

GENERAL NOTES:

- A. RE: SE.000 FOR ADDITIONAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B. ALL MANHOLE AND PULL BOX LOCATIONS SHALL BE STAKED AND REVIEWED BY THE ARCHITECT, AND HCC PROJECT MANAGER PRIOR TO INSTALLING MANHOLES OR PULLBOXES.
- C. SCHEDULE ALL SHUT DOWNS WITH HOUSTON COMMUNITY COLLEGE FACILITIES GROUP A MINIMUM OF 30 DAYS PRIOR TO SHUT DOWN. ALL SHUT DOWNS WILL BE DONE AFTER HOURS OR AS APPROVED BY HOUSTON COMMUNITY COLLEGE, IN WRITING. LIMIT THE DURATION OF SHUT DOWNS.

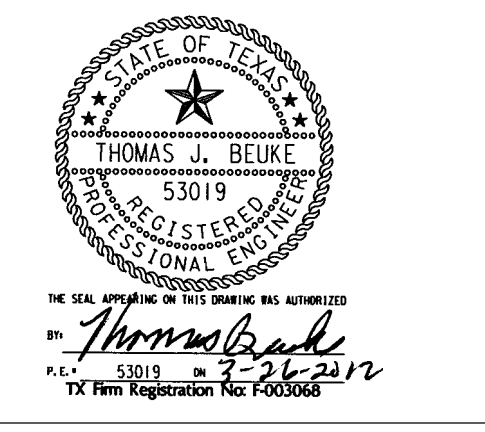
DRAWING NOTES:

- ① EXISTING CENTERPOINT POWER POLE TO REMAIN.
- ② NEW CENTERPOINT TERMINAL POLE.
- ③ NEW UNDERGROUND DUCTBANK PER CENTERPOINT ENERGY STANDARDS.
- ④ COORDINATE THE REMOVAL OF THE OVERHEAD SERVICE AND SERVICE POLES WITH CENTERPOINT ENERGY AFTER THE PERMANENT UNDERGROUND SERVICE HAS BEEN INSTALLED AND ALL LOW VOLTAGE VENDORS CABLING HAS BEEN RELOCATED.
- ⑤ NEW CONCRETE PULL BOX, (36" X36" BY DEPTH AS REQUIRED), STAKE LOCATION FOR REVIEW BY ARCHITECT PRIOR TO INSTALLATION.
- ⑥ NEW CENTERPOINT PAD MOUNTED SERVICE TRANSFORMER. REFER TO SE300 FOR DETAILS.
- ⑦ EXISTING CENTERPOINT POLE TO REMAIN.
- ⑧ INSTALL (4) 4" EMPTY CONDUITS WITH PULLSTRINGS AND COORDINATE THE RELOCATION OF THE OVERHEAD UTILITIES TO UNDERGROUND WITH THE LOW VOLTAGE VENDORS, ALSO COORDINATE ROUTING WITH HCC.
- ⑨ EXISTING CENTERPOINT POLE STREET LIGHT FED UNDERGROUND TO REMAIN.
- ⑩ COORDINATE WITH CENTERPOINT TO REPLACE THE EXISTING WOODEN POLE STREET LIGHT WITH A NEW STEEL POLE PROVIDED BY CENTERPOINT. BACKFEED THIS POLE FROM THE EXISTING POLE UNDERGROUND, RE: NOTE 9. PROVIDE 2" CONDUIT (SCHEDULE 40, SCHEDULE 80 UNDER DRIVES) PER CENTERPOINT STANDARDS.
- ⑪ EXISTING BUSSED WEATHER HEADS SERVING BUILDINGS TO BE REMOVED AFTER NEW SERVICE IS INSTALLED.
- ⑫ NEW TRAFFIC RATED PULL BOX, (36" X36" BY DEPTH AS REQUIRED), CAPTURE THE EXISTING UNDERGROUND FEEDER TO THE ANGELA MORALES BUILDING AND BACKFEED FROM THE NEW PAD MOUNTED CENTERPOINT TRANSFORMER, RE: SE300.
- ⑬ NEW TRAFFIC RATED PULL BOX, (36" X36" BY DEPTH AS REQUIRED), CAPTURE THE EXISTING UNDERGROUND FEEDER TO THE FELIX MORALES BUILDING AND BACKFEED FROM THE NEW PAD MOUNTED CENTERPOINT TRANSFORMER, RE: SE300.
- ⑭ EXISTING PRIMARY POWER AND TELEPHONE SERVICE POLE TO BE REMOVED AFTER SERVICES ARE BACKFEED. PROVIDE IN GROUND SPLICE BOX AND EXTEND (2) 4" EMPTY CONDUITS TO EXISTING POLE. COORDINATE EXACT REQUIREMENTS WITH TELEPHONE PROVIDER.
- ⑮ EXISTING PRIMARY TERMINAL POLES SERVING CENTERPOINT PAD MOUNTED TRANSFORMERS FOR WORK FORCE AND LEARNING HUB BUILDINGS TO REMAIN.
- ⑯ EXISTING TRANSFORMER POLE WITH LIGHT TO REMAIN TRANSFORMER IS SERVING 120V POWER FOR POLE LIGHT TO BE RELOCATED BY POWER COMPANY.
- ⑰ EXISTING OVERHEAD PRIMARY TO REMAIN.
- ⑱ EXISTING UNDERGROUND 120V POWER SERVING LIGHT POLE TO REMAIN.
- ⑲ EXISTING OVERHEAD 120V LIGHTING POWER TO BE REMOVED BY CENTERPOINT.
- ⑳ EXISTING MAIN SWITCHBOARD LOCATION.
- ㉑ EXISTING SERVICE CONDUITS, FIELD VERIFY EXACT ROUTING.
- ㉒ COORDINATE ROUTING OF NEW ELECTRICAL SECONDARY DUCT BANK WITH THE EXISTING WATER AND SANITARY PIPING. REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION.



