

City of Arvada

City Council Agenda

JUNE 3, 2024

CITY COUNCIL CHAMBERS

Regular Business

Info: 720-898-7550

Councilmembers:

Lauren Simpson, Mayor
Randy Moorman, Mayor Pro-Tem
Shawna Ambrose, District 2
Sharon Davis, At large
Lisa Feret, At large
Bob Fifer, District 4
John Marriott, District 3

Staff Members Usually Present:

Lorie Gillis, City Manager
Linda Haley, Deputy City Manager
Don Wick, Deputy City Manager
Rachel Morris, City Attorney
Jacqueline Rhoades, Director of Public Works
Sharon Israel, Director of Utilities
Jessica Garner, Director of Community & Econ. Dev.
Bryan Archer, Director of Finance
Gabriella Bommer, Director of Human Resources
Rachael Kuroiwa, Director of Communications & Engagement
Kristen Rush, City Clerk

THIRD FLOOR CONFERENCE ROOM

EXECUTIVE SESSION

5:00 P.M.

Legal Advice, Pursuant to CRS 24-6-402(4)(b) Relating to Ralston Road change order

CITY COUNCIL MEETING – CITY COUNCIL CHAMBERS

6:00 PM

1. Call to Order - 6:00 PM
2. Moment of Reflection and Pledge of Allegiance - Councilmember Davis
3. Roll Call of Councilmembers
4. Approval of Minutes
 - A. May 20, 2024 City Council Meeting
5. Recognitions and Communications
 - A. Proclamation for National Gun Violence Awareness Day - Presented by Councilmember Feret
 - B. Proclamation for the 80th Anniversary of D-Day - Presented by Councilmember Marriott
6. Presentations - None
7. Public Comment on Issues not Scheduled on Agenda - Three Minute Limit
8. New Business
 - A. Consent Agenda

1. R24-059, A Resolution Authorizing Change Order No. 2 to the Construction Management Agreement For Pre-Construction & Construction Services for the Meyer's Pool Replacement Project
 2. R24-060, A Resolution Authorizing Change Order No. 6 to An Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an amount not to exceed \$866,646.61 for a revised total contract amount not to exceed \$18,590,691.96
 - B. Resolutions
 1. R24-061, A Resolution Authorizing a First Amendment to Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory (Aaron Jacks, Senior Asst City Attorney and Edna Hendershot, Deputy Police Chief)
 - C. Ordinances (First Reading) - None
9. Other
- A. Ratification and Approval of CP2024-0001 a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada's Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., as Amended (Presenter: Rob Smetana, Manager of City Planning and Development)
 - B. Appointment to Park Advisory Committee
10. Public Hearings - 6:15 PM
- A. Four (4) Major Modifications for Indian Tree Golf Course Cart Barn, a 0.7 acre parcel of land generally located 7555 Wadsworth Blvd. (Presenter: Rob Smetana, Manager of City Planning and Development)
 1. A Major Modification from Subsection 5-1-2-3.B of the Land Development Code related to primary buildings being designed to avoid a monolithic appearance when viewed from the street, for the building generally located at 7555 Wadsworth Blvd.
 2. A Major Modification from the Land Development Code subsection 5-1-2-3(C)(6)(b), related to facades facing streets, parks, or open space, having a minimum of 20 percent of the facade be windows, for the building generally located at 7555 Wadsworth Blvd
 3. A Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(c), related to the maximum length of a continuous roof ridgeline being 35 feet, for the building generally located at 7555 Wadsworth Blvd.
 4. A Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(d), related to pitched roofs having a minimum eave overhang of at least one-foot, for the building generally located at 7555 Wadsworth Blvd.
11. Public Comment - Five Minute Limit
12. Reports from City Council
- A. Council Committee Reports
13. Reports from City Manager
- A. Review of Future Workshops and Presentations
14. Reports from City Attorney
15. Adjournment



SUMMARY OF MINUTES OF THE MEETING OF THE ARVADA CITY COUNCIL HELD MAY 20, 2024

1. Call to Order - 6:00 p.m.

This Arvada City Council meeting was a hybrid meeting using webinar technology. Councilmember Ambrose, Councilmember Davis, Councilmember Fifer, Councilmember Marriott were all present in chambers. Mayor Simpson was on Zoom. Members of the public were given notice with instructions on how to participate with public comment.

2. Moment of Reflection and Pledge of Allegiance

3. Roll Call of Councilmembers

Those Present: Mayor Lauren Simpson, Councilmember Shawna Ambrose, Councilmember Sharon Davis, Councilmember Bob Fifer, Councilmember John Marriott.

Councilmember Ambrose moved to excuse Mayor Pro Tem Moorman and Councilmember Feret from the meeting.

The following votes were cast on the Motion:

Those voting Yes: Simpson, Ambrose, Davis, Fifer, Marriott

Those absent: Moorman, Feret

The Motion was Approved.

Councilmember Davis moved that Councilmember Fifer be the presiding officer for the meeting since Mayor Simpson is on Zoom

The following votes were cast on the Motion:

Those voting Yes: Simpson, Ambrose, Davis, Fifer, Marriott

Those absent: Moorman, Feret

The Motion was Approved.

Also Present: Lorie Gillis, City Manager; Rachel Morris, City Attorney; Linda Haley, Deputy City Manager; Don Wick, Deputy City Manager; Bryan Archer, Director of Finance; Jessica Garner, Director of Community and Economic Development; Rachael Kuroiwa, Director of Communications and Engagement, and Kristen Rush, City Clerk.

4. Moment of Reflection and Pledge of Allegiance

5. Approval of Minutes – May 6, 2024

The minutes stand approved.

6. Recognition and Communication –

A. Proclamation for Proclamation for Pride Month - Presented by Councilmember Davis

Councilmember Davis read the proclamation and said that City Council proclaims June as Pride Month.

B. Proclamation for National Public Works Week - Presented by Councilmember Marriott

Councilmember Marriott read the proclamation and said that City Council proclaims the Week of May 19-25 as National Public Works Week.

C. Proclamation for Drinking Water Week - Presented by Councilmember Davis

Councilmember Davis read the proclamation and said that City Council proclaims the week of May 5-11 as Drinking Water Week.

D. Proclamation for Building Safety Month - Presented by Councilmember Marriott

Councilmember Marriott read the proclamation and said that the month of May is recognized as Building Safety Month. The theme for this year is "Mission Possible". It encourages us all to raise awareness about building safety on a personal, local and global scale. This is an opportunity to acknowledge building safety and fire prevention officials, architects, engineers, builders, tradespeople, laborers and others in the construction industry and the role they play in ensuring that the places where we live, learn, work, worship and play are safe and sustainable.

Building Safety Month is an international campaign that takes place in May to raise awareness about building safety. This campaign reinforces the need for the adoption of modern, regularly-updated building codes, and helps individuals, families and businesses understand what it takes to create safe and sustainable structures.

The International Code Council, its members, and a diverse partnership of professionals from the building construction, design and safety communities come together with corporations, government agencies, professional associations and nonprofits to promote building safety through proclamations, informational events, legislative briefings and more. We come together to support Building Safety Month because we understand the need for safe and sustainable structures where we live, work and play.

All communities need building codes to protect their citizens from disasters like fires, weather-related events and structural collapse. Building codes are society's best way of protecting homes, offices, schools, manufacturing facilities, stores and entertainment venues. Code officials work day in and day out to keep the public safe.

History

For the last 44 years, we have celebrated advances in constructing safe, sustainable, affordable and resilient buildings and homes. The ongoing support of Building Safety Month and the important role code officials play in public safety in the built environment has come from U.S. presidents, governors, mayors, county executives, other government officials and construction industry professionals.

Building Safety Month is an international campaign celebrated in May to raise awareness about building safety.

For more than 44 years, Building Safety Month has reinforced the need for the adoption of modern,

regularly-updated building codes, and helps individuals, families and businesses understand what it takes to create safe and sustainable structures.

The 2024 Building Safety Month theme is "Mission Possible", and each week focuses on a specific topic:

Week 1: Understanding the Mission

Week 2: Preparing a Building Safety Plan

Week 3: Learning from the Pros

Week 4: Engaging Your Community

Week 5: Celebrating Success in Building Safety.

Representatives from the Arvada Building Inspection Division were present to accept the Proclamation.

E. Proclamation for Poppy Month - Presented by Councilmember Ambrose

Councilmember Ambrose read the proclamation and said that the poppy flower adorned the battlefields of Flanders Field in France during World War I and was looked upon by those serving as a living symbol of their fallen comrades' sacrifices. In 1920, after World War I, the poppy became the official flower of The American Legion Family to memorialize the soldiers who fought and died during the war, and distribution of poppies became a Legion national program in 1924. To this day, thanks in large part to the American Legion Auxiliary, the poppy is nationally recognized and worn as a symbol of sacrifice made by the men and women who served and died for their country during a time of war.

Members of the American Legion Auxiliary Wilmore-Richter Unit 161 were present to accept the proclamation.

F. Proclamation for Mental Health Month – Presented by Councilmember Ambrose

Councilmember Ambrose read the proclamation and said that City Council will proclaim May 2024 as Mental Health Month in Arvada.

Amy Miller, Director of Adult Services for Jefferson Center for Mental Health was present to accept the proclamation.

7. Presentations –

A. Olde Town Arvada Business Improvement District Presentation

Joe Hengstler, Executive Director of the Olde Town Arvada Business Improvement District provided an overview of the BID, its scope and the current operations.

Mr. Hengstler reviewed that background and said that in 2014, the business and property owners of Olde Town in conjunction with The City of Arvada, created the Olde Town Arvada Business Improvement District (BID) with the mission to preserve, promote and enhance the vibrancy of Olde Town. The BID strives to create and maintain an identifiable and always active business district that is inclusive to all, allowing diverse businesses to prosper and setting the stage for a truly authentic experience. The BID's operating plan focuses on advocacy, marketing and events, place making, mobility, physical improvements, and safety.

Because it has been 10 years since the formation of the Olde Town Arvada Business Improvement District, it is an appropriate time for the BID to provide the City Council with an overview of their scope and their operations over the years. The presentation will also include information regarding the BID's funding, their 2023 year-in-review, current challenges in Olde Town and the BID's goals for the future.

8. Public Comment –

- A. Dar-Lon Chang, Arvada resident, addressed council regarding Microgrids.
- B. Erica Tucker, Arvada resident, addressed council regarding the Middle East Conflict
- C. Gordon Reusink, Arvada resident, addressed council regarding Homelessness
- D. Vanessa Kendrick, Representing the Chamber of Commerce, addressed council regarding affordable housing.
- E. Kristine Disney, Wheat Ridge resident, addressed council regarding affordable housing.
- F. Marshall Moore, Golden resident, addressed council regarding affordable housing.
- G. Amy Case-Miranda, Wheat Ridge resident, addressed council regarding affordable housing.

8. New Business

A. Consent Agenda

- 1. R24-048 A Resolution Authorizing the Issuance of a Purchase Order in the amount of \$815,100.00 to Mobile Concepts Technology, LLC (MCT) for Mobile Computer Equipment for the Arvada Police Department
- 2. R24-050 A Resolution Authorizing Acceptance Of Fleet ZERO-Emission Resource Opportunity Grant Funds From The State Of Colorado To Install Electric Vehicle Charging Stations
- 3. R24-051 A Resolution Authorizing An Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc., for Asphalt Mill/Overlay For City of Arvada Parking Lots - Phase I, CSB 24-FAC-035, In An Amount Not to Exceed \$662,849.05
- 4. R24-052 A Resolution Authorizing Acceptance Of Charge Ahead Colorado Grant Funds From The State Of Colorado To Install Electric Vehicle Charging Stations
- 5. R24-053 A Resolution Approving an Agreement by and Between the City of Arvada and Origins at Olde Town Owner Association, Inc. for the Grant of a Revocable Encroachment License to Accommodate Two pedestrian Guardrails along a Portion of the Public Sidewalk Adjacent to 5350 Carr Street Unit A and 5352 Carr Street Unit A, within Public Right of Way
- 6. R24-054 A Resolution Approving an Agreement by and between the City of Arvada and Origins at Olde Town Owner Association, Inc. for the grant of a revocable encroachment license to accommodate a pedestrian guardrail along a portion of the public sidewalk adjacent to 5430 Carr Street unit A, within public right of way
- 7. R24-055 A Resolution Approving a Lease Agreement by and between the City of Arvada and GoFarm for Agricultural Production on Approximately 3.5 Acres of Land at Hills at Standley Lake Park at 8412 Alkire Street, Arvada, Colorado 80005

Councilmember Ambrose moved that R24-048, A Resolution Authorizing the Issuance of a Purchase Order in the amount of \$815,100.00 to Mobile Concepts Technology, LLC (MCT) for Mobile Computer Equipment for the Arvada Police Department; R24-050, A Resolution Authorizing Acceptance Of Fleet ZERO-Emission Resource Opportunity Grant Funds From The State Of Colorado To Install Electric

Vehicle Charging Stations; R24-051, A Resolution Authorizing An Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc., for Asphalt Mill/Overlay For City of Arvada Parking Lots - Phase I, CSB 24-FAC-035, In An Amount Not to Exceed \$662,849.05; R24-052, A Resolution Authorizing Acceptance Of Charge Ahead Colorado Grant Funds From The State Of Colorado To Install Electric Vehicle Charging Stations; R24-053, A Resolution Approving an Agreement by and Between the City of Arvada and Origins at Olde Town Owner Association, Inc. for the Grant of a Revocable Encroachment License to Accommodate Two pedestrian Guardrails along a Portion of the Public Sidewalk Adjacent to 5350 Carr Street Unit A and 5352 Carr Street Unit A, within Public Right of Way; R24-054, A Resolution Approving an Agreement by and between the City of Arvada and Origins at Olde Town Owner Association, Inc. for the grant of a revocable encroachment license to accommodate a pedestrian guardrail along a portion of the public sidewalk adjacent to 5430 Carr Street unit A, within public right of way; R24-055, A Resolution Approving a Lease Agreement by and between the City of Arvada and GoFarm for Agricultural Production on Approximately 3.5 Acres of Land at Hills at Standley Lake Park at 8412 Alkire Street, Arvada, Colorado 80005, be approved.

The following votes were cast on the Motion:

Those voting Yes: Simpson, Ambrose, Davis, Fifer, Marriott

The Motion was Approved.

B. Resolutions –

1. R24-056 A Resolution Approving the 2024-2030 City Council Strategic Plan
(Presenter: Lorie Gillis, City Manager)

Lorie Gillis, City Manager, reviewed this resolution with council.

Councilmember Davis moved that R24-056, A Resolution Approving the 2024-2030 City Council Strategic Plan be approved I move that R24-056, A Resolution Adopting the City of Arvada 2024-2030 City Council Strategic Plan with Local Economy Goal 8, be approved.

The following votes were cast on the Motion:

Those voting Yes: Simpson, Ambrose, Davis, Fifer, Marriott

Those Absent: Moorman, Feret

The Motion was Approved.

2. R24-057 A Resolution Approving the 2024 Arvada Housing Strategic Plan

Carrie Espinosa and Pat Noonan, Housing Advisory Committee Chair, reviewed this resolution with council.

Councilmember Ambrose moved that R24-057, A Resolution Approving the 2024 Arvada Housing Strategic Plan, be approved.

The following votes were cast on the Motion:

Those voting Yes: Simpson, Ambrose, Davis, Fifer

Those voting No: Marriott

Those Absent: Moorman, Feret

The Motion was Approved.

3. R24-058 A Resolution Authorizing Two Lease Agreements By and Between the

City of Arvada and the United States Postal Service for Lease of the Building at 5885 Allison Street and for Lease of the Parking Lot at 5886 Ammons Street, and Authorizing a Commission Agreement with Jones Lang LaSalle Americas, Inc.

Kim Vagher, Manager of City Facilities, reviewed this resolution with council.

Councilmember Ambrose moved that R24-058, A Resolution Authorizing Two Lease Agreements By and Between the City of Arvada and the United States Postal Service for Lease of the Building at 5885 Allison Street and for Lease of the Parking Lot at 5886 Ammons Street, and Authorizing a Commission Agreement with Jones Lang LaSalle Americas, Inc, be approved.

The following votes were cast on the Motion:

Those voting Yes: Simpson, Ambrose, Davis, Fifer, Marriott

Those Absent: Moorman, Feret

The Motion was Approved.

4. R24-049 A Resolution Authorizing a Non-Exclusive Easement Agreement Between the City of Arvada and the City and County of Denver, Acting by and Through Its Board of Water Commissioners, for Denver Water's 2-Inch Rigid PVC Coated Conduit for Communication Cables and Appurtenances

Mary Stahl, Utilities Engineering Manager, reviewed this resolution with council.

Councilmember Ambrose moved that R24-049, A Resolution Authorizing a Non-Exclusive Easement Agreement Between the City of Arvada and the City and County of Denver, Acting by and Through Its Board of Water Commissioners, for Denver Water's 2-Inch Rigid PVC Coated Conduit for Communication Cables and Appurtenances, be approved.

The following votes were cast on the Motion:

Those voting Yes: Simpson, Ambrose, Davis, Fifer, Marriott

Those Absent: Moorman, Feret

The Motion was Approved.

C. Ordinances (First Reading) – None

9. Other - None

10. Public Hearings – None

11. Public Comment - Five Minute Limit - None

12. City Council Reports –

- A. Councilmember Ambrose discussed the R-1 School District Coordinating Committee Meeting that she attended.

13. City Manager Reports –

- A. Lorie Gillis, City Manager, thanked council for adopting the Strategic Plan tonight and

thanked everyone that worked on it, especially Elizabeth Blythe.

B. Lorie Gillis, City Manager, reviewed upcoming workshops.

14. City Attorney Reports – None

15. Adjournment at 8:45 p.m.

Lauren Simpson, Mayor

SEAL:

Kristen R. Rush, City Clerk



REPORT TO CITY COUNCIL

AGENDA ITEM
5.A.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: Proclamation for National Gun Violence Awareness Day - Presented by Councilmember Feret

Report in Brief

City Council will proclaim June 7, 2024, as National Gun Violence Awareness Day. Teenagers from Arvada West and surrounding schools, representing Team Enough, will be present to accept the Proclamation.

Prepared by:

Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator 5/10/2024

Laura Hemler, Assistant City Attorney 5/10/2024

Approved by:

Linda Haley, Deputy City Manager 5/10/2024

Rachel Morris, City Attorney 5/17/2024

Lorie Gillis, City Manager 5/22/2024

Enclosure, exhibits & attachments required to support the report

WHEREAS, every day, 120 Americans are killed by gun violence, alongside more than 200 who are shot and wounded, and on average there are nearly 18,000 gun homicides every year and Americans are 26 times more likely to die by gun homicide than people in other high-income countries; and

WHEREAS, Colorado has 951 gun deaths every year, with a rate of 15.9 deaths per 100,000 people, a crisis that costs the state \$11.7 billion each year, of which \$156.1 million is paid by taxpayers. Colorado has the 22nd highest rate of gun deaths in the US and gun homicides and assaults are concentrated in cities, with more than half of all firearm related gun deaths in the nation occurring in 127 cities; and

WHEREAS, cities across the nation, including in Arvada, are working to end the senseless violence with evidence-based solutions and, protecting public safety in the communities they serve is mayors' highest responsibility. Support for the Second Amendment rights of law-abiding citizens goes hand-in-hand with keeping guns away from people with dangerous histories; and

WHEREAS, mayors and law enforcement officers—in partnership with local violence intervention activists and resources—know their communities best, are the most familiar with local criminal activity and how to address it, and are best positioned to understand how to keep their citizens safe; and gun violence prevention is more important than ever as we see an increase in firearm homicides, and nonfatal shootings across the country, increased calls to domestic violence hotlines, and an increase in city gun violence; and

WHEREAS, in January 2013, Hadiya Pendleton was tragically shot and killed at age 15; and on June 7, 2024, to recognize the 27th birthday of Hadiya Pendleton (born: June 2, 1997), people across the United States will recognize National Gun Violence Awareness Day and wear orange in tribute to Hadiya Pendleton and other victims of gun violence and the loved ones of those victims; and

WHEREAS, the idea was inspired by a group of Hadiya's friends, who asked their classmates to commemorate her life by wearing orange; they chose this color because hunters wear orange to announce themselves to other hunters when out in the woods and orange is a color that symbolizes the value of human life; and

WHEREAS, anyone can join this campaign by pledging to wear orange on June 7th, the first Friday in June in 2024, to help raise awareness about gun violence and by wearing orange on June 7, 2024 Americans will raise awareness about gun violence and honor the lives of gun violence victims and survivors; and

WHEREAS, we renew our commitment to reduce gun violence and pledge to do all we can to keep firearms out of the hands of people who should not have access to them, and encourage responsible gun ownership to help keep our families and communities safe.

NOW, THEREFORE, BE IT PROCLAIMED by the Mayor and City Council of the City of Arvada, Colorado, that June 7, 2024, be designated National Gun Violence Awareness Day and we encourage all to support local efforts to prevent the tragic effects of gun violence and to honor and value human lives.

Dated this 3rd^h day of June 2024.

Lauren Simpson, Mayor

Randy Moorman, Mayor Pro Tem

Shawna Ambrose, Councilmember

Sharon Davis, Councilmember

Lisa Feret, Councilmember

Bob Fifer, Councilmember

John Marriott, Councilmember



REPORT TO CITY COUNCIL

AGENDA ITEM
5.B.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: Proclamation for the 80th Anniversary of D-Day - Presented by Councilmember Marriott

Report in Brief

City Council will recognize June 6th as a day to acknowledge all World War II veterans.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Lorie Gillis, City Manager 5/30/2024

Enclosure, exhibits & attachments required to support the report

Proclamation



CITY OF ARVADA

WHEREAS, The Girl who Wore Freedom is a film documentary which invites audiences to discover the untold stories of D-Day from the men, women, and children who lived through German occupation and Allied liberation of Normandy, France; and

WHEREAS, the film tells the stories of an America that lived its values, instilling a pride in country that is in danger of becoming a relic of the past; and

WHEREAS, The Girl who Wore Freedom reminds viewers of who we are as Americans when we are at our very best, when we are standing up for those who are poor, oppressed, especially those whose freedoms and liberties have been stolen; and

WHEREAS, this film will be a reminder that individual and national acts of bravery, care and compassion have the power to impact others for generations; and

WHEREAS, The Girl who Wore Freedom will be coming to The Harkins Theater 14 in Arvada on June 5th to celebrate the 80th anniversary of D-Day, the veterans who served in World War II and all veterans who followed in their footsteps; and

WHEREAS, Arvada has over 100 World War II veterans, some who may have served in the Normandy campaign.

NOW, THEREFORE, BE IT PROCLAIMED by the Mayor and City Council of the City of Arvada, Colorado, that on the 80th Anniversary of Operation Overlord, best known as D-Day, the City of Arvada hereby officially recognizes June 6th as a day to acknowledge all World War II liberating veterans of the City of Arvada and acknowledge those veterans of this city, who followed in their footsteps. For their sacrifices and contributions to securing liberty for this great nation, the City of Arvada is forever grateful, and will remember their dedication for maintaining our freedom, both in the past and present.

Dated this 3rd day of June, 2024.

Lauren Simpson, Mayor

Randy Moorman, Mayor Pro Tem

Shawna Ambrose, Councilmember

Sharon Davis, Councilmember

Lisa Feret, Councilmember

Bob Fifer, Councilmember

John Marriott, Councilmember



REPORT TO CITY COUNCIL

AGENDA ITEM
8.A.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: Consent Agenda

Report in Brief

1. R24-059, A Resolution Authorizing Change Order No. 2 to the Construction Management Agreement For Pre-Construction & Construction Services for the Meyer's Pool Replacement Project

2. R24-060, A Resolution Authorizing Change Order No. 6 to An Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an amount not to exceed \$866,646.61 for a revised total contract amount not to exceed \$18,590,691.96

Suggested Motion: Moved by: _____ I move that the Consent Item(s),
Number(s) _____

be
(Removed from the Consent Agenda and Heard Upon Item _____) (Referred to a Workshop) (Postponed
Indefinitely).

YES _____ NO _____ ABSENT _____

That All/Remaining Consent Items be (Approved) (Rejected).

YES _____ NO _____ ABSENT _____

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Enclosure, exhibits & attachments required to support the report



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.1.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: R24-059, A Resolution Authorizing Change Order No. 2 to the Construction Management Agreement For Pre-Construction & Construction Services for the Meyer's Pool Replacement Project

Report in Brief

Kim Vagher, Manager of City Facilities

The Meyer's Pool (Arvada Aquatics Center) project is on schedule and budget with substantial completion in September 2024 and final completion in November 2024. The majority of change order no. 2 is the contribution funds in the amount of \$412,882.00 for construction per agreement with Pool for Kids, Inc. a nonprofit corporation, and the audio visual (AV) system work in the total amount of \$354,551 both items accounted for in the project budget. The contribution will be used to construct a 3-meter and 5-meter platform, plus three 3-meter springboards and three 1-meter springboards. Please see perspective view of the diving facility attached. The balance of the change order will cover unforeseen conditions, design modifications, and material cost increases. This change order will not impact the current project schedule (0 days).

Summary of project costs for Saunders Construction:

Initial Guaranteed Maximum Costs (IGMP)	\$38,240,799.00
Final Guaranteed Maximum Costs (FGMP)	\$38,727,339.00
Change Order # 1	\$199,591.40
Change Order #2 (This Request)	\$999,398.44
Revised FMGP	\$39,926,328.84
Change Order % of Construction Costs	3.10 %
Project Contingency Current Balance	\$424,136.14

The Arvada team recommends that the City Council approve R24-059, A Resolution Authorizing Change Order No. 2 to the Construction Management Agreement For Pre-Construction & Construction Services for the Meyer's Pool Replacement Project.

Financial Impact

The items in this change order are in the project budget and contingency funds. There is no impact on the overall project schedule. Contingency balance is provided below. Saunders Contract Summary:

Initial Guaranteed Maximum Costs (IGMP)	\$38,240,799.00
Final Guaranteed Maximum Costs (FGMP)	\$38,727,339.00
Change Order # 1	\$199,591.40
Change Order #2 (This Request)	\$999,398.44
Revised FMGP	\$39,926,328.84
Change Order % of Construction Costs	3.10 %
Project Contingency Current Balance	\$424,136.14

Background

The IGA with Jefferson County School District (JCSD) and Apex was approved by City Council in November 2021 providing the process and procedures to build a cooperative relationship in the development, design, construction, and operation of the new pool facility. Arvada is taking the lead on managing the full project scope with JCSD and Apex operating as co-leads on the project. The project is currently on track to gain LEED Silver certification. The project has incorporated many sustainable initiatives and was approved by Xcel Energy for the Energy Design Assistance (EDA) program that has a potential to yield energy savings rebates depending on the performance of the facility.

Discussion

The recommended action to approval of this change order are cost neutral to the Meyer's Pool project budget.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

The recommended action aligns with the following principle within the Infrastructure Priority Area of the City Council Strategic Plan:

Applies cost-effective and timely engineering design, geographic information, effective construction practices, and established standards and specifications to align public infrastructure reinvestment capacity with community needs.

Alternative Courses of Action

No Recommendations

Recommendation for Action

The Arvada team recommends that the City Council approve R24-059, A Resolution Authorizing Change Order No. 2 to the Construction Management Agreement For Pre-Construction & Construction Services for the Meyer's Pool Replacement Project.

Suggested Motion:

I move that R24-059, A Resolution Authorizing Change Order No. 2 to the Construction Management Agreement For Pre-Construction & Construction Services for the Meyer's Pool Replacement Project, be (approved) (rejected).

Prepared by:
Kim Vagher, Manager of City Facilities

Reviewed by:

Approved by:

Kim Vagher, Manager of City Facilities

5/9/2024

SUBJECT: R24-059, A Resolution Authorizing Change Order No. 2 to the Construction Management Agreement For Pre-Construction & Construction Services for the Meyer's Pool Replacement Project

PAGE: 3
ITEM: 8.A.1.

Jacqueline Rhoades, Public Works Director	5/13/2024
Bryan Archer, Director of Finance	5/14/2024
Tammy Hedlund, Legal Specialist	5/14/2024
Kylie Justus, Assistant City Attorney	5/15/2024
Don Wick, Deputy City Manager	5/15/2024
Rachel Morris, City Attorney	5/17/2024
Lorie Gillis, City Manager	5/22/2024

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R24-059

A RESOLUTION AUTHORIZING CHANGE ORDER NO. 2
TO THE CONSTRUCTION MANAGEMENT AGREEMENT
FOR PRE-CONSTRUCTION & CONSTRUCTION SERVICES
FOR THE MEYER'S POOL REPLACEMENT PROJECT

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, Change Order No. 2, which is in substantially the same form as that attached hereto.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 3rd day of June, 2024.

Lauren Simpson, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____



86 Inverness Place North
Englewood CO 80112 USA

CHANGE ORDER

NO. OCO-003

Printed On: 03/14/2024

Page 1 of 1

TITLE:

OCO-003 / SCA-038, 049, 050, 052, 054, 056, 057, 060, 061, 070, 071, 076, 090, 094 & 110

PROJECT:

Meyers Pool Replacement

TO:

City of Arvada
8101 Ralston Road
Arvada CO 80001-8101
USA
Phone: 720-898-7000 Fax: 720-898-7860

ISSUE DATE:

03/14/2024

JOB:

22015012

Item#	Description	Bill Amount
SCA-038	PR 02 Added EIFS	20,701.98
SCA-049	ASI #12: PDU Power Changes	8,000.00
SCA-050	PR #06: Metal Railings (Zimmerman Only)	2,260.00
SCA-052	PR 004 LEED Added Metering	12,449.00
SCA-054	ASI #16: Aquatics Update and RFI 169	15,700.00
SCA-056	Drilled Pier Overrun	24,959.15
SCA-057	Alternate #3	412,882.00
SCA-060	RFI 41.1 Electrical Coordination (undo TFR 25)	3,211.00
SCA-061	SCA_027 Alternate #2: Coverboard Correction	62,399.00
SCA-070	Updated Progress Schedule	0.00
SCA-071	Gunbarrel Grey Storefront Color	11,722.00
SCA-076	PR #08 (1) Sound Isolation	3,611.00
SCA-090	RFI 198 Water Sub Meter Electrical Requirements	1,458.00
SCA-094	Additional Appliances above Budget	7,256.06
SCA-110	Hillen - Abatement Scope	6,735.00

Total:

\$593,344.19

The Original Contract Sum was	\$38,240,799.00
Net Change by Previously Authorized Requests and Changes	\$686,131.40
The Contract Sum Prior to This Change Order was	\$38,926,930.40
The Contract Sum will be Changed by	\$593,344.19
The New Contract Sum Including This Change Order	\$39,520,274.59
The Contract Time Will Not Be Changed	
The Date of Substantial Completion as of This Change Order therefore is	09/18/2024

ACCEPTED: This change order is hereby added to the Contract Sum as a Stipulated Sum Amount

Contractor

Saunders Construction, LLC

Architect

Ohlson Lavoie Corporation

Owner

City of Arvada

By:

Anna Gannon

By:

Robert McDonald

By:

Date:

March 14, 2024 | 2:54 PM PD

Date:

March 14, 2024 | 5:13 PM MDT

Date:

3/13/2024

Meyers Pool Replacement											
SCA #	Description	Approved in OCO	Cost				Category	Date Submitted	Days Out	Status	
			ROM-SWAG	Submitted SCA	Submitted Contingency Use	Approved SCA					Approved Contingency Use
SCA_038	PR 02	OCO 003		\$ 20,701.98		\$ 20,701.98	Design	12/27/2023		Executed	
SCA_049	ASI #012: PDU Power Changes	OCO 003		\$ 8,000.00		\$ 8,000.00	Design	12/27/2023		Executed	
SCA_050	PR #06: Metal Railings (Zimmerman Only)	OCO 003		\$ 2,260.00		\$ 2,260.00	Design	12/22/2023		Executed	
SCA_052	PR #04 LEED Added Metering	OCO 003		\$ 12,449.00		\$ 12,449.00	Design	12/27/2023		Executed	
SCA_054	ASI #016: Aquatics Update / RFI #169	OCO 003		\$ 15,700.00		\$ 15,700.00	Design	1/7/2024		Executed	
SCA_056	Cassion Overrun	OCO 003		\$ 24,959.00		\$ 24,959.15	Unforseen	1/7/2024		Executed	
SCA_057	Alternate #3	OCO 003		\$ 412,882.00		\$ 412,882.00	Design	2/8/2024		Executed	
SCA_060	TFR 025 RFI 41.1 Electrical Coordination	OCO 003		\$ 3,211.00		\$ 3,211.00	Design			Executed	
SCA_061	SCA_027 Alt #2: Coverboard Correction	OCO 003		\$ 62,339.00		\$ 62,399.00	\$ (63,550.00)	Design	2/8/2024	Executed	
SCA_070	Updated Progress Schedule	OCO 003				\$ -		SCI		Executed	
SCA_071	Gunbarrel Grey Storefront Color	OCO 003		\$ 11,722.00		\$ 11,722.00		Design		Executed	
SCA_076	PR #08 (1) Sound Isolation	OCO 003		\$ 3,611.00		\$ 3,611.00		Design	2/8/2024	Executed	
SCA_090	RFI 198 Water Sub Meter Electrical Requirements	OCO 003		\$ 1,458.00		\$ 1,458.00		Design	2/12/2024	Executed	
SCA_094	Additional Appliances above Budget	OCO 003		\$ 7,256.06		\$ 7,256.06		Design	2/19/2024	Executed	
SCA_110	Hillen Abatement Scope	OCO 003		\$ 6,735.00		\$ 6,735.00		Unforseen		Executed	
			A	B	B	C	D				
			Original Contract Value					\$ 38,240,799.00			
			OCO 1					\$ 486,540.00			
			OCO 2					\$ 199,591.40			
			OCO 3 (Table Above)					\$ 593,344.19			
			Current Contract Value (With Approved SCAs)					\$ 39,520,274.59			



86 Inverness Place North
Englewood, CO 80112

February 12, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-038 PR 02 Added EIFS

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-038		PR 02 Added EIFS		Source	
Reference Date	11/25/2023		Owner Number			
Scope Description						
Saunders added a deduct for the material owed to attach the sunshades to the precast. This was a scope gap. The credit is for the material only as EAP glass had the labor. The labor remain the same.						
22015012	07240	SUB	DM Construction		14,112.98	EIFS
22015012	07400	SUB	Douglass Colony Group Inc.		-29,390.00	Metal Wall / Soffit Panels
22015012	09250	SUB	Interior Contractors Inc, LLC dba ICI, LLC		36,075.00	Drywall & Metal Studs
22015012	98500	OVD			-1,125.00	SCI Contingency
22015012	98003	OVD			22.00	Builders Risk
22015012	98005	OVD			187.00	Commercial Insurance
22015012	98301	OVD			256.00	SDI
22015012	98600	OVD			30.00	Closeout and Warranty
22015012	99000	FEE			534.00	Fee
Stipulated Sum					20,701.98	

Approved:

Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-038		PR 02 Added EIFS		Source	
Reference Date	11/25/2023		Owner Number			
Scope Description						
Saunders added a deduct for the material owed to attach the sunshades to the precast. This was a scope gap. The credit is for the material only as EAP glass had the labor. The labor remains the same.						
22015012	07240	SUB	DM Construction		14,112.98	EIFS
22015012	07400	SUB	Douglass Colony Group Inc.		-29,390.00	Metal Wall / Soffit Panels
22015012	08600	SUB	EAP Inc. dba EAP Glass, Inc.		27,996.00	Curtain Wall System
22015012	09250	SUB	Interior Contractors Inc, LLC dba ICI, LLC		36,075.00	Drywall & Metal Studs
22015012	98500	OVD			-1,125.00	SCI Contingency
22015012	98003	OVD			52.00	Builders Risk
22015012	98005	OVD			453.00	Commercial Insurance
22015012	98301	OVD			620.00	SDI
22015012	98600	OVD			72.00	Closeout and Warranty
22015012	99000	FEE			1,295.00	Fee
Stipulated Sum					50,160.98	

Approved:
Saunders Construction, LLC

City of Arvada
Kim Vagher

Laurel Lane
Project Manager

Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date

DM Construction

2040 W Hamilton Pl
Sheridan CO 80110



Date	Estimate #
11/6/2023	#

Project:	Meyers Pool
Drawing Dated:	10/19/2023

Description	Total		
Per PR 002 this PCO accounts for the added EIFS per wall section 2/A303. DM has also accounted for the added complexities of installation on the mechanical mezzanine along with roof protection. Note - DM assumes mech units and screen wall will not be in place at time of this work, if not we will need to revise our number. Material - \$5,023.41 Labor - \$5,061.19 Tax - \$501.68 Management - \$1,470.34 O&P - \$1,890.35 Rental - \$786.75 Total - \$14,733.72	\$14,733.72		
<table><tr><td>Total</td><td>\$14,733.72</td></tr></table>		Total	\$14,733.72
Total	\$14,733.72		

All material is guaranteed to be as specified. All work is to be completed in compliance with standard practices. Any alternation or deviation from specifications involving extra cost will be executed upon written order as an extra charge above proposal. All agreements are contingent upon strikes, accidents, or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our works are fully covered by workman's compensation and general liability insurances.

Proposal maybe withdrawn, if not accepted in 90 Days.

Signature Of Acceptance _____



Douglass Colony Group Inc
5901 East 58th Avenue
Commerce City, CO 80022
303.288.2635
303.288.8602 fax

Change Request

To: Saunders Construction
86 Inverness Place North
Englewood, CO 80112
Ph: (303)699-9000 Fax: (303)680-7448

Number: 2
Date: 2/9/24
Job: 50-010-3574 Meyers Pool Replacement
Phone:
Fax: BW

Description: COR #2 - PR02 Credit for Wall Section 2 on A303

We hereby propose to make the following changes:

This is a credit for the deletion of PVC membrane, 1/2" sheathing, and 2" insulation indicated on the vertical surface of the Mechanical Mezzanine per PR02.

The total amount to provide this work is \$-29,390.00

(Please refer to attached sheet for details.)

If you have any questions, please contact me at 303-288-2635.

Submitted by: Jake Bechtholdt
Douglass Colony Group

Approved by: _____
Date: _____



Douglass Colony Group Inc

5901 East 58th Avenue

Commerce City, CO 80022

303.288.2635

303.288.8602 fax

		Description	Quantity	Units	Unit Price	Price
Labor						
		Labor	-152.00	mh	72.00	-10,944.00
					Labor Total:	-10,944.00
Material						
		Material	-1.00	ls	15,001.63	-15,001.63
					Material Total:	-15,001.63

Subtotal: \$-25,945.63

Material Tax -\$15,001.63 7.96% \$-1,194.13

Equipment Tax \$0.00

Other Tax \$0.00

Mark Up -\$15,001.63 15.00% \$-2,250.24

Sub Mark Up \$0.00

Total: \$-29,390.00



6275 Simms St
Arvada, CO 80004
Ph : (303) 526-0855

Change Request

To: Alex Krasnec
Saunders

Number: 002

Date: 12/17/23

Job: 02-23-009 Meyers Pool Replacement

Phone:

Description: PR 02

Reason: Change in Scope

We are pleased to offer the following specifications and pricing to make the following changes:

This Change Order Request includes pricing on material, equipment and labor for added spray foam, weather barrier and stud blocking as indicated to updated building sections per PR 02.

Work performed by us:

Description	Quantity	Unit	Unit Price	Price
Labor				\$27,561.00
Material				\$5,554.00
Equipment				\$1,781.00
			Subtotal:	\$34,896.00
			Subtotal:	\$34,896.00
	OHP 15.00%	\$7,335.00		\$1,100.00
	Textura 0.22%	\$35,996.00		\$79.00
			Total:	\$36,075.00

If you have any questions, please contact me at .

Submitted by: Will Rinehart
INTERIOR CONTRACTORS INC, LLC

Approved by: _____
Date: _____

Interior Contractors Inc.
Change Order Request Form
Project 23009 - Meyers Pool Replacement

Date:12/7/23

Change DescriptionPR 02

Reference PCO No.

COR002

Change Description: PR 02

This Change Order Request includes pricing on material and labor for added spray foam, weather barrier and stud blocking as indicated to updated building sections per PR 02.

Material						
Description	Quantity	Unit		Unit \$	Total	
1 Spray Foam	1	LS	X	3,867.00	\$3,867	
2 Weather Barrier	1	LS	X	733.00	\$733	
3 Framing	1	LS	X	250	\$250	
4 Thermal Insulation Credit	666	SF	X	-0.565	(\$376)	
5			X		\$0	
6			X		\$0	
7 Sundries		1	X	15%	\$671.06	
Material Sub-total:					\$5,145	
Tax @ 7.96%					\$410	
Total Material:					\$5,554	

Miscellaneous						
	Quantity	Unit		Unit \$	Total	
1 Lifts	1	LS	X	1,650.00	\$	1,650.00
2			X		\$	-
3			X		\$	-
4			X		\$	-
5			X		\$	-
6					\$	-
Material Sub-total:					\$1,650	
Tax @ 7.96%					\$131	
Total Miscellaneous:					\$1,781	

Labor:							
Superintendent	24	Hrs.	ST	X	\$	146.71	\$3,521
Foreman	-	Hrs.	ST	X	\$	109.51	\$0
Carpenter	16	Hrs.	ST	X	\$	90.87	\$1,454
Spray Foam/Weather Barrier	232	Hrs.	ST	X	\$	90.87	\$21,082
Thermal Insulation Credit	(8)	Hrs.	ST	X	\$	45.44	(\$364)
Laborer	24	Hrs.	ST	X	\$	77.80	\$1,867
Painter	-	Hrs.	ST	X	\$	88.21	\$0
Total Labor:						\$27,560.48	

Total:	Subtotal Cost:		\$34,896
	OHP@	15.00%	\$1,100
	Subtotal Cost + OHP:		\$35,996
	Bond @	0.00%	\$0
	Textura @	0.22%	\$79
Total Request:			\$36,076

- Qualifications:
- 1

The price indicated is only for the above described and highlighted changes shown on the attached colored up drawings. Should there be any additional changes associated with the above mentioned directive it will be completed on a T&M basis and will need to be compensated with a additional Change Order to our contract.
- 2

Should ICI be directed to proceed with this work prior to receiving the written change order or you receiving our COR for said work it is assumed that the above mentioned price is agreed and ICI will be compensated in full for the described work at said value. This COR is good for 30 days, after this duration COR is open to be repriced based on current site conditions.
- 3

This price doesn’t include any pricing escalations or increases. Should there be any price increases prior to proceeding with said work ICI will need to be issued a additional change order to our contract for said increases.
- 4

This work has been priced with the assumption that work will be completed at the same time as base contract work. Should additional mobilizations be required due to this change it will need to be compensated in a additional change order to our contract.
- 5

Any accelerations or delays caused by this change will be compensated to ICI in a additional change order to our contract.



400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
www.olcdesigns.com



03/10/2023

**MEYERS POOL REPLACEMENT
ARVADA, CO**
7904 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
2	03/10/2023	BID & PERMIT
5	06/15/2023	AHJ REVIEW 1

SCALE: 1" = 10'-0"

ISSUE DATE: 03/10/2023

DRAWN BY: SO

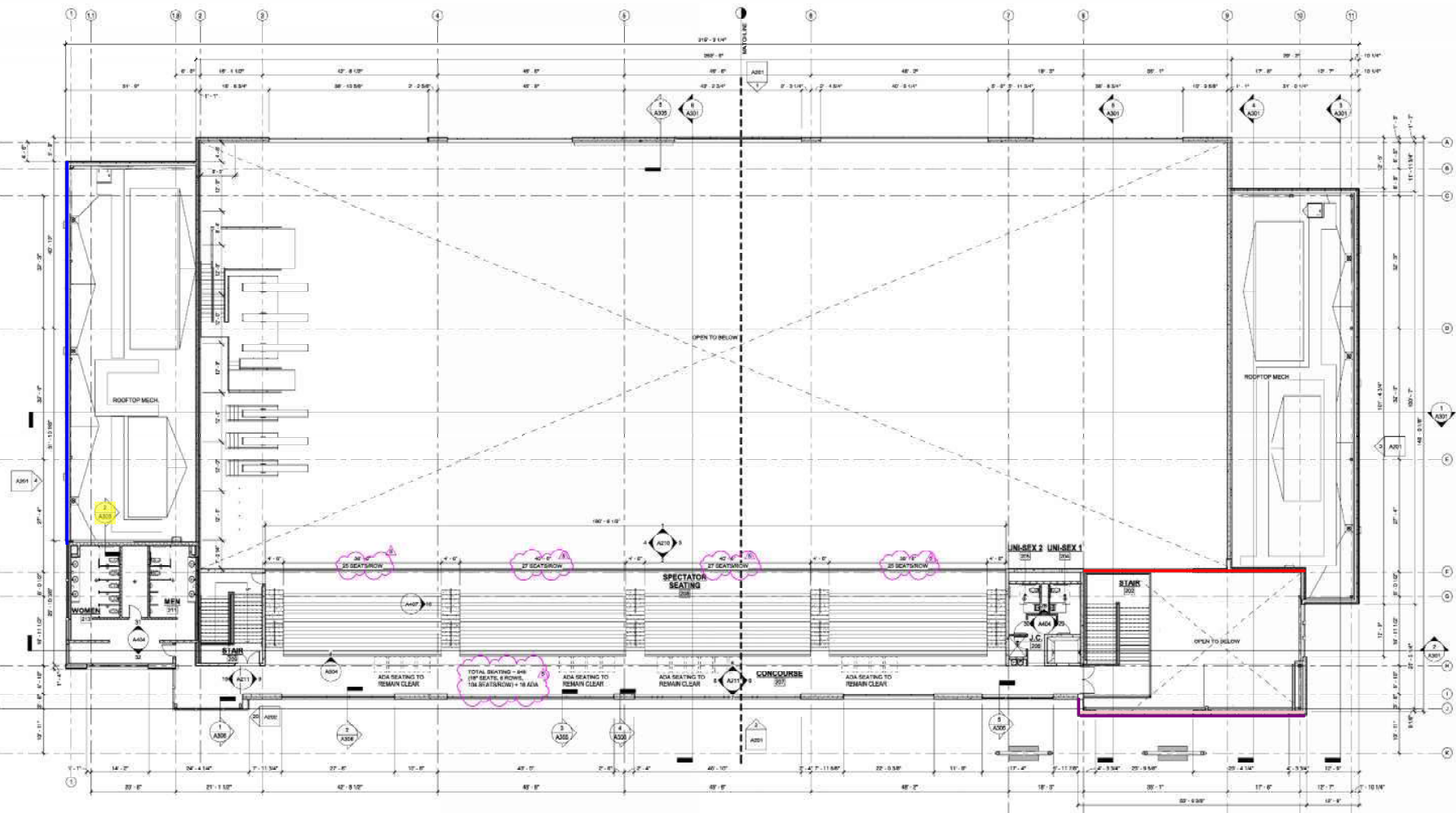
REV'D BY: BM

PROJECT #: 22044

TITLE: MEZZANINE FLOOR
OVERALL PLAN

SHEET #:

A102



1 MEZZANINE FLOOR OVERALL PLAN
1" = 10'-0"

Autodesk Docs / 22044_Arvada Meyers Pool/22044-Meyers Pool_023.rvt

01/15/2023 4:08:23 PM



5515 W. Warren Ave.
Denver, CO 80227
Phone: (303) 825-8555
Fax: (303) 623-9483

Quote Valid for 30 Days.

Bill to: Saunders Construction
86 Inverness Place North
ENGLEWOOD, CO 80112

Phone: (303)699-9000 Fax: (303)617-3868

Ship to: Saunders Construction
86 Inverness Place North
ENGLEWOOD, CO 80112

Phone: (303)699-9000 Fax: (303)617-3868

Quote

Quote Number : 609715-0

Customer# : SAUNDERS C

Quote Date : 02/02/2024

Quoted To : CASEY

Entered By : Tim Wicker

Salesperson : NVP

Terms : 2% 15 NET 30

Ship Via : DELIVERED

Ship Acct# :

Job/Rel# :

Line	Qty	U/M	Item #	Description	Price	Extension
0003	250	EACH	SIMPSTB2-75512	STRONG BOLT 2 WEDGE ANCHOR 3/4 X 5-1/2 10 PER BOX	4.50	1125.00
SubTotal						1,125.00

SEE REVERSE FOR DISCLAIMER OF ALL WARRANTIES AND RETURN POLICY

WHAT YOU NEED...
WHEN YOU NEED IT!

A finance charge of 1.5% per month will be added
on all past due accounts. Purchaser agrees to pay all
cost of collection, including reasonable attorney's fees.

~~Tax~~ 45.01



Construction, LLC
86 Inverness Place North
Englewood, CO 80112

December 26, 2023

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-049 ASI #12: PDU Power Changes

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-049		ASI #12: PDU Power Changes			Source
Reference Date	12/20/2023		Owner Number			
Scope Description						
PDU downsize from 400A to 200A						
Pool timing system pathways						
22015012	26000	SUB	Kennedy Electric, Inc.		7,603.00	Electrical
22015012	98003	OVD			8.00	Builders Risk
22015012	98005	OVD			72.00	Commercial Insurance
22015012	98006	OVD			99.00	SDI
22015012	98600	OVD			11.00	Closeout and Warranty
22015012	99000	FEE			207.00	Fee
Stipulated Sum					8,000.00	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #10

December 12, 2023

Revised 12.20.23

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North	Address:	7900 Carr Drive
	Englewood, CO 80112		Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per ASI#12

Proposal includes the following;

PDU#1 has been downsized from 400A to 225A

PDU#3 has been downsized from 400A to 225A

Credit for uninstalled conduit (please note that 400A sized underground conduits to PDU-3 has already been installed)

Credit for downsizing conductors from 400A to 225A

Add two 200A 3P 277/480V Circuit Breakers to project scope

Remove and return two 400A 3P 277/480V Circuit Breakers to Manufacturer

Add Seventeen 6" x 6" x 4" Junction boxes for pool timing system

Add 1" conduit between pool timing junction boxes and wall mounted timer system

Make up connections

Test

Credit for uninstalled conduits, feeder downsizing, and returning 400A breakers:	\$	(9,983.00)
Add for new 200A conduits, conductors, and two circuit breakers:	\$	10,900.00
Material:	\$	1,456.80
Labor:	\$	4,045.08
Overhead:	\$	641.89
Profit:	\$	320.94
Bond @ 3.0 %	\$	221.45
TOTAL ADDITIONAL WORK AUTHORIZATION AMOUNT:	\$	7,603.00

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____

December 27, 2023

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-050 PR #06: Metal Railings (Zimmerman Only)

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.



86 Inverness Place North
Englewood, CO 80112

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-050		PR #06: Metal Railings (Zimmerman Only)		Source	
Reference Date	12/21/2023		Owner Number			
Scope Description						
22015012	05100	SUB	Zimmerman Metals, Inc.		2,149.00	Structural Steel
22015012	98003	OVD			2.00	Builders Risk
22015012	98005	OVD			20.00	Commercial Insurance
22015012	98006	OVD			28.00	SDI
22015012	98600	OVD			3.00	Closeout and Warranty
22015012	99000	FEE			58.00	Fee
Stipulated Sum					2,260.00	

Approved:

Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada

Kim Vagher

Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date

Limmerman Metals, Inc.

CHANGE ORDER REQUEST

To: SAUNDERS
 Project: GEORGE MEYERS POOL
 Reference: COR #9 - PR #6 LOBBY STAIR RAILING MESH CHANGEZMI COR: 9

Date: 12/21/2023
 ZMI Job: 311

		QUAN.	UNIT	UNIT RATE	TOTAL		
MATERIAL	Material (raw, bolts, etc.)	0	lbs		\$0		
	Material Re-Stock	1	each		\$250		
	Metal Deck	0	sq.ft		\$0		
	Shear Studs	0	each		\$0		
	Grating	0	sq.ft		\$0		
	Other				\$0		
	Total Material				\$250		
ENGINEERING	Shop Drawings				\$1,500	\$1,275.00	
	In-house	4.00	hrs	\$84.00	\$336		
	Connection / Stair Design				\$0		
	Other				\$0		
	Total Engineering				\$1,836	\$1,611.00	
FABRICATION	Shop Labor	0.00	hrs	\$93.00	\$0		
	Inspection	0.00	hrs	\$93.00	\$0		
	Other				\$0		
	Total Fabrication				\$0		
FREIGHT	Legal Loads	0	Load	\$575	\$0		
	Permit Loads	0	Load	\$900	\$0		
	Escort Loads	0	Load	\$1,500	\$0		
	Dunnage				\$0		
	Total Freight				\$0		
ERECTION	Field Labor				\$0		
	Erector Bond				\$0		
	Other				\$0		
	Total Installation				\$0		
Subtotal					\$2,086	\$1,861.00	
Tax					0.0%	\$0	
Total Cost					\$2,086	\$1,861.00	
Overhead					10%	\$209	\$186.00
Subtotal					\$2,295	\$2,047.00	
Profit					5%	\$104	\$102.00
Bond					0.0%	\$0	
Total Add					\$2,399	\$2,149.00	

NARRATIVE SUMMARY OF PR#6 - LOBBY STAIR RAILING MESH CHANGE

EXISTING MESH RE-STOCKING FEE: \$250.00.

MODIFICATIONS TO SHOP DRAWINGS: ASSEMBLIES, SINGLE PARTS, ERECTION DRAWINGS: \$1,500.00.

ZMI PURCHASING DEPARTMENT TO ORGANIZE RETURN/RE-ORDER MESH: 2 HOURS.

ZMI PROJECT MANAGEMENT TO MANAGE SHOP DRAWING CHANGES, PRE-FABRICATION TASKS: 2 HOURS



86 Inverness Place North
Englewood, CO 80112

December 26, 2023

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-052 PR 004 LEED Added Metering

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-052		PR 004 LEED Added Metering			Source
Reference Date	12/26/2023		Owner Number			
Scope Description						
22015012	26000	SUB	Kennedy Electric, Inc.		11,831.00	Electrical
22015012	98003	OVD			13.00	Builders Risk
22015012	98005	OVD			112.00	Commercial Insurance
22015012	98006	OVD			154.00	SDI
22015012	98600	OVD			18.00	Closeout and Warranty
22015012	99000	FEE			321.00	Fee
Stipulated Sum					12,449.00	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #9

December 12, 2023

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North Englewood, CO 80112	Address:	7900 Carr Drive Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per PR#004

Proposal includes the following;

Add one 20A 3P 277/480V Circuit breaker to panel HP1A
 Add 3 Current transformers for MAU in panel HP1A
 Add 3 current transformers for PDU-1 in panel MSB
 Add 3 current transformers for PDU-2 in panel MSB
 Add 3 current transformers for PDU-3 in panel MSB
 Add 3 current transformers for RTU-1 in panel MSB
 Add one new digital metering system in Electrical room 131
 Extend new 20A 3P 277/480V Circuit to new meter in Electrical room 131
 Make up connections
 Test

Material: \$	6,685.48
Labor: \$	3,302.52
Overhead: \$	998.80
Profit: \$	499.40
Bond @ 3.0 % \$	344.59

TOTAL ADDITIONAL WORK AUTHORIZATION AMOUNT: \$ 11,831.00

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____



SAUNDERS CONSTRUCTION, LLC
86 Inverness Place North
Englewood, CO 80112

January 2, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-054 ASI #16: Aquatics Update and RFI 169

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-054		ASI #16: Aquatics Update and RFI 169		Source	
Reference Date	12/27/2023		Owner Number			
Scope Description						
22015012	04001	SUB	Soderberg Masonry, Inc.		4,872.00	Masonry
22015012	05100	SUB	Zimmerman Metals, Inc.		8,129.00	Structural Steel
22015012	13100	SUB	Associated Pool Builders, Inc.		16,710.00	Swimming Pool (ASI #16 / RFI #169)
22015012	13100	SUB	Associated Pool Builders, Inc.		18,630.00	Swimming Pool (RFI #084)
22015012	98003	OVD			16.00	Builders Risk
22015012	98005	OVD			142.00	Commercial Insurance
22015012	98006	OVD			194.00	SDI
22015012	98600	OVD			22.00	Closeout and Warranty
22015012	99000	FEE			405.00	Fee
Stipulated Sum					15,700.00	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date

Soderberg



239 SOUTH SUMMIT VIEW DRIVE, FORT COLLINS, COLORADO 80524
PHONE # 970-482-3766 FAX #970-482-3768

MEYER POOL - SMI INVOICE #002 - ASI 16

TO:	Luis Cardona	FROM:	Jerrold Michalak
COMPANY:	Saunders CI	DATE:	December 13, 2023
E-MAIL:	L.Cardona@saundersinc.com	TOTAL NO. OF PAGES INCLUDING COVER:	2
PHONE NUMBER:	303-472-5297	SENDER'S REFERENCE NUMBER:	970-482-3766
RE:	Invoice #02 ASI 16	YOUR REFERENCE NUMBER:	

☒ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

Luis,

Please see the attached invoice in the amount of \$4,872.00. Changes occurred at Level 1 regarding grouting/rebar placement of shear walls. See S110a/S110b clouded areas.

Thank you,

JERROD MICHALAK

JMICHALAK@SODERBERGMASONRY.COM

SODERBERG MASONRY, INC 970-482-3766

SODERBERG MASONRY, INC. - 239 SOUTH SUMMIT VIEW DRIVE. FORT COLLINS. COLORADO 80524

INVOICE FOR EXTRA WORK

TO: SAUNDERS CI - LUIS CARDONA

PAGE 1/1, PLUS ATTACHMENTS

PROJECT: MEYER POOL ARVADA

SMI INVOICE #02 - ASI #016 - CHANGE GROUT SPACING @ L1 WALLS

PROD	DESCRIPTION	QUANT.	UOM	MATL U PRICE	MATL COSTS	EQ/SUB U PRICE	EQUIP/ SUB CST	LABOR U PRICE	LABOR COSTS	TOTALS
*****	ASI CHANGES S110A/B	*****	****	*****	*****	*****	*****	*****	*****	*****
	** LABOR CHANGES				-----		-----		-----	-----
2.5	INSTALL ADDITIONAL GROUT	2.67	CYD		-----		-----	274.40	733	733
800	INSTALL ADDITIONAL REBAR	576	CYD		-----		-----	0.86	494	494
	**MATERIALS				-----		-----		-----	-----
	GROUT MATERIAL	2.67	CYD	410	1095		-----		-----	1095
	PURCHASE #5 REBAR	0.36	TNS	2375	862		-----		-----	862
	REBAR POSITIONERS	120	U	0.84	101		-----		-----	101
*****	FLATE RATE FUEL/DL/EQUIPMENT	*****	*****	*****	*****	*****	*****	*****	*****	*****
	EQUIPMENT	20	%		-----		-----		245	245
*					2058		0	35.0%	1472	\$3,530
	SALES TAX @			0.00 %	0		-----	TX & INS	515	\$515
							-----	BEN.	173	\$173
							-----	HOUSING		N/A
					2058		0		2160	\$4,218
							10 % OVERHEAD			\$422
										\$4,640
							5 % PROFIT			\$232
								TOTALS		\$4,872
								BONDS		\$0
								INVOICE AMOUNT		\$4,872

SMI INVOICE #02 - ASI #016 - CHANGE GROUT SPACING @ L1 WALLS

Zimmerman



Zimmerman Metals Inc.
Quality Workmanship and Service Since 1936

201 East 58th Avenue, Denver, CO 80216 | (303) 294-0180

Zimmerman Metals, Inc

Date : 12/20/2023

Page 1 of 1

CO #: 8

Job #: 311

George Meyers Pool

Job Location: Arvada, CO

Change Order Request

To: Oliver Deck
SAUNDERS CONSTRUCTION INC
7904 CARR DR.
ARVADA, CO 80005

Subject: COR #8 - ASI #16

Change Requested By: Robbie Burd

Sent Via: E-mail

Description of Change:

Zimmerman Metals has reviewed the above requested change and has determined a price increase of \$8,129.00 to incorporate the changes. Please see attached ZMI COR #08 for the details of the pricing.

Included:

- Shop Drawings
- Material/Fabrication
- Erection

Excluded:

- Scope not specified as included per attached ZMI narrative of the changes.

Please add (0) days to our schedule for the project.

Please issue a change order to our contract at your earliest convenience.

This pricing is valid for 30 days.

The change will cause an increase of \$8,129.00 to the contract amount.

A signature below indicates acceptance of all changes shown herein. Any work associated with this change will begin upon receipt of a signed copy of this C.O. in our office. Please respond by 12/29/2023.

If the requested response time is not met, the project may be delayed.

Accepted By

Zimmerman Metals, Inc

Limmerman Metals, Inc.
CHANGE ORDER REQUEST

To: SAUNDERS
Project: GEORGE MEYERS POOL
Reference: COR #8 - ASI #16

Date: 12/20/2023
ZMI Job: 311
ZMI COR: 8

		QUAN.	UNIT	UNIT RATE	TOTAL
MATERIAL	Material (raw, bolts, etc.)	1,188	lbs		\$1,543
	Joists	0	tons		\$0
	Metal Deck	0	sq.ft		\$0
	Shear Studs	0	each		\$0
	Grating	0	sq.ft		\$0
	Other				\$35
	Total Material				\$1,578
ENGINEERING	Shop Drawings				\$155
	In-house	20.00	hrs	\$84.00	\$1,680
	Connection / Stair Design				\$0
	Other				\$0
	Total Engineering				\$1,835
FABRICATION	Shop Labor	10.30	hrs	\$93.00	\$958
	Inspection	0.50	hrs	\$93.00	\$47
	Other				\$0
	Total Fabrication				\$1,004
FREIGHT	Legal Loads	0	Load	\$575	\$0
	Permit Loads	0	Load	\$900	\$0
	Escort Loads	0	Load	\$1,500	\$0
	Dunnage				\$0
	Total Freight				\$0
ERECTION	Field Labor				\$2,625
	Erector Bond				\$26
	Other				\$0
	Total Installation				\$2,651
Subtotal					\$7,069
Tax					0.0% \$0
Total Cost					\$7,069
Overhead					10% \$707
Subtotal					\$7,776
Profit					5% \$353
Bond					0.0% \$0
Total Add					\$8,129

311 - George Meyers Pool
ASI #16 Narrative

SHEET	DETAIL	SCOPE	IMPACT		
S216	ELEV. 2	ADDED GIRT BM & CONNECTIONS	DETAILING	MATERIAL/FAB	ERECTION
S510	16	REVISED WELDING @ WT TO JOIST	DETAILING	ERECTION	
S511	5	REVISED DIVE HARNESS SUPPORT	DETAILING	MATERIAL/FAB	ERECTION
	12	DIVE HARNESS EYE ASSEMBLY	DETAILING	MATERIAL/FAB	ERECTION
AQ000	PLAN	NTP FOR BID ALTERNATE #3	DETAILING	MATERIAL/FAB	ERECTION



400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
www.olcdesigns.com

MARTIN/MARTIN
CONSULTING ENGINEERS
12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215
MAIN: 303.431.6100 MARTIN/MARTIN.COM

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7904 Carr Drive, Arvada, CO 80005

NO. DATE: TITLE/PURPOSE:
3 12/01/2023 ASI-16

SCALE: 3/16" = 1'-0"

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

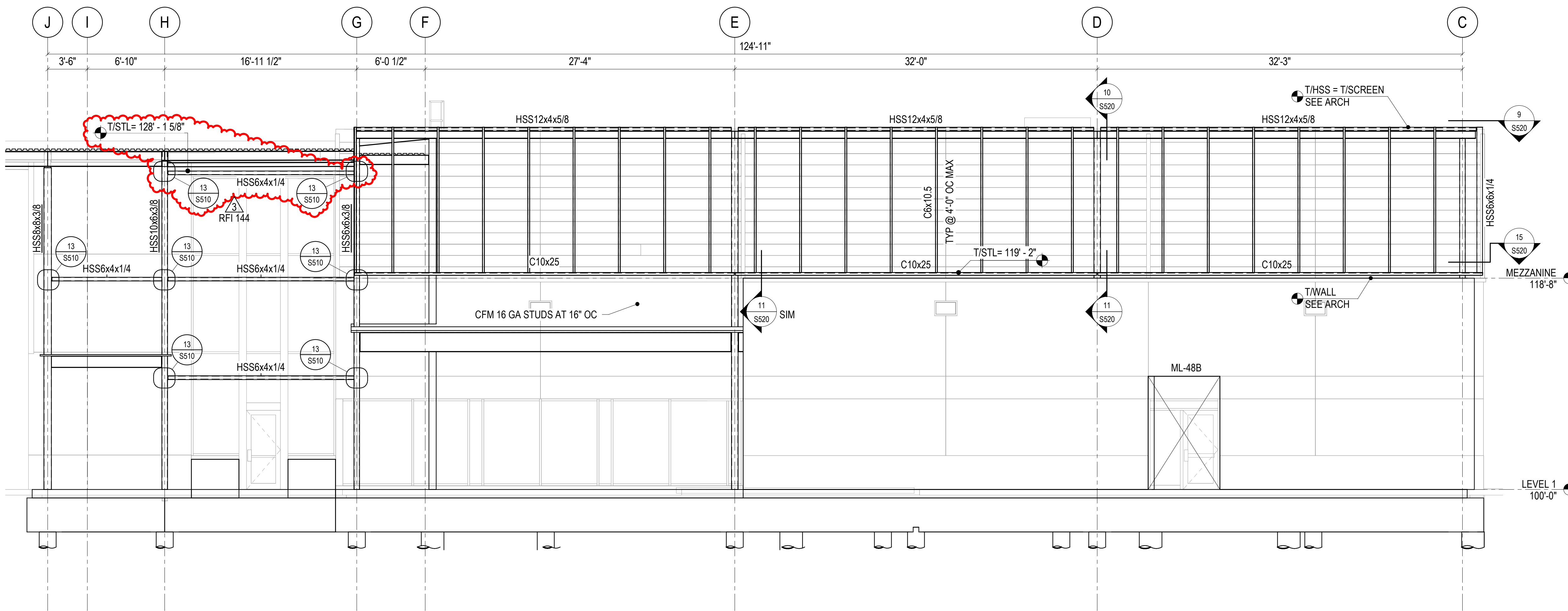
REV'D BY: ALACK

PROJECT #: 22.0851S.01

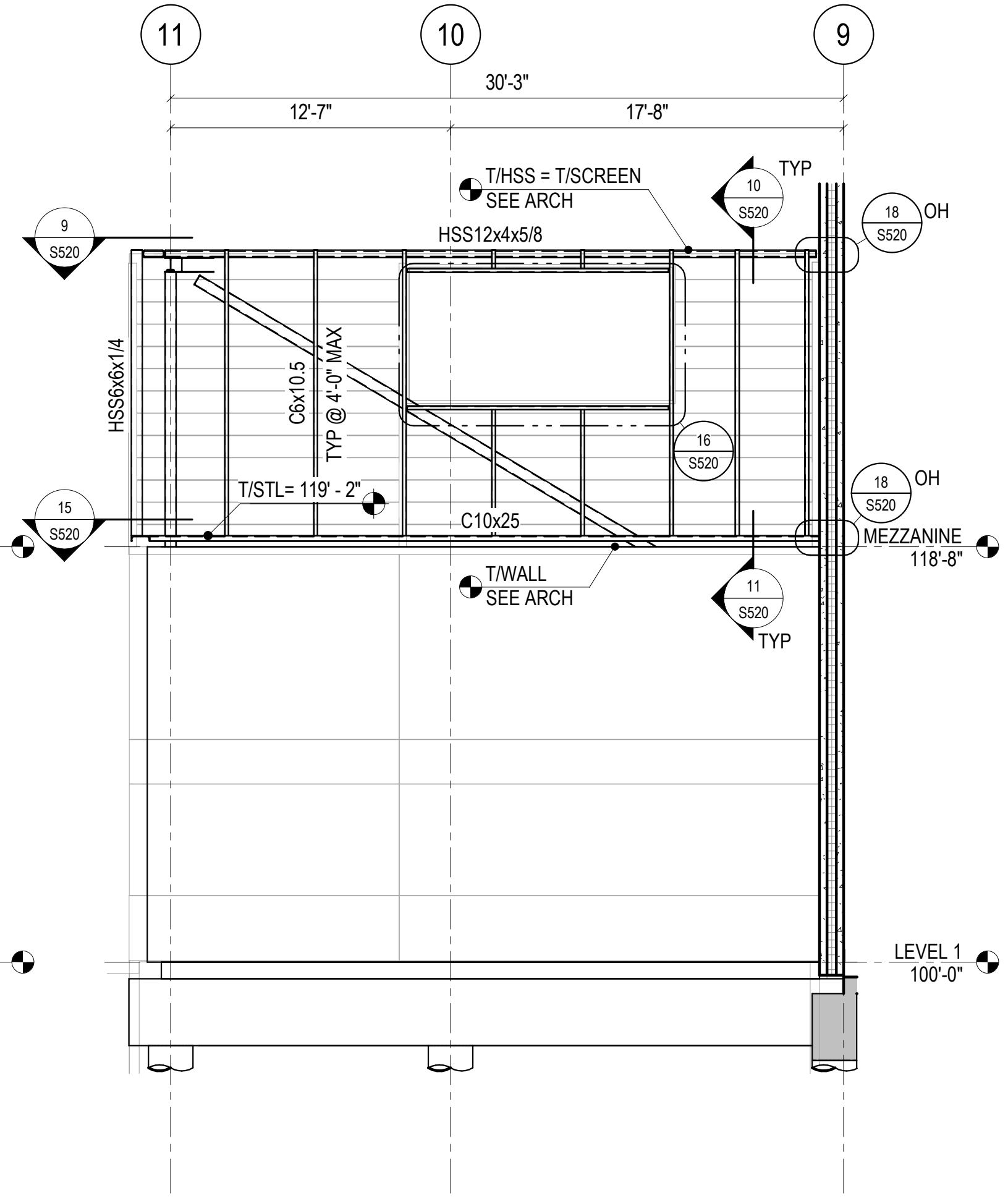
TITLE: SCREENWALL EXTERIOR
ELEVATIONS

SHEET #:

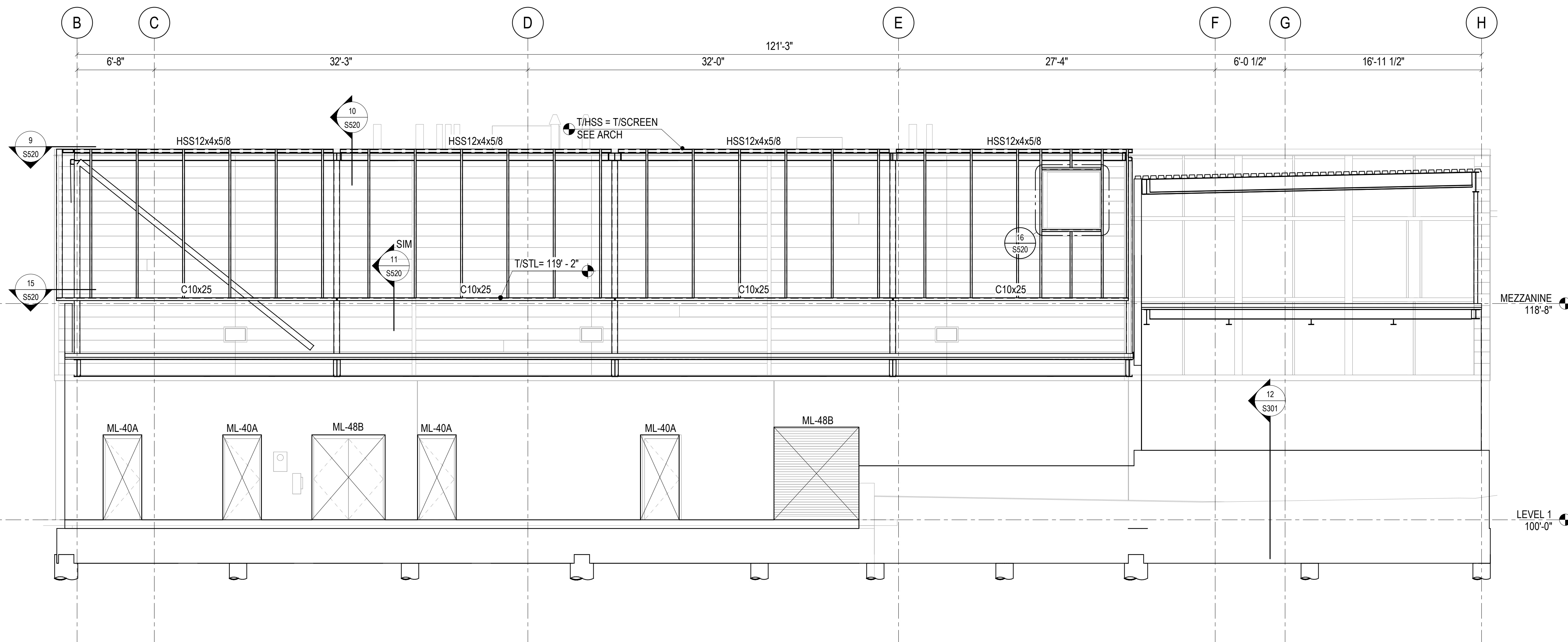
S216



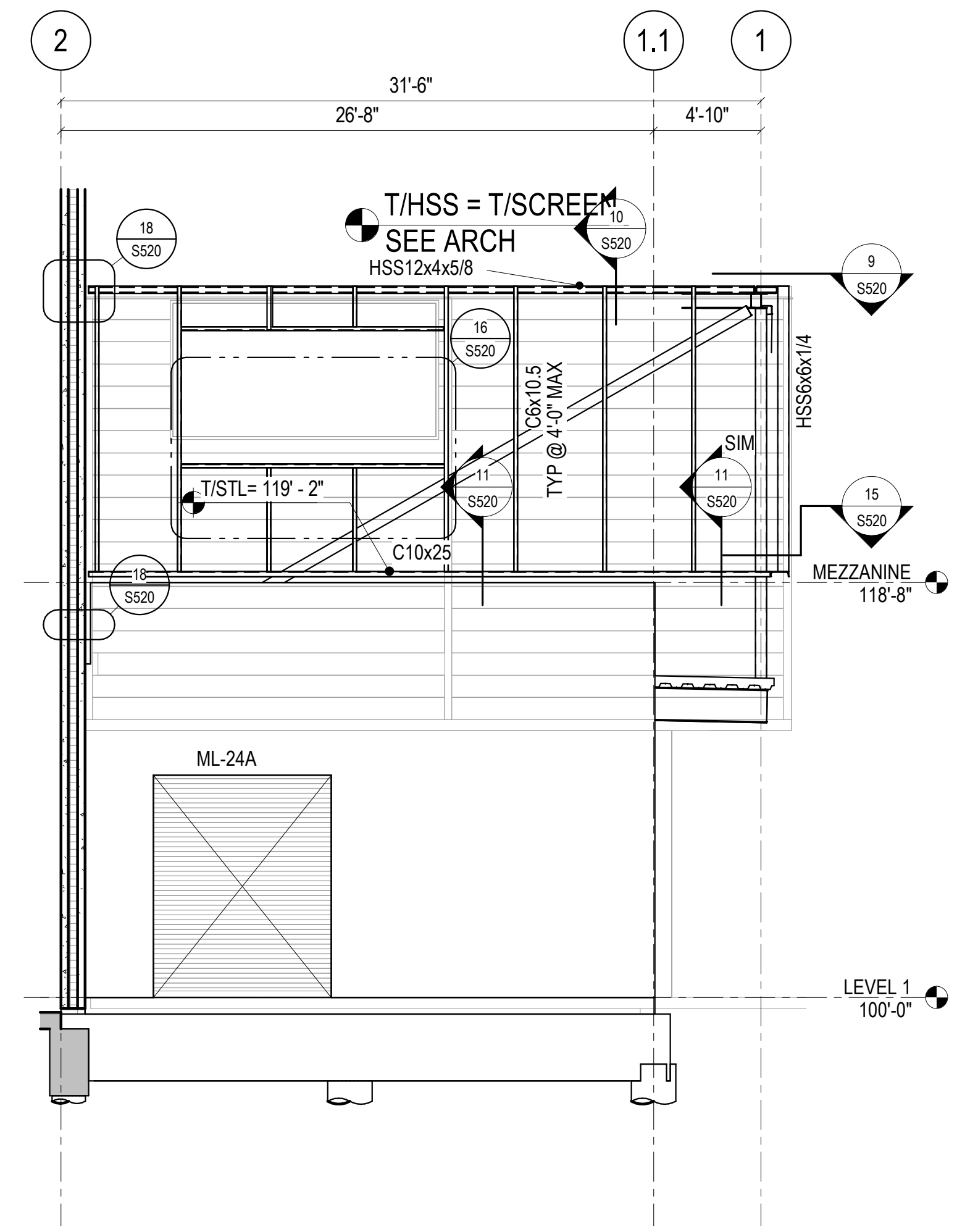
2 EAST SCREENWALL EAST ELEVATION
3/16" = 1'-0"



1 EAST SCREENWALL NORTH ELEVATION
3/16" = 1'-0"



4 WEST SCREENWALL WEST ELEVATION
3/16" = 1'-0"



3 WEST SCREENWALL NORTH ELEVATION
3/16" = 1'-0"

4	3/4" = 1'-0" TYPICAL ROOF DECK TO T/PC WAL
----------	--



7904 Carr Drive, Arvada, CO 80005

S511



AQ000

Associated Pool Builders



2121 Lovett Ave.
P. O. Box 2318
Bismarck, ND 58502
Phone: 701-258-6012 Fax: 701-224-9729

PROPOSED CHANGE ORDER NO: 3.2 Rev1

Attn: Saunders Inc.
Robert Burd
86 Inverness Place North
Englewood, CO 80112

Date: 12/28/2023
Email: hunterv@associatedpoolbuilders.com
Job Name: Meyers Pool Replacement
Job Location: Arvada, CO
Job No: 23-1765

We hereby agree to make the change(s) specified below:

Item No.	Description	Unit Price	Qty	Amount
ASI 16				
1	Add for ETS UV on comp pool in lieu of Aquionics 14" wafer	\$ 4,000.00	1 EA	\$ 4,000.00
2	Add for ETS UV on training pool in lieu of Aquionics 8" wafer	\$ 2,000.00	1 EA	\$ 2,000.00
3	Deduct for 4 owner provided Duraform 16' Maxiflex Diving Board. APBI to install	\$ (5,000.00)	4 EA	\$ (20,000.00)
4	Deduct for owner provided ADA Lift at training pool. APBI to install	\$ (4,000.00)	1 EA	\$ (4,000.00)
5	Add for ADA lift anchor at east side of Comp. pool	\$ 250.00	1 EA	\$ 250.00
6	Add for 15M resurface markers to west side of pool.	\$ 500.00	2 EA	\$ 1,000.00
7	DalLUX non-slip flat tile at training pool ramp entry in lieu of 2"x2" Daltile.	\$ 60.00	4 LF	\$ 240.00
8	Add for additional surge tank ladder rungs.	\$ 100.00	2 EA	\$ 200.00
9	Deduct for 6" heater isolation butterfly valve	\$ (200.00)	2 EA	\$ (400.00)

NOTES:

- *Reference ASI 16 & RFI #169 for equipment confirmation
- *This change order does not include southwestern stanchion replaced with welded post on 1M springboard guardrails. This needs to be coordinated. APBI currently is not providing railing for diving boards/stands.
- *Refer to CO 3.3 for drain tile per RFI 84
- *Refer to CO 3.1 for Raypak Xtherm Indirect Heaters
- *Items 1 & 2: ETS UV shall be provided in lieu of Aquionics for the competition pool and training pool UV system.
- *Item 3: Ownership will re-use four (4) DuraFlex Maxi-Flex B springboards from the existing facility. Only two (2) new Duraflex Maxiflex B springboards need to be provided by APBI per C-H submittal comments. All six (6) boards and all six (6) short stands will be installed by APBI.
- *Item 4: APBI will supply and install four (4) new Aqua Creek Mighty 400 Anchors. Three (3) at the competition pool and one (1) at the training pool. Ownership will reuse one (1) Aqua Creek Mighty 400 lift from their existing facility at the training pool. APBI will provide two (2) new Aqua Creek Mighty 400 lifts for install at competition pool.
- Items 6, 7, 8, & 9: Per changes to plans from ASI 16.
- *All starting blocks are owner provided. APBI to furnish and install anchors - 17 total deck mounted, 10 total bulkhead mounted.
- *Change Order 3 is Voided
- *Excludes any and all grounding and bonding
- *This Change Order will add 4 additional working days to our schedule.
- *This Change Order becomes part of and is incorporated in the existing contract.
- *This Change Order is valid for 14 days.

WE AGREE hereby to make the change(s) specified above at this price:

Deduct: -\$16,710.00

ACCEPTED - The above prices and specifications of this Change Order are satisfactory and are hereby accepted. All work to be performed under same terms and conditions as specified in original contract unless otherwise specified.

Date: 12/28/2023

Date of Acceptance: _____

Signature: _____

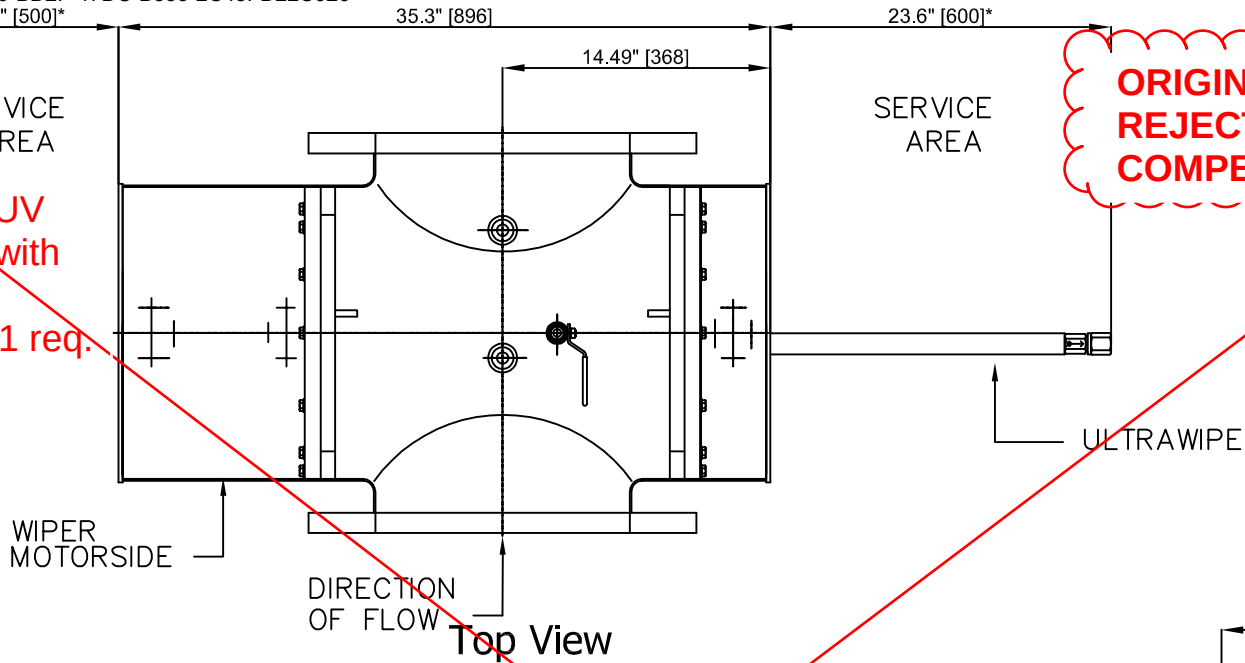
Associated Pool Builders, Inc.
Hunter Volk, Project Manager

Signature: _____

For: _____

Hanovia 14" wafer UV
system, 3080 gpm with
cabinet
#UV SWIM I 4000, 1 req.

ORIGINAL SUBMITTAL
REJECTED/RESUBMIT
COMPETITION POOL



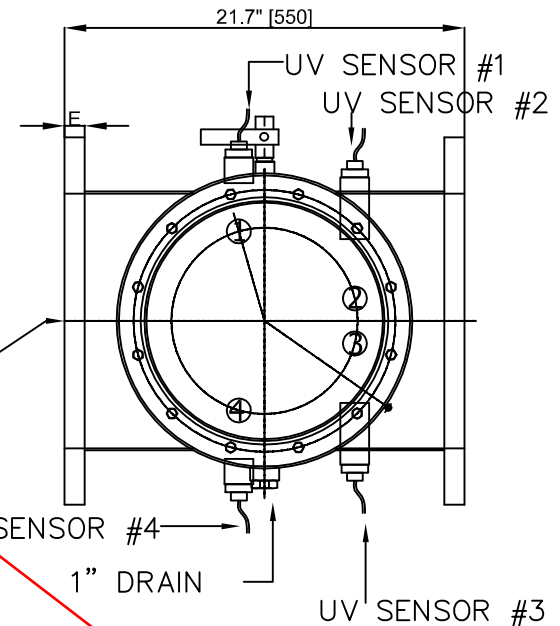
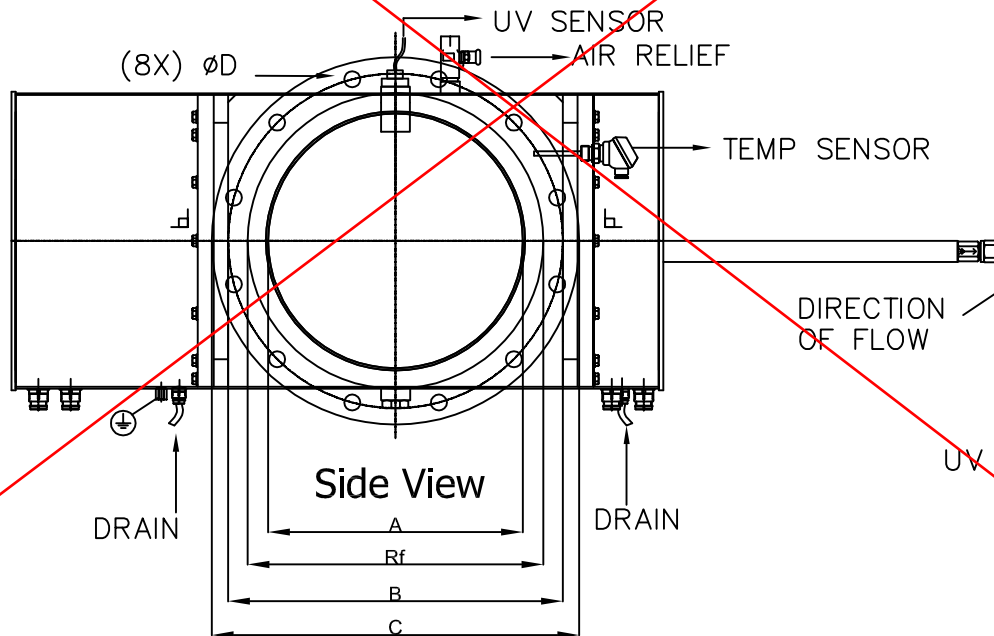
* Free space necessary for service and operation of cleaning mechanism.

NOTE:
Finishing:
Inside.....0.8
Outside brushed..K280

TOLERANCE
According to:
Standard ISO 2768-1
unless otherwise mentioned

UV Vessel Notes:

1. Dimensions in inches [mm].
2. Clearance recommended for service.
3. 14" ANSI flanges, 150 lbs.
4. Four (4) B3535H lamp.
5. Automatic cleaning system.
6. Do not scale drawing.
7. Dimensions subject to change.
8. Maximum hydraulic flow: 6.3MGD.
9. UV Swim I 4000+ is equivalent to Inline D 4000+

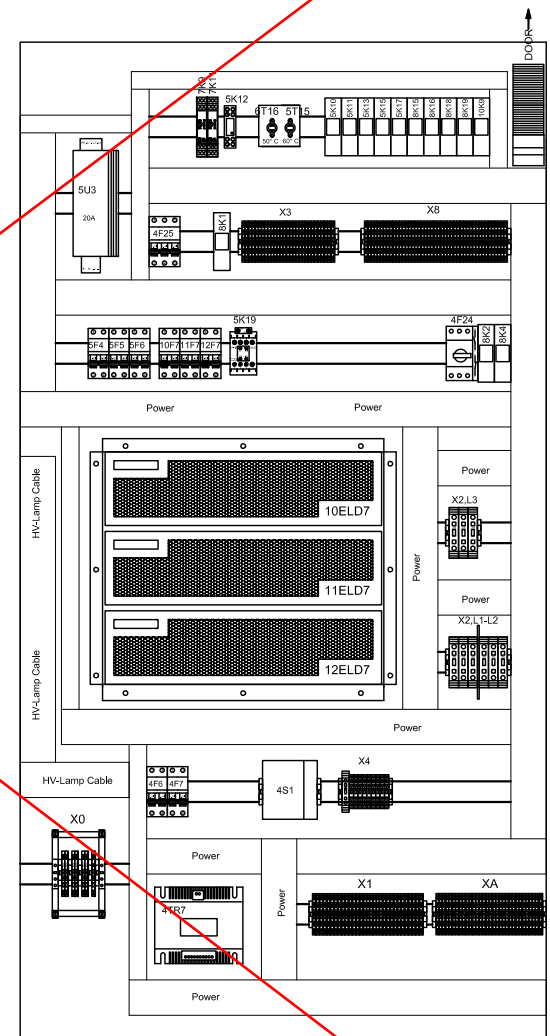


Flange Type	Size A	Pcd. B	Dia. C	Hole Dia.	Thickns E	Rf	Face Height	Number of Holes
DIN 2576 NW350	350	460	505	22	28	---	---	16
ANSI 14"	350	476	533	30	34.9	413	1.6	12

All information contained within this drawing is the property of Aquionics Inc..
Any reproduction must have the prior written permission of Aquionics Inc..

Aquiionics Inc. Confidential					
Title: UV Vessel with Ultrawipe				Scale: NTS	
InLine D 4000+				Page 1 of 1	
Sales Drawing			Drawn:SWL	Date:03/16/11	
			Appd:BT	Date:03/22/11	
			Mat:316L SS		Rev: A
			Dwg: VS-IL-4000+U-SLS-03-A		





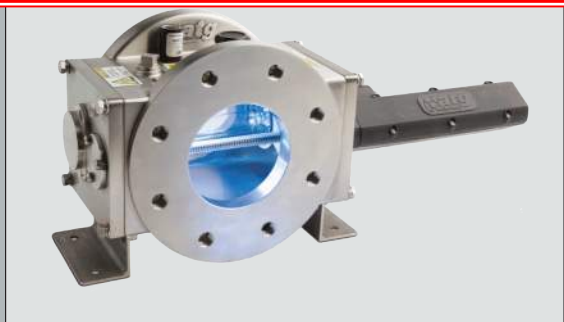
	Description: UV Swim 4000+	Ref. Tek.:	Id		
	UVtronic power/control module		Id		
Project no.	Customer.	Appr.:	Id		
		Drawn: JvdR	Id		
Order no.		Date: 11-02-2016	Revision:		
		Projection Unit:			
		Sheet 2 of 19			
drawing no:		ETAS-UV-4-G-01		Size	A3



WAFER™ UV - SUBMITTAL SHEET

WF-430-12-N

Neptune Benson/Evoqua 12" ETS wafer UV system, 3080 gpm, #WF-430-12-N (1002-5363) (change order item)



The wafer™ UV system is the most advanced UV system available. The treatment chamber has been designed for the simplest installation into any pipe work system. The chamber can be mounted vertically or horizontally. The compact design allows existing facilities to be easily upgraded with minimum site work.

COMPETITION POOL, ETS UV IN LIEU OF AQUIONIC 14" WAFER

TREATMENT CHAMBER

The Wafer™ treatment chambers are designed for installation into the piping after the filters but before chemical injection.

The treatment chamber is manufactured from solid cast 316L stainless steel, with standard ANSI flanged piping connections. Temperature probe, UV monitor probe, and automatic quartz wiper system included.

A pressure rating for the unit is 150 PSI and pressure drop through the chamber is minimal.

Our objective for the product is simple, to be the best on the market, no compromise. The Wafer™ system offers the flexibility of a horizontal or vertical installation application. The Wafer™ product line treats the largest pools with a very compact footprint.

Utilizing our proven medium pressure lamp technology, the Wafer™ system offers a high quality, 'high specifications' product at a very competitive price. The WF-430-12 is suitable for all pools and whirlpools with flows rates up to 3,080 GPM for indoor applications and 3,520 GPM outdoors applications.



CONTROL SYSTEM

The control system is housed in a IP 54 rated panel. As a standard, it is supplied with 30 ft cables for connection to the treatment chamber.

The power supply (PSU) and control cabinet are powered with the latest Spectra III microprocessor control unit. Three levels of operation (simple control, full parameter display, and operator configuration) allow for easy, uncomplicated operation of the unit by an operator. The control system features a sophisticated password protected engineering section for integrating the unit with other system devices.

Auto power restart, pump and valve interfaces, process interrupt and low power overnight operation are all features specifically designed for use on all recreational water applications.

Neptune-Benson
EVOQUA

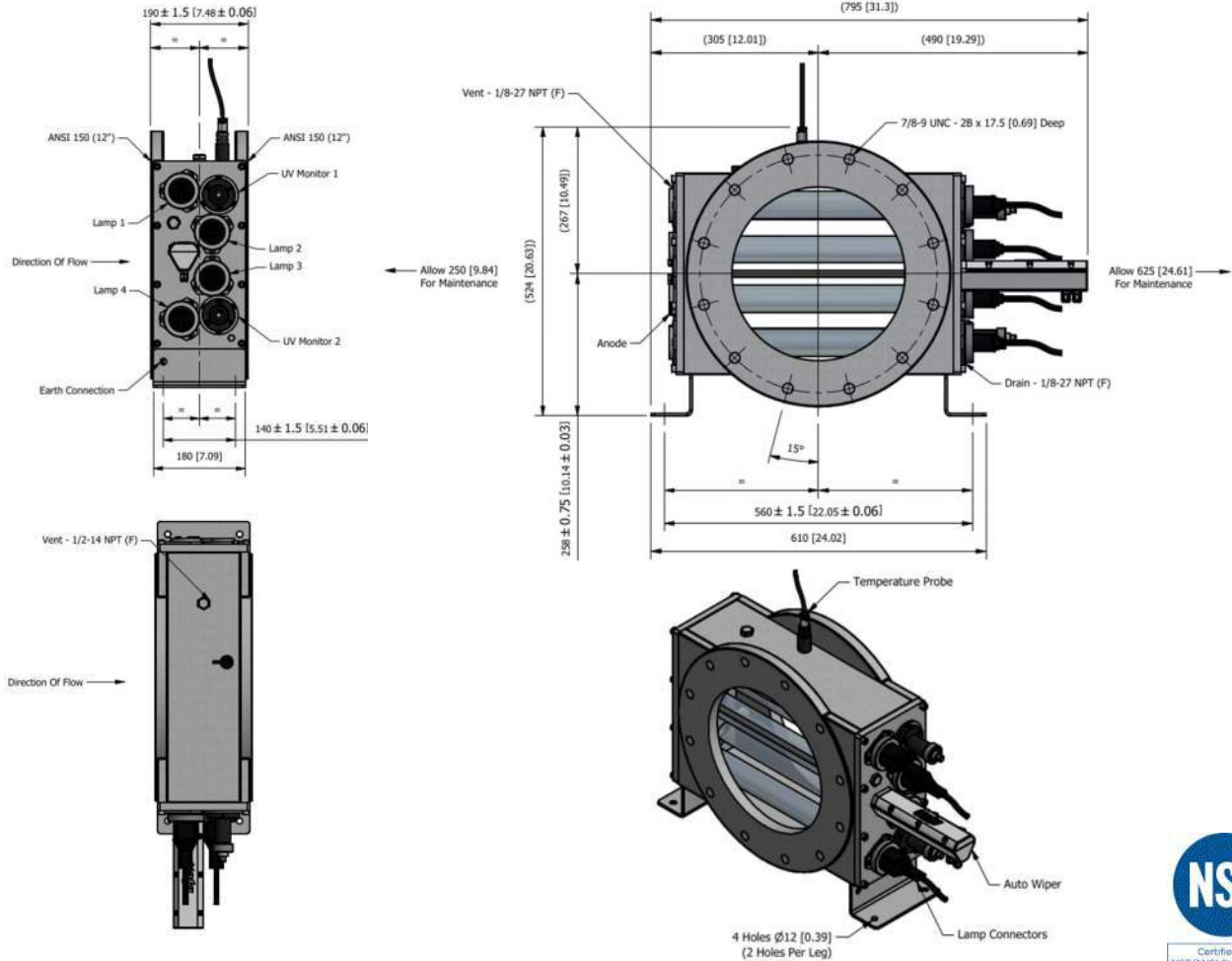
www.neptunebenson.com | Sales & Service : +1 920-885-4628

4/1/20

WAFER™ UV for Recreational Water



TREATMENT CHAMBER WF-430-12 Technical Data Sheet



Type	Lamp & Power	Weight (Dry/Wet)	Connection Size	Sacrificial Anode	Wiper System	Material Construction
WF-430-12	4 X 3.0 kW	194/247 lbs	12"	1/2" NPT	Automatic	316L SS
Pressure Rating			150 PSI			
Drain & Vent			1/8" - 27 NPT Drain 1/2" - 14 NPT Vent			
Standard Cable Length			30 feet			
Ingress Protection			IP55			
GPM for 60 mj/cm2 Dose			3,080 GPM (indoor)			
GPM for 40 mj/cm2 Dose			3,520 GPM (outdoor)			
Strainer			12" EZ Clean Strainer Included			

Neptune-Benson
EVOQUA

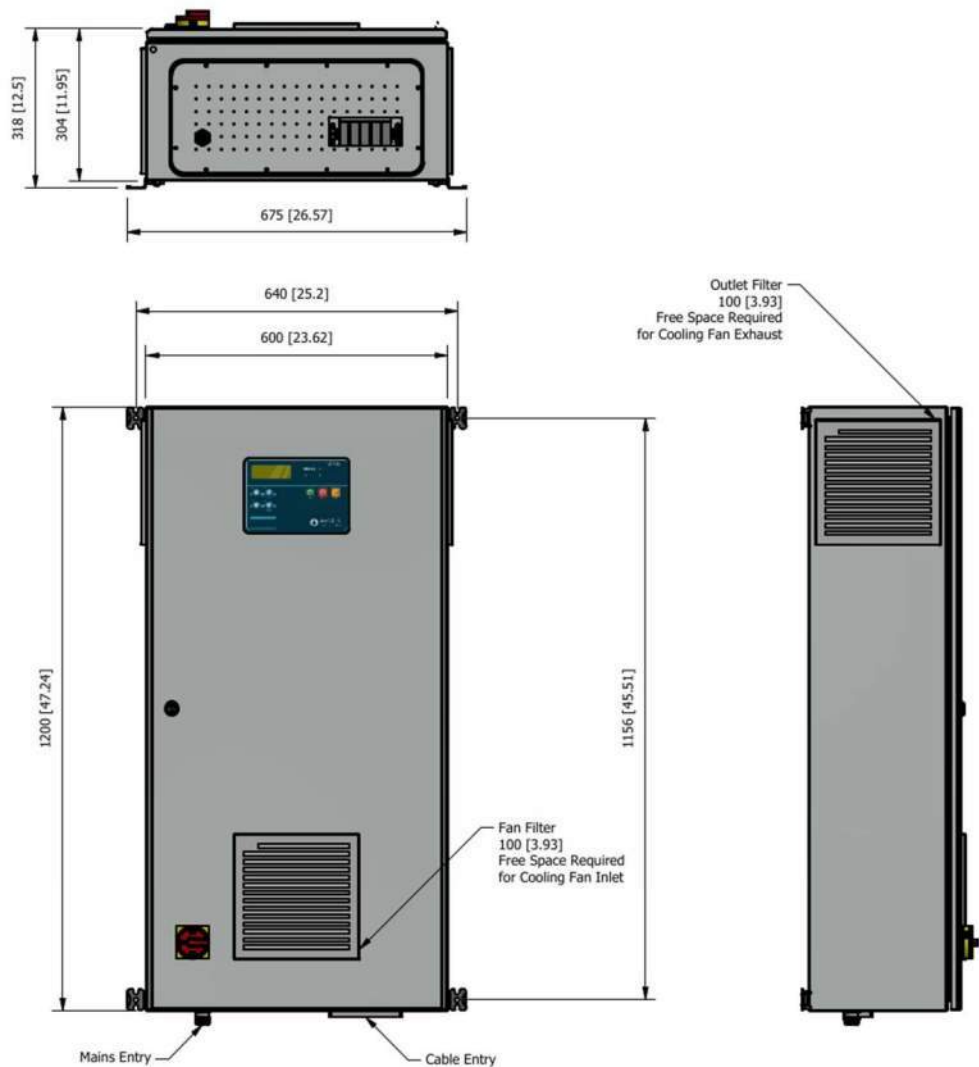
Sales & Service : +1 920-885-4628
www.neptunebenson.com

4/1/20

WAFER™ UV for Recreational Water



CONTROL PANEL
WF-430-12 Technical Data Sheet



Type	Lamp & Power	Panel Weight	Breaker Size	Power Supply	Phase	Frequency
PGA 4x3000	4 X 3.0 kW	<165 lbs	40 Amp	380-480V	3 Ph	50/60 Hz
Variable Power			100% to 30% Power (Automatic Dose Pacing)			
User Interface			Spectra Membrane			
Ventilation			Forced Air Cooled (Fan)			
Ingress Protection			IP 54			



EZ STRAINER - SUBMITTAL SHEET



Easy to install.
Easy to operate.
Nothing to remove & clean.
Tremendous labor savings.

EZ Strainer is the first and only clean-in-place UV strainer designed to provide safety and reliability against the rare chance of lamp or quartz breakage. As simple as unlocking and turning the handle, the EZ strainer is now free and clear of fine debris that may have made it through the system.

Features

- Available in 4"/100mm to 12"/300mm pipe sizes.
- Durable stainless steel strainer disc and shaft.
- 180° positive stop.
- Lightweight cast aluminum riser (nylon) coated valve housing.

Model	Connection		Description
	inches	mm	
EZCLN-4	4	100	Standard Model Strainer
EZCLN-6	6	150	Standard Model Strainer
EZCLN-8	8	200	Standard Model Strainer
EZCLN-10	10	250	Standard Model Strainer
EZCLN-12	12	300	Standard Model Strainer

Neptune-Benson
 EVOQUA

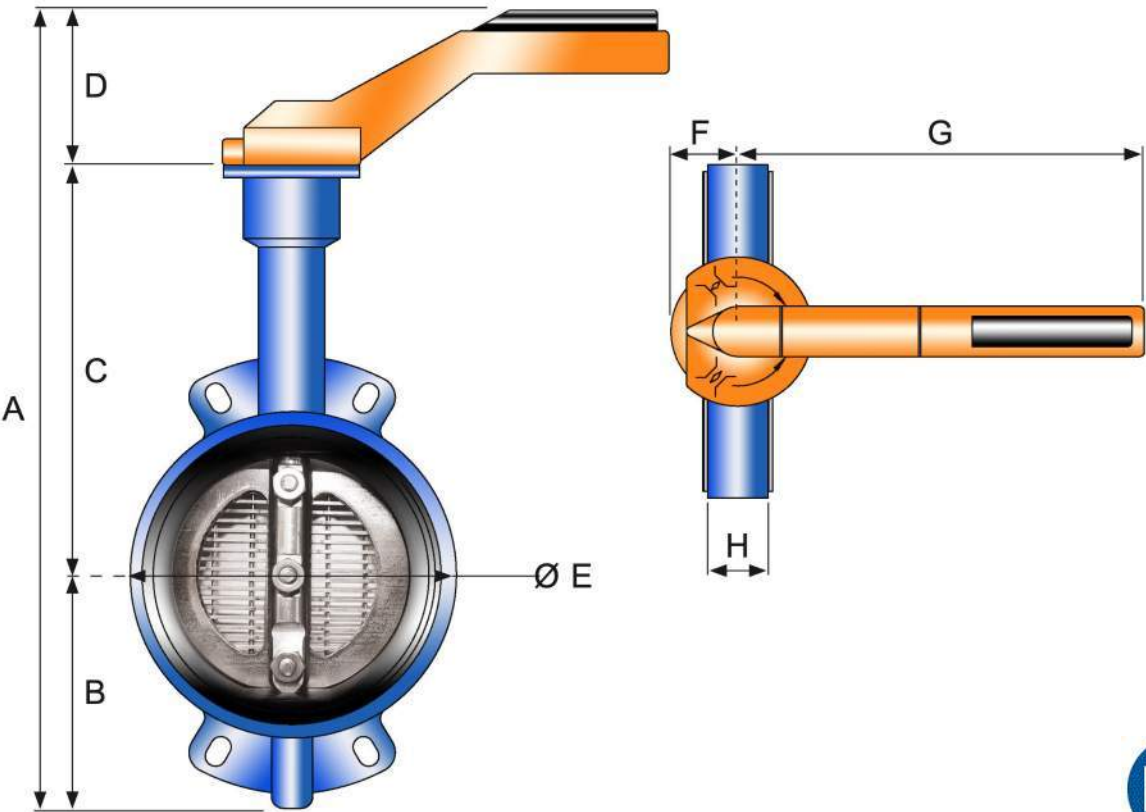
www.neptunebenson.com | Sales & Service : +1 920-885-4628

4/9/20

EZ Strainer for Recreational Water

EZ Strainer
by Neptune Benson

Technical Data Sheet



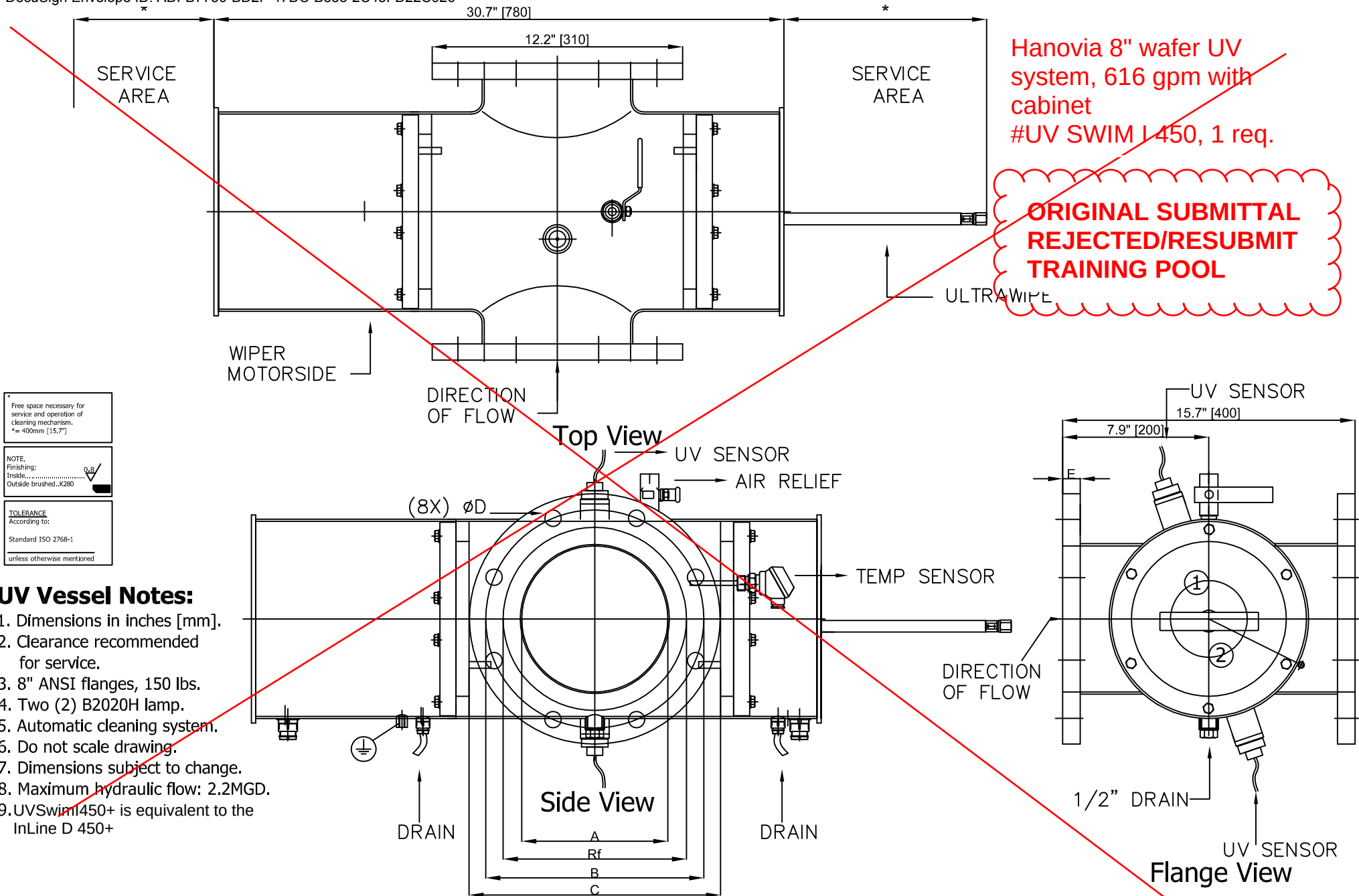
The EZ Strainer is designed to be used in the “Normally Closed” position and rotated 180 degrees daily.

Connection Sizes & Model Data

Model Number	Connection		A	B	C	D	E	F	G	H
	in	mm	measurements in inches							
EZCLN-4	4	100	14 1/4	3 3/8	7	3 7/8	6 1/4	1 3/4	12 5/8	2 1/16
EZCLN-6	6	150	16 7/16	4 9/16	8	3 7/8	8 7/16	1 3/4	12 5/8	2 1/4
EZCLN-8	8	200	19 15/16	5 7/8	9 9/16	3 7/8	10 5/8	1 3/4	12 5/8	2 3/8
EZCLN-10	10	250	22 1/2	7 7/8	10 3/4	3 7/8	13 1/16	1 3/4	12 5/8	2 11/16
EZCLN-12	12	300	25 1/8	8 7/8	12 3/8	3 7/8	15	1 3/4	12 5/8	3 1/16

Neptune-Benson
EVOQUA

Sales & Service : +1 920-885-4628
www.neptunebenson.com



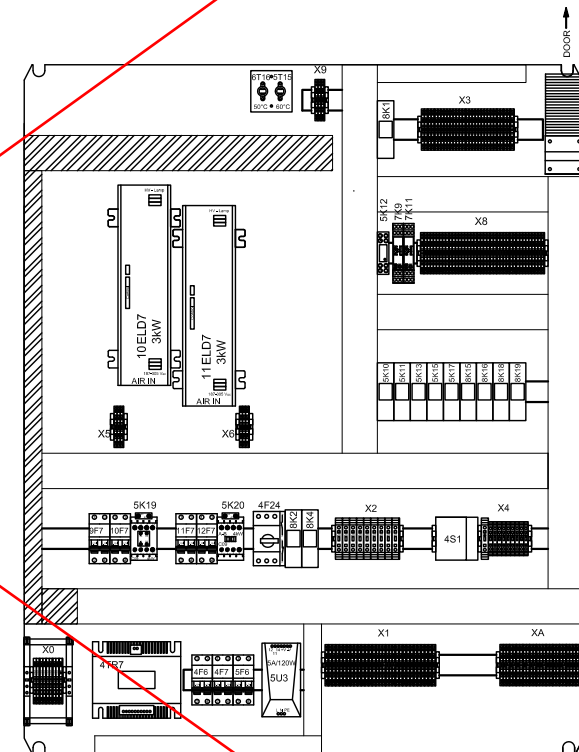
Flange Type	Size A	Pcd. B	Dia. C	Hole Dia.	Thickns E	Rf	Face Height	Number of Holes
DIN 2576 NW350	200	295	340	24	24	---	---	8
ANSI 8"	8"	298.6	342.9	22.4	28.4	269.7	1.6	8

All information contained within this drawing is the property of Aquionics Inc..
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Title: UV Vessel with Ultrawipe		Scale: NTS	
InLine D 450+		Page 1 of 1	
Sales Drawing		Drawn: SWL	Date: 03/04/11
Appd: BT		Date: 03/21/11	
Mat: 316L SS		Rev: A	
Dwg: VS-IL-450+U-SLS-03-A			



Aquionics Inc. Confidential



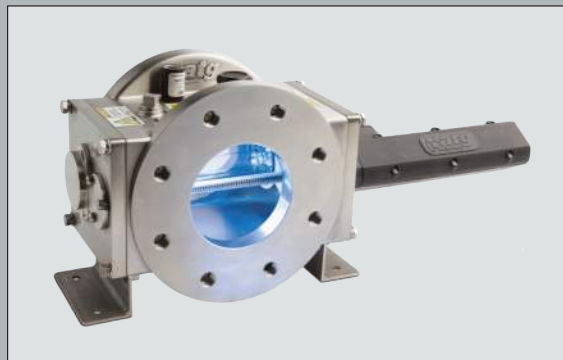
 Only High Voltage cable (HV)

	Description:		Ref. 1450	1450	1450	1450	1450	1450
	UV Swim 1450+							
	UVtronic		Appr:					
	power/control module		Drawn: JvdR					
Project no.	Customer,		Date: 08-06-2016	Revision:	Name			
-	-		Scale	Projection	Unit	Sheet 2 of 19		
Order no.	drawing no:		drawing no:		drawing no:		drawing no:	
-	ND3-UV-1-4-01		ND3-UV-1-4-01		ND3-UV-1-4-01		Size A3	



WAFER™ UV - SUBMITTAL SHEET

WF-125-6-N



Neptune Benson/Evoqua 6" ETS wafer UV system, 616 gpm, verify UV 208/240V single phase power available-change order item

The Wafer™ UV system is the most advanced UV system available. The treatment chamber has been designed for the simplest installation into any pipe work system. The chamber can be mounted vertically or horizontally. The compact design allows existing facilities to be easily upgraded with minimum site work.

TRAINING POOL, ETS UV IN LIEU OF AQUIONIC 8" WAFER

TREATMENT CHAMBER

The Wafer™ treatment chambers are designed for installation into the piping after the filters but before chemical injection.

The treatment chamber is manufactured from solid cast 316L stainless steel, with standard ANSI flanged piping connections. Temperature probe, UV monitor probe, and automatic quartz wiper system included.

A pressure rating for the unit is 150 PSI and pressure drop through the chamber is minimal.

Our objective for the product is simple, to be the best on the market, no compromise. The Wafer™ system offers the flexibility of a horizontal or vertical installation application. The Wafer™ product line treats the largest pools with a very compact footprint.

Utilizing our proven medium pressure lamp technology, the Wafer™ system offers a high quality, 'high specifications' product at a very competitive price. The 6" WF-125-6 is suitable for all pools and whirlpools with flows rates up to 616 GPM for indoor applications and 660 GPM outdoors applications.



CONTROL SYSTEM

The control system is housed in a IP 54 rated panel. As a standard, it is supplied with 30 ft cables for connection to the treatment chamber.

The power supply (PSU) and control cabinet are powered with the latest Spectra III microprocessor control unit. Three levels of operation (simple control, full parameter display, and operator configuration) allow for easy, uncomplicated operation of the unit by an operator. The control system features a sophisticated password protected engineering section for integrating the unit with other system devices.

Auto power restart, pump and valve interfaces, process interrupt and low power overnight operation are all features specifically designed for use on all recreational water applications.

Neptune-Benson
EVOQUA

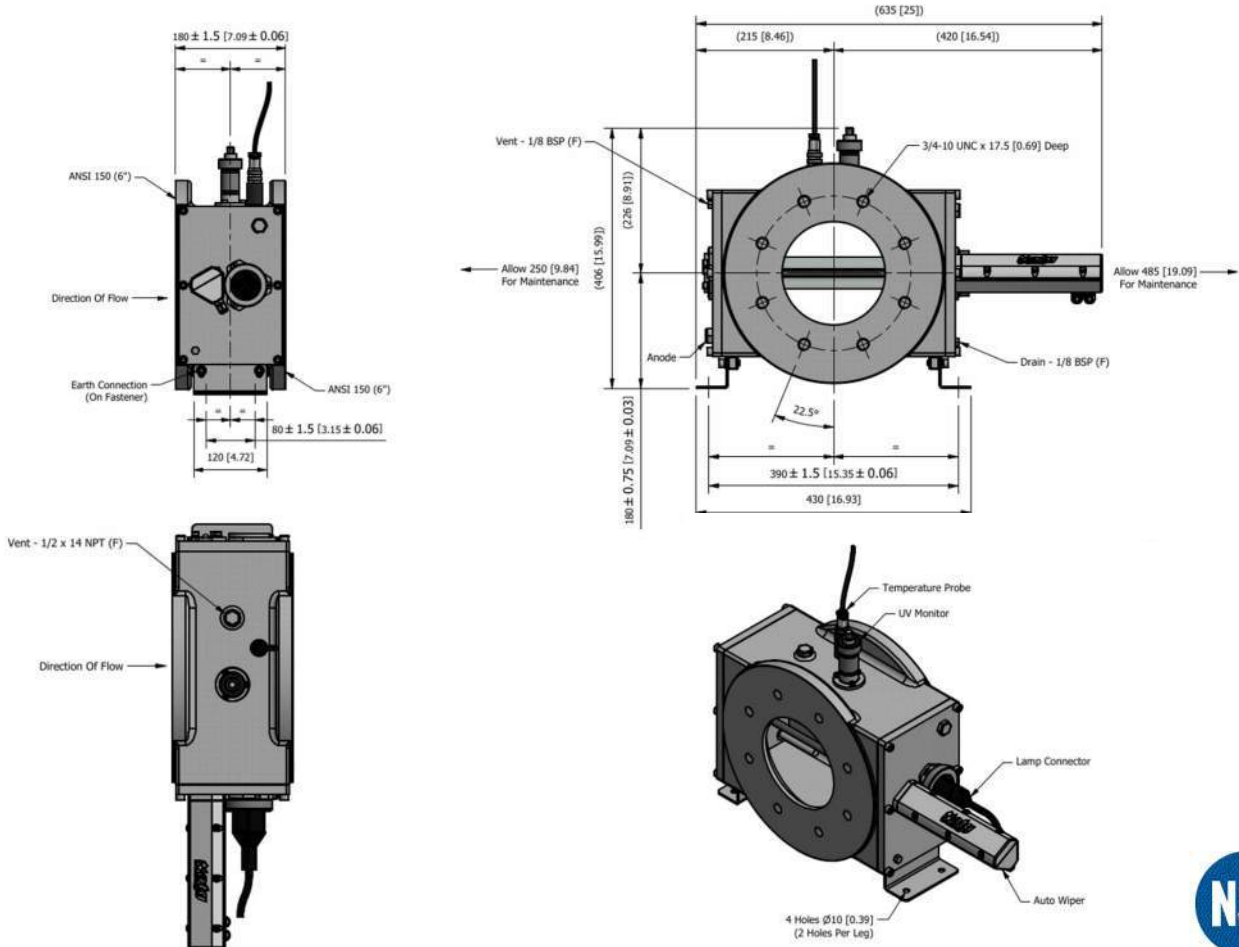
www.neptunebenson.com | Sales & Service : +1 920-885-4628

4/1/20

WAFER™ UV for Recreational Water



TREATMENT CHAMBER WF-125-6 Technical Data Sheet



Type	Lamp & Power	Weight (Dry/Wet)	Connection Size	Sacrificial Anode	Wiper System	Material Construction
WF-125-6	1 X 2.5 kW	126/148 lbs	6"	1/2" NPT	Automatic	316L SS
Pressure Rating			150 PSI			
Drain & Vent			1/8" - 27 NPT Drain 1/2" - 14 NPT Vent			
Standard Cable Length			30 feet			
Ingress Protection			IP55			
GPM for 60 mj/cm2 Dose			616 GPM (indoor)			
GPM for 40 mj/cm2 Dose			660 GPM (outdoor)			
Strainer			6" EZ Clean Strainer Included			

Neptune-Benson
EVOQUA

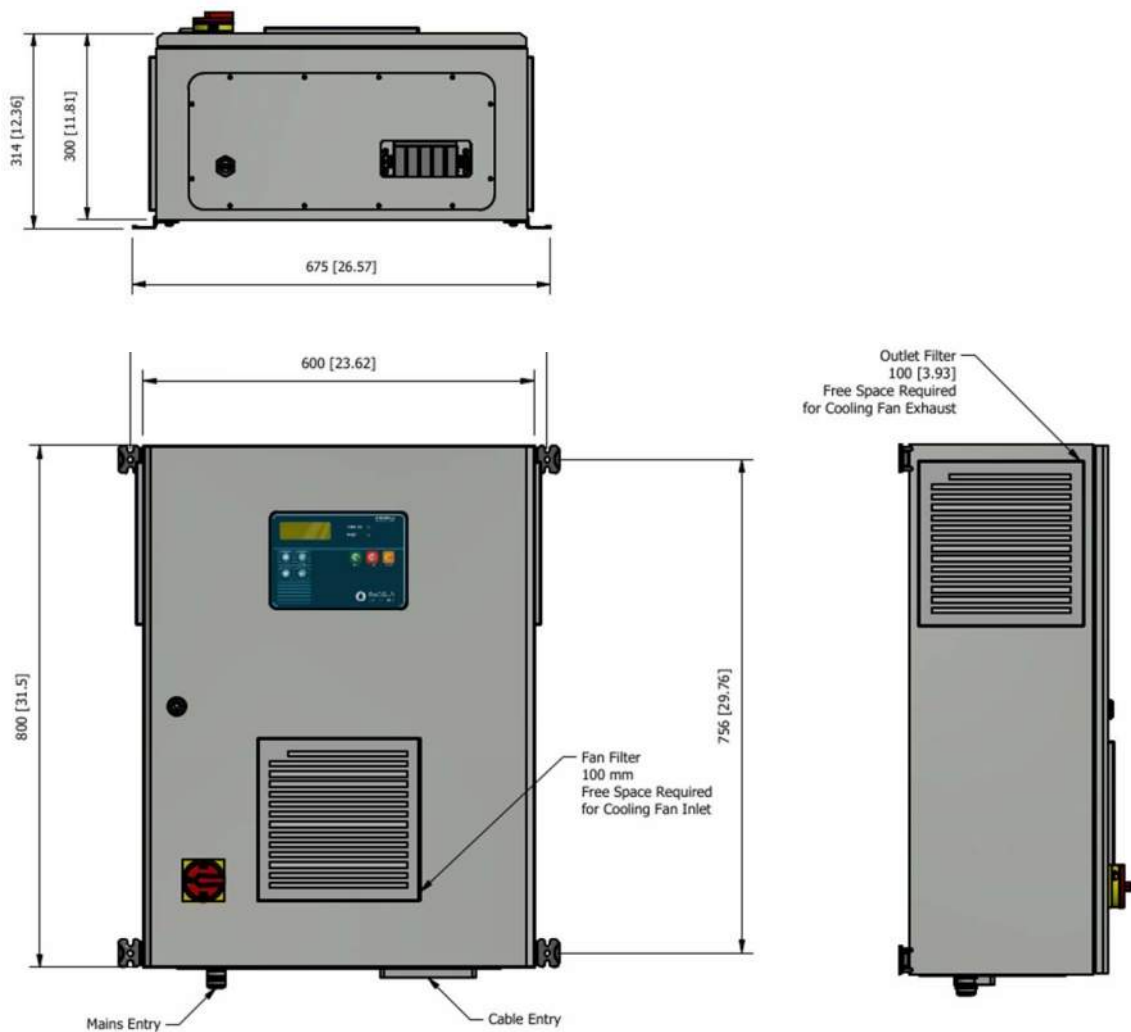
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www.neptunebenson.com

4/1/20

WAFER™ UV for Recreational Water



CONTROL PANEL
WF-125-6 Technical Data Sheet



Type	Lamp & Power	Panel Weight	Breaker Size	Power Supply	Phase	Frequency
PGA 2x3000	1 X 2.5 kW	110 lbs	30 Amp	208-240V	1 Ph	50/60 Hz
Variable Power			100% to 30% Power (Automatic Dose Pacing)			
User Interface			Spectra Membrane			
Ventilation			Forced Air Cooled (Fan)			
Ingress Protection			IP 54			



EZ STRAINER - SUBMITTAL SHEET



Easy to install.
Easy to operate.
Nothing to remove & clean.
Tremendous labor savings.

EZ Strainer is the first and only clean-in-place UV strainer designed to provide safety and reliability against the rare chance of lamp or quartz breakage. As simple as unlocking and turning the handle, the EZ strainer is now free and clear of fine debris that may have made it through the system.

Features

- Available in 4"/100mm to 12"/300mm pipe sizes.
- Durable stainless steel strainer disc and shaft.
- 180° positive stop.
- Lightweight cast aluminum riser (nylon) coated valve housing.

Model	Connection		Description
	inches	mm	
EZCLN-4	4	100	Standard Model Strainer
EZCLN-6	6	150	Standard Model Strainer
EZCLN-8	8	200	Standard Model Strainer
EZCLN-10	10	250	Standard Model Strainer
EZCLN-12	12	300	Standard Model Strainer

Neptune-Benson
 EVOQUA

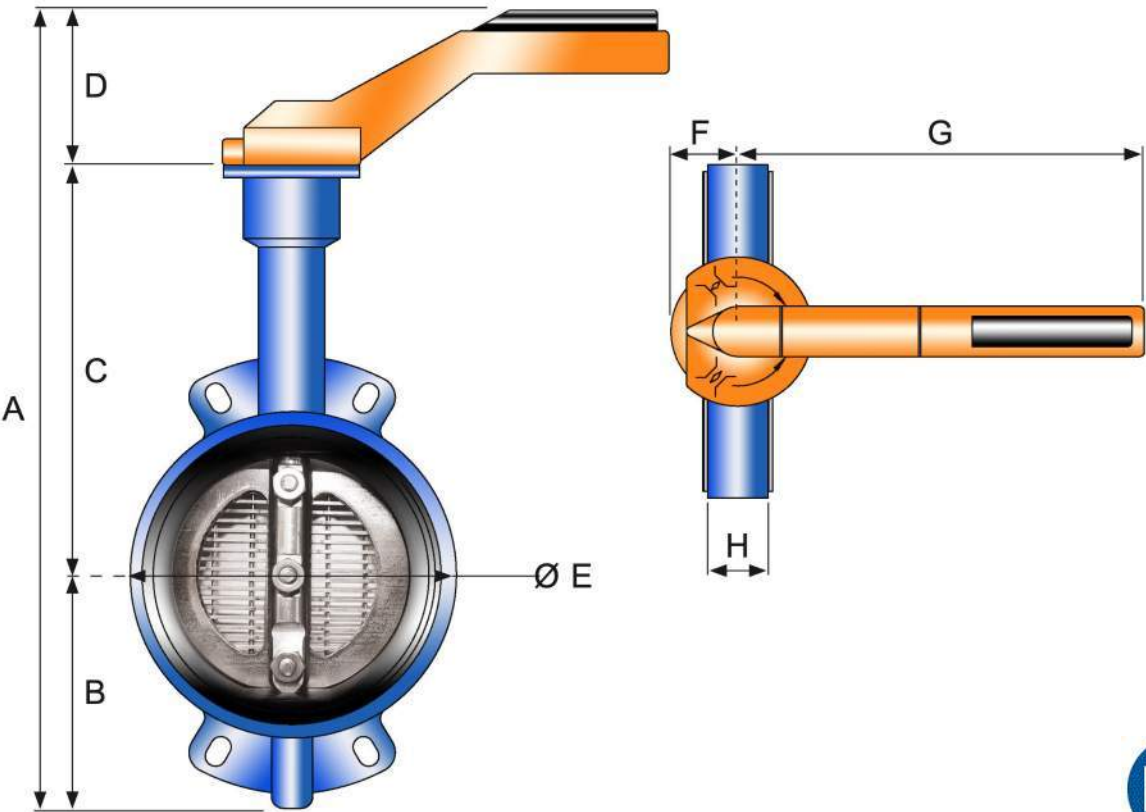
www.neptunebenson.com | Sales & Service : +1 920-885-4628

4/9/20

EZ Strainer for Recreational Water

EZ Strainer
by Neptune Benson

Technical Data Sheet



The EZ Strainer is designed to be used in the “Normally Closed” position and rotated 180 degrees daily.

Connection Sizes & Model Data

Model Number	Connection		A	B	C	D	E	F	G	H
	in	mm	measurements in inches							
EZCLN-4	4	100	14 1/4	3 3/8	7	3 7/8	6 1/4	1 3/4	12 5/8	2 1/16
EZCLN-6	6	150	16 7/16	4 9/16	8	3 7/8	8 7/16	1 3/4	12 5/8	2 1/4
EZCLN-8	8	200	19 15/16	5 7/8	9 9/16	3 7/8	10 5/8	1 3/4	12 5/8	2 3/8
EZCLN-10	10	250	22 1/2	7 7/8	10 3/4	3 7/8	13 1/16	1 3/4	12 5/8	2 11/16
EZCLN-12	12	300	25 1/8	8 7/8	12 3/8	3 7/8	15	1 3/4	12 5/8	3 1/16

Neptune-Benson
EVOQUA

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www.neptunebenson.com

Durafirm 16' Maxiflex diving board, #16-MX/66-231-330, 6 req.



16' MAXIFLEX - MODEL B CATALOG # 66-231-330

The 16' Maxiflex model B (also called Maxi-B) is the diving board that is used in all major competitive diving events in the world. The Maxi-B is the diving board to specify for facilities that have any competitive diving events.

The 16' Maxi-B is tapered from the fulcrum area to the diving tip, and it is tapered from the fulcrum area to the anchor end. The double-taper allows the whole board to arc while flexing, giving it much more lift than the 16' Duraflex. What distinguishes the Maxi-B from the other models is that the board has 189 slots at the tip end.



16' DURAFLEX CATALOG # 66-231-326

The 16' Duraflex is used for recreational diving in commercial pools that conform to USA Diving, FINA or NCAA minimum dimensions. They are tapered from the fulcrum area to the diving tip.



14' DURAFLEX CATALOG # 66-231-324

The 14' Duraflex is used for recreational diving in commercial pools that conform to USA Diving, FINA or NCAA minimum dimensions. They are tapered from the fulcrum area to the diving tip.

ALUMINUM SPRINGBOARDS

Our aluminum springboards are a one piece ribbed extrusion of heat-treated, aircraft grade aluminum alloy. A torsional stabilizer is attached to the bottom. The boards are coated with a slip-resistant surface. The underside of the board is protected from direct contact with our fulcrum by rubber channels attached to the ribs.

Warning: The pool where these boards will be installed must have diving-well dimensions conforming to FINA, USA Diving, or NCAA minimum dimensions.

**OWNERSHIP WILL REUSE
FOUR (4) DURAFLEX
MAXIFLEX B SPRINGBOARDS
FROM THE EXISTING
FACILITY. ONLY TWO (2) NEW
DURAFLEX MAXIFLEX B
SPRINGBOARDS NEED TO BE
PROVIDED BY APBI PER C-H
SUBMITTAL COMMENTS.**



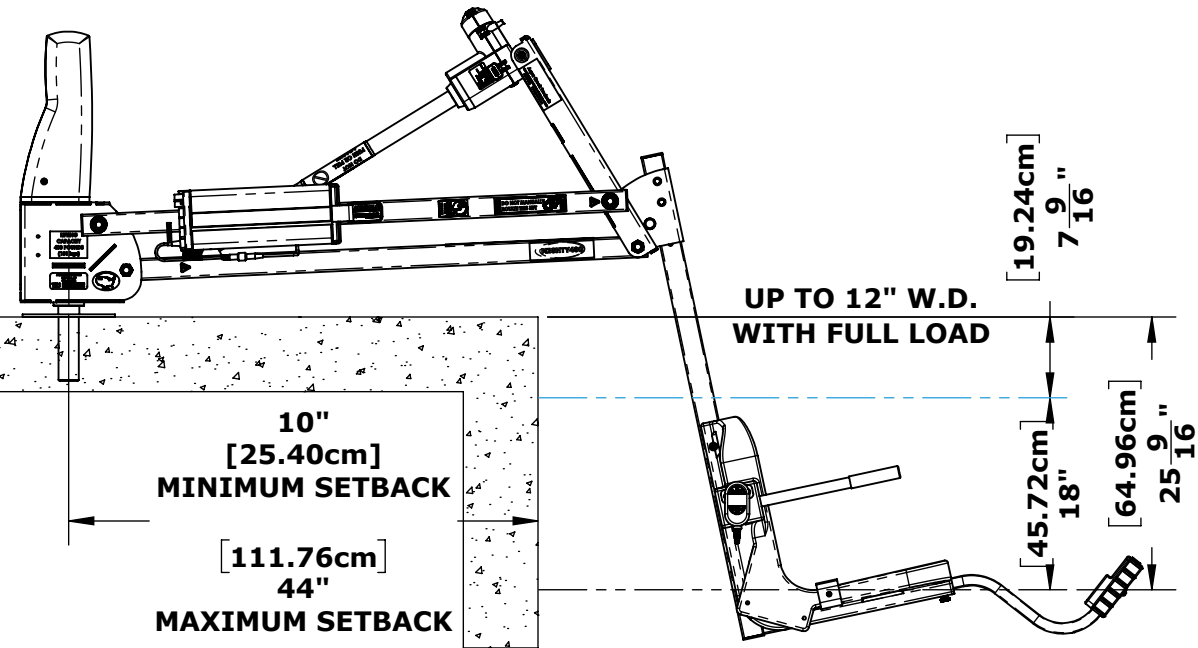
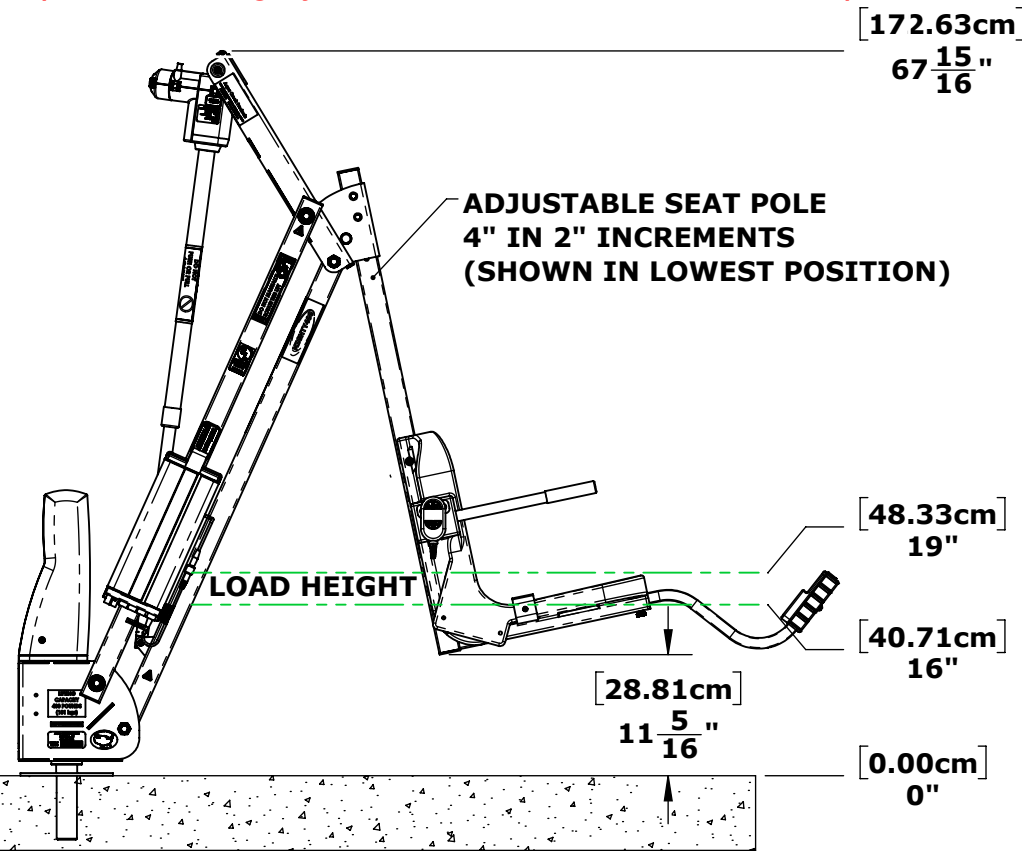
160 WUNOTOO ROAD SPARKS, NEVADA 89434
PHONE 775.343.0115 • FAX 775.343.0203

DURAFLEXINTERNATIONAL.COM



OFFICIAL SUPPLIER

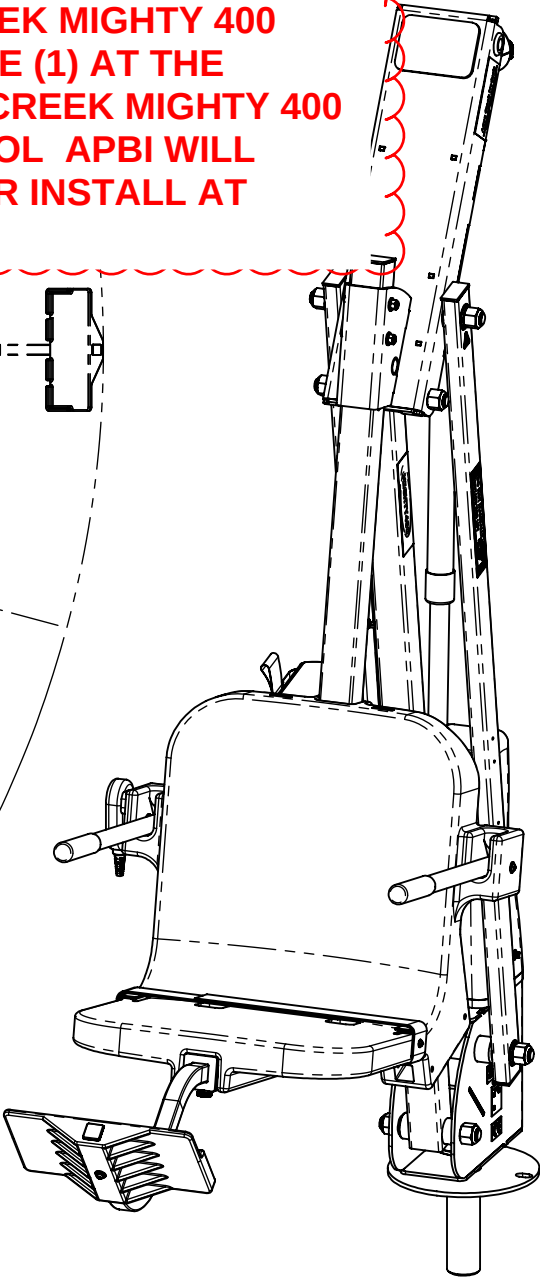
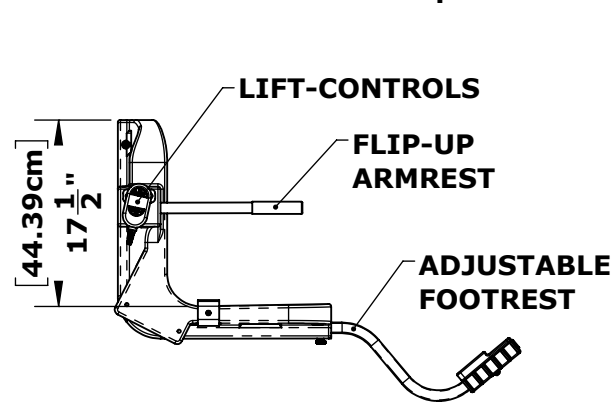
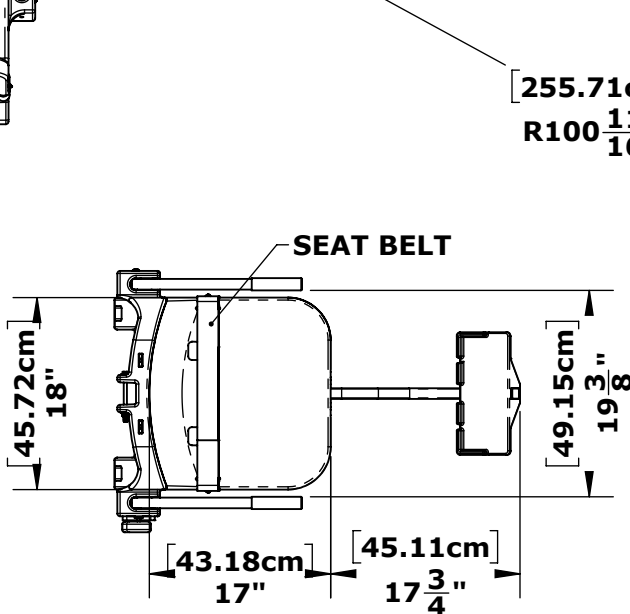
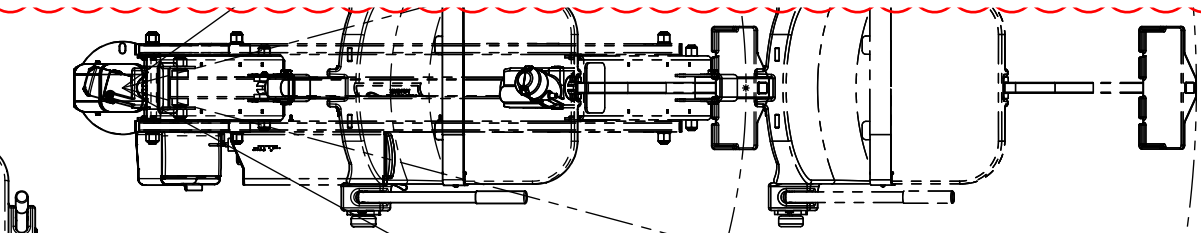
Aqua Creek Mighty 400 ADA lift, #F-MTY400, 2 req.



TOLERANCES

DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SHOWN
FRACTIONAL: ±1/16
ANGULAR: ±1°
TWO PLACE DECIMAL: ±.01
THREE PLACE DECIMAL: .. ±.005

APBI WILL SUPPLY AND INSTALL FOUR (4) NEW AQUA CREEK MIGHTY 400 ANCHORS. THREE (3) AT THE COMPETITION POOL AND ONE (1) AT THE TRAINING POOL. OWNERSHIP WILL REUSE ONE (1) AQUA CREEK MIGHTY 400 LIFT FROM THEIR EXISTING FACILITY AT THE TRAINING POOL APBI WILL PROVIDE TWO (2) NEW AQUA CREEK MIGHTY 400 LIFTS FOR INSTALL AT COMPETITION POOL.



FEATURES

- ◆ UL CERTIFIED ◆ 400 LB. (181 kg.) WEIGHT CAPACITY ◆ SETBACK RANGE 10" TO 44" (26 - 111 cm) ◆ ADJUSTABLE SEAT POLE ◆ WATER DRAFT 12" ◆ 360° ROTATION ◆ FLIP UP ARMREST ◆ ALL STAINLESS STEEL CONSTRUCTION ◆ DURABLE POWDER COAT FINISH ◆ RECHARGEABLE BATTERY & WALL MOUNT CHARGER ◆ FIVE YEAR STRUCTURAL WARRANTY ◆ FIVE YEAR PRO-RATED ELECTRONICS WARRANTY

CLICK HERE TO VIEW THIS PRODUCT:
<https://aquacreekproducts.com/>

MIGHTY 400 - BLUE

F-MTY400
PART NO. INV01698

MATERIAL: 304 STAINLESS STEEL
FINISH: POWDER COAT - WHITE
APPROX. WEIGHT: 180.23 LBS.



9889 GARRYMORE LANE
MISSOULA, MT 59808
(406) 549-0769
FAX (406) 549-2602
www.AquaCreek.com

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*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
P1	INITIAL RELEASE	3/25/2021	J.MAXWELL
P2	MODIFIED LIFTING ARM/HEAD	9/27/2022	J.MAXWELL

MODEL
P2
REVISION

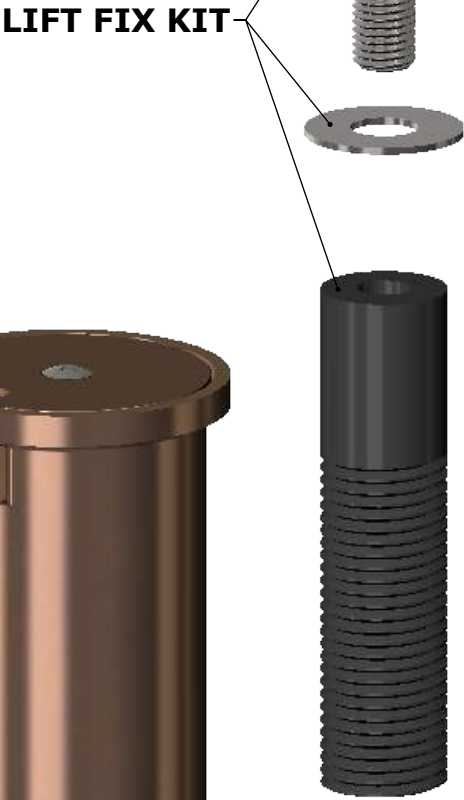
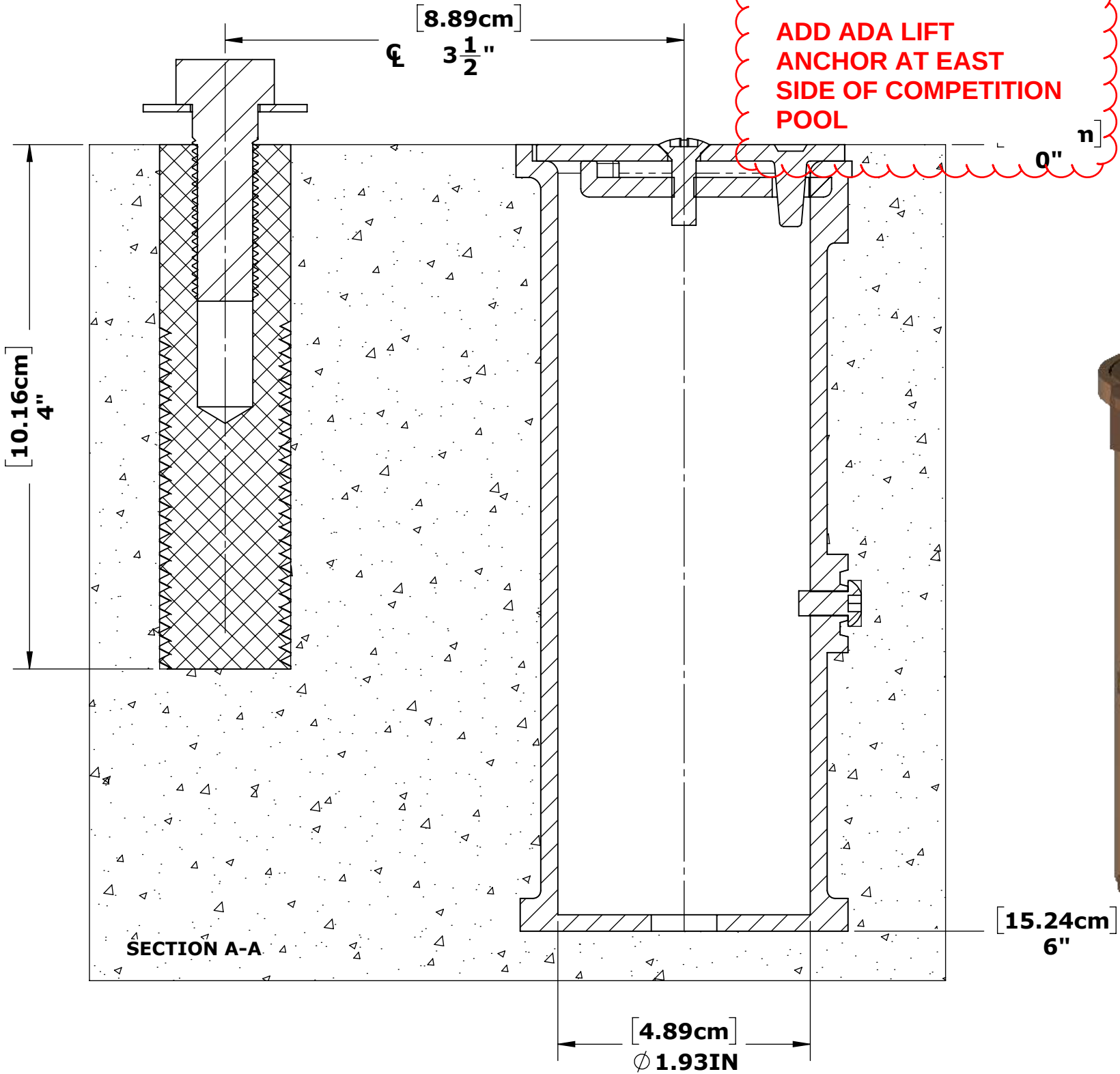
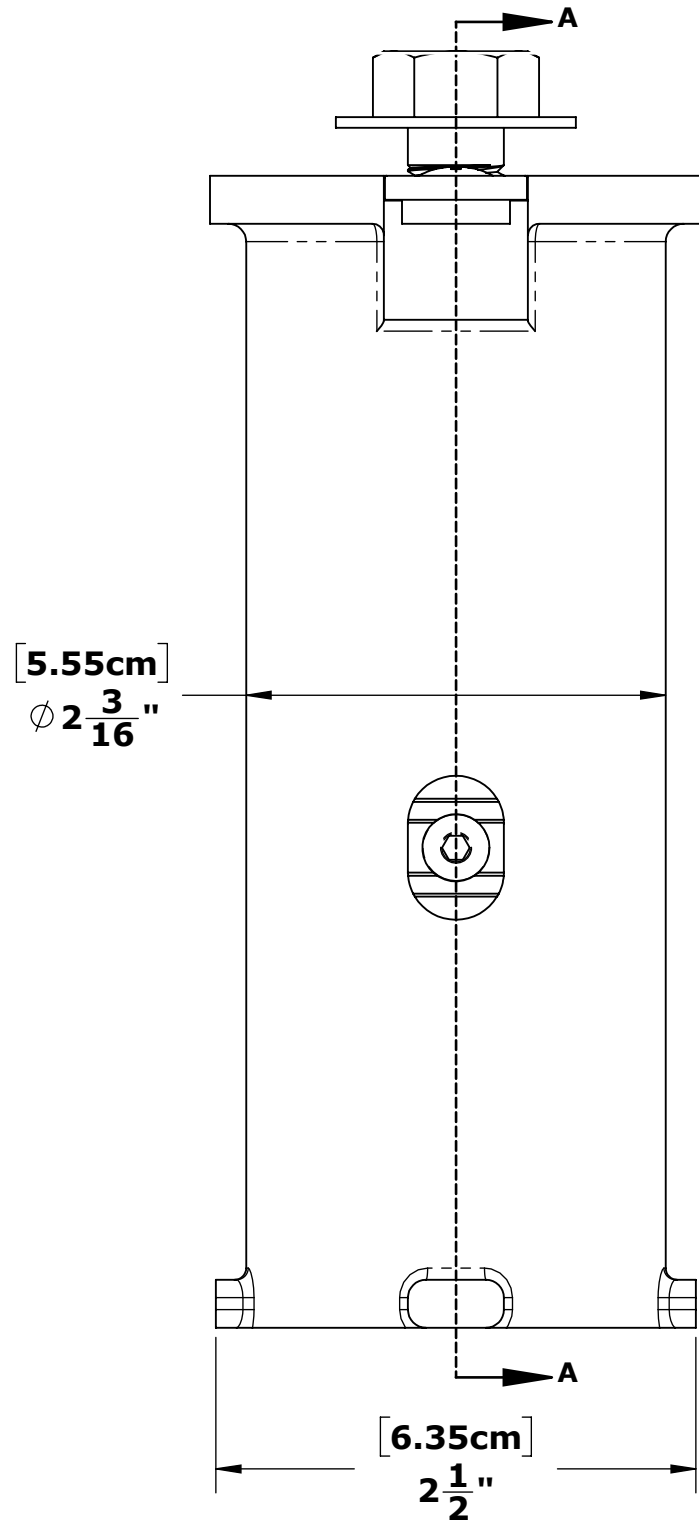
MIGHTY 400 - BLUE - INV01698

51-163-220

SCALE
1:18

SHEET
1

Aqua Creek ADA lift anchor, #F-808SA, 1 req.



TOLERANCES

DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SHOWN
FRACTIONAL: ±1/16
ANGULAR: ±1°
TWO PLACE DECIMAL: ±.01
THREE PLACE DECIMAL: .. ±.005

ANCHOR - 1.90"X6.00" - W/KIT
F-808SA
PART NO. INV01494

MATERIAL: BRONZE
FINISH: N/A
APPROX. WEIGHT: 2.19 LBS.



9889 GARRYMORE LANE
MISSOULA, MT 59808
(406) 549-0769
FAX (406) 549-2602
www.AquaCreek.com

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
P1	INITIAL RELEASE	6/22/2021	J.MAXWELL

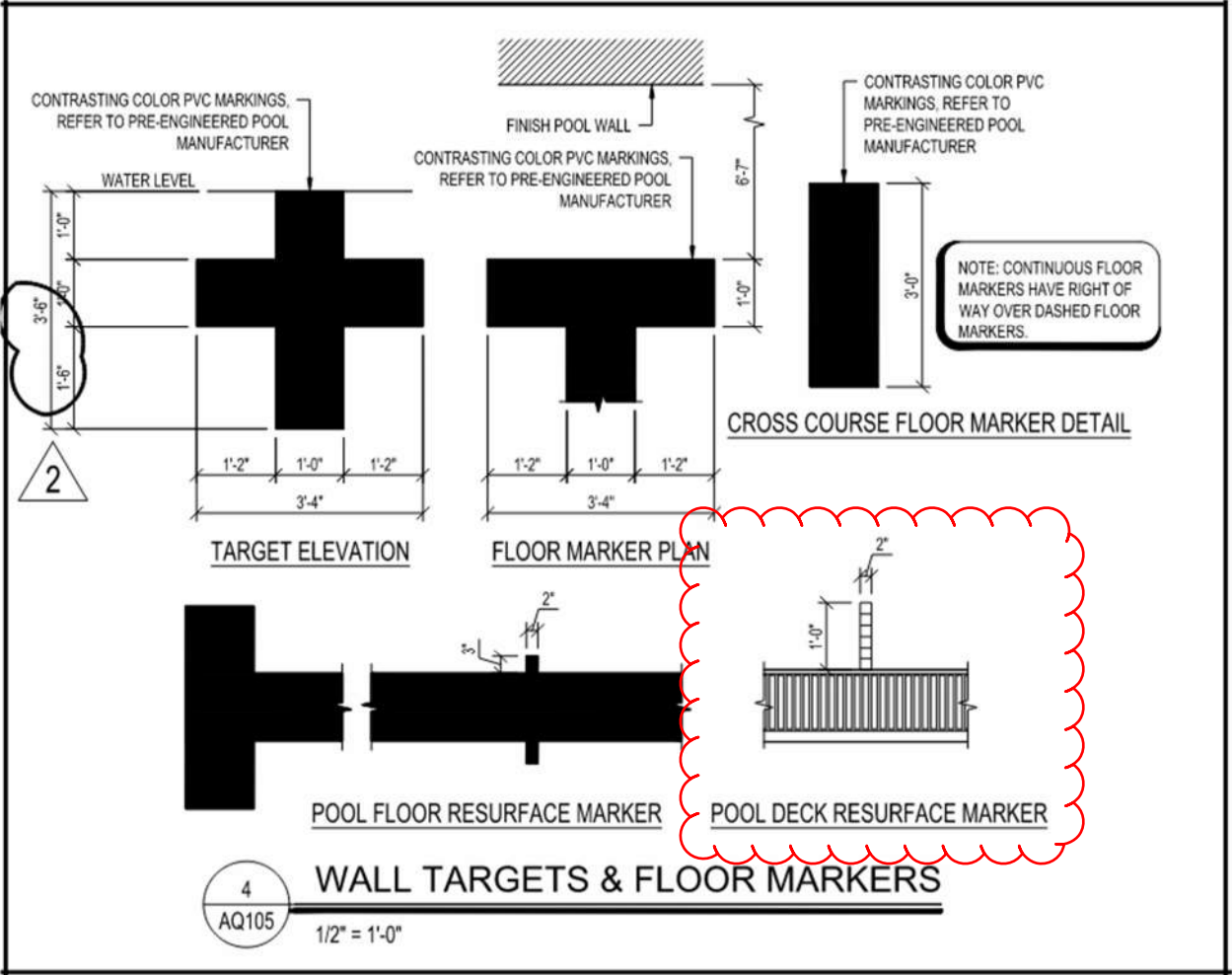
MODEL
P1
REVISION

ANCHOR - 1.90"X6.00" - W/KIT - INV01494

51-163-220

SCALE
1:1

SHEET
1



**ADD FOR 15M
RESURFACE
MARKERS TO WEST
SIDE OF POOL**

**DALTILE-KEYSTONE
2 x 2 Tile, ORIGINAL SUBMITTAL.**

**THIS IS NO LONGER AT THE
TRAINING POOL RAMP ENTRY.
IT HAS BEEN REPLACED WITH
DaILUX FLAT TILE.**

FLOOR | WALL | DECORATIVE

KEYSTONES™

COLORBODY™ PORCELAIN MOSAICS

 **daltile®**
IMAGINE WHAT'S POSSIBLE™

KEYSTONES™

COLORBODY™ PORCELAIN MOSAICS

GROUP 1



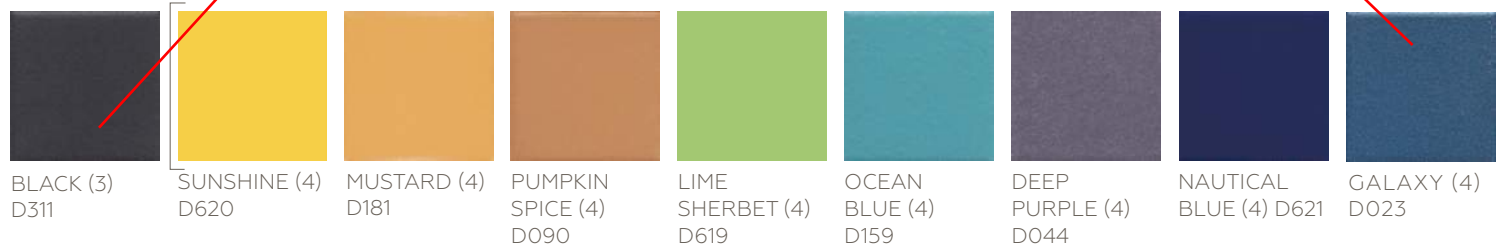
GROUP 2



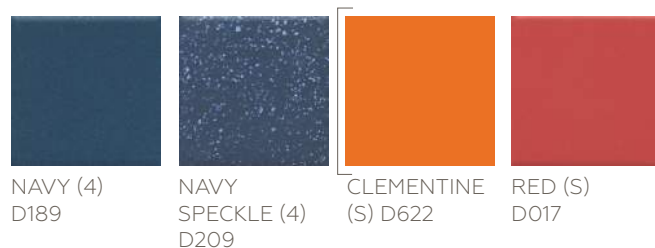
GROUP 3



GROUP 4



GROUP S



(1), (2), (3), (4) and (S) indicate Price Groups, (1) being the least expensive.

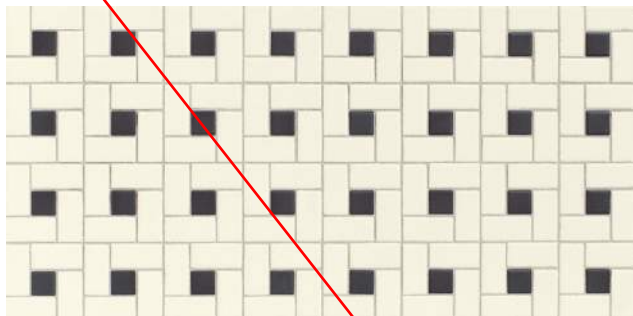
All Keystones™ 1 x 1 and 2 x 2 mosaics are offered in all colors and available on a standard made-to-order basis using ClearFace™ mounting system.

FLOOR | WALL | DECORATIVE

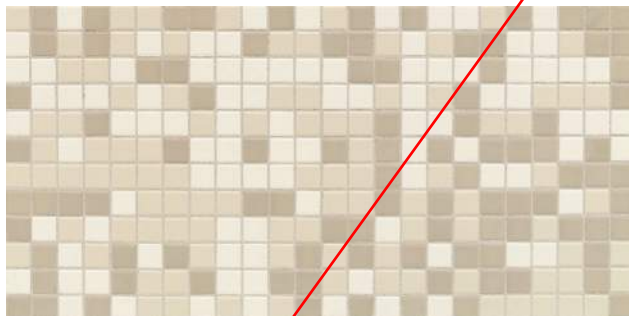
KEYSTONES™

COLORBODY™ PORCELAIN MOSAICS

STOCKED BLENDS AND PATTERNS



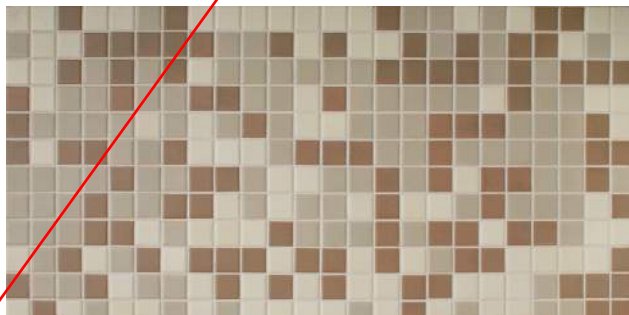
WINDMILL DK20
1 x 1 & 2 x 1 Mosaic
Biscuit D317 with Black D311



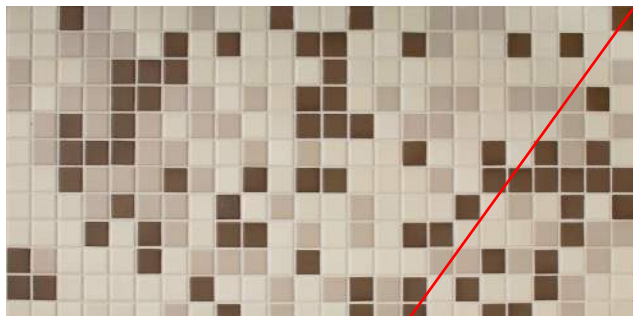
BEACH DK04
1 x 1 Mosaic
33% Porcelain D335, 33% Biscuit D317, 34% Urban Putty D161



MIRAGE DK11
1 x 1 Mosaic
40% Biscuit D317, 30% Urban Putty D161,
30% Architectural Gray D109



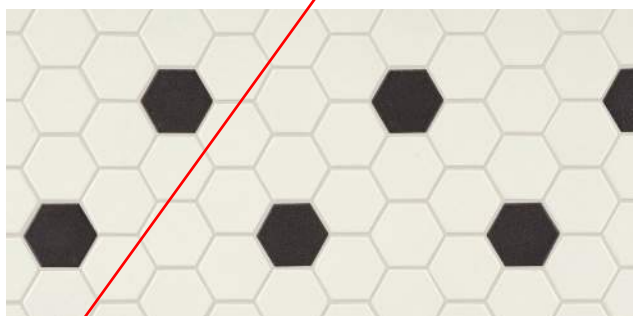
KHAKI DK12
1 x 1 Mosaic
33% Urban Putty D161, 33% Almond D335,
33% Elemental Tan D166



CHOCOLATE DK13
1 x 1 Mosaic
40% Almond D335, 30% Urban Putty D161,
30% Artisan Brown D144



MOONLIGHT DK14
1 x 1 Mosaic (Also available in 2 x 1 Brick-Joint)
33% Arctic White D617, 33% Suede Gray D182,
33% Desert Gray D014



HEXAGON DK16
2" Hexagonal Tile
Arctic White D617 and Black D311



HEXAGON DK16
1" Hexagonal Tile
Arctic White D617 and Black D311

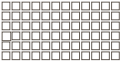
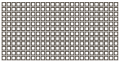
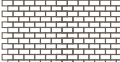
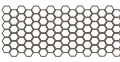
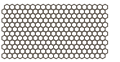
DK04, DK11, DK12, and DK14 are also available in 2 x 1 brick-joint.

FLOOR | WALL | DECORATIVE

KEYSTONES™

COLORBODY™ PORCELAIN MOSAICS

SIZES

			Thickness	Sq. Ft. per Carton	Pieces per Carton
	2 x 2 Mosaic (Dot-mounted)	(2" x 2" Piece) (12" x 24" Sheet) (30.48 cm x 60.96 cm Sheet)	1/4"	24.00	12
	1 x 1 Mosaic (Dot-mounted)	(1" x 1" Piece) (12" x 24" Sheet) (30.48 cm x 60.96 cm Sheet)	1/4"	24.00	12
	2 x 1 Straight-joint Mosaic (Dot-mounted)	(2" x 1" Piece) (12" x 24" Sheet) (30.48 cm x 60.96 cm Sheet)	1/4"	24.00	12
	2 x 1 Brick-joint Mosaic (Dot-mounted)	(2" x 1" Piece) (12" x 24" Sheet) (30.48 cm x 60.96 cm Sheet)	1/4"	22.00	12
	2" Hexagon Mosaic (Dot-mounted)	(2" x 2" Piece) (12" x 24" Sheet) (30.48 cm x 60.96 cm Sheet)	1/4"	24.24	12
	1" Hexagon Mosaic (Dot-mounted)	(1" x 1" Piece) (12" x 22-5/8" Sheet) (30.48 cm x 58.10 cm Sheet)	1/4"	21.00	12
	2 x 4 Straight-joint Mosaic (Dot-mounted)	(2" x 4" Piece) (12" x 24" Sheet) (30.48 cm x 60.96 cm Sheet)	1/4"	24.00	12

All colors in 1 x 1 and 2 x 2 size available with Keystones ClearFace™ mounting system on a made-to-order basis.

APPLICATIONS

	Target DCOF wet	Suitable
Dry & Level – Interior Floor	N/A	✓
Wet & Level – Interior Floor	≥ 0.42	✓
Shower Floors (Residential or Light Commercial)	≥ 0.42	✓
Exterior Floor Applications, including Pool Decking & Other Wet Areas with Minimal Footwear	≥ 0.55	✓*
Ramps & Inclines	≥ 0.65	
Walls/Backsplashes	N/A	✓
Countertops	N/A	✓
Pool Linings	N/A	✓
Pool Tank/Submerged	N/A	✓**

A DCOF value of ≥ 0.42 is the standard for tiles specified for level interior spaces expected to be walked upon when wet, as stated in ANSI A137.1-2012, Section 9.6. For more information about DCOF and the DCOF AcuTest™, visit daltile.com/DCOF.

