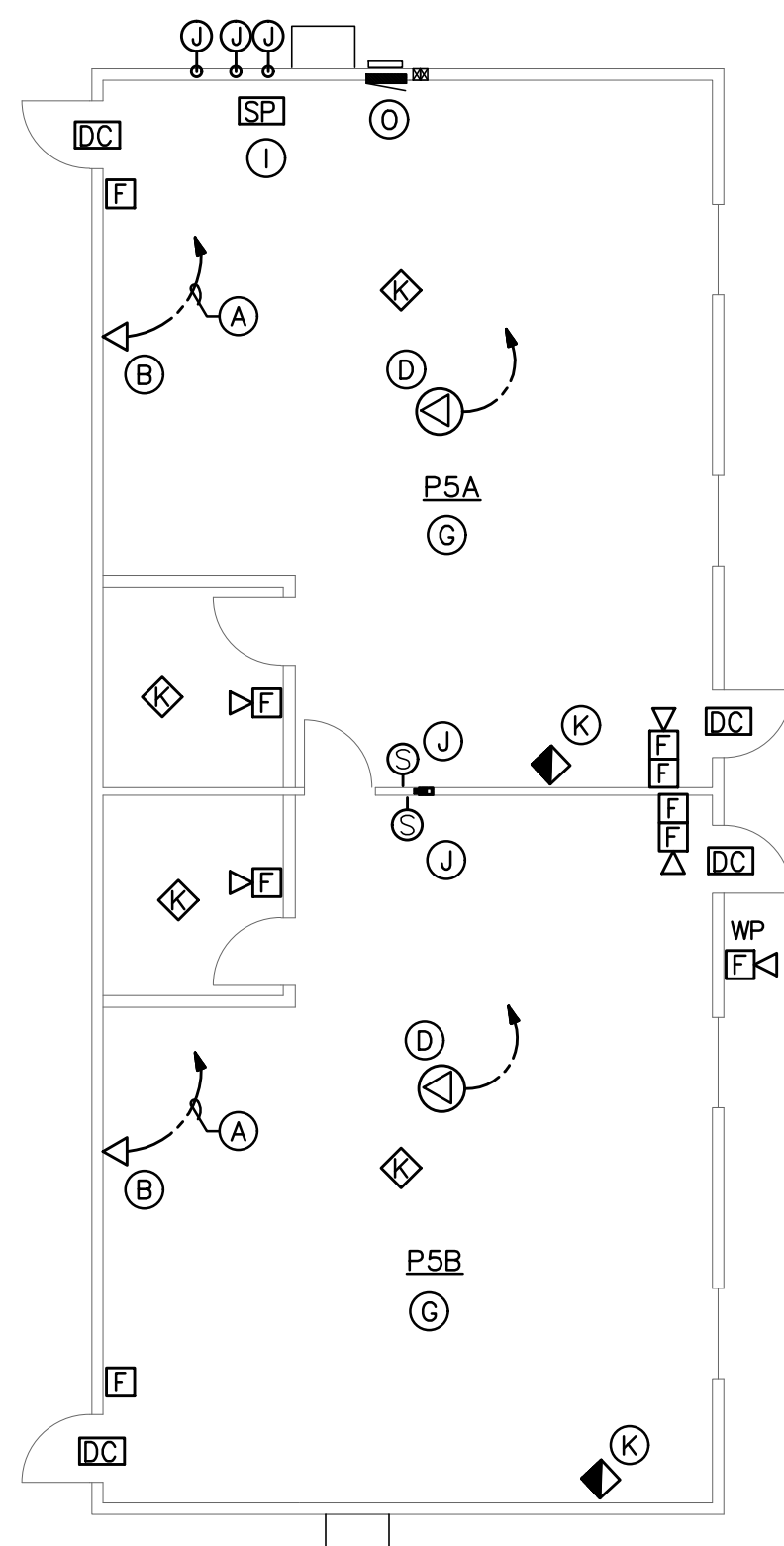
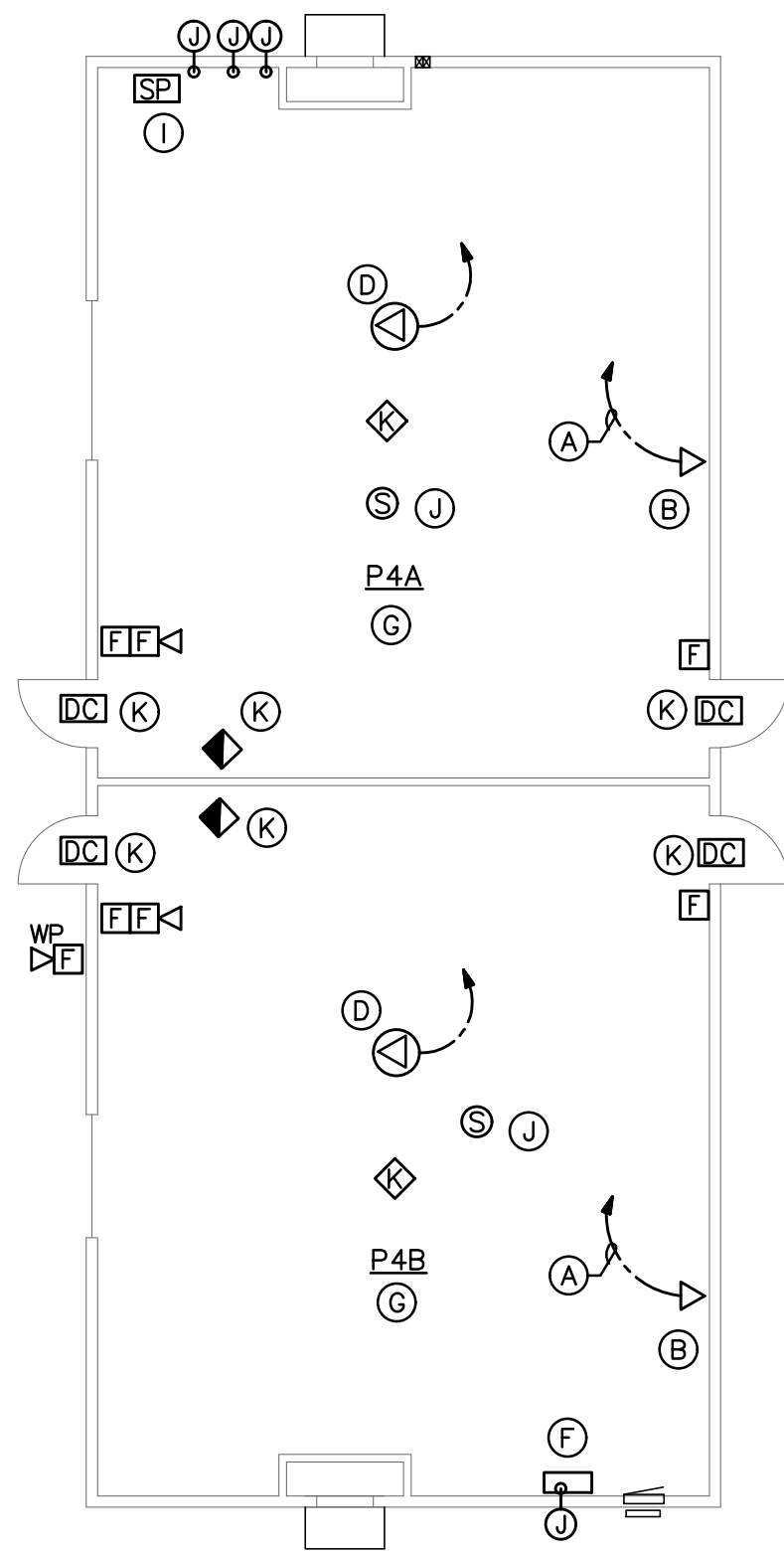
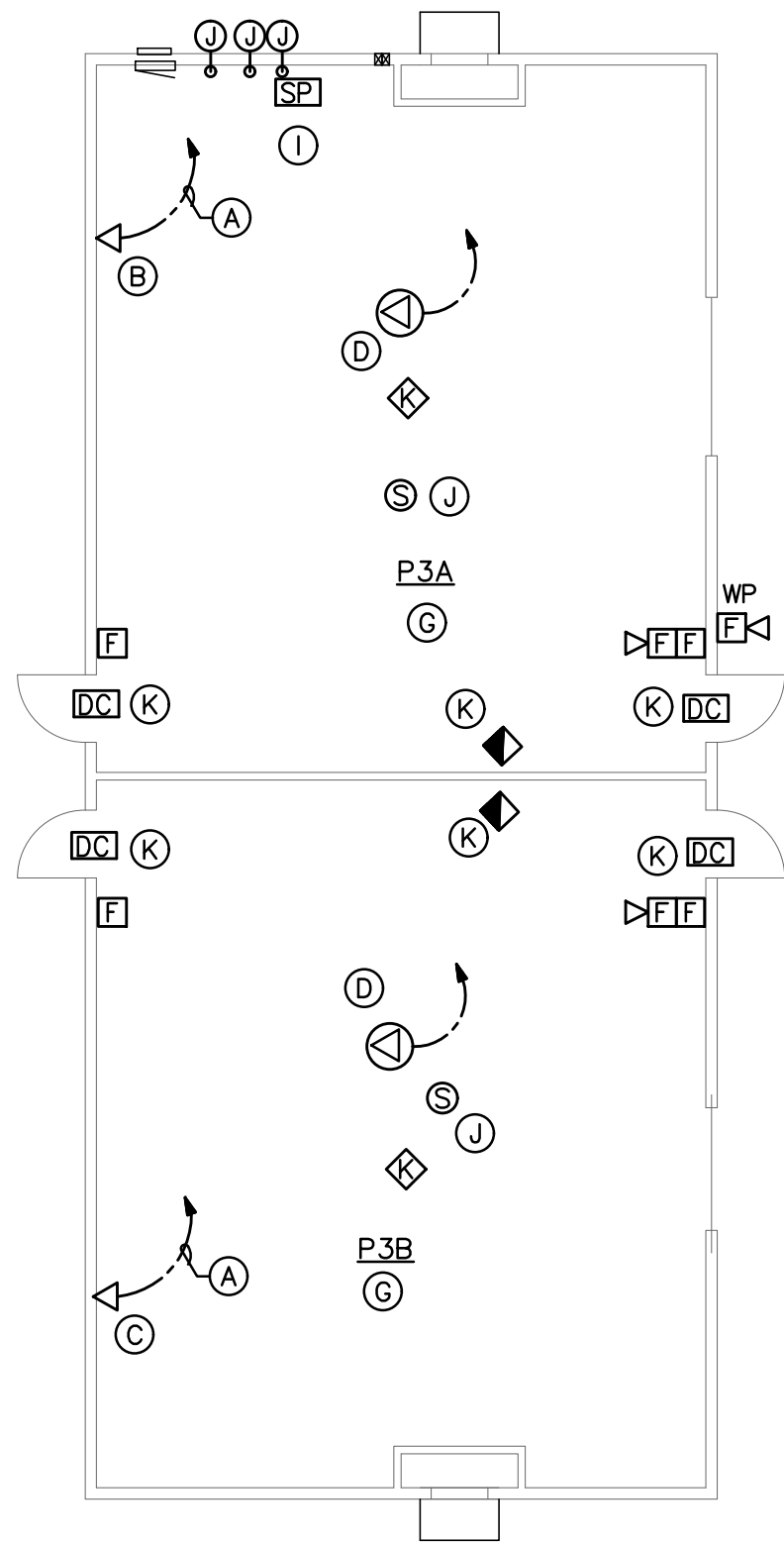
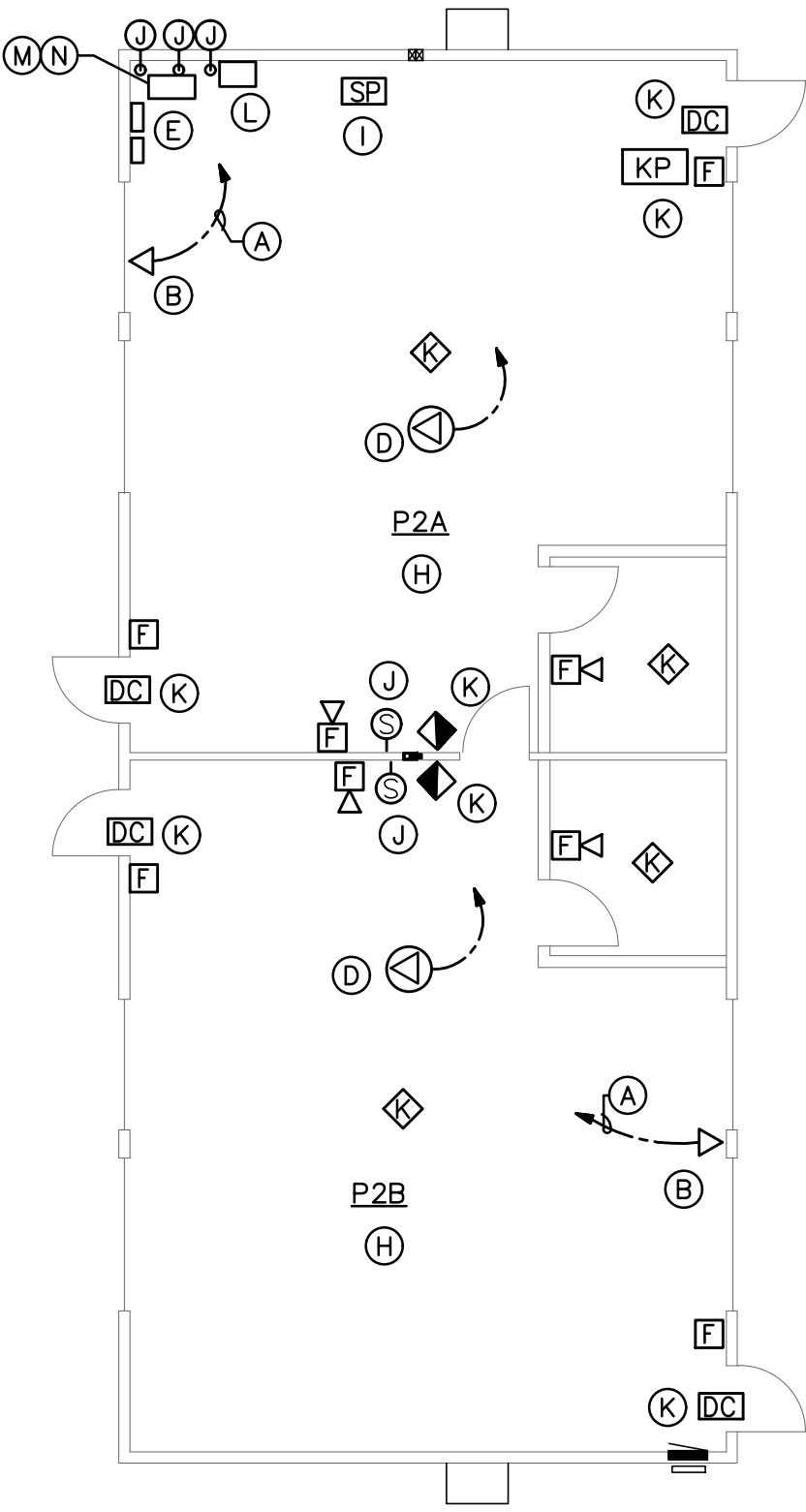