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Issue:

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|---------|---------------------------------|
| 3-02-12 | Issued for Bid and Construction |
| 3-26-12 | ADD #1 |

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| | |
|------------------|---------|
| E&C Project No.: | 2670.00 |
| A/E Project No.: | |
| Drawn By: | MHS |
| Checked By: | TJB |
| CAD File: | MHS |

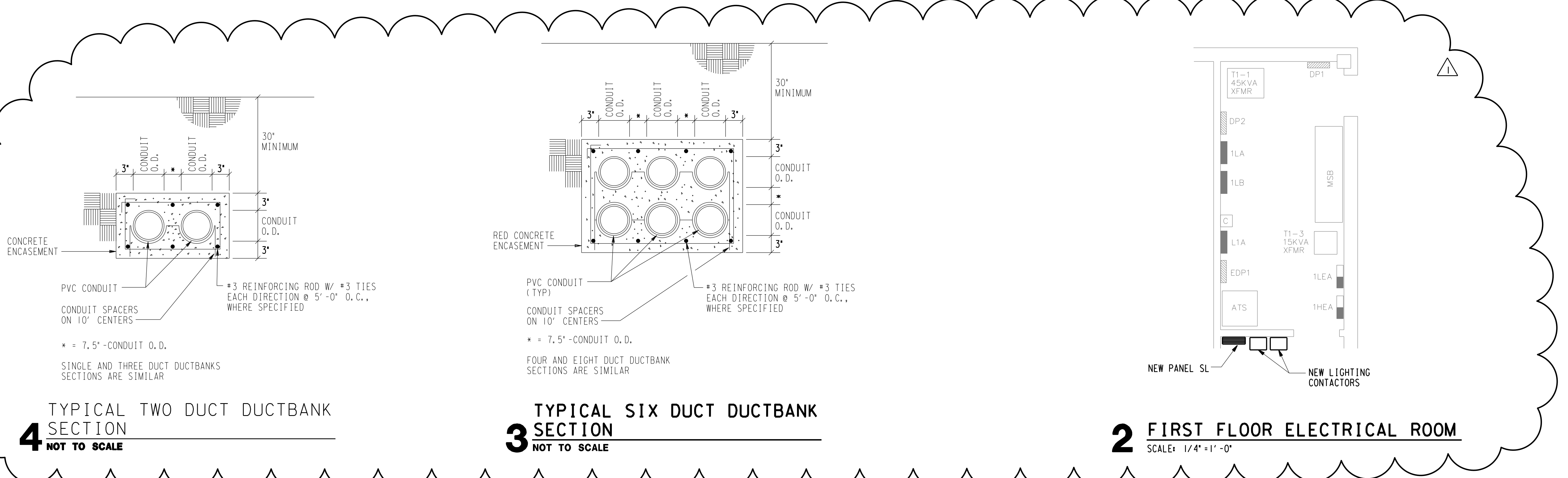
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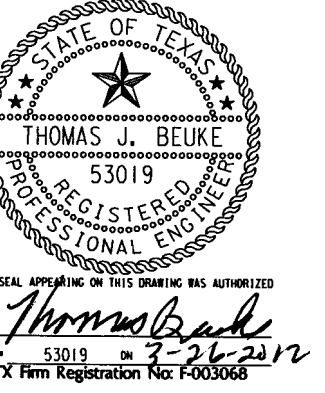
ELECTRICAL SITE PLAN POWER

