City of Phoenix

OFFICE OF THE CITY ENGINEER
DESIGN AND CONSTRUCTION PROCUREMENT
200 W. Washington Street, 5th Floor
Phoenix, Arizona 85003-1611

HOHOKAM DRAINAGE PROGRAM 1
ENGINEERING SERVICES
PROJECT Nos.
ST83140137, ST83140139, ST83140142 & ST83140143

RFx 6000001645

NOTIFICATION LETTER NO. 1

AUGUST 21, 2024

This notification letter shall become part of the Request for Qualifications for the above referenced project.

Q1.	Which time is correct? The City's website states one date & time and the RFQ states a different time on page 5, please clarify.
A1.	**DO NOT follow the ProcurePHX website RFx 1645 Submission Deadline time of 14:00:00 hours. Follow the RFQ Section V, Submittal Requirements, Submittals: bullet five- Submit electronically the Statement of Qualifications by 12:00 noon, Phoenix time, on Friday August 23, 2024. Submit via email to kathleen.kennedy@phoenix.gov.**
Q2.	Please clarify Evaluation Criteria D. 2, 3, 4, 6, and 7 is accurate?
A2.	**The evaluation criteria D. 2, 3, 4, 6, and 7 in the Request for Qualifications are accurate as written.**
Q3.	On page 4, Criteria D – Items 3 & 6 seem to be the same question just worded differently. Will the city combine and reword the question.
A3.	**Items 3 and 6 serve different purposes: Item 3 focuses on engaging stakeholders for communication and collaboration, while Item 6 covers broader coordination and communication efforts, including public outreach management.**
Q4.	On page 4, Criteria D – Items 4 & 7 seem to be the same question just worded differently. Will the city combine and reword the question.
A4.	**Items 4 and 7 address different aspects of quality and innovation: Item 4 emphasizes innovative solutions and value engineering, while Item 7 focuses solely on the quality assurance and control processes.**
Q5.	On page 4, Criteria E – Item 5 seems to be a left-over item from a previous RFQ, are we to respond to this in our submittal.

A5.	**Criteria E, Item 5, though standard, is still relevant for this Request for Qualifications, as it pertains to staffing availability and the potential use of an owner allowance if additional services are required.**
Q6.	The “ST” numbers in the power point slide for Elements 2 and 3 are different from the “ST” numbers shown in the RFP. Please clarify which one is correct.
A6.	**The ST numbers for Elements 2 and 3 are correct, but the order in the Request for Qualifications does not coincide with the element numbers in the PowerPoint.**
Q7.	Criteria D, Item 2, on page 3, there is a section a., but next page 4, on top of page, it jumps back to section d. Is section d miss labeled?
A7.	**Yes. Request for Qualifications, Section IV-Statement of Qualifications Evaluation Criteria: Delete the following section: Sec. IV, Subparagraph D-2.d, Page 4: “d. Highlight methods for maintaining project timelines and budgets while ensuring quality and performance standards” and replace with: Sec. IV, Subparagraph D-2.b, Page 4: “b. Highlight methods for maintaining project timelines and budgets while ensuring quality and performance standards”.**
Q8.	Design quality of topographics, is the PM aware of and covers that?
A8.	**The Flood Control District of Maricopa County (FCDMC) Area Drainage Master Plan (ADMP) Level 3 Report (page 2) uses detailed hydrologic and hydraulic models based on a 10-year, 6-hour design event, focusing on storm drain systems, detention basins, and flow attenuation with comprehensive conceptual plans for infrastructure improvements. While topographic surveys are part of the design phase, the report does not explicitly address the quality of the topographic data.**
Q9.	Th current Park refurbishing plans, can they be provided?
A9.	**See Attached.**
Q10.	Is softball field included?
A10.	**No.**
Q11.	Is City maintaining improvements?
A11.	**Yes**
Q12.	Will Flood Control review 30, 60, 90% plans?
A12.	**Yes.**

All other terms and conditions remain unchanged.

Attachments:
Pre-Final Highline Park Plan Set (148 Pages)

Kathleen Kennedy
Contracts Specialist II
CITY OF PHOENIX
DESIGN AND CONSTRUCTION PROCUREMENT

**********END OF NOTIFICATION**********

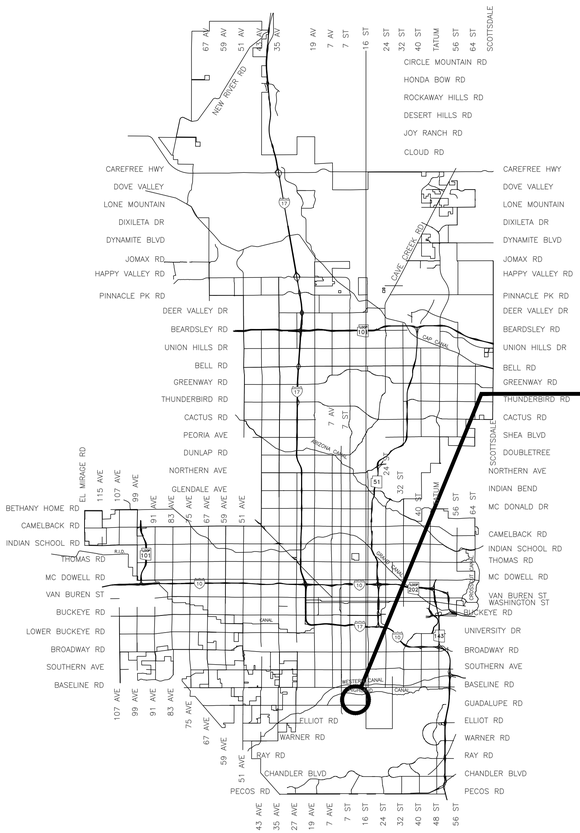
CITY OF PHOENIX

OFFICE OF THE CITY ENGINEER

100% PRE-FINAL

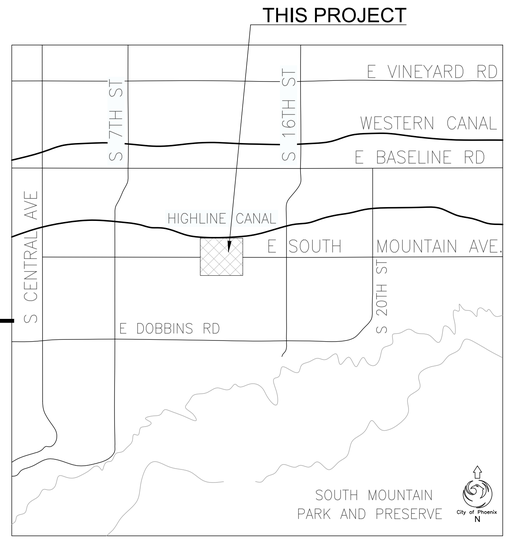
PARKS AND RECREATION DEPARTMENT
HIGHLINE PARK
1346 E SOUTH MOUNTAIN AVENUE, PHOENIX, AZ 85042
PROJECT NUMBER: PA75200668-1

2024



VICINITY MAP

NTS



SHEET INDEX:

1	GN-101	OVERALL PROJECT COVER SHEET
2	GN-102	SITE PLAN
3	PI-101	LANDSCAPE INVENTORY AND SALVAGE COVER
4-7	PI-201 - PI-204	LANDSCAPE INVENTORY AND SALVAGE PLAN
8-10	PI-301 - PI-303	LANDSCAPE INVENTORY AND SALVAGE INDEX
11	SW-101	STORM WATER MANAGEMENT COVER SHEET
12-13	SW-201 - SW-202	STORM WATER MANAGEMENT PLAN
14	SW-301	STORM WATER MANAGEMENT DETAILS
15	WL-201	POTABLE WATER LINE PLAN
16	D-101	DEMOLITION GENERAL NOTES
17-20	D-201 - D-204	DEMOLITION PLAN
21-23	GR01 - GR03	GRADING & DRAINAGE SHEET
24	DD01	SWALE DITCH DETAIL SHEET
24-26	RB01 - RB02	RAIN HARVEST BASIN SHEET
27	RB03	RAIN HARVEST OUTLET SHEET
28	SGN01	SEWER GENERAL NOTES SHEETS
29-30	SS01 - SS02	SEWER PLAN & PROFILE SHEET
31	HS-101	SITE AMENITIES SCHEDULE
32-40	HS-201 - HS-209	HARDSCAPE PLAN
41-47	HS-301 - HS-307	HARDSCAPE PLAN ENLARGEMENT
48-58	HS-401 - HS411	HARDSCAPE DETAILS
59	S01	POST-TENSIONED FOUNDATION NOTES
60	S02	POST-TENSIONED FOUNDATION PLAN BASKETBALL COURTS
61	S03	POST-TENSIONED FOUNDATION PLAN PICKLEBALL COURTS
62	S04	POST-TENSIONED FOUNDATION PLAN TENNIS COURTS
63	S05	POST-TENSIONED FOUNDATION DETAILS
64	LS-101	LANDSCAPE GENERAL NOTES
65-73	LS-201 - LS-209	LANDSCAPE PLAN
74-82	LS-301 - LS-309	SURFACE MATERIAL PLAN
83	LS-401	LANDSCAPE AND SURFACE MATERIAL DETAILS
84	IR-101	IRRIGATION GENERAL NOTES
85	IR-102	IRRIGATION LEGEND
86	IR-103	IRRIGATION MAINLINE PLAN
87	IR-104	IRRIGATION WIRE DIAGRAM
88-96	IR-201 - IR-209	IRRIGATION PLAN
97-99	IR-301 - IR-303	IRRIGATION DETAILS
100	SE1.1	SITE ELECTRICAL COVER SHEET
101-109	SE2.1 - SE2.9	SITE ELECTRICAL PLAN
110-114	SE3.1 - SE3.5	SITE ELECTRICAL DETAILS
115-124	SE4.1 - SE4.10	PHOTOMETRIC ANALYSIS
125	A-1	SHEET INDEX, PROJECT DATA AND ARCHITECTURAL SITE PLAN
126	A-2	DIMENSION FLOOR PLAN
127	A-2.1	REFERENCE FLOOR PLAN
128	A-3	BUILDING SECTION AND DETAILS
129	A-4	EXTERIOR ELEVATIONS
130	A-5	REFLECTED CEILING PLAN AND ROOF PLAN
131	A-6	RESTROOM ELEVATIONS, ADA GUIDELINES, DOOR SCHEDULE
132	RS-1.1	GENERAL STRUCTURAL NOTES
133	RS-1.2	TYPICAL DETAILS
134	RS-2.1	FOUNDATION PLAN
135	RS-2.2	ROOF FRAMING PLAN
136	RS-3.1	FOUNDATION DETAILS
137	RS-4.1	FRAMING DETAILS
138	M100	MECHANICAL PLAN
139	P100	PLUMBING SCHEDULES AND PLANS
140	P101	PLUMBING SCHEMATICS
141	P201	PLUMBING DETAILS
142	P301	PLUMBING SPECIFICATIONS
143-144	RE1.1 - RE1.2	RESTROOM SITE ELECTRICAL COVER SHEET
145-146	RE2.1 - RE2.2	RESTROOM ELECTRICAL PLAN
147-148	RE3.1 - RE3.2	RESTROOM ELECTRICAL DETAILS

MAYOR

KATE GALLEGO

CITY COUNCIL

DISTRICT NO. 1 - ANN O'BRIEN

DISTRICT NO. 2 - JIM WARING

DISTRICT NO. 3 - DEBRA STARK

DISTRICT NO. 4 - LAURA PASTOR

DISTRICT NO. 5 - BETTY GUARDADO

DISTRICT NO. 6 - KEVIN ROBINSON

DISTRICT NO. 7 - YASSAMIN ANSARI

DISTRICT NO. 8 - KESHA HODGE WASHINGTON

CITY MANAGER

JEFF BARTON

CITY ENGINEER

ERIC J. FROBERG, PE

APPROVALS

(CLIENT DEPARTMENT) DATE

ENGINEERING MANAGER DATE

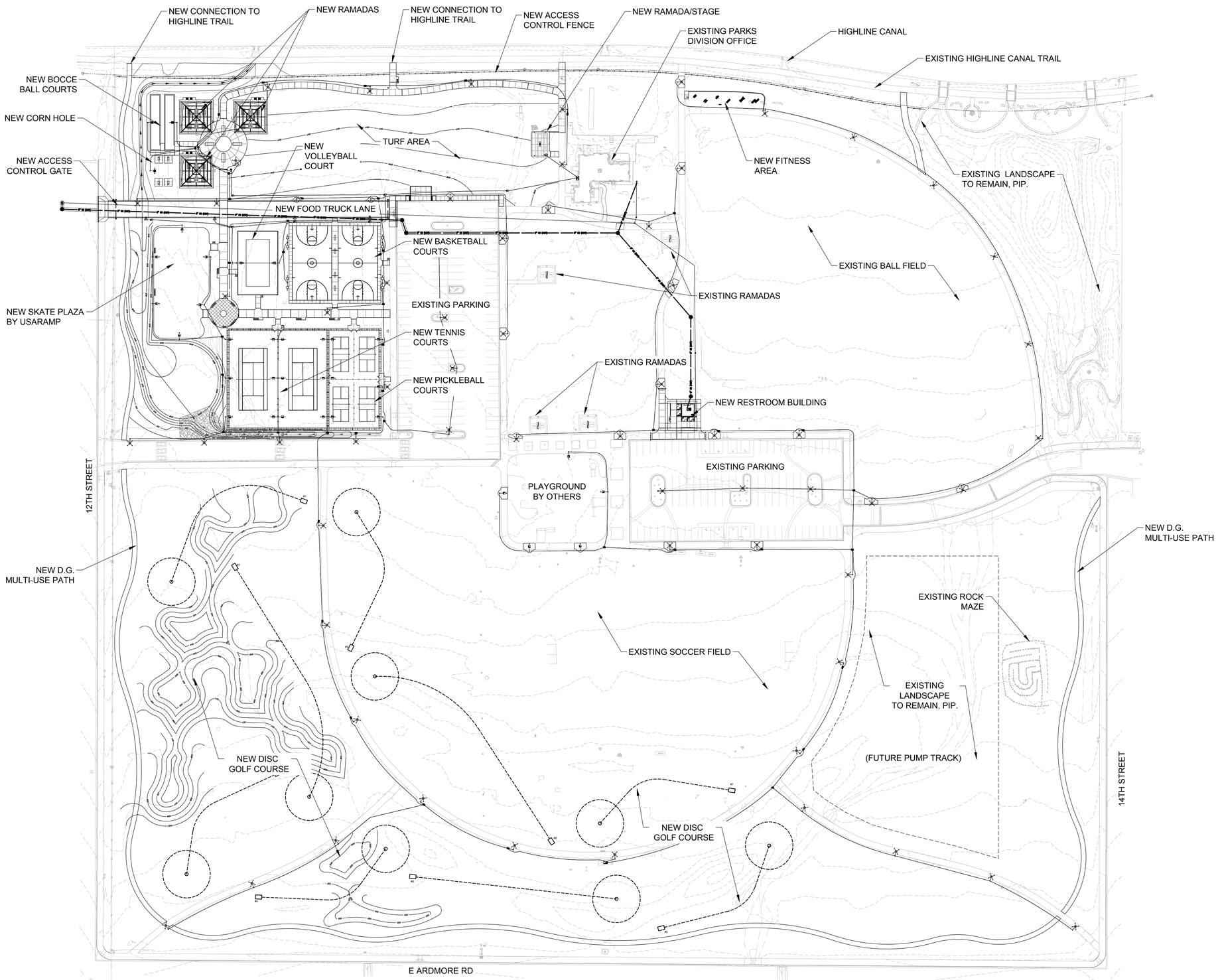
VERTICAL PROJECT MANAGEMENT SECTION

KIVA # KIVA#

SDEV # SDEV#

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

VPM: MASTER COVER SHEET REVISED DATE: MM/DD/YYYY



Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By:	MN,TB
Drawn By:	J2CAD
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

Title:
SITE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX | OFFICE OF THE CITY ENGINEER | PARKS AND RECREATION DEPT. | HIGHLINE PARK

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

0 60' 120'
SCALE: 1"=60'

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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Sheet
GN-102
2 OF 148

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CITY OF PHOENIX

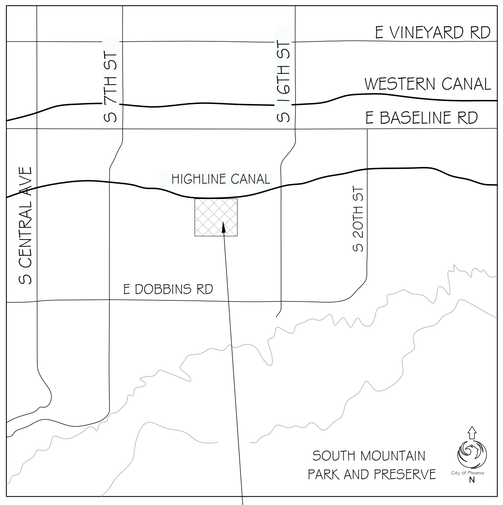
OFFICE OF THE CITY ENGINEER

PARKS AND RECREATION DEPARTMENT

HIGHLINE PARK

1346 E SOUTH MOUNTAIN AVE, PHOENIX, AZ 85042

PA75200668-1



VICINITY MAP

NTS

THIS PROJECT

PROJECT OWNER REPRESENTATIVE

AARON JENSEN,
PARKS DEPARTMENT DIVISION
CITY OF PHOENIX
200 WEST WASHINGTON STREET, 16TH FLOOR
PHOENIX, AZ 85003
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PHONE: 602.261.8799

CONTACT: KAREN NYHUS
EMAIL: KAREN.NYHUS@PHOENIX.GOV
CITY OF PHOENIX
PLANNING AND DEVELOPMENT DEPARTMENT
200 W. WASHINGTON ST. 2ND FLOOR
PHOENIX, ARIZONA 85003
PHONE: 602.534.6059

CONSULTANT:

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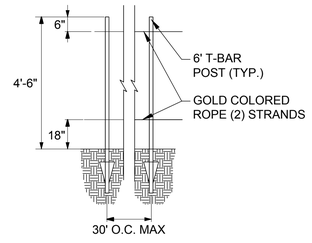
EMAIL: AALLAN@J2DESIGN.US
J2 DESIGN, LLC
4649 EAST COTTON GIN LOOP, SUITE B2
PHOENIX, ARIZONA 85040
PHONE: 602.438.2221 EXT: 114

SHEET INDEX

PI-101	LANDSCAPE INVENTORY AND SALVAGE COVER
PI-201	LANDSCAPE INVENTORY AND SALVAGE PLAN
PI-202	LANDSCAPE INVENTORY AND SALVAGE PLAN
PI-203	LANDSCAPE INVENTORY AND SALVAGE PLAN
PI-204	LANDSCAPE INVENTORY AND SALVAGE PLAN
PI-301	LANDSCAPE INVENTORY AND SALVAGE INDEX
PI-302	LANDSCAPE INVENTORY AND SALVAGE INDEX
PI-303	LANDSCAPE INVENTORY AND SALVAGE INDEX

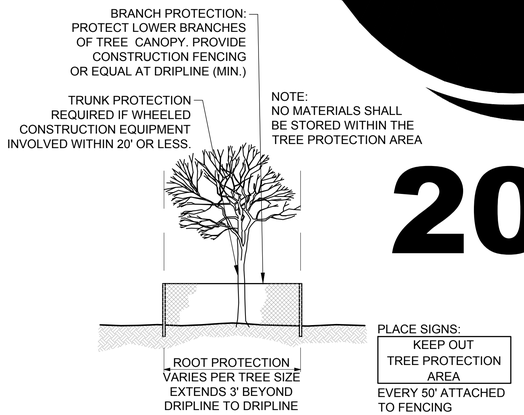
CITY OF PHOENIX GENERAL PLANT CONSERVATION NOTES

1. THE CITY OF PHOENIX GENERAL NOTES ARE THE ONLY NOTES APPROVED ON THIS PLAN. ADDITIONAL GENERAL NOTES GENERATED BY THE SEALANT AND PLACED ON THE PLANS ARE NOT APPROVED AS PART OF THIS PLAN AND ARE NOTED AS SUCH ON THE PLANS.
2. PLANT MATERIALS MUST BE INDIVIDUALLY TAGGED IN THE FIELD AT THE TIME THE INVENTORY PLANS ARE SUBMITTED. TAGGED MATERIAL MUST BE CLEARLY MARKED WITH WATERPROOF INK AND INCLUDE THE NUMBER WHICH CORRESPONDS TO THE NUMBER SHOWN ON THE PLAN. A FIELD REVIEW WILL NOT OCCUR UNTIL CLEARLY MARKED TAGS ARE IN PLACE ON EACH PLANT TO BE INCLUDED IN THE INVENTORY. ADDITIONAL FEES MAY BE CHARGED FOR ADDITIONAL SITE VISITS.
3. ALL MATERIAL IS TO BE CLEARLY FLAGGED WITH TAPE OR PLASTIC TAGS VISIBLE FROM ALL DIRECTIONS. TAGS SHALL BE NUMBERED TO CORRESPOND WITH THE PLANT INVENTORY PLAN AND LEGEND. COLOR CODE TAGS AS FOLLOWS: WHITE = PRESERVE AND PROTECT IN PLACE, BLUE = DESTROY, NOT SALVAGEABLE AND CANNOT REMAIN IN PLACE.
4. CONTACT THE PARKS & RECREATION DEPARTMENT, FORESTRY SUPERVISOR, AT 602-262-6862, TO VERIFY OWNERSHIP OF ANY PLANT MATERIAL IN THE PUBLIC R.O.W. PRIOR TO ANY PLANT RE-LOCATIONS OR REMOVALS. OBTAIN WRITTEN PERMISSION FROM THE PARKS AND RECREATION DEPARTMENT PRIOR TO THE REMOVAL OF ANY CITY PLANT MATERIAL OR EQUIPMENT.
5. CONTACT THE STREET TRANSPORTATION DEPARTMENT HORTICULTURIST, AT 602-262-6284, PRIOR TO THE REMOVAL OF EXISTING PLANT MATERIAL IN THE A.D.O.T. R.O.W. THAT IS ON THE CITY'S SIDE OF THE SOUND WALL. OBTAIN WRITTEN PERMISSION FROM THE STREET TRANSPORTATION DEPARTMENT PRIOR TO THE RE-LOCATION OR REMOVAL OF ANY PLANT MATERIAL OR EQUIPMENT.
6. ALL PROTECTIVE FENCING SHALL BE IN PLACE BEFORE ANY EARTH MOVING EQUIPMENT IS MOVED ONTO THE SITE AND BEFORE ANY SALVAGE CLEARING OR GRUBBING TAKES PLACE. CONTACT THE CITY OF PHOENIX PROJECT MANAGER TO SCHEDULE AN INSPECTION OF CONSTRUCTION FENCE.
7. TREES AND PROTECTED PLANT MATERIAL THAT ARE DESTROYED OR DIE DURING THE MAINTENANCE PERIOD WILL BE REPLACED WITH A PLANT OF EQUAL OR GREATER SIZE AND TYPE BY THE RESPONSIBLE PARTY A MINIMUM OF 90 DAYS BEFORE THE COMPLETION OF THE PROJECT. NO CERTIFICATES OF OCCUPANCY WILL BE ISSUED BEFORE ALL REQUIRED MATERIAL HAS BEEN REPLACED. ALL REPLACEMENT MATERIAL SHALL BE APPROVED BY THE CITY OF PHOENIX REPRESENTATIVE. A MAXIMUM OF 10% OF THE SALVAGEABLE PLANT MATERIAL WILL NOT BE REQUIRED TO BE REPLACED IF LOST.
8. ALL REQUIREMENTS OF THE STATE OF ARIZONA, INCLUDING THE "NOTICE OF INTENT TO CLEAR LAND," SHALL BE MET NOTWITHSTANDING ANY APPROVALS BY THE CITY OF PHOENIX.
9. FILE NOTICE OF INTENT (NOI) TO CLEAR LAND WITH THE STATE OF ARIZONA, 602-542-6408. PROVIDE A COPY OF THE NOI PERMIT TO THE INSPECTOR. http://www.azda.gov/ESD/clearland.pdf
10. PROVIDE A COPY OF THE COUNTY DUST CONTROL PERMIT TO THE INSPECTOR.



CONSTRUCTION FENCE DETAIL

NTS



NOTES:

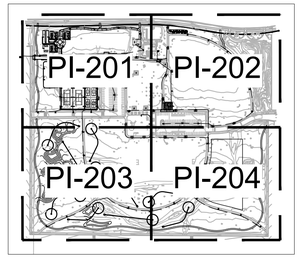
1. ALL TREES TO BE PROTECTED WITHIN THE CONSTRUCTION AREA SHALL BE IDENTIFIED WITH WHITE SURVEY TAPE WRAPPED AROUND THE TRUNK. GROUPING OF MORE THAN ONE TREE WITHIN THE TREE PROTECTION ZONE MAY OCCUR.
2. TO PREVENT TREE ROOT SMOTHERING, SOIL STOCKPILES, SUPPLIES, EQUIPMENT OR ANY OTHER MATERIAL SHALL NOT BE PLACED OR STORED WITHIN A TREE DRIP LINE OR WITHIN 25 FEET OF A TREE TRUNK, WHICHEVER IS GREATER.
3. TRENCHES SHALL BE HAND DUG WITHIN THE DRIP LINE IN AREAS WHERE ROOTS TWO INCHES IN DIAMETER AND GREATER ARE PRESENT, OR WHEN IN CLOSE PROXIMITY TO LOW BRANCHING TREES. WHENEVER POSSIBLE, ROOTS TWO INCHES OR GREATER IN DIAMETER SHALL BE TUNNELED OR BORED UNDER AND SHALL BE COVERED TO PREVENT DEHYDRATION.
4. TREE ROOTS SHALL NOT BE CUT UNLESS CUTTING IS UNAVOIDABLE. WHEN ROOT CUTTING IS UNAVOIDABLE, A CLEAN SHARP CUT WITH AN APPROVED PRUNING SAW SHALL BE MADE TO AVOID SHREDDING OR SMASHING. ROOT CUTS SHOULD BE MADE BACK TO A LATERAL ROOT. WHENEVER POSSIBLE, TREE ROOTS SHOULD BE CUT BETWEEN LATE FALL AND BUD OPENING, WHEN ROOT ENERGY SUPPLIES ARE HIGH AND CONDITIONS ARE LEAST FAVORABLE FOR DISEASE-CAUSING AGENTS. EXPOSED ROOTS SHALL BE COVERED IMMEDIATELY TO PREVENT DEHYDRATION.ROOTS SHALL BE COVERED WITH SOIL OR BURLAP AND KEPT MOIST. BACKFILL MATERIAL AROUND DAMAGED ROOTS SHALL BE A LIGHT MULCH/SAND MIXTURE TO PROMOTE ROOT RECOVERY.
5. WATERING OF PROTECTED TREES IN WHICH ROOTS WERE CUT SHALL BE PROVIDED BY THE CONTRACTOR. WATERING SCHEDULE TO BE ESTABLISHED BY CITY ARBORIST.
6. HORIZONTAL BORING RATHER THAN TRENCHING SHOULD BE USED FOR UTILITY PLACEMENT WITHIN DRIP LINE OF TREE WHENEVER POSSIBLE.
7. FENCING MATERIAL SHALL ENCIRCLE ANY TREE WHOSE OUTER DRIP LINE EDGE IS WITHIN 25 FEET OF ANY CONSTRUCTION ACTIVITIES.
8. FENCING MATERIAL SHALL BE AT A MINIMUM TWO (2) STRANDS OF GOLD ROPE ON T- BAR POSTS. POSTS ARE TO BE PLACED 30' FEET ON CENTER AND AT ALL ANGLE POINTS. SEE DETAIL, THIS SHEET.
9. FENCING MATERIAL SHALL BE SET AT THE DRIP LINE OR 25 FEET FROM TREE TRUNK,WHICHEVER IS GREATER, AND MAINTAINED IN AN UPRIGHT POSITION THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
10. ANY GRADE CHANGES OR RETAINING WALL/TREE WELL INSTALLATION WITHIN THE DRIP LINE SHALL BE APPROVED BY CITY ARBORIST.

TREE PROTECTION DETAIL

NTS

ANTICIPATED PLANT SALVAGE TO TAKE PLACE SUMMER, 2024

Overall Project Site



TOTALS & PERCENTAGES	QUANTITY TREES
REMAIN/ PIP	342
SALVAGE	0
DESTROY	38

APPROX. 32.4	ACRES OF AREA BEING EVALUATED FOR USABLE MATERAL
380	TOTAL NUMBER OF PLANTS INVENTORIED ON-SITE

-WARNING-

OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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KIVA # _____
SDEV # _____

Sheet
PI-101
3 OF 148

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

2024

Title: PLANT INVENTORY COVER SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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PROPERTY LINE

HIGHLINE TRAIL

HIGHLINE CANAL

TRASH RECEPTACLE

EXISTING TENNIS COURT

DISTRICT OFFICE

EXISTING BUILDING

S 12TH ST

PARKING LOT

EXISTING BASKETBALL COURT

EXISTING VOLLEYBALL COURT

TURF

RAMADAS

PLAYGROUND

MATCH LINE SHEET PI-202

MATCH LINE SHEET PI-203

PLANT INVENTORY LEGEND:	
SYMBOL	DESCRIPTION
D #	EXISTING TREE - TO BE DESTROYED
PIP #	EXISTING TREE - TO BE PROTECTED IN PLACE
PIP #	EXISTING CACTUS - TO BE PROTECTED IN PLACE

GENERAL NOTES:

1) SEE NATIVE PLANT SHEET PI-101 TO PI-103 FOR COMPLETE NATIVE PLANT INVENTORY SUMMARY TABLES AND INFORMATION.

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: MN

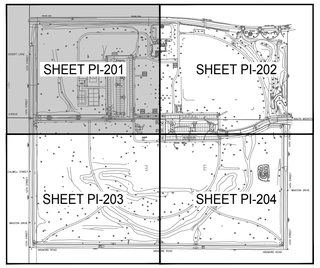
Drawn By: MN

Checked By: JB

Date: 4/19/2024

Project #: 22.1618.002

KEYMAP



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0 30' 60'
SCALE: 1"=30'

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602 438 2221

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KIVA # _____
SDEV # _____

Sheet
PI-201
4 OF 148

Title:
PLANT INVENTORY PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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EXERCISE EQUIPMENT

HIGHLINE TRAIL

HIGHLINE CANAL

PROPERTY LINE

EXISTING BUILDING

BALL FIELD

RESTROOM BUILDING

PARKING LOT

S 14TH ST

MATCH LINE SHEET PI-201

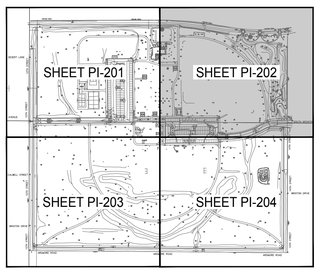
MATCH LINE SHEET PI-204

PLANT INVENTORY LEGEND:	
SYMBOL	DESCRIPTION
D	EXISTING TREE - TO BE DESTROYED
PIP	EXISTING TREE - TO BE PROTECTED IN PLACE
PIP	EXISTING CACTUS - TO BE PROTECTED IN PLACE

GENERAL NOTES:

1) SEE NATIVE PLANT SHEET PI-101 TO PI-103 FOR COMPLETE NATIVE PLANT INVENTORY SUMMARY TABLES AND INFORMATION.

KEYMAP



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ARIZONA 811
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Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

0 30' 60'

SCALE: 1"=30'

Design

4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION OR RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: PLANT INVENTORY PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

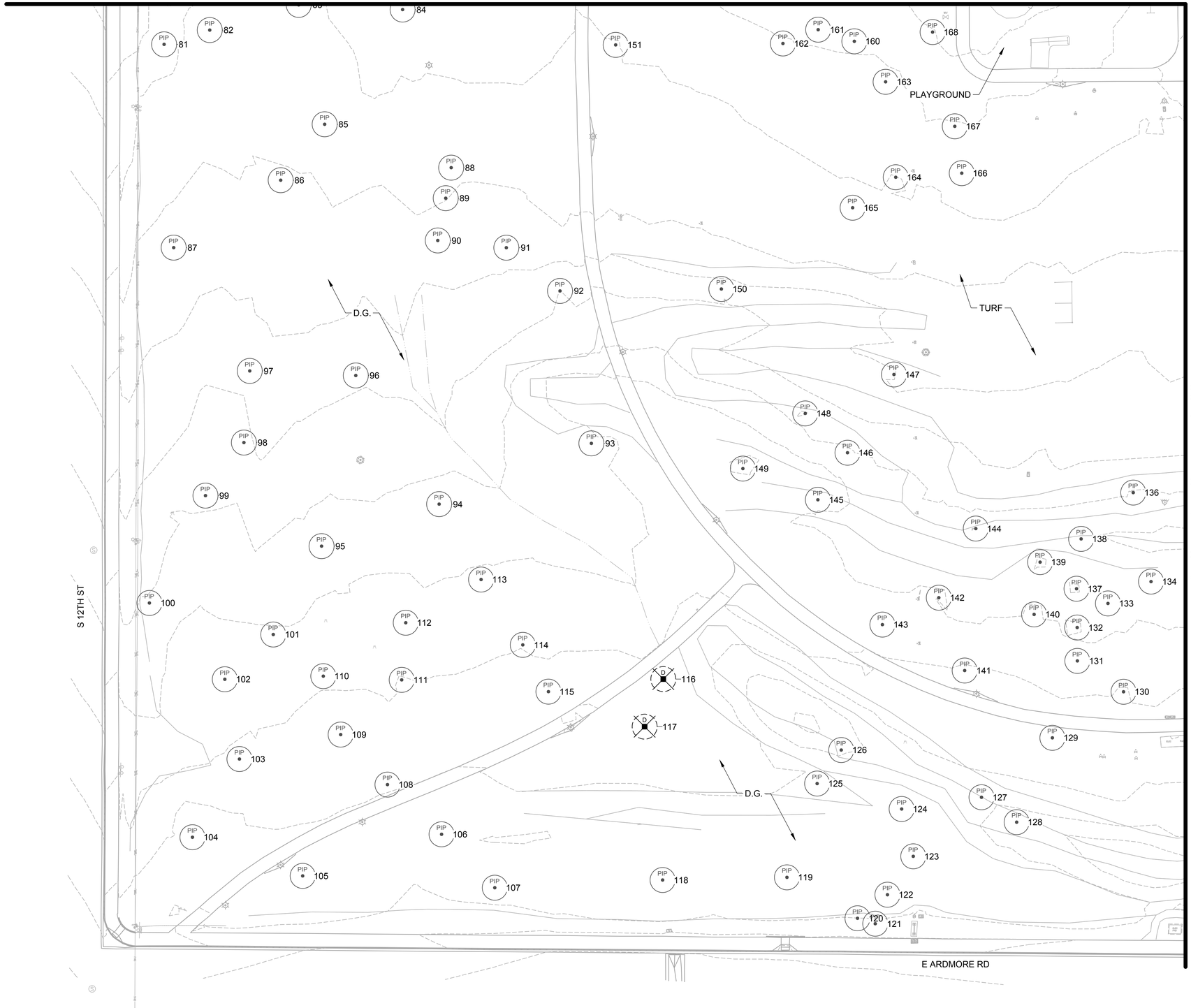
KIVA #
SDEV #

Sheet
PI-202
5 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\221618.002\12Cad\Sheets\1618.002-PI200.dwg 4/29/2024 12:20:14 PMB-W.CTB MARIA NOVACEK

MATCH LINE SHEET PI-201



MATCH LINE SHEET PI-204

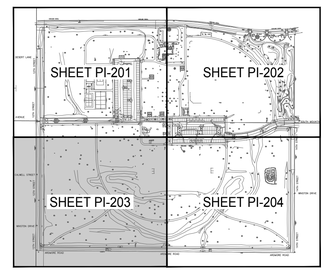
PLANT INVENTORY LEGEND:

SYMBOL	DESCRIPTION
D	EXISTING TREE - TO BE DESTROYED
PIP	EXISTING TREE - TO BE PROTECTED IN PLACE
PIP	EXISTING CACTUS - TO BE PROTECTED IN PLACE

GENERAL NOTES:

1) SEE NATIVE PLANT SHEET PI-101 TO PI-103 FOR COMPLETE NATIVE PLANT INVENTORY SUMMARY TABLES AND INFORMATION.

KEYMAP



-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
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CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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Sheet
PI-203
6 OF 148

P:\221618.002\L02\cadSheets\1618.002-PI200.dwg 4/29/2024 12:20:19 PMB-W.CTB MARIA NOVACEK

MATCH LINE SHEET PI-202

MATCH LINE SHEET PI-203

PARKING LOT

TURF

ROCK MAZE

D.G.

S 14TH ST

E. ARDMORE RD

PLANT INVENTORY LEGEND:	
SYMBOL	DESCRIPTION
D	EXISTING TREE - TO BE DESTROYED
PIP	EXISTING TREE - TO BE PROTECTED IN PLACE
PIP	EXISTING CACTUS - TO BE PROTECTED IN PLACE

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Designed By: MN

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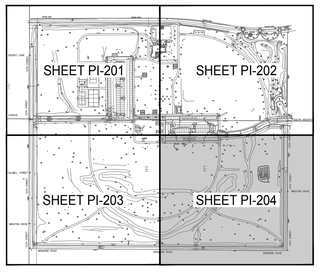
Checked By: JB

Date: 4/19/2024

Project #: 22.1618.002

KEYMAP



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0 30' 60'
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J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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KIVA # _____
SDEV # _____

Sheet
PI-204
7 OF 148

Title:
PLANT INVENTORY PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\22\618.002\L2\Cad\Sheets\1618.002-PI200.dwg 4/29/2024 12:20:23 PM B-W.CTB MARIA NOVACEK

Plant #	Species	Common Name	Caliper (in)	Width (ft)	Height (ft)	Condition	Inventory Designation	Final Designation	Comments
1	*Prosopis spp.*	Mesquite	12	20	16	Poor	NS	D	Bores / Cambium Damage
2	*Parkinsonia aculeta*	Mexican Palo Verde	16	18	14	Poor	NS	D	Weed Species / Cambium Damage
3	*Ulmus parvifolia*	Evergreen Elm	10	20	15	Fair	NS	D	Exposed Roots
4	*Prosopis spp.*	Mesquite	25	40	22	Fair	NS	PIP	Exposed Roots / Leaning
5	*Phoenix dactylifera*	Date Palm	24	14	26	Fair	NS	PIP	Trunk Damage
6	*Eucalyptus spp.*	Eucalyptus	35	45	65	Poor	NS	PIP	Advanced Age / Cambium Damage
7	*Prosopis spp.*	Mesquite	22	38	20	Good	S	PIP	
8	*Parkinsonia aculeta*	Mexican Palo Verde	10	16	15	Poor	NS	D	Weed Species / Trunk Damage
9	*Prosopis spp.*	Mesquite	6	14	14	Fair	NS	D	Leaning / Poor Structure
10	*Parkinsonia florida*	Blue Palo Verde	8	15	15	Good	S	PIP	
11	*Fouquieria splendens*	Ocotillo			7	Good	S	PIP	
12	*Pinus spp.*	Pine	22	22	47	Poor	NS	PIP	Advanced Age / Cambium Damage
13	*Pinus spp.*	Pine	10	15	24	Good	S	PIP	
14	*Eucalyptus spp.*	Eucalyptus	26	45	50	Fair	NS	PIP	Leaning / Poor Structure
15	*Phoenix dactylifera*	Date Palm	22	16	60	Fair	NS	PIP	Trunk Damage
16	*Olea europaea*	Olive	16	17	16	Poor	NS	PIP	Cambium Damage / Trunk Damage
17	*Lysiloma thornberi*	Fern of the Desert	44	55	24	Fair	NS	PIP	Wide Base / Poor Structure
18	*Phoenix dactylifera*	Date Palm	22	16	47	Fair	NS	PIP	Trunk Damage
19	*Pinus spp.*	Pine	12	15	25	Poor	NS	PIP	Cambium Damage / Trunk Damage
20	*Pinus spp.*	Pine	20	19	25	Good	S	PIP	
21	*Parkinsonia aculeta*	Mexican Palo Verde	8	21	18	Poor	NS	PIP	Weed Species / Cambium Damage
22	*Phoenix dactylifera*	Date Palm	18	16	40	Fair	NS	PIP	Trunk Damage
23	*Fouquieria splendens*	Ocotillo			10	Good	S	PIP	
24	*Lysiloma thornberi*	Fern of the Desert	16	16	15	Fair	NS	PIP	Proximity to Building
25	*Lysiloma thornberi*	Fern of the Desert	8	14	15	Fair	NS	PIP	Proximity to Building
26	*Washingtonia spp.*	Fan Palm	8	6	6	Good	S	PIP	
27	*Ulmus parvifolia*	Evergreen Elm	8	15	16	Good	S	PIP	
28	*Fouquieria splendens*	Ocotillo			8	Good	S	PIP	
29	*Pinus spp.*	Pine	22	26	50	Poor	NS	PIP	Declining / Advanced Age
30	*Pinus spp.*	Pine	22	20	30	Poor	NS	PIP	Declining / Advanced Age
31	*Pinus spp.*	Pine	18	18	37	Fair	NS	PIP	Exposed Roots / Advanced Age
32	*Pinus spp.*	Pine	18	18	39	Fair	NS	PIP	Exposed Roots / Advanced Age
33	*Pinus spp.*	Pine	16	20	35	Poor	NS	PIP	Declining / Advanced Age
34	*Pinus spp.*	Pine	18	20	30	Poor	NS	PIP	Declining / Advanced Age
35	*Ulmus parvifolia*	Evergreen Elm	14	26	20	Fair	NS	PIP	Exposed Roots
36	*Eucalyptus spp.*	Eucalyptus	24	30	33	Fair	NS	PIP	Exposed Roots / Trunk Damage
37	*Fouquieria splendens*	Ocotillo			7	Good	S	PIP	
38	*Fouquieria splendens*	Ocotillo			7	Good	S	PIP	
39	*Pachycereus marginatus*	Mexican Fence Post			4	Good	S	PIP	
40	*Acacia farnesiana*	Sweet Acacia	6	6	6	Fair	NS	PIP	Cambium Damage / Poor Structure
41	*Prosopis spp.*	Mesquite	10	10	11	Poor	NS	PIP	Trunk Damage / Branch Damage
42	*Prosopis spp.*	Mesquite	18	22	18	Fair	NS	D	Exposed Roots / Trunk Damage
43	*Prosopis spp.*	Mesquite	18	22	18	Fair	NS	D	Insect Damage / Trunk Damage
44	*Prosopis spp.*	Mesquite	24	38	20	Fair	NS	D	Leaning / Poor Structure
45	*Prosopis spp.*	Mesquite	42	50	25	Fair	NS	PIP	Exposed Roots / Trunk Damage
46	*Prosopis spp.*	Mesquite	18	15	20	Poor	NS	D	Trunk Damage / Branch Damage
47	*Parkinsonia aculeta*	Mexican Palo Verde	10	19	14	Poor	NS	D	Weed Species / Trunk Damage
48	*Prosopis spp.*	Mesquite	25	39	23	Fair	NS	PIP	Leaning / Cambium Damage
49	*Parkinsonia florida*	Blue Palo Verde	16	20	12	Fair	NS	PIP	Leaning / Poor Structure
50	*Parkinsonia florida*	Blue Palo Verde	4	6	7	Good	S	PIP	
51	*Parkinsonia florida*	Blue Palo Verde	4	6	7	Good	S	PIP	
52	*Parkinsonia florida*	Blue Palo Verde	6	10	10	Fair	NS	PIP	Proximity to Fence
53	*Prosopis spp.*	Mesquite	9	13	13	Poor	NS	PIP	Trunk Damage / Branch Damage
54	*Parkinsonia florida*	Blue Palo Verde	22	21	23	Poor	NS	PIP	Trunk Damage / Branch Damage
55	*Prosopis spp.*	Mesquite	14	15	15	Poor	NS	D	Trunk Damage / Branch Damage
56	*Prosopis spp.*	Mesquite	25	33	25	Fair	NS	D	Leaning / Cambium Damage
57	*Parkinsonia florida*	Blue Palo Verde	14	17	15	Fair	NS	D	Leaning / Cambium Damage
58	*Parkinsonia florida*	Blue Palo Verde	15	22	19	Good	S	D	
59	*Parkinsonia florida*	Blue Palo Verde	14	17	16	Poor	NS	D	Trunk Damage / Branch Damage
60	*Prosopis spp.*	Mesquite	15	26	19	Good	S	D	
61	*Pithecellobium flexicaule*	Texas Ebony	8	14	12	Poor	NS	D	Trunk Damage / Cambium Damage
62	*Prosopis spp.*	Mesquite	14	18	15	Fair	NS	D	Leaning / Poor Structure
63	*Prosopis spp.*	Mesquite	10	14	16	Poor	NS	D	Trunk Damage / Branch Damage
64	*Prosopis spp.*	Mesquite	14	25	18	Fair	NS	D	Leaning / Poor Structure
65	*Prosopis spp.*	Mesquite	16	27	16	Fair	NS	D	Leaning / Cambium Damage
66	*Ulmus parvifolia*	Evergreen Elm	14	32	19	Good	S	D	
67	*Prosopis spp.*	Mesquite	12	20	16	Fair	NS	D	Leaning / Poor Structure
68	*Eucalyptus spp.*	Eucalyptus	24	40	52	Fair	NS	D	Leaning / Cambium Damage
69	*Eucalyptus spp.*	Eucalyptus	14	30	27	Fair	NS	D	Leaning / Poor Structure
70	*Eucalyptus spp.*	Eucalyptus	10	21	21	Fair	NS	D	Leaning / Poor Structure
71	*Eucalyptus spp.*	Eucalyptus	16	22	22	Fair	NS	D	Leaning / Cambium Damage
72	*Eucalyptus spp.*	Eucalyptus	20	30	25	Poor	NS	D	Advanced Age / Cambium Damage
73	*Eucalyptus spp.*	Eucalyptus	15	24	24	Good	S	D	
74	*Prosopis spp.*	Mesquite	18	22	20	Good	S	D	
75	*Parkinsonia aculeta*	Mexican Palo Verde	14	18	13	Poor	NS	D	Weed Species / Cambium Damage
76	*Prosopis spp.*	Mesquite	6	10	11	Poor	NS	D	Trunk Damage / Branch Damage
77	*Eucalyptus spp.*	Eucalyptus	22	25	23	Poor	NS	D	Trunk Damage / Branch Damage
78	*Parkinsonia florida*	Blue Palo Verde	14	22	18	Good	S	D	
79	*Eucalyptus spp.*	Eucalyptus	20	26	22	Fair	NS	PIP	Leaning / Poor Structure
80	*Parkinsonia florida*	Blue Palo Verde	17	25	20	Poor	NS	D	Cambium Damage / Trunk Damage
81	*Parkinsonia florida*	Blue Palo Verde	22	15	15	Poor	NS	PIP	Cambium Damage / Trunk Damage
82	*Parkinsonia florida*	Blue Palo Verde	4	15	7	Good	S	PIP	
83	*Prosopis spp.*	Mesquite	12	22	17	Fair	NS	PIP	Leaning / Poor Structure
84	*Chilopsis linearis*	Desert Willow	8	16	14	Fair	NS	PIP	Leaning / Poor Structure
85	*Prosopis spp.*	Mesquite	10	20	17	Fair	NS	PIP	Leaning / Cambium Damage
86	*Prosopis spp.*	Mesquite	8	16	16	Fair	NS	PIP	Leaning / Cambium Damage
87	*Prosopis spp.*	Mesquite	23	35	22	Fair	NS	PIP	Exposed Roots / Leaning
88	*Parkinsonia aculeta*	Mexican Palo Verde	7	13	12	Poor	NS	PIP	Weed Species / Trunk Damage
89	*Parkinsonia aculeta*	Mexican Palo Verde	8	6	6	Poor	NS	PIP	Weed Species / Wide Base
90	*Parkinsonia aculeta*	Mexican Palo Verde	8	10	10	Poor	NS	PIP	Weed Species / Trunk Damage
91	*Prosopis spp.*	Mesquite	19	21	19	Poor	NS	PIP	Trunk Damage / Branch Damage
92	*Prosopis spp.*	Mesquite	18	21	19	Poor	NS	PIP	Trunk Damage / Branch Damage
93	*Prosopis spp.*	Mesquite	18	22	20	Good	S	PIP	
94	*Prosopis spp.*	Mesquite	14	20	17	Fair	NS	PIP	Leaning / Cambium Damage
95	*Parkinsonia florida*	Blue Palo Verde	8	17	15	Poor	NS	PIP	Cambium Damage / Trunk Damage
96	*Parkinsonia aculeta*	Mexican Palo Verde	8	13	13	Poor	NS	PIP	Weed Species / Trunk Damage
97	*Acacia farnesiana*	Sweet Acacia	12	8	8	Poor	NS	PIP	Cambium Damage / Trunk Damage
98	*Acacia farnesiana*	Sweet Acacia	14	8	8	Fair	NS	PIP	Wide Base / Poor Structure
99	*Chilopsis linearis*	Desert Willow	5	10	10	Fair	NS	PIP	Leaning / Cambium Damage
100	*Parkinsonia aculeta*	Mexican Palo Verde	8	16	12	Poor	NS	PIP	Weed Species / Trunk Damage
101	*Parkinsonia aculeta*	Mexican Palo Verde	6	8	7	Poor	NS	PIP	Weed Species / Trunk Damage
102	*Chilopsis linearis*	Desert Willow	8	15	10	Fair	NS	PIP	Leaning / Cambium Damage
103	*Chilopsis linearis*	Desert Willow	8	14	10	Fair	NS	PIP	Leaning / Cambium Damage
104	*Prosopis spp.*	Mesquite	14	22	16	Fair	NS	PIP	Leaning / Poor Structure
105	*Parkinsonia aculeta*	Mexican Palo Verde	8	16	15	Poor	NS	PIP	Weed Species / Trunk Damage
106	*Parkinsonia aculeta*	Mexican Palo Verde	4	8	7	Poor	NS	PIP	Weed Species / Trunk Damage
107	*Eucalyptus spp.*	Eucalyptus	12	20	19	Fair	NS	PIP	Leaning / Cambium Damage
108	*Prosopis spp.*	Mesquite	14	14	14	Poor	NS	PIP	Trunk Damage / Branch Damage
109	*Prosopis spp.*	Mesquite	12	15	14	Good	S	PIP	
110	*Pithecellobium flexicaule*	Texas Ebony	6	9	9	Poor	NS	PIP	Trunk Damage / Cambium Damage
111	*Parkinsonia florida*	Blue Palo Verde	8	16	14	Poor	NS	PIP	Trunk Damage / Branch Damage
112	*Prosopis spp.*	Mesquite	7	10	11	Fair	NS	PIP	Leaning / Cambium Damage
113	*Prosopis spp.*	Mesquite	10	17	17	Fair	NS	PIP	Leaning / Cambium Damage
114	*Parkinsonia florida*	Blue Palo Verde	8	15	14	Poor	NS	PIP	Cambium Damage / Trunk Damage
115	*Parkinsonia florida*	Blue Palo Verde	10	20	17	Poor	NS	PIP	Trunk Damage / Branch Damage
116	*Prosopis spp.*	Mesquite	14	18	18	Poor	NS	D	Trunk Damage / Branch Damage
117	*Parkinsonia aculeta*	Mexican Palo Verde	8	15	14	Poor	NS	D	Weed Species / Trunk Damage
118	*Parkinsonia aculeta*	Mexican Palo Verde	9	14	14	Poor	NS	PIP	Weed Species / Trunk Damage
119	*Parkinsonia aculeta*	Mexican Palo Verde	7	10	10	Poor	NS	PIP	Weed Species / Trunk Damage
120	*Parkinsonia aculeta*	Mexican Palo Verde	10	16	14	Poor	NS	PIP	Weed Species / Trunk Damage
121	*Parkinsonia aculeta*	Mexican Palo Verde	8	14	13	Poor	NS	PIP	Weed Species / Trunk Damage
122	*Parkinsonia aculeta*	Mexican Palo Verde	10	18	17	Poor	NS	PIP	Weed Species / Trunk Damage
123	*Parkinsonia aculeta*	Mexican Palo Verde	5	13	11	Poor	NS	PIP	Weed Species / Trunk Damage
124	*Parkinsonia aculeta*	Mexican Palo Verde	4	10	8	Poor	NS	PIP	Weed Species / Trunk Damage
125	*Parkinsonia aculeta*	Mexican Palo Verde	4	10	8	Poor	NS	PIP	Weed Species / Trunk Damage
126	*Parkinsonia aculeta*	Mexican Palo Verde	4	8	8	Poor	NS	PIP	Weed Species / Trunk Damage
127	*Parkinsonia aculeta*	Mexican Palo Verde	4	7	7	Poor	NS	PIP	Weed Species / Trunk Damage
128	*Parkinsonia aculeta*	Mexican Palo Verde	14	9	8	Poor	NS	PIP	Weed Species / Trunk Damage
129	*Eucalyptus spp.*	Eucalyptus	22	30	34	Poor	NS	PIP	Advanced Age / Trunk Damage
130	*Eucalyptus spp.*	Eucalyptus	20	34	34	Poor	NS	PIP	Advanced Age / Trunk Damage
131	*Eucalyptus spp.*	Eucalyptus	8	15	23	Poor	NS	PIP	Branch Damage / Cambium Damage
132	*Eucalyptus spp.*	Eucalyptus	9	16	25	Fair	NS	PIP	Leaning / Poor Structure
133	*Eucalyptus spp.*	Eucalyptus	9	18	18	Fair	NS	PIP	Leaning / Poor Structure
134	*Eucalyptus spp.*	Eucalyptus	10	18	25	Fair	NS	PIP	Poor Structure / Trunk Damage
135	*Eucalyptus spp.*	Eucalyptus	16	20	26	Fair	NS	PIP	Poor Structure / Trunk Damage
136	*Tamarix chinensis*	Salt Cedar	12	20	21	Poor	NS	PIP	Weed Species / Cambium Damage
137	*Eucalyptus spp.*	Eucalyptus	8	14	18	Fair	NS	PIP	Poor Structure / Trunk Damage
138	*Eucalyptus spp.*	Eucalyptus	12	25	27	Fair	NS	PIP	Poor Structure / Branch Damage
139	*Eucalyptus spp.*	Eucalyptus	14	30	28	Good	S	PIP	
140	*Eucalyptus spp.*	Eucalyptus	10	16	22	Poor	NS	PIP	Branch Damage / Declining
141	*Eucalyptus spp.*	Eucalyptus	25	43	40	Poor	NS	PIP	Advanced Age / Trunk Damage
142	*Eucalyptus spp.*	Eucalyptus	14	20	27	Poor	NS	PIP	Advanced Age / Trunk Damage
143	*Eucalyptus spp.*	Eucalyptus	14	25	26	Poor	NS	PIP	Advanced Age / Trunk Damage
144	*Eucalyptus spp.*	Eucalyptus	24	45	55	Poor	NS	PIP	Advanced Age / Trunk Damage
145	*Eucalyptus spp.*	Eucalyptus	14	30	25	Fair	NS	PIP	Leaning / Poor Structure
146	*Eucalyptus spp.*	Eucalyptus	14	21	23	Fair	NS	PIP	Leaning / Cambium Damage
147	*Eucalyptus spp.*	Eucalyptus	18	23	29	Poor	NS	PIP	Trunk Damage / Branch Damage
148	*Eucalyptus spp.*	Eucalyptus	14	25	28	Fair	NS	PIP	Leaning / Poor Structure
149	*Eucalyptus spp.*	Eucalyptus	24	30	31	Poor	NS	PIP	Trunk Damage / Branch Damage
150	*Prosopis spp.*	Mesquite	26	54	28	Fair	NS	PIP	Exposed Roots / Trunk Damage
151	*Prosopis spp.*	Mesquite	22	26	24	Poor	NS	PIP	Trunk Damage / Branch Damage
152	*Prosopis spp.*	Mesquite	12	14	16	Poor	NS	PIP	Trunk Damage / Branch Damage
153	*Prosopis spp.*	Mesquite	16	20	13	Fair	NS	PIP	Leaning / Poor Structure
154	*Prosopis spp.*	Mesquite	10	14	13	Poor	NS	PIP	Trunk Damage / Branch Damage
155	*Eucalyptus spp.*	Eucalyptus	24	40	55	Poor	NS	PIP	Advanced Age / Trunk Damage
156	*Eucalyptus spp.*	Eucalyptus	19	42	29	Fair	NS	PIP	Leaning / Cambium Damage
157	*Eucalyptus spp.*	Eucalyptus	26	35	62	Poor	NS	PIP	Advanced Age / Trunk Damage
158	*Eucalyptus spp.*	Eucalyptus	24	48	32	Poor	NS	PIP	Advanced Age / Trunk Damage
159	*Eucalyptus spp.*	Eucalyptus	24	39	34	Poor	NS	PIP	Advanced Age / Trunk Damage
160	*Eucalyptus spp.*	Eucalyptus	8	17	22	Poor	NS	PIP	Declining / Poor Structure

Revisions	Date

PRE-FINAL
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Designed By: MN

Drawn By: MN

Checked By: JB

Date: 4/19/2024

Project #: 22.1618.002

Title: **PLANT INVENTORY INDEX**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
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Sheet
PI-301
8 OF 148

P:\221618.002\J2Cad\Sheets\1618.002-PI300.dwg 4/29/2024 12:20:32 PM\B-W.CTB MARIA NOVACEK

Plant #	Species	Common Name	Caliper (in)	Width (ft)	Height (ft)	Condition	Inventory Designation	Final Designation	Comments
161	*Eucalyptus spp.*	Eucalyptus	14	20	24	Good	S	PIP	
162	*Eucalyptus spp.*	Eucalyptus	10	20	24	Fair	NS	PIP	Leaning / Poor Structure
163	*Eucalyptus spp.*	Eucalyptus	18	30	41	Poor	NS	PIP	Declining / Advanced Age
164	*Eucalyptus spp.*	Eucalyptus	16	30	24	Fair	NS	PIP	Poor Structure / Trunk Damage
165	*Eucalyptus spp.*	Eucalyptus	10	20	18	Good	S	PIP	
166	*Eucalyptus spp.*	Eucalyptus	20	27	30	Fair	NS	PIP	Leaning / Trunk Damage
167	*Eucalyptus spp.*	Eucalyptus	15	29	26	Fair	NS	PIP	Leaning / Poor Structure
168	*Eucalyptus spp.*	Eucalyptus	12	20	21	Fair	NS	PIP	Leaning / Poor Structure
169	*Fraxinus spp.*	Ash Tree	8	14	14	Fair	NS	PIP	Cambium Damage / Leaning
170	*Eucalyptus spp.*	Eucalyptus	60	58	76	Poor	NS	PIP	Trunk Damage / Branch Damage
171	*Dalbergia sissoo*	Indian Rosewood	7	12	12	Good	S	PIP	
172	*Ulmus parvifolia*	Evergreen Elm	4	10	9	Good	S	PIP	
173	*Ulmus parvifolia*	Evergreen Elm	8	16	14	Fair	NS	PIP	Leaning
174	*Phoenix dactylifera*	Date Palm	22	16	49	Fair	NS	PIP	Trunk Damage
175	*Phoenix dactylifera*	Date Palm	22	16	40	Fair	NS	PIP	Trunk Damage
176	*Phoenix dactylifera*	Date Palm	20	14	25	Fair	NS	PIP	Trunk Damage
177	*Phoenix dactylifera*	Date Palm	16	14	20	Fair	NS	PIP	Trunk Damage
178	*Phoenix dactylifera*	Date Palm	16	15	30	Fair	NS	PIP	Trunk Damage
179	*Ulmus parvifolia*	Evergreen Elm	8	16	15	Good	S	PIP	
180	*Phoenix dactylifera*	Date Palm	22	16	62	Fair	NS	PIP	Trunk Damage
181	*Phoenix dactylifera*	Date Palm	23	15	47	Fair	NS	PIP	Trunk Damage
182	*Phoenix dactylifera*	Date Palm	22	15	31	Fair	NS	PIP	Trunk Damage
183	*Phoenix dactylifera*	Date Palm	10	13	21	Fair	NS	PIP	Trunk Damage
184	*Phoenix dactylifera*	Date Palm	10	13	25	Fair	NS	PIP	Trunk Damage
185	*Phoenix dactylifera*	Date Palm	24	17	51	Fair	NS	PIP	Trunk Damage
186	*Ulmus parvifolia*	Evergreen Elm	9	18	15	Good	S	PIP	
187	*Phoenix dactylifera*	Date Palm	20	16	36	Fair	NS	PIP	Trunk Damage
188	*Phoenix dactylifera*	Date Palm	20	16	33	Fair	NS	PIP	Trunk Damage
189	*Phoenix dactylifera*	Date Palm	24	16	54	Fair	NS	PIP	Trunk Damage
190	*Phoenix dactylifera*	Date Palm	25	16	57	Fair	NS	PIP	Trunk Damage
191	*Prosopis spp.*	Mesquite	25	42	30	Fair	NS	PIP	Exposed Roots / Leaning
192	*Phoenix dactylifera*	Date Palm	22	14	42	Fair	NS	PIP	Trunk Damage
193	*Phoenix dactylifera*	Date Palm	22	14	42	Fair	NS	PIP	Trunk Damage
194	*Phoenix dactylifera*	Date Palm	22	14	40	Fair	NS	PIP	Trunk Damage
195	*Phoenix dactylifera*	Date Palm	22	14	40	Fair	NS	PIP	Trunk Damage
196	*Phoenix dactylifera*	Date Palm	22	14	42	Fair	NS	PIP	Trunk Damage
197	*Phoenix dactylifera*	Date Palm	22	14	42	Fair	NS	PIP	Trunk Damage
198	*Ulmus parvifolia*	Evergreen Elm	10	20	18	Good	S	PIP	
199	*Ulmus parvifolia*	Evergreen Elm	13	25	18	Good	S	PIP	
200	*Ulmus parvifolia*	Evergreen Elm	10	22	17	Good	S	PIP	
201	*Eucalyptus spp.*	Eucalyptus	54	55	80	Poor	NS	PIP	Advanced Age / Trunk Damage
202	*Ulmus parvifolia*	Evergreen Elm	9	18	16	Fair	NS	PIP	Proximity to Concrete
203	*Ulmus parvifolia*	Evergreen Elm	8	16	15	Fair	NS	PIP	Leaning
204	*Ulmus parvifolia*	Evergreen Elm	7	17	15	Fair	NS	PIP	Cambium Damage / Proximity to Concrete
205	*Pistacia chinensis*	Chinese Pistache	7	14	14	Good	S	PIP	
206	*Pistacia chinensis*	Chinese Pistache	6	11	11	Good	S	PIP	
207	*Pistacia chinensis*	Chinese Pistache	7	12	13	Good	S	PIP	
208	*Pinus spp.*	Pine	24	35	42	Poor	NS	PIP	Declining / Advanced Age
209	*Ulmus parvifolia*	Evergreen Elm	8	17	15	Fair	NS	PIP	Cambium Damage / Trunk Damage
210	*Ulmus parvifolia*	Evergreen Elm	8	17	15	Fair	NS	PIP	Cambium Damage / Trunk Damage
211	*Ulmus parvifolia*	Evergreen Elm	11	18	16	Good	S	PIP	
212	*Ulmus parvifolia*	Evergreen Elm	7	14	13	Good	S	PIP	
213	*Ulmus parvifolia*	Evergreen Elm	14	22	15	Fair	NS	PIP	Leaning
214	*Prosopis spp.*	Mesquite	32	45	32	Fair	NS	PIP	Exposed Roots / Leaning
215	*Prosopis spp.*	Mesquite	14	32	18	Fair	NS	PIP	Leaning / Cambium Damage
216	*Prosopis spp.*	Mesquite	14	22	18	Fair	NS	PIP	Leaning / Cambium Damage
217	*Prosopis spp.*	Mesquite	15	22	20	Fair	NS	PIP	Exposed Roots / Trunk Damage
218	*Phoenix dactylifera*	Date Palm	20	17	30	Fair	NS	PIP	Trunk Damage
219	*Eucalyptus spp.*	Eucalyptus	18	24	24	Poor	NS	PIP	Cambium Damage / Trunk Damage
220	*Eucalyptus spp.*	Eucalyptus	15	22	24	Fair	NS	PIP	Leaning / Cambium Damage
221	*Eucalyptus spp.*	Eucalyptus	9	23	18	Fair	NS	PIP	Leaning / Poor Structure
222	*Eucalyptus spp.*	Eucalyptus	11	23	19	Fair	NS	PIP	Leaning / Poor Structure
223	*Eucalyptus spp.*	Eucalyptus	24	40	30	Poor	NS	PIP	Advanced Age / Cambium Damage
224	*Eucalyptus spp.*	Eucalyptus	12	22	18	Poor	NS	PIP	Advanced Age / Cambium Damage
225	*Parkinsonia florida*	Blue Palo Verde	16	22	16	Good	S	PIP	
226	*Eucalyptus spp.*	Eucalyptus	8	15	15	Fair	NS	PIP	Leaning / Poor Structure
227	*Eucalyptus spp.*	Eucalyptus	20	30	28	Poor	NS	PIP	Trunk Damage / Branch Damage
228	*Parkinsonia florida*	Blue Palo Verde	8	30	15	Fair	NS	PIP	Leaning / Cambium Damage
229	*Parkinsonia florida*	Blue Palo Verde	22	28	26	Fair	NS	PIP	Exposed Roots / Trunk Damage
230	*Chilopsis linearis*	Desert Willow	12	10	8	Fair	NS	PIP	Wide Base / Poor Structure
231	*Parkinsonia florida*	Blue Palo Verde	18	27	19	Poor	NS	PIP	Trunk Damage / Branch Damage
232	*Parkinsonia florida*	Blue Palo Verde	18	32	20	Poor	NS	PIP	Trunk Damage / Branch Damage
233	*Parkinsonia florida*	Blue Palo Verde	12	20	16	Good	S	PIP	
234	*Eucalyptus spp.*	Eucalyptus	18	39	26	Fair	NS	PIP	Leaning / Poor Structure
235	*Eucalyptus spp.*	Eucalyptus	20	33	28	Fair	NS	PIP	Leaning / Cambium Damage
236	*Eucalyptus spp.*	Eucalyptus	20	29	36	Poor	NS	PIP	Trunk Damage / Branch Damage
237	*Eucalyptus spp.*	Eucalyptus	24	43	40	Poor	NS	PIP	Advanced Age / Cambium Damage
238	*Eucalyptus spp.*	Eucalyptus	20	30	30	Fair	NS	PIP	Leaning / Poor Structure
239	*Eucalyptus spp.*	Eucalyptus	15	32	26	Fair	NS	PIP	Leaning / Cambium Damage
240	*Eucalyptus spp.*	Eucalyptus	24	40	55	Poor	NS	PIP	Advanced Age / Cambium Damage

Plant #	Species	Common Name	Caliper (in)	Width (ft)	Height (ft)	Condition	Inventory Designation	Final Designation	Comments
241	*Eucalyptus spp.*	Eucalyptus	18	35	20	Poor	NS	PIP	Advanced Age / Cambium Damage
242	*Eucalyptus spp.*	Eucalyptus	14	25	25	Poor	NS	PIP	Trunk Damage / Branch Damage
243	*Parkinsonia florida*	Blue Palo Verde	10	20	16	Poor	NS	PIP	Trunk Damage / Branch Damage
244	*Eucalyptus spp.*	Eucalyptus	14	23	26	Fair	NS	PIP	Leaning / Cambium Damage
245	*Parkinsonia florida*	Blue Palo Verde	16	25	17	Good	S	PIP	
246	*Prosopis spp.*	Mesquite	8	18	14	Poor	NS	PIP	Cambium Damage / Trunk Damage
247	*Prosopis spp.*	Mesquite	22	40	28	Poor	NS	PIP	Cambium Damage / Trunk Damage
248	*Prosopis spp.*	Mesquite	30	50	20	Fair	NS	PIP	Exposed Roots / Trunk Damage
249	*Prosopis spp.*	Mesquite	24	16	16	Poor	NS	PIP	Trunk Damage / Branch Damage
250	*Prosopis spp.*	Mesquite	9	20	13	Good	S	PIP	
251	*Acacia farnesiana*	Sweet Acacia	30	6	6	Fair	NS	PIP	Wide Base / Poor Structure
252	*Acacia farnesiana*	Sweet Acacia	6	6	6	Poor	NS	PIP	Cambium Damage / Trunk Damage
253	*Acacia farnesiana*	Sweet Acacia	6	6	7	Good	S	PIP	
254	*Acacia farnesiana*	Sweet Acacia	20	12	11	Fair	NS	PIP	Wide Base / Branch Damage
255	*Acacia farnesiana*	Sweet Acacia	8	12	10	Good	S	PIP	
256	*Acacia farnesiana*	Sweet Acacia	6	10	9	Poor	NS	PIP	Cambium Damage / Trunk Damage
257	*Acacia farnesiana*	Sweet Acacia	7	10	8	Good	S	D	
258	*Parkinsonia florida*	Blue Palo Verde	14	25	17	Fair	NS	PIP	Exposed Roots / Leaning
259	*Chilopsis linearis*	Desert Willow	8	14	11	Poor	NS	PIP	Trunk Damage / Branch Damage
260	*Chilopsis linearis*	Desert Willow	14	20	14	Poor	NS	PIP	Trunk Damage / Branch Damage
261	*Chilopsis linearis*	Desert Willow	10	13	10	Poor	NS	PIP	Trunk Damage / Branch Damage
262	*Parkinsonia florida*	Blue Palo Verde	20	30	23	Poor	NS	PIP	Trunk Damage / Branch Damage
263	*Parkinsonia florida*	Blue Palo Verde	18	30	19	Poor	NS	PIP	Trunk Damage / Branch Damage
264	*Parkinsonia florida*	Blue Palo Verde	16	25	15	Poor	NS	PIP	Trunk Damage / Branch Damage
265	*Parkinsonia florida*	Blue Palo Verde	12	17	15	Poor	NS	PIP	Trunk Damage / Branch Damage
266	*Parkinsonia florida*	Blue Palo Verde	17	28	20	Poor	NS	PIP	Trunk Damage / Branch Damage
267	*Parkinsonia florida*	Blue Palo Verde	20	17	14	Poor	NS	PIP	Trunk Damage / Branch Damage
268	*Parkinsonia florida*	Blue Palo Verde	22	40	27	Poor	NS	PIP	Trunk Damage / Branch Damage
269	*Parkinsonia florida*	Blue Palo Verde	10	20	18	Poor	NS	PIP	Trunk Damage / Branch Damage
270	*Parkinsonia florida*	Blue Palo Verde	16	20	14	Poor	NS	PIP	Trunk Damage / Branch Damage
271	*Parkinsonia florida*	Blue Palo Verde	18	18	15	Poor	NS	PIP	Trunk Damage / Branch Damage
272	*Pithecellobium flexicaule*	Texas Ebony	6	9	9	Poor	NS	PIP	Trunk Damage / Cambium Damage
273	*Acacia farnesiana*	Sweet Acacia	5	8	8	Good	S	PIP	
274	*Parkinsonia florida*	Blue Palo Verde	22	37	18	Poor	NS	PIP	Trunk Damage / Branch Damage
275	*Prosopis spp.*	Mesquite	6	11	10	Poor	NS	PIP	Trunk Damage / Branch Damage
276	*Parkinsonia florida*	Blue Palo Verde	18	25	17	Good	S	PIP	
277	*Parkinsonia florida*	Blue Palo Verde	8	16	13	Poor	NS	PIP	Trunk Damage / Branch Damage
278	*Prosopis spp.*	Mesquite	8	11	10	Poor	NS	PIP	Trunk Damage / Branch Damage
279	*Pithecellobium flexicaule*	Texas Ebony	5	7	8	Poor	NS	PIP	Trunk Damage / Cambium Damage
280	*Prosopis spp.*	Mesquite	24	47	17	Fair	NS	PIP	Leaning / Cambium Damage
281	*Prosopis spp.*	Mesquite	12	22	17	Poor	NS	PIP	Trunk Damage / Branch Damage
282	*Prosopis spp.*	Mesquite	24	47	24	Poor	NS	PIP	Trunk Damage / Branch Damage
283	*Prosopis spp.*	Mesquite	6	12	10	Poor	NS	PIP	Trunk Damage / Branch Damage
284	*Prosopis spp.*	Mesquite	7	13	11	Poor	NS	PIP	Bores
285	*Parkinsonia florida*	Blue Palo Verde	7	17	11	Poor	NS	PIP	Trunk Damage / Branch Damage
286	*Washingtonia spp.*	Fan Palm	38	12	15	Good	S	PIP	
287	*Washingtonia spp.*	Fan Palm	38	10	13	Good	S	PIP	
288	*Phoenix dactylifera*	Date Palm	20	17	45	Fair	NS	PIP	Trunk Damage
289	*Phoenix dactylifera*	Date Palm	18	17	30	Fair	NS	PIP	Trunk Damage
290	*Ulmus parvifolia*	Evergreen Elm	14	25	20	Good	S	PIP	
291	*Ulmus parvifolia*	Evergreen Elm	17	25	20	Good	S	PIP	
292	*Ulmus parvifolia*	Evergreen Elm	8	17	15	Fair	NS	PIP	Leaning
293	*Ulmus parvifolia*	Evergreen Elm	12	20	16	Good	S	PIP	
294	*Ulmus parvifolia*	Evergreen Elm	14	28	20	Fair	NS	PIP	Cambium Damage / Trunk Damage
295	*Ulmus parvifolia*	Evergreen Elm	14	30	24	Good	S	PIP	
296	*Phoenix dactylifera*	Date Palm	16	18	53	Fair	NS	PIP	Trunk Damage
297	*Prosopis spp.*	Mesquite	24	40	27	Fair	NS	PIP	Exposed Roots / Advanced Age
298	*Prosopis spp.*	Mesquite	20	40	25	Poor	NS	PIP	Trunk Damage / Branch Damage
299	*Washingtonia spp.*	Fan Palm	36	12	43	Poor	NS	PIP	Cambium Damage / Trunk Damage
300	*Ulmus parvifolia*	Evergreen Elm	8	20	17	Fair	NS	PIP	Leaning
301	*Prosopis spp.*	Mesquite	30	45	28	Fair	NS	PIP	Exposed Roots / Trunk Damage
302	*Parkinsonia aculeta*	Mexican Palo Verde	22	26	18	Poor	NS	PIP	Weed Species / Trunk Damage
303	*Prosopis spp.*	Mesquite	14	20	18	Poor	NS	PIP	Trunk Damage / Branch Damage
304	*Prosopis spp.*	Mesquite	16	24	15	Fair	NS	PIP	Leaning / Cambium Damage
305	*Prosopis spp.*	Mesquite	24	33	27	Good	S	PIP	
306	*Prosopis spp.*	Mesquite	30	33	27	Fair	NS	PIP	Exposed Roots
307	*Prosopis spp.*	Mesquite	10	22	16	Good	S	PIP	
308	*Leucaena retusa*	Goldenball Leadtree	10	15	18	Poor	NS	PIP	Weed Species / Trunk Damage
309	*Prosopis spp.*	Mesquite	4	16	16	Fair	NS	PIP	Leaning / Poor Structure
310	*Parkinsonia aculeta*	Mexican Palo Verde	6	16	16	Poor	NS	PIP	Weed Species / Trunk Damage
311	*Prosopis spp.*	Mesquite	14	28	27	Good	S	PIP	
312	*Leucaena retusa*	Goldenball Leadtree	8	16	25	Poor	NS	PIP	Weed Species / Leaning
313	*Parkinsonia florida*	Blue Palo Verde	22	29	20	Fair	NS	PIP	Leaning / Cambium Damage
314	*Prosopis spp.*	Mesquite	24	40	26	Fair	NS	PIP	Leaning / Poor Structure
315	*Prosopis spp.*	Mesquite	12	25	20	Fair	NS	PIP	Leaning / Poor Structure
316	*Prosopis spp.*	Mesquite	20	33	27	Good	S	PIP	
317	*Prosopis spp.*	Mesquite	8	20	20	Fair	NS	PIP	Leaning / Cambium Damage
318	*Prosopis spp.*	Mesquite	12	25	22	Fair	NS	PIP	Leaning / Cambium Damage
319	*Prosopis spp.*	Mesquite	12	25	27	Fair	NS	PIP	Leaning / Poor Structure
320	*Prosopis spp.*	Mesquite	16	30	28	Fair	NS	PIP	Leaning / Poor Structure

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: MN

Drawn By: MN

Checked By: JB

Date: 4/19/2024

Project #: 22.1618.002

Title: **PLANT INVENTORY INDEX**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Sheet
PI-302
9 OF 148

P:\221618.002\L2Cad\Sheets\1618.002-PI300.dwg 4/29/2024 12:20:37 PM MARIA NOVACEK

Plant #	Species	Common Name	Caliper (in)	Width (ft)	Height (ft)	Condition	Inventory Designation	Final Designation	Comments
321	*Chilopsis linearis*	Desert Willow	20	15	14	Fair	NS	PIP	Leaning / Cambium Damage
322	*Parkinsonia aculeta*	Mexican Palo Verde	6	16	16	Poor	NS	PIP	Weed Species / Leaning
323	*Prosopis spp.*	Mesquite	20	23	20	Fair	NS	PIP	Leaning / Poor Structure
324	*Parkinsonia aculeta*	Mexican Palo Verde	12	22	18	Poor	NS	PIP	Weed Species / Trunk Damage
325	*Acacia farnesiana*	Sweet Acacia	14	14	13	Fair	NS	PIP	Leaning / Poor Structure
326	*Prosopis spp.*	Mesquite	8	14	15	Good	S	PIP	
327	*Prosopis spp.*	Mesquite	7	13	13	Good	S	PIP	
328	*Prosopis spp.*	Mesquite	16	16	16	Poor	NS	PIP	Trunk Damage / Branch Damage
329	*Prosopis spp.*	Mesquite	7	14	15	Good	S	PIP	
330	*Prosopis spp.*	Mesquite	22	30	27	Poor	NS	PIP	Trunk Damage / Branch Damage
331	*Prosopis spp.*	Mesquite	18	30	27	Good	S	PIP	
332	*Prosopis spp.*	Mesquite	18	33	23	Good	S	PIP	
333	*Prosopis spp.*	Mesquite	8	22	18	Fair	NS	PIP	Leaning / Cambium Damage
334	*Prosopis spp.*	Mesquite	26	40	30	Fair	NS	PIP	Leaning / Cambium Damage
335	*Parkinsonia florida*	Blue Palo Verde	12	26	20	Fair	NS	PIP	Leaning / Cambium Damage
336	*Parkinsonia florida*	Blue Palo Verde	4	12	13	Poor	NS	PIP	Branch Damage / Cambium Damage
337	*Prosopis spp.*	Mesquite	24	32	22	Good	S	PIP	
338	*Parkinsonia florida*	Blue Palo Verde	10	22	17	Poor	NS	PIP	Cambium Damage / Trunk Damage
339	*Parkinsonia florida*	Blue Palo Verde	8	20	16	Good	S	PIP	
340	*Prosopis spp.*	Mesquite	14	22	16	Good	S	PIP	
341	*Prosopis spp.*	Mesquite	8	16	14	Fair	NS	PIP	Leaning / Cambium Damage
342	*Prosopis spp.*	Mesquite	5	11	11	Good	S	PIP	
343	*Prosopis spp.*	Mesquite	6	15	14	Good	S	PIP	
344	*Parkinsonia florida*	Blue Palo Verde	7	10	10	Poor	NS	PIP	Trunk Damage / Branch Damage
345	*Prosopis spp.*	Mesquite	22	42	27	Good	S	PIP	
346	*Prosopis spp.*	Mesquite	10	20	18	Good	S	PIP	
347	*Parkinsonia microphylla*	Foothills Palo Verde	9	14	14	Poor	NS	PIP	Trunk Damage / Branch Damage
348	*Parkinsonia microphylla*	Foothills Palo Verde	7	12	12	Good	S	PIP	
349	*Parkinsonia microphylla*	Foothills Palo Verde	8	15	14	Good	S	PIP	
350	*Prosopis spp.*	Mesquite	14	22	18	Good	S	PIP	
351	*Prosopis spp.*	Mesquite	28	40	27	Fair	NS	PIP	Proximity to Wall
352	*Parkinsonia microphylla*	Foothills Palo Verde	12	18	16	Fair	NS	PIP	Leaning / Poor Structure
353	*Chilopsis linearis*	Desert Willow	7	14	13	Poor	NS	PIP	Trunk Damage / Branch Damage
354	*Chilopsis linearis*	Desert Willow	5	6	8	Poor	NS	PIP	Trunk Damage / Branch Damage
355	*Chilopsis linearis*	Desert Willow	16	14	12	Poor	NS	PIP	Trunk Damage / Branch Damage
356	*Prosopis spp.*	Mesquite	7	14	14	Good	S	PIP	
357	*Chilopsis linearis*	Desert Willow	16	15	15	Poor	NS	PIP	Trunk Damage / Branch Damage
358	*Parkinsonia florida*	Blue Palo Verde	20	39	22	Good	S	PIP	
359	*Prosopis spp.*	Mesquite	12	25	17	Poor	NS	PIP	Trunk Damage / Branch Damage
360	*Prosopis spp.*	Mesquite	5	14	12	Poor	NS	PIP	Trunk Damage / Branch Damage
361	*Chilopsis linearis*	Desert Willow	7	12	6	Poor	NS	PIP	Trunk Damage / Branch Damage
362	*Chilopsis linearis*	Desert Willow	6	12	12	Good	S	PIP	
363	*Prosopis spp.*	Mesquite	22	42	28	Poor	NS	PIP	Trunk Damage / Branch Damage
364	*Prosopis spp.*	Mesquite	15	30	18	Fair	NS	PIP	Leaning / Cambium Damage
365	*Prosopis spp.*	Mesquite	22	36	20	Poor	NS	PIP	Trunk Damage / Branch Damage
366	*Prosopis spp.*	Mesquite	38	60	30	Fair	NS	PIP	Exposed Roots / Leaning
367	*Prosopis spp.*	Mesquite	22	33	20	Fair	NS	PIP	Leaning / Trunk Damage
368	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
369	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
370	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
371	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
372	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
373	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
374	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
375	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
376	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
377	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
378	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
379	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken
380	*Pistacia chinensis*	Chinese Pistache	2	3	6	Good		PIP	Planted After Inventory Was Taken

Summary			
	Trees	**Cacti**	**Total**
Salvage	0	0	**0**
Demo	38	0	**38**
Protect In Place	336	6	**342**
Total Plants	**374**	**6**	**380**

Inventory Designation Legend
S = Salvageable
NS = Non Salvageable
D = Destroy
RIP = Remain In Place

Final Designation Legend
S = Salvageable
D = Demo
PIP = Protect in Place

Revisions	Date

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Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Sheet
PI-303
10 OF 148

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CITY OF PHOENIX

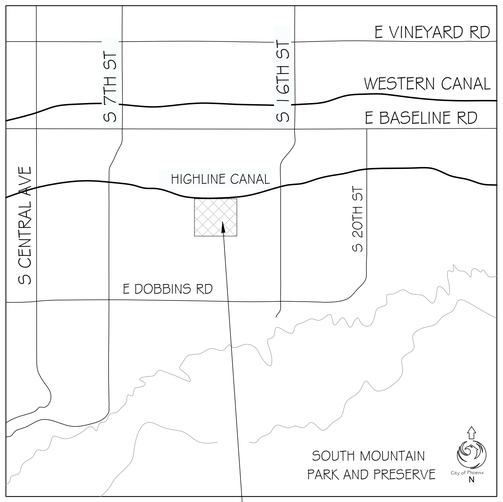
OFFICE OF THE CITY ENGINEER

PARKS AND RECREATION DEPARTMENT

HIGHLINE PARK

1346 E SOUTH MOUNTAIN AVE, PHOENIX, AZ 85042

PROJECT NUMBERI PA75200668-1



VICINITY MAP
NTS

THIS PROJECT

PROJECT OWNER REPRESENTATIVE

AARON JENSEN,
PARKS DEPARTMENT DIVISION
CITY OF PHOENIX
200 WEST WASHINGTON STREET, 16TH FLOOR
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EMAIL: AARON.JENSEN@PHOENIX.GOV
PHONE: 602.261.8799

CONTACT: KAREN NYHUS
EMAIL: KAREN.NYHUS@PHOENIX.GOV
CITY OF PHOENIX
PLANNING AND DEVELOPMENT DEPARTMENT
200 W. WASHINGTON ST. 2ND FLOOR
PHOENIX, ARIZONA 85003
PHONE: 602.534.6059

PRIME CONSULTANT

JASON TOUCHIN, PE
J2 DESIGN
4649 E. COTTON GIN LOOP, SUITE B-2
PHOENIX, ARIZONA 85040
CONTACT: JASON TOUCHIN, PE
PHONE: 602.438.2221 EXT: 128
EMAIL: JTOUCHIN@J2DESIGN.US

AREA

NET ACREAGE OF IMPROVED AREA = 32.4 ACRES
DISTURBED AREA = 18.8 ACRES

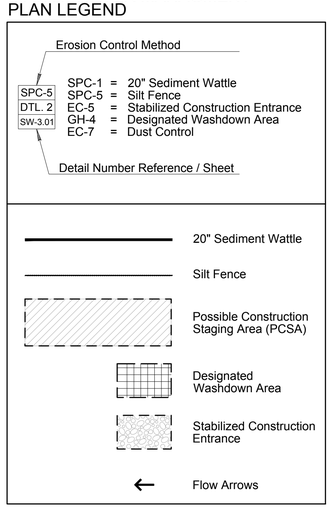
INDEX OF SHEETS

SW-101	SWMP COVER SHEET
SW-201	SWMP PLAN
SW-202	SWMP PLAN
SW-301	SWMP DETAILS

PROJECT DESCRIPTION

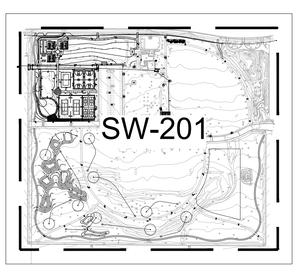
THE CITY OF PHOENIX IS RE-DEVELOPING AN EXISTING 32.4 ACRE PARK IMMEDIATELY SOUTH OF THE HIGHLINE CANAL, BETWEEN S. 12TH AND S. 14TH STREETS . THE NEW & REFURBISHED IMPROVEMENTS WILL INCLUDE BASKETBALL COURTS, TENNIS COURTS, PICKLE BALL COURTS, EXERCISE EQUIPMENT, WALKING PATHS, SKATE PLAZA, DISC GOLF, RAMADAS, RESTROOMS, PARKING LOT, & LANDSCAPE.

STORM WATER MANAGMENT PLAN LEGEND



Notes:
1. Refer to Maricopa County Flood Control District Erosion Control Manual for Additional Information

Overall Project Site



2024

CITY OF PHOENIX STORM WATER MANAGEMENT PLAN NOTES

1. A COPY OF THE APPROVED GRADING AND DRAINAGE PLAN FOR THIS PROJECT TOGETHER WITH A COPY OF THE NOTICE OF INTENT (N.O.I.) AND THE STORM WATER MANAGEMENT PLAN (S.W.M.P), SHALL BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW. THOSE ELEMENTS OF THE GRADING AND DRAINAGE PLAN PERTINENT TO OR REFERENCED ON THE S.W.M.P. SHALL BE CONSIDERED A PART OF THE S.W.M.P.
2. PLANNING AND DEVELOPMENT DEPARTMENT'S CIVIL/SITE INSPECTION GROUP SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON-SITE AND/OR OFF-SITE CONSTRUCTION BEGINS, AT (602) 262-7811.
3. THE OPERATOR SHALL OBTAIN A DUST CONTROL PERMIT FROM MARICOPA COUNTY HEALTH DEPARTMENT AND PERFORM MEASURES AS REQUIRED BY THE PERMIT TO PREVENT EXCESS DUST.
4. THE OPERATOR SHALL PERFORM, AT A MINIMUM, A VISUAL INSPECTION OF THE CONSTRUCTION SITE ONCE EVERY MONTH AND WITHIN 24 HOURS OF RAINFALL GREATER THAN OR EQUAL TO A HALF AN INCH OR MORE. THE OPERATOR SHALL PREPARE A REPORT DOCUMENTING HIS/HER FINDINGS ON THE SWMP CONTROLS AND NOTE ANY EROSION PROBLEM AREAS. THE OPERATOR'S REPORT IS TO BE SUBMITTED TO THE PLANNING & DEVELOPMENT DEPARTMENT CIVIL /SITE INSPECTOR FOR REVIEW AND APPROVAL. FACILITIES SHALL BE MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
5. THE OPERATOR SHALL AMEND THIS PLAN AS NECESSARY DURING THE COURSE OF CONSTRUCTION TO RESOLVE ANY PROBLEM AREAS WHICH BECOME EVIDENT DURING THE CONSTRUCTION AND/OR DURING RAINFALLS.
6. THE PERMITTEE SHALL FILE A NOTICE OF TERMINATION (N.O.T.) AFTER COMPLETION OF CONSTRUCTION AND PLACEMENT OF FINAL LANDSCAPE MATERIALS. THE N.O.T. IS TO BE SUBMITTED TO THE PLANNING & DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR TO FINAL THE SWMP PERMIT.
7. THE PERMITTEE SHALL SAVE ALL RECORDS, INCLUDING THE N.O.I., S.W.M.P., N.O.T., AND INSPECTION REPORTS, ON FILE FOR A MINIMUM OF THREE YEARS FROM THE DATE OF FILING THE N.O.T.
8. THE IMPLEMENTATION OF THESE PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND THE UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED AND THE N.O.T. SUBMITTED TO THE PLANNING & DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR.
9. THE FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS, AND MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
10. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENTOF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By:	JT
Drawn By:	J2CAD
Checked By:	JT
Date:	4/19/2024
Project #:	22.1618.002

Title: STORM WATER MANAGEMENT COVER SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602 438 2221

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

KIVA # _____
SDEV # _____

Sheet
SW-101
11 OF 148

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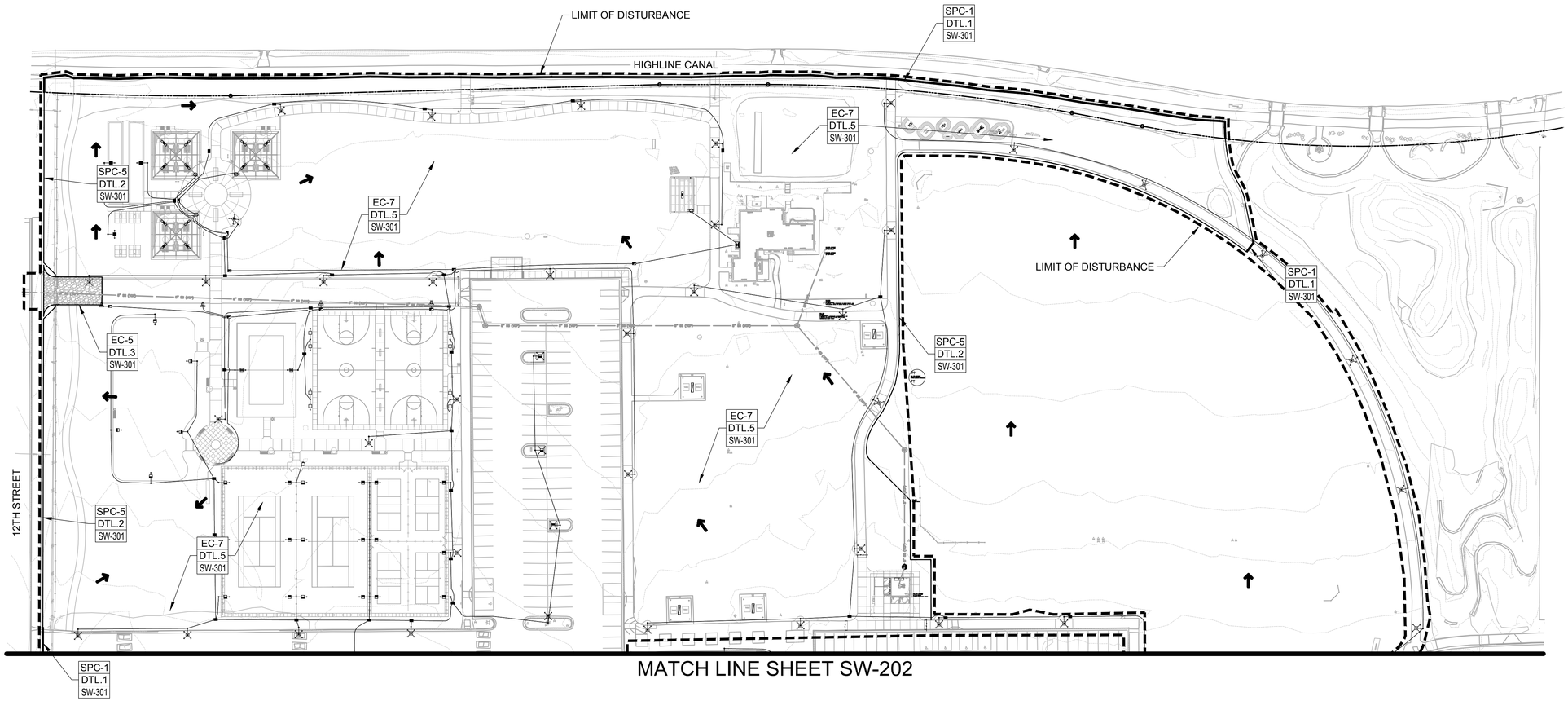

STORM WATER MANAGMENT PLAN LEGEND

Erosion Control Method

SPC-5 / DTL. 2 / SW-3.01 (Detail Number Reference / Sheet)

- SPC-1 = 20" Sediment Wattle
- SPC-5 = Silt Fence
- EC-5 = Stabilized Construction Entrance
- GH-4 = Designated Washdown Area
- EC-7 = Dust Control

- 20" Sediment Wattle
- Silt Fence
- Possible Construction Staging Area (PCSA)
- Designated Washdown Area
- Stabilized Construction Entrance
- Flow Arrows

Notes:
1. Refer to Maricopa County Flood Control District Erosion Control Manual for Additional Information

-WARNING-
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0 50' 100'
SCALE: 1"=50'

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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Designed By: JT
Drawn By: J2CAD
Checked By: JT
Date: 4/19/2024
Project #: 22.1618.002

KIVA #
SDEV #

Sheet
SW-201
12 OF 148

Title:
STORM WATER MANAGEMENT PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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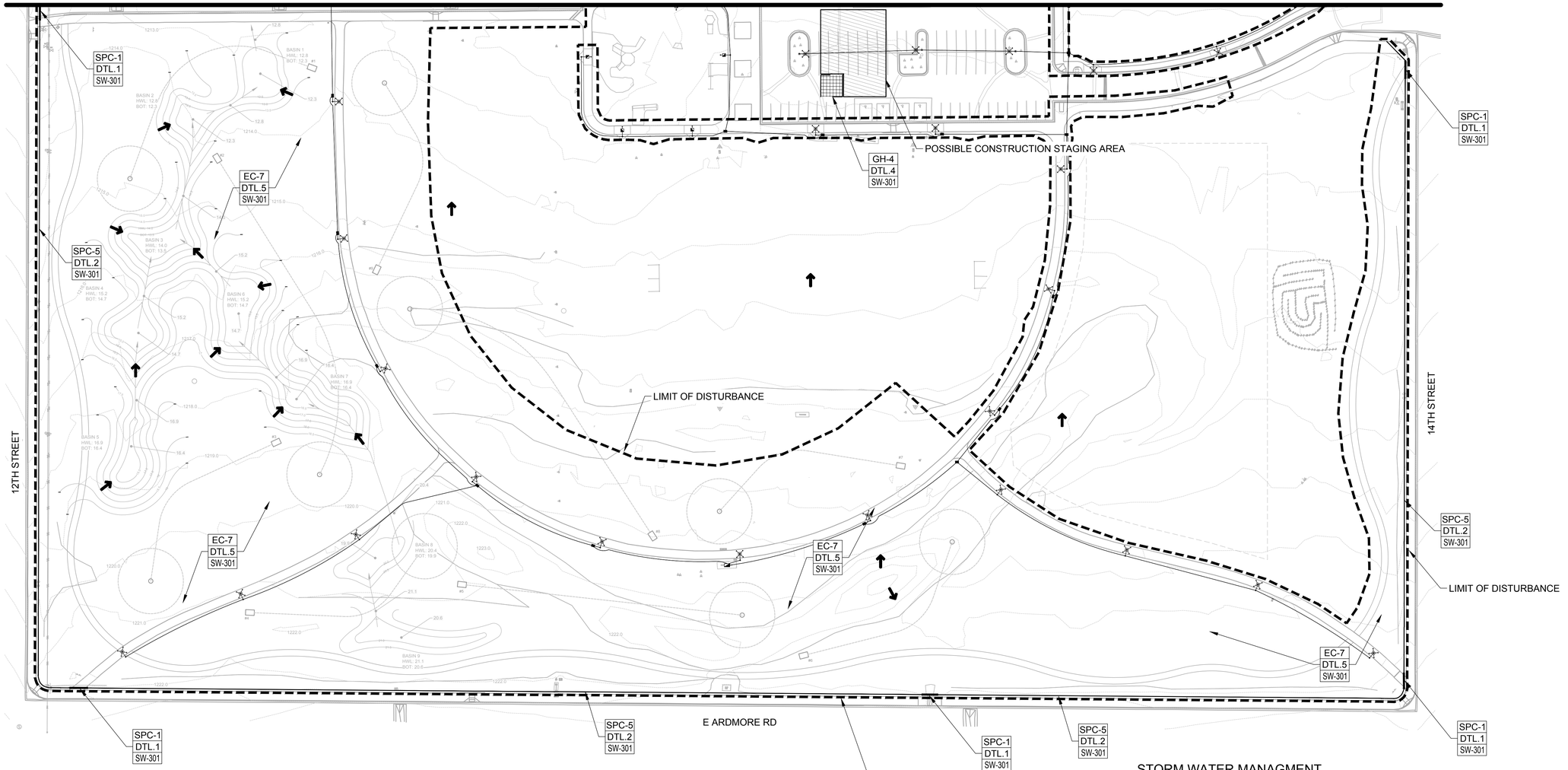
MATCH LINE SHEET SW-201



STORM WATER MANAGMENT PLAN LEGEND

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- 20" Sediment Wattle
- Silt Fence
- Possible Construction Staging Area (PCSA)
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- Stabilized Construction Entrance
- Flow Arrows

Notes:
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Date:	4/19/2024
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Title:
STORM WATER MANAGEMENT PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

KIVA # _____
SDEV # _____

Sheet
SW-202
13 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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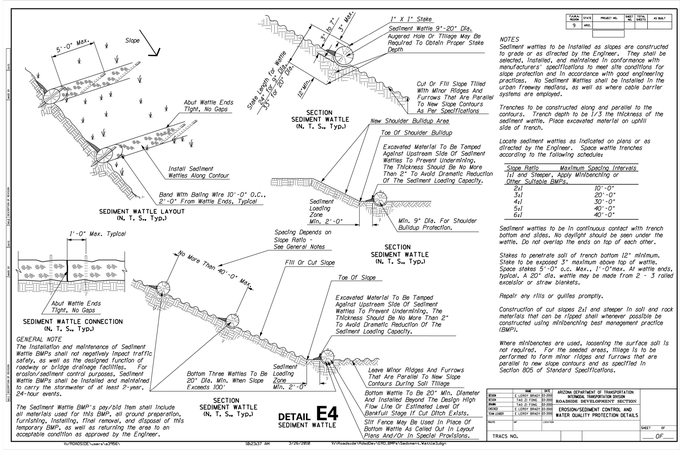
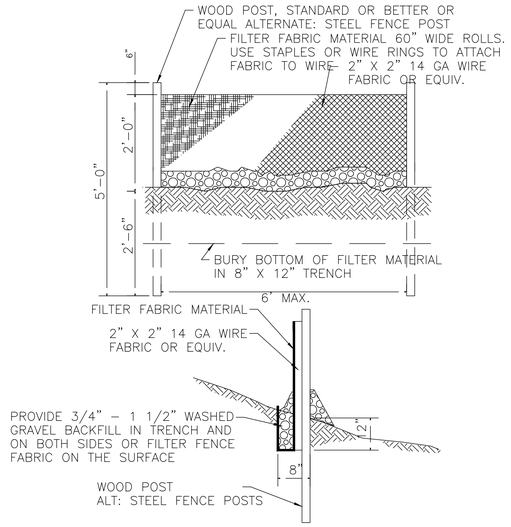
NOTE:
- CONTRACTOR TO ENSURE ALL DETAILS ARE IN COMPLIANCE WITH THE DDMME EROSION CONTROL 2018



SPC-1 Sediment Wattle Drawing

Drainage Design Manual for Maricopa County — *Erosion Control: Best Management Practices*



1 SEDIMENT WATTLE (SPC-1)
N.T.S.

DEFINITION

A GEOTEXTILE FABRIC STRETCHED BETWEEN EITHER WOODEN OF METAL POSTS WITH THE LOWER EDGE OF THE FABRIC SECURELY EMBEDDED IN THE SOIL. THE FENCE IS TYPICALLY LOCATED DOWNSTREAM OF DISTURBED AREAS TO INTERCEPT SHEET FLOW RUNOFF.

MATERIALS

SELECTION OF FABRIC TENSILE STRENGTH AND BURSTING STRENGTH CHARACTERISTICS SHALL BE SUPPORTED WITH WIRE MESH IN AND AS RECOMMENDED BY THE FABRIC MANUFACTURER. FILTER FABRIC MATERIAL SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE LIFE AT A TEMPERATURE RANGE OF 0° F. TO 120° F.

INSTALLATION

FILTER FENCES ARE TO BE CONSTRUCTED ON A LEVEL CONTOUR TO MAXIMIZE THE AVAILABLE PONDING AREA AND PREVENT CONCENTRATION OF FLOW AGAINST THE FENCE.

a. POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 30 INCHES.

b. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.

c. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY- DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES.

d. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED AND THE FILTER FABRIC STAPLED OR WIRED DIRECTLY TO THE POSTS.

e. THE USE OF JOINTS SHOULD BE AVOIDED WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP AND BOTH. ENDS SECURELY FASTENED TO THE POST.

f. THE TRENCH SHALL BE BACKFILLED WITH 3/4-INCH MINIMUM DIAMETER WASHED GRAVEL OR COMPACTED- NATIVE MATERIAL.

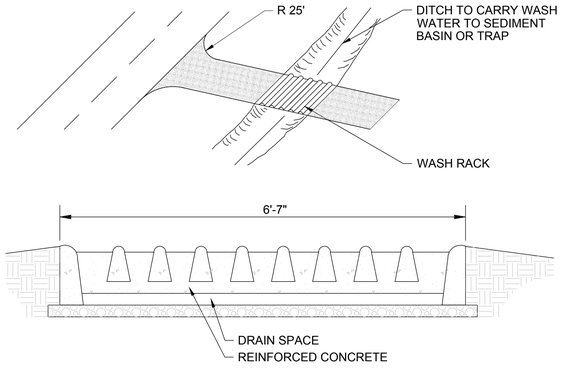
MAINTENANCE REQUIREMENTS

INSPECT MONTHLY DURING DRY PERIODS AND IMMEDIATELY AFTER EACH RAINFALL. REPAIR AS NECESSARY. SEDIMENT MUST BE REMOVED WHEN IT REACHES APPROXIMATELY ONE THIRD THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. FILTER FENCES SHOULD NOT BE REMOVED UNTIL THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED

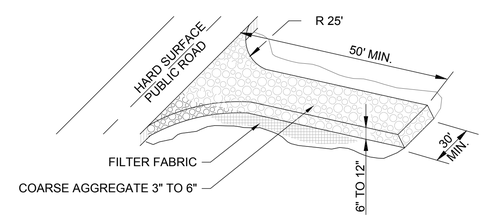
COA NOTES:

A SILT FENCE IS REQUIRED FOR CONSTRUCTION SITE PERIMETER
CONTAINMENT CONTROL OF SILT, DIRT AND DEBRIS AROUND A SITE INCLUDING ANY BASIN OUTFALL LOCATIONS. THE SILT FENCE IS REQUIRED TO BE INSTALLED AROUND THE CONSTRUCTION SITES' PERIMETER EXTENDING TO A DISTANCE WHERE THE ELEVATION REACHES 18" ABOVE THE SITE OUTFALL ELEVATION. ONCE THIS IS REACHED, APPROVED WATTLES MAY BE UTILIZED FOR THE REMAINING PERIMETER CONTROL REQUIREMENTS. FOR RELATIVELY FLAT SITES, THIS MAY REQUIRE THE ENTIRE PERIMETER TO USE SILT FENCE.

2 SILT FENCE (SPC-5)
N.T.S.

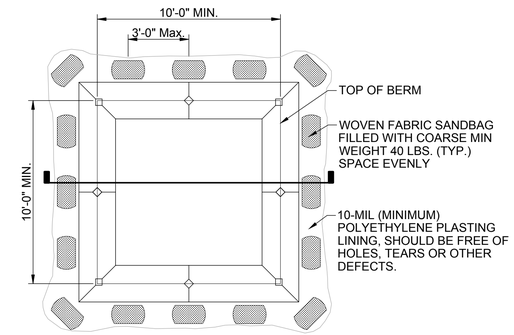


WASH RACK

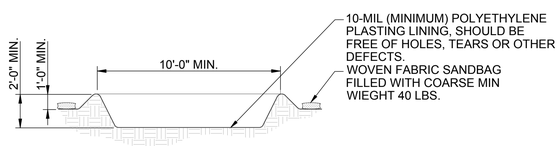


NOTE:
1. FABRIC TO BE IN ACCORDANCE WITH MAG SECTION 796.2.2 CLASS 'B' NON-WOVEN

3 STABILIZED CONSTRUCTION ENTRANCE (EC-5)
N.T.S.



PLAN



SECTION

4 DESIGNATED WASHDOWN AREA (GH-4)
N.T.S.

EC-7 Dust Control Table

TABLE 5.2
COMMONLY USED DUST SUPPRESSANTS (CONTINUED)

Types	Ideal Soil Characteristics	Relative Cost Comparison (average life expectancy)	Environmental Considerations
Freshwater	None	Low initial cost, high long-term maintenance cost (0 months)	Minimal environmental hazard. If applied excessively, may result in erosion and sediment runoff. Supply may be limited in some areas and, depending on the source, may require a water right permit.
Calcium Chloride	Plasticity index > 8 10-20 percent fines passing the No. 200 sieve (by weight)	Low initial cost, medium long-term maintenance cost (1-6 months)	Repeated applications and long term use may harm adjacent vegetation (See the manufacturer's product information).
Magnesium Chloride	Plasticity index > 8 10-20 percent fines passing the No. 200 sieve (by weight)	Low initial cost, medium long-term maintenance cost (1-6 months)	Repeated applications and long term use may harm adjacent and nearby vegetation (See the manufacturer's product information).
Lignin Derivatives	Plasticity index > 8 10-30 percent fines passing the No. 200 sieve (by weight)	Medium initial cost, low long-term maintenance cost (3-12 months)	Lignin products have high BOD (biological oxygen demand) in aquatic systems. Spills or runoff into surface or groundwaters may create low dissolved oxygen conditions resulting in fish kills or increases in ground water concentrations of iron, sulfur compounds arid other pollutants. (See the product MSDS for specific information).
Tree Resin Emulsions (tall oil)	Plasticity index < 3 10-20 percent fines passing the No. 200 sieve (by weight)	Medium initial cost, low long-term maintenance cost (1-6 months)	(See the manufacturer's product information)
Synthetic Polymer	Plasticity index < 3 5-20 percent fines passing the No. 200 sieve (by weight)	High initial cost, low long-term maintenance cost (1-3 months)	(See the manufacturer's product information)
Bituments, Tars, and Resins	Plasticity index < 3 <20 percent fines passing the No. 200 sieve (by weight)	High initial cost, high long-term maintenance cost (1-3 months)	Use of used oils prohibited. Some petroleum based products may contain carcinogenic polycyclic aromatic hydrocarbons (PAHs). (See the manufacturer's product information)
Cementitious Based Binders	Depending on the type of cementitious based binder, will work with both high and low plasticity index soils.	Low initial cost, medium long-term maintenance cost (3-6 months)	None

5 DUST CONTROL (EC-7)
N.T.S.

Revisions	Date

PRE-FINAL
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Designed By: JT
Drawn By: J2CAD
Checked By: JT
Date: 4/19/2024
Project #: 22.1618.002

Title: **STORM WATER MANAGEMENT DETAILS**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX — OFFICE OF THE CITY ENGINEER — PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602 438 2221

KIVA # _____
SDEV # _____

Note:
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Sheet
SW-301
14 OF 148

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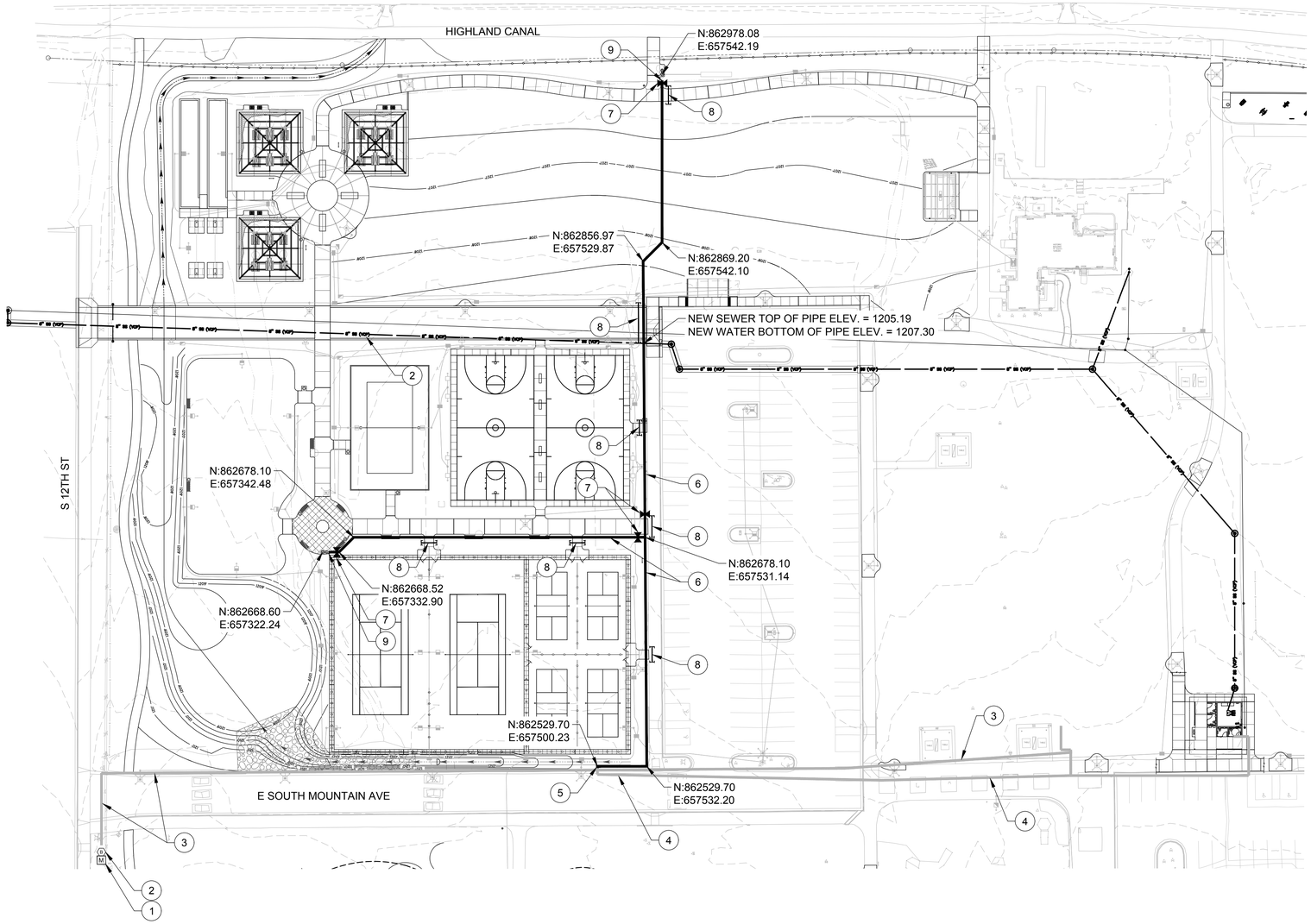

GENERAL WATERLINE NOTES

1. CONTACT CITY OF PHOENIX WATER QUALITY SERVICES FOR LATEST LIST OF APPROVED BACKFLOW PREVENTERS AND CERTIFIED TESTERS.
2. THE REQUIRED BACKFLOW PREVENTION ASSEMBLY SHALL BE A MANUFACTURER AND MODEL NUMBER DESIGNATED IN THE CURRENT CITY OF PHOENIX LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. THE BACKFLOW PREVENTION ASSEMBLY SHALL BE TESTED AND APPROVED BY A CERTIFIED TECHNICIAN DESIGNATED IN THE CURRENT CITY OF PHOENIX LIST OF APPROVED INSPECTORS PRIOR TO THE REQUEST FOR FINAL INSPECTION.
4. ENTIRE BACKFLOW AND PIPING SHALL BE PAINTED 'TAN', DO NOT PAINT THE NAME PLATE OR ANY BRASS PARTS OF THE ASSEMBLY.
5. INSTALL BRASS PIPE PLUG IN EACH TESTCOCK ON THE ASSEMBLY.
6. FINISHED GRADE UNDER THE BACKFLOW PREVENTER SHALL BE COMPACTED PER GEOTECHNICAL REPORT REQUIREMENTS.
7. PROVIDE 24-INCH MINIMUM CLEARANCE BETWEEN BACKFLOW PREVENTION ASSEMBLY AND PERMANENT STRUCTURES.
8. BACKLFOW CAGE TO BE POWDERCOATEDZ E 'TAN' FROM FACTORY.
9. ALL COMPONENTS SHALL BE LEAD FREE.
10. PROVIDE 18 AWG TRACER WIRE ALONG ALL POTABLE WATERLINES. ATTACH @ 8' O.C. PROVIDE EXPANSION LOOPS AT ALL BENDS AND AT ALL VALVE BOXES.
11. LOCATE ALL VALVES, QUICK COUPLERS, BACKFLOWS WITHIN LANDSCAPE ALL BACKFLOWS SHALL BE A MIN. OF 18" CLEAR FROM BACK OF CURBS OR SIDEWALKS.
12. ALL ONSITE PLUMBING WORK TO COMPLY WITH THE 2018 INTERNATIONAL PLUMBING CODE, 2018 IPC, AND ALL CITY OF PHOENIX ADOPTED CODES AND AMENDMENTS, IBC 107.2. CALL FOR INSPECTION AND WITNESS TESTING PRIOR TO CONCEALING WATER, SEWER.
13. WATER SERVICE PIPE SHALL CONFORM TO NSF 61 AND SHALL CONFORM TO ONE OF LISTED STANDARDS IN IPC TABLE 605.3. WATER DISTRIBUTION PIPE SHALL CONFORM TO NSF 61 AND SHALL CONFORM TO ONE OF LISTED STANDARDS IN IPC TABLE 605.4. PIPE FITTINGS SHALL CONFORM TO NSF 61 AND SHALL CONFORM TO TABLE IPC TABLE 605.5. THE SITE BACKFLOW ASSEMBLY NEEDS TO CARRY LISTING BY USC OR ASSE, IPC 608.3.
14. WATER PIPING INSTALLED MINIMUM OF 12 INCH ABOVE SEWER AT CROSSINGS IPC 603.2. THE USE OF MAG STANDARD 404 OR ANY KIND OF CONCRETE ENCASEMENT OF ONSITE PRIVATE DOMESTIC WATER AND SANITARY SEWER PIPING IS PROHIBITED, IPC 305.1, UPC 312.2. NO PRIVATE PLUMBING SHALL BE EMBEDDED IN CONCRETE.
15. FOR NONMETALLIC PIPE, PROVIDE UNDERGROUND LOCATING DEVICE, SUCH AS A TRACER WIRE, ARS 40-360.22
16. TEST ALL WATER PIPING PRIOR TO BACKFILL AND COVER. CALL FOR INSPECTION AND WITNESS TESTING PRIOR TO CONCEALING WATER PIPING, IBC 107.2, 312.0
17. FLUSH ALL POTABLE WATER PIPING PRIOR TO OCCUPANCY, IPC 610.
18. ALL WATERLINE CONSTRUCTION AND TESTING SHALL BE PER MAG STANDARD SPECIFICATIONS SECTIONS 610 AND 611.
19. ALL WATERLINES SHALL BE INSTALLED WITH TRACER WIRE AND MARKER BALLS.
20. THRUST BLOCKS SHALL BE INSTALLED PER MAG STD DETAILS 380 AND 381.
21. CONTRACTOR SHALL POTHOLE EXISTING UTILITIES PRIOR TO INSTALLING NEW WATER SERVICE.
22. ALL METER INSTALLATIONS WILL NEED TO BE COORDINATED/PERMITTED THROUGH OUR WATER SERVICES IRS SECTION. METER INSTALLATIONS WILL BE PERFORMED BY CITY FORCES. INFORMATION PROVIDED BELOW.

CITY OF PHOENIX - CITY HALL
WATER SERVICES DEPARTMENT 8TH FLOOR
IRS SECTION
200 W. WASHINGTON
PHOENIX, AZ 85003

23. WATER SERVICES DEPARTMENT REQUIRES AS-BUILTS AT THE COMPLETION OF THE PROJECT TO MAP ALL PROPOSED WATER METERS.

WATER CONSTRUCTION NOTES

PER SHEET

#	DESCRIPTION	QTY.	UNIT
1	EXISTING POTABLE WATER METER PER DESIGN DRAWINGS DATED 1984. CONTRACTOR TO VERIFY SIZE AND LOCATION.	1	EA
2	EXISTING REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY PER DESIGN DRAWINGS DATED 1984. CONTRACTOR TO VERIFY SIZE AND LOCATION.	1	EA
3	EXISTING 4" PVC WATER LINE PER DESIGN DRAWINGS DATED 1984. CONTRACTOR TO VERIFY SIZE AND LOCATION.		
4	EXISTING 1" PVC WATER LINE PER DESIGN DRAWINGS DATED 1984. CONTRACTOR TO VERIFY SIZE AND LOCATION.		
5	POINT OF CONNECTION TO EXISTING 1" PVC PIPE. CONTRACTOR TO VERIFY SIZE AND LOCATION.	1	EA
6	INSTALL 1" SCHEDULE 40 PVC MAINLINE, PER DTL 2, SHT IR-303	690	LF
7	INSTALL 1" ISOLATION BALL VALVE, PER DTL 5, SHT IR-301	4	EA
8	INSTALL PIPE SLEEVE, PER DTL. 5, SHT IR-303	2" -90	LF
9	SEE DRINKING FOUNTAIN DTLS. 4 & 5, SHT HS-402 FOR CONTINUATION	2	EA

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: JT
Drawn By: TB
Checked By: JT
Date: 4/19/2024
Project #: 22.1618.002

Title: **POTABLE WATER LINE PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

-WARNING-
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Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

0 40' 80'
SCALE: 1"=40'

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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Sheet
WL-201
15 OF 148

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DEMOLITION GENERAL NOTES:

1. ANY QUANTITIES PROVIDED WITHIN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK.
2. ALL ITEMS TO BE REMOVED SHALL BE TAGGED AND/OR MARKED IN FIELD BY CONTRACTOR FOR REVIEW AND APPROVAL BY CITY OF PHOENIX REPRESENTATIVE, PRIOR TO REMOVAL.
3. ALL CONCRETE SAW-CUTS REMOVALS TO BE AT THE NEAREST JOINT, CONTRACTOR SHALL PAINT PROPOSED REMOVAL IN FIELD, AND HAVE THE CITY OF PHOENIX FIELD REPRESENTATIVE REVIEW AND APPROVAL PRIOR TO REMOVAL.
4. ALL EXISTING CONCRETE & STRUCTURE NOT IDENTIFIED TO BE REMOVED ARE TO BE PROTECT-IN-PLACE. CONTRACTOR T TO ESTABLISH LIMITS OF DISTURBANCE AND WALK EXISTING SITE WITH CITY OF PHOENIX REPRESENTATIVE TO REVIEW CONDITIONS OF ALL EXISTING PAVEMENT AND STRUCTURES PRIOR TO ANY DEMOLITION WORK TO IDENTIFY ANY CRACKED OR MARRED PANELS OR STRUCTURES.
5. ALL TREES DESIGNATED TO REMAIN IN PLACE SHALL BE TEMPORARILY IRRIGATED IF CONSTRUCTION EFFECTS EXISTING DRIP LATERALS. THEY SHALL BE WATERED BY WATER TRUCK, MODIFIED IRRIGATION SYSTEM OR ALTERNATE WATERING METHOD AS APPROVED BY THE CITY OF PHOENIXS ARBORIST.
6. ALL IRRIGATION EQUIPMENT CALLED FOR REMOVAL, INCLUDING BUT NOT LIMITED TO, VALVES, VALVE BOXES, AND ROTOR/SPRAY HEADS SHALL BE RETURNED TO THE CITY OF PHOENIX.
7. ALL FOOTINGS SHALL BE FULLY REMOVED AND VOIDS FILLED & COMPACTED PER MAG STD. SECTION 211
8. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION REGARDING LIGHT REMOVALS.
9. ALL EXISTING DECOMPOSED GRANITE SHALL BE REMOVED AND IS CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK.
10. CONTRACTOR SHALL DISPOSE OF ANY MATERIALS THE CITY OF PHOENIX DOES NOT WISH TO RETAIN.

IRRIGATION RESTORATION NOTES:

1. THE CONTRACTOR SHALL CUT & CAP, RECONNECT, REROUTE, OR REPLACE THE EXISTING IRRIGATION SYSTEM TO ALL DISTURBED AREA DUE TO NEW CONSTRUCTION. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE GENERAL CONTRACTOR SHALL STAKE AREAS THAT ARE DESIGNATED TO BE DISTURBED.
2. CONTRACTOR SHALL ADD ANY EQUIPMENT NECESSARY TO GUARANTEE 100% COVERAGE TO ALL EXISTING PLANT MATERIAL.
3. THE GENERAL CONTRACTOR AND CITY REPRESENTATIVE IS TO INSPECT THE EXISTING IRRIGATION SYSTEM IS FULLY FUNCTIONAL PRIOR TO ANY CONSTRUCTION. IF THE IRRIGATION SYSTEM IS DEEMED FAULTY OR INSUFFICIENT, A MEETING ON SITE WITH CITY STAFF, AND THE CONTRACTOR WILL BE HELD TO EVALUATE THE SPECIFIC CONDITION.
4. THE GENERAL CONTRACTOR SHALL BE REQUIRED TO REPAIR AND OR REPLACE ALL DISTURBED OR DAMAGED IRRIGATION COMPONENTS RETURNING THEIR OPERATION TO 100%.
5. GENERAL CONTRACTOR SHALL ENSURE THAT ALL RECONNECTIONS (WATER & POWER) HAVE BEEN TESTED AND APPROVED BY THE CITY PRIOR TO BACKFILLING. PRIOR TO FINAL ACCEPTANCE AND DURING THE MAINTENANCE PERIOD SPECIFIED THE GENERAL CONTRACTOR AND CITY FIELD ENGINEER SHALL MEET AGAIN AND ENSURE THAT EACH SYSTEM HAS BEEN RETURNED TO A FULLY OPERATIONAL AND FUNCTIONAL SYSTEM AND THAT ANY DEFICIENCIES HAVE BEEN CORRECTED.
6. ALL WORK SHALL COMPLY WITH THESE PLANS AND SPECIAL PROVISIONS. THE COST OF THIS WORK IS CONSIDERED INCLUDED IN THE COST OF LANDSCAPE AND IRRIGATION RESTORATION.

DEMOLITION / REMOVAL SCHEDULE:

KEY #	DESCRIPTION	QTY.	NOTES
1	REMOVE EXISTING CONCRETE PAVEMENT	34,528 SF	-
2	REMOVE EXISTING BENCH	3 EA	-
3	REMOVE EXISTING CHAIN LINK FENCE	410 LF	-
4	REMOVE ELECTRICAL LIGHTS	SEE ELEC	SEE ELECTRICAL PLANS
5	REMOVE RACKET BALL COURT	1 EA	-
6	REMOVE EXISTING TREES AND GRIND STUMPS	35	SEE PLANT INVENTORY
7	REMOVE EXISTING STUMPS	11	-
8	SALVAGE EXISTING NETS, POLES & RELATED EQUIPMENT AND, RETURN EQUIPMENT TO COP	4	BASKETBALL, TENNIS, VOLLEYBALL
9	REMOVE EXISTING RESTROOM BUILDING, SEE ARCHITECTURE PLANS	1 EA	
10	SALVAGE EXISTING FITNESS EQUIPMENT, CONC. HEADER & D.G. AREA, RETURN EQUIPMENT TO COP	3	
11	REMOVE EXISTING DRINKING FOUNTAIN & STONE STRUCTURE	1	
12	REMOVE EXISTING CURB & GUTTER	48 LF	
13	REMOVE EXISTING IRRIGATION CONTROLLER INSIDE PARKS & REC BUILDING	1 EA	
14	REMOVE EXISTING IRRIGATION CONTROLLER OUTSIDE PARKS & REC BUILDING	1 EA	
15	REMOVE EXISTING LARGE RECTANGULAR STEEL CONTROLLER CABINET & PAD OUTSIDE P&R BUILDING	1 EA	
16	REMOVE EXISTING IRRIGATION CONTROLLER FROM INSIDE ELECTRICAL CABINET	1 EA	

NOTES:
1. CONTRACTOR SHALL RETURN REMOVED IRRIGATION IRRIGATION CONTROLLERS AND LARGE STEEL CONTROLLER CABINET TO CITY PER CITY'S REQUEST. CONTRACTOR SHALL CONFIRM IF CITY PREFERS TO RETAIN ANY OTHER REMOVED ITEMS PRIOR TO DISPOSAL.

PROTECT-IN-PLACE SCHEDULE:

KEY #	DESCRIPTION	NOTES
1	EXISTING TREES	SEE PLANT INVENTORY
2	EXISTING CONCRETE PAD	
3	EXISTING TURF GRASS	
4	EXISTING CURB & GUTTER	
5	EXISTING ROCK FEATURE	
6	EXISTING CONCRETE WALK	
7	EXISTING PARKING LOT	
8	EXISTING PLAYGROUND	
9	EXISTING RAMADAS	
10	EXISTING MISC. UTILITY EQUIPMENT TO REMAIN	
11	EXISTING WATER METERS & BACKFLOW PREVENTER	
12	SALVAGE BOULDERS	16 BOULDERS

Revisions	Date

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Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

Title: DEMOLITION GENERAL NOTES
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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Sheet
D-101
16 OF 148

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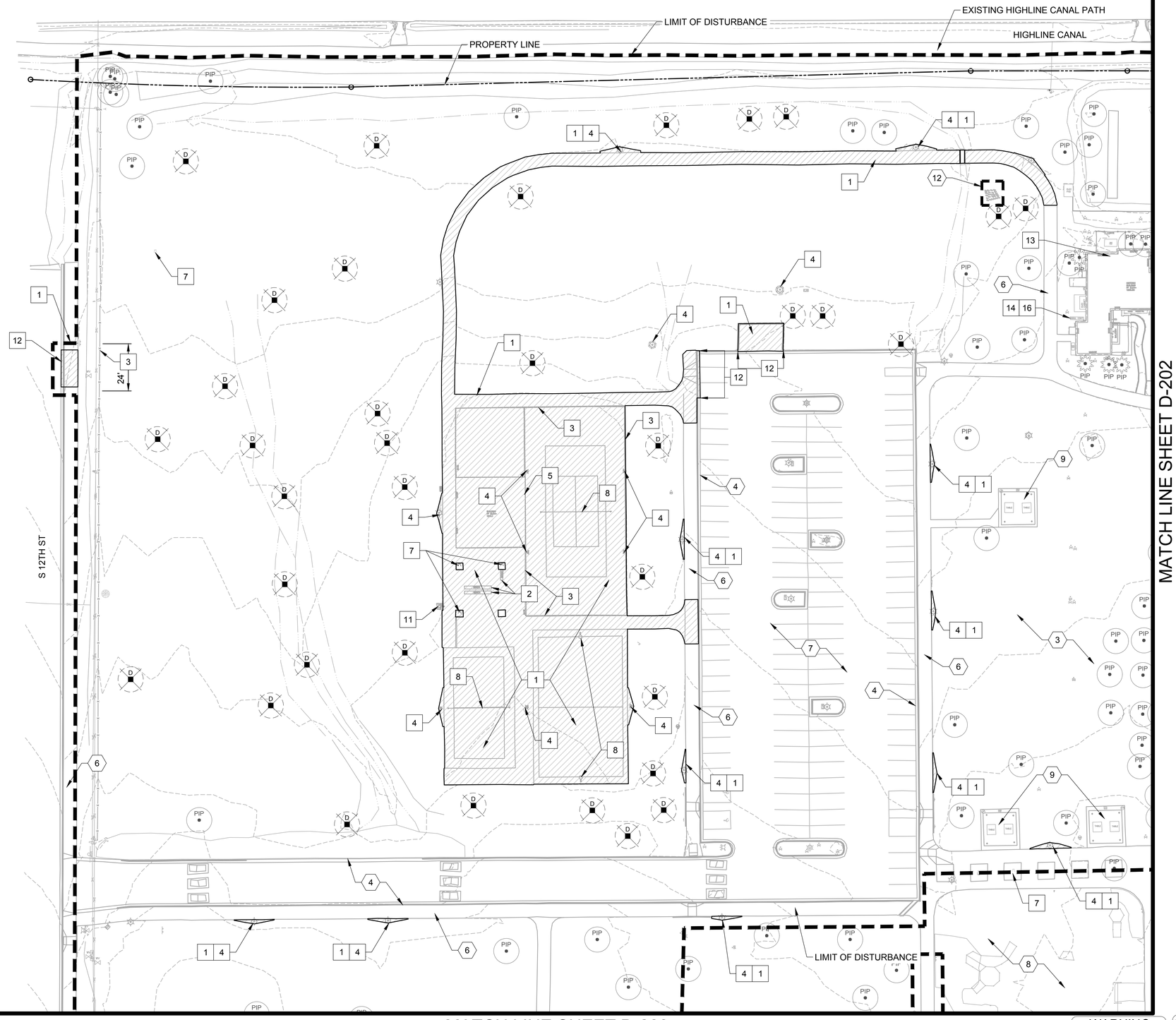

DEMOLITION LEGEND:

	CONCRETE PAVEMENT REMOVAL
D	EXSITING TREE TO BE REMOVED- SEE PLANT INVENTORY FOR TREE TYPE AND SIZE
PIP	EXISTING TREE TO BE PROTECTED IN PLACE- SEE PLANT INVENTORY FOR TREE TYPE AND SIZE

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12	REMOVE EXISTING CURB & GUTTER
13	REMOVE IRRIG. CONTROLLER INSIDE P&R BUILDING
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2	EXISTING CONCRETE PAD
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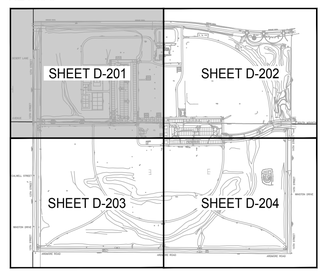
4	EXISTING CURB & GUTTER
5	EXISTING ROCK FEATURE
6	EXISTING CONCRETE WALK
7	EXISTING PARKING LOT
8	EXISTING PLAYGROUND
9	EXISTING RAMADAS
10	EXISTING MISC. UTILITY EQUIPMENT
11	EXISTING WATER METERS & BACKFLOW PREVENTER
12	SALVAGE BOULDERS

NOTES:
1. SEE D-101 FOR DEMOLITION & REMOVAL QUANTITIES AND NOTES ABOUT PROVIDING REMOVED EQUIPMENT TO CITY.
2. ALL EXISTING VEGETATION SHALL BE PROTECTED-IN-PLACE UNLESS OTHERWISE NOTED.