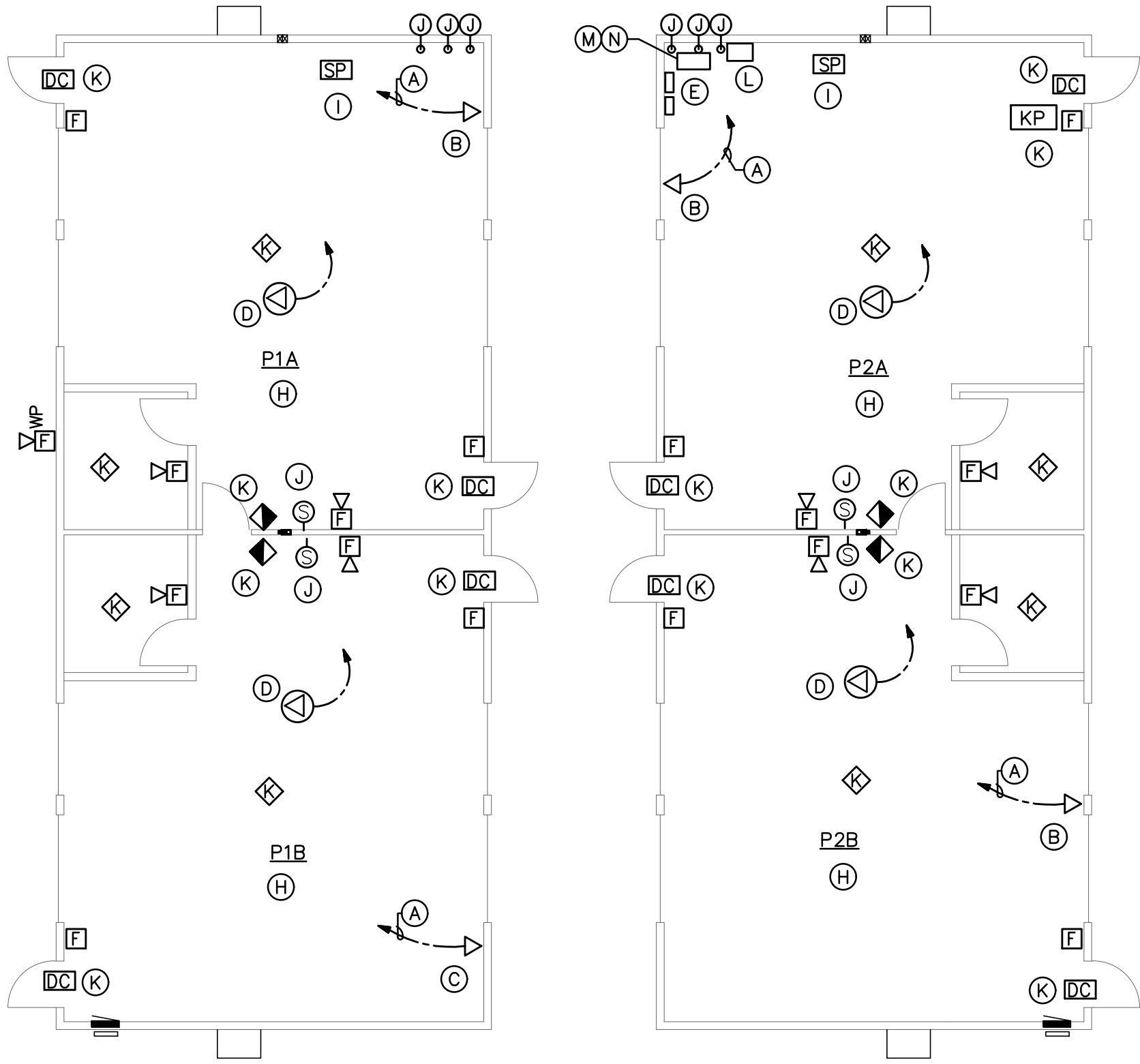
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general@hultzbhu.com Job Number: 20-038