APPLICATION NOTES:

Suitable for exterior applications in freezing and non-freezing climates, when proper installation methods are followed.

- * Keystones mosaics have recurrent grout joints and reflect a DCOF of ≥ 0.55 wet making them suitable for these applications.
- ** Keystones mosaics with ClearFace™ mounting system recommended for pool tanks and submerged applications.

INSTALLATION

Grout Joint Recommendation	Shade Variation
1/8" Approximately	 Low (V1) to Random (V4)

Solid colors have low shade variation, mottled and speckled colors have medium, and blends have random.

TEST RESULTS

	ASTM#	Result
Water Absorption	C373	< 0.5%
Breaking Strength	C648	> 300 lbs
Scratch Hardness	MOHS	N/A
Chemical Resistance	C650	Resistant

FLOOR | WALL | DECORATIVE

KEYSTONES™

COLORBODY™ PORCELAIN MOSAICS

TRIM

	Type	Number	Size	Pieces / LF Per Carton	Groups
	Bullnose	S-862	1 x 1	196	1, 2
	Bullnose	S-886	2 x 2	180	1, 2, 3, 4
	Bullnose Corner	SC-862 ♦	1 x 1	100	1, 2
	Bullnose Corner	SC-886	2 x 2	100	1, 2, 3, 4
	Cove Base	C-813	1 x 1	84	1, 2
	Cove Base	C-833	2 x 2	84	1, 2, 3
	Cove Base Corner	CB-813	1 x 1	100	1, 2
	Cove Base Corner	CK-813	1 x 1	100	1, 2, 3
	Cove Base Corner	SB-816 ♦	2 x 2	100	1, 2
	Cove Base Corner	SC-816 ♦	2 x 2	100	1, 2
	Outcorner	SCRL-833 ♦	2 x 1	100	1, 2, 3
	Universal Trim	S-812 ♦	1 x 1	112	1, 2
	Universal Trim	S-832	2 x 2	112	1, 2
	Universal Trim	SC-813	2 x 2	100	1, 2, 3
	Universal Trim	C-701 ♦	1 x 1	50	1, 2, 3, 4
	Build-up Base	MB-4C	(3) Rows 1 x 1 (1) Row C-813	26	1, 2
	Build-up Base	MB-5	(1) Row S-862 (3) Rows 1 x 1 (1) Row C-813	26	1, 2
	Build-up Base	MB-5A	(2) Rows 2 x 2 (1) Row C-833	26	1, 2, 3
	Build-up Base	MB-5B	(1) Row S-886 (1) Row 2 x 2 (1) Row C-833	26	1, 2, 3

♦ Made-to-order

NOTES

Since there are variations in all fired ceramic and natural products, tile and trim supplied for your particular installation may not match samples. Final confirmation should be made from actual tiles and trim prior to installation. Manufactured in accordance with ANSI A137.1 standards.

Not for use on ramps. Water, oil, grease, improper drainage and certain footwear can create slippery conditions. Floor applications expected to be exposed to these conditions require extra caution in product selection.

For additional information refer to "Factors to Consider" at: daltile.com/Factors.

Random visuals enhance the natural beauty of this product. To achieve optimal results, all tile should be selected from multiple cartons and shading and graphic arrangement planned prior to installation.

Special care should be taken when grouting with dark pigmented colors. A grout release is recommended to prevent finely powdered pigments from lodging in the pores of the surface. Use of a latex modified thin-set is recommended for installation.

CLEARFACE™ MOUNTING SYSTEM

- Keystones™ ClearFace™ is a new mounting system intended primarily for use in swimming pools and submerged applications. ClearFace™ mounted tile is a premium product to existing paper-face offerings and supplements dot-mounted mosaics.
- Additionally, ClearFace™ allows the contractor to see chips as they are being installed, allowing for realignment when wet should a chip need adjustment. ClearFace's premium feature includes complete tile-back-to-substrate mortar transfer.
- All Keystones 1" and 2" colors are available on a standard made-to-order basis using the ClearFace™ mounting system.
- Complete tile-to-substrate mortar transfer
- Premium alternative for swimming pool installations
- Provides 100% contact between the tile and setting materials, providing additional bond strength
- Allows for visual inspection and better alignment during installation
- Comes with extended 25-year pro-rated limited warranty



GROUP 1

Color Name		Keystones Unglazed 1 x 1 & 2 x 2	Keystones Unglazed 2 x 1 & 2 x 4	Keystones 1" Hex	Keystones 2" Hex	Trim
D317	Biscuit	STK	STK	STK	MTO	STK
D147	Buffstone Range	STK	N/A	MTO	N/A	STK
D139	Crisp Linen	MTO	N/A	MTO	N/A	+
D014	Desert Gray	STK	STK	MTO	STK	STK
D200	Desert Gray Speckle	STK	STK	N/A	STK	STK
D166	Elemental Tan	STK	N/A	N/A	N/A	STK
D175	Elemental Tan Speckle	STK	N/A	N/A	N/A	STK
D050	Mottled Medium Brown	STK	N/A	MTO	MTO	STK
D037	Pepper White	STK	N/A	N/A	N/A	STK
D148	Spa	MTO	N/A	MTO	N/A	*
D161	Urban Putty	STK	STK	N/A	STK	STK
D201	Urban Putty Speckle	STK	STK	N/A	STK	STK
D169	Waterfall	STK	N/A	N/A	N/A	*

GROUP 2

D335	Almond	STK	STK	MTO	MTO	STK
D109	Architectural Gray	STK	STK	N/A	STK	*
D617	Arctic White	STK	STK	STK	STK	STK
D144	Artisan Brown	STK	N/A	N/A	MTO	*
D204	Artisan Brown Speckle	STK	N/A	N/A	MTO	*
D160	Cornsilk	MTO	N/A	MTO	N/A	+
D452	Cypress	MTO	N/A	MTO	MTO	+
D141	Garden Spot	MTO	N/A	N/A	N/A	+
D138	Golden Granite	STK	N/A	MTO	N/A	*
D142	Luminary Gold	MTO	N/A	N/A	MTO	+
D325	Marble	STK	N/A	N/A	N/A	STK
D152	Mint Ice	MTO	N/A	N/A	MTO	+
D182	Suede Gray	STK	STK	MTO	MTO	STK
D208	Suede Gray Speckle	STK	STK	N/A	MTO	STK
D132	Uptown Taupe	STK	N/A	MTO	N/A	*
D202	Uptown Taupe Speckle	STK	N/A	N/A	MTO	STK

* Trim Stocked in S886, SC886, C833 and SC813. Made-to-Order in C701, SCR-L833, CK813, MB5B and MB5A. No other trim available.

+ Trim Made-to-order in S886, SC886, C833, SC813, C701, SCR-L833, CK813, MB5B and MB5A. No other trim available. STK Trim stocked in S862, S886, SC886, C813, C833, CB813, CK813, S832, SC813, MB-4C, MB-5, MB-5A, MB-5B and made to order in SC862, SB816, SC816, SCR-L833, S812 and C701

** Group 4 trim offered in S886, SC886 and C701. No other trim offered.

STK = stocked, NA = Not available, MTO = Made-to-Order. Made to Order items require 6 - 8 week lead time.

All colors (except D017 Red and Orange) available with 7 ½ % abrasive content on a made to order basis in 1x1 and 2x2.

All colors available on a made to order basis in 1x1 and 2x2 with ClearFace™ mounting system.

FLOOR | WALL | DECORATIVE

KEYSTONES™

COLORBODY™ PORCELAIN MOSAICS

GROUP 3

Color Name	Keystones Unglazed 1 x 1 & 2 x 2	Keystones 1" Hex	Keystones 2" Hex	Trim
D192 Aegean	MTO	N/A	N/A	+
D197 Aqua Glow	MTO	N/A	N/A	+
D311 Black	STK	STK	MTO	*
D618 Castlerock	STK	N/A	MTO	*
D007 Cinnamon Range	MTO	MTO	N/A	+
D171 Cityline Kohl	MTO	N/A	N/A	+
D207 Cityline Kohl Speckle	MTO	N/A	N/A	+
D195 Oak Moss	MTO	N/A	N/A	+
D372 Sea Spec	MTO	N/A	N/A	+

GROUP 4

D044 Deep Purple	MTO	MTO	N/A	MTO**
D023 Galaxy	STK	MTO	MTO	STK**
D619 Lime Sherbet	STK	N/A	N/A	STK**
D181 Mustard	STK	MTO	N/A	STK**
D621 Nautical Blue	STK	N/A	N/A	STK**
D189 Navy	STK	N/A	N/A	STK**
D209 Navy Speckle	STK	N/A	N/A	STK**
D159 Ocean Blue	MTO	N/A	N/A	MTO**
D090 Pumpkin Spice	MTO	MTO	N/A	MTO**
D620 Sunshine	STK	N/A	N/A	MTO**

GROUP 5

D017 Red #	MTO	N/A	N/A	N/A
D622 Clementine #	MTO	N/A	N/A	N/A

Available in 1 x 1 and 2 x 2 only (no trim) on a made to order basis.



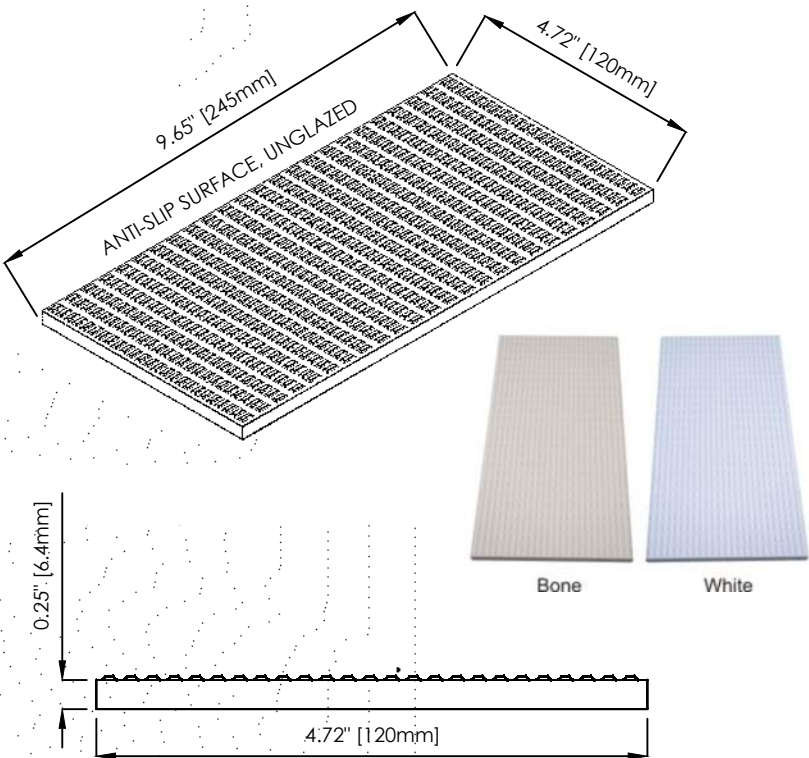
DESIGNED TO HELP EARN LEED™ CREDITS. For more detailed information, visit daltilegreenworks.com.

7834 C. F. Hawn Freeway,
Dallas, Texas 75217 | 1.800.933.TILE

To view the complete collection of Daltile® products and information, visit our website at daltile.com.



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TILE CROSS SECTION

DallUX PORCELAIN ANTI-SLIP TILE			
DallUX-TILE-AS-05	4.72" [120mm] x 9.65" [245mm] Anti-Slip Tile		
COLOR	White	Bone	Cobalt
LINEAL FEET			
Write in or circle applicable information			

All drawing are saved in a *.dwg format and are provided as a service to our customers; dimensions supplied by Daldorado are for reference only. Daldorado or any authorized distributor of our products will not be held responsible from files which have been converted and does not warranty the documents against deficiencies or typographical errors of any kind. All measurements of the actual product must be verified before any custom fabrication in the field occurs. COPYRIGHT: This document is the property of Daldorado, LLC and is provided on an in-confidence basis, it may not be copied or reproduced without the permission of Daldorado or its authorized agent.

DalLUX PORCELAIN TILE

- A. ALL SERAPOOL BY DALDORADO TILES EUROPEAN CERTIFICATION.
- B. PERFECT FIT TO COMPLIMENT DALDOR DalLUX-ST5, STONE/TILE SUPPORT SYSTE
- C. ALL TILES ARE PORCELAIN. STRUCTURE CERAMIC. SURFACE IS MORE RESISTANT TO ACIDS & ALKALI COMPARED TO CERAMIC. NOT AFFECTED BY TEMPERATURE CHANGE. THE SURFACE IS NOT POROUS.
- D. SLIP RESISTANT VALUE (SRV) AND TESTING - DALDORADO PORCELAIN TILE IS TESTED BY NATA TO HB198: WET PENDULUM FRICTION TESTER (PFT) FOR SURFACE WET WITH WATER WHEN WALKED UPON USING SLIDER 55, ENDORSED BY CTIOA SINCE 2001, WITH A CLASSIFICATION OF SRV P5 = >44
- E. SURFACE PREPARATION, GROUT, INSTALLATION OF TILE PER PROJECT DESIGNER SPECIFICATIONS IN ACCORDANCE WITH ACI 302 AND CTIOA P601 AND B417.
- F. REFERENCE STANDARD = EC 14411. DECLARATION OF PERFORMANCE NO. = PB-001. SYSTEMS OF ASSESSMENT AND VERIFICATION OF CONSISTENCY OF PERFORMANCE = SYSTEM 4.

DalLUX NON-SLIP FLAT TILE AT TRAINING POOL RAMP ENTRY IN LIEU OF 2"X2" DAL TILE

THE CE

Characteristics		Test Standard	Necessary Requirements	DalLUX Standards
			190 < S 410	190 < S 410
	Deviation of the average dimension of each tile from the working dimension (W), %	ISO 10545-2	±0.75	±0.6
	Deviation of the average dimension of each tile from the average dimension of 10 test sample, %	ISO 10545-2	±0.5	±0.4
	Water Absorption %	ISO 10545-3	≤ 0.5	Max. 0.5
	Breaking Strength, Thickness = 27.5mm	ISO 10545-4	Min 1300 N	1300 N
	Bending Strength	ISO 10545-4	>35 N/mm²	>35 N/mm²
	Wearing Strength	ISO 10545-6		40
	Deep wearing strength of glazed tiles:		Max 175 MM²	95.80
	Thermal Shock Strength	ISO 10545-9	Required	Compliant, Hard-wearing
	Cracking Strength: Glazed Tiles	ISO 10545-11	Required	Compliant, Hard-wearing
	Frost Resistance	ISO 10545-12	Required	Compliant, Hard-wearing
	Released Lead and Cadmium	ISO 10545-15		Lead: <0.1 mg/dm² Cadmium:<0.01 mg/dm²
	Color Change After UV Rays			Stable
	Reaction to Fire	96/03/EC1		A1RL/A1
	Resistance to Slip	CEN/TS 16165 A CEN/TS 16165 B		Min 18C 65F Min 23C 74F
	Bond Strength-Adhesion Type C2 Dispersion Adhesive Reaction Resin Adhesive	EN 12004-2:2017		>1 N/mm² NPD NPD

Product: DalLUX AS-05 Anti-Slip Tile

Product #: DalLUX-TILE-AS-05

Material: Porcelain Rev Date: 07/25/2023

Color: Per Table Rev By: Daldorado

DALDORADO

4327 Arnold Ave, Naples, FL 34104
Phone: 888.509.8128
www.daldorado.com



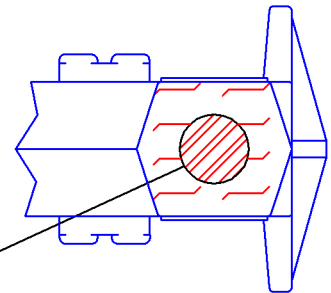
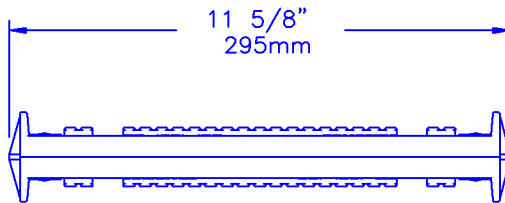
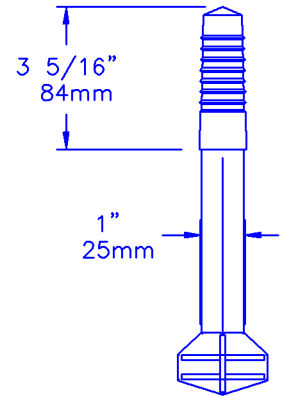
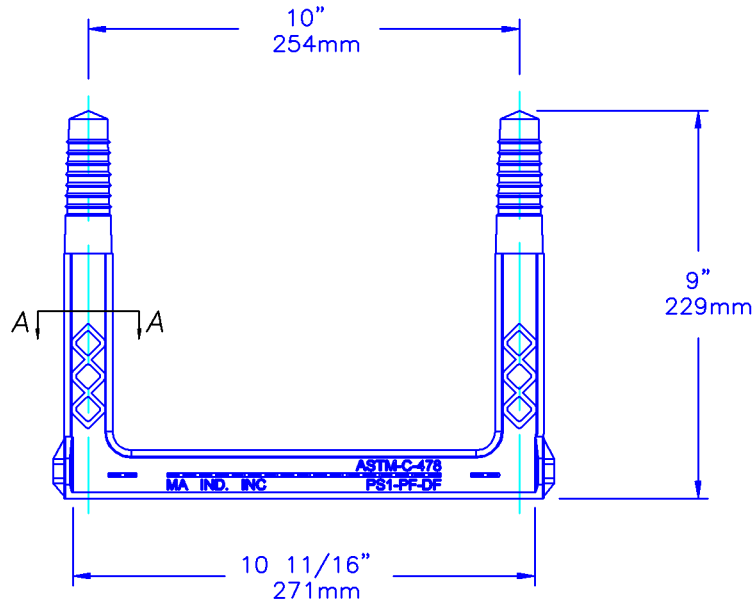
MA Industries manway step, 8 req.

ADD FOR ADDITIONAL
SURGE TANK LADDER
RUNGS

PS1-PF Manhole Steps



With the invention of the steel reinforced copolymer polypropylene manhole step in 1969 by **M.A. Industries**, the M.A. Step became the standard against which all other manhole steps are measured. Our Manhole Steps withstand a vertical load test of 800 lbs and pullout strength is well over 400 lbs. M.A. Steps will withstand Impact Testing of up to 300 ft lbs with only minor deflection and no cracking or breaking. **M.A. Manhole Steps** are simply driven into preformed holes created by cam pins, step inserts or drilling. No epoxy or grout is necessary.

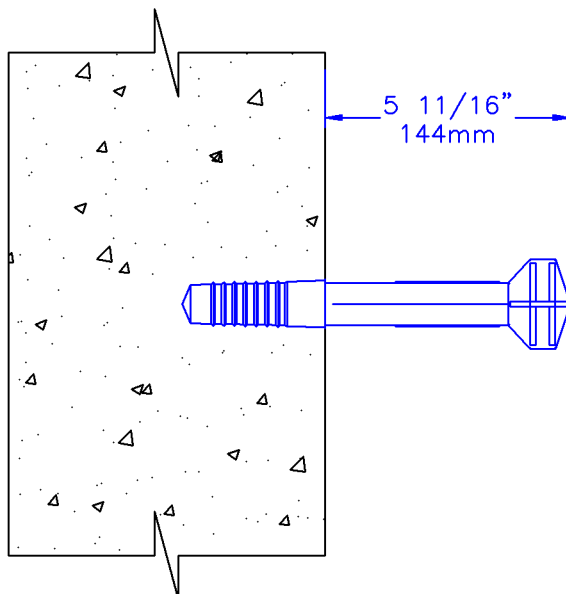


SECTION-A

Copolymer Polypropylene Plastic

13mm
1/2" GRADE 60 STEEL REINFORCEMENT

MEETS: ASTM C-478
ASTM D-4101
ASTM A-615
AASHTO M-199



Notes:

1. For Drilling - Drill 1" Hole 10" On Center 3-3/4" Deep.
2. Drive Step into concrete a minimum of 3".

TVI Butterfly Valves, lever operated



**THERMOPLASTIC
VALVES INC.**

ARRANGEMENT DRAWING

WAFER STYLE BUTTERFLY VALVE FOR ANSI FLANGES

SIZE: 2" - 8"

**DWN BY
CKP**

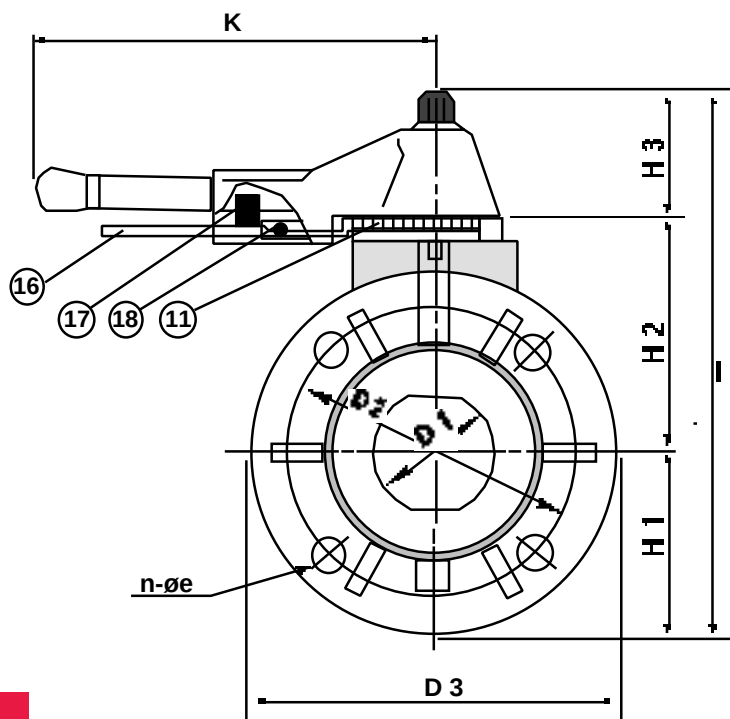
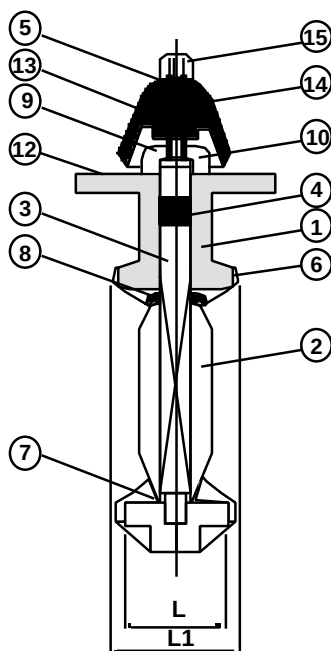
**DATE
1-96**

**DWG NO.
110-BFV**

**DEDUCT FOR 6"
HEATER ISOLATION
BUTTERFLY VALVE**

CERTIFIED

CORRECT FOR GENERAL DIMENSIONS Date _____ Per: _____



Ansi Dimensions

Size Inch	D1	D2	D3	e	n	L	L1	H1	H2	H3	I	K	Test Press (PSI) Body	Working Press (PSI) Seat	Working Press (PSI)
2"	2.24	4.75	6.54	0.75	4	1.38	1.65	3.27	4.01	2.68	9.96	8.66	222	177	150
2 1/2"	2.75	5.50	7.24	0.75	4	1.46	1.81	3.62	4.33	2.68	10.63	8.66	222	177	150
3"	3.15	6.00	7.87	0.75	4	1.46	1.81	3.94	4.64	2.68	11.26	8.66	222	177	150
4"	4.01	7.50	9.06	0.75	8	1.85	2.20	4.53	5.28	2.68	12.48	8.66	222	177	150
5"	5.12	8.50	10.00	0.87	8	2.24	2.60	5.00	6.30	3.78	15.08	12.20	222	177	150
6"	6.02	9.50	11.42	0.87	8	2.44	2.80	5.71	6.97	3.78	16.46	12.20	222	177	150
8"	7.99	11.75	13.27	0.87	8	2.99	3.43	6.61	8.03	3.66	18.31	16.30	222	177	150

Testing performed on PVC/PP/EPDM valves at 73°F water temperature, non-shock.

Materials of Construction

Item	Parts	Pcs	Materials	Item	Parts	Pcs	Materials
1	Body	1	PVC, PP, PVDF, CPVC*	10	Retainer Cap	1	PVC, PP, CPVC, PVDF
2	Disc	1	PVC, PP, PVDF, CPVC*	11	Positioner	1	SUS304, 8" Use SS41
3	Stem	1	SUS410, SUS304, SUS316	12	Screw	3	SUS304
4	Stem O'ring	2	EPDM, VITON®, BUNA N	13	Handle	1	ABS
5	Washer	1	SUS304	14	Inserted Metal of Handle	1	CS
6	Seat	1	EPDM, VITON®, BUNA N	15	Nut	1	PVC COATED BRASS, SUS304
7	Disc O'Ring	2	EPDM, VITON®, BUNA N	16	Hand Lever	1	SUS 304, SUS41
8	Disc O'Ring	2	EPDM, VITON®, BUNA N	17	Spring	1	SUS304
9	Stem Retainer	1	SUS304	18	Set Pin	1	BRASS

*CPVC available to 12"

VITON® is a trademark of DuPont Performance Elastomers

TVI BUTTERFLY VALVE (2" - 24")

DESIGN SPECIFICATIONS

Thermoplastic Butterfly Valves 2"-24" are wafer style to fit between ANSI B16.5 Class 150 flanges. Disc is smooth and contoured for lowest possible pressure drop (highest Cv). Shaft is 410 S.S. and of one piece, through shaft design, with square drive through entire length of blade. 24" valves shall have epoxy coated gear actuators with handwheel. Seat liners shall be full faced with integral, ribbed flanges. No auxiliary gaskets shall be required for installation. Seat liners shall effectively isolate the body and shaft from the flow media. Seat liners shall also thermally insulate the body from the internal operating temperature. Valve liner and seals are replaceable. Materials of construction shall be: (select as required for service)

BODY

PVC,CPVC (available to 12"), ASTM D-1784,
PP, ASTM D-4101
PVDF, ASTM D-3222

DISC

PP, ASTM D-4101 (Standard 2" - 24" in PVC & PP valves)
PVC, CPVC, ASTM D-1784 (CPVC disc standard in CPVC valves)
PVDF, ASTM D-3222

SHAFT

ASTM A-240, TYPE 410 S.S. (Standard) 304 S.S., 316 S.S. and Titanium available

SEALS / SEAT

EPDM, Ethylene Propylene Diene Monomer
Fluorocarbon, Viton (Dupont Dow Elastomers)
Nitrile (Butadiene) Rubber (BUNA N)

HARDWARE

2" THRU 24" 304 S.S. 8" size positioner plate 410 S.S. Chrome Plated

LEVER

ABS, ASTM D-1788

GEAR BOX

Cast iron housing ASTM A -53, Epoxy coated

OTHER MATERIALS AVAILABLE UPON REQUEST.

Not recommended for compressed air or gas service



**Associated
Pool
Builders, Inc.**

2121 Lovett Ave.
P.O. Box 2318
Bismarck, ND 58502
Phone: 701-258-6012 Fax: 701-224-9729

**PROPOSED CHANGE ORDER
NO: 3.1**

Attn: Saunders Inc.
Robbie Burd
86 Inverness Place North
Englewood, CO 80112

Date: 12/5/2023
Email: hunterv@associatedpoolbuilders.com
Job Name: Meyers Pool Replacement
Job Location: Arvada, CO
Job No: 23-1765

We hereby agree to make the change(s) specified below:

Item No.	Description	Unit Price	Qty	Amount
RFI #84				
9	4" Drain Pipe	\$ 9.00	2,000 LF	\$ 18,000.00
10	4" Drain Pipe Sock	\$ 5.00	2,000 LF	\$ 10,000.00
11	4" Drain Pipe 45 degree bend	\$ 25.00	40 EA	\$ 1,000.00
12	4" Drain Pipe WYE	\$ 32.00	40 EA	\$ 1,280.00
13	4" Drain Pipe CAP	\$ 25.00	24 EA	\$ 600.00
14	4" Drain Pipe Coupling	\$ 25.00	10 EA	\$ 250.00
15	Credit for 4" Corrugated Drain Pipe	\$ (12,500.00)	1 LS	\$ (12,500.00)

NOTES:

- *This Change Order will add 7 additional working days to our schedule.
- *This Change Order becomes part of and is incorporated in the existing contract.
- *This Change Order is valid for 14 days.

WE AGREE hereby to make the change(s) specified above at this price:

Add: \$18,630.00

Previous Contract Amount: \$5,158,000.00

Revised Contract Total: \$5,176,630.00

ACCEPTED - The above prices and specifications of this Change Order are satisfactory and are hereby accepted. All work to be performed under same terms and conditions as specified in original contract unless otherwise specified.

Date: 12/5/2023

Signature: _____
Associated Pool Builders, Inc.
Hunter Volk, Project Manager

Date of Acceptance: _____

Signature: _____

For: _____

ASI #16



2000 Lawrence Street
Denver, CO 80205
303.294.9244
olcdesigns.com

ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS (ASI)

Project: **Meyers Pool Replacement**
Project #: **22044.00**

ASI#: 016
Date: Dec. 1, 2023

End-User: ☒ **Apex Park and Recreation District**

Owner: ☒ **City of Arvada**

Contractor: ☒ **Saunders Construction**

CC:
FIELD ☒
OTHER ☐
OTHER ☐
OTHER ☐

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.

DESCRIPTION: (Continued on attached sheets)

SHEET	DESCRIPTION
A210	Detail 4 – Pool West elevation: Revise wall tile at pool deck showers as indicated.
A405	Detail 1 – Mech and Pool Storage Enlarged Plan-1, PROVIDE location of pool deck shower plumbing.
A409	Various Details – PROVIDE dimensions for Diving Tower as indicated.
S110A	Plan revisions – Revised location for 1M spring board platforms, RFI 110 and 130 Revisions to CMU walls.
S110B	Plan revision for RFI 130 – CMU Wall callout.
S120A	Plan Revisions – RFI 110 CMU wall revision, RFI 149 steel beam connection detail revision.
S130A	Plan Revisions – RFI 110 CMU wall revision,
S205	Plan views 3 and 4 – Revised platform layout and slab dimensions. Detail 5 - Additional information provided to support the dive platform structure.
S206	Detail 12 – Revised platform layout and slab dimensions. Details 13 and 15 – revised dive platform slab thickness.
S211	Elevation 1 – Revised precast wall thicknesses to match precast shop drawings.
S212	Elevation 9 – Revised precast wall thicknesses to match precast shop drawings.
S216	Elevation 2 – RFI 144 Added girt at top of curtain wall.

Issued By:

Dec. 1, 2023

ARCHITECT

Date:



2000 Lawrence Street
Denver, CO 80205
303.294.9244
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S400	Detail 4 – Revised CMU wall schedule for RFI 130 Response
S401	Detail 17 – Added new detail for CMU wall reinforcement for RFI 110 Response
S510	Detail 16 – Weld callout added for RFI 139 response.
S511	Detail 5 – Revised dive harness support per RFI 096. Detail 12 – Added dive harness attachment detail to joist.
S520	Detail 9 – Revision of weld detail as requested by Fabricator in steel shop drawings.
AQ000	Plan updated to indicate concrete diving equipment per Alternate #3
AQ100	- Plan updated to indicate concrete diving equipment per Alternate #3. - Depth marker and warning sign locations adjusted to avoid stanchion post locations and wall target locations - Bulkhead stanchion anchor locations updated - Myrtha-hybrid starting blocks replace MTS blocks on large bulkhead - ADA lift location updated - ADA lift anchor added to east side of pool 15M resurface markers added to west side of pool
AQ101	5M platform added to section - Location of recessed steps and grab rails updated to match Myrtha shops 2/AQ101 removed for clarity
AQ102	- Myrtha-hybrid starting blocks replace MTS blocks on large bulkhead - Stanchion anchor locations updated closer to pool
AQ103	- Western 15M resurface markers added to 1/AQ103 - Myrtha-Hybrid starting blocks indicated on cross course - Southwestern stanchion replaced with welded post on 1M springboard guardrails - Bulkhead stanchion anchor locations updated
AQ104	- Updated pace clock locations to match pre-cast and Colorado Time Systems correspondence - Updated scoreboard outlet locations to match pre-cast and Colorado Time Systems correspondence - All language regarding alternates has been removed
AQ105	- Wall target depth revised from 3'-4" to 3'-6" on 4/AQ105 - Small timing system wall plate removed from 11/AQ105
AQ106	Note on 1/AQ106 indicating that pace clocks are provided by Ownership

Issued By:

Dec. 1, 2023

ARCHITECT

Date:



2000 Lawrence Street
Denver, CO 80205
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	- Setback updated for starter deck plate on 2/AQ106 - Starting block setback updated for 6/AQ106 - Removed details 7/AQ106 and 9/AQ106 for clarity - Revised guard rail illustration to match architect on 10/AQ106 - Blocks and anchors revised to Myrtha hybrid which will be provided by Ownership and Timing system plate locations updated for starting block changes on 11/AQ106. 12/AQ106 updated for stanchion, starting block, and timing system adjustments.
AQ107	1/AQ107, 3/AQ107, and 5/AQ107 removed for clarity. 7/AQ107 updated for Myrtha-Hybrid blocks, block anchor, stanchion anchor, and timing plate location updates.
AQ200	- Depth marker and warning sign locations adjusted to avoid stanchions and wall targets - Ramp floor inlet location updated - Pool perimeter illustration updated to 4" handhold tile per Myrtha shop drawings - Setbacks of stanchion anchors updated - Skimmer relocated per Myrtha shop drawings 2/AQ200 updated for accuracy with plan dimensions - Skimmer illustration added to 3/AQ200
AQ201	1/AQ201 and 2/AQ201 updated to 4" handhold tile per Myrtha shop drawings - Rail profile updated for 3/AQ301. Wall inlet location update to match Myrtha shop drawings. - Depth marker and warning signs detail 5/AQ201 updated for 4" handhold tile and 6" deck-to-water dimension 10/AQ201 updated to indicate skimmer pool. 12/AQ201 updated for ramp rail plan view, updated dimensions, updated water elevations, and updated floor inlet locations.
AQ202	1/AQ202 viewport updated, rail plan changes captured. 2/AQ202 updated to include DaLLUX non-slip flat tile per Architect preference.

Issued By:

Dec. 1, 2023

ARCHITECT

Date:



2000 Lawrence Street
Denver, CO 80205
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AQ300	LP Plan and LP Schedule updated for all changes described on previous sheets.
AQ400	- Heaters included in Chemical Treatment note #2 on GENERAL POOL MECHANICAL ROOM NOTES - PP1 and PP2 model numbers updated in PUMP SCHEDULE to match pump from submittals. - Voltage and amperage amounts clarified to match electrical sheets for UV TREATMENT SYSTEMS SCHEDULE - Quantity of agitator boxes and fittings updated in PIPING LEGEND for Alternate #3. - Quantity of skimmers updated in PIPING LEGEND to match plan.
AQ500	- EQUIPMENT SCHEDULE hex tags adjusted and re-arranged for accuracy and clarity. - Fill funnel and accompanying piping P3 to surge tank updated to match in-field images of sleeve locations. - Supplemental heating tees were removed. - CF2 location in sanitizer room has been updated. - Valves illustrated at pool heater influent/effluent lines to match schematic and details. 2/AQ500 updated to provide lower elevation and more space for PP4 suction lines. 3/AQ500 updated to show fill funnel penetration per on-site images. 4/AQ500 updated to show piping heights that match revit model for coordination.
AQ501	- Surge tank vent penetration dimensioned on 1/AQ501. - Fill funnel penetration adjusted on 1/AQ501 and 4/AQ501 for sleeves observed in on-site images. 2 additional surge tank ladder rungs added on 2/AQ501 for ease of entry to surge tank.
AQ503	12" minimum between suction valve and wall shown on 1/AQ503. 2/AQ503 updated to eliminate supplemental heating and add standalone gas-fired heaters.
AQ504	11/AQ504 system fill valve locations updated, one (1) valve has been removed.

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Dec. 1, 2023

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	12/AQ504 updated to match eyeball inlet to be provided per Myrtha shop drawings. 13/AQ504 updated to remove supplemental heating.
AQ505	5/AQ505 updated to remove unnecessary water seals. 9/AQ505 updated to show static line coming through pump pit wall 11/AQ505 updated for 4" handhold per myrtha shop drawings, cap/seal on skimmer overflow lines, and 2" typical line from skimmer to suction main. 13/AQ505 updated to indicate surge tank vent coming up vertically from the tank through the pool mechanical room floor. 12" minimum between suction valve and wall shown on 15/AQ505.
AQ506	Quantity of isolation valves reduced from six (6) to four (4) at 1/AQ506.
AQ600	1/AQ600 updated to remove supplemental heating loop and remove two (2) unnecessary isolation valves from heater bypass lines. - Reference to Pool Heater Schedule added.
SPEC SECTION	DESCRIPTION
None	None

ATTACHMENTS: (List documents that support description)

DRAWING SHEETS:

Architectural Drawing Sheets: A210, A405, A409

Structural Drawing Sheets: S110A, S110B, S120A, S130A, S205, S206, S211, S212, S216, S400, S401, S510, S511, S520

Aquatics Drawing Sheets: AQ000, AQ100, AQ101, AQ102, AQ103, AQ104, AQ105, AQ106, AQ107, AQ200, AQ201, AQ202, AQ300, AQ400, AQ401, AQ402, AQ500, AQ501, AQ503, AQ504, AQ505, AQ506, AQ600

SPECIFICATION SECTIONS:

NONE

END OF SUPPLEMENTAL INSTRUCTIONS

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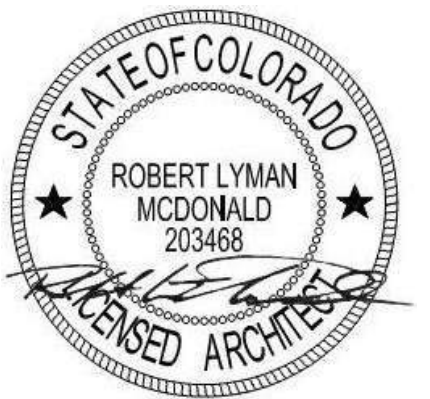
Dec. 1, 2023

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07/14/2023:

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7904 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
3	11/10/2023	ASI-10
5	11/13/2023	ASI-13
6	11/22/2023	ASI-14
8	12/01/2023	ASI- 16

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

ISSUE DATE: 07/14/2023

DRAWN BY: SD

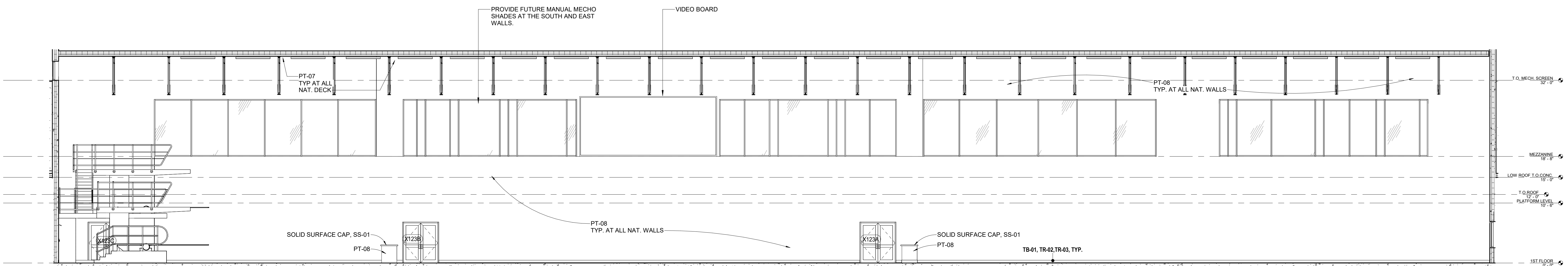
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PROJECT #: 22044

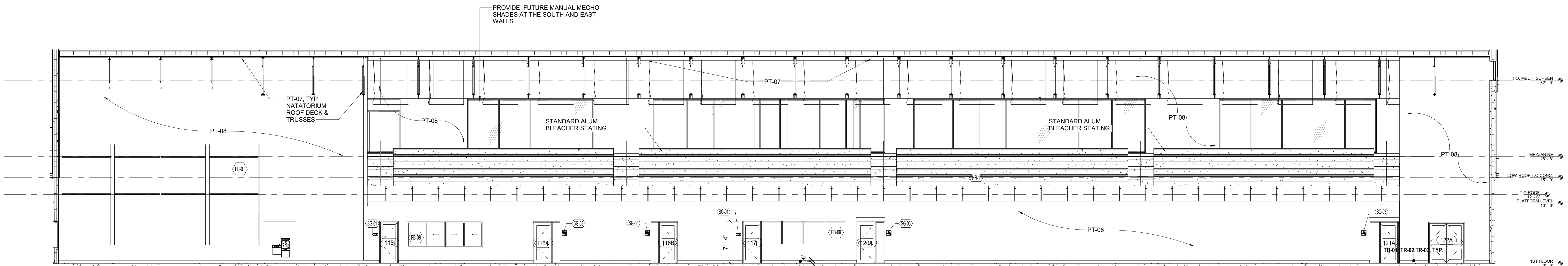
TITLE: INTERIOR ELEVATIONS

SHEET #:

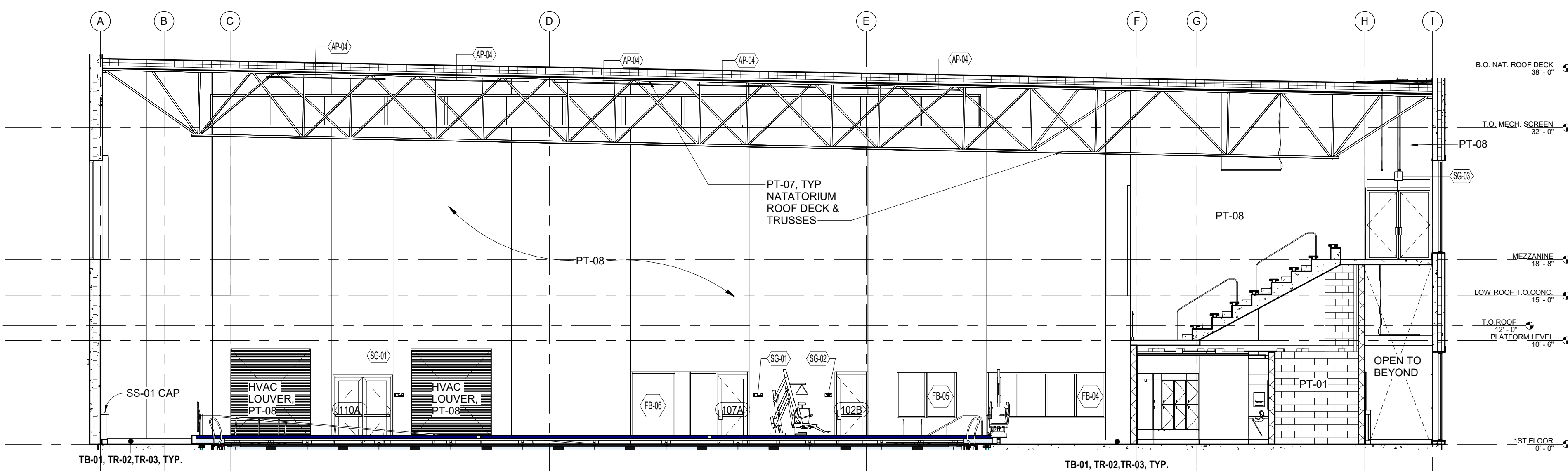
A210



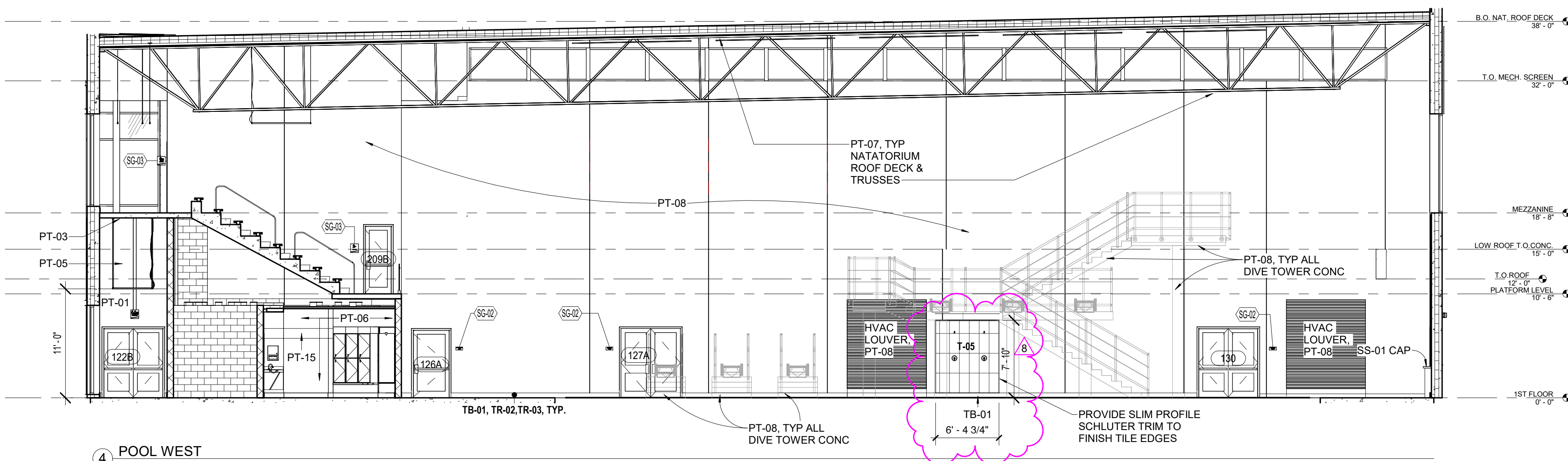
1 POOL NORTH
1/8" = 1'-0"



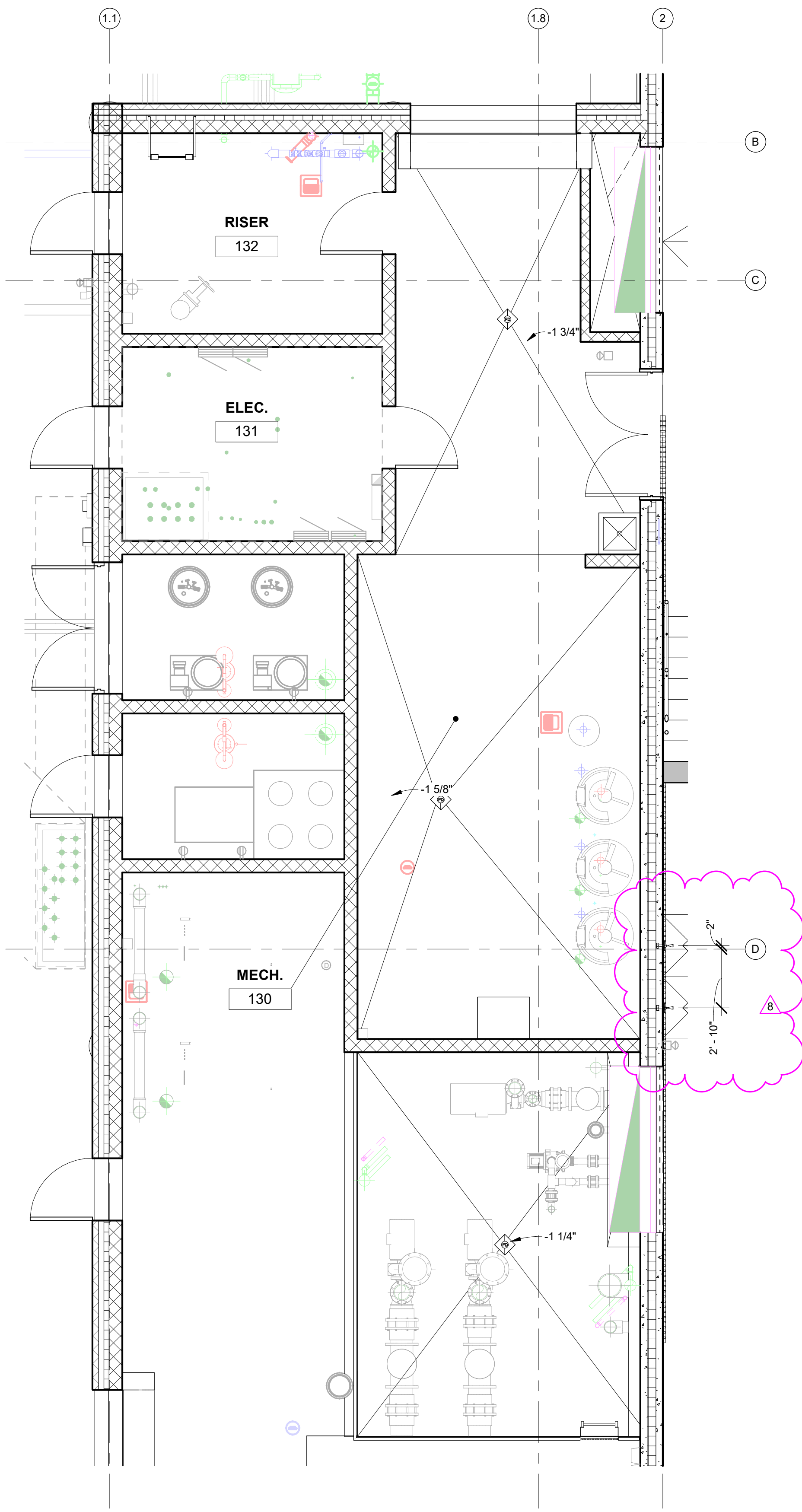
2 POOL SOUTH
1/8" = 1'-0"



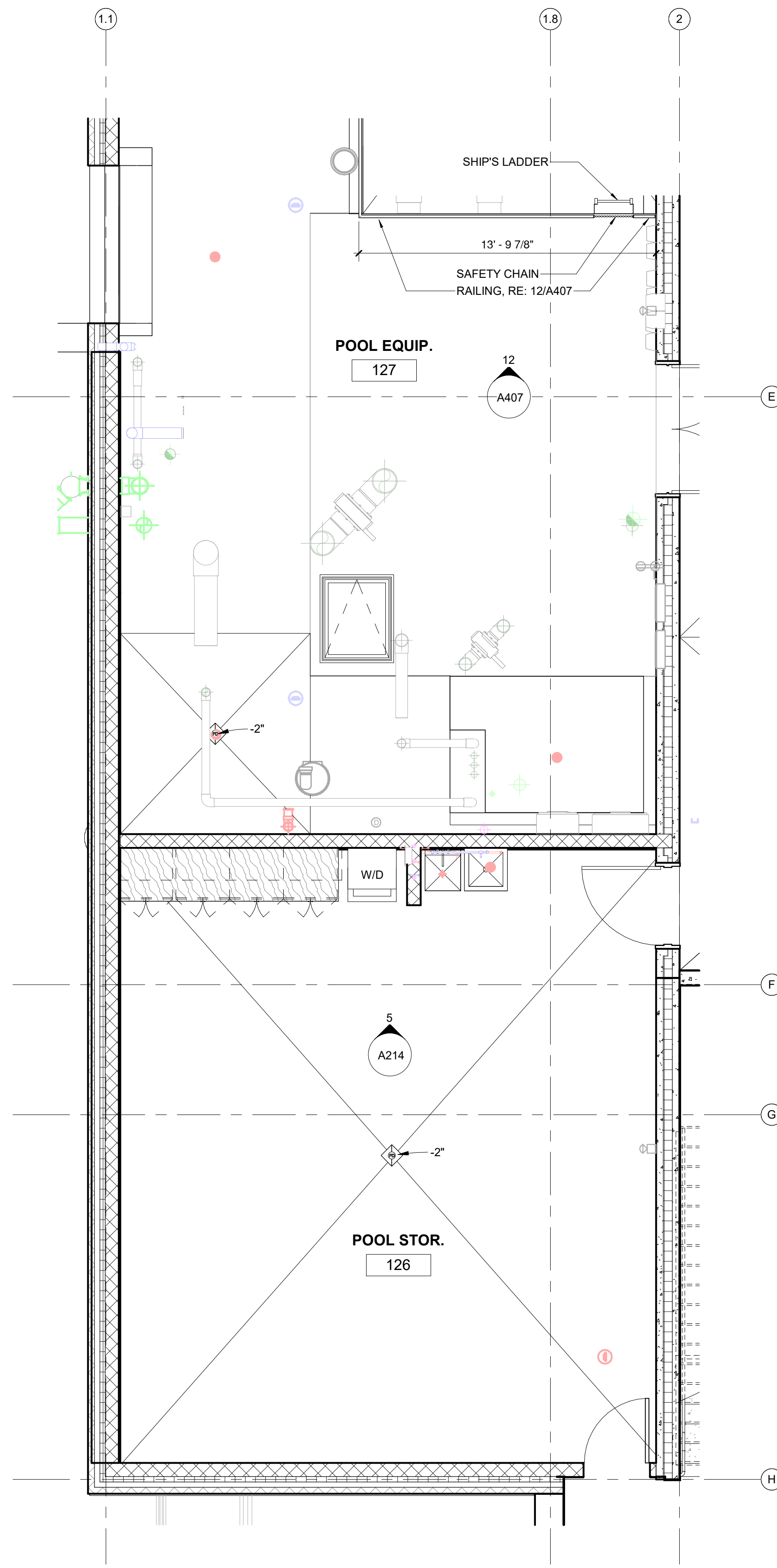
3 POOL EAST
1/8" = 1'-0"



4 POOL WEST
1/8" = 1'-0"



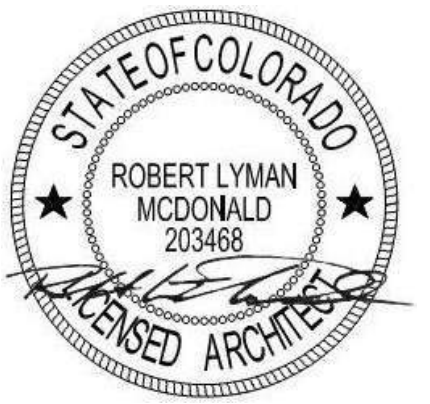
1 MECH AND POOL STORAGE ENLARGED PLAN-1
1/4" = 1'-0"



2 MECH AND POOL STORAGE ENLARGED PLAN-2
1/4" = 1'-0"



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NO.	DATE:	TITLE/PURPOSE:
5	11/13/2023	ASI-13
8	12/01/2023	ASI- 16

SCALE: 1/4" = 1'-0"

ISSUE DATE: 07/14/2023

DRAWN BY: SD

REV'D BY: BM

PROJECT #: 22044

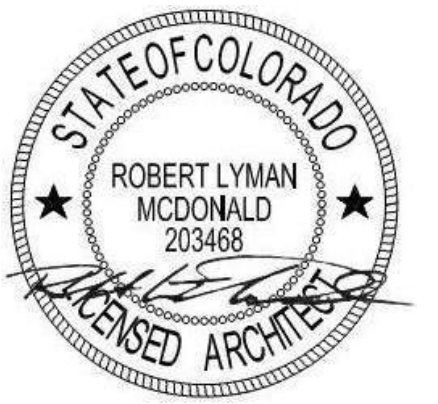
TITLE: ENLARGED WET AREA

SHEET #:

A405



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8	12/01/2023	ASI- 16

SCALE: **As indicated**

ISSUE DATE: 07/14/2023

DRAWN BY: SD

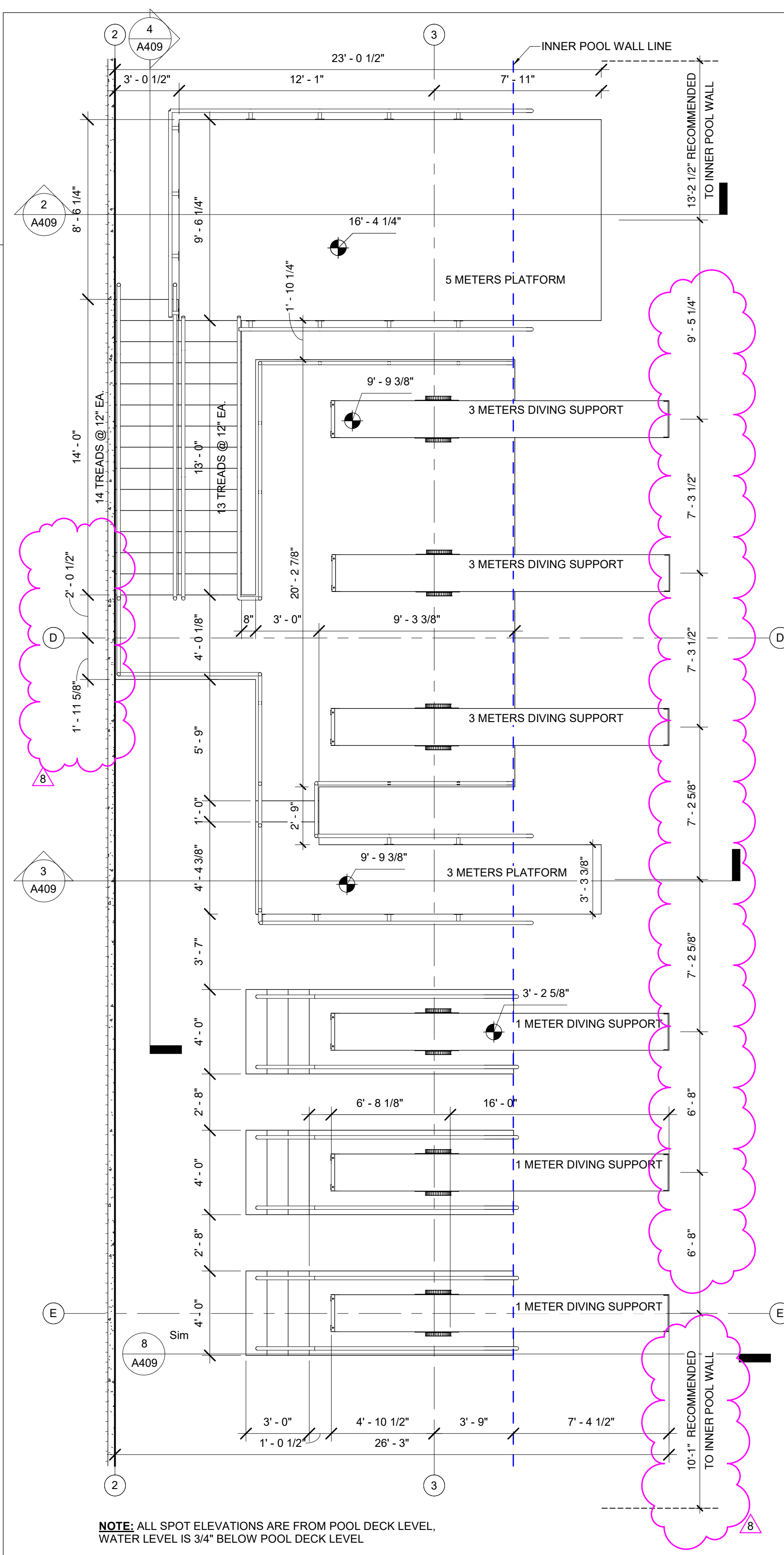
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PROJECT #: 22044

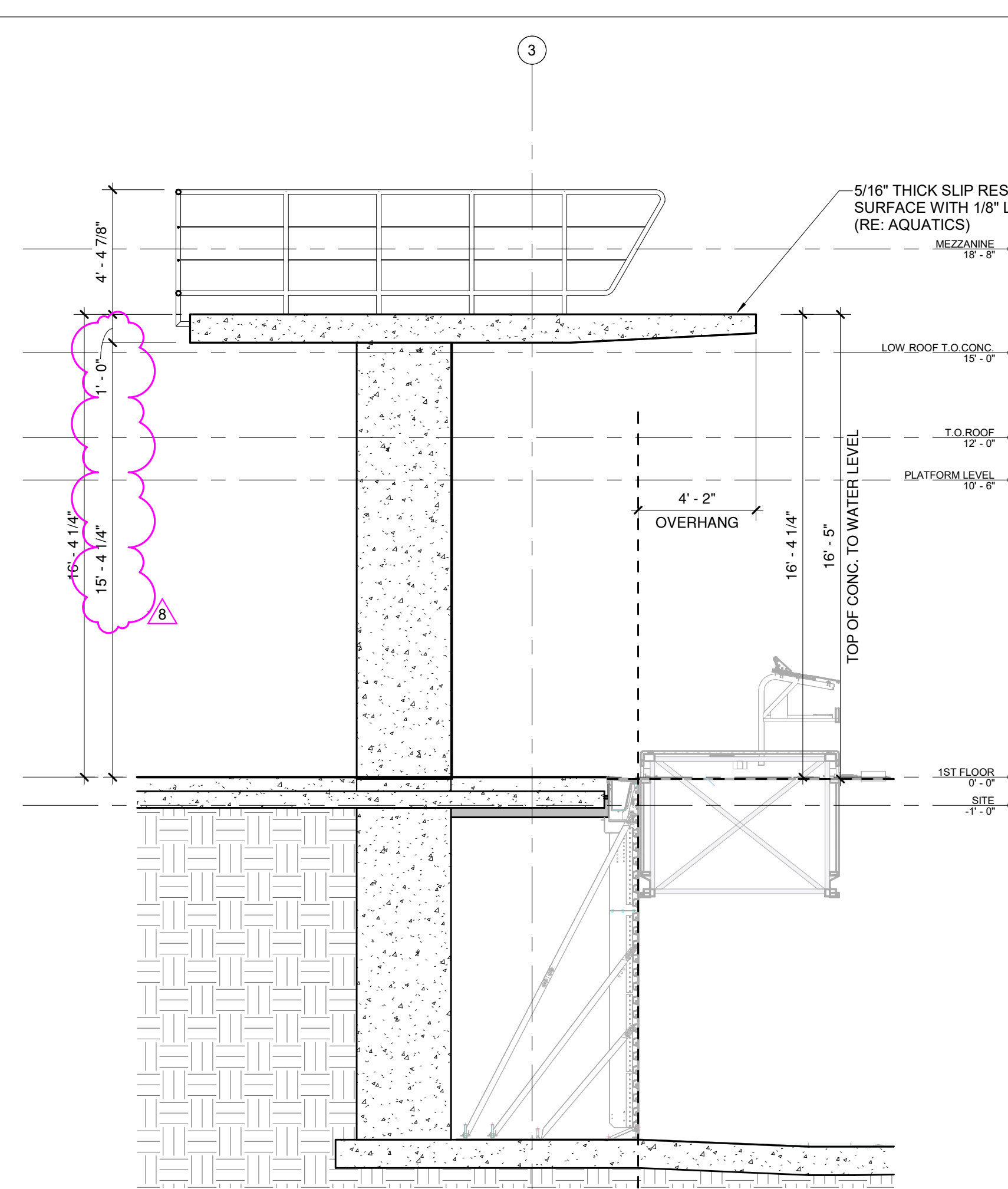
TITLE: **DIVING PLATFORMS
ENLARGED DETAILS**

SHEET #:

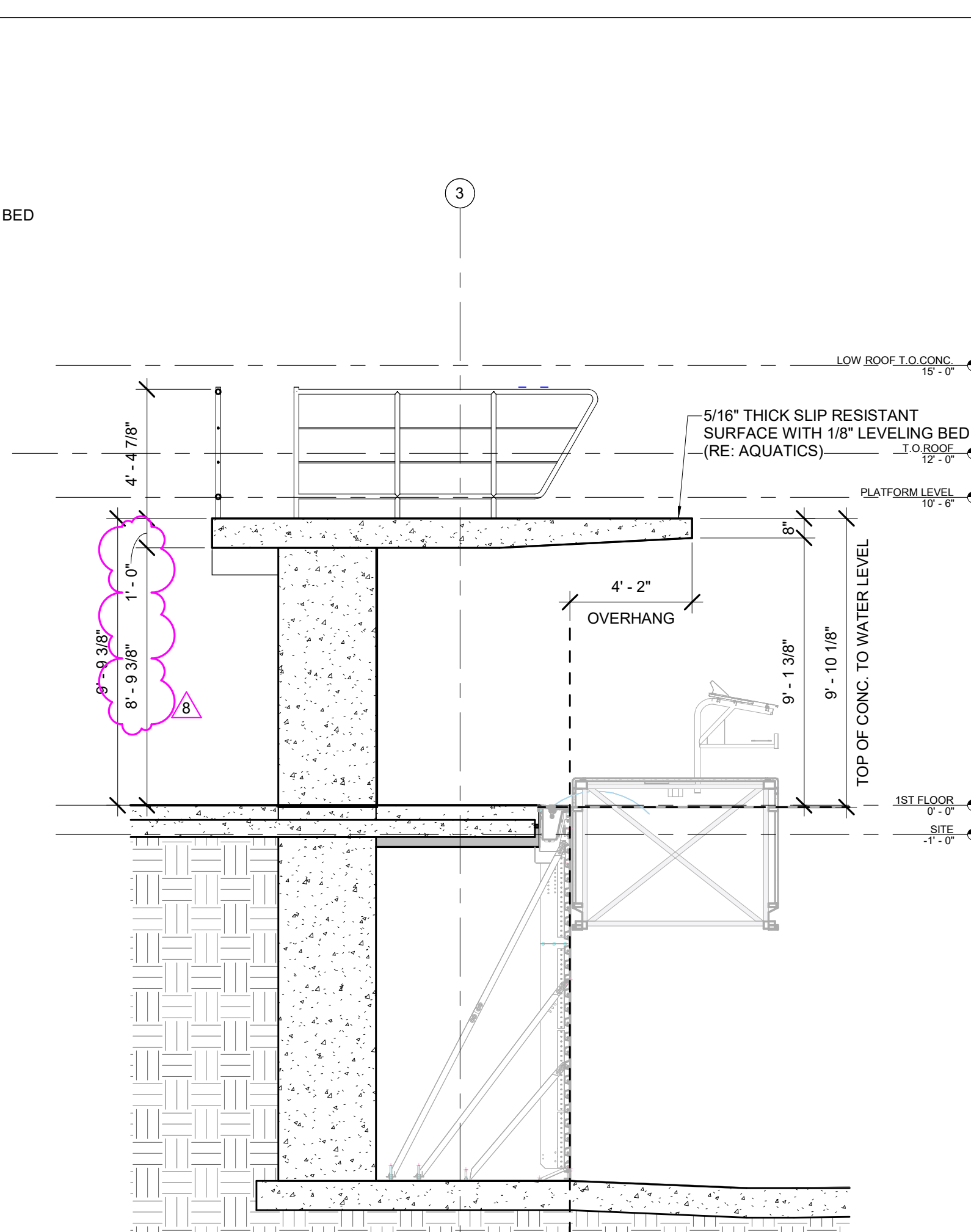
A409



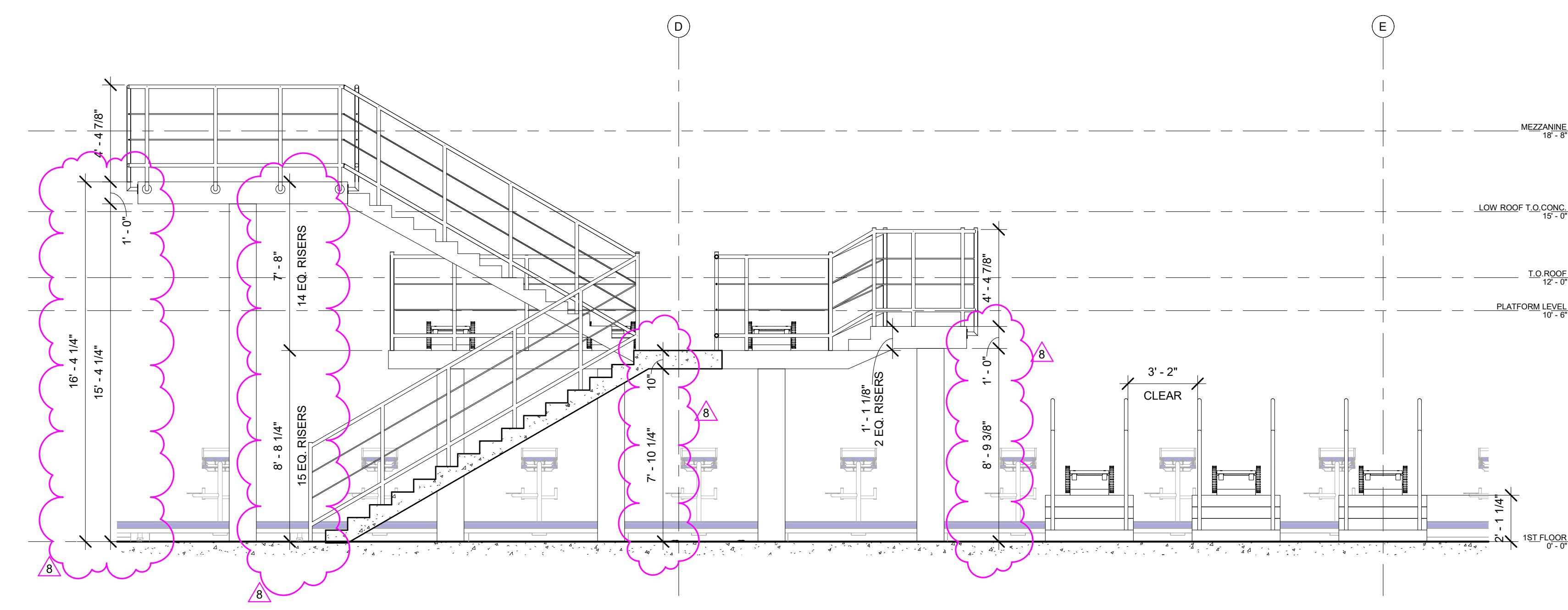
1 DIVING PLATFORMS ENLARGED PLAN
1/4" = 1'-0" **ALTERNATE 3**



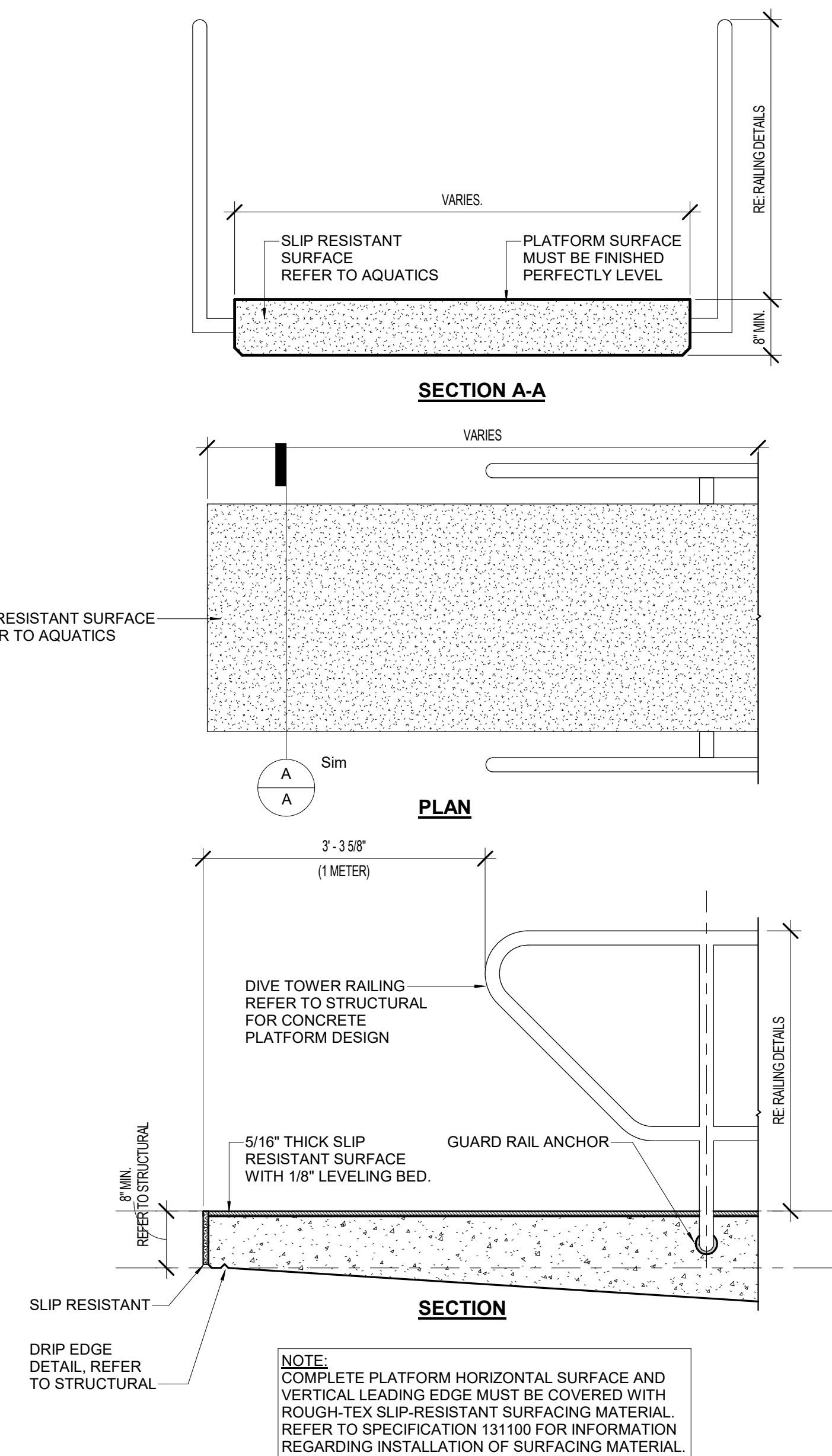
2 DIVING PLATFORMS SECTION-1
1/4" = 1'-0" **ALTERNATE 3**



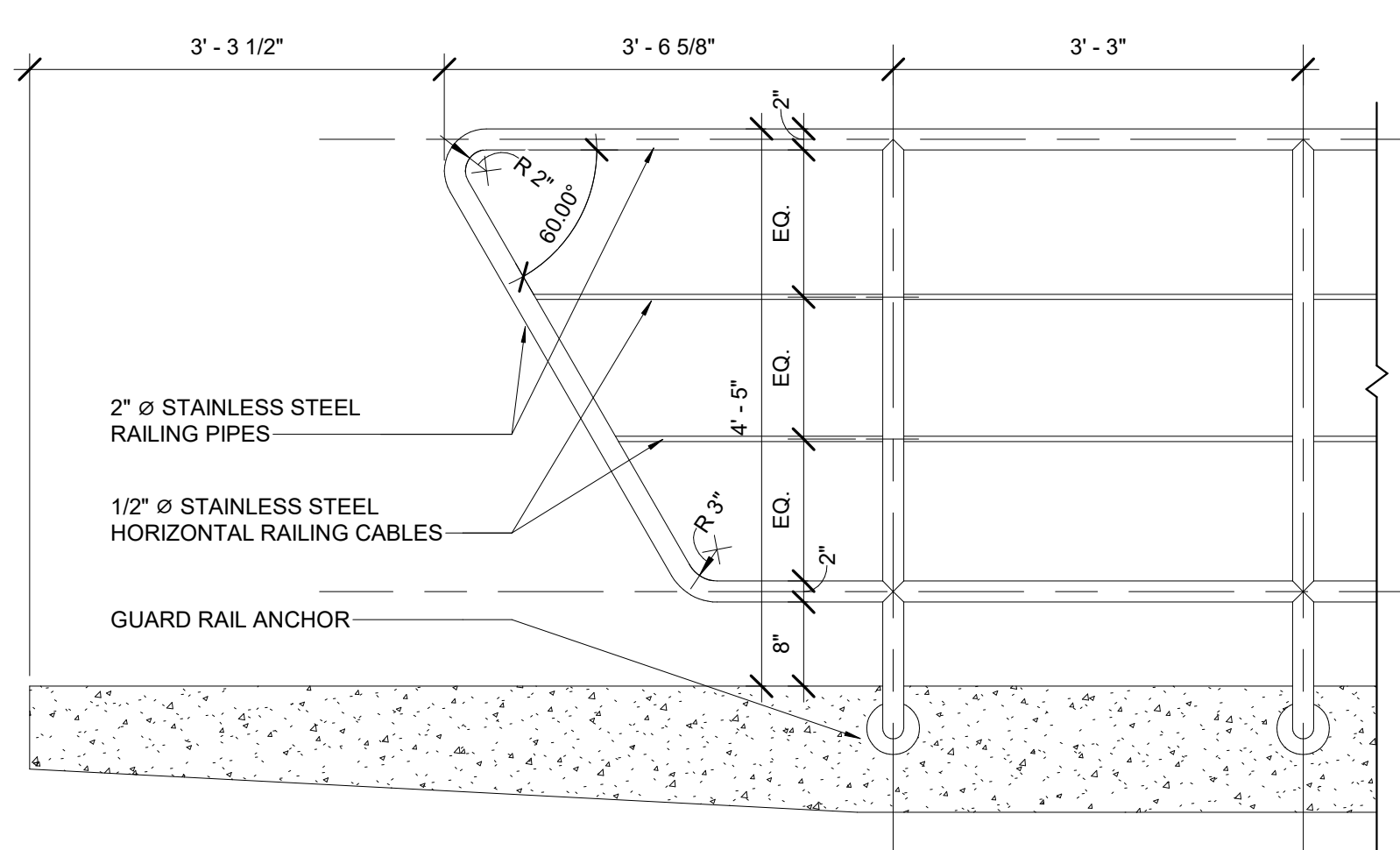
③ DIVING PLATFORMS SECTION-2
1/4" = 1'-0" **ALTERNATE 3**



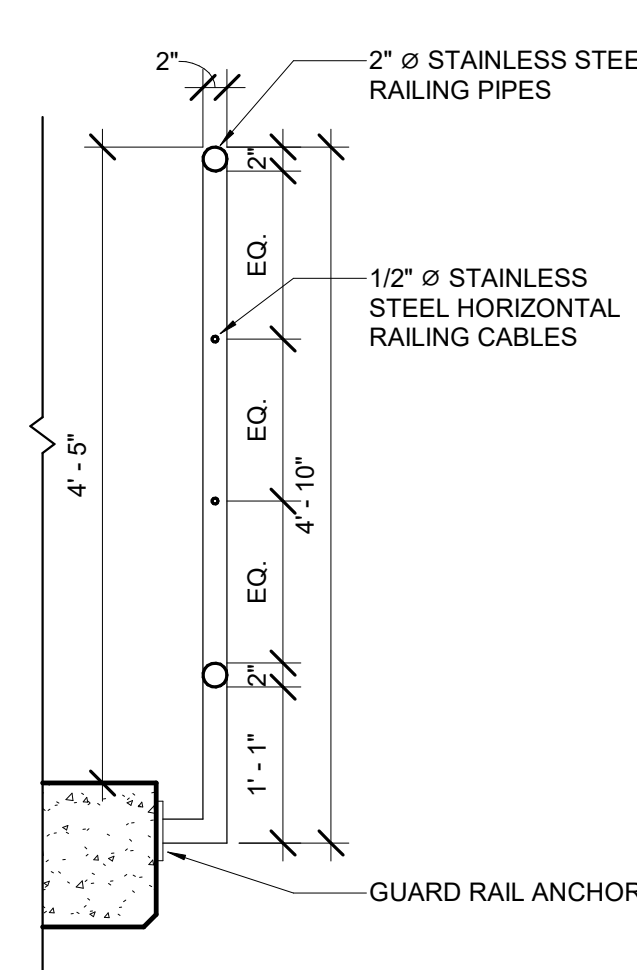
4 DIVING PLATFORMS STAIR SECTION-1
1/4" = 1'-0" **ALTERNATE 3**



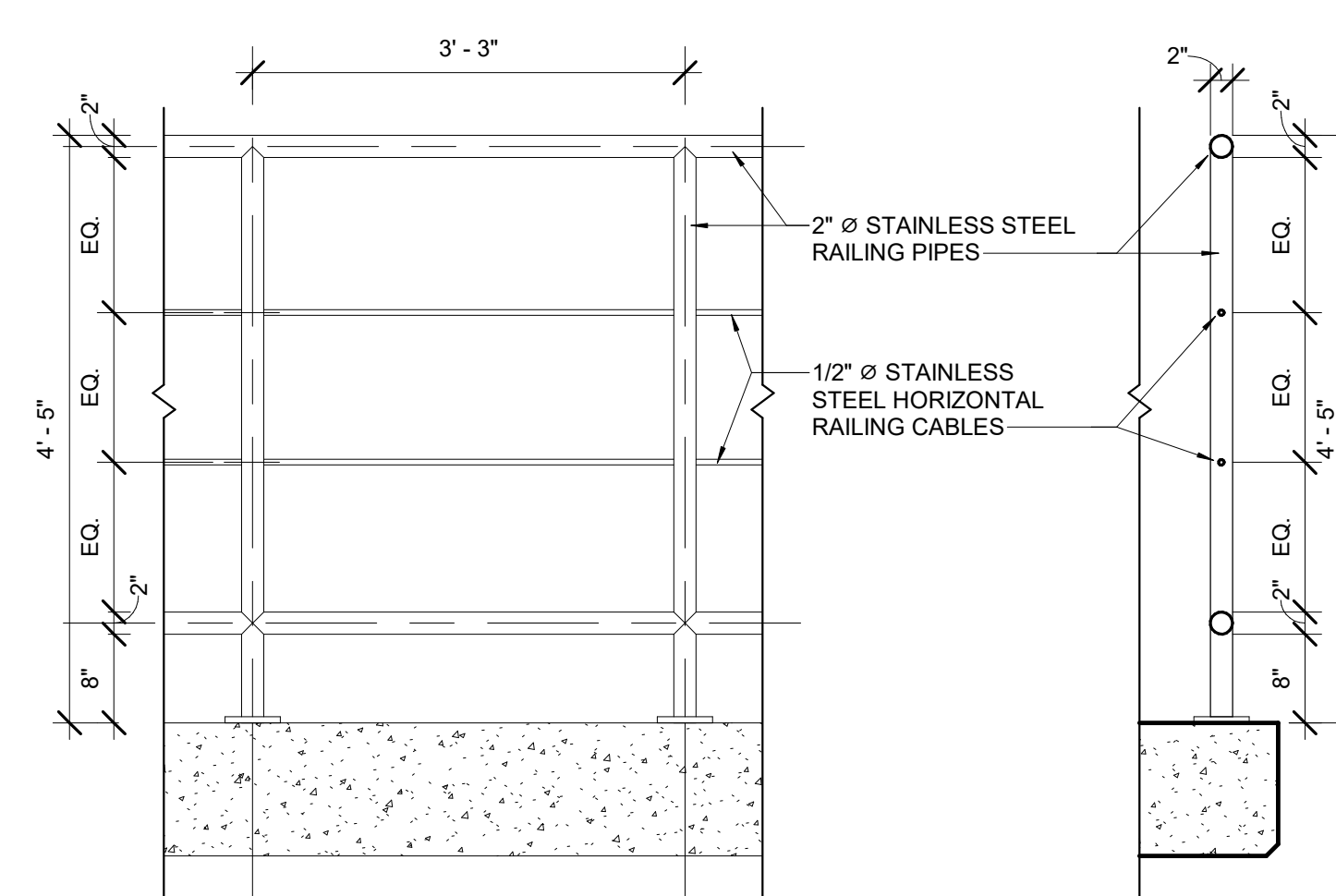
5 DIVING PLATFORMS DETAILS
3/4" = 1'-0" **ALTERNATE 3**



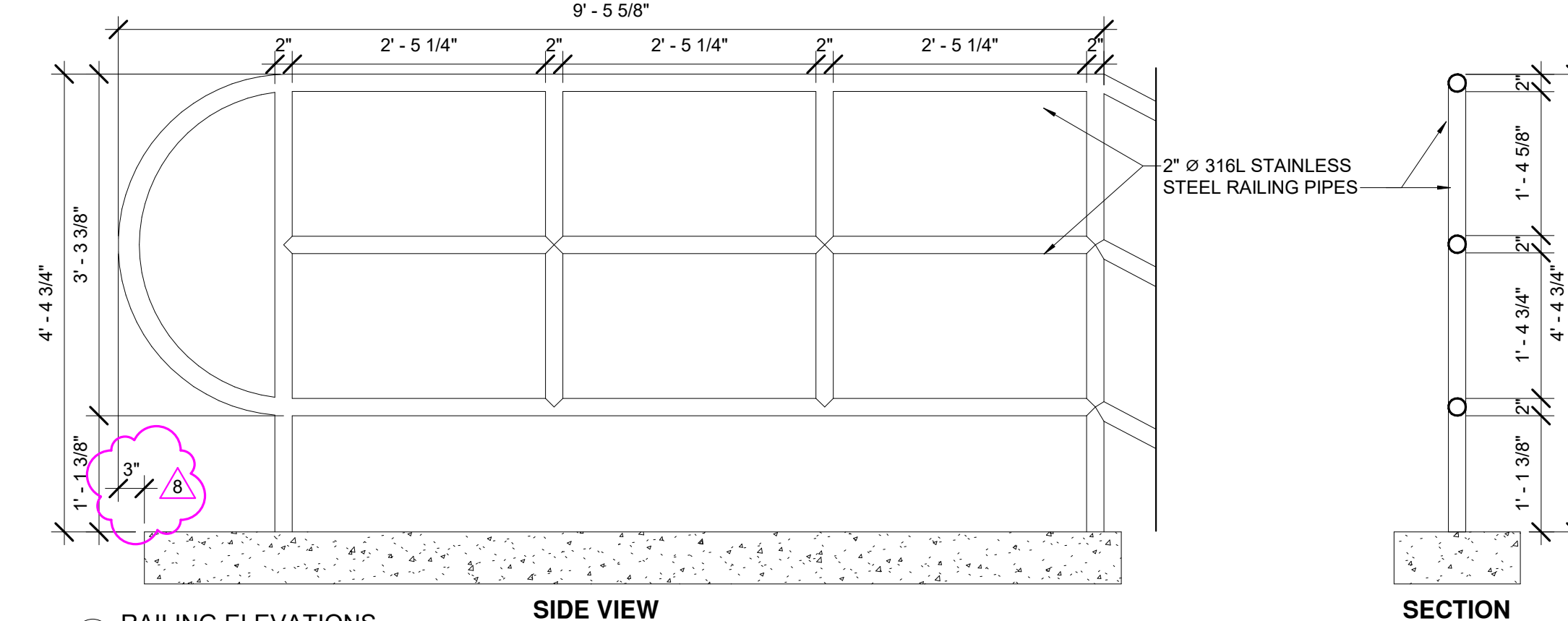
6 SIDE MOUNTED RAILING DETAIL
3/4" = 1'-0" **ALTERNATE 3**



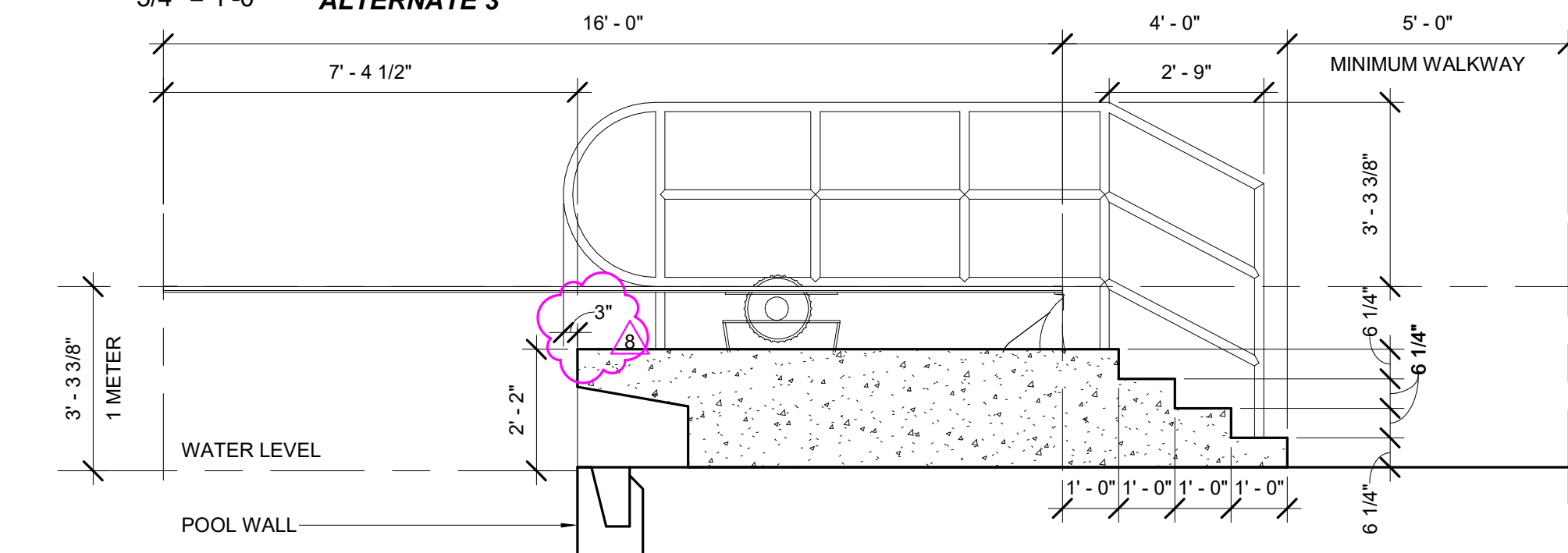
SECTION



SIDE VIEW
 7 FLOOR MOUNTED RAILING DETAIL
 3/4" = 1'-0" **ALTERNATE 3**



9 RAILING ELEVATIONS
3/4" = 1'-0" **ALTERNATE 3**



⑧ ONE METER SPRINGBOARD SUPPORT - ADD ALT #3
3/8" = 1'-0" **ALTERNATE 3**



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NO.	DATE:	TITLE/PURPOSE:
1	07/21/2023	ASI 01
2	11/13/2023	ASI-13
3	12/01/2023	ASI-16

SCALE: **As indicated**

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

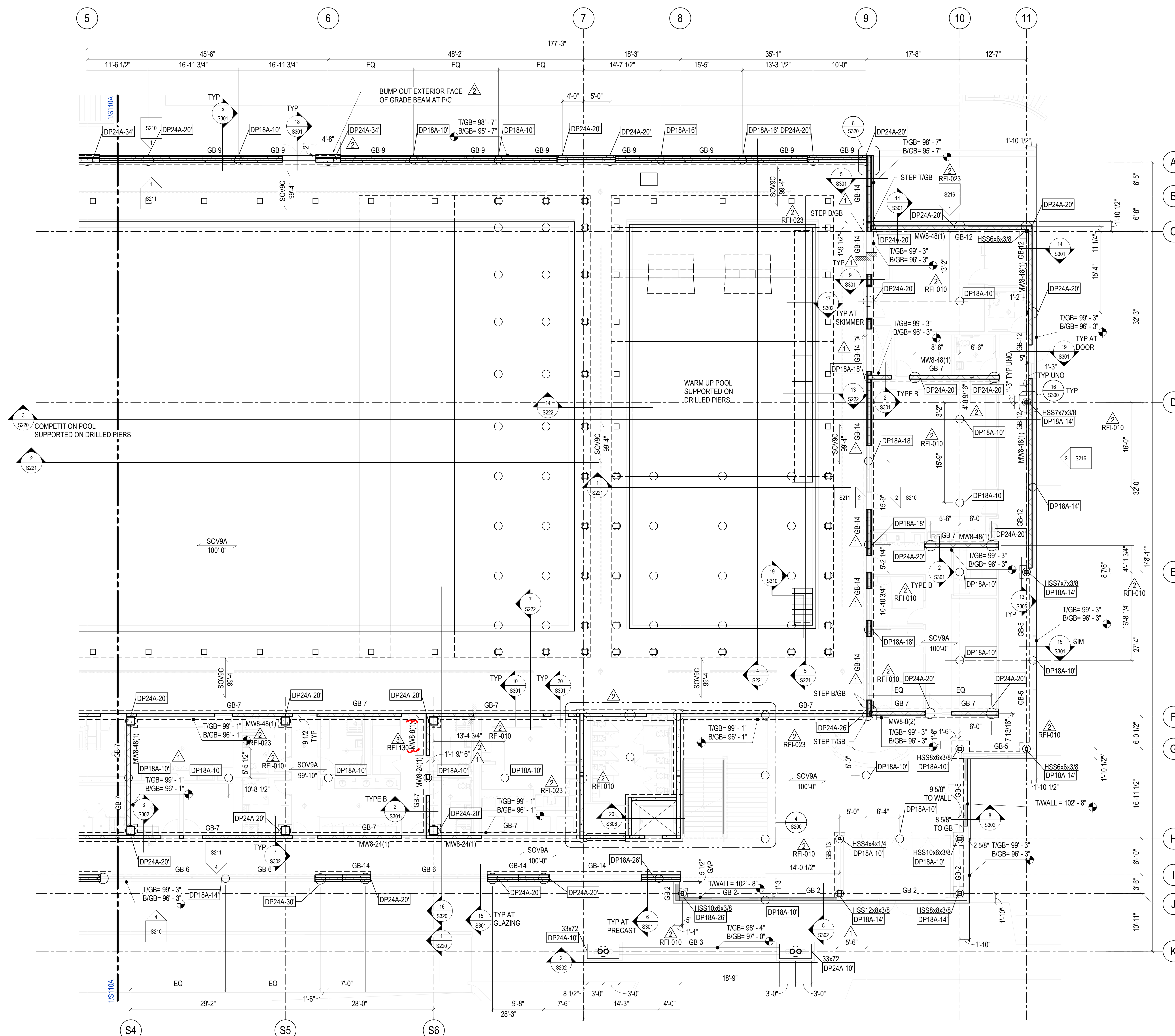
REV'D BY: **ALACK**

PROJECT #: 22.0851S.01

TITLE: FOUNDATION PLAN AREA E

SHEET #:

S110B



1 LEVEL 1 AREA B

$$\frac{1}{8}'' = 1'-0''$$

LEVEL 1 AND FOUNDATION PLAN NOTES

1. GENERAL

- A. SEE 50 SERIES SHEETS FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B. USES ELEVATION 5477.00' = PROJECT ELEVATION 0'-0". VERIFICATION FIELD AND WITH CIVIL AND ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
- C. SEE S3 SERIES SHEETS FOR TYPICAL CONCRETE DETAILS.
- D. SEE ARCHITECTURAL, MECHANICAL, PLUMBING, AND AQUATIC DRAWINGS FOR SLOPE SLOPES, DEPRESSIONS, FILL, PADS, AND CURBS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- E. SEE AQUATIC DRAWINGS FOR TOP OF WALL AND SPECIAL POOL DETAILING REQUIREMENTS.
- F. SEE AQUATIC AND ARCHITECTURAL DRAWINGS FOR DETAILED DIMENSION OF POOL DECK, POOL STRUCTURES, PITS AND TANKS.

2. DRILLED PIERS

3. A. SEE DETAIL 8/S305 FOR TYPICAL DRILLED PIER SCHEDULE
ALL DRILLED PIERS ARE CENTERED ON THE INTERSECTION OF
GRIDS BELOW THE SUPPORTED COLUMN UNLESS DIMENSIONED
OTHERWISE ON PLAN.
A. ALL NEW DRILLED PIERS AT LEVEL 1 TO BE DP18-10" TYP, UNO
ON PLANS. 7"PIER ELEVATION = 0'-9" BELOW TOP OF SLAB
ELEVATION TYP, UNO ON PLANS.

4. GRADE BEAMS / STEM WALLS:

- A. GRADE BEAMS NOTED ON PLAN THUS: GB-#
- B. SEE **8/S300** FOR GRADE BEAM DETAILS AND SCHEDULE
- C. SEE PLAN FOR DIMENSIONED LOCATIONS OF GRADE BEAMS.
- D. SEE **20/S305** FOR LIMITS OF GRADE BEAM/WALL FOUR LENGTHS.
- E. SEE **17/S300** FOR TYPICAL PENETRATIONS THROUGH GRADE BEAMS
- F. REINFORCING
 - a. SEE **13/S300** FOR GRADE BEAM HORIZONTAL CORNER AND INTERSECTION REINFORCING
 - b. SEE **16/S300** FOR TYPICAL PILASTER REINFORCING

5. SLAB-ON-VOID:

- A. INTERIOR SLAB IS A SLAB-ON-VOID. SEE DETAIL 1531/30 FOR TYPICAL SLAB-ON-VOID DETAIL.
- B. POOL DECK IS A SLAB-ON-VOID. SEE DETAIL 1310 FOR TYPICAL SLAB-ON-VOID DETAIL. MYRTHA POOL WALL SYSTEM TO BE INSTALLED PRIOR TO BACK FILLING BELOW POOL DECK SLAB.
- C. SEE 17/S390 FOR CURB AND MECHANICAL EQUIPMENT PAD DETAILS.
- D. SEE AQUATIC AND ARCHITECTURAL DRAWINGS FOR DETAILED DIMENSION OF POOL DECK AND POOL STRUCTURES.
- E. SEE ARCH DRAWINGS FOR VAPOR RETARDER LOCATIONS. INSTALL VAPOR RETARDER DIRECTLY UNDER SLAB PER RECOMMENDATIONS OF PCA AND ACI 302.1R-04. TAKE PRECAUTIONS TO MINIMIZE SLAB CURLING. GRIND SLAB TO ACHIEVE SPECIFIED FLOOR FLATNESS AND LEVELNESS VALUES.

6. COLUMNS/PILASTERS

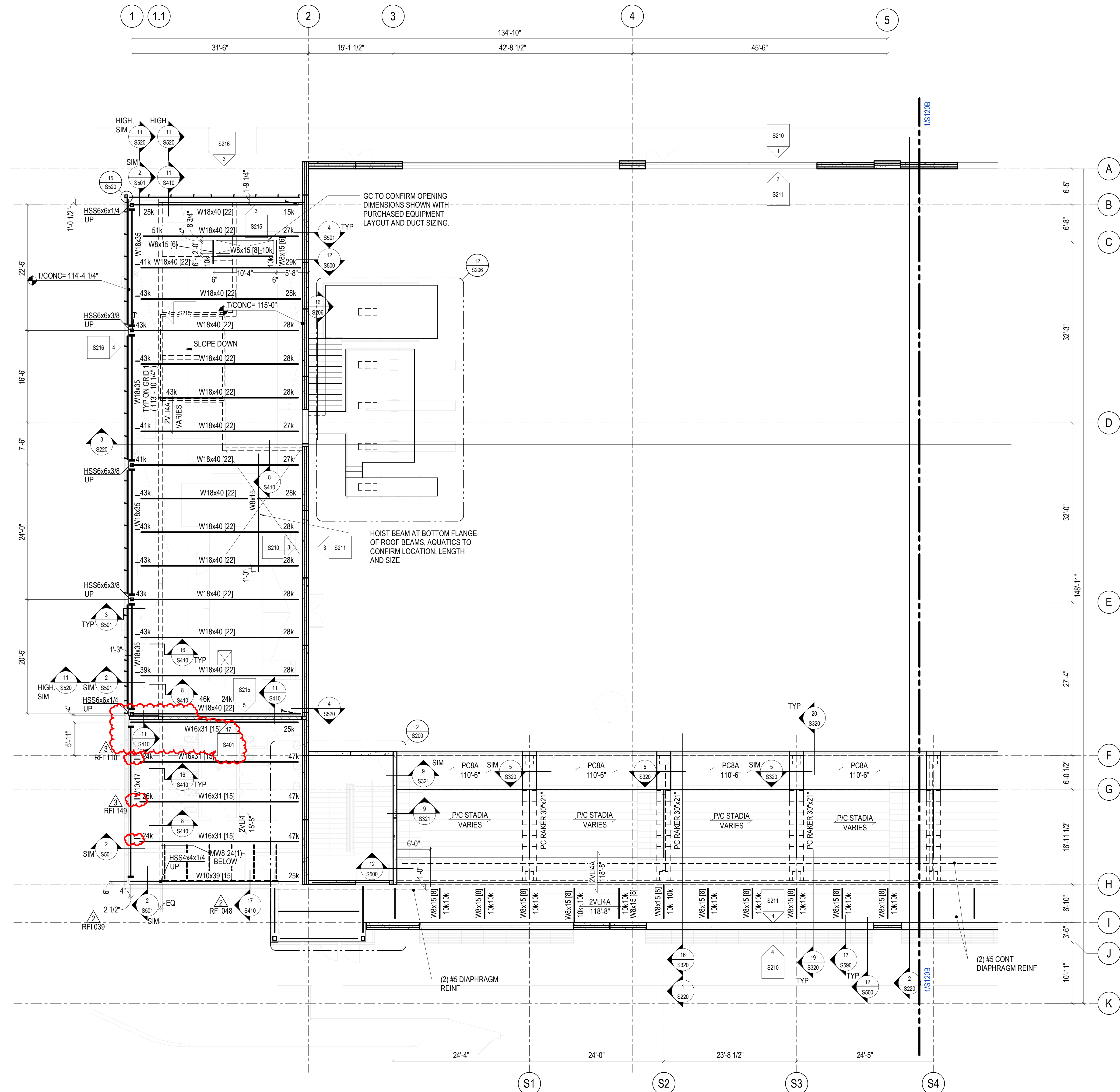
- A. ALL COLUMNS/PILASTERS ARE CENTERED ON THE INTERSECTION OF GRIDS BELOW THE SUPPORTED COLUMN UNLESS DIMENSIONED OTHERWISE ON PLAN.
- B. REFER TO 16/S300 FOR PILASTER DETAILS BELOW COLUMNS AND AT GRADE BEAMS OFFSET FROM TOP OF PIER

7. MASONRY

- A. SEE S400 FOR TYPICAL STRUCTURAL MASONRY WALL DETAILS. MASONRY PARTITION WALLS ARE NOT SHOWN.
- B. SEE S410 FOR TYPICAL MASONRY PARTITION WALL DETAILS.
- a. ALL INTERIOR MASONRY PARTITION WALLS TO BE 8" CMU UNGROUTED EXCEPT FOR BOND BEAM AT TOP AND BOTTOM OF WALL AND EACH SIDE OF OPENINGS
- b. PROVIDE CONTROL JOINTS IN CMU WALLS AT A MAXIMUM OF 30 FEET ON CENTER. CONTROL JOINT PER DETAIL 2/S400

8. MISCELLANEOUS NOTES

- A. SEE SHEET 3390 FOR MISCELLANEOUS CONCRETE DETAILS AND INFORMATION INCLUDING CONCRETE LAP SPICE SCHEDULE, TYPICAL HOOK DETAILS, AND CLEAR COVER REQUIREMENTS.
- B. SEE DETAIL 11/3390 FOR TYPICAL REINFORCING AT WALL PENETRATIONS.
- C. SEE DETAIL 12/3390 FOR TYPICAL WELD BETWEEN REINFORCING BARS AND EMBED PLATES. DETAIL APPLIES AT ALL LOCATIONS WHERE "DAS" IS INDICATED ON DRAWINGS.
- D. ALL STEEL EXPOSED TO THE EXTERIOR OR IN THE NATATORIUM (INCLUDING EMBEDS) SHALL BE GALVANIZED.



1 MEZZANINE FRAMING PLAN AREA A

$$\frac{1}{8}'' = 1'-0''$$

MEZZANINE FRAMING PLAN NOTES:

1. COLUMNS:
 - A. ALL COLUMNS SHALL BE CENTERED ON GRID LINE INTERSECTIONS UNLESS DIMENSIONED OTHERWISE.
2. STEEL BEAMS:
 - A. STEEL BEAMS SHALL BE EQUALLY SPACED BETWEEN GRID LINES UNLESS DIMENSIONED OTHERWISE.
 - B. STEEL BEAMS INDICATED ON PLAN THUS:

STEEL BEAM
XXk
BEAM SIZE [XX] c=X"
(XXX-XX")
SHEAR STUD QUANTITY
Camber (INCHES)
EL OF T/STEEL
ULTIMATE BM REACTION
USING LRFD LOAD
COMBINATIONS (KIPS)

-  FULL HEIGHT SHEAR CONNECTION, SEE [11/S590](#)
 MOMENT CONNECTION, SEE [7/S590](#)
 DESIGN AXIAL DRAG FORCE OR DETAIL
 AXIAL DRAG CONNECTION
 BOTTOM FLANGE BRACING CONNECTION, SEE [5/S590](#)

3. SLAB-ON-METAL DECK:
 - A. SEE [11/S530](#) FOR ADDITIONAL INFORMATION AND FOR CONNECTION OF DECK TO SUPPORTING MEMBERS.
 - B. WHERE POSSIBLE, DECK SHALL BE LOCATED OVER A MINIMUM OF 4 SUPPORTS (3-SPAN).
 - C. DECK DIRECTION AND TYPE NOTED AS THUS:

Diagram illustrating the notation for a slab-on-deck:

- DECK TYPE
- ABOVE DECK CONCRETE THICKNESS
- TYPE
- DECK SPAN DIRECTION
- T/SLAB AT SLAB-ON-DECK

- D. LOCATE SLAB CONSTRUCTION JOINTS PER DETAIL 4/5530. SUBMIT LOCATION OF SLAB CONSTRUCTION JOINTS FOR REVIEW 3 WEEKS MINIMUM PRIOR TO POUR. SPACE JOINTS AND POUR SEQUENCES TO MINIMIZE SHRINKAGE CRACKS.
- E. SEE 19/5530 FOR ADDITIONAL REINFORCING REQUIRED AT SLAB PENETRATIONS.
- F. SEE MECHANICAL AND ARCHITECTURAL SHEETS FOR ADDITIONAL OPENINGS NOT SHOWN. SEE DETAIL FOR ADDITIONAL FRAMING REQUIRED AT ALL MECHANICAL OPENINGS.

4. MECHANICAL AND ELECTRICAL EQUIPMENT:
 - A. CONTRACTOR TO VERIFY ALL EQUIPMENT WEIGHTS, SIZES, LOCATIONS, AND OPENINGS REQUIRED WITH MECHANICAL CONTRACTOR. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CHANGES IN THE WEIGHTS OR LOCATIONS SHOWN ON THE DRAWINGS. SUCH CHANGES SHALL BE SUBJECT TO STRUCTURAL ENGINEERING REVIEW.
 - B. MECHANICAL EQUIPMENT WEIGHTS, IN KIPS, NOTED ON PLAN TH.
 - C. WEIGHTS SHOWN DO NOT INCLUDE HOUSEKEEPING PAD WEIGHT.
 - D. MECHANICAL WEIGHT SHALL BE EVENLY DISTRIBUTED TO ALL SUPPORTS.

5. PRECAST STADIA AND RAKERS:
 - A. REFER TO S320 FOR PRECAST RAKER AND STADIA PERFORMANCE CRITERIA AND DETAILS
6. MASONRY WALLS:
 - A. REFER TO S400, S401 and S410 FOR TYPICAL MASONRY WALL DETAILS AND SCHEDULES.
 - B. PROVIDE CONTROL JOINTS IN CMU WALLS AT A MAXIMUM OF 30 FEET ON CENTER, CONTROL JOINT PER 2/S400

NO.	DATE:	TITLE/PURPOSE:
2	11/13/2023	ASI-13
3	12/01/2023	ASI-16

SCALE: **As indicated**

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

REV'D BY: **ALACK**

PROJECT #: 22.0851S.01

TITLE: **MEZZANINE LEVEL FRAMING
PLAN AREA A**

SHEET #:

S120A



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STEEL ROOF FRAMING PLAN NOTES:

- COLUMNS:
 - ALL COLUMNS SHALL BE CENTERED ON GRID LINE INTERSECTIONS UNLESS DIMENSIONED OTHERWISE.
- STEEL BEAMS:
 - STEEL BEAMS SHALL BE EQUALLY SPACED BETWEEN GRID LINES UNLESS DIMENSIONED OTHERWISE.
 - STEEL BEAMS INDICATED ON PLAN THUS:

STEEL BEAM

BEAM SIZE (XX) c/c" XXk

SHEAR STUD QUANTITY (XXX-XX)

CAMBER (INCHES) EL OF T/STEEL (XXX-XX)

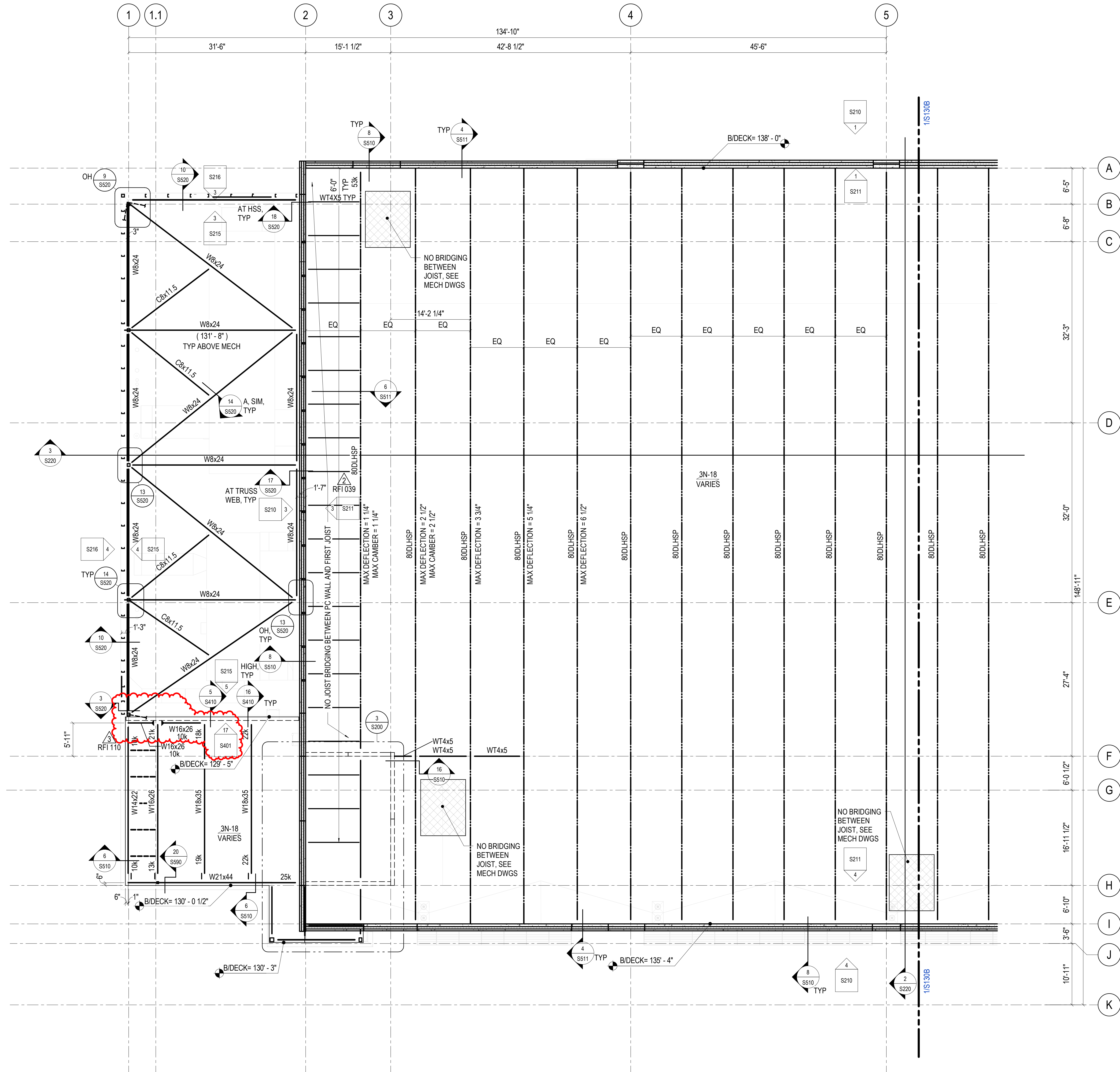
ULTIMATE BM REACTION USING LRFD LOAD COMBINATIONS (KIPS)
- STEEL BAR JOISTS:
 - STEEL BAR JOISTS SHALL BE EQUALLY SPACED BETWEEN GRIDLINES / COLUMNS / GIRDERS UNLESS DIMENSIONED OTHERWISE.
 - JOISTS INDICATED ON PLAN THUS:

DEPTH

SERIES

SIZE

XXLHXX
 - TOP OF JOISTS SHALL EQUAL BOTTOM OF METAL DECK ELEVATION.
 - SEE PLAN FOR BOTTOM OF DECK ELEVATION
 - CAMBER ALL JOISTS FOR THE ACTUAL JOIST DEAD LOAD DEFLECTION. DO NOT USE STANDARD SJ CAMBERS. SEE DESIGN CRITERIA FOR SUPERIMPOSED DEAD LOADS.
 - MAX DEFLECTIONS NOTED ON PLAN ARE TO BE UNDER TOTAL LOAD+CAMBER LOAD CASE.
 - JOIST BEARINGS SHALL HAVE STANDARD BEARING LENGTHS PER SJ SPECIFICATIONS UNLESS NOTED OTHERWISE.
 - SEE S004 FOR JOIST LOADING PLAN
- METAL DECK:
 - SEE 3/S535 FOR ADDITIONAL INFORMATION AND FOR CONNECTION OF DECK TO SUPPORTING MEMBERS.
 - WHERE POSSIBLE, DECK SHALL BE LOCATED OVER A MINIMUM OF 4 SUPPORTS (3-SPAN).
 - DECK DIRECTION AND TYPE NOTED AS THUS: XX
 - SEE MECHANICAL AND ARCHITECTURAL SHEETS FOR ADDITIONAL OPENINGS NOT SHOWN. SEE DETAIL FOR ADDITIONAL FRAMING REQUIRED AT ALL MECHANICAL OPENINGS.



1 ROOF FRAMING PLAN AREA A

1/8" = 1'-0"

DESIGNER: TOM LADD
DATE: 11/13/2023
DATE PRINTED: 12/10/2023 2:52 PM
FILE PATH: Arvada\Arvada\Docs\2024\Arvada Meyer Pool\2023\0851 S.01 MEYERS POOL REPLACEMENT - S310A

MLJ09 # 22.0851S.01
EGR NICK BRACKSON
PROJECT MANAGER ANDREW JACK

NO.	DATE:	TITLE/PURPOSE:
2	11/13/2023	ASI-13
3	12/01/2023	ASI-16

SCALE: As indicated

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

REV'D BY: ALACK

PROJECT #: 22.0851S.01

TITLE: ROOF FRAMING PLAN AREA A

SHEET #:

S130A



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3	12/01/2023	ASI-16

SCALE: As indicated

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

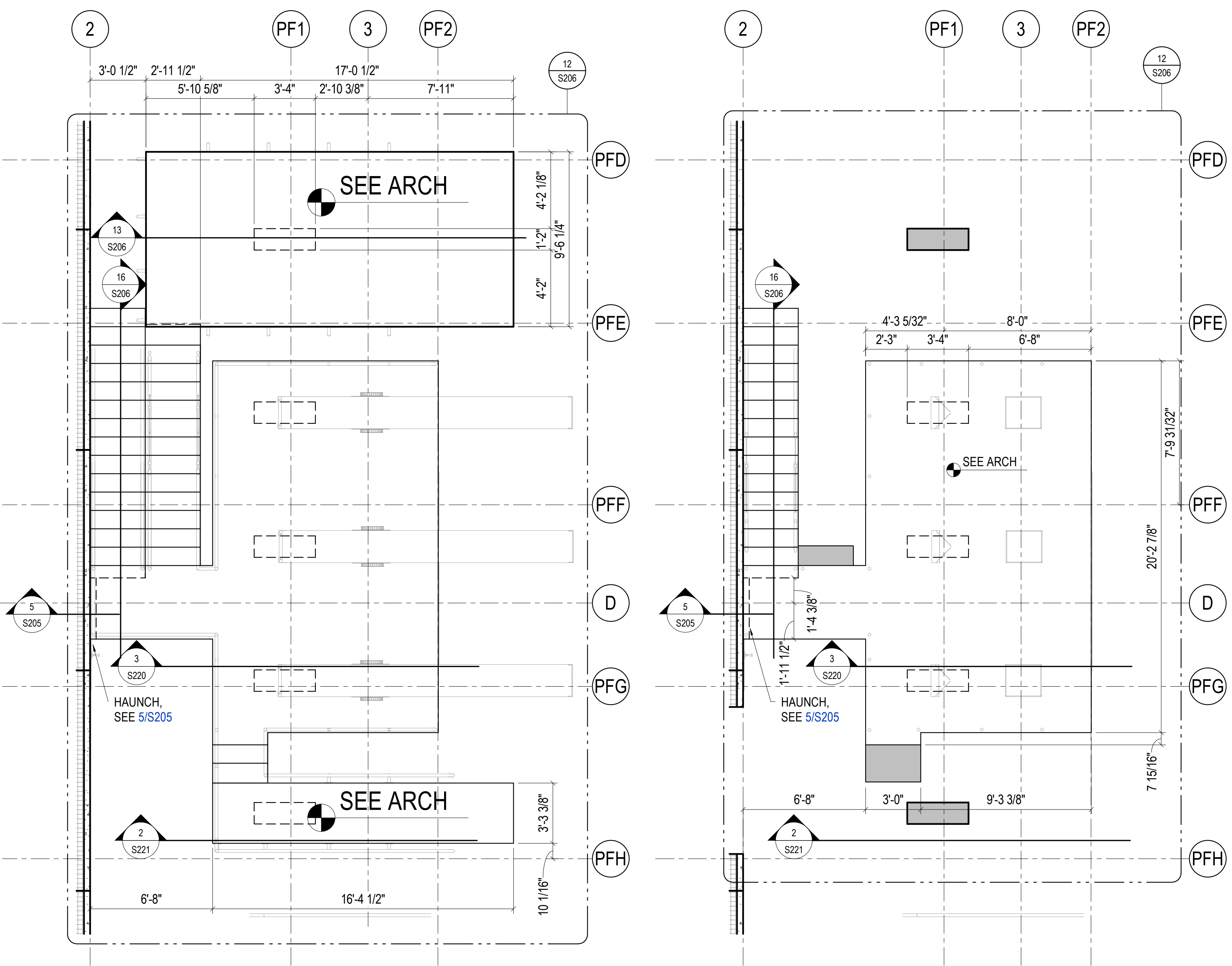
REV'D BY: ALACK

PROJECT #: 22.0851S.01

TITLE: DIVE TOWER FRAMING PLANS

SHEET #:

S205

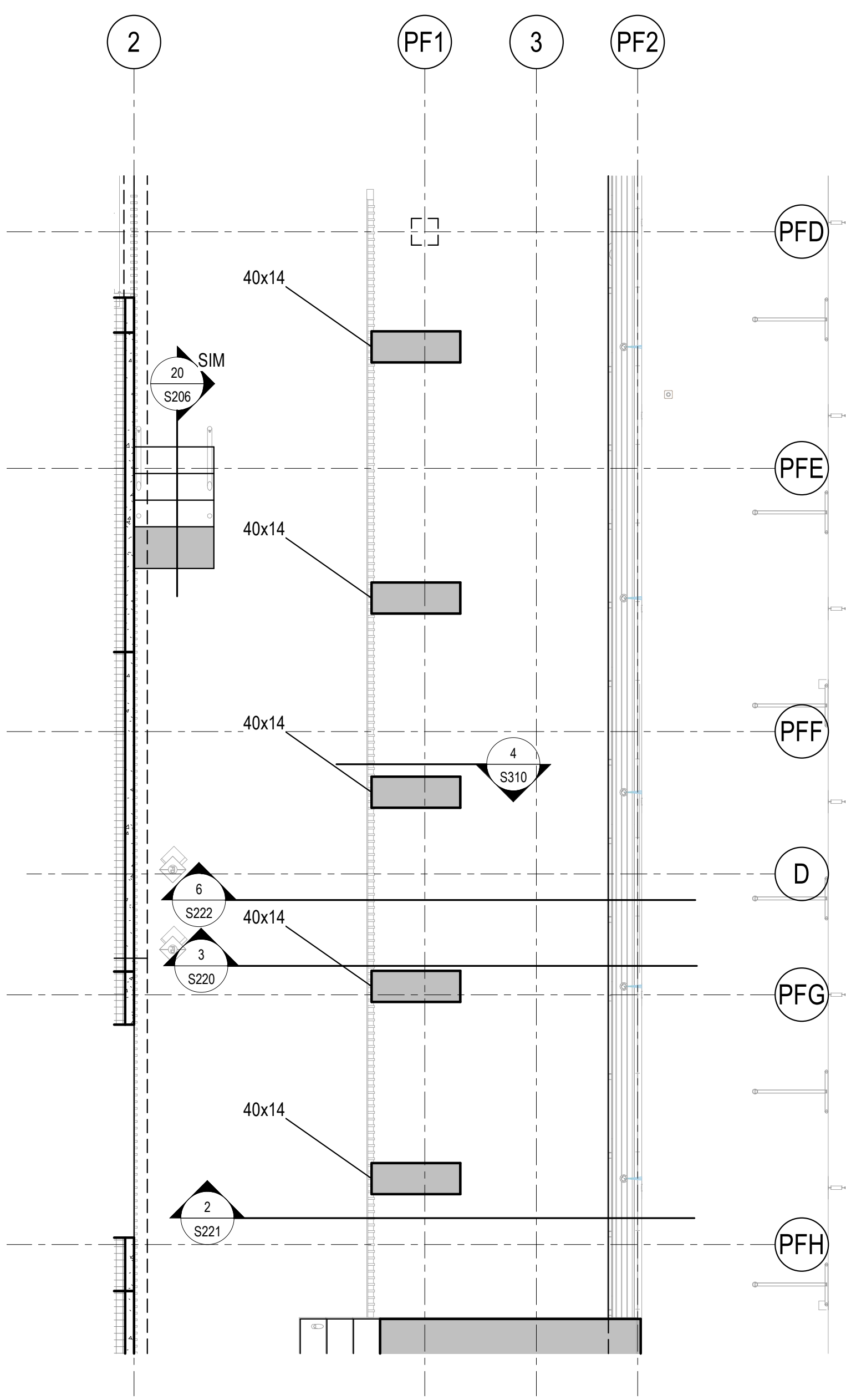


PLAN NOTES:
1. SEE S110 SERIES SHEETS FOR PLAN INFORMATION

PLAN NOTES:
1. SEE S110 SERIES SHEETS FOR PLAN INFORMATION

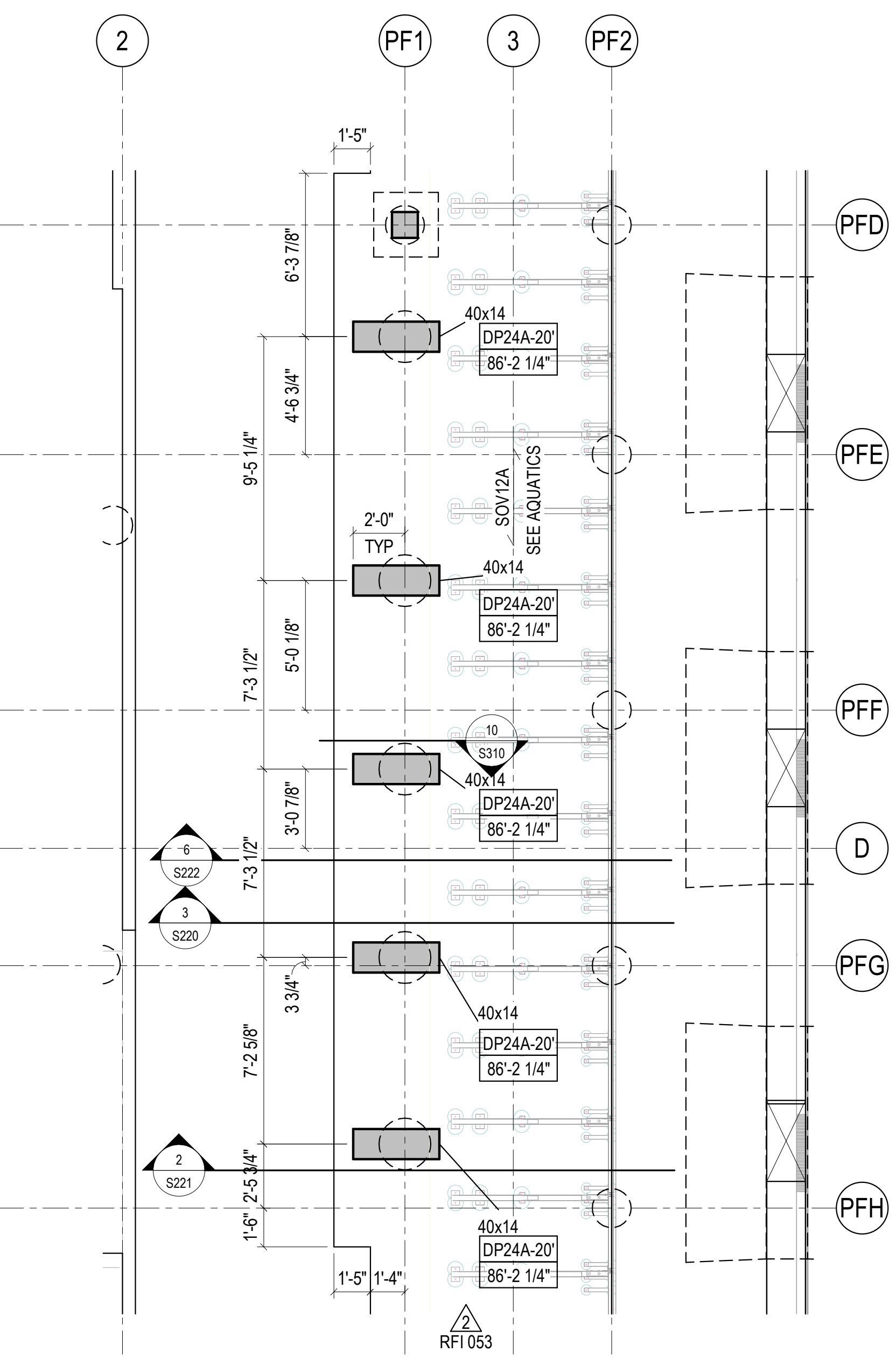
4 DIVE PLATFORM AT 3 AND 5 METER FIXED
1/4" = 1'-0"

3 DIVE PLATFORM AT 3M SPRINGBOARDS
1/4" = 1'-0"



PLAN NOTES:
1. SEE S110 SERIES SHEETS FOR PLAN INFORMATION

2 DIVE PLATFORM AT LEVEL 1
1/4" = 1'-0"





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MAIN: 303.431.6100 MARTIN/MARTIN.COM

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MEYERS POOL REPLACEMENT ARVADA, CO

7904 Carr Drive, Arvada, CO 80005

NO. DATE: TITLE/PURPOSE:
3 12/01/2023 ASI-16

SCALE: As indicated

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

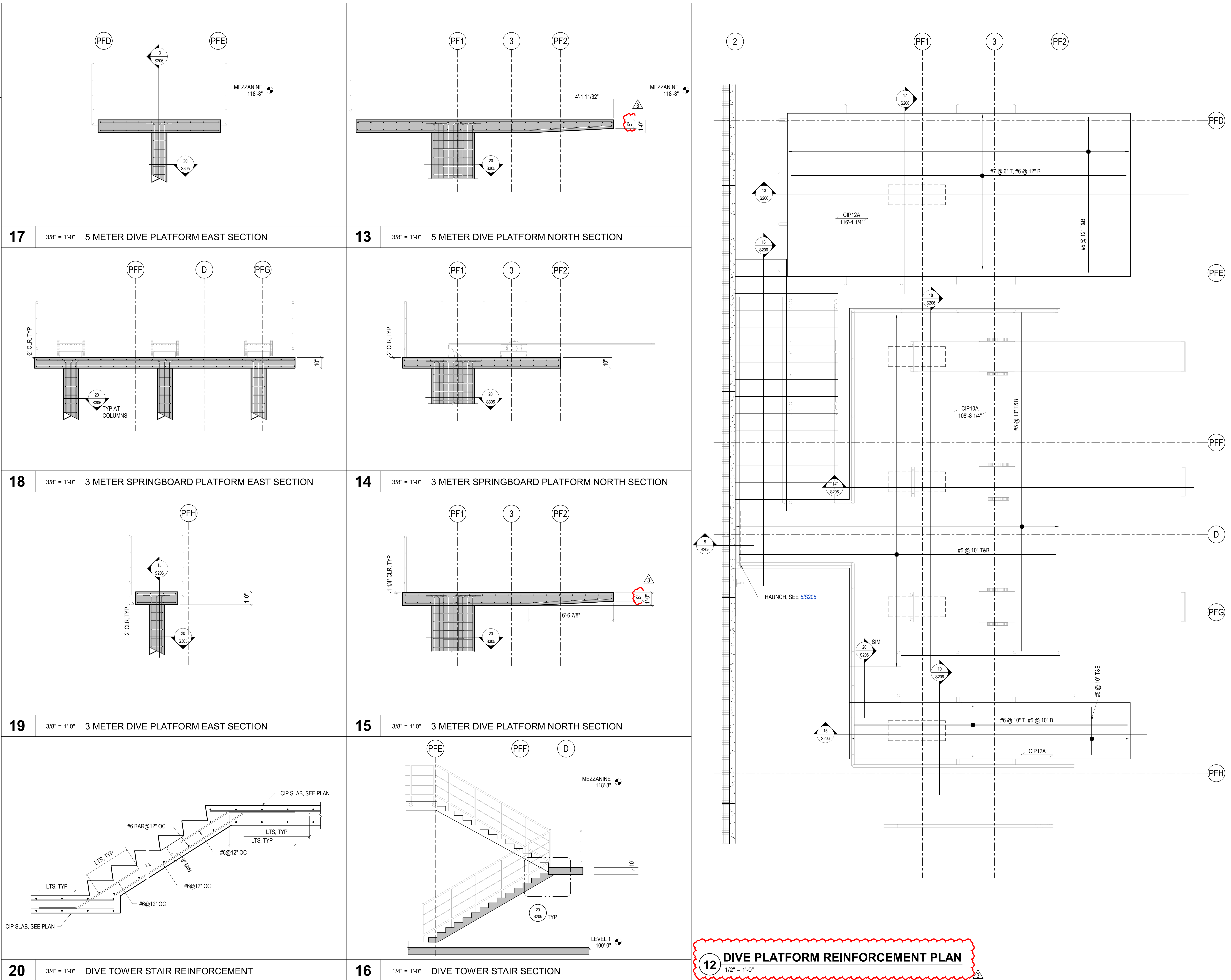
REV'D BY: ALACK

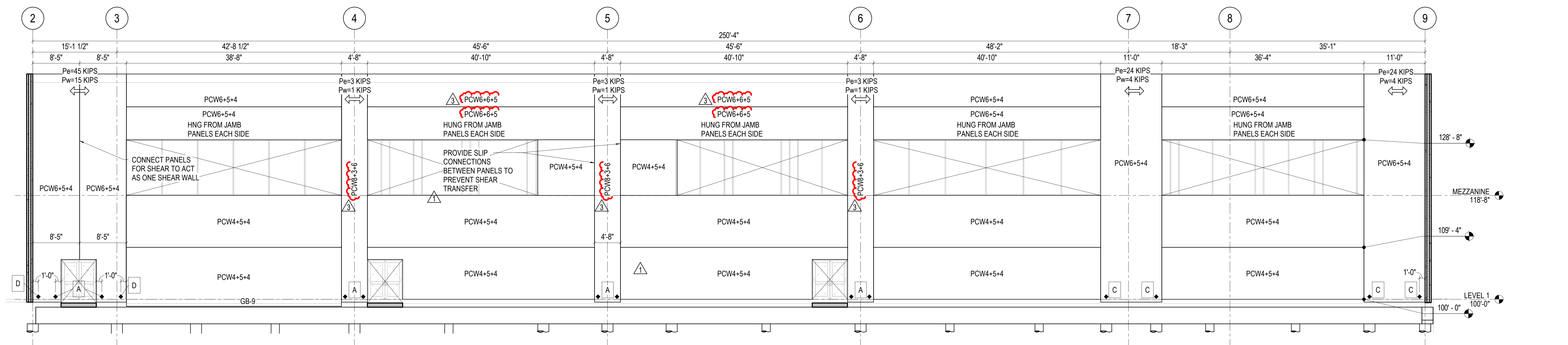
PROJECT #: 22.0851S.01

TITLE: DIVE TOWER
REINFORCEMENT

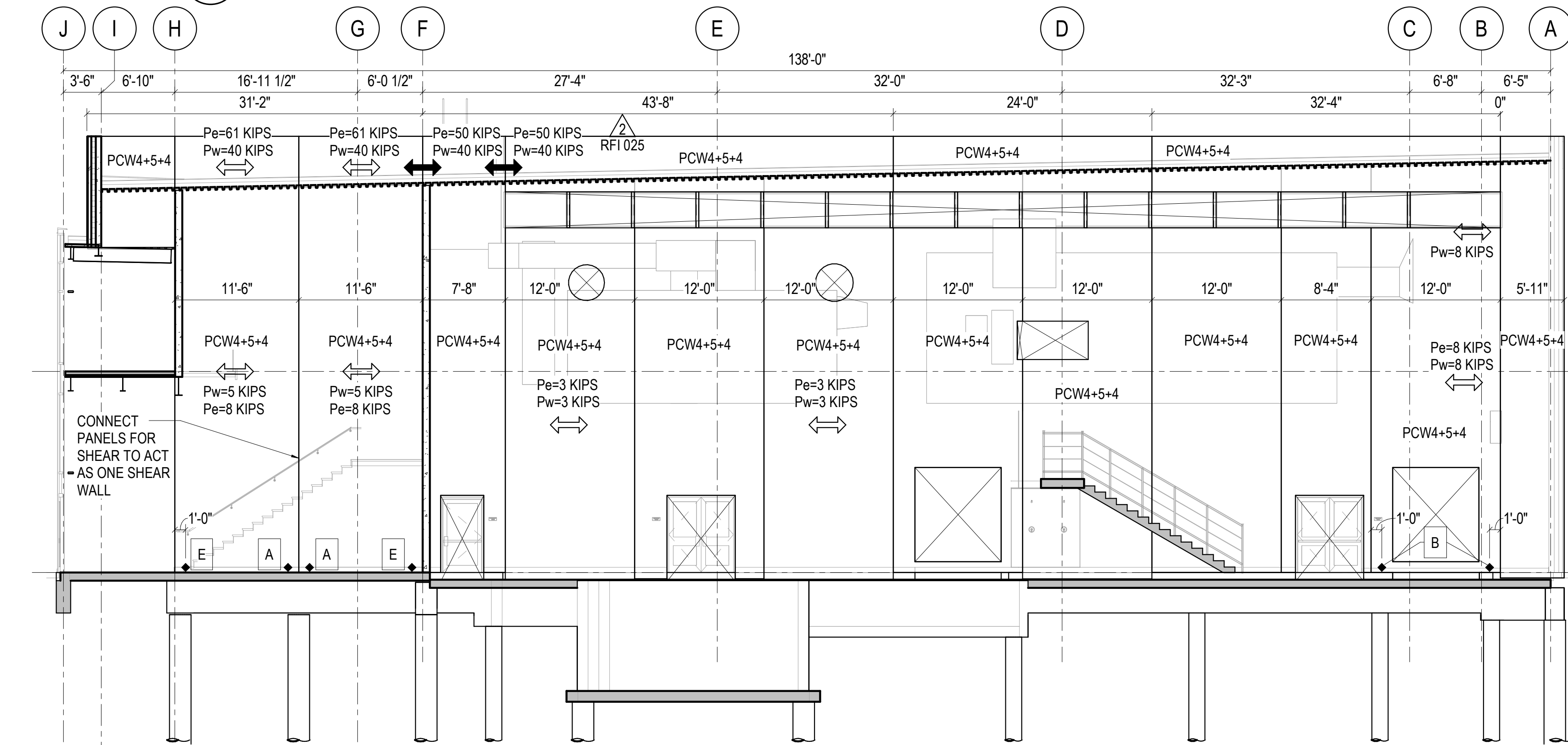
SHEET #:

S206



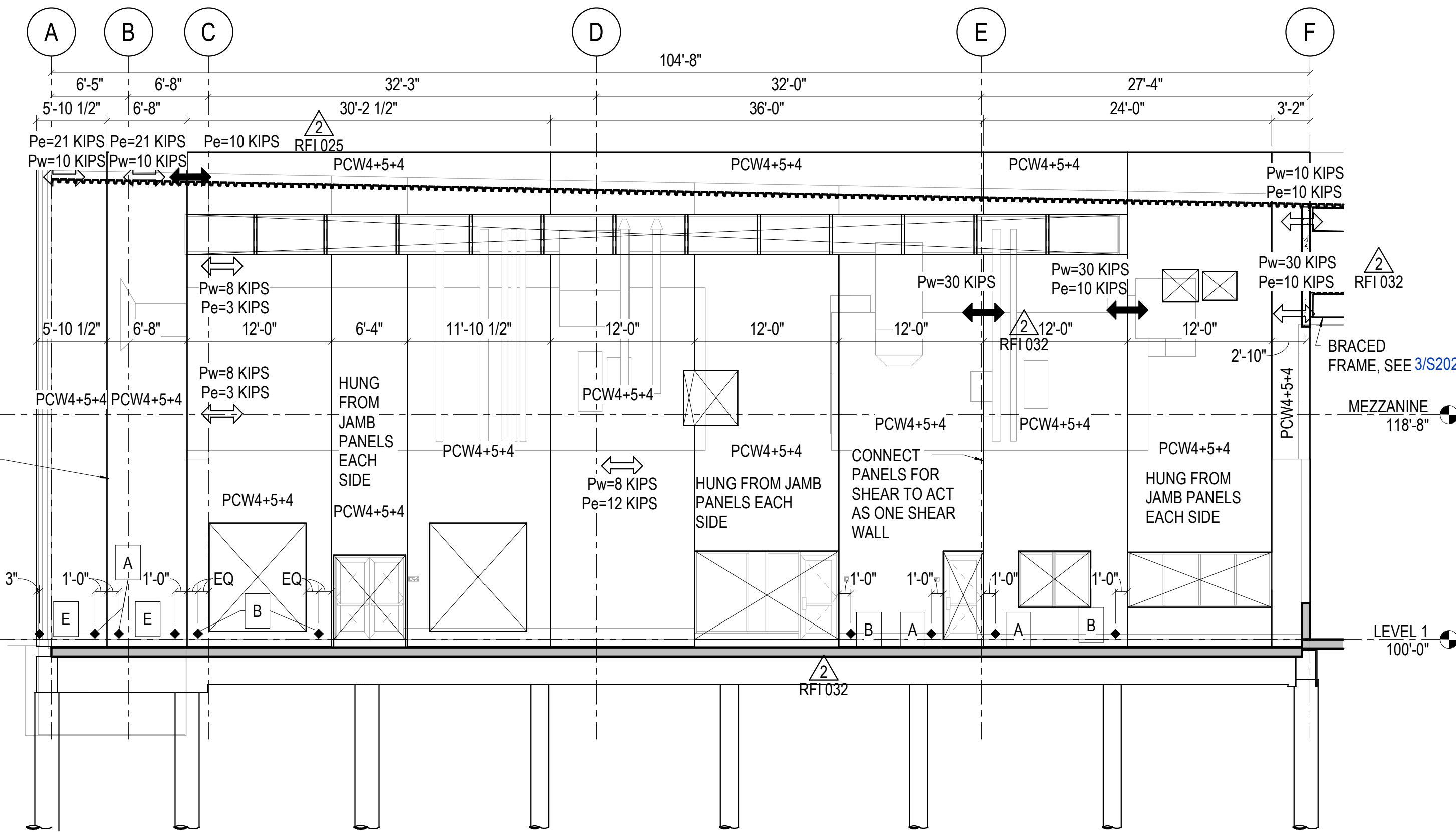


1 NORTH PRECAST WALL INTERIOR ELEVATION
1/8" = 1'-0"



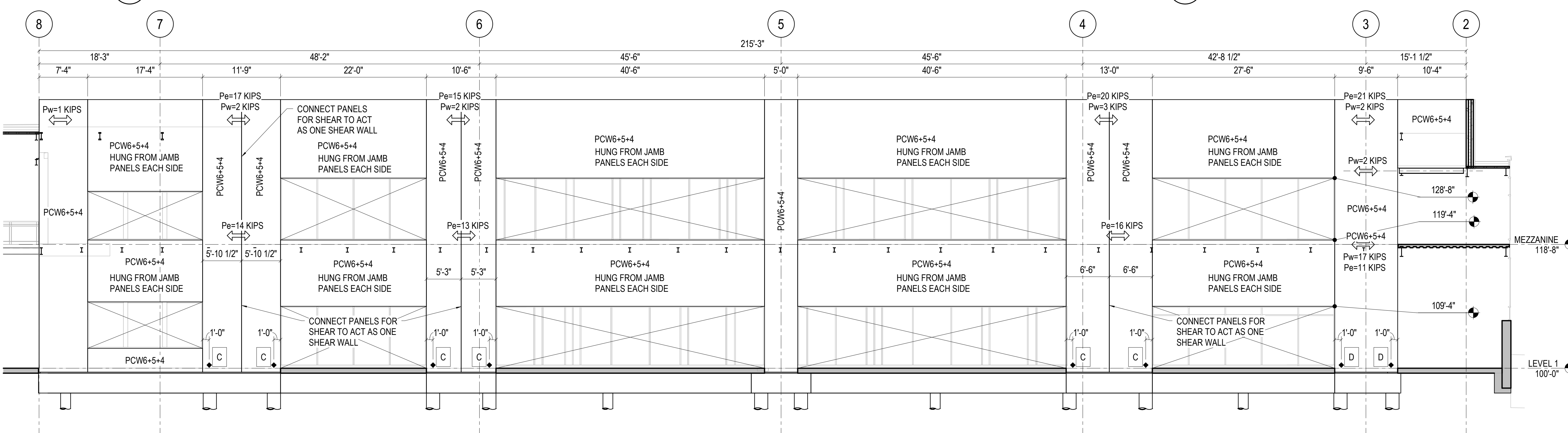
ELEVATION NOTES:
↔ DENOTES TRANSFER FORCE TO BE TAKEN BY PC PANEL TO PC PANEL CONNECTION. RFI 025

3 WEST PRECAST WALL INTERIOR ELEVATION
1/8" = 1'-0"



ELEVATION NOTES:
↔ DENOTES TRANSFER FORCE TO BE TAKEN BY PC PANEL TO PC PANEL CONNECTION. RFI 025

2 EAST PRECAST WALL INTERIOR ELEVATION
1/8" = 1'-0"



4 SOUTH PRECAST WALL INTERIOR ELEVATION
1/8" = 1'-0"

SHEAR WALL ELEVATION NOTES:

- ONLY IN-PLANE LATERAL LOADS ARE SHOWN ON WALL ELEVATIONS. GRAVITY LOADS TO WALLS SHALL BE DETERMINED AS INDICATED BELOW:
 - AT FLOOR AND ROOF DECKS FRAMING INTO PRECAST PANELS USE PLANS TO DETERMINE TRIBUTARY LENGTH AND REFER TO GRAVITY LOADING INDICATED IN THE DESIGN CRITERIA FOR SUPERIMPOSED DEAD AND LIVE LOADS. SELF WEIGHT OF SLAB IS 80 PSF FOR 2VL4.5 AND 85 PSF FOR 3VL4.5. SELF WEIGHT OF ROOF DECK IS 3 PSF.
 - BEAM REACTIONS NOTED ON PLANS ARE TOTAL LOAD AT ULTIMATE LEVEL. ASSUME THE FOLLOWING:
 - METAL ROOF DECKS: 50% DEAD LOAD, 50% LIVE LOAD
 - COMPOSITE FLOORS AND ROOFS: 45% DEAD LOAD, 55% LIVE LOAD
- FOR TYPICAL STEEL BEAM CONN TO PRECAST WALL WITH EMBED PL
- LATERAL LOADS SHOWN ARE IN UNITS OF KIPS AND NOTED ON ELEVATIONS THUS: (←) (Pw=WIND, Pe=SEISMIC, ULTIMATE)
- UNLESS NOTED OTHERWISE, BUILDING STIFFNESS AND LATERAL FORCE DISTRIBUTION ASSUMES EACH WALL PANEL WITH LATERAL LOAD SHOWN ON ELEVATION BEHAVES AS AN INDIVIDUAL PANEL.
- FOUNDATION DESIGN ASSUMES OVERTURNING FORCES ON SHEARWALLS ARE RESISTED AT ENDS OF WALLS.
- DESIGN EXTERIOR WALLS FOR THE OUT-OF-PLANE COMPONENTS AND CLADDING WIND LOADS OUTLINED IN THE DESIGN CRITERIA ON S002 OUT-OF-PLANE LOADS ARE NOT CONCURRENT WITH IN-PLANE LOADS.
- DESIGN PRECAST WALLS FOR OUT-OF-PLANE SEISMIC FORCES. PRECAST WALLS SHALL BE DESIGNED FOR A FORCE NORMAL TO THE SURFACE EQUAL TO $F_p = 0.4 S_{ds} I_e$ TIMES THE WEIGHT OF THE STRUCTURAL WALL WITH A MAXIMUM FORCE OF 10% OF THE WEIGHT OF THE WALL.
- EACH PRECAST WALL TO HAVE A TYPICAL TYPE A HOLD-DOWN 1'-0" FROM EACH END OF WALL AND AT 4'-0" OC BETWEEN ENDS, PER 4/IS20. ALL OTHER HOLD DOWNS ARE NOTED ON ELEVATION, SEE 4/IS20 FOR DETAIL. SEE 4/IS20 FOR DETAIL.

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO
7904 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	07/21/2023	ASI 01
2	11/13/2023	ASI-13
3	12/01/2023	ASI-16

SCALE: As indicated

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

REV'D BY: ALACK

PROJECT #: 22.08515.01

TITLE: INTERIOR PRECAST ELEVATIONS

SHEET #:

S211



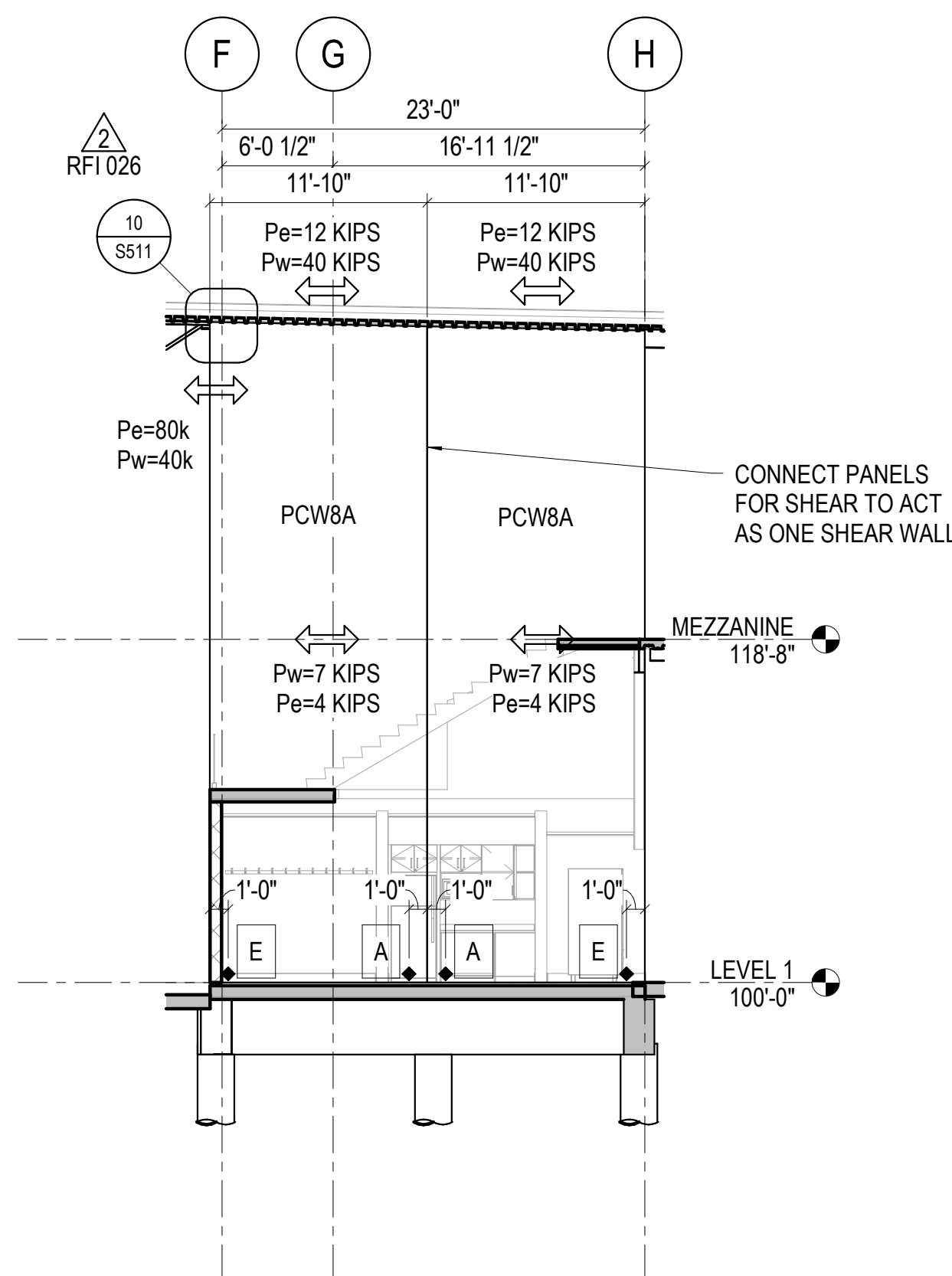
400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
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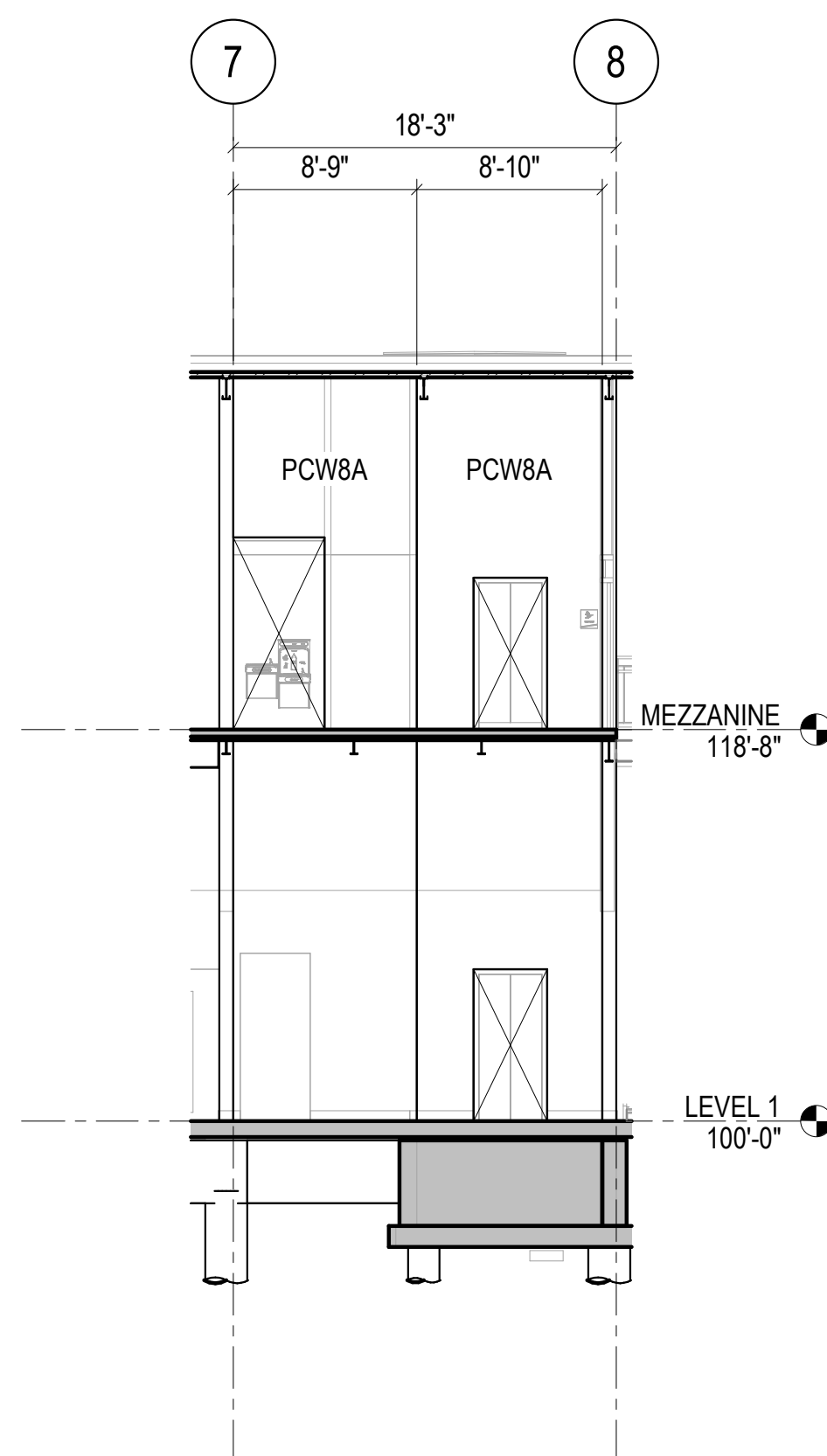
FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

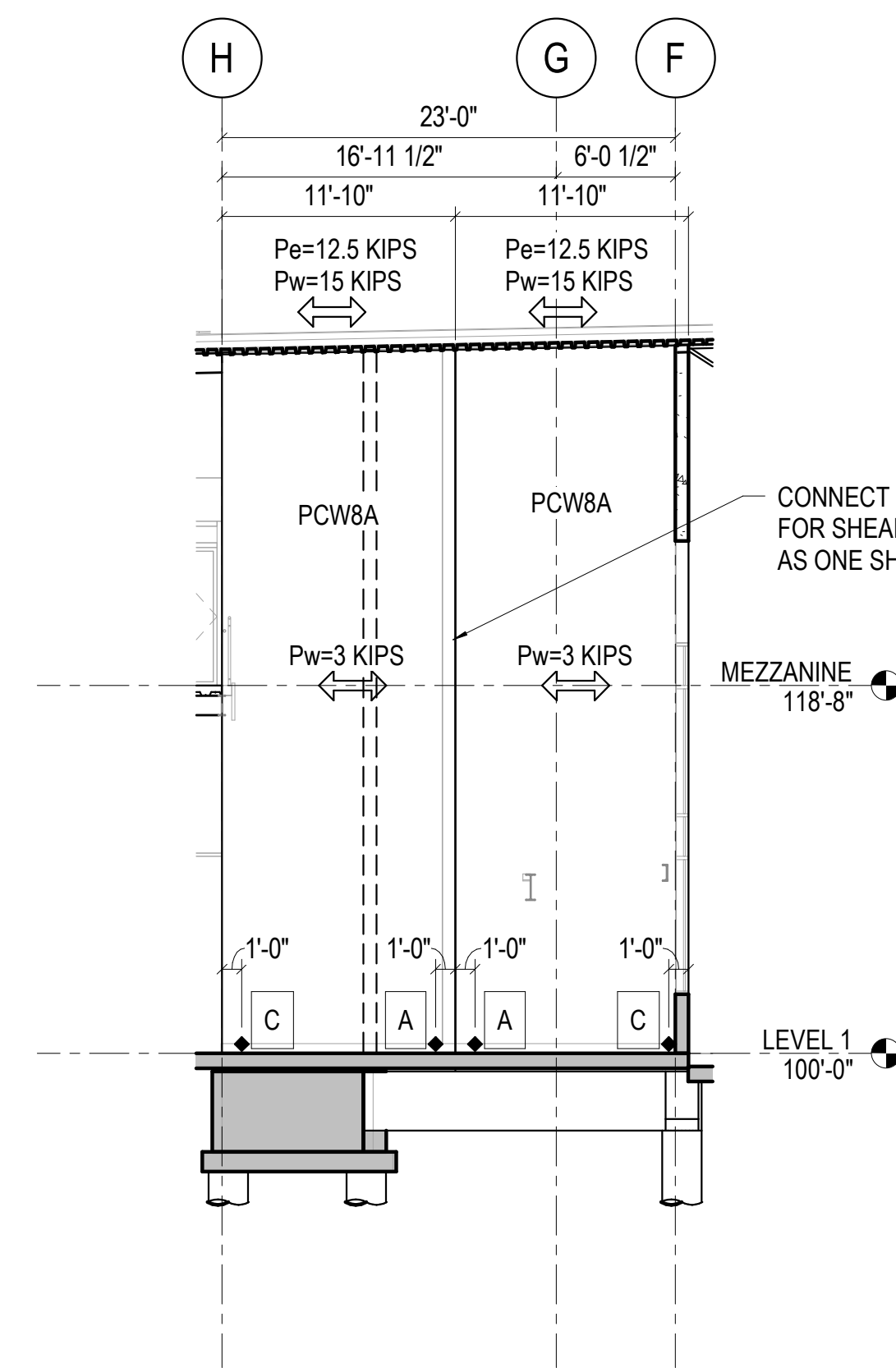
7904 Carr Drive, Arvada, CO 80005



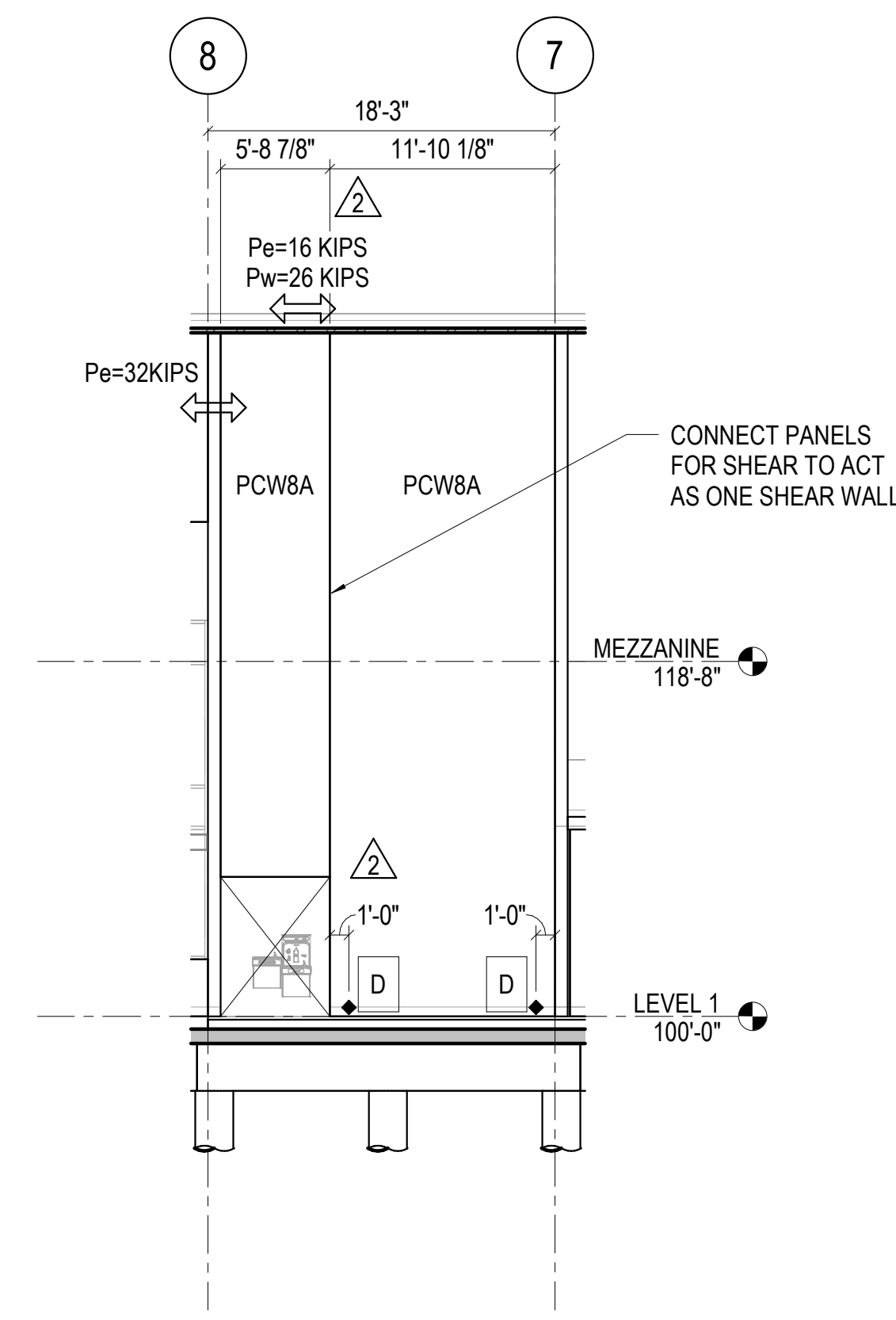
7 EAST CORE WEST ELEVATION
1/8" = 1'-0"



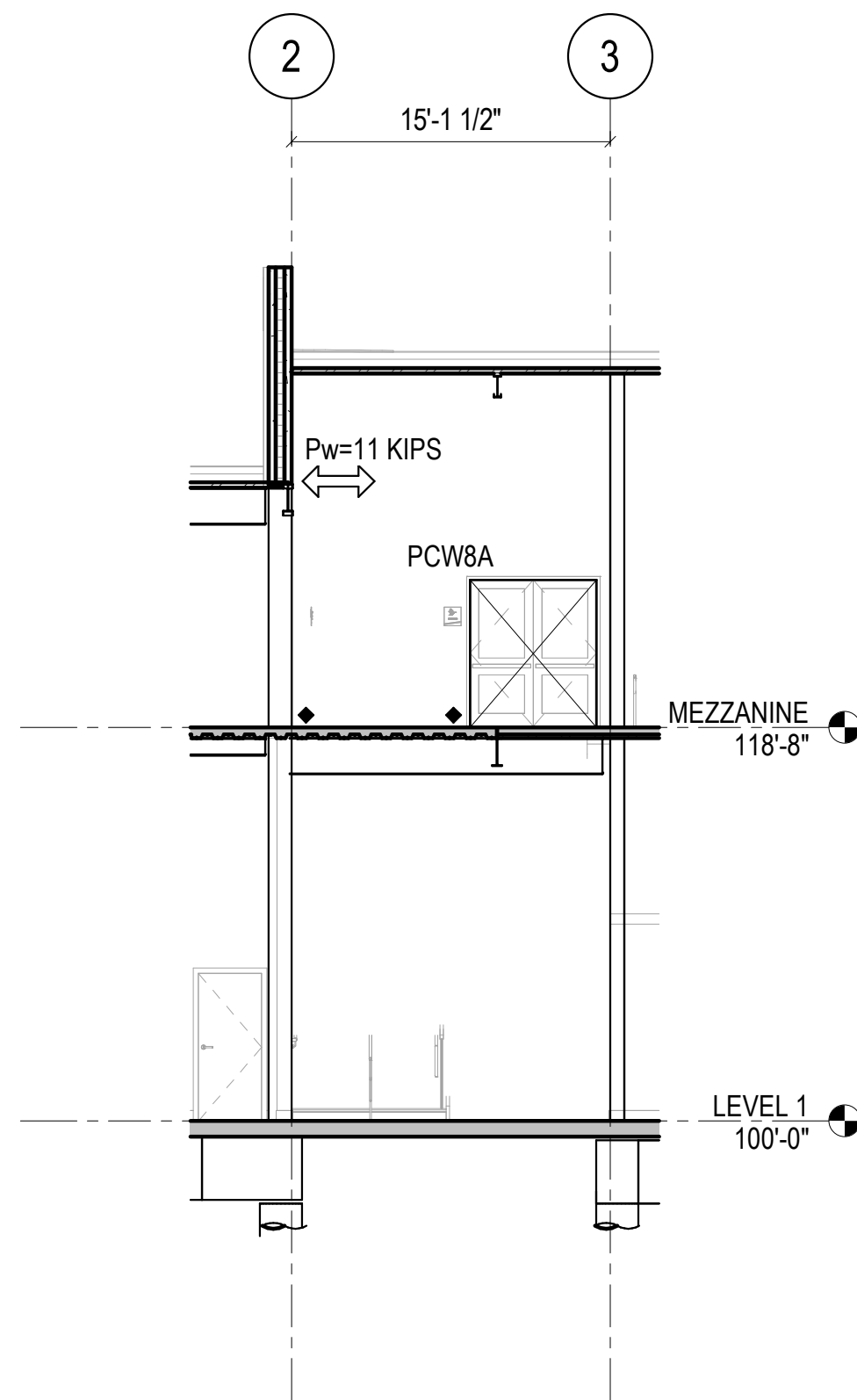
5 EAST CORE SOUTH ELEVATION
1/8" = 1'-0"



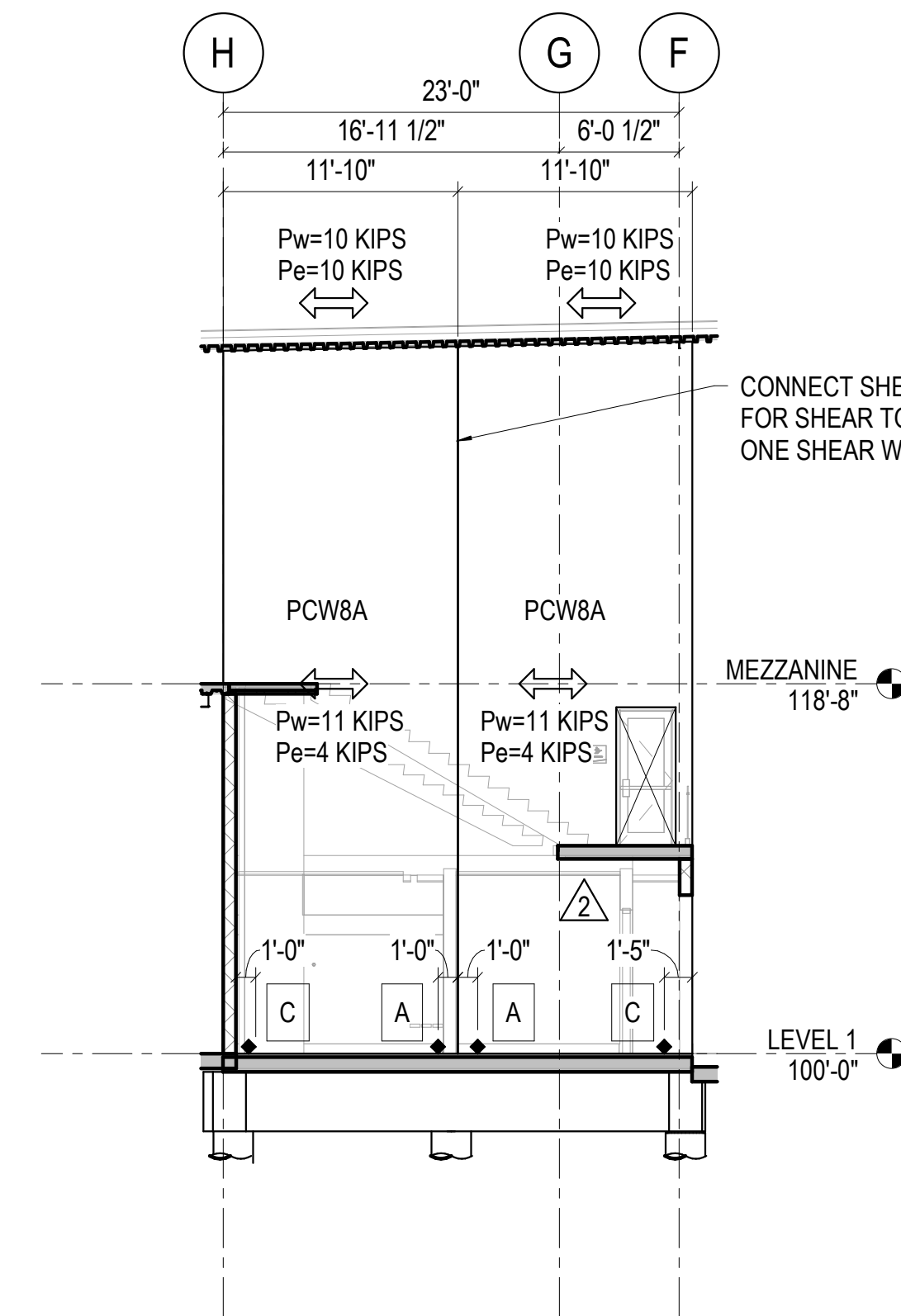
3 EAST CORE EAST ELEVATION
1/8" = 1'-0"



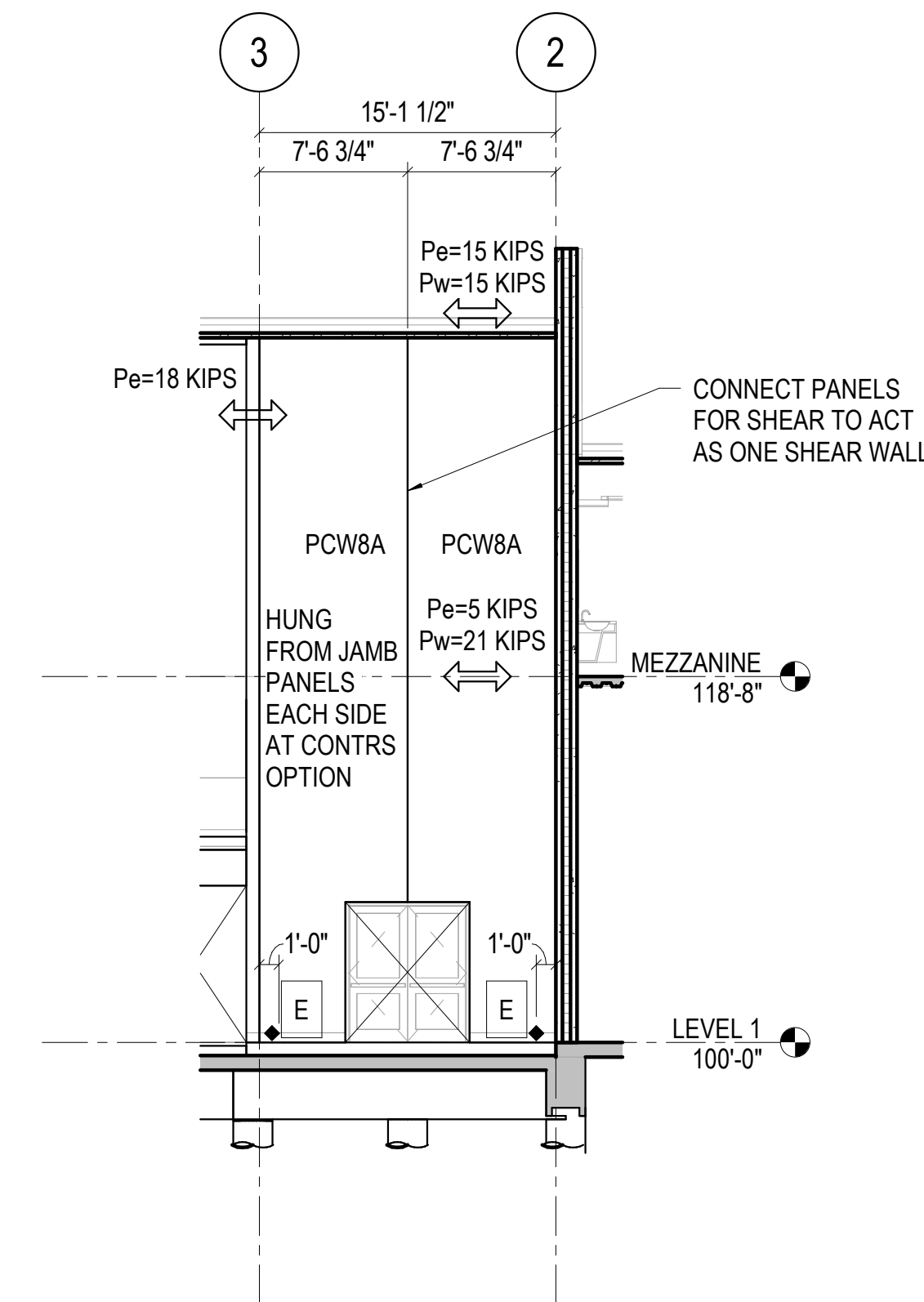
1 EAST CORE NORTH ELEVATION
1/8" = 1'-0"



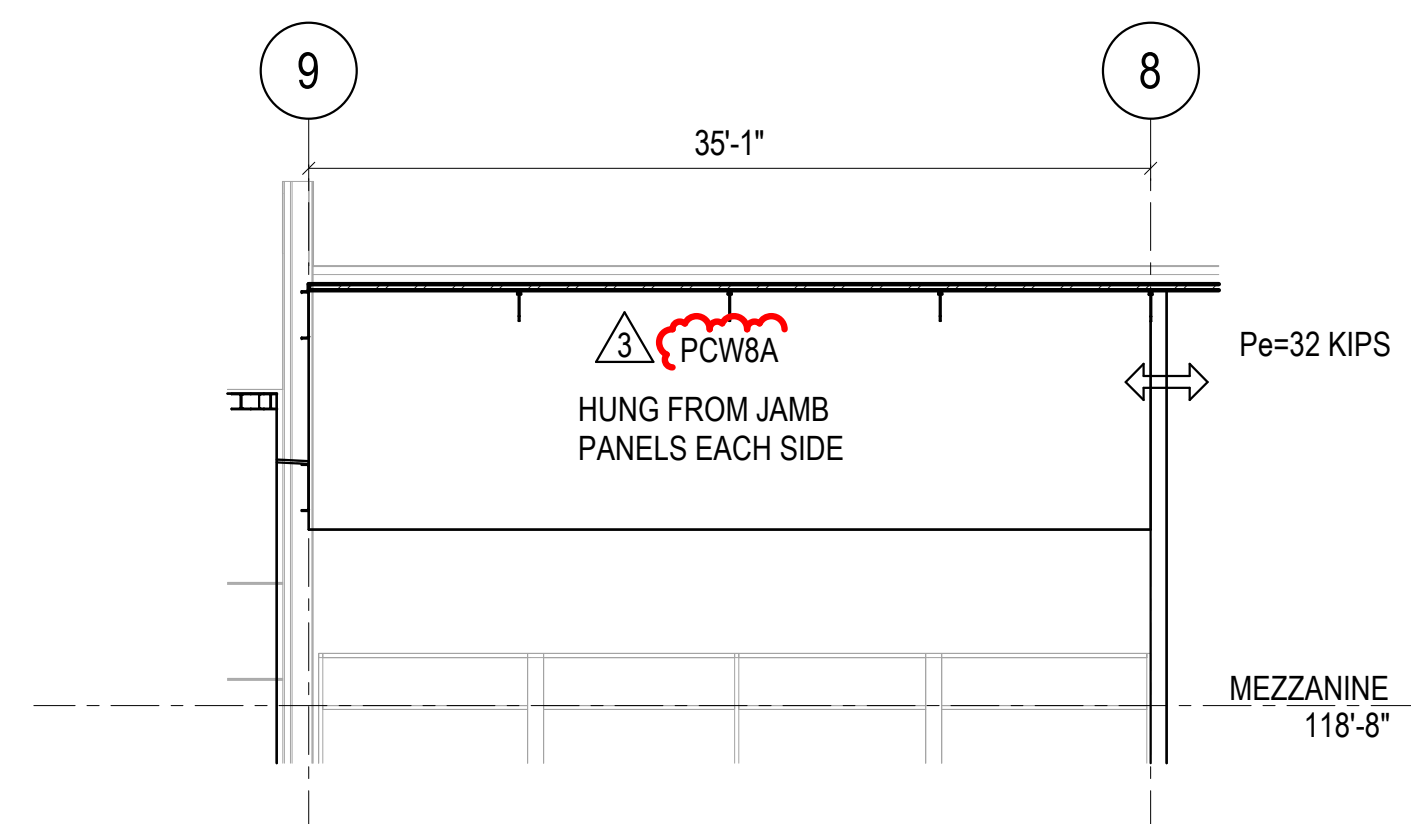
6 WEST CORE SOUTH ELEVATION
1/8" = 1'-0"



4 WEST CORE EAST ELEVATION
1/8" = 1'-0"



2 WEST CORE NORTH ELEVATION
1/8" = 1'-0"



9 MAIN ENTRY PRECAST WALL
1/8" = 1'-0"

SHEAR WALL ELEVATION NOTES:

- ONLY IN-PLANE LATERAL LOADS ARE SHOWN ON WALL ELEVATIONS. GRAVITY LOADS TO WALLS SHALL BE DETERMINED AS INDICATED BELOW:
 - AT FLOOR AND ROOF DECKS FRAMING INTO PRECAST PANELS USE PLANS TO DETERMINE TRIBUTARY LENGTH AND REFER TO GRAVITY LOADING INDICATED IN THE DESIGN CRITERIA FOR SUPERIMPOSED DEAD AND LIVE LOADS. SELF WEIGHT OF SLAB IS 80 PSF FOR 2VL4.5 AND 85 PSF FOR 3VL4.5. SELF WEIGHT OF ROOF DECK IS 3 PSF.
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- FOUNDATION DESIGN ASSUMES OVERTURNING FORCES ON SHEARWALLS ARE RESISTED AT ENDS OF WALLS.
- DESIGN EXTERIOR WALLS FOR THE OUT-OF-PLANE COMPONENTS AND CLADDING WIND LOADS OUTLINED IN THE DESIGN CRITERIA ON S002 OUT-OF-PLANE LOADS ARE NOT CONCURRENT WITH IN-PLANE LOADS.
- DESIGN PRECAST WALLS FOR OUT-OF-PLANE SEISMIC FORCES. PRECAST WALLS SHALL BE DESIGNED FOR A FORCE NORMAL TO THE SURFACE EQUAL TO $F_p=0.4s_{ds}I_e$ TIMES THE WEIGHT OF THE STRUCTURAL WALL WITH A MAXIMUM FORCE OF 10% OF THE WEIGHT OF THE WALL.
- EACH PRECAST WALL TO HAVE A TYPICAL TYPE A HOLD-DOWN 1'-0" FROM EACH END OF WALL AND AT 4'-0" OC BETWEEN ENDS, PER 4/S320. ALL OTHER HOLD DOWNS ARE NOTED ON ELEVATION, SEE 4/S320 FOR DETAIL. SEE 4/S320 FOR DETAIL.