KEYMAP



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Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: **DEMOLITION PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
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0 30' 60'
SCALE: 1"=30'

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602 438 2221

KIVA # _____
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Sheet
D-201
17 OF 148

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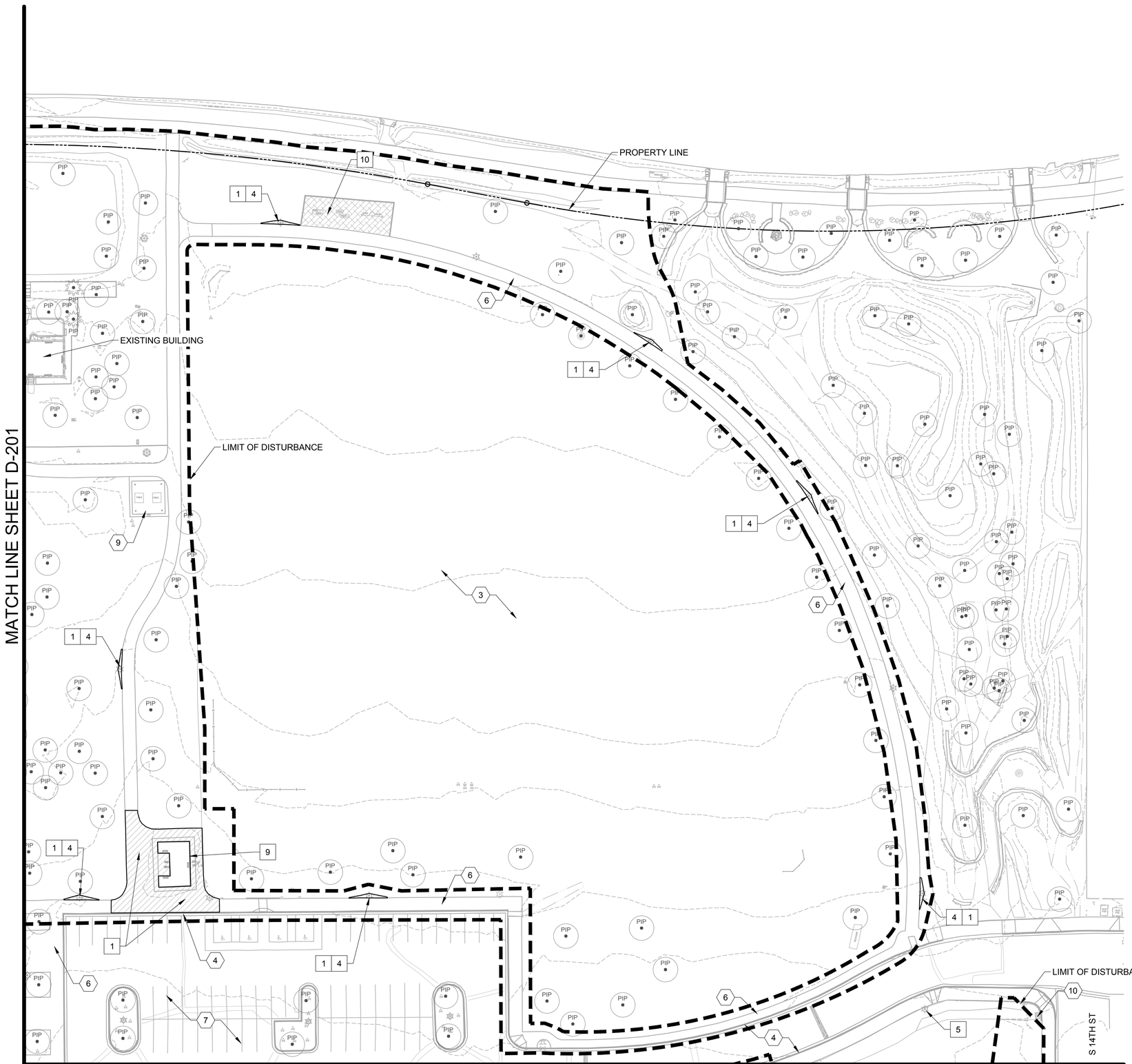

DEMOLITION LEGEND:

	CONCRETE PAVEMENT REMOVAL
D	EXSITING TREE TO BE REMOVED- SEE PLANT INVENTORY FOR TREE TYPE AND SIZE
PIP	EXISTING TREE TO BE PROTECTED IN PLACE- SEE PLANT INVENTORY FOR TREE TYPE AND SIZE

DEMOLITION / REMOVAL SCHEDULE:

#	DESCRIPTION
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5	EXISTING ROCK FEATURE
6	EXISTING CONCRETE WALK
7	EXISTING PARKING LOT
8	EXISTING PLAYGROUND
9	EXISTING RAMADAS
10	EXISTING MISC. UTILITY EQUIPMENT
11	EXISTING WATER METERS & BACKFLOW PREVENTER
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NOTES:
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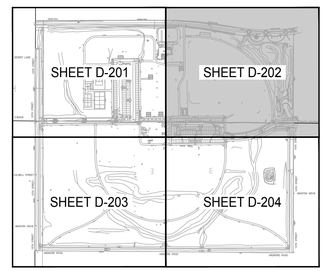
KEYMAP



Revisions	Date

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Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: **DEMOLITION PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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J2 Design
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KIVA # _____
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Sheet
D-202
18 OF 148

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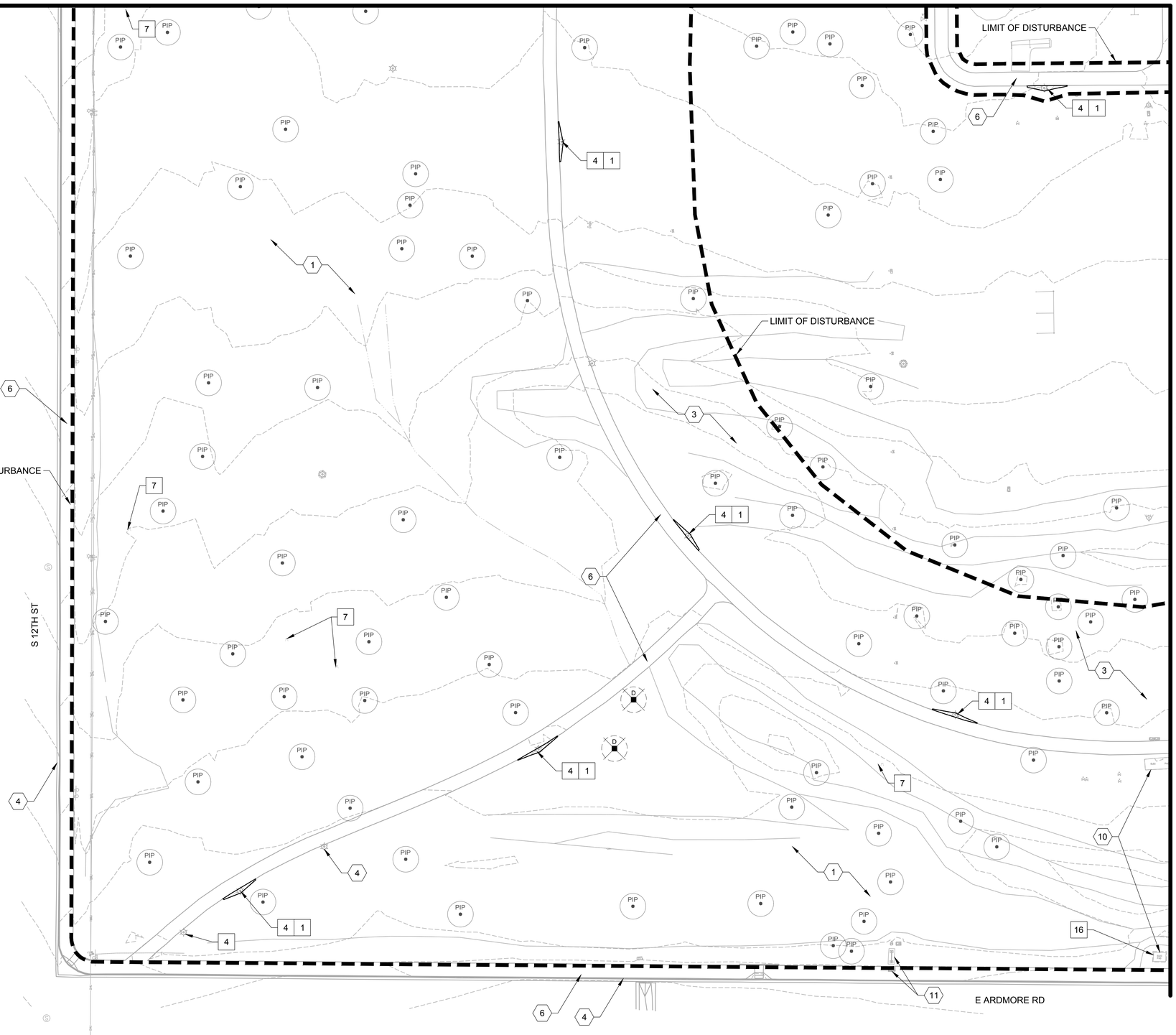

DEMOLITION LEGEND:

	CONCRETE PAVEMENT REMOVAL
D	EXSITING TREE TO BE REMOVED- SEE PLANT INVENTORY FOR TREE TYPE AND SIZE
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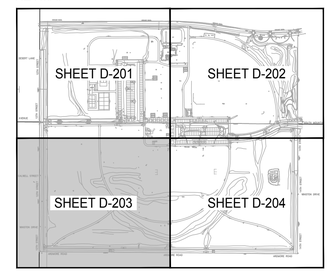

Revisions	Date

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Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: **DEMOLITION PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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Sheet
D-203
19 OF 148

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MATCH LINE SHEET D-202

MATCH LINE SHEET D-203

LIMIT OF DISTURBANCE

S 14TH ST

E. ARDMORE RD

LIMIT OF DISTURBANCE

DEMOLITION LEGEND:

	CONCRETE PAVEMENT REMOVAL
D	EXSITING TREE TO BE REMOVED- SEE PLANT INVENTORY FOR TREE TYPE AND SIZE
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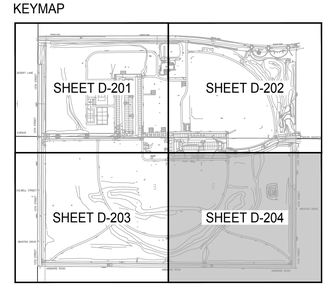
13	REMOVE IRRIG. CONTROLLER INSIDE P&R BUILDING
14	REMOVE IRRIG. CONTROLLER OUTSIDE P&R BUILDING
15	REMOVE IRRIG. CONTROLLER STEEL ENCLOSURE & PAD
16	REMOVE IRRIG. CONTROLLER INSIDE ELECT. CABINET

PROTECT-IN-PLACE SCHEDULE:

#	DESCRIPTION
1	EXISTING TREES - SEE LANDSCAPE INVENTORY PLANS
2	EXISTING CONCRETE PAD
3	EXISTING TURF GRASS
4	EXISTING CURB & GUTTER
5	EXISTING ROCK FEATURE
6	EXISTING CONCRETE WALK
7	EXISTING PARKING LOT
8	EXISTING PLAYGROUND
9	EXISTING RAMADAS
10	EXISTING MISC. UTILITY EQUIPMENT
11	EXISTING WATER METERS & BACKFLOW PREVENTER
12	SALVAGE BOULDERS

NOTES:
1. SEE D-101 FOR DEMOLITION & REMOVAL QUANTITIES AND NOTES ABOUT PROVIDING REMOVED EQUIPMENT TO CITY.
2. ALL EXISTING VEGETATION SHALL BE PROTECTED-IN-PLACE UNLESS OTHERWISE NOTED.

KEYMAP



-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

0 30' 60'
SCALE: 1"=30'

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

KIVA # _____
SDEV # _____

Sheet
D-204
20 OF 148

Title:
DEMOLITION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

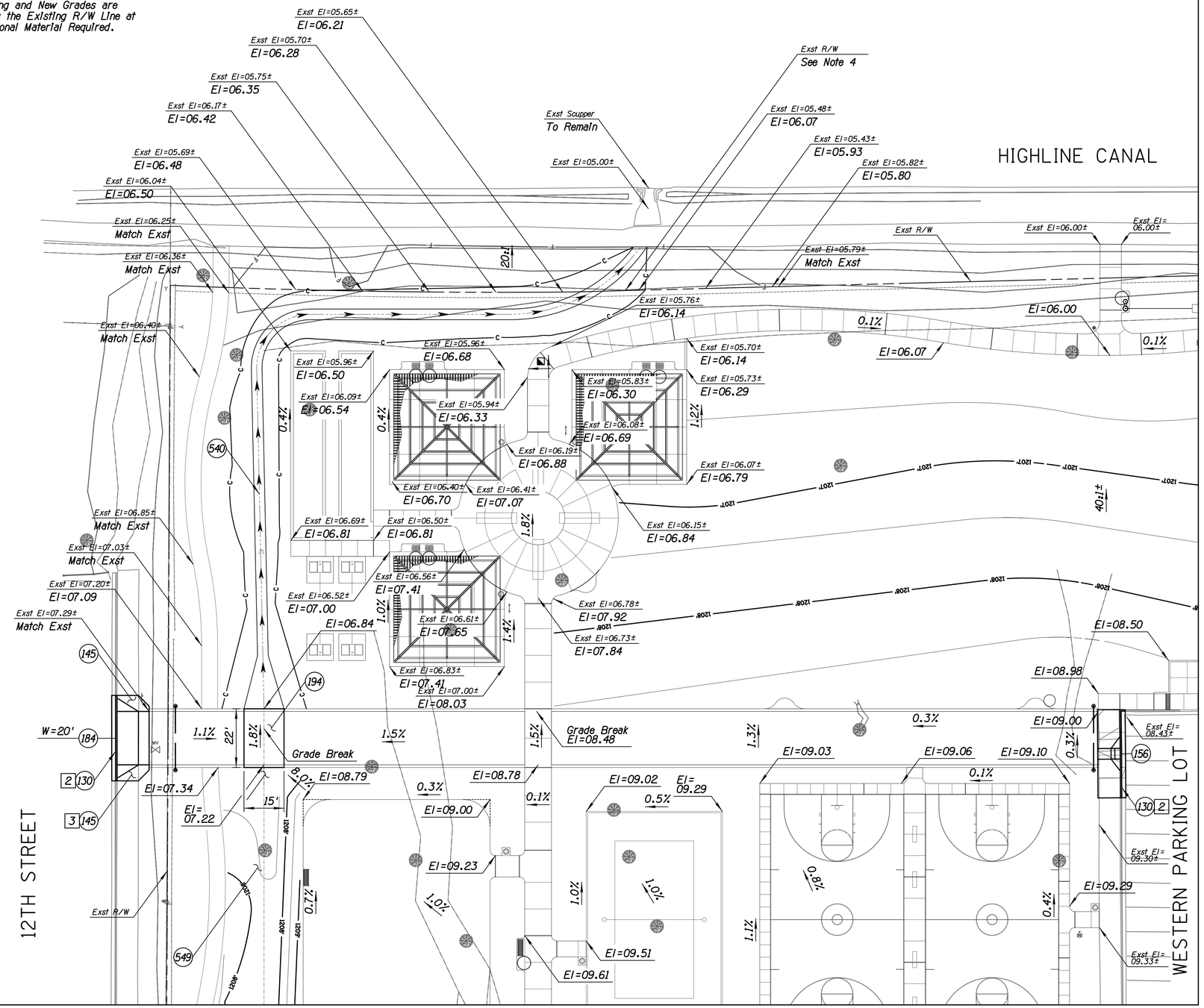
P:\22\1618.002\L\02\cad\Sheets\1618.002-D200.dwg 4/29/2024 12:21:43 PM B-W.CTB MARIA NOVACEK

Notes:
1. To Obtain Actual Elevations, Add 1,200 to the Elevations Shown on this Sheet.

2. GB = Grade Break
   ◪ = 1% Min, 2% Max Slope

3. Maximum Longitudinal Sidewalk Slope = 5%

4. Additional Material Will Be Required to Construct the New Swale Per Detail D1. Existing and New Grades are Depicted on this Sheet Along the Existing R/W Line at 25' Intervals for the Additional Material Required.



CONSTRUCTION NOTES				
NO	DESCRIPTION	UNIT	QTY	
100	Site Grading	SF	100,131	
130	Vertical Curb & Gutter MAG Dtl 220 Type "A"	LF	65	
145	Concrete Sidewalk MAG Dtl 230	SF	88	
156	Directional Sidewalk Ramp COP Dtl P1241-1	EA	1	
184	Driveway Entrance COP Dtl 1255-1, 9" Thick	SF	280	
194	9" Thick PCCP Over Subgrade	SF	330	
540	4' Wide Swale Ditch See Detail D1	LF	290	
549	Earthwork For Retention Basins	CY	282	

REMOVAL NOTES			
NO	DESCRIPTION	UNIT	QTY
2	Sawcut & Remove Curb & Gutter	LF	65
3	Sawcut & Remove Concrete Sidewalk/Driveway/Ramp	SF	257

Revisions	Date

PRE-FINAL
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NOT FOR CONSTRUCTION OR RECORDING

Designed By: KRT
Drawn By: KRT
Checked By: RW
Date: 04/17/2024
Project #: 22.1618.002

N

20 0 20 40
SCALE IN FEET

Title: GRADING & DRAINAGE SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA #
SDEV #

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

Note:
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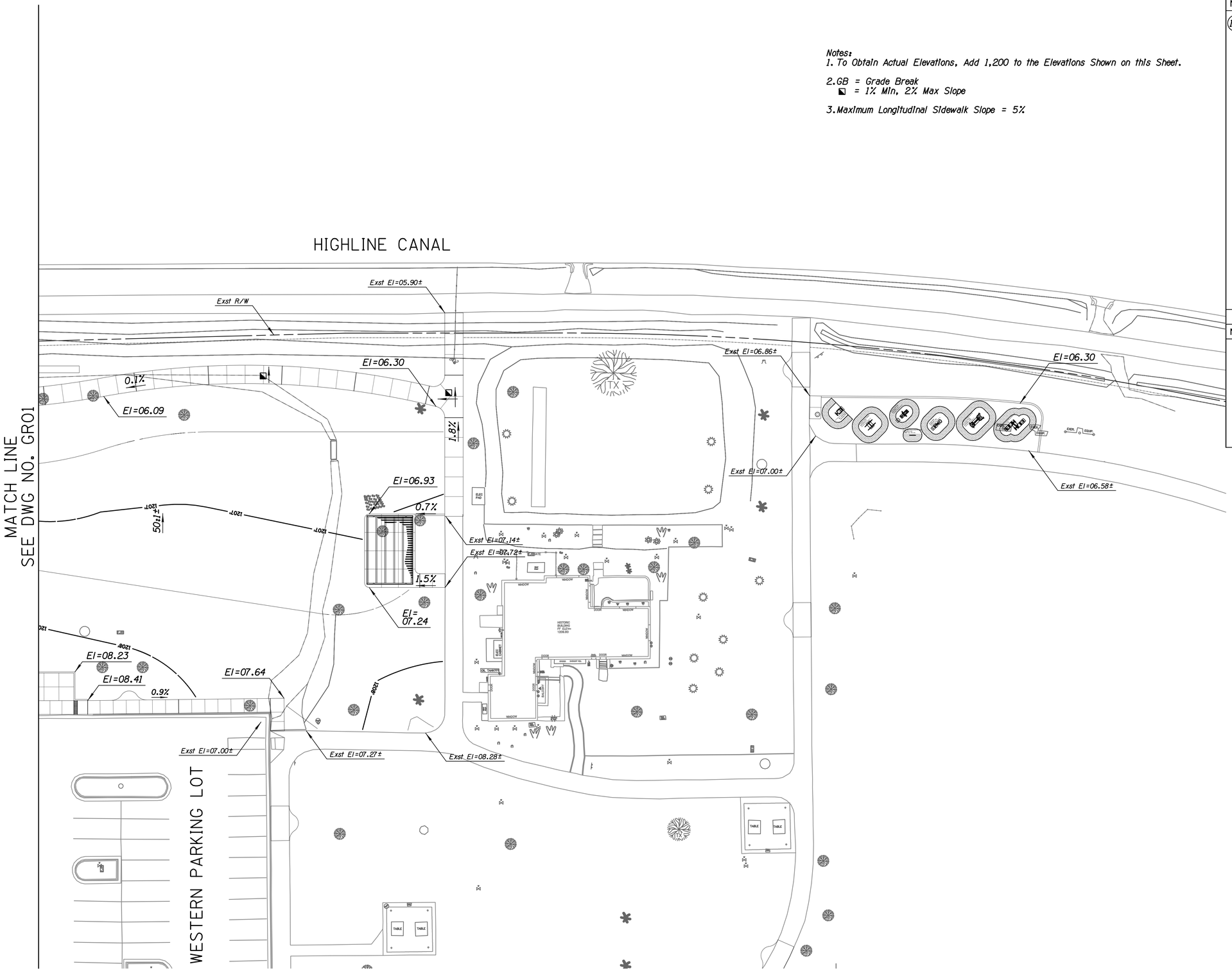
Sheet GR01
21 OF 148

Notes:
1. To Obtain Actual Elevations, Add 1,200 to the Elevations Shown on this Sheet.

2. GB = Grade Break
▣ = 1% Min, 2% Max Slope

3. Maximum Longitudinal Sidewalk Slope = 5%



CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
100	Site Grading	SF	46,813

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

Revisions	Date

PRE-FINAL
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Designed By: KRT
Drawn By: KRT
Checked By: RW
Date: 04/17/2024
Project #: 22.1618.002

Title: GRADING & DRAINAGE SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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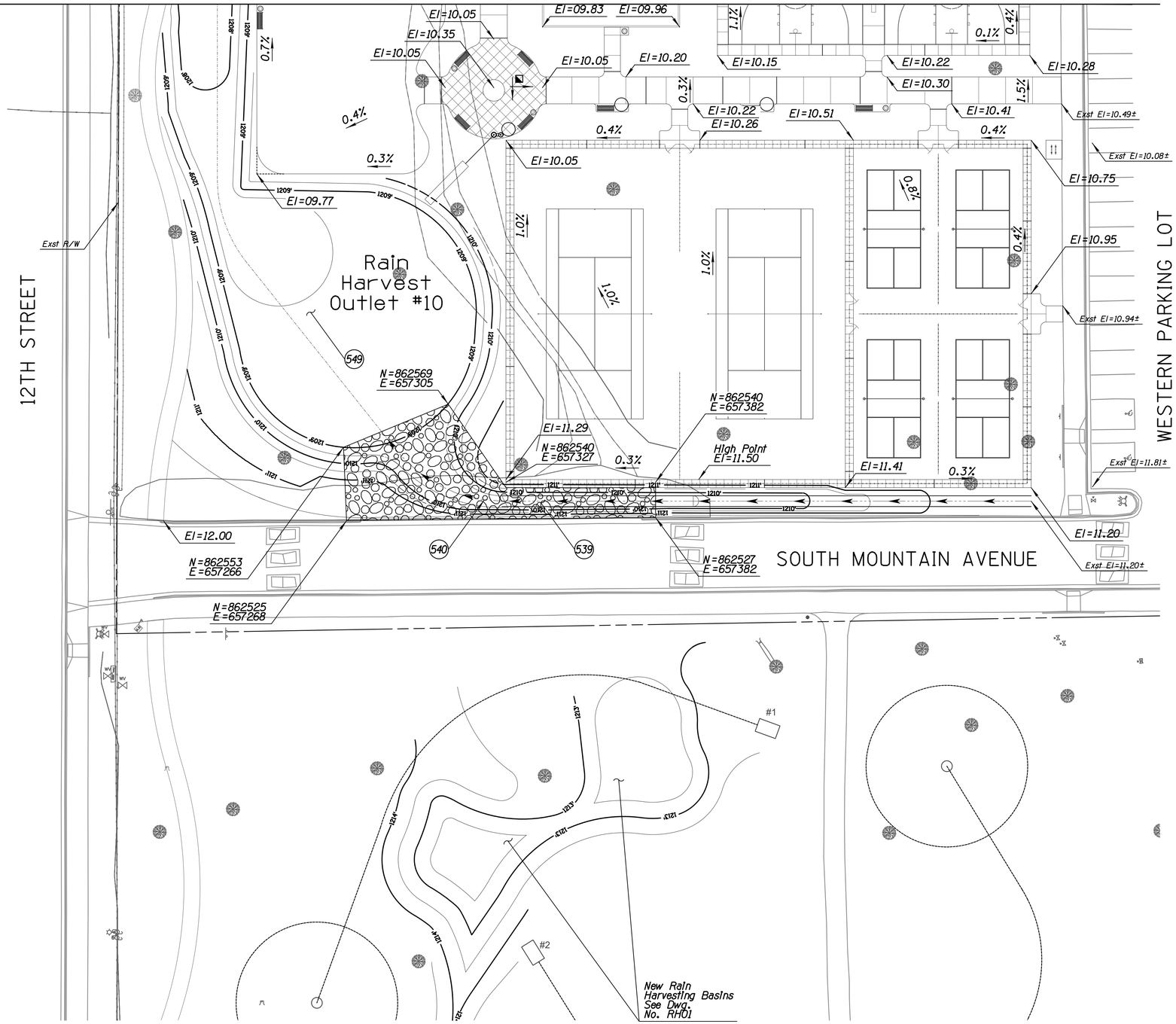
KIVA #
SDEV #

Sheet
GR02
22 OF 148

MATCH LINE
SEE DWG NO. GR01



N

20 0 20 40
SCALE IN FEET

Notes:
1. To Obtain Actual Elevations, Add 1,200 to the Elevations Shown on this Sheet.

2. GB = Grade Break
   ◹ = 1% Min, 2% Max Slope

3. Maximum Longitudinal Sidewalk Slope = 5%

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
100	Site Grading	SF	66,429
539	Dumped Riprap - Remove, Salvage and Reinstall	CY	95
540	4' Wide Swale Ditch See Detail D1	LF	245
549	Earthwork For Retention Basins	CY	461

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

Revisions	Date

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OR
RECORDING

Designed By: KRT
Drawn By: KRT
Checked By: RW
Date: 04/17/2024
Project #: 22.1618.002

Title: GRADING & DRAINAGE SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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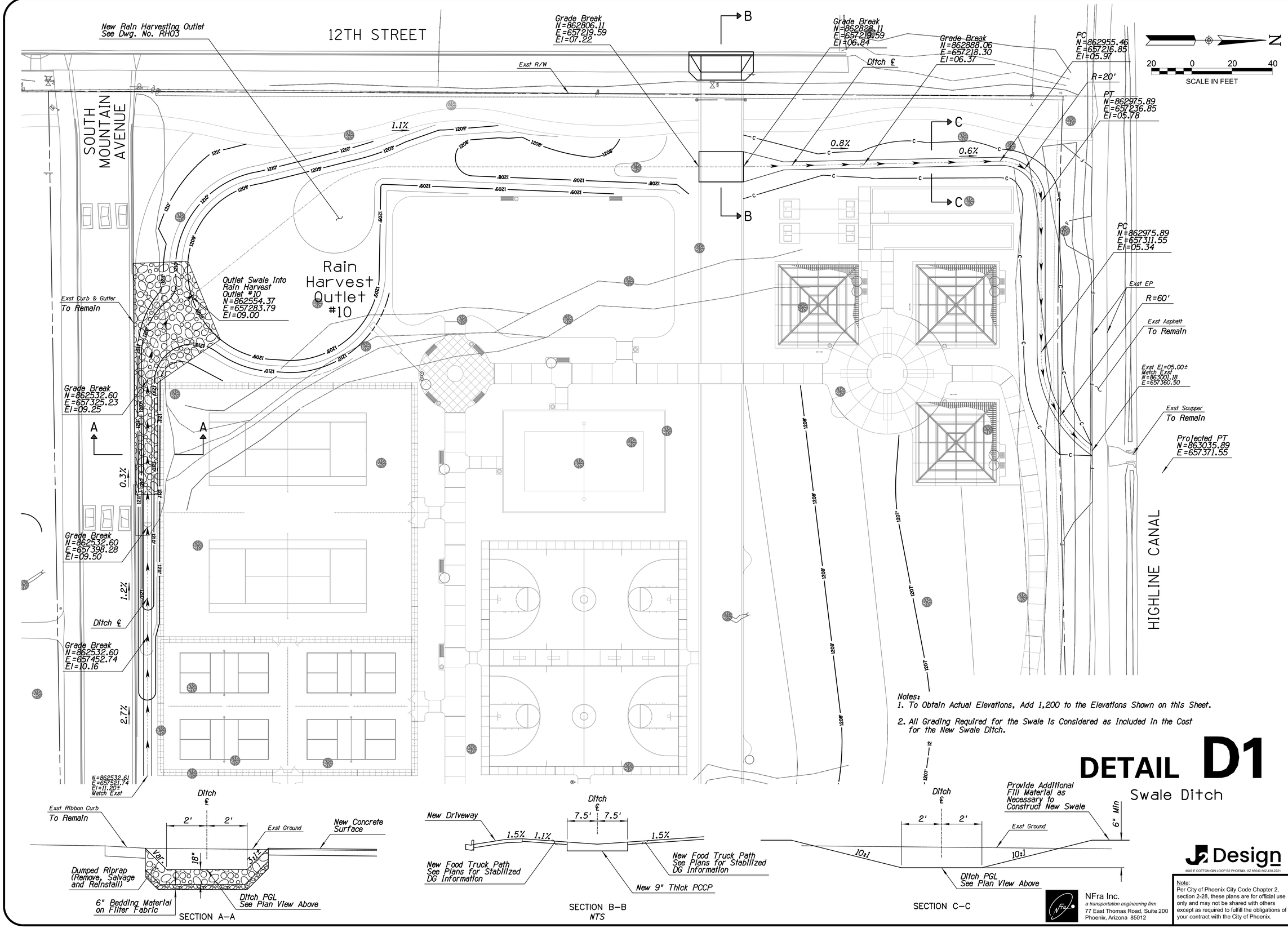
KIVA # _____
SDEV # _____

Sheet
GR03
23 OF 148



Notes:
1. To Obtain Actual Elevations, Add 1,200 to the Elevations Shown on this Sheet.
2. All Grading Required for the Swale Is Considered as Included In the Cost for the New Swale Ditch.

SECTION A–A

SECTION B–B
NTS

SECTION C–C

DETAIL D1

Swale Ditch

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77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

J2 Design
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Revisions	Date

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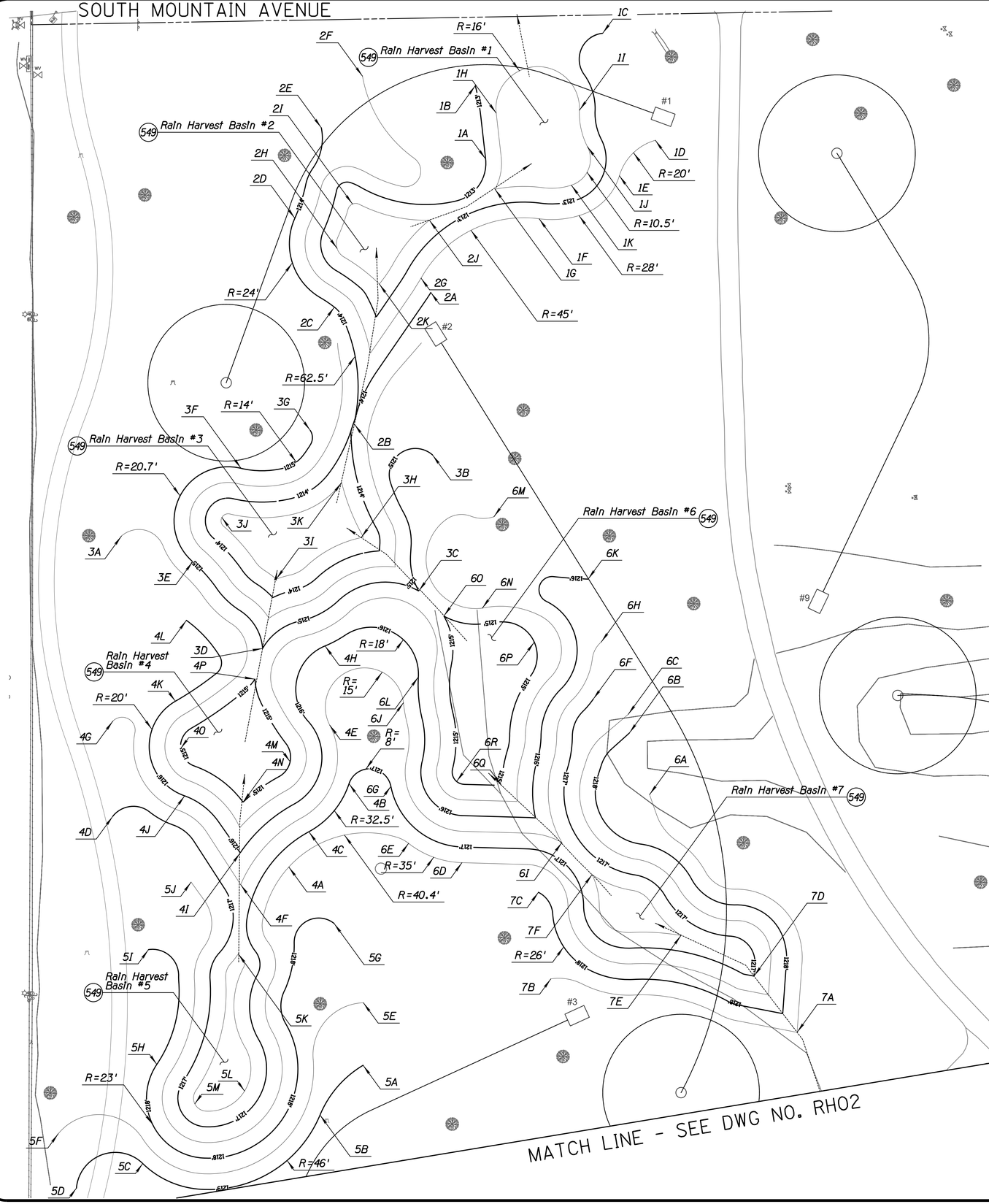
Designed By:	KRT
Drawn By:	KRT
Checked By:	RW
Date:	04/17/2024
Project #:	22.1618.002

Title: **SWALE DITCH DETAIL SHEET**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

KIVA # _____
SDEV # _____

Sheet
DD01
24 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK



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SCALE IN FEET

N

RAIN HARVEST BASIN #1 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
1A	862432.00	657355.88	1213.00
1B	862460.07	657351.94	1213.00
1C	862480.12	657400.72	1213.00
1D	862439.15	657420.88	1213.50
1E	862425.57	657407.09	1213.50
1F	862409.11	657376.38	1213.50
1G	862420.42	657359.46	1212.50
1H	862449.56	657359.92	1212.50
1I	862450.67	657391.81	1212.50
1J	862436.74	657394.86	1212.50
1K	862421.96	657388.72	1212.50

RAIN HARVEST BASIN #2 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
2A	862380.88	657334.90	1214.00
2B	862330.45	657305.65	1214.00
2C	862375.28	657297.96	1214.00
2D	862409.30	657282.81	1214.00
2E	862443.95	657292.96	1214.00
2F	862463.68	657308.74	1213.50
2G	862386.36	657331.15	1213.50
2H	862397.74	657299.00	1212.50
2I	862414.75	657304.89	1212.50
2J	862408.57	657334.34	1212.50
2K	862384.12	657315.15	1212.50

RAIN HARVEST BASIN #3 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
3A	862287.61	657216.41	1215.50
3B	862318.67	657335.56	1215.00
3C	862266.56	657330.27	1215.00
3D	862244.59	657270.49	1215.00
3E	862277.82	657243.70	1215.00
3F	862313.53	657262.25	1215.00
3G	862328.03	657288.73	1215.00
3H	862287.03	657308.23	1213.50
3I	862271.13	657275.69	1213.50
3J	862294.72	657254.87	1213.50
3K	862308.15	657300.73	1213.50

RAIN HARVEST BASIN #4 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
4A	862160.89	657280.50	1217.50
4B	862192.79	657303.56	1217.00
4C	862174.39	657288.18	1217.00
4D	862180.32	657213.12	1217.00
4E	862215.21	657296.19	1216.50
4F	862154.14	657262.08	1216.50
4G	862216.79	657213.14	1216.50
4H	862245.54	657294.38	1216.00
4I	862166.30	657261.90	1216.00
4J	862188.14	657240.63	1216.00
4K	862224.35	657237.05	1216.00
4L	862255.33	657241.29	1216.00
4M	862201.20	657281.01	1215.00
4N	862185.73	657262.97	1215.00
4O	862206.22	657239.09	1215.00
4P	862232.80	657267.52	1215.00

RAIN HARVEST BASIN #5 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
5A	862084.96	657308.97	1219.00
5B	862065.90	657292.46	1219.00
5C	862047.35	657224.58	1219.00
5D	862037.94	657199.16	1219.00
5E	862108.90	657309.06	1218.50
5F	862058.74	657192.21	1218.50
5G	862139.26	657297.85	1218.00
5H	862085.29	657229.96	1218.00
5I	862129.26	657226.76	1218.00
5J	862155.12	657243.10	1217.50
5K	862127.65	657261.14	1216.50
5L	862075.10	657263.57	1216.50
5M	862070.21	657244.52	1216.50

RAIN HARVEST BASIN #6 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
6A	862188.62	657418.67	1218.50
6B	862212.14	657410.88	1218.00
6C	862219.33	657410.50	1217.50
6D	862162.55	657346.82	1217.50
6E	862169.95	657326.37	1217.50
6F	862225.13	657397.07	1217.00
6G	862191.77	657319.60	1217.00
6H	862247.05	657400.15	1216.50
6I	862170.28	657385.09	1216.50
6J	862223.79	657324.40	1216.50
6K	862271.13	657395.13	1216.00
6L	862233.67	657330.13	1216.00
6M	862295.02	657359.07	1215.50
6N	862260.02	657354.62	1215.50
6O	862256.98	657339.88	1215.00
6P	862247.01	657374.51	1215.00
6Q	862192.14	657361.93	1215.00
6R	862193.64	657344.78	1215.00

RAIN HARVEST BASIN #7 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
7A	862097.58	657475.15	1218.50
7B	862118.06	657380.86	1218.50
7C	862151.20	657376.10	1218.00
7D	862119.10	657458.66	1217.00
7E	862134.67	657430.70	1216.50
7F	862157.98	657396.65	1216.50

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
549	Earthwork For Retention Basins	CY	1358

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

Revisions	Date

PRE-FINAL
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CONSTRUCTION
OR
RECORDING

Designed By: KRT

Drawn By: KRT

Checked By: RW

Date: 04/17/2024

Project #: 22.1618.002

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

Title: RAIN HARVEST BASIN SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: PA75200668-1

J Design
4641 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

KIVA #

SDEV #

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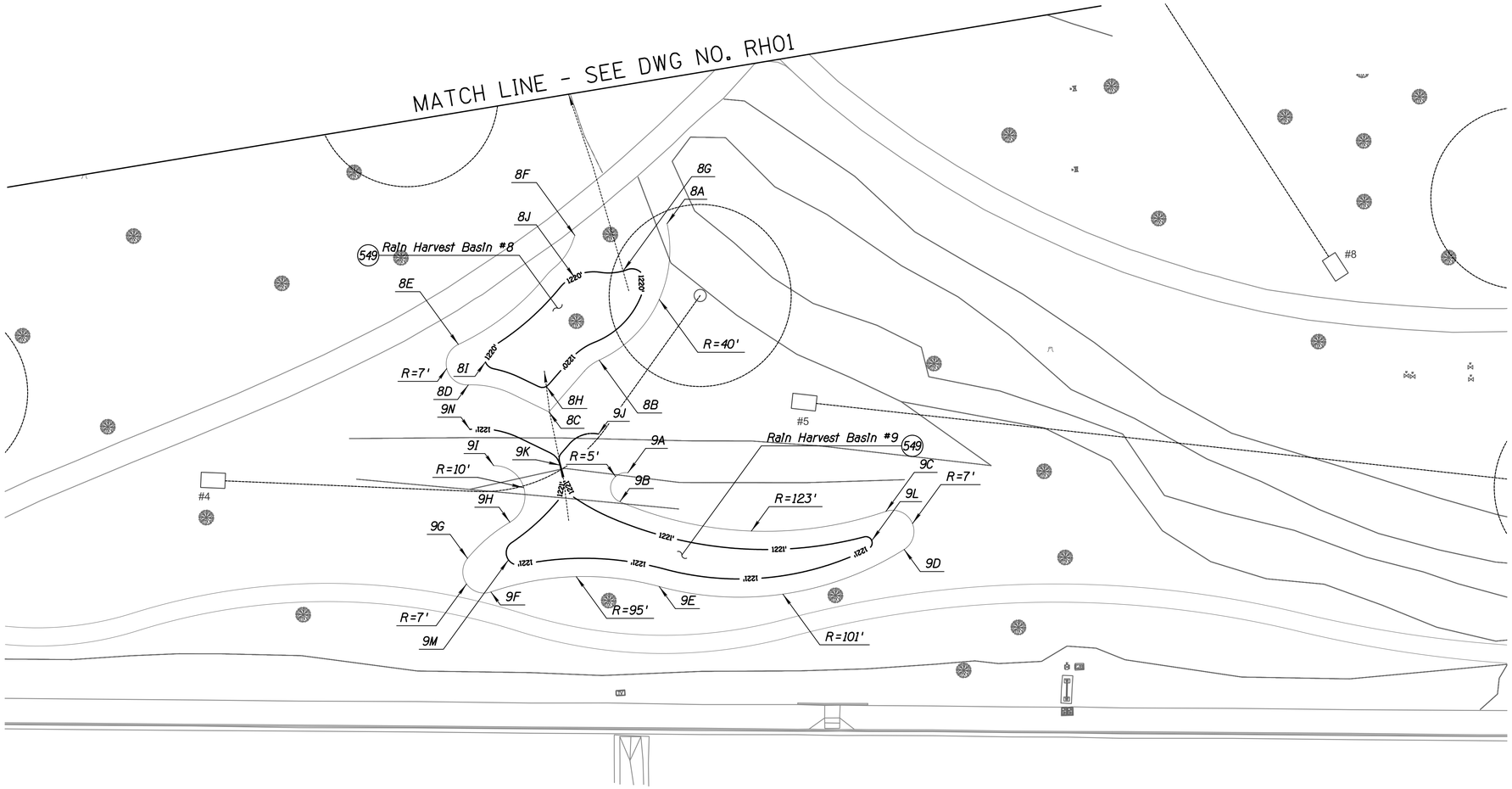
Sheet RH01

25 OF 148

RAIN HARVEST BASIN #8 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
8A	862032.31	657516.42	1220.50
8B	861987.36	657494.04	1220.50
8C	861970.31	657477.52	1220.50
8D	861979.18	657450.91	1220.50
8E	861992.51	657447.65	1220.50
8F	862028.45	657486.04	1220.50
8G	862016.72	657501.94	1220.00
8H	861978.68	657476.65	1220.00
8I	861986.75	657456.56	1220.00
8J	862014.52	657486.01	1220.00

RAIN HARVEST BASIN #9 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
9A	861950.23	657503.52	1221.50
9B	861940.67	657500.86	1221.50
9C	861937.51	657588.56	1221.50
9D	861924.97	657594.56	1221.50
9E	861912.76	657513.83	1221.50
9F	861910.97	657458.36	1221.50
9G	861922.03	657450.68	1221.50
9H	861933.93	657464.63	1221.50
9I	861952.56	657459.29	1221.50
9J	861962.99	657493.81	1221.00
9K	861952.70	657481.33	1221.00
9L	861927.86	657583.90	1221.00
9M	861921.52	657464.16	1221.00
9N	861964.53	657451.43	1221.00



CONSTRUCTION NOTES			
NO	DESCRIPTION	UNIT	QTY
549	Earthwork For Retention Basins	CY	112

REMOVAL NOTES			
NO	DESCRIPTION	UNIT	QTY

Revisions	Date

PRE-FINAL
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CONSTRUCTION
OR
RECORDING

Designed By: KRT

Drawn By: KRT

Checked By: RW

Date: 04/17/2024

Project #: 22.1618.002

N

20 0 20 40
SCALE IN FEET

Title:
RAIN HARVEST BASIN SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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SDEV #

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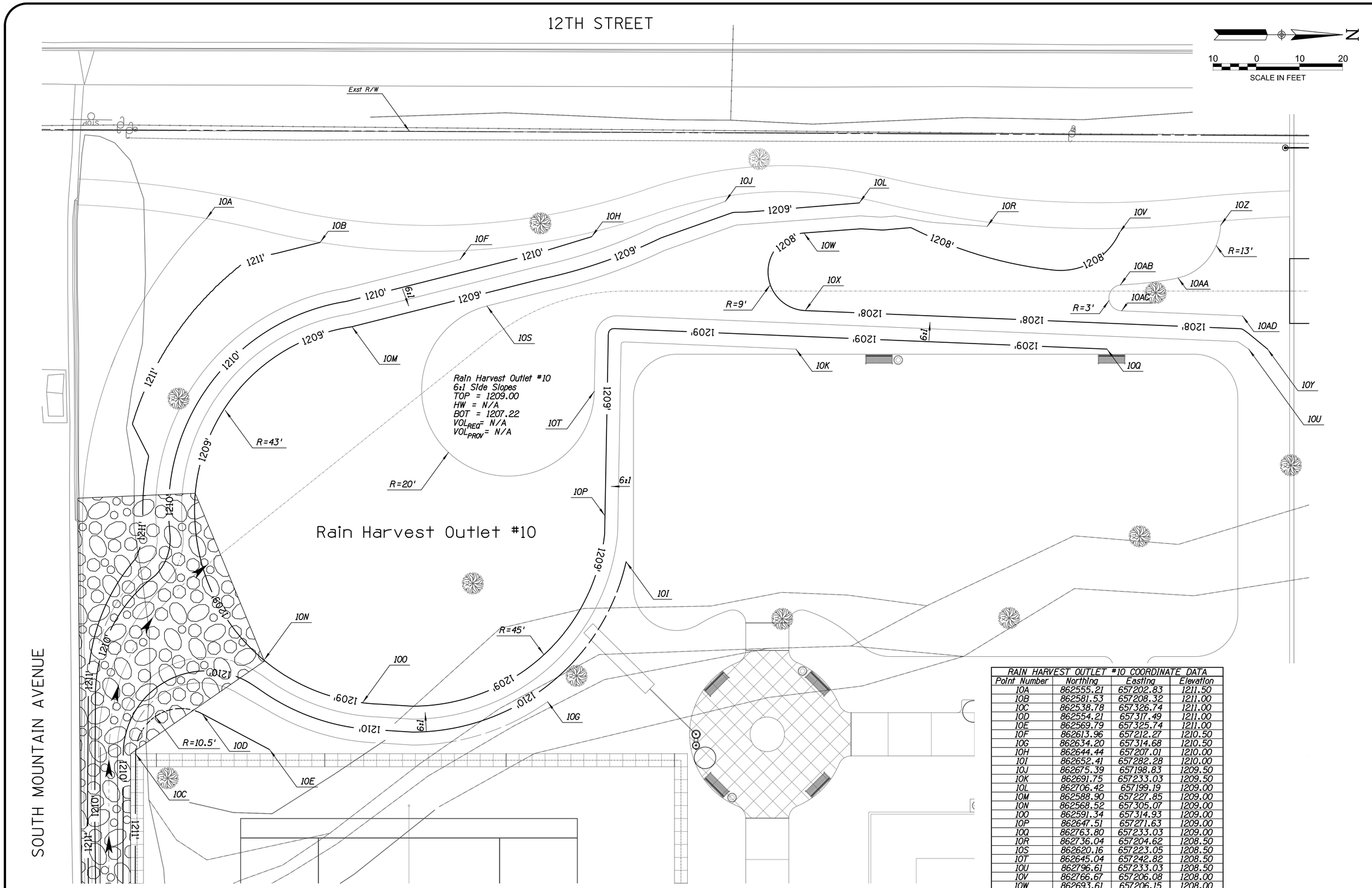

RAIN HARVEST OUTLET #10 COORDINATE DATA			
Point Number	Northing	Easting	Elevation
10A	862555.21	657202.83	1211.50
10B	862581.53	657208.32	1211.00
10C	862538.78	657326.74	1211.00
10D	862554.21	657317.49	1211.00
10E	862569.79	657325.74	1211.00
10F	862613.96	657212.27	1210.50
10G	862634.20	657314.68	1210.50
10H	862644.44	657207.01	1210.00
10I	862652.41	657282.28	1210.00
10J	862675.39	657198.83	1209.50
10K	862691.75	657233.03	1209.50
10L	862706.42	657199.19	1209.00
10M	862588.90	657227.85	1209.00
10N	862568.52	657305.07	1209.00
10O	862591.34	657314.93	1209.00
10P	862647.51	657271.63	1209.00
10Q	862763.80	657233.03	1209.00
10R	862736.04	657204.62	1208.50
10S	862620.16	657223.05	1208.50
10T	862645.04	657242.82	1208.50
10U	862796.61	657233.03	1208.50
10V	862766.67	657206.08	1208.00
10W	862693.61	657206.15	1208.00
10X	862693.90	657224.12	1208.00
10Y	862800.99	657233.03	1208.00
10Z	862790.10	657204.39	1207.50
10AA	862780.29	657216.59	1207.50
10AB	862766.88	657218.19	1207.50
10AC	862767.20	657224.17	1207.50
10AD	862795.18	657225.34	1207.50

Revisions	Date

PRE-FINAL
100%
NOT FOR
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OR
RECORDING

Designed By: KRT
Drawn By: KRT
Checked By: RW
Date: 04/17/2024
Project #: 22.1618.002

Title: RAIN HARVEST OUTLET SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
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KIVA #
SDEV #

Sheet
RH03
27 OF 148

GENERAL NOTES FOR SEWER CONSTRUCTION

A. PLANNING & DEVELOPMENT DEPARTMENT'S CIVIL/SITE INSPECTION STAFF SHALL BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS, TELEPHONE (602) 262-7811.

B. ANY SEWER MAIN 15 INCH IN SIZE OR 12 FEET IN DEPTH, OR GREATER, REQUIRES 5' MANHOLES.

C. ALL MANHOLES NEWLY CONSTRUCTED OR EXISTING THAT ARE WORKED IN FOR CONNECTIONS SHALL BE PAINTED WITH INSECTICIDE PAINT PER CITY OF PHOENIX SUPPLEMENT TO M.A.G. SECTION 627.

D. MANHOLES WITH 60" DIAMETER AND PIPES GREATER THAN 12" REQUIRE COATING PER C.O.P. SUPPLEMENT 626. ANY EXISTING MANHOLES WITH CORROSION COATING THAT ARE DISTURBED OR ADJUSTED TO NEW FINISH GRADES SHALL HAVE ANY DAMAGED COATING REPAIRED, INCLUDING ALL ADJUSTING RINGS.

E. THIS SET OF PLANS HAS BEEN INITIALLY REVIEWED BY THE CITY OF PHOENIX. SUCH REVIEW IS PART OF THE PROCESS THAT DEVELOPER(S)/CONTRACTOR(S) MUST GO THROUGH IN ORDER TO OBTAIN A CONSTRUCTION PERMIT. THE RESULTS OF SUCH INITIAL REVIEW, HOWEVER, SHALL NOT DICTATE THE CITY OF PHOENIX'S FINAL DETERMINATION AS TO THE ACCEPTABILITY OF THE PLANS, NOR SHALL IT PREVENT THE CITY OF PHOENIX FROM REQUIRING THAT ERRORS AND OMISSIONS, AS FOUND ON PLANS, BE ADDRESSED BY DEVELOPER(S) / CONTRACTOR(S), WHERE SUCH ERRORS AND OMISSIONS CAUSE THE PLANS TO BE IN VIOLATION OF OR INADEQUATE UNDER APPLICABLE FEDERAL / STATE / COUNTY / LOCAL CODES, ORDINANCES, REGULATIONS, OR OTHER LAWS. THIS REVIEWED AND STAMPED SET OF PLANS MUST BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.

F. ALL CONSTRUCTION IN CITY OF PHOENIX RIGHT-OF-WAY, OR EASEMENT, IS TO CONFORM TO M.A.G. SPECIFICATIONS AND DETAILS AND CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS AND DETAILS, UNLESS MODIFIED ON THE PLANS.

G. ALL SEWER MAINS MUST HAVE A T.V. INSPECTION BEFORE ACCEPTED AS COMPLETE (SEE CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATION SECTION 615.11(C)

H. TRAFFIC REGULATIONS: ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE CURRENT CITY OF PHOENIX " TRAFFIC BARRICADE MANUAL".

I. THE FOLLOWING M.A.G. DETAILS ARE SPECIFICALLY NOT APPROVED: 425 24" ALUMINUM FRAME AND COVER.

J. NEW MANHOLES ARE TO BE BUILT WITHOUT STEPS.

K. COMPACTION SHALL COMPLY WITH M.A.G. SECTION 601 & CITY OF PHOENIX SUPPLEMENTS.

L. NEW SEWER LINES ARE TO BE BUILT IN ACCORDANCE WITH CITY OF PHOENIX "STANDARD UTILITY LOCATIONS".

M. A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND UTILITY SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF UNDERGROUND UTILITY.

N. A ONE (1) FOOT MINIMUM VERTICAL SEPARATION FROM ANY DRY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF DRY UNDERGROUND UTILITY.

O. A TWO (2) FOOT MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY SEWER MAIN OR STORM DRAIN MAIN CROSSING A WATER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR STORM DRAIN MAIN. SEE M.A.G. STANDARD DETAIL 404 FOR ADDITIONAL INFORMATION AND/OR PROVISIONS FOR CLEARANCE.

P. EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.

GENERAL NOTES FOR SEWER CONSTRUCTION (CONTINUED)

Q. ANY AND ALL MORE STRINGENT SEPARATION REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

R. ANY SEWER LINES THAT ARE INSTALLED WITH LESS THAN .004 FT/FT SLOPE MUST BE INSTALLED USING A LASER.

S. WHEN DIP SEWER PIPE IS USED, LINING IS REQUIRED PER CITY OF PHOENIX SUPPLEMENT TO M.A.G. SEC. 750.1.

T. CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND PRIOR TO FINAL INSPECTION.

U. RECORD DRAWING SUBMITTALS MUST COMPLY WITH WATER SERVICES DEPARTMENT ENGINEERING POLICY P-69. A COPY OF THE POLICY CAN BE OBTAINED IN THE DEPARTMENT'S WEBSITE: HTTP://PHOENIX.GOV/WATERSERVICES/DESIGN/ENGPOLICIES/INDEX.HTML.

V. ASPHALT RESTORATION IS REQUIRED FOR ANY STREET CUT. REFER TO STREET PAVEMENT CUT POLICY (TRT 00164 AND ORDINANCE G-6308).

W. PLAN APPROVAL IS VALID FOR 12 MONTHS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED, OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

X. PER PHOENIX CITY CODE, CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW.

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: KRT

Drawn By: KRT

Checked By: RW

Date: 04/17/2024

Project #: 22.1618.002

Title: **SEWER GENERAL NOTES SHEET**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

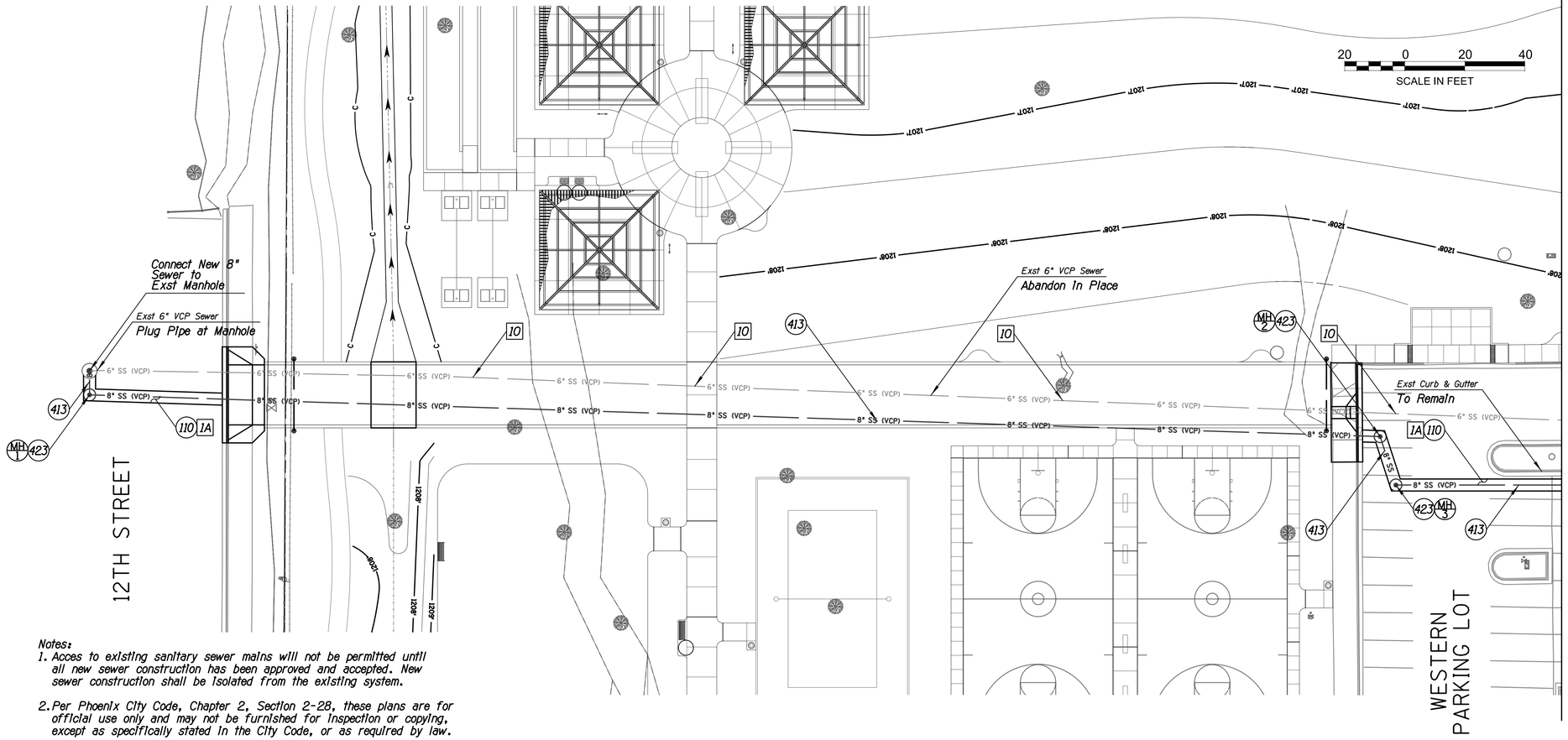
JE Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

KIVA #
SDEV #

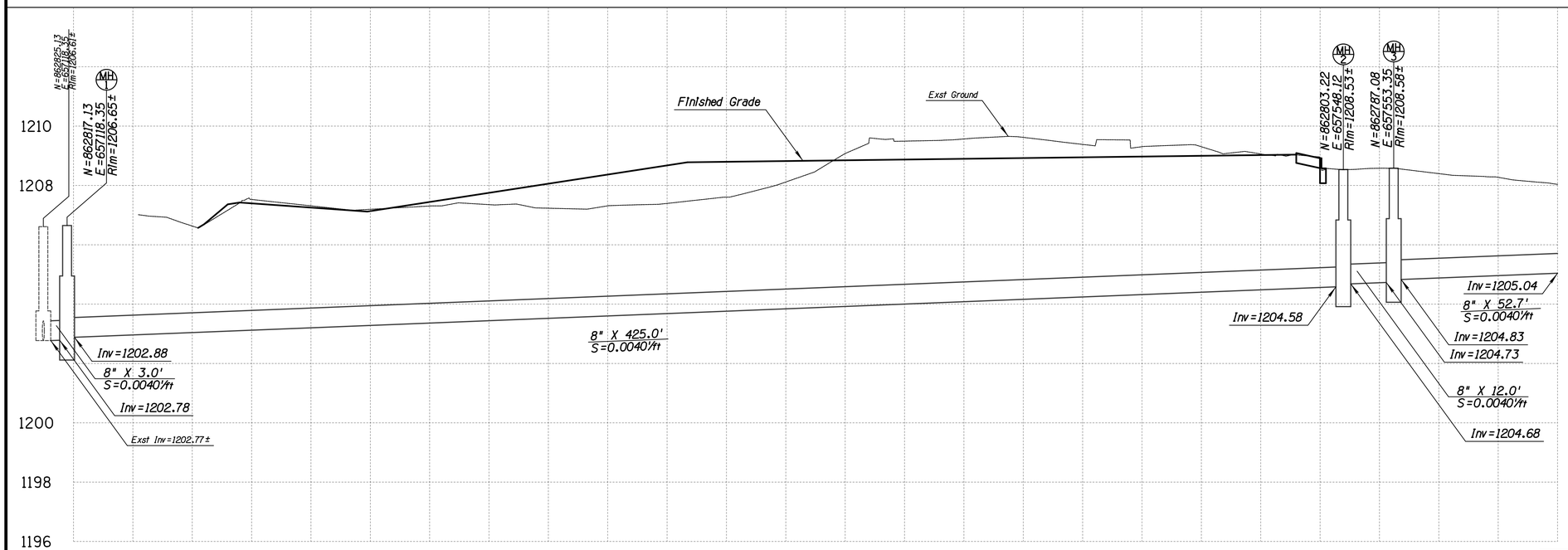
Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Sheet
SGN01
28 OF 148



Notes:
1. Acces to existing sanitary sewer mains will not be permitted until all new sewer construction has been approved and accepted. New sewer construction shall be isolated from the existing system.

2. Per Phoenix City Code, Chapter 2, Section 2-28, these plans are for official use only and may not be furnished for inspection or copying, except as specifically stated in the City Code, or as required by law.



CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
110	Backfill, Surface Replacement MAG Dtl 200 "T" Top	SY	57
413	8" VCP Sewer Pipe	LF	490
423	5' Dia Pre-Cast Concrete Flat Top Sewer Manhole MAG Dtl 420	EA	3

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
1A	Sawcut & Remove AC Pvm't & Base Material	SY	57
10	Remove Sewer Cleanout & Plug Pipes	EA	4

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION OR RECORDING

Designed By: KRT
Drawn By: KRT
Checked By: RW
Date: 04/17/2024
Project #: 22.1618.002

Title: **SEWER PLAN & PROFILE SHEET**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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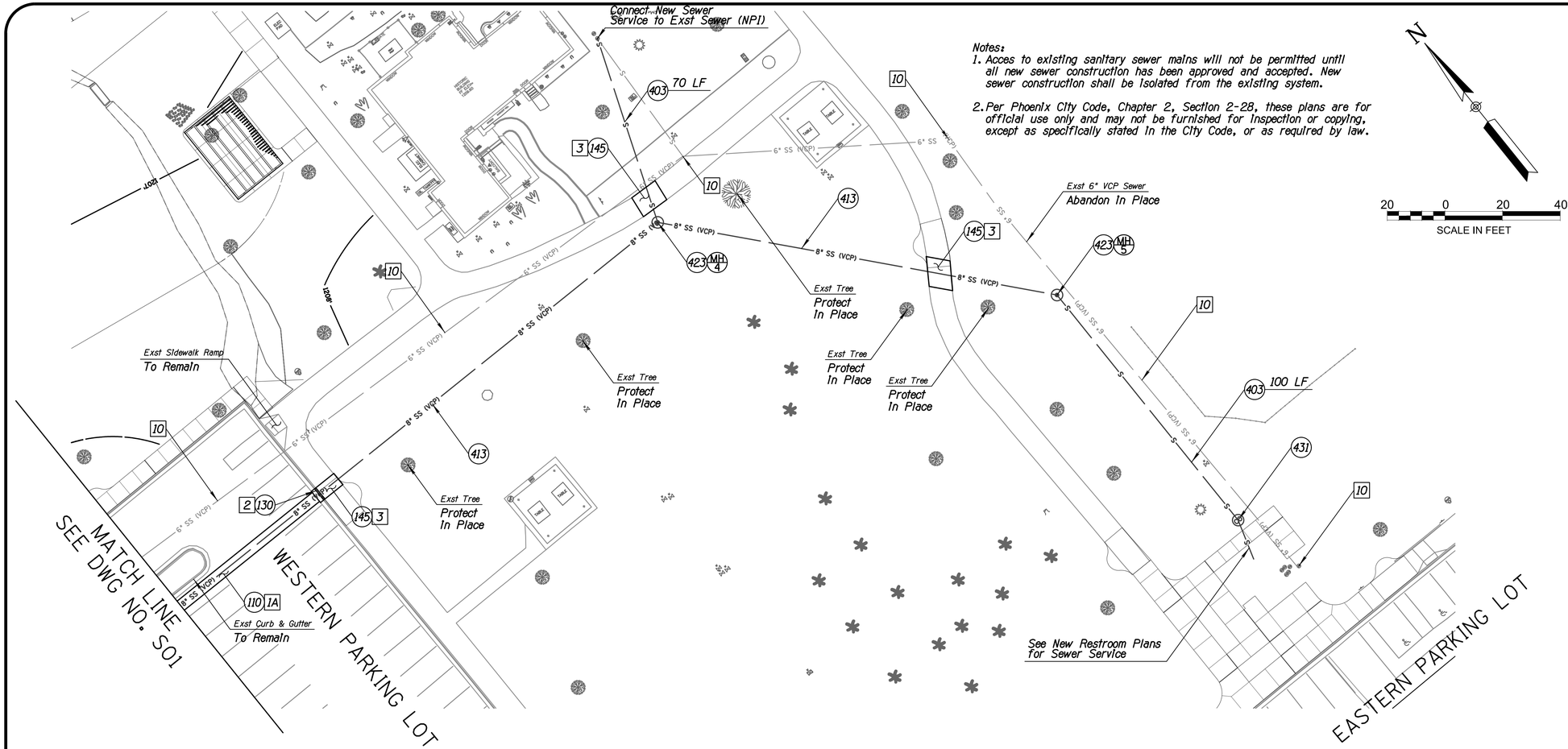
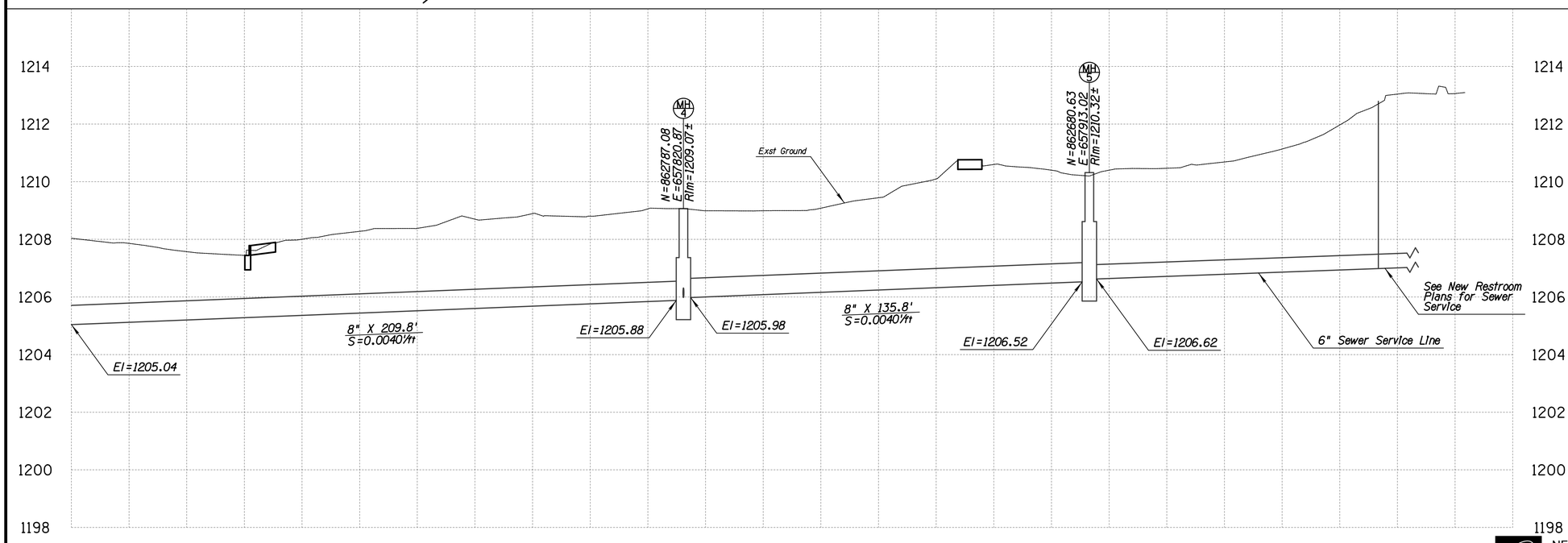
Sheet
SS01
29 OF 148





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
110	Backfill, Surface Replacement MAG Dtl 200 "T" Top	SY	27
130	Vertical Curb & Gutter MAG Dtl 220 Type "A"	LF	5
145	Concrete Sidewalk MAG Dtl 230	SF	202
403	6" Sewer Service, COP Dtl P1440	EA	2
413	8" VCP Sewer Pipe	LF	346
423	5' Dia Pre-Cast Concrete Flat Top Sewer Manhole MAG Dtl 420	EA	2
431	Sewer Cleanout MAG Dtl 441	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
1A	Sawcut & Remove AC Pvm't & Base Material	SY	27
2	Sawcut & Remove Curb & Gutter	LF	5
3	Sawcut & Remove Concrete Sidewalk/Driveway/Ramp	SF	202
10	Remove Sewer Cleanout & Plug Pipes	EA	6

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION OR RECORDING

Designed By: KRT
Drawn By: KRT
Checked By: RW
Date: 04/17/2024
Project #: 22.1618.002

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Sheet
SS02
30 OF 148

CONSTRUCTION AMENITIES SCHEDULE

DESCRIPTION	QTY.	MANUFACTURER	MODEL	MATERIAL	COLOR	FINISH	DETAIL	NOTES
HARDSCAPE ELEMENTS								
6" CONCRETE PAVING	34,517 SF	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM BROOM	DTL. 2, SHT. HS-401	MOCK-UP REQUIRED
POST TENSION CONCRETE PAVING (SPORT COURTS)	32,834 SF	N/A	N/A	POST TENSION CONCRETE	STD. GRAY	MEDIUM BROOM	SEE STRUCTURAL ENG'S DETAILS	SUBMITTAL REQUIRED
8" CONCRETE PAVING	1,608 SF	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM BROOM	DTL. 2, SHT. HS-401	MOCK-UP REQUIRED
8" CONCRETE HEADER	841 LF	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM BROOM	DTL. 3, SHT. HS-401	MOCK-UP REQUIRED
SITE AMENITIES								
8' PICNIC TABLE (ADA) w/ BRACE PIPE	18 EACH	PW ATHLETIC MFG. CO.	4214-08-ADA	STEEL	FRAMES: 270 QUARTZ GRAY SURFACES: 270 QUARTZ GRAY BRACE PIPE: 270 QUARTZ GRAY	POWDERCOAT	DTL. 5, SHT. HS-401	INSTALL PER MANUFACTURER SPECIFICATIONS/SUBMITTAL REQUIRED
BIKE RACK (SURFACE MOUNT)	5 EACH	PW ATHLETIC MFG. CO.	ROUND UP 1700-00P	STEEL	270 QUARTZ GRAY	POWDERCOAT	DTL. 1, SHT. HS-403	INSTALL PER MANUFACTURER SPECIFICATIONS/SUBMITTAL REQUIRED
6' BENCH (W/ BACK & CENTER ARM)	10 EACH	PW ATHLETIC MFG. CO.	PHOENIX BENCH SURFACE MOUNT	STEEL	FRAMES: 515 REGAL BLUE SURFACES: 515 REGAL BLUE	POWDERCOAT	DTL. 4, SHT. HS-401	INSTALL PER MANUFACTURER SPECIFICATIONS/SUBMITTAL REQUIRED
6' BENCH (NO BACK)	4 EACH	OCC OUTDOORS, INC.	6 FOOT BACKLESS BUS STOP BENCH WITH ARM REST. BLBEN-V-AR-6	STEEL	SILVER GREY	POWDERCOAT	DTL. 4, SHT. HS-401	INSTALL PER MANUFACTURER SPECIFICATIONS/SUBMITTAL REQUIRED
DRINKING FOUNTAIN (ADA)	2 EACH	MOST DEPENDABLE FOUNTAINS	440-18 SMSS, SURFACE MOUNT CHILLED	STEEL	CHROME	POWDERCOAT	DTLS. 2 & 3, SHT. HS-402	INSTALL PER MANUFACTURER SPECIFICATIONS. PROVIDE BOWL SAND STRAINER, RECESSED HOSEBIBB & LOCK DOOR, SAFE STREAM BUBBLER, JUG FILLER, SUBMITTAL REQUIRED
GROUP BBQ GRILL	6 EACH	PW ATHLETIC MFG. CO.	1140-20 SURFACE MOUNT	STEEL	BLACK	ENAMEL PAINT	DTL. 3, SHT. HS-403	INSTALL PER MANUFACTURER SPECIFICATIONS/SUBMITTAL REQUIRED
PET WASTE STATION	2 EACH	CUSTOM	N/A	STEEL & PVC	GRAY TO MATCH TRASH RECEPTACLES	POWERCOAT	DTL. 4, SHT. HS-403	SHOP DRAWINGS REQUIRED
LARGE RAMADA (40'X40')	3 EACH	POLIGON INC.	SQUARE, SQR 40	STEEL	ROOF: ROMAN BLUE POST: SUEDE	POWDERCOAT	SHT. HS-304	INSTALL PER MANUFACTURER SPECIFICATION. SHOP DRAWINGS REQUIRED - DEFERRED SUBMITTAL REQUIRED
SMALL RAMADA (20'X30')	1 EACH	POLIGON INC.	MONOSLOPE, MSX-20X30	STEEL	ROOF: ROMAN BLUE POST: SUEDE	POWDERCOAT	SHT. HS-305	INSTALL PER MANUFACTURER SPECIFICATION. SHOP DRAWINGS REQUIRED - DEFERRED SUBMITTAL REQUIRED
TRASH RECEPTACLE	12 EACH	THOMAS STEELE	SSTR-32D-P STATE STREET, SURFACE MOUNT LID-D-P	STEEL	LID: GUNMETAL BODY: GUNMETAL	POWDERCOAT	DTL. 6, SHT. HS-401	INSTALL PER MANUFACTURER SPECIFICATIONS/SUBMITTAL REQUIRED
TUBE STEEL FENCING	988 LF	CUSTOM	CUSTOM	STEEL	BLACK	NATURAL RUST	DTL 2, SHT. HS-403	SHOP DRAWINGS REQUIRED
SINGLE SWING GATE (PAIR)	2 EACH	CUSTOM	CUSTOM	STEEL	BLACK	NATURAL RUST	DTL. 1, SHT. HS-410	SHOP DRAWINGS REQUIRED
SPORTS/PROGRAM AMENITIES								
BASKETBALL BACKBOARD	4 EACH	PW ATHLETICS MFG. CO.	#22 FAN BACKBOARD HEAVY DUTY W/TARGET AND PERIMETER	CAST ALUMINUM	WHITE	PER MANUFACTURER	SEE SHT. HS-404	SUBMITTAL REQUIRED
BASKETBALL RIM & NET	4 EACH	PW ATHLETICS MFG. CO.	#39 EXTRA HEAVY-DUTY DOUBLE RIM W/UNIVERSAL MOUNT PLATE	RIM - STEEL NET - NYLON	RIM - ORANGE NET - WHITE	RIM - POWDERCOAT NET - PER MFG.	SEE SHT. HS-404	SUBMITTAL REQUIRED
BASKETBALL POST	4 EACH	PW ATHLETICS MFG. CO.	#1523G 4 $\frac{1}{2}$" O.D. W/ 4' OFFSET	STEEL	GALVANIZED	GALVANIZED	SEE SHT. HS-404	SUBMITTAL REQUIRED
BASKETBALL COURT SURFACING	9,400 SF	SPORTMASTER			SEE SHT. HS-404	SEE SHT. HS-404	SEE SHT. HS-404	INSTALL PER MANUFACTURERS SPECIFICATIONS
VOLLEYBALL POLES	4 EACH	PW ATHLETICS MFG. CO.	2219-21	STEEL	BRONZE	POWDERCOAT	SEE DTL. 2, SHT. HS-407	INSTALL PER MANUFACTURERS SPECIFICATIONS
VOLLEYBALL NETS	2 EACH	PW ATHLETICS MFG. CO.	8361-20	NYLON	N/A	N/A	SEE DTL. 2, SHT. HS-407	INSTALL PER MANUFACTURERS SPECIFICATIONS
VOLLEYBALL BOUNDARY MARKERS	2 EACH	PW ATHLETICS MFG. CO.	8369	ROPE	N/A	N/A	SEE DTL. 3, SHT. HS-407	INSTALL PER MANUFACTURERS SPECIFICATIONS
PICKLEBALL FENCE WITH 10'-0" WIND SCREEN	245 LF	N/A	CHAIN LINK FENCE WIND SCREEN MATERIAL	GALVANIZED STEEL	GALVANIZED (FENCE) DARK GREEN (SCREEN)	GALVANIZED	SEE DTL. 1, SHT. HS-406	SHOP DRAWINGS REQUIRED
PICKLEBALL DIVIDER FENCE	167 LF	N/A	CHAIN LINK FENCE	GALVANIZED STEEL	GALVANIZED	GALVANIZED	SEE DTL. 2, SHT. HS-406	SHOP DRAWINGS REQUIRED
PICKLEBALL GATE	4 EACH	N/A	CHAIN LINK FENCE	GALVANIZED STEEL	GALVANIZED	GALVANIZED	SEE DTL. 1, SHT. HS-406	SHOP DRAWINGS REQUIRED
PICKLEBALL NET POSTS	8 EACH	PW ATHLETICS MFG. CO.	2202-11P	STEEL	BRONZE	POWDERCOAT	SEE DTL. 3, SHT. HS-406	INSTALL PER MANUFACTURERS SPECIFICATIONS
PICKLEBALL NETS	4 EACH	PW ATHLETICS MFG. CO.	8354-36	NYLON	N/A	N/A	SEE DTL. 3, SHT. HS-406	INSTALL PER MANUFACTURERS SPECIFICATIONS
PICKLEBALL COURT SURFACING	7,750 SF	SPORTMASTER		ACRYLIC	SEE SHT. HS-405	SEE SHT. HS-405	SEE DTL. 1, SHT. HS-405	MOCK UP REQUIRED
TENNIS FENCE WITH 10'-0" WIND SCREEN	488 LF	N/A	CHAIN LINK FENCE WIND SCREEN MATERIAL	GALVANIZED STEEL	GALVANIZED (FENCE) DARK GREEN (SCREEN)	GALVANIZED	SEE DTL. 1, SHT. HS-406	SHOP DRAWINGS REQUIRED
TENNIS GATE	2 EACH	N/A	CHAIN LINK FENCE	GALVANIZED STEEL	GALVANIZED	GALVANIZED	SEE DTL. 1, SHT. HS-406	SHOP DRAWINGS REQUIRED
TENNIS POST	4 EACH	PW ATHLETICS MFG. CO.	2205-GRN-HD W/ TOP PULLY AND NET TIGHTENER	GALVANIZED STEEL	BRONZE	POWDERCOAT	SEE DTL. 2, SHT. HS-408	INSTALL PER MANUFACTURERS SPECIFICATIONS
TENNIS NET	2 EACH	PW ATHLETICS MFG. CO.	8352, 8371-20 NET GROUND ANCHOR. 8371-30 NET TIE DOWN STRAP	NYLON	WHITE	N/A	SEE DTL. 2, SHT. HS-408	INSTALL PER MANUFACTURERS SPECIFICATIONS
TENNIS COURT SURFACING	15,130 SF	SPORTMASTER		ACRYLIC		SEE SHT. HS-408	SEE DTL. 1, SHT. HS-408	MOCK UP REQUIRED
FITNESS EQUIPMENT (NEW)	4 EACH	GREENFIELDS OUTDOOR FITNESS	REFER TO SHT. HS-3.12 FOR EQUIPMENT MODEL NUMBERS	STEEL	GREEN	PER MANUFACTURER	SEE SHT. HS-301	INSTALL PER MANUFACTURERS SPECIFICATIONS
SKATE PLAZA	1 EACH		N/A	N/A	N/A	N/A	SHT. HS-302	SHOP DRAWINGS REQUIRED
DISC GOLF BASKET	9 EACH	LATTITUDE 64	PROBASKET ELITE	GALVANIZED STEEL	YELLOW	POWDERCOAT	DTL. 2, SHT. HS-411	SHOP DRAWINGS REQUIRED
6" DISC GOLF CONCRETE PAD	9 EACH	N/A	N/A	CONCRETE	STANDARD GRAY	MEDIUM BROOM W/ SAND BLAST LETTERING	DTL. 1, SHT. HS-411	MOCK UP REQUIRED

NOTES:

1. QUANTITIES GIVEN FOR CONTRACTOR CONVENIENCE ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES.
2. ALL SITE AMENITIES SHALL BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
3. REFERENCES TO EQUIPMENT OR MATERIALS BY MANUFACTURER, TRADE NAME, MAKE OR CATALOG NUMBER SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY, FINISH, APPEARANCE, PERFORMANCE OR, AS INDICATED, A SELECTION BASED UPON COMPATIBILITY WITH EXISTING EQUIPMENT OR MATERIALS. AN ALTERNATE OR SUBSTITUTE ITEM OR SOURCE MAY BE SUBMITED IN ACCORDANCE WITH MAG STD SECTION 106-4 TRADE NAMES & SUBSTITUTIONS.

HARDSCAPE SHEET LIST:

HS-101	SITE AMENITIES SCHEDULE
HS-201 - HS-209	HARDSCAPE PLANS
HS-301 - HS-306	HARDSCAPE ENLARGEMNTS
HS-401 - HS-411	HARDSCAPE DETAILS

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION OR RECORDING

Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: SITE AMENITIES SCHEDULE
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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Sheet
HS-101
31 OF 148

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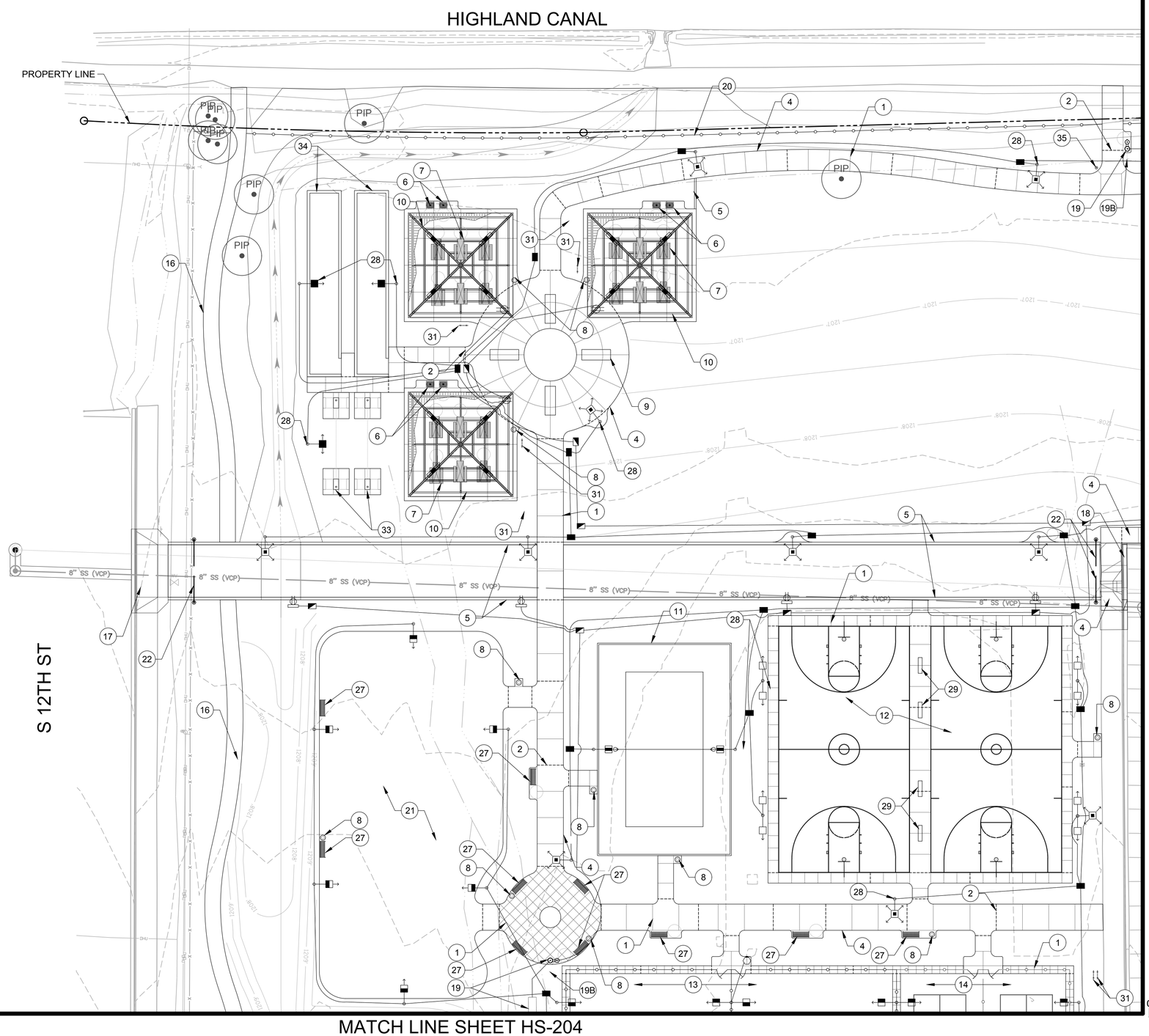
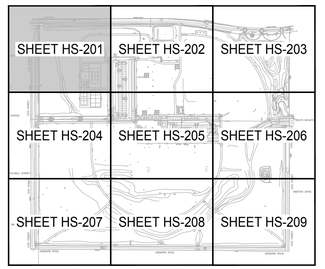


HARDSCAPE KEYNOTES

NO.	DESCRIPTION	DETAIL
HARDSCAPE IMPROVEMENTS		
1	CONTROL JOINT - TOOLED, TYP	DTL. 1, SHT. HS-401
2	EXPANSION JOINT, TYP	DTL. 1, SHT. HS-401
3	6" CONCRETE PAVING, TYP	DTL. 2, SHT. HS-401
4	8" CONCRETE PAVING, TYP	DTL. 2, SHT. HS-401
5	CONCRETE HEADER, TYP	DTL. 3, SHT. HS-401
6	BBQ GRILL, TYP	DTL. 1, SHT. HS-402
7	8' PICNIC TABLE ADA, TYP	DTL. 5, SHT. HS-401
8	TRASH RECEPTACLE, TYP	DTL. 6, SHT. HS-401
9	CONCRETE TABLES, TYP	DTL. 2, SHT. HS-410
10	RAMADA (LARGE)	SEE ENLARGEMENT SHT. HS-305
11	SAND VOLLEYBALL COURT	SEE ENLARGEMNT SHT. HS-303 & SHT. HS-407
12	BASKETBALL COURT	SEE ENLARGMENT SHT. HS-303 & SHT. HS-404
13	TENNIS COURT	SEE ENLARGMENT SHT. HS-304 & SHT. HS-408
14	PICKLEBALL COURT	SHT. HS-303, DTL. 1, SHT. HS-405, SHT. HS-406
15	FITNESS EQUIPMENT, TYP	SEE ENLARGEMENT SHT. HS-301
16	COMPACTED DECOMPOSED GRANITE PATH, TYP	DTL. 6, SHT. LS-401
17	DRIVEWAY	SEE CIVIL PLANS
18	MOUNTABLE CURB, TYP	SEE CIVIL PLANS
19	DRINKING FOUNTAIN W/ LEACH FIELD	DTL. 2, SHT. HS-402
19B	DRINKING FOUNTAIN WATER CONENCTION	SEE CIVIL UTILITY PLANS FOR CONTINUATION
20	TUBE STEEL FENCING, TYP	DTL. 2, SHT. HS-403
21	SKATE PARK	SEE ENLARGEMENT SHT. HS-302
22	SWING GATE, TYP	DTL. 1, SHT. HS-410
23	TRASH/RECYCLE AREA	-
24	DISC GOLF BASKET, TYP	DTL. 2, SHT. HS-411
25	DISC GOLF CONCRETE PAD, TYP	DTL. 1, SHT. HS-411
26	EXISTING SPEED BUMP	-
27	6' SURFACE MOUNT BENCH, W/ BACK, TYP	DTL. 4, SHT. HS-401
28	LIGHT, TYP	SEE ELECTRICAL PLANS
29	6' SURFACE MOUNT BENCH W/ NO BACK, TYP	DTL. 4, SHT. HS-401
30	RESTROOM BUILDING	SEE ARCH. PLANS
31	BIKE RACK, TYP	DTL. 1, SHT. HS-403
32	RAMADA (STAGE)	SEE ENLARGEMENT SHT. HS-306
33	CORN HOLE, TYP	SEE ENLARGEMENT SHT. HS-307
34	BOCCE BALL COURT, TYP	SEE ENLARGEMENT SHT. HS-307
35	PET WASTE STATION, TYP	DTL. 4, SHT. HS-403
36	FOOD TRUCK ENTRANCE COMPACTED AB	DTL. 6, SHT. LS-401
37	EMERGENCY TENNIS COURT EXIT, TYP	DTL. ON SHT. HS-408

MATCH LINE SHEET HS-202

KEYMAP



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J2 Design
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Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: **HARDSCAPE PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

KIVA # _____
SDEV # _____

Sheet
HS-201
32 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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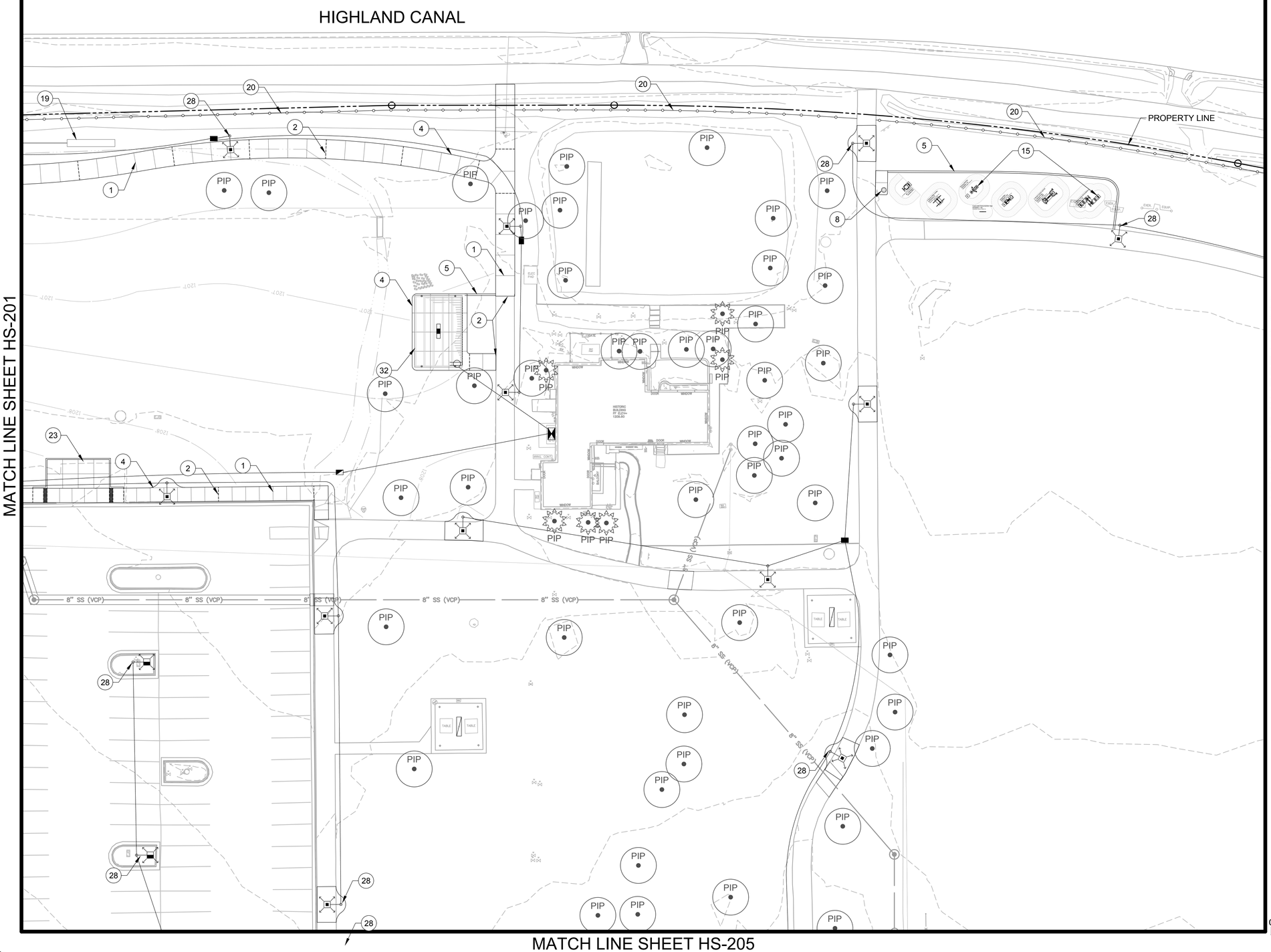

HARDSCAPE KEYNOTES

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6	BBQ GRILL, TYP	DTL. 1, SHT. HS-402
7	8' PICNIC TABLE ADA, TYP	DTL. 5, SHT. HS-401
8	TRASH RECEPTACLE, TYP	DTL. 6, SHT. HS-401
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11	SAND VOLLEYBALL COURT	SEE ENLARGEMNT SHT. HS-303 & SHT. HS-407
12	BASKETBALL COURT	SEE ENLARGMENT SHT. HS-303 & SHT. HS-404
13	TENNIS COURT	SEE ENLARGMENT SHT. HS-304 & SHT. HS-408
14	PICKLEBALL COURT	SHT. HS-303, DTL. 1, SHT. HS-405, SHT. HS-406
15	FITNESS EQUIPMENT, TYP	SEE ENLARGEMENT SHT. HS-301
16	COMPACTED DECOMPOSED GRANITE PATH, TYP	DTL. 6, SHT. LS-401
17	DRIVEWAY	SEE CIVIL PLANS
18	MOUNTABLE CURB, TYP	SEE CIVIL PLANS
19	DRINKING FOUNTAIN W/ LEACH FIELD	DTL. 2, SHT. HS-402
19B	DRINKING FOUNTAIN WATER CONENCTION	SEE CIVIL UTILITY PLANS FOR CONTINUATION
20	TUBE STEEL FENCING, TYP	DTL. 2, SHT. HS-403
21	SKATE PARK	SEE ENLARGEMENT SHT. HS-302
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SHEET HS-201	SHEET HS-202	SHEET HS-203
SHEET HS-204	SHEET HS-205	SHEET HS-206
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Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

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1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

J2 Design
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Sheet
HS-202
33 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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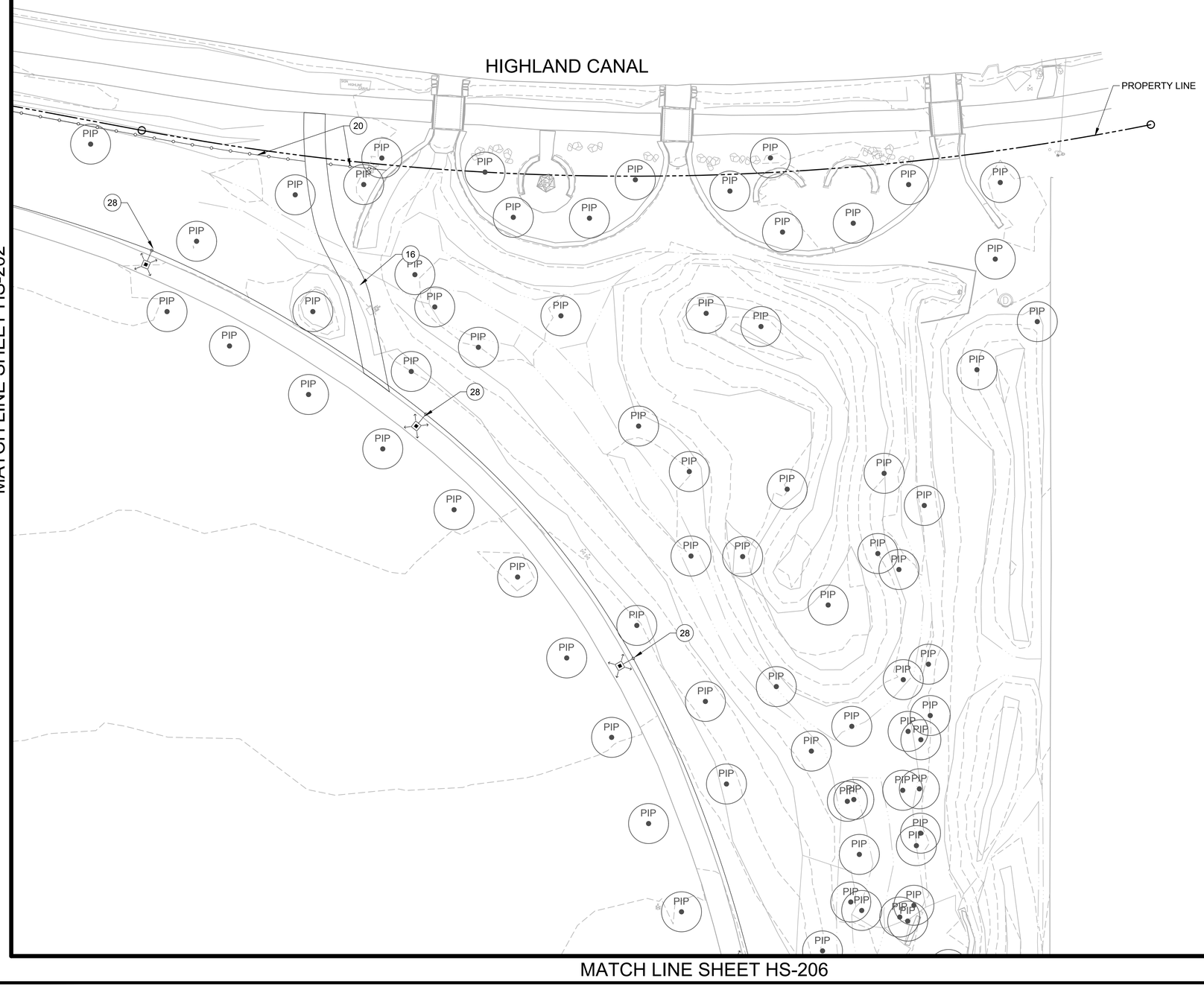

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Drawn By: J2CAD

Checked By: JB

Date: 4/19/2024

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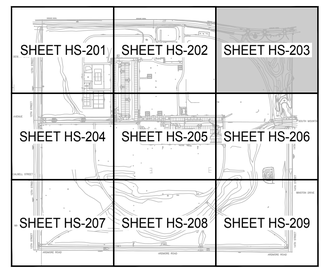

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KIVA # _____
SDEV # _____

Sheet
HS-203
34 OF 148

Title:
HARDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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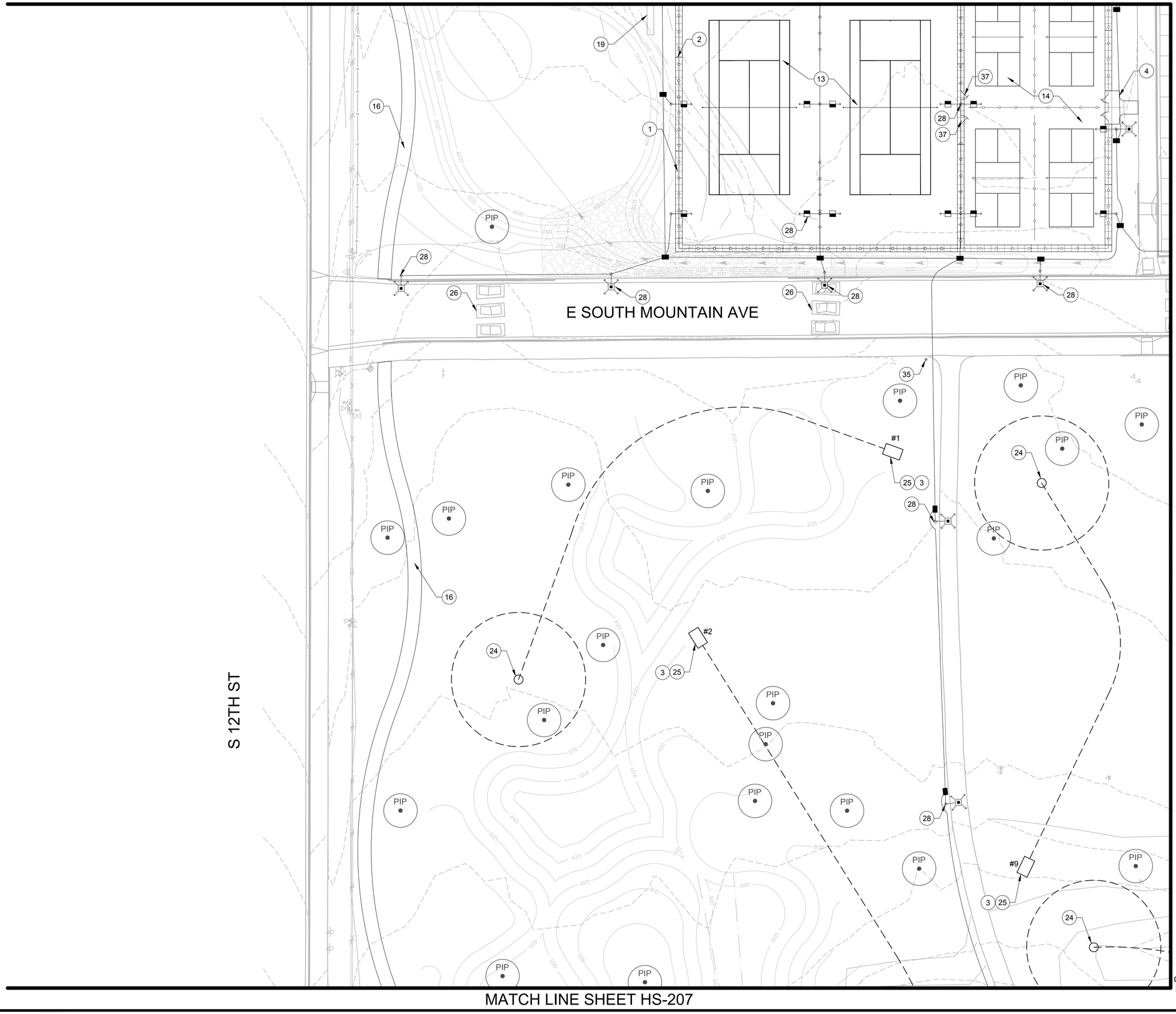
MATCH LINE SHEET HS-201



MATCH LINE SHEET HS-207

MATCH LINE SHEET HS-205

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SHEET HS-201	SHEET HS-202	SHEET HS-203
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CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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Sheet
HS-204
35 OF 148

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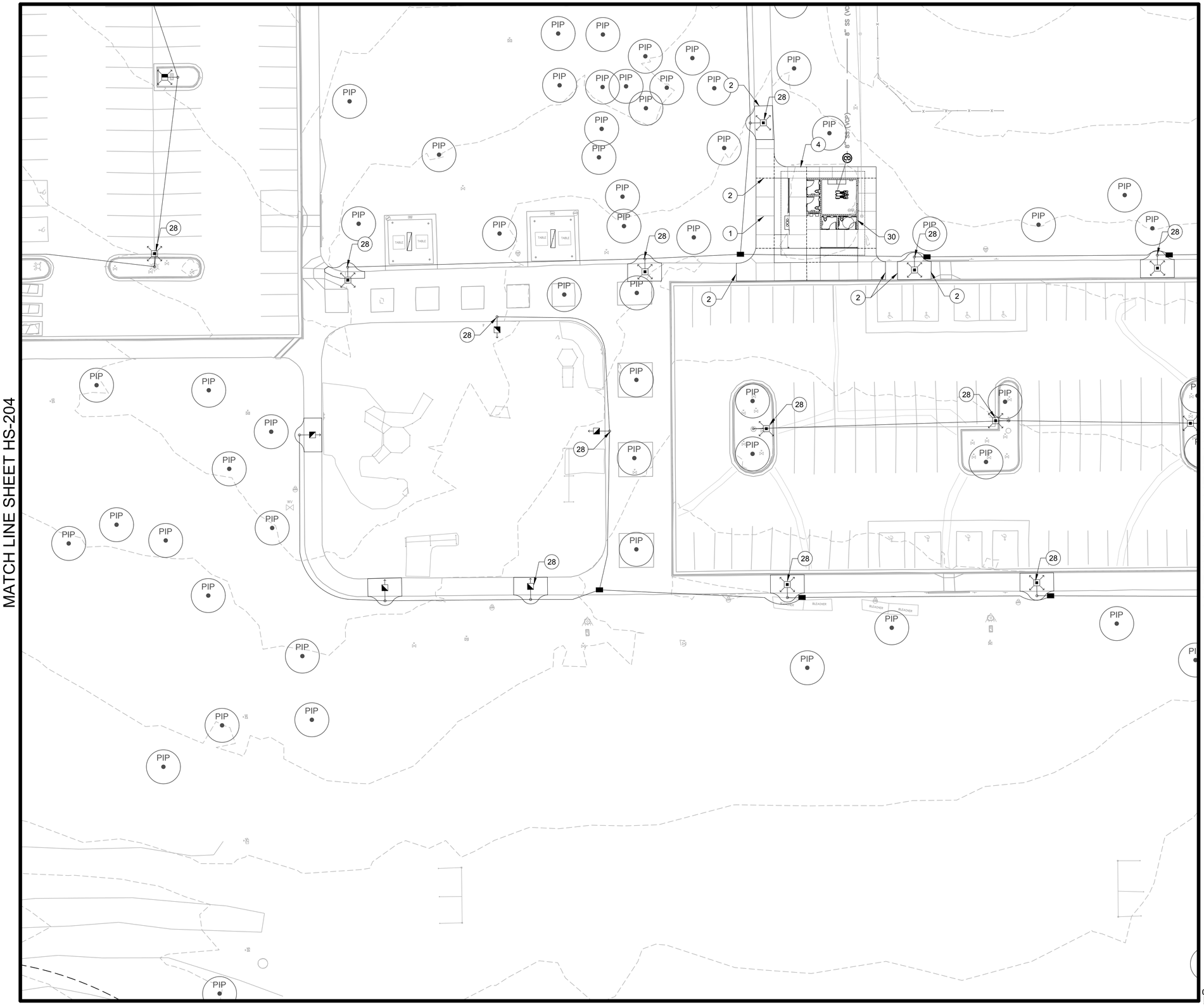
MATCH LINE SHEET LS-202



MATCH LINE SHEET HS-204

MATCH LINE SHEET HS-206

MATCH LINE SHEET HS-208

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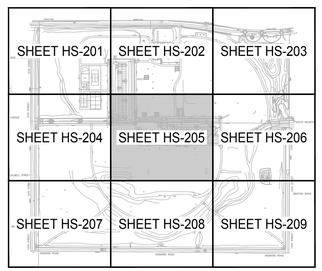

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Sheet
HS-205
36 OF 148

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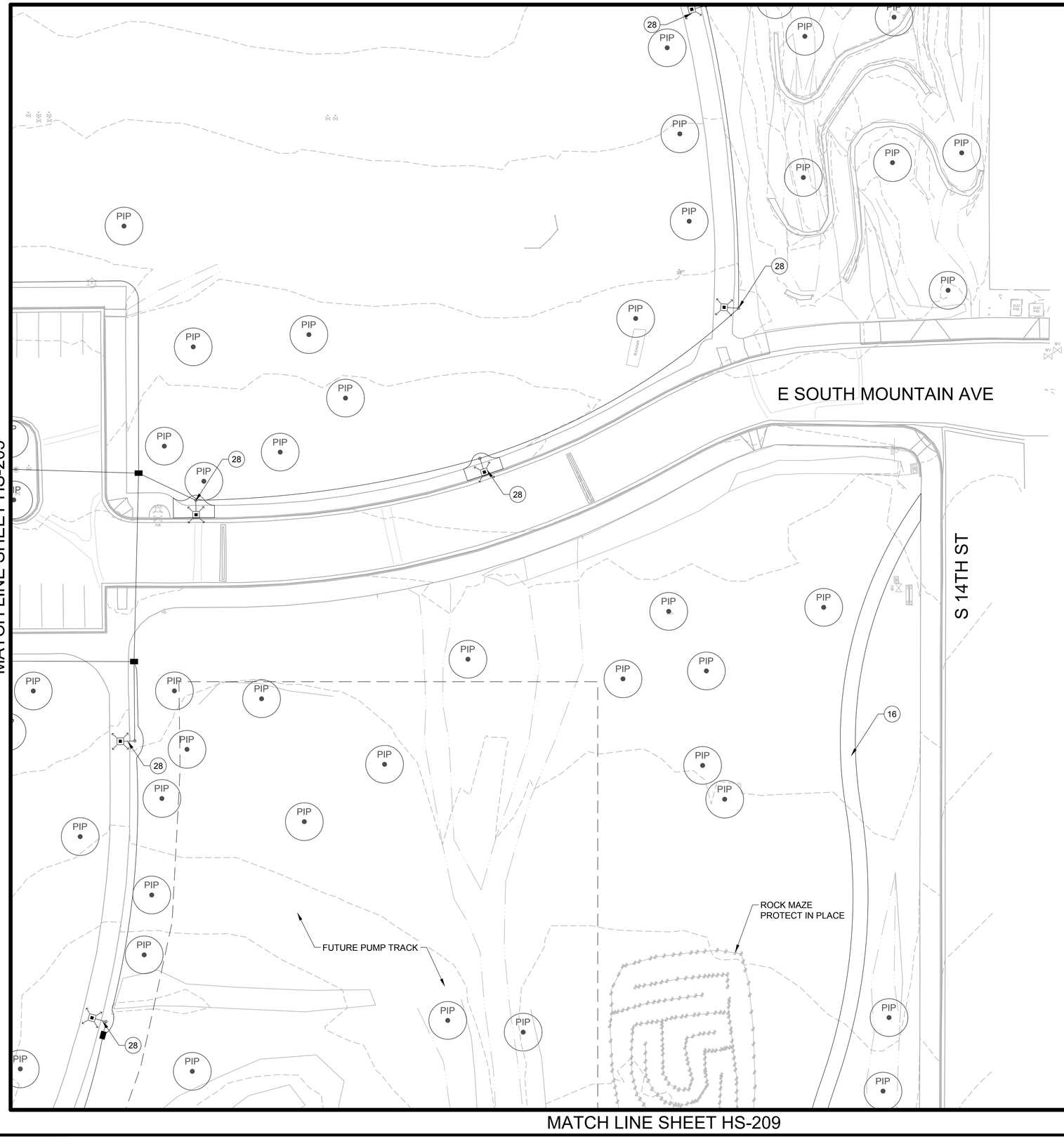
P:\22\1618.002\J2Cad\Sheets\1618.002-HS200.dwg 4/29/2024 12:22:08 PM B-W.CTB MARIA NOVACEK

MATCH LINE SHEET HS-203



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18	MOUNTABLE CURB, TYP	SEE CIVIL PLANS
19	DRINKING FOUNTAIN W/ LEACH FIELD	DTL. 2, SHT. HS-402
19B	DRINKING FOUNTAIN WATER CONENCTION	SEE CIVIL UTILITY PLANS FOR CONTINUATION
20	TUBE STEEL FENCING, TYP	DTL. 2, SHT. HS-403
21	SKATE PARK	SEE ENLARGEMENT SHT. HS-302
22	SWING GATE, TYP	DTL. 1, SHT. HS-410
23	TRASH/RECYCLE AREA	-
24	DISC GOLF BASKET, TYP	DTL. 2, SHT. HS-411
25	DISC GOLF CONCRETE PAD, TYP	DTL. 1, SHT. HS-411
26	EXISTING SPEED BUMP	-
27	6' SURFACE MOUNT BENCH, W/ BACK, TYP	DTL. 4, SHT. HS-401
28	LIGHT, TYP	SEE ELECTRICAL PLANS
29	6' SURFACE MOUNT BENCH W/ NO BACK, TYP	DTL. 4, SHT. HS-401
30	RESTROOM BUILDING	SEE ARCH. PLANS
31	BIKE RACK, TYP	DTL. 1, SHT. HS-403
32	RAMADA (STAGE)	SEE ENLARGEMENT SHT. HS-306
33	CORN HOLE, TYP	SEE ENLARGEMENT SHT. HS-307
34	BOCCE BALL COURT, TYP	SEE ENLARGEMENT SHT. HS-307
35	PET WASTE STATION, TYP	DTL. 4, SHT. HS-403
36	FOOD TRUCK ENTRANCE COMPACTED AB	DTL. 6, SHT. LS-401
37	EMERGENCY TENNIS COURT EXIT, TYP	DTL. ON SHT. HS-408

SHEET HS-201	SHEET HS-202	SHEET HS-203
SHEET HS-204	SHEET HS-205	SHEET HS-206
SHEET HS-207	SHEET HS-208	SHEET HS-209

-WARNING-
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0 20' 40'
SCALE: 1"=20'

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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Revisions	Date

PRE-FINAL
100%
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OR
RECORDING

Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: HARDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

KIVA # _____
SDEV # _____

Sheet
HS-206
37 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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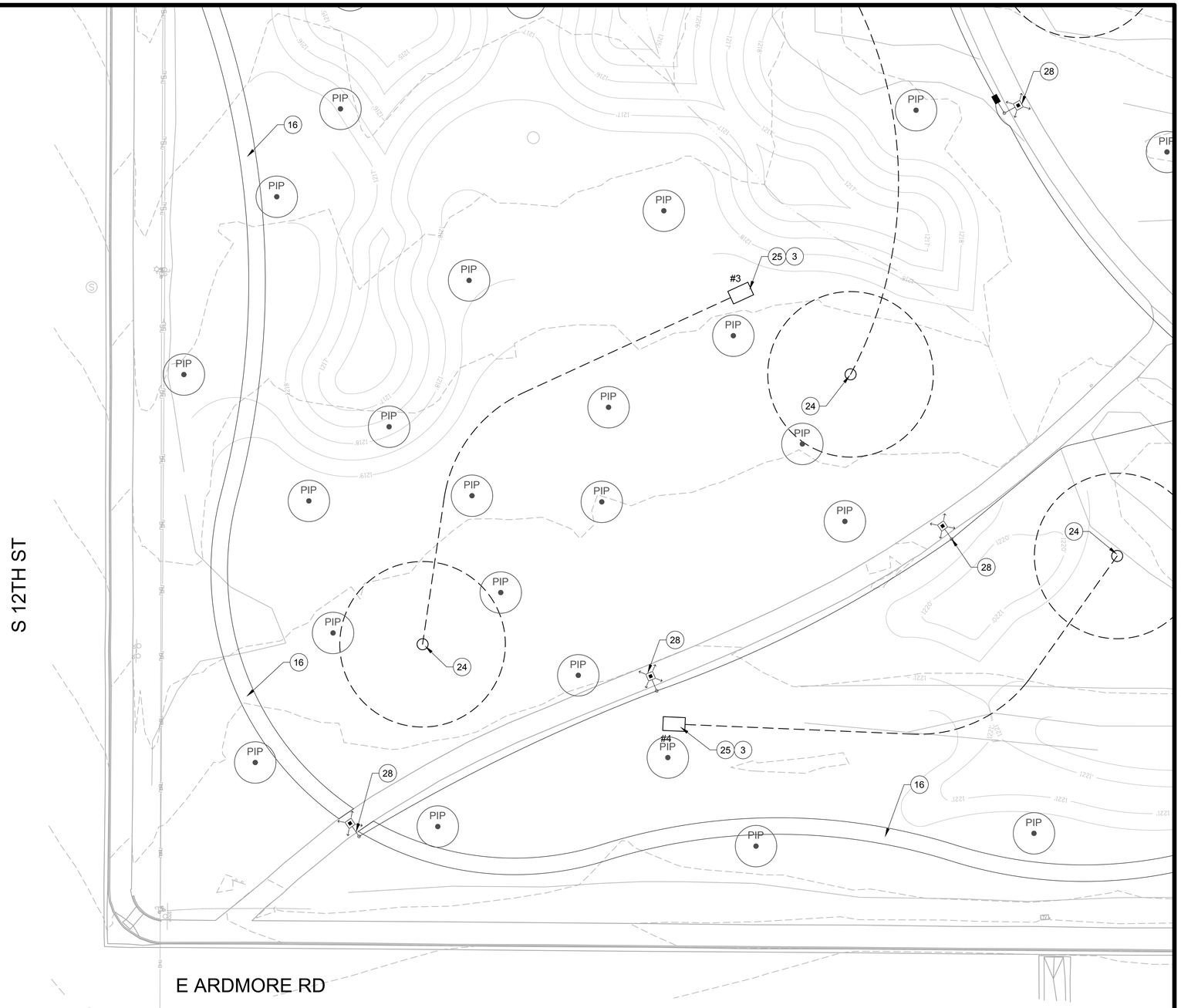
MATCH LINE SHEET HS-204



MATCH LINE SHEET HS-208

HARDSCAPE KEYNOTES

NO.	DESCRIPTION	DETAIL
HARDSCAPE IMPROVEMENTS		
1	CONTROL JOINT - TOOLED, TYP	DTL. 1, SHT. HS-401
2	EXPANSION JOINT, TYP	DTL. 1, SHT. HS-401
3	6" CONCRETE PAVING, TYP	DTL. 2, SHT. HS-401
4	8" CONCRETE PAVING, TYP	DTL. 2, SHT. HS-401
5	CONCRETE HEADER, TYP	DTL. 3, SHT. HS-401
6	BBQ GRILL, TYP	DTL. 1, SHT. HS-402
7	8' PICNIC TABLE ADA, TYP	DTL. 5, SHT. HS-401
8	TRASH RECEPTACLE, TYP	DTL. 6, SHT. HS-401
9	CONCRETE TABLES, TYP	DTL. 2, SHT. HS-410
10	RAMADA (LARGE)	SEE ENLARGEMENT SHT. HS-305
11	SAND VOLLEYBALL COURT	SEE ENLARGEMNT SHT. HS-303 & SHT. HS-407
12	BASKETBALL COURT	SEE ENLARGMENT SHT. HS-303 & SHT. HS-404
13	TENNIS COURT	SEE ENLARGMENT SHT. HS-304 & SHT. HS-408
14	PICKLEBALL COURT	SHT. HS-303, DTL. 1, SHT. HS-405, SHT. HS-406
15	FITNESS EQUIPMENT, TYP	SEE ENLARGEMENT SHT. HS-301
16	COMPACTED DECOMPOSED GRANITE PATH, TYP	DTL. 6, SHT. LS-401
17	DRIVEWAY	SEE CIVIL PLANS
18	MOUNTABLE CURB, TYP	SEE CIVIL PLANS
19	DRINKING FOUNTAIN W/ LEACH FIELD	DTL. 2, SHT. HS-402
19B	DRINKING FOUNTAIN WATER CONENCTION	SEE CIVIL UTILITY PLANS FOR CONTINUATION
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21	SKATE PARK	SEE ENLARGEMENT SHT. HS-302
22	SWING GATE, TYP	DTL. 1, SHT. HS-410
23	TRASH/RECYCLE AREA	-
24	DISC GOLF BASKET, TYP	DTL. 2, SHT. HS-411
25	DISC GOLF CONCRETE PAD, TYP	DTL. 1, SHT. HS-411
26	EXISTING SPEED BUMP	-
27	6' SURFACE MOUNT BENCH, W/ BACK, TYP	DTL. 4, SHT. HS-401
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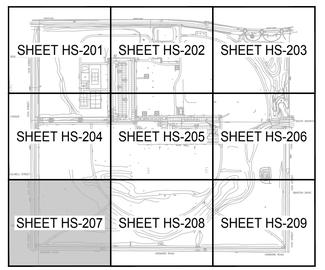
34	BOCCE BALL COURT, TYP	SEE ENLARGEMENT SHT. HS-307
35	PET WASTE STATION, TYP	DTL. 4, SHT. HS-403
36	FOOD TRUCK ENTRANCE COMPACTED AB	DTL. 6, SHT. LS-401
37	EMERGENCY TENNIS COURT EXIT, TYP	DTL. ON SHT. HS-408



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Title: **HARDSCAPE PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

KIVA #
SDEV #

Sheet
HS-207
38 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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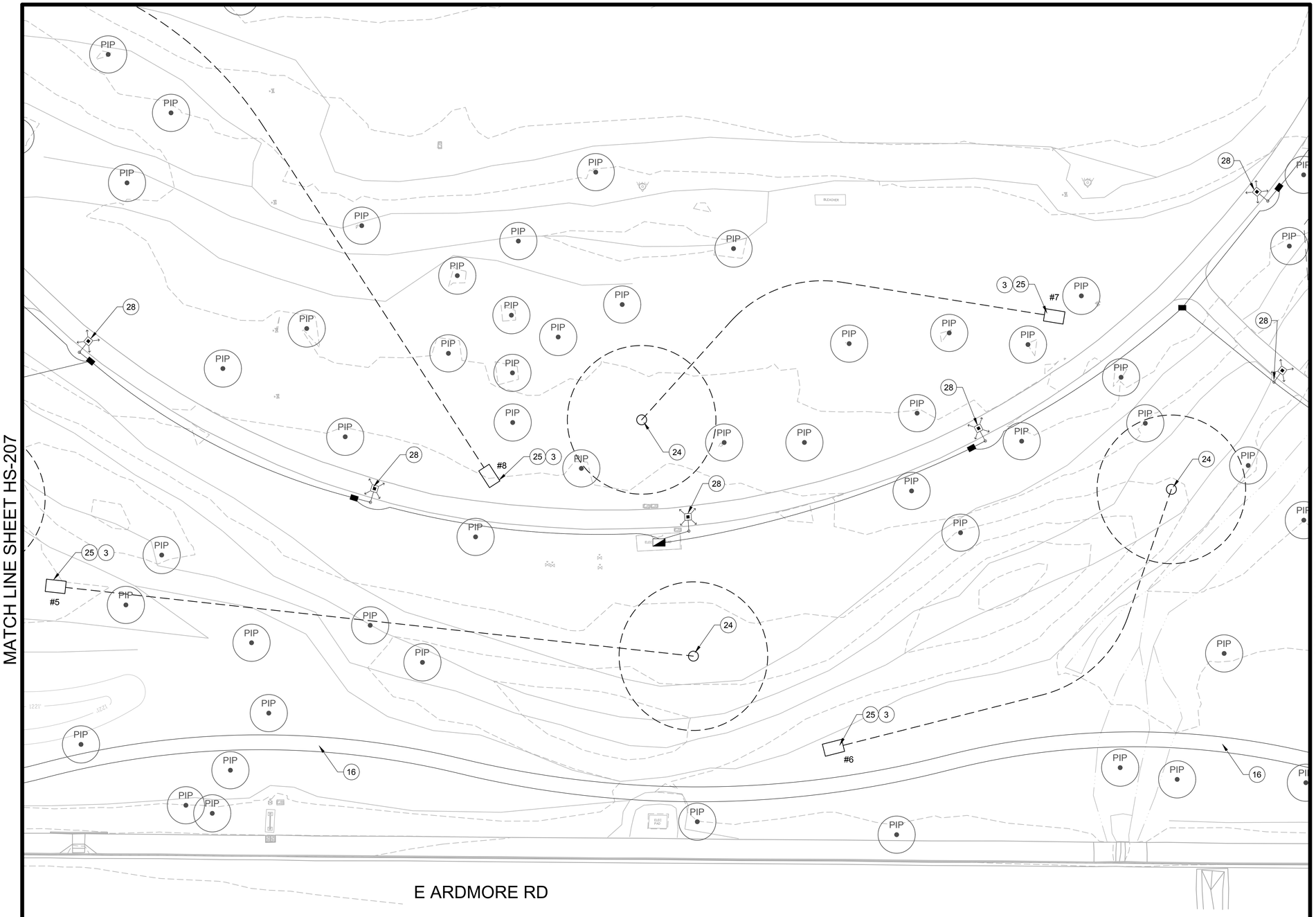
MATCH LINE SHEET HS-205



MATCH LINE SHEET HS-207

MATCH LINE SHEET HS-209

HARDSCAPE KEYNOTES

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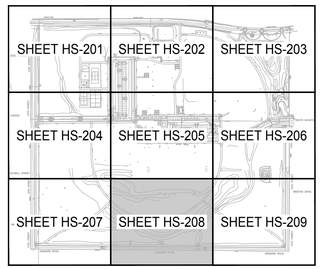
37	EMERGENCY TENNIS COURT EXIT, TYP	DTL. ON SHT. HS-408



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Revisions	Date

PRE-FINAL
100%
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Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: HARDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

KIVA # _____
SDEV # _____

Sheet
HS-208
39 OF 148

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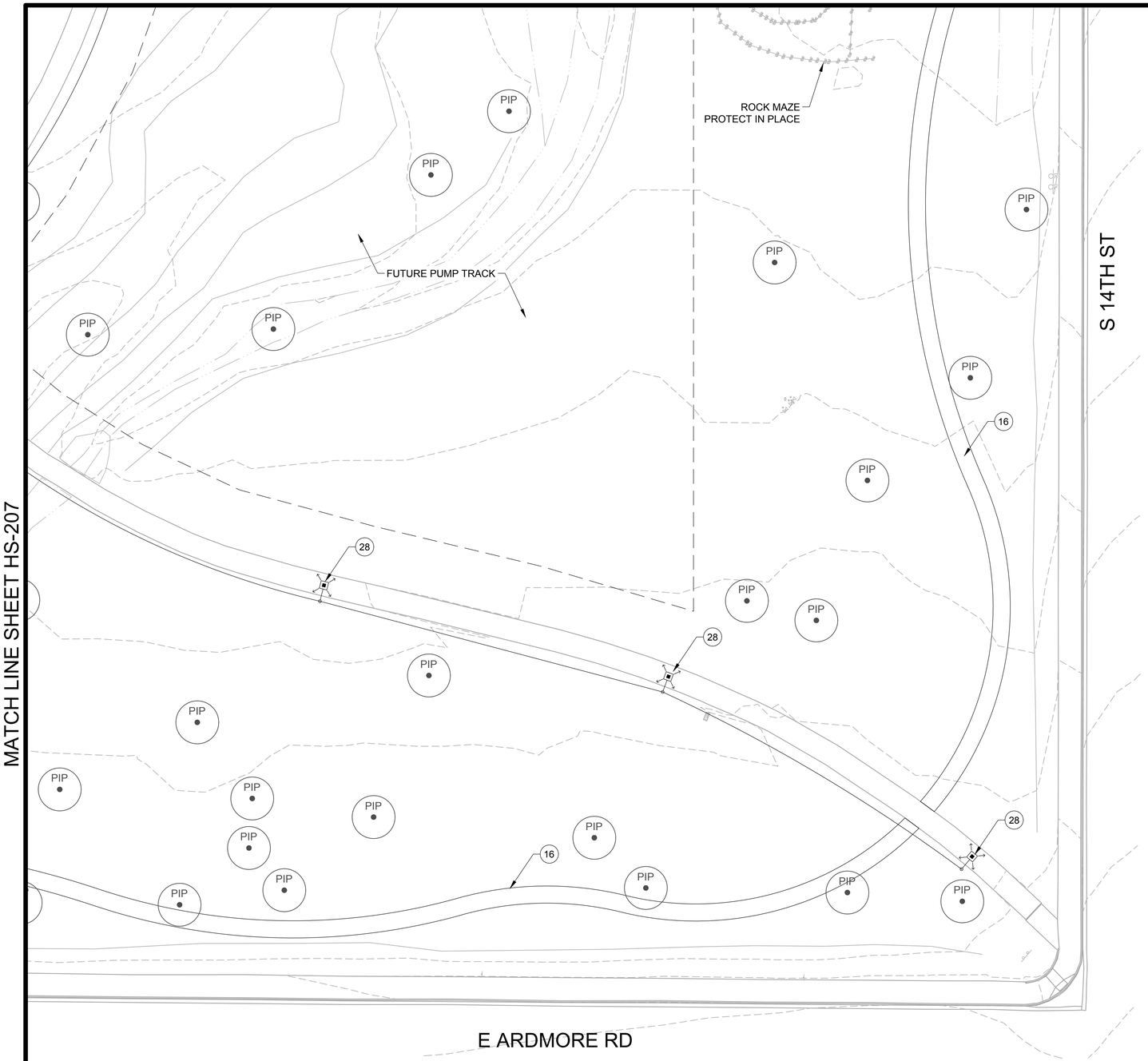

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17	DRIVEWAY	SEE CIVIL PLANS
18	MOUNTABLE CURB, TYP	SEE CIVIL PLANS
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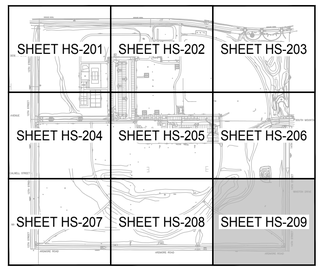

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Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: HARDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA #
SDEV #

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Sheet
HS-209
40 OF 148

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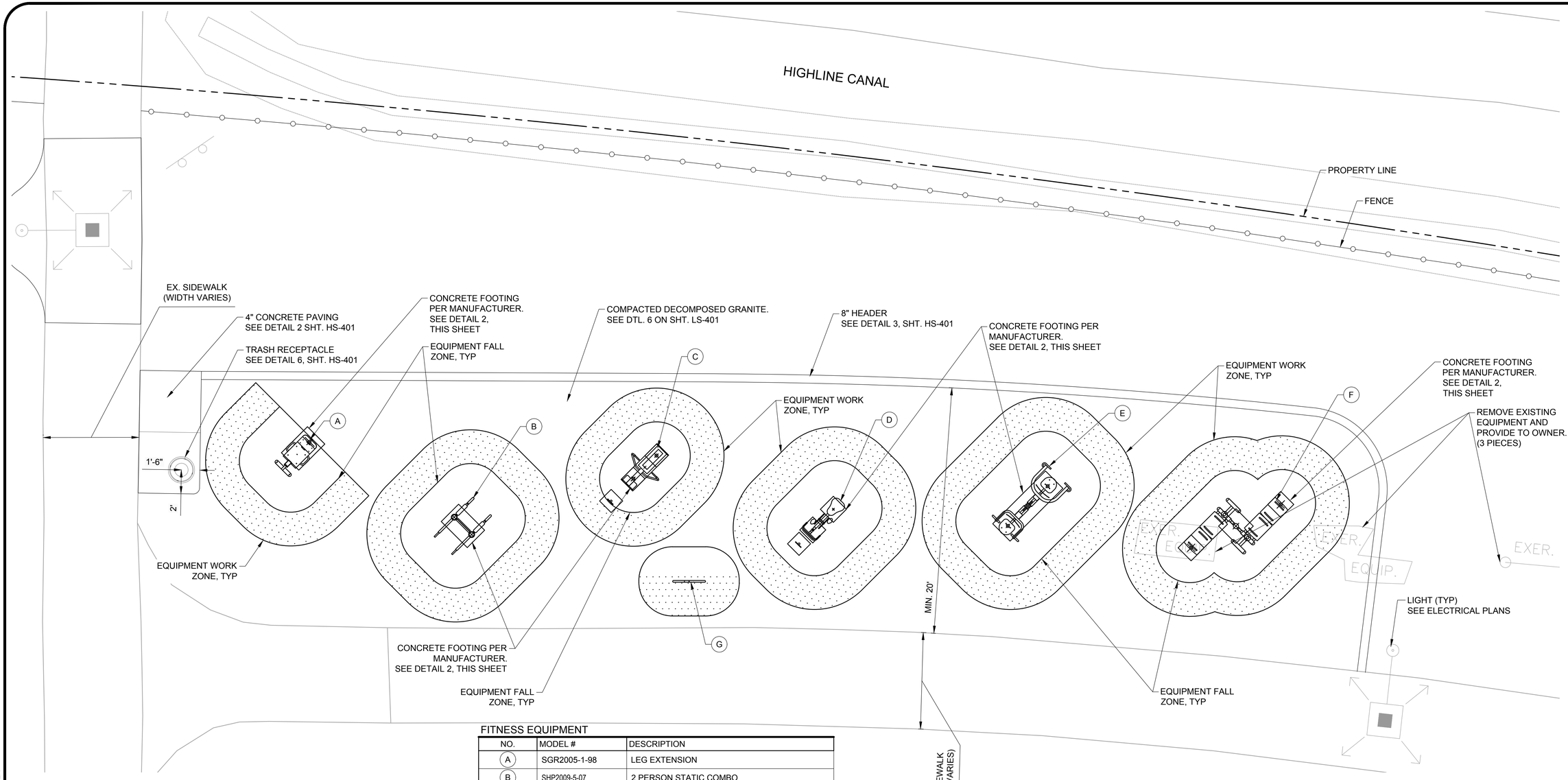
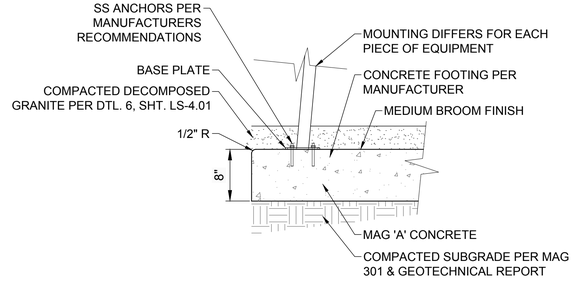


FITNESS EQUIPMENT

NO.	MODEL #	DESCRIPTION
A	SGR2005-1-98	LEG EXTENSION
B	SHP2009-5-07	2 PERSON STATIC COMBO
C	SGR2005-1-91	ROWING MACHINE
D	SGR2005-1-89	UPRIGHT BIKE
E	SGR2005-1-48C	2 PERSON COMBO LAT PULL & VERTICAL PRESS
F	SGR2005-1-19	TWO PERSON SIT-UP BENCH
G	SGR2005-1-105	CUSTOMIZED ANNOUNCEMENT SIGN

1 FITNESS PLAZA ENLARGEMENT

3"=1'-0"



2 EQUIPMENT MOUNTING PAD

NTS

Revisions	Date

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Sheet
HS-301
41 OF 148

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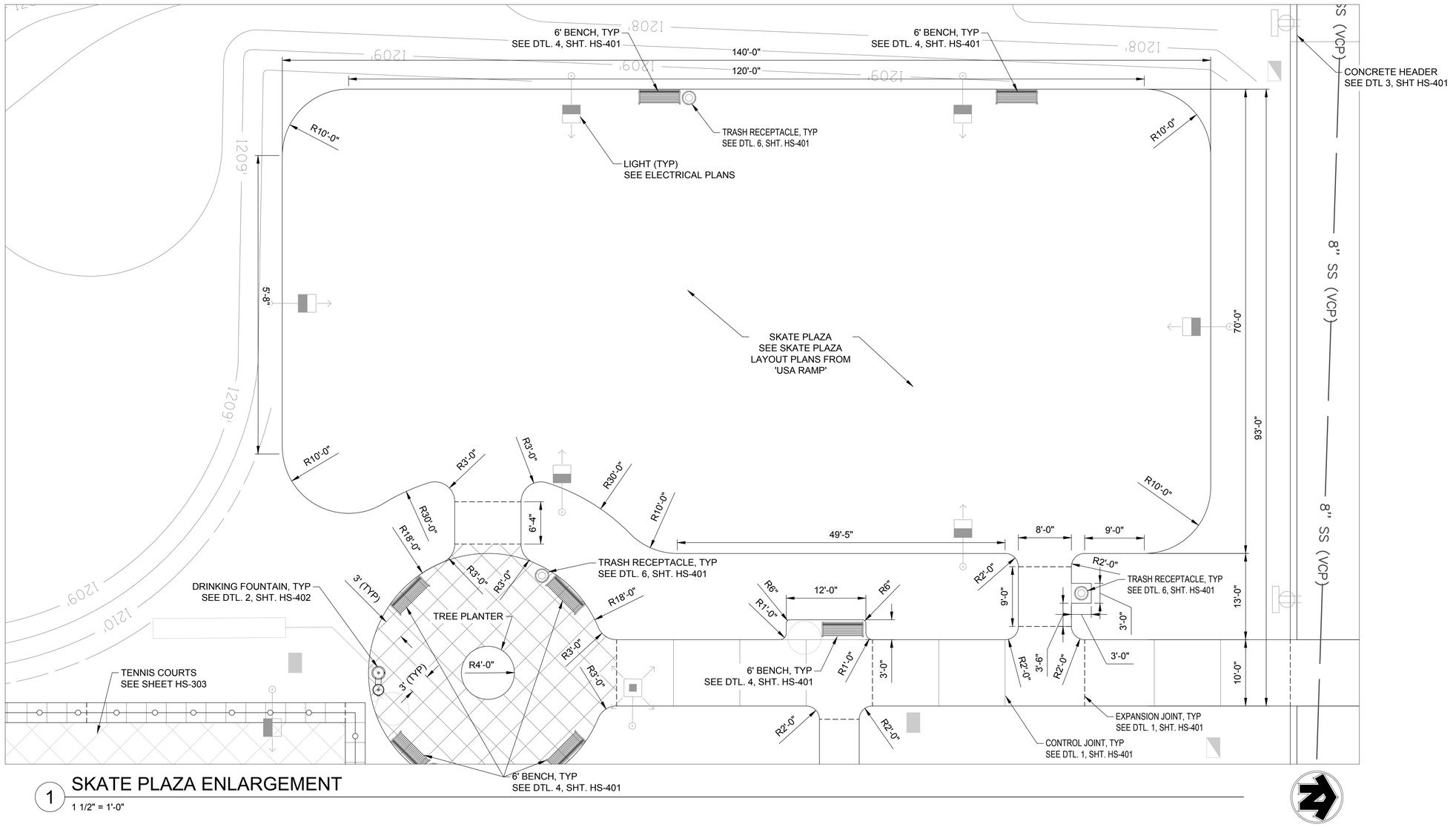

1 SKATE PLAZA ENLARGEMENT

1 1/2" = 1'-0"

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Sheet
HS-302
42 OF 148

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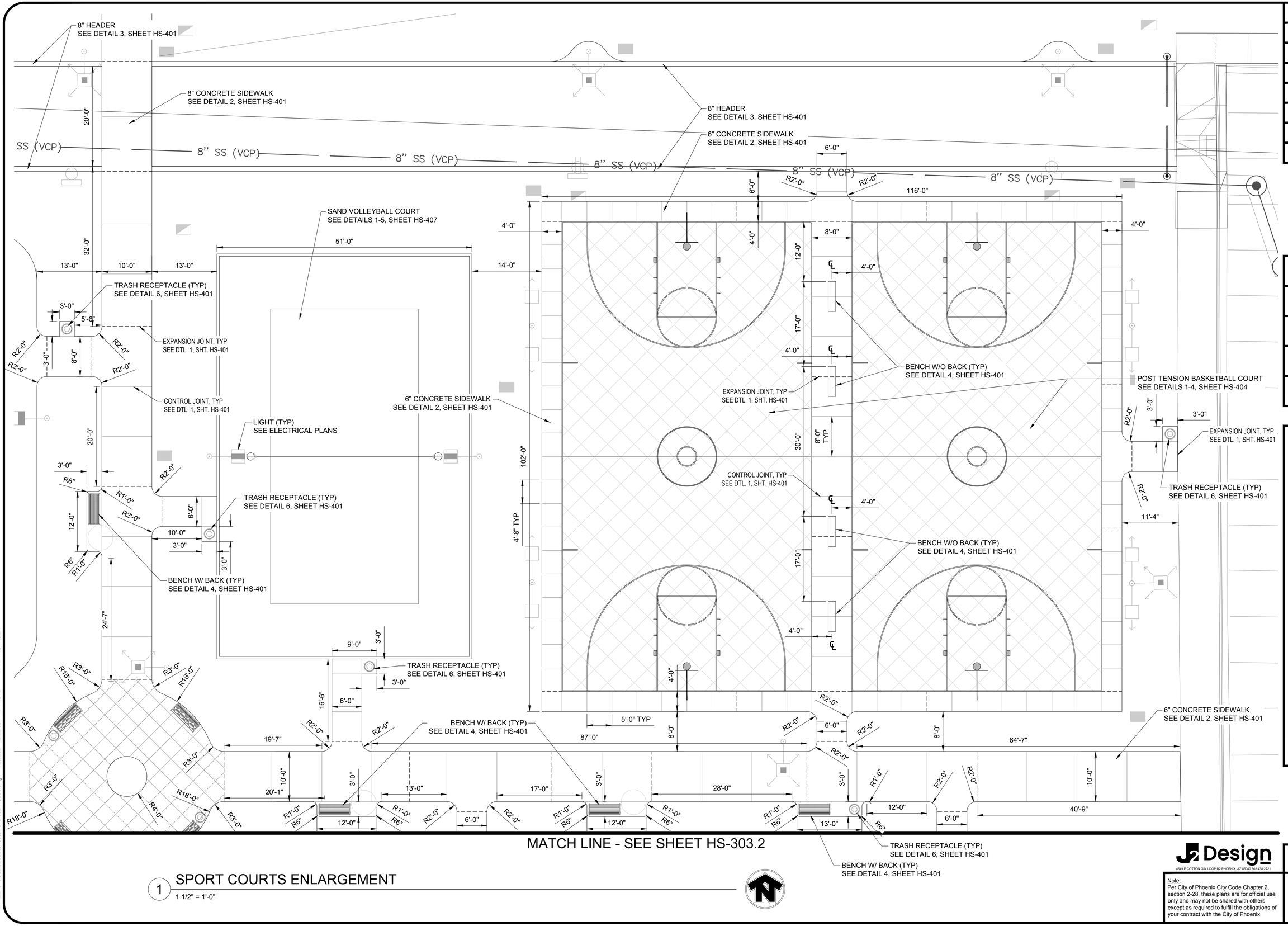

MATCH LINE - SEE SHEET HS-303.2

1 SPORT COURTS ENLARGEMENT

1 1/2" = 1'-0"

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Sheet
HS-303
43 OF 148

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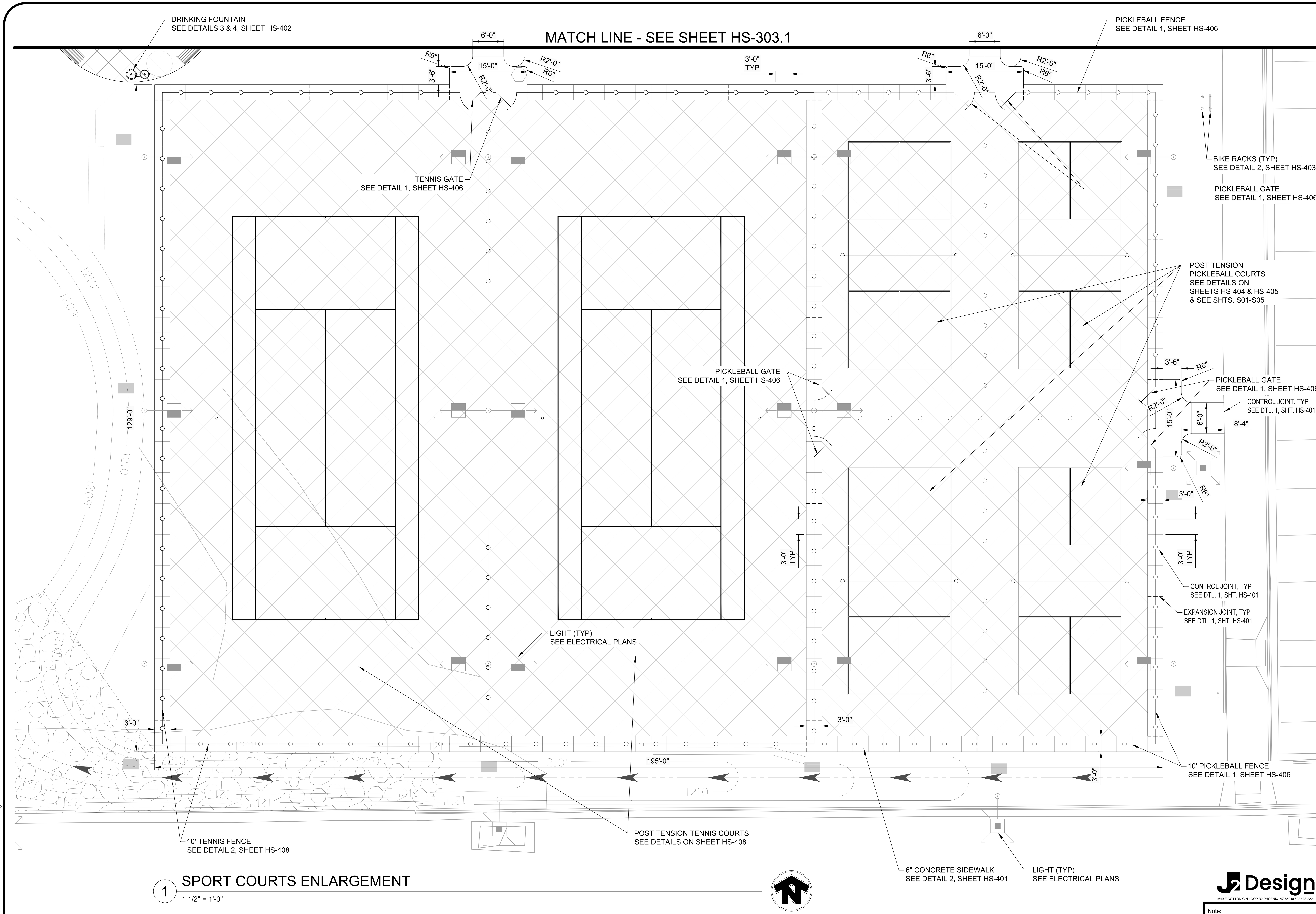

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J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
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KIVA # ____________
SDEV # ____________

Sheet
HS-304

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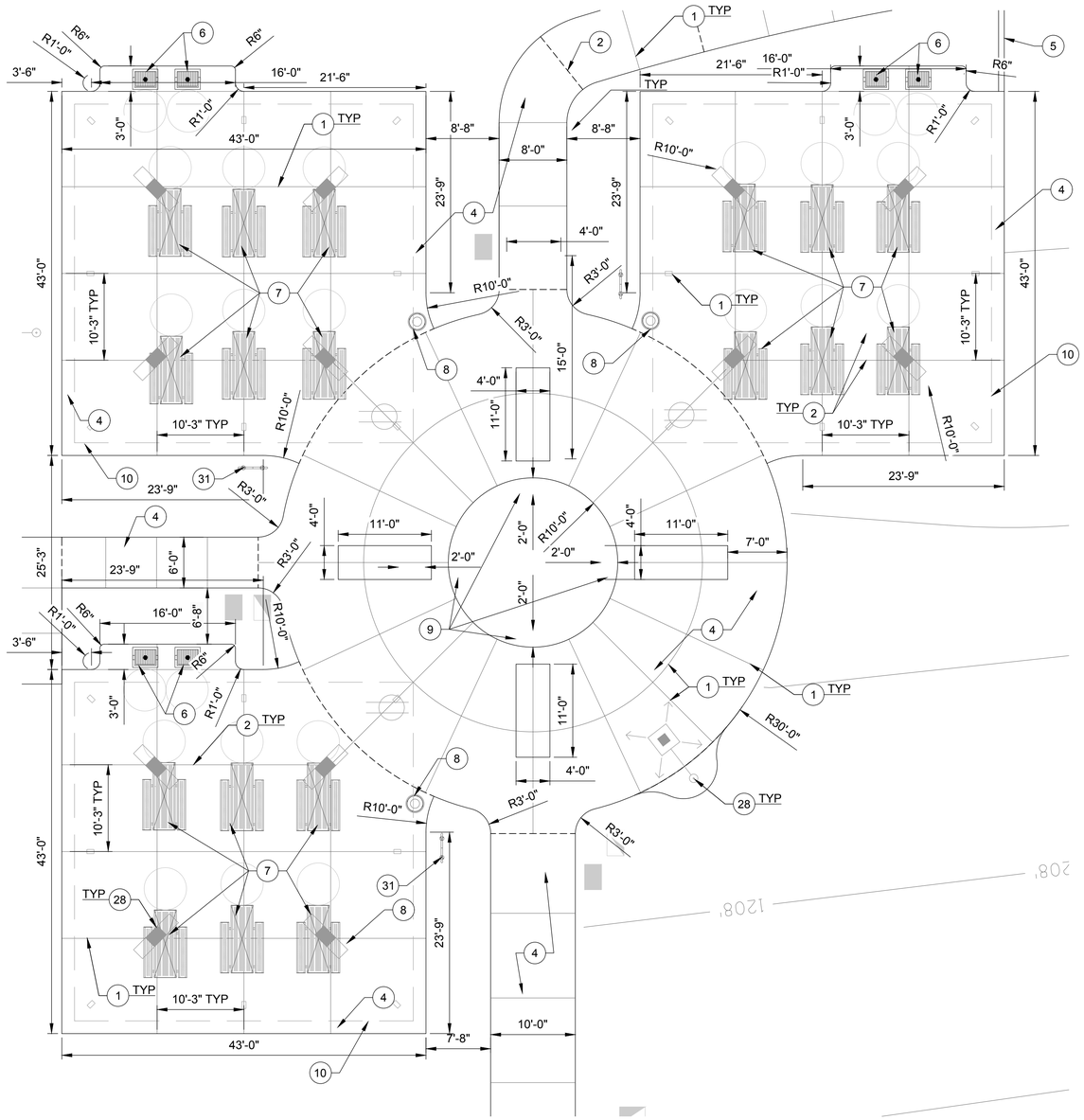

1 COMMUNITY PLAZA / RAMADAS ENLARGEMENT

1 1/2" = 1'-0

HARDSCAPE KEYNOTES

NO.	DESCRIPTION	DETAIL
HARDSCAPE IMPROVEMENTS		
1	CONTROL JOINT - TOOLED, TYP	DTL. 1, SHT. HS-401
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4	8" CONCRETE PAVING, TYP	DTL. 2, SHT. HS-401
5	CONCRETE HEADER, TYP	DTL. 3, SHT. HS-401
6	BBQ GRILL, TYP	DTL. 1, SHT. HS-402
7	8' PICNIC TABLE ADA, TYP	DTL. 5, SHT. HS-401
8	TRASH RECEPTACLE, TYP	DTL. 6, SHT. HS-401
9	CONCRETE TABLES, TYP	DTL. 2, SHT. HS-410
10	RAMADA (LARGE)	SEE ENLARGEMENT SHT. HS-305
11	SAND VOLLEYBALL COURT	SEE ENLARGEMNT SHT. HS-303 & SHT. HS-407
12	BASKETBALL COURT	SEE ENLARGMENT SHT. HS-303 & SHT. HS-404
13	TENNIS COURT	SEE ENLARGMENT SHT. HS-304 & SHT. HS-408
14	PICKLEBALL COURT	SHT. HS-303, DTL. 1, SHT. HS-405, SHT. HS-406
15	FITNESS EQUIPMENT, TYP	SEE ENLARGEMENT SHT. HS-301
16	COMPACTED DECOMPOSED GRANITE PATH, TYP	DTL. 6, SHT. LS-401
17	DRIVEWAY	SEE CIVIL PLANS
18	MOUNTABLE CURB, TYP	SEE CIVIL PLANS
19	DRINKING FOUNTAIN W/ LEACH FIELD	DTL. 2, SHT. HS-402
19B	DRINKING FOUNTAIN WATER CONENCTION	SEE CIVIL UTILITY PLANS FOR CONTINUATION
20	TUBE STEEL FENCING, TYP	DTL. 2, SHT. HS-403
21	SKATE PARK	SEE ENLARGEMENT SHT. HS-302
22	SWING GATE, TYP	DTL. 1, SHT. HS-410
23	TRASH/RECYCLE AREA	-
24	DISC GOLF BASKET, TYP	DTL. 2, SHT. HS-411
25	DISC GOLF CONCRETE PAD, TYP	DTL. 1, SHT. HS-411
26	EXISTING SPEED BUMP	-
27	6' SURFACE MOUNT BENCH, W/ BACK, TYP	DTL. 4, SHT. HS-401
28	LIGHT, TYP	SEE ELECTRICAL PLANS
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34	BOCCE BALL COURT, TYP	SEE ENLARGEMENT SHT. HS-307
35	PET WASTE STATION, TYP	DTL. 4, SHT. HS-403
36	FOOD TRUCK ENTRANCE COMPACTED AB	DTL. 6, SHT. LS-401
37	EMERGENCY TENNIS COURT EXIT, TYP	DTL. ON SHT. HS-408

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: MN,TB

Drawn By: J2CAD

Checked By: JB

Date: 4/19/2024

Project #: 22.1618.002

Title: **HARDSCAPE PLAN ENLARGEMENT**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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Sheet
HS-305
45 OF 148

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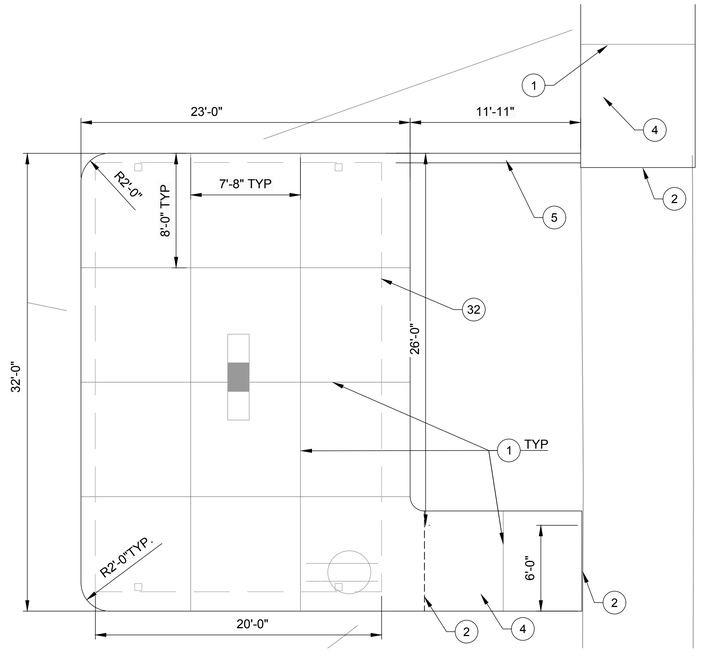

1 STAGE RAMADA

1" = 5'

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J2 Design
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Sheet
HS-306
46 OF 148

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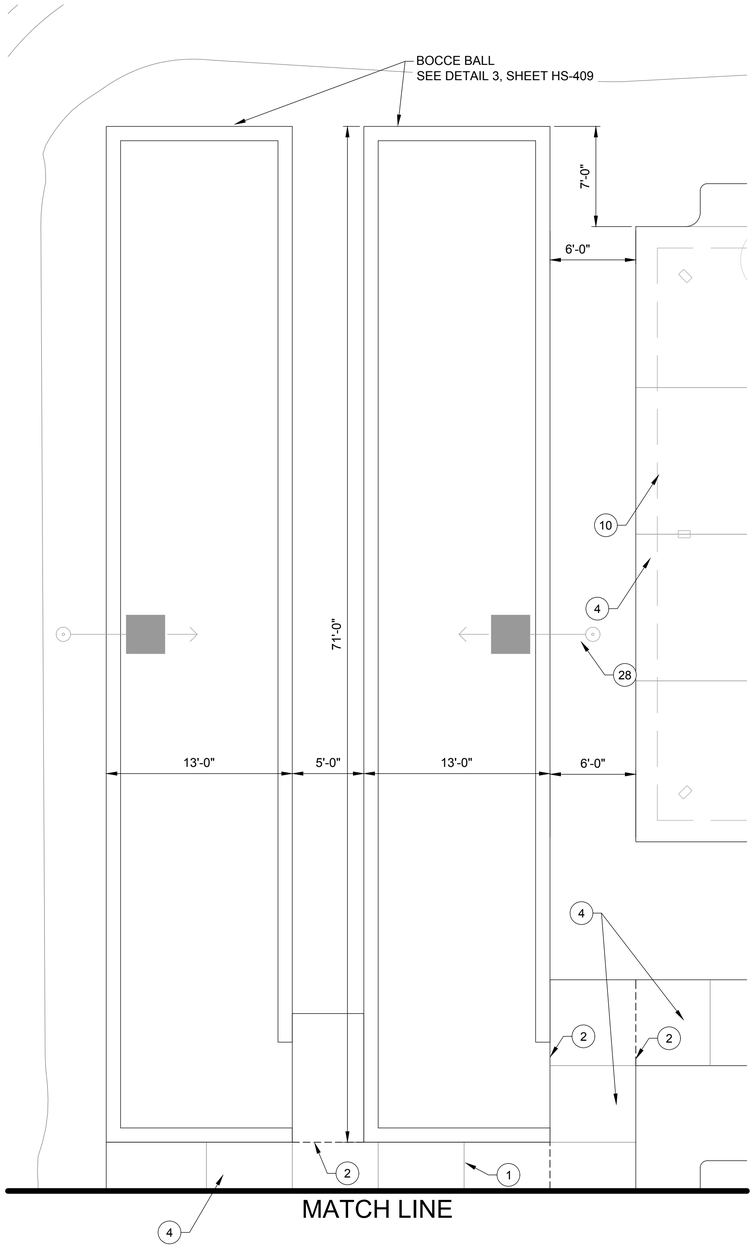

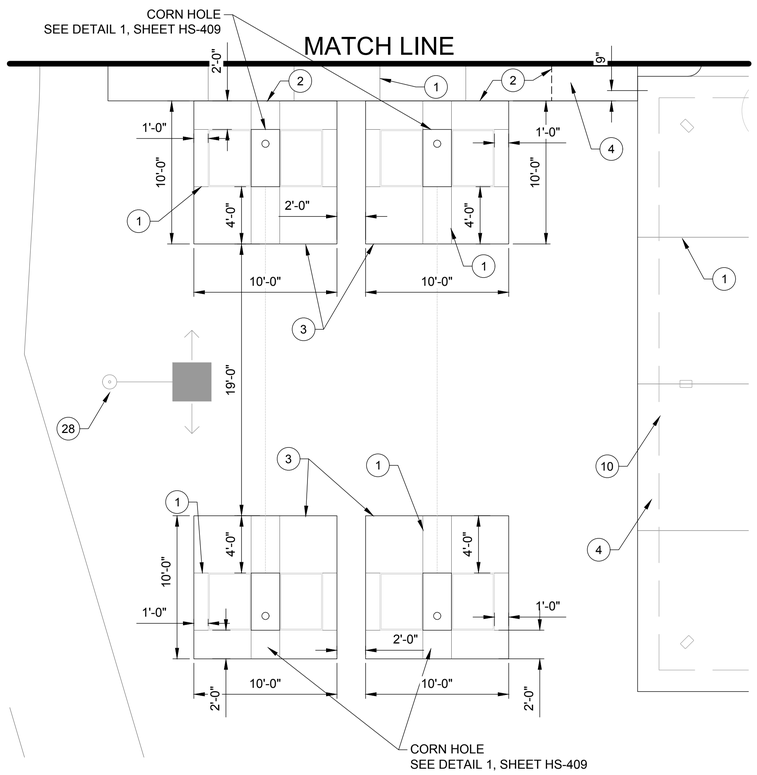

1 BOCCE BALL & CORN HOLE LAYOUT

1" = 5'

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Sheet
HS-307
47 OF 148

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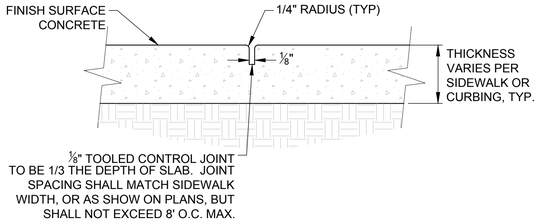
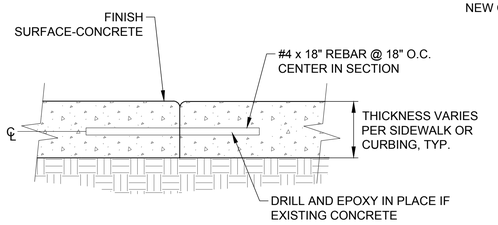


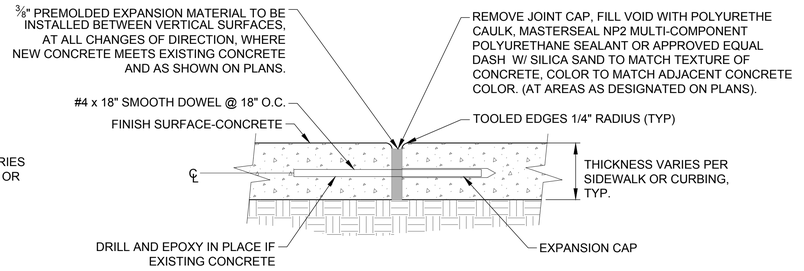
NOTE:
ALL CURBING SHALL NOT EXCEED 5'-0" O.C. MAX FOR CONTROL JOINTS.