Scale: As Noted

SE200

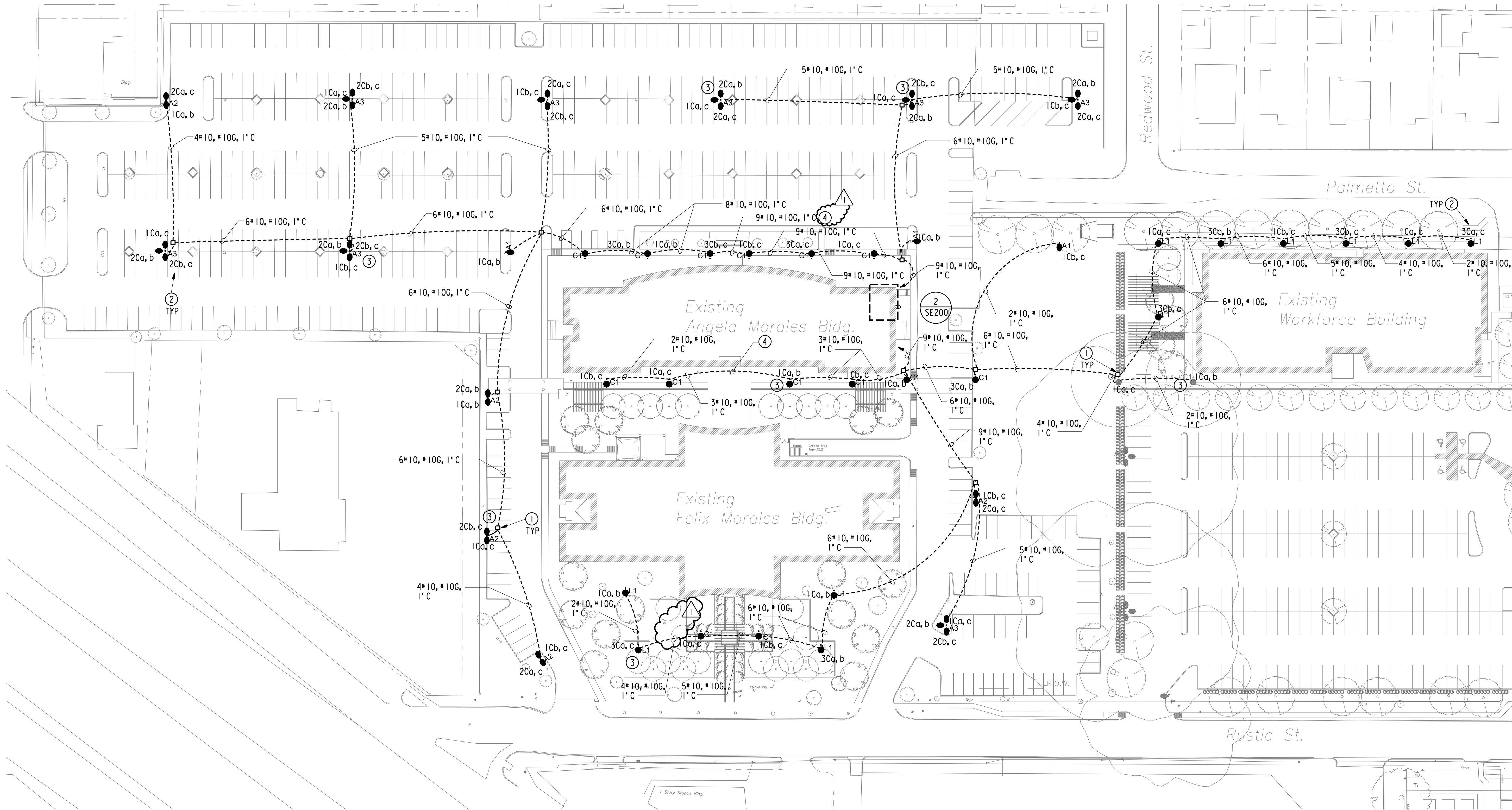
1 ELECTRICAL SITE PLAN POWER
SCALE: 1" = 40' - 0"





Issue:

| | |
|---------|---------------------------------|
| 3-02-12 | Issued for Bid and Construction |
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1 ELECTRICAL SITE PLAN LIGHTING
SCALE: 1" = 40' - 0"

GENERAL NOTES:

- A. REFER TO SE000 FOR ADDITIONAL GENERAL NOTES AND SYMBOLS AND ABBREVIATIONS.
- B. SCHEDULE ALL WORK ON THE SITE WITH HOUSTON COMMUNITY COLLEGE PRIOR TO SCHEDULING.

DRAWING NOTES:

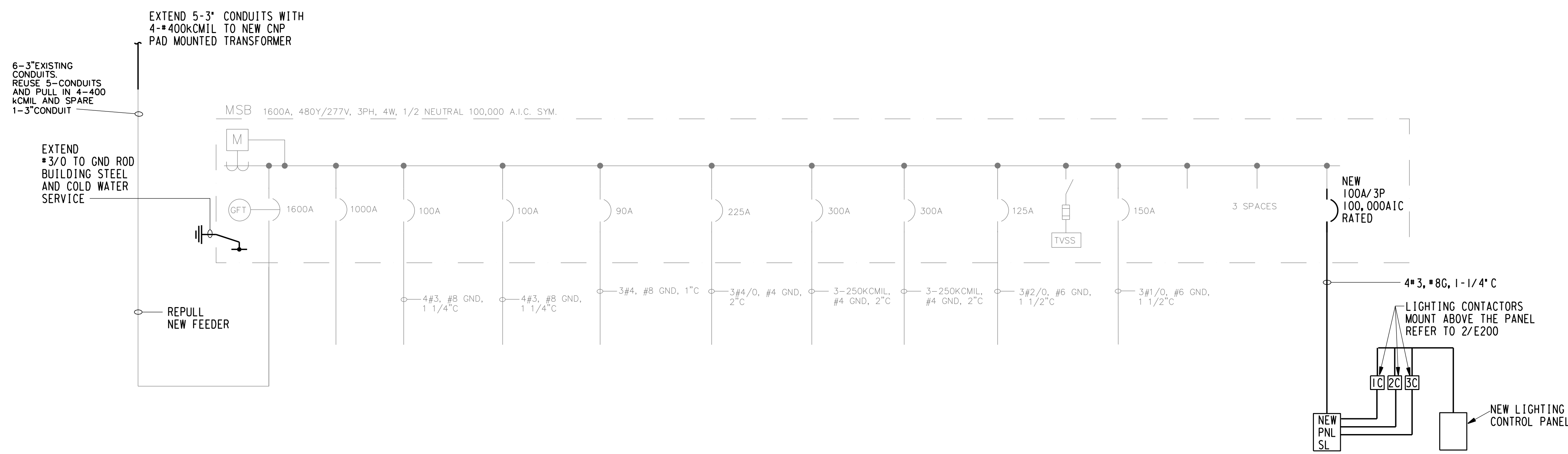
- ① PROVIDE IN-GROUND PRECAST CONCRETE PULL BOX MANUFACTURED BY BROOKS. 24" X24" BY 12" DEEP. MAKE ALL CONNECTIONS WATERTIGHT. PROVIDE STEEL COVER WITH ELECTRICAL ON COVER, PROVIDE TRAFFIC RATED COVER WHEN INSTALLED IN TRAFFIC AND PARKING AREAS.
- ② INDICATES CONTACTOR NUMBER, SMALL LETTERS INDICATE PHASE, RE: 2/SE300 FOR ADDITIONAL INFORMATION.
- ③ STUB CONDUIT UP POLE FOR FUTURE COMMUNICATIONS, REFER TO POLE BASE DETAIL, 1/SE300.
- ④ BORE CONDUIT UNDER THE EXISTING SIDEWALK.