NO.	DATE:	TITLE/PURPOSE:
2	11/13/2023	ASI-13
3	12/01/2023	ASI-16

SCALE: As indicated

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

REV'D BY: ALACK

PROJECT #: 22.08515.01

TITLE: PRECAST CORE ELEVATIONS

SHEET #:

S212



400 SANTA FE DRIVE
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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7904 Carr Drive, Arvada, CO 80005

NO. DATE: TITLE/PURPOSE:
3 12/01/2023 ASI-16

SCALE: 3/16" = 1'-0"

ISSUE DATE: 07/14/2023

DRAWN BY: M/M

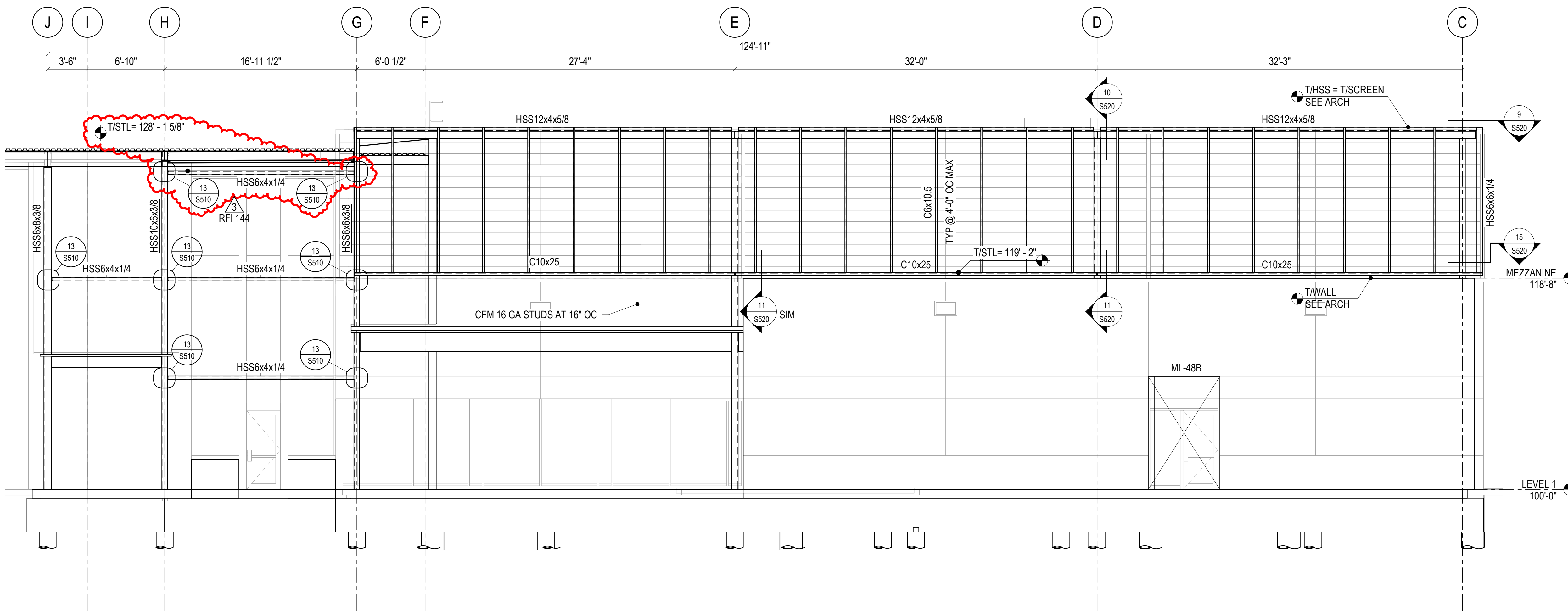
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PROJECT #: 22.0851S.01

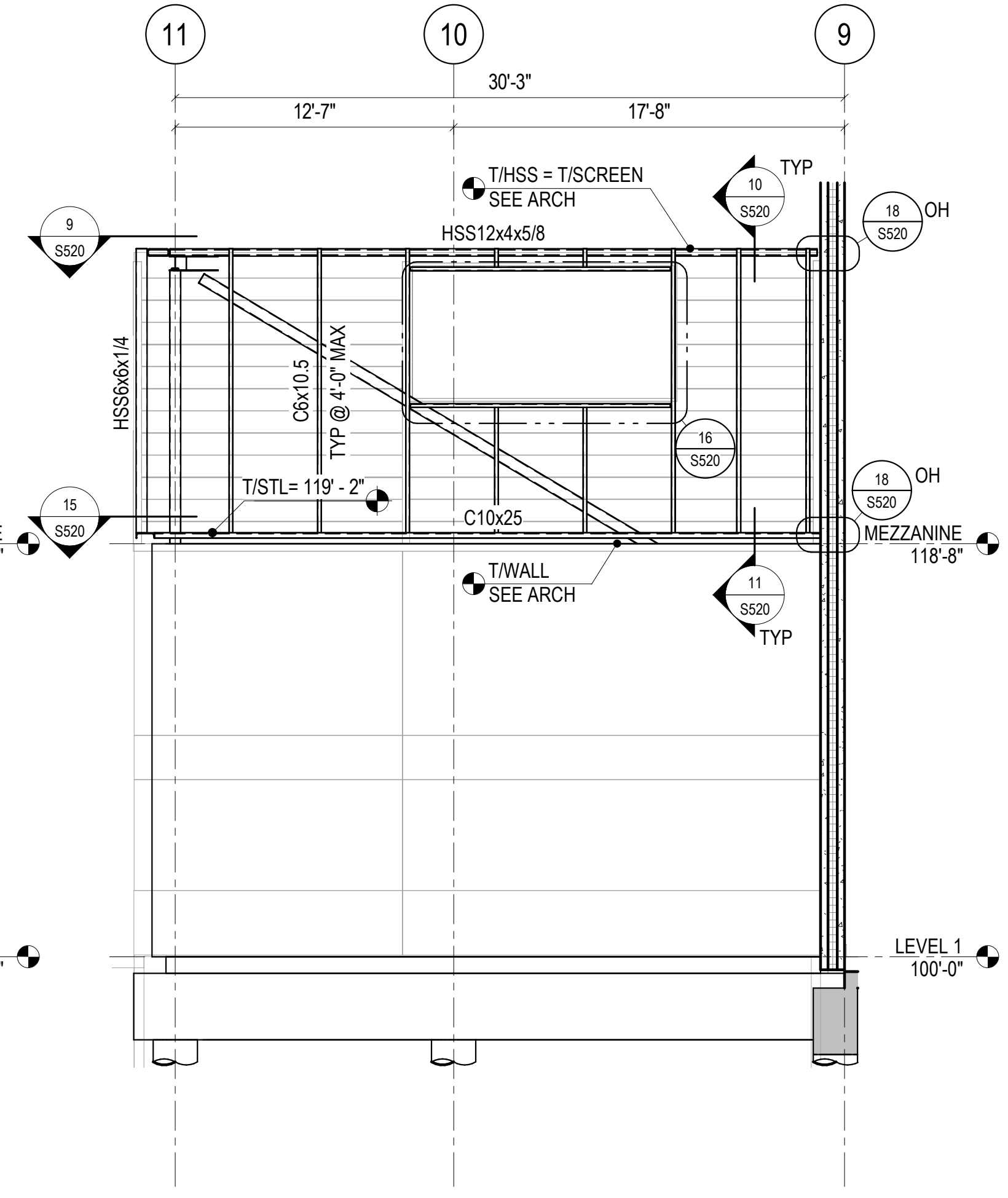
TITLE: SCREENWALL EXTERIOR
ELEVATIONS

SHEET #:

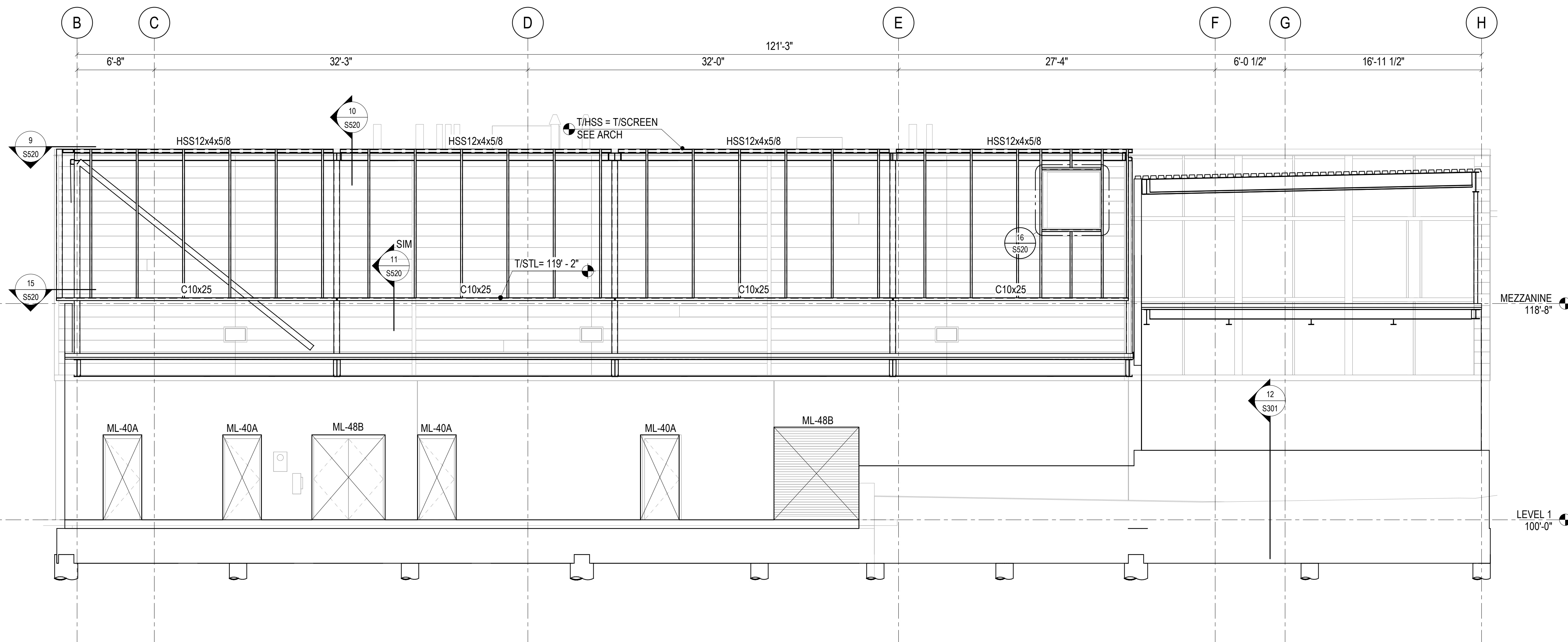
S216



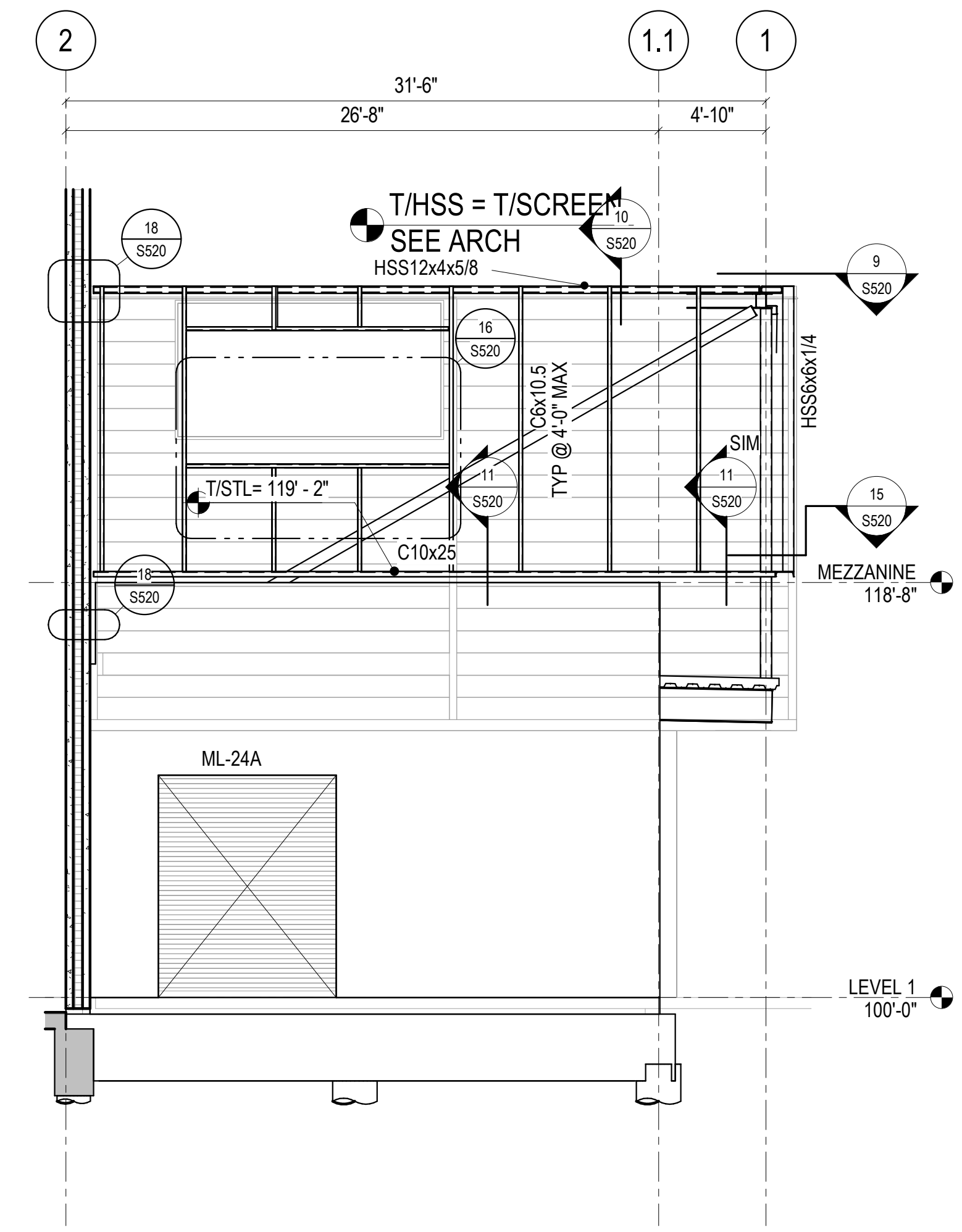
2 EAST SCREENWALL EAST ELEVATION
3/16" = 1'-0"



1 EAST SCREENWALL NORTH ELEVATION
3/16" = 1'-0"



4 WEST SCREENWALL WEST ELEVATION
3/16" = 1'-0"



3 WEST SCREENWALL NORTH ELEVATION
3/16" = 1'-0"



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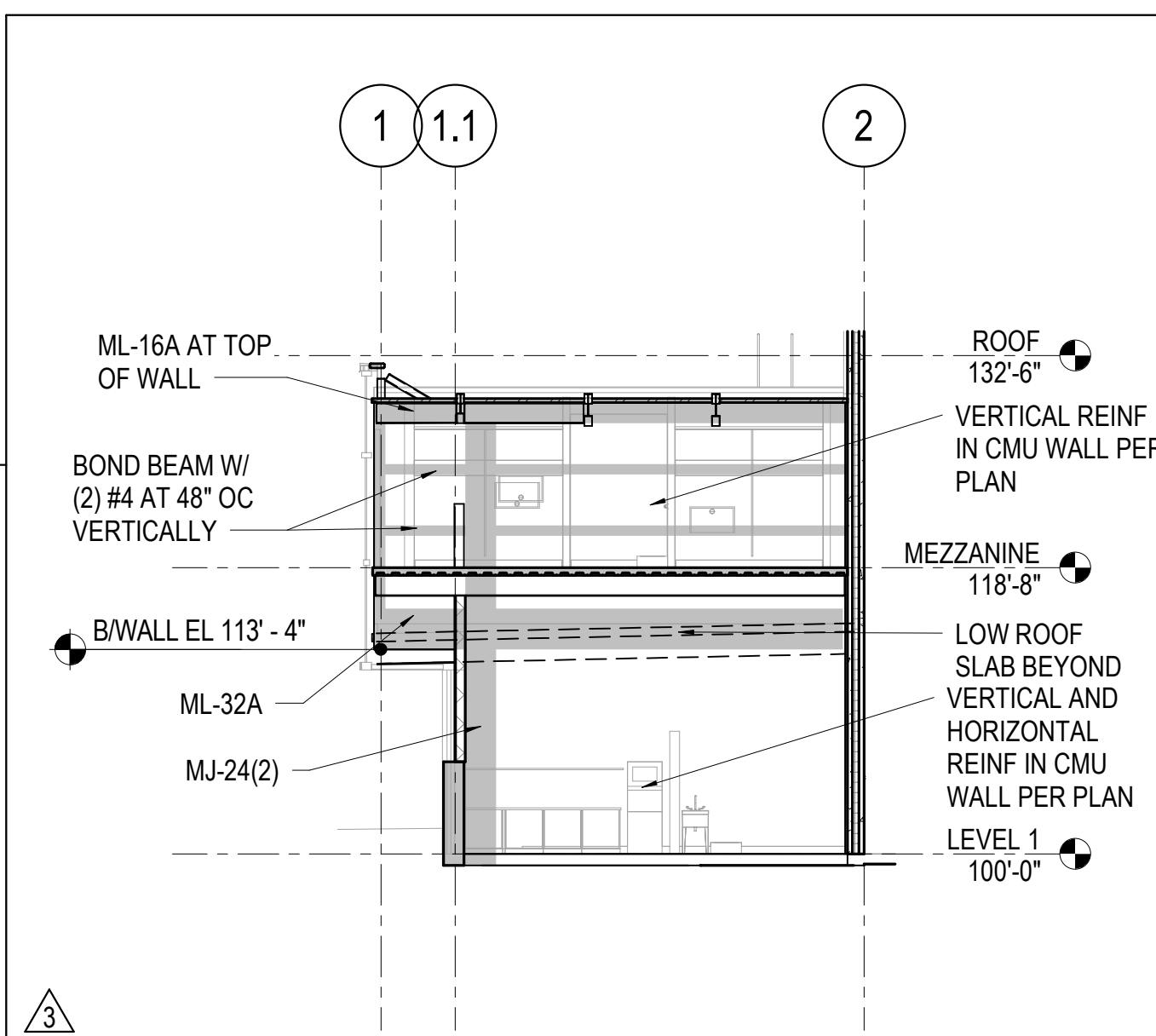
REV'D BY: ALACK

PROJECT #: 22.0851S.01

TITLE: MASONRY PARTITION
DETAILS

SHEET #:

S401

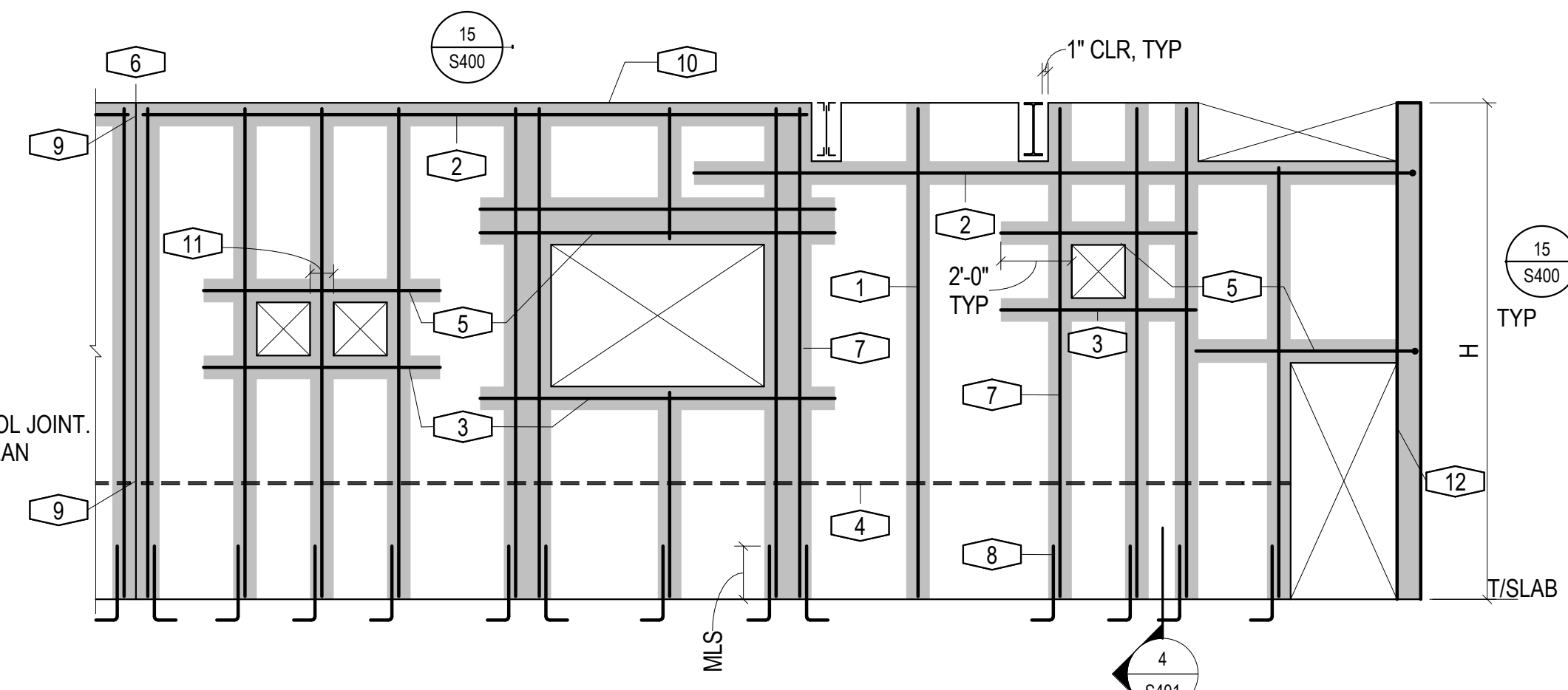


17 3/32" = 1'-0" CMU WALL AT GRID E.7 ELEVATION

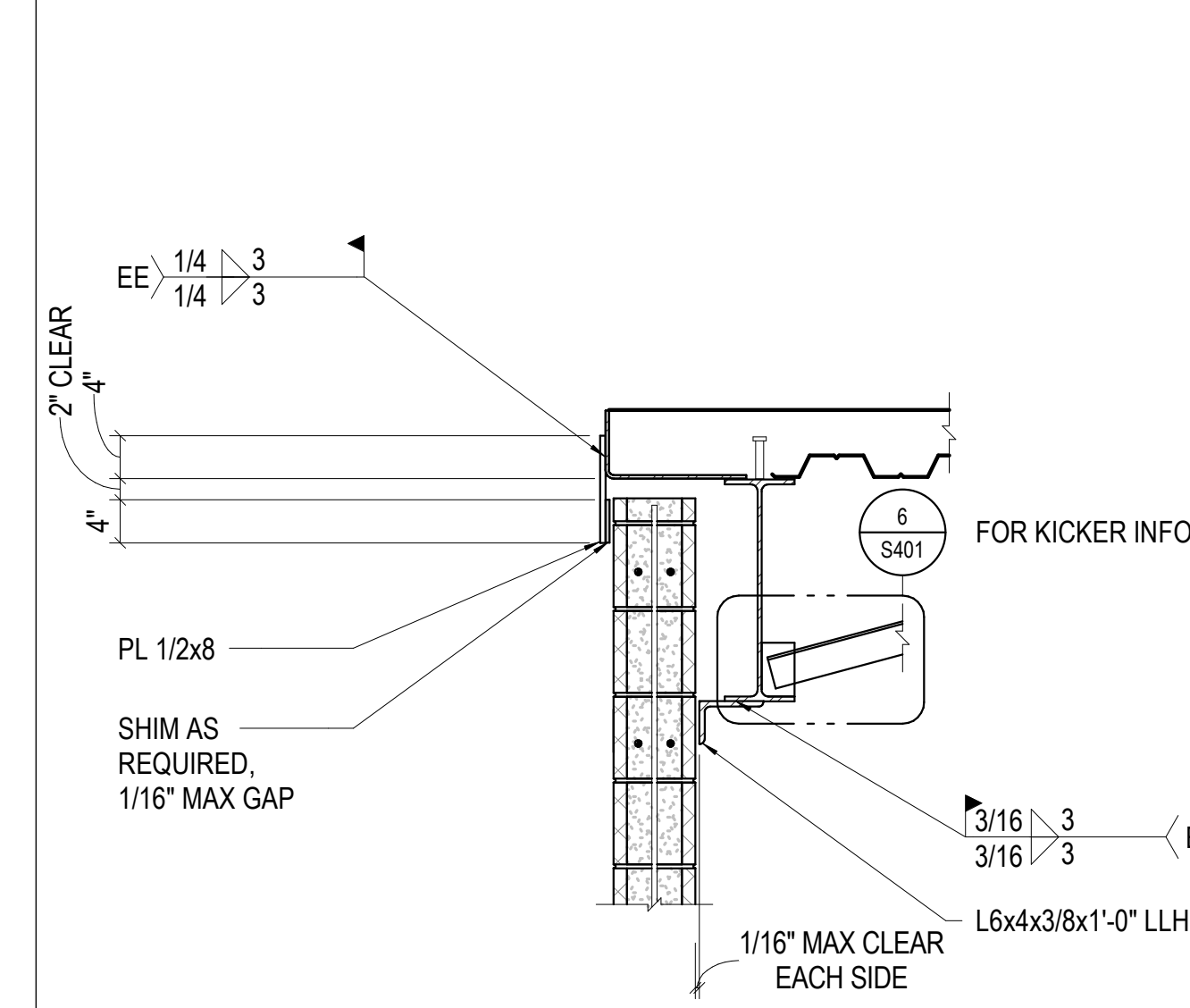
- KEYNOTES:**
- 1 TYPICAL WALL VERTICAL REINFORCING: #4@48" OC
 - 2 BOND BEAM W/ (1) #5 AT TWALL
 - 3 BOND BEAM W/ (1) #5 AT BOT OF ALL OPENINGS
 - 4 HORIZ JOINT REINF: "LADDER" TYPE JOINT REINF W/ (2) W1.7 WIRES @ 16" OC
 - 5 LINTEL
 - 6 CONTROL JOINTS @ 20'-0" OC MAX AND EACH END OF WALL
 - 7 JAMB REINFORCEMENT EACH SIDE OF OPENING
 - 8 DOWELS TO MATCH SIZE AND LOCATION OF VERTICAL BARS
 - 9 TERMINATE ALL HORIZONTAL REINFORCEMENT AT CONTROL JOINTS
 - 10 TWALL SUPPORT, SEE DETAILS THIS PAGE, SPACE AS FOLLOWS:
 - 1. TWO (2) SUPPORTS MINIMUM BETWEEN CONTROL JOINTS.
 - 2. LOCATE TWALL SUPPORTS NO FURTHER THAN 5 FT FROM EACH SIDE OF EACH CONTROL JOINT.
 - 3. INTEGRALLY CONSTRUCTED RETURN WALLS (CORNERS OR INTERSECTIONS) WITH A PLAN DIMENSION OF AT LEAST THE WALL HEIGHT / 3 (H/3) QUALIFY AS A SUPPORT.

WALL HEIGHT	SPACING OF SUPPORT (FT)			
	8PSF (ULT) 5PSF (SER)	16PSF (ULT) 10PSF (SER)	24PSF (ULT) 15PSF (SER)	
0' - 12'	16'-0" MAX	16'-0" MAX	13'-6" MAX	
12' - 16'	16'-0" MAX	14'-6" MAX	12'-0" MAX	
16' - 20'	16'-0" MAX	13'-0" MAX	10'-6" MAX	

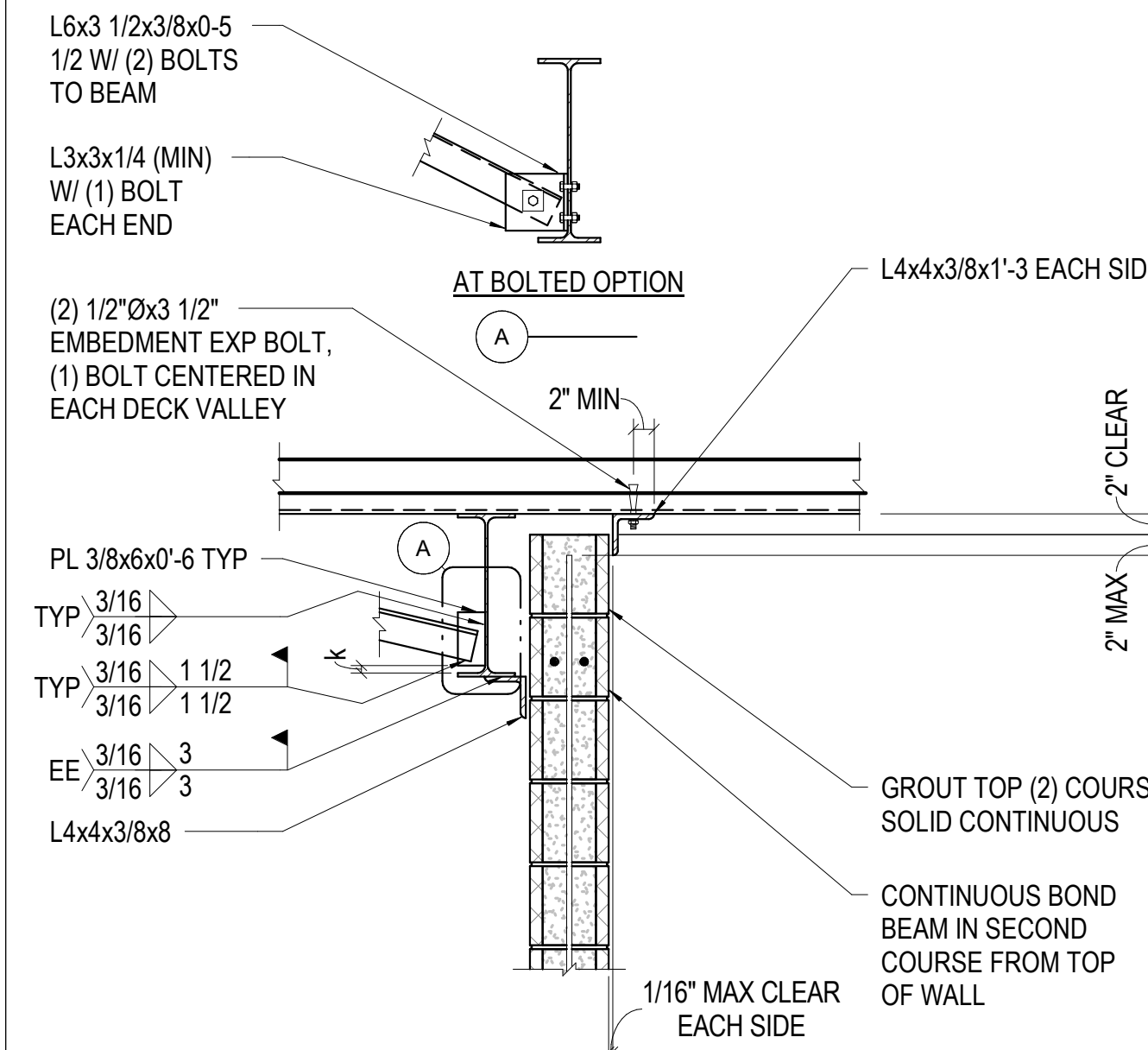
- 11 AT SERIES OF TWO OR MORE OPENINGS, MASONRY LINTEL REINFORCEMENT SHALL BE CONTINUOUS. IF SPACE BETWEEN OPENINGS IS LESS THAN 1'-4", USE OVERALL WIDTH OF SERIES OF OPENINGS TO DETERMINE LINTEL SIZE AND JAMB REINF
- 12 WHERE EDGE OF OPENING IS FLUSH WITH PERPENDICULAR WALL, OR REQUIRED JAMB SIZE IS LARGER THAN AVAILABLE, A CONTROL JOINT IS NOT PERMITTED AT THIS INTERSECTION



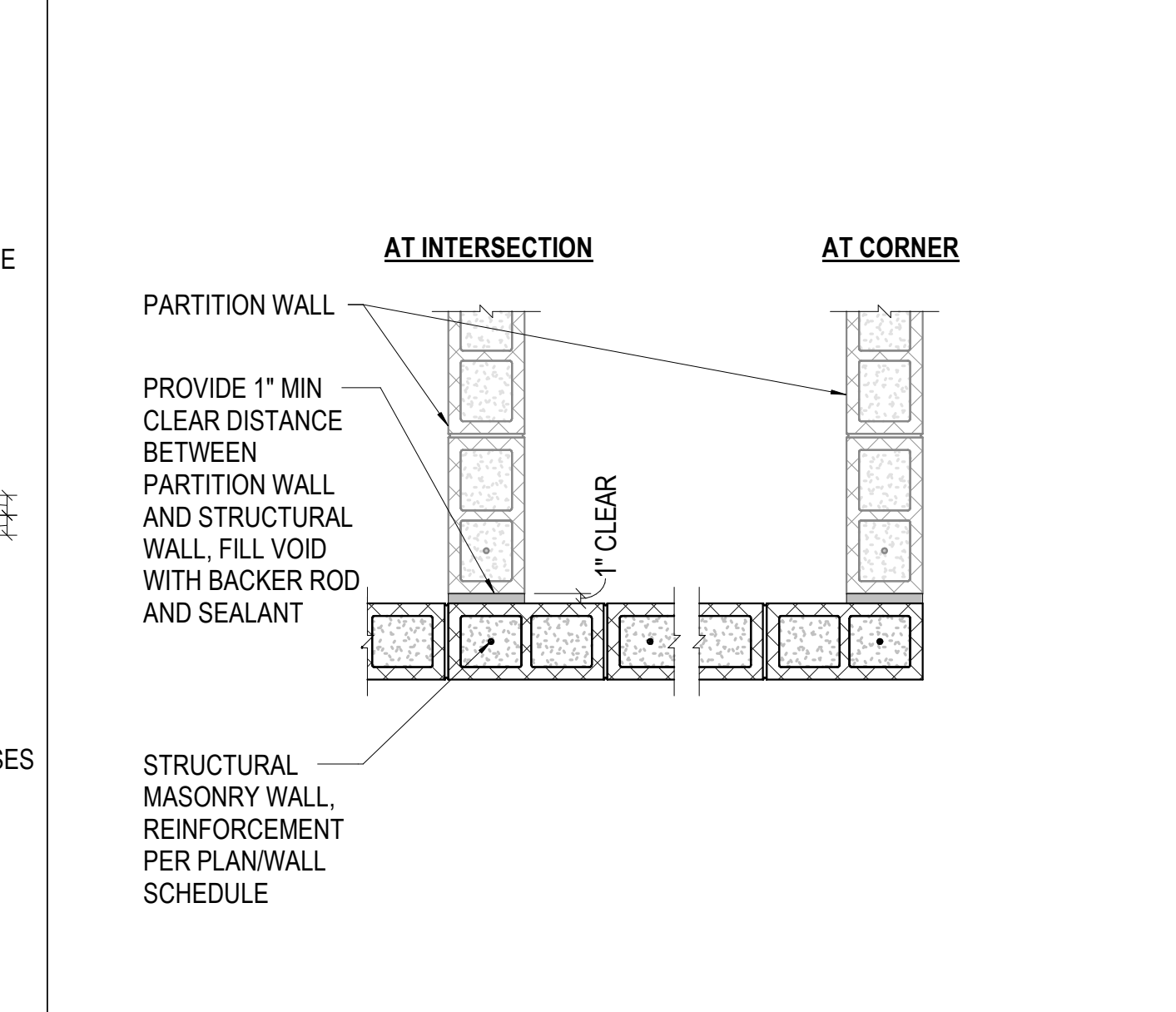
9 1/4" = 1'-0" TYPICAL MASONRY PARTITION ELEVATION



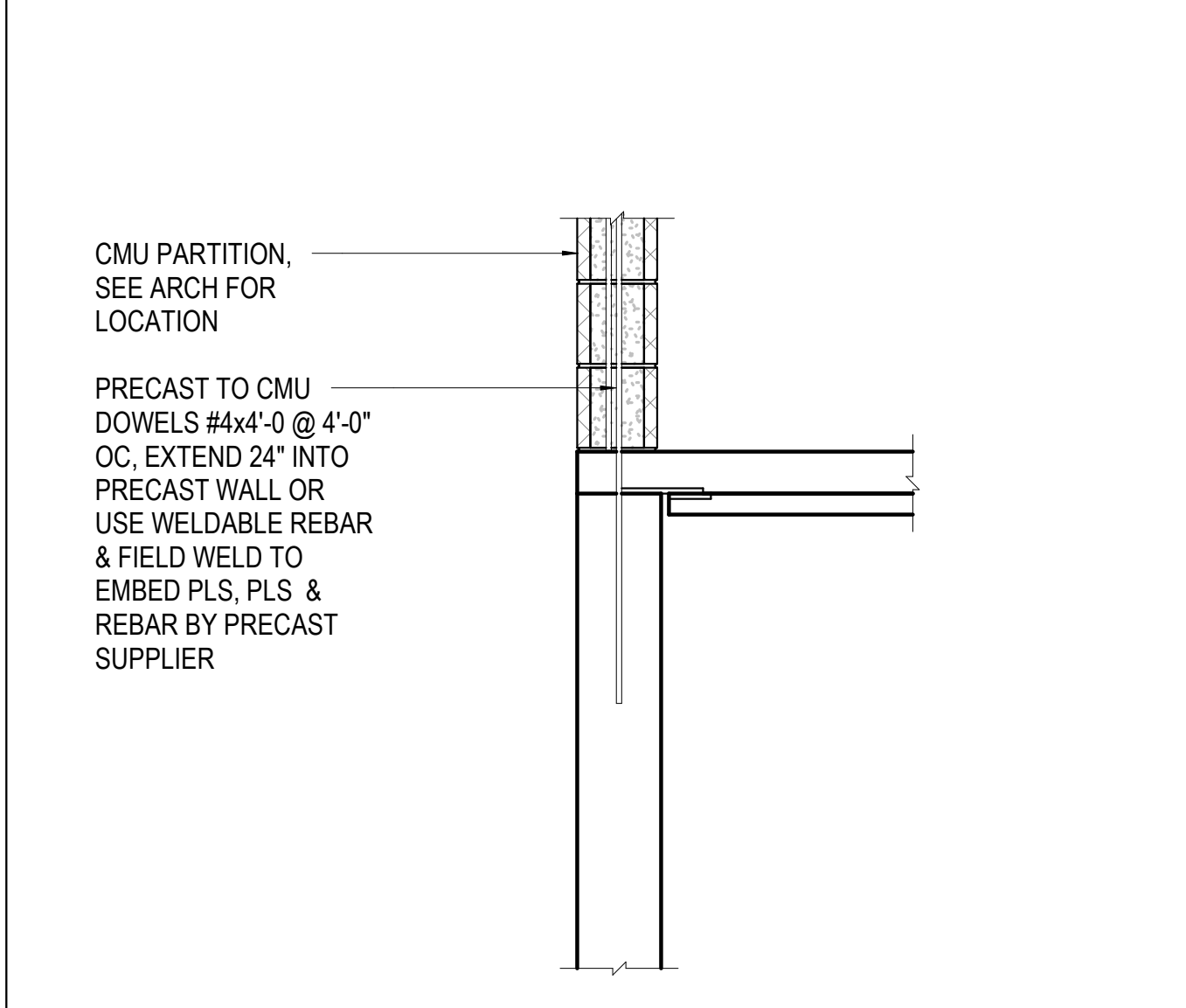
10 3/4" = 1'-0" MASONRY PARTITION SUPPORT - EOS



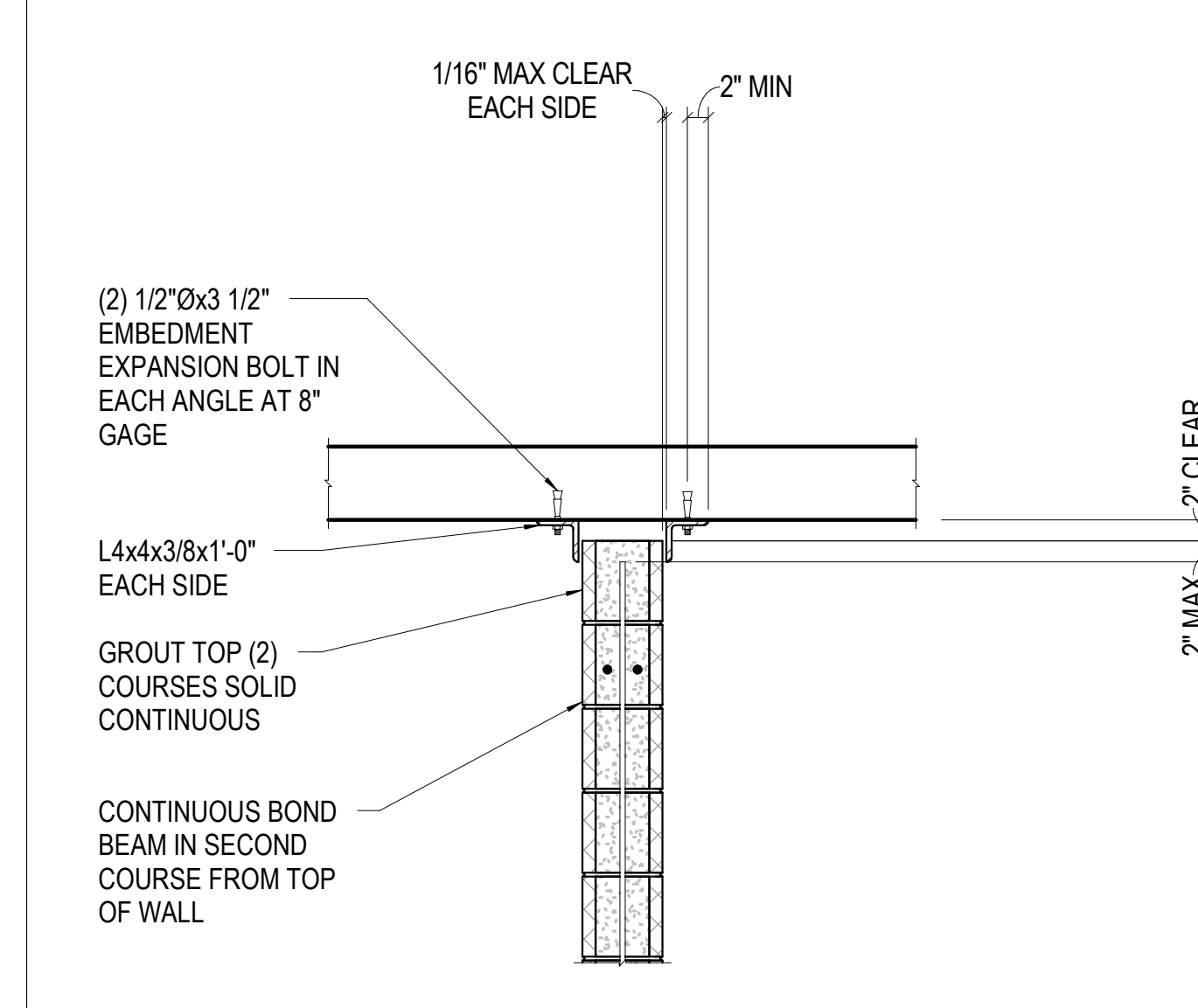
6 3/4" = 1'-0" MASONRY PARTITION SUPPORT - ADJACENT TO STEEL BEAM



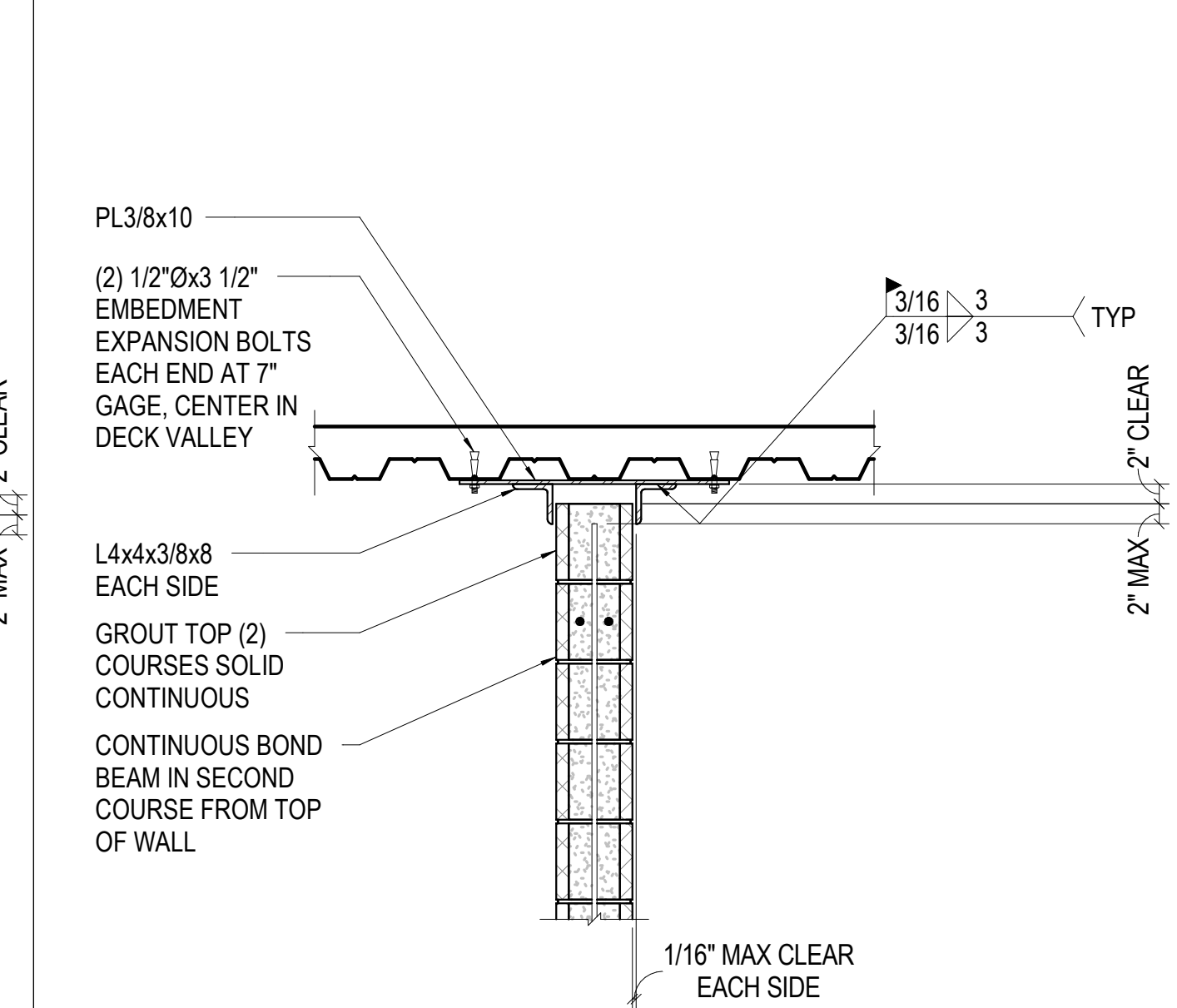
2 3/4" = 1'-0" MASONRY WALL INTERSECTION - PARTITION TO STRUCTURAL WALL



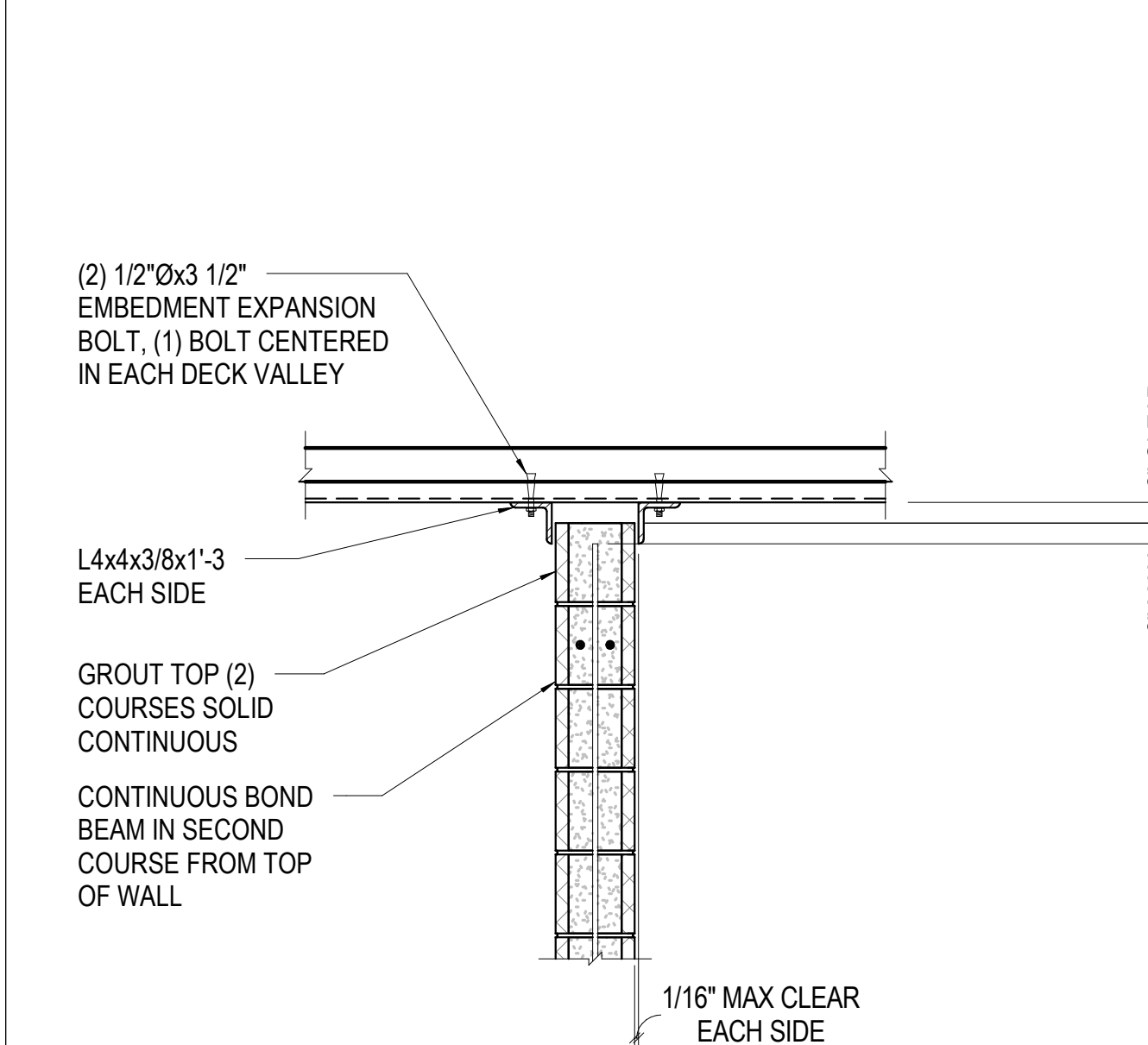
19 3/4" = 1'-0" MASONRY PARTITION AT PRECAST WALL/DT



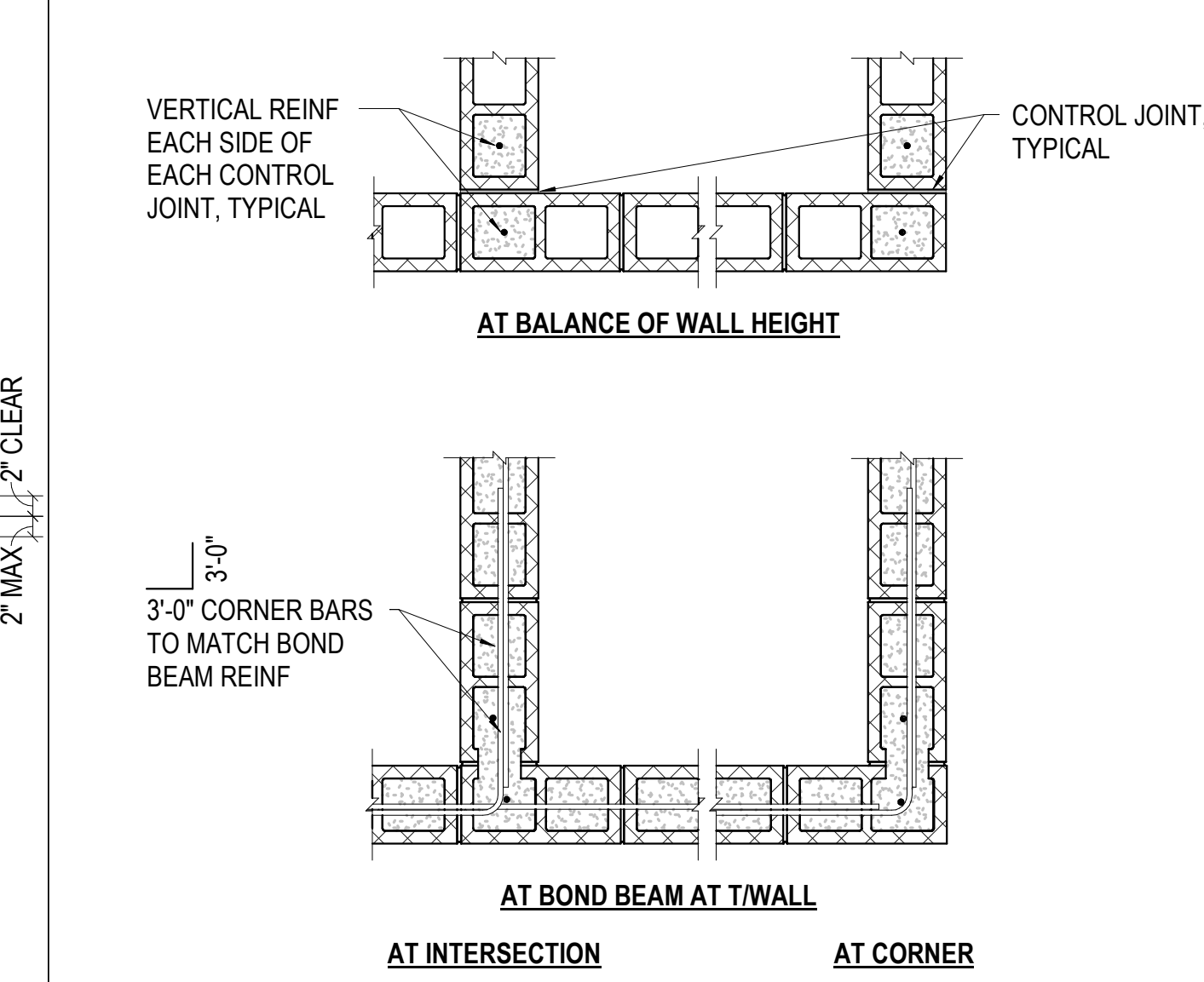
15 3/4" = 1'-0" MASONRY PARTITION SUPPORT - CIP SLAB



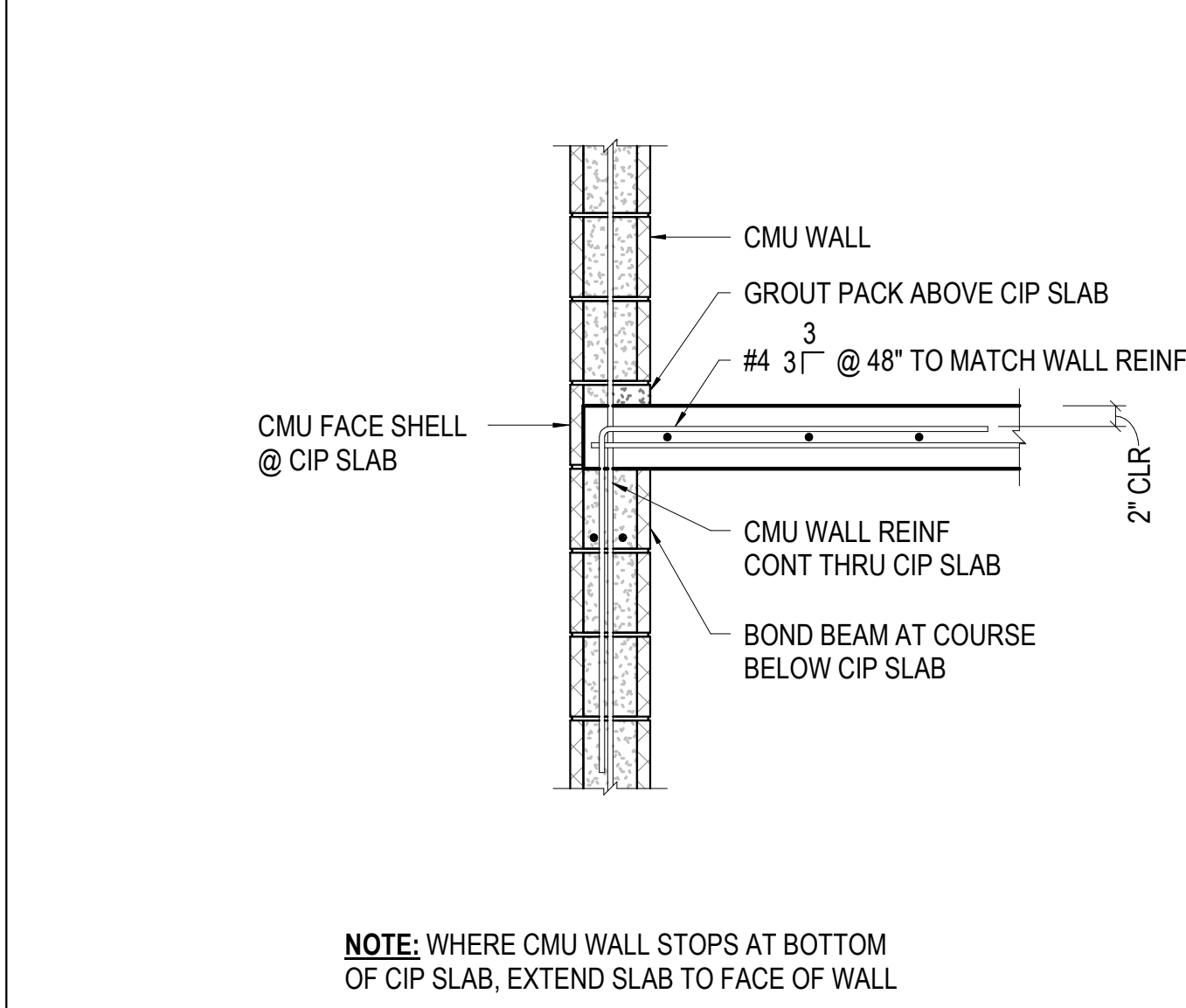
11 3/4" = 1'-0" TYP MASONRY PARTITION SUPPORT - PARALLEL/SKEWED TO DECK



7 3/4" = 1'-0" TYPICAL MASONRY PARTITION SUPPORT - PERP TO DECK



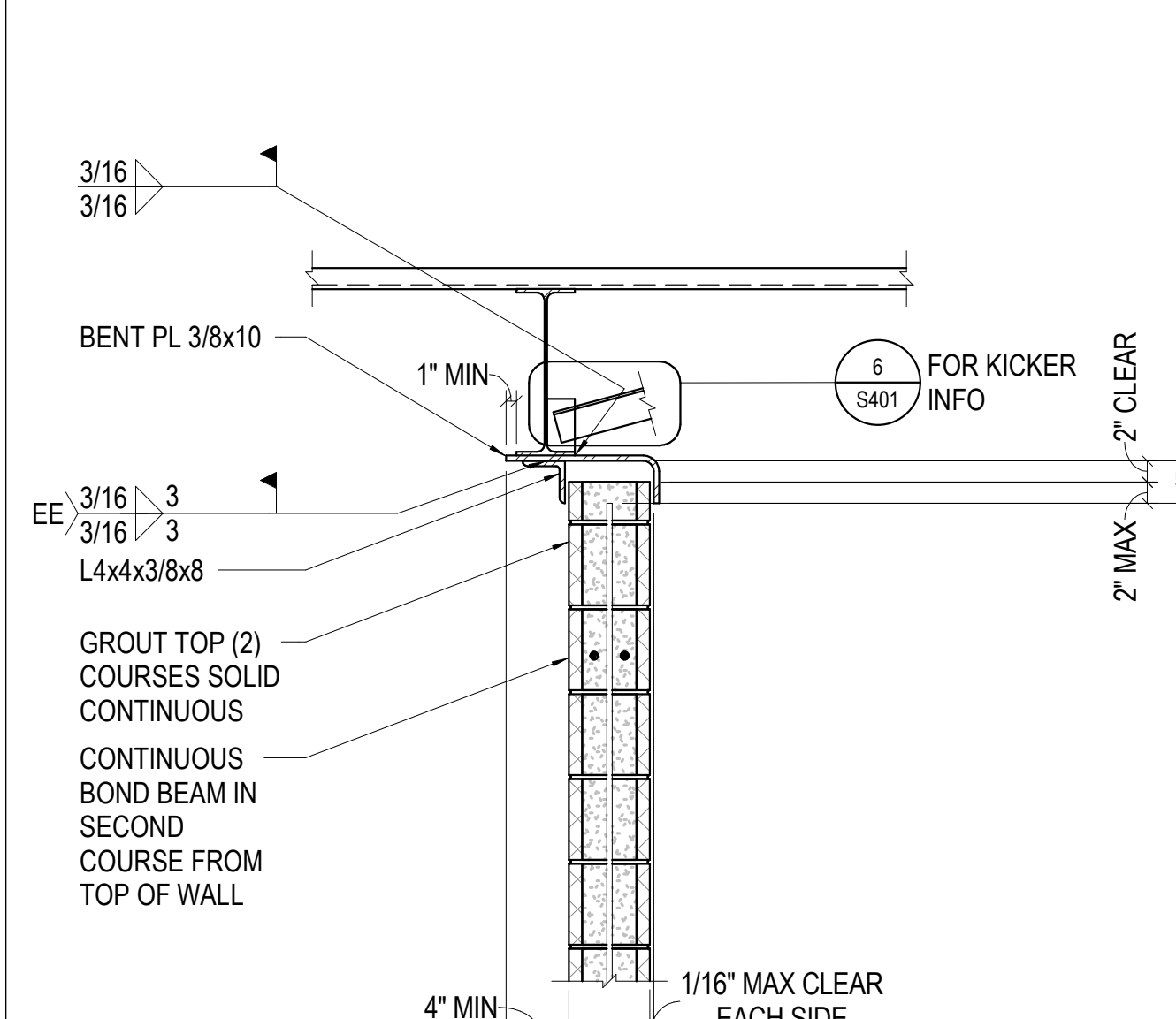
3 3/4" = 1'-0" PARTITION TO PARTITION WALL DETAIL



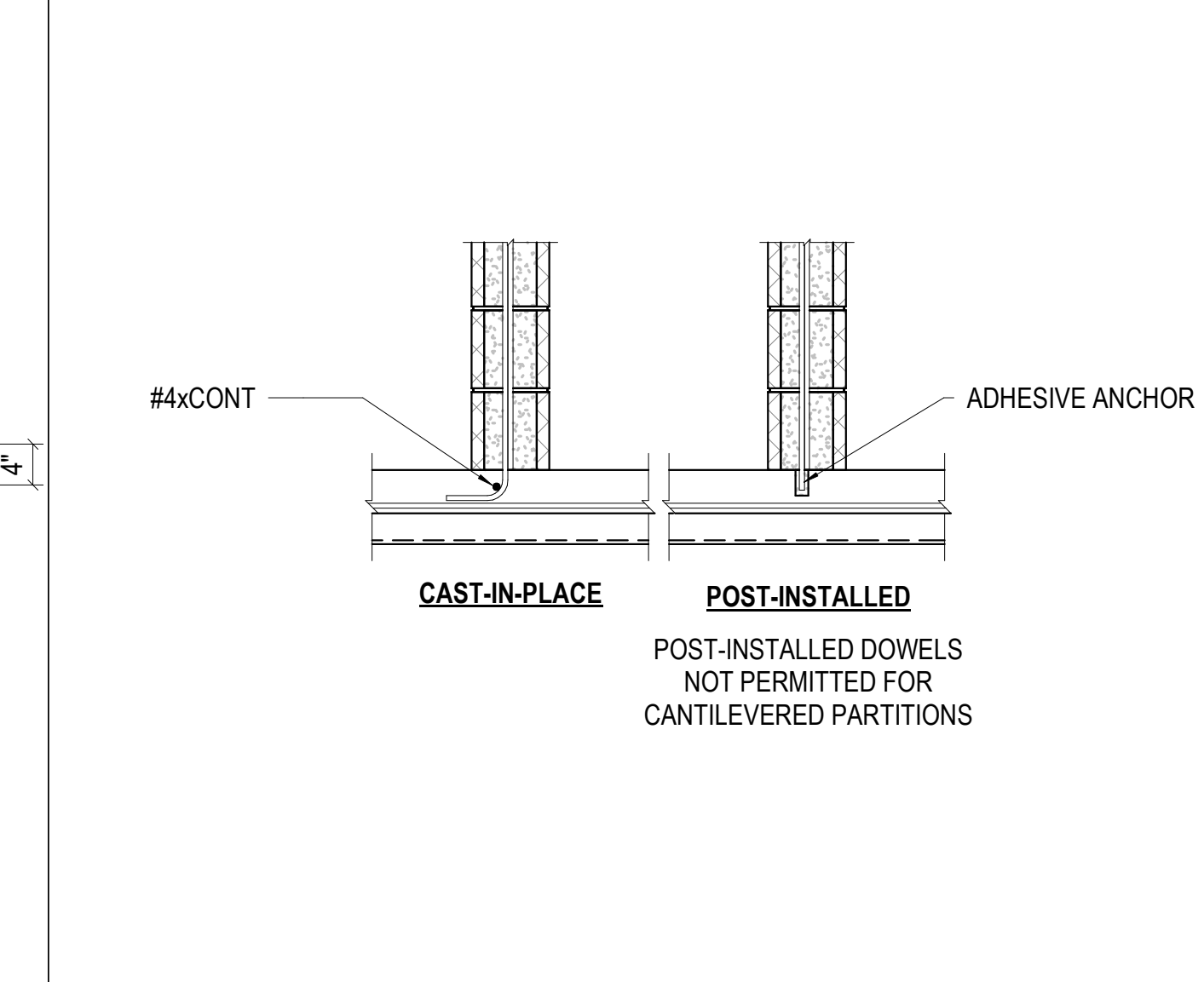
20 3/4" = 1'-0" CIP SLAB TO CMU WALL



12 3/4" = 1'-0" MASONRY PARTITION SUPPORT - PERPENDICULAR TO STEEL BEAM

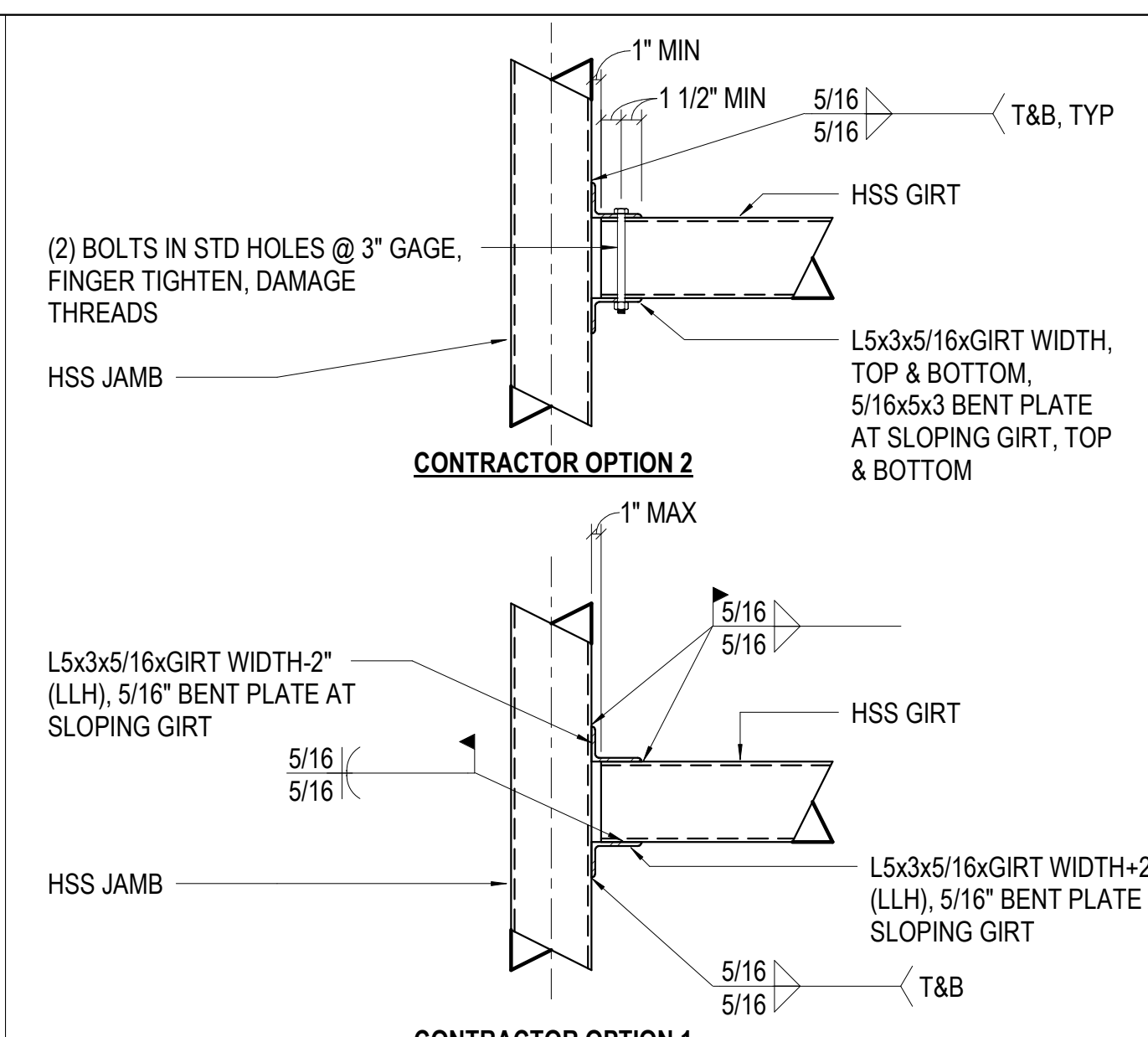
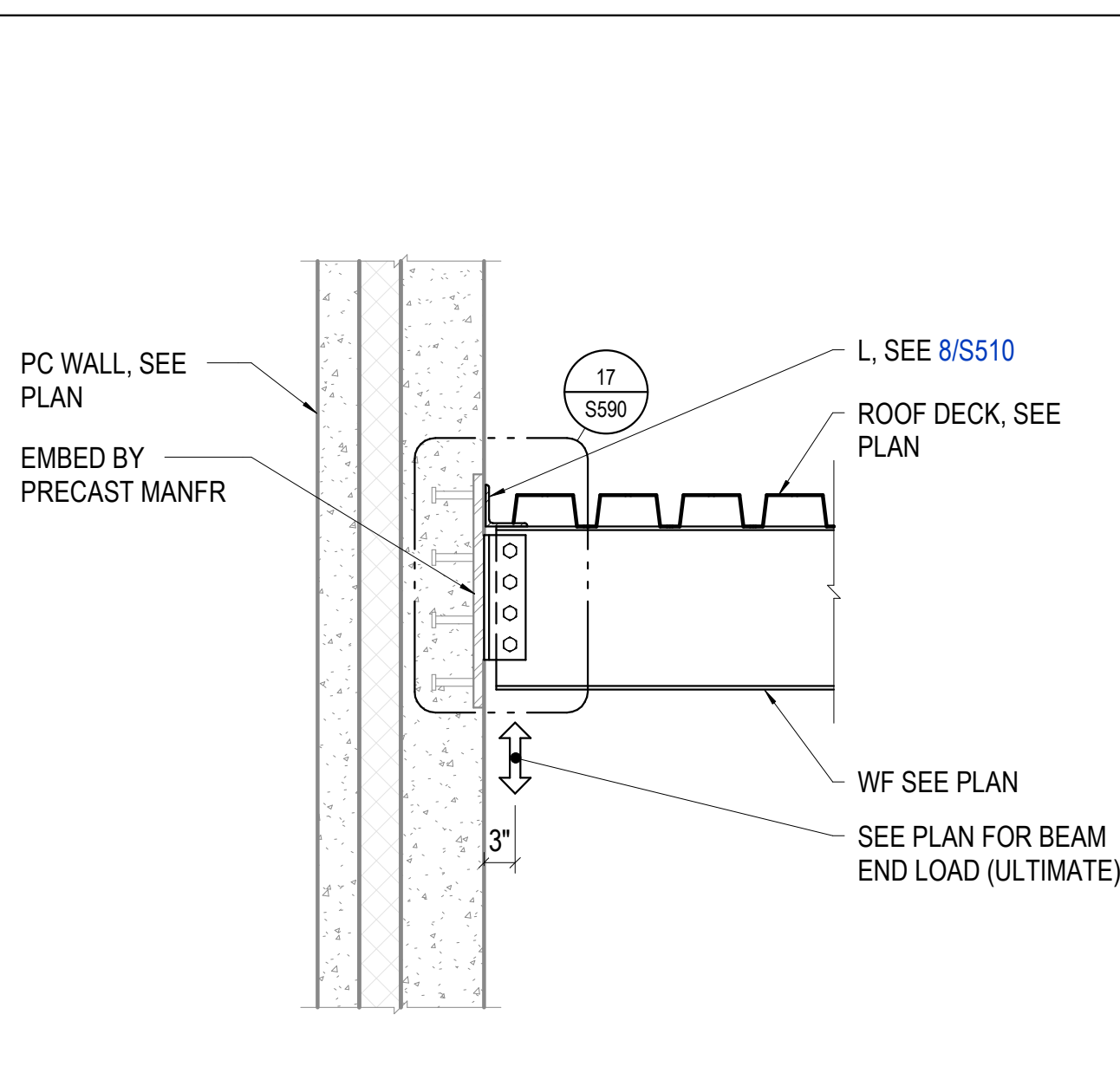
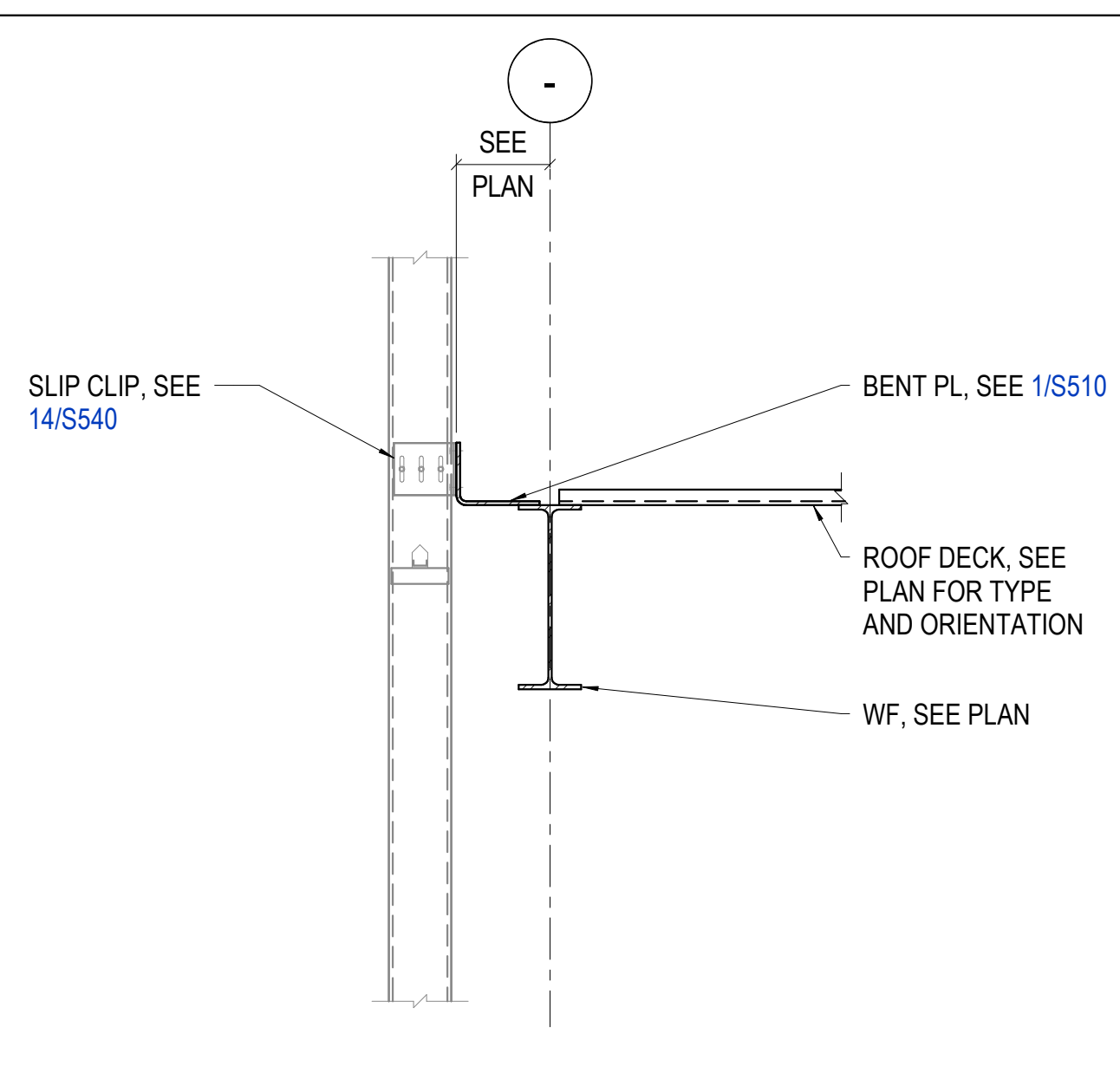
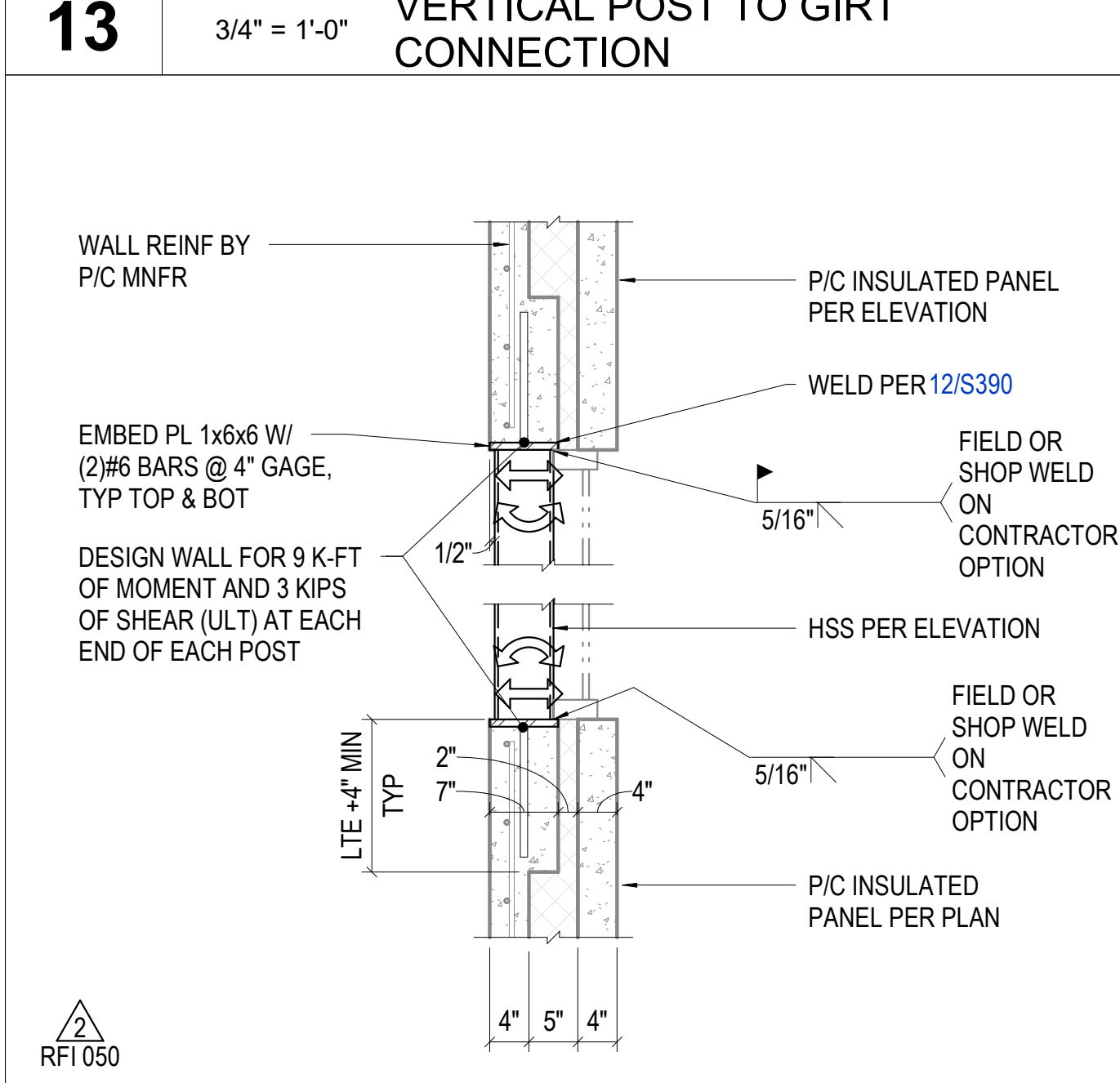
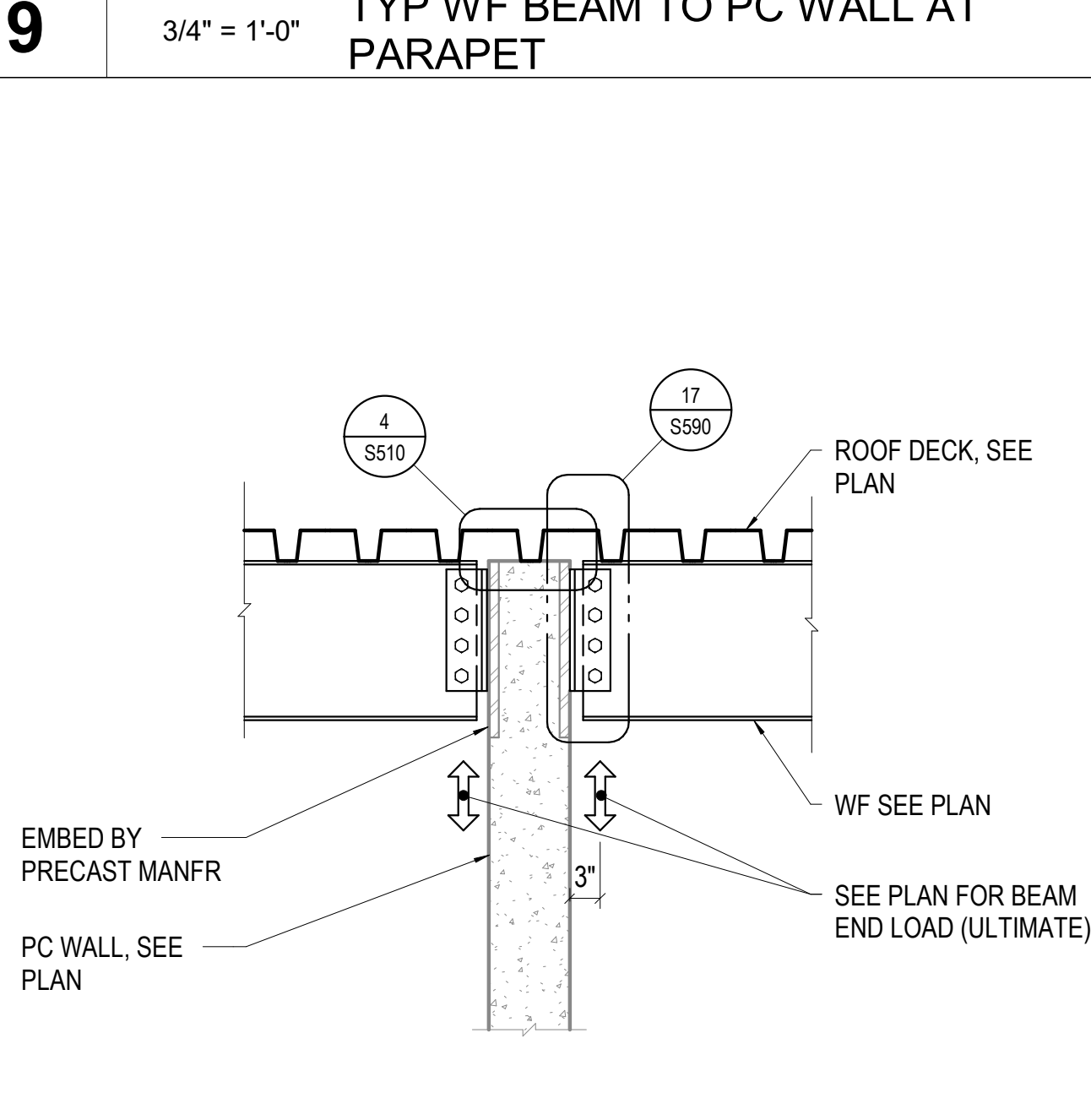
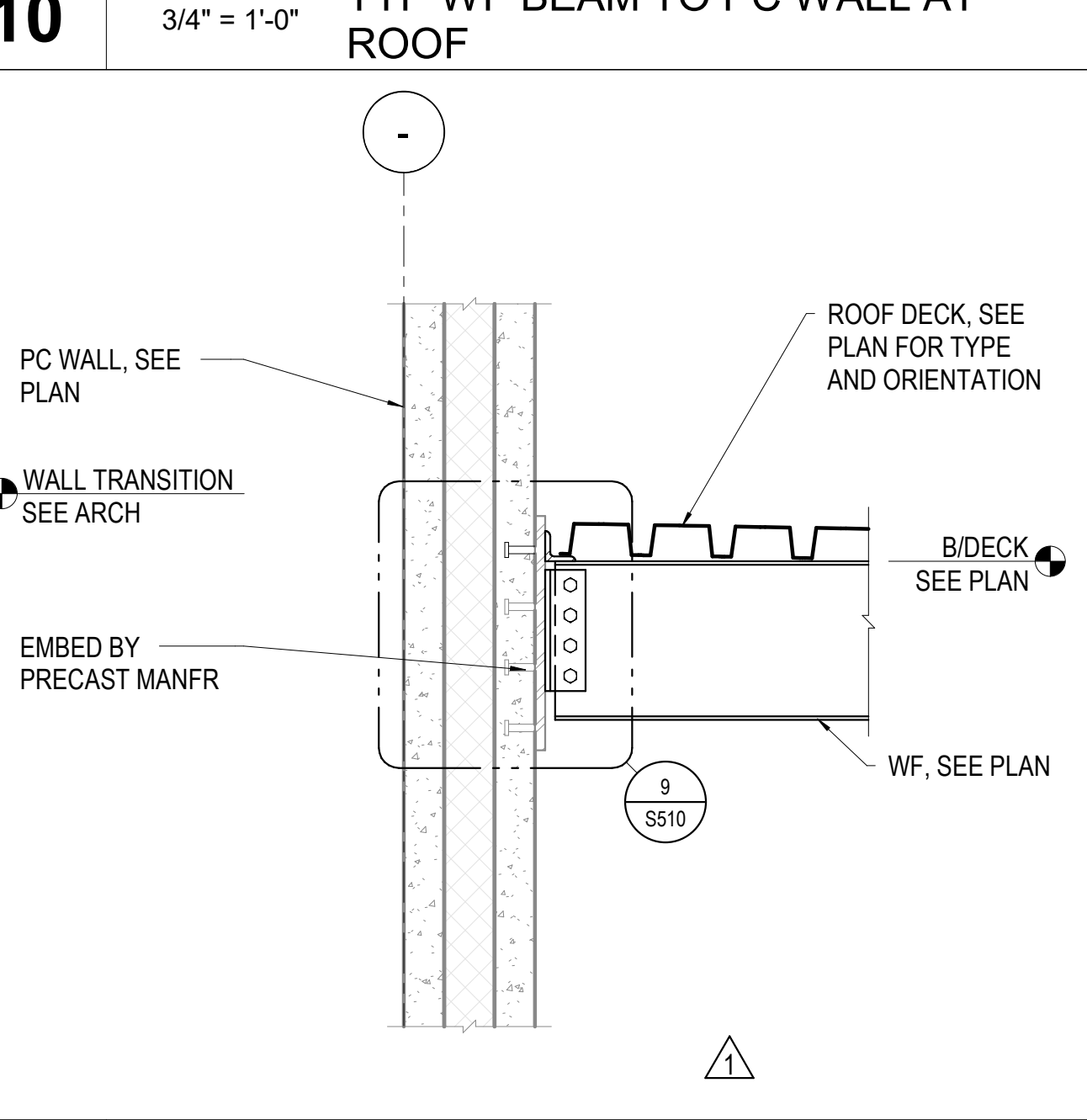


8 3/4" = 1'-0" MASONRY PARTITION SUPPORT - PARALLEL TO STEEL BEAM



4 3/4" = 1'-0" MASONRY PARTITION ON METAL DECK SLAB

DESIGNER: TOM LADD
DATE PRINTED: 12/10/2023 2:38:50 PM
FILE PATH: \\arvada\arvada\Docs\2024\Arvada Meyers Pool\02.0851 S.01 MEYERS POOL REPLACEMENT - S31.rvt
MLJCB # 22.0851S.01
EGR: NICK BRACKSON
PROJECT MANAGER: ANDREW JACK

	 (2) BOLTS IN STD HOLES @ 3" GAGE, FINGER TIGHTEN, DAMAGE THREADS HSS JAMB CONTRACTOR OPTION 2 L5x3x5/16xGIRT WIDTH-2" (LLH), 5/16" BENT PLATE AT SLOPING GIRT HSS GIRT 5/16 5/16 1" MAX 1 1/2" MIN 5/16 5/16 T&B, TYP						
	 PC WALL, SEE PLAN EMBED BY PRECAST MANFR 17 S590 L, SEE 8/S510 ROOF DECK, SEE PLAN WF SEE PLAN SEE PLAN FOR BEAM END LOAD (ULTIMATE) 3"						
	 SEE PLAN SLIP CLIP, SEE 14/S540 BENT PL, SEE 1/S510 ROOF DECK, SEE PLAN FOR TYPE AND ORIENTATION WF, SEE PLAN 3/4" = 1'-0"						
13	3/4" = 1'-0"	9	3/4" = 1'-0"	5	3/4" = 1'-0"	1	3/4" = 1'-0"
VERTICAL POST TO GIRT CONNECTION		TYP WF BEAM TO PC WALL AT PARAPET		ROOF EDGE W/ STUD SLIP CLIP		TYPICAL ROOF EDGE DETAIL - (BOTTOM FLANGE UNBRACED)	
	 WALL REINF BY P/C MANFR P/C INSULATED PANEL PER ELEVATION WELD PER 12/S390 EMBED PL 1x6x6 W/ (2)#6 BARS @ 4" GAGE, TYP TOP & BOT DESIGN WALL FOR 9 K-FT OF MOMENT AND 3 KIPS OF SHEAR (ULT) AT EACH END OF EACH POST 1/2" 5/16" 4" 4" 4" 4" FIELD OR SHOP WELD ON CONTRACTOR OPTION HSS PER ELEVATION FIELD OR SHOP WELD ON CONTRACTOR OPTION P/C INSULATED PANEL PER PLAN RFI 050						
14	3/4" = 1'-0"	10	3/4" = 1'-0"	6	3/4" = 1'-0"		
PRECAST STEEL SUPPORT AT GLAZING		TYP WF BEAM TO PC WALL AT ROOF		ROOF EDGE W/ STUD SLIP CLIP BRACED			
	 PC WALL, SEE PLAN WALL TRANSITION SEE ARCH EMBED BY PRECAST MANFR ROOF DECK, SEE PLAN FOR TYPE AND ORIENTATION BIDECK SEE PLAN WF, SEE PLAN 3"						
		11	3/4" = 1'-0"	7	3/4" = 1'-0"		
		PC WALL TRANSITION AT ROOF		ROOF EDGE AT SOFFIT			
	 ROOF DECK, SEE PLAN EMBED, SEE 4/S510 SEISMIC DRAG FORCE = 19 KIPS (ULT) PC WALL, SEE PLAN WT, COPE WEB AT JOISTS, SEE PLAN JOIST, SEE PLAN PL 1/4x2x3 TYP WT TO JOIST RFI 139						
16	1 1/2" = 1'-0"	12	3/4" = 1'-0"	8	3/4" = 1'-0"	4	3/4" = 1'-0"
WT DRAG AT ROOF		WF BEAM SUPPORTING PC WALL		ROOF DECK TO PC WALL		TYPICAL ROOF DECK TO T/PC WALL	
	 PC WALLS, SEE PLAN WF, SEE PLAN ROOF DECK, SEE PLAN L, SEE 8/S510 EMBEDS BY PC WALL MANFR 3/4" = 1'-0"						

FOR CONSTRUCTION

**MEYERS POOL REPLACEMENT
ARVADA, CO**

7904 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	07/21/2023	ASI-01
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SCALE: As indicated

ISSUE DATE: 07/14/2023

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PROJECT #: 22.0851S.01

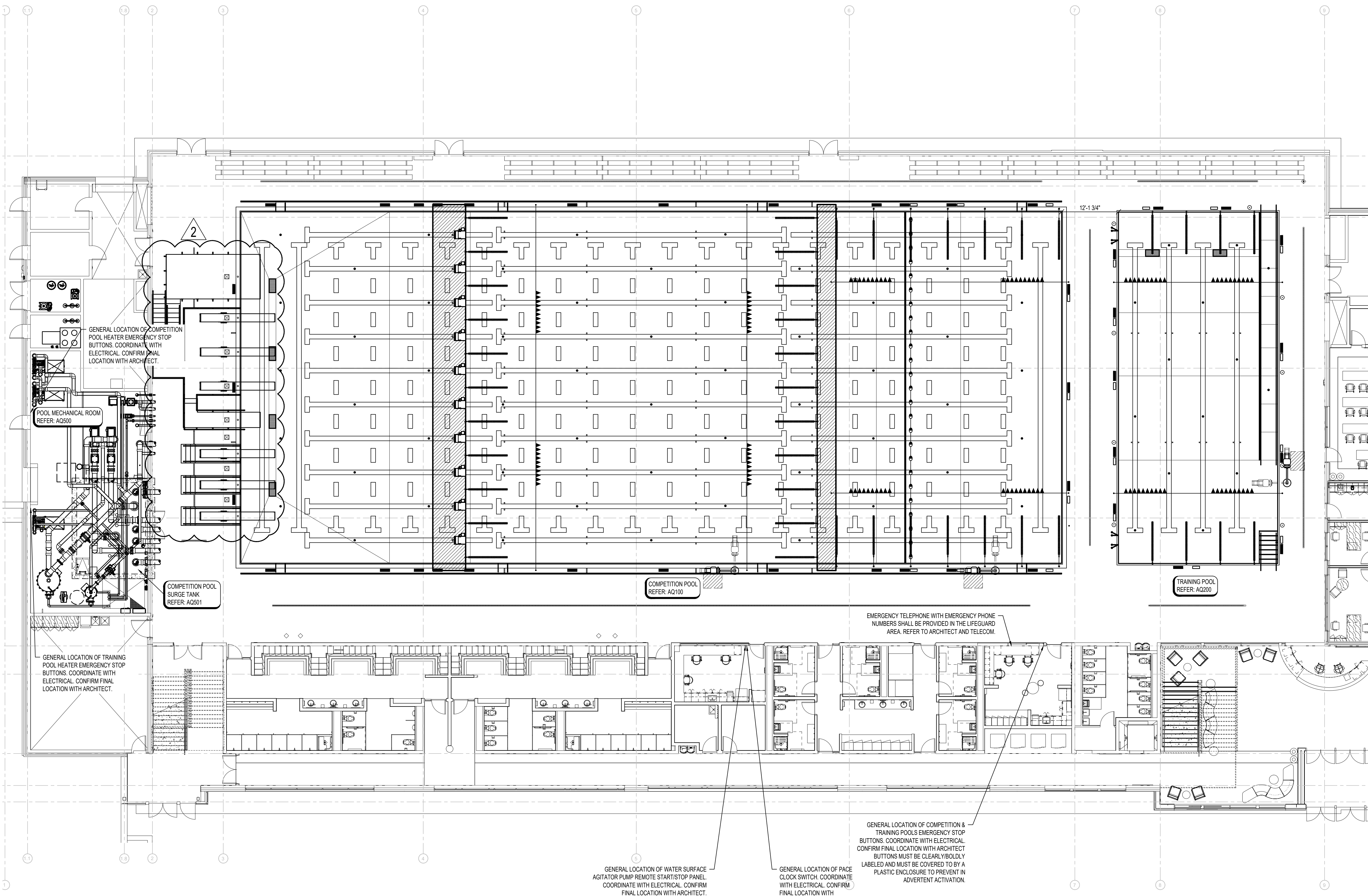
TITLE: ROOF DETAILS

SHEET #:

S510

SHEET #:

S511



1
AQ000
3/32" = 1'-0"

DRAWING INDEX	
SHEET	DESCRIPTION
AQ000	POOL REFERENCE PLAN
AQ100	COMPETITION POOL PLAN
AQ101	COMPETITION POOL SECTIONS
AQ102	COMPETITION POOL COURSE LAYOUTS
AQ103	COMPETITION POOL TIMING SYSTEM LAYOUT
AQ104	COMPETITION POOL DETAILS
AQ105	COMPETITION POOL DETAILS
AQ106	COMPETITION POOL DETAILS
AQ107	COMPETITION POOL DETAILS
AQ200	TRAINING POOL PLAN & SECTIONS
AQ201	TRAINING POOL DETAILS
AQ202	TRAINING POOL DETAILS
AQ300	POOL LOCATION POINT PLAN
AQ400	POOL MECHANICAL NOTES & SCHEDULES
AQ401	POOL SUCTION PIPING PLAN
AQ402	POOL RETURN PIPING PLAN
AQ500	POOL MECHANICAL ROOM PLAN & SECTIONS
AQ501	COMPETITION POOL SURGE TANK PLAN & SECTIONS
AQ502	NOT USED
AQ503	POOL MECHANICAL DETAILS
AQ504	POOL MECHANICAL DETAILS
AQ505	POOL MECHANICAL DETAILS
AQ506	POOL MECHANICAL DETAILS
AQ600	POOL SYSTEMS SCHEMATICS

DESIGN DATA			
	UNITS	COMPETITION POOL	TRAINING POOL
LENGTH	FT.	175'-3 7/16"	75'-1"
WIDTH	FT.	75'-1"	34'-0"
WATER SURFACE AREA	SQ. FT.	13,161	2,526
PERIMETER	FT.	218	118
VOLUME	GALLON	765,251	71,329
RECIRCULATION SYSTEM			
POOL TURNOVER RATE	HOURLY	5.93	2.97
RECIRCULATION RATE	GPM	2,150	400
SURGE CAPACITY	GALLON	13,905	N/A
SEWER CAPACITY	GPM	REFER TO PLUMBING	REFER TO PLUMBING
BATHER LOAD	PERSON	448	169
ISPS 2018 CLASSIFICATION		A (COMPETITION POOL)	B (PUBLIC POOL)

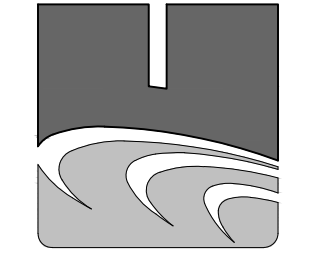
- ### GENERAL POOL NOTES
- ◆ DENOTES WATER DEPTH FROM WATER LEVEL.
 - POOL FINISH MUST BE A PROPRIETARY PVC MEMBRANE WITH HORIZONTAL TILE DEPTH MARKERS AND WARNING SIGNS. PVC MEMBRANE COLOR MUST BE WHITE. PVC MEMBRANE MUST BE A SMOOTH, EASILY CLEANABLE SURFACE AND MUST NOT BE ABRASIVE OR CAUSE HAZARD TO USERS.
 - ALL POOL FLOOR AREAS 18" AND SHALLOWER AND ALL STAIR TREADS MUST HAVE A SLIP RESISTANT FINISH.
 - TYPICAL POOL DIMENSIONS SHOWN ARE FROM INSIDE FINISHED POOL WALL.
 - REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ALL DIMENSIONS RELATING TO THE THICKNESS OF THE CONCRETE POOL FLOOR SLABS AND SURGE TANKS, CONCRETE CURING METHODS, AND DRILLED PIERS.
 - THE JUNCTION BETWEEN THE SWIMMING POOL WALL AND THE FLOOR MUST BE COVERED WITH A MAXIMUM 2" RADIUS.
 - DEPTH MARKERS AND WARNING SIGNS ARE SHOWN IN APPROXIMATE LOCATIONS. DEPTH MARKERS AND WARNING SIGNS MUST NOT EXCEED 25'-0" APART FROM EACH OTHER, AND MUST BE PLACED AT EVEN FOOT INTERVALS PER LOCAL CODE.
 - ALL PROPRIETARY NAMES MENTIONED ARE TO DESIGNATE PERFORMANCE STANDARDS. EQUIVALENT PRODUCTS MUST BE SUBMITTED FOR APPROVAL.
 - SLIP RESISTANT DECK FINISH REQUIRED. REFER TO ARCHITECT.
 - REFER TO PLUMBING FOR DECK DRAINS AND HOSE BIBBS.
 - ALL SURFACE WATER MUST DRAIN AWAY FROM THE POOL.
 - REFER TO ELECTRICAL FOR GFI OUTLETS IN NATATORIUM.
 - ELECTRICAL INSPECTOR MUST APPROVE INSTALLATION OF BONDING GRID FOR POOL REINFORCING AND ALL POOL EMBEDS PRIOR TO PLACEMENT OF CONCRETE.
 - NO GROUND WATER MUST BE ALLOWED TO RISE ABOVE ANY PORTION OF THE POOL BOTTOM DURING CONSTRUCTION.
 - COMPETITION POOL HAS BEEN DESIGNED TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS OF USA SWIMMING (USA-S) NATIONAL COLLEGIATE ATHLETIC ASSOCIATION (NCAA) - NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS (NFHS).
 - REFER TO SWIMMING POOL SPECIFICATIONS FOR COMPETITION RACE COURSE TOLERANCES.
 - BULKHEAD DIMENSION SHOWN ON COURSE LAYOUT(S) INCLUDE BULKHEAD TOLERANCE.
 - TIMING SYSTEM SHOWN FOR REFERENCE ONLY. REFER ARCHITECTURAL, ELECTRICAL, AND TELECOM DRAWINGS.
 - ALL POOL REINFORCING STEEL, METAL FITTINGS, EQUIPMENT WITHIN 5'-0" OF POOL EDGE AND ANY METAL PARTS OF POOL EQUIPMENT IN CONTACT WITH POOL REINFORCING SYSTEM MUST BE BONDED PER NEC-800. REFER 31A2005.
 - IT IS RECOMMENDED THAT ZONE EVALUATIONS ACCORDING TO THE AMERICAN RED CROSS OR A SIMILAR APPLICABLE LIFEGUARD AGENCY ARE CONDUCTED PRIOR TO OPERATING THE FACILITY AND REGULARLY ACCORDING TO AGENCY GUIDELINES. ZONE EVALUATIONS ARE NECESSARY TO CONFIRM APPROPRIATE LIFEGUARD PLACEMENT AND ZONE COVERAGE.
 - CONTRACTOR TO PROVIDE CHEMICAL QUANTITIES PER CONTRACTOR SUPPLIED POOL CHEMICAL SCHEDULE AFTER INITIAL WATER BALANCE IS REACHED PRIOR TO OWNER TURNOVER.
 - CONTRACTOR TO PERFORM A HYDROSTATIC WATER TIGHTNESS TEST ON THE POOL, SURGE TANK, AND GUTTER SYSTEMS. REFER TO SPECIFICATIONS.
- ### STAINLESS STEEL WALL SYSTEM
- SWIMMING POOL STAINLESS STEEL MANUFACTURER MUST REVIEW THE PROJECT GEOTECHNICAL REPORT PRIOR TO INSTALLATION. BACKFILL MATERIAL MUST MEET STAINLESS STEEL MANUFACTURER'S RECOMMENDATIONS.
 - SWIMMING POOL STAINLESS STEEL MANUFACTURER MUST FURNISH COMPLETE STRUCTURAL CALCULATIONS FOR WALL PANELS AND WALL CONNECTIONS TO DESIGN TEAM FOR REVIEW PRIOR TO FABRICATION COMMENCING.
 - SWIMMING POOL STAINLESS STEEL MANUFACTURER MUST PROVIDE GUTTER BAFFLES TO MINIMIZE NOISE AT ALL GUTTER DROPOUT LOCATIONS.
 - SWIMMING POOL STAINLESS STEEL MANUFACTURER MUST PROVIDE STAINLESS STEEL GRADE FOR ALL WALL PANELS, SUPPORTS, AND FASTENERS PRIOR TO FABRICATION COMMENCING.
 - ALL STAINLESS STEEL ITEMS PROVIDED BY THE SWIMMING POOL STAINLESS STEEL MANUFACTURER MUST BE BONDED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 680 OF THE NATIONAL ELECTRIC CODE.
 - THE SWIMMING POOL STAINLESS STEEL MANUFACTURER MUST PROVIDE SHOP DRAWINGS THAT MEET THE PLANS, DETAILS, AND REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS.
 - SWIMMING POOL STAINLESS STEEL MANUFACTURER MUST PROVIDE ALL GUTTER DIMENSIONS, CAPACITIES, AND DROPOUT LINE REQUIREMENTS TO THE DESIGN TEAM FOR REVIEW PRIOR TO FABRICATION COMMENCING.
 - STRUCTURAL CONCRETE SURFACES TO RECEIVE STAINLESS STEEL FRAME AND BUTTRESS REQUIRE CONCRETE COVERAGE OVER REINFORCING STEEL TO AVOID CONFLICTS WITH REBAR WHEN DRILLING FOR ANCHOR INSERTS. CONCRETE COVERAGE MUST BE COORDINATED AND INDICATED IN THE STRUCTURAL DRAWINGS. REFER: 41A2106 & 11A2201.

CONTRACTOR SUPPLIED POOL CHEMICALS	
DESCRIPTION	AMOUNT
CALCIUM HYPOCHLORITE	FULL FEEDERS(S) + 1200 LBS
MURIATIC ACID	FULL CARBOYS(S) + 90 GALLONS
SODIUM BICARBONATE	200 LBS
CALCIUM CARBONATE	100 LBS
SODIUM THIOSULFATE	50 LBS

- ### POOL ALTERNATES
- CONCRETE DIVE TOWER:
BASE BID: PROVIDE THREE (3) MANUFACTURED 3-METER STANDS, THREE (3) MANUFACTURED 1-METER STANDS, AND SIX (6) WATER SURFACE AGITATOR FITTINGS AND ASSOCIATED PIPING. CONCRETE FOOTINGS FOR MANUFACTURED STANDS BY BUILDING STRUCTURAL.
- ALTERNATE #3: PROVIDE SIX (6) MANUFACTURED SHORT STANDS, EIGHT (8) WATER SURFACE AGITATOR FITTINGS AND ASSOCIATED PIPING, AND SURFACING FOR THE 3-METER AND 5-METER PLATFORM DIVING LOCATIONS. CONCRETE TOWER, PLATFORMS, STAIRS AND GUARD RAILS BY ARCHITECTURAL AND BUILDING STRUCTURAL.



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO 7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

REV'D BY: CCH

PROJECT #: 22044

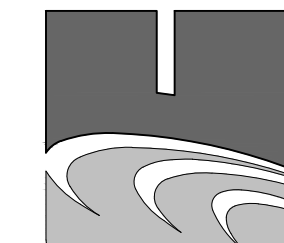
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SHEET #:

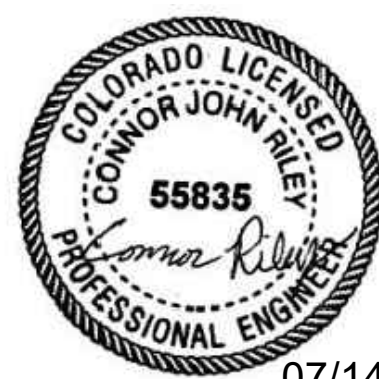
AQ000



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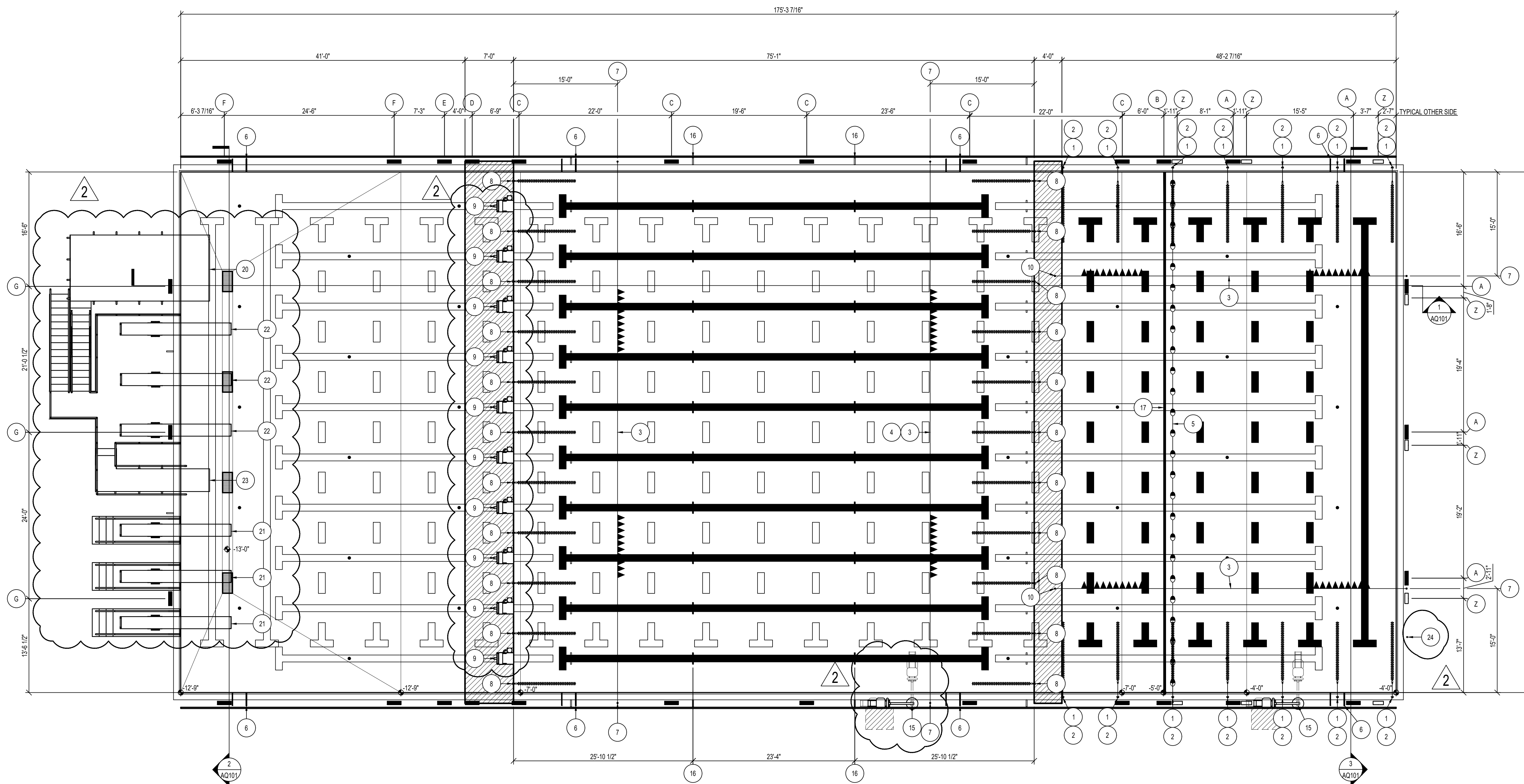
FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7900 Carr Drive, Arvada, CO 80005

DEPTH & WARNING SIGNAGE SCHEDULE	
ID	SIGNAGE
A	4 FT 0 IN
B	5 FT 0 IN
C	7 FT 0 IN
D	9 FT 0 IN
E	11 FT 0 IN
F	12 FT 9 IN
G	13 FT 0 IN
Z	NO DIVING
NOTE: REFER: 6/AQ105 FOR DETAIL.	

EQUIPMENT SCHEDULE	
ID	ITEM
1	LANE ROPE ANCHOR REFER: 1, 2, & 3/AQ105
2	LANE ROPE EXTENSION REFER: 7/AQ105
3	BACKSTROKE PENNANT
4	FALSE START ROPE ASSEMBLY
5	SAFETY ROPE
6	GRAB RAILS & RECESSED STEPS REFER: 5/AQ105
7	STANCHION POST & ANCHOR REFER: 8/AQ105
8	BULKHEAD LANE ROPE CUP ANCHOR REFER: 7/AQ107
9	BULKHEAD MOUNTED STARTING PLATFORM & ANCHOR REFER: 11/AQ105
10	BULKHEAD MOUNTED STANCHION POST & ANCHOR REFER: 3/AQ105
11	DECK MOUNTED STARTING PLATFORM & ANCHOR REFER: 8/AQ105
12	FLOATING WATER POLO GOAL REFER: 10/AQ105
13	NOT USED
14	NOT USED
15	POOL LIFT & ANCHOR REFER: 10/AQ105
16	RESURFACING MARKER REFER: 4/AQ105
17	4" CONTRASTING BAND
18	WALL TARGET REFER: 4/AQ105
19	POOL COVE REFER: 12/AQ107
20	FIVE METER DIVING PLATFORM (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 5/AQ105
21	ONE METER SPRINGBOARD DIVING SUPPORT (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 10/AQ105
22	THREE METER SPRINGBOARD DIVING SUPPORT (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 8/AQ105
23	THREE METER DIVING PLATFORM (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 5/AQ105
24	ADDITIONAL POOL LIFT ANCHOR REFER: 10/AQ105



1
AQ100
1/8" = 1'-0"

COMPETITION POOL PLAN (25 YARD COURSE LAYOUT #1) (ALTERNATE #3)

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

REV'D BY: CCH

PROJECT #: 22044

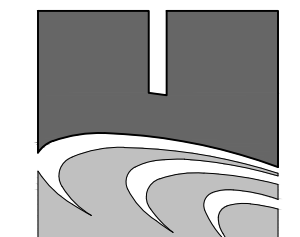
TITLE: COMPETITION POOL PLAN

SHEET #:

AQ100



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MEYERS POOL REPLACEMENT ARVADA, CO

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EQUIPMENT SCHEDULE

ID	ITEM
1	LANE ROPE ANCHOR REFER: 1, 2, & 3/AQ105
2	LANE ROPE EXTENSION REFER: 7/AQ105
3	BACKSTROKE PENNANT
4	FALSE START ROPE ASSEMBLY
5	SAFETY ROPE
6	GRAB RAILS & RECESSED STEPS REFER: 5/AQ105
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8	BULKHEAD LANE ROPE CUP ANCHOR REFER: 7/AQ107
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10	BULKHEAD MOUNTED STANCHION POST & ANCHOR REFER: 3/AQ106
11	DECK MOUNTED STARTING PLATFORM & ANCHOR REFER: 6/AQ106
12	FLOATING WATER POLO GOAL REFER: 12/AQ105
13	NOT USED
14	NOT USED
15	POOL LIFT & ANCHOR REFER: 10/AQ105
16	RESURFACING MARKER REFER: 4/AQ105
17	4" CONTRASTING BAND
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22	THREE METER SPRINGBOARD DIVING SUPPORT (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 8/AQ106
23	THREE METER DIVING PLATFORM (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 5/AQ106
24	ADDITIONAL POOL LIFT ANCHOR REFER: 10/AQ105

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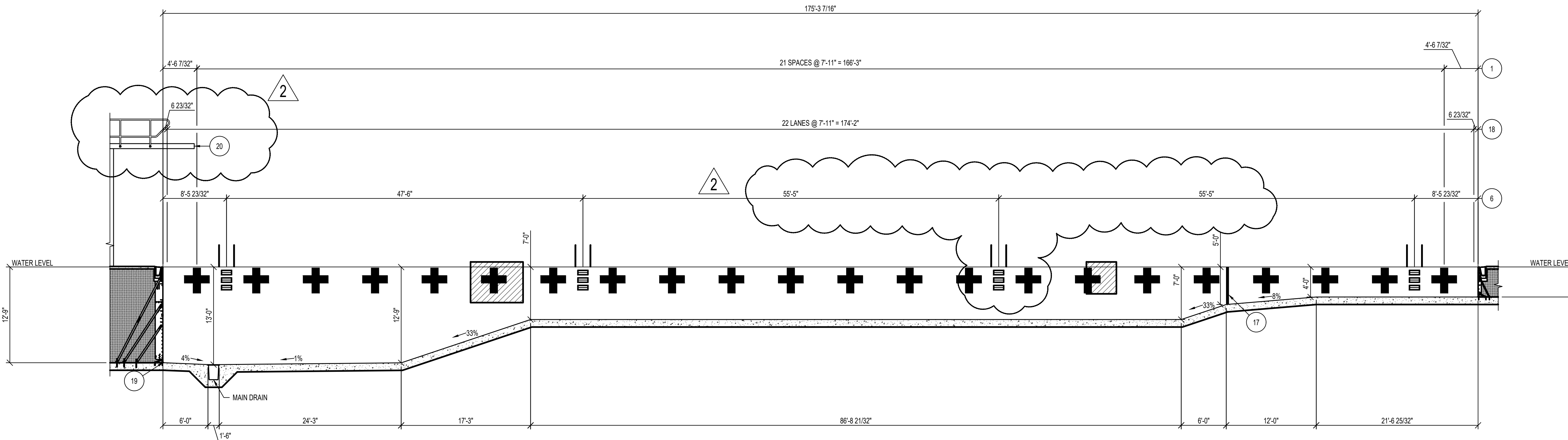
REV'D BY: CCH

PROJECT #: 22044

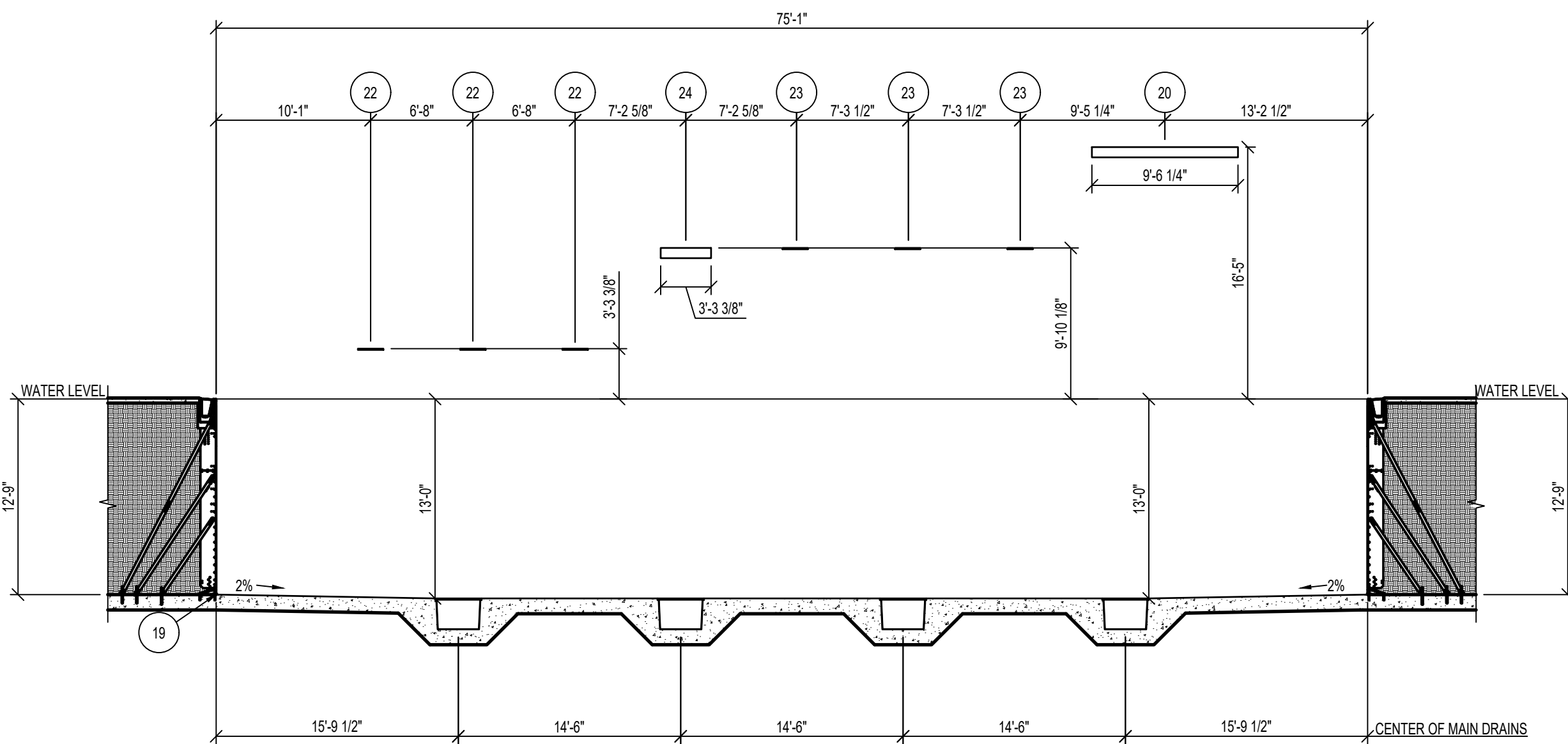
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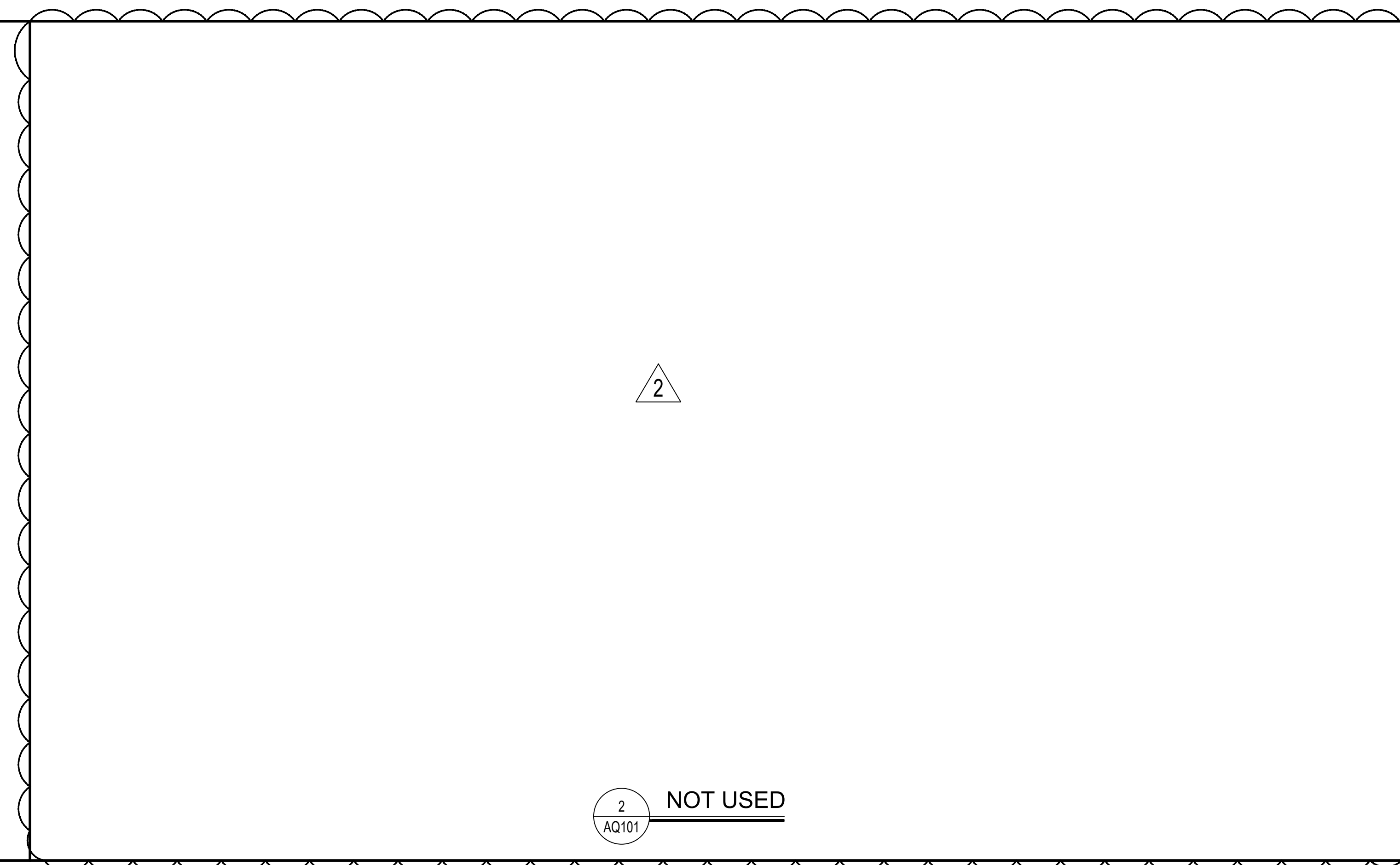
AQ101



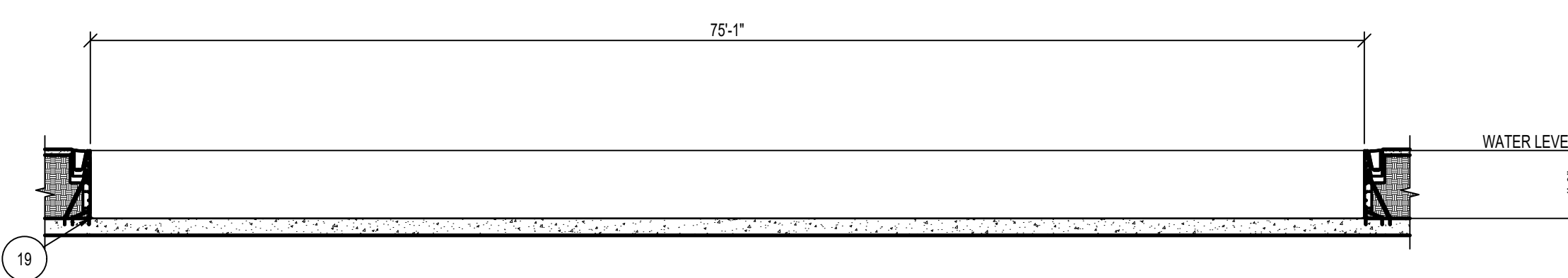
1
AQ101
1/8" = 1'-0"



4
AQ101
1/8" = 1'-0"



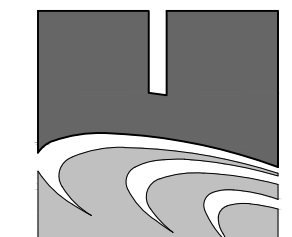
2
AQ101
NOT USED



3
AQ101
1/8" = 1'-0"



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7900 Carr Drive, Arvada, CO 80005

EQUIPMENT SCHEDULE

ID	ITEM
1	LANE ROPE ANCHOR REFER: 1, 2, & 3/AQ105
2	LANE ROPE EXTENSION REFER: 7/AQ105
3	BACKSTROKE PENNANT
4	FALSE START ROPE ASSEMBLY
5	SAFETY ROPE
6	GRAB RAILS & RECESSED STEPS REFER: 5/AQ105
7	STANCHION POST & ANCHOR REFER: 8/AQ105
8	BULKHEAD LANE ROPE CUP ANCHOR REFER: 7/AQ107
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10	BULKHEAD MOUNTED STANCHION POST & ANCHOR REFER: 3/AQ106
11	DECK MOUNTED STARTING PLATFORM & ANCHOR REFER: 6/AQ106
12	FLOATING WATER POLO GOAL REFER: 12/AQ105
13	NOT USED
14	NOT USED
15	POOL LIFT & ANCHOR REFER: 10/AQ105
16	RESURFACING MARKER REFER: 4/AQ105
17	4" CONTRASTING BAND
18	WALL TARGET REFER: 4/AQ105
19	POOL COVE REFER: 12/AQ107
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22	THREE METER SPRINGBOARD DIVING SUPPORT (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 8/AQ106
23	THREE METER DIVING PLATFORM (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 5/AQ106
24	ADDITIONAL POOL LIFT ANCHOR REFER: 10/AQ105

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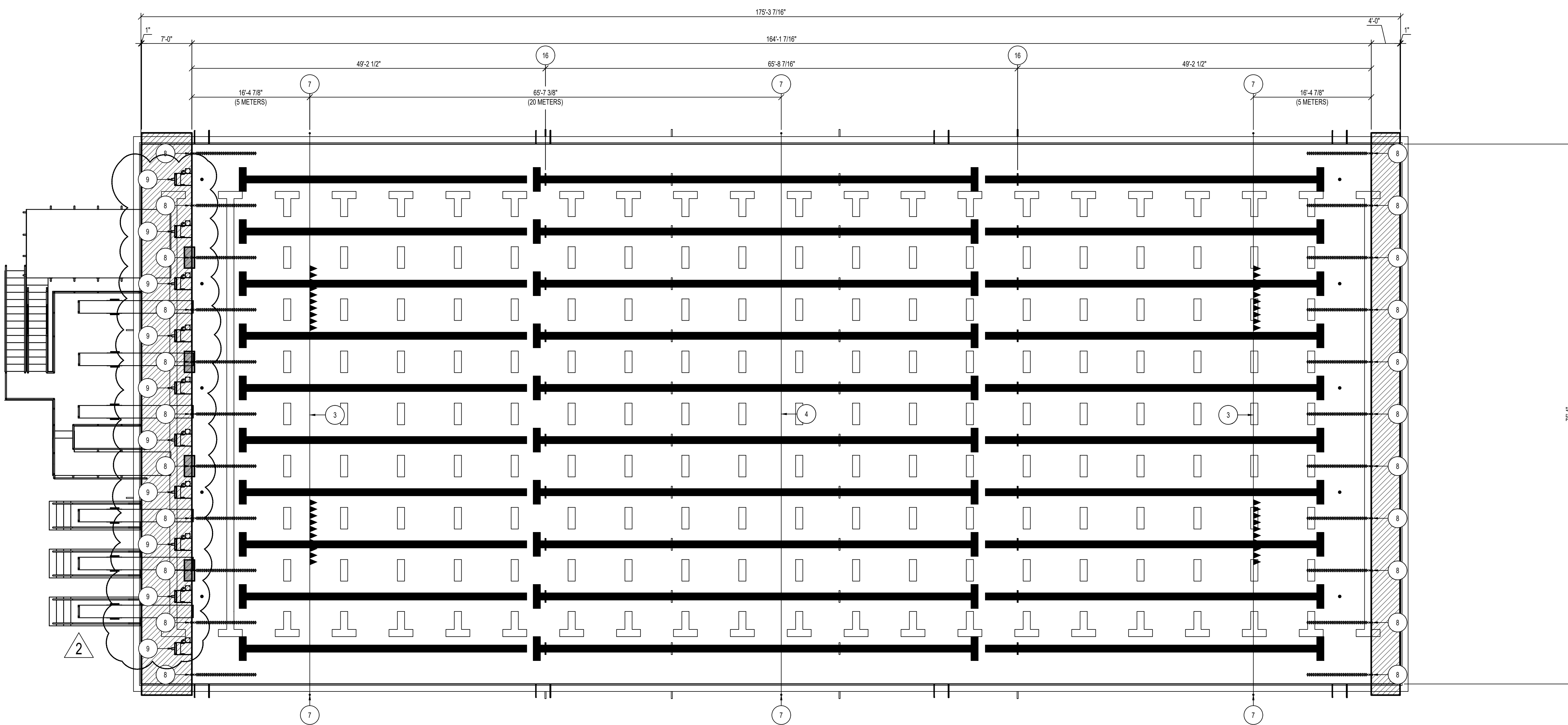
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PROJECT #: 22044

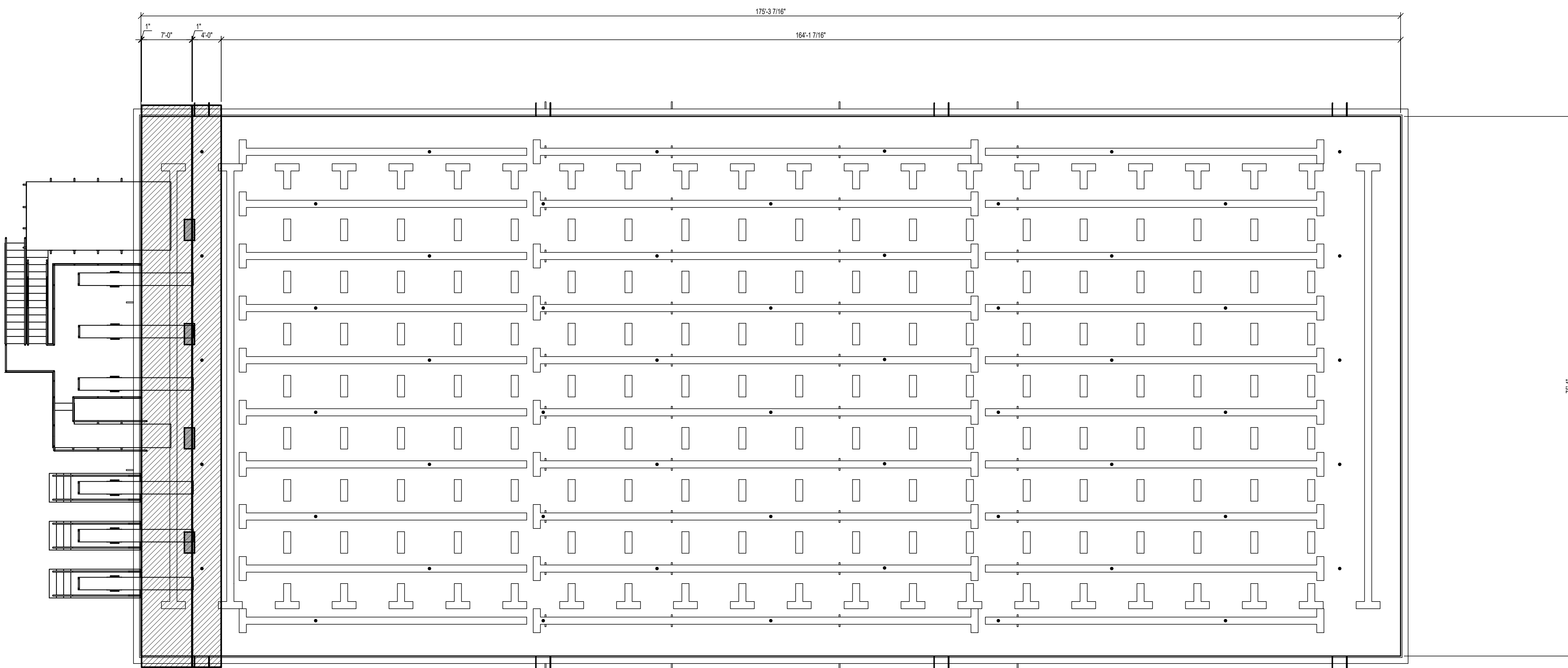
TITLE: COMPETITION POOL
COURSE LAYOUTS

SHEET #:

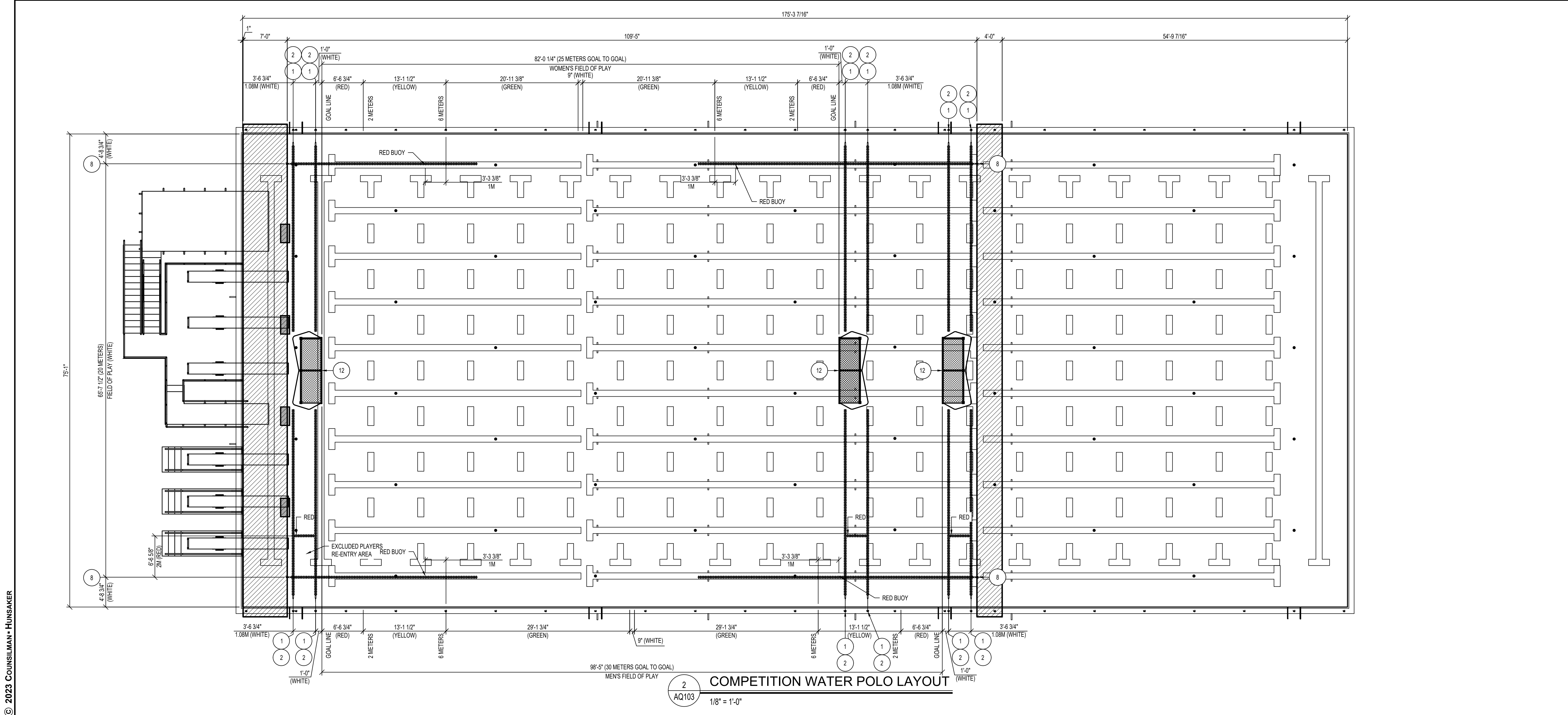
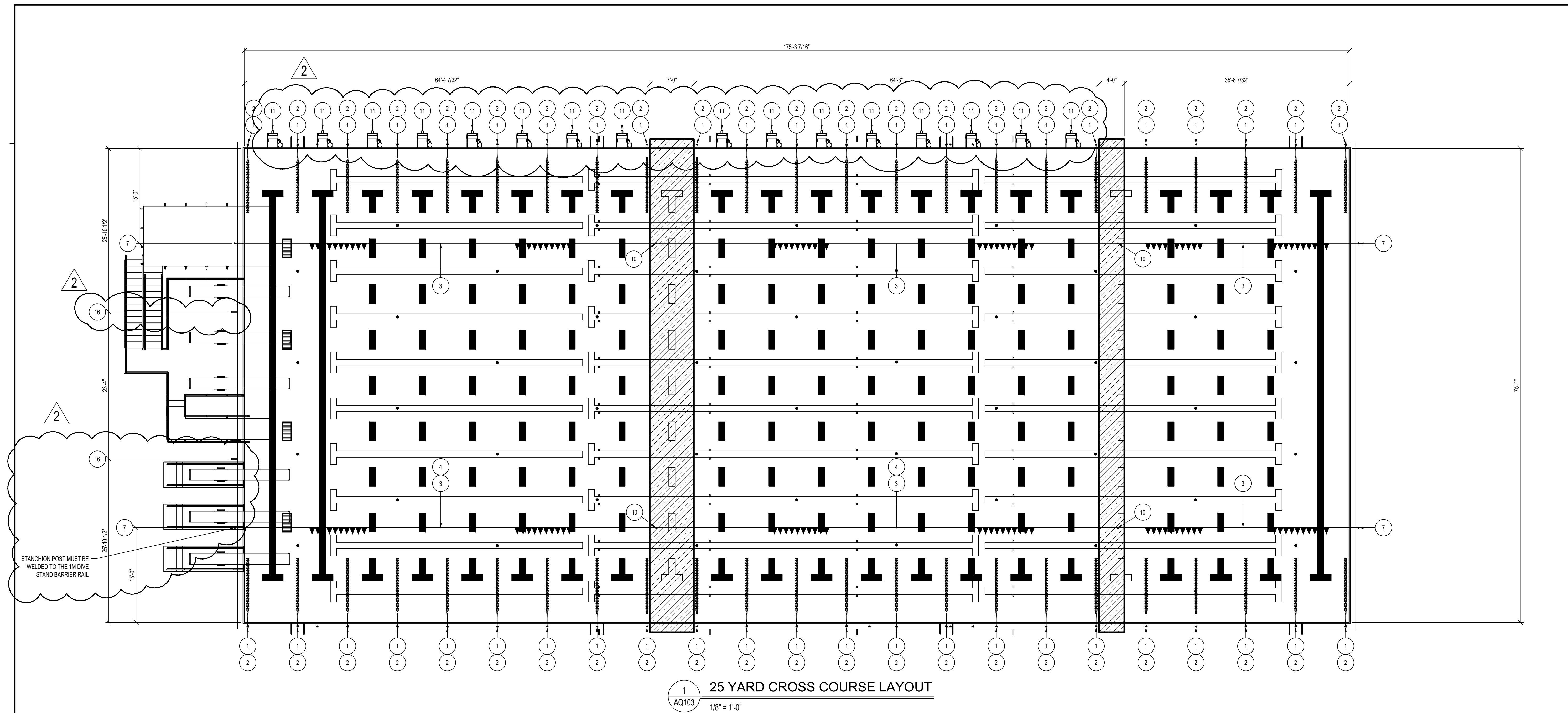
AQ102



1
AQ102
50 METER COURSE LAYOUT
1/8" = 1'-0"



2
AQ102
OPEN POOL LAYOUT
1/8" = 1'-0"

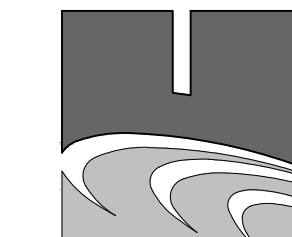


EQUIPMENT SCHEDULE

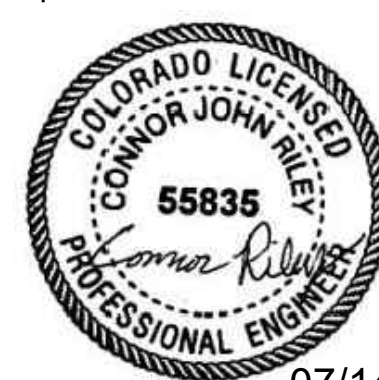
ID	ITEM
1	LANE ROPE ANCHOR REFER: 1, 2, & 3/AQ105
2	LANE ROPE EXTENSION REFER: 7/AQ105
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23	THREE METER DIVING PLATFORM (ALTERNATE #3) REFER TO ARCHITECT & STRUCTURAL & 5/AQ106
24	ADDITIONAL POOL LIFT ANCHOR REFER: 10/AQ105



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07/14/2023

FOR CONSTRUCTION

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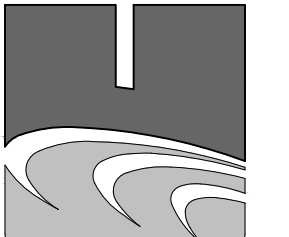
TITLE: COMPETITION POOL
COURSE LAYOUTS

SHEET #:

AQ103



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TITLE: COMPETITION POOL TIMING SYSTEM LAYOUT

SHEET #:

AQ104

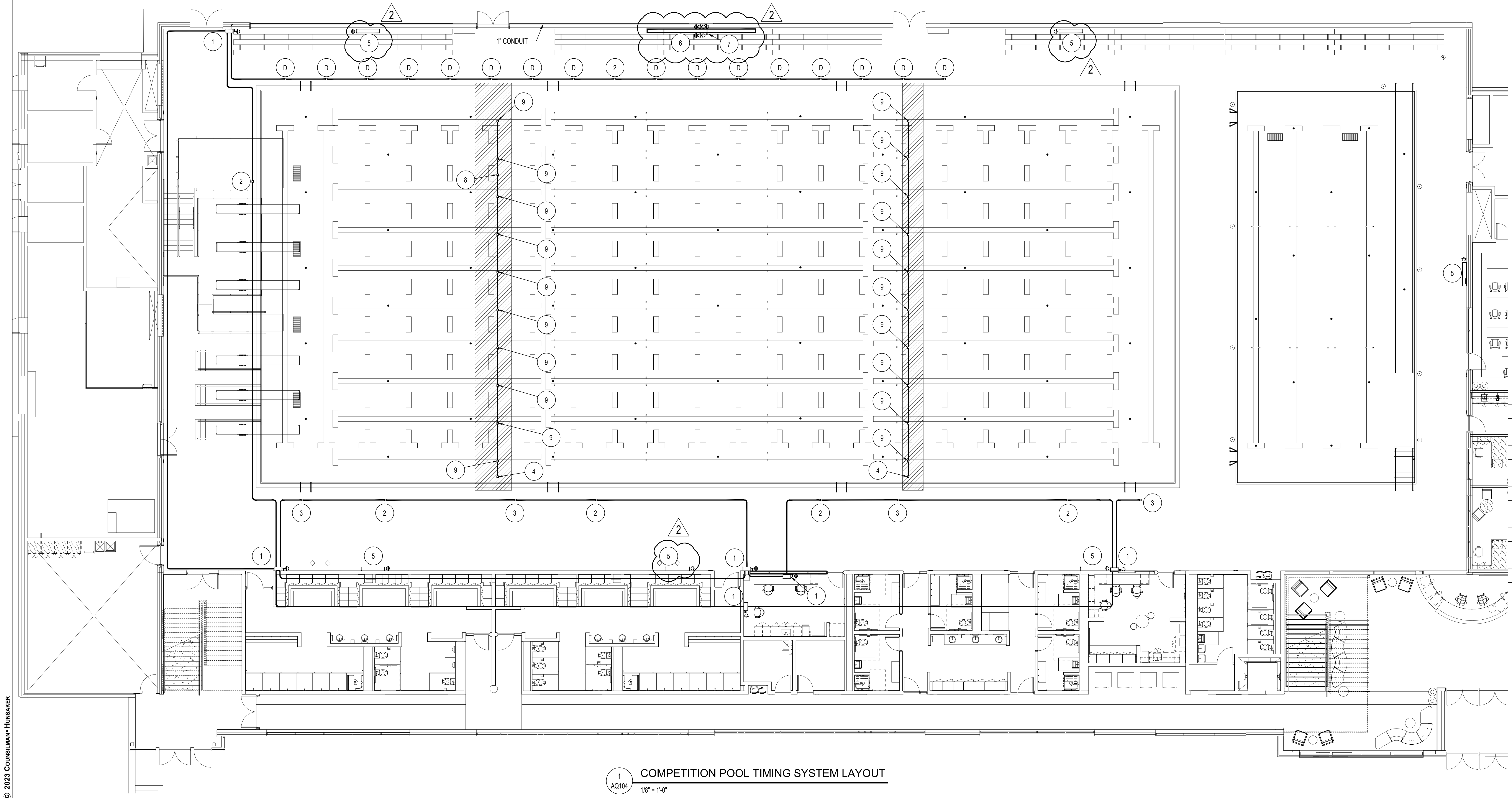
TIMING SYSTEM NOTES

TIMING SYSTEM COMPONENTS AND SCOREBOARD MUST BE OWNER-PROVIDED. ALL CONDUITS, POWER, DATA, AND JUNCTION BOXES MUST BE SUPPLIED BY THE CONTRACTOR.

TIMING SYSTEM SCHEDULE

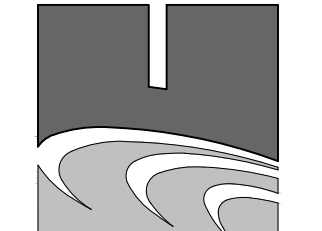
ID	QTY.	ITEM	DESCRIPTION
D	16	TIMING DECK PLATE REFER: BIAQ106	4"X4"X8" PVC JUNCTION BOX.
1	6	WALL PLATE REFER: 11/AQ105	12"X12"X8" PVC JUNCTION BOX WITH 120V QUAD OUTLET & ETHERNET CONNECTION MOUNTED AT 18" A.F.F.
2	6	START DECK PLATE REFER: 2/AQ106	4"X4"X8" PVC JUNCTION BOX.
3	4	BULKHEAD DECK PLATE REFER: 2/AQ106	4"X4"X8" PVC JUNCTION BOX.
4	2	BULKHEAD CONNECTOR DECK PLATE	4"X4"X8" PVC JUNCTION BOX OR 4.5" ACCESS HOLE, COORDINATE WITH BULKHEAD MANUFACTURER
5	6	PAGE CLOCK REFER: 1/AQ106	PAGE CLOCK WITH 120 VAC DUPLEX OUTLET MOUNTED AT 8'-0" A.F.F.
6	1	VIDEO SCOREBOARD	SCOREBOARD WITH SEVEN (7) 120 VAC DUPLEX OUTLETS. REFER TO ARCHITECT FOR MOUNTING HEIGHT.
7	1	SCOREBOARD DATA BOX	SINGLE GANG BOX AT HEIGHT OF SCOREBOARD
8	1	BULKHEAD START PLATE	4"X4"X8" PVC JUNCTION BOX. COORDINATE WITH BULKHEAD MANUFACTURER.
9	20	BULKHEAD TIMING DECK PLATE REFER: 11/AQ106	4"X4"X8" PVC JUNCTION BOX. COORDINATE WITH BULKHEAD MANUFACTURER.

NOTE:
1. COORDINATE FINAL LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS PRIOR TO INSTALLATION. REFERENCES TO MOUNTING HEIGHTS ARE MINIMUMS TO THE BOTTOM OF OUTLET/EQUIPMENT.
2. CONDUIT, JUNCTION BOXES, ETHERNET CONNECTIONS, AND POWER MUST BE PROVIDED BY ELECTRICAL. TIMING SYSTEM MANUFACTURER MUST PROVIDE ANY REQUIRED CABLING AND CONNECTIVITY SPECIFIC TO THEIR PRODUCT.
3. ALL JUNCTION BOXES MUST BE RECESSED INTO THE NATATORIUM WALLS AND POOL DECK. PVC CONDUIT MUST BE RUN IN THE WALLS OR IN POOL DECK. SURFACE MOUNTING IS NOT ALLOWED.
4. PVC CONDUIT MUST BE 2" UNLESS NOTED OTHERWISE.





