



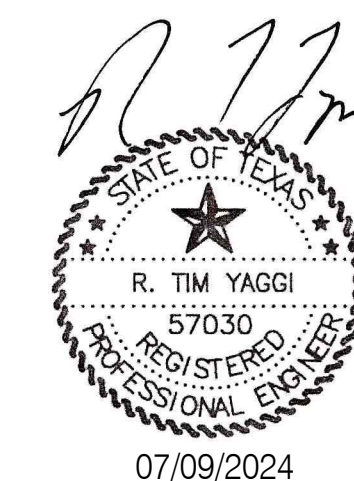
CAMPUS LIGHTING UPGRADES HIGH MAST ZONES 6, 11, 25, 29, AND AVE. C UNIVERSITY OF NORTH TEXAS DENTON, TEXAS

JULY 9, 2024

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Construction Documents

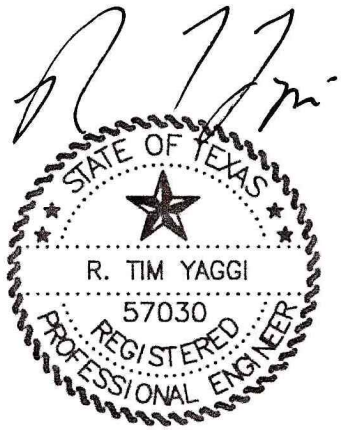


YAGGI ENGINEERING, INC.

5840 WEST I-20, SUITE 270
ARLINGTON, TEXAS 76017
817-483-2373 FAX: 817-483-4233
TEXAS REGISTRATION NO. F-9622
YE PROJECT NO. 2210.00



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07-09-2024

UNIVERSITY OF NORTH TEXAS

PROJECT NAME:

CAMPUS LIGHTING UPGRADES
 HIGH MAST ZONES 6, 11, 25, 29 & AVE C
 DENTON, TEXAS



GENERAL DEMOLITION NOTES:

1. VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES, IRRIGATION PIPING, IRRIGATION WIRING, TELEPHONE, GAS, NETWORK FIBER, CONDUITS, ETC. CALL "811" PRIOR TO EXCAVATION. ALL EXISTING UTILITIES ARE NOT SHOWN. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION AND TO DETERMINE AND VERIFY THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. ITEMS DAMAGED BY CONTRACTOR SHALL BE REPLACED OR REPAIRED AS DIRECTED BY OWNER AT NO ADDITIONAL COST TO OWNER.
2. WHERE EXISTING SITE LIGHTING CIRCUITS ARE BEING MODIFIED, LIMIT SERVICE INTERRUPTION PERIOD TO DAYLIGHT HOURS.
3. WHERE FOOTINGS ARE SHOWN TO BE REMOVED, REMOVE TO MINIMUM 24" BELOW GRADE.
4. WHERE HIGH MAST POLES AND FIXTURES ARE SHOWN TO BE REMOVED, THE HIGH MAST LIGHTING SYSTEM SHALL REMAIN IN PLACE AND IN SERVICE UNTIL NEW LIGHTING SYSTEM IN THAT AREA IS OPERATIONAL. HIGH MAST POLE FOOTINGS SHALL BE REMOVED TO MINIMUM 24" BELOW GRADE.
5. WHERE BANNER POLES ARE SHOWN TO BE REMOVED, RETURN POLE, BANNER ARMS AND POLES TO OWNER.

LEGEND - EXISTING POLES AND FIXTURES

- POLE AND FIXTURE TO REMAIN UNLESS NOTED OTHERWISE
 - TYPE P SERIES - PEDESTRIAN
 - TYPE L SERIES - PARKING
 - TYPE C SERIES - DRIVE
- MISCELLANEOUS LIGHTING DENOTED BY TYPE (TO REMAIN UNLESS NOTED OTHERWISE):
 - TYPE B - BOLLARDS
 - TYPE D - DECORATIVE
 - TYPE F - FLAG UPLIGHTS
 - TYPE G - GROUND ACCENT
 - TYPE S - STEP LIGHTS
 - TYPE SP - SPORTS
 - TYPE T - THEATRICAL
 - TYPE U - IN-GRADE UPLIGHT
- REMOVE HIGH MAST POLE WHERE NOTED.
 - TYPE L4

REVISIONS:

- ① _____
- ② _____
- ③ _____

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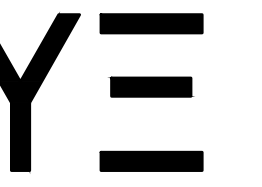
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YE PROJECT NO.: 2210.00

SHEET CONTENTS:
ELECTRICAL
DEMOLITION
NOTES

SHEET NUMBER:

ED.00



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REVISIONS:

- ① _____
- ② _____
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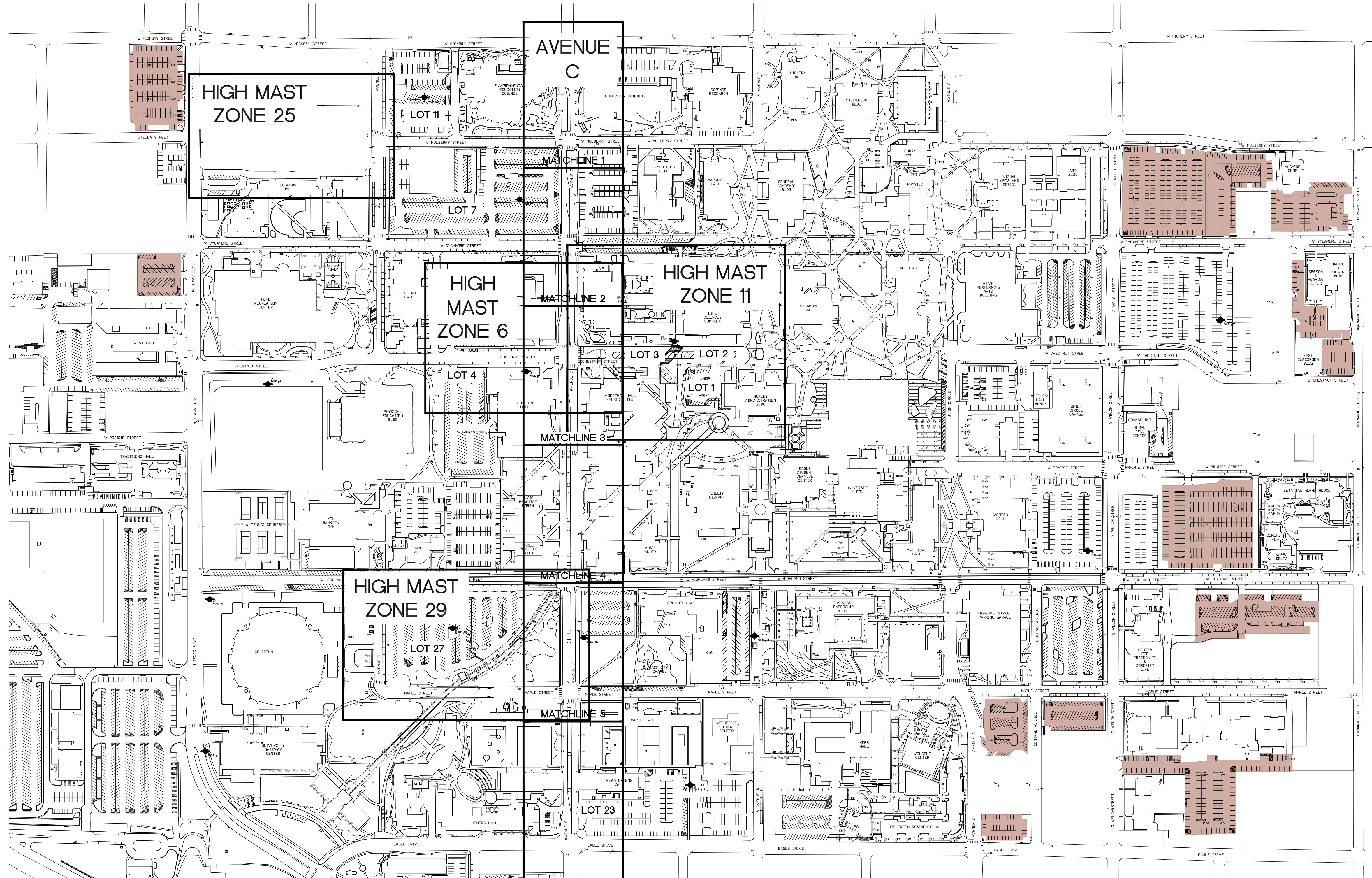
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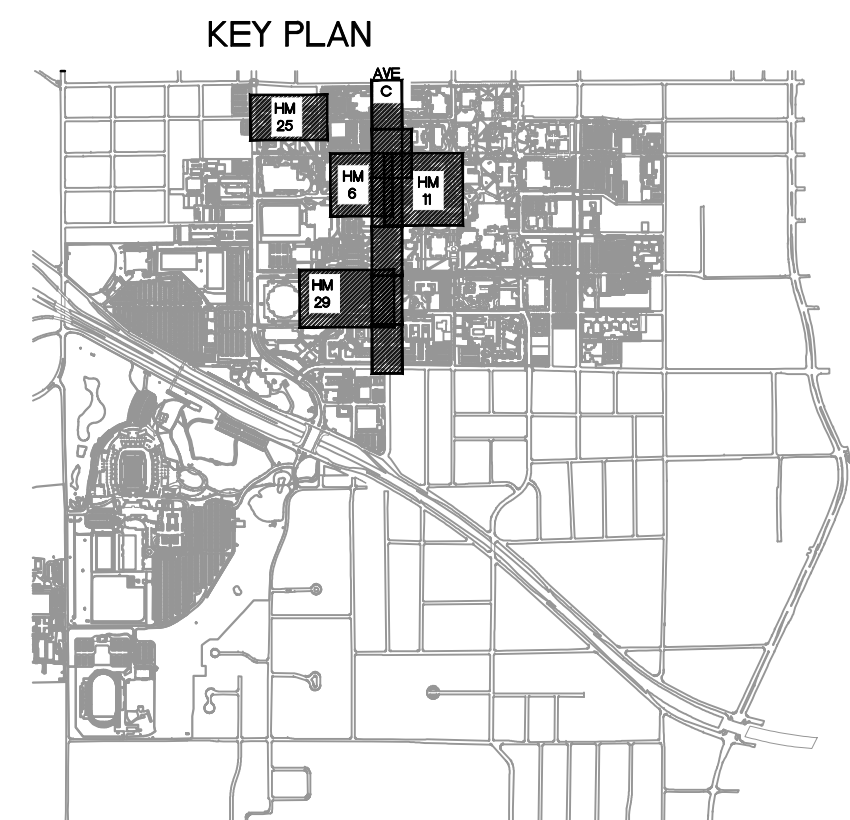
SHEET CONTENTS:
 LIGHTING
 OVERALL PLAN -
 DEMOLITION

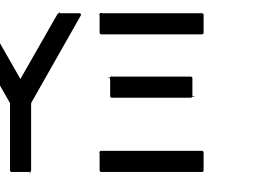
SHEET NUMBER:

ED.01



1 LIGHTING OVERALL PLAN - DEMOLITION
 SCALE: 1"=200'-0" 400





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 DENTON, TEXAS



REVISIONS:

- 1
- 2
- 3

DATE ISSUED: 07-09-2024

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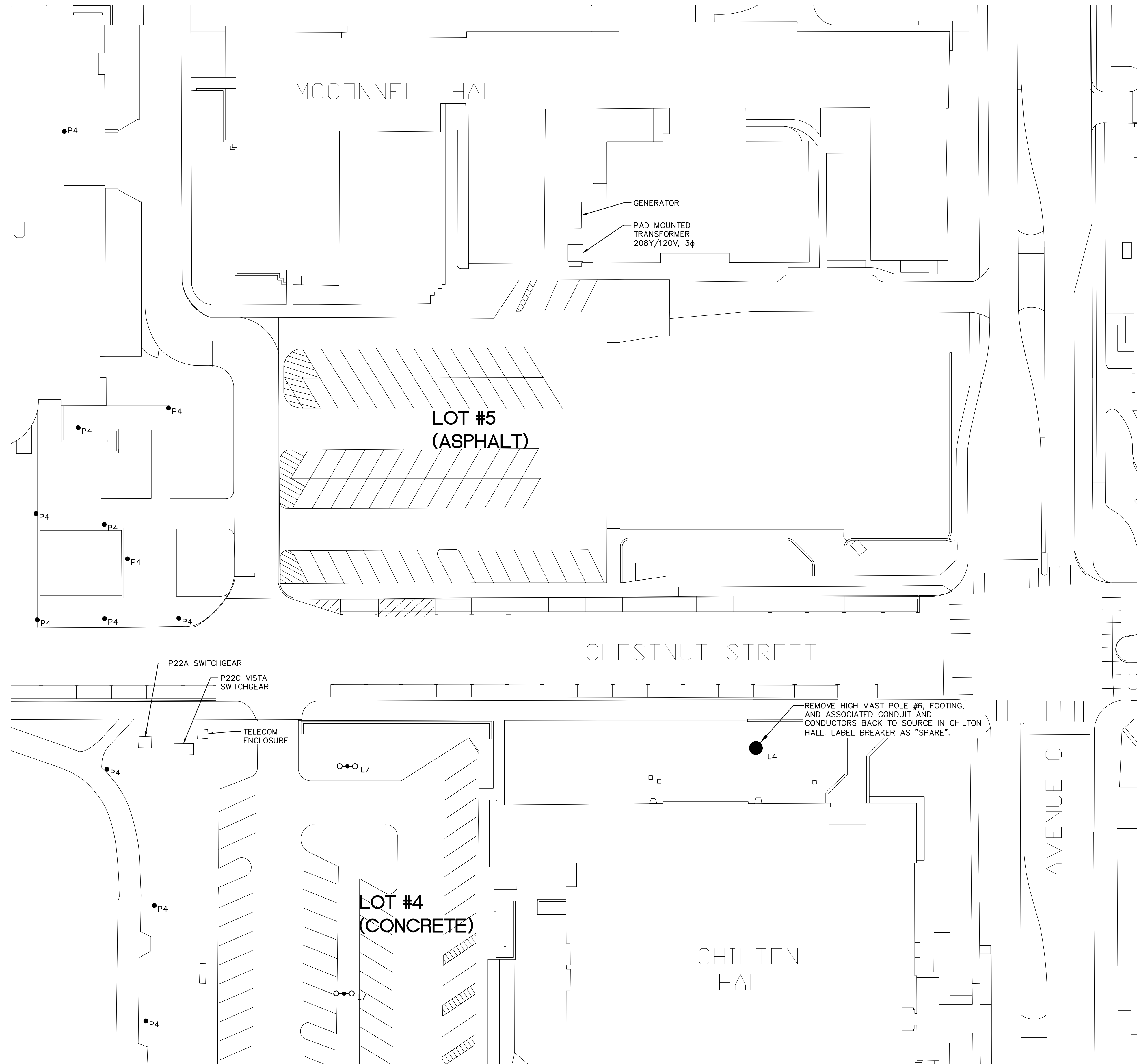
DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 LIGHTING PLAN -
 HIGH MAST
 ZONE 6 -
 DEMOLITION

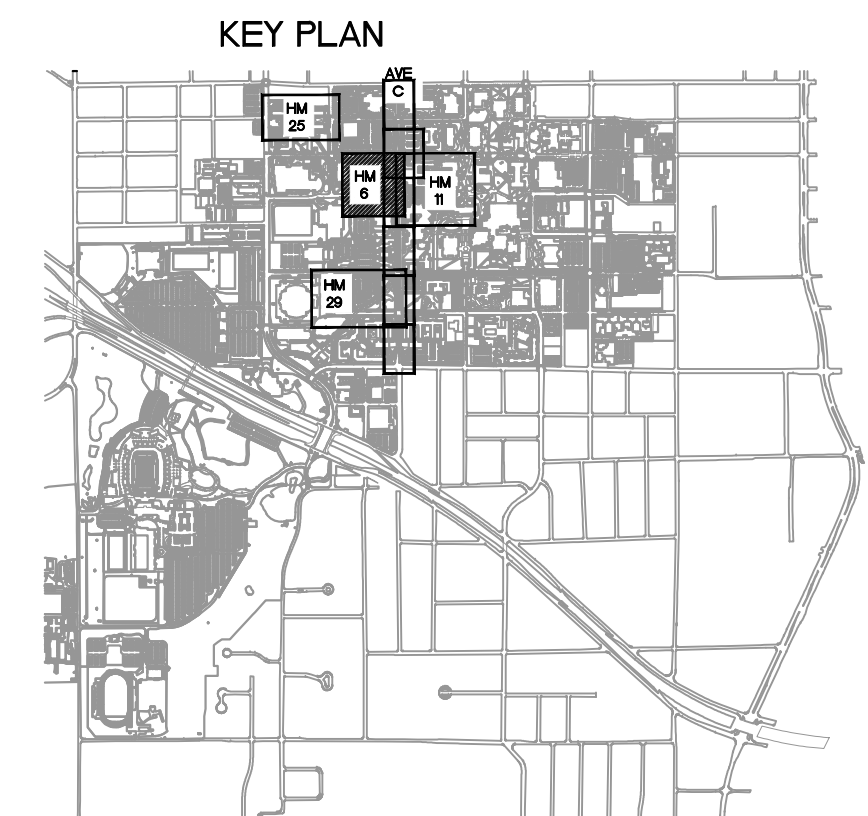
SHEET NUMBER:

ED.02



GENERAL NOTES:

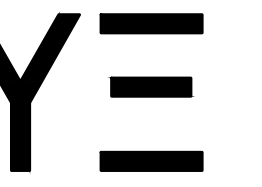
- REFER TO GENERAL DEMOLITION NOTES ON ED.00
- REFER TO "LEGEND - EXISTING POLES AND FIXTURES" ON ED.00



1

LIGHTING PLAN - HIGH MAST ZONE 6 - DEMOLITION

SCALE: 1"=30'-0"



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 CAMPUS LIGHTING UPGRADES
 HIGH MAST ZONES 6, 11, 25, 29 & AVE C
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REVISIONS:

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- ▲ _____

DATE ISSUED: 07-09-2024

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DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 LIGHTING PLAN -
 HIGH MAST
 ZONE 11 -
 DEMOLITION

SHEET NUMBER:

ED.03

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GENERAL NOTES:

1. REFER TO GENERAL DEMOLITION NOTES ON ED.00
2. REFER TO "LEGEND - EXISTING POLES AND FIXTURES" ON ED.00

NOTES BY SYMBOL:

- ① REMOVE POLE AND FIXTURE. RETURN TO OWNER. REUSE EXISTING FOOTING AND ANCHOR BOLTS. REUSE EXISTING BRANCH CIRCUIT CONDUCTORS UNLESS NOTED OTHERWISE.
- ② REMOVE BOLLARD AND ASSOCIATED FOOTING.
- ③ REMOVE CONDUIT TO MINIMUM 18" BELOW GRADE. REMOVE CONDUCTORS.
- ④ REWORK EXISTING CONDUIT TO FACILITATE INSTALLATION OF NEW PULL BOX. REPLACE CONDUCTORS WITHOUT SPLICE.
- ⑤ REWORK EXISTING CONDUIT TO FACILITATE INSTALLATION OF NEW POLE. REPLACE CONDUCTORS WITHOUT SPLICE.

REMOVE HIGH MAST POLE #11, FOOTING, AND ASSOCIATED CONDUIT AND CONDUCTORS BACK TO SOURCE IN LIFE SCIENCE BUILDING "A" BASEMENT. LABEL BREAKER AS "SPARE".

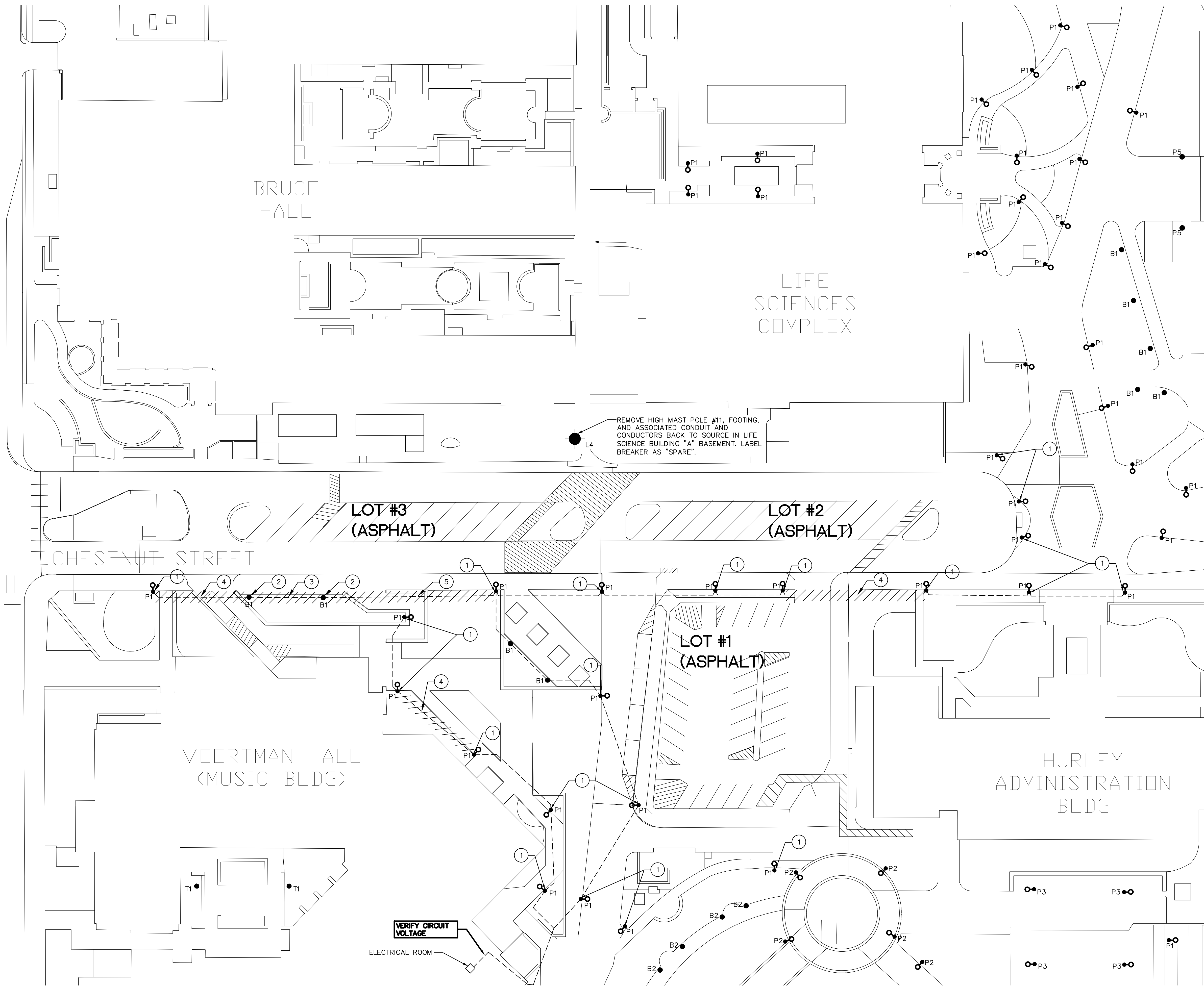
VERIFY CIRCUIT VOLTAGE

ELECTRICAL ROOM

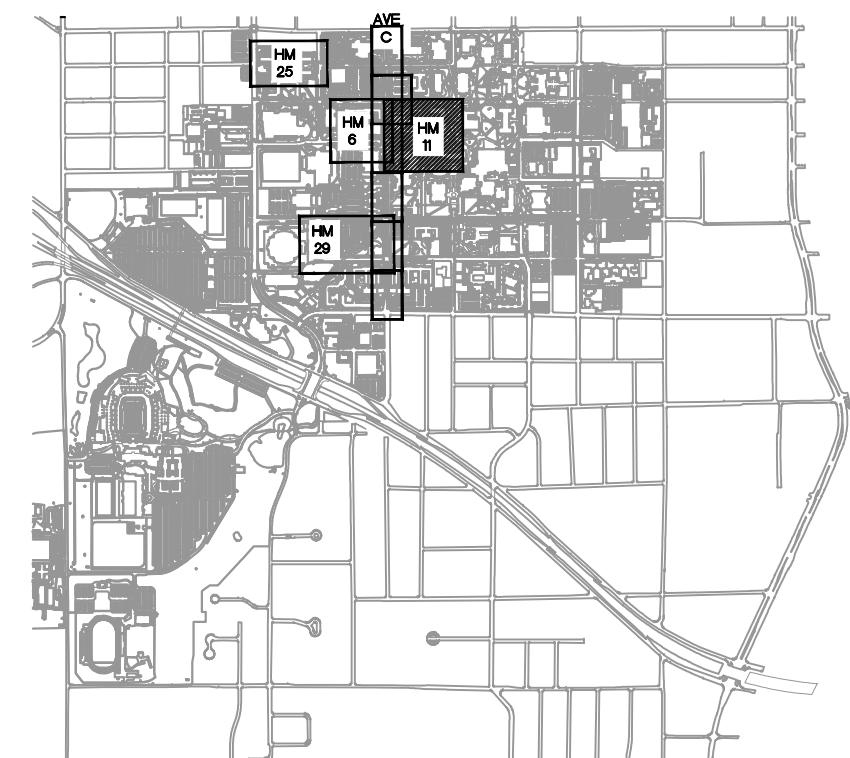


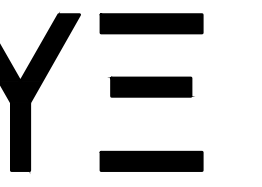
1 LIGHTING PLAN - HIGH MAST ZONE 11 - DEMOLITION

SCALE: 1"=30'-0"



KEY PLAN





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REVISIONS:

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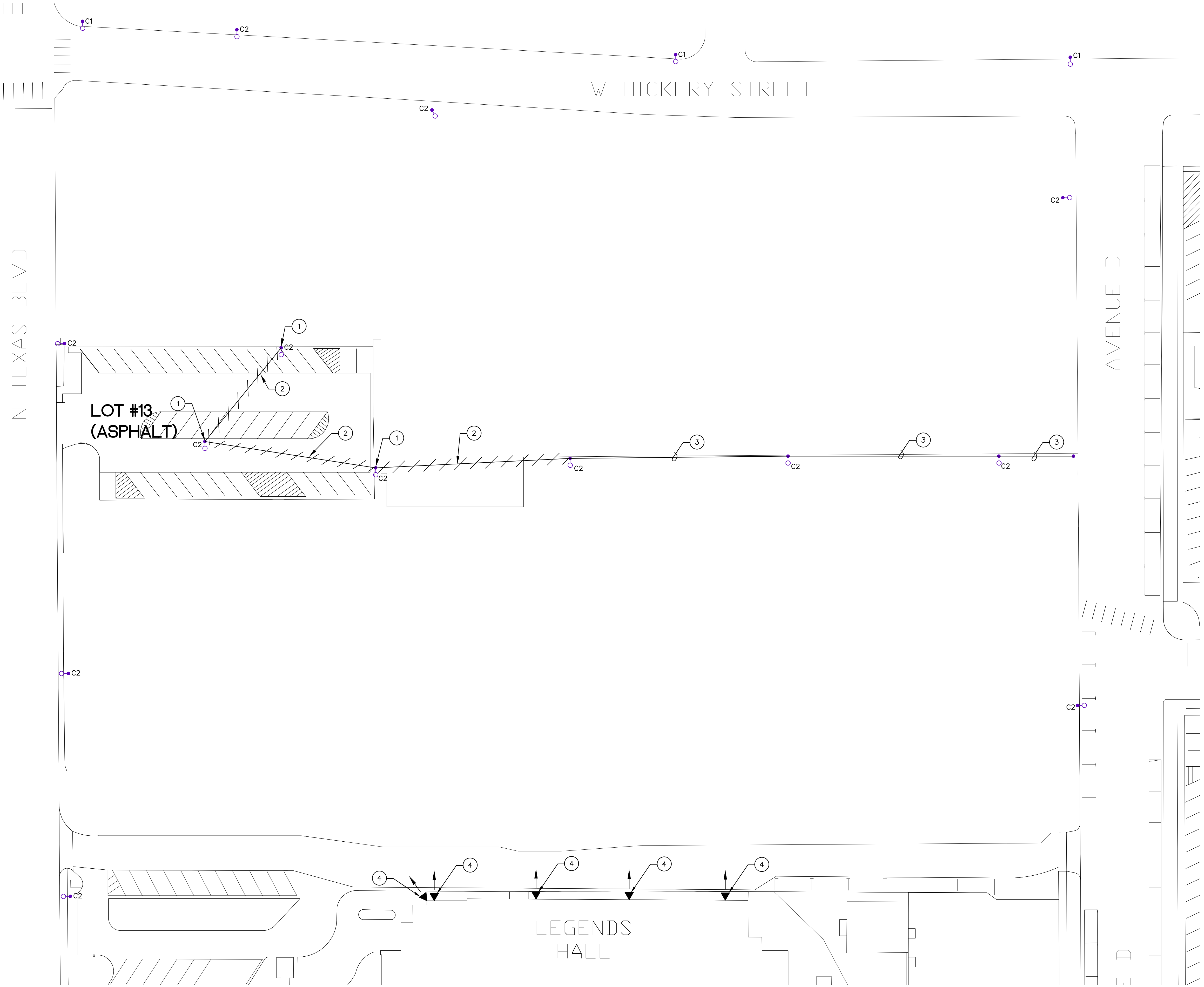
DESIGN BY: RTY

DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 LIGHTING PLAN -
 HIGH MAST
 ZONE 25 -
 DEMOLITION
 (ALT. NO. 3A/3B)
 SHEET NUMBER:

ED.04

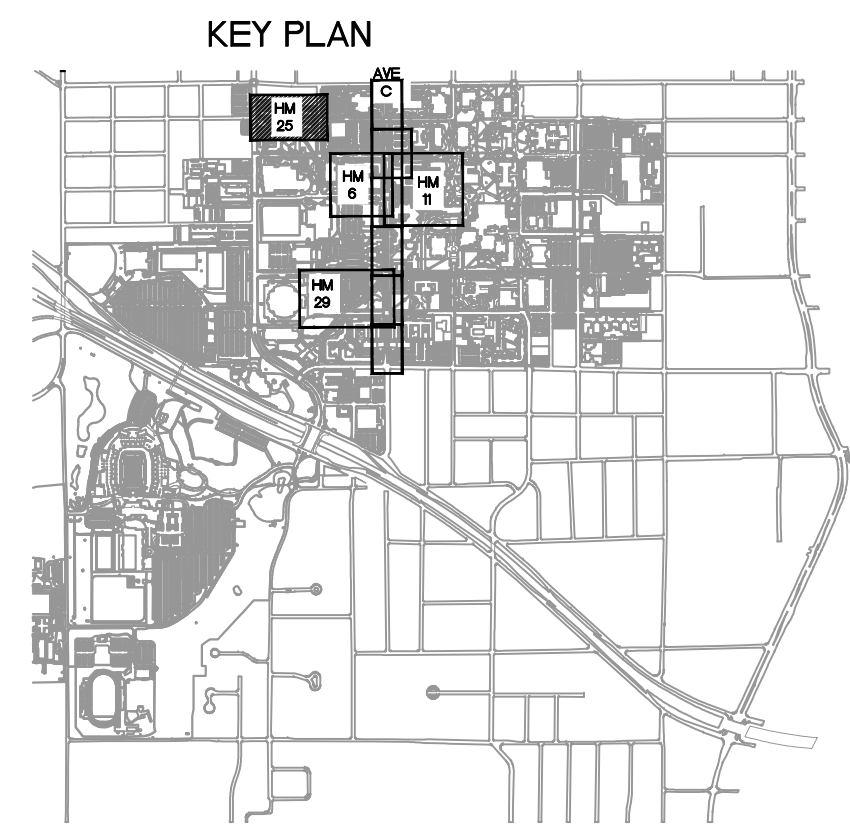


GENERAL NOTES:

1. REFER TO GENERAL DEMOLITION NOTES ON ED.00
2. REFER TO "LEGEND - EXISTING POLES AND FIXTURES" ON ED.00

NOTES BY SYMBOL:

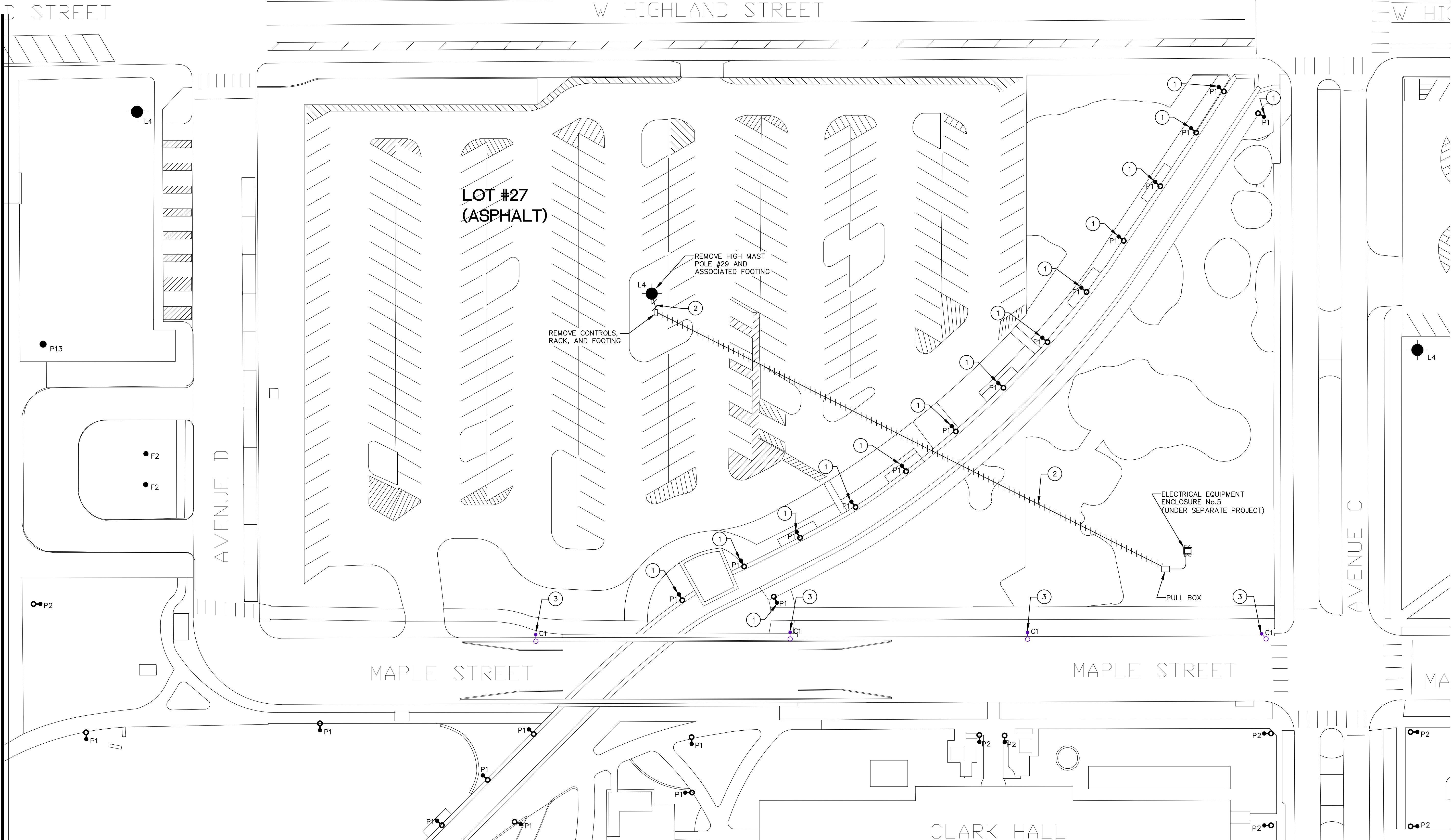
- 1 REMOVE POLE, FIXTURE, FOOTING AND ASSOCIATED WIRING. COORDINATE WITH DME.
- 2 REMOVE OVERHEAD CONDUCTORS. COORDINATE WITH DME.
- 3 OVERHEAD CONDUCTORS TO REMAIN.
- 4 REMOVE TEMPORARY BUILDING MOUNTED FLOOD LIGHT & ASSOCIATED CONDUIT, CONDUCTORS, AND CONTROLS. SEAL ALL BUILDING PENETRATIONS AND RESTORE TO ORIGINAL CONDITION. LABEL BREAKER AS "SPARE".



1

LIGHTING PLAN - HIGH MAST ZONE 25 - DEMOLITION (ALT. NO. 3A/3B)

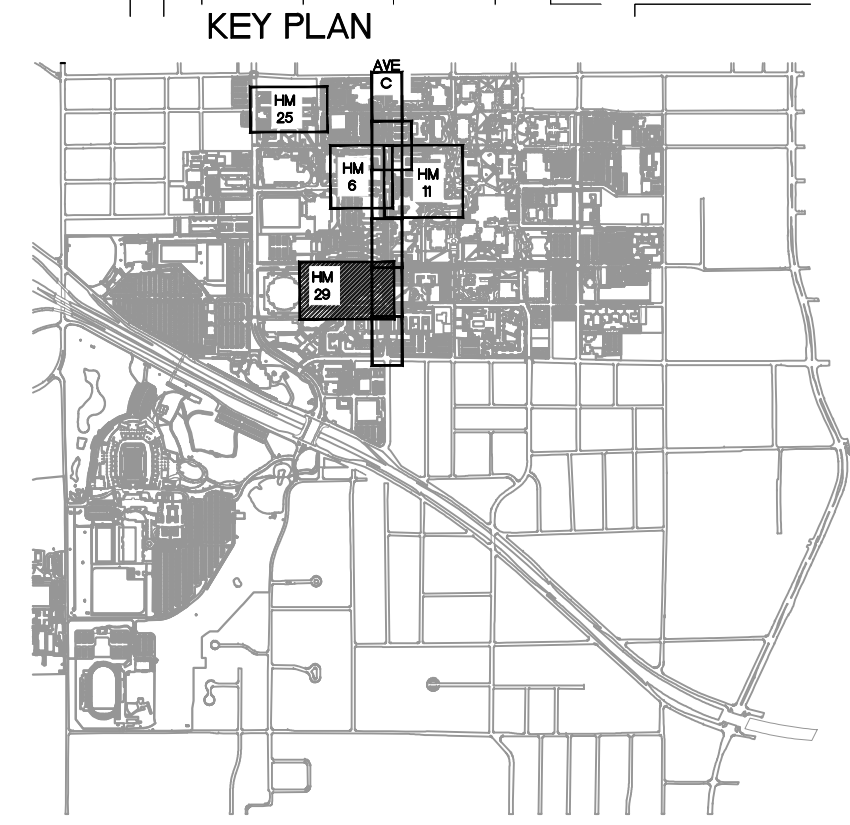
SCALE: 1"=30'-0"



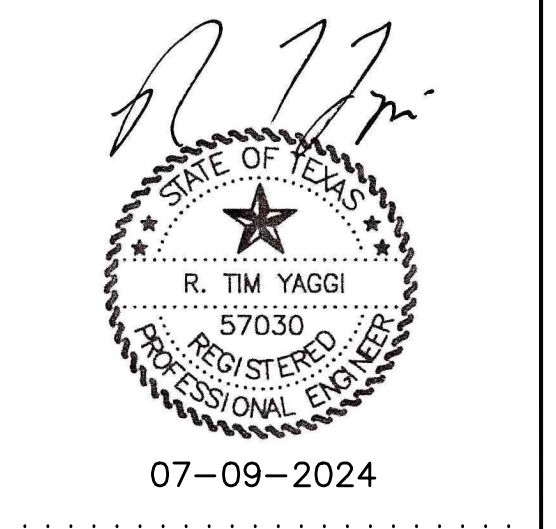
1 LIGHTING PLAN - HIGH MAST ZONE 29 - DEMOLITION (ALT. NO. 2A/2B)
 SCALE: 1"=30'-0"

- NOTES BY SYMBOL:**
- ① REMOVE POLE AND FIXTURE. RETURN TO OWNER. POLE INCLUDES 120V RECEPTACLE. REUSE EXISTING FOOTING AND ANCHOR BOLTS. REUSE EXISTING LIGHTING AND SEPARATE 120V RECEPTACLE BRANCH CIRCUIT CONDUCTORS.
 - ② REMOVE CONDUCTORS. REMOVE CONDUIT AT STUB UP LOCATIONS TO MINIMUM 18" BELOW GRADE.
 - ③ STREET LIGHT MOUNTED ON WOOD UTILITY POLE TO BE REMOVED BY DME.

- GENERAL NOTES:**
- 1. REFER TO GENERAL DEMOLITION NOTES ON ED.00
 - 2. REFER TO "LEGEND - EXISTING POLES AND FIXTURES" ON ED.00



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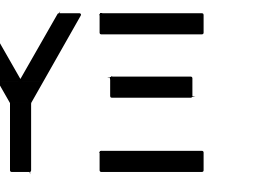
DESIGN BY: RTY

DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 LIGHTING PLAN -
 HIGH MAST
 ZONE 29 -
 DEMOLITION
 (ALT NO. 2A/2B)
 SHEET NUMBER:

ED.05



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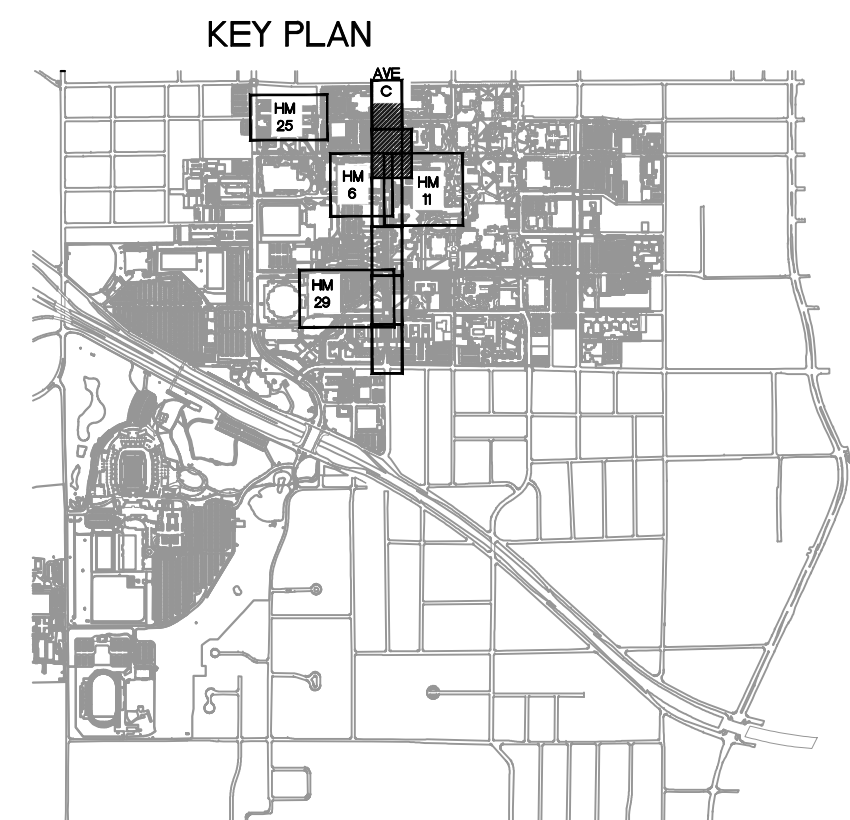
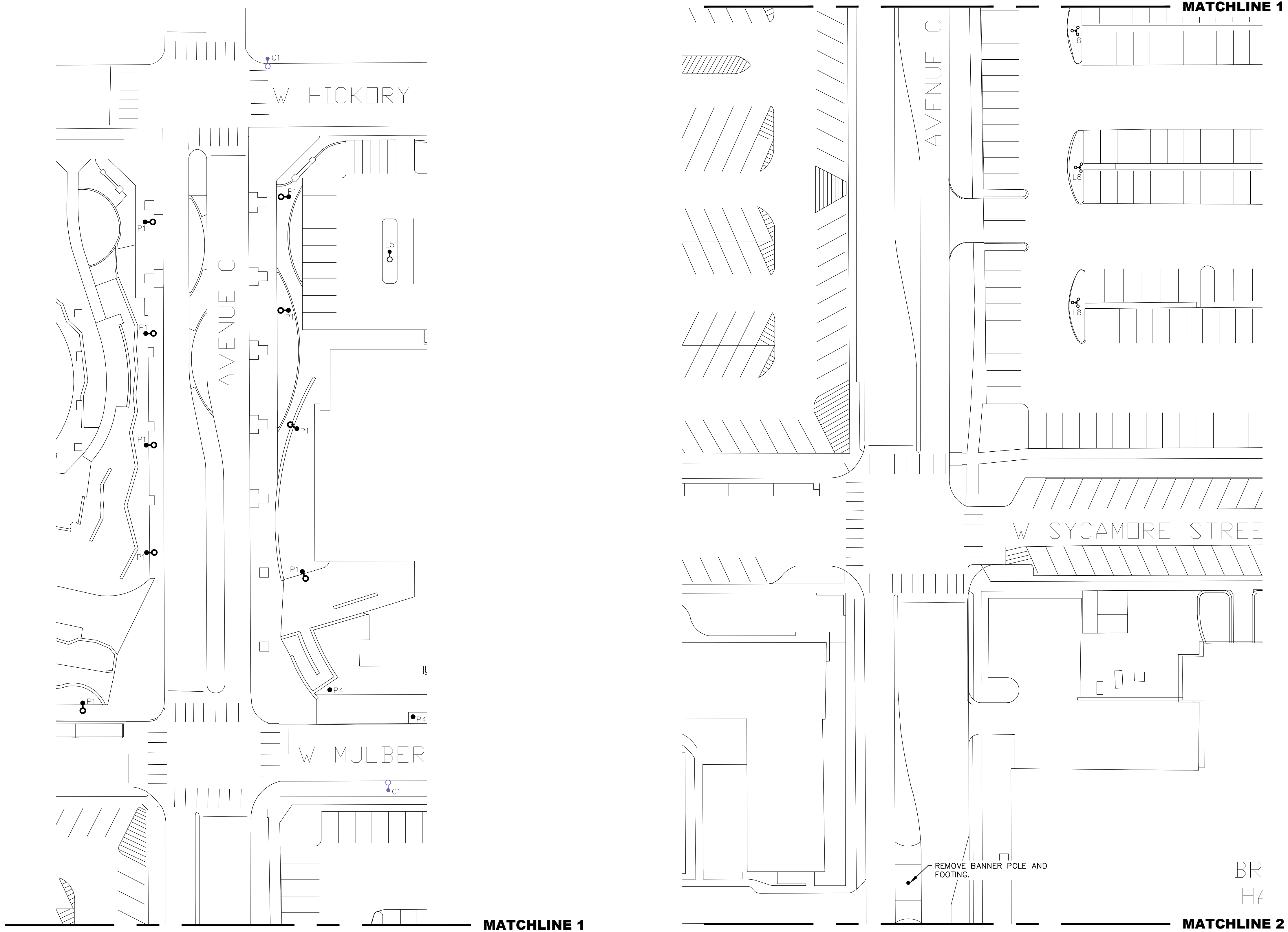
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YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 LIGHTING PLAN -
 AVENUE C -
 PART 1 OF 3 -
 DEMOLITION

SHEET NUMBER:

ED.06



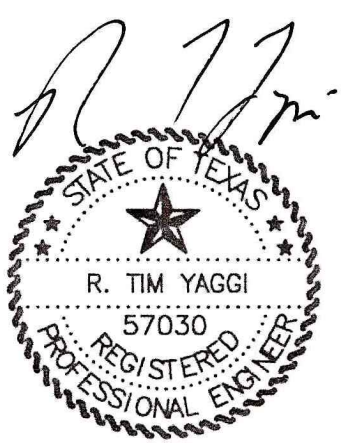
1

LIGHTING PLAN - AVENUE C - PART 1 OF 3 - DEMOLITION

SCALE: 1"=30'-0" 60



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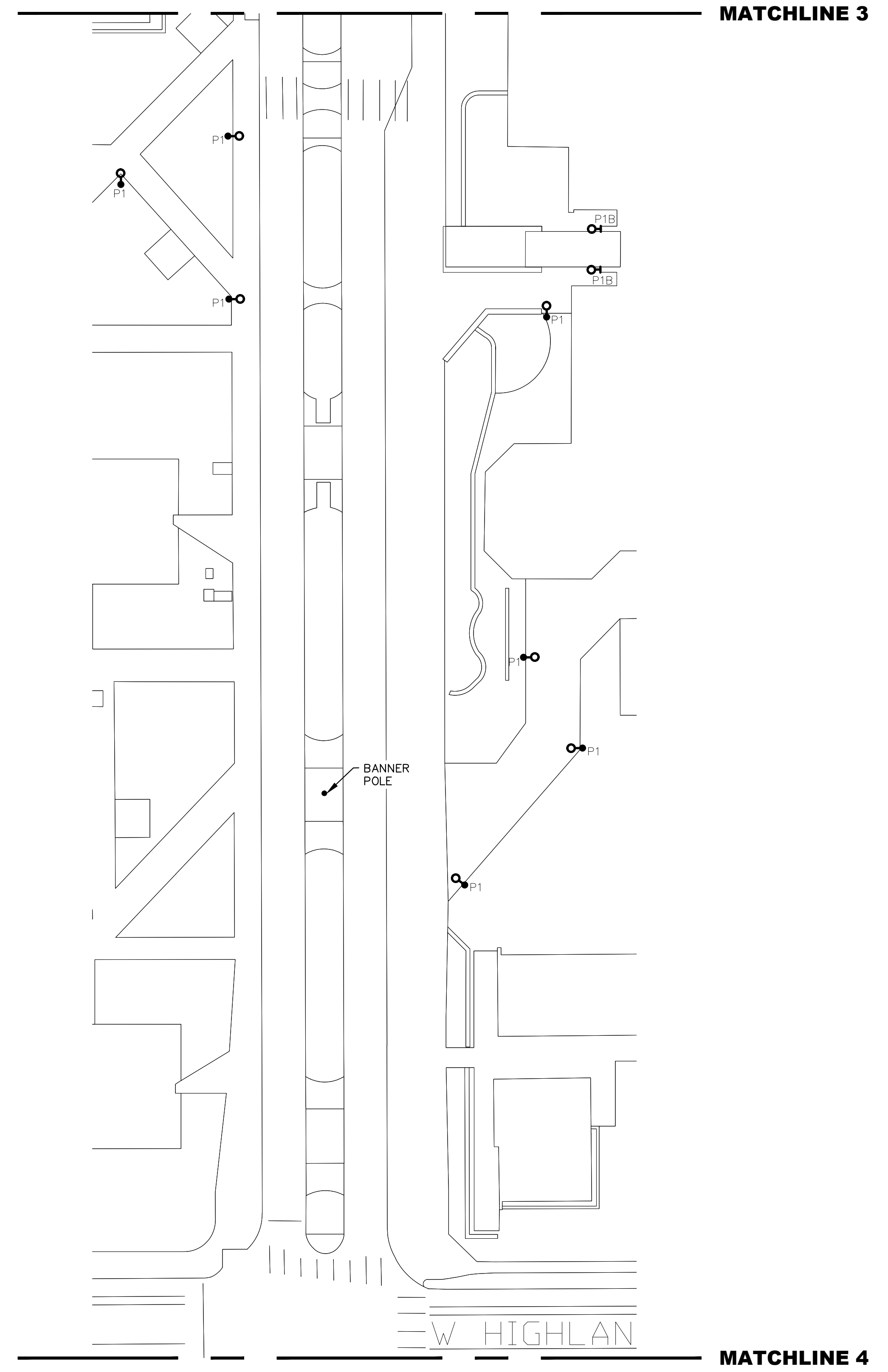
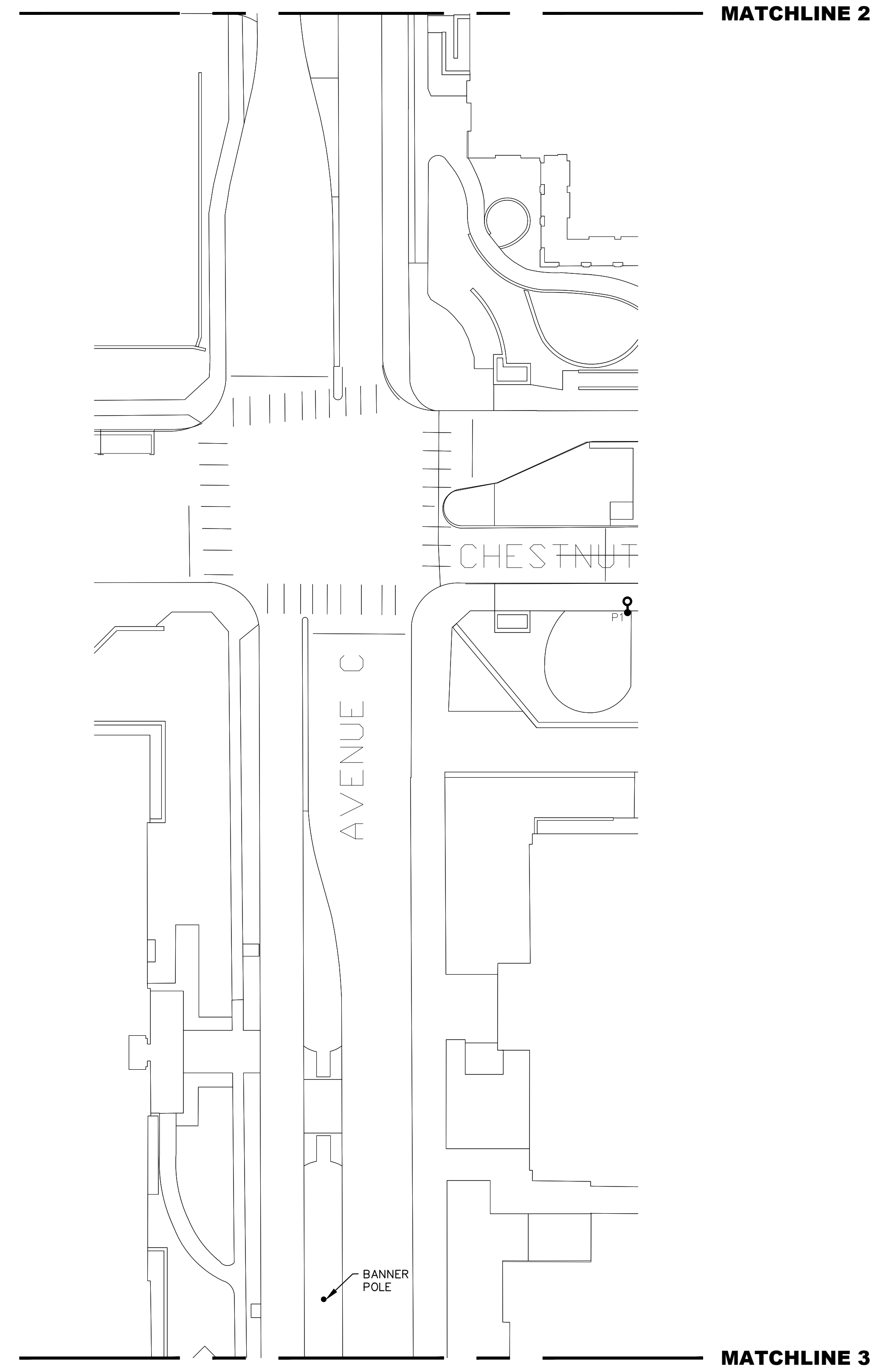
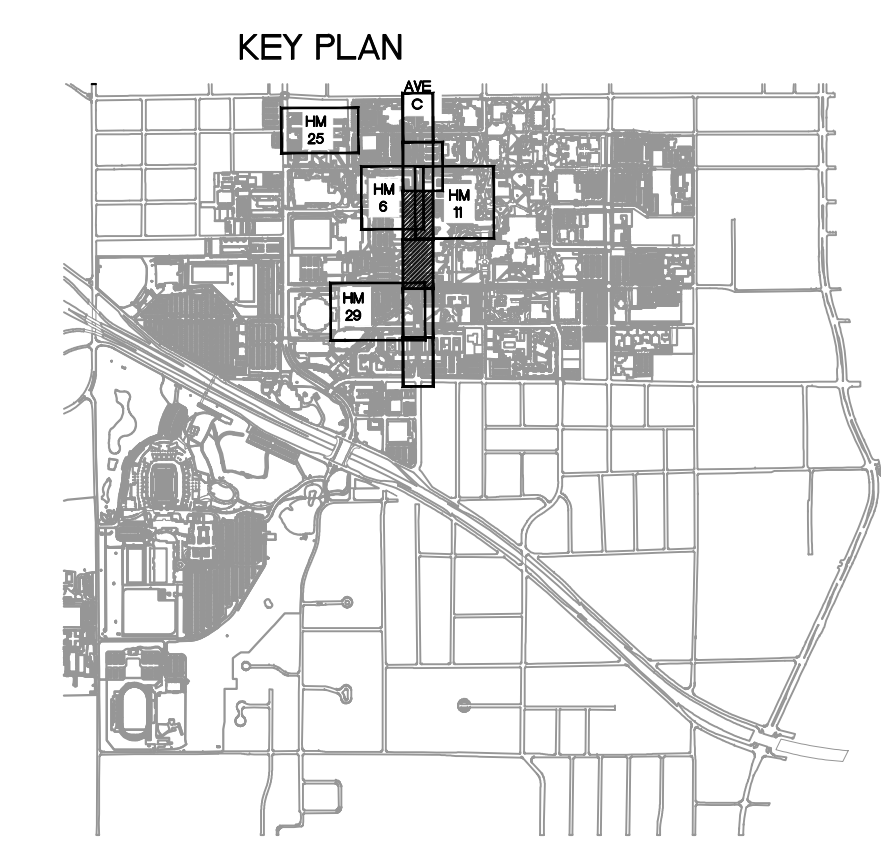
SHEET CONTENTS:
LIGHTING PLAN -
AVENUE C -
PART 2 OF 3 -
DEMOLITION