| LIGHT FIXTURE SCHEDULE | | |
|--|--|-----------------|
| ALL LIGHT FIXTURES SHOWN ARE NOT NECESSARILY USED ON THE PROJECT COORDINATE TYPES WITH SITE LIGHTING PLANS | | |
| TYPE | DESCRIPTION | Watts/Luminaire |
| A1 | FIXTURE: MOONGOOSE PARKING AREA LIGHT WITH INTEGRAL ARCHITECTURAL ARM SUITABLE FOR SITE LINK MOUNTING. (1) VERTICAL 400W PULSE START METAL HALIDE LAMP, 480V, SINGLE PHASE, ENERGY SAVING LOW LOSS BALLAST, TEMPERED FLAT GLASS LENS, SYMMETRICAL IES FULL CUT-OFF DISTRIBUTION, GRAPHITE POWDER COAT (TIGER DRYLAC METALLIC #P5 4980180-C), ARCHITECTURAL ARM MOUNTING. MANUFACTURER: (1) HOLOPHANE G40LPM48L SFAA-SL-HCCA MOONGOOSE WITH ARCHITECTURAL ARM (4) 1/2" X 3/8" - 10TDP5 (1) 1197-11) SITELINK STL200002SP-SPL-HCCA-STL2POLK1EKTSDPAB27-4-TMP40000A LAMP: (1) SYLVANIA 64189 LAMP -MS400PSBL-ONLYB728 | 509 |
| A2 | FIXTURE: MOONGOOSE PARKING AREA LIGHT WITH INTEGRAL ARCHITECTURAL ARM SUITABLE FOR SITE LINK MOUNTING. (2) VERTICAL 400W PULSE START METAL HALIDE LAMP, 480V, SINGLE PHASE, ENERGY SAVING LOW LOSS BALLAST, TEMPERED FLAT GLASS LENS, SYMMETRICAL IES FULL CUT-OFF DISTRIBUTION, GRAPHITE POWDER COAT (TIGER DRYLAC METALLIC #P5 4980180-C), ARCHITECTURAL ARM MOUNTING. MANUFACTURER: (2) HOLOPHANE G40LPM48L SFAA-SL-HCCA MOONGOOSE WITH ARCHITECTURAL ARM (4) 1/2" X 3/8" - 10TDP5 (2) 1197-11) SITELINK STL200002SP-SPL-HCCA-STL2POLK1EKTSDPAB27-4-TMP40000A LAMP: (2) SYLVANIA 64189 LAMP -MS400PSBL-ONLYB728 | 1018 |
| A3 | FIXTURE: MOONGOOSE PARKING AREA LIGHT WITH INTEGRAL ARCHITECTURAL ARM SUITABLE FOR SITE LINK MOUNTING. (3) VERTICAL 400W PULSE START METAL HALIDE LAMP, 480V, SINGLE PHASE, ENERGY SAVING LOW LOSS BALLAST, TEMPERED FLAT GLASS LENS, SYMMETRICAL IES FULL CUT-OFF DISTRIBUTION, GRAPHITE POWDER COAT (TIGER DRYLAC METALLIC #P5 4980180-C), ARCHITECTURAL ARM MOUNTING. MANUFACTURER: (3) HOLOPHANE G40LPM48L SFAA-SL-HCCA MOONGOOSE WITH ARCHITECTURAL ARM (4) 1/2" X 3/8" - 10TDP5 (3) 1197-11) SITELINK STL200002SP-SPL-HCCA-STL2POLK1EKTSDPAB27-4-TMP40000A LAMP: (3) SYLVANIA 64189 LAMP -MS400PSBL-ONLYB728 | 1527 |
| C1 | FIXTURE: HALLBROOK PEDESTRIAN FIXTURE WITH BISHOPS CROOK PENDANT ARM, SUITABLE FOR SITE LINK MOUNTING. VERTICAL 175 WATT PULSE START METAL HALIDE POLE MOUNTED WALKWAY FIXTURE, PRISMATIC GLASS BOWL, REFRACTOR, SYMMETRICAL IES FULL CUT-OFF DISTRIBUTION, GRAPHITE POWDER COAT (TIGER DRYLAC METALLIC #P5 4980180-C), 480V, 1PHASE. POLE: FLUTED TRACK POLE, 16" HIGH EXTRUDED ALUMINUM 4" SQUARE SHAFT, CAST 356 ALLOY POLE TOP AND 13" SALEM STYLE BASE, HAND HOLE WITH SS TAMPER-RESISTANT SCREWS, GRAPHITE POWDER COAT (TIGER DRYLAC METALLIC #P5 4980180-C) WITH BOLT COVER. MANUFACTURER: (1) HOLOPHANE GS175PM482AS7N HALLBROOK (1) SITELINK SL41801F4D5+2) 7N1738-10SL45D5+1) SL45GMKIT-SPL-1) SITELINK SL45131400D5P3-AB-31-4 LAMP: (1) GE 12622 LAMP MVR175VBUIPA | 240 |
| L1 | FIXTURE: 175 WATT PULSE START METAL HALIDE YOKL MOUNTED METROVUE POLE LIGHT, VERTICAL LAMP, PRISMATIC SAG GLASS LENS, SYMMETRICAL IES FULL CUT-OFF DISTRIBUTION, GRAPHITE POWDER COAT (TIGER DRYLAC METALLIC #P5 4980180-C), 480V, 1PHASE. POLE: FLUTED TRACK LOCK POLE, 4 MOUNTING TRACKS, 14" HIGH WITH EXTRUDED 8661-T6, 4.5" FLUTED ALUMINUM ALLOY SHAFT, 60 MPH WIND LOAD TIME 1.3 GUST FACTOR, CAST 356 ALLOY POLE TOP AND 13" SALEM STYLE BASE, HAND HOLE WITH SS TAMPER-RESISTANT SCREWS, GRAPHITE POWDER COAT (TIGER DRYLAC METALLIC #P5 4980180-C) WITH BOLT COVER. MANUFACTURER: SINGLE HOLOPHANE PEDESTRIAN METROVUE YOKE (1) 17EY-175PM48-H-6-A-N-1) SITELINK SL45131400D5P3-AB-31-4. LAMP: (1) GE MVR175VBUIPA | 240 |