1a TOOLED CONTROL JOINT



NOTE:
JOINTS TO OCCUR @ ALL CONSTRUCTION OR COLD JOINTS.

1b DOWELED CONSTRUCTION JOINT

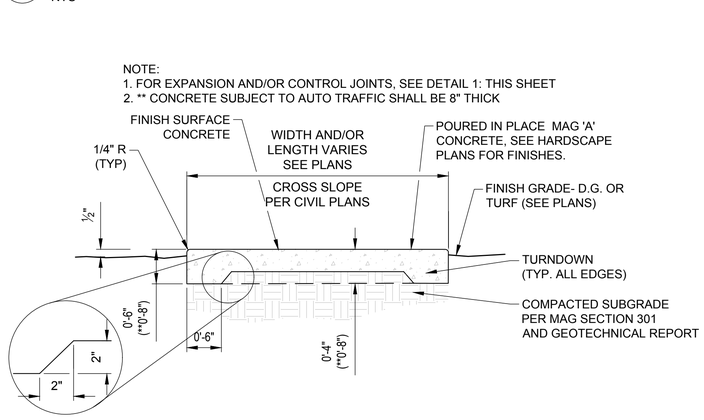


NOTE:
JOINTS ALONG CURBING SHALL ALIGN WITH JOINTS IN ADJACENT SIDEWALK

1c DOWELED EXPANSION JOINT

1 EXPANSION / CONTROL JOINTS

NTS



2 CONCRETE PAVING

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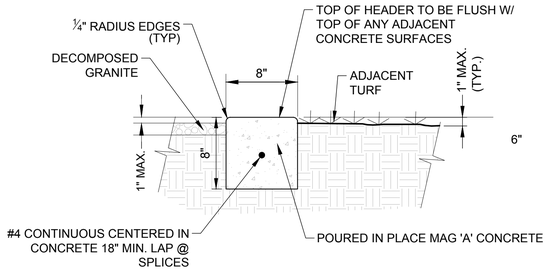
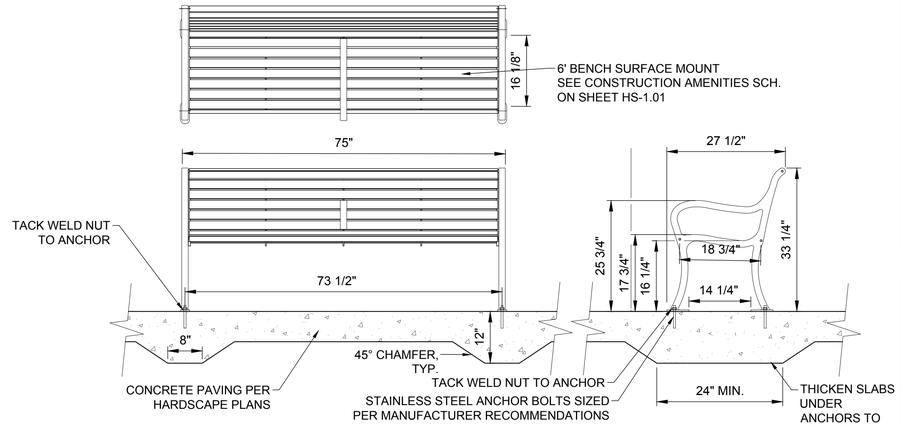


HEADER BETWEEN D.G. & TURF

NOTES:
1. FOR EXPANSION JOINTS AND/OR CONTROL JOINTS, SEE DTL 1, THIS SHT.
2. TOOLED CONTROL JOINTS @ 5'-0" O.C. MAX

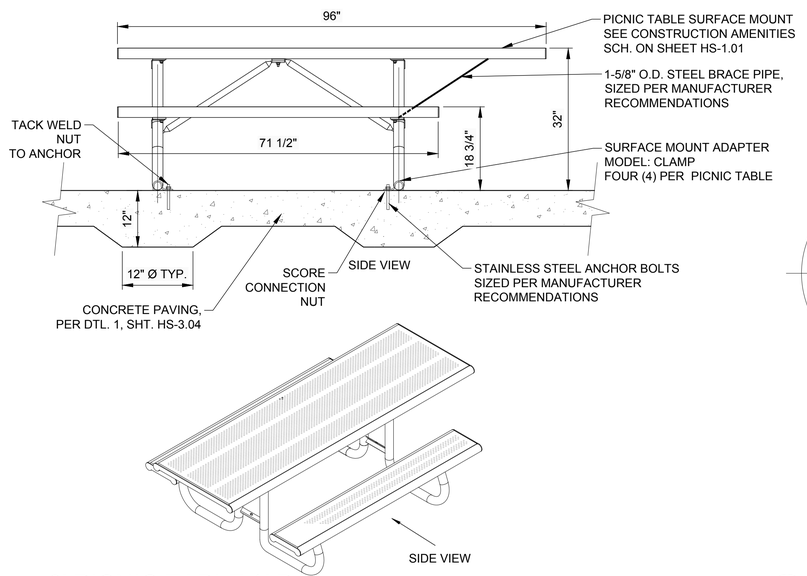
3 8" CONCRETE HEADER

NTS



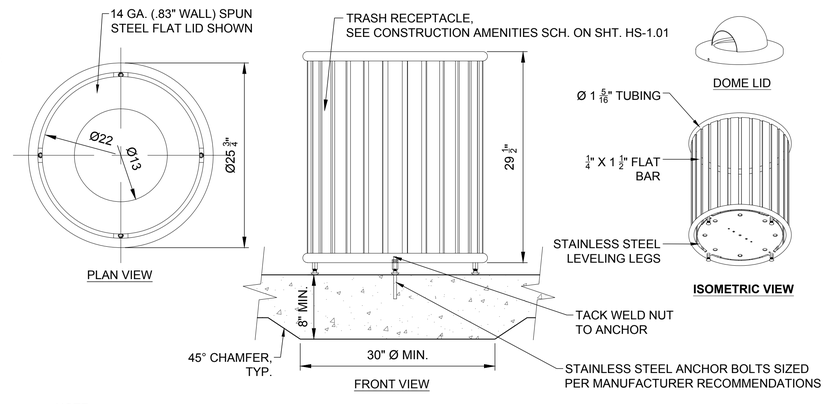
4 6' SURFACE MOUNT BENCH

NTS



5 8' PICNIC TABLE (ADA)

NTS



NOTE:
1. TRASH RECEPTACLE TO BE SURFACE MOUNTED THROUGH BOTTOM ANCHOR HOLE DIRECTLY TO THE CONCRETE BELOW.
2. LIDS ARE ATTACHED WITH STEEL VINYL COATED CABLE. PLASTIC LINER INCLUDED.

6 SURFACE MOUNT TRASH RECEPTACLE

NTS

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HS-401
48 OF 148

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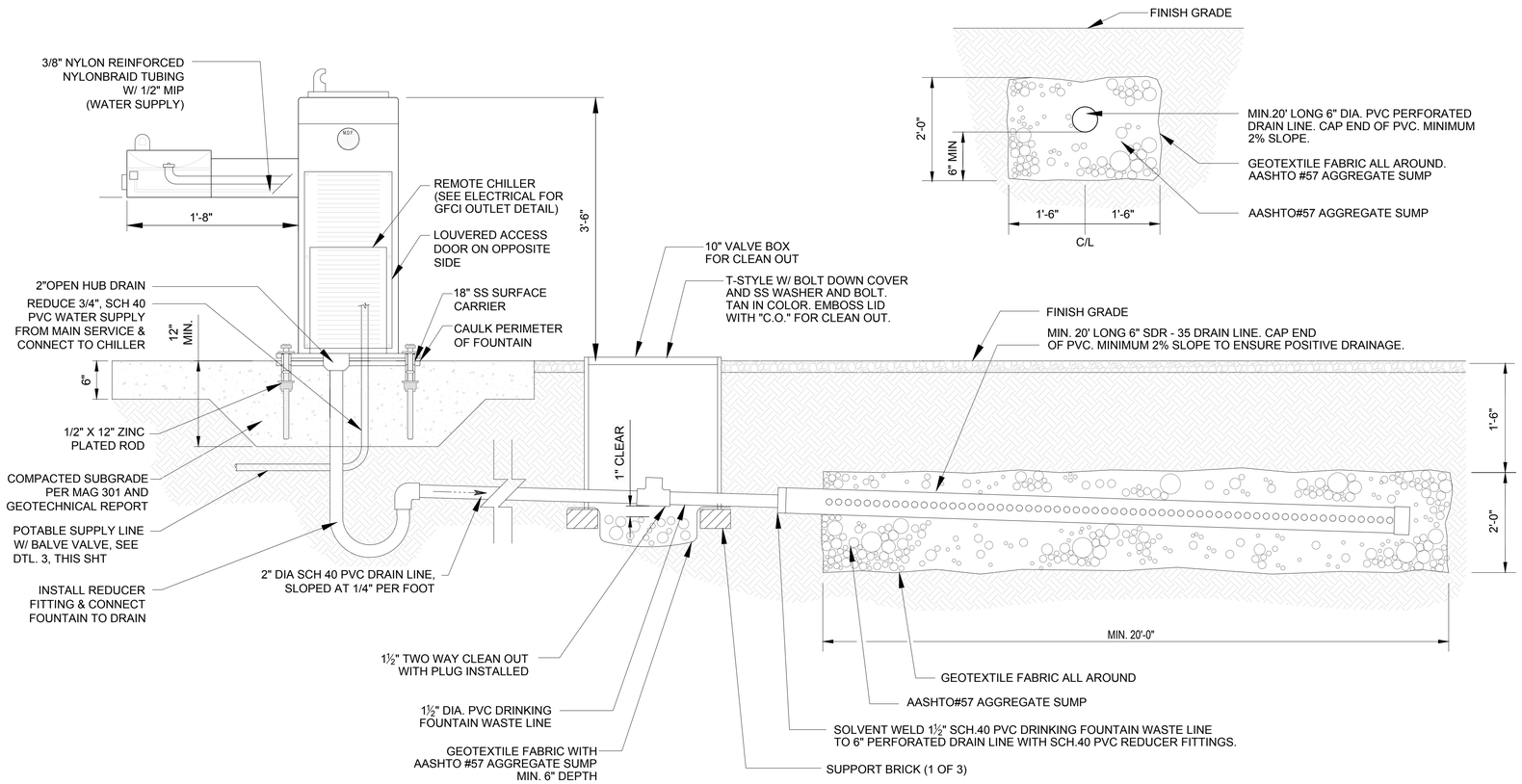
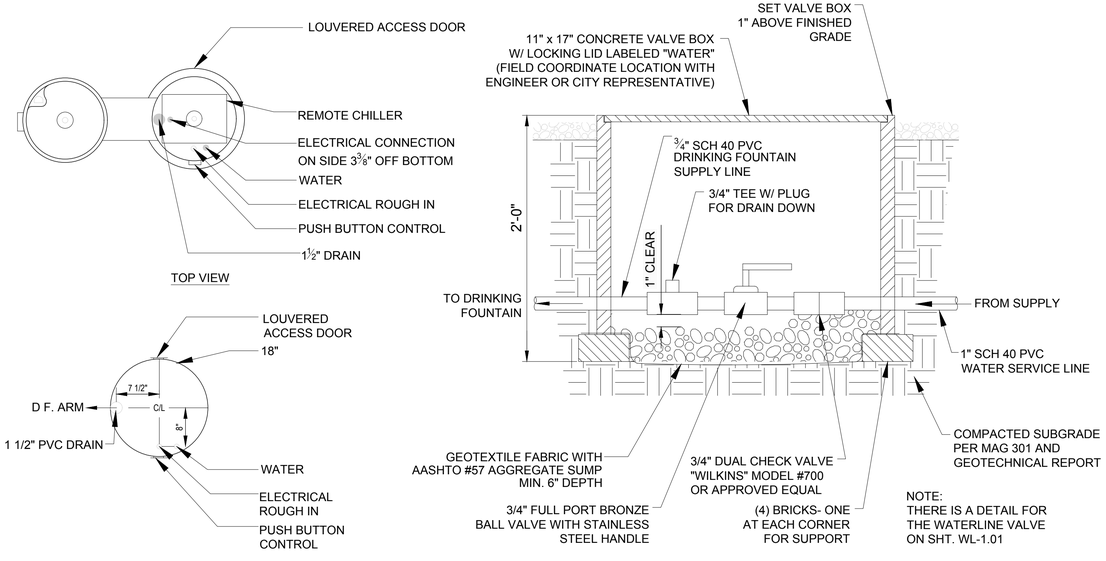


1 DRINKING FOUNTAIN LEACH FIELD

NTS

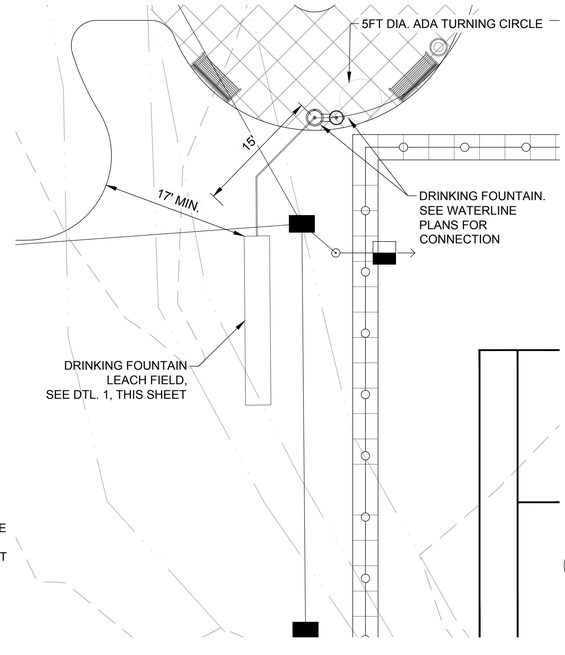


2 DRINKING FOUNTAIN

NTS

3 DRINKING FOUNTAIN VALVE BOX

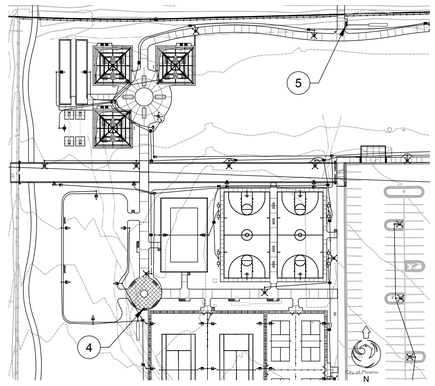
NTS

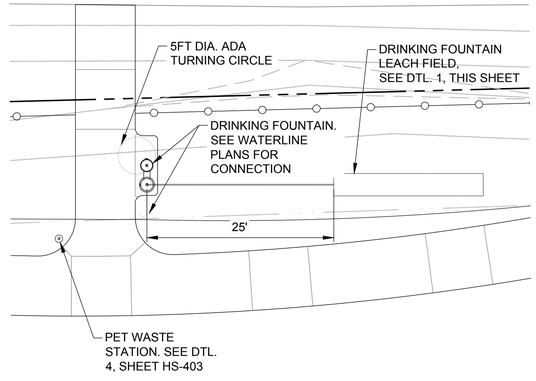


4 DRINKING FOUNTAIN (SKATE PARK LOCATION)

NTS

LOCATION MAP





5 DRINKING FOUNTAIN (RAMADAS LOCATION)

NTS

GENERAL NOTES

1. MOST DEPENDABLE FOUNTAINS MODEL 440-18 SMSS INSTALLATION SHALL INCLUDE ISOLATION VALVE, CHILLER, JUG FILLER, RECESSED HOSE BIBB & LOCK DOOR, AND STAINLESS STEEL SURFACE MOUNT OPTIONS. **CONTRACTOR TO USE ALL METAL INTERIOR PARTS, NO PLASTIC**.
2. EXTEND SERVICES TO FOUNTAIN LOCATION AND INSTALL CONCRETE PAD WITH MOUNTING RING PRIOR TO DELIVERING FOUNTAIN TO SITE.
3. ADJUST LAYOUT OF PIPES AS NECESSARY TO ACCOMMODATE INSTALLATION OF DRINKING FOUNTAIN.
4. WATER VALVE BOX AND SUMP ARE SHOWN ONLY IN RECOMMENDED LOCATION IN THIS DETAIL, SEE PLAN VIEWS FOR ACTUAL LOCATION. CONTRACTOR SHALL VERIFY LOCATION WITH ENGINEER OR CITY REPRESENTATIVE PRIOR TO INSTALLATION.
5. INSTALL 1/2" THICK EXPANSION JOINT MATERIAL AT ALL LOCATIONS WHERE NEW CONCRETE PAD IS ADJACENT TO EXISTING CONCRETE PATHWAYS OR PADS.
6. COORDINATE ADJACENT CONCRETE PLACEMENT TO ACCOMMODATE ADA ACCESS. FOUNTAIN SHALL NOT PROTRUDE INTO PEDESTRIAN WALKWAYS. STAKE LOCATIONS AND OBTAIN APPROVAL PRIOR TO BEGINNING CONSTRUCTION OF FOUNTAIN & ADJACENT CONCRETE PADS.
7. VERIFY EXISTING WATER PRESSURE AT DRINKING FOUNTAIN. PROVIDE PRESSURE REGULATOR IF EX. PRESSURE EXCEEDS 45 PSI. PRESSURE TEST RESULTS SHALL BE PROVIDED TO CITY OF PHOENIX IN WRITING.
8. PROVIDE CLEAN OUT FOR DRAIN BETWEEN FOUNTAIN AND TRAP.
9. HOSE BIB SHALL BE LOOSE KEYED, BRASS UNIT. INSTALL BRASS ATMOSPHERIC VACUUM BREAKER. W/ HOSE BIB LOCK OUT DEVICE, PIVOTAL SECURITY DEVICES, MDL. HBL-281.
10. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE CITY OF PHOENIX PRIOR TO INSTALLATION.
11. CONTRACTOR SHALL REPAIR UTILITY AND SPRINKLER LINES IF DAMAGED DURING TRENCHING & PIPING INSTALLATIONS. TRENCHES SHALL REMAIN OPEN AND REPAIRS APPROVED BY CITY STAFF PRIOR TO BACKFILLING.
12. DRINKING FOUNTAIN TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
13. REMOVE VALVE KEY AND RETURN TO CITY PARKS REPRESENTATIVE.
14. ALL FITTINGS SHALL BE LEAD FREE.
15. ALL GEOTEXTILE FABRIC SHALL BE NON-WOVEN CLASS 'A' PER MAG STD. SPEC 796.2.2

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HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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Sheet
HS-402
49 OF 148

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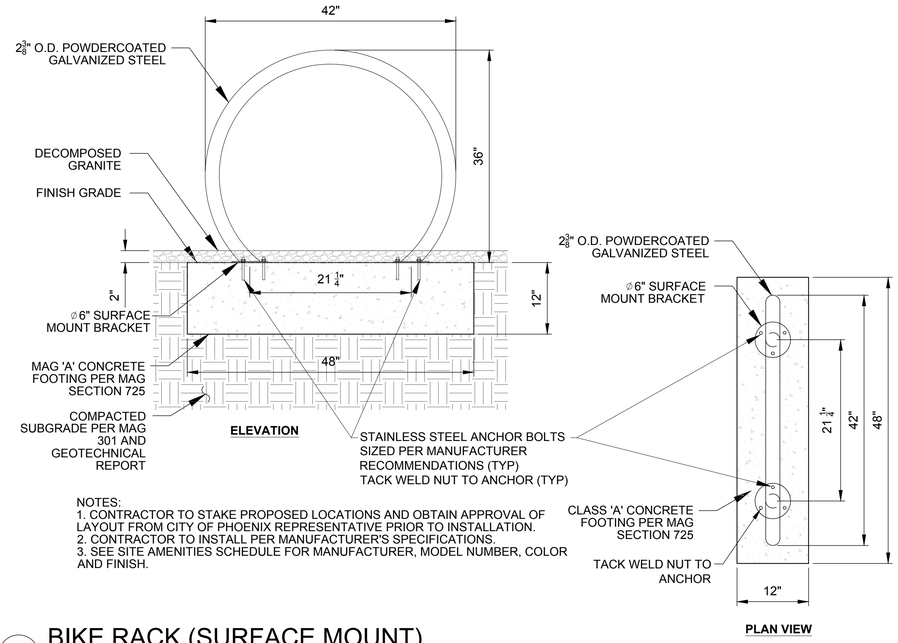
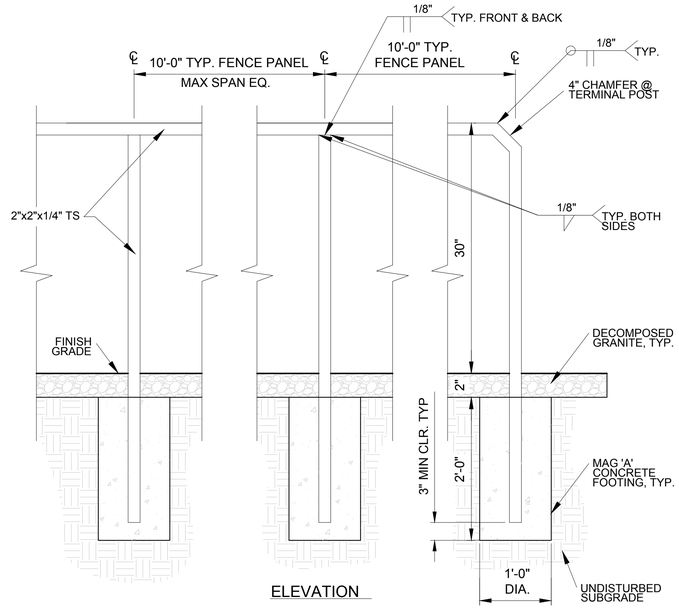


NOTES:
1. CONTRACTOR TO STAKE PROPOSED LOCATIONS AND OBTAIN APPROVAL OF LAYOUT FROM CITY OF PHOENIX REPRESENTATIVE PRIOR TO INSTALLATION.
2. CONTRACTOR TO INSTALL PER MANUFACTURER'S SPECIFICATIONS.
3. SEE SITE AMENITIES SCHEDULE FOR MANUFACTURER, MODEL NUMBER, COLOR AND FINISH.

1 BIKE RACK (SURFACE MOUNT)

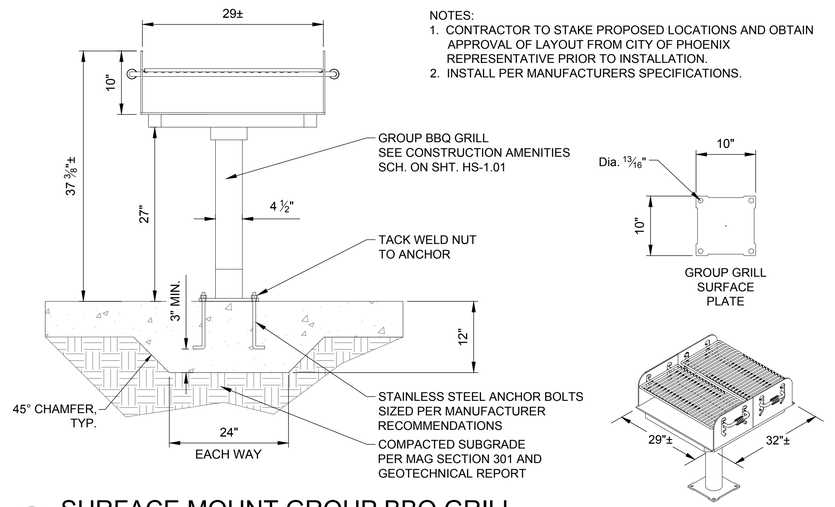
NTS



NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUBMITTALS OF ALL HARDWARE, AND STEEL MEMBERS TO RESIDENT ENGINEER & CITY OF PHOENIX REPRESENTATIVE FOR REVIEW & APPROVAL PRIOR TO FABRICATION.
2. ALL METAL MEMBERS & WELDS SHALL BE GROUND SMOOTH/ ROUNDED TO BE FREE OF ANY SHARP EDGES, CORNERS, AND BURRS.
3. ALL WELDS SHALL CONFORM TO AWS STANDARDS. ALL FIELD WELDS SHALL BE TESTED BY NON-DESTRUCTIVE METHOD.
4. ALL STEEL SHALL BE LEFT TO NATURALLY PATINA.
5. ALL SUBGRADE SHALL BE COMPACTED PER THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.

2 TUBE STEEL PERIMETER FENCE

NTS

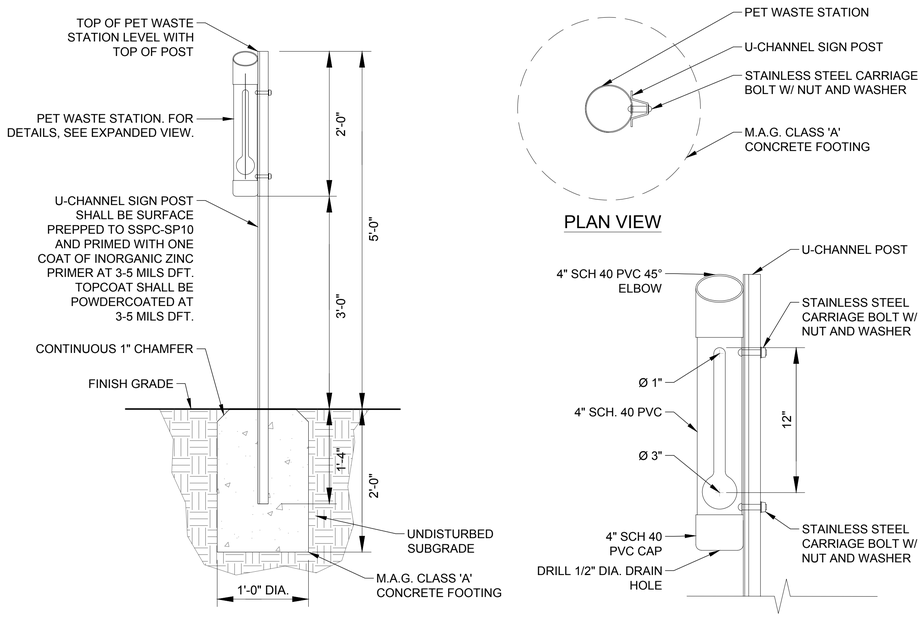


NOTES:
1. CONTRACTOR TO STAKE PROPOSED LOCATIONS AND OBTAIN APPROVAL OF LAYOUT FROM CITY OF PHOENIX REPRESENTATIVE PRIOR TO INSTALLATION.
2. INSTALL PER MANUFACTURERS SPECIFICATIONS.

3 SURFACE MOUNT GROUP BBQ GRILL

NTS

NOTES:
1. ROUND ALL POST CORNERS & EDGES 1/4" RADIUS.



NOTES:
1. CONTRACTOR SHALL STAKE PROPOSED LOCATIONS & OBTAIN APPROVAL OF LAYOUT FROM COP REPRESENTATIVE PRIOR TO INSTALL.
2. PVC TO BE PRIMED & PAINTED POST TO BE PRIMED & POWDERCOATED. PROVIDE SAMPLE FOR REVIEW AND APPROVAL.
3. ROUND ALL POST CORNERS & EDGES 1/4" RADIUS.

4 PET WASTE STATION

NTS

Revisions	Date

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Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: HARDSCAPE DETAILS
1346 E SOUTH MOUNTAIN AVE RD
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CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602 438 2221

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Sheet
HS-403
50 OF 148

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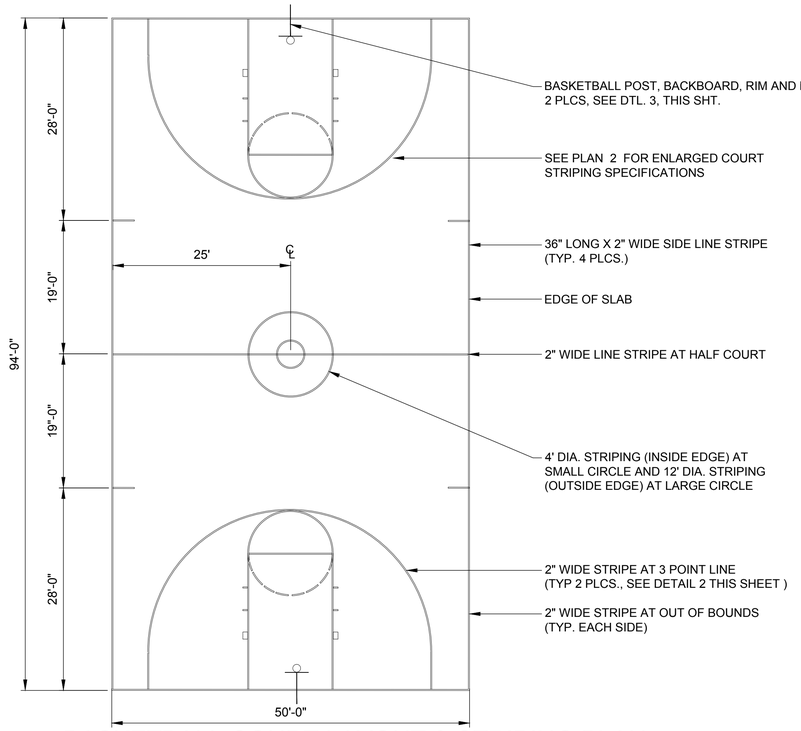
STRIPING NOTES:

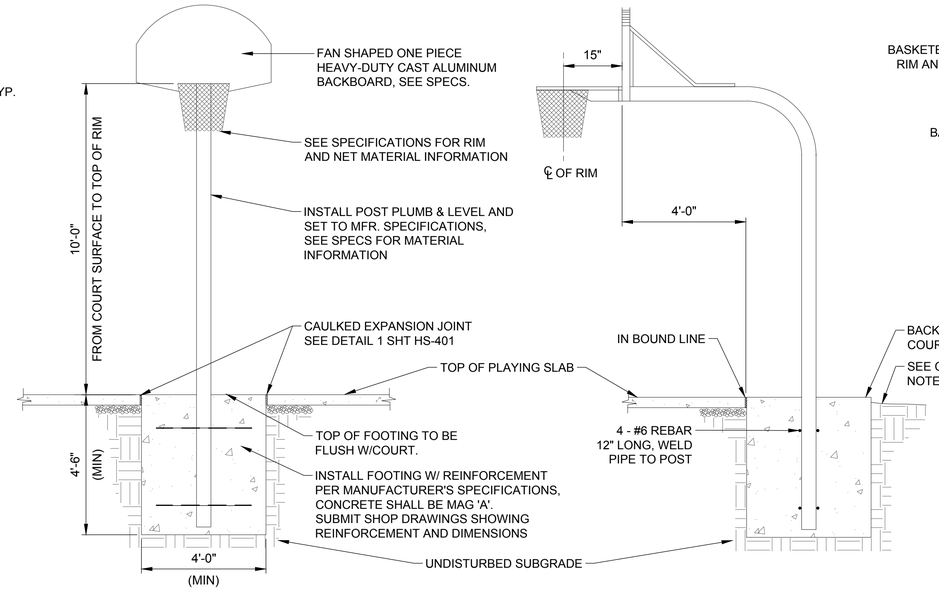
1. THE COLOR OF THE BOUNDING LINES, LANE SPACE MARKS AND NEUTRAL ZONE MARKS SHALL BE WHITE.
2. ALL LINES SHALL BE 2" WIDE. (NEUTRAL ZONE EXCLUDED).
3. ALL DIMENSIONS ARE TO INSIDE EDGE OF LINES EXCEPT AS NOTED.
4. PROVIDE PAINT SAMPLES & SPEC. SHEETS FOR ALL PRODUCTS TO THE CITY OF PHOENIX PROJECT MANAGER FOR APPROVAL PRIOR TO APPLICATION.



1 BASKETBALL COURT LAYOUT & STRIPING PLAN

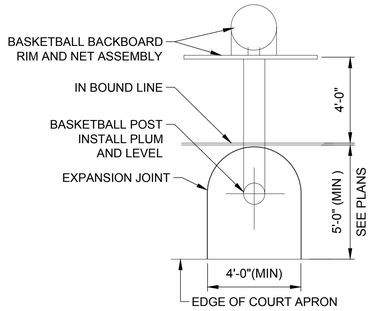
NTS

NOTES:
1. WHEN BOLTING BACKBOARD TO SUPPORT POST, TACK WELD WASHERS TO SUPPORT POST & BACKBOARD BRACE. TACK WELD NUT TO THE WASHERS.
2. POSTS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, MATERIALS AND INSTALLATION INDICATED ON DRAWING ARE CONSIDERED MINIMUM REQUIREMENTS.



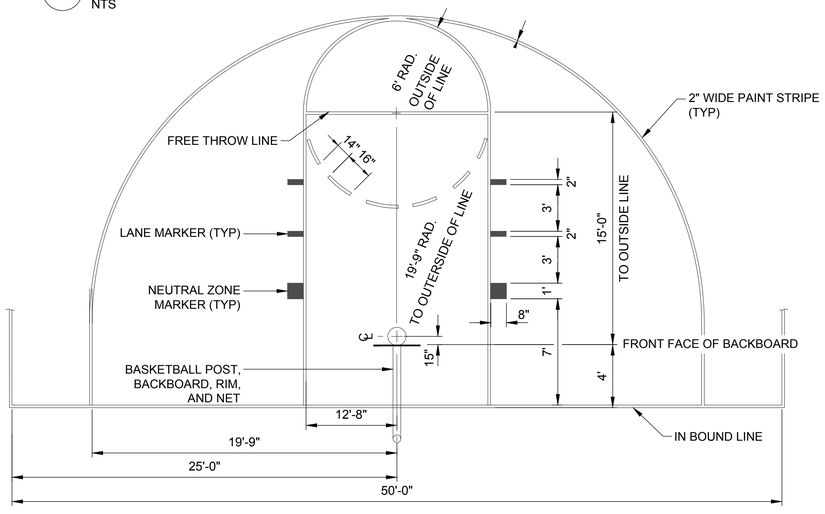
3 BACKBOARD & COLUMN SUPPORT

NTS



FOOTING PLAN VIEW

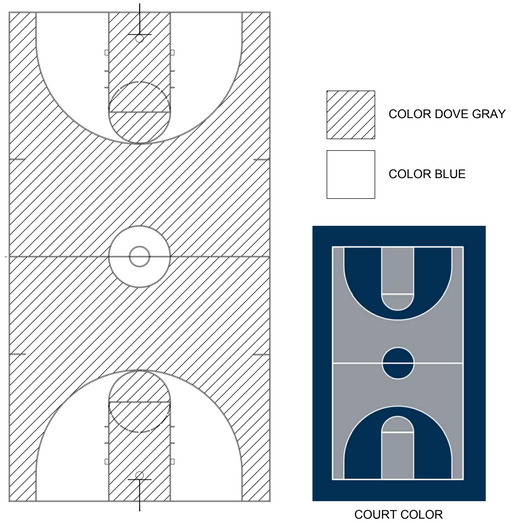
NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL. BASKETBALL COURT SLAB & ADJACENT CONCRETE SHALL BE JOINED TO PREVENT DIFFERENTIAL SETTLING, METHOD SHALL BE INCLUDED IN SHOP DRAWINGS FOR REVIEW AND APPROVAL.
2. PROVIDE EXPANSION JOINT AROUND ENTIRE PERIMETER BETWEEN POST TENSION SLAB AND SURROUNDING CONCRETE PER DETAIL 1, SHT. HS-401. EXPANSION JOINT SHALL BE CAULKED.

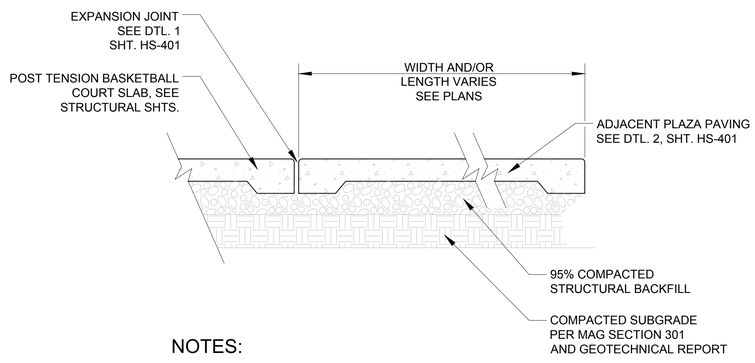


2 ENLARGED COURT STRIPING PLAN

NTS

ACRYLIC OVERLAY SHALL BE IN THE COLORS INDICATED ON THE PLANS, OR CITY APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURE SPECIFICATIONS.





NOTES:

1. CONTRACTOR SHALL MATCH SUBGRADE PREPERATION UNDER POST TENSION SLAB TO PLAZA PAVING OF SURROUNDING CONCRETE

4 BASKETBALL COURT/PLAZA PAVING INTERFACE

NTS

UNDER DEVELOPMENT

CONSTRUCTION NOTES:

1. CONTRACTOR TO SUBMIT CONCRETE MIX DESIGN AND PLAN FOR INSTALLATION (SEE SPEC.) TO THE CITY OF PHOENIX FOR APPROVAL. WITH THE INSTALLATION PLAN THE CONTRACTOR SHALL ASSURE ADEQUATE MANPOWER IS AVAILABLE TO SUPPORT THE CONCRETE PLACEMENT SCHEDULE.
2. SEE STRUCTURAL PLANS FOR POST-TENSION SLAB REQUIREMENTS.
3. CONCRETE SURFACE SHALL HAVE A MEDIUM BROOM FINISH (STIFF BRISTLE BRUSH), CONSISTENT THROUGHOUT COURT. PROVIDE 5' X 5' X 6" SAMPLE PANEL(S) FOR CITY REVIEW PRIOR TO CONSTRUCTING COURT. SAMPLE SHALL NOT BE REMOVED PRIOR TO ACCEPTANCE OF ENTIRE INSTALLATION BY CITY OF PHOENIX. BROOM FINISH SHALL BE AS RECOMMENDED BY ACRYLIC OVERLAY MANUFACTURER SPECIFICATIONS TO ENSURE PROPER ADHESION. ALL COURTS SHALL RECEIVE AN EPOXY ACRYLIC OVERLAY OF A MINIMUM OF TWO COATS.
4. FINISHED GRADE ADJACENT TO COURT SHALL BE 1" BELOW TOP OF COURT SURFACE AND SHALL BE SLOPED 10 TO 1 AWAY FROM COURT.
5. CONTRACTOR SHALL FIELD MARK BASKETBALL STRIPING AND OBTAIN COP APPROVAL PRIOR TO PAINTING.

Revisions	Date

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Drawn By: J2CAD
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Sheet
HS-404
51 OF 148

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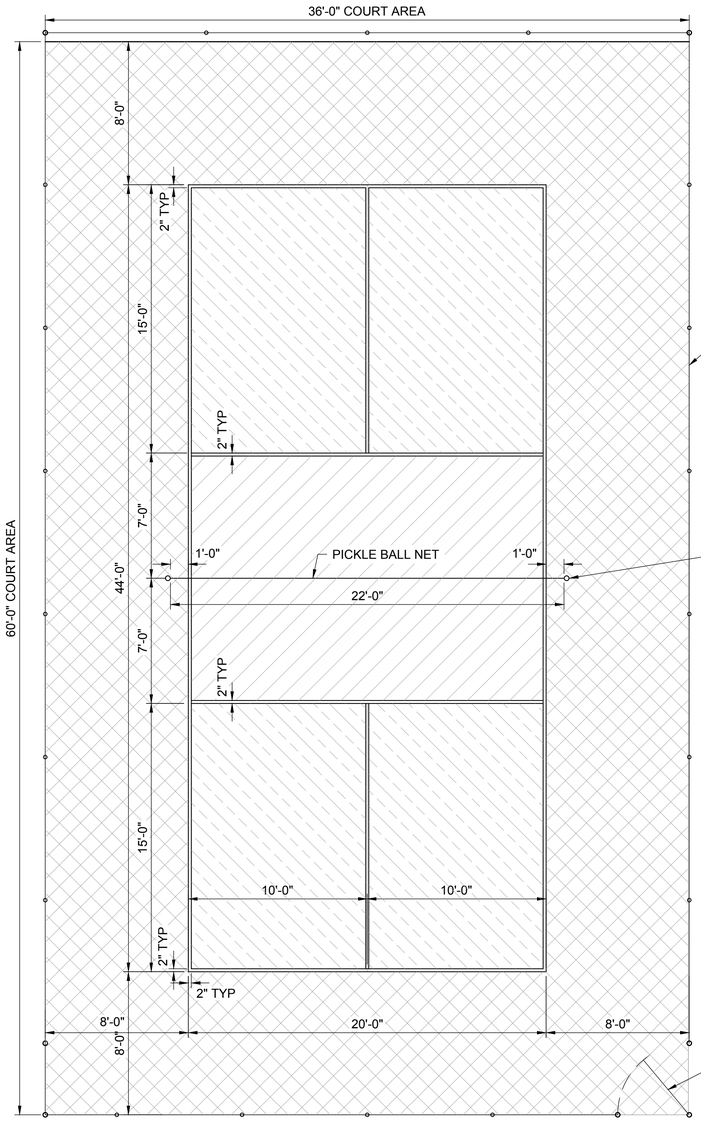


NOTE:
SEE SHEET HS-303 FOR ENLARGEMENT FOR LAYOUT, ADDITIONAL DIMENSIONS AND NOTES

CHAINLINK AND GATES SURROUNDING THE COURT - REFER TO CHAINLINK FENCING PLANS, SHEET HS-406

PICKLE BALL POST AND NET - REFER TO DETAIL 3, SHEET HS-406 CONTRACTOR TO INSTALL PER MANUFACTURERS SPECIFICATIONS.

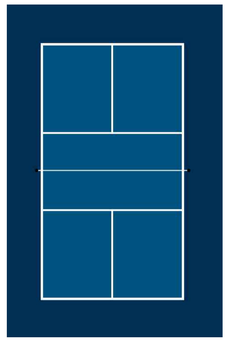
PICKLE BALL COURT COLOR SCHEME:
1. LINES - WHITE (2" WIDE) - USE PLEXICOLOR LINE PAINT AVAILABLE FROM PLEXIPAVE (800-225-1141)
2. NON-VOLLEY ZONE - LIGHT BLUE
3. COURT - LIGHT BLUE
4. EXTENDED COURT - BLUE
5. PLEXIPAVE PRODUCTS ARE AVAILABLE FROM PLEXIPAVE (800-225-1141). INSTALL ALL PLEXIPAVE PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.

LIGHT BLUE

LIGHT BLUE

BLUE

4'-0" PICKLEBALL GATE,SEE SHEETS HS-406 FOR DETAIL.



COLOR EXAMPLE

GENERAL NOTES:
1. PICKLEBALL COURT COURT CONSTRUCTION SHALL CONFORM TO ALL LOCAL CODES AND CONSTRUCTION PRACTICES.
2. GRADE SURFACE AREA WITH 24" SHELF BEYOND COURT (ALL SIDES) WITH COMPACTED SUBGRADE AND SLOPE TO MATCH COURT SURFACE. WATER SETTLE AND COMPACT TO 95%.
3. PROVIDE UNIFORM 1% SLOPE AWAY FROM COURT SURFACE.
4. CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE OF ANY DEVIATIONS OR SITE SPECIFIC CONSIDERATIONS THAT MAY ALTER ORIGINAL DESIGN INTENT. CONTRACTOR ASSUMES LIABILITY FOR ANY DISCREPANCIES BEYOND THESE DOCUMENTS THAT ARE NOT RECEIVED PRIOR TO CONSTRUCTION.
5. CONCRETE COLOR TO BE NATURAL GRAY AND PROVIDE MEDIUM BROOM FINISH TO ENTIRE COURT.
6. FILL ALL EXPANSION JOINTS WITH APPROVED ELASTIC CAULKING TO ALLOW FOR MOVEMENT. FINISH WITH SURFACE PAINT ONLY.
7. ACCURATELY LOCATE ALL PLAYING LINES AND STRIPES FOR A PICKLE BALL COURT WITH PLEXICOLOR LINE WHITE PAINT, HAND BRUSHED BETWEEN MASKING TAPE FOR ACCURACY AND SHARPNESS.
8. ALL PLAYING LINES TO BE 2" WIDE.
9. CLEAR ANY ADJACENT HAZARD THAT MAY IMPEDE CLEAR ACCESS AND PLAY. CONTACT LANDSCAPE ARCHITECT FOR ANY CONFLICTS PRIOR TO CONSTRUCTION.
10. CONTRACTOR SHALL PROVIDE FULL TWO (2) YEAR GUARANTEE FROM THE TIME OF FINAL COMPLETION AND OWNER ACCEPTANCE ON ALL WORK AND/OR MATERIALS.
11. PROVIDE MOCK UPS FOR APPROVAL. APPROVED MOCK UP SHALL NOT BE REMOVED FROM SITE UNTIL THE PROJECT CLOSE OUT.
12. CONTRACTOR TO STAMP "POST TENSION SLAB DO NOT CUT OR DRILL" INTO CONCRETE SLAB.

1 PICKLE BALL COURT
SCALE:1/4"=1'-0"

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52 OF 148

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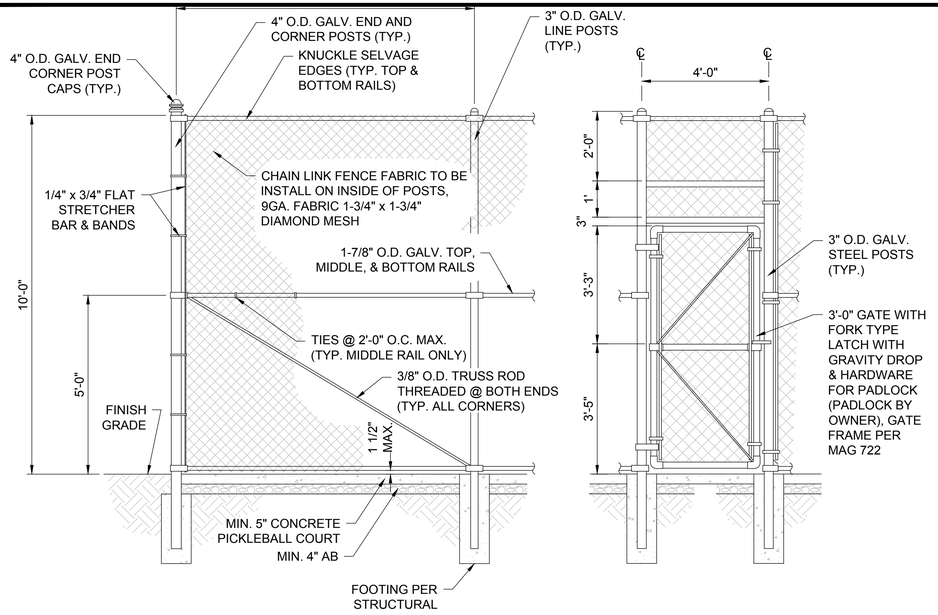
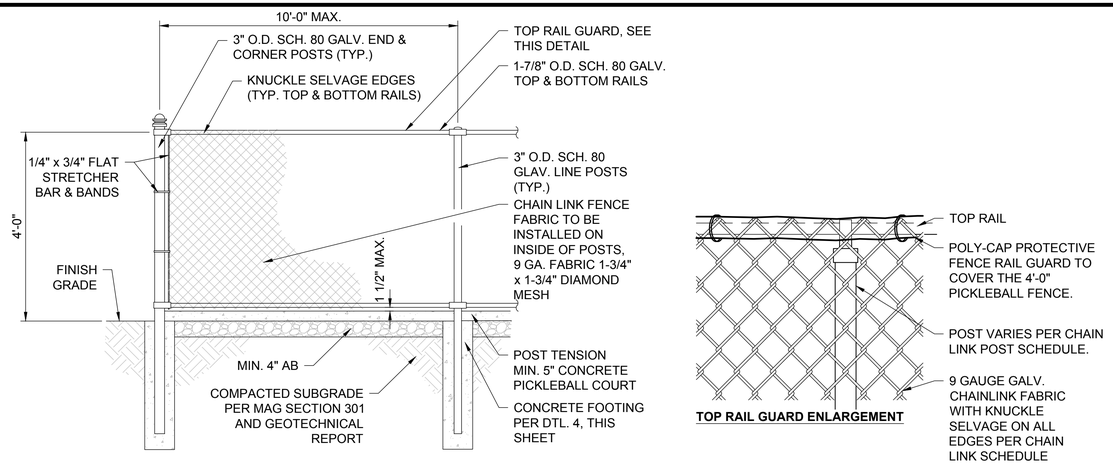


1 FENCE AND GATE DETAIL (10')

SCALE:1/2"=1'-0"

SUBMITTAL REQUIRED SEE STRUCTURAL

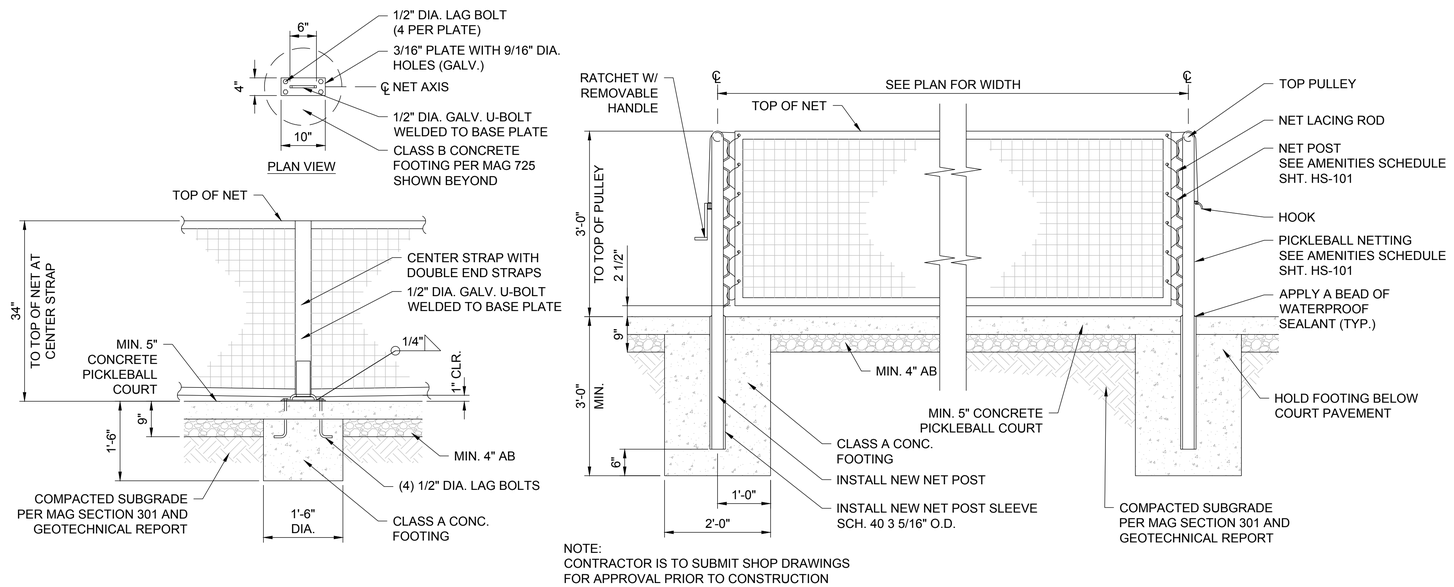


2 FENCE DETAIL (4' HIGH)

SCALE:1/2"=1'-0"

CHAIN LINK SCHEDULE

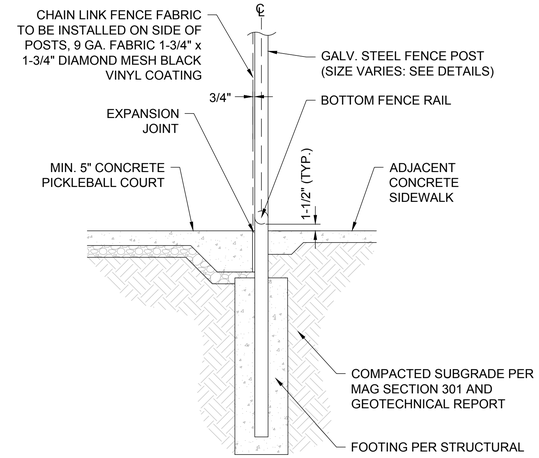
DESCRIPTION	POST SIZING	HORIZONTAL RAIL DIA.	HEIGHT	FABRIC	FABRIC COLOR	TOP RAIL GUARD / SHADE FABRIC	TIES	FOOTING DIAMETER	FOOTING DEPTH
PICKLEBALL COURT FENCE (EXTERIOR)	4" DIA. 3" DIA.	1-7/8" DIA.	10'-0"	9 GA. 1-3/4 MESH	GALVANIZED	SHADE/WIND FABRIC	9 GA. @ 18" O.C.	18" DIA	6'-0"
PICKLEBALL COURT FENCE (INTERIOR)	4" DIA. 3" DIA.	1-7/8" DIA.	4'-0"	9 GA. 1-3/4" MESH	GALVANIZED	TOP RAIL GUARD	9 GA. @ 18" O.C.	18" DIA	5'-0"
FOR ALL CHAIN LINK CONDITIONS AND NOTES - SEE "GENERAL NOTES FOR CHAIN LINK AND FENCING" ON THIS SHEET									



NOTE:
CONTRACTOR IS TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION

3 PICKLEBALL NETTING & POST DETAIL

SCALE:1/2"=1'-0"



4 PICKLEBALL/ TENNIS FENCING & POST FOOTING / COURT EDGE DETAIL

SCALE:1/2"=1'-0"

GENERAL NOTES FOR CHAIN LINK AND FENCING:

1) GATES, AND CORNER POSTS TO BE 4" DIA. POST; LINE POSTS TO BE 3" DIA. POSTS.
2) HORIZONTAL RAILS TO BE 1-7/8" DIA. TYP.
3) CENTER RAIL IS REQUIRED ON ALL FENCES 6'-0" AND TALLER.
4) GRIND ALL BOLTS TO WITHIN 1/8" OF NUT AND FACE AWAY FROM FIELD / INTERIOR OF FENCING.
5) ALL EDGES OF EXPOSED THREADS ON ALL BOLTS AND SHARP EDGES SHALL BE GROUND SMOOTH.
6) ALL POST AND RAILS TO BE SCHEDULE 40 HOT-DIPPED GALVANIZED STEEL (INSIDE AND OUT).
7) ALL HARDWARE TO BE HOT-DIPPED GALVANIZED.
8) ALL POST TO BE CAPPED.
9) KNUCKLED SELVAGE AT ALL FENCE FABRIC EDGES.
10) TIE FABRIC TO ALL RAILS WITH 9 GAUGE GALVANIZED TIES @ 18" O.C.
11) ALL FENCING FABRIC TO BE INSTALLED ON COURT SIDE OF FENCE LINE.
12) CONTRACTOR TO FIELD STAKE FENCING AND OBTAIN THE OWNER OR OWNER REPRESENTATIVE'S APPROVAL PRIOR TO INSTALLATION.
13) CONTRACTOR TO SUBMIT SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO ORDERING OR INSTALLATION.
14) CONTRACTOR TO ENSURE ALL GATES ARE ADA COMPLIANT.
15) ALL CHAIN LINK FENCING TO HAVE TOP AND BOTTOM RAIL.
16) TOP RAIL SHALL PASS THROUGH LINE POST TOPS TO FORM CONTINUOUS BRACE AND BE SECURELY ATTACHED TO TERMINAL POST. SPLICES @ 20'-0" W/ COUPLINGS FOR CONNECTING THE LENGTHS INTO A CONTINUOUS RUN. COUPLINGS SHALL BE NOT LESS THAN 6" IN LENGTH WITH A WALL THICKNESS OF .070".
17) CONTRACTOR TO INSTALL TOP RAIL GUARD ON 4'-0" COURT INTERIOR FENCE; ATTACH PER MANUFACTURER'S SPECIFICATIONS.
18) CONTRACTOR TO REFERENCE MAG SECTION 771.1 FOR GALVANIZING SPECIFICATIONS AND SECTION 772 FOR CHAIN LINK FENCING SPECIFICATIONS.
19) SLOPE ALL BOTTOM RAILS OF FENCE PARALLEL TO FINISH GRADE MAINTAINING 1-1/2" CLEARANCE (COORDINATE BOTTOM RAIL INSTALLATION WITH GRADING PLAN).
20) *SCH - DIMENSIONS & NOTATION INCLUDED WITH CHAIN LINK SCHEDULE THIS DETAIL

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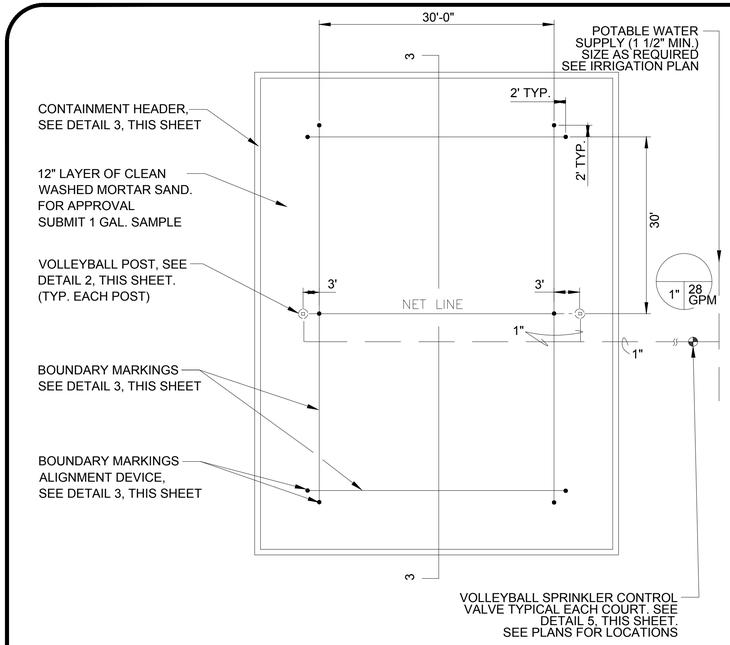
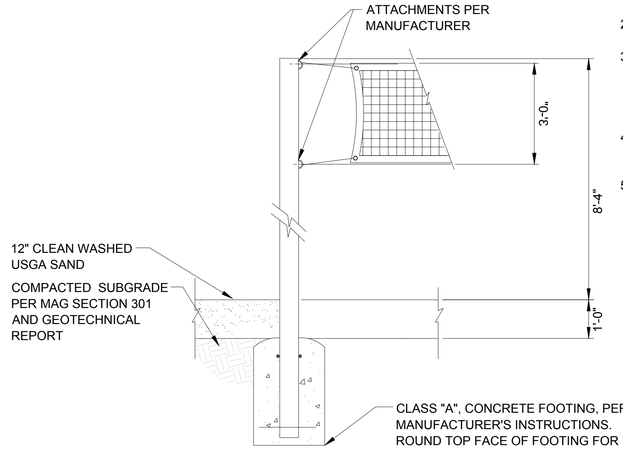


NOTES:
1. CONTAINMENT HEADER SHOWN ON THIS DRAWING IS RECTANGULAR, ACTUAL LAYOUT TO BE STAKED FROM CONSTRUCTION PLAN SHEETS.
2. DO NOT RUN ELECTRICAL WIRING (120 V OR 24V) UNDER SAND AREA.
3. CONCRETE HEADER SHALL BE MAG 222 MODIFIED AS SHOWN. PROVIDE EXPANSION AND CONTROL JOINTS, PER DTL. 1 ON SHEET HS-401, TO ELIMINATE CRACKING. FINISH EXPOSED SIDES OF CONTAINMENT EDGES.
4. AT BOUNDARY MARKING INSTALL TAPE WITH ENOUGH SLACK FOR IT TO BE LAID ON THE SURFACE OF THE SAND AS SHOWN IN PLAN VIEW. HARDWARE USED FOR FASTENING SHALL BE STAINLESS STEEL, FREE FROM ANY SHARP OR PROTRUDING POINTS, ETC. CITY STAFF TO APPROVE FASTENERS PRIOR TO INSTALLATION. TRIM ENDS OF MARKING TAPE CLOSE TO FASTENERS AND EPOXY ENDS TO PREVENT UNRAVELING.

1 VOLLEYBALL COURT/ROPE LAYOUT

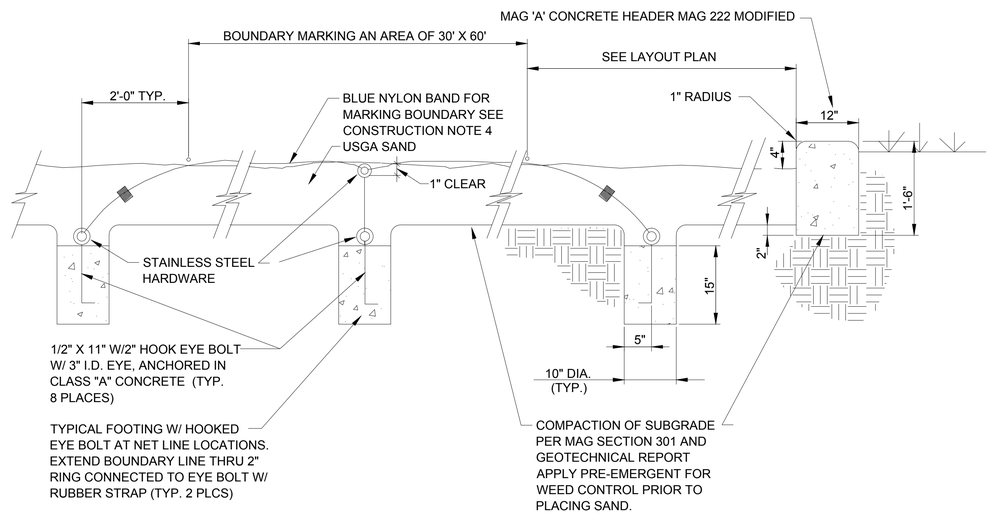
SCALE: N.T.S



NOTES:
1. NET SHALL BE 32' LONG AND 3' WIDE. TOP OF THE NET SHALL BE AT 8'-0" ABOVE SAND & NET SHALL HAVE A MAXIMUM OF 6" VERTICAL SAG AT CENTER OF NET.
2. FOR NET PRODUCT INFORMATION, SEE SHEET HS-101.
3. VOLLEYBALL SPRINKLER SYSTEM MUST BE CONNECTED TO A POTABLE WATER SUPPLY.PIPE MUST HAVE AN NSF RATING STAMPED ON POTABLE PLASTIC PIPE (MIN CLASS 200).
4. SEE IRRIGATION PLAN FOR SUPPLY PIPE TO VOLLEYBALL CONTROL VALVES.
5. ADJUSTABLE VOLLEYBALL POST AND NET SYSTEM SHALL BE 'MONSON SLIDER SYSTEM' AS MANUFACTURED AND DISTRIBUTED BY UNITED VOLLEYBALL SUPPLY, LLC. MANUFACTURER MAY BE CONTACTED AT 1-800-494-3933 OR AT VOLLEYBALLUSA.COM. CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS DETAILING MONSON SLIDER SYSTEM, INCLUDING FOOTINGS. SHOP DRAWINGS SHALL BE REVIEWED AND APPROVED BY CITY OF PHOENIX AND LANDSCAPE ARCHITECT PRIOR TO ORDERING.

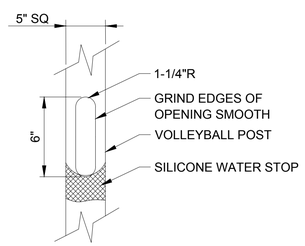
2 VOLLEYBALL POST & NET - MONSON SLIDER SYSTEM

SCALE: N.T.S



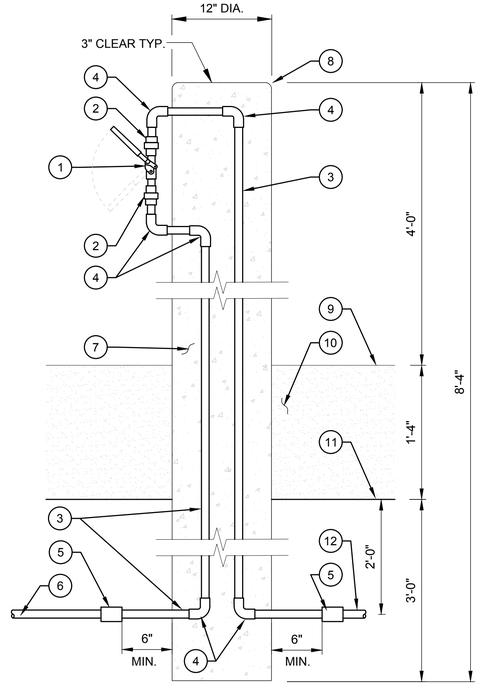
3 VOLLEYBALL BOUNDARY ROPE

SCALE: N.T.S



4 WATER SUPPLY POST OPENING

SCALE: N.T.S



KEY NOTES:
1. APOLLO 76-505-01A VALVE
2. BRONZE UNION
3. 1 1/2" TYPE "K" HARD COPPER PIPE W/ PROTECTIVE PIPE WRAP WHEN IN CONC.
4. COPPER 90° ELBOW W/ PROTECTIVE PIPE WRAP WHEN IN CONC.
5. PVC TO COPPER ADAPTER
6. 1 1/2" PVC WATER SUPPLY LINE
7. CONCRETE BOLLARD (MAG CLASS A)
8. 3/4" RADIUS
9. FINISH GRADE
10. USGA SAND
11. SUBGRADE
12. 1 ½" PVC WATER LINE TO VOLLEYBALL POST

5 VOLLEYBALL SPRINKLER VALVE

SCALE: N.T.S

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: **HARDSCAPE DETAILS**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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Sheet
HS-407
54 OF 148

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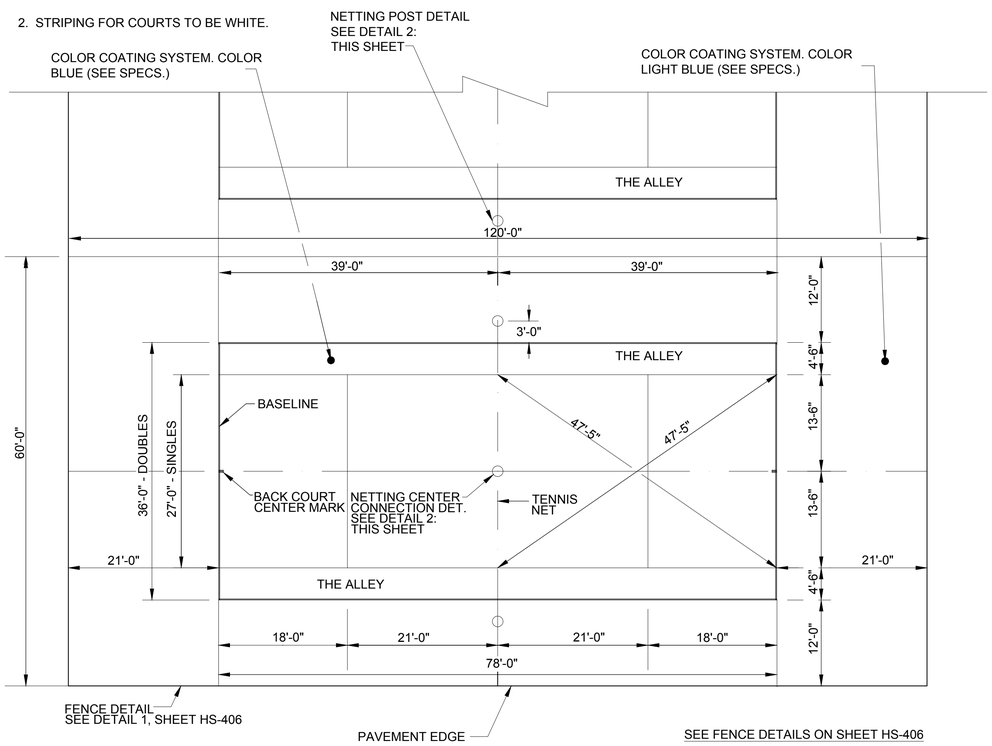
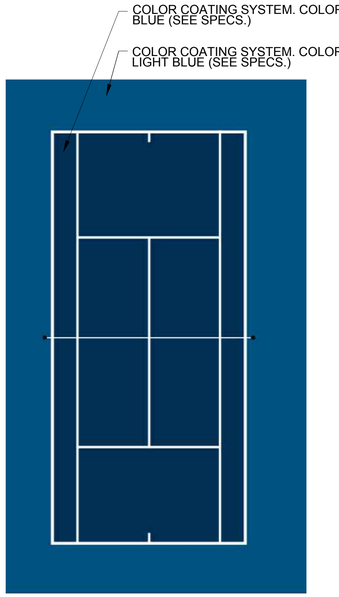
NOTES:

1. STRIPING TO BE 2" WIDE LINE. PAINT AS SPECIFIED BY U.S. TENNIS ASSOCIATION.
2. STRIPING FOR COURTS TO BE WHITE.

DOUBLE TENNIS COURT





TENNIS COURT COLORS

1 DOUBLE TENNIS COURT LAYOUT

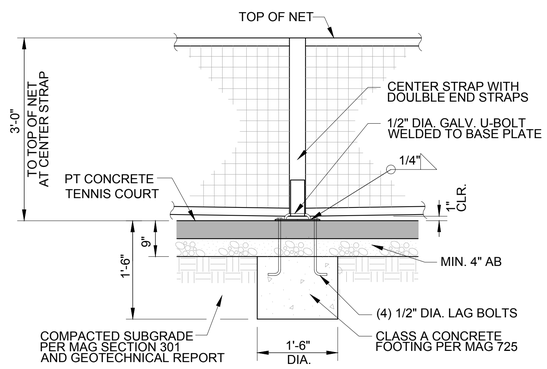
N.T.S.

SUBMITTAL REQUIRED

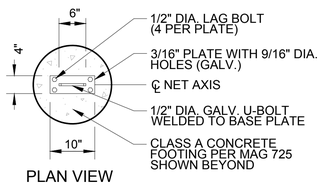
SEE STRUCTURAL. CONTRACTOR SHALL SUBMIT SEALED STRUCTURAL PLANS, DETAILS, SPECIFICATIONS, CROSS SECTIONS AND JOINTING PLANS FOR REVIEW AND APPROVAL.

CHAIN LINK SCHEDULE

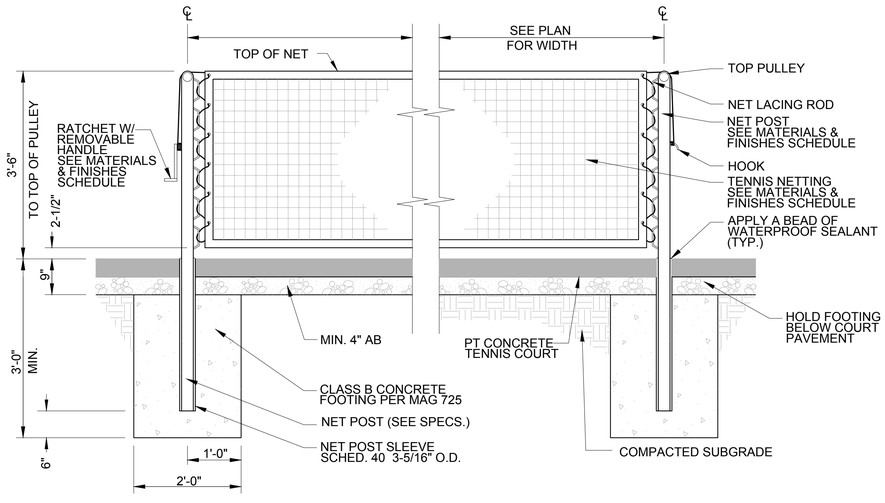
DESCRIPTION	POST SIZING	HORIZONTAL RAIL DIA.	HEIGHT	FABRIC	FABRIC COLOR	SHADE FABRIC	TIES	FOOTING DIAMETER	FOOTING DEPTH
TENNIS COURT FENCE (EXTERIOR)	4" DIA. 3" DIA.	1-7/8" DIA.	10'-0"	9 GA. 1-3/4" MESH	GALVANIZED	SHADE/WIND FABRIC	9 GA. @ 18" O.C.	18" DIA	6'-0"
TENNIS COURT FENCE (INTERIOR)	4" DIA. 3" DIA.	1-7/8" DIA.	8'-0"	9 GA. 1-3/4" MESH	GALVANIZED		9 GA. @ 18" O.C.	18" DIA	6'-0"
FOR ALL CHAIN LINK CONDITIONS AND NOTES - SEE SHEET HS-406									



NOTES:
1. CONTRACTOR IS TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.



PLAN VIEW



2 TENNIS NETTING & POST DETAIL

N.T.S.

Revisions	Date

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Designed By: MN,TB
Drawn By: J2CAD
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: HARDSCAPE DETAILS
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602 438 2221

KIVA # _____
SDEV # _____

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Sheet
HS-408
55 OF 148

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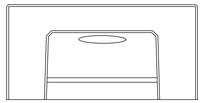
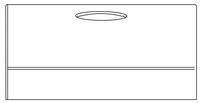
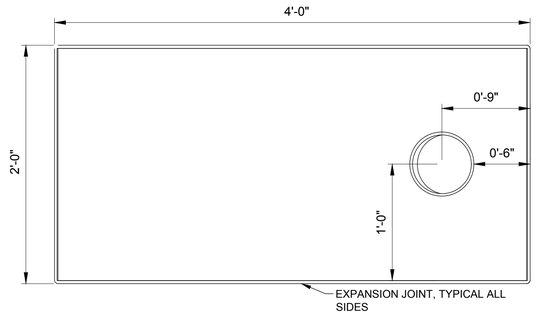


SIDE VIEW

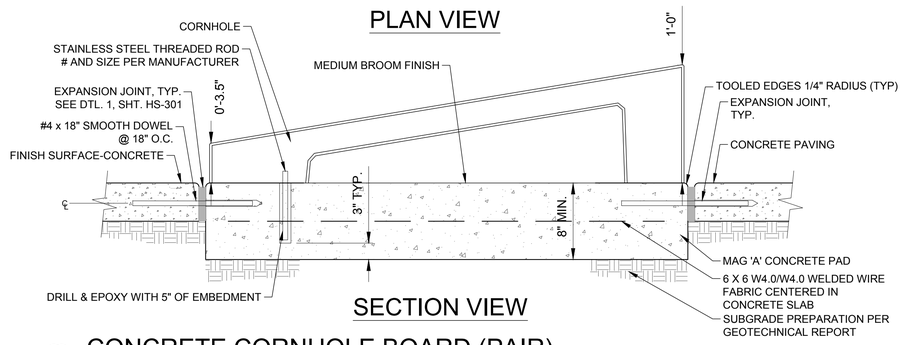


SIDE VIEW

* SEE MANUFACTURERS SPECS FOR MORE INFORMATION



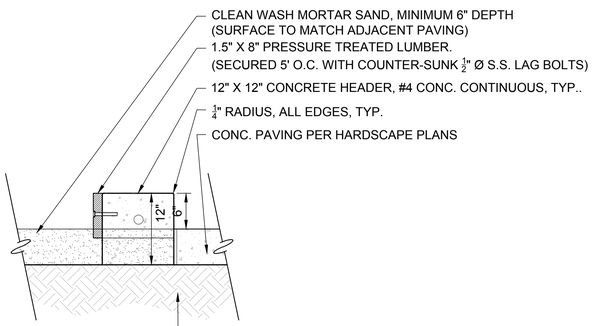
PLAN VIEW



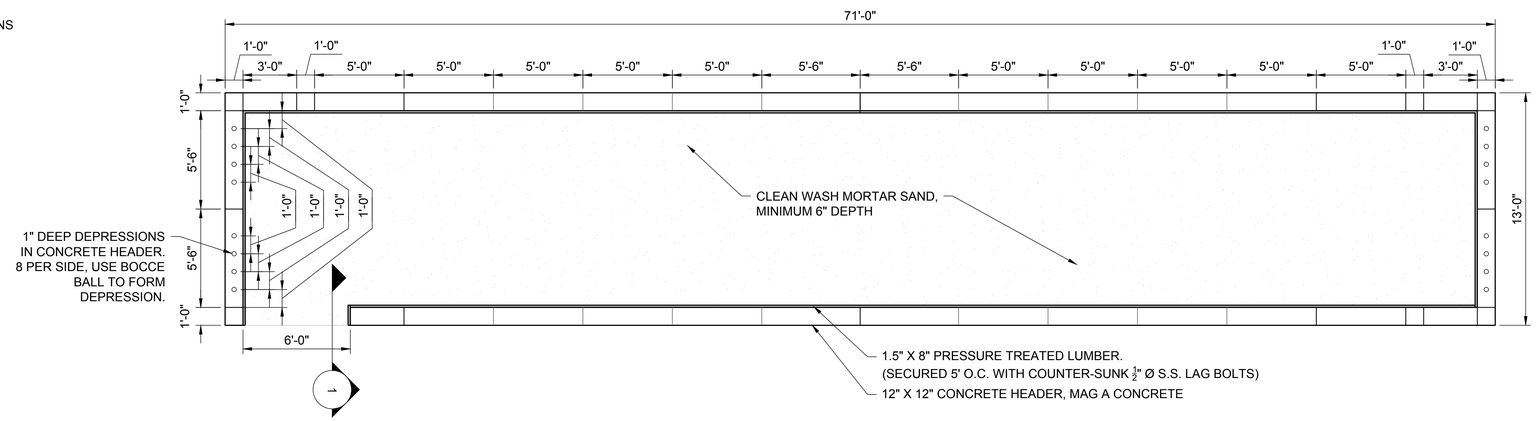
SECTION VIEW

1 CONCRETE CORNHOLE BOARD (PAIR)

NTS



SECTION 1



3 BOCCE BALL COURT

NTS

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Checked By: JB

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Sheet
HS-409
56 OF 148

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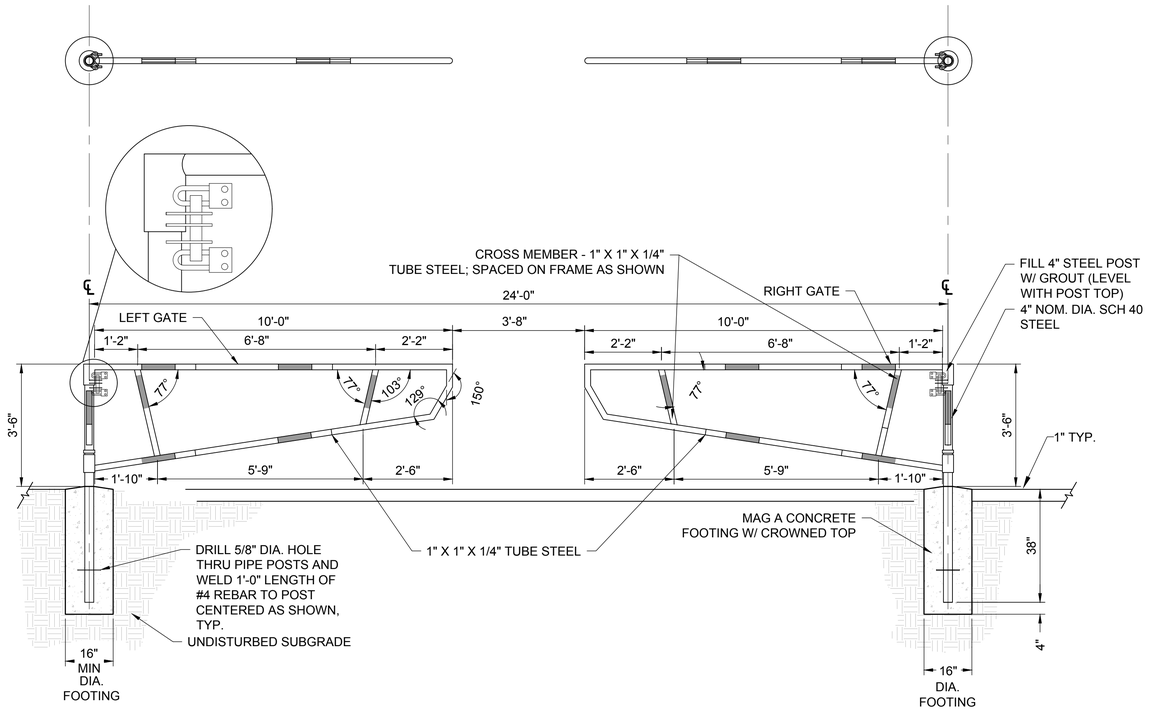
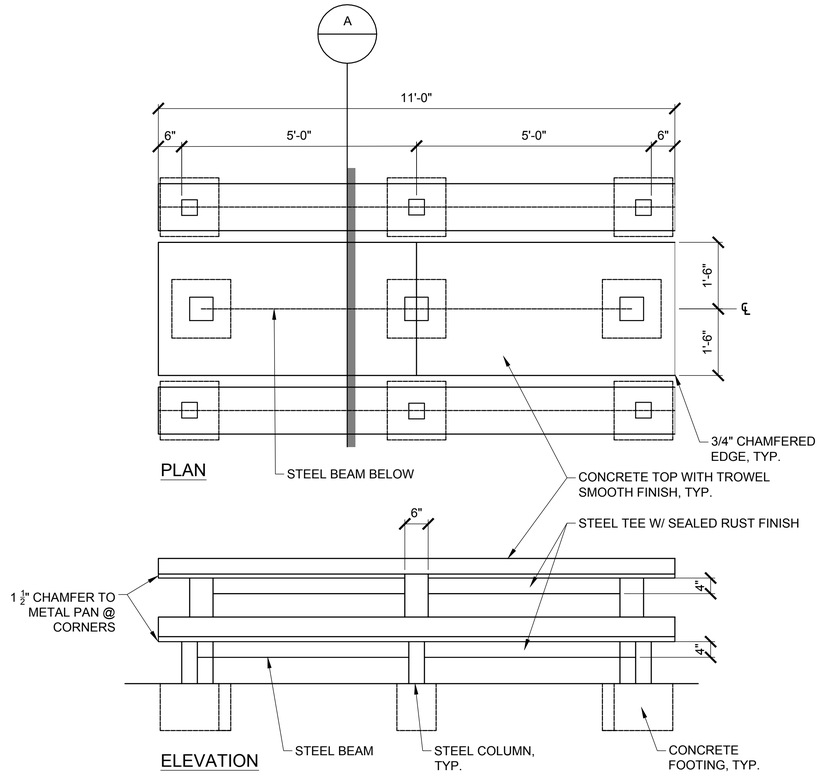


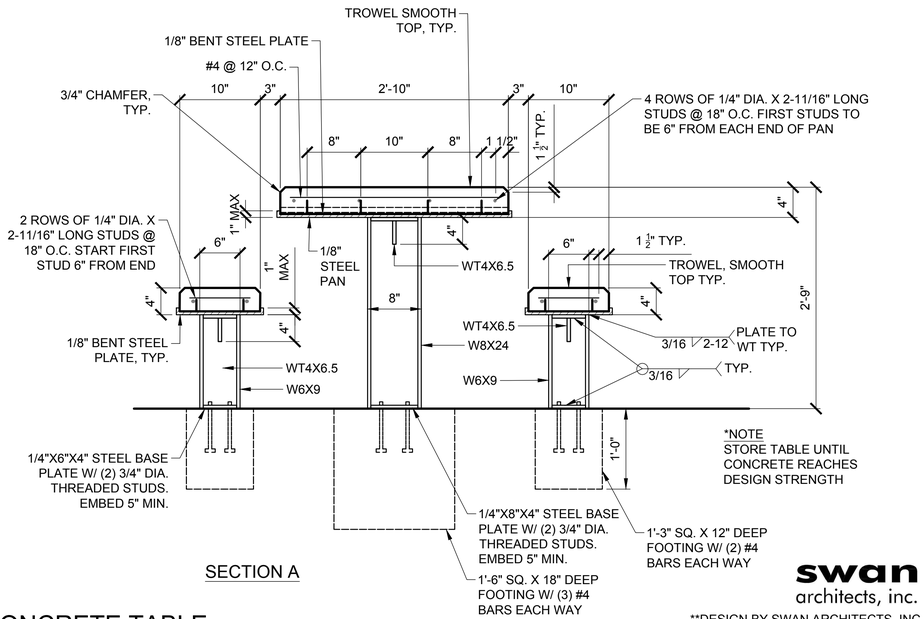
NOTES:

1. ELEVATION SHOWN IS FRONT (PARKING LOT OR STREET) SIDE OF GATES.
2. LEFT & RIGHT GATES ARE TYPICAL. SEE HARDSCAPE PLANS FOR LOCATIONS.
3. ALL GATE FRAME PIPES ARE 2" X 2" X ¼" TUBE STEEL WITH NATURAL PATINA.
4. FOR ILLUSTRATION ONLY.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUBMITTALS OF ALL HARDWARE, STEEL MEMBERS, AND PANELS TO RESIDENT ENGINEER & CITY OF PHOENIX REPRESENTATIVE FOR REVIEW & APPROVAL PRIOR TO FABRICATION.
6. ALL METAL MEMBERS & WELDS SHALL BE GROUND SMOOTH/ ROUNDED TO BE FREE OF ANY SHARP EDGES, CORNERS, AND BURRS.
7. ALL WELDS SHALL CONFORM TO AWS STANDARDS. ALL FIELD WELDS SHALL BE TESTED BY NON-DESTRUCTIVE METHOD.
8. ALL SUBGRADE SHALL BE COMPACTED PER THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.

1 VEHICLE ACCESS DOUBLE GATES

SCALE:1/2"=1'-0"





SECTION A

2 CONCRETE TABLE

SCALE:NTS

*NOTE
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW.

swan architects, inc.

**DESIGN BY SWAN ARCHITECTS, INC.

Revisions	Date

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HS-410
57 OF 148

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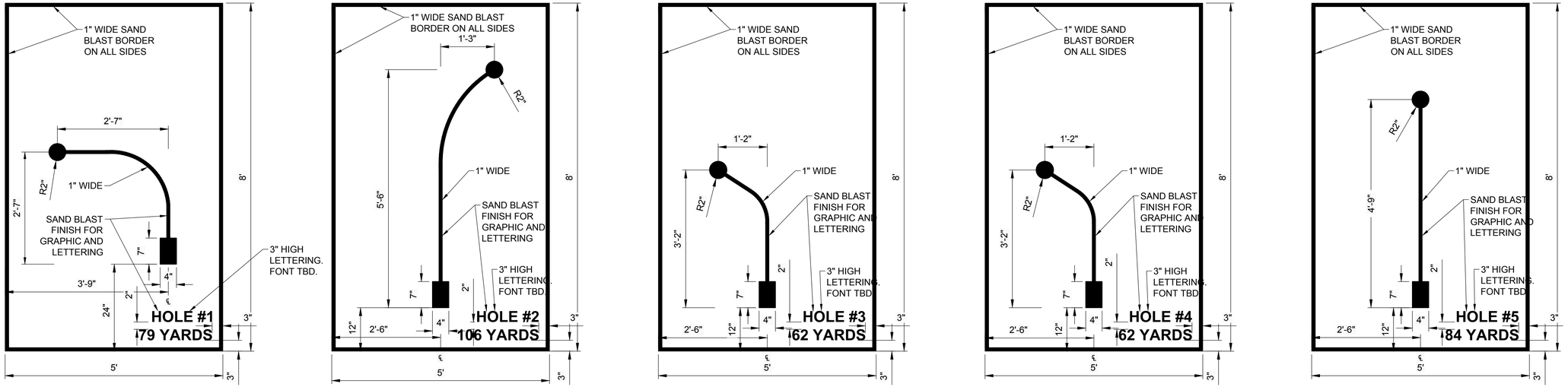
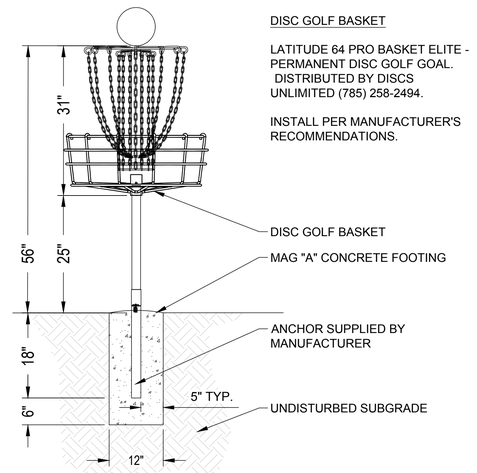


1 DISC GOLF HOLE MARKERS

NTS

NOTE:
CONTRACTOR SHALL PROVIDE MOCK-UP FOR SANDBLAST TEXTURE FOR REVIEW AND APPROVAL. ALL AREAS TO RECEIVE SANDBLAST SHALL HAVE TEMPLATE REVIEW AND APPROVED BY CITY PRIOR TO IMPLEMENTATION. SANDBLAST SHALL ACHIEVE MIN. OF 1/8" DEPTH. PROVIDE MIN. OF 3 SAMPLE STAIN COLORS ON SANDBLAST FOR CITY TO APPROVE.



DISC GOLF BASKET

LATITUDE 64 PRO BASKET ELITE - PERMANENT DISC GOLF GOAL. DISTRIBUTED BY DISCS UNLIMITED (785) 258-2494.

INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

2 DISC GOLF BASKET

N.T.S

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HS-411
58 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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POST-TENSIONED CONCRETE SLAB NOTES:

GENERAL REQUIREMENTS:

ALL INFORMATION HEREIN APPLY ONLY TO THE CONSTRUCTION OF POST-TENSIONED CONCRETE SLABS AND FOUNDATIONS ON GRADE. DESIGN FOR SUCH ITEMS IS MADE IN ACCORDANCE WITH LOADING CONDITIONS NOTED BY THE ENGINEER OF RECORD AS NOTED ON THE PLAN SHEETS OR CALCULATIONS. OTHER STRUCTURAL DESIGNS (EMBEDDED HARDWARE, SHEAR WALLS, POSTS, ETC.) ARE THE RESPONSIBILITY OF THE ENGINEER OF RECORD.

METHOD OF CONSTRUCTION:

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION.

TYPICAL DETAILS:
TYPICAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. ALL WORK OR CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, REGULATIONS AND SAFETY REQUIREMENTS.

DISCREPANCIES:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS AND CONDITIONS WITH ARCHITECTURAL OR LANDSCAPE DRAWINGS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ARCHITECT OR ENGINEER OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCIES, OMISSIONS, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

OTHER TRADES:
ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTOR PRIOR TO CONSTRUCTION.

FOUNDATION NOTES:
FOUNDATIONS DESIGNED IN CONFORMANCE WITH RECOMMENDATIONS AND INTENT OF THE GEOTECHNICAL EXPLORATION REPORT BY ETHOS ENGINEERING.
PROJECT NUMBER 2023033
DATED OCTOBER 30, 2023

SOIL COMPACTION:
ALL SUBGRADE SHALL BE COMPACTED TO MINIMUM 95% OF THE MAXIMUM ASTM D698 STANDARD PROCTOR DENSITY. CONTRACTOR SHALL PROVIDE COMPACTION TEST RESULTS OF GRADE PRIOR TO PLACING POST-TENSIONING TENDONS.

MOISTURE CONTROL:
BEFORE AND AFTER CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INCLUDE SAND OR GRAVEL FILL, VAPOR BARRIER (IF APPLICABLE), ETC. WHERE VAPOR BARRIER IS SPECIFIED, USE 15 MIL POLYETHYLENE FILM OR APPROVED EQUAL. PRODUCT PERMANENCE SHALL BE IN ACCORDANCE TO ASTM E 96. VAPOR BARRIER SHALL BE LAPPED IN ACCORDANCE TO ASTM E 1643 OR PER MANUFACTURER'S REQUIREMENTS.

EXCAVATION:
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT.

CONCRETE MIXES:
CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED INDEPENDENT LABORATORY AND APPROVED BY THE ENGINEER.

CONCRETE:
CONCRETE FOR POST-TENSIONED SLABS SHALL PRODUCE A MINIMUM STRENGTH OF 3,000 PSI AT 28 DAYS. SPECIAL INSPECTION REQUIRED. WATER/CEMENT RATIO SHALL NOT EXCEED 0.45

ADMIXTURES:
ADD THE FOLLOWING ADMIXTURES IN THE AMOUNTS REQUIRED BY THE MANUFACTURER:

A. EUCON SRA SHRINKAGE REDUCING ADMIXTURE AND/OR CONEX SHRINKAGE COMPENSATING ADMIXTURE. 28-DAY CONCRETE SHRINKAGE SHALL BE A MAXIMUM OF 0.02%.
B. EUCOSHIELD AND/OR EUCOBAR FINISHING ADMIXTURE.

AGGREGATE:
MAXIMUM SIZE OF AGGREGATE SHALL BE 1 1/2 INCH PER ASTM C57 OR C33

CEMENT:
PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II.

CONCRETE AGE:
NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY TESTING AGENCY.

CONCRETE PLACEMENT AND QUALITY:
SHALL BE PER RECOMMENDATIONS IN ACI 614, ACI 301 AND ACI 318. MECHANICALLY VIBRATE CONCRETE ONLY AROUND POST-TENSIONING ANCHORS AND UNDER FLOOR DUCTS, ETC. REMOVE ALL DEBRIS FROM FORMS BEFORE POURING.

COLD/HOT WEATHER CONCRETING:
PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH IN COMPLIANCE WITH ACI 305 AND ACI 306

CURING:
KEEP SLAB CONTINUOUSLY WET DURING CURING PROCESS FOR AT LEAST 7 DAYS MINIMUM. USE PONDING OR PLASTIC BACKED CURIN BLANKETS AND REINTRODUCE WATER UNDER THE BLANKETS AT LEAST ONCE A DAY.

REINFORCING QUALITY:
ASTM A615 GRADE 60 FOR ALL BARS.

PRESTRESSING STEEL:

SHALL BE SEVEN-WIRE LOW RELAXATION STRAND IN ACCORDANCE WITH ASTM A416, GRADE 270 KSI, WITH A GUARANTEED ULTIMATE TENSILE STRENGTH OF 41.3 KIPS. ALL MATERIAL SHALL BE CLEAN AND FREE FROM RUST.

NOMINAL DIAMETER----------1/2"
NOMINAL AREA ----------0.153 SQ. INCHES
MAX. TEMPORARY JACKING FORCE----------33 KIPS

FABRICATION AND MANUFACTURE OF THE UNBONDED SYSTEM SHALL BE IN ACCORDANCE WITH THE GUIDE SPECIFICATIONS AS OUTLINED BY THE POST-TENSIONING INSTITUTE.

ANCHORAGES SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION AND AS SPECIFIED IN THESE DRAWINGS.

REUSABLE POCKETFORMERS ARE TO BE USED ON ALL STRESSING ENDS. THE POCKETFORMER SHALL PROVIDE ADEQUATE CONCRETE COVERAGE FOR THE ANCHOR AS REQUIRED. DIPPING POCKETFORMERS IN OIL OR OTHER MATERIALS, FOR EASE OF REMOVAL, IS ACCEPTABLE.

ALL DEAD END ANCHORAGES SHALL BE SHOP FABRICATED, PRESEATED WEDGES.

TENDON PLACEMENT:

REFER TO THE FOUNDATION PLAN AND OR THE TENDON PLACEMENT PLAN FOR THE LOCATION OF EACH TENDON.

ALL TENDONS ARE TAGGED DENOTING THE LENGTH OF EACH TENDON. THIS NOTED LENGTH INCLUDES THE APPROPRIATE ADDED LENGTH REQUIRED FOR STRESSING (2'-0" FOR DEAD ENDS AND 4'-0" FOR DOUBLE END STRESSES).

DRILL A 13/16" DIAMETER HOLE AT THE CENTER OF FORM BOARD NOTED ON THE TYPICAL SECTION FOR TENDON PLACEMENT. TENDON LOCATIONS NOT DIMENSIONED ON PLANS SHALL BE PLACED AT APPROXIMATELY EQUAL SPACES BETWEEN CONTROL POINTS.

PLACE TENDONS WITH THE INTERSECTION OF TENDONS AT SLAB MID-DEPTH. AT EDGE OF SLAB LOCATE TENDONS TO THE CENTER OF THE STRAND AS SHOWN ON DETAILS. TOLERANCE 1/4" TYPICAL EXCEPT CORNERS WHERE ONE OF THE TWO ANCHORS MAY BE PLACED AT 4 1/2" TO CENTER OF STRAND TO AVOID INTERFERENCE.

TENDONS ARE TO BE PLACED IN LAYERS. TENDONS SPANNING THE LONGER DIRECTION SHALL BE PLACED FIRST FOLLOWED BY TENDONS SPANNING THE SHORTER DIRECTION. ALL REMAINING TENDONS SHALL BE PLACED AFTERWARDS. TYPICAL FOR ALL CASES - SEE DETAILS.

ALL TENDON OVERLAPS SHALL BE CENTERED IN DEPTH OF CONCRETE SLAB U.N.O.

TENDON PLACING SEQUENCE:

UNROLL TENDON COIL STARTING AT THE DEAD END FIRST. AT THE STRESSING END PASS THE TENDON THROUGH THE ANCHOR AND POCKETFORMER, REMOVING THE PLASTIC SHEATHING WITHIN 6" OF THE FACE OF THE ANCHOR. SECURE THE DEAD END AND STRESSING ENDS WITH NAILS. BE SURE TO PROVIDE THE PROPER CONCRETE COVERAGE AT THE DEAD END. SEE FIXED END DETAIL.

WHERE CONCRETE DOBBIE BLOCKS ARE USED THE TENDONS SHALL BE TIED TOGETHER AT EACH TENDON INTERSECTION. WHERE STANDARD PLASTIC CHAIRS ARE USED, THE TENDONS SHALL BE TIED TOGETHER AND TO THE CHAIR AT EVERY THIRD TENDON INTERSECTION EACH DIRECTION (MINIMUM).

PLACEMENT OF MILD STEEL REINFORCEMENT SHALL BE COORDINATED WITH THE PLACEMENT OF POST-TENSIONING TENDONS. PROPER TENDON PLACEMENT HAS PRIORITY.

IT IS THE RESPONSIBILITY OF THE CONCRETE CONTRACTOR TO EXERCISE GREAT CARE SO AS NOT TO DISTURB THE LOCATIONS OF THE TENDONS DURING CONCRETE PLACEMENT.

TENDON STRESSING:

ALL TENDON STRESSING OPERATIONS MUST BE PERFORMED UNDER THE IMMEDIATE CONTROL OF A PERSON EXPERIENCED IN POST-TENSIONING STRESSING OPERATIONS. THE PERSON IN CONTROL SHALL MAINTAIN STRICT SAFETY PRECAUTIONS AND RIGID CONTROL OF GAUGE PRESSURE READINGS AND ELONGATION MEASUREMENTS.

TENDON STRESSING MAY PROCEED WHEN THE CONCRETE STRENGTH OBTAINS 2,000 PSI. CONTRACTOR TO PROVIDE CONCRETE CYLINDER BREAK TEST RESULTS TO INSPECTOR PRIOR TO STRESSING.

ALL TENDONS SHALL BE STRESSED BY MEANS OF A HYDRAULIC JACK, EQUIPPED WITH A CALIBRATED PRESSURE GAUGE. EACH JACK SHALL BE ACCOMPANIED BY A CURRENT CALIBRATION CHART. IF THE MEASURED ELONGATION DOES NOT CORRESPOND TO THE CALCULATED ELONGATION BY PLUS OR MINUS 5%, STOP STRESSING OPERATIONS AND DETERMINE THE CAUSE OF THE DISCREPANCY. ON TENDONS 25'-0" OR LESS, GAUGE PRESSURE GOVERNS OVER ELONGATION.

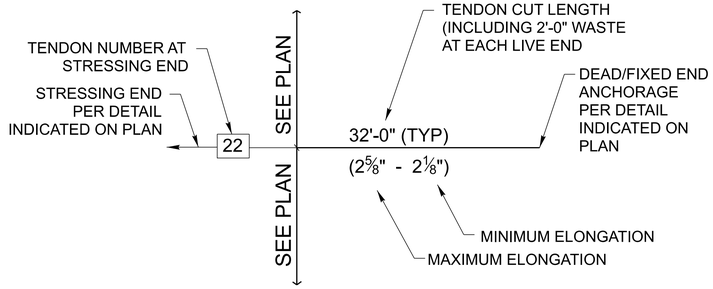
RECORD ALL ELONGATIONS AND GAUGE PRESSURES DURING THE STRESSING OPERATIONS. SUBMIT THOSE FINDINGS TO THE ENGINEER FOR APPROVAL BEFORE CUTTING THE STRESSING TAILS.

DO NOT STAND BEHIND THE JACK DURING STRESSING.

PARTIAL STRESSING (50% OF TOTAL FORCE) IS REQUIRED THE DAY AFTER CONCRETING FOR ALL CABLES WHEN THE STRUCTURE LENGTH EXCEEDS 100'-0".

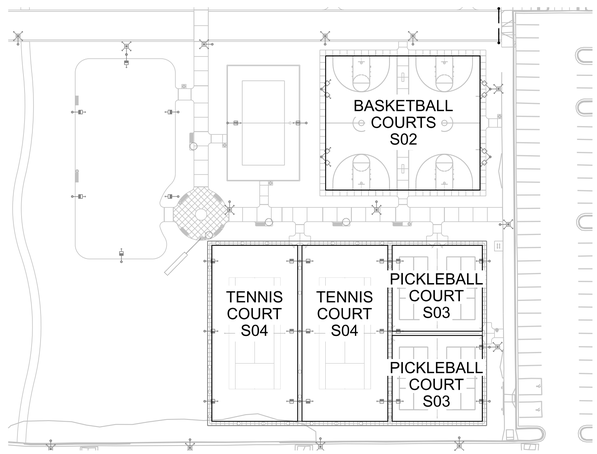
INSPECTIONS:

ANY INSPECTIONS THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR BY THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DONE BY AN INDEPENDANT INSPECTION COMPANY, THE BUILDING DEPARTMENT, OR THE ENGINEER (WHEN AUTHORIZED BY BUILDING DEPARTMENT).