SHEET NUMBER:

ED.07

GENERAL NOTES:

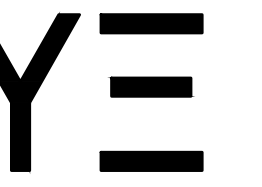
1. REFER TO GENERAL DEMOLITION NOTES ON ED.00
2. REFER TO "LEGEND - EXISTING POLES AND FIXTURES" ON ED.00



1

LIGHTING PLAN - AVENUE C - PART 2 OF 3 - DEMOLITION

SCALE: 1"=30'-0"



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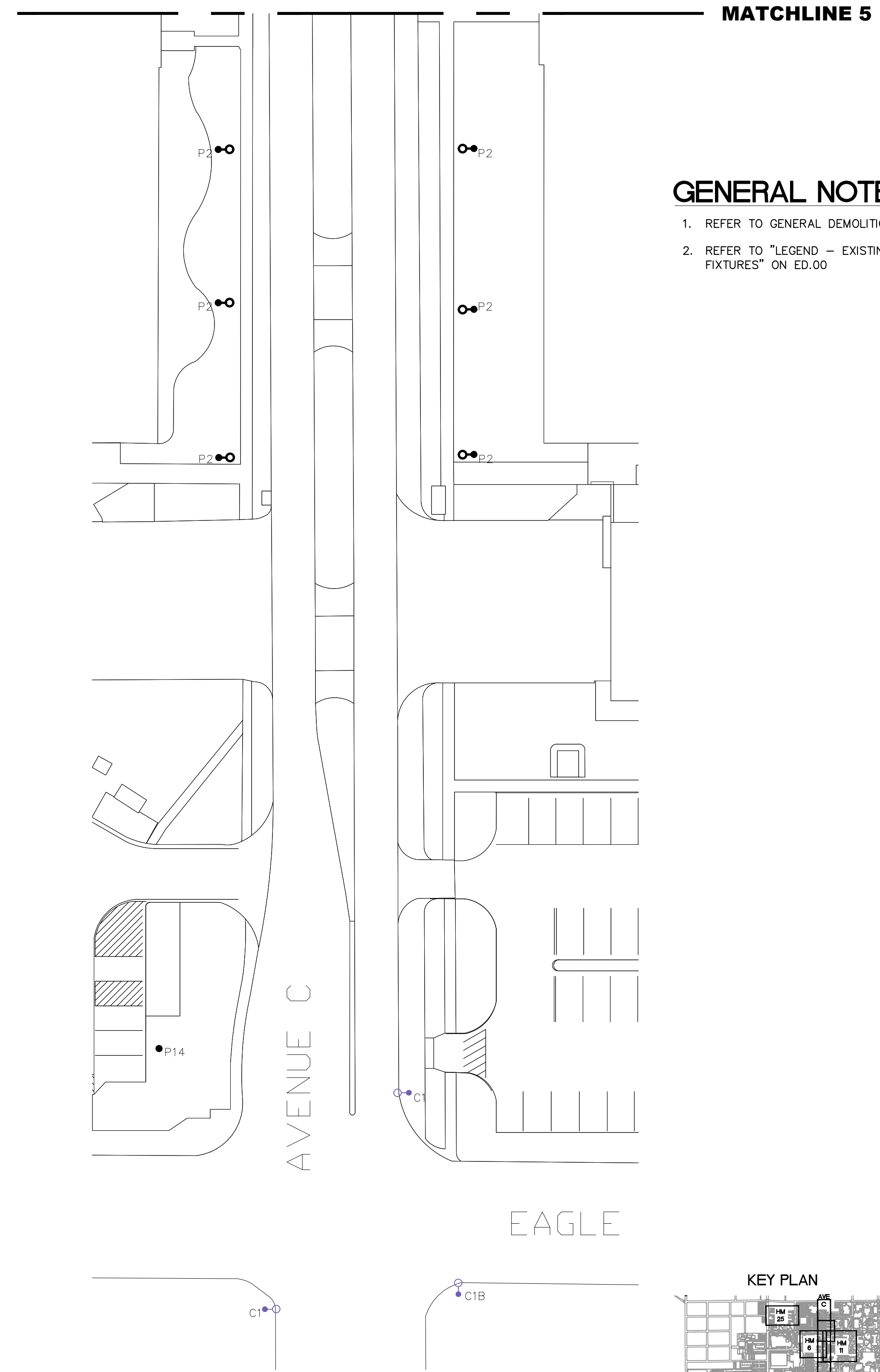
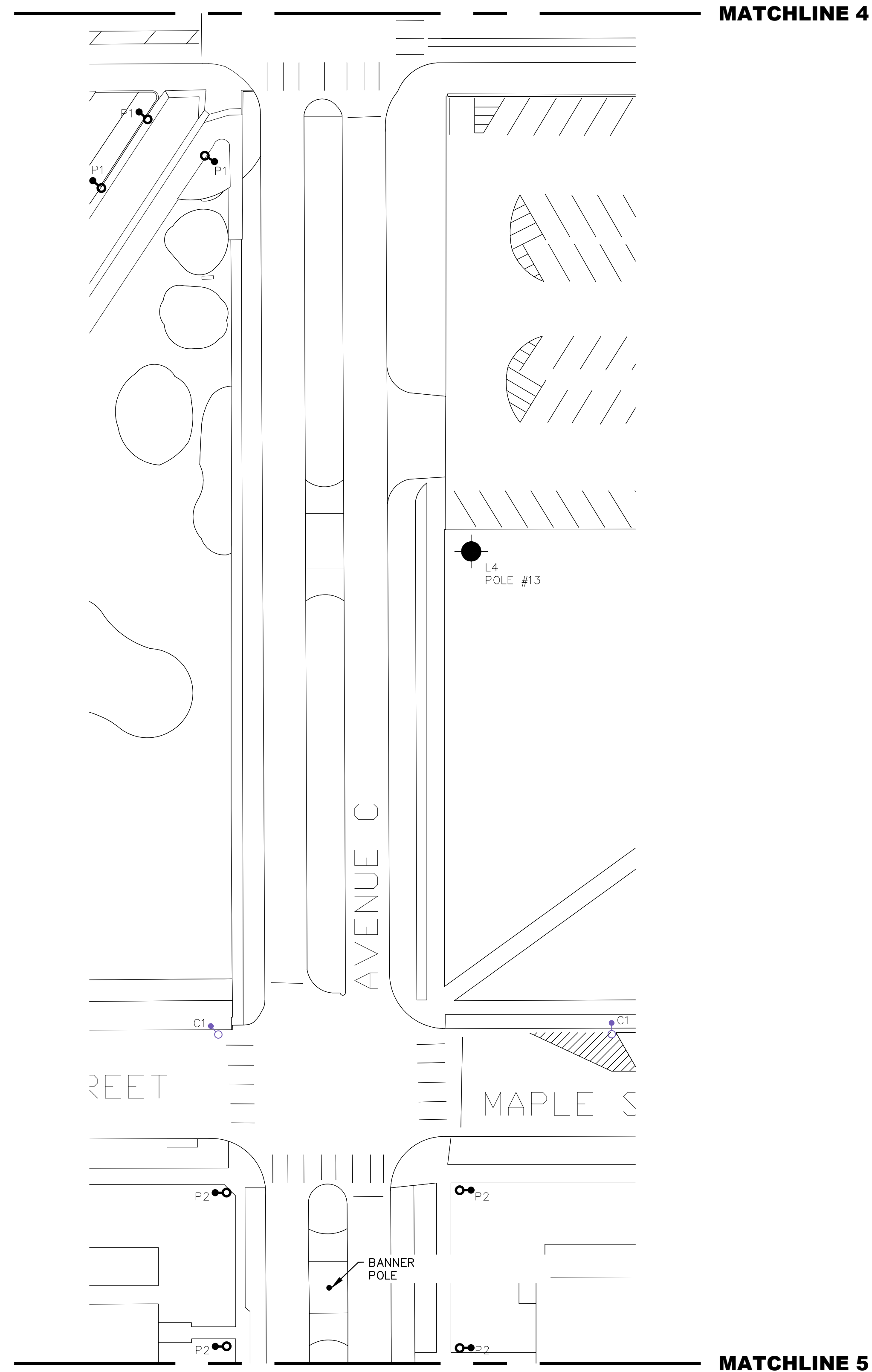
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SHEET CONTENTS:
 LIGHTING PLAN -
 AVENUE C -
 PART 3 OF 3 -
 DEMOLITION

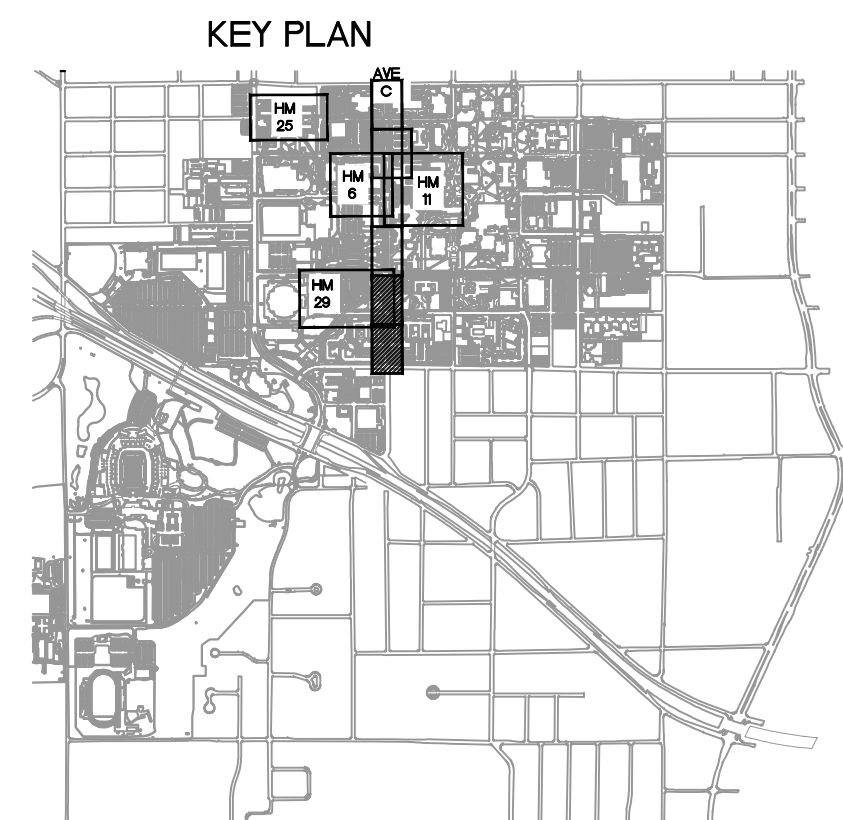
SHEET NUMBER:

ED.08



GENERAL NOTES:

1. REFER TO GENERAL DEMOLITION NOTES ON ED.00
2. REFER TO "LEGEND - EXISTING POLES AND FIXTURES" ON ED.00



1

LIGHTING PLAN - AVENUE C - PART 3 OF 3 - DEMOLITION

SCALE: 1"=30'-0"

HUBBELL

RAB

PEDESTRIAN ISO-FOOTCANDLE DIAGRAMS (1" = 30'-0")

GENERAL NOTES:

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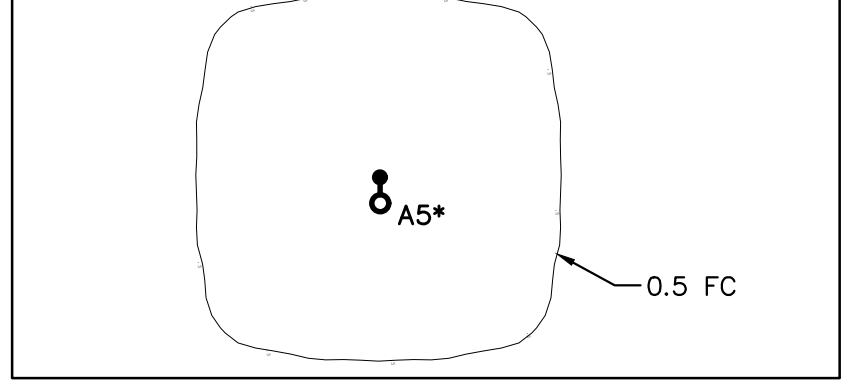
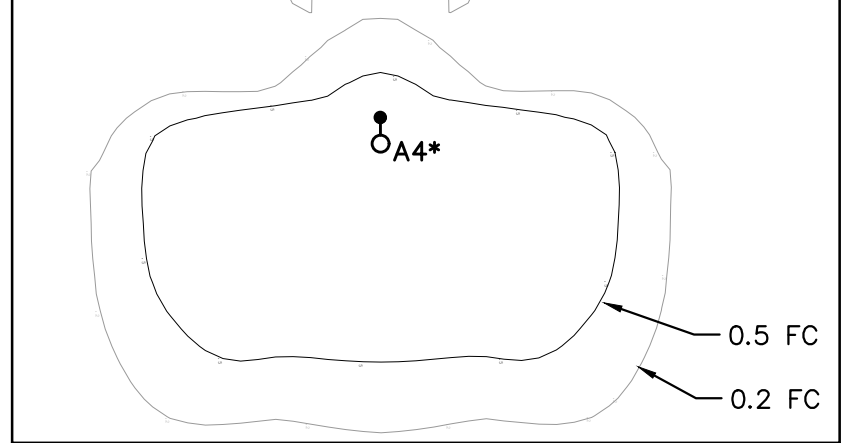
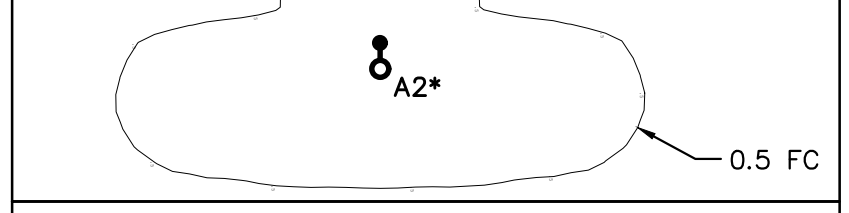
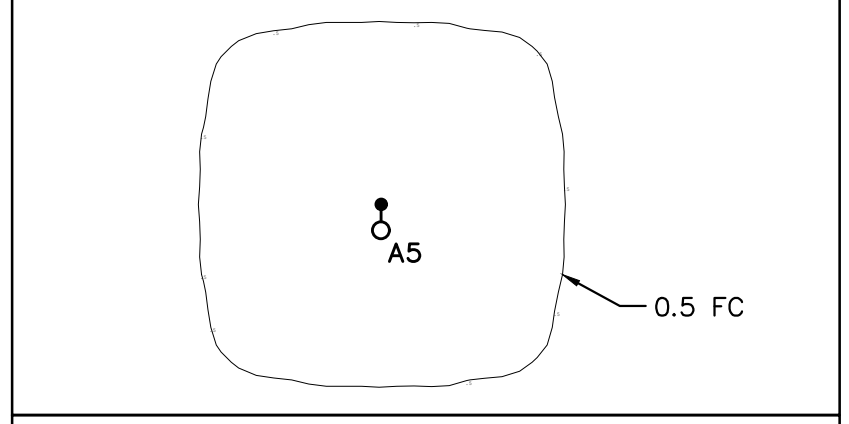
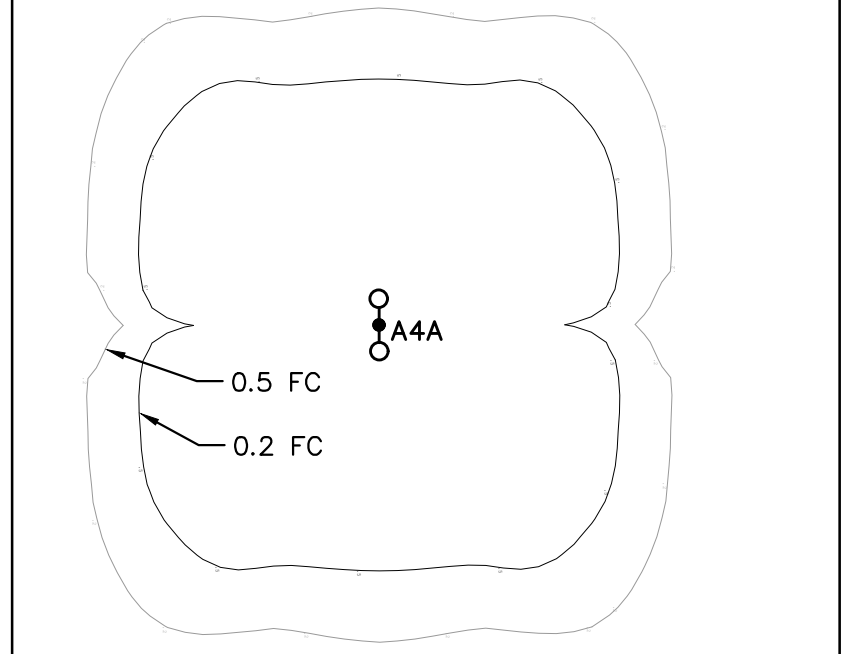
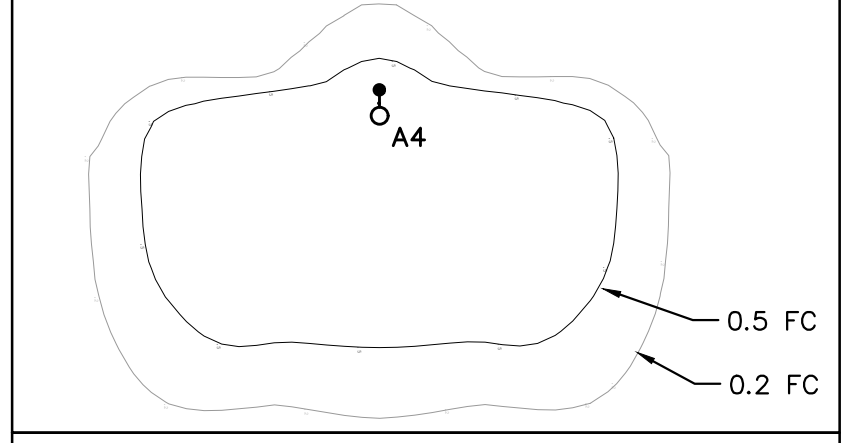
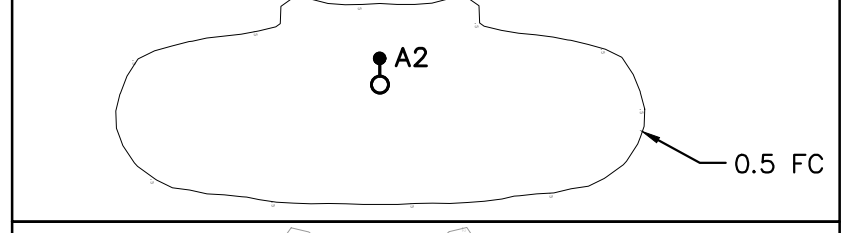
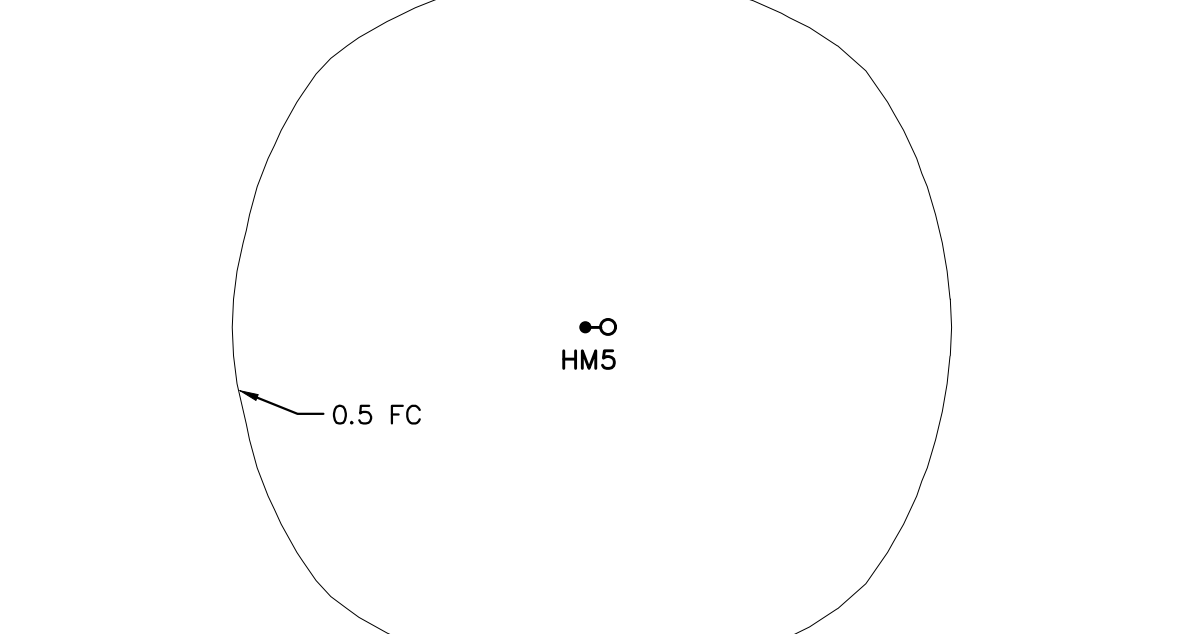
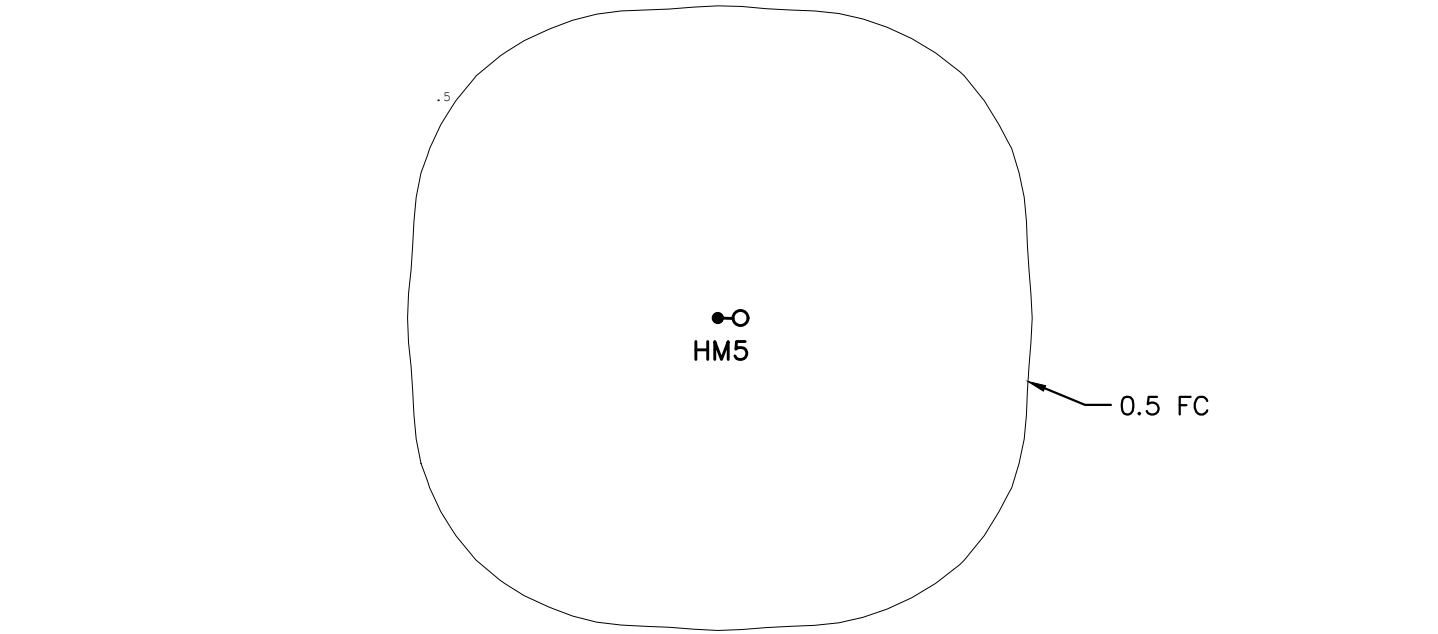
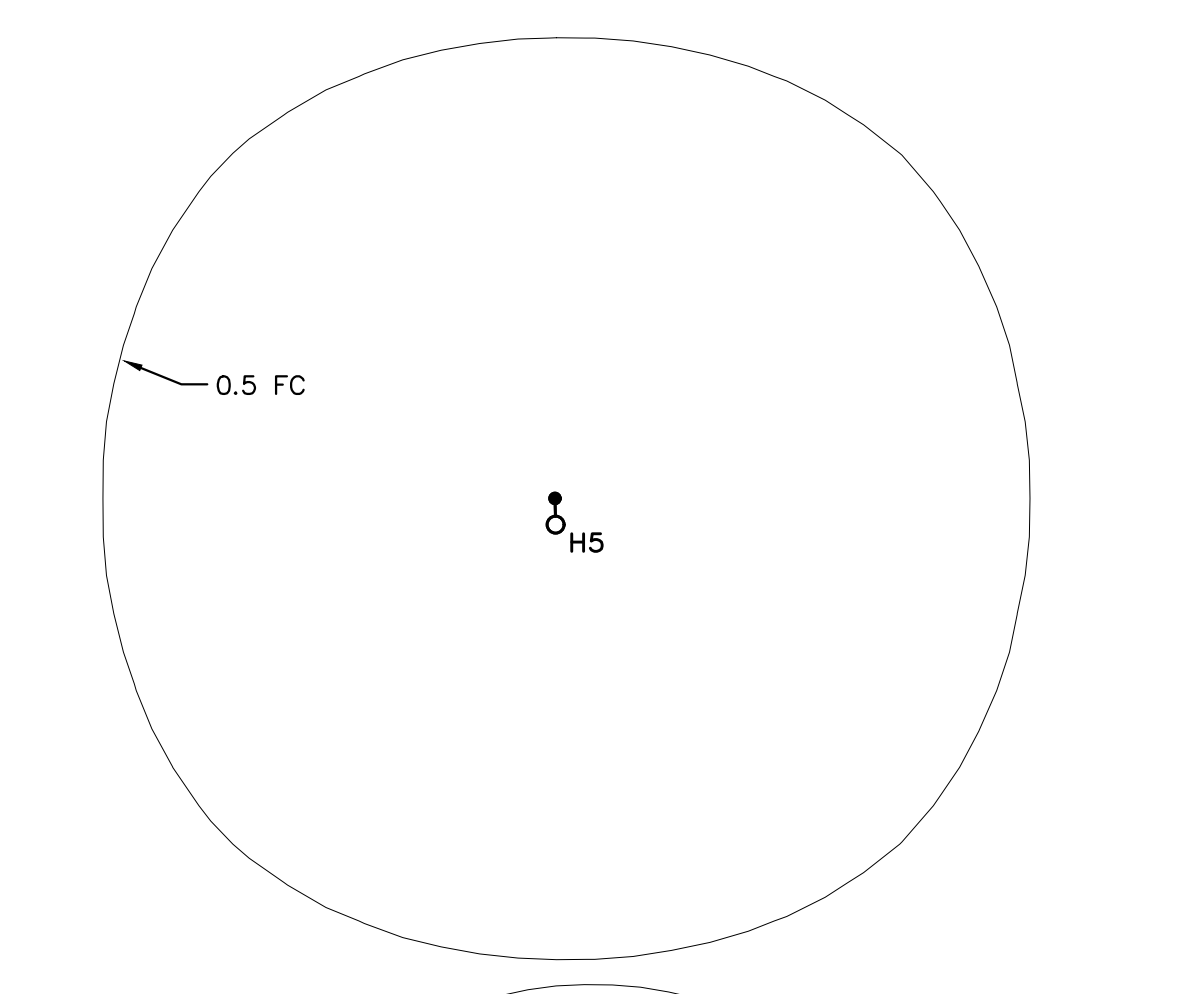
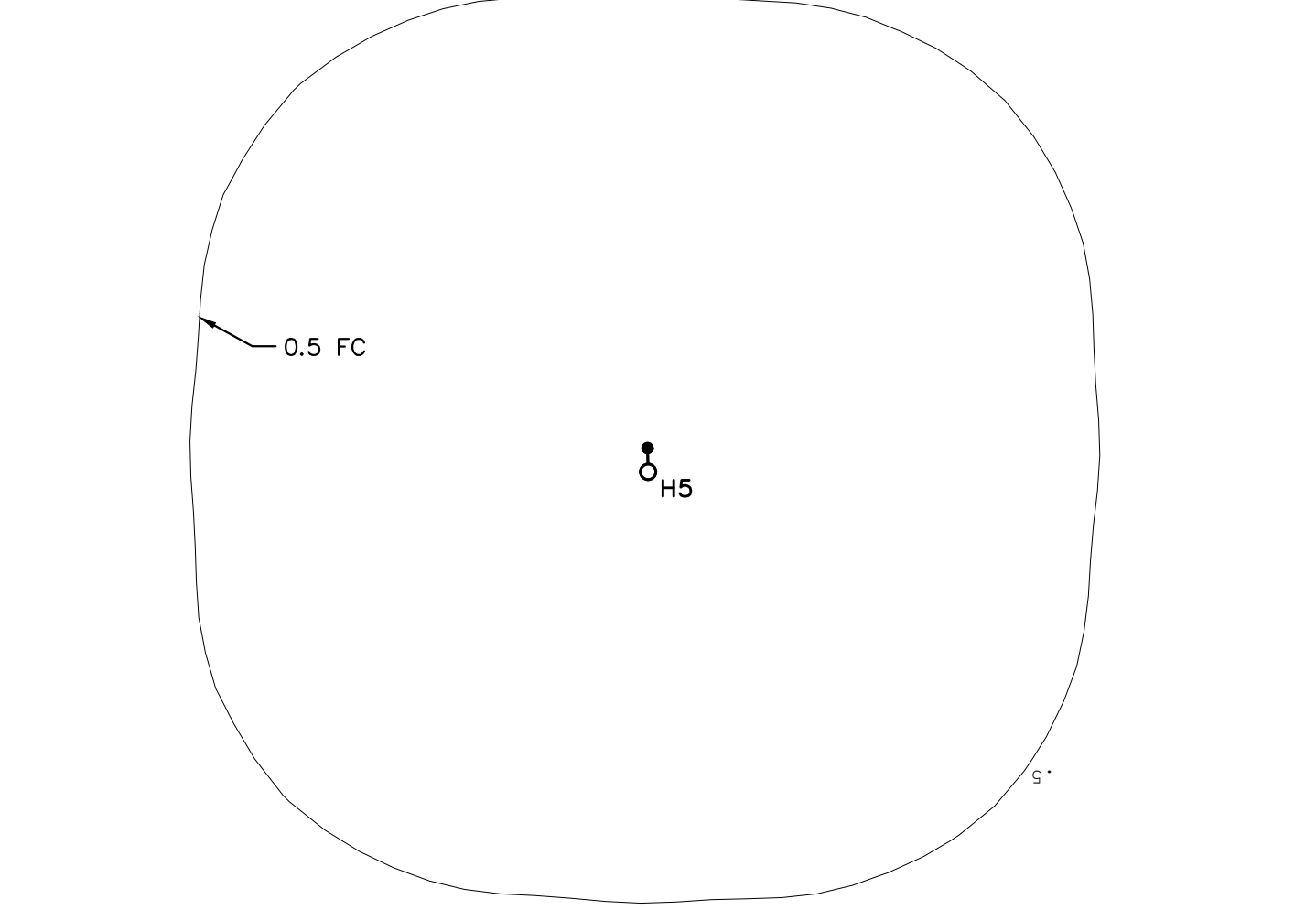
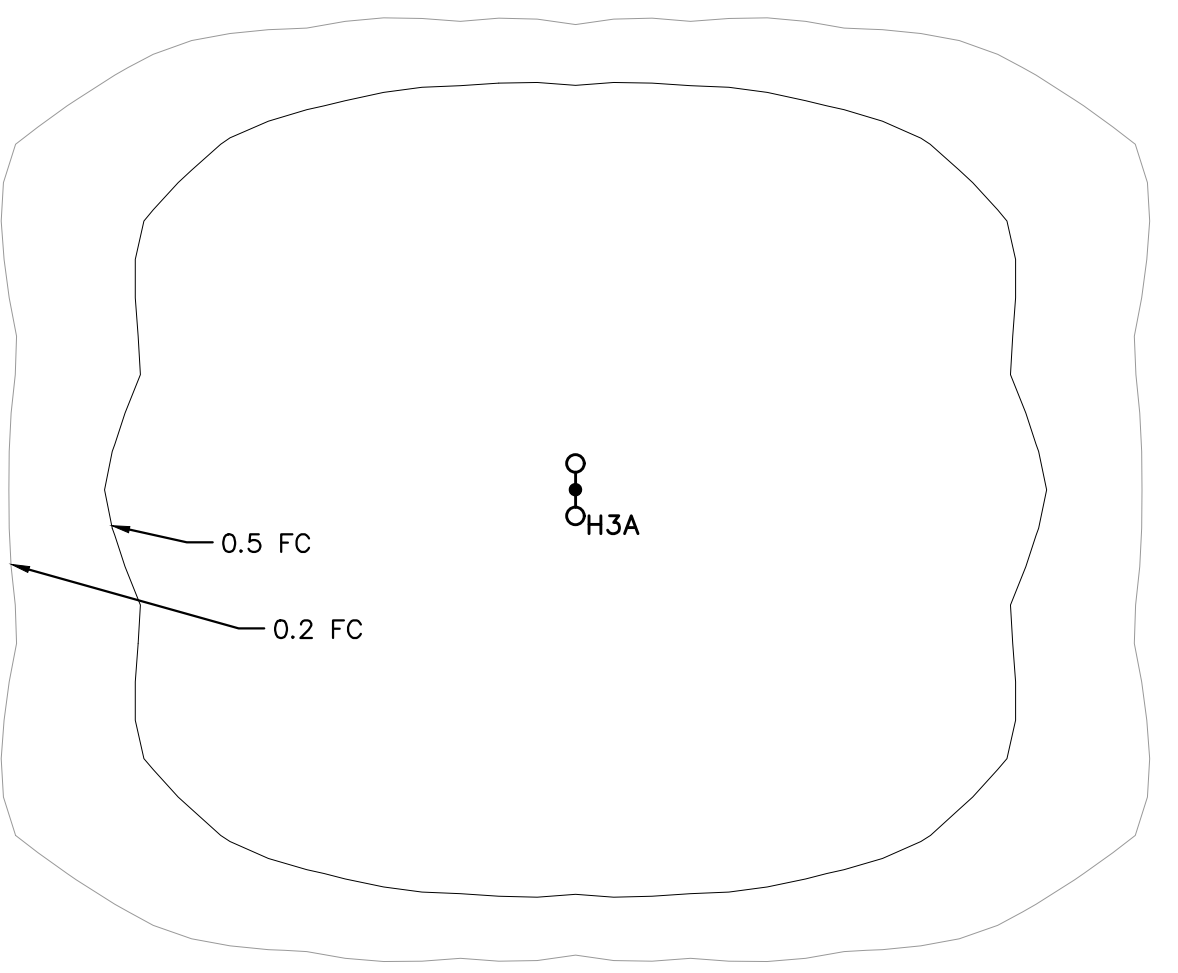
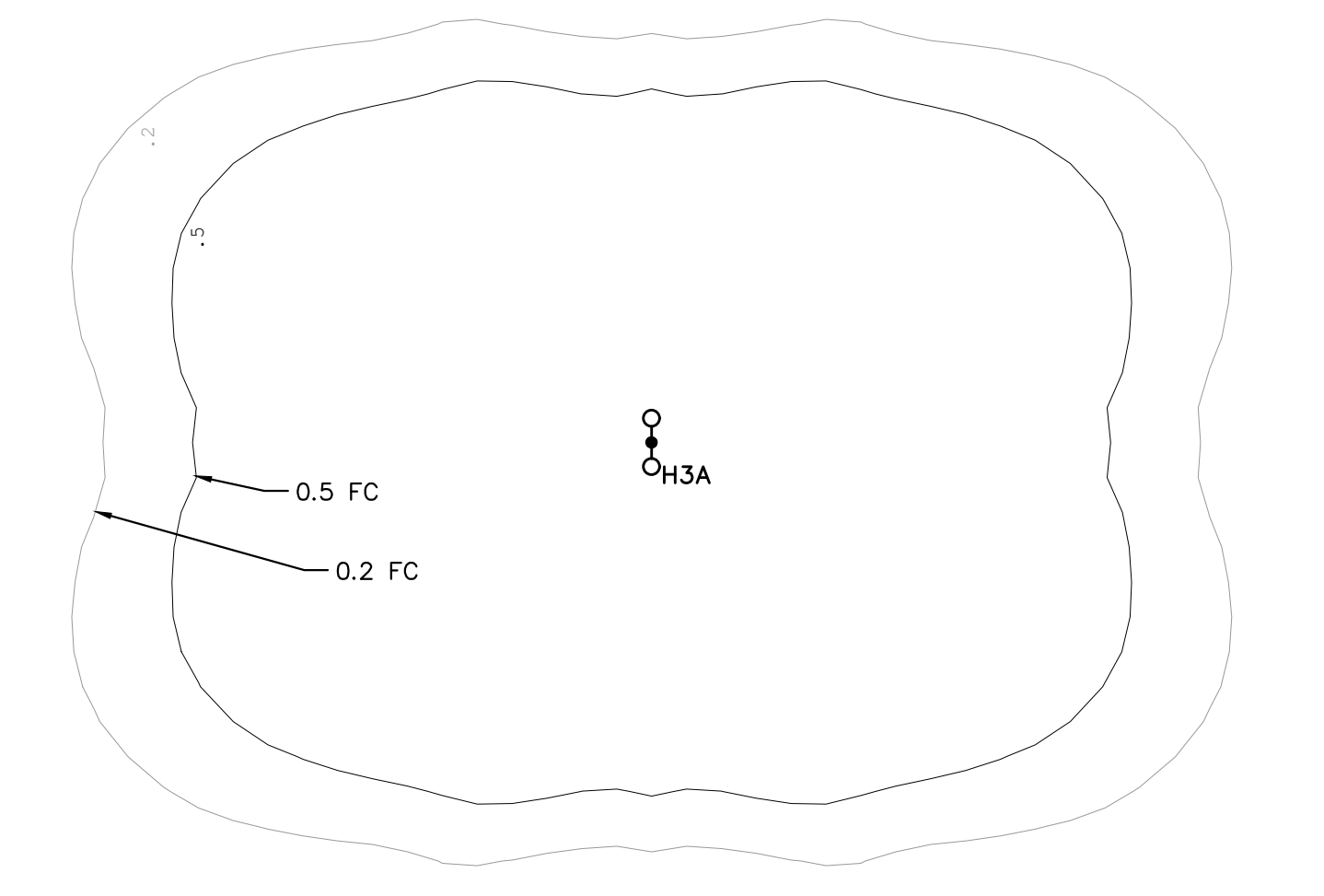
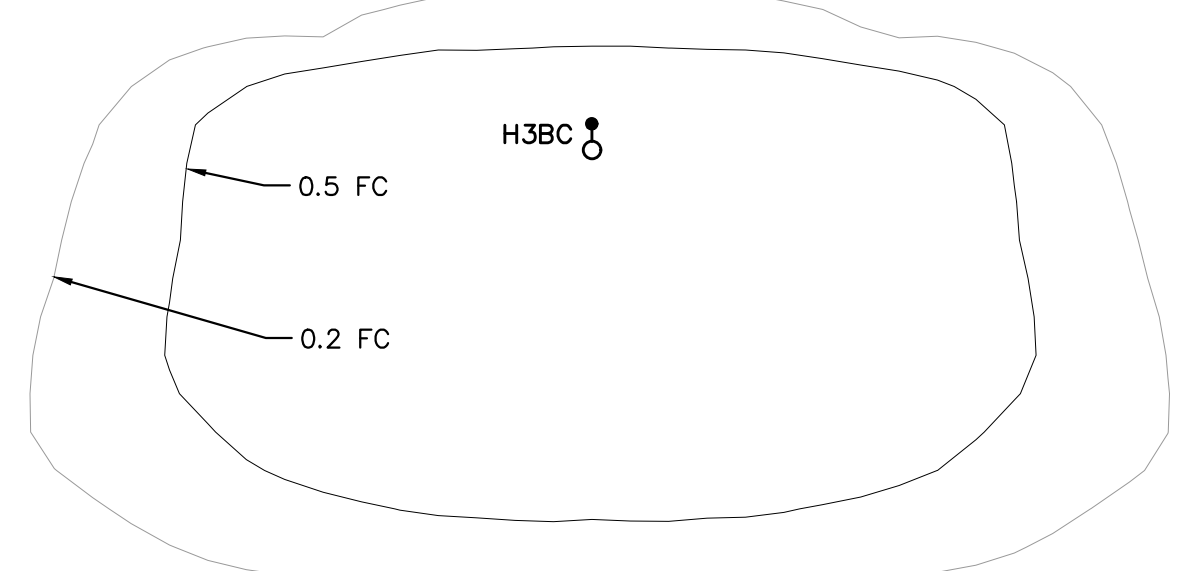
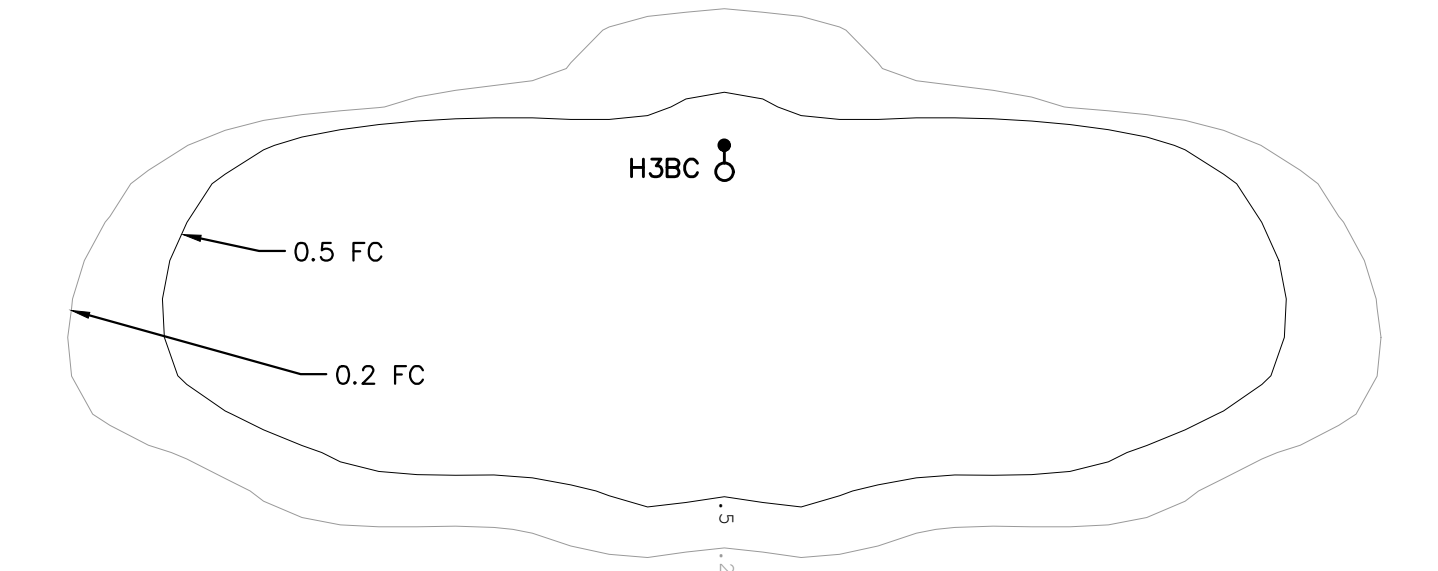
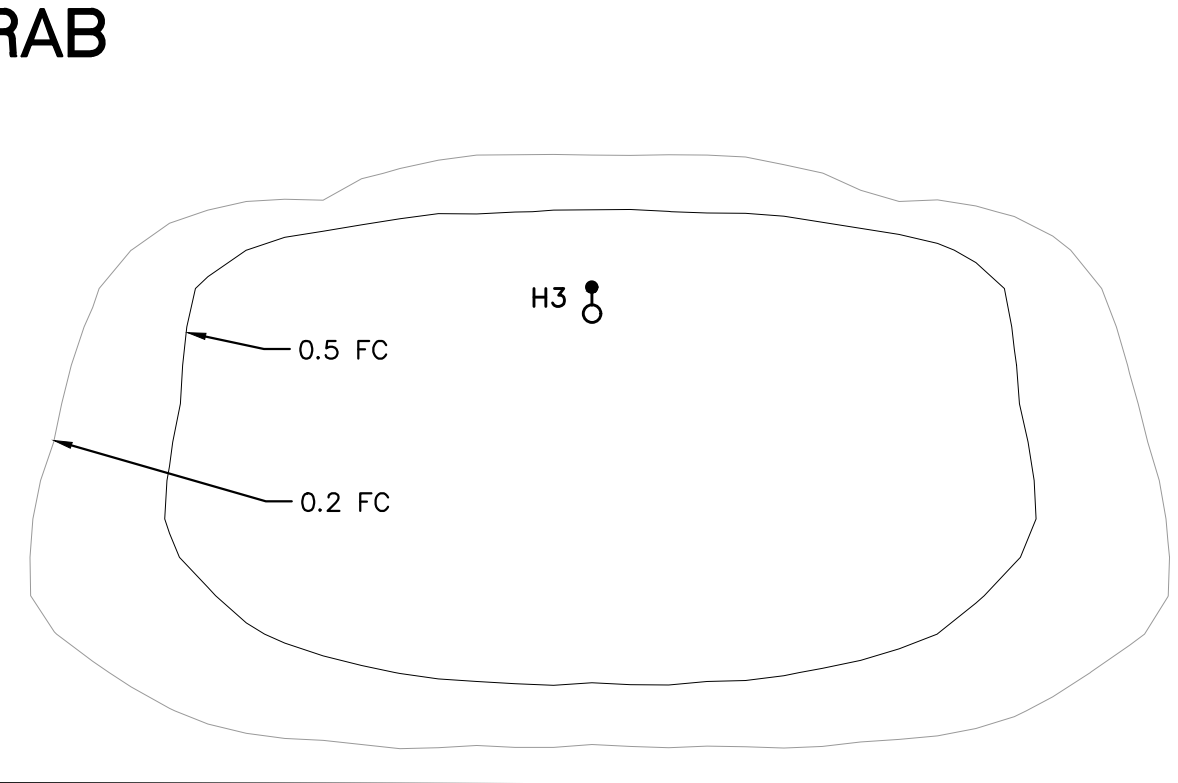
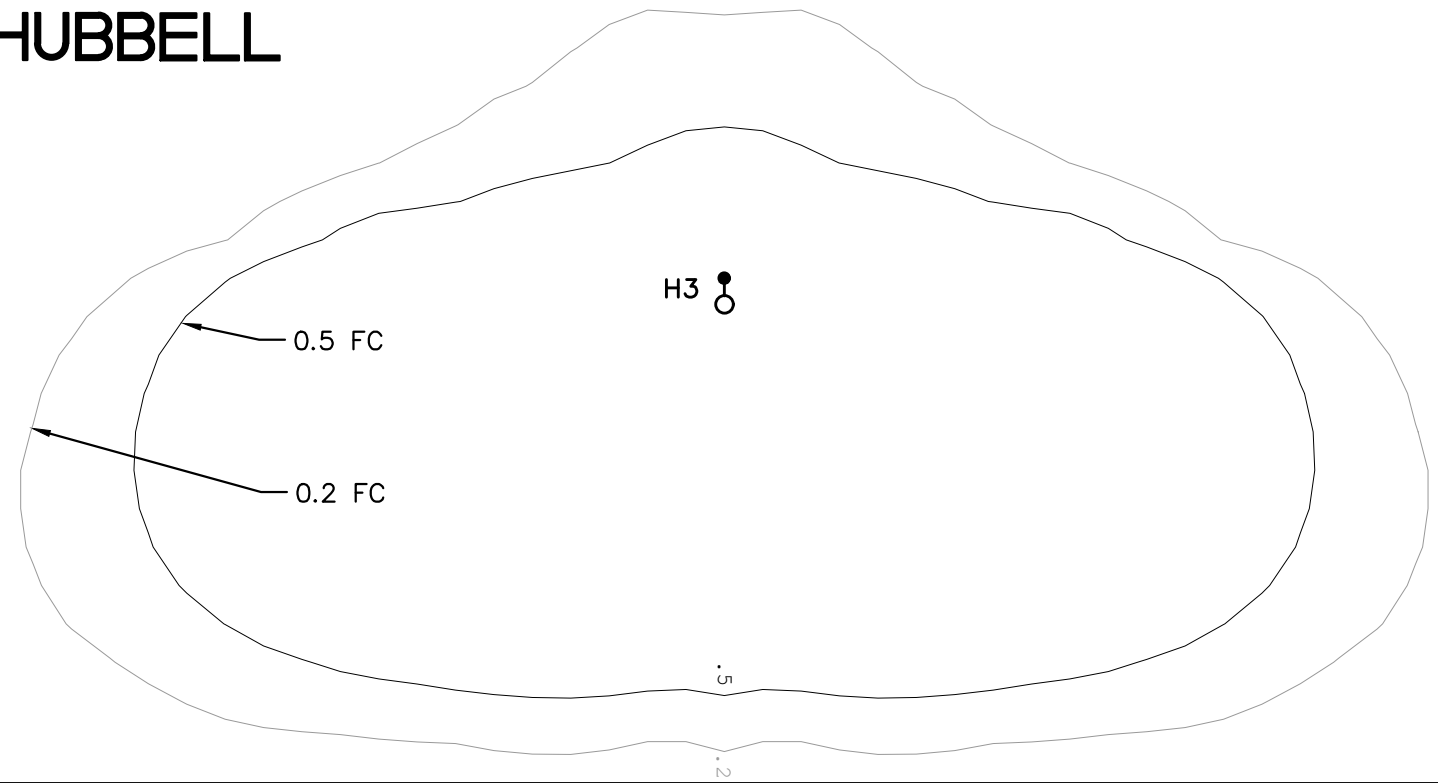
DESIGN BY: RTY

DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
ELECTRICAL NOTES

SHEET NUMBER:
E1.00



STREET/DRIVE ISO-FOOTCANDLE DIAGRAMS (1" = 30'-0")

- STAKE LOCATIONS OF ALL POLES, PULL BOXES AND CONDUITS FOR OWNER/ENGINEER APPROVAL BEFORE EXCAVATION OR INSTALLATION.
- ALL SITE LIGHTING CONDUITS SHALL BE MINIMUM OF 30" BELOW GRADE UNLESS OTHERWISE NOTED. DEPTHS SHALL BE INCREASED AS NECESSARY TO COORDINATE WITH OTHER WORK AND AS REQUIRED TO MAINTAIN SEPARATION AND COVER.
- VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES, IRRIGATION PIPING, IRRIGATION WIRING, TELEPHONE, GAS, NETWORK FIBER, CONDUITS, ETC. CALL "811" PRIOR TO EXCAVATION. ALL EXISTING UTILITIES ARE NOT SHOWN. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION AND TO DETERMINE AND VERIFY THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. ITEMS DAMAGED BY CONTRACTOR SHALL BE REPLACED OR REPAIRED AS DIRECTED BY OWNER AT NO ADDITIONAL COST TO OWNER.

INFORMATION REGARDING EXISTING UTILITIES SHOWN ON E3 SERIES DRAWINGS WERE PROVIDED BY OWNER. OBTAIN GIS DATA FOR EXISTING UTILITIES FROM OWNER. RELOCATE EXISTING UTILITIES AS NECESSARY TO FACILITATE CONSTRUCTION.
- ALL TRENCHES SHALL BE FILLED, LEVELED AND COMPACTED TO 95%.
- SUBMIT SHOP DRAWING FOR ROUTING OF ALL CONDUITS FOR ENGINEER APPROVAL PRIOR TO TRENCHING.
- CONDUIT ROUTING SHOWN IS DIAGRAMMATIC. CONTRACTOR TO ADJUST ROUTING AS REQUIRED TO RESOLVE ANY CONFLICTS WITH EXISTING UTILITIES AND NEW WORK.
- AVOID CRITICAL ROOT ZONE AREA (DRIP LINE) OF EXISTING TREES AND LANDSCAPING WHEN TRENCHING. UTILIZE WATER INJECTION DRILLING AS NECESSARY TO PROTECT TREES, LANDSCAPING, UTILITIES, ETC. COMPLY WITH UNT GROUNDS DEPARTMENT STANDARDS. UNT WILL PRUNE TREES WHERE NECESSARY.
- PROVIDE ADDITIONAL PULL BOXES AS REQUIRED.
- DO NOT SPLICE IN IN-GRADE PULL BOXES UNLESS OTHERWISE NOTED.
- WHERE EXISTING POLE FOOTINGS AND CIRCUITS ARE BEING REUSED:
 A. MODIFY AND EXTEND EXISTING CONDUCTORS AS REQUIRED.
 B. PRIOR TO PREPARING SUBMITTALS, VERIFY ANCHOR BOLTS ALIGN WITH NEW POLE ANCHOR BOLT PATTERN. IF ANCHOR BOLT PATTERN DOES NOT ALIGN WITH NEW POLE ANCHOR BOLT PATTERN:
 1) PROVIDE CUSTOM POLE BASE (COORDINATE WITH POLE MANUFACTURER).
 2) CUT ANCHOR BOLTS AND PROVIDE HILTI ANCHORS SUPPLIED BY NEW POLE MANUFACTURER.
 a.) THIS OPTION WILL BE EVALUATED BY OWNER AND ENGINEER ON A CASE-BY-CASE BASIS.
- COORDINATE ALL PUBLIC STREET CROSSINGS WITH THE CITY OF DENTON. OBTAIN REQUIRED PERMITS AND ASSIST OWNER WITH RIGHT OF WAY AGREEMENTS. BORE UNDER STREETS OR CUT/PATCH AS DIRECTED BY CITY AND UNT.
- WHERE POLES ARE BEING REPLACED, LABEL SAME AS EXISTING POLE.
- IF IRRIGATION SYSTEM WIRING IS DAMAGED, SPLICE/REPAIR AND PROVIDE SPLICE BOX PER UNT STANDARDS.
- PROVIDE BARRICADES AND CAUTION TAPE TO SECURE CONSTRUCTION AREAS.
- POLE SETBACKS SHOWN ARE FROM CENTER OF POLE TO BACK OF CURB, OR CENTER OF POLE TO EDGE OF SIDEWALK.
- RESTRIPE PARKING SPACES WITHIN CUT/PATCH AREAS OF PARKING LOTS. RESTRIPE ENTIRE PARKING LOT AS DESCRIBED IN ALTERNATES.