**KELSO SCHOOL DISTRICT NO. 453
CATLIN ELEMENTARY
TEMPORARY PORTABLE CLASSROOMS
404 LONG AVE, KELSO, WA 98626**

| | |
|-------------|------------------|
| Date: | 06/06/2021 |
| Job No.: | 21938.00 |
| Drawn By: | SB |
| Checked by: | TU |
| Revisions | |
| # | Date Description |

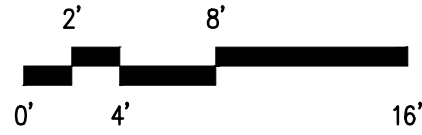
ELECTRICAL
SERVICE PLAN

E100



PORTABLE ELECTRICAL PLANS

SCALE: 1/8" = 1'-0"



PORTABLE ELECTRICAL PLAN BUBBLE NOTES

- (A) (2) CAT 6 CABLE TO IDF IN CLASSROOM P2A.
- (B) PROVIDE NEW RJ45 JACKS AT EXISTING LOCATION, UTILIZE EXISTING FACEPLATE
- (C) PROVIDE NEW RJ45 JACKS AT NEW LOCATION, PROVIDE CUT-IN BOX WITH 1" INNERDUCT IN WALL TO ABOVE CEILING, PROVIDE NEW FACEPLATE, COLOR TO MATCH EXISTING
- (D) PROVIDE NEW RJ45 JACK ABOVE CEILING WITH CAT 6 CABLE TO IDF IN CLASSROOM P2A
- (E) EXISTING HONEYWELL FIRE ALARM & INTRUSION ALARM PANEL. DISCONNECT FIRE ALARM COMPONENTS & UTILIZE FOR INTRUSION ALARM ONLY. PROVIDE NEW NAMEPLATE: "INTRUSION ALARM PANEL ONLY".
- (F) EXISTING EDWARDS EST EXPANSION PANEL. PROVIDE NEW CONNECTION TO EXISTING EDWARDS EST-3 PANEL WITHIN MAIN BUILDING. PROVIDE CABLING TO NEW & REINSTALLED DEVICES.
- (G) PORTABLE CLASSROOM BUILDING RELOCATED FROM BUTLER ACRES. PROVIDE NEW CABLING FOR EXISTING EDWARDS FIRE ALARM DEVICES TO EST EXPANSION PANEL.
- (H) PORTABLE CLASSROOM BUILDING RELOCATED FROM WALLACE. REMOVE EXISTING HONEYWELL FIRE ALARM DEVICES & PROVIDE NEW FIRE ALARM DEVICES & CABLING TO EST EXPANSION PANEL.
- (I) FIRE ALARM SYSTEM SURGE PROTECTORS. PROVIDE ON EACH END OF FIRE ALARM CABLE.
- (J) EXISTING INTERCOM SPEAKER, PROVIDE NEW CABLING TO INTERCOM HEAD END IN MAIN BUILDING. ALL SPEAKERS TO BE ON COMMON ZONE FOR CLASS CHANGE & ANNOUNCEMENTS ONLY. TWO WAY COMMUNICATION TO OCCUR THRU TELEPHONE HANDSETS.
- (K) EXISTING INTRUSION ALARM DEVICE, PROVIDE NEW CABLING TO HONEYWELL SYSTEM.
- (L) EXISTING FIBER ENCLOSURE, PROVIDE NEW FIBER CABLING.
- (M) TERMINATE CABLES ON OWNER-FURNISHED CAT 6 PATCH PANEL. PROVIDE LIGHTNING PROTECTION AS REQUIRED, GROUND RACK WITH #6 TO BUILDING GROUND
- (N) PROVIDE TERMINAL BLOCK FOR INTERCOM CABLING
- (O) PROVIDE NEW CIRCUIT BREAKERS IN EXISTING SPACES WITH HANDLE TIES, SEE PANEL SCHEDULE