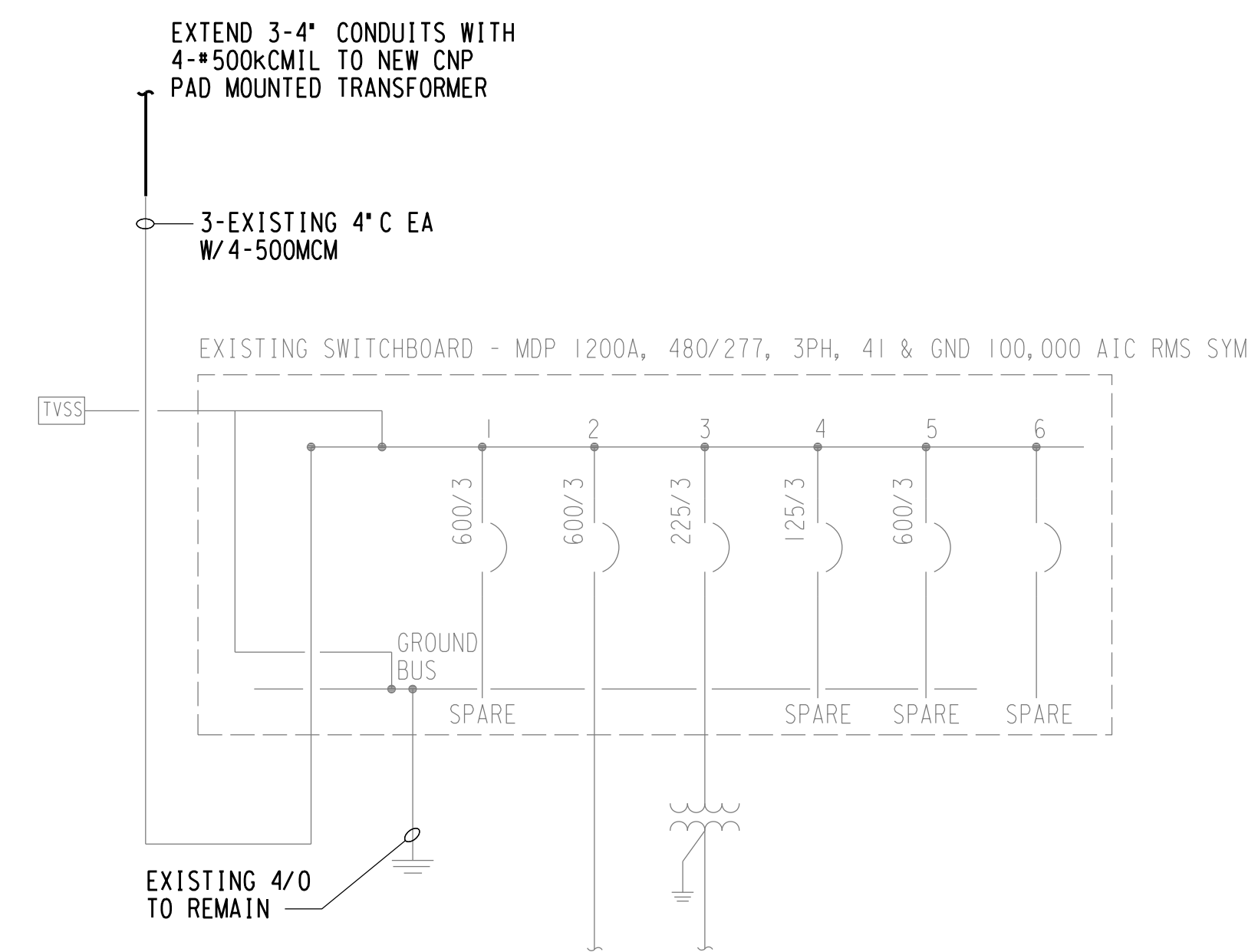
| Panel | | SL | | Project | | SOUTHEAST COLLEGE EASTSIDE | |
|-------------------|--------------------|----------------------------------|---------|---------|---------|----------------------------|------|
| Location | | ELECTRICAL ROOM | | E&C No. | | 2670 | |
| Panel Information | | Panel Loads | Phase A | Phase B | Phase C | Total | |
| Voltage | 277/480V, 3P, 4W | Panel Lighting VA | 7190 | 6730 | 6517 | 20437 | |
| Panel Type | Panelboard | Panel Receptacle VA | 0 | 0 | 0 | 0 | |
| Bus Amps | 100A, 100% Neutral | Panel Equipment VA | 0 | 0 | 0 | 0 | |
| Bus Type | Copper/NEC 500KAC | FTL VA | 0 | 0 | 0 | 0 | |
| Panel Mains | 100A MLO | Total Connected VA | 7190 | 6730 | 6517 | 20437 | |
| Breaker Mfg | Breaker | Total Connected Amps | 28 | 24 | 24 | 25 | |
| Enclosure | NEMA 1 Surface | NEC VA | 6668 | 6413 | 6146 | 25646 | |
| Accessories | Ground Bus | NEC Amps | 32 | 30 | 29 | 31 | |
| Ckt. | Bkr. | Circuit Use | Load | Type | Ph. | Ckt. | Bkr. |
| 1 | - | - | 4021 | 2 | A | 2 | - |
| 3 | 303 | Site Ltg Contactor 1C (Security) | 3791 | 2 | B | 4 | 303 |
| 5 | - | - | 3808 | 2 | C | 6 | - |
| 7 | - | - | 2930 | 2 | A | 8 | - |
| 9 | 303 | Site Ltg Contactor 2C | 2300 | 2 | B | 10 | - |
| 11 | - | - | 2070 | 2 | C | 12 | - |
| 13 | - | - | 2 | A | 14 | - | - |
| 15 | - | - | 2 | B | 16 | - | - |
| 17 | - | - | 2 | C | 18 | - | - |
| 19 | - | - | Space | A | 20 | - | - |
| 21 | - | - | Space | B | 22 | - | - |
| 23 | - | - | Space | C | 24 | - | - |
| 25 | - | - | Space | A | 26 | - | - |
| 27 | - | - | Space | B | 28 | - | - |
| 29 | - | - | Space | C | 30 | - | - |