DESCRIPTION OF ALTERNATES:

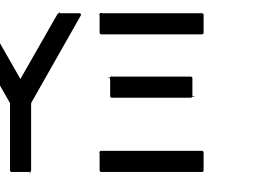
- ALT. No. 1: RAB IN LIEU OF HUBBELL FOR "H" SERIES POLES AND FIXTURES
 "A" SERIES FIXTURES SHALL BE 80 CRI UNDER THIS ALTERNATE.
- ALT. NO. 1A: RESTRIPE ENTIRE PARKING LOT #1.
- ALT. NO. 1B: RESTRIPE ENTIRE PARKING LOT #5.
- ALT. NO. 2A: HIGH MAST ZONE 29 UTILIZING HUBBELL FOR "H" AND "A" SERIES POLES AND FIXTURES.
- ALT. NO. 2B: HIGH MAST ZONE 29 UTILIZING RAB FOR "H" SERIES POLES AND FIXTURES AND UTILIZING HUBBELL FOR "A" SERIES POLES AND FIXTURES. "A" SERIES FIXTURES SHALL BE 80 CRI UNDER THIS ALTERNATE FOR HIGH MAST ZONE 29.
- ALT. NO. 2C: RESTRIPE ENTIRE PARKING LOT #27.
- ALT. NO. 3A: HIGH MAST ZONE 25 UTILIZING HUBBELL FOR "H" SERIES AND "A" SERIES POLES AND FIXTURES.
- ALT. NO. 3B: HIGH MAST ZONE 25 UTILIZING RAB FOR "H" SERIES POLES AND FIXTURES AND HUBBELL FOR "A" SERIES POLES AND FIXTURES. "A" SERIES FIXTURES SHALL BE 80 CRI UNDER THIS ALTERNATE FOR HIGH MAST ZONE 25.
- ALT. NO. 3C: RESTRIPE ENTIRE PARKING LOT #13.

PHASING PLAN:

- NEW LIGHTING SYSTEMS SHALL BE INSTALLED AND FUNCTIONING PRIOR TO DEACTIVATING EXISTING HIGH MAST POLE LIGHTING SYSTEM.
- NO MORE THAN 25% OF OF EACH PARKING AREA CAN BE UNDER CONSTRUCTION AT ANY TIME. COORDINATE WITH OWNER.
- SCHEDULING PRIORITY:
 - AVENUE C
 - HIGH MAST ZONE 11
 - HIGH MAST ZONE 6
 - HIGH MAST ZONE 29
 - HIGH MAST ZONE 25

CAMPUS STANDARD ILLUMINATION LEVELS:

LOCATION	MIN. FOOTCANDLE LEVEL	AVERAGE FOOTCANDLE LEVEL
PEDESTRIAN WALKWAYS	1.0 MIN	-
BUILDING EXTERIOR EGRESS	2.0 MIN	-
BICYCLE PATHS	1.0 MIN	-
BIKE RACKS	1.0 MIN	-
ROADWAYS	.25 MIN	1.0 TO 1.5 AVG
PARKING (ASPHALT)	0.5 HORIZONTAL MIN 0.25 VERTICAL MIN	MAX:MIN 15:1
PARKING (CONCRETE)	1.0 HORIZONTAL MIN 0.5 VERTICAL MIN	MAX:MIN 15:1



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 Texas Registration No. F-9622



07-09-2024

UNIVERSITY OF NORTH TEXAS

PROJECT NAME:
 CAMPUS LIGHTING UPGRADES
 HIGH MAST ZONES 6, 11, 25, 29 & AVE C
 DENTON, TEXAS



REVISIONS:

- ▲ _____
- ▲ _____
- ▲ _____

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

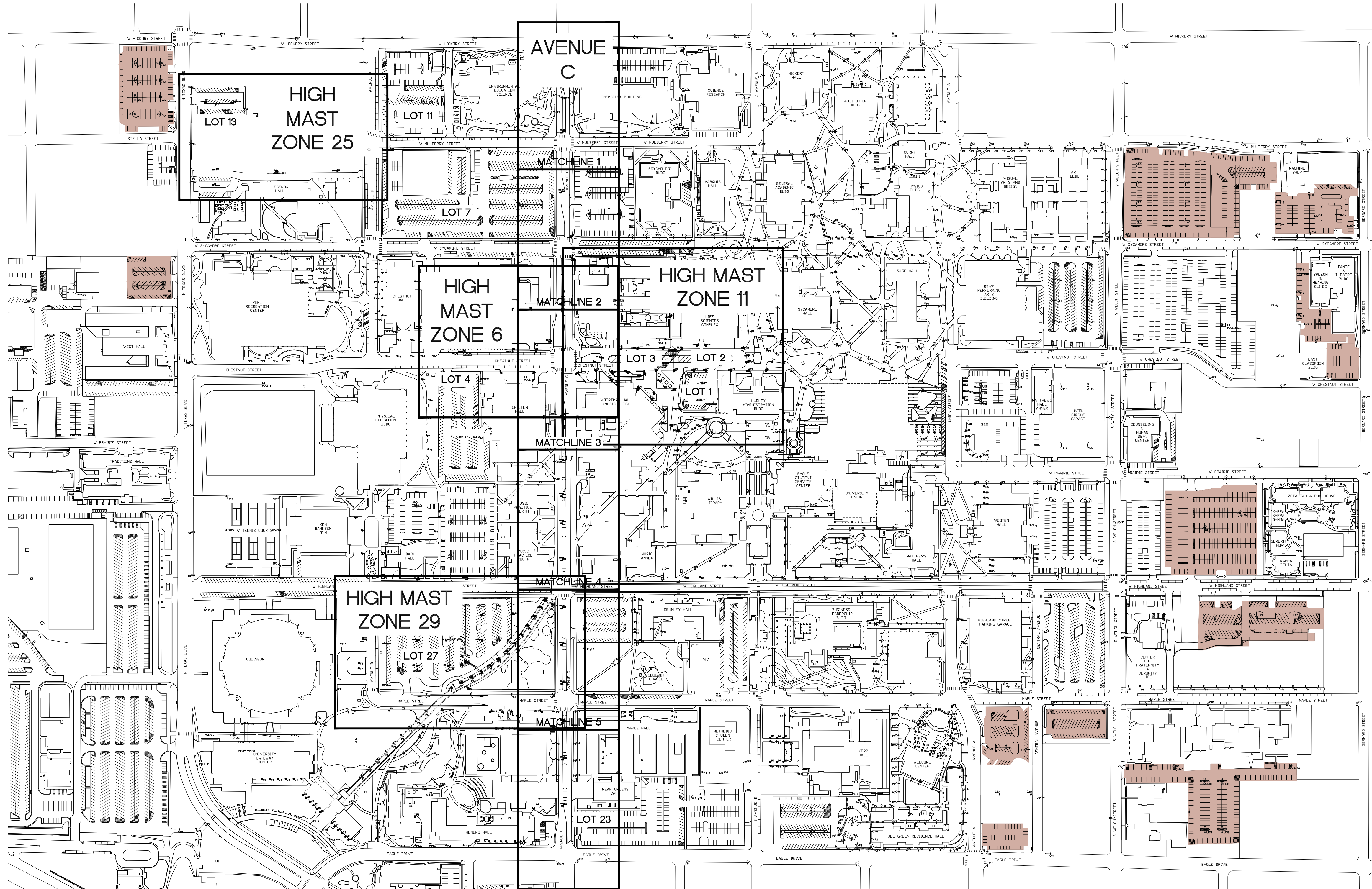
DRAWN BY: RLT

YE PROJECT NO.: 2210.00

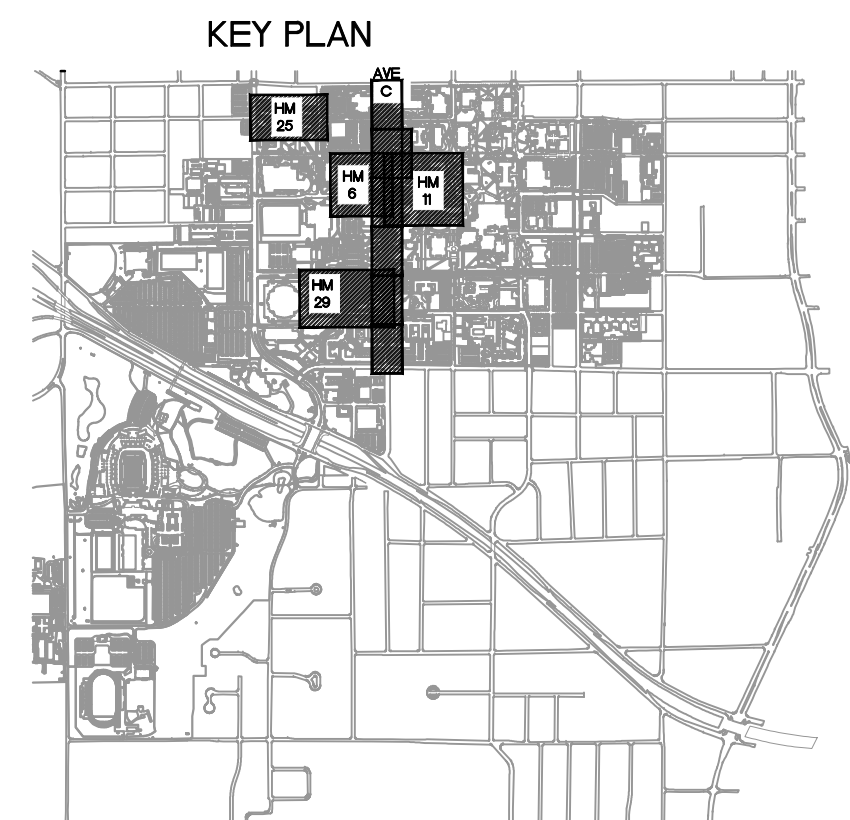
SHEET CONTENTS:
 LIGHTING
 OVERALL PLAN

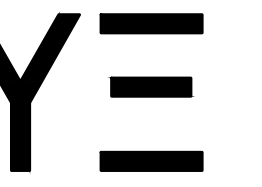
SHEET NUMBER:

E1.01



1 LIGHTING OVERALL PLAN
 SCALE: 1"=200'-0" 400





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 DENTON, TEXAS



REVISIONS:

1	
2	
3	

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 LIGHTING PLAN - HIGH MAST ZONE 6

SHEET NUMBER:

E1.02

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GENERAL NOTES:

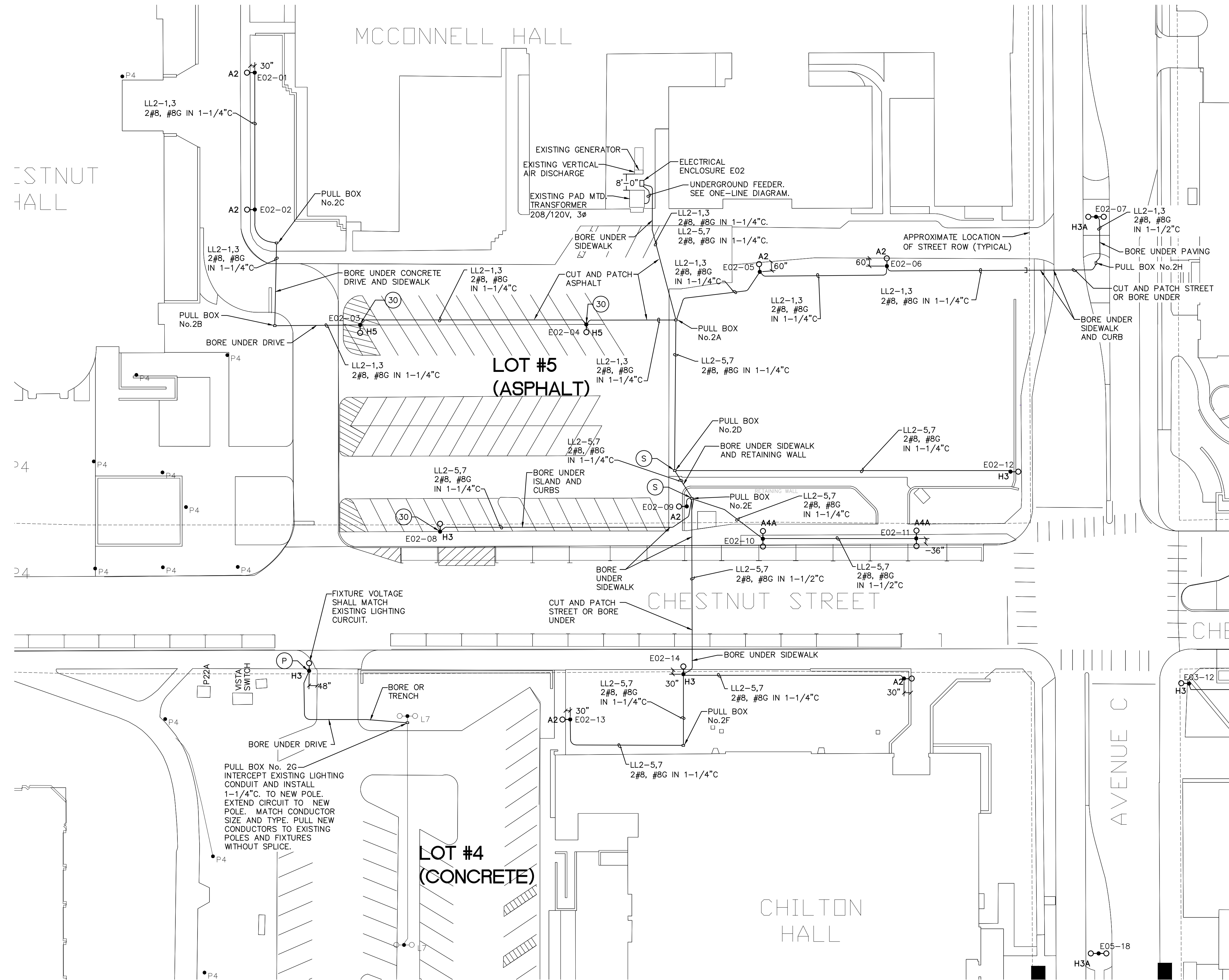
- REFER TO GENERAL NOTES ON E1.00
- VERIFY POLE NUMBER DESIGNATION PRIOR TO ORDERING LABELS.

NOTES BY SYMBOL:

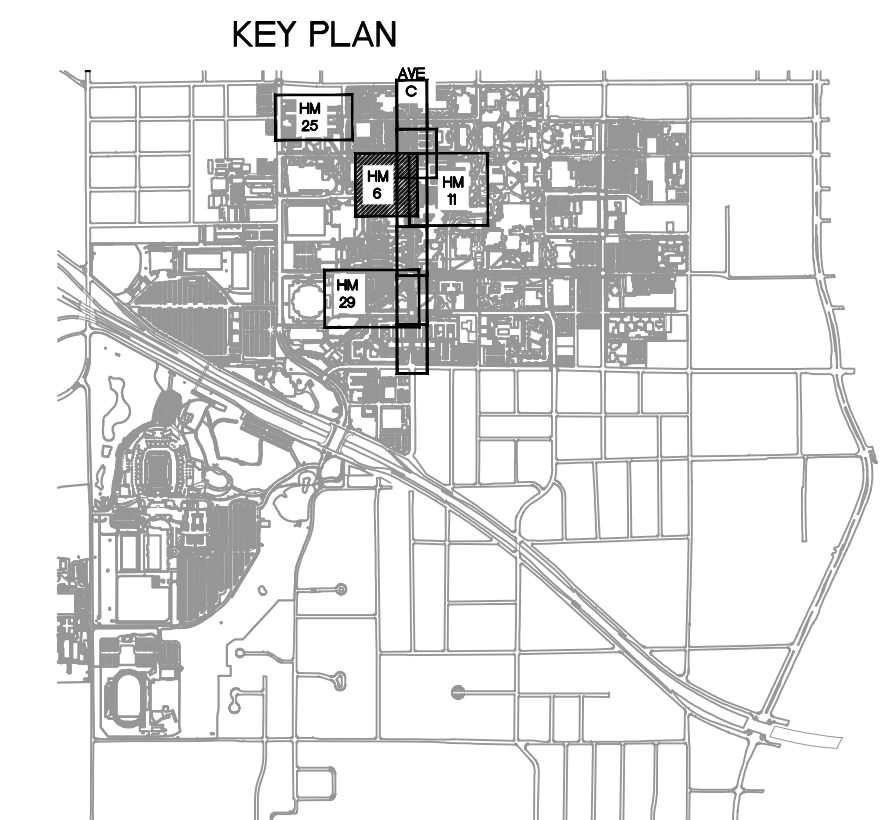
- (30) FOOTING SHALL EXTEND 30" ABOVE GRADE.
- (P) COORDINATE POLE NUMBER DESIGNATIONS WITH OWNER.
- (S) SPLICES PERMITTED IN THIS PULL BOX.

ALTERNATES:

ALT. No. 1B: RESTRIPE ENTIRE PARKING LOT #5.

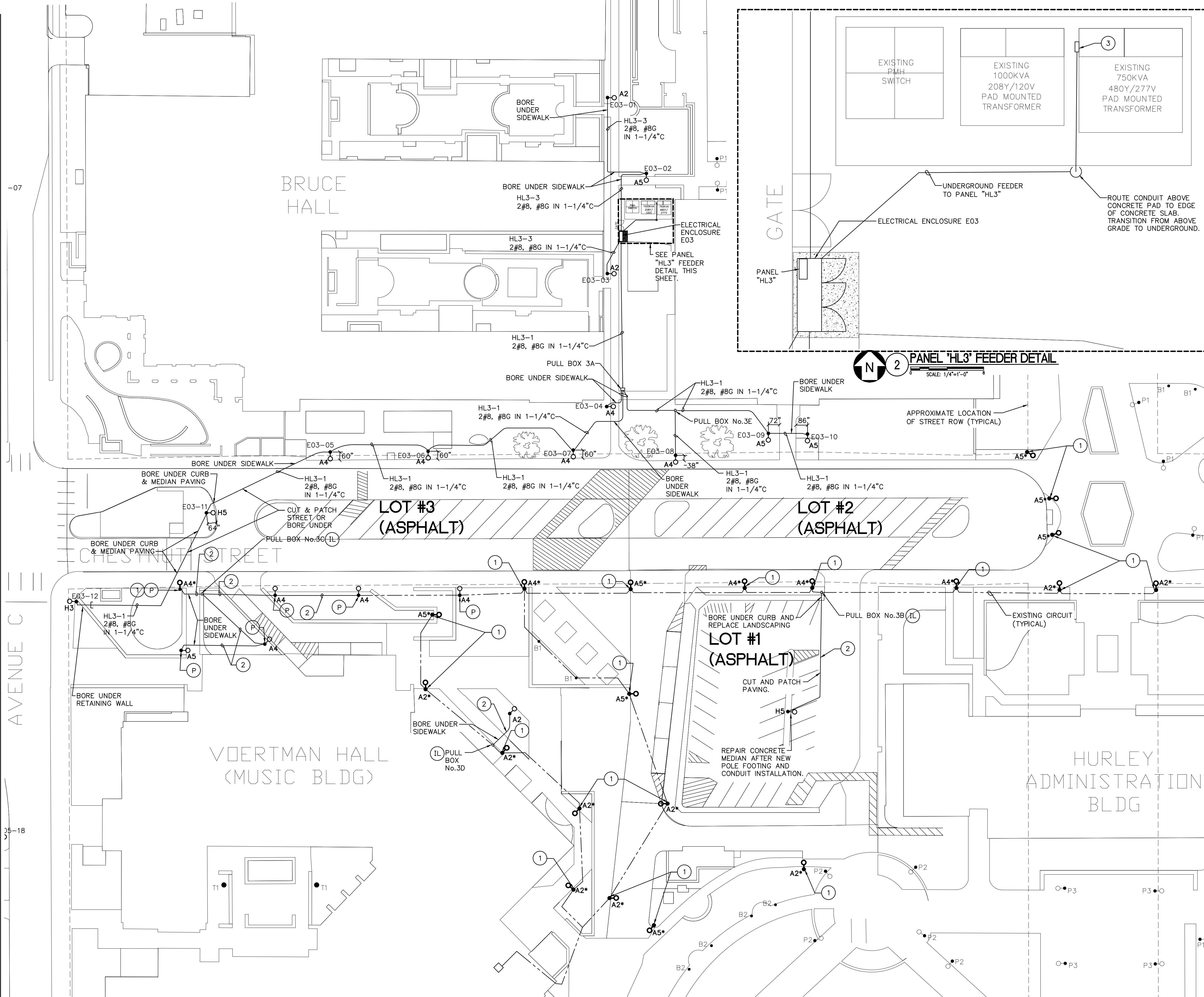


1 LIGHTING PLAN - HIGH MAST ZONE 6
 SCALE: 1"=30'-0"



-07

35-18



1 LIGHTING PLAN - HIGH MAST ZONE 11
 SCALE: 1"=30'-0"

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00
2. VERIFY POLE NUMBER DESIGNATION PRIOR TO ORDERING LABELS.
3. POLES/FIXTURES INSTALLED AT MUSIC BUILDING SHALL MATCH EXISTING CIRCUIT VOLTAGE. VERIFY CIRCUIT VOLTAGE PRIOR TO ORDERING FIXTURES.
4. VERIFY AND CONFIRM POLE FOOTING DIAMETERS FOR PEDESTRIAN POLES PRIOR TO ANY WORK.
5. WHERE EXISTING POLES BEING REPLACED HAVE 120V RECEPTACLES, NEW POLE SHALL NOT HAVE RECEPTACLE. REWORK EXISTING 120V RECEPTACLE CIRCUIT TO MAINTAIN SERVICE TO REMAINING RECEPTACLES IN OTHER POLES NOT BEING REPLACED.

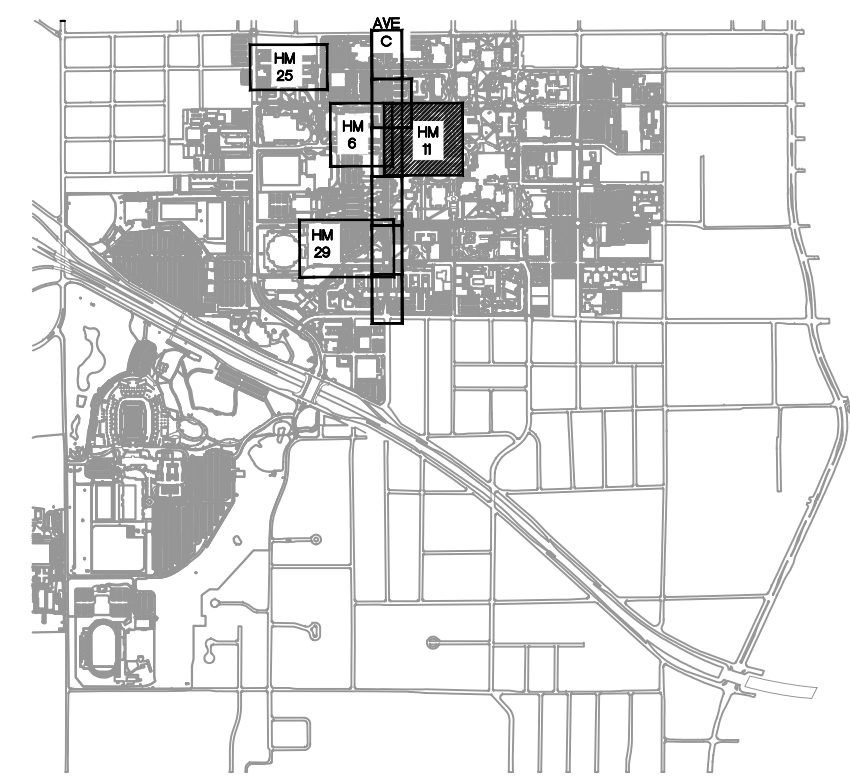
NOTES BY SYMBOL:

- 1 INSTALL NEW POLE AND FIXTURE ON EXISTING FOOTING. REUSE EXISTING BRANCH CIRCUIT CONDUCTORS UNLESS NOTED OTHERWISE.
- 2 EXTEND EXISTING LIGHTING CIRCUIT. MATCH EXISTING CONDUCTOR SIZE AND TYPE. MINIMUM 1-1/4" C. INSTALL NEW CONDUCTORS TO EXISTING POLES AND FIXTURES WITHOUT SPLICE.
- 3 NIPPLE OUT OF SIDE OF TRANSFORMER ENCLOSURE AND INSTALL CONDUIT ON TOP OF CONCRETE SLAB AND EXTEND TO EDGE OF CONCRETE SLAB.
- 30 FOOTING SHALL EXTEND 30" ABOVE GRADE.
- P COORDINATE POLE NUMBER DESIGNATIONS WITH OWNER.
- IL INTERCEPT EXISTING LIGHTING CONDUIT AND INSTALL 1-1/4"C. TO NEW POLE. EXTEND CIRCUIT TO NEW POLES.

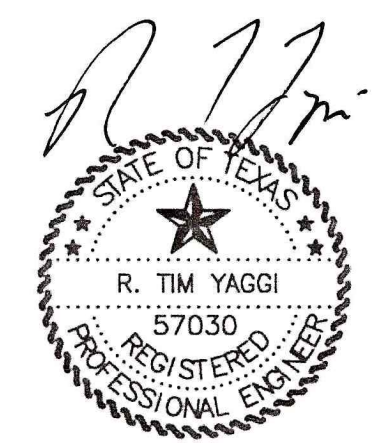
ALTERNATES:

ALT. No. 1A: RESTRIPE ENTIRE PARKING LOT #1.

KEY PLAN



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07-09-2024

UNIVERSITY OF NORTH TEXAS
PROJECT NAME:
 CAMPUS LIGHTING UPGRADES
 HIGH MAST ZONES 6, 11, 25, 29 & AVE C
 DENTON, TEXAS



REVISIONS:

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DATE ISSUED: 07-09-2024

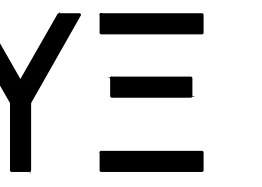
DESIGN BY: RTY

DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 LIGHTING PLAN -
 HIGH MAST
 ZONE 11

SHEET NUMBER:
E1.03



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2	
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DATE ISSUED: 07-09-2024

DESIGN BY: RTY

DRAWN BY: RLТ

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 LIGHTING PLAN -
 HIGH MAST
 ZONE 25
 (ALT. NO. 3A/3B)

SHEET NUMBER:

E1.04

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00
2. VERIFY POLE NUMBER DESIGNATION PRIOR TO ORDERING LABELS.

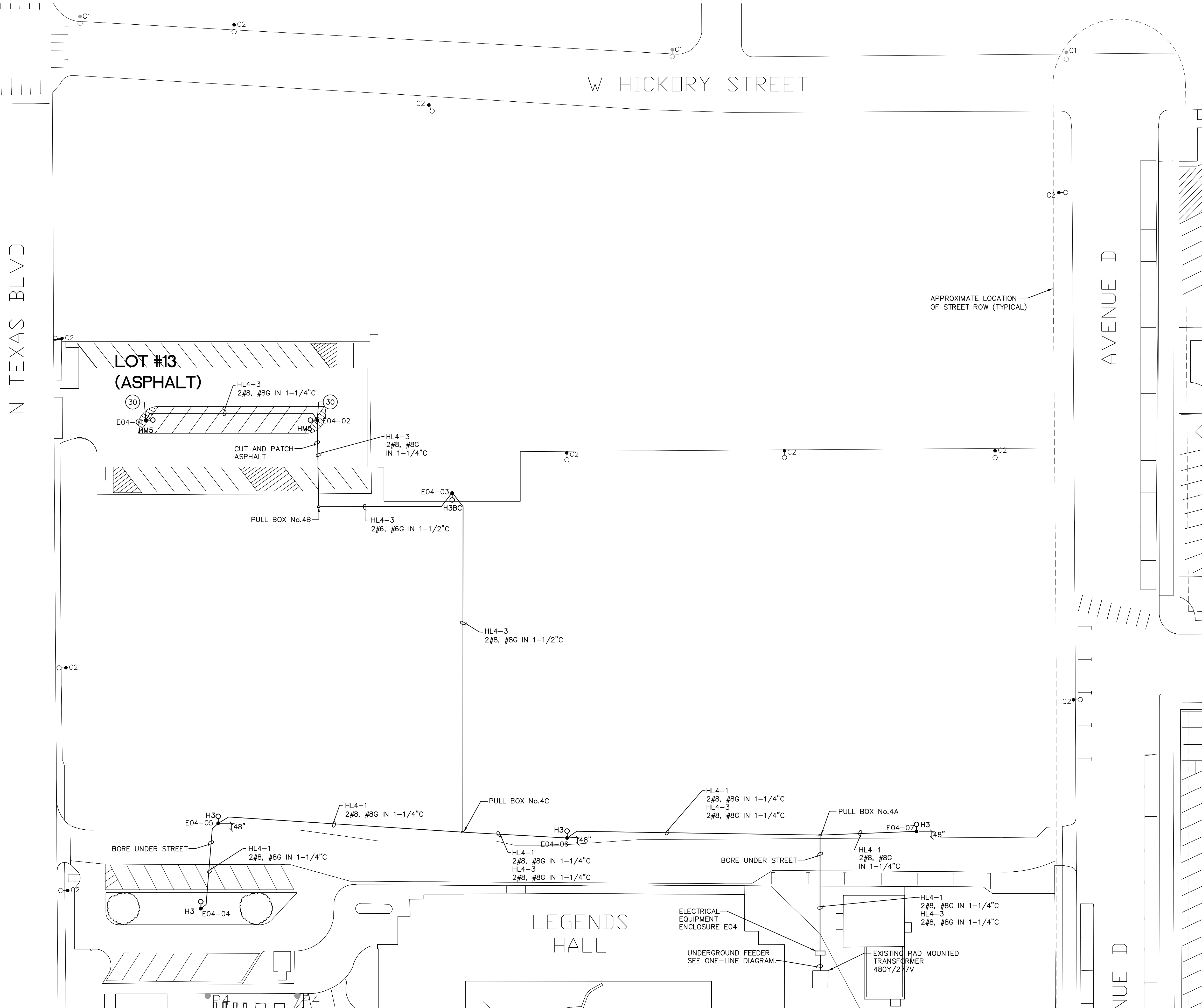
NOTES BY SYMBOL:

- 30 FOOTING SHALL EXTEND 30" ABOVE GRADE.

ALTERNATES:

- ALT. NO. 3C: RESTRIPE ENTIRE PARKING LOT #13

KEY PLAN



1 LIGHTING PLAN - HIGH MAST ZONE 25 (ALT. NO. 3A/3B)
 SCALE: 1"=30'-0"



07-09-2024

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- ①
- ②
- ③

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

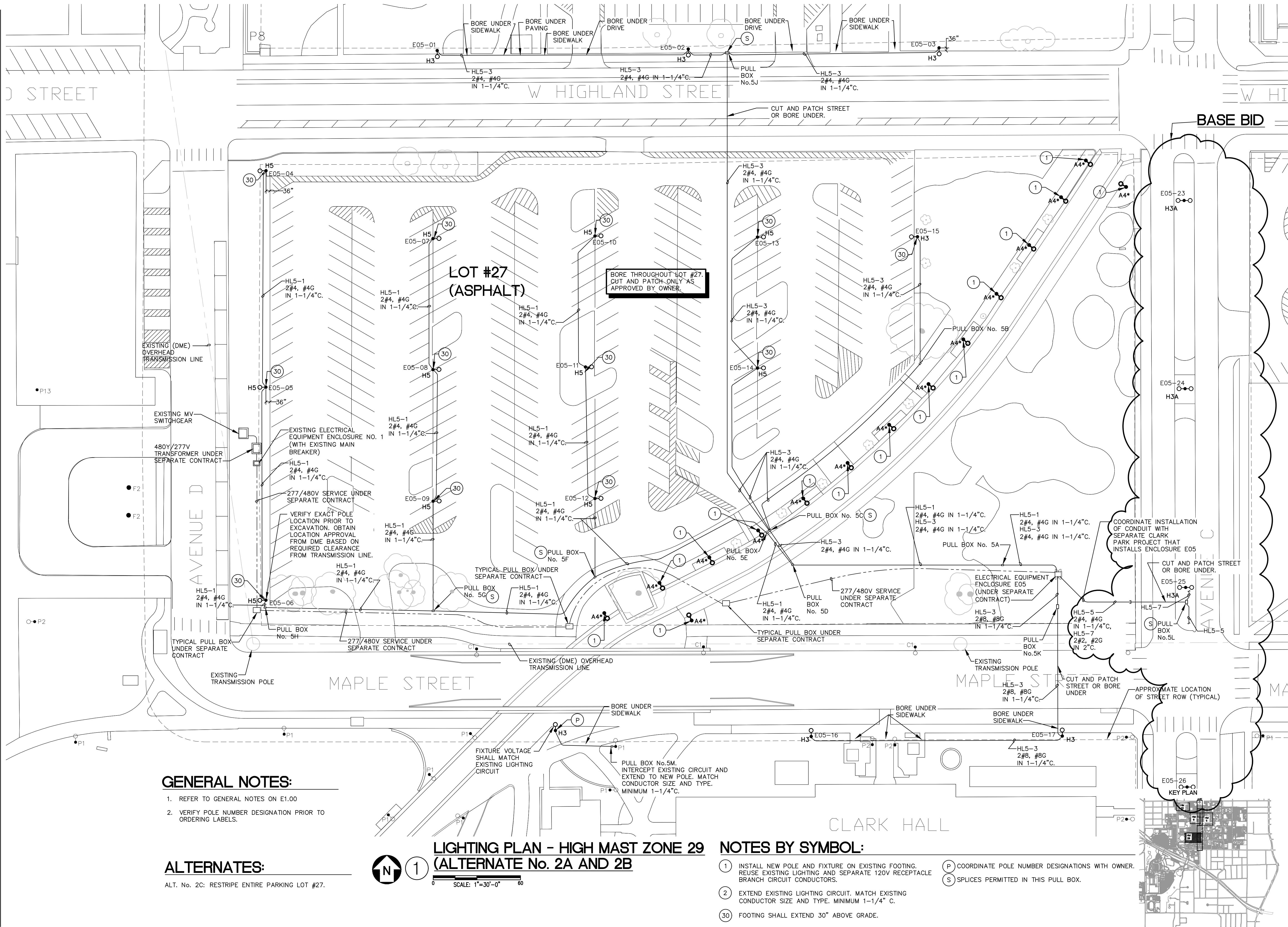
DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
LIGHTING PLAN -
HIGH MAST
ZONE 29
(ALT. No. 2A/2B)

SHEET NUMBER:

E1.05



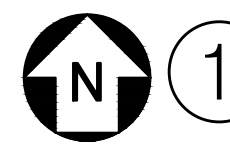
**BORE THROUGHOUT LOT #27.
CUT AND PATCH ONLY AS
APPROVED BY OWNER.**

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00
2. VERIFY POLE NUMBER DESIGNATION PRIOR TO ORDERING LABELS.

ALTERNATES:

ALT. No. 2C: RESTRIPE ENTIRE PARKING LOT #27.

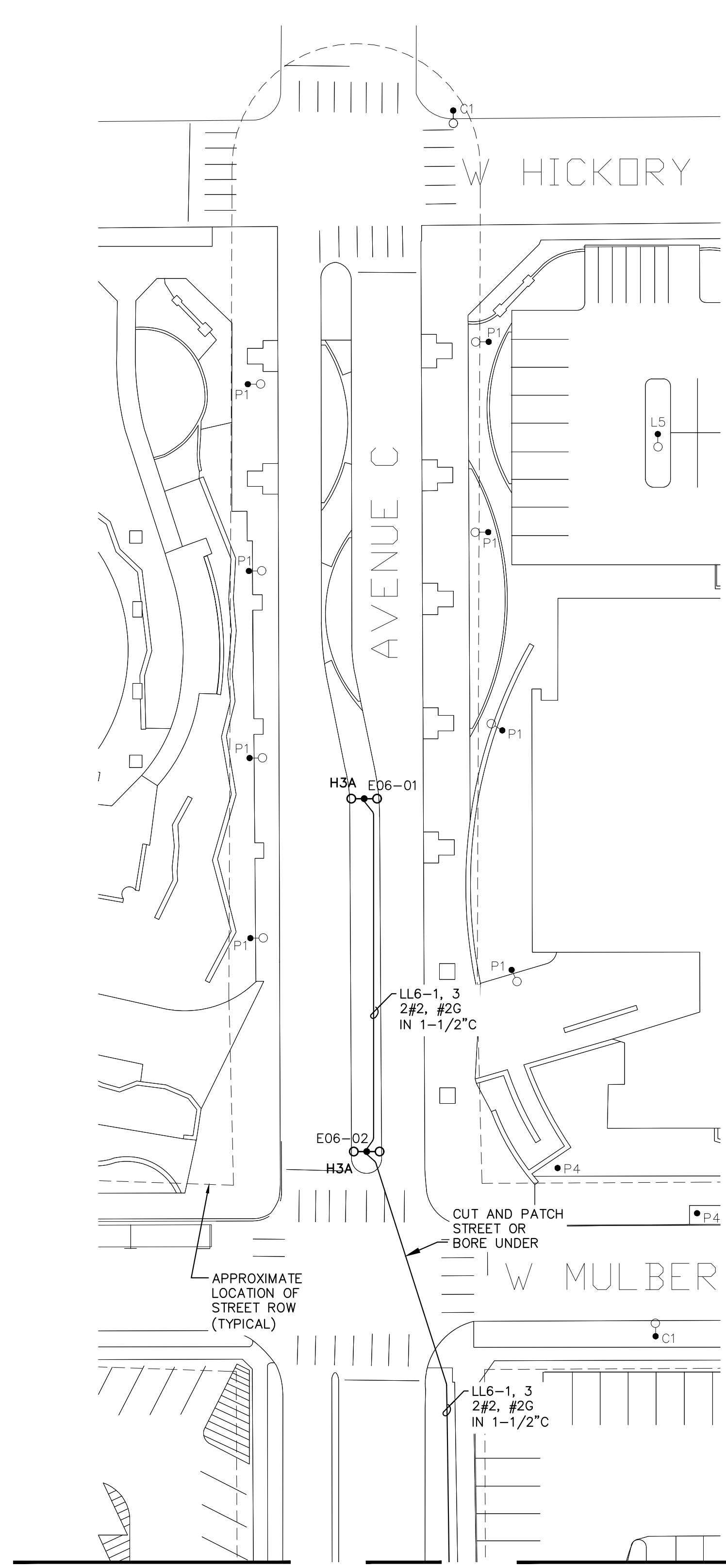


**LIGHTING PLAN - HIGH MAST ZONE 29
(ALTERNATE No. 2A AND 2B)**

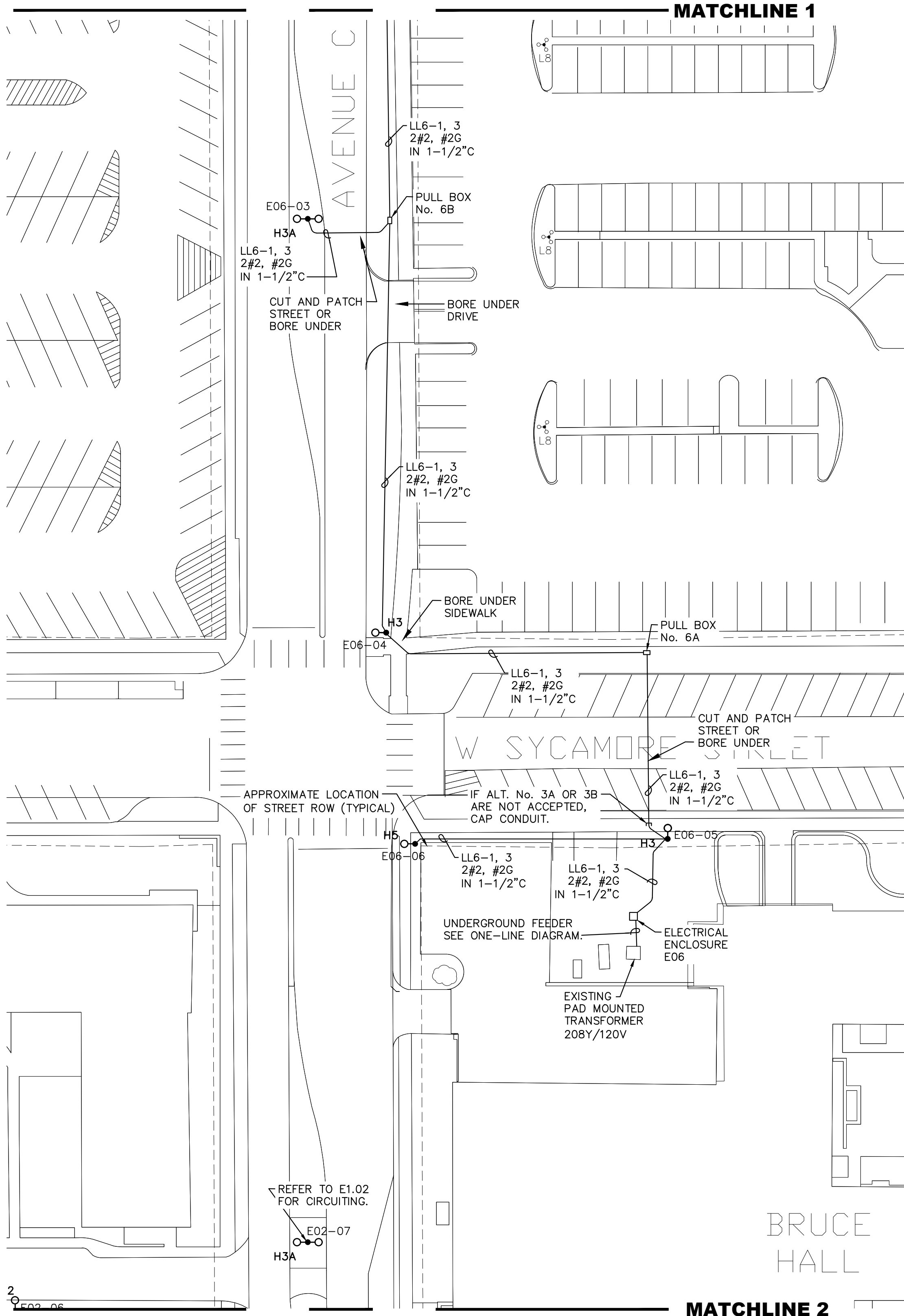
SCALE: 1"=30'-0"

NOTES BY SYMBOL:

- ① INSTALL NEW POLE AND FIXTURE ON EXISTING FOOTING. REUSE EXISTING LIGHTING AND SEPARATE 120V RECEPTACLE BRANCH CIRCUIT CONDUCTORS.
- ② EXTEND EXISTING LIGHTING CIRCUIT. MATCH EXISTING CONDUCTOR SIZE AND TYPE. MINIMUM 1-1/4" C.
- ③ FOOTING SHALL EXTEND 30" ABOVE GRADE.
- P COORDINATE POLE NUMBER DESIGNATIONS WITH OWNER.
- S SPLICES PERMITTED IN THIS PULL BOX.



MATCHLINE 1



MATCHLINE 2

1 LIGHTING PLAN - AVENUE C - PART 1 OF 3

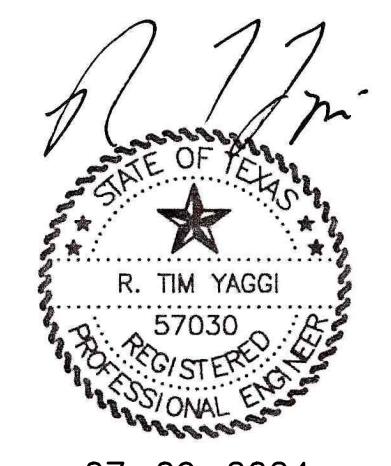
SCALE: 1"=30'-0"

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00
2. VERIFY POLE NUMBER DESIGNATION PRIOR TO ORDERING LABELS.



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- 3. _____

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

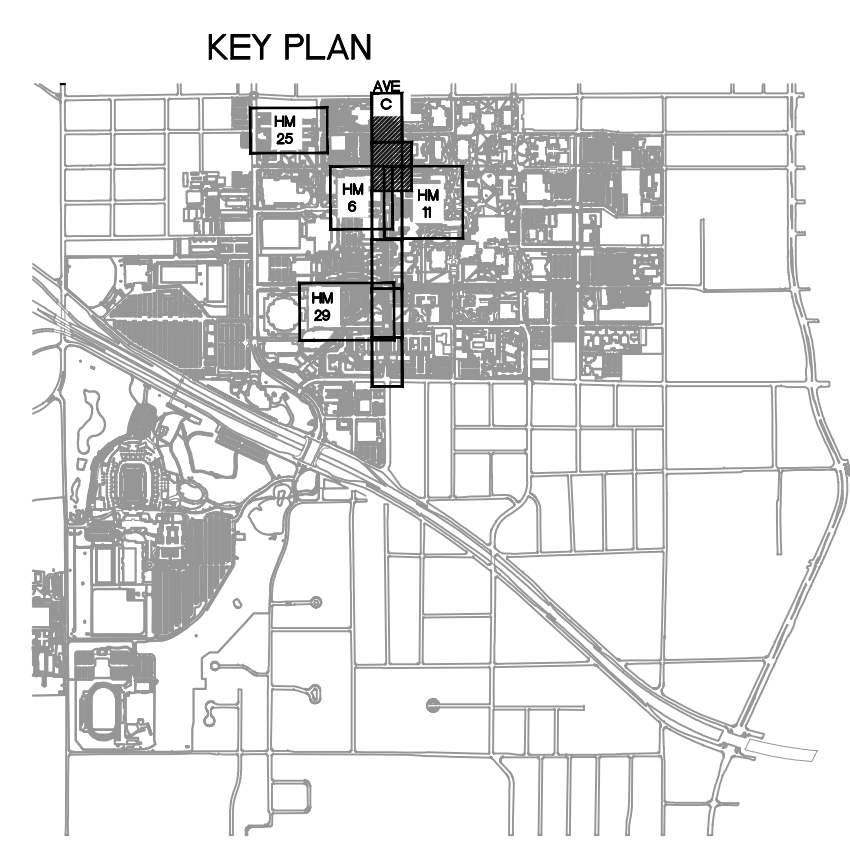
DRAWN BY: RLT

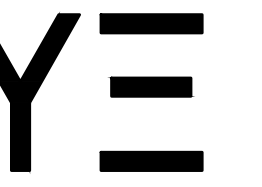
YE PROJECT NO.: 2210.00

SHEET CONTENTS:
LIGHTING PLAN - AVENUE C - PART 1 OF 3

SHEET NUMBER:

E1.06





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- 2
- 3

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

DRAWN BY: RLТ

YE PROJECT NO.: 2210.00

SHEET CONTENTS:

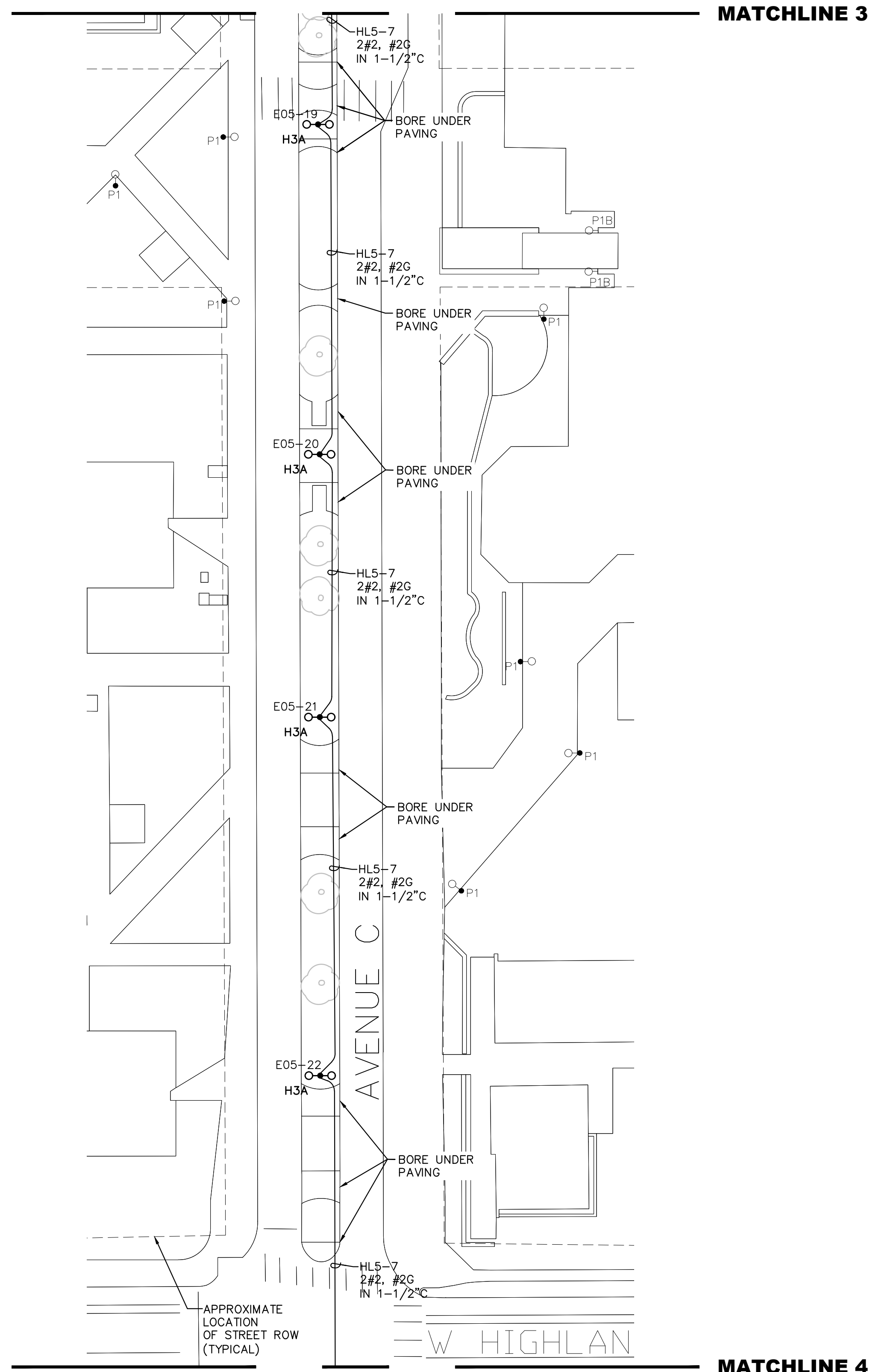
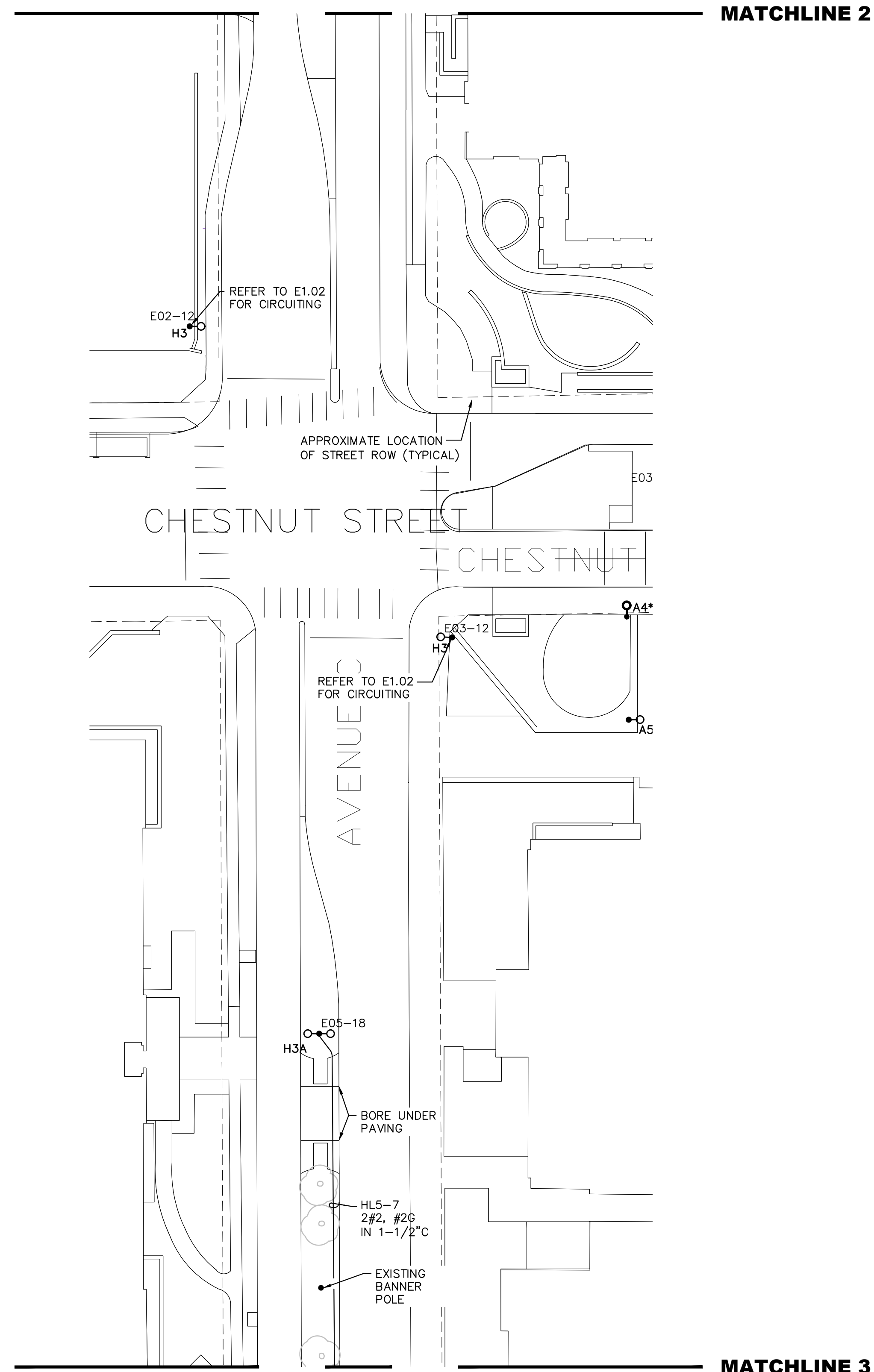
LIGHTING PLAN -
 AVENUE C -
 PART 2 OF 3

SHEET NUMBER:

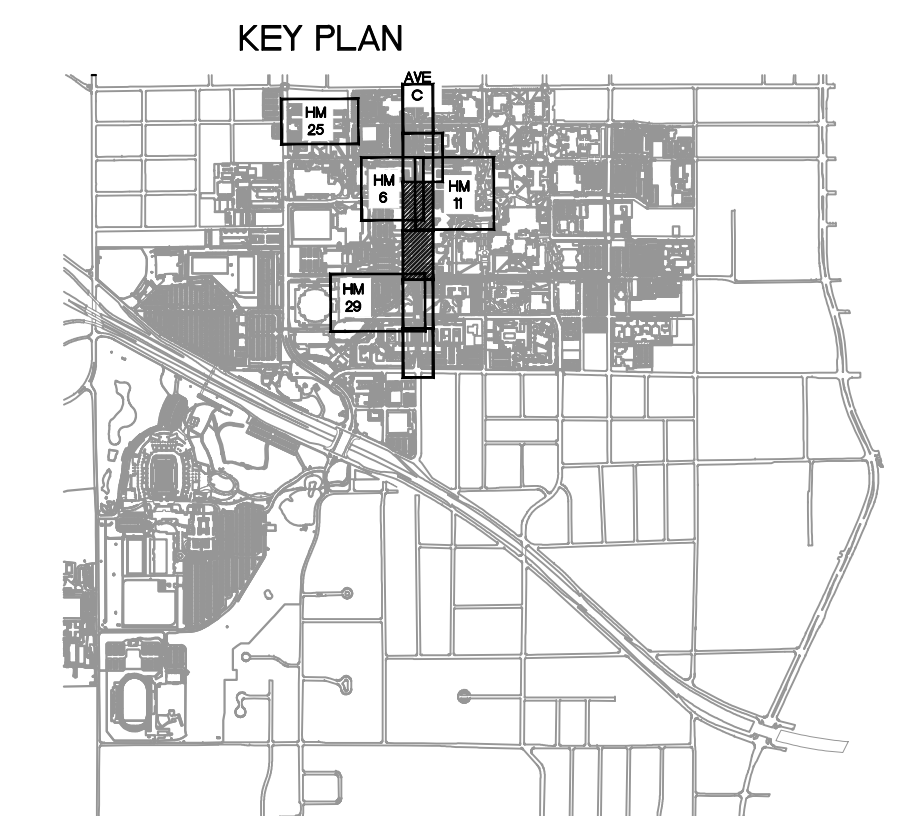
E1.07

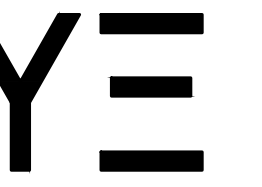
GENERAL NOTES:

- REFER TO GENERAL NOTES ON E1.00
- VERIFY POLE NUMBER DESIGNATION PRIOR TO ORDERING LABELS.