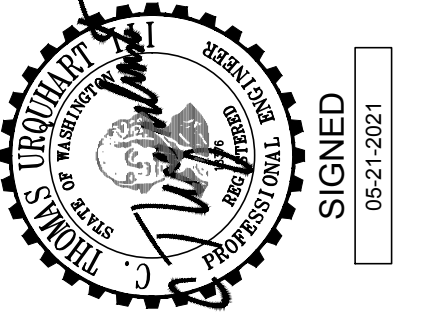
| ELECTRICAL LEGEND | |
|-------------------|---|
| SYMBOL | DESCRIPTION |
| --- | UNDERGROUND ELECTRICAL WORK |
| --- | LOW VOLTAGE CABLING |
| ⊙ | JUNCTION BOX |
| ⬮ | PANELBOARD - EXISTING OR BY PORTABLE MANUFACTURER |
| ⬮ | SMOKE DETECTOR |
| ⬮ | FIRE ALARM MANUAL PULL STATION |
| ⬮ | AUDIBLE & VISUAL DEVICE |
| ⬮ WP | WEATHERPROOF AUDIBLE & VISUAL DEVICE |
| SP | SURGE PROTECTOR |
| ⬮ | DUPLEX RJ45 CAT 6 OUTLETS WITH (2) CAT 6 CABLES TO IDF |
| ⬮ | RJ45 CAT 6 OUTLET WITH (1) CAT 6 CABLE TO IDF (LOCATE ABOVE CEILING) |
| ⬮ | WALL MOUNT INTERCOM SPEAKER |
| ⬮ | CEILING MOUNT INTERCOM SPEAKER |
| ⬮ | INTRUSION ALARM MOTION SENSOR |
| ⬮ | INTRUSION ALARM DOOR CONTACT |
| FACP | FIRE ALARM CONTROL PANEL |
| F.A. | FIRE ALARM |
| I.C. | INTERCOM |
| WP | WEATHERPROOF |
| ⬮ | NEMA 5-20R DUPLEX GFCI RECEPTACLE WITH WEATHERPROOF IN USE PADLOCKABLE COVER - TAMPER RESISTANT |
| ⬮ | CIRCUIT BREAKER |

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| | | |
|-------------|------------|-------------|
| Date: | 05.21.2021 | |
| Job No.: | 21938.00 | |
| Drawn By: | SH | |
| Checked by: | TU | |
| Revisions | | |
| # | Date | Description |

PORTABLE
ELECTRICAL
PLANS

E200



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integrus
ARCHITECTURE

117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA 98104
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| NO. P1 (EXISTING BY PORTABLE MANUFACTURER) | | | | 120/208VOLT 1-PHASE 3-WIRE | | | |
|--|-------|------|---------|---|---------|---------|-------------------------|
| LOCATION: P1 | | | | BUS: 200 AMPS MAIN BKR | | | |
| ENCLOSURE: FLUSH | | | | 10,000 AIC ASSEMBLY | | | |
| MODERN BUILDING SYSTEMS DBL WET | | | | | | | |
| DESCRIPTION | VA | BKR | CKT NO. | A | PHASE B | CKT NO. | DESCRIPTION |
| LTG & FAN - CR A | 349 | 20/1 | 1 | 3,217 | 2 | 25/2 | 2,868 HVAC - CR A |
| LTG & FAN - CR B | 324 | 20/1 | 3 | 3,192 | 4 | | 2,868 |
| EXT RECEP | 360 | 20/1 | 5 | 3,228 | 6 | 25/2 | 2,868 HVAC - CR B |
| RECEP - CR A | 900 | 20/1 | 7 | | 8 | | 2,868 |
| RECEP - CR A | 900 | 20/1 | 9 | 1,900 | 3,768 | 20/1 | 1,000 DRINKING FOUNTAIN |
| RECEP - CR B | 900 | 20/1 | 11 | | 900 | 12 | SPACE |
| RECEP - CR B | 900 | 20/1 | 13 | 900 | | 14 | SPACE |
| WATER HTR | 1,500 | 20/1 | 15 | | 1,500 | 16 | SPACE |
| SPACE | | | 17 | 0 | | 18 | SPACE |
| SPACE | | | 19 | | 0 | 20 | SPACE |
| | | | | 9,245 | 9,360 | | |
| REMARKS: | | | | LIGHTING 673 VA 125% LIGHTING 841 VA | | | |
| LOAD BASED ON MODERN BUILDING | | | | TOTAL RECEP 3,960 VA FIRST 10KVA RECEP 3,960 VA | | | |
| SYSTEMS JOB # 2019-DH-21 | | | | LG MOTOR 5,736 VA 50% RECEP OVER 10KVA 0 VA | | | |
| DRAWING E3.0 | | | | OTHER MOTORS 5,736 VA 125% LARGEST MOTOR 7,170 VA | | | |
| | | | | KITCHEN 0 VA 65% KITCHEN 0 VA | | | |
| | | | | COMPUTERS 0 VA COMPUTERS 0 VA | | | |
| | | | | HEAT 0 VA HEAT 0 VA | | | |
| | | | | MISC 2,500 VA MISC 2,500 VA | | | |
| | | | | TOTAL CONN 18.61 KVA TOTAL CALCULATED 20.21 KVA | | | |
| | | | | 89.45 AMPS 97.15 AMPS | | | |

| NO. P2 (EXISTING BY PORTABLE MANUFACTURER) | | | | 120/208 VOLT 1-PHASE 3-WIRE | | | |
|--|-------|------|---------|---|---------|---------|-------------------------|
| LOCATION: P2 | | | | BUS: 200 AMPS MAIN BKR | | | |
| ENCLOSURE: FLUSH | | | | 10,000 AIC ASSEMBLY | | | |
| MODERN BUILDING SYSTEMS DBL | | | | | | | |
| DESCRIPTION | VA | BKR | CKT NO. | A | PHASE B | CKT NO. | DESCRIPTION |
| LTG & FAN - CR A | 349 | 20/1 | 1 | 3,217 | 2 | 25/2 | 2,868 HVAC - CR A |
| LTG & FAN - CR B | 324 | 20/1 | 3 | 3,192 | 4 | | 2,868 |
| EXT RECEP | 360 | 20/1 | 5 | 3,228 | 6 | 25/2 | 2,868 HVAC - CR B |
| RECEP - CR A | 900 | 20/1 | 7 | | 3,768 | 8 | |
| RECEP - CR A | 900 | 20/1 | 9 | 1,900 | 900 | 20/1 | 1,000 DRINKING FOUNTAIN |
| RECEP - CR B | 900 | 20/1 | 11 | | | 12 | SPACE |
| RECEP - CR B | 900 | 20/1 | 13 | 900 | | 14 | SPACE |
| WATER HTR | 1,500 | 20/1 | 15 | | 1,500 | 16 | SPACE |
| SPACE | | | 17 | 0 | | 18 | SPACE |
| SPACE | | | 19 | | 0 | 20 | SPACE |
| | | | | 9,245 | 9,360 | | |
| REMARKS: | | | | LIGHTING 673 VA 125% LIGHTING 841 VA | | | |
| LOAD BASED ON MODERN BUILDING | | | | TOTAL RECEP 3,960 VA FIRST 10KVA RECEP 3,960 VA | | | |
| SYSTEMS JOB # 2019-DH-21 | | | | LG MOTOR 5,736 VA 50% RECEP OVER 10KVA 0 VA | | | |
| DRAWING E3.0 | | | | OTHER MOTORS 5,736 VA 125% LARGEST MOTOR 7,170 VA | | | |
| | | | | KITCHEN 0 VA 65% KITCHEN 0 VA | | | |
| | | | | COMPUTERS 0 VA COMPUTERS 0 VA | | | |
| | | | | HEAT 0 VA HEAT 0 VA | | | |
| | | | | MISC 2,500 VA MISC 2,500 VA | | | |
| | | | | TOTAL CONN 18.61 KVA TOTAL CALCULATED 20.21 KVA | | | |
| | | | | 89.45 AMPS 97.15 AMPS | | | |