TENDON SYMBOL LEGEND

DRAWING	TITLE
S01	POST-TENSIONED FOUNDATION NOTES
S02	POST-TENSIONED FOUNDATION PLAN BASKETBALL COURTS
S03	POST-TENSIONED FOUNDATION PLAN PICKLEBALL COURTS
S04	POST-TENSIONED FOUNDATION PLAN TENNIS COURTS
S05	POST-TENSIONED FOUNDATION DETAILS



KEY MAP

Revisions	Date

PRE-FINAL
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RECORDING

Designed By: HGM
Drawn By: HGM
Checked By: SEO
Date: 4/17/2024
Project #: 2023033

Title: POST-TENSIONED FOUNDATION NOTES
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

ethos ENGINEERING, LLC. 9180 S Kyrene Rd Suite #104 Tempe, AZ 85284

KIVA # _____
SDEV # _____

Note:
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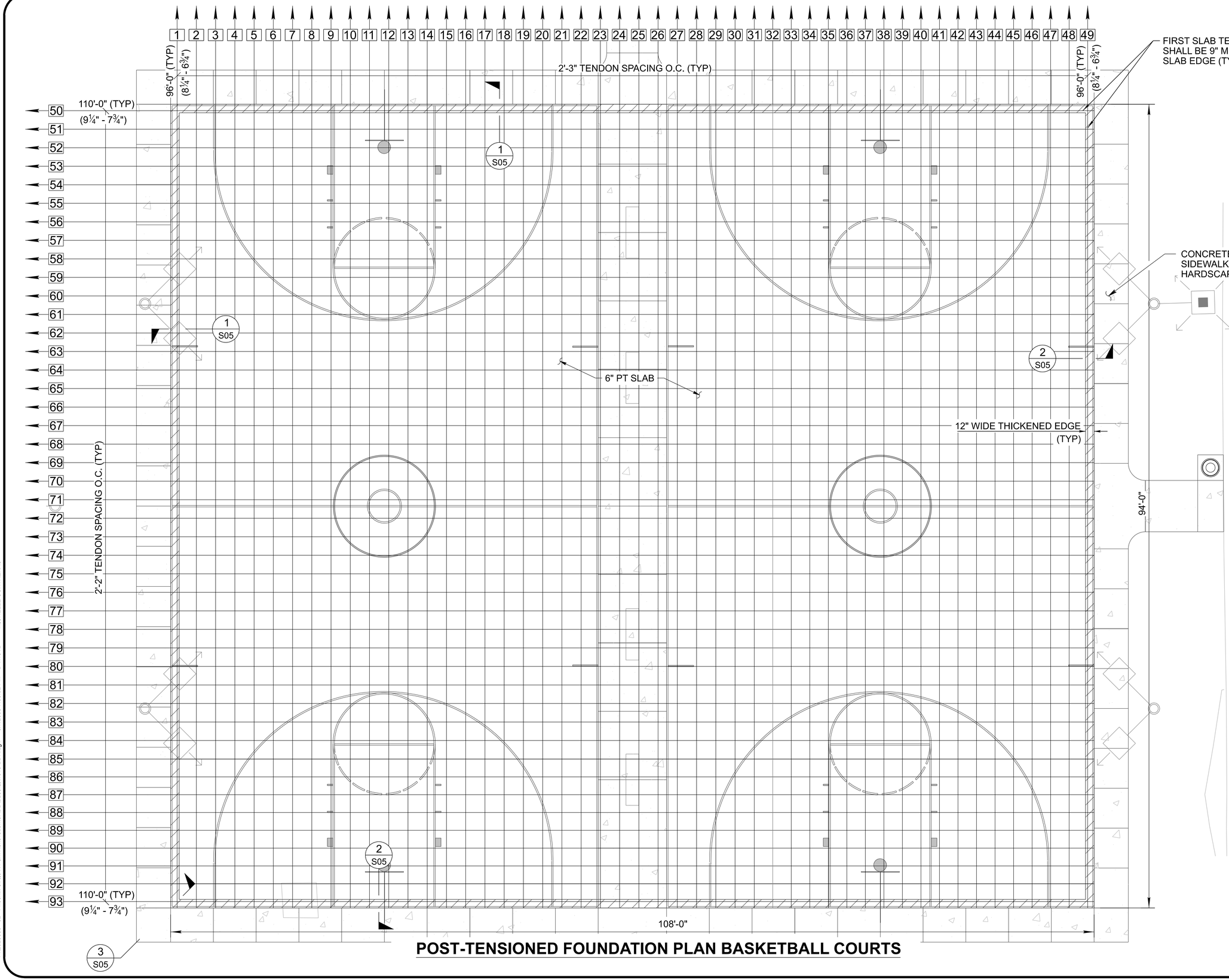
Sheet
S01
59 OF 148

P:\2023033 - J2 - Phoenix Circle K Park Renovation\CADD\Basefile\1618-BDR.dgn 9/7/2005 7:08:02 PM B-W.CTB MICHELLE CONTRERAS



POST-TENSIONED FOUNDATION PLAN BASKETBALL COURTS

Revisions	Date

PRE-FINAL
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OR
RECORDING

Designed By: HGM
Drawn By: HGM
Checked By: SEO
Date: 4/17/2024
Project #: 2023033

Title: POST-TENSIONED FOUNDATION PLAN
BASKETBALL COURTS
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

ethos ENGINEERING, LLC.
9180 S Kyrene Rd
Suite #104
Tempe, AZ 85284

KIVA # _____
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S02
60 OF 148

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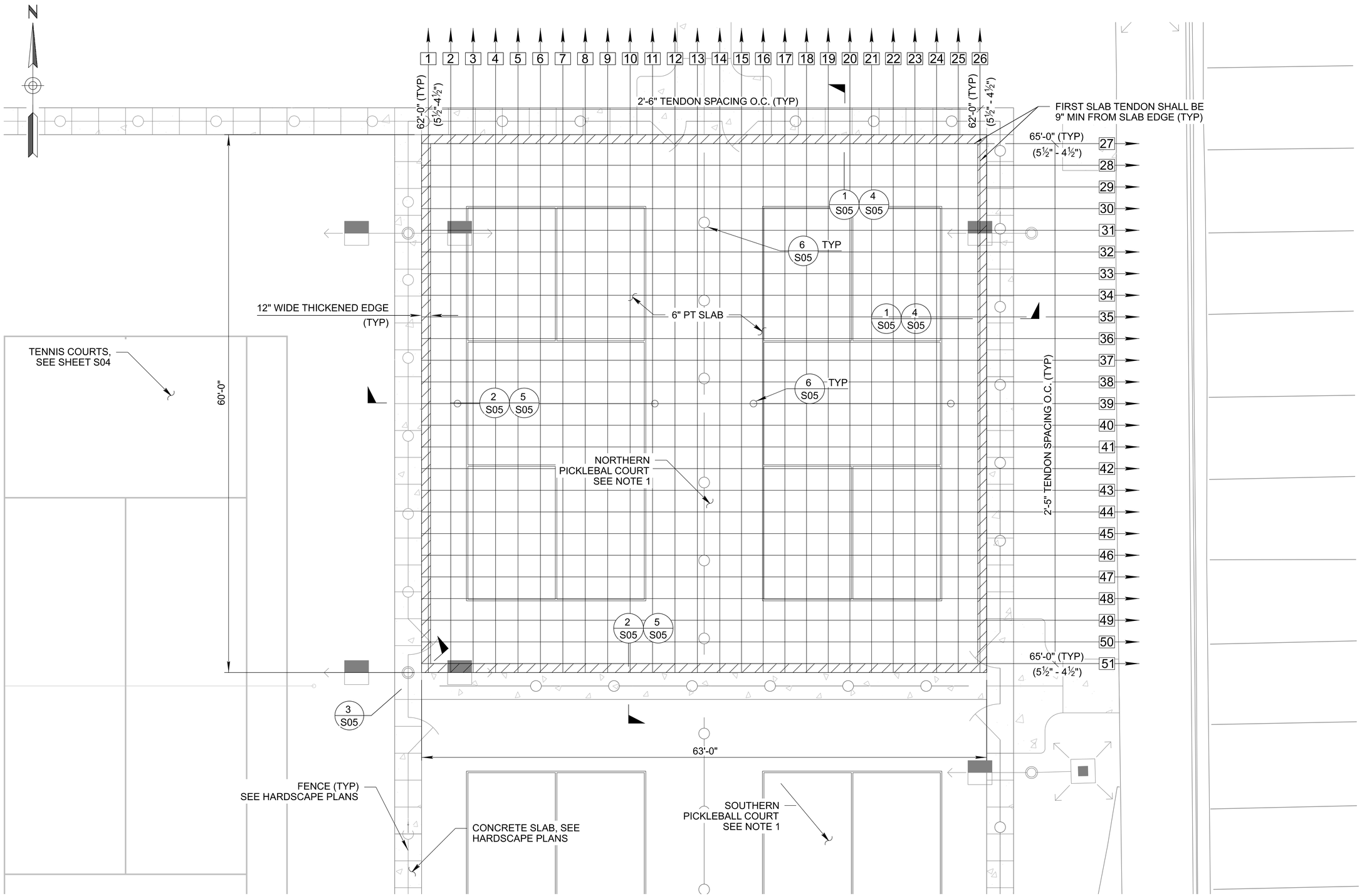

NOTES:

1. NORTHERN PICKLEBALL COURTS SHOWN, SOUTHERN PICKLEBALL COURTS SIMILAR.

POST-TENSIONED FOUNDATION PLAN PICKLEBALL COURTS

Revisions	Date

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Designed By: HGM
Drawn By: HGM
Checked By: SEO
Date: 4/17/2024
Project #: 2023033

Title: POST-TENSIONED FOUNDATION PLAN
PICKLEBALL COURTS
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

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Sheet
S03
61 OF 148

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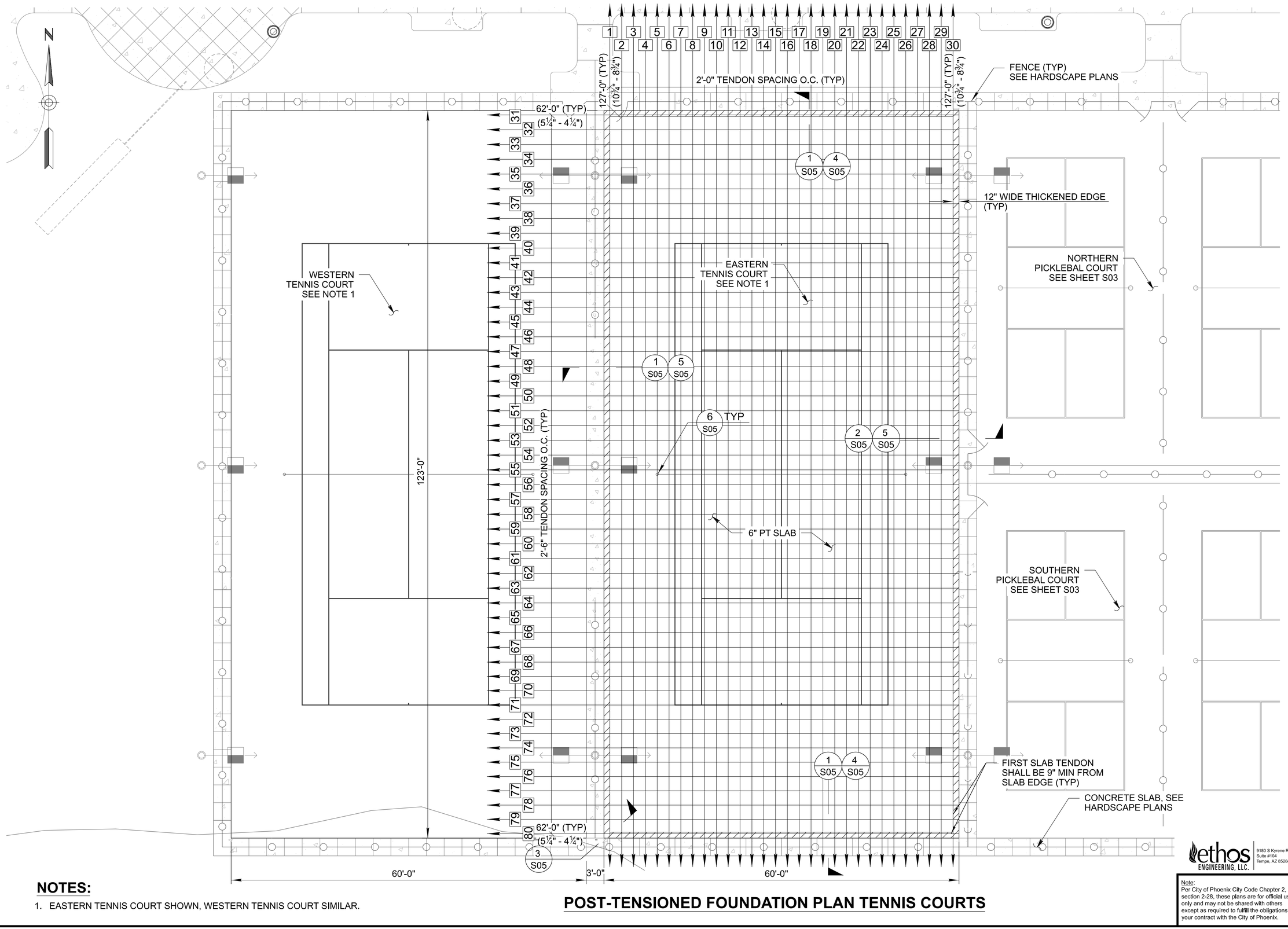

NOTES:

1. EASTERN TENNIS COURT SHOWN, WESTERN TENNIS COURT SIMILAR.

POST-TENSIONED FOUNDATION PLAN TENNIS COURTS

Revisions	Date

PRE-FINAL
100%
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CONSTRUCTION
OR
RECORDING

Designed By:	HGM
Drawn By:	HGM
Checked By:	SEO
Date:	4/17/2024
Project #:	2023033

Title: POST-TENSIONED FOUNDATION PLAN TENNIS COURTS

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

ethos ENGINEERING, LLC.
9180 S Kyrene Rd
Suite #104
Tempe, AZ 85284

KIVA # _____
SDEV # _____

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Sheet
S04
62 OF 148

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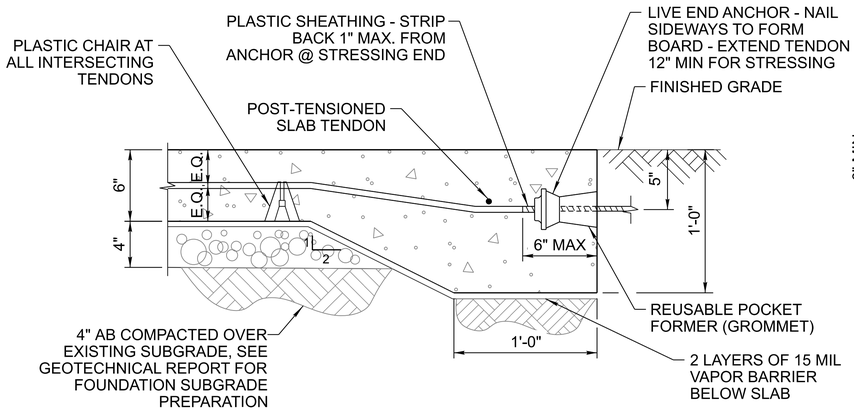
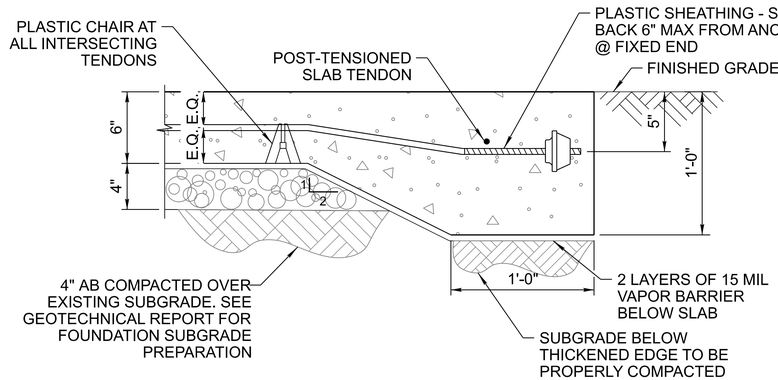


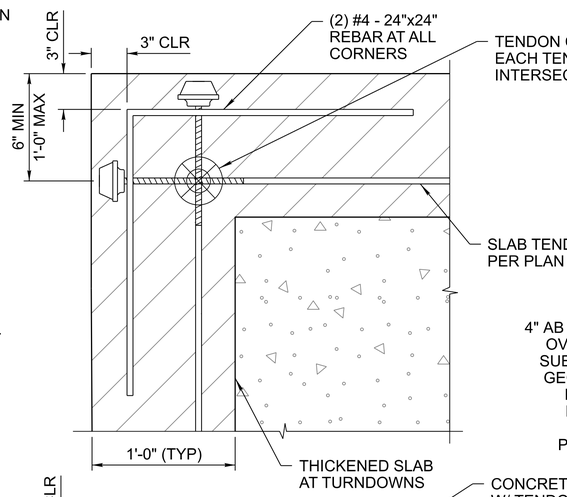
1 SLAB DETAIL - TYP. STRESSING END

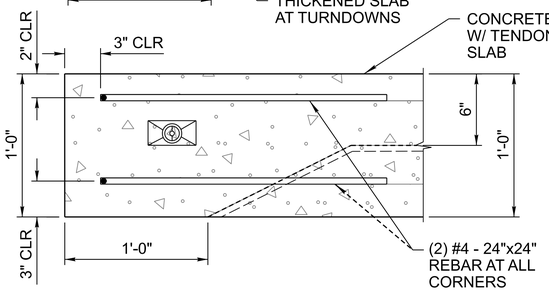
Scale: NTS



2 SLAB DETAIL - TYP. FIXED END ANCHORAGE

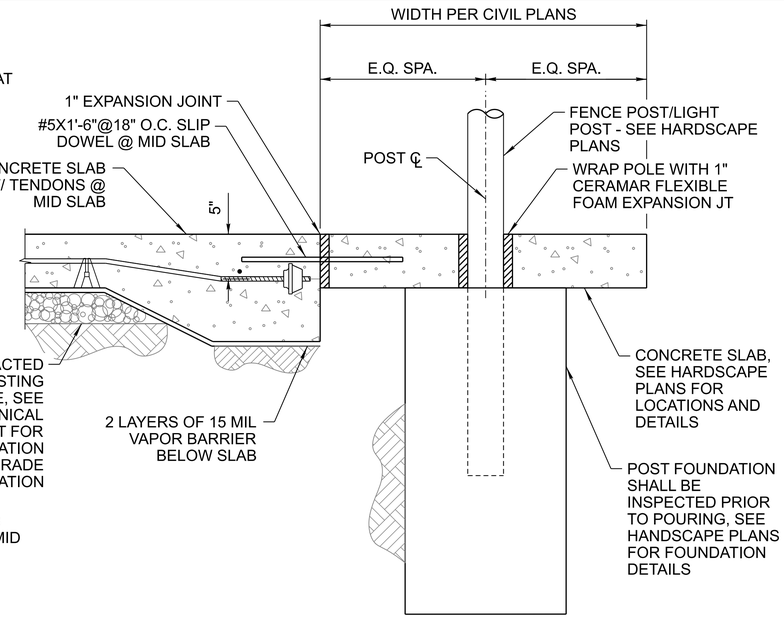
Scale: NTS





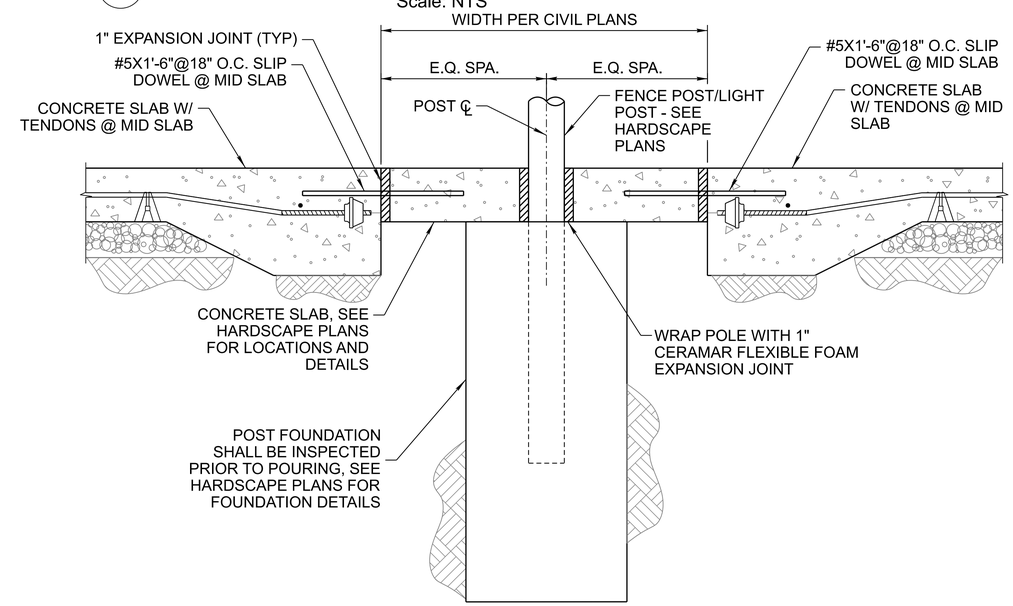
3 CORNER REINFORCEMENT

Scale: NTS



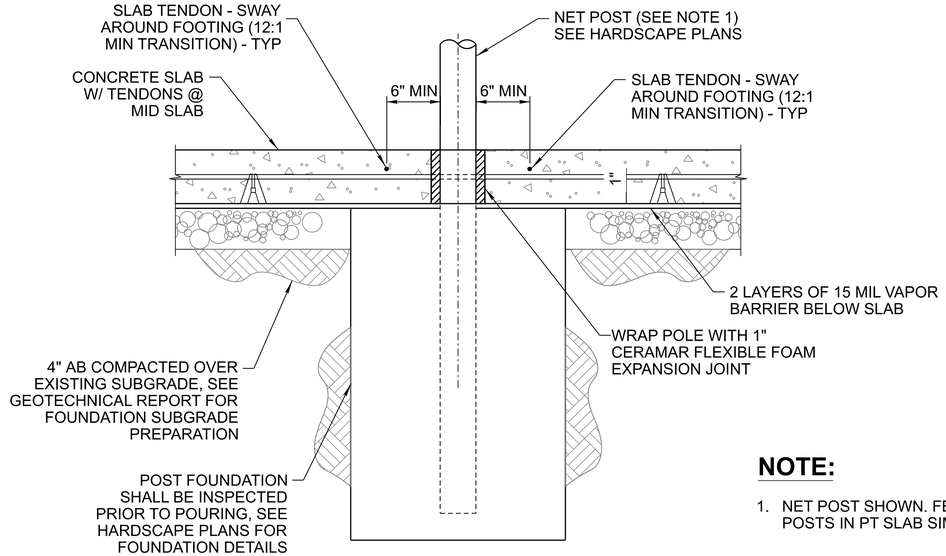
4 FENCE POST ADJACENT TO PT SLAB

Scale: NTS



5 SLAB WITH FENCE POST BETWEEN PT SLABS

Scale: NTS



6 POST ON SLAB

Scale: NTS

NOTE:

1. NET POST SHOWN. FENCE POSTS IN PT SLAB SIMILAR.

Revisions	Date

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Designed By: HGM
Drawn By: HGM
Checked By: SEO
Date: 4/17/2024
Project #: 2023033

Title: POST-TENSIONED FOUNDATION DETAILS

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

ethos ENGINEERING, LLC.
9180 S Kyrene Rd
Suite #104
Tempe, AZ 85284

KIVA # _____
SDEV # _____

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S05
63 OF 148

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LANDSCAPE NOTES

1. FINAL BUILDING PERMIT CANNOT BE OBTAINED UNTIL BONDING OR APPROVED ASSURANCES IS PROVIDED FOR THE LANDSCAPING WITHIN THE RIGHT-OF-WAY.
2. NO PLANT SUBSTITUTIONS, TYPE, OR QUANTITY DEVIATIONS FROM THE APPROVED LANDSCAPE OR IRRIGATION PLANS WITHOUT PRIOR APPROVAL FROM THE CITY OF PHOENIX.
3. ALL PLANT MATERIAL SPECIFICATIONS TO CONFORM TO THE ARIZONA NURSERYMAN ASSOCIATION STANDARDS.
4. VERIFY OWNERSHIP OF ANY PLANT MATERIAL OR IRRIGATION LOCATED IN PUBLIC RIGHT-OF-WAY. OBTAIN PERMISSION FROM PARKS & RECREATION DEPARTMENT (PRD), IN WRITING, PRIOR TO REMOVAL OF ANY CITY PLANT MATERIAL OR EQUIPMENT.
5. ALL EXISTING TREES AND SHRUBS IN RIGHT-OF-WAY DESIGNATED TO REMAIN BUT ARE DAMAGED OR DESTROYED WILL BE REPLACED IN LIKE SIZE AND KIND BY THE CONTRACTOR. CONTACT THE PARKS & RECREATION DEPARTMENT PRIOR TO ANY RIGHT-OF-WAY PLANT RELOCATIONS.
6. EXISTING CITY OF PHOENIX IRRIGATION SHALL BE MODIFIED IN RIGHT-OF-WAY AND CONNECTED TO THE NEW SYSTEM. MAINTAIN ANY THROUGH IRRIGATION REQUIREMENTS. CONTRACTOR TO CAP OFF OR ABANDON EXISTING IRRIGATION TO PLANT MATERIAL AND PROVIDE NEW IRRIGATION FROM PROJECT TO EXISTING RIGHT-OF-WAY LANDSCAPING.
7. ALL ON-SITE ACCESSIBLE SIDEWALKS SHALL BE A MINIMUM OF 5 FEET 0 INCHES WIDE AND HAVE A MAXIMUM SLOPE OF 1:20 WITH THE MAXIMUM CROSS SLOPE OF 1:50. ALL CURBS MUST PROVIDE ACCESSIBLE RAMPS PURSUANT TO THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS.
8. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL LAWS, CODES AND REGULATIONS APPLICABLE TO THE WORK COVERED BY THESE PLANS AND SPECIFICATIONS.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE THE LANDSCAPE CONSTRUCTION WORK COVERED BY THESE PLANS AND SPECIFICATIONS.
10. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THE LANDSCAPE CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL CALL FOR BLUE STAKE 263-1100 PRIOR TO ANY EXCAVATION.
11. ALL GENERAL SITE GRADING TO WITHIN (0.10 FOOT, INCLUDING ALL BERMS, SWALES AND RETENTION AREAS WILL BE CONSTRUCTED AS PER THE GRADING AND DRAINAGE PLANS. LANDSCAPE AREAS SHALL NOT EXCEED 3 TO 1 MAXIMUM SLOPE. THE LANDSCAPE AND IRRIGATION CONTRACTOR SHALL VERIFY AND ACCEPT THESE ROUGH GRADES PRIOR TO STARTING ANY LANDSCAPE AND IRRIGATION WORK. ALL DRAINAGE FLOWS SHALL BE PROTECTED AND MAINTAINED THROUGHOUT LANDSCAPE AND IRRIGATION CONSTRUCTION.
12. ANY DISCREPANCIES FOUND BETWEEN THESE PLANS AND SPECIFICATIONS AND THE SITE SHALL BE REPORTED TO THE CITY OF PHOENIX PRIOR TO STARTING ANY LANDSCAPE AND IRRIGATION WORK.
13. NO OVERHEAD POWERLINES ON PROJECT SITE EXIST.
14. SHOULD THE LANDSCAPE CONTRACTOR HAVE ANY QUESTIONS REGARDING THESE PLANS AND SPECIFICATIONS, OR SHOULD THERE BE ANY DISCREPANCIES, THE CONTRACTOR SHALL CONTACT THE CITY OF PHOENIX FOR CLARIFICATION BEFORE PROCEEDING FURTHER WITH ANY OTHER WORK.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE JOB SITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT COULD AFFECT THE INSTALLATION OF ANY WORK SET FORTH IN THESE PLANS OR CITY SPECIFICATIONS PRIOR TO SUBMITTING A BID.
16. CONTRACTOR SHALL VERIFY ROCK AND SOIL CONDITIONS WITHIN THE PROJECT SITE PRIOR TO BIDDING. NO EXTRA PAYMENT OR TIME EXTENSION WILL BE GIVEN DUE TO ROCKY SOIL CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING SITE INSPECTIONS AND CHECKING TESTING LOGS TO DETERMINE SUBSURFACE CONDITIONS PRIOR TO BIDDING. IN TURF AREAS CONTRACTOR TO REMOVE ALL ROCK LARGER THAN 2" FROM THE TOP 6" OF THE SUBGRADE, AND ALL ROCK 1/2" AND LARGER SHALL BE REMOVED FROM THE TOP 2" OF THE SUBGRADE.
17. CONTRACTOR TO VERIFY LIMITS OF DISTURBANCE THROUGHOUT THE PROJECT. BRING DISCREPANCIES IMMEDIATELY TO THE ATTENTION OF THE CITY OF PHOENIX.
18. THE JOB SITE AT THE COMPLETION OF THE CONSTRUCTION SHALL BE CLEANED OF ANY DEBRIS RESULTING FROM CONSTRUCTION. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, GUTTERS AND PAVEMENT HAVE BEEN SWEPT CLEAN OF ALL DIRT AND DEBRIS.
19. SEPARATE INSPECTIONS ARE REQUIRED FOR THE BACK FLOW PREVENTER AND RELATED ELECTRICAL CONNECTIONS.
20. ALL EQUIPMENT AND MATERIALS NOT SHOWN OR SPECIFIED ON THE PLANS OR IN CITY SPECIFICATIONS BUT WHICH ARE REQUIRED TO COMPLETE THIS INSTALLATION SHALL BE SUPPLIED BY THE CONTRACTOR AS PART OF THIS CONTRACT WORK SHALL BE CONSIDERED INCIDENTAL TO THE WORK INVOLVED.
21. THE PLANT PITS ARE TO BE INSPECTED BY CITY OF PHOENIX PRIOR TO PLANTING BY THE CONTRACTOR. THE CONTRACTOR SHALL REQUEST AN INSPECTION 48 HOURS IN ADVANCE.
22. PLANT PIT DEPTH SHALL BE MEASURED ON THE LOW SIDE OF PLANT PIT WHEN ON A SLOPE.
23. ALL PLANTS SHALL BE CENTERED IN PLANT PITS.
24. FINAL PLANT MATERIAL PLACEMENT IN THE FIELD MAY BE REQUIRED TO BE ADJUSTED WHERE TREES OCCUR DIRECTLY UNDER OR OVER EXISTING UTILITIES.
25. THE PLANT PIT SOIL MIXTURE SHALL CONSIST OF EQUAL PARTS EXISTING SOIL/MULCH THAT ARE THOROUGHLY MIXED PRIOR TO BACK FILLING SHALL BE IN SIX INCH (6") LIFTS. EACH LIFT SHALL BE WATER SETTLED WITHOUT PUDDLING.
26. WHERE CALICHE IS ENCOUNTERED IN PLANT PITS, THE WIDTH OF THE PIT SHALL BE INCREASED BY ONE-THIRD (1/3) OVER SPECIFICATIONS. A LIQUID PENETRATION, "ALCLEACHEY" OR APPROVED EQUAL SHALL BE INCORPORATED FOR EACH PIT PER MANUFACTURER'S RECOMMENDATIONS. NO OVER EXCAVATION SHALL OCCUR WITHOUT APPROVAL OF CITY OF PHOENIX. IF CALICHE IS DISCOVERED TO BE PREVALENT IN THE AREA, CONTRACTOR SHALL IMMEDIATELY NOTIFY CITY OF PHOENIX TO DETERMINE ACTION AND ASSOCIATED COST. CONTRACTOR SHALL NOT PROCEED WITH ADDITIONAL WORK UNTIL DIRECTED BY CITY OF PHOENIX LANDSCAPE ARCHITECT PROJECT MANAGER.
27. PLANT LOCATIONS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL STAKE TREE AND SHRUB LOCATIONS FOR 5 GALLON PLANTS AND LARGER. THE LOCATIONS ARE TO BE APPROVED BY CITY OF PHOENIX LANDSCAPE ARCHITECT PROJECT MANGER PRIOR TO INSTALLATION. THE STAKES SHALL BE MARKED ACCORDING TO SPECIFICATIONS.
28. THE CONTRACTOR SHALL PROVIDE GRANITE SAMPLES TO CITY PRIOR TO INSTALLATION. MINIMUM OF 1 TON OF EACH COLOR (COVERS AN AREA APPROXIMATELY 10'X10') LEVEL SAMPLE IN AREA. SAMPLES TO BE PLACED AT EACH RESPECTIVE PARK SITE OR AT LOCATION TO BE DETERMINED BY CITY OF PHOENIX LANDSCAPE ARCHITECT PROJECT MANAGER.

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:	DETAILS:	QTYS:
	4" CONCRETE PAVING - BROOM FINISH	SEE DTL 4 SHEET HS-301	474 SQ. FT.
	6" CONCRETE PAVING - BROOM FINISH	SEE DTL 4 SHEET HS-301	37,139 SQ. FT.
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL	SEE DTL 1 SHEET LS-302	127,237 SQ. FT.
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL	SEE DTL 3 SHEET LS-302	19,239 SQ. FT.
	COMPACTED AGGREGATE BASE	SEE SPECS	6,912 SQ. FT.
	POST TENSION CONCRETE SPORT COURT	SEE STRUCTURAL	31,897 SQ. FT.
	SEED: COMMON BERMUDA	SEE SPECS	52,749 SQ. FT.
	NATIVE SEED MIX	SEE SPECS	62,680 SQ. FT.
	SAND (USGA SAND)	SEE SPECS	4,000 SQ. FT.

NOTE:
QUANTITIES ARE GIVEN FOR CONTRACTOR CONVENIENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITY TAKE-OFFS AND VERIFICATIONS. IF A DISCREPANCY OCCURS BETWEEN ANY SUMMARY TABLE AND THE PLANS, THE PLAN QUANTITIES ARE ASSUMED TO BE CORRECT.

PLANT SYMBOLS:

	GENUS/SPECIES	COMMON NAME	QTYS	SIZE	REMARKS	CALIPER
	TREES:					
△	ACACIA ANEURA	MULGA	15	24" BOX	SINGLE TRUNK	1.75"-2.5"
	CHILOPSIS LINEARIS ART'S SEEDLESS	SEEDLESS DESERT WILLOW	52	24" BOX	MULTI TRUNK	1.75"-2.5"
	OLNEYA TESOTA	DESERT IRONWOOD	30	36" BOX	MULTI TRUNK	1.75"-2.25"
	PISTACIA CHINENSIS	CHINESE PISTACHE	21	24" BOX	SINGLE TRUNK	1.75"-2.5"
	PROSOPIS PUBESCENS	SCREWBEAN MESQUITE	26	36" BOX	LOW BREAKING	1.75"-2.25"
Q	QUERCUS VIRGINIANA	LIVE OAK	46	36" BOX	SINGLE TRUNK	1.75"-2.5"
□	ULMUS PARVIFOLIA	CHINESE ELM	21	24" BOX	SINGLE TRUNK	1.5"-2.0"
PIP	EXISTING TREE (PROTECT IN PLACE)		-			
	SHRUBS:					
	ASCLEPIAS SUBULATA	DESERT MILKWEED	93	5 GAL.	CONTAINER FULL	
	CALLIANDRA ERIOPHYLLA	PINK FAIRY DUSTER	80	5 GAL.	CONTAINER FULL	
	EREMOPHILA GLABRA 'MINGENEW GOLD'	OUTBACK SUNRISE EMU	63	5 GAL.	CONTAINER FULL	
	ENCELIA FARINOSA	BRITTLEBUSH	98	5 GAL.	CONTAINER FULL	
	LANTANA 'NEW GOLD'	NEW GOLD LANTANA	65	1 GAL.	CONTAINER FULL	
	LEUCOPHYLLUM LANGMANIAE 'LYNN'S LEGACY'	LYNN'S LEGACY TEXAS SAGE	44	5 GAL.	CONTAINER FULL	
	MELAMPODIUM LEUCANTHUM	BLACKFOOT DAISY	87	1 GAL.	CONTAINER FULL	
	RUELLIA PENNINSULARIS	BAJA RUELLIA	41	5 GAL.	CONTAINER FULL	
	RUSSELIA EQUISETIFORMIS	CORAL FOUNTAIN	49	5 GAL.	CONTAINER FULL	
	SIMMONDSIA CHINENSIS 'VISTA'	COMPACT JOJOBA	42	5 GAL.	CONTAINER FULL	
	VERBENA GOODDINGII	GOODING VERBENA	103	1 GAL.	CONTAINER FULL	
	SIGHT VISIBILITY TRIANGLE					
S	SALVAGED BOULDERS +/-16					

NATIVE SEED MIX

BOTANICAL NAME	COMMON NAME	PLS# / ACRE
Ambrosia deltoidea	Triangle Leaf Bursage	1.5
Aristada purpurea	Purple Three-awn	2
Baileya multiradiata	Desert Marigold	1.5
Bouteloua aristidoides	Needle Grama	2
Cassia covesii	Desert Senna	1.5
Castilleja exserta	Owl's Clover	1
Dasyochloa pulchella	Fluff Grass	1
Dichelostemma capitatum	Blue Dicks	1
Eschscholzia californica	California Poppy	2
Lupinus sparsiflorus	Desert Lupine	1
Penstemon sp.	Penstemon	1
Phacelia campanularia	Desert Bluebell	1
Sporobolus cryptandrus	Sand Dropseed	0.5
	TOTAL:	17

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION OR RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: **LANDSCAPE GENERAL NOTES**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No. **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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LS-101
64 OF 148

P:\22\618.002\J2Cad\Sheets\1618.002-LS100.dwg 4/29/2024 12:23:57 PMB-W.CTB MARIA NOVACEK

HIGHLAND CANAL

BOCCE BALL

PROPERTY LINE

MULTI-USE PATH

CORN HOLE

FOOD TRUCK GATE

FOOD TRUCK ENTRANCE

S 12TH ST

TURF

SAND VOLLEYBALL

BASKETBALL COURT

SKATE PLAZA

D.G. MULTI-USE PATH

TENNIS COURT

PICKLEBALL

8" SS (VCP)

MATCH LINE SHEET LS-202

MATCH LINE SHEET LS-204

0 20' 40'

SCALE: 1"=20'

PLANT SYMBOLS:

GENUS/SPECIES

TREES:

- ACACIA ANEURA
- CHILOPSIS LINEARIS ART'S SEEDLESS
- OLNEYA TESOTA
- PISTACIA CHINENSIS
- PROSOPIS PUBESCENS
- QUERCUS VIRGINIANA
- ULMUS PARVIFOLIA
- EXISTING TREE (PROTECT IN PLACE)

SHRUBS:

- ASCLEPIAS SUBULATA
- CALLIANDRA ERIOPHYLLA
- EREMOPHILA GLABRA 'MINGENEW GOLD'
- ENCELIA FARINOSA
- LANTANA 'NEW GOLD'
- LEUCOPHYLLUM LANGMANIAE 'LYNN'S LEGACY'
- MELAMPODIUM LEUCANTHUM
- RUELLIA PENNINSULARIS
- RUSSELIA EQUISETIFORMIS
- SIMMONDSIA CHINENSIS 'VISTA'
- VERBENA GOODDINGII
- SIGHT VISIBILITY TRIANGLE
- SALVAGED BOULDERS
- NATIVE SEED MIX
- RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
SHEET LS-204	SHEET LS-205	SHEET LS-206
SHEET LS-207	SHEET LS-208	SHEET LS-209

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION OR RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

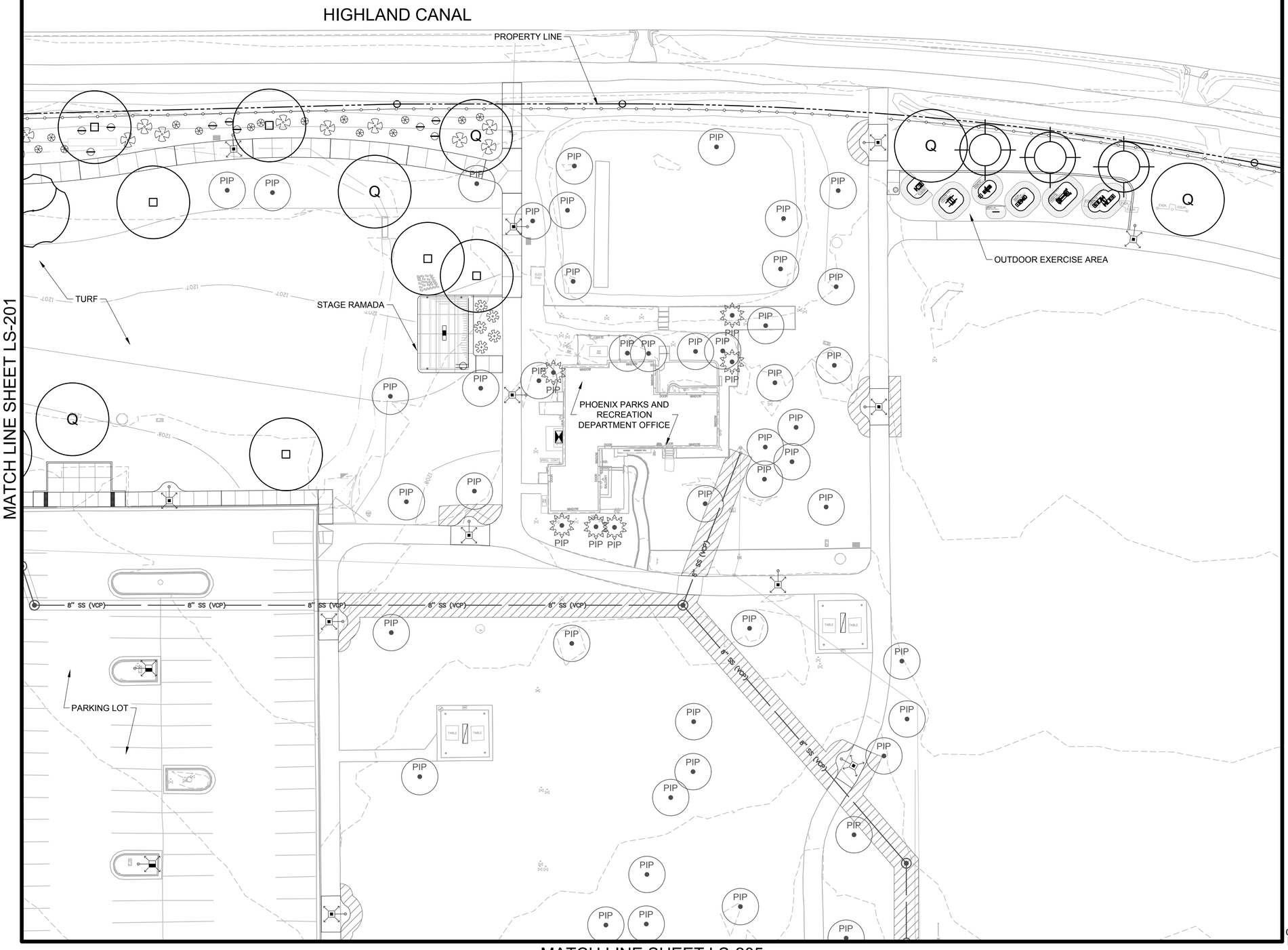
KIVA #
SDEV #

Sheet
LS-201
65 OF 148

Title:
LANDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\221618.002\J2Cad\Sheets\18\18.002-LS200.dwg 4/29/2024 12:24:05 PM B-W.CTB MARIA NOVACEK



PLANT SYMBOLS:

GENUS/SPECIES

TREES:

- ACACIA ANEURA
- CHILOPSIS LINEARIS ART'S SEEDLESS
- OLNEYA TESOTA
- PISTACIA CHINENSIS
- PROSOPIS PUBESCENS
- Q — QUERCUS VIRGINIANA
- ULMUS PARVIFOLIA
- PIP — EXISTING TREE (PROTECT IN PLACE)

SHRUBS:

- ASCLEPIAS SUBULATA
- CALLIANDRA ERIOPHYLLA
- EREMOPHILA GLABRA 'MINGENEW GOLD'
- ENCELIA FARINOSA
- LANTANA 'NEW GOLD'
- LEUCOPHYLLUM LANGMANIAE 'LYNN'S LEGACY'
- MELAMPODIUM LEUCANTHUM
- RUELLIA PENNINSULARIS
- RUSSELIA EQUISETIFORMIS
- SIMMONDSIA CHINENSIS 'VISTA'
- VERBENA GOODDINGII
- SIGHT VISIBILITY TRIANGLE
- S — SALVAGED BOULDERS
- NATIVE SEED MIX
- RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
SHEET LS-204	SHEET LS-205	SHEET LS-206
SHEET LS-207	SHEET LS-208	SHEET LS-209

-WARNING-
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0 20' 40'
SCALE: 1"=20'

Revisions	Date

PRE-FINAL
100%
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Designed By:	MN
Drawn By:	MN
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

Title:
LANDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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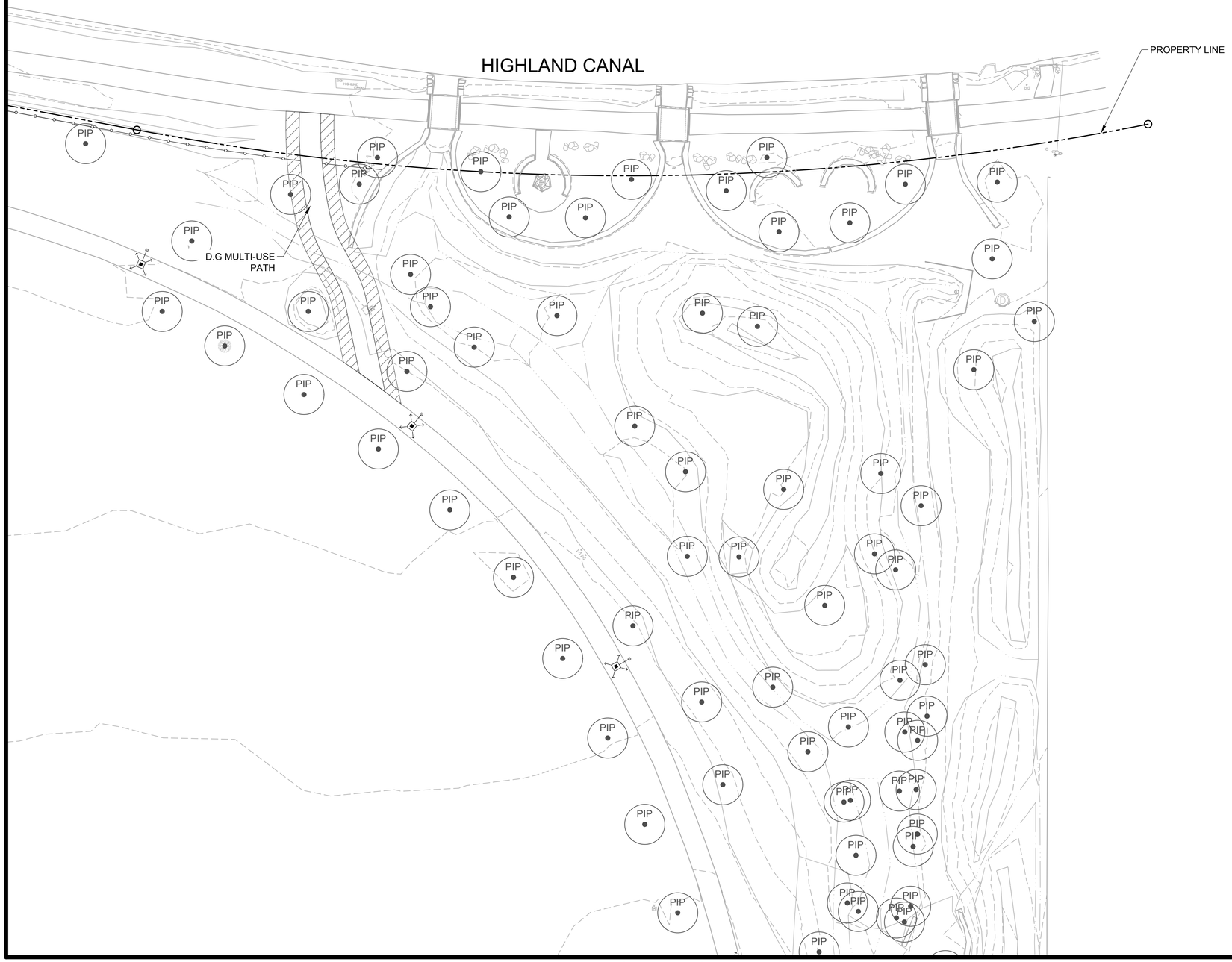
Sheet
LS-202
66 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\221618.002\i2\Cad\Sheets\1618.002-LS200.dwg 4/29/2024 12:24:08 PMB-W.CTB MARIA NOVACEK

NO NEW PLANTING THIS SHEET



MATCH LINE SHEET LS-202

MATCH LINE SHEET LS-206

PLANT SYMBOLS:

GENUS/SPECIES

TREES:

- ACACIA ANEURA
- CHILOPSIS LINEARIS ART'S SEEDLESS
- OLNEYA TESOTA
- PISTACIA CHINENSIS
- PROSOPIS PUBESCENS
- QUERCUS VIRGINIANA
- ULMUS PARVIFOLIA
- EXISTING TREE (PROTECT IN PLACE)

SHRUBS:

- ASCLEPIAS SUBULATA
- CALLIANDRA ERIOPHYLLA
- EREMOPHILA GLABRA 'MINGENEW GOLD'
- ENCELIA FARINOSA
- LANTANA 'NEW GOLD'
- LEUCOPHYLLUM LANGMANIAE 'LYNN'S LEGACY'
- MELAMPODIUM LEUCANTHUM
- RUELLIA PENNINSULARIS
- RUSSELIA EQUISETIFORMIS
- SIMMONDSIA CHINENSIS 'VISTA'
- VERBENA GOODDINGII
- SIGHT VISIBILITY TRIANGLE
- SALVAGED BOULDERS
- NATIVE SEED MIX
- RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
SHEET LS-204	SHEET LS-205	SHEET LS-206
SHEET LS-207	SHEET LS-208	SHEET LS-209

-WARNING-
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In Maricopa County: (602) 263-1100

0 20' 40'
SCALE: 1"=20'

J Design
4549 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

KIVA #
SDEV #

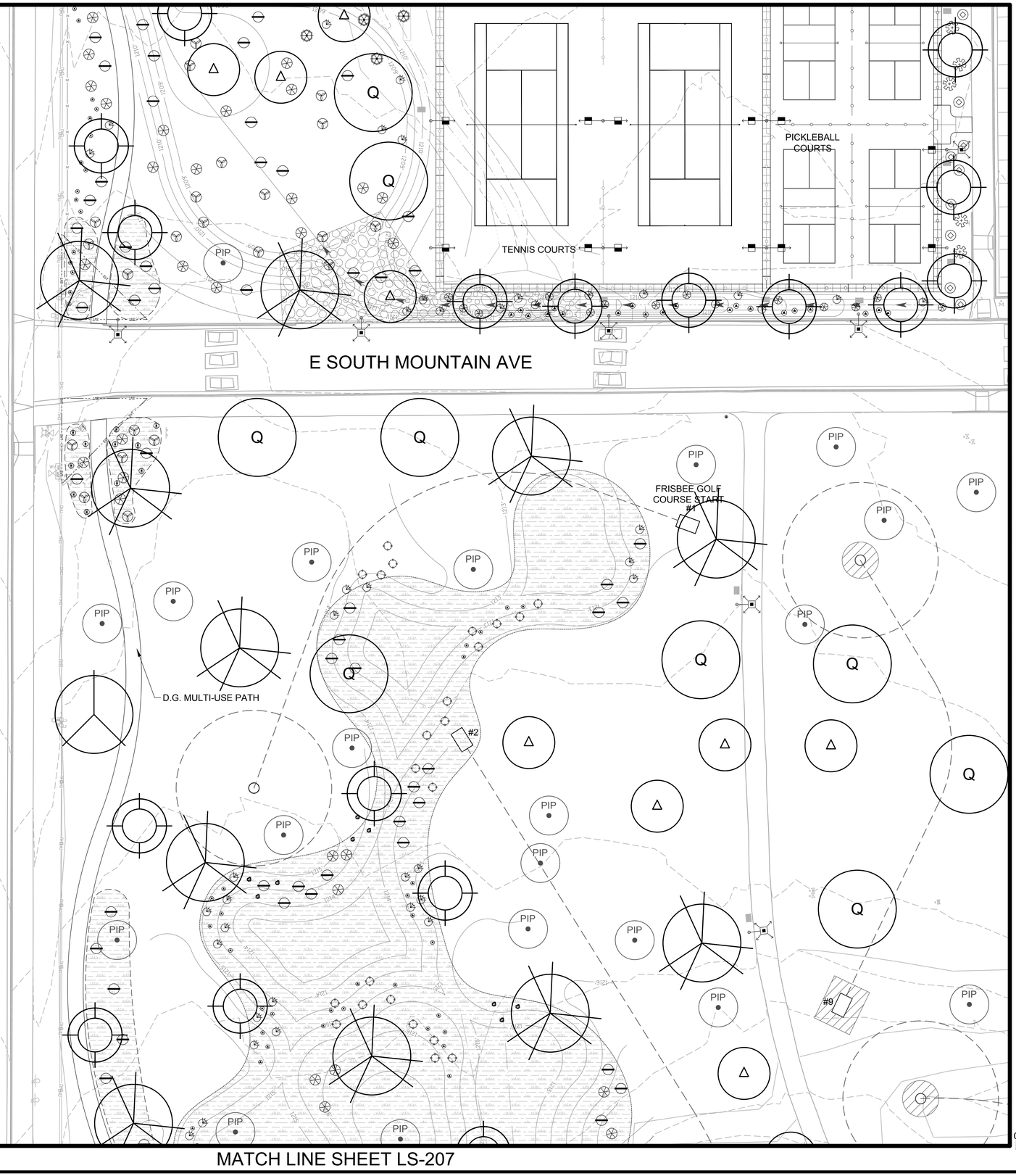
Sheet
LS-203
67 OF 148

Title:
LANDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\22\1618.002\L2\Cad\Sheets\1618.002-LS200.dwg 4/29/2024 12:24:11 PM MARIA.NOVACEK

MATCH LINE SHEET LS-201



MATCH LINE SHEET LS-205

PLANT SYMBOLS:

GENUS/SPECIES

TREES:

- ACACIA ANEURA
- CHILOPSIS LINEARIS ART'S SEEDLESS
- OLNEYA TESOTA
- PISTACIA CHINENSIS
- PROSOPIS PUBESCENS
- Q — QUERCUS VIRGINIANA
- ULMUS PARVIFOLIA
- PIP — EXISTING TREE (PROTECT IN PLACE)

SHRUBS:

- ASCLEPIAS SUBULATA
- CALLIANDRA ERIOPHYLLA
- EREMOPHILA GLABRA 'MINGENEW GOLD'
- ENCELIA FARINOSA
- LANTANA 'NEW GOLD'
- LEUCOPHYLLUM LANGMANIAE 'LYNN'S LEGACY'
- MELAMPODIUM LEUCANTHUM
- RUELLIA PENNINSULARIS
- RUSSELIA EQUISETIFORMIS
- SIMMONDSIA CHINENSIS 'VISTA'
- VERBENA GOODDINGII
- SVT — SIGHT VISIBILITY TRIANGLE
- S — SALVAGED BOULDERS

NATIVE SEED MIX

RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
SHEET LS-204	SHEET LS-205	SHEET LS-206
SHEET LS-207	SHEET LS-208	SHEET LS-209

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

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ARIZONA 811
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In Maricopa County: (602) 263-1100

0 20' 40'
SCALE: 1"=20'

MATCH LINE SHEET LS-207

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: **LANDSCAPE PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No. **PA75200668-1**

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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Sheet
LS-204
68 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

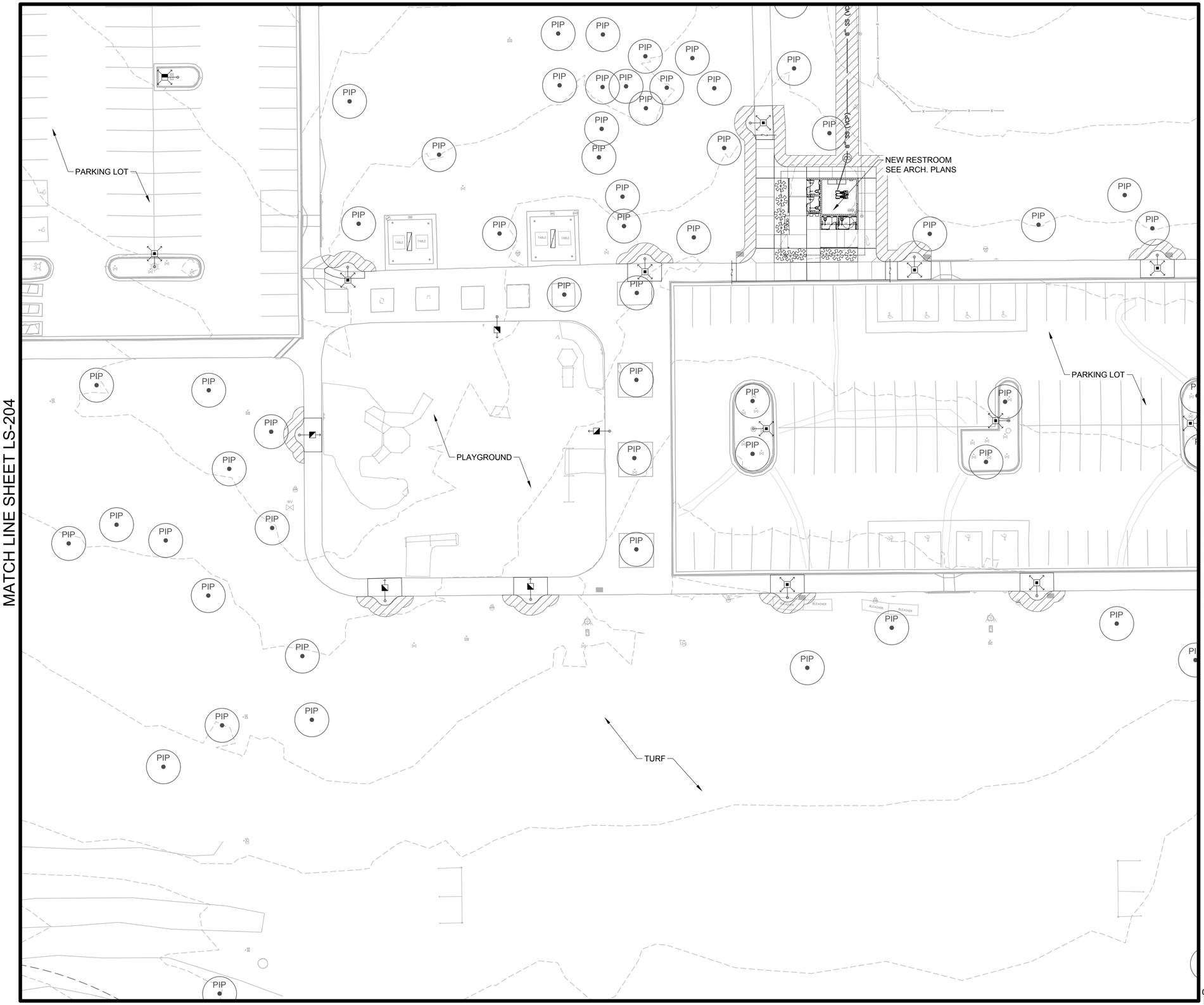
P:\22\618.002\J2Cad\Sheets\1618.002-LS200.dwg 4/29/2024 12:24:14 PMB-W.CTB MARIA NOVACEK

MATCH LINE SHEET LS-202

MATCH LINE SHEET LS-204

MATCH LINE SHEET LS-206

MATCH LINE SHEET LS-208



PLANT SYMBOLS:

GENUS/SPECIES

TREES:

- △ — ACACIA ANEURA
- CHILOPSIS LINEARIS ART'S SEEDLESS
- OLNEYA TESOTA
- PISTACIA CHINENSIS
- PROSOPIS PUBESCENS
- Q — QUERCUS VIRGINIANA
- □ — ULMUS PARVIFOLIA
- PIP — EXISTING TREE (PROTECT IN PLACE)

SHRUBS:

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- CALLIANDRA ERIOPHYLLA
- EREMOPHILA GLABRA 'MINGENEW GOLD'
- ENCELIA FARINOSA
- LANTANA 'NEW GOLD'
- LEUCOPHYLLUM LANGMANIAE 'LYNN'S LEGACY'
- MELAMPODIUM LEUCANTHUM
- RUELLIA PENNINSULARIS
- RUSSELIA EQUISETIFORMIS
- SIMMONDSIA CHINENSIS 'VISTA'
- VERBENA GOODDINGII
- SVT — SVT — SIGHT VISIBILITY TRIANGLE
- S — SALVAGED BOULDERS
- NATIVE SEED MIX
- RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
SHEET LS-204	SHEET LS-205	SHEET LS-206
SHEET LS-207	SHEET LS-208	SHEET LS-209

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

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In Maricopa County: (602) 263-1100

0 20' 40'
SCALE: 1"=20'

Revisions	Date

PRE-FINAL
100%
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CONSTRUCTION
OR
RECORDING

Designed By:	MN
Drawn By:	MN
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

Title: **LANDSCAPE PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX **OFFICE OF THE CITY ENGINEER** **PARKS AND RECREATION DEPT.** | **HIGHLINE PARK**

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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Sheet
LS-205
69 OF 148

P:\22\1618.002\L2\Cad\Sheets\1618.002-LS200.dwg 4/29/2024 12:24:17 PM B-W.CTB MARIA NOVACEK

MATCH LINE SHEET LS-203

MATCH LINE SHEET LS-205

E SOUTH MOUNTAIN AVE

S 14TH ST

MULTI-USE PATH

FUTURE PUMP TRACK

PIP

MATCH LINE SHEET LS-209

PLANT SYMBOLS:

GENUS/SPECIES

TREES:

- △ — ACACIA ANEURA
- CHILOPSIS LINEARIS ART'S SEEDLESS
- OLNEYA TESOTA
- PISTACIA CHINENSIS
- PROSOPIS PUBESCENS
- Q — QUERCUS VIRGINIANA
- □ — ULMUS PARVIFOLIA
- PIP — EXISTING TREE (PROTECT IN PLACE)

SHRUBS:

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- LANTANA 'NEW GOLD'
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- RUELLIA PENNINSULARIS
- RUSSELIA EQUISETIFORMIS
- SIMMONDSIA CHINENSIS 'VISTA'
- VERBENA GOODDINGII
- SVT — SVT — SIGHT VISIBILITY TRIANGLE
- S — SALVAGED BOULDERS

NATIVE SEED MIX

RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
SHEET LS-204	SHEET LS-205	SHEET LS-206
SHEET LS-207	SHEET LS-208	SHEET LS-209

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

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ARIZONA 811
Arizona Blue Stake, Inc.
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In Maricopa County: (602) 263-1100

0 20' 40'
SCALE: 1"=20'

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: LANDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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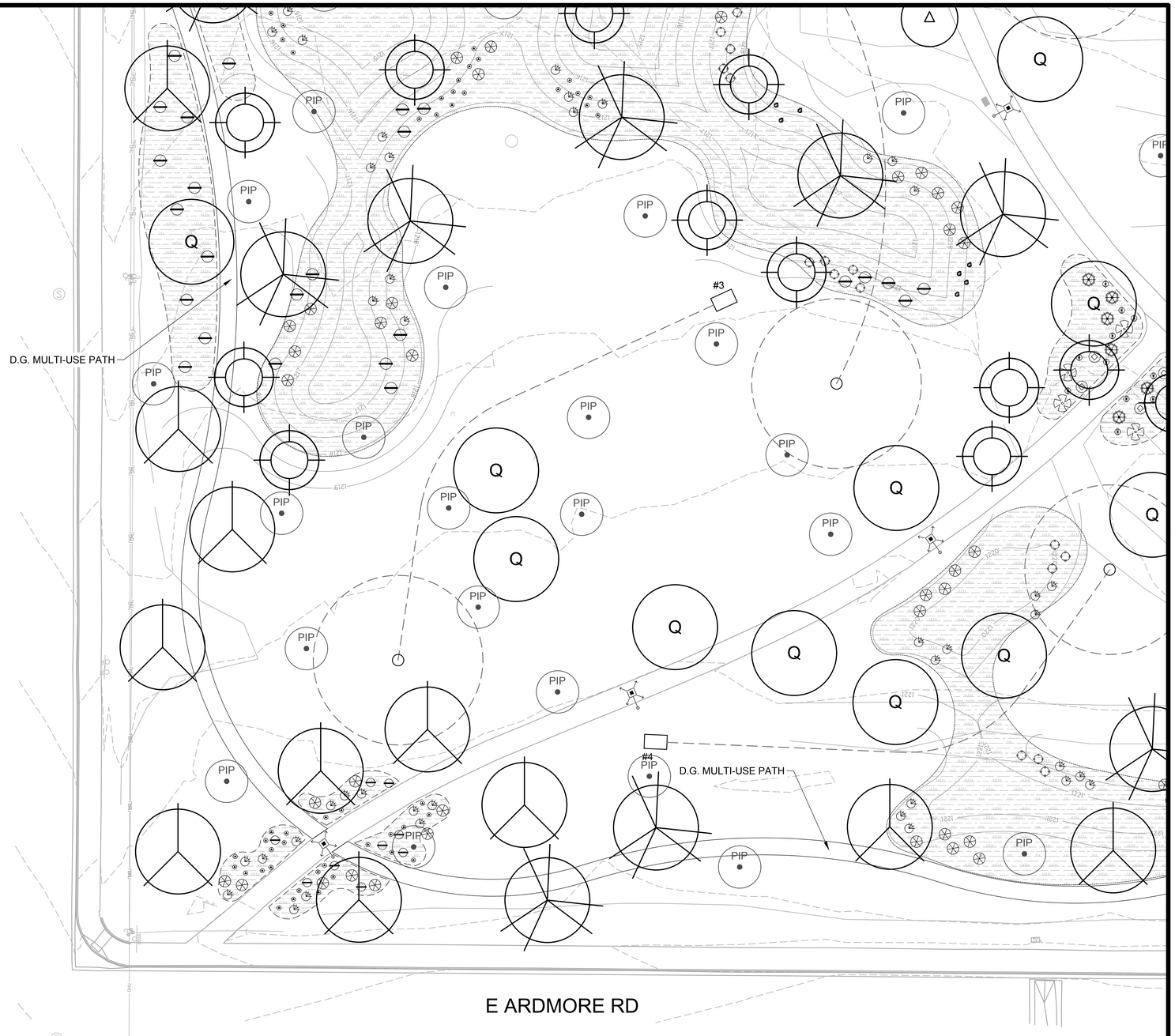
Sheet
LS-206
70 OF 148

P:\221618.002\J2Cad\Sheets\18.002-LS200.dwg 4/29/2024 12:24:20 PM B-W.CTB MARIA NOVACEK

MATCH LINE SHEET LS-204



MATCH LINE SHEET LS-208

PLANT SYMBOLS:

GENUS/SPECIES

TREES:

- △ — ACACIA ANEURA
- CHILOPSIS LINEARIS ART'S SEEDLESS
- OLNEYA TESOTA
- PISTACIA CHINENSIS
- PROSOPIS PUBESCENS
- Q — QUERCUS VIRGINIANA
- □ — ULMUS PARVIFOLIA
- PIP — EXISTING TREE (PROTECT IN PLACE)

SHRUBS:

- ASCLEPIAS SUBULATA
- CALLIANDRA ERIOPHYLLA
- EREMOPHILA GLABRA 'MINGENEW GOLD'
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- LANTANA 'NEW GOLD'
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- SIMMONDSIA CHINENSIS 'VISTA'
- VERBENA GOODDINGII
- SVT — SIGHT VISIBILITY TRIANGLE
- S — SALVAGED BOULDERS

NATIVE SEED MIX

RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
SHEET LS-204	SHEET LS-205	SHEET LS-206
SHEET LS-207	SHEET LS-208	SHEET LS-209

-WARNING-
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0 20' 40'
SCALE: 1"=20'

Revisions	Date

PRE-FINAL
100%
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Designed By:	MN
Drawn By:	MN
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

CITY OF PHOENIX | OFFICE OF THE CITY ENGINEER | PARKS AND RECREATION DEPT. | HIGHLINE PARK

Title: **LANDSCAPE PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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Sheet
LS-207
71 OF 148

P:\22\1618.002\L\2Cad\Sheets\1618.002-LS200.dwg 4/29/2024 12:24:23 PM B-W.CTB MARIA NOVACEK

MATCH LINE SHEET LS-205

MATCH LINE SHEET LS-207

MATCH LINE SHEET LS-209

E ARDMORE RD

D.G. MULTI-USE PATH

#5 #6 #7 #8

PIP Q

PLANT SYMBOLS:

GENUS/SPECIES

TREES:

- ACACIA ANEURA
- CHILOPSIS LINEARIS ART'S SEEDLESS
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- NATIVE SEED MIX
- RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
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SHEET LS-207	SHEET LS-208	SHEET LS-209

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Drawn By:	MN
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

Title: **LANDSCAPE PLAN**
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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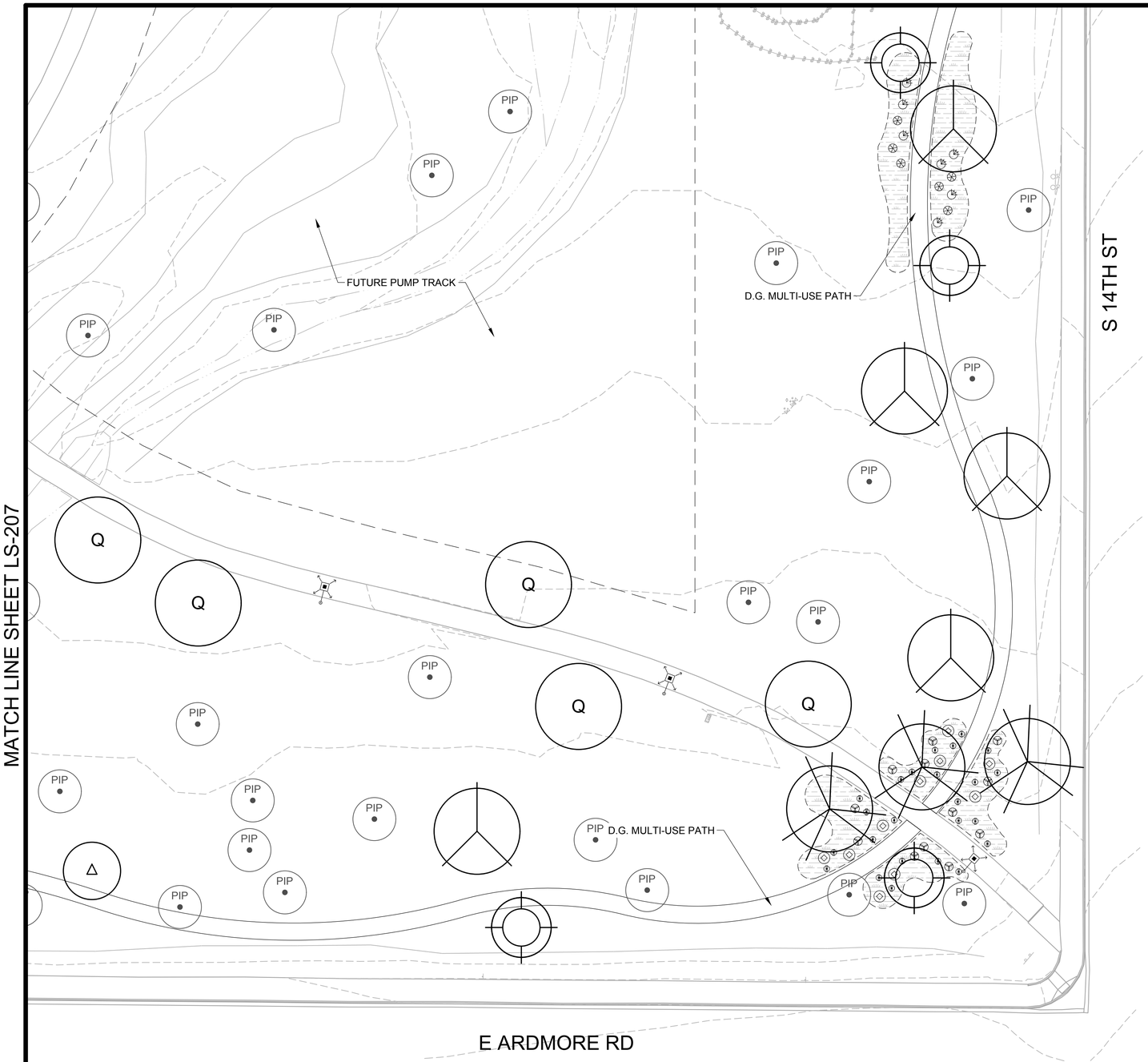
Sheet
LS-208
72 OF 148

P:\221618.002\L\02\cadSheets\1618.002-LS200.dwg 4/29/2024 12:24:26 PMB-W.CTB MARIA NOVACEK

MATCH LINE SHEET LS-206

MATCH LINE SHEET LS-207



PLANT SYMBOLS:

GENUS/SPECIES

TREES:

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- SVT — SVT — SIGHT VISIBILITY TRIANGLE
- S — SALVAGED BOULDERS

NATIVE SEED MIX

RESTORE DISTURBED LANDSCAPE AND IRRIGATION

SHEET LS-201	SHEET LS-202	SHEET LS-203
SHEET LS-204	SHEET LS-205	SHEET LS-206
SHEET LS-207	SHEET LS-208	SHEET LS-209

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

0 20' 40'
SCALE: 1"=20'

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title:
LANDSCAPE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No. **PA75200668-1**

KIVA # _____
SDEV # _____

Sheet
LS-209
73 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\22\1618.002\J2Cad\Sheets\1618.002-LS200.dwg 4/29/2024 12:24:30 PMB-W.CTB MARIA NOVACEK

HIGHLAND CANAL

S 12TH ST

8" SS (VCP)

PIP

MATCH LINE SHEET LS-304

MATCH LINE SHEET LS-302

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By:	MN
Drawn By:	MN
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

SHEET LS-301	SHEET LS-302	SHEET LS-303
SHEET LS-304	SHEET LS-305	SHEET LS-306
SHEET LS-307	SHEET LS-308	SHEET LS-309

-WARNING-

OVERHEAD POWER LINES MAY PRESENT CONSTRUCTION HAZARD

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
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J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
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0 20' 40'
SCALE: 1"=20'

KIVA #
SDEV #

Sheet
LS-301
74 OF 148

Title:
SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\221618.002\L\02\cad\Sheets\1618.002-LS300.dwg 4/29/2024 12:24:38 PMB-W.CTB MARIA NOVACEK

HIGHLAND CANAL

MATCH LINE SHEET LS-301

MATCH LINE SHEET LS-303

MATCH LINE SHEET LS-305

8" SS (VCP)

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND

Revisions	Date

PRE-FINAL
100%
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Designed By:	MN
Drawn By:	MN
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

SHEET LS-301	SHEET LS-302	SHEET LS-303
SHEET LS-304	SHEET LS-305	SHEET LS-306
SHEET LS-307	SHEET LS-308	SHEET LS-309

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

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0 20' 40'
SCALE: 1"=20'

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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Sheet
LS-302
75 OF 148

Title:
SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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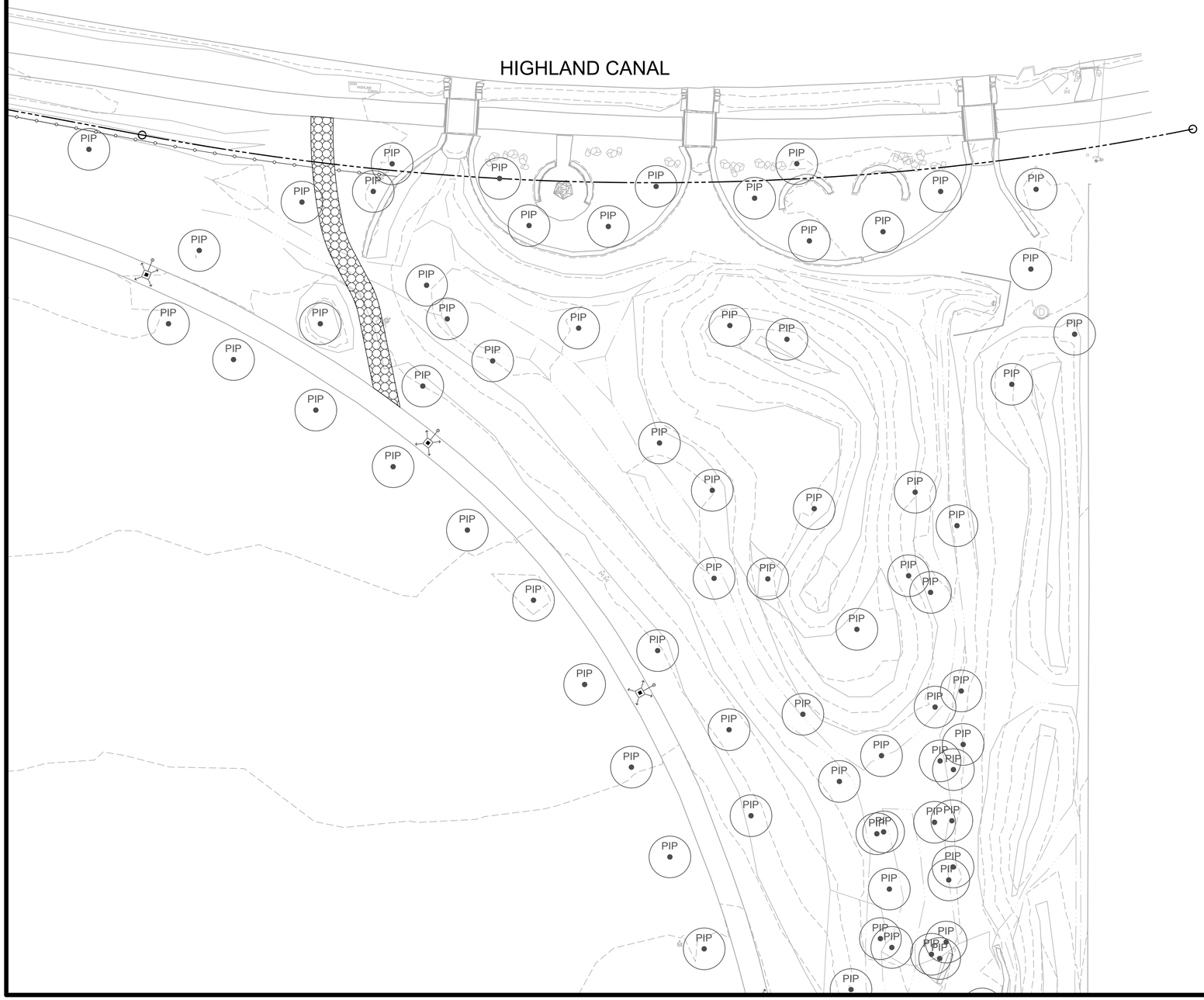
MATCH LINE SHEET LS-302

HIGHLAND CANAL



MATCH LINE SHEET LS-306

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

SHEET LS-301	SHEET LS-302	SHEET LS-303
SHEET LS-304	SHEET LS-305	SHEET LS-306
SHEET LS-307	SHEET LS-308	SHEET LS-309

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

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In Maricopa County: (602) 263-1100

0 20' 40'
SCALE: 1"=20'

J Design
4549 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
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KIVA # _____
SDEV # _____

Sheet
LS-303
76 OF 148

Title:
SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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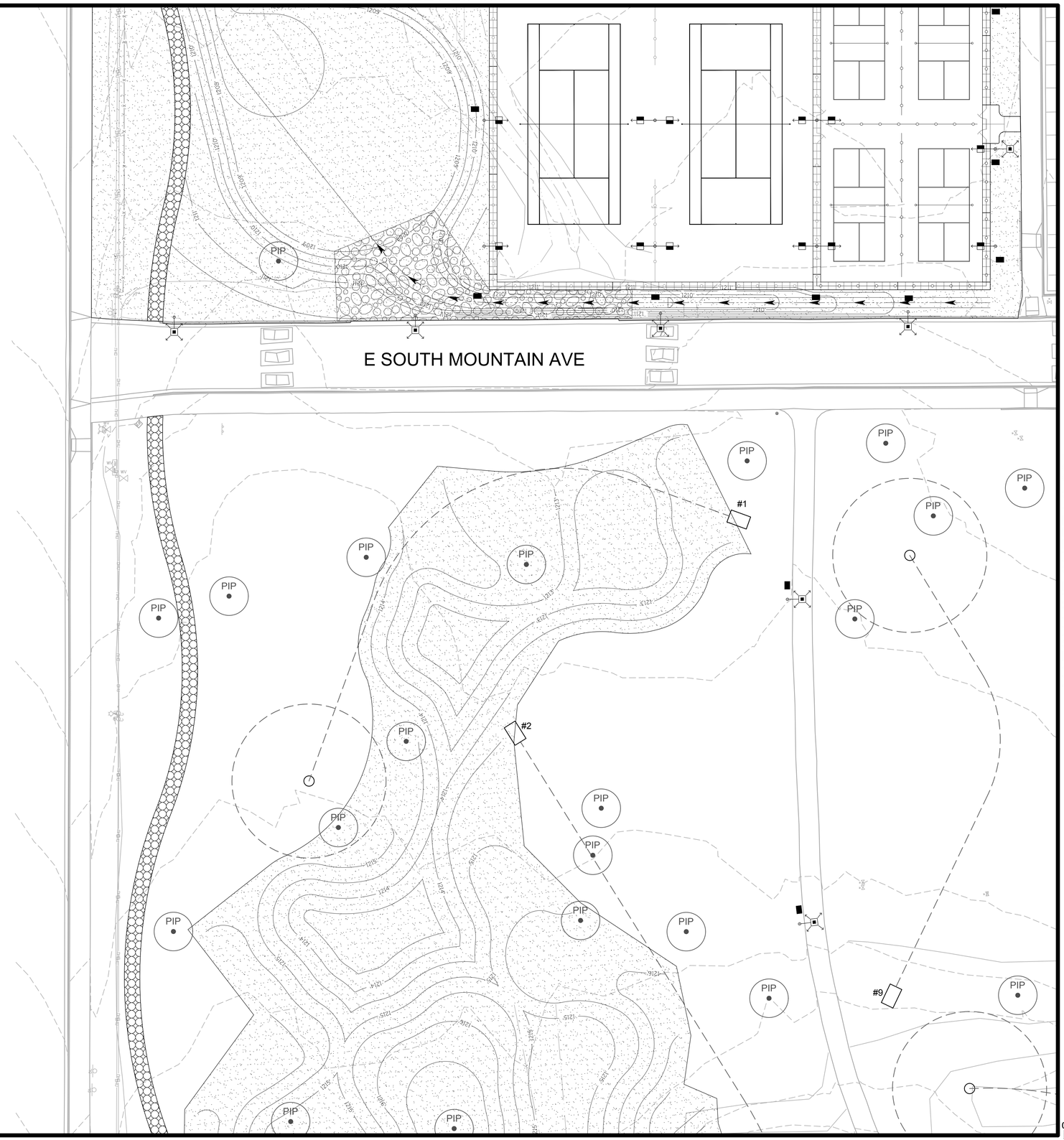
MATCH LINE SHEET LS-301



MATCH LINE SHEET LS-307

MATCH LINE SHEET LS-305

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND

Revisions	Date

PRE-FINAL
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Designed By:	MN
Drawn By:	MN
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

SHEET LS-301	SHEET LS-302	SHEET LS-303
SHEET LS-304	SHEET LS-305	SHEET LS-306
SHEET LS-307	SHEET LS-308	SHEET LS-309

-WARNING-
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0 20' 40'
SCALE: 1"=20'

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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KIVA # _____
SDEV # _____

Sheet
LS-304
77 OF 148

Title:
SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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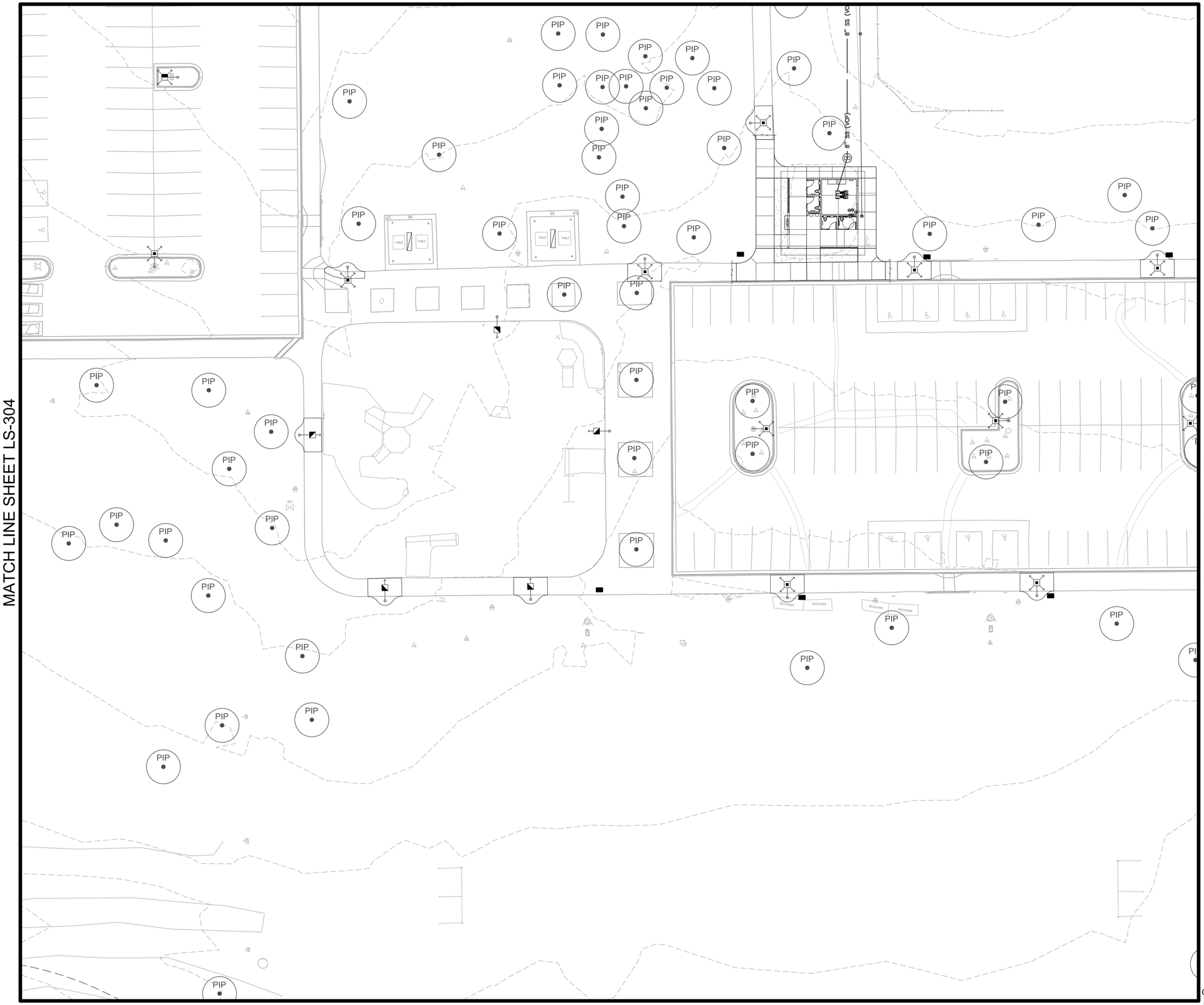
MATCH LINE SHEET LS-302



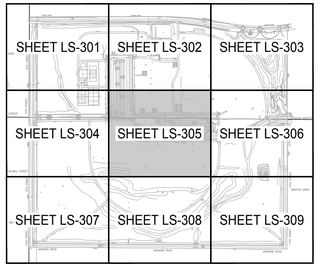
MATCH LINE SHEET LS-304

MATCH LINE SHEET LS-306

MATCH LINE SHEET LS-308

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND



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J2 Design
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Revisions	Date

PRE-FINAL
100%
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Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

KIVA #
SDEV #

Sheet
LS-305
78 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\221618.002\J2Cad\Sheets\1618.002-LS300.dwg 4/29/2024 12:24:49 PMB-W.CTB MARIA NOVACEK

MATCH LINE SHEET LS-303

MATCH LINE SHEET LS-305

E SOUTH MOUNTAIN AVE

S 14TH ST

FUTURE PUMP TRACK

MATCH LINE SHEET LS-309

PIP

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND

Revisions	Date

PRE-FINAL
100%
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OR
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Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

SHEET LS-301	SHEET LS-302	SHEET LS-303
SHEET LS-304	SHEET LS-305	SHEET LS-306
SHEET LS-307	SHEET LS-308	SHEET LS-309

-WARNING-
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0 20' 40'
SCALE: 1"=20'

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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Sheet
LS-306
79 OF 148

Title:
SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\22\1618.002\J2\Cad\Sheets\1618.002-LS300.dwg 4/29/2024 12:24:52 PM B-W.CTB MARIA NOVACEK

MATCH LINE SHEET LS-304

S 12TH ST

E ARDMORE RD

MATCH LINE SHEET LS-308

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By:	MN
Drawn By:	MN
Checked By:	JB
Date:	4/19/2024
Project #:	22.1618.002

SHEET LS-301	SHEET LS-302
SHEET LS-304	SHEET LS-305
SHEET LS-307	SHEET LS-308

SHEET LS-303
SHEET LS-306
SHEET LS-309

-WARNING-
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0 20' 40'
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J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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Sheet
LS-307
80 OF 148

Title:
SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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MATCH LINE SHEET LS-305

MATCH LINE SHEET LS-307

MATCH LINE SHEET LS-309

E ARDMORE RD

PIP

#5 #6 #7 #8

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: MN

Drawn By: MN

Checked By: JB

Date: 4/19/2024

Project #: 22.1618.002

SHEET LS-301	SHEET LS-302	SHEET LS-303
SHEET LS-304	SHEET LS-305	SHEET LS-306
SHEET LS-307	SHEET LS-308	SHEET LS-309

-WARNING-
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0 20' 40'
SCALE: 1"=20'

J2 Design
4549 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA #
SDEV #

Note:
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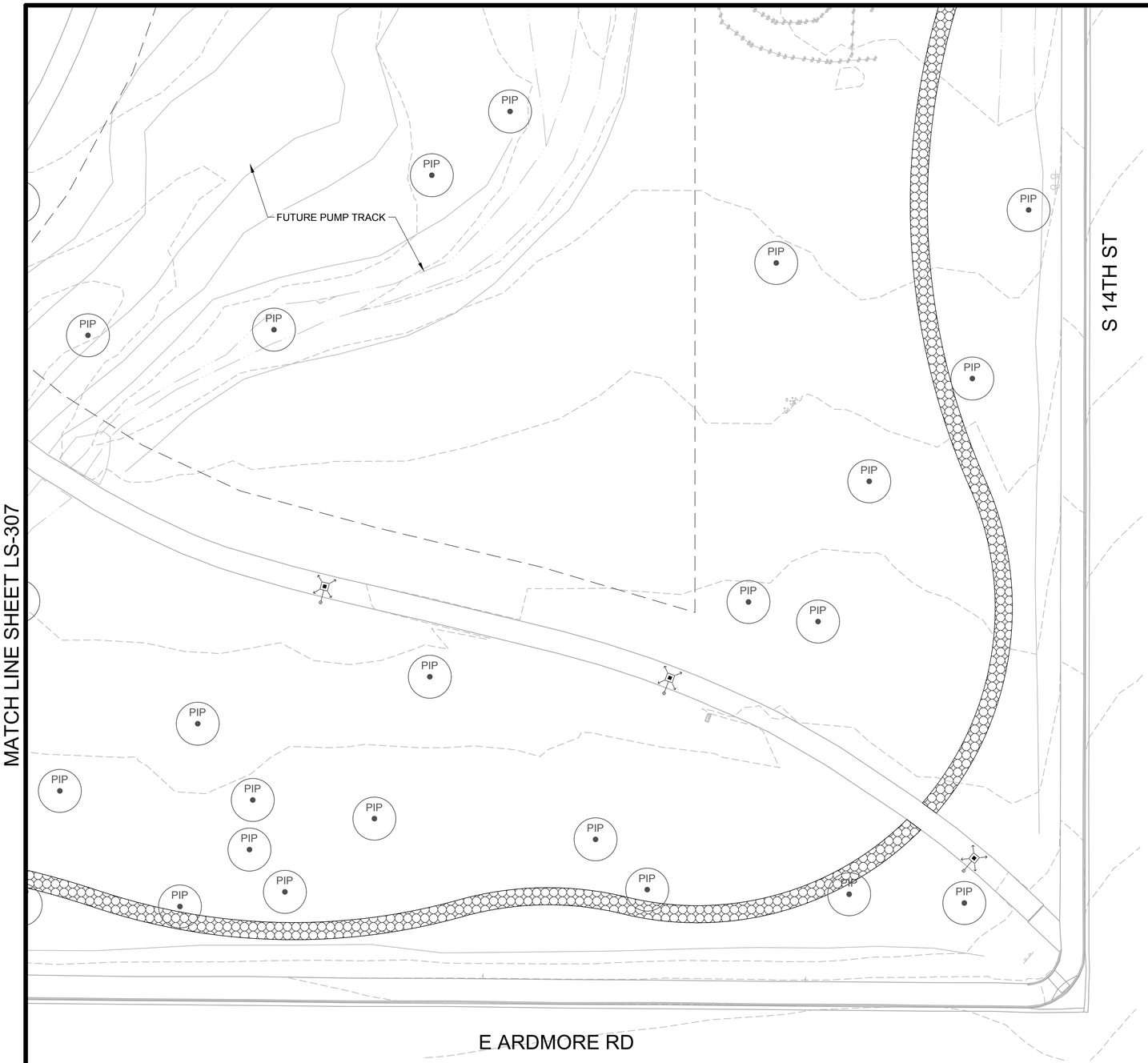
Sheet
LS-308
81 OF 148

Title:
SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX | OFFICE OF THE CITY ENGINEER | PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\22\1618.002\J2Cad\Sheets\1618.002-LS300.dwg 4/29/2024 12:24:58 PM MARIA.NOVACEK

MATCH LINE SHEET LS-306



MATCH LINE SHEET LS-307

SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:
	DECOMPOSED GRANITE SIZE: ¼" SCREENED COLOR: MATCH EXISTING OR APPROVED EQUAL
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: APACHE RED OR APPROVED EQUAL
	COMPACTED AGGREGATE BASE
	SEED: COMMON BERMUDA
	SAND

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

SHEET LS-301	SHEET LS-302	SHEET LS-303
SHEET LS-304	SHEET LS-305	SHEET LS-306
SHEET LS-307	SHEET LS-308	SHEET LS-309

-WARNING-
OVERHEAD POWER LINES MAY EXIST IN PROJECT CONSTRUCTION LIMITS

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0 20' 40'
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KIVA #
SDEV #

Sheet
LS-309
82 OF 148

Title: SURFACE MATERIAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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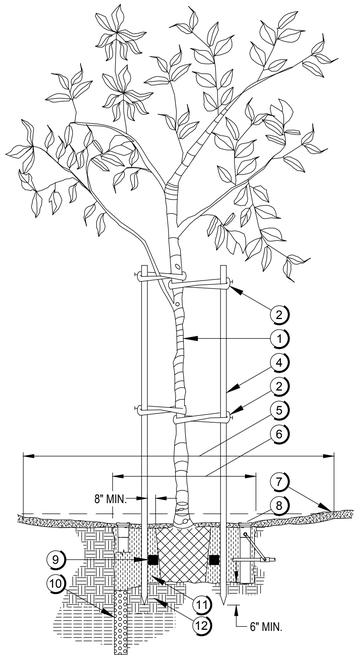


KEY NOTES

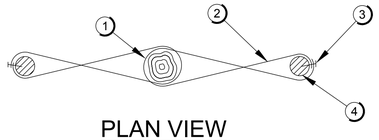
1. TREE TRUNK
2. DEEP ROOT "ARBORTIE GREEN" OR EQUAL INSTALL (TIE) AS PER MANUFACTURER SEE: DEEPROOT.COM

   NOTES:

   PLACE TREE TIE SUPPORTS WITH TOP TIE ABOVE SCAFFOLD BRANCHES AND SECOND TIE MIDWAY TO GRADE. AVOID RIGID RESTRAINT OF TREE, ALLOW FOR SOME TRUNK MOVEMENT.
3. FOLD ENDS OF ARBORTIE BACK. SECURE TO STAKE W/ 1" GALVANIZED. NAIL
4. (2)-2" DIAMETER TREE STAKES DRIVEN INTO UNDISTURBED SOIL. PLACE TREE STAKES FOR MAXIMUM SUPPORT, AVOID PENETRATING ROOTBALL. 8' LODGE POLE STAKE REQUIRED. PLACE EAST & WEST
5. IRRIGATION SAUCER, ADEQUATE FOR PLANT DIAMETER, SEE SPECIFICATIONS
6. DIG PLANT PIT 2X THE DIAMETER OF THE ROOTBALL AND ONLY AS DEEP AS THE ROOTBALL. REMOVE EXCESS SURFACE SOIL FROM CONTAINER, EXPOSING CROWN & ROOT HAIRS FOR IRRIGATION. TEST DRAINAGE OF PLANT PITS PER CITY SUPPLEMENT TO M.A.G. SECTION 430.
7. DECOMPOSED GRANITE, APPLY PRE-EMERGENT WEED SUPPRESSANT PER SPECIFICATIONS
8. IRRIGATION RISER ASSEMBLY(S) SEE DETAIL
9. FERTILIZER PLANT TABLETS, SEE SPECIFICATIONS
10. DRAINAGE CHIMNEY WHEN APPLICABLE SEE CITY SUPPLEMENT TO M.A.G. 430
11. PREPARED SOIL AS SPECIFIED
12. FIRM NATIVE SOIL

1 TREE PLANTING & STAKING

NOT TO SCALE PLT-TRE-01 REV. 1/17



PLAN VIEW
ARBORTIE

KEY NOTES

1. TREE TRUNK
2. DEEP ROOT "ARBORTIE GREEN" OR EQUAL INSTALL (TIE) AS PER MANUFACTURER SEE: DEEPROOT.COM

   NOTES:

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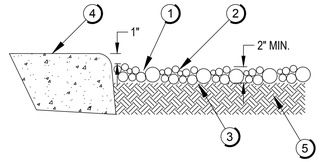
3. FOLD ENDS OF ARBORTIE BACK. SECURE TO STAKE W/ 1" GALVANIZED. NAIL
4. (2)-2" DIAMETER TREE STAKES DRIVEN INTO UNDISTURBED SOIL. PLACE TREE STAKES FOR MAXIMUM SUPPORT, AVOID PENETRATING ROOTBALL. 8' LODGE POLE STAKE REQUIRED. PLACE EAST & WEST

2 TREE STAKING DETAIL

NOT TO SCALE PLT-TRE-01 REV. 1/17

GRADATION REQUIRMENTS - 3/4" MINUS			
PASSING SIEVE	% PASSING	PASSING SIEVE	% PASSING
2"	100	#8	32-36
1 1/2"	100	#10	29-33
1 1/4"	98-100	#16	21-25
1"	95-100	#30	13-17
3/4"	85-89	#40	10-14
1/2"	71-75	#50	8-12
3/8"	63-67	#100	4-8
1/4"	52-56	#200	2-6
#4	46-50		



NOTES:

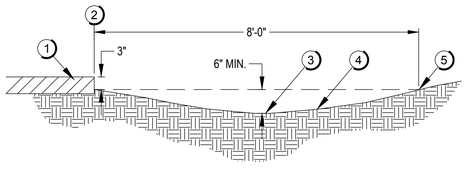
1. APPLY FINAL APPLICATION OF PRE-EMERGENT HERBICIDE PER MANUFACTURERS RECOMMENDATIONS. (SURFLAN OR APPROVED EQUAL) WITHIN 30 DAYS OF END OF MAINTENANCE PERIOD
2. PROVIDE SECOND APPLICATION OF WEED CONTROL UPON FINAL RAKING.
3. DECOMPOSED GRANITE FINISH GRADE TO BE RAKED SMOOTH. PROVIDE INITIAL APPLICATION OF PRE EMERGENT
4. ADJACENT CONCRETE EDGE
5. COMPACTED SUBGRADE PER MAG SECTION 301 AND GEOTECHNICAL REPORT

3 DECOMPOSED GRANITE

NOT TO SCALE PLT-CVR-01 REV. 1/17

KEY NOTES

1. PAVEMENT
2. BACK OF SIDEWALK
3. CONTROL SWALE
4. FINISH SUBGRADE BEFORE PLACEMENT OF DECOMPOSED GRANITE OR TURF
5. ELEVATION MATCH POINT OF ADJACENT POINT @ R.O.W. / SIDEWALK OR CURB



NOTE:

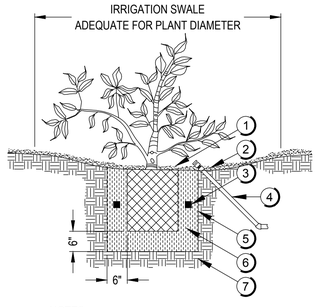
1. IRRIGATION SWALE MUST BE APPROVED PRIOR TO PLACEMENT OF PLANTS, TURF, OR DECOMPOSED GRANITE.

4 IRRIGATION WATER CONTROL SWALE

NOT TO SCALE PLT-SWL-01 REV. 1/17

KEY NOTES

1. ROOT BALL TO BE 1" ABOVE GRADE SCORE BEFORE PLANTING
2. DECOMPOSED GRANITE, APPLY PRE-EMERGENT WEED SUPPRESSANT PER SPECIFICATIONS
3. FERTILIZER TABLETS PER SPECIFICATIONS
4. IRRIGATION RISER ASSEMBLY, SEE DETAIL
5. SCARIFY GLAZED PERIMETER OF PLANT PITS
6. PREPARED SOIL AS SPECIFIED
7. FIRM NATIVE SOIL



NOTES:

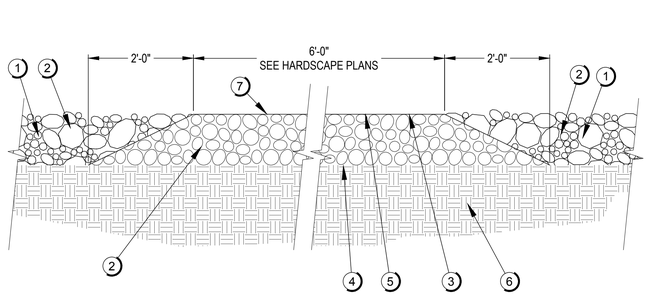
1. CONSTRUCT AN EXAMPLE IRRIGATION SAUCER FOR LANDSCAPE ARCHITECT APPROVAL PRIOR TO PLACING DECOMPOSED GRANITE.
2. TEST PLANT PITS FOR DRAINAGE.

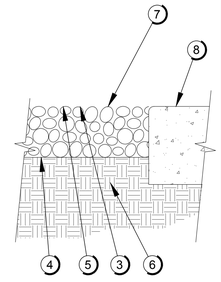
5 SHRUB PLANTING

NOT TO SCALE PLT-SHB-01 REV. 1/17

KEY NOTES

1. LANDSCAPE AREA
2. 2" LAYER OF DECOMPOSED GRANITE (D.G.), CONTRACTOR TO LAY IN 1" LIFTS AND COMPACT IN PLACE. FINISH SURFACE TO BE RAKED SMOOTH.
3. ROLLER COMPACTED DG TO BE FLUSH FOR ADA AND ANTICIPATED MAXIMUM $\frac{1}{2}$" SETTLEMENT, WHEN ALONG WALKWAY @ DESIGNATED ADA ENTRY POINTS
4. APPLY FIRST APPLICATION OF PRE-EMERGENT HERBICIDE AS PER MANUFACTURER'S RECOMMENDATIONS (SHUREGUARD - ADD MARKER DYE) PRIOR TO D.G. PLACEMENT
5. PROVIDE SECOND APPLICATION OF PRE-EMERGENT WEED CONTROL UPON FINAL RAKING
6. COMPACTED SUBGRADE PER MAG SECTION 301 AND GEOTECHNICAL REPORT
7. FINISH SURFACE $\frac{1}{4}$" ROLLER COMPACTED D.G.
8. FINISH SURFACE, TOP OF CONCRETE SIDEWALK





ADA TRANSITION FROM CONCRETE WALKWAY TO DG PATH

NOTE:

1. 1/4" MINUS MATERIAL TO CONTAIN AT A MINUM 10% CLAY CONTENT TO AID IN COMPACTION, CONTRACTOR TO PROVIDE (2) - 5 GALLON SAMPLE BUCKETS OF MATERIAL AND TESTING RESULTS OF CLAY CONTENT TO CITY OF PHOENIX FOR REVIEW AND APPROVAL PRIOR TO ORDERING AND INSTALLATION.
2. STAKE LAYOUT OF WALKWAYS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

6 COMPACTED DECOMPOSED GRANITE

NOT TO SCALE

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: MN
Drawn By: MN
Checked By: JB
Date: 4/19/2024
Project #: 22.1618.002

Title: LANDSCAPE DETAILS
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No. PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4549 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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LS-401
83 OF 148

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IRRIGATION CONTRACTOR NOTES:

1. PRIOR TO ANY LANDSCAPE OR IRRIGATION CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE CITY'S CONSTRUCTION COORDINATOR AT LEAST 48 HOURS IN ADVANCE OF INSTALLATION OF WORK.

2. PRIOR TO ANY CONSTRUCTION OR UTILITY WORK STARTING WITHIN A CITY RIGHT-OF-WAY, WHICH MAY AFFECT EXISTING CITY OWNED AND MAINTAINED LANDSCAPING OR IRRIGATION SYSTEMS, THERE WILL BE A MEETING ON SITE TO SHOW THAT THE EXISTING SYSTEMS OR LANDSCAPED AREAS ARE IN PROPER REPAIR AND FUNCTIONING. AT THE COMPLETION OF THE CONSTRUCTION WORK THERE WILL BE ANOTHER MEETING AND INSPECTION ON SITE. THE SAME AREAS AND SYSTEMS WILL AGAIN BE REVIEWED. ANY DAMAGE TO THE LANDSCAPING OR TO THE IRRIGATION SYSTEM WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND MUST BE REPAIRED TO THE SATISFACTION OF THE CITY WITHIN FIVE (5) WORKING DAYS. IF THIS WORK IS NOT COMPLETED WITHIN THE ALLOTTED TIME, THE CITY WILL MAKE THE REPAIRS OR CORRECTIONS AND MONEY WILL BE DEDUCTED OR BILLED TO THE GENERAL CONTRACTOR ON THE PROJECT. THE INDIVIDUALS WHICH SHOULD BE REPRESENTED AT THESE ON-SITE MEETINGS SHALL BE: A REPRESENTATIVE FROM THE CONTRACTOR AND A REPRESENTATIVE FROM THE ENGINEERING FIRM AND/OR CITY RESPONSIBLE FOR THE CONSTRUCTION INSPECTION.

3. PRIOR TO ANY WORK, THE CONTRACTOR SHALL PERFORM A SURVEY TO ESTABLISH THE WORK LIMITS.

4. PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL CONTACT ARIZONA 811 BLUE STAKE (1-800-782-5348) TO VERIFY LOCATIONS OF UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THIS WORK AND SHALL BE RESPONSIBLE FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF THE WORK.

5. CONTRACTOR SHALL READ THOROUGHLY AND BECOME FAMILIAR WITH THE PLANS, INSTALLATION DETAILS, PROJECT SPECIFICATIONS, AND ANY APPLICABLE CITY STANDARD DETAILS & SPECIFICATIONS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE THE WORK COVERED BY THESE PLANS.

7. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, CODES AND REGULATIONS APPLICABLE TO THE WORK COVERED BY THESE PLANS.

8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, COORDINATION, AND SEQUENCING DURING CONSTRUCTION UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THESE PLANS AND SPECIFICATIONS.

10. ONCE CONSTRUCTION OPERATIONS HAVE COMMENCED, IT IS THE INTENTION OF THIS PROJECT THAT THE JOB SITE BE FULLY MANNED / STAFFED UNTIL THE COMPLETION OF THE WORK WITHOUT GAPS IN PROGRESS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPENSATING THE OWNER FOR ANY DESIGN CHANGES MADE AS RESULT OF DEVIATION BY THE CONTRACTOR FROM THESE PLANS AND SPECIFICATIONS OR DUE TO ERRORS, FAULTY MATERIAL, OR FAULTY WORKMANSHIP.

12. THE CONTRACTOR SHALL VERIFY AND ACCEPT ALL SITE CONDITIONS AND ROUGH GRADES PRIOR TO STARTING ANY WORK. ALL DRAINAGE FLOWS SHALL BE PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION UNLESS PLANS SPECIFICALLY NOTE OTHERWISE.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING CONSTRUCTION AND SHALL ACQUIRE A DUST CONTROL PERMIT FROM THE COUNTY. ALL COSTS ASSOCIATED WITH DUST CONTROL AND PERMITS IS CONSIDERED INCIDENTAL TO THE PROJECT.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF STATE, COUNTY, AND CITY SALES TAXES.

15. THE CONTRACTOR AGREES TO INDEMNIFY AND HOLD HARMLESS THE CITY, ITS OFFICERS, AGENTS AND EMPLOYEES, AND ANY JURISDICTION OR AGENCY ISSUING PERMITS FOR ANY WORK INCLUDED IN THE PROJECT FROM ALL SUITS, INCLUDING ATTORNEY'S FEES AND COST OF LITIGATION, ACTIONS, LOSS DAMAGE, EXPENSE, COST OR CLAIMS OF ANY CHARACTER OR NATURE ARISING OUT OF THE WORK DONE IN FULFILLMENT OF THE TERMS OF THESE PLANS OR SPECIFICATIONS, OR FROM ANY CLAIM OR ACT UNDER THE WORKMAN'S COMPENSATION LAW, OR ARISING OUT OF THE CONTRACTOR TO CONFORM TO ANY SUITS, REGULATION, LAW OR COURT DECREE.

16. CONTRACTOR SHALL VERIFY SITE INSTALLATION CONDITIONS PRIOR TO START OF CONSTRUCTION AND NOTIFY OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY IF ANY CONFLICTS OR DISCREPANCIES ARE FOUND BETWEEN PROPOSED PLANS AND SITE CONDITIONS THAT WILL OBSTRUCT OR DELAY CONSTRUCTION ACTIVITIES THAT ARE NOT ALREADY KNOWN .

GENERAL IRRIGATION NOTES:

1. CONTRACTOR'S MAINTENANCE PERIOD OF IRRIGATION SYSTEM SHALL BE 90 DAYS DURATION BEGINNING ONCE SUBSTANTIAL COMPLETION ACCEPTANCE IS GRANTED BY OWNER. SUBSTANTIAL COMPLETION ACCEPTANCE IS TYPICALLY GRANTED AFTER THE INITIAL PUNCH WALK IS PERFORMED AND AFTER CONTRACTOR ADDRESSES ANY DEFICIENCIES IDENTIFIED BY THE SUBSTANTIAL PUNCH WALK REPORT. THIS ACCEPTANCE IS ONLY GRANTED BY THE OWNER AND SHOULD BE OBTAINED BY CONTRACTOR IN WRITING / EMAIL.

2. CONTRACTOR'S WARRANTY PERIOD OF IRRIGATION SYSTEM PRODUCTS AND INSTALLATION INCLUDING LABOR SHALL BE 1 YEAR (365 DAYS) DURATION BEGINNING ONCE FINAL COMPLETION ACCEPTANCE IS GRANTED BY OWNER. FINAL COMPLETION ACCEPTANCE IS TYPICALLY GRANTED AT THE END OF THE CONTRACTOR'S DEFINED MAINTENANCE PERIOD, HOWEVER A FINAL COMPLETION PUNCH WALK SHALL BE PERFORMED AND CONTRACTOR SHALL ADDRESS ANY DEFICIENCIES IDENTIFIED BY THE FINAL PUNCH WALK REPORT PRIOR TO FINAL ACCEPTANCE BEING GRANTED. THIS ACCEPTANCE IS ONLY GRANTED BY THE OWNER AND SHOULD BE OBTAINED BY CONTRACTOR IN WRITING / EMAIL. UPON FINAL ACCEPTANCE THE MAINTENANCE RESPONSIBILITY SHALL TRANSITION FROM CONTRACTOR TO OWNER.

3. ALL MATERIALS UTILIZED ON THIS PROJECT ARE INTENDED TO BE NEW AND OF THE BEST GRADE AVAILABLE. NO USED, SALVAGED, RECLAIMED, OR SECONDS WILL BE ACCEPTED UNLESS PLANS SPECIFICALLY STATE OTHERWISE.

4. ANY QUANTITIES PROVIDED WITHIN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK.

5. ALL IRRIGATION EQUIPMENT TO BE INSTALLED PER IRRIGATION DETAILS, PROJECT SPECIFICATIONS, AND PER MANUFACTURER'S SPECIFICATIONS.

6. ALL ITEMS SHALL BE BID AS NOTED. AFTER BID IS AWARDED CONTRACTOR MAY PROPOSE PRODUCT SUBSTITUTIONS OF EQUAL OR BETTER PRODUCTS TO THAT SPECIFIED IN PLANS DURING THE PRODUCT SUBMITTAL PROCESS AS OUTLINED PER THE PROJECT SPECIFICATIONS. DURING THIS PROCESS ALL PROPOSED PRODUCTS TO BE INSTALLED SHALL BE SUBMITTED BY CONTRACTOR TO OWNER AND / OR OWNER'S REPRESENTATIVE FOR REVIEW AND THEY SHALL EITHER APPROVE OR DENY USE OF SUBMITTED PRODUCTS. ONCE THIS PROCESS IS COMPLETED NO FURTHER SUBSTITUTIONS WILL BE ALLOWED UNLESS PRIOR APPROVAL IS OBTAINED IN WRITING FROM OWNER OR OWNER'S REPRESENTATIVE.

7. ONLY APPROVED PRODUCTS THROUGH THE PRODUCT SUBMITTAL PROCESS ARE PERMITTED TO BE INSTALLED. ANY UNAPPROVED PRODUCTS FOUND INSTALLED SHALL BE SUBJECT TO REVIEW BY OWNER AND POTENTIALLY TO BE REMOVED AND REPLACED WITH APPROVED ITEM AT NO ADDITIONAL EXPENSE TO OWNER BEYOND THE COST OF APPROVED ITEM AND INSTALLATION OF THAT ITEM ONLY.

8. ALL CONTROL WIRES SHALL BE SLEEVED SEPARATELY IN UL APPROVED SCH 40 PVC ELECTRICAL CONDUIT SIZED AS NOTED PER PLANS IN SAME TRENCH AS MAINLINE PIPE LOCATED HORIZONTAL TO AND BELOW TOP OF MAINLINE PIPE PER TRENCHING DETAIL. IF CONTROL WIRES MUST BE INSTALLED WITHOUT MAINLINE OR OTHER PIPES, THEN WIRES SHALL BE INSTALLED IN CONTINUOUS CONDUIT AT MINIMUM OF 18" DEPTH FOR LENGTH OF TRENCH UNTIL REACHING JOINT TRENCH LOCATION WITH PIPES AND AN APPROVED WARNING TAPE 2" MINIMUM WIDTH SHALL BE INSTALLED AT 6" ABOVE CONDUIT.

9. ALL MAINLINE PIPES SHALL BE INSTALLED AT DEPTHS AS NOTED PER TRENCHING DETAIL (18" MINIMUM DEPTH) AND SHALL HAVE AN APPROVED WARNING TAPE 3" MINIMUM WIDTH INSTALLED AT 6" ABOVE MAINLINE PIPE OR 6" ABOVE HIGHEST PIPE INSTALLED WITHIN SAME TRENCH AS MAINLINE PIPE.

10. THE PLANS INDICATE A DETAILED LAYOUT OF IRRIGATION MAINLINE PIPES, LATERAL PIPES, AND EQUIPMENT LOCATIONS; PIPES INTENDED TO BE IN JOINT TRENCH ARE TYPICALLY SHOWN PARALLEL AND EVENLY SPACED TOGETHER. DUE TO GRAPHICAL CLARITY, SOMETIMES LINES REPRESENTING PIPES OR SLEEVES AND SOMETIMES EQUIPMENT SYMBOLS MAY BE SHOWN DIAGRAMMATICALLY BEYOND THE LIMITS OF PLANTING AREAS. THE CONTRACTOR SHALL FOLLOW THE INTENT OF THE PLAN LAYOUT AND SHALL CONTACT DESIGNER FOR CLARIFICATION IF INTENT IS NOT CLEAR.

11. CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE OWNER OR OWNER'S REPRESENTATIVE FOR ANY CHANGES TO LAYOUT AS SHOWN PER PLANS AND SHALL CLEARLY DOCUMENT ANY SUCH CHANGES FOR USE WITH RECORD DRAWINGS (AS-BUILTS).

12. ADJUST IRRIGATION OPERATING TIMES TO ACCOMMODATE FOR PLANT MATURITY, SOIL TYPE, PLANT EXPOSURE, SLOPE CONDITIONS, AND SEASONAL REQUIREMENTS.

13. ALL CONTROL VALVE & PIPE SIZES SHALL BE INSTALLED AS NOTED PER PLANS. ANY DEVIATIONS TO INSTALLED PIPE SIZES MUST BE APPROVED IN WRITING BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION OF SUCH PIPE OR EQUIPMENT. ALL PVC PIPES WERE DESIGNED TO FLOW AT A MAXIMUM VELOCITY OF 5.0 FPS AND ALL COPPER PIPES AT A MAXIMUM VELOCITY OF 7.5 FPS, HOWEVER MANY TIMES PIPES ARE PURPOSELY SIZED TO EXCEED THESE REQUIREMENTS IN EFFORTS TO REDUCE FRICTION LOSS AND PRESSURE LOSS THROUGH IRRIGATION SYSTEM.

14. ALL MASTER & CONTROL VALVES SHALL INCLUDE IDENTIFICATION TAGS INSTALLED ON WIRES PRIOR TO INSTALLATION OF WIRE CONNECTORS WITH CORRESPONDING INFORMATION AS IDENTIFIED PER PLANS CLEARLY PRINTED ON ONE SIDE ON TAG USING BLACK PERMANENT MARKER AT MINIMUM OF 1" SIZE TEXT. WIRE TAGS SHALL BE STANDARD SIZE, BLANK BOTH SIDES, & YELLOW COLOR WHEN USED WITH POTABLE WATER SYSTEMS OR SHALL BE MAXI SIZE, BLANK ONE SIDE WITH BILINGUAL 'WARNING- DO NOT DRINK' PRINTED ON OPPOSITE SIDE BY MANUFACTURER, & PURPLE COLOR WHEN USED WITH ANY NON-POTABLE WATER SYSTEM.

15. PVC MAINLINE PIPES SIZED 3" AND LARGER SHALL USE EITHER BELL END GASKET PIPE CONNECTIONS AND / OR DUCTILE IRON FITTINGS WITH RESTRAINTS AND / OR THRUST BLOCKS AS NOTED PER PLANS INSTALLED AT 24" MINIMUM DEPTH OR AS NOTED PER TRENCHING DETAIL. PVC MAINLINE PIPES SIZED 2 1/2" AND SMALLER SHALL BE SOLVENT WELD USING SCHEDULE 80 PVC FITTINGS INSTALLED AT 18" MINIMUM DEPTH OR AS NOTED PER TRENCHING DETAIL. ALL LATERAL PVC PIPES SHALL BE SOLVENT WELD USING SCHEDULE 40 PVC FITTINGS INSTALLED AT 12" MINIMUM DEPTH OR AS NOTED PER TRENCHING DETAIL. ALL THREADED PVC CONNECTIONS SHALL USE SCHEDULE 80 PVC FITTING WITH TEFLON SEALANT. ALL COPPER PIPE SHALL BE TYPE 'K' COPPER WITH LEAD-FREE SOLDERED WROUGHT FITTINGS. ALL PVC PIPE MATERIAL TYPES SHOULD BE AS IDENTIFIED PER PLANS.

16. PVC PIPE SLEEVES SHALL BE INSTALLED AT DEEPEST PIPE DEPTH OF PIPES INSTALLED WITHIN SLEEVE OR AT 36" MINIMUM COVER WHEN INSTALLED UNDER VEHICULAR DRIVING HARDSCAPE SURFACES.

17. ANY PVC ELECTRICAL CONDUITS CONTAINING LOW VOLTAGE CONTROL WIRES, 2-WIRE PATH CABLES, COMMUNICATION CABLES, OR GROUNDING WIRES SHALL BE INSTALLED WITHIN UL APPROVED PVC CONDUIT SIZED AS NOTED PER PLANS AND INSTALLED AT PIPE SLEEVE DEPTHS OR AT 20" MINIMUM COVER.

18. PVC SOLVENT CEMENT SHALL BE USED WITH PURPLE COLOR PRIMER PER MANUFACTURER'S SPECIFICATIONS. SPECIFIC SOLVENT AND PRIMER PRODUCTS TO BE USED MUST BE SUBMITTED WITH PRODUCT SUBMITTAL PROCESS AND CORRESPOND WITH PVC PIPE MATERIALS BEING USED.

19. ALL VALVE BOXES SHALL BE SIZED AS NOTED PER PLANS WITH BOLT DOWN T-STYLE COVERS (EXCEPT EMITTER BOXES). ALL BOLT DOWN HARDWARE SHALL BE STAINLESS STEEL. WHEN IRRIGATION SYSTEM UTILIZES POTABLE WATER ALL VALVE BOX BODIES & COVERS SHALL BE TAN COLOR WHEN LOCATED IN GRANITE OR GREEN COLOR WHEN LOCATED IN TURF. WHEN SYSTEM UTILIZES NON-POTABLE WATER ALL VALVE BOX BODIES & COVERS SHALL BE INTEGRAL PURPLE COLOR. ALL BOX COVERS (EXCEPT EMITTER BOXES) SHALL BE EMBOSSED WITH STENCIL LETTERS / NUMBERS TO DESIGNATE EQUIPMENT TYPE AS NOTED PER PLANS.

20. ALL 24 VOLT CONTROL WIRE CONNECTIONS SHALL BE MADE WITH 3M'S #DBY/R-6 WATERPROOF WIRE CONNECTORS, OR APPROVED EQUAL CONNECTORS, OR AS REQUIRED BY CONTROLLER MANUFACTURER FOR CONTROLLER WARRANTY PURPOSE.

21. HAND DIG ANY EXCAVATIONS WITHIN 2'-0" OF ALL ELECTRICAL OR IRRIGATION STRUCTURES.

22. SEE PROJECT SPECIFICATIONS FOR FURTHER PRODUCT DESCRIPTIONS.

23. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS (AS-BUILT PLANS) PER PROJECT SPECIFICATIONS INCLUDING, BUT NOT LIMITED TO, DOCUMENTING ANY DEVIATIONS FROM PLANS AND PROVIDING DIMENSIONS TO LOCATE TRENCHES, SLEEVE ENDS, AND EQUIPMENT FROM FIXED LOCATIONS AS IDENTIFIABLE IN BOTH FIELD AND ON PLANS.

GENERAL BUBBLER & EMITTER NOTES:

1. INSTALL BUBBLERS & MULTI-PORT EMITTERS WITH FLOWS AND QUANTITIES TO EACH PLANT PER 'BUBBLER / EMITTER LEGEND' ON IR-103.

2. INSTALL ALL EMITTER TUBES UP SLOPE FROM PLANT MATERIAL.

3. INSTALL EMITTERS PER PLAN DETAILS.

4. USE RIGID 3/4" SCHEDULE 40 PVC AS DRIP LATERAL PIPES (SHOWN PER PLANS) AS EMITTER LATERAL PIPES (NOT SHOWN PER PLANS) UNLESS SPECIFICALLY NOTED OTHERWISE IN PLANS. USE SCHEDULE 40 PVC FITTINGS ONLY FOR ALL PVC LATERAL PIPE FITTINGS.

5. CONTRACTOR MAY INSTALL RIGID 1/2" CLASS 315 PVC BUBBLER / EMITTER LATERAL PIPES (NOT SHOWN IN PLANS) AS REQUIRED AT A MAXIMUM ACCUMULATIVE LENGTH OF 15'-0" FROM THE 3/4" DRIP LATERAL PIPES (SHOWN IN PLANS) TO DESIRED MULTI-PORT EMITTER LOCATIONS.

6. EMITTER TUBES (DISTRIBUTION TUBING) SHALL BE POLYETHYLENE MATERIAL SIZED AS REQUIRED TO FIT THE APPROVED EMITTER TYPE AND EACH TUBE SHALL NOT EXCEED 6'-0" IN LENGTH. EMITTER TUBES SHALL BE BURIED A MINIMUM OF 2" BELOW FINISH GRADE OF SOIL (NOT FINISH GRADE OF DG) AND SHALL NOT BE INSTALLED WHERE TUBES ARE PINCHED OR KINKED RESULTING IN RESTRICTED FLOW. ALL TUBES SHALL BE INSTALLED WITH ENDS OF TUBES LOCATED PER INSTALLATION DETAILS WITH ALL ENDS OF TUBES EXPOSED AND CUT AT 1" - 2" ABOVE THE FINISH GRADE OF SURFACE MATERIAL (DG, RIP-RAP, OR TURF).

7. INSTALL FLUSHING END CAPS AT ENDS OF DRIP LATERAL PIPES AS SHOWN PER PLANS. INSTALL ALL FLUSHING END CAPS IN A MINIMUM 10" DIA. CIRCULAR PURPLE VALVE BOX WITH T-STYLE BOLT DOWN COVERS. A MAXIMUM OF TWO FLUSHING END CAPS MAY SHARE A SINGLE VALVE BOX IF THEY ARE LOCATED WITHIN CLOSE PROXIMITY IN PLANS.

8. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS AND PROVIDE 100% WATER COVERAGE TO ALL PLANTS.

VALVE BOX NOTES:

1. ALL VALVE BOX BODIES & COVERS TO BE INTEGRAL TAN COLOR WITH T-STYLE BOLT DOWN COVERS AND STAINLESS STEEL WASHER & BOLT.

2. EMBOSS VALVE BOX COVERS WITH 2" TALL STENCIL LETTERS/ NUMBERS PER THE VALVE BOX INSTALLATION DETAIL IN THIS SET.

WIRE PATH NOTES:

1. ALL CONVENTIONAL CONTROL WIRES SHALL BE TYPE UF & TWU IN ACCORDANCE TO NATIONAL ELECTRIC CODE FOR OPERATION AT A POTENTIAL OF 600 VOLTS OR LESS AND AT A TEMPERATURE OF 75°C OR LESS. LISTED BY UL, ETL, OR CSA. CONDUCTORS SHALL BE OF SOFT DRAWN BARE COPPER MEETING THE REQUIREMENTS OF ASTM SPECIFICATION B-3 OR B-8. TEMPERATURE RATING OF -10°C + 75°C. INSULATION SHALL BE POLYVINYL CHLORIDE RATED TO 75°C CONFORMING TO UL STANDARDS 493 AND 83. INSULATION SHALL BE MARKED WITH MANUFACTURER'S NAME, VOLTAGE RATING, SIZE AND TYPE, LISTING FILE NUMBERS, RoHS. ALL CABLES SHALL BE TESTED PHYSICALLY AND ELECTRICALLY IN ACCORDANCE WITH UL STANDARD 493 AND 83. IT SHOULD ALSO BE TESTED TO CSA RULE C.22.2 NO. 75. ALL REELS AND CARTONS BEAR LISTING LABELS.

2. ALL CONTROL, COMMON, AND SPARE WIRES SHALL BE #14 GAUGE SOLID CORE COPPER WIRE INSTALLED WITHIN CONTINUOUS GRAY COLOR ELECTRICAL CONDUITS.

3. ALL 24 VOLT CONTROL WIRE CONNECTIONS SHALL BE MADE WITH 3M SCOTCHCAST 3570G GEL FILLED CONNECTOR SEALING PACKS OR APPROVED EQUAL PER IRRIGATION CONTROLLER MANUFACTURERS SPECIFICATIONS.

4. DIRECT BURY OF WIRE SPLICES IS NOT ACCEPTABLE. WIRE SPLICES SHALL ONLY OCCUR INSIDE VALVE BOXES AT VALVES AS SHOWN PER DETAILS AND INSIDE DEDICATED WIRE SPLICE BOXES WHERE WIRES TEE IN DIFFERENT DIRECTIONS AND WHERE WIRE RUNS EXCEED 2,500 LF. WIRE SPLICES WITH SPLICE BOX SHALL BE USED TO CONNECT TO EXISTING CONTROL WIRE LOCATIONS AND EXTENDED TO NEW CONTROLLERS AS REQUIRED. ALL WIRE ENDS INSIDE WIRE SPLICE BOXES SHALL BE LABELED WITH ASSOCIATED STATION NUMBERS.

Revisions	Date

PRE-FINAL
100%
NOT FOR
CONSTRUCTION
OR
RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

Title: IRRIGATION GENERAL NOTES
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

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KIVA # _____
SDEV # _____

Sheet
IR-101
84 OF 148

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IRRIGATION LEGEND

DETAIL:	SYMBOL:	DESCRIPTION:	REMARKS:	QUANTITIES:
---	M	WATER METER	EXISTING WATER METER - PROTECT IN PLACE	
---	B	REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY	REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY - PROTECT IN PLACE	
1 & 2 IR-301	A B C	CONVENTIONAL IRRIGATION CONTROLLERS	CONTROLLER 'A': CALSENSE 3000 SERIES CONTROLLER #CS3-48-SD-CS3-EN-CS3-MSSE-KIT-CS3-SR-KIT = CONVENTIONAL WIRE 48 STATIONS CONTROLLER (CS3-32); DOUBLE WIDE STAINLESS STEEL PEDESTAL MOUNTED ENCLOSURE FOR TWO CS3000 CONTROLLERS 'A' & 'B' (-SD); HARDWIRE ETHERNET CONNECTION FOR COMMUNICATIONS TO CLOUD-BASED COMMAND CENTER (-CS3-EN); HARDWIRE COMMUNICATIONS CARD AND TERMINAL BOARD FOR COMMUNICATION BETWEEN CONTROLLERS USING PAGE #P7171D COMMS. CABLE; SPREAD SPECTRUM RADIO KIT (-CS3-SR-KIT) FOR COMMUNICATIONS BETWEEN CONTROLLERS 'A' & 'C' INCLUDING STUBBY ANTENNA. CONTROLLER 'B': CALSENSE 3000 SERIES CONTROLLER #CS3-24 = CONVENTIONAL WIRE 24 STATIONS CONTROLLER (CS3-32) INSTALLED WITHIN DOUBLE WIDE SS PEDESTAL WITH HARDWIRE CONNECTION TO CONTROLLER 'A', BOTH AS PROVIDED WITH CONTROLLER 'A' DESCRIPTION ABOVE. CONTROLLER 'C': CALSENSE 3000 SERIES CONTROLLER #CS3-32-S-CS3-SR-KIT = CONVENTIONAL WIRE 32 STATIONS CONTROLLER (CS3-32) WITH SPREAD SPECTRUM RADIO KIT (-CS3-SR-KIT) INCLUDING STUBBY ANTENNA FOR COMMUNICATIONS BETWEEN CONTROLLERS 'A' & 'C'. GROUND EACH CONTROLLER SEPARATELY PER MANUFACTURER'S SPECIFICATIONS WITH 5/8" x 8'-0" COPPER CLAD GROUND ROD (CONTRACTOR MAY SUBSTITUTE ROD WITH 4" x 8'-0" COPPER GROUND PLATE IF UNABLE TO INSTALL ROD DUE TO SOIL CONDITIONS); UTILIZE EXISTING POWER SUPPLIES MODIFIED AS REQUIRED FOR NEW CONTROLLERS; SEE SPECIFICATIONS FOR ON-SITE MAINTENANCE TRAINING REQUIREMENTS.	1 EA 1 EA 1 EA (INCLUDED WITH EACH CONTROLLER)
3 IR-301		CONTROL WIRES (SYMBOL SHOWN WHEN NOT IN JOINT TRENCH WITH MAINLINE PIPE)	ALL CONTROL WIRES SHALL BE #14 GAUGE WITH ONE CONTINUOUS SPARE WIRE PROVIDED IN EACH DIRECTION OF CONTROLLER COILED INTO EVERY REMOTE CONTROL VALVE BOX (DO NOT CUT) UNTIL TERMINATING AT FURTHEST CONTROL VALVE FROM CONTROLLER; ALL CONTROL WIRES SHALL BE INSTALLED WITHIN CONTINUOUS GRAY COLOR PVC ELECTRICAL CONDUIT (WIRE SLEEVES)- SIZE SLEEVES AS REQUIRED; ALL WIRE CONNECTORS SHALL BE 3M SCOTCHCAST CONNECTOR SEALING PACK #3570G-N WATERPROOF WIRE CONNECTORS PER CALSENSE RECOMMENDATIONS.	± X,XXX LF WIRE SLEEVE: 2.0" = XXX LF 1.5" = XXX LF 1.25" = XXX LF 1.0" = X,XXX LF .75" = X,XXX LF
4 IR-301		ISOLATION GATE VALVE ASSEMBLY	(3" & LARGER PIPES ONLY- SIZE VALVE PER PIPE SIZE): NIBCO #P-619-RW RESILIENT WEDGE GATE VALVE WITH FUSION EPOXY COATED DUCTILE IRON BODY RATED TO 250 PSI, NON-RISING STEM, 2" SQUARE OPERATING NUT, & PUSH-ON CONNECTIONS WITH PVC PIPE OR MECHANICAL JOINT CONNECTIONS WITH DUCTILE IRON PIPE; LEEMCO LG SERIES DUCTILE IRON RESTRAINTS; 8" DIA. PVC SLEEVE; INSTALL IN CARSON #910 10" ROUND TAN VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET; ALL DUCTILE IRON PIPES, VALVES, AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE WRAP PER MAG SPECIFICATIONS SECTION 610.6.1.	3.0" = 12 EA
5 IR-301		ISOLATION BALL VALVE ASSEMBLY	(2.5" & SMALLER PIPES ONLY- SIZE VALVE PER PIPE SIZE): NIBCO #T-585-70-66 SERIES FULL PORT BRASS BALL VALVE WITH STAINLESS STEEL HANDLE & NUT AND WITH THREADED CONNECTIONS RATED TO 235 PSI MIN. WORKING PRESSURE; INSTALL IN CARSON #1220 TAN VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET.	1.0" = 11 EA 1.5" = 1 EA 2.0" = 1 EA
6 IR-301		SHRUBS DRIP REMOTE CONTROL VALVE ASSEMBLY INSTALLED ON 2.5" OR SMALLER MAINLINE PIPE	2.5" OR SMALLER MAINLINE PIPE: RAIN BIRD DRIP KIT #XCZ-100-PRB-LC WITH 1" PEB GLASS-FILLED NYLON GLOBE VALVE; 1" PRESSURE REGULATING BASKET FILTER (40 PSI WITH 200 MESH STAINLESS STEEL SCREEN); 1" SPEARS 2000 SERIES SCH. 80 FULL PORT BALL VALVE RATED TO 235 PSI WORKING PRESSURE (SxFPT); SCH. 80 PVC NIPPLES & FITTINGS; CHRISTY'S STANDARD YELLOW ID TAG WITH CONTROLLER LETTER & STATION # CLEARLY WRITTEN ONE SIDE WITH BLACK PERMANENT MARKER AND INSTALLED ON CONTROL WIRE; IN CARSON #1324 SUPER JUMBO TAN COLOR VALVE BOX WITH BOLT DOWN T-STYLE COVER EMBOSSED WITH 2" STENCIL LETTERS / NUMBERS OF CONTROLLER LETTER & STATION # TO MATCH WIRE ID TAG PER VALVE BOX INSTALLATION DETAIL IN THIS SET.	1 EA
7 IR-301		SHRUBS DRIP REMOTE CONTROL VALVE ASSEMBLY INSTALLED ON 3" OR LARGER MAINLINE PIPE	3" OR LARGER MAINLINE PIPE: PROVIDE SAME EQUIPMENT AS DRIP VALVE ASSEMBLY NOTED ABOVE WITH 2.5" MAINLINES OR SMALLER EXCEPT REPLACE PVC BALL VALVE & UNION WITH 2" x 12" HARCO DUCTILE IRON (D.I.) STANDARD PORT LATERAL ISOLATION VALVE WITH MALE SWIVEL x GASKET CONNECTIONS #841112L; WITH HARCO D.I. FEMALE SWIVEL TEE SIZED PER MAINLINE PIPE SIZE; HARCO MPT x MPT NIPPLE, 2" FPT x FPT UNION, 2" SPIGOT x MPT ADAPTER, & CLAMSHELL RESTRAINTS; PROVIDE RISER EXTENSIONS AND/OR ADAPTERS AS REQUIRED TO PRODUCE PROPER DEPTHS & SIZES.	5 EA
8 IR-301		BUBBLER REMOTE CONTROL VALVE ASSEMBLY INSTALLED ON 2.5" OR SMALLER MAINLINE PIPE	2.5" OR SMALLER MAINLINE PIPE: RAINBIRD #150-EFB-CP CONTROL VALVE (SIZE AS NOTED PER VALVE KEYS IN PLANS) WITH BRASS GLOBE STYLE BODY, SELF FLUSHING, SLOW CLOSING, EPDM DIAPHRAGM, AND RAIN BIRD 30 PSI INLINE PRESSURE REGULATOR #PSI-M30X-075 (YELLOW LABEL); SPEARS 2000 SERIES SCH. 80 FULL PORT BALL VALVE (SIZE PER VALVE SIZE) RATED TO 235 PSI WORKING PRESSURE (SxFPT); SCH. 80 PVC NIPPLES & FITTINGS; CHRISTY'S STANDARD YELLOW ID TAG WITH CONTROLLER LETTER & STATION # CLEARLY WRITTEN ONE SIDE WITH BLACK PERMANENT MARKER AND INSTALLED ON CONTROL WIRE; IN CARSON #1324 SUPER JUMBO TAN COLOR VALVE BOX WITH BOLT DOWN T-STYLE COVER EMBOSSED WITH 2" STENCIL LETTERS / NUMBERS OF CONTROLLER LETTER & STATION # TO MATCH WIRE ID TAG PER VALVE BOX INSTALLATION DETAIL IN THIS SET.	1.5" = 2 EA
1 IR-302		BUBBLER REMOTE CONTROL VALVE ASSEMBLY INSTALLED ON 3" OR LARGER MAINLINE PIPE	3" OR LARGER MAINLINE PIPE: PROVIDE SAME EQUIPMENT AS BUBBLER VALVE ASSEMBLY NOTED ABOVE WITH 2.5" MAINLINES OR SMALLER EXCEPT REPLACE PVC BALL VALVE & UNION WITH 2" x 12" HARCO DUCTILE IRON (D.I.) STANDARD PORT LATERAL ISOLATION VALVE WITH MALE SWIVEL x GASKET CONNECTIONS #841112L; WITH HARCO D.I. FEMALE SWIVEL TEE SIZED PER MAINLINE PIPE SIZE; HARCO MPT x MPT NIPPLE, 2" FPT x FPT UNION, 2" SPIGOT x MPT ADAPTER, & CLAMSHELL RESTRAINTS; PROVIDE RISER EXTENSIONS AND/OR ADAPTERS AS REQUIRED TO PRODUCE PROPER DEPTHS & SIZES.	1.5" = 16 EA
2 IR-302		TURF REMOTE CONTROL VALVE ASSEMBLY INSTALLED ON 3" OR LARGER MAINLINE PIPE	3" OR LARGER MAINLINE PIPE: PROVIDE SAME EQUIPMENT AS BUBBLER VALVE ASSEMBLY NOTED ABOVE WITH 3" MAINLINES OR LARGER EXCEPT MODIFY CONTROL VALVE TO 2" RAINBIRD #200-EFB-CP-PRS-D AND REPLACE INLINE PRESSURE REGULATOR WITH ADJUSTABLE PRESSURE REGULATING MODULE #PRS-D.	2.0" = 6 EA
3 IR-302		QUICK COUPLER ASSEMBLY	1" RAIN BIRD #44-RC TWO PIECE BODY QUICK COUPLER VALVE WITH YELLOW RUBBER COVER; RAINBIRD 1" SWING JOINT WITH 12" LAY ARM #TSJ-12; SCH. 80 PVC NIPPLES & FITTINGS; INSTALL IN CARSON #910 10" ROUND TAN COLOR VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET; PROVIDE TWO SETS OF VALVE KEY WITH SWIVEL TO CITY: RAIN BIRD QUICK COUPLING VALVE KEY #44-K & 1" FPT x 3/4" MHT HOSE SWIVEL #SH-1.	11 EA
4 IR-302		DRIP FLUSH CAP ASSEMBLY	3/4" SCH. 40 PVC FITTINGS; 3/4" PVC FLEX HOSE RISER; 3/4" SCH. 40 PVC BALL VALVE RATED TO MIN. 150 PSI WORKING PRESSURE (SxS); 3/4" SCH. 40 PVC FITTINGS; 3/4" SCH 40 PVC CAP WITH O-RING; INSTALL IN CARSON #910 10" ROUND TAN IN DG OR GREEN IN TURF VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET; TWO END CAPS MAX. MAY BE INSTALLED WITHIN SAME VALVE BOX IF LOCATED IN CLOSE VICINITY.	17 EA
5 IR-302	#Q #H #F	TURF ROTOR SPRINKLER ASSEMBLY W/ MATCHED PRECIP. RATE NOZZLES: # = NOZZLE NO. F = FULL CIRCLE H = HALF CIRCLE Q = QUARTER CIRCLE	RAINBIRD 5000 SERIES #5006-+-FC/PC-SAM-R-SS ROTOR WITH 3/4" NPT INLET, 6" STAINLESS STEEL POP-UP RISER, SAM CHECK VALVE, 'PLUS' FLOW SHUT-OFF, 45 PSI FLOW OPTIMIZER, FULL & PART CIRCLE APPLICATIONS, & COLOR CODED MATCHED PRECIPITATION NOZZLES WITH STANDARD TRAJECTORY; COMMERCIAL OR HEAVY DUTY PRE-FABRICATED SWING JOINTS SIZED TO MATCH SPRINKLER BODY INLET SIZE; SEE 'SPRINKLER LEGEND' ON IR-103 FOR ADDITIONAL NOZZLE SPECIFICATIONS.	FC = 49 EA PC = 46 EA

IRRIGATION LEGEND (CONTINUED)

DETAIL:	SYMBOL:	DESCRIPTION:	REMARKS:	QUANTITIES:
6 & 7 IR-302	■	BUBBLER ASSEMBLY- TREES ONLY	TORO 500 SERIES ADJUSTABLE UNIVERSAL FLOOD BUBBLER #514-20 WITH 1/2" FPT INLET; SCH. 40 FLEX HOSE RISER AT 8" MIN.- 20" MAX. LENGTH; SCH. 40 PVC MALE ADAPTER & FITTINGS; 1/2" CLASS 315 PVC PIPE; INSTALL RISER & BUBBLER INSIDE PERFORATED 4" DIA. x 12"L CLASS 200 PVC SLEEVE WRAPPED IN LANDSCAPE FABRIC AND FILLED WITH PEA GRAVEL; SEE 'EMITTER SCHEDULE' ON IR-1.03 FOR REQ'D FLOW & QTY PER TREE	408 EA
8 & 9 IR-302	NOT SHOWN	MULTI-PORT EMITTER ASSEMBLY- SHRUBS ONLY	SHRUBS: RAIN BIRD #XBT-10-6 (1.0 GPH, BLACK) MULTI-PORT EMITTER WITH 1/2" FPT INLET; SCH. 40 FLEX HOSE RISER AT 8" MIN. LENGTH; 1/4" POLYETHYLENE DISTRIBUTION TUBE AT 6'-0" MAX. LENGTH ; SCH. 40 PVC MALE ADAPTER & FITTINGS; IN 6" DIA. CARSON EMITTER BOX WITH T-COVER; SEE 'EMITTER SCHEDULE' ON IR-1.03 FOR REQUIRED FLOW & QTY. OF DIST. TUBES PER PLANT.	300 EA
1 IR-303	NOT SHOWN	SINGLE-PORT EMITTER ASSEMBLY	SHRUBS: RAIN BIRD #XBT-10 (1.0 GPH, BLACK) SINGLE-PORT EMITTER WITH 1/2" FPT INLET; SCH. 40 FLEX HOSE RISER AT 8" MIN.- 20" MAX. LENGTH; SCH. 40 PVC MALE ADAPTER & FITTINGS; 1/2" CLASS 315 PVC PIPE; INSTALL RISER & BUBBLER DIRECT BURIED PER DETAIL; SEE 'EMITTER SCHEDULE' ON IR-1.03 FOR REQ'D FLOW & QTY PER PLANT; USE SINGLE-PORT EMITTERS WHERE MORE EFFICIENT TO USE VERSUS MULTI-PORTS.	80 EA
2,3,& 4 IR-303	X"	MAINLINE PIPE	1" = SCHEDULE 40 PVC PIPE SOLVENT WELD WITH SCH 80 PVC FITTINGS 4" OR 6" = CLASS 200 PVC GASKET JOINT PIPE WITH DUCTILE IRON FITTINGS WITH MINIMUM PRESSURE RATING OF 250 PSI; ALL MAINLINES SHALL HAVE 18 AWG BLUE COLOR TRACER WIRE & BLUE COLOR 3" WARNING TAPE INSTALLED AT 6" ABOVE TOP OF PIPES; ALL MAINLINES 3" & LARGER SHALL INCLUDE PIPE RESTRAINTS OR CONCRETE THRUST BLOCKS (SIZE ALL PIPE AS NOTED PER PLANS) ALL DUCTILE IRON PIPES, VALVES, AND FITTINGS TO BE WRAPPED WITH POLYETHYLENE WRAP PER MAG SPECIFICATIONS SECTION 610.6.1.	1.0" = 685 LF 1.5" = 170 LF 2.0" = 300 LF 3.0" = 2,735 LF
	X"	TURF & TREE BUBBLER LATERAL PIPE	TURF LATERAL PIPE: .75", 1", 1.25", 1.5", 2.0", 2.5", & 3.0" SCH 40 PVC SOLVENT WELD PIPE WITH SCH 40 PVC FITTINGS (SIZE AS NOTED PER PLANS). INSTALL TURF LATERAL PIPES AT 12" DEPTH.	.75" = 4,870 LF 1.0" = 2,970 LF 1.25" = 3,245 LF 1.5" = 1,655 LF 2.0" = 1,320 LF 2.5" = 810 LF 3.0" = 90 LF
		SHRUBS DRIP LATERAL PIPE	3/4" SCH 40 PVC SOLVENT WELD PIPE WITH SCH 40 PVC FITTINGS INSTALL DRIP LATERAL PIPES AT 12" DEPTH.	.75" = 7,710 LF
5 IR-303	X"PS	PIPE SLEEVES (PS)	2", 3", 4" OR 6" SCH. 40 PVC PIPE SLEEVES (WHITE) UNDER HARDSCAPE- SIZE AS NOTED PER PLANS	2.0" = 112 LF 3.0" = 310 LF 4.0" = 35 LF 6.0" = 290 LF

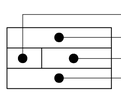
BUBBLER & EMITTER LEGEND

SYMBOL:	BOTANICAL NAME / COMMON NAME:	QUANTITY / TYPE:	FLOW PER BUBBLER:	FLOW PER PLANT:
TREES:				
△	ACACIA ANEURA MULGA	2 / BUBBLER	2.0 GPM	4.0 GPM
◎	CHILOPSIS LINEARIS 'ART'S SEEDLESS' SEEDLESS DESERT WILLOW	2 / BUBBLER	2.0 GPM	4.0 GPM
✳	OLNEYA TESOTA DESERT IRONWOOD	2 / BUBBLER	2.0 GPM	4.0 GPM
◌	PISTACIA CHINENSIS CHINESE PISTACHE	2 / BUBBLER	2.0 GPM	4.0 GPM
✳	PROSOPIS PUBESCENS SCREWBEAN MESQUITE	2 / BUBBLER	2.0 GPM	4.0 GPM
○	QUERCUS VIRGINIANA LIVE OAK	2 / BUBBLER	2.0 GPM	4.0 GPM
□	ULMUS PARVIFOLIA CHINESE ELM	2 / BUBBLER	2.0 GPM	4.0 GPM
PIP ✳	EXISTING TREE TO REMAIN	2 / BUBBLER	2.0 GPM	4.0 GPM

SYMBOL:	BOTANICAL NAME / COMMON NAME:	QUANTITY / TYPE:	FLOW PER BUBBLER:	FLOW PER PLANT:
SHRUBS:				
✳	ASCLEPIAS SUBULATA DESERT MILKWEED	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
✳	CALLIANDRA ERIOPHYLLA PINK FAIRY DUSTER	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
✳	EREMOPHILA GLABRA 'MINGENEW GOLD' OUTBACK SUNRISE EMU	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
✳	ENCELIA FARINOSA BRITTLEBUSH	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
✳	LANTANA SPECIES 'NEW GOLD' NEW GOLD LANTANA	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
✳	LEUCOPHYLLUM LANGMANIAE LYNN'S LEGACY TEXAS RANGER	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
✳	MELAMPODIUM LEUCANTHUM BLACKFOOT DAISY	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
✳	RUELLIA PENNINSULARIS BAJA RUELLIA	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
✳	RUSSELIA EQUISETIFORMIS CORAL FOUNTAIN	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
◇	SIMMONDSIA CHINENSIS 'VISTA' COMPACT JOJOBA	1 / MULTI *	1 / 1.0 GPH	1.0 GPH
▲	VERBENA GOODDINGII GOODING VERBENA	1 / MULTI *	1 / 1.0 GPH	1.0 GPH

NOTES:
1. BUBBLERS SHALL NOT BE SUBSTITUTED WITH EMITTERS. TWO BUBBLERS SHALL BE INSTALLED PER EACH TREE LOCATED 180° APART INLINE WITH TREE AND SPACED 3'-0" FROM EACH SIDE OF TREE CENTER.
2. * = MULTI-PORT EMITTERS SHALL BE SHARED BETWEEN ADJACENT SHRUBS WITHIN 6'-0" MAX EMITTER TUBE REACH WITH SAME EMITTER FLOW. CONTRACTOR MAY SUBSTITUTE MULTI-PORT EMITTERS FOR SINGLE-PORT EMITTERS AS NEEDED FOR SINGLE PLANT MATERIALS.