1 LIGHTING PLAN - AVENUE C - PART 2 OF 3
 SCALE: 1"=30'-0"





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 DENTON, TEXAS



GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00
2. VERIFY POLE NUMBER DESIGNATION PRIOR TO ORDERING LABELS.

NOTES BY SYMBOL:

- ① INSTALL NEW POLE AND FIXTURE ON EXISTING FOOTING.
- Ⓢ SPLICES PERMITTED IN THIS PULL BOX.

REVISIONS:

- ① _____
- ② _____
- ③ _____

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

DRAWN BY: RLT

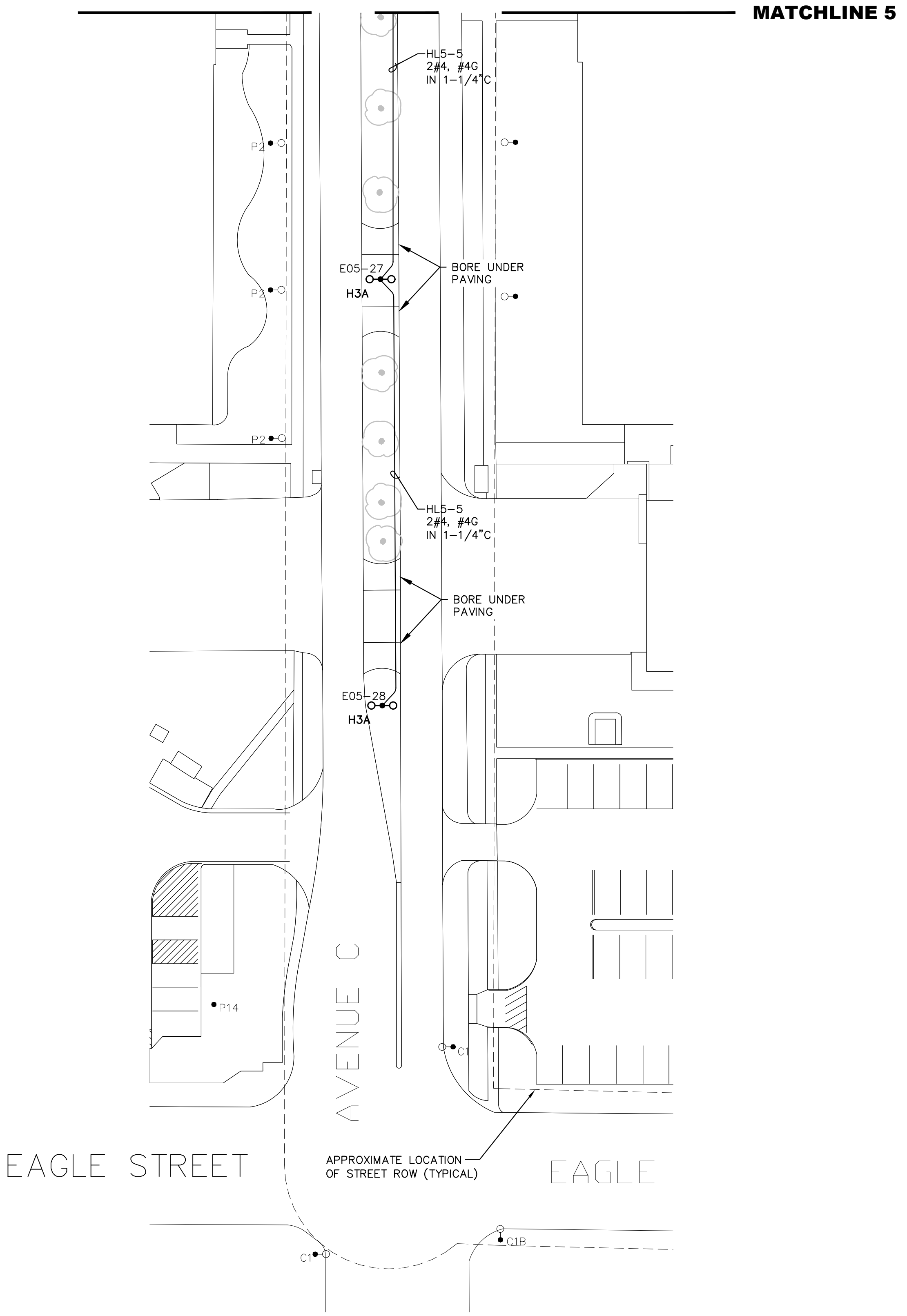
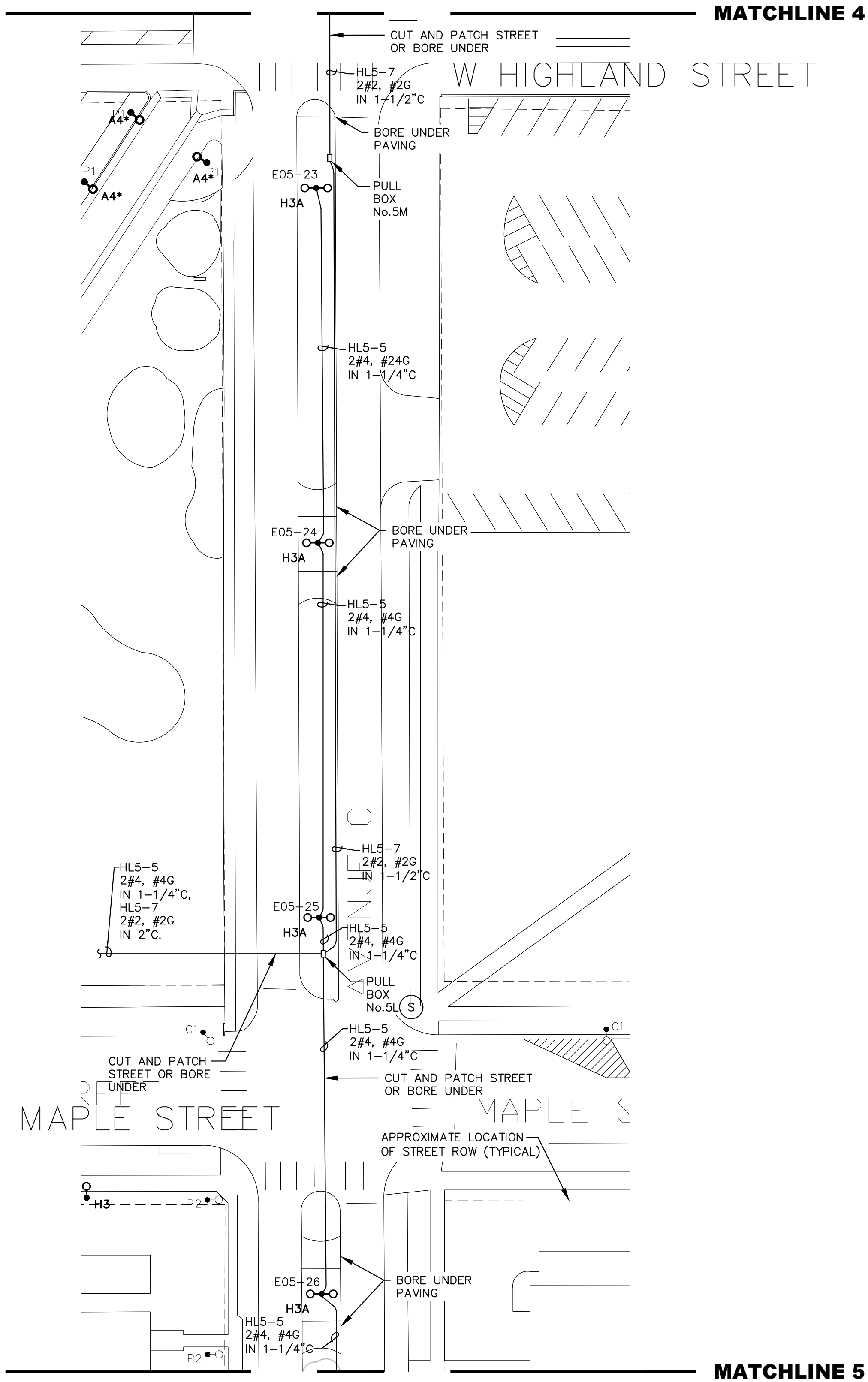
YE PROJECT NO.: 2210.00

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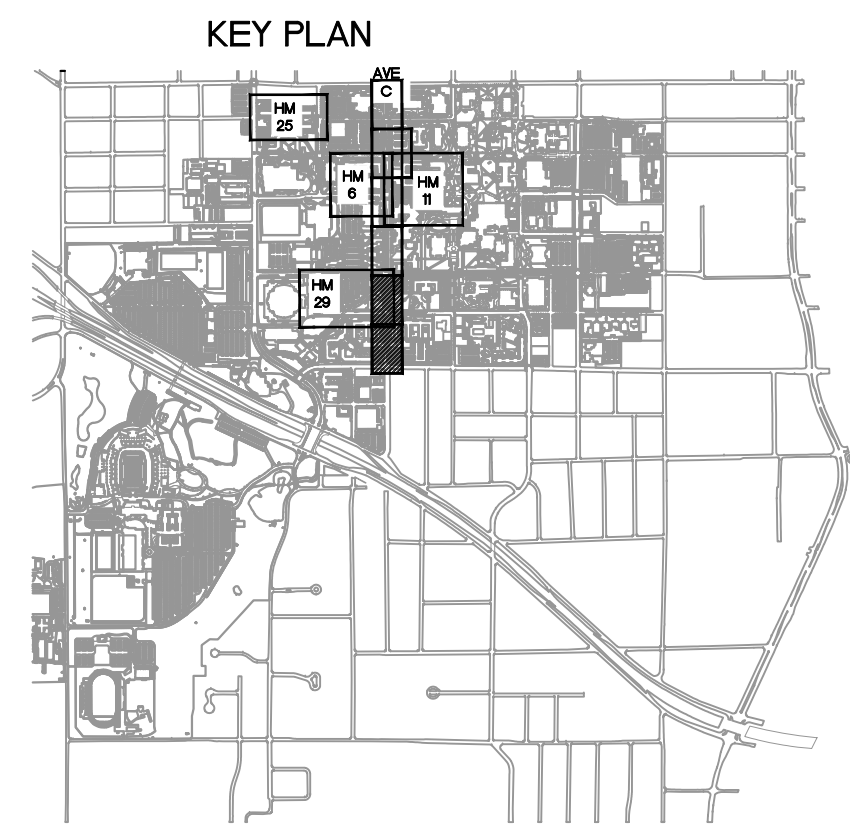
**LIGHTING PLAN -
 AVENUE C -
 PART 3 OF 3**

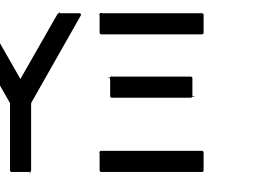
SHEET NUMBER:

E1.08



1 LIGHTING PLAN - AVENUE C - PART 3 OF 3
 SCALE: 1"=30'-0"





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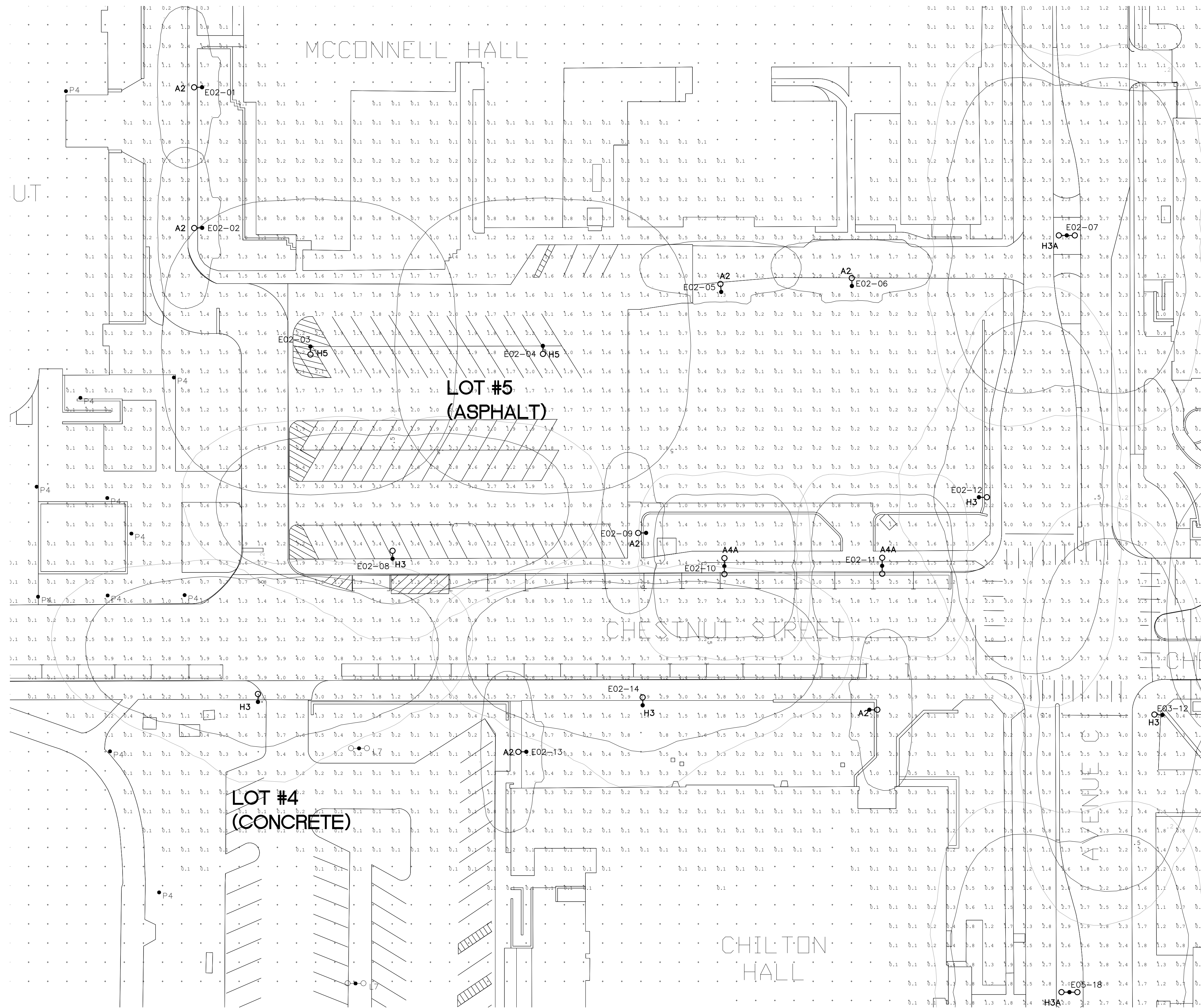
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PROJECT NAME:
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 HIGH MAST ZONES 6, 11, 25, 29 & AVE C
 DENTON, TEXAS

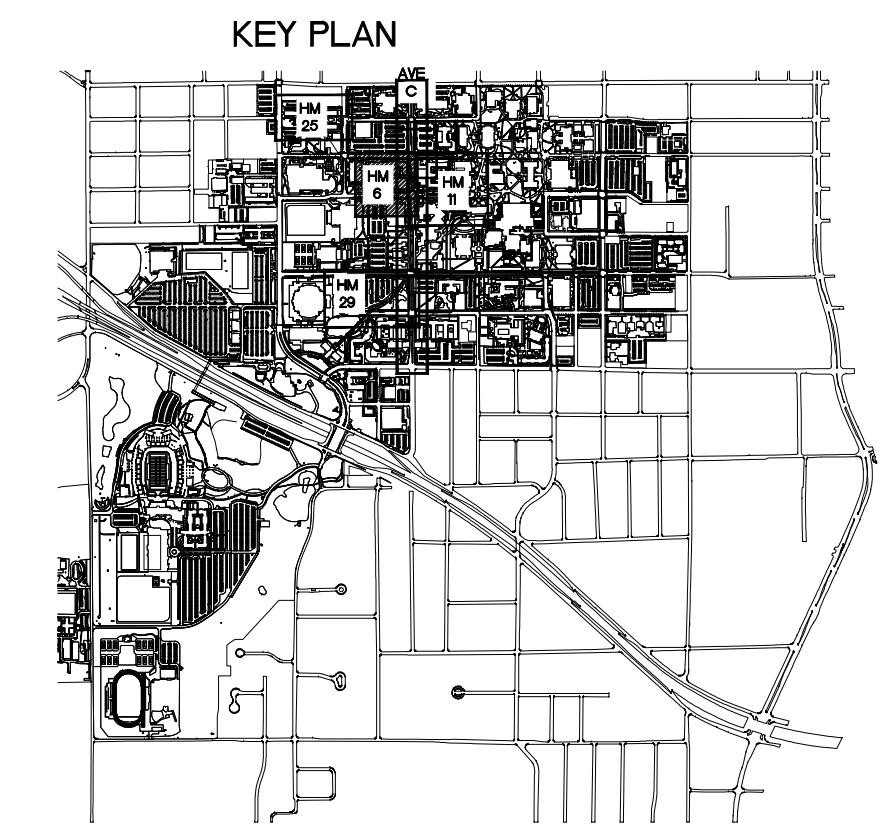


GENERAL NOTES:

1. REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00



1 PHOTOMETRIC PLAN - HIGH MAST ZONE 6
 SCALE: 1"=30'-0"



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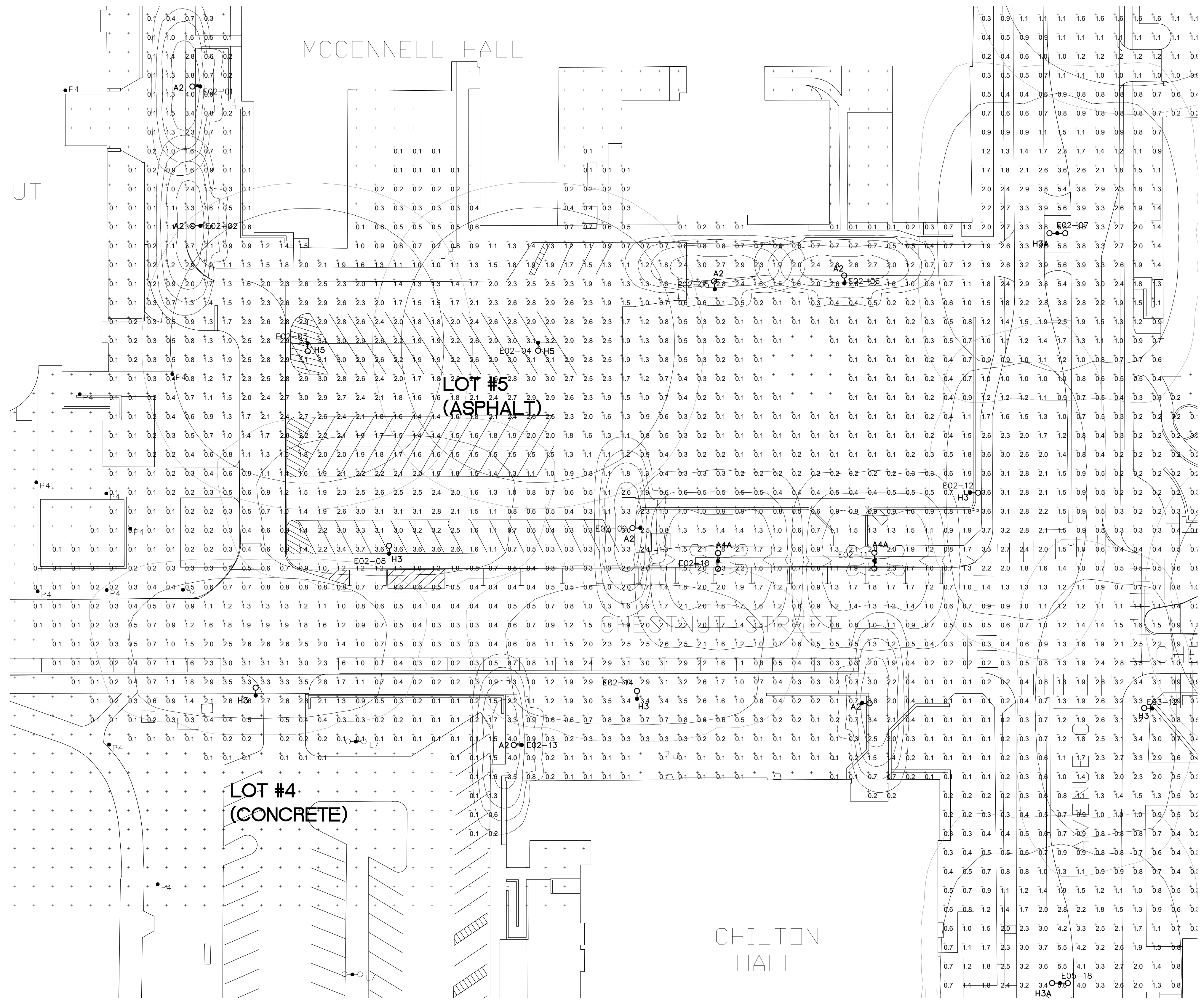
DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
PHOTOMETRIC PLAN - HIGH MAST ZONE 6

SHEET NUMBER:

E2.01




1 PHOTOMETRIC PLAN - HIGH MAST ZONE 6 - RAB
 SCALE: 1"=30'-0"

GENERAL NOTES:




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2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00


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 R. Tim Yaggi
 REGISTERED PROFESSIONAL ENGINEER
 07-09-2024

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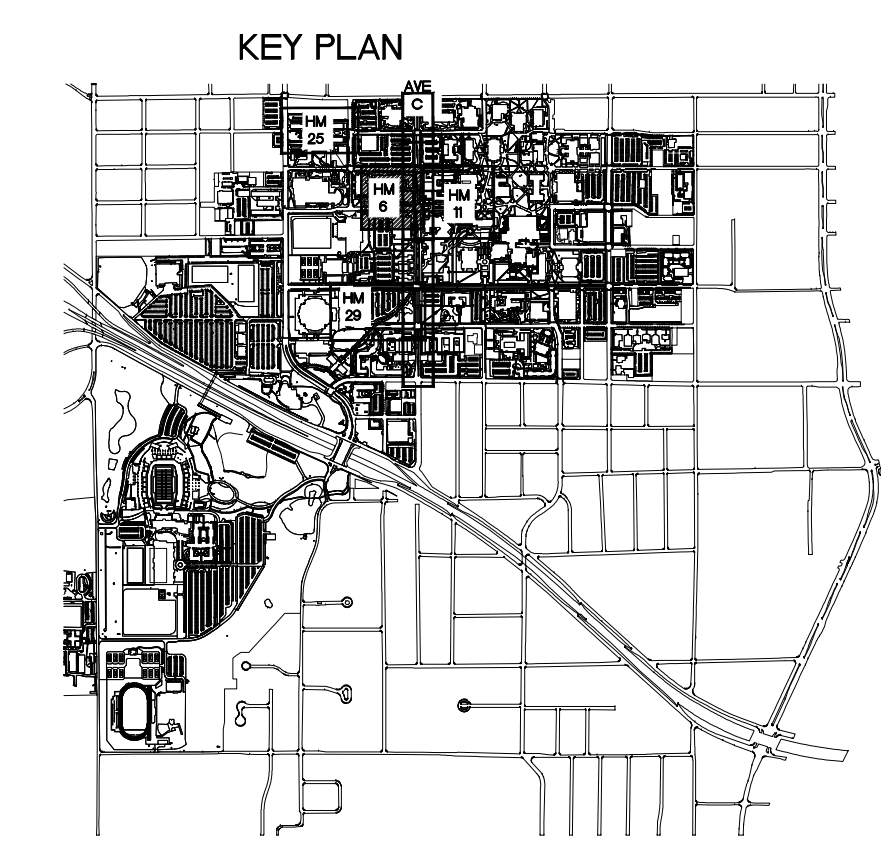
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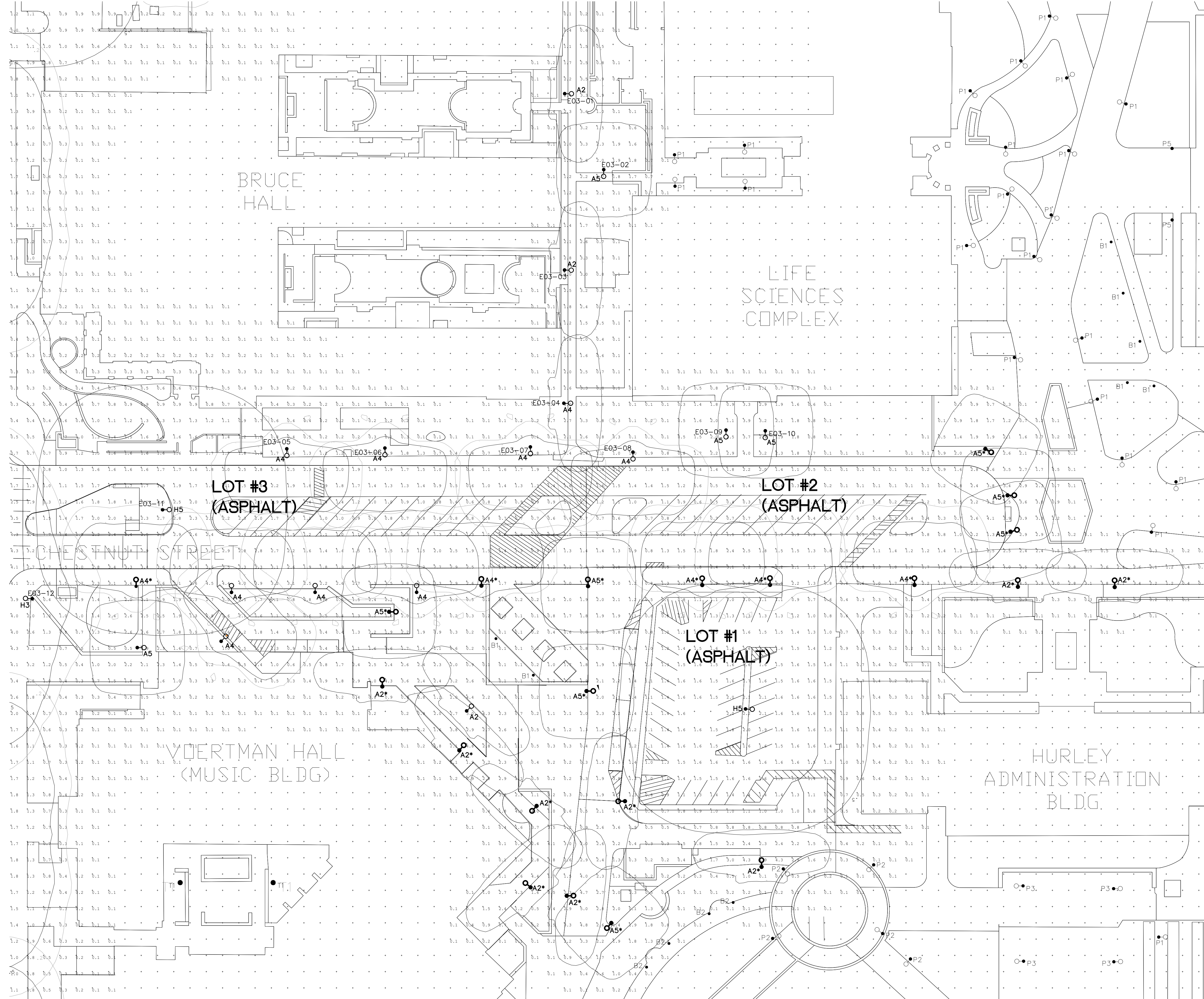
DRAWN BY: RLT

YE PROJECT NO.: 2210.00

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 PLAN - HIGH MAST
 ZONE 6 - RAB

SHEET NUMBER:
E2.01A

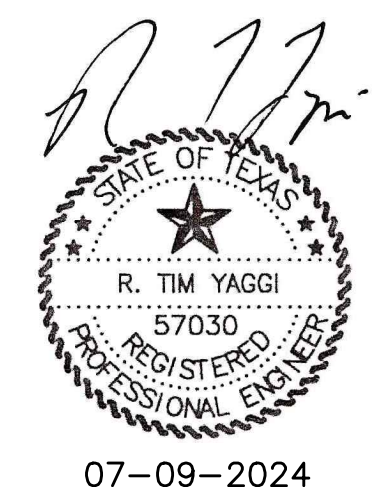




GENERAL NOTES:

1. REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00

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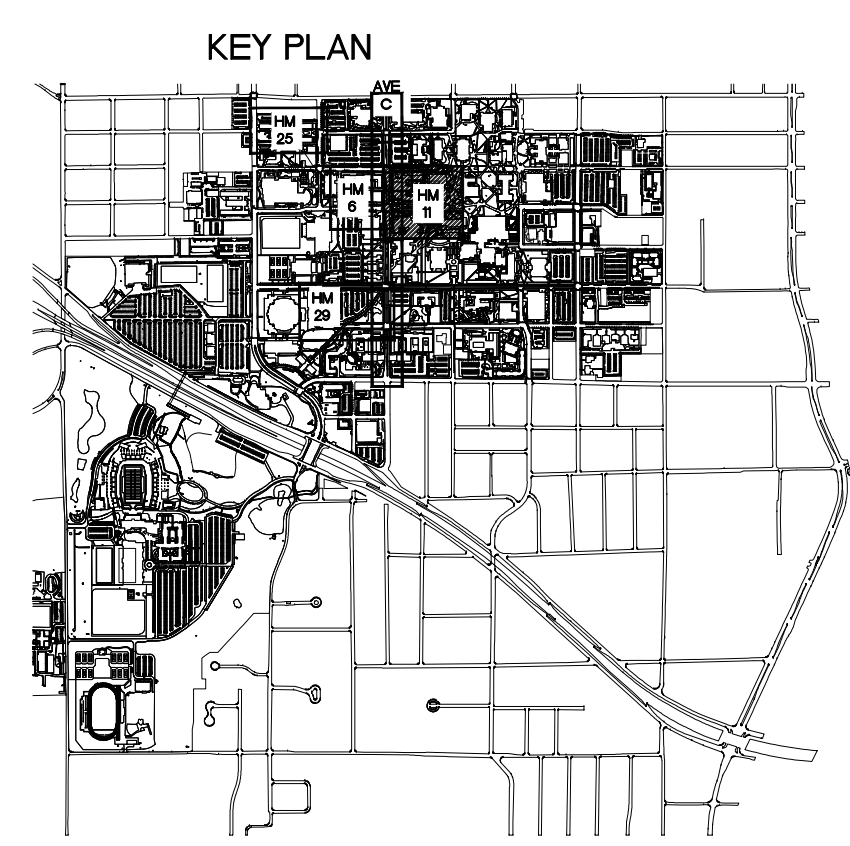
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YE PROJECT NO.: 2210.00

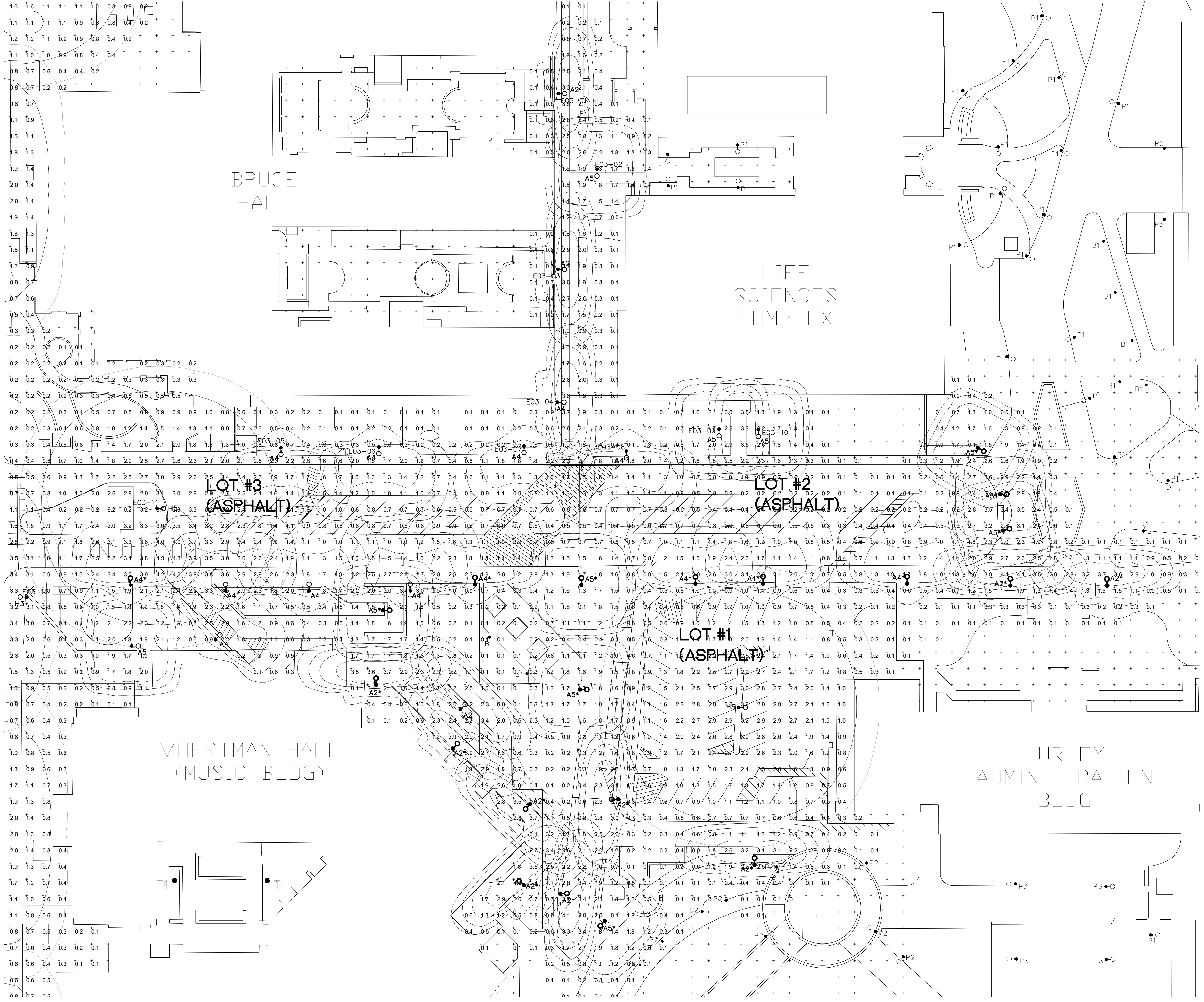
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E2.02



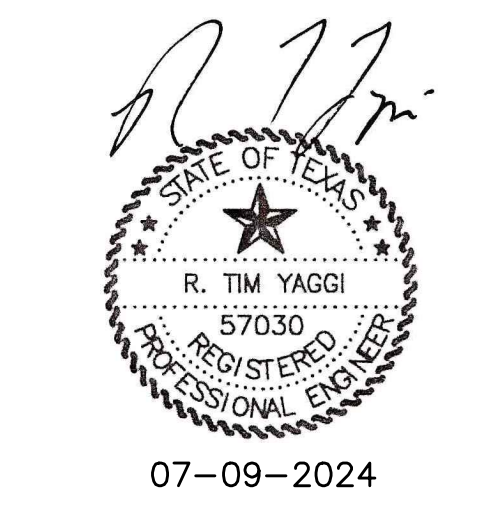
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 SCALE: 1"=30'-0"



GENERAL NOTES:

1. REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00

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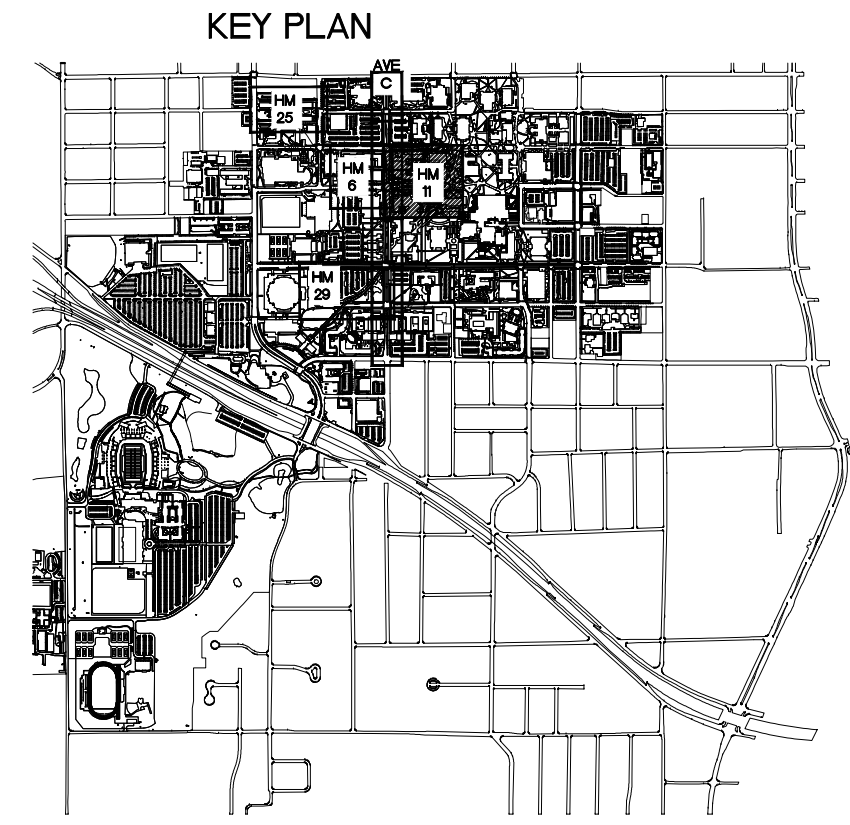
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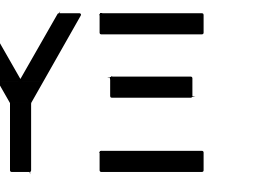
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 PLAN - HIGH MAST
 ZONE 11 - RAB

SHEET NUMBER:

E2.02A



1 PHOTOMETRIC PLAN - HIGH MAST ZONE 11 - RAB
 SCALE: 1"=30'-0"



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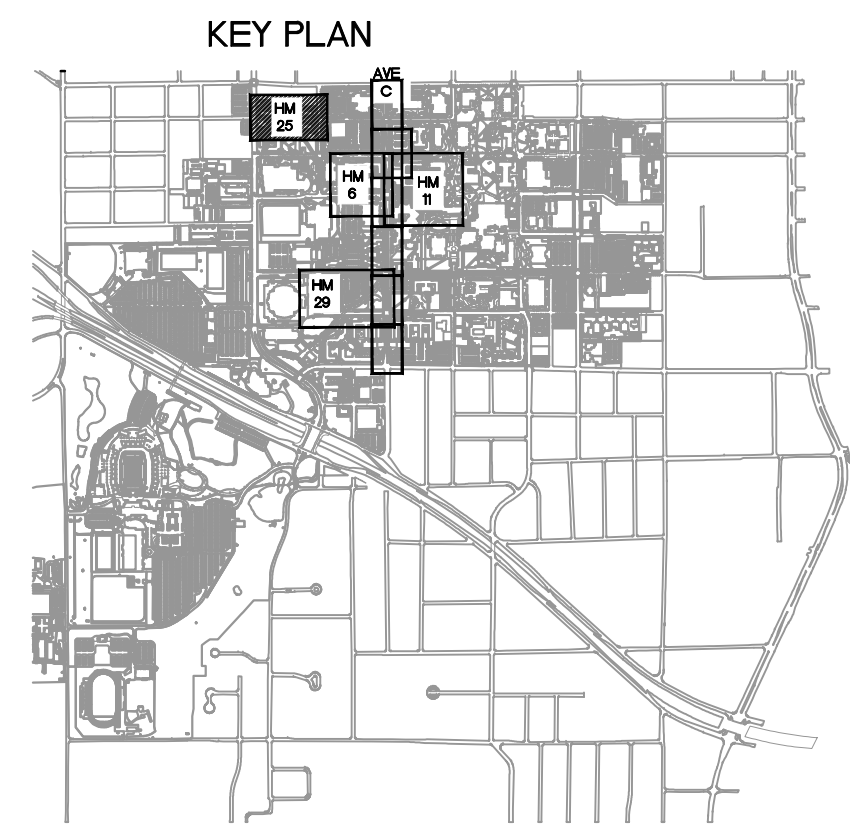
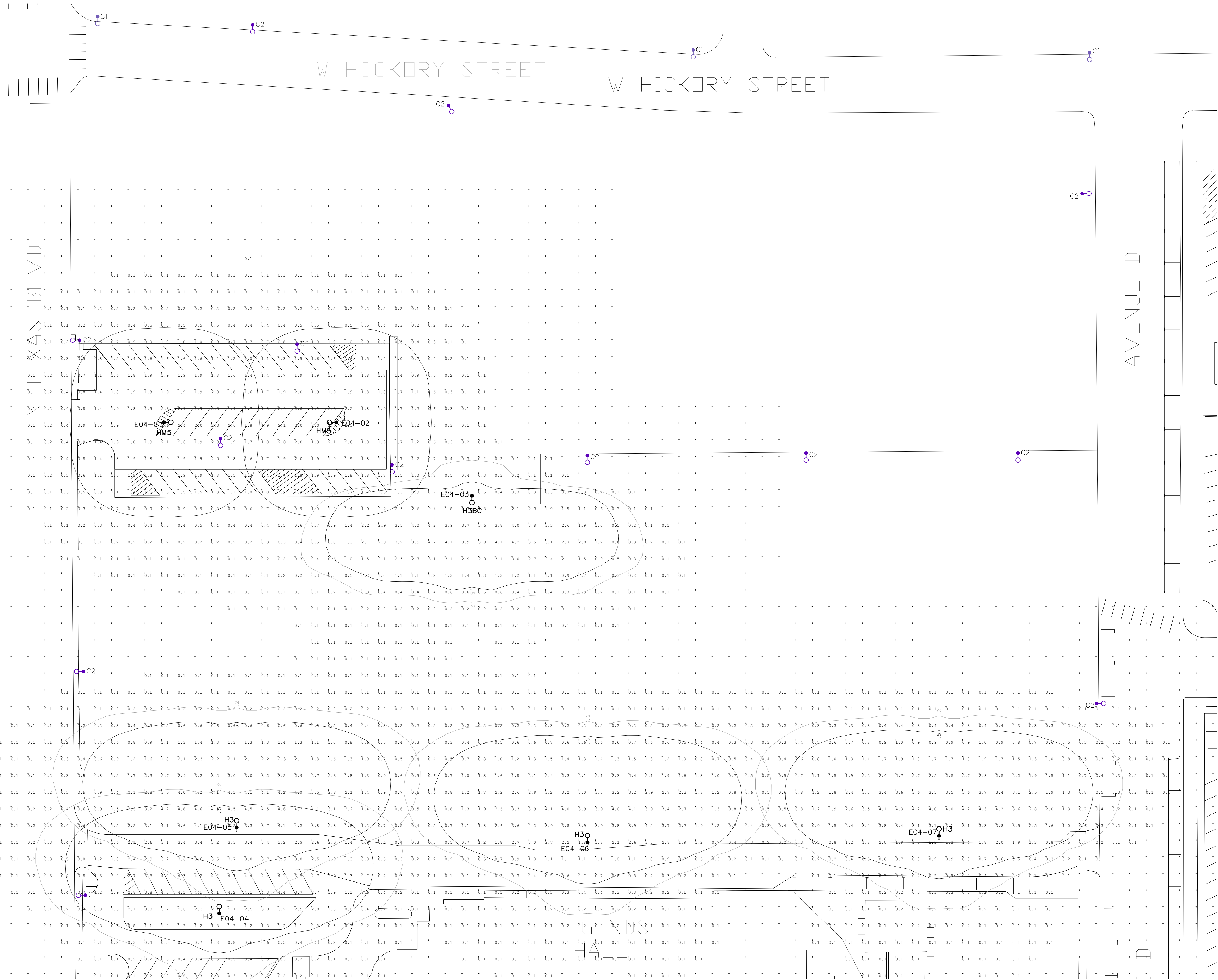
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 PLAN - HIGH MAST
 ZONE 25

SHEET NUMBER:

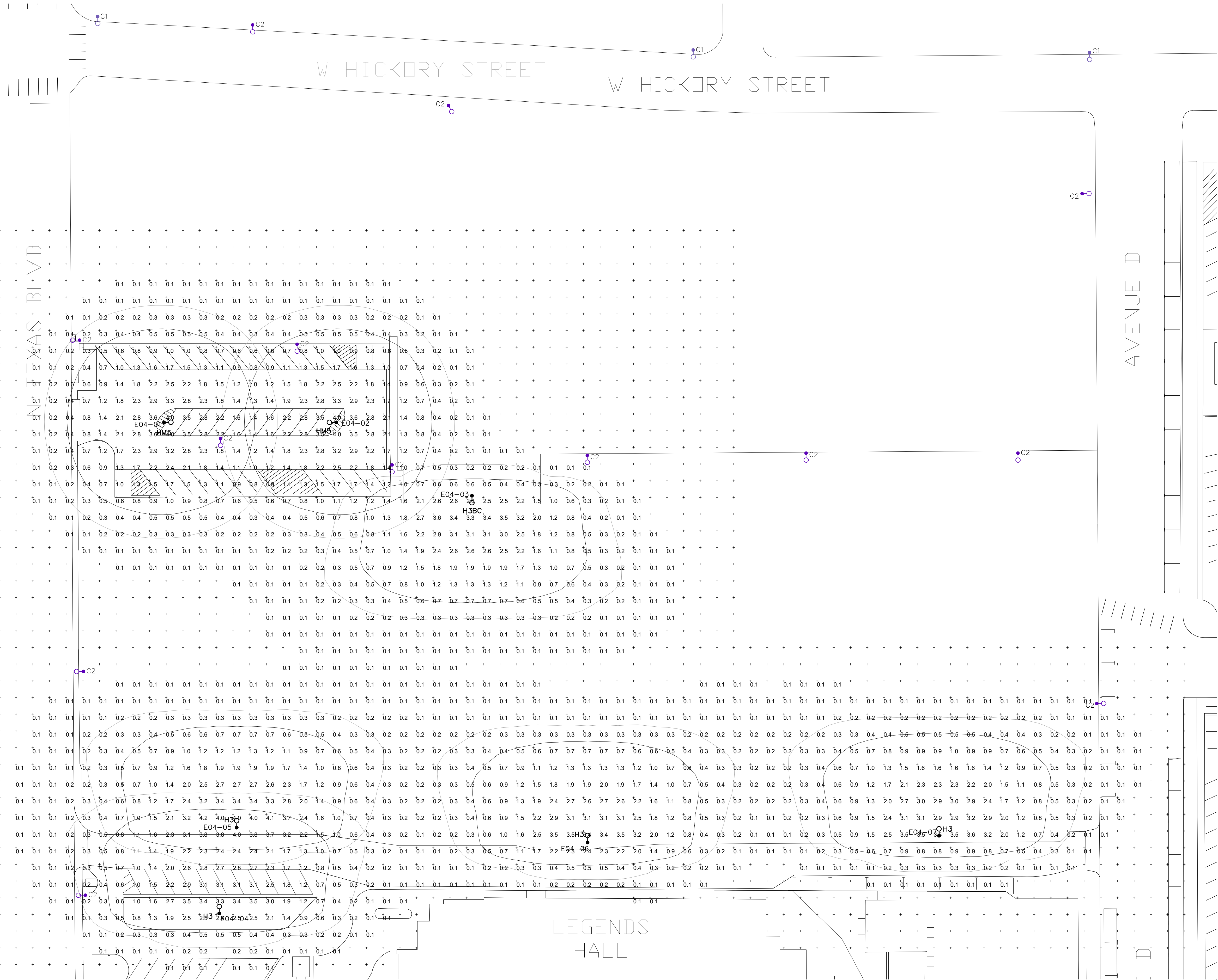
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GENERAL NOTES:

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2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00

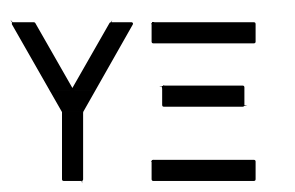


1 PHOTOMETRIC PLAN - HIGH MAST ZONE 25
 SCALE: 1"=30'-0"

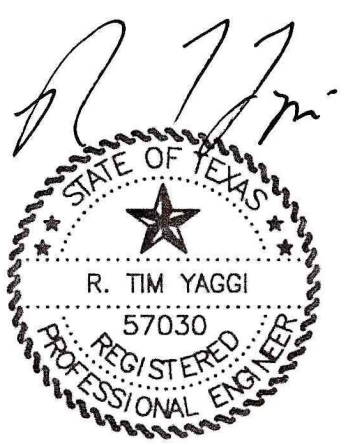


GENERAL NOTES:

1. REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00



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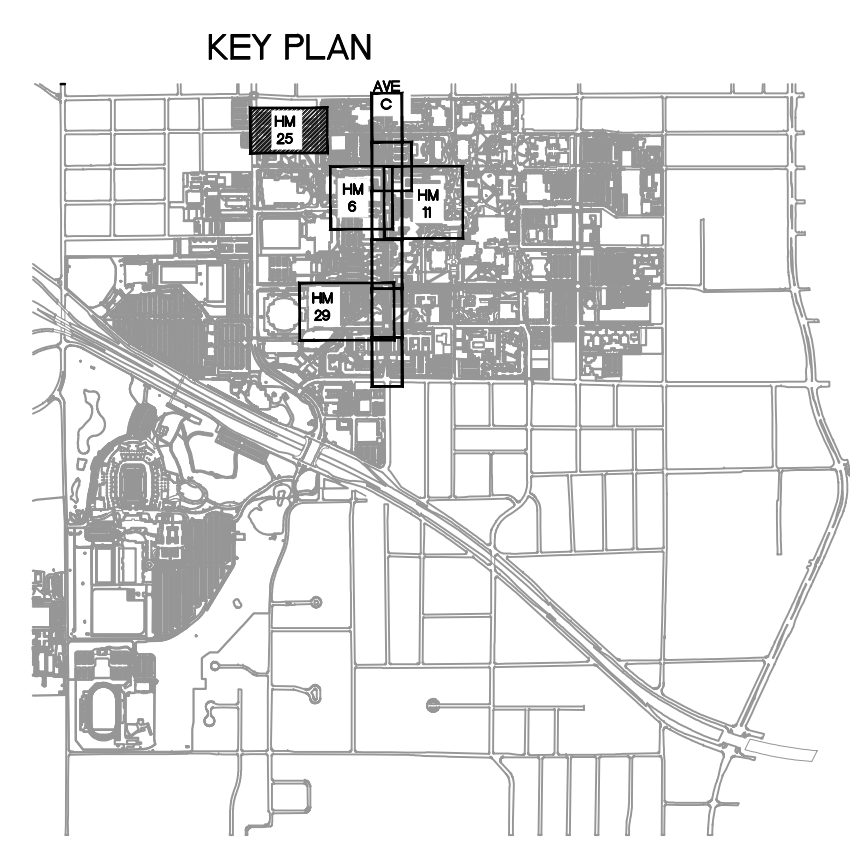
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YE PROJECT NO.: 2210.00