| NO. P3 (EXISTING BY PORTABLE MANUFACTURER) | | | | 120/208 VOLT 1-PHASE 3-WIRE | | | |
|--|-----|------|---------|---|---------|---------|-------------------|
| LOCATION: P3 | | | | BUS: 200 AMPS MAIN BKR | | | |
| ENCLOSURE: FLUSH | | | | 22,000 AIC ASSEMBLY | | | |
| BLAZER DBL DRY | | | | | | | |
| DESCRIPTION | VA | BKR | CKT NO. | A | PHASE B | CKT NO. | DESCRIPTION |
| LTG - CR A | 792 | 20/1 | 1 | 6,750 | 2 | 90/2 | 5,958 HVAC - CR A |
| LTG - CR B | 792 | 20/1 | 3 | | 6,750 | 4 | 5,958 |
| RECEP | 720 | 20/1 | 5 | 6,678 | 6 | 90/2 | 5,958 HVAC - CR B |
| RECEP | 720 | 20/1 | 7 | | 6,678 | 8 | 5,958 |
| RECEP | 720 | 20/1 | 9 | 900 | 20/1 | 180 | DATA CABINET |
| SPACE | | | 11 | | 0 | 12 | SPACE |
| SPACE | | | 13 | 0 | 0 | 14 | SPACE |
| SPACE | | | 15 | | 0 | 16 | SPACE |
| SPACE | | | 17 | 0 | 0 | 18 | SPACE |
| SPACE | | | 19 | | 0 | 20 | SPACE |
| SPACE | | | 21 | 0 | 0 | 22 | SPACE |
| SPACE | | | 23 | | 0 | 24 | SPACE |
| | | | | 14,328 | 13,428 | | |
| REMARKS: | | | | LIGHTING 1,584 VA 125% LIGHTING 1,980 VA | | | |
| LOAD BASED ON BLAZER INDUSTRIES | | | | TOTAL RECEP 2,160 VA FIRST 10KVA RECEP 2,160 VA | | | |
| JOB # 18658-60 63 64 | | | | LG MOTOR 3,528 VA 50% RECEP OVER 10KVA 0 VA | | | |
| DRAWING E-1 | | | | OTHER MOTORS 5,304 VA 125% LARGEST MOTOR 4,410 VA | | | |
| | | | | KITCHEN 0 VA OTHER MOTORS 5,304 VA | | | |
| | | | | COMPUTERS 0 VA 65% KITCHEN 0 VA | | | |
| | | | | HEAT 15,000 VA HEAT 15,000 VA | | | |
| | | | | MISC 180 VA MISC 180 VA | | | |
| | | | | TOTAL CONN 27.76 KVA TOTAL CALCULATED 29.03 KVA | | | |
| | | | | 133.44 AMPS 139.59 AMPS | | | |

| NO. P3 (EXISTING BY PORTABLE MANUFACTURER) | | | | 120/208 VOLT 1-PHASE 3-WIRE | | | |
|--|-----|------|---------|---|---------|---------|-------------------|
| LOCATION: P3 | | | | BUS: 200 AMPS MAIN BKR | | | |
| ENCLOSURE: FLUSH | | | | 22,000 AIC ASSEMBLY | | | |
| BLAZER DBL DRY | | | | | | | |
| DESCRIPTION | VA | BKR | CKT NO. | A | PHASE B | CKT NO. | DESCRIPTION |
| LTG - CR A | 792 | 20/1 | 1 | 6,750 | 2 | 90/2 | 5,958 HVAC - CR A |
| LTG - CR B | 792 | 20/1 | 3 | | 6,750 | 4 | 5,958 |
| RECEP | 720 | 20/1 | 5 | 6,678 | 6 | 90/2 | 5,958 HVAC - CR B |
| RECEP | 720 | 20/1 | 7 | | 6,678 | 8 | 5,958 |
| RECEP | 720 | 20/1 | 9 | 900 | 20/1 | 180 | DATA CABINET |
| SPACE | | | 11 | | 0 | 12 | SPACE |
| SPACE | | | 13 | 0 | 0 | 14 | SPACE |
| SPACE | | | 15 | | 0 | 16 | SPACE |
| SPACE | | | 17 | 0 | 0 | 18 | SPACE |
| SPACE | | | 19 | | 0 | 20 | SPACE |
| SPACE | | | 21 | 0 | 0 | 22 | SPACE |
| SPACE | | | 23 | | 0 | 24 | SPACE |
| | | | | 14,328 | 13,428 | | |
| REMARKS: | | | | LIGHTING 1,584 VA 125% LIGHTING 1,980 VA | | | |
| LOAD BASED ON BLAZER INDUSTRIES | | | | TOTAL RECEP 2,160 VA FIRST 10KVA RECEP 2,160 VA | | | |
| JOB # 18658-60 63 64 | | | | LG MOTOR 3,528 VA 50% RECEP OVER 10KVA 0 VA | | | |
| DRAWING E-1 | | | | OTHER MOTORS 5,304 VA 125% LARGEST MOTOR 4,410 VA | | | |
| | | | | KITCHEN 0 VA OTHER MOTORS 5,304 VA | | | |
| | | | | COMPUTERS 0 VA 65% KITCHEN 0 VA | | | |
| | | | | HEAT 15,000 VA HEAT 15,000 VA | | | |
| | | | | MISC 180 VA MISC 180 VA | | | |
| | | | | TOTAL CONN 27.76 KVA TOTAL CALCULATED 29.03 KVA | | | |
| | | | | 133.44 AMPS 139.59 AMPS | | | |

| NO. P4 (EXISTING BY PORTABLE MANUFACTURER) | | | | 120/208 VOLT 1-PHASE 3-WIRE | | | |
|--|-----|------|---------|---|---------|---------|-------------------|
| LOCATION: P4 | | | | BUS: 200 AMPS MAIN BKR | | | |
| ENCLOSURE: FLUSH | | | | 22,000 AIC ASSEMBLY | | | |
| BLAZER DBL DRY | | | | | | | |
| DESCRIPTION | VA | BKR | CKT NO. | A | PHASE B | CKT NO. | DESCRIPTION |
| LTG - CR A | 792 | 20/1 | 1 | 6,750 | 2 | 90/2 | 5,958 HVAC - CR A |
| LTG - CR B | 792 | 20/1 | 3 | | 6,750 | 4 | 5,958 |
| RECEP | 720 | 20/1 | 5 | 6,678 | 6 | 90/2 | 5,958 HVAC - CR B |
| RECEP | 720 | 20/1 | 7 | | 6,678 | 8 | 5,958 |
| RECEP | 720 | 20/1 | 9 | 900 | 20/1 | 180 | DATA CABINET |
| SPACE | | | 11 | | 0 | 12 | SPACE |
| SPACE | | | 13 | 0 | 0 | 14 | SPACE |
| SPACE | | | 15 | | 0 | 16 | SPACE |
| SPACE | | | 17 | 0 | 0 | 18 | SPACE |
| SPACE | | | 19 | | 0 | 20 | SPACE |
| SPACE | | | 21 | 0 | 0 | 22 | SPACE |
| SPACE | | | 23 | | 0 | 24 | SPACE |
| | | | | 14,328 | 13,428 | | |
| REMARKS: | | | | LIGHTING 1,584 VA 125% LIGHTING 1,980 VA | | | |
| LOAD BASED ON BLAZER INDUSTRIES | | | | TOTAL RECEP 2,160 VA FIRST 10KVA RECEP 2,160 VA | | | |
| JOB # 18658-60 63 64 | | | | LG MOTOR 3,528 VA 50% RECEP OVER 10KVA 0 VA | | | |
| DRAWING E-1 | | | | OTHER MOTORS 5,304 VA 125% LARGEST MOTOR 4,410 VA | | | |
| | | | | KITCHEN 0 VA OTHER MOTORS 5,304 VA | | | |
| | | | | COMPUTERS 0 VA 65% KITCHEN 0 VA | | | |
| | | | | HEAT 15,000 VA HEAT 15,000 VA | | | |
| | | | | MISC 180 VA MISC 180 VA | | | |
| | | | | TOTAL CONN 27.76 KVA TOTAL CALCULATED 29.03 KVA | | | |
| | | | | 133.44 AMPS 139.59 AMPS | | | |