Load Types: 0 = Recept (per NEC), 1 = Equip. (100%), 2 = Lighting (125%), 3 = A/C (100%), 4 = Heating (100%), 5 = Lgt. Motor (125%), 6 = Kitchen Equip. (per NEC)

Notes:

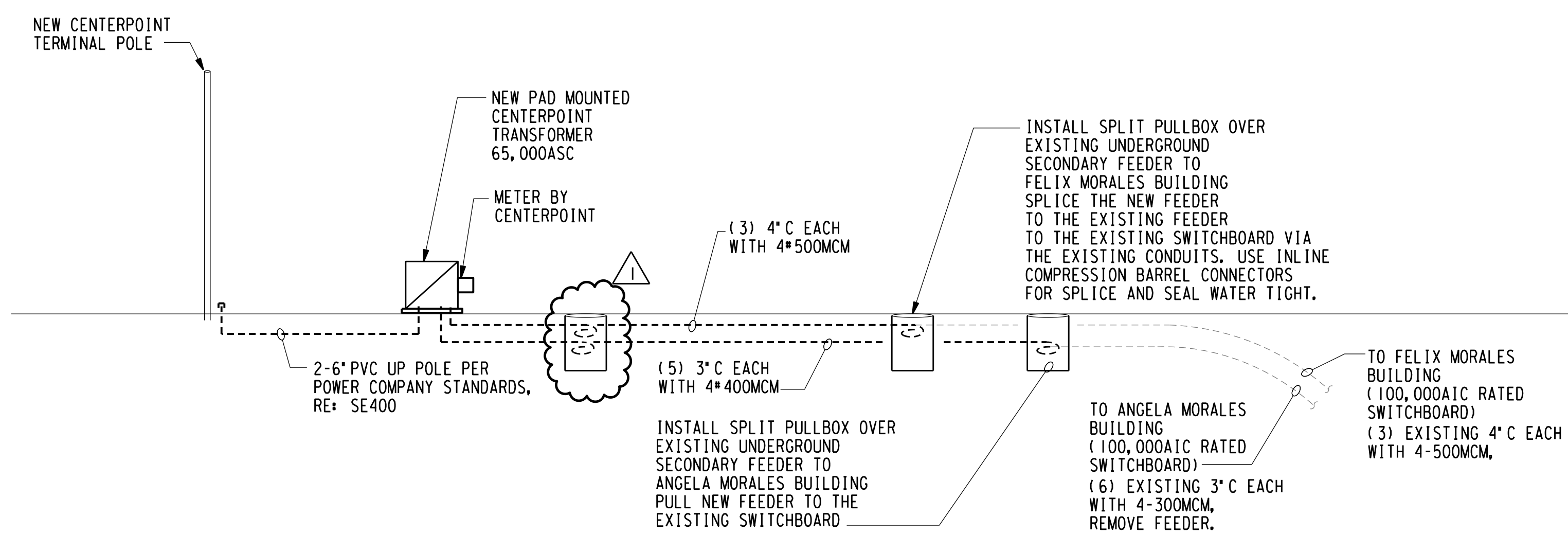


4 ELECTRICAL PARTIAL ONE LINE DIAGRAM (ANGELA BLDG.)
NOT TO SCALE



5 ELECTRICAL PARTIAL ONE LINE DIAGRAM (FELIX BLDG.)
NOT TO SCALE

NOTE:
ALL SHUT DOWN REQUIRED TO INSTALL NEW FEEDERS TO BE DOWN ON WEEKENDS, COORDINATE WITH HCC AND CENTERPOINT.



3 ELECTRICAL ONE LINE DIAGRAM
NOT TO SCALE

Preliminary Load Analysis