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07/14/2023

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

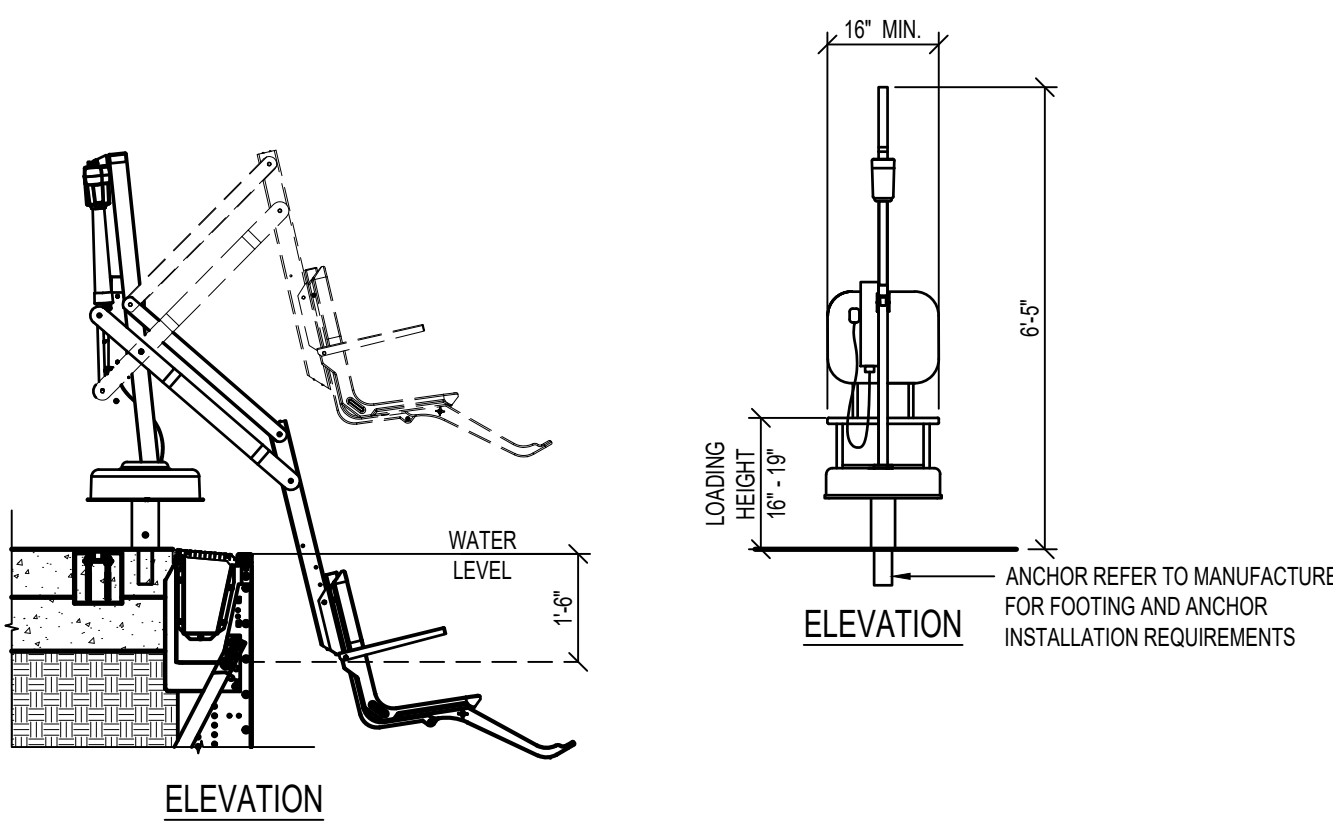
REV'D BY: CCH

PROJECT #: 22044

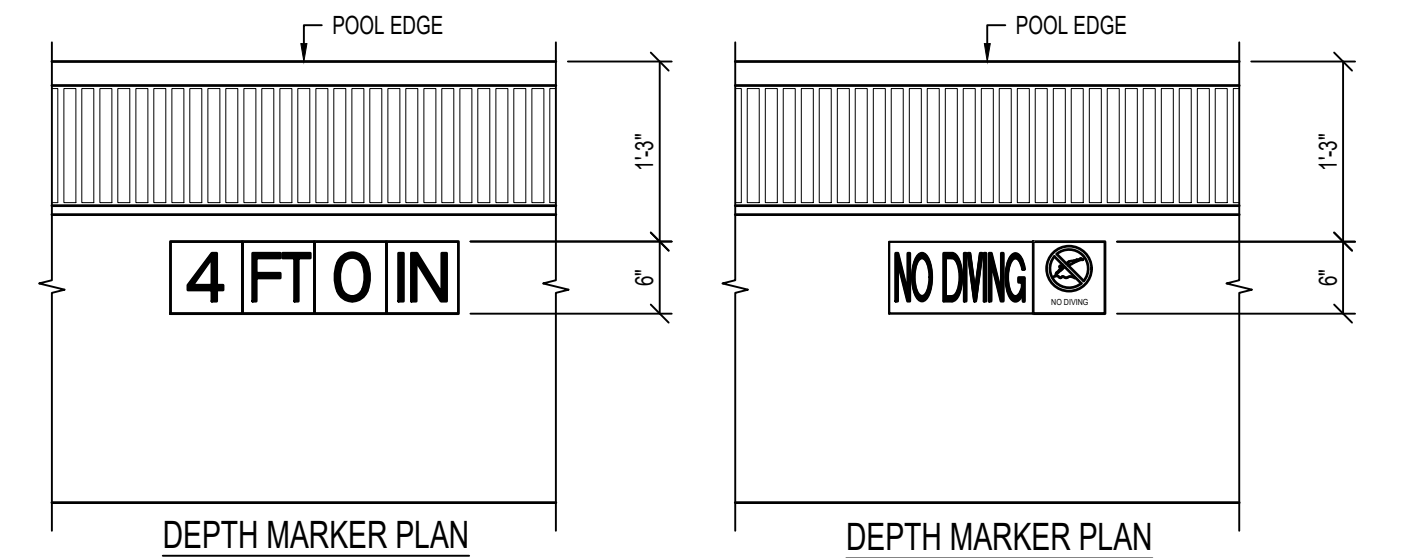
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COMPETITION POOL DETAILS

SHEET #:

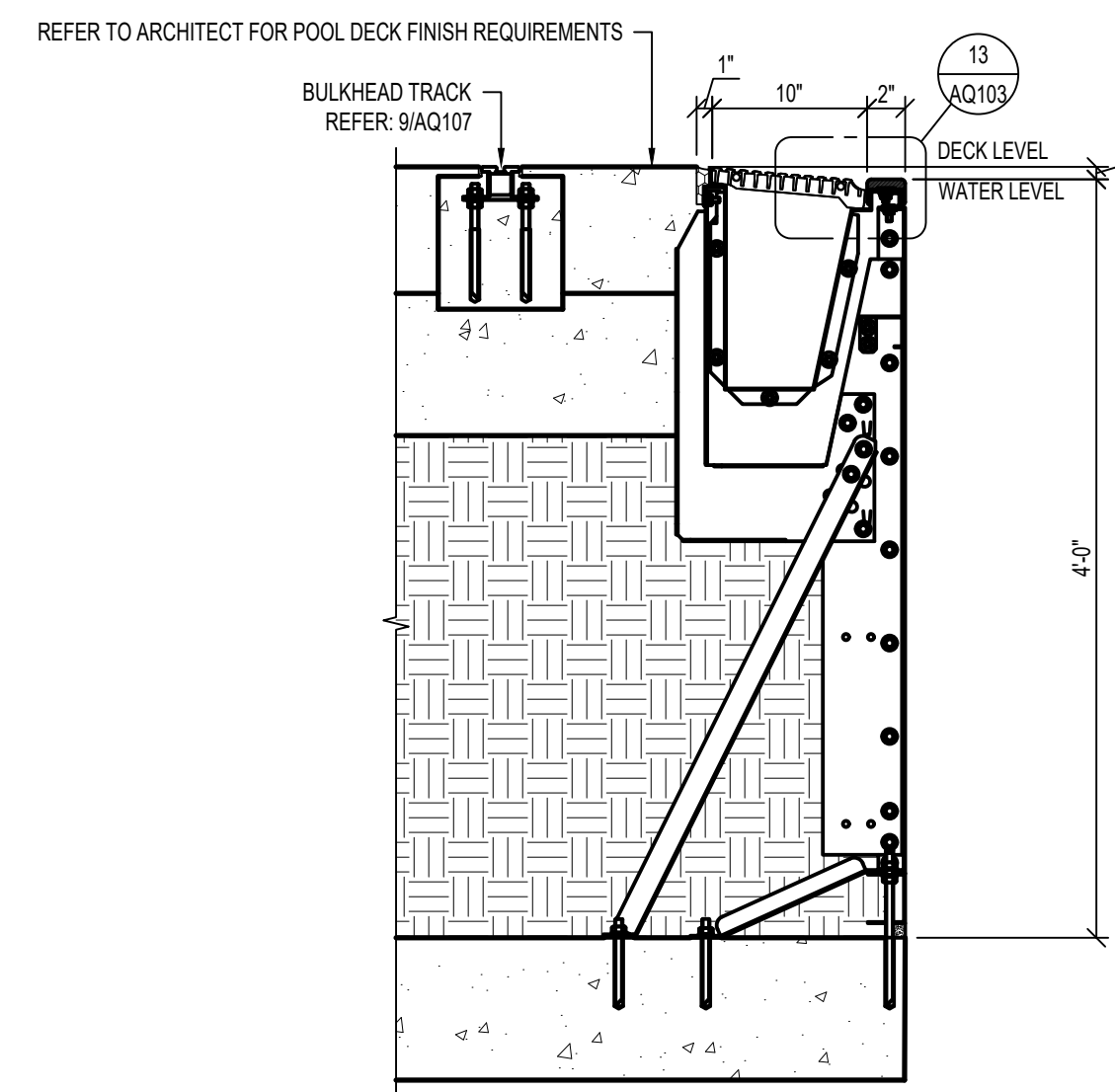
AQ105



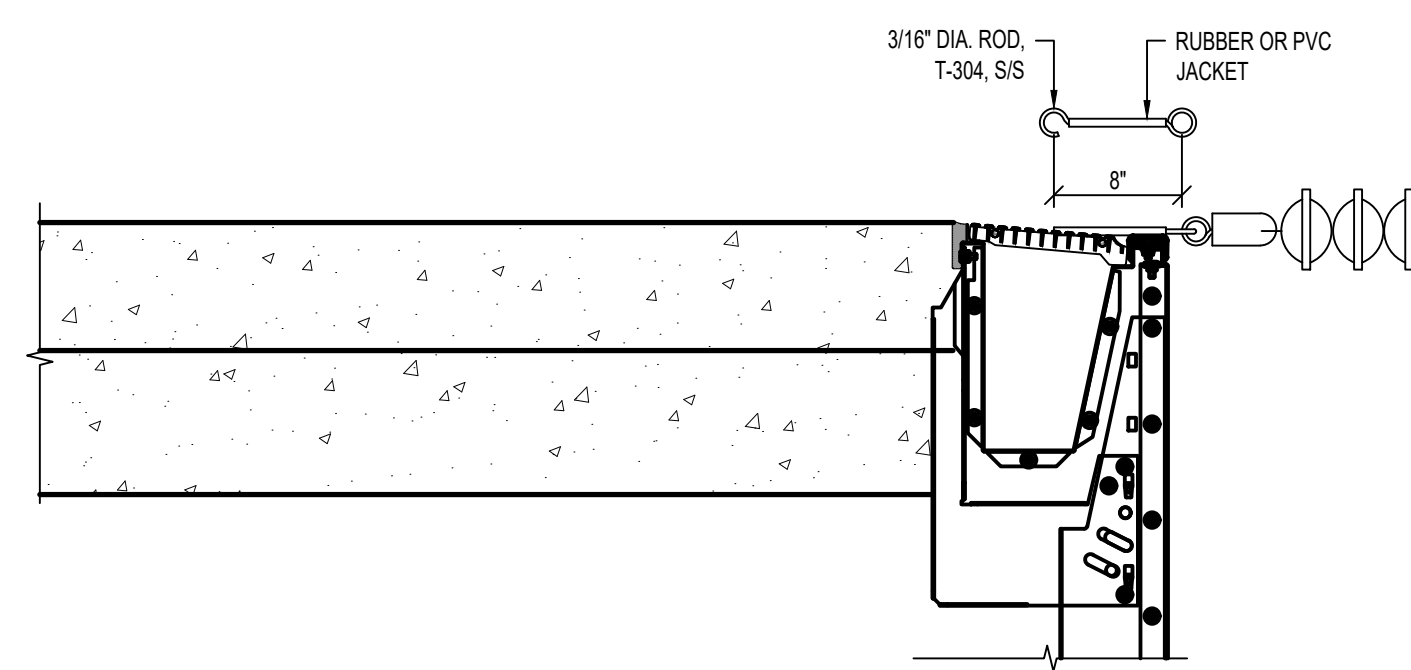
10
AQ105
COMPETITION POOL LIFT
3/8" = 1'-0"



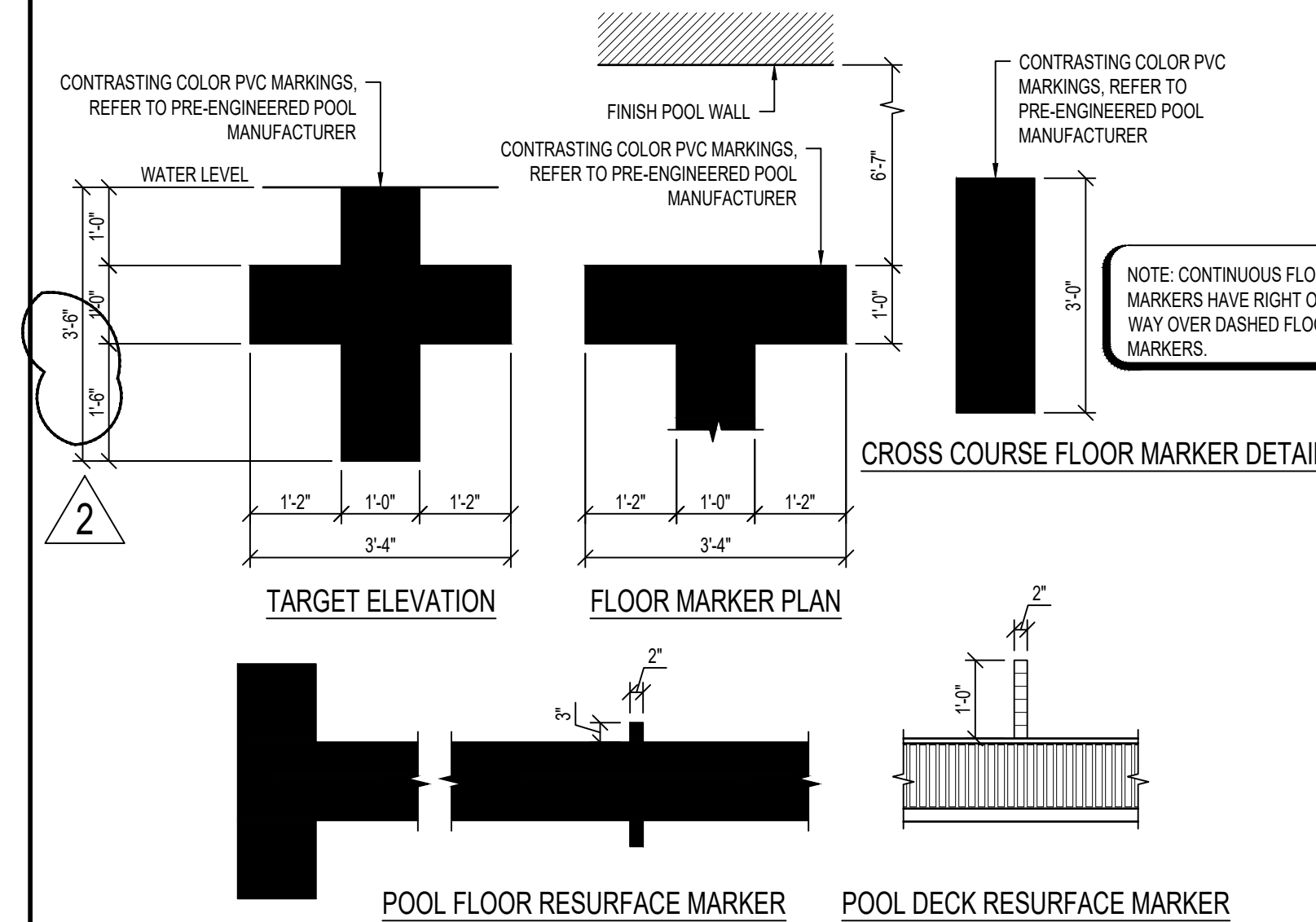
6
AQ105
DEPTH MARKERS & WARNING SIGNS
3/4" = 1'-0"



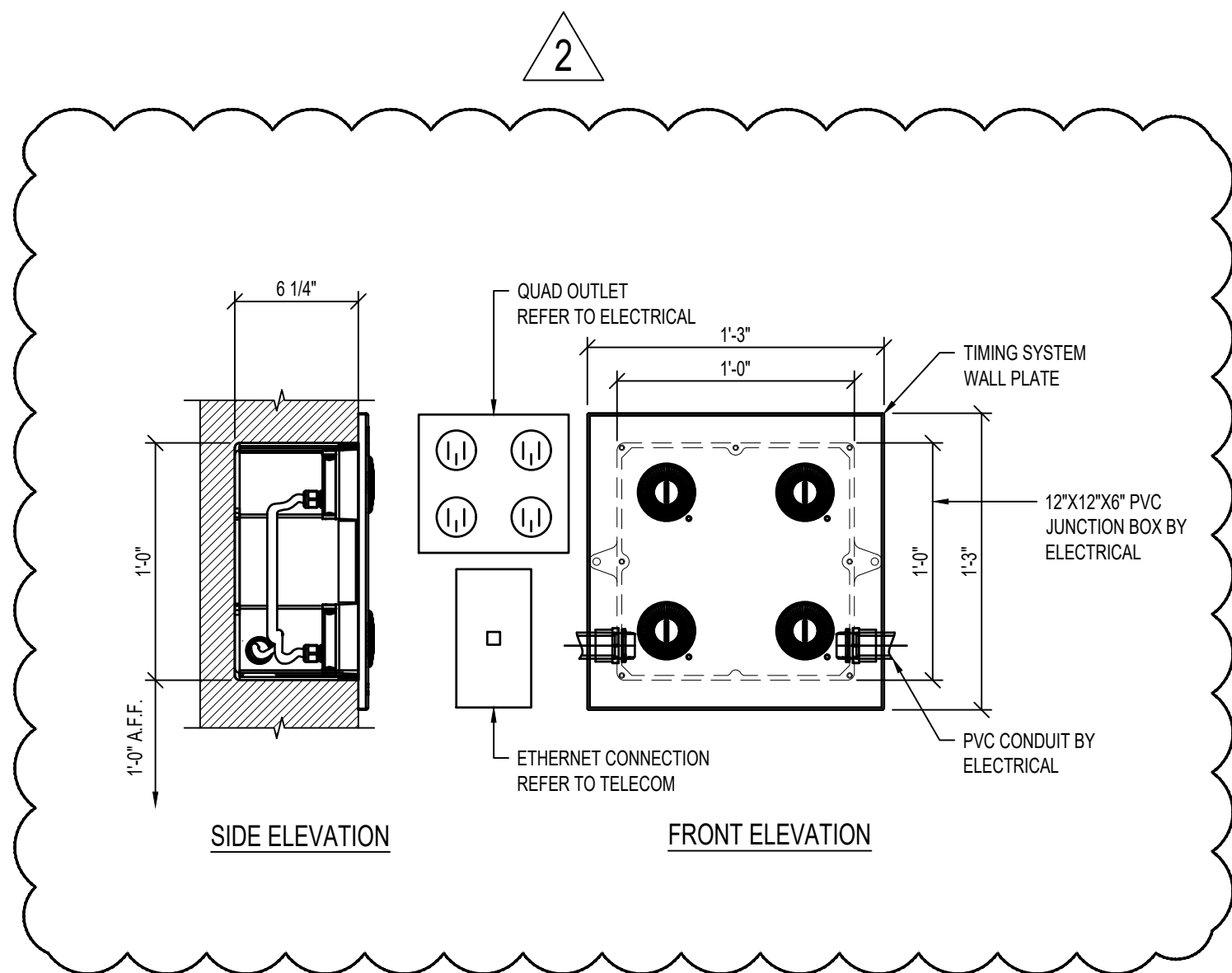
3
AQ105
S/S DECK LEVEL GUTTER WALL TYPE 3
1" = 1'-0"



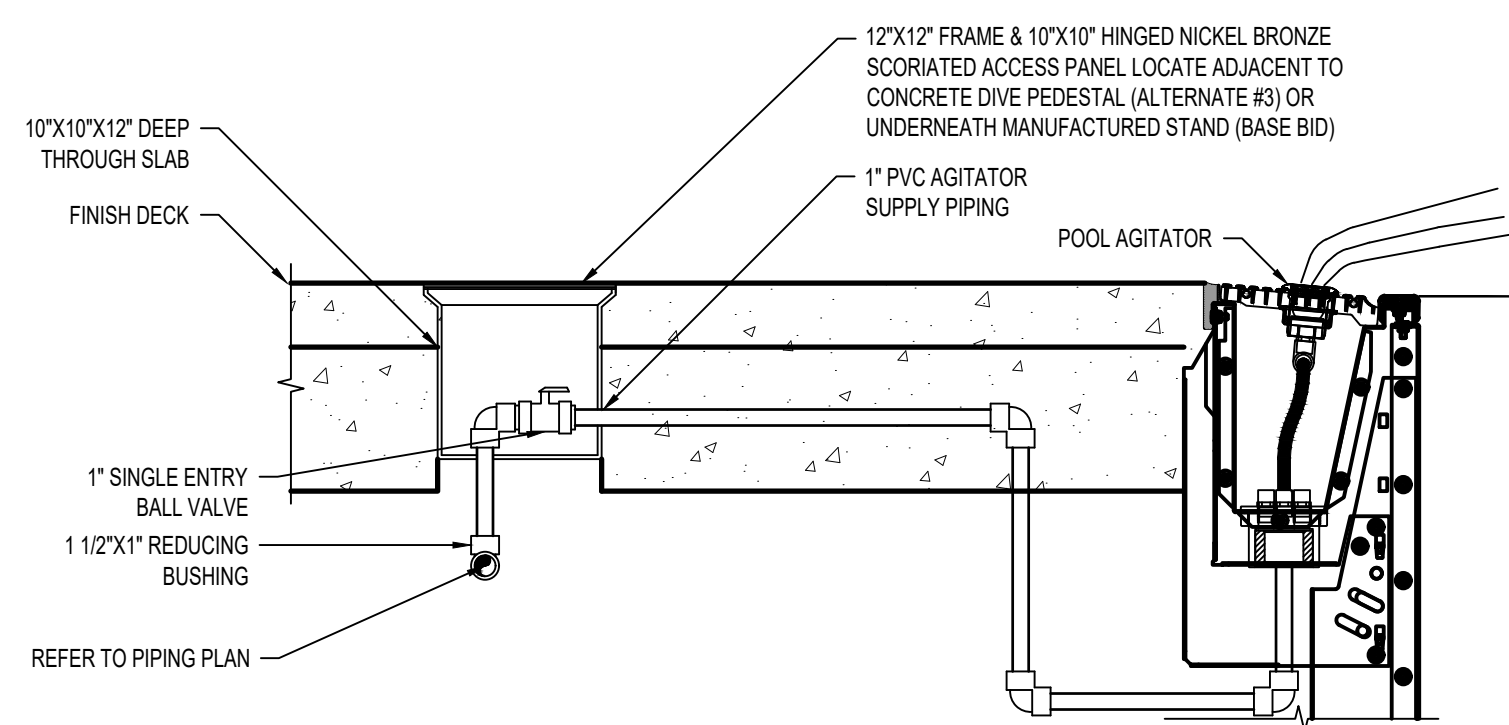
7
AQ105
LANE ROPE EXTENSION
1" = 1'-0"



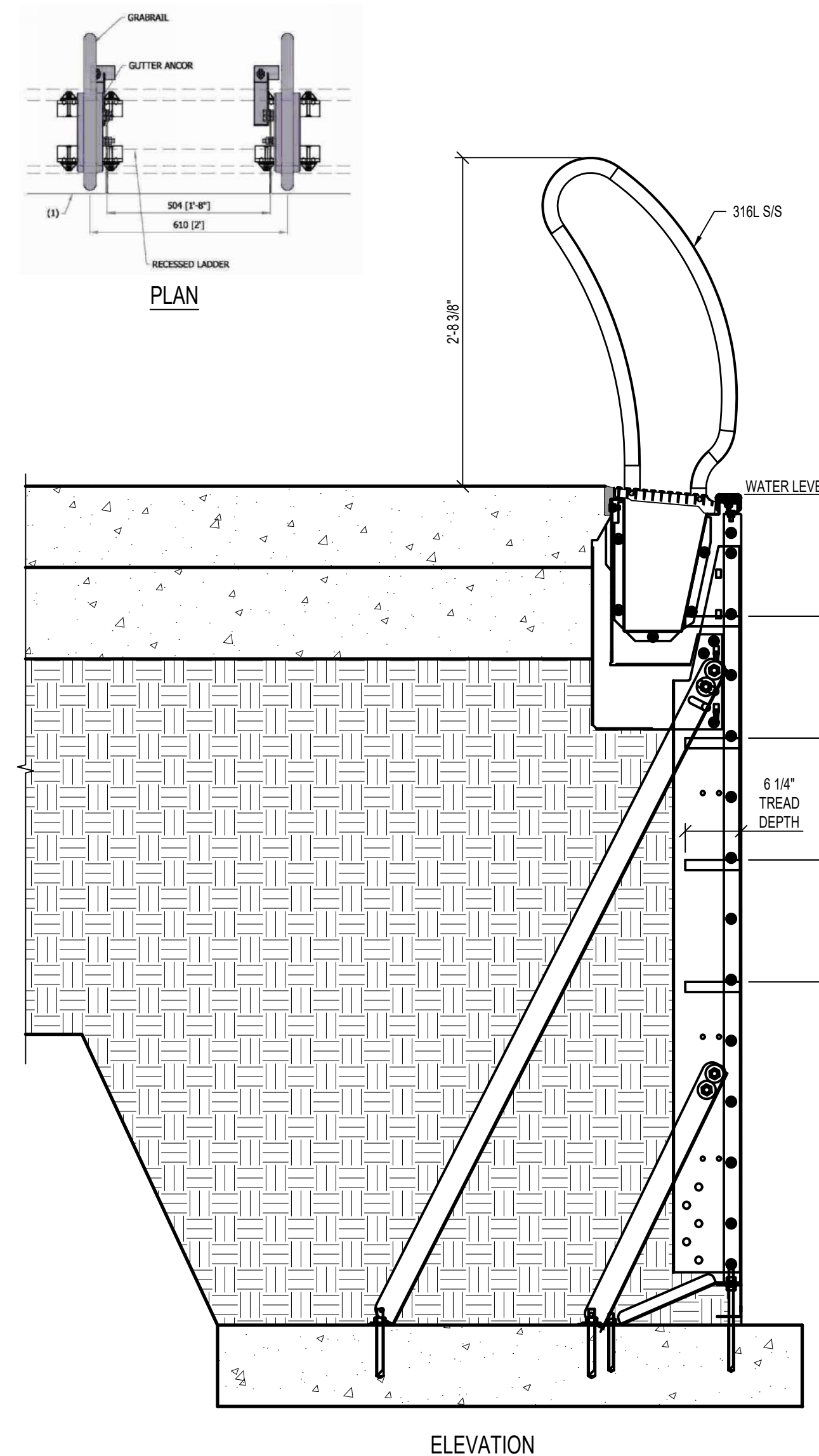
4
AQ105
WALL TARGETS & FLOOR MARKERS
1/2" = 1'-0"



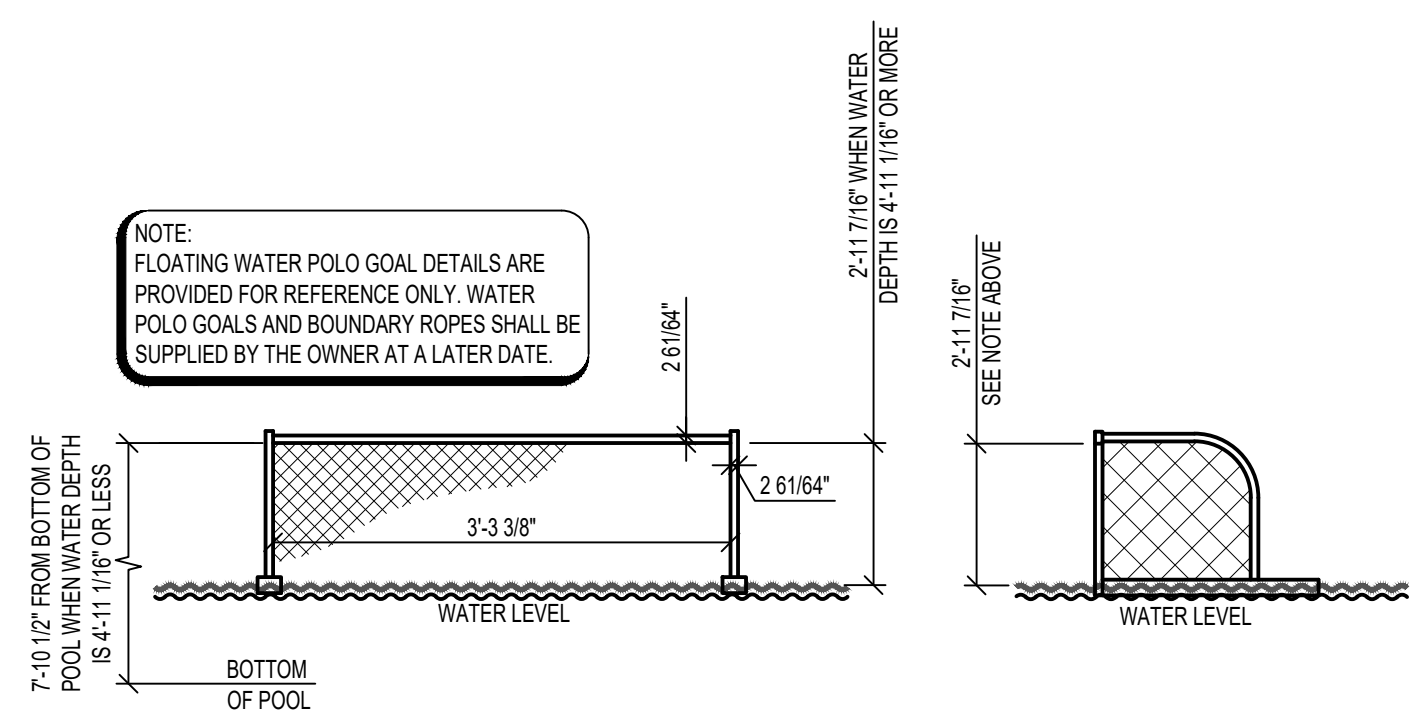
11
AQ105
WALL PLATE
1 1/2" = 1'-0"



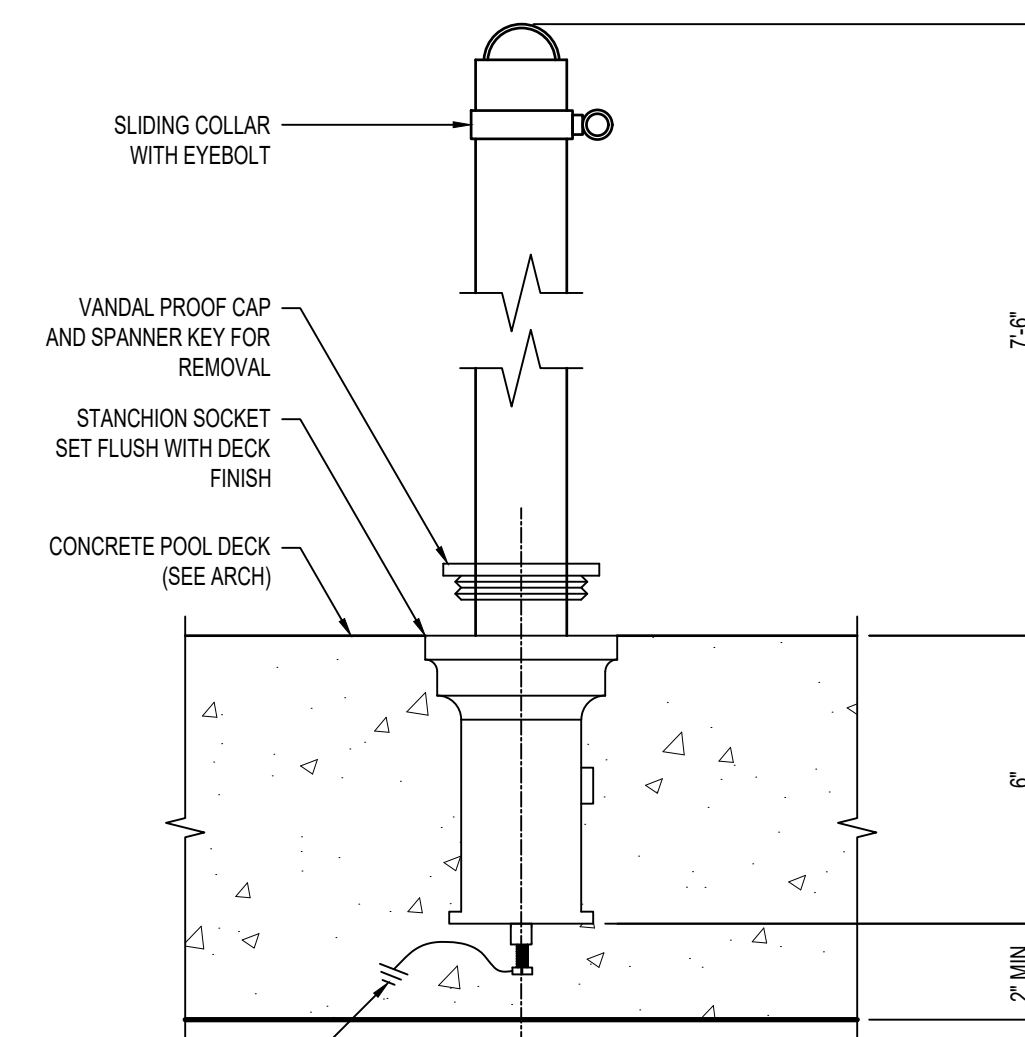
8
AQ105
WATER SURFACE AGITATOR
3/4" = 1'-0"



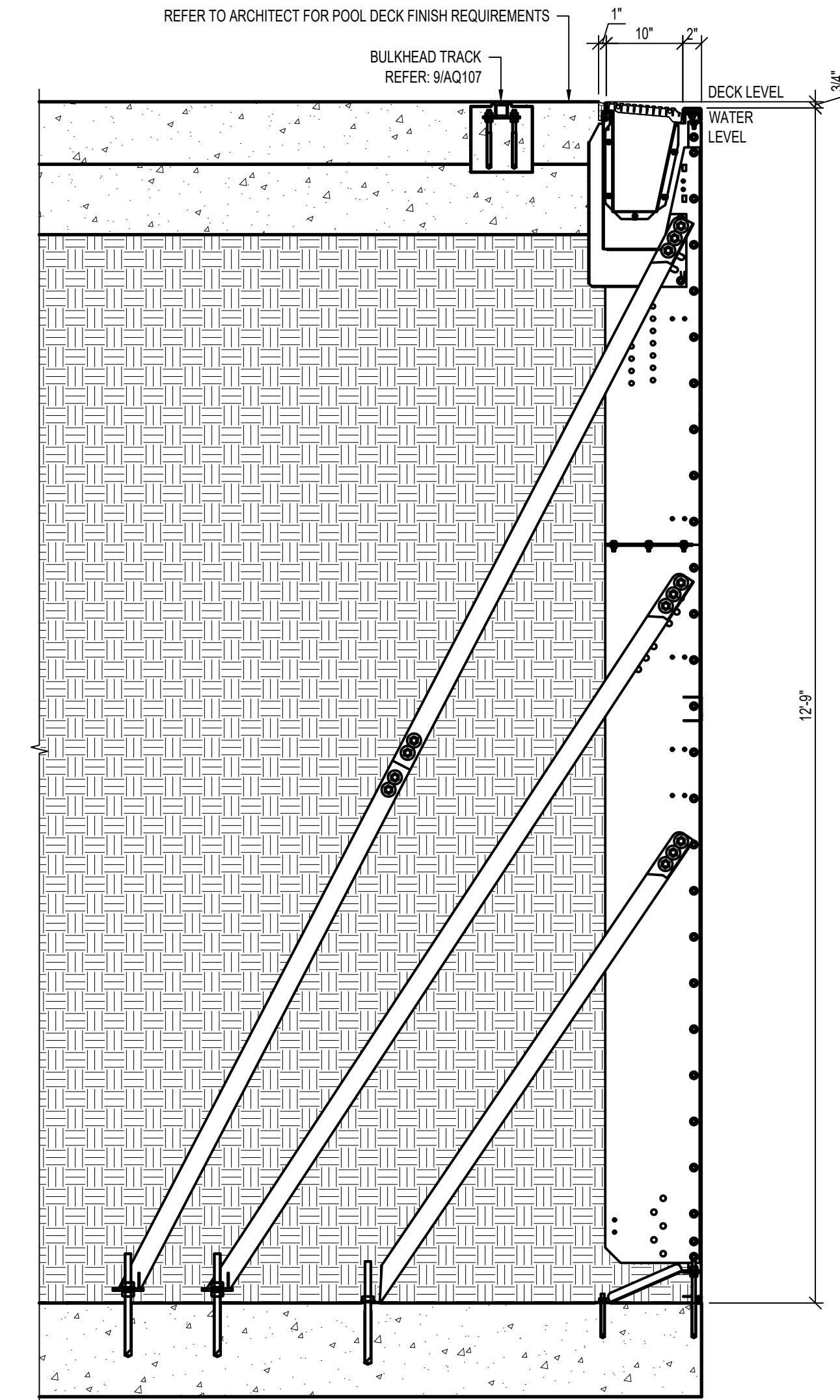
5
AQ105
GRAB RAILS & RECESSED STEPS
1" = 1'-0"



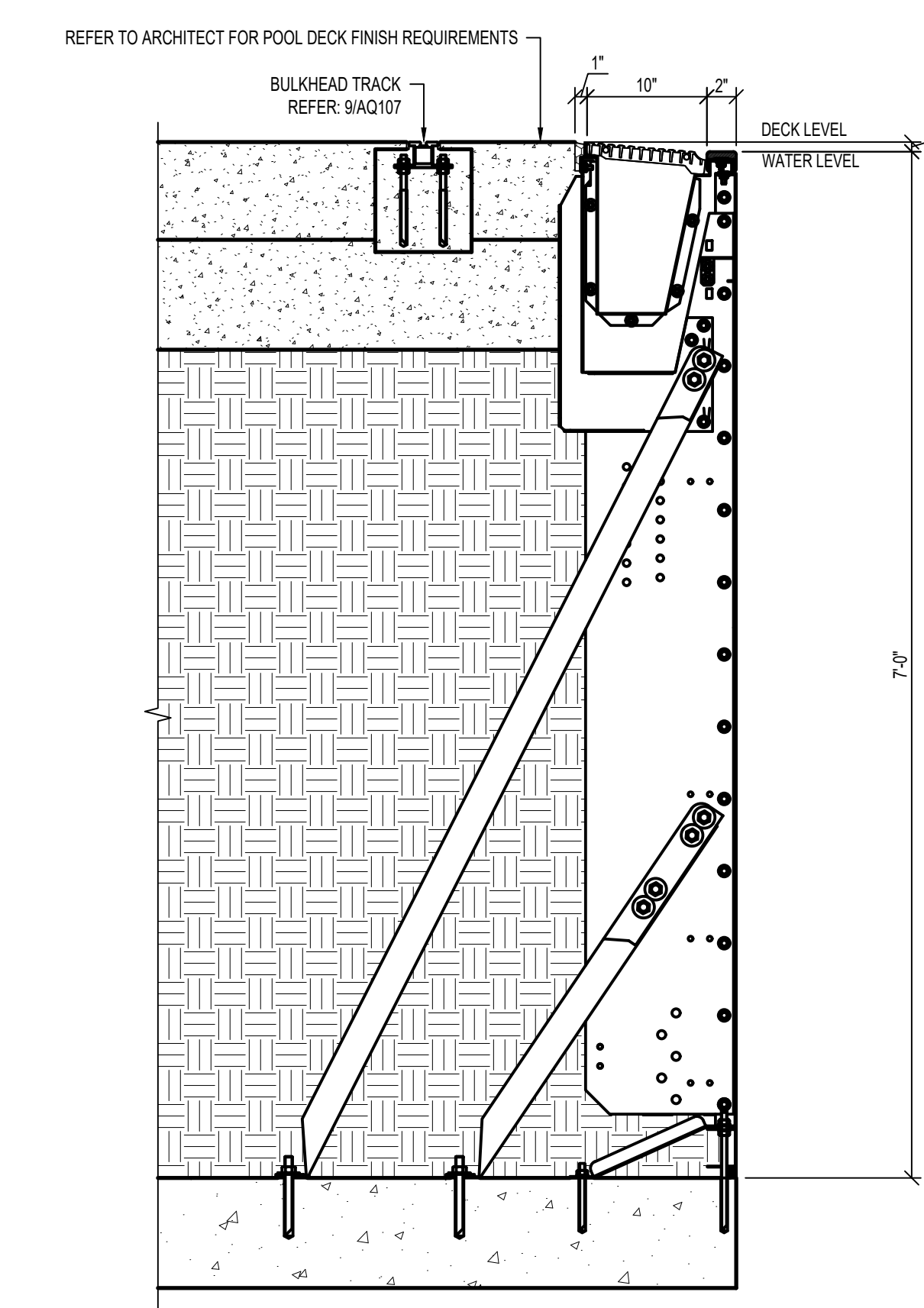
12
AQ105
FLOATING WATER POLO GOAL
1/4" = 1'-0"



9
AQ105
STANCHION POST & ANCHOR
3" = 1'-0"



1
AQ105
S/S DECK LEVEL GUTTER WALL TYPE 1
3/4" = 1'-0"



2
AQ105
S/S DECK LEVEL GUTTER WALL TYPE 2
1" = 1'-0"

AQ106

4 BUTTRESS ANCHOR
AQ106 3/4" = 1'-0"



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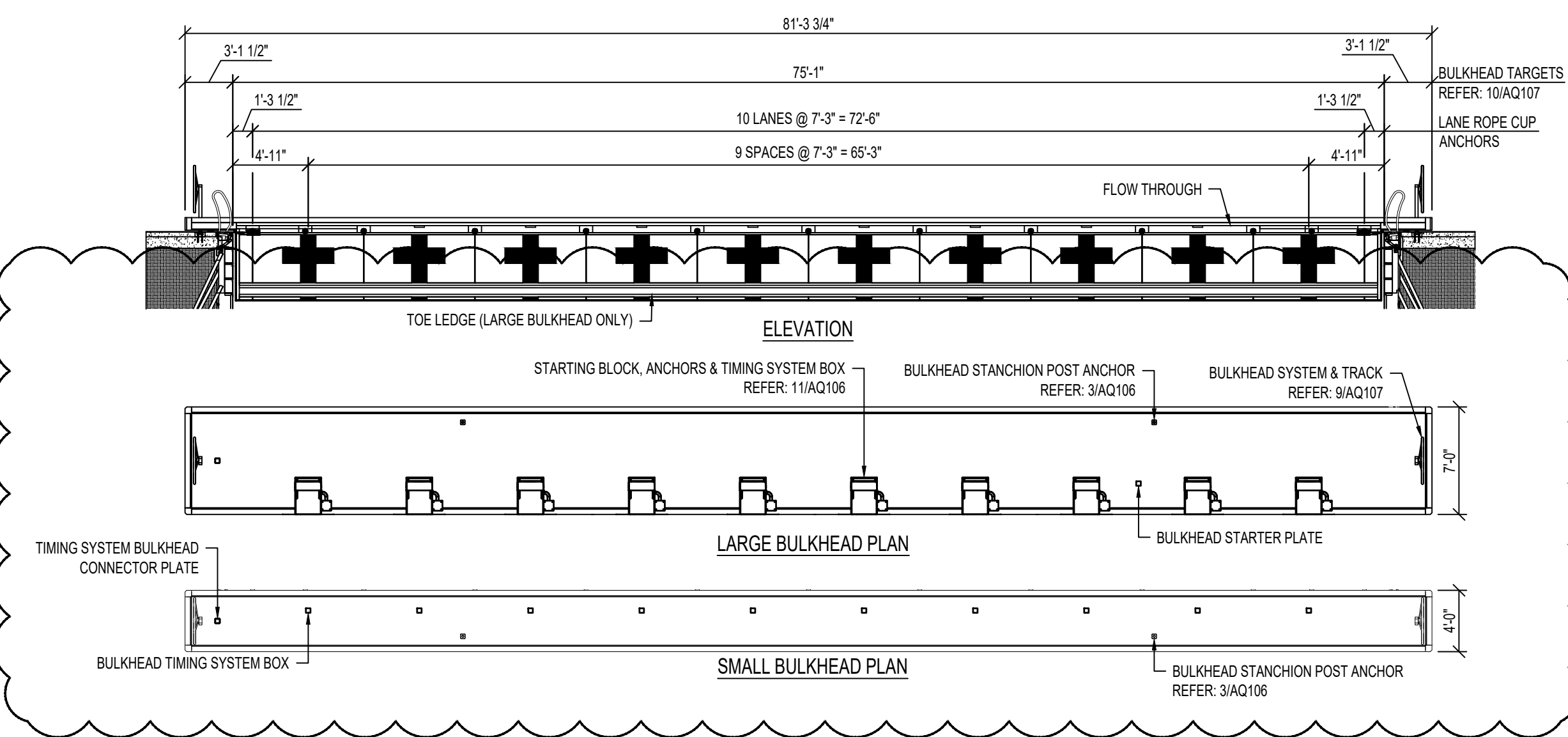
REV'D BY: CCH

PROJECT #: 22044

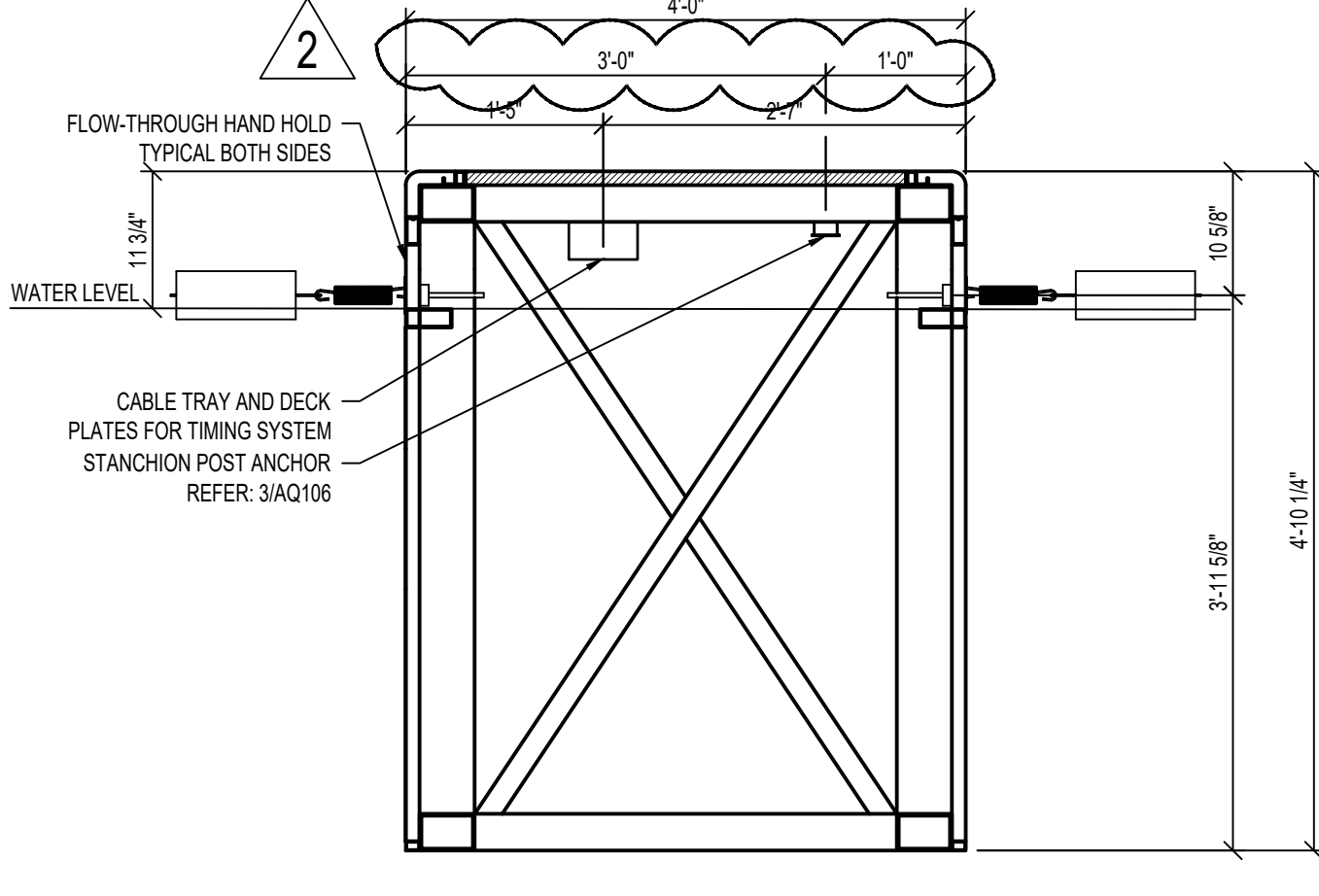
TITLE:
COMPETITION POOL DETAILS

SHEET #:

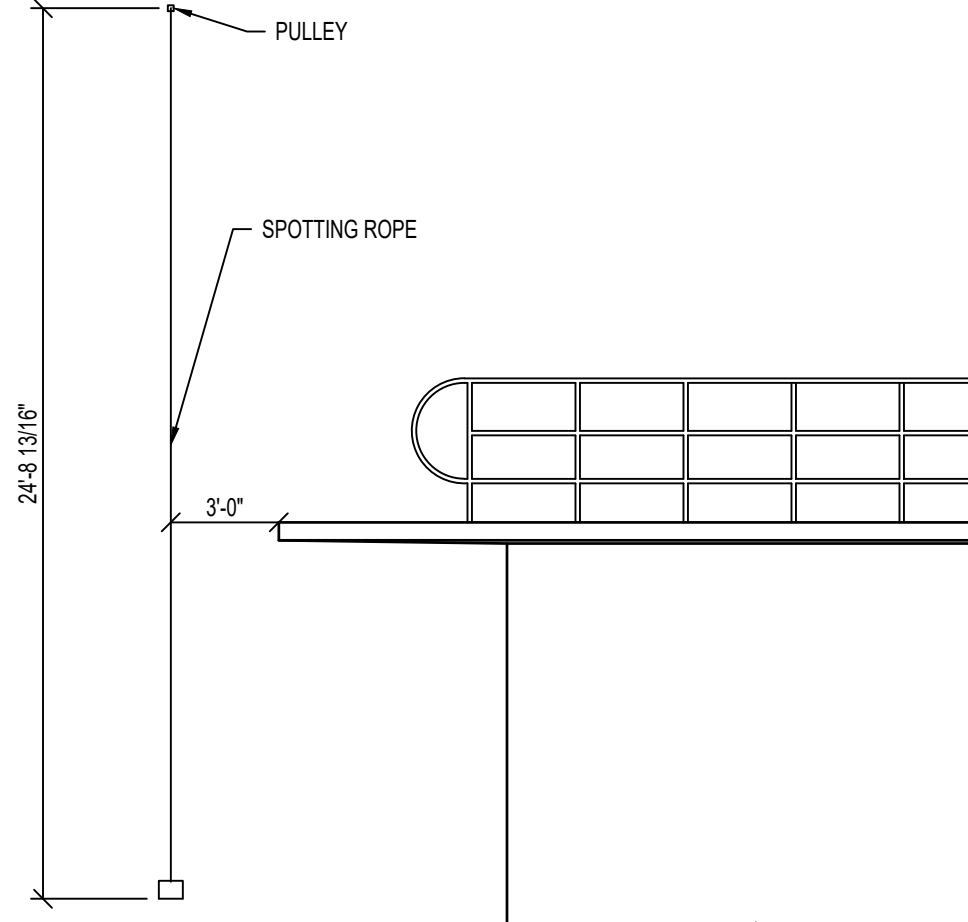
AQ107



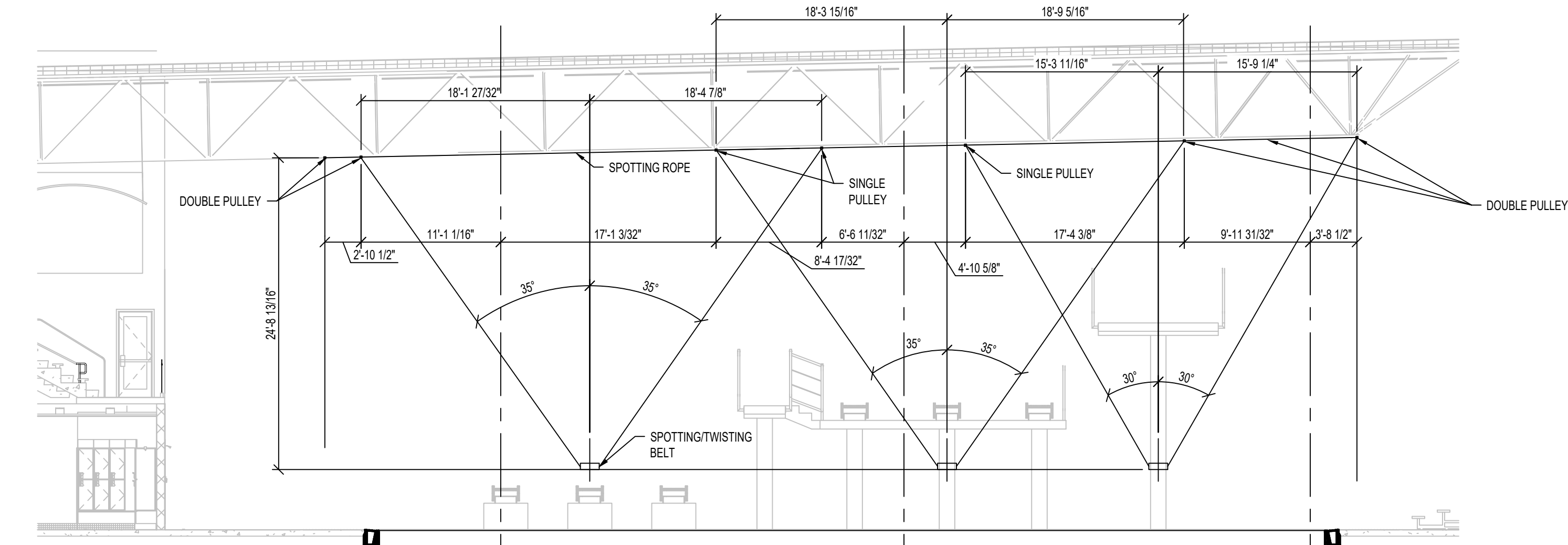
7 BULKHEAD PLANS & FRONT ELEVATION
AQ107 1/8" = 1'-0"



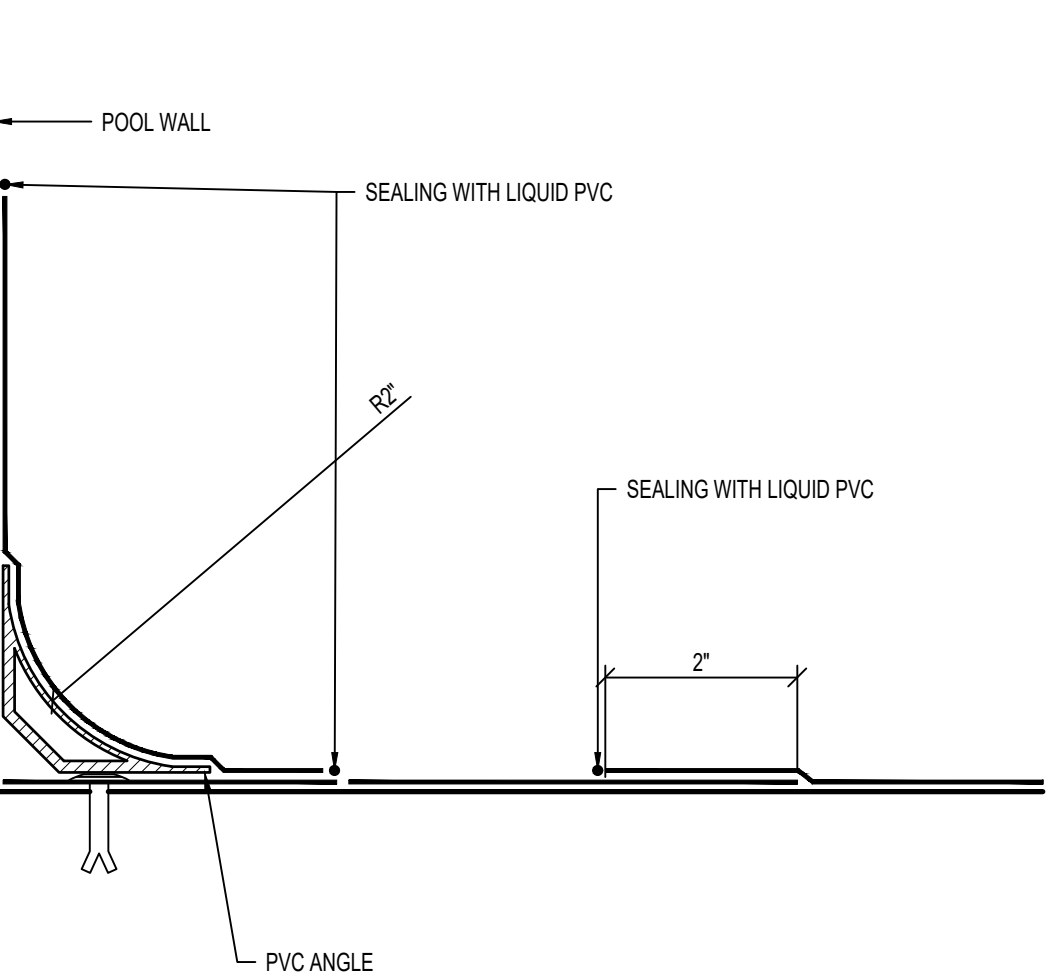
11 SMALL BULKHEAD SECTION
AQ107 3/4" = 1'-0"



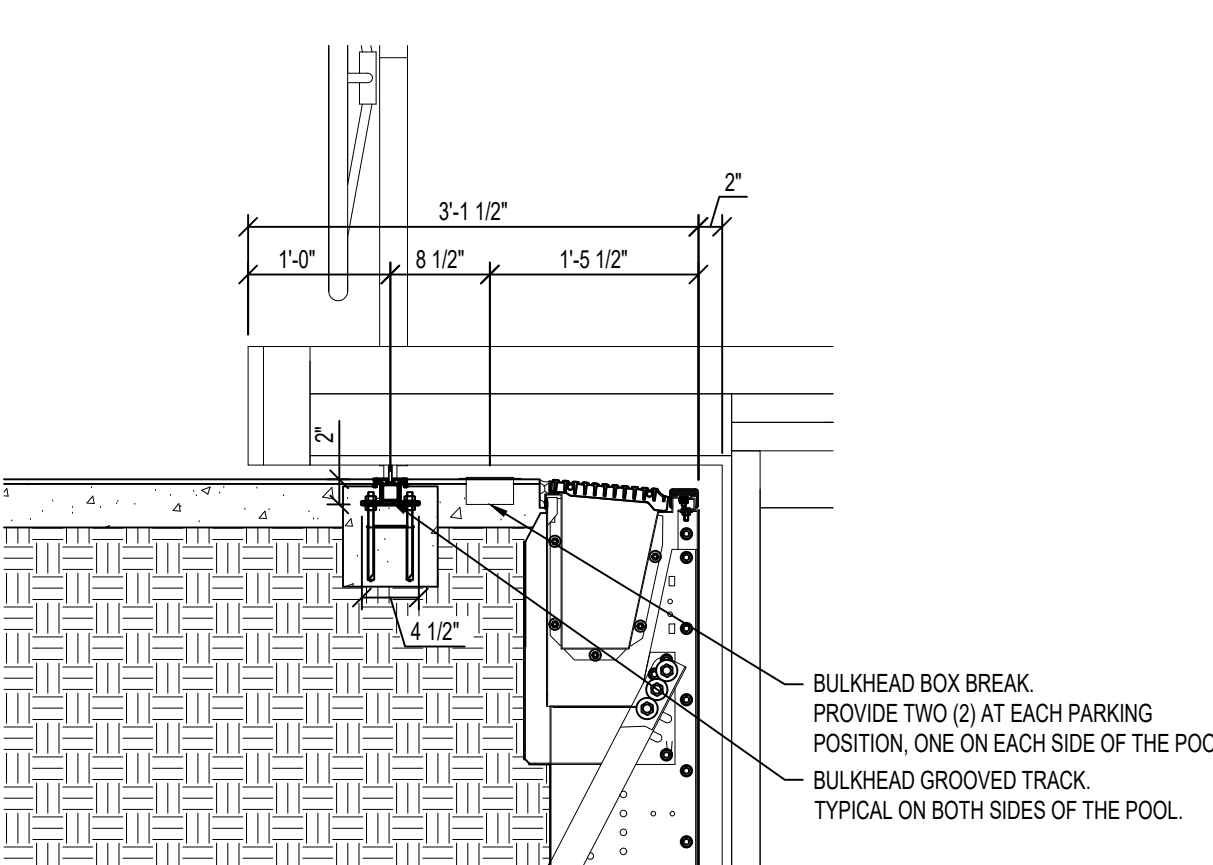
8 FIVE METER DIVING HARNESS
AQ107 3/16" = 1'-0"



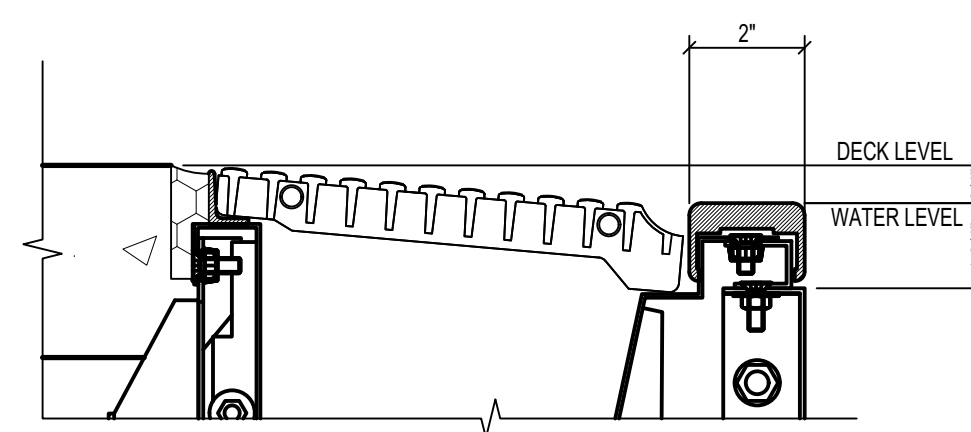
2 DIVING HARNESS ELEVATION
AQ107 1/8" = 1'-0"



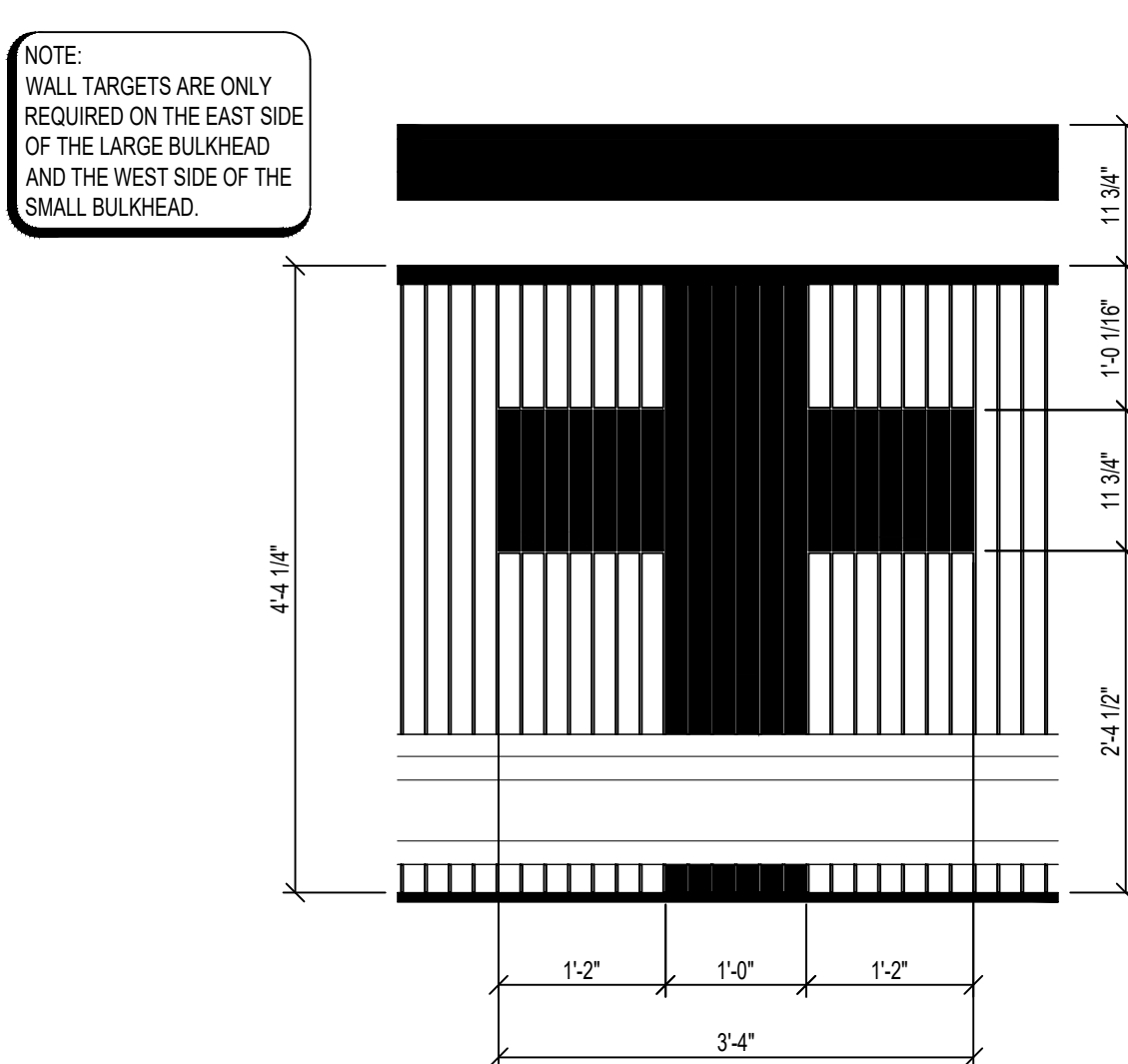
12 POOL COVE
AQ107 6" = 1'-0"



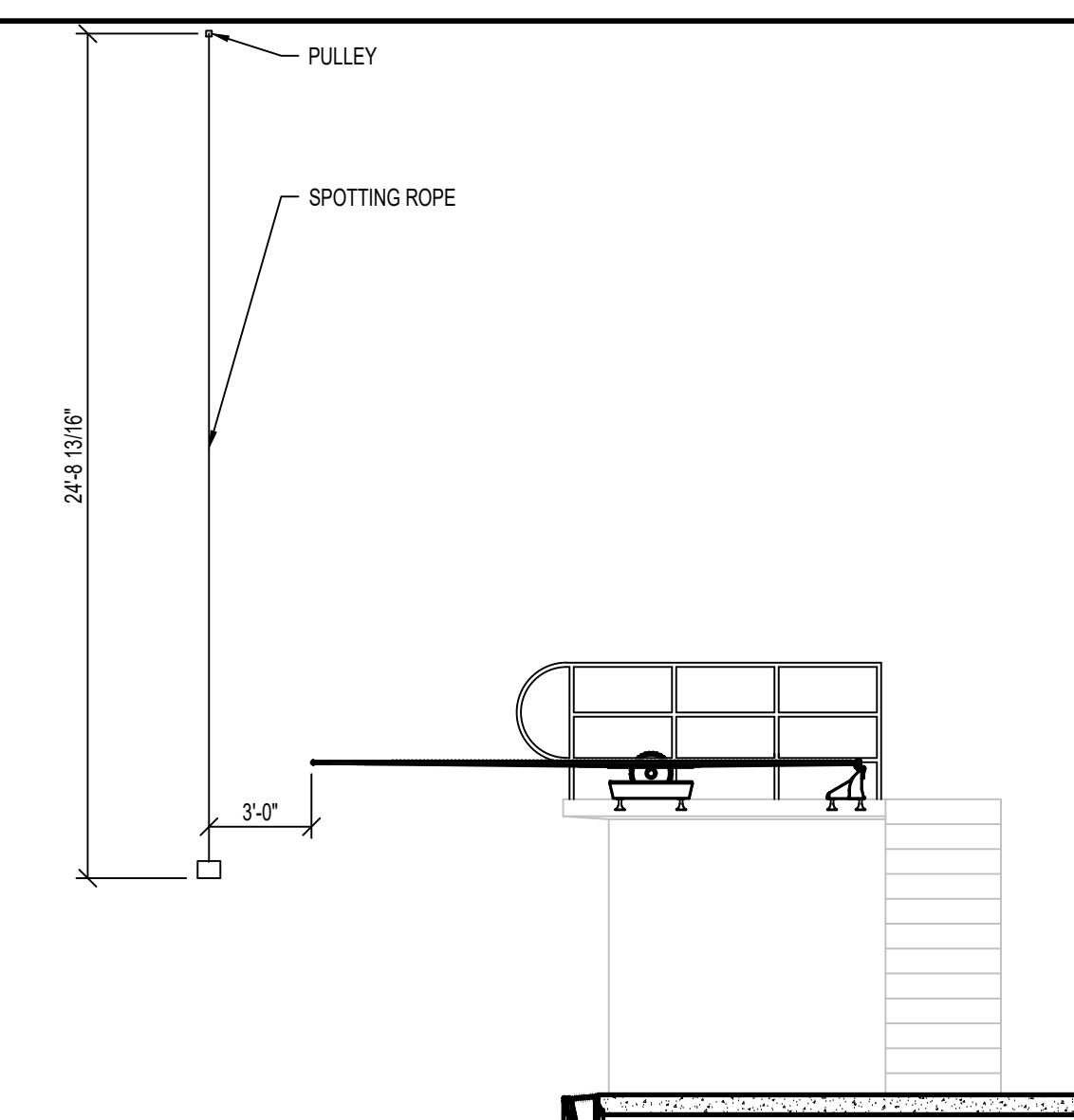
9 BULKHEAD TRACK
AQ107 3/4" = 1'-0"



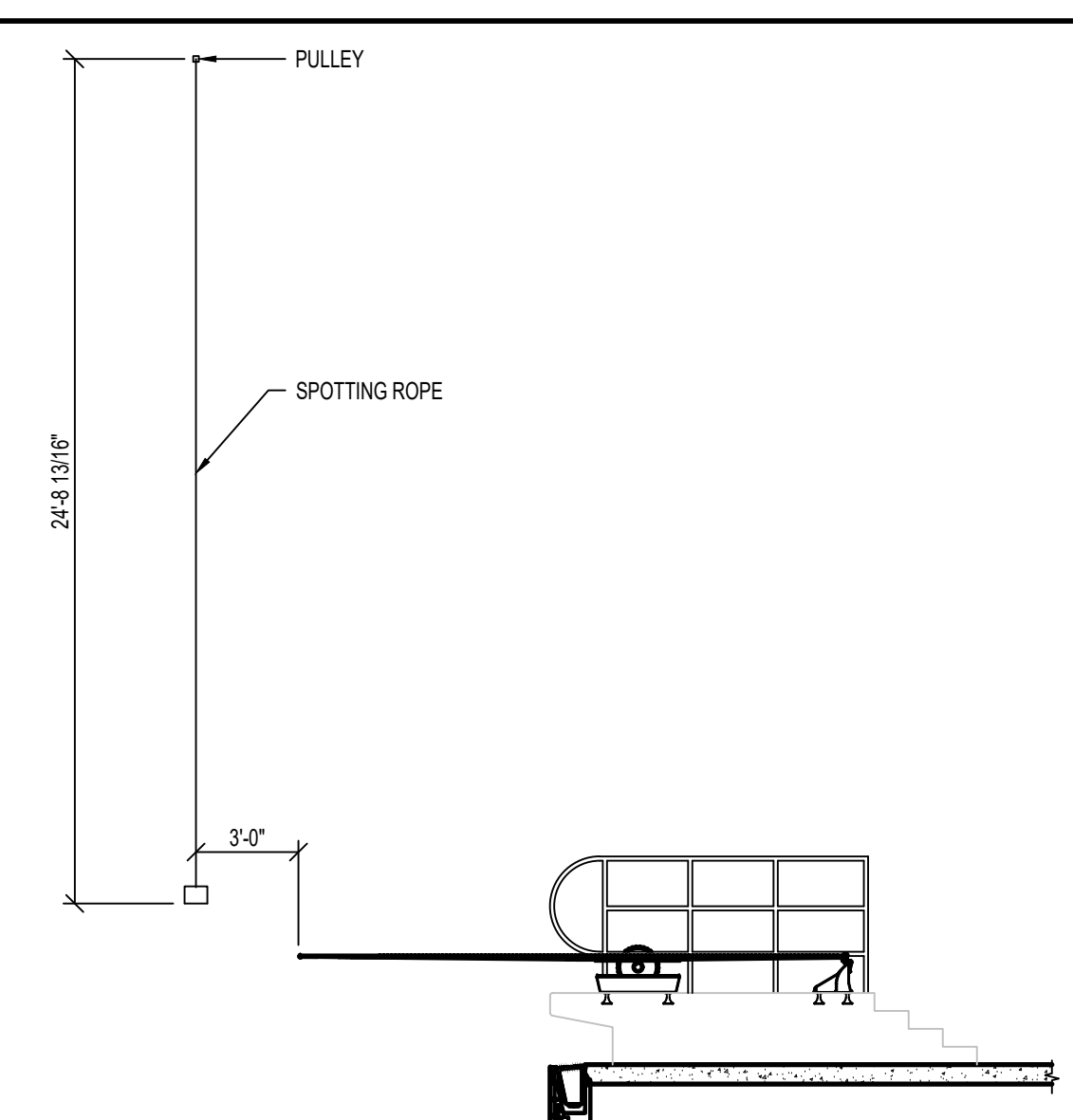
13 S/S DECK LEVEL GUTTER HANDHOLD
AQ107 3" = 1'-0"



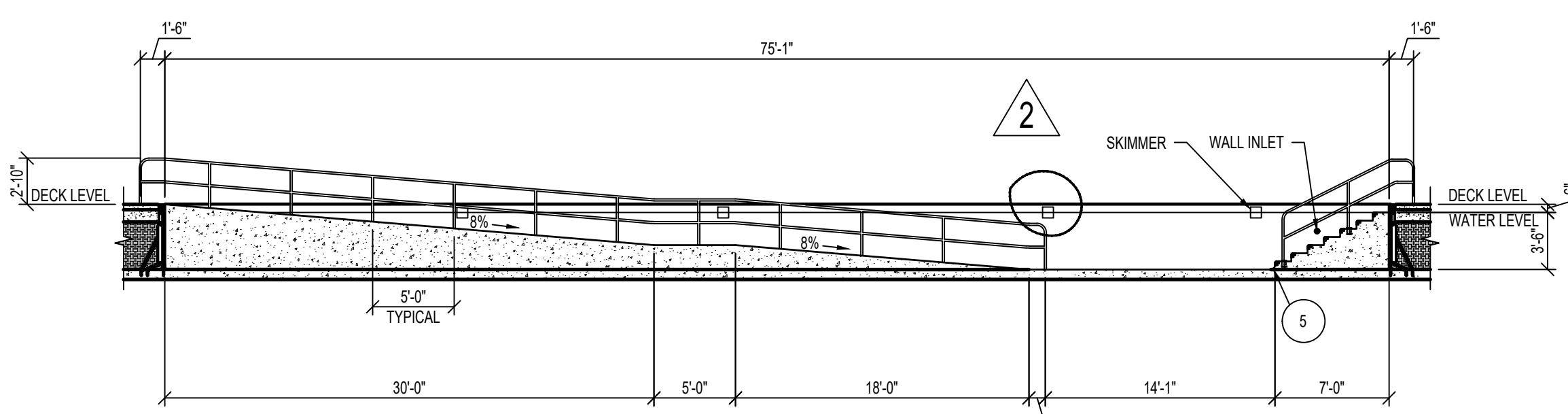
10 BULKHEAD TARGET
AQ107 3/4" = 1'-0"



6 THREE METER DIVING HARNESS
AQ107 3/16" = 1'-0"



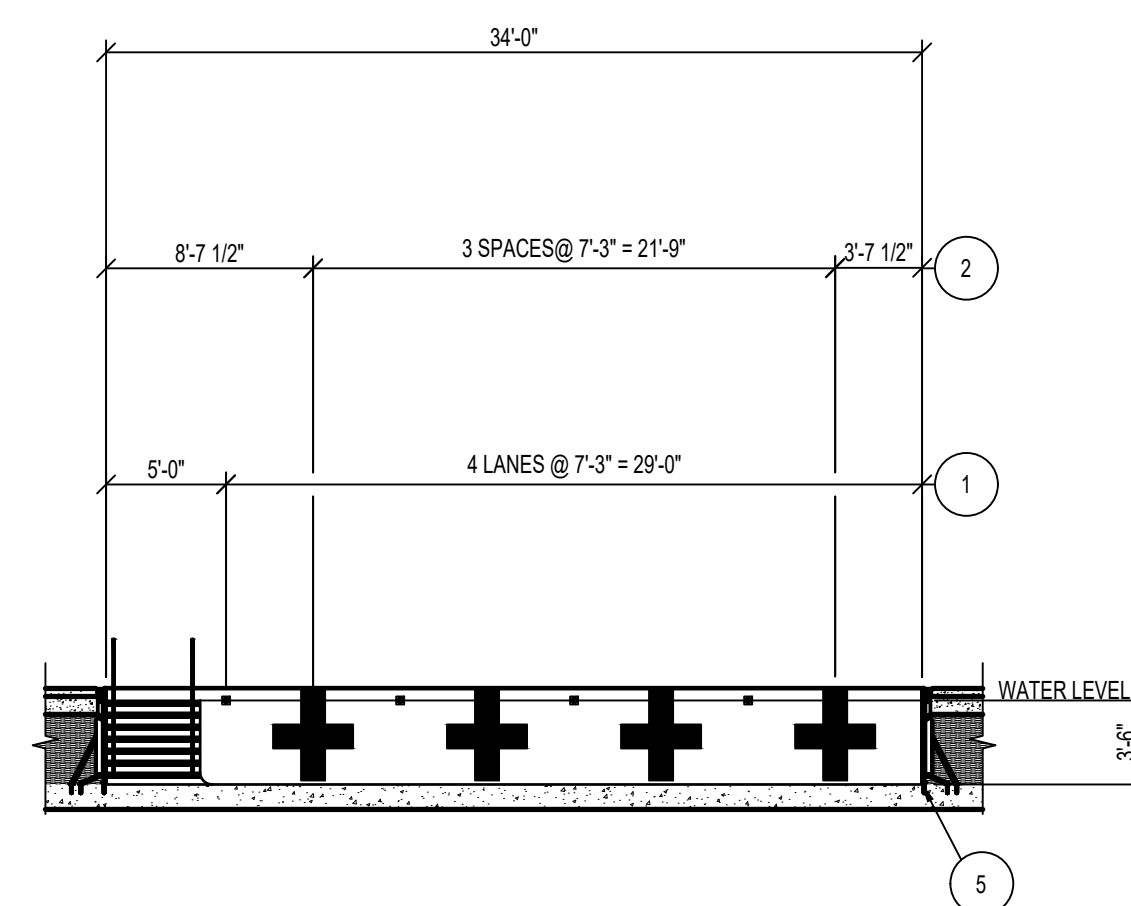
4 ONE METER DIVING HARNESS
AQ107 3/16" = 1'-0"



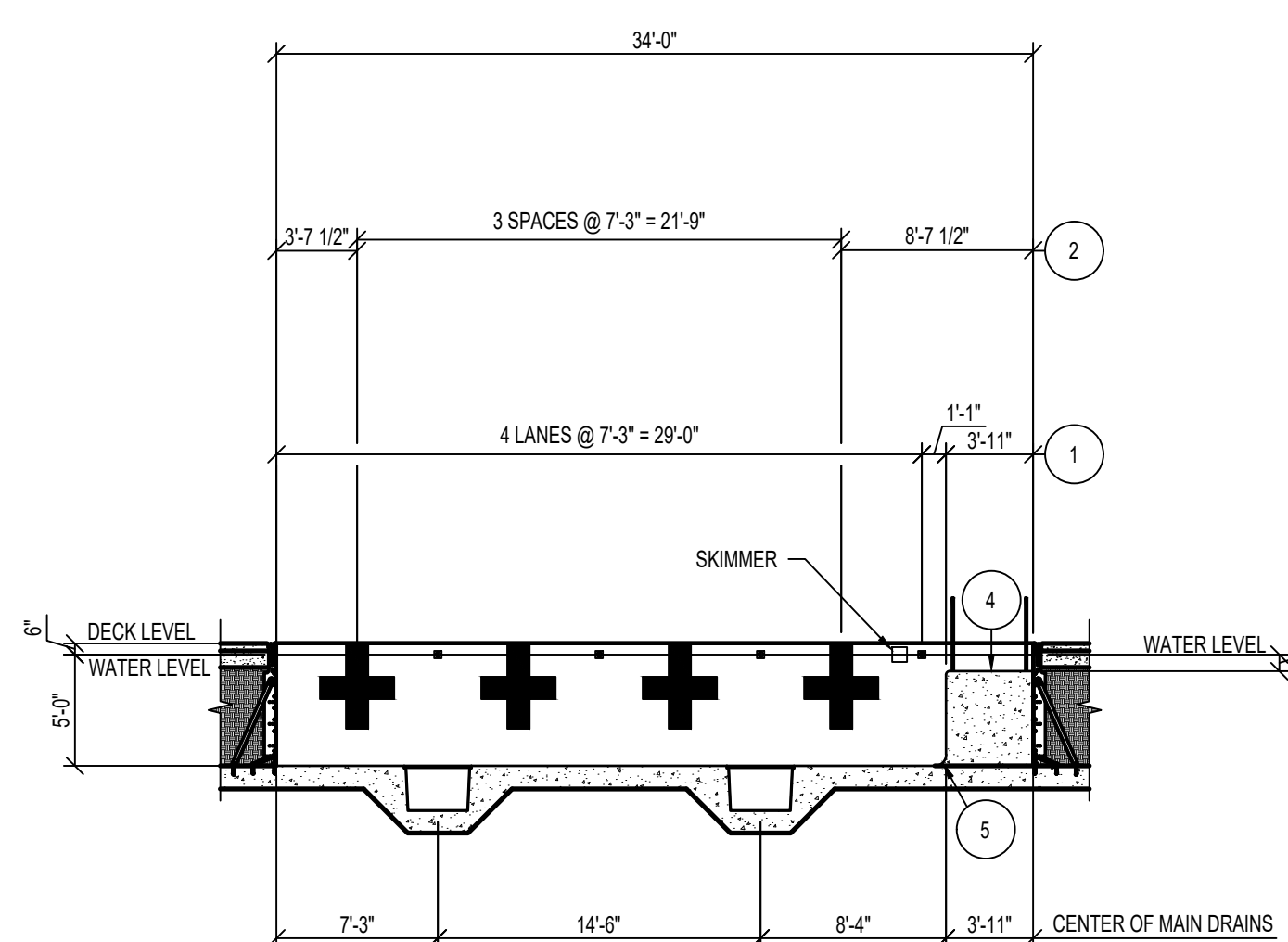
3
AQ200

TRAINING POOL SECTION

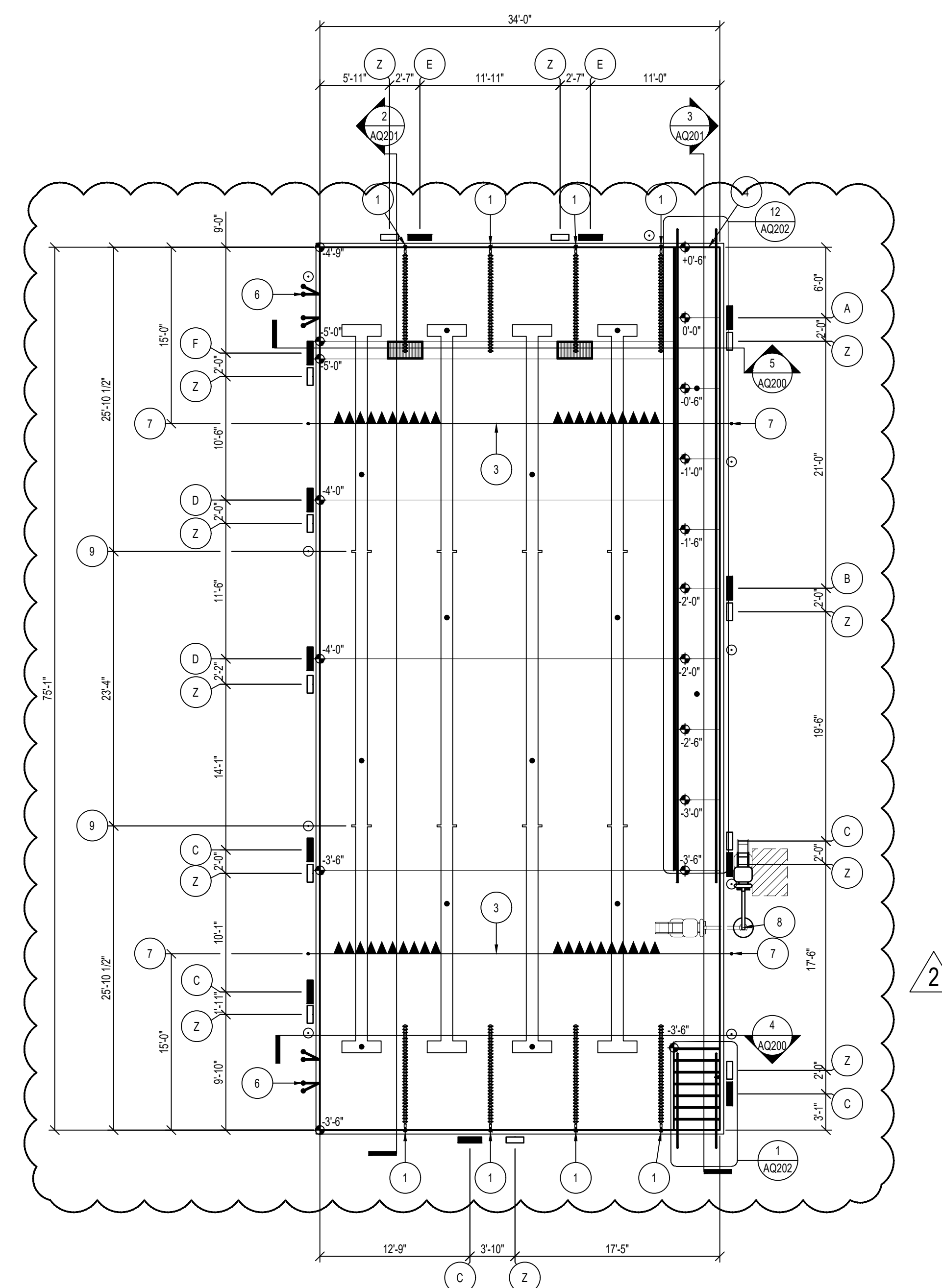
1/8" = 1'-0"



4 TRAINING POOL SECTION
AQ200
1/8" = 1'-0"



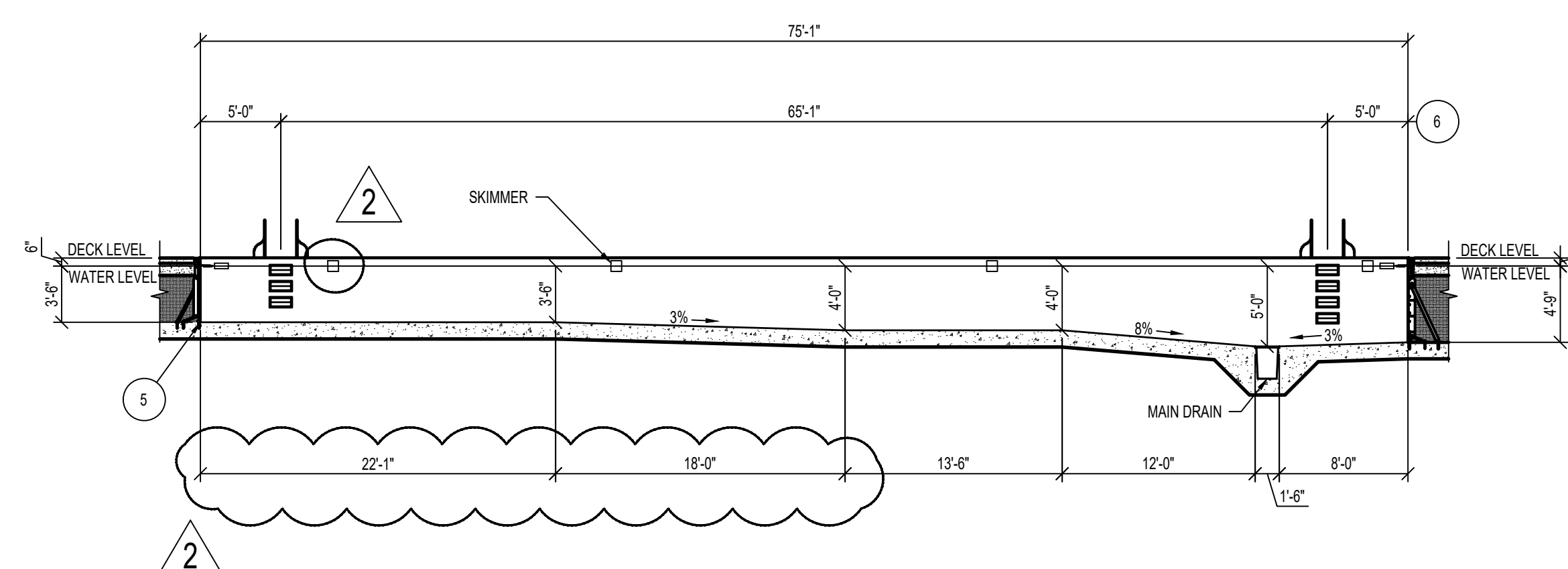
5 TRAINING POOL SECTION
AQ200 $1/8" = 1'-0"$



1
AQ200

TRAINING POOL PLAN

1/8" = 1'-0"



2 TRAINING POOL SECTION
AQ200
1/8" = 1'-0"

DEPTH & WARNING SIGNAGE SCHEDULE

ID	SIGNAGE
(A)	0 FT 0 IN
(B)	2 FT 0 IN
(C)	3 FT 6 IN
(D)	4 FT 0 IN
(E)	4 FT 9 IN
(F)	5 FT 0 IN
(Z)	NO DIVING 

NOTE:
REFER: 5/AQ201 FOR DETAIL.

EQUIPMENT SCHEDULE

ID	ITEM
1	LANE ROPE ANCHOR REFER: 1/AQ201
2	WALL TARGET REFER: 6/AQ201
3	BACKSTROKE PENNANT
4	RAMP ENTRY REFER: 12/AQ201
5	POOL COVE REFER: 3/AQ202
6	GRAB RAILS & RECESSED STEPS REFER: 9/AQ201
7	STANCHION POST & ANCHOR REFER: 8/AQ201
8	POOL LIFT & ANCHOR REFER: 10/AQ201
9	RESURFACING MARKER REFER: 6/AQ201



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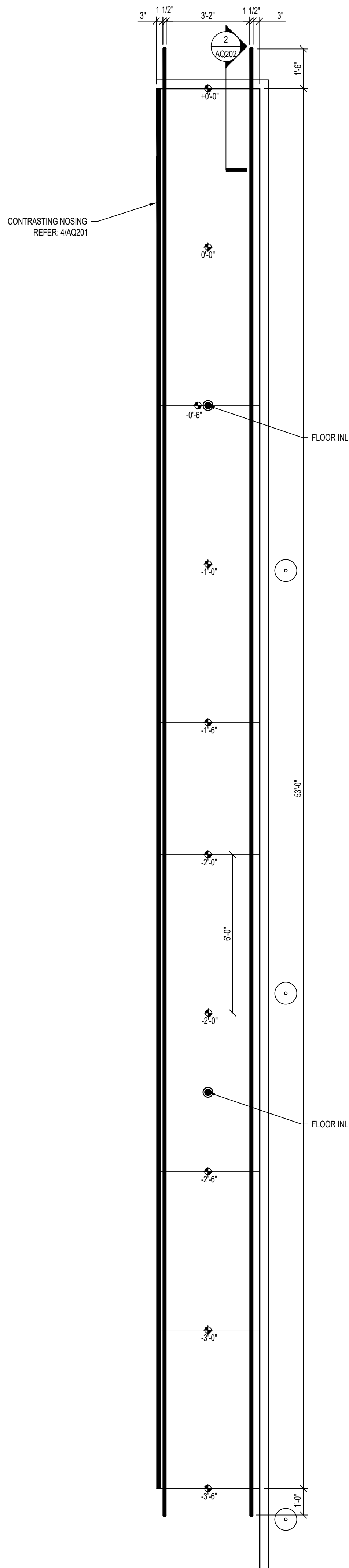
REV'D BY: CCH

PROJECT #: 22044

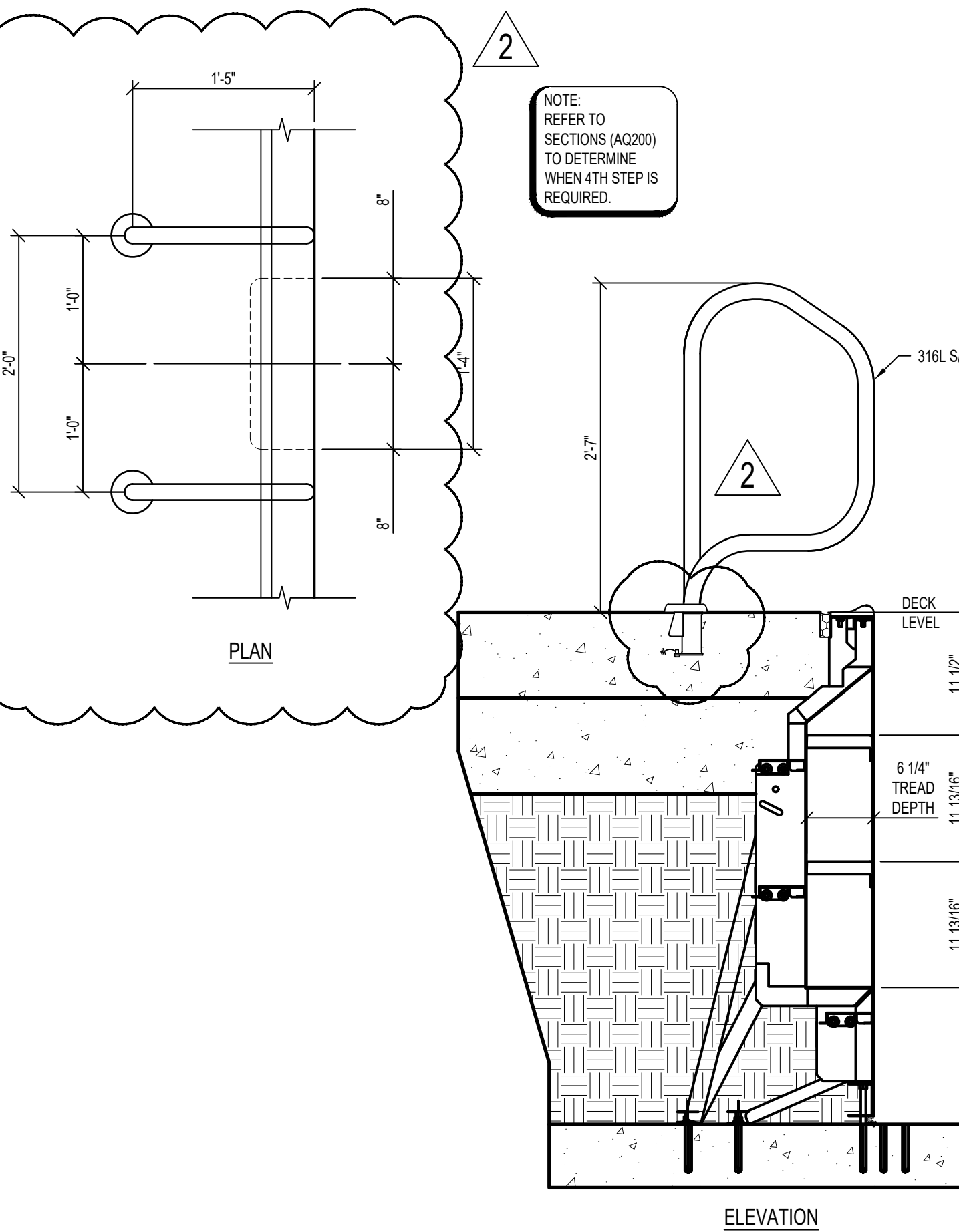
TITLE: TRAINING POOL PLAN & SECTIONS

SHEET #:

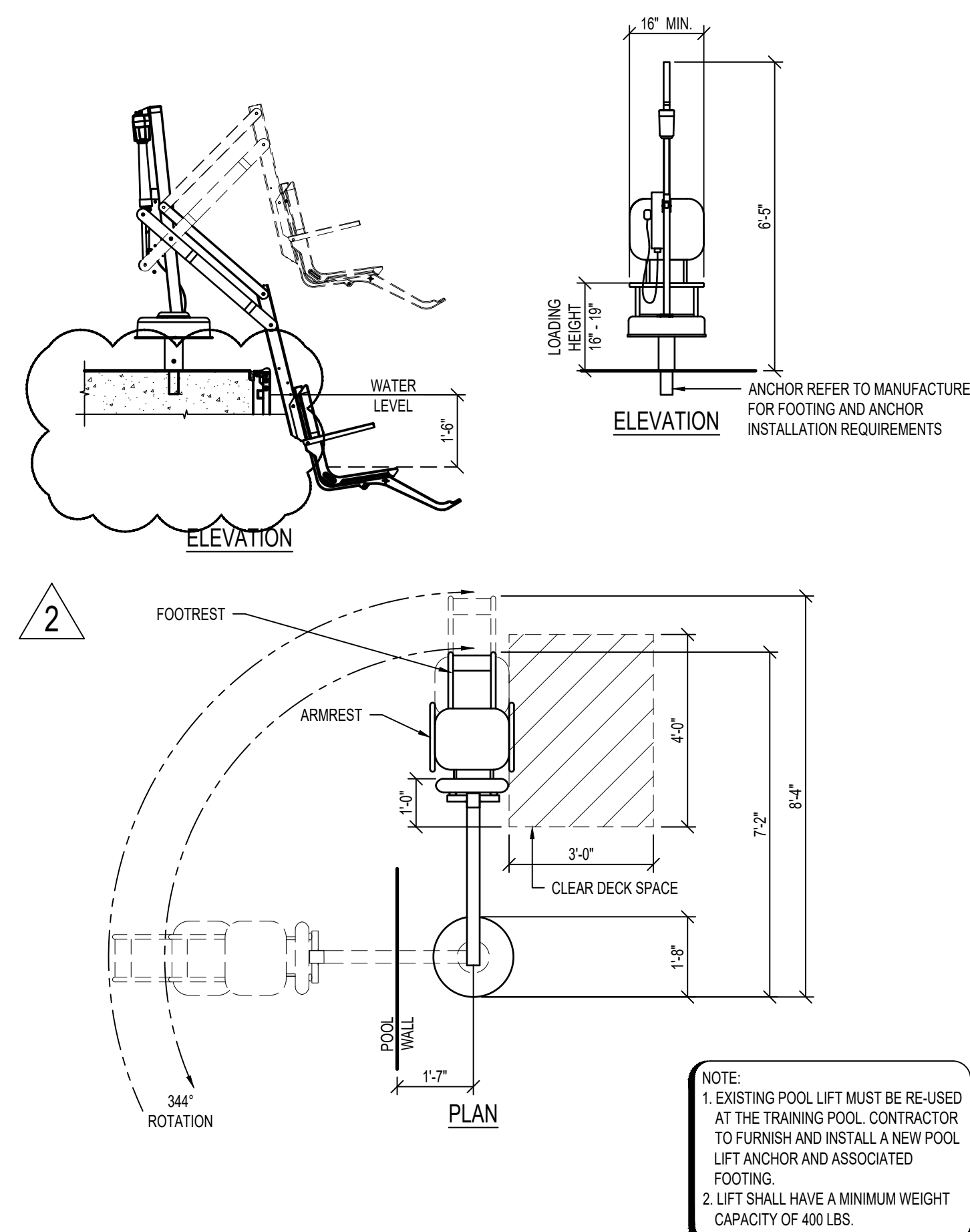
AQ200



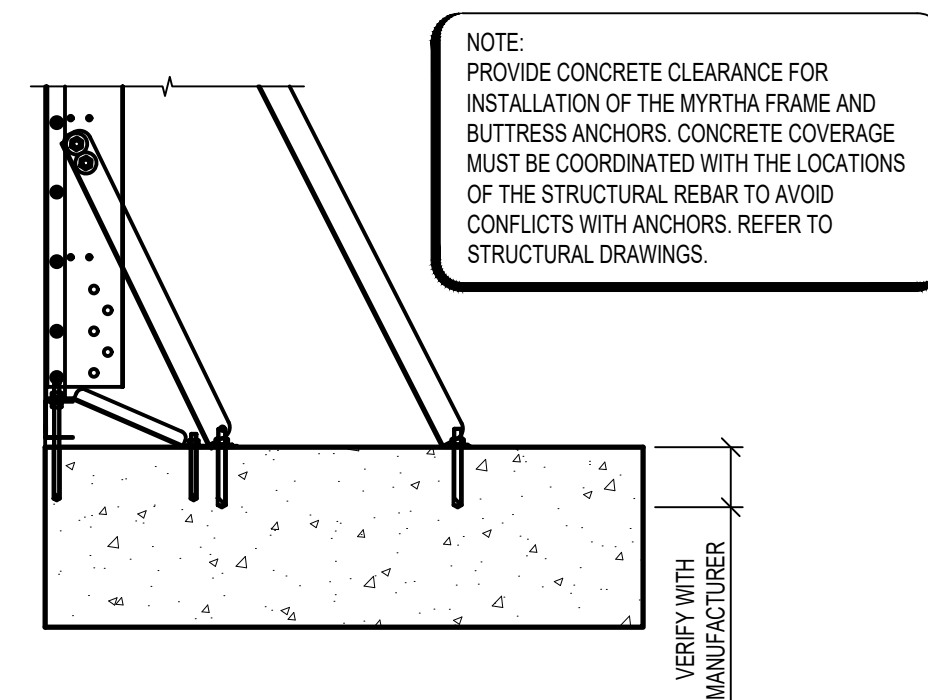
12
AQ201
ENLARGED RAMP PLAN
3/8" = 1'-0"



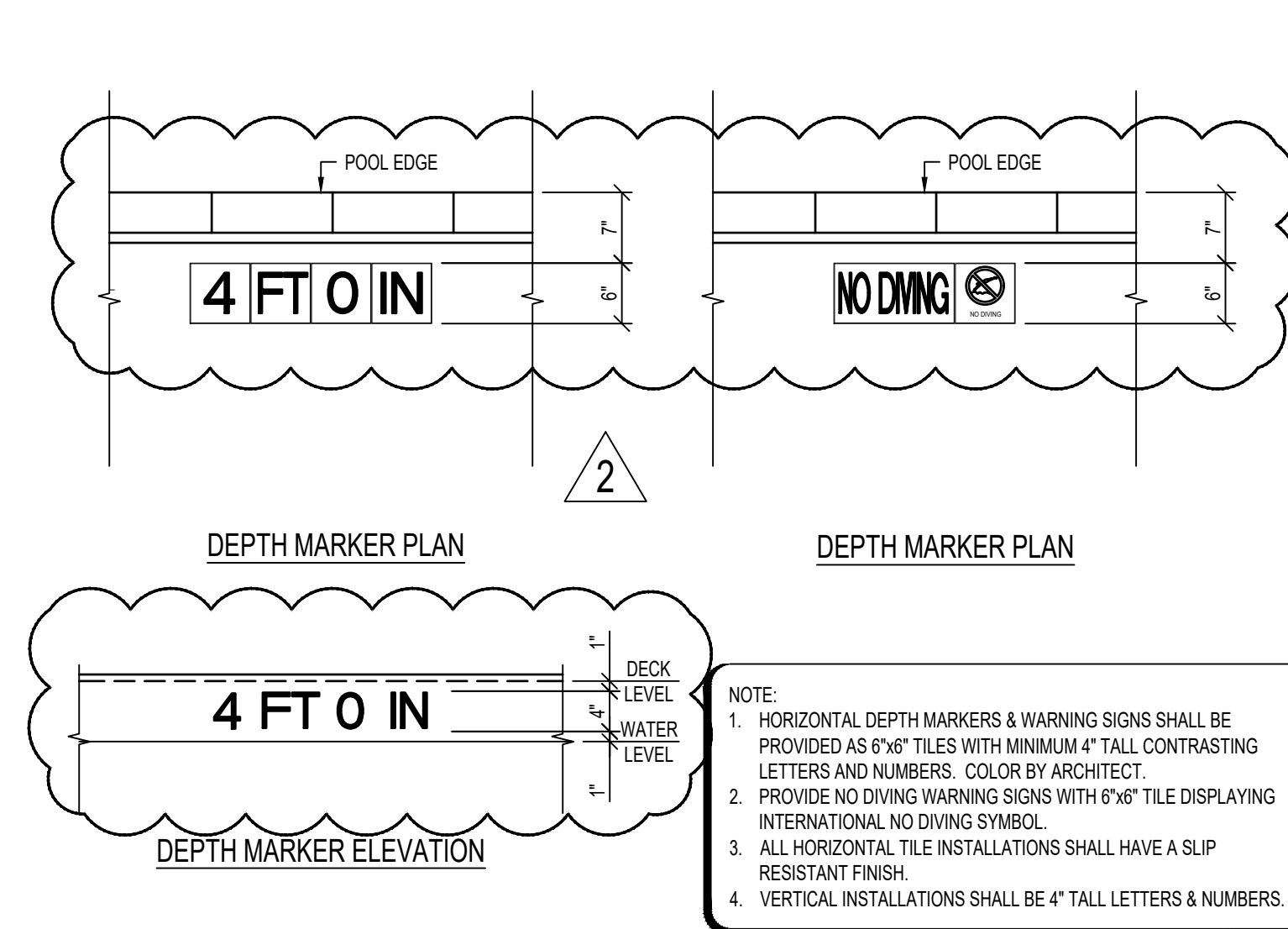
9
AQ201
GRAB RAILS & RECESSED STEPS
1" = 1'-0"



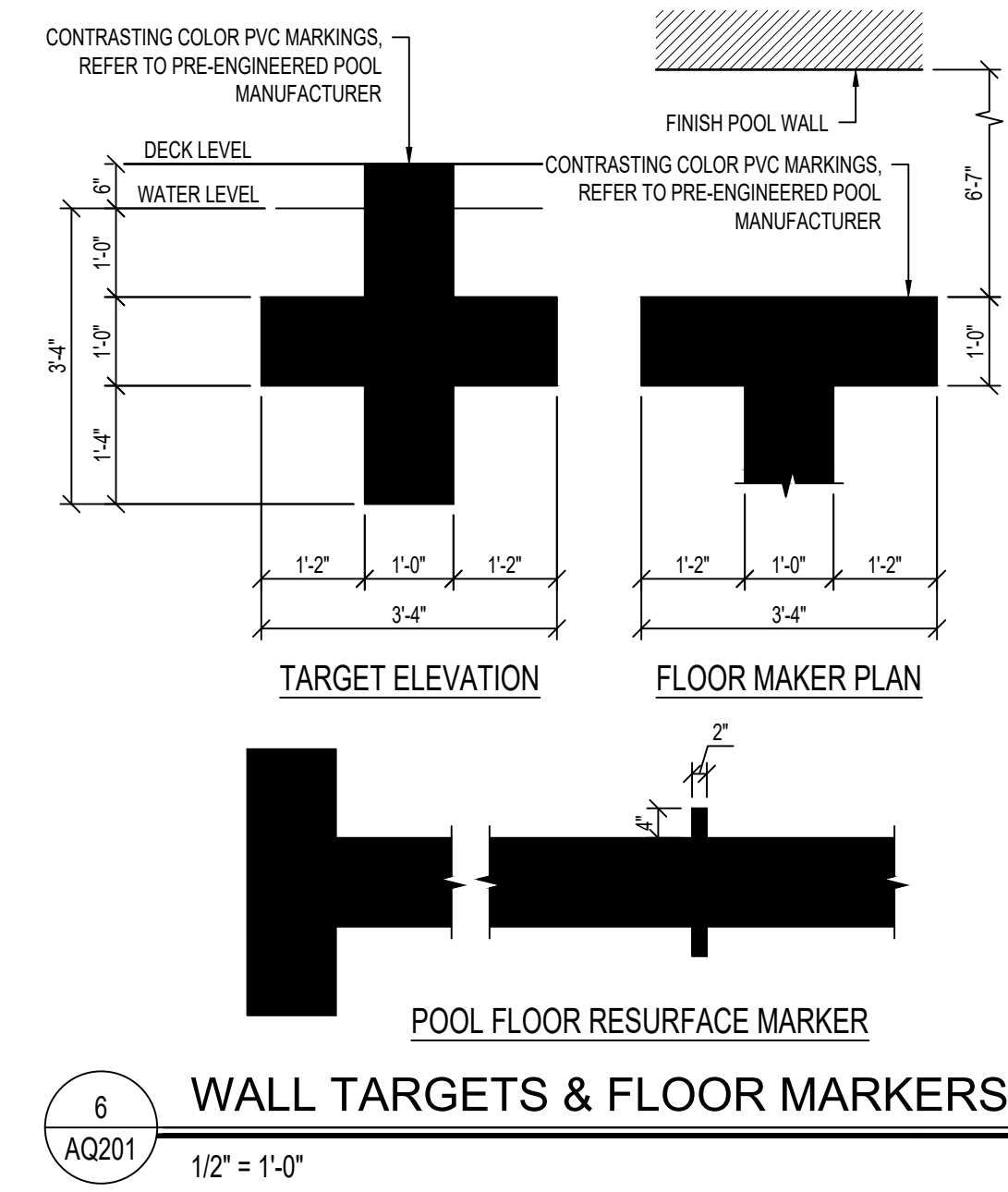
10
AQ201
TRAINING POOL LIFT
3/8" = 1'-0"



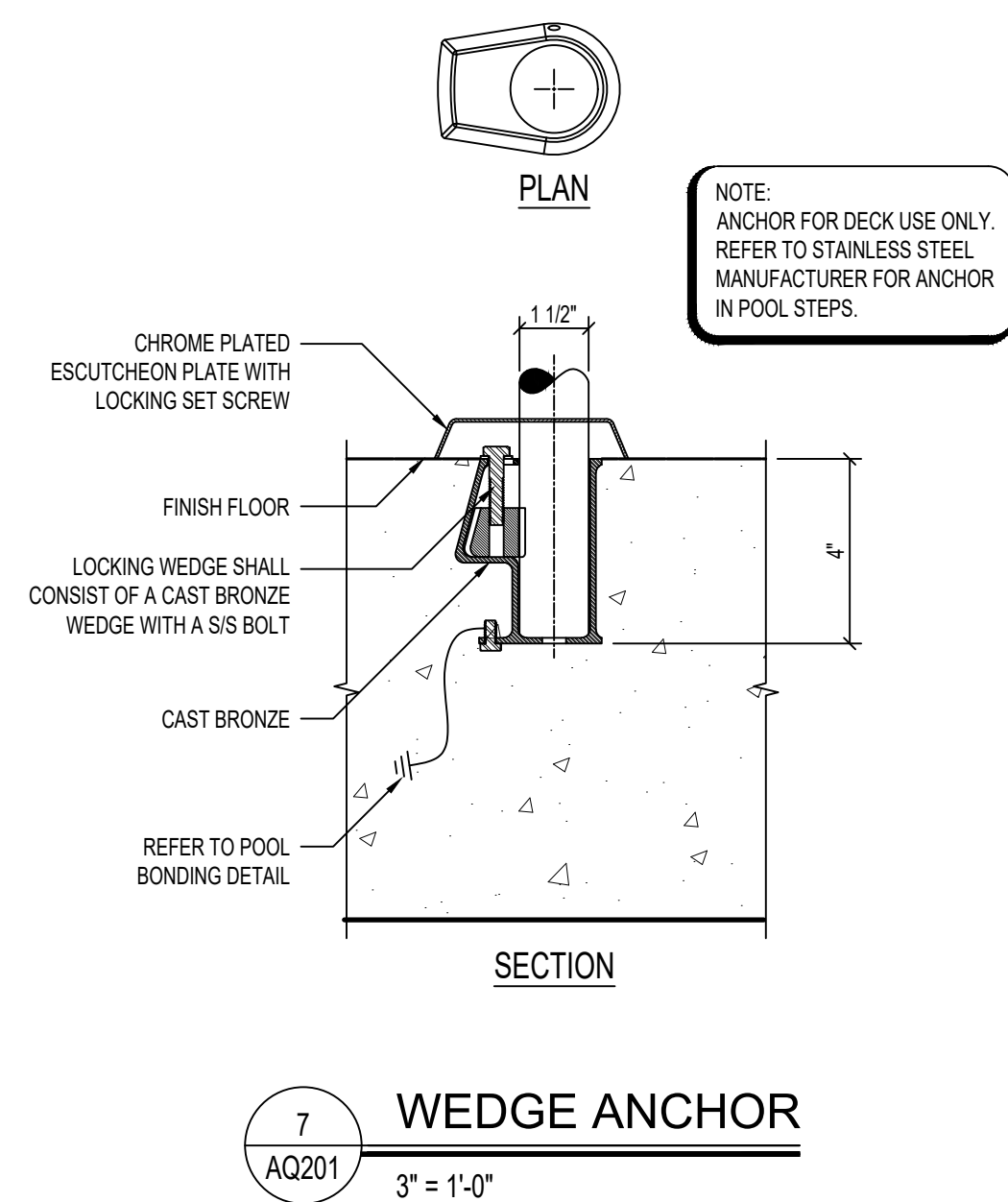
11
AQ201
BUTTRESS ANCHOR
3/4" = 1'-0"



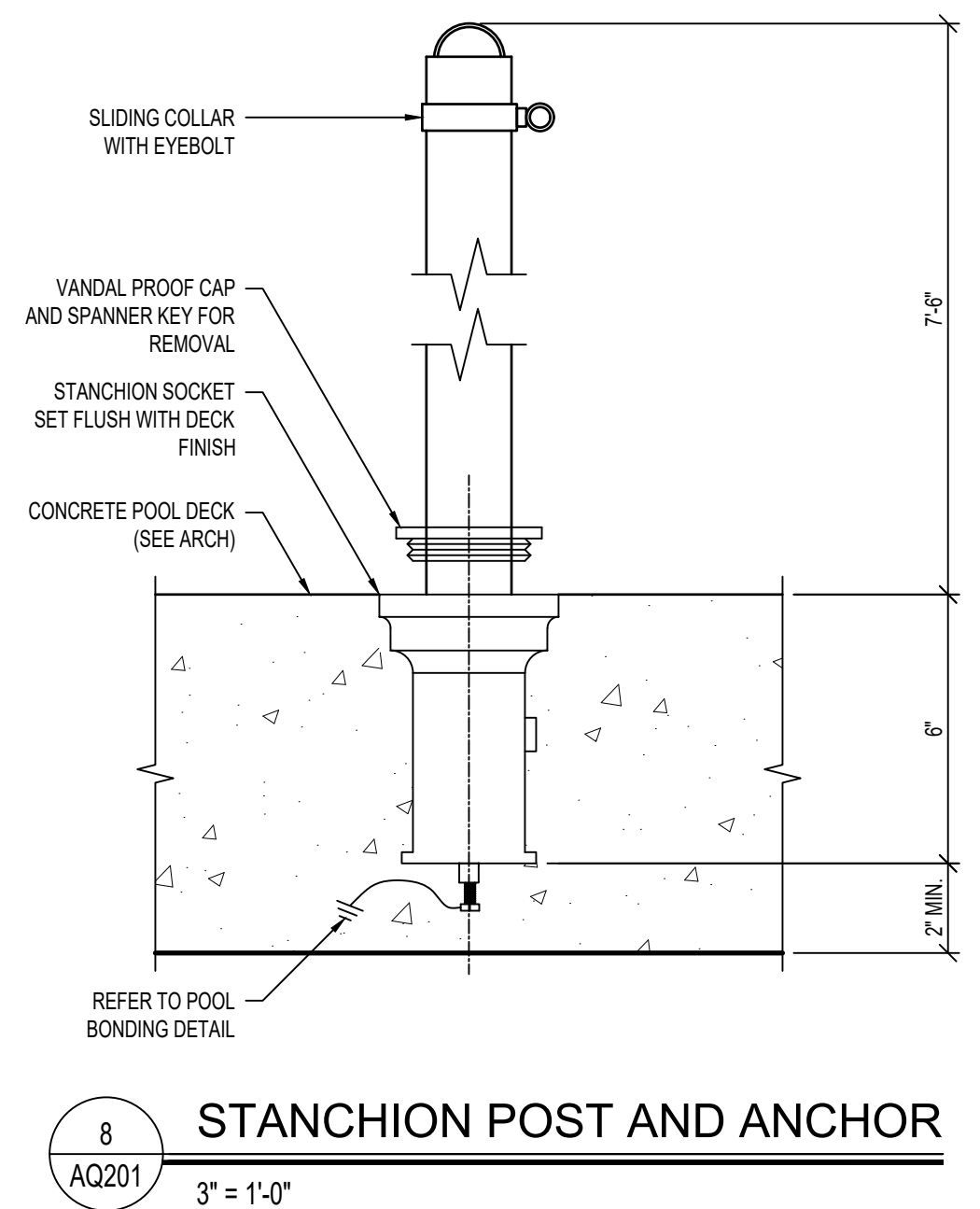
5
AQ201
DEPTH MARKERS & WARNING SIGNS
3/4" = 1'-0"



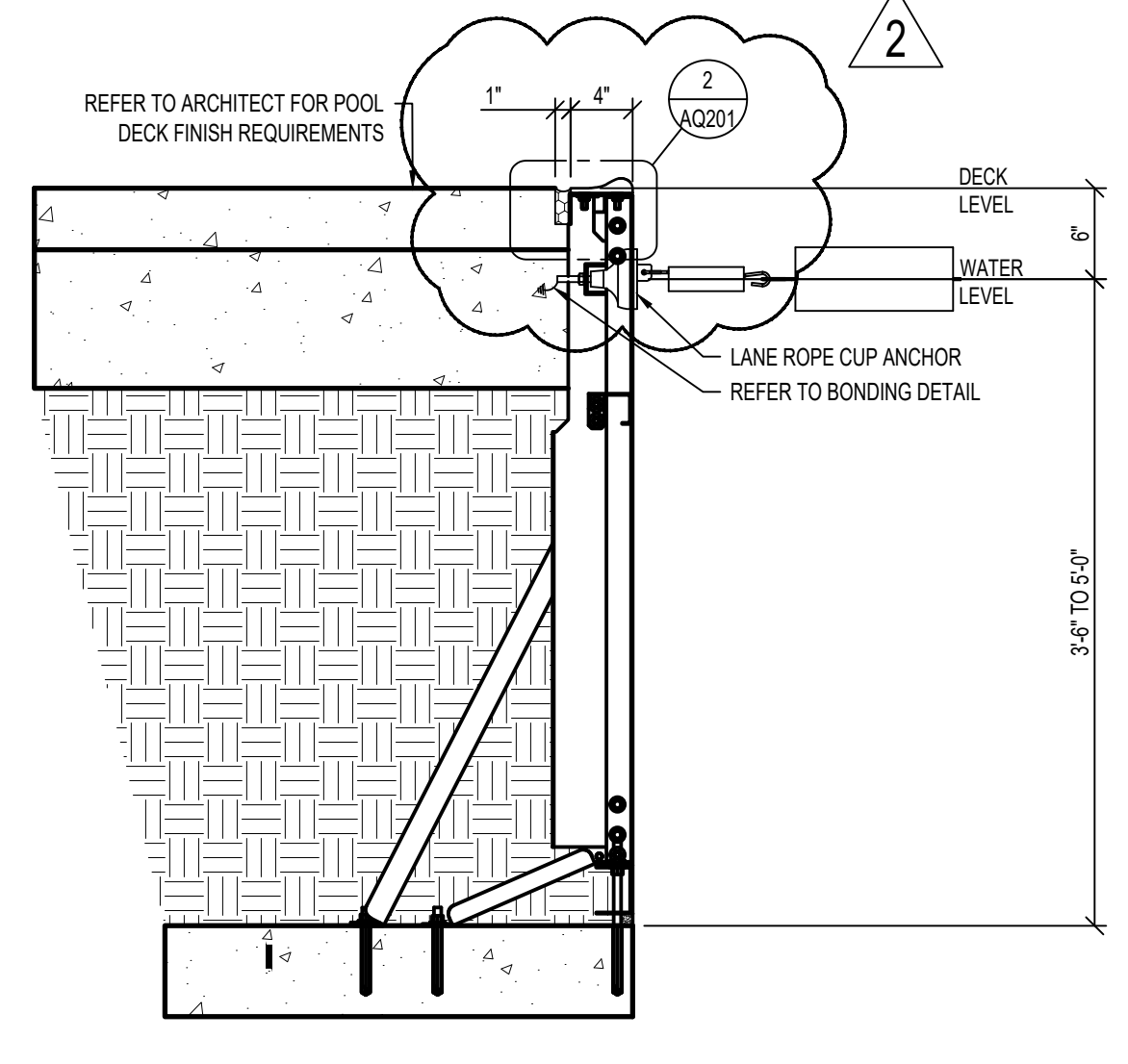
6
AQ201
WALL TARGETS & FLOOR MARKERS
1/2" = 1'-0"



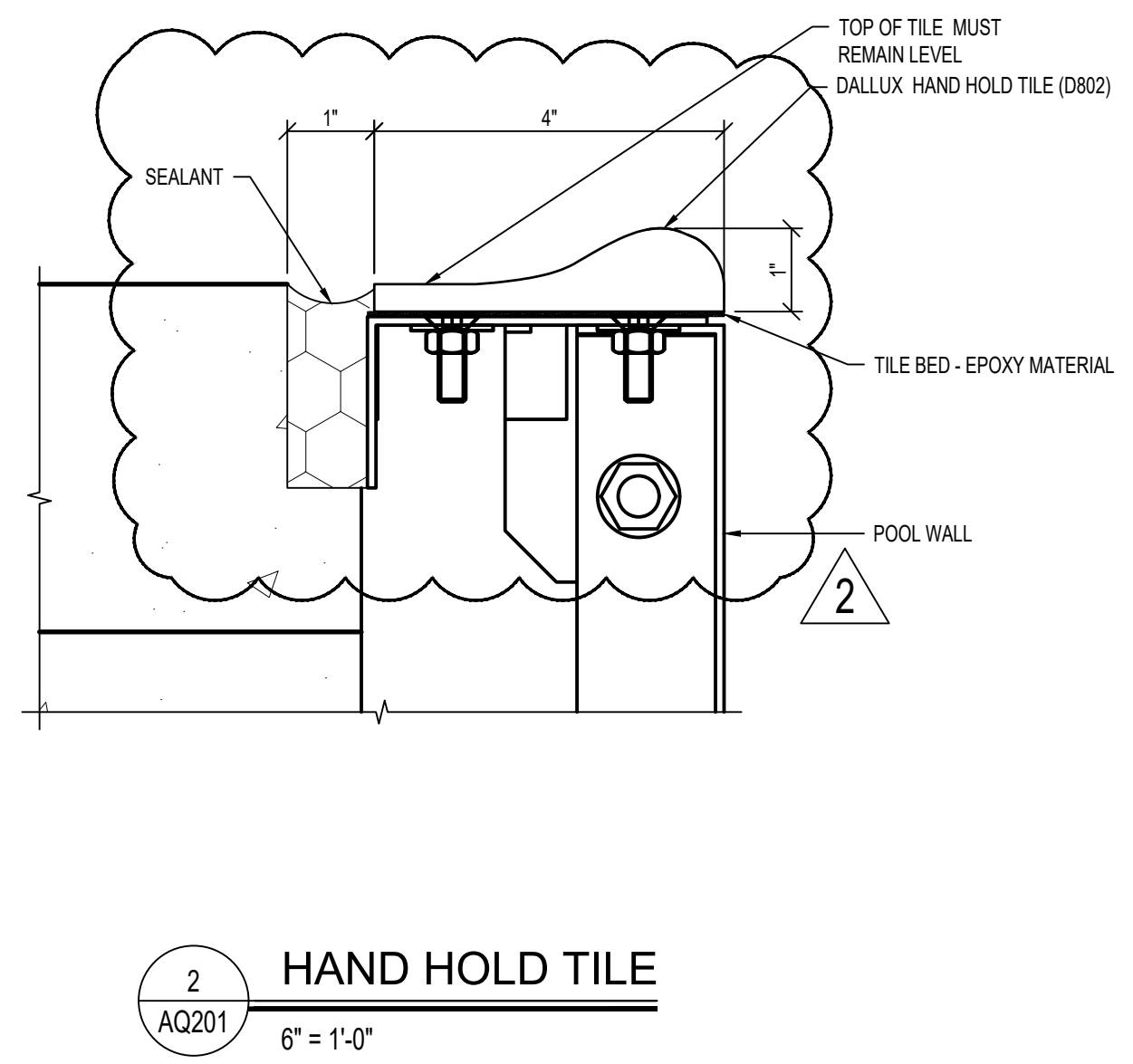
7
AQ201
WEDGE ANCHOR
3" = 1'-0"



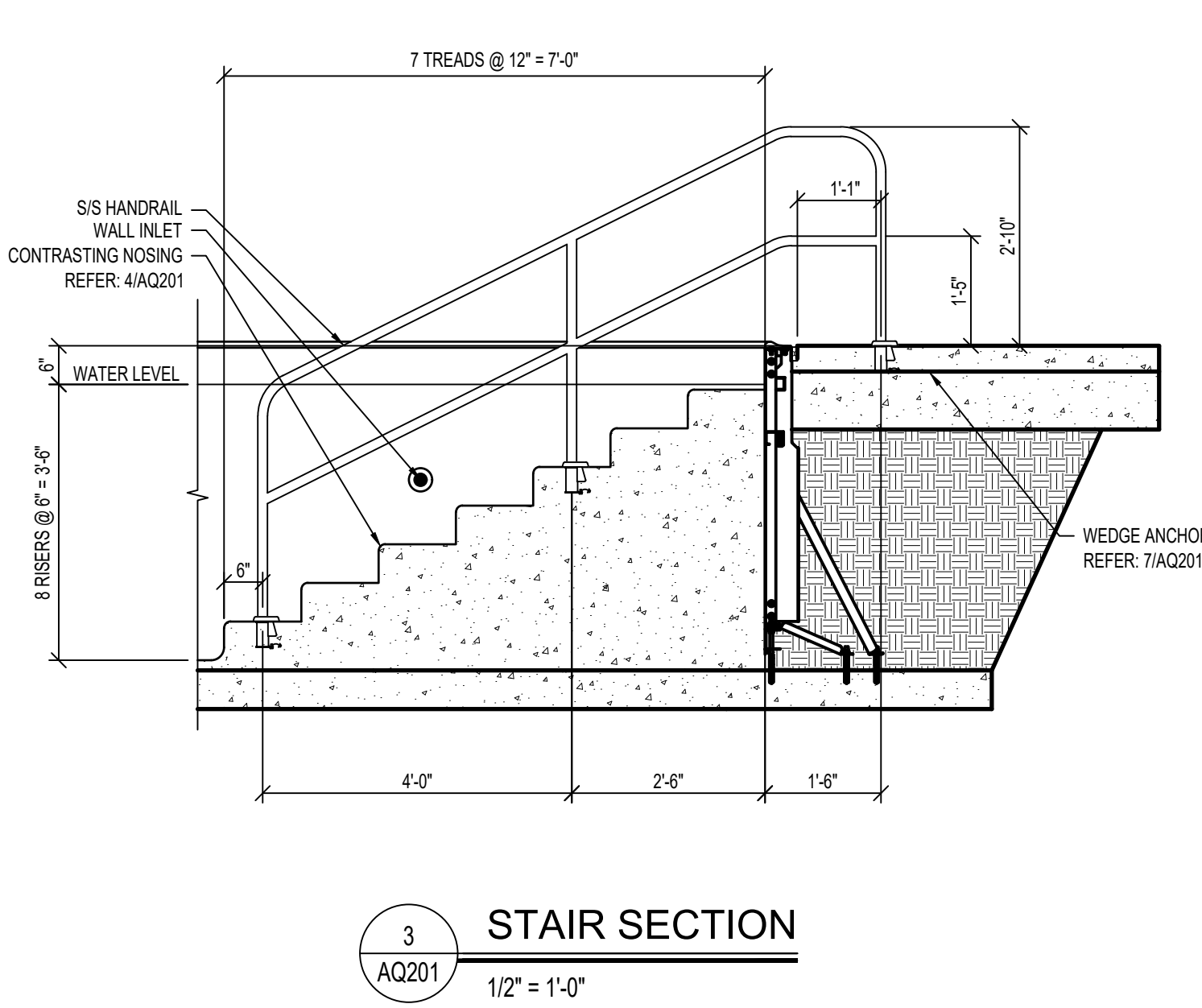
8
AQ201
STANCHION POST AND ANCHOR
3" = 1'-0"



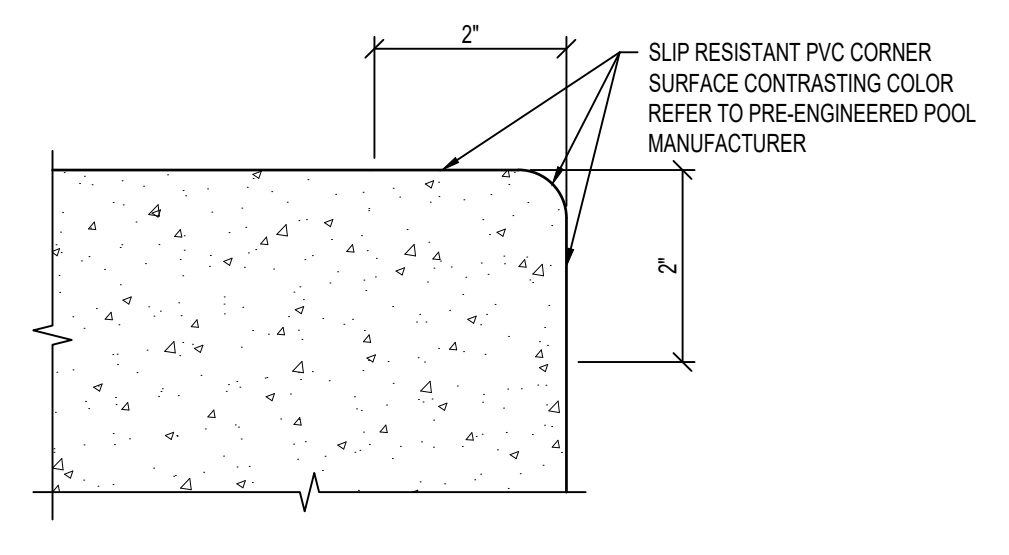
1
AQ201
S/S POOL WALL
1" = 1'-0"



2
AQ201
HAND HOLD TILE
6" = 1'-0"



3
AQ201
STAIR SECTION
1/2" = 1'-0"



4
AQ201
CONTRASTING NOSING
6" = 1'-0"



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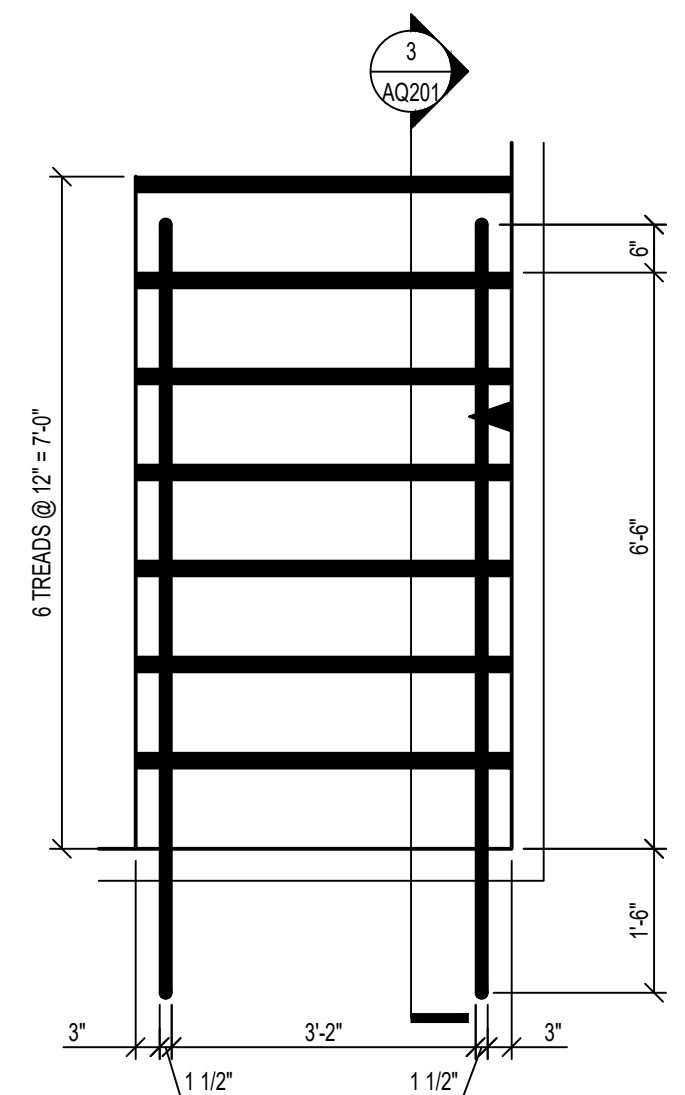
REV'D BY: CCH

PROJECT #: 22044

TITLE:
TRAINING POOL DETAILS

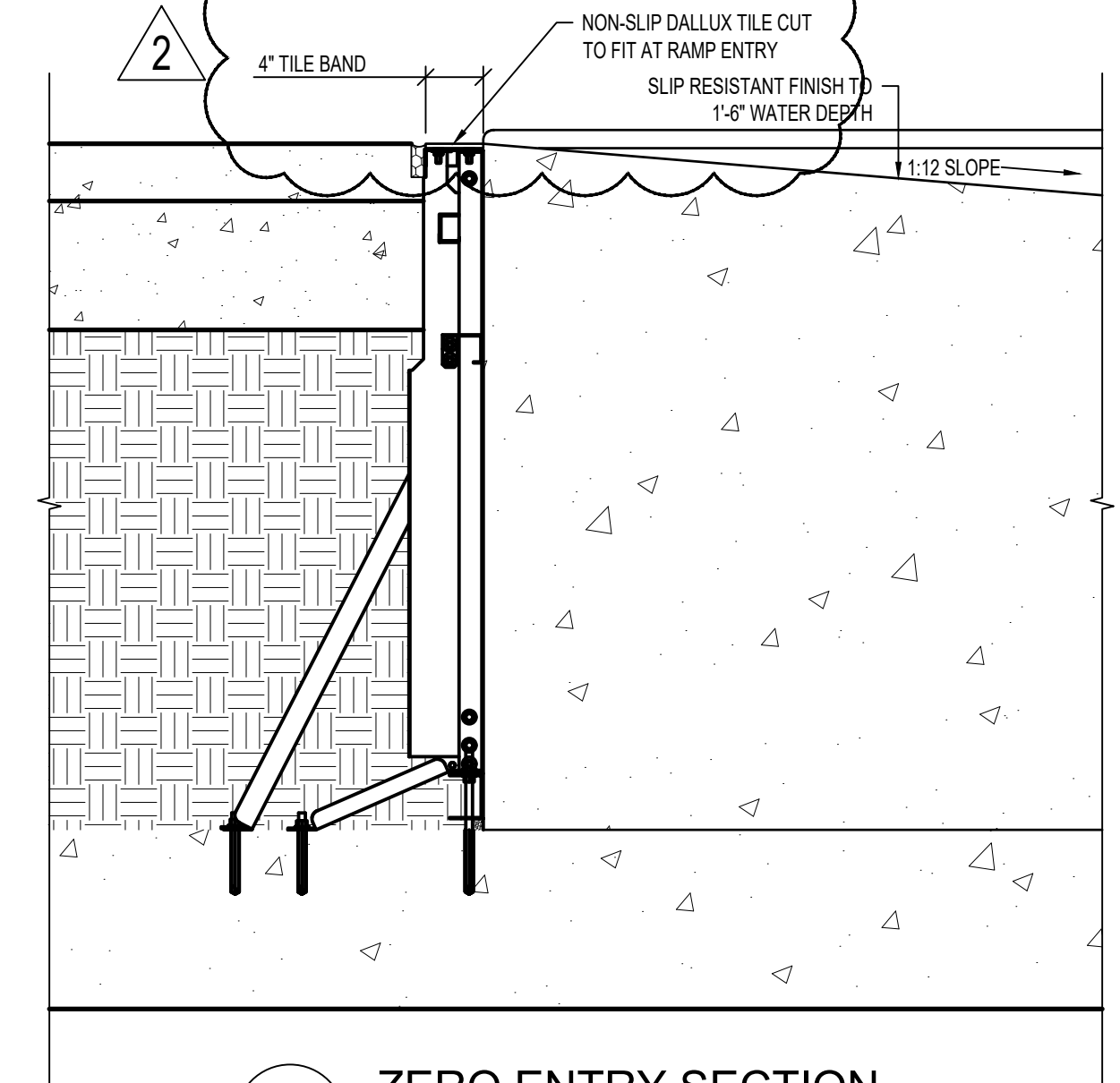
SHEET #:

AQ201



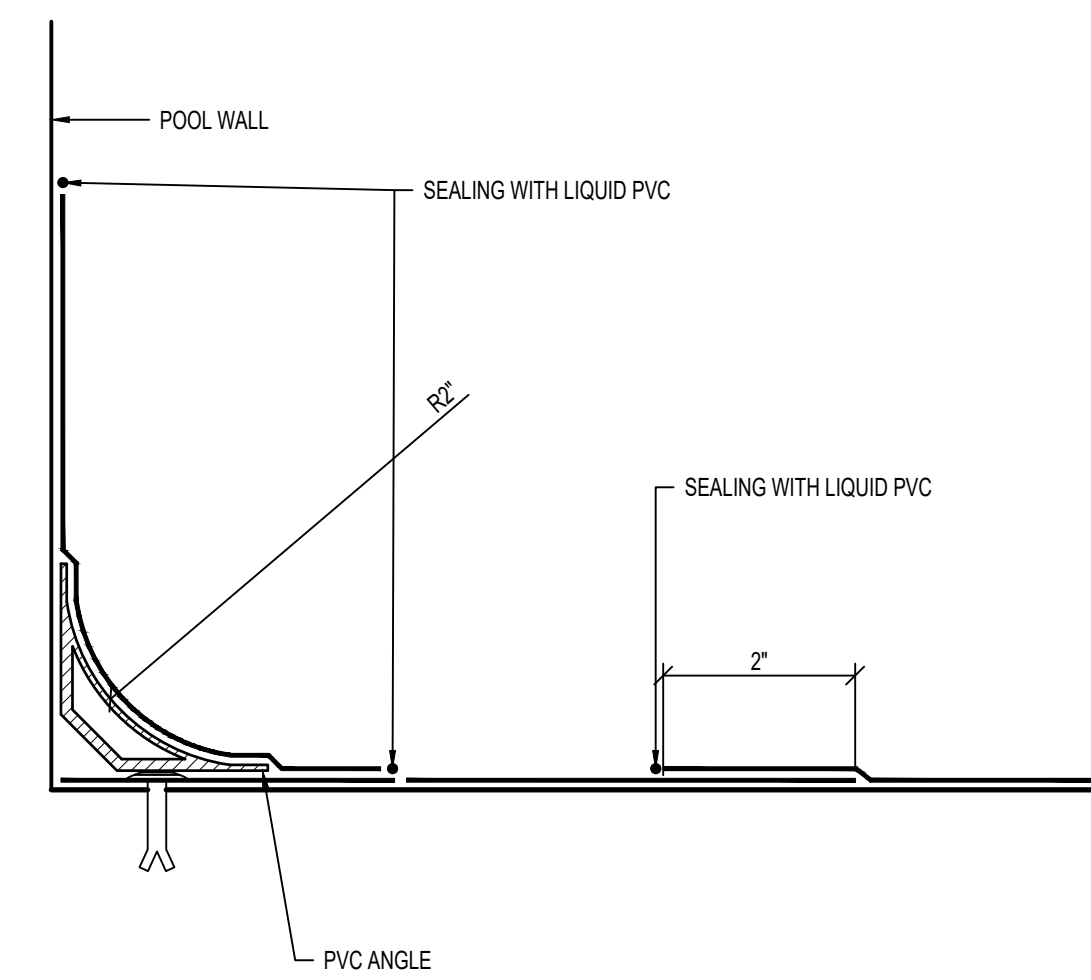
1
AQ202
1/2" = 1'-0"

ENLARGED STAIR PLAN



2
AQ202
1" = 1'-0"

ZERO ENTRY SECTION

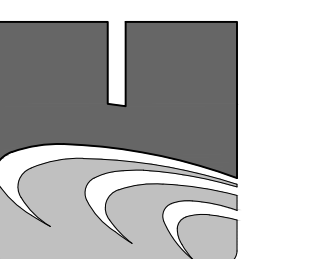


3
AQ202
6" = 1'-0"

POOL COVE



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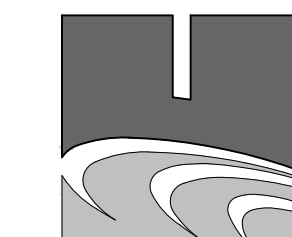
TITLE:
TRAINING POOL DETAILS

SHEET #:

AQ202



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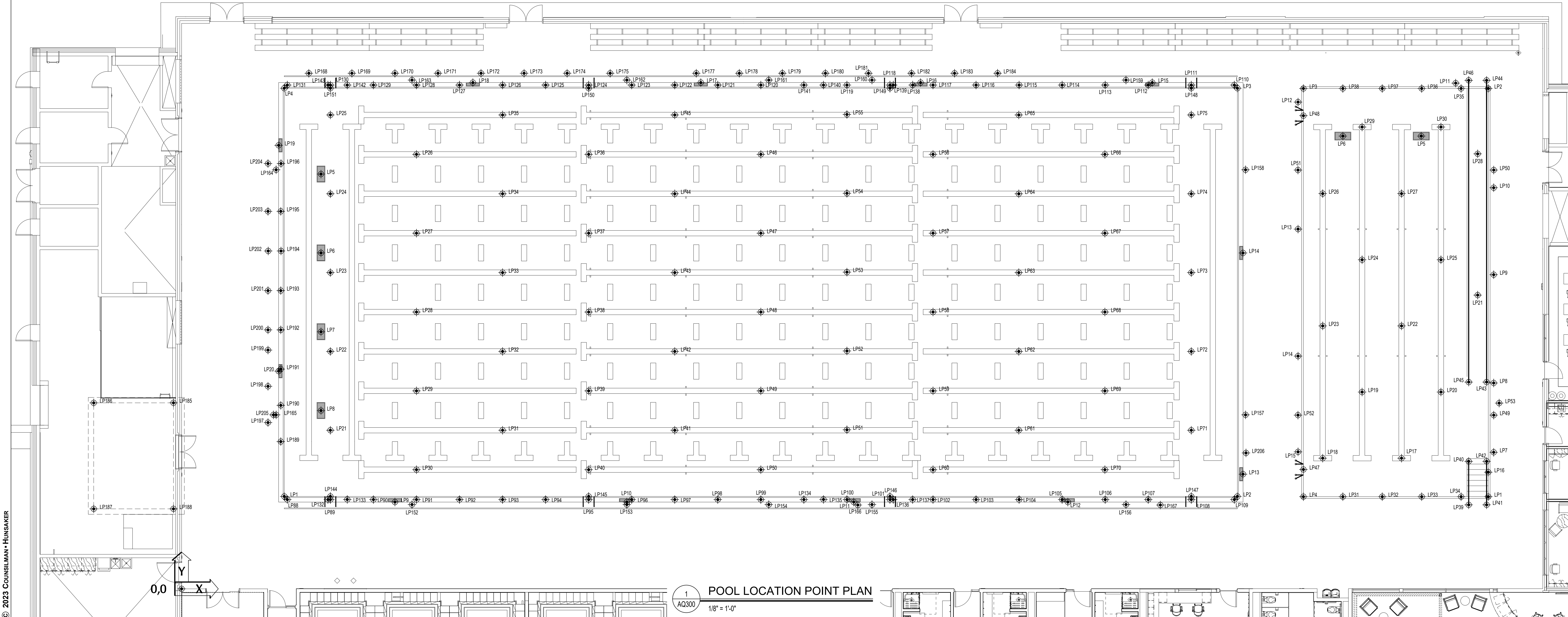
PROJECT #: 22044

TITLE: POOL LOCATION POINT PLAN

SHEET #:

AQ300

COMPETITION POOL LOCATION POINT SCHEDULE				TRAINING POOL LOCATION POINT SCHEDULE			
LP#	X	Y	DESCRIPTION	LP#	X	Y	DESCRIPTION
1	18'-10 1/2"	17'-0"	CONSTRUCTION POINT	70	189'-9 1/2"	21'-11"	FLOOR INLET
2	194'-2"	17'-0"	CONSTRUCTION POINT	71	185'-8 1/4"	29'-2"	FLOOR INLET
3	194'-2"	92'-1"	CONSTRUCTION POINT	72	185'-8 1/4"	43'-8"	FLOOR INLET
4	18'-10 1/2"	92'-1"	CONSTRUCTION POINT	73	185'-8 1/4"	58'-2"	FLOOR INLET
5	25'-2 1/2"	76'-3 1/2"	MAIN DRAIN	74	185'-8 1/4"	72'-8"	FLOOR INLET
6	25'-7 1/2"	81'-9 1/2"	MAIN DRAIN	75	186'-8 1/4"	92'-2"	FLOOR INLET
7	25'-7 1/2"	47'-3 1/2"	MAIN DRAIN	76			NOT USED
8	25'-7 1/2"	27'-6 1/2"	MAIN DRAIN	77			NOT USED
9	39'-2 3/4"	15'-11 1/2"	GUTTER DROPOUT BOX	78			NOT USED
10	81'-10 1/2"	15'-11 1/2"	GUTTER DROPOUT BOX	79			NOT USED
11	123'-7 1/4"	15'-11 1/2"	GUTTER DROPOUT BOX	80			NOT USED
12	162'-11 3/4"	15'-11 1/2"	GUTTER DROPOUT BOX	81			NOT USED
13	185'-2 1/2"	21'-1"	GUTTER DROPOUT BOX	82			NOT USED
14	185'-2 1/2"	61'-9 1/4"	GUTTER DROPOUT BOX	83			NOT USED
15	178'-6 1/4"	93'-1 1/2"	GUTTER DROPOUT BOX	84			NOT USED
16	135'-10 3/4"	93'-1 1/2"	GUTTER DROPOUT BOX	85			NOT USED
17	85'-5 3/4"	93'-1 1/2"	GUTTER DROPOUT BOX	86			NOT USED
18	53'-6 3/4"	93'-1 1/2"	GUTTER DROPOUT BOX	87			NOT USED
19	17'-10"	81'-3"	GUTTER DROPOUT BOX	88	27'-4 1/4"	16'-5"	LANE ROPE ANCHOR
20	17'-10"	40'-0 1/2"	GUTTER DROPOUT BOX	89	35'-3 1/4"	16'-5"	LANE ROPE ANCHOR
21	27'-4 1/4"	43'-8"	FLOOR INLET	90	43'-2 1/4"	16'-5"	LANE ROPE ANCHOR
22	27'-4 1/4"	58'-2"	FLOOR INLET	91	51'-1 1/4"	16'-5"	LANE ROPE ANCHOR
23	27'-4 1/4"	72'-8"	FLOOR INLET	92	59'-0 1/4"	16'-5"	LANE ROPE ANCHOR
24	27'-4 1/4"	87'-2"	FLOOR INLET	93	66'-11 1/4"	16'-5"	LANE ROPE ANCHOR
25	43'-2 1/4"	79'-11"	FLOOR INLET	94	74'-10 1/4"	16'-5"	LANE ROPE ANCHOR
26	43'-2 1/4"	93'-1 1/2"	FLOOR INLET	95	82'-9 1/4"	16'-5"	LANE ROPE ANCHOR
27	43'-2 1/4"	93'-1 1/2"	FLOOR INLET	96	82'-9 1/4"	16'-5"	LANE ROPE ANCHOR
28	43'-2 1/4"	93'-1 1/2"	FLOOR INLET	97	82'-9 1/4"	16'-5"	LANE ROPE ANCHOR
29	43'-2 1/4"	93'-1 1/2"	FLOOR INLET	98	82'-9 1/4"	16'-5"	LANE ROPE ANCHOR
30	43'-2 1/4"	93'-1 1/2"	FLOOR INLET	99	106'-6 1/4"	16'-5"	LANE ROPE ANCHOR
31	59'-0 1/4"	29'-2"	FLOOR INLET	100	122'-4 1/4"	16'-5"	LANE ROPE ANCHOR
32	59'-0 1/4"	43'-8"	FLOOR INLET	101	130'-3 1/4"	16'-5"	LANE ROPE ANCHOR
33	59'-0 1/4"	58'-2"	FLOOR INLET	102	138'-2 1/4"	16'-5"	LANE ROPE ANCHOR
34	59'-0 1/4"	72'-8"	FLOOR INLET	103	146'-1 1/4"	16'-5"	LANE ROPE ANCHOR
35	59'-0 1/4"	87'-2"	FLOOR INLET	104	154'-0 1/4"	16'-5"	LANE ROPE ANCHOR
36	74'-10 1/4"	79'-11"	FLOOR INLET	105	161'-11 1/4"	16'-5"	LANE ROPE ANCHOR
37	74'-10 1/4"	65'-5"	FLOOR INLET	106	169'-10 1/4"	16'-5"	LANE ROPE ANCHOR
38	74'-10 1/4"	50'-11"	FLOOR INLET	107	177'-9 1/4"	16'-5"	LANE ROPE ANCHOR
39	74'-10 1/4"	35'-5"	FLOOR INLET	108	185'-8 1/4"	16'-5"	LANE ROPE ANCHOR
40	74'-10 1/4"	21'-11"	FLOOR INLET	109	193'-7 1/4"	16'-5"	LANE ROPE ANCHOR
41	90'-8 1/4"	29'-2"	FLOOR INLET	110	193'-7 1/4"	92'-8"	LANE ROPE ANCHOR
42	90'-8 1/4"	43'-8"	FLOOR INLET	111	185'-8 1/4"	92'-8"	LANE ROPE ANCHOR
43	90'-8 1/4"	58'-2"	FLOOR INLET	112	177'-9 1/4"	92'-8"	LANE ROPE ANCHOR
44	90'-8 1/4"	72'-8"	FLOOR INLET	113	169'-10 1/4"	92'-8"	LANE ROPE ANCHOR
45	90'-8 1/4"	87'-2"	FLOOR INLET	114	161'-11 1/4"	92'-8"	LANE ROPE ANCHOR
46	106'-6 1/4"	79'-11"	FLOOR INLET	115	154'-0 1/4"	92'-8"	LANE ROPE ANCHOR
47	106'-6 1/4"	65'-5"	FLOOR INLET	116	146'-1 1/4"	92'-8"	LANE ROPE ANCHOR
48	106'-6 1/4"	50'-11"	FLOOR INLET	117	138'-2 1/4"	92'-8"	LANE ROPE ANCHOR
49	106'-6 1/4"	35'-5"	FLOOR INLET	118	130'-3 1/4"	92'-8"	LANE ROPE ANCHOR
50	122'-4 1/4"	21'-11"	FLOOR INLET	119	122'-4 1/4"	92'-8"	LANE ROPE ANCHOR
51	122'-4 1/4"	29'-2"	FLOOR INLET	120	106'-6 1/4"	92'-8"	LANE ROPE ANCHOR
52	122'-4 1/4"	43'-8"	FLOOR INLET	121	98'-7 1/4"	92'-8"	LANE ROPE ANCHOR
53	122'-4 1/4"	58'-2"	FLOOR INLET	122	90'-8 1/4"	92'-8"	LANE ROPE ANCHOR
54	122'-4 1/4"	72'-8"	FLOOR INLET	123	82'-9 1/4"	92'-8"	LANE ROPE ANCHOR
55	122'-4 1/4"	87'-2"	FLOOR INLET	124	74'-10 1/4"	92'-8"	LANE ROPE ANCHOR
56	138'-2 1/4"	79'-11"	FLOOR INLET	125	66'-11 1/4"	92'-8"	LANE ROPE ANCHOR
57	138'-2 1/4"	65'-5"	FLOOR INLET	126	59'-0 1/4"	92'-8"	LANE ROPE ANCHOR
58	138'-2 1/4"	50'-11"	FLOOR INLET	127	51'-1 1/4"	92'-8"	LANE ROPE ANCHOR
59	138'-2 1/4"	35'-5"	FLOOR INLET	128	43'-2 1/4"	92'-8"	LANE ROPE ANCHOR
60	138'-2 1/4"	21'-11"	FLOOR INLET	129	35'-3 1/4"	92'-8"	LANE ROPE ANCHOR
61	153'-11 1/2"	29'-2"	FLOOR INLET	130	27'-4 1/4"	92'-8"	LANE ROPE ANCHOR
62	153'-11 1/2"	43'-8"	FLOOR INLET	131	19'-5 1/4"	92'-8"	LANE ROPE ANCHOR
63	153'-11 1/2"	58'-2"	FLOOR INLET	132	28'-10 3/4"	16'-5"	WATER POLO ROPE ANCHOR
64	153'-11 1/2"	72'-8"	FLOOR INLET	133	30'-5 1/2"	16'-5 1/4"	WATER POLO ROPE ANCHOR
65	153'-11 1/2"	87'-2"	FLOOR INLET	134	114'-5 1/4"	16'-5"	WATER POLO ROPE ANCHOR
66	189'-9 1/2"	79'-11"	FLOOR INLET	135	118'-0 1/2"	16'-5 1/4"	WATER POLO ROPE ANCHOR
67	189'-9 1/2"	65'-5"	FLOOR INLET	136	132'-0 1/2"	16'-5"	WATER POLO ROPE ANCHOR
68	189'-9 1/2"	50'-11"	FLOOR INLET	137	134'-5 1/4"	16'-5"	WATER POLO ROPE ANCHOR
69	189'-9 1/2"	35'-5"	FLOOR INLET	138	134'-5 1/4"	92'-8"	WATER POLO ROPE ANCHOR



EQUIPMENT SCHEDULE	
ID	ITEM
COMPETITION POOL	
1A	CHEMICAL CONTROLLER REFER: 2IAQ203
1B	WATER LEVEL CONTROLLER REFER: 12IAQ205
1C	VARIABLE FREQUENCY DRIVE AND BYPASS PANEL
1D	FLOW METER SENSOR REFER: 3IAQ204
1E	VARIABLE FREQUENCY DRIVE
1F	FREE CHLORINE SENSOR PANEL REFER: 3IAQ203
1G	TOTAL ALKALINITY SENSOR PANEL REFER: 4IAQ203
TRAINING POOL	
2A	CHEMICAL CONTROLLER REFER: 2IAQ203
2B	WATER LEVEL CONTROLLER REFER: 12IAQ205
2C	VARIABLE FREQUENCY DRIVE AND BYPASS PANEL
2D	FLOW METER SENSOR REFER: 3IAQ204
2E	FREE CHLORINE SENSOR PANEL REFER: 3IAQ203
2F	TOTAL ALKALINITY SENSOR PANEL REFER: 4IAQ203
COMBINED	
3A	LADDER RUNGS
3B	SAFETY CHAIN
3C	REMOVABLE RAILING
3D	LINK SEAL REFER: 4IAQ204
3E	6'-4"x6'-0"x4'-0" DEEP BACKWASH CATCH BASIN
3F	AIR COMPRESSOR
3G	EYEWASH STATION REFER TO PLUMBING
3H	AIR COMPRESSOR HOSE CONNECTION FOR PORTABLE DIVE SPARGER. CONFIRM FINAL LOCATION WITH ARCHITECT.
3I	ACID TANKS REFER: 5IAQ203
3J	BACKWASH PIT GRATING REFER TO ARCHITECT & STRUCTURAL
3K	DEDICATED AREA FOR PERLITE STORAGE
3M	DEDICATED AREA FOR DIVING AIR COMPRESSOR (PROVIDED BY DIVING TEAM)
3N	CO ₂ TANK REFER: 10IAQ203
3O	CO ₂ FILLBOX REFER: 12IAQ203

HEATER SCHEDULE												
ID	POOL	MAKE	MODEL	QTY.	BOILER EFF (%)	INPUT (MBH)	AIR INLET SIZE (INCHES)	PIPE SIZE (IN/OUT)	VENT SIZE (INCH)	ELECTRICAL DATA (3 REQUIRED CONNECTIONS PER HEATER)		
H1	COMPETITION	RAYPAK	H7-1505A	2	96	1,500	8	6	8	V	PH	HZ
										120	3	60
										120	3	60
										120	3	60
H2	TRAINING	RAYPAK	H7-1005A	1	96	1,000	6	4	6	V	PH	HZ
										120	3	60
										120	3	60
										120	3	60
NOTE: 1. THE BASIS OF DESIGN MANUFACTURER IS LOCHINVAR. ALTERNATE MANUFACTURER: RAYPAK OR APPROVED EQUAL. 2. HEATERS MUST BE INSTALLED ON HOUSEKEEPING PADS. 3. REFER: 1 & 2IAQ206 4. EACH HEATER MUST BE SUPPLIED WITH AN EMERGENCY SHUTOFF BUTTON.												

UV TREATMENT SYSTEMS SCHEDULE						
ID	POOL	MODEL NUMBER	CALCULATED 60 MJC/M2 (GPM)	LAMPS	POWER (KW)	VOLTAGE (V) WITH BREAKER SIZE (60 OR 80 HZ)
U1	COMPETITION	WF-430-12-N	3.080	4 @ 3.0KW	12.0	480 V (3Ø)-40A
U2	TRAINING	WF-125-6-N	616	1 @ 2.9KW	2.5	208 V (1Ø)-30A
NOTE: 1. THE BASIS OF DESIGN MANUFACTURER IS EVOQUA TECHNOLOGIES LTD. ALTERNATE MANUFACTURER: PROMINENT, AQUONICS OR APPROVED EQUAL. 2. INTERLOCK UV SYSTEM WITH CHEMICAL CONTROLLER OR RECIRCULATION PUMP. 3. REFER: 13IAQ203						

PIPING LEGEND				
LEGEND	QTY.	ITEM	MAKE	MODEL
COMPETITION POOL				
	55	FLOOR INLET REFER: 4IAQ205	MYRTHA	0141515 (WHITE), 0141514 (BLACK)
	12	GUTTER DROPOUT BOX REFER: 8IAQ205	SUPPLIED BY POOL MANUFACTURER	
	4	MAIN DRAIN REFER: 5IAQ205	REFER TO MAIN DRAIN SCHEDULE	
	8	AGITATOR BOX REFER: 8IAQ105	ZURN	#2ANB-1481-12/P
	8	AGITATOR FITTING REFER: 8IAQ105	MYRTHA	0059969
TRAINING POOL				
	1	WALL INLET REFER: 12IAQ204	HAYWARD	SP-1421-D
	14	FLOOR INLET REFER: 4IAQ205	MYRTHA	0141515 (WHITE), 0141514 (BLACK)
	9	SKIMMER REFER: 11IAQ205	HAYWARD	SP1084 (WHITE)
	2	MAIN DRAIN REFER: 5IAQ205	REFER TO MAIN DRAIN SCHEDULE	
COMBINED				
----	N/A	BELOW GRADE PIPING	CHEMTROL	SCH 40 PVC, SCH 80 PVC

FILTER SCHEDULE											
ID	POOL	MANUFACTURER	FILTER MODEL	QTY.	FILTRATION TYPE	MAXIMUM FILTRATION RATE (GPM/SQ. FT.)	REQUIRED FILTRATION AREA (SQ. FT.)	DESIGN FILTRATION RATE (GPM/SQ. FT.)	DESIGN FILTRATION AREA (SQ. FT.)	FILTER BACKWASH RATE (GPM/SQ. FT.)	BACKWASH FLOW RATE PER FILTER (GPM)
F1	COMPETITION	NEPTUNE BENSON	SP-55-48-2078	1	RMF	1.4	1,535.7	1.32	1,625.0	0.5	300
F2	TRAINING	NEPTUNE BENSON	SP-27-48-487	1	RMF	1.4	285.7	1.05	381.0	0.5	300
NOTE: 1. BACKWASH METHOD MUST BE FULLY-AUTOMATIC. 2. ALL FILTER SUPPORTS MUST BE SEISMICALLY RATED FOR THE SEISMIC ZONE IN WHICH IT IS INSTALLED IN ACCORDANCE WITH LOCAL AND/OR STATE REQUIREMENTS. 3. FILTER MANUFACTURER MUST CERTIFY FILTER MEDIA. 4. VALVES MUST BE PROVIDED TO BACKWASH EACH FILTER VESSEL INDEPENDENTLY. 5. THE BACKWASH PIPING MUST TERMINATE NO CLOSER THAN 6" ABOVE THE FLOOR RIM OF THE BACKWASH CATCH BASIN OR TWICE THE PIPE DIAMETER, WHICHEVER IS GREATER. 6. FILTER TANK ASSEMBLIES MUST BE 6" HET THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL FOR A MAXIMUM FLOW RATE OF 14 GPM PER SQUARE FOOT OF FILTER MEDIA. 7. PROVIDE HARD PLUMBED SCHEDULE 80 PIPE FROM BOTTOM OF THE FILTER TANK TO WASTE PIT IN ORDER TO DRAIN TANK AND MEDIA ON AN NEEDED BASIS. PIPE SLOPED FROM FILTER TANK TO WASTE PIT. 8. PROVIDE NON-HAZARDOUS, NON-TOXIC, FILTER MEDIA. PARTICLE SIZE MUST HAVE MEDIAN PORE SIZE OF NO GREATER THAN 20 MICRONS. 9. REFER: 11IAQ204 & 1IAQ205											

PUMP SCHEDULE											
ID	DESCRIPTION	MANUFACTURER	MODEL	SIZE	GPM	TDH	HP	NPSH-R	HAIR/LINT	NOTES	
PP1	COMPETITION POOL RECIRCULATION PUMP 1 REFER: 1IAQ203	AURORA	5X8X11	6'X5'	1,075	95	40	10.49	MERMADE	12'X12'	1,23.4 5,68.11
										12'X12'	1,23.4 5,6.8
PP2	COMPETITION POOL RECIRCULATION PUMP 2 REFER: 1IAQ203	AURORA	5X8X11	6'X5'	1,075	95	40	10.49	MERMADE	12'X12'	1,23.4 5,6.8
PP3	COMPETITION POOL DRAIN DOWNWAGITATOR PUMP REFER: 15IAQ205	PENTAIR	WHSPERFLOW	XFK-8	100	40	2	N/A	INTEGRAL		1,23.7 8,9.10
PP4	TRAINING POOL RECIRCULATION PUMP REFER: 1IAQ203	AURORA	3X4X9.5	4'X3'	400	85	20	5.94	MERMADE	6'X8'	1,23.4 6,8.11
NOTE: 1. THE MANUFACTURER INDICATED IS BASIS OF DESIGN. PUMP MANUFACTURERS: GRISWOLD, HERBORNER, PACO OR AURORA MUST BE CONSIDERED EQUAL PROVIDED THEY MEET SPECIFICATIONS AS INDICATED IN BID DOCUMENTS. 2. POOL PUMPS AND STRAINERS MUST BE INSTALLED ON HOUSEKEEPING PADS. 3. PROVIDE INFLUENT AND EFFLUENT GAUGES FOR EACH PUMP. PRESSURE GAUGES HAVE A RANGE OF 0-60 PSI. COMPOUND GAUGES HAVE A RANGE OF 0-30 HG / 0-60 PSI. 4. PROVIDE WITH 480 VOLT, 3 PHASE, 60HZ, 1800 RPM MOTOR. 5. PROVIDE WITH CHECK VALVE. 6. PROVIDE VARIABLE FREQUENCY AND BYPASS PANEL. 7. PROVIDE REMOTE PUMP START. 8. PROVIDE EMERGENCY STOP. 9. PROVIDE WITH 480 VOLT, 3 PHASE, 60 HZ, 3450 RPM MOTOR. 10. PROVIDE VARIABLE FREQUENCY DRIVE. 11. PROVIDE A SPARE PUMP AND MOTOR FOR FUTURE REPLACEMENT.											

CHEMICAL FEED SCHEDULE						
ID	DESCRIPTION	MANUFACTURER	MODEL	TUBE #	HP	FLOW
CF1	COMPETITION POOL CHLORINATION BOOSTER PUMP REFER: 8IAQ203	ACCUTAB	3070AT	N/A	1.5	244 LBS/DAY
CF2	TRAINING POOL CHLORINATION BOOSTER PUMP REFER: 8IAQ203	ACCUTAB	1030	N/A	1	67 LBS/DAY
CF3	COMPETITION POOL CO2 FEED REFER: 10IAQ203	BECS	BECYS002	N/A	N/A	20-200 SCFH
CF4	TRAINING POOL CO2 FEED REFER: 10IAQ203	BECS	BECYS002	N/A	N/A	20-200 SCFH
CF5	COMPETITION POOL ACID FEED PUMP REFER: 5IAQ203	STENNER	45M3	3	FRAC	22 GAL/DAY
CF6	TRAINING POOL ACID FEED PUMP REFER: 5IAQ203	STENNER	45M3	3	FRAC	22 GAL/DAY
NOTE: 1. THE MANUFACTURER INDICATED IS BASIS OF DESIGN. 2. PROVIDE WITH 120 VOLT, SINGLE PHASE, ADJUSTABLE FEED. 3. INTERLOCK WITH POOL RECIRCULATION PUMP. 4. INTERLOCK CHEMICAL FEED PUMP WITH FILTER TO PREVENT FEEDING DURING PRE-COAT CYCLE. 5. PROVIDE ONE (1) SPARE ACID FEED PUMP FOR FUTURE REPLACEMENT.						