| | | | | | | | |
|--------------------------------------|--------------|--------|---------|-----------------------------|---------|---------|------------------------------------|
| NO. P5 (EXISTING EATON TYPE CS) | | | | 120/208 VOLT 1-PHASE 3-WIRE | | | |
| LOCATION: P5 | | | | BUS: 225 AMPS 200A MAIN BKR | | | |
| ENCLOSURE: FLUSH | | | | 10,000 AIC ASSEMBLY | | | |
| MODERN DBL | | | | | | | |
| DESCRIPTION | VA | BKR | CKT NO. | A | PHASE B | CKT NO. | DESCRIPTION |
| HVAC - CR A HEAT | 3,750 | 60/2 | 1 | 7,500 | 2 | 60/2 | 3,750 HVAC - CR B HEAT |
| HVAC - CR A FANS/COMPRESSORS | 3,750 | | 3 | | 7,500 | 4 | 3,750 |
| | 2,208 | 30/2 | 5 | 4,416 | 8 | 30/2 | 2,208 HVAC - CR B FANS/COMPRESSORS |
| | 2,208 | | 7 | | 4,416 | 8 | 2,208 |
| WATER HTR (LOCKED OUT - NOT PLUMBED) | | 30/1 | 9 | 720 | 10 | 20/1 | 720 RECEP |
| RECEP - WALL & CLG | 900 | 20/1 | 11 | 1,600 | 12 | 20/1 | 700 LTS |
| RESTRM LTG & FANS | 1,200 | 20/1 | 13 | 1,920 | 14 | 20/1 | 720 RECEP |
| RECEP | 720 | 20/1 | 15 | | 900 | 16 | 20/1 |
| LTG - CR A & EXT | 800 | 20/1 | 17 | 2,300 | 18 | 20/1 * | 1,500 DEDICATED RECEP - SITE |
| RECEP | 720 | 20/1 | 19 | | 2,220 | 20 | 20/1 * |
| RECEP | 180 | 20/1 | 21 | 1,680 | 22 | 20/1 * | 1,500 DEDICATED RECEP - SITE |
| DEDICATED RECEP - SITE ** | 1,500 | 20/1 | 23 | | 1,500 | 24 | |
| SPACE | | | 25 | 0 | | | SPACE |
| SPACE | | | 27 | 0 | | 28 | SPACE |
| SPACE | | | 29 | 0 | | 30 | SPACE |
| | | | | 18,536 | 18,136 | | |
| REMARKS: | LIGHTING | 2,700 | VA | 125X LIGHTING | | 3,375 | VA |
| LOAD BASED ON MODERN | TOTAL RECEP | 4,140 | VA | FIRST 10KVA RECEP | | 4,140 | VA |
| OVERHEATING SYSTEMS JOB 2001-KM-24 | | | | 50KZ RECEP OVER 10KVA | | 0 | VA |
| SHEETS 10 & 11 | LG MOTOR | 3,528 | VA | 125X LARGEST MOTOR | | 4,410 | VA |
| AND FIELD OBSERVATION | OTHER MOTORS | 5,304 | VA | OTHER MOTORS | | 5,304 | VA |
| * PROVIDE NEW CKT BKR IN EXISTING | HEAT | 15,000 | VA | HEAT | | 15,000 | VA |
| | MISC | 6,000 | VA | MISC | | 6,000 | VA |
| ** NEW LOAD ON EXISTING SPARE | TOTAL CONNN | 36.67 | KVA | TOTAL CALCULATED | | 38.23 | KVA |
| CKT BKR | | 176.31 | AMPS | | | 183.79 | AMPS |