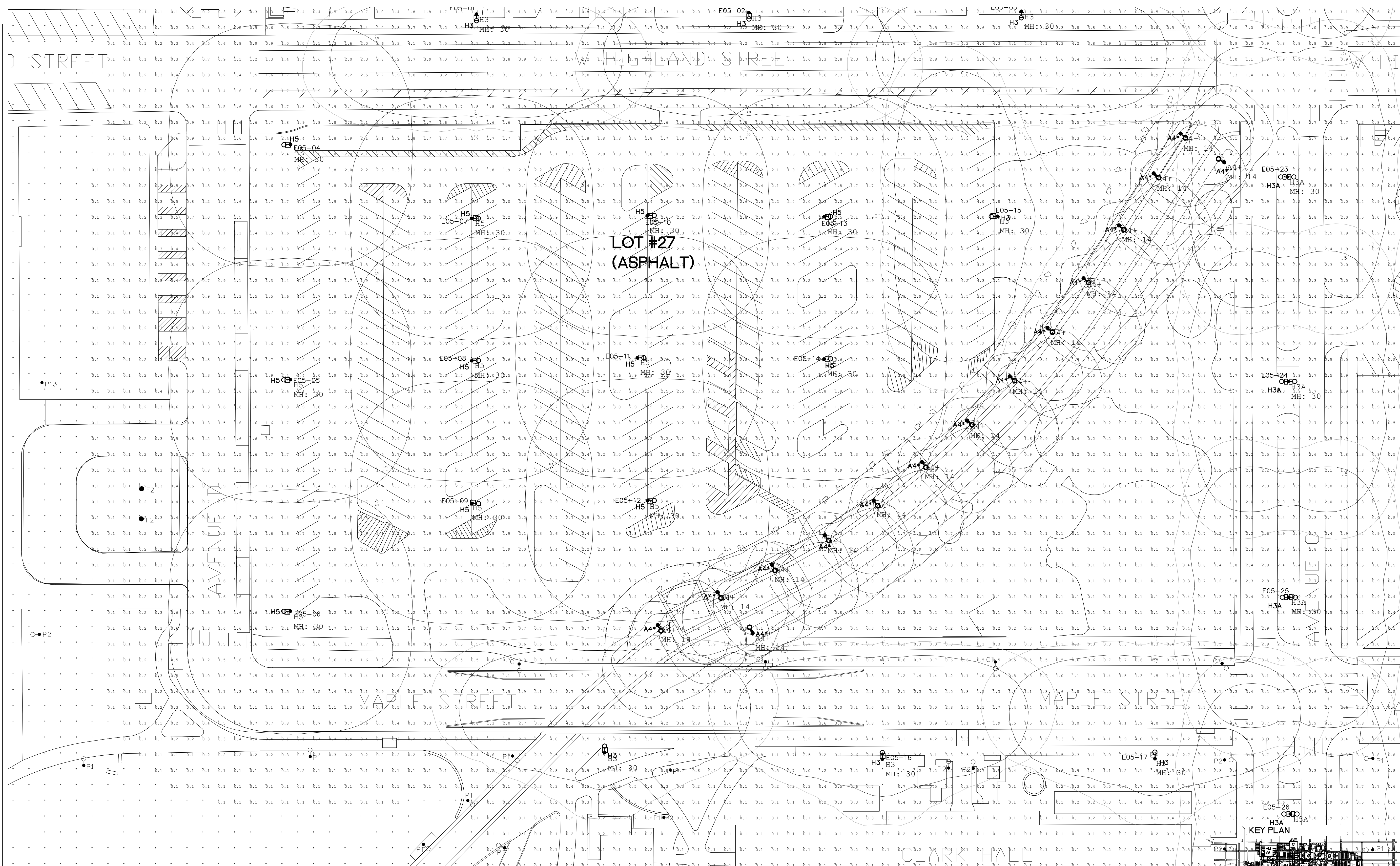
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 ZONE 25 - RAB

SHEET NUMBER:

E2.03A



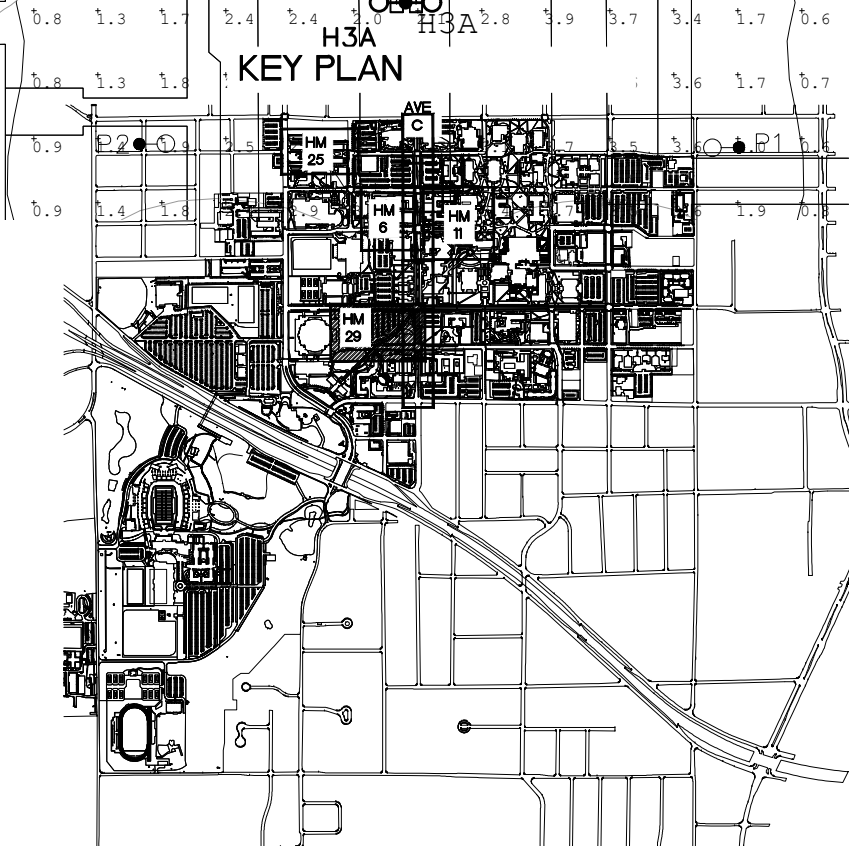
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 SCALE: 1"=30'-0" 60



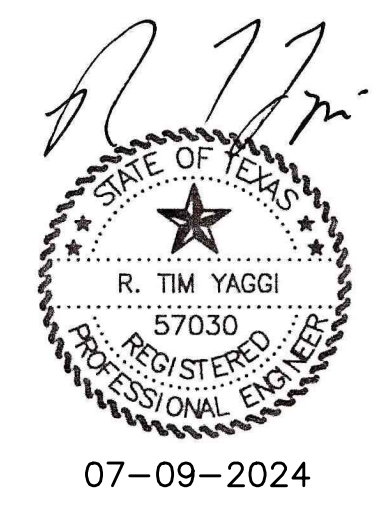
PHOTOMETRIC PLAN - HIGH MAST ZONE 29
 SCALE: 1"=30'-0"

GENERAL NOTES:

1. REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00



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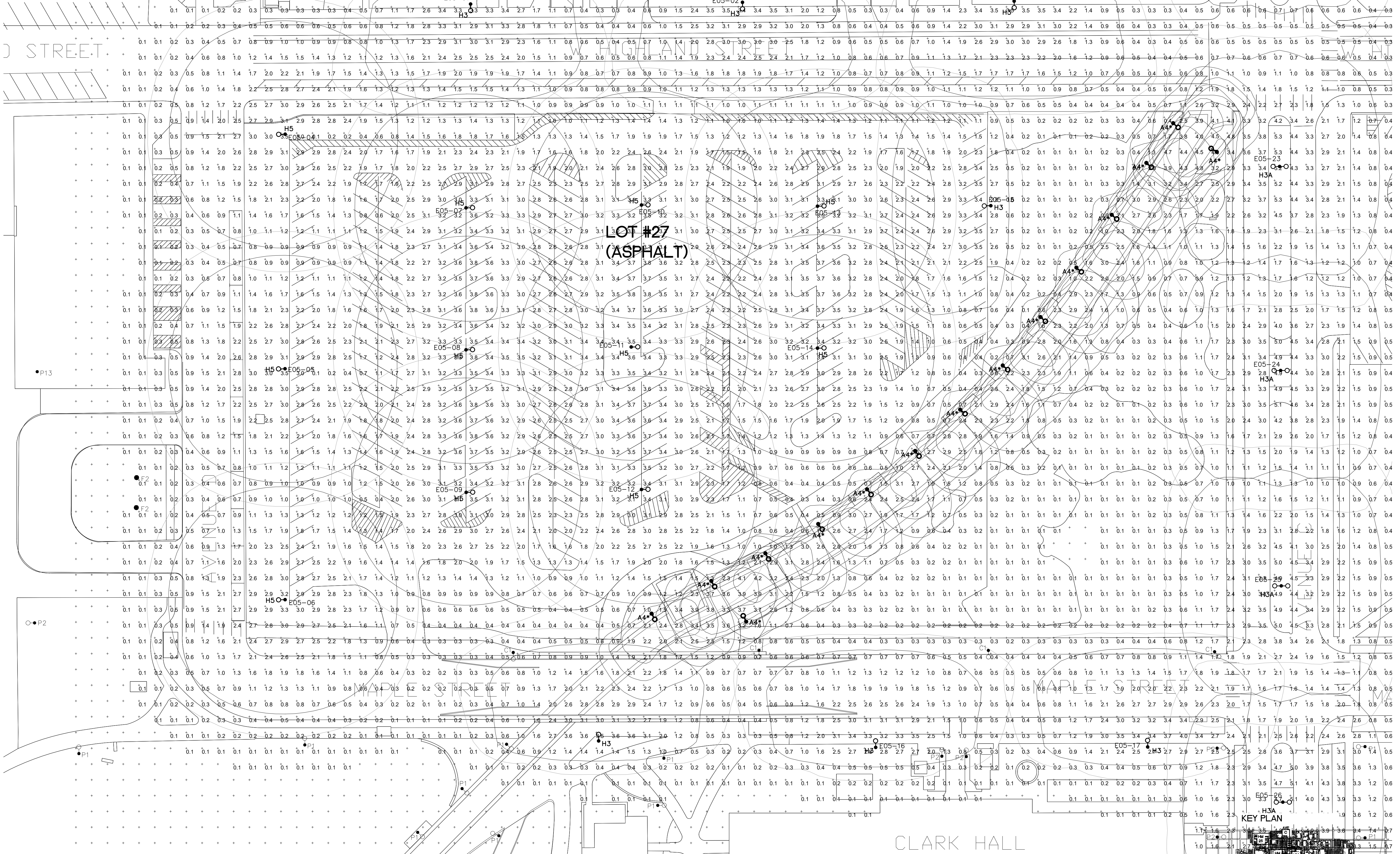
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YE PROJECT NO.: 2210.00

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PHOTOMETRIC PLAN - HIGH MAST ZONE 29

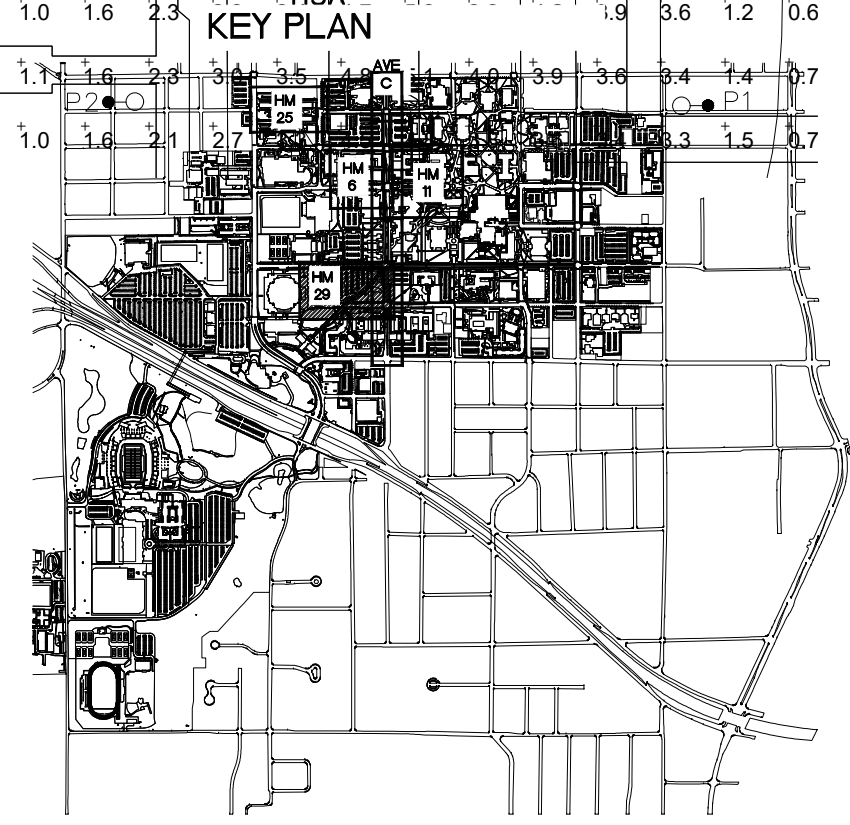
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 SCALE: 1"=30'-0"

GENERAL NOTES:

1. REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00



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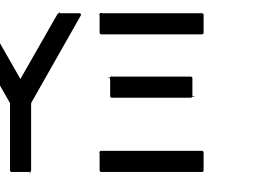
DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
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 PLAN - HIGH MAST
 ZONE 29 - RAB

SHEET NUMBER:

E2.04A



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SHEET CONTENTS:
PHOTOMETRIC PLAN - AVENUE C - PART 1 OF 3

SHEET NUMBER:

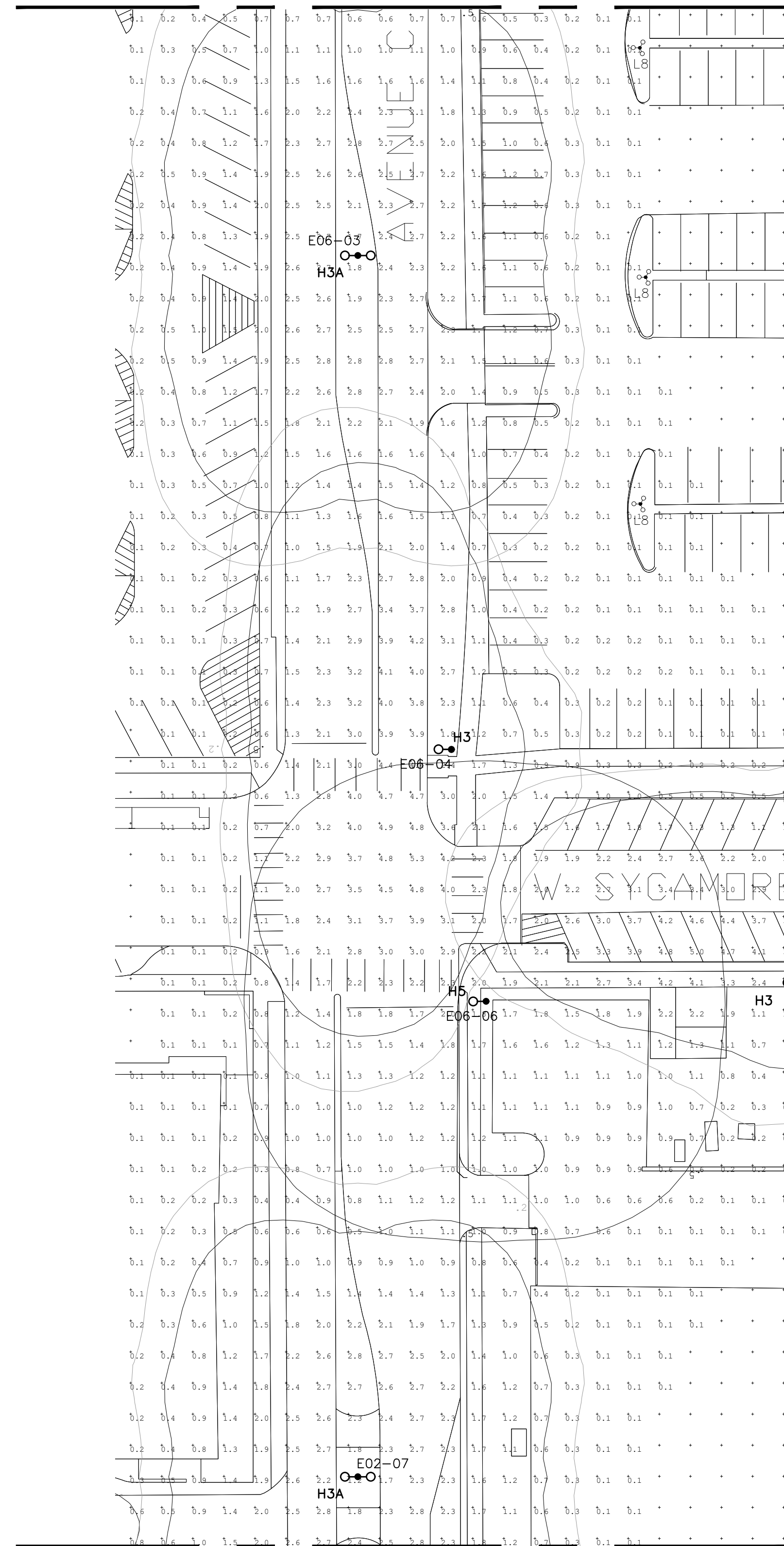
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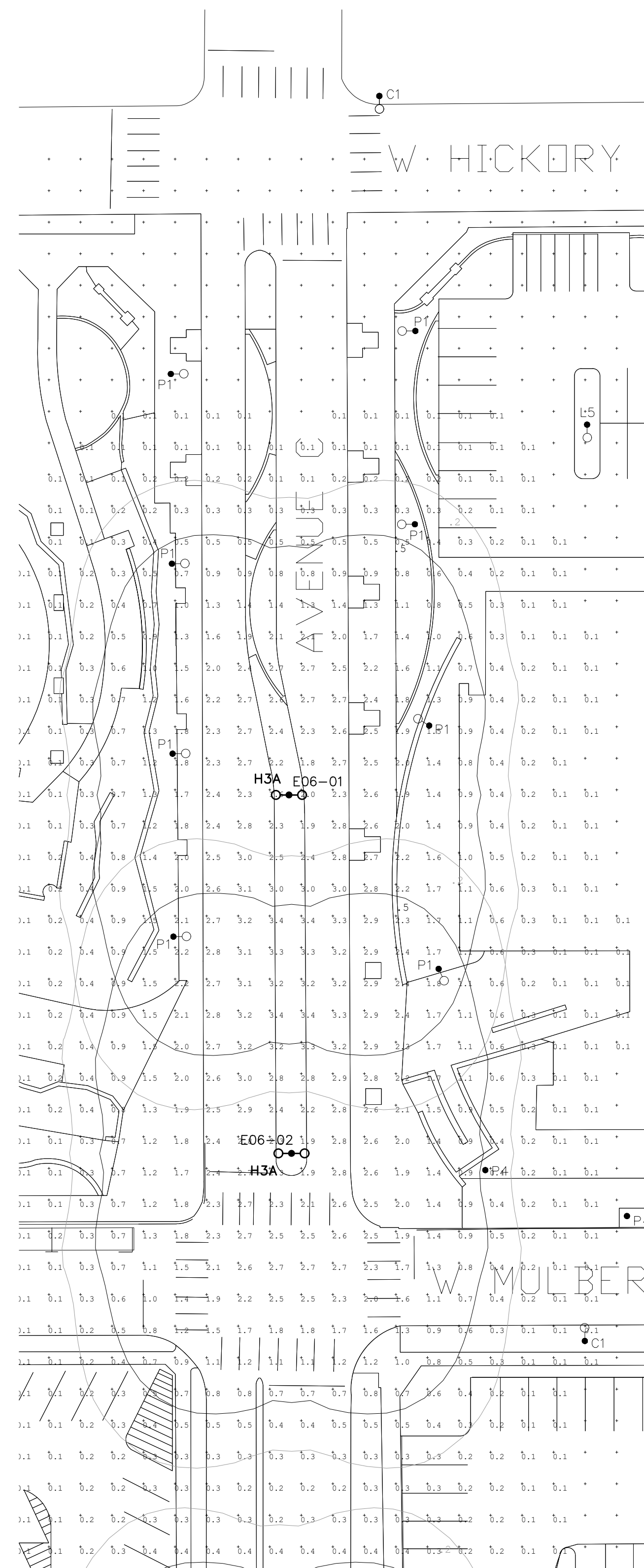
GENERAL NOTES:

1. REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
2. REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00

MATCHLINE 1



MATCHLINE 2

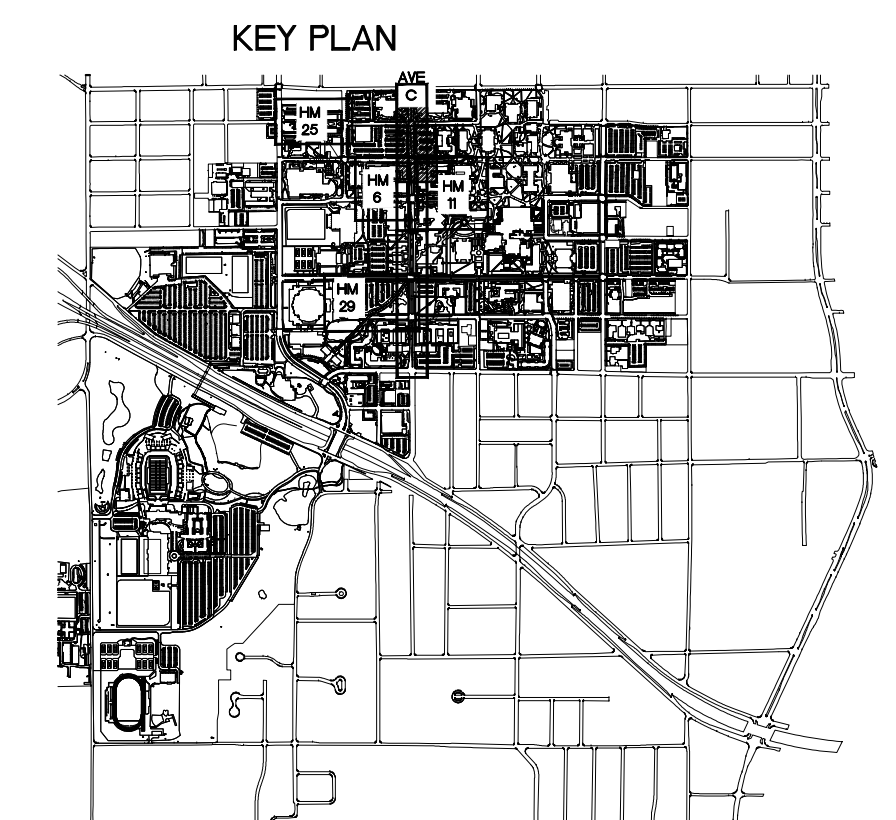


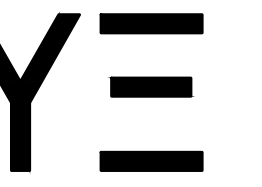
MATCHLINE 1



1 PHOTOMETRIC PLAN - AVENUE C - PART 1 OF 3

SCALE: 1"=30'-0"





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SHEET CONTENTS:
 PHOTOMETRIC PLAN - AVENUE C - PART 1 OF 3 - RAB

SHEET NUMBER:

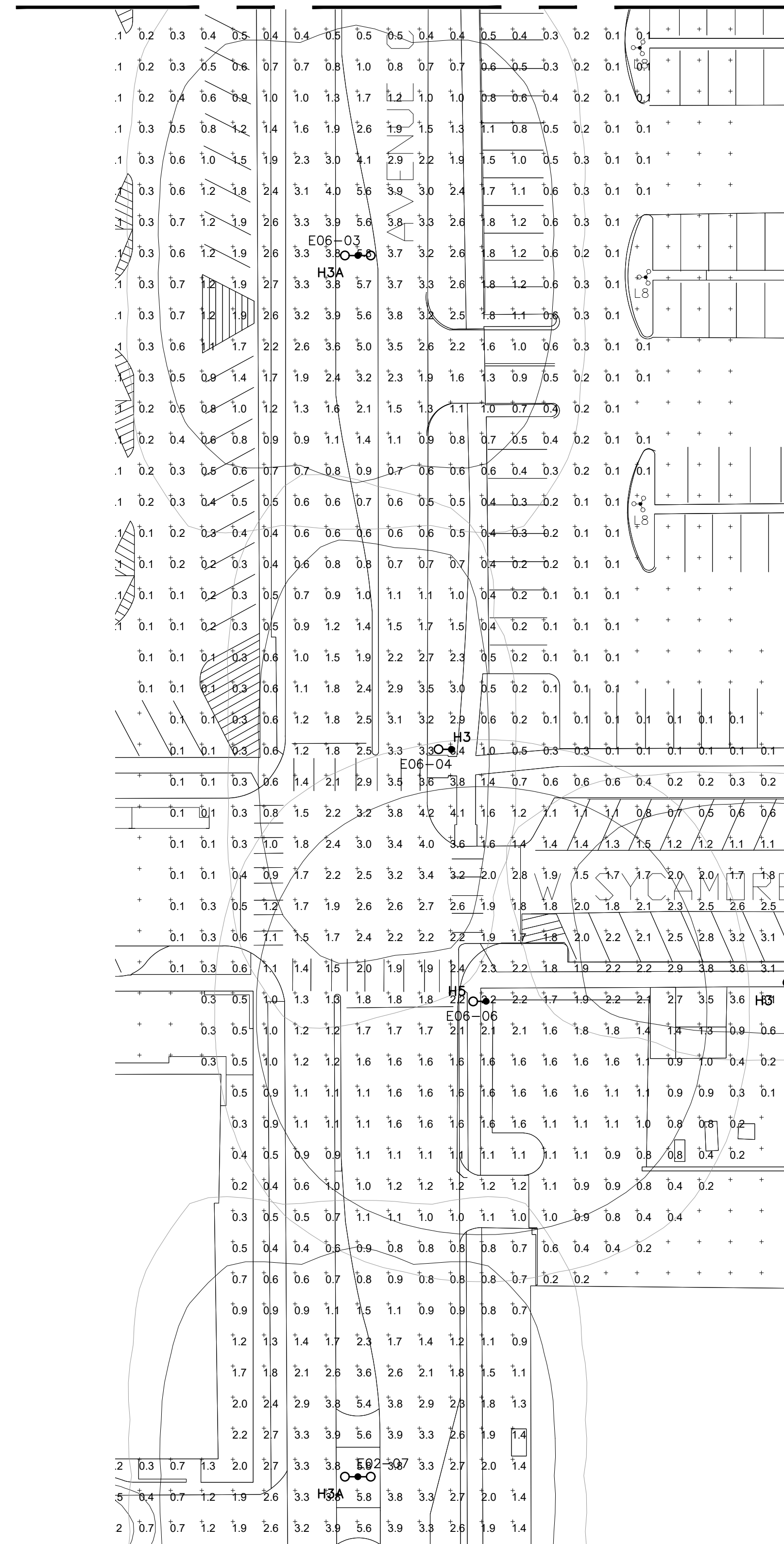
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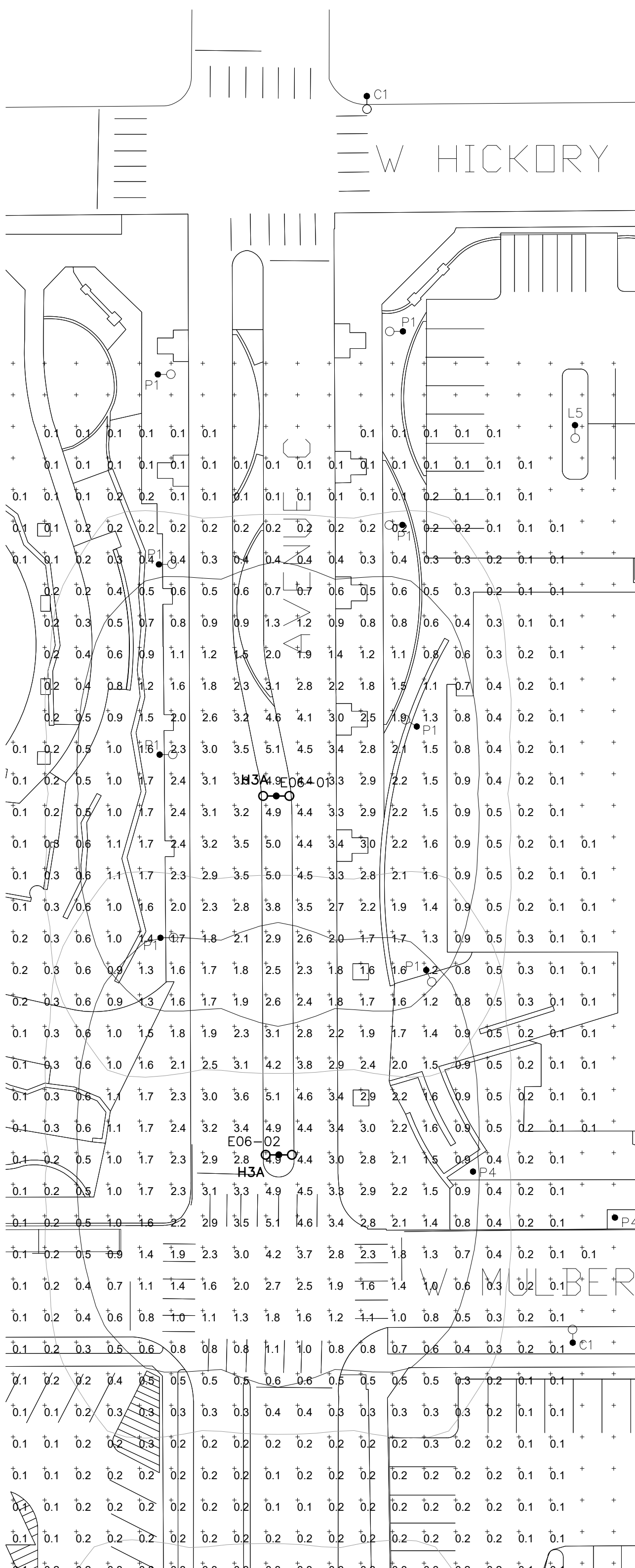
GENERAL NOTES:

- REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
- REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00

MATCHLINE 1



MATCHLINE 2

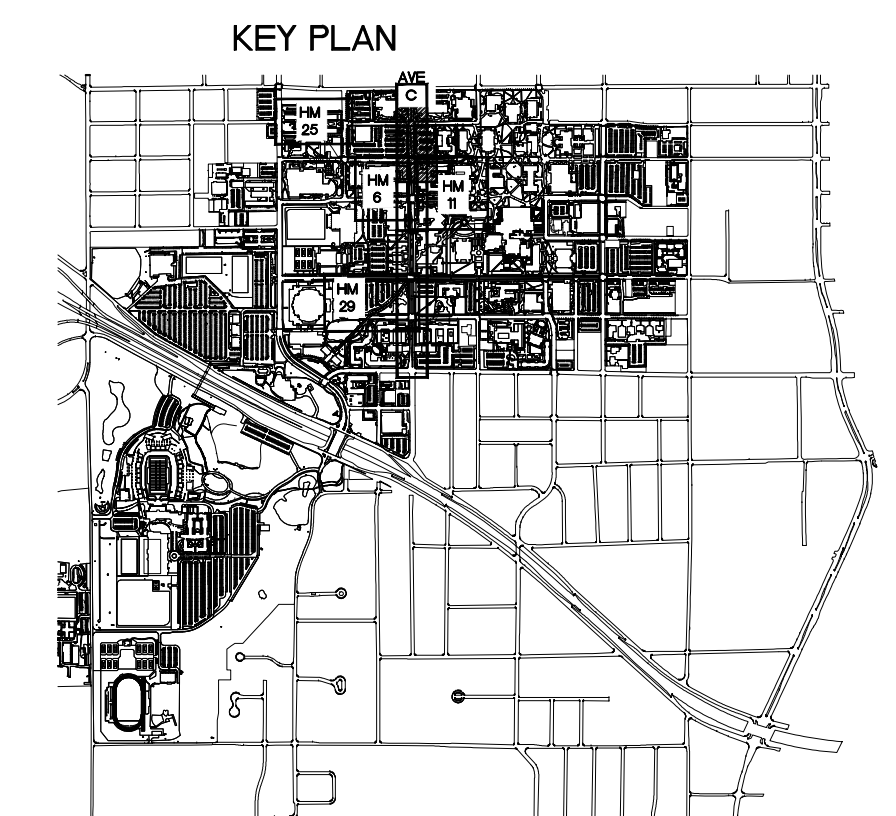


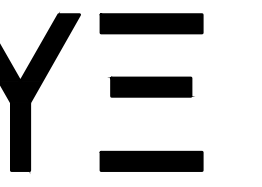
MATCHLINE 1



1 PHOTOMETRIC PLAN - AVENUE C - PART 1 OF 3 - RAB

SCALE: 1"=30'-0"





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SHEET CONTENTS:
 PHOTOMETRIC PLAN - AVENUE C -
 PART 2 OF 3

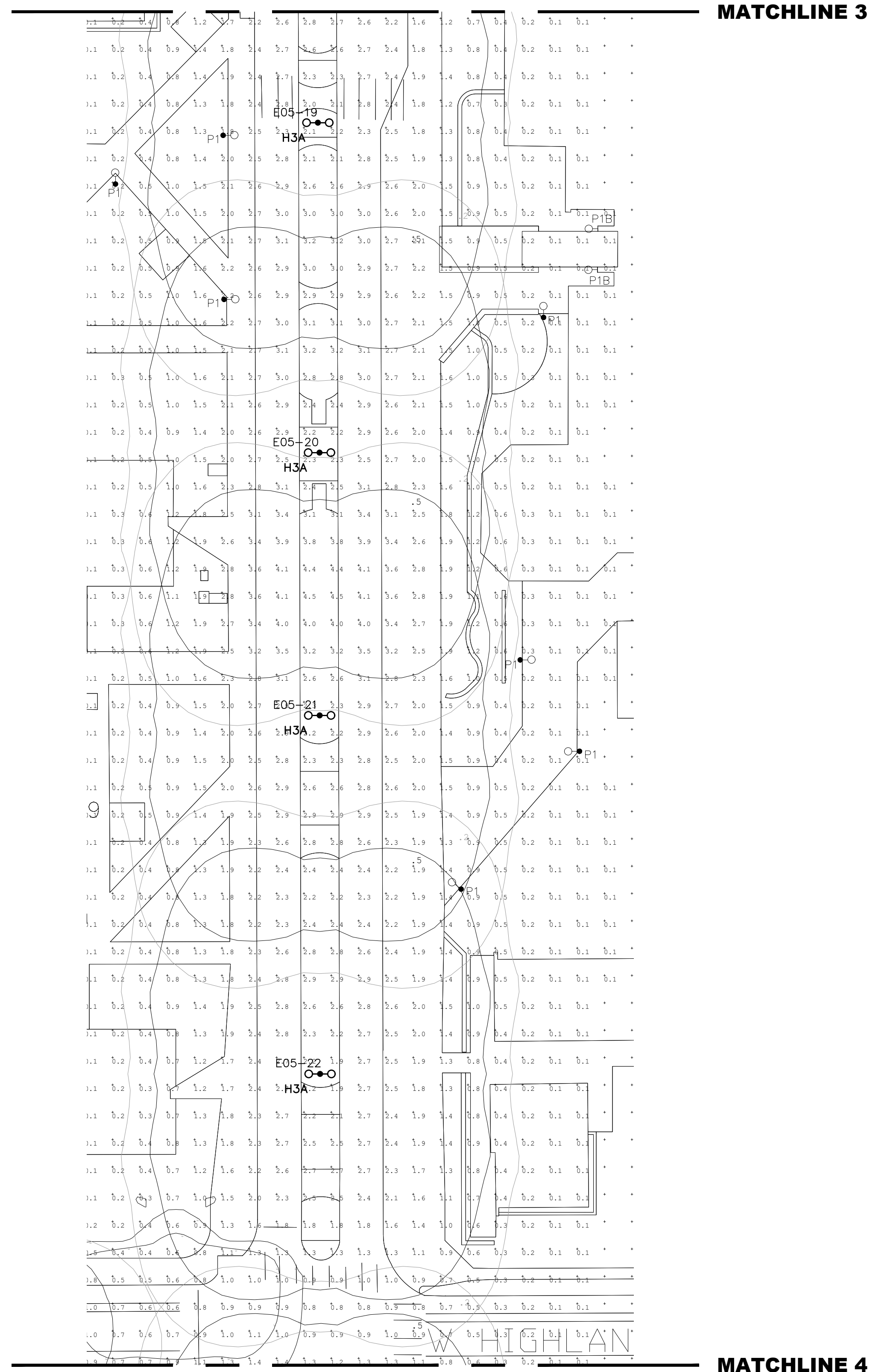
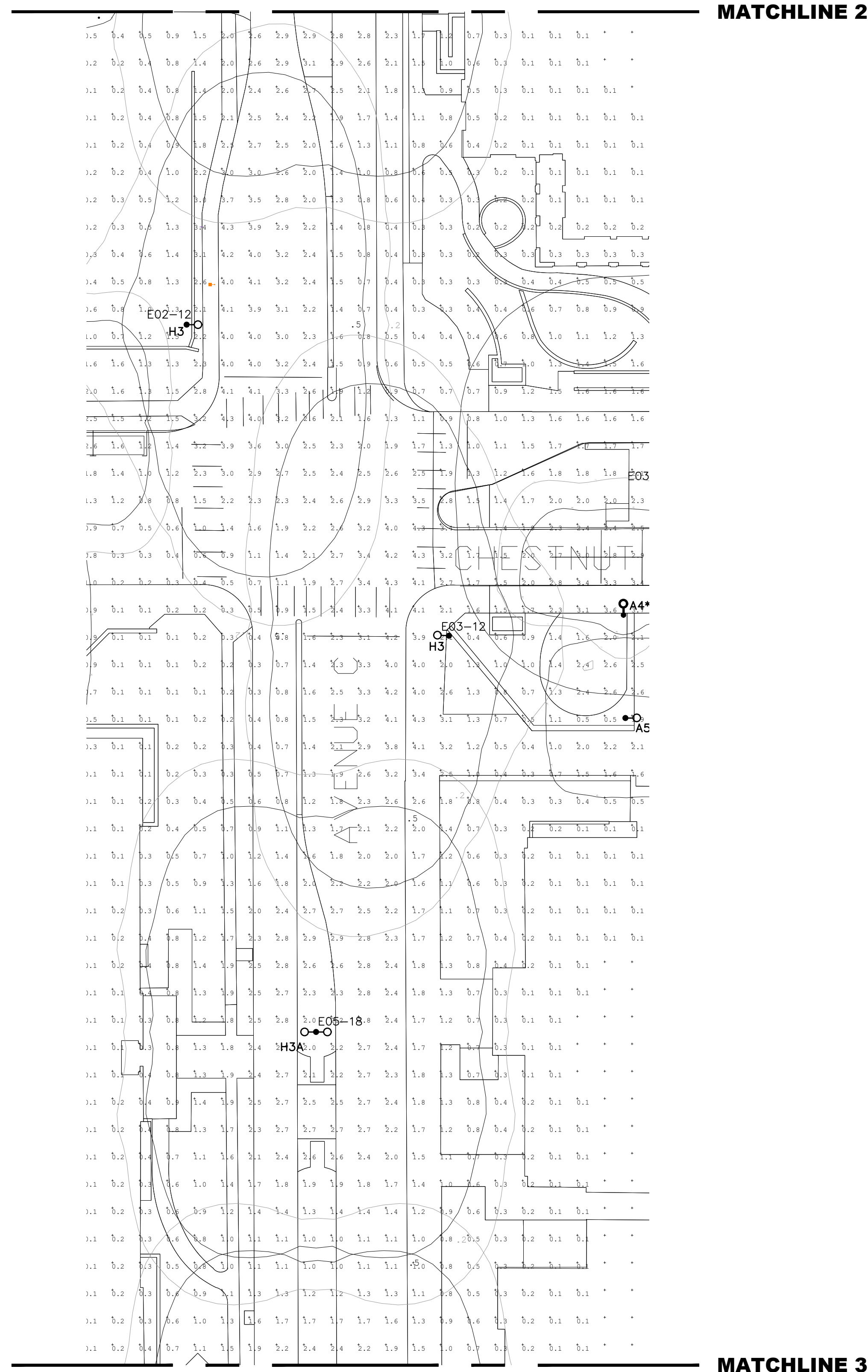
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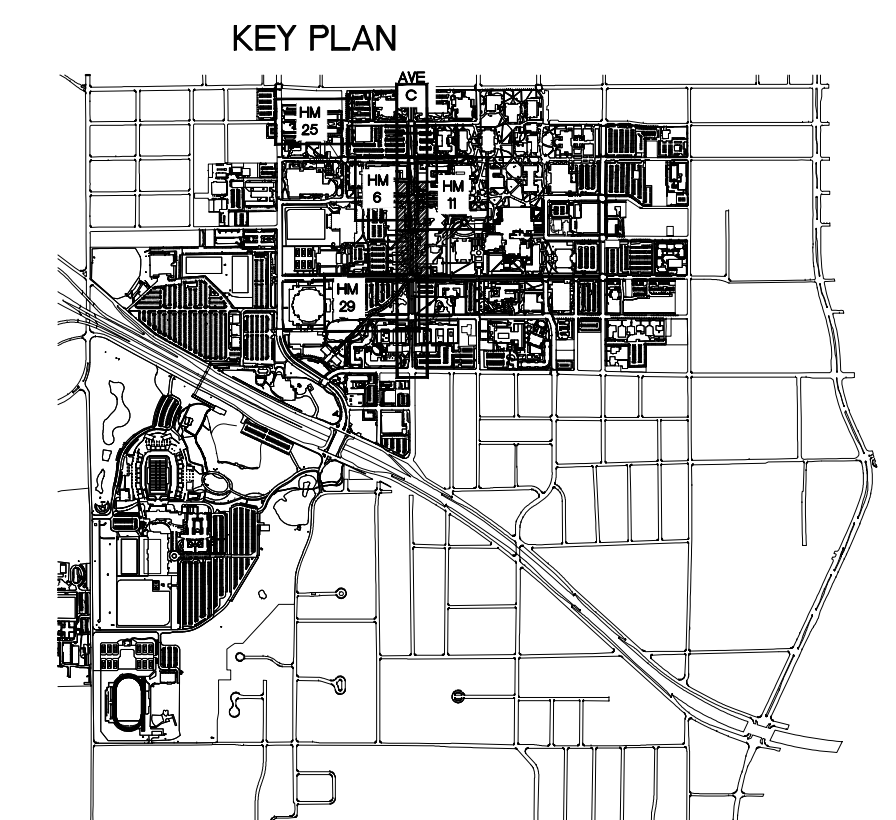
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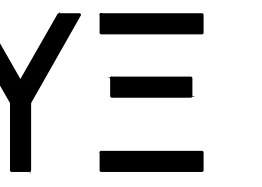
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- REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
- REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00

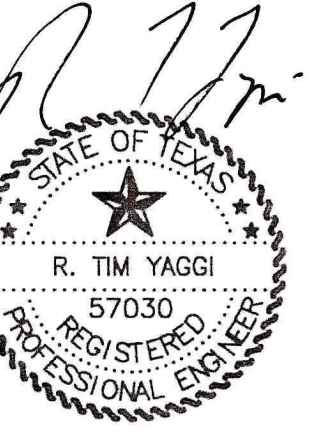


1 PHOTOMETRIC PLAN - AVENUE C - PART 2 OF 3
 SCALE: 1"=30'-0"





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SHEET CONTENTS:
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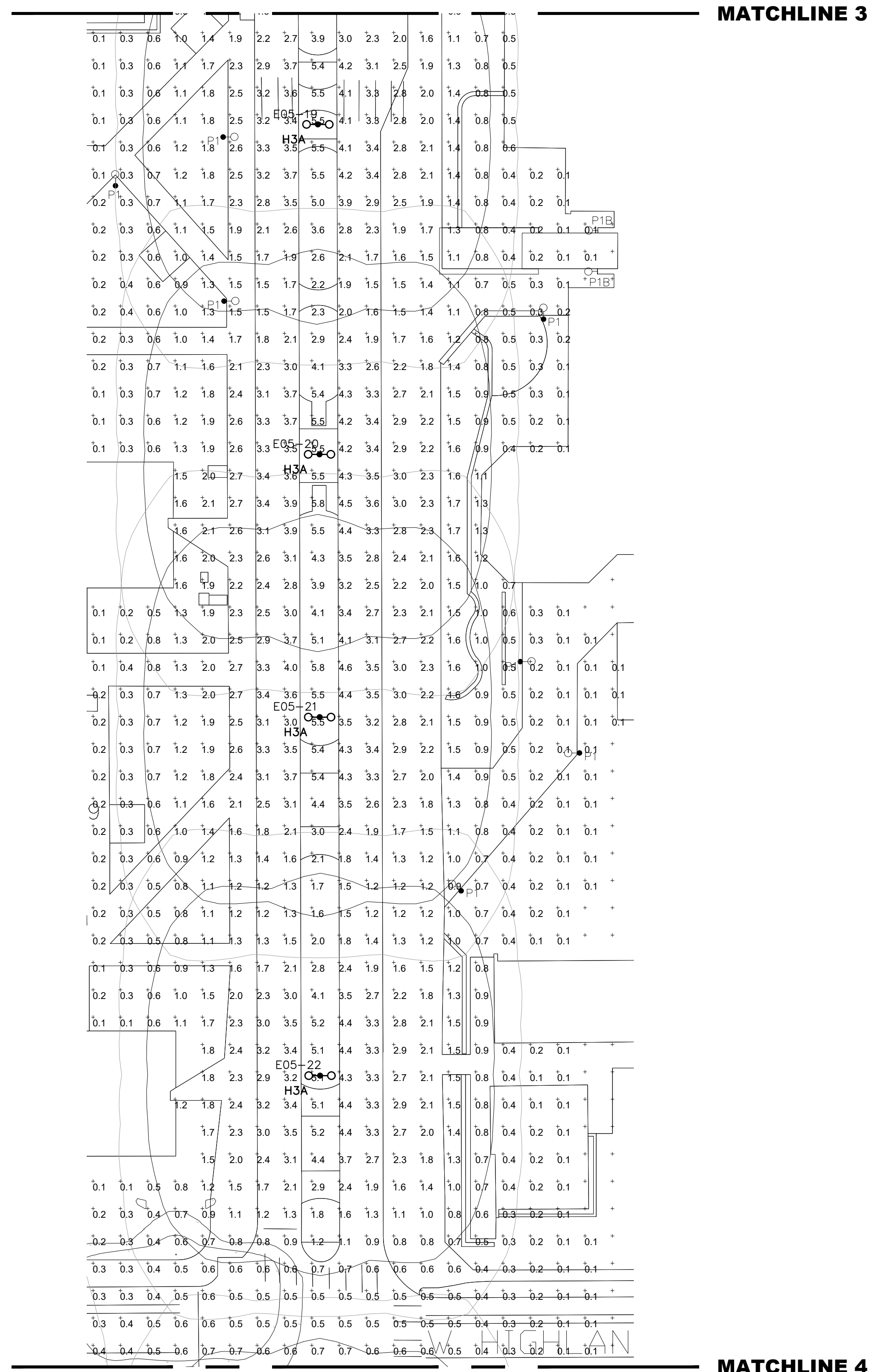
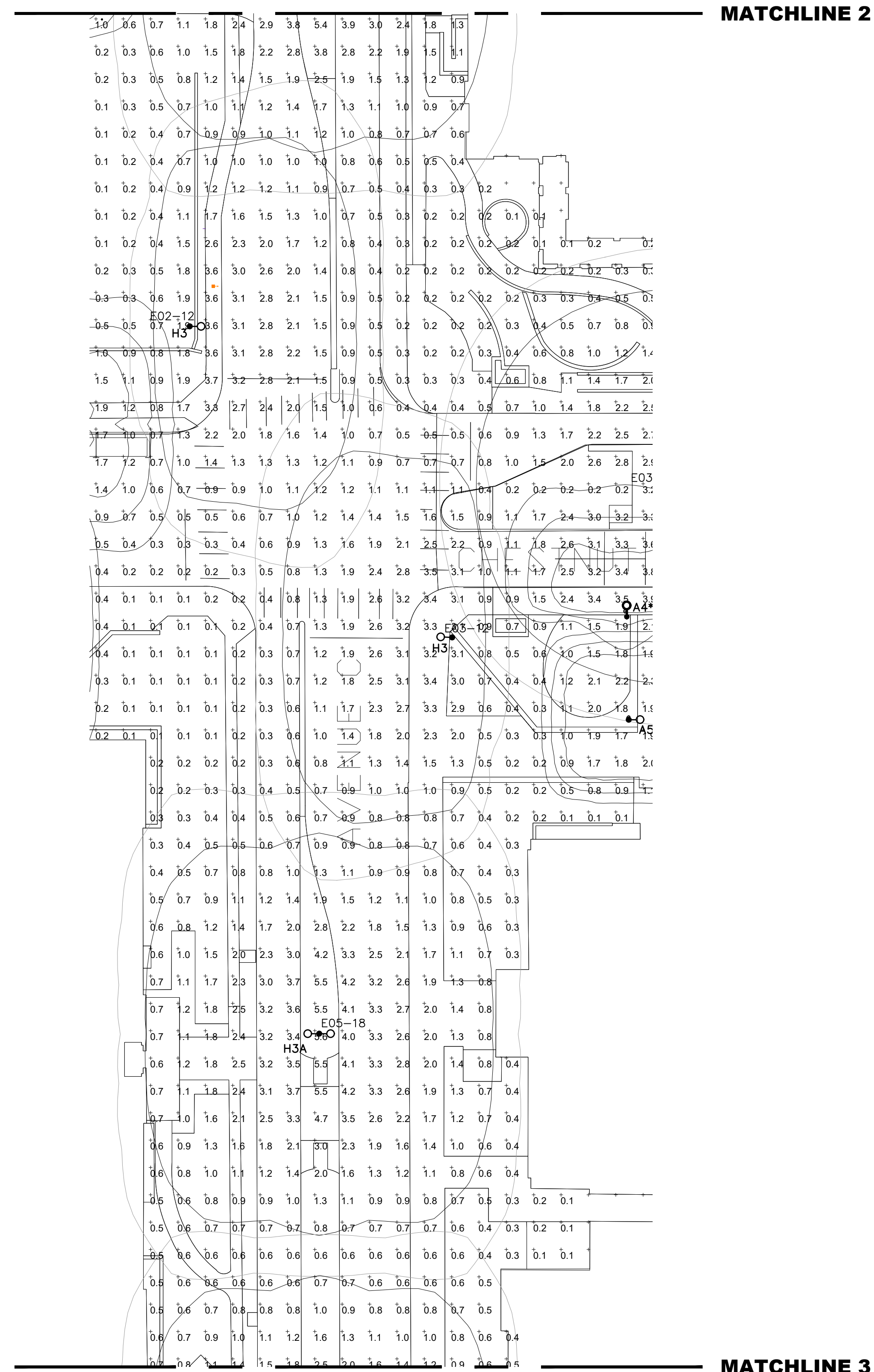
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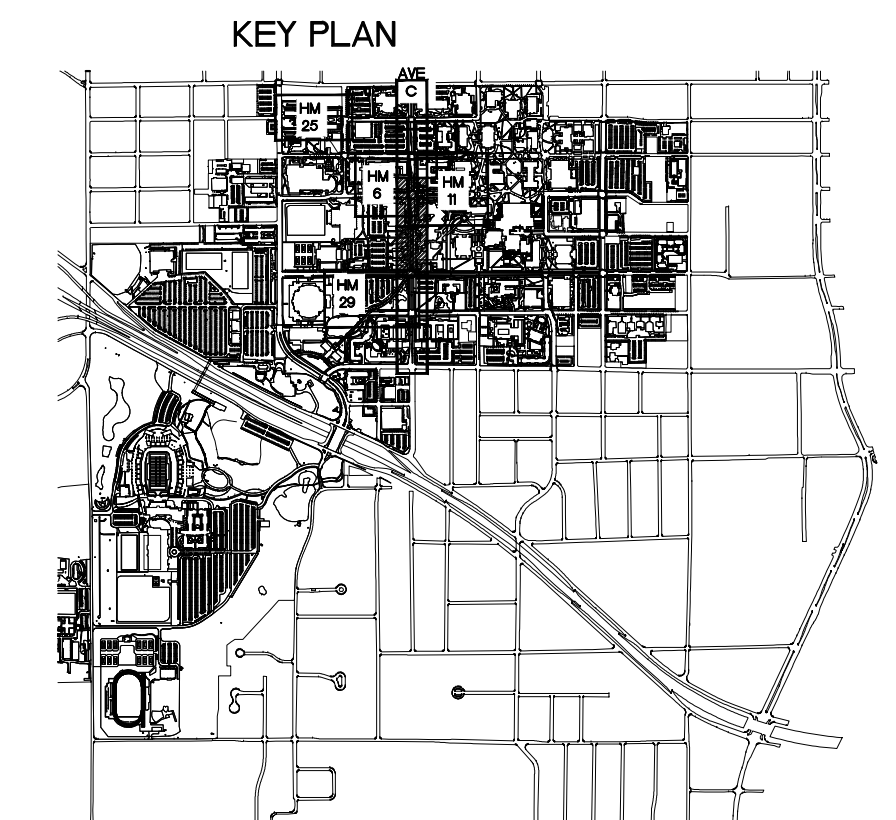
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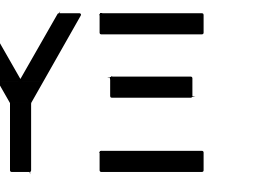
GENERAL NOTES:

- REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
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1 PHOTOMETRIC PLAN - AVENUE C - PART 2 OF 3 - RAB
 SCALE: 1"=30'-0"





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SHEET CONTENTS:
PHOTOMETRIC PLAN - AVENUE C - PART 3 OF 3

SHEET NUMBER:

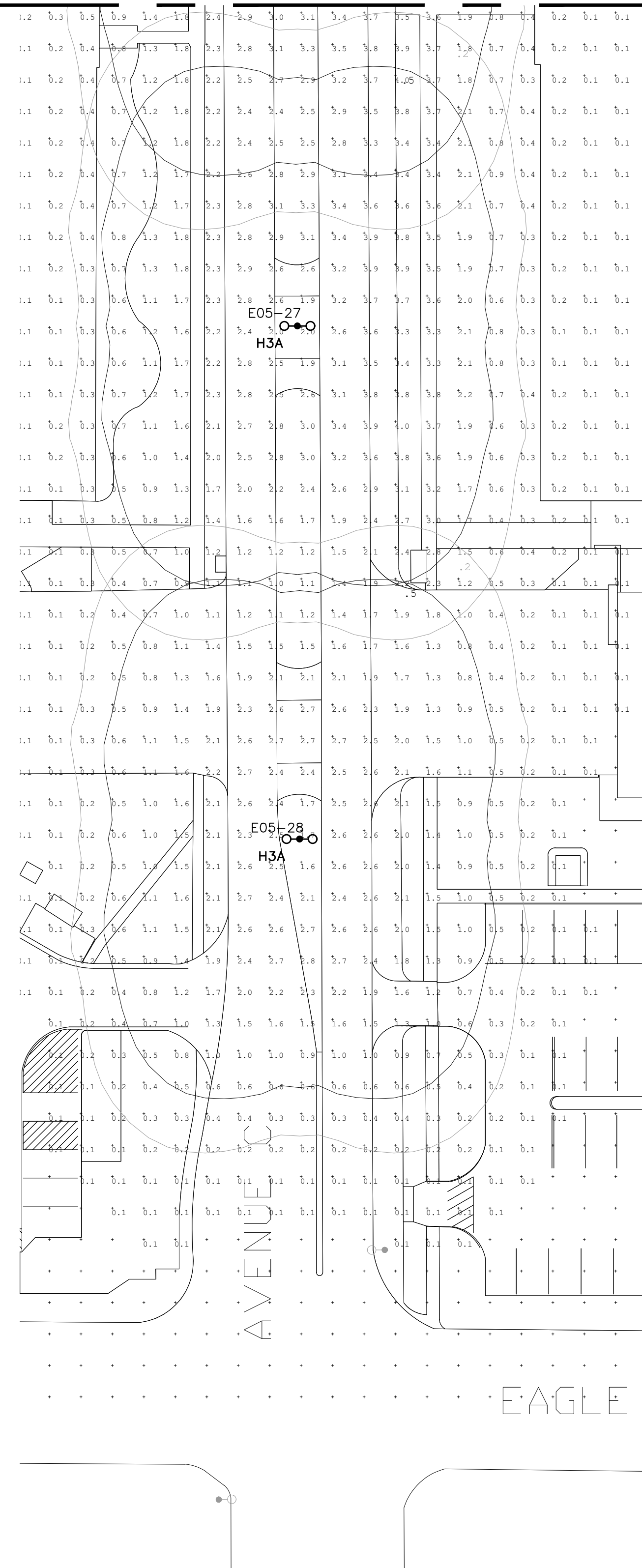
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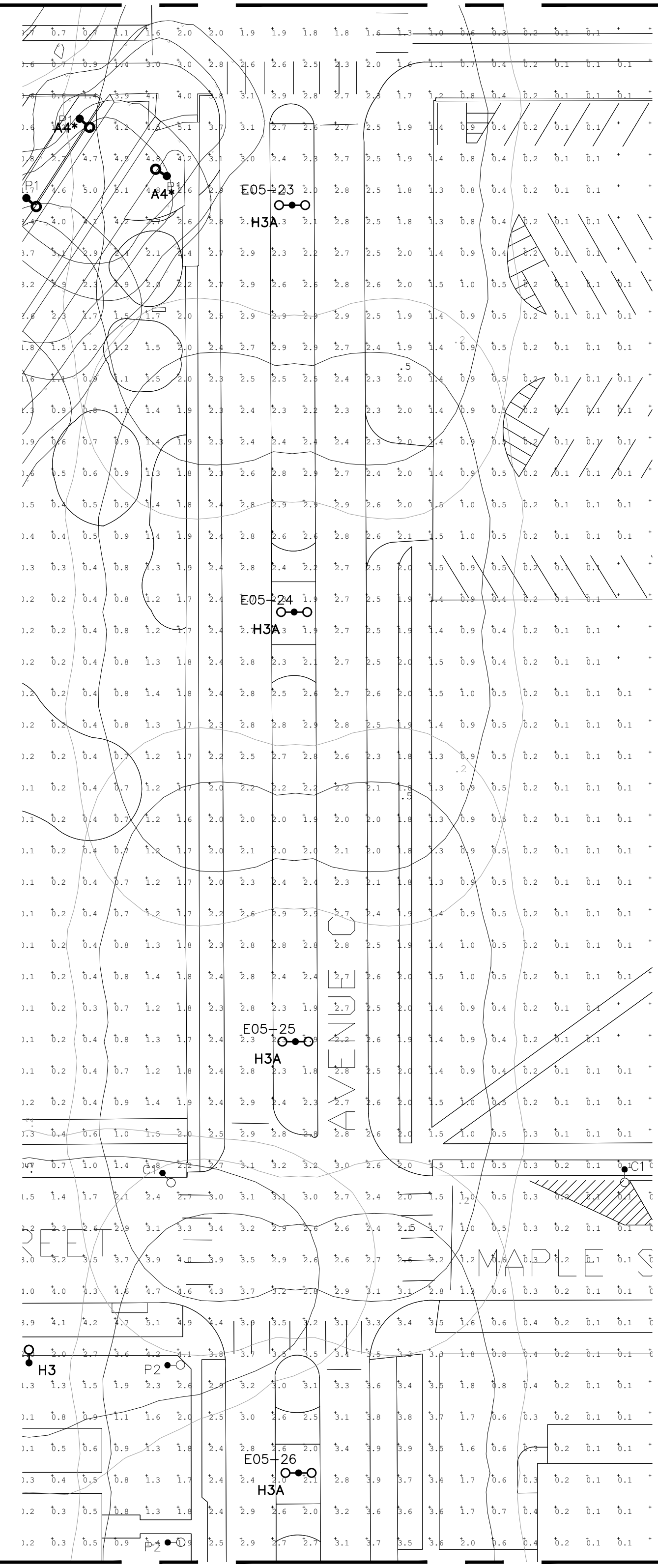
GENERAL NOTES:

- REFER TO ISO-FOOTCANDLE DIAGRAMS ON E1.00
- REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00

MATCHLINE 5



MATCHLINE 4

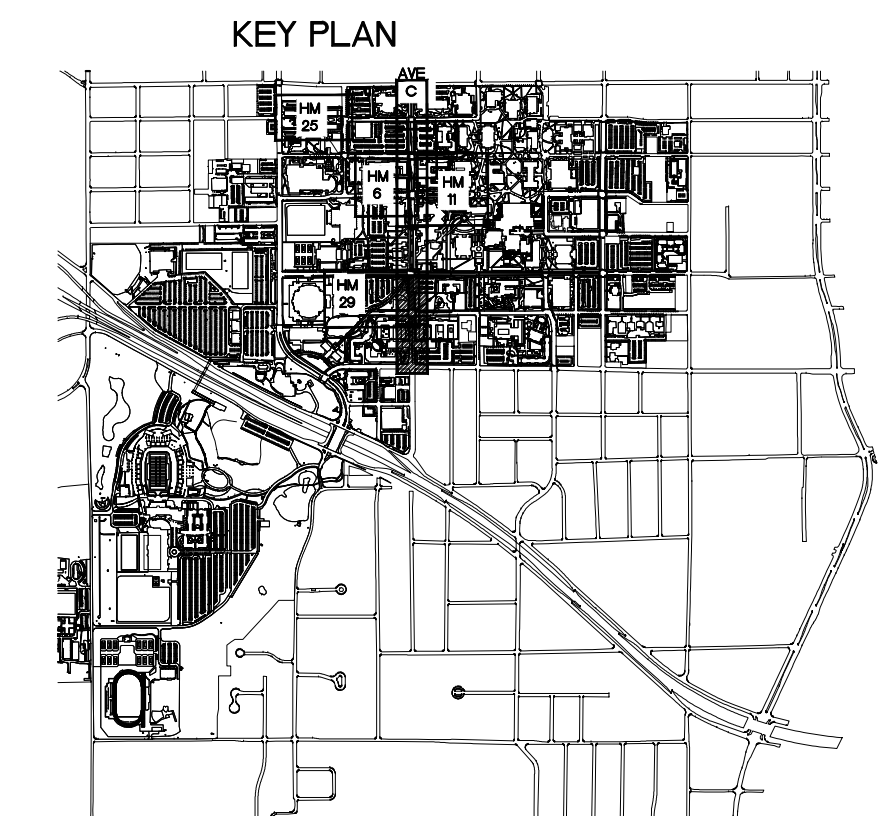


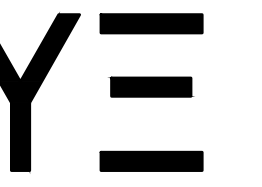
MATCHLINE 5



1 PHOTOMETRIC PLAN - AVENUE C - PART 3 OF 3

SCALE: 1"=30'-0"





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 Arlington, Texas 76017
 817-483-2373
 www.yaggiengineering.com
 Texas Registration No. F-9622



07-09-2024

UNIVERSITY OF NORTH TEXAS
PROJECT NAME:
 CAMPUS LIGHTING UPGRADES
 HIGH MAST ZONES 6, 11, 25, 29 & AVE C
 DENTON, TEXAS



REVISIONS:
 1
 2
 3

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 PHOTOMETRIC PLAN - AVENUE C - PART 3 OF 3 - RAB

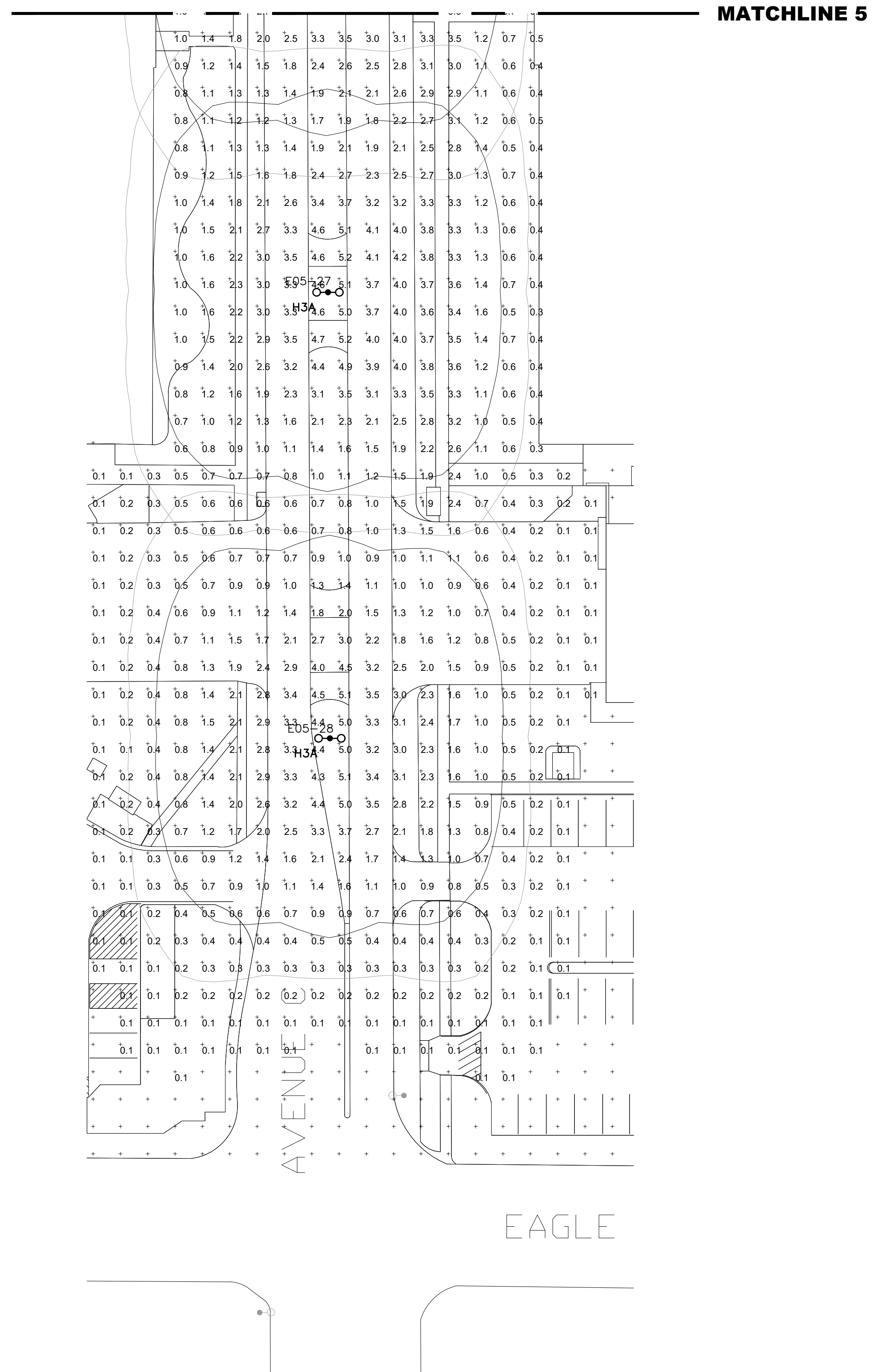
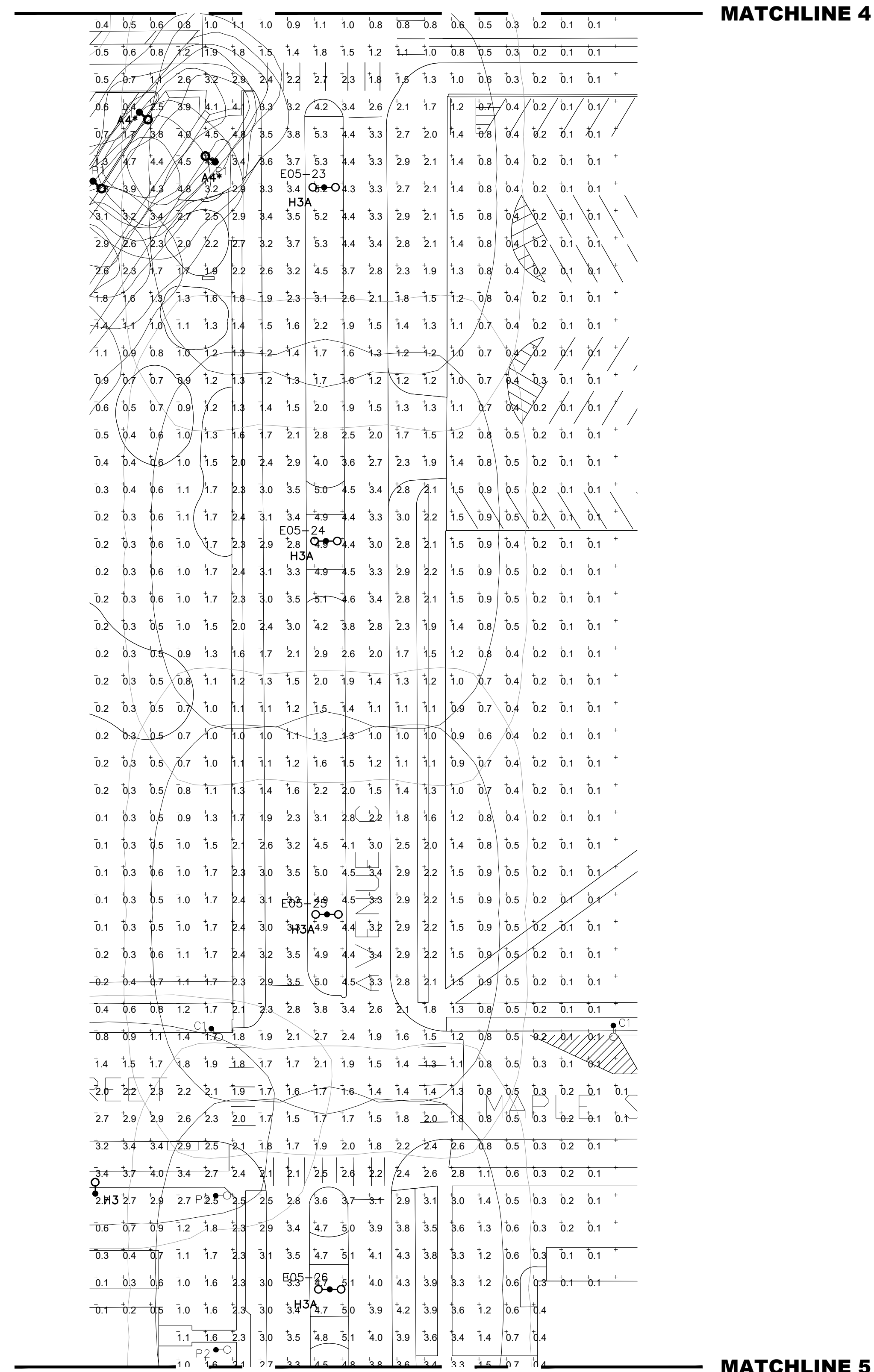
SHEET NUMBER:

E2.07A

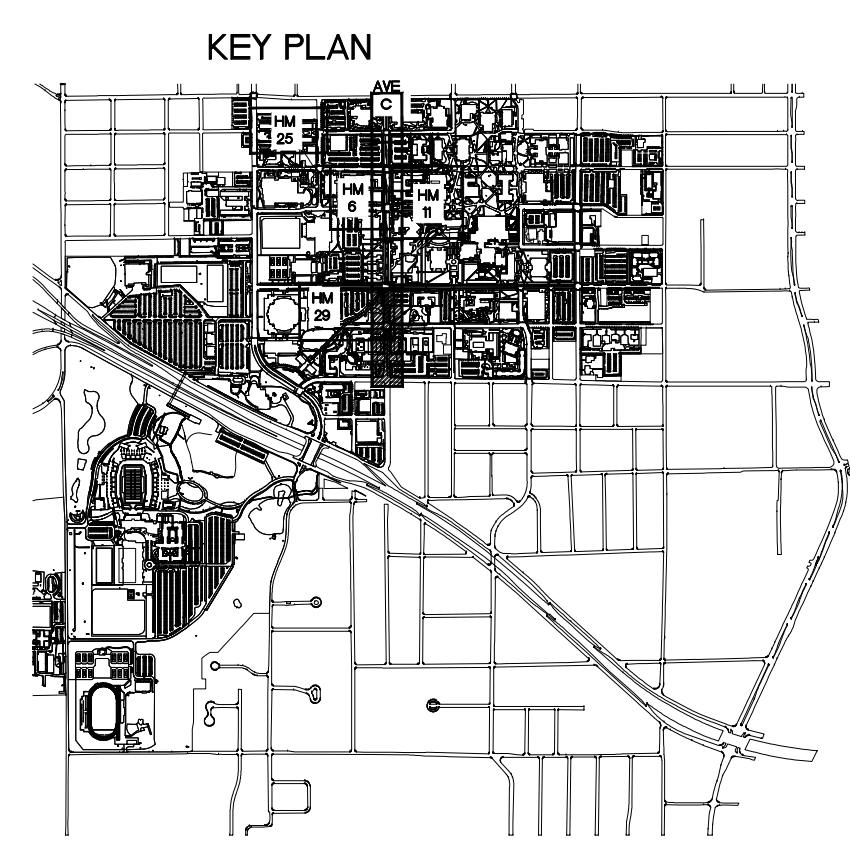
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GENERAL NOTES:

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- REFER TO CAMPUS STANDARD ILLUMINATION LEVELS ON E1.00

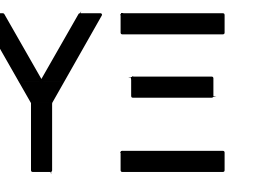


1 PHOTOMETRIC PLAN - AVENUE C - PART 3 OF 3 - RAB
 SCALE: 1"=30'-0"

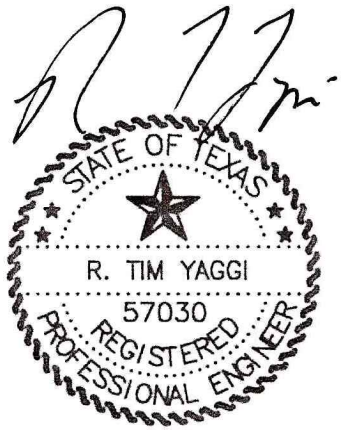


GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00.
2. UTILITIES SHOWN WERE OBTAINED BY UNT GIS DATABASE. OBTAIN GIS DATA FROM OWNER AS NECESSARY TO IDENTIFY EACH UTILITY.



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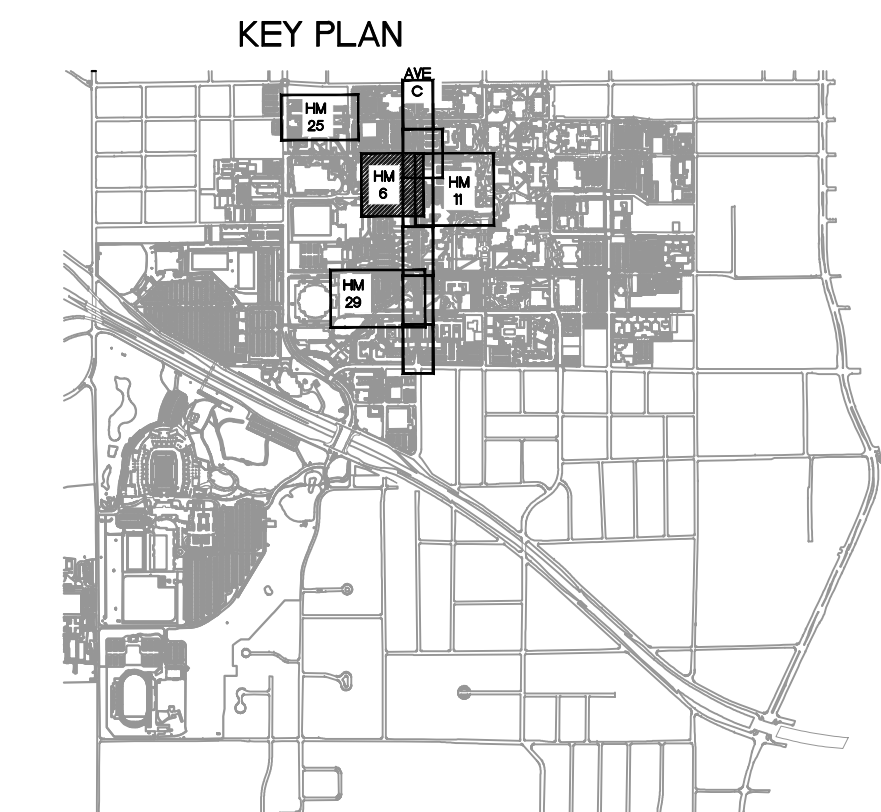
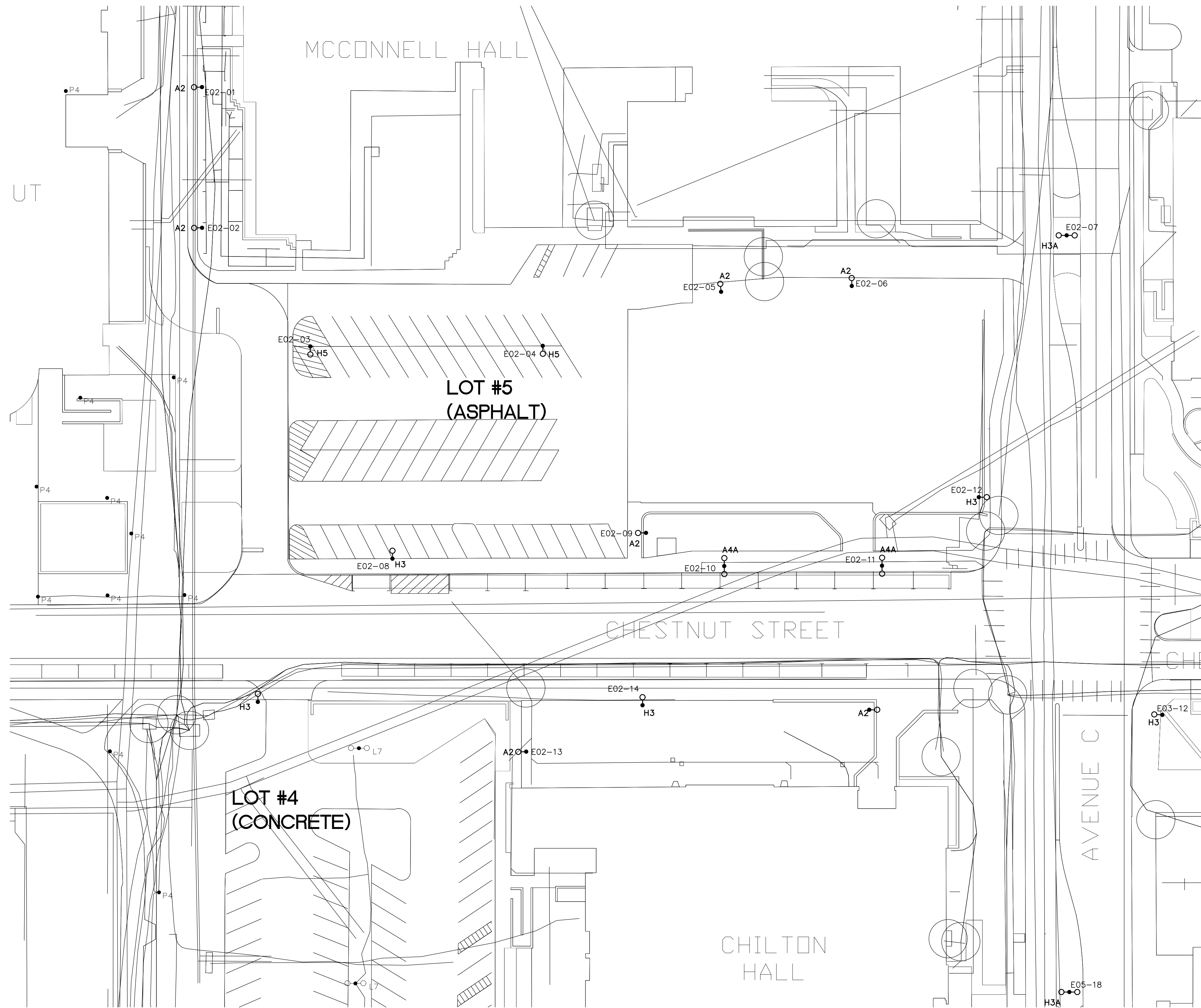
DRAWN BY: RLT

YE PROJECT NO.: 2210.00

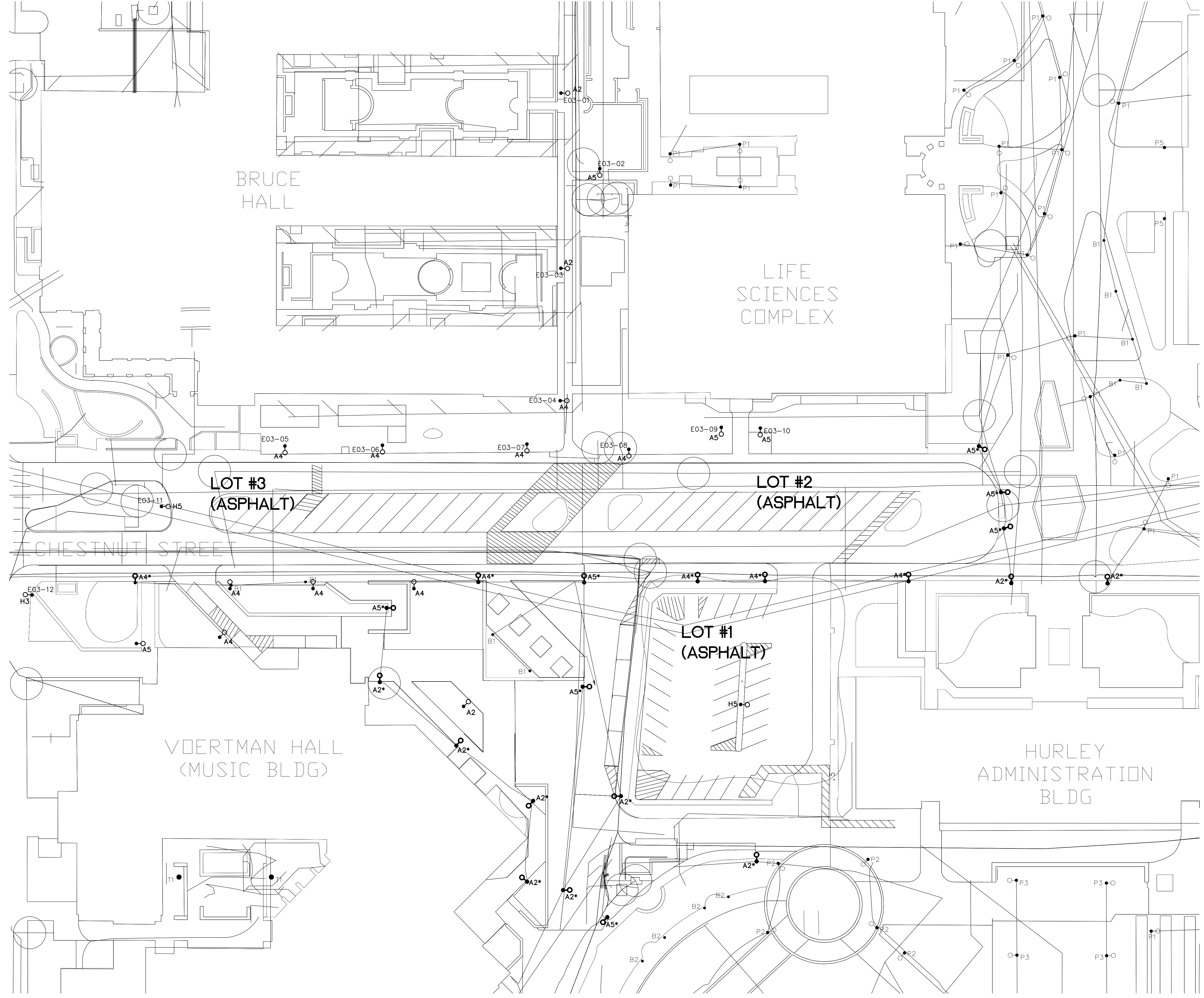
SHEET CONTENTS:
 EXISTING UTILITY
 PLAN - HIGH MAST
 ZONE 6

SHEET NUMBER:

E3.01



1 EXISTING UTILITY PLAN - HIGH MAST ZONE 6
 SCALE: 1"=30'-0"

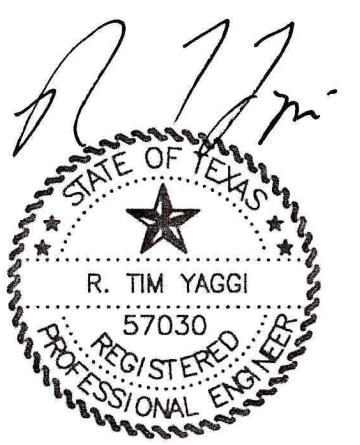


GENERAL NOTES:

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DATE ISSUED: 07-09-2024

DESIGN BY: RTY

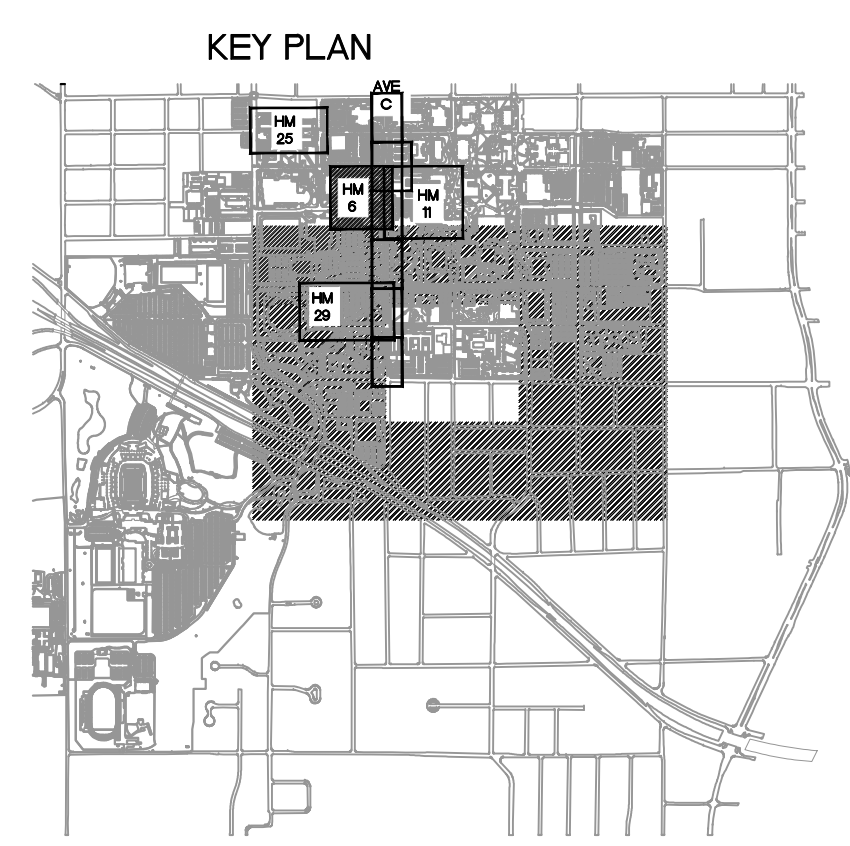
DRAWN BY: RLT

YE PROJECT NO.: 2210.00

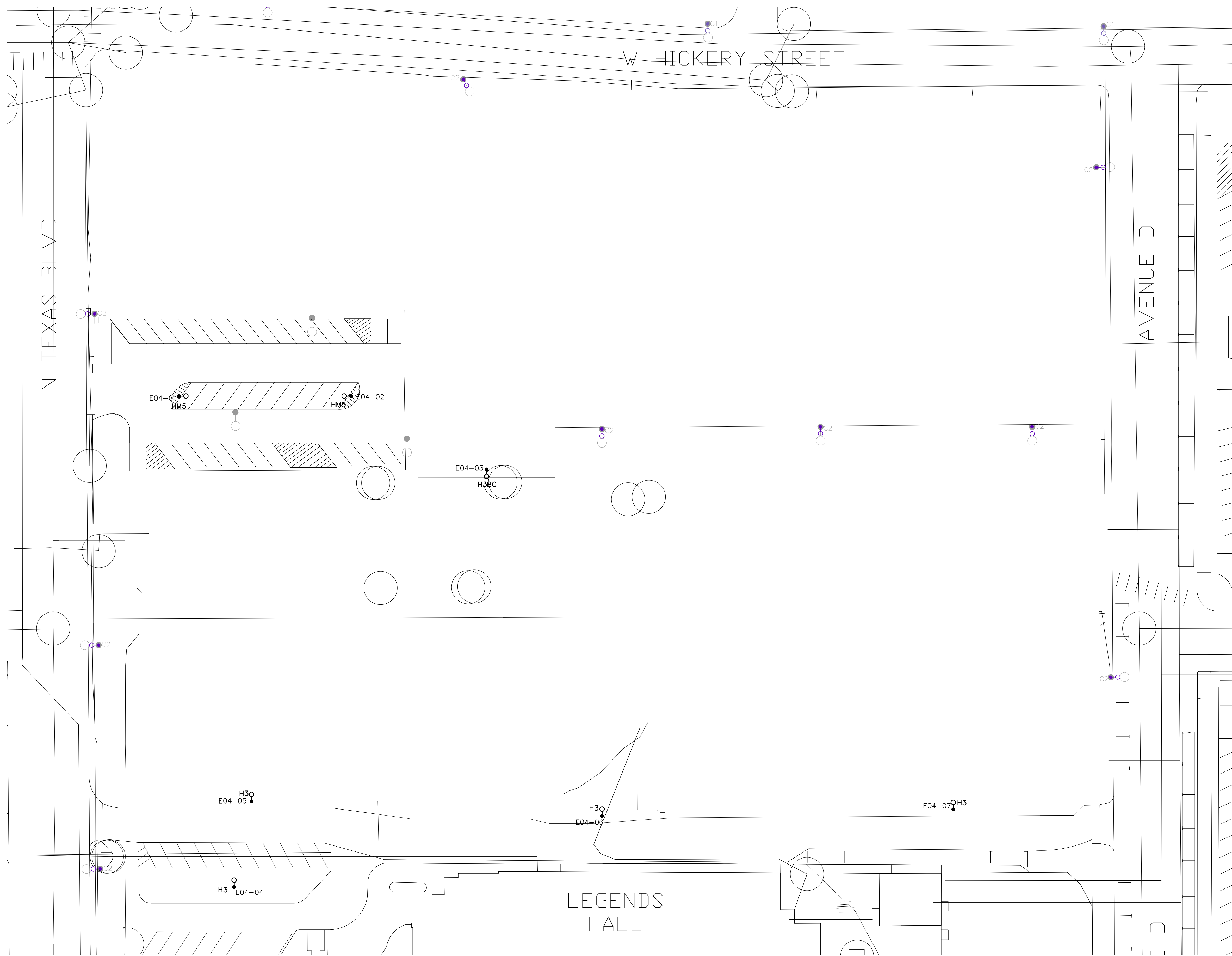
SHEET CONTENTS:
 EXISTING UTILITY
 PLAN - HIGH MAST
 ZONE 11

SHEET NUMBER:

E3.02



1 EXISTING UTILITY PLAN - HIGH MAST ZONE 11
 SCALE: 1"=30'-0"



1 EXISTING UTILITY PLAN - HIGH MAST ZONE 25
 SCALE: 1"=30'-0"

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00.
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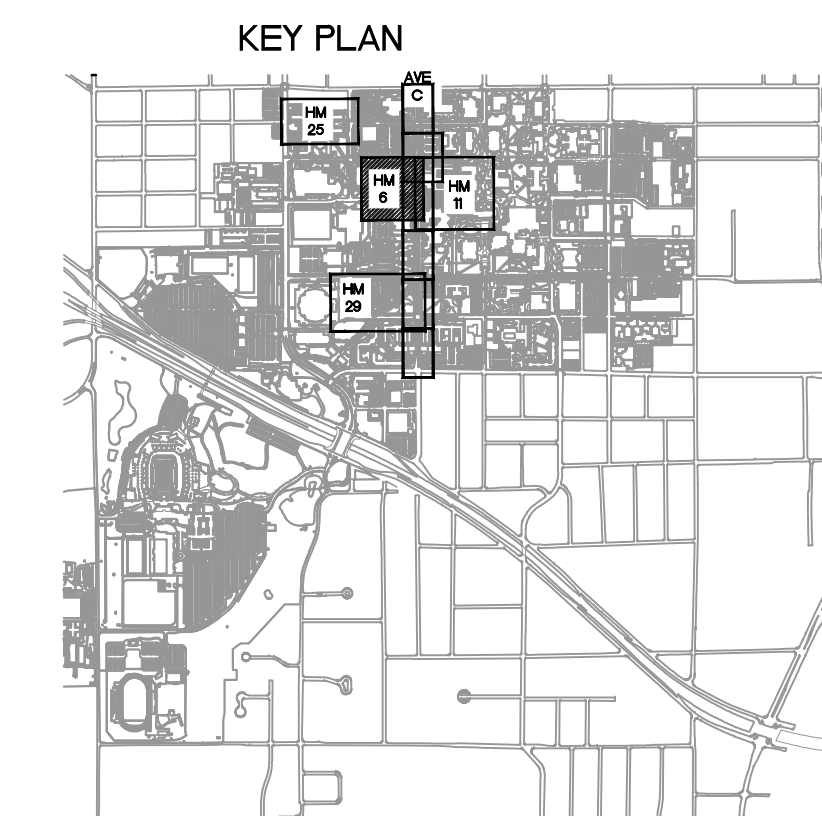
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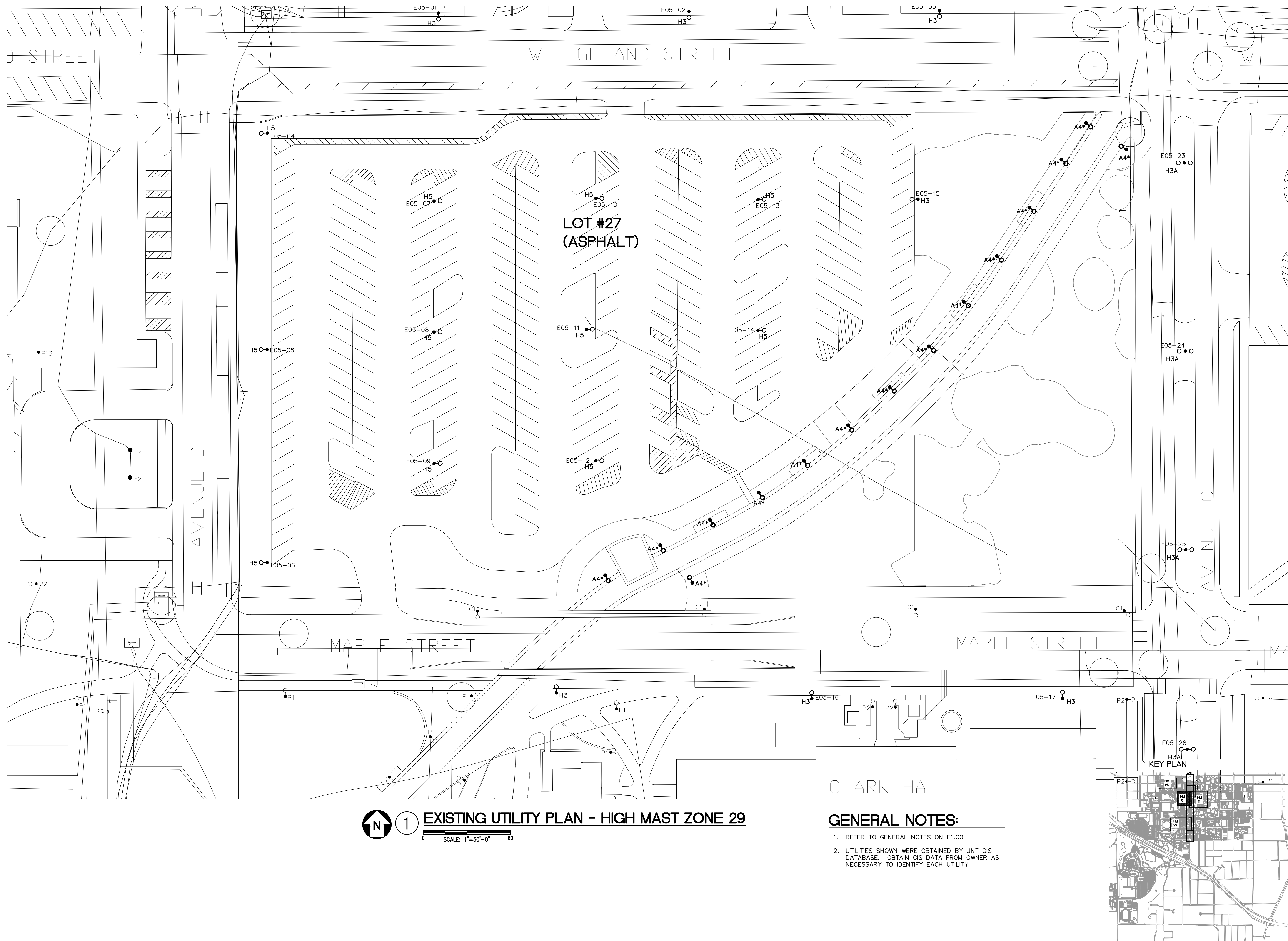
YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 EXISTING UTILITY
 PLAN - HIGH MAST
 ZONE 25

SHEET NUMBER:

E3.03





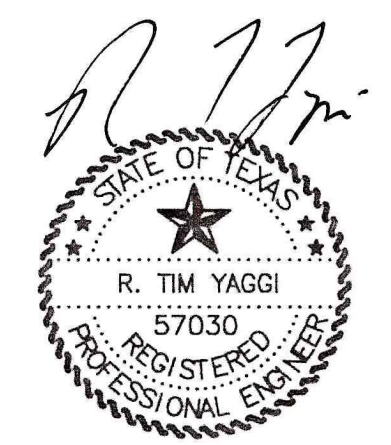
1 EXISTING UTILITY PLAN - HIGH MAST ZONE 29
 SCALE: 1"=30'-0"

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00.
2. UTILITIES SHOWN WERE OBTAINED BY UNT GIS DATABASE. OBTAIN GIS DATA FROM OWNER AS NECESSARY TO IDENTIFY EACH UTILITY.



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DESIGN BY: RTY

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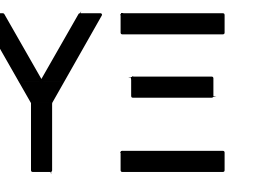
YE PROJECT NO.: 2210.00

SHEET CONTENTS:
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 PLAN - HIGH MAST
 ZONE 29

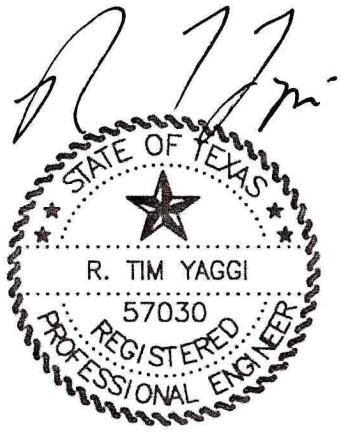
SHEET NUMBER:
E3.04

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON E1.00.
2. UTILITIES SHOWN WERE OBTAINED BY UNT GIS DATABASE. OBTAIN GIS DATA FROM OWNER AS NECESSARY TO IDENTIFY EACH UTILITY.



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DESIGN BY: RTY

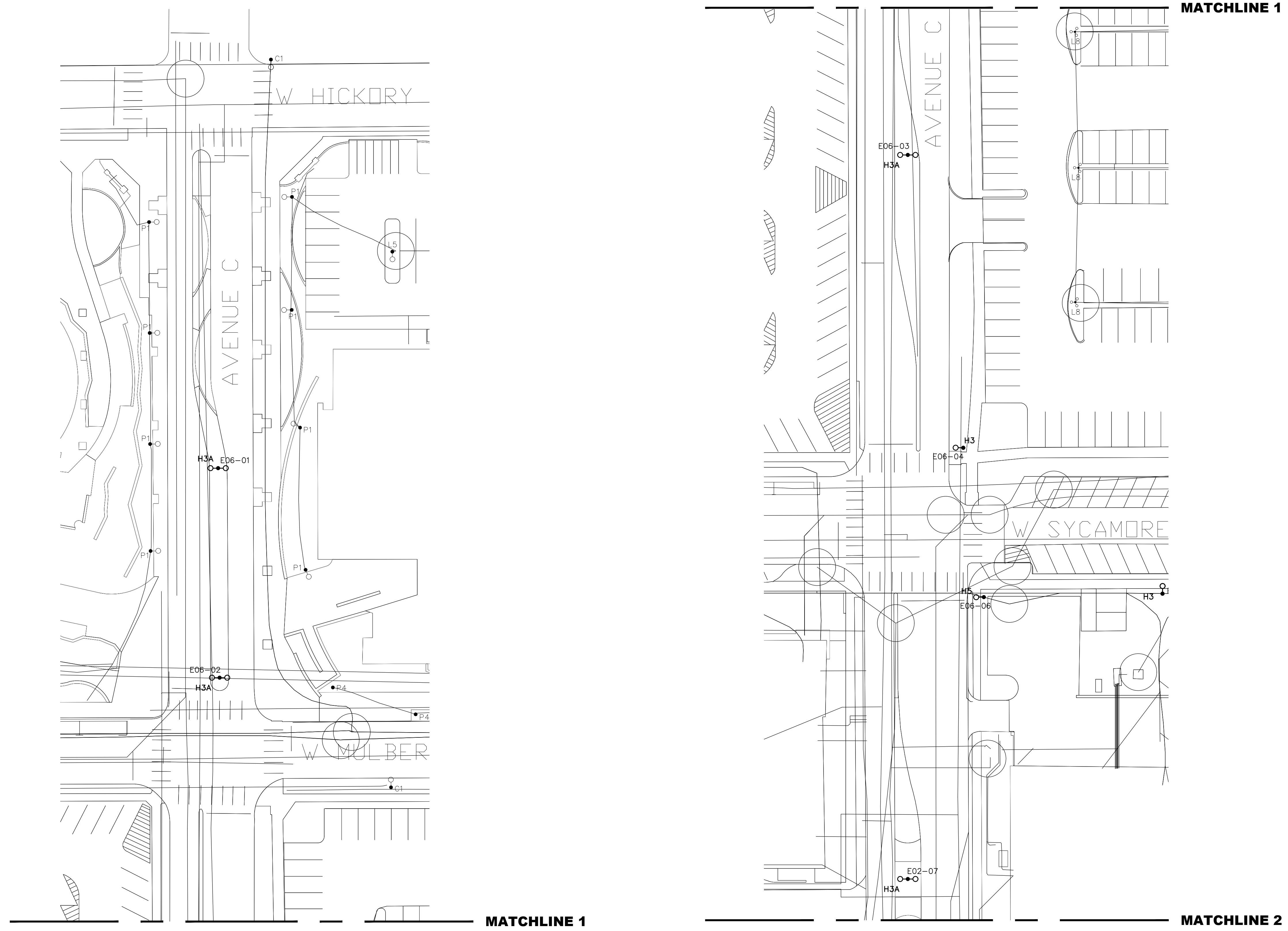
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YE PROJECT NO.: 2210.00

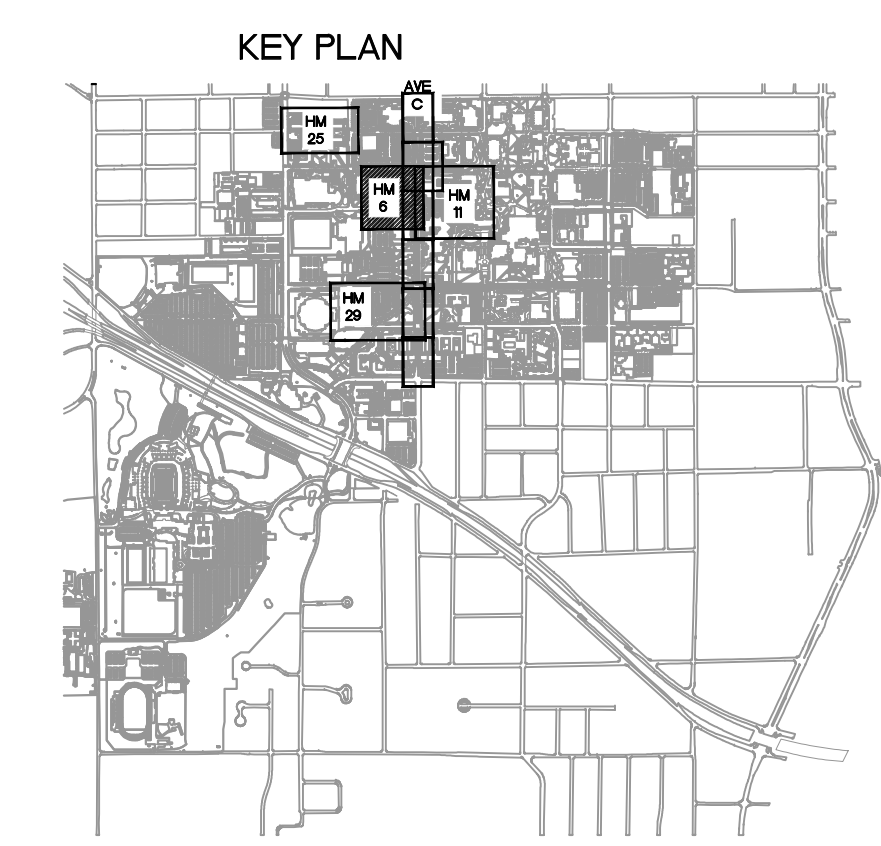
SHEET CONTENTS:
 EXISTING UTILITY
 PLAN - AVENUE C -
 PART 1 OF 3

SHEET NUMBER:

E3.05

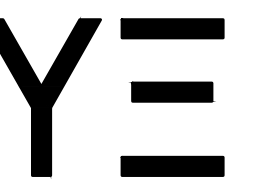


1 EXISTING UTILITY PLAN - AVENUE C - PART 1 OF 3
 SCALE: 1"=30'-0"

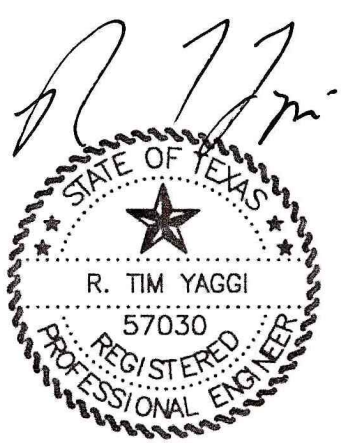


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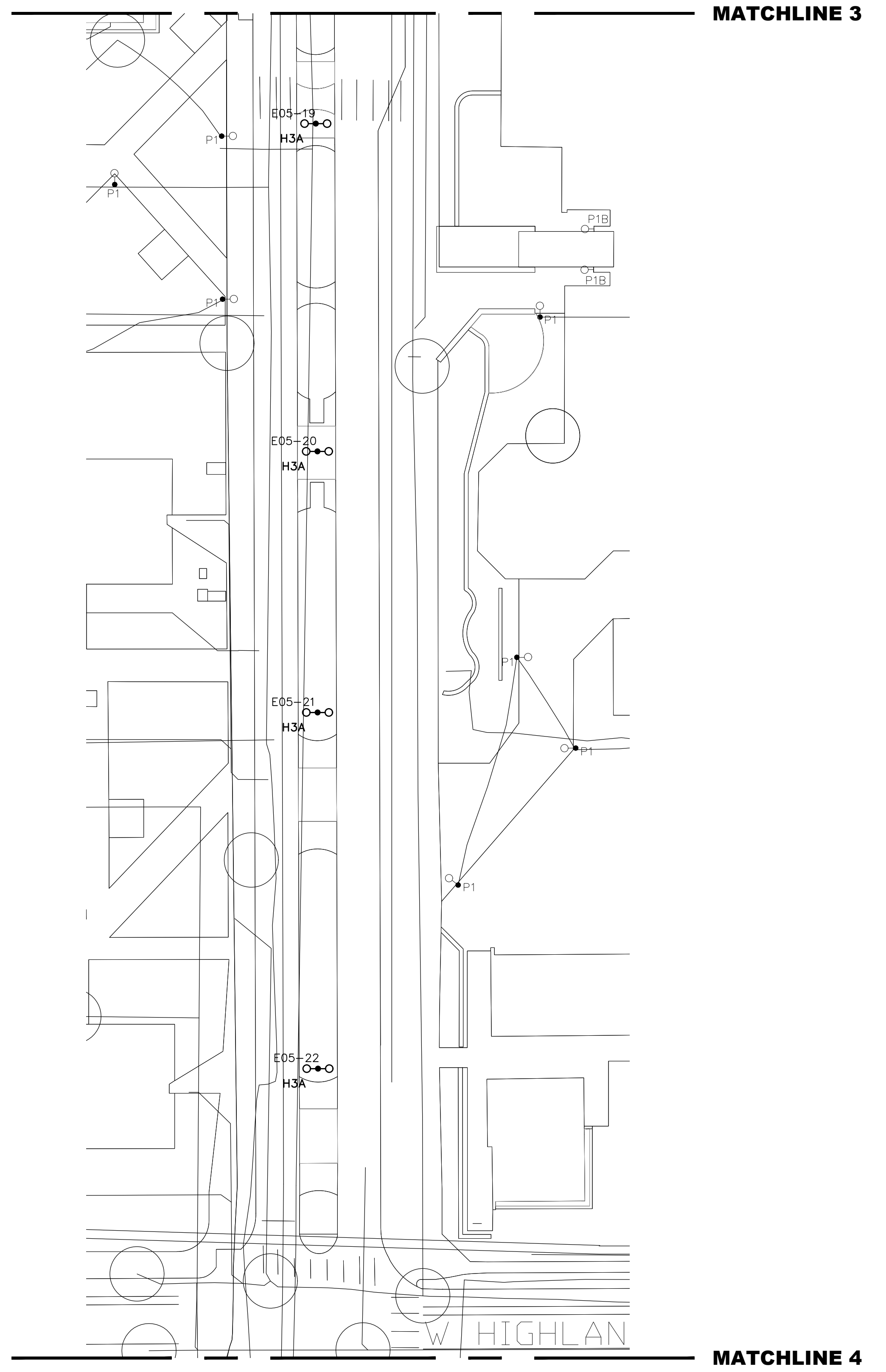
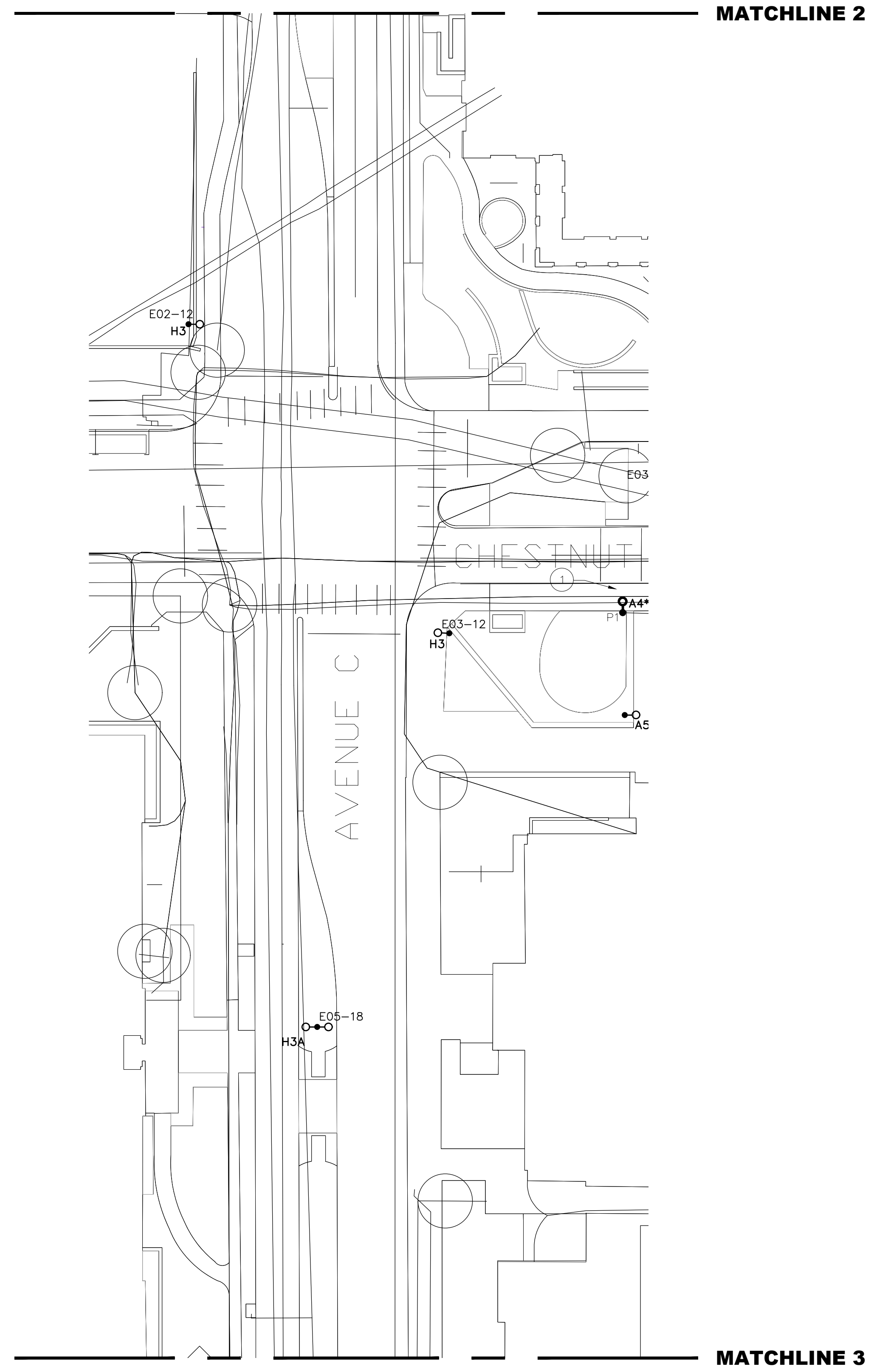
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YE PROJECT NO.: 2210.00