GENERAL POOL MECHANICAL ROOM NOTES											
1. EQUIPMENT ROOM FLOOR AND PUMP PIT FLOOR MUST SLOPE 1/4" TO 1/2" PER FOOT TO FLOOR DRAINS OR SUMP PIT. REFER TO PLUMBING. 2. PROVIDE HOSE BIBBS FOR HOUSE CLEANING PURPOSES. REFER BUILDING MECHANICAL DRAWINGS. 3. THE INSIDE SURFACES OF THE BACKWASH CATCH BASIN MUST BE WATERPROOFED. REFER TO SPECIFICATION. 4. VENTILATION OF POOL MECHANICAL ROOM AND CHEMICAL STORAGE AREAS PER LOCAL, STATE AND INTERNATIONAL MECHANICAL CODE MINIMUM. REFER TO MECHANICAL. 5. THE FOLLOWING INFORMATION MUST BE LAMINATED AND POSTED IN THE POOL MECHANICAL ROOM: BACKWASH PROCEDURE, POOL FILLING AND DRAINING, VALVE REFERENCE CHART, POOL MECHANICAL ROOM PLAN, POOL PIPING SCHEMATICS, AND POOL SYSTEMS SCHEMATICS. 6. REFER TO MECHANICAL FOR HVAC SYSTEMS DESIGN. 7. REFER TO ARCHITECTURAL DRAWINGS FOR LADDER RUNGS, SAFETY CHAIN, AND REMOVABLE RAILING AT PUMP PIT. PIPING 1. MINIMUM 7'-0" CLEARANCE BENEATH ALL OVERHEAD PIPING. 2. PROVIDE AND SUPPORT OVERHEAD AND VERTICAL PIPING PER SPECIFICATION REQUIREMENTS. 3. LABEL AND IDENTIFY ALL PIPING IN COMPLIANCE WITH THE SPECIFICATIONS. 4. ALL FLOW METERS MUST BE SIZED TO MATCH THE PIPE ON WHICH IT IS INSTALLED. PROVIDE PRESSURE GAUGES ON INFLUENT AND EFFLUENT SIDE OF EACH FILTRATION SYSTEM AND A FULL LINE SIZE FLOW METER ON FILTER RETURN. 5. HYDROSTATICALLY TEST ALL PIPING AT 50 PSI FOR TWO HOURS AND MAINTAIN A PRESSURE OF 20 PSI IN ALL PIPING THROUGHOUT CONSTRUCTION. SECURE ALL FIXTURES PER SPECIFICATION REQUIREMENTS BEFORE HYDROSTATIC TEST. 6. REFER TO DETAILS 5-10 ON DRAWING AQ404 FOR INSTALLATION OF PIPE SUPPORTS. 7. ALL PIPING ROUTED THROUGH THE CHEMICAL ROOM WALLS INTO THE MAIN MECHANICAL ROOM MUST BE PROPERLY SEALED AND FIREPROOFED PER THE FIRE RATING OF THE ROOM. REFER TO ARCHITECT. CHEMICAL TREATMENT 1. CHEMICAL FEED REQUIREMENTS - REFER TO THE POOL SYSTEMS SCHEMATIC(S) ON AQ600. 2. INTERLOCK POOL RECIRCULATION PUMP(S) WITH ITS CORRESPONDING WATER CHEMISTRY CONTROLLER, CHEMICAL FEED PUMPS (AND HEATERS). 3. SECURE SIGNAGE ON CHEMICAL ROOM DOORS IN COMPLIANCE WITH THE STATE FIRE CODE. REFER: 1AQS64 4. SECURE CHEMICAL METERING PUMP FEED LINES TO WALL AND/OR OVERHEAD WITH CLIPS OR DEVICES THAT DO NOT CRIMP, DISTORT OR ALLOW HIGH AND LOW AREAS IN TUBING RUNS. PROVIDE CHECK VALVE AND SHUT-OFF VALVE BEFORE LINES ENTER POOL RETURN PIPING. 5. WATER CHEMISTRY CONTROLLERS MUST CONTROL THE SANITIZING SYSTEM AND PH CONTROL SYSTEM AND SHUT THEM DOWN UPON LOSS OF SAMPLE STREAM FLOW. 6. SAMPLE FEED PIPING TO/FROM THE RECIRCULATION SYSTEM TO THE WATER CHEMISTRY CONTROLLER MUST BE PIPED PER THE SYSTEMS SCHEMATIC. BYPASS PIPING MUST BE SADDLED OR TEED. NO TAPPING OR DRILLING INTO THE PIPING WILL BE ALLOWED. 7. PROVIDE ETHERNET CONNECTION FOR REMOTE ACCESS TO ALL WATER CHEMISTRY CONTROLLERS AND COORDINATE INTERFACE TO BUILDING MANAGEMENT SYSTEM. REFER TO ELECTRICAL AND/OR CONTROLS CONSULTANT. 8. INSTALL SANITIZER INJECTION POINT DOWNSTREAM OF PH BUFFER INJECTION POINT ON FILTERED WATER RETURN PIPE. CHEMICAL INJECTION POINTS MUST BE LOCATED DOWNSTREAM OF ALL OTHER EQUIPMENT/SYSTEMS IN THE POOL MECHANICAL ROOM AT A MAXIMUM HEIGHT OF 7'-0" ABOVE FINISHED FLOOR. REFER: 14IAQ203 ELECTRICAL 1. GFCI'S PROVIDED AT OUTLETS. REFER TO ELECTRICAL. 2. POOL EQUIPMENT ROOM AND CHEMICAL STORAGE AREAS MUST BE PROVIDED WITH ARTIFICIAL LIGHTING SUFFICIENT TO ILLUMINATE ALL EQUIPMENT AND SUPPLIES. REFER TO ELECTRICAL. 3. CONDUIT MUST BE ROUTED OVERHEAD OR BELOW GRADE. 4. PROVIDE ELECTRICAL CONNECTION ADJACENT TO FILTER SYSTEM FOR FILTER BACKWASH CONTROLLER. REFER TO ELECTRICAL.											

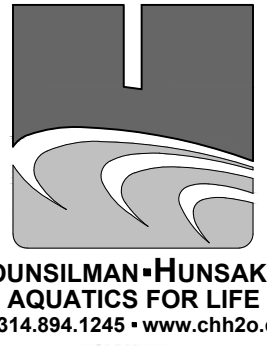
GENERAL PIPING NOTES											
1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERATIONAL PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE. 2. PIPE SIZES INDICATED ARE NOMINAL, I.P.S. 3. UNLESS OTHERWISE NOTED, ALL OVERHEAD PIPING MUST BE TIGHT TO UNDERSIDE OF STRUCTURE OR SLAB. 4. ALL BALANCING VALVES AND BUTTERFLY VALVES MUST BE PROVIDED WITH POSITION INDICATORS AND MAXIMUM ADJUSTABLE STOPS (MEMORY STOPS). 5. ALL VALVES MUST BE INSTALLED SO THAT THE VALVE REMAINS IN SERVICE WHEN THE EQUIPMENT OR PIPING ON THE EQUIPMENT SIDE OF THE VALVE IS REMOVED. 6. PROVIDE CHAIN WHEEL OPERATORS FOR ALL VALVES IN EQUIPMENT ROOMS MOUNTED GREATER THAN 7'-0" ABOVE FINISHED FLOOR. CHAIN MUST EXTEND TO 7'-0" ABOVE FINISHED FLOOR LEVEL. 7. ALL VALVE HARDWARE MUST BE 316L STAINLESS STEEL AND MEET ANSI HARDWARE INSTALLATION GUIDELINES. REFER: 14IAQ204 8. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING. 9. ALL PIPING WORK MUST BE COORDINATED WITH ALL TRADES AND SITE CONDITIONS. OFFSETS, EXPANSION LOOPS, OR TRANSITIONS IN PIPING AROUND OBSTRUCTIONS MUST BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. 10. ALL PIPING INDICATED MUST BE CONSIDERED DIAGRAMMATIC. 11. ALL SWIMMING POOL PIPING ROUTED BELOW THE POOL SHELL MUST BE CONCRETE ENCASED SCHEDULE 40 PVC, UNLESS OTHERWISE NOTED. REFER: 8IAQ205 12. ALL UNDERGROUND OR EXPOSED SWIMMING POOL PIPING MUST BE SCHEDULE 80 PVC, UNLESS OTHERWISE NOTED. CONTRACTOR MUST REFER TO PLANS AND SPECIFICATIONS FOR ANY SPECIFIC REQUIREMENTS REGARDING PLACEMENT AND BACKFILLING OF BELOW GRADE POOL PIPE. 13. ALL DIMENSIONS INDICATED FROM THE FINISH WALL SURFACE AND DO NOT ACCOUNT FOR ANY VARIATIONS IN FINISH GRADE OR SLOPE DISTANCES. 14. THE CHEMICAL SENSOR LINE MUST BE A 3/4" TO 1" DIAMETER, SCHEDULE 80 PVC PIPE EXTENDED FROM THE WET CELL SENSOR TO ITS RESPECTIVE FILL FUNNEL AND THE BACKWASH CATCH BASIN OR PUMP SUCTION. 15. ALL FLOOR INLETS MUST BE ADJUSTED TO ACHIEVE AN EVEN FLOW DISTRIBUTION THROUGHOUT SYSTEMS. 16. ALL PIPE TEES MUST BE SIZED FOR LARGEST PIPE CONNECTION. 17. SURGE TANK VENT PIPING TO INCLUDE POWERED VENT FAN AND ROUTE TO BUILDING EXTERIOR. REFER TO MECHANICAL. 18. ALL GUTTER DROPOUT LINES MUST SLOPE 1/8" PER FOOT MINIMUM.											

FILL SCHEDULE						
ID	POOL	FRESH WATER SUPPLY GPM (MIN.)	FILL FUNNEL SIZE	REDUCER SIZE	SPLASH COLLAR SIZE	DESIGN FILL TIME (HOURS)
L1	COMPETITION	177	12"	12'X8"	10"	72
L2	TRAINING	50	8"	8'X4"	6"	24
NOTE: REFER: 2IAQ204						

MAIN DRAIN SCHEDULE							
ID	DESCRIPTION	SIZE	QTY	DESIGN FLOW (GPM)	DESIGN VELOCITY (FPS)	MAX FLOW (GPM)	MANUFACTURER
M1	COMPETITION POOL RECIRCULATION	18X36	2	1,175	0.47	2,480	DALMAX-MBD-183628
M2	COMPETITION POOL RECIRCULATION	18X36	2	1,075	0.43	2,480	DALMAX-MBD-183628
M3	TRAINING POOL RECIRCULATION	18X36	2	400	0.16	1,984	DALMAX-MBD-183624
NOTE: 1. MAIN DRAIN GRATING MUST BE MANUFACTURED BY DALDORADO. 2. MAXIMUM FACE VELOCITY MUST NOT EXCEED 1.5 FEET PER SECOND. 3. OPEN AREA IS BASED ON MANUFACTURERS DATA. 4. THE INSTALLED LIFE OF THE MAIN DRAIN COVER MUST BE 10 YEARS. 5. ALL MAIN DRAINS MUST BE INSTALLED IN THE POOL FLOOR. WALL SUMPS WILL NOT BE PERMITTED. 6. FASTEN MAIN DRAIN COVER TO EMBEDDED PVC FRAME/POOL FLOOR WITH SS TAMPER PROOF FASTENERS AT A SPACING NO GREATER THAN 24" O.C. REFER TO FRAME AND GRATE MANUFACTURERS INSTALLATION INSTRUCTIONS. 7. PROVIDE WATER BONDING FITTING IN MAIN DRAIN SUMP AT DEEPEST SECTION OF THE POOL. BASIS OF DESIGN: PERMA-CAST SWIMMING POOL PRODUCTS MODEL PB-SK-20. 8. PROVIDE HYDROSTATIC RELIEF VALVE IN EACH MAIN DRAIN. BASIS OF DESIGN: HAYWARD MODEL SP1056 & SP1055.							



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07/14/2023

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO

7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

REV'D BY: CCH

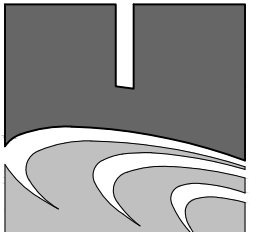
PROJECT #: 22044

TITLE:
POOL MECHANICAL NOTES &
SCHEDULES
SHEET #:

AQ400



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07/14/2023

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

REV'D BY: CCH

PROJECT #: 22044

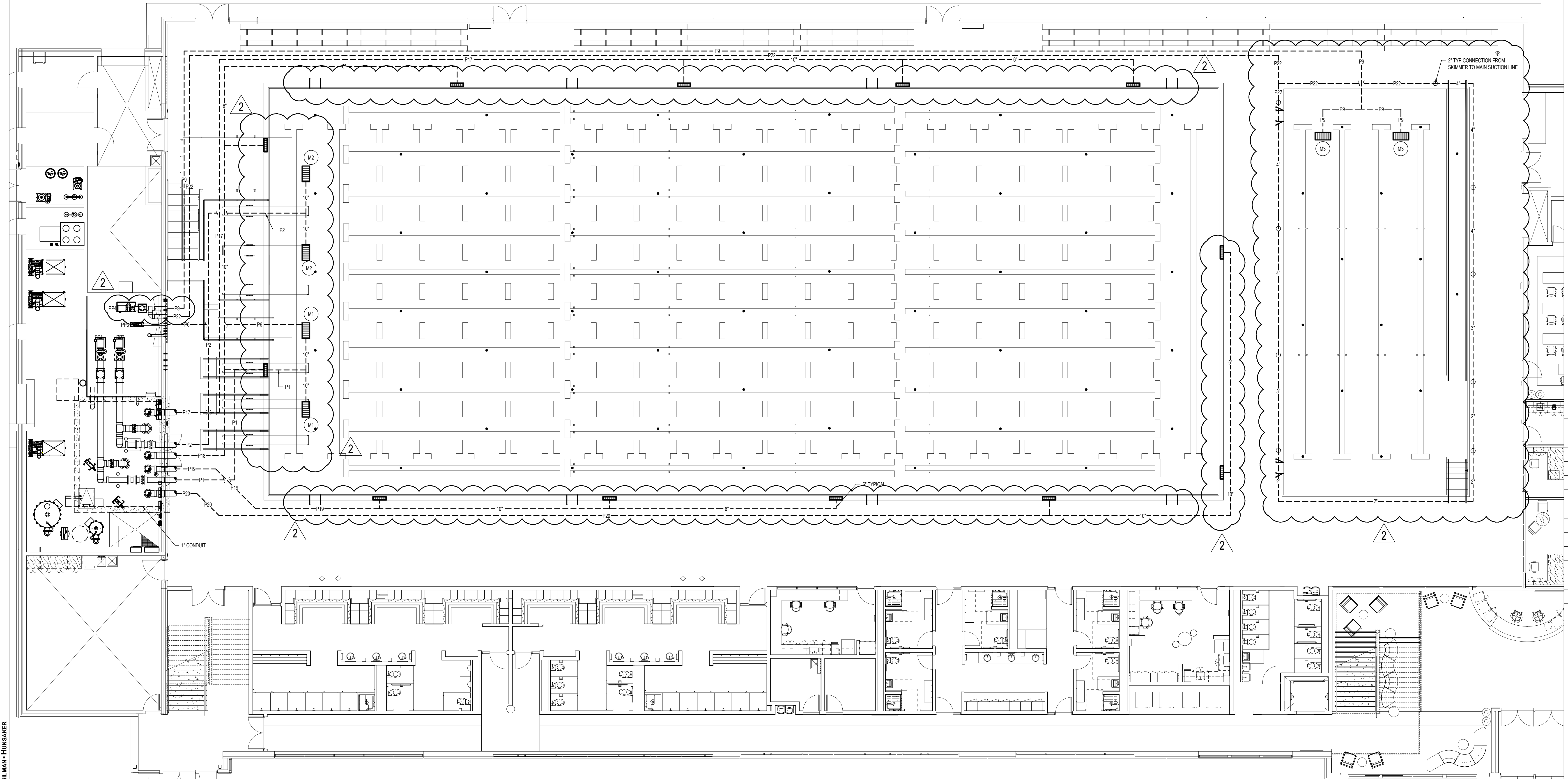
TITLE: POOL SUCTION PIPING PLAN

SHEET #:

AQ401

PIPING SUPPORT NOTES	
1. ALL GUTTER DROPOUT PIPING, MAIN DRAIN PIPING, AND PRESSURE PIPING EXTERIOR TO THE POOL SHELLS MUST BE PROPERLY SUPPORTED ON OR ABOVE THE CONCRETE FLOOR SLAB/APRON AT INTERVALS OF THIRTY-FIVE FEET OR LESS. PIPING MUST BE SUPPORTED BY RESTING DIRECTLY ON THE CONCRETE SLAB OR WITH A STRUT BRACKER OR PIPE SUPPORT. REFER: S & B 6005A	
2. ALL PIPING MUST BE CONSIDERED DIAGRAMMATIC. SLIGHT MODIFICATION IN ROUTING MAY BE REQUIRED TO ADDRESS CONFLICTS WITH DRILLED PIERS OR DIVE TOWER FOOTINGS.	

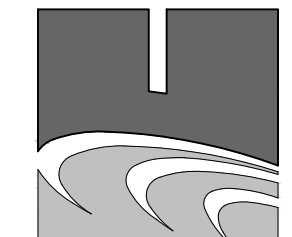
PIPE SCHEDULE	
ID	DESCRIPTION
P1	12" FROM M1 TO PP1
P2	12" FROM M2 TO PP2
P3	8" FROM L1 TO SURGE TANK
P4	12" FROM F1 TO COMPETITION POOL INLETS
P5	3" FROM PP3 TO COMPETITION POOL AGITATORS
P6	3" FROM M1 TO PP3
P7	4" FROM L2 TO M3
P8	6" FROM F2 TO TRAINING POOL INLETS
P9	6" FROM M3 TO PP4
P10	12" FROM PP1 & PP2 TO POOL FILTERS
P11	4" FROM P10 TO BACKWASH CATCH BASIN
P12	3" FROM P5 TO BACKWASH CATCH BASIN
P13	6" FROM PP4 TO TRAINING POOL FILTER
P14	3" FROM P13 TO BACKWASH CATCH BASIN
P15	4" FROM COMPETITION POOL FILTER TO BACKWASH CATCH BASIN
P16	3" FROM TRAINING POOL FILTER TO BACKWASH CATCH BASIN
P17	12" FROM COMPETITION POOL GUTTER DROPOUT BOXES TO SURGE TANK
P18	12" FROM COMPETITION POOL GUTTER DROPOUT BOXES TO SURGE TANK
P19	12" FROM COMPETITION POOL GUTTER DROPOUT BOXES TO SURGE TANK
P20	12" FROM COMPETITION POOL GUTTER DROPOUT BOXES TO SURGE TANK
P21	6" COMPETITION POOL SURGE TANK VENT (REFER TO MECHANICAL)
P22	6" FROM TRAINING POOL SKIMMERS TO PP4
P23	2" STATIC LINE TO M3
P24	NOT IN USE
P25	6" COMPETITION POOL PRECOAT LINE
P26	4" TRAINING POOL PRECOAT LINE
P27	NOT IN USE
P28	3" FROM P5 TO COMPETITION POOL SURGE TANK
P29	8" FROM P4 TO H1
P30	8" FROM H1 TO P4
P31	4" FROM P5 TO H2
P32	4" FROM H2 TO P5



1
AQ401
POOL SUCTION PIPING PLAN
1/8" = 1'-0"



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07/14/2023

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

REV'D BY: CCH

PROJECT #: 22044

TITLE: POOL RETURN PIPING PLAN

SHEET #:

AQ402

PIPING SUPPORT NOTES

1. ALL GUTTER DROPOUT PIPING, MAIN DRAIN PIPING, AND PRESSURE PIPING EXTERIOR TO THE POOL SHELLS MUST BE PROPERLY SUPPORTED ON OR ABOVE THE CONCRETE FLOOR SLAB/APRON AT INTERVALS OF THIRTY-FIVE FEET OR LESS. PIPING MUST BE SUPPORTED BY RESTING DIRECTLY ON THE CONCRETE SLAB OR WITH A STRUT BRACKER OR PIPE SUPPORT. REFER: S & G40204.
2. ALL PIPING MUST BE CONSIDERED DIAGRAMMATIC. SLIGHT MODIFICATION IN ROUTING MAY BE REQUIRED TO ADDRESS CONFLICTS WITH DRILLED PIERS OR DIVE TOWER FOOTINGS.

PIPE SCHEDULE

ID	DESCRIPTION
P1	12" FROM M1 TO PP1
P2	12" FROM M2 TO PP2
P3	8" FROM L1 TO SURGE TANK
P4	12" FROM F1 TO COMPETITION POOL INLETS
P5	3" FROM PP3 TO COMPETITION POOL AGITATORS
P6	3" FROM M1 TO PP3
P7	4" FROM L2 TO M3
P8	6" FROM F2 TO TRAINING POOL INLETS
P9	6" FROM M3 TO PP4
P10	12" FROM PP1 & PP2 TO POOL FILTERS
P11	4" FROM P10 TO BACKWASH CATCH BASIN
P12	3" FROM P5 TO BACKWASH CATCH BASIN
P13	6" FROM PP4 TO TRAINING POOL FILTER
P14	3" FROM P13 TO BACKWASH CATCH BASIN
P15	4" FROM COMPETITION POOL FILTER TO BACKWASH CATCH BASIN
P16	3" FROM TRAINING POOL FILTER TO BACKWASH CATCH BASIN
P17	12" FROM COMPETITION POOL GUTTER DROPOUT BOXES TO SURGE TANK
P18	12" FROM COMPETITION POOL GUTTER DROPOUT BOXES TO SURGE TANK
P19	12" FROM COMPETITION POOL GUTTER DROPOUT BOXES TO SURGE TANK
P20	12" FROM COMPETITION POOL GUTTER DROPOUT BOXES TO SURGE TANK
P21	6" COMPETITION POOL SURGE TANK VENT (REFER TO MECHANICAL)
P22	8" FROM TRAINING POOL SKIMMERS TO PP4
P23	2" STATIC LINE TO M3
P24	NOT IN USE
P25	8" COMPETITION POOL PRECOAT LINE
P26	4" TRAINING POOL PRECOAT LINE
P27	NOT IN USE
P28	3" FROM P5 TO COMPETITION POOL SURGE TANK
P29	8" FROM P4 TO H1
P30	8" FROM H1 TO P4
P31	4" FROM P6 TO H2
P32	4" FROM H2 TO P5

1" TYP.

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POOL AGITATOR PIPING PLAN

2

AQ402

3/16" = 1'-0"

2

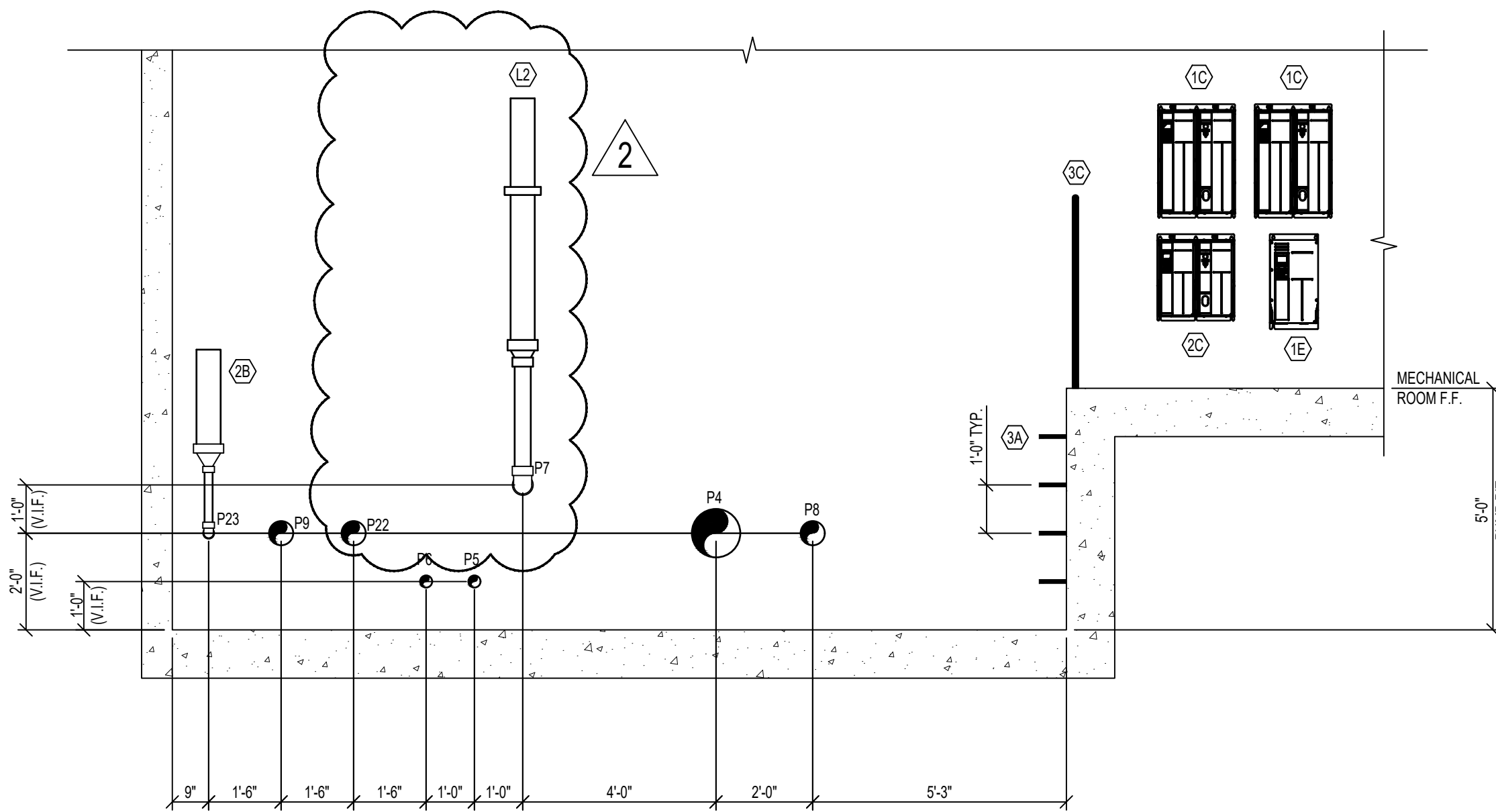
POOL RETURN PIPING PLAN

1

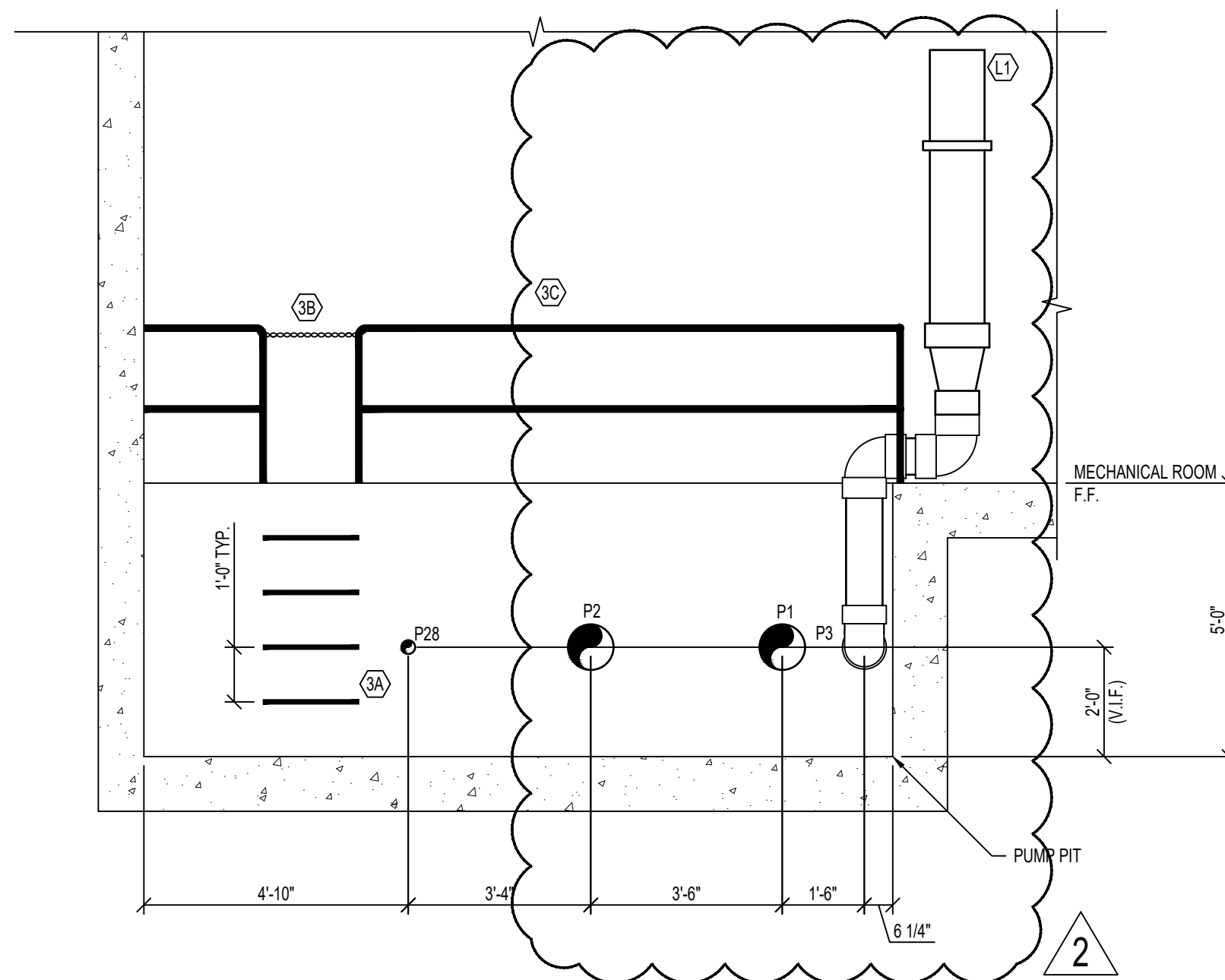
AQ402

1/8" = 1'-0"

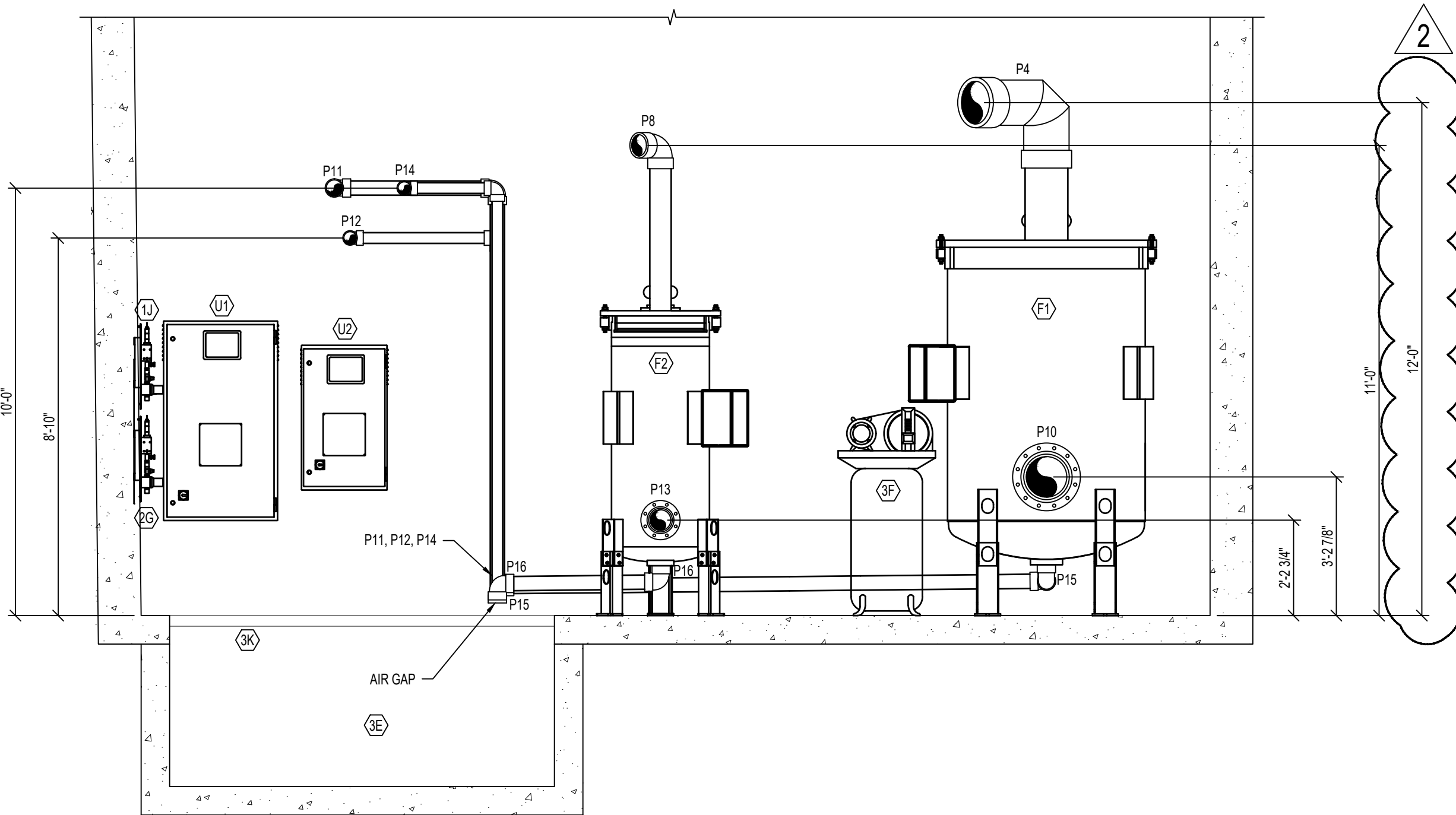
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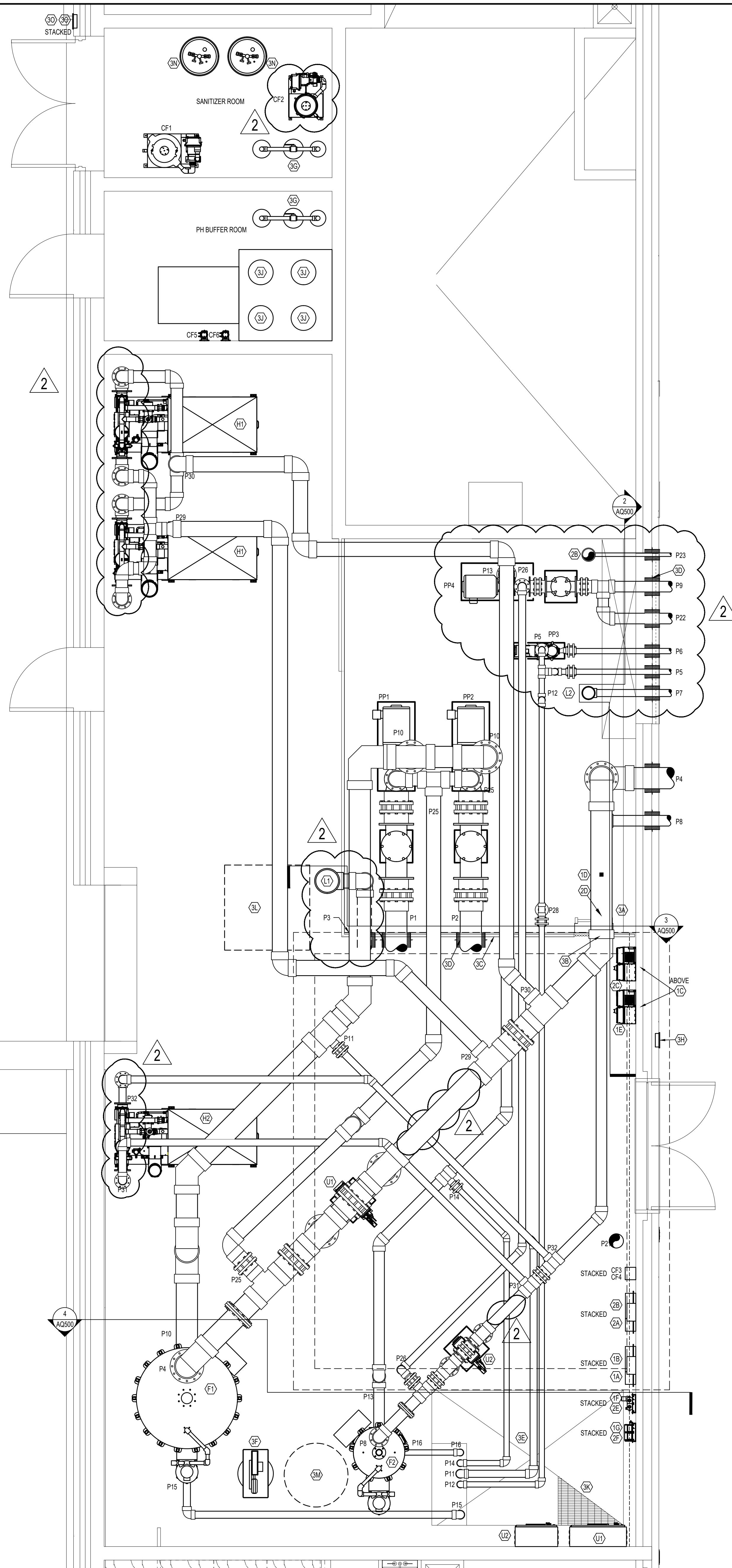
2 POOL MECHANICAL ROOM SECTION
3/8" = 1'-0"



3 POOL MECHANICAL ROOM SECTION
3/8" = 1'-0"



4 POOL MECHANICAL ROOM SECTION
3/8" = 1'-0"



1 POOL MECHANICAL ROOM PLAN
3/8" = 1'-0"

PIPE SCHEDULE

ID	DESCRIPTION
P1	12" FROM M1 TO PP1
P2	12" FROM M2 TO PP2
P3	8" FROM L1 TO SURGE TANK
P4	12" FROM F1 TO COMPETITION POOL INLETS
P5	3" FROM PP3 TO COMPETITION POOL AGITATORS
P6	3" FROM M1 TO PP3
P7	4" FROM L2 TO M3
P8	6" FROM F2 TO TRAINING POOL INLETS
P9	6" FROM M2 TO PP4
P10	12" FROM PP1 & PP2 TO POOL FILTERS
P11	4" FROM P10 TO BACKWASH CATCH BASIN
P12	3" FROM P5 TO BACKWASH CATCH BASIN
P13	6" FROM PP4 TO TRAINING POOL FILTER
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P28	3" FROM P5 TO COMPETITION POOL SURGE TANK
P29	8" FROM P4 TO H1
P30	8" FROM H1 TO P4
P31	4" FROM P5 TO H2
P32	4" FROM H2 TO P5

EQUIPMENT SCHEDULE

ID	ITEM
COMPETITION POOL	
1A	CHEMICAL CONTROLLER REFER: 2IAQ503
1B	WATER LEVEL CONTROLLER REFER: 12IAQ505
1C	VARIABLE FREQUENCY DRIVE AND BYPASS PANEL
1D	FLOW METER SENSOR REFER: 3IAQ504
1E	VARIABLE FREQUENCY DRIVE
1F	FREE CHLORINE SENSOR PANEL REFER: 3IAQ503
1G	TOTAL ALKALINITY SENSOR PANEL REFER: 4IAQ503
TRAINING POOL	
2A	CHEMICAL CONTROLLER REFER: 2IAQ503
2B	WATER LEVEL CONTROLLER REFER: 12IAQ505
2C	VARIABLE FREQUENCY DRIVE AND BYPASS PANEL
2D	FLOW METER SENSOR REFER: 3IAQ504
2E	FREE CHLORINE SENSOR PANEL REFER: 3IAQ503
2F	TOTAL ALKALINITY SENSOR PANEL REFER: 4IAQ503
COMBINED	
3A	LADDER RUNGS
3B	SAFETY CHAIN
3C	REMOVABLE RAILING
3D	LINK SEAL REFER: 4IAQ504
3E	6'-4"x9'-0"x4'-0" DEEP BACKWASH CATCH BASIN
3F	AIR COMPRESSOR
3G	EYEWASH STATION REFER TO PLUMBING
3H	AIR COMPRESSOR HOSE CONNECTION FOR PORTABLE DIVE SPARGER. CONFIRM FINAL LOCATION WITH ARCHITECT
3I	2000 TANKS REFER: 3IAQ503
3K	BACKWASH PIT GRATING REFER TO ARCHITECT & STRUCTURAL
3L	DEDICATED AREA FOR PERLITE STORAGE
3M	DEDICATED AREA FOR DIVING AIR COMPRESSOR (PROVIDED BY DIVING TEAM)
3N	CO ₂ TANK REFER: 10IAQ503
3O	CO ₂ FILLBOX REFER: 12IAQ503



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

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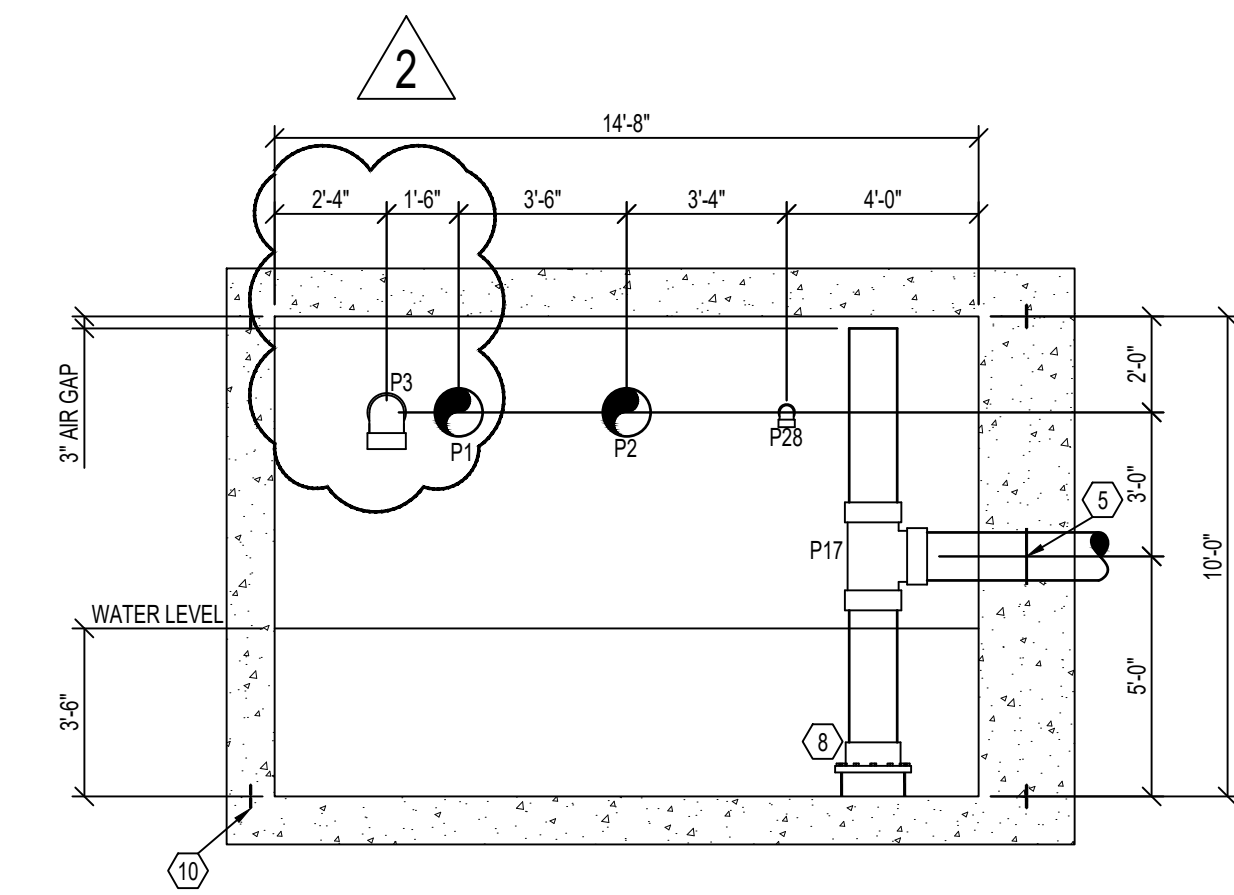
DRAWN BY: DXB

REV'D BY: CCH

PROJECT #: 22044

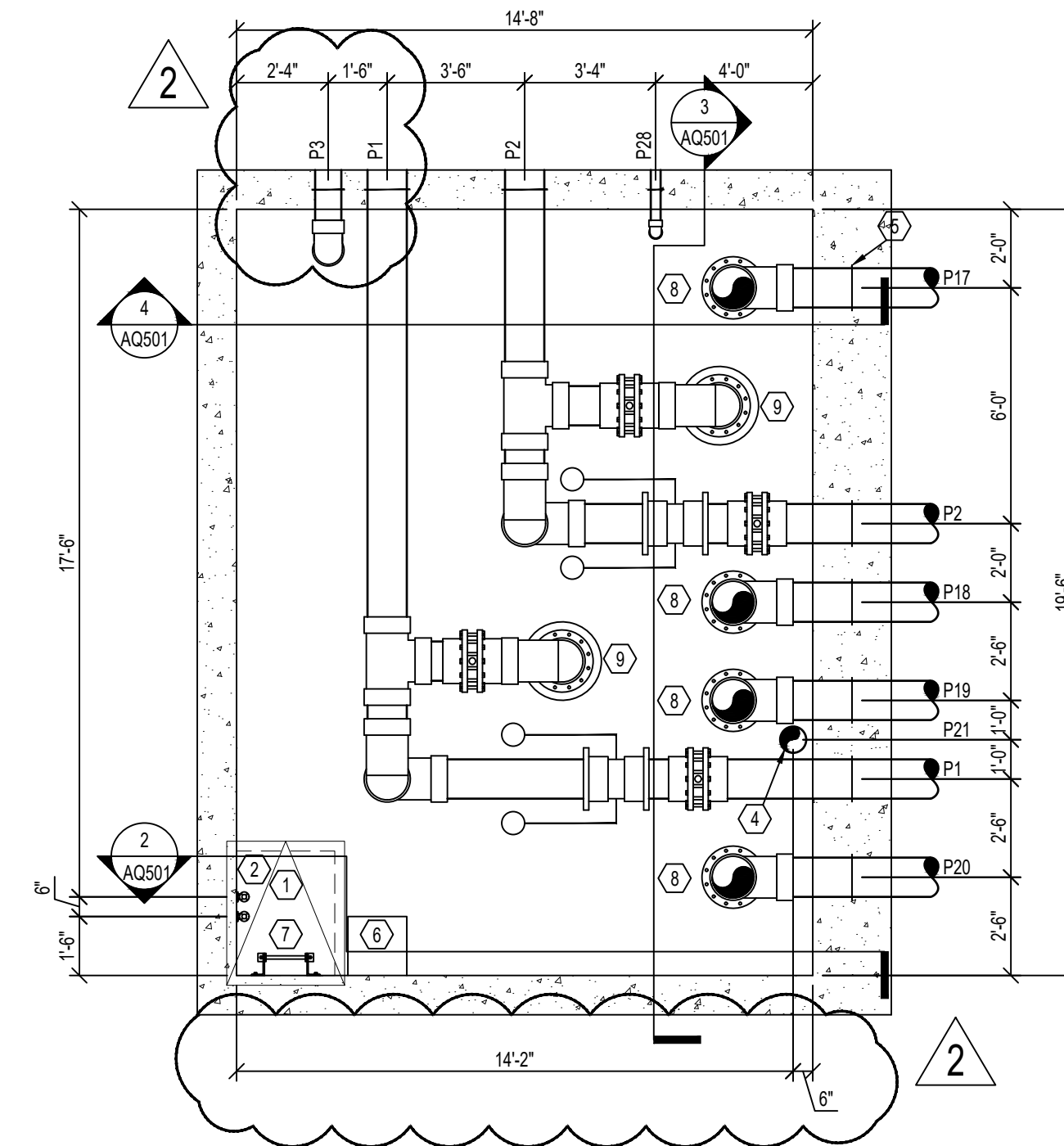
TITLE:
POOL MECHANICAL ROOM PLAN &
SECTIONS
SHEET #:

AQ500



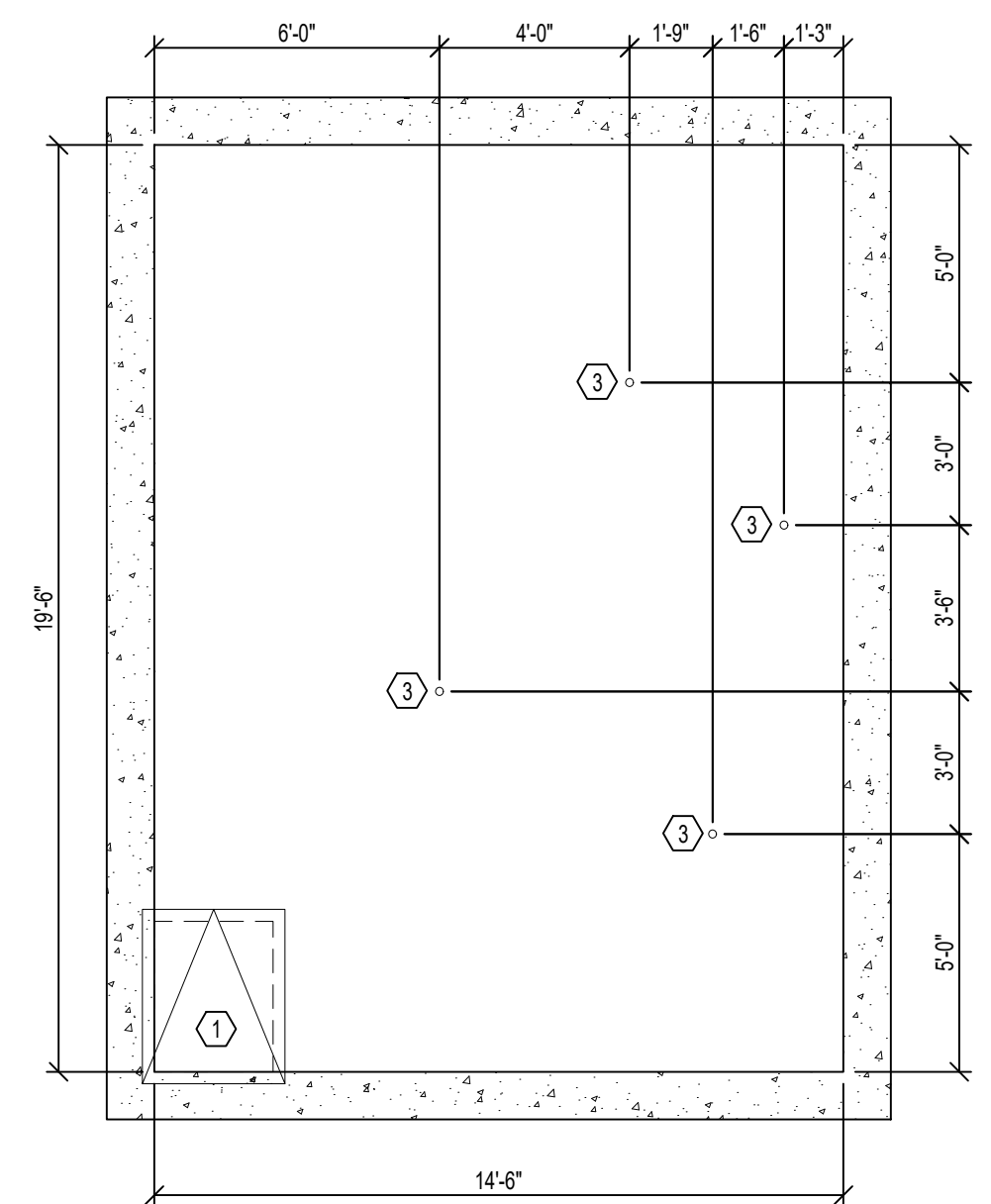
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AQ501
1/4" = 1'-0"

SURGE TANK SECTION



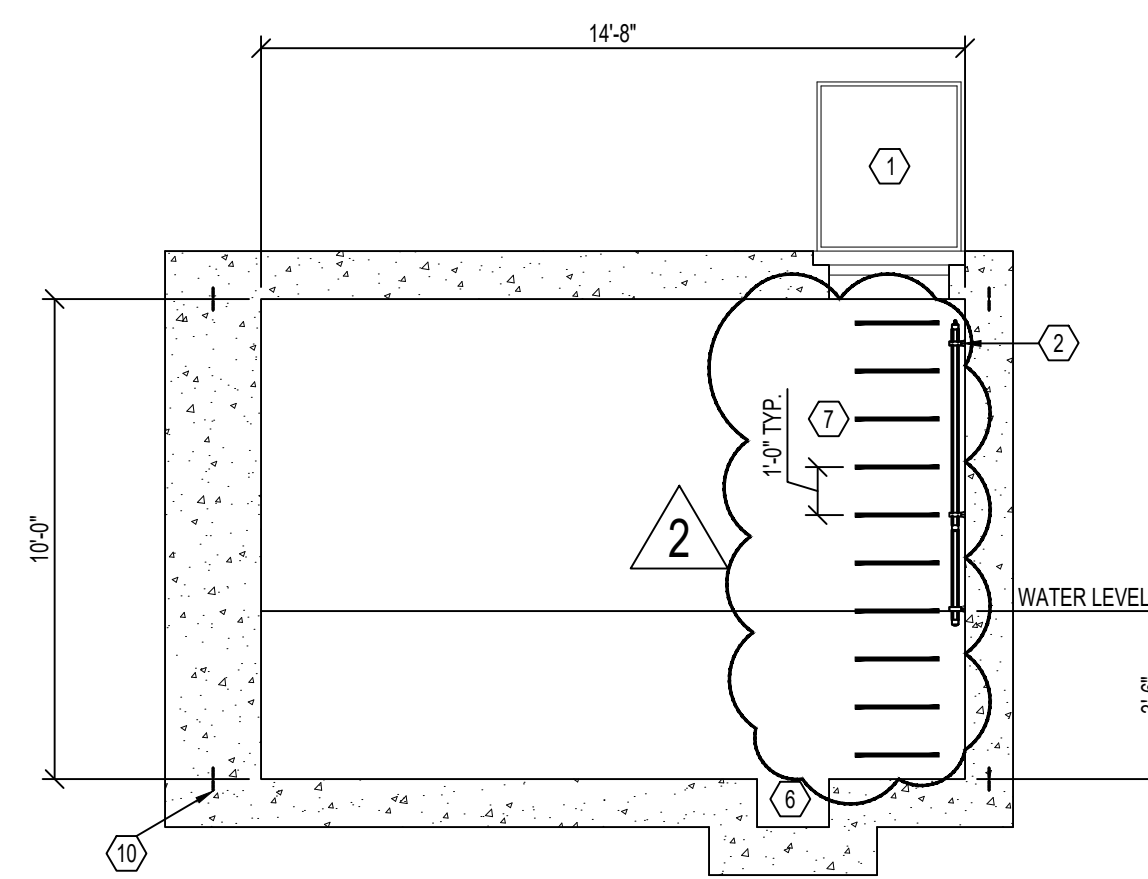
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AQ501
1/4" = 1'-0"

SURGE TANK PLAN



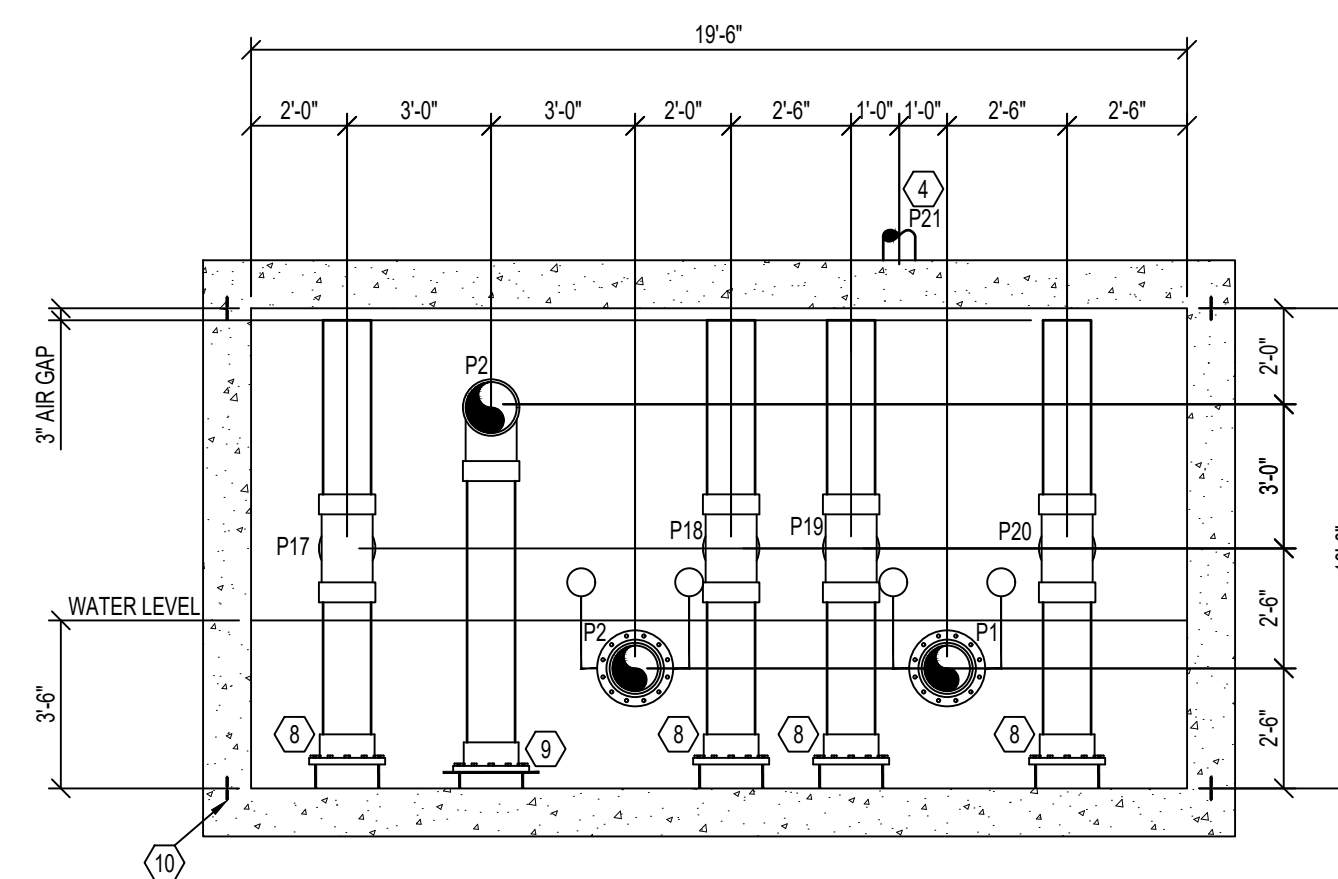
5
AQ501
1/4" = 1'-0"

VALVE EXTENSION PENETRATION PLAN



2
AQ501
1/4" = 1'-0"

SURGE TANK SECTION



3
AQ501
1/4" = 1'-0"

SURGE TANK SECTION

SURGE TANK NOTES

1. A WATERPROOFING COATING MUST BE PROVIDED TO ALL INTERIOR SURFACES OF SURGE TANK INCLUDING LID.
2. PROVIDE WATER TIGHT PIPE PENETRATIONS AND INTERFACES WITHIN THE SURGE TANK.
3. REFER TO BUILDING STRUCTURAL DRAWINGS FOR SURGE TANK STRUCTURAL SHELL DESIGN.
4. SLEEVES IN SLAB OVER SURGE TANK FOR VALVE EXTENSIONS POSITIONED DIRECTLY ABOVE SURGE TANK VALVES BELOW MUST BE COORDINATED.
5. A TEE TO THE TOP OF THE SURGE TANK MUST BE PROVIDED FOR ALL GUTTER DROPOUT LINES. THE TOP OF PIPE ELEVATION MUST ALLOW FOR A 3" AIR GAP.
6. LADDER RUNGS MUST BE PROVIDED.
7. REFER TO BUILDING STRUCTURAL DRAWINGS FOR WATER STOPS.
8. PVC ANTI-VORTEX PLATE MUST BE MINIMUM 2.5 TIMES CONNECTING PIPE DIAMETER UP TO 24" AND 4" A.F.F.
9. SUPPORT FLANGE WITH FOUR (4) LEGS EQUAL TO NOMINAL PIPE DIAMETER, BUT NOT LESS THAN 6" A.F.F.
10. PROVIDE 18"X18"X12" DEEP SUMP LOCATED NEAR ACCESS HATCH.

PIPE SCHEDULE

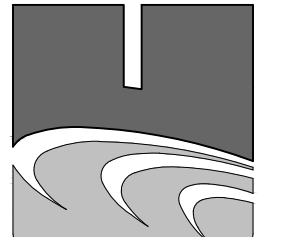
ID	DESCRIPTION
P1	12" FROM M1 TO PP1
P2	12" FROM M2 TO PP2
P3	8" FROM L1 TO SURGE TANK
P4	12" FROM F1 TO COMPETITION POOL INLETS
P5	3" FROM PP3 TO COMPETITION POOL AGITATORS
P6	3" FROM M1 TO PP3
P7	4" FROM L2 TO M3
P8	6" FROM F2 TO TRAINING POOL INLETS
P9	6" FROM M3 TO PP4
P10	12" FROM PP1 & PP2 TO POOL FILTERS
P11	4" FROM PP10 TO BACKWASH CATCH BASIN
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P22	6" FROM TRAINING POOL SKIMMERS TO PP4
P23	2" STATIC LINE TO M3
P24	NOT IN USE
P25	8" COMPETITION POOL PRECOAT LINE
P26	4" TRAINING POOL PRECOAT LINE
P27	NOT IN USE
P28	3" FROM PP5 TO COMPETITION POOL SURGE TANK
P29	8" FROM PP4 TO H1
P30	8" FROM H1 TO PP4
P31	4" FROM PP5 TO H2
P32	4" FROM H2 TO PP5

EQUIPMENT SCHEDULE

ID	ITEM
1	ACCESS HATCH REFER: 10/AQ505
2	WATER LEVEL CONTROLLER(S) REFER: 12/AQ505
3	VALVE EXTENSION REFER: 14/AQ505
4	SURGE TANK VENT REFER: 13/AQ505
5	WATER SEAL REFER: 8/AQ505
6	SUMP
7	LADDER RUNGS
8	SUPPORT FLANGE
9	ANTI-VORTEX PLATE
10	WATERSTOP



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07/14/2023

FOR CONSTRUCTION

**MEYERS POOL REPLACEMENT
ARVADA, CO**

7900 Carr Drive, Arvada, CO 80005

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SCALE: AS NOTED

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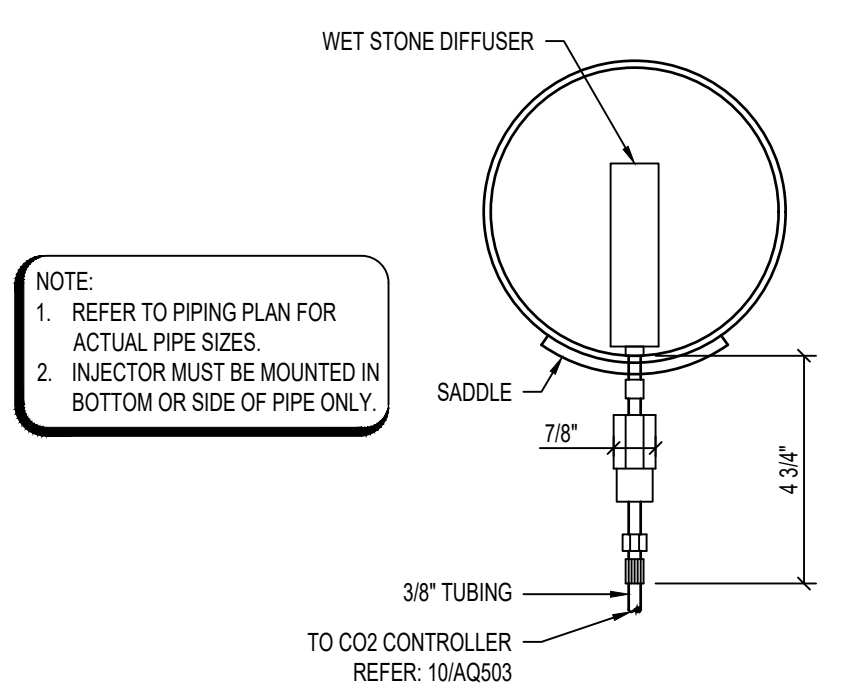
DRAWN BY: DXB

REV'D BY: CCH

PROJECT #: 22044

TITLE:
COMPETITION POOL SURGE TANK
PLAN & SECTIONS
SHEET #:

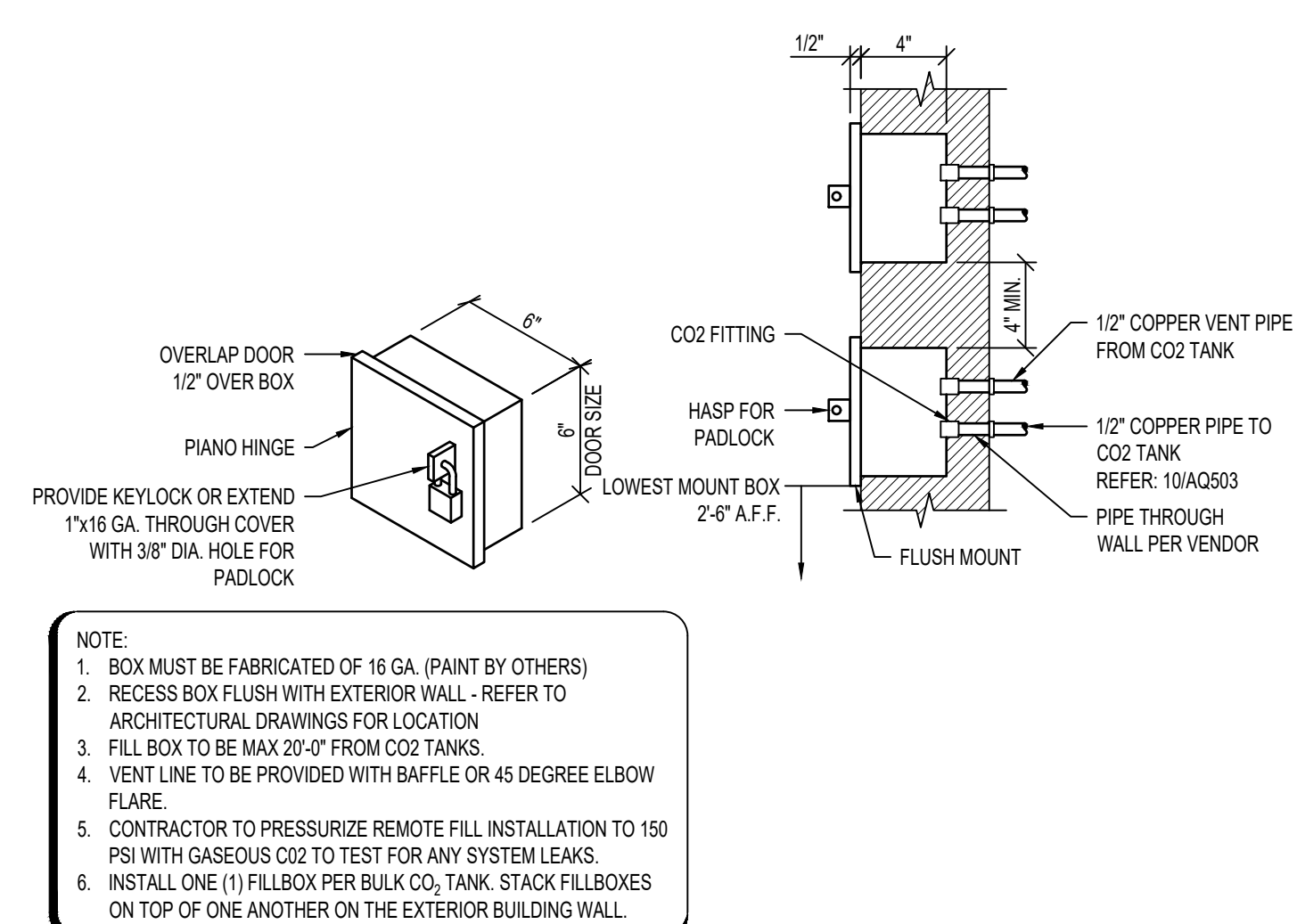
AQ501



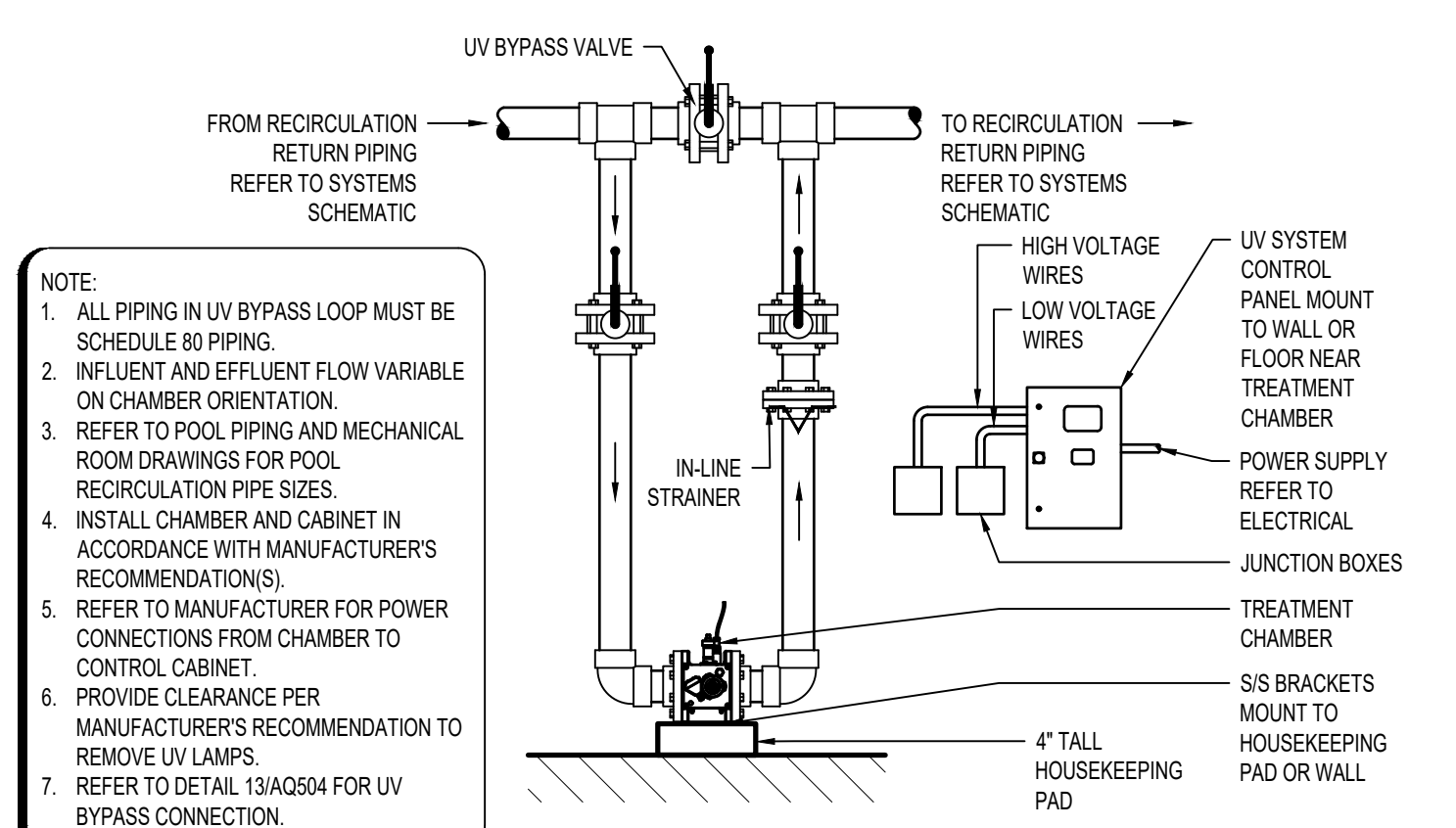
11
AQ503

CO2 DIFFUSER

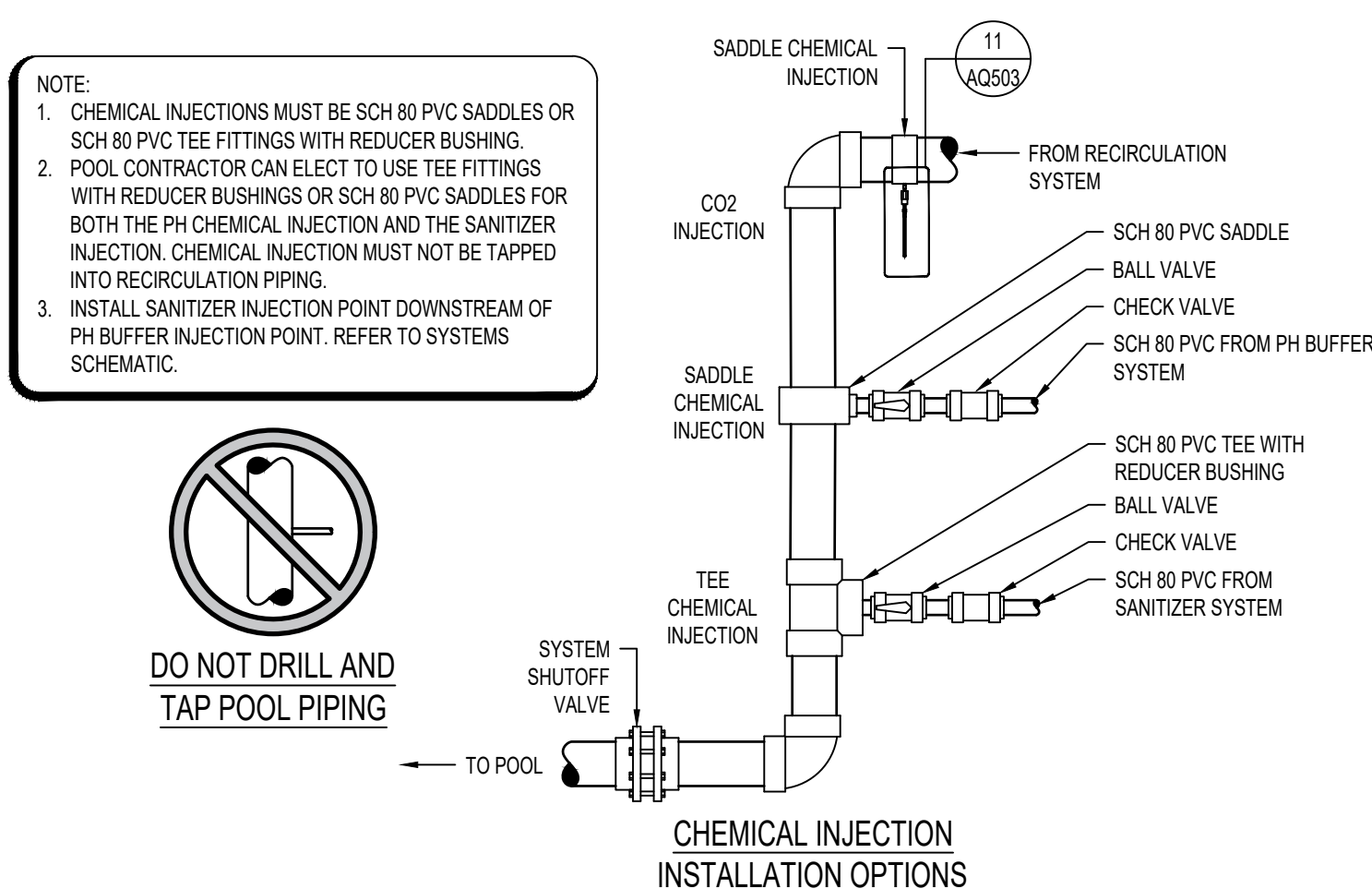
3" = 1'-0"



12
AQ503



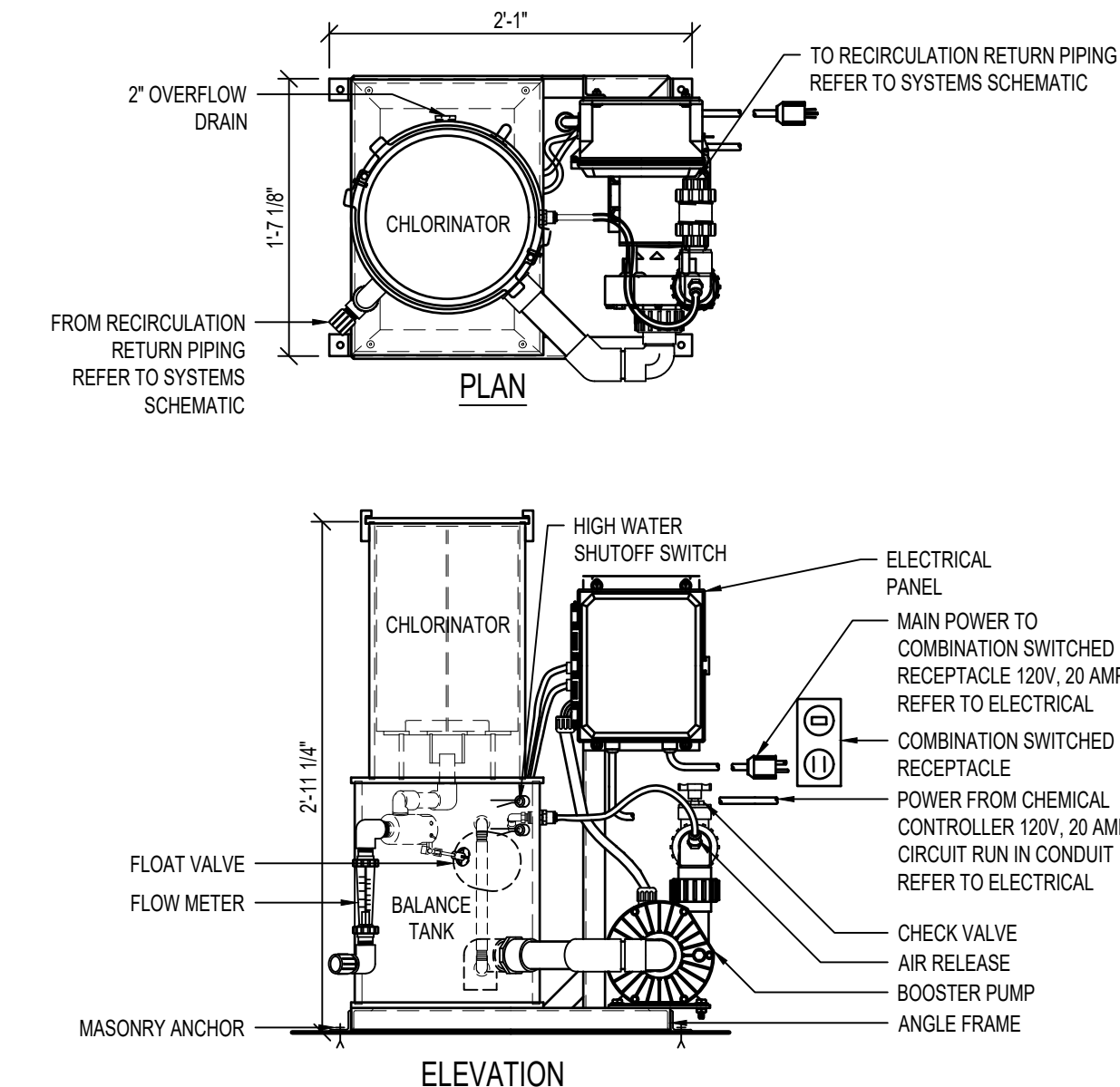
13 UV TREATMENT SYSTEM
AQ503 1/2" = 1'-0"



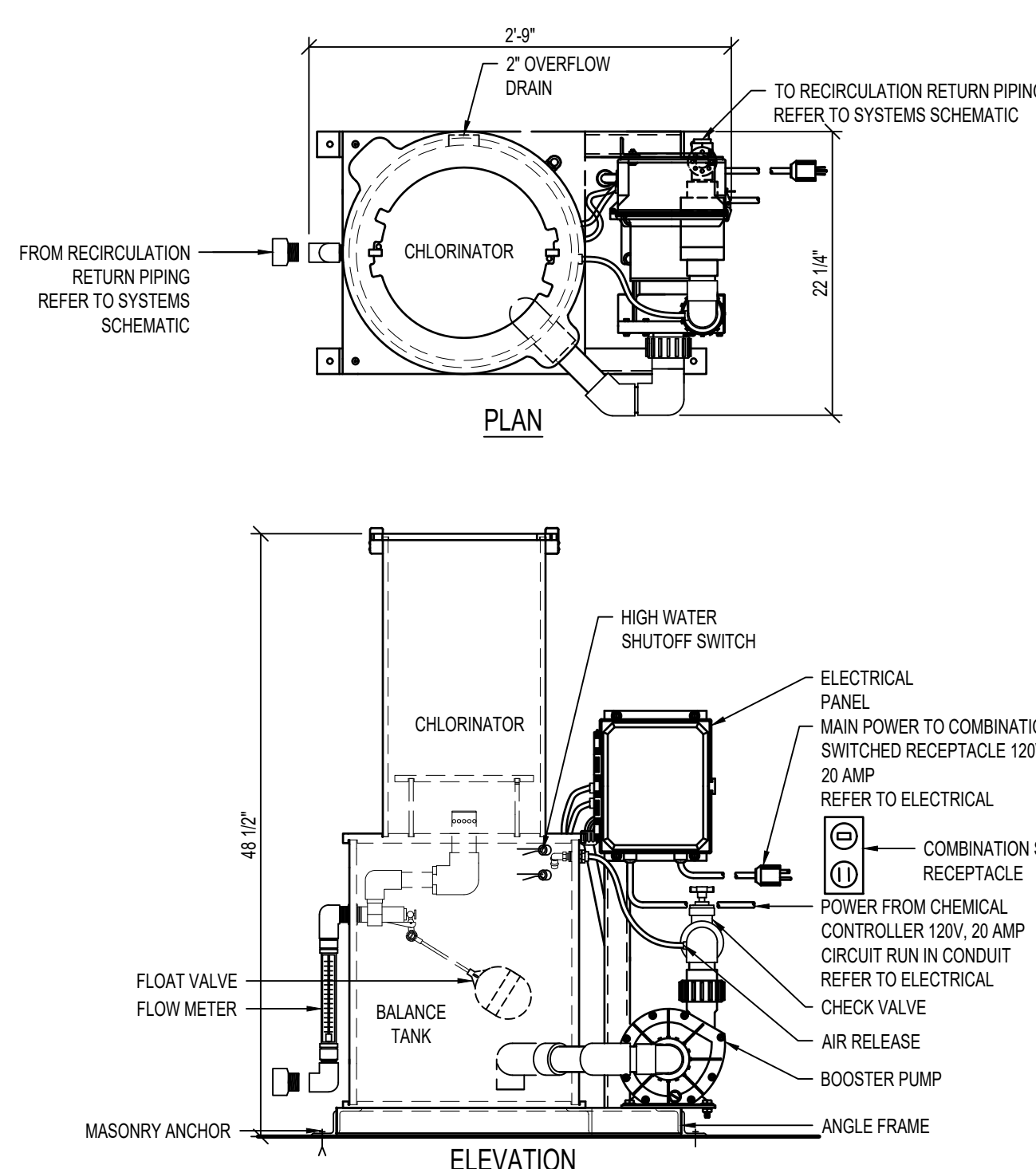
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AQ503

CHEMICAL INJECTION

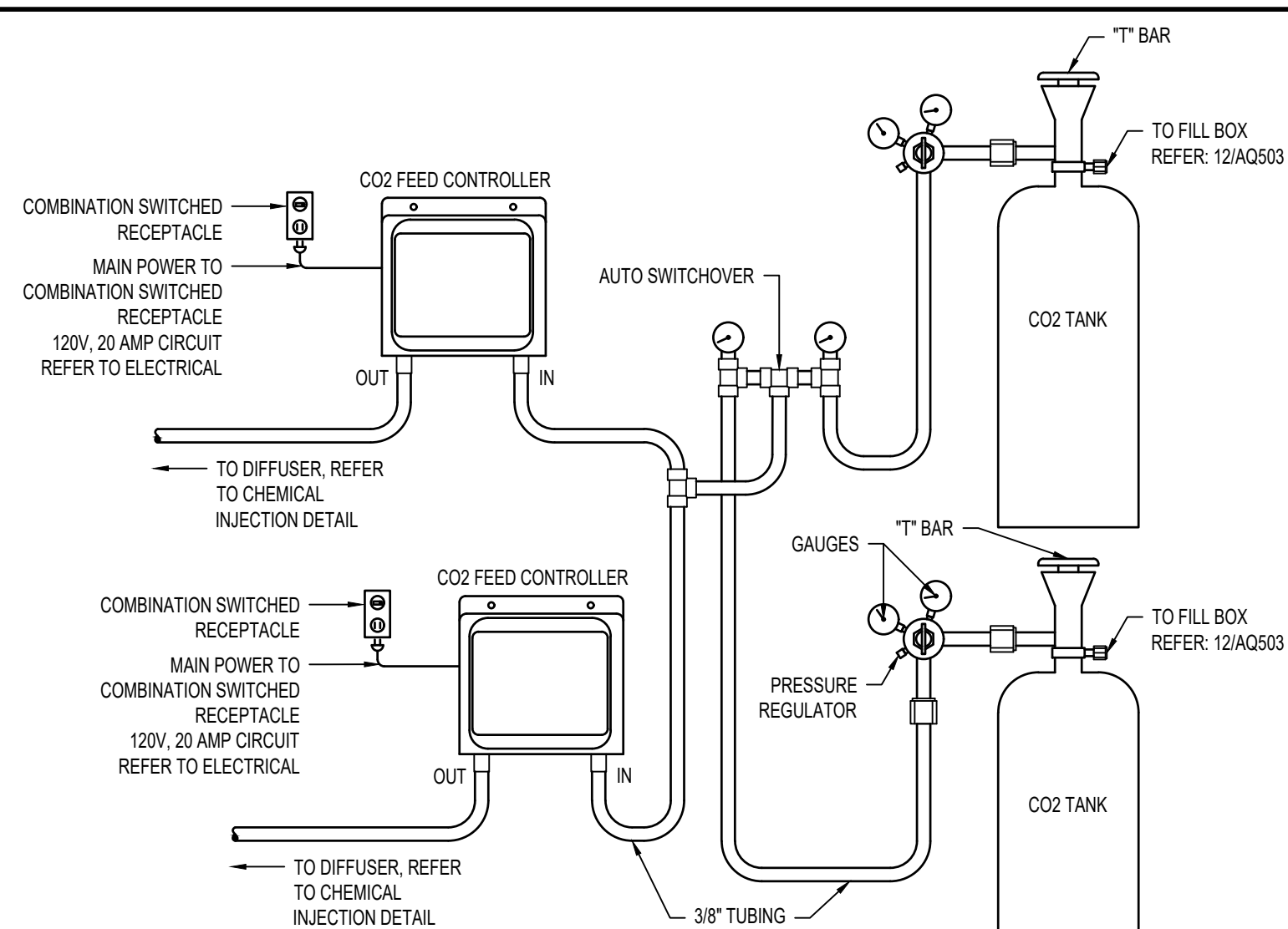
1/2" = 1'-0"



8 TRAINING POOL CHLORINATION SYSTEM
AQ503 1" = 1'-0"



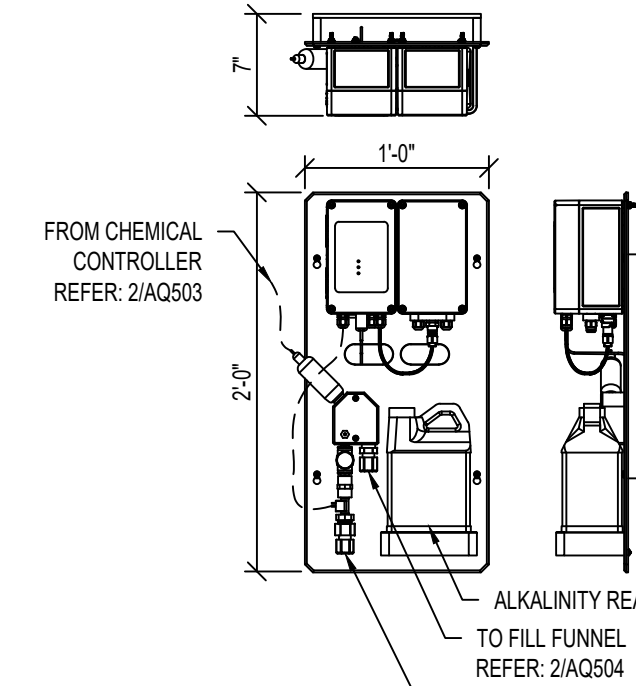
9 AQ503 COMPETITION POOL CHLORINATION SYSTEM



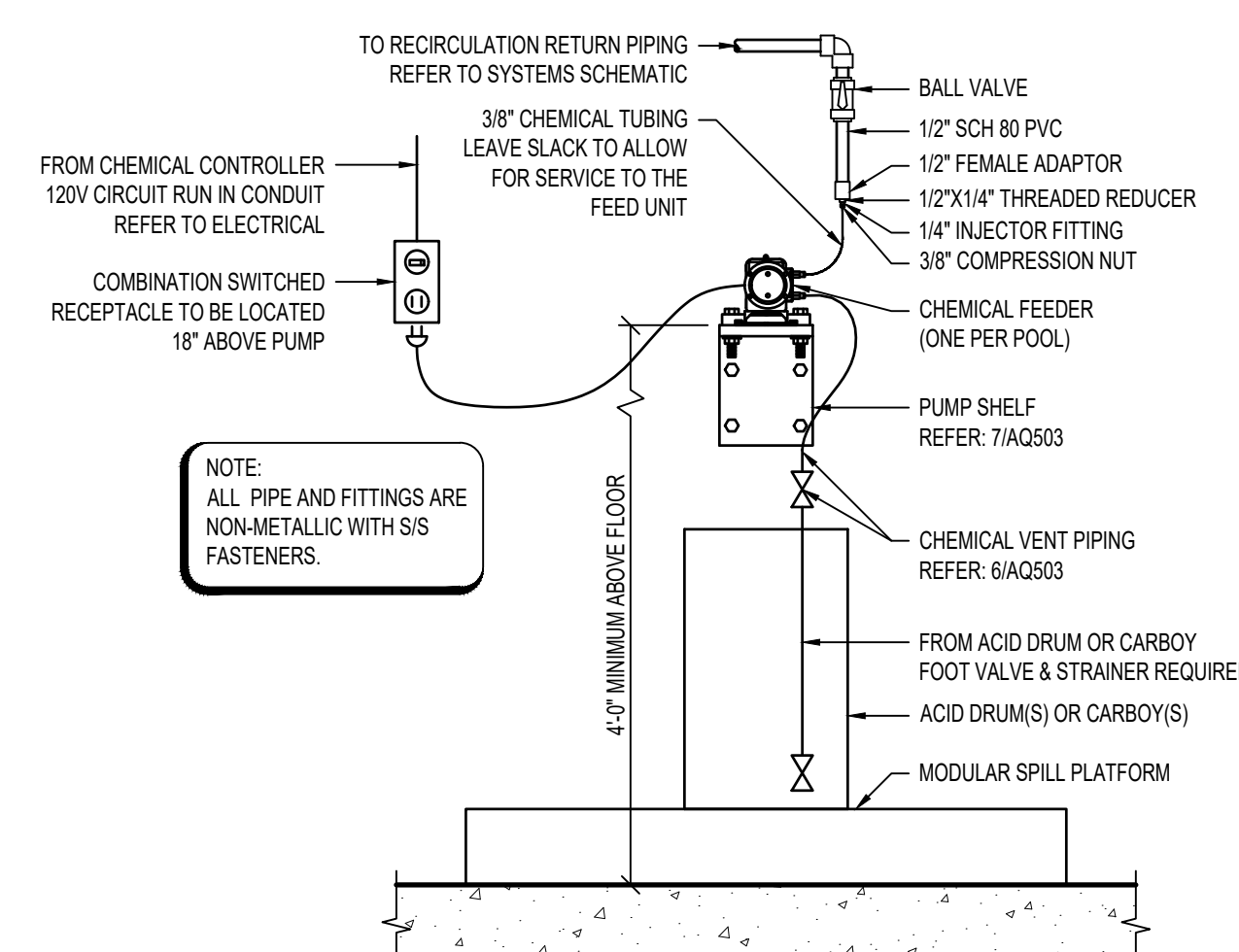
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AQ503

CO2 STORAGE REGULATION

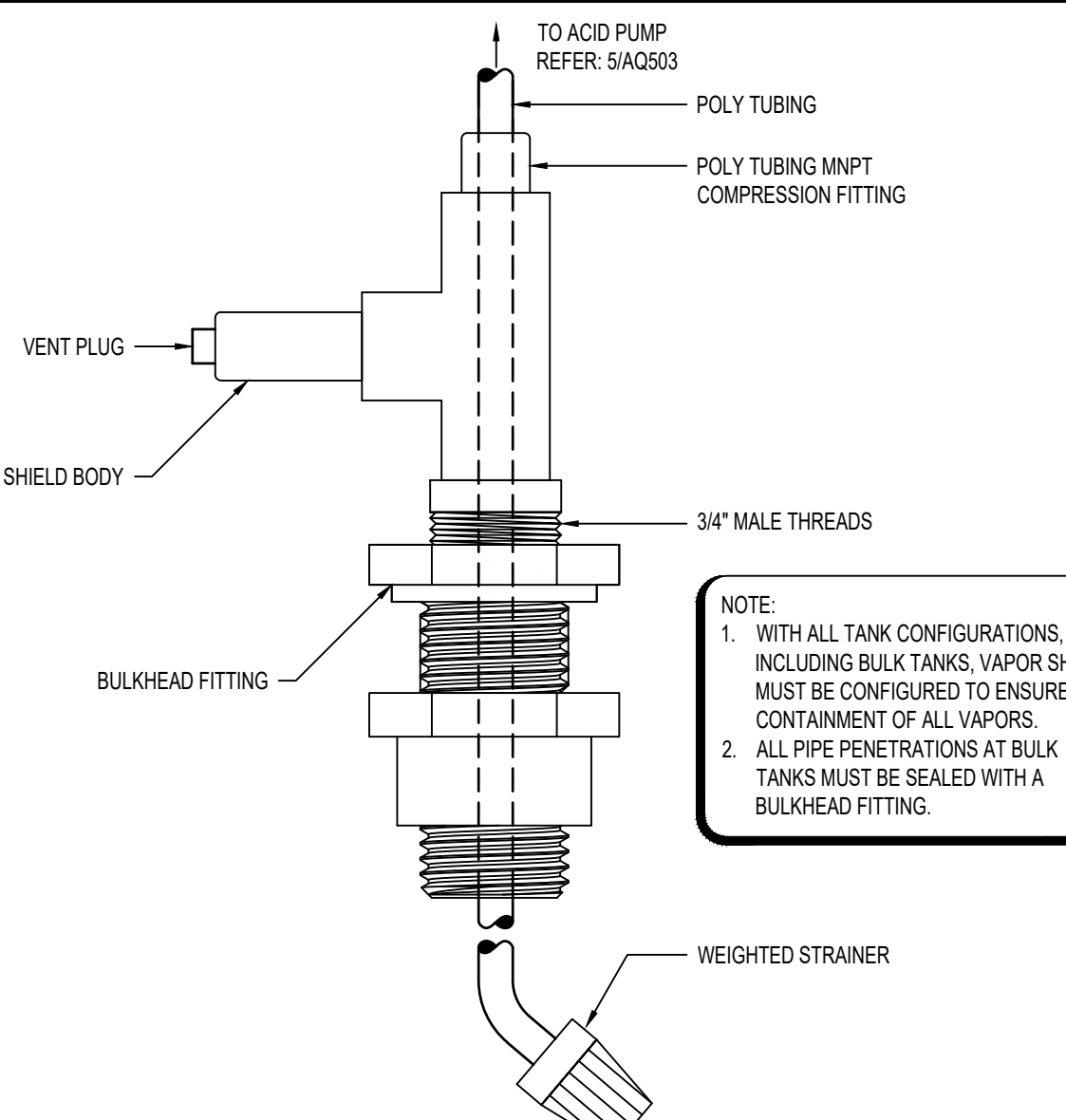
1/2" = 1'-0"



4 TOTAL ALKALINITY PANEL
AQ503 NTS



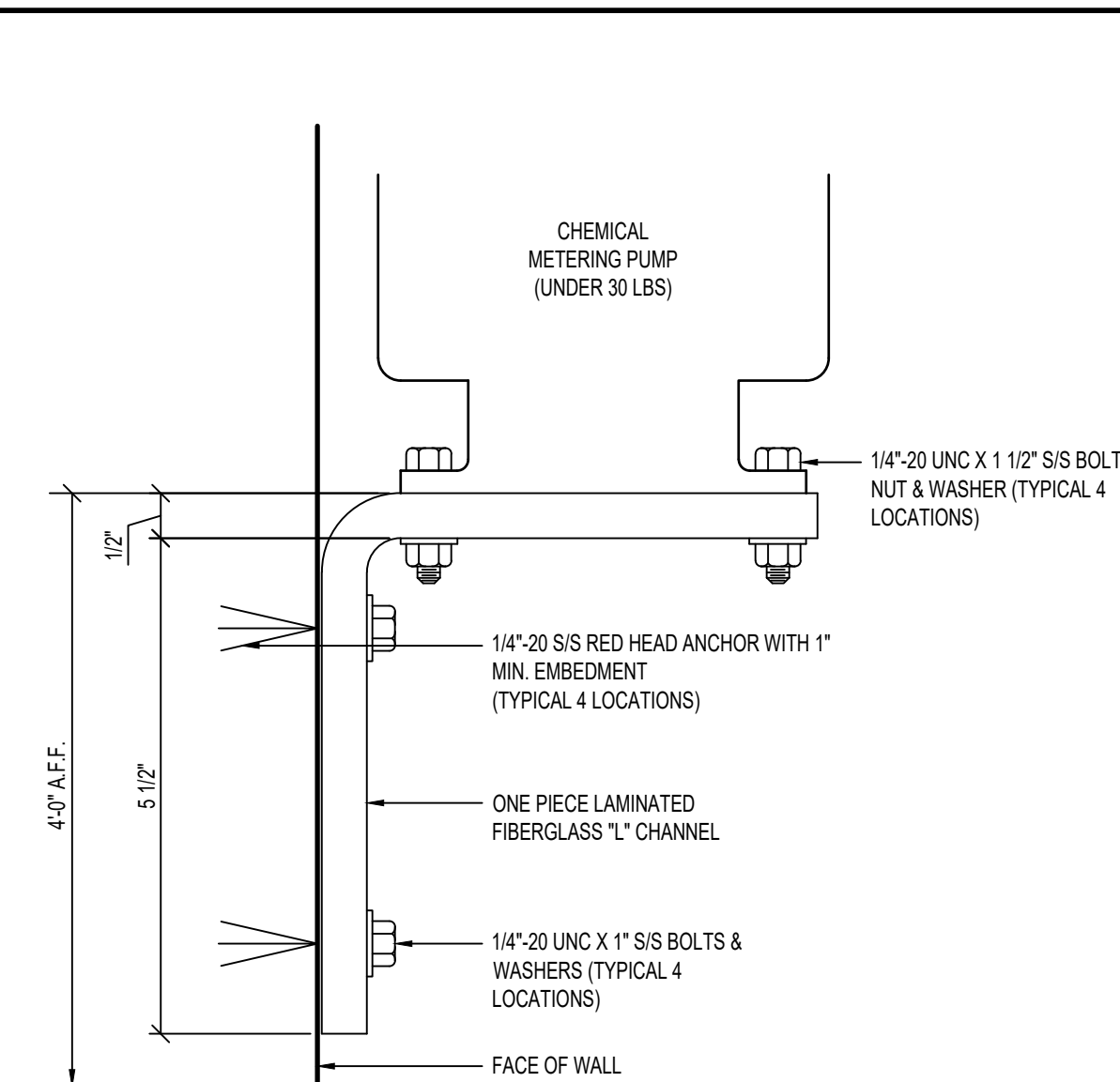
5 ACID SYSTEM
AQ503 $3/4" = 1'-0"$



6
AQ503

CHEMICAL VENT PIPING

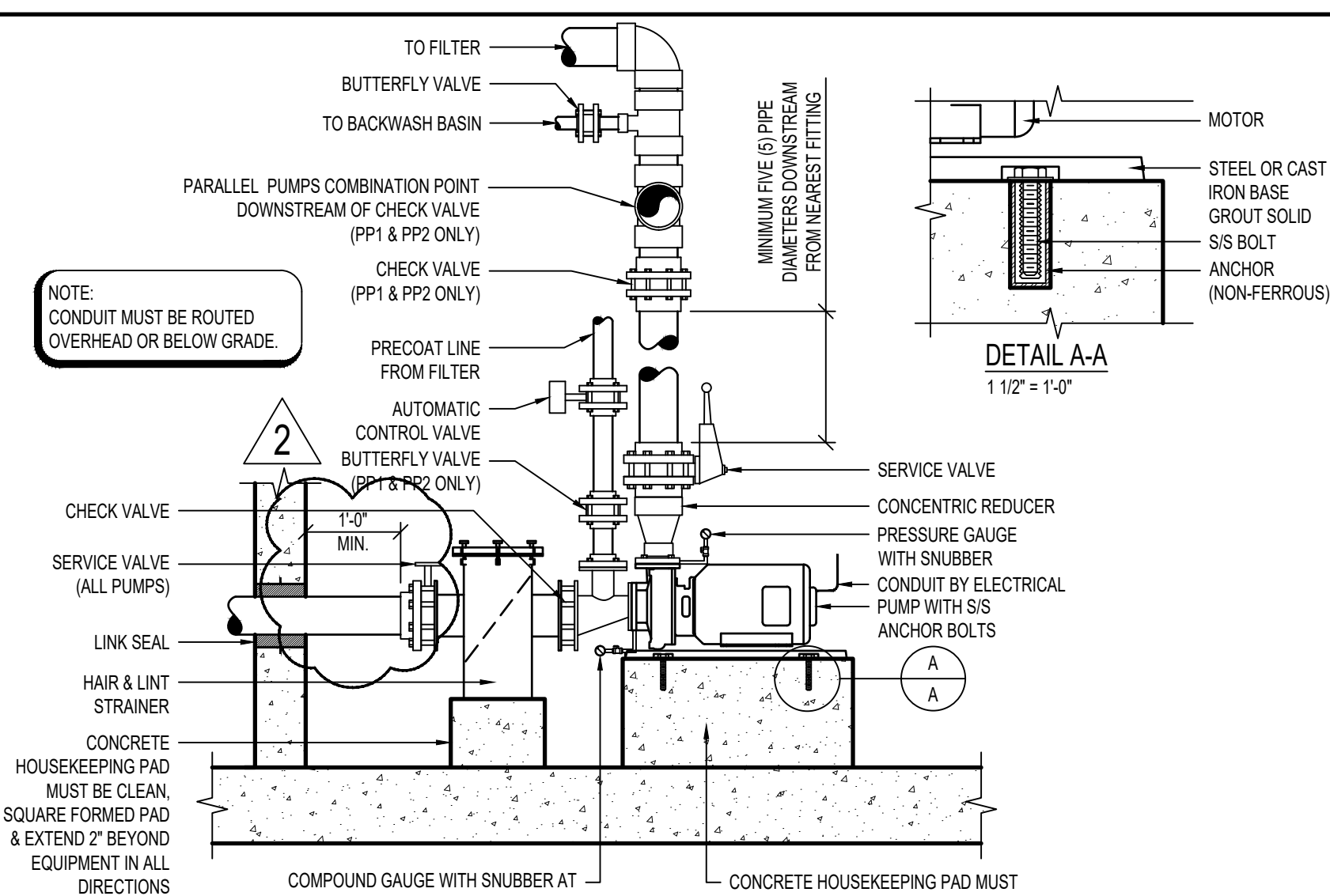
6" = 1'-0"



7
AQ503

CHEMICAL PUMP SHELF

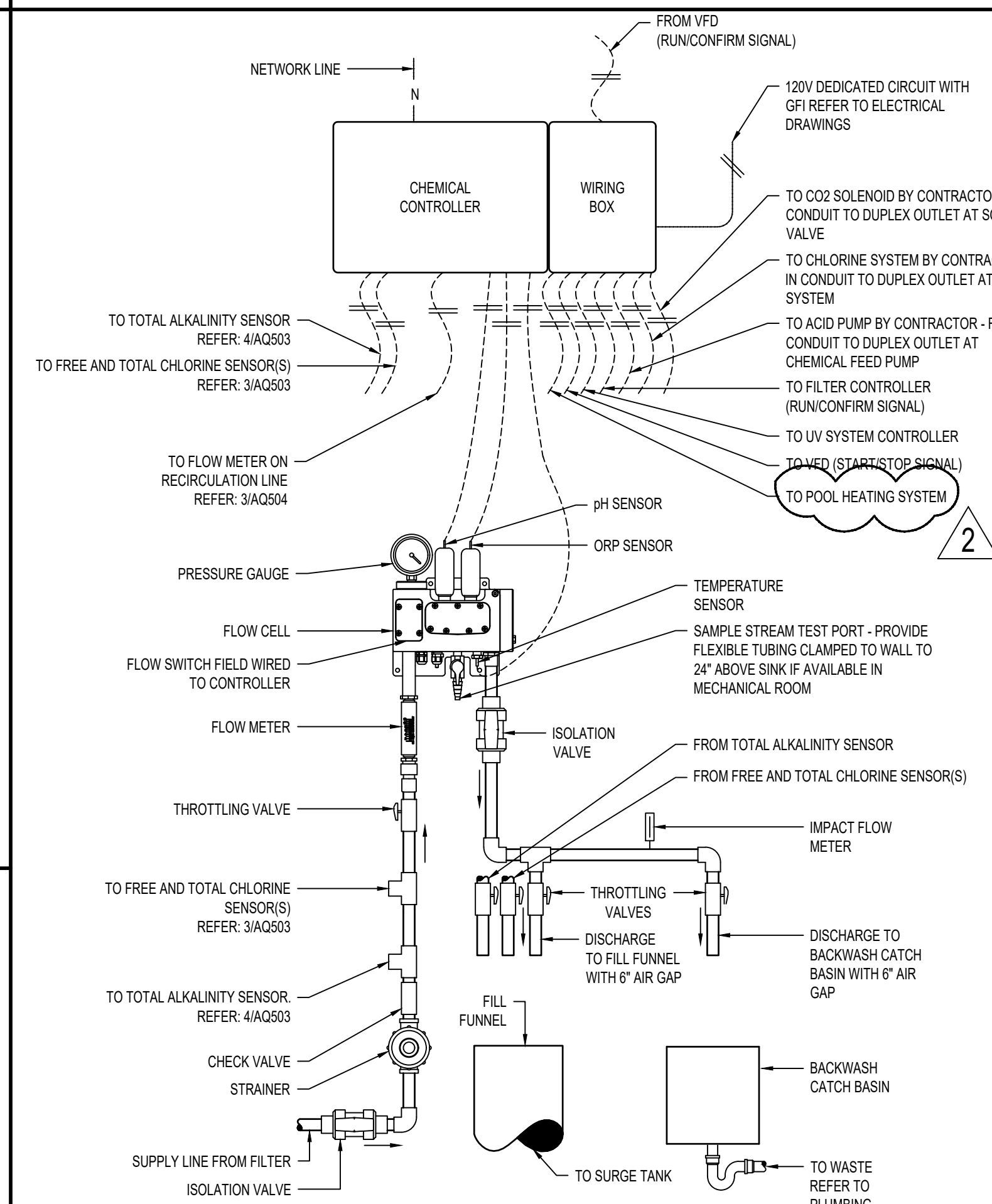
6" = 1'-0"



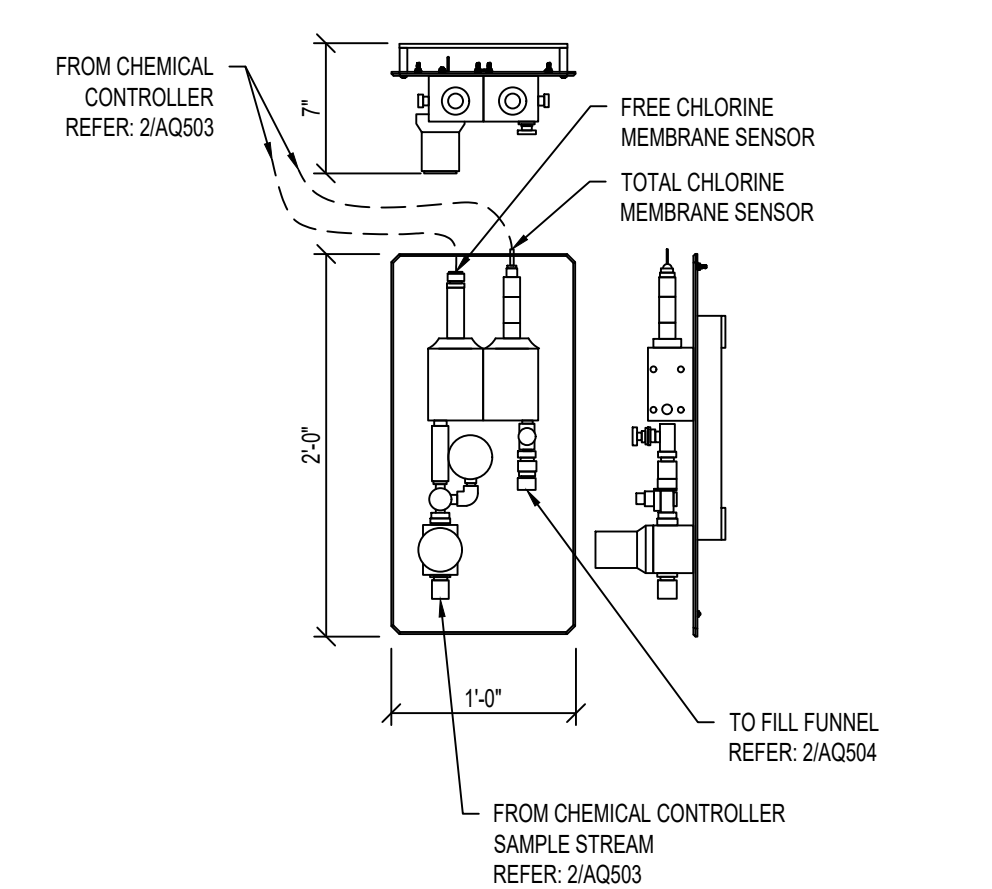
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AQ503

RECIRCULATION PUMP DETAIL

1/2" = 1'-0"



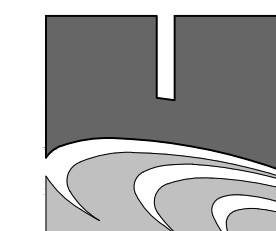
2
AQ503



3 FREE AND TOTAL CHLORINE SENSOR
AQ503 NTS



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DRAWN BY: DXB

REV'D BY: CCH

PROJECT #: 22044

TITLE:
POOL MECHANICAL DETAILS

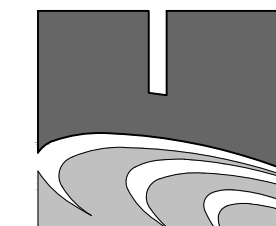
SHEET #:

AQ503

11 COMPETITION POOL AUTOMATIC REGENERATIVE MEDIA SCHEMATIC
AQ504



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ISSUE DATE: 07/14/2023

DRAWN BY: DXB

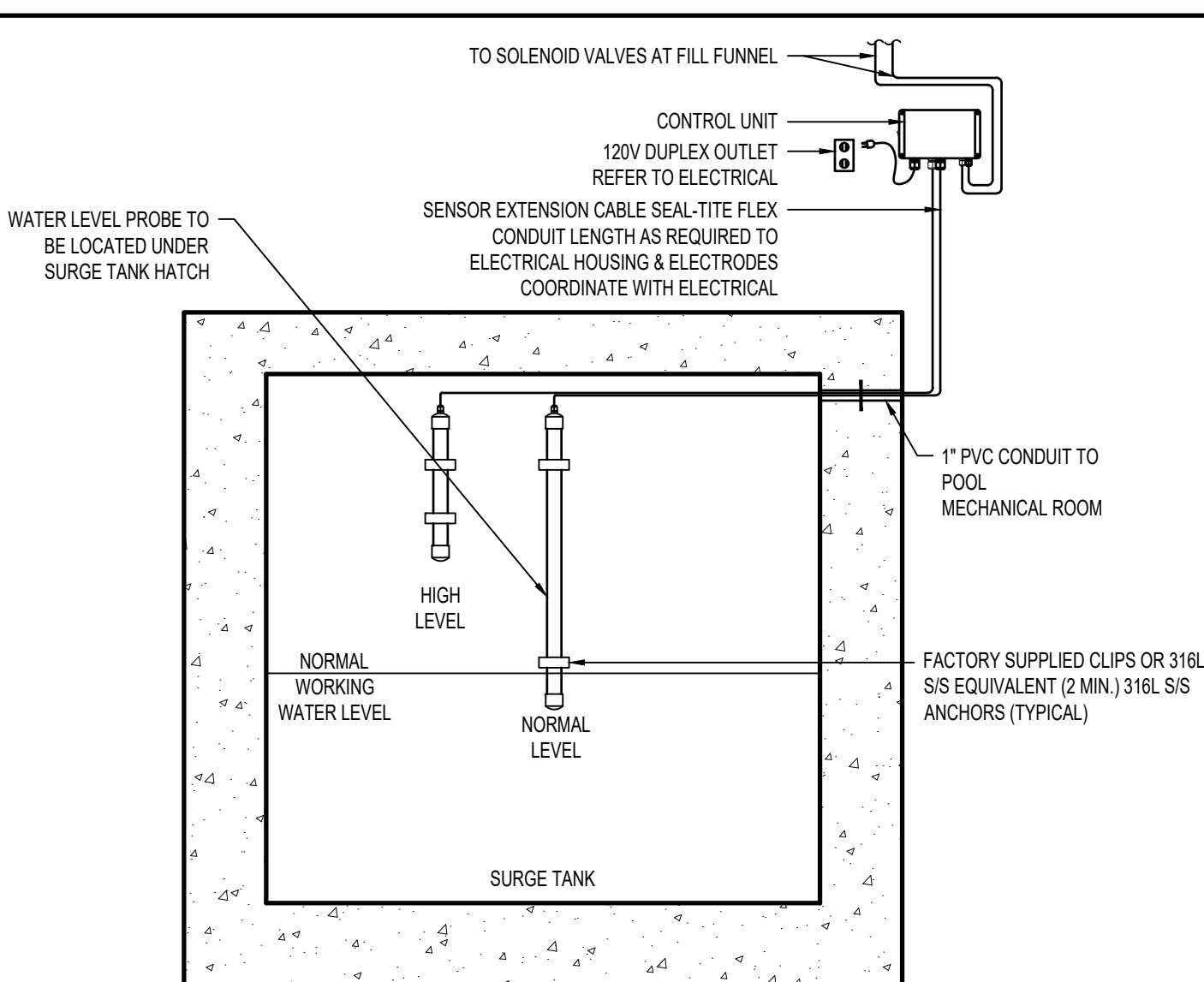
REV'D BY: CCH

PROJECT #: 22044

TITLE:
POOL MECHANICAL DETAILS

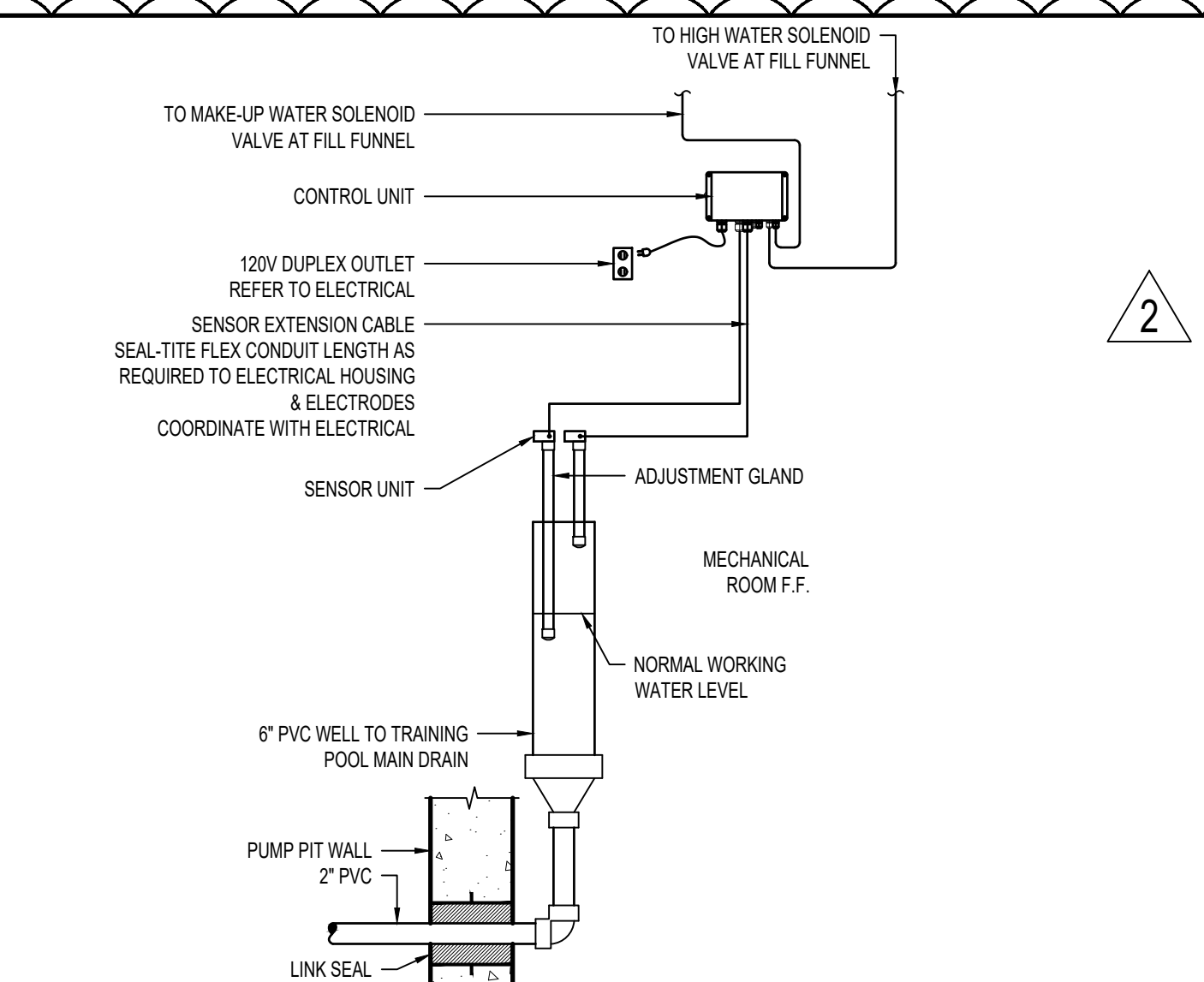
SHEET #:

AQ505



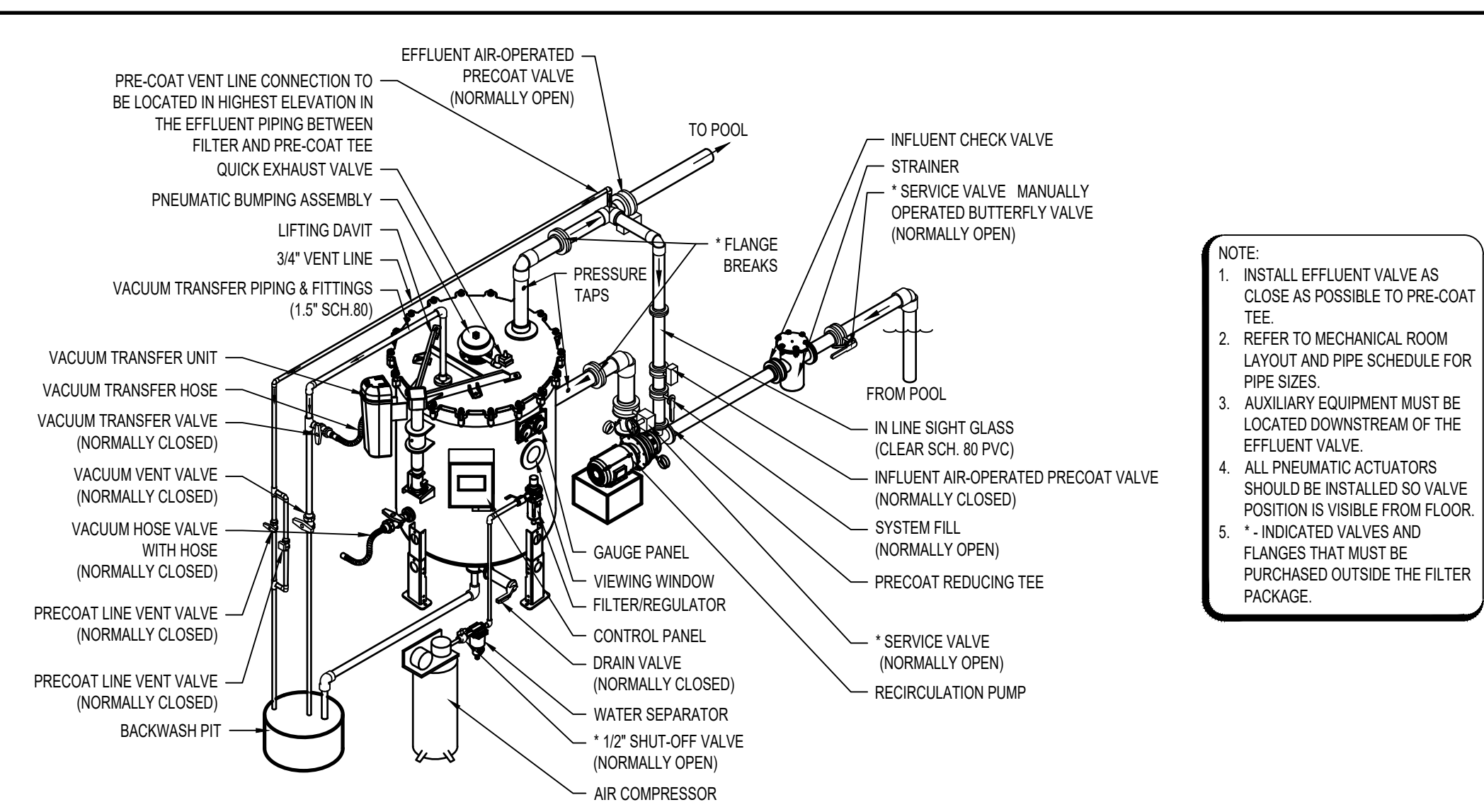
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AQ505
3/4" = 1'-0"

COMPETITION POOL WATER LEVEL CONTROLLER



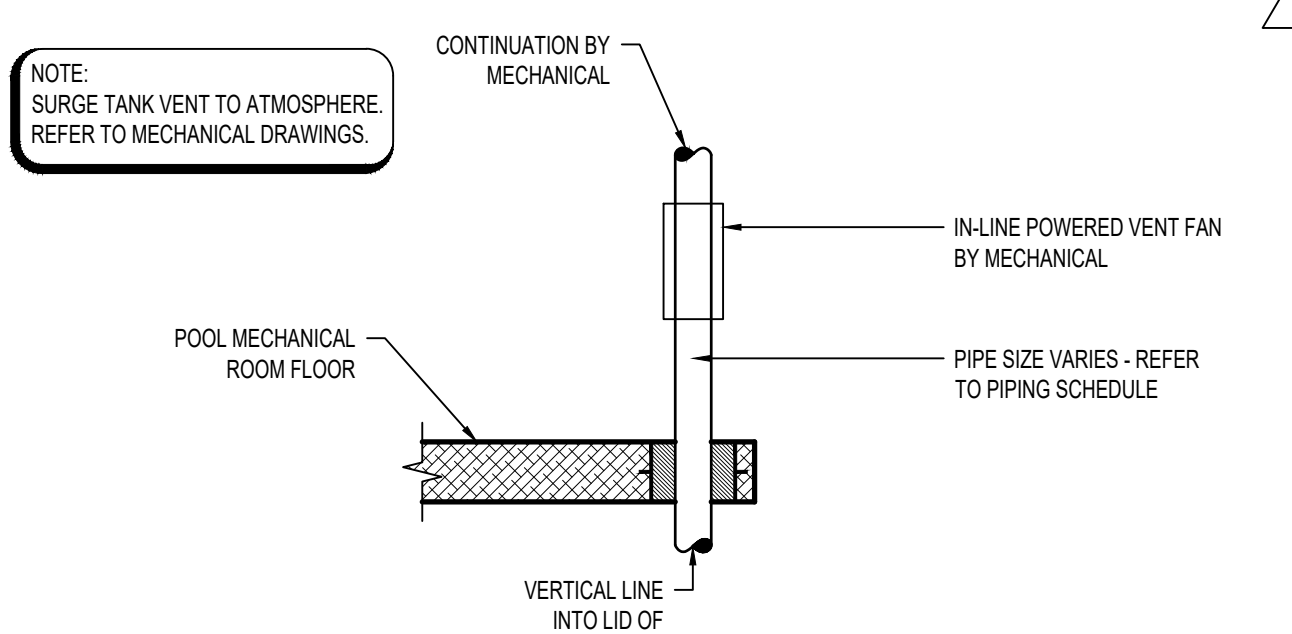
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TRAINING POOL WATER LEVEL CONTROLLER



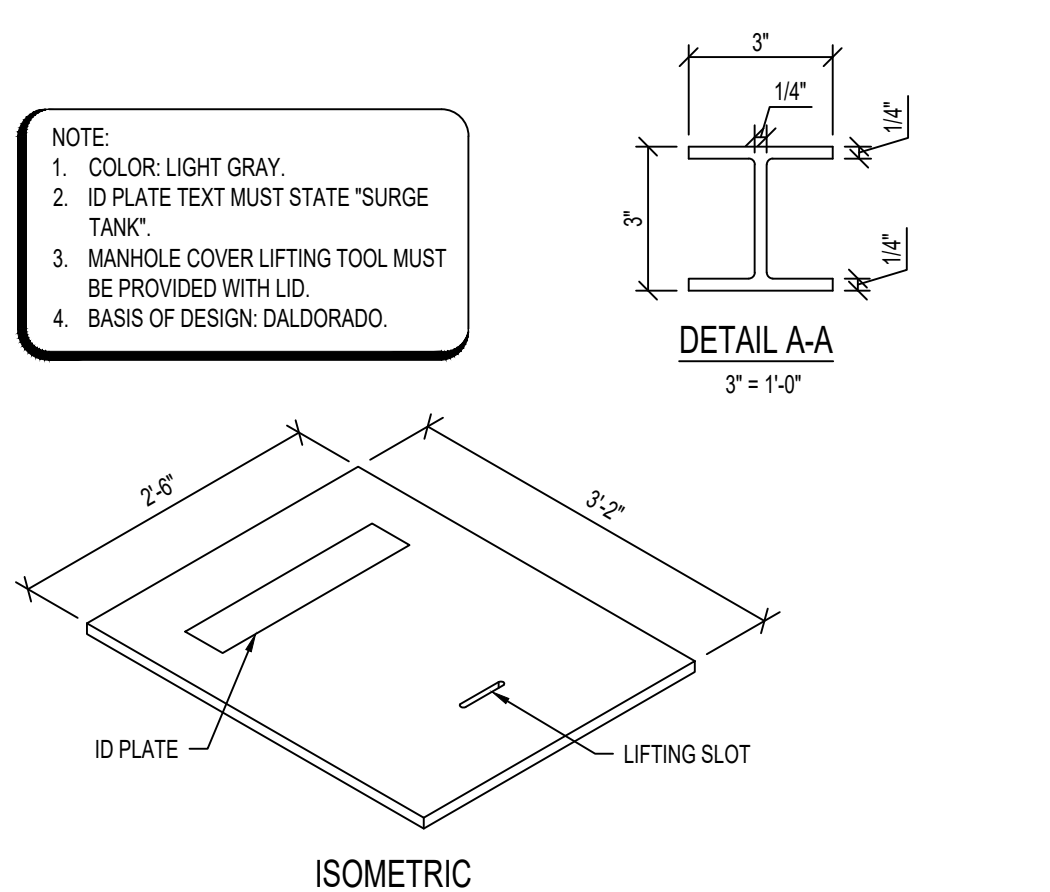
1
AQ505
NTS

TRAINING POOL AUTOMATIC REGENERATIVE MEDIA SCHEMATIC



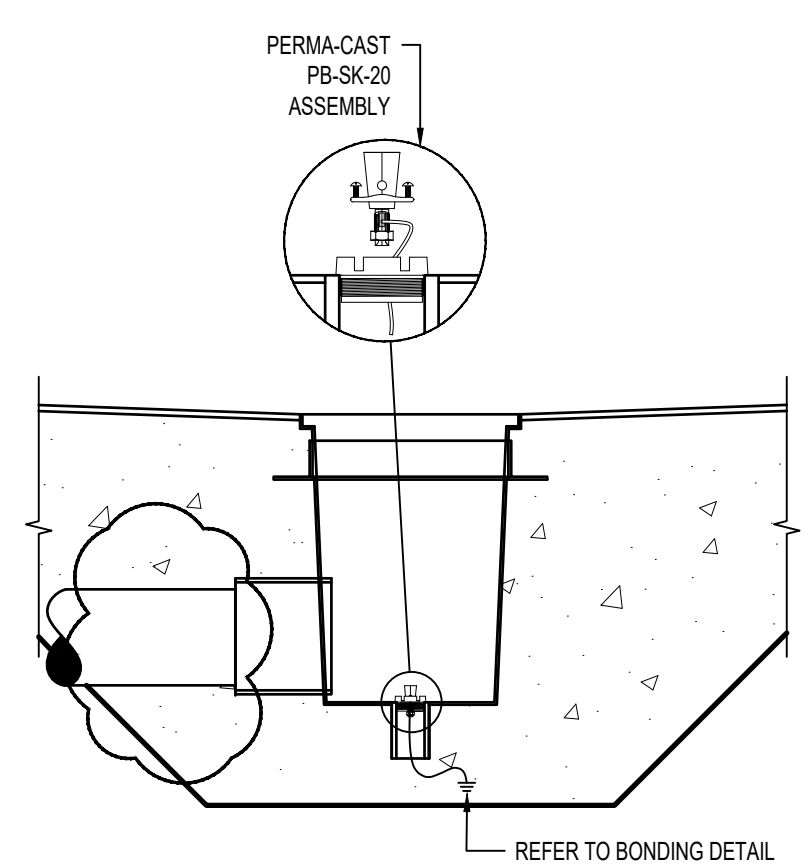
13
AQ505
3/4" = 1'-0"

SURGE TANK VENT



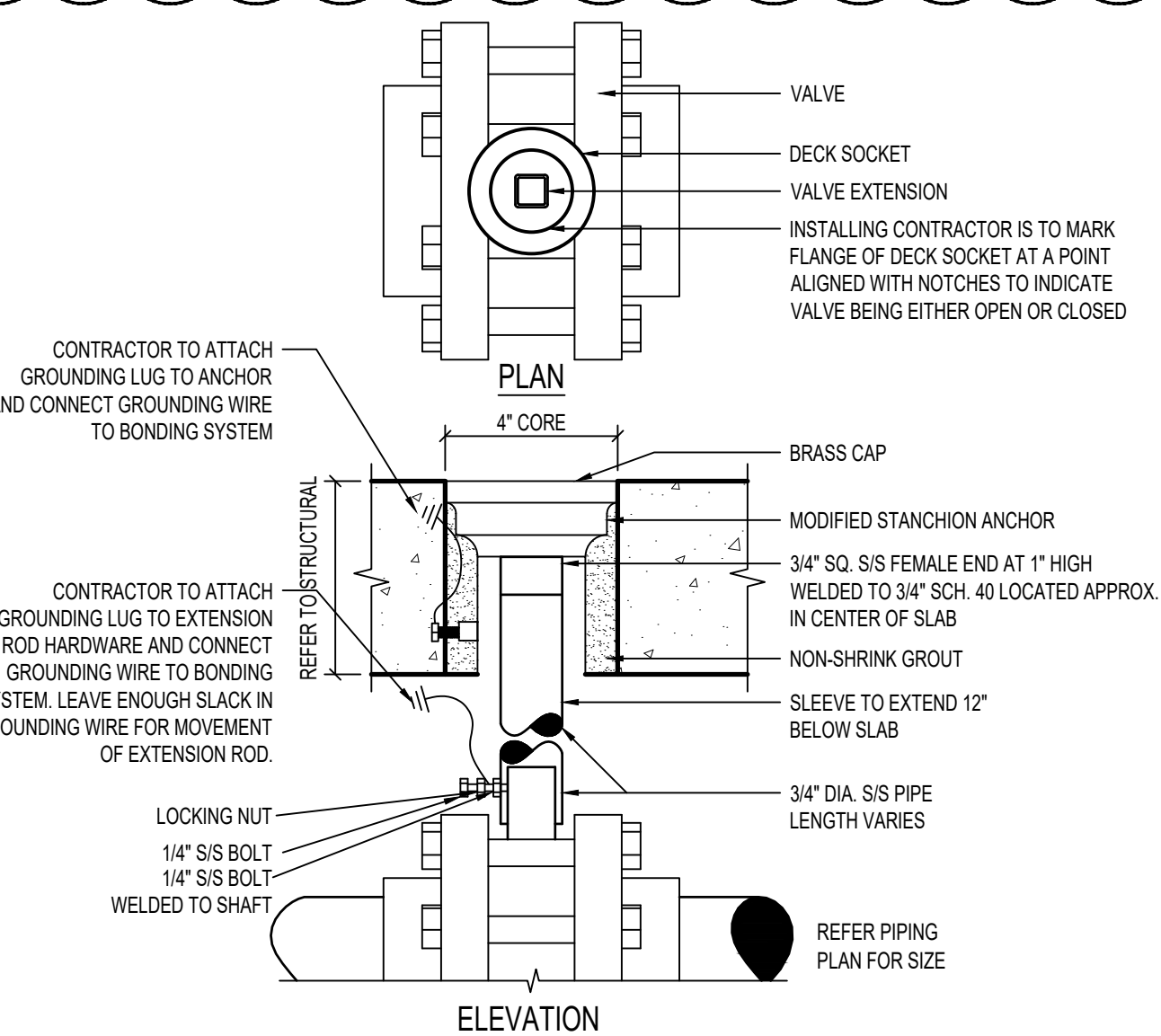
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3/4" = 1'-0"

MAIN DRAIN

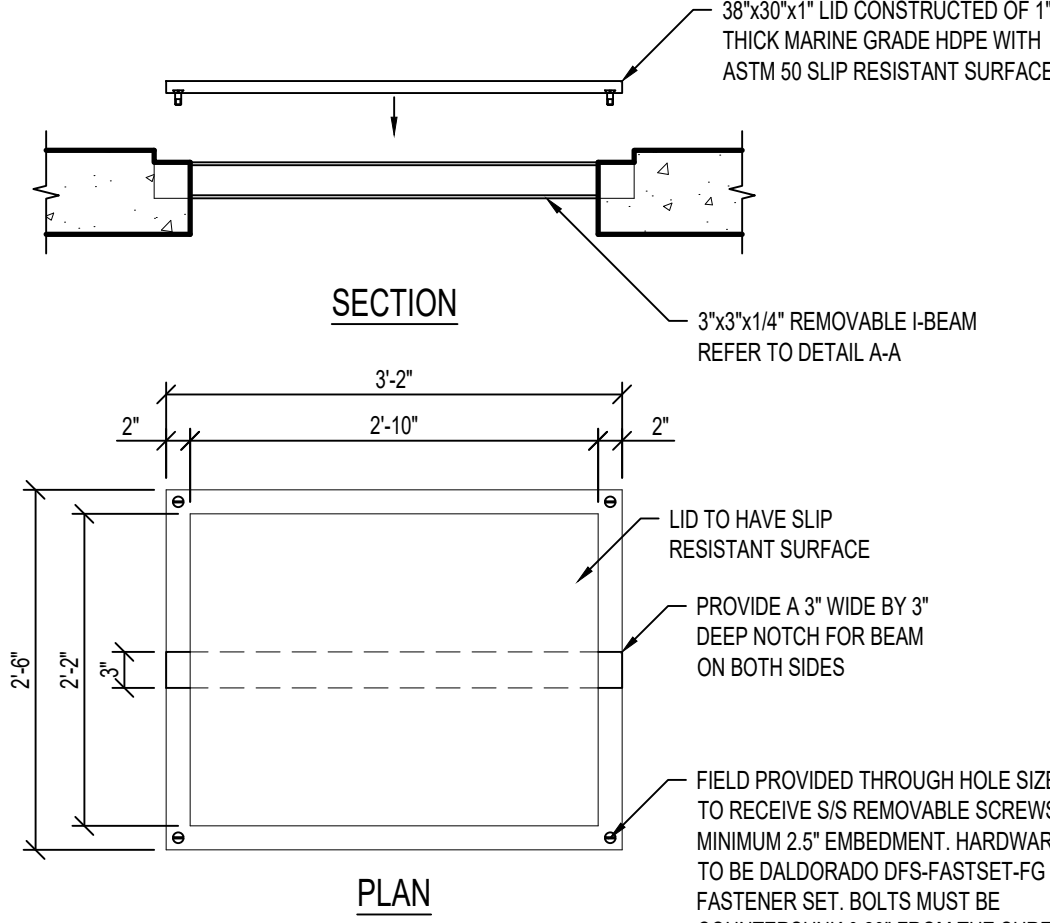


2
AQ505
3/4" = 1'-0"

MAIN DRAIN BONDING DETAIL

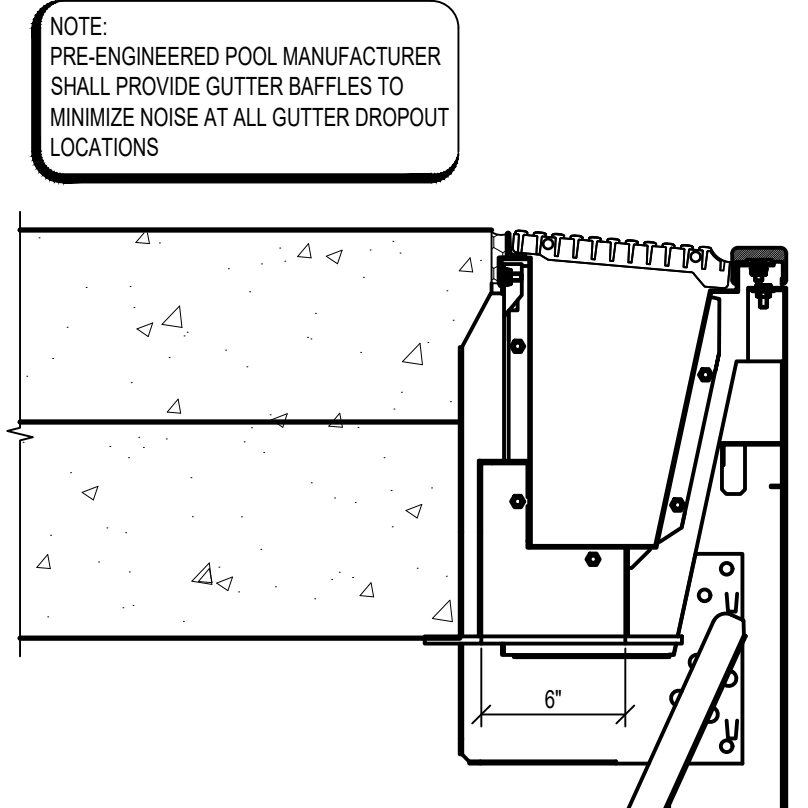


14
AQ505
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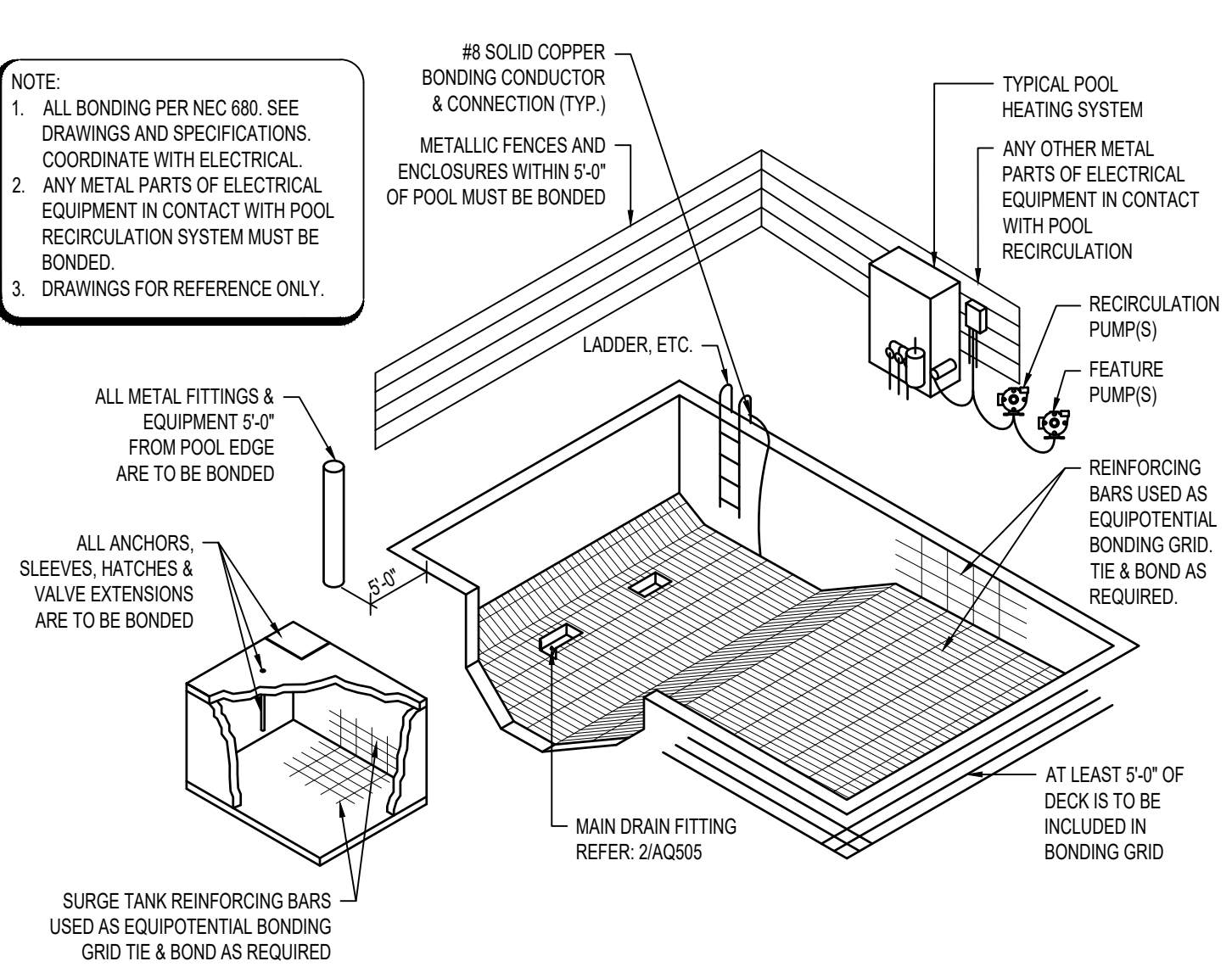


10
AQ505
3/4" = 1'-0"

COMPETITION POOL SURGE TANK ACCESS HATCH

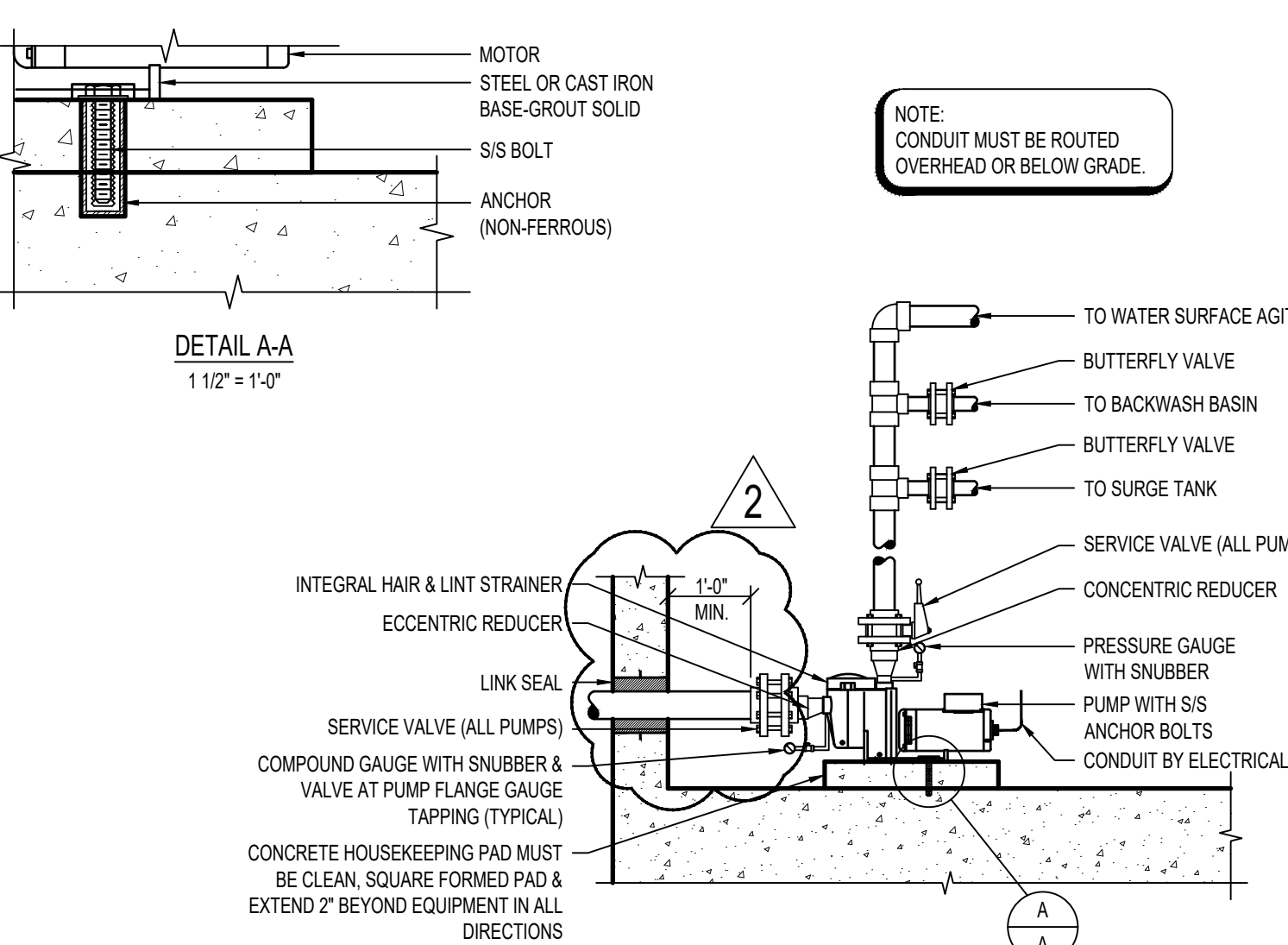


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1 1/2\"/>

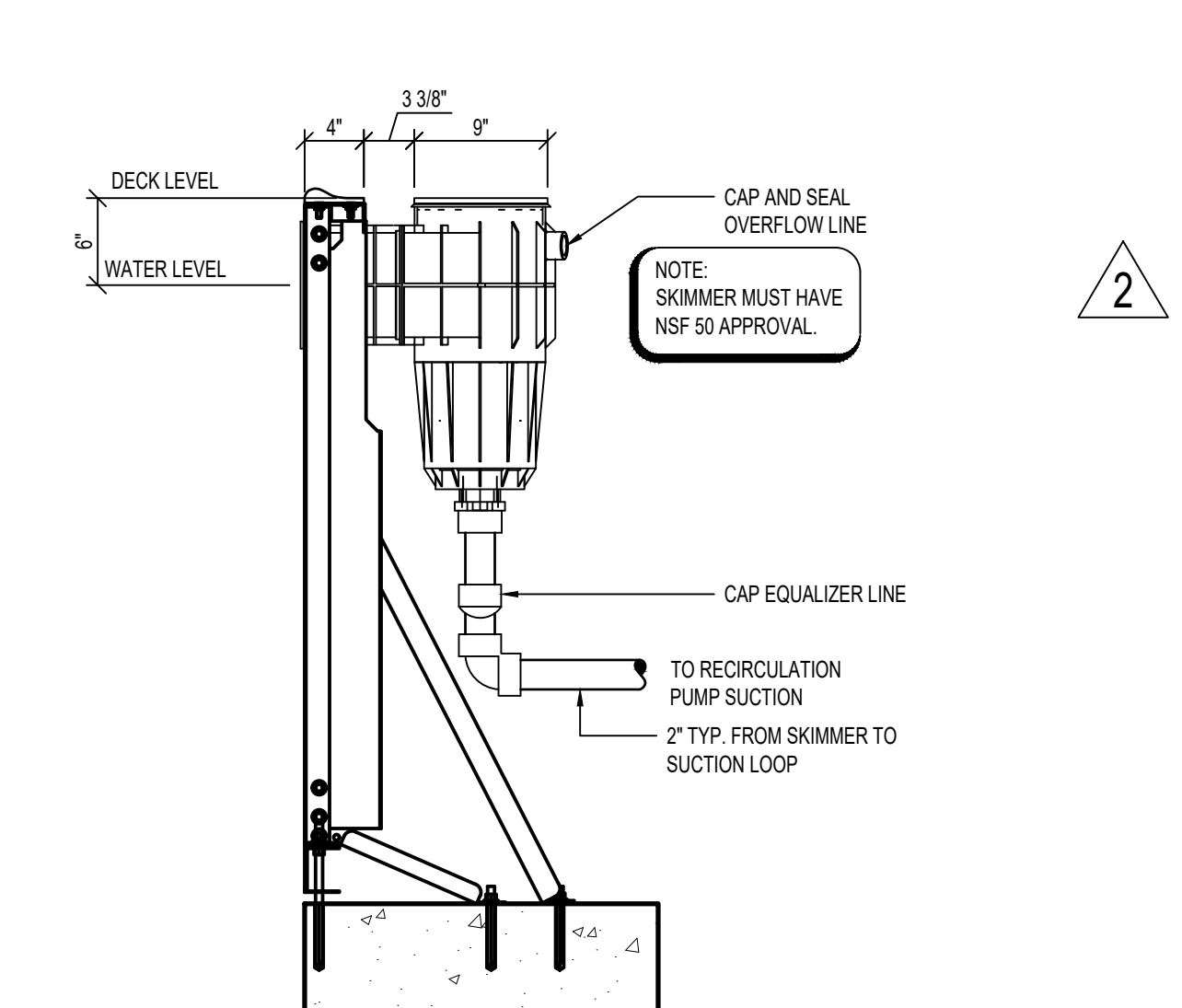


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AQ505
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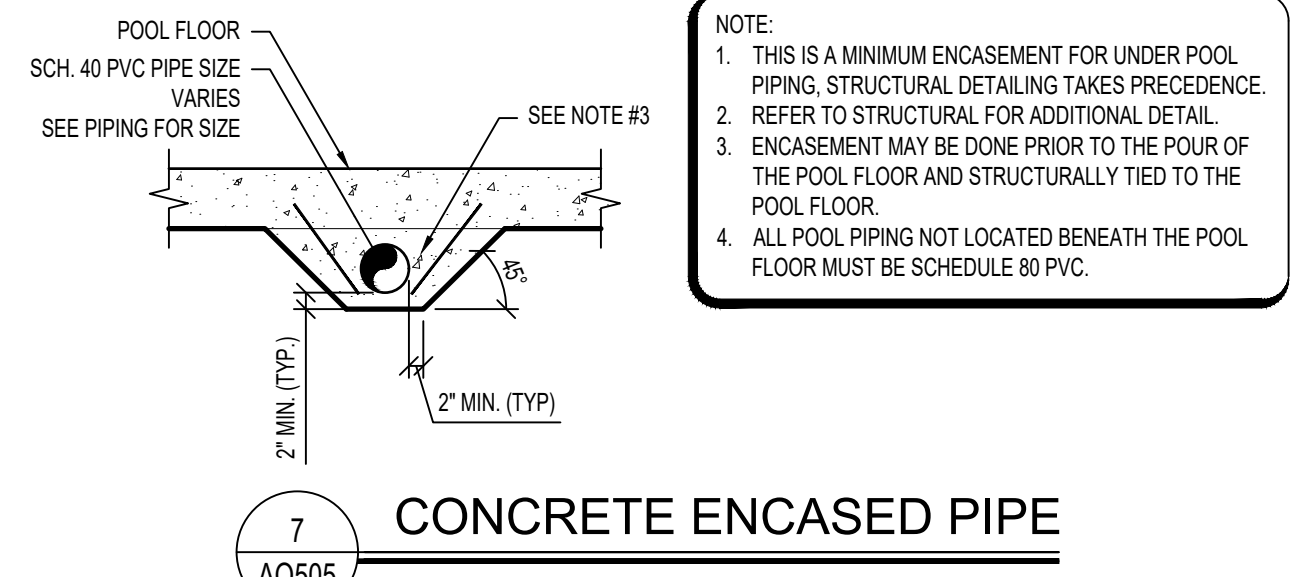
TYPICAL POOL BONDING DETAIL



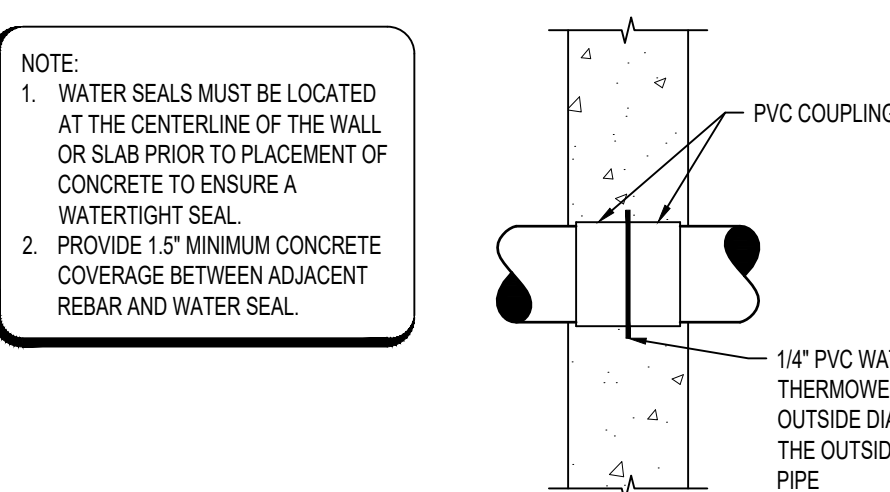
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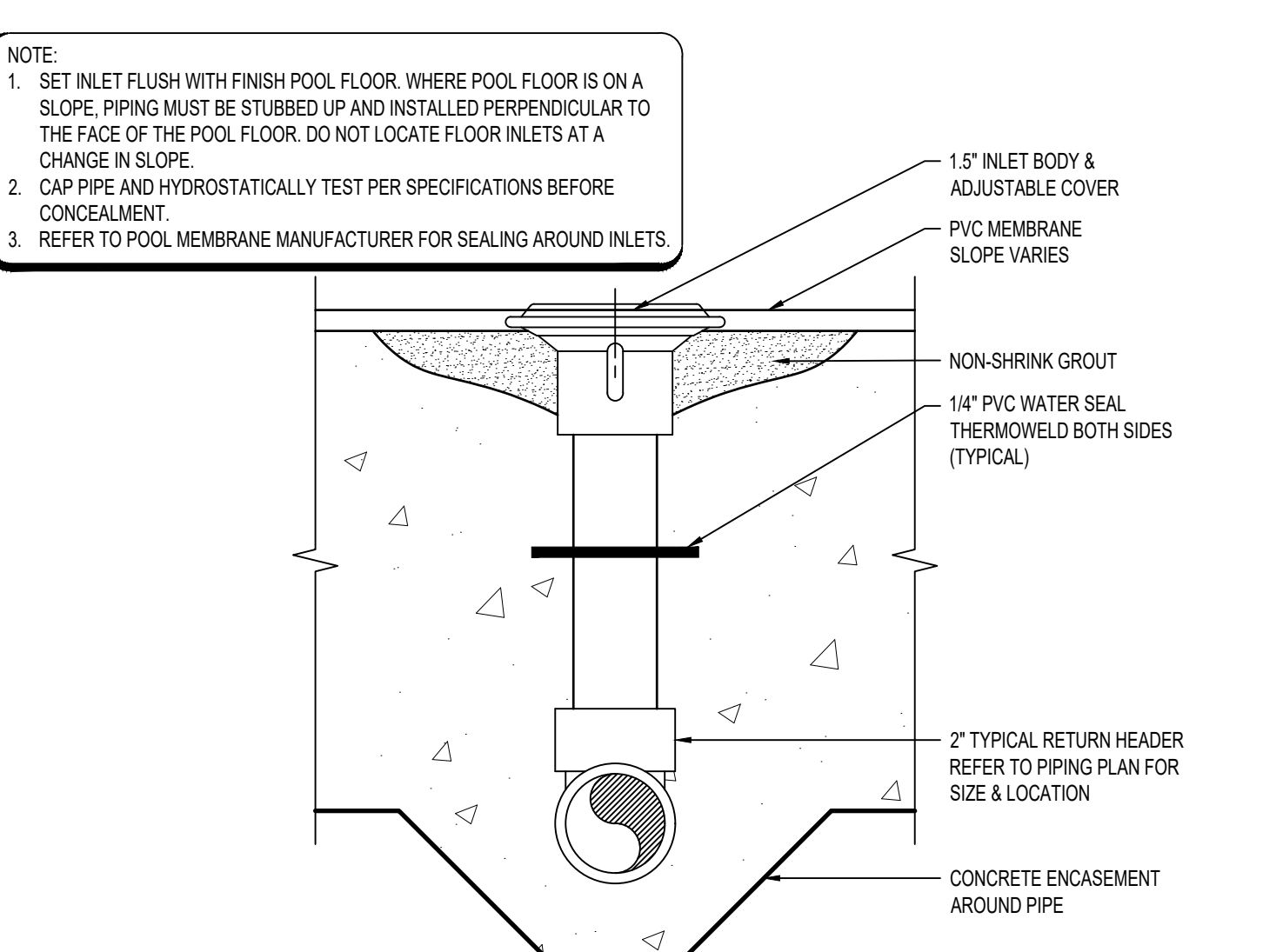
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AQ505
1\"/>



7
AQ505
1/2\"/>



8
AQ505
1\"/>



4
AQ505
3\"/>

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07/14/2023

FOR CONSTRUCTION

**MEYERS POOL REPLACEMENT
ARVADA, CO**

7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

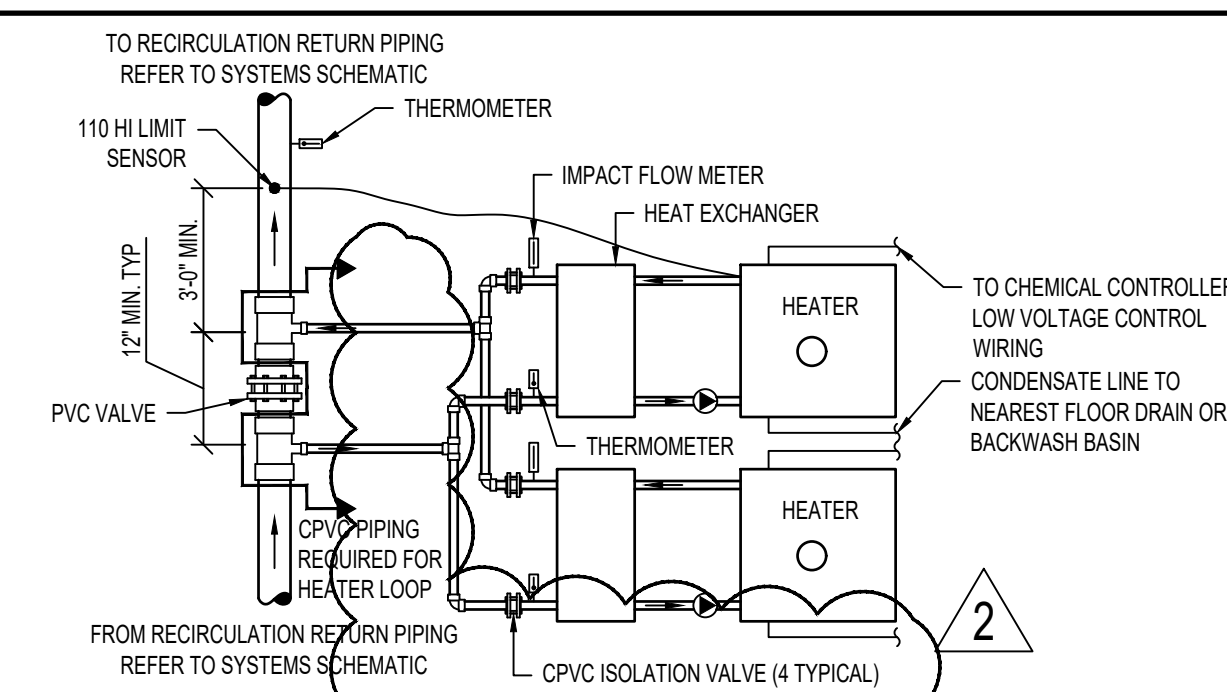
REV'D BY: CCH

PROJECT #: 22044

TITLE:
POOL MECHANICAL DETAILS

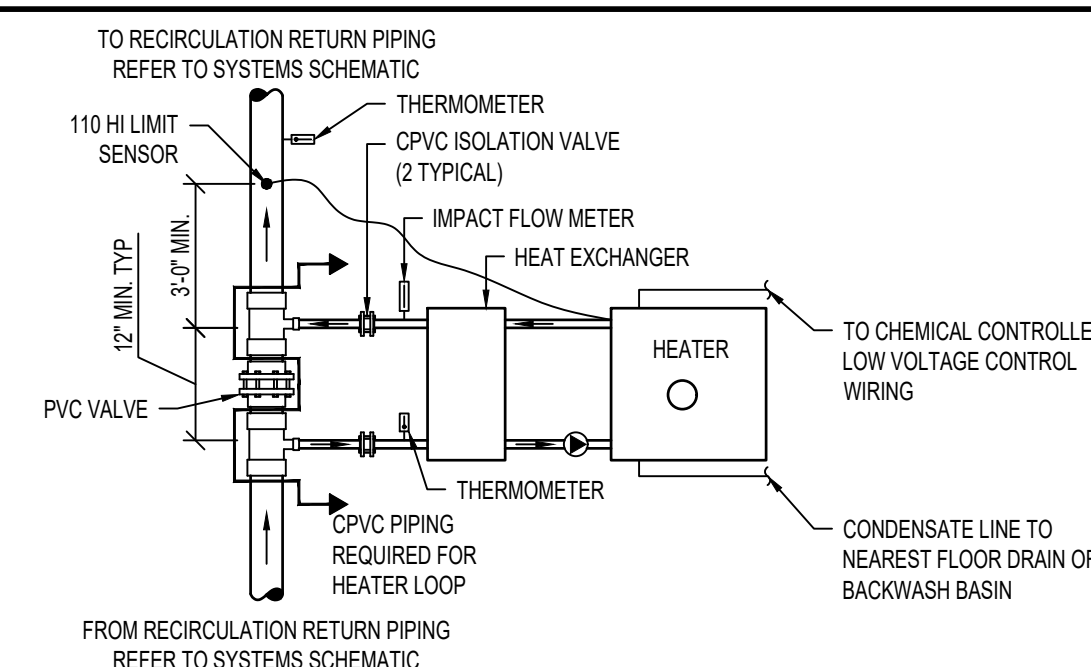
SHEET #:

AQ506



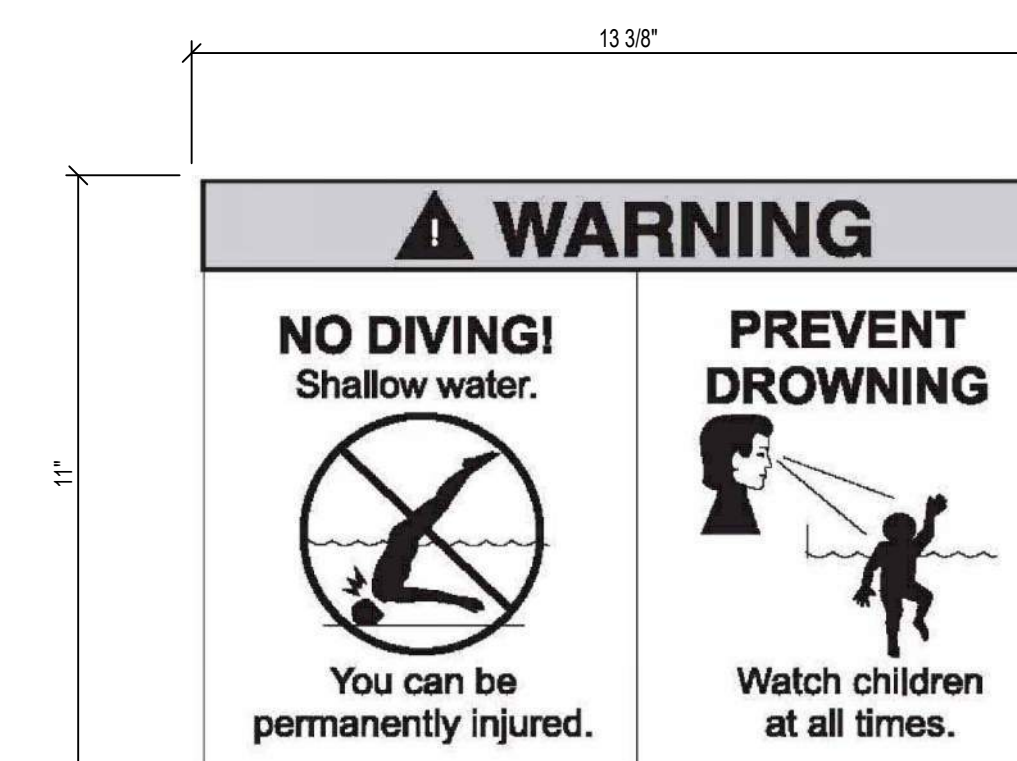
- NOTE:
1. HEATER BRANCH LINES MUST BE EQUAL LENGTH AND HAVE EQUAL FITTINGS.
 2. PROVIDE ALL NECESSARY SUPPORTS AND CONNECTIONS DEEMED NECESSARY FOR COMPLETE INSTALLATION OF HEATER AND PIPING.
 3. VERIFY ALL DIMENSIONS AND LOCATIONS ON SITE PRIOR TO INSTALLATION.
 4. WILMIT SENSORS TO BE INSTALLED A MINIMUM OF 3'-0" DOWNSTREAM FROM HEATER CONNECTION.
 5. INSTALL PER MANUFACTURER RECOMMENDATIONS.
 6. INSTALL FLOW METER IN STRAIGHT PIPE WITH TEN PIPE DIAMETERS PRIOR AND FIVE PIPE DIAMETERS AFTER FLOW METER.
 7. HEATER AIR INTAKE, VENTING, AND GAS LINE MUST BE BY MECHANICAL ELECTRICAL CONTRACTOR. MUST BE ELECTRICAL. REFER TO HEATER SCHEDULE FOR MANUFACTURER REQUIREMENTS.
 8. REFER TO DETAIL 13AQ504 FOR HEATER BYPASS CONNECTION.