HCC Southeast Campus 6815 Rustic Ave

| | kVA | Amps |
|---------------------------------------|---------------|--------------|
| Existing Peak Demand from CenterPoint | 652 kVA | 785 |
| +25% NEC Demand | 163 | 196 |
| New Site Lighting | 20 | 25 |
| +25% Continuous Duty | 5 | 6 |
| Total | 841kVA | 1011A |

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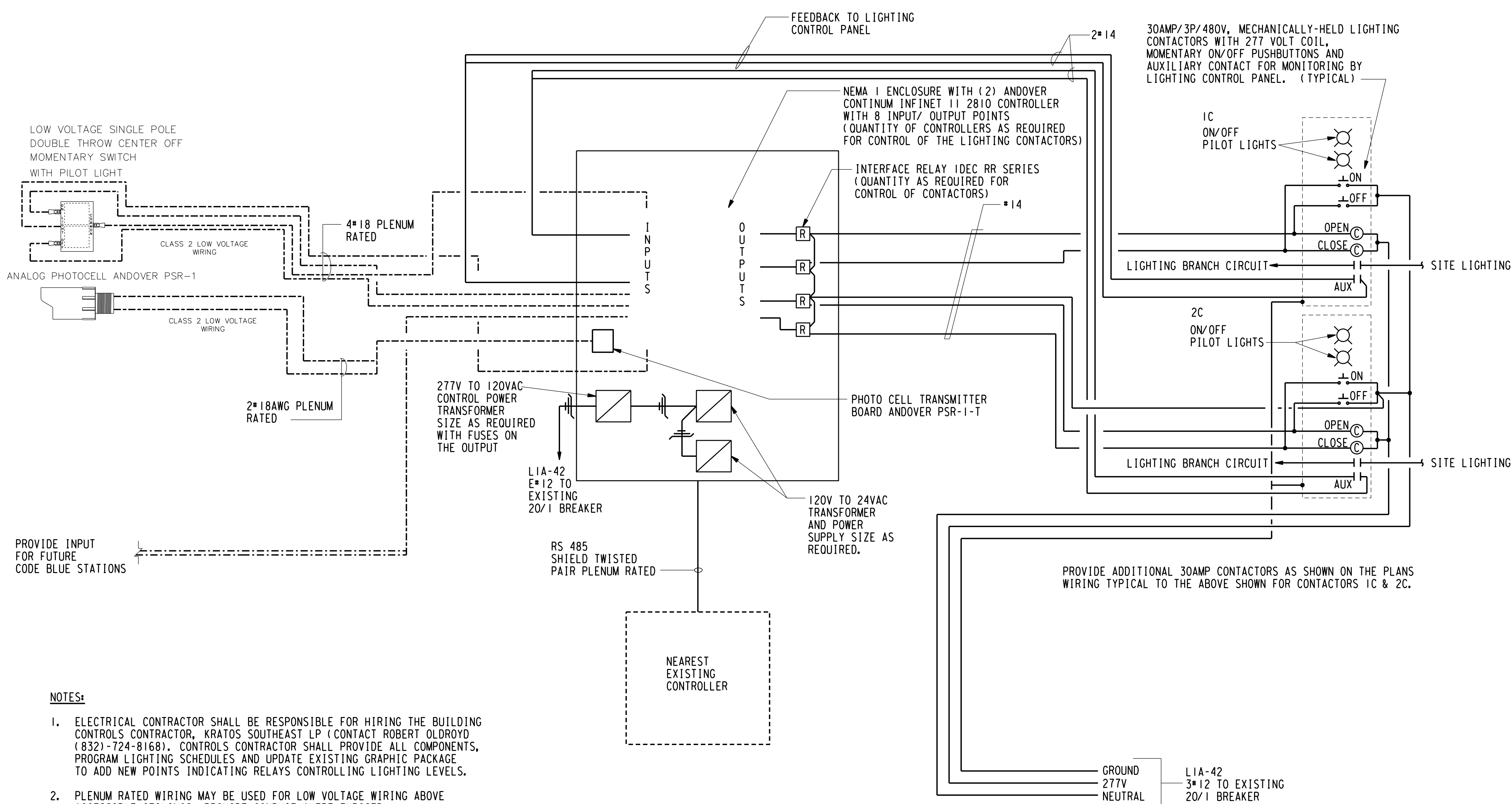
E&C Project No.: 2670.00
A/E Project No.:
Drawn By: MHS
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CAD File: MHS