ELECTRICAL SPECIFICATIONS

- | | | | |
|---|--|---|--|
| <p>PEPE</p> <p>A. PROVIDE ALL LABOR, EQUIPMENT, MATERIAL, ACCESSORIES AND, TESTING FOR ELECTRICAL POWER AND SIGNAL SERVICES TO EACH PORTABLE CLASSROOM BUILDING, COMPLETE AND OPERATING. WHERE BUILDING CONSTRUCTION PERMITS, CONCEAL INDOOR POWER AND SIGNAL WIRING IN ATTICS, CEILING SPACES, CRAWL SPACES AND WITHIN WALL CONSTRUCTION. WHERE BUILDING CONSTRUCTION DOES NOT ACCOMMODATE CONCEALMENT, PROVIDE SURFACE METAL RACEWAY AND ROUTE ALONG OR PERPENDICULAR TO BUILDING LINES.</p> <p>B. OBTAIN FROM THE SCHOOL DISTRICT MANUFACTURER SHOP DRAWINGS FOR EACH PORTABLE BUILDING FOR LAYOUT OF OUTLETS, CONDUIT ROUGH-IN, AND CONSTRUCTION FEATURES PROVIDED BY THE BUILDING MANUFACTURER.</p> <p>2. SUBMITTALS</p> <p>A. POWER SYSTEMS: PROVIDE PRODUCT SUBMITTALS ON WIRE AND CABLE, DISTRIBUTION EQUIPMENT. OBTAIN WRITTEN APPROVAL PRIOR TO ORDERING.</p> <p>B. SIGNAL SYSTEMS: PROVIDE SYSTEM SHOP DRAWINGS AND PRODUCT SUBMITTALS ON WIRE AND CABLE AND ALL EQUIPMENT, COMPONENTS, AND DEVICES BEING FURNISHED FOR EACH SIGNAL SYSTEM. OBTAIN WRITTEN APPROVAL PRIOR TO ORDERING.</p> <p>SUBMIT FIRE ALARM SHOP DRAWINGS TO FIRE MARSHALL FOR REVIEW AND APPROVAL. PROVIDE SYSTEM PER AHJ REQUIREMENTS.</p> <p>3. DEFINITIONS</p> <p>A. FURNISH: DELIVER TO THE PROJECT.</p> <p>B. INDICATED: SHOWN, SCHEDULED, NOTED, OR OTHERWISE CALLED OUT ON THE DRAWINGS.</p> <p>C. INSTALL: ENTER PERMANENTLY INTO THE PROJECT COMPLETE AND READY FOR SERVICE.</p> <p>D. PROVIDE: FURNISH AND INSTALL COMPLETE AND READY FOR SERVICE.</p> <p>E. EQUIPMENT CONNECTION: MAKE BRANCH CIRCUIT CONNECTION, MOUNT AND CONNECT CONTROL DEVICES AS REQUIRED. PROVIDE DISCONNECT AND OVERCURRENT PROTECTION.</p> <p>F. WIRING: CONDUCTORS IN RACEWAY OR AN APPROVED CABLE ASSEMBLY.</p> <p>4. EXISTING CONDITIONS</p> <p>A. CUTTING & PATCHING: PROVIDE CUTTING AND PATCHING REQUIRED FOR ELECTRICAL WORK AND TO PROVIDE OPENINGS IN FOR ELECTRICAL PENETRATIONS. LOCATE AND EXECUTE CUTS SO AS NOT TO DAMAGE OTHER WORK OR WEAKEN STRUCTURAL COMPONENTS. CORE DRILL OR SAW CUT RIGID MATERIALS. PATCH AND RESTORE TO ORIGINAL CONDITION. SEAL ALL CONDUIT PENETRATIONS WEATHER TIGHT WITH ACRYLIC WEATHERPROOF CAULKING SUITABLE FOR PAINTING. SEAL ALL OPENINGS AND CONDUIT PENETRATIONS TO MAINTAIN RATING OF FIRE RATED CONSTRUCTION. PROVIDE FLASHING AROUND CONDUITS AT ALL REQUIRED ROOF PENETRATIONS. ROOF FLASHING SHALL CONFORM TO STANDARD RECOMMENDED INSTALLATION DETAILS OF THE ROOF SYSTEM MANUFACTURER WHICH MAY BE OBTAINED FROM THE SCHOOL DISTRICT.</p> <p>B. POWER OUTAGES: SCHEDULE POWER OUTAGES FOR EVENINGS, WEEKENDS, OR HOLIDAYS UNLESS OTHERWISE APPROVED. INCLUDE COSTS FOR OVERTIME AND WORK OUTSIDE REGULAR HOURS.</p> <p>C. FIELD VERIFICATION: FIELD VERIFY EXISTING POWER AND SIGNAL CIRCUIT WIRING AND SOURCE OF SUPPLY AS REQUIRED TO PERFORM WORK.</p> <p>D. ACCESS: CAREFULLY REMOVE, STORE, AND REINSTALL REMOVABLE PANELS AND CEILING TILES WHERE ACCESS TO PERFORM WORK IN CRAWL SPACES AND CEILING SPACES IS REQUIRED. ACCESS TO CRAWL SPACES SHALL BE SECURED AT ALL TIMES EXCEPT WHEN CONTRACTOR IS PRESENT AND PERFORMING WORK IN THE ACCESSED SPACE.</p> <p>E. CIRCUIT DIRECTORIES: UPDATE PANELBOARD AND LOAD CENTER CIRCUIT DIRECTORIES TO INDICATE CHANGES AND ADDITIONS TO EACH CIRCUIT.</p> <p>F. ADDITIONAL OUTLETS: COORDINATE WITH SUBCONTRACTORS FOR SIGNAL SYSTEMS SPECIFIED BELOW. PROVIDE PLUG-IN OR HARDWIRED OUTLETS FOR NEW POWER SUPPLIES, AMPLIFIERS, CONTROL PANELS, AND OTHER NEW EQUIPMENT REQUIRING 120 VAC POWER. PROVIDE BRANCH CIRCUIT BREAKER AND EXTEND DEDICATED CIRCUIT FROM NEAREST PANELBOARD.</p> <p>5. REGULATORY REQUIREMENTS</p> <p>NATIONAL ELECTRICAL CODE, STATE AND LOCAL ELECTRICAL, FIRE, AND BUILDING CODES; LOCAL UTILITY COMPANY REQUIREMENTS. OBTAIN AND PAY FOR REQUIRED PERMITS.</p> | <p>2. GROUNDING</p> <p>A. GROUNDING ELECTRICAL SYSTEM AT EACH PORTABLE BUILDING PER CODE. PROVIDE TWO COPPER CLAD STEEL 3/4 INCH X 8 FOOT GROUND RODS WITH 10 FOOT MINIMUM SEPARATION BETWEEN GROUND RODS AT EACH BUILDING.</p> <p>B. DRIVEN ELECTRODES: DRIVE GROUND RODS FULL DEPTH AND BURIED 12 INCHES MINIMUM BELOW FINISHED GRADE. MAKE GROUNDING CONNECTIONS WHICH ARE BURIED USING EXOTHERMIC WELDS.</p> <p>C. PROVIDE EQUIPMENT GROUND CONDUCTOR WITH CIRCUIT CONDUCTORS BETWEEN BUILDING AND/OR STRUCTURE. SIZE EQUIPMENT FOUNDING CONDUCTOR PER NEC 250-122 UNLESS LARGER SIZE IS INDICATED.</p> <p>D. PROVIDE SEPARATE GROUNDING CONDUCTOR IN NON-METALLIC CONDUIT.</p> <p>E. PROVIDE CONDUIT SLEEVES WHERE GROUND CONDUCTORS ARE EXPOSED BELOW EIGHT FEET ABOVE GRADE. METAL CONDUIT SLEEVES SHALL HAVE THREADED END EXTENDING ABOVE SLAB TO ACCOMMODATE A GROUNDING BUSHING OR CONDUIT HUB PER NEC 250-92(B).</p> <p>F. PROVIDE MINIMUM #6 AWG CONDUCTOR FOR IDF CABINET GROUNDING. CONNECT CONDUCTOR TO BUILDING GROUND ELECTRODE SYSTEM.</p> <p>G. SEPARATELY DERIVED SYSTEMS</p> <p>GROUND SECONDARY NEUTRAL AND HOUSING OF ALL TRANSFORMERS PER CODE, USING DRIVEN ELECTRODE SYSTEM, TWO GROUND RODS MINIMUM. SIZE ELECTRODE CONDUCTOR PER NEC 250-66.</p> <p>7. UNDERGROUND SERVICES</p> <p>A. INSTALL 24 INCHES MINIMUM BELOW GRADE.</p> <p>B. COORDINATE WITH SCHOOL DISTRICT AND OBTAIN LOCATOR SERVICE TO IDENTIFY AND MARK EXISTING PUBLIC AND PRIVATE UNDERGROUND UTILITIES THE MAY INTERFERE WITH NEW WORK. EXCAVATE TO EXPOSE INTERFERING UNDERGROUND UTILITIES PRIOR TO TRENCHING.</p> <p>C. EXISTING PAVEMENT AREAS SHALL BE SAW CUT WITH NEAT PARALLEL STRAIGHT LINES.</p> <p>D. DIG TRENCHES OF UNIFORM WIDTH AND DEPTH. PROVIDE UNIFORM GRADE AT BOTTOM OF TRENCHES FREE OF ROCKS, DEBRIS, AND SOFT SPOTS. OVER DEPTHS SHALL BE FILLED WITH SAND.</p> <p>E. BACKFILL MATERIALS SHALL BE SOIL FREE OF DEBRIS, ROOTS, WOOD, REFUSE, AND OF ROCKS EXCEEDING 3 INCHES IN LARGEST DIMENSION. THE FIRST 12 INCHES OF BACKFILL SHALL BE SELECT FILL CONSISTING OF BUILDING SAND OR BACKFILL MATERIAL FREE FROM PARTICLES THAT WOULD BE RETAINED ON A 3/8 INCH SIEVE.</p> <p>F. PLACE BACKFILL IN 6 INCH LOOSE LIFTS AND COMPACT TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D 1557, EXCEPT THE FIRST 6 INCHES OF BACKFILL MATERIAL ABOVE PVC CONDUIT SHALL NOT BE COMPACTED.</p> <p>G. EXCESS MATERIAL AND EXCAVATED MATERIAL NOT SUITABLE FOR USE AS BACKFILL SHALL BE REMOVED AND LEGALLY DISPOSED OFF OWNER'S PROPERTY.