1 COMPETITION POOL DUAL CONDENSING BOILER



- NOTE:**
- 1. HEATER BRANCH LINES MUST BE EQUAL LENGTH AND HAVE EQUAL FITTINGS.
 - 2. PROVIDE ALL NECESSARY SUPPORTS AND CONNECTIONS DEEMED NECESSARY FOR COMPLETE INSTALLATION OF HEATER AND PIPING.
 - 3. VERIFY ALL DIMENSIONS AND LOCATIONS ON SITE PRIOR TO INSTALLATION.
 - 4. POOL HEATER MUST BE WITHIN 15" OF POOL RECIRCULATION LINE.
 - 5. HILM SENSOR TO BE INSTALLED A MINIMUM OF 3' OF DOWNSTREAM FROM HEATER CONNECTION
 - 6. INSTALL PER MANUFACTURER RECOMMENDATIONS.
 - 7. INSTALL FLOW METER IN STRAIGHT PIPE WITH TEN PIPE DIAMETERS PRIOR AND FIVE PIPE DIAMETERS AFTER FLOW METER.
 - 8. HEATER AIR INTAKE, VENTING, AND GAS LINE MUST BE BY MECHANICAL. ELECTRICAL CONNECTIONS MUST BE BY ELECTRICAL. REFER TO HEATER SCHEDULE FOR MINIMUM REQUIREMENTS.
 - 9. REFER TO DETAIL 313040A FOR HEATER BYPASS CONNECTION.

2 TRAINING POOL CONDENSING BOILER
AQ506 NTS



NOTE:
PRINT AND LAMINATE
SIGNAGE AND POST
ON ALL PEDESTRIAN
NATATORIUM
ENTRANCE DOORS

3 SAFETY SIGNAGE DETAIL
AQ506 NTS



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07/14/2023

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO 7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

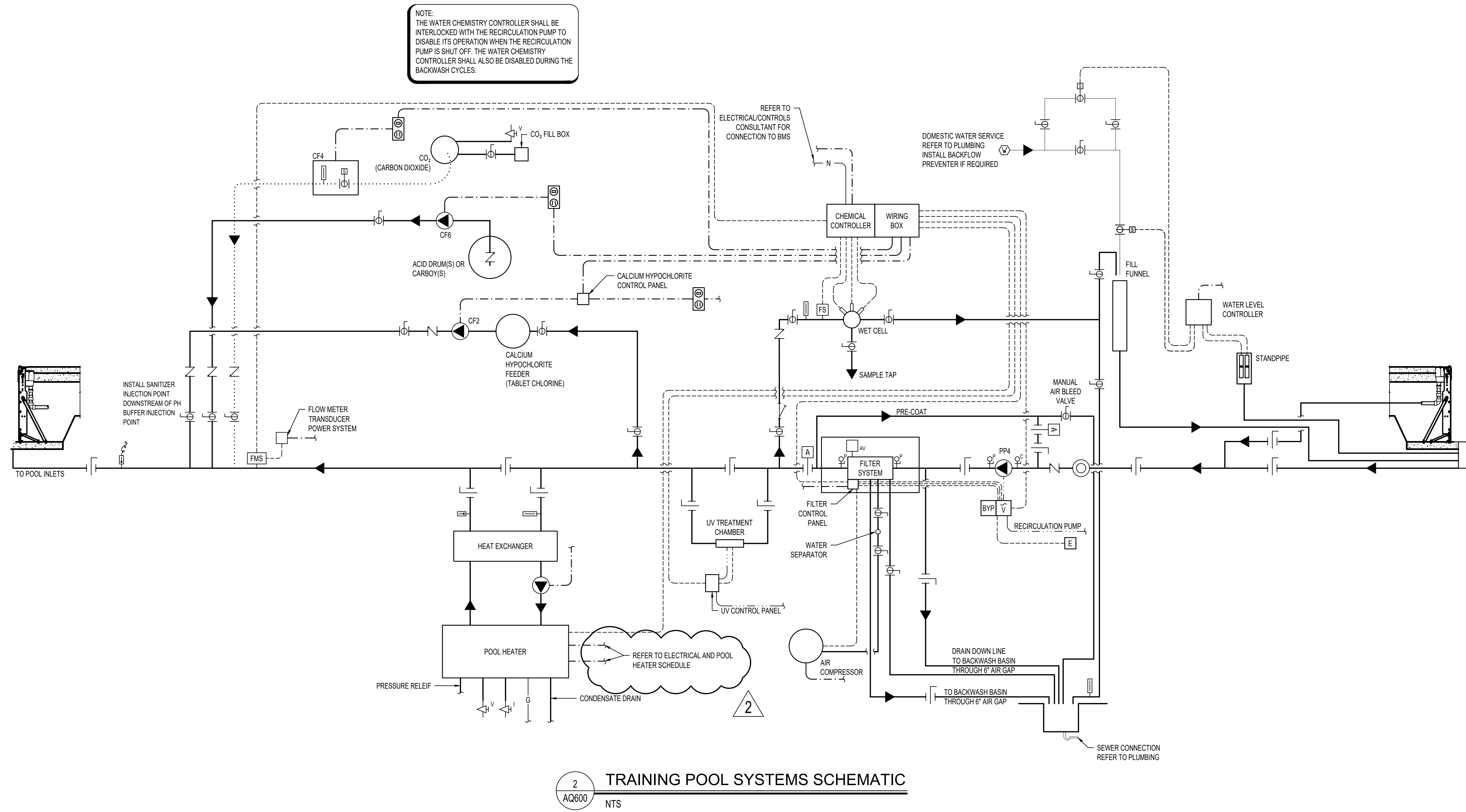
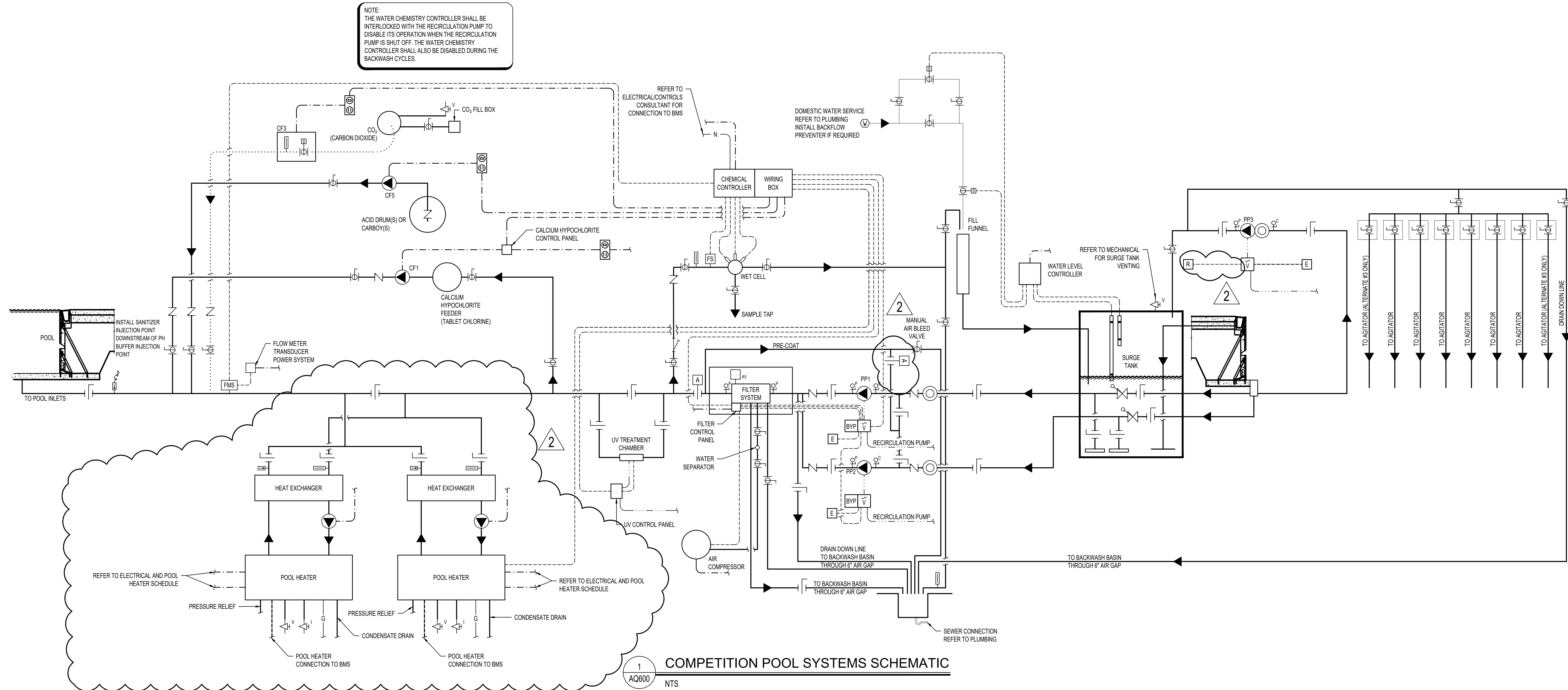
REV'D BY: CCH

PROJECT #: 22044

TITLE:
POOL SYSTEMS SCHEMATICS

SHEET #:
AQ600

LEGEND	ITEM
	FLOW DIRECTION
	BUTTERFLY VALVE
	BALL VALVE
	MODULATING FLOAT VALVE
	SOLENOID VALVE
	CHECK VALVE
	THREE WAY VALVE
	PUMP
	HAIR AND LINT STRAINER
	Y-Y STRAINER
	FLOW METER SENSOR
	FLOW SWITCH
	IMPACT FLOW METER
	VENTURI FLOW METER
	WATER METER
	AUTOMATIC AIR VENT
	AIR VENT
	AIR INLET
	PRESSURE GAUGE AND COCK
	COMPOUND GAUGE AND COCK
	DIGITAL TEMP SENSOR
	THERMOMETER
	PNEUMATIC ACTUATOR
	FLOW CONTROL VALVE
	COMBINATION SWITCH/RECEPTACLE
	AUTOMATIC PUMP SHUT-OFF DEVICE
	VARIABLE FREQUENCY DRIVE
	REMOTE START/STOP
	EMERGENCY STOP
	VARIABLE FREQUENCY DRIVE BYPASS
	CONTACT MOTOR SELECTOR
	15 MINUTE TIMER SWITCH
	LOW VOLTAGE CONTROL
	WATER LINE
	1 PHASE POWER
	3 PHASE POWER
	CO2 LINE
	NETWORK LINE BY ELECTRICAL
	GAS LINE



RFI #169

RFI detail

#169 Swimming Pool Equipment, Materials Confirmation



Status	Closed
Created on	Dec 12, 2023 by Luis Cardona (SAUNDERS CONSTRUCTION, INC.)
Ball in court	Luis Cardona (SAUNDERS CONSTRUCTION, INC.)
Answered	Dec 27, 2023 by Cole Henry

Question

Please Reference Drawings: Submittals #1844, #1845, AQ400, RFI #084, CO #003 and attached markup.

- Please confirm the following:
- Drainage pipe is to be changed to Perforated Pipe in lieu of Corrugated Drain pipe
 - ETS UV in competition pool in lieu of Aquionics 14" Wafer
 - ETS UV in competition pool in lieu of Aquionics 8" Wafer
 - 8 Agitator access boxes required at pool.
 - Whether Raypack direct or indirect heaters are to be chosen.
 - Owner provided 4 maxiflex diving boards, APBI to provide.
 - APBI to furnish and install 6 short stands. - APBI to install 6 diving boards.
 - Owner provided 1 ADA lift at training pool. APBI to provide APBI to furnish and install 4 ADA lift anchors.

Suggested answer

Please Reference Drawings: Submittals #1844, #1845, AQ400, RFI #084, CO #003 and attached markup.

- Please confirm the following:
- Drainage pipe is to be changed to Perforated Pipe in lieu of Corrugated Drain pipe
 - ETS UV in competition pool in lieu of Aquionics 14" Wafer
 - ETS UV in competition pool in lieu of Aquionics 8" Wafer
 - 8 Agitator access boxes required at pool.
 - Whether Raypack direct or indirect heaters are to be chosen.
 - Owner provided 4 maxiflex diving boards, APBI to provide.
 - APBI to furnish and install 6 short stands. - APBI to install 6 diving boards.
 - Owner provided 1 ADA lift at training pool. APBI to provide APBI to furnish and install 4 ADA lift anchors.

Official response

- Cole Henry: C-H Responses below:
1. Confirmed by the Ballard Group that foundation drainage piping shall be perforated PVC piping (solid not corrugated) per RFI 84.
 2. ETS is preferred by Ownership as this is a standard product within their other facilities – it will be easier for

- them to service and install. ETS shall be provided in lieu of Aquionics for the competition pool UV system per submittal responses from C-H.
3. ETS is preferred by Ownership as this is a standard product within their other facilities – it will be easier for them to service and install. ETS shall be provided in lieu of Aquionics for the training pool UV system per submittal responses from C-H.
4. Eight (8) Agitator boxes are required at the pool per C-H submittal comments. 8 plummets are being provided per Alternate #3 which was selected.
5. Raypak Xtherm Indirect Heaters shall be provided per Heater Schedule on AQ400 and Specification 131100 Paragraph 2.19 provided in Addendum No 3. Ownership desires a dedicated standalone heat exchanger for each pool heater. This is why the Raypak Indirect was selected.
6. Ownership will re-use four (4) DuraFlex Maxi-flex B springboards from the existing facility. Only two (2) new Duraflex Maxi-Flex B springboards need to be provided by APBI per C-H submittal comments.
7. All six (6) boards and all six (6) short stands will be installed by APBI – confirmed by Ownership on Wednesday, 12/20.
8. APBI will supply and install four (4) new Aqua Creek Mighty 400 Anchors. Three (3) at the competition pool and one (1) at the training pool. Ownership will reuse one (1) Aqua Creek Mighty 400 lift from their existing facility at the training pool. APBI will provide two (2) new Aqua Creek Mighty 400 lifts for install at competition pool. This is all per ASI 16.
9. For starting blocks: Sixteen (16) single-post Spectrum-Myrtha Hybrid starting platforms (that work at both bulkhead and cross course) will be provided by Ownership. APBI will furnish and install ten (10) Spectrum single post bulkhead anchors and seventeen (17) Spectrum single post cross-course anchors.

By **Cole Henry** - Dec 27, 2023, 11:44 AM MST

References

Files (1)

- [RFI_169_Markup.pdf](#)

Impact

Cost impact	Yes
Schedule impact	Unknown

Other attributes

Priority	High
Discipline	Other
Category	Other
Location	Main Building, Main Building > 1st Floor
Location details	Pool Equipment

External id	-
Co-reviewer(s)	 Brian Beckler  Cole Henry  Daniel Borgatti  Shane Daniels  Dan Potter
Confirming RFI	Yes
Posted	-

Activities	By	At
Luis Cardona changed the status from  Open Answered to  Closed		
Official response: Cole Henry: C-H Responses below: 1. Confirmed by the Ballard Group that foundation drainage piping shall be perforated PVC piping (solid not corrugated) per RFI 84. 2. ETS is preferred by Ownership as this is a standard product within their other facilities – it will be easier for them to service and install. ETS shall be provided in lieu of Aquionics for the competition pool UV system per submittal responses from C-H. 3. ETS is preferred by Ownership as this is a standard product within their other facilities – it will be easier for them to service and install. ETS shall be provided in lieu of Aquionics for the training pool UV system per submittal responses from C-H. 4. Eight (8) Agitator boxes are required at the pool per C-H submittal comments. 8 plummets are being provided per Alternate #3 which was selected. 5. Raypak Xtherm Indirect Heaters shall be provided per Heater Schedule on AQ400 and Specification 131100 Paragraph 2.19 provided in Addendum No 3. Ownership desires a dedicated standalone heat exchanger for each pool heater. This is why the Raypak Indirect was selected. 6. Ownership will re-use four (4) DuraFlex Maxi-flex B springboards from the existing facility. Only two (2) new DuraFlex Maxi-Flex B springboards need to be provided by APBI per C-H submittal comments. 7. All six (6) boards and all six (6) short stands will be installed by APBI – confirmed by Ownership on Wednesday, 12/20. 8. APBI will supply and install four (4) new Aqua Creek Mighty 400 Anchors. Three (3) at the competition pool and one (1) at the training pool. Ownership will reuse one (1) Aqua Creek Mighty 400 lift from their existing facility at the training pool. APBI will provide two (2) new Aqua Creek Mighty 400 lifts for install at competition pool. This is all per ASI 16. 9. For starting blocks: Sixteen (16) single-post Spectrum-Myrtha Hybrid starting platforms (that work at both bulkhead and cross course) will be provided by Ownership. APBI will furnish and install ten (10) Spectrum single post bulkhead anchors and seventeen (17) Spectrum single post cross-course anchors.		
colehenry@chh2o.com changed the status from  Open In Review to  Open Answered set Ball in court to Luis Cardona (SAUNDERS CONSTRUCTION, INC.).	Luis Cardona	Dec 27, 2023, 11:44 AM MST
	colehenry@chh2o.com	Dec 22, 2023, 10:04 AM MST

colehenry@chh2o.com added a response: C-H Responses below: 1. Confirmed by the Ballard Group that foundation drainage piping shall be perforated PVC piping (solid not corrugated) per RFI 84. 2. ETS is preferred by Ownership as this is a standard product within their other facilities – it will be easier for them to service and install. ETS shall be provided in lieu of Aquionics for the competition pool UV system per submittal responses from C-H. 3. ETS is preferred by Ownership as this is a standard product within their other facilities – it will be easier for them to service and install. ETS shall be provided in lieu of Aquionics for the training pool UV system per submittal responses from C-H. 4. Eight (8) Agitator boxes are required at the pool per C-H submittal comments. 8 plummets are being provided per Alternate #3 which was selected. 5. Raypak Xtherm Indirect Heaters shall be provided per Heater Schedule on AQ400 and Specification 131100 Paragraph 2.19 provided in Addendum No 3. Ownership desires a dedicated standalone heat exchanger for each pool heater. This is why the Raypak Indirect was selected. 6. Ownership will re-use four (4) DuraFlex Maxi-flex B springboards from the existing facility. Only two (2) new Duraflex Maxi-Flex B springboards need to be provided by APBI per C-H submittal comments. 7. All six (6) boards and all six (6) short stands will be installed by APBI – confirmed by Ownership on Wednesday, 12/20. 8. APBI will supply and install four (4) new Aqua Creek Mighty 400 Anchors. Three (3) at the competition pool and one (1) at the training pool. Ownership will reuse one (1) Aqua Creek Mighty 400 lift from their existing facility at the training pool. APBI will provide two (2) new Aqua Creek Mighty 400 lifts for install at competition pool. This is all per ASI 16. 9. For starting blocks: Sixteen (16) single-post Spectrum-Myrtha Hybrid starting platforms (that work at both bulkhead and cross course) will be provided by Ownership. APBI will furnish and install ten (10) Spectrum single post bulkhead anchors and seventeen (17) Spectrum single post cross-course anchors.

colehenry@chh2o.com Dec 22,
2023, 10:04
AM MST

set Ball in court to colehenry@chh2o.com .	Robert Mcdonald	Dec 21, 2023, 1:36 PM MST
set Ball in court to Robert Mcdonald, colehenry@chh2o.com, tharris@theballardgroup.com .	Robert Mcdonald	Dec 18, 2023, 8:49 AM MST
Luis Cardona changed the priority to <i>High</i>	Luis Cardona	Dec 18, 2023, 8:09 AM MST

Luis Cardona changed the **suggested answer** to *Please Reference Drawings: Submittals #1844, #1845, AQ400, RFI #084, CO #003 and attached markup. Please confirm the following: - Drainage pipe is to be changed to Perforated Pipe in lieu of Corrugated Drain pipe - ETS UV in competition pool in lieu of Aquionics 14" Wafer - ETS UV in competition pool in lieu of Aquionics 8" Wafer - 8 Agitator access boxes required at pool. - Whether Raypack direct or indirect heaters are to be chosen. - Owner provided 4 maxiflex diving boards, APBI to provide. - APBI to furnish and install 6 short stands. - APBI to install 6 diving boards. - Owner provided 1 ADA lift at training pool. APBI to provide APBI to furnish and install 4 ADA lift anchors.*

Luis Cardona

Dec 13,
2023, 7:01
AM MST

Luis Cardona changed the **suggested answer** to *Please Reference Drawings: Submittals #1844, #1845, AQ400, RFI #084, CO #003 and attached markup. Please confirm the following: - Drainage pipe is to be changed to Perforated Pipe in lieu of Corrugated Drain pipe - ETS UV in competition pool in lieu of Aquionics 14" Wafer - ETS UV in competition pool in lieu of Aquionics 8" Wafer - 8 Agitator access boxes required at pool. - Whether Raypack direct or indirect heaters are to be chosen.*

Luis Cardona

Dec 13,
2023, 7:00
AM MST

Luis Cardona changed the **question** to *Please Reference Drawings: Submittals #1844, #1845, AQ400, RFI #084, CO #003 and attached markup. Please confirm the following: - Drainage pipe is to be changed to Perforated Pipe in lieu of Corrugated Drain pipe - ETS UV in competition pool in lieu of Aquionics 14" Wafer - ETS UV in competition pool in lieu of Aquionics 8" Wafer - 8 Agitator access boxes required at pool. - Whether Raypack direct or indirect heaters are to be chosen. - Owner provided 4 maxiflex diving boards, APBI to provide. - APBI to furnish and install 6 short stands. - APBI to install 6 diving boards. - Owner provided 1 ADA lift at training pool. APBI to provide APBI to furnish and install 4 ADA lift anchors.*

Luis Cardona

Dec 13,
2023, 7:00
AM MST

Luis Cardona changed the **question** to *Please Reference Drawings: Submittals #1844, #1845, AQ400, RFI #084, CO #003 and attached markup. Please confirm the following: - Drainage pipe is to be changed to Perforated Pipe in lieu of Corrugated Drain pipe - ETS UV in competition pool in lieu of Aquionics 14" Wafer - ETS UV in competition pool in lieu of Aquionics 8" Wafer - 8 Agitator access boxes required at pool. - Whether Raypack direct or indirect heaters are to be chosen. - Owner provided 4 maxiflex diving boards. APBI to provide APBI to furnish and install 6 short stands. APBI to install 6 diving boards. 2. Owner provided 1 ADA lift at training pool. APBI to provide 2. APBI to furnish and install 4 ADA lift anchors.*

Luis Cardona

Dec 13,
2023, 6:59
AM MST

Luis Cardona added a reference to a file **RFI_169_Markup.pdf**

Luis Cardona

Dec 12,
2023, 5:41
PM MST

Luis Cardona (SAUNDERS CONSTRUCTION, INC.) created this RFI in **Closed** status and set Ball in court to **Luis Cardona** (SAUNDERS CONSTRUCTION, INC.).

Luis Cardona

Dec 12,
2023, 5:41
PM MST



86 Inverness Place North, Englewood, CO 80112

www.saundersinc.com

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Submittal Package: 131100_Swimming_Pools_Competition_Pool_Rev1_PD_FA

Submittal Approval Sheet

*****PLEASE USE THE SPACES BELOW FOR COMMENTS AND STAMPS*****



SUBMITTED FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS EXCEPT AS NOTED. REVIEW OF THIS SUBMITTAL DOES NOT RELEASE THE SUBCONTRACTOR OF ITS RESPONSIBILITY TO CONFORM WITH THE PLANS AND SPECIFICATIONS NOR DOES THIS REVIEW RELEASE THE SUBCONTRACTOR FROM VERIFYING THE ACCURACY OF QUANTITIES AND FIELD DIMENSIONS.

Submittal Package Number:
131100_Swimming_Pools_Competition_Pool_Rev1_PD_FA
for Review
Signed: l.cardona
Date: 11/14/2023



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1401 Zuni Street
Denver, Colorado 80204
www.olcdesigns.com - Main: 303.294.9244
Architecture - Interiors - Aquatic Design - Planning

- ☒ **APPROVED, NO EXCEPTIONS NOTED**
- ☐ **APPROVED, IMPLEMENT CORRECTIONS NOTED**
- ☐ **REVISE AND RESUBMIT**
- ☐ **REJECTED**
- ☐ **NO ACTION TAKEN**

This review is limited to checking for conformance with the information given and the design concept expressed in the contract documents. The Contractor and/or Construction Manager remains totally responsible for all dimensions, quantities, construction methods and means, techniques, sequences in the work, and procedures. Corrections or comments made on the shop drawings during review do not relieve the contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component.

BY: R. McDonald

DATE: 12/5/2023



Counsilman Hunsaker
AQUATICS FOR LIFE

SHOP DRAWING & SUBMITTAL REVIEW:

Review is only for general conformance with the design of the project and general compliance with the contract documents. Review does not relieve contractor from compliance with the requirements of the contract documents. Contractor is responsible for conforming and correlating all quantities and dimensions, selecting fabrication processes, means, techniques, sequences and procedures of construction; coordinating their work with that of all other trades; performing this work in a safe and satisfactory manner; and for all errors or omissions in submittals.

[] Reviewed, no exception [X] Reviewed as noted
[] Revise & Resubmit [] Rejected, Resubmit

Date: 11/28/2023

Reviewed By: cch

-Refer to responses to APBI notes on the following page in blue.
-Pumping equipment: Coordinate all motor/VFD power requirements with Electrical prior to ordering. The gauges on the suction side of the pump shall be compound per the specification with ranges from 30 inHg to 60psi.
-Filtration equipment: two (2) influent check valves shall be provided.
-Recirculation fittings: Provide eight (8) agitator valve boxes.
-Chemical Feed equipment: Provide an additional Stenner acid feed pump per note #5 on Chemical Feed Schedule on AQ400. Coordinate UV system requirements with electrical prior to ordering.
-Water Level Control: Provide solenoid valves for both high level shutoff and autofill applications. Coordinate sizing with Plumbing prior to ordering.
-Deck Equipment: Stanchion Anchor count is incorrect. Verify prior to ordering. Revise quantity of surge tank ladder rungs from 8 to 10 per ASI 14. Revise quantity of ADA lift anchors from 2 to 3 per ASI 14. Provide light grey color for surge tank access hatch.
-Pool Heating: Verify that two (2) of the submitted heaters will be provided for the Comp Pool. Coordinate connection requirements with electrical, venting/intake/gas requirements with mechanical, and condensate requirements with plumbing prior to ordering.

PROVIDE STANDARD WHITE ADA LIFT WITH BLUE SEAT AND ACCESSORIES TO MATCH OWNER'S EXISTING UNIT TO BE USED IN THIS FACILITY.

At Saunders,
our reputation
and relationships
are based on:

Care
Collaboration
Commitment
Community



Competition Pool Equipment Submittal APBI Response

REJECTED

-Pumping equipment: Concentric reducer 12"x5" is not applicable for RMF application, provide reducer for PP3. 12"x5" reducers were intended for pump discharge on PP1 and PP2. No reducer needed for PP3.

Noted - no exception taken.

-Chemical Treatment Systems: Per direction from Ownership in VE meetings, ETS UV is desired. Aquionics will not be accepted. Please provide ETS UV and inform Ownership of any cost differences. ETS submitted in revised submittal. See change order 3 for cost difference.

Noted. ETS is desired by APEX. Please confirm with C-H that change order #3 was accepted.

-Deck equipment, inserts & anchor sockets: Escutcheons are not required for competition pool equipment. No premanufactured diving stands and anchors are required for the competition pool due to Alternate #3 being accepted. APBI current contract does not include Alternate #3. Base Bid: Provide three (3) manufactured 3-meter stands, three (3) manufactured 1-meter stands, and six (6) water surface agitator fittings.

The alternate is accepted by Ownership and will be paid for by Mile High Dive Club per previous discussions. Please consult with Apex/Arvada on how this needs to be organized, divided up, and paid for, but alternate #3 will move forward.

-Loose equipment: Competition floating lane ropes, backstroke flags, recall rope, lane line storage reel and associated equipment are not required as they will be Owner provided per Spec 131100. If included in pool contractor pricing, please provide Owner credit for loose equipment that is not required. Submitted in Error. Removed in revised submittal. This equipment is not included in current APBI pricing.

Noted.

REVISE & RESUBMIT

-Water Chemistry Monitoring and Control Systems: Chemistry controller must have an alkalinity meter in accordance with specification 131100 section 2.7.B.2 and a free/total/combined chlorine in accordance with specification 131100 section 2.7.B.3. Chemistry controller must be capable of communication via BACNet. Verified and included in revised submittal.

Noted.

-Water Level Controllers: Provide solenoid valves for both high level shutoff and autofill applications. Coordinate sizing with Plumbing prior to ordering. Verified and included in revised submittal.

Noted.

-Pool Heaters: Documentation submitted is for Raypak direct heaters rather than the specified indirect heaters. Provide indirect pool heaters in accordance with the Heater Schedule on AQ400. Indirect pool heaters submitted in revised submittal. APBI received quote for direct fired heaters based on heater schedule on AQ400. See change order 3 for cost difference.

Change Order 3 must not include a cost increase for the difference between heater models.

Please refer to Specification Section 131100 from Addendum No. 3, Paragraph 2.19.A states an Indirect Gas Fired Boiler.

Additionally - part numbers shown in heater schedule match the corresponding Raypak Xtherm Indirect Part Numbers shown on Raypak Documentation.

Refer to details 1&2 on AQ506 for indication of standalone heat exchanger at pool heaters.

REVIEWED AS NOTED

-Pumping equipment: Coordinate all motor/VFD power requirements with Electrical prior to ordering. PP3 must be WhisperfloXF model XFK-8 with TEFC motor as per the pump schedule on sheet AQ400 to allow 3-phase power, as shown on 1/AQ600. VFDs for all recirc pumps must be provided with electromechanical bypass panel option. Whisperflo XFK-8 submitted in revised submittal.

Electromechanical bypass panel option included for all VFDs on recirc pumps.  Noted.

-Ensure that hoist beam trolley is rated for 2-ton minimum carrying capacity. Verified. 2-ton capacity hoist beam trolley included.  Noted.

-Filtration equipment: Two 12" influent check valves are required per the plans. Included in revised submittal.  Noted.

-Shipping pallet label for comp pool filter is incorrect. This item has been identified on submittal.  Noted.

-Recirculation fittings: All main drains must have slip coupling type ports and be schedule 40 PVC only since below pool floor piping will be concrete encased. Sumps ordered with slip coupling type ports and schedule 80 PVC. Schedule 40 piping to port.  Noted.

-8 agitator access boxes are required. APBI current contract does not include Alternate #3. Base Bid: Provide three (3) manufactured 3-meter stands, three (3) manufactured 1-meter stands, and six (6) water surface agitator fittings.  Noted.

The alternate is accepted by Ownership and will be paid for by Mile High Dive Club per previous discussions. Please consult with Apex/Arvada on how this needs to be organized, divided up, and paid for, but alternate #3 will move forward.

-Piping systems: Provide 2x 12" modulating float valves as shown on 1/AQ501. Quantity revised in revised submittal  Noted.

-Chemical treatment systems: Coordinate all power requirements with electrical prior to ordering chemical treatment systems. CO2 fillbox must be flush mounted in accordance with detail 12/AQ503. Each CO2 bulk tank must include its own fillbox. Confirmed. (1) CO2 bulk tank and (1) CO2 fill box – flush mounted.  One (1) bulk tank and one (1) fill box for each body of water at the facility.

-Deck equipment, inserts & anchor sockets: Stanchion anchor count is incorrect - please verify for all courses. Verified and revised.  Noted.

-Provide diving stand anchors for short stands only. Provide only qty. 2 diving boards, remaining 4 will be Owner provided as communicated by the Owner following construction documents. Provide Owner credit for qty. 2 diving boards. See change order 3 for cost difference.  Noted.

-4 surge tank valve extensions are required - please revise quantity. Refer to Architect for pool lift color selection. Surge tank access hatch is approved but under specification 131100 section 2.10 rather than 2.17, color selection shall be light gray and label shall read "SURGE TANK". Valve extension quantity revised  Noted.

-Thermometers: Provide in line thermometer model with 6" stem instead of the selected model, in accordance with specification 131100 section 2.14.A.2 Revised. 6" stem included.  Noted.



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Submittal Package: 131100_Swimming_Pools_Training_Rev1_PD_FA

Submittal Approval Sheet

PLEASE USE THE SPACES BELOW FOR COMMENTS AND STAMPS



SUBMITTED FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS EXCEPT AS NOTED. REVIEW OF THIS SUBMITTAL DOES NOT RELEASE THE SUBCONTRACTOR OF ITS RESPONSIBILITY TO CONFORM WITH THE PLANS AND SPECIFICATIONS NOR DOES THIS REVIEW RELEASE THE SUBCONTRACTOR FROM VERIFYING THE ACCURACY OF QUANTITIES AND FIELD DIMENSIONS.

Submittal Package Number:
131100_Swimming_Pools_Training_Pool_Rev1_PD_FA for Review
Signed: l.cardona
Date: 11/16/2023



OHLSON LAVOIE COLLABORATIVE

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Architecture - Interiors - Aquatic Design - Planning

- ☐ APPROVED, NO EXCEPTIONS NOTED
- ☒ APPROVED, IMPLEMENT CORRECTIONS NOTED
- ☐ REVISE AND RESUBMIT
- ☐ REJECTED
- ☐ NO ACTION TAKEN

This review is limited to checking for conformance with the information given and the design concept expressed in the contract documents. The Contractor and/or Construction Manager remains totally responsible for all dimensions, quantities, construction methods and means, techniques, sequences in the work, and procedures. Corrections or comments made on the shop drawings during review do not relieve the contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component.

BY: R. McDonald

DATE: 12/5/2023

See engineers review comments



Counsilman Hunsaker
AQUATICS FOR LIFE

SHOP DRAWING & SUBMITTAL REVIEW:

Review is only for general conformance with the design of the project and general compliance with the contract documents. Review does not relieve contractor from compliance with the requirements of the contract documents. Contractor is responsible for conforming and correlating all quantities and dimensions, selecting fabrication processes, means, techniques, sequences and procedures of construction; coordinating their work with that of all other trades; performing this work in a safe and satisfactory manner; and for all errors or omissions in submittals.

- ☐ Reviewed, no exception ☒ Reviewed as noted
☐ Revise & Resubmit ☐ Rejected, Resubmit

Date: 12/04/2023

Reviewed By: cch

- Refer to responses to APBI notes on the following page in blue.
- Nine (9) skimmers are required. Revise quantity prior to ordering. Send skimmer information to Myrtha for final coordination with wall panels. Equalizer ports shall be plugged at skimmers per ISPC.
- Pumping equipment: Coordinate all motor/VFD power requirements with Electrical prior to ordering.
- Recirculation fittings: There is one extra 4" port on "side D" of the 2nd main drain sump. Please remove unless intentional.
- Chemical Feed equipment: Coordinate UV system requirements with electrical prior to ordering. Only one (1) CO2 tank switchover mechanism is required for the entire facility.
- Water Level Control: Provide solenoid valves for both high level shutoff and autofill applications. Coordinate sizing with Plumbing prior to ordering.
- Deck Equipment: Remove lift from construction cost and provide/install only the lift anchor. Refer to markups on rail submittals in blue, and please resubmit stair/ramp rails for record. Verify that ramp rail posts do not block skimmer opening locations on approved Myrtha shop drawings.
- Pool Heating: Verify that one (1) of the submitted heaters will be provided for the Training Pool. Coordinate connection requirements with electrical, venting/intake/gas requirements with mechanical, and condensate requirements with plumbing prior to ordering. Provide motorized combustion air damper option for all three (3) Raypak pool heaters on the job per Mechanical Engineer.

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Training Pool Equipment Submittal APBI Response

REJECTED

-Perimeter Overflow: Skimmers must have 2" ports and NSF50 listing to be accepted. Submittal revised to include specified Hayward SP1084 skimmer. ← no exception

-Recirculation Fittings: Anti-vortex plates are not required at the training pool. Please remove. Submitted in error. Removed in revised submittal. ← noted

-Piping Systems: Float valves are not required at the training pool. Please remove. Submitted in error. Removed in revised submittal. ← noted

-Chemical Treatment Systems: Per direction from Ownership in VE meetings, ETS UV is desired. Aquionics will not be accepted. Please provide ETS UV and inform Ownership of any cost differences. ETS submitted in revised submittal. See change order 3 for cost difference. ← noted. ETS is desired by APEX. Please confirm with C-H that change order #3 was accepted.

-Deck Equipment: Existing Pool Lift will be reused by Ownership - only anchor and anchor installation is required by Contractor at the training pool. Please provide data on existing pool lift to submit proper anchor. APBI will credit back included lift if owner provided. ← the existing pool lift to remain is the Aqua Creek Mighty 400, which is the same as was specified for the competition pool.

-Surge tank access hatch and valve extension sleeves are not required at the training pool. Submitted in error. Removed in revised submittal. ← noted

-Loose equipment: Floating lane ropes, extension hooks, backstroke flags, lane line storage reel are not required as they will be Owner provided per Spec 131100. If included in pool contractor pricing, please provide Owner credit for loose equipment that is not required. Submitted in Error. Removed in revised submittal. This equipment is not included in current APBI pricing. ← noted

REVISE & RESUBMIT

-Water Chemistry Monitoring and Control Systems: Chemistry controller must have an alkalinity meter in accordance with specification 131100 section 2.7.B.2 and a free/total/combined chlorine in accordance with specification 131100 section 2.7.B.3. Chemistry controller must be capable of communication via BACNet. Verified and included in revised submittal. ← noted

-Water Level Controllers: Provide wet well configuration for training pool. Provide solenoid valves for both high level shutoff and autofill applications. Coordinate sizing with Plumbing prior to ordering. Verified and included in revised submittal. ← noted

-Deck Equipment: All stair and ramp rail posts within pool floor must match locations indicated in latest Myrtha shop drawings for coordination with floor liner, PVC floor anchors, as well as intended skimmer locations. All stair and ramp rail posts will be field verified prior to manufacturing.

-Pool Heaters: Documentation submitted is for Raypak direct heaters rather than the specified indirect heaters. Provide indirect pool heaters in accordance with the Heater Schedule on AQ400. Indirect pool heaters submitted in revised submittal. APBI received quote for direct fired heaters based on heater schedule on AQ400. See change order 3 for cost difference.

Change Order 3 must not include a cost increase for the difference between heater models. Please refer to Specification Section 131100 from Addendum No. 3, Paragraph 2.19.A states an Indirect Gas Fired Boiler. Additionally - part numbers shown in heater schedule match the corresponding Raypak Xtherm Indirect Part Numbers shown on Raypak Documentation. Refer to details 1&2 on AQ506 for indication of standalone heat exchanger at pool heaters.

stair rails must be manufactured according to 3/AQ201, 1/AQ202, and the approved Myrtha pool drawings. Ramp rails must be manufactured according to 3/AQ200, 12/AQ201, and the approved Myrtha pool drawings.

REVIEWED AS NOTED

-Pumping equipment: Coordinate all motor/VFD power requirements with Electrical prior to ordering. VFDs for all recirc pumps must be provided with electromechanical bypass panel option.

Electromechanical bypass panel option included for all VFDs on recirc pumps. ← noted

-Strainer may remain as 8"x8" if contractor prefers, but appropriate tees and bushings must be provided to convert the 6" suction lines to 8" size at strainer. Strainer revised to 6"x6". Precoat Tee revised to 6"x4"x4" ← noted

-Filtration equipment: 8"x4"x4" reducing tee shall be provided if 8"x8" strainer is utilized by the Contractor. 3"x6" increaser is required at the pump discharge in lieu of 4"x6" as shown due to the submitted pump discharge size. Strainer revised to 6"x6". 3"x6" increaser for pump discharge included in revised submittal. ← noted

-1 filter air compressor is required for the pool mechanical room. Air compressor removed from training pool submittal. Total quantity of 1 air compressor verified. ← noted

-Recirculation fittings: Main drain M3-B does not require a 4" port on side D -refer to AQ401 and AQ402 for main drain sump connections. All main drain ports shall be slip fittings sized for Sch 40 PVC, as piping to main drains will be encased in concrete. M3-B revised. Sumps ordered with slip coupling type ports and schedule 80 PVC. Schedule 40 piping to port. ← noted

-Chemical treatment systems: Coordinate all power requirements with electrical prior to ordering chemical treatment systems. CO2 fillbox must be flush mounted in accordance with detail 12/AQ503. Each CO2 bulk tank must include its own fillbox. Confirmed. (1) CO2 bulk tank and (1) CO2 fill box – flush mounted. ← one (1) bulk tank and one (1) fill box for each body of water at the facility

-Deck equipment, inserts & anchor sockets: Only 1 pool lift anchor and anchor installation is required by Contractor at the training pool - Owner is reusing existing lift. Please provide data on existing pool lift to submit proper anchor. APBI will credit back included lift if owner provided.

-Verify that Cisco grab rails are 316LSS material option. Verified ← noted

EQUIPMENT SCHEDULE	
ID	ITEM
COMPETITION POOL	
1A	CHEMICAL CONTROLLER REFER: 2IAQ203
1B	WATER LEVEL CONTROLLER REFER: 12IAQ205
1C	VARIABLE FREQUENCY DRIVE AND BYPASS PANEL
1D	FLOW METER SENSOR REFER: 3IAQ204
1E	VARIABLE FREQUENCY DRIVE
1F	FREE CHLORINE SENSOR PANEL REFER: 3IAQ203
1G	TOTAL ALKALINITY SENSOR PANEL REFER: 4IAQ203
TRAINING POOL	
2A	CHEMICAL CONTROLLER REFER: 2IAQ203
2B	WATER LEVEL CONTROLLER REFER: 12IAQ205
2C	VARIABLE FREQUENCY DRIVE AND BYPASS PANEL
2D	FLOW METER SENSOR REFER: 3IAQ204
2E	FREE CHLORINE SENSOR PANEL REFER: 3IAQ203
2F	TOTAL ALKALINITY SENSOR PANEL REFER: 4IAQ203
COMBINED	
3A	LADDER RUNGS
3B	SAFETY CHAIN
3C	REMOVABLE RAILING
3D	LINK SEAL REFER: 4IAQ204
3E	6'-4"x6'-0"x4'-0" DEEP BACKWASH CATCH BASIN
3F	AIR COMPRESSOR
3G	EYEWASH STATION REFER TO PLUMBING
3H	AIR COMPRESSOR HOSE CONNECTION FOR PORTABLE DIVE SPARGER. CONFIRM FINAL LOCATION WITH ARCHITECT.
3I	ACID TANKS REFER: 5IAQ203
3J	BACKWASH PIT GRATING REFER TO ARCHITECT & STRUCTURAL
3L	DEDICATED AREA FOR PERLITE STORAGE
3M	DEDICATED AREA FOR DIVING AIR COMPRESSOR (PROVIDED BY DIVING TEAM)
3N	CO ₂ TANK REFER: 10IAQ203
3O	CO ₂ FILLBOX REFER: 12IAQ203

HEATER SCHEDULE													
ID	POOL	MAKE	MODEL	QTY.	BOILER EFF (%)	INPUT (MBH)	AIR INLET SIZE (INCHES)	PIPE SIZE (IN/OUT)	VENT SIZE (INCH)	ELECTRICAL DATA (3 REQUIRED CONNECTIONS PER HEATER)			
H1	COMPETITION	RAYPAK	H7-1505A	2	96	1,500	8	6	8	V	PH	HZ	AMP
										120	3	60	30
										120	3	60	30
										120	3	60	30
H2	TRAINING	RAYPAK	H7-1005A	1	96	1,000	6	4	6	V	PH	HZ	AMP
										120	3	60	20
										120	3	60	20
										120	3	60	20
NOTE: 1. THE BASIS OF DESIGN MANUFACTURER IS LOCHINVAR. ALTERNATE MANUFACTURER: RAYPAK OR APPROVED EQUAL. 2. HEATERS MUST BE INSTALLED ON HOUSEKEEPING PADS. 3. REFER: 1 & 2IAQ206 4. EACH HEATER MUST BE SUPPLIED WITH AN EMERGENCY SHUTOFF BUTTON.													

UV TREATMENT SYSTEMS SCHEDULE						
ID	POOL	MODEL NUMBER	CALCULATED 60 MU/CM2 (GPM)	LAMPS	POWER (KW)	VOLTAGE (V) WITH BREAKER SIZE (60 OR 80 HZ)
U1	COMPETITION	WF-430-12-N	3,080	4 @ 3.0KW	12.0	480 V (3Ø)-40A
U2	TRAINING	WF-125-6-N	616	1 @ 2.9KW	2.5	208 V (1Ø)-30A
NOTE: 1. THE BASIS OF DESIGN MANUFACTURER IS EVOQUA TECHNOLOGIES LTD. ALTERNATE MANUFACTURER: PROMINENT, AQUONICS OR APPROVED EQUAL. 2. INTERLOCK UV SYSTEM WITH CHEMICAL CONTROLLER OR RECIRCULATION PUMP. 3. REFER: 13IAQ203						

PIPING LEGEND				
LEGEND	QTY.	ITEM	MAKE	MODEL
COMPETITION POOL				
	55	FLOOR INLET REFER: 4IAQ205	MYRTHA	0141515 (WHITE), 0141514 (BLACK)
	12	GUTTER DROPOUT BOX REFER: 8IAQ205	SUPPLIED BY POOL MANUFACTURER	
	4	MAIN DRAIN REFER: 5IAQ205	REFER TO MAIN DRAIN SCHEDULE	
	8	AGITATOR BOX REFER: 8IAQ105	ZURN	#2ANB-1481-12/P
	8	AGITATOR FITTING REFER: 8IAQ105	MYRTHA	0059969
TRAINING POOL				
	1	WALL INLET REFER: 12IAQ204	HAYWARD	SP-1421-D
	14	FLOOR INLET REFER: 4IAQ205	MYRTHA	0141515 (WHITE), 0141514 (BLACK)
	9	SKIMMER REFER: 11IAQ205	HAYWARD	SP1084 (WHITE)
	2	MAIN DRAIN REFER: 5IAQ205	REFER TO MAIN DRAIN SCHEDULE	
COMBINED				
----	N/A	BELOW GRADE PIPING	CHEMTROL	SCH 40 PVC, SCH 80 PVC

FILTER SCHEDULE											
ID	POOL	MANUFACTURER	FILTER MODEL	QTY.	FILTRATION TYPE	MAXIMUM FILTRATION RATE (GPM/SQ. FT.)	REQUIRED FILTRATION AREA (SQ. FT.)	DESIGN FILTRATION RATE (GPM/SQ. FT.)	DESIGN FILTRATION AREA (SQ. FT.)	FILTER BACKWASH RATE (GPM/SQ. FT.)	BACKWASH FLOW RATE PER FILTER (GPM)
F1	COMPETITION	NEPTUNE BENSON	SP-55-48-2078	1	RMF	1.4	1,535.7	1.32	1,625.0	0.5	300
F2	TRAINING	NEPTUNE BENSON	SP-27-48-487	1	RMF	1.4	285.7	1.05	381.0	0.5	300
NOTE: 1. BACKWASH METHOD MUST BE FULLY-AUTOMATIC. 2. ALL FILTER SUPPORTS MUST BE SEISMICALLY RATED FOR THE SEISMIC ZONE IN WHICH IT IS INSTALLED IN ACCORDANCE WITH LOCAL AND/OR STATE REQUIREMENTS. 3. FILTER MANUFACTURER MUST CERTIFY FILTER MEDIA. 4. VALVES MUST BE PROVIDED TO BACKWASH EACH FILTER VESSEL INDEPENDENTLY. 5. THE BACKWASH PIPING MUST TERMINATE NO CLOSER THAN 6" ABOVE THE FLOOR RIM OF THE BACKWASH CATCH BASIN OR TWICE THE PIPE DIAMETER, WHICHEVER IS GREATER. 6. FILTER TANK ASSEMBLIES MUST BE 6" HET THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL FOR A MAXIMUM FLOW RATE OF 14 GPM PER SQUARE FOOT OF FILTER MEDIA. 7. PROVIDE HARD PLUMBED SCHEDULE 80 PIPE FROM BOTTOM OF THE FILTER TANK TO WASTE PIT IN ORDER TO DRAIN TANK AND MEDIA ON AN NEEDED BASIS. PIPE SLOPED FROM FILTER TANK TO WASTE PIT. 8. PROVIDE NON-HAZARDOUS, NON-TOXIC, FILTER MEDIA. PARTICLE SIZE MUST HAVE MEDIAN PORE SIZE OF NO GREATER THAN 20 MICRONS. 9. REFER: 11IAQ204 & 1IAQ205											

PUMP SCHEDULE											
ID	DESCRIPTION	MANUFACTURER	MODEL	SIZE	GPM	TDH	HP	NPSH-R	HAIR/LINT	NOTES	
PP1	COMPETITION POOL RECIRCULATION PUMP 1 REFER: 1IAQ203	AURORA	5X8X11	6'X5'	1,075	95	40	10.49	MERMADE	12'X12'	1,23.4 5,68.11
										12'X12'	1,23.4 5,6.8
PP2	COMPETITION POOL RECIRCULATION PUMP 2 REFER: 1IAQ203	AURORA	5X8X11	6'X5'	1,075	95	40	10.49	MERMADE	12'X12'	1,23.4 5,6.8
PP3	COMPETITION POOL DRAIN DOWNWAGITATOR PUMP REFER: 15IAQ205	PENTAIR	WHSPERFLOW	XFK-8	100	40	2	N/A	INTEGRAL		1,23.7 8,9.10
PP4	TRAINING POOL RECIRCULATION PUMP REFER: 1IAQ203	AURORA	3X4X9.5	4'X3'	400	85	20	5.94	MERMADE	6'X8'	1,23.4 6,8.11
NOTE: 1. THE MANUFACTURER INDICATED IS BASIS OF DESIGN. PUMP MANUFACTURERS: GRISWOLD, HERBORNER, PACO OR AURORA MUST BE CONSIDERED EQUAL PROVIDED THEY MEET SPECIFICATIONS AS INDICATED IN BID DOCUMENTS. 2. POOL PUMPS AND STRAINERS MUST BE INSTALLED ON HOUSEKEEPING PADS. 3. PROVIDE INFLUENT AND EFFLUENT GAUGES FOR EACH PUMP. PRESSURE GAUGES HAVE A RANGE OF 0-60 PSI. COMPOUND GAUGES HAVE A RANGE OF 0-30 HG / 0-60 PSI. 4. PROVIDE WITH 480 VOLT, 3 PHASE, 60HZ, 1800 RPM MOTOR. 5. PROVIDE WITH CHECK VALVE. 6. PROVIDE VARIABLE FREQUENCY AND BYPASS PANEL. 7. PROVIDE REMOTE PUMP START. 8. PROVIDE EMERGENCY STOP. 9. PROVIDE WITH 480 VOLT, 3 PHASE, 60 HZ, 3450 RPM MOTOR. 10. PROVIDE VARIABLE FREQUENCY DRIVE. 11. PROVIDE A SPARE PUMP AND MOTOR FOR FUTURE REPLACEMENT.											

CHEMICAL FEED SCHEDULE						
ID	DESCRIPTION	MANUFACTURER	MODEL	TUBE #	HP	FLOW
CF1	COMPETITION POOL CHLORINATION BOOSTER PUMP REFER: 8IAQ203	ACCUTAB	3070AT	N/A	1.5	244 LBS/DAY
CF2	TRAINING POOL CHLORINATION BOOSTER PUMP REFER: 8IAQ203	ACCUTAB	1030	N/A	1	67 LBS/DAY
CF3	COMPETITION POOL CO2 FEED REFER: 10IAQ203	BECS	BECYS002	N/A	N/A	20-200 SCFH
CF4	TRAINING POOL CO2 FEED REFER: 10IAQ203	BECS	BECYS002	N/A	N/A	20-200 SCFH
CF5	COMPETITION POOL ACID FEED PUMP REFER: 5IAQ203	STENNER	45M3	3	FRAC	22 GAL/DAY
CF6	TRAINING POOL ACID FEED PUMP REFER: 5IAQ203	STENNER	45M3	3	FRAC	22 GAL/DAY
NOTE: 1. THE MANUFACTURER INDICATED IS BASIS OF DESIGN. 2. PROVIDE WITH 120 VOLT, SINGLE PHASE, ADJUSTABLE FEED. 3. INTERLOCK WITH POOL RECIRCULATION PUMP. 4. INTERLOCK CHEMICAL FEED PUMP WITH FILTER TO PREVENT FEEDING DURING PRE-COAT CYCLE. 5. PROVIDE ONE (1) SPARE ACID FEED PUMP FOR FUTURE REPLACEMENT.						

GENERAL POOL MECHANICAL ROOM NOTES											
1. EQUIPMENT ROOM FLOOR AND PUMP PIT FLOOR MUST SLOPE 1/4" TO 1/2" PER FOOT TO FLOOR DRAINS OR SUMP PIT. REFER TO PLUMBING. 2. PROVIDE HOSE BIBBS FOR HOUSE CLEANING PURPOSES. REFER BUILDING MECHANICAL DRAWINGS. 3. THE INSIDE SURFACES OF THE BACKWASH CATCH BASIN MUST BE WATERPROOFED. REFER TO SPECIFICATION. 4. VENTILATION OF POOL MECHANICAL ROOM AND CHEMICAL STORAGE AREAS PER LOCAL, STATE AND INTERNATIONAL MECHANICAL CODE MINIMUM. REFER TO MECHANICAL. 5. THE FOLLOWING INFORMATION MUST BE LAMINATED AND POSTED IN THE POOL MECHANICAL ROOM: BACKWASH PROCEDURE, POOL FILLING AND DRAINING, VALVE REFERENCE CHART, POOL MECHANICAL ROOM PLAN, POOL PIPING SCHEMATICS, AND POOL SYSTEMS SCHEMATICS. 6. REFER TO MECHANICAL FOR HVAC SYSTEMS DESIGN. 7. REFER TO ARCHITECTURAL DRAWINGS FOR LADDER RUNGS, SAFETY CHAIN, AND REMOVABLE RAILING AT PUMP PIT. PIPING 1. MINIMUM 7'-0" CLEARANCE BENEATH ALL OVERHEAD PIPING. 2. PROVIDE AND SUPPORT OVERHEAD AND VERTICAL PIPING PER SPECIFICATION REQUIREMENTS. 3. LABEL AND IDENTIFY ALL PIPING IN COMPLIANCE WITH THE SPECIFICATIONS. 4. ALL FLOW METERS MUST BE SIZED TO MATCH THE PIPE ON WHICH IT IS INSTALLED. PROVIDE PRESSURE GAUGES ON INFLUENT AND EFFLUENT SIDE OF EACH FILTRATION SYSTEM AND A FULL LINE SIZE FLOW METER ON FILTER RETURN. 5. HYDROSTATICALLY TEST ALL PIPING AT 50 PSI FOR TWO HOURS AND MAINTAIN A PRESSURE OF 20 PSI IN ALL PIPING THROUGHOUT CONSTRUCTION. SECURE ALL FIXTURES PER SPECIFICATION REQUIREMENTS BEFORE HYDROSTATIC TEST. 6. REFER TO DETAILS 5-10 ON DRAWING AQ404 FOR INSTALLATION OF PIPE SUPPORTS. 7. ALL PIPING ROUTED THROUGH THE CHEMICAL ROOM WALLS INTO THE MAIN MECHANICAL ROOM MUST BE PROPERLY SEALED AND FIREPROOFED PER THE FIRE RATING OF THE ROOM. REFER TO ARCHITECT. CHEMICAL TREATMENT 1. CHEMICAL FEED REQUIREMENTS - REFER TO THE POOL SYSTEMS SCHEMATIC(S) ON AQ600. 2. INTERLOCK POOL RECIRCULATION PUMP(S) WITH ITS CORRESPONDING WATER CHEMISTRY CONTROLLER, CHEMICAL FEED PUMPS, (AND HEATERS). 3. SECURE SIGNAGE ON CHEMICAL ROOM DOORS IN COMPLIANCE WITH THE STATE FIRE CODE. REFER: 1AQS64 4. SECURE CHEMICAL METERING PUMP FEED LINES TO WALL AND/OR OVERHEAD WITH CLIPS OR DEVICES THAT DO NOT CRIMP, DISTORT OR ALLOW HIGH AND LOW AREAS IN TUBING RUNS. PROVIDE CHECK VALVE AND SHUT-OFF VALVE BEFORE LINES ENTER POOL RETURN PIPING. 5. WATER CHEMISTRY CONTROLLERS MUST CONTROL THE SANITIZING SYSTEM AND PH CONTROL SYSTEM AND SHUT THEM DOWN UPON LOSS OF SAMPLE STREAM FLOW. 6. SAMPLE FEED PIPING TO/FROM THE RECIRCULATION SYSTEM TO THE WATER CHEMISTRY CONTROLLER MUST BE PIPED PER THE SYSTEMS SCHEMATIC. BYPASS PIPING MUST BE SADDLED OR TEED. NO TAPPING OR DRILLING INTO THE PIPING WILL BE ALLOWED. 7. PROVIDE ETHERNET CONNECTION FOR REMOTE ACCESS TO ALL WATER CHEMISTRY CONTROLLERS AND COORDINATE INTERFACE TO BUILDING MANAGEMENT SYSTEM. REFER TO ELECTRICAL AND/OR CONTROLS CONSULTANT. 8. INSTALL SANITIZER INJECTION POINT DOWNSTREAM OF PH BUFFER INJECTION POINT ON FILTERED WATER RETURN PIPE. CHEMICAL INJECTION POINTS MUST BE LOCATED DOWNSTREAM OF ALL OTHER EQUIPMENT/SYSTEMS IN THE POOL MECHANICAL ROOM AT A MAXIMUM HEIGHT OF 7'-0" ABOVE FINISHED FLOOR. REFER: 14IAQ203 ELECTRICAL 1. GFCI'S PROVIDED AT OUTLETS. REFER TO ELECTRICAL. 2. POOL EQUIPMENT ROOM AND CHEMICAL STORAGE AREAS MUST BE PROVIDED WITH ARTIFICIAL LIGHTING SUFFICIENT TO ILLUMINATE ALL EQUIPMENT AND SUPPLIES. REFER TO ELECTRICAL. 3. CONDUIT MUST BE ROUTED OVERHEAD OR BELOW GRADE. 4. PROVIDE ELECTRICAL CONNECTION ADJACENT TO FILTER SYSTEM FOR FILTER BACKWASH CONTROLLER. REFER TO ELECTRICAL.											

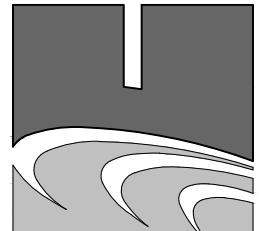
GENERAL PIPING NOTES											
1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERATIONAL PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE. 2. PIPE SIZES INDICATED ARE NOMINAL, I.P.S. 3. UNLESS OTHERWISE NOTED, ALL OVERHEAD PIPING MUST BE TIGHT TO UNDERSIDE OF STRUCTURE OR SLAB. 4. ALL BALANCING VALVES AND BUTTERFLY VALVES MUST BE PROVIDED WITH POSITION INDICATORS AND MAXIMUM ADJUSTABLE STOPS (MEMORY STOPS). 5. ALL VALVES MUST BE INSTALLED SO THAT THE VALVE REMAINS IN SERVICE WHEN THE EQUIPMENT OR PIPING ON THE EQUIPMENT SIDE OF THE VALVE IS REMOVED. 6. PROVIDE CHAIN WHEEL OPERATORS FOR ALL VALVES IN EQUIPMENT ROOMS MOUNTED GREATER THAN 7'-0" ABOVE FINISHED FLOOR. CHAIN MUST EXTEND TO 7'-0" ABOVE FINISHED FLOOR LEVEL. 7. ALL VALVE HARDWARE MUST BE 316L STAINLESS STEEL AND MEET ANSI HARDWARE INSTALLATION GUIDELINES. REFER: 14IAQ204 8. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING. 9. ALL PIPING WORK MUST BE COORDINATED WITH ALL TRADES AND SITE CONDITIONS. OFFSETS, EXPANSION LOOPS, OR TRANSITIONS IN PIPING AROUND OBSTRUCTIONS MUST BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. 10. ALL PIPING INDICATED MUST BE CONSIDERED DIAGRAMMATIC. 11. ALL SWIMMING POOL PIPING ROUTED BELOW THE POOL SHELL MUST BE CONCRETE ENCASED SCHEDULE 40 PVC, UNLESS OTHERWISE NOTED. REFER: 8IAQ205 12. ALL UNDERGROUND OR EXPOSED SWIMMING POOL PIPING MUST BE SCHEDULE 80 PVC, UNLESS OTHERWISE NOTED. CONTRACTOR MUST REFER TO PLANS AND SPECIFICATIONS FOR ANY SPECIFIC REQUIREMENTS REGARDING PLACEMENT AND BACKFILLING OF BELOW GRADE POOL PIPE. 13. ALL DIMENSIONS INDICATED FROM THE FINISH WALL SURFACE AND DO NOT ACCOUNT FOR ANY VARIATIONS IN FINISH GRADE OR SLOPE DISTANCES. 14. THE CHEMICAL SENSOR LINE MUST BE A 3/4" TO 1" DIAMETER, SCHEDULE 80 PVC PIPE EXTENDED FROM THE WET CELL SENSOR TO ITS RESPECTIVE FILL FUNNEL AND THE BACKWASH CATCH BASIN OR PUMP SUCTION. 15. ALL FLOOR INLETS MUST BE ADJUSTED TO ACHIEVE AN EVEN FLOW DISTRIBUTION THROUGHOUT SYSTEMS. 16. ALL PIPE TEES MUST BE SIZED FOR LARGEST PIPE CONNECTION. 17. SURGE TANK VENT PIPING TO INCLUDE POWERED VENT FAN AND ROUTE TO BUILDING EXTERIOR. REFER TO MECHANICAL. 18. ALL GUTTER DROPOUT LINES MUST SLOPE 1/8" PER FOOT MINIMUM.											

FILL SCHEDULE						
ID	POOL	FRESH WATER SUPPLY GPM (MIN.)	FILL FUNNEL SIZE	REDUCER SIZE	SPLASH COLLAR SIZE	DESIGN FILL TIME (HOURS)
L1	COMPETITION	177	12"	12"X8"	10"	72
L2	TRAINING	50	8"	8"X4"	6"	24
NOTE: REFER: 2IAQ204						

MAIN DRAIN SCHEDULE							
ID	DESCRIPTION	SIZE	QTY	DESIGN FLOW (GPM)	DESIGN VELOCITY (FPS)	MAX FLOW (GPM)	MANUFACTURER
M1	COMPETITION POOL RECIRCULATION	18X36	2	1,175	0.47	2,480	DALMAX-MBD-183628
M2	COMPETITION POOL RECIRCULATION	18X36	2	1,075	0.43	2,480	DALMAX-MBD-183628
M3	TRAINING POOL RECIRCULATION	18X36	2	400	0.16	1,984	DALMAX-MBD-183624
NOTE: 1. MAIN DRAIN GRATING MUST BE MANUFACTURED BY DALDORADO. 2. MAXIMUM FACE VELOCITY MUST NOT EXCEED 1.5 FEET PER SECOND. 3. OPEN AREA IS BASED ON MANUFACTURERS DATA. 4. THE INSTALLED LIFE OF THE MAIN DRAIN COVER MUST BE 10 YEARS. 5. ALL MAIN DRAINS MUST BE INSTALLED IN THE POOL FLOOR. WALL SUMPS WILL NOT BE PERMITTED. 6. FASTEN MAIN DRAIN COVER TO EMBEDDED PVC FRAME/POOL FLOOR WITH SS TAMPER PROOF FASTENERS AT A SPACING NO GREATER THAN 24" O.C. REFER TO FRAME AND GRATE MANUFACTURERS INSTALLATION INSTRUCTIONS. 7. PROVIDE WATER BONDING FITTING IN MAIN DRAIN SUMP AT DEEPEST SECTION OF THE POOL. BASIS OF DESIGN: PERMA-CAST SWIMMING POOL PRODUCTS MODEL PB-SK-20. 8. PROVIDE HYDROSTATIC RELIEF VALVE IN EACH MAIN DRAIN. BASIS OF DESIGN: HAYWARD MODEL SP1056 & SP1055.							



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07/14/2023

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO

7900 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	11/01/2023	RFI 96
2	11/30/2023	ASI 16

SCALE: AS NOTED

ISSUE DATE: 07/14/2023

DRAWN BY: DXB

REV'D BY: CCH

PROJECT #: 22044

TITLE:
POOL MECHANICAL NOTES &
SCHEDULES
SHEET #:

AQ400

January 2, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-056 Drilled Pier Overrun

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-056		Drilled Pier Overrun			Source
Reference Date	12/27/2023		Owner Number			
Scope Description						
**Note: There are 4 remaining drilled piers to be installed at the trash enclosure.						
22015012	03300	SUBA	Saunders Concrete Structures, LLC		23,720.15	Cast in place concrete
22015012	98003	OVD			26.00	Builders Risk
22015012	98005	OVD			225.00	Commercial Insurance
22015012	98006	OVD			308.00	SDI
22015012	98600	OVD			36.00	Closeout and Warranty
22015012	99000	FEE			644.00	Fee
Stipulated Sum					24,959.15	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date



Date: 12/22/2023

Project: Meyers Pool Replacement

Project Address:

7904 Carr Dr.

Arvada, CO. 80005

Change Order # 005

Value: \$23,720.15

(Please see detailed back-up)

SCOPE OF WORK:

The drilled piers were drilled to the depths specified in contractual documents, based on structural requirements and bedrock depth as determined by third party inspector. The attached back up consolidates the overrun/underrun costs for these drilled piers, based on the difference between theoretical pier length and actual pier length, with unit prices as agreed upon in the contract.

Erika Pierce

Saunders Concrete Structures, LLC.

BUILDING CONFIDENCE

86 Inverness Place North, Englewood, CO 80112 | t 303.699.9000 f 303.680.7448 | saundersinc.com

Drilled Pier Tracking Template															Type	
Drilled Pier Number (Structure)	Diagram of Pier	A ACTUAL Top Of Pier Elevation (Structural)	B ACTUAL Soil Elevation (Field)	Depth to bedrock	C THEORETICAL Bottom of Pier Elevation (A-depth to bedrock (see note 2))	D THEORETICAL Shaft Depth (B-C)	E THEORETICAL Length of Pier (B-C)	F EMBEDMENT Per (Structural)	G THEORETICAL Bedrock Elevation (Soils Report)	H THEORETICAL Depth to bedrock	I ACTUAL Bedrock Elevation (CTU)	J ACTUAL Shaft Depth (3rd Party)	K ACTUAL Bottom Elevation (B-G)	Overrun (J)/Underrun (I)		
13-595	1.5	5472.58	5472.55	15	5454.58	17.92	25	10	5464.5	8	5457.5	25.75	5446.75	-0.84	18A	
3393	1.5	5472.58	5472.79	15	5452.79	20	25	10	5463	9.79	5458.29	25.04	5447.54	-0.04	18A	
3394	2	5472.58	5472.69	14.5	5453.65	42.18	42.13	34	5464.5	8.13	5457.63	49.42	5433.21	-7.24	24A	
3392	2	5472.58	5472.75	15	5453.83	39.52	39.75	30	5463	9.75	5457.75	45.34	5447.61	-5.43	24A	
3377	2	5472.58	5472.8	11.5	5451.28	41.52	41.3	30	5461.5	11.3	5457.8	45	5447.8	-3.48	24A	
3376	2	5472.58	5473.67	8.5	5453.41	43.26	42.17	30	5461.5	12.17	5465.17	39	5437.91	-5436.67	4.27	24A
3380	2	5473.25	5473.36	5	5453.39	42.87	42.86	30	5461.5	12.86	5469.36	37.89	5435.27	-4.88	24A	
3379	2	5473.25	5472.85	6	5453.9	40.93	41.35	30	5461.5	11.35	5466.85	36	5436.85	-4.96	24A	
3389	2	5473.25	5472.84	0	5445.91	26.95	27.34	20	5461.5	7.34	5472.84	25.25	5447.59	1.69	24A	
3390	1.5	5473.25	5472.84	6	5451.91	24.35	25.05	14	5461.5	7.34	5466.34	25.67	5447.17	-1.08	18A	
13-591	1.5	5473.25	5472.55	6	5448.2	20.9	25.05	14	5461.5	11.05	5466.55	26.34	5446.21	-1.99	18A	
3396	1.5	5473.25	5472.62	5	5452.33	20.9	25	14	5461.5	11.32	5473.32	25.78	5447.37	-1.89	18A	
3375	1.5	5473.25	5472.73	5.00	5452.02	20.21	25	14	5461.5	7.23	5467.73	26.69	5446.56	-1.69	18A	
3378	1.5	5473.25	5473.42	7	5431.33	42.09	41.92	30	5461.5	11.92	5466.42	37.5	5435.92	4.6	18A	
3382	1.5	5473.25	5472.5	4	5453.25	18.64	25	18	5474	0	5472.89	26.25	5447.8	-1.25	18A	
3381	1.5	5473.25	5472.72	5	5453.03	18.69	37.22	30	5461.5	7.22	5467.72	36.12	5437.13	1.11	18A	
3388	1.5	5473.25	5472.96	0	5455.29	17.67	25	14	5469	3.96	5472.96	25	5429	0.29	18A	
3387	1.5	5473.25	5472.43	0	5453.25	19.18	25	20	5474	0	5472.43	25.59	5441.34	-1.41	18A	
3386	1.5	5473.25	5472.89	0	5453.25	18.64	25	20	5474	0	5472.89	26.25	5446.64	-1.61	18A	
3384	1.5	5473.25	5472.83	0	5453.25	19.58	25	20	5478.5	0	5472.83	25.42	5447.41	-0.86	18A	
3385	2	5473.25	5472.85	0	5443.25	29.6	30	30	5478.5	0	5472.85	30.75	5442.1	-1.15	24A	
3452	2	5473.25	5473.34	0	5449.25	24.09	25	24	5478.5	0	5473.34	25.67	5447.62	-0.59	24A	
13-590	1.5	5473.25	5472.92	0	5453.25	19.67	25	20	5478.5	0	5472.92	28.75	5444.17	-4.08	18A	
3392	1.5	5473.25	5472.96	0	5453.25	21.3	25	14	5478.5	0	5472.96	25.78	5447.33	-0.19	18A	
3393	1.5	5473.25	5472.86	0	5458.25	13.61	25	14	5478.5	0	5472.86	25.67	5447.19	-1.07	18A	
3454	1.5	5473.25	5473.7	0	5457.25	16.45	25	16	5478.5	0	5473.7	26.25	5447.45	-0.82	18A	
3390	1.5	5473.25	5473.54	0	5453.25	20.29	22.14	20	5478.5	0	5473.54	25.84	5447.59	-0.47	18A	
3453	1.5	5473.25	5473.7	0	5449.25	24.45	25	24	5478.5	0	5473.7	25.84	5447.86	-0.01	18A	
3499	2	5473.25	5473.43	0	5453.25	19.18	25	20	5478.5	0	5473.43	26	5447.63	-0.82	24A	
3498	2	5473.25	5473.24	0	5453.25	19.09	25	20	5478.5	0	5473.24	25.43	5447.62	-0.82	24A	
3497	2	5473.25	5473.19	0	5453.25	20.04	25	20	5474	0	5473.19	25.57	5447.49	-0.57	24A	
3451	2	5473.25	5473.34	0	5447.25	26.09	26	26	5474	0	5473.34	26.67	5446.67	-0.19	24A	
3494	2	5473.08	5473.5	0	5453.08	20.42	25	20	5474	0	5473.5	25.59	5447.91	-0.59	24A	
13-589	2	5473.08	5473.52	0	5463.08	10.44	25	10	5476	0	5473.52	25.75	5447.77	-0.32	24A	
3493	2	5473.08	5473.25	0	5453.08	20.17	25	20	5476	0	5473.25	25.67	5447.58	-0.5	24A	
3495	2	5473.08	5473.2	0	5453.08	20.12	25	20	5476	0	5473.2	25.75	5447.65	-0.65	24A	
3449	2	5473.25	5473.28	0	5447.62	27.81	27.78	26	5471.5	1.78	5473.28	26.5	5446.78	-1.3	24A	
3516	1.5	5472	5464	0	5442	22	30	30	5478.5	0	5464	31.5	5432.5	9.5	18A	
3517	1.5	5472	5464	0	5442	22	30	30	5478.5	0	5464	31.67	5432.33	-9.68	18A	
3508	1.5	5471	5464	0	5441	23	30	30	5465.5	0	5464	32.59	5431.41	-9.6	18A	
3507	1.5	5471	5464	0	5441	23	30	30	5465.5	0	5464	33	5431	-10	18A	
3505	1.5	5473.25	5473.5	0	5457.45	15.85	25	14	5471.5	1.8	5473.5	25.43	5447.3	-0.46	18A	
3462	1.5	5476.08	5473.5	0	5464.08	9.42	25	10	5471.5	2	5473.5	26.5	5448	-0.08	24A	
13-588	2	5473.08	5473.5	0	5451.08	22.42	25	20	5471.5	2	5473.5	25.5	5448	-4.09	24A	
3448	2	5473.25	5473.33	0	5443.25	30.08	30	30	5474	0	5473.33	30.59	5442.74	-0.53	24A	
3464	2	5473.08	5473.35	0	5453.08	20.27	25	20	5474	0	5473.35	25.67	5447.68	-0.41	24A	
3461	2	5473.08	5473.3	0	5453.08	20.22	25	20	5474	0	5473.3	25.75	5447.54	-0.5	24A	
3446	2	5473.25	5473.34	0	5447.41	25.93	25.84	24	5471.5	1.84	5473.34	26.17	5447.17	-0.24	24A	
3445	2	5473.25	5473.13	0	5447.62	25.91	25.63	24	5471.5	1.63	5473.13	26.25	5446.88	-0.74	24A	
3440	2	5472.8	5472.86	0	5451.44	21.42	25	20	5471.5	1.96	5472.86	26.09	5446.77	-1.03	24A	
3462	2	5473.08	5473.19	0	5451.21	21.89	25	20	5471.5	1.99	5473.19	25.5	5447.59	-0.24	24A	
3459	2	5473.08	5473.17	0	5451.13	22.04	25	20	5471.7	2.5	5473.17	25.14	5447.67	-1.15	24A	
3443	2	5473.25	5472.75	7	5448.5	34.25	33.75	30	5469	3.75	5465.75	37.59	5435.16	-4.35	24A	
3452	2	5473.25	5472.8	7	5446.8	26.45	26.8	26	5469	6.8	5465.8	28	5444.8	-1.65	24A	
3458	2	5472.8	5473	7	5449.8	23.2	25	20	5469	4	5466	27.09	5445.91	-1.2	24A	
3444	1.5	5473.25	5473.13	7.5	5457.62	15.61	25	14	5471.5	1.63	5473.13	25.57	5447.46	-0.79	18A	
3520	1.5	5473.08	5472.77	0	5451.61	10.06	25	10	5471.5	1.27	5472.77	26.67	5447.1	-0.98	18A	
3488	1.5	5476.08	5473.12	0	5461.46	8.56	25	10	5471.5	1.62	5473.12	25.65	5447.62	-3.46	18A	
3447	2	5473.25	5473.53	0	5457.22	16.31	25	14	5471.5	2.03	5473.53	25.59	5447.94	-0.32	18A	
13-587	2	5473.08	5473.28	0	5453.08	20.2	25	20	5474	0	5473.28	25.59	5447.69	-0.41	24A	
3466	2	5473.08	5473.33	0	5453.08	20.25	25	20	5474	0	5473.33	25.75	5447.33	-0.75	24A	
3491	1.5	5476.08	5473.18	0	5466.08	7.25	25	10	5474	0	5473.18	25.69	5447.58	-3.5	18A	
3490	1.5	5476.08	5473.3	0	5466.08	7.25	25	10	5474	0	5473.3	25.75	5447.58	-3.5	18A	
3437	1.5	5473.25	5472.7	11	5446.55	24.15	25	10	5468	14.7	5457.7	27.67	5445.03	-0.23	18A	
3437	1.5	5476.08	5472.48	15	5463.48	18.6	25	10	5473.5	0.9	5473.48	25.34	5446.14	-1.64	18A	
3486	1.5	5476.08	5472.8	15	5461.28	12.52	25	10	5469	4.8	5462.8	23.34	5450.62	-3.63	18A	
3489	1.5	5476.08	5473.12	12	5461.96	11.16	25	10	5469	4.12	5461.12	23.42	5449.39	-1.09	18A	
3455	2	5473.08	5473.08	12	5446.02	27.04	27.06	20	5466	7.06	5461.06	32.42	5446.04	-5.38	24A	
3432	2	5473.08	5473.14	12	5453.08	42.14	42.14	30	5461	12.14	5461.14	43.42	5436.46	-24.87	24A	
3433	2	5473.08	5473.08	14.5	5431	42.08	42.08	30	5468	12.08	5458.58	46	5427.08	-3.93	24A	
3481	2	5473.25	5472.71	14	5426.54	46.17	46.71	26	5452	20.71	5458.71	41.67	5431.04	-5.51	24A	
13-586	2	5473.08	5472.85	10.75	5446.23	26.62	26.85	20	5466	6.85	5462.1	31.75	5441.1	-5.13	24A	
3456	2	5473.08	5472.94	10	5449.14	23.8	25	20	5469	3.84	5462.94	30.75	5442.19	-5.9	24A	
3442	2	5473.25	5473.62	11	5441.63	30.99	31.62	12	5461	6.62	5461.62	32.44	5440.62	-1.04	24A	
3434	2	5473.08	5472.77	12	5431.31	41.46	41.77	30	5461	11.77	5460.77	42.59	5430.18	-1.13	24A	
3483	2	5473.08	5472.71	12	5431.37	41.34	41.71	30	5461	11.71	5460.71	43.84	5429.37	-1.03	24A	
3441	2	5473.25	5472.78	10	5441.77	31.47	31.78	14	5461	3.78	5461.78					

cost / foot over run			
-168.73	-74.05	12494.46	18A
-80.93	-69.93	5659.43	18
-48.96	-113.69	5566.26	24
		23720.15	over run cost

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0012
Service Date: 09/11/23
Report Date: 09/14/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation at west side of site (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observations for today were reported to Justin Cooper with Saunders

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report No. 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	10

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0011, .0013
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments**Compliance Statement**

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),
Oliver Deck

(1) Saunders Construction, Inc (CO),
Robert Burd

Reviewed By:

Alex Seay
 Senior Project Manager

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Report Number: 25231103.0012
Service Date: 09/11/23
Report Date: 09/14/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	A.0 x 4.4	A.0 x 3.7	A.0 x 4.0	A.0 x 3.3	A.0 x 3.0	A.0 x 2.0
	Pier Type	DP18A	DP18A	DP24A	DP24A	DP24A	DP24A
	Start Date	9/11/2023	9/11/2023	9/11/2023	9/11/2023	9/11/2023	9/11/2023
	End Date	9/11/2023	9/11/2023	9/11/2023	9/11/2023	9/11/2023	9/11/2023
Elevations (ft)	Pier Diameter (inches)	18	18	24	24	24	24
	Ground surface, A	5496.00'	5496.00'	5496.00'	5496.00'	5496.00'	5496.00'
	Top of concrete, B	5495.58'	5495.58'	5495.58'	5495.58'	5495.58'	5495.58'
	Top of bedrock, C = (A-F)	5481.00'	5481.50'	5481.00'	5481.00'	5481.00'	5487.50'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	5470.25'	5470.50'	5446.50'	5450.67'	5451.00'	5457.00'
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.75'	25.50'	49.50'	45.33'	45.00'	39.00'
	Overburden thickness (ft), F	15.00'	14.50'	15.00'	15.00'	15.00'	8.50'
	Total pier length (ft) Actual (B-D)	25.33'	25.08'	49.08'	44.91'	44.58'	38.58'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	10.75'	11.00'	34.50'	30.33'	30.00'	30.50'
Groundwater	Required	10.00'	10.00'	34.00'	30.00'	30.00'	30.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars	10#6	10#6	10#6	10#6	10#6	10#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	24.83'	24.83'	48.50'	45.33'	43.75'	38.00'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method	2#7	2#7	3#8	3#8	3#8	3#8
Miscellaneous	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:		Terracon report no. 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alex Seay

Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0012
Service Date: 09/11/23
Report Date: 09/14/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	B.0 x 1.1	B.0 x 1.5	D.2 x 1.1	C.7 x 1.1		
	Pier Type	DP24A	DP24A	DP24A	DP24A		
	Start Date	09/11.2023	09/11.2023	09/11.2023	09/11.2023		
	End Date	9/11/2023	09/11.2023	09/11.2023	09/11.2023		
Elevations (ft)	Pier Diameter (inches)	24	24	24	24		
	Ground surface, A	5496.25'	5496.25'	5496.25'	5496.25'		
	Top of concrete, B	5496.25'	5496.25'	5496.25'	5496.25'		
	Top of bedrock, C = (A-F)	5491.25'	5490.25'	5496.25'	5489.75'		
	Estimated bedrock elevation	N/A	N/A	N/A	N/A		
	Bottom of pier, D = (A-E)	5460.17'	5460.25'	5471.00'	5470.58'		
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone		
	Total depth drilled (ft), E	36.08'	36.00'	25.25'	25.67'		
	Overburden thickness (ft), F	5.00'	6.00'	0.00'	6.50'		
	Total pier length (ft) Actual (B-D)	36.08'	36.00'	25.25'	25.67'		
	Required	25.00'	25.00'	25.00'	25.00'		
	Penetration (ft) Actual (C-D)	31.08'	30.00'	25.25'	19.17'		
Groundwater	Required	30.00'	30.00'	20.00'	14.00'		
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A		
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A		
	Casing required?	No	No	No	No		
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A		
	Casing diameter (in)	N/A	N/A	N/A	N/A		
Reinforcing	No. and size of bars	10 #6	10 #6	10 #6	10 #6		
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"		
	Total reinforcing length (ft)	35.50'	35.50'	24.83'	24.83'		
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A		
	Dowels and placement method	3#8	3#8	3#8	3#8		
	Plumbness						
Miscellaneous	Actual	<1%	<1%	<1%	<1%		
	Spec.	<1%	<1%	<1%	<1%		
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings		
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"		
Geotechnical Report No.:		Terracon report no. 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Dock
- (1) Saunders Construction, Inc (CO), Casey Batten

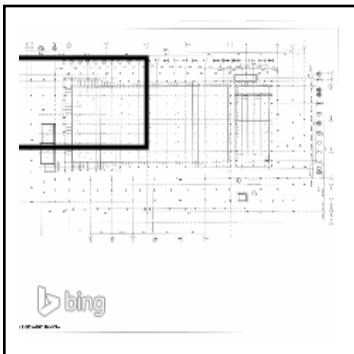
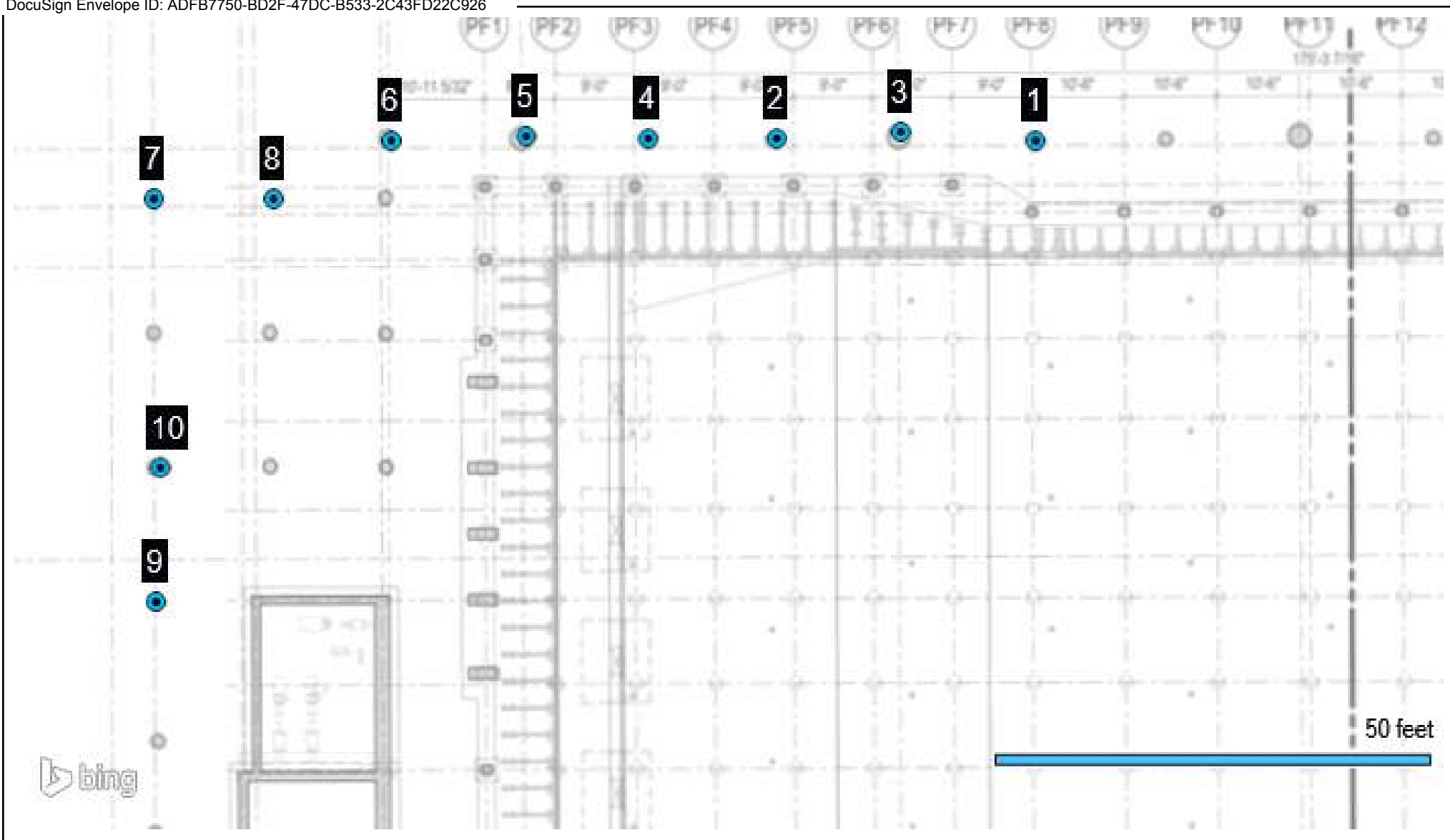
(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alexander Ale
Senior Project Manager

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- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0012

Service Date:

09/11/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0015
Service Date: 09/12/23
Report Date: 09/18/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation at See attach map for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon Report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	12

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0014
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

At Pier H.0 x 1.1, LMS Drilling was unable to finish due to the auger was unable to get past the hard sandstone layer. This will be finish at a later dated with a rock auger.

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),
Oliver Deck

(1) Saunders Construction, Inc (CO),
Robert Burd

Reviewed By:

Alex Seay
Senior Project Manager

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Report Number: 25231103.0015
Service Date: 09/12/23
Report Date: 09/18/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	C.4 x 1.1	C.5 x 1.5	C.9 x 1.5	B.0 x 2.0	C.5 x 2.0	C.2 x 2.0
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	9/12/2023	9/12/2023	9/12/2023	9/12/2023	9/12/2023	9/12/2023
	End Date	9/12/2023	9/12/2023	9/12/2023	9/12/2023	9/12/2023	9/12/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	5496.50'	5496.50'	5496.50'	5496.50'	5496.50'	5496.50'
	Top of concrete, B	5496.25'	5496.25'	5496.25'	5496.25'	5496.25'	5496.25'
	Top of bedrock, C = (A-F)	5490.00'	5491.50'	5491.50'	5489.50'	5492.50'	5491.50'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	5470.17'	5470.25'	5470.25'	5459.00'	5471.00'	5460.92'
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	26.33'	26.25'	26.25'	37.50'	25.50'	35.58'
	Overburden thickness (ft), F	6.50'	5.00'	5.00'	7.00'	4.00'	5.00'
	Total pier length (ft) Actual (B-D)	26.08'	26.00'	26.00'	37.25'	25.25'	35.33'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	19.83'	21.25'	21.25'	30.50'	21.50'	30.58'
Groundwater	Required	14.00'	14.00'	14.00'	30.00'	18.00'	30.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars	8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing	#4 at 12'	#4 at 12'	#4 at 12'	#4 at 12'	#4 at 12'	#4 at 12'
	Total reinforcing length (ft)	24.83'	24.83'	24.83'	36.00'	24.83'	34.50'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method	8#6	8#6	8#6	8#6	8#6	8#6
	Plumbness						
Miscellaneous	Actual	<1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0015
Service Date: 09/12/23
Report Date: 09/18/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		D.6 x 1.1	D.9 x 1.1	E.4 x 1.1	H.0 x 1.1	G.1 x 1.1	I.0 x 2.8
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18A	DP24A
	Start Date		9/12/2023	9/12/2023	9/12/2023	9/12/2023	9/12/2023	9/12/2023
	End Date		9/12/2023	9/12/2023	9/12/2023	9/12/2023	9/12/2023	9/12/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	24
	Ground surface, A		5496.50'	5496.50'	5496.50'	5496.50'	5496.50'	5496.50'
	Top of concrete, B		5496.25'	5496.25'	5496.25'	5496.25'	5496.25'	5496.25'
	Top of bedrock, C = (A-F)		5496.50'	5496.50'	5496.50'	5496.50'	5496.50'	5496.50'
Calculations	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		5470.92'	5470.83'	5470.25'		5471.00'	5465.75'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.58'	25.67'	26.25'		25.50'	30.75'
Groundwater	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D)	25.33'	25.42'	26.00'		25.25'	30.50'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	25.58'	25.67'	26.25'		25.50'	30.75'
Required		14.00'	14.00'	20.00'	20.00'	20.00'	30.00'	
Reinforcing	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		No	No	No	No	No	No
Miscellaneous	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars		8#6	8#6	8#6	8#6	8#6	10#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		25.75'	25.75'	25.75'		25.75'	29.50'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		2#8	2#8	2#8	2#8	2#8	3#8
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

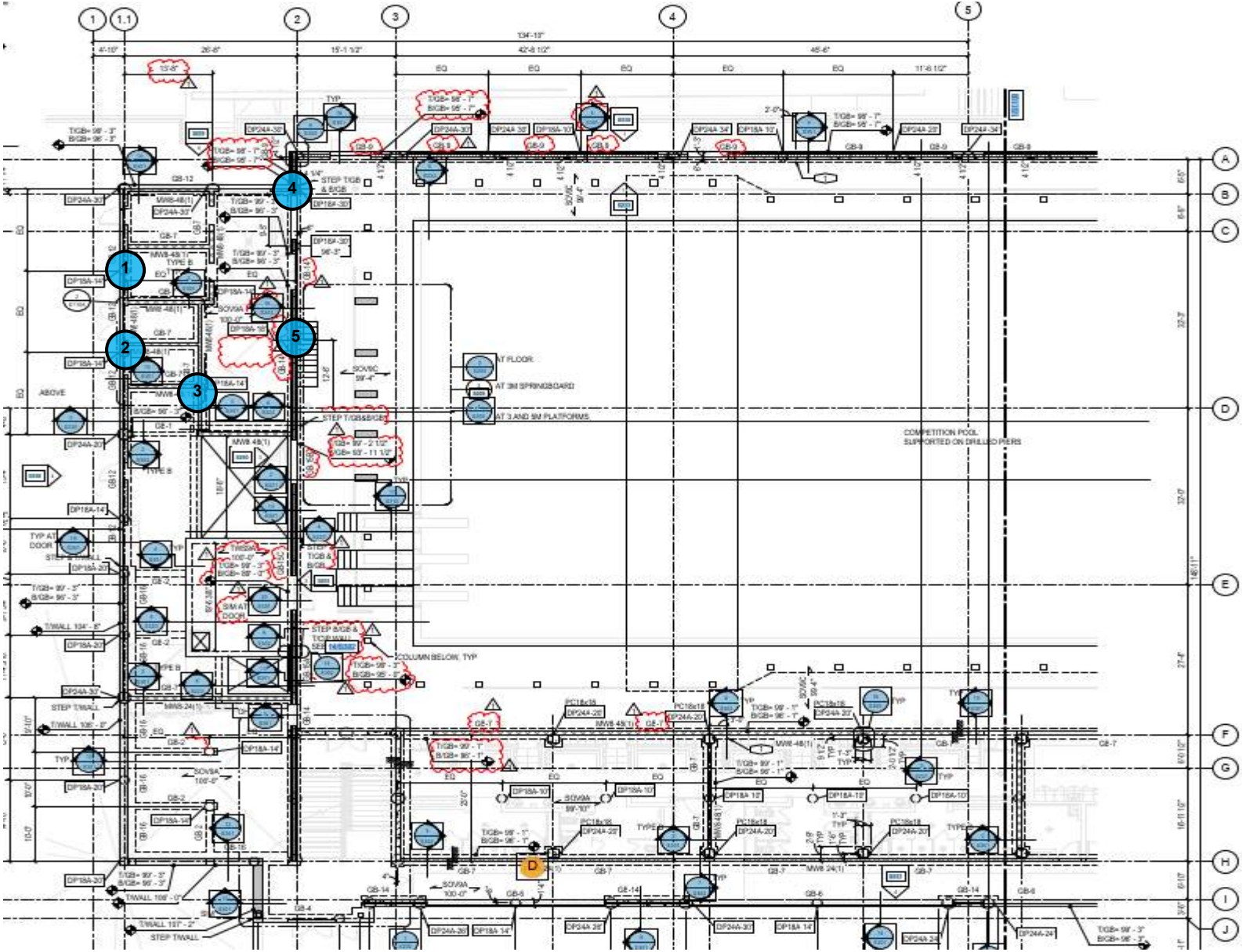
Report Distribution

(1) City of Arvada CO, Kim Vagher
 (1) Saunders Construction, Inc (CO), Juan Vagher
 (1) Saunders Construction, Inc (CO), Oliver Dock
 (1) Saunders Construction, Inc (CO), Casey Batten
 (1) Saunders Construction, Inc (CO), Julio Gonzalez
 (1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alexander Alejo
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



Meyers Pool Replacement

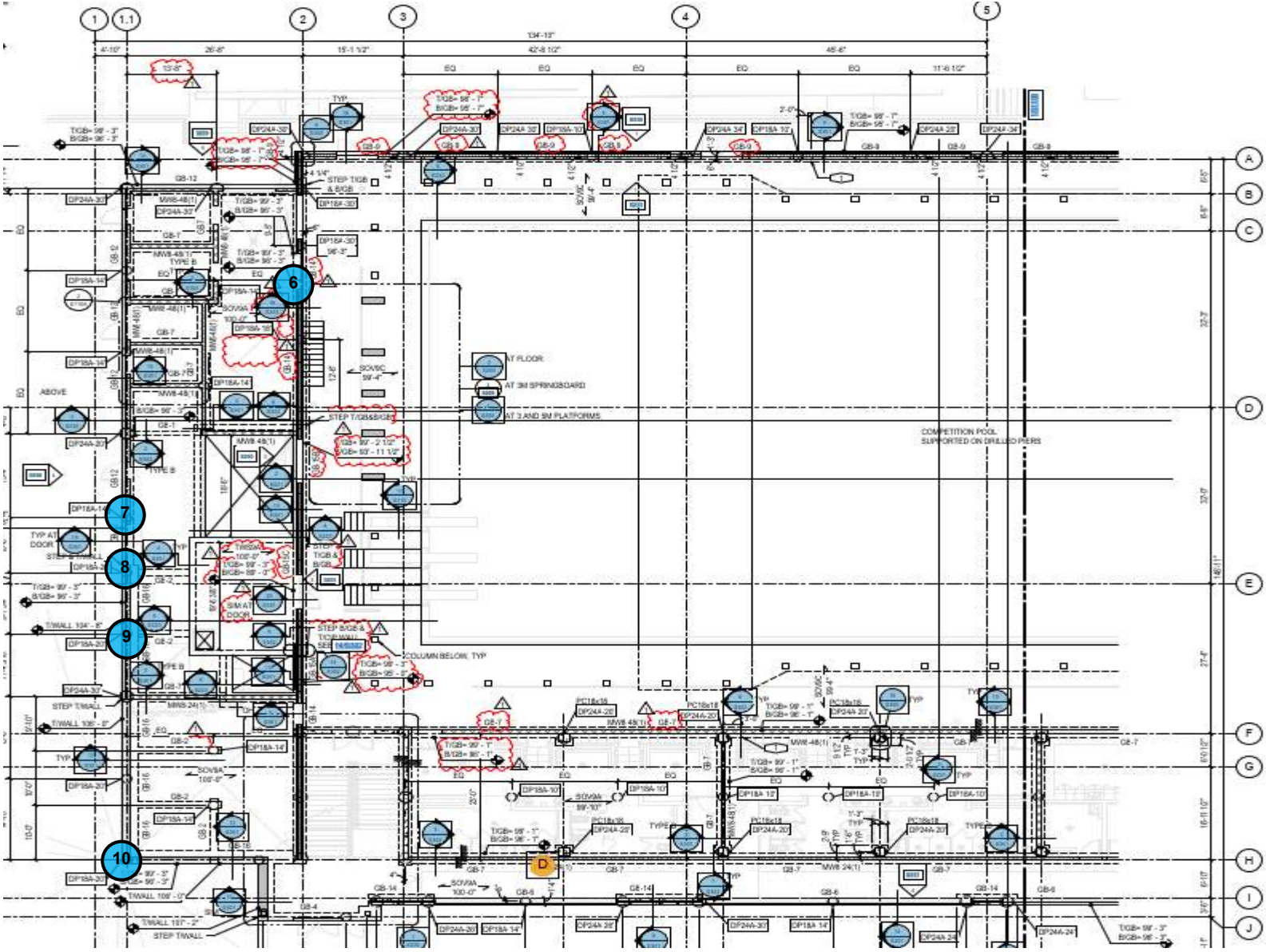
7904 Carr Drive
Arvada, CO 80005

Site Plan:

Report Number: 25231103.0015
Technician: Antonio C. Chavez
Date: 09/12/23
Scale: Not to Scale



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300



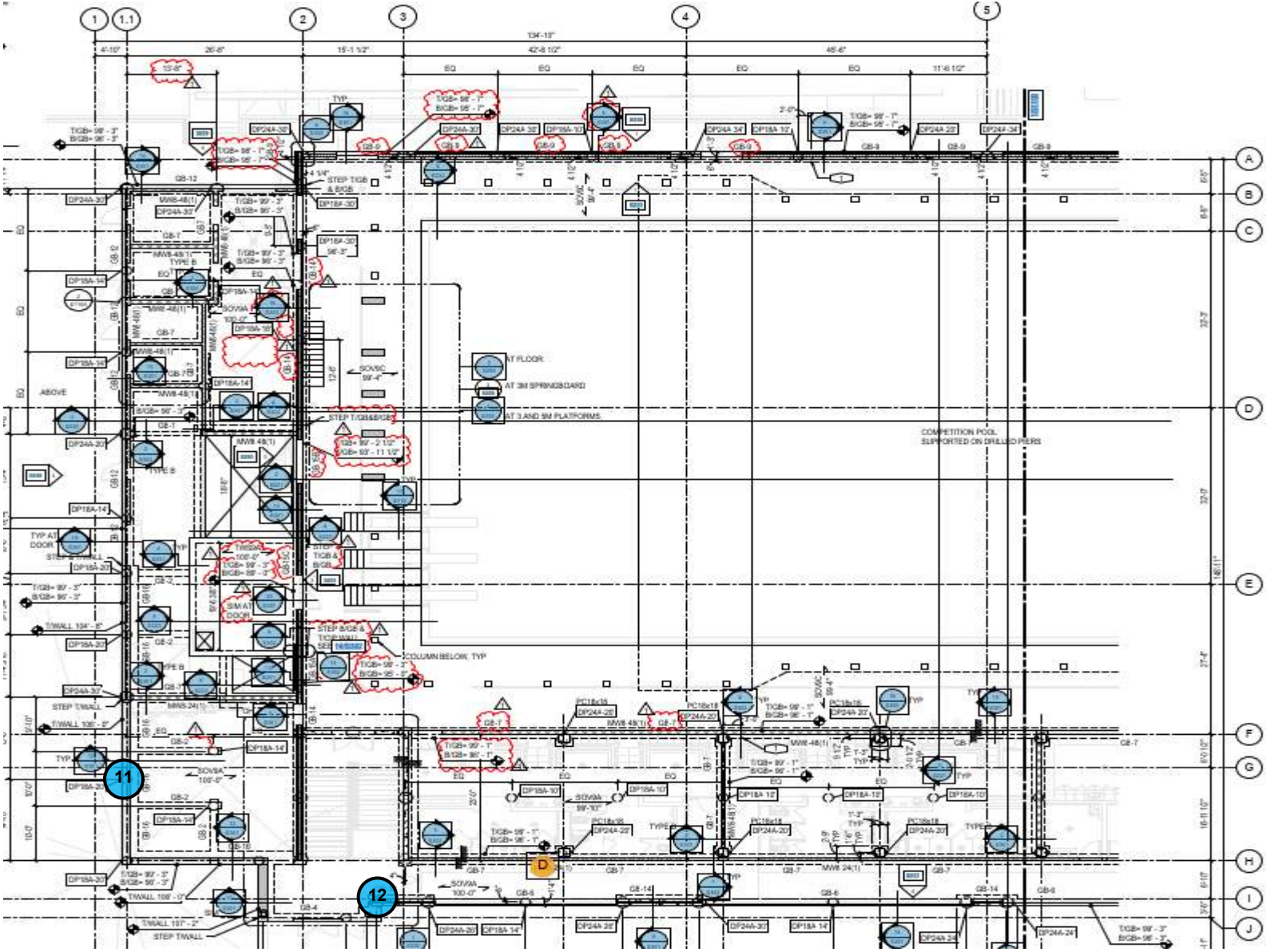
Meyers Pool Replacement

7904 Carr Drive
Arvada, CO 80005

Site Plan:
Report Number: 25231103.0015
Technician: Antonio C. Chavez
Date: 09/12/23
Scale: Not to Scale



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300



Meyers Pool Replacement

7904 Carr Drive
Arvada, CO 80005

Site Plan:
Report Number: 25231103.0015
Technician: Antonio C. Chavez
Date: 09/12/23
Scale: Not to Scale


10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0017
Service Date: 09/13/23
Report Date: 09/19/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation see attach map for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	20
Minimum diameter of pier per geotechnical report	18Terracon report
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	11

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s):.0016, .0018
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Oliver Deck

Robert Burd

Reviewed By:

Alex Seay
 Senior Project Manager

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Report Number: 25231103.0017
Service Date: 09/13/23
Report Date: 09/19/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	H.0 x 1.1	G.5 x 1.5	F.2 x 1.7	H.0 x 1.7	J.0 x 1.7	J.0 x 2.7
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023
	End Date	9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	5493.00'	5493.00'	5493.00'	5493.00'	5493.00'	5493.00'
	Top of concrete, B	5493.00'	5493.00'	5493.00'	5493.00'	5493.00'	5493.00'
	Top of bedrock, C = (A-F)	5493.00'	5493.00'	5493.00'	5493.00'	5493.00'	5493.00'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	5464.25'	5467.50'	5467.17'	5466.67'	5467.17'	5467.17'
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	28.75'	25.50'	25.83'	26.33'	25.83'	25.83'
	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft) Actual (B-D)	28.75'	25.50'	25.83'	26.33'	25.83'	25.83'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	28.75'	25.50'	25.83'	26.33'	25.83'	25.83'
Groundwater	Required	20.00'	14.00'	14.00'	16.00'	20.00'	24.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars	8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 ab 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	28.00'	24.83'	24.83'	25.50'	24.83'	24.83'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method	2#7	2#7	2#7	2#7	2#7	2#7
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:						
Geotechnical Report No.:		Terracon report 20205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0017
Service Date: 09/13/23
Report Date: 09/19/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		H.0 x 2.0	G.4 x 2.0	F.0 x 2.0	I.0 x 3.2	H.0 x 3.0	
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18A	
	Start Date		9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023	
	End Date		9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023	
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	
	Ground surface, A		5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	
	Top of concrete, B		5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	
	Top of bedrock, C = (A-F)		5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)		5470.30'	5470.80'	5470.80'	5469.63'	5470.63'	
Calculations	Supporting stratum		Sandstone`	Sandstone`	Sandstone`	Sandstone`	Sandstone`	
	Total depth drilled (ft), E		26.00'	25.50'	25.50'	26.67'	25.67'	
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	
	Total pier length (ft)	Actual (B-D)	26.00'	25.50'	25.50'	26.67'	25.67'	
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	
	Penetration (ft)	Actual (C-D)	26.00'	25.50'	25.50'	26.67'	25.67'	
Required		20.00'	18.00'	20.00'	26.00'	20.00'		
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	
	Casing required?		No	No	No	No	No	
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	
	No. and size of bars		8#6	8#6	8#6	8#6	8#6	
Reinforcing	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	
	Total reinforcing length (ft)		24.83'	24.83'	24.83'	26.00'	24.83'	
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	
	Dowels and placement method		2#7	2#7	2#7	2#7	2#7	
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	
		Spec.	<1%	<1%	<1%	<1%	<1%	
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
	Comments:		Top-#4 at 6"	Top-#4 at 6"	Top-#4 at 6"	Top-#4 at 6"	Top-#4 at 6"	
	Geotechnical Report No.:		Terracon report 20205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Dock
- (1) Saunders Construction, Inc (CO), Casey Batten

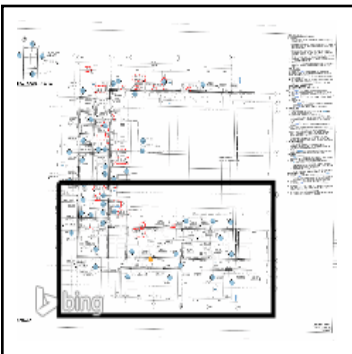
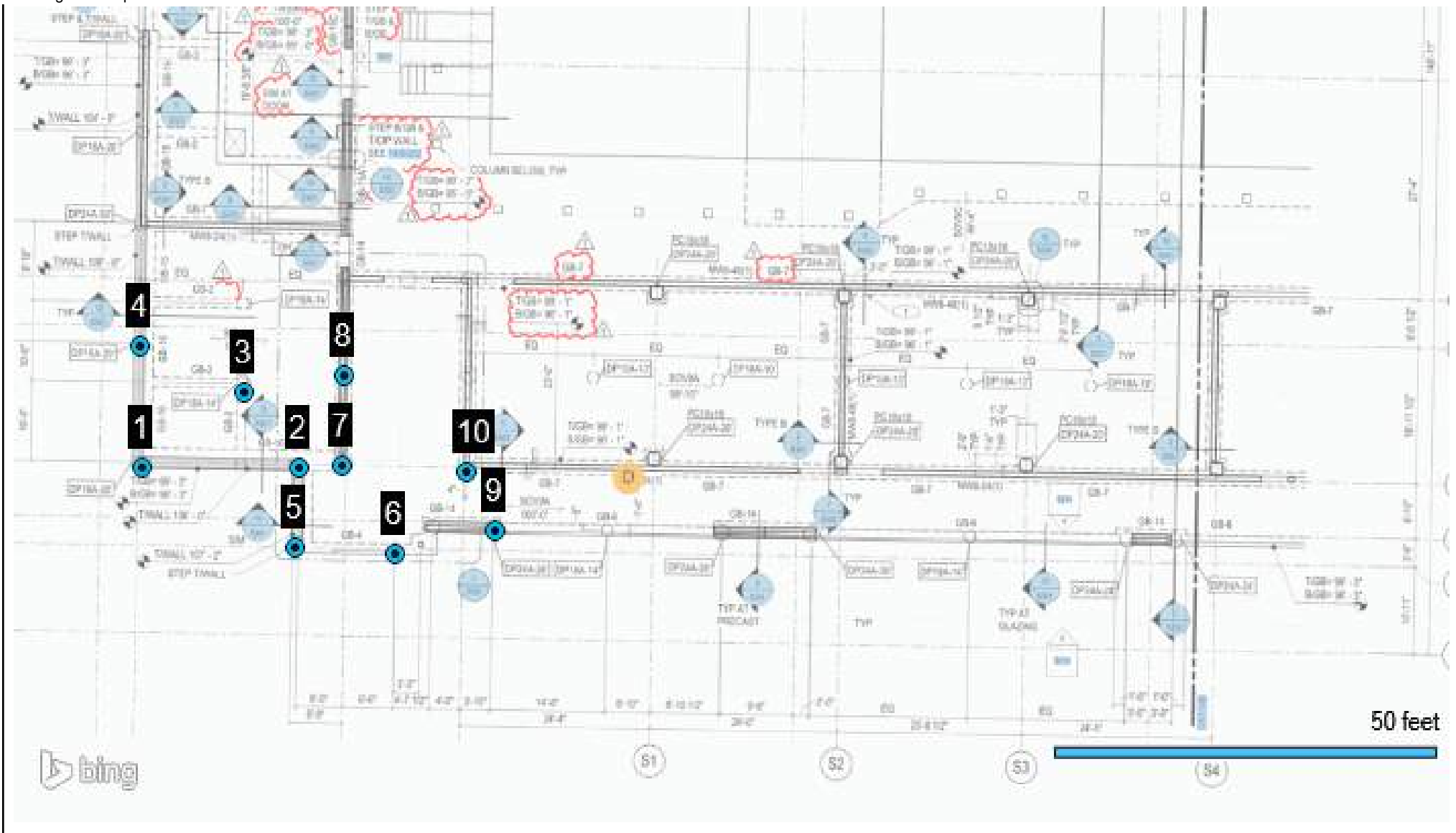
(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alexander Ale
Senior Project Manager

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- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
 N 80033-1729
 303-423-3300 terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0017

Service Date:

09/13/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0020
Service Date: 09/14/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for observation of drilled shaft(s), which are being constructed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans. Permit No: N/A.

Geotechnical engineering report No. Are prepared by Terracon Consultants.

Drilled Shaft Summary

Shaft Location/ID	Construction Method	Completed	Status
(1) A/24A	Dry	Yes	Complies

Additional Comments

N/A.

Summary Statement

Based on our observations, the drilled shaft(s) at the above reference location(s) appear to be in general accordance with the project plans and specifications, unless noted otherwise on the above Drilled Shaft Summary.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: LMS Drilling

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),

Juan Vazquez
(1) Saunders Construction, Inc (CO),
Oliver Deck

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),
Julio Gonzalez
(1) Saunders Construction, Inc (CO),
Robert Burd

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT RECORD

Report Number: 25231103.0020
Service Date: 09/14/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

General Contractor:**Start Date: 09/14/2023****Drilling Contractor: LMS Drilling****Completed Date: 9/14/2023****Drilled Shaft Location: A****Terracon Representative: Chavez, Tony****Drilled Shaft ID: 24A****Reported To: Justin Cooper with Saunders**

Site Conditions			
Weather	Temperature (°F)		Description
Clear No Wind	70		Dry
Design Parameters	Values		Comments
Shaft Diameter (Inches)	18		
Estimated Shaft Length (Feet)	25		
Bearing Pressure	NA		
Socket Length (Feet)	10		
Top of Shaft Elevation (Feet)	5496.3		
Skin Friction	NA		
Field Configuration	Values		Comments
Measured Auger Diameter (Inches)	18		
Top of Ground Elevation (Feet)	5495.83		
Casing Used / Length of Casing (Feet)	No	NA	
Reference Elevation - Top of Ground	5495.83		
Auger Refusal Confirmed?	Yes		
Drilled Depth from Reference Elev. - After Clean Out (Feet)	5495.83		
Top of Socket Elevation (Feet)	0		
Actual Length of Socket - Below Bottom of Casing (Feet)	10		
Plumbness / Cleanliness Within Tolerance / Mushrooming	Yes	Yes	No
Tip Elevation (Feet)	-10		
Description of Bearing Strata	Confirmed		N/A
Reinforcing / Dowels Installed According to Approved Plans	Yes		
Cage Centralizers Installed	Yes		
Top of Cage Elevation (Feet)	NA		
Time Concrete Placement Started / Completed	1000	1015	
Concrete Installed by Tremie or Freefall?	Tremie		
Tested Slump (Inches)	8		Report No. .0016.
Top of Shaft Elevation (Feet)	5496.3		
Shaft Length (Feet)	5506.3		
Neat Line Volume {Concrete/Grout} (c.y.)	360.2		
Groundwater Present / Controlled	No	NA	

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0020
Service Date: 09/14/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	11

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s):.0019, .0021
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: LMS Drilling

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
 Juan Vazquez
 (1) Saunders Construction, Inc (CO),
 Oliver Deck

(1) Saunders Construction, Inc (CO),
 Casey Reiter
 (1) Saunders Construction, Inc (CO),
 Julio Gonzalez
 (1) Saunders Construction, Inc (CO),
 Robert Burd

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0020
Service Date: 09/14/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		G.3 x 3.0	F.0 x 3.0	F.0 x 2.5	J.0 x 3.5	E.8 x 1.5	E.8 x 2.0
	Pier Type		DP24A	DP24A	DP24A	DP24	DP18A	DP18A
	Start Date		9/14/2023	9/14/2023	9/14/2023	9/14/2023	9/14/2023	9/14/2023
	End Date		9/14/2023	9/14/2023	9/14/2023	9/14/2023	9/14/2023	9/14/2023
Elevations (ft)	Pier Diameter (inches)		24	24	24	24	18	18
	Ground surface, A		5496.3	5496.3	5496.3	5496.3	5497.3	5497.3
	Top of concrete, B		5496.3	5496.3	5496.3	5496.3	5496.3	5496.3
	Top of bedrock, C = (A-F)		5496.30'	5496.30'	5496.30'	5496.30'	5497.30'	5497.30'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		5470.55'	5470.63'	5470.55'	5469.80'	5465.80'	5465.63'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.75'	25.67'	25.75'	26.50'	31.50'	31.67'
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D)	25.75'	25.67'	25.75'	26.50'	30.50'	30.67'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	25.75'	25.67'	25.75'	26.50'	31.50'	31.67'
Required		10.00'	20.00'	20.00'	26.00'	30.00'	30.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars		10#6	10#6	10#6	10#6	8#6	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		24.83'	24.83'	24.83'	25.50'	29.75'	30.00'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		3#8	3#8	3#8	3#8	2#7	2#7
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		top #4 at 6"	top #4 at 6"	top #4 at 6"	top #4 at 6"	top #4 at 6"	top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: LMS Drilling

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By: _____
Alex Seay
Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0020
Service Date: 09/14/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		D.3 x 1.7	D.3 x 2.0	I.0 x 3.4	G.5 x 3.3	H.0 x 3.5	
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP24A	
	Start Date		9/14/2023	9/14/2023	9/14/2023	9/14/2023	9/14/2023	
	End Date		09/14/2023	9/14/2023	9/14/2023	9/14/2023	9/14/2023	
	Pier Diameter (inches)		18	18	18	18	24	
Elevations (ft)	Ground surface, A		5491.10'	5496.30'	5496.30'	5496.30'	5496.30'	
	Top of concrete, B		5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	
	Top of bedrock, C = (A-F)		5491.10'	5496.30'	5496.30'	5496.30'	5496.30'	
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)		5458.52'	5463.30'	5470.80'	5469.80'	5470.80'	
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	
	Total depth drilled (ft), E		32.58'	33.00'	25.50'	26.50'	25.50'	
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	
	Total pier length (ft)	Actual (B-D)	37.78'	33.00'	25.50'	26.50'	25.50'	
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	
	Penetration (ft)	Actual (C-D)	32.58'	33.00'	25.50'	26.50'	25.50'	
		Required	30.00'	30.00'	14.00'	10.00'	20.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	
	Casing required?		No	No	No	No	No	
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	
Reinforcing	No. and size of bars		8#6	8#6	8#6	8#6	10#6	
	Reinforcing ties and spacing		#4 at 12'	#4 at 12'	#4 at 12'	#4 at 12'	#4 at 12'	
	Total reinforcing length (ft)		37.00'	32.00'	24'10	25.50'	24'10	
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	
	Dowels and placement method		2#7	2#7	2#7	2#7	3#8	
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	
		Spec.	<1%	<1%	<1%	<1%	<1%	
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	
Geotechnical Report No.:			Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: LMS Drilling

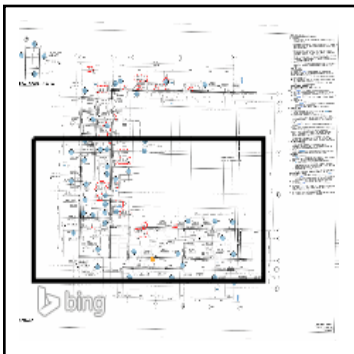
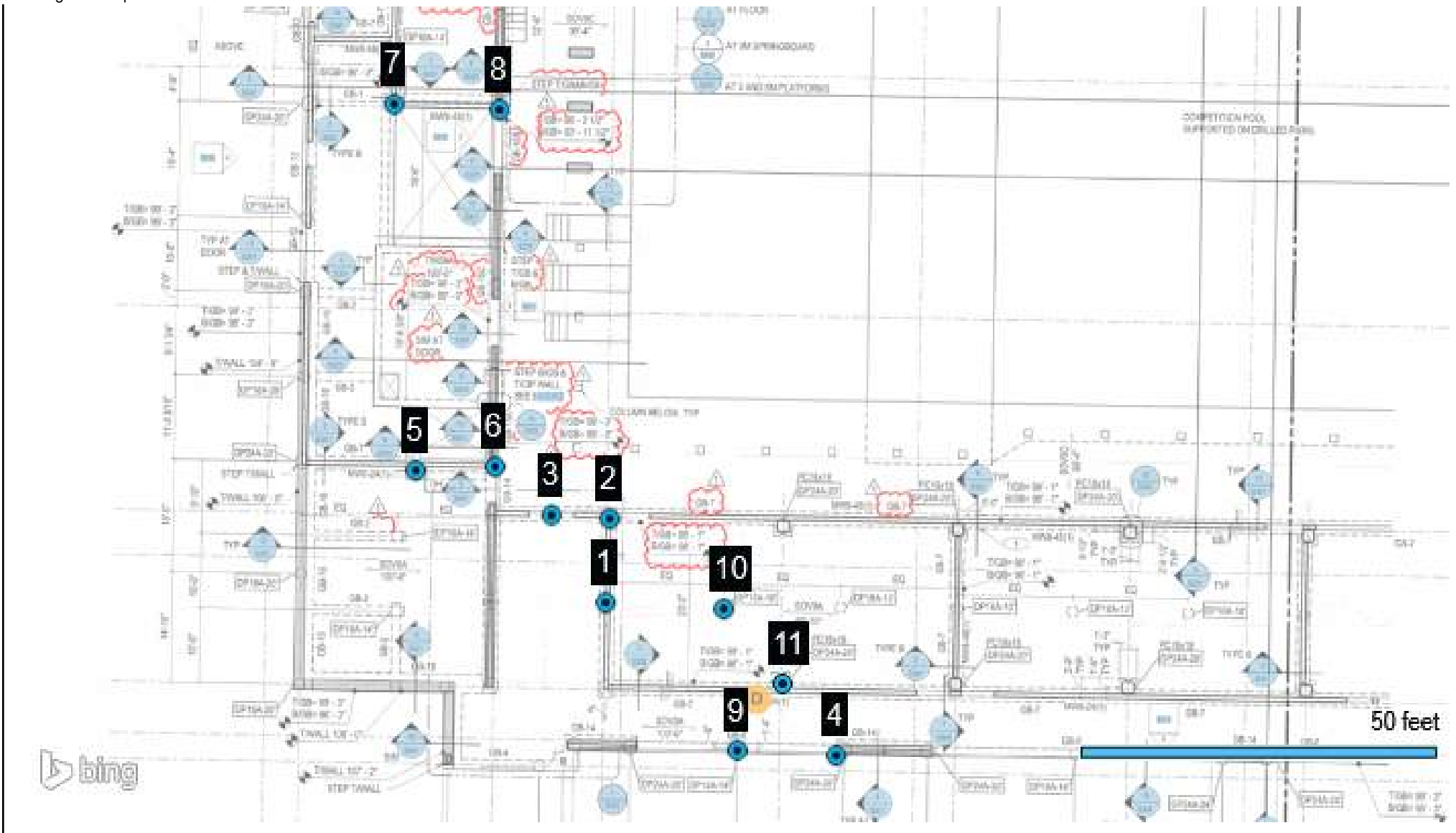
Report Distribution

(1) City of Arvada CO, Kim Vagher
 (1) Saunders Construction, Inc (CO), Juan Vagher
 (1) Saunders Construction, Inc (CO), Oliver Dock
 (1) Saunders Construction, Inc (CO), Casey Batten
 (1) Saunders Construction, Inc (CO), Julio Gonzalez
 (1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alexander Ale
 Senior Project Manager

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- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
 N 80033-1729
 303-423-3300 terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0020

Service Date:

09/14/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0025
Service Date: 09/18/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation see attach map for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	15

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0024
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments**Compliance Statement**

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Oliver Deck

Robert Burd

Reviewed By:

Alex Seay
 Senior Project Manager

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Report Number: 25231103.0025
Service Date: 09/18/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		I.O x 4.1	H.O x 4.2	H.O x 4.6	I.O x 4.9	I.O x 5.1	H.O x 5.2
	Pier Type		DP24A	DP24A	DP24A	DP24A	DP24A	DP24A
	Start Date		9/18/2023	9/18/2023	9/18/2023	9/18/2023	9/18/2023	9/18/2023
	End Date		9/18/2023	9/18/2023	9/18/2023	9/18/2023	9/18/2023	9/18/2023
Elevations (ft)	Pier Diameter (inches)		24	24	24	24	24	24
	Ground surface, A		5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	5496.30'
	Top of concrete, B		5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	5496.30'
	Top of bedrock, C = (A-F)		5496.30'	5496.30'	5496.30'	5495.63'	5495.63'	5495.63'
	Estimated bedrock elevation		N/A	N/A	N/A	N/	N/A	N/A
Calculations	Bottom of pier, D = (A-E)		5465.72'	5470.63'	5470.80'	5470.13'	5470.05'	5470.22'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		30.58'	25.67'	25.50'	26.17'	26.25'	26.08'
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.67'	0.67'	0.67'
	Total pier length (ft)	Actual (B-D)	30.58'	25.67'	25.50'	26.17'	26.25'	26.08'
Required		25.00'	25.00'	25.00'	25.00'	25.00'	25.00'	
Penetration (ft)	Actual (C-D)	30.58'	25.67'	25.50'	25.50'	25.58'	25.41'	
	Required	30.00'	20.00'	20.00'	24.00'	24.00'	20.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		10#6	10#6	10#6	10#6	10#6	10#6
	Reinforcing ties and spacing		#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"
	Total reinforcing length (ft)		30.00'	24.83'	24.83'	25.00'	25.00'	24.50'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		3#8	3#8	3#8	3#8	3#8	3#8
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:			Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Back
- (1) Saunders Construction, Inc (CO), Casey Back

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Back

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0025
Service Date: 09/18/23
Report Date: 09/25/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	F.0 x 4.6	F.0 x 5.2	I.0 x5.9	I.0 x 6.4	F.0 x 5.7	I.0 x 5.5
	Pier Type	DP24A	DP24A	DP24A	DP24A	DP24A	DP18A
	Start Date	9/18/2023	9/18/2023	9/18/2023	9/18/2023	9/18/2023	9/18/2023
	End Date	9/18/2023	9/18/2023	9/18/2023	9/18/2023	9/18/2023	9/18/2023
Elevations (ft)	Pier Diameter (inches)	24	24	24	24	24	18
	Ground surface, A	5496.30'	5496.30'	5496.30'	5495.40'	5496.30'	5496.30'
	Top of concrete, B	5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	5496.30'
	Top of bedrock, C = (A-F)	5496.30'	5496.30'	5489.30'	5488.40'	5489.30'	5488.80'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	5470.70'	5470.80'	5458.72'	5467.40'	5469.22'	5470.63'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.60'	25.50'	37.58'	28.00'	27.08'	25.67'
Groundwater	Overburden thickness (ft), F	0.00'	0.00'	7.00'	7.00'	7.00'	7.50'
	Total pier length (ft) Actual (B-D)	25.60'	25.50'	37.58'	28.90'	27.08'	25.67'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	25.60'	25.50'	30.58'	21.00'	20.08'	18.17'
Reinforcing	Required	20.00'	20.00'	30.00'	20.00'	20.00'	14.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	No	No	No	No	No	No
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A		N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	10#6	106	10#6	10#6	10#6	8#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	24.83'	24.83'	36.50'	28.25'	26.50'	24.83'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method	3#8	3#8	3#8	3#8	3#8	2#7
	Plumbness Actual	<1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Back
- (1) Saunders Construction, Inc (CO), Casey Baker

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0025
Service Date: 09/18/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	G.4 x 5.2	G.4 x 4.7	I.0 x 4.4			
	Pier Type	DP18A	DP18A	DP18A			
	Start Date	9/18/2023	9/18/2023	9/18/2023			
	End Date	9/18/2023	9/18/2023	9/18/2023			
Elevations (ft)	Pier Diameter (inches)	18	18	18			
	Ground surface, A	5496.30'	5496.30'	5496.30'			
	Top of concrete, B	5496.30'	5496.30'	5496.30'			
	Top of bedrock, C = (A-F)	5496.30'	5496.30'	5496.30'			
	Estimated bedrock elevation	N/A	N/A	N/A			
	Bottom of pier, D = (A-E)	5470.63'	5470.70'	5470.72'			
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone			
	Total depth drilled (ft), E	25.67'	25.60'	25.58'			
	Overburden thickness (ft), F	0.00'	0.00'	0.00'			
	Total pier length (ft) Actual (B-D)	25.67'	25.60'	25.58'			
	Required	25.00'	25.00'	25.00'			
	Penetration (ft) Actual (C-D)	25.67'	25.60'	25.58'			
Groundwater	Required	10.00'	10.00'	14.00'			
	Groundwater depth (ft), G	N/A	N/A	N/A			
	Elevation (ft), (A-G)	N/A	N/A	N/A			
	Casing required?	No	No	No			
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A			
	Casing diameter (in)	N/A	N/A	N/A			
Reinforcing	No. and size of bars	8#6	8#6	8#6			
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"			
	Total reinforcing length (ft)	24.83'	24.83'	24.83'			
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A			
	Dowels and placement method	2#7	2#7	2#t			
Miscellaneous	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
		Spec. <1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening						
	Comments:						
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

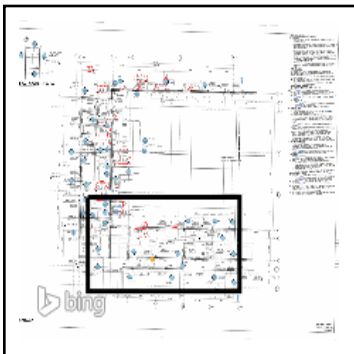
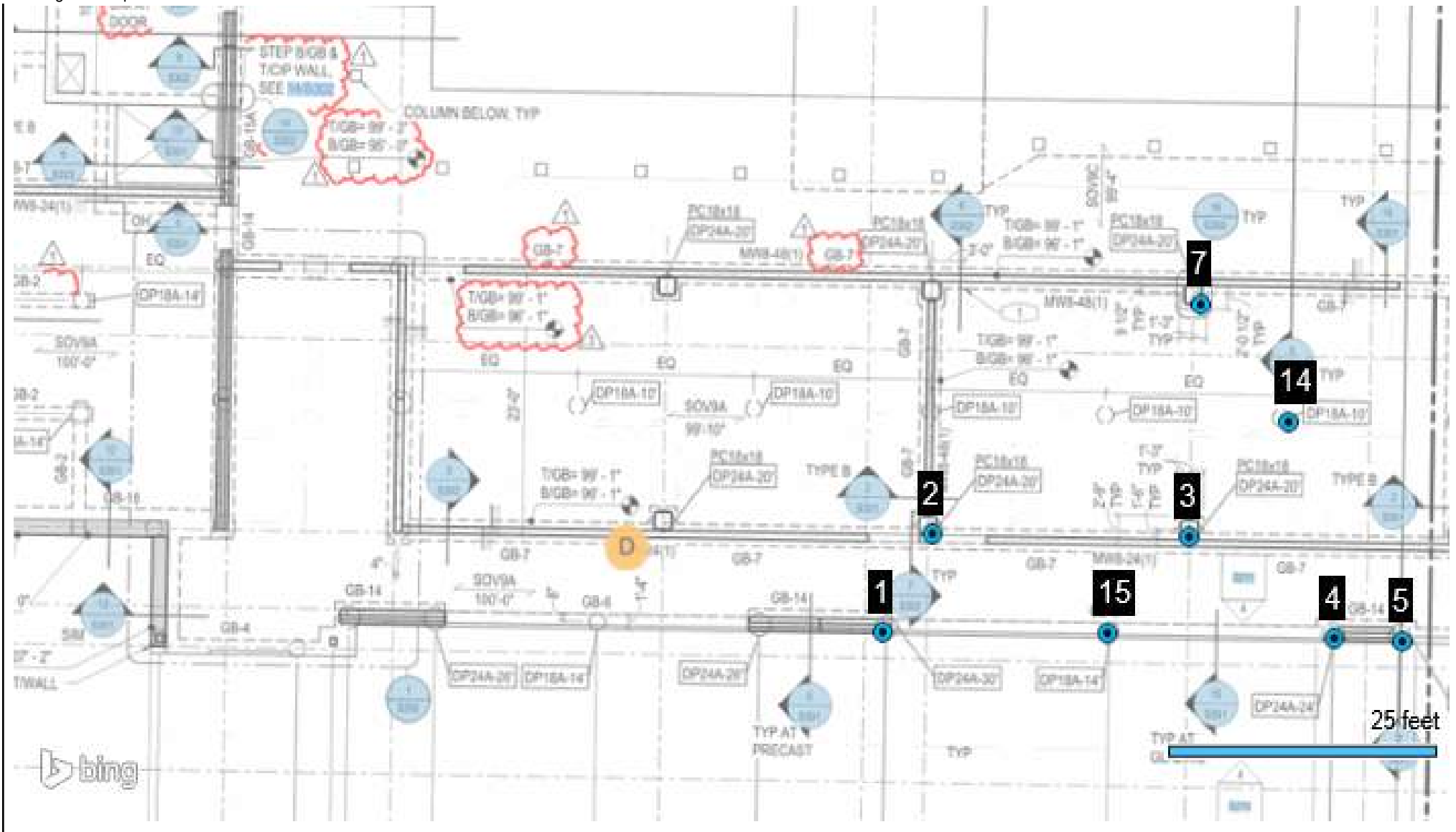
Report Distribution

(1) City of Arvada CO, Kim Vagher
 (1) Saunders Construction, Inc (CO), Juan Vagher
 (1) Saunders Construction, Inc (CO), Oliver Back
 (1) Saunders Construction, Inc (CO), Casey Back
 (1) Saunders Construction, Inc (CO), Julio Gonzalez
 (1) Saunders Construction, Inc (CO), Robert Back

Reviewed By:

Alexander Alexander
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
 N 80033-1729
 303-423-3300 terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0025

Service Date:

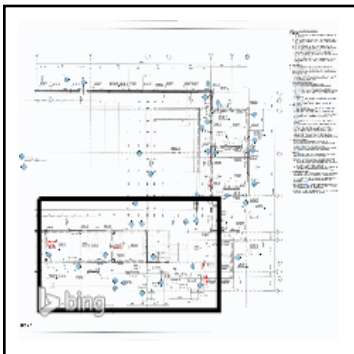
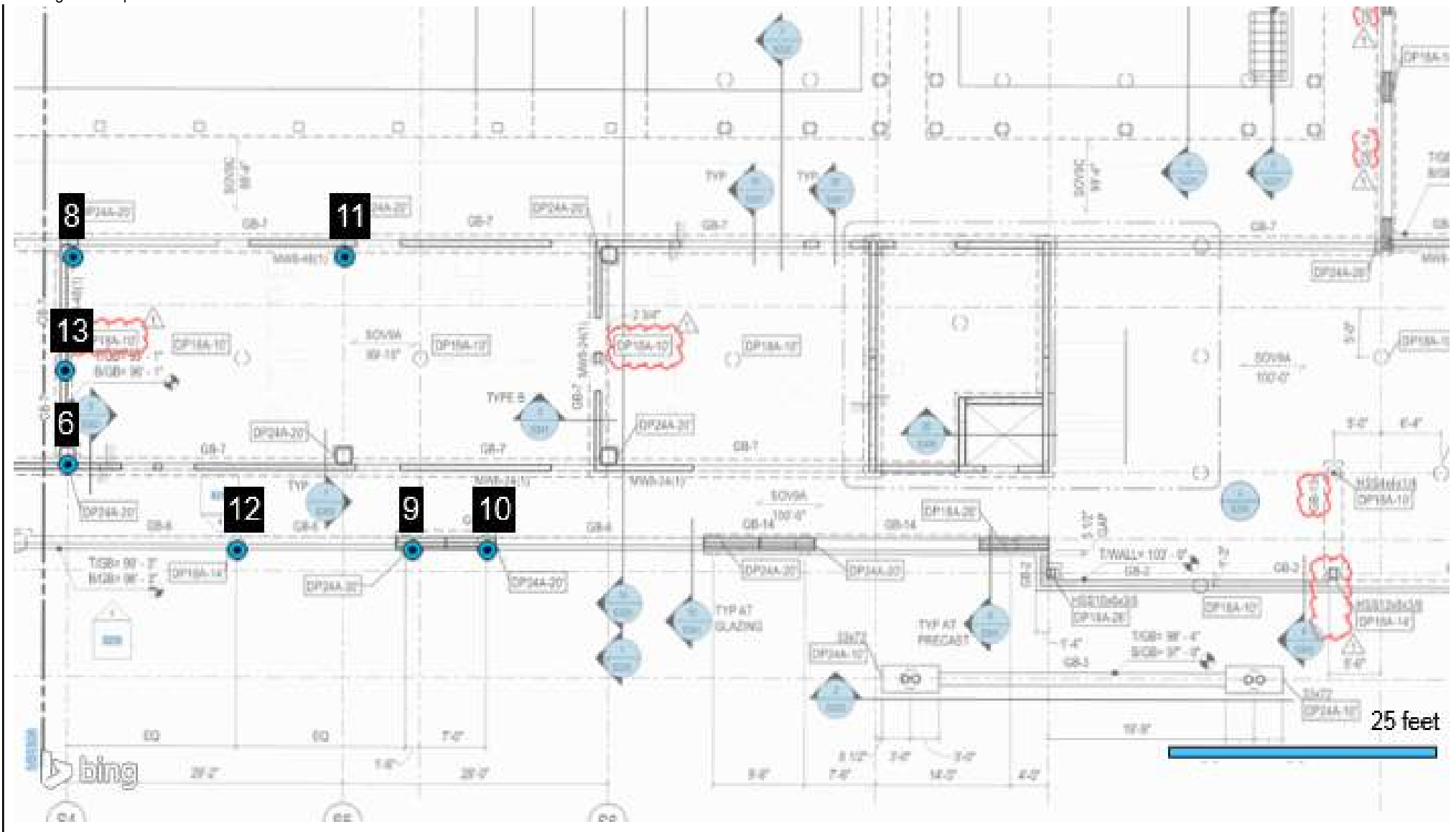
09/18/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
 N 80033-1729
 303-423-3300 terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0025

Service Date:

09/18/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0027
Service Date: 09/19/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation see attach map for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	12

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0026 and .0028
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),
Oliver Deck

(1) Saunders Construction, Inc (CO),
Robert Burd

Reviewed By:

Alex Seay
 Senior Project Manager

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Report Number: 25231103.0027
Service Date: 09/19/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	F.0 x 4.2	F.0 x 3.5	G.4 x 3.3	G.4 x 3.7	G.4 x 4.2	F.0 x 8.5
	Pier Type	DP24A	DP24A`	DP24A	DP24A	DP18A	DP18A
	Start Date	9/19/2023	9/19/2023	9/19/2023	9/19/2023	9/19/2023	9/19/2023
	End Date	9/19/2023	9/19/2023	9/19/2023	9/19/2023	9/19/2023	9/19/2023
Elevations (ft)	Pier Diameter (inches)	24	24	24	24	18	18
	Ground surface, A	5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	5495.70'
	Top of concrete, B	5496.30'	5496.30'	5499.10'	5496.30'	5499.10'	5496.30'
	Top of bedrock, C = (A-F)	5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	5480.70'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	5470.72'	5470.30'	5473.60'	5470.55'	5472.80'	5468.03'
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.58'	26.00'	22.70'	25.75'	23.50'	27.67'
	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'	0.00'	15.00'
	Total pier length (ft) Actual (B-D)	25.58'	26.00'	25.50'	25.75'	26.30'	28.27'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	25.58'	26.00'	22.70'	25.75'	23.50'	12.67'
Groundwater	Required	20.00'	20.00'	10.00'	10.00'	10.00'	12.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars	10#6	10#6	10#6	10#6	10#6	8#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	24.83'	24.83'	24.83'	24.83'	25.50'	27.00'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method	3#8	3#8	3#8	3#8	2#7	2#7
	Plumbness						
Miscellaneous	Actual	<1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	top #4 at 6"	top #4 at 6"	top #4 at 6"	top #4 at 6"	top #4 at 6"	top #4 at 6"
Geotechnical Report No.:		Terracon report 25205503 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0027
Service Date: 09/19/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		G.5 x 5.5	G.5 x 6.0	F.0 x 6.5	F.0 x 7.0	F.0 x 7.5	F.0 x 9.0
	Pier Type		DP18A	DO18A	DP24A	DP24A	DP24A	DP24A
	Start Date		9/19/2023	9/19/2023	9/19/2023	9/19/2023	9/19/2023	9/19/2023
	End Date		9/19/2023	9/19/2023	9/19/2023	9/19/2023	9/19/2023	9/19/2023
	Pier Diameter (inches)		18	18	24	24	24	24
Elevations (ft)	Ground surface, A		5496.30'	5496.30'	5496.30'	5496.30'	5496.30'	5496.30'
	Top of concrete, B		5499.10'	5499.10'	5496.10'	5495.70'	5495.70'	5495.70'
	Top of bedrock, C = (A-F)		5496.30'	5485.30'	5484.30'	5484.30'	5481.80'	5482.30'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		5469.97'	5472.97'	5463.80'	5452.80'	5450.30'	5454.47'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		26.33'	23.33'	32.50'	43.50'	46.00'	41.83'
	Overburden thickness (ft), F		0.00'	11.00'	12.00'	12.00'	14.50'	14.00'
	Total pier length (ft)	Actual (B-D)	29.13'	26.13'	32.30'	42.90'	45.40'	41.23'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Penetration (ft)	Actual (C-D)	26.33'	12.33'	20.50'	31.50'	31.50'	27.83'	
	Required	10.00'	10.00'	20.00'	30.00'	30.00'	26.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	8#6	10#6	10#6	10#6	10#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		28.50'	25.50'	31.33'	41.75'	44.50'	40.83'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		2#7	2#7	3#8	3#8	3#8	3#8
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:							
Geotechnical Report No.:			Terracon report 25205503 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

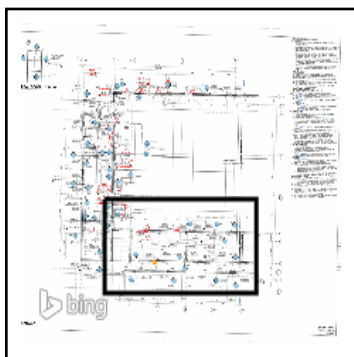
Report Distribution

(1) City of Arvada CO, Kim Vagher
 (1) Saunders Construction, Inc (CO), Juan Vagher
 (1) Saunders Construction, Inc (CO), Oliver Dock
 (1) Saunders Construction, Inc (CO), Casey Batten
 (1) Saunders Construction, Inc (CO), Julio Gonzalez
 (1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alexander Ale
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



-  Test
-  Retested / Accepted
-  Deviation



Report Number:
25231103.0027

Employee:	Chavez, Tony
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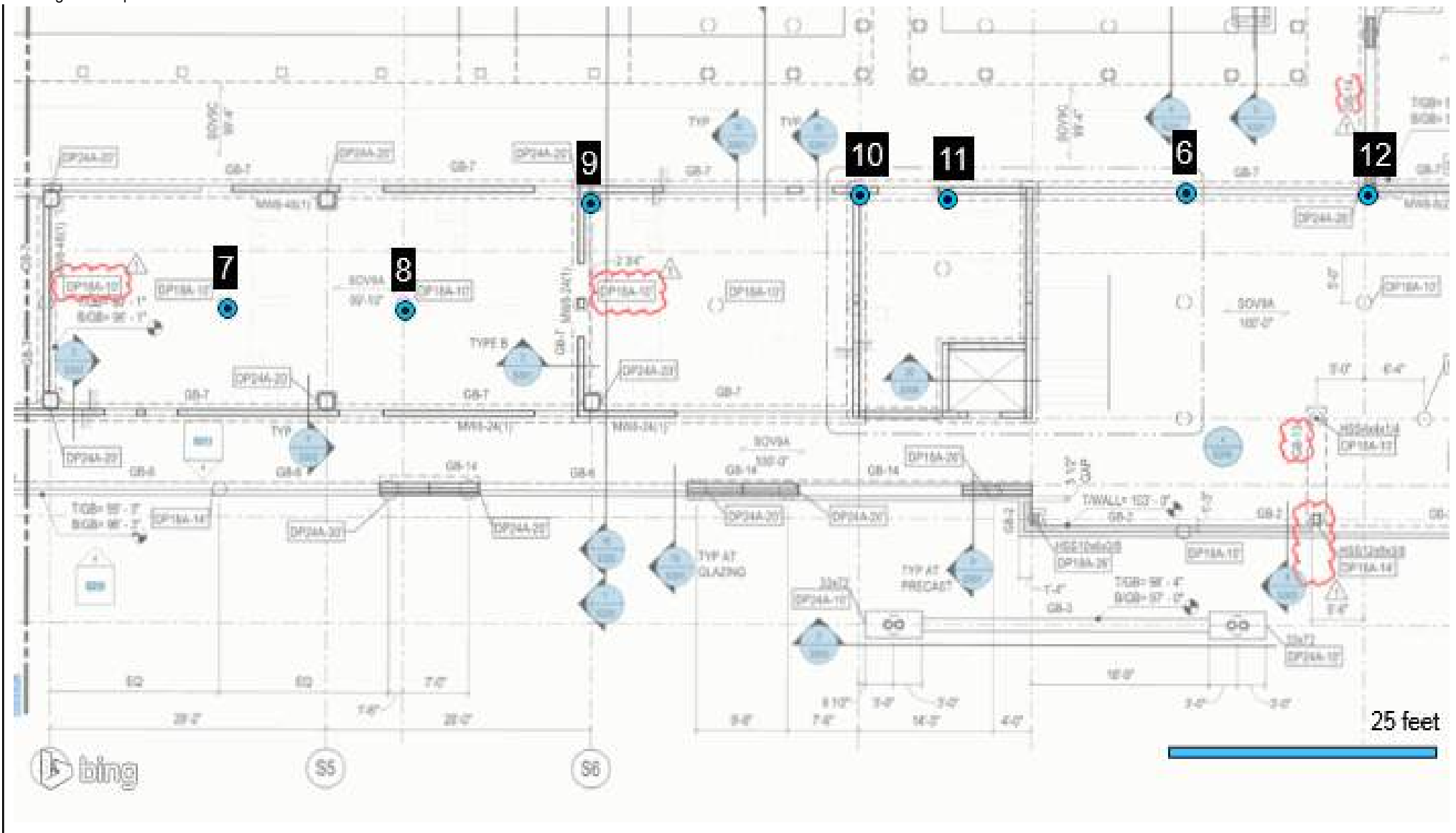
Scale:
Refer to Drawing

Meyers Pool Replacement

Drilled Shaft Observation

Exhibit

A-1



- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
 N 80033-1729
 303-423-3300 terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0027

Service Date:

09/19/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0030
Service Date: 09/20/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	11

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0029
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),
Juan Vazquez
(1) Saunders Construction, Inc (CO),
Oliver Deck

(1) Saunders Construction, Inc (CO),
Julio Gonzalez
(1) Saunders Construction, Inc (CO),
Robert Burd

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0030
Service Date: 09/20/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		H.0 x 6.5	H.0 x 5.7	I.0 x 6.7	H.0 x 7.0	G.4 x 7.0	I.0 x 6.5
	Pier Type		DP24A	DP24A	DP24A	DP24A	DP24A	DP24A
	Start Date		9/20/2023	9/20/2023	9/20/2023	9/20/2023	9/20/2023	9/20/2023
	End Date		9/20/2023	9/20/2023	9/20/2023	9/20/2023	9/20/2023	9/20/2023
Elevations (ft)	Pier Diameter (inches)		24	24	24	24	24	24
	Ground surface, A		95.83'	95.83'	95.67'	95.75'	95.67'	95.67'
	Top of concrete, B		96.10'	96.10'	96.30'	96.10'	96.10'	96.10'
	Top of bedrock, C = (A-F)		85.08'	85.83'	84.67'	83.75'	83.67'	85.67'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		64.08'	65.08'	63.67'	53.17'	52.34'	62.67'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		31.75'	30.75'	32.00'	42.58'	43.33'	33.00'
	Overburden thickness (ft), F		10.75'	10.00'	11.00'	12.00'	12.00'	10.00'
	Total pier length (ft)	Actual (B-D)	32.02'	31.02'	32.63'	42.93'	43.76'	33.43'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	21.00'	20.75'	21.00'	30.58'	31.33'	23.00'
Required		20.00'	20.00'	20.00'	30.00'	30.00'	20.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars		10#6	10#6	10#6	10#6	10#6	10#6
Reinforcing	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		31.75'	30.75'	32.00'	41.92'	43.92'	32.67'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		8#11	3#8	3#8	3*8	3#8	3#8
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205503 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0030
Service Date: 09/20/23
Report Date: 09/25/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	H.0 x 8.0	G.5 x 8.0	F.0 x 8.0	H.0 x 7.5	G.5 x 7.5	
	Pier Type	DP24A	DP24A	DP24A	DP18A	DP18A	
	Start Date	9/20/2023	9/20/2023	9/20/2023	9/20/2023	9/20/2023	
	End Date	9/23/2023	9/20/2023	9/20/2023	9/20/2023	9/20/2023	
Elevations (ft)	Pier Diameter (inches)	24	24	24	18	18	
	Ground surface, A	95.50'	95.50'	96.10'	95.60'	95.60'	
	Top of concrete, B	94.00'	94.00'	95.58'	94.00'	94.00'	
	Top of bedrock, C = (A-F)	80.50'	80.50'	80.10'	80.60'	81.60'	
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)	60.50'	60.50'	50.10'	66.60'	66.60'	
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	
	Total depth drilled (ft), E	35.00'	35.00'	46.00'	29.00'	29.00'	
	Overburden thickness (ft), F	15.00'	15.00'	16.00'	15.00'	14.00'	
	Total pier length (ft) Actual (B-D)	33.50'	33.50'	45.48'	27.40'	27.40'	
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	
	Penetration (ft) Actual (C-D)	20.00'	20.00'	30.00'	14.00'	15.00'	
Groundwater	Required	20.00'	20.00'	30.00'	14.00'	14.00'	
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	
	Casing required?	No	No	No	No	No	
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	
Reinforcing	No. and size of bars	10#6	10#6	10#6	8#6	8#6	
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	
	Total reinforcing length (ft)	32.50'	32.50'	44.75'	26.75'	26.75'	
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	
	Dowels and placement method	3#8	3#8	3#8	2#7	2#7	
	Plumbness						
Miscellaneous	Actual	<1%	<1%	<1%	<1%	<1%	
	Spec.	<1%	<1%	<1%	<1%	<1%	
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	
Geotechnical Report No.:		Terracon report 25205503 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Dock
- (1) Saunders Construction, Inc (CO), Casey Batten

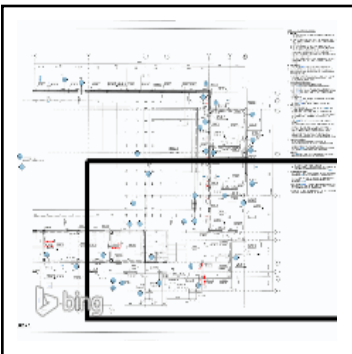
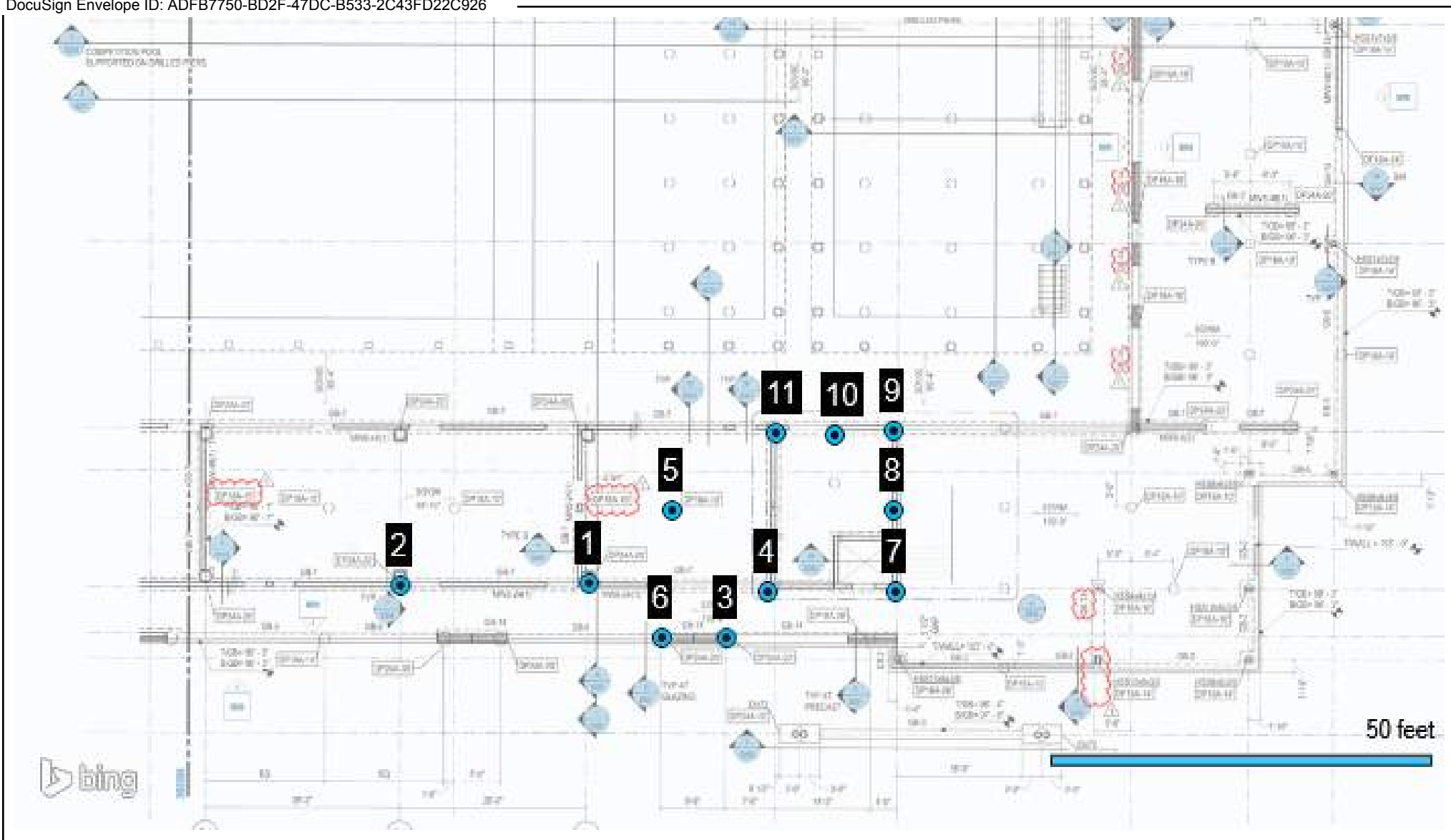
(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alexander Ale
Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

N

303-423-3300

Wheat Ridge, CO

80033-1729

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0030

Service Date:

09/20/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0032
Service Date: 09/21/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe / Direct Discharge
Number of piers installed today	15

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0031
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Oliver Deck

Robert Burd

Reviewed By:

Alex Seay

Senior Project Manager

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Report Number: 25231103.0032
Service Date: 09/21/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		G.5 x 6.5	G.5 x 6.7	G.1 x 7.5	G.3 x 8.4	H.0 x 8.4	J.0 x 8.4
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date		9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023
	End Date		09/21/20223	9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	1818	
	Ground surface, A		96.25'	96.25'	95.50'	96.25'	96.25'	96.25'
	Top of concrete, B		99.08'	99.08'	98.50'	99.25'	99.25'	96.25'
	Top of bedrock, C = (A-F)		84.25'	84.25'	81.50'	81.25'	81.25'	81.25'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		70.83'	70.83'	69.83'	70.25'	70.92'	71.08'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.42'	25.42'	25.67'	26.00'	25.33'	25.17'
	Overburden thickness (ft), F		12.00'	12.00'	14.00'	15.00'	15.00'	15.00'
	Total pier length (ft)	Actual (B-D)	28.25'	28.25'	28.67'	29.00'	28.33'	25.17'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	13.42'	13.42'	11.67'	11.00'	10.33'	10.17'
Required		10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars		8#6	8#6	8#6	8#6	8#6	8#6
Reinforcing	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		27.50'	27.50'	28.00'	28.25'	27.50'	24.50'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		2#7	2#7	2#7	2#7	2#7	2#7
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0032
Service Date: 09/21/23
Report Date: 09/25/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		I.0 x 7.8	J.0 x 7.8	E.4 x 9.0	E.6 x 11.0	G.0 x 11.0	E.6 x 10.0
	Pier Type		DP18/2023	DP18/2023	DP18/2023	DP18/2023	DP18/2023	DP18/2023
	Start Date		9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023
	End Date		9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	18
	Ground surface, A		96.25'	96.25'	95.50'	96.25'	96.25'	99.25'
	Top of concrete, B		96.25'	96.25'	96.25'	97.25'	96.67'	99.25'
	Top of bedrock, C = (A-F)		82.25'	82.25'	80.50'	81.25'	83.25'	86.25'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
Calculations	Bottom of pier, D = (A-E)		55.75'	55.75'	62.25'	71.00'	70.75'	73.75'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		40.50'	40.50'	33.25'	25.25'	25.50'	25.50'
	Overburden thickness (ft), F		14.00'	14.00'	15.00'	15.00'	13.00'	13.00'
	Total pier length (ft)	Actual (B-D)	40.50'	40.50'	34.00'	26.25'	25.92'	25.50'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Groundwater	Penetration (ft)	Actual (C-D)	26.50'	26.50'	18.25'	10.25'	12.50'	12.50'
		Required	26.00'	26.00'	18.00'	10.00'	10.00'	10.00'
Reinforcing	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Miscellaneous	No. and size of bars		8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		40.00'	40.00'	33.25'	25.50'	25.17'	24.83'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		2#7	2#7	2#7	2#7	2#7	2#7
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear rings	Shear rings	Shear rings	Shear rings	Shear rings	Shear rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:			Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alex Seay

Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0032
Service Date: 09/21/23
Report Date: 09/25/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	G.0 x 11.0	G.2 x 9.0	J.0 x 8.8			
	Pier Type	DP18A	DP18A	DP18A			
	Start Date	9/21/2023	9/21/2023	9/21/2023			
	End Date	9/21/2023	9/21/2023	9/21/2023			
Elevations (ft)	Pier Diameter (inches)	18	18	18			
	Ground surface, A	96.25'	96.25'	96.25'			
	Top of concrete, B	99.25'	99.25'	99.25'			
	Top of bedrock, C = (A-F)	81.25'	82.25'	82.25'			
	Estimated bedrock elevation	N/A	N/A	N/A			
	Bottom of pier, D = (A-E)	66.92'	70.75'	68.00'			
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone			
	Total depth drilled (ft), E	29.33'	25.50'	28.25'			
	Overburden thickness (ft), F	15.00'	14.00'	14.00'			
	Total pier length (ft) Actual (B-D)	32.33'	28.50'	31.25'			
	Required	25.00'	25.00'	25.00'			
	Penetration (ft) Actual (C-D)	14.33'	11.50'	14.25'			
Groundwater	Required	14.00'	10.00'	14.00'			
	Groundwater depth (ft), G	N/A	N/A	N/A			
	Elevation (ft), (A-G)	N/A	N/A	N/A			
	Casing required?	No	No	No			
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A			
	Casing diameter (in)	N/A	N/A	N/A			
Reinforcing	No. and size of bars	8#6	8#6	8#6			
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"			
	Total reinforcing length (ft)	28.50'	25.83'	27.50'			
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A			
	Dowels and placement method	8#6	8#6	8#6			
	Plumbness						
Miscellaneous	Actual	<1%	<1%	<1%			
	Spec.	<1%	<1%	<1%			
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings			
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"			
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Dock
- (1) Saunders Construction, Inc (CO), Casey Batten

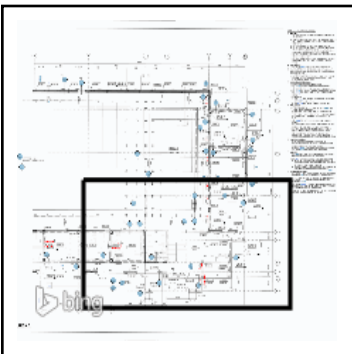
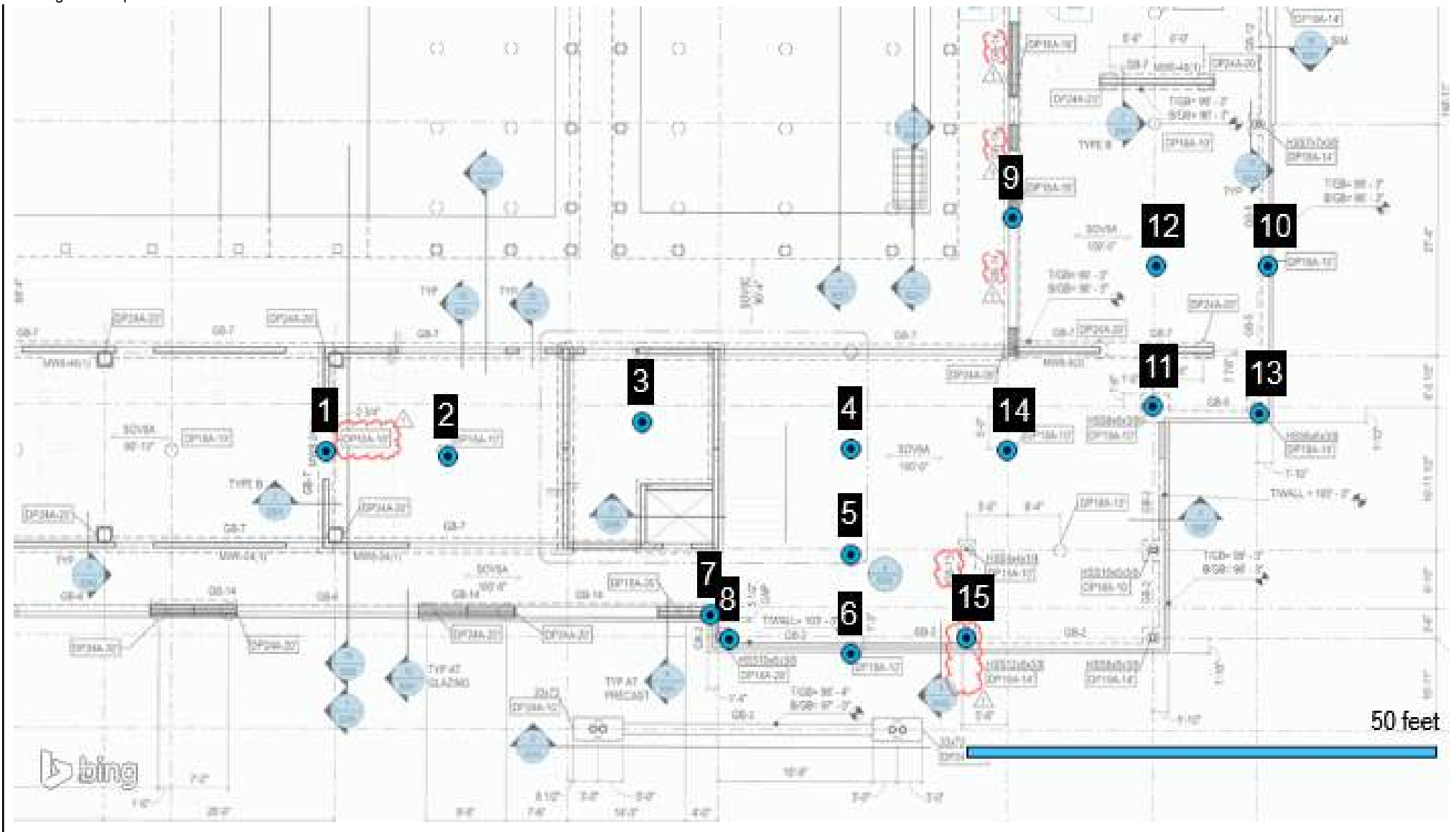
(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:


Alexander Alemany
Senior Project Manager

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- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
 N 80033-1729
 303-423-3300 terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0032

Service Date:

09/21/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0034
Service Date: 09/22/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	13

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0033
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),
Oliver Deck

(1) Saunders Construction, Inc (CO),
Robert Burd

Reviewed By:

Alex Seay
 Senior Project Manager

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Report Number: 25231103.0034
Service Date: 09/22/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		H.0 x 8.8	H.0 x 9.4	H.0 x 10.0	J.0 x 10.0	E.0 x 9.6	E.8 x 10.5
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP24A	DP24A
	Start Date		9/22/2023	9/22/2023	9/22/2023	9/22/2023	9/22/2023	9/22/2023
	End Date		9/22/2023	9/22/2023	9/22/2023	9/22/2023	9/22/2023	9/22/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	24	24
	Ground surface, A		95.50'	95.50'	95.50'	95.50'	95.50'	95.83'
	Top of concrete, B		96.25'	99.25'	96.25'	96.25'	96.25'	96.25'
	Top of bedrock, C = (A-F)		80.00'	81.50'	81.50'	81.50'	81.50'	81.83'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		69.92'	69.75'	70.42'	67.50'	61.33'	61.31'
Calculations	Supporting stratum		Sandtone	Sandtone	Sandtone	Sandtone	Sandtone	Sandtone
	Total depth drilled (ft), E		25.58'	25.75'	25.08'	28.00'	34.17'	34.52'
	Overburden thickness (ft), F		15.50'	14.00'	14.00'	14.00'	14.00'	14.00'
	Total pier length (ft)	Actual (B-D)	26.33'	29.50'	25.83'	28.75'	34.92'	34.94'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	10.08'	11.75'	11.08'	14.00'	20.17'	20.52'
Required		10.00'	10.00'	10.00'	14.00'	20.00'	20.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars		8#6	8#6	8#6	8#6	10#6	10#6
Reinforcing	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		25.50'	29.00'	25.00'	28.00'	34.33'	34.33'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		2#7	2#7	2#7	2#7	2#7	2#7
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Back
- (1) Saunders Construction, Inc (CO), Casey Back

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Back

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0034
Service Date: 09/22/23
Report Date: 09/25/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	G.5 x 11.0	C.0 x 10.0	C.0 x 9.0	C.5 x 9.0	A.0 x 9.0	A.0 x 8.7
	Pier Type	DP24A	DP24A	DP24A	DP24A	DP24A	DP24A
	Start Date	9/22/2023	9/22/2023	9/22/2023	9/22/2023	9/22/2023	9/22/2023
	End Date	9/22/2023	9/22/2023	9/22/2023	9/22/2023	9/22/2023	9/22/2023
Elevations (ft)	Pier Diameter (inches)	24	24	24	24	24	24
	Ground surface, A	94.5	94.17	94.58	98.08	96.6	96.5
	Top of concrete, B	96.25'	96.25'	95.58'	96.25'	95.58'	95.58'
	Top of bedrock, C = (A-F)	79.00'	80.17'	81.58'	86.08'	84.60'	84.50'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	58.92'	59.84'	56.83'	66.00'	64.43'	64.25'
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	35.58'	34.33'	37.75'	32.08'	32.17'	32.25'
	Overburden thickness (ft), F	15.50'	14.00'	13.00'	12.00'	12.00'	12.00'
	Total pier length (ft) Actual (B-D)	37.33'	36.41'	38.75'	30.25'	31.15'	31.33'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	20.08'	20.33'	24.75'	20.08'	20.17'	20.25'
Groundwater	Required	20.00'	20.00'	20.00'	20.00'	20.00'	20.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars	10#6	10#6	10#6	10#6	10#6	10#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	36.58'	35.35'	38.00'	29.50'	30.50'	30.50'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method	3#8	3#8	3#8	3#8	3#8	3#8
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

(1) City of Arvada CO, Kim Vagher
(1) Saunders Construction, Inc (CO), Juan Vagher
(1) Saunders Construction, Inc (CO), Oliver Back

(1) Saunders Construction, Inc (CO), Casey Back
(1) Saunders Construction, Inc (CO), Julio Gonzalez
(1) Saunders Construction, Inc (CO), Robert Back

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0034
Service Date: 09/22/23
Report Date: 09/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	A.0 x 8.4					
	Pier Type	DP18A					
	Start Date	9/22/2023					
	End Date	0922/2023					
Elevations (ft)	Pier Diameter (inches)	18					
	Ground surface, A	96.90'					
	Top of concrete, B	95.70'					
	Top of bedrock, C = (A-F)	80.90'					
	Estimated bedrock elevation	N/A					
	Bottom of pier, D = (A-E)	64.73'					
Calculations	Supporting stratum	Sandstone					
	Total depth drilled (ft), E	32.17'					
	Overburden thickness (ft), F	16.00'					
	Total pier length (ft) Actual (B-D)	30.97'					
	Required	25.00'					
	Penetration (ft) Actual (C-D)	16.17'					
Groundwater	Required	16.00'					
	Groundwater depth (ft), G	N/A					
	Elevation (ft), (A-G)	N/A					
	Casing required?	No					
	Casing length (ft) / Cased Depth (ft)	N/A					
	Casing diameter (in)	N/A					
Reinforcing	No. and size of bars	8#6					
	Reinforcing ties and spacing	#4 at 12"					
	Total reinforcing length (ft)	30.33'					
	Length of pier reinforcing above conc. (ft)	N/A					
	Dowels and placement method	2#7					
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings					
Comments:		Top #4 at 6"					
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

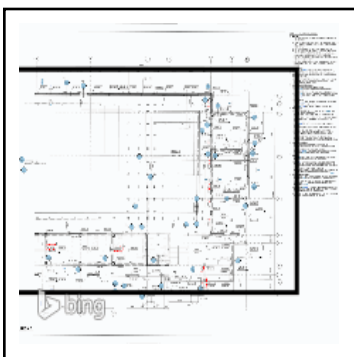
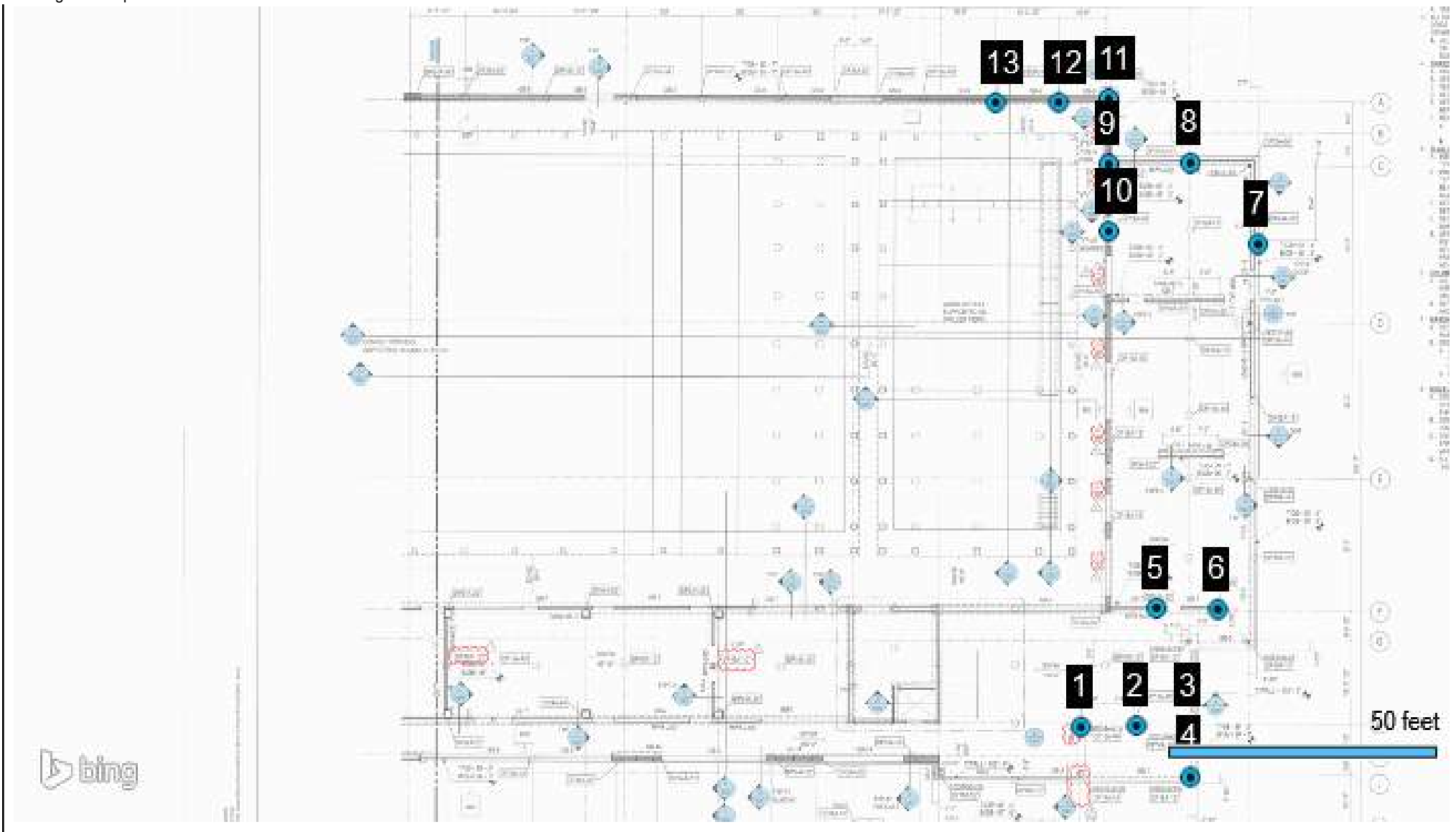
Report Distribution

(1) City of Arvada CO, Kim Vagher
 (1) Saunders Construction, Inc (CO), Juan Vagher
 (1) Saunders Construction, Inc (CO), Oliver Bickel
 (1) Saunders Construction, Inc (CO), Casey Bickel
 (1) Saunders Construction, Inc (CO), Julio Gonzalez
 (1) Saunders Construction, Inc (CO), Robert Bickel

Reviewed By:

Alexander Alexander
 Senior Project Manager

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- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

N

303-423-3300

Wheat Ridge, CO

80033-1729

terracon.com

Meyers Pool Replacement

Drilled Shaft Observation

Exhibit

A-1

Report Number:

25231103.0034

Service Date:

09/22/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0036
Service Date: 09/25/23
Report Date: 09/27/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Pilladrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	11

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0035
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),
Oliver Deck

(1) Saunders Construction, Inc (CO),
Robert Burd

Reviewed By:

Alex Seay
 Senior Project Manager

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Report Number: 25231103.0036
Service Date: 09/25/23
Report Date: 09/27/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	C.5 x 10.0	C.7 x 9.0	A.0 x 7.8	A.0 x 6.7	A.0 x 7.2	A.0 x 6.7
	Pier Type	DP18A	DP18A	Dp18A	DP18A	DP24A	DP24A
	Start Date	9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023
	End Date	9/25/2923	9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	24	24
	Ground surface, A	94.42'	94.42'	95.58'	95.58'	95.58'	95.58'
	Top of concrete, B	99.25'	96.25'	96.42'	96.00'	96.33'	96.17'
	Top of bedrock, C = (A-F)	80.42'	80.42'	82.58'	85.58'	83.58'	83.58'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	69.09'	62.17'	66.50'	69.41'	63.50'	63.41'
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.33'	32.25'	29.08'	26.17'	32.08'	32.17'
	Overburden thickness (ft), F	14.00'	14.00'	13.00'	10.00'	12.00'	12.00'
	Total pier length (ft) Actual (B-D)	30.16'	34.08'	29.92'	26.59'	32.83'	32.76'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	11.33'	18.25'	16.08'	16.17'	20.08'	20.17'
Groundwater	Required	10.00'	18.00'	16.00'	10.00'	20.00'	20.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars	8#6	8#6	8#6	8#6	10#6	10#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	37.00'	33.00'	29.25'	29.00'	32.25'	32.25'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method	2#7	2#7	2#7	2#7	3#8	3#8
	Plumbness						
Miscellaneous	Actual	<1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0036
Service Date: 09/25/23
Report Date: 09/27/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		A.0 x 6.0	C.0 x 11.0	A.0 x 5.2	A.0 x 6.7	A.0 x 6.3	
	Pier Type		DP24A	DP24A	DP24A	DP18A	DP18A	
	Start Date		9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023	
	End Date		0925/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023	
Elevations (ft)	Pier Diameter (inches)		24	24	24	18	18	
	Ground surface, A		96.25'	93.67'	95.75'	96.67'	96.00'	
	Top of concrete, B		96.33'	96.25'	95.58'	96.25'	96.25'	
	Top of bedrock, C = (A-F)		85.25'	80.67'	83.75'	86.67'	85.00'	
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)		50.92'	60.59'	62.83'	70.00'	71.00'	
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	
Calculations	Total depth drilled (ft), E		45.33'	33.08'	32.92'	26.67'	25.00'	
	Overburden thickness (ft), F		11.00'	13.00'	12.00'	10.00'	11.00'	
	Total pier length (ft)	Actual (B-D)	45.41'	35.66'	32.75'	26.25'	25.25'	
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	
	Penetration (ft)	Actual (C-D)	34.33'	20.08'	20.92'	16.67'	14.00'	
Required		34.00'	20.00'	20.00'	10.00'	10.00'		
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	
	Casing required?		NO	NO	NO	NO	NO	
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	
Reinforcing	No. and size of bars		10#6	10#6	10#6	8#6	8#6	
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	
	Total reinforcing length (ft)		45.67'	35.00'	32.00'	25.25'	24.25'	
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	
	Dowels and placement method		3#8	3#8	3#8	2#7	2#7	
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	
		Spec.	<1%	<1%	<1%	<1%	<1%	
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	
Geotechnical Report No.:			Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

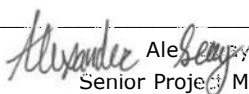
(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Dock
- (1) Saunders Construction, Inc (CO), Casey Batten

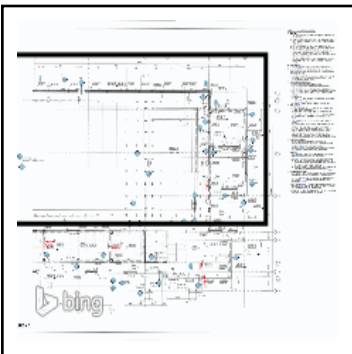
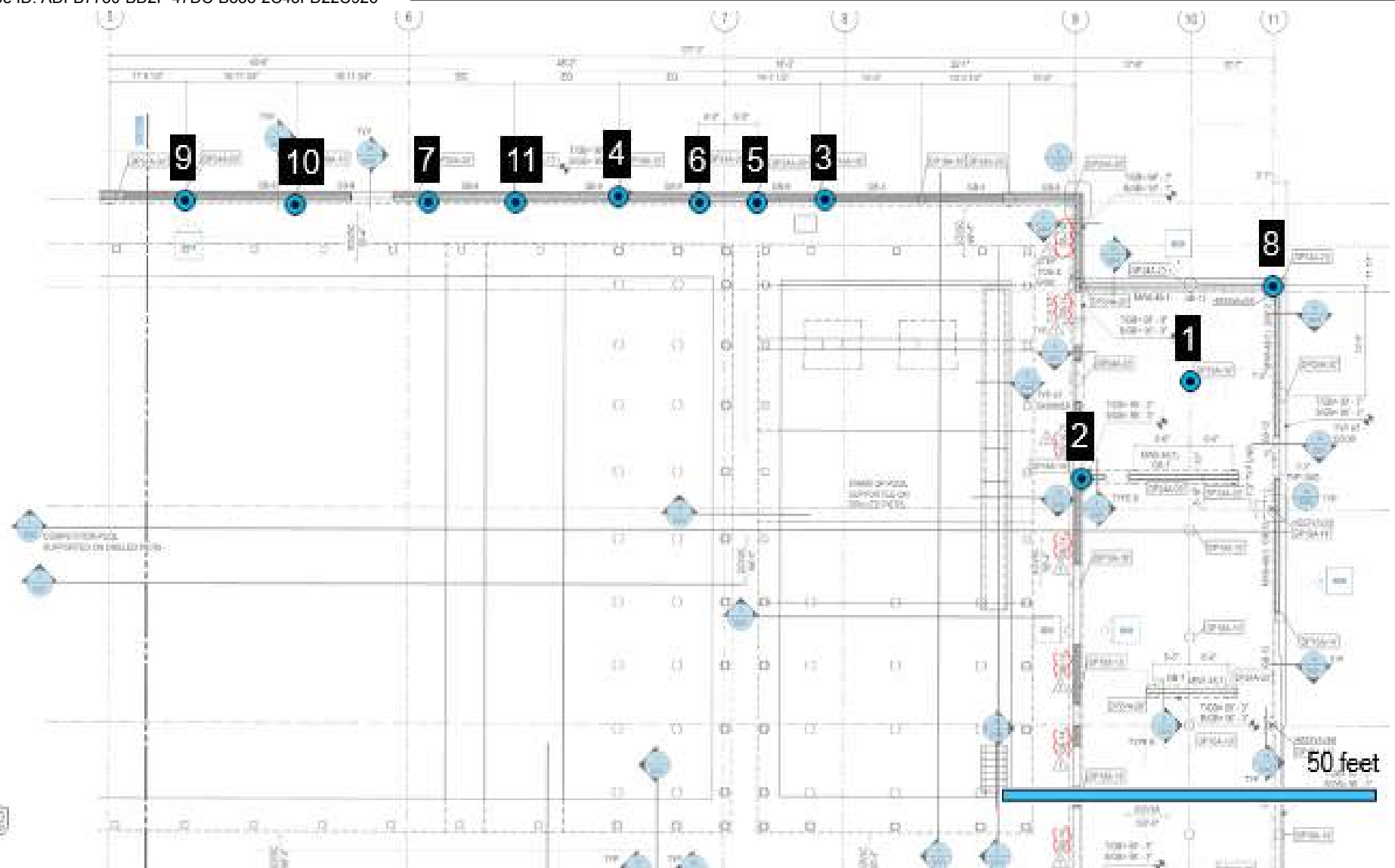
(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:


Alexander Alemany
Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0036

Service Date:

09/25/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0038
Service Date: 09/26/23
Report Date: 09/27/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill Drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	8

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0037
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

There was approx. 3.25hr stand by due to the drill rig had a oil leak and also due to waiting for the surveyor to arrive on site to lay out pier locations.