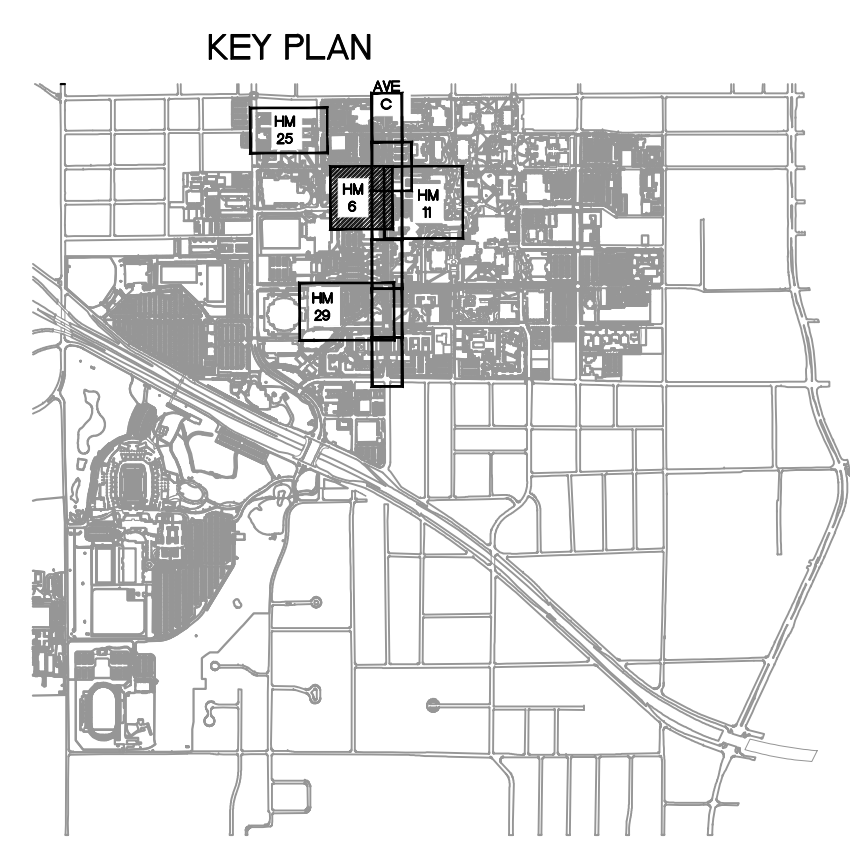
SHEET CONTENTS:
 EXISTING UTILITY
 PLAN - AVENUE C -
 PART 2 OF 3

SHEET NUMBER:

E3.06



1 EXISTING UTILITY PLAN - AVENUE C - PART 2 OF 3
 SCALE: 1"=30'-0"

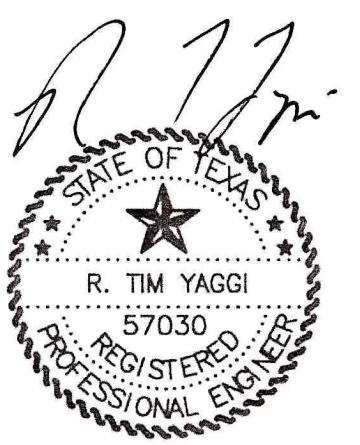


GENERAL NOTES:

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DATE ISSUED: 07-09-2024

DESIGN BY: RTY

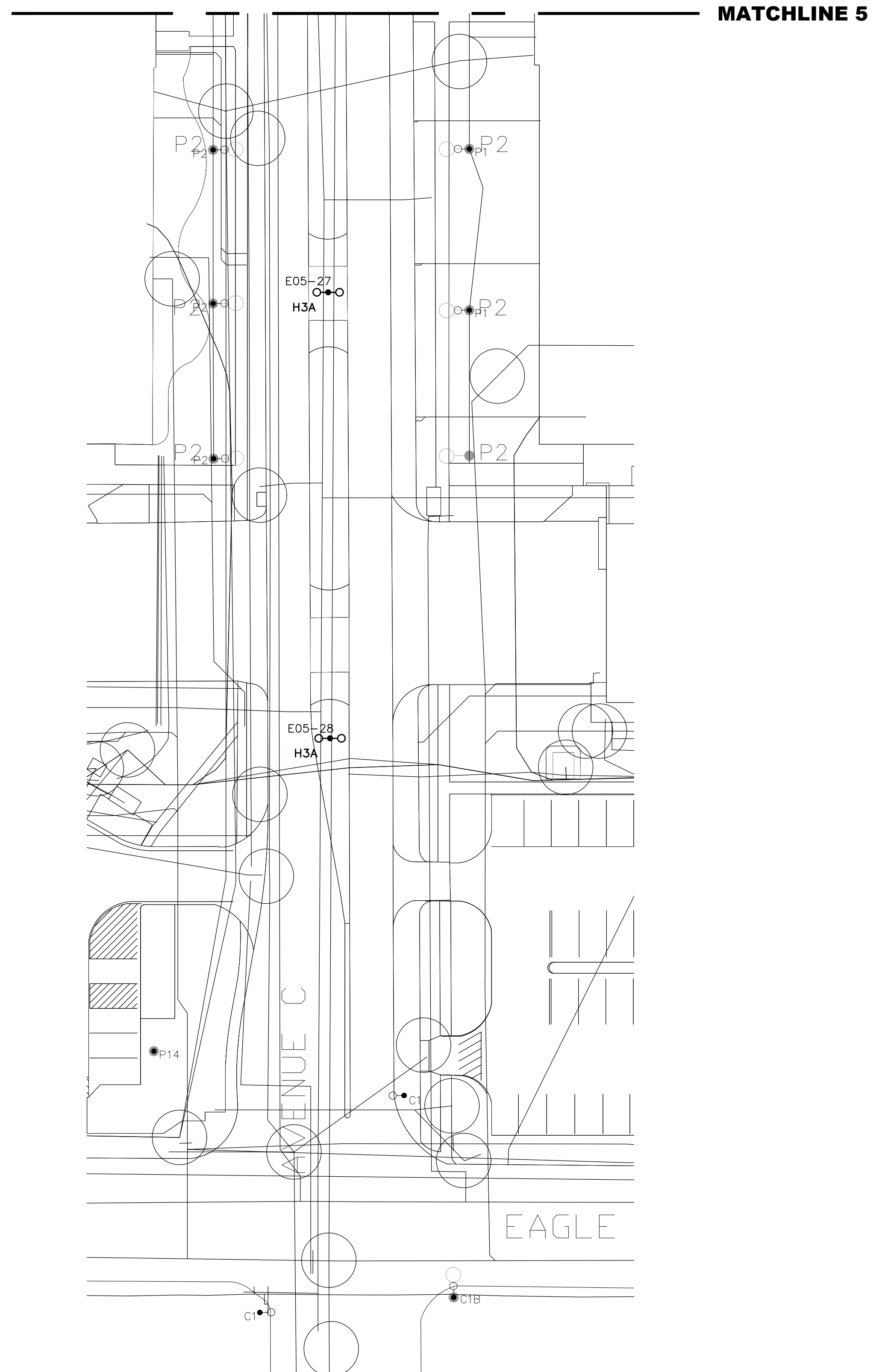
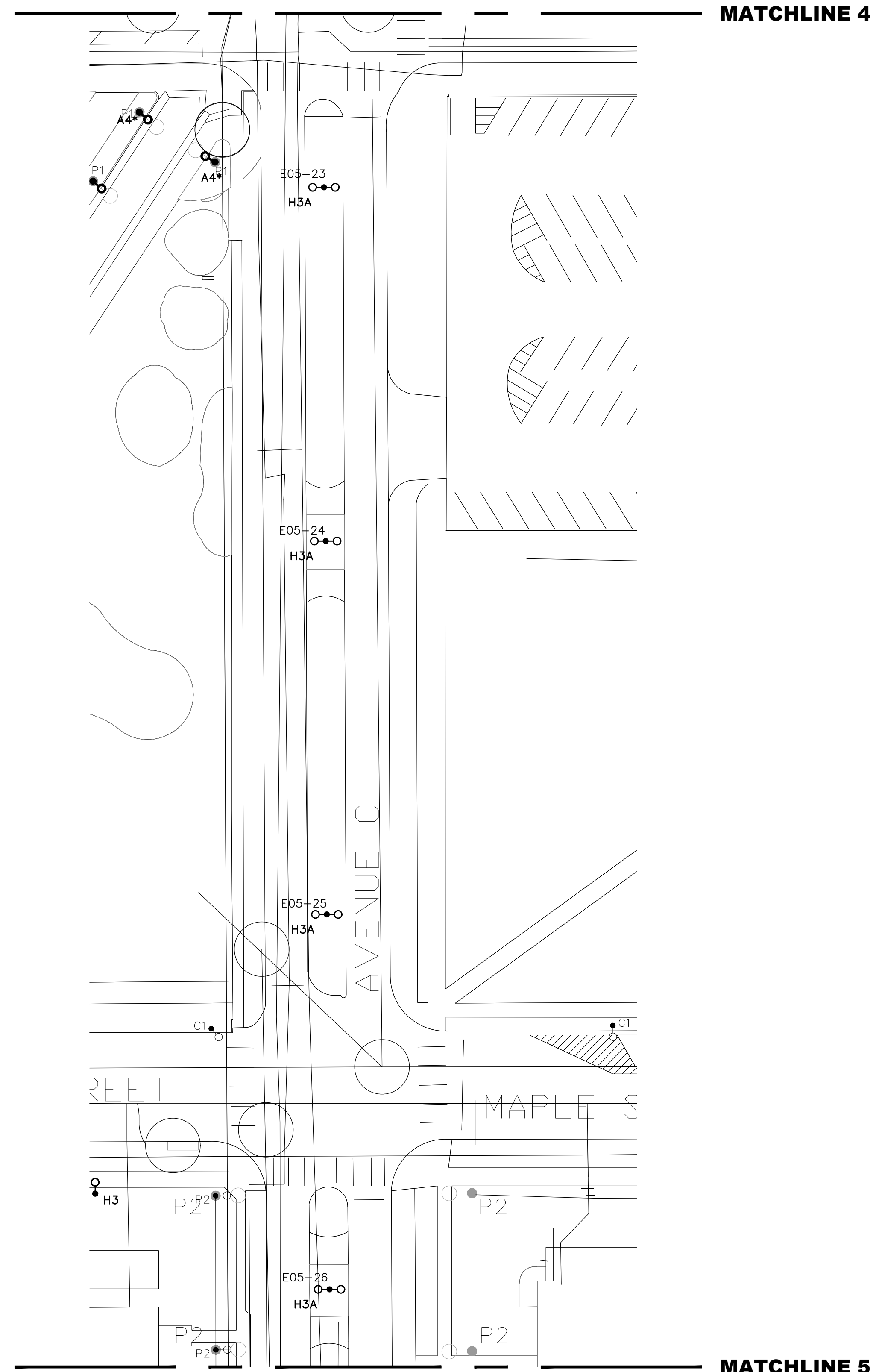
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YE PROJECT NO.: 2210.00

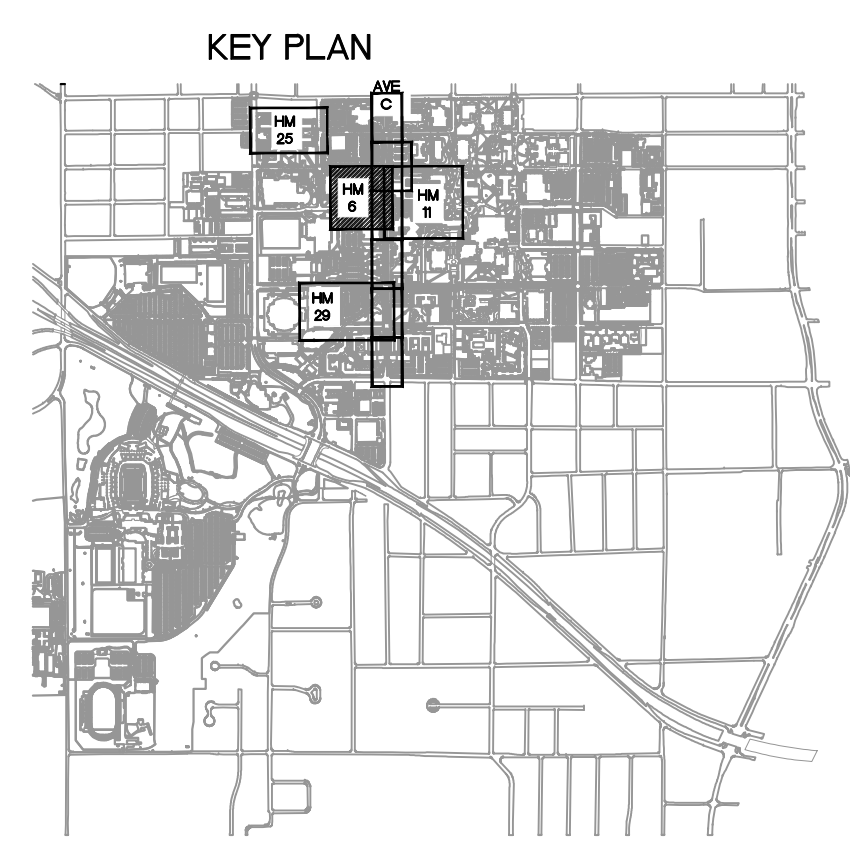
SHEET CONTENTS:
 EXISTING UTILITY PLAN - AVENUE C - PART 3 OF 3

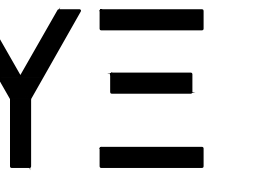
SHEET NUMBER:

E3.07



1 EXISTING UTILITY PLAN - AVENUE C - PART 3 OF 3
 SCALE: 1"=30'-0"





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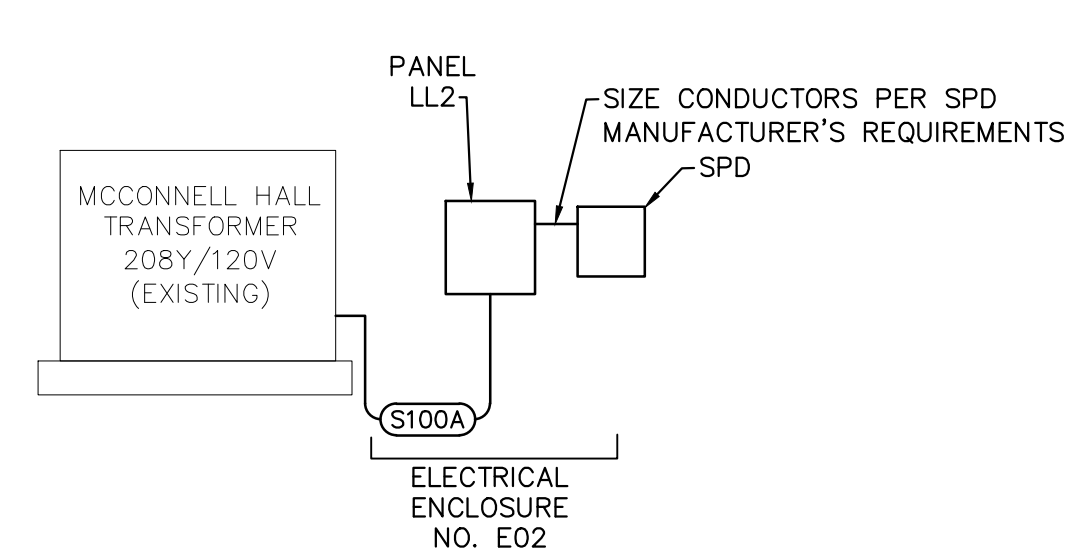
DRAWN BY: RLJ

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
 ELECTRICAL
 ONE LINE
 DIAGRAMS AND
 SCHEDULES

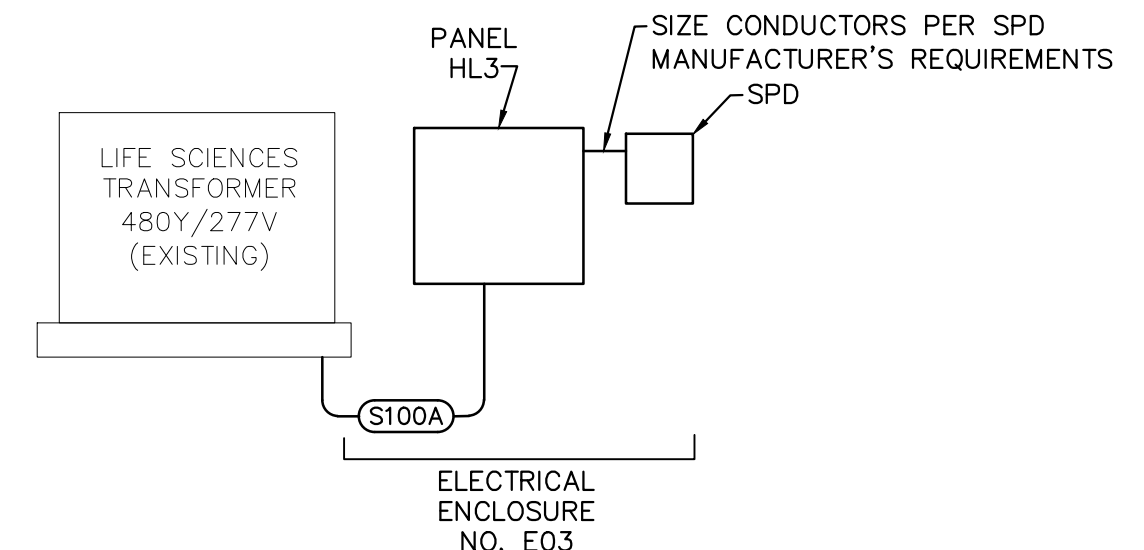
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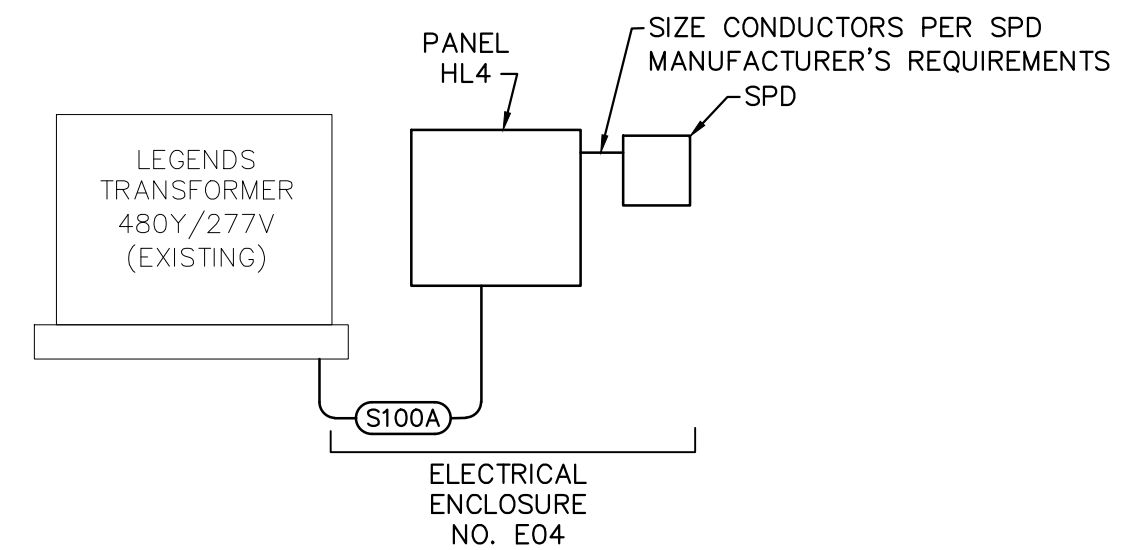
1 ELECTRICAL ONE LINE DIAGRAM
 (ENCLOSURE NO. E02)

PANEL LL2									
V (L-L)		208		PHASE 3		BUS 100 A		SECTION 1 OF 1	
V (L-N)		120		WIRE 4		MCB 100 A		SURFACE MOUNTED 65,000 A.I.C.	
DESCRIPTION	LOAD (KVA)	BKR POLES	BKR AMPS	CKT #	CKT #	BKR POLES	BKR AMPS	LOAD (KVA)	DESCRIPTION
PKG LOTS & STREET LTG	0.8	2	30	1	2	1	20	0.5	SPARE
PKG LOTS & STREET LTG	1.1	2	30	3	4	1	20	0.5	SPARE
SPARE	0.5	1	20	7	8	3	60		SPD
SPARE	0.5	1	20	9	10				
SPARE	0.5	1	20	11	12				
CONN. N.E.C. LOAD MULT. (KVA) (KVA)									
LIGHTING	2	2							
MOTOR									
HEATING									
KITCHEN									
RECEPTACLE			12 CONN. LOAD (AMPS)						
MISCELLANEOUS			14 N.E.C. MULT. (AMPS)						
SPARE			51 PERCENT SPARE						
TOTAL	3	3	1.00 KITCHEN MULTIPLIER						
	4	5	1.00 MSC. MULTIPLIER						



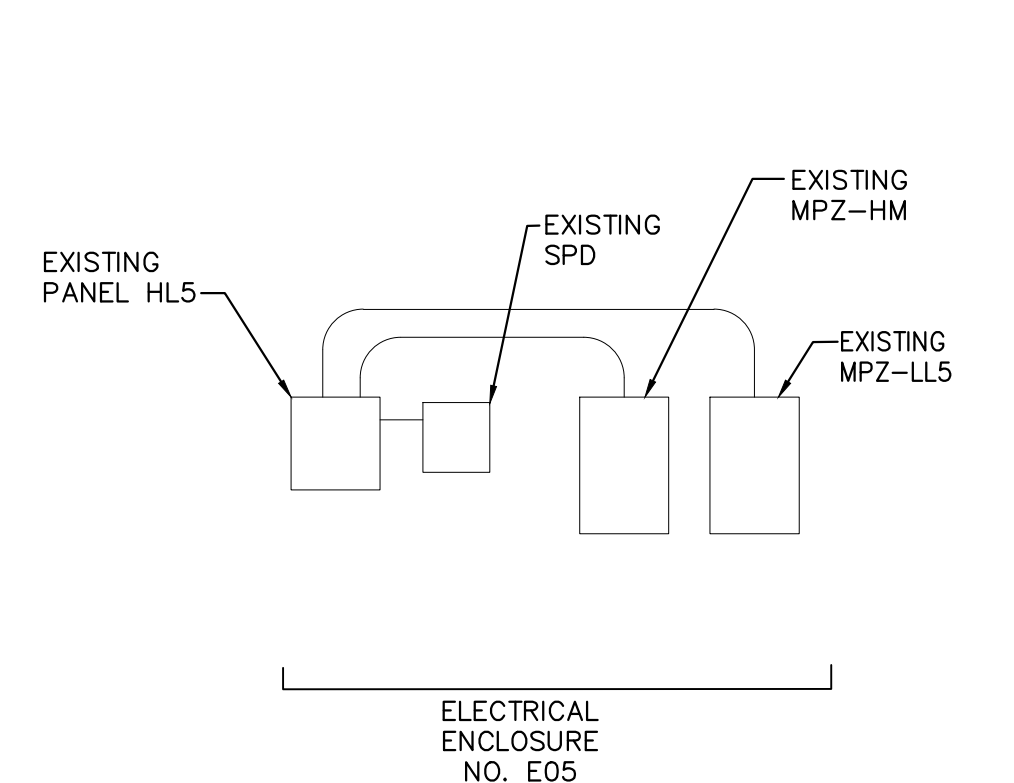
2 ELECTRICAL ONE LINE DIAGRAM
 (ENCLOSURE NO. E03)

PANEL HL3									
V (L-L)		480		PHASE 3		BUS 100 A		SECTION 1 OF 1	
V (L-N)		277		WIRE 4		MCB 100 A		SURFACE MOUNTED 42,000 A.I.C.	
DESCRIPTION	LOAD (KVA)	BKR POLES	BKR AMPS	CKT #	CKT #	BKR POLES	BKR AMPS	LOAD (KVA)	DESCRIPTION
PED. STREET PARKG. LTS	1.8	1	30	1	2	1	20	0.5	SPARE
PED. STREET PARKG. LTS	0.2	1	30	3	4	1	20	0.5	SPARE
SPARE				7	8	3	60		SPD
SPARE				9	10				
SPARE				11	12				
CONN. N.E.C. LOAD MULT. (KVA) (KVA)									
LIGHTING	2	2							
MOTOR									
HEATING									
KITCHEN									
RECEPTACLE			4 CONN. LOAD (AMPS)						
MISCELLANEOUS			5 N.E.C. MULT. (AMPS)						
SPARE			38 PERCENT SPARE						
TOTAL	2	2	1.00 KITCHEN MULTIPLIER						
	3	4	1.00 MSC. MULTIPLIER						



3 ELECTRICAL ONE LINE DIAGRAM
 (ENCLOSURE NO. E04) - ALT. NO. 3A/3B

PANEL HL4									
V (L-L)		480		PHASE 3		BUS 100 A		SECTION 1 OF 1	
V (L-N)		277		WIRE 4		MCB 100 A		SURFACE MOUNTED 42,000 A.I.C.	
DESCRIPTION	LOAD (KVA)	BKR POLES	BKR AMPS	CKT #	CKT #	BKR POLES	BKR AMPS	LOAD (KVA)	DESCRIPTION
STREET & PARKING LTS	1.4	1	30	1	2	1	20	0.5	SPARE
STREET & PARKING LTS	0.2	1	30	3	4	1	20	0.5	SPARE
SPARE	0.5	1	20	7	8	3	60		SPD
SPARE	0.5	1	20	9	10				
SPARE	0.5	1	20	11	12				
CONN. N.E.C. LOAD MULT. (KVA) (KVA)									
LIGHTING	2	2							
MOTOR									
HEATING									
KITCHEN									
RECEPTACLE			8 CONN. LOAD (AMPS)						
MISCELLANEOUS			7 N.E.C. MULT. (AMPS)						
SPARE			62 PERCENT SPARE						
TOTAL	4	4	1.00 KITCHEN MULTIPLIER						
	5	6	1.00 MSC. MULTIPLIER						



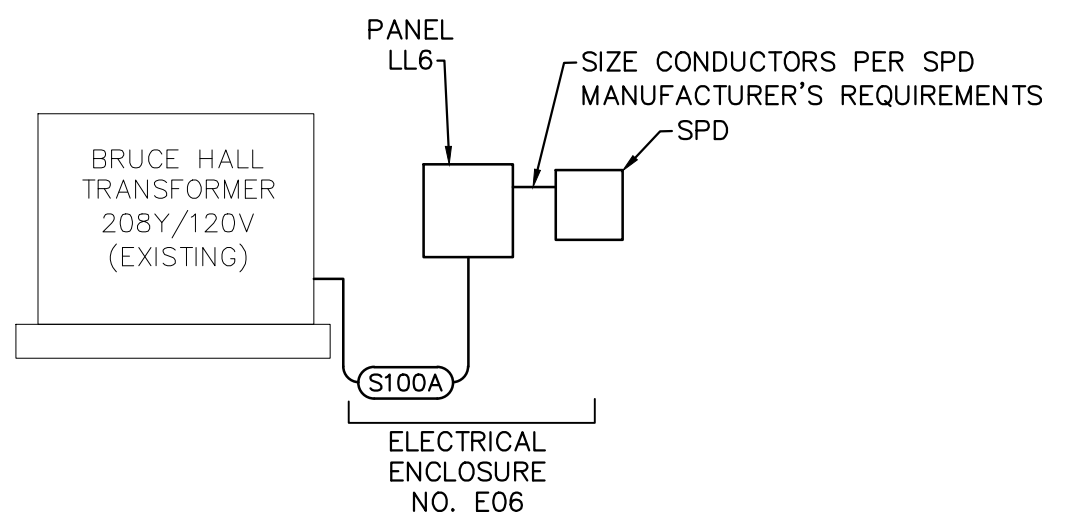
4 ELECTRICAL ONE LINE DIAGRAM
 (EXISTING ENCLOSURE NO. E05)

EX. PANEL HL5									
V (L-L)		480		PHASE 3		BUS 225 A		SECTION 1 OF 1	
V (L-N)		277		WIRE 4		MCB 150 A		SURFACE MOUNTED 14,000 A.I.C.	
DESCRIPTION	LOAD (KVA)	BKR POLES	BKR AMPS	CKT #	CKT #	BKR POLES	BKR AMPS	LOAD (KVA)	DESCRIPTION
LOT 27 LIGHTS*	2.9	1	30	1	2	1	30	0.5	SPARE
LOT 27 LIGHTS*	1.9	1	30	3	4	2	60	8.0	MPZ-HM
ST. LITS. AVE C-SOUTH*	0.6	1	30	7	8	-	-	-	-
ST. LITS. AVE C-NORTH*	2.4	1	30	7	8	3	40	12.2	MPZ-LL5
SPARE	0.5	1	20	9	10	-	-	-	-
SPARE	0.5	1	20	11	12	-	-	-	-
SPARE	0.5	1	20	13	14	1	20	0.5	SPARE
SPARE	0.5	1	20	15	16	1	20	0.5	SPARE
SPARE	0.5	1	20	17	18	1	20	0.5	SPARE
SPARE	0.5	1	20	19	20	3	60		SPD
SPARE	0.5	1	20	21	22	-	-	-	-
SPARE	0.5	1	20	23	24	-	-	-	-
CONN. N.E.C. LOAD MULT. (KVA) (KVA)									
LIGHTING	20	25							
MOTOR	1	1							
HEATING									
KITCHEN									
RECEPTACLE	4	4	41 CONN. LOAD (AMPS)						
MISCELLANEOUS	1	1	42 N.E.C. MULT. (AMPS)						
SPARE			22 PERCENT SPARE						
TOTAL	34	40	1.00 KITCHEN MULTIPLIER						
			1.00 MSC. MULTIPLIER						

FEEDER SCHEDULE	
AMPS	SIZE DESCRIPTION
1000A	(4) #1, IN 2" C

NOTE: WIRE/CONDUIT SIZE SHOWN IS MINIMUM AND SHALL BE INCREASED IF SHOWN OTHERWISE ON DRAWINGS AND AS REQUIRED BY SPECIFICATIONS.

6 FEEDER SCHEDULE



5 ELECTRICAL ONE LINE DIAGRAM
 (ENCLOSURE NO. E06)

PANEL LL6									
V (L-L)		208		PHASE 3		BUS 100 A		SECTION 1 OF 1	
V (L-N)		120		WIRE 4		MCB 100 A		SURFACE MOUNTED 35,000 A.I.C.	
DESCRIPTION	LOAD (KVA)	BKR POLES	BKR AMPS	CKT #	CKT #	BKR POLES	BKR AMPS	LOAD (KVA)	DESCRIPTION
STREET LIGHTS	1.4	2	20	1	2	1	20	0.5	SPARE
SPARE	0.5	1	20	3	4	1	20	0.5	SPARE
SPARE	0.5	1	20	7	8	3	60		SPD
SPARE	0.5	1	20	9	10	-	-		
SPARE	0.5	1	20	11	12	-	-		
CONN. N.E.C. LOAD MULT. (KVA) (KVA)									
LIGHTING	1	2							
MOTOR									
HEATING									
KITCHEN									
RECEPTACLE			14 CONN. LOAD (AMPS)						
MISCELLANEOUS			15 N.E.C. MULT. (AMPS)						
SPARE			87 PERCENT SPARE						
TOTAL	4	4	1.00 KITCHEN MULTIPLIER						
	5	5	1.00 MSC. MULTIPLIER						

EX. MINI POWER ZONE MPZ-HM									
V (L-L)		240		PHASE 1		BUS 100 A		SECTION 1 OF 1	
V (L-N)		120		WIRE 3		MCB 80 A		SURFACE MOUNTED 22,000 A.I.C.	
DESCRIPTION	LOAD (KVA)	BKR POLES	BKR AMPS	CKT #	CKT #	BKR POLES	BKR AMPS	LOAD (KVA)	DESCRIPTION
HIGH MAST LIGHTING	8.0	2	40	1	2	2	40		SPACE
SPARE				3	4	-	-		
SPARE				5	6	1	20		SPACE
SPARE				7	8	1	20		SPACE
SPARE				9	10	1	20		SPACE
SPARE				11	12	1	20		SPACE
CONN. N.E.C. LOAD MULT. (KVA) (KVA)									
LIGHTING	8	10							
MOTOR									
HEATING									
KITCHEN									
RECEPTACLE			33 CONN. LOAD (AMPS)						
MISCELLANEOUS			42 N.E.C. MULT. (AMPS)						
SPARE			PERCENT SPARE						
TOTAL	8	10	1.00 KITCHEN MULTIPLIER						
			1.00 MSC. MULTIPLIER						

EX. MINI POWER ZONE MPZ-LL5									
V (L-L)		208		PHASE 3		BUS 100 A		SECTION 1 OF 1	
V (L-N)		120		WIRE 4		MCB 60 A		SURFACE MOUNTED 22,000 A.I.C.	
DESCRIPTION	LOAD (KVA)	BKR POLES	BKR AMPS	CKT #	CKT #	BKR POLES	BKR AMPS	LOAD (KVA)	DESCRIPTION
PEDESTRIAN POLE LTS	1.9	1	30	1	2	1	20	1.9	PEDESTRIAN RECEPT.
PEDESTRIAN POLE LTS	1.9	1	30	3	4	1	20	1.9	PEDESTRIAN RECEPT.
LIGHTING CONTROLS	0.1	1	20	5	6	1	20	1.0	IRRIGATION CONTROLLER
SPARE	0.5	1	20	7	8	1	20	1.0	ENCLOSURE EXH FANS
SPARE	0.5	1	20	9	10	1	20	0.5	SPARE
SPARE	0.5	1	20	11	12	1	20	0.5	SPARE
CONN. N.E.C. LOAD MULT. (KVA) (KVA)									
LIGHTING	4	5							
MOTOR	1	1							
HEATING									
KITCHEN									
RECEPTACLE	4	4	34 CONN. LOAD (AMPS)						
MISCELLANEOUS	1	1	37 N.E.C. MULT. (AMPS)						
SPARE			18 PERCENT SPARE						
TOTAL	3	3	1.00 KITCHEN MULTIPLIER						
	12	13	1.00 MSC. MULTIPLIER						

EXTERIOR SITE LIGHTING CONTROL SCHEDULE						
ZONE	PHOTOCELL # ON/OFF	HOA SWITCH #	CONTACTOR			NOTES
			CONTACTOR #	RATING	CIRCUITS	
ELECTRICAL ENCLOSURE NO. E02	E02	E02	C-E02	6P-30A	LL2-1,3 LL2-5,7	
ELECTRICAL ENCLOSURE NO. E03	E03	E03	C-E03	4P-30A	HL3-1 HL3-3	
ELECTRICAL ENCLOSURE NO. E04	E04	E04	C-E04	4P-30A	HL4-1 HL4-3	
EXISTING ELECTRICAL ENCLOSURE NO. E05	E05	E05	C-E05	6P-30A	HL5-1, HL5-2, HL5-5, HL5-7 MPZ-LL5-1, MPZ-LL5-3	ENCLOSURE, CONTACTORS, HOA INSTALLED UNDER SEPARATE PROJECT
ELECTRICAL ENCLOSURE NO. E06	E06	E06	C-E06	4P-30A	LL6-1,3	

GENERAL NOTES:
1. PROVIDE AUXILIARY RELAYS AS REQUIRED FOR 2-WIRE CONTROL.
2. CONTACTORS SHALL BE LOCATED IN MAIN ELECTRIC ROOM.
3. PHOTOCELL SHALL BE INSTALLED ON ROOF OF BUILDING, FACING NORTH.
4. PROVIDE PHOTOCELL-ON, PHOTOCELL-OFF CONTROL AND HOA SWITCH FOR HAND (BY-PASS ON/OFF/AUTO OPERATION).
5. ALL RELAYS AND CONTACTORS SHALL BE INSTALLED IN SEPARATE HINGED, LOCKABLE NEMA 1 ENCLOSURES.
6. INSTALL HOA SWITCH IN COVER OF CONTACTOR ENCLOSURE.

LIGHT FIXTURE SCHEDULE (APPLIES TO BASE BID, ALT. No. 2A, ALT. No. 3A)						
TYPE	DESCRIPTION	MANUFACTURER	MOUNTING	LED	VOLTAGE	
A2	PEDESTRIAN FIXTURE: TEMPERED GLASS LENS, CAST ALUMINUM HOUSING, INTEGRAL SURGE PROTECTION, UL 1598 WET LOCATION LISTED, CUSTOM RAL 9005 FINISH, STRAIGHT HOOD STYLE, SLA20 MOUNTING ARM, TENON TO RECEIVE SLA20 ARM WELDED TO POLE TOP PER UNT STANDARD, BEZEL PAINTED WHITE PER UNT STANDARD, 325 mA DRIVE CURRENT, LED (36 TOTAL), TYPE 2 OPTICS. POLE: (RSS) 4.5" X 14'-0" ROUND STRAIGHT STEEL POLE: 0.125" THICKNESS PER UNT STANDARD, CUSTOM RAL 9005 FINISH PER UNT STANDARD, GFI RECEPTACLE (WHERE NOTED), SINGLE ARM SLA20 MOUNTING.	HUBBELL ARCHITECTURAL AREA LIGHTING UCM2 SERIES	14' POLE	40W 4905 LUMENS 70 CRI 5000K	120-277V (UNV)	
A2*	SAME AS TYPE A2 EXCEPT WITH CUSTOM BASE PLATE. MATCH EXISTING BOLT CIRCLE DIAMETER APPROXIMATELY 8" (VERIFY).					
A4	PEDESTRIAN FIXTURE: TEMPERED GLASS LENS, CAST ALUMINUM HOUSING, INTEGRAL SURGE PROTECTION, UL 1598 WET LOCATION LISTED, CUSTOM RAL 9005 FINISH, STRAIGHT HOOD STYLE, SLA20 MOUNTING ARM, TENON TO RECEIVE SLA20 ARM WELDED TO POLE TOP PER UNT STANDARD, BEZEL PAINTED WHITE PER UNT STANDARD, 325 mA DRIVE CURRENT, LED (36 TOTAL), TYPE 4W OPTICS. POLE: (RSS) 4.5" X 14'-0" ROUND STRAIGHT STEEL POLE: 0.125" THICKNESS PER UNT STANDARD, CUSTOM RAL 9005 FINISH PER UNT STANDARD, GFI RECEPTACLE (WHERE NOTED), SINGLE ARM SLA20 MOUNTING.	HUBBELL ARCHITECTURAL AREA LIGHTING UCM2 SERIES	14' POLE	40W 4855 LUMENS 70 CRI 5000K	120-277V (UNV)	
A4*	SAME AS TYPE A4 EXCEPT WITH CUSTOM BASE PLATE. MATCH EXISTING BOLT CIRCLE DIAMETER APPROXIMATELY 8" (VERIFY).					
A4A	SAME AS TYPE A4 WITH AN ADDITIONAL A4 FIXTURE. INCLUDE SLA20-2 MOUNTING ARM FOR 180 DEGREE BACK-TO BACK INSTALLATION ON (1) POLE.			(2) 40W FIXTURES 80W TOTAL 4855 LUMENS EACH 9712 LUMENS TOTAL 70 CRI 5000K		
A5	PEDESTRIAN FIXTURE: TEMPERED GLASS LENS, CAST ALUMINUM HOUSING, INTEGRAL SURGE PROTECTION, UL 1598 WET LOCATION LISTED, CUSTOM RAL 9005 FINISH, STRAIGHT HOOD STYLE, SLA20 MOUNTING ARM, TENON TO RECEIVE SLA20 ARM WELDED TO POLE TOP PER UNT STANDARD, BEZEL PAINTED WHITE PER UNT STANDARD, 325 mA DRIVE CURRENT, LED (36 TOTAL), TYPE 5Q OPTICS. POLE: (RSS) 4.5" X 14'-0" ROUND STRAIGHT STEEL POLE: 0.125" THICKNESS PER UNT STANDARD, CUSTOM RAL 9005 FINISH PER UNT STANDARD, GFI RECEPTACLE (WHERE NOTED), SINGLE ARM SLA20 MOUNTING.	HUBBELL ARCHITECTURAL AREA LIGHTING UCM2 SERIES	14' POLE	40W 5097 LUMENS 70 CRI 5000K	120-277V (UNV)	
A5*	SAME AS TYPE A5 EXCEPT WITH CUSTOM BASE PLATE. MATCH EXISTING BOLT CIRCLE DIAMETER APPROXIMATELY 8" (VERIFY).					
H3	PARKING LOT/STREET FIXTURE: LUMINAIRE WITH MICRO STRIKE 320 OPTICS, INTEGRAL SURGE SUPPRESSION DEVICE, FIELD ROTATABLE OPTICS, UL 1598 WET LOCATION LISTED, DIE-CAST ALUMINUM HOUSING, CUSTOM RAL 9005 FINISH PER UNT STANDARD, SIZE 2, TYPE 3 DISTRIBUTION. POLE: (RTS) 30' ROUND TAPERED STEEL POLE, CUSTOM RAL 9005 FINISH PER UNT STANDARD, INCLUDE VIBRATION DAMPER SYSTEM FOR POLE.	HUBBELL BEACON VIPER AREA/SITE SERIES	30' POLE	241W 3258 LUMENS (33000 LUMEN NOM.) 70 CRI 5000K	120-277V (UNV)	
H3A	PARKING LOT/STREET FIXTURE: (2) LUMINAIRES (BACK TO BACK MOUNTING), WITH MICRO STRIKE 320 OPTICS, INTEGRAL SURGE SUPPRESSION DEVICE, FIELD ROTATABLE OPTICS, UL 1598 WET LOCATION LISTED, DIE-CAST ALUMINUM HOUSING, CUSTOM RAL 9005 FINISH PER UNT STANDARD, SIZE 1, TYPE 3 DISTRIBUTION. POLE: (RTS) 30' ROUND TAPERED STEEL POLE, CUSTOM RAL 9005 FINISH PER UNT STANDARD, INCLUDE VIBRATION DAMPER SYSTEM FOR POLE.	HUBBELL BEACON VIPER AREA/SITE SERIES	30' POLE	(2) 144.5W FIXTURES 289W TOTAL 18510 LUMENS EACH 37020 LUMENS TOTAL 70 CRI 5000K	120-277V (UNV)	
H3BC	SAME AS TYPE H3 EXCEPT WITH BACKLIGHT CONTROL SHIELD (FINISH SAME AS FIXTURE).			241W 22872 LUMENS (33000 LUMEN NOM.) 70 CRI 5000K		
H5	SAME AS TYPE H3 EXCEPT TYPE 5QM (5 SQUARE MEDIUM) DISTRIBUTION.			241W 35180 LUMENS (33000 LUMEN NOM.) 70 CRI 5000K		
HM5	PARKING LOT FIXTURE: LUMINAIRE WITH MICRO STRIKE 320 OPTICS, INTEGRAL SURGE SUPPRESSION DEVICE, FIELD ROTATABLE OPTICS, UL 1598 WET LOCATION LISTED, DIE-CAST ALUMINUM HOUSING, CUSTOM RAL 9005 FINISH PER UNT STANDARD, SIZE 2, TYPE 5QW DISTRIBUTION. POLE: (RTS) 20' ROUND TAPERED STEEL POLE, CUSTOM RAL 9005 FINISH PER UNT STANDARD, INCLUDE VIBRATION DAMPER SYSTEM FOR POLE.	HUBBELL BEACON VIPER AREA/SITE SERIES	20' POLE	150W 22421 LUMENS (21000 LUMENS NOM.) 70 CRI 5000K	120-277V (UNV)	

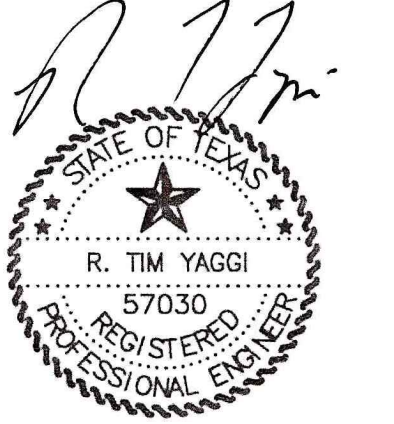
NOTES:
1. SUBMIT WRITTEN CERTIFICATION THAT POLE BEING INSTALLED ON EXISTING FOOTING WILL ACCOMMODATE EXISTING ANCHOR BOLTS.
2. FIXTURE COLORS AND FINISHES SHALL BE CLEARLY MARKED IN SUBMITTALS.
3. SUBMIT POINT BY POINT CALCULATIONS AND RENDERINGS FOR ALL ZONES.
4. POLE VIBRATION DAMPER SYSTEMS SHALL BE INSTALLED IN ALL TYPE "H" SERIES POLES.
5. WHERE FIXTURES ARE SHOWN TO BE SERVED FROM EXISTING CIRCUITS, VERIFY CIRCUIT VOLTAGE AND PROVIDE FIXTURE VOLTAGE TO MATCH.

LIGHT FIXTURE SCHEDULE (APPLIES TO ALT. No. 1, ALT. No. 2B, ALT. No. 3B)						
TYPE	DESCRIPTION	MANUFACTURER	MOUNTING	LED	VOLTAGE	
A2	PEDESTRIAN FIXTURE: TEMPERED GLASS LENS, CAST ALUMINUM HOUSING, INTEGRAL SURGE PROTECTION, UL 1598 WET LOCATION LISTED, CUSTOM RAL 9005 FINISH, STRAIGHT HOOD STYLE, SLA20 MOUNTING ARM, TENON TO RECEIVE SLA20 ARM WELDED TO POLE TOP PER UNT STANDARD, BEZEL PAINTED WHITE PER UNT STANDARD, 325 mA DRIVE CURRENT, LED (36 TOTAL), TYPE 2 OPTICS. POLE: (RSS) 4.5" X 14'-0" ROUND STRAIGHT STEEL POLE: 0.125" THICKNESS PER UNT STANDARD, CUSTOM RAL 9005 FINISH PER UNT STANDARD, GFI RECEPTACLE (WHERE NOTED), SINGLE ARM SLA20 MOUNTING.	HUBBELL ARCHITECTURAL AREA LIGHTING UCM2 SERIES	14' POLE	40W 4312 LUMENS 80 CRI 5000K	120-277V (UNV)	
A2*	SAME AS TYPE A2 EXCEPT WITH CUSTOM BASE PLATE. MATCH EXISTING BOLT CIRCLE DIAMETER APPROXIMATELY 8" (VERIFY).					
A4	PEDESTRIAN FIXTURE: TEMPERED GLASS LENS, CAST ALUMINUM HOUSING, INTEGRAL SURGE PROTECTION, UL 1598 WET LOCATION LISTED, CUSTOM RAL 9005 FINISH, STRAIGHT HOOD STYLE, SLA20 MOUNTING ARM, TENON TO RECEIVE SLA20 ARM WELDED TO POLE TOP PER UNT STANDARD, BEZEL PAINTED WHITE PER UNT STANDARD, 325 mA DRIVE CURRENT, LED (36 TOTAL), TYPE 4W OPTICS. POLE: (RSS) 4.5" X 14'-0" ROUND STRAIGHT STEEL POLE: 0.125" THICKNESS PER UNT STANDARD, CUSTOM RAL 9005 FINISH PER UNT STANDARD, GFI RECEPTACLE (WHERE NOTED), SINGLE ARM SLA20 MOUNTING.	HUBBELL ARCHITECTURAL AREA LIGHTING UCM2 SERIES	14' POLE	40W 4268 LUMENS 80 CRI 5000K	120-277V (UNV)	
A4*	SAME AS TYPE A4 EXCEPT WITH CUSTOM BASE PLATE. MATCH EXISTING BOLT CIRCLE DIAMETER APPROXIMATELY 8" (VERIFY).					
A4A	SAME AS TYPE A4 WITH AN ADDITIONAL A4 FIXTURE. INCLUDE SLA20-2 MOUNTING ARM FOR 180 DEGREE BACK-TO BACK INSTALLATION ON (1) POLE.			(2) 40W FIXTURES 80W TOTAL 4268 LUMENS EACH 8536 LUMENS TOTAL 80 CRI 5000K		
A5	PEDESTRIAN FIXTURE: TEMPERED GLASS LENS, CAST ALUMINUM HOUSING, INTEGRAL SURGE PROTECTION, UL 1598 WET LOCATION LISTED, CUSTOM RAL 9005 FINISH, STRAIGHT HOOD STYLE, SLA20 MOUNTING ARM, TENON TO RECEIVE SLA20 ARM WELDED TO POLE TOP PER UNT STANDARD, BEZEL PAINTED WHITE PER UNT STANDARD, 325 mA DRIVE CURRENT, LED (36 TOTAL), TYPE 5Q OPTICS. POLE: (RSS) 4.5" X 14'-0" ROUND STRAIGHT STEEL POLE: 0.125" THICKNESS PER UNT STANDARD, CUSTOM RAL 9005 FINISH PER UNT STANDARD, GFI RECEPTACLE (WHERE NOTED), SINGLE ARM SLA20 MOUNTING.	HUBBELL ARCHITECTURAL AREA LIGHTING UCM2 SERIES	14' POLE	40W 4480 LUMENS 80 CRI 5000K	120-277V (UNV)	
A5*	SAME AS TYPE A5 EXCEPT WITH CUSTOM BASE PLATE. MATCH EXISTING BOLT CIRCLE DIAMETER APPROXIMATELY 8" (VERIFY).					
H3	PARKING LOT/STREET FIXTURE: LUMINAIRE WITH FIELD SELECTABLE LIGHT OUTPUT - 3 STEPS, INTEGRAL SURGE SUPPRESSION DEVICE, UL WET LOCATION LISTED, DIE-CAST ALUMINUM HOUSING, CUSTOM RAL 9005 FINISH PER UNT STANDARD, SIZE MEDIUM, TYPE 3 DISTRIBUTION. POLE: 30' TAPERED ROUND STEEL POLE, CUSTOM RAL 9005 FINISH PER UNT STANDARD, INCLUDE VIBRATION DAMPER SYSTEM FOR POLE.	RAB ALED SERIES	30' POLE	148W 19192 LUMENS (HIGHEST OUTPUT) 85 CRI 5000K	120-277V (UNV)	
H3A	PARKING LOT/STREET FIXTURE: (2) LUMINAIRES (BACK TO BACK MOUNTING) WITH FIELD SELECTABLE LIGHT OUTPUT - 3 STEPS, INTEGRAL SURGE SUPPRESSION DEVICE, UL WET LOCATION LISTED, DIE-CAST ALUMINUM HOUSING, CUSTOM RAL 9005 FINISH PER UNT STANDARD, SIZE MEDIUM, TYPE 3 DISTRIBUTION. POLE: 30' TAPERED ROUND STEEL POLE, CUSTOM RAL 9005 FINISH PER UNT STANDARD, INCLUDE VIBRATION DAMPER SYSTEM FOR POLE.	RAB ALED SERIES	30' POLE	(2) 148W FIXTURES 296W TOTAL (HIGHEST OUTPUT) 19192 LUMENS EACH 38384 LUMENS TOTAL 85 CRI 5000K	120-277V (UNV)	
H3BC	SAME AS TYPE H3 EXCEPT WITH BACKLIGHT CONTROL SHIELD (FINISH SAME AS FIXTURE).			148W 19192 LUMENS (HIGHEST OUTPUT) 85 CRI 5000K		
H5	PARKING LOT/STREET FIXTURE: LUMINAIRE WITH FIELD SELECTABLE LIGHT OUTPUT - 3 STEPS, INTEGRAL SURGE SUPPRESSION DEVICE, UL WET LOCATION LISTED, DIE-CAST ALUMINUM HOUSING, CUSTOM RAL 9005 FINISH PER UNT STANDARD, SIZE LARGE, TYPE 5 DISTRIBUTION.	RAB ALED SERIES		225W 34807 LUMENS 85 CRI 5000K		
HM5	PARKING LOT/STREET FIXTURE: LUMINAIRE WITH FIELD SELECTABLE LIGHT OUTPUT - 3 STEPS, INTEGRAL SURGE SUPPRESSION DEVICE, UL WET LOCATION LISTED, DIE-CAST ALUMINUM HOUSING, CUSTOM RAL 9005 FINISH PER UNT STANDARD, SIZE MEDIUM, TYPE 5 DISTRIBUTION. POLE: 20' TAPERED ROUND STEEL POLE, CUSTOM RAL 9005 FINISH PER UNT STANDARD, INCLUDE VIBRATION DAMPER SYSTEM FOR POLE.	RAB ALED SERIES	20' POLE	146W 21067 LUMENS (HIGHEST OUTPUT) 85 CRI 5000K	120-277V (UNV)	

NOTES:
1. SUBMIT WRITTEN CERTIFICATION THAT POLE BEING INSTALLED ON EXISTING FOOTING WILL ACCOMMODATE EXISTING ANCHOR BOLTS.
2. FIXTURE COLORS AND FINISHES SHALL BE CLEARLY MARKED IN SUBMITTALS.
3. SUBMIT POINT BY POINT CALCULATIONS AND RENDERINGS FOR ALL ZONES.
4. POLE VIBRATION DAMPER SYSTEMS SHALL BE INSTALLED IN ALL TYPE "H" SERIES POLES.
5. WHERE FIXTURES ARE SHOWN TO BE SERVED FROM EXISTING CIRCUITS, VERIFY CIRCUIT VOLTAGE AND PROVIDE FIXTURE VOLTAGE TO MATCH.