</p> <p>H. RESTORE ALL SURFACES DISTURBED BY NEW CONSTRUCTION TO ITS ORIGINAL GRADE AND CONDITION. LANDSCAPE MATERIALS SHALL BE SIMILAR IN TYPE AND QUALITY AS THAT REMOVED. NEW TOPSOIL SHALL BE THREE-WAY MIX (50% BLACK SILT SAND 30% PEAT MOSS, 20% CHICKEN MANURE) 2-INCH MINIMUM DEPTH. RESTORE GRASS WITH SOD LAWN.</p> <p>8. RACEWAYS (UNLESS OTHERWISE NOTED)</p> <p>A. OUTDOORS:</p> <p>ABOVE GRADE – POWER – RIGID GALVANIZED STEEL (RGS), GALVANIZED INTERMEDIATE METAL CONDUIT (IMC), RISERS – RGS, IMC OR SCHEDULE 80 PVC.</p> <p>BELOW GRADE OR WITHIN PORTABLE CRAWL SPACE – SCHEDULE 40 PVC, COATED RGS OR COATED IMC.</p> <p>ABOVE GRADE – SIGNAL – SCHEDULE 80 PVC.</p> <p>B. INDOORS: ELECTRICAL METALLIC TUBING (EMT), RGS, IMC. CONCEALED – FLEXIBLE METAL CONDUIT UP TO 1-INCH DIAMETER. EXPOSED IN FINISHED AREAS – SURFACE METAL RACEWAY (SMR).</p> <p>C. USE CONDUIT ROUGH-IN WHERE PROVIDED IN WALLS FOR SIGNAL SYSTEM OUTLETS AT PORTABLE CLASSROOM BUILDINGS.</p> <p>9. CONDUCTORS</p> <p>COPPER BUILDING WIRE INSTALLED IN RACEWAY, TYPE THWN. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG.</p> <p>10. POWER DISTRIBUTION SYSTEM</p> <p>A. GENERAL: GENERAL DUTY EQUIPMENT MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS OR CUTLER-HAMMER. OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.</p> <p>B. PANELBOARDS: EXISTING PROVIDED BY PORTABLE MANUFACTURER.</p> <p>C. CIRCUIT BREAKERS: NEMA AB1; MOLDED CASE, THERMAL MAGNETIC TRIP. MATCH EXISTING MANUFACTURE AND TYPE WHERE INSTALLED IN EXISTING DISTRIBUTION EQUIPMENT.</p> <p>D. ENCLOSED CIRCUIT BREAKERS: UL 489; MOLDED CASE CIRCUIT BREAKER WITH THERMAL MAGNETIC TRIP, FIXED MOUNTED, SINGLE HANDLE COMMON POLE OPERATION. ENCLOSURE: NEMA 1CS6; TYPE 1 INDOORS, TYPE 3R PADLOCKABLE OUTDOORS.</p> <p>E. DRY TYPE TRANSFORMERS, GENERAL: ANSI/NEMA ST 20, GENERAL PURPOSE, AIR COOLED, RATINGS AS SHOWN ON DRAWINGS, 220 DEGREE C INSULATION, 115 DEGREE C RISE ABOVE 40 DEGREE C AMBIENT, SIX (6) 2-1/2% PRIMARY WINDING TAPS (2 ABOVE AND 4 BELOW NORMAL), SOUND LEVEL NOT TO EXCEED ANSI/NEMA ST 20 STANDARDS, AS MANUFACTURED BY SQUARE D, TIERNEY, CUTLER-HAMMER, GENERAL ELECTRIC, OR SIEMENS. INSTALL WEATHER SHIELDS ON TRANSFORMERS INSTALLED IN INDOOR LOCATIONS COMMON WITH WATER PIPING AND/OR FIRE SPRINKLERS. PROVIDE TAMPER PROOF NEMA 3R PAD MOUNT ENCLOSURE WHERE INSTALLED OUTDOORS.</p> <p>INSTALLATION OUTDOORS: PROVIDE CONCRETE SLAB FOUNDATION, 5-1/2" THICK REINFORCED WITH 6" X 6" NO. 6 WELDED STEEL FABRIC UNIFORMLY CENTERED IN SLAB. SLAB SHALL BE PLACED ON A WELL COMPACTED 9" DEEP GRAVEL SUBBASE SO THAT THE TOP IS 3" ABOVE GRADE. ALL EDGES SHALL HAVE 1/2" CHAMFER. PAD DIMENSIONS SHALL ALLOW AT LEAST 6" OF FREE SPACE ON ALL SIDES OF THE EQUIPMENT. SECURE TRANSFORMER TO PAD WITH MINIMUM OF FOUR CORROSION PROOF ANCHORS. CONDUIT ENTRANCE DIMENSIONS AND LOCATION SHALL COMPLY WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. PROVIDE GROUND ELECTRODE SYSTEM WITH MEASURED MAXIMUM RESISTANCE TO GROUND OF 5 OHMS. BOND NON-CURRENT CARRYING METAL EQUIPMENT PARTS AND SECONDARY NEUTRAL TO GROUND.</p> | <p>11. VOICE/DATA SYSTEM</p> <p>A. EXTEND EXISTING VOICE/DATA SYSTEM FROM INDICATED SOURCE TO STATION OUTLETS, CABLE, CROSS-CONNECT COMPONENTS, AND IDENTIFICATION LABELING TO CONFORM TO SCHOOL DISTRICT STANDARDS. FROM EACH STATION OUTLET, HOMERUN A STATION CABLE TO THE CROSS CONNECT TERMINAL.</p> <p>B. COORDINATE WITH OWNER'S REPRESENTATIVE TO VERIFY PRODUCTS AND SYSTEM PARAMETERS. SUBMIT AS-BUILT DRAWINGS WITH STATIONS LABELED AND TEST REPORTS.</p> <p>C. CABLING TO BE INDOOR/OUTDOOR RATED. CABLING MAY BE INSTALLED WITHOUT CONDUIT IN ACCESSIBLE CEILING AND ATTIC SPACES.</p> <p>D. SYSTEM REQUIREMENTS:</p> <p>1) REGULATORY REQUIREMENTS:</p> <p>ANSI/TIA-568.0-D GENERAL TELECOMMUNICATIONS CABLING FOR CUSTOMER PREMISES</p> <p>ANSI/TIA-568.1-D COMMERCIAL BUILDING TELECOMMUNICATIONS INFRASTRUCTURE STANDARD</p> <p>ANSI/TIA-568.C.2 BALANCED TWISTED PAIR TELECOMMUNICATIONS CABLING AND COMPONENTS STANDARD</p> <p>ANSI/TIA-568.3-D OPTICAL FIBER CABLING AND COMPONENTS STANDARD</p> <p>ANSI/TIA-569-D TELECOMMUNICATIONS PATHWAYS AND SPACES</p> <p>2) STATION CABLE: UL TYPE CMR, EIA/TIA CATEGORY 6, 24 AWG SOLID COPPER, 4-PAIR UNSHIELDED TWISTED PAIR, INDOOR/OUTDOOR RATED.</p> <p>3)FIBER OPTIC CABLE: UL LISTED OFNR SIX (6) STRAND MULTI-MODE 50/125 MICRON ULTRA GRADE, INDOOR/OUTDOOR RATED, LOOSE BUFFER, UV JACKET, TERMINATE WITH LC STYLE CONNECTORS. INSTALL CABLE IN NONMETALLIC CORRUGATED FLEXIBLE RACEWAY, ORANGE COLOR, SUITABLE FOR USE AS INNERDUCT, PLENUM RATED.</p> <p>5) STATION OUTLETS: RJ45 CAT 6, T568A/B TERMINATION.</p> <p>6) CROSS CONNECT TERMINALS – LAN – BY OWNER.</p> <p>7) PATCH CORDS: BY OWNER.</p> <p>8) SURGE PROTECTORS: PROVIDE FOR CATEGORY 6 CABLING.</p> <p>9) CABLE TERMINATION: PROVIDE ALL CABLE TERMINATIONS EACH END UNLESS OTHERWISE INDICATED.</p> <p>10) TESTING: TEST EACH NEW CABLE DROP FOR ANSI/TIA CATEGORY 6 COMPLIANCE AND SUBMIT REPORT. CORRECT DEFICIENCIES.</p> <p>TEST EACH NEW FIBER INSTALLATION FOR CONTINUITY AND ATTENUATION AND SUBMIT REPORTS. MAXIMUM ALLOWABLE ATTENUATION FOR MULTI-MODE FIBERS FOR A BANDWIDTH OF 500 MHz-KM – 3.5 Db/km AT 850nm AND 1.5 Db/km AT 1300nm. CORRECT DEFICIENCIES.</p> <p>11) ETHERNET SWITCH: BY OWNER.</p> | <p>12. INTERCOM SPEAKERS:</p> <p>A. EXTEND SCHOOL INTERCOM SYSTEM FROM INDICATED SOURCE TO EACH PORTABLE CLASSROOM UTILIZING COMMON SPEAKER ZONE. SPEAKERS FURNISHED BY OWNER, PROVIDE ADDITIONAL COMPONENTS AS REQUIRED FOR FUNCTIONING SYSTEM.</p> <p>B. WIRING SHALL BE COLOR CODED, SHIELDED TWISTED PAIR, COPPER CABLE WITH OUTER JACKET, AND SIZED TO LIMIT VOLTAGE DROP TO 3% UNDERGROUND CABLES SHALL BE UL LISTED FOR WET LOCATION. SPEAKER WIRING MAY BE INSTALLED WITHOUT CONDUIT IN ACCESSIBLE CEILING AND ATTIC SPACES.</p> <p>C. APPROVED SUB-CONTRACTOR: GB MANCHESTER, VANCOUVER, WA LACI ROWLAND, (360)816-0484.</p> <p>13. INTRUSION ALARM</p> <p>A. MODIFY EXISTING AS REQUIRED TO ACCOMMODATE NEW WORK. FURNISH SHOP DRAWING AND INCLUDE DEVICE PROGRAMMING. PROVIDE NEW CABLING TO EXISTING DEVICES. PROVIDE MODULES AS REQUIRED FOR SYSTEM COMPATIBILITY.</p> <p>B. WIRING SHALL BE MULTI-CONDUCTOR (8#18) COPPER CABLE CONFORMING TO EXISTING SYSTEM REQUIREMENTS AND SIZED TO LIMIT VOLTAGE DROP TO 3% UNDERGROUND CABLE SHALL BE SUITABLE FOR WET LOCATIONS. WIRING MAY BE INSTALLED WITHOUT CONDUIT IN ACCESSIBLE CEILING, ATTIC, CRAWL SPACES. PROVIDE TRANSIENT PROTECTOR WHERE UNDERGROUND CABLES ENTER MAIN BUILDING.</p> <p>14. FIRE ALARM</p> <p>A. EXTEND EXIST</p> |
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