VALVE KEY LEGEND



VALVE SIZE
STATION NUMBER
DISCHARGE FLOW (GPM)
ZONE TYPE:
'TREES' = TREE BUBBLER
'SHRUBS' = SHRUB DRIP
'TURF-PC' = PART CIRCLE ROTORS
'TURF-FC' = FULL CIRCLE ROTORS

SPRINKLER LEGEND

SYMBOL	BODY	NOZZLE	ARC PATTERN	DESIGN PRESSURE	RADIUS	FLOW GPM	PRECIP RATE (IN / HR)
MATCHED PRECIPITATION RATE ROTORS:							
25H	5006-+-PC-SAM-R-SS	5000-MPR-25-H	HALF CIRCLE	45 PSI	25 FT	1.98	0.61
30Q	5006-+-PC-SAM-R-SS	5000-MPR-30-Q	QUARTER CIRCLE	45 PSI	30 FT	1.40	0.60
30H	5006-+-PC-SAM-R-SS	5000-MPR-30-H	HALF CIRCLE	45 PSI	30 FT	2.96	0.63
30F	5006-+-FC-SAM-R-SS	5000-MPR-30-F	FULL CIRCLE	45 PSI	30 FT	5.78	0.62
35Q	5006-+-PC-SAM-R-SS	5000-MPR-35-Q	QUARTER CIRCLE	45 PSI	35 FT	1.92	0.60
35H	5006-+-PC-SAM-R-SS	5000-MPR-35-H	HALF CIRCLE	45 PSI	35 FT	3.81	0.60
35F	5006-+-FC-SAM-R-SS	5000-MPR-35-F	FULL CIRCLE	45 PSI	35 FT	7.58	0.60

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION OR RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

Title: IRRIGATION LEGEND
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

J Design
4549 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Sheet
IR-102
85 OF 148

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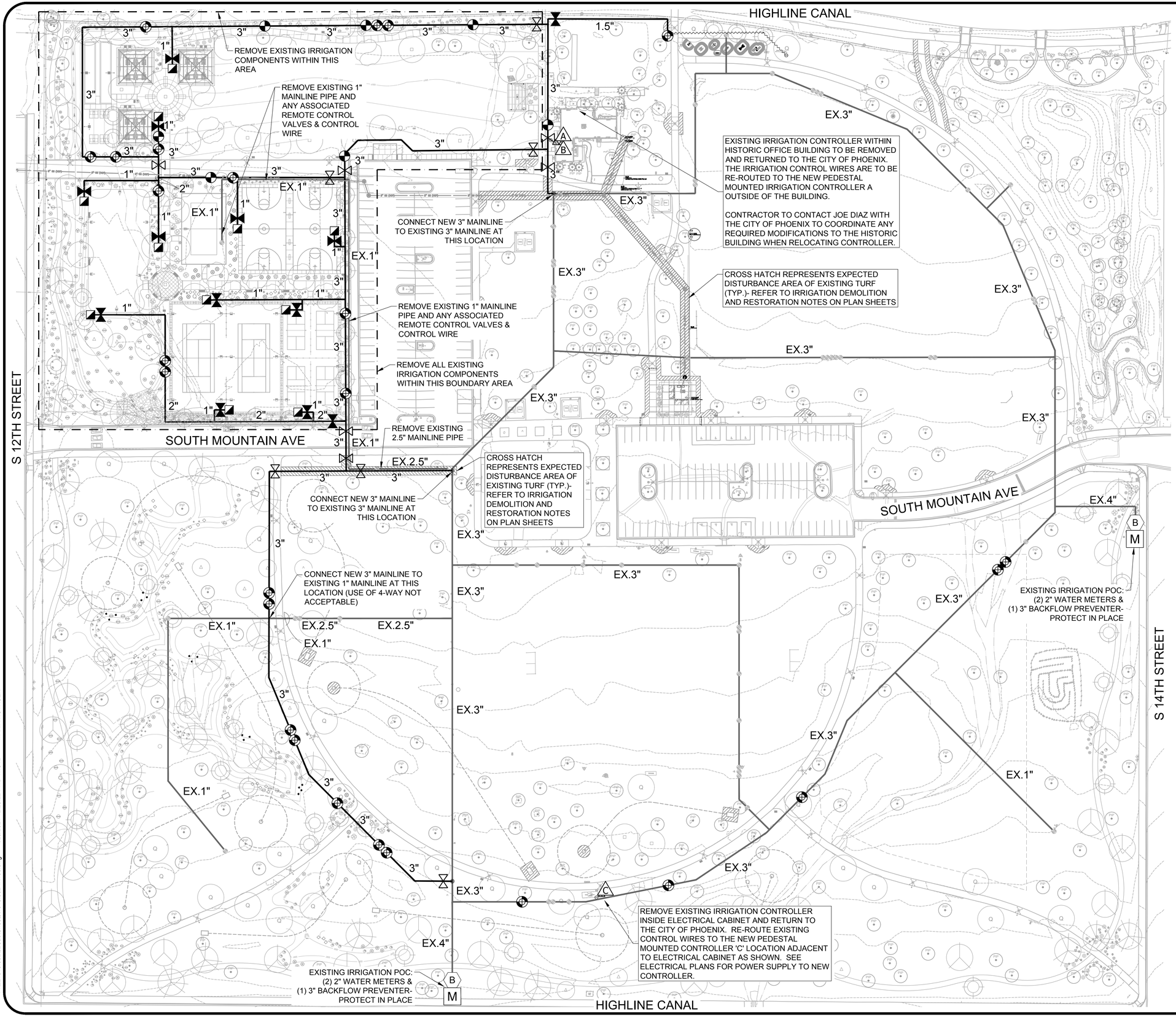

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION
M	EXISTING WATER METER
B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
	BALL VALVE ASSEMBLY
	GATE VALVE ASSEMBLY
	DRIP CONTROL VALVE ASSEMBLY
	TURF CONTROL VALVE ASSEMBLY
	QUICK COUPLER ASSEMBLY
NOT SHOWN	SINGLE-PORT EMITTER ASSEMBLY
	DEEP-ROOT WATERING ASSEMBLY
	LATERAL FLUSH END CAP ASSEMBLY
	CONNECTION POINT BETWEEN EXISTING AND NEW PIPING
WS	WIRE SPLICE BOX

PIPEING LEGEND:		TURF LEGEND:
X"	MAINLINE PIPE	(MPR) MATCHED PRECIP. RATE SMALL ROTOR
X"	TURF LATERAL PIPE	
X"	TREE LATERAL PIPE	
	SHRUB LATERAL PIPE	
	PIPE & WIRE SLEEVES	
	WIRE PATH (NOT WITH MAINLINE TRENCH)	

VALVE KEY:

VALVE SIZE
A-1 — CONTROLLER LETTER - STATION #
1" 2.3 — CONTROL ZONE FLOW (GPM)
TREES — ZONE TYPES:

'TREES' = BUBBLERS TO NEW TREES
'SHRUBS' = DRIP TO NEW SHRUBS
'VB' = VOLLEYBALL SPRAYS
'TURF' = MATCHED PRECIPITATION TURF ROTORS

GENERAL IRRIGATION CONSTRUCTION NOTES:

1) SEE IRRIGATION LEGENDS ON IR-102 FOR COMPLETE IRRIGATION EQUIPMENT DESCRIPTIONS.
2) CONTRACTOR SHALL STAKE ALL MAINLINE ROUTING & CONTROL VALVES LOCATIONS FOR APPROVAL BY CITY PRIOR TO INSTALLATION.
3) LARGE ROTORS ARE SHOWN AT TRUE LOCATIONS (CENTER OF SYMBOLS). NOT ALL SMALL ROTORS AND SPRAYS ARE SHOWN AT TRUE LOCATIONS DUE TO GRAPHICAL CLARITY- ADJUST SMALL ROTOR & SPRAY LOCATIONS AS REQUIRED.
4) CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND MAINTAIN MINIMUM SEPARATION DISTANCES FROM OTHER UTILITIES AND IMPROVEMENTS.
5) CONTRACTOR TO COORDINATE WITH ON-SITE MAINTENANCE STAFF FOR NEW NUMBERING OF ALL REMOTE CONTROL VALVES.

EXISTING IRRIGATION SYSTEM IS SHOWN FOR DIAGRAMMATIC PURPOSE AND IS BASED ON RECORD DRAWINGS DATED 11-08-1985. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR TO FIELD VERIFY THE EXISTING SYSTEM AND PROVIDE ANY DISCREPANCIES TO THE IRRIGATION DESIGNER PRIOR TO ANY INSTALLATION. CONTRACTOR SHALL ADJUST ANY REMAINING IRRIGATION EQUIPMENT OR PIPES AS NEEDED TO FACILITATE NEW CONSTRUCTION.

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

Title: IRRIGATION MAINLINE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

0 50' 100'
SCALE: 1"=50'

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

Design
4649 E COTTON GIN LOOP 82 PHOENIX, AZ 85040 602.438.2221

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KIVA # _____
SDEV # _____

Sheet IR-103
86 OF 148

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HIGHLINE CANAL

S 12TH STREET

SOUTH MOUNTAIN AVE

SOUTH MOUNTAIN AVE

S 14TH STREET

HIGHLINE CANAL

EXISTING IRRIGATION POINT OF CONNECTION, PROTECT IN PLACE

EXISTING IRRIGATION POINT OF CONNECTION, PROTECT IN PLACE

EXISTING IRRIGATION CONTROLLER WITHIN ELECTRICAL PANEL TO BE REMOVED AND RETURNED TO THE CITY OF PHOENIX. THE IRRIGATION CONTROL WIRES ARE TO BE RE-ROUTED TO THE NEW PEDESTAL MOUNTED IRRIGATION CONTROLLERS OUTSIDE THE CABINET

IRRIGATION WIRE DIAGRAM LEGEND:

SYMBOL	DESCRIPTION
M	EXISTING WATER METER
B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
	TURF CONTROL VALVE ASSEMBLY
	DRIP CONTROL VALVE ASSEMBLY

WIRE LEGEND:

———	WIRE PATH

CONDUIT SIZING CHART:

0-10 #14 AWG = 1-1/4" CONDUIT
11-18 #14 AWG = 1-1/2" CONDUIT
19-26 #14 AWG = 2" CONDUIT
27-38 #14 AWG = 2-1/2" CONDUIT
39-60 #14 AWG = 3" CONDUIT
* (1) #12 AWG = (2) #14 AWG FOR CONDUIT SIZING PURPOSES

EXISTING IRRIGATION SYSTEM IS SHOWN FOR DIAGRAMMATIC PURPOSE AND IS BASED ON RECORD DRAWINGS DATED 11-08-1985. ACTUAL FIELD CONDITION MAY VARY. CONTRACTOR TO FIELD VERIFY THE EXISTING SYSTEM AND PROVIDE ANY DISCREPANCIES TO THE IRRIGATION DESIGNER PRIOR TO ANY INSTALLATION. CONTRACTOR TO ADJUST ANY EXISTING EQUIPMENT OR PIPES TO REMAIN AS NEEDED TO FACILITATE NEW CONSTRUCTION.

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

0 50' 100'
SCALE: 1"=50'

-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

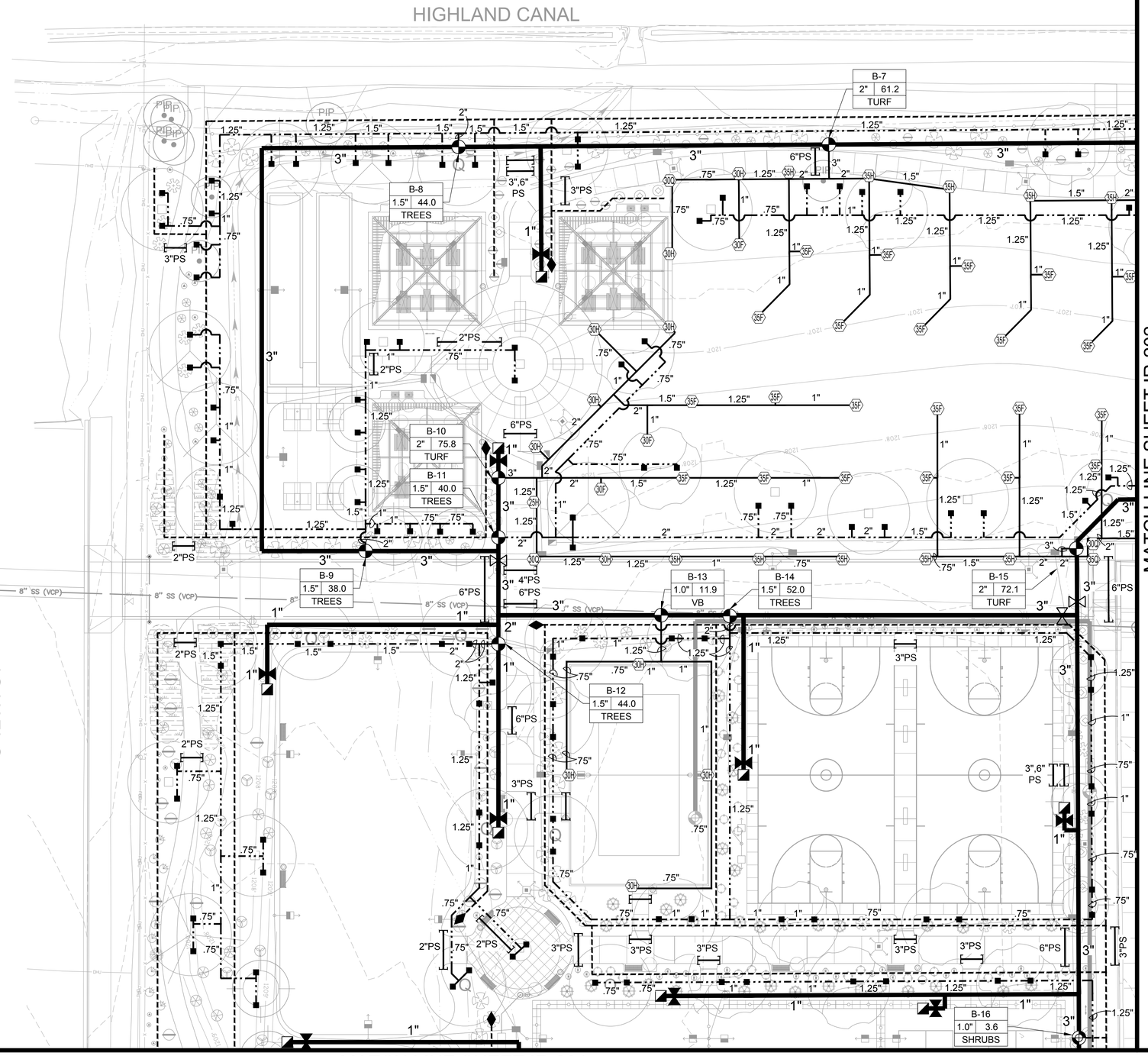
KIVA # _____
SDEV # _____

Sheet
IR-104
87 OF 148

Title:
IRRIGATION WIRE DIAGRAM
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\221618.002\12Cad\Sheets\1618.002-IR100.dwg 4/29/2024 12:25:29 PMB-W.CTB MARIA NOVACEK



IRRIGATION LEGEND:

SYMBOL	DESCRIPTION
M	EXISTING WATER METER
B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
	BALL VALVE ASSEMBLY
	GATE VALVE ASSEMBLY
	DRIP CONTROL VALVE ASSEMBLY
	TURF CONTROL VALVE ASSEMBLY
	QUICK COUPLER ASSEMBLY
NOT SHOWN	SINGLE-PORT EMITTER ASSEMBLY
	DEEP-ROOT WATERING ASSEMBLY
	LATERAL FLUSH END CAP ASSEMBLY
	CONNECTION POINT BETWEEN EXISTING AND NEW PIPING
WS	WIRE SPLICE BOX

PIPEING LEGEND:

X"	MAINLINE PIPE
X"	TURF LATERAL PIPE
X"	TREE LATERAL PIPE
	SHRUB LATERAL PIPE
	PIPE & WIRE SLEEVES
	WIRE PATH (NOT WITH MAINLINE TRENCH)

TURF LEGEND:

(MPR) MATCHED PRECIP. RATE SMALL ROTOR

VALVE KEY:

A-1 — CONTROLLER LETTER - STATION #
1" | 2.3 — VALVE SIZE | CONTROL ZONE FLOW (GPM)
TREES — ZONE TYPES:

'TREES' = BUBBLERS TO NEW TREES
'SHRUBS' = DRIP TO NEW SHRUBS
'VB' = VOLLEYBALL SPRAYS
'TURF' = MATCHED PRECIPITATION TURF ROTORS

GENERAL IRRIGATION CONSTRUCTION NOTES:

1) SEE IRRIGATION LEGENDS ON IR-102 FOR COMPLETE IRRIGATION EQUIPMENT DESCRIPTIONS.
2) CONTRACTOR SHALL STAKE ALL MAINLINE ROUTING & CONTROL VALVES LOCATIONS FOR APPROVAL BY CITY PRIOR TO INSTALLATION.
3) LARGE ROTORS ARE SHOWN AT TRUE LOCATIONS (CENTER OF SYMBOLS). NOT ALL SMALL ROTORS AND SPRAYS ARE SHOWN AT TRUE LOCATIONS DUE TO GRAPHICAL CLARITY- ADJUST SMALL ROTOR & SPRAY LOCATIONS AS REQUIRED.
4) CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND MAINTAIN MINIMUM SEPARATION DISTANCES FROM OTHER UTILITIES AND IMPROVEMENTS.
5) CONTRACTOR TO COORDINATE WITH ON-SITE MAINTENANCE STAFF FOR NEW NUMBERING OF ALL REMOTE CONTROL VALVES.

SHEET IR-201	SHEET IR-202	SHEET IR-203
SHEET IR-204	SHEET IR-205	SHEET IR-206
SHEET IR-207	SHEET IR-208	SHEET IR-209

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0 20' 40'
SCALE: 1"=20'

J Design
4545 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
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Revisions	Date

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Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

KIVA #
SDEV #

Sheet
IR-201
88 OF 148

Title:
IRRIGATION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No.: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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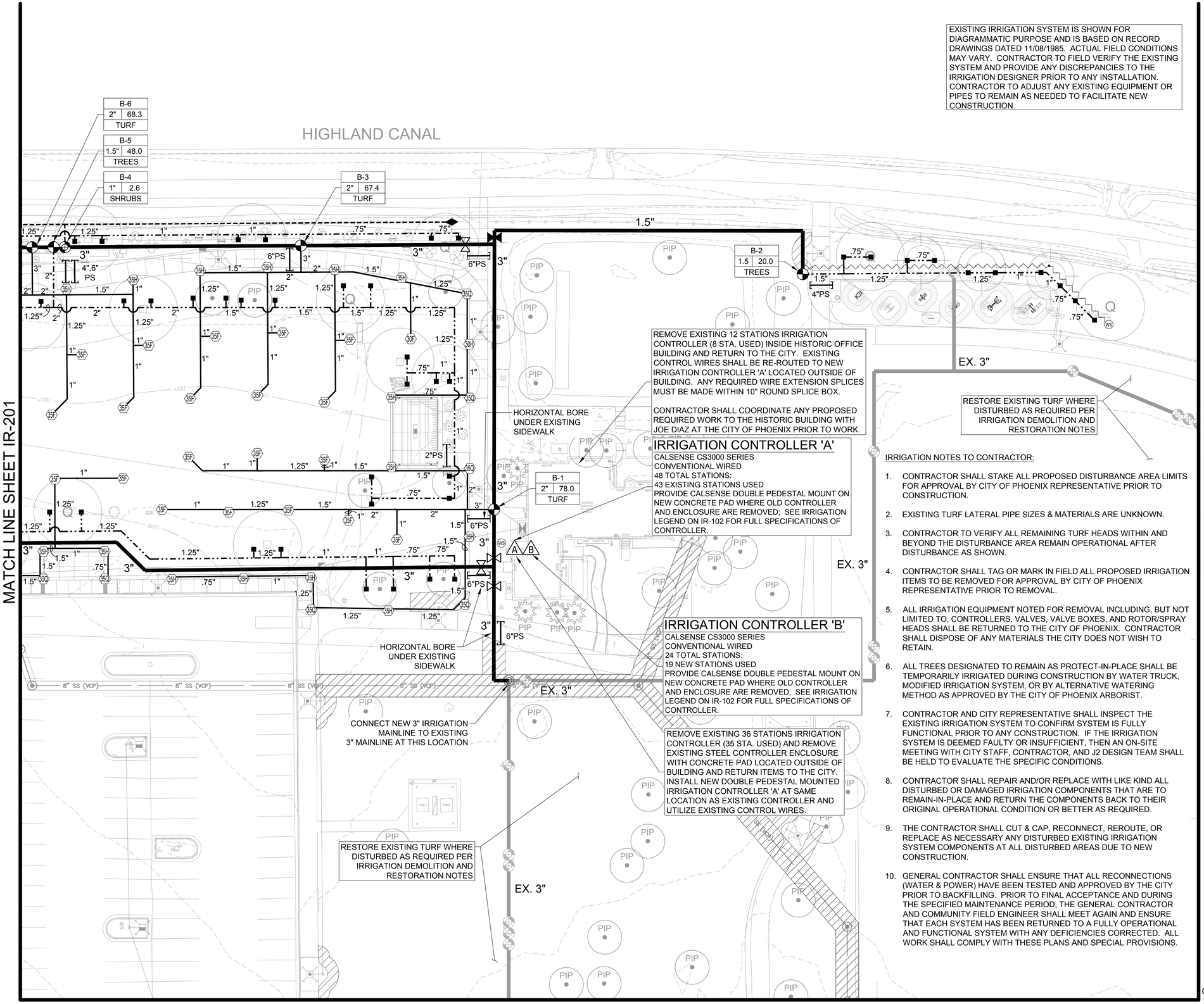

EXISTING IRRIGATION SYSTEM IS SHOWN FOR DIAGRAMMATIC PURPOSE AND IS BASED ON RECORD DRAWINGS DATED 11/08/1985. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR TO FIELD VERIFY THE EXISTING SYSTEM AND PROVIDE ANY DISCREPANCIES TO THE IRRIGATION DESIGNER PRIOR TO ANY INSTALLATION. CONTRACTOR TO ADJUST ANY EXISTING EQUIPMENT OR PIPES TO REMAIN AS NEEDED TO FACILITATE NEW CONSTRUCTION.

IRRIGATION NOTES TO CONTRACTOR:

1. CONTRACTOR SHALL STAKE ALL PROPOSED DISTURBANCE AREA LIMITS FOR APPROVAL BY CITY OF PHOENIX REPRESENTATIVE PRIOR TO CONSTRUCTION.
2. EXISTING TURF LATERAL PIPE SIZES & MATERIALS ARE UNKNOWN.
3. CONTRACTOR TO VERIFY ALL REMAINING TURF HEADS WITHIN AND BEYOND THE DISTURBANCE AREA REMAIN OPERATIONAL AFTER DISTURBANCE AS SHOWN.
4. CONTRACTOR SHALL TAG OR MARK IN FIELD ALL PROPOSED IRRIGATION ITEMS TO BE REMOVED FOR APPROVAL BY CITY OF PHOENIX REPRESENTATIVE PRIOR TO REMOVAL.
5. ALL IRRIGATION EQUIPMENT NOTED FOR REMOVAL INCLUDING, BUT NOT LIMITED TO, CONTROLLERS, VALVES, VALVE BOXES, AND ROTOR/SPRAY HEADS SHALL BE RETURNED TO THE CITY OF PHOENIX. CONTRACTOR SHALL DISPOSE OF ANY MATERIALS THE CITY DOES NOT WISH TO RETAIN.
6. ALL TREES DESIGNATED TO REMAIN AS PROTECT-IN-PLACE SHALL BE TEMPORARILY IRRIGATED DURING CONSTRUCTION BY WATER TRUCK, MODIFIED IRRIGATION SYSTEM, OR BY ALTERNATIVE WATERING METHOD AS APPROVED BY THE CITY OF PHOENIX ARBORIST.
7. CONTRACTOR AND CITY REPRESENTATIVE SHALL INSPECT THE EXISTING IRRIGATION SYSTEM TO CONFIRM SYSTEM IS FULLY FUNCTIONAL PRIOR TO ANY CONSTRUCTION. IF THE IRRIGATION SYSTEM IS DEEMED FAULTY OR INSUFFICIENT, THEN AN ON-SITE MEETING WITH CITY STAFF, CONTRACTOR, AND J2 DESIGN TEAM SHALL BE HELD TO EVALUATE THE SPECIFIC CONDITIONS.
8. CONTRACTOR SHALL REPAIR AND/OR REPLACE WITH LIKE KIND ALL DISTURBED OR DAMAGED IRRIGATION COMPONENTS THAT ARE TO REMAIN-IN-PLACE AND RETURN THE COMPONENTS BACK TO THEIR ORIGINAL OPERATIONAL CONDITION OR BETTER AS REQUIRED.
9. THE CONTRACTOR SHALL CUT & CAP, RECONNECT, REROUTE, OR REPLACE AS NECESSARY ANY DISTURBED EXISTING IRRIGATION SYSTEM COMPONENTS AT ALL DISTURBED AREAS DUE TO NEW CONSTRUCTION.
10. GENERAL CONTRACTOR SHALL ENSURE THAT ALL RECONNECTIONS (WATER & POWER) HAVE BEEN TESTED AND APPROVED BY THE CITY PRIOR TO BACKFILLING. PRIOR TO FINAL ACCEPTANCE AND DURING THE SPECIFIED MAINTENANCE PERIOD, THE GENERAL CONTRACTOR AND COMMUNITY FIELD ENGINEER SHALL MEET AGAIN AND ENSURE THAT EACH SYSTEM HAS BEEN RETURNED TO A FULLY OPERATIONAL AND FUNCTIONAL SYSTEM WITH ANY DEFICIENCIES CORRECTED. ALL WORK SHALL COMPLY WITH THESE PLANS AND SPECIAL PROVISIONS.

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION
M	EXISTING WATER METER
B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
	BALL VALVE ASSEMBLY
	GATE VALVE ASSEMBLY
	DRIP CONTROL VALVE ASSEMBLY
	TURF CONTROL VALVE ASSEMBLY
	QUICK COUPLER ASSEMBLY
NOT SHOWN	SINGLE-PORT EMITTER ASSEMBLY
	DEEP-ROOT WATERING ASSEMBLY
	LATERAL FLUSH END CAP ASSEMBLY
	CONNECTION POINT BETWEEN EXISTING AND NEW PIPING
WS	WIRE SPLICE BOX

PIPEING LEGEND:		TURF LEGEND:
X"	MAINLINE PIPE	(MPR) MATCHED PRECIP. RATE SMALL ROTOR
X"	TURF LATERAL PIPE	
X"	TREE LATERAL PIPE	
	SHRUB LATERAL PIPE	
	PIPE & WIRE SLEEVES	
	WIRE PATH (NOT WITH MAINLINE TRENCH)	

VALVE KEY:

VALVE SIZE
A-1 — CONTROLLER LETTER - STATION #
1" 2.3 — CONTROL ZONE FLOW (GPM)
TREES — ZONE TYPES:

'TREES' = BUBBLERS TO NEW TREES
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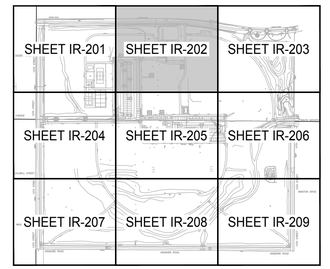
GENERAL IRRIGATION CONSTRUCTION NOTES:

1) SEE IRRIGATION LEGENDS ON IR-102 FOR COMPLETE IRRIGATION EQUIPMENT DESCRIPTIONS.
2) CONTRACTOR SHALL STAKE ALL MAINLINE ROUTING & CONTROL VALVES LOCATIONS FOR APPROVAL BY CITY PRIOR TO INSTALLATION.
3) LARGE ROTORS ARE SHOWN AT TRUE LOCATIONS (CENTER OF SYMBOLS). NOT ALL SMALL ROTORS AND SPRAYS ARE SHOWN AT TRUE LOCATIONS DUE TO GRAPHICAL CLARITY- ADJUST SMALL ROTOR & SPRAY LOCATIONS AS REQUIRED.
4) CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND MAINTAIN MINIMUM SEPARATION DISTANCES FROM OTHER UTILITIES AND IMPROVEMENTS.
5) CONTRACTOR TO COORDINATE WITH ON-SITE MAINTENANCE STAFF FOR NEW NUMBERING OF ALL REMOTE CONTROL VALVES.

KEYMAP



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0 20' 40'
SCALE: 1"=20'

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
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Revisions	Date

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100%
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Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

Title: IRRIGATION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

KIVA #
SDEV #

Sheet
IR-202
89 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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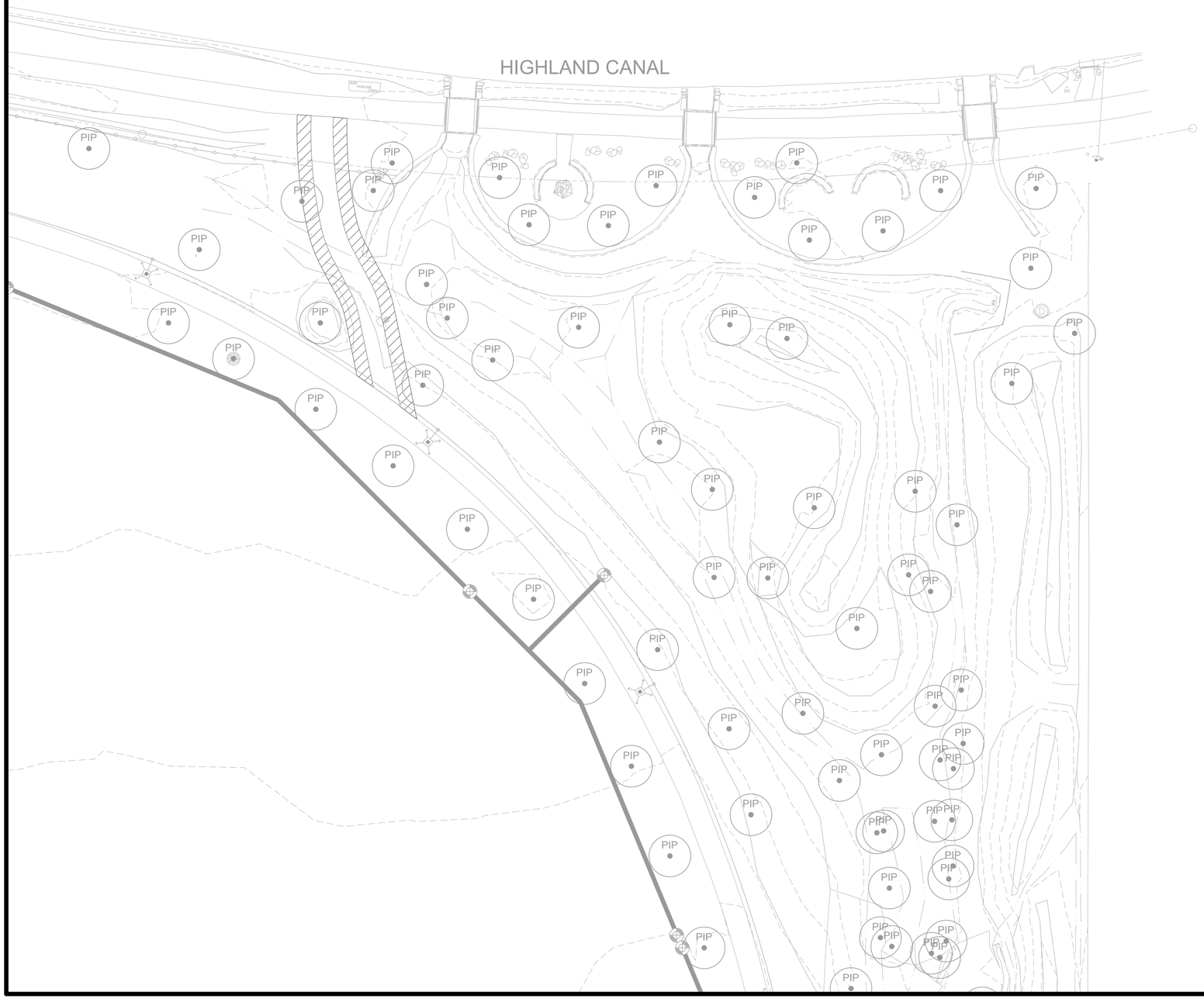
NO NEW IRRIGATION THIS SHEET



IRRIGATION LEGEND:	
SYMBOL	DESCRIPTION
M	EXISTING WATER METER
B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
	BALL VALVE ASSEMBLY
	GATE VALVE ASSEMBLY
	DRIP CONTROL VALVE ASSEMBLY
	TURF CONTROL VALVE ASSEMBLY
	QUICK COUPLER ASSEMBLY
NOT SHOWN	SINGLE-PORT EMITTER ASSEMBLY
	DEEP-ROOT WATERING ASSEMBLY
	LATERAL FLUSH END CAP ASSEMBLY
	CONNECTION POINT BETWEEN EXISTING AND NEW PIPING
WS	WIRE SPLICE BOX

PIPEING LEGEND:	
X"	MAINLINE PIPE
X"	TURF LATERAL PIPE
X"	TREE LATERAL PIPE
	SHRUB LATERAL PIPE
	PIPE & WIRE SLEEVES
	WIRE PATH (NOT WITH MAINLINE TRENCH)

TURF LEGEND:
(MPR) MATCHED PRECIP. RATE SMALL ROTOR

VALVE KEY:

VALVE SIZE
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GENERAL IRRIGATION CONSTRUCTION NOTES:

1) SEE IRRIGATION LEGENDS ON IR-102 FOR COMPLETE IRRIGATION EQUIPMENT DESCRIPTIONS.

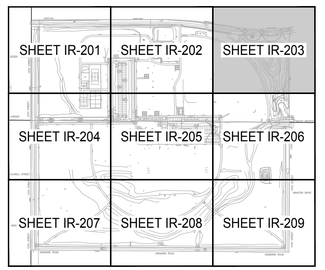
2) CONTRACTOR SHALL STAKE ALL MAINLINE ROUTING & CONTROL VALVES LOCATIONS FOR APPROVAL BY CITY PRIOR TO INSTALLATION.

3) LARGE ROTORS ARE SHOWN AT TRUE LOCATIONS (CENTER OF SYMBOLS). NOT ALL SMALL ROTORS AND SPRAYS ARE SHOWN AT TRUE LOCATIONS DUE TO GRAPHICAL CLARITY- ADJUST SMALL ROTOR & SPRAY LOCATIONS AS REQUIRED.

4) CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND MAINTAIN MINIMUM SEPARATION DISTANCES FROM OTHER UTILITIES AND IMPROVEMENTS.

5) CONTRACTOR TO COORDINATE WITH ON-SITE MAINTENANCE STAFF FOR NEW NUMBERING OF ALL REMOTE CONTROL VALVES.

KEYMAP



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Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

KIVA #
SDEV #

Sheet
IR-203
90 OF 148

Title: IRRIGATION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

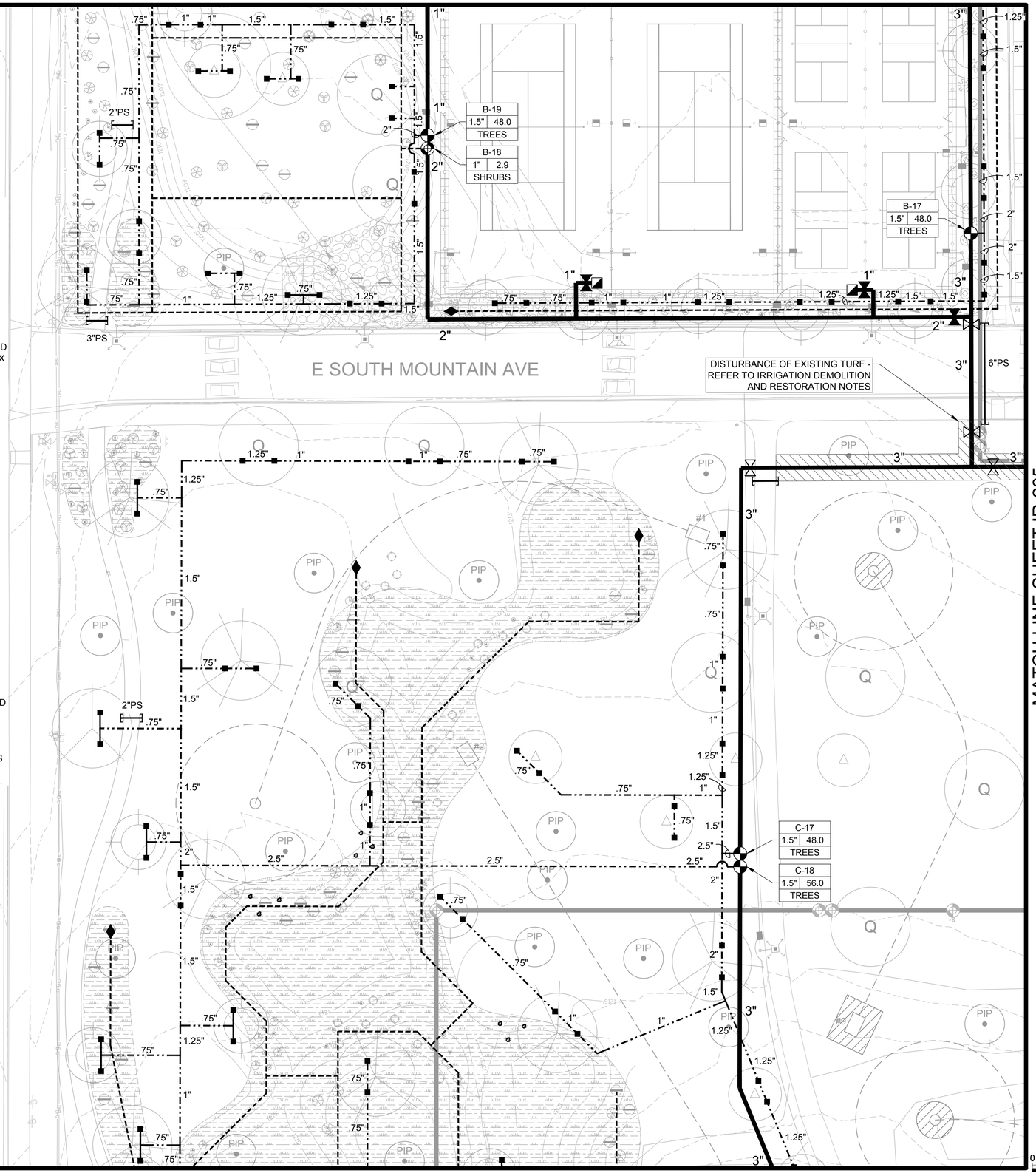
P:\22\618.002\J2Cad\Sheets\1618.002-IR200.dwg 4/29/2024 12:25:46 PM B-W.CTB MARIA NOVACEK

MATCH LINE SHEET IR-201

EXISTING IRRIGATION SYSTEM IS SHOWN FOR DIAGRAMMATIC PURPOSE AND IS BASED ON RECORD DRAWINGS DATED 11-08-1985. ACTUAL FIELD CONDITION MAY VARY. CONTRACTOR TO FIELD VERIFY THE EXISTING SYSTEM AND PROVIDE ANY DISCREPANCIES TO THE IRRIGATION DESIGNER PRIOR TO ANY INSTALLATION. CONTRACTOR TO ADJUST ANY EXISTING EQUIPMENT OR PIPES TO REMAIN AS NEEDED TO FACILITATE NEW CONSTRUCTION.

IRRIGATION DEMOLITION AND RESTORATION NOTES

1. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL STAKE AREAS THAT ARE DESIGNATED TO BE DISTURBED.
2. ALL WORK SHALL COMPLY WITH THESE PLANS AND SPECIAL PROVISIONS. THE COST OF THIS WORK IS CONSIDER INCLUDED IN THE COST OF LANDSCAPE AND IRRIGATION RESTORATION.
3. TURF LATERALS SIZE & MATERIAL ARE UNKNOWN, CONTRACTOR TO VERIFY REMAINING TURF HEADS WITHIN AND BEYOND THIS AREA REMAIN OPERATIONAL AFTER DISTURBANCE AS SHOWN.
4. ALL ITEMS TO BE REMOVED SHALL BE TAGGED AND/OR MARKED IN FIELD BY THE CONTRACTOR FOR REVIEW AND APPROVAL BY CITY OF PHOENIX REPRESENTATIVE, PRIOR TO REMOVAL.
5. ALL IRRIGATION EQUIPMENT CALLED FOR REMOVAL, INCLUDING BUT NOT LIMITED TO, VALVES, VALVE BOXES, AND ROTOR/SPRAY HEADS SHALL BE RETURNED TO THE CITY OF PHOENIX. CONTRACTOR SHALL DISPOSE OF ANY MATERIALS THE CITY OF PHOENIX DOES NOT WISH TO RETAIN.
6. ALL TREE DESIGNATED TO REMAIN PROTECT-IN-PLACE, SHALL BE TEMPORARILY IRRIGATED DURING CONSTRUCTION BY WATER TRUCK, MODIFIED IRRIGATION SYSTEM, OR ALTERNATIVE WATERING METHOD AS APPROVED BY THE CITY OF PHOENIX ARBORIST.
7. THE CONTRACTOR AND CITY REPRESENTATIVE IS TO INSPECT THE EXISTING IRRIGATION SYSTEM IS FULLY FUNCTIONAL PRIOR TO ANY CONSTRUCTION. IF THE IRRIGATION SYSTEM IS DEEMED FAULTY OR INSUFFICIENT, A MEETING ON SITE WITH CITY STAFF, AND THE CONTRACTOR WILL BE HELD TO EVALUATE THE SPECIFIC CONDITION.
8. THE CONTRACTOR SHALL BE REQUIRED TO REPAIR AND OR REPLACE ALL DISTURBED OR DAMAGED IRRIGATION COMPONENTS RETURNING THEIR OPERATION TO 100% AND ADD ANY EQUIPMENT NECESSARY TO GUARANTEE 100% COVERAGE TO ALL EXISTING PLANT MATERIAL.
9. THE CONTRACTOR SHALL CUT & CAP, RECONNECT, REROUTE, OR REPLACE THE EXISTING IRRIGATION SYSTEM TO ALL DISTURBED AREA DUE TO NEW CONSTRUCTION.
10. GENERAL CONTRACTOR SHALL ENSURE THAT ALL RECONNECTIONS (WATER & POWER) HAVE BEEN TESTED AND APPROVED BY THE COMMUNITY PRIOR TO BACKFILLING. PRIOR TO FINAL ACCEPTANCE AND DURING THE MAINTENANCE PERIOD SPECIFIED THE GENERAL CONTRACTOR AND COMMUNITY FIELD ENGINEER SHALL MEET AGAIN AND ENSURE THAT EACH SYSTEM HAS BEEN RETURNED TO A FULLY OPERATIONAL AND FUNCTIONAL SYSTEM AND THAT ANY DEFICIENCIES HAVE BEEN CORRECTED. ALL WORK SHALL COMPLY WITH THESE PLANS AND SPECIAL PROVISIONS. THE COST OF THIS WORK IS CONSIDER INCLUDED IN THE COST OF LANDSCAPE AND IRRIGATION RESTORATION.



MATCH LINE SHEET IR-205

MATCH LINE SHEET IR-207

IRRIGATION LEGEND:	
SYMBOL	DESCRIPTION
M	EXISTING WATER METER
B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
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WS	WIRE SPLICE BOX

PIPEING LEGEND:		TURF LEGEND:
X"	MAINLINE PIPE	(MPR) MATCHED PRECIP. RATE SMALL ROTOR
X"	TURF LATERAL PIPE	
X"	TREE LATERAL PIPE	
	SHRUB LATERAL PIPE	
	PIPE & WIRE SLEEVES	
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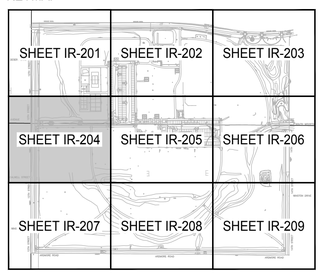
KEYMAP



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0 20' 40'
SCALE: 1"=20'

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Checked By: KW, AA
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Project #: 22.1618.002

KIVA #
SDEV #

Sheet
IR-204
91 OF 148

Title: IRRIGATION PLAN
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Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

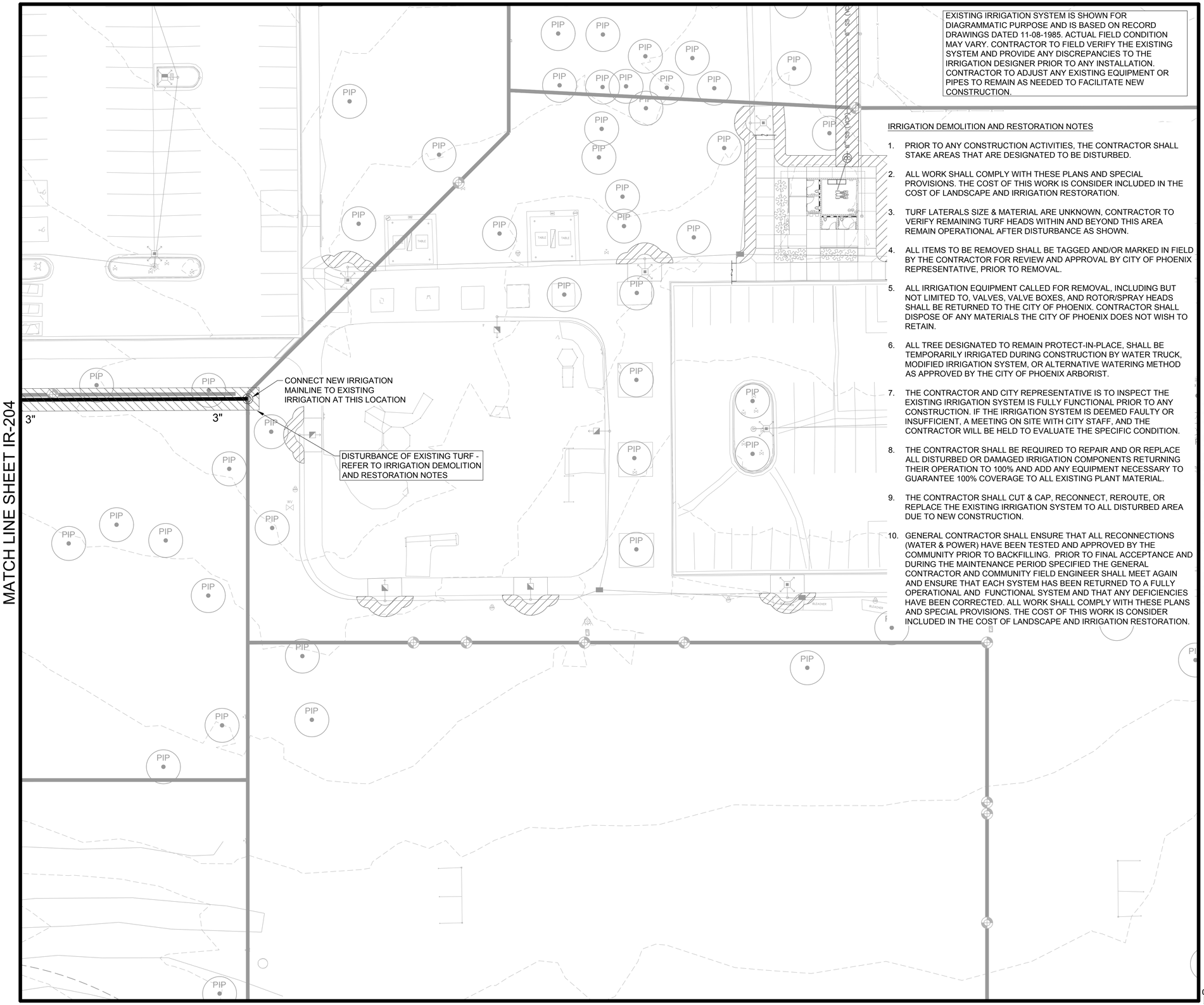
P:\221618.002\L02cad\Sheets\1618.002-IR200.dwg 4/29/2024 12:25:50 PM MARIA NOVACEK

MATCH LINE SHEET IR-202

MATCH LINE SHEET IR-204

MATCH LINE SHEET IR-206

MATCH LINE SHEET IR-208



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8. THE CONTRACTOR SHALL BE REQUIRED TO REPAIR AND OR REPLACE ALL DISTURBED OR DAMAGED IRRIGATION COMPONENTS RETURNING THEIR OPERATION TO 100% AND ADD ANY EQUIPMENT NECESSARY TO GUARANTEE 100% COVERAGE TO ALL EXISTING PLANT MATERIAL.
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IRRIGATION LEGEND:

SYMBOL	DESCRIPTION
M	EXISTING WATER METER
B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
	BALL VALVE ASSEMBLY
	GATE VALVE ASSEMBLY
	DRIP CONTROL VALVE ASSEMBLY
	TURF CONTROL VALVE ASSEMBLY
	QUICK COUPLER ASSEMBLY
NOT SHOWN	SINGLE-PORT EMITTER ASSEMBLY
	DEEP-ROOT WATERING ASSEMBLY
	LATERAL FLUSH END CAP ASSEMBLY
	CONNECTION POINT BETWEEN EXISTING AND NEW PIPING
WS	WIRE SPLICE BOX

PIPEING LEGEND:	
X"	MAINLINE PIPE
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TURF LEGEND:	
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VALVE KEY:

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GENERAL IRRIGATION CONSTRUCTION NOTES:

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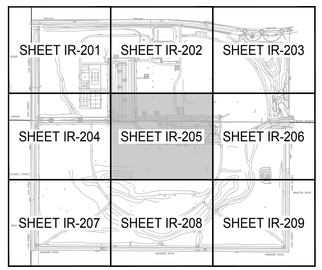
KEYMAP



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J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

KIVA #
SDEV #

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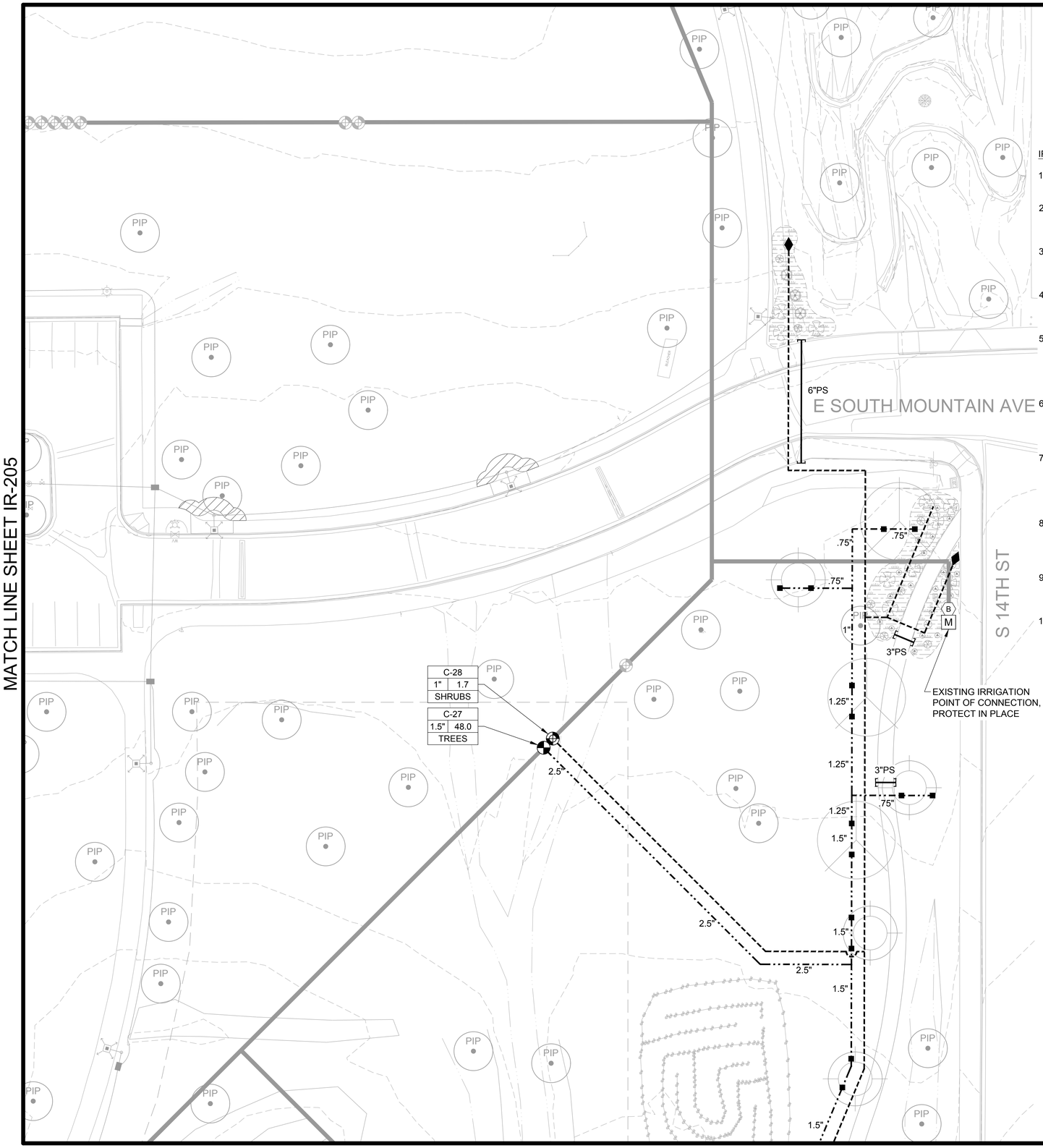
Sheet
IR-205
92 OF 148

Title: IRRIGATION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX | OFFICE OF THE CITY ENGINEER | PARKS AND RECREATION DEPT. | HIGHLINE PARK

P:\22\1618.002\J2\Cad\Sheets\1618.002-IR200.dwg 4/29/2024 12:25:54 PM B-W.CTB MARIA NOVACEK

MATCH LINE SHEET IR-203



MATCH LINE SHEET IR-205

MATCH LINE SHEET IR-209

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B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
	BALL VALVE ASSEMBLY
	GATE VALVE ASSEMBLY
	DRIP CONTROL VALVE ASSEMBLY
	TURF CONTROL VALVE ASSEMBLY
	QUICK COUPLER ASSEMBLY
NOT SHOWN	SINGLE-PORT EMITTER ASSEMBLY
■	DEEP-ROOT WATERING ASSEMBLY
	LATERAL FLUSH END CAP ASSEMBLY
	CONNECTION POINT BETWEEN EXISTING AND NEW PIPING
WS	WIRE SPLICE BOX

PIPEING LEGEND:

X"	MAINLINE PIPE
X"	TURF LATERAL PIPE
X"	TREE LATERAL PIPE
	SHRUB LATERAL PIPE
	PIPE & WIRE SLEEVES
	WIRE PATH (NOT WITH MAINLINE TRENCH)

TURF LEGEND:

(MPR) MATCHED PRECIP. RATE SMALL ROTOR

VALVE KEY:

A-1 — CONTROLLER LETTER - STATION #
1" 2.3 — VALVE SIZE / CONTROL ZONE FLOW (GPM)
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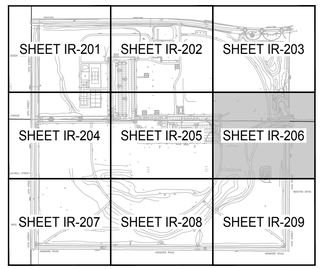

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Revisions	Date

PRE-FINAL
100%
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OR
RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

KIVA # _____
SDEV # _____

Sheet
IR-206
93 OF 148

Title:
IRRIGATION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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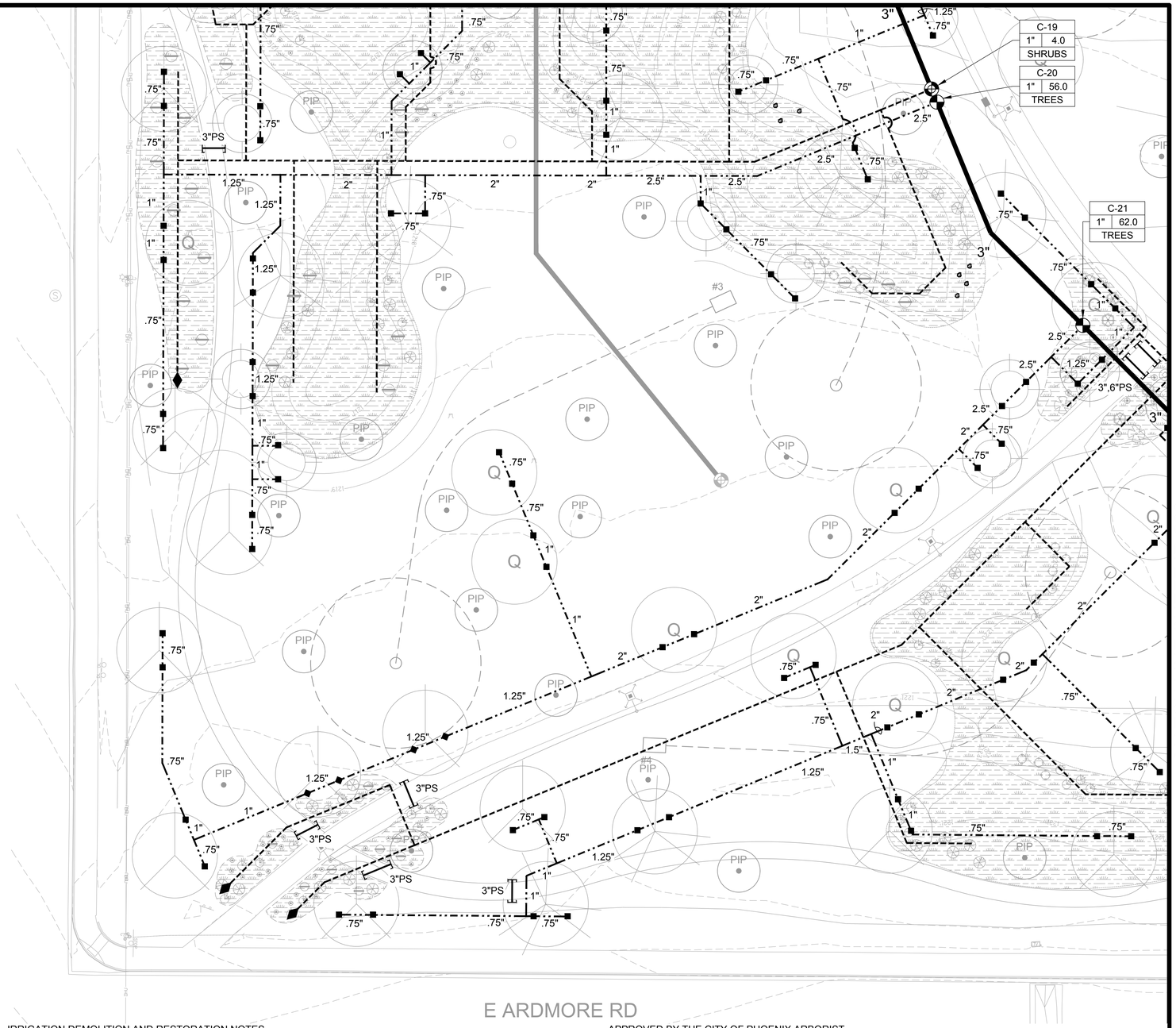
MATCH LINE SHEET IR-204



MATCH LINE SHEET IR-208

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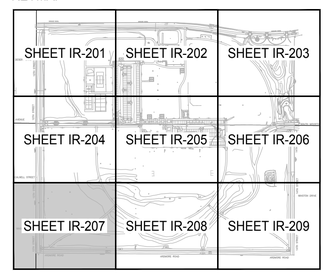

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Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

KIVA #
SDEV #

Sheet
IR-207
94 OF 148

Title: IRRIGATION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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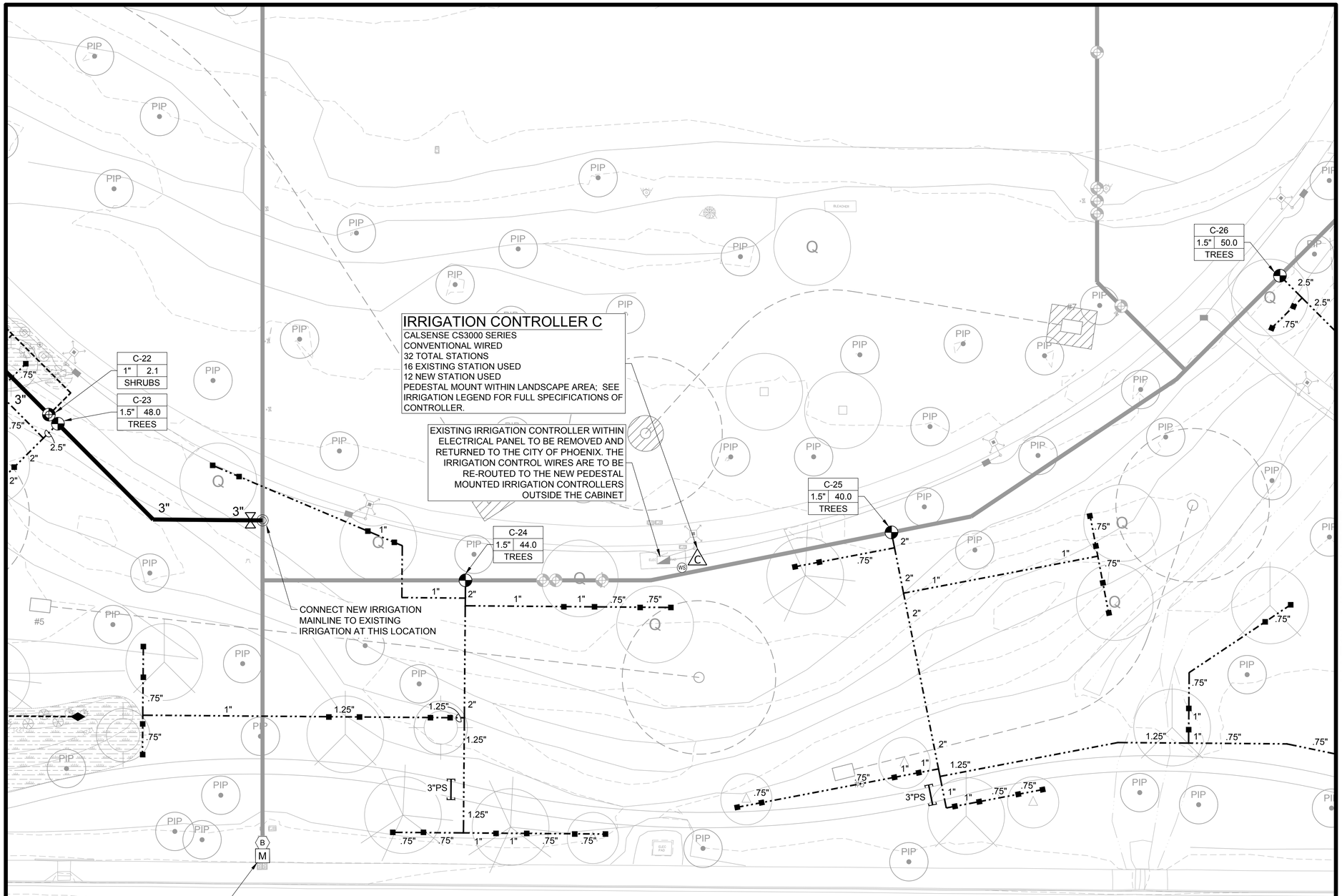
MATCH LINE SHEET IR-205

MATCH LINE SHEET IR-207

MATCH LINE SHEET IR-209



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	LATERAL FLUSH END CAP ASSEMBLY
	CONNECTION POINT BETWEEN EXISTING AND NEW PIPING
WS	WIRE SPLICE BOX

PIPEING LEGEND:

X"	MAINLINE PIPE
X"	TURF LATERAL PIPE
X"	TREE LATERAL PIPE
	SHRUB LATERAL PIPE
	PIPE & WIRE SLEEVES
	WIRE PATH (NOT WITH MAINLINE TRENCH)

TURF LEGEND:

(MPR) MATCHED PRECIP. RATE SMALL ROTOR

VALVE KEY:

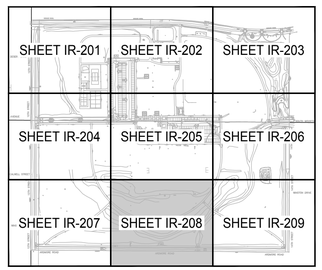
VALVE SIZE
A-1 CONTROLLER LETTER - STATION #
1" 2.3 CONTROL ZONE FLOW (GPM)
TREES ZONE TYPES:

'TREES' = BUBBLERS TO NEW TREES
'SHRUBS' = DRIP TO NEW SHRUBS
'VB' = VOLLEYBALL SPRAYS
'TURF' = MATCHED PRECIPITATION TURF ROTORS

GENERAL IRRIGATION CONSTRUCTION NOTES:

1) SEE IRRIGATION LEGENDS ON IR-102 FOR COMPLETE IRRIGATION EQUIPMENT DESCRIPTIONS.
2) CONTRACTOR SHALL STAKE ALL MAINLINE ROUTING & CONTROL VALVES LOCATIONS FOR APPROVAL BY CITY PRIOR TO INSTALLATION.
3) LARGE ROTORS ARE SHOWN AT TRUE LOCATIONS (CENTER OF SYMBOLS). NOT ALL SMALL ROTORS AND SPRAYS ARE SHOWN AT TRUE LOCATIONS DUE TO GRAPHICAL CLARITY- ADJUST SMALL ROTOR & SPRAY LOCATIONS AS REQUIRED.
4) CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND MAINTAIN MINIMUM SEPARATION DISTANCES FROM OTHER UTILITIES AND IMPROVEMENTS.
5) CONTRACTOR TO COORDINATE WITH ON-SITE MAINTENANCE STAFF FOR NEW NUMBERING OF ALL REMOTE CONTROL VALVES.

KEYMAP



-WARNING-
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

0 20' 40'
SCALE: 1"=20'

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

Title: IRRIGATION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Sheet
IR-208
95 OF 148

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

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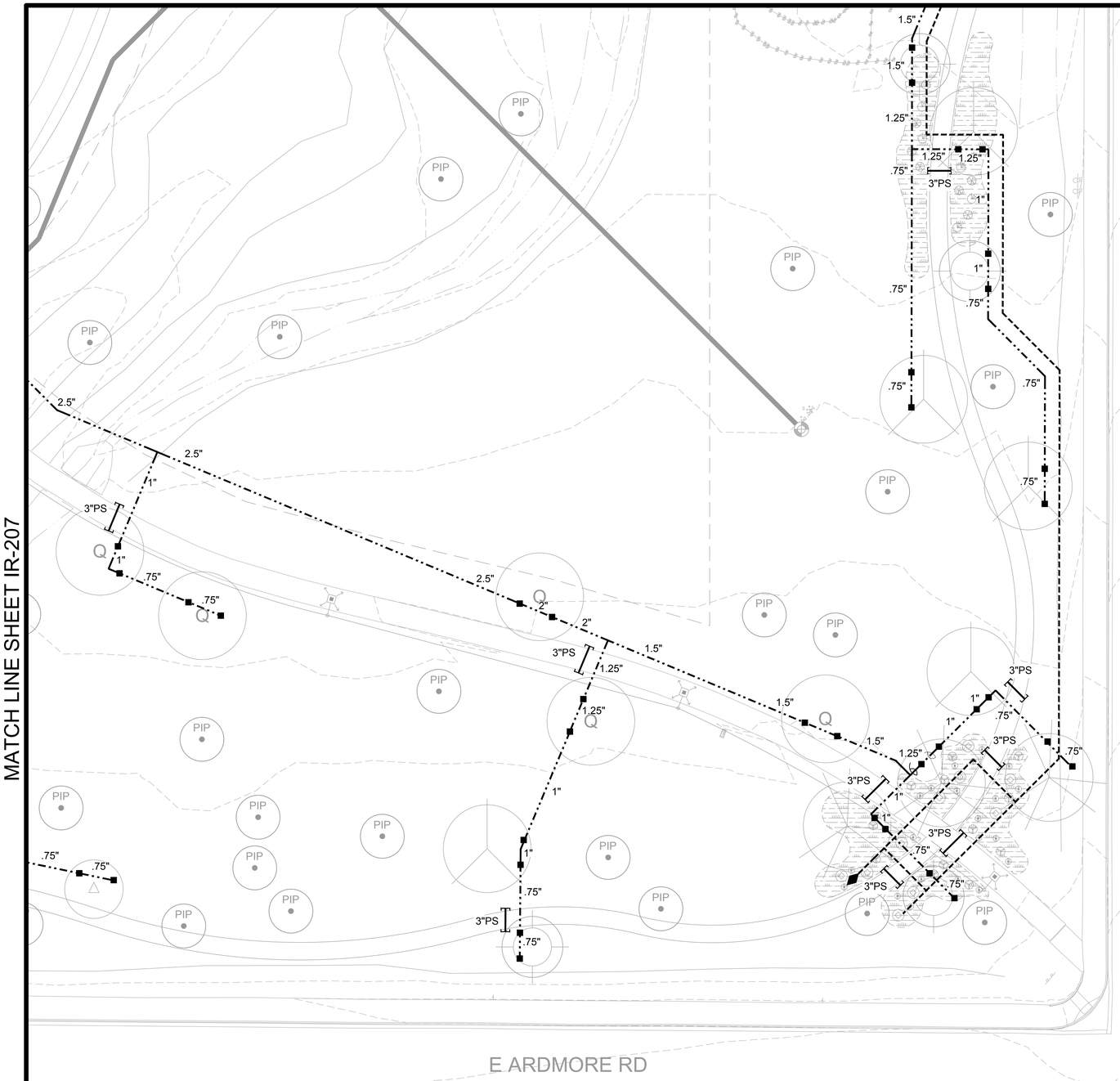
MATCH LINE SHEET IR-205



MATCH LINE SHEET IR-207

S 14TH ST

EXISTING IRRIGATION SYSTEM IS SHOWN FOR DIAGRAMMATIC PURPOSE AND IS BASED ON RECORD DRAWINGS DATED 11-08-1985. ACTUAL FIELD CONDITION MAY VARY. CONTRACTOR TO FIELD VERIFY THE EXISTING SYSTEM AND PROVIDE ANY DISCREPANCIES TO THE IRRIGATION DESIGNER PRIOR TO ANY INSTALLATION. CONTRACTOR TO ADJUST ANY EXISTING EQUIPMENT OR PIPES TO REMAIN AS NEEDED TO FACILITATE NEW CONSTRUCTION.

IRRIGATION DEMOLITION AND RESTORATION NOTES

1. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL STAKE AREAS THAT ARE DESIGNATED TO BE DISTURBED.
2. ALL WORK SHALL COMPLY WITH THESE PLANS AND SPECIAL PROVISIONS. THE COST OF THIS WORK IS CONSIDER INCLUDED IN THE COST OF LANDSCAPE AND IRRIGATION RESTORATION.
3. TURF LATERALS SIZE & MATERIAL ARE UNKNOWN, CONTRACTOR TO VERIFY REMAINING TURF HEADS WITHIN AND BEYOND THIS AREA REMAIN OPERATIONAL AFTER DISTURBANCE AS SHOWN.
4. ALL ITEMS TO BE REMOVED SHALL BE TAGGED AND/OR MARKED IN FIELD BY THE CONTRACTOR FOR REVIEW AND APPROVAL BY CITY OF PHOENIX REPRESENTATIVE, PRIOR TO REMOVAL.
5. ALL IRRIGATION EQUIPMENT CALLED FOR REMOVAL, INCLUDING BUT NOT LIMITED TO, VALVES, VALVE BOXES, AND ROTOR/SPRAY HEADS SHALL BE RETURNED TO THE CITY OF PHOENIX. CONTRACTOR SHALL DISPOSE OF ANY MATERIALS THE CITY OF PHOENIX DOES NOT WISH TO RETAIN.
6. ALL TREE DESIGNATED TO REMAIN PROTECT-IN-PLACE, SHALL BE TEMPORARILY IRRIGATED DURING CONSTRUCTION BY WATER TRUCK, MODIFIED IRRIGATION SYSTEM, OR ALTERNATIVE WATERING METHOD AS APPROVED BY THE CITY OF PHOENIX ARBORIST.
7. THE CONTRACTOR AND CITY REPRESENTATIVE IS TO INSPECT THE EXISTING IRRIGATION SYSTEM IS FULLY FUNCTIONAL PRIOR TO ANY CONSTRUCTION. IF THE IRRIGATION SYSTEM IS DEEMED FAULTY OR INSUFFICIENT, A MEETING ON SITE WITH CITY STAFF, AND THE CONTRACTOR WILL BE HELD TO EVALUATE THE SPECIFIC CONDITION.
8. THE CONTRACTOR SHALL BE REQUIRED TO REPAIR AND OR REPLACE ALL DISTURBED OR DAMAGED IRRIGATION COMPONENTS RETURNING THEIR OPERATION TO 100% AND ADD ANY EQUIPMENT NECESSARY TO GUARANTEE 100% COVERAGE TO ALL EXISTING PLANT MATERIAL.
9. THE CONTRACTOR SHALL CUT & CAP, RECONNECT, REROUTE, OR REPLACE THE EXISTING IRRIGATION SYSTEM TO ALL DISTURBED AREA DUE TO NEW CONSTRUCTION.
10. GENERAL CONTRACTOR SHALL ENSURE THAT ALL RECONNECTIONS (WATER & POWER) HAVE BEEN TESTED AND APPROVED BY THE COMMUNITY PRIOR TO BACKFILLING. PRIOR TO FINAL ACCEPTANCE AND DURING THE MAINTENANCE PERIOD SPECIFIED THE GENERAL CONTRACTOR AND COMMUNITY FIELD ENGINEER SHALL MEET AGAIN AND ENSURE THAT EACH SYSTEM HAS BEEN RETURNED TO A FULLY OPERATIONAL AND FUNCTIONAL SYSTEM AND THAT ANY DEFICIENCIES HAVE BEEN CORRECTED. ALL WORK SHALL COMPLY WITH THESE PLANS AND SPECIAL PROVISIONS. THE COST OF THIS WORK IS CONSIDER INCLUDED IN THE COST OF LANDSCAPE AND IRRIGATION RESTORATION.

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION
M	EXISTING WATER METER
B	EXISTING BACKFLOW PREVENTOR
A	IRRIGATION CONTROLLER
	BALL VALVE ASSEMBLY
	GATE VALVE ASSEMBLY
	DRIP CONTROL VALVE ASSEMBLY
	TURF CONTROL VALVE ASSEMBLY
	QUICK COUPLER ASSEMBLY
NOT SHOWN	SINGLE-PORT EMITTER ASSEMBLY
■	DEEP-ROOT WATERING ASSEMBLY
	LATERAL FLUSH END CAP ASSEMBLY
	CONNECTION POINT BETWEEN EXISTING AND NEW PIPING
WS	WIRE SPLICE BOX

PIPEING LEGEND:

X"	MAINLINE PIPE
X"	TURF LATERAL PIPE
X"	TREE LATERAL PIPE
	SHRUB LATERAL PIPE
	PIPE & WIRE SLEEVES
	WIRE PATH (NOT WITH MAINLINE TRENCH)

TURF LEGEND:

(MPR) MATCHED PRECIP. RATE SMALL ROTOR

VALVE KEY:

VALVE SIZE
A-1 — CONTROLLER LETTER - STATION #
1" 2.3 — CONTROL ZONE FLOW (GPM)
TREES — ZONE TYPES:

'TREES' = BUBBLERS TO NEW TREES
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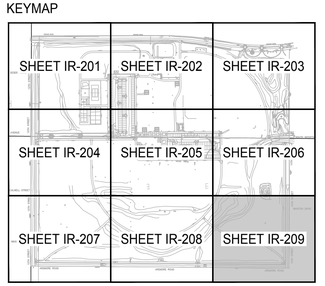
KEYMAP



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4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602 438 2221

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Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

KIVA #
SDEV #

Sheet
IR-209
96 OF 148

Title: IRRIGATION PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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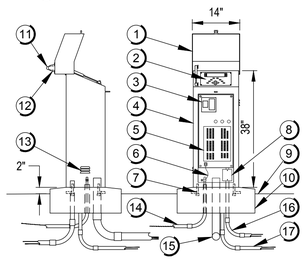
KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS

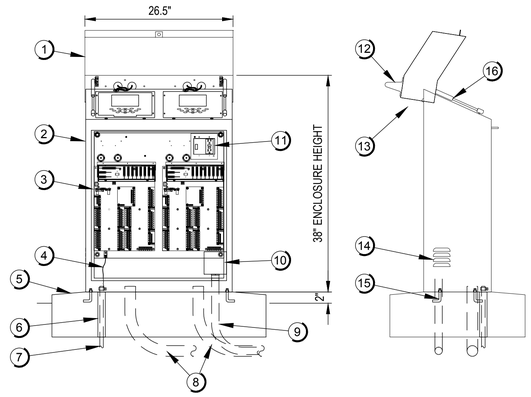
1. FLIP TOP IN OPEN POSITION
2. CALSENSE CONTROLLER PANEL
3. GFI OUTLET & SWITCH
4. STAINLESS STEEL PEDESTAL CABINET
5. TP-1 TRANSIENT PROTECTION BOARD
6. #6 AWG GROUNDING WIRE CONNECTED TO GROUND LUG
7. MOUNTING BOLTS
8. 120 VAC JUNCTION BOX
9. FINISH GRADE
10. CONCRETE BASE 26" x 24" x 8"
11. GR-STUBBY CENTRAL CONTROL RADIO ANTENNA - (AS SPECIFIED)
12. RRe-DOME HANDHELD REMOTE ANTENNA (EACH CONTROLLER NEEDS ANTENNA) - (AS SPECIFIED)
13. LOUVERED VENT
14. 2" SWEEP ELL - GROUND WIRE
15. 2-4" SWEEP ELL - CONTROL WIRE
16. 1" SWEEP ELL - 120v SERVICE
17. 1 1/2" SWEEP ELL - CONTROLLER COMMUNICATIONS & FLOW SENSOR CABLE



NOTE:
1. IRRIGATION CONTROLLER AND ENCLOSURE TO BE AS SPECIFIED ON PLANS. CONTROLLER AND ENCLOSURE SHALL BE DESIGNED AND MANUFACTURED FOR USE TOGETHER.
2. ALL WIRING AND CONDUIT WORK SHALL BE PER LOCAL AND UNIFORM ELECTRICAL CODE.
3. INSTALL CONTROLLER AND ENCLOSURE LEVEL AND CONDUITS PLUMB.
4. GROUND CONTROLLER PER MANUFACTRTER'S RECOMMENDATIONS

1 PEDESTAL MOUNT CONTROLLER

NOT TO SCALE IRR-CTL-CAL1 REV. 1/17

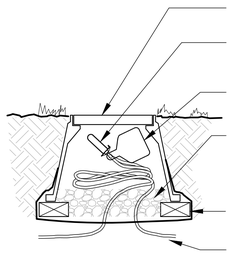


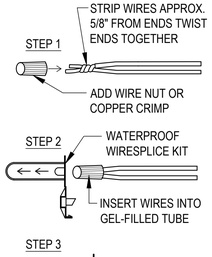
KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. FLIP LID IN OPEN POSITION
2. CALSENSE STAINLESS STEEL FACTORY ASSEMBLED ENCLOSURE
3. 120 VAC POWER AND GROUNDING PER NATIONAL AND LOCAL ELECTRIC CODES
4. #6 BARE COPPER GROUND WIRE
5. 38" x 24" x 8" CONCRETE BASE
6. PVC SLEEVE FOR GROUND ROD
7. 5/8" x 8' COPPER GROUND ROD- 1 PER SSE-D
8. SCH 40 PVC ELECTRICAL SWEEP FOR FIELD WIRES (2 TYP)
9. SCH 40 PVC ELECTRICAL SWEEP FOR 120 VAC POWER SUPPLY
10. 120 VAC JUNCTION BOX (INCLUDED WITH ENCLSOURE)
11. GFI OUTLET AND SWITCH
12. OPTIONAL DOME ANTENNA
13. ALLOW MINIMUM OF 7" BEHIND ENCLOSURE FOR FULLY OPENED LID
14. LOUVERED VENT
15. MOUNTING J-BOLT (4 TYP)
16. FLIP LID PISTON

2 DOUBLE WIDE PEDESTAL MOUNT CONTROLLERS

NOT TO SCALE



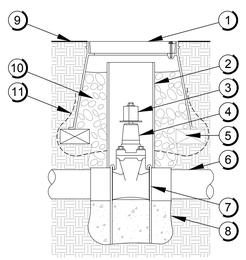


NOTES:
1. SEE IRRIGATION LEGEND FOR REQUIRED BRAND & MODEL OF CONNECTORS.
2. FOR ALL WIRE SIZES NO. 14,12,&10.
3. ALL CONNECTIONS IN VALVE BOXES ONLY.
4. INSTALL VALVE BOX AND BRANDING PER VALVE BOX INSTALLATION DETAIL.
5. LABEL ALL WIRES ENDS IN SPLICE BOX.

FOR 1 - 10 CONTROL WIRES USE 10" ROUND CARSON #910 VALVE BOX;
FOR 11 OR MORE CONTROL WIRES USE RECTANGULAR CARSON #1220 JUMBO VALVE BOX.

3 WIRE SPLICE

NOT TO SCALE



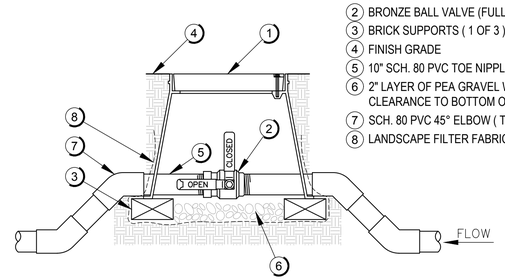
KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. 10-INCH VALVE BOX W/ BOLT DOWN COVER. INCLUDE STAINLESS STEEL BOLTS, & HEAT BRAND "GV" ONTO LID.
2. 6" SCH. 40 PVC PIPE
3. GATE VALVE W/ OPERATING NUT
4. RESILIENT SEATED DUCTILE IRON EPOXY COATED GATE VALVE
5. BRICK SUPPORTS (1 OF 3)
6. PVC MAINLINE PIPE
7. #4 REBAR, "U" SHAPE W/ MASTIC COATING (1 OF 2)
8. 6" THICK CONCRETE BASE
9. FINISH GRADE
10. PEA GRAVEL
11. LANDSCAPE FILTER FABRIC

NOTES:
1. GATE VALVE SHALL MATCH NOMINAL SIZE OF MAINLINE PIPE.

4 ISOLATION GATE VALVE - 3" AND LARGER

NOT TO SCALE IRR-VAL-GV1 REV. 1/17



KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. 10-INCH ROUND VALVE BOX W/ BOLT DOWN COVER. INCLUDE STAINLESS STEEL BOLTS, & HEAT BRAND "GV" ONTO LID.
2. BRONZE BALL VALVE (FULL PORT)
3. BRICK SUPPORTS (1 OF 3)
4. FINISH GRADE
5. 10" SCH. 80 PVC TOE NIPPLE (TYP. 1 OF 2)
6. 2" LAYER OF PEA GRAVEL W/ 1" MIN. CLEARANCE TO BOTTOM OF VALVE
7. SCH. 80 PVC 45° ELBOW (TYP. 4)
8. LANDSCAPE FILTER FABRIC

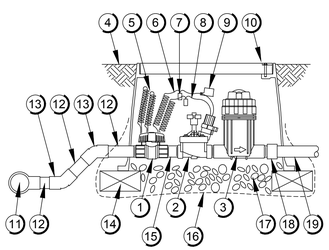
NOTES:
1. BALL VALVE SHALL MATCH NOMINAL SIZE OF MAINLINE PIPE.

5 ISOLATION BALL VALVE - 2 1/2" AND SMALLER

NOT TO SCALE IRR-VAL-GV2 REV. 1/17

KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. PVC SCH. 40 BALL VALVE
2. REMOTE CONTROL DRIP VALVE
3. PRESSURE REGULATOR & FILTER
4. FINISH GRADE
5. SPARE CONTROL WIRE COILS PER SPEC. (WRAP 1/2" PIPE 15 TIMES)
6. NO. 12 COMMON WIRE (WHITE)
7. WATER TIGHT WIRE CONNECTOR
8. NO. 14 PILOT WIRE (ORANGE)
9. VALVE I.D. TAG
10. JUMBO VALVE BOX W/ BOLT DOWN COVER. INCLUDE STAINLESS STEEL BOLTS
11. PVC SCH. 80 MAINLINE TEE
12. PVC SCH. 80 PIPE (LENGTH AS REQUIRED)
13. PVC SCH. 80 45° ELL
14. BRICK SUPPORTS (1 OF 4)
15. PVC SCH. 80 TBE NIPPLE
16. LANDSCAPE FILTER FABRIC
17. 6-INCH MINIMUM DEPTH OF PEA GRAVEL
18. PVC SCH. 80 FEMALE ADAPTER
19. PVC SCH. 40 LATERAL PIPE



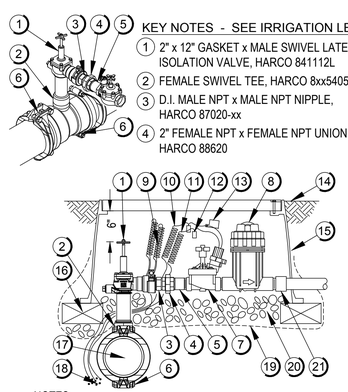
NOTES:
1. STEP-UP VALVE W/45° FITTINGS TO MAINTAIN 6" BETWEEN VALVE AND TOP OF BOX.
2. EMBOSS COVER WITH 1/2" NUMBERS, WHICH CORRESPOND TO VALVE NUMBERS ON IRRIGATION PLAN AND TO CONTROLLER STATION.
3. USE PURPLE VALVE BOXES AND LIDS FOR VALVES SERVICED BY NON POTABLE WATER SOURCE.

6 DRIP REMOTE CONTROL VALVE (1" - 2 1/2" MAINLINE)

NOT TO SCALE IRR-VAL-DRC1 REV. 1/17

KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. 2" x 12" GASKET x MALE SWIVEL LATERAL ISOLATION VALVE, HARCO 841112L
2. FEMALE SWIVEL TEE, HARCO 8xx5405
3. D.I. MALE NPT x MALE NPT NIPPLE, HARCO 87020-xx
4. 2" FEMALE NPT x FEMALE NPT UNION, HARCO 88620
5. D.I. 2" SPIGOT x MALE NPT ADAPTER, HARCO 874xx08
6. D.I. CLAMSHELL RESTRAINT, HARCO 82xx11
7. REMOTE CONTROL DRIP VALVE DRIP
8. PRESSURE REGULATOR & FILTER
9. SPARE CONTROL WIRE COILS PER SPEC. (WRAP 1/2" PIPE 15 TIMES)
10. NO. 14 PILOT WIRE
11. NO. 12 COMMON WIRE
12. WATER TIGHT WIRE CONNECTORS
13. VALVE I.D. TAGS
14. FINISH GRADE
15. JUMBO VALVE BOX W/ BOLT DOWN COVER. INCLUDE STAINLESS STEEL BOLT
16. BRICK SUPPORTS (1 OF 4)
17. PVC MAINLINE PIPE
18. WIRE BUNDLE
19. LANDSCAPE FILTER FABRIC
20. 6" MIN. DEPTH OF PEA GRAVEL
21. PVC SCH. 80 FEMALE ADAPTER



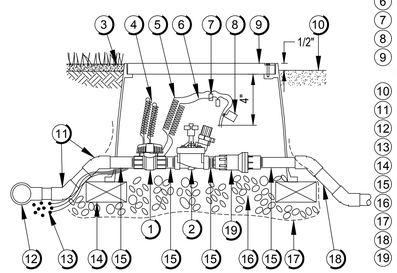
NOTES:
1. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" WITH 1/2" LETTERS, WHICH CORRESPOND TO VALVE NUMBERS ON IRRIGATION PLAN AND TO THE CONTROLLER STATION.
2. USE PURPLE VALVE BOXES AND LIDS FOR VALVES SERVICED BY NON-POTABLE WATER SOURCE.

7 DRIP REMOTE CONTROL VALVE (3" & LARGER MAINLINE)

NOT TO SCALE IRR-VAL-DRC2 REV. 1/17

KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. PVC SCH. 40 BALL VALVE
2. REMOTE CONTROL VALVE
3. FINISH GRADE - TURF AREAS
4. SPARE CONTROL WIRE COILS PER SPEC. (WRAP 1/2" PIPE 15 TIMES)
5. NO. 14 PILOT WIRE
6. NO. 12 COMMON WIRE
7. WATER TIGHT WIRE CONNECTORS
8. VALVE I.D. TAGS
9. VALVE BOX W/ BOLT DOWN COVER. INCLUDE STAINLESS STEEL BOLTS
10. FINISH GRADE - DECOMPOSED GRANITE
11. PVC SCH. 80 ELL
12. PVC MAINLINE PIPE
13. WIRE BUNDLE
14. BRICK SUPPORTS (1 OF 4)
15. PVC SCH. 80 THREADED NIPPLE
16. 6" MIN. DEPTH OF PEA GRAVEL
17. LANDSCAPE FILTER FABRIC
18. PVC LATERAL PIPE
19. PRESET INLINE PRESSURE REGULATOR



NOTES:
1. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" WITH 1/2" LETTERS, WHICH CORRESPOND TO VALVE NUMBERS ON IRRIGATION PLAN AND TO THE CONTROLLER STATION.
2. USE PURPLE VALVE BOXES AND LIDS FOR VALVES SERVICED BY NON-POTABLE WATER SOURCE.

8 BUBBLER REMOTE CONTROL VALVE (1" - 2 1/2" MAINLINE)

NOT TO SCALE IRR-VAL-RC1 REV. 1/17

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
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RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

Title: IRRIGATION DETAILS
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Sheet
IR-301
97 OF 148

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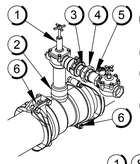
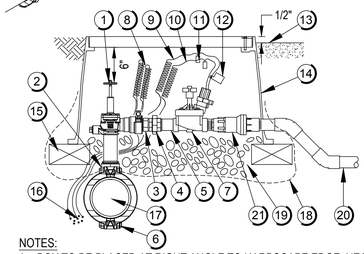
KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS



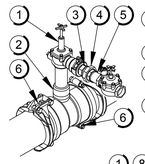
1. 2" x 12" GASKET x MALE SWIVEL LATERAL ISOLATION VALVE, HARCO 841112L
2. FEMALE SWIVEL TEE, HARCO 8xx5405
3. D.I. MALE NPT x MALE NPT NIPPLE, HARCO 87020-xx
4. 2" FEMALE NPT x FEMALE NPT UNION, HARCO 88620
5. D.I. 2" SPIGOT x MALE NPT ADAPTER, HARCO 874xx08
6. D.I. CLAMSHELL RESTRAINTS, HARCO 82xx11
7. REMOTE CONTROL VALVE
8. SPARE CONTROL WIRE COILS PER SPEC. (WRAP 1/2" PIPE 15 TIMES)
9. NO. 14 PILOT WIRE
10. NO. 12 COMMON WIRE
11. WATER TIGHT WIRE CONNECTORS
12. VALVE I.D. TAGS
13. FINISH GRADE
14. JUMBO VALVE BOX W/ BOLT DOWN COVER. INCLUDE STAINLESS STEEL BOLT
15. BRICK SUPPORTS (1 OF 4)
16. WIRE BUNDLE
17. PVC MAINLINE PIPE
18. LANDSCAPE FILTER FABRIC
19. 6" MIN. DEPTH OF PEA GRAVEL
20. PVC LATERAL PIPE
21. PRESET INLINE PRESSURE REGULATOR



NOTES:
1. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" WITH 1/2" LETTERS, WHICH CORRESPOND TO VALVE NUMBERS ON IRRIGATION PLAN AND TO THE CONTROLLER STATION.
2. USE PURPLE VALVE BOXES AND LIDS FOR VALVES SERVICED BY NON-POTABLE WATER SOURCE.

1 BUBBLER REMOTE CONTROL VALVE (3" & LARGER MAINLINE)
NOT TO SCALE

KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS



1. 2" x 12" GASKET x MALE SWIVEL LATERAL ISOLATION VALVE, HARCO 841112L
2. FEMALE SWIVEL TEE, HARCO 8xx5405
3. D.I. MALE NPT x MALE NPT NIPPLE, HARCO 87020-xx
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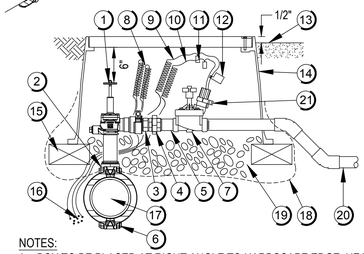
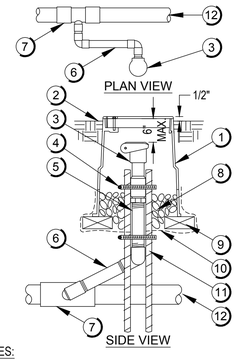
5. D.I. 2" SPIGOT x MALE NPT ADAPTER, HARCO 874xx08
6. D.I. CLAMSHELL RESTRAINTS, HARCO 82xx11
7. REMOTE CONTROL VALVE
8. SPARE CONTROL WIRE COILS PER SPEC. (WRAP 1/2" PIPE 15 TIMES)
9. NO. 14 PILOT WIRE
10. NO. 12 COMMON WIRE
11. WATER TIGHT WIRE CONNECTORS
12. VALVE I.D. TAGS
13. FINISH GRADE
14. JUMBO VALVE BOX W/ BOLT DOWN COVER. INCLUDE STAINLESS STEEL BOLT
15. BRICK SUPPORTS (1 OF 4)
16. WIRE BUNDLE
17. PVC MAINLINE PIPE
18. LANDSCAPE FILTER FABRIC
19. 6" MIN. DEPTH OF PEA GRAVEL
20. PVC LATERAL PIPE
21. ADJUSTABLE PRESSURE REGULATOR



NOTES:
1. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" WITH 1/2" LETTERS, WHICH CORRESPOND TO VALVE NUMBERS ON IRRIGATION PLAN AND TO THE CONTROLLER STATION.
2. USE PURPLE VALVE BOXES AND LIDS FOR VALVES SERVICED BY NON-POTABLE WATER SOURCE.

2 TURF REMOTE CONTROL VALVE (3" & LARGER MAINLINE)
NOT TO SCALE

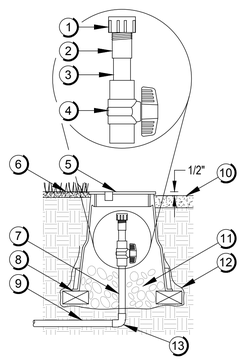


KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. 10" ROUND VALVE BOX W/ LOCKING "T" STYLE COVER (SUPPLY W/ STAINLESS STEEL BOLTS), EMBOSS COVER W/ "QC" OR AS DIRECTED
2. FINISH GRADE
3. QUICK COUPLING VALVE
4. STAINLESS STEEL HOSE CLAMP (1 OF 2)
5. SCH. 80 TBE NIPPLE (LENGTH AS REQUIRED)
6. SCH. 80 PVC SWING JOINT W/ "O" RING
7. PVC SCH. 40 TEE OR ELL
8. 6" MIN. DEPTH PEA GRAVEL
9. BRICK SUPPORTS (1 OF 3)
10. LANDSCAPE FILTER FABRIC
11. 36" LONG #5 REBAR SUPPORTS (2 REQUIRED)
12. PVC MAINLINE PIPE

NOTES:
1. EACH QUICK COUPLER SHALL BE IN A SEPARATE VALVE BOX.
2. USE PURPLE VALVE BOXES AND LIDS FOR VALVES SERVICED BY NON POTABLE WATER SOURCE.
3. FOR MAINLINE SIZES 3-INCHES & LARGER, INSTALL DEEP-BELL DUCTILE IRON GASKET SERVICE TEE FOR MAINLINE CONNECTIONS.
4. SWING JOINT SHALL BE THE SAME SIZE AS QUICK COUPLER VALVE.

3 QUICK COUPLING VALVE ASSEMBLY
NOT TO SCALE IRR-VAL-QC1 REV. 1/17

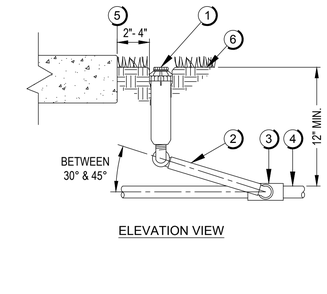


KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. 3/4" SCH. 40 PVC CAP WITH O-RING (FHT)
2. 3/4" SCH. 40 PVC HOSE FITTING (MHT x SLIP)
3. PVC SCH. 40 NIPPLE
4. PVC SCH. 40 BALL VALVE
5. 10" ROUND VALVE BOX WITH LOCKING "T" STYLE COVER (SUPPLY WITH STAINLESS STEEL BOLTS) HEAT BRAND "FC" ONTO LID
6. FINISH GRADE IN TURF AREAS
7. 3/4" SCH. 40 ALGAE RESISTANT FLEX HOSE
8. BRICK SUPPORTS (1 OF 3)
9. PVC EMITTER LATERAL PIPE
10. FINISHED GRADE IN SHRUB AREAS
11. 4" MIN. DEPTH OF PEA GRAVEL
12. LANDSCAPE FILTER FABRIC
13. SCH. 40 PVC 90° ELL (OR REDUCING ELL) (SLIP x SLIP)

NOTES:
1. FOR VALVES SERVICED BY NON POTABLE WATER SOURCE, USE PURPLE VALVE BOXES WITH PURPLE LIDS.
2. TAG FLUSH CAPS SERVICED BY NON POTABLE SOURCE WITH CHRISTY'S ID TAG MODEL: ID-STD-P2-RC1P2

4 DRIP FLUSH CAP ASSEMBLY
NOT TO SCALE IRR-VAL-FC REV. 1/17



ELEVATION VIEW

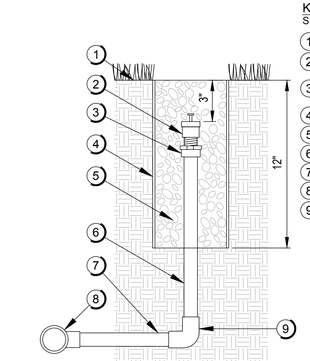
PLAN VIEW

KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. SET LARGE ROTOR SPRINKLER HEAD CLEAR FROM PAVEMENT AND 1/2" BELOW FINISH GRADE
2. PRE-FABRICATED SWING JOINT WITH "O" RING INSTALL SWING JOINT LAY ARM AT AN ANGLE BETWEEN 30° AND 45°
3. PVC SCH. 80 SLIP TEE OR ELL
4. PVC LATERAL SCH. & SIZE PER PLAN
5. EDGE OF PAVEMENT
6. FINISH GRADE

NOTE:
1. USE A NON POTABLE RUBBER COLLAR FOR ROTORS SERVICED BY A NON POTABLE WATER SOURCE.

5 ROTOR SPRINKLER ASSEMBLY
NOT TO SCALE IRR-SPK-ROT REV. 1/17



KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

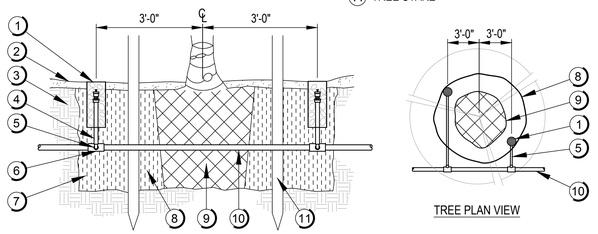
1. FINISH GRADE
2. BUBBLER (FPT UNLESS OTHERWISE NOTED)
3. 1/2" THREADED SCH. 40 MALE ADAPTER (MPT x SLIP) FLEX PVC CEMENT REQUIRED
4. 4" DIA. x 12" PVC CLASS 200 SLEEVE
5. PEA GRAVEL
6. 1/2" SCH. 40 FLEX HOSE (MIN. LENGTH 8")
7. 1/2" SDR 13.5 PVC MIN. LENGTH 12"
8. LATERAL IRRIGATION PIPE
9. 1/2" SCH. 40 ELL OR TEE (SLIP x SLIP)

NOTES:
1. SEE 'BUBBLER & EMITTER LEGEND' ON IR-103 FOR BUBBLER FLOW RATES AND QUANTITY PER TREE.

6 TREE BUBBLER ASSEMBLY
NOT TO SCALE

KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS

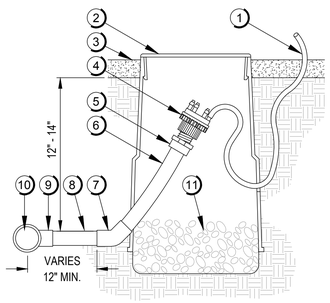
1. TREE BUBBLER ASSEMBLY PER DETAIL 6
2. FINISH GRADE
3. NATIVE SOIL
4. 1/2" FLEX HOSE RISER
5. 1/2" CLASS 315 PVC EXTENSION PIPE- LENGTH AS REQ'D
6. SCH. 40 PVC TEE OR ELL- SIZE AS REQ'D
7. PLANT PIT BACKFILL PER LANDSCAPE DETAIL
8. PLANT PIT
9. PLANT ROOT BALL
10. PVC LATERAL PIPE
11. TREE STAKE



TREE PLAN VIEW

NOTES:
1. POSITION TWO BUBBLER UNITS PER EACH TREE WITHIN EXCAVATED PLANTING PIT SPACED 3'-0" FROM CENTER OF TREE AND 180° INLINE WITH TREE.
2. INSTALL PRODUCT WITH TOP EVEN WITH GROUND SURFACE.
3. WHEN INSTALLING IN EXTREMELY HARD OR CLAY SOILS, ADD 3/4" GRAVEL UNDER AND AROUND THE UNIT TO ALLOW FASTER WATER INFILTRATION AND ROOT PENETRATION.

7 TREE BUBBLER LOCATION DETAIL
NOT TO SCALE

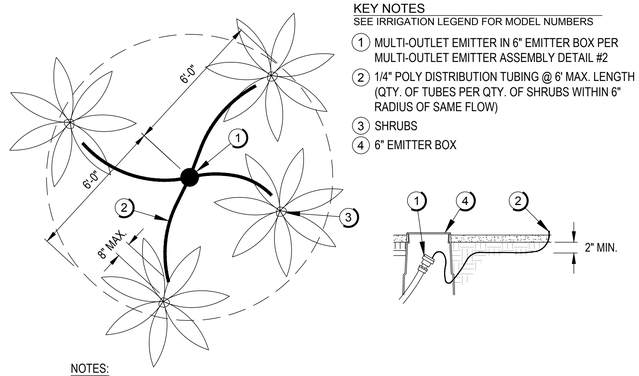


KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. 1/4" POLY TUBING - SEE DISTRIBUTION DETAIL (6' MAX. LENGTH)
2. 6" DIAMETER TAN CLEAN OUT BOX
3. FINISH GRADE - 2" LAYER OF SPECIFIED DECOMPOSED GRANITE
4. MULTI-OUTLET EMITTER
5. 1/2" THREADED SCH. 40 MALE ADAPTER
6. 1/2" SCH. 40 FLEX HOSE (8" LENGTH MIN.)
7. 1/2" PVC SCH. 40 - 45° ELL
8. 1/2" PVC CLASS 315 PIPE 12" MIN.
9. 1/2" PVC SCH. 40 FITTING
10. LATERAL IRRIGATION PIPE
11. 6" MIN. LAYER OF PEA GRAVEL

NOTES:
1. PLACE EMITTER ASSEMBLY OUTSIDE OF ROOT BALL.
2. POLYETHYLENE EMITTER TUBING EMISSION POINTS SHALL BE EQUALLY SPACED AND LOCATED TO DIRECT WATER FLOW TO THE PERIMETER OF THE DRIP LINE.
3. NO EMITTER LATERALS OR PIPING SHALL BE INSTALLED THROUGH OR BENEATH PLANT PITS. MINIMUM DISTANCE BETWEEN PLANT PIT PERIMETER AND PIPING SHALL BE 12".

8 MULTI-OUTLET EMITTER ASSEMBLY
NOT TO SCALE IRR-DRP-EMT2 REV. 1/17



KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. MULTI-OUTLET EMITTER IN 6" EMITTER BOX PER MULTI-OUTLET EMITTER ASSEMBLY DETAIL #2
2. 1/4" POLY DISTRIBUTION TUBING @ 6' MAX. LENGTH (QTY. OF TUBES PER QTY. OF SHRUBS WITHIN 6" RADIUS OF SAME FLOW)
3. SHRUBS
4. 6" EMITTER BOX

NOTES:
1. PLACE EMITTER DISTRIBUTION TURE ENDS WITHIN 8" OF SHRUB BASE ON UPHILL SIDE.
2. ALL TUBE ENDS SHALL BE VISIBLE EXTENDING 1" MIN. - 2" MAX. ABOVE DG FINISH GRADE.
3. DO NOT STRETCH OR KINK TUBES.
4. DISTRIBUTION TUBING SHALL BE POLYETHYLENE MATERIAL SIZED TO FIT EMITTER.
5. INSTALL DISTRIBUTION TUBE UNDER 2" MIN. DEPTH OF SOIL (NOT UNDER DG ONLY).

9 SHRUB MULTI-OUTLET EMITTER DISTRIBUTION DETAIL
NOT TO SCALE

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION OR RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
Project #: 22.1618.002

Title: IRRIGATION DETAILS
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Sheet
IR-302
98 OF 148

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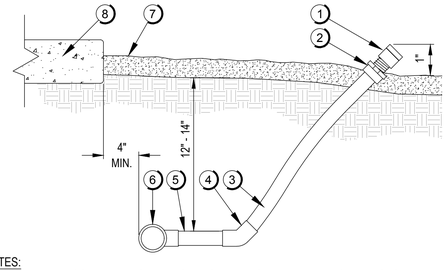
KEY NOTES - SEE IRRIGATION LEGEND FOR MODEL NUMBERS

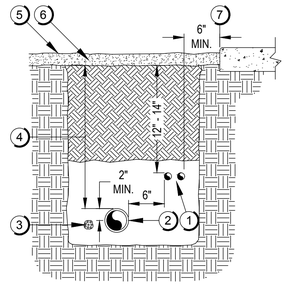
1. EMITTER OR BUBBLER DEVICE AS SPECIFIED (FPT UNLESS OTHERWISE NOTED)
2. 1/2" THREADED SCH. 40 MALE ADAPTER (MPT x SLIP) FLEX PVC CEMENT REQUIRED
3. 1/2" SCH. 40 FLEX HOSE (LENGTH: 8" MIN., 20' MAX.)
4. 45° ELL SCH. 40 (SLIP x SLIP)
5. 1/2" CLASS 315 PVC EXTENSION PIPE (LENGTH AS REQ.D
6. DRIP OR BUBBLER LATERAL PIPE
7. 2" LAYER DECOMPOSED GRANITE
8. HARDSCAPE EDGE



NOTES:
1. SEE EMITTER SCHEDULE FOR DEVICE FLOW RATES AND NUMBER OF DEVICES PER PLANT.

1 SINGLE-OUTLET EMITTER / BUBBLER ASSEMBLY

NOT TO SCALE



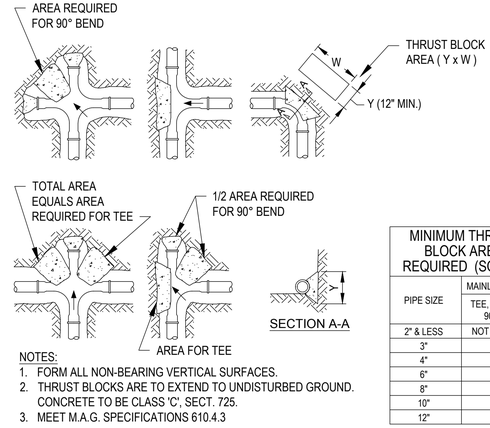
KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

1. IRRIGATION LATERAL PIPE
2. IRRIGATION MAINLINE
3. IRRIGATION CONTROL WIRING, BUNDLE AND TAPE AT 10' O.C. PROVIDE A LOOSE 12" LOOP AT ALL CHANGE OF DIRECTIONS AND AT A MIN. OF 250'.
4. 1" - 3" MAINLINE: DEPTH IS 18"
   4" - 6" MAINLINE: DEPTH IS 24"
   8" & LARGER DEPTH IS 36"
5. FINISH GRADE
6. DECOMPOSED GRANITE
7. PAVEMENT EDGE

NOTES:
1. DEPTH DIMENSION MAY VARY WHERE INDICATED ON IRRIGATION PLANS.
2. ALL PIPE INSTALLATION, TRENCH EXCAVATION, BACK FILLING AND COMPACTION SHALL CONFORM WITH M.A.G. SECTION 440.

2 TRENCHING

NOT TO SCALE IRR-PIP-TR1 REV. 1/17



NOTES:
1. FORM ALL NON-BEARING VERTICAL SURFACES.
2. THRUST BLOCKS ARE TO EXTEND TO UNDISTURBED GROUND. CONCRETE TO BE CLASS 'C', SECT. 725.
3. MEET M.A.G. SPECIFICATIONS 610.4.3

MINIMUM THRUST BLOCK AREA REQUIRED (SQ. FT.)

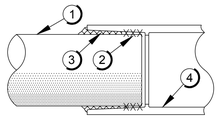
PIPE SIZE	MAINLINE FITTING TEE, DEAD END, 90° BEND
2" & LESS	NOT REQUIRED
3"	1.5
4"	3
6"	4
8"	6
10"	10
12"	14

3 THRUST BLOCKING

NOT TO SCALE IRR-PIP-TB1 REV. 1/17

KEY NOTES

1. PVC PIPE END
2. FUSED SURFACE
3. BONDED SURFACES
4. PVC FITTING SOCKET



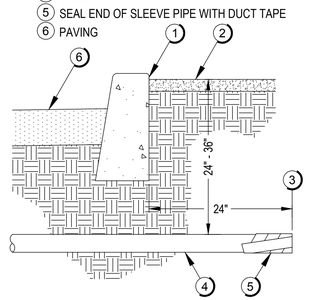
NOTES:
1. SOLVENT WELDED JOINTS SHALL BE MADE IN ACCORDANCE TO ASTM D-2855, AND TYPE OF SOLVENT AND PRIMER RECOMMENDED BY PIPE MANUFACTURER SHALL BE USED.
2. APPLICATOR DAUBER SHALL BE 1/2 THE DIAMETER OF THE PIPE BEING JOINED. 2" PIPE = 1" DAUBER..
3. FOLLOW THE FOLLOWING SEQUENCE OF APPLYING PRIMER AND CEMENT.
   A. PRIME BOTH PIPE AND FITTING SOCKET TO BE JOINED.
   B. IMMEDIATELY APPLY A COAT OF CEMENT TO THE PIPE END.
   C. APPLY A LIGHT COAT OF CEMENT TO THE FITTING SOCKET.
   D. ADD A SECOND COAT OF CEMENT TO THE PIPE.
   E. PUSH THE PARTS TOGETHER, ROTATING 1/8 TO 1/4 TURN, AND HOLD FOR 15 TO 30 SECONDS.
4. THE CONTRACTOR SUPERINTENDENT SHALL CONDUCT A FIELD CLASS INSTRUCTING HIS EMPLOYEES ON THE PROPER METHOD FOR SOLVENT WELDING PIPE. THE SEMINAR SHALL BE HELD ON SITE. THE CITY'S REPRESENTATIVE SHALL BE INVITED TO ATTEND.

4 SOLVENT WELDED PVC JOINTS

NOT TO SCALE IRR-PIP-SW REV. 1/17

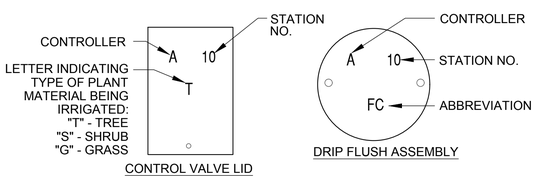
KEY NOTES
SEE IRRIGATION LEGEND FOR MODEL NUMBERS

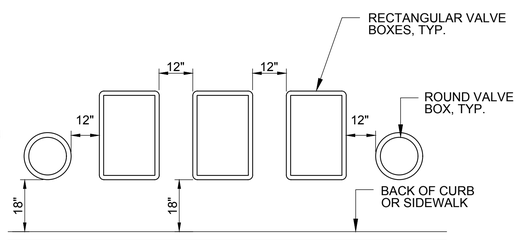
1. CHISEL AND PAINT 3/4" "X" AT EDGE OF PAVING, CURB OR WALK AT ALL SLEEVE LOCATIONS AS APPROVED BY ENGINEER
2. FINISH GRADE BEYOND PAVEMENT EDGE
3. EXTEND SLEEVE PIPE A MINIMUM 24" BEYOND PAVEMENT EDGE
4. SLEEVE PIPE
5. SEAL END OF SLEEVE PIPE WITH DUCT TAPE
6. PAVING



5 IRRIGATION SLEEVE UNDER PAVEMENT

NOT TO SCALE IRR-PIP-SLV REV. 1/17





ABBREVIATIONS:

DRIP VALVE ASSEMBLY - (SEE ABOVE)
DRIP FLUSH ASSEMBLY - (SEE ABOVE)
CONTROL VALVE - (SEE ABOVE)
"MV" - MASTER VALVE
"FS" - FLOW SENSOR
"WS" - WIRE SPLICE
"BV" - BALL VALVE
"GV" - GATE VALVE
"QC" - QUICK COUPLER
"AR" - AIR RELIEF
"PR" - PRESSURE REGULATOR
"GR" - GROUNDING ROD
"DR" - MAINLINE DRAIN
"SM" - SOIL MOISTURE

NOTES:
1. DETAIL IS SHOWN FOR INTENT ONLY. ALL BRANDING SHALL BE DONE IN A MANNER THAT IS CLEARLY LEGIBLE. LOCATION OF LETTERING MAY VERY DUE TO VALVE BOX TEXTURE.
2. VALVE BOX TO BE TAN COLOR IN DECOMPOSED GRANITE, GREEN IN TURF WHEN USED WITH POTABLE WATER, OR PURPLE COLOR WHEN USED WITH NON-POTABLE WATER.
3. VALVE BOX LID - BOLT DOWN T-STYLE COVER WITH STAINLESS STEEL WASHER AND BOLT.
4. LETTERING / NUMBERING TO BE 2" TALL STENCIL LETTERING

6 VALVE BOX INSTALLATION

NOT TO SCALE

Revisions	Date

PRE-FINAL
100%
NOT FOR CONSTRUCTION
OR
RECORDING

Designed By: AJH, KW
Drawn By: AJH, KW
Checked By: KW, AA
Date: 4/19/2024
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J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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Sheet
IR-303
99 OF 148

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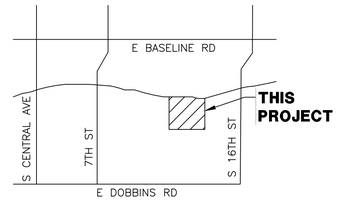
HIGHLINE PARK
SITE ELECTRICAL PLAN
PHOENIX, ARIZONA

GENERAL ELECTRICAL NOTES

1. ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (2017 EDITION), FEDERAL, STATE AND LOCAL JURISDICTION CODES AS ADOPTED BY THE CITY OF PHOENIX, INCLUDING THE 2018 IBC, 2018 IEBC, 2018 IRC, 2018 IMC, 2018 IFGC, 2018 IFC, 2018 IECC, 2018 UPC OR 2018 IPC & 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN & 2009 ICC ANSI A117.1.
2. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION.
3. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING UTILITIES AND AVOIDING DAMAGE TO SAME. CONTRACTOR TO CALL 811 FOR BLUE STAKE. FOR ALL MUNICIPAL OR PRIVATELY OWNED UTILITIES EXISTING WITHIN LIMITS OF WORK OF PROJECT, CONTRACTOR TO PRIVATELY LOCATE UTILITIES. IRRIGATION LINES LESS THAN 2" WILL NOT TYPICALLY BE MARKED AND CAUTION SHOULD BE USED TO AVOID DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL UTILITIES CAUSED AS A RESULT OF CONTRACT WORK, ALL DAMAGES TO BE REPAIRED IN KIND.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING WALKS, WALLS, DRIVES, CURBS, ETC. DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
6. PROPER PROTECTION OF THE CONSTRUCTION AREA FOR SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COVER ALL TRENCHES AT THE END OF EACH WORK DAY. BARRICADES SHALL BE INSTALLED AS DIRECTED BY THE OWNER OR THE PROJECT INSPECTOR. THE SITE AND ALL WORK SHALL CONFORM TO OSHA REQUIREMENTS.
7. ALL EXISTING LANDSCAPE, HARDSCAPE AND SPRINKLER SYSTEMS DAMAGED OR DISTURBED DURING THE CONSTRUCTION OF THIS PROJECT BY THE CONTRACTOR SHALL BE REPLACED IN KIND.
8. CONTRACTOR SHALL PAY FOR PERMITS AND INSPECTIONS AS MAY BE REQUIRED AND PROVIDE A CERTIFICATE OF INSPECTION TO THE OWNER.
9. PROTECT ALL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, AND LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
10. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION.
11. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, BURIED 24" MINIMUM BELOW FINISHED GRADE, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
12. PROVIDE EMT INDOOR AND GRS OUTDOOR FOR ABOVE GROUND CONDUIT. WHERE METALLIC CONDUITS COME IN CONTACT WITH DIRT, THEY SHALL BE HALF LAP WRAPPED WITH SCOTCH 50 TAPE TO 12" AFG. FITTINGS SHALL BE STEEL, THREADED TYPE WITH INSULATED THROATS. SECURELY ATTACH ALL SURFACE MOUNTED CONDUIT EVERY 10 FEET AND WITHIN 3 FEET OF EACH JUNCTION BOX, PER NEC ARTICLE 344.30.
13. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
14. ALL FEEDERS AND BRANCH CIRCUIT WIRE SHALL BE COPPER TYPE XHHW (75 DEGREE C) FOR BELOW GRADE INSTALLATIONS (AND CONDUIT RISERS) AND THHN/THWN (75 DEGREE C) FOR ABOVE GRADE INSTALLATIONS. MINIMUM SIZE SHALL BE #12 AWG, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS. ALL WIRING SHALL BE IN CONDUIT. FOR NEW WIRING IN COMMERCIAL APPLICATIONS, THE USE OF TYPES NM, NMC, NMS (ROMEX) CABLES IS NOT PERMITTED. ALL CONDUCTORS SHALL BE NEW UNLESS NOTED OTHERWISE IN PLANS.
15. A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR (BOND) SHALL BE INSTALLED WITHIN EACH RACEWAY, INCLUDING WITHIN EMT CONDUIT. EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED PER NEC TABLE 250.122.
16. WHEN A PANEL IS SUPPLIED BY A FEEDER OR BRANCH CIRCUIT, ANY INSTALLED GROUNDED CONDUCTOR SHALL NOT BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR (GEC) OR TO THE GROUNDING ELECTRODE(S) PER NEC ARTICLE 250.32(B).
17. BOND ALL ENCLOSURES PER NEC ARTICLE 250.96.
18. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, ETC. NECESSARY FOR A COMPLETE AND WORKABLE ELECTRICAL SYSTEM WHETHER OR NOT THESE ITEMS ARE SPECIFICALLY NOTED ON THESE DRAWINGS. INCIDENTAL ITEMS NOT INDICATED ON THE DRAWINGS, NOR MENTIONED IN SPECIFICATIONS THAT CAN BE LEGITIMATELY AND REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED OR BE NECESSARY IN GOOD PRACTICE TO PROVIDE A COMPLETE SYSTEM, SHALL BE FURNISHED AND INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.
19. CONTRACTOR IS RESPONSIBLE FOR AND SHALL PROVIDE ALL LABOR, MATERIAL, TRENCHING, CONDUIT, TRANSFORMER PAD AND OTHER REQUIRED EQUIPMENT PER UTILITY COMPANY PLANS AND SPECIFICATIONS NECESSARY FOR A COMPLETE UNDERGROUND CONDUIT SYSTEM FROM THE UTILITY POINT OF SERVICE TO THE UTILITY CO. TRANSFORMER AND FROM THE UTILITY CO. TRANSFORMER TO THE ELECTRICAL SERVICE ENTRANCE SECTION.
20. ALL TRENCHING, CONDUITS, ETC. SHALL BE ROUTED AND INSTALLED IN SUCH A MANNER THAT WILL NOT DAMAGE EXISTING FACILITIES. SHOULD DAMAGE OCCUR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR DAMAGE TO THE SATISFACTION OF THE OWNER OR INSPECTOR.
21. ALL CONDUIT RUNS SHOWN ON THIS PLAN ARE SCHEMATIC IN NATURE. THE CONTRACTOR SHALL MAKE SURE THAT ALL CONDUIT, ETC. FALLS WITHIN THE CONSTRUCTION AREA/RIGHT OF WAY. (THIS INCLUDES MAINTAINING ALL REQUIRED CLEARANCES.)
22. WHEN CROSSING PATHWAYS OR SIDEWALKS, CONTRACTOR SHALL BORE UNDER EXISTING CONCRETE WALKS AND SAWCUT ASPHALT WALKS. ASPHALT WALKS SHALL BE REPLACED IN KIND.
23. CONTRACTOR SHALL GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, USUAL WEAR EXCEPTED, AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE PROJECT BY THE OWNER, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.
24. CONTRACTOR SHALL IDENTIFY SERVICE ENTRANCE SECTION MAIN SERVICE DISCONNECT(S) WITH 3/32-INCH THICK LAMINATED PHENOLIC TYPE NAMEPLATES WITH 1/4-INCH MINIMUM HEIGHT LETTERS. NAMEPLATE TO BE BLACK MATTE FINISH SURFACE WITH WHITE LETTER ENGRAVING. ATTACH NAMEPLATE TO THE OUTSIDE PANEL FACE WITH TWO STAINLESS STEEL SELF-TAPPING SCREWS. NAMEPLATE SHALL READ "SERVICE DISCONNECT" PER NEC ARTICLE 230.70(B).
25. ALL CIRCUITS SHALL BE LEGIBLY IDENTIFIED AT THE PANEL, JUNCTION BOXES AND AT ALL EQUIPMENT IN A PERMANENT MANNER (I.E. ETCHED PLATES, CONDUCTOR TAG, PERMANENT MARKER, ETC.). THE LABELING SHALL INCLUDE PANEL CIRCUIT NUMBER, "TO" AND "FROM" IDENTIFICATION, AND MARKED "SPARE" WHERE APPLICABLE.
26. CONTRACTOR SHALL TEST ELECTRICAL SYSTEM FOR SHORT CIRCUITS AND MEGGER TEST FEEDER CIRCUIT WIRING. PROVIDE CERTIFIED TEST RESULTS FOR MEGGER TEST TO OWNER UPON COMPLETION OF PROJECT.
27. ALL CONDUIT SHOWN SHALL BE CONCEALED WHEN POSSIBLE. WHEN NOT POSSIBLE, CONDUIT MAY BE SURFACE MOUNTED WITH PERMISSION OF THE OWNER OR OWNER'S REPRESENTATIVE.
28. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT CONNECTIONS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL FUSED DISCONNECT SWITCHES AND CONTROLS IF OVERCURRENT PROTECTION OR CONTROLS IS NOT INTEGRAL WITH UNITS.
29. ALL EQUIPMENT SHALL BE FUSE SIZED PER MANUFACTURES RECOMMENDATIONS AND BEAR U.L. APPROVAL. COORDINATE WITH ENGINEER/OWNER.
30. ELECTRICAL DEVICES, DISCONNECT SWITCHES, ETC., SHALL BE SUPPORTED INDEPENDENT OF AND ISOLATED FROM EQUIPMENT VIBRATIONS.
31. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA-3R OR NEMA-4 ENCLOSURES.
32. CONDUITS OR RACEWAYS ROUTED FROM INDOORS TO OUTDOORS OR AS DESCRIBED IN NEC 300.7(A), SHALL BE SEALED WITH A PLIABLE SEALING COMPOUND AT A CONDUIT BODY OR AT A JUNCTION BOX BEFORE THE CONDUIT ENTERS THE COLDER ENVIRONMENT.
33. CONDUITS OR RACEWAYS INSTALLED IN AREAS WHERE ELEVATION CHANGES MAY CAUSE WATER OR MOISTURE TO ENTER THE ELECTRICAL EQUIPMENT THROUGH THE CONDUIT SHALL BE SEALED WITH A HERMETIC CONDUIT SEAL AT BOTH ENDS OF THE CONDUIT OR RACEWAY.
34. ALL POLE LIGHTS SHALL BE PROVIDED WITH A TWO POLE FUSE HOLDER BUSSMANN #HEX OR A SINGLE POLE FUSE HOLDER BUSSMANN #HEB OR EQUAL FOR INLINE FUSING, PROVIDE 5 AMP FUSING IN FUSEHOLDER.
35. PRIOR TO POURING THE POLE BASES OR COVERING ANY ELECTRICAL CONDUITS, CONTACT THE INSPECTION DEPARTMENT 24 HOURS IN ADVANCE FOR APPROVAL.
36. MATERIALS SHALL BE NEW AND OF THE BEST QUALITY WITH MANUFACTURER'S NAME PRINTED THEREON. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UNDERWRITER'S LABORATORY OR OTHER APPLICABLE STANDARDS AND RATED FOR HEAVY DUTY SERVICE.
37. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE. ALL 15 AND 20 AMP, 125 AND 250 VOLT, NONLOCKING RECEPTACLES INSTALLED OUTDOORS SHALL BE LISTED WEATHER-RESISTANT TYPE. RECEPTACLE COVERS IN WET LOCATIONS SHALL BE EXTRA DUTY PER NEC 406.9(B). ALL WEATHERPROOF WHILE IN-USE RECEPTACLE COVERS SHALL BE METAL.
38. SELECTION OF MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE DRAWINGS AND/OR SPECIFICATIONS. THE USE OF MANUFACTURER'S NAME, MODEL, AND NUMBER IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. CONTRACTOR SHALL SUBMIT TO THE OWNER OR OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL (PRIOR TO ORDERING MATERIALS) COPIES OF EQUIPMENT SHOP DRAWINGS AS FOLLOWS: LIGHT FIXTURES, POLES, POLE BASES, SERVICE ENTRANCE SECTION, ELECTRICAL EQUIPMENT, DISCONNECT SWITCHES, TIME CLOCKS AND OTHER CONTROLS, LIGHTING CONTACTORS AND PULL BOXES. AT THE TIME OF EACH SUBMITTAL, THE CONTRACTOR SHALL DEFINE AND DELINEATE IN WRITING ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS. THE REVIEW WILL BE ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE WORK AND FOR COMPLIANCE WITH THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE REVIEW OF A SPECIFIED ITEM, AS SUCH, WILL NOT INDICATE REVIEW OF THE ASSEMBLY IN WHICH THE ITEM FUNCTIONS. REVIEW BY THE OWNER OR OWNER'S REPRESENTATIVE WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN THE SUBMITTALS NOR FROM HIS RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.
39. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.



VICINITY MAP
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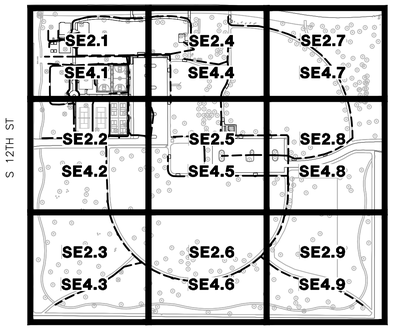

AREA MAP
NOT TO SCALE

NORTH

Revisions	Date

PRELIMINARY
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CONSTRUCTION

Designed By:	BKM
Drawn By:	BKM
Checked By:	CMT
Date:	4/19/2024
Project #:	22.1618.002

Title: **SITE ELECTRICAL COVER SHEET**
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: **PA75200668-1**

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www.wrightengineering.us
Wright Project # 23152

J Design
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Note:
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KIVA # _____
SDEV # _____

Sheet
SE1.1
100 OF 148

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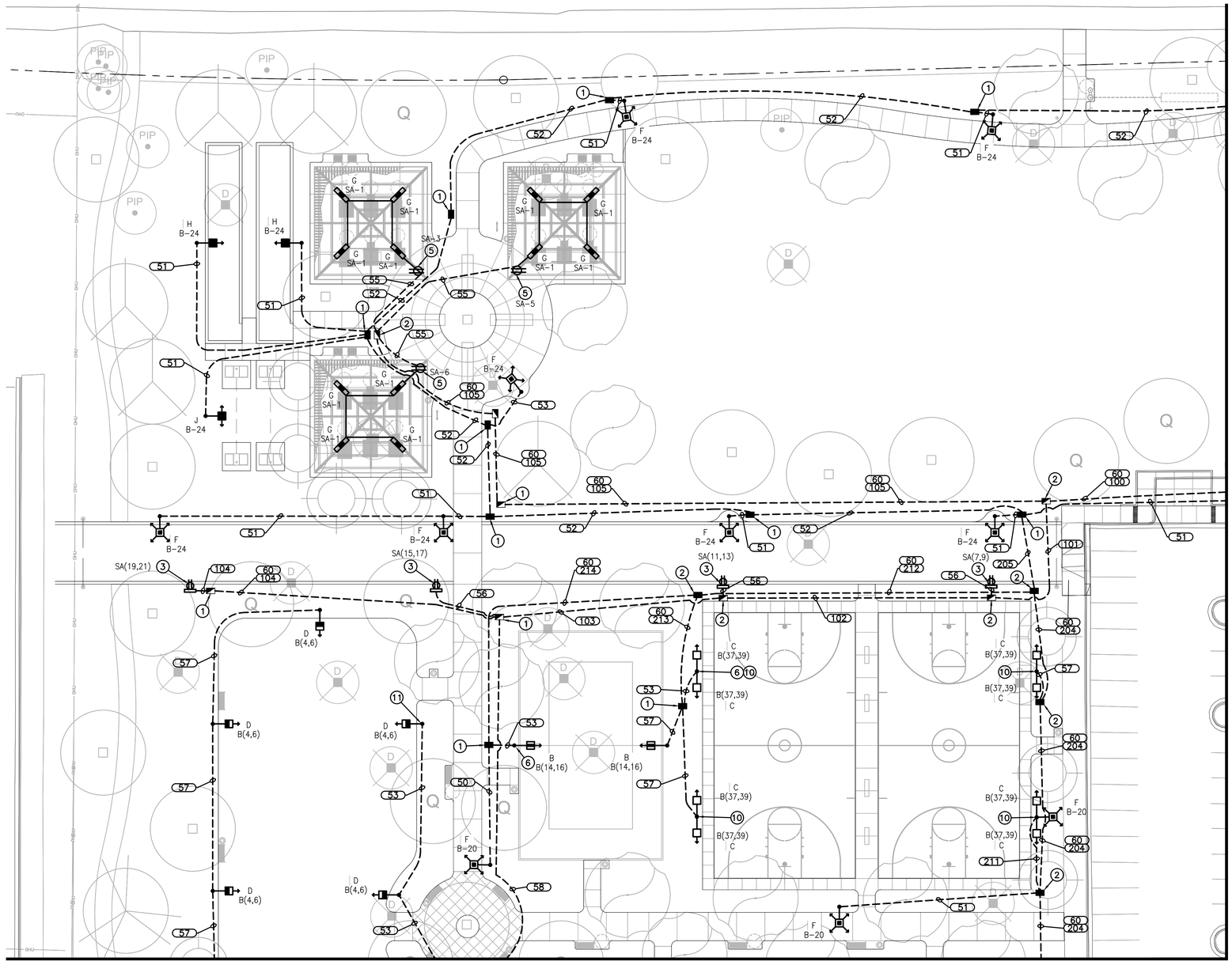

CONSTRUCTION NOTES

1. #3-1/2 CONCRETE PULL BOX, SEE DETAIL 8 ON SE3.4.
2. #5 CONCRETE PULL BOX, SEE DETAIL 8 ON SE3.4.
3. EVENT RECEPTACLE, SEE DETAIL 7 ON SE3.4. COORDINATE EXACT LOCATION WITH LANDSCAPE ARCHITECT.
4. ELECTRICAL CONTRACTOR SHALL INSTALL POWER FEED TO DRINKING FOUNTAIN & MAKE ALL 120V CONNECTIONS, SEE DETAIL 6 ON SE3.3. COORDINATE WORK WITH GENERAL CONTRACTOR.
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7. EXISTING 600 AMP, 120/208V, 3ø, 4W, METERED ELECTRIC SERVICE, SEE DETAIL 1 ON SE3.1.
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- A-1 CIRCUIT NUMBER
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- EXISTING RAMADA LIGHT TO REMAIN
- EXISTING LIGHT TO REMAIN

FOR WIRE & CONDUIT TABLE, LIGHT FIXTURE SCHEDULE AND POLE SCHEDULE, SEE SHEET SE3.5.