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO),
Casey Reiter

(1) Saunders Construction, Inc (CO),

(1) Saunders Construction, Inc (CO),

Juan Vazquez

Julio Gonzalez

(1) Saunders Construction, Inc (CO),
Oliver Deck

(1) Saunders Construction, Inc (CO),
Robert Burd

Reviewed By:

Alex Seay

Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Report Number: 25231103.0038
Service Date: 09/26/23
Report Date: 09/27/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		A.0 x 5.7	A.0 x 5.0	PP2.2 x PFG.4	PP2.5 x PFH.0	PP2.8 x PFH.7	PP1.0 x PFI.1
	Pier Type		DP24A	DP24A	DP18A	DP18A	DP18A	DP18A
	Start Date		9/26/2023	9/26/2023	9/26/2023	9/26/2023	9/26/2023	9/26/2023
	End Date		9/26/2023	9/26/2023	9/26/2023	9/26/2023	9/26/2023	9/26/2023
	Pier Diameter (inches)		24	24	24	24	24	
Elevations (ft)	Ground surface, A		96.00'	96.00'	87.83'	87.50'	87.50'	86.92'
	Top of concrete, B		95.58'	95.58'	96.50'	94.00'	78.83'	88.00'
	Top of bedrock, C = (A-F)		86.00'	84.00'	87.83'	87.50'	87.50'	86.92'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		66.00'	50.00'	62.00'	62.00'	52.58'	61.42'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		30.00'	46.00'	25.83'	25.50'	34.92'	25.50'
	Overburden thickness (ft), F		10.00'	12.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D)	29.58'	45.58'	34.50'	32.00'	26.25'	26.58'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Groundwater	Penetration (ft)	Actual (C-D)	20.00'	34.00'	25.83'	25.50'	34.92'	25.50'
		Required	20.00'	34.00'	20.00'	14.00'	14.00'	24.00'
Reinforcing	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	NO	NO	NO	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Miscellaneous	No. and size of bars		10#6	10#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		28.83'	45.50'	34.00'	31.25'	25.50'	25.83'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		3#8	3#8	2#7	2#7	2#7	2#7
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Beck
- (1) Saunders Construction, Inc (CO), Casey Batten

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Bland

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0038
Service Date: 09/26/23
Report Date: 09/27/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PP1.0 X PFK.5	PP2.5 X PFJ.5			
	Pier Type	DP18A	DP18A			
	Start Date	9/26/2023	9/26/2023			
	End Date	9/26/2023	9/26/2023			
Elevations (ft)	Pier Diameter (inches)	18	18			
	Ground surface, A	88.80'	87.42'			
	Top of concrete, B	88.00'	88.00'			
	Top of bedrock, C = (A-F)	88.80'	87.42'			
	Estimated bedrock elevation	N/A	N/A			
	Bottom of pier, D = (A-E)	62.88'	61.67'			
Calculations	Supporting stratum	Sandstone	Sandstone			
	Total depth drilled (ft), E	25.92'	25.75'			
	Overburden thickness (ft), F	0.00'	0.00'			
	Total pier length (ft) Actual (B-D)	25.12'	26.33'			
	Required	25.00'	25.00'			
	Penetration (ft) Actual (C-D)	25.92'	25.75'			
Groundwater	Required	24.00'	24.00'			
	Groundwater depth (ft), G	N/A	N/A			
	Elevation (ft), (A-G)	N/A	N/A			
	Casing required?	NO	NO			
	Casing length (ft) / Cased Depth (ft)	N/A	N/A			
	Casing diameter (in)	N/A	N/A			
Reinforcing	No. and size of bars	8#6	8#6			
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"			
	Total reinforcing length (ft)	24.42'	25.50'			
	Length of pier reinforcing above conc. (ft)	N/A	N/A			
	Dowels and placement method	2#7	2#7			
	Plumbness					
Miscellaneous	Actual	<1%	<1%			
	Spec.	<1%	<1%			
	Shear Rings/Roughening	Shear Rings	Shear Rings			
	Comments:	Top #4 at 6"	Top #4 at 6"			
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023				

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution

- (1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Juan Vagher

(1) Saunders Construction, Inc (CO), Oliver Dock
- (1) Saunders Construction, Inc (CO), Casey Dutton

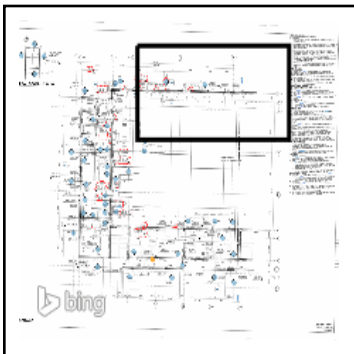
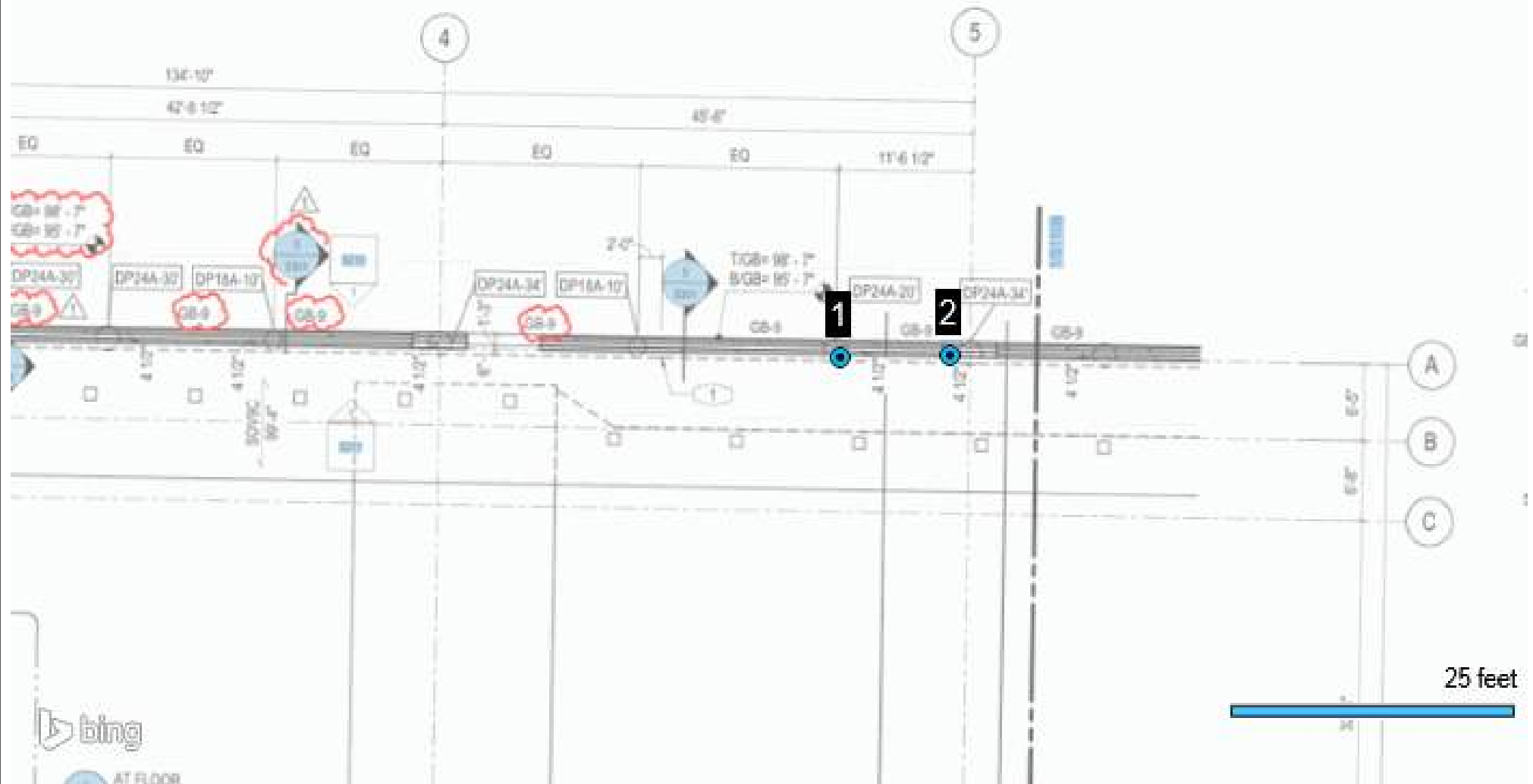
(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Robert Dutton

Reviewed By:

Alexander Alejo
Senior Project Manager

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- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0038

Service Date:

09/26/2023

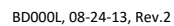
Employee:

Chavez, Tony

Scale:

Refer to Drawing

BD000L, 08-24-13, Rev.2



DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0040
Service Date: 09/27/23
Report Date: 09/28/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25ft
Minimum embedment length of pier per geotechnical report	10ft
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	3

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0039
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

There was a 2.5hr stand by time due to waiting for the surveyors to arrive to locate the pier. After this Randy with Saunders cancelled the rest of the day

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0040
Service Date: 09/27/23
Report Date: 09/28/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PP2.5 x PFI.8	PP3.0 X PFK.8	PP3.0 X PFI.0			
	Pier Type	DP18A	DP24A	DP24A			
	Start Date	9/27/2023	9/27/2023	9/27/2023			
	End Date	9/27/2023	9/27/2023	9/27/2023			
Elevations (ft)	Pier Diameter (inches)	18	24	24			
	Ground surface, A	87.50'	88.00'	88.00'			
	Top of concrete, B	88.00'	87.92'	88.83'			
	Top of bedrock, C = (A-F)	87.50'	88.00'	88.00'			
Calculations	Estimated bedrock elevation	N/A	N/A	N/A			
	Bottom of pier, D = (A-E)	61.23'	61.42'	61.42'			
	Supporting stratum	Sandstone	Sandstone	Sandstone			
	Total depth drilled (ft), E	26.27'	26.58'	26.58'			
Groundwater	Overburden thickness (ft), F	0.00'	0.00'	0.00'			
	Total pier length (ft) Actual (B-D)	26.77'	26.50'	27.41'			
	Required	25.00'	25.00'	25.00'			
	Penetration (ft) Actual (C-D)	26.27'	26.58'	26.58'			
Reinforcing	Required	24.00'	24.00'	24.00'			
	Groundwater depth (ft), G	N/A	N/A	N/A			
	Elevation (ft), (A-G)	N/A	N/A	N/A			
	Casing required?	NO	NO	NO			
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A			
	Casing diameter (in)	N/A	N/A	N/A			
	No. and size of bars	8#6	8#6	8#6			
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"			
	Total reinforcing length (ft)	25.50'	25.75'	25.75'			
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A			
	Dowels and placement method	2#7	3#8	3#8			
	Plumbness Actual	<1%	<1%	<1%			
	Spec.	<1%	<1%	<1%			
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings			
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"			
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

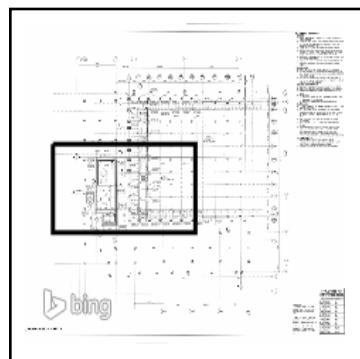
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Ale
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



 Test
  Retested / Accepted
  Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
N 80033-1729
 303-423-3300 terracon.com

Meyers Pool Replacement

Exhibit

A-1

Drilled Shaft Observation

Report Number:

25231103.0040

Service Date:

09/27/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0040

Service Date: 09/27/23

Report Date: 09/28/23

Task: Drilled Piers


10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0043
Service Date: 09/28/23
Report Date: 10/02/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25ft
Minimum embedment length of pier per geotechnical report	10ft
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	8

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0042
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

There was a 2hr stand by due to the drill rig had a blown hose and had to wait for a new hose.

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Report Number: 25231103.0043
Service Date: 09/28/23
Report Date: 10/02/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location							
	Pier Type		DP24A	DP24A	DP24A	DP24A	DP18A	
	Start Date		9/28/2023	9/28/2023	9/28/2023	9/28/2023	9/28/2023	
	End Date		9/28/2023	9/28/2023	9/28/2023	9/28/2023	9/28/2023	
Elevations (ft)	Pier Diameter (inches)		24	24	24	24	18	
	Ground surface, A		85.17'	85.17'	85.17'	85.17'	85.42'	85.66'
	Top of concrete, B		86.60'	85.17'	86.42'	86.42'	85.62'	85.98'
	Top of bedrock, C = (A-F)		85.17'	85.17'	85.17'	85.17'	85.42'	85.66'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		59.17'	59.67'	58.92'	59.92'	59.09'	59.33'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
Calculations	Total depth drilled (ft), E		26.00'	25.50'	26.25'	25.25'	26.33'	26.33'
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D)	27.43'	25.50'	27.50'	26.50'	26.53'	26.65'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	26.00'	25.50'	26.25'	25.25'	26.33'	26.33'
		Required	20.00'	20.00'	20.00'	20.00'	20.00'	12.00'
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		10#6	10#6	10#6	10@6	10#6	86
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		26.67'	24.75'	26.75'	25.75'	25.75'	25.75'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		12#6	12#6	12#6	12#6	12#6	4#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:		Terracon report no. 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0043
Service Date: 09/28/23
Report Date: 10/02/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location					
	Pier Type	DP18A	Dp18A			
	Start Date	9/28/2023	9/28/2023			
	End Date	9/28/2023	9/28/2023			
Elevations (ft)	Pier Diameter (inches)	18	18			
	Ground surface, A	84.62'	84.87'			
	Top of concrete, B	84.87'	84.87'			
	Top of bedrock, C = (A-F)	84.62'	84.87'			
	Estimated bedrock elevation	N/A	N/A			
	Bottom of pier, D = (A-E)	58.29'	58.37'			
Calculations	Supporting stratum	Sandstone	Sandstone			
	Total depth drilled (ft), E	26.33'	26.50'			
	Overburden thickness (ft), F	0.00'	0.00'			
	Total pier length (ft) Actual (B-D)	26.58'	26.50'			
	Required	25.00'	25.00'			
	Penetration (ft) Actual (C-D)	26.33'	26.50'			
Groundwater	Required	12.00'	12.00'			
	Groundwater depth (ft), G	N/A	N/A			
	Elevation (ft), (A-G)	N/A	N/A			
	Casing required?	NO	NO			
	Casing length (ft) / Cased Depth (ft)	N/A	N/A			
	Casing diameter (in)	N/A	N/A			
Reinforcing	No. and size of bars	8#6	8#6			
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"			
	Total reinforcing length (ft)	25.75'	25.75'			
	Length of pier reinforcing above conc. (ft)	N/A	N/A			
	Dowels and placement method	4#6	46			
Miscellaneous	Plumbness	Actual <1%	<1%			
		Spec. <1%	<1%			
	Shear Rings/Roughening	Shear Rings	Shear Rings			
	Comments:	Top #4 at 6"	Top #4 at 6"			
	Geotechnical Report No.:	Terracon report no. 25205033 dated 03/23/2023				

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

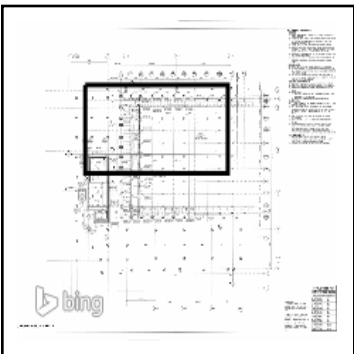
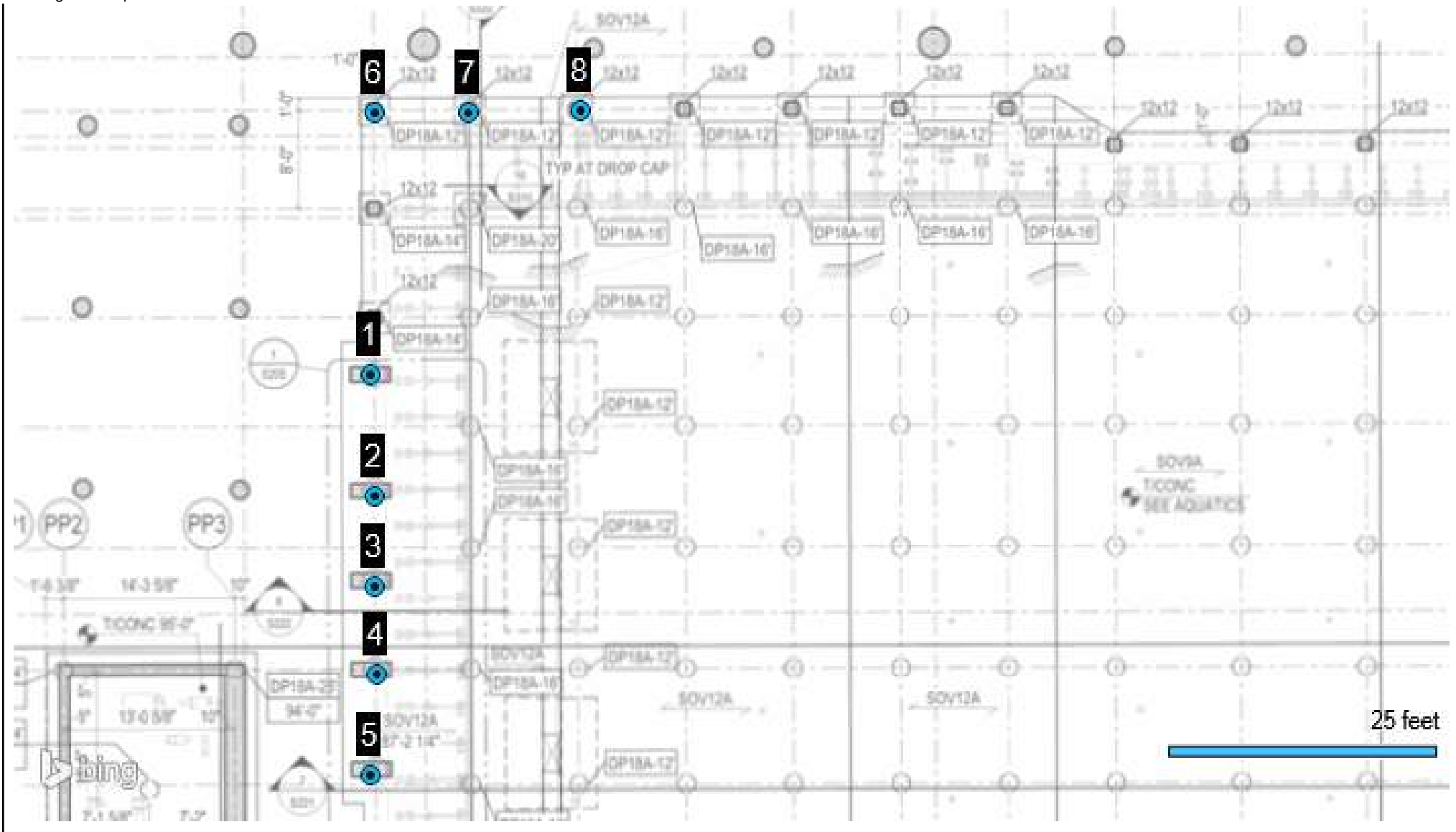
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Ale
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0043

Service Date:

09/28/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0043

Service Date: 09/28/23

Report Date: 10/02/23

Task: Drilled Piers


10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0047
Service Date: 09/29/23
Report Date: 10/03/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report no.25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25ft
Minimum embedment length of pier per geotechnical report	10ft
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	16

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0045
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

OE construction placed flash fill for water line on Carr Drive at the north and south entrance of site.

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Report Number: 25231103.0047
Service Date: 09/29/23
Report Date: 10/03/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFC.0 X PF1.0	PFD.0 x PF1.0	PFD.0 X PF2.0	PFC.0 X PF2.0	PFC.0 X PF3.0	PFE.0 X PF2.0
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023
	End Date	9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	84.76'	84.96'	86.20'	85.17'	85.21'	85.21'
	Top of concrete, B	86.26'	86.26'	85.10'	84.93'	85.01'	85.21'
	Top of bedrock, C = (A-F)	84.76'	84.96'	86.20'	85.17'	85.21'	85.21'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	58.59'	58.71'	59.70'	58.84'	59.96'	60.04'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	26.17'	26.25'	26.50'	26.33'	25.25'	25.17'
Groundwater	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft) Actual (B-D)	27.67'	27.55'	25.40'	26.09'	25.05'	25.17'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	26.17'	26.25'	26.50'	26.33'	25.25'	25.17'
Reinforcing	Required	14.00'	14.00'	16.00'	14.00'	16.00'	16.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	26.75'	26.75'	24.83'	25.50'	25.50'	25.50'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method	4#6	4#6	2#7	2#7	2#7	2#7
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0047
Service Date: 09/29/23
Report Date: 10/03/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		PFF.0 X PF2	PFG.0 X PF2.0	PFH.0 X PF4.0	PFA.0 X PF4.0	PFC.0 X PF4.0	PFD.0 X PF4.0
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date		9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023
	End Date		9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		85.22'	85.04'	84.93'	84.27'	85.26'	85.86'
	Top of concrete, B		85.22'	85.16'	87.73'	84.40'	85.15'	85.55'
	Top of bedrock, C = (A-F)		85.22'	85.04'	84.93'	84.27'	85.26'	85.86'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		59.72'	59.79'	58.93'	58.69'	60.09'	60.03'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.50'	25.25'	26.00'	25.58'	25.17'	25.83'
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D)	25.50'	25.37'	28.80'	25.71'	25.06'	25.52'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	25.50'	25.25'	26.00'	25.58'	25.17'	25.83'
Required		16.00'	16.00'	16.00'	12.00'	16.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		24.83'	24.83'	28.00'	25.00'	24.50'	25.00'
	Length of pier reinforcing above conc. (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Dowels and placement method		2#7	2#7	2#7	4#6	2#7	2#7
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:			Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0047
Service Date: 09/29/23
Report Date: 10/03/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFD.0 X PF3.0	PFE.0 X PF3.0	PFE.0 X PF4.0	PFF.0 X 3.0		
	Pier Type	DP18A	DP18A	DP18A	DP18A		
	Start Date	9/29/2023	9/29/2023	9/29/2023	9/29/2023		
	End Date	9/29/2023	9/29/2023	9/29/2023	9/29/2023		
	Pier Diameter (inches)	18	18	18	18		
Elevations (ft)	Ground surface, A	85.16'	85.15'	85.78'	85.05'		
	Top of concrete, B	84.94'	82.23'	85.56'	82.13'		
	Top of bedrock, C = (A-F)	85.16'	85.15'	85.78'	85.05'		
	Estimated bedrock elevation	N/A	N/A	N/A	N/A		
	Bottom of pier, D = (A-E)	59.33'	56.48'	60.20'	56.22'		
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone		
	Total depth drilled (ft), E	25.83'	28.67'	25.58'	28.83'		
	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'		
	Total pier length (ft) Actual (B-D)	25.61'	25.75'	25.36'	25.91'		
	Required	25.00'	25.00'	25.00'	25.00'		
Groundwater	Penetration (ft) Actual (C-D)	25.83'	28.67'	25.58'	28.83'		
	Required	12.00'	12.00'	10.00'	12.00'		
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A		
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A		
	Casing required?	NO	NO	NO	NO		
Reinforcing	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A		
	Casing diameter (in)	N/A	N/A	N/A	N/A		
	No. and size of bars	8#6	8#6	8#6	8#6		
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"		
	Total reinforcing length (ft)	24.83'	25.00'	24.75'	25.25'		
Miscellaneous	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A		
	Dowels and placement method	2#7	2#7	2#7	2#7		
	Plumbness	Actual	<1%	<1%	<1%		
		Spec.	<1%	<1%	<1%		
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings		
Miscellaneous	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"		
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

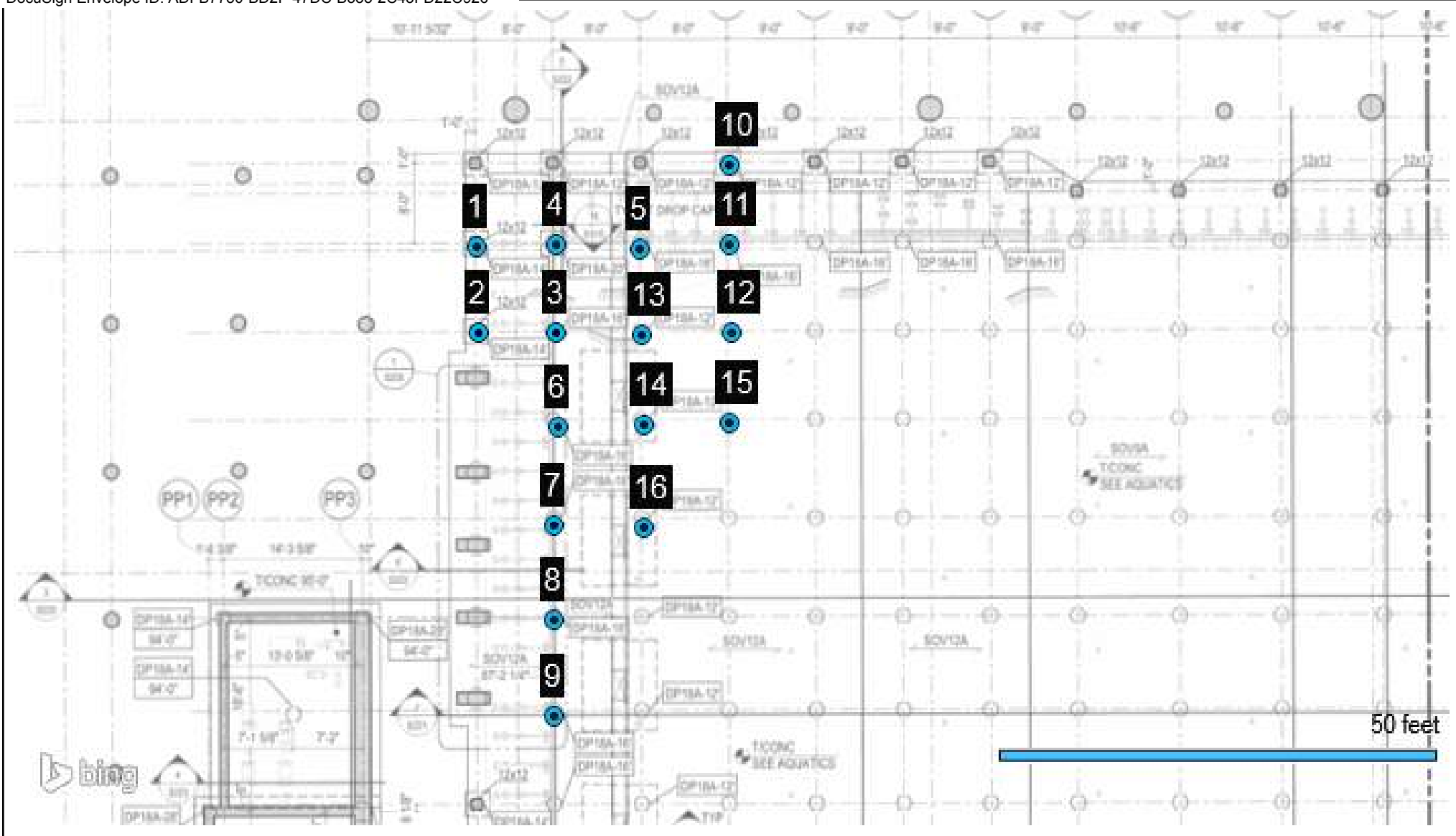
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Alexander
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0047

Service Date:

09/29/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0047

Service Date: 09/29/23

Report Date: 10/03/23

Task: Drilled Piers


10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0050
Service Date: 10/02/23
Report Date: 10/09/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 02/17/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25ft
Minimum embedment length of pier per geotechnical report	10ft
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	18

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0048
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0050
Service Date: 10/02/23
Report Date: 10/09/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFF.0 x PF4.0	PFG.0 x PF4.0	PFG.0 X PF4.0	PFG.0 X PF3.0	PFH.0 X PF4.0	PFA.0 X PF6.0
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023
	End Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	85.00'	85.00'	85.00'	85.92'	85.00'	86.68'
	Top of concrete, B	85.00'	85.00'	85.00'	85.92'	85.00'	86.58'
	Top of bedrock, C = (A-F)	85.00'	85.00'	85.00'	85.92'	85.00'	86.68'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	59.42'	59.33'	59.42'	57.42'	59.67'	61.01'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.58'	25.67'	25.58'	28.50'	25.33'	25.67'
Groundwater	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft) Actual (B-D)	25.58'	25.67'	25.58'	28.50'	25.33'	25.57'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	25.58'	25.67'	25.58'	28.50'	25.33'	25.67'
Reinforcing	Required	10.00'	10.00'	12.00'	12.00'	10.00'	12.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	1#10	1#10	8#6	8#6	1#10	8#6
	Reinforcing ties and spacing	N/A	N/A	#4 at 12"	#4 at 12"	N/A	#4 at 12"
	Total reinforcing length (ft)	25.83'	25.92'	25.83'	31.00'	25.58'	25.92'
	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	3.00'	0.75'	0.75'
	Dowels and placement method	2#6	2#6	2#6	N/A	2#6	2#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"	#4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0050
Service Date: 10/02/23
Report Date: 10/09/23
Task: Drilled Piers


10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

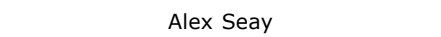
Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFA.0 x PF5.0	PFC.0 X PF6.0	PFC.0 X PF5.0	PFD.0 X PF6.0	PFD.0 X PF5.0	PFE.0 X PF6.0
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023
	End Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	85.08'	86.58'	85.08'	86.58'	85.08'	86.58'
	Top of concrete, B	85.08'	86.58'	85.08'	86.58'	85.08'	86.58'
	Top of bedrock, C = (A-F)	85.08'	86.58'	85.08'	86.58'	85.08'	86.58'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	59.75'	60.91'	59.50'	61.08'	59.33'	61.00'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.33'	25.67'	25.58'	25.50'	25.75'	25.58'
Groundwater	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft) Actual (B-D)	25.33'	25.67'	25.58'	25.50'	25.75'	25.58'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	25.33'	25.67'	25.58'	25.50'	25.75'	25.58'
Reinforcing	Required	12.00'	12.00'	12.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	8#6	8#6	1#10	1#10	1#10
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	25.75'	26.75'	25.83'	25.75'	26.00'	25.83'
	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method	6#6	6#6	6#6	2#6	2#6	2#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: 
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0050
Service Date: 10/02/23
Report Date: 10/09/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFE.0 X PF5.0	PFF.0 X PF6.0	PFF.0 X PF5.0	PFG.0 X PF6.0`	PFG.0 X PF5.0	PFH.0 X PF6.0
	Pier Type	DP18	DP18	DP18	DP18	DP18	DP18
	Start Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023
	End Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	86.58'	86.58'	85.08'	86.58'	85.08'	86.58'
	Top of concrete, B	86.58'	86.58'	85.08'	86.58'	85.07'	86.58'
	Top of bedrock, C = (A-F)	86.58'	86.58'	85.08'	86.58'	85.08'	86.58'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	60.91'	61.00'	59.33'	61.08'	59.66'	61.08'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.67'	25.58'	25.75'	25.50'	25.42'	25.50'
Groundwater	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft) Actual (B-D)	25.67'	25.58'	25.75'	25.50'	25.41'	25.50'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	25.67'	25.58'	25.75'	25.50'	25.42'	25.50'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	1#10	1#10	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing	N/A	N/A	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)	25.92'	25.83'	26.00'	25.75'	25.67'	25.75'
	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method	2#6	236	2#6	2#6	2#6	2#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:						
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

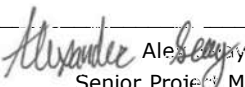
Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

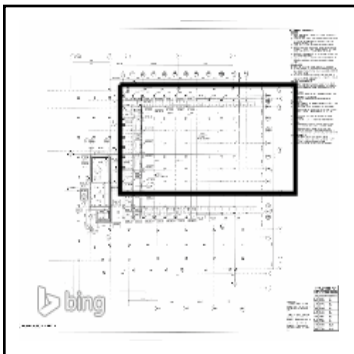
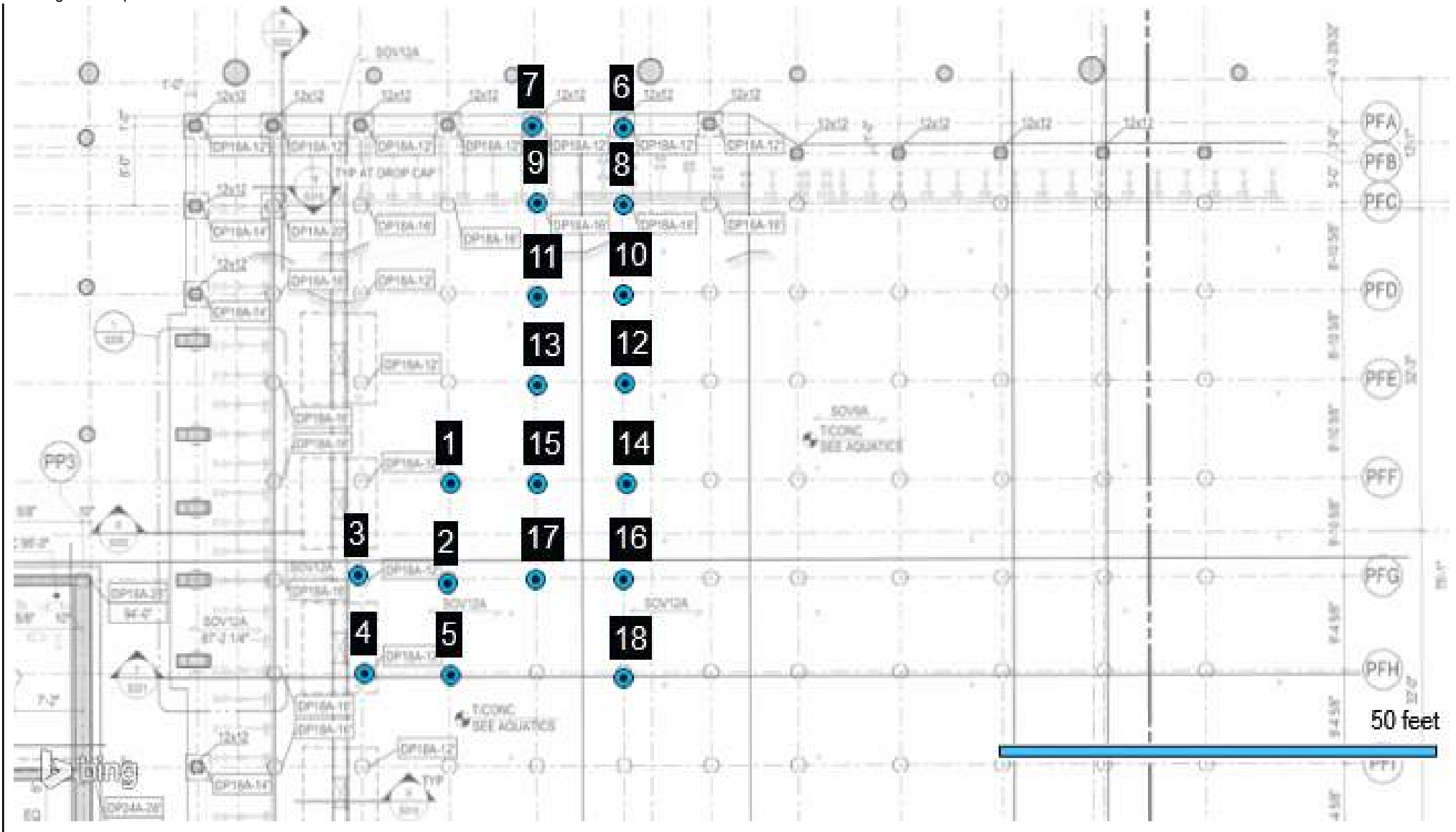
Report Distribution

See attached distribution list.

Reviewed By:


 Alexander A. Sanyal
 Senior Project Manager

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- Test
- ▲ Retested / Accepted
- ▲ ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0050

Service Date:

10/02/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0050

Service Date: 10/02/23

Report Date: 10/09/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0053
Service Date: 10/03/23
Report Date: 10/09/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	16

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0052
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

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Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFH.0 X 5.0	PFM.0 X PF1.0	PFK.0 X PF1.0	PFM.0 X PF2.0	PFK.0 X PF2.0	PFM.0X PF3.0
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date		10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023
	End Date		10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		85.08'	85.17'	85.17'	85.17'	85.17'	84.92'
	Top of concrete, B		85.08'	85.17'	85.17'	85.17'	85.17'	84.92'
	Top of bedrock, C = (A-F)		85.08'	85.17'	85.17'	85.17'	85.17'	84.92'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		59.50'	59.84'	59.75'	59.84'	59.84'	59.50'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.58'	25.33'	25.42'	25.33'	25.33'	25.42'
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D)	25.58'	25.33'	25.42'	25.33'	25.33'	25.42'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Penetration (ft)	Actual (C-D)	25.58'	25.33'	25.42'	25.33'	25.33'	25.42'	
	Required	10.00'	12.00'	14.00'	12.00'	20.00'	12.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		25.83'	25.58'	25.67'	25.58'	25.58'	25.67'
	Length of pier reinforcing above conc. (ft)		0.75'	75.00'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method		2#6	6#6	6#6	6#6	2#6	6#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0053
Service Date: 10/03/23
Report Date: 10/09/23
Task: Drilled Piers



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 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

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 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFM.0 X PF4.0	PFM.0 X PF5.0	PFK.0 X PF3.0	PFM.0 X PF6.0	PFK.0 X PF6.0	PFJ.0 X PF6.0
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023
	End Date	10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	85.00'	86.08'	84.92'	86.58'	86.58'	86.58'
	Top of concrete, B	85.00'	86.08'	84.92'	86.58'	86.58'	86.58'
	Top of bedrock, C = (A-F)	85.00'	86.08'	84.92'	86.58'	86.58'	86.58'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	59.50'	60.33'	59.42'	61.08'	61.16'	61.00'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.50'	25.75'	25.50'	25.50'	25.42'	25.58'
Groundwater	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft) Actual (B-D)	25.50'	25.75'	25.50'	25.50'	25.42'	25.58'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	25.50'	25.75'	25.50'	25.50'	25.42'	25.58'
Reinforcing	Required	10.00'	12.00'	16.00'	12.00'	16.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	8#6	8#6	8#6	8#6	1#10
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	N/A	N/A
	Total reinforcing length (ft)	25.75'	26.00'	25.75'	25.75'	25.67'	25.83'
	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method	6#6	6#6	2#6	6#6	2#6	2#6
	Plumbness	Actual <1% Spec. <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	N/A
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0053
Service Date: 10/03/23
Report Date: 10/09/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFK.0 X PF4.0	PFK.0 X PF5.0	PFJ.0 X PF1.0	PFJ.0 x PF2.0		
	Pier Type	DP18A	DP18A	DP18A	DP18A		
	Start Date	10/3/2023	10/3/2023	10/3/2023	10/3/2023		
	End Date	10/3/2023	10/3/2023	10/3/2023	10/3/2023		
	Pier Diameter (inches)	18	18	18	18		
Elevations (ft)	Ground surface, A	85.00'	85.08'	85.17'	85.17'		
	Top of concrete, B	85.00'	85.08'	85.17'	85.17'		
	Top of bedrock, C = (A-F)	85.00'	85.08'	85.17'	85.17'		
	Estimated bedrock elevation	N/A	N/A	N/A	N/A		
	Bottom of pier, D = (A-E)	59.33'	59.50'	59.67'	59.84'		
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstoe	Sandstone		
	Total depth drilled (ft), E	25.67'	25.58'	25.50'	25.33'		
	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'		
	Total pier length (ft) Actual (B-D)	25.67'	25.58'	25.50'	25.33'		
	Required	25.00'	25.00'	25.00'	25.00'		
Groundwater	Penetration (ft) Actual (C-D)	25.67'	25.58'	25.50'	25.33'		
	Required	16.00'	16.00'	14.00'	16.00'		
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A		
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A		
	Casing required?	NO	NO	NO	NO		
Reinforcing	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A		
	Casing diameter (in)	N/A	N/A	N/A	N/A		
	No. and size of bars	8#6	8#6	8#6	8#6		
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"		
	Total reinforcing length (ft)	25.92'	25.83'	25.75'	25.58'		
Miscellaneous	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	0.75'		
	Dowels and placement method	2#6	6#6	2#6	6#6		
	Plumbness	Actual	<1%	<1%	<1%		
		Spec.	<1%	<1%	<1%		
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings		
Comments:							
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

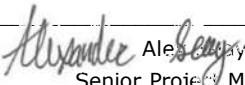
Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

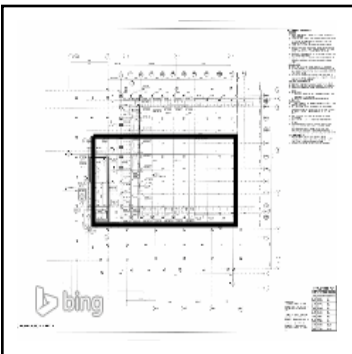
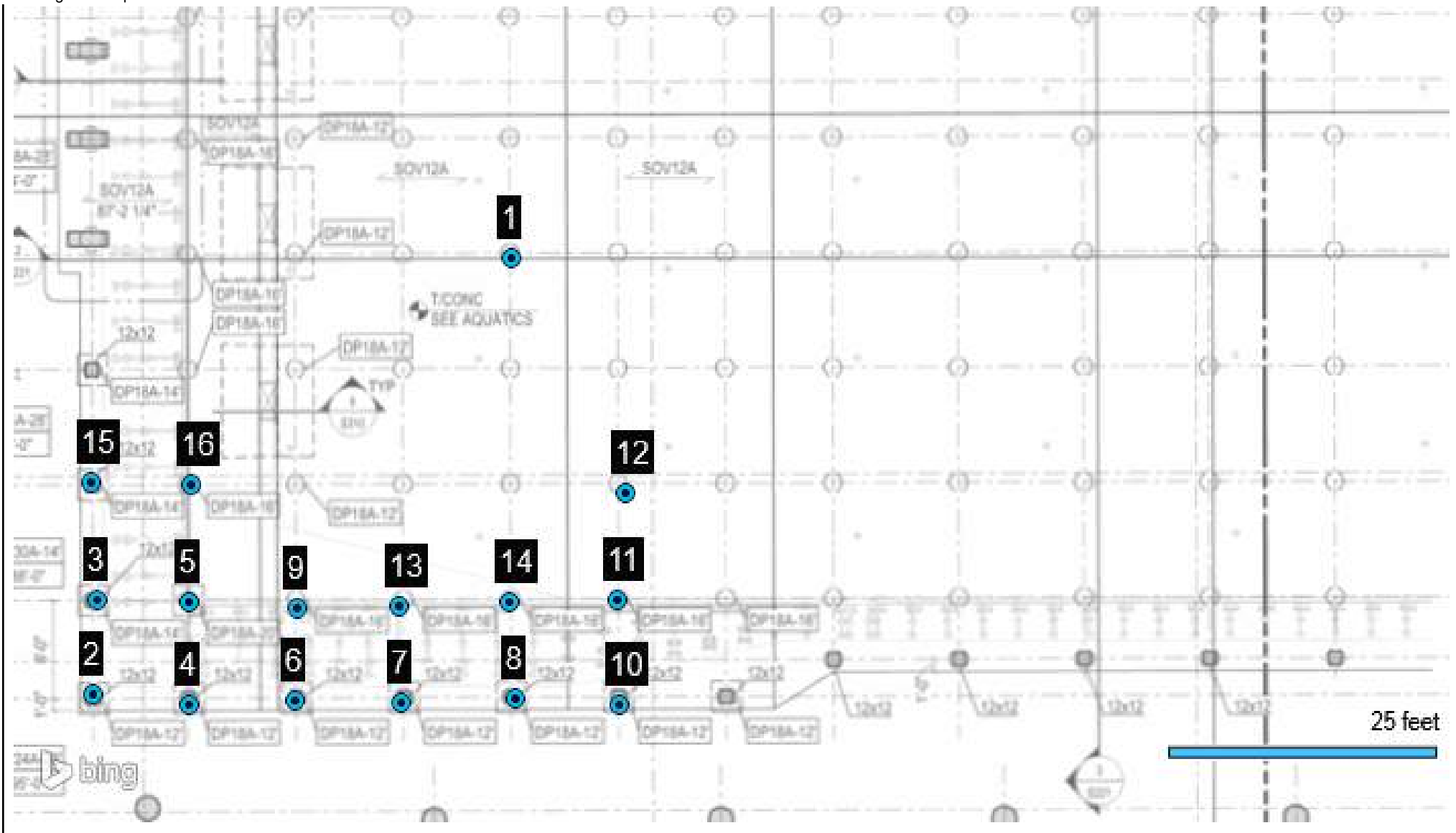
Report Distribution

See attached distribution list.

Reviewed By:


 Alexander Sanyal
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- ▲ Retested / Accepted
- ▲ ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0053

Service Date:

10/03/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0053

Service Date: 10/03/23

Report Date: 10/09/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0056
Service Date: 10/04/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation(see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023t.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25ft
Minimum embedment length of pier per geotechnical report	10f
Minimum diameter of pier per geotechnical report	28"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Piradrill drill rig	
Concrete placement method	Tremie Pipe
Number of piers installed today	17

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0057
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Report Number: 25231103.0056
Service Date: 10/04/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFJ.0 X PF3.0	PFJ.0 X PF4.0	PFJ.0 X PF5.0	PFA.0 X PF7.0	PFB.0 X PF8.0	PFB.0 X PF9.0
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date		10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023
	End Date		10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	18
	Ground surface, A		84.92'	85.00'	85.08'	89.58'	91.17'	91.17'
	Top of concrete, B		84.92'	85.00'	85.08'	89.58'	91.17'	91.17'
	Top of bedrock, C = (A-F)		84.92'	85.00'	85.08'	88.58'	87.17'	87.17'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
Calculations	Bottom of pier, D = (A-E)		59.17'	59.42'	59.75'	64.16'	66.00'	65.59'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.75'	25.58'	25.33'	25.42'	25.17'	25.58'
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	1.00'	4.00'	4.00'
	Total pier length (ft)	Actual (B-D)	25.75'	25.58'	25.33'	25.42'	25.17'	25.58'
Required		25.00'	25.00'	25.00'	25.00'	25.00'	25.00'	
Penetration (ft)	Actual (C-D)	25.75'	25.58'	25.33'	24.42'	21.17'	21.58'	
	Required	10.00'	10.00'	10.00'	12.00'	12.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		1#10	1#10	1#10	8#6	8#6	8#6
	Reinforcing ties and spacing		N/A	N/A	N/A	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		26.00'	25.83'	25.58'	25.67'	25.50'	25.83'
	Length of pier reinforcing above conc. (ft)		0.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method		2#6	2#6	2#6	6#6	6#6	6#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:			Terracon 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0056
Service Date: 10/04/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		PFB .0 x PF10.0	PFB.0 X PF11.0	PFC.0 X PF8.0	PFC.0 X PF7.0	PFD.0 X PF7	PFC.0 X PF9.0
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18	DP18
	Start Date		10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023
	End Date		10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		91.17'	91.17'	91.17'	89.58'	89.58'	91.17'
	Top of concrete, B		91.17'	91.17'	91.17'	89.58'	89.58'	91.17'
	Top of bedrock, C = (A-F)		87.17'	87.17'	87.17'	88.58'	88.58'	87.17'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		65.67'	65.42'	65.67'	64.08'	64.08'	65.59'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.50'	25.75'	25.50'	25.50'	25.50'	25.58'
	Overburden thickness (ft), F		4.00'	4.00'	4.00'	1.00'	1.00'	4.00'
	Total pier length (ft)	Actual (B-D)	25.50'	25.75'	25.50'	25.50'	25.50'	25.58'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	21.50'	21.75'	21.50'	24.50'	24.50'	21.58'
Required		10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	8#6	8#6	8#6	1#10	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	N/A	#4 at 12"
	Total reinforcing length (ft)		25.75'	26.00'	25.75'	25.75'	25.75'	25.83'
	Length of pier reinforcing above conc. (ft)		0.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method		6#6	6#6	6#6	2#6	2#6	6#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	N/A	Top #4 at 6"
Geotechnical Report No.:			Terracon 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0056
Service Date: 10/04/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFD.0 x PF8.0	PFD.0 x PF9.0	PFC.0 x PF10.0	PFD.0 x PF10.0	PFC.0 x PF11.0	
	Pier Type	DP18	DP18	DP18A	DP18	DP18	
	Start Date	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023	
	End Date	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023	
	Pier Diameter (inches)	18	18	18	18	18	
Elevations (ft)	Ground surface, A	91.17'	91.17'	91.17'	91.17'	91.17'	
	Top of concrete, B	91.17'	91.17'	91.17'	91.17'	91.17'	
	Top of bedrock, C = (A-F)	87.17'	87.17'	87.17'	87.17'	87.17'	
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)	64.59'	65.34'	65.84'	65.34'	65.50'	
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	
	Total depth drilled (ft), E	26.58'	25.83'	25.33'	25.83'	25.67'	
	Overburden thickness (ft), F	4.00'	4.00'	4.00'	4.00'	4.00'	
	Total pier length (ft) Actual (B-D)	26.58'	25.83'	25.33'	25.83'	25.67'	
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	
Groundwater	Penetration (ft) Actual (C-D)	22.58'	21.83'	21.33'	21.83'	21.67'	
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	
	Casing required?	NO	NO	NO	NO	NO	
Reinforcing	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	
	No. and size of bars	1#10	1#10	8#6	1#10	8#6	
	Reinforcing ties and spacing	N/A	N/A	#4 at 12"	N/A	#4 at 12"	
	Total reinforcing length (ft)	26.75'	26.17'	25.58'	26.17'	26.00'	
Miscellaneous	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	0.75'	0.75'	
	Dowels and placement method	2#6	2#6	2#6	2#6	2#6	
	Plumbness Actual	<1%	<1%	<1%	<1%	<1%	
	Spec.	<1%	<1%	<1%	<1%	<1%	
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
	Comments:	N/A	N/A	Top #4 at 6"	N/A	Top #4 at 6"	
	Geotechnical Report No.:	Terracon 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

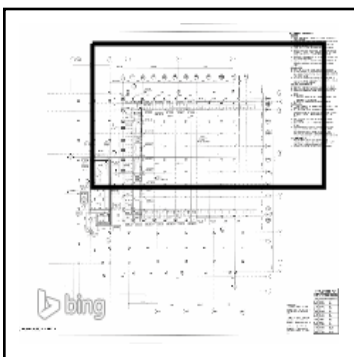
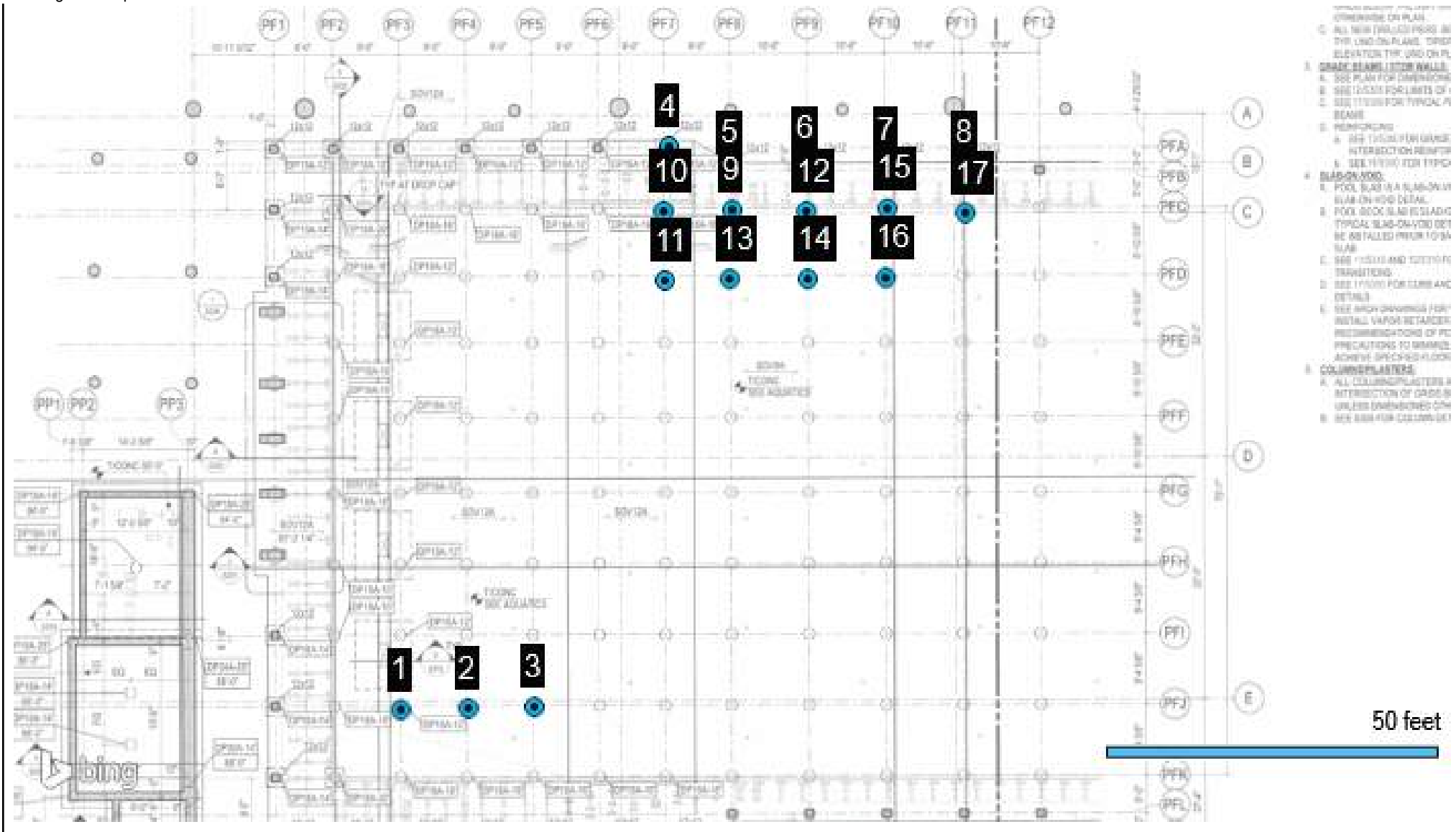
Report Distribution

See attached distribution list.

Reviewed By:

Alexander S. Sanyal
 Alexander Sanyal
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Myers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0056

Service Date:

10/04/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0056

Service Date: 10/04/23

Report Date: 10/12/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0107
Service Date: 10/23/23
Report Date: 10/26/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders Construction.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Spiradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	9

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0106
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0107
Service Date: 10/23/23
Report Date: 10/26/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFI.0 X PF25.0	PFI.0 X PF28.0	D.8 X 9.0	D.8 X 9.7	D.8 X 10.5	E.0 X 10.0
	Pier Type		DP18	DP18A	DP18A	DP24A	DP24A	DP18A
	Start Date		10/23/2023	10/23/2023	10/23/2023	10/23/2023	10/23/2023	10/23/2023
	End Date		10/23/2023	10/23/2023	10/23/2023	10/23/2023	10/23/2023	10/23/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	24	24	18
	Ground surface, A		95.25'	95.50'	96.25'	95.92'	96.00'	95.33'
	Top of concrete, B		94.25'	94.25'	95.75'	96.25'	96.25'	99.25'
	Top of bedrock, C = (A-F)		83.25'	82.50'	79.25'	78.92'	79.00'	78.33'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
Calculations	Bottom of pier, D = (A-E)		68.92'	69.00'	60.17'	58.34'	58.42'	68.16'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		26.33'	26.50'	36.08'	37.58'	37.58'	27.17'
	Overburden thickness (ft), F		12.00'	13.00'	17.00'	17.00'	17.00'	17.00'
	Total pier length (ft)	Actual (B-D)	25.33'	25.25'	35.58'	37.91'	37.83'	31.09'
Required		25.00'	25.00'	25.00'	25.00'	25.00'	25.00'	
Miscellaneous	Penetration (ft)	Actual (C-D)	14.33'	13.50'	19.08'	20.58'	20.58'	10.17'
		Required	10.00'	10.00'	18.00'	20.00'	20.00'	10.00'
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		1#10	8#6	8#6	10#6	10#6	8#6
	Reinforcing ties and spacing		N/A	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		26.00'	24.75'	35.00'	37.00'	37.00'	30.33'
	Length of pier reinforcing above conc. (ft)		1.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Dowels and placement method		2#6	6#6	2#7	4#8	4#8	2#7
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
Comments:			Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	
Geotechnical Report No.:		Terracon report 25205300 dated 03/23/2023						

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0107
Service Date: 10/23/23
Report Date: 10/26/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	E.0 x 11.0	K.0 x 7.1	K.0 x 8.7			
	Pier Type	DP18A	DP24A	DP24A			
	Start Date	10/23/2023	10/23/2023	10/23/2023			
	End Date	10/23/2023	10/23/2023	10/23/2023			
Elevations (ft)	Pier Diameter (inches)	18	24	24			
	Ground surface, A	96.08'	95.25'	96.17'			
	Top of concrete, B	96.25'	97.00'	97.00'			
	Top of bedrock, C = (A-F)	79.08'	82.25'	81.67'			
	Estimated bedrock elevation	N/A	N/A	N/A			
	Bottom of pier, D = (A-E)	64.75'	70.00'	70.84'			
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone			
	Total depth drilled (ft), E	31.33'	25.25'	25.33'			
	Overburden thickness (ft), F	17.00'	13.00'	14.50'			
	Total pier length (ft) Actual (B-D)	31.50'	27.00'	26.16'			
	Required	25.00'	25.00'	25.00'			
	Penetration (ft) Actual (C-D)	14.33'	12.25'	10.83'			
Groundwater	Required	14.00'	10.00'	10.00'			
	Groundwater depth (ft), G	N/A	N/A	N/A			
	Elevation (ft), (A-G)	N/A	N/A	N/A			
	Casing required?	NO	NO	NO			
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A			
	Casing diameter (in)	N/A	N/A	N/A			
Reinforcing	No. and size of bars	8#6	10#6	10#6			
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"			
	Total reinforcing length (ft)	30.75'	26.25'	25.42'			
	Length of pier reinforcing above conc. (ft)	0.00'	0.00'	0.00'			
	Dowels and placement method	2#7	3#8	3#8			
	Plumbness						
Miscellaneous	Actual	<1%	<1%	<1%			
	Spec.	<1%	<1%	<1%			
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings			
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"			
Geotechnical Report No.:		Terracon report 25205300 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

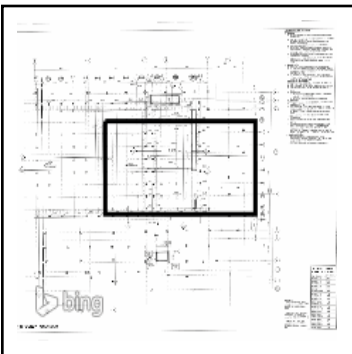
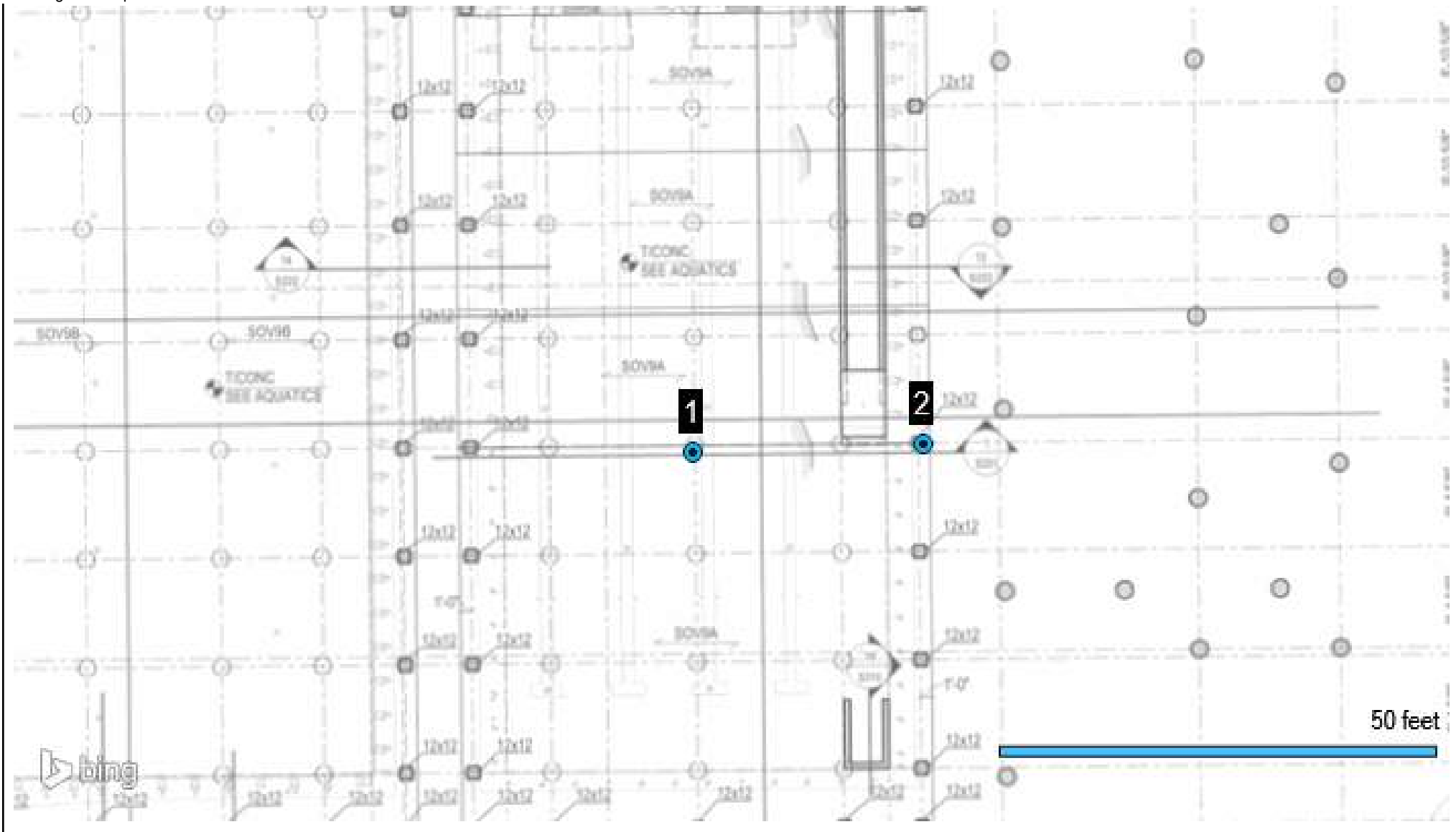
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Alejo
 Senior Project Manager

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- Test
- ▲ Retested / Accepted
- ▲ ▲ Deviation



10625 W I70 Frontage Rd

N

303-423-3300

Wheat Ridge, CO

80033-1729

terracon.com

Meyers Pool Replacement

Drilled Shaft Observation

Exhibit

A-1

Report Number:

25231103.0107

Service Date:

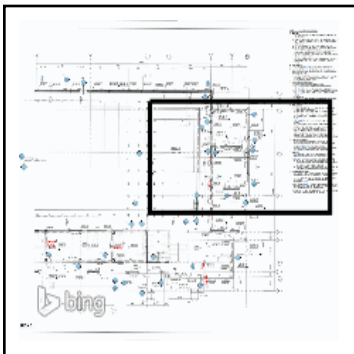
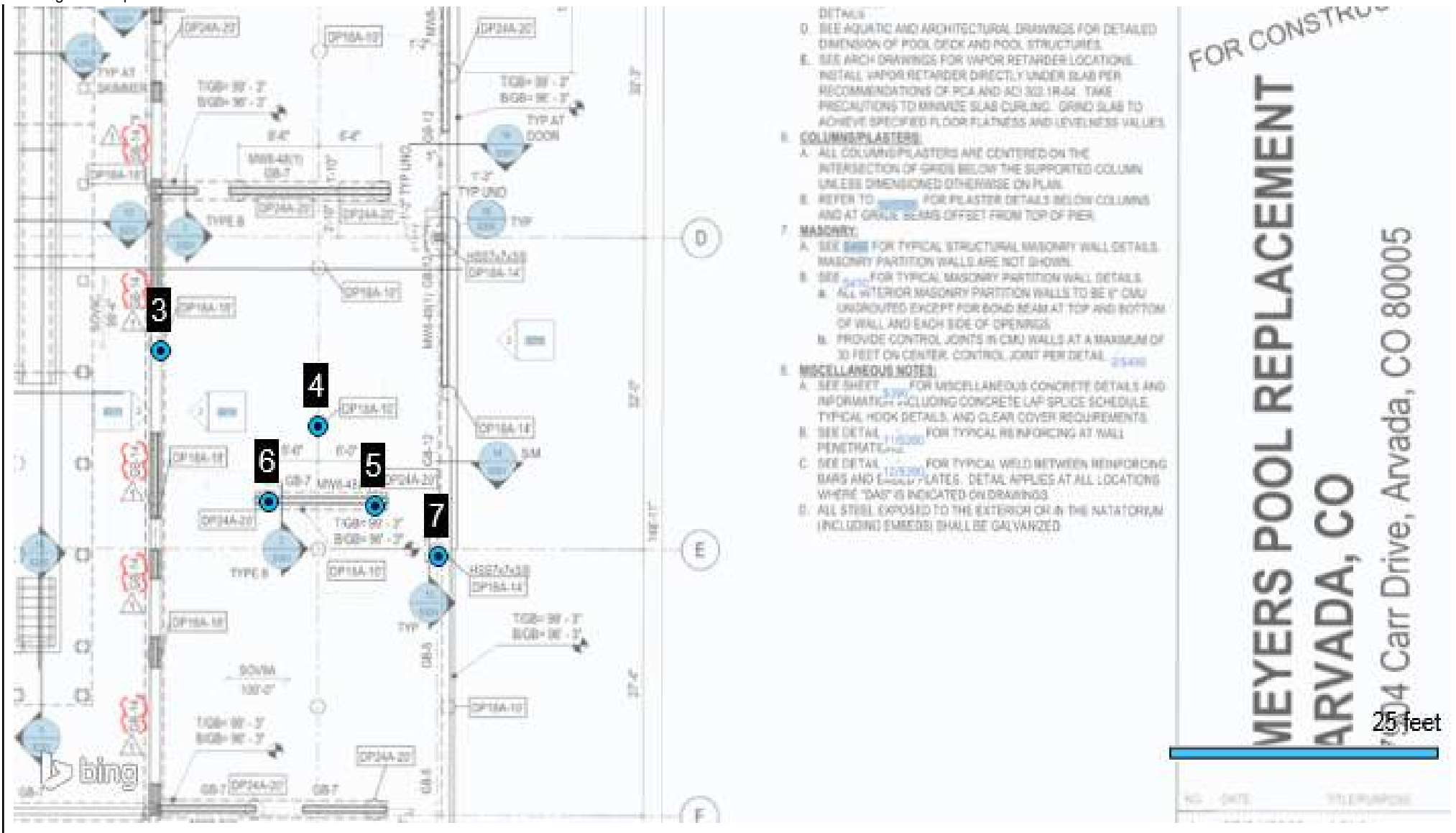
10/23/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
 N 80033-1729
 303-423-3300 terracon.com

MeYers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0107

Service Date:

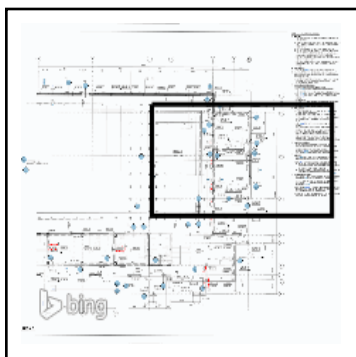
10/23/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



-  Test
-  Retested / Accepted
-  Deviation



Report Number:
25231103.0107

Service Date:	10/23/2023
---------------	------------

Employee:
Chavez, Tony

Scale:
Refer to Drawing

Meyers Pool Replacement

Drilled Shaft Observation

Exhibit

A-1

Distribution Page

Report Number: 25231103.0107

Service Date: 10/23/23

Report Date: 10/26/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Martin/Martin Inc, Andrew Lack
- (1) Martin/Martin Inc, Hunter Senior
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd
- (1) Wember Inc., Conor Bancroft
- (1) Wember Inc., Selena Twilley

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0063
Service Date: 10/05/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation at (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Ringsugenhening
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	21

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s):.0061
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0063
Service Date: 10/05/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFB.0 X PF12.0	PFC.0 X PF12.0	PFD.0 X PF11.0	PFD.0 X PF12.0	PFB.0 X PF13.0	PFC.0 X PF13.0
	Pier Type	DP18A	DP18A	DP18	DP18	DP18A	DP18A
	Start Date	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023
	End Date	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	91.17'	92.17'	92.17'	92.17'	92.17'	92.17'
	Top of concrete, B	91.17'	92.17'	92.17'	92.17'	92.17'	92.17'
	Top of bedrock, C = (A-F)	87.17'	88.17'	88.17'	88.17'	88.17'	88.17'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	65.42'	66.50'	66.34'	66.50'	66.34'	66.50'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.75'	25.67'	25.83'	25.67'	25.83'	25.67'
Groundwater	Overburden thickness (ft), F	4.00'	4.00'	4.00'	4.00'	4.00'	4.00'
	Total pier length (ft) Actual (B-D)	25.75'	25.67'	25.83'	25.67'	25.83'	25.67'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	21.75'	21.67'	21.83'	21.67'	21.83'	21.67'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	8#6	1#10	1#10	8#6	8#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	N/A	N/A	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	26.00'	26.00'	26.25'	26.00'	25.25'	26.00'
	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method	6#6	2#6	2#6	2#6	6#6	2#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	N/A	N/A	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Justin Cooper with Saunders
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0063
Service Date: 10/05/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFB.0 X 14.0	PFC.0 X 14.0	PF.D.0 X PF13.0	PFE.0 X PF7.0	PFE.0 X PF8.0	PFE.0 X PF9.0
	Pier Type	DP18A	DP18A	DP18	DP18	DP18	DP18
	Start Date	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023
	End Date	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	91.17'	91.17'	91.17'	91.17'	91.17'	91.17'
	Top of concrete, B	91.17'	91.17'	91.17'	91.17'	91.17'	91.17'
	Top of bedrock, C = (A-F)	87.17'	87.17'	87.17'	90.17'	87.17'	87.17'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	65.59'	65.34'	65.67'	65.34'	65.42'	65.67'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.58'	25.83'	25.50'	25.83'	25.75'	25.50'
Groundwater	Overburden thickness (ft), F	4.00'	4.00'	4.00'	1.00'	4.00'	4.00'
	Total pier length (ft) Actual (B-D)	25.58'	25.83'	25.50'	25.83'	25.75'	25.50'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	21.58'	21.83'	21.50'	24.83'	21.75'	21.50'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	8#6	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing	#4 at 12"	#4 at 12'	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)	26.00'	26.42'	26.00'	26.42'	26.25'	26.00'
	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.00'	1.00'	1.00'	1.00'
	Dowels and placement method	6#6	6#6	2#6	2#6	2#6	2#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6'	N/A	N/A	N/A	N/A
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0063
Service Date: 10/05/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFE.0 X PH10.0	PFE.0 X PF11.0	PFE.0 X PF12.0	PFE.0 X PF13.0	PFF.0 X PF7.0	PFF.0 X PF8.0
	Pier Type	DP18	DP18	DP18	DP18	DP18	DP18
Elevations (ft)	Start Date	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023
	End Date	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023
	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	91.17'	91.17'	91.17'	91.17'	89.58'	91.17'
	Top of concrete, B	91.17'	91.17'	91.17'	91.17'	89.58'	91.17'
Calculations	Top of bedrock, C = (A-F)	87.17'	87.17'	87.17'	87.17'	85.58'	87.17'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	65.17'	65.67'	65.25'	65.67'	64.08'	65.67'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	26.00'	25.50'	25.92'	25.50'	25.50'	25.50'
Groundwater	Overburden thickness (ft), F	4.00'	4.00'	4.00'	4.00'	4.00'	4.00'
	Total pier length (ft) Actual (B-D)	26.00'	25.50'	25.92'	25.50'	25.50'	25.50'
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Penetration (ft) Actual (C-D)	22.00'	21.50'	21.92'	21.50'	21.50'	21.50'
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
Reinforcing	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
Miscellaneous	No. and size of bars	1#10	1#10	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing	N/A	N/A	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)	26.25'	26.00'	26.25'	26.00'	26.00'	25.00'
	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method	N/A	N/A	N/A	N/A	N/A	N/A
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:						
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0063
Service Date: 10/05/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFF.0 X PF9.0	PFF.0 X PF10.0	PFF.0 X PF11.0			
	Pier Type	DP18	DP18	DP18			
	Start Date	10/5/2023	10/5/2023	10/5/2023			
	End Date	10/5/2023	10/5/2023	10/5/2023			
Elevations (ft)	Pier Diameter (inches)	18	18	18			
	Ground surface, A	91.17'	91.17'	91.17'			
	Top of concrete, B	91.17'	91.17'	91.17'			
	Top of bedrock, C = (A-F)	87.17'	87.17'	87.17'			
Calculations	Estimated bedrock elevation	N/A	N/A	N/A			
	Bottom of pier, D = (A-E)	65.84'	65.67'	65.67'			
	Supporting stratum	Sandstone	Sandstone	Sandstone			
	Total depth drilled (ft), E	25.33'	25.50'	25.50'			
Groundwater	Overburden thickness (ft), F	4.00'	4.00'	4.00'			
	Total pier length (ft) Actual (B-D)	25.33'	25.50'	25.50'			
	Required	10.00'	10.00'	10.00'			
	Penetration (ft) Actual (C-D)	21.33'	21.50'	21.50'			
Reinforcing	Required	10.00'	10.00'	10.00'			
	Groundwater depth (ft), G	N/A	N/A	N/A			
	Elevation (ft), (A-G)	N/A	N/A	N/A			
	Casing required?	NO	NO	NO			
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A			
	Casing diameter (in)	N/A	N/A	N/A			
	No. and size of bars	1#10	1#10	1#10			
	Reinforcing ties and spacing	N/A	N/A	N/A			
	Total reinforcing length (ft)	26.00'	26.00'	26.00'			
	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.00'			
	Dowels and placement method	N/A	N/A	N/A			
	Plumbness Actual	<1%	<1%	<1%			
	Spec.	<1%	<1%	<1%			
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings			
	Comments:	N/A	N/A	N/A			
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Justin Cooper with Saunders

Contractor: Saunders Construction

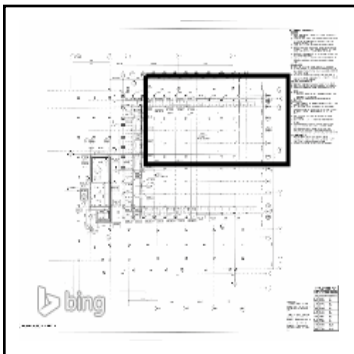
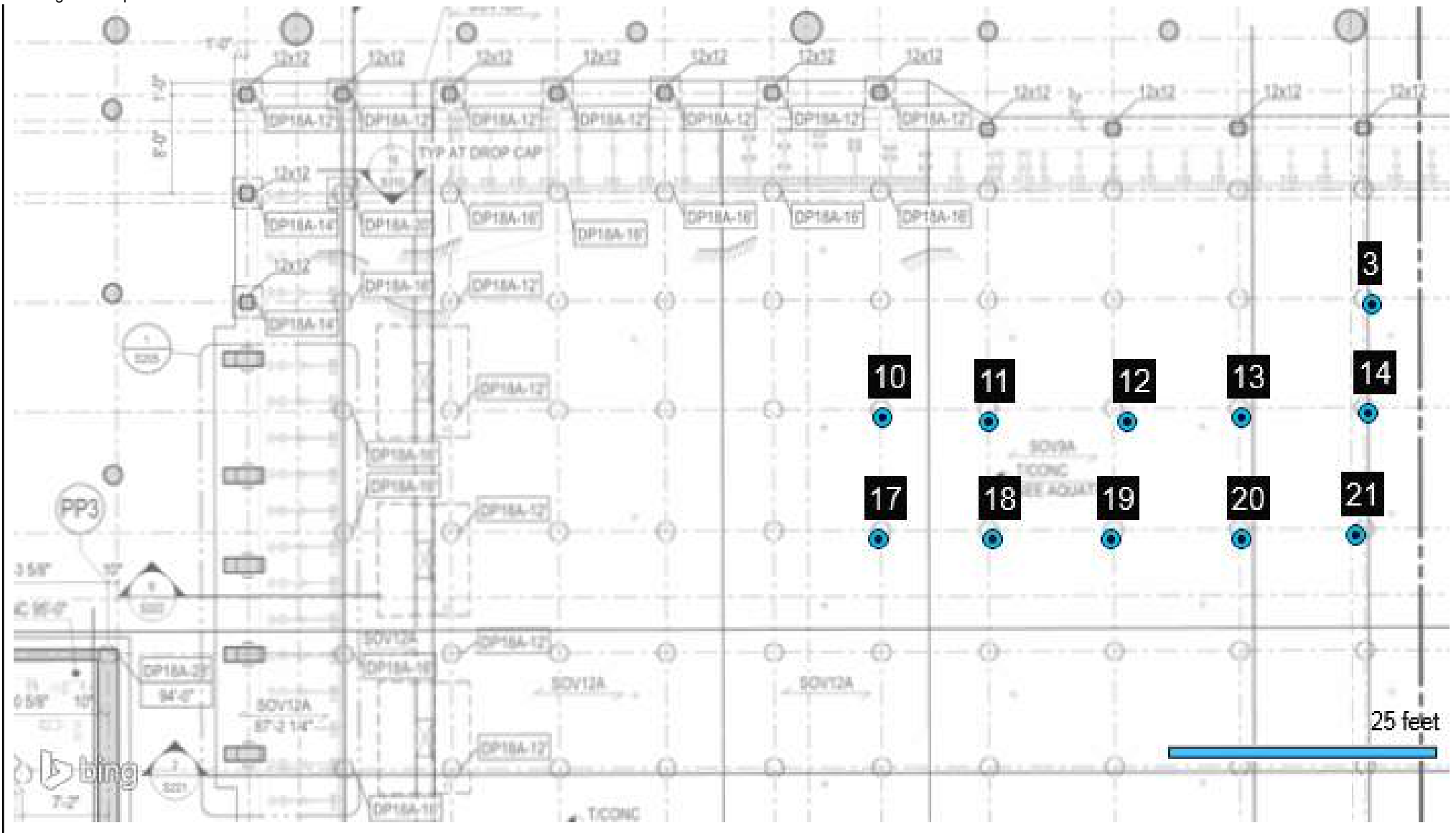
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Alexander
 Senior Project Manager

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- Test
- ◆ Retested / Accepted
- ▲ ◆ Deviation



10625 W I70 Frontage Rd

N

303-423-3300

Wheat Ridge, CO

80033-1729

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0063

Service Date:

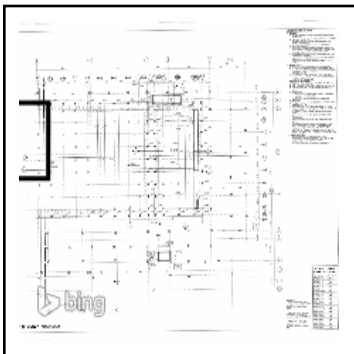
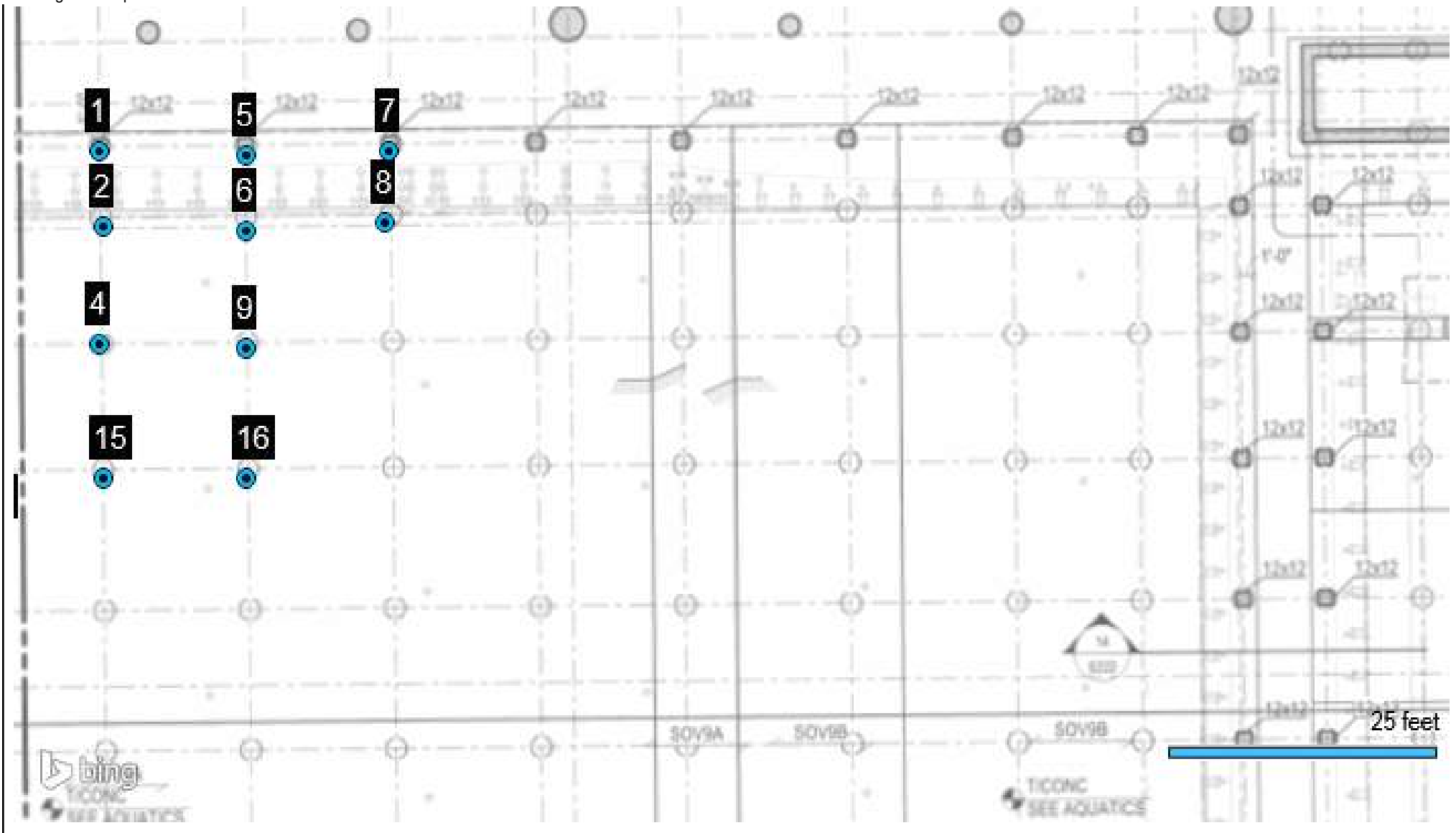
10/05/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0063

Service Date:

10/05/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0063

Service Date: 10/05/23

Report Date: 10/12/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0072
Service Date: 10/09/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders

The construction documents referenced for this observation include: Site plans dated 07/21/2023

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	17

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0071
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0072
Service Date: 10/09/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFM.0 X PF7.0	PFK.0 X PF7.0	PFL.0 X PF8.0	PFK.0 X PF8.0	PFJ.0 X PF8.0	PFL.0 X PF9.0
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18	DP18A
	Start Date		10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023
	End Date		10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		90.58'	90.58'	91.17'	91.17'	91.17'	91.17'
	Top of concrete, B		90.58'	90.58'	91.17'	91.17'	91.17'	91.17'
	Top of bedrock, C = (A-F)		89.58'	89.58'	87.17'	87.17'	87.17'	87.17'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		65.00'	65.25'	65.42'	65.42'	65.25'	65.67'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.58'	25.33'	25.75'	25.75'	25.92'	25.50'
	Overburden thickness (ft), F		1.00'	1.00'	4.00'	4.00'	4.00'	4.00'
	Total pier length (ft)	Actual (B-D)	25.58'	25.33'	25.75'	25.75'	25.92'	25.50'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Penetration (ft)	Actual (C-D)	24.58'	24.33'	21.75'	21.75'	21.92'	21.50'	
	Required	12.00'	16.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	8#6	8#6	8#6	1#10	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 a12"	#4 at 12"	#4 at 12"	N/A	#4 at 12"
	Total reinforcing length (ft)		26.00'	25.58'	26.75'	26.00'	26.83'	26.00'
	Length of pier reinforcing above conc. (ft)		0.08'	1.00'	1.00'	0.75'	1.00'	1.00'
	Dowels and placement method		6#6	6#6	6#6	6#6	2#6	6#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	N/A	Top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0072
Service Date: 10/09/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFK.0 PF9.0	PFJ.0 X PF9.0	PFL.0 X PF10.0	PFK.0 X OF10.0	PFJ.0 X PF11	PFL.0 X PF11.0
	Pier Type	DP18A	DP18	DP18A	DP18A	DP18	DP18A
	Start Date	10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023
	End Date	10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	91.17'	91.17'	91.17'	91.17'	91.17'	91.17'
	Top of concrete, B	91.17'	91.17'	91.17'	91.17'	91.17'	91.17'
	Top of bedrock, C = (A-F)	87.17'	87.17'	87.17'	87.17'	87.17'	87.17'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	65.50'	65.75'	66.00'	66.00'	65.34'	65.50'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	sandstone
	Total depth drilled (ft), E	25.67'	25.42'	25.17'	25.17'	25.83'	25.67'
Groundwater	Overburden thickness (ft), F	4.00'	4.00'	4.00'	4.00'	4.00'	4.00'
	Total pier length (ft) Actual (B-D)	25.67'	25.42'	25.17'	25.17'	25.83'	25.67'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	21.67'	21.42'	21.17'	21.17'	21.83'	21.67'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	1#10	8#6	8#6	1#10	8#6
	Reinforcing ties and spacing	#4 at 12"	N/A	#4 at 12"	#4 at 12"	N/A	#4 at 12"
	Total reinforcing length (ft)	26.00'	25.75'	25.50'	25.50'	25.25'	26.00'
	Length of pier reinforcing above conc. (ft)	0.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method	6#6	2#6	6#6	6#6	2#6	6#6
	Plumbness	Actual <1% Spec. <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%	<1% <1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	N/A	#4 at 6"	#4 at 6"	N/A	#4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0072
Service Date: 10/09/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFK.0 X PF11.0	PFJ.0 X PF11.0	PFL.0 X PF12.0	PFK.0 X PF12.0	PFJ.0 X PF12.0	
	Pier Type	DP18A	DP18	DP18A	DP18A	DP18	
	Start Date	10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023	
	End Date	10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/9/2023	
	Pier Diameter (inches)	18	18	18	18	18	
Elevations (ft)	Ground surface, A	91.17'	91.17'	91.17'	91.17'	91.17'	
	Top of concrete, B	91.17'	91.17'	91.17'	91.17'	91.17'	
	Top of bedrock, C = (A-F)	87.17'	87.17'	87.17'	87.17'	87.17'	
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)	65.34'	65.17'	65.17'	65.25'	66.00'	
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	
	Total depth drilled (ft), E	25.83'	26.00'	26.00'	25.92'	25.17'	
	Overburden thickness (ft), F	4.00'	4.00'	4.00'	4.00'	4.00'	
	Total pier length (ft) Actual (B-D)	25.83'	26.00'	26.00'	25.92'	25.17'	
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	
Groundwater	Penetration (ft) Actual (C-D)	21.83'	22.00'	22.00'	21.92'	21.17'	
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	
	Casing required?	NO	NO	NO	NO	NO	
Reinforcing	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	
	No. and size of bars	8#6	1#10	8#6	8#6	1#10	
	Reinforcing ties and spacing	#4 at 12"	N/A	#4 at 12"	#4 at 12"	N/A	
	Total reinforcing length (ft)	26.25'	26.50'	26.50'	26.50'	26.50'	
Miscellaneous	Length of pier reinforcing above conc. (ft)	0.83'	1.00'	1.00'	1.00'	0.75'	
	Dowels and placement method	6#6	2@6	6#6	6#6	2#6	
	Plumbness Actual	<1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
Miscellaneous	Comments:	Top #4 at 6"	N/A	Top #4 at 6"	Top #4 at 6"	N/A	
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

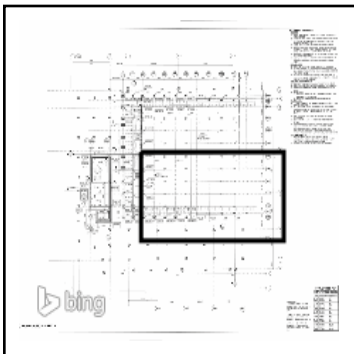
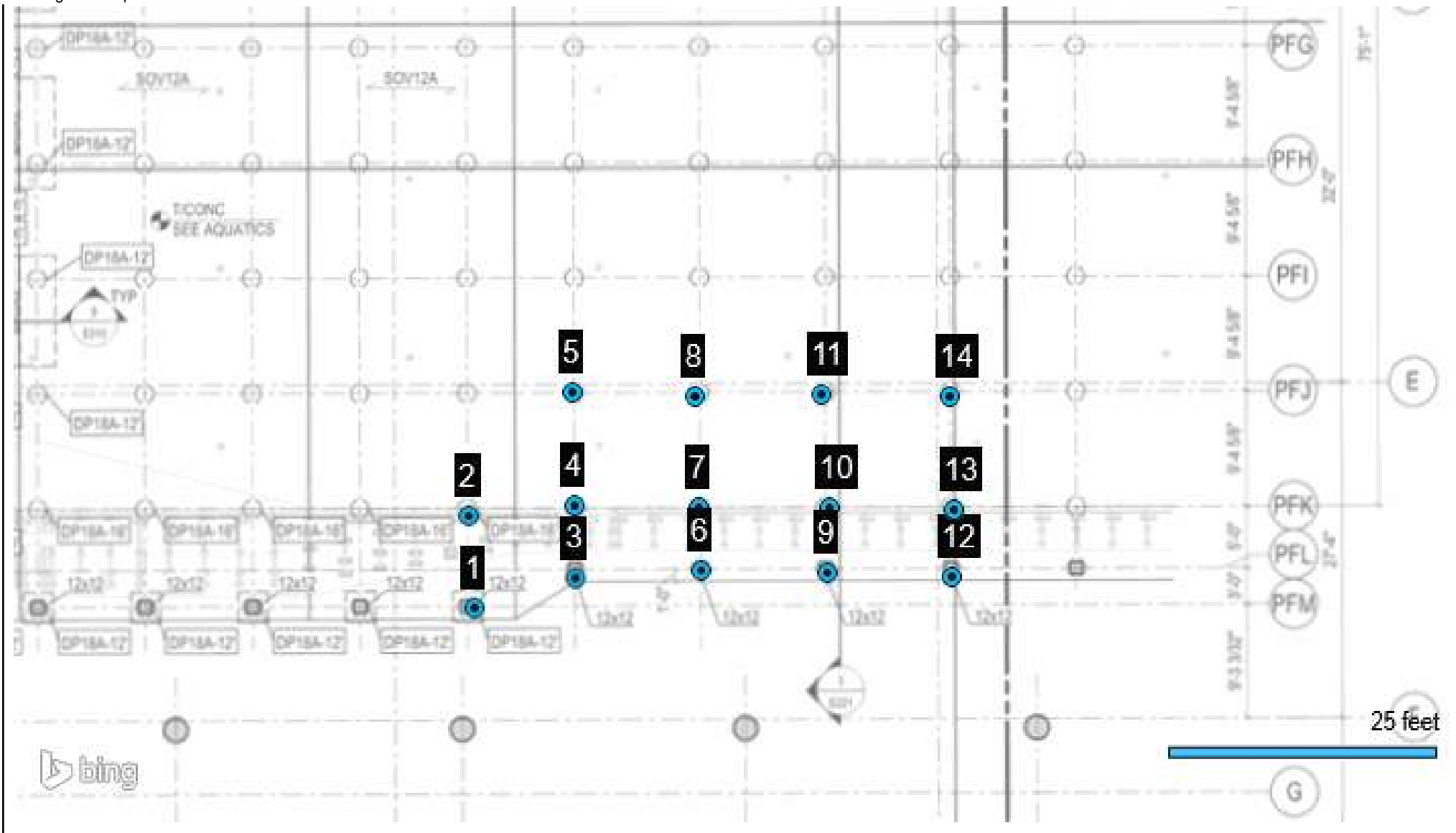
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Alexander
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0072

Service Date:

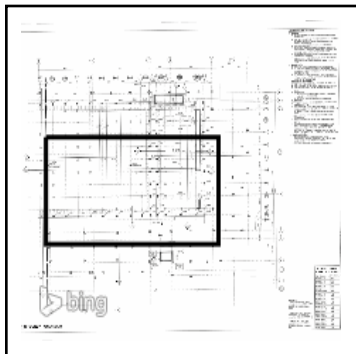
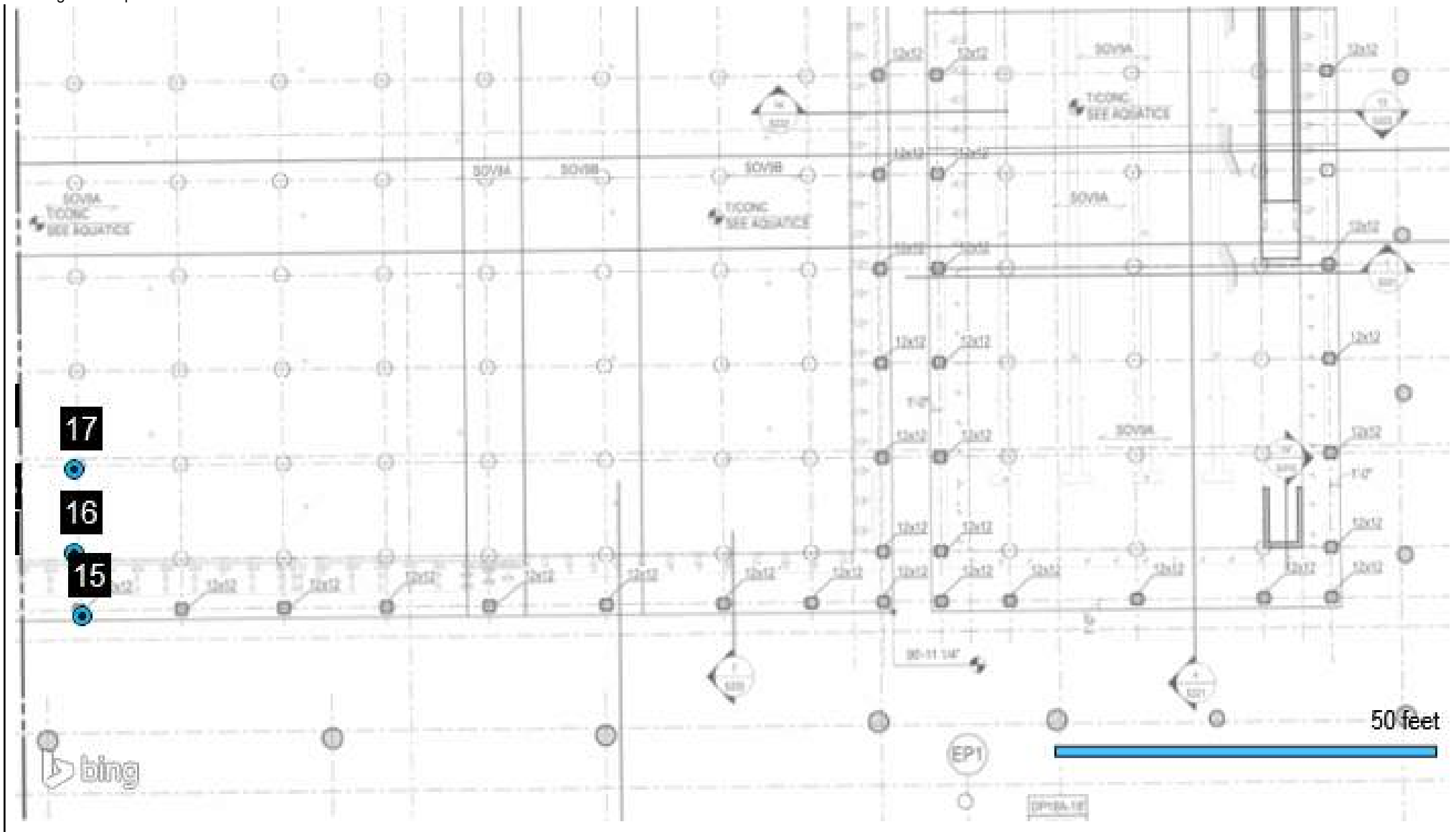
10/09/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0072

Service Date:

10/09/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0072

Service Date: 10/09/23

Report Date: 10/12/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0076
Service Date: 10/10/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders

The construction documents referenced for this observation include: Site plans dated 07/21/2023

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	22

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0075
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Alex Palko

Reported To:

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0076
Service Date: 10/10/23
Report Date: 10/12/23
Task: Drilled Piers



Client
City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project
Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFL/PF13	PFK/PF13	PFJ/PF13	PFL/PF13	PFK/PF14	PFJ/PF14
	Pier Type		DP18A	DP18A	DP18	DP18A	DP18A	DP18
	Start Date		10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
	End Date		10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		91.00'	91.00'	91.00'	91.00'	91.00'	91.00'
	Top of concrete, B		91.19'	91.19'	91.19'	91.19'	91.19'	91.19'
	Top of bedrock, C = (A-F)		88.00'	88.00'	87.00'	88.00'	88.00'	88.00'
	Estimated bedrock elevation		3-4'	3-4'	3-4'	3-4'	3-4'	3-4'
	Bottom of pier, D = (A-E)		65.00'	65.70'	65.70'	65.50'	65.70'	65.60'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		26.00'	25.30'	25.30'	25.50'	25.30'	25.40'
	Overburden thickness (ft), F		3.00'	3.00'	4.00'	3.00'	3.00'	3.00'
	Total pier length (ft)	Actual (B-D)	26.19'	25.49'	25.49'	25.69'	25.49'	25.59'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	23.00'	22.30'	21.30'	22.50'	22.30'	22.40'
Required		10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		(8) #6	(8) #6	(1) #10	(8) #6	(8) #6	(1) #10
	Reinforcing ties and spacing		#4 @ 12"	#4 @ 12"	NA	#4 @ 12"	#4 @ 12"	NA
	Total reinforcing length (ft)		26.00'	26.00'	26.75'	26.00'	26.00'	26.75'
	Length of pier reinforcing above conc. (ft)		1.00'	1.00'	1.75'	1.00'	1.00'	1.75'
	Dowels and placement method		(6) #6	(6) #6	(2) #6	(2) #6	(2) #6	(2) #6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 @6"	Top #4 @6"		Top #4 @6"	Top #4 @6"	
	Geotechnical Report No.:							

Services: Drilled Pier Observation
Terracon Rep: Alex Palko
Reported To:
Contractor: Saunders Construction
Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0076
Service Date: 10/10/23
Report Date: 10/12/23
Task: Drilled Piers


10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PF7/PFG	PF8/PFG	PF8/PFH	PF9/PFG	PF9/PFH	PF10/PFG
	Pier Type		DP18	DP18	DP18	DP18	DP18	DP18
	Start Date		10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
	End Date		10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	18
	Ground surface, A		88.30'	91.36'	91.27'	91.19'	91.19'	91.19'
	Top of concrete, B		89.30'	91.19'	91.19'	91.19'	91.19'	91.19'
	Top of bedrock, C = (A-F)		85.30'	88.36'	88.27'	88.19'	88.19'	88.19'
	Estimated bedrock elevation		3-4'	3-4'	3-4'	3-4'	3-4'	3-4'
	Bottom of pier, D = (A-E)		62.60'	65.66'	65.97'	65.69'	65.69'	65.79'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
Calculations	Total depth drilled (ft), E		25.70'	25.70'	25.30'	25.50'	25.50'	25.40'
	Overburden thickness (ft), F		3.00'	3.00'	3.00'	3.00'	3.00'	3.00'
	Total pier length (ft)	Actual (B-D)	26.70'	25.53'	25.22'	25.50'	25.50'	25.40'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	22.70'	22.70'	22.30'	22.50'	22.50'	22.40'
		Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		(1) #10	(1) #10	(1) #10	(1) #10	(1) #10	(1) #10
	Reinforcing ties and spacing		NA	NA	NA	NA	NA	NA
	Total reinforcing length (ft)		26.75'	26.75'	26.75'	26.75'	26.75'	26.75'
	Length of pier reinforcing above conc. (ft)		1.75'	1.75'	1.75'	1.75'	1.75'	1.75'
	Dowels and placement method		(2) #6	(2) #6	(2) #6	(2) #6	(2) #6	(2) #6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:							
	Geotechnical Report No.:		0					

Services: Drilled Pier Observation

Terracon Rep: Alex Palko

Reported To:

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0076
Service Date: 10/10/23
Report Date: 10/12/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

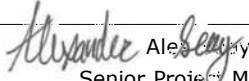
Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PF10/PFH	PF11/PFG	PF12/PFF	PF12/PFG	PF14/PFD	PF14/PFE
	Pier Type		DP18A	DP18A	DP18	DP18	DP18	DP18
	Start Date		10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
	End Date		10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	18
	Ground surface, A		91.19'	91.19'	91.19'	91.19'	91.19'	91.19'
	Top of concrete, B		91.19'	91.19'	91.19'	91.19'	91.19'	91.19'
	Top of bedrock, C = (A-F)		88.19'	88.19'	88.19'	88.19'	88.19'	88.19'
	Estimated bedrock elevation		3-4'	3-4'	3-4'	3-4'	3-4'	3-4'
	Bottom of pier, D = (A-E)		65.49'	65.49'	65.89'	65.69'	65.69'	65.79'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
Calculations	Total depth drilled (ft), E		25.70'	25.70'	25.30'	25.50'	25.50'	25.40'
	Overburden thickness (ft), F		3.00'	3.00'	3.00'	3.00'	3.00'	3.00'
	Total pier length (ft)	Actual (B-D)	25.70'	25.70'	25.30'	25.50'	25.50'	25.40'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	22.70'	22.70'	22.30'	22.50'	22.50'	22.40'
		Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		No	No	No	No	No	No
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		(1) #10	(1) #10	(1) #10	(1) #10	(1) #10	(1) #10
	Reinforcing ties and spacing		NA	NA	NA	NA	NA	NA
	Total reinforcing length (ft)		26.75'	26.75'	26.75'	26.75'	26.75'	26.75'
	Length of pier reinforcing above conc. (ft)		1.75'	1.75'	1.75'	1.75'	1.75'	1.75'
	Dowels and placement method		(2) #6	(2) #6	(2) #6	(2) #6	(2) #6	(2) #6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:							
Geotechnical Report No.:			0					

Services: Drilled Pier Observation
Terracon Rep: Alex Palko
Reported To:
Contractor: Saunders Construction
Report Distribution
See attached distribution list.

Reviewed By:


Alexander Sanyal
Senior Project Manager

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Report Number: 25231103.0076
Service Date: 10/10/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFF/PF13	PFF/PF14	PF16/PFB	PF15/PFB		
	Pier Type	DP18	DP18	DP18A	DP18A		
	Start Date	10/10/2023	10/10/2023	10/10/2023	10/10/2023		
	End Date	10/10/2023	10/10/2023	10/10/2023	10/10/2023		
Elevations (ft)	Pier Diameter (inches)	18	18	18	18		
	Ground surface, A	91.00'	91.00'	91.00'	91.00'		
	Top of concrete, B	91.19'	91.19'	91.58'	91.19'		
	Top of bedrock, C = (A-F)	88.00'	88.00'	84.00'	85.00'		
	Estimated bedrock elevation	3-4'	3-4'	3-4'	3-4'		
	Bottom of pier, D = (A-E)	65.70'	65.40'	65.80'	66.00'		
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone		
	Total depth drilled (ft), E	25.30'	25.60'	25.20'	25.00'		
	Overburden thickness (ft), F	3.00'	3.00'	7.00'	6.00'		
	Total pier length (ft) Actual (B-D)	25.49'	25.79'	25.78'	25.19'		
	Required	25.00'	25.00'	25.00'	25.00'		
	Penetration (ft) Actual (C-D)	22.30'	22.60'	18.20'	19.00'		
Groundwater	Required	10.00'	10.00'	10.00'	10.00'		
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A		
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A		
	Casing required?	No	No	No	No		
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A		
	Casing diameter (in)	N/A	N/A	N/A	N/A		
Reinforcing	No. and size of bars	(1) #10	(1) #10	(8) #6	(8) #6		
	Reinforcing ties and spacing	N/A	N/A	#4 @ 12"	#4 @ 12"		
	Total reinforcing length (ft)	26.75'	26.75'	26.00'	26.00'		
	Length of pier reinforcing above conc. (ft)	1.75'	1.75'	1.00'	1.00'		
	Dowels and placement method	(2) #6	(2) #6	(6) #6	(6) #6		
Miscellaneous	Plumbness	Actual <1%	<1%	<1%	<1%		
		Spec. <1%	<1%	<1%	<1%		
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings		
Comments:				Top #4 @6"	Top #4 @6"		
Geotechnical Report No.:							

Services: Drilled Pier Observation

Terracon Rep: Alex Palko

Reported To:

Contractor: Saunders Construction

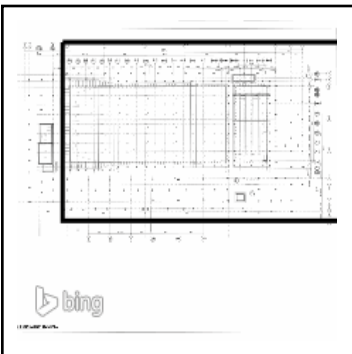
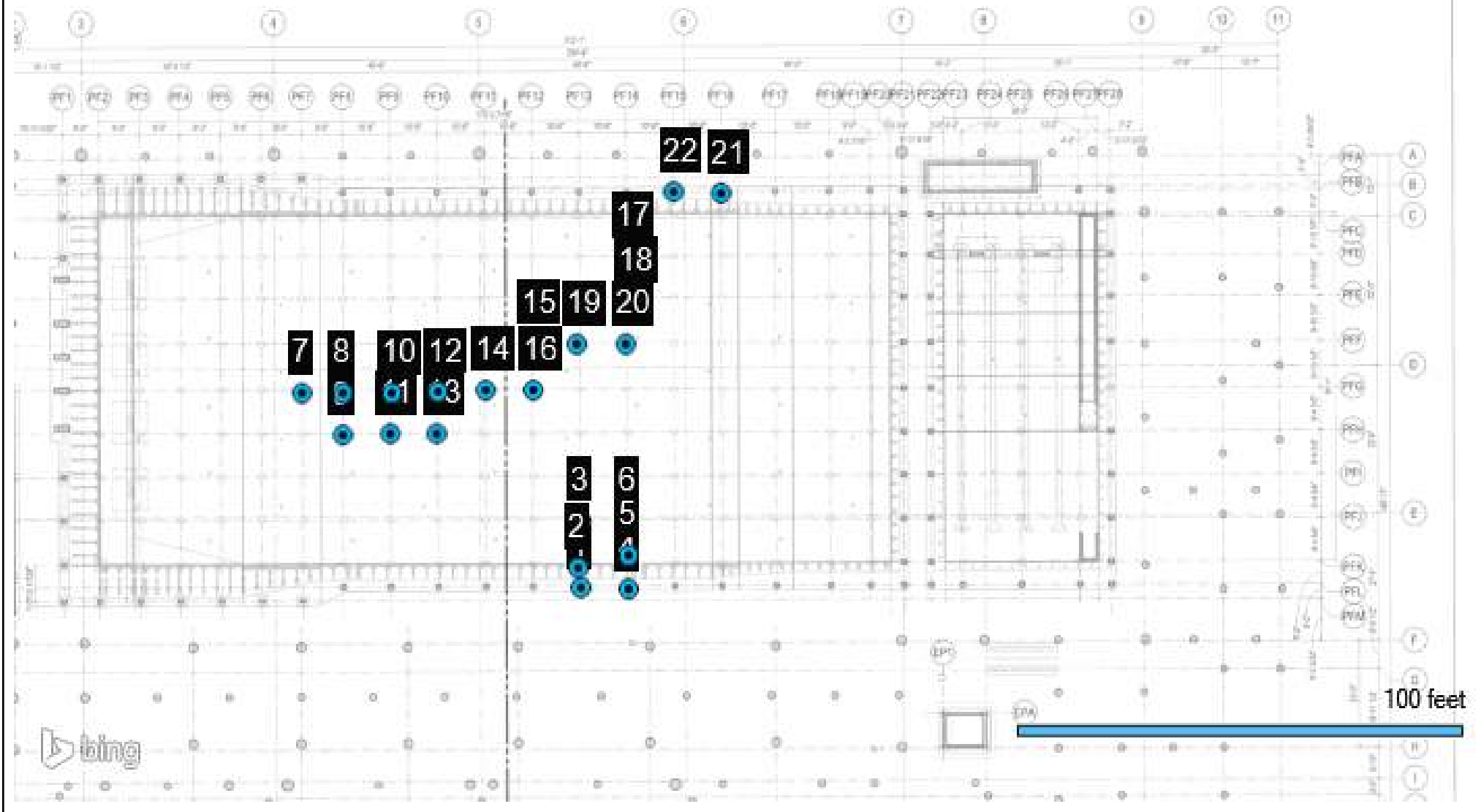
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Ale
Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- ▲ Retested / Accepted
- ▲ ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0076

Service Date:

10/10/2023

Employee:

Palko, Alex

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0076

Service Date: 10/10/23

Report Date: 10/12/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0080
Service Date: 10/11/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders Construction.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drillrig
Concrete placement method	Tremie Pipe
Number of piers installed today	19

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0078
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0080
Service Date: 10/11/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFC.0 X PF16.0	PFC.0 X PF15.0	PFD.0 X PF16.0	PFD.0 X PF15.0	PFE.0 X PF16.0	PFE.0 X PF15.0
	Pier Type		DP18A	DP18A	DP1	DP18	DP18	DP18
	Start Date		10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023
	End Date		10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	18
	Ground surface, A		93.83'	94.00'	93.83'	94.00'	93.83'	94.00'
	Top of concrete, B		93.83'	94.00'	93.83'	94.00'	93.83'	94.00'
	Top of bedrock, C = (A-F)		89.83'	90.00'	89.83'	90.00'	89.83'	90.00'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		68.50'	68.75'	68.50'	68.58'	68.75'	68.83'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.33'	25.25'	25.33'	25.42'	25.08'	25.17'
	Overburden thickness (ft), F		4.00'	4.00'	4.00'	4.00'	4.00'	4.00'
	Total pier length (ft)	Actual (B-D)	25.33'	25.25'	25.33'	25.42'	25.08'	25.17'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	21.33'	21.25'	21.33'	21.42'	21.08'	21.17'
Required		10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	8#6	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)		25.67'	25.75'	25.67'	26.00'	25.50'	25.67'
	Length of pier reinforcing above conc. (ft)		1.00'	1.00'	1.00'	1.00'	1.00'	1.00'
	Dowels and placement method		6#6	6#6	2#6	2#6	2#6	2#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	N/A	N/A	
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023						

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0080
Service Date: 10/11/23
Report Date: 10/12/23
Task: Drilled Piers


10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

Location		PFF.0 X PF15.0	PFH.0 X PF11.0	PFH.0 X PF12.0	PFG.0 X PF13.0	PFG.0 X PF13.0	PFG.0 X PF14.0	
General	Pier Type	DP18	DP18	DP18	DP18	DP18	DP18	
	Start Date	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	
	End Date	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	
	Pier Diameter (inches)	18	18	18	18	18	18	
Elevations (ft)	Ground surface, A	91.92'	91.17'	91.17'	91.17'	91.17'	91.17'	
	Top of concrete, B	91.92'	91.17'	91.17'	91.17'	91.17'	91.17'	
	Top of bedrock, C = (A-F)	87.92'	87.17'	87.17'	87.17'	87.17'	87.17'	
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A	
Calculations	Bottom of pier, D = (A-E)	66.75'	65.84'	65.42'	65.17'	65.50'	65.67'	
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	
	Total depth drilled (ft), E	25.17'	25.33'	25.75'	26.00'	25.67'	25.50'	
	Overburden thickness (ft), F	4.00'	4.00'	4.00'	4.00'	4.00'	4.00'	
Groundwater	Total pier length (ft)	Actual (B-D)	25.17'	25.33'	25.75'	26.00'	25.67'	25.50'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	21.17'	21.33'	21.75'	22.00'	21.67'	21.50'
		Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
Reinforcing	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A	
	Casing required?	NO	NO	NO	NO	NO	NO	
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A	
Miscellaneous	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A	
	No. and size of bars	1#10	1#10	1#10	1#10	1#10	1#10	
	Reinforcing ties and spacing	N/A	N/A	N/A	N/A	N/A	N/A	
	Total reinforcing length (ft)	25.67'	25.83'	26.33'	26.50'	26.25'	26.00'	
	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.00'	1.00'	1.00'	1.00'	
	Dowels and placement method	2#6	2#6	2#6	2#6	2#6	2#6	
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
Comments:		N/A	N/A	N/A	N/A	N/A	N/A	
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023						

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction
Report Distribution
See attached distribution list.

Reviewed By: Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0080
Service Date: 10/11/23
Report Date: 10/12/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFH.0 X PF14.0	PFG.0 X PF15.0	PFH.0 X PF15.0	PFB.0 X PF17.0	PFC.0 X PF17.0	PFD.0 X PF17.-
	Pier Type		DP18	DP18	DP18	DP18A	DP18A	DP18A
	Start Date		10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023
	End Date		10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	18
	Ground surface, A		91.17'	91.17'	91.17'	94.17'	94.17'	94.17'
	Top of concrete, B		91.17'	91.17'	91.17'	94.17'	94.17'	94.17'
	Top of bedrock, C = (A-F)		87.17'	87.17'	87.17'	88.17'	88.17'	88.17'
Calculations	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		65.75'	65.59'	65.92'	68.50'	68.50'	68.92'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.42'	25.58'	25.25'	25.67'	25.67'	25.25'
Groundwater	Overburden thickness (ft), F		4.00'	4.00'	4.00'	6.00'	6.00'	6.00'
	Total pier length (ft)	Actual (B-D)	25.42'	25.58'	25.25'	25.67'	25.67'	25.25'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	21.42'	21.58'	21.25'	19.67'	19.67'	19.25'
Required		10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Reinforcing	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
Miscellaneous	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars		1#10	1#10	1#10	8#6	8#6	1#10
	Reinforcing ties and spacing		N/A	N/A	N/A	#4 at 12"	#4 at 12"	N/A
	Total reinforcing length (ft)		26.00'	26.17'	25.75'	26.25'	26.25'	25.75'
	Length of pier reinforcing above conc. (ft)		1.00'	1.00'	1.00'	1.00'	1.00'	1.00'
	Dowels and placement method		2#6	2#6	2#6	6#6	6#6	2#7
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Shear Rings/Roughening			Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
Comments:			N/A	N/A	N/A	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
Geotechnical Report No.:			Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0080
Service Date: 10/11/23
Report Date: 10/12/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFE.0 X PF17.0					
	Pier Type	DP18					
	Start Date	10/11/2023					
	End Date	10/11/2023					
Elevations (ft)	Pier Diameter (inches)	18					
	Ground surface, A	91.17'					
	Top of concrete, B	91.17'					
	Top of bedrock, C = (A-F)	87.17'					
	Estimated bedrock elevation	N/A					
	Bottom of pier, D = (A-E)	65.84'					
	Supporting stratum	sandstone					
Calculations	Total depth drilled (ft), E	25.33'					
	Overburden thickness (ft), F	4.00'					
	Total pier length (ft) Actual (B-D)	25.33'					
	Required	25.00'					
	Penetration (ft) Actual (C-D)	21.33'					
Groundwater	Required	10.00'					
	Groundwater depth (ft), G	N/A					
	Elevation (ft), (A-G)	N/A					
	Casing required?	NO					
	Casing length (ft) / Cased Depth (ft)	N/A					
	Casing diameter (in)	N/A					
	No. and size of bars	1#10					
	Reinforcing ties and spacing	N/A					
	Total reinforcing length (ft)	23.75'					
	Length of pier reinforcing above conc. (ft)	1.00'					
Reinforcing	Dowels and placement method	N/A					
	Plumbness Actual	<1%					
	Spec.	<1%					
	Shear Rings/Roughening	Shear Rings					
	Comments:	N/A					
Miscellaneous	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

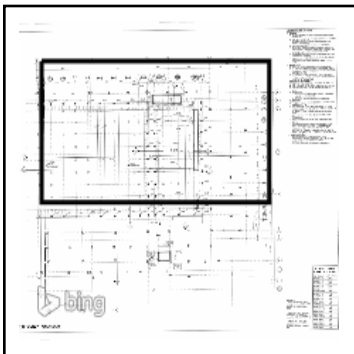
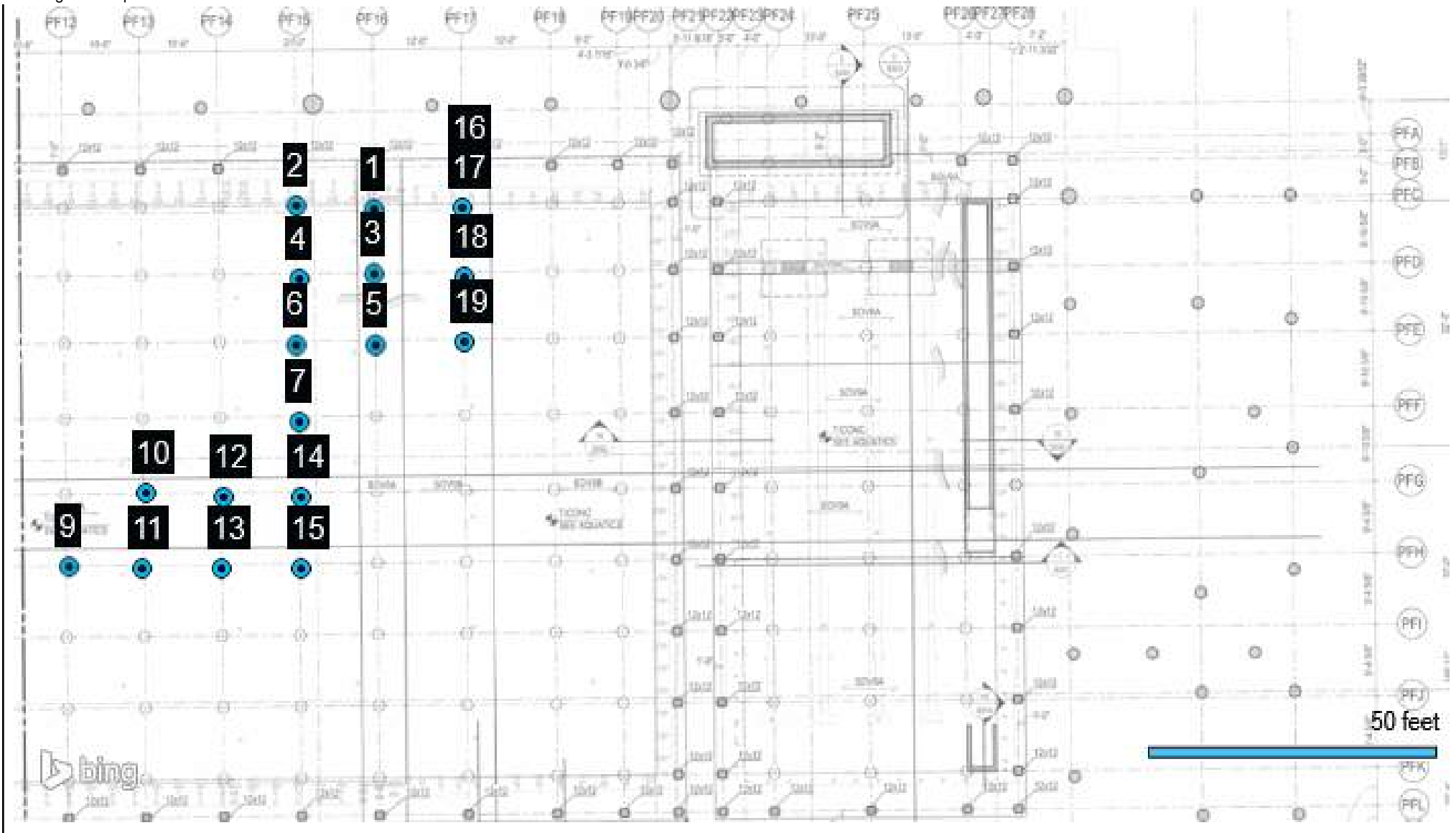
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Alejo
 Senior Project Manager

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- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd Wheat Ridge, CO
 N 80033-1729
 303-423-3300 terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0080

Service Date:

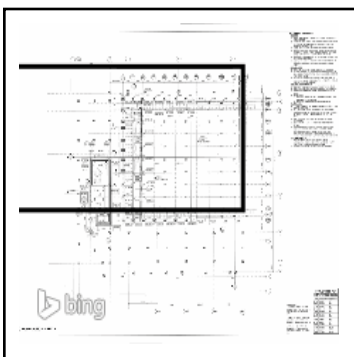
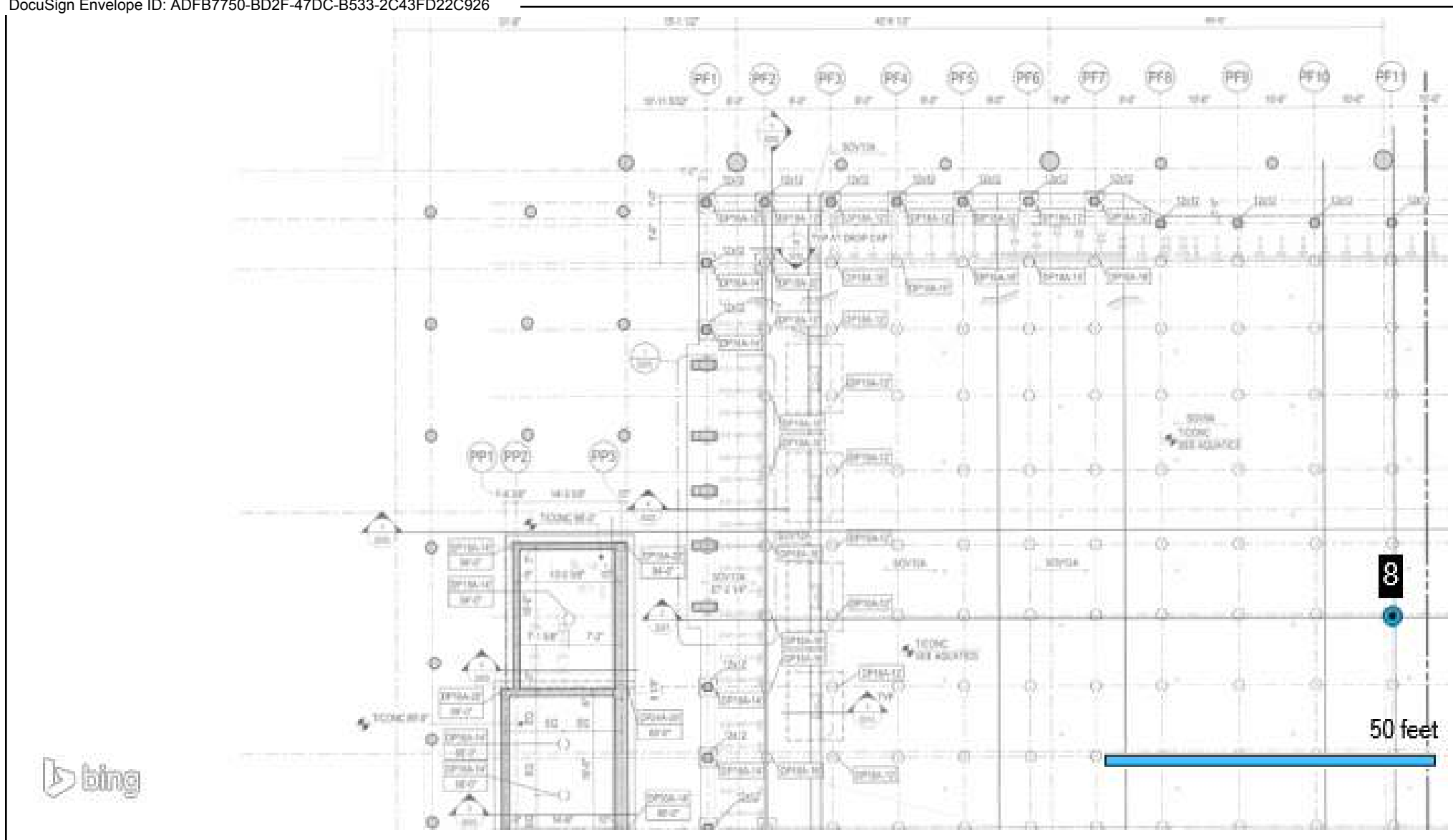
10/11/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0080

Service Date:

10/11/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0080

Service Date: 10/11/23

Report Date: 10/12/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Casey Reiter

(1) Saunders Construction, Inc (CO), Erika Pierce

(1) Saunders Construction, Inc (CO), Guillermo Ramos

(1) Saunders Construction, Inc (CO), Juan Vazquez

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Justin Cooper

(1) Saunders Construction, Inc (CO), Kevin Ramos

(1) Saunders Construction, Inc (CO), Oliver Deck

(1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0084
Service Date: 10/12/23
Report Date: 10/16/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders Construction.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	23

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0082
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Report Number: 25231103.0084
Service Date: 10/12/23
Report Date: 10/16/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFF.0 X PF16.0	PFG.0 X PF16.0	PFH.0 X PF16.0	PFF.0 X PF17.0	PFG.0 X PF17.0	PFH.0 X PFH.0
	Pier Type	DP18	DP18	DP18	DP18	DP18	DP18
	Start Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
	End Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	93.83'	93.83'	93.83'	94.17'	94.17'	94.17'
	Top of concrete, B	93.83'	93.83'	93.83'	94.17'	94.17'	94.17'
	Top of bedrock, C = (A-F)	89.83'	89.83'	89.83'	88.17'	88.17'	88.17'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	68.00'	68.08'	68.50'	69.00'	68.84'	68.59'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.83'	25.75'	25.33'	25.17'	25.33'	25.58'
Groundwater	Overburden thickness (ft), F	4.00'	4.00'	4.00'	6.00'	6.00'	6.00'
	Total pier length (ft) Actual (B-D)	25.83'	25.75'	25.33'	25.17'	25.33'	25.58'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	21.83'	21.75'	21.33'	19.17'	19.33'	19.58'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	1#10	1#10	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing	N/A	N/A	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)	26.50'	26.25'	26.83'	26.67'	26.83'	26.12'
	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.00'	1.00'	1.00'	1.00'
	Dowels and placement method	2#6	2#6	2#6	2#6	2#6	2#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	N/A	N/A	N/A	N/A	N/A	N/A
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0084
Service Date: 10/12/23
Report Date: 10/16/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFB.0 X PF18.0	PFC.0 X PF18.0	PFD.0 X PF18.0	PFE.0 X PF18.0	PFF.0 X PF18.0	PFG.0X PF18.0
	Pier Type	DP18A	DP18A	DP18	DP18	DP18	DP18
	Start Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
	End Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	94.17'	94.17'	94.17'	94.17'	94.17'	94.17'
	Top of concrete, B	94.17'	94.17'	94.17'	94.17'	94.17'	94.17'
	Top of bedrock, C = (A-F)	87.17'	87.17'	87.17'	87.17'	87.17'	87.17'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	69.00'	68.92'	68.65'	68.92'	68.50'	68.75'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.17'	25.25'	25.52'	25.25'	25.67'	25.42'
Groundwater	Overburden thickness (ft), F	7.00'	7.00'	7.00'	7.00'	7.00'	7.00'
	Total pier length (ft) Actual (B-D)	25.17'	25.25'	25.52'	25.25'	25.67'	25.42'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	18.17'	18.25'	18.52'	18.25'	18.67'	18.42'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	8#6	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing	N/A	N/A	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)	25.67'	25.75'	26.00'	25.75'	26.25'	26.00'
	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.00'	1.00'	1.00'	1.00'
	Dowels and placement method	6#6	6#6	N/A	N/A	N/A	N/A
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	N/A	N/A	N/A	N/A
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0084
Service Date: 10/12/23
Report Date: 10/16/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFH.0 X PF18.0	PFB.0 X PF19.0	PFB.0 X PF1.0	PFC.0 X PF21.0	PFC.0 X PF19.0	PFD.0 X PF21.0
	Pier Type	DP18	DP18A	DP18A	DP18A`	DP18A	
	Start Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
	End Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	94.17'	94.17'	94.17'	94.17'	94.17'	94.17'
	Top of concrete, B	94.17'	94.17'	94.17'	94.17'	94.17'	94.17'
	Top of bedrock, C = (A-F)	87.17'	87.17'	87.17'	87.17'	87.17'	87.17'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	68.67'	68.67'	68.84'	68.92'	68.67'	68.59'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.50'	25.50'	25.33'	25.25'	25.50'	25.58'
Groundwater	Overburden thickness (ft), F	7.00'	7.00'	7.00'	7.00'	7.00'	7.00'
	Total pier length (ft) Actual (B-D)	25.50'	25.50'	25.33'	25.25'	25.50'	25.58'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	18.50'	18.50'	18.33'	18.25'	18.50'	18.58'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	1#10	8#6	8#6	8#6	8#6	1#10
	Reinforcing ties and spacing	N/A	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	N/A
	Total reinforcing length (ft)	26.00'	26.00'	25.83'	25.75'	26.00'	25.17'
	Length of pier reinforcing above conc. (ft)	1'	1.00'	1.00'	1.00'	1.00'	1.00'
	Dowels and placement method	6#6	6#6	6#6	6#6	6#6	2#6
	Plumbness						
	Actual	<1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	N/A	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	N/A
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0084
Service Date: 10/12/23
Report Date: 10/16/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFD.0 X PF19.0	PFE.0 X PF21.0	PFE.0 X PF19.0	PFF.0 X PF21.0	PFF.0 X PF19.0	
	Pier Type	DP18	DP18	DP18	DP18	DP18	
	Start Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	
	End Date	10/12/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	
	Pier Diameter (inches)	18	18	18	18	18	
Elevations (ft)	Ground surface, A	92.75'	92.75'	92.75'	92.75'	92.75'	
	Top of concrete, B	92.75'	92.75'	92.75'	92.75'	92.75'	
	Top of bedrock, C = (A-F)	85.75'	85.75'	85.75'	85.75'	85.75'	
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)	67.58'	67.25'	67.42'	67.42'	67.17'	
Calculations	Supporting stratum	Sandstoe	Sandstoe	Sandstoe	Sandstoe	Sandstoe	
	Total depth drilled (ft), E	25.17'	25.50'	25.33'	25.33'	25.58'	
	Overburden thickness (ft), F	7.00'	7.00'	7.00'	7.00'	7.00'	
	Total pier length (ft) Actual (B-D)	25.17'	25.50'	25.33'	25.33'	25.58'	
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	
Groundwater	Penetration (ft) Actual (C-D)	18.17'	18.50'	18.33'	18.33'	18.58'	
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	
	Casing required?	NO	NO	NO	NO	NO	
Reinforcing	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	
	No. and size of bars	1#10	1#10	1#10	1#10	1#10	
	Reinforcing ties and spacing	N/A	N/A	N/A	N/A	N/A	
	Total reinforcing length (ft)	25.67'	26.00'	25.83'	25.83'	26.17'	
Miscellaneous	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.00'	1.00'	1.00'	
	Dowels and placement method	2#6	2#6	2#6	2#6	2#6	
	Plumbness	Actual	<1%	<1%	<1%	<1%	
		Spec.	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
Miscellaneous	Comments:	N/A	N/A	N/A	N/A	N/A	N/A
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

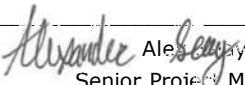
Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

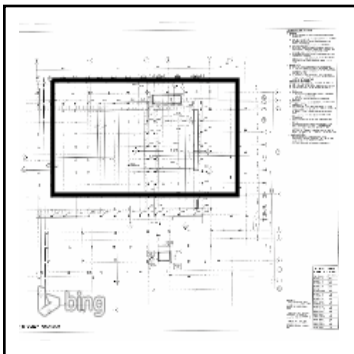
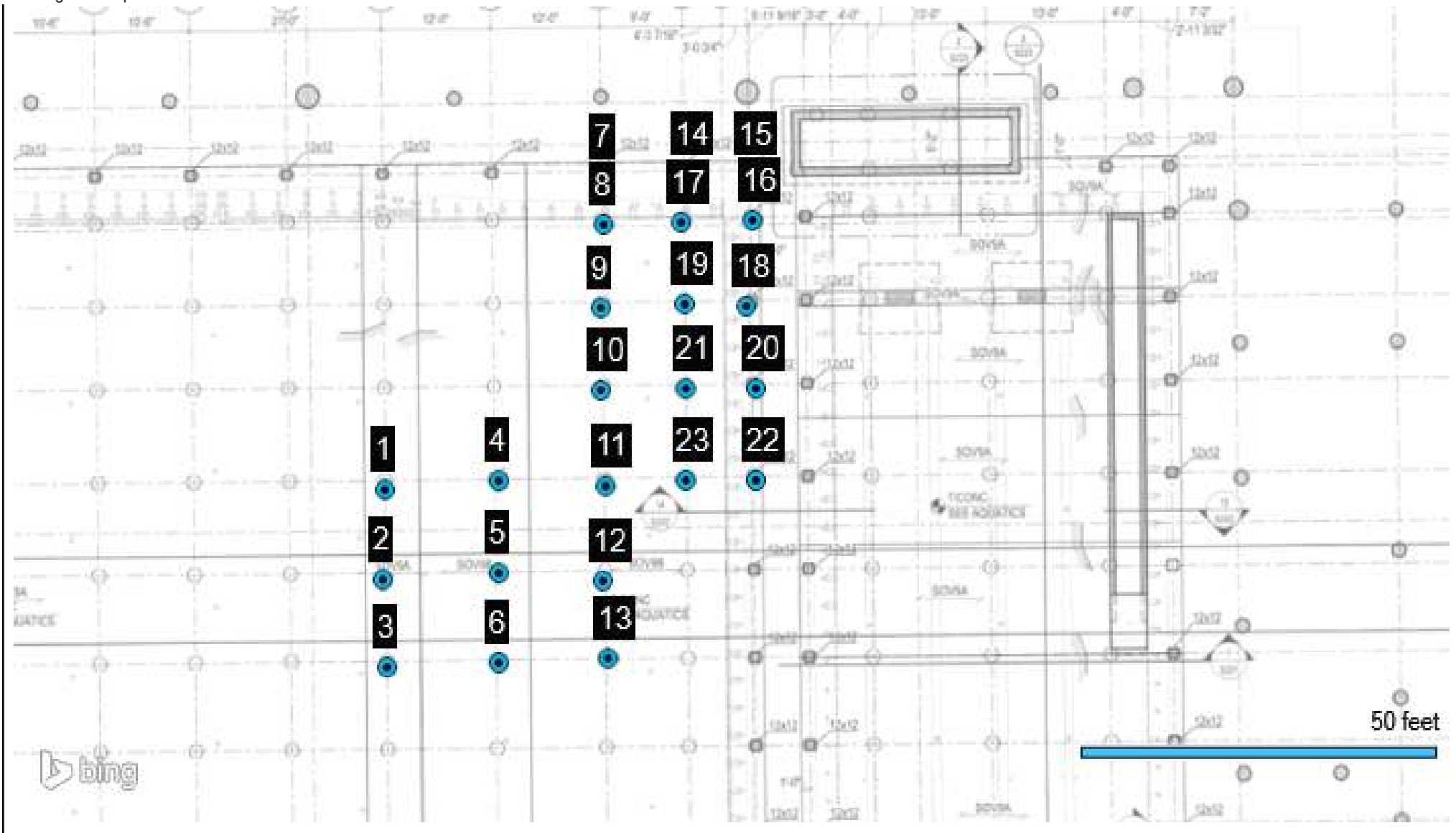
Report Distribution

See attached distribution list.

Reviewed By:


 Alexander Alejandro
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0084

Service Date:

10/12/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0084

Service Date: 10/12/23

Report Date: 10/16/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Casey Reiter

(1) Saunders Construction, Inc (CO), Erika Pierce

(1) Saunders Construction, Inc (CO), Guillermo Ramos

(1) Saunders Construction, Inc (CO), Juan Vazquez

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Justin Cooper

(1) Saunders Construction, Inc (CO), Kevin Ramos

(1) Saunders Construction, Inc (CO), Oliver Deck

(1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0088
Service Date: 10/13/23
Report Date: 10/17/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders Construction.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	20

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0086
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0088
Service Date: 10/13/23
Report Date: 10/17/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFG.0 X PF20	PFG.0 X PF19	PFH.0 X PF19	PFH.0 X PF21.0	PFB.0 X PF22.0	PFC.0 X PF22.0
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023
	End Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023
	Pier Diameter (inches)	18	18	18	18	18	18
Elevations (ft)	Ground surface, A	94.50'	94.50'	94.50'	94.50'	95.17'	94.83'
	Top of concrete, B	94.50'	94.50'	94.50'	94.50'	93.67'	92.92'
	Top of bedrock, C = (A-F)	87.50'	87.50'	87.50'	87.50'	84.17'	83.83'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	69.33'	69.25'	69.00'	69.17'	68.17'	67.83'
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.17'	25.25'	25.50'	25.33'	27.00'	27.00'
	Overburden thickness (ft), F	7.00'	7.00'	7.00'	7.00'	11.00'	11.00'
	Total pier length (ft)	Actual (B-D)	25.17'	25.25'	25.50'	25.33'	25.09'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'
Groundwater	Penetration (ft)	Actual (C-D)	18.17'	18.25'	18.50'	18.33'	16.00'
		Required	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Reinforcing	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	1#10	8#6	1#10	8#6	8#6
	Reinforcing ties and spacing	#4 at 12"	N/A	#4 at 12"	N/A	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	26.75'	26.75'	26.75'	26.75'	26.75'	26.75'
Miscellaneous	Length of pier reinforcing above conc. (ft)	2.25'	1.58'	1.67'	2'42"	2.25'	2.25'
	Dowels and placement method	6#6	6#6	6#6	6#6	6#6	6#6
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear rings	Shear rings	Shear rings	Shear rings	Shear rings	Shear rings
Miscellaneous	Comments:	Top #4 at 6"	N/A	Top #4 at 6"	N/A	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0088
Service Date: 10/13/23
Report Date: 10/17/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFB.0 X PF24.0	PFC.0 X PF24.0	PFB.0 X PF25.0	PFC.0 X PF25.0	PFD.0 X PF28.0	PFB.0 X PF26.0
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023
	End Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023
	Pier Diameter (inches)	18	18	18	18	18	18
Elevations (ft)	Ground surface, A	93.00'	93.00'	93.00'	93.00'	93.00'	93.00'
	Top of concrete, B	93.00'	93.00'	93.00'	93.00'	93.00'	93.00'
	Top of bedrock, C = (A-F)	84.00'	84.00'	84.00'	84.00'	84.00'	84.00'
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	65.75'	66.33'	67.75'	67.83'	67.83'	67.58'
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	27.25'	26.67'	25.25'	25.17'	25.17'	25.42'
	Overburden thickness (ft), F	9.00'	9.00'	9.00'	9.00'	9.00'	9.00'
	Total pier length (ft)	Actual (B-D) 27.25'	26.67'	25.25'	25.17'	25.17'	25.42'
	Penetration (ft)	Required 25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Groundwater	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars	8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	26.75'	26.75'	26.75'	26.75'	26.75'	26.75'
	Length of pier reinforcing above conc. (ft)	1.75'	1.58'	1.00'	1.33'	1.00'	1.00'
	Dowels and placement method	6#6	6#6	6#6	6#6	6#6	6#6
Miscellaneous	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Spec. <1%	<1%	<1%	<1%	<1%	<1%
	Comments:	Shear rings #4 at 6"	Shear rings #4 at 6"	Shear rings #4 at 6"	Shear rings #4 at 6"	Shear rings #4 at 6"	Shear rings #4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0088
Service Date: 10/13/23
Report Date: 10/17/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFC.0 X PF28	PFC.0 X PF26	PFD.0 X PF28.0	PFE.0 PF28.0	PFF.0 X PF28.0	PFG.0 X PF28.0
	Pier Type	DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023
	End Date	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023	10/13/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	93.00'	92.92'	92.83'	93.42'	93.75'	93.92'
	Top of concrete, B	93.00'	92.92'	92.83'	93.42'	93.75'	93.92'
	Top of bedrock, C = (A-F)	86.00'	85.92'	85.83'	86.42'	86.75'	86.92'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	67.58'	67.84'	67.50'	68.34'	68.17'	68.34'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.42'	25.08'	25.33'	25.08'	25.58'	25.58'
Groundwater	Overburden thickness (ft), F	7.00'	7.00'	7.00'	7.00'	7.00'	7.00'
	Total pier length (ft)	Actual (B-D) 25.42'	25.08'	25.33'	25.08'	25.58'	25.58'
		Required 25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D) 18.42'	18.08'	18.33'	18.08'	18.58'	18.58'
Reinforcing		Required 10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	26.75'	26.75'	26.75'	26.75'	26.75'	27.75'
	Length of pier reinforcing above conc. (ft)	1.58'	1.92'	1.67'	1.92'	1.42'	1.42'
	Dowels and placement method	6#6	6#6	6#6	6#6	6#6	6#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
		Spec. <1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0088
Service Date: 10/13/23
Report Date: 10/17/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFH.0 X PF28.0	PFH.0 X PF26.0			
	Pier Type	DP18A	DP18			
	Start Date	10/13/2023	10/13			
	End Date	10/13/2023	10/13/2023			
Elevations (ft)	Pier Diameter (inches)	18	18			
	Ground surface, A	93.92'	93.92'			
	Top of concrete, B	93.92'	93.92'			
	Top of bedrock, C = (A-F)	86.92'	86.92'			
	Estimated bedrock elevation	N/A	N/A			
	Bottom of pier, D = (A-E)	68.58'	68.25'			
	Supporting stratum	Sandstone	Sandstone			
Calculations	Total depth drilled (ft), E	25.33'	25.67'			
	Overburden thickness (ft), F	7.00'	7.00'			
	Total pier length (ft)	Actual (B-D)	25.33'	25.67'		
		Required	25.00'	25.00'		
	Penetration (ft)	Actual (C-D)	18.33'	18.67'		
		Required	10.00'	10.00'		
Groundwater	Groundwater depth (ft), G	N/A	N/A			
	Elevation (ft), (A-G)	N/A	N/A			
	Casing required?	NO	NO			
	Casing length (ft) / Cased Depth (ft)	N/A	N/A			
	Casing diameter (in)	N/A	N/A			
Reinforcing	No. and size of bars	8#6	1#10			
	Reinforcing ties and spacing	#4 at 12"	N/A			
	Total reinforcing length (ft)	26.75'	26.75'			
	Length of pier reinforcing above conc. (ft)	1.67'	1.33'			
	Dowels and placement method	6#6	2#6			
	Plumbness	Actual	<1%	<1%		
Miscellaneous		Spec.	<1%	<1%		
	Shear Rings/Roughening	Shear Rings	Shear Rings			
	Comments:	Top #4 at 6"	N/A			
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023				

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

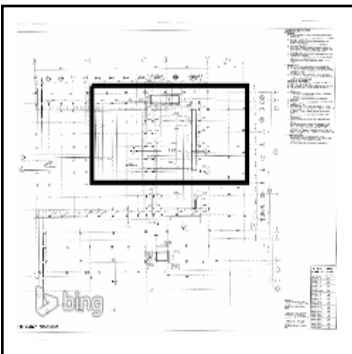
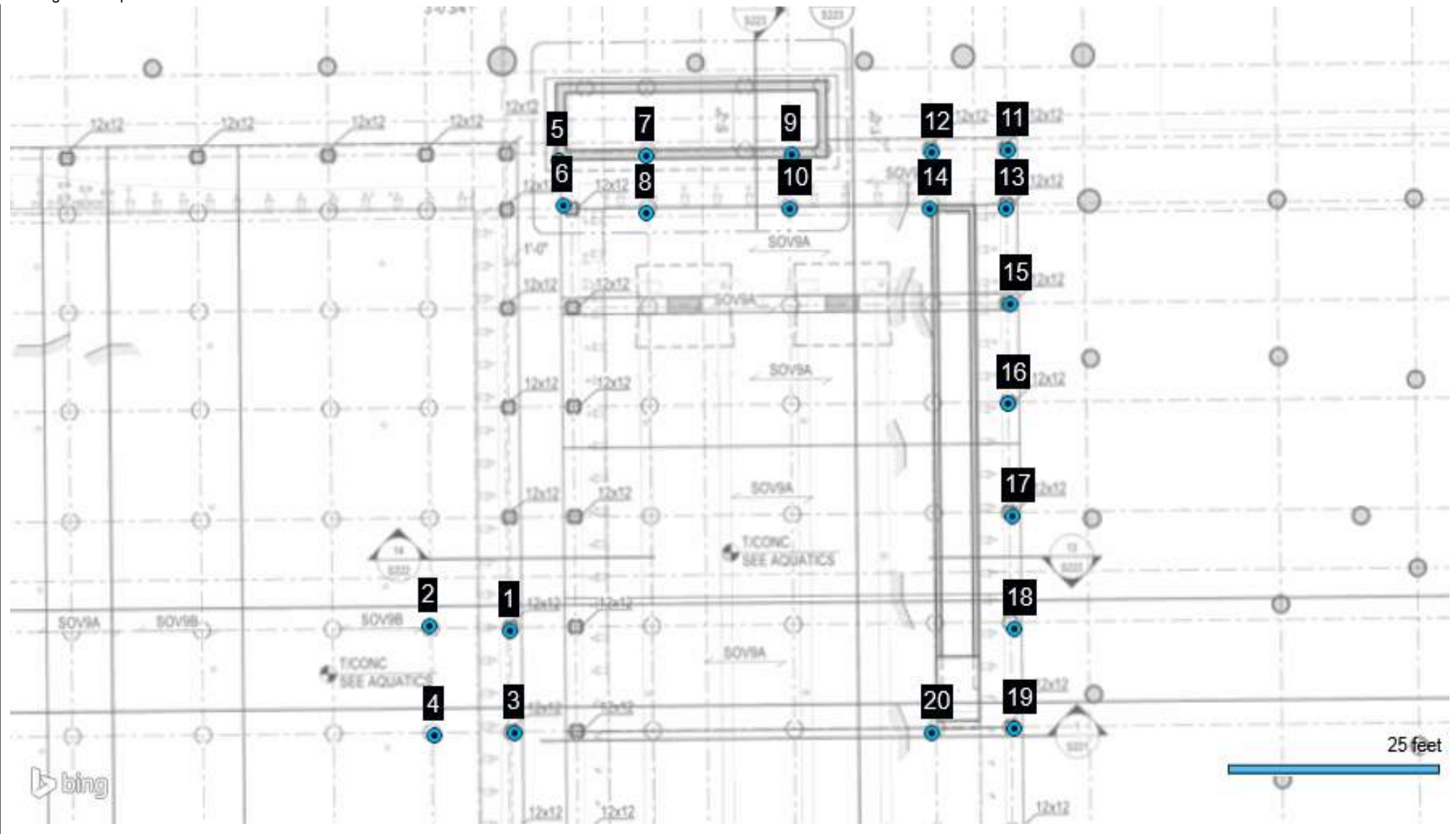
Report Distribution

See attached distribution list.