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ELECTRICAL RISER DIAGRAM AND DETAILS

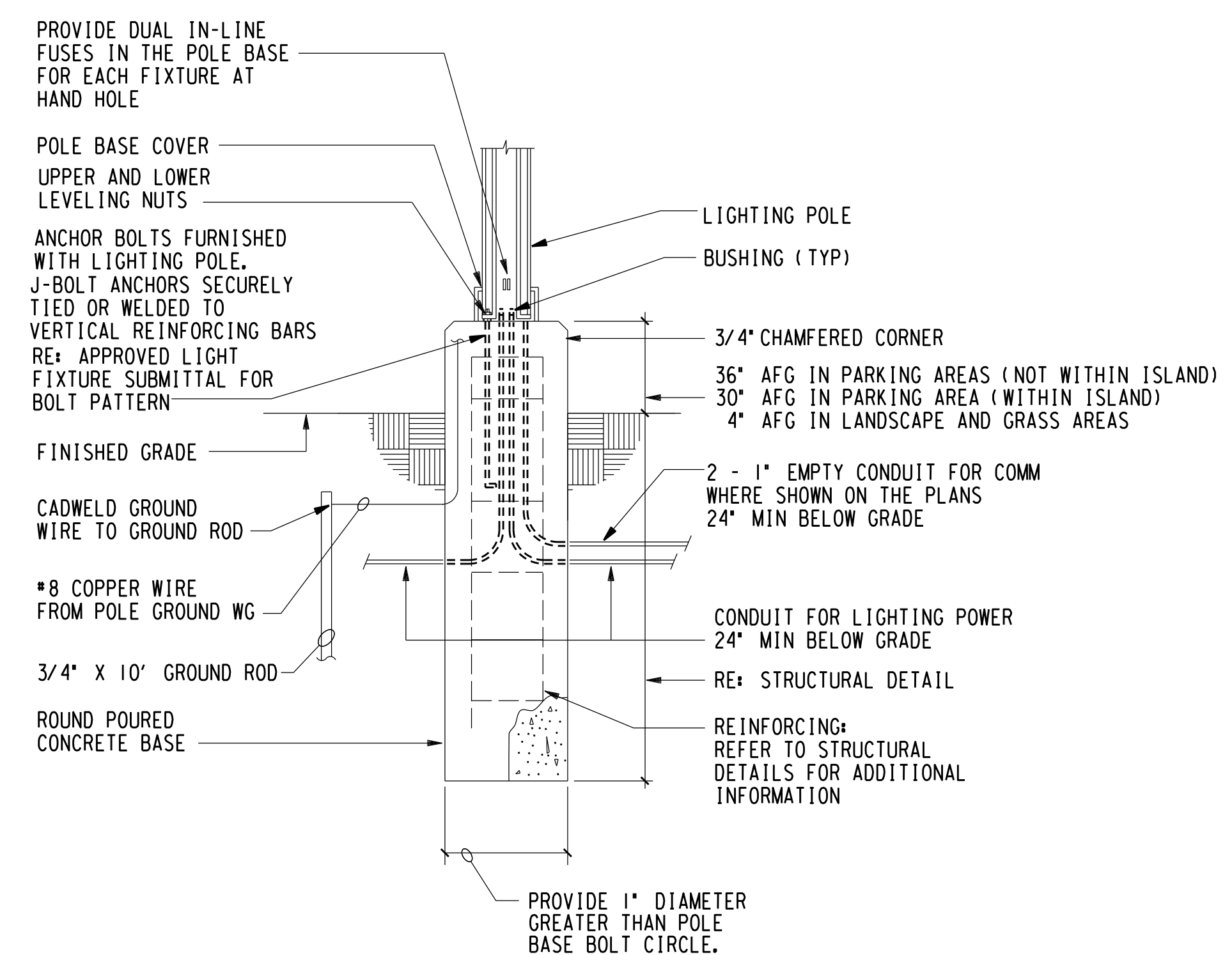
Scale: As Noted

SE300



- NOTES:**
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING THE BUILDING CONTROLS CONTRACTOR, KRATOS SOUTHEAST LP (CONTACT ROBERT OLDROYD (832)-724-8168). CONTROLS CONTRACTOR SHALL PROVIDE ALL COMPONENTS, PROGRAM LIGHTING SCHEDULES AND UPDATE EXISTING GRAPHIC PACKAGE TO ADD NEW POINTS INDICATING RELAYS CONTROLLING LIGHTING LEVELS.
 - PLENUM RATED WIRING MAY BE USED FOR LOW VOLTAGE WIRING ABOVE ACCESSIBLE CEILINGS. PROVIDE CONDUIT WHERE EXPOSED.

2 LIGHTING CONTROL WIRING DIAGRAM
NOT TO SCALE



1 TYPICAL SITE LIGHTING POLE BASE DETAIL
NOT TO SCALE