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

Revisions	Date

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CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: SITE ELECTRICAL PLAN
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: PA75200668-1

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Sheet
SE2.1
101 OF 148

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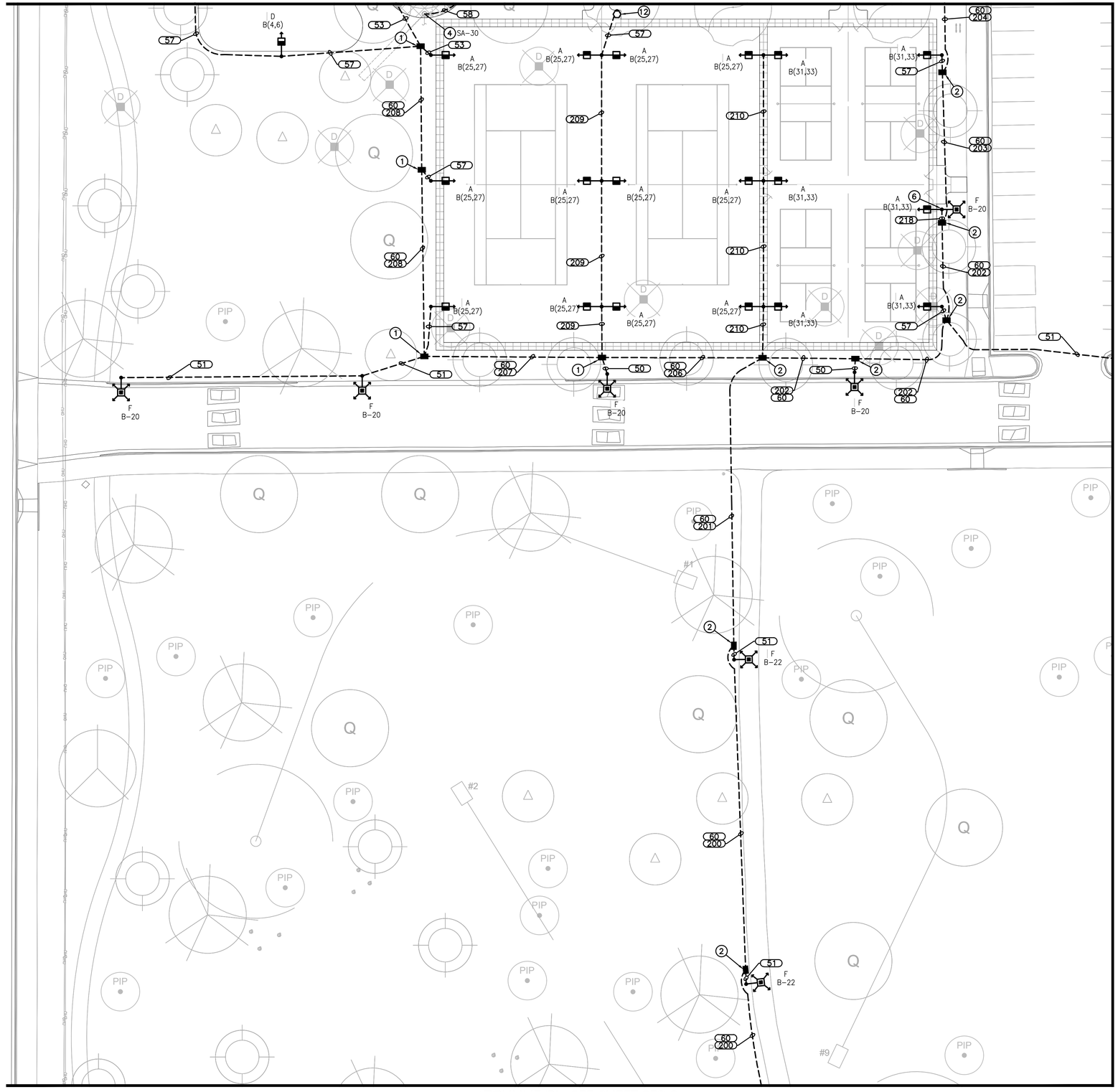

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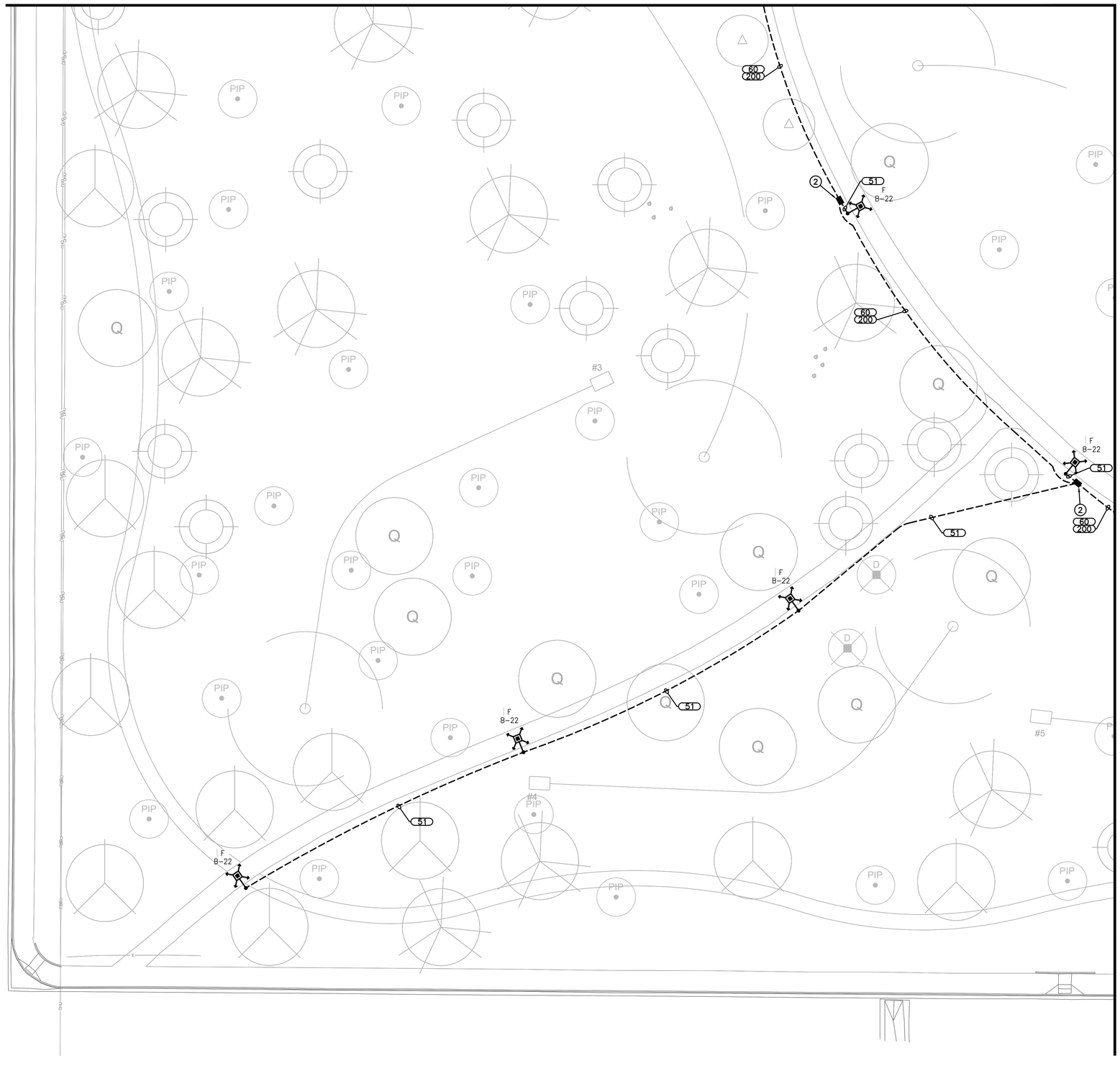
Sheet
SE2.2
102 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:11 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'B' - SEE SHEET SE2.2



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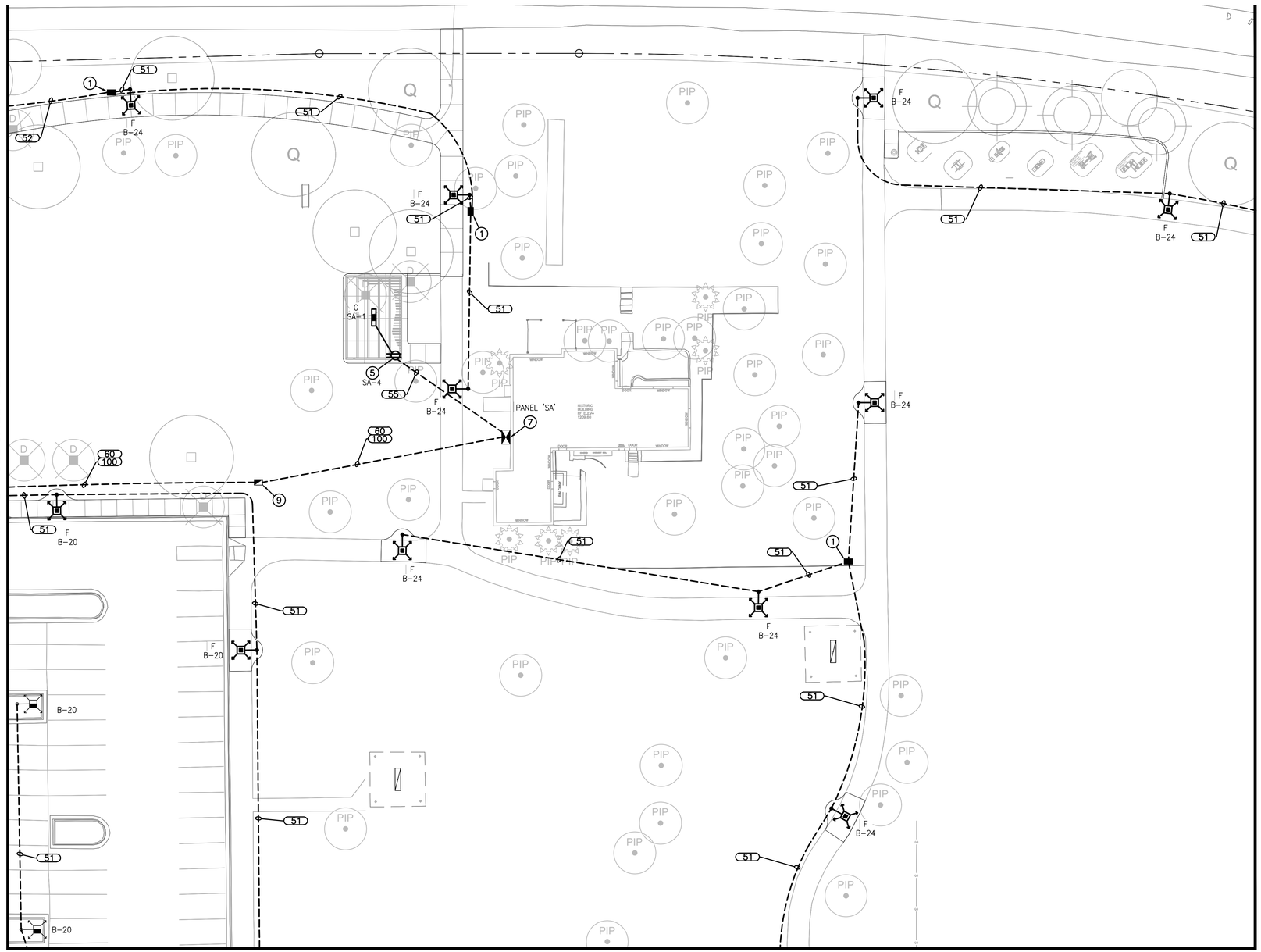
KIVA # _____
SDEV # _____

Sheet
SE2.3
103 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:14 PM B-W.CTB BROCK MCNEIL



CONSTRUCTION NOTES

1. #3-1/2 CONCRETE PULL BOX, SEE DETAIL 8 ON SE3.4.
2. #5 CONCRETE PULL BOX, SEE DETAIL 8 ON SE3.4.
3. EVENT RECEPTACLE, SEE DETAIL 7 ON SE3.4. COORDINATE EXACT LOCATION WITH LANDSCAPE ARCHITECT.
4. ELECTRICAL CONTRACTOR SHALL INSTALL POWER FEED TO DRINKING FOUNTAIN & MAKE ALL 120V CONNECTIONS, SEE DETAIL 6 ON SE3.3. COORDINATE WORK WITH GENERAL CONTRACTOR.
5. RAMADA LIGHT AND RECEPTACLE, SEE DETAIL 4 ON SE3.3. RAMADA LIGHTS TO BE ROUTED THROUGH EXISTING LIGHTING CONTROLS.
6. PUSH BUTTON ON LIGHT POLE. INSTALL PUSH BUTTON TO FACE COURT. SEE DETAIL 5 ON SE3.3.
7. EXISTING 600 AMP, 120/208V, 3ø, 4W, METERED ELECTRIC SERVICE, SEE DETAIL 1 ON SE3.1.
8. EXISTING 400 AMP, 277/480V, 3ø, 4W, METERED ELECTRIC SERVICE, SEE DETAIL 2 ON SE3.1. INSTALL NEW LIGHTING CONTROL EQUIPMENT PER SCHEMATIC ON SE3.2.
9. #7 CONCRETE PULL BOX, SEE DETAIL 8 ON SE3.4.
10. LED OPTICS TO BE ROTATED BY MANUFACTURER TO FACE COURT.
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12. PUSH BUTTON ON STEEL POST. INSTALL PUSH BUTTON TO FACE NORTH. SEE DETAIL 9 ON SE3.4.

LEGEND

- EXISTING 600A 120/208V 3ø PEDESTAL
- NEW PULL BOX FOR PANEL "B"
- NEW PULL BOX FOR PANEL "SA"
- 120V GFCI RECEPTACLE
- EVENT RECEPTACLE
- NEW UNDERGROUND CONDUIT
- NEW ABOVE GROUND CONDUIT
- EXISTING 400A 277/480V 3ø PEDESTAL
- A-1 CIRCUIT NUMBER
- (101) WIRE & CONDUIT TAG, SEE WIRE & CONDUIT TABLE
- PUSH BUTTON POST
- EXISTING RAMADA LIGHT TO REMAIN
- EXISTING LIGHT TO REMAIN

FOR WIRE & CONDUIT TABLE, LIGHT FIXTURE SCHEDULE AND POLE SCHEDULE, SEE SHEET SE3.5.

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

Revisions	Date

PRELIMINARY NOT FOR CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: **SITE ELECTRICAL PLAN**
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 811 or 1-800-STAKE-IT (782-5348)

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE
CHANDLER, ARIZONA 85225
PHONE: 480.497.5829
FAX: 480.497.5807
www.wrightengineering.us
Wright Project # 23152

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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Sheet
SE2.4
104 OF 148

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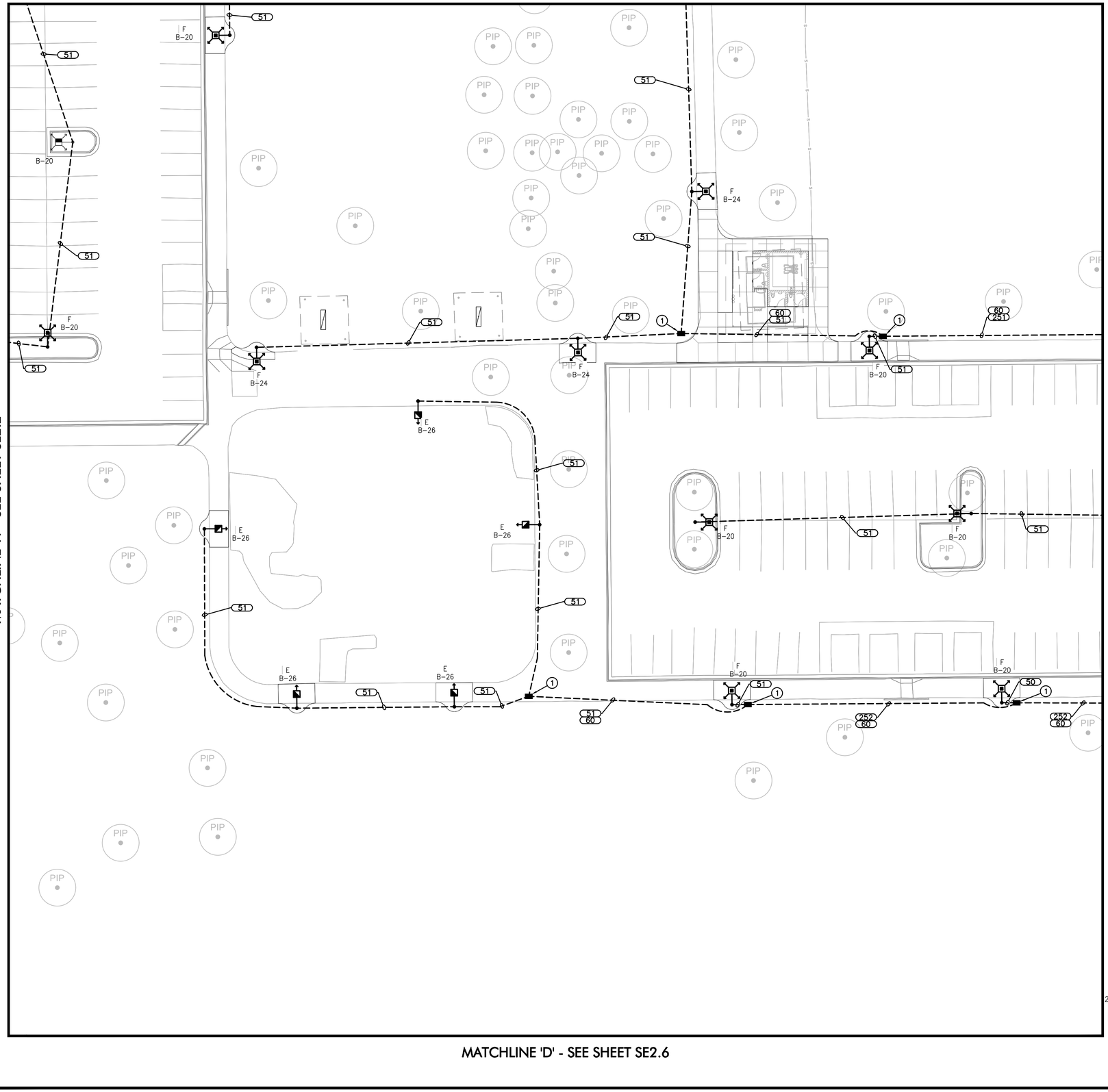
MATCHLINE 'C' - SEE SHEET SE2.4



MATCHLINE 'H' - SEE SHEET SE2.2

MATCHLINE 'K' - SEE SHEET SE2.8

MATCHLINE 'D' - SEE SHEET SE2.6

CONSTRUCTION NOTES

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LEGEND

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- EVENT RECEPTACLE
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- NEW ABOVE GROUND CONDUIT
- EXISTING 400A 277/480V 3ø PEDESTAL
- A-1 CIRCUIT NUMBER
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- PUSH BUTTON POST
- EXISTING RAMADA LIGHT TO REMAIN
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GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

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FAX: 480.497.5807
www.wrightengineering.us
Wright Project # 23152

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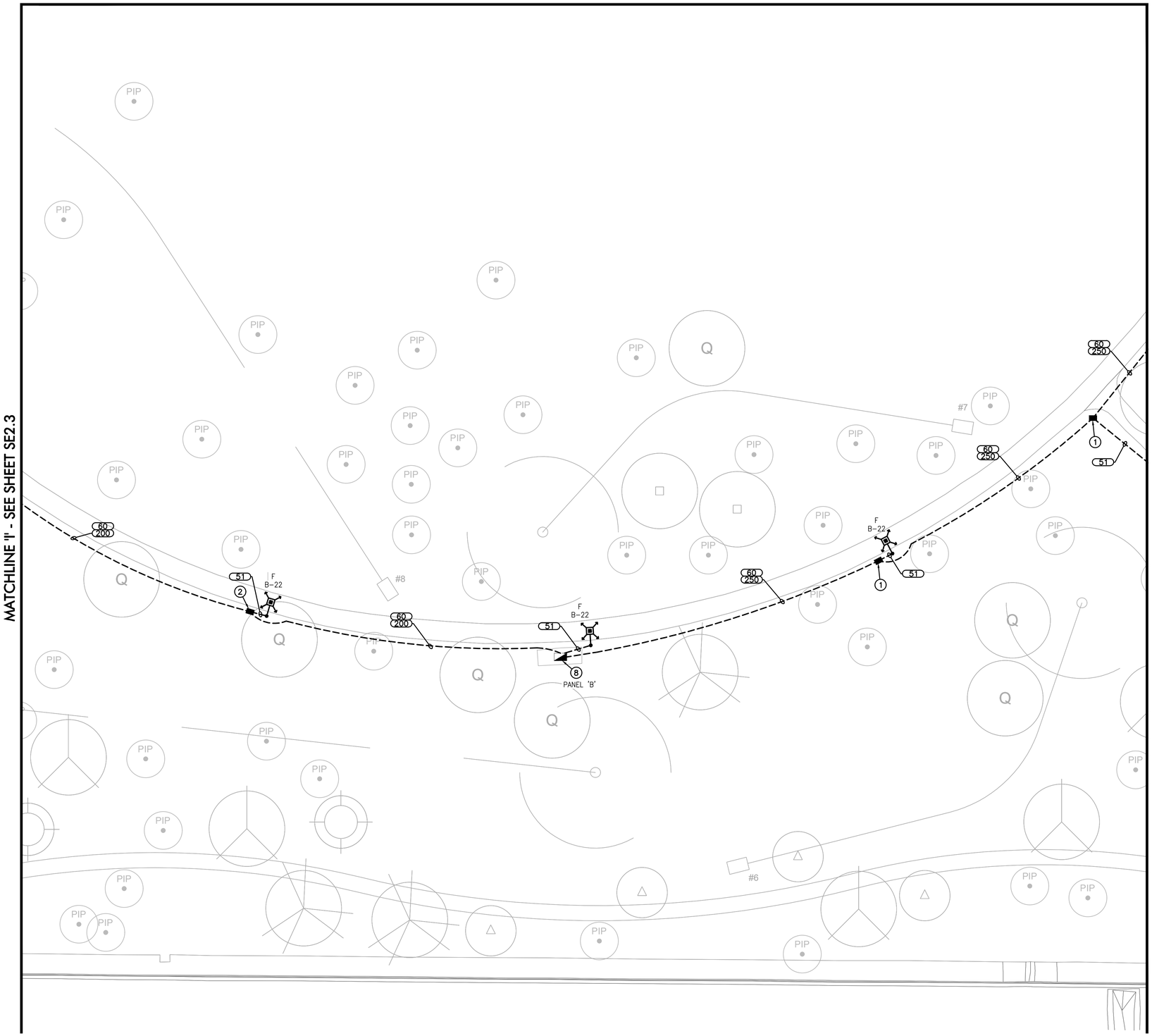
Sheet
SE2.5
105 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:20 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'D' - SEE SHEET SE2.5



MATCHLINE 'I' - SEE SHEET SE2.3

MATCHLINE 'L' - SEE SHEET SE2.9

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NORTH

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Checked By: CMT
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Wright Project # 23152

Design
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Sheet
SE2.6
106 OF 148

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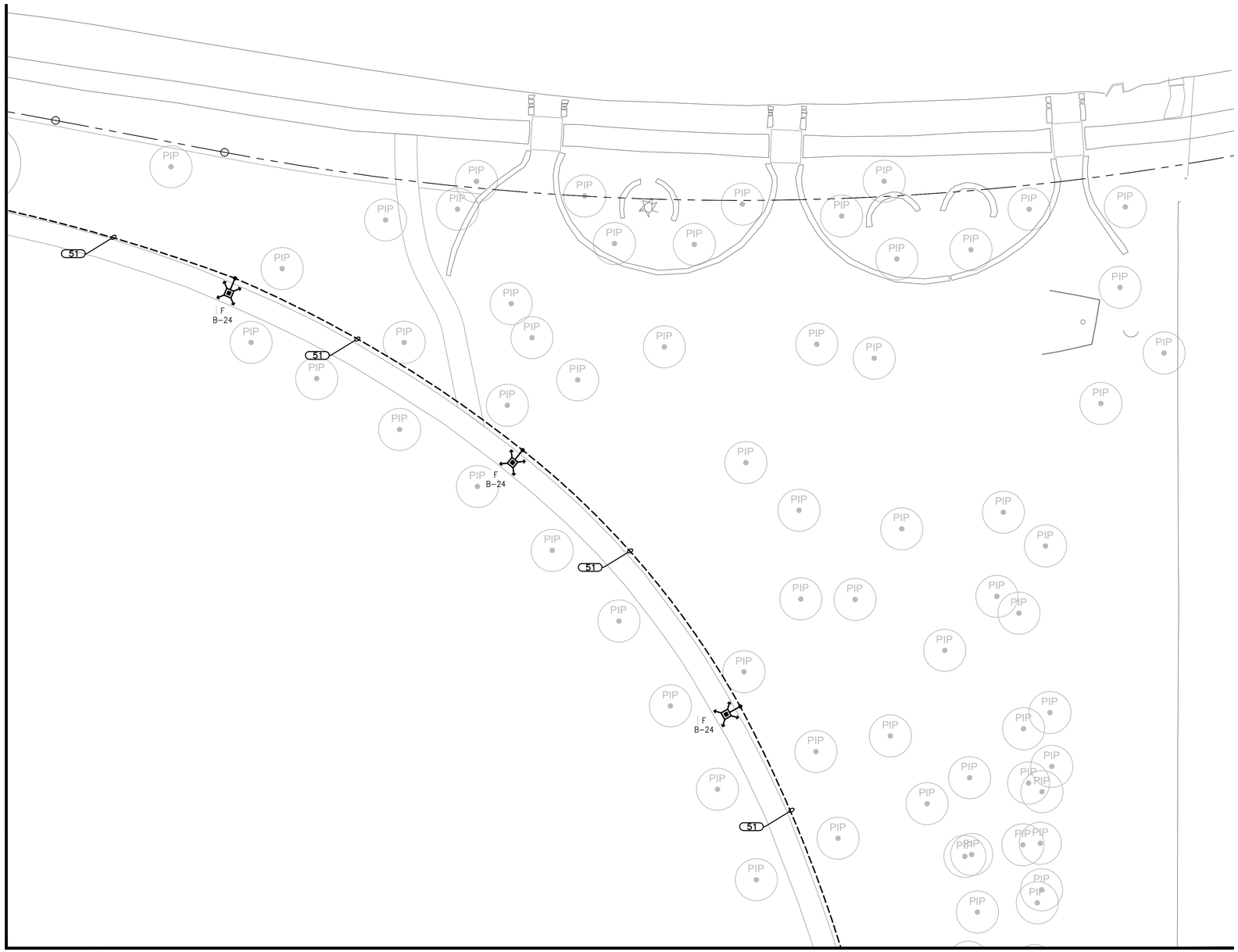

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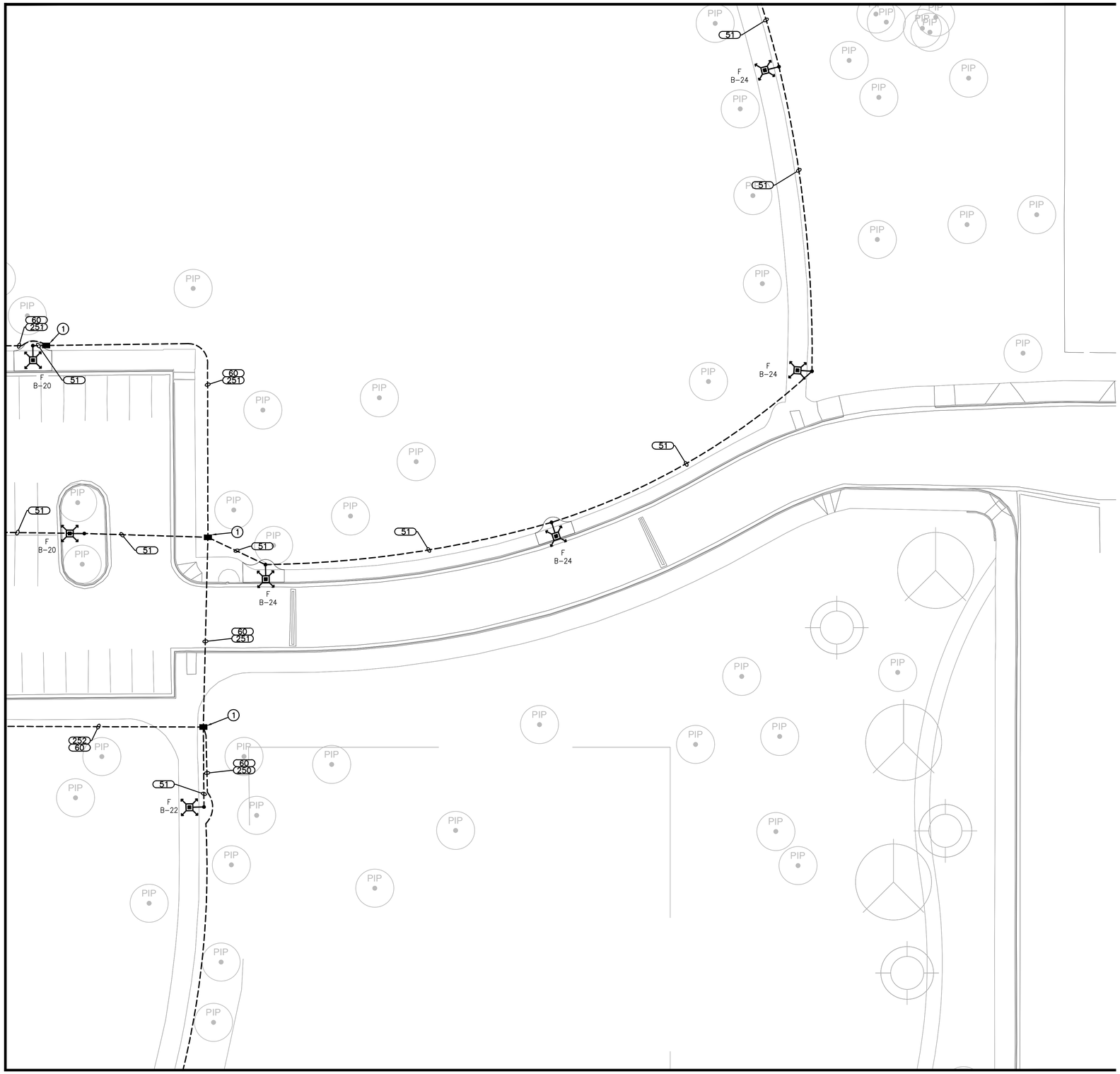
Sheet
SE2.7
107 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:25 PM B-W.CTB BROCK MONEIL

MATCHLINE 'E' - SEE SHEET SE2.7



MATCHLINE 'K' - SEE SHEET SE2.5

MATCHLINE 'F' - SEE SHEET SE2.9

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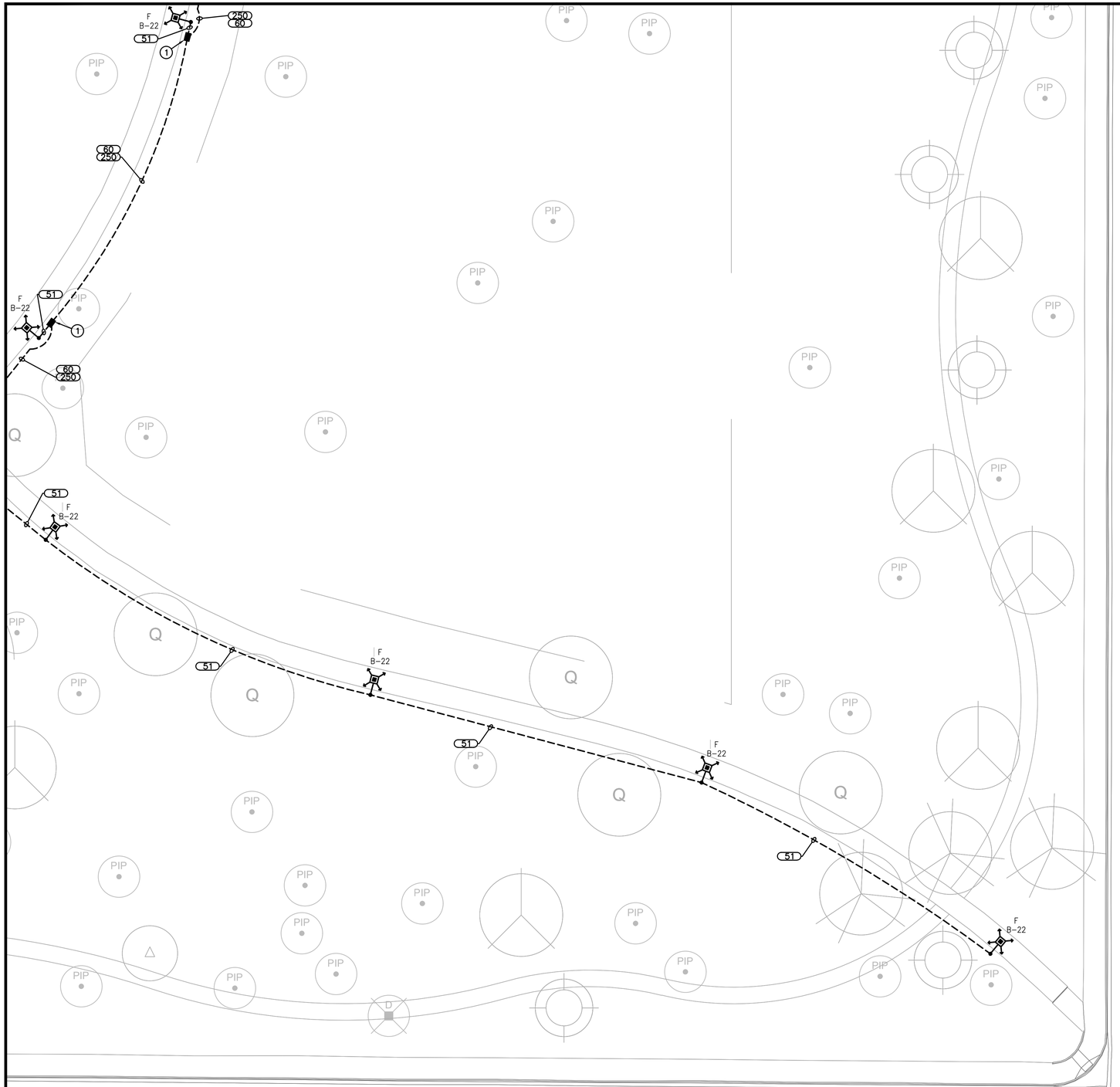
SE2.8
108 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:28 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'F' - SEE SHEET SE2.8



MATCHLINE 'L' - SEE SHEET SE2.6

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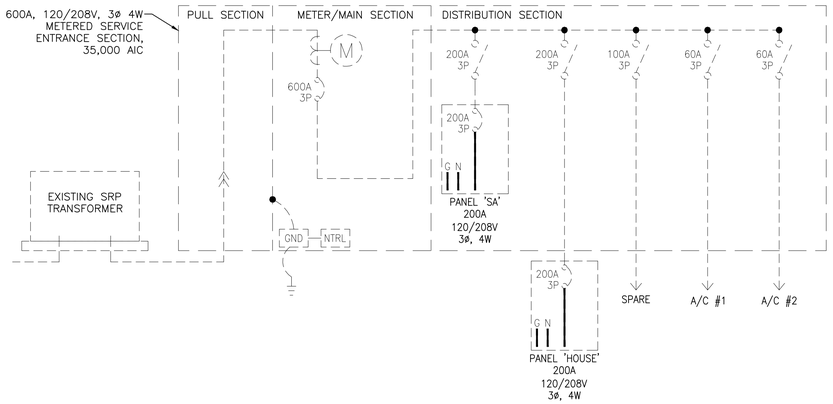
SE2.9
109 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:30 PM B-W.CTB BROCK MCNEIL

PANEL NAME: 'SA'			120/208V, 3ø, 4W				200A MAIN BKR			
LOCATION: WEST OF BUILDING			TYPE: PLUG-IN				WALL MTD., NEMA 3R			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
** 1	20/1	**RAMADA LIGHTS***	**893**	1613			720	RAMADA RECEPTACLES	20/1	2
3	**20/1**	**WEST RAMADA RECEPTACLE 1**	**480**		960		**480**	**NE RAMADA RECEPTACLE**	**20/1**	4
5	**20/1**	**WEST RAMADA RECEPTACLE 2**	**480**			960	**480**	**WEST RAMADA RECEPTACLE 3**	**20/1**	6
7	**50/**	**EVENT RECEPTACLE 1**	**4800**	4800			**0**	**SPARE**	20/	8
9	**/2**		**4800**		4800		**0**		/2	10
11	**50/**	**EVENT RECEPTACLE 2**	**4800**			4800	**0**	**SPARE**	20/	12
13	**/2**		**4800**	4800			**0**		/2	14
15	**50/**	**EVENT RECEPTACLE 3**	**4800**		4800		**0**	**SPARE**	20/	16
17	**/2**		**4800**			4800	**0**		/2	18
19	**50/**	**EVENT RECEPTACLE 4**	**4800**	4800			**0**	**SPARE**	30/	20
21	**/2**		**4800**		4800		**0**		/2	22
23	60/	RESTROOM ***	5045			5045	0	BUSSED SPACE		24
25	/2		3475	3675			200	TC 1	20/1	26
27		BUSSED SPACE	0		200		200	TC 2	20/1	28
29		BUSSED SPACE	0			1200	**1200**	**S DRINKING FOUNTAIN**	**20/1**	30
31		BUSSED SPACE	0	0			0	BUSSED SPACE		32
33		BUSSED SPACE	0		0		0	BUSSED SPACE		34
35		BUSSED SPACE	0			0	0	BUSSED SPACE		36
37		BUSSED SPACE	0	0			0	BUSSED SPACE		38
39		BUSSED SPACE	0		0		0	BUSSED SPACE		40
41		BUSSED SPACE	0			0	0	BUSSED SPACE		42
CODE TOTAL VA/ø				19688	15560	16805	*INDICATES LOAD @ 125%			
CODE TOTAL AMPS/ø				164.1	129.7	140.0	22,000 AIC BREAKERS			

GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED.
NEW BREAKERS TO MATCH TYPE AND AIC RATING OF EXISTING.
** CONTRACTOR TO CONFIRM NEW LIGHTS ARE ROUTED THROUGH EXISTING LIGHTING CONTROL.
*** PER BUILDING ELECTRICAL PLAN



1 600A SINGLE LINE DIAGRAM (PANEL 'SA')

NO SCALE — 120/208V 3ø 4W
GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED

LOAD CALCULATION SUMMARY SES

SRP – PHOENIX, ARIZONA

PER SRP CO. RECORDS, MAX DEMAND
ON EXISTING METER = 32.0 kW (AUGUST 2023)

$$32.0 \text{ kW} \times \frac{1.25 \text{ (SF)}}{0.8 \text{ (PF)}} \times \frac{1}{\sqrt{3} \times 208\text{V}} = 138.79 \text{ AMPS}$$

LOAD BEING REMOVED = 100.46 AMPS

NEW LOAD ADDED = 141.38 AMPS

TOTAL SES LOAD = 179.71 AMPS

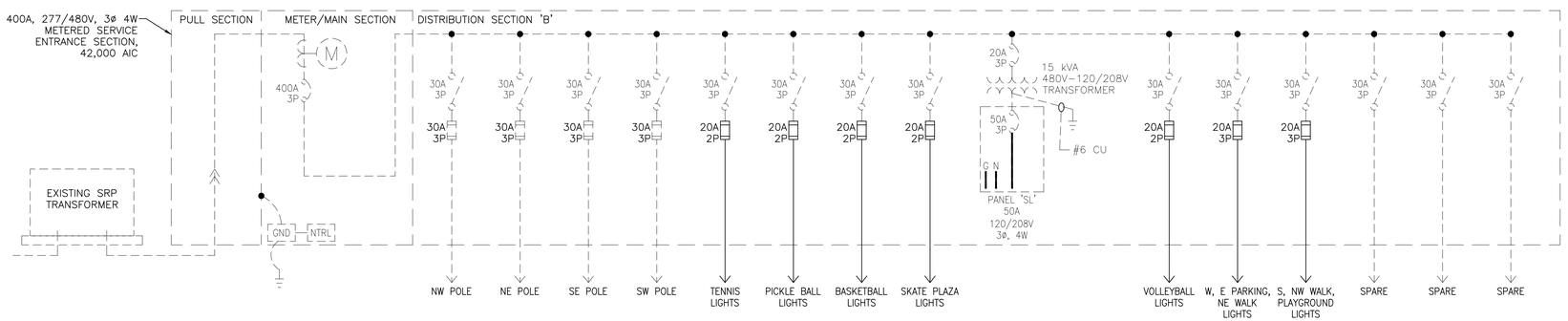
EXISTING 600 AMP SERVICE OK

PANEL NAME: 'B'			277/480V, 3ø, 4W				400A MAIN BKR			
LOCATION: SOUTH OF PARK			TYPE: PLUG-IN				PEDASTAL MTD., NEMA 3R			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	30/		0	0			0		30/	2
3	/	NW POLE	0		1609		**1609**	**SKATE PLAZA LIGHTS***	/	4
5	/3		0			1609	**1609**		/3	6
7	30/		0	200			200		30/	8
9	/	NE POLE	0		200		200	PANEL 'SL' TRANSFORMER	/	10
11	/3		0			0	0		/3	12
13	30/		0	602			**602**	**VOLLEYBALL LIGHTS***	30/	14
15	/	SE POLE	0		602		**602**		/	16
17	/3		0			0	0		/3	18
19	30/		0	3438			**3438**	**PARKING LOT LIGHTS***	30/	20
21	/	SW POLE	0		2657		**2657**	**S WALK LIGHTS***	/	22
23	/3		0			4403	**4403**	**N WALK LIGHTS***	/3	24
25	30/	**TENNIS LIGHTS***	**4140**	5472			**1332**	**PLAYGROUND LIGHTS***	30/	26
27	/		**4140**		4140		0		/	28
29	/3		0			0	0		/3	30
31	30/	**PICKLE BALL LIGHTS***	**2070**	2070			0			32
33	/		**2070**		2070		0			34
35	/3		0			0	0			36
37	30/	**BASKETBALL LIGHTS***	**2145**	2145			0			38
39	/		**2145**		2145		0			40
41	/3		0			0	0			42
CODE TOTAL VA/ø				13927	13423	6012	*INDICATES LOAD @ 125%			
CODE TOTAL AMPS/ø				50.3	48.5	21.7	42,000 AIC BREAKERS			

GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED.

PANEL NAME: SL			120/240V, 1ø, 3W				50A MAIN BKR			
LOCATION: SOUTH OF PARK			TYPE: PLUG-IN				PEDASTAL MTD., NEMA P1			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.	
1		BUSSED SPACE	0	200		200	**LIGHTING CONTROL**	20/1	2	
3		BUSSED SPACE	0		200	200	IRRIGATION CONTROLLER	20/1	4	
5		BUSSED SPACE	0	0		0	SPARE	20/1	6	
7		BUSSED SPACE	0		0	0	SPARE	20/1	8	
9		BUSSED SPACE	0	0		0	SPARE	20/1	10	
11		BUSSED SPACE	0		0	0	SPARE	20/1	12	
13		BUSSED SPACE	0	0		0	SPARE	20/1	14	
15		BUSSED SPACE	0		0	0	SPARE	20/1	16	
17		BUSSED SPACE	0	0		0	SPARE	20/1	18	
19		BUSSED SPACE	0		0	0	SPARE	20/1	20	
21		BUSSED SPACE	0	0		0	SPARE	20/1	22	
23		BUSSED SPACE	0		0	0	SPARE	15/1	24	
25		BUSSED SPACE	0	0		0	BUSSED SPACE		26	
27		BUSSED SPACE	0		0	0	BUSSED SPACE		28	
29		BUSSED SPACE	0	0		0	BUSSED SPACE		30	
31		BUSSED SPACE	0		0	0	BUSSED SPACE		32	
33		BUSSED SPACE	0	0		0	BUSSED SPACE		34	
35		BUSSED SPACE	0		0	0	BUSSED SPACE		36	
37		BUSSED SPACE	0	0		0	BUSSED SPACE		38	
39		BUSSED SPACE	0		0	0	BUSSED SPACE		40	
41		BUSSED SPACE	0	0		0	BUSSED SPACE		42	
CODE TOTAL VA/ø				200	200	*INDICATES LOAD @ 125%				
CODE TOTAL AMPS/ø				1.7	1.7	22,000 AIC BREAKERS				

GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED.



2 400A SINGLE LINE DIAGRAM (PANEL 'B')

NO SCALE — 277/480V 3ø 4W
GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED

LOAD CALCULATION SUMMARY SES

SRP – PHOENIX, ARIZONA

PER SRP CO. RECORDS, MAX DEMAND
ON EXISTING METER = 60.8 kW (JULY 2023)

$$60.8 \text{ kW} \times \frac{1.25 \text{ (SF)}}{0.8 \text{ (PF)}} \times \frac{1}{\sqrt{3} \times 480\text{V}} = 114.27 \text{ AMPS}$$

LOAD BEING REMOVED = 0.0 AMPS

NEW LOAD ADDED = 39.65 AMPS

TOTAL SES LOAD = 153.92 AMPS

EXISTING 400 AMP SERVICE OK

Revisions	Date

PRELIMINARY
NOT FOR
CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: SITE ELECTRICAL DETAILS
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE
CHANDLER, ARIZONA 85225
PHONE: 480.497.5829
FAX: 480.497.5807
www.wrightengineering.us
Wright Project # 23152

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 811 or 1-800-STAKE-IT (782-5348)

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Sheet
SE3.1
110 OF 148

Note:
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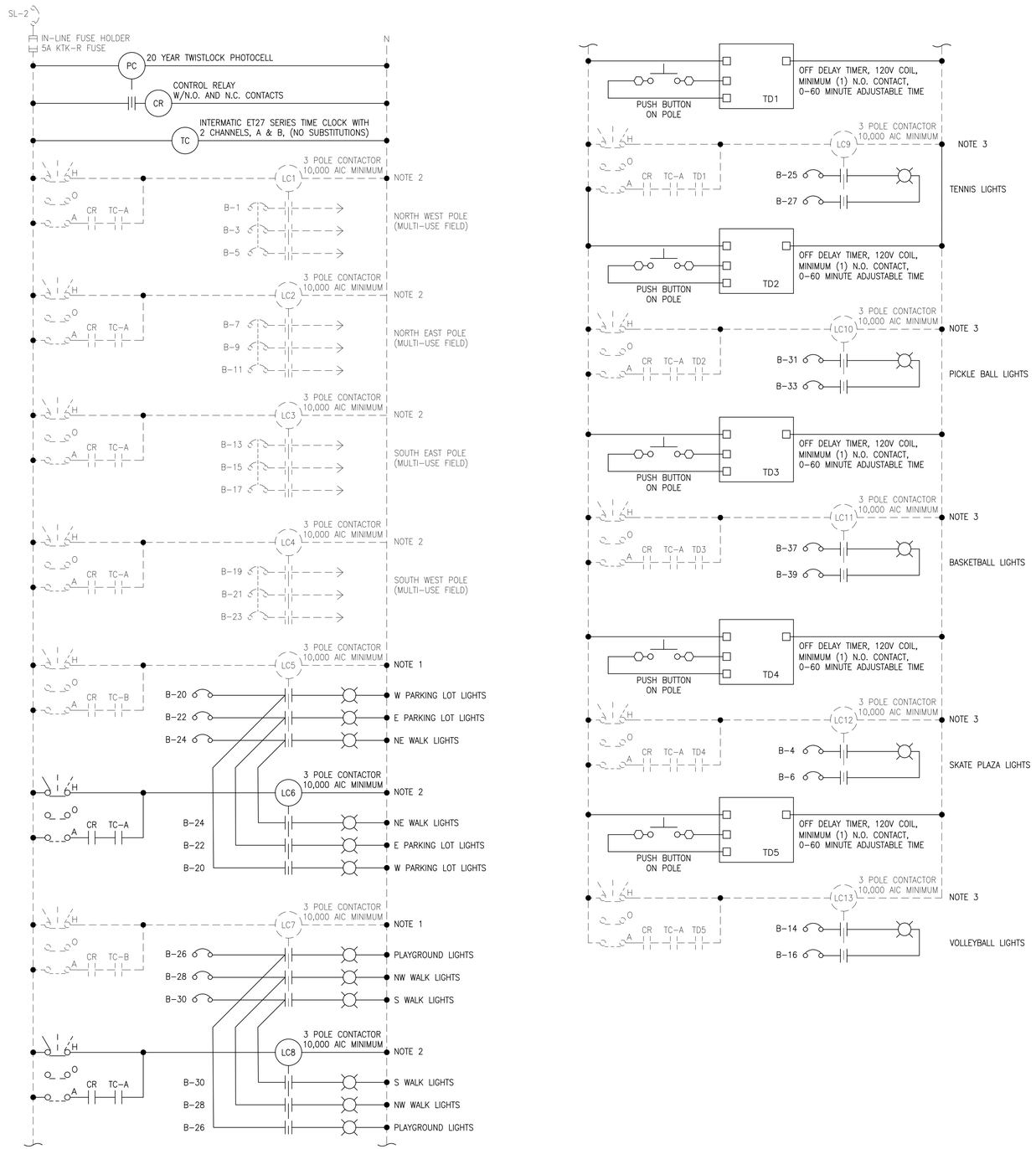

CONTROL SCHEMATIC LEGEND

- HAND-OFF-AUTO SWITCH
- PC — PHOTOCELL RELAY
- CR# — CONTROL RELAY
- TC# — TIME CLOCK
- LC# — LIGHTING CONTACTOR
- TDR# — TIME DELAY RELAY
- N.O. — NORMALLY OPEN CONTACT
- N.C. — NORMALLY CLOSED CONTACT
- CIRCUIT BREAKER
- REMOTE CONNECTION POINT
- DEVICE CONNECTION POINT

CONTROLLER NOTES

1. THIS CIRCUIT TO BE ACTIVATED FROM DUSK TO DAWN.
2. THIS CIRCUIT TO BE ACTIVATED AT DUSK AND SHUT OFF AT 10:30 PM.
3. THIS CIRCUIT TO BE ACTIVATED VIA POLE MOUNTED PUSH BUTTON. ONCE ACTIVATED CIRCUIT WILL BE ON UNTIL TIMER EXPIRES. CIRCUIT CAN THEN BE REACTIVATED WITH PUSH BUTTON. CIRCUIT WILL BE AVAILABLE FOR USE FROM DUSK TO 10:30 PM.

LIGHTING CONTROL SCHEMATIC

NO SCALE
GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED

120V

Revisions	Date

PRELIMINARY
NOT FOR
CONSTRUCTION

Designed By: BKM
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Sheet
SE3.2
111 OF 148

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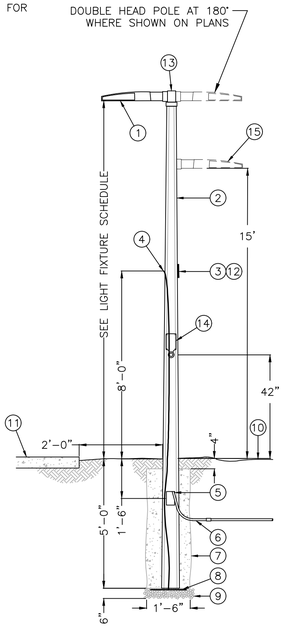
1. LED LIGHT FIXTURE, WITH IES PHOTOMETRIC DISTRIBUTION PER PLANS, SEE LIGHT FIXTURE SCHEDULE FOR SPECIFICATION. PROVIDE 2 CIRCUIT DIMMING PROVISIONS WITH LUMINAIRE WHERE SHOWN ON LIGHT FIXTURE SCHEDULE.
2. DIRECT–BURIED, TAPERED, PRE–STRESSED, REINFORCED, SPUN CONCRETE POLE. MANUFACTURED BY AMERON OR TRADITIONAL CONCRETE. POLE SHALL HAVE EXPOSED AGGREGATE FINISH WITH ANTI–GRAFFITI SEALER. ALL POLES ARE TO BE PROVIDED FROM THE SAME MANUFACTURER. SEE POLE SCHEDULE FOR SHAPE, COLOR AND HEIGHT SPECIFICATIONS.
3. FLUSH MOUNTED HANDHOLE WITH FLUSH, TAMPERPROOF, STAINLESS STEEL SECURITY SCREWS (BUTTON TORX WITH CENTER PIN). POLE MANUFACTURER TO PLACE HANDHOLE SO THAT IT WILL BE LOCATED ABOVE FINISHED GRADE AT HEIGHT NOTED IN DETAIL TO CENTER OF HANDHOLE AFTER INSTALLATION. INSTALL POLE WITH HANDHOLE FACING AWAY FROM PATH/SIDEWALK, WHERE POSSIBLE. WHERE POLE IS INSTALLED AGAINST WALL, HANDHOLE TO FACE PATH/SIDEWALK.
4. POLE MANUFACTURER TO PROVIDE A FACTORY INSTALLED GROUND WIRE WHICH IS CONNECTED TO THE STEEL REINFORCING IN THE POLE. CONNECT THE ELECTRICAL SYSTEM GROUND WIRE TO THIS POLE GROUND WIRE.
5. APERTURE IN POLE BASE FOR UNDERGROUND WIRING. APERTURE SIZED 1–1/2" BY 5" MINIMUM. PROVIDE TWO (2) EACH POLE AT 180 DEGREES FROM EACH OTHER AND 90 DEGREES FROM HANDHOLE. TAPE OPENINGS PRIOR TO BACKFILLING THE DRILLED HOLE.
6. PVC SCHEDULE 40 CONDUIT INTO POLE BASE FOR ELECTRICAL BRANCH CIRCUIT. SEE LIGHTING SITE PLAN FOR SIZES AND QUANTITIES. CONDUITS ARE TO BE INSTALLED IN POLE TO A POINT 2" BELOW HANDHOLE OPENING.
7. AFTER POLE HAS BEEN ALIGNED AND IS PLUMB, BLOCK POLE IN PLACE UNDERGROUND, BACKFILL HOLE PER STRUCTURAL DETAIL TO A POINT 4" BELOW FINISHED GRADE, BACKFILL THE REMAINING 4" WITH SURROUNDING SOIL.
8. COIL 20' OF #8 SOLID COPPER BOND. RUN BOND THROUGH POLE TO FACTORY INSTALLED GROUND WIRE IN HAND HOLE.
9. 1" WASHED RIVER ROCK FOR DRAINAGE, COMPACT BEFORE SETTING POLE.
10. FINISHED GRADE.
11. WHERE LIGHTS ARE INSTALLED NEXT TO PATHWAY OR SIDEWALK, MAINTAIN CLEARANCE FROM EDGE TO FACE OF POLE AS SHOWN IN DETAIL.
12. PROVIDE BUSSMAN #HEB FUSE HOLDER, ON EACH UNGROUNDED CONDUCTOR, WITH 5 AMP FUSES FOR INLINE FUSING. WHERE CIRCUIT IS SPLICED IN HANDHOLE, MAKE ALL SPLICES WITH UL486D WET LISTED WIRE NUTS, EQUAL TO DRYCONN AQUA WATERPROOF CONNECTORS. PROVIDE 18" MINIMUM OF SLACK IN THE CONDUCTORS.
13. TENON MOUNT SLIPFITTER PROVIDED BY POLE MANUFACTURER, CONTRACTOR TO COORDINATE SIZE OF SLIPFITTER SO THE FIXTURE COVERS ENTIRE TENON DOWN TO THE POLE TOP MOUNTING PLATE. PAINT EXPOSED METAL MOUNTING PLATE ON TENON TO MATCH FIXTURE.
14. PUSH BUTTON WHERE SHOWN ON PLANS. INSTALL AT ORIENTATION PER SITE PLAN, SEE DETAIL 5 ON THIS SHEET.
15. 1" MINIMUM DIAMETER WIREWAY HOLE TO BE PROVIDED IN POLE, AT DIMENSION ABOVE GRADE AS SHOWN IN DETAIL, TO ALLOW CONDUCTORS TO PASS THROUGH ARM MOUNT ATTACHMENT TO LIGHT FIXTURE. PROVIDE THREADED INSERTS IN POLE FOR ATTACHING FIXTURE, COORDINATE INSERT LOCATIONS WITH FIXTURE MANUFACTURER. CONTRACTOR TO ENSURE THAT ARM MOUNTS TIGHTLY AND SECURELY TO SIDE OF POLE.

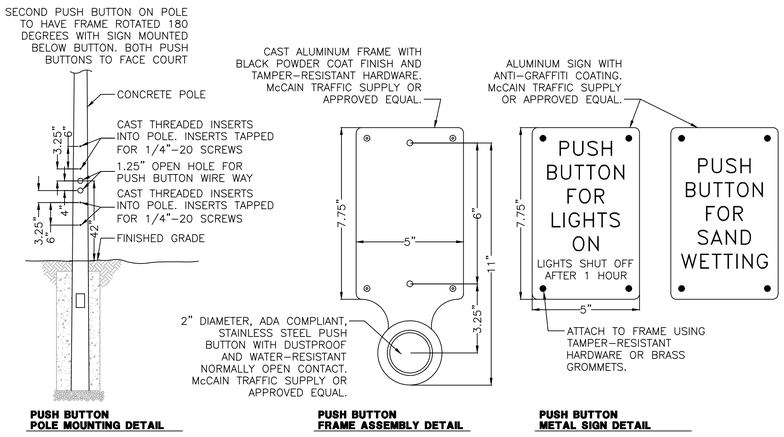


3 CONCRETE AREA LIGHT DETAIL
NO SCALE

SECOND PUSH BUTTON ON POLE TO HAVE FRAME ROTATED 180 DEGREES WITH SIGN MOUNTED BELOW BUTTON. BOTH PUSH BUTTONS TO FACE COURT

CAST ALUMINUM FRAME WITH BLACK POWDER COAT FINISH AND TAMPER–RESISTANT HARDWARE. McCAIN TRAFFIC SUPPLY OR APPROVED EQUAL.

ALUMINUM SIGN WITH ANTI–GRAFFITI COATING. McCAIN TRAFFIC SUPPLY OR APPROVED EQUAL.

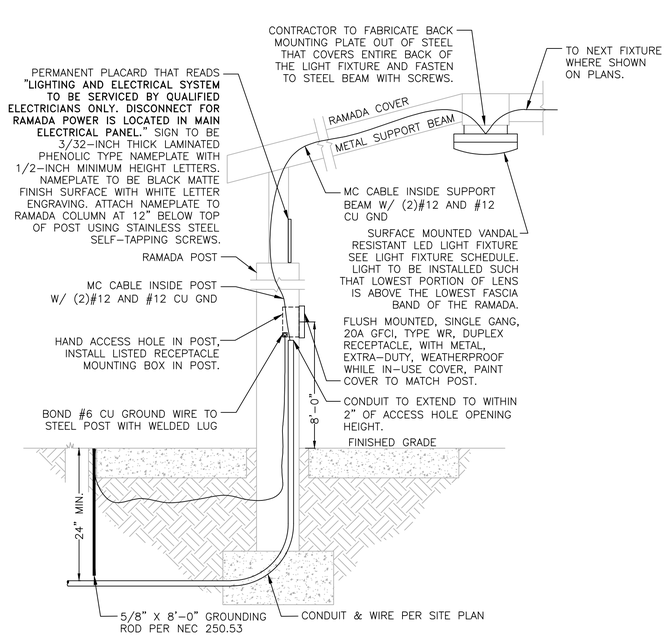


2" DIAMETER, ADA COMPLIANT, STAINLESS STEEL PUSH BUTTON WITH DUSTPROOF AND WATER–RESISTANT NORMALLY OPEN CONTACT. McCAIN TRAFFIC SUPPLY OR APPROVED EQUAL.

ATTACH TO FRAME USING TAMPER–RESISTANT HARDWARE OR BRASS GROMMETS.

PUSH BUTTON POLE MOUNTING DETAIL | **PUSH BUTTON FRAME ASSEMBLY DETAIL** | **PUSH BUTTON METAL SIGN DETAIL**

5 PUSH BUTTON DETAIL
NO SCALE



4 RAMADA ELECTRICAL DETAIL
NO SCALE

VISION **VPF4**
Vandal Resistant
VPF4 Series LED
Fixture Type
Date
Job Name
Approved By
Catalog Number

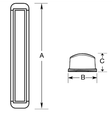
SPECIFICATIONS

UL Listing | ADA ADA Compliant | BAA

Description	The Vision VPF4 series features an all aluminum, ligature resistant construction which allows it to be used in nearly any environmental condition. Designed in conjunction with an opthalmologist, the polycarbonate lens provides complete control of glare and LED image while maintaining the high efficiency of clear optical material. The Vision VPF4 series can be row mounted to any length. Natatorium finish is standard for all versions of this fixture.
Housing	Marine grade heat treated extruded aluminum. Finished with Super Durable Corrosion Resistant powder coat (SDCR) that meets AAMA 2605 high performance specification, providing superior UV durability and corrosion resistance. Salt spray test: 4,000 hours.
Lens	Extruded UV stabilized polycarbonate with integral prisms. Maximum wall thickness 0.160". Secured to housing with die cast aluminum clamps and stainless steel TORX® head screws.
End Caps	Die cast marine grade aluminum with conduit knockouts that are visible from interior of end cap.
Drivers	Dimming to 1%, 10% or Programable Lumen Output driver options. Non-Dimming Driver is also available.
LED	Samsung LM561B+ series @ 2700K, 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of over 130,000 hours at 50°C.
UL Listing	U.L., C.UL. Damp Location Listing standard, Wet Location Listing optional.
Buy American Act	Luminaire LED, LLC products are assembled in the USA. Our products meet the Buy America(n) government procurement requirements under FAR, DFARS, and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.
Warranty	**Lifetime** warranty against vandalism. Luminaire LED will repair or replace any fixture damaged due to vandalism for the lifetime of the installation. **10-year** warranty on LED boards against operational defects. Tested in accordance with LM-80.
Note	Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

DIMENSIONAL DATA

	A	B	C
VPF4 1FT	15.50	4.35	2.70
VPF4 2FT	26.10	4.35	2.70
VPF4 3FT	37.88	4.35	2.70
VPF4 4FT	49.69	4.35	2.70



Luminaire LED One Lithonia Way, Conyers GA 30012 | 1.800.705.SERV (7378) | www.luminaireled.net
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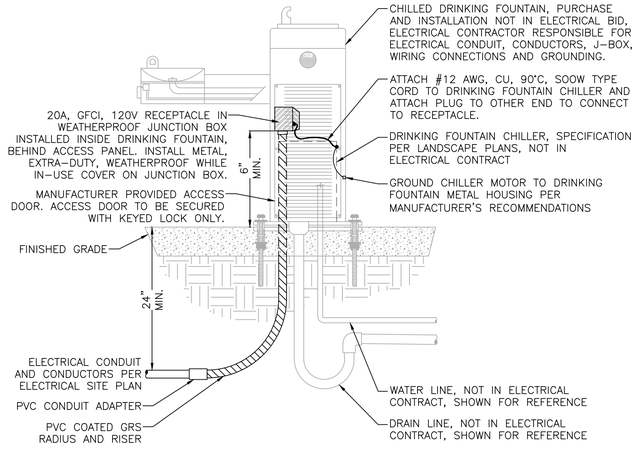
LUMINAIRE-LED-WSI06-VPF4-LED
Rev. 11/10/22
Page 1 of 5



NOTE: DETAIL OF FOUNTAIN MAY NOT EXACTLY REPRESENT ACTUAL FOUNTAIN SPECIFICATION, BUT IS SHOWN FOR ELECTRICAL EQUIPMENT INSTALLATION ONLY.

6 DRINKING FOUNTAIN ELECTRICAL CONNECTION
NO SCALE

Revisions	Date

PRELIMINARY NOT FOR CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: **SITE ELECTRICAL DETAILS**
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No. **PA75200668-1**

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165 EAST CHILTON DRIVE
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www.wrightengineering.us
Wright Project # 23152

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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KIVA # _____
SDEV # _____

Sheet **SE3.3**
112 OF 148

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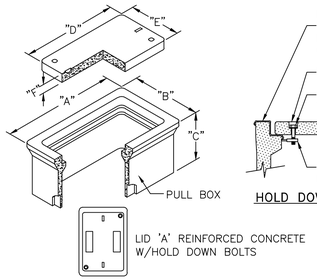
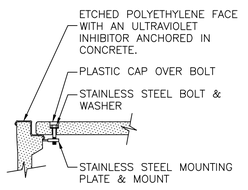
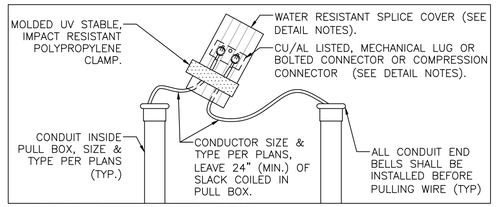
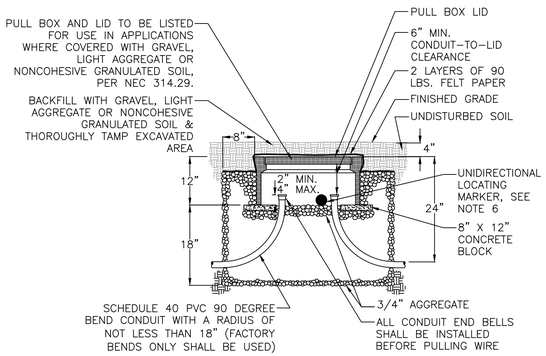




HOLD DOWN BOLT DETAIL



SPLICES INSIDE PULL BOX

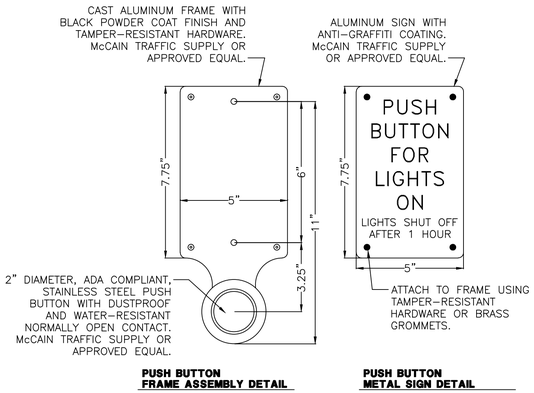


DETAIL NOTES:

1. THE PULL BOX SHALL BE MADE OF A HIGH DENSITY REINFORCED CONCRETE MATERIAL WITH END & SIDE KNOCKOUTS, & NON-SETTLING SHOULDERS TO MAINTAIN GRADE, MANUFACTURED WITH APPROXIMATE DIMENSIONS AS SHOWN.
2. PULL BOXES TO BE INSTALLED IN NON-VEHICULAR TRAFFIC AREAS, AND TO HAVE A LOAD RATING FOR LIGHT DUTY PEDESTRIAN TRAFFIC.
3. STEEL REINFORCEMENT SHALL BE AS REGULARLY USED IN STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.
4. COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS: "ELECTRIC" OR "HIGH VOLTAGE" OR "COMMUNICATIONS". AS REQUIRED.
5. THE PULL BOX SHALL HAVE AN ETCHED POLYETHYLENE FACE WITH AN ULTRAVIOLET INHIBITOR ANCHORED IN CONCRETE.
6. ALL CABLE & CONDUCTOR SPLICES MADE USING CU/AL LISTED, MECHANICAL LUG OR BOLTED CONNECTOR OR COMPRESSION CONNECTOR, (TYCO ELECTRONICS, NSI INDUSTRIES, ILSCO OR APPROVED EQUAL). CONNECTION TO BE INSULATED & MADE WATER RESISTANT WITH TYCO ELECTRONICS GELCAP-SL, NSI INDUSTRIES ESSLK-2/0 OR 3M SCOTCHCAST SPLICE KIT 85 SERIES.
7. INSTALL A UNIDIRECTIONAL, 4 INCH DIAMETER. RED BALL MARKER (3M CAT#1402-XR OR APPROVED EQUAL) IN BOX TO BE USED FOR LOCATING BURIED PULL BOX. RED BALL MARKER SHALL BE COMPATIBLE WITH AGENCY LOCATING EQUIPMENT, COORDINATION WITH AGENCY IS REQUIRED.

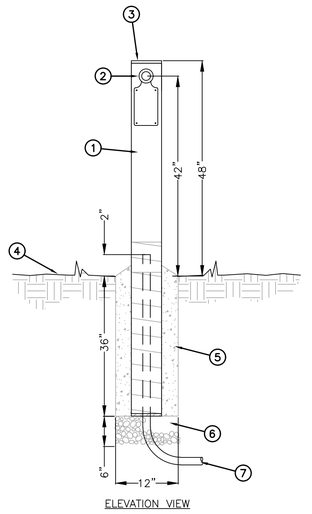
DATA TABLE							
PULLBOX TYPE	PULLBOX LENGTH	PULLBOX WIDTH	PULLBOX HEIGHT	LID LENGTH	LID WIDTH	LID HEIGHT
	"A"	"B"	"C"	"D"	"E"	"F"
#3-1/2	19-3/4"	14-1/4"	12"	15-1/2"	10"	1-3/4"
#5	25-1/8"	15-5/8"	12"	20-3/4"	10-5/8"	2"
#7	35"	22"	12"	30-1/2"	17-1/2"	2"
#9	40-1/2"	28-1/4"	18"	35-1/2"	24"	3"

8 UNDERGROUND PULL BOX INSTALLATION
NO SCALE



PUSH BUTTON FRAME ASSEMBLY DETAIL

PUSH BUTTON METAL SIGN DETAIL

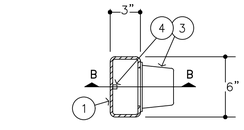


ELEVATION VIEW

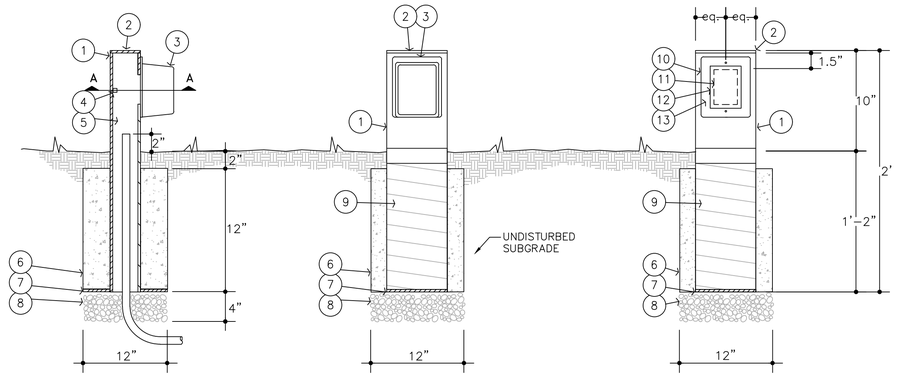
STEEL POST NOTES

1. 5"X5"X7' LONG 11 GAUGE GALVANIZED SQUARE STEEL POST HALF-LAP WRAPPED W/ SCOTCH 50 TAPE TO +4" AFG. FINISH COLOR PER OWNER, SHALL BE POLYESTER POWDER COAT WITH MINIMUM 2.5 MILS THICKNESS.
2. INSTALL PUSH BUTTON FACING TOWARDS COURT PER DETAIL THIS SHEET.
3. 1/8" THICK GALVANIZED STEEL TOP. PROVIDE CONTINUOUS WELD ALONG PERIMETER OF CAP.
4. FINISHED GRADE.
5. AFTER POST HAS BEEN PLUMBED, BACKFILL EXCAVATED HOLE WITH 2500 PSI CONCRETE.
6. 1" WASHED RIVER ROCK.
7. ELECTRICAL BRANCH CIRCUIT. SEE LIGHTING SITE PLAN FOR SIZES, ETC..

9 SPORT COURT LIGHTING PUSH BUTTON DETAIL
NO SCALE



SECTION A



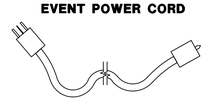
SECTION B | FRONT ELEVATION (WEATHERPROOF COVER INSTALLED) | FRONT ELEVATION (WEATHERPROOF COVER OFF)

KEYED NOTES

1. RECTANGULAR STRAIGHT GALVANIZED STEEL TUBE, 3"x6"x24" LONG, 3/16" THICK.
2. 1/8" THICK STEEL TOP. PROVIDE CONTINUOUS WELD ALONG PERIMETER OF CAP.
3. 50A RECEPTACLE WITH A METAL, EXTRA-DUTY, WEATHERPROOF LOCKABLE SNAP SHUT OUTLET COVER. KEYED LOCK PER OWNER REQUIREMENTS, ALL RECEPTACLE COVER LOCKS ON PROJECT TO BE KEYED THE SAME. RECEPTACLE CONFIGURATION TO MATCH RECEPTACLE ON SPIDER BOX.
4. WELD A 1/4" STEEL NUT ONTO THE INSIDE FACE OF THE STEEL TUBE OPPOSITE THE CONVENIENCE RECEPTACLES FOR ATTACHING SYSTEM GROUND WIRING.
5. STUB UNDERGROUND CONDUITS 2" ABOVE FINISHED GRADE INSIDE STEEL TUBE.
6. MAG 'A' 3000 PSI CONCRETE.
7. TWO 3"x6"x3/16" STEEL PLATES (ONE EACH SIDE) WELDED TO THE BASE OF THE STEEL TUBE.
8. 3/8" WASHED RIVER ROCK FOR DRAINAGE.
9. PROVIDE 1/8" THICK BITUMINOUS COATING ON THE INSIDE AND OUTSIDE OF THE STEEL TUBE AS INDICATED. WRAP THE OUTSIDE OF THE TUBE WITH 10 MIL PLASTIC TAPE, HALF LAPPED.
10. OUTLINE OF WEATHERPROOF COVER.
11. OUTLINE OF HOLE IN STEEL TUBE FOR RECEPTACLE.
12. OUTLINE OF CONVENIENCE RECEPTACLE FORM.
13. DRILL AND TAP HOLES IN STEEL TUBE FOR MOUNTING RECEPTACLE AND WEATHERPROOF COVER.

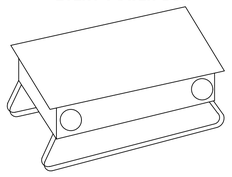
7A EVENT RECEPTACLE DETAIL
NO SCALE

EVENT POWER CORD



NOTES
50A RATED 4 WIRE CORDSET, WITH MALE AND FEMALE ENDS TO MATCH EVENT RECEPTACLE AND SPIDER BOX INLET. INCLUDE WEATHERPROOF BOOTS AND RINGS FOR ALL CORDS AND OUTLETS, ERICSON CAT# 7717 & 510RR OR EQUAL. 10'-0" MINIMUM CORD IN LENGTH. CORD COLOR AND ENDS TO BE YELLOW.

EVENT POWER BOX



NOTES
TEMPORARY POWER DISTRIBUTION CENTER WITH 120/208V 1ø INPUT AND (6)20A 1 POLE 120V RECEPTACLES WITH OVERLOAD PROTECTION AND (1) 30A 2 POLE 208V RECEPTACLE WITH OVERLOAD PROTECTION. (ERICSON OSCAR SERIES TEMPORARY POWER DISTRIBUTION CENTER CAT# 1066-BFS OR EQUAL). INCLUDE WEATHERPROOF COVERS FOR ALL 50A OUTLETS ON POWER BOX, ERICSON CAT# 7788-CR OR EQUAL.

CONTRACTOR TO PROVIDE THE OWNER WITH (4) FOUR EVENT POWER BOX ASSEMBLIES AND (4) FOUR CORDSETS WITH THIS PROJECT.

7B EVENT POWER BOX ASSEMBLY
NO SCALE

Revisions	Date

PRELIMINARY NOT FOR CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: **SITE ELECTRICAL DETAILS**
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No. **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE
CHANDLER, ARIZONA 85225
PHONE: 480.497.5829
FAX: 480.497.5807
www.wrightengineering.us
Wright Project # 23152

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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ARIZONA 811 Arizona Blue Stake, Inc.
Dial 811 or 1-800-STAKE-IT (782-5348)

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Sheet
SE3.4
113 OF 148

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WIRE & CONDUIT TABLE

CONDUIT		WIRE		REMARKS
NO.	SIZE	POWER	GROUND	(CKT #)
51	1"	3-#10	1-#10	TYPICAL
52	1"	3-#8	1-#8	TYPICAL
53	1"	2-#12	1-#12	TYP SPORTS LIGHT
		2-#12		TYP PUSH BUTTON
54	1"	2-#10	1-#10	TYP SPORTS LIGHT
		2-#12		TYP PUSH BUTTON
55	1"	2-#12	1-#10	TYP RAMADA LIGHT
		2-#10		TYP RECEPTACLE
56	1.5"	3-#4	1-#4	TYP EVENT RECEPTACLE
57	1"	2-#12	1-#12	TYPICAL
58	1"	2-#10	1-#10	TYPICAL
60	1.5"	PULL ROPE		SPARE
100	3.5"	3-#2	1-#1	SA(7,9)
		3-#1/0		SA(11,13)
		3-#2/0		SA(15,17)
		3-#2/0		SA(19,21)
	1.5"	2-#6	1-#6	SA-3
		2-#6		SA-5
		2-#6		SA-6
	1"	2-#12	1-#10	SA-1
		2-#10		SA-30
101	3"	3-#2	1-#1	SA(7,9)
		3-#1		SA(11,13)
		3-#1/0		SA(15,17)
		3-#2/0		SA(19,21)
	1"	2-#10	1-#10	SA-30
102	1"	2-#10	1-#10	SA-30
	3"	3-#1	1-#1	SA(11,13)
		3-#1/0		SA(15,17)
		3-#2/0		SA(19,21)
103	2.5"	2-#10	1-#1	SA-30
		3-#1/0		SA(15,17)
		3-#2/0		SA(19,21)
104	2"	3-#2/0	1-#1	SA(19,21)
105	1.25"	2-#6	1-#6	SA-3
		2-#6		SA-5
		2-#6		SA-6
	1"	2-#12	1-#12	SA-1
200	1.5"	3-#12	1-#6	B-30
		3-#6		B-24
	1.5"	2-#10	1-#8	B(31,33)
		2-#12		PICKLEBALL PUSH BUTTON
		2-#8		B(25,27)
		2-#12		TENNIS PUSH BUTTON
		3-#8		B-20
	1.5"	2-#8	1-#8	B(37,39)
		2-#12		BASKETBALL PUSH BUTTON
		2-#10		B(14,16)
		2-#12		VOLLEYBALL PUSH BUTTON
		2-#10		B(4,6)
		2-#12		SKATE PUSH BUTTON
201	1"	2-#10	1-#8	B-20
		3-#8		B-24
	1.25"	2-#12	1-#6	B(31,33)
		2-#12		PICKLEBALL PUSH BUTTON
		2-#8		B(25,27)
		2-#12		TENNIS PUSH BUTTON
	1"	2-#10	1-#10	B(37,39)
		2-#12		BASKETBALL PUSH BUTTON
		2-#10		B(14,16)
		2-#12		VOLLEYBALL PUSH BUTTON
		2-#10		B(4,6)
		2-#12		SKATE PUSH BUTTON
202	1"	3-#10	1-#8	B-20
		3-#8		B-24
	1.5"	2-#10	1-#8	B(31,33)
		2-#12		PICKLEBALL PUSH BUTTON
		2-#10		B(37,39)
		2-#12		BASKETBALL PUSH BUTTON
		2-#10		B(14,16)
		2-#12		VOLLEYBALL PUSH BUTTON

WIRE & CONDUIT TABLE

CONDUIT		WIRE		REMARKS
NO.	SIZE	POWER	GROUND	(CKT #)
203	1"	3-#10	1-#8	B-20
		3-#8		B-24
	1"	2-#10	1-#10	B(37,39)
		2-#12		BASKETBALL PUSH BUTTON
		2-#10		B(14,16)
		2-#12		VOLLEYBALL PUSH BUTTON
		2-#10		B(31,33)
204	1"	3-#10	1-#8	B-20
		3-#8		B-24
	1"	2-#10	1-#10	B(37,39)
		2-#12		BASKETBALL PUSH BUTTON
		2-#10		B(14,16)
		2-#12		VOLLEYBALL PUSH BUTTON
205	1"	3-#10	1-#8	B-20
		3-#8		B-24
206	1"	2-#10	1-#10	B(25,27)
		2-#12		TENNIS PUSH BUTTON
		2-#10		B(4,6)
		2-#12		SKATE PUSH BUTTON
		3-#10		B-20
207	1"	2-#10	1-#10	B(25,27)
		2-#10		B(4,6)
		2-#12		SKATE PUSH BUTTON
	1"	3-#10	1-#10	B-20
208	1"	2-#10	1-#10	B(25,27)
		2-#10		B(4,6)
		2-#12		SKATE PUSH BUTTON
209	1"	2-#10	1-#10	B(25,27)
		2-#12		TENNIS PUSH BUTTON
210	1"	2-#10	1-#10	B(25,27)
		2-#10		B(31,33)
211	1"	3-#10	1-#10	B-20
		2-#10		B(37,39)
212	1"	2-#10	1-#10	B(37,39)
		2-#12		BASKETBALL PUSH BUTTON
	1"	2-#10	1-#10	B(14,16)
		2-#12		VOLLEYBALL PUSH BUTTON
		3-#10		B-20
213	1"	2-#10	1-#10	B(37,39)
		2-#12		BASKETBALL PUSH BUTTON
		2-#10		B(14,16)
214	1"	2-#10	1-#10	B(14,16)
		2-#12		VOLLEYBALL PUSH BUTTON
		3-#10		B-20
218	1"	3-#10	1-#10	B-20
		2-#10		B(31,33)
		2-#12		PICKLEBALL PUSH BUTTON
250	1"	3-#10	1-#10	B-30
		3-#10		B-22
	1"	3-#8	1-#8	B-24
		3-#10		B-26
251	1"	3-#10	1-#10	B-22
		3-#10		B-24
252	1"	3-#10	1-#10	B-22
		3-#10		B-26

LIGHT FIXTURE SCHEDULE

SYMBOL	LETTER ID	MANUFACTURER	CATALOG NUMBER	FINISH COLOR	VOLTS	LAMP	LUMENS (MIN)	CCT	MOUNTING HEIGHT	DETAIL	APPROVED EQUAL	NOTES
	A	COOPER LIGHTING	GLAN-SA9D-740-H-T4W-BZ	BRONZE	480	552W LED	70,182	4000K	20'-0"	PICKLEBALL & TENNIS LIGHT SEE DETAIL 3 SHEET SE3.2	LITHONIA LIGHTING	LIGHT FIXTURE HAS FULL HORIZONTAL CUTOFF. FIXTURE TO BE WET LABELED.
	B	COOPER LIGHTING	GLAN-SA9C-740-H-T4W-BZ	BRONZE	480	481W LED	63,781	4000K	20'-0"	VOLLEYBALL LIGHT SEE DETAIL 3 SHEET SE3.2	LITHONIA LIGHTING	LIGHT FIXTURE HAS FULL HORIZONTAL CUTOFF. FIXTURE TO BE WET LABELED.
	C	COOPER LIGHTING	GLAN-SA8C-740-H-T4FT-BZ	BRONZE	480	429W LED	56,646	4000K	20'-0"	BASKETBALL LIGHT SEE DETAIL 3 SHEET SE3.2	LITHONIA LIGHTING	LIGHT FIXTURE HAS FULL HORIZONTAL CUTOFF. FIXTURE TO BE WET LABELED. ROTATE OPTICS TO FACE COURT.
	D	COOPER LIGHTING	GLAN-SA8C-740-H-T4W-BZ	BRONZE	480	429W LED	56,812	4000K	20'-0"	SKATE PLAZA LIGHT SEE DETAIL 3 SHEET SE3.2	LITHONIA LIGHTING	LIGHT FIXTURE HAS FULL HORIZONTAL CUTOFF. FIXTURE TO BE WET LABELED.
	E	COOPER LIGHTING	GLAN-SA4C-727-U-T4FT-BZ-2L	BRONZE	277	213W LED	23,208	2700K	15'-0"	PLAYGROUND LIGHT SEE DETAIL 3 SHEET SE3.2	LITHONIA LIGHTING	LIGHT FIXTURE HAS FULL HORIZONTAL CUTOFF. FIXTURE TO BE WET LABELED.
	F	COOPER LIGHTING	GLAN-SA2D-727-U-5WQ-BZ-2L	BRONZE	277	125W LED	13,617	2700K	15'-0"	PATHWAY LIGHT SEE DETAIL 3 SHEET SE3.2	LITHONIA LIGHTING	LIGHT FIXTURE HAS FULL HORIZONTAL CUTOFF. FIXTURE TO BE WET LABELED.
	G	LUMINAIRE LIGHTING	VPF4-4FT-NODIM-40W-27K -MVOLT-OP-BRZ	BRONZE	120	42W LED	4,015	2700K	10'-0"	RAMADA LIGHT SEE DETAIL 4 SHEET SE3.2	COOPER LIGHTING	FIXTURE TO BE WET LABELED.
	H	COOPER LIGHTING	GLAN-SA2B-727-U-T2-BZ-2L	BRONZE	277	82W LED	9,624	2700K	15'-0"	BOCCE COURT LIGHT SEE DETAIL 3 SHEET SE3.2	LITHONIA LIGHTING	LIGHT FIXTURE HAS FULL HORIZONTAL CUTOFF. FIXTURE TO BE WET LABELED.
	J	COOPER LIGHTING	GLAN-SA2C-727-U-T3-BZ-2L	BRONZE	277	108W LED	11,725	2700K	15'-0"	HORSE SHOE LIGHT SEE DETAIL 3 SHEET SE3.2	LITHONIA LIGHTING	LIGHT FIXTURE HAS FULL HORIZONTAL CUTOFF. FIXTURE TO BE WET LABELED.

POLE SCHEDULE

SYMBOL	LETTER ID	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	HEIGHT ABOVE GROUND	BURY DEPTH	FOUNDATION TYPE	HAND HOLE LOCATION ABOVE GROUND	LUMINAIRE MOUNTING TYPE	COLOR	APPROVED EQUAL
	A	TRADITIONAL CONCRETE POLES	D220 EXPOSED AGGREGATE FINISH ANTI-GRAFFITI SEALER	OCTAGONAL CONCRETE	20'-0"	5'-0"	DIRECT EMBEDDED	8'-0"	TENON	BRONZE	AMERON CONCRETE POLES
	B	TRADITIONAL CONCRETE POLES	D220 EXPOSED AGGREGATE FINISH ANTI-GRAFFITI SEALER	OCTAGONAL CONCRETE	20'-0"	5'-0"	DIRECT EMBEDDED	8'-0"	TENON	BRONZE	AMERON CONCRETE POLES
	C	TRADITIONAL CONCRETE POLES	D220 EXPOSED AGGREGATE FINISH ANTI-GRAFFITI SEALER	OCTAGONAL CONCRETE	20'-0"	5'-0"	DIRECT EMBEDDED	8'-0"	TENON	BRONZE	AMERON CONCRETE POLES
	D	TRADITIONAL CONCRETE POLES	D220 EXPOSED AGGREGATE FINISH ANTI-GRAFFITI SEALER	OCTAGONAL CONCRETE	20'-0"	5'-0"	DIRECT EMBEDDED	8'-0"	TENON	BRONZE	AMERON CONCRETE POLES
	E	TRADITIONAL CONCRETE POLES	D216 EXPOSED AGGREGATE FINISH ANTI-GRAFFITI SEALER	OCTAGONAL CONCRETE	15'-0"	5'-0"	DIRECT EMBEDDED	8'-0"	TENON	BRONZE	AMERON CONCRETE POLES
	F	TRADITIONAL CONCRETE POLES	D216 EXPOSED AGGREGATE FINISH ANTI-GRAFFITI SEALER	OCTAGONAL CONCRETE	15'-0"	5'-0"	DIRECT EMBEDDED	8'-0"	TENON	BRONZE	AMERON CONCRETE POLES
	H	TRADITIONAL CONCRETE POLES	D216 EXPOSED AGGREGATE FINISH ANTI-GRAFFITI SEALER	OCTAGONAL CONCRETE	15'-0"	5'-0"	DIRECT EMBEDDED	8'-0"	TENON	BRONZE	AMERON CONCRETE POLES
	J	TRADITIONAL CONCRETE POLES	D216 EXPOSED AGGREGATE FINISH ANTI-GRAFFITI SEALER	OCTAGONAL CONCRETE	15'-0"	5'-0"	DIRECT EMBEDDED	8'-0"	TENON	BRONZE	AMERON CONCRETE POLES

Revisions	Date

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Date: 4/19/2024
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CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: PA75200668-1

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ELECTRICAL ENGINEERING AND DESIGN
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CHANDLER, ARIZONA 85225
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4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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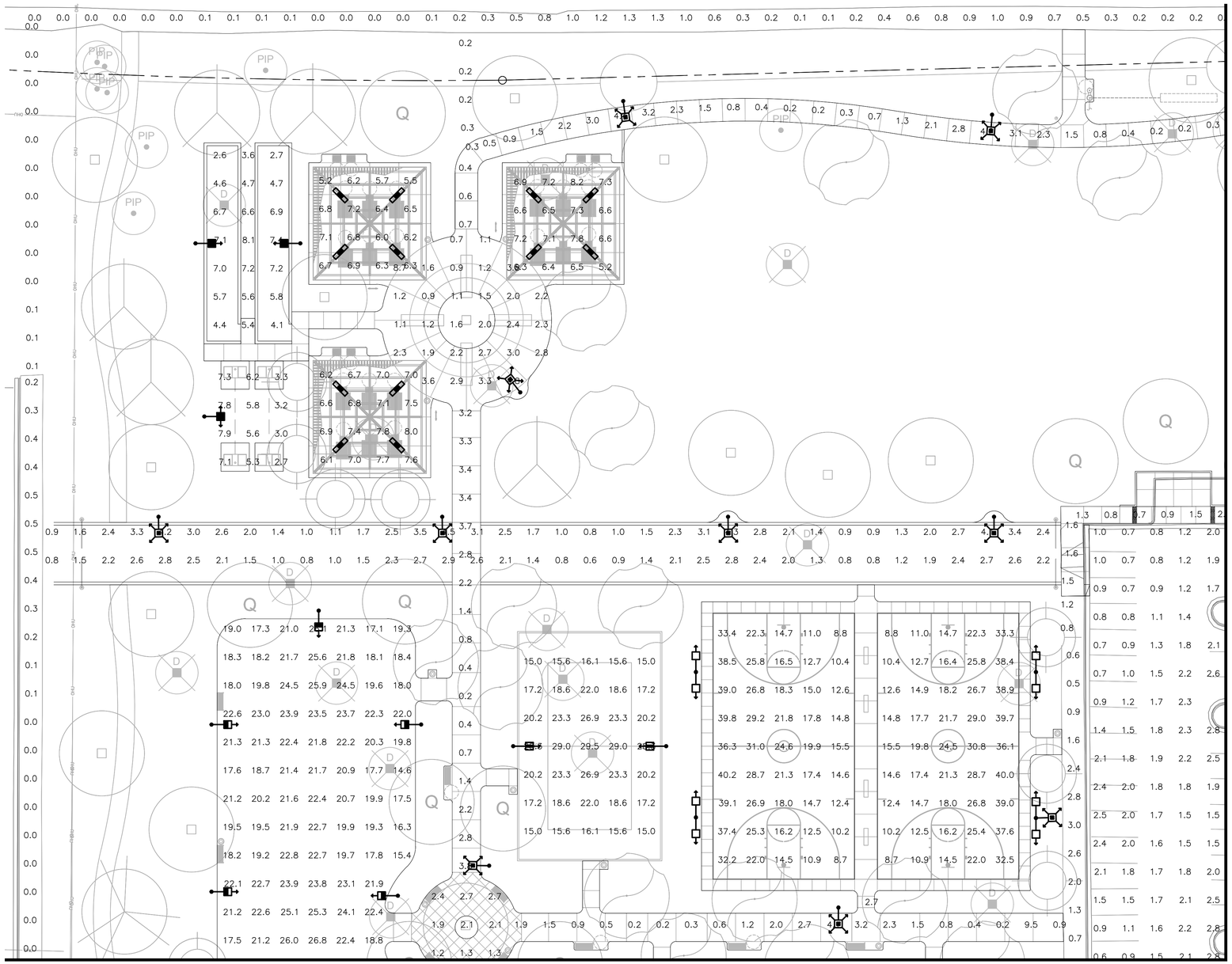
114 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:36 PM B-W.CTB BROCK MCNEIL



PHOTOMETRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES
Average 6.6
Maximum 10.8
Minimum 2.5
Avg:Min 2.65
Max:Min 4.32
Coef Var 0.21

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 20.4
Maximum 29.5
Minimum 15.0
Avg:Min 1.36
Max:Min 1.97
Coef Var 0.23
UnifGrad 1.40

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES
Average 29.3
Maximum 36.1
Minimum 22.9
Avg:Min 1.28
Max:Min 1.58
Coef Var 0.10

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.8
Maximum 40.2
Minimum 8.7
Avg:Min 2.50
Max:Min 4.62
Coef Var 0.44
UnifGrad 1.22

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES
Average 34.4
Maximum 51.6
Minimum 27.1
Avg:Min 1.27
Max:Min 1.90
Coef Var 0.16

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.4
Maximum 4.1
Minimum 0.4
Avg:Min 3.62
Max:Min 10.25
Coef Var 0.65
UnifGrad 2.00

PLAYGROUND
142 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.2
Maximum 13.0
Minimum 2.3
Avg:Min 2.24
Max:Min 5.65
Coef Var 0.41
UnifGrad 1.91

PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.6
Maximum 4.6
Minimum 0.3
Avg:Min 5.36
Max:Min 15.33
Coef Var 0.42
UnifGrad 2.00

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES
Average 1.8
Maximum 9.9
Minimum 0.2
Avg:Min 9.19
Max:Min 49.50
Coef Var 0.86

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES
Average 0.0
Maximum 0.0
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 0.00

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES
Average 0.2
Maximum 1.7
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 1.76

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.1
Maximum 26.8
Minimum 14.6
Avg:Min 1.44
Max:Min 1.84
Coef Var 0.13
UnifGrad 1.36

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.9
Maximum 4.5
Minimum 0.5
Avg:Min 3.77
Max:Min 9.00
Coef Var 0.48
UnifGrad 1.56

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.6
Maximum 8.1
Minimum 2.6
Avg:Min 2.14
Max:Min 3.12
Coef Var 0.30
UnifGrad 1.77

PHOTOMETRIC LEGEND

Tennis & Pickleball Lights
candela file 'GLAN-SA9D-740-U-T4W_70182 lumens.ies'
144 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 552
mounting height= 20 ft
number locations= 18, number luminaires= 18
kw all locations= 9.9

Volleyball Lights
GLAN-SA9C-740-U-T4W
candela file 'GLAN-SA9C-740-U-T4W_63781 lumens.ies'
144 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 481
mounting height= 20 ft
number locations= 2, number luminaires= 2
kw all locations= 1.0

Basketball Lights
candela file 'GLAN-SA8C-740-U-T4FT_56646 lumens.ies'
128 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 429
mounting height= 20 ft
number locations= 16, number luminaires= 16
kw all locations= 6.9

Pathway lights
GLAN-SA2D-727-U-5WQ
candela file 'GLAN-SA2D-727-U-5WQ_13617 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 125
mounting height= 15 ft
number locations= 63, number luminaires= 63
kw all locations= 7.9

Playground lights
GLAN-SA4C-727-U-T4FT
candela file 'GLAN-SA4C-727-U-T4FT_23208 lumens.ies'
64 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 213
mounting height= 16 ft
number locations= 5, number luminaires= 5
kw all locations= 1.1

Skate Plaza lights
candela file 'GLAN-SA8C-740-U-T4W_56812 lumens.ies'
128 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 429
mounting height= 20 ft
number locations= 6, number luminaires= 6
kw all locations= 2.6

Existing Roadway Lights
40W 5000 Lumen
candela file 'ATBX P50 XXXXX R2 3K.ies'
1 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 41
mounting height= 26 ft
number locations= 2, number luminaires= 2
kw all locations= 0.1

Ramada Light
VPF4 4FT 40W
candela file 'VPF4 4FT 40W 40K CLP.ies'
168 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.781, watts per luminaire = 42
mounting height= 10 ft
number locations= 13, number luminaires= 13
kw all locations= 0.5

Existing Parking Lot Light
candela file 'GLAN-SA2D-727-U-5WQ_13617 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 125
mounting height= 15 ft
number locations= 3, number luminaires= 3
kw all locations= 0.4

Existing Ramada Light
candela file 'VPF4 4FT 40W 40K CLP.ies'
168 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.781, watts per luminaire = 42
mounting height= 10 ft
number locations= 4, number luminaires= 4
kw all locations= 0.2

Bocce Court Light
candela file 'GLAN-SA2B-727-U-T2_9624 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 82
mounting height= 15 ft
number locations= 2, number luminaires= 2
kw all locations= 0.2

Horse Shoe Light
candela file 'GLAN-SA2C-727-U-T3_11725 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 108
mounting height= 15 ft
number locations= 1, number luminaires= 1
kw all locations= 0.1

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

Revisions	Date

PRELIMINARY
NOT FOR
CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: PHOTOMETRIC ANALYSIS
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE
CHANDLER, ARIZONA 85225
PHONE: 480.497.5829
FAX: 480.497.5807
www.wrightengineering.us
Wright Project # 23152

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 811 or 1-800-STAKE-IT (782-5348)

Note:
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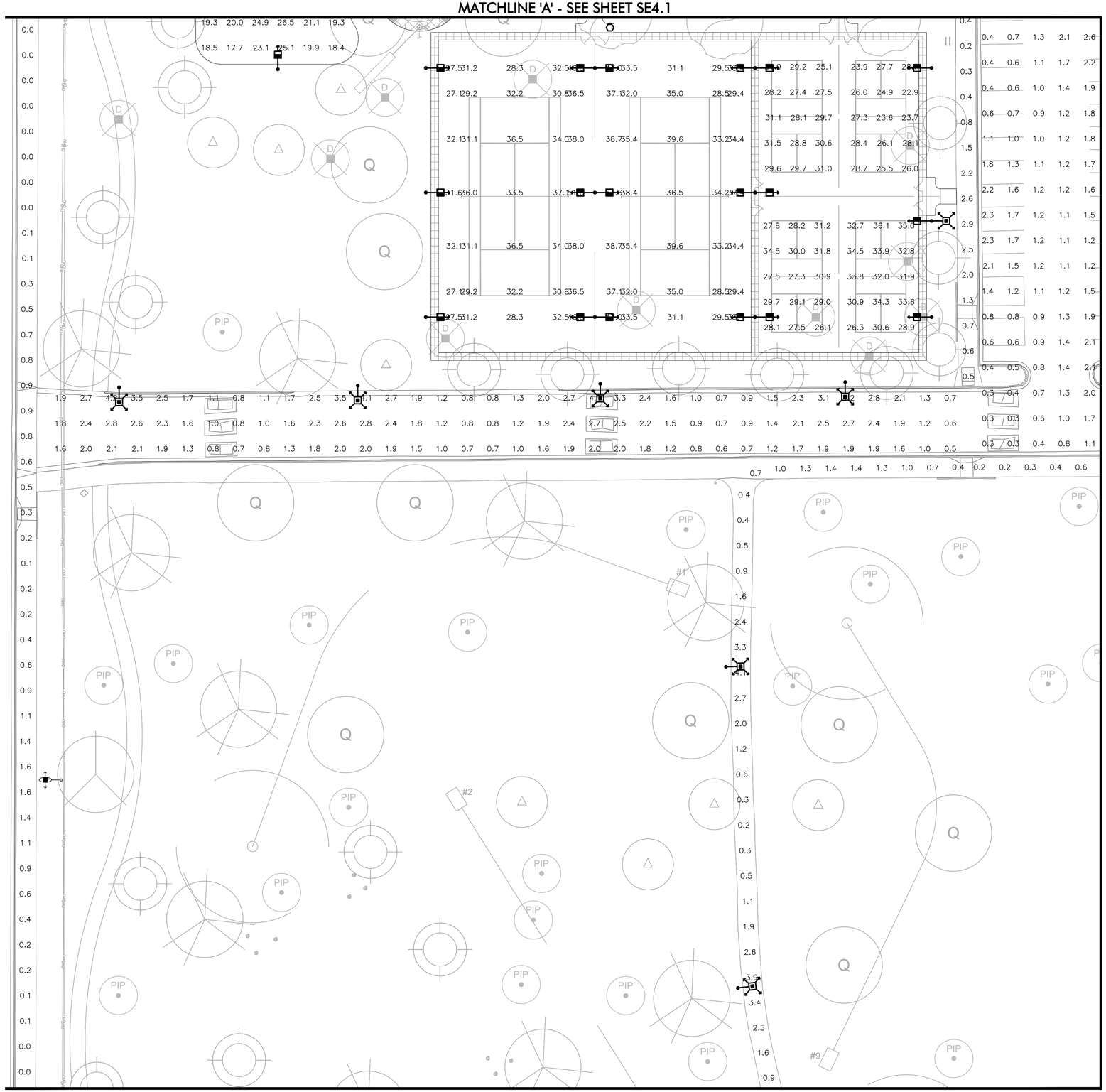
KIVA # _____
SDEV # _____

Sheet
SE4.1
115 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:41 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'A' - SEE SHEET SE4.1



MATCHLINE 'B' - SEE SHEET SE4.3

MATCHLINE 'H' - SEE SHEET SE4.5

PHOTOMECTRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES
Average 6.6
Maximum 10.8
Minimum 2.5
Avg:Min 2.65
Max:Min 4.32
Coef Var 0.21

PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.6
Maximum 4.6
Minimum 0.3
Avg:Min 5.36
Max:Min 15.33
Coef Var 0.42
UnifGrad 2.00

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 20.4
Maximum 29.5
Minimum 15.0
Avg:Min 1.36
Max:Min 1.97
Coef Var 0.23
UnifGrad 1.40

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES
Average 1.8
Maximum 9.9
Minimum 0.2
Avg:Min 9.19
Max:Min 49.50
Coef Var 0.86

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES
Average 29.3
Maximum 36.1
Minimum 22.9
Avg:Min 1.28
Max:Min 1.58
Coef Var 0.10

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES
Average 0.0
Maximum 0.0
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 0.00

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.8
Maximum 40.2
Minimum 8.7
Avg:Min 2.50
Max:Min 4.62
Coef Var 0.44
UnifGrad 1.22

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES
Average 0.2
Maximum 1.7
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 1.76

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES
Average 34.4
Maximum 51.6
Minimum 27.1
Avg:Min 1.27
Max:Min 1.90
Coef Var 0.16

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.1
Maximum 26.8
Minimum 14.6
Avg:Min 1.44
Max:Min 1.84
Coef Var 0.13
UnifGrad 1.36

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.4
Maximum 4.1
Minimum 0.4
Avg:Min 3.62
Max:Min 10.25
Coef Var 0.65
UnifGrad 2.00

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.9
Maximum 4.5
Minimum 0.5
Avg:Min 3.77
Max:Min 9.00
Coef Var 0.48
UnifGrad 1.56

PLAYGROUND
142 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.2
Maximum 13.0
Minimum 2.3
Avg:Min 2.24
Max:Min 5.65
Coef Var 0.41
UnifGrad 1.91

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.6
Maximum 8.1
Minimum 2.6
Avg:Min 2.14
Max:Min 3.12
Coef Var 0.30
UnifGrad 1.77

FOR PHOTOMETRIC LEGEND,
SEE SHEET SE4.1.

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

Revisions	Date

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Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: **PHOTOMETRIC ANALYSIS**
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: **PA75200668-1**

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J Design
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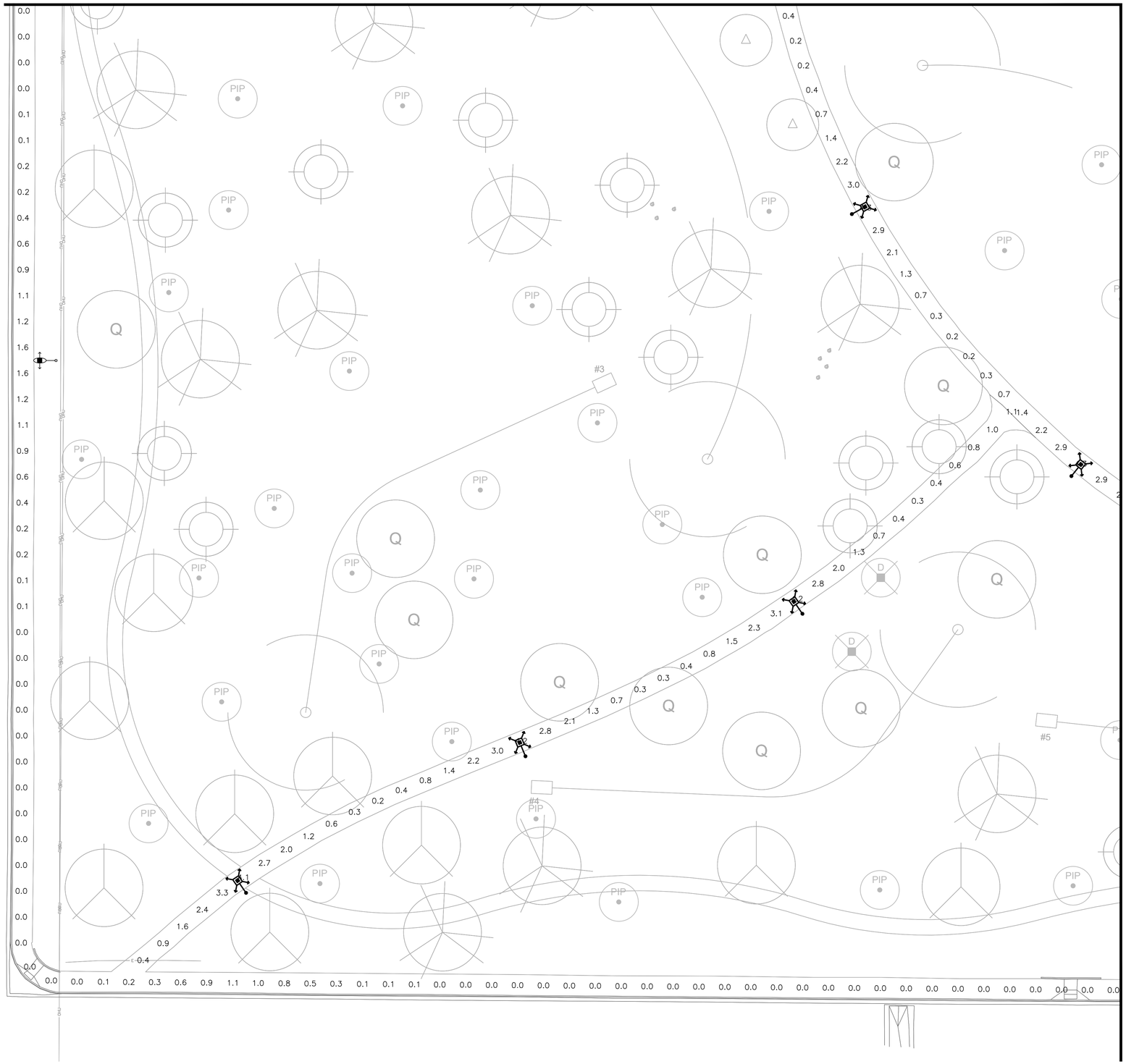
KIVA # _____
SDEV # _____

Sheet
SE4.2
116 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:44 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'B' - SEE SHEET SE4.2



MATCHLINE 'I' - SEE SHEET SE4.6

PHOTOMECTRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES
Average 6.6
Maximum 10.8
Minimum .2.5
Avg:Min 2.65
Max:Min 4.32
Coef Var 0.21

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 20.4
Maximum 29.5
Minimum 15.0
Avg:Min 1.36
Max:Min 1.97
Coef Var 0.23
UnifGrad 1.40

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES
Average 29.3
Maximum 36.1
Minimum 22.9
Avg:Min 1.28
Max:Min 1.58
Coef Var 0.10

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.8
Maximum 40.2
Minimum .8.7
Avg:Min 2.50
Max:Min 4.62
Coef Var 0.44
UnifGrad 1.22

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES
Average 34.4
Maximum 51.6
Minimum 27.1
Avg:Min 1.27
Max:Min 1.90
Coef Var 0.16

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.4
Maximum 4.1
Minimum 0.4
Avg:Min 3.62
Max:Min 10.25
Coef Var 0.65
UnifGrad 2.00

PLAYGROUND
142 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.2
Maximum 13.0
Minimum .2.3
Avg:Min 2.24
Max:Min 5.65
Coef Var 0.41
UnifGrad 1.91

PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.6
Maximum 4.6
Minimum 0.3
Avg:Min 5.36
Max:Min 15.33
Coef Var 0.42
UnifGrad 2.00

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES
Average 1.8
Maximum 9.9
Minimum 0.2
Avg:Min 9.19
Max:Min 49.50
Coef Var 0.86

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES
Average 0.0
Maximum 0.0
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 0.00

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES
Average 0.2
Maximum 1.7
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 1.76

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.1
Maximum 26.8
Minimum 14.6
Avg:Min 1.44
Max:Min 1.84
Coef Var 0.13
UnifGrad 1.36

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.9
Maximum 4.5
Minimum 0.5
Avg:Min 3.77
Max:Min 9.00
Coef Var 0.48
UnifGrad 1.56

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.6
Maximum 8.1
Minimum 2.6
Avg:Min 2.14
Max:Min 3.12
Coef Var 0.30
UnifGrad 1.77

FOR PHOTOMETRIC LEGEND, SEE SHEET SE4.1.

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

Revisions	Date

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Drawn By: BKM
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KIVA # _____
SDEV # _____

Sheet
SE4.3
117 OF 148

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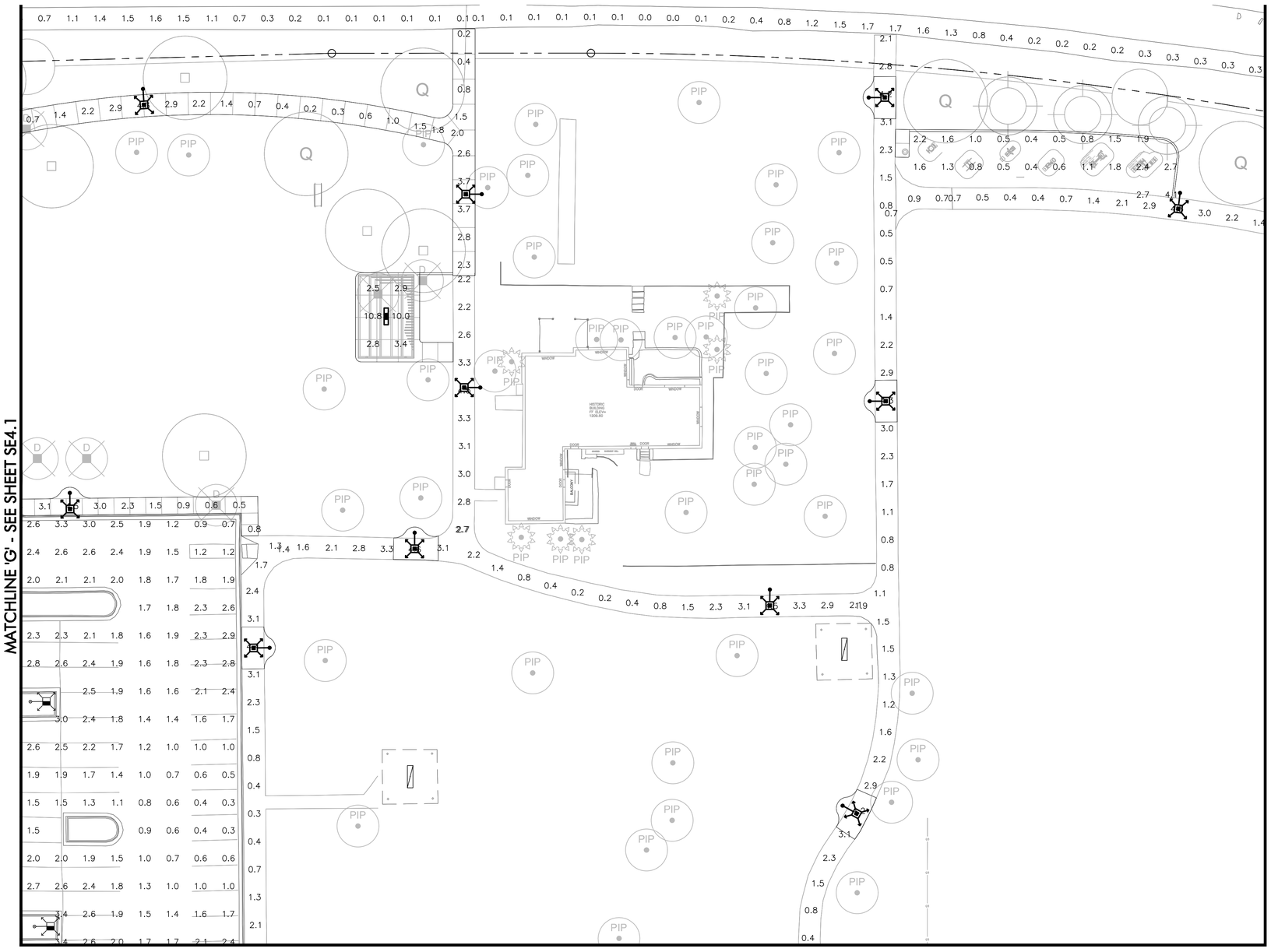

PHOTOMETRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES
Average	6.6
Maximum	10.8
Minimum	2.5
Avg:Min	2.65
Max:Min	4.32
Coef Var	0.21

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average	20.4
Maximum	29.5
Minimum	15.0
Avg:Min	1.36
Max:Min	1.97
Coef Var	0.23
UnifGrad	1.40

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES
Average	29.3
Maximum	36.1
Minimum	22.9
Avg:Min	1.28
Max:Min	1.58
Coef Var	0.10

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES
Average	21.8
Maximum	40.2
Minimum	8.7
Avg:Min	2.50
Max:Min	4.62
Coef Var	0.44
UnifGrad	1.22

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES
Average	34.4
Maximum	51.6
Minimum	27.1
Avg:Min	1.27
Max:Min	1.90
Coef Var	0.16

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average	1.4
Maximum	4.1
Minimum	0.4
Avg:Min	3.62
Max:Min	10.25
Coef Var	0.65
UnifGrad	2.00

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142 points at z=0, sp 10ft by 10ft
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Average	5.2
Maximum	13.0
Minimum	2.3
Avg:Min	2.24
Max:Min	5.65
Coef Var	0.41
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PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average	1.6
Maximum	4.6
Minimum	0.3
Avg:Min	5.36
Max:Min	15.33
Coef Var	0.42
UnifGrad	2.00

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES
Average	1.8
Maximum	9.9
Minimum	0.2
Avg:Min	9.19
Max:Min	49.50
Coef Var	0.86

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES
Average	0.0
Maximum	0.0
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	0.00

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES
Average	0.2
Maximum	1.7
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	1.76

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average	21.1
Maximum	26.8
Minimum	14.6
Avg:Min	1.44
Max:Min	1.84
Coef Var	0.13
UnifGrad	1.36

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES
Average	1.9
Maximum	4.5
Minimum	0.5
Avg:Min	3.77
Max:Min	9.00
Coef Var	0.48
UnifGrad	1.56

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES
Average	5.6
Maximum	8.1
Minimum	2.6
Avg:Min	2.14
Max:Min	3.12
Coef Var	0.30
UnifGrad	1.77

PHOTOMETRIC LEGEND

Tennis & Pickleball Lights
candela file 'GLAN-SA9D-740-U-T4W_70182 lumens.ies'
144 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 552
mounting height= 20 ft
number locations= 18, number luminaires= 18
kw all locations= 9.9

Volleyball Lights
GLAN-SA9C-740-U-T4W
candela file 'GLAN-SA9C-740-U-T4W_63781 lumens.ies'
144 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 481
mounting height= 20 ft
number locations= 2, number luminaires= 2
kw all locations= 1.0

Basketball Lights
candela file 'GLAN-SA8C-740-U-T4FT_56646 lumens.ies'
128 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 429
mounting height= 20 ft
number locations= 16, number luminaires= 16
kw all locations= 6.9

Pathway lights
GLAN-SA2D-727-U-5WQ
candela file 'GLAN-SA2D-727-U-5WQ_13617 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 125
mounting height= 15 ft
number locations= 63, number luminaires= 63
kw all locations= 7.9

Playground lights
GLAN-SA4C-727-U-T4FT
candela file 'GLAN-SA4C-727-U-T4FT_23208 lumens.ies'
64 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 213
mounting height= 16 ft
number locations= 5, number luminaires= 5
kw all locations= 1.1

Skate Plaza lights
candela file 'GLAN-SA8C-740-U-T4W_56812 lumens.ies'
128 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 429
mounting height= 20 ft
number locations= 6, number luminaires= 6
kw all locations= 2.6

Existing Roadway Lights
40W 5000 Lumen
candela file 'ATBX P50 XXXXX R2 3K.ies'
1 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 41
mounting height= 26 ft
number locations= 2, number luminaires= 2
kw all locations= 0.1

Ramada Light
VPF4 4FT 40W
candela file 'VPF4 4FT 40W 40K CLP.ies'
168 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.781, watts per luminaire = 42
mounting height= 10 ft
number locations= 13, number luminaires= 13
kw all locations= 0.5

Existing Parking Lot Light
candela file 'GLAN-SA2D-727-U-5WQ_13617 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 125
mounting height= 15 ft
number locations= 3, number luminaires= 3
kw all locations= 0.4

Existing Ramada Light
candela file 'VPF4 4FT 40W 40K CLP.ies'
168 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.781, watts per luminaire = 42
mounting height= 10 ft
number locations= 4, number luminaires= 4
kw all locations= 0.2

Bocce Court Light
candela file 'GLAN-SA2B-727-U-T2_9624 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 82
mounting height= 15 ft
number locations= 2, number luminaires= 2
kw all locations= 0.2

Horse Shoe Light
candela file 'GLAN-SA2C-727-U-T3_11725 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 108
mounting height= 15 ft
number locations= 1, number luminaires= 1
kw all locations= 0.1

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE
CHANDLER, ARIZONA 85225
PHONE: 480.497.5829
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www.wrightengineering.us
Wright Project # 23152

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Note:
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Revisions	Date

PRELIMINARY
NOT FOR
CONSTRUCTION

Designed By:	BKM
Drawn By:	BKM
Checked By:	CMT
Date:	4/19/2024
Project #:	22.1618.002

Title: **PHOTOMETRIC ANALYSIS**
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: **PA75200668-1**

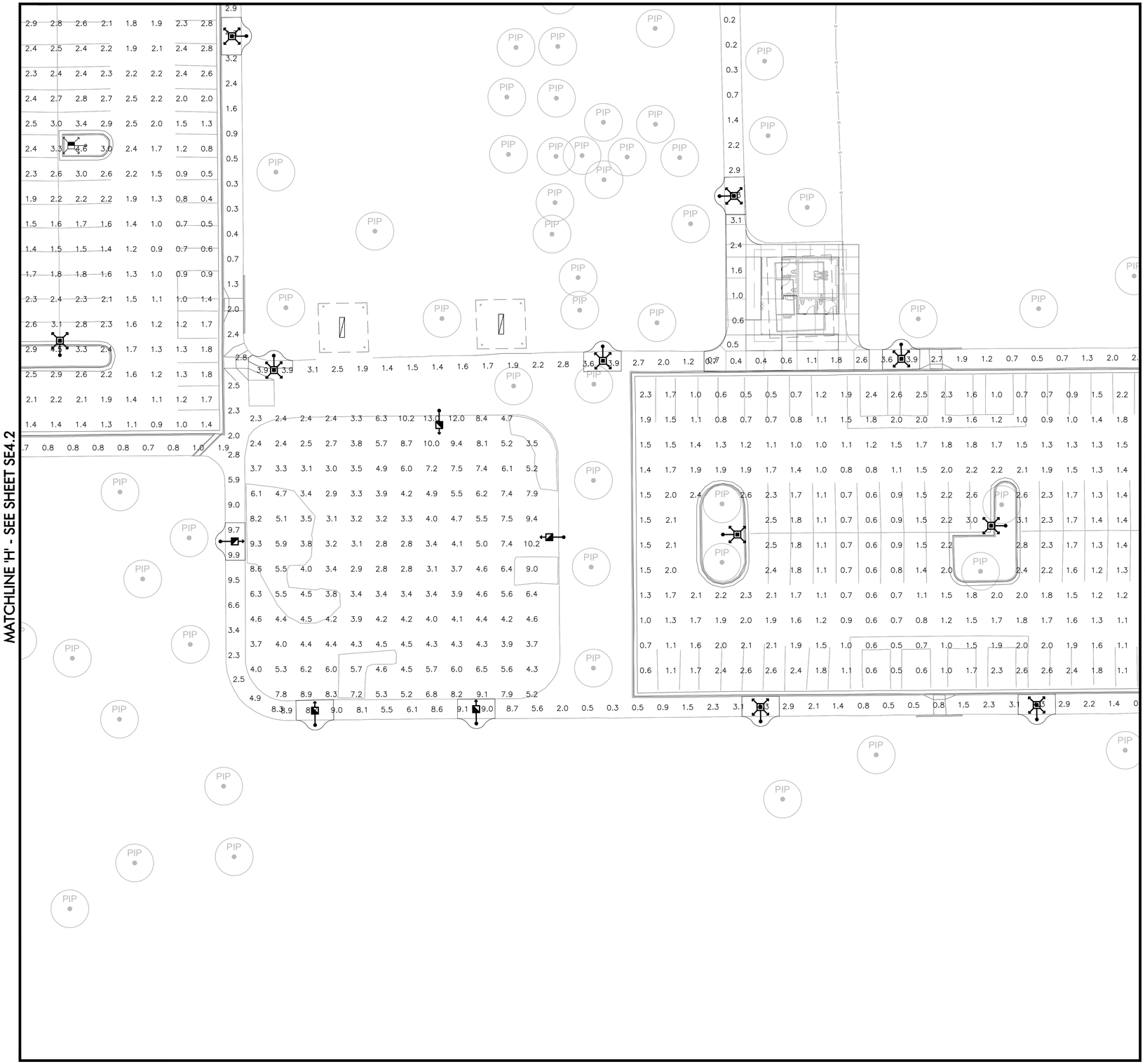
KIVA # _____
SDEV # _____

Sheet
SE4.4
118 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:51 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'C' - SEE SHEET SE4.4



MATCHLINE 'H' - SEE SHEET SE4.2

MATCHLINE 'K' - SEE SHEET SE4.8

MATCHLINE 'D' - SEE SHEET SE4.6

PHOTOMECTRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES

Average	6.6
Maximum	10.8
Minimum	2.5
Avg:Min	2.65
Max:Min	4.32
Coef Var	0.21

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	20.4
Maximum	29.5
Minimum	15.0
Avg:Min	1.36
Max:Min	1.97
Coef Var	0.23
UnifGrad	1.40

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES

Average	29.3
Maximum	36.1
Minimum	22.9
Avg:Min	1.28
Max:Min	1.58
Coef Var	0.10

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES

Average	21.8
Maximum	40.2
Minimum	8.7
Avg:Min	2.50
Max:Min	4.62
Coef Var	0.44
UnifGrad	1.22

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES

Average	34.4
Maximum	51.6
Minimum	27.1
Avg:Min	1.27
Max:Min	1.90
Coef Var	0.16

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.4
Maximum	4.1
Minimum	0.4
Avg:Min	3.62
Max:Min	10.25
Coef Var	0.65
UnifGrad	2.00

PLAYGROUND
142 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	5.2
Maximum	13.0
Minimum	2.3
Avg:Min	2.24
Max:Min	5.65
Coef Var	0.41
UnifGrad	1.91

PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.6
Maximum	4.6
Minimum	0.3
Avg:Min	5.36
Max:Min	15.33
Coef Var	0.42
UnifGrad	2.00

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES

Average	1.8
Maximum	9.9
Minimum	0.2
Avg:Min	9.19
Max:Min	49.50
Coef Var	0.86

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES

Average	0.0
Maximum	0.0
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	0.00

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES

Average	0.2
Maximum	1.7
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	1.76

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	21.1
Maximum	26.8
Minimum	14.6
Avg:Min	1.44
Max:Min	1.84
Coef Var	0.13
UnifGrad	1.36

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.9
Maximum	4.5
Minimum	0.5
Avg:Min	3.77
Max:Min	9.00
Coef Var	0.48
UnifGrad	1.56

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES

Average	5.6
Maximum	8.1
Minimum	2.6
Avg:Min	2.14
Max:Min	3.12
Coef Var	0.30
UnifGrad	1.77

FOR PHOTOMETRIC LEGEND, SEE SHEET SE4.4.

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

Revisions	Date

PRELIMINARY NOT FOR CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: PHOTOMETRIC ANALYSIS
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: PA75200668-1

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www.wrightengineering.us

Wright Project # 23152

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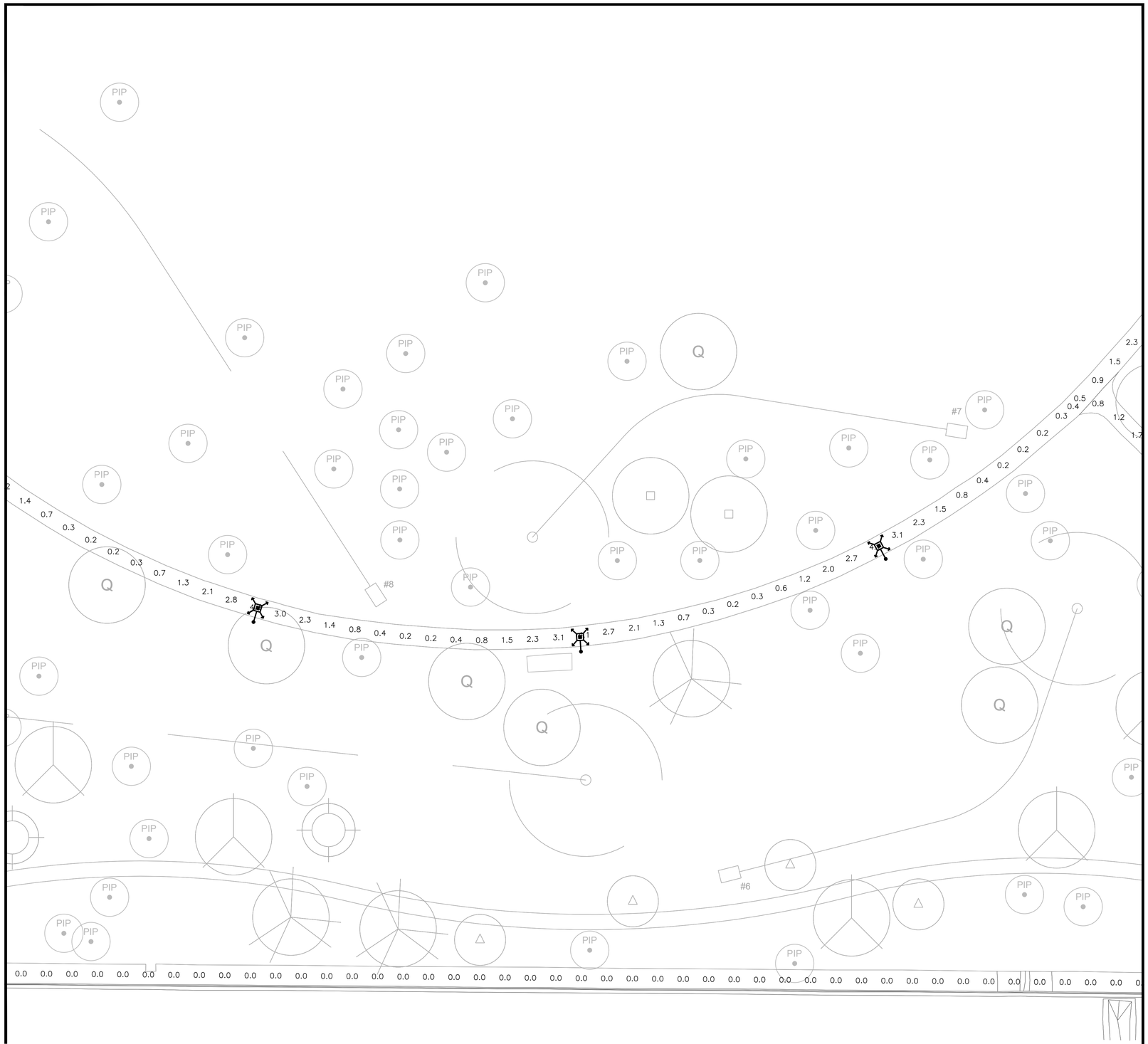
KIVA # _____
SDEV # _____

Sheet
SE4.5
119 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:54 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'D' - SEE SHEET SE4.5



PHOTOMECTRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES
Average 6.6
Maximum 10.8
Minimum 2.5
Avg:Min 2.65
Max:Min 4.32
Coef Var 0.21

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 20.4
Maximum 29.5
Minimum 15.0
Avg:Min 1.36
Max:Min 1.97
Coef Var 0.23
UnifGrad 1.40

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES
Average 29.3
Maximum 36.1
Minimum 22.9
Avg:Min 1.28
Max:Min 1.58
Coef Var 0.10

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.8
Maximum 40.2
Minimum 8.7
Avg:Min 2.50
Max:Min 4.62
Coef Var 0.44
UnifGrad 1.22

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES
Average 34.4
Maximum 51.6
Minimum 27.1
Avg:Min 1.27
Max:Min 1.90
Coef Var 0.16

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.4
Maximum 4.1
Minimum 0.4
Avg:Min 3.62
Max:Min 10.25
Coef Var 0.65
UnifGrad 2.00

PLAYGROUND
142 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.2
Maximum 13.0
Minimum 2.3
Avg:Min 2.24
Max:Min 5.65
Coef Var 0.41
UnifGrad 1.91

PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.6
Maximum 4.6
Minimum 0.3
Avg:Min 5.36
Max:Min 15.33
Coef Var 0.42
UnifGrad 2.00

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES
Average 1.8
Maximum 9.9
Minimum 0.2
Avg:Min 9.19
Max:Min 49.50
Coef Var 0.86

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES
Average 0.0
Maximum 0.0
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 0.00

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES
Average 0.2
Maximum 1.7
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 1.76

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.1
Maximum 26.8
Minimum 14.6
Avg:Min 1.44
Max:Min 1.84
Coef Var 0.13
UnifGrad 1.36

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.9
Maximum 4.5
Minimum 0.5
Avg:Min 3.77
Max:Min 9.00
Coef Var 0.48
UnifGrad 1.56

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.6
Maximum 8.1
Minimum 2.6
Avg:Min 2.14
Max:Min 3.12
Coef Var 0.30
UnifGrad 1.77

FOR PHOTOMETRIC LEGEND, SEE SHEET SE4.4.

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

Revisions	Date

PRELIMINARY
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CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: **PHOTOMETRIC ANALYSIS**
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: **PA75200668-1**

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ELECTRICAL ENGINEERING AND DESIGN
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J Design
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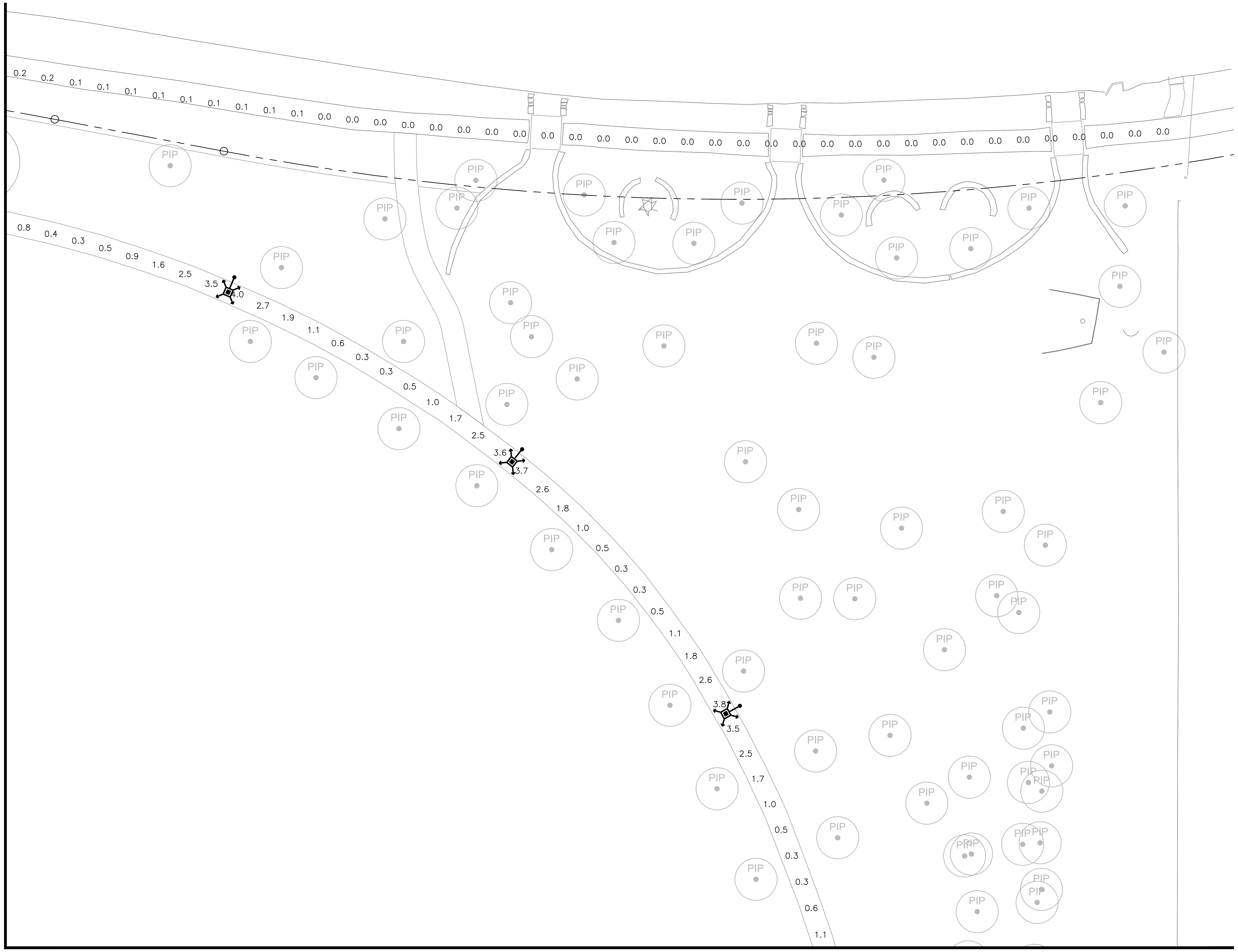
Sheet
SE4.6
120 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:04:57 PM B-W.CTB BROCK MCNEIL



MATCHLINE 'J' - SEE SHEET SE4.4

MATCHLINE 'E' - SEE SHEET SE4.8

PHOTOMECTRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES

Average	6.6
Maximum	10.8
Minimum	2.5
Avg:Min	2.65
Max:Min	4.32
Coef Var	0.21

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	20.4
Maximum	29.5
Minimum	15.0
Avg:Min	1.36
Max:Min	1.97
Coef Var	0.23
UnifGrad	1.40

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES

Average	29.3
Maximum	36.1
Minimum	22.9
Avg:Min	1.28
Max:Min	1.58
Coef Var	0.10

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES

Average	21.8
Maximum	40.2
Minimum	8.7
Avg:Min	2.50
Max:Min	4.62
Coef Var	0.44
UnifGrad	1.22

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES

Average	34.4
Maximum	51.6
Minimum	27.1
Avg:Min	1.27
Max:Min	1.90
Coef Var	0.16

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.4
Maximum	4.1
Minimum	0.4
Avg:Min	3.62
Max:Min	10.25
Coef Var	0.65
UnifGrad	2.00

PLAYGROUND
142 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	5.2
Maximum	13.0
Minimum	2.3
Avg:Min	2.24
Max:Min	5.65
Coef Var	0.41
UnifGrad	1.91

PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.6
Maximum	4.6
Minimum	0.3
Avg:Min	5.36
Max:Min	15.33
Coef Var	0.42
UnifGrad	2.00

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES

Average	1.8
Maximum	9.9
Minimum	0.2
Avg:Min	9.19
Max:Min	49.50
Coef Var	0.86

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES

Average	0.0
Maximum	0.0
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	0.00

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES

Average	0.2
Maximum	1.7
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	1.76

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	21.1
Maximum	26.8
Minimum	14.6
Avg:Min	1.44
Max:Min	1.84
Coef Var	0.13
UnifGrad	1.36

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.9
Maximum	4.5
Minimum	0.5
Avg:Min	3.77
Max:Min	9.00
Coef Var	0.48
UnifGrad	1.56

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES

Average	5.6
Maximum	8.1
Minimum	2.6
Avg:Min	2.14
Max:Min	3.12
Coef Var	0.30
UnifGrad	1.77

PHOTOMETRIC LEGEND

Tennis & Pickleball Lights
candela file 'GLAN–SA9D–740–U–T4W_70182 lumens.ies'
144 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 552
mounting height= 20 ft
number locations= 18, number luminaires= 18
kw all locations= 9.9

Volleyball Lights
GLAN–SA9C–740–U–T4W
candela file 'GLAN–SA9C–740–U–T4W_63781 lumens.ies'
144 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 481
mounting height= 20 ft
number locations= 2, number luminaires= 2
kw all locations= 1.0

Basketball Lights
candela file 'GLAN–SA8C–740–U–T4FT_56646 lumens.ies'
128 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 429
mounting height= 20 ft
number locations= 16, number luminaires= 16
kw all locations= 6.9

Pathway lights
GLAN–SA2D–727–U–5WQ
candela file 'GLAN–SA2D–727–U–5WQ_13617 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 125
mounting height= 15 ft
number locations= 63, number luminaires= 63
kw all locations= 7.9

Playground lights
GLAN–SA4C–727–U–T4FT
candela file 'GLAN–SA4C–727–U–T4FT_23208 lumens.ies'
64 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 213
mounting height= 16 ft
number locations= 5, number luminaires= 5
kw all locations= 1.1

Skate Plaza lights
candela file 'GLAN–SA8C–740–U–T4W_56812 lumens.ies'
128 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 429
mounting height= 20 ft
number locations= 6, number luminaires= 6
kw all locations= 2.6

Existing Roadway Lights
40W 5000 Lumen
candela file 'ATBX P50 XXXXX R2 3K.ies'
1 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 41
mounting height= 26 ft
number locations= 2, number luminaires= 2
kw all locations= 0.1

Ramada Light
VPF4 4FT 40W
candela file 'VPF4 4FT 40W 40K CLP.ies'
168 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.781, watts per luminaire = 42
mounting height= 10 ft
number locations= 13, number luminaires= 13
kw all locations= 0.5

Existing Parking Lot Light
candela file 'GLAN–SA2D–727–U–5WQ_13617 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 125
mounting height= 15 ft
number locations= 3, number luminaires= 3
kw all locations= 0.4

Existing Ramada Light
candela file 'VPF4 4FT 40W 40K CLP.ies'
168 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.781, watts per luminaire = 42
mounting height= 10 ft
number locations= 4, number luminaires= 4
kw all locations= 0.2

Bocce Court Light
candela file 'GLAN–SA2B–727–U–T2_9624 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 82
mounting height= 15 ft
number locations= 2, number luminaires= 2
kw all locations= 0.2

Horse Shoe Light
candela file 'GLAN–SA2C–727–U–T3_11725 lumens.ies'
32 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.910, watts per luminaire = 108
mounting height= 15 ft
number locations= 1, number luminaires= 1
kw all locations= 0.1

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

PRELIMINARY
NOT FOR
CONSTRUCTION

Revisions	Date

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title:
PHOTOMETRIC ANALYSIS
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: **PA75200668-1**

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Wright Project # 23152

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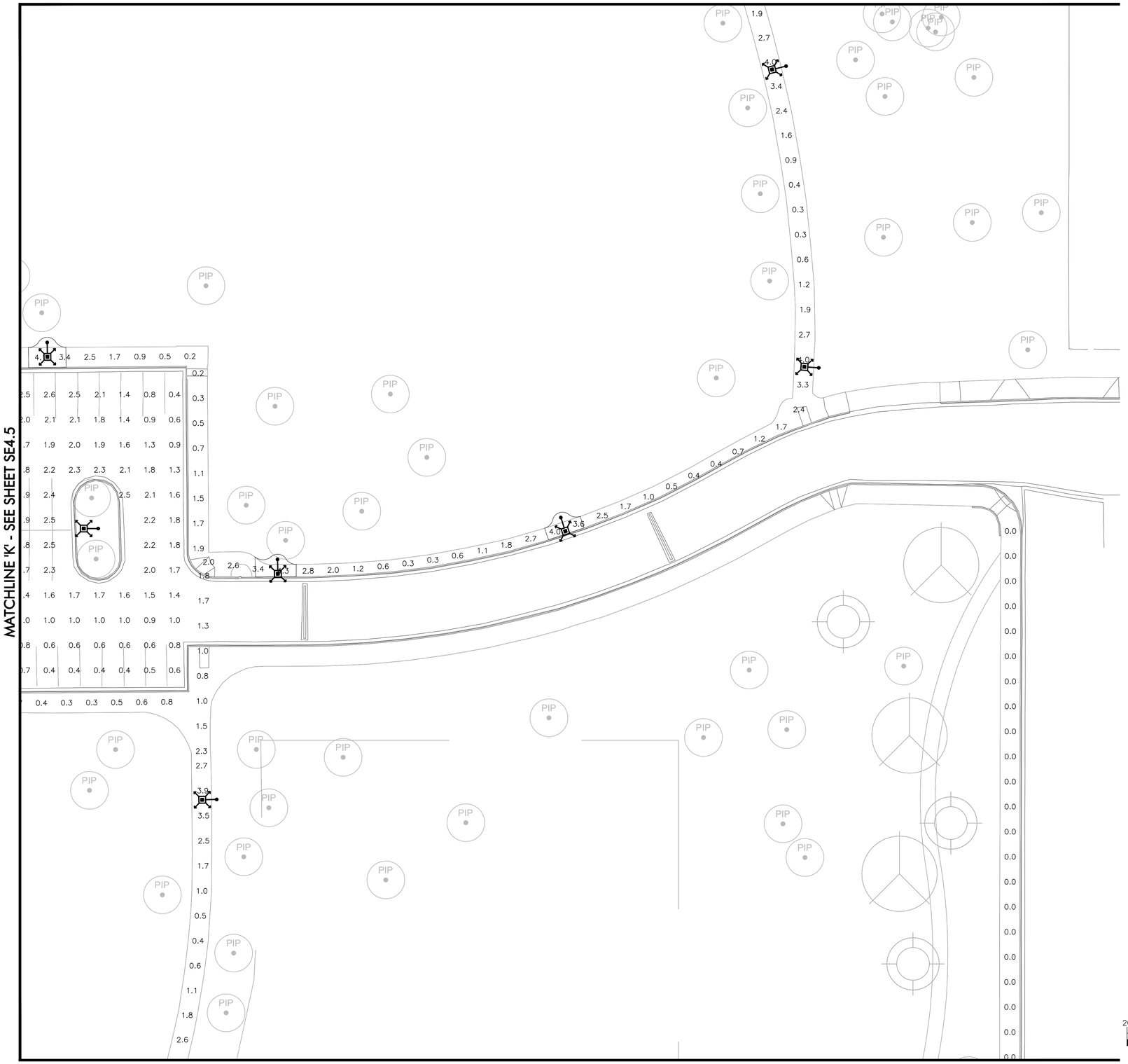
KIVA # ____________
SDEV # ____________

Sheet
SE4.7

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:05:01 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'E' - SEE SHEET SE4.7



MATCHLINE 'K' - SEE SHEET SE4.5

MATCHLINE 'F' - SEE SHEET SE4.9

PHOTOMECTRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES
Average 6.6
Maximum 10.8
Minimum .2.5
Avg:Min 2.65
Max:Min 4.32
Coef Var 0.21

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 20.4
Maximum 29.5
Minimum 15.0
Avg:Min 1.36
Max:Min 1.97
Coef Var 0.23
UnifGrad 1.40

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES
Average 29.3
Maximum 36.1
Minimum 22.9
Avg:Min 1.28
Max:Min 1.58
Coef Var 0.10

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.8
Maximum 40.2
Minimum .8.7
Avg:Min 2.50
Max:Min 4.62
Coef Var 0.44
UnifGrad 1.22

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES
Average 34.4
Maximum 51.6
Minimum 27.1
Avg:Min 1.27
Max:Min 1.90
Coef Var 0.16

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.4
Maximum 4.1
Minimum 0.4
Avg:Min 3.62
Max:Min 10.25
Coef Var 0.65
UnifGrad 2.00

PLAYGROUND
142 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.2
Maximum 13.0
Minimum .2.3
Avg:Min 2.24
Max:Min 5.65
Coef Var 0.41
UnifGrad 1.91

PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.6
Maximum 4.6
Minimum 0.3
Avg:Min 5.36
Max:Min 15.33
Coef Var 0.42
UnifGrad 2.00

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES
Average 1.8
Maximum 9.9
Minimum 0.2
Avg:Min 9.19
Max:Min 49.50
Coef Var 0.86

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES
Average 0.0
Maximum 0.0
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 0.00

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES
Average 0.2
Maximum 1.7
Minimum 0.0
Avg:Min N/A
Max:Min N/A
Coef Var 1.76

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES
Average 21.1
Maximum 26.8
Minimum 14.6
Avg:Min 1.44
Max:Min 1.84
Coef Var 0.13
UnifGrad 1.36

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES
Average 1.9
Maximum 4.5
Minimum 0.5
Avg:Min 3.77
Max:Min 9.00
Coef Var 0.48
UnifGrad 1.56

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES
Average 5.6
Maximum 8.1
Minimum 2.6
Avg:Min 2.14
Max:Min 3.12
Coef Var 0.30
UnifGrad 1.77

FOR PHOTOMETRIC LEGEND,
SEE SHEET SE4.7.