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Texas Registration No. F-9622



07-09-2024

UNIVERSITY OF NORTH TEXAS
PROJECT NAME:
CAMPUS LIGHTING UPGRADES
HIGH MAST ZONES 6, 11, 25, 29 & AVE C
DENTON, TEXAS



REVISIONS:
1. _____
2. _____
3. _____

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

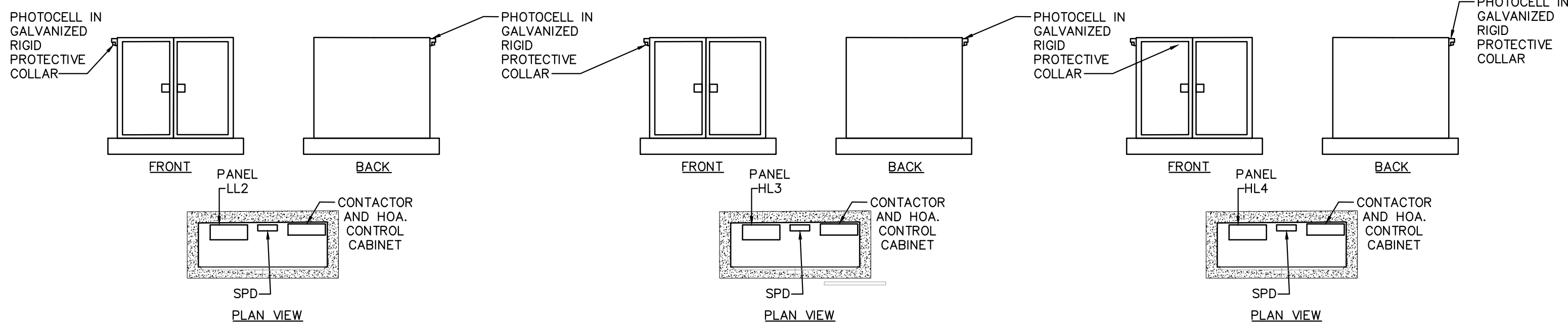
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YE PROJECT NO.: 2210.00

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ELECTRICAL SCHEDULES

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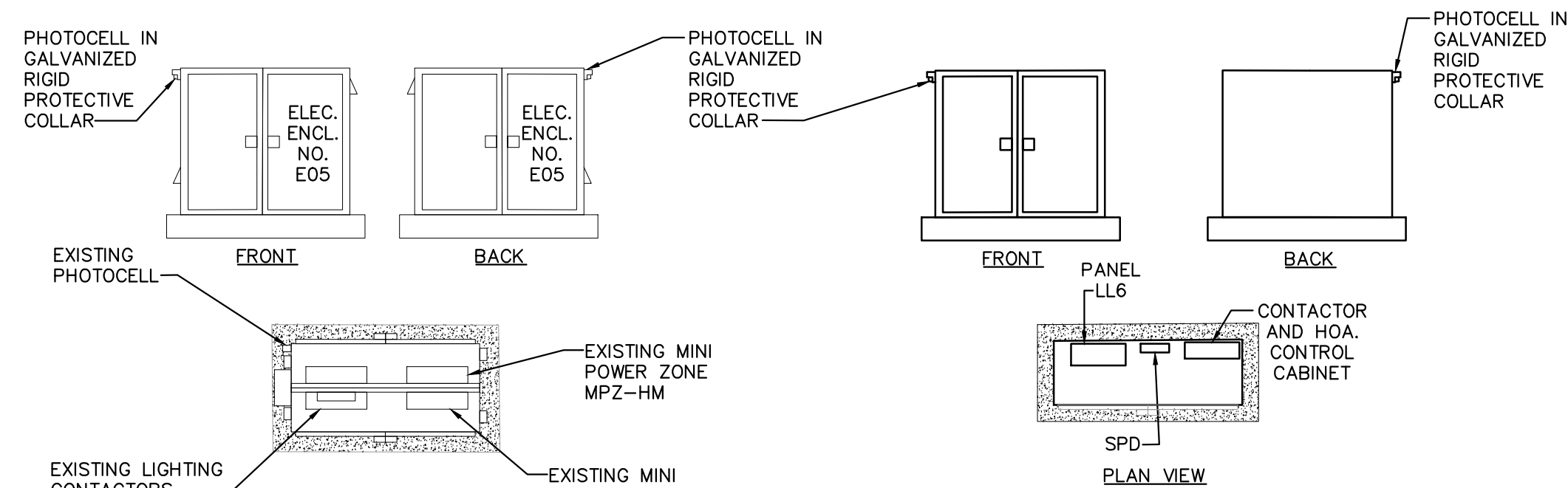
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1 ENCLOSURE DETAIL (ENCLOSURE NO. E02) NOT TO SCALE

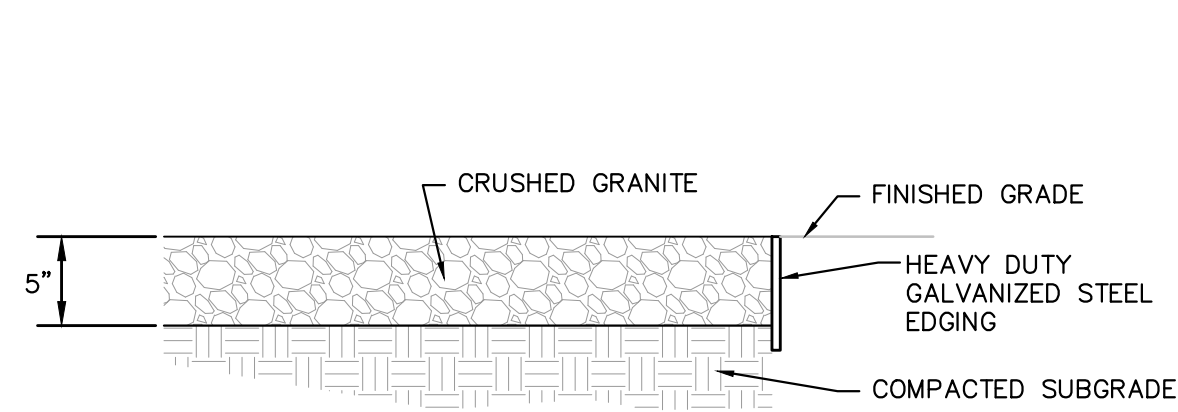
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3 ENCLOSURE DETAIL (ENCLOSURE NO. E04) ALT. NO. 3A/3B NOT TO SCALE

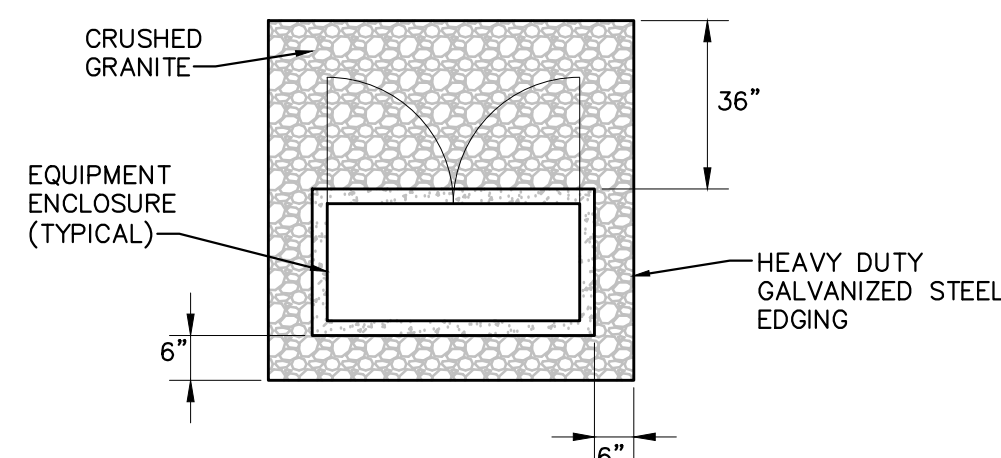


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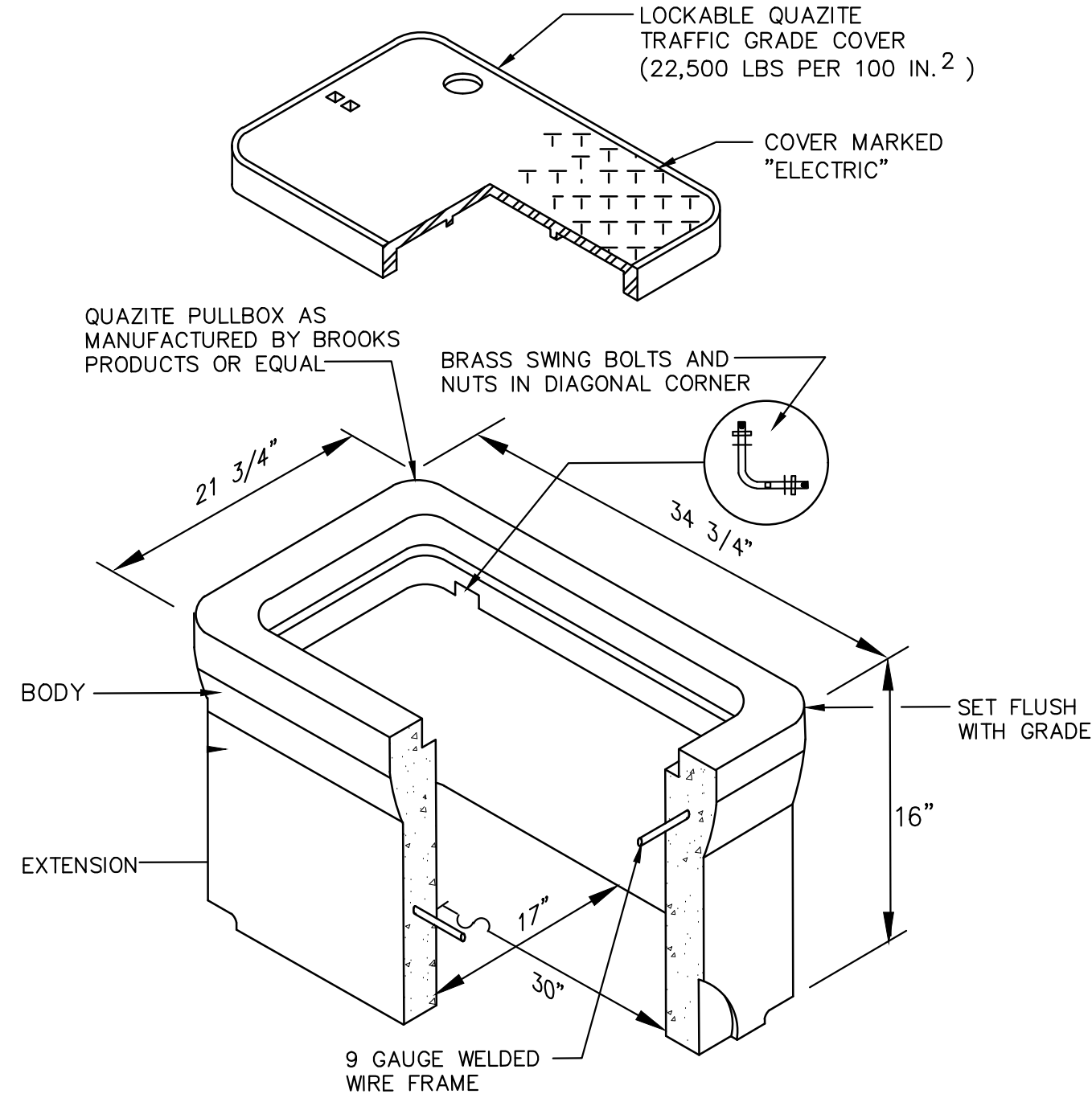
5 ENCLOSURE DETAIL (ENCLOSURE NO. E06) NOT TO SCALE



7 CRUSHED GRANITE DETAIL NOT TO SCALE

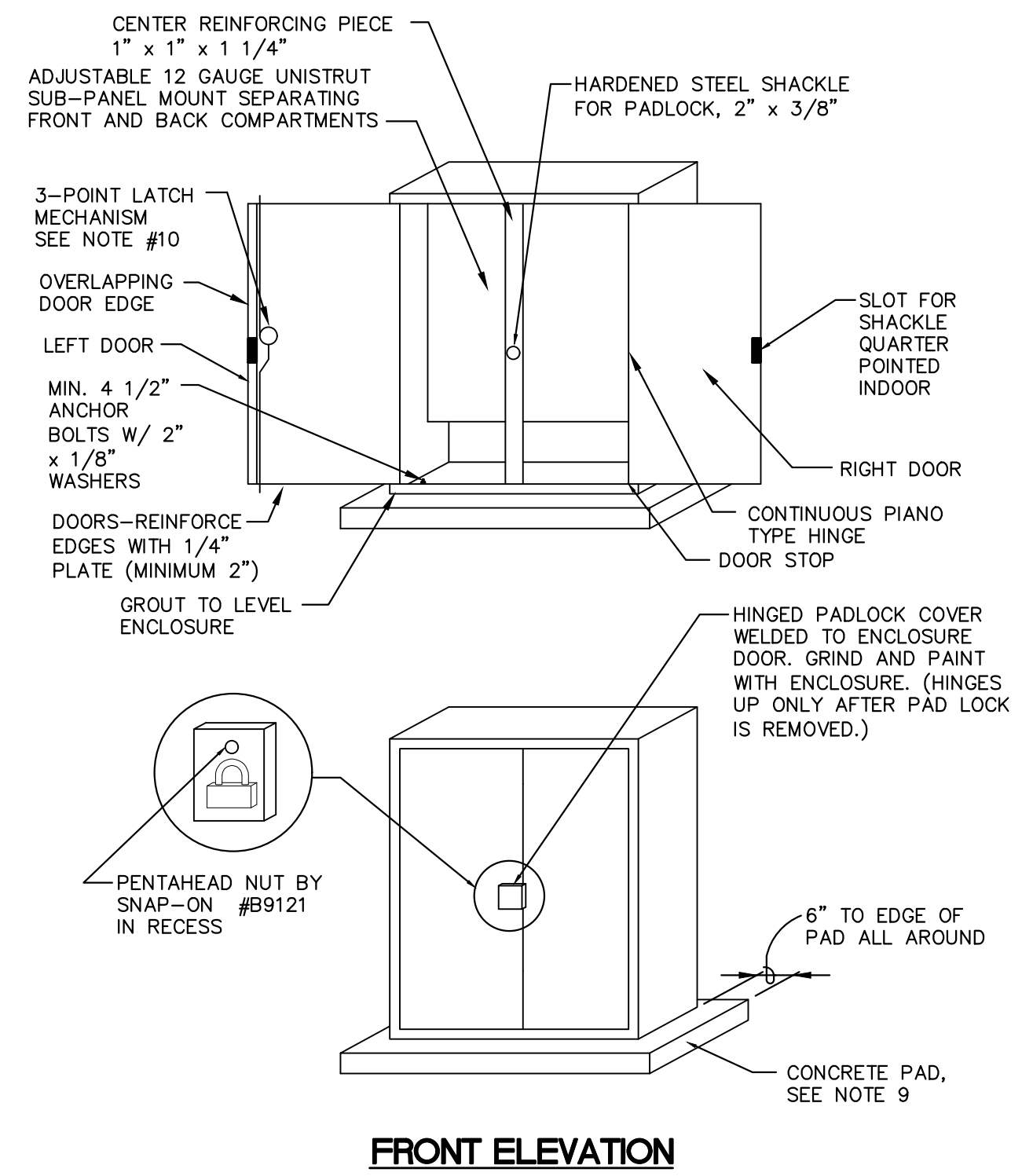


8 CRUSHED GRANITE DETAIL NOT TO SCALE



9 OUTDOOR ELECTRICAL PULLBOX 17"X 30" NOT TO SCALE

NOTES:
1. SET ON 6" SAND CUSHION AT BASE.

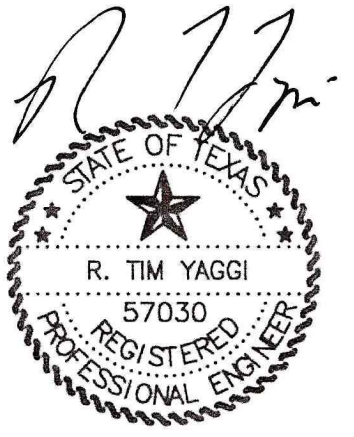


6 TYPICAL ELECTRICAL ENCLOSURES NOT TO SCALE

- NOTES:
- SEE ENCLOSURE EQUIPMENT LAYOUT, SCHEDULES & DETAILS FOR EQUIPMENT INSTALLED HEREIN.
 - CONTINUOUS FOAM GASKETING AROUND DOOR.
 - ENCLOSURE SHALL BE NEMA 4 EQUIVALENT (10 GAUGE STEEL MINIMUM) WITH RAIN SHIELD OVER DOORS.
 - ALL INTERIOR COMPONENTS SHALL BE DEAD FRONT. NO EXPOSED ELECTRICAL TERMINALS SHALL BE VISIBLE. ALL CONDUCTORS SHALL BE INSTALLED IN RACEWAYS.
 - INTERIOR PANELS SHALL BE INSTALLED FOR MOUNTING OF ALL COMPONENTS.
 - WELDED AND CUT JOINTS SHALL BE GROUND SMOOTH.
 - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL COMPONENTS FIT INSIDE ENCLOSURE.
 - SUBMIT DIMENSIONED FABRICATION DRAWINGS WITH INTERIOR COMPONENT LAYOUT FOR ENGINEER APPROVAL.
 - CONCRETE PAD SHALL BE MINIMUM 3" ABOVE GRADE AND MINIMUM 5" BELOW GRADE. ALL TOP EDGES TO BE TOOLED WITH 3/4" CHAMFER. PAD TO BE 6" LARGER THAN ENCLOSURE ON ALL SIDES. PLACE #3 REBAR 6" O.C. BOTH WAYS. MEDIUM BROOM FINISH.
 - 3-POINT LATCHING MECHANISM SHALL BE OPENED AND CLOSED WITH PENTAHEAD NUT WELDED TO LATCHING MECHANISM. RIGHT DOOR IS TO CLOSE FIRST, AND LEFT DOOR WITH LATCHING MECHANISM CLOSING LAST WITH A 4" OVERLAP. PENTAHEAD NUT BY SNAP-ON #B9121 SHALL BE IN RECESS TO PROHIBIT USE OF ANY SOCKET EXCEPT PENTAHEAD SOCKET.
 - ENCLOSURE FINISH SHALL HAVE RUST INHIBITIVE PRIMER AND TWO COATS OF HIGH GRADE POWDER-COAT FINISH, COLOR SHALL BE S&C GREEN.
 - FURNISH TWO (2) PENTAHEAD SOCKETS TO OWNER WITH ENCLOSURE.
 - INSTALL GROUNDING BUSHING ON ALL CONDUIT ENTRIES.
 - CABINET DIMENSIONS SHALL BE DETERMINED BY THE ENCLOSED COMPONENTS. CABINET MINIMUM DIMENSIONS SHALL NOT BE LESS THAN 36"D. HEIGHT SHALL NOT EXCEED 72".
 - PROVIDE EXHAUST FAN PER DETAIL.
 - PROVIDE 2" MINIMUM DIAMETER STEEL PIPE COLLAR TO PROTECT PHOTOCELL.



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HIGH MAST ZONES 6, 11, 25, 29 & AVE C
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REVISIONS:

- 1
- 2
- 3

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

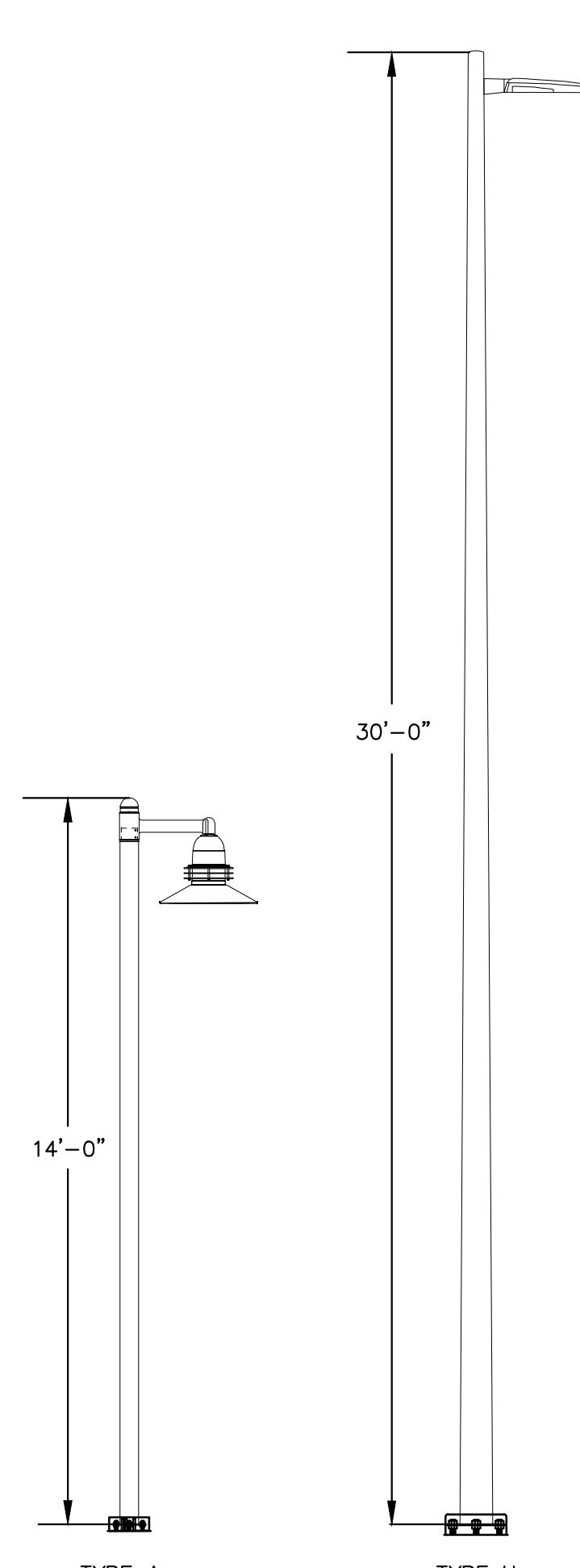
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YE PROJECT NO.: 2210.00

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ELECTRICAL
DETAILS

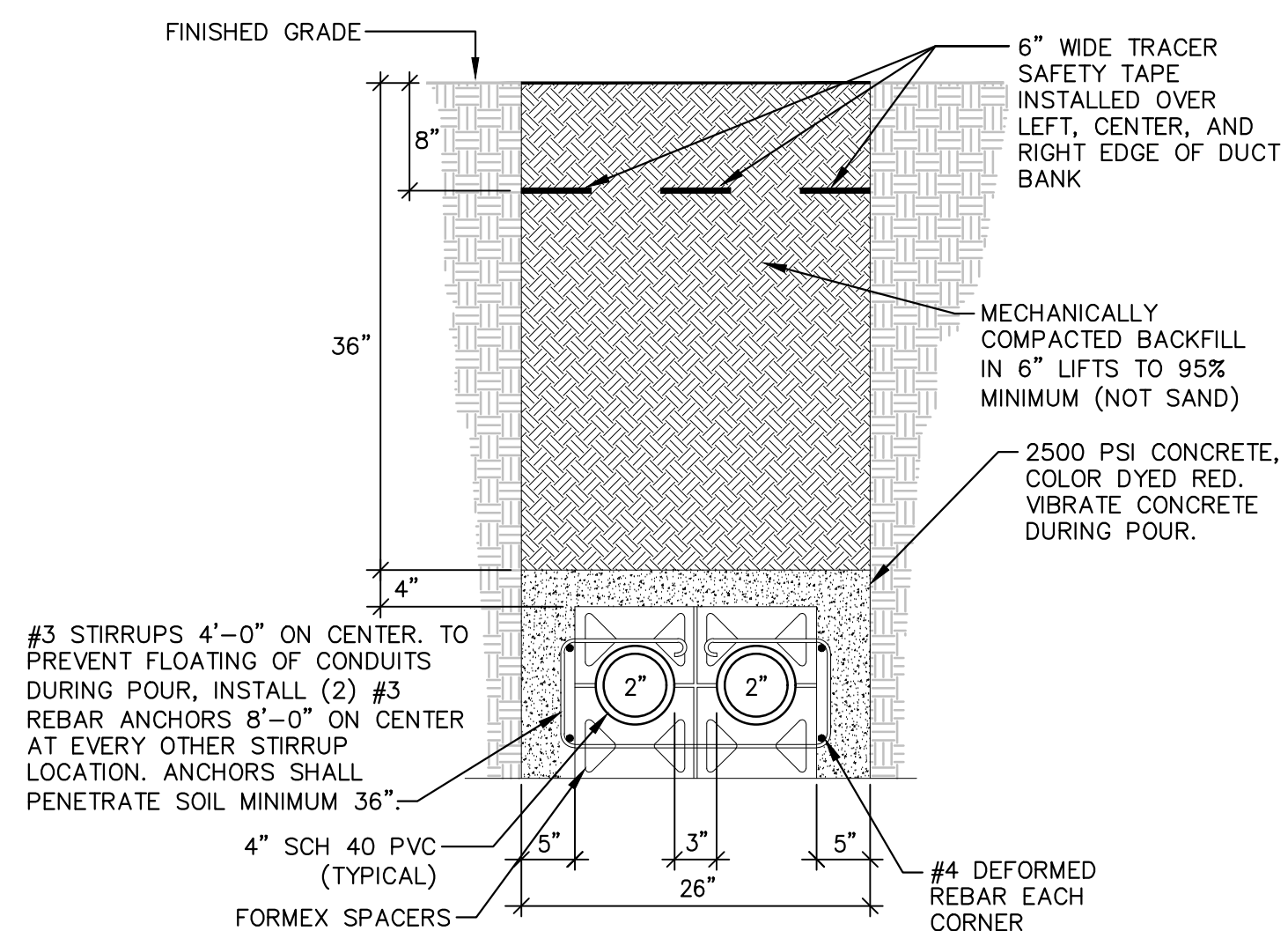
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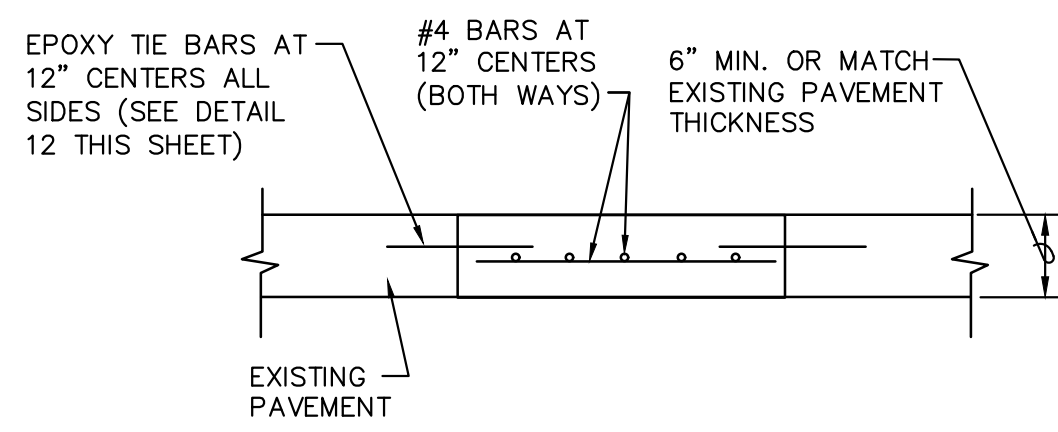
1 TYPE 'A' AND 'H' FIXTURE ELEVATIONS
NOT TO SCALE

- NOTES:
1. DIMENSION DOES NOT INCLUDE POLE FOOTING.



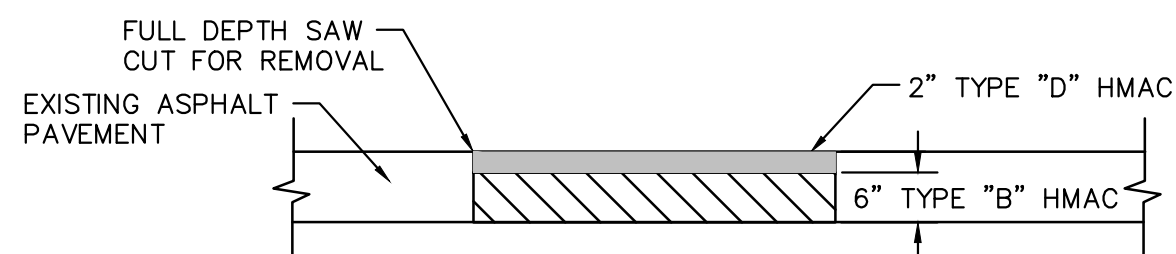
7 SECONDARY DUCT BANK
NOT TO SCALE

- NOTES:
1. ALL DUCT BANKS SHALL BE MINIMUM OF 36" BELOW GRADE UNLESS OTHERWISE NOTED. DEPTHS SHALL BE INCREASED AS NECESSARY TO COORDINATE WITH OTHER WORK AND AS REQUIRED TO MAINTAIN SEPARATION FROM OTHER UTILITIES.
2. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR QUANTITY OF CONDUITS.
3. COMPLY WITH OSHA TRENCH EXCAVATION REGULATIONS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.



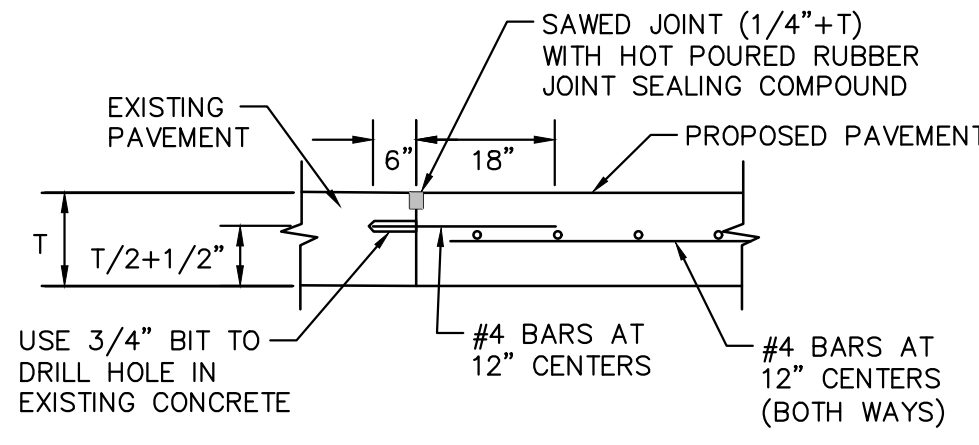
2 CONCRETE CUT AND PATCH DETAIL
NOT TO SCALE

- NOTES:
1. FOR SIDEWALK REPAIR, USE #3 BARS ON 18" CENTERS (BOTH WAYS) AND MATCH EXISTING PAVEMENT THICKNESS.
2. A SAW SHALL BE USED TO CUT CONCRETE FULL DEPTH PRIOR TO OPENING THE DITCH IN ORDER TO ENSURE A NEAT STRAIGHT EDGE. BROKEN OR SPALLED EDGES SHALL BE RE-SAWED FULL DEPTH BETWEEN JOINTS OR FULL LENGTH OF CUT.
3. ALL CONCRETE PAVEMENT SHALL BE 6-SACK CONCRETE MIX.
4. ALL CONCRETE PAVEMENT MUST BE VIBRATED.



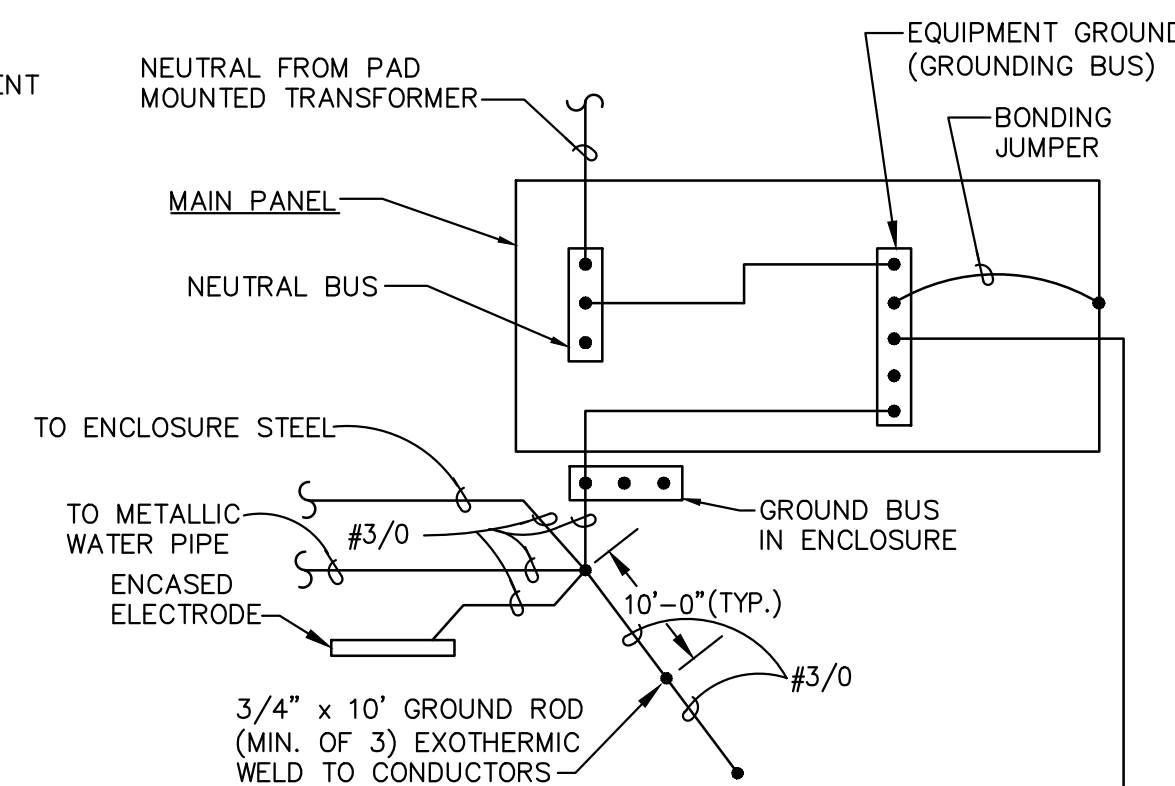
3 ASPHALT CUT AND PATCH DETAIL
NOT TO SCALE

- NOTES:
1. A SAW SHALL BE USED TO CUT ASPHALT FULL DEPTH PRIOR TO OPENING THE DITCH IN ORDER TO ENSURE A NEAT STRAIGHT EDGE. BROKEN OR SPALLED EDGES SHALL BE RE-SAWED FULL DEPTH BETWEEN JOINTS OR FULL LENGTH OF CUT.



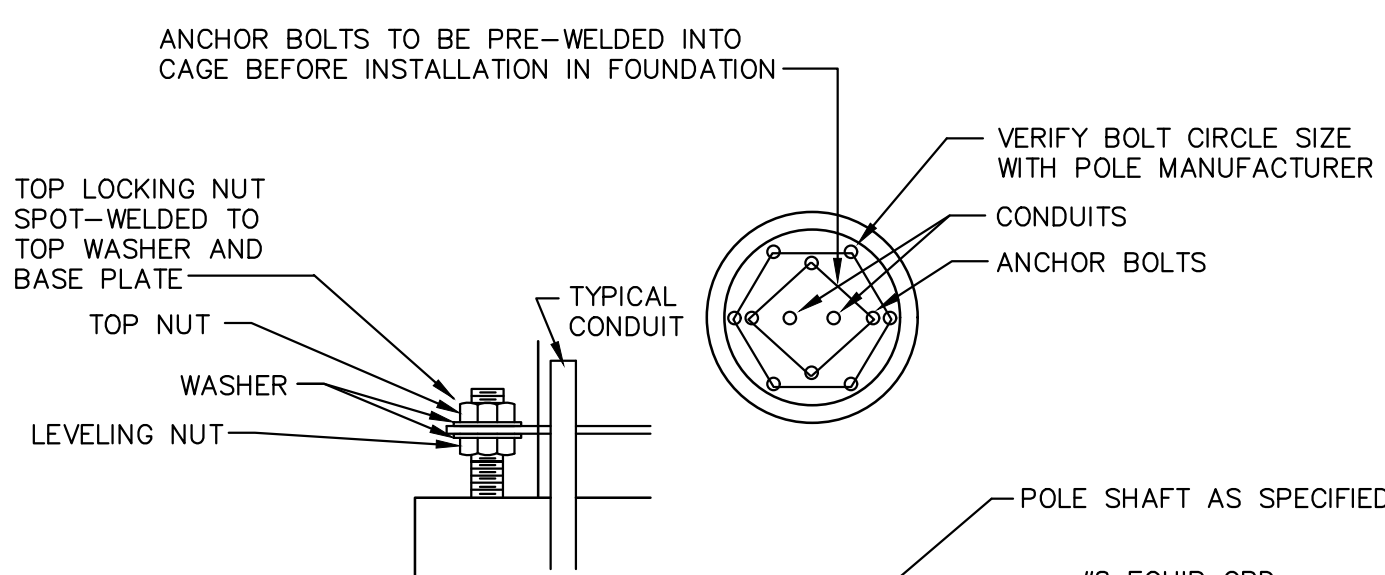
4 EPOXY TIE-BAR DETAIL
NOT TO SCALE

- NOTES:
1. USE 3/4" BIT TO DRILL HOLE IN EXISTING CONCRETE.
2. SAWED JOINT (1/4"+T) WITH HOT POURED RUBBER JOINT SEALING COMPOUND.
3. #4 BARS AT 12" CENTERS (BOTH WAYS).



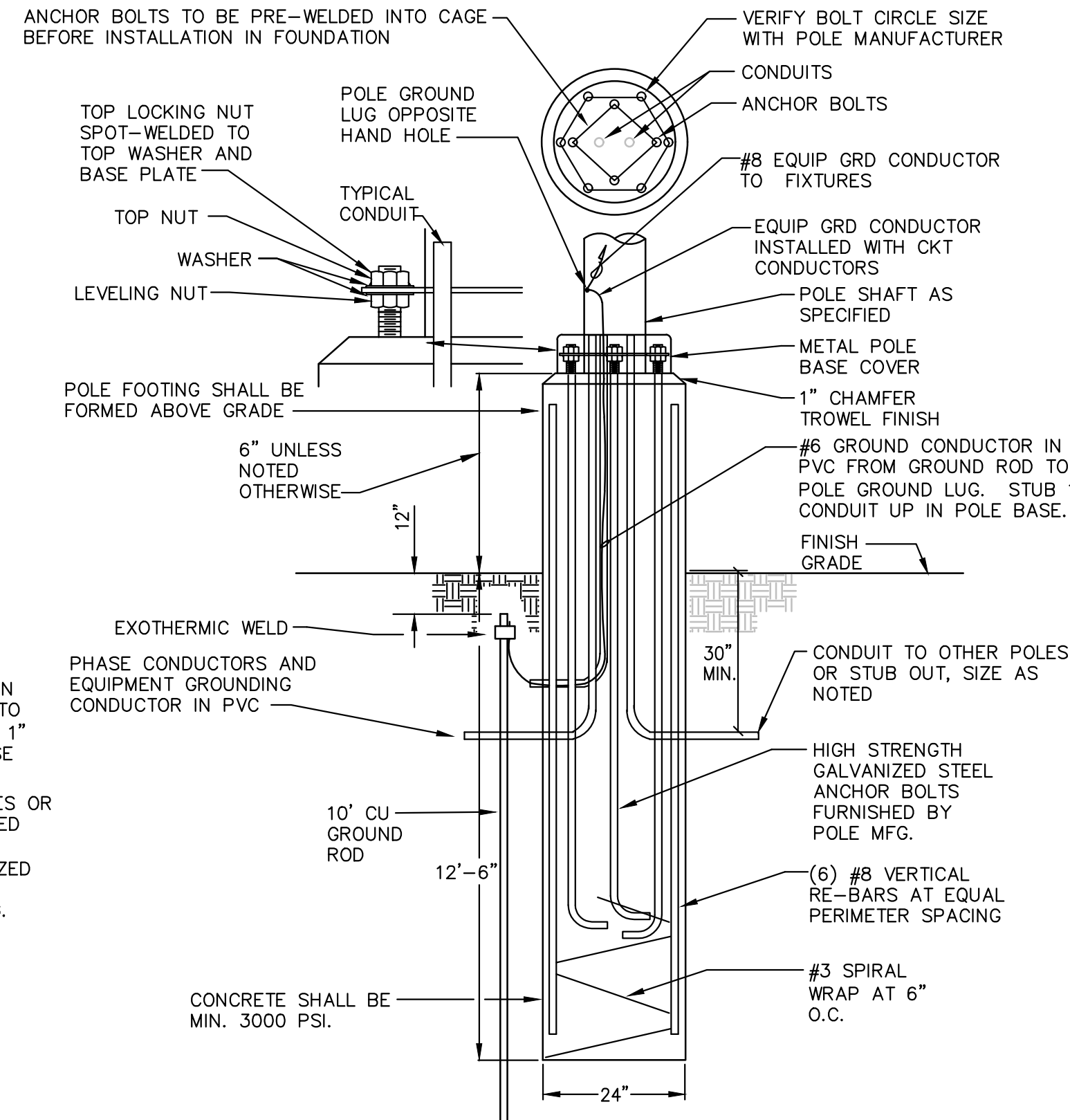
6 GROUNDING SCHEMATIC
NOT TO SCALE

- NOTES:
1. MEASURED RESISTANCE TO GROUND SHALL NOT EXCEED 2 OHMS.



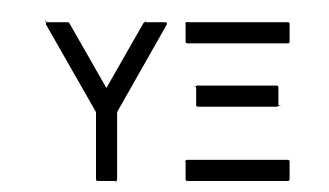
8 TYPE 'A' SERIES LIGHTING POLE AND FOOTING DETAIL
NOT TO SCALE

- NOTES:
1. FOUNDATION DIAMETER SHALL NOT BE LESS THAN 6" LARGER THAN POLE BASE DIAMETER.
2. MAX WIND SPEED = 115 MPH, 3 SEC. GUST
3. MIN 1% STEEL.
4. MIN. LAPSPlice LENGTH = 60" X BAR DIAMTER
5. CLEAR COVER SHALL BE 3" UNLESS NOTED OTHERWISE.
6. DRILLED SHAFT REINFORCEMENT SHALL BE GRADE 60.



9 TYPE 'H' SERIES LIGHTING POLE AND FOOTING DETAIL
NOT TO SCALE

- NOTES:
1. FOUNDATION DIAMETER SHALL NOT BE LESS THAN 6" LARGER THAN POLE BASE DIAMETER.
2. MAX WIND SPEED = 115 MPH, 3 SEC. GUST
3. MIN 1% STEEL.
4. MIN. LAPSPlice LENGTH = 60" X BAR DIAMTER
5. CLEAR COVER SHALL BE 3" UNLESS NOTED OTHERWISE.
6. DRILLED SHAFT REINFORCEMENT SHALL BE GRADE 60.



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Texas Registration No. F-9622



07-09-2024

UNIVERSITY OF NORTH TEXAS

PROJECT NAME:
CAMPUS LIGHTING UPGRADES
HIGH MAST ZONES 6, 11, 25, 29 & AVE C
DENTON, TEXAS



REVISIONS:
1
2
3

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

DRAWN BY: RLT

YE PROJECT NO.: 2210.00

SHEET CONTENTS:
ELECTRICAL
DETAILS

SHEET NUMBER:
E5.02



07-09-2024

UNIVERSITY OF NORTH TEXAS

PROJECT NAME:
 CAMPUS LIGHTING UPGRADES
 HIGH MAST ZONES 6, 11, 25, 29 & AVE C
 DENTON, TEXAS



REVISIONS:

- ① _____
- ② _____
- ③ _____

DATE ISSUED: 07-09-2024

DESIGN BY: RTY

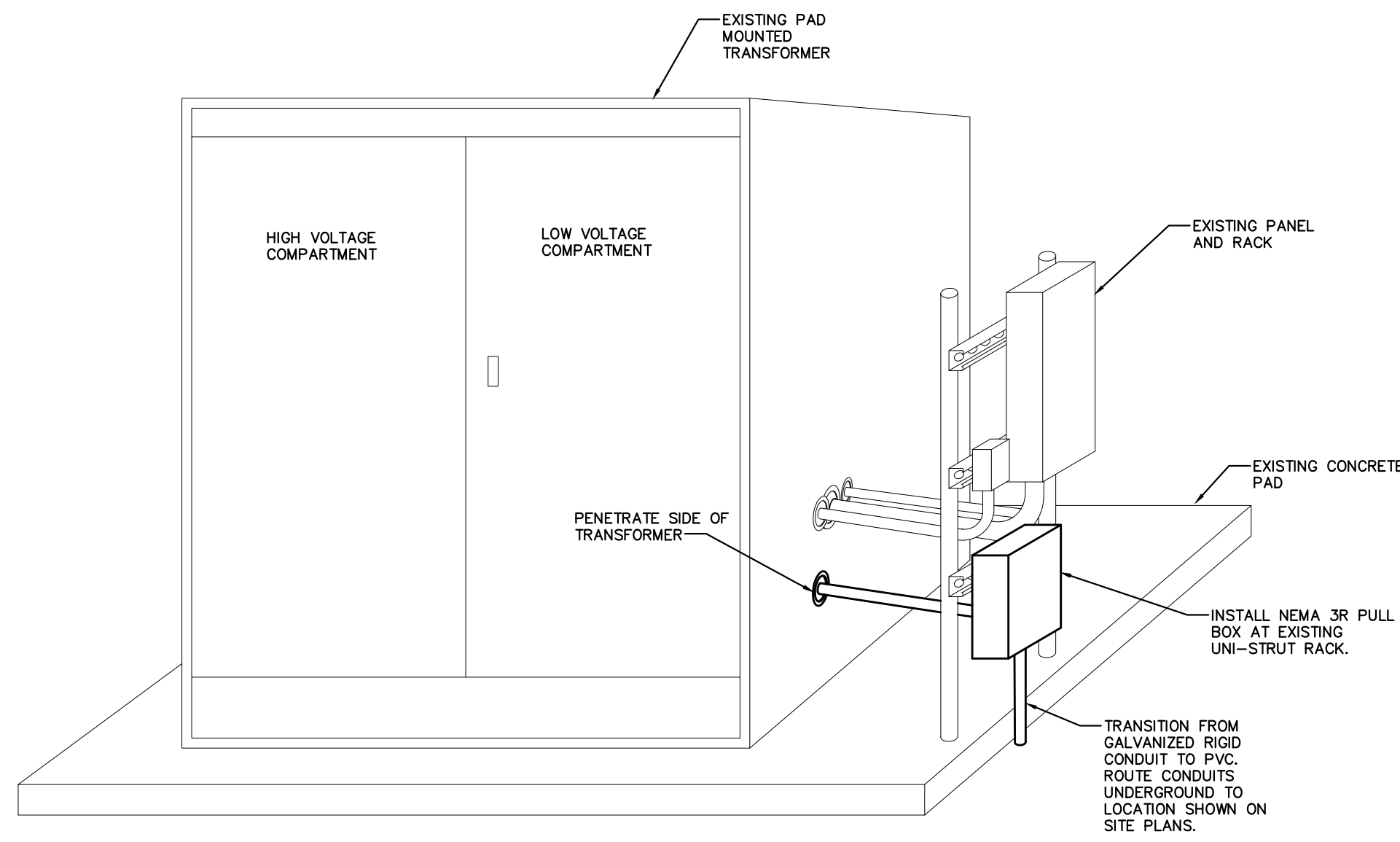
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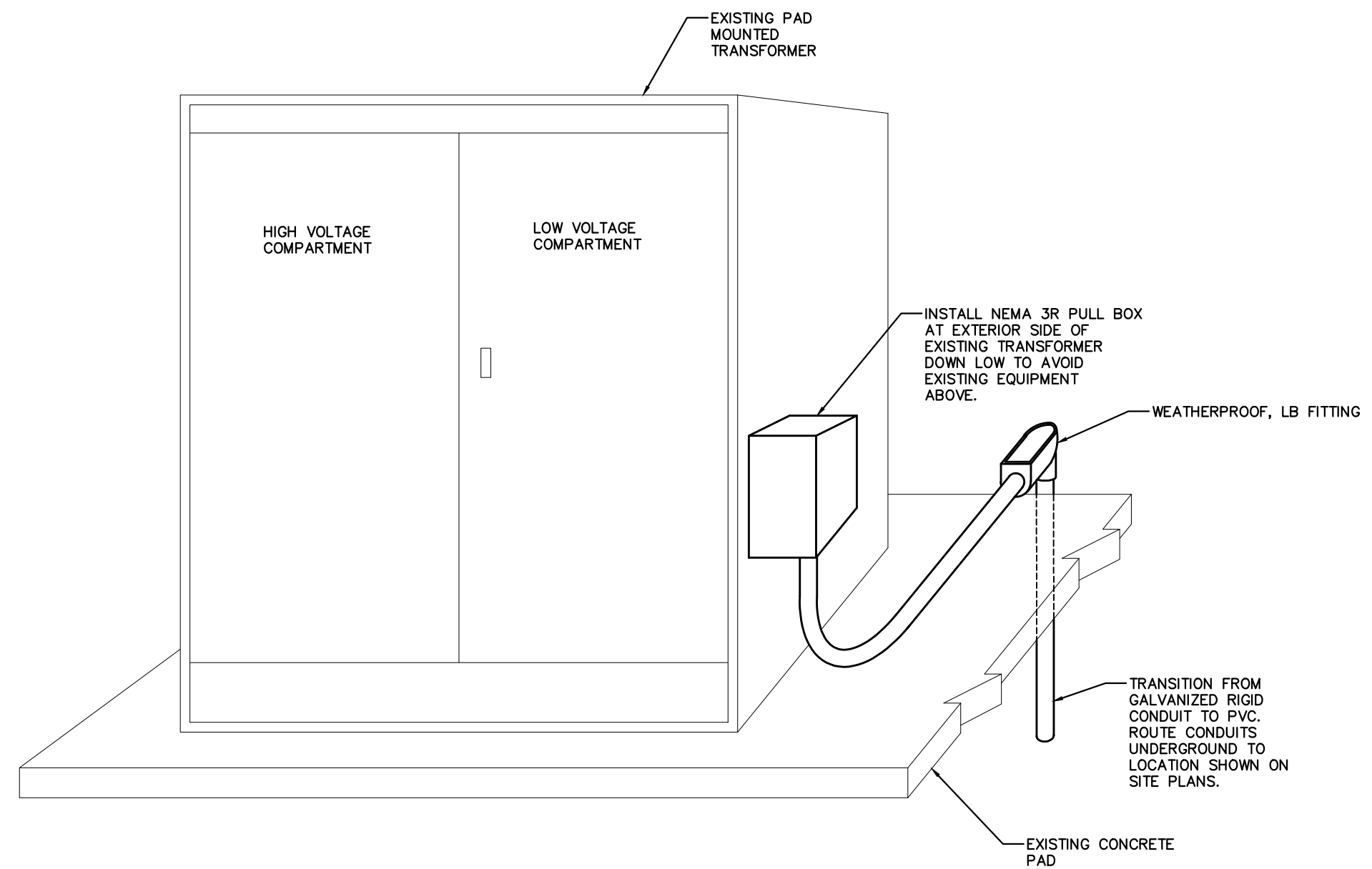
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 DETAILS

SHEET NUMBER:

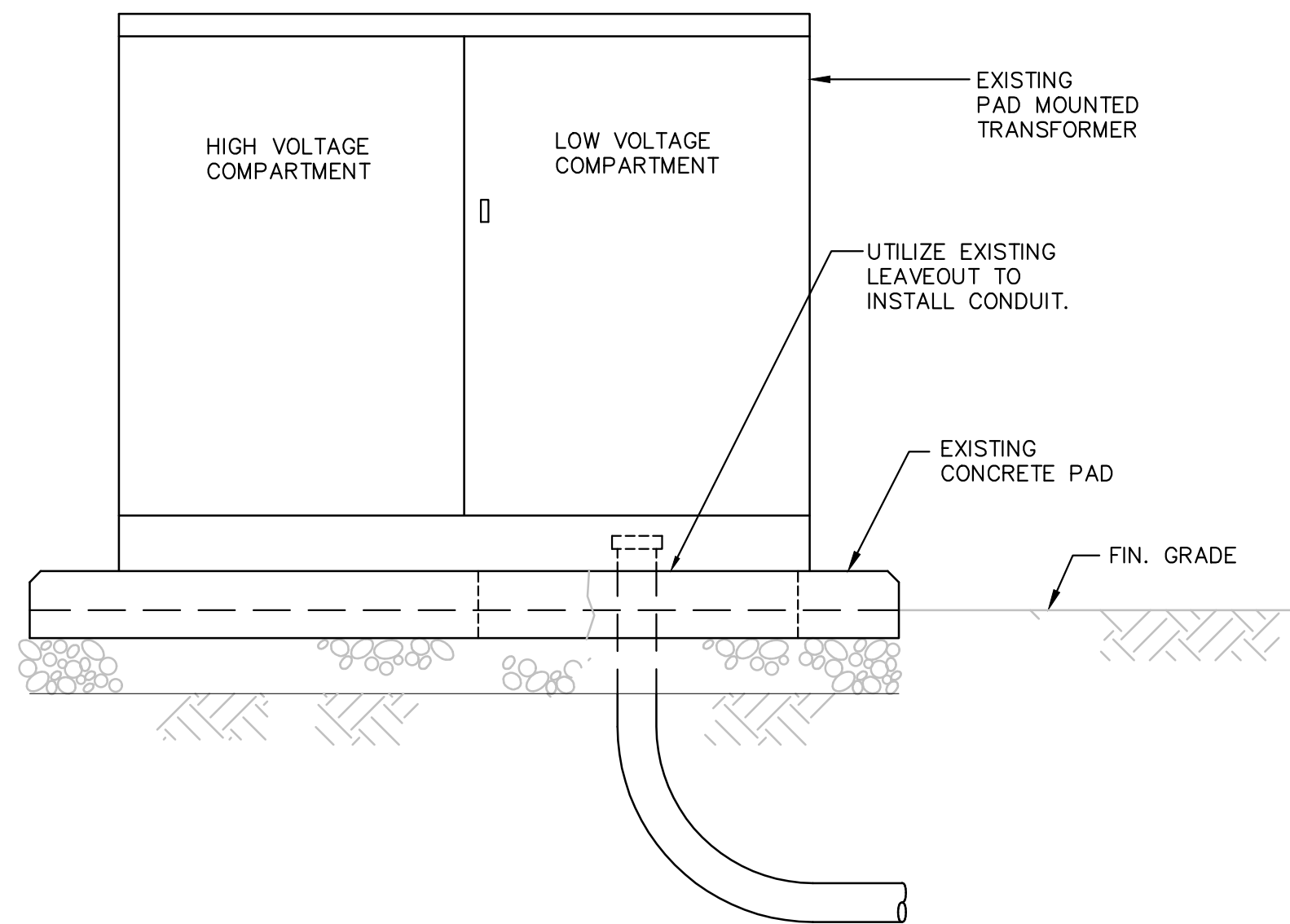
E5.03



① **TRANSFORMER CONDUIT EXIT DETAIL**
SERVES ELECTRICAL ENCLOSURE NO. E02
 NOT TO SCALE



② **TRANSFORMER CONDUIT EXIT DETAIL**
SERVES ELECTRICAL ENCLOSURE NO. E03
 NOT TO SCALE



③ **TRANSFORMER CONDUIT EXIT DETAIL**
(XFMRS SERVING ELECTRICAL ENCLOSURES NO. E04 AND E06)
 NOT TO SCALE