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

Revisions	Date

PRELIMINARY
NOT FOR
CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
Date: 4/19/2024
Project #: 22.1618.002

Title: **PHOTOMETRIC ANALYSIS**
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX | OFFICE OF THE CITY ENGINEER | PARKS AND RECREATION DEPT. | HIGHLINE PARK

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 811 or 1-800-STAKE-IT (782-5348)

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE
CHANDLER, ARIZONA 85225
PHONE: 480.497.5829
FAX: 480.497.5807
www.wrightengineering.us

Wright Project # 23152

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Note:
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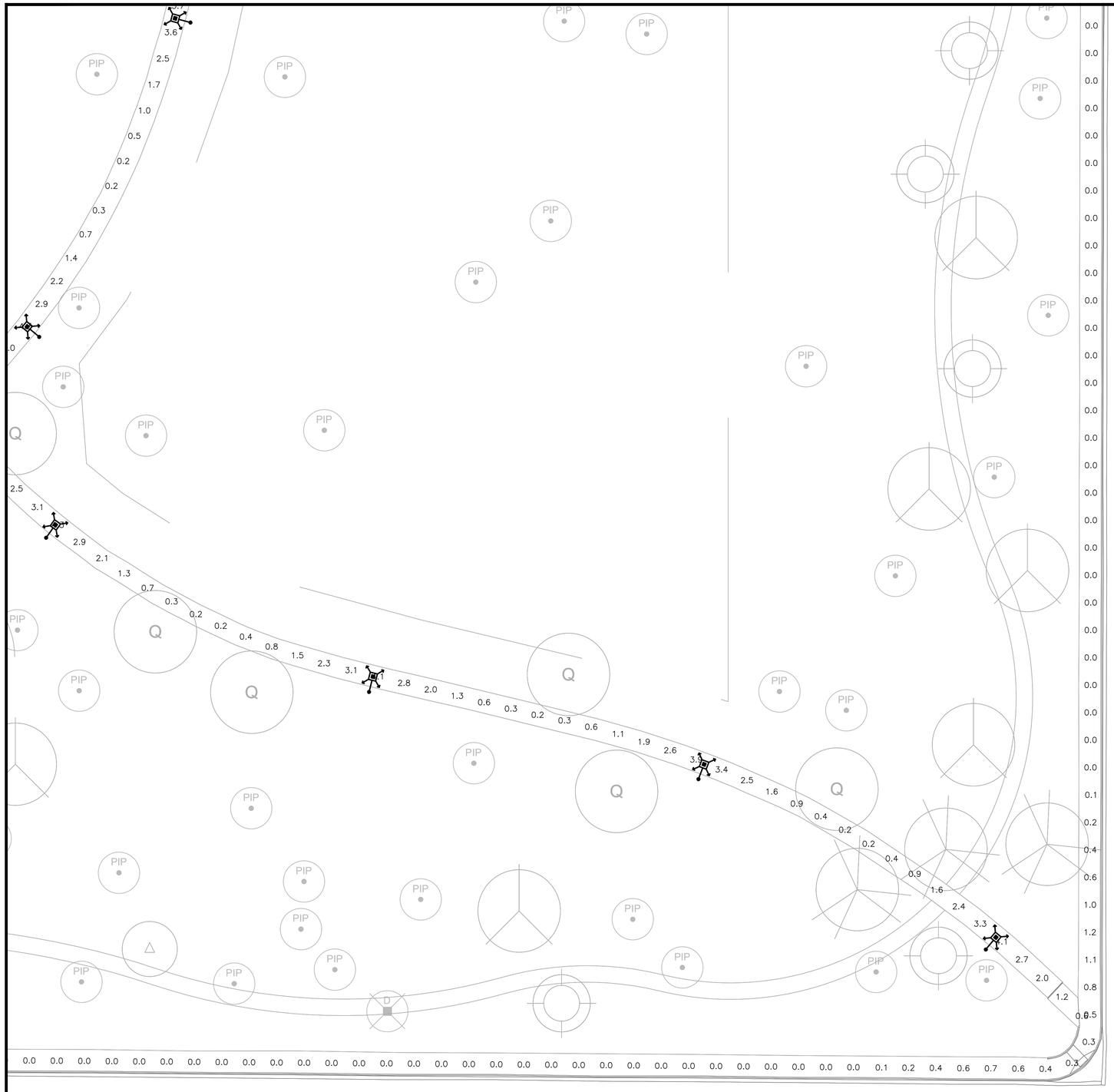
KIVA # _____
SDEV # _____

Sheet
SE4.8
122 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:05:04 PM B-W.CTB BROCK MCNEIL

MATCHLINE 'F' - SEE SHEET SE4.8



PHOTOMECTRIC RESULTS

RAMADA
54 points
HORIZONTAL FOOTCANDLES

Average	6.6
Maximum	10.8
Minimum	2.5
Avg:Min	2.65
Max:Min	4.32
Coef Var	0.21

PARKING LOT
712 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.6
Maximum	4.6
Minimum	0.3
Avg:Min	5.36
Max:Min	15.33
Coef Var	0.42
UnifGrad	2.00

VOLLEYBALL COURT
35 points at z=3, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	20.4
Maximum	29.5
Minimum	15.0
Avg:Min	1.36
Max:Min	1.97
Coef Var	0.23
UnifGrad	1.40

INNER PATHWAY
746 points
HORIZONTAL FOOTCANDLES

Average	1.8
Maximum	9.9
Minimum	0.2
Avg:Min	9.19
Max:Min	49.50
Coef Var	0.86

PICKLEBALL COURT
60 points
HORIZONTAL FOOTCANDLES

Average	29.3
Maximum	36.1
Minimum	22.9
Avg:Min	1.28
Max:Min	1.58
Coef Var	0.10

PROPERTY LINE
531 points
HORIZONTAL FOOTCANDLES

Average	0.0
Maximum	0.0
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	0.00

BASKETBALL COURT
90 points at z=3, sp 2ft by 10ft
HORIZONTAL FOOTCANDLES

Average	21.8
Maximum	40.2
Minimum	8.7
Avg:Min	2.50
Max:Min	4.62
Coef Var	0.44
UnifGrad	1.22

OUTER PATHWAY
430 points
HORIZONTAL FOOTCANDLES

Average	0.2
Maximum	1.7
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	1.76

TENNIS COURT
70 points
HORIZONTAL FOOTCANDLES

Average	34.4
Maximum	51.6
Minimum	27.1
Avg:Min	1.27
Max:Min	1.90
Coef Var	0.16

SKATE PLAZA
93 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	21.1
Maximum	26.8
Minimum	14.6
Avg:Min	1.44
Max:Min	1.84
Coef Var	0.13
UnifGrad	1.36

FITNESS STATION
21 points at z=0, sp 10ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.4
Maximum	4.1
Minimum	0.4
Avg:Min	3.62
Max:Min	10.25
Coef Var	0.65
UnifGrad	2.00

ENTRANCE ROAD
180 points at z=0, sp 5.22ft by 10ft
HORIZONTAL FOOTCANDLES

Average	1.9
Maximum	4.5
Minimum	0.5
Avg:Min	3.77
Max:Min	9.00
Coef Var	0.48
UnifGrad	1.56

PLAYGROUND
142 points at z=0, sp 10ft by 10ft
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Coef Var	0.41
UnifGrad	1.91

HORSE SHOE & BOCCE
33 points at z=0, sp 1.659ft by 10ft
HORIZONTAL FOOTCANDLES

Average	5.6
Maximum	8.1
Minimum	2.6
Avg:Min	2.14
Max:Min	3.12
Coef Var	0.30
UnifGrad	1.77

FOR PHOTOMETRIC LEGEND,
SEE SHEET SE4.7.

GRAPHIC SCALE
20 10 0 10 20 40
1 INCH = 20 FEET

NORTH

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PRELIMINARY
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CONSTRUCTION

Designed By: BKM
Drawn By: BKM
Checked By: CMT
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Project #: 22.1618.002

Title: PHOTOMETRIC ANALYSIS
1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
Index No: PA75200668-1

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www.wrightengineering.us
Wright Project # 23152

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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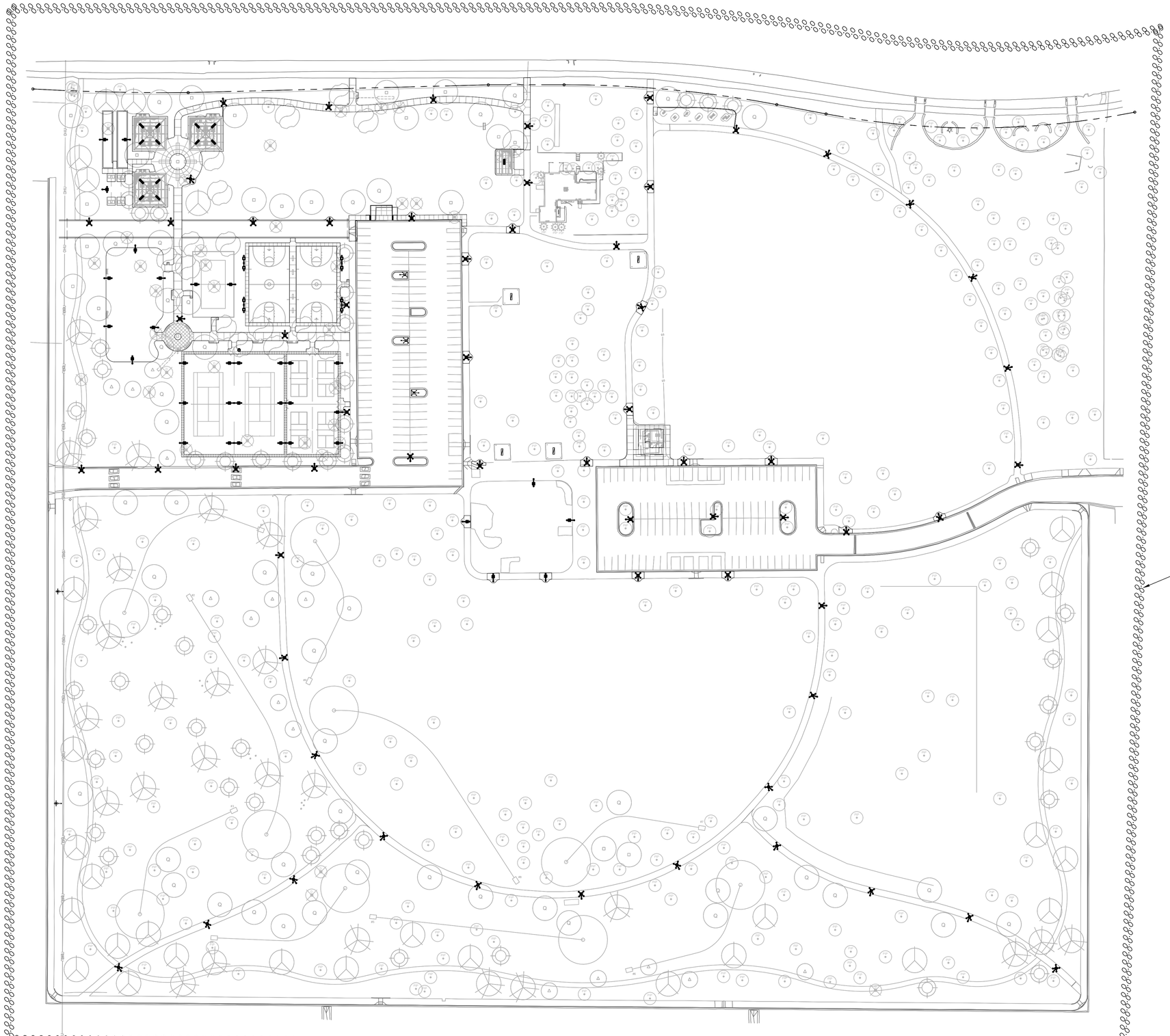
SDEV # _____

Sheet
SE4.9
123 OF 148

H:\2023\23152-Circle K Park, Phoenix\23152-SE.dwg 2024-04-18 12:05:07 PM B-W.CTB BROCK MCNEIL



PHOTOMECTRIC RESULTS

OUTER PATHWAY
430 points

HORIZONTAL FOOTCANDLES	
Average	0.2
Maximum	1.7
Minimum	0.0
Avg:Min	N/A
Max:Min	N/A
Coef Var	1.76

NORTH

GRAPHIC SCALE

60 30 0 30 60 120

1 INCH = 60 FEET

SEE SHEET SE4.1 FOR PHOTOMETRIC LEGEND AND CALCULATIONS

Revisions	Date

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Designed By: BKM
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1346 E SOUTH MOUNTAIN AVE
HIGHLINE PARK
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SDEV # _____

Sheet
SE4.10
124 OF 148

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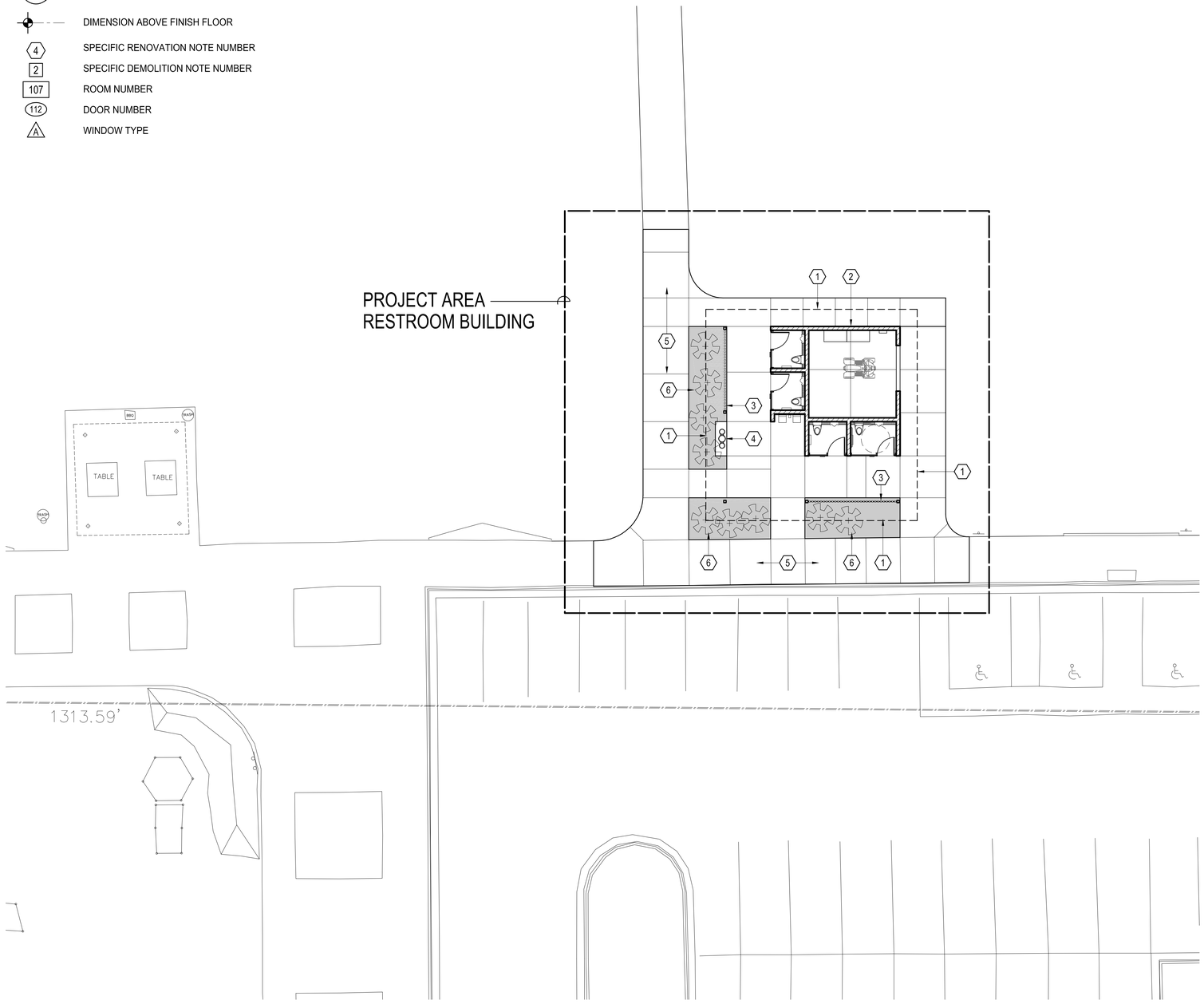
SYMBOLS LIST

- 1 / A-3 — DETAIL NUMBER / SHEET NUMBER WHERE DETAIL APPEARS
- A / A-3 — SECTION NUMBER / SHEET NUMBER WHERE SECTION APPEARS
- 1 / A-3 — ELEVATION NUMBER / SHEET NUMBER WHERE ELEVATION APPEARS
- DIMENSION ABOVE FINISH FLOOR
- 4 — SPECIFIC RENOVATION NOTE NUMBER
- 2 — SPECIFIC DEMOLITION NOTE NUMBER
- 107 — ROOM NUMBER
- 112 — DOOR NUMBER
- A — WINDOW TYPE

SPECIFIC DESCRIPTIVE NOTES

1. LINE OF ROOF OVERHANG.
2. PROVIDE RESTROOM BUILDING.
3. PROVIDE STEEL TUBE SCREEN / FENCE.
4. PROVIDE ELECTRIC DRINKING FOUNTAIN. REFER TO PLUMBING AND ELECTRICAL DRAWINGS.
5. PROVIDE CONCRETE SIDEWALK.
6. LANDSCAPING.

INDICATES LANDSCAPE AREAS



ARCHITECTURAL SITE PLAN
SCALE: 1"=10'

INDEX TO DRAWINGS

A-1 SHEET INDEX, PROJECT DATA, SYMBOLS LIST AND ARCHITECTURAL SITE PLAN
A-2 DIMENSION FLOOR PLAN
A-2.1 REFERENCE FLOOR PLAN
A-3 BUILDING SECTION AND DETAILS
A-4 EXTERIOR ELEVATIONS
A-5 ROOF PLAN, REFLECTED CEILING PLANS AND DETAIL
A-6 RESTROOM INTERIOR ELEVATIONS, ADA GUIDELINES AND DOOR SCHEDULE
S-1.1 GENERAL STRUCTURAL NOTES
S-1.2 TYPICAL STRUCTURAL DETAILS
S-2.1 FOUNDATION PLAN
S-2.2 ROOF FRAMING PLAN
S-3.1 FOUNDATION DETAILS
S-4.1 FRAMING DETAILS
M100 MECHANICAL PLAN
P100 PLUMBING PIPING, WASTE AND VENT PLANS, WATER CALCULATIONS, AND PLUMBING FIXTURE SCHEDULE
P101 WATER, WASTE AND VENT SCHEMATICS
P201 PLUMBING DETAILS
P301 PLUMBING GENERAL NOTES
SE1.1 SITE ELECTRICAL COVER SHEET
SE1.2 ELECTRICAL SPECIFICATIONS
SE2.1 SITE ELECTRICAL PLAN
SE2.2 ELECTRICAL LIGHTING AND POWER PLAN
SE3.1 PANEL SCHEDULES, SINGLE LINE DIAGRAM AND LIGHTING CONTROL SCHEMATIC
SE3.2 LIGHT FIXTURE CUT SHEETS AND DIAGRAMS

PROJECT DATA

PROJECT DESCRIPTION: DESIGN AND CONSTRUCT RESTROOM BUILDING CONSISTING OF 3 STANDARD STALLS AND 1 ACCESSIBLE STALL AND A STORAGE / MAINTENANCE WAREHOUSE SPACE AT HIGHLINE PARK

PROJECT ADDRESS: 1346 E. SOUTH MOUNTAIN AVE.
PHOENIX, AZ 85042

OWNER: CITY OF PHOENIX PARKS AND RECREATION DEPARTMENT
200 WEST WASHINGTON
PHOENIX, ARIZONA 85003

PROJECT MANAGER: JEFF BENTZ, PLA
J2 ENGINEERING AND ENVIRONMENTAL DESIGN
TEL: 602-438-2221

ARCHITECT: SWAN ARCHITECTS, INC.
833 N. 5TH AVENUE
PHOENIX, AZ 85003-1315
JEFFRY A. SWAN, AIA
TEL: 602-264-3083

BUILDING CODES: 2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2017 NATIONAL ELECTRIC CODE
2018 PHOENIX FIRE CODE W/AMENDMENTS
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
INTERNATIONAL CODE COUNCIL (ANSI A117.1 - 2009)

CONSTRUCTION TYPE: VB - NO A.F.E.S.

OCCUPANCY GROUP: B

BUILDING AREA:

BUILDING:	470 S.F.
ROOF OVERHANG:	874 S.F.
TOTAL:	1,344 S.F.

OCCUPANT LOAD:

RESTROOM STALLS:	4
MAINTENANCE ROOM:	1
TOTAL OCCUPANT LOAD:	5

Revisions	Date

REGISTERED ARCHITECT
CERTIFICATE NO.
26579
JEFFRY ALLEN SWAN
4/22/24
ARIZONA, U.S.A.
EXPIRES 9/30/2025

Designed By: JAS
Drawn By: JAS
Checked By: JAS
Date: 4/19/2024
Project #: 22.1618.002

Title: SHEET INDEX, PROJECT DATA AND ARCHITECTURAL SITE PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

swan architects, inc.

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

Note:
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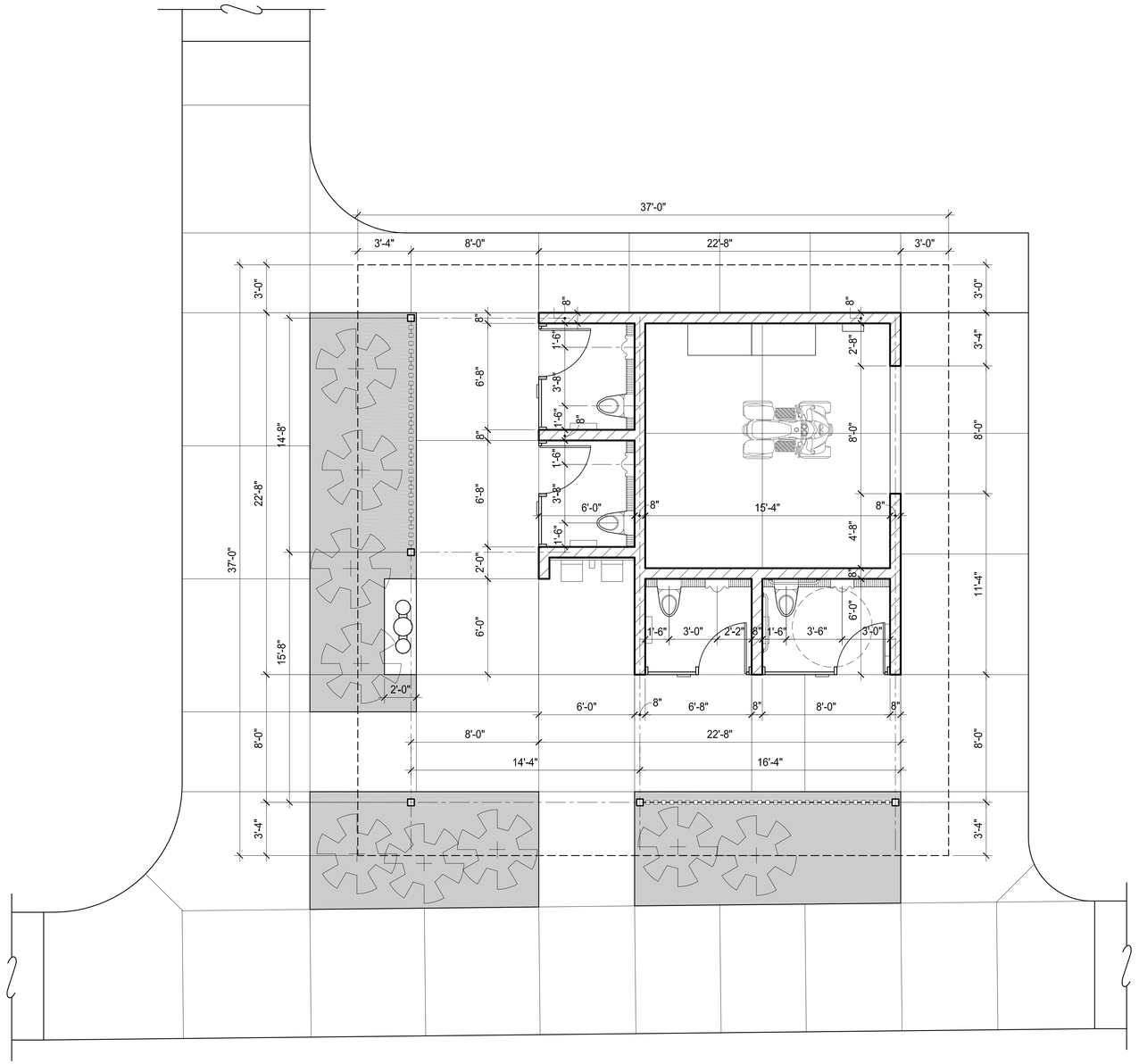
Sheet
A-1
125 OF 148

GENERAL NOTE

A. REPORT TO ARCHITECT ANY DISCREPANCIES IN DIMENSIONS PRIOR TO COMMENCING WORK.



DIMENSION FLOOR PLAN

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

Revisions	Date

REGISTERED ARCHITECT
CERTIFICATE NO.
26579
JEFFRY ALLEN SWAN
Date Signed 4/22/24
ARIZONA, U.S.A.

EXPIRES 9/30/2025

Designed By:	JAS
Drawn By:	JAS
Checked By:	JAS
Date:	4/19/2024
Project #:	22.1618.002

Title: DIMENSION FLOOR PLAN

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

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Sheet
A-2
126 OF 148

REFERENCE FLOOR PLAN

SCALE: 1/4" = 1'-0"

SPECIFIC DESCRIPTIVE NOTES

1. PROVIDE 8 X 8 X 16 SMOOTH-FACE STANDARD COLOR CMU WITH STAIN FINISH AND PENETRATING SEALER. PLACE IN STACKED BOND.
2. APPLY BLOCK FILLER AND PAINT FACES OF CMU IN RESTROOM AND MAINTENANCE ROOM ONLY WITH A GLOSS SHEEN.
3. CONCRETE IN RESTROOMS TO HAVE A TROWELED SMOOTH FINISH. APPLY A CLEAR, PENETRATING, WATER RESISTANT SEALER.
4. PROVIDE STAINLESS STEEL ABUSE RESISTANT STANDARD HEIGHT WALL HUNG URINAL.
5. PROVIDE STAINLESS STEEL ABUSE RESISTANT ACCESSIBLE HEIGHT WALL HUNG URINAL COMPLYING WITH ADA GUIDELINES.
6. PROVIDE STAINLESS STEEL ABUSE RESISTANT STANDARD HEIGHT WALL HUNG WATERCLOSET.
7. PROVIDE STAINLESS STEEL ABUSE RESISTANT ACCESSIBLE HEIGHT WALL HUNG WATERCLOSET COMPLYING WITH ADA GUIDELINES.
8. PROVIDE STAINLESS STEEL JUMBO TOILET PAPER DISPENSER AS MANUFACTURED BY GEORGIA PACIFIC OR APPROVED EQUAL. MUST BE COMPATIBLE WITH COP FACILITIES VENDORS PRODUCTS.
9. PROVIDE SECURITY GRAB BARS MODEL SA70 AS MANUFACTURED BY BRADLEY.
10. PROVIDE ABUSE RESISTANT, MANUAL STAINLESS STEEL FOAM SOAP DISPENSER AS MANUFACTURED BY OPS.
11. PROVIDE SINGLE-STATION WALL HUNG STAINLESS STEEL WASH BASIN
12. APPLY BLOCK FILLER AND PAINT WITH GLOSS FINISH ON CMU BEHIND LAVATORY ONLY.
13. PROVIDE CHILLED DRINKING FOUNTAIN MODEL 10145-18 (TWO STATION WITH BOTTLE FILLER) AS MANUFACTURED BY MDF .
14. PROVIDE HSS 5 X 5 STEEL TUBE WITH SEMI-GLOSS PAINT FINISH. REFER TO STRUCTURAL DRAWINGS.
15. PROVIDE 3 X 3 X 1/8" STEEL TUBE WITH SEMI-GLOSS PAINT FINISH.
16. PROVIDE 48"x24" WORK BENCH MODEL H-6863 WITH COMPOSITE WOOD TOP AS MANUFACTURED BY ULINE OR APPROVED EQUAL.
17. PROVIDE AN ELECTRICAL PANEL AND RELATED ITEMS. REFER TO ELECTRICAL DRAWINGS.
18. PROVIDE 4" THICK, 3000 PSI CONCRETE SLAB / SIDEWALK OVER COMPACTED BASE COARSE. REFER TO CIVIL / LANDSCAPE DRAWINGS.
19. PROVIDE 1/2" MAX RADIUS OR SAWCUT CONTROL JOINTS, TYPICAL EXCEPT IN RESTROOM NO JOINTS.
20. LINE OF ROOF OVERHANG.
21. PROVIDE 1/4" THICK STEEL PLATE WITH SEMI-GLOSS PAINT FINISH.
22. PROVIDE RESTROOM SIGNS COMPLYING WITH ADA GUIDELINES.
23. PROVIDE MANUALLY OPERATED OVERHEAD COILING DOOR WITH CUSTOM COLOR PAINT FINISH.
24. LANDSCAPE AREA. REFER TO LANDSCAPE PLANS.
25. PROVIDE 48"x24"x72" (3 COMPOSITE WOOD SHELVES) MODEL H-5393 AS MANUFACTURED BY ULINE OR APPROVED EQUAL.
26. PROVIDE TRENCH DRAIN. REFER TO PLUMBING DRAWINGS.

Revisions	Date

REGISTERED ARCHITECT
26579
JEFFRY ALLEN SWAN
4/12/24
ARIZONA, U.S.A.

EXPIRES 9/30/2025

Designed By: JAS

Drawn By: JAS

Checked By: JAS

Date: 4/19/2024

Project #: 22.1618.002

Title: REFERENCE FLOOR PLAN

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

swan architects, inc.

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

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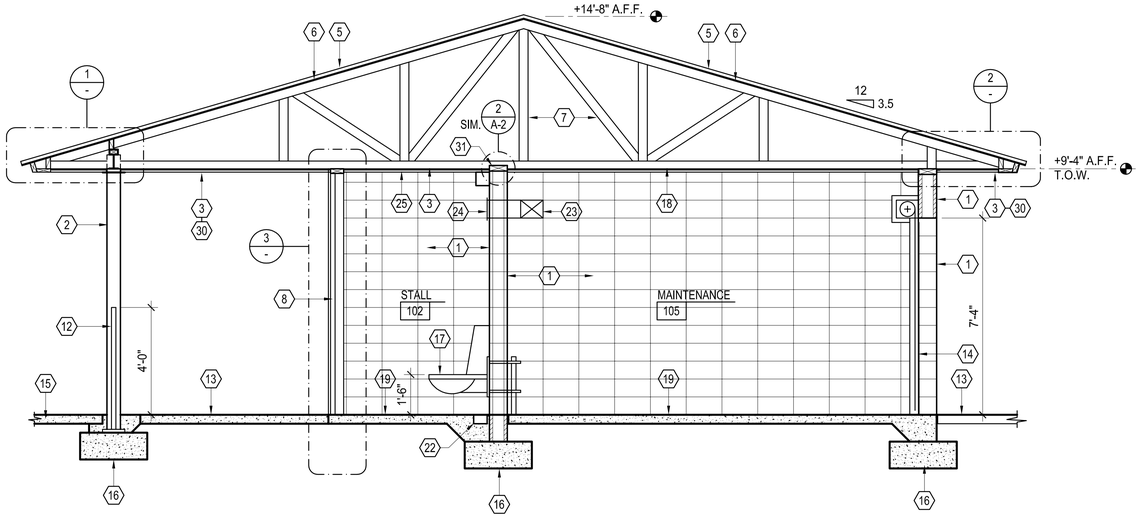
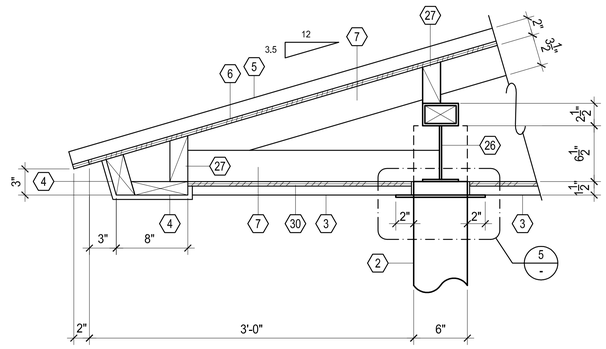
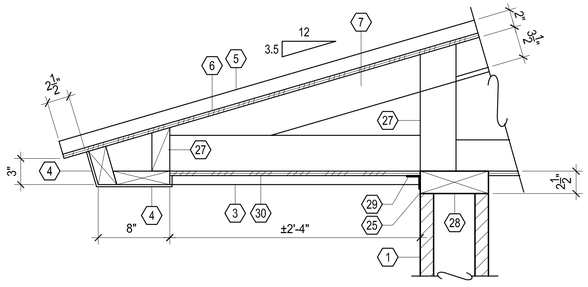
Sheet
A-2.1
127 OF 148



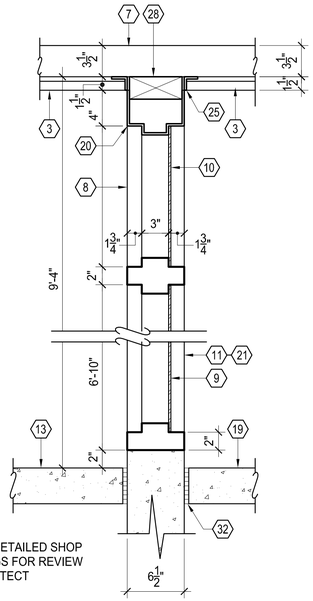
A BUILDING SECTION
SCALE: 3/8" = 1'-0"



1 METAL EAVE DETAIL
SCALE: 1 1/2"=1'-0"

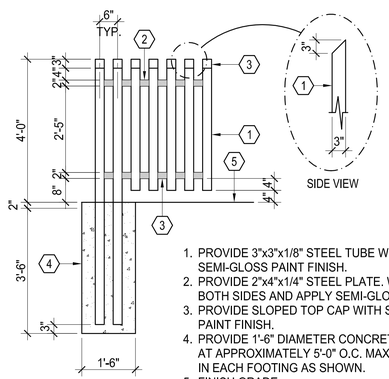


2 METAL EAVE DETAIL
SCALE: 1 1/2"=1'-0"



NOTE:
SUBMIT DETAILED SHOP DRAWINGS FOR REVIEW BY ARCHITECT

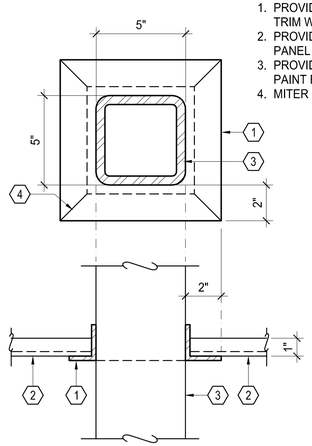
3 HOLLOW METAL DOOR / FRAME DETAIL
SCALE: 1 1/2"=1'-0"



1. PROVIDE 3"x3"x1/8" STEEL TUBE WITH SEMI-GLOSS PAINT FINISH.
2. PROVIDE 2"x4"x1/4" STEEL PLATE. WELD BOTH SIDES AND APPLY SEMI-GLOSS PAINT.
3. PROVIDE SLOPED TOP CAP WITH SEMI-GLOSS PAINT FINISH.
4. PROVIDE 1'-6" DIAMETER CONCRETE FOOTING AT APPROXIMATELY 5'-0" O.C. MAX. INSTALL 2-TUBES IN EACH FOOTING AS SHOWN.
5. FINISH GRADE.

NOTE: SUBMIT SHOP DRAWINGS

4 STEEL PIPE SCREEN DETAIL
SCALE: 1/2" = 1'-0"



1. PROVIDE PREFORMED 18-GAUGE METAL TRIM WITH FACTORY FINISH.
2. PROVIDE 18 GAUGE METAL SOFFIT PANEL WITH FACTORY FINISH.
3. PROVIDE STEL TUBE WITH SEMI-GLOSS PAINT FINISH.
4. MITER CORNERS.

5 STEEL POST SOFFIT TRIM
SCALE: 3" = 1'-0"

SPECIFIC DESCRIPTIVE NOTES

1. PROVIDE 8 X 8 X 16 SMOOTH-FACE STANDARD COLOR CMU WITH STAIN FINISH. PLACE IN A STACKED BOND. PAINT INTERIOR OF STALLS AND MAINTENANCE SPACE WITH A SEMI-GLOSS PAINT FINISH.
2. PROVIDE HSS 5 X 5 STEEL TUBE POST WITH PAINT FINISH. REFER TO STRUCTURAL DRAWINGS.
3. PROVIDE 1" THICK, 18 GAUGE METAL SOFFIT PANEL WITH PAINT FINISH.
4. PROVIDE 22 GAUGE METAL CLADDING OVER WOOD FASCIA AND SOFFIT TRIM, TYPICAL.
5. PROVIDE 22-GAUGE STANDING SEAM METAL ROOF.
6. PROVIDE HIGH TEMPERATURE UNDERLAYMENT OVER PLYWOOD SHEATHING. REFER TO STRUCTURAL DRAWINGS.
7. PROVIDE PREFABRICATED WOOD TRUSSES. SUBMIT AS DEFERRED SUBMITTAL. REFER TO STRUCTURAL DRAWINGS.
8. PROVIDE 14 GAUGE HOLLOW METAL FRAME WITH PAINT FINISH.
9. PROVIDE 1/4" THICK STEEL PLATE WITH PAINT FINISH.
10. PROVIDE 8 GAUGE STEEL 5/16" SQUARES ON 1/2" STRAIGHT CENTERS, 39% OPEN AREA PERFORATED GALVANIZED STEEL PLATE WITH SEMI-GLOSS PAINT FINISH.
11. PROVIDE 14 GAUGE HOLLOW METAL DOOR WHERE OCCURS ON PLAN
12. PROVIDE HSS 3 X 3 X 1/8 GALVANIZED STEEL TUBE WITH WELDED STEEL CAP AND SEMI-GLOSS PAINT FINISH. SPACE 6 INCHES ON CENTER.
13. PROVIDE 4" THICK, 3000 PSI CONCRETE SLAB OVER COMPACTED BASE COARSE AND LIGHT BROOM FINISH.
14. PROVIDE OVERHEAD COILING DOOR.
15. SLOPE FINISH GRADE AWAY FROM BUILDING, TYPICAL.
16. PROVIDE CONCRETE FOOTING. REFER TO STRUCTURAL DRAWINGS.
17. PROVIDE STAINLESS STEEL WALL MOUNTED WATERCLOSET. REFER TO PLUMBING DRAWINGS.
18. PROVIDE 1/2" GPDW CEILING (IN MAINTENANCE-105 ONLY) WITH SEMI-GLOSS PAINT FINISH.
19. PROVIDE SMOOTH TROWEL FINISH ON CONCRETE SLABS IN STALLS AND MAINTENANCE ROOM. FINISH WITH CLEAR PENETRATING SEALER. SLOPE SLAB TO DRAIN TOWARD TRENCH DRAIN IN ACCORDANCE WITH ADA GUIDELINES.
20. PROVIDE 4" HOLLOW METAL HEAD.
21. UNDERCUT HOLLOW METAL DOOR 2 INCHES WHERE OCCURS.
22. PROVIDE TRENCH DRAIN. REFER TO PLUMBING DRAWINGS.
23. PROVIDE EXHAUST DUCT. REFER TO MECHANICAL DRAWINGS.
24. PROVIDE SIDE WALL DIFFUSER. REFER TO MECHANICAL DRAWINGS.
25. PROVIDE 22-GAUGE METAL PREFORMED TRIM / FLASHING OVER 3X TOP PLATE, TYPICAL. ALL SIDES EXCEPT ON INTERIOR SIDE OF MAINTENANCE-105 ONLY.
26. PROVIDE STEEL BEAM. REFER TO STRUCTURAL DRAWINGS.
27. PROVIDE 2X BLOCKING. REFER TO STRUCTURAL DRAWINGS.
28. PROVIDE 3X TOP PLATE. REFER TO STRUCTURAL DRAWINGS.
29. PROVIDE PREFORMED METAL TRIM / CLOSURE TRIM, TYPICAL.
30. PROVIDE 1/2" PLYWOOD SHEATHING BELOW WOOD TRUSSES.
31. PROVIDE LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
32. PROVIDE CONCRETE STEM 2 INCHES ABOVE THE SLAB (WITH SMOOTH FINISH) AT HOLLOW METAL FRAMES, TYPICAL.

Revisions	Date

REGISTERED ARCHITECT
26579
JEFFRY ALLEN SWAN
4/22/24
ARIZONA, U.S.A.
EXPIRES 9/30/2025

Designed By: JAS
Drawn By: JAS
Checked By: JAS
Date: 4/19/2024
Project #: 22.1618.002

Title: BUILDING SECTION AND DETAILS

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX **OFFICE OF THE CITY ENGINEER** **PARKS AND RECREATION DEPT.** | **HIGHLINE PARK**

swan architects, inc.

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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Sheet
A-3
128 OF 148

ARCHITECTURAL SPECIFICATIONS

THE FOLLOWING PRODUCTS ARE CONSIDERED "BASIS OF DESIGN". OTHER PRODUCTS THAT ARE EQUAL MAY BE CONSIDERED.

MANUFACTURER'S PUBLISHED TECHNICAL SPECIFICATIONS AND WARRANTIES APPLY TO THESE PRODUCTS. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL.

TERMITE TREATMENT

PROVIDE CITY OF PHOENIX APPROVED TOXICANT WITH (5) YEAR WARRANTY AGAINST INVASION OF SUBTERRANEAN TERMITES FROM DATE OF FINAL ACCEPTANCE.

REINFORCED MASONRY UNITS

PROVIDE 8 X 8 X 16 SMOOTH FACE UNLESS NOTED OTHERWISE, STANDARD COLOR, CONCRETE MASONRY UNITS. REFER TO STRUCTURAL GENERAL NOTES FOR ADDITIONAL INFORMATION.

METAL ROOFING

PROVIDE 22 GAUGE, 16" WIDE PANELS, CONCEALED FASTENING SYSTEM WITH BATTENLOCK HS WITH SMOOTH FINISH AND STRIATIONS AND TRIM, FLASHING, AND SUBFLASHING AS REQUIRED FOR A COMPLETE INSTALLATION AS MANUFACTURED BY MBCI. FINISH SHALL BE SIGNATURE 300 IN COLOR SELECTED BY ARCHITECT. INSTALL HIGH TEMPERATURE UNDERLAYMENT AS RECOMMENDED BY METAL ROOFING MANUFACTURER.

METAL SOFFIT AND TRIM

PROVIDE 20-GAUGE CONCEALED FASTENER, 12" WIDE X 1" DEEP. FW-120 SOFFIT PANEL AND PREFORMED TRIM, FLASHING, AND SUBFLASHING FOR A COMPLETE INSTALLATION AS MANUFACTURED BY MBCI. FINISH SHALL BE SIGNATURE 300 IN COLOR SELECTED BY ARCHITECT.

OVERHEAD ROLLING DOOR

PROVIDE MODEL ESD10 MANUAL ROLLING SERVICE DOOR WITH Z-GUIDES AND ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION AS MANUFACTURED BY COOKSON. FINISH WITH SPECTRASHIELD POWDER COATING, COLOR AS SELECTED BY ARCHITECT.

PAINTING

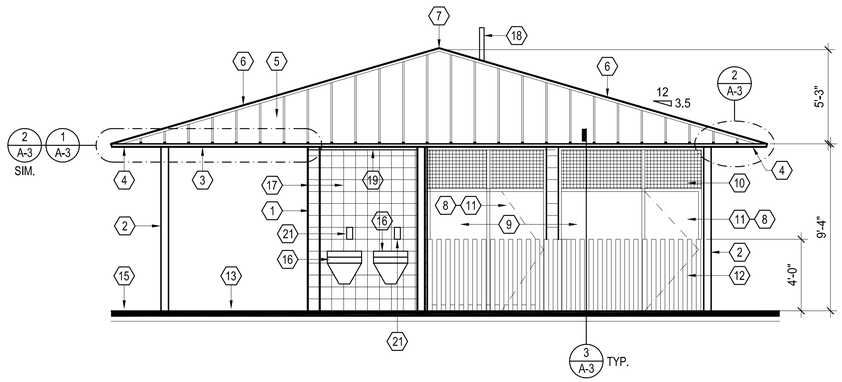
HOLLOW METAL DOORS, FRAMES, MESH AND RELATED ITEMS	1ST COAT:	BLOC-RUST (BRPRDO)
	2ND COAT:	ARISTOSHIELD EXTERIOR SEMI-GLOSS (ASHL50)
	3RD COAT:	ARISTOSHIELD EXTERIOR SEMI-GLOSS (ASHL50)
CONCRETE MASONRY UNITS: (EXTERIOR SURFACES UNLESS NOTED OTHERWISE)	1ST AND: 2ND COATS:	VERSA FLAT EXTERIOR LATEX PAINT (W6240V) SUREKLEEN WEATHERSEAL SILOXANE WB CONCENTRATE

INTERIOR MASONRY SURFACES AS NOTED:

1ST COAT:	BLOCFIL PREMIUM (SBPROO). LEVEL 3-PREMIUM FILL.
2ND COAT:	US COATING AQUA GRIP 2600 WATER BASE EPOXY COATING APPLIED AT 5.0 DRY MILS.
3RD COAT:	US COATING AQUA GRIP 2600 WATER BASE EPOXY COATING APPLIED AT 5.0 DRY MILS.

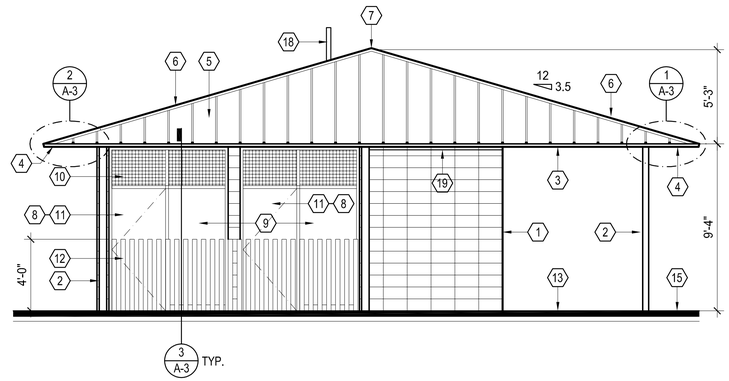
SPECIFIC DESCRIPTIVE NOTES

1. PROVIDE 8 X 8 X 16 SMOOTH-FACE STANDARD COLOR CMU WITH STAIN FINISH. PLACE IN A STACKED BOND. REFER TO STRUCTURAL DRAWINGS.
2. PROVIDE HSS 5 X 5 STEEL TUBE POST WITH PAINT FINISH. REFER TO STRUCTURAL DRAWINGS.
3. PROVIDE 1" THICK, 20 GAUGE METAL SOFFIT PANEL WITH FACTORY FINISH.
4. PROVIDE 20 GAUGE METAL CLADDING OVER WOOD FASCIA AND SOFFIT TRIM.
5. PROVIDE 22-GAUGE STANDING SEAM METAL ROOF WITH FACTORY FINISH OVER HIGH TEMPERATURE UNDERLAYMENT OVER PLYWOOD SHEATHING.
6. PROVIDE 22-GAUGE METAL HIP TRIM.
7. PROVIDE 22-GAUGE METAL CAP TRIM.
8. PROVIDE 14-GAUGE HOLLOW METAL FRAME WITH PAINT FINISH.
9. PROVIDE 1/4" THICK GALVANIZED STEEL PLATE WITH PAINT FINISH.
10. PROVIDE 8-GAUGE STEEL WITH 5/16" SQUARES AT 1/2" STRAIGHT CENTERS, 39% AREA WITH SEMI-GLOSS FINISH.
11. PROVIDE 14-GAUGE HOLLOW METAL DOOR.
12. PROVIDE HSS 3 X 3 X 1/8 GALVANIZED STEEL TUBE WITH WELDED STEEL CAP AND PAINT FINISH. SPACE 6 INCHES ON CENTER.
13. PROVIDE 4" THICK, 3000 PSI CONCRETE SLAB OVER COMPACTED BASE COARSE AND LIGHT BROOM FINISH.
14. PROVIDE OVERHEAD COILING DOOR WITH CUSTOM FACTORY FINISH.
15. SLOPE FINISH GRADE AWAY FROM BUILDING.
16. PROVIDE STAINLESS STEEL SINK.
17. PROVIDE 8 X 8 X 16 SINGLE SCORED STANDARD COLOR CMU WITH SEMI-GLOSS PAINT FINISH ON BACK WALL ONLY. PLACE IN A STACKED BOND.
18. PROVIDE VENT THROUGH ROOF. PAINT TO MATCH COLOR OF ROOF. FLASHING TO HAVE FACTORY FINISH.
19. PROVIDE 22-GAUGE METAL CLADDING OVER WOOD PLATE, TYPICAL.
20. PROVIDE EXHAUST FAN GRILLE. PAINT TO MATCH CMU.
21. PROVIDE SOAP DISPENSER MODEL 655 AS MANUFACTURED BY BRADLEY.



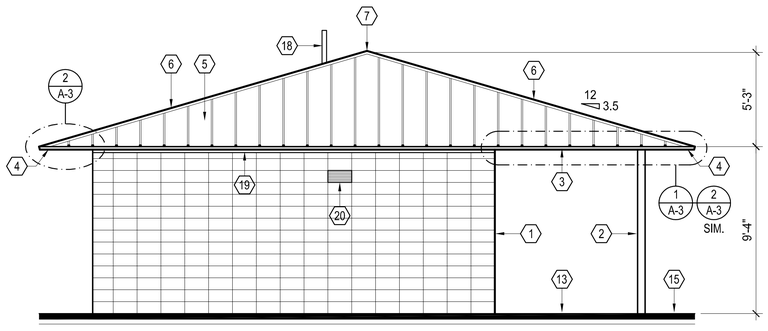
SOUTHEAST ELEVATION

SCALE: 1/4" = 1'-0"



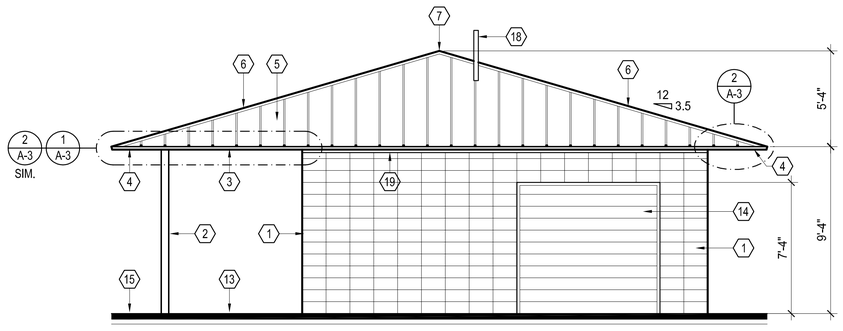
SOUTHWEST ELEVATION

SCALE: 1/4" = 1'-0"



NORTHWEST ELEVATION

SCALE: 1/4" = 1'-0"



NORTHEAST ELEVATION

SCALE: 1/4" = 1'-0"

Revisions	Date

REGISTERED ARCHITECT
JEFFRY ALLEN SWAN
26579
4/19/24
ARIZONA, U.S.A.
EXPIRES 9/30/2025

Designed By: JAS
Drawn By: JAS
Checked By: JAS
Date: 4/19/2024
Project #: 22.1618.002

Title: EXTERIOR ELEVATIONS

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

swan architects, inc.

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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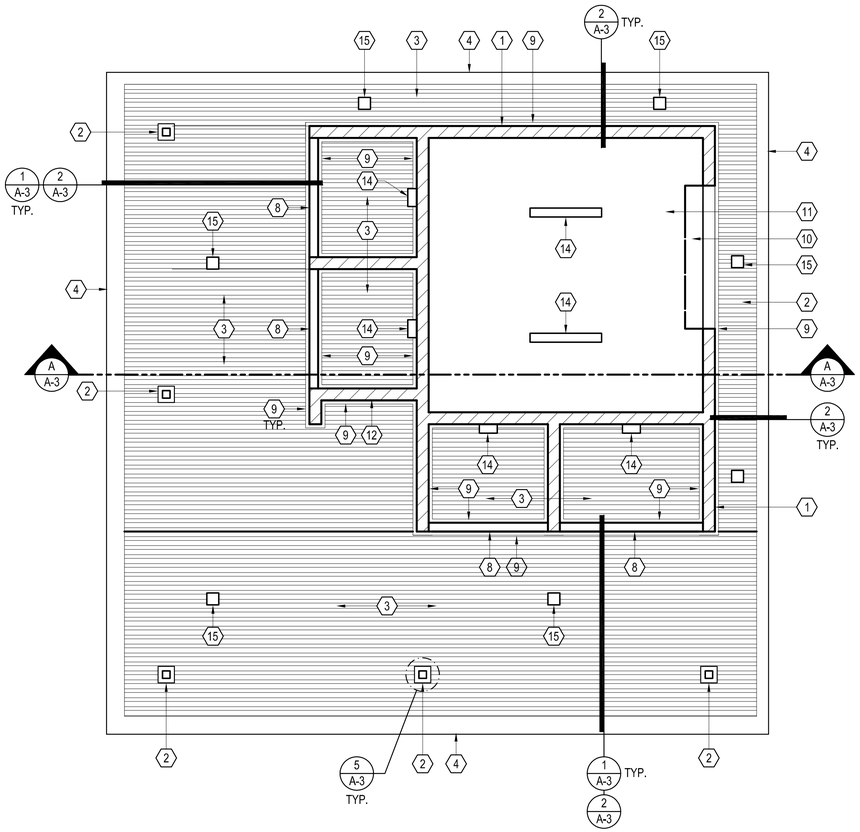
Sheet
A-4
129 OF 148

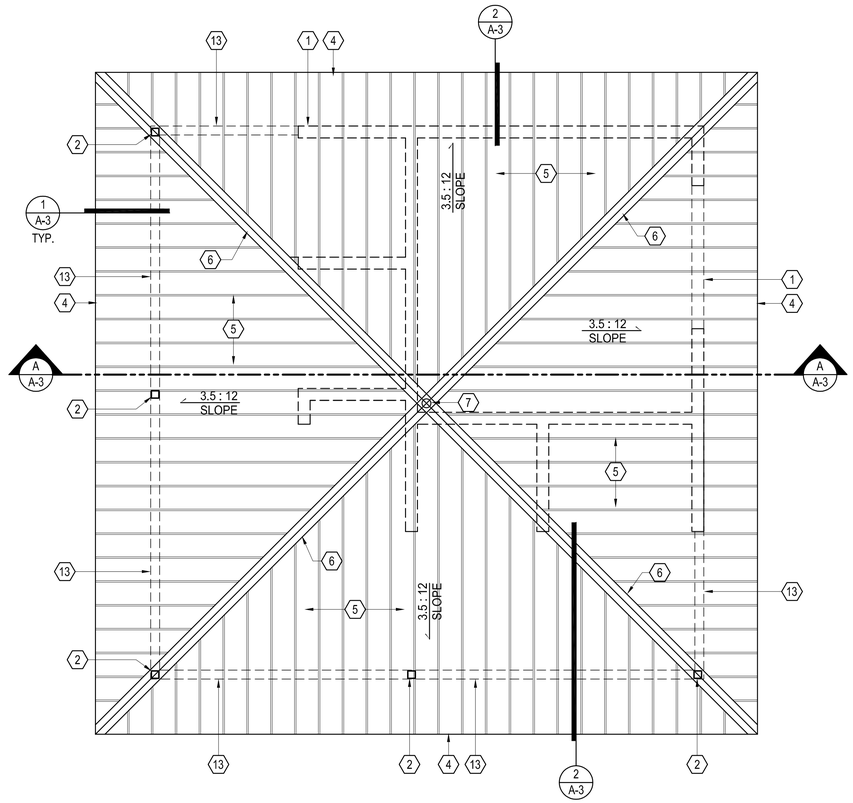
SPECIFIC DESCRIPTIVE NOTES

1. PROVIDE 8 X 8 X 16 SMOOTH-FACE STANDARD COLOR CMU WITH STAIN FINISH. PLACE IN A STACKED BOND. REFER TO STRUCTURAL DRAWINGS.
2. PROVIDE HSS 5 X 5 STEEL TUBE POST WITH PAINT FINISH. REFER TO STRUCTURAL DRAWINGS.
3. PROVIDE 1" THICK, 18 GAUGE METAL SOFFIT WITH FACTORY FINISH.
4. PROVIDE 22-GAUGE METAL CLADDING OVER WOOD FASCIA AND SOFFIT TRIM, TYPICAL.
5. PROVIDE 22-GAUGE STANDING SEAM METAL ROOF OVER HIGH TEMPERATURE UNDERLAYMENT AND WOOD SHEATHING.
6. PROVIDE 22-GAUGE METAL HIP TRIM.
7. PROVIDE 22-GAUGE METAL CAP TRIM.
8. PROVIDE 14-GAUGE HOLLOW METAL FRAME WITH PAINT FINISH.
9. PROVIDE METAL TRIM / FLASHING TO COVER 3X.
10. PROVIDE MANUAL OVERHEAD COILING DOOR.
11. PROVIDE 1/2" GPDW CEILING WITH PAINT FINISH.
12. PROVIDE 8 X 8 X 16 SINGLE SCORED STANDARD COLOR CMU WITH SEMI-GLOSS PAINT FINISH ON BACK WALL ONLY. PLACE IN A STACKED BOND.
13. PROVIDE CONCEALED STEEL BEAM. REFER TO STRUCTURAL DRAWINGS.
14. PROVIDE SURFACE MOUNTED LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
15. PROVIDE RECESSED LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.



REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"



ROOF PLAN

SCALE: 1/4" = 1'-0"

Revisions	Date

REGISTERED ARCHITECT
JEFFREY ALLEN SWAN
26579
ARIZONA, U.S.A.
4/22/24
EXPIRES 9/30/2025

Designed By: JAS

Drawn By: JAS

Checked By: JAS

Date: 4/19/2024

Project #: 22.1618.002

Title: REFLECTED CEILING PLAN AND ROOF PLAN

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

swan architects, inc.

J2 Design
4949 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

KIVA # _____
SDEV # _____

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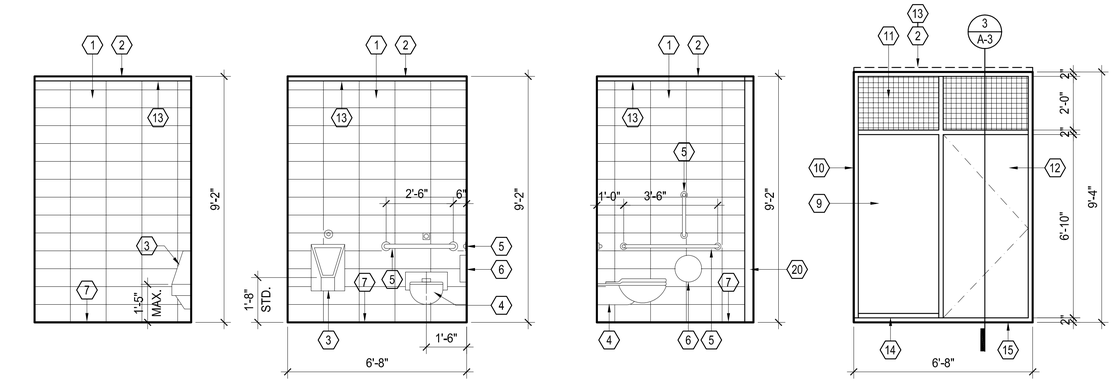
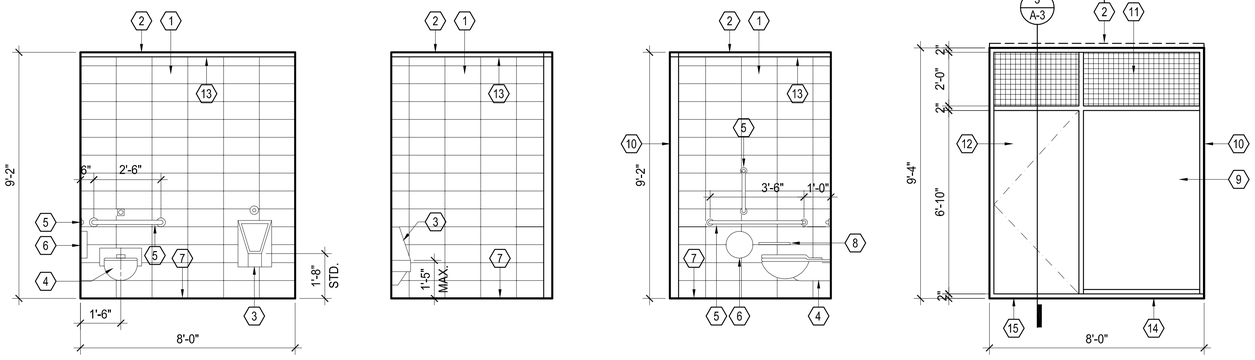
Sheet
A-5
130 OF 148



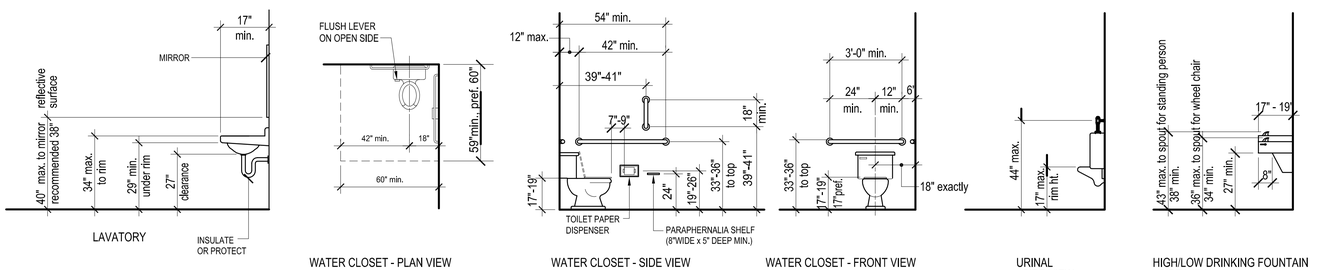
1 TYPICAL RESTROOM INTERIOR ELEVATIONS

SCALE: 3/8" = 1'-0"



2 ADA RESTROOM INTERIOR ELEVATIONS

SCALE: 3/8" = 1'-0"



ADA GUIDELINES

N.T.S.

SPECIFIC DESCRIPTIVE NOTES

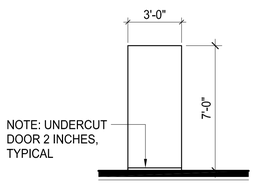
1. PROVIDE SEMI-GLOSS PAINT FINISH OVER BLOCK FILLER AND CMU.
2. PROVIDE 18-GAUGE METAL SOFFIT PANEL WITH FACTORY FINISH.
3. PROVIDE STAINLESS STEEL PENAL-TYPE WALL-MOUNTED URINAL. REFER TO PLUMBING DRAWINGS.
4. PROVIDE STAINLESS STEEL PENAL-TYPE WALL-MOUNTED WATERCLOSET. REFER TO PLUMBING DRAWINGS.
5. PROVIDE GRAB BARS MODEL 812 AS MANUFACTURED BY BRADLEY.
6. PROVIDE GIANT-ROLL TYPE TOILET PAPER HOLDER MODEL 5425 AS MANUFACTURED BY BRADLEY.
7. PROVIDE SMOOTH TROWEL FINISH ON CONCRETE SLAB. FINISH WITH A CLEAR, PENETRATING SEALER.
8. PROVIDE 4 X 4 X 12 X 1/4" STEEL SHELF COMPLYING WITH ADA GUIDELINES IN FAMILY STALL ONLY. ROUND EXPOSED CORNERS.
9. PROVIDE 1/4" THICK STEEL PANEL FINISHED WITH SEMI-GLOSS PAINT.
10. PROVIDE 14-GAUGE HOLLOW METAL FRAME FINISHED WITH SEMI-GLOSS PAINT.
11. PROVIDE 8-GAUGE STEEL 5/16" SQUARES AT 1/2" STRAIGHT CENTERS, 39% OPEN. PAINT WITH SEMI-GLOSS PAINT FINISH.
12. PROVIDE 14-GAUGE HOLLOW METAL DOOR FINISHED WITH SEMI-GLOSS PAINT.
13. PROVIDE PREFORMED METAL TRIM / FLASHING WITH FACTORY FINISH OVER 3X WOOD PLATE, TYPICAL.
14. PROVIDE CONCRETE STEM (WITH TROWELED SMOOTH FINISH) 2 INCHES ABOVE FINISH FLOOR BELOW HOLLOW METAL FRAME.
15. UNDERCUT DOOR 2 INCHES AT RESTROOM STALLS ONLY.

DOOR SCHEDULE

NO.	TYPE	SIZE	DOOR	FRAME	HDWR	REMARKS
101	A	3'-0" X 6'-10" X 1-3/4"	HM	HM	1	
102	A	3'-0" X 6'-10" X 1-3/4"	HM	HM	1	
103	A	3'-0" X 6'-10" X 1-3/4"	HM	HM	1	
104	A	3'-0" X 6'-10" X 1-3/4"	HM	HM	1	

HARDWARE SCHEDULE / GROUP 1

QTY	UM	TYPE	DESCRIPTION	FINISH	MFGR
2	EA.	HINGE, 4-1/2, HVY WT	5BB1HW X 4.5 X 4.5 X NRP	652	IVE
1	EA.	ELECTRIC HINGE, HVY	5BB1HW X 4.5 X 4.5 X TW8	652	IVE
1	EA.	ELECTRIC MORTISE LOCK FAIL SAFE WITH CYLINDER OVERRIDE	64-NAC-82270 X 12V X LNL X KA	US26D	SAR
1	EA.	CYLINDER CORE	6300 X NG	US15	SAR
1	EA.	CYLINDERICAL DEAD LOCK TURN BOLT, NO CYLINDER, OUTSIDE OCCUPANCY INDICATOR	B571 X 12-288 X 10-094	626	SCH
1	EA.	CLOSER, PARALLEL ARM WITH 5TH SCREW	1431-P10	EN	SAR
1	EA.	FLOOR STOP	FS18L	STEEL/ RUBBER	IVE
1	EA.	WEATHER STRIPPING	160S X 36 X 84	MILL	NAT
1	EA.	LATCH GAURD	NLP-110-630	630	DON
1	EA.	TIMER	DT-7	-	ESH
1	EA.	MISCELLANEOUS	3551	-	SAR
1	EA.	CUY KEY	6251CTL X HF	-	SAR



(A) REFER TO EXTERIOR ELEVATIONS FOR HOLLOW METAL FRAME DIMENSIONS

DOOR TYPE

SCALE: 1/4" = 1'-0"

Revisions	Date

REGISTERED ARCHITECT
CERTIFICATE NO.
26579
JEFFRY ALLEN SWAN
Date Signed 4/22/24
ARIZONA, U.S.A.
EXPIRES 9/30/2025

Designed By: JAS
Drawn By: JAS
Checked By: JAS
Date: 4/19/2024
Project #: 22.1618.002

Title: RESTROOM ELEVATIONS, ADA GUIDELINES, DOOR SCHEDULE

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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Sheet
A-6
131 OF 148

ABBREVIATIONS

ABBREV1

NOTE: ABBREVIATIONS MAY OR MAY NOT HAVE PERIODS, BUT SHALL BE READ AS SAME.

A.B.	ANCHOR BOLT
A.B.C.	AGGREGATE BASE COURSE
ACI	AMERICAN CONCRETE INSTITUTE
A/C	AIR CONDITIONER
A.F.F.	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALT.	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH'L	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
A.W.T.S.	AUTOMATIC WELDED THREADED STUDS
BM	BEAM
B.F.F	BELOW FINISHED FLOOR
BLK	BLOCK
B.O.B.	BOTTOM OF BEAM
B.O.D.	BOTTOM OF DECK
B.O.F.	BOTTOM OF FOOTING
BRG	BEARING
C	CAMBER
C.C.	CENTERLINE TO CENTERLINE
CFS	COLD FORMED STEEL
C.G.	CENTER OF GRAVITY
C.I.P.	CAST IN PLACE
C.L.	CENTERLINE
C.L.B.	CENTERLINE OF BEAM
C.L.C.	CENTERLINE OF COLUMN
C.L.F.	CENTERLINE OF FOOTING
C.L.W.	CENTERLINE OF WALL
CLR	CLEAR
CONC	CONCRETE
CONC C.J.	CONCRETE CONTROL JOINT
CONC S.J.	CONCRETE SAWCUT JOINT
C.M.U.	CONCRETE MASONRY UNIT
CONN	CONNECTION
CONT	CONTINUOUS
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
D.F. (D.F.L.)	DOUGLAS FIR LARCH
DL	DEAD LOAD
DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
E.C.	END TO CENTERLINE
E.E.	END TO END
E.O.S.	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EXP. BOLT (E.B.)	EXPANSION BOLT
EXP. JT (E.J.)	EXPANSION JOINT
E.W.	EACH WAY
(E)	EXISTING
F.F.	FINISHED FLOOR
F.O.M.	FACE OF MEMBER
F.O.S.	FACE OF STEEL
F.O.W.	FACE OF WALL
GA	GAGE (UNIT OF MEASUREMENT)
GALV	GALVANIZED
G.S.N.	GENERAL STRUCTURAL NOTES
GLB (GLULAM)	GLUED-LAMINATED BEAM
H.F.	HEM FIR
HORIZ	HORIZONTAL REINFORCING
H.S.	HEADED STUDS
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
ICF	INSULATED CONCRETE FORMS
I.F.W.	INSIDE FACE OF WALL
I.O.D.	INTERPRETATION OF DRAWINGS
JST	JOIST
K(KIP)	1000 POUNDS
KLF	KIPS PER LINEAR FOOT
LBS (#)	POUNDS
LGR	LEDGER
LGS	LIGHT GAGE STEEL
LGSEA	LIGHT GAGE STEEL ENGINEERS ASSOCIATION
L.O.D.	LOCATION OF DETAILS
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAS	MASONRY
MAS C.J.	MASONRY CONTROL JOINT
MAX	MAXIMUM
MBMA	METAL BUILDING MANUFACTURERS ASSOCIATION
MECH'L	MECHANICAL
MFR'D	MANUFACTURED
MFR('S)	MANUFACTURER('S)
MIN	MINIMUM
N/A	NOT APPLICABLE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.F.W.	OUTSIDE FACE OF WALL
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PCI	PRECAST/PRESTRESSED CONCRETE INSTITUTE
P.C.	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PLF	POUNDS PER LINEAR FOOT
±	PLUS OR MINUS
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PTI	POST-TENSIONING INSTITUTE
REINF	REINFORCING
SDI	STEEL DECK INSTITUTE
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SJI	STEEL JOIST INSTITUTE
SIM	SIMILAR
SQ.	SQUARE
SSMA	STEEL STUD MANUFACTURERS ASSOCIATION
STD	STANDARD
STL	STEEL
TL	TOTAL LOAD
T.O.B.	TOP OF BEAM
T.O.C.T.	TOP OF CONCRETE TOPPING
T.O.D.	TOP OF DECK
T.O.F.	TOP OF FOOTING
T.O.L.	TOP OF LEDGER
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PLATE
T.O.P.C.	TOP OF PRECAST CONCRETE
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TPI	TRUSS PLATE INSTITUTE
TYP	TYPICAL
T&G	TONGUE AND GROOVE
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL REINFORCING
WCLA	WEST COAST LUMBER ASSOCIATION
WCLIB	WEST COAST LUMBER INSPECTION BUREAU
W.W.F.	WELDED WIRE FABRIC
WWPA	WESTERN WOOD PRODUCTS ASSOCIATION
W/C	WATER TO CEMENT RATIO
W/O	WITHOUT

GENERAL STRUCTURAL NOTES

Applies unless noted otherwise on drawings

BUILDING CODE:

2018 EDITION OF THE INTERNATIONAL BUILDING CODE AND STANDARDS REFERENCED THEREIN, WITH CITY OF PHOENIX AMENDMENTS.

LOADS:

ROOFS:

ROOF LIVE LOAD = 20 PSF (REDUCIBLE).
ROOF DEAD LOAD = 16 PSF.
NET WIND UPLIFT = 10 PSF. (DESIGN BASED ON 0.6D – 0.6W)
ALL PREFABRICATED WOOD ROOF TRUSSES SHALL BE DESIGNED FOR A SUPERIMPOSED FUTURE MECHANICAL LOAD OF 300 LBS. AT ANY LOCATION.
MECHANICAL LOADS SHOWN ON PLANS SHALL BE IN ADDITION TO THE REQUIREMENTS NOTED ABOVE.
MECHANICAL UNIT WEIGHTS SHOWN ON FRAMING PLANS HAVE BEEN INCREASED BY A FACTOR OF 1.2.

ROOF LOADS INCLUDE 1.5 PSF ALLOWANCE FOR FIRE SPRINKLER PIPE BRANCH LINES. DESIGNERS OF STRUCTURAL MEMBERS ENGINEERED BY OTHERS SHALL COORDINATE WITH CONTRACTOR THE WEIGHTS AND LOCATIONS OF ALL FIRE SPRINKLER BRANCH LINES GREATER THAN 3" DIA. THESE BRANCH LINES SHALL BE SHOWN ON SHOP DRAWINGS SUBMITTED FOR REVIEW.

LATERAL:

WIND:

BASIC DESIGN WIND SPEED (3-SECOND GUST), V(ult) = 102 MPH.
RISK CATEGORY, II.
EXPOSURE C.
INTERNAL PRESSURE COEFFICIENT = +0.18/ –0.18.
COMPONENTS AND CLADDING WIND LOADS:
WALL ZONE 4 = 22.0 PSF.
WALL ZONE 5 = 26.1 PSF.

SEISMIC:

RISK CATEGORY, II.
SEISMIC IMPORTANCE FACTOR, I = 1.0.
MAPPED SHORT PERIOD SPECTRAL ACCELERATION, Ss = 0.173.
MAPPED ONE SECOND SPECTRAL ACCELERATION, S1 = 0.064.
SOIL SITE CLASS, D (ASSUMED).
DESIGN SHORT PERIOD SPECTRAL ACCELERATION, Sds = 0.185.
DESIGN ONE SECOND SPECTRAL ACCELERATION, Sd1 = 0.102.
SEISMIC DESIGN CATEGORY, B.
BASIC SEISMIC-FORCE-RESISTING SYSTEM = BEARING WALL – INTERMEDIATE REINFORCED MASONRY SHEAR WALLS AND STEEL ORDINARY CANTILEVER COLUMN SYSTEM.
DESIGN BASE SHEAR = 8.64k.
SEISMIC RESPONSE COEFFICIENT, Cs = 0.148.
RESPONSE MODIFICATION FACTOR (R) = 1.25.
ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE PROCEDURE

FOR DEFLECTION/CAMBER CRITERIA OF STRUCTURAL MEMBERS ENGINEERED BY OTHERS, SEE SPECIFIC MEMBER'S SECTION BELOW.

FOUNDATIONS:

SPREAD FOOTING DESIGNS ARE BASED ON IBC SECTION 1806, CLASS 4 SOILS. SPREAD FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL 18" MINIMUM BELOW ADJACENT EXISTING GRADE. DESIGN SOIL BEARING VALUE = 2,000 PSF. GEOTECHNICAL ENGINEER SHALL INSPECT FOUNDATION EXCAVATIONS PRIOR TO PLACEMENT OF CONCRETE.

FOR USE OF CODE MINIMUM SECTION 1806 PRESUMPTIVE SOIL LOAD-BEARING VALUES, THE CONTRACTOR AND/OR GEOTECHNICAL ENGINEER ARE TO VERIFY THAT THE ONSITE, SITE SOILS MEET CLASS 4 SOILS AS FOLLOWS: SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL, OR CLAYEY GRAVEL (SW, SP, SM, SC, GM, OR GC). CONTRACTOR AND GEOTECHNICAL ENGINEER SHALL VERIFY THAT SITE SOILS ARE HOMOGENEOUS AND FREE OF MUD, ORGANIC SILT, ORGANIC CLAYS, PEAT AND/OR UNPREPARED OR UNDOCUMENTED FILLS. IF THESE MATERIALS ARE ENCOUNTERED OR IF THERE IS REASON TO DOUBT THE STRENGTH OR COMPRESSIBILITY OF THE ONSITE SOILS, A GEOTECHNICAL ENGINEER SHALL PROVIDE A GEOTECHNICAL REPORT WITH THE SOIL CLASSIFICATION AND RE-DESIGN OF THE FOUNDATIONS MAY BE REQUIRED.

CONCRETE:

SPECIFIED 28 DAY COMPRESSIVE STRENGTH F'c:

FOUNDATIONS (DESIGN BASED ON 2,500 PSI)------------------------ 3,000 PSI
EXTERIOR SLAB ON GRADE------------------ 3,000 PSI
INTERIOR SLAB ON GRADE ---------------- 3,000 PSI

GENERAL:

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE REFERENCED EDITION OF THE ACI STANDARDS. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED UNLESS NOTED OTHERWISE. ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE USED. NO OTHER ADMIXTURES PERMITTED WITHOUT APPROVAL. FOR CONCRETE WITHOUT PLASTICIZER, MAXIMUM SLUMP 4 1/2" AT POINT OF PLACEMENT U.N.O. IF PLASTICIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON STRUCTURAL ENGINEER'S APPROVAL.

FOR REINFORCING INFORMATION, SEE REINFORCING SECTION OF G.S.N., PLANS, SCHEDULES AND DETAILS.

UNLESS NOTED OTHERWISE ON THE DRAWINGS, THE EMBEDMENT OF CONDUITS, PIPES, SLEEVES, ETC. OF ANY MATERIAL SHALL NOT BE PERMITTED WITHIN ANY CONCRETE STRUCTURAL ELEMENT (IE: COLUMNS, BEAMS, ELEVATED SLABS, ETC.) OR STRUCTURAL CONCRETE TOPPINGS WITHOUT THE EXPRESSED APPROVAL OF THE STRUCTURAL ENGINEER.

FLY ASH – IF PERMITTED BY ARCHITECTURAL SPECIFICATIONS, SHALL BE LIMITED TO 25% OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT. FLY ASH SHALL BE INCLUDED IN THE CALCULATION OF W/C RATIOS SPECIFIED ABOVE. FLY ASH ADDITIVES SHALL NOT BE USED ON SLABS WITH A BURNISHED OR ACID FINISH.

TEST DATA FOR EACH CONCRETE MIX SHALL BE SUBMITTED FOR REVIEW PER CHAPTER 5 OF ACI 318. REFERENCE FIGURE R5.3 FOR SUBMITTAL REQUIREMENTS AND OPTIONS. CONCRETE MIX DESIGNS THAT ARE SUBMITTED WITHOUT THE APPROPRIATE TEST DATA CANNOT BE REVIEWED.

SLABS ON GRADE:

MAXIMUM SLUMP WITHOUT PLASTICIZER AT POINT OF PLACEMENT SHALL BE 5 INCHES. MIX DESIGNS SHALL TAKE CARE TO PROVIDE THE LARGEST POSSIBLE SIZE OF COARSE AGGREGATE WHILE MAINTAINING CONCRETE WORKABILITY. NOMINAL MAXIMUM AGGREGATE SIZE SHALL NOT BE LESS THAN 3/4 INCH NOR MORE THAN 1/3 THE DEPTH OF THE SLAB.

FOR SLABS ON GRADE, PROVIDE CONCRETE WITH AN ULTIMATE SHRINKAGE LESS THAN 0.05% AT 28 DAYS. LABORATORY TEST RESULTS SHALL BE SUBMITTED INDICATING THAT THE CONCRETE SLAB ON GRADE MIX DESIGN (OR COMPARABLE) MEETS THE ULTIMATE SHRINKAGE REQUIREMENTS. SHRINKAGE VALUES FOR CONCRETE SPECIMENS SHALL BE TESTED PER ASTM C157 AND THE PROCEDURES IN ACI 209R TO PREDICT THE ULTIMATE DRYING SHRINKAGE.

CONCRETE SHALL BE MIXED, PLACED, FINISHED AND CURED PER REFERENCED EDITION OF ACI 302.1 FOR THE APPROPRIATE FLOOR CLASS TYPE PER TABLE 2.1 AND CHAPTER 7 AND 8. CURING COMPOUND SHALL BE COMPATIBLE WITH ARCHITECTURAL FLOOR FINISH. SLABS SHALL BE PLACED ON A FLAT, SMOOTH, FIRM, COMPACTED SUBGRADE.

ALL REINFORCING SHALL BE CHAIRED OR POSITIONED USING REBAR SPACERS TO ENSURE PROPER CLEARANCES. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. SUPPORT OF SLAB ON GRADE REINFORCING SHALL BE SUPPORTED AND TIED FROM THE LOWER MAT OF REINFORCING SUCH THAT THE REINFORCING MAT'S DO NOT MOVE DURING CONCRETE PLACEMENT. SUPPORT OF SLAB ON GRADE REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION BY USE OF A PLASTIC OR CONCRETE CHAIR. DUCT-TAPE COVERED REINFORCING IS NOT AN ACCEPTABLE CHAIR.

SLABS ON GRADE SHALL BE VIBRATED ONLY AT TRENCHES, FLOOR DUCTS, TURNDOWNS, ETC. CAST CLOSURE POUR AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED. UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT, ALL CONCRETE SLABS ON GRADE SHALL BE BOUND BY CONTROL JOINTS (CONSTRUCTION OR SAW CUT) PER TYPICAL DETAILS, AS SHOWN ON THE FOUNDATION PLAN, SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 150 SQUARE FEET. CONSTRUCTION CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING, ALL OTHER JOINTS MAY BE SAW CUT. SLAB REINFORCING, WHERE SHOWN, SHALL NOT EXTEND MORE THAN 125 FEET WITHOUT STOPPING THE REINFORCEMENT AT A CONTROL JOINT.

MASONRY:

GENERAL:

ALL MASONRY CONSTRUCTION SHALL BE PER THE REFERENCED ACI 530/530.1 AND TMS 402/602, BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES. CONCRETE MASONRY ASSEMBLY SHALL BE PLACED IN A RUNNING BOND PATTERN AND HAVE A NET COMPRESSIVE STRENGTH OF F'm = 2,000 PSI AND BE COMPRISED OF THE FOLLOWING COMPONENTS: MEDIUM WEIGHT, GRADE N, HOLLOW CONCRETE MASONRY UNITS PER ASTM C90 WITH A NET COMPRESSIVE STRENGTH OF 2,000 PSI , MORTAR SHALL BE TYPE S PER ASTM C270 WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 PSI, GROUT SHALL BE PER ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI. DETERMINATION OF COMPRESSIVE STRENGTH FOR EACH CONCRETE MASONRY ASSEMBLY SHALL BE PER THE UNIT STRENGTH METHOD OR THE PRISM TEST METHOD PER TMS 602. PRISM TESTING IS NOT REQUIRED IF THE UNIT STRENGTH METHOD IS USED.

MECHANICALLY VIBRATE GROUT IMMEDIATELY AFTER GROUTING AND AGAIN 5 TO 10 MINUTES LATER. PROVIDE CLEANOUTS IF GROUT LIFT EXCEEDS 5'-0" IN BLOCK WALLS. MAXIMUM GROUT LIFT SHALL BE 5'-0". WHEN APPROVED BY THE STRUCTURAL ENGINEER AND BUILDING OFFICIAL, GROUT LIFTS MAY BE GREATER THAN 5'-0" IF IT CAN BE DEMONSTRATED BY THE CONTRACTOR THAT THE GROUT SPACES CAN BE PROPERLY FILLED. FILL CELLS SOLIDLY WITH GROUT IN LIFTS AND STOP POURS 1 1/2" BELOW THE TOP OF A COURSE TO FORM A KEY AT POUR POINTS. UNLESS NOTED OTHERWISE ON THE PLANS, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUNS OF WALL EXCEEDS 24'-0". CONTROL JOINTS SHALL NOT OCCUR AT WALL CORNERS, INTERSECTIONS, ENDS, WITHIN 24" OF CONCENTRATED POINTS OF BEARING OR JAMBS, OR OVER OPENINGS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS. ALL MASONRY BELOW FINISHED FLOOR OR GRADE SHALL BE GROUTED SOLID.

VERTICAL REINFORCING:

1 #5 IN CENTER OF GROUT AT CENTER OF WALL, CONTINUOUS FULL HEIGHT OF WALL AT ALL CORNERS, INTERSECTIONS, WALL ENDS, BEAM BEARINGS, JAMBS, EACH SIDE OF CONTROL JOINTS AND AT INTERVALS NOT TO EXCEED 48" O.C. UNLESS NOTED OTHERWISE. TIE AT 8'-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE BY A.A. WIRE PRODUCTS COMPANY. DOWEL VERTICAL REINFORCING TO FOUNDATION WITH DOWELS TO MATCH VERTICAL REINFORCING.

HORIZONTAL REINFORCING:

2 #5 IN MINIMUM 16" DEEP GROUTED CONTINUOUS BOND BEAM AT ELEVATED FRAMING ASSEMBLIES. 1 #5 IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT TOP OF PARAPETS AND FREESTANDING WALLS. PLACE THESE BARS CONTINUOUS THRU CONTROL JOINTS PER TYPICAL DETAIL. TO MAINTAIN BOND BEAM CONTINUITY, INSTALL BENT BARS PER TYPICAL DETAILS TO MATCH HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND INTERSECTIONS. STANDARD WEIGHT (NO. 9 GAGE WIRE) HOHMANN AND BARNARD INC. OR EQUIVALENT LADDER MESH TYPE JOINT REINFORCEMENT AT 16" O.C. ALL JOINT REINFORCING SHALL BE EITHER HOT-DIPPED GALVANIZED OR STAINLESS STEEL. FOR INTERIOR WALLS ONLY – JOINT REINFORCING MAY BE MILL GALVANIZED AT CONTRACTORS OPTION.

LAP SPLICES:

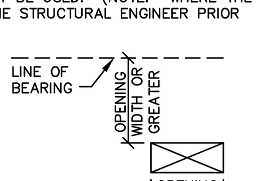
LAP SPLICES FOR VERTICAL AND HORIZONTAL REINFORCING SHALL BE PER TYPICAL DETAIL. DO NOT SPLICE WITHIN 8'-0" OF CONTROL JOINTS. LAP HORIZONTAL LADDER TYPE JOINT REINFORCING 12" MINIMUM.

FOR ADDITIONAL REINFORCING INFORMATION, SEE REINFORCING SECTION OF G.S.N., PLANS, SCHEDULES AND DETAILS.

MISCELLANEOUS LINTELS:

UNLESS NOTED OTHERWISE OR SHOWN, PROVIDE THE FOLLOWING LINTELS IN 8" MASONRY WALLS. USE THESE LINTEL ANGLES FOR OPENINGS REQUIRED BY OTHER DISCIPLINES (MECHANICAL, ELECTRICAL, PLUMBING, ETC.). PROVIDE MINIMUM 5" BEARING OF ANGLES ON JAMBS. SEE SKETCH BELOW WHERE THESE LINTEL ANGLES MAY BE USED. (NOTE: WHERE THE REQUIREMENTS OF THIS SKETCH ARE NOT POSSIBLE, NOTIFY THE STRUCTURAL ENGINEER PRIOR TO START OF MASONRY CONSTRUCTION.)

OPENING WIDTH	LINTEL ANGLES
0'-0" TO 3'-4"	2 – 3 1/2" X 2 1/2" X 1/4" (SLV) OR POWERS PS8-8"
3'-5" TO 4'-8"	2 – 3 1/2" X 3" X 1/4" (SLV) OR POWERS PS8-8"
4'-9" TO 6'-0"	2 – 3 1/2" X 3 1/2" X 1/4" OR POWERS PS8-12"
6'-1" OR GREATER	NOTIFY STRUCTURAL ENGINEER



THESE LINTELS, OR THE OPENING THEY SPAN, SHALL NOT BE PLACED SO AS TO INTERFERE WITH THE REQUIREMENTS OF OTHER STRUCTURAL ELEMENTS (I.E. BOND BEAMS, LINTELS, CONTROL JOINTS, CONCENTRATED POINTS OF BEARING, ETC.) WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

SOLID GROUT SHALL BE PROVIDED BETWEEN WEBS AND MASONRY FACE SHELLS FOR FULL LENGTH OF ALL STEEL LINTELS. MORTAR MAY BE USED FOR GROUT FOR THIS PURPOSE ONLY. FACE UNITS, SOAPS, ROMANS, ETC., SHALL BE LAID WITH FULL HEAD AND BED JOINTS.

FOR ADDITIONAL INFORMATION AT OPENINGS IN MASONRY WALLS, SEE TYPICAL DETAILS.

"POWERS" LINTELS SHALL BE AS MANUFACTURED BY POWERS STEEL AND WIRE PRODUCTS, INC., AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND CITY OF PHOENIX 15004 – LPST PRODUCT APPROVAL STANDARD. EQUIVALENT LINTELS MANUFACTURED BY GA-PO STEEL OR KACHINA STEEL SHALL BE DEEMED APPROVED EQUALS. OPTIONAL MANUFACTURED STEEL LINTELS SHALL BE SUBMITTED FOR APPROVAL.

REINFORCING:

ALL REINFORCING PER CRSI SPECIFICATIONS AND HANDBOOK. ASTM A615 (Fy = 60 KSI / GRADE 60) DEFORMED BARS FOR ALL BARS #5 AND LARGER ASTM A615 (Fy = 40 KSI / GRADE 40) DEFORMED BARS FOR ALL BARS #4 AND SMALLER. WHERE SHOWN ON DRAWINGS ALL GRADE 60 REINFORCING TO BE WELDED SHALL BE ASTM A706. WELDED WIRE REINFORCING AND WIRE PER ASTM A1064. NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER. REFERENCED ACI STANDARDS AND DETAILING MANUAL APPLY. CLEAR CONCRETE COVERAGES AS FOLLOWS:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ------------------- 3"
EXPOSED TO EARTH OR WEATHER
#6 OR LARGER --- 2"
#5 AND SMALLER -------------------------------------- 1 1/2"
ALL OTHER PER REFERENCED EDITION OF ACI 318

ALL REINFORCING SHALL BE CHAIRED OR POSITIONED USING REBAR SPACERS TO ENSURE PROPER CLEARANCES. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. SUPPORT OF FOUNDATION REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION BY USE OF A PLASTIC OR CONCRETE CHAIR. DUCT-TAPE COVERED REINFORCING IS NOT AN ACCEPTABLE CHAIR.

ALL DIMENSIONS REFERENCED IN DRAWINGS AS "CLEAR" SHALL BE FROM FACE OF STRUCTURE TO EDGE OF REINFORCING, AND SHALL NOT BE LESS THAN STATED, NOR GREATER THAN "CLEAR" DIMENSION PLUS 3/8". ALL OTHERS SHALL BE PLUS OR MINUS 1/4" TYPICAL UNLESS NOTED OTHERWISE.

FIELD BENDING OR STRAIGHTENING OF DEFORMED BARS SHALL BE LIMITED TO #5 BARS AND SMALLER AND SHALL BE FIELD BENT OR STRAIGHTENED ONLY ONCE. ANY BEND SHALL BE LIMITED TO 90 DEGREES. IF FIELD BENDING OR STRAIGHTENING OF #6 BARS OR LARGER IS REQUIRED, OR IF A SECOND BEND IS REQUIRED FOR #5 BARS AND SMALLER, HEAT SHALL BE APPLIED FOR BENDING OR STRAIGHTENING. CONTRACTOR SHALL SUBMIT PROCEDURE FOR APPLYING HEAT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BENDING OR STRAIGHTENING BARS.

LAP SPLICES IN CONCRETE:

ALL SPLICE LOCATIONS SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. DOWEL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90-DEGREE HOOKS UNLESS NOTED OTHERWISE. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

LAP SPLICES, UNLESS NOTED OTHERWISE, SHALL BE CLASS "B" TENSION LAP SPLICES PER REFERENCED EDITION OF ACI 318.

LAPS IN WELDED WIRE REINFORCING SHALL BE MADE SO THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH REINFORCING SHEET, IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.

DRYPACK:

DRYPACK SHALL BE 5,000 PSI NON-SHRINK GROUT, FIVE STAR OR EQUIVALENTS. INSTALL DRYPACK UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL DRYPACK UNDER BASE PLATES AFTER THE STRUCTURAL STEEL FRAME HAS BEEN PLUMBED BUT PRIOR TO SUPPORTED DECKING BEING INSTALLED.

ANCHORAGE:

ANCHOR RODS:

ANCHOR RODS INCLUDE HOOKED, HEADED, AND THREADED AND NUTTED ANCHORS. THE TERMS ANCHOR BOLT AND ANCHOR ROD ARE USED SYNONYMOUSLY THROUGHOUT THESE DOCUMENTS. ALL ANCHOR ROD MATERIAL SHALL BE PER ASTM F1554 GRADE 36, U.N.O. A307 ANCHOR RODS MAY BE SUBSTITUTED FOR ASTM F1554 GRADE 36 AT CONTRACTOR'S OPTION. ALL ANCHOR RODS SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. ALL ANCHOR RODS SHALL BE INSTALLED WITH STEEL WASHERS AT OVERSIZED ROUND HOLES USING SNUG TIGHT INSTALLATION, UNLESS NOTED OTHERWISE.

THE ANCHORING MECHANISM FOR NUTTED ANCHOR RODS SHALL CONSIST OF DOUBLE NUTS WITH A WASHER BETWEEN. THE NUTS AND WASHER ARE TO BE EMBEDDED INTO THE CONCRETE PER THE DETAILS AND PLANS. THE WASHER SHALL BE 1/4"X4"X4" U.N.O. THE CONTRACTOR SHALL PREVENT THE NUTS FROM SPINNING OFF DURING THE VIBRATION OF THE CONCRETE. THIS COULD BE ACCOMPLISHED BY TIGHTENING THE NUTS AGAINST EACH OTHER THEREBY LOCKING THEM IN PLACE OR BY TACK WELDING EACH NUT TO THE ANCHOR ROD.

WHERE THE ANCHORS ARE TO BE GALVANIZED, THE ANCHOR ROD AND THE NUTS SHALL BE GALVANIZED WITH THE SAME PROCESS TO ENSURE THE THREADS MATCH.

AT CONTRACTOR'S OPTION HEADED ANCHORS PER ABOVE MAY BE SUBSTITUTED FOR CONVENTIONAL ANCHORS AND MACHINE BOLTS (REVERSE SUBSTITUTION NOT ALLOWABLE).

PROPRIETARY ANCHORS SHALL BE INSTALLED PER THE MANUFACTURES INSTRUCTIONS AND DETAILS. SUBSTITUTIONS FOR PROPRIETARY ANCHORS ARE NOT PERMITTED WITHOUT APPROVAL OF THE ENGINEER OF RECORD. ALL REQUESTS FOR SUBSTITUTION MUST BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO BEING INSTALLED IN THE FIELD.

POST-INSTALLED ANCHORS:

GENERAL:

ALL POST-INSTALLED ANCHORS SHALL UTILIZE THE EXACT ANCHORAGE SYSTEM SPECIFIED IN THE STRUCTURAL DETAILS. WHERE ANCHORAGE "PER GSN" IS SPECIFIED, SEE BELOW. ANCHORAGE PRODUCTS MAY NOT BE SWAPPED BETWEEN MANUFACTURERS WITHOUT APPROVAL OF THE ENGINEER OF RECORD. ALL REQUESTS FOR EQUIVALENT ANCHORAGE PRODUCTS MUST BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO BEING INSTALLED IN THE FIELD.

UNLESS NOTED OTHERWISE POST INSTALLED ANCHORS SHALL NOT BE INSTALLED UNTIL CONCRETE OR MASONRY MATERIAL HAVE REACHED DESIGN STRENGTH AND HAVE BEEN FULLY CURED FOR A MINIMUM OF 21 DAYS.

MANUFACTURER'S INSTALLATION TRAINING AND CERTIFICATE ARE REQUIRED FOR ALL INSTALLERS OF POST-INSTALLED ANCHORS. ALL ANCHORS SHALL BE INSTALLED WITH STEEL WASHERS AT SHORT SLOTTED HOLES IN ACCORDANCE WITH THE MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS (MPII). ALL ANCHORS SHALL TIGHTENED/TORQUED AS REQUIRED PER MANUFACTURERS INSTRUCTIONS AND EVALUATION REPORTS.

POST-INSTALLED ANCHORS IN CONCRETE:

ALL EXPANSION TYPE ANCHORAGE FOR CONCRETE INSTALLATION ONLY SHALL BE PER HILTI 'KWIK BOLT-TZ2' EXPANSION ANCHOR PER ICC ESR-4266 OR APPROVED ICC EQUIVALENT. ALL EPOXY ADHESIVE TYPE ANCHORAGE FOR CONCRETE INSTALLATION ONLY SHALL BE PER HILTI 'HIT-RE 500 V3' ADHESIVE ANCHORS PER ICC ESR-3814 OR APPROVED ICC EQUIVALENT. ALL SCREW TYPE ANCHORAGE FOR CONCRETE INSTALLATION ONLY SHALL BE PER HILTI 'KWIK HUS-EZ' SCREW ANCHOR PER ICC ESR-3027 OR APPROVED ICC EQUIVALENT.

POST-INSTALLED ANCHORS IN MASONRY:

ALL EXPANSION TYPE ANCHORAGE FOR MASONRY INSTALLATION ONLY SHALL BE PER HILTI 'KWIK BOLT-TZ2' EXPANSION ANCHOR PER ICC ESR-4561 OR APPROVED ICC EQUIVALENT. ALL EPOXY ADHESIVE TYPE ANCHORAGE FOR MASONRY INSTALLATION ONLY SHALL BE PER HILTI 'HIT-HY 270' ADHESIVE ANCHOR ICC ESR-4143 OR APPROVED ICC EQUIVALENT. ALL SCREW TYPE ANCHORAGE FOR MASONRY INSTALLATION ONLY SHALL BE PER HILTI 'KWIK HUS-EZ' SCREW ANCHOR PER ICC ESR-3056 OR APPROVED ICC EQUIVALENT.

STRUCTURAL STEEL:

GENERAL:

ALL STEEL CONSTRUCTION SHALL BE PER THE REFERENCED AISC STEEL CONSTRUCTION MANUAL. ALL WIDE FLANGE STEEL SHALL BE ASTM A992 (Fy = 50 KSI). ALL PIPE STEEL SHALL BE ASTM A500 (Fy = 42 KSI) OR ASTM A53, TYPE E OR S, GRADE B (Fy = 35 KSI). ALL TUBE STEEL SHALL BE ASTM A500 (Fy = 46 KSI). ALL MISCELLANEOUS STEEL UNLESS NOTED OTHERWISE SHALL BE ASTM A36 (Fy = 36 KSI). THE TERMS PIPE AND ROUND HOLLOW STRUCTURAL SECTIONS (HSS) ARE USED SYNONYMOUSLY THROUGHOUT THESE DOCUMENTS ALONG WITH THE TERMS TUBE STEEL AND RECTANGULAR OR SQUARE HSS.

ALL STRUCTURAL ROLLED STEEL MEMBERS WITH Fy GREATER THAN 36 KSI ARE TO BE IDENTIFIED WITH AN ASTM SPECIFICATION MARK OR TAG PER IBC SEC. 2202.

UNLESS NOTED OTHERWISE, ALL BOLTS SHALL BE ASTM A307. A325 BOLTS MAY BE SUBSTITUTED FOR A307 BOLTS AT THE CONTRACTOR'S OPTION, REVERSE SUBSTITUTION IS NOT PERMITTED. ALL BOLTS SHALL BE INSTALLED WITH STEEL WASHERS AT SHORT SLOTTED HOLES USING SNUG TIGHT INSTALLATION, UNLESS NOTED OTHERWISE.

WELDING:

UNLESS NOTED OTHERWISE, ALL SHOP AND FIELD WELDS PER REFERENCED EDITION OF THE AWS STANDARDS. ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING DOCUMENTED CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. FOR GRADE 60 REINFORCING BARS, USE E90 SERIES. THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS; THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

HIGH STRENGTH HEADED STUDS SHALL BE AUTOMATIC WELDED CONFORMING TO ALL REQUIREMENTS OF THE REFERENCED EDITION OF THE "RECOMMENDED PRACTICES FOR STUD WELDING". CONFORMANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL QUALITY CONTROL TESTING PROVISIONS OF THE AFOREMENTIONED PUBLICATIONS

WOOD:

GENERAL:

WOOD FRAMING MEMBERS SHALL NOT BE NOTCHED OR DRILLED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT. STRUCTURAL WOOD FRAMING MEMBERS SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% WHEN DELIVERED TO THE JOB SITE. ALL NAILING NOT NOTED SHALL BE PER TYPICAL DETAIL AND COMMON NAIL DIAMETER TABLE BELOW. ALL BOLTING SHALL BE PER STRUCTURAL STEEL SECTION. WOOD CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. OR OTHER MANUFACTURER WITH CURRENT AND EQUIVALENT ICC APPROVAL. WHERE "TYPE" OF CONNECTOR IS INDICATED ON THE DRAWINGS, THE CONNECTOR AND ATTACHMENT SHALL BE PER THE MAXIMUM MODEL NUMBER BASED ON THE SIZE OF THE MEMBERS CONNECTED.

NAIL TYPE	REQ'D DIA	REQ'D GA	LENGTH	NAIL TYPE	REQ'D DIA	REQ'D GA	LENGTH
6d	0.113"	11 1/2	2"	12d	0.148"	9	3 1/4"
8d	0.131"	10 1/4	2 1/2"	16d	0.162"	8	3 1/2"
10d	0.148"	9	3"	20d	0.192"	6	4"

IN STUD WALLS, UNLESS NOTED OTHERWISE, INSTALL DOUBLE STUDS AT ALL JAMBS, CORNERS, INTERSECTIONS AND AT ISOLATED BEARING POINTS OF FRAMING MEMBERS ABOVE. STUD WALLS SHALL HAVE A SIMPSON RSP TIE TOP AND BOTTOM OF STUDS AT 32" O.C. MAXIMUM, EXCEPT AT THOSE WALLS WHERE WOOD SHEATHING IS NAILED DIRECTLY TO THE TOP AND BOTTOM PLATES. PROVIDE 2X SOLID BLOCKING AT MID-HEIGHT OF STUD WALLS.

PROVIDE A MINIMUM OF 0.229" X 3" X 3" GALVANIZED STEEL PLATE WASHER UNDER EACH NUT AT FOUNDATION ANCHORS OF SHEAR WALLS. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4", PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.

PROVIDE 2" SOLID BLOCKING AT SUPPORTS OF ALL JOISTS. DOUBLE UP FLOOR JOISTS AND BLOCKING UNDER PARTITIONS.

WOOD SHRINKAGE:

WOOD STUDS AND TRUSSES SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% WHEN DELIVERED TO THE JOB SITE.

PRESERVATIVE-TREATED WOOD:

ALL SILL PLATES IN CONTACT WITH CONCRETE SHALL BE PRESERVATIVE-TREATED WOOD. WOOD FRAMING MEMBERS ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY OR CONCRETE WALLS BELOW GRADE SHALL BE PRESERVATIVE-TREATED WOOD.

ALL WOOD FRAMING MEMBERS, INCLUDING WOOD SHEATHING, WHICH ARE LOCATED AT EXTERIOR WALLS AND ARE LESS THAN 8 INCHES FROM FINISHED GRADE SHALL BE PRESERVATIVE-TREATED WOOD.

ALL FASTENERS INCLUDING NUTS AND WASHERS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE PER ASTM A153. FASTENERS OTHER THAN NAILS, WOOD SCREWS AND LAG SCREWS ARE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS PER ASTM B695, CLASS 55 MINIMUM.

SAWN LUMBER:

FRAMING LUMBER SHALL COMPLY WITH THE REFERENCED EDITION OF THE GRADING RULES OF THE WWPA OR THE WCLIB. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY AND SHALL HAVE MINIMUM PROPERTIES WHICH MEET OR EXCEED THE FOLLOWING WOOD TYPES:

	WOOD TYPE
JOISTS	
– 2 X 4	D.F.L. STND
– 2 X 6 OR LARGER	D.F.L. #2
BEAMS	
– WIDTH 4" OR LESS	D.F.L. #1
– WIDTH GREATER THAN 4"	D.F.L. #1
LEDGERS AND TOP PLATES	D.F.L. #2
STUDS	
– 2 X 4	D.F.L. STND
– 2 X 6 OR LARGER	D.F.L. #2
POSTS	
– 4 X 4	D.F.L. #2
– 4 X 6 OR LARGER	D.F.L. #2
– 6 X 6 OR LARGER	D.F.L. #1

PREFABRICATED WOOD TRUSS FRAMING MEMBERS:

FRAMING MEMBERS SHALL BE DESIGNED TO SUPPORT SELF WEIGHT PLUS LIVE LOAD AND SUPERIMPOSED DEAD LOADS STATED IN THE GENERAL STRUCTURAL NOTES OR AS LOCATED ON PLANS. BRIDGING SIZE AND SPACING BY FABRICATOR UNLESS NOTED OTHERWISE. ALL CONNECTORS SHALL HAVE CURRENT ICC APPROVAL. FRAMING MEMBERS SHALL BE AGENCY STAMPED AND CONFORM TO THE REFERENCED BUILDING CODE AND ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL CONNECTED WOOD TRUSS CONSTRUCTION." CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, ERECTION DRAWINGS AND DESIGN CALCULATIONS TO INCLUDE CAMBER REQUIREMENTS. SEALED BY A REGISTERED ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. SAID SUBMITTAL, IN ADDITION TO LOADS SPECIFIED IN THE G.S.N. AND PLANS, SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

A. DEFLECTION/CAMBER:
- FLOOR:
  - LIVE LOAD MAXIMUM = L/600 (L/480 FOR RESIDENTIAL)
  - LIVE LOAD AND CREEP MAXIMUM = L/360
- ROOFS WITH (WITHOUT) PLASTER OR GYPBOARD CEILINGS:
  - LIVE LOAD MAXIMUM = L/360 (L/240)
  - LIVE LOAD AND CREEP MAXIMUM = L/240 (L/180)

CREEP FACTOR TO BE 2.0 FOR SEASONED LUMBER.

FABRICATOR SHALL DESIGN ROOF MEMBERS FOR PONDING WHERE ROOF SLOPES ARE LESS THAN 1/4" PER FOOT. FRAMING MEMBERS SHALL BE CAMBERED FOR 1.0 TIMES THE INITIAL DEAD LOAD DEFLECTION. MAXIMUM LIVE LOAD DEFLECTION OF MEMBERS SHALL BE 1"; FABRICATOR SHALL DESIGN ADJACENT MEMBERS FOR MAXIMUM OF 1/4" DIFFERENTIAL DEFLECTION.

B. TOP CHORD MEMBER WOOD SPECIES SHALL HAVE A SPECIFIC GRAVITY OF 0.42 OR GREATER.

C. MULTIPLE FRAMING MEMBERS SHALL BE FASTENED TOGETHER TO ALLOW TRANSFER OF SHEAR AND TENSION FORCES (MINIMUM 200 PLF) AT WOOD SHEATHING JOINTS AND TO PREVENT CROSS GRAIN BENDING OF TOP CHORDS. ATTACHMENT SHALL BE A CONTINUOUS 20 GAGE METAL PLATE OR OTHER APPROVED MEANS. METHOD OF ATTACHMENT SHALL BE INDICATED ON SHOP DRAWINGS FOR REVIEW.

D. SHALL SHOW ANY SPECIAL DETAILS REQUIRED AT BEARING POINTS.

VERIFY SIZE, WEIGHT AND LOCATION OF SUPPORTED EQUIPMENT WITH ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SPRINKLER AND THEIR RELATED DRAWINGS. ADDITIONAL FRAMING MEMBERS SHALL BE SUPPLIED AS REQUIRED TO SUPPORT EQUIPMENT.

FABRICATOR SHALL HAVE ICC APPROVAL OR BE APPROVED ACCORDING TO THE BUILDING JURISDICTION.

WOOD SHEATHING:

ALL WOOD SHEATHING SHALL BE APA RATED SHEATHING, EXPOSURE 1 NOMINAL 4' X 8' SHEETS AND SHALL BEAR THE STAMP OF AN APPROVED TESTING AGENCY. LAY UP SHEATHING WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. STAGGER JOINTS. ALL NAILING SHALL BE COMMON NAILS. WOOD SCREWS SHALL BE USED WHERE SCREWS ARE INDICATED FOR WOOD TO WOOD ATTACHMENTS. THE TERMS WOOD SHEATHING, WOOD STRUCTURAL PANELS (WSP) AND PLYWOOD SHEATHING ARE USED SYNONYMOUSLY THROUGHOUT THESE DOCUMENTS. ALL SHEATHING SHALL BE OF THE FOLLOWING PERFORMANCE CATEGORY, SPAN RATING AND SHALL BE ATTACHED AS FOLLOWS UNLESS NOTED OTHERWISE:

USE	PERFORMANCE CATEGORY	SPAN RATING	EDGE ATTACHMENT	INTERMEDIATE ATTACHMENT
ROOF	15/32	23/16	8d AT 16" O.C.	8d AT 12" O.C.

ALL SHEATHING SHALL BE GAPPED 1/8" ON THE EDGES AND ENDS. ROOF SHEATHING SHALL HAVE PANEL SHEATHING CLIPS APPROPRIATELY INSTALLED BETWEEN THE TRUSSES.

ATTACHMENT AT STEEL MEMBERS SHALL BE HILTI X-U SERIES, 0.157" DIAMETER X 1 1/2" LONG (3/4" WOOD SHEATHING MAX), POWDER DRIVEN FASTENERS INSTALLED PER ICC ESR-2269, SECTION 4.2.8., OR APPROVED EQUIVALENT. SPACING SHALL BE AS NOTED ABOVE FOR NAILS.

VERIFY SHEATHING REQUIREMENTS WITH OWNER AND ARCHITECT. VERIFY SHEATHING MEETS ROOFING OR WATERPROOFING SYSTEM MANUFACTURERS REQUIREMENTS WHERE ROOFING, BALCONY WATERPROOFING, OR OUTDOOR DECK WATERPROOFING IS TO BE GUARANTEED.

SHOP DRAWINGS:

SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. CONTRACTOR SHALL PROVIDE A MINIMUM OF 2 HARD COPY SUBMITTAL SETS OF EACH ITEM TO CTS FOR REVIEW, UNLESS NOTED OTHERWISE IN ARCHITECTURAL SPECIFICATIONS. ELECTRONIC SUBMITTALS ARE ALSO ACCEPTABLE.

THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON CONTRACTOR'S REVIEW.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS.

MANUFACTURER OR FABRICATOR SHALL CLOUD ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY.

THE ENGINEER HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME BEFORE OR AFTER SHOP DRAWING REVIEW.

THE SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT BE CONSIDERED CHANGES TO CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ITEMS ARE CONSTRUCTED TO CONTRACT DOCUMENTS.

THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY.

REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR.

DEFERRED SUBMITTALS:

SHOP DRAWING SUBMITTALS REQUIRED BY THESE GENERAL STRUCTURAL NOTES WHICH CONTAIN DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER OTHER THAN THE ENGINEER OF RECORD, SHALL BE SUBMITTED DURING CONSTRUCTION TO THE CITY FIELD INSPECTOR FOR REVIEW. THE DOCUMENTS WILL FIRST BE REVIEWED BY THE ENGINEER OF RECORD AND DETERMINED TO BE IN GENERAL CONFORMANCE WITH THE BUILDING DESIGN. THESE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. THE FOLLOWING ITEMS SHALL BE SUBMITTED PER THIS SECTION:

PREFABRICATED WOOD TRUSSES

GENERAL NOTES:

THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. EXCEPT WHERE NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE STRUCTURAL ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES FOR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS).

WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE REFERENCED EDITION AND/OR ADDENDA. ANY ENGINEERING DESIGN, PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A REGISTERED ENGINEER RECOGNIZED BY THE BUILDING CODE JURISDICTION OF THIS PROJECT.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS AND ELEVATIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE RESOLVED THROUGH THE ARCHITECT. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL ITEMS WITH THE APPROPRIATE TRADE DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE.

CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

OPTIONS AND SUBSTITUTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION OR SUBSTITUTION IS CHOSEN, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS.

SPECIAL INSPECTION – STRUCTURAL ONLY:

FOR SPECIAL STRUCTURAL INSPECTIONS: CONTACT CARUSO TURLEY SCOTT, INC. AT 480-774-1700 PRIOR TO CONSTRUCTION:

SPECIAL INSPECTIONS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A STATE REGISTERED STRUCTURAL ENGINEER WHO IS FAMILIAR WITH THE STRUCTURAL DESIGN OF THIS PROJECT. THE SUPERVISING STRUCTURAL ENGINEER SHALL SEAL THE SPECIAL INSPECTION CERTIFICATE.

SPECIAL INSPECTION IS TO BE PROVIDED FOR THE ITEMS LISTED BELOW IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING JURISDICTION. "SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE BUILDING JURISDICTION INSPECTIONS REQUIRED BY SECTION 110 OF THE INTERNATIONAL BUILDING CODE. SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17 FOR THE FOLLOWING:

CONCRETE CONSTRUCTION:

1. CONCRETE:
A. DURING THE TAKING OF TEST SPECIMENS.
B. CONTINUOUS INSPECTION DURING THE PLACEMENT OF ALL REINFORCED CONCRETE, UNLESS NOTED OTHERWISE.
C. CONTINUOUS INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS.
(EXCEPTION: NO INSPECTION IS REQUIRED FOR PLACEMENT OF CONCRETE AROUND FOUNDATION ANCHOR BOLTS.)
D. NO INSPECTION IS REQUIRED FOR PLACEMENT OF SLAB ON GRADE CONCRETE. INSPECTION OF SLAB ON GRADE REINFORCING IS REQUIRED PER "REINFORCING STEEL" SECTION BELOW.
E. NO INSPECTION IS REQUIRED FOR THE PLACEMENT OF FOUNDATION CONCRETE. INSPECTION OF FOUNDATION REINFORCING IS REQUIRED PER "REINFORCING STEEL" SECTION BELOW.

2. REINFORCING STEEL: INSPECTION OF IN-PLACE REINFORCING FOR CONFORMANCE PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE FOR THE FOLLOWING:
A. REINFORCING FOR ALL CONCRETE REQUIRED TO HAVE INSPECTION NOTED ABOVE.
B. REINFORCING FOR CONCRETE FOUNDATIONS.
C. REINFORCING FOR SLABS ON GRADE.
D. REINFORCING FOR ALL MASONRY REQUIRED TO HAVE INSPECTION NOTED BELOW.

STEEL CONSTRUCTION:

1. WELDING:
A. VERIFICATION OF VALID WELDER'S CERTIFICATES.
B. PERIODIC VISUAL INSPECTION OF ALL SHOP AND FIELD WELDS.
C. ALL STRUCTURAL STEEL FABRICATORS SHALL EMPLOY AN AWS CERTIFIED INDEPENDENT TESTING AGENCY TO PROVIDE SHOP WELD INSPECTIONS PER CODE. INSPECTION REPORTS AND REQUIRED DOCUMENTATION SHALL BE SUBMITTED TO ENGINEER OF RECORD PRIOR TO STEEL INSTALLATION. EXCEPTION: NO SHOP INSPECTION IS REQUIRED IF THE FABRICATOR IS ON THE CITY OF PHOENIX APPROVED STEEL FABRICATOR LIST.
D. CONTINUOUS INSPECTION OF ALL MULTIPASS FILLET WELDS, SINGLE PASS FILLET WELDS LARGER THAN 5/16", COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS, PLUG AND SLOT WELDS.

MASONRY CONSTRUCTION:

1. STRUCTURAL MASONRY:
A. DURING PREPARATION OF PRISMS.
B. INSPECTION OF IN-PLACE REINFORCING FOR CONFORMANCE PRIOR TO THE DELIVERY OF GROUT TO THE JOBSITE.
C. CONTINUOUS INSPECTION DURING PLACEMENT OF GROUT.
D. CLEANOUTS PRIOR TO CLOSING.

SPECIAL CASES:

1. EXPANSION, EPOXY, ADHESIVE, AND SCREW ANCHORS: DURING THE PLACEMENT OF ALL ANCHORS SHOWN ON STRUCTURAL DRAWINGS. ADDITIONAL INSPECTIONS REQUIRED FOR REPAIR DETAILS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.
A. INSPECTION OF HOLE DIAMETER, HOLE DEPTH AND DRILL BIT CONFORMANCE.
B. INSPECTION OF HOLE CLEANING WITH WIRE BRUSH AND COMPRESSED AIR.
C. INSPECTION OF ANCHOR INSTALLATION USING SPECIFIED PRODUCT AND MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
D. INSPECTION OF EXPANSION ANCHORS SHALL INCLUDE THE VERIFICATION OF THE TIGHTENING TORQUE THAT IS SPECIFIED BY THE ANCHOR MANUFACTURER.

SPECIAL INSPECTIONS – NON STRUCTURAL (PERFORMED BY OTHERS):

GEOTECHNICAL INSPECTIONS – SOILS:

1. PERIODIC VERIFICATION THAT MATERIALS BELOW GRADE ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.
2. PERIODIC VERIFICATION THAT EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.
3. PERFORM PERIODIC CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.
4. CONTINUOUS VERIFICATION THAT USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.
5. PERIODIC VERIFICATION PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.

DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:

A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATION.
B. THE SPECIAL INSPECTOR IS NOT AUTHORIZED TO APPROVE DEVIATIONS FROM THE DESIGN DRAWINGS OR SPECIFICATIONS, AND ALL DEVIATIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PROCEEDING WITH THE WORK. ALL REQUESTS FOR DEVIATIONS SHALL BE INITIATED BY THE CONTRACTOR VIA WRITTEN REQUEST FOR INFORMATION (RFI).
C. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE ENGINEER OR ARCHITECT OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
D. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR ACCESS TO ALL ITEMS REQUIRING SPECIAL INSPECTION. ACCESS SHALL BE PROVIDED BY IN-PLACE LADDERS, SCAFFOLDS, LIFTS AND/OR OTHER EQUIPMENT OPERATED BY THE CONTRACTOR'S PERSONNEL AS REQUIRED FOR SAFE OBSERVATION. THE SPECIAL INSPECTOR IS NOT RESPONSIBLE OR AUTHORIZED TO OPERATE CONTRACTOR'S EQUIPMENT.
E. UPON COMPLETION OF THE ASSIGNED WORK THE ENGINEER OR ARCHITECT IN CHARGE OF SPECIAL INSPECTIONS SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

LOCATION OF DETAILS		
DETAILS	SHEET	DESCRIPTION
---	S1.1	GENERAL STRUCTURAL NOTES
01–19	S1.2	TYPICAL DETAILS
101–119	S3.1	FOUNDATION DETAILS
201–219	S4.1	ROOF FRAMING DETAILS

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY –NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

PROJECT NUMBER	24–0057	PROJECT MANAGER	TET
PROJECT ENGINEER	TLW	PROJECT DRAFTER	NCR

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Revisions	Date

Registered Professional Engineer (Structural)
CERTIFICATE NO. 38832
TROY E. TURLEY
Date Signed 04-26-24
ARIZONA, U.S.A.

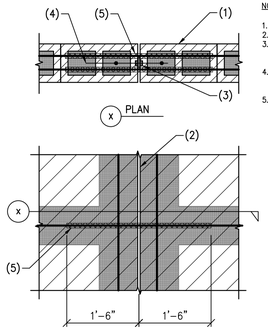
Designed By: TLW
Drawn By: NCR
Checked By: TET
Date: 4/19/2024
Project Number: 22.1618.002

Title: GENERAL STRUCTURAL NOTES
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

KIVA # ____________
CPGD # ____________

Note:
Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

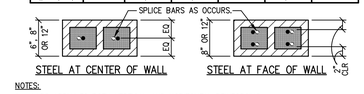


NOTES:
1. MASONRY WALL.
2. CONTROL JOINT.
3. CONTROL JOINT MATERIAL PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
4. VERTICAL REINFORCING TO MATCH WALL REINFORCING EACH SIDE OF CONTROL JOINT.
5. CONTINUOUS BOND BEAM BARS – WRAP BARS WITH MASTIC FOR BOND BREAK.

NOTE: BOND BEAM BARS SHALL NOT BE LAPPED WITHIN 8'-0" OF CONTROL JOINT.

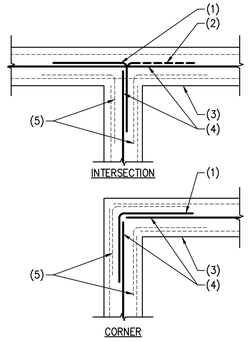
16 CONTROL JOINT IN MASONRY WALL — 507-01 — NO SCALE

REBAR SIZE (METRIC)	REBAR GRADE	MASONRY LAP SPLICE LENGTH				
		STEEL AT CENTER OF WALL			STEEL AT FACE OF WALL (& BOND BEAMS)	
		6" BLK	8" BLK	12" BLK	8" BLK	12" BLK
#4 (13)	40	20"	20"	20"	20"	20"
#4 (13)	60	26"	26"	26"	26"	26"
#5 (16)	60	32"	32"	32"	40"	40"
#6 (19)	60	N/A	43"	43"	54"	54"
#7 (22)	60	N/A	60"	60"	N/A	63"
#8 (25)	60	N/A	N/A	72"	N/A	72"



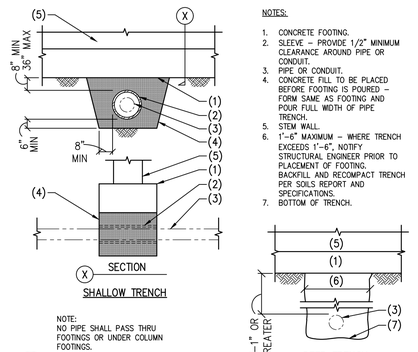
NOTES:
1. LAPS APPLY TO BOTH VERTICAL AND HORIZONTAL REINFORCING.
2. PROVIDE BENT BARS TO MATCH HORIZONTAL BOND BEAM REINFORCING, AT CORNERS AND WALL INTERSECTION TO MAINTAIN BOND BEAM CONTINUITY.
3. DO NOT SPLICE HORIZONTAL BARS WITHIN 8'-0" OF CONTROL JOINTS.
4. FOR LADDER TYPE HORIZONTAL REINFORCING, SEE G.S.N.
5. LAP LENGTHS ARE BASED ON A CALCULATED STEEL STRESS (fs) NOT EXCEEDING 80 PERCENT OF THE ALLOWABLE STEEL STRESS (Fs).

12 ULTIMATE STRENGTH OR ALLOWABLE STRESS MASONRY LAP SPLICES FOR REINFORCING STEEL – 2012/2015/2018/2021 IBC — 501-105 — NO SCALE



NOTES:
1. CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING. LAP PER TYPICAL DETAIL (24" MINIMUM).
2. ALTERNATE BEND.
3. CONCRETE STEM WALL OR FOOTING.
4. REINFORCING PER PLANS AND/OR DETAILS.
5. CORNER BARS AT MULTIPLE REINFORCING.

08 PLAN – CORNER REINFORCING IN CONCRETE FOOTING, STEM OR WALL — 105-02 — NO SCALE



NOTES:
1. CONCRETE FOOTING.
2. SLEEVE – PROVIDE 1/2" MINIMUM CLEARANCE AROUND PIPE OR CONDUIT.
3. PIPE OR CONDUIT.
4. CONCRETE FILL TO BE PLACED BEFORE FOOTING IS POURED – FORM SAME AS FOOTING AND POUR FULL WIDTH OF PIPE TRENCH.
5. STEM WALL.
6. 1'-6" MAXIMUM – WHERE TRENCH EXCEEDS 1'-6", NOTIFY STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF FOOTING. BACKFILL AND RECOMPACT TRENCH PER SOILS REPORT AND SPECIFICATIONS.
7. BOTTOM OF TRENCH.

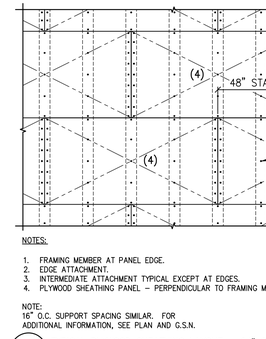
NOTE: NO PIPE SHALL PASS THRU FOOTINGS OR UNDER COLUMN FOOTINGS.

04 PIPE PASSING UNDER WALL FOOTING — 105-30 — NO SCALE

CONC PSI	CLASS B TENSION SPLICE LENGTHS						COMP. BARS	
	f'c=2,500/3,000 PSI		f'c = 4,000 PSI		f'c = 5,000 PSI		f'c = ≥ 3,000	
BAR SIZE (METRIC) / LOCATION	REGULAR	TOP	REGULAR	TOP	REGULAR	TOP	STD. LAP	ENCLOSED W/ SPIRAL TIES
#3 (10)	24"	31"	19"	24"	17"	22"	12"	12"
#4 (13)	32"	41"	25"	32"	22"	29"	15"	12"
#5 (16)	39"	51"	31"	40"	28"	36"	19"	14"
#6 (19)	47"	61"	37"	48"	33"	43"	23"	17"
#7 (22)	69"	89"	54"	70"	49"	63"	26"	20"
#8 (25)	78"	102"	62"	80"	55"	72"	30"	23"
#9 (29)	88"	115"	70"	91"	63"	81"	34"	25"
#10 (32)	99"	129"	79"	102"	70"	91"	38"	28"
#11 (36)	110"	143"	87"	113"	78"	101"	42"	31"

NOTES:
1. TOP BARS ARE ANY HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
2. LAP SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES PER LATEST EDITION OF ACI 318 UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS OR SCHEDULES.
3. CONTACT STRUCTURAL ENGINEER IF CLEAR SPACING OF REINFORCEMENT IS LESS THAN OR ≤ EQUAL TO 2 BAR DIAMETERS (2db), OR IF CLEAR COVER IS LESS THAN THE BAR DIAMETER (db).
4. THIS TABLE IS BASED ON NORMAL WEIGHT CONCRETE.
5. FOR ADDITIONAL INFORMATION, SEE G.S.N., PLANS, SCHEDULES AND DETAILS.

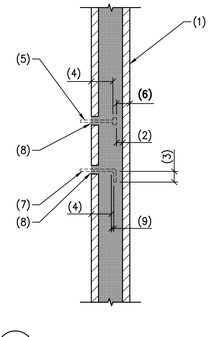
01 LAP SCHEDULE FOR REINFORCING STEEL IN CONCRETE — 201-31.01 — NO SCALE



NOTES:
1. CONTINUOUS MASONRY WALL.
2. 1/8" THICK x 1 1/4" WIDE x 2'-8"x2" BENT STEEL "Z" PLATES AT 48" O.C.
3. VERTICAL REINFORCING TO MATCH WALL REINFORCING AT CORNER OR INTERSECTION.
4. MASONRY WALL WHICH ABUTS CONTINUOUS MASONRY WALL AND IS NOT "TOOTHED" INTO IT.

NOTE: THIS DETAIL FOR ABUTTING WALLS ONLY. FOR WALL REINFORCING, SEE PLANS.

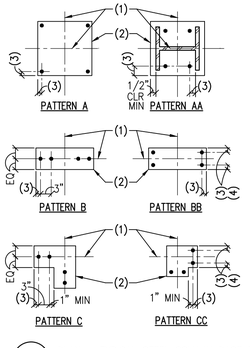
17 PLAN – TYPICAL CONNECTION FOR NON-TOOTHED ABUTTING MASONRY WALLS — 501-06 — NO SCALE



NOTES:
1. MASONRY WALL.
2. BOND BEAM REINFORCING.
3. CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING – LAP PER TYPICAL DETAIL (24" MINIMUM).
4. SINGLE BAR REINFORCING WHERE OCCURS. ALTERNATE BEND OF CORNER BARS AT INTERSECTION.

NOTE: SEE TYPICAL DETAIL FOR NON-TOOTHED ABUTTING WALLS AS OCCURS.

13 MASONRY BOND BEAM AT INTERSECTING WALLS — 510-01 — NO SCALE

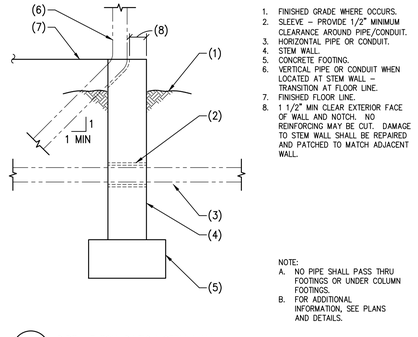


NOTES:
1. CONCRETE SLAB ON GRADE.
2. SAWCUT – 1/8" WIDE x 1/4 SLAB THICKNESS IN DEPTH – CUT SHALL BE MADE SOON ENOUGH TO PREVENT SHRINKAGE CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE WHILE SAWING. WORK MUST BE ACCOMPLISHED WITHIN 4 TO 12 HOURS OF CONCRETE FINISH.
3. CONTINUOUS KEY – SEE TYPICAL KEY IN CONCRETE SLAB ON GRADE DETAIL ____ (101-03).

NOTE: CONSTRUCTION JOINT SPACING SHALL NOT EXCEED 125'-0" ON CENTER.

NOTE: KEYED JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT UNLESS SPECIFICALLY NOTED ON THE PLANS.

09 CONTROL JOINTS IN CONCRETE SLAB ON GRADE — (L)101-01 — NO SCALE



NOTES:
1. LAP PER TYPICAL DETAIL (24" MIN) – TYP.
2. TOP OF WALL FOOTING.
3. PIPE THRU STEM WALL AS OCCURS – SEE TYPICAL DETAIL.
4. RETURN TO FOOTING THICKNESS AS SHOWN ON PLAN.
5. MAXIMUM SLOPE BETWEEN BOTTOM OF FOOTINGS SHALL BE PER SKETCH. STEP FOOTINGS AS REQUIRED, SEE TYPICAL DETAIL.
6. BOTTOM OF CONCRETE FOOTING.
7. BOTTOM OF ADJACENT FOOTING OR TRENCH. WHERE LOW TRENCH ONLY IS LOWER THAN SHOWN, SEE DETAIL 06.
8. PIPE ADJACENT TO STEM WALL TO NOT INTERFERE WITH FOOTING.
9. TYPICAL UNLESS NOTED OTHERWISE IN SOIL REPORT.

NOTE: D = 2'-0" MAXIMUM. FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS.

05 TYPICAL STEP IN CONCRETE FOOTING MAXIMUM SLOPE BETWEEN ADJACENT FOOTING OR TRENCH — 105-10 — NO SCALE

BOLT DIAMETER (db)	VERT BOLT EMBEDMENT LENGTH	HORIZ BOLT EMBEDMENT LENGTH	ANCHOR FILLET WELD SIZE, "S".
1/2"	6"	4"	1/4"
5/8"	6"	4"	5/16"
3/4"	7"	5"	5/16"
7/8"	8"	6"	5/16"
1"	9"	7"	3/8"
1 1/8"	10"	8"	-----
1 1/4"	11"	9"	-----

NOTES:
1. PROVIDE ANCHORS, ANCHOR RODS AND ANCHOR BOLTS PER THIS SCHEDULE UNLESS NOTED OTHERWISE ON PLANS, SCHEDULES OR DETAILS.
2. AUTOMATIC WELDED TO DEVELOP FULL CAPACITY OF HIGH STRENGTH HEADED STUDS.
3. THICKNESS OF DRYPACK DOES NOT APPLY TOWARDS EMBEDMENT.
4. BOLT/PLATE EDGE CLEARANCES PER THE FOLLOWING – TYP U.N.O.:
   3/4" DIA OR LESS – 1 1/4"
   7/8" DIA -------- 1 1/2"
   1" DIA ---------- 1 3/4"
   1 1/8" DIA ------ 2"
   1 1/4" DIA ------ 2 1/4"
   OVER 1 1/4" DIA – 1.75xDIA
5. THIS DETAIL APPLIES TO CAST-IN-PLACE ANCHORS ONLY. FOR POST-INSTALLED ANCHORS, CONTACT EOR.

NOTE: SEE G.S.N FOR ADDITIONAL INFORMATION – TYPICAL

02 TYPICAL ANCHOR ROD, ANCHOR BOLT, ANCHOR AND HEADED STUD SCHEDULE AND BOLT/PLATE EDGE CLEARANCES — 401-02 — NO SCALE

CONNECTION (COMMON NAILS ONLY)	NAILING
JOIST TO SILL OR GIRDER, TOENAIL	3 – 8d
BRIDGING TO JOIST, TOENAIL EACH END	2 – 8d
SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANEL	16d AT 16" O.C. 3–16d PER 16"
TOP PLATE TO STUD, END NAIL	2 – 16d
STUD TO SOLE PLATE	4 – 8d, TOENAIL OR: 2 – 16d, END NAIL
DOUBLED STUDS, FACE NAIL	16d AT 24" O.C.
DOUBLED TOP PLATES, TYPICAL FACE NAIL DOUBLED TOP PLATES, LAP SPLICE	16d AT 16" O.C. 8 – 16d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3 – 8d
RIM JOIST TO TOP PLATE, TOENAIL	8d AT 6" O.C.
TOP PLATE, LAPS AND INTERSECTIONS, FACE NAIL	2 – 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	3 – 8d
CONTINUOUS HEADER TO STUDS, TOENAIL	4 – 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3 – 16d
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3 – 16d
RAFTER TO PLATE, TOENAIL	3 – 8d
BUILT-UP CORNER STUDS	16d AT 24" O.C.
BUILT-UP GIRDER AND BEAMS	20d AT 32" O.C. TOP AND BOTTOM, AND STAGGERED 2–20d EACH END AND SPLICES

NOTE: FOR COMMON NAIL MINIMUM REQUIREMENTS, SEE G.S.N.

18 NAILING SCHEDULE – U.N.O. — 601-01 — NO SCALE

NOTES:
1. MASONRY WALL.
2. STEEL LINTEL PER PLAN OR G.S.N. – GROUT SOLID.
3. JAMB REINFORCING PER G.S.N. OR DETAILS CUT ON PLAN.
4. 2 #5 IN 8" DEEP SOLID GROUTED BOND BEAM – BEND BARS UP AT WALL CORNERS.
5. MASONRY LINTEL – SEE PLAN OR DETAILS FOR ADDITIONAL INFORMATION.
6. OPENING WIDTH.
7. LINTEL BLOCK AT OPENING.
8. OPEN ENDED BLOCK FULL DEPTH OF LINTEL. EXTEND 24" EACH SIDE.

14 TYPICAL OPENING IN MASONRY WALL WITH STEEL OR MASONRY LINTEL — 505-76 — NO SCALE

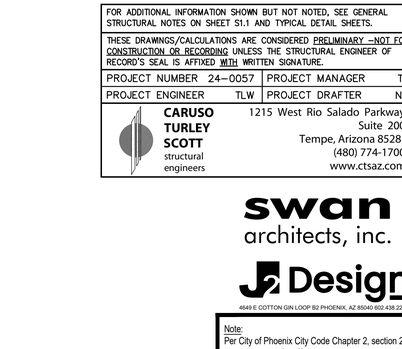
NOTES:
1. "CONC. C.J." WHERE SHOWN ON PLAN.
2. CENTERLINE OF COLUMN.
3. BUTT JOINT – SEE TYPICAL DETAIL AND BELOW. (NO DOWELS).
4. RADIUS 1'-6" MINIMUM/3'-0" MAXIMUM.
5. 2'-0" MINIMUM/4'-0" MAXIMUM.
6. CONCRETE SLAB ON GRADE.
7. LINE OF CONCRETE CLOSURE POUR OR SLAB AS OCCURS.

NOTE: FOR CLARITY, COLUMNS OMITTED. FOR CONFIGURATION OF SPECIFIC CLOSURE POURS, SEE PLAN.

10 TYPICAL COLUMN CLOSURE POUR AT CONCRETE SLAB ON GRADE — (H)101-24.52 — NO SCALE

NOTES:
1. FINISHED GRADE.
2. WALL AND FOOTING.
3. BACKFILL AND RECOMPACT TRENCH PER SOILS REPORT AND SPECIFICATIONS.
4. 500 PSI SLURRY MIX.
5. SLEEVE – 1/2" CLEAR ALL AROUND PIPE.
6. PIPE.
7. TYPICAL UNLESS NOTED OTHERWISE IN SOIL REPORT.

06 PARALLEL PIPE TRENCH ADJACENT TO BUILDING FOOTING — 105-16.76 — NO SCALE



NOTES:
1. LAP – SEE G.S.N.
2. MAXIMUM 1/5 LAP BUT NOT MORE THAN 6".
3. WIRE TIES.
4. 1d (1" MINIMUM).
5. RADIUS=3d FOR BARS NOT OVER #5. 4d FOR #5, #10 AND #11 BARS; 5d FOR #14 AND #18 BARS. 5d FOR ALL GRADE 40 BARS WITH 180 DEGREE HOOK.
6. 4d (4" MINIMUM).
7. 12d (90 DEGREE HOOK).
8. 6d (4" MINIMUM).
9. 135 DEGREE BEND.
10. BEND AROUND 1 1/2" PIN FOR #3 BARS. BEND AROUND 2" PIN FOR #4 BARS. BEND AROUND 2 1/2" PIN FOR #5 BARS.
11. ROTATE TIE LOCATION 90 DEGREES EACH COURSE.

03 TYPICAL REINFORCING BAR DETAILS — 201-32 — NO SCALE

NOTES:
1. FRAMING MEMBER AT PANEL EDGE.
2. EDGE ATTACHMENT.
3. INTERMEDIATE ATTACHMENT TYPICAL EXCEPT AT EDGES.
4. PLYWOOD SHEATHING PANEL – PERPENDICULAR TO FRAMING MEMBERS.

NOTE: 16" O.C. SUPPORT SPACING SIMILAR. FOR ADDITIONAL INFORMATION, SEE PLAN AND G.S.N.

19 TYPICAL PLYWOOD SHEATHING LAYOUT – 24" O.C. SUPPORTS — 685-03 — NO SCALE

NOTES:
1. MASONRY WALL.
2. 1/2" MIN.
3. 1 1/2 BOLT DIAMETER EXTENSION.
4. EMBEDMENT PER TYPICAL DETAIL OR PER PLAN.
5. HEADED STUD.
6. 2" MIN.
7. ANCHOR BOLT.
8. BREAK OPEN FACE SHELL TO PROVIDE 1/2" MIN GROUT COVER AROUND ANCHOR.
9. 1 BOLT DIAMETER.

15 TYPICAL ANCHOR EMBEDMENT REQUIREMENTS IN MASONRY WALL — 401-06 — NO SCALE

NOTES:
1. CENTERLINE OF COLUMN AND STEEL BASE PLATE.
2. STEEL BASE PLATE.
3. EDGE CLEARANCES PER THE FOLLOWING – TYP U.N.O.:
   3/4" DIA OR LESS – 1 1/4"
   7/8" DIA -------- 1 1/2"
   1" DIA ---------- 1 3/4"
   1 1/8" DIA ------ 2"
   1 1/4" DIA ------ 2 1/4"
   OVER 1 1/4" DIA – 1.75 x DIA.
4. ON BEAM GAGE WHERE NOTED.

NOTE: EXCEPT WHERE SHOWN, COLUMN OMITTED FOR CLARITY. FOR COLUMN TYPE, SIZE AND BASE PLATE AND ANCHOR BOLTS, SEE SCHEDULE.

11 PLAN – TYPICAL STEEL COLUMN BASE PLATE PATTERNS — 401-31 — NO SCALE

NOTES:
1. FINISHED GRADE WHERE OCCURS.
2. SLEEVE – PROVIDE 1/2" MINIMUM CLEARANCE AROUND PIPE/CONDUIT.
3. HORIZONTAL PIPE OR CONDUIT.
4. STEM WALL.
5. CONCRETE FOOTING.
6. VERTICAL PIPE OR CONDUIT WHEN LOCATED AT STEM WALL – TRANSITION AT FLOOR LINE.
7. FINISHED FLOOR LINE.
8. 1 1/2" MIN CLEAR EXTERIOR FACE OF WALL AND NOTCH. NO REINFORCING MAY BE CUT. DAMAGE TO STEM WALL SHALL BE REPAIRED AND PATCHED TO MATCH ADJACENT WALL.

NOTE:
A. NO PIPE SHALL PASS THRU FOOTINGS OR UNDER COLUMN FOOTINGS.
B. FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS.

07 PIPE AT FOUNDATION STEM WALL — 105-24 — NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY –NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

PROJECT NUMBER 24–0057	PROJECT MANAGER TET
PROJECT ENGINEER TLW	PROJECT DRAFTER NCR

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Revisions	Date

Registered Professional Engineer (Structural) CERTIFICATE NO. 38832 TROY E. TURLEY (4-20-24) Date Signed

Designed By: TLW
Drawn By: NCR
Checked By: TET
Date: 4/19/2024
Project Number: 22.1618.002

Title: TYPICAL DETAILS

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

KIVA # _____
CPGD # _____

Note: Per City of Phoenix City Code Chapter 2, section 2-28, these plans are for official use only and may not be shared with others except as required to fulfill the obligations of your contract with the City of Phoenix.

Sheet RS-1.2
133 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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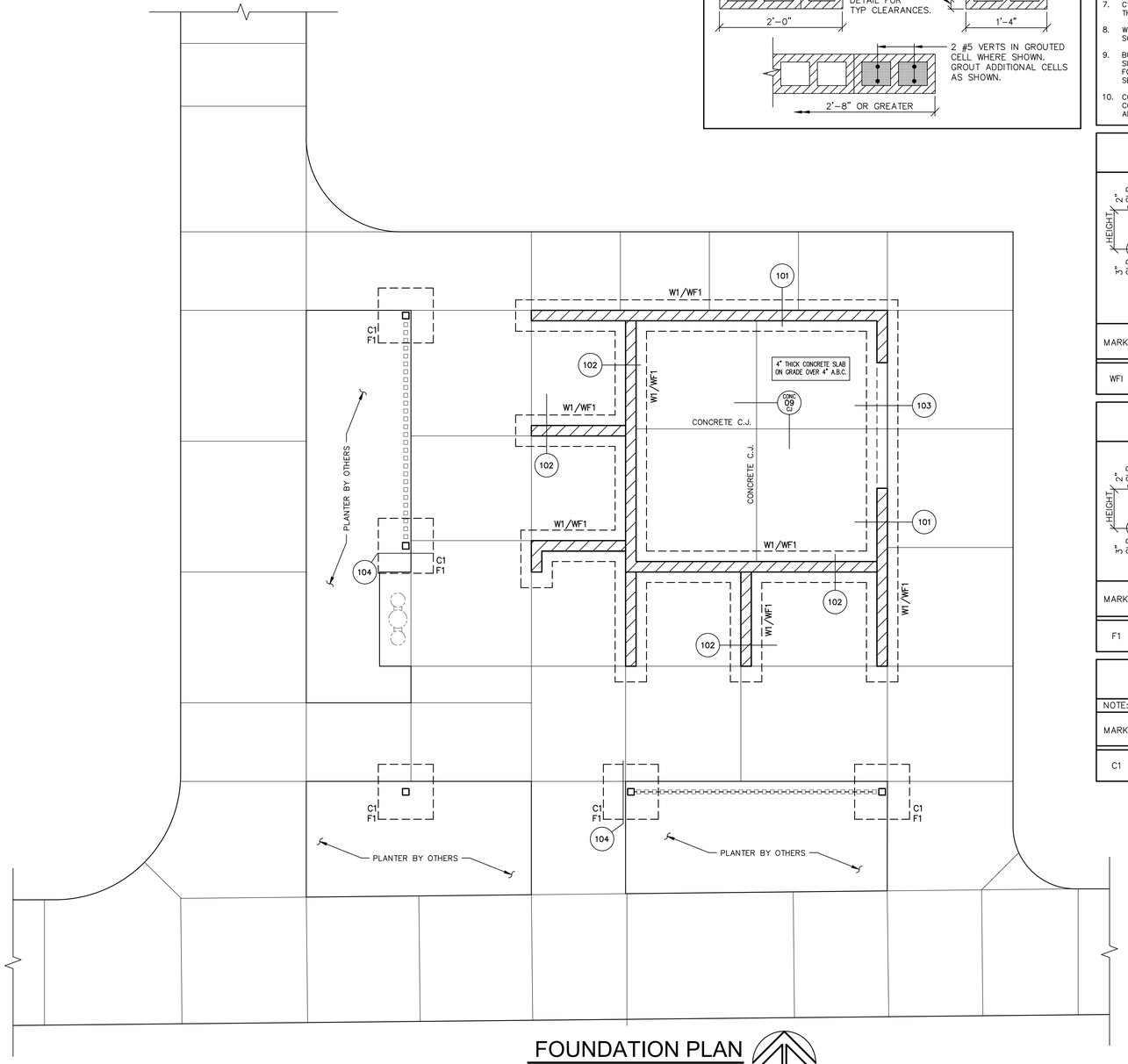


FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

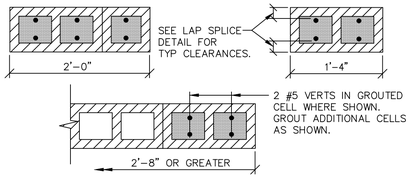
MASONRY WALL REINFORCING (W) SCHEDULE

913–06

NOTE:
1. ALL REINFORCING SHOWN ON PLAN AND AS NOTED BELOW SHALL BE FULL HEIGHT OF WALL U.N.O.
2. FOR LAP SPLICES, SEE TYPICAL DETAIL.
3. HORIZONTAL REINFORCING PER G.S.N. U.N.O.

MARK	VERTICAL REINFORCING	REMARKS
W1	#5 AT 48" O.C. – CENTERED	---

TYPICAL JAMB REINFORCING – U.N.O.

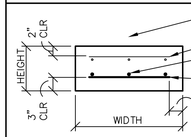


FOUNDATION NOTES – TYP U.N.O.:

1. **VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND SHALL BE VERIFIED WITH SAME PRIOR TO PROCEEDING WITH THE WORK. DO NOT USE CONC C.J. FOR LOCATING BUILDING ELEMENTS.**
2. SCHEDULED MARK DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
3. ▨ – AS SHOWN ON PLAN INDICATES 8" MASONRY WALL, SEE G.S.N., TYPICAL DETAILS, PLANS AND DETAILS FOR ADDITIONAL INFORMATION. ALL REINFORCING SHOWN AND/OR NOTED SHALL BE FULL HEIGHT OF WALL – TYP U.N.O.
4. WF1, WF2, ETC – AS SHOWN ON PLAN INDICATES CONTINUOUS WALL FOOTING, SEE SCHEDULE THIS SHEET.
5. F1, F2, ETC – AS SHOWN ON PLAN INDICATES ISOLATED FOOTING, SEE SCHEDULE THIS SHEET.
6. UNLESS NOTED OTHERWISE ON PLANS AND/OR DETAILS, DEPTH OF FOOTING DIMENSIONS INDICATED IN THE G.S.N. ARE MINIMUMS. FOUNDATION CONTRACTOR SHALL COORDINATE WITH SOIL REPORT AND ALL TRADES TO INSURE THAT THESE MINIMUMS ARE SUFFICIENT FOR THE WORK. SEE TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS.
7. C1, C2, ETC – AS SHOWN ON PLAN INDICATES STEEL COLUMN, SEE SCHEDULE THIS SHEET.
8. W1, W2, ETC – AS SHOWN ON PLAN INDICATES MASONRY WALL REINFORCING, SEE SCHEDULE THIS SHEET. FOR ADDITIONAL INFORMATION, SEE G.S.N.
9. BUILDING CONCRETE SLAB ON GRADE SHALL BE AS NOTED ON PLAN. VERIFY EXACT SIZE AND LOCATION OF DEPRESSED AND/OR RAISED SLABS WITH ARCH'L DRAWINGS. FOR SIDEWALK LOCATION, SEE ARCH'L DRAWINGS. FOR ADDITIONAL INFORMATION, SEE G.S.N. AND TYPICAL DETAILS.
10. CONC C.J. – AS SHOWN ON PLAN INDICATES LOCATION OF EITHER KEYED OR SAWCUT CONTROL JOINT IN CONCRETE SLAB ON GRADE AT CONTRACTOR'S OPTION, SEE G.S.N. AND TYPICAL DETAILS.

CONTINUOUS FOOTING (WF) SCHEDULE

901–01

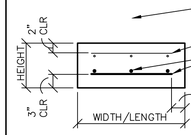


NOTE:
1. FOR DEPTH OF FOOTING, SEE G.S.N. U.N.O.
2. CENTER FOOTING ON CONSTRUCTION ABOVE U.N.O.
3. EXTEND FOOTINGS 12" BEYOND JAMBS U.N.O.

MARK	DIMENSIONS		FOOTING REINFORCING		REMARKS
	HEIGHT	WIDTH	LONGITUDINAL	TRANSVERSE	
WF1	12"	2'–0"	2 #5	·	---

ISOLATED FOOTING (F) SCHEDULE

901–11



NOTE:
1. FOR DEPTH OF FOOTING, SEE G.S.N. U.N.O.
2. CENTER FOOTING ON CONSTRUCTION ABOVE U.N.O.

MARK	DIMENSIONS			FOOTING REINFORCING	REMARKS
	HEIGHT	WIDTH	LENGTH		
F1	12"	3'–6"	3'–6"	3 #5 EACH WAY TOP AND BOTTOM	---

COLUMN (C) SCHEDULE

910–01

NOTE: FOR ANCHOR BOLT PATTERN, SEE TYPICAL DETAIL 11.

MARK	SIZE	BASE CONNECTION	BOLT PATTERN AND/OR REMARKS
C1	HSS 5x5x1/4	3/4"x12"x12" STEEL PLATE WITH (4) 3/4" DIA ANCHOR BOLTS	---

LOCATION OF DETAILS

DESCRIPTION	SHEET	
GENERAL STRUCTURAL NOTES	S1.1	
TYPICAL DETAILS	S1.2	
FOUNDATION DETAILS	S3.1	
ROOF FRAMING DETAILS	S4.1	

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

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PROJECT NUMBER	24–0057	PROJECT MANAGER	TET
PROJECT ENGINEER	TLW	PROJECT DRAFTER	NCR

CARUSO TURLEY SCOTT structural engineers
1215 West Rio Salado Parkway
Suite 200
Tempe, Arizona 85281
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swan architects, inc.

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Revisions	Date

Registered Professional Engineer (Structural) CERTIFICATE NO. 38832 TROY E. TURLEY 04-26-24 Date Signed

Designed By:	TLW
Drawn By:	NCR
Checked By:	TET
Date:	4/19/2024
Project Number:	22.1618.002

Title: FOUNDATION PLAN

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: **PA75200668-1**

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

KIVA # _____
CPGD # _____

Sheet
RS-2.1
134 OF 148

Note:
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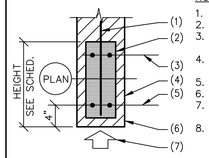
ROOF FRAMING NOTES – TYP U.N.O.:

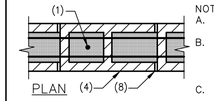
1. **VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND SHALL BE VERIFIED WITH SAME PRIOR TO PROCEEDING WITH THE WORK.**
2. SCHEDULED MARK DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
3. [– – – –] – AS SHOWN ON PLAN INDICATES STRUCTURAL BEARING AND/OR SHEAR WALL BELOW.
4. ML1, ML2, ETC – AS SHOWN ON PLAN INDICATES MASONRY LINTEL, SEE SCHEDULE THIS SHEET, G.S.N. AND TYPICAL DETAILS.
5. FOR MISCELLANEOUS LINTELS NOT SHOWN, SEE G.S.N. AND TYPICAL DETAILS. MASONRY CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR EXACT SIZE AND LOCATION REQUIREMENTS.
6. FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITIONS. ALL OPENINGS MAY NOT BE SHOWN ON THIS PLAN. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SPRINKLER AND THEIR RELATED DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL DETAILS.
7. VERIFY EXACT SIZE, WEIGHT AND LOCATION OF EQUIPMENT AND SUPPORTS INDICATED ON PLAN WITH ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SPRINKLER AND THEIR RELATED DRAWINGS. EQUIPMENT INDICATED ARE ONLY THOSE THAT EXCEED LOADS SPECIFIED IN THE G.S.N. FOR SUPPORT OF EQUIPMENT, SEE TYPICAL DETAILS AND OTHER TRADES.
8. 'TG' WHERE SHOWN ON PLAN INDICATES LOCATION OF TRUSS GIRDER (2–PLY MINIMUM).
9. 'HC' WHERE SHOWN ON PLAN INDICATES LOCATION OF HIP CARRIER (2–PLY MINIMUM).

MASONRY LINTEL (ML) SCHEDULE

937–01



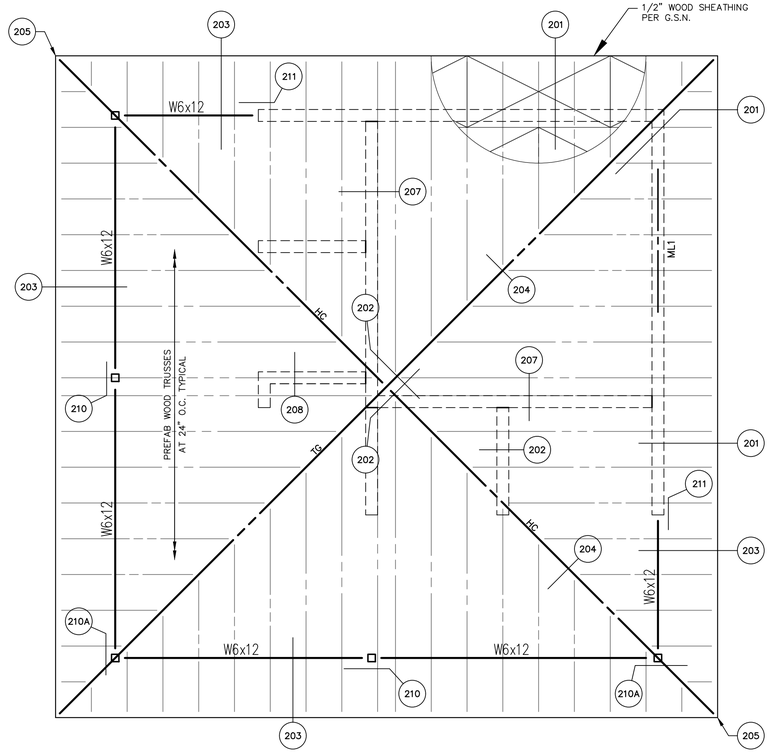
NOTES:
1. VERTICAL WALL REINFORCING.
2. TOP OF SOLID GROUT.
3. TOP REINFORCING WHERE INDICATED IN LINTEL SCHEDULE.
4. OPEN END BLOCKS – BLOCKS OPEN ONE SIDE.
5. REINFORCING – SEE SCHEDULE.
6. LINTEL "U" BLOCK.
7. SHORE LINTEL UNTIL GROUT REACHES DESIGN STRENGTH.
8. FULL MORTAR JOINTS ON VERTICAL AND HORIZONTAL FACE SHELLS.



NOTE:
A. VERTICAL REINFORCING TO MATCH AND LAP WALL REINFORCING PER G.S.N.
B. EXTEND GROUT, OPEN END MASONRY UNITS AND REINFORCING 24" PAST EACH JAMB. INSTALL CORNER BARS WHERE 24" CANNOT BE ACHIEVED.
C. DO NOT LAP SPLICE REINFORCING IN SINGLE SPAN LINTELS. WHERE SPLICES ARE REQUIRED IN MULTIPLE SPANS, LAP BOTTOM REINFORCING AT SUPPORTS AND TOP REINFORCING AT MIDSPAN.

SEE G.S.N. FOR ADDITIONAL INFORMATION.

MARK	HEIGHT	REINFORCING	REMARKS
ML1	24"	2 #5 BOTTOM	---



ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

LOCATION OF DETAILS

DETAILS	SHEET	DESCRIPTION
---	S1.1	GENERAL STRUCTURAL NOTES
01–19	S1.2	TYPICAL DETAILS
101–119	S3.1	FOUNDATION DETAILS
201–219	S4.1	ROOF FRAMING DETAILS

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

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Revisions	Date

Registered Professional Engineer (Structural)
CERTIFICATE NO.
38832
TROY E. TURLEY
04-26-24
Date Signed
Not to Scale

Designed By: TLW
Drawn By: NCR
Checked By: TET
Date: 4/19/2024
Project Number: 22.1618.002

Title: ROOF FRAMING PLAN

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: **PA75200668-1**

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Sheet
RS-2.2
135 OF 148

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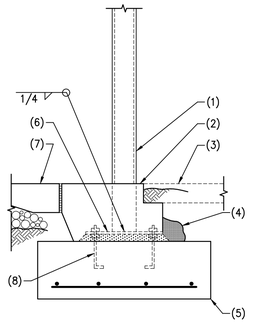
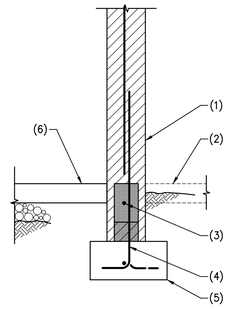


NOTES:

1. STEEL COLUMN.
2. CONCRETE CLOSURE POUR PER TYPICAL DETAIL.
3. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
4. 3" MINIMUM CONCRETE COVER AROUND ALL STEEL BELOW GRADE.
5. CONCRETE FOOTING.
6. BASE PLATE OVER 1 1/2"± DRYPACK.
7. CONCRETE SLAB ON GRADE.
8. ANCHOR BOLTS WITH DOUBLE NUTS.

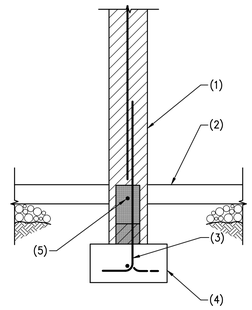
104 STEEL COLUMN FOOTING — 138–02 — NO SCALE



NOTES:

1. MASONRY WALL – GROUT SOLID BELOW GRADE.
2. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
3. 1 #5 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM.
4. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING PER TYPICAL DETAIL – ALTERNATE BENDS.
5. CONCRETE FOOTING.
6. CONCRETE SLAB ON GRADE.

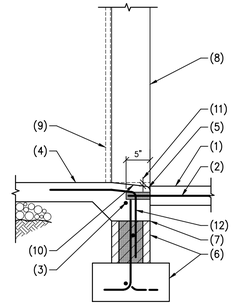
101 MASONRY WALL FOOTING — 108–51 — NO SCALE



NOTES:

1. MASONRY WALL – GROUT SOLID BELOW GRADE.
2. CONCRETE SLAB ON GRADE.
3. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING PER TYPICAL DETAIL – ALTERNATE BENDS.
4. CONCRETE FOOTING.
5. 1 #5 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM.

102 MASONRY WALL FOOTING — 110–51 — NO SCALE



NOTES:

1. EXTERIOR CONCRETE SLAB.
2. #4 DOWELS x 24" LONG AT 12" O.C. DRILL AND EPOXY DOWEL PER G.S.N.
3. 1 #4 CONTINUOUS.
4. CONCRETE SLAB ON GRADE.
5. TOOLED EDGE.
6. SOLID GROUTED MASONRY STEM WALL AND CONCRETE FOOTING WITH REINFORCING CONTINUOUS FROM BEYOND.
7. DEPRESS STEM WALL 8" MIN.
8. WALL BEYOND.
9. OVERHEAD DOOR PER ARCH'L DRAWINGS.
10. SLOPE CONCRETE WITH A 1:10 SLOPE FROM FACE OF OVERHEAD DOOR TO EXTERIOR FACE OF WALL.
11. 3/4" MIN, 1" MAX.
12. #4 SLAB DOWELS AT 24" O.C. MAXIMUM.

103 CONCRETE SLAB AT OVERHEAD DOOR — 24–0057 — NO SCALE

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Sheet
RS-3.1
136 OF 148

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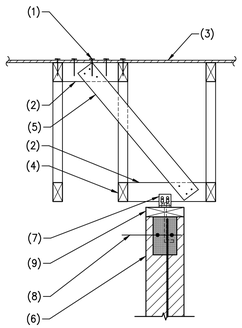
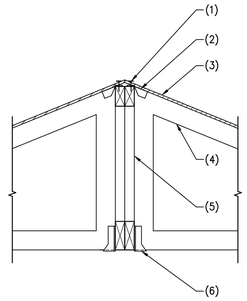


NOTES:

1. NAILING AT 6" O.C.
2. 2x4 BLOCKING AT EACH BRACE.
3. PLYWOOD SHEATHING.
4. PREFAB WOOD TRUSSES.
5. 2x4 BRACE AT 24" O.C. WITH 3-16d AT EACH END.
6. MASONRY WALL.
7. SIMPSON DTC TRUSS CLIP AT EACH BRACE.
8. BOND BEAM PER G.S.N.
9. CONTINUOUS 2x PLATE WITH 3/4" DIA ANCHOR BOLTS AT 48" O.C.

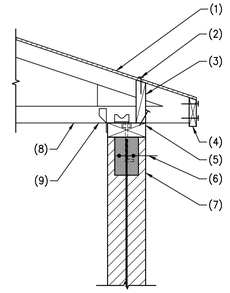
208 PREFABRICATED WOOD TRUSS AT NON-BEARING MASONRY WALL
636-032.01 NO SCALE



NOTES:

1. EDGE NAILING.
2. SIMPSON H3 AT EACH TRUSS.
3. PLYWOOD SHEATHING.
4. PREFAB WOOD TRUSS.
5. PREFAB WOOD HIP CARRIER TRUSS.
6. HANGER PER TRUSS MFR.

204 PREFABRICATED WOOD TRUSS TO TRUSS CONNECTION
637-916M NO SCALE



NOTES:

1. PLYWOOD SHEATHING.
2. EDGE NAILING.
3. 2x BLOCKING WITH 3-16d PER BLOCK.
4. CONTINUOUS 2x FASCIA WITH 2-16d AT EACH TRUSS.
5. CONTINUOUS 3x PLATE WITH 3/4" DIA ANCHOR BOLTS AT 48" O.C. - COUNTERSUNK.
6. BOND BEAM PER G.S.N.
7. MASONRY WALL.
8. PREFAB WOOD TRUSS.
9. SIMPSON H2.5A AND A34 AT EACH TRUSS. PROVIDE 2 CLIPS AT GIRDER TRUSSES - ALTERNATE SIDES OF PLATE.

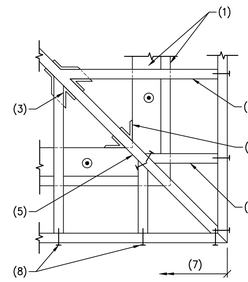
201 PREFABRICATED WOOD TRUSS AT MASONRY WALL
636-017M NO SCALE

NOMINAL BEAM DEPTH "D"	NUMBER OF 3/4" DIA ASTM F3125 GRADE A325 BOLTS
UP TO 7"	2
8" - 11"	2
12" - 14"	3
15" - 17"	4
18" - 20"	5
21" - 23"	6
24" - 29"	7
30" - 32"	8
33" - 35"	9
36"	10

FRAMING NOTES:

1. THE TYPICAL STEEL BEAM TO STEEL COLUMN OR STEEL BEAM TO STEEL BEAM CONNECTION CONSISTS OF 3/8" SINGLE SHEAR PLATES WITH BOLTS PER SCHEDULE. USE 5/8" SHEAR PLATES WHERE "D" = 27" OR GREATER.
2. ALL BOLTS SHALL BE INSTALLED THROUGH "SHORT" SLOTTED HOLES IN EITHER THE BEAM WEB OR SHEAR PLATE. INSTALL WASHERS AND TIGHTEN "SNUG TIGHT" U.N.O.

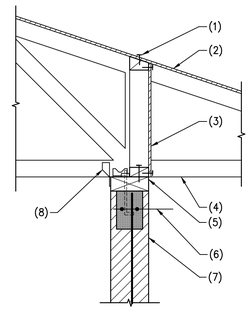
209 BOLT SCHEDULE FOR TYPICAL STEEL CONNECTIONS
401-14 NO SCALE



NOTES:

1. WOOD BLOCKING AND PLATE BELOW.
2. JACK TRUSS. NAIL TOP CHORD WITH 2-16d TO HIP JACK.
3. HANGER PER TRUSS MFR.
4. SIMPSON H2.5 EACH SIDE.
5. HIP JACK TRUSS.
6. TYPICAL JACK TRUSS WITH 2-16d TO HIP JACK AT TOP AND BOTTOM CHORD.
7. CONTINUOUS FASCIA (DO NOT SPLICE WITHIN 6'-0" FROM CORNER - EACH WAY).
8. 3-16d NAILS - TYPICAL AT EACH TRUSS.

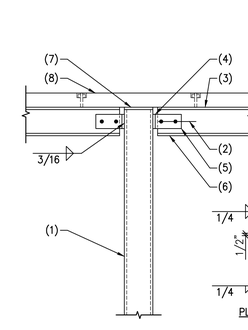
205 PLAN - WOOD JACK TRUSSES AT HIP JACK TRUSS
636-016.02M NO SCALE



NOTES:

1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. PLYWOOD SHEAR PANEL PER TYPICAL DETAIL.
4. PREFAB WOOD TRUSS.
5. CONTINUOUS 3x WOOD PLATE WITH 3/4" DIA ANCHOR BOLTS AT 48" O.C.
6. BOND BEAM PER G.S.N.
7. MASONRY WALL.
8. SIMPSON H2.5A AND A34 AT EACH TRUSS.

202 PREFABRICATED WOOD TRUSS AT MASONRY WALL
636-052M NO SCALE

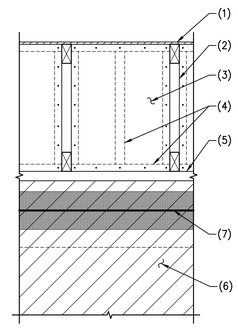


PLAN - STEEL FACE PLATE

NOTES:

1. STEEL COLUMN.
2. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
3. STEEL BEAM.
4. STEEL FACE PLATE TO MATCH SHEAR PLATE - INSTALL PER PLAN BELOW AS OCCURS.
5. SHEAR PLATE PER TYPICAL BOLT SCHEDULE.
6. BEAM ONE SIDE ONLY AT DETAIL 210A.
7. 3/16" CAP PLATE.
8. 3x NAILER WITH 1/2" DIA. AUTOMATIC WELDED THREADED STUDS AT 24" O.C. COUNTERSUNK.

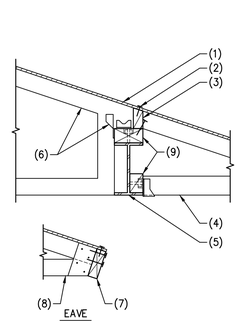
210 STEEL BEAMS TO STEEL COLUMN CONNECTION
210A AS NOTED 24-0057 NO SCALE



NOTES:

1. PLYWOOD SHEATHING.
2. PREFABRICATED WOOD TRUSS.
3. 3/8" PLYWOOD SHEAR PANEL WITH 8d AT 6" O.C. PANEL EDGES AND 8d AT 12" O.C. AT INTERMEDIATE SUPPORTS, OR NAILING AND SHEATHING TO MATCH PLYWOOD SHEAR WALL BELOW AS OCCURS.
4. 2x4 AT FOUR SIDES AND INTERMEDIATE.
5. WOOD TOP PLATE.
6. MASONRY WALL.
7. BOND BEAM PER G.S.N.

206 PLYWOOD SHEAR PANEL
635-41.52 NO SCALE

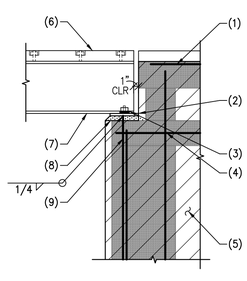


NOTES:

1. PLYWOOD SHEATHING.
2. EDGE NAILING.
3. 2x BLOCKING WITH 3-16d PER BLOCK.
4. 2x SOFFIT FRAMING WITH SIMPSON LUS TYPE HANGER.
5. STEEL BEAM.
6. PREFAB WOOD TRUSS WITH CANTILEVERED TOP CHORD AND SIMPSON H2.5A AND A34 AT EACH TRUSS.
7. 2x FASCIA WITH 2-16d AT EACH TRUSS - FOR OVERHANG, SEE ARCH'L.
8. SOFFIT FRAMING TO FASCIA AS OCCURS.
9. 3x NAILER WITH 1/2" DIA. AUTOMATIC WELDED THREADED STUDS AT 24" O.C. - COUNTERSUNK.

NOTE:
AT GIRDER TRUSS INSTALL A35 EACH SIDE OF TRUSS AT OPPOSITE SIDE OF PLATE.

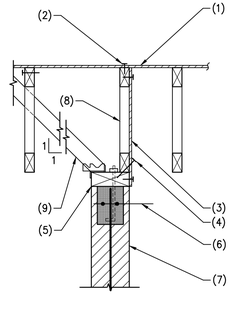
203 PREFAB WOOD TRUSS AT WOOD BEAM
637-161.26M NO SCALE



NOTES:

1. CONTINUOUS GROUTED BOND BEAM.
2. 1/2"x7"x7"STEEL BEARING PLATE WITH (2) 3/4" DIA AUTOMATIC WELDED STUDS. TIGHTEN NUTS FINGERTIGHT.
3. 1 1/2" LONG SLOTTED HOLES.
4. 2 #5 x 42" IN 8" DEEP x 48" LONG GROUTED BOND BEAM.
5. MASONRY WALL.
6. WOOD NAILER PER DETAIL 203.
7. STEEL BEAM.
8. 1" ± DRYPACK.
9. 2 #5 x 40" DOWELS.

211 STEEL BEAM AT MASONRY WALL
423-61M NO SCALE



NOTES:

1. PLYWOOD SHEATHING.
2. EDGE NAILING.
3. 3/8" PLYWOOD SHEATHING WITH 8d AT 6" O.C.
4. 16d TOENAILS AT 12" O.C.
5. 3x CONTINUOUS WOOD PLATE WITH 3/4" DIA ANCHOR BOLTS AT 48" O.C.
6. BOND BEAM PER G.S.N.
7. MASONRY WALL.
8. PREFAB WOOD TRUSSES.
9. 2x4 WOOD BRACE AT 48" O.C. WITH SIMPSON A35 WITH 3-WAY BEND AT EACH END.

207 WOOD TRUSS AT MASONRY WALL
636-051M NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY - NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

PROJECT NUMBER	24-0057	PROJECT MANAGER	TET
PROJECT ENGINEER	TLW	PROJECT DRAFTER	NCR

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1215 West Rio Salado Parkway
Suite 200
Tempe, Arizona 85281
(480) 774-1700
www.ctsaz.com

swan architects, inc.

J2 Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

Revisions	Date

Registered Professional Engineer (Structural)
CERTIFICATE NO
38832
TROY E. TURLEY
04-26-24
Date Signed
Not Valid Unless Signed

Designed By: TLW
Drawn By: NCR
Checked By: TET
Date: 4/19/2024
Project Number: 22.1618.002

Title: FRAMING DETAILS

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: PA75200668-1

KIVA # _____
CPGD # _____

Sheet
RS-4.1
137 OF 148

Note:
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C:\Users\kft16\Documents\00--WORK--00\240057\240057-S41.dwg, 4/26/2024 6:51:03 AM, dft16

REGISTER, LOUVER & GRILLE SCHEDULE

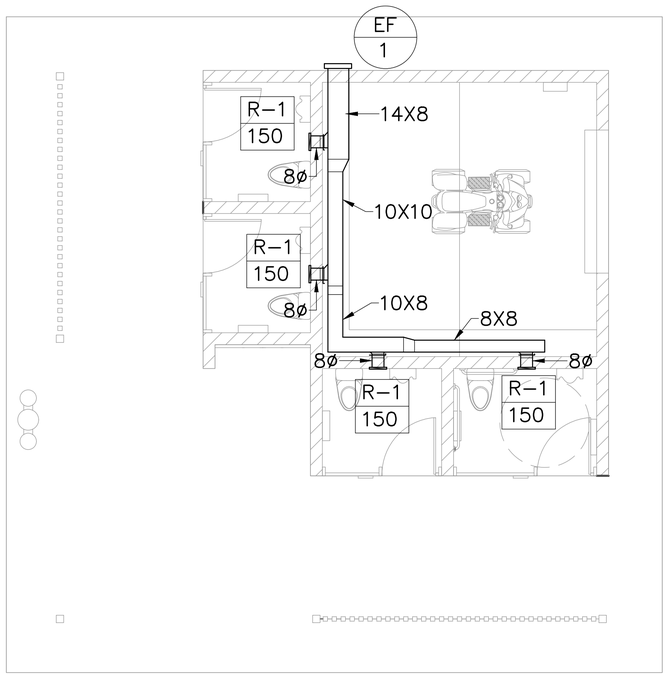
MARK	TYPE	SERVICE	CFM RANGE (1)	NOMINAL SIZE	REMARKS (3)
R-1	EXHAUST GRILL (4)	EA	50-165	8X4	BACK DRAFT DAMPER ON EACH GRILL

(1) MAXIMUM NC=25 @ MAXIMUM CFM NOTED.
(2) SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
(3) EXHAUST GRILL TO BE A HIGH ABUSE GRILL

EXHAUST FAN SCHEDULE (2)(3)

MARK	SERVES ROOM	MIN. (1) S.C.F.M.	STATIC PRESSURE IN W.G.	MIN WATTS	REMARKS
EF 1	UNISEX	600	.375	300	VRBK06L1

(1) EXHAUST FAN TO RUN CONTINUOUSLY (2) VOLTAGE IS 115/1ø/60



MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

N

Revisions	Date

15315 RANDY JAY ROBINSON
ARIZONA, U.S.A.
EXPIRES 3/31/25

Designed By: JAS
Drawn By: JAS
Checked By: JAS
Date: 4/19/2024
Project #: 22.1618.002

Title: MECHANICAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

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SDEV # _____

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Sheet
M100
138 OF 148

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	PIPE SIZE					REMARKS	QUAN	WASTE F.U. EACH	COLD WATER F.U. EACH	HOT WATER F.U. EACH	COMB. WATER F.U. EACH	WASTE F.U. TOTAL	COLD WATER F.U. TOTAL	HOT WATER F.U. TOTAL	COMB. WATER F.U. TOTAL
		TRAP	WASTE	VENT	C.W.	H.W.										
WC-1	WATER CLOSET	INT.	4"	2"	1/2"	–	ACORN MODEL 1675-W-1-1.8 GPF-FVH-C01-SW, WALL HUNG FRONT MOUNTED, BLOWOUT JET, 14 GAGE TYPE 304 STAINLESS STEEL, ELONGATED BOWL, INTEGRAL SEAT, CLEANOUT WITH O-RING, 4" NO-HUB CONNECTION, WALL SLEEVE. FLUSH VALVE: HYDRAULIC, CONCEALED FLUSH VALVE, 1.6 GALLONS PER FLUSH, 1-1/2" REAR CONNECTION. CARRIER: PROVIDE APPROPRIATE J.R. SMITH CARRIER; COORDINATE WITH FITTING TYPE	4	6	5	0	5	24	20	0	20
WC-2	WATER CLOSET	INT.	4"	2"	1/2"	–	ACORN MODEL. 1675-W-1-1.6 GPF-FVH-C01-ADA-SW SAME OPTIONS AS "WC-1" EXCEPT WITH BOWL HEIGT AT 17" ABOVE FINISHED FLOOR TO MEET ADA REQUIRMENTS. CARRIER: PROVIDE APPROPRIATE J.R SMITH CARRIER, COORDINATE WITH FITTING TYPE REQUIRMENTS.	4	6	5	0	5	24	20	0	20
U-1	URINAL	INT.	3"	2"	3/4"	–	FLUSH VALVE, WALL HUNG, MAY 1.0 GPF (1)	3	3	5	0	5	9	15	0	15
U-1	URINAL	INT.	3"	2"	3/4"	–	FLUSH VALVE, WALL HUNG, MAY 1.0 GPF(ADA) (1)	1	3	5	0	5	3	5	0	5
HB-1	HOSE BIBB	–	–	–	3/4"	–	WOODFORD MODEL NO 824, CHROME PLATED FINISH 3/4" HOSE CONNECTION WITH INTEGRAL VACUUM BREAKER, WHEEL HANDLE OPERATOR ENCLOSED IN A FLUSH MOUNTED POLISHED CHROME WALL BOX WITH LOCKABLE COVER	1	0	3	0	3	0	3	0	3
L-1	LAVATORY	1-1/4"	1-1/4"	1-1/2"	1/2"	1/2"	COUNTER TOP MOUNT, MAX, 0.5 GPH FLOW RESTRICTOR	2	1	1.5	1.5	2	2	3.00	3.00	4
TD-1	TRENCH DRAIN	2"	2"	2"	–	–	ABT, INC. "POLYDRAIN" MODEL 2001.08 "PICCOLO" SHALLOW (3" DEEP) PRECAST MODULAR CHANNELS WITH INTERLOCKING JOINTS AND POLYETHYLENE INSERTS FOR GRATE LOCKING DEVICES. TRENCH DRAIN SHALL BE FUNISHED COMPLETE WITH 2005.08-10 CLOSED END PLATES, 2899 INSTALLATION LEG WITH SCREW AND 452, STAINLESS STEEL HEEL-PROOF GRATE WITH 840A LOCKING DEVICE. LENGTH OF TRENCH DRAIN TO COINCIDE WITH THE WIDTH OF TOIL COMPARTMENTS.	4	2	0	0	0	8	0	0	0
WH-1	WATER HEATER	–	–	–	3/4"	3/4"	BRADFORD WHITE MODEL TET055V240 TANKLESS WATER HEATER 5.5 kW, 240 VOLT, 23 AMP.	1	0	0	0	0	0	0	0	0
FD-1	FLOOR DRAIN	2"	2"	2"	–	–	WITH DEEP SEAL P-TRAP	1	2	0	0	0	2	0	0	0
DF-1	DRINKING FOUNTAIN	1-1/2"	1-1/2"	1-1/2"	1/2"	–	MDF MODEL NO. 1014SMFA, PEDESTAL TYPE BARRIER FREE SPLIT-LEVEL DRINKING FOUNTAIN WITH BOTTLE FILLER, TYPE 304 SCHEDULE 10 STAINLESS STEEL CONSTRUCTION WILL POWDER COATING (COLOR TO BE SELECTED BY ARCHITECT) 18 GAUGE STAINLESS STEEL RECEPTOR BOWLS WITH ANTI-SQUIRT HEADS, TYPE 304 STAINLESS STEEL PUSHBARS, WITH INTEGRAL CONTROL VALVE, WATER SUPPLY (NYLO BRAID TUBING AND FITTINGS, NSF-61 CERTIFIED), 1 1/2" SCHEDULE 40 PVC WASTE PIPING, ALL WORKING PARTS ACCESSIBLE THROUGH BOWL OF FOUNTAIN, FOUNTAIN TO BE ANCHORED TO CONCRETE THROUGH A WELDED PLATE.	1	1	.25	0	.25	1	.25	0	.25
												TOTAL (F.U.)	73	66.25	3	67.25
												GPM		62.1	3	62.4

(1) WHEN MOUNTED PER ARCHITECTURAL ELEVATIONS, ADA ACCESSIBILITY REQUIREMENTS ARE SATISFIED.

LEGEND

MEANING	SYMBOL OR ABBREVIATION	MEANING	SYMBOL OR ABBREVIATION
HOT WATER LINE	— — — — —	WALL CLEANOUT	WCO
COLD WATER LINE	— — - — —	CLEANOUT TO GRADE	COTG
VENT LINE	----------	VENT THRU ROOF	VTR
WASTE LINE	— — — — —	FLOOR DRAIN	⊙
HOSE BIB WITH LOCK BOX	(HB-1)		

WATER CALCULATIONS

PRESSURE AVAILABLE AT PRV	50.0 PSI
LOSS THROUGH PRV	2.35 PSI
PRESSURE AVAILABLE FOR BUILDING SUPPLY	47.65 PSI
PIPING LENGTH PRV TO LAST FIXTURE	45 FT
MIN. PRESSURE REQUIRED AT FIXTURE	15.0 PSI
ALLOWABLE PRESSURE DROP THROUGH PIPING	32.65 PSI

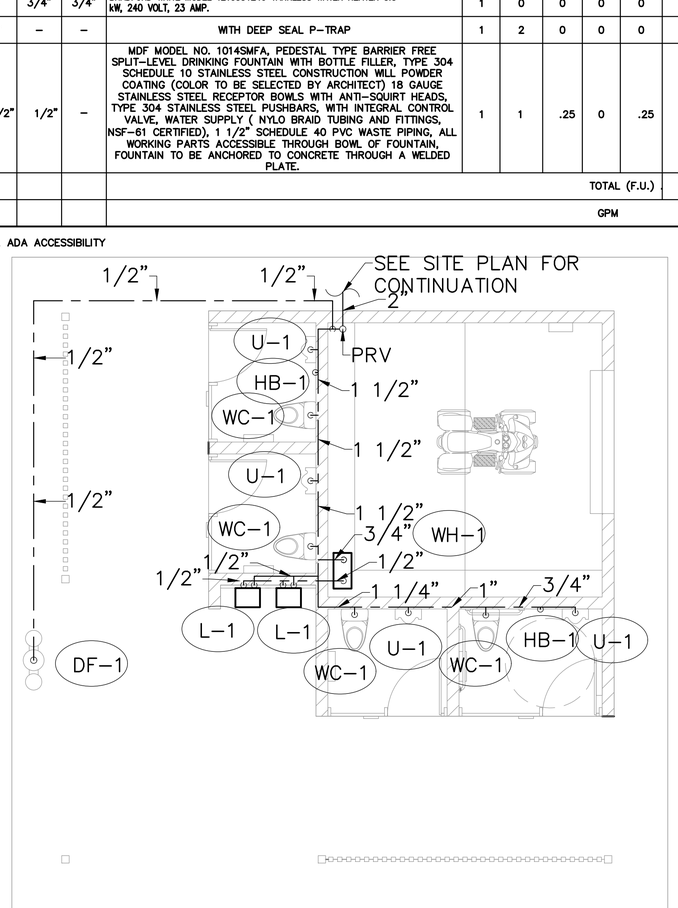
PIPE FRICTION LOSS ALLOWABLE = ALLOW PRESSURE DROP / LENGTH TO MOST DIST FIXTURE X 100 FT

32.65 PSI / 45 FT X 100 FT = 72.5 PSI PER 100 FT.

USE 6.44 PSI PER 100 FT AS DESIGN

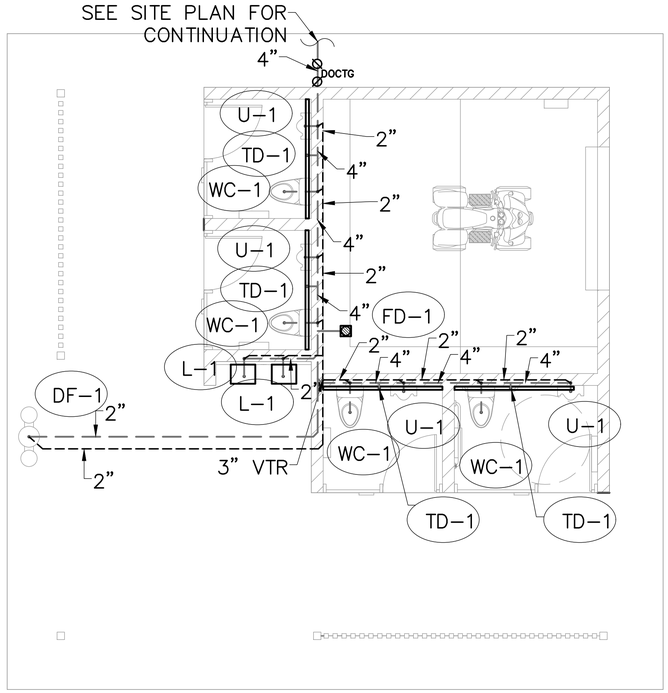
PIPE SIZING TABLE

	SIZE	GPM
PIPE SIZING TABLE FROM IPC FIG. E103.3 (3) AT 8 PSI PER 100 FT. WITH COPPER PIPE AND SMOOTH FLOW FITINGS	1/2"	3
	3/4"	7.5
	1"	19
	1-1/4"	29
	1-1/2"	50
	2"	75



WATER PIPING PLAN

SCALE: 1/4" = 1'-0"



WASTE AND VENT PIPING PLAN

SCALE: 1/4" = 1'-0"

Revisions	Date

Designed By: JAS

Drawn By: JAS

Checked By: JAS

Date: 4/19/2024

Project #: 22.1618.002

Title: PLUMBING SCHEDULES AND PLANS

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: PA75200668-1

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

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JOB # P24016

J2 Design
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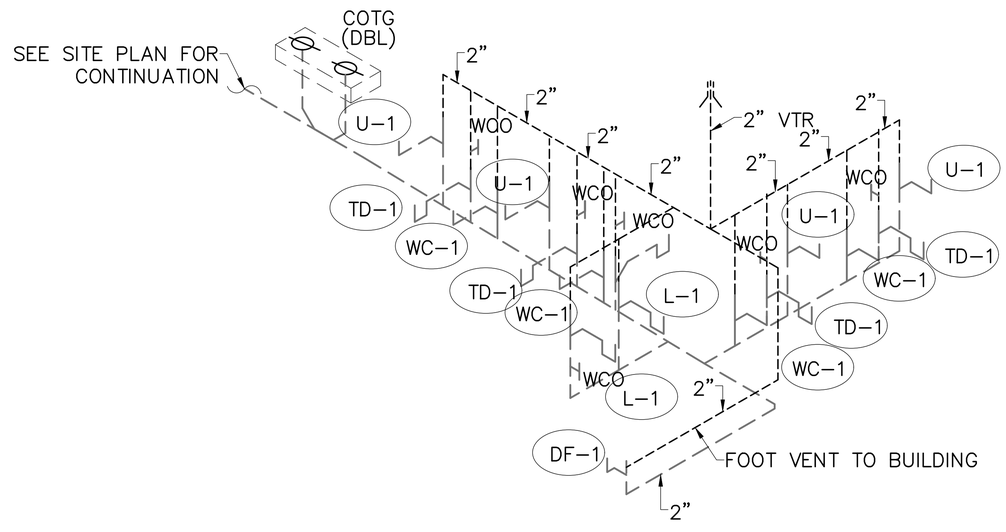
Sheet
P100
139 OF 148

WATER PIPING SCHEMATIC

SCALE: NO SCALE



WASTE AND VENT PIPING SCHEMATIC

SCALE: NO SCALE

Revisions	Date

Designed By: JAS

Drawn By: JAS

Checked By: JAS

Date: 4/19/2024

Project #: 22.1618.002

Title: **PLUMBING SCHEMATICS**

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: **PA75200668-1**

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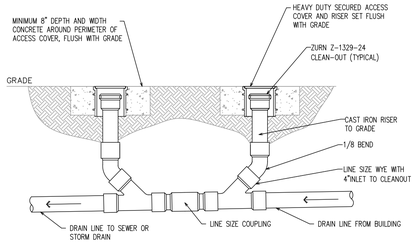
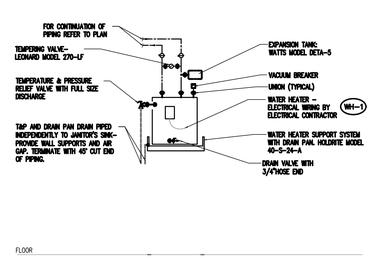
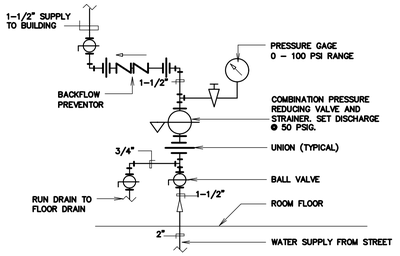
Sheet
P101
140 OF 148



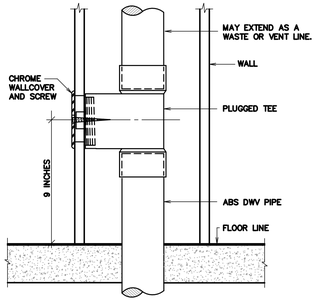
Ⓐ DOUBLE CLEAN OUT TO GRADE
SCALE: NONE



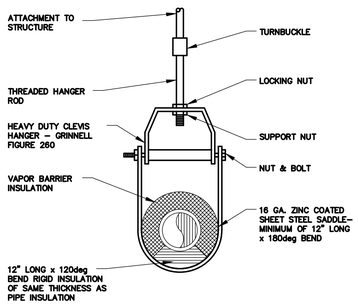
Ⓑ WATER HEATER
SCALE: NONE



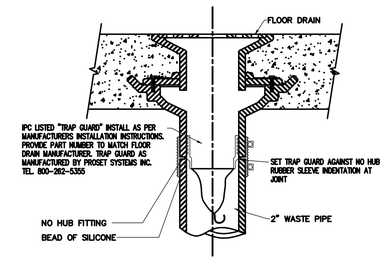
Ⓒ PRESSURE REDUCING VALVE
SCALE: NONE



Ⓓ WALL CLEANOUT DETAIL
SCALE: NONE



Ⓔ CLEVIS HANGER DETAIL
SCALE: NONE



Ⓕ FL. DRAIN TRAP SEAL DETAIL
SCALE: NONE

Revisions	Date

EXPIRES 3/31/25

Designed By: JAS
Drawn By: JAS
Checked By: JAS
Date: 4/19/2024
Project #: 22.1618.002

Title: **PLUMBING DETAILS**

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

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Sheet
P201
141 OF 148

PLUMBING SPECIFICATIONS

1. ALL PLUMBING WORK, INCLUDING FURNISHING AND INSTALLATION OF MATERIALS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE CURRENT PLUMBING AND RELATED CODES AND STANDARDS RECOGNIZED AND OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

2. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION. FURNISH THE ARCHITECT/ENGINEER WITH COMPLETE APPROVAL CERTIFICATES PRIOR TO REQUESTING APPROVAL FROM ARCHITECT/ENGINEER.

3. ALL PLUMBING WORK SHALL ALSO COMPLY WITH CURRENT STANDARDS AND MANUFACTURERS DIRECTIONS AND RECOMMENDATIONS. THE PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS, LICENSE(S), INSPECTIONS, APPROVALS AND FEES.
   - 3.1. STANDARDS SHALL INCLUDE CURRENT EDITION OF THE FOLLOWING:
     - 3.1.1. ASPE (AMERICAN SOCIETY OF PLUMBING ENGINEERS) DATA BOOK, CURRENT EDITION
     - 3.1.2. INTERNATIONAL FUEL GAS CODE.

4. ALL INSTALLATION, METHODS AND CONDITIONS AT THE WORK PLACE SHALL COMPLY WITH OSHA AND EPA REQUIREMENTS.

5. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.

6. GENERAL PLUMBING PIPING MATERIALS:
   - 6.1. WATER PIPING:
     - 6.1.1. ABOVE GRADE: TYPE "L" HARD DRAWN COPPER CONFORMING TO ASTM B88
     - 6.1.2. BELOW GRADE: TYPE "K" SOFT DRAWN, CONFORMING TO ASTM B88. WATER PIPING SET IN OR UNDER CONCRETE OR IN THE GROUND, WRAP LINES BELOW CONCRETE FLOORS WITH 20 MILS OF POLYKON TAPE. BRAZE ALL COPPER UNDERGROUND FITTINGS AND CONNECTIONS USING RODS MEETING AWS CLASSIFICAITON BCUP-4 COPPER PHOSPHORUS (6 PERCENT SILVER).

7. WASTE AND VENT LINES: ABS WASTE AND VENT LINES CONFORMING TO INTERNATIONAL PLUMBING CODE.

8. ALL WATER PIPING SHALL BE INSTALLED IN AREAS OF THE BUILDING THAT ARE NOT SUBJECT TO FREEZING WHERE POSSIBLE. PIPING INSTALLED IN AREAS THAT MAY BE SUBJECT TO FREEZING SHALL BE INSULATED WITH A MINIMUM OF R-6.5 IN ACCORDANCE WITH ASTM C177.

9. PROVIDE VACUUM BREAKERS FOR ALL FIXTURES TO WHICH A HOSE MAY BE ATTACHED. VACUUM BREAKERS SHALL BE INTEGRAL WITH THE OUTLET OR PERMANENTLY ATTACHED.

10. WHERE COPPER OR BRASS PIPING FOR FITTING ARE PASSING THROUGH OR ARE CONCEALED IN CONCRETE OR MASONRY, PVC SLEEVES SHALL BE REQUIRED. INSULATE THE PIPE OR FITTING WITH A MINIMUM 1/2" THICK CLOSED CELL TYPE INSULATION BY ARMACEL OR EQUAL.

11. DIELECTRIC CONNECTIONS SHALL BE USED BETWEEN ALL DIELECTRIC DIS-SIMILAR PIPE MATERIALS, IE FERROUS AND NON-FERROUS PIPING.

12. VERIFY ALL INVERT ELEVATIONS PRIOR TO FINAL TRENCHING AND INSTALLATION OF WASTE PIPING, TO PROVIDE THE A MINIMUM SLOPE OF 1/8" PER FOOT FOR 3" AND LARGER PIPING AND 1/4" PER FOT FOR PIPE SMALLER THAN 3". COORDINATE ALL UNDERGROUND PIPING WITH ALL STRUCTURAL FOUNDATIONS AND WITH THE INVERT ELEVATION OF THE SEWER CONNECTION.

13. PROVIDE CLEANOUTS AT THE BASE OF ALL WASTE STACKS, AT EVERY FOUR (4) HORIZONTAL 45° TURNS, AND AT EVERY 100 FEET OF PIPE LENGTH. CLEANOUTS SHALL BE INSTALLED AT ACCESSIBLE LOCATIONS.

14. COOPERATIVE WORK:
   - 14.1. COOPERATIVE WORK INCLUDES: GENERAL SUPERVISION AND RESPONSIBILITY FOR PROPER LOCATION, ROUGH-IN AND SIZE OF WORK RELATED TO THIS DIVISION BUT PROVIDED UNDER OTHER DIVISIONS OF THE WORK.
   - 14.2. CORRECT WITHOUT CHARGE, ANY WORK REQUIRING ALTERATION DUE TO LACK OF PROPER SUPERVISION, COORDINATION BETWEEN DIVISIONS OF THE WORK OR FAILURE TO PAPER PROPER PROVISIONS IN TIME. CORRECT WITHOUT CHARGE ANY DAMAGE TO ADJACENT WORK CAUSED BY ALTERATION.

15. DRAWINGS INDICATE GENERAL ARRANGEMENT OF PIPING, EQUIPMENT, ETC. FOLLOW AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND JOBSITE CONDITIONS PERMIT. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, NOT ALL NECESSARY AND REQUIRED OFFSETS, FITTINGS AND ACCESSORIES ARE SHOWN. PLUMBING CONTRACTOR SHALL PROVIDE ALL SUCH OFFSETS, FITTINGS AND ACCESSORIES FOR A COMPLETE AND WORKING SYSTEM. PLUMBING CONTRACTOR SHALL COORDINATE THIS WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF MATERIALS OR EQUIPMENT. VARIANCES BETWEEN THE REQUIREMENTS OF THESE DRAWINGS AND THE CONDITIONS OR DIMENSIONS IN THE FIELD SHALL BE REPORTED TO THE ENGINEERS PRIOR TO ORDERING OR PERFORMANCE OF THE AFFECTED WORK. DO NOT SCALE DRAWINGS FOR MEASUREMENTS.

16. ALL PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE FLASHED AND COUNTERFLASHED. AND SEALED TO PREVENT WATER PENETRATION. ESCUTCHEONS SHALL BE INSTALLED AT PIPING PENETRATIONS AT ALL EXPOSED LOCATIONS.

17. THE PLUMBING CONTRACTOR SHALL COORDINATE AND VERIFY ALL PENETRATION LOCATIONS FOR VENTS AND FLUES WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.

18. ROUGH-IN ALL EQUIPMENT, ACCESSORIES AND FIXTURES AS DESIGNATED ON THE DRAWINGS. THE DRAWINGS INDICATE ONLY THE APPROXIMATE LOCATION OF ROUGH-INS' THE CONTRACTOR SHALL OBTAIN ALL CERTIFIED ROUGH-IN INFORMATION BEFORE PROGRESSING WITH ANY WORK FOR ROUGH-IN OR FINAL CONNECTIONS.

19. COVER NO WORK UNTIL INSPECTED, TESTED AND APPROVED, BY ARCHITECT OR OTHER OWNER DESIGNATED REPRESENTATIVE AND BY AUTHORITY HAVING JURISDICTION. WHERE WORK IS COVERED BEFORE INSPECTION AND TEST, UNCOVER IT AND WHEN INSPECTED, TESTED AND APPROVED, RESTORE ALL WORK TO ORIGINAL, PROPER CONDITION.

20. ALL PLUMBING EQUIPMENT SHALL BE LISTED AND LABELED BY UL OR EQUIVALENT TESTING AGENCY ACCEPTABLE TO LOCAL CODES AND AUTHORITY HAVING JURISDICTION.

21. ALL PIPING SYSTEMS SHALL BE TESTED AS REQUIRED IN THE LOCAL PLUMBING CODE. POTABLE WATER SYSTEMS SHALL BE DIS-INFECTED PER LOCAL PLUMBING OR HEALTH CODES.

22. DEMONSTRATE THAT ALL APPARATUS ARE FUNCTIONING PROPERLY AND EFFICIENTLY, AND ALL SYSTEMS ARE PLACED IN OPERATION. INCLUDE START-UP AND ADJUSTMENTS.

23. WINDOWS AND OTHER OPENINGS AND ALL BUILDING OUTSIDE AIR INTAKES SHALL BE LOCATED A MINIM OF 10'0" FROM ALL PLUMBING VENT LOCATIONS.

Revisions	Date

EXPIRES 3/31/25

Designed By: JAS

Drawn By: JAS

Checked By: JAS

Date: 4/19/2024

Project #: 22.1618.002

Title: **PLUMBING SPECIFICATIONS**

1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: **PA75200668-1**

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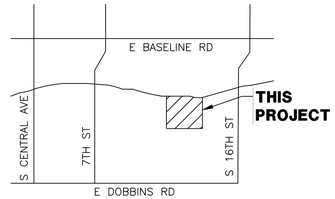
Sheet
P301
142 OF 148

HIGHLINE PARK RR
SITE ELECTRICAL PLAN
PHOENIX, ARIZONA

GENERAL ELECTRICAL NOTES

1. ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (LATEST EDITION), FEDERAL, STATE AND LOCAL JURISDICTION CODES.
2. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION.
3. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING UTILITIES AND AVOIDING DAMAGE TO SAME. CONTRACTOR TO CALL 811 FOR BLUE STAKE. FOR ALL MUNICIPAL OR PRIVATELY OWNED UTILITIES EXISTING WITHIN LIMITS OF WORK OF PROJECT, CONTRACTOR TO PRIVATELY LOCATE UTILITIES. IRRIGATION LINES LESS THAN 2" WILL NOT TYPICALLY BE MARKED AND CAUTION SHOULD BE USED TO AVOID DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL UTILITIES CAUSED AS A RESULT OF CONTRACT WORK, ALL DAMAGES TO BE REPAIRED IN KIND.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING WALKS, WALLS, DRIVES, CURBS, ETC. DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
6. PROPER PROTECTION OF THE CONSTRUCTION AREA FOR SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COVER ALL TRENCHES AT THE END OF EACH WORK DAY. BARRICADES SHALL BE INSTALLED AS DIRECTED BY THE OWNER OR THE PROJECT INSPECTOR. THE SITE AND ALL WORK SHALL CONFORM TO OSHA REQUIREMENTS.
7. ALL EXISTING LANDSCAPE, HARDSCAPE AND SPRINKLER SYSTEMS DAMAGED OR DISTURBED DURING THE CONSTRUCTION OF THIS PROJECT BY THE CONTRACTOR SHALL BE REPLACED IN KIND.
8. CONTRACTOR SHALL PAY FOR PERMITS AND INSPECTIONS AS MAY BE REQUIRED AND PROVIDE A CERTIFICATE OF INSPECTION TO THE OWNER.
9. PROTECT ALL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, AND LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
10. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION.
11. IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND/OR CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED AND SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND ALL O & M MANUALS.
12. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, BURIED 24" MINIMUM BELOW FINISHED GRADE, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
13. PROVIDE EMT INDOOR AND GRS OUTDOOR FOR ABOVE GROUND CONDUIT. WHERE METALLIC CONDUITS COME IN CONTACT WITH DIRT, THEY SHALL BE HALF LAP WRAPPED WITH SCOTCH 50 TAPE TO 12" AFG. FITTINGS SHALL BE STEEL, THREADED TYPE WITH INSULATED THROATS. SECURELY ATTACH ALL SURFACE MOUNTED CONDUIT EVERY 10 FEET AND WITHIN 3 FEET OF EACH JUNCTION BOX, PER NEC ARTICLE 344.30.
14. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
15. ALL FEEDERS AND BRANCH CIRCUIT WIRE SHALL BE COPPER TYPE XHHW (75 DEGREE C) FOR BELOW GRADE INSTALLATIONS (AND CONDUIT RISERS) AND THHN/THWN (75 DEGREE C) FOR ABOVE GRADE INSTALLATIONS. MINIMUM SIZE SHALL BE #12 AWG, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS. ALL WIRING SHALL BE IN CONDUIT. FOR NEW WIRING IN COMMERCIAL APPLICATIONS, THE USE OF TYPES NM, NMC, NMS (ROMEX) CABLES IS NOT PERMITTED. ALL CONDUCTORS SHALL BE NEW UNLESS NOTED OTHERWISE IN PLANS.
16. A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR (BOND) SHALL BE INSTALLED WITHIN EACH RACEWAY, INCLUDING WITHIN EMT CONDUIT. EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED PER NEC TABLE 250.122.
17. WHEN A PANEL IS SUPPLIED BY A FEEDER OR BRANCH CIRCUIT, ANY INSTALLED GROUNDED CONDUCTOR SHALL NOT BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR (GEC) OR TO THE GROUNDING ELECTRODE(S) PER NEC ARTICLE 250.32(B).
18. BOND ALL ENCLOSURES PER NEC ARTICLE 250.96.
19. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, ETC. NECESSARY FOR A COMPLETE AND WORKABLE ELECTRICAL SYSTEM WHETHER OR NOT THESE ITEMS ARE SPECIFICALLY NOTED ON THESE DRAWINGS. INCIDENTAL ITEMS NOT INDICATED ON THE DRAWINGS, NOR MENTIONED IN SPECIFICATIONS THAT CAN BE LEGITIMATELY AND REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED OR BE NECESSARY IN GOOD PRACTICE TO PROVIDE A COMPLETE SYSTEM, SHALL BE FURNISHED AND INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.
20. CONTRACTOR IS RESPONSIBLE FOR AND SHALL PROVIDE ALL LABOR, MATERIAL, TRENCHING, CONDUIT, TRANSFORMER PAD AND OTHER REQUIRED EQUIPMENT PER UTILITY COMPANY PLANS AND SPECIFICATIONS NECESSARY FOR A COMPLETE UNDERGROUND CONDUIT SYSTEM FROM THE UTILITY POINT OF SERVICE TO THE UTILITY CO. TRANSFORMER AND FROM THE UTILITY CO. TRANSFORMER TO THE ELECTRICAL SERVICE ENTRANCE SECTION.
21. ALL TRENCHING, CONDUITS, ETC. SHALL BE ROUTED AND INSTALLED IN SUCH A MANNER THAT WILL NOT DAMAGE EXISTING FACILITIES. SHOULD DAMAGE OCCUR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR DAMAGE TO THE SATISFACTION OF THE OWNER OR INSPECTOR.
22. ALL CONDUIT RUNS SHOWN ON THIS PLAN ARE SCHEMATIC IN NATURE. THE CONTRACTOR SHALL MAKE SURE THAT ALL CONDUIT, ETC. FALLS WITHIN THE CONSTRUCTION AREA/RIGHT OF WAY. (THIS INCLUDES MAINTAINING ALL REQUIRED CLEARANCES.)
23. WHEN CROSSING PATHWAYS OR SIDEWALKS, CONTRACTOR SHALL BORE UNDER EXISTING CONCRETE WALKS AND SAWCUT ASPHALT WALKS. ASPHALT WALKS SHALL BE REPLACED IN KIND.
24. CONTRACTOR SHALL GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, USUAL WEAR EXCEPTED, AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE PROJECT BY THE OWNER, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.
25. CONTRACTOR SHALL IDENTIFY SERVICE ENTRANCE SECTION MAIN SERVICE DISCONNECT(S) WITH 3/32-INCH THICK LAMINATED PHENOLIC TYPE NAMEPLATES WITH 1/4-INCH MINIMUM HEIGHT LETTERS. NAMEPLATE TO BE BLACK MATTE FINISH SURFACE WITH WHITE LETTER ENGRAVING. ATTACH NAMEPLATE TO THE OUTSIDE PANEL FACE WITH TWO STAINLESS STEEL SELF-TAPPING SCREWS. NAMEPLATE SHALL READ "SERVICE DISCONNECT" PER NEC ARTICLE 230.70(B).
26. ALL CIRCUITS SHALL BE LEGIBLY IDENTIFIED AT THE PANEL, JUNCTION BOXES AND AT ALL EQUIPMENT IN A PERMANENT MANNER (I.E. ETCHED PLATES, CONDUCTOR TAG, PERMANENT MARKER, ETC.). THE LABELING SHALL INCLUDE PANEL CIRCUIT NUMBER, "TO" AND "FROM" IDENTIFICATION, AND MARKED "SPARE" WHERE APPLICABLE.
27. CONTRACTOR SHALL TEST ELECTRICAL SYSTEM FOR SHORT CIRCUITS AND MEGGER TEST FEEDER CIRCUIT WIRING. PROVIDE CERTIFIED TEST RESULTS FOR MEGGER TEST TO OWNER UPON COMPLETION OF PROJECT.
28. ALL CONDUIT SHOWN SHALL BE CONCEALED WHEN POSSIBLE. WHEN NOT POSSIBLE, CONDUIT MAY BE SURFACE MOUNTED WITH PERMISSION OF THE OWNER OR OWNER'S REPRESENTATIVE.
29. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT CONNECTIONS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL FUSED DISCONNECT SWITCHES AND CONTROLS IF OVERCURRENT PROTECTION OR CONTROLS IS NOT INTEGRAL WITH UNITS.
30. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA-3R OR NEMA-4 ENCLOSURES.
31. CONDUITS OR RACEWAYS ROUTED FROM INDOORS TO OUTDOORS OR AS DESCRIBED IN NEC 300.7(A), SHALL BE SEALED WITH A PLIABLE SEALING COMPOUND AT A CONDUIT BODY OR AT A JUNCTION BOX BEFORE THE CONDUIT ENTERS THE COLDER ENVIRONMENT.
32. CONDUITS OR RACEWAYS INSTALLED IN AREAS WHERE ELEVATION CHANGES MAY CAUSE WATER OR MOISTURE TO ENTER THE ELECTRICAL EQUIPMENT THROUGH THE CONDUIT SHALL BE SEALED WITH A HERMETIC CONDUIT SEAL AT BOTH ENDS OF THE CONDUIT OR RACEWAY.
33. INSTALL FIRE SEALS IN ALL CONDUITS PENETRATING THE FIRE WALL TO MAINTAIN THE FIRE RESISTANCE RATING OF THE WALL, AS REQUIRED BY NEC 300.21.
34. PRIOR TO POURING THE POLE BASES OR COVERING ANY ELECTRICAL CONDUITS, CONTACT THE INSPECTION DEPARTMENT 24 HOURS IN ADVANCE FOR APPROVAL.
35. MATERIALS SHALL BE NEW AND OF THE BEST QUALITY WITH MANUFACTURER'S NAME PRINTED THEREON. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UNDERWRITER'S LABORATORY OR OTHER APPLICABLE STANDARDS AND RATED FOR HEAVY DUTY SERVICE.
36. SELECTION OF MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE DRAWINGS AND/OR SPECIFICATIONS. THE USE OF MANUFACTURER'S NAME, MODEL, AND NUMBER IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. CONTRACTOR SHALL SUBMIT TO THE OWNER OR OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL (PRIOR TO ORDERING MATERIALS) COPIES OF EQUIPMENT SHOP DRAWINGS AS FOLLOWS: LIGHT FIXTURES, SERVICE ENTRANCE SECTION, ELECTRICAL EQUIPMENT, DISCONNECT SWITCHES, TIME CLOCKS AND OTHER CONTROLS, LIGHTING CONTACTORS AND PULL BOXES. AT THE TIME OF EACH SUBMITTAL, THE CONTRACTOR SHALL DEFINE AND DELINEATE IN WRITING ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS. THE REVIEW WILL BE ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE WORK AND FOR COMPLIANCE WITH THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE REVIEW OF A SPECIFIED ITEM, AS SUCH, WILL NOT INDICATE REVIEW OF THE ASSEMBLY IN WHICH THE ITEM FUNCTIONS. REVIEW BY THE OWNER OR OWNER'S REPRESENTATIVE WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN THE SUBMITTALS NOR FROM HIS RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.
37. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.



VICINITY MAP
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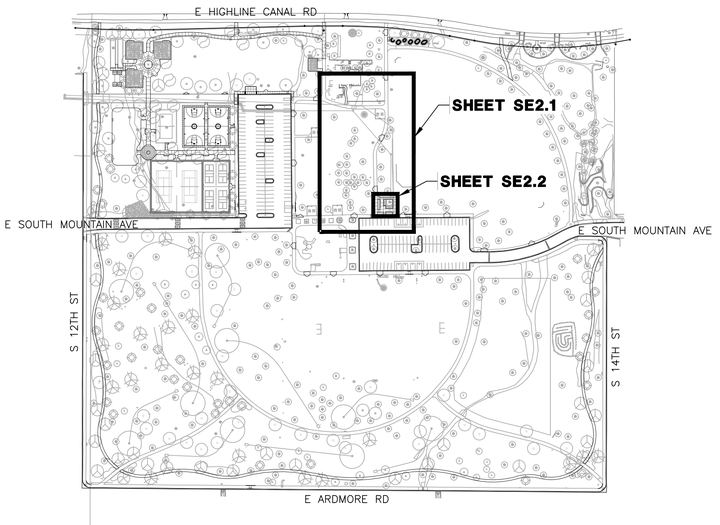

AREA MAP
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NORTH

Revisions	Date

Registered Professional Engineer (Retired)
Certificate No.
57159
CLIFFORD M. TOLMAN
Date Signed 4-25-24
Expires 3-31-26

Designed By: CJL
Drawn By: CJL
Checked By: CMT
Date: 4/25/2024
Project #: 22.1618.002

Title: **RESTROOM**
SITE ELECTRICAL COVER SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

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Sheet
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143 OF 148

ELECTRICAL SYSTEM SPECIFICATIONS

1.0 INTENT

1.1 FURNISH AND INSTALL A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

1.2 ALL DRAWINGS ARE SCHEMATIC IN NATURE AND THE REQUIRED INSTALLATION IS NOT LIMITED TO WHAT IS SHOWN. ALL APPURTENANCES NECESSARY TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM MUST BE INCLUDED IN THE CONTRACTORS BID AND WORK

2.0 GENERAL

2.1 THE CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS BID OR WORK. NO ALLOWANCES WILL BE MADE FOR EXISTING CONDITIONS OR THE CONTRACTORS FAILURE TO ACCOMMODATE EXISTING CONDITIONS ON HIS BID.

2.2 IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN CLARIFICATION OF ANY APPARENT CONFLICT OR INCONSISTENCY IN THE DRAWINGS, SPECIFICATION, OR DESIGN, PRIOR TO HIS BID AND IN WRITHING WITH THE ENGINEER. OTHERWISE THE CONTRACTOR ACCEPTS RESPONSIBILITY TO CORRECT (AT HIS COST) ANY SUCH ITEMS TO MEET THE INTENT AS INTERPRETED BY THE ENGINEER.

2.3 ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE MOST RECENT EDITIONS OF THE NFPA, NATIONAL ELECTRIC CODE (NEC), U.B.C., APPLICABLE CITY AND STATE CODES AND ORDINANCES, THE AMERICANS WITH DISABILITIES ACT, E.P.A. REGULATIONS (INCLUDING EPACT 1992), AND UTILITY COMPANY REQUIREMENTS, THE FOREGOING CODES AND REGULATIONS ARE REQUIREMENTS AND ARE INCORPORATED IN THIS SPECIFICATION FOR THIS WORK BY REFERENCE.

2.4 THE CONTRACTOR SHALL COORDINATE AND PROVIDE INFORMATION AS REQUIRED TO ALL SERVING UTILITIES IN A TIMELY MANNER AS NECESSARY TO PROVIDE THE SERVICE REQUIRED AND MEET UTILITY REQUIREMENTS. IMMEDIATE COORDINATION WILL BE REQUIRED FOR MOST PROJECTS. FIELD COORDINATE ALL REQUIREMENTS PRIOR TO TRENCHING.

2.5 REFER TO ARCHITECTURAL, MECHANICAL, CIVIL, STRUCTURAL, AND/OR EQUIPMENT SUPPLIERS DRAWINGS AND SPECIFICATIONS FOR EXACT EQUIPMENT LOCATIONS, LOADS AND ADDITIONAL REQUIREMENTS. REPRESENTATIONS OF THE WORK SPECIFIC TO THE OTHER DISCIPLINES IS SHOWN ON THE ELECTRICAL DRAWINGS FOR CLARITY ONLY.

2.6 THE CONTRACTOR ASSUMES RESPONSIBILITY FOR ALL EQUIPMENT HE SUPPLIES. ALL EQUIPMENT SHALL BE INSTALLED STRICTLY PER MANUFACTURERS RECOMMENDATIONS. OTHERWISE THE CONTRACTOR ASSUMES RESPONSIBILITY (AT HIS COST) TO CORRECT AND REMEDY ANY INSTALLATION NOT IN COMPLIANCE WITH THE MANUFACTURES RECOMMENDATIONS AND INTENTIONS AS INTERPRETED BY THE ENGINEER.

2.7 ANY VARIANCE OR EXCEPTIONS TO THE DRAWINGS AND SPECIFICATIONS MUST BE REQUESTED AND APPROVED IN WRITING. INTERIM VERBAL APPROVALS WILL ONLY BE PROVIDED WHEN THE ENGINEER DETERMINES THIS TO BE JUSTIFIED AND MUST BE CONFIRMED IN WRITING TO BE FINAL.

2.8 THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL NECESSARY VARIANCES, AND APPROVALS, ETC, (AT HIS COST) WHICH MAY BE REQUIRED FOR COMPLETION OF THIS WORK.

2.9 PRIOR TO ROUGH-IN, THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL LIGHT FIXTURES AND WIRING DEVISES: TO INCLUDE MOUNTING HEIGHT AND LOCATIONS. ALL CONFLICTS SHALL BE REPORTED TO THE ENGINEER/ARCHITECT.

2.10 THE ELECTRICAL CONTRACTOR SHALL PROVIDE EQUIPMENT AND SUPPORT FOR PROGRESS AND FINAL INSPECTIONS. THIS INCLUDES COMPLETE ACCESS TO ALL EQUIPMENT. ADDITIONALLY A COMPLETE SET OF SPARE FUSES FOR ALL FUSES USED AND A 5% SUPPLY OF ALL LIGHT BULBS PROVIDED IN FIXTURES (TO A MAXIMUM OF 15 FOR EACH STYLE) SHALL BE PROVIDED TO THE OWNER AT FINAL INSPECTION.

3.0 MATERIALS AND METHODS

3.1 THE USE OF EMT IS ACCEPTABLE IN ACCORDANCE WITH NEC ARTICLE 348-1. EMT SHALL NOT BE USED WHERE IT IS SUBJECT TO SEVERE PHYSICAL DAMAGE. EMT FITTINGS SHALL BE COMPRESSION TYPE OR SET SCREW TYPE WITH A CODE SIZED COPPER BOND WIRE. MINIMUM TRADE CONDUIT SIZE IS 1/2"
CONDUCTORS SHALL BE 600V COPPER (98% CONDUCTIVITY). MINIMUM LINE VOLTAGE WIRE SIZE IS #12 A.W.G. #6 AND SMALLER SHALL HAVE THHN/THHW INSULATION. #4 AND LARGER SHALL HAVE XHHW/XHHW-2 INSULATION. ALL CONDUCTORS SHALL HAVE 90° RATED INSULATION.

3.2 WHEN SEPARATE BRANCH CIRCUIT NEUTRAL CONDUCTORS ARE USED WITH EACH PHASE CONDUCTOR OR SYSTEMS FURNITURE IS INDICATED, THE MINIMUM NEUTRAL CONDUCTOR SIZE SHALL BE #10 A.W.G. STANDARD COPPER.

3.3 ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE, (MINIMUM 20 AMPS RATED FOR RECEPTACLES AND SWITCHES). HUBBELL OR LEVITON ARE ACCEPTABLE, ALL SPECIAL RECEPTACLES AND GROUND FAULT PROTECTION DEVICES MUST BE PERMANENTLY MARKED WITH ENGRAVED COVER PLATES.

3.4 COVER PLATES SHALL BE PER OWNERS DIRECTION.

3.5 ALL CONDUCTORS TO BE CONCEALED EXCEPT TO SURFACE MOUNTED PANES AND AT THE CEILING OF EXPOSED STRUCTURE AREAS. CONDUITS WILL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.

3.6 LIQUID TIGHT FLEXIBLE METAL CONDUIT (SEAL TITE) SHALL BE USED FOR CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION (E.G. MOTORS).

3.7 THE USE OF MC CABLE IS ACCEPTABLE IN ACCORDANCE WITH NEC ARTICLE 334-3 AND 334-4, BUT LIMITED TO USE FOR CONCEALED BRANCH CIRCUITS ONLY. ADDITIONALLY MC CABLE MAY NOT BE USED FOR HOME RUNS OR OUTDOORS.

3.8 NONMETALLIC CONDUIT MAY BE USED ONLY IN OR UNDER SLABS AND IN CONCRETE OR MASONRY WALLS. BELOW GRADE OR UNDER SLAB INSTALLATION BUST BE 24" DEEP OR GREATER. CARLON IS ACCEPTABLE.

3.9 FUSES SHALL BE BUSSMAN, LITTLEFUSE, OR GOULD SHAWMUT.

3.10 CONDUCTORS WILL BE SOLID OR STRANDED WITH INSULATION CONTINUOUSLY COLOR COATED UP TO AND INCLUDING SIZE #6 A.W.G. GROUNDING/BONDING CONDUCTORS SHALL BE U.L. LABELED ROPE STRAND.

3.11 CONNECTIONS SPLICES SHALL BE EXOTHERMIC WELD (CAD WELD) FOR GROUNDING/BONDING CONDUCTORS.

3.12 NEW CONDUCTORS SHALL BE CONTINUOUS. HYDRAULIC CRIMP SPLICES OR CONNECTIONS ARE EXCEPTIONS AND REQUIRE SPECIFIC APPROVAL IN WRITHING.

3.13 ALL CONDUIT SUPPORT SYSTEMS SHALL BE INSTALLED ON THE BUILDING STRUCTURE. UNISTRUT, BEELINE, OR CADDY MOUNTING SYSTEMS ARE ACCEPTABLE. NO CONDUIT WILL BE SUPPORTED BY THE CEILING WIRES OR GRID SYSTEM. PERFORATED STRAPS OR OTHER PIPING AND CONDUIT STRAPS ARE NOT ACCEPTABLE SUPPORTS.

3.14 ACCEPTABLE MANUFACTURES FOR SWITCH GEAR AND RELATED COMPONENTS ARE: SQUARE D, CHALLENGER, GENERAL ELECTRIC, SIEMENS, AND CUTLER-HAMMER.

3.15 CONDUCTORS SHALL BE COLOR CODED FOR BRANCH CIRCUITS (IN ACCORDANCE WITH NEC 210-5) AND PHASE LEGS OF FEEDERS TO PANEL BOARDS. SWITCHBOARDS, ETC. (IN ACCORDANCE WITH NEC 384-3(f) AN LOCAL MUNICIPAL REQUIREMENTS. SPECIFIC REQUIREMENTS INCLUDE THE FOLLOWING:
- 120-V, 2-WIRE CIRCUIT: GROUNDED NEUTRAL-WHITE; UNGROUNDED LEG-BLACK.
- 208/120-V, 4 WIRE, THREE PHASE CIRCUIT: GROUNDED NEUTRAL-WHITE; PHASE A-BLACK; PHASE B-RED; PHASE C-BLUE.
- EQUIPMENT GROUNDING CONDUCTORS-GREEN.

4.0 SUBMITTALS

4.1.1 SUBMIT SHOP DRAWINGS AND SAMPLES (WHERE SPECIFIED) FOR ALL EQUIPMENT, PRIOR TO ORDERING, IN A TIMELY MANNER. SUBMITTALS SHALL INCLUDE LIGHT FIXTURES (INCLUDING LIGHT POLES), SWITCHBOARDS, PANELBOARDS, STARTER CONTROL EQUIPMENT, ELECTRICAL DEVICES, HVAC ELECTRICAL EQUIPMENT AND TRANSFORMERS.

4.1.2 SHOP DRAWINGS SHALL INCLUDE LAYOUT DIMENSIONS AND IDENTIFICATION OF SPECIFIC EQUIPMENT FOR INSTALLATION, MINIMUM NEC CLEARANCES (E.G. 110-16) SHALL BE INDICATED.

4.2 THE CONTRACTOR SHALL INCLUDE COMPARISON DATA AND SAMPLES FOR BOTH THE SUBSTITUTE AND SPECIFIED ITEMS WHEN SUBSTITUTIONS ARE PROPOSED. THE CONTRACTOR REMAINS RESPONSIBLE TO PROVIDE THE ORIGINALLY SPECIFIED INSTALLATION IN ACCORDANCE WITH THE ORIGINAL DELIVERY DATE (AT THEIR COST) WHEN SUBSTITUTIONS ARE NOT APPROVED.

4.3 THE CONTRACTOR SHALL PROVIDE PROOF OF PERFORMANCE BOND WITH INITIAL SUBMITTALS (E.G. SHOP DRAWINGS) TO INCLUDE WARRANTY FOR THE WARRANTY PERIOD DESCRIBED IN SECTION 5.0.

4.4 PROVIDE 2 COPIES OF ALL MANUFACTURER/SUPPLIER WARRANTIES AND GUARANTEES TO THE OWNER WITHIN 2 WEEKS OF FINAL ACCEPTANCE BY THE OWNER.

4.5 THE CONTRACTOR SHALL SUBMIT COMPLETE AND ACCURATE "AS BUILT" DRAWING TO THE OWNER AND ENGINEER WITHIN 2 WEEKS OF OWNER ACCEPTANCE. FAILURE TO COMPLY WILL RESULT IN WITHHOLDING OF PAYMENTS DUE, AND ASSESSMENT OF CHARGES (AGAINST THE CONTRACTOR) FOR AS-BUILT DEVELOPMENT BY THE ENGINEER AT THE CURRENT HOURLY RATE.

4.6 PROVIDE A LETTER TO THE OWNER AND ENGINEER CERTIFYING ALL EQUIPMENT AND TERMINATIONS ARE PROPERLY TORQUED. THIS CERTIFICATION SHALL BE EXECUTED BY A LICENSED CONTRACTOR, AND WRITTEN CERTIFICATION PROVIDED ON COMPANY LETTERHEAD.

4.7 TESTS

4.7.1 SUBMIT 2 COPIES OF ALL INDEPENDENT TEST RESULTS FOR THE ELECTRICAL POWER DISTRIBUTION SYSTEM AS A COMPLETE PACKAGE TO THE OWNER AND ENGINEER. PACKAGE MUST PROVIDE SPECIFIC VALUES OF TEST DATA OBTAINED AGAINST ACCEPTANCE CRITERIA (SIMPLE PASS/FAIL ALONE IS INADEQUATE). TESTING PERSONNEL SHALL BE CERTIFIED BY INTERNATIONAL ELECTRIC TESTING ASSOCIATION (NETA) OR NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET).

4.7.1.1 GROUNDING SYSTEM FALL-OFF-POTENTIAL (RESISTANCE TO GROUND) SHALL PROVIDE LESS THAN 4 OHMS RESISTANCE TO GROUND AND LESS THAN 0.5 OHMS TO MAJOR ELECTRICAL EQUIPMENT FRAMES. SYSTEM NEUTRAL, AND/OR DERIVED NEUTRAL POINTS. (REF IEEE STANDARD 81-1991 AND 142). SHALL NOT BE PERFORMED WITHIN 24 HOURS OF RAIN FALL.

4.7.1.2 OVER POTENTIAL (HIGH POTENTIAL) TESTING ON BUSSES GREATER THAN 1000 AMPS (OR MODIFICATION OF SERVICES) GREATER THAN 400 AMPS AND EACH PHASE TO GROUND IN ACCORDANCE WITH SWITCH GEAR / SWITCH BOARD MANUFACTURES RECOMMENDATIONS FOR ONE MINUTE. THE INSULATION SHALL WITH STAND THE OVER POTENTIAL TEST VOLTAGE APPLIED.

4.7.1.3 GROUND-FAULT PROTECTION SYSTEM SHALL BE TESTED USING PRIMARY DETECTION FOR PICK UP TEST. RELAY TIMING SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION.

4.7.2 PROVIDE TWO COPIES OF ACCEPTANCE OF FIRE ALARM SYSTEM BY LOCAL FIRE AUTHORITY, WHERE FIRE ALARM SYSTEM IS REQUIRED.

4.7.3 INSULATION RESISTANCE (MEGGER) (AC AND DC(1000V) FOR ONE MINUTE) SHALL PROVIDE 50 MEGOHMS OR GREATER. MAY BE PERFORMED BY CONTRACTOR, WITH WRITTEN CERTIFICATION BY LICENSED CONTRACTOR.

5.0 WARRANTY

5.1 THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FURNISHED BY HIM UNDER THIS CONTRACT FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. ANY DEFECTS DEVELOPING DURING THE WARRANTY PERIOD TRACEABLE TO MATERIALS OF WORKMANSHIP SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.

5.2 THE OWNER RETAINS THE RIGHT TO REQUIRE REMOVAL AND INSTALLATION (AT ANY TIME) OF ANY MATERIAL OR EQUIPMENT NOT IN COMPLIANCE WITH THE PROVISIONS AND STANDARDS OF THESE DRAWINGS AND SPECIFICATIONS. NO CLAIM FOR ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK PERFORMED IN THIS REGARD.

5.3 THE CONTRACTOR AGREES TO TRANSFER ALL MANUFACTURERS/SUPPLIERS WARRANTS AND GUARANTEES TO THE OWNER. THIS INCLUDES COMPLETION OF ALL DOCUMENTATION FOR THE MANUFACTURER/SUPPLIER.

6.0 SERVICE

WHERE SES IS EXISTING:

6.1.1 THE CONTRACTOR IS TO VERIFY THAT THE CONDITION OF THE EQUIPMENT MEETS LOCAL AND NEC STANDARDS. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR PRIOR TO THE ADDITION OF NEW LOAD TO EXISTING PANEL. IF THE SERVICE HAS SUFFICIENT ELECTRICAL CAPACITY (DETERMINED BY ENGINEERS LOAD CALCULATION), INSTALL NEW EQUIPMENT PER PLANS.

6.1.2 WHERE THE FAULT CURRENT AT THE EXISTING CABINET IS GREATER THAN 22,000, THE AIC AT PANEL WILL BE CALCULATED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO INSTALL COMPONENTS NECESSARY (PER CALCULATION) TO REDUCE THE AIC AT PANEL TO 22,000 AIC OR LESS.

WHERE SES IS PROPOSED:

6.2.1 PROVIDE AND INSTALL NEW SERVICE SECTION AS SHOWN ON DRAWINGS. SES SHALL BEAR U.L. LABEL, HAVE COPPER BUSSING - SILVER PLATED AND AMPERAGE RATING AS SHOWN ON DRAWINGS, METERING AND PRIMARY PULL SECTION SHALL BE BARRIERED FROM OTHER WORK AND APPROVED BY BOTH THE LOCAL UTILITY COMPANY AND AUTHORITY HAVING JURISDICTION.

6.2.2 ENCLOSURES SHALL MEET UL. & PUBLIC UTILITY REQUIREMENTS-PHYSICALLY BARRIERED BETWEEN SECTIONS, LINE AND LOAD.

6.2.3 NO COVERS GREATER THAN 1/3 HEIGHT OF EQUIPMENT.

6.2.4 FULL SIZED NEUTRAL BUSSING AND FULLY RATED (NON-TAPERED) BUSSING WILL BE STANDARD. ALL SPACE WILL BE FULLY BUSSED FOR FUTURE. ALL BUSSING WILL BE PHYSICALLY BARRIERED.

6.2.5 ALL SERVICES SHALL BE PROVIDED WITH A PERMANENTLY ATTACHED, ENGRAVED PLATE SHOWING S.E.S. BUSSING TO INCLUDE ALL TORQUE VALUES FOR PREVENTATIVE MAINTENANCE PURPOSES.

6.2.6 ALL SERVICES SHALL BE U.L. LISTED FOR FRONT ACCESSIBILITY ONLY.

6.2.7 ALL SERVICE SECTIONS SHALL BE OF A CONSISTENT HEIGHT AND INCLUDE PROTECTION OF OPERATIONAL DEVICES AND METERS FROM PHYSICAL DAMAGE.

DISTRIBUTION

PANELBOARDS: SHALL BE RATED AS SHOWN ON DRAWINGS WITH PLATED COPPER BUSSING. PROVIDE NEMA ENCLOSURES AS REQUIRED BY CODE FOR REGULATION. BACK BOXES ENLARGED FOR DOUBLE NEUTRALS AND LUGS CAPABLE OF OVERSIZING-ISOLATED GROUND AND NORMAL GROUND BUS. ALL LUGS OR CONNECTORS TO BE 75° C RATED MINIMUM. PANELBOARD CABINET SHALL BE EQUIPPED WITH PIANO HINGES WITH DOOR IN DOOR CONSTRUCTION.

CIRCUIT BREAKERS WILL BE SWITCH RATED AND AMBIENT COMPENSATED FOR ALL CIRCUITS. PROVIDE SWITCHED NEUTRALS ON ALL CIRCUIT BREAKERS FEEDING CLASS 1 AND CLASS 2 AREAS WITH NEUTRALS. GFCI ON CIRCUITS WITH NEUTRALS TO DEVICES ABOVE CLASSIFIED AREAS. ALL LIGHTING PANELS/CIRCUIT BREAKERS SHALL BE RATED FOR CONTINUOUS DUTY.

ALL EQUIPMENT (PANELS, DISCONNECT SWITCHES. STARTERS, ETC.) WILL BE MARKED WITH BLACK ENGRAVERS STOCK TAGS EMBOSSED WITH 1/4" HIGH LETTERS DESCRIBING EACH ITEM. CONDUCTORS WILL BE MARKED AT ALL TERMINATION AND JUNCTION POINTS (PANELS, JUNCTION BOXES, SPLICES, ETC.) WITH LABELS BEARING THE PANEL AND CIRCUIT NUMBER WHICH FEEDS EACH CONDUCTOR (PER NEC 210-4,300.3).

7.4 ALL PANELBOARDS WILL HAVE TYPED DIRECTORY CARDS IDENTIFYING ALL CIRCUITS AND SPACES (REVISED FOR THIS WORK).

7.5 LABEL ALL PANELS/DISCONNECTS WITH "WARNING" - ELECTRICAL EQUIPMENT - DANGER - QUALIFIED PERSONNEL ONLY TO OPERATE ON OPEN EQUIPMENT.

7.6 DISCONNECT SWITCHES WILL BE HEAVY-DUTY, QUICK-MAKE, QUICK-BREAK, HORSEPOWER RATED, NEMA 1 INDOOR, NEMA 3R GASKETED, (4X) NEMA 12, OR NEMA 7 AS APPLICABLE WITH UL CLASS J-TIME DELAY FUSES, WHEN SPECIFIED WITH OVER CURRENT PROTECTION.

7.7 MANUAL MOTOR STARTERS WITH THERMAL OVERLOADS WILL BE PROVIDED FOR FRACTIONAL HORSEPOWER MOTORS 1/2 HP OR GREATER. AMBIENT COMPENSATED AS REQUIRED.

7.8 MAGNETIC MOTOR STARTERS WITH THERMAL OVERLOADS, (2) AUXILIARY CONTACT SWITCHES, INTERNAL LINE VOLTAGE TO 24 VOLT TRANSFORMER (250VA, MIN) WITH PROPER PRIMARY /SECONDARY PROTECTION, AMBIENT COMPENSATED, RED RUNNING LIGHT, HAND-OFF-AUTO, ACROSS THE LINE STARTERS TO 25 HP, WILL BE PROVIDED WITH EACH MOTOR AS SHOWN ON THE DRAWING (5 HP TO 25 HP).

8.0 LIGHT FIXTURES

8.1 ACCEPTABLE MANUFACTURERS FOR LIGHTING AND RELATED COMPONENTS ARE: PER FIXTURE SPECIFICATIONS ON PLANS.

8.2 FURNISH AND INSTALL ALL LIGHTING FIXTURES COMPLETE WITH LAMPS, WHIPS AND ACCESSORIES. ALL RECESS FIXTURES WILL BE RATED FOR USE IN ANY CEILING APPLICATIONS AND BE THERMALLY PROTECTED.

8.3 MOUNTING TYPE AND VOLTAGE OF FIXTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. (4) EARTHQUAKE CLIPS WILL BE INSTALLED ON EACH FIXTURE MOUNTED IN GRID OR FLANGE TYPE CEILINGS.

8.4 ALL FIXTURES TO BE INSTALLED IN SYMMETRICAL MANNER FREE FROM LIGHT LEAKS AND DIRTY LENSES OR REFLECTORS.

8.5 SUPPORT FIXTURES PER UBC-25-213 WITH TWO LOOSE SIZE 9 WIRES TO STRUCTURES ON OPPOSITE CORNERS AND 2 TAUGHT SIZE 9 WIRE TO STRUCTURES AT CORNERS OR TO GRID WITHIN 3" OF FIXTURE.

8.6 SWITCHES

8.6.1 SWITCHES SHALL MEET OR EXCEED ANSI/IEEE STD.C62.41-1980

8.6.2 SWITCHES SHALL MEET UL 20 AND UL 1472.

8.7 LIGHTING CONTACTORS

8.7.1 LIGHTING CONTACTORS SHALL HAVE A WITHSTAND RATING OF 10,000 AMPS FOR 0.5 SEC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

Revisions	Date

Registered Professional Engineer (Retired)
Certificate No.
57159
CLIFFORD M. TOLMAN
Date Signed 4-25-24
Expires 3-31-26

Designed By: CJL
Drawn By: CJL
Checked By: CMT
Date: 4/25/2024
Project #: 22.1618.002

Title: RESTROOM
SITE ELECTRICAL COVER SHEET
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

CITY OF PHOENIX
OFFICE OF THE CITY ENGINEER
PARKS AND RECREATION DEPT. | HIGHLINE PARK

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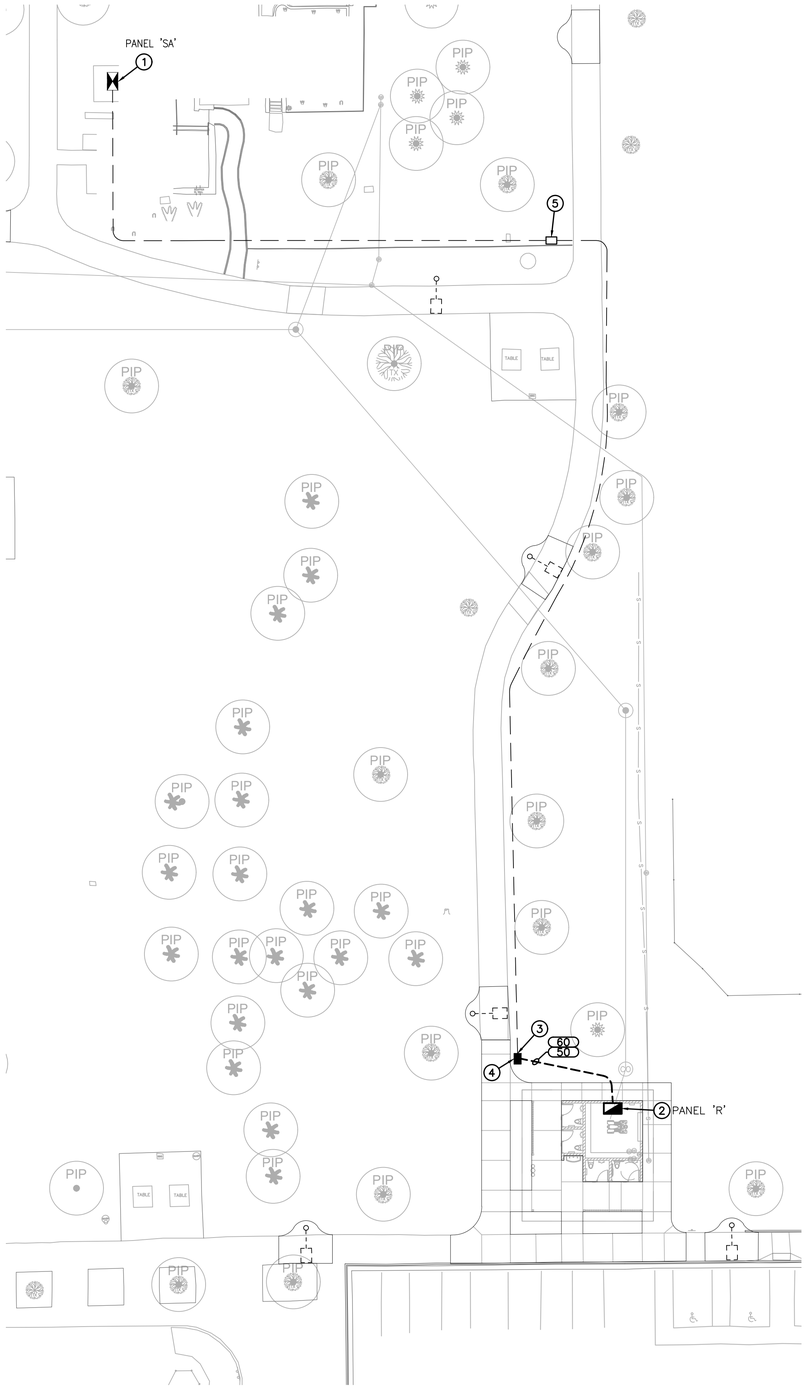
KIVA # _____
SDEV # _____

Sheet
RE1.2
144 OF 148



CONSTRUCTION NOTES

1. EXISTING 400 AMP, 120/208V, 3ø, 4W, METERED ELECTRIC SERVICE ENTRANCE SECTION, SEE DETAIL 1 ON SE3.1.
2. 60 AMP, 120/208V, 1ø, 3W, ELECTRIC PANEL, SEE DETAIL 2 ON SE3.1.
3. DIG DOWN AND INTERCEPT EXISTING CONDUIT STUB OUT AND TIE INTO NEW RUN.
4. #3-1/2 CONCRETE PULL BOX, SEE DETAIL 3 ON SE3.2.
5. EXISTING #3-1/2 CONCRETE PULL BOX.

LEGEND

- EXISTING 400A 120/208V 3ø PEDESTAL
- 60A 120/208V 1ø PANEL
- NEW PULL BOX
- EXISTING PULL BOX
- EXISTING AREA LIGHT
- EXISTING CONDUIT, SHOWN AS SCHEMATIC
- NEW UNDERGROUND CONDUIT

WIRE & CONDUIT TABLE

CONDUIT		WIRE			REMARKS
NO.	SIZE	POWER	GROUND	TYPE*	(CKT #)
50	2"	3-#3/0	1-#1	CU	PANEL 'R'
60	(2) 2"	PULL ROPE			SPARE

* THIS COLUMN IDENTIFIES THE CONDUCTOR MATERIAL TYPE.
CU = COPPER, AL = ALUMINUM.

NORTH

GRAPHIC SCALE

20 10 0 10 20 40

1 INCH = 20 FEET

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Drawn By: CJL
Checked By: CMT
Date: 4/25/2024
Project #: 22.1618.002

Title: **RESTROOM**
SITE ELECTRICAL PLAM
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: **PA75200668-1**

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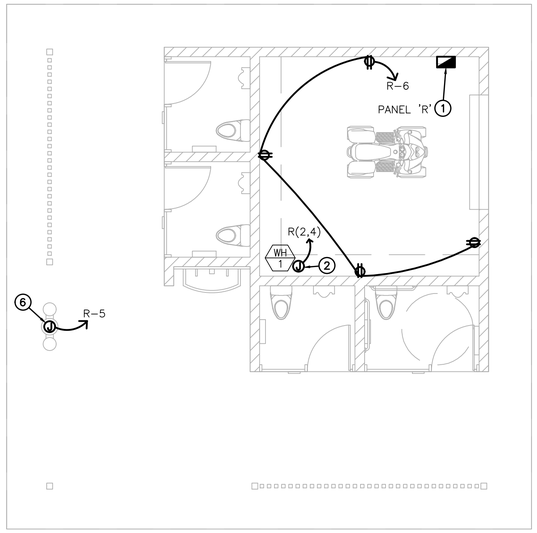
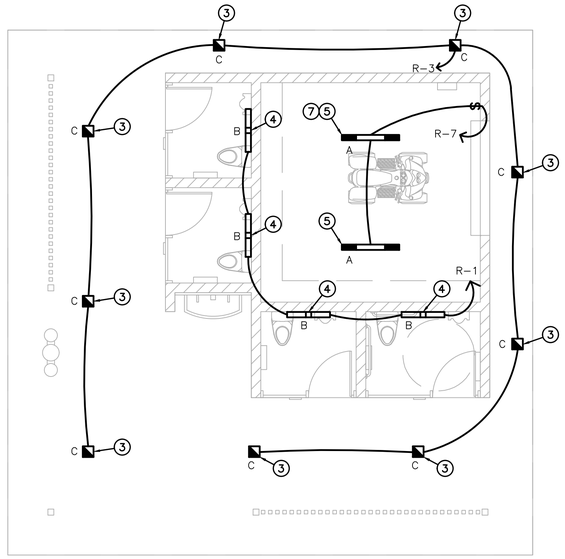
Sheet
RE2.1
145 OF 148



BUILDING ELECTRICAL PLAN

NO SCALE



BUILDING LIGHTING PLAN

NO SCALE

CONSTRUCTION NOTES

1. INSTALL 60A 120/208V, 1ø, 3W ELECTRIC PANEL AND CONTROL EQUIPMENT PER DETAIL 2 ON SHEET SE3.1.
2. INSTALL J-BOX FOR WATER HEATER, 2-#10 AWG CU CONDUCTORS & 1-#10 CU GROUND, 3/4" CONDUIT.
3. LIGHTS TO BE CONTROLLED VIA TIME CLOCK.
4. LIGHTS PROVIDED WITH INTEGRAL OCCUPANCY SENSOR.
5. LIGHTS TO BE CONTROLLED VIA WALL MOUNTED SWITCH, DO NOT ROUTE LIGHTS THROUGH TIME CLOCK.
6. INSTALL 20A GFCI RECEPTACLE FOR WATER CHILLER POWER FOR DRINKING FOUNTAIN, 2-#12 AWG CU CONDUCTORS & 1-#12 CU GROUND, 3/4" CONDUIT. SEE DETAIL 4 ON SE3.2.
7. LIGHT TO BE EQUIPPED WITH EMERGENCY BATTERY PACK. RUN ADDITIONAL (UN-SWITCHED) HOT WIRE FROM SWITCH TO LIGHT FOR BATTERY BACKUP POWER (ON SAME CIRCUIT).

LEGEND

- NEW BUILDING SUB-PANEL
- 120V GFCI, TYPE WR RECEPTACLE, +18" AFF, WITH METAL EXTRA DUTY WEATHERPROOF WHILE-IN-USE COVER
- SINGLE POLE SWITCH MOUNTED AT +42"
- JUNCTION BOX
- ABOVE GROUND CONDUIT WITH 2-#12 & 1-#12 GND IN 1/2" EMT CONDUIT, UNLESS NOTED OTHERWISE
- R-1 CIRCUIT TAG, SEE PANEL SCHEDULE ON SHEET SE3.1

EQUIPMENT SCHEDULE

	HP	KW	LOAD/EA.	VOLTS-ø	DISCONNECT SWITCH	FEEDERS
WH 1	WATER HEATER					
	–	5.5	30A	240-1	30A	2#10 & 1#10 BOND

LIGHT FIXTURE SCHEDULE

SYMBOL	LETTER ID	MANUFACTURER	CATALOG NUMBER	FINISH COLOR	VOLTS	LAMP	LUMENS (MIN)	CCT	MOUNTING HEIGHT	DETAIL	NOTES
	A	LUMINAIRE LIGHTING	VPF4-4FT-NODIM-40W-27K-MVOLT-OP-BRZ	BRONZE	120	43W LED	4,015	2700K	CEILING	CEILING LIGHT SEE CUT SHEET ON SHEET SE3.2	CEILING MOUNTED, 48" LENGTH FIXTURE. FIXTURE TO BE WET LABELED.
	B	LUMINAIRE LIGHTING	AEL-36IN-NODIM-30W-27K-MVOLT-DP-BZH-PIR	BRONZE	120	27W LED	2,954	2700K	10'-0"	WALL LIGHT SEE CUT SHEET ON SHEET SE3.2	WALL MOUNTED, 36" LENGTH FIXTURE WITH INTEGRAL OCCUPANCY SENSOR.
	C	LUMINAIRE LIGHTING	VRDL4-MIN1-ZT-2500LM-WD-27K-80CRI-MVOLT-CPL-BRZ	BRONZE	120	37W LED	2,500	2700K	CEILING	CEILING LIGHT SEE CUT SHEET ON SHEET SE3.2	CEILING MOUNTED, RECESSED CANOPY FIXTURE. FIXTURE TO BE FULL CUTOFF. FIXTURE TO BE WET LABELED.

NORTH

GRAPHIC SCALE
5 2.5 0 2.5 5 10
1 INCH = 5 FEET

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CLIFFORD M. TOLMAN
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Expires 3-31-26

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Drawn By: CJL
Checked By: CMT
Date: 4/25/2024
Project #: 22.1618.002

Title: RESTROOM
SITE ELECTRICAL PLAN
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

KIVA # _____
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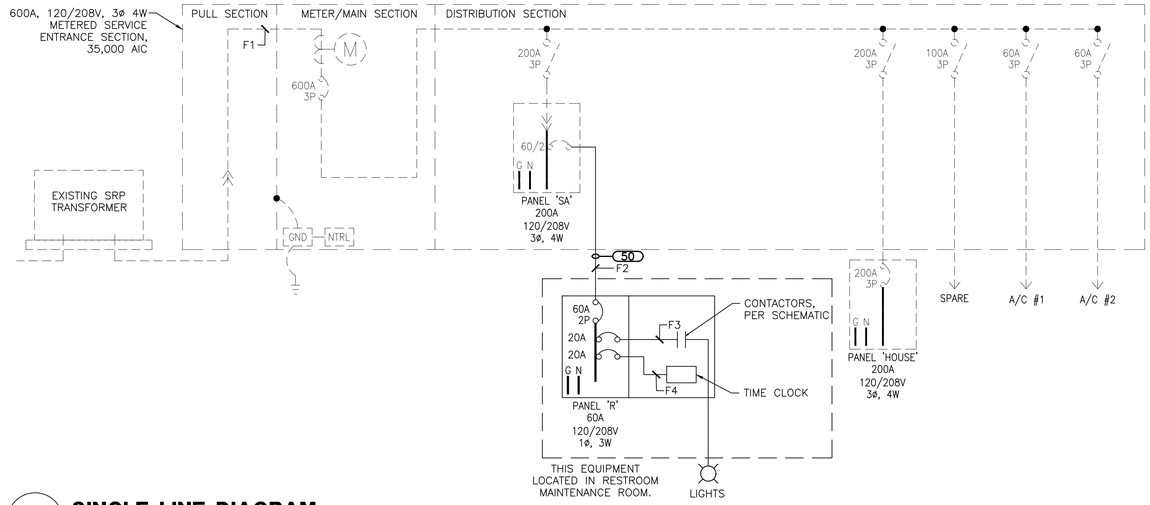
Sheet
RE2.2
146 OF 148

CITY OF PHOENIX OFFICE OF THE CITY ENGINEER PARKS AND RECREATION DEPT. | HIGHLINE PARK

PANEL NAME: 'SA'			120/208V, 3ø, 4W				200A MAIN LUGS ONLY		
LOCATION: WEST OF BUILDING			TYPE: PLUG-IN				WALL MTD., NEMA 3R		
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	20/1	**RAMADA LIGHTS***	**893**	1613			720	RAMADA RECEPTACLES	20/1	2
3	20/1	**WEST RAMADA RECEPTACLE 1**	**480**		960		**480**	**NE RAMADA RECEPTACLE**	**20/1**	4
5	20/1	**WEST RAMADA RECEPTACLE 2**	**480**			960	**480**	**WEST RAMADA RECEPTACLE 3**	**20/1**	6
7	**50/**	**EVENT RECEPTACLE 1**	**4800**	4800			**0**	**SPARE**	20/	8
9	**/2**		**4800**		4800		**0**		/2	10
11	**50/**	**EVENT RECEPTACLE 2**	**4800**			4800	**0**	**SPARE**	20/	12
13	**/2**		**4800**	4800			**0**		/2	14
15	**50/**	**EVENT RECEPTACLE 3**	**4800**		4800		**0**	**SPARE**	20/	16
17	**/2**		**4800**			4800	**0**		/2	18
19	**50/**	**EVENT RECEPTACLE 4**	**4800**	4800			**0**	**SPARE**	30/	20
21	**/2**		**4800**		4800		**0**		/2	22
23	60/	**RESTROOM PANEL 'R'**	**5045**			5045	0	BUSSED SPACE		24
25	/2		**3475**	3675			200	TC1	20/1	26
27		BUSSED SPACE	0		200		200	TC2	20/1	28
29		BUSSED SPACE	0			1200	**1200**	**S DRINKING FOUNTAINS**	**20/1**	30
31		BUSSED SPACE	0	0			0	BUSSED SPACE		32
33		BUSSED SPACE	0		0		0	BUSSED SPACE		34
35		BUSSED SPACE	0			0	0	BUSSED SPACE		36
37		BUSSED SPACE	0	0			0	BUSSED SPACE		38
39		BUSSED SPACE	0		0		0	BUSSED SPACE		40
41		BUSSED SPACE	0			0	0	BUSSED SPACE		42
CODE TOTAL VA/ø				19688	15560	16805	*INDICATES LOAD @ 125%			
CODE TOTAL AMPS/ø				164.1	129.7	140.0	35,000 AIC BREAKERS			

GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED.
NEW BREAKERS TO MATCH TYPE AND AIC RATING OF EXISTING.
** PROVIDE GFCI TYPE BREAKER.
*** PROVIDE LOCKABLE BREAKER.

PANEL NAME: R			120/208V, 1ø, 3W			60A MAIN BKR			
LOCATION: SEE SITE PLAN			TYPE: PLUG-IN			WALL MTD., NEMA 3R			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	20/1	RESTROOM LIGHTS*	135	2895		2760	WATER HEATER	30/	2
3	20/1	BUILDING LIGHTS*	525		3285	2760		/2	4
5	20/1	DRINKING FOUNTAIN	1200	2160		960	RECEPTACLES	20/1	6
7	20/1	SPARE	0		0	0	SPARE	20/1	8
9	20/1	SPARE	0	0		0	SPARE	20/1	10
11	20/1	SPARE	0		0	0	SPARE	20/1	12
13	20/1	SPARE	0	0		0	SPARE	20/1	14
15	20/1	SPARE	0		200	200	LIGHTING CONTROL	20/1	16
CODE TOTAL VA/ø				5055	3485	*INDICATES LOAD @ 125%			
CODE TOTAL AMPS/ø				42.1	29.0	10,000 AIC BREAKERS			



1 SINGLE LINE DIAGRAM

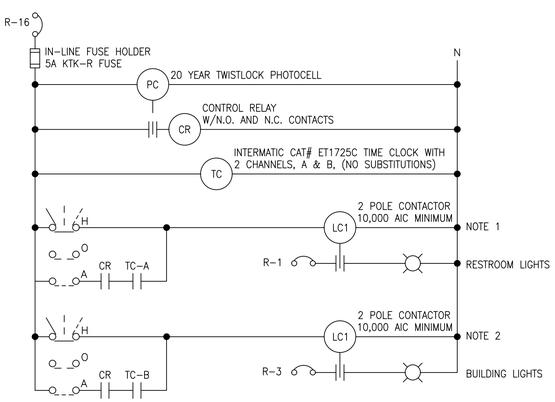
NO SCALE — 120/208V 3ø 4W
GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED

FAULT CALCULATIONS

TAG	EQUIPMENT	FEEDER SIZE/TYPE	VOLTAGE / PHASE	TYPE OF CONDUIT	"C" VALUE	DISTANCE	AVAILABLE FAULT CURRENT	EQUIPMENT SHORT CIRCUIT CURRENT RATING
F1	SES	PER UTILITY COMPANY	208 / 3ø	PVC	N/A	<100 FEET	29,241 A*	35,000 AIC
F2	PANEL 'R'	3/0 AWG CU	208 / 1ø	PVC	13,923	430 FEET	3,020 A	10,000 AIC
F3	LIGHTING CONTACTORS	12 AWG CU	120 / 1ø	PVC	617	7 FEET	2,272 A	10,000 AIC
F4	TIME CLOCK	12 AWG CU	120 / 1ø	PVC	617	7 FEET	2,272 A	10,000 AIC

*VALUE PROVIDED BY UTILITY COMPANY AND IS THE MAXIMUM FAULT CURRENT AT THE SERVICE ENTRANCE SECTION.

SEE LOAD SUMMARY AND PEAK DEMAND ON SE3.1.



2B LIGHTING CONTROL SCHEMATIC

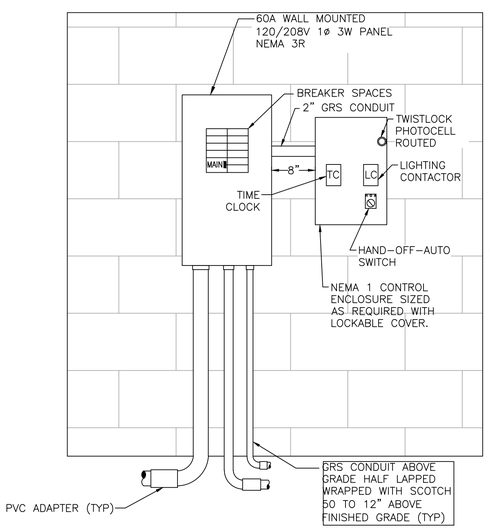
NO SCALE — 120V

CONTROL SCHEMATIC LEGEND

- H / O / A — HAND–OFF–AUTO SWITCH
- PC — PHOTOCELL RELAY
- CR# — CONTROL RELAY
- TC# — TIME CLOCK
- LC# — LIGHTING CONTACTOR
- N.O. — NORMALLY OPEN CONTACT
- CIRCUIT BREAKER

CONTROLLER NOTES

1. THIS CIRCUIT TO BE ACTIVATED AT DAWN AND SHUT OFF AT PARK CLOSE.
2. THIS CIRCUIT TO BE ACTIVATED AT DUSK AND SHUT OFF AT PARK CLOSE.



2A 60A WALL MOUNTED SERVICE

NO SCALE — 120/208V 1ø 3W

NOTES

1. APPROVED EQUAL MANUFACTURERS: SQUARE D, CUTLER HAMMER.
2. ALL WIRING SHALL BE INSTALLED IN AN ORGANIZED AND NEAT MANNER.
3. ALL EQUIPMENT SHALL HAVE LAMICOID NAMEPLATES WITH 1/4" LETTERING.
4. PANEL SCHEDULE SHALL BE NEATLY & ACCURATELY TYPED AND PLACED ON THE INSIDE DOOR ON A LAMINATED SHEET.
5. PAINT ALL EXPOSED CONDUIT AND EQUIPMENT TO MATCH WALL (COLOR PER OWNER).
6. INSTALL PHOTOCELL SHIELD ON ROOF.

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Title: RESTROOM SITE ELECTRICAL DETAILS
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK
Index No: PA75200668-1

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Sheet
RE3.1
147 OF 148

VISION VPF4

Vandal Resistant

VPF4 Series LED

Fixture Type | Date

Job Name | Approved By

Catalog Number

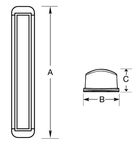
SPECIFICATIONS

UL Listing | ADA Compliant | Buy American

Description	The Vision VPF4 series features an all aluminum, ligature resistant construction which allows it to be used in nearly any enviornmental condition. Designed in conjunction with an opthalmologist, the polycarbonate lens provides complete control of glare and LED image while maintaining the high efficiency of clear optical material. The Vision VPF4 series can be row mounted to any length. Natatorium finish is standard for all versions of this fixture.
Housing	Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat.
Lens	Extruded UV stabilized polycarbonate with integral prisms. Maximum wall thickness 0.160". Secured to housing with die cast aluminum clamps and stainless steel TORX® head screws.
End Caps	Die cast marine grade aluminum with conduit knockouts that are visible from interior of end cap.
Drivers	Dimming to 1%, 10% or Programable Lumen Output driver options. Non-Dimming Driver is also available.
LED	Samsung LM561B+ series @ 2700K, 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of over 130,000 hours at 50ºC.
UL Listing	U.L., C.UL. Damp Location Listing standard, Wet Location Listing optional. Wet listing for horizontal mounting only. Consult factory for vertical mounting applications.
Buy American	Luminaire LED, LLC products are assembled in the USA. Our products meet the Buy America(n) government procurement requirements under FAR, DFARS, and DOT.
Warranty	**Lifetime** warranty against vandalism. Luminaire LED will repair or replace any fixture damaged due to vandalism for the lifetime of the installation. **10-year** warranty on LED boards against operational defects. Tested in accordance with LM-80.
Note	Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

DIMENSIONAL DATA

	A	B	C
VPF4 1FT	15.50	4.35	2.70
VPF4 2FT	26.10	4.35	2.70
VPF4 3FT	37.88	4.35	2.70
VPF4 4FT	49.69	4.35	2.70



ARCHITECTUAL EGRESS

Vandal Resistant

AEL Full Cut-Off LED

Fixture Type | Date

Job Name | Approved By

Catalog Number

SPECIFICATIONS

UL Listing | Buy American

Description	The Architectural Egress Luminaire combines a unique, patented design shaped with high performance, full cut-off optics to achieve completely unobtrusive illumination of a space or path of egress. When mounted over a doorway, the fixture is perceived as an element of the building structure and, additionally, provides water protection in the form of a drip cap over the doorway. Multiple lengths are available to match a given door opening and our unique quick mount system facilitates installation and maintenance.
Housing	Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat.
Wall Mount	Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat. Designed to provide quick mounting to housing and secured with (2) captive stainless steel TORX® head screws.
Lens Frame	Marine grade heat treated extruded aluminum, clear anodized. Secured to fixture via integral concealed hinge and (3) captive stainless steel TORX® head screws.
Lens	UV stabilized diffused extruded polycarbonate.
End Caps	Die cast marine grade aluminum continuously welded to housing. All welds ground smooth.
Reflector	Electrostatically brightened anodized aluminum PVD coated and absolutely color-free of iridescence. Shaped to provide full cutoff, LED point dispersion and maximum efficiency.
Drivers	Dimming to 1%, 10% or Programmable Lumen Output driver options. Non-Dimming Driver is also available.
Gaskets	Closed cell self-adhesive neoprene to provide watertight seal between fixture and wall and between fixture and lens frame.
LED	Samsung LM561B+ series @ 2700K, 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of over 130,000 hours at 50°C.
UL Listing	U.L., C.UL. Wet Location Listing standard.
Buy American	Luminaire LED, LLC products are assembled in the USA. Our products meet the Buy America(n) government procurement requirements under FAR, DFARS, and DOT.
Warranty	Lifetime warranty against vandalism. Luminaire LED will repair or replace any fixture damaged due to vandalism for the lifetime of the installation. 10-year warranty on LED boards against operational defects. Tested in accordance with LM-80.
Note	Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

DIMENSIONAL DATA

	A	B	C
AEL 12IN	20.79	5.40	3.60
AEL 24IN	32.04	5.40	3.60
AEL 36IN	43.29	5.40	3.60
AEL 48IN	54.75	5.40	3.60
AEL 72IN	78.75	5.40	3.60

VRDL4

Vandal Resistant

VRDL4 Series STWH

Fixture Type | Date

Job Name | Approved By

Catalog Number

SPECIFICATIONS

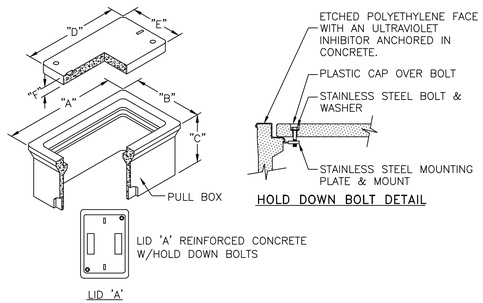
IP66 RATED | WET LOCATION | IK10 | NSF | cSPus | BAA

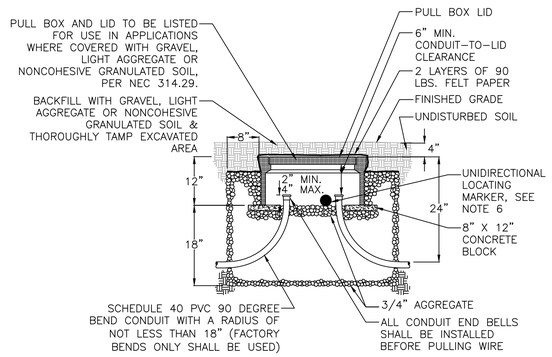
Description	The VRDL recessed downlight features a ligature-resistant construction suitable for behavioral institutions and vandal-prone areas.
Lens	Impact resistant polycarbonate lens with 0.25" nominal thickness. Available with patent pending flangled or flangeless (GB) trim. If IP66 rating is required, no-pick caulk (or vandal resistant equivalent caulk) is recommended. See Installation Instructions for more detail. Lens and trim secured with tamper resistant center pin reject TORX fasteners to prevent intrusion and mitigate ligature.
LED Drivers	Factory tuned constant current electronic dimming driver is standard. Flicker free dimming available down to <1%. Electrical specifications, PF >.9 and THD <20%. Meets FCC Title 47 Class A or Class B. Other available drivers include Lutron and DALI protocol drivers.
LED	Static white in 1800K, 2700K, 3000K, 3500K, 4000K, or 5000K in either 80CRI or 90CRI standard. Optional RED LED. All LED within a 2.5 step MacAdam ellipse.
Controls and System Networking Options	Optional integrated nLight® controls make each fixture addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors, and photocontrols. Connection to nLight is simple. It can be accomplished with remote nLight AIR wireless or through standard Cat-5 cabling. (cabling "by others") nLight offers unique plug-and-play convenience as devices and luminaires automatically discover each other, while nLight AIR is commissioned easily through an intuitive mobile app.
Listing	CSA certified to meet U.S. and Canadian standards (UL1598 and UL8750) and CAN/CSA C22.2 No. 250.0. Standard is wet location and IP66 @ IK10. Certified for NSF Splash Zone 2 with AMF and BSS finish. Non-IC rated.
BUY AMERICAN ACT	This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.
Warranty	Lifetime warranty against vandalism. Luminaire LED will repair or replace any fixture damaged due to vandalism for the lifetime of the installation. 10-year warranty on LED boards against operational defects. Tested in accordance with LM-80. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed.
Note	Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

COMPANION LUMINAIRE
VRDL6

CEILING MOUNTED FIXTURE CUT SHEET (TYPE A)

NO SCALE



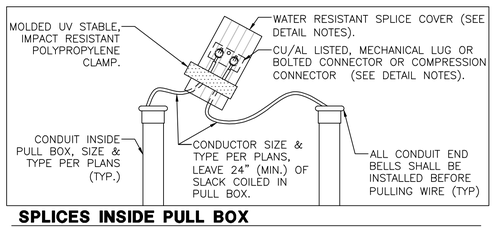


3 UNDERGROUND PULL BOX INSTALLATION

NO SCALE

WALL MOUNTED FIXTURE CUT SHEET (TYPE B)

NO SCALE



SPLICES INSIDE PULL BOX

DETAIL NOTES:

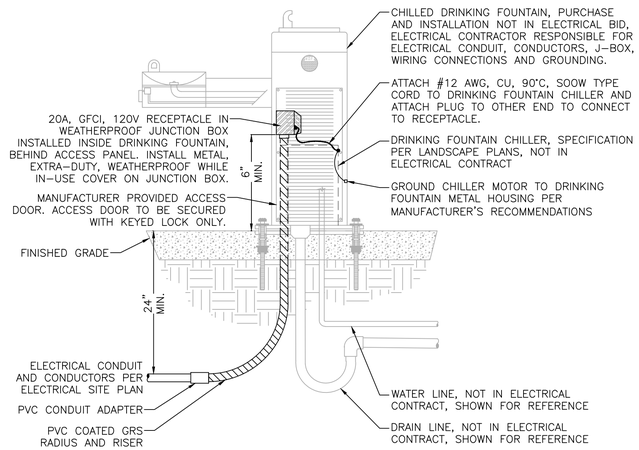
1. THE PULL BOX SHALL BE MADE OF A HIGH DENSITY REINFORCED CONCRETE MATERIAL WITH END & SIDE KNOCKOUTS, & NON-SETTLING SHOULDERS TO MAINTAIN GRADE, MANUFACTURED WITH APPROXIMATE DIMENSIONS AS SHOWN.
2. PULL BOXES TO BE INSTALLED IN NON-VEHICULAR TRAFFIC AREAS, AND TO HAVE A LOAD RATING FOR LIGHT DUTY PEDESTRIAN TRAFFIC.
3. STEEL REINFORCEMENT SHALL BE AS REGULARLY USED IN STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.
4. COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS: "ELECTRIC" OR "HIGH VOLTAGE" OR "COMMUNICATIONS". AS REQUIRED.
5. THE PULL BOX SHALL HAVE AN ETCHED POLYETHYLENE FACE WITH AN ULTRAVIOLET INHIBITOR ANCHORED IN CONCRETE.
6. ALL CABLE & CONDUCTOR SPLICES MADE USING CU/AL LISTED, MECHANICAL LUG OR BOLTED CONNECTOR OR COMPRESSION CONNECTOR, (TYCO ELECTRONICS, NSI INDUSTRIES, ILSCO OR APPROVED EQUAL). CONNECTION TO BE INSULATED & MADE WATER RESISTANT WITH TYCO ELECTRONICS GELCAP-SL, NSI INDUSTRIES ESSLK-2/0 OR 3M SCOTCHCAST SPLICE KIT 85 SERIES.
7. INSTALL A UNIDIRECTIONAL, 4 INCH DIAMETER. RED BALL MARKER (3M CAT#1402-XR OR APPROVED EQUAL) IN BOX TO BE USED FOR LOCATING BURIED PULL BOX. RED BALL MARKER SHALL BE COMPATIBLE WITH AGENCY LOCATING EQUIPMENT, COORDINATION WITH AGENCY IS REQUIRED.

DATA TABLE

PULLBOX TYPE	PULLBOX LENGTH	PULLBOX WIDTH	PULLBOX HEIGHT	LID LENGTH	LID WIDTH	LID HEIGHT
	"A"	"B"	"C"	"D"	"E"	"F"
#3-1/2	19-3/4"	14-1/4"	12"	15-1/2"	10"	1-3/4"
#5	25-1/8"	15-5/8"	12"	20-3/4"	10-5/8"	2"
#7	35"	22"	12"	30-1/2"	17-1/2"	2"
#9	40-1/2"	28-1/4"	18"	35-1/2"	24"	3"

CEILING MOUNTED FIXTURE CUT SHEET (TYPE C)

NO SCALE



NOTE: DETAIL OF FOUNTAIN MAY NOT EXACTLY REPRESENT ACTUAL FOUNTAIN SPECIFICATION, BUT IS SHOWN FOR ELECTRICAL EQUIPMENT INSTALLATION ONLY.

4 DRINKING FOUNTAIN ELECTRICAL CONNECTION

NO SCALE

Revisions	Date

Registered Professional Engineer (General)
Certificate No.
57159
CLIFFORD M. TOLMAN
Date Signed 4-25-24
Expires 3-31-26

Designed By: CJL

Drawn By: CJL

Checked By: CMT

Date: 4/25/2024

Project #: 22.1618.002

Title: RESTROOM
SITE ELECTRICAL DETAILS
1346 E SOUTH MOUNTAIN AVE RD
HIGHLINE PARK

Index No: PA75200668-1

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KIVA # _____
SDEV # _____

Sheet
RE3.2
148 OF 148