Reviewed By:


 Senior Project Manager

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- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0088

Service Date:

10/13/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0088

Service Date: 10/13/23

Report Date: 10/17/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

(1) City of Arvada CO, Kim Vagher

(1) Saunders Construction, Inc (CO), Casey Reiter

(1) Saunders Construction, Inc (CO), Erika Pierce

(1) Saunders Construction, Inc (CO), Guillermo Ramos

(1) Saunders Construction, Inc (CO), Juan Vazquez

(1) Saunders Construction, Inc (CO), Julio Gonzalez

(1) Saunders Construction, Inc (CO), Justin Cooper

(1) Saunders Construction, Inc (CO), Kevin Ramos

(1) Saunders Construction, Inc (CO), Oliver Deck

(1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0091
Service Date: 10/16/23
Report Date: 10/17/23
Task: Drilled Piers

10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders Construction.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated -3/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	17

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0090 and .0092
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT**Report Number:** 25231103.0091**Service Date:** 10/16/23**Report Date:** 10/17/23**Task:** Drilled Piers

10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Client

City of Arvada CO

Attn: Kim Vagher

8101 Ralston Rd

PO Box 8101

Arvada, CO 80002-2439

Project

Meyers Pool Replacement

7904 Carr Drive

Arvada, CO 80005

Project No. 25231103

General	Location		PFD.0 X PF24.0	PFD.0 X PF25	PFD.0 X PF26.0	PFE.0 X PF26.0	PFF.0 X PF26.0	PFG.0 X PF26.0
	Pier Type		DP18	PDP18	DP18	DP18	DP18	DP18
	Start Date		10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
	End Date		10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		93.00'	93.00'	93.00'	93.00'	93.00'	93.00'
	Top of concrete, B		93.00'	93.00'	93.00'	93.00'	93.00'	93.00'
	Top of bedrock, C = (A-F)		84.00'	84.00'	84.00'	84.00'	84.00'	84.00'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		67.83'	67.83'	67.67'	67.50'	67.75'	67.67'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.17'	25.17'	25.33'	25.50'	25.25'	25.33'
	Overburden thickness (ft), F		9.00'	9.00'	9.00'	9.00'	9.00'	9.00'
	Total pier length (ft)	Actual (B-D)	25.17'	25.17'	25.33'	25.50'	25.25'	25.33'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Penetration (ft)	Actual (C-D)	16.17'	16.17'	16.33'	16.50'	16.25'	16.33'	
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		1#10	1#10	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing		N/A	N/A	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)		26.42'	26.42'	26.33'	26.25'	26.00'	26.33'
	Length of pier reinforcing above conc. (ft)		1.00'	1.00'	1.00'	1.00'	1.00'	1.00'
	Dowels and placement method		2#6	2#6	2#6	2#6	2#6	2#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:							
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation**Terracon Rep:** Antonio C. Chavez**Reported To:** Erika Pierce with Saunders Construction**Contractor:** Saunders Construction**Report Distribution**

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT**Report Number:** 25231103.0091**Service Date:** 10/16/23**Report Date:** 10/17/23**Task:** Drilled Piers

10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Client

City of Arvada CO

Attn: Kim Vagher

8101 Ralston Rd

PO Box 8101

Arvada, CO 80002-2439

Project

Meyers Pool Replacement

7904 Carr Drive

Arvada, CO 80005

Project No. 25231103

General	Location		PFH.0 X PF22.0	PFG.0 X PF22.0	PFD.0 X PF22.0	PFE.0 X PF22.0	PFE.0 X PF24	PFE.0 X PF25.0
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18	DP18
	Start Date		10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
	End Date		10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		95.92'	95.92'	95.75'	95.92'	93.00'	93.00'
	Top of concrete, B		93.67'	93.67'	93.67'	93.67'	93.00'	93.00'
	Top of bedrock, C = (A-F)		84.92'	84.92'	84.75'	84.92'	84.00'	84.00'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		68.67'	68.59'	68.58'	68.67'	67.58'	67.58'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		27.25'	27.33'	27.17'	27.25'	25.42'	25.42'
	Overburden thickness (ft), F		11.00'	11.00'	11.00'	11.00'	9.00'	9.00'
	Total pier length (ft)	Actual (B-D)	25.00'	25.08'	25.09'	25.00'	25.42'	25.42'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Groundwater	Penetration (ft)	Actual (C-D)	16.25'	16.33'	16.17'	16.25'	16.42'	16.42'
		Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
Reinforcing	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars		8#6	8#6	8#6	8#6	1#10	1#10
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12'	#4 at 12'	N/A	N/A
	Total reinforcing length (ft)		26.75'	26.75'	26.75'	2.00'	26.75'	26.75'
Miscellaneous	Length of pier reinforcing above conc. (ft)		2.00'	2.00'	2.00'	2.25'	1.00'	1.00'
	Dowels and placement method		6#6	6#6	6#6	6#6	2#6	2#6
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
Miscellaneous	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	N/A	N/A
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation**Terracon Rep:** Antonio C. Chavez**Reported To:** Erika Pierce with Saunders Construction**Contractor:** Saunders Construction**Report Distribution**

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0091
Service Date: 10/16/23
Report Date: 10/17/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		PFF.0 X PF22.0	PFF.0 X PF24.0	PFG.0 X PF24.0	PFH.0 X PF24.0	PFF.0 X PF25.0	
	Pier Type		DP18A	DP18	DP18	DP18	DP18	
	Start Date		10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	
	End Date		10/16/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023	
	Pier Diameter (inches)		18	18	18	18	18	
Elevations (ft)	Ground surface, A		95.92'	93.00'	93.00'	93.00'	93.00'	
	Top of concrete, B		93.67'	93.00'	93.00'	93.00'	93.00'	
	Top of bedrock, C = (A-F)		84.92'	84.00'	84.00'	84.00'	84.00'	
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)		68.59'	67.67'	67.75'	67.25'	67.42'	
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	
	Total depth drilled (ft), E		27.33'	25.33'	25.25'	25.75'	25.58'	
	Overburden thickness (ft), F		11.00'	9.00'	9.00'	9.00'	9.00'	
	Total pier length (ft)	Actual (B-D)	25.08'	25.33'	25.25'	25.75'	25.58'	
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	
Groundwater	Penetration (ft)	Actual (C-D)	16.33'	16.33'	16.25'	16.75'	16.58'	
		Required	10.00'	10.00'	10.00'	10.00'	10.00'	
	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	
	Casing required?		NO	NO	NO	NO	NO	
Reinforcing	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	
	No. and size of bars		8#6	1#10	1#10	1#10	1#10	
	Reinforcing ties and spacing		#4 at 12"	N/A	N/A	N/A	N/A	
	Total reinforcing length (ft)		26.75'	26.33'	26.25'	25.75'	26.50'	
Miscellaneous	Length of pier reinforcing above conc. (ft)		1.92'	1.00'	1.00'	1.25'	1.00'	
	Dowels and placement method		6#6	2#6	2#6	2#6	2#6	
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	
		Spec.	<1%	<1%	<1%	<1%	<1%	
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
Miscellaneous	Comments:		Top #4 at 6"	N/A	N/A	N/A	N/A	
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

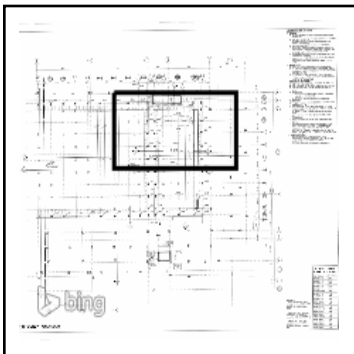
Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0091

Service Date:

10/16/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0091

Service Date: 10/16/23

Report Date: 10/17/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0095
Service Date: 10/17/23
Report Date: 10/18/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders Construction.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205300 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	17

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	N/A	
Concrete was tested	N/A	Refer to report number(s): .0093
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0095
Service Date: 10/17/23
Report Date: 10/18/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFG.0 X PF25.0	PFH.0 X PF25.0	PFL.0 X PF15.0	PFK.0X PF15.0	PFJ.0 X PF15.0	PFL.0 X PF16.0
	Pier Type	DP18	DP18	DP18A	DP18A	DP18	DP18A
	Start Date	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023
	End Date	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	93.00'	93.00'	91.92'	91.92'	91.92'	92.67'
	Top of concrete, B	93.00'	93.00'	91.92'	91.92'	91.92'	91.58'
	Top of bedrock, C = (A-F)	84.00'	84.00'	91.92'	91.92'	91.92'	92.67'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	67.67'	67.50'	66.50'	66.67'	66.84'	66.17'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	25.33'	25.50'	25.42'	25.25'	25.08'	26.50'
Groundwater	Overburden thickness (ft), F	9.00'	9.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft) Actual (B-D)	25.33'	25.50'	25.42'	25.25'	25.08'	25.41'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	16.33'	16.50'	25.42'	25.25'	25.08'	26.50'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	1#10	1#10	8#6	8#6	1#10	8#6
	Reinforcing ties and spacing	N/A	N/A	#4 at 12"	#4 at 12"	N/A	#4 at 12"
	Total reinforcing length (ft)	26.08'	26.25'	26.17'	26.00'	26.00'	26.17'
	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.00'	1.00'	1.17'	1.00'
	Dowels and placement method	2#6	2#6	6#6	6#6	1#10	6#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	N/A	N/A	Top #4 at 6"	Top #4 at 6"	N/A	Top #4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0095
Service Date: 10/17/23
Report Date: 10/18/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		PFK.0 X PF16.0	PFJ.0 X PF16.0	PFL.0 X PF17.0	PFK.0 X PF17.0	PFJ.0 X PF17.0	PFL.0 X PF18.0
	Pier Type		DP18A	DP18	DP18A	DP18A	DP18	DP18A
	Start Date		10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023
	End Date		10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		92.67'	92.67'	95.50'	95.50'	95.50'	95.33'
	Top of concrete, B		91.58'	91.58'	95.17'	95.17'	95.17'	95.17'
	Top of bedrock, C = (A-F)		92.67'	92.67'	91.50'	91.50'	91.50'	91.33'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		66.25'	66.17'	70.08'	70.08'	69.90'	69.83'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		26.42'	26.50'	25.42'	25.42'	25.60'	25.50'
	Overburden thickness (ft), F		0.00'	0.00'	4.00'	4.00'	4.00'	4.00'
	Total pier length (ft)	Actual (B-D)	25.33'	25.41'	25.09'	25.09'	25.27'	25.34'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Penetration (ft)	Actual (C-D)	26.42'	26.50'	21.42'	21.42'	21.60'	21.50'	
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	1#10	8#6	8#6	1#10	8#6
	Reinforcing ties and spacing		#4 at 12"	N/A	#4 at 12"	#4 at 12"	N/A	#4 at 12"
	Total reinforcing length (ft)		26.00'	26.75'	26.00'	26.00'	26.75'	26.08'
	Length of pier reinforcing above conc. (ft)		0.92'	1.58'	1.17'	1.17'	1.75'	1.00'
	Dowels and placement method		6#6	2#6	6#6	6#6	2#6	6#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	N/A	Top #4 at 6"	Top #4 at 6"	N/A	Top #4 at 6"
Geotechnical Report No.:			Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0095
Service Date: 10/17/23
Report Date: 10/18/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFL.0 X PF19.0	PFK.0 X PF18.0	PFK.0 X PF19.0	PFJ.0 X PF19	PFJ.0 X PF18.0	
	Pier Type	DP18A	DP18A	DP18A	DP18	DP18	
	Start Date	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	
	End Date	10/17/2023	10/17/2023	10/17/2023	10/17/2023	10/17/2023	
	Pier Diameter (inches)	18	18	18	18	18	
Elevations (ft)	Ground surface, A	95.17'	95.17'	95.17'	95.17'	95.17'	
	Top of concrete, B	95.17'	95.17'	95.17'	95.17'	95.17'	
	Top of bedrock, C = (A-F)	91.17'	91.17'	91.17'	91.17'	91.17'	
	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	
	Bottom of pier, D = (A-E)	69.84'	69.92'	69.67'	69.59'	69.59'	
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	
	Total depth drilled (ft), E	25.33'	25.25'	25.50'	25.58'	25.58'	
	Overburden thickness (ft), F	4.00'	4.00'	4.00'	4.00'	4.00'	
	Total pier length (ft) Actual (B-D)	25.33'	25.25'	25.50'	25.58'	25.58'	
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	
Groundwater	Penetration (ft) Actual (C-D)	21.33'	21.25'	21.50'	21.58'	21.58'	
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	
	Casing required?	NO	NO	NO	NO	NO	
Reinforcing	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	
	No. and size of bars	8#6	8#6	8#6	1#10	1#10	
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	N/A	N/A	
	Total reinforcing length (ft)	26.08'	26.00'	26.75'	26.75'	26.75'	
Miscellaneous	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.50'	1.42'	1.42'	
	Dowels and placement method	6#6	6#6	6#6	2#6	2#6	
	Plumbness	Actual	<1%	<1%	<1%	<1%	
		Spec.	<1%	<1%	<1%	<1%	
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
Miscellaneous	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	N/A	N/A	
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

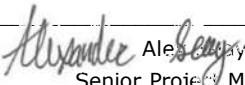
Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

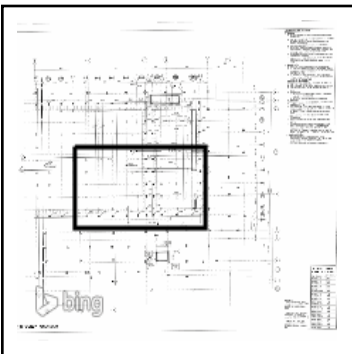
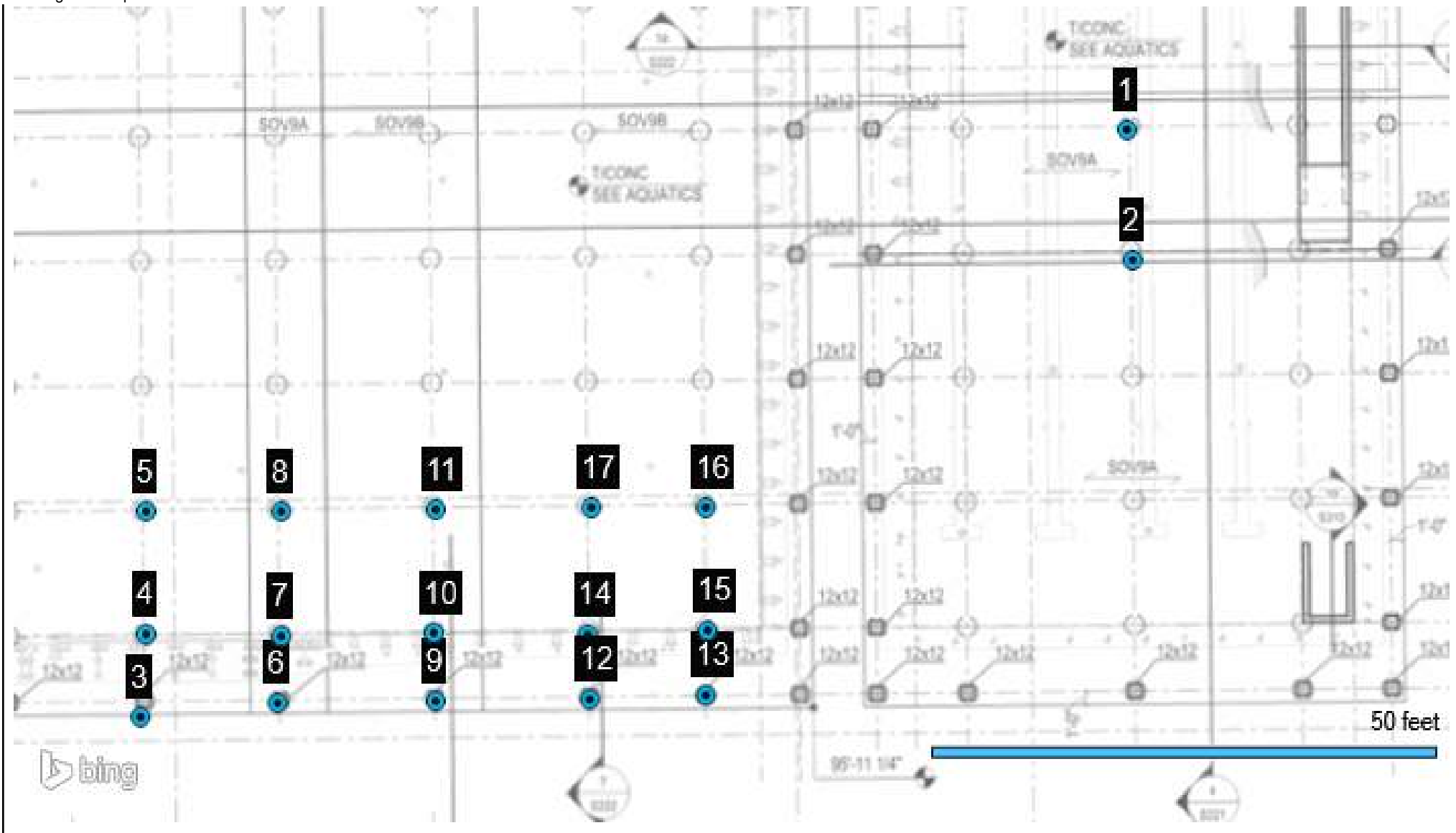
Report Distribution

See attached distribution list.

Reviewed By:


 Alexander Alejandro
 Senior Project Manager

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- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meiers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0095

Service Date:

10/17/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0095

Service Date: 10/17/23

Report Date: 10/18/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0098
Service Date: 10/18/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Justin Cooper with Saunders.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Piradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	20

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0096
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

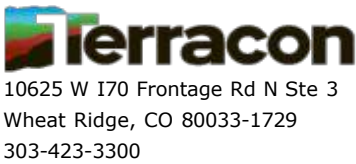
See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0098
Service Date: 10/18/23
Report Date: 10/25/23
Task: Drilled Piers



Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFL.0 X PF21.0	PFL.0 X PF22.0	PFL.0 X PF24.0	PFK.0 X PF21.0	PFK.0 PF22.0	PFK.0 X PF24.0
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date		10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
	End Date		10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	18
	Ground surface, A		94.17'	94.92'	93.00'	94.20'	94.42'	93.00'
	Top of concrete, B		94.20'	93.00'	93.00'	94.17'	93.67'	93.00'
	Top of bedrock, C = (A-F)		85.17'	83.92'	85.00'	85.20'	83.42'	84.00'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		68.34'	67.59'	67.83'	68.03'	67.34'	66.83'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
Calculations	Total depth drilled (ft), E		25.83'	27.33'	25.17'	26.17'	27.08'	26.17'
	Overburden thickness (ft), F		9.00'	11.00'	8.00'	9.00'	11.00'	9.00'
	Total pier length (ft)	Actual (B-D)	25.86'	25.41'	25.17'	26.14'	26.33'	26.17'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	16.83'	16.33'	17.17'	17.17'	16.08'	17.17'
		Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		26.75'	26.75'	26.75'	26.75'	26.75'	26.75'
	Length of pier reinforcing above conc. (ft)		0.33'	0.50'	0.83'	N/A	0.92'	1.00'
	Dowels and placement method		6#6	6#6	6#6	6#6	6#6	2#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	
Geotechnical Report No.:		Terracon report 25205300 dated 03/23/2023						

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT**Report Number:** 25231103.0098**Service Date:** 10/18/23**Report Date:** 10/25/23**Task:** Drilled Piers

10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Client

City of Arvada CO

Attn: Kim Vagher

8101 Ralston Rd

PO Box 8101

Arvada, CO 80002-2439

Project

Meyers Pool Replacement

7904 Carr Drive

Arvada, CO 80005

Project No. 25231103

General	Location		PFJ.0 X PF21.0	PFJ.0 X PF22.0	PFJ.0 X PF24.0	PFL.0 X PF25.0	PFL.0 X PF26.0	PFK.0 X PF25.0
	Pier Type		DP18	DP18	DP18	DP18A	DP18A	DP18A
	Start Date		10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
	End Date		10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		94.17'	94.17'	94.17'	93.00'	93.00'	93.83'
	Top of concrete, B		94.17'	94.17'	94.17'	93.00'	94.20'	93.83'
	Top of bedrock, C = (A-F)		85.17'	87.17'	87.17'	86.00'	86.00'	86.83'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		67.17'	67.00'	67.84'	67.75'	67.75'	68.58'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		27.00'	27.17'	26.33'	25.25'	25.25'	25.25'
	Overburden thickness (ft), F		9.00'	7.00'	7.00'	7.00'	7.00'	7.00'
	Total pier length (ft)	Actual (B-D)	27.00'	27.17'	26.33'	25.25'	26.45'	25.25'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Penetration (ft)	Actual (C-D)	18.00'	20.17'	19.33'	18.25'	18.25'	18.25'	
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		1#10	1#10	1#10	8#6	8#6	8#6
	Reinforcing ties and spacing		N/A	N/A	N/A	6#6	6#6	2#6
	Total reinforcing length (ft)		26.75'	26.75'	26.75'	25.75'	0.25'	0.25'
	Length of pier reinforcing above conc. (ft)		0.33'	N/A	33.00'	N/A	26.00'	26.00'
	Dowels and placement method		2#6	2#6	0.33	N/A	0.25	0.25
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:					Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205300 dated 03/23/2023					

Services: Drilled Pier Observation**Terracon Rep:** Antonio C. Chavez**Reported To:** Erika Pierce with Saunders Construction**Contractor:** Saunders Construction**Report Distribution**

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0098
Service Date: 10/18/23
Report Date: 10/25/23
Task: Drilled Piers

Terracon
10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location		PFL.0 X PF26.0	PHK.0 XPF26.0	PFJ.0 X PF26.0	PFL.0 X PF28.0	PFK.0 X PF28.0	PFJ.0 X PF28.0
	Pier Type		DP18A	DP18A	DP18A	DP18A	DP18A	DP18A
	Start Date		10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
	End Date		10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		94.17'	94.17'	94.17'	94.17'	94.17'	94.17'
	Top of concrete, B		94.17'	94.17'	94.17'	94.17'	94.17'	94.17'
	Top of bedrock, C = (A-F)		85.17'	81.17'	81.17'	81.17'	81.17'	81.17'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		68.92'	67.92'	67.92'	68.50'	68.42'	67.84'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.25'	26.25'	26.25'	25.67'	25.75'	26.33'
	Overburden thickness (ft), F		9.00'	13.00'	13.00'	13.00'	13.00'	13.00'
	Total pier length (ft)	Actual (B-D)	25.25'	26.25'	26.25'	25.67'	25.75'	26.33'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
Penetration (ft)	Actual (C-D)	16.25'	13.25'	13.25'	12.67'	12.75'	13.33'	
	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	8#6	8#6	8#6	8#6	8#6
	Reinforcing ties and spacing		#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)		26.50'	26.75'	26.75'	26.42'	26.50'	26.75'
	Length of pier reinforcing above conc. (ft)		1.00'	N/A	N/A	1.00'	1.00'	0.50'
	Dowels and placement method		6#6	6#6	6#6	6#6	6#6	6#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:		Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:		Terracon report 25205300 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0098
Service Date: 10/18/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	D.0 x 11.0	D.5 x 11.0				
	Pier Type	DP18A	DP18A				
	Start Date	11/18/2023	11/18/2023				
	End Date	11/18/2023	11/18/2023				
Elevations (ft)	Pier Diameter (inches)	18	18				
	Ground surface, A	93.92'	95.83'				
	Top of concrete, B	96.25'	96.25'				
	Top of bedrock, C = (A-F)	76.92'	78.83'				
	Estimated bedrock elevation	N/A	N/A				
	Bottom of pier, D = (A-E)	62.42'	64.33'				
Calculations	Supporting stratum	Sandstone	Sandsrone				
	Total depth drilled (ft), E	31.50'	31.50'				
	Overburden thickness (ft), F	17.00'	17.00'				
	Total pier length (ft)	Actual (B-D)	33.83'	31.92'			
		Required	25.00'	25.00'			
	Penetration (ft)	Actual (C-D)	14.50'	14.50'			
Groundwater		Required	14.00'	14.00'			
	Groundwater depth (ft), G	N/A	N/A				
	Elevation (ft), (A-G)	N/A	N/A				
	Casing required?	NO	NO				
	Casing length (ft) / Cased Depth (ft)	N/A	N/A				
	Casing diameter (in)	N/A	N/A				
Reinforcing	No. and size of bars	8#6	8#6				
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"				
	Total reinforcing length (ft)	33.25'	31.42'				
	Length of pier reinforcing above conc. (ft)	N/A	N/A				
	Dowels and placement method	2#7	2#7				
Miscellaneous	Plumbness	Actual	<1%	<1%			
		Spec.	<1%	<1%			
	Shear Rings/Roughening	Shear Rings	Shear Rings				
	Comments:	Top #4 at 6"	Top #4 at 6"				
	Geotechnical Report No.:	Terracon report 25205300 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

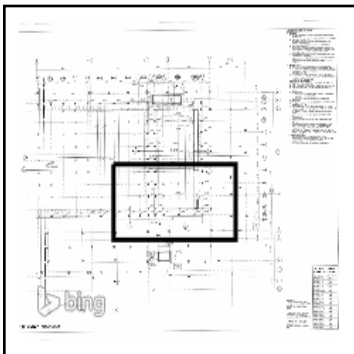
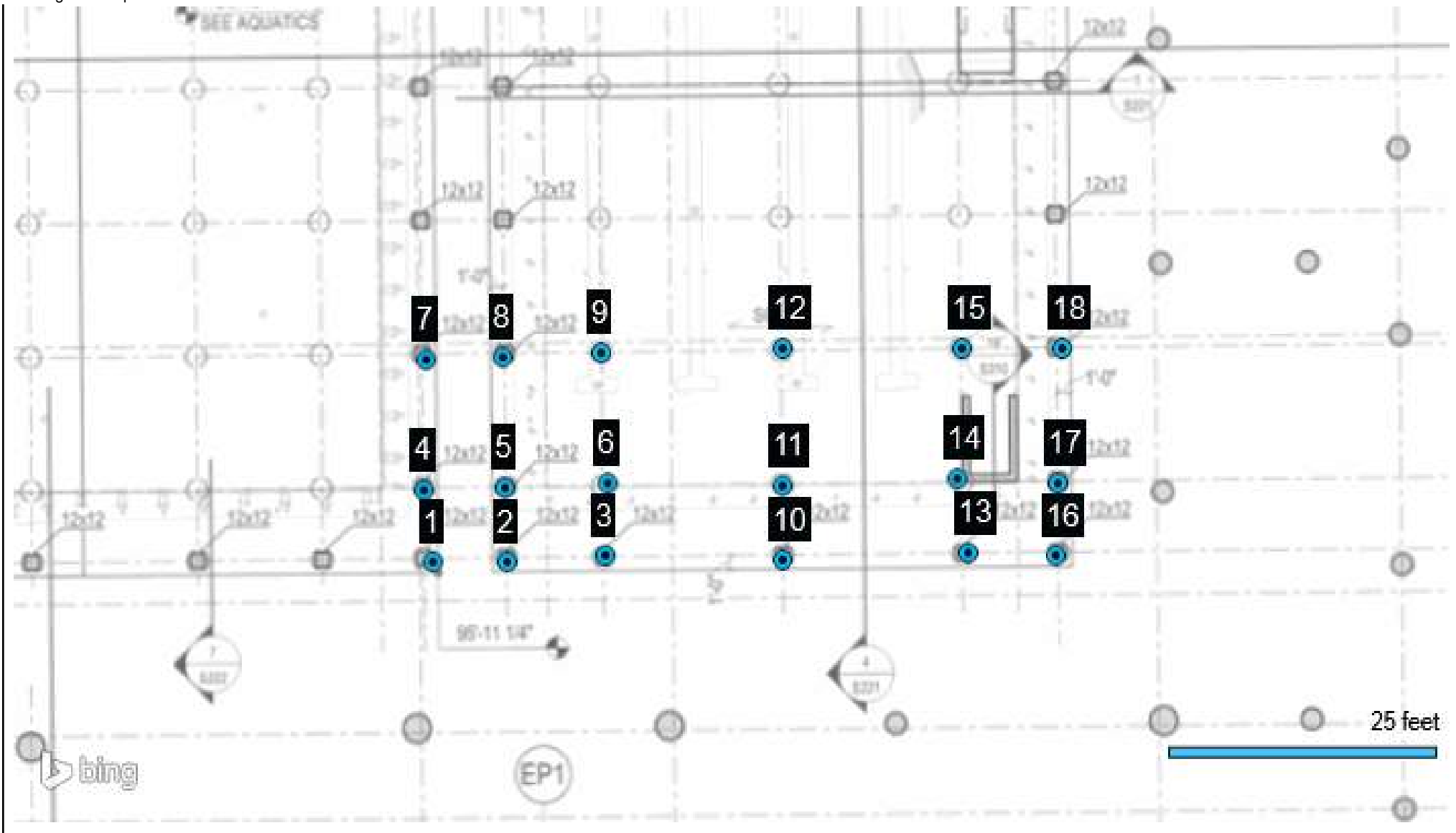
Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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- Test
- ▲ Retested / Accepted
- ▲ ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0098

Service Date:

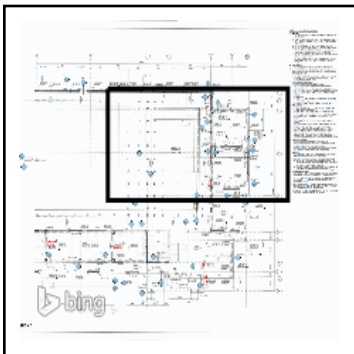
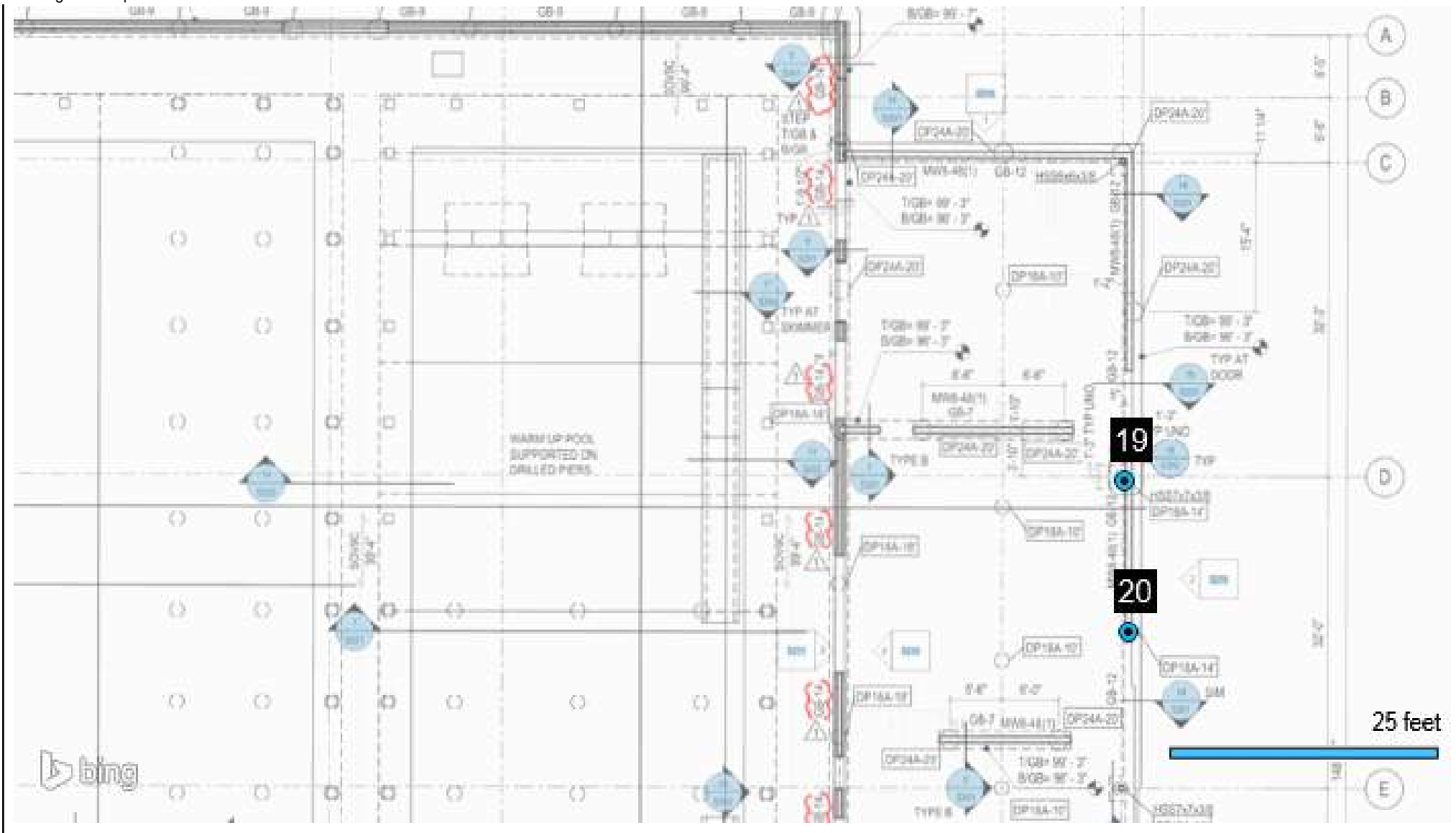
10/18/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0098

Service Date:

10/18/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0098

Service Date: 10/18/23

Report Date: 10/25/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Martin/Martin Inc, Andrew Lack
- (1) Martin/Martin Inc, Hunter Senior
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd
- (1) Wember Inc., Conor Bancroft
- (1) Wember Inc., Selena Twilley

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0100
Service Date: 10/19/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders Construction.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Spiredrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	13

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0099
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT**Report Number:** 25231103.0100**Service Date:** 10/19/23**Report Date:** 10/25/23**Task:** Drilled Piers

10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Client

City of Arvada CO

Attn: Kim Vagher

8101 Ralston Rd

PO Box 8101

Arvada, CO 80002-2439

Project

Meyers Pool Replacement

7904 Carr Drive

Arvada, CO 80005

Project No. 25231103

General	Location	D.2 x 10.0	D.8 x 9.0	C.8 x 10.1	C.8 x 9.5	PFI.0 x PF1.0	PFI.0 x PF2.0
	Pier Type	DP18A	DP18A	DP24A	DP24A	DP18A	DP18A
	Start Date	10/19/2023	10/19/2023	10/19/2023	10/19/2023	10/19/2023	10/19/2023
	End Date	10/19/2023	10/19/2023	10/19/2023	10/19/2023	10/19/2023	10/19/2023
Elevations (ft)	Pier Diameter (inches)	18	18	24	24	18	18
	Ground surface, A	95.82'	95.75'	96.00'	95.71'	86.50'	85.50'
	Top of concrete, B	99.30'	96.30'	96.30'	96.30'	85.20'	85.20'
	Top of bedrock, C = (A-F)	77.82'	78.75'	78.00'	77.71'	86.50'	85.50'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	67.65'	60.08'	57.50'	57.38'	59.83'	60.00'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	28.17'	35.67'	38.50'	38.33'	26.67'	25.50'
Groundwater	Overburden thickness (ft), F	18.00'	17.00'	18.00'	18.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D) 31.65'	36.22'	38.80'	38.92'	25.37'	25.20'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D) 10.17'	18.67'	20.50'	20.33'	26.67'	25.50'
Reinforcing		Required	10.00'	18.00'	20.00'	14.00'	16.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	8#6	8#6	10#6	10#6	8#6	8#6
	Reinforcing ties and spacing	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"	#4 at 12"
	Total reinforcing length (ft)	32.25'	36.75'	39.00'	39.00'	26.75'	25.75'
	Length of pier reinforcing above conc. (ft)	N/A	N/A	N/A	N/A	0.75'	1.00'
	Dowels and placement method	2#7	2#7	4#7	4#7	6#6	2#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"	Top #4 at 6"
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation**Terracon Rep:** Antonio C. Chavez**Reported To:** Erika Pierce with Saunders Construction**Contractor:** Saunders Construction**Report Distribution**

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0100
Service Date: 10/19/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		PFI.0 X PF3.0	PFI.0 X PF4.0	PFI.0 PF5.0	PFI.0 X PF6.0	PFJ.0 X PF7.0	PFH.0 X PF7.0
	Pier Type		DP18A	DP18	DP18	DP18	DP18	DP18
	Start Date		10/19/2023	10/19/2023	10/19/2023	10/19/2023	10/19/2023	10/19/2023
	End Date		10/19/2023	10/19/2023	10/19/2023	10/19/2023	10/19/2023	10/19/2023
	Pier Diameter (inches)		18	18	18	18	18	18
Elevations (ft)	Ground surface, A		86.00'	91.17'	91.17'	86.58'	89.58'	86.33'
	Top of concrete, B		83.00'	91.17'	91.17'	86.58'	89.58'	93.50'
	Top of bedrock, C = (A-F)		86.00'	91.17'	91.17'	86.58'	89.58'	86.33'
	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		57.50'	65.75'	65.75'	61.28'	64.08'	61.00'
Calculations	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		28.50'	25.42'	25.42'	25.30'	25.50'	25.33'
	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D)	25.50'	25.42'	25.42'	25.30'	25.50'	32.50'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	28.50'	25.42'	25.42'	25.30'	25.50'	25.33'
		Required	12.00'	10.00'	10.00'	10.00'	10.00'	10.00'
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	No. and size of bars		8#6	1#10	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing		#4 at 12"	N/A	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)		28.00'	26.75'	26.75'	26.75'	26.75'	26.75'
	Length of pier reinforcing above conc. (ft)		2.75'	0.75'	0.75'	0.75'	0.75'	0.75'
	Dowels and placement method		6#6	2#6	2#6	2#6	2#6	2#6
Miscellaneous	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
Comments:		Top #4 at 6"						
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023						

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT**Report Number:** 25231103.0100**Service Date:** 10/19/23**Report Date:** 10/25/23**Task:** Drilled Piers

10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Client

City of Arvada CO

Attn: Kim Vagher

8101 Ralston Rd

PO Box 8101

Arvada, CO 80002-2439

Project

Meyers Pool Replacement

7904 Carr Drive

Arvada, CO 80005

Project No. 25231103

General	Location	PFI.0 x PF7.0					
	Pier Type	DP18					
	Start Date	10/19/2023					
	End Date	10/19/2023					
Elevations (ft)	Pier Diameter (inches)	18					
	Ground surface, A	87.25'					
	Top of concrete, B	90.58'					
	Top of bedrock, C = (A-F)	87.25'					
	Estimated bedrock elevation	N/A					
	Bottom of pier, D = (A-E)	63.92'					
	Supporting stratum	Sandstone					
	Total depth drilled (ft), E	23.33'					
Calculations	Overburden thickness (ft), F	0.00'					
	Total pier length (ft)	Actual (B-D) 26.66'					
		Required 25.00'					
	Penetration (ft)	Actual (C-D) 23.33'					
Groundwater		Required 10.00'					
	Groundwater depth (ft), G	N/A					
	Elevation (ft), (A-G)	N/A					
	Casing required?	NO					
	Casing length (ft) / Cased Depth (ft)	N/A					
	Casing diameter (in)	N/A					
	No. and size of bars	1#10					
	Reinforcing ties and spacing	N/A					
	Total reinforcing length (ft)	27.00'					
	Length of pier reinforcing above conc. (ft)	N/A					
Reinforcing	Dowels and placement method	2#6					
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
		Spec. <1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings					
Miscellaneous	Comments:						
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation**Terracon Rep:** Antonio C. Chavez**Reported To:** Erika Pierce with Saunders Construction**Contractor:** Saunders Construction**Report Distribution**

See attached distribution list.

Reviewed By:

Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0100
Service Date: 10/19/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location						
	Pier Type						
	Start Date						
	End Date						
Elevations (ft)	Pier Diameter (inches)						
	Ground surface, A						
	Top of concrete, B						
	Top of bedrock, C = (A-F)						
	Estimated bedrock elevation						
	Bottom of pier, D = (A-E)						
	Supporting stratum						
Calculations	Total depth drilled (ft), E						
	Overburden thickness (ft), F						
	Total pier length (ft)	Actual (B-D)					
		Required					
	Penetration (ft)	Actual (C-D)					
Groundwater		Required					
	Groundwater depth (ft), G						
	Elevation (ft), (A-G)						
	Casing required?						
	Casing length (ft) / Cased Depth (ft)						
Reinforcing	Casing diameter (in)						
	No. and size of bars						
	Reinforcing ties and spacing						
	Total reinforcing length (ft)						
	Length of pier reinforcing above conc. (ft)						
Miscellaneous	Dowels and placement method						
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening						
	Comments:						
Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

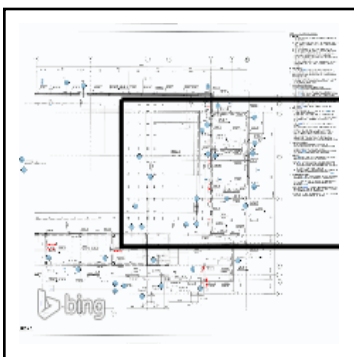
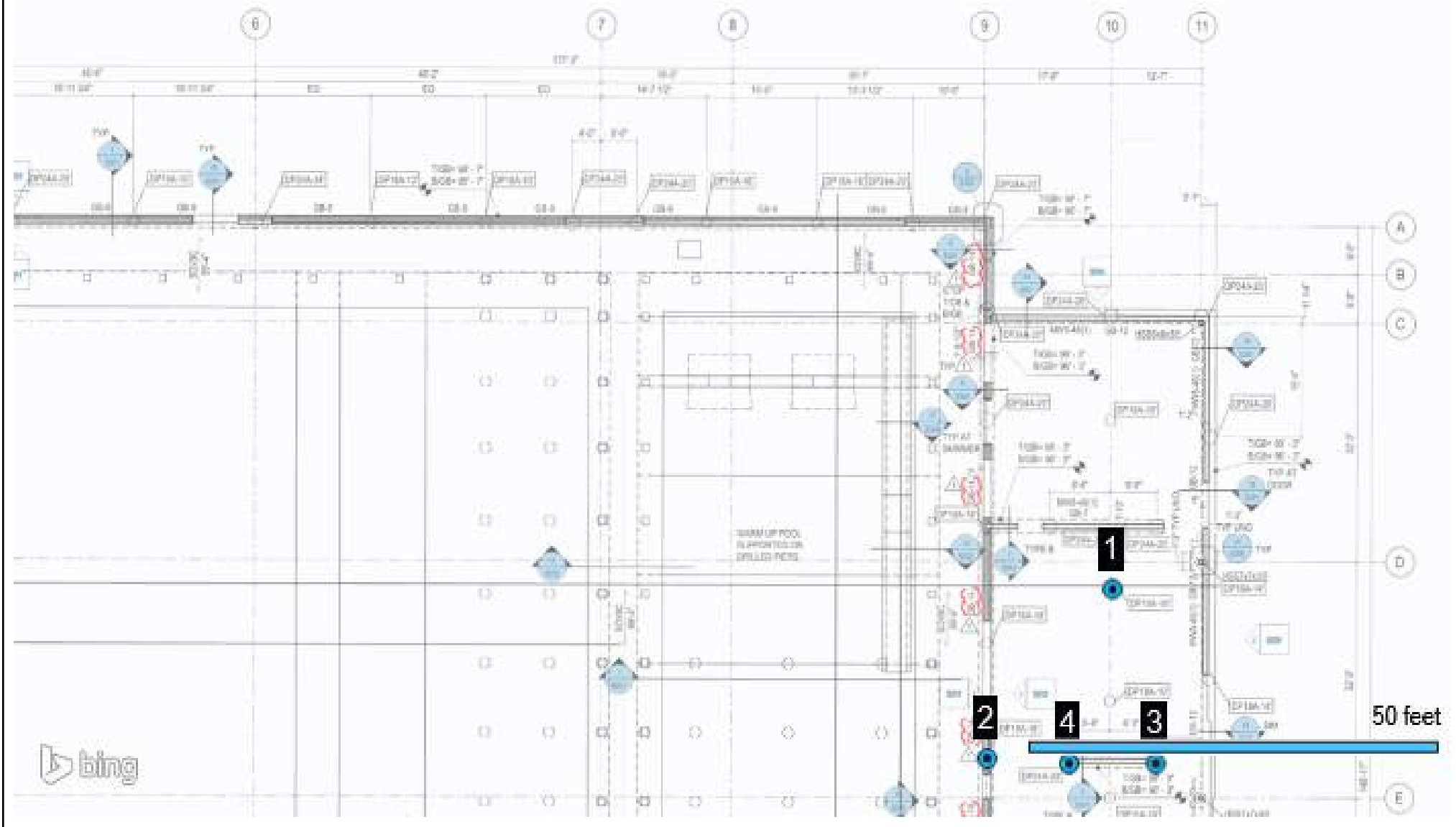
See attached distribution list.

Reviewed By:

Alex Seay

Senior Project Manager

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- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0100

Service Date:

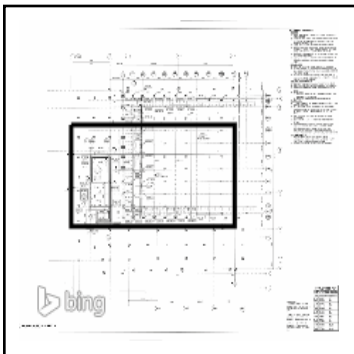
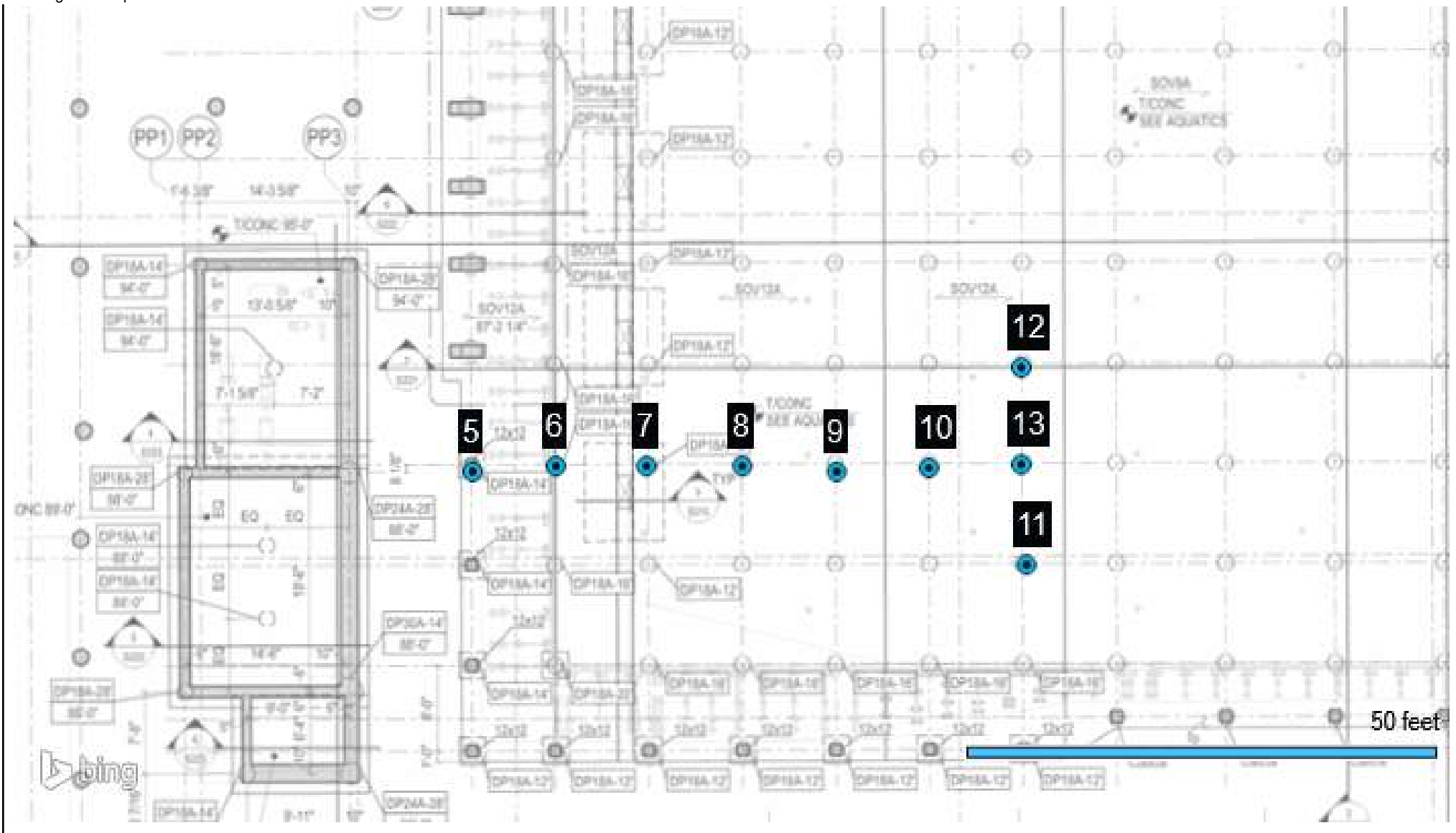
10/19/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



- Test
- Retested / Accepted
- ▲ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0100

Service Date:

10/19/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0100

Service Date: 10/19/23

Report Date: 10/25/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Martin/Martin Inc, Andrew Lack
- (1) Martin/Martin Inc, Hunter Senior
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd
- (1) Wember Inc., Conor Bancroft
- (1) Wember Inc., Selena Twilley

DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0105
Service Date: 10/20/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project Number: 25231103

General Information

Justin Cooper with Saunders requested Terracon to be on site for drilled pier observation (see attach map) for the above referenced project. Observed work was being performed by LMS Drilling. The results of observation(s) for today were reported to Erika Pierce with Saunders Construction.

The construction documents referenced for this observation include: Site plans dated 07/21/2023.

Drilled Piers

Item	Comments
Geotechnical report	Terracon report 25205033 dated 03/23/2023
Minimum length of pier per geotechnical report	25'
Minimum embedment length of pier per geotechnical report	10'
Minimum diameter of pier per geotechnical report	18"
Pier penetration zone treatment	Shear Rings
Drilling contractor	LMS Drilling
Drilling equipment used	Spiradrill drill rig
Concrete placement method	Tremie Pipe
Number of piers installed today	16

Item	Status	Comments
Pier reinforcing steel per plan	Complies	
Pier(s) were drilled to the minimum length required	Complies	
Pier(s) were drilled to the minimum embedment length required	Complies	
Pier penetration zone treatment installed	Complies	
Concrete was tested	Complies	Refer to report number(s): .0102
Concrete placed without segregation	Complies	
Ufer Connection Observed	N/A	

Additional Comments

N/A

Compliance Statement

Based on our observations, drilled pier construction activities at the above-referenced locations appeared to be completed in general accordance with project plans and specifications.

Services: Drilled Pier Observation

Terracon Rep.: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution:

See attached distribution list.

Reviewed By:


 Alex Seay
 Senior Project Manager

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Report Number: 25231103.0105
Service Date: 10/20/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033-1729
303-423-3300

Client

City of Arvada CO
Attn: Kim Vagher
8101 Ralston Rd
PO Box 8101
Arvada, CO 80002-2439

Project

Meyers Pool Replacement
7904 Carr Drive
Arvada, CO 80005

Project No. 25231103

General	Location	PFI.0 X PF8.0	PFI.0 X PF9.0	PFI.0 X PF10.0	PFI.0 X PF11.0	PFI.0 X PF12.0	PFI.0 X PF13.0
	Pier Type	DP18	DP18	DP18	DP18	DP18	DP18
	Start Date	10/20/2023	10/20/2023	10/20/2023	10/20/2023	10/20/2023	10/20/2023
	End Date	10/20/2023	10/20/2023	10/20/2023	10/20/2023	10/20/2023	10/20/2023
Elevations (ft)	Pier Diameter (inches)	18	18	18	18	18	18
	Ground surface, A	88.50'	91.17'	91.17'	91.17'	91.17'	91.17'
	Top of concrete, B	91.17'	91.17'	91.17'	91.17'	91.17'	91.17'
	Top of bedrock, C = (A-F)	88.50'	91.17'	91.17'	91.17'	91.17'	91.17'
Calculations	Estimated bedrock elevation	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)	65.17'	65.67'	65.75'	65.75'	64.59'	65.75'
	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E	23.33'	25.50'	25.42'	25.42'	26.58'	25.42'
Groundwater	Overburden thickness (ft), F	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft) Actual (B-D)	26.00'	25.50'	25.42'	25.42'	26.58'	25.42'
	Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft) Actual (C-D)	23.33'	25.50'	25.42'	25.42'	26.58'	25.42'
Reinforcing	Required	10.00'	10.00'	10.00'	10.00'	10.00'	10.00'
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?	NO	NO	NO	NO	NO	NO
Miscellaneous	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A	N/A	N/A
	Casing diameter (in)	N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars	1#10	1#10	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing	N/A	N/A	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)	26.75'	26.25'	25.92'	25.92'	26.17'	25.92'
	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	25.92'	1.00'	1.00'	1.00'
	Dowels and placement method	2#6	2#6	2#6	2#6	2#6	2#6
	Plumbness	Actual <1%	<1%	<1%	<1%	<1%	<1%
	Spec.	<1%	<1%	<1%	<1%	<1%	<1%
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings
	Comments:						
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation
Terracon Rep: Antonio C. Chavez
Reported To: Erika Pierce with Saunders Construction
Contractor: Saunders Construction

Report Distribution
See attached distribution list.

Reviewed By: _____
Alex Seay
Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0105
Service Date: 10/20/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location		PFI.0 X PF8.0	PFI.0 X PF9.0	PFI.0 X PF10.0	PFI.0 X PF11.0	PFI.0 X PF12.0	PFI.0 X PF13.0
	Pier Type		DP18	DP18	DP18	DP18	DP18	DP18
	Start Date		10/20/2023	10/20/2023	10/20/2023	10/20/2023	10/20/2023	10/20/2023
	End Date		10/20/2023	10/20/2023	10/20/2023	10/20/2023	10/20/2023	10/20/2023
Elevations (ft)	Pier Diameter (inches)		18	18	18	18	18	18
	Ground surface, A		91.17'	91.17'	91.17'	91.17'	91.17'	91.17'
	Top of concrete, B		91.17'	91.17'	91.17'	91.17'	91.17'	91.17'
	Top of bedrock, C = (A-F)		91.17'	91.17'	91.17'	91.17'	91.17'	91.17'
Calculations	Estimated bedrock elevation		N/A	N/A	N/A	N/A	N/A	N/A
	Bottom of pier, D = (A-E)		65.67'	65.75'	64.00'	65.50'	65.42'	64.42'
	Supporting stratum		Sandstone	Sandstone	Sandstone	Sandstone	Sandstone	Sandstone
	Total depth drilled (ft), E		25.50'	25.42'	27.17'	25.67'	25.75'	26.75'
Calculations	Overburden thickness (ft), F		0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
	Total pier length (ft)	Actual (B-D)	25.50'	25.42'	27.17'	25.67'	25.75'	26.75'
		Required	25.00'	25.00'	25.00'	25.00'	25.00'	25.00'
	Penetration (ft)	Actual (C-D)	25.50'	25.42'	27.17'	25.67'	25.75'	26.75'
Required		10.00'	10.00'	10.00'	10.00'	10.00'	10.00'	
Groundwater	Groundwater depth (ft), G		N/A	N/A	N/A	N/A	N/A	N/A
	Elevation (ft), (A-G)		N/A	N/A	N/A	N/A	N/A	N/A
	Casing required?		NO	NO	NO	NO	NO	NO
	Casing length (ft) / Cased Depth (ft)		N/A	N/A	N/A	N/A	N/A	N/A
Reinforcing	Casing diameter (in)		N/A	N/A	N/A	N/A	N/A	N/A
	No. and size of bars		1#10	1#10	1#10	1#10	1#10	1#10
	Reinforcing ties and spacing		N/A	N/A	N/A	N/A	N/A	N/A
	Total reinforcing length (ft)		26.00'	26.00'	27.67'	26.25'	26.25'	27.25'
Miscellaneous	Length of pier reinforcing above conc. (ft)		1.00'	1.00'	1.00'	1.00'	1.00'	1.00'
	Dowels and placement method		2#6	2#6	2#6	2#6	2#6	2#6
	Plumbness	Actual	<1%	<1%	<1%	<1%	<1%	<1%
		Spec.	<1%	<1%	<1%	<1%	<1%	<1%
Miscellaneous	Shear Rings/Roughening		Shear Rings	Shear Rings	Shear Rings	Shear Rings	Shear Rings	
	Comments:							
	Geotechnical Report No.:		Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

Report Distribution

See attached distribution list.

Reviewed By:

Alex Seay
 Senior Project Manager

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DRILLED SHAFT OBSERVATION REPORT

Report Number: 25231103.0105
Service Date: 10/20/23
Report Date: 10/25/23
Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3
 Wheat Ridge, CO 80033-1729
 303-423-3300

Client

City of Arvada CO
 Attn: Kim Vagher
 8101 Ralston Rd
 PO Box 8101
 Arvada, CO 80002-2439

Project

Meyers Pool Replacement
 7904 Carr Drive
 Arvada, CO 80005

Project No. 25231103

General	Location	PFI.0 X PF21.0	PFI.0 X PF22.0	PFI.0 X PF24.0	PFI.0 X PF26.0		
	Pier Type	DP18	DP18	DP18	DP18A		
	Start Date	10/20/2023	10/20/2023	10/20/2023	10/20/2023		
	End Date	10/20/2023	10/20/2023	10/20/2023	10/20/2023		
	Pier Diameter (inches)	18	18	18	18		
Elevations (ft)	Ground surface, A	95.75'	97.00'	95.08'	99.17'		
	Top of concrete, B	94.17'	95.17'	94.25'	95.75'		
	Top of bedrock, C = (A-F)	88.75'	88.00'	88.08'	81.17'		
	Estimated bedrock elevation	N/A	N/A	N/A	N/A		
	Bottom of pier, D = (A-E)	68.42'	69.75'	68.50'	70.75'		
Calculations	Supporting stratum	Sandstone	Sandstone	Sandstone	Sandstone		
	Total depth drilled (ft), E	27.33'	27.25'	26.58'	28.42'		
	Overburden thickness (ft), F	7.00'	9.00'	7.00'	18.00'		
	Total pier length (ft) Actual (B-D)	25.75'	25.42'	25.75'	25.00'		
	Required	25.00'	25.00'	25.00'	25.00'		
Groundwater	Penetration (ft) Actual (C-D)	20.33'	18.25'	19.58'	10.42'		
	Required	10.00'	10.00'	10.00'	10.00'		
	Groundwater depth (ft), G	N/A	N/A	N/A	N/A		
	Elevation (ft), (A-G)	N/A	N/A	N/A	N/A		
	Casing required?	NO	NO	NO	NO		
Reinforcing	Casing length (ft) / Cased Depth (ft)	N/A	N/A	N/A	N/A		
	Casing diameter (in)	N/A	N/A	N/A	N/A		
	No. and size of bars	1#10	1#10	1#10	8#6		
	Reinforcing ties and spacing	N/A	N/A	N/A	#4 at 12"		
	Total reinforcing length (ft)	26.25'	26.00'	26.08'	26.00'		
Miscellaneous	Length of pier reinforcing above conc. (ft)	1.00'	1.00'	1.00'	1.00'		
	Dowels and placement method	2#6	2#6	2#6	2#6		
	Plumbness Actual	<1%	<1%	<1%	<1%	<1	
	Spec.	<1%	<1%	<1%	<1%		
	Shear Rings/Roughening	Shear Rings	Shear Rings	Shear Rings	Shear Rings		
Miscellaneous	Comments:						
	Geotechnical Report No.:	Terracon report 25205033 dated 03/23/2023					

Services: Drilled Pier Observation

Terracon Rep: Antonio C. Chavez

Reported To: Erika Pierce with Saunders Construction

Contractor: Saunders Construction

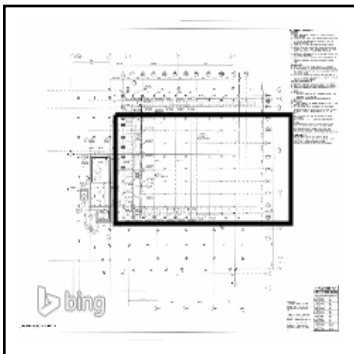
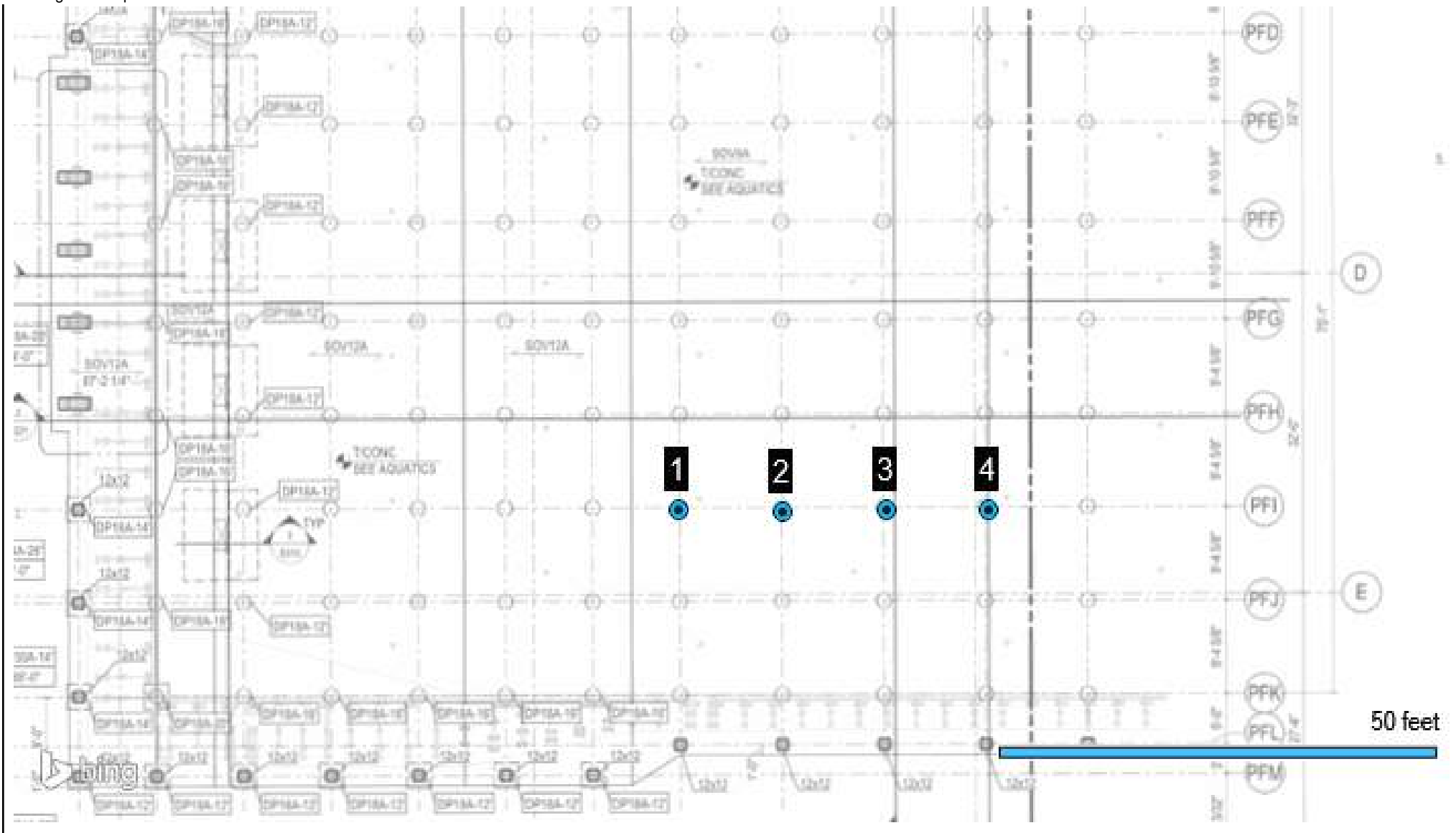
Report Distribution

See attached distribution list.

Reviewed By:

Alexander Alexander
 Senior Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0105

Service Date:

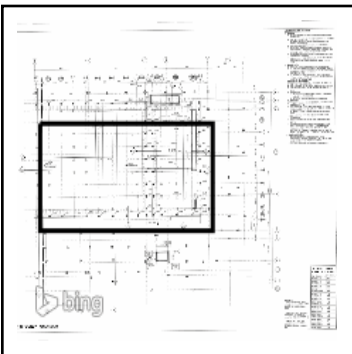
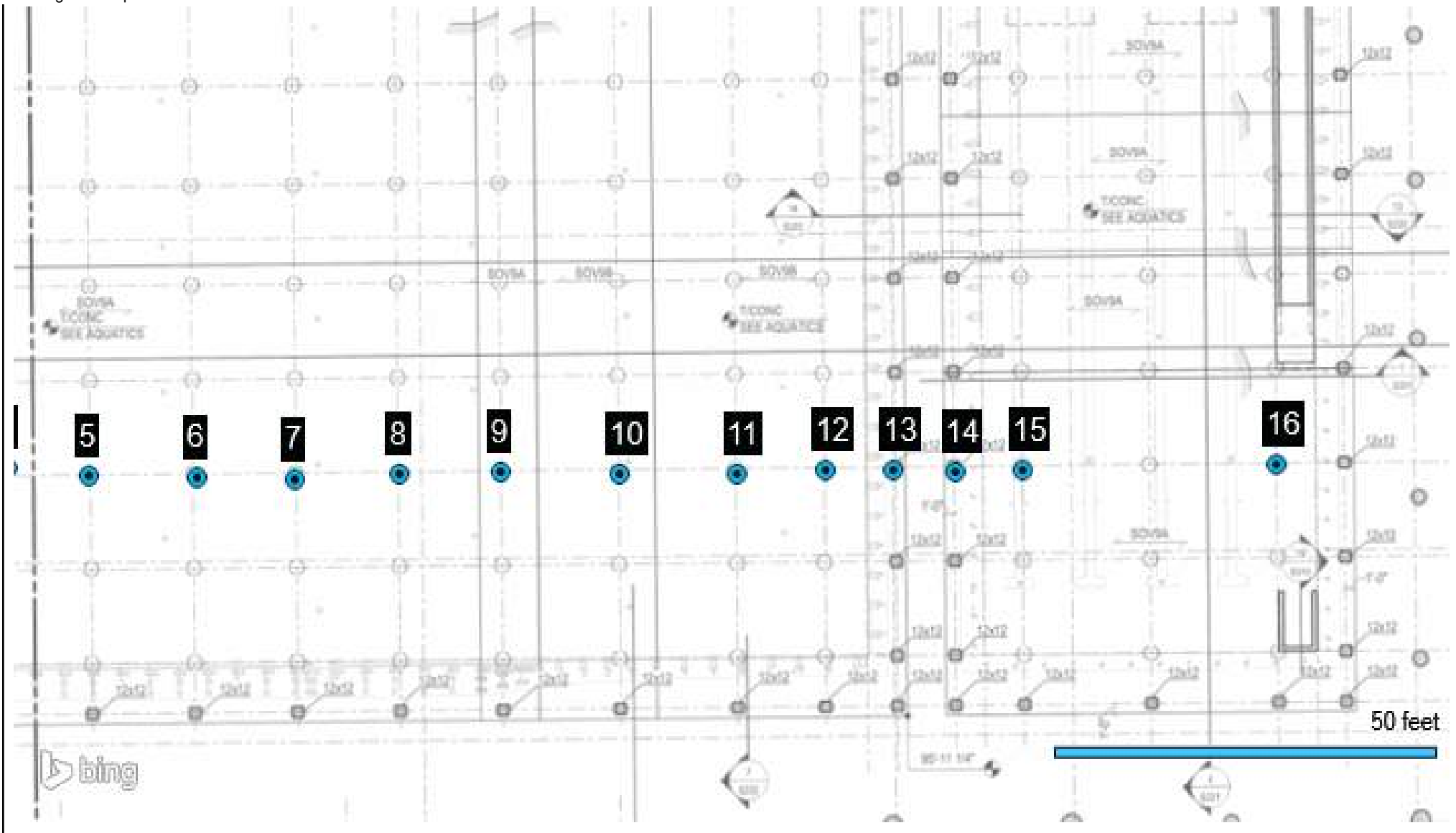
10/20/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing



- Test
- ▲ Retested / Accepted
- ▲ ■ Deviation



10625 W I70 Frontage Rd

Wheat Ridge, CO

N

80033-1729

303-423-3300

terracon.com

Meyers Pool Replacement

Exhibit

Drilled Shaft Observation

A-1

Report Number:

25231103.0105

Service Date:

10/20/2023

Employee:

Chavez, Tony

Scale:

Refer to Drawing

Distribution Page

Report Number: 25231103.0105

Service Date: 10/20/23

Report Date: 10/25/23

Task: Drilled Piers



10625 W I70 Frontage Rd N Ste 3

Wheat Ridge, CO 80033-1729

303-423-3300

Distribution List

- (1) City of Arvada CO, Kim Vagher
- (1) Martin/Martin Inc, Andrew Lack
- (1) Martin/Martin Inc, Hunter Senior
- (1) Saunders Construction, Inc (CO), Casey Reiter
- (1) Saunders Construction, Inc (CO), Erika Pierce
- (1) Saunders Construction, Inc (CO), Guillermo Ramos
- (1) Saunders Construction, Inc (CO), Juan Vazquez
- (1) Saunders Construction, Inc (CO), Julio Gonzalez
- (1) Saunders Construction, Inc (CO), Justin Cooper
- (1) Saunders Construction, Inc (CO), Kevin Ramos
- (1) Saunders Construction, Inc (CO), Oliver Deck
- (1) Saunders Construction, Inc (CO), Robert Burd
- (1) Wember Inc., Conor Bancroft
- (1) Wember Inc., Selena Twilley

January 3, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-057 Alternate #3

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

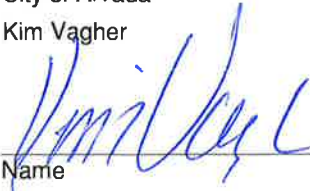
CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-057		Alternate #3		Source	
Reference Date	12/27/2023		Owner Number			
Scope Description						
22015012	05100	SUB	Zimmerman Metals, Inc.		275,373.00	Structural Steel
22015012	13100	SUB	Associated Pool Builders, Inc.		117,000.00	Swimming Pool
22015012	98003	OVD			432.00	Builders Risk
22015012	98005	OVD			3,728.00	Commercial Insurance
22015012	98006	OVD			5,101.00	SDI
22015012	98600	OVD			589.00	Closeout and Warranty
22015012	99000	FEE			10,659.00	Fee
Stipulated Sum					412,882.00	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

 3-6-24
Name Date

Ohlson Lavoie Corporation
Bob McDonald

Name Date

Zimmerman



Zimmerman Metals Inc.
Quality Workmanship and Service Since 1936

201 East 58th Avenue, Denver, CO 80216 | (303) 294-0180

Zimmerman Metals, Inc

Date : 12/13/2023

Page 1 of 2

CO #: 7

Job #: 311

George Meyers Pool

Job Location: Arvada, CO

Change Order Request

To: Laurel Lane

SAUNDERS CONSTRUCTION INC
7904 CARR DR.
ARVADA, CO 80005

Subject: COR #7 - ADDED STAINLESS RAILINGS AT CONCRETE PLATFORM, STAIRS, & ACCESSORIES W/ STAINLESS RAILINGS

Change Requested By: Laurel Lane

Sent Via: E-mail

Description of Change:

Zimmerman Metals has reviewed the above requested change and has determined a price increase of \$275,373.00 to incorporate the changes. Please see attached ZMI COR #06 for the details of the pricing.

Included:

- Scope as coordinated per allowance referenced in SCI/ZMI Subcontract Scope Attachment D1.

Excluded:

- Changes to this scope per recently issued ASI #16.

Schedule based on date of acceptance (NTP) of this COR:

- Assume 5-6 weeks for Delegated Engineering calculations and shop drawings.
- Assume 8-10 weeks for shop fabrication after shop drawing approval (or field measurement by ZMI at SCI's option).
- Assume 2 weeks for erection.
- Assume 1 week for cabling.

Please add (15) days to our schedule for the project for erection and cabling.

Please issue a change order to our contract at your earliest convenience.

This pricing is valid for 30 days.



Zimmerman Metals Inc.
Quality Workmanship and Service Since 1936

201 East 58th Avenue, Denver, CO 80216 | (303) 294-0180

Zimmerman Metals, Inc

Date : 12/13/2023

Page 2 of 2

CO #: 7

Job #: 311

George Meyers Pool

Job Location: Arvada, CO

Change Order Request

To: Laurel Lane

SAUNDERS CONSTRUCTION INC
7904 CARR DR.
ARVADA, CO 80005

Subject: COR #7 - ADDED STAINLESS RAILINGS AT CONCRETE PLATFORM, STAIRS, &
ACCESSORIES W/ STAINLESS RAILINGS

The change will cause an increase of \$275,373.00 to the contract amount.

A signature below indicates acceptance of all changes shown herein. Any work associated with this change will begin upon receipt of a signed copy of this C.O. in our office. Please respond by 12/20/2023.

If the requested response time is not met, the project may be delayed.

Accepted By

Zimmerman Metals, Inc

Associated Pool Builders



**Associated
Pool
Builders, Inc.**

2121 Lovett Ave.
P.O. Box 2318
Bismarck, ND 58502
Phone: 701-258-6012 Fax: 701-224-9729

**PROPOSED CHANGE ORDER
NO: 4**

Attn: Saunders Inc.
Robbie Burd
86 Inverness Place North
Englewood, CO 80112

Date: 12/28/2023
Email: hunternv@associatedpoolbuilders.com
Job Name: Meyers Pool Replacement
Job Location: Arvada, CO
Job No: 23-1765

We hereby agree to make the change(s) specified below:

Item No.	Description	Unit Price	Qty	Amount
Alternate #3				
1	Add for concrete dive tower	\$ 117,000.00	1 EA	\$ 117,000.00

INCLUSIONS 3x concrete 1M dive stands
1x concrete dive structure including 1x 3M diving support, 1x 3M platform, and 1x 5M platform
6x duraflex new short stands
Sack rub finish on dive structure
Rough-Tex slip resistant finish on 3M and 5M dive platforms.
Removes 3x 1M duraflex dive stands
Removes 3x 3M duraflex dive stands

EXCLUSIONS Any and all bonding and grounding
Foundations and columns for dive structure below pool deck
Any and all railing and rail anchors around dive structure and dive stands.
Layout/survey of dive structure and stands

NOTES: *This Change Order will add 35 additional working days / 7 weeks to our schedule.
*This Change Order becomes part of and is incorporated in the existing contract.
*This Change Order is valid for 14 days.

WE AGREE hereby to make the change(s) specified above at this price:

Add: \$117,000.00

ACCEPTED - The above prices and specifications of this Change Order are satisfactory and are hereby accepted. All work to be performed under same terms and conditions as specified in original contract unless otherwise specified.

Date: 12/28/2023

Date of Acceptance: _____

Signature: _____
Associated Pool Builders, Inc.
Hunter Volk, Project Manager

Signature: _____

For: _____

Duraflex 1 meter diving stand,
#1M/70-231-400, 3 req.

**REMOVED FROM SCOPE
WITH ACCEPTANCE OF
CHANGE ORDER**

1 METER STANDS

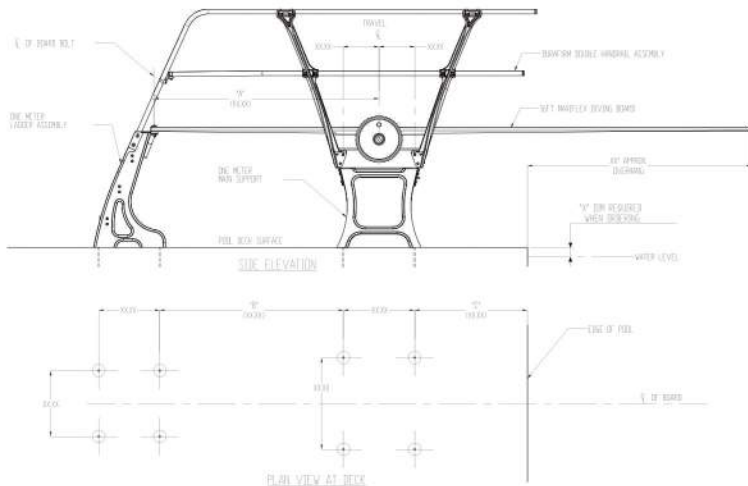
CATALOG # 70-231-400

The 1-meter Duraflex stand is designed to provide a firm foundation for mounting Duraflex aluminum springboards. The Duraflex stand is the result of design focused on stability, low noise level and ease of installation.

Duraflex stands can easily be installed at an existing pool without the need for costly excavation. The stand consists of a ladder assembly, fulcrum assembly and main support assembly. The major components are heavy duty aluminum castings coated with top quality epoxy powder coating.

The ladder assembly features wide, comfortable steps with replaceable slip-resistant treads. Hard-anodized, forged aluminum hinges mounted to a heavy cast anchor plate provide the attachment points for the Duraflex springboards.

The Duraflex stands have double stainless-steel handrails on both sides. The 1-meter structures are manufactured in five different heights to accommodate various deck to water levels. The deck to water dimension of the pool, deck slope and diving board model must be indicated when ordering. This information is used to determine the correct stand height for your facility. Drawings and CAD files can then be provided.



160 WUNOTOO ROAD SPARKS, NEVADA 89434
PHONE 775.343.0115 • FAX 775.343.0203

DURAFLEXINTERNATIONAL.COM



OFFICIAL SUPPLIER

Duraflex 3 meter diving stand,
#3M/70-231-300, 3 req.

**REMOVED FROM SCOPE
WITH ACCEPTANCE OF
CHANGE ORDER**

3 METER STANDS

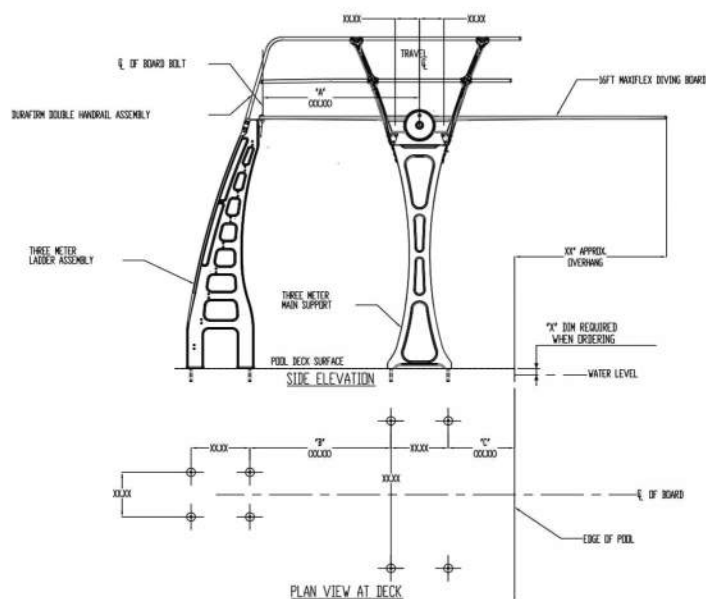
CATALOG # 70-231-300

The 3-meter Duraflex stand is designed to provide a firm foundation for mounting Duraflex aluminum springboards. The Duraflex stand is the result of design focused on stability, low noise level and ease of installation. Built-in handrails on the ladder provide a comfortable grip.

Duraflex stands can be installed at an existing pool without the need for costly excavation. The stand consists of a ladder assembly, fulcrum assembly and main support assembly. The major components are heavy duty aluminum castings coated with top quality epoxy powder coating.

The ladder assembly features wide, comfortable steps with replaceable slip-resistant treads. Hard-anodized forged aluminum hinges mounted to a heavy cast anchor fitting provide the attachment points for the Duraflex springboards.

The Duraflex stands have double stainless-steel handrails on both sides. The 3-meter structures are manufactured in three heights to accommodate various deck to water levels. The deck to water dimension of the pool, deck slope and diving board model must be indicated when ordering. This information is used to determine the correct stand height for your facility. Drawings and CAD files can then be provided.



160 WUNOTOO ROAD SPARKS, NEVADA 89434
PHONE 775.343.0115 • FAX 775.343.0203

DURAFLEXINTERNATIONAL.COM



OFFICIAL SUPPLIER

THE ALL NEW SHORT STAND

Improved feel, performance,
and virtually maintenance free

Duraflex New Short Stand, #10007, 6 req.



Following our tradition of innovation and providing world-class competition diving boards, the all-new Duraflex Short Stand gives divers increased confidence, consistency and performance between diving board stands.

The Duraflex short stand provides a firm foundation for mounting Duraflex springboards, consisting of a short stand anchor and a fulcrum assembly. The major components are heavy duty aluminium and hard anodized castings.

Through new mechanisms in the fulcrum, there is no longer any slip-stick or 'breaking the footwheel free' when adjusting the fulcrum. This allows divers of all ages to adjust the fulcrum to their desired position.

The Short Stand features a new alignment beam that runs between the fulcrum and rear end, ensuring the rear end and the fulcrum are correctly spaced and aligned. This gives a much more consistent feel of the board, giving divers even more confidence as they take off.

Correct installation of our stands and boards is vital to giving divers the confidence they need.

In conjunction with the beam for alignment, the shape of the mounting locations has been designed to allow for more flexibility when mounting holes in the deck are misaligned.

Using innovative design and more sustainable manufacturing processes, the Short Stand is virtually maintenance free. The fulcrum mechanism no longer requires adding grease or cleaning to ensure optimal use and there are no longer any anti-rattle clamps/ roller clamps to adjust. The only routine maintenance is to add oil to the hinges.

THE ALL NEW SHORT STAND



FEATURES

- **New fulcrum mechanisms** avoid slip-stick when adjusting the fulcrum
- **Alignment beam** to ensure correct installation and spacing between the rear end of the stand and the fulcrum giving greater consistency between diving stands
- **Redesigned mounting locations** ensure correct alignment and compensate for less-than-ideal decks
- **Enhanced coating process** to reduce corrosion

BENEFITS

- **Virtually maintenance free**
- **Increased performance and consistency between stands**
- **Easier fulcrum adjustments** – especially for younger divers
- **Easier installation process**

Virtually
maintenance
Free



Increased
performance



Easier
fulcrum
adjustments



Easier
installation



160 Wunotoo Road, Sparks NV 89437
Email: info@duraflexinternational.com
Tel: 775.343.0115
duraflexinternational.com



 **DURAFLEX**
OFFICIAL SUPPLIER

Rough-Tex slip resistant finish
on 3M and 5M dive platforms



"Your Complete Source for Springboard and Platform Diving Equipment and Supplies"

3-PLY BLACK ROUGH-TEX PLATFORM SURFACE

(Specification Sheet – Updated 01/01/2020)

PRODUCT THICKNESS (Overall Gauge):	21/64" (0.33) of an inch (8.33 mm)
COVER (Top):	Black SBR
CARCASS (Backing):	Polyester / Bare RFL
WORKING TENSION (Per Inch Width):	225 lbs. (102 kg) P.I.W.
APPROX. WEIGHT LBS. (Per Inch Width):	.117 lbs. (53.1 g) -- (** See Below)
TEMPERATURE RANGE:	-40 – 250 F (-40 C – 121 C)

OTHER: Static Conducting (NO); High Heat (NO); Impression Top (YES); Oil Resistant (NO); Fire Resistant (NO); FDA Approved (NO)

APPLICATION: Construction is three plies of high-strength, all-synthetic polyester fabric. Very flexible, low stretch and moisture resistant.

** To determine approximate weight, multiply width (in inches) x 0.117 x length (in feet)

INSTALLATION RECOMMENDATIONS: (Always use a reputable flooring installer)

It is of paramount importance that prior to installing this material, that you or your installer perform a "pull test" or "bonding test" to make sure that the adhesive you choose to use bonds the material to the substrate of the diving platform or pool deck.

Rough-Tex should always be installed **IN LINE WITH THE DIVING PLATFORM** – the direction in which the diver moves to leave the platform, and never across a platform. If Rough-Tex is installed across the platform, it does not have the same slip-resistant properties that it has when installed correctly in line with the platform.

You must have good, clean surface with NO PAINT on the concrete. Installer should scuff or "scarify" the concrete before attaching material in order to gain extra surface area to adhesive.

Use an edge-sealing compound (like clear silicone caulk or similar) to seal the side edges. Be sure to add weight to the edges after applying to help form the seal. Finally, some customers have installed carpet or flooring transition pieces to the edges to "dress it up" and to add another layer of protection to keep water or moisture from getting underneath the installed material.

Springboards and More supplied 2-Ply BLACK Rough-tex to London 2012, Beijing 2008 and Athens 2004 Olympic Aquatic Facilities for use on their diving platforms.

To enable innovations to be introduced quickly, the manufacturer reserves the right to alter specifications without notice.



Saunders Construction, LLC
86 Inverness Place North
Englewood, CO 80112

January 24, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-060 RFI 41.1 Electrical Coordination (undo TFR 25)

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.



SAUNDERS CONSTRUCTION, LLC
86 Inverness Place North
Englewood, CO 80112

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-060		RFI 41.1 Electrical Coordination (undo TFR 25)		Source	
Reference Date	01/23/2024		Owner Number			
Scope Description						
During the coordination process, an issue arose with plumbing piping. Kennedy was currently doing underground work and could not wait for the RFI to be answered as their work needed to be completed. They ran some extra conduit in order to be able to facilitate the changes to plumbing piping later down the road once the RFI was answered. So, this change is for labor and material per RFI #41.4 - Showers Plumbing Piping.						
22015012	26000	SUB	Kennedy Electric, Inc.		-3,051.00	Electrical
22015012	26000	SUB	Kennedy Electric, Inc.		3,051.00	Electrical
22015012	98500	OVD			3,051.00	SCI Contingency
22015012	98003	OVD			3.00	Builders Risk
22015012	98005	OVD			29.00	Commercial Insurance
22015012	98301	OVD			40.00	SDI
22015012	98600	OVD			5.00	Closeout and Warranty
22015012	99000	FEE			83.00	Fee
Stipulated Sum					3,211.00	

Approved:

Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date



Construction, LLC
86 Inverness Place North
Englewood, CO 80112

March 7, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-061 SCA_027 Alternate #2: Coverboard Correction

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			

Change Order SCA-061 SCA_027 Alternate #2: Coverboard Correction Source

Reference Date 01/23/2024 Owner Number

Scope Description

Updated 3/7/24:

- Line item 1 – I have applied a negative \$(63,550) towards 07400 membrane roofing. This offsets what was done in SCA-061
- Line item 2 – I have applied a positive \$63,550 towards 98500 SCI contingency. This offsets what was done in SCA-061
- Line item 3 – Cost of the coverboard
- Line item 4 – small credit applied towards cost of coverboard – from my understanding, in previous discussions this was the difference between the coverboard from the low bidder vs. DCG, so Saunders is covering that difference for utilizing DCG.
- The cost of SCA-061 did not change from its previous version
- I have included all previous SCAs as backup with narrative

22015012	07400	SUB	-63,550.00	Metal Wall / Soffit Panels SCA-027 OFFSET
22015012	07400	SUB	63,550.00	Metal Wall / Soffit Panels SCA-027 OFFSET
22015012	09900	SEST	-4,250.00	Painting SCI CREDIT TOWARDS SCA
22015012	98500	OVD	63,550.00	SCI Contingency COST OF SCA, BACKUP PAGE 3/4
22015012	98003	OVD	65.00	Builders Risk
22015012	98005	OVD	563.00	Commercial Insurance
22015012	98301	OVD	771.00	SDI
22015012	98600	OVD	89.00	Closeout and Warranty
22015012	99000	FEE	1,611.00	Fee
Stipulated Sum			62,399.00	

Approved:

Saunders Construction, LLC



Anna Gannon
Project Manager

Clty of Arvada

Kim Vagher

 3-13-24

Name

Date

Ohlson Lavoie Corporation

Bob McDonald

Name

Date



Douglass Colony Group Inc
5901 East 58th Avenue
Commerce City, CO 80022
303.288.2635
303.288.8602 fax

Change Request

To: Saunders Construction
86 Inverness Place North
Englewood, CO 80112
Ph: (303)699-9000 Fax: (303)680-7448

Number: 1
Date: 1/24/24
Job: 50-010-3574 Meyers Pool Replacement
Phone:
Fax: BW

Description: Roofing Cover Board

We hereby propose to make the following changes:
Install the 1/2" Dens Deck Prime cover board.

The total amount to provide this work is	\$63,550.00
(Please refer to attached sheet for details.)	

If you have any questions, please contact me at 303.288.2635.

Submitted by: Dane Bechtholdt
Douglass Colony Group Inc

Approved by: _____
Date: _____



Douglass Colony Group Inc

5901 East 58th Avenue

Commerce City, CO 80022

303.288.2635

303.288.8602 fax

Description		Quantity	Units	Unit Price	Price
Labor					
	Installation	260.00	mh	72.00	18,720.00
				Labor Total:	18,720.00
Material					
	1/2" Dens Deck Prime	416.00	sq	82.00	34,112.00
				Material Total:	34,112.00
Equipment					
	Crane	6.00	hours	391.17	2,347.02
				Equipment Total:	2,347.02
Subtotal:					\$55,179.02
	Material Tax	\$34,112.00	7.96%		\$2,715.32
	Equipment Tax	\$2,347.02	7.96%		\$186.82
	Other Tax				\$0.00
	Mark Up	\$36,459.02	15.00%		\$5,468.84
	Sub Mark Up				\$0.00
Total:					\$63,550.00

INCLUDED FOR REFERENCE ONLY

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-027		Alternate #2: Coverboard		Source	
Reference Date	09/27/2023		Owner Number			
Scope Description						
22015012	07500	SUB			63,550.00	Membrane Roofing
22015012	98500	OVD			-63,550.00	SCI Contingency
Stipulated Sum					0.00	

THIS IS THE ORIGINAL SCA-027. THIS IS BEING
'ZEROED OUT' BY THE UPDATED SCA-061 ON
PAGE 2 OF THIS PDF.

INCLUDED FOR REFERENCE ONLY

Approved:
Saunders Construction, LLC

City of Arvada
Kim Vagher

INCLUDED FOR REFERENCE ONLY

Laurel Lane
Project Manager

Name	Date
Ohlson Lavoie Corporation	
Bob McDonald	

Name	Date
------	------

INCLUDED FOR REFERENCE ONLY

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-061		SCA_027 Alternate #2: Coverboard Correction		Source	
Reference Date	01/23/2024		Owner Number			
Scope Description						
22015012	07400	SUB	Douglass Colony Group Inc.		-63,550.00	Metal Wall / Soffit Panels
22015012	07400	SUB	Douglass Colony Group Inc.		63,550.00	Metal Wall / Soffit Panels
22015012	09900	SEST			-4,250.00	Painting
22015012	98500	OVD			63,550.00	SCI Contingency
22015012	98003	OVD			65.00	Builders Risk
22015012	98005	OVD			563.00	Commercial Insurance
22015012	98301	OVD			771.00	SDI
22015012	98600	OVD			89.00	Closeout and Warranty
22015012	99000	FEE			1,611.00	Fee
Stipulated Sum					62,399.00	

THIS IS THE ORIGINAL SCA-061. THESE
NUMBERS HAVE BEEN UPDATED IN THE
UPDATED SCA-061, PAGE 2 OF THIS PDF.

INCLUDED FOR REFERENCE ONLY

Approved:
Saunders Construction, LLC

City of Arvada
Kim Vagher

INCLUDED FOR REFERENCE ONLY

Laurel Lane
Project Manager

NameDate

Ohlson Lavoie Corporation
Bob McDonald

NameDate



86 Inverness Place North
Englewood, CO 80112

February 14, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-070 Updated Progress Schedule

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-070		Updated Progress Schedule		Source	
Reference Date	01/23/2024		Owner Number			
Scope Description						
Updated progress schedule. No general conditions are being requested.						
					0.00	
			Stipulated Sum		0.00	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

Name

Ohlson Lavoie Corporation
Bob McDonald

Name

Date

Date

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024															
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November					
	Project Summary	440d	Jan 16 23 A	Oct 04 24																												
	Pre-Construction Milestones	67d	Jan 16 23 A	Apr 19 23 A																												
3	Preconstruction Start	0d	Jan 16 23 A	Jan 16 23 A	◆ Preconstruction Start																											
4	Project sent out to Bid (SCI)	0d	Jan 16 23 A	Jan 16 23 A	◆ Project sent out to Bid (SCI)																											
5	Subcontractor Bid Deadline	0d	Feb 03 23 A	Feb 03 23 A	◆ Subcontractor Bid Deadline																											
6	Bid submission for Parking Lot	0d	Feb 10 23 A	Feb 10 23 A	◆ Bid submission for Parking Lot																											
7	Contract Award	0d	Feb 13 23 A	Feb 13 23 A	◆ Contract Award																											
8	Parking Lot City Council Approval	0d	Apr 17 23 A	Apr 17 23 A	◆ Parking Lot City Council Approval																											
9	Building Permit (Parking Lot)	0d	Apr 17 23 A	Apr 17 23 A	◆ Building Permit (Parking Lot)																											
10	Notice to Proceed	0d	Apr 19 23 A	Apr 19 23 A	◆ Notice to Proceed																											
	Construction Milestones	351d	May 19 23 A	Oct 04 24																												
12	Overall Project Duration	340d	May 19 23 A	Sep 18 24	Overall Project Duration																											
13	Parking Lot Construction Start	0d	May 22 23 A	May 22 23 A	◆ Parking Lot Construction Start																											
14	Start Drilled Piers	0d	Aug 01 23 A	Aug 01 23 A	◆ Start Drilled Piers																											
15	Start Pre-Cast	0d	Dec 18 23 A	Dec 18 23 A	◆ Start Pre-Cast																											
16	Pool Start	0d	Feb 01 24	Feb 01 24	◆ Pool Start																											
17	Start Building Exteriors	0d	Apr 16 24	Apr 16 24	◆ Start Building Exteriors																											
18	Pool Equipment Room Ready For Equipment	0d	Apr 24 24	Apr 24 24	◆ Pool Equipment Room Ready For Equipment																											
19	Start Building Interiors	0d	May 13 24	May 13 24	◆ Start Building Interiors																											
20	Dry In	0d	May 13 24	May 13 24	◆ Dry In																											
21	Demo Existing Building	0d	May 15 24	May 15 24	◆ Demo Existing Building																											
22	Start Sitework	0d	Jun 13 24	Jun 13 24	◆ Start Sitework																											
23	Permanent Power On	0d	Jul 16 24	Jul 16 24	◆ Permanent Power On																											
24	Fill Pool	0d	Aug 23 24	Aug 23 24	◆ Fill Pool																											
25	Construction Complete	0d	Sep 26 24	Sep 26 24	◆ Construction Complete																											
26	Anticipated Weather Days Remaining	6d	Sep 26 24	Oct 03 24	Anticipated Weather Days Remaining																											
27	Project Substantial Completion (Contract Date 9/18/24)	0d	Oct 04 24	Oct 04 24 *	◆ Project Substantial Completion																											
	Impacts	171d	Jun 05 23 A	Feb 05 24																												
	Weather Impacts	171d	Jun 05 23 A	Feb 05 24																												
30	Weather Day #1 - 6/5/2023	1d	Jun 05 23 A	Jun 05 23 A	Weather Day #1 - 6/5/2023																											
31	Weather Day #2 - 6/30/2023	1d	Jun 30 23 A	Jun 30 23 A	Weather Day #2 - 6/30/2023																											
32	Weather Day #3 - 7/5/2023	1d	Jul 05 23 A	Jul 05 23 A	Weather Day #3 - 7/5/2023																											
33	Weather Day #4 - 09/15/2023	1d	Sep 15 23 A	Sep 15 23 A	Weather Day #4 - 09/15/2023																											
34	Weather Day #5 - 11/27/23	1d	Nov 27 23 A	Nov 27 23 A	Weather Day #5 - 11/27/23																											
35	Weather Day #6 - 1/10/24	1d	Jan 10 24 A	Jan 10 24 A	Weather Day #6 - 1/10/24																											
36	Weather Day #7 - 1/15/24	1d	Jan 15 24 A	Jan 15 24 A	Weather Day #7 - 1/15/24																											
37	Weather Day #8 - 2/5/24	1d	Feb 05 24 *	Feb 05 24	Weather Day #8 - 2/5/24																											
	Constrution Impacts	0d	Jan 16 24	Jan 16 24																												
	Pre-Construction	385d	Jan 17 23 A	Jul 18 24																												
	Design/Estimating	142d	Jan 17 23 A	Aug 04 23 A																												
	Parking Lot Preconstruction	35d	Jan 17 23 A	Mar 06 23 A																												
42	Subcontractors review of bid	13d	Jan 17 23 A	Feb 02 23 A	Subcontractors review of bid																											
43	SCI review/compilation of Bid packages	5d	Feb 03 23 A	Feb 09 23 A	SCI review/compilation of Bid packages																											
Line	Name	OD	Start	Finish	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November					

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January -7	February -6	March -5	April -4	May -3	June -2	July -1	August 1	September 2	October 3	November 4	December 5	January 6	February 7	March 8	April 9	May 10	June 11	July 12	August 13	September 14	October 15	Nov	
44	Subcontractor Buyout	16d	Feb 13 23 A	Mar 06 23 A																								
	Main Building Preconstruction	129d	Feb 03 23 A	Aug 04 23 A																								
	Design	128d	Feb 03 23 A	Aug 03 23 A																								
47	100% DD	0d	Feb 03 23 A	Feb 03 23 A																								
48	Production of CD's (80%)	25d	Feb 06 23 A	Mar 10 23 A																								
49	DD Page Flip with Arvada/Design	0d	Feb 08 23 A	Feb 08 23 A																								
50	DD/VE Approval	0d	Mar 07 23 A	Mar 07 23 A																								
51	80% CD Review/ 100% CD Production	75d	Mar 13 23 A	Jun 26 23 A																								
52	Receipt of Production CD's	0d	Mar 13 23 A	Mar 13 23 A																								
53	GMP Bid Submission for Main Building	0d	Apr 27 23 A	Apr 27 23 A																								
54	Final Reconciliation of FInal Drawings	19d	Jun 26 23 A	Jul 21 23 A																								
55	100% CD Drawings Completion	0d	Jun 27 23 A	Jun 27 23 A																								
56	Amendment 1 of FF GM	5d	Jul 24 23 A	Aug 03 23 A																								
	Bidding	103d	Mar 13 23 A	Aug 04 23 A																								
58	Project ITB to subs (SCI)	0d	Mar 13 23 A	Mar 13 23 A																								
59	Subcontractor Review of Bid	22d	Mar 13 23 A	Apr 11 23 A																								
60	Sub Contractor Bid submissions Due	0d	Apr 12 23 A	Apr 12 23 A																								
61	SCI Bid Reviews/Compilation	13d	Apr 12 23 A	Apr 28 23 A																								
62	GMP Bid Submission to City of Arvada	0d	Apr 28 23 A	Apr 28 23 A																								
63	GMP VE Process	2d	May 01 23 A	May 02 23 A																								
64	Meeting to Review Bid	0d	May 01 23 A	May 01 23 A																								
65	Subcontractor buyout/Award (Critical Scopes first)	66d	May 03 23 A	Aug 04 23 A																								
66	Contract Award	0d	Jul 10 23 A	Jul 10 23 A																								
67	City Council Approval	0d	Jul 10 23 A	Jul 10 23 A																								
68	Notice to Proceed	0d	Jul 11 23 A	Jul 11 23 A																								
	Material Procurement	356d	Feb 27 23 A	Jul 18 24																								
	Procurement (Long Lead)(Including Submittals)	356d	Feb 27 23 A	Jul 18 24																								
	Parking Lot	111d	Feb 27 23 A	Aug 02 23 A																								
72	(Procurement) Light Poles	107d	Feb 27 23 A	Aug 02 23 A																								
73	(Procurement) Utilities	15d	May 22 23 A	Jun 12 23 A																								
	Main Building After GMP (w/Submittals and Lead Times)	281d	Jun 13 23 A	Jul 18 24																								
75	(Procurement) Precast Panels	122d	Jun 13 23 A	Dec 15 23 A																								
76	(Procurement) Myrtha Pool	120d	Aug 11 23 A	Jan 31 24																								
77	(Procurement) Main Switch Boards	214d	Aug 15 23 A	Jun 14 24																								
78	(Procurement) Gear/Transformers	194d	Sep 13 23 A	Jun 14 24																								
79	(Procurement) AHU	152d	Sep 14 23 A	Apr 17 24																								
80	(Procurement) Structural Steel	107d	Sep 15 23 A	Feb 15 24																								
81	(Procurement) PDU	215d	Sep 15 23 A	Jul 18 24																								
82	(Procurement) Roofing Material	40d	Sep 15 23 A	Nov 09 23 A																								
83	(Procurement) Boilers/Water Heaters	130d	Sep 15 23 A	Mar 19 24																								
84	(Procurement) Brick Veneer	30d	Sep 15 23 A	Oct 26 23 A																								
85	(Procurement) Lighting (Depending on manufacturer)	140d	Sep 15 23 A	Apr 02 24																								
86	(Procurement) Vulcraft Joist/Deck	66d	Nov 30 23 A	Mar 01 24																								
Line	Name	OD	Start	Finish	2023												2024											
					January -7	February -6	March -5	April -4	May -3	June -2	July -1	August 1	September 2	October 3	November 4	December 5	January 6	February 7	March 8	April 9	May 10	June 11	July 12	August 13	September 14	October 15	Nov	



SAUNDERS

Owner: City of Arvada

Progress Period (Data Date):
1/16/2024

Start Date: 1/16/2023
Finish Date: 10/4/2024

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Nov	
87	(Procurement) Elevator	90d	Dec 08 23	A	Apr 12 24																							
88	(Procurement) Window Frames/Glass	25d	Feb 01 24		Mar 06 24																							
89	(Procurement) Metal Panels	23d	Apr 15 24		May 15 24																							
	Before GMP	0d	Jan 16 24		Jan 16 24																							
	Permits	124d	Mar 13 23	A	Sep 06 23	A																						
	Permit	124d	Mar 13 23	A	Sep 06 23	A																						
93	Permitting Process	124d	Mar 13 23	A	Sep 05 23	A																						
94	Building Permit	0d	Sep 06 23	A	Sep 06 23	A																						
	Construction	344d	May 22 23	A	Sep 25 24																							
	School Parking Lot Construction	56d	May 22 23	A	Aug 10 23	A																						
97	Mobilization at School Parking Lot (Connex, Signage, Fence, Porto-lets)	5d	May 22 23	A	May 26 23	A																						
98	Locate Utilities	5d	May 22 23	A	May 26 23	A																						
99	Excavate Pond	5d	Jun 02 23	A	Jun 09 23	A																						
100	Overlot Demo/Grading	10d	Jun 06 23	A	Jun 19 23	A																						
101	Underground utilities	14d	Jun 13 23	A	Jun 30 23	A																						
102	Irrigation Sleeves	3d	Jun 20 23	A	Jun 22 23	A																						
103	Light Pole Bases	11d	Jun 23 23	A	Jul 10 23	A																						
104	Road Base Installation at East Parking Lot	7d	Jun 26 23	A	Jul 17 23	A																						
105	Grading for Curb and Gutter / Sidewalk	1d	Jul 07 23	A	Jul 07 23	A																						
106	Curb and Gutter	7d	Jul 10 23	A	Jul 18 23	A																						
107	Landscape Grading	3d	Jul 17 23	A	Jul 19 23	A																						
108	Fine Grade for Asphalt	4d	Jul 19 23	A	Jul 22 23	A																						
109	Concrete Sidewalks	10d	Jul 19 23	A	Aug 01 23	A																						
110	Irrigation	9d	Jul 19 23	A	Aug 04 23	A																						
111	Asphalt	1d	Jul 24 23	A	Jul 24 23	A																						
112	Handicap Area - Demo	1d	Jul 27 23	A	Jul 27 23	A																						
113	Entrance Pan	2d	Jul 28 23	A	Jul 31 23	A																						
114	Handicap Area - Scarify/Recompact	1d	Jul 28 23	A	Jul 28 23	A																						
115	Handicap Area - Hardscape	1d	Jul 31 23	A	Jul 31 23	A																						
116	Seeding/Planting	7d	Aug 01 23	A	Aug 08 23	A																						
117	Handicap Area - Asphalt	1d	Aug 01 23	A	Aug 01 23	A																						
118	Striping	1d	Aug 02 23	A	Aug 02 23	A																						
119	Light Poles	1d	Aug 03 23	A	Aug 03 23	A																						
120	Punch List/AHJ comments	2d	Aug 08 23	A	Aug 09 23	A																						
121	Inspections	1d	Aug 09 23	A	Aug 09 23	A																						
122	TCO / Parking Lot	0d	Aug 10 23	A	Aug 10 23	A																						
	Meyers Pool Replacement Construction	304d	Jul 19 23	A	Sep 25 24																							
	Mobilization	18d	Jul 19 23	A	Aug 14 23	A																						
125	Mobilization & Site Set-up (Main Building)	7d	Jul 19 23	A	Aug 03 23	A																						
126	Install intial BMP's	1d	Aug 10 23	A	Aug 10 23	A																						
127	Intial BMP city inpsction	1d	Aug 11 23	A	Aug 11 23	A																						
128	Start Main Building	0d	Aug 14 23	A	Aug 14 23	A																						
	Foundations	117d	Aug 10 23	A	Jan 25 24																							
Line	Name	OD	Start	Finish	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Nov	
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov	
					2023												2024											



Owner: City of Arvada

Progress Period (Data Date):
1/16/2024

Start Date: 1/16/2023
Finish Date: 10/4/2024

Meyers Pool Replacement

Construction Schedule - All Work

Planned by Asta Powerproject

Printed: 2/14/2024

Line	Name	OD	Start	Finish	2023												2024											
					January -7	February -6	March -5	April -4	May -3	June -2	July -1	August 1	September 2	October 3	November 4	December 5	January 6	February 7	March 8	April 9	May 10	June 11	July 12	August 13	September 14	October 15	Nov	
	Foundation Excavation	108d	Aug 10 23 A	Jan 12 24 A																								
131	Clearing lot and Demo	7d	Aug 10 23 A	Aug 18 23 A																								
132	Establish control on site	2d	Aug 10 23 A	Aug 11 23 A																								
133	Survey overlot grade/building rough grade	1d	Aug 18 23 A	Aug 18 23 A																								
134	Overlot grade	12d	Aug 21 23 A	Sep 06 23 A																								
135	Pre Tie Cages	5d	Sep 01 23 A	Sep 08 23 A																								
136	Initial Pool Excavation to 96'	3d	Sep 06 23 A	Sep 08 23 A																								
137	Mobilize Drill Rig/Concrete Crew (ALAP)	1d	Sep 08 23 A	Sep 08 23 A																								
138	Shoring Excavation	2d	Sep 19 23 A	Sep 20 23 A																								
139	Sequence 2 excavate shoring	3d	Sep 20 23 A	Sep 22 23 A																								
140	Sequence 3 excavate surge tanks	4d	Sep 25 23 A	Sep 28 23 A																								
141	Excavate for sump pit and surge tank	2d	Sep 29 23 A	Oct 02 23 A																								
142	Set surge tank & sump pit & backfill	8d	Oct 03 23 A	Oct 12 23 A																								
143	access to surge tank for plumbing	7d	Oct 13 23 A	Oct 23 23 A																								
144	Backfill Grade Beams	61d	Oct 17 23 A	Jan 12 24 A																								
145	Grade Beam Dampproofing	17d	Oct 27 23 A	Nov 20 23 A																								
146	Underground Plumbing	30d	Nov 08 23 A	Dec 21 23 A																								
	Foundations and Tanks	96d	Sep 11 23 A	Jan 25 24																								
	Drilled Piers	31d	Sep 11 23 A	Oct 23 23 A																								
149	Drilled Piers Precast Enabling	9d	Sep 11 23 A	Sep 21 23 A																								
150	Drill, Reinforce, and Place Drilled Piers Drilled Piers Shoring Enabling	1d	Sep 11 23 A	Sep 11 23 A																								
151	Drill, Reinforce, and Place Drilled Piers Precast Enabling - Seq1	5d	Sep 12 23 A	Sep 19 23 A																								
152	Drill, Reinforce, and Place Drilled Piers Precast Enabling - Seq2	2d	Sep 20 23 A	Sep 21 23 A																								
153	Drilled Piers Tanks/Pools	22d	Sep 22 23 A	Oct 23 23 A																								
154	Drill, Reinforce, and Place Drilled Piers Tanks/Pools - Seq1	5d	Sep 22 23 A	Sep 28 23 A																								
155	Drill, Reinforce, and Place Drilled Piers Tanks/Pools - Seq2	6d	Sep 29 23 A	Oct 06 23 A																								
156	Drill, Reinforce, and Place Drilled Piers Tanks/Pools - Seq3	6d	Oct 09 23 A	Oct 16 23 A																								
157	Drill, Reinforce, and Place Drilled Piers Tanks/Pools - Seq4	4d	Oct 17 23 A	Oct 20 23 A																								
158	Demobilize Drill Rig Tanks/Pools	1d	Oct 23 23 A	Oct 23 23 A																								
	Pool Shoring - Deep end	10d	Sep 11 23 A	Sep 22 23 A																								
160	Schnabel Mobilize - Pool Shoring	2d	Sep 11 23 A	Sep 12 23 A																								
161	Drill Soldier Beams - Pool Shoring	2d	Sep 13 23 A	Sep 18 23 A																								
162	Guardrail - Pool Shoring	1d	Sep 18 23 A	Sep 18 23 A																								
163	Lagging - Pool Shoring	4d	Sep 19 23 A	Sep 22 23 A																								
	Foundations Precast Enabling	86d	Sep 25 23 A	Jan 25 24																								
165	Grade Beams Foundations Precast Enabling	86d	Sep 25 23 A	Jan 25 24																								
166	Grade Beams Foundations Precast Enabling Sequence 1	8d	Sep 25 23 A	Oct 04 23 A																								
167	Form Grade Beams Foundations Precast Enabling Sequence 1	3d	Sep 25 23 A	Sep 27 23 A																								
168	Reinforce Grade Beams Foundations Precast Enabling Sequence 1	2d	Sep 27 23 A	Sep 28 23 A																								
169	Button-Up Grade Beams Foundations Precast Enabling Sequence 1	2d	Sep 28 23 A	Sep 29 23 A																								
170	Place Grade Beams Foundations Precast Enabling Sequence 1	1d	Oct 02 23 A	Oct 02 23 A																								
171	Strip Walls Grade Beams Foundations Precast Enabling Sequence 1	2d	Oct 03 23 A	Oct 04 23 A																								
172	Grade Beams Foundations Precast Enabling Sequence 3	8d	Oct 05 23 A	Oct 16 23 A																								
Line	Name	OD	Start	Finish	-7 January	-6 February	-5 March	-4 April	-3 May	-2 June	-1 July	1 August	2 September	3 October	4 November	5 December	6 January	7 February	8 March	9 April	10 May	11 June	12 July	13 August	14 September	15 October	Nov	

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023																									
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February
					-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
173	Form Grade Beams Foundations Precast Enabling Sequence 3	3d	Oct 05 23 A	Oct 09 23 A																										
174	Reinforce Grade Beams Foundations Precast Enabling Sequence 3	2d	Oct 09 23 A	Oct 10 23 A																										
175	Button-Up Grade Beams Foundations Precast Enabling Sequence 3	2d	Oct 10 23 A	Oct 11 23 A																										
176	Place Grade Beams Foundations Precast Enabling Sequence 3	1d	Oct 12 23 A	Oct 12 23 A																										
177	Strip Walls Grade Beams Foundations Precast Enabling Sequence 3	2d	Oct 13 23 A	Oct 16 23 A																										
178	Grade Beams Foundations Precast Enabling Sequence 4	8d	Oct 17 23 A	Oct 26 23 A																										
179	Form Grade Beams Foundations Precast Enabling Sequence 4	3d	Oct 17 23 A	Oct 19 23 A																										
180	Reinforce Grade Beams Foundations Precast Enabling Sequence 4	2d	Oct 19 23 A	Oct 20 23 A																										
181	Button-Up Grade Beams Foundations Precast Enabling Sequence 4	2d	Oct 20 23 A	Oct 23 23 A																										
182	Place Grade Beams Foundations Precast Enabling Sequence 4	1d	Oct 24 23 A	Oct 24 23 A																										
183	Strip Walls Grade Beams Foundations Precast Enabling Sequence 4	2d	Oct 25 23 A	Oct 26 23 A																										
184	Grade Beams Foundations Precast Enabling Sequence 5	8d	Oct 26 23 A	Nov 06 23 A																										
185	Form Grade Beams Foundations Precast Enabling Sequence 5	3d	Oct 26 23 A	Oct 30 23 A																										
186	Reinforce Grade Beams Foundations Precast Enabling Sequence 5	2d	Oct 30 23 A	Oct 31 23 A																										
187	Button-Up Grade Beams Foundations Precast Enabling Sequence 5	2d	Oct 31 23 A	Nov 01 23 A																										
188	Place Grade Beams Foundations Precast Enabling Sequence 5	1d	Nov 02 23 A	Nov 02 23 A																										
189	Strip Walls Grade Beams Foundations Precast Enabling Sequence 5	2d	Nov 03 23 A	Nov 06 23 A																										
190	Grade Beams Foundations Precast Enabling Sequence 6	8d	Nov 06 23 A	Nov 15 23 A																										
191	Form Grade Beams Foundations Precast Enabling Sequence 6	3d	Nov 06 23 A	Nov 08 23 A																										
192	Reinforce Grade Beams Foundations Precast Enabling Sequence 6	2d	Nov 08 23 A	Nov 09 23 A																										
193	Button-Up Grade Beams Foundations Precast Enabling Sequence 6	2d	Nov 09 23 A	Nov 10 23 A																										
194	Place Grade Beams Foundations Precast Enabling Sequence 6	1d	Nov 13 23 A	Nov 13 23 A																										
195	Strip Walls Grade Beams Foundations Precast Enabling Sequence 6	2d	Nov 14 23 A	Nov 15 23 A																										
196	Grade Beams Foundations Precast Enabling Sequence 7	8d	Nov 15 23 A	Nov 28 23 A																										
197	Form Grade Beams Foundations Precast Enabling Sequence 7	3d	Nov 15 23 A	Nov 17 23 A																										
198	Reinforce Grade Beams Foundations Precast Enabling Sequence 7	2d	Nov 17 23 A	Nov 20 23 A																										
199	Button-Up Grade Beams Foundations Precast Enabling Sequence 7	2d	Nov 20 23 A	Nov 21 23 A																										
200	Place Grade Beams Foundations Precast Enabling Sequence 7	1d	Nov 22 23 A	Nov 22 23 A																										
201	Strip Walls Grade Beams Foundations Precast Enabling Sequence 7	2d	Nov 27 23 A	Nov 28 23 A																										
202	Grade Beams Foundations Precast Enabling Sequence 2 (2 lifts)	16d	Nov 29 23 A	Dec 20 23 A																										
203	Grade Beams Foundations Precast Enabling Lift 1	8d	Nov 29 23 A	Dec 08 23 A																										
204	Form Grade Beams Foundations Precast Enabling Lift 1	2d	Nov 29 23 A	Nov 30 23 A																										
205	Reinforce Grade Beams Foundations Precast Enabling Lift 1	2d	Dec 01 23 A	Dec 04 23 A																										
206	Button-Up Grade Beams Foundations Precast Enabling Lift 1	2d	Dec 04 23 A	Dec 05 23 A																										
207	Place Grade Beams Foundations Precast Enabling Lift 1	1d	Dec 06 23 A	Dec 06 23 A																										
208	Strip Walls Grade Beams Foundations Precast Enabling Lift 1	2d	Dec 07 23 A	Dec 08 23 A																										
209	Grade Beams Foundations Precast Enabling Lift 2	8d	Dec 11 23 A	Dec 20 23 A																										
210	Form Grade Beams Foundations Precast Enabling Sequence 2	2d	Dec 11 23 A	Dec 12 23 A																										
211	Reinforce Grade Beams Foundations Precast Enabling Sequence 2	2d	Dec 13 23 A	Dec 14 23 A																										
212	Button-Up Grade Beams Foundations Precast Enabling Sequence 2	2d	Dec 14 23 A	Dec 15 23 A																										
213	Place Grade Beams Foundations Precast Enabling Sequence 2	1d	Dec 18 23 A	Dec 18 23 A																										
214	Strip Walls Grade Beams Foundations Precast Enabling Sequence 2	2d	Dec 19 23 A	Dec 20 23 A																										
215	Grade Beams Foundations Precast Enabling Sequence 8	8d	Jan 16 24	Jan 25 24																										
					2024																									
Line	Name	OD	Start	Finish	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February
					2023																									
					2024																									



SAUNDERS

Owner: City of Arvada

Progress Period (Data Date):
1/16/2024

Start Date: 1/16/2023
Finish Date: 10/4/2024

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January -7	February -6	March -5	April -4	May -3	June -2	July -1	August 1	September 2	October 3	November 4	December 5	January 6	February 7	March 8	April 9	May 10	June 11	July 12	August 13	September 14	October 15	Nov	
216	Form Grade Beams Foundations Precast Enabling Sequence 8	3d	Jan 16 24	Jan 18 24																								
217	Reinforce Grade Beams Foundations Precast Enabling Sequence 8	2d	Jan 18 24	Jan 19 24																								
218	Button-Up Grade Beams Foundations Precast Enabling Sequence 8	2d	Jan 19 24	Jan 22 24																								
219	Place Grade Beams Foundations Precast Enabling Sequence 8	1d	Jan 23 24	Jan 23 24																								
220	Strip Walls Grade Beams Foundations Precast Enabling Sequence 8	2d	Jan 24 24	Jan 25 24																								
221	Elevator Pit Precast Enabling	13d	Oct 27 23 A	Nov 14 23 A																								
222	Elevator Pit Slab Precast Enabling	5d	Oct 27 23 A	Nov 02 23 A																								
223	Excavate Elevator Pit Slab Foundations Precast Enabling	1d	Oct 27 23 A	Oct 27 23 A																								
224	Form Elevator Pit Slab Foundations Precast Enabling	1d	Oct 30 23 A	Oct 30 23 A																								
225	Reinforce Elevator Pit Slab Foundations Precast Enabling	1d	Oct 31 23 A	Oct 31 23 A																								
226	Place Elevator Pit Slab Foundations Precast Enabling	1d	Nov 01 23 A	Nov 01 23 A																								
227	Strip Elevator Pit Slab Foundations Precast Enabling	1d	Nov 02 23 A	Nov 02 23 A																								
228	Elevator Pit Walls	8d	Nov 03 23 A	Nov 14 23 A																								
229	Form Walls Elevator Foundations Precast Enabling	2d	Nov 03 23 A	Nov 06 23 A																								
230	Reinforce Walls Elevator Foundations Precast Enabling	2d	Nov 06 23 A	Nov 07 23 A																								
231	Button-Up Walls Elevator Foundations Precast Enabling	2d	Nov 07 23 A	Nov 08 23 A																								
232	Place Walls Elevator Foundations Precast Enabling	1d	Nov 09 23 A	Nov 09 23 A																								
233	Cure Walls Elevator Foundations Precast Enabling	3d	Nov 10 23 A	Nov 14 23 A																								
234	Strip Walls Elevator Foundations Precast Enabling	2d	Nov 10 23 A	Nov 13 23 A																								
235	Backfill Walls Elevator Foundations Precast Enabling	1d	Nov 14 23 A	Nov 14 23 A																								
	Surge Tanks	54d	Oct 13 23 A	Jan 01 24 A																								
237	Surge Tanks Slabs	44d	Oct 13 23 A	Dec 15 23 A																								
238	Surge Tanks Slab Tank A	6d	Oct 13 23 A	Oct 20 23 A																								
239	Form Surge Tanks Slab Tank A	1d	Oct 13 23 A	Oct 13 23 A																								
240	Reinforce Surge Tanks Slab Tank A	1d	Oct 16 23 A	Oct 16 23 A																								
241	Place Slab Surge Tanks Slab Tank A	1d	Oct 17 23 A	Oct 17 23 A																								
242	Cure Surge Tanks Slabs Tank B	3d	Oct 18 23 A	Oct 20 23 A																								
243	Strip Surge Tanks Slabs Tank B	2d	Oct 18 23 A	Oct 19 23 A																								
244	Surge Tanks Slabs Tank B	6d	Dec 08 23 A	Dec 15 23 A																								
245	Form Surge Tanks Slabs Tank B	2d	Dec 08 23 A	Dec 11 23 A																								
246	Reinforce Surge Tanks Slabs Tank B	1d	Dec 12 23 A	Dec 12 23 A																								
247	Button-Up Surge Tanks Slabs Tank B	2d	Dec 13 23 A	Dec 14 23 A																								
248	Place Surge Tanks Slabs Tank B	1d	Dec 15 23 A	Dec 15 23 A																								
249	Surge Tanks Walls	49d	Oct 20 23 A	Jan 01 24 A																								
250	Surge Tanks Walls Tank A	4d	Oct 20 23 A	Oct 25 23 A																								
251	Form Slab Surge Tanks Walls Tank A	1d	Oct 20 23 A	Oct 20 23 A																								
252	Reinforce Surge Tanks Walls Tank A	1d	Oct 23 23 A	Oct 23 23 A																								
253	Place Slab Surge Tanks Walls Tank A	1d	Oct 24 23 A	Oct 24 23 A																								
254	Strip Slab Surge Tanks Walls Tank A	1d	Oct 25 23 A	Oct 25 23 A																								
255	Foundation Drain Around Walls and Backfill	15d	Nov 15 23 A	Dec 07 23 A																								
256	Surge Tanks Lid Tank A	7d	Dec 08 23 A	Dec 18 23 A																								
257	Form Lid Surge Tanks Tank A	3d	Dec 08 23 A	Dec 12 23 A																								
258	Reinforce Lid Surge Tanks Tank A	1d	Dec 13 23 A	Dec 13 23 A																								
Line	Name	OD	Start	Finish	-7 January	-6 February	-5 March	-4 April	-3 May	-2 June	-1 July	1 August	2 September	3 October	4 November	5 December	6 January	7 February	8 March	9 April	10 May	11 June	12 July	13 August	14 September	15 October	Nov	

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line		Name	OD	Start	Finish	2023												2024											
						January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov	
						-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
259		Place Lid Surge Tanks Tank A	1d	Dec 14 23 A	Dec 14 23 A																								
260		Strip Lid Tank A	2d	Dec 15 23 A	Dec 18 23 A																								
261		Surge Tanks Walls Tank B	10d	Dec 18 23 A	Jan 01 24 A																								
262		Form Walls Surge Tanks Tank B	3d	Dec 18 23 A	Dec 20 23 A																								
263		Reinforce Walls Surge Tanks Tank B	2d	Dec 20 23 A	Dec 21 23 A																								
264		Button-Up Walls Surge Tanks Tank B	2d	Dec 21 23 A	Dec 22 23 A																								
265		Place Walls Surge Tanks Tank B	1d	Dec 26 23 A	Dec 26 23 A																								
266		Cure Walls Surge Tanks Tank B	3d	Dec 27 23 A	Dec 29 23 A																								
267		Strip Walls Surge Tanks Tank B	2d	Dec 27 23 A	Dec 28 23 A																								
268		Backfill Walls Surge Tanks Tank B	1d	Jan 01 24 A	Jan 01 24 A																								
		Columns Pools	25d	Dec 13 23 A	Jan 17 24																								
270		Columns Pools Sequence 1	3d	Dec 13 23 A	Dec 15 23 A																								
271		Reinforce and Form Columns Pools Sequence 1	1d	Dec 13 23 A	Dec 13 23 A																								
272		Place Columns Pools Sequence 1	1d	Dec 14 23 A	Dec 14 23 A																								
273		Strip Columns Pools Sequence 1	1d	Dec 15 23 A	Dec 15 23 A																								
274		Columns Pools Sequence 2	3d	Dec 15 23 A	Dec 19 23 A																								
275		Reinforce and Form Columns Pools Sequence 2	1d	Dec 15 23 A	Dec 15 23 A																								
276		Place Columns Pools Sequence 2	1d	Dec 18 23 A	Dec 18 23 A																								
277		Strip Columns Pools Sequence 2	1d	Dec 19 23 A	Dec 19 23 A																								
278		Columns Pools Sequence 3	3d	Dec 19 23 A	Dec 21 23 A																								
279		Reinforce and Form Columns Pools Sequence 3	1d	Dec 19 23 A	Dec 19 23 A																								
280		Place Columns Pools Sequence 3	1d	Dec 20 23 A	Dec 20 23 A																								
281		Strip Columns Pools Sequence 3	1d	Dec 21 23 A	Dec 21 23 A																								
282		Columns Pools Sequence 4	3d	Dec 21 23 A	Dec 26 23 A																								
283		Reinforce and Form Columns Pools Sequence 4	1d	Dec 21 23 A	Dec 21 23 A																								
284		Place Columns Pools Sequence 4	1d	Dec 22 23 A	Dec 22 23 A																								
285		Strip Columns Pools Sequence 4	1d	Dec 26 23 A	Dec 26 23 A																								
286		Columns Pools Sequence 5	3d	Dec 26 23 A	Dec 28 23 A																								
287		Reinforce and Form Columns Pools Sequence 5	1d	Dec 26 23 A	Dec 26 23 A																								
288		Place Columns Pools Sequence 5	1d	Dec 27 23 A	Dec 27 23 A																								
289		Strip Columns Pools Sequence 5	1d	Dec 28 23 A	Dec 28 23 A																								
290		Columns Pools Sequence 6	3d	Dec 28 23 A	Jan 01 24 A																								
291		Reinforce and Form Columns Pools Sequence 6	1d	Dec 28 23 A	Dec 28 23 A																								
292		Place Columns Pools Sequence 6	1d	Dec 29 23 A	Dec 29 23 A																								
293		Strip Columns Pools Sequence 6	1d	Jan 01 24 A	Jan 01 24 A																								
294		Columns Pools Sequence 7	3d	Jan 08 24 A	Jan 10 24 A																								
295		Reinforce and Form Columns Pools Sequence 7	1d	Jan 08 24 A	Jan 08 24 A																								
296		Place Columns Pools Sequence 7	1d	Jan 09 24 A	Jan 09 24 A																								
297		Strip Columns Pools Sequence 7	1d	Jan 10 24 A	Jan 10 24 A																								
298		Columns Pools Sequence 8	3d	Jan 10 24 A	Jan 12 24 A																								
299		Reinforce and Form Columns Pools Sequence 8	1d	Jan 10 24 A	Jan 10 24 A																								
300		Place Columns Pools Sequence 8	1d	Jan 11 24 A	Jan 11 24 A																								
301		Strip Columns Pools Sequence 8	1d	Jan 12 24 A	Jan 12 24 A																								
Line		Name	OD	Start	Finish	2023												2024											
						January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov	
						-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January -7	February -6	March -5	April -4	May -3	June -2	July -1	August 1	September 2	October 3	November 4	December 5	January 6	February 7	March 8	April 9	May 10	June 11	July 12	August 13	September 14	October 15	Nov	
302	Columns Pools Sequence 9	4d	Jan 12 24 A	Jan 17 24																								
303	Reinforce and Form Columns Pools Sequence 9	1d	Jan 12 24 A	Jan 12 24 A																								
304	Place Columns Pools Sequence 9	1d	Jan 16 24	Jan 16 24																								
305	Strip Columns Pools Sequence 9	1d	Jan 17 24	Jan 17 24																								
	Utilities & Sitework	258d	Sep 22 23 A	Sep 25 24																								
	Site Utilities	173d	Sep 22 23 A	May 24 24																								
308	Site Utilities main water loop/fireline/domestic - Sitework - Phase 1	15d	Sep 22 23 A	Oct 12 23 A																								
309	Storm Line P3 (MH5 to Pond) - Site - P1 - East	3d	Apr 24 24	Apr 26 24																								
310	Storm Line P4 (P8 to MH5) - Site - P1 - North	3d	Apr 29 24	May 01 24																								
311	Storm Line P4 (Bldg. to P8) - Site - P1 - West	3d	May 02 24	May 06 24																								
312	Gas Main Installation - Site - P1 - West	5d	May 07 24	May 13 24																								
313	Slotted Storm Line (Basin P10.2 to Inlet P5) - Site - P1 - South	3d	May 22 24	May 24 24																								
	Sitework - Phase 1	87d	Apr 29 24	Aug 29 24																								
	Sitework - Phase 1 - East	63d	Apr 29 24	Jul 26 24																								
316	Rough Grade / Excavate Retaining Walls - Site - P1 - East	5d	Apr 29 24	May 03 24																								
317	Retaining Walls - Site - P1 - East	13d	Jun 10 24	Jun 26 24																								
318	Backfill Retaining Wall / Grade - Site - P1 - East	5d	Jun 27 24	Jul 03 24																								
319	Stake Hardscapes & Light Poles - Site - P1 - East	1d	Jul 05 24	Jul 05 24																								
320	Irrigation Sleeves - Site - P1 - East	5d	Jul 08 24	Jul 12 24																								
321	Place Light Pole Bases and Curb & Gutter - Site - P1 - East	5d	Jul 08 24	Jul 12 24																								
322	Electrical Underground - Site - P1 - East	3d	Jul 08 24	Jul 10 24																								
323	Place Sidewalks - Site - P1 - East	5d	Jul 15 24	Jul 19 24																								
324	Landscape Planting - Site - P1 - East	5d	Jul 22 24	Jul 26 24																								
325	Install Site Railing - Site - P1 - East	5d	Jul 22 24	Jul 26 24																								
	Sitework - Phase 1 - Pond	74d	May 14 24	Aug 27 24																								
327	Relocate Trailers To Existing Parking Lot - Sitework - Phase 1 - Pond	5d	May 14 24	May 20 24																								
328	Rough grade pond - Sitework - Phase 1 - Pond	2d	Jun 06 24	Jun 07 24																								
329	Storm Line B2 - Sitework - Phase 1 - Pond	5d	Jun 20 24	Jun 26 24																								
330	Form / Reinforce / Place Forebays & Outlet Structures - Sitework - Phase 1 - Pond	5d	Jun 27 24	Jul 03 24																								
331	Rip Rap @ Emergency Spillway - Sitework - Phase 1 - Pond	5d	Jul 05 24	Jul 11 24																								
332	Pond concrete trickle channel - Sitework - Phase 1 - Pond	3d	Jul 12 24	Jul 16 24																								
333	Pond Fine Grading - Sitework - Phase 1 - Pond	5d	Jul 17 24	Jul 23 24																								
334	Pond Volume Cert. - Sitework - Phase 1 - Pond	5d	Jul 24 24	Jul 30 24																								
335	Pond Irrigation/ Landscaping - Sitework - Phase 1 - Pond	5d	Jul 24 24	Jul 30 24																								
336	Pond Certification - Sitework - Phase 1 - Pond	20d	Jul 31 24	Aug 27 24																								
	Sitework - Phase 1 - West	48d	May 23 24	Jul 31 24																								
338	Rough Grade / Excavate Retaining Walls - Site - P1 - West	5d	May 23 24	May 30 24																								
339	Retaining Wall - Site - P1 - West	14d	May 31 24	Jun 19 24																								
340	Backfill Retaining Wall / Grade - Site - P1 - West	5d	Jun 20 24	Jun 26 24																								
341	Secondary Conduit to Transformer - Site - P1 - West	3d	Jun 27 24	Jul 01 24																								
342	Stake Hardscapes & Light Poles - Site - P1 - West	1d	Jun 27 24	Jun 27 24																								
343	Irrigation Sleeves - Site - P1 - West	5d	Jun 28 24	Jul 05 24																								
344	Electrical Underground - Site - P1 - West	5d	Jun 28 24	Jul 05 24																								

Meyers Pool Replacement

Construction Schedule - All Work

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Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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345	Set Transformer - Site - P1 - West	5d	Jul 02 24	Jul 09 24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

Meyers Pool Replacement

Construction Schedule - All Work

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Line	Name	OD	Start	Finish	2023												2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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388	Landscape Grading - Sitework - Phase 2	5d	Jul 17 24	Jul 23 24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

Line	Name	OD	Start	Finish	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January -7	February -6	March -5	April -4	May -3	June -2	July -1	August 1	September 2	October 3	November 4	December 5	January 6	February 7	March 8	April 9	May 10	June 11	July 12	August 13	September 14	October 15	Nov	
431	Slab-On-Void Associated Pool Scope Competition Pool Pour 5	19d	Dec 07 23 A	Jan 03 24 A																								
432	MEP Underground Slab-On-Void Associated Pool Scope Competition Pool Pour 5	3d	Dec 07 23 A	Dec 11 23 A																								
433	Form Slab-On-Void Associated Pool Scope Competition Pool Pour 5	2d	Dec 12 23 A	Dec 13 23 A																								
434	Install Void Slab-On-Void Associated Pool Scope Competition Pool Pour 5	1d	Dec 13 23 A	Dec 13 23 A																								
435	Reinforce Slab-On-Void Associated Pool Scope Competition Pool Pour 5	2d	Dec 29 23 A	Jan 01 24 A																								
436	Place Slab-On-Void Associated Pool Scope Competition Pool Pour 5	1d	Jan 02 24 A	Jan 02 24 A																								
437	Strip Slab-On-Void Associated Pool Scope Competition Pool Pour 5	1d	Jan 03 24 A	Jan 03 24 A																								
438	Slab-On-Void Associated Pool Scope Warm-Up Pool	19d	Dec 12 23 A	Jan 08 24 A																								
439	Slab-On-Void Associated Pool Scope Warm-Up Pool Pour 1	19d	Dec 12 23 A	Jan 08 24 A																								
440	MEP Underground Slab-On-Void Associated Pool Scope Warm-Up Pool Pour 1	8d	Dec 12 23 A	Dec 21 23 A																								
441	Form Slab-On-Void Associated Pool Scope Warm-Up Pool Pour 1	2d	Dec 22 23 A	Dec 26 23 A																								
442	Install Void Slab-On-Void Associated Pool Scope Warm-Up Pool Pour 1	4d	Dec 26 23 A	Dec 29 23 A																								
443	Reinforce Slab-On-Void Associated Pool Scope Warm-Up Pool Pour 1	4d	Jan 01 24 A	Jan 04 24 A																								
444	Place Slab-On-Void Associated Pool Scope Warm-Up Pool Pour 1	1d	Jan 05 24 A	Jan 05 24 A																								
445	Strip Slab-On-Void Associated Pool Scope Warm-Up Pool Pour 1	1d	Jan 08 24 A	Jan 08 24 A																								
	Slab-On-Void Pool Deck	16d	Mar 05 24	Mar 26 24																								
447	Slab-On-Void Pool Deck Pour 1	14d	Mar 05 24	Mar 22 24																								
448	MEP Underground Slab-On-Void Pool Deck Pour 1	4d	Mar 05 24	Mar 08 24																								
449	Edge Form Slab-On-Void Pool Deck Pour 1	1d	Mar 18 24	Mar 18 24																								
450	Install Void Form Slab-On-Void Pool Deck Pour 1	2d	Mar 19 24	Mar 20 24																								
451	Reinforce Slab-On-Void Pool Deck Pour 1	2d	Mar 20 24	Mar 21 24																								
452	Place/Finish Slab-On-Void Pool Deck Pour 1	1d	Mar 22 24	Mar 22 24																								
453	Slab-On-Void Pool Deck Pour 2	12d	Mar 11 24	Mar 26 24																								
454	MEP Underground Slab-On-Void Pool Deck Pour 2	4d	Mar 11 24	Mar 14 24																								
455	Edge Form Slab-On-Void Pool Deck Pour 2	1d	Mar 21 24	Mar 21 24																								
456	Install Void Form Slab-On-Void Pool Deck Pour 2	2d	Mar 22 24	Mar 23 24																								
457	Reinforce Slab-On-Void Pool Deck Pour 2	2d	Mar 23 24	Mar 25 24																								
458	Place/Finish Slab-On-Void Pool Deck Pour 2 (Saturday Req'd)	1d	Mar 26 24	Mar 26 24																								
	Slab-On-Void Outer Building	8d	Mar 05 24	Mar 14 24																								
460	Slab-On-Void Outer Building Pour 1	7d	Mar 05 24	Mar 13 24																								
461	MEP Underground Slab-On-Void Outer Building Pour 1	1d	Mar 05 24	Mar 05 24																								
462	Edge Form Slab-On-Void Outer Building Pour 1	1d	Mar 06 24	Mar 06 24																								
463	Install Void Form Slab-On-Void Outer Building Pour 1	2d	Mar 07 24	Mar 08 24																								
464	Reinforce Slab-On-Void Outer Building Pour 1	2d	Mar 11 24	Mar 12 24																								
465	Place/Finish Slab-On-Void Outer Building Pour 1	1d	Mar 13 24	Mar 13 24																								
466	Slab-On-Void Outer Building Pour 2	7d	Mar 06 24	Mar 14 24																								
467	MEP Underground Slab-On-Void Outer Building Pour 2	1d	Mar 06 24	Mar 06 24																								
468	Edge Form Slab-On-Void Outer Building Pour 2	1d	Mar 07 24	Mar 07 24																								
469	Install Void Form Slab-On-Void Outer Building Pour 2	2d	Mar 08 24	Mar 11 24																								
470	Reinforce Slab-On-Void Outer Building Pour 2	2d	Mar 12 24	Mar 13 24																								
471	Place/Finish Slab-On-Void Outer Building Pour 2	1d	Mar 14 24	Mar 14 24																								
	Topping Slabs Pool Deck	7d	Jul 10 24	Jul 18 24																								
473	Topping Slab Pool Deck Pour 1	5d	Jul 10 24	Jul 16 24																								
Line	Name	OD	Start	Finish	-7 January	-6 February	-5 March	-4 April	-3 May	-2 June	-1 July	1 August	2 September	3 October	4 November	5 December	6 January	7 February	8 March	9 April	10 May	11 June	12 July	13 August	14 September	15 October	Nov	



SAUNDERS

Owner: City of Arvada

Progress Period (Data Date):
1/16/2024

Start Date: 1/16/2023
Finish Date: 10/4/2024

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January -7	February -6	March -5	April -4	May -3	June -2	July -1	August 1	September 2	October 3	November 4	December 5	January 6	February 7	March 8	April 9	May 10	June 11	July 12	August 13	September 14	October 15	Nov	
474	Edge Form Topping Slab Pool Deck Pour 1	2d	Jul 10 24	Jul 11 24																							Edge Form Topping Slab Pool Deck Pour 1	
475	Reinforce Topping Slab Pool Deck Pour 1	2d	Jul 12 24	Jul 15 24																							Reinforce Topping Slab Pool Deck Pour 1	
476	Place/Finish Topping Slab Pool Deck Pour 1	1d	Jul 16 24	Jul 16 24																							Place/Finish Topping Slab Pool Deck Pour 1	
477	Topping Slab Pool Deck Pour 2	5d	Jul 12 24	Jul 18 24																								
478	Edge Form Topping Slab Pool Deck Pour 2	2d	Jul 12 24	Jul 15 24																							Edge Form Topping Slab Pool Deck Pour 2	
479	Reinforce Topping Slab Pool Deck Pour 2	2d	Jul 16 24	Jul 17 24																							Reinforce Topping Slab Pool Deck Pour 2	
480	Place/Finish Topping Slab Pool Deck Pour 2	1d	Jul 18 24	Jul 18 24																							Place/Finish Topping Slab Pool Deck Pour 2	
	Precast	72d	Dec 18 23 A	Mar 27 24																								
482	Erect Precast bleachers	5d	Dec 18 23 A	Dec 22 23 A																							Erect Precast bleachers	
483	Wells shut down for holidays	10d	Dec 26 23 A	Jan 08 24 A																							Wells shut down for holidays	
484	Erect building Precast	16d	Jan 09 24 A	Jan 29 24																							Erect building Precast	
485	Field measure window openings	2d	Jan 30 24	Jan 31 24																							Field measure window openings	
486	Erect Precast Leave Out Panels	5d	Mar 21 24	Mar 27 24																							Erect Precast Leave Out Panels	
	Load Bearing Masonry	26d 4h	Jan 26 24	Mar 04 24																								
488	Doors Frames in CMU	5d	Jan 26 24	Feb 01 24																							Doors Frames in CMU	
489	Plumbing CMU Wall Rough - Load Bearing Walls	25d	Jan 29 24	Mar 04 24																							Plumbing CMU Wall Rough - Load Bearing Walls	
490	Electrical CMU Wall Rough - Load Bearing Walls	25d	Jan 29 24	Mar 04 24																							Electrical CMU Wall Rough - Load Bearing Walls	
491	Load Bearing Masonry Walls	25d	Jan 29 24	Mar 04 24																							Load Bearing Masonry Walls	
	Structural Steel	48d	Feb 16 24	Apr 23 24																								
493	Anchor Bolt Survey - Structural Steel	2d	Feb 16 24	Feb 19 24																							Anchor Bolt Survey - Structural Steel	
494	Mobilize Equipment - Structural Steel	1d	Feb 20 24	Feb 20 24																							Mobilize Equipment - Structural Steel	
495	Build Crane - Structural Steel	2d	Feb 21 24	Feb 22 24																							Build Crane - Structural Steel	
	Structural Steel - Area A	29d	Feb 23 24	Apr 03 24																								
497	Material Delivery/Shakeout - Steel - Area A	1d	Feb 23 24	Feb 23 24																							Material Delivery/Shakeout - Steel - Area A	
498	Mezzanine Erection - Steel - Area A	3d	Feb 26 24	Feb 28 24																							Mezzanine Erection - Steel - Area A	
499	Mezzanine Detail and Deck - Steel - Area A	4d	Feb 29 24	Mar 05 24																							Mezzanine Detail and Deck - Steel - Area A	
500	Roof Erection - Steel - Area A	1d	Feb 29 24	Feb 29 24																							Roof Erection - Steel - Area A	
501	Vestibule and Stair A Erection - Steel - Area A	3d	Mar 01 24	Mar 05 24																							Vestibule and Stair A Erection - Steel - Area A	
502	Slab-On-Metal Deck Mezzanine Pour 1	9d	Mar 06 24	Mar 18 24																								
503	MEP Slab-On-Metal Deck Mezzanine Pour 1	4d	Mar 06 24	Mar 11 24																							MEP Slab-On-Metal Deck Mezzanine Pour 1	
504	Edge Form Slab-On-Metal Deck Mezzanine Pour 1	1d	Mar 12 24	Mar 12 24																							Edge Form Slab-On-Metal Deck Mezzanine Pour 1	
505	Reinforce Slab-On-Metal Deck Mezzanine Pour 1	3d	Mar 13 24	Mar 15 24																							Reinforce Slab-On-Metal Deck Mezzanine Pour 1	
506	Place/Finish Slab-On-Metal Deck Mezzanine Pour 1	1d	Mar 18 24	Mar 18 24																							Place/Finish Slab-On-Metal Deck Mezzanine Pour 1	
507	Roof Detail and Deck - Steel - Area A	2d	Mar 06 24	Mar 07 24																							Roof Detail and Deck - Steel - Area A	
508	Vestibule and Stair Detail and Deck - Steel - Area A	3d	Mar 08 24	Mar 12 24																							Vestibule and Stair Detail and Deck - Steel - Area A	
509	Mechanical Screen Roof Steel - Steel - Area A	1d	Apr 03 24	Apr 03 24																							Mechanical Screen Roof Steel - Steel - Area A	
	Steel Erection - Natatorium	23d	Mar 04 24	Apr 03 24																								
511	Material Delivery (Natatorium)	2d	Mar 04 24	Mar 05 24																							Material Delivery (Natatorium)	
512	Erection (Natatorium)	8d	Mar 06 24	Mar 15 24																							Erection (Natatorium)	
513	Detail and Deck (Natatorium)	13d	Mar 18 24	Apr 03 24																							Detail and Deck (Natatorium)	
	Steel Erection - Area B	27d	Mar 18 24	Apr 23 24																								
515	Material Delivery/Shakeout - Steel - Area B	1d	Mar 18 24	Mar 18 24																							Material Delivery/Shakeout - Steel - Area B	
516	Mezzanine Erection - Steel - Area B	3d	Mar 19 24	Mar 21 24																							Mezzanine Erection - Steel - Area B	
Line	Name	OD	Start	Finish	-7 January	-6 February	-5 March	-4 April	-3 May	-2 June	-1 July	1 August	2 September	3 October	4 November	5 December	6 January	7 February	8 March	9 April	10 May	11 June	12 July	13 August	14 September	15 October	Nov	

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov	
					-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
517	Roof Erection - Steel - Area B	1d	Mar 22 24	Mar 22 24																								
518	Vestibule and Lobby Stair Erection - Steel - Area B	3d	Mar 25 24	Mar 27 24																								
519	Canopy Erection - Steel - Area B	3d	Mar 28 24	Apr 01 24																								
520	Mechanical Screen Roof Steel Erection - Steel - Area B	1d	Apr 02 24	Apr 02 24																								
521	Mezzanine Detail and Deck - Steel - Area B	4d	Apr 04 24	Apr 09 24																								
522	Slab-On-Metal Deck Outer Building Mezzanine Pour 2	9d	Apr 10 24	Apr 22 24																								
523	MEP Slab-On-Metal Deck Mezzanine Pour 2	4d	Apr 10 24	Apr 15 24																								
524	Edge Form Slab-On-Metal Deck Mezzanine Pour 2	1d	Apr 16 24	Apr 16 24																								
525	Reinforce Slab-On-Metal Deck Mezzanine Pour 2	3d	Apr 17 24	Apr 19 24																								
526	Place/Finish Slab-On-Metal Deck Mezzanine Pour 2	1d	Apr 22 24	Apr 22 24																								
527	Roof Detail and Deck - Steel - Area B	2d	Apr 10 24	Apr 11 24																								
528	Vestibule and Lobby Stair Detail and Deck - Steel - Area B	3d	Apr 12 24	Apr 16 24																								
529	Canopy Detail and Deck - Steel - Area B	5d	Apr 17 24	Apr 23 24																								
	Interiors	157d	Feb 01 24	Sep 11 24																								
	Interiors - First Floor	154d	Feb 01 24	Sep 06 24																								
	First Floor - Pool Area	154d	Feb 01 24	Sep 06 24																								
533	Start Pool - Pool Area	0d	Feb 01 24	Feb 01 24																								
534	Competition Pool Walls - Pool Area (6d Calendar)	27d	Feb 01 24	Mar 02 24																								
535	Warm-Up Pool Walls - Pool Area (6d Calendar)	15d	Feb 15 24	Mar 02 24																								
536	Backfill Competition Pool Walls - Pool Area (6d Calendar)	15d	Mar 04 24	Mar 20 24																								
537	Underground Plumbing Competition Pool	10d	Mar 04 24	Mar 15 24																								
538	Backfill Warm Up Pool - Pool Area (6d Calendar)	15d	Mar 04 24	Mar 20 24																								
539	Underground Plumbing Warm Up Pool	10d	Mar 04 24	Mar 15 24																								
540	Gutter Piping - Pool Area (6d Calendar)	5d	Mar 04 24	Mar 08 24																								
541	Dive Tower and Platforms	42d	Mar 27 24	May 23 24																								
542	Dive Tower Columns	19d	Mar 27 24	Apr 22 24																								
543	Dive Tower Columns L1 - L2	4d	Mar 27 24	Apr 01 24																								
544	Reinforce and Form Columns Dive Tower L1 - L2	2d	Mar 27 24	Mar 28 24																								
545	Place Columns Dive Tower L1 - L2	1d	Mar 29 24	Mar 29 24																								
546	Strip Columns Dive Tower L1 - L2	1d	Apr 01 24	Apr 01 24																								
547	Dive Tower Columns L2 - L3	4d	Apr 08 24	Apr 11 24																								
548	Reinforce and Form Columns Dive Tower L2 - L3	2d	Apr 08 24	Apr 09 24																								
549	Place Columns Dive Tower L2 - L3	1d	Apr 10 24	Apr 10 24																								
550	Strip Columns Dive Tower L2 - L3	1d	Apr 11 24	Apr 11 24																								
551	Dive Tower Columns L3 - L4	3d	Apr 18 24	Apr 22 24																								
552	Reinforce and Form Columns Dive Tower L3 - L4	1d	Apr 18 24	Apr 18 24																								
553	Place Columns Dive Tower L3 - L4	1d	Apr 19 24	Apr 19 24																								
554	Strip Columns Dive Tower L3 - L4	1d	Apr 22 24	Apr 22 24																								
555	Dive Tower Elevated Structural Deck	38d	Apr 02 24	May 23 24																								
556	Dive Tower Elevated Structural Deck L2	4d	Apr 02 24	Apr 05 24																								
557	Form Dive Tower Elevated Structural Deck Level 2	2d	Apr 02 24	Apr 03 24																								
558	Reinforce Dive Tower Elevated Structural Deck Level 2	1d	Apr 04 24	Apr 04 24																								
559	Place Dive Tower Elevated Structural Deck Level 2	1d	Apr 05 24	Apr 05 24																								
Line	Name	OD	Start	Finish	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Nov	
560	Dive Tower Elevated Structural Deck L3	4d	Apr 12 24	Apr 17 24																								
561	Form Dive Tower Elevated Structural Deck Level 3	2d	Apr 12 24	Apr 15 24																Form Dive Tower Elevated Structural Deck Level 3								
562	Reinforce Dive Tower Elevated Structural Deck Level 3	1d	Apr 16 24	Apr 16 24																Reinforce Dive Tower Elevated Structural Deck Level 3								
563	Place Dive Tower Elevated Structural Deck Level 3	1d	Apr 17 24	Apr 17 24																Place Dive Tower Elevated Structural Deck Level 3								
564	Dive Tower Elevated Structural Deck L3	4d	Apr 23 24	Apr 26 24																								
565	Form Dive Tower Elevated Structural Deck Level 4	2d	Apr 23 24	Apr 24 24																Form Dive Tower Elevated Structural Deck Level 4								
566	Reinforce Dive Tower Elevated Structural Deck Level 4	1d	Apr 25 24	Apr 25 24																Reinforce Dive Tower Elevated Structural Deck Level 4								
567	Place Dive Tower Elevated Structural Deck Level 4	1d	Apr 26 24	Apr 26 24																Place Dive Tower Elevated Structural Deck Level 4								
568	Dive Tower Elevated Structural Deck Stairs	19d	Apr 29 24	May 23 24																								
569	Form Dive Tower Elevated Structural Deck Stairs	3d	Apr 29 24	May 01 24																Form Dive Tower Elevated Structural Deck Stairs								
570	Reinforce Dive Tower Elevated Structural Deck Stairs	2d	May 02 24	May 03 24																Reinforce Dive Tower Elevated Structural Deck Stairs								
571	Form Risers and Stringers Dive Tower Elevated Structural Deck Stairs	5d	May 06 24	May 10 24																Form Risers and Stringers Dive Tower Elevated Structural Deck Stairs								
572	Place Dive Tower Elevated Structural Deck Level 3	1d	May 13 24	May 13 24																Place Dive Tower Elevated Structural Deck Level 3								
573	Strip and Demobilize Dive Tower	3d	May 14 24	May 16 24																Strip and Demobilize Dive Tower								
574	Rub & Sack Exposed Concrete	5d	May 17 24	May 23 24																Rub & Sack Exposed Concrete								
575	Set Up Dance Floor In Deep End - Pool Area	10d	Apr 04 24	Apr 17 24																Set Up Dance Floor In Deep End - Pool Area								
576	Overhead Elec. Rough - Pool Area	10d	Apr 18 24	May 01 24																Overhead Elec. Rough - Pool Area								
577	Overhead Fire Sprinkler Rough - Pool Area	10d	Apr 18 24	May 01 24																Overhead Fire Sprinkler Rough - Pool Area								
578	Mechanical Hangers - Pool Area	10d	Apr 18 24	May 01 24																Mechanical Hangers - Pool Area								
579	Overhead Plumbing - Pool Area	10d	Apr 18 24	May 01 24																Overhead Plumbing - Pool Area								
580	Tectum Panel Layout - Pool Area	5d	May 02 24	May 08 24																Tectum Panel Layout - Pool Area								
581	Overhead Paint - Pool Area (Nights)	10d	May 13 24	May 24 24																Overhead Paint - Pool Area (Nights)								
582	Field Measure Dive Tower Handrail	2d	May 17 24	May 20 24																Field Measure Dive Tower Handrail								
583	Overhead ductwork/fans - Pool Area	25d	May 20 24	Jun 24 24																Overhead ductwork/fans - Pool Area								
584	Tectum Panels - Pool Area	15d	May 22 24	Jun 12 24																Tectum Panels - Pool Area								
585	Overhead Elec. Trim - Pool Area	5d	May 28 24	Jun 03 24																Overhead Elec. Trim - Pool Area								
586	Mechanical Controls - Pool Area	5d	May 28 24	Jun 03 24																Mechanical Controls - Pool Area								
587	Insulate roof Drain - Pool Area	5d	May 28 24	Jun 03 24																Insulate roof Drain - Pool Area								
588	MEP Inspections - Pool Area	5d	Jun 04 24	Jun 10 24																MEP Inspections - Pool Area								
589	Overhead Punch List - Pool Area	5d	Jun 25 24	Jul 01 24																Overhead Punch List - Pool Area								
590	Remove Dance Floor - Pool Area	5d	Jul 02 24	Jul 09 24																Remove Dance Floor - Pool Area								
591	Install Stainless Dive Tower Handrail	5d	Jul 03 24	Jul 10 24																Install Stainless Dive Tower Handrail								
592	Doors/Glazing - Pool Area	5d	Jul 10 24	Jul 16 24																Doors/Glazing - Pool Area								
593	Paint Pool Area - Pool Area	9d	Jul 17 24	Jul 29 24																Paint Pool Area - Pool Area								
594	Pool Liner and bulkhead - Pool Area	25d	Jul 19 24	Aug 22 24																Pool Liner and bulkhead - Pool Area								
595	MEP Trim - Pool Area	5d	Jul 30 24	Aug 05 24																MEP Trim - Pool Area								
596	Pool Fill - Pool Area	5d	Aug 23 24	Aug 29 24																Pool Fill - Pool Area								
597	Pool Start-Up - Pool Area	5d	Aug 30 24	Sep 06 24																Pool Start-Up - Pool Area								
	First Floor - Pool Equipment & Storage	96d	Mar 19 24	Aug 01 24																								
599	Protect Slab Finish - Pool Equip & Storage Area	2d	Mar 19 24	Mar 20 24																Protect Slab Finish - Pool Equip & Storage Area								
600	Block Fill / Prime & First Coat of Paint - Pool Equip & Storage Area	4d	Mar 21 24	Mar 26 24																Block Fill / Prime & First Coat of Paint - Pool Equip & Storage Area								
601	Fire Sprinkler Rough In - Pool Equip & Storage Area	10d	Mar 27 24	Apr 09 24																Fire Sprinkler Rough In - Pool Equip & Storage Area								
602	Pre-Equip Overhead Mechanical Rough - Pool Equip & Storage Area	5d	Mar 27 24	Apr 02 24																Pre-Equip Overhead Mechanical Rough - Pool Equip & Storage Area								
Line	Name	OD	Start	Finish	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov	

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov	
					-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
603	Pre-Equip Overhead Electrical Rough - Pool Equip & Storage Area	5d	Apr 03 24	Apr 09 24																								
604	Pre-Equip Overhead Plumbing Rough - Pool Equip & Storage Area	10d	Apr 10 24	Apr 23 24																								
605	Pool Equipment Set Ready for MEP Connections - Pool Area	20d	May 13 24	Jun 10 24																								
606	Hookup Pool Equipment and Plumbing Trim - Pool Equip & Storage Area	10d	Jun 11 24	Jun 24 24																								
607	Hookup Pool Equipment and Mechanical Trim - Pool Equip & Storage Area	10d	Jun 11 24	Jun 24 24																								
608	Install Electrical Gear	10d	Jun 17 24	Jun 28 24																								
609	Hookup Pool Equipment and Electrical Trim - Pool Equip & Storage Area	5d	Jun 25 24	Jul 01 24																								
610	Install Doors & Hardware - Pool Equip & Storage Area	3d	Jun 25 24	Jun 27 24																								
611	Inspect Electrical Gear	5d	Jul 01 24	Jul 08 24																								
612	Set Electric Meter	5d	Jul 09 24	Jul 15 24																								
613	Telecom/Security Trim - Pool Equip & Storage Area	2d	Jul 22 24	Jul 23 24																								
614	Final Paint - Pool Equip & Storage Area	3d	Jul 24 24	Jul 26 24																								
615	Seal Concrete Floor - Pool Equip & Storage Area	2d	Jul 29 24	Jul 30 24																								
616	Rubber Base - Pool Equip & Storage Area	2d	Jul 31 24	Aug 01 24																								
	First Floor - Locker Room Area	94d	Mar 19 24	Jul 30 24																								
618	Set HM Door Frames - Locker Rooms	1d	Mar 19 24	Mar 19 24																								
619	Protect Slab Finish - Locker Rooms	2d	Mar 19 24	Mar 20 24																								
620	Set Carriers - Locker Rooms	5d	Mar 19 24	Mar 25 24																								
621	CMU Locker Bases & Demising Walls - Locker Rooms	8d	Mar 26 24	Apr 04 24																								
622	Electrical Wall Rough in CMU - Locker Rooms	8d	Mar 26 24	Apr 04 24																								
623	Plumbing Wall Rough in CMU - Locker Rooms	8d	Mar 26 24	Apr 04 24																								
624	Fire Sprinkler Rough In - Locker Rooms	3d	Apr 05 24	Apr 09 24																								
625	Overhead Mechanical Rough - Locker Rooms	5d	May 13 24	May 17 24																								
626	Overhead Plumbing Rough - Locker Rooms	5d	May 20 24	May 24 24																								
627	Frame Soffits - Locker Rooms	3d	May 20 24	May 22 24																								
628	Overhead Electrical Rough - Locker Rooms	5d	May 23 24	May 30 24																								
629	Partition supports	3d	May 23 24	May 28 24																								
630	Inspect Soffits - Locker Rooms	2d	May 31 24	Jun 03 24																								
631	Drywall, Tape & Finish Soffits - Locker Rooms	5d	Jun 04 24	Jun 10 24																								
632	Block Fill / Prime & First Coat of Paint - Locker Rooms	5d	Jun 11 24	Jun 17 24																								
633	Phenolic Locker Install - Locker Rooms	10d	Jun 18 24	Jul 01 24																								
634	Ceiling Grid - Locker Rooms	3d	Jun 18 24	Jun 20 24																								
635	Mechanical Trim - Locker Rooms	4d	Jun 21 24	Jun 26 24																								
636	Plumbing Trim - Locker Rooms	4d	Jun 27 24	Jul 02 24																								
637	Electrical Trim - Locker Rooms	4d	Jun 27 24	Jul 02 24																								
638	Shower / Toilet Partition Install - Locker Rooms	4d	Jul 03 24	Jul 09 24																								
639	Ceiling Tile - Locker Rooms	2d	Jul 10 24	Jul 11 24																								
640	Fire Sprinkler Trim - Locker Rooms	1d	Jul 12 24	Jul 12 24																								
641	Install Doors & Hardware - Locker Rooms	5d	Jul 12 24	Jul 18 24																								
642	Telecom/AV/Security Trim - Locker Rooms	3d	Jul 12 24	Jul 16 24																								
643	Final Paint - Locker Rooms	3d	Jul 19 24	Jul 23 24																								
644	Seal Concrete Floor - Locker Rooms	3d	Jul 24 24	Jul 26 24																								
645	Rubber Base - Locker Rooms	2d	Jul 29 24	Jul 30 24																								

Line	Name	OD	Start	Finish	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov	
					-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
	First Floor - Changing Room Area	73d	Apr 23 24	Aug 05 24																								
647	Set HM Door Frames - Changing Rooms	1d	Apr 23 24	Apr 23 24																								
648	Set Carriers - Changing Rooms	5d	Apr 23 24	Apr 29 24																								
649	Protect Slab Finish - Changing Rooms	2d	Apr 26 24	Apr 29 24																								
650	CMU Demising Walls - Changing Rooms	5d	Apr 30 24	May 06 24																								
651	Fire Sprinkler Rough In - Changing Rooms	3d	May 07 24	May 09 24																								
652	Overhead Mechanical Rough - Changing Rooms	5d	May 13 24	May 17 24																								
653	Power for Elevator Install	5d	May 20 24	May 24 24																								
654	Overhead Plumbing Rough - Changing Rooms	5d	May 20 24	May 24 24																								
655	Frame Soffits - Changing Rooms	3d	May 20 24	May 22 24																								
656	Overhead Electrical Rough - Changing Rooms	5d	May 23 24	May 30 24																								
657	Install Elevators - Changing Rooms	20d	May 28 24	Jun 24 24																								
658	Inspect Soffits - Changing Rooms	2d	May 31 24	Jun 03 24																								
659	Drywall, Tape & Finish Soffits - Changing Rooms	6d	Jun 04 24	Jun 11 24																								
660	Block Fill / Prime & First Coat of Paint - Changing Rooms	3d	Jun 12 24	Jun 14 24																								
661	Ceiling Grid - Changing Rooms	3d	Jun 17 24	Jun 19 24																								
662	Mechanical Trim - Changing Rooms	3d	Jun 20 24	Jun 24 24																								
663	MEP Trades Elevator Hoistway Work	10d	Jun 25 24	Jul 09 24																								
664	Plumbing Trim - Changing Rooms	3d	Jun 25 24	Jun 27 24																								
665	Electrical Trim - Changing Rooms	3d	Jun 25 24	Jun 27 24																								
666	Phenolic Locker Install - Changing Rooms	5d	Jul 02 24	Jul 09 24																								
667	Shower / Toilet Partition Install - Changing Rooms	3d	Jul 10 24	Jul 12 24																								
668	Ceiling Tile - Changing Rooms	3d	Jul 15 24	Jul 17 24																								
669	Fire Sprinkler Trim - Changing Rooms	1d	Jul 18 24	Jul 18 24																								
670	Install Doors & Hardware - Changing Rooms	5d	Jul 18 24	Jul 24 24																								
671	Telecom/AV/Security Trim - Changing Rooms	3d	Jul 18 24	Jul 22 24																								
672	Final Paint - Changing Rooms	3d	Jul 25 24	Jul 29 24																								
673	Seal Concrete Floor - Changing Rooms	3d	Jul 30 24	Aug 01 24																								
674	Rubber Base - Changing Rooms	2d	Aug 02 24	Aug 05 24																								
	First Floor - Office Area	70d	Apr 24 24	Aug 01 24																								
676	Set HM Door Frames - Office Area	3d	Apr 24 24	Apr 26 24																								
677	Protect Slab Finish - Office Area	2d	Apr 24 24	Apr 25 24																								
678	Set Carriers - Office Area	2d	Apr 30 24	May 01 24																								
679	CMU Demising Walls - Office Area	5d	May 02 24	May 08 24																								
680	Fire Sprinkler Rough In - Office Area	3d	May 09 24	May 13 24																								
681	Overhead Mechanical Rough - Office Area	5d	May 13 24	May 17 24																								
682	Overhead Plumbing Rough - Office Area	5d	May 20 24	May 24 24																								
683	Frame Soffits - Office Area	3d	May 20 24	May 22 24																								
684	Overhead Electrical Rough - Office Area	5d	May 23 24	May 30 24																								
685	Inspect Soffits - Office Area	2d	May 31 24	Jun 03 24																								
686	Drywall, Tape & Finish Soffits - Office Area	6d	Jun 04 24	Jun 11 24																								
687	Block Fill / Prime & First Coat of Paint - Office Area	3d	Jun 12 24	Jun 14 24																								
688	Millwork Install - Office Area	5d	Jun 17 24	Jun 21 24																								
Line	Name	OD	Start	Finish	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov	
					2023												2024											



SAUNDERS

Owner: City of Arvada

Progress Period (Data Date):
1/16/2024

Start Date: 1/16/2023
Finish Date: 10/4/2024

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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689	Ceiling Grid - Office Area	3d	Jun 17 24	Jun 19 24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

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					2023												2024										

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Line	Name	OD	Start	Finish	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
					January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	Nov
					2023												2024										

Meyers Pool Replacement

Construction Schedule - All Work

Printed: 2/14/2024

Planned by Asta Powerproject

Line	Name	OD	Start	Finish	2023												2024											
					January -7	February -6	March -5	April -4	May -3	June -2	July -1	August 1	September 2	October 3	November 4	December 5	January 6	February 7	March 8	April 9	May 10	June 11	July 12	August 13	September 14	October 15	Nov	
775	Parapet Roof Blocking - Canopy Roof	2d	Apr 24 24	Apr 25 24																								
776	Roof Dry-in - Canopy Roof (Saturday Work Required)	5d	May 11 24	May 16 24																								
777	Parapet Cap Flashing - Canopy Roof	5d	May 17 24	May 23 24																								
	Main Roof	16d	Apr 26 24	May 17 24																								
779	Set Roof Drain Bodies - Main Roof	5d	Apr 26 24	May 02 24																								
780	Parapet Roof Blocking - Main Roof	10d	Apr 26 24	May 09 24																								
781	Roof Dry-in (Saturday Work Required)	10d	Apr 30 24	May 10 24																								
782	Parapet Cap Flashing - Main Roof	5d	May 13 24	May 17 24																								
	Facade - West Elevation	47d	Mar 19 24	May 22 24																								
784	Overhead Door - Facade - West	3d	Mar 19 24	Mar 21 24																								
785	Exterior Framing & Sheathing - Facade - West	5d	Apr 04 24	Apr 10 24																								
786	Field Measure for Metal Panels - Facade - West	2d	Apr 11 24	Apr 12 24																								
787	Storefront Blocking - Facade - West	3d	Apr 11 24	Apr 15 24																								
788	Curtain wall Framing/Windows - Facade - West	2d	Apr 16 24	Apr 17 24																								
789	Glazing - Facade - West	2d	Apr 18 24	Apr 19 24																								
790	CMU Veneer - Facade - West	5d	Apr 22 24	Apr 26 24																								
791	Vents/Louvers - Facade - West	5d	Apr 29 24	May 03 24																								
792	XCEL Gas Meter - Facade - West	3d	Apr 29 24	May 01 24																								
793	Joint Sealants - Facade - West	3d	May 06 24	May 08 24																								
794	Exterior Paint - Facade - West	2d	May 09 24	May 10 24																								
795	Exterior Lighting - Facade - West	3d	May 13 24	May 15 24																								
796	Screen Wall Metal Panels - West Mech Well	5d	May 16 24	May 22 24																								
	Facade - South Elevation	35d	Apr 24 24	Jun 12 24																								
798	Exterior Framing & Sheathing - Facade - South	5d	Apr 24 24	Apr 30 24																								
799	Curtain wall Framing/Windows - Facade - South	10d	Apr 24 24	May 07 24																								
800	Brick Veneer & Precast Cap - Facade - South	5d	May 01 24	May 07 24																								
801	Glazing - Facade - South	10d	May 08 24	May 21 24																								
802	EIFS - Facade - South	3d	May 22 24	May 24 24																								
803	Joint Sealants - Facade - South	5d	May 28 24	Jun 03 24																								
804	Exterior Paint - Facade - South	4d	Jun 04 24	Jun 07 24																								
805	Exterior Lighting - Facade - South	3d	Jun 10 24	Jun 12 24																								
	Facade - East Elevation	35d	May 01 24	Jun 19 24																								
807	Exterior Framing & Sheathing - Facade - East	3d	May 01 24	May 03 24																								
808	Field Measure for Metal Panels - Facade - East	2d	May 06 24	May 07 24																								
809	Brick Veneer - Facade - East	4d	May 08 24	May 13 24																								
810	Curtain wall Framing/Windows - Facade - East	2d	May 14 24	May 15 24																								
811	Glazing - Facade - East	3d	May 22 24	May 24 24																								
812	EIFS - Facade - East	3d	May 28 24	May 30 24																								
813	Screen Wall Metal Panels - East Mech Well	5d	Jun 06 24	Jun 12 24																								
814	Joint Sealants - Facade - East	2d	Jun 11 24	Jun 12 24																								
815	Exterior Paint - Facade - East	3d	Jun 13 24	Jun 17 24																								
816	Exterior Lighting - Facade - East	2d	Jun 18 24	Jun 19 24																								
	Facade - North Elevation	30d	May 06 24	Jun 17 24																								
Line	Name	OD	Start	Finish	-7 January	-6 February	-5 March	-4 April	-3 May	-2 June	-1 July	1 August	2 September	3 October	4 November	5 December	6 January	7 February	8 March	9 April	10 May	11 June	12 July	13 August	14 September	15 October	Nov	
					2023												2024											

Meyers Pool Replacement

Construction Schedule - All Work

Planned by Asta Powerproject

Printed: 2/14/2024

[illegible]



86 Inverness Place North
Englewood, CO 80112

March 12, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-110 Hillen - Abatement Scope

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-110		Hillen - Abatement Scope			Source
Reference Date	03/12/2024		Owner Number			
Scope Description						
Please reference attached emails for pricing of the abatement scope of work to add to Hillen's contract per Wember.						
22015012	02060	SUB	Hillen Demolition, LLC		6,400.00	Building Demolition
22015012	98003	OVD			7.00	Builders Risk
22015012	98005	OVD			61.00	Commercial Insurance
22015012	98301	OVD			83.00	SDI
22015012	98600	OVD			10.00	Closeout and Warranty
22015012	99000	FEE			174.00	Fee
Stipulated Sum					6,735.00	

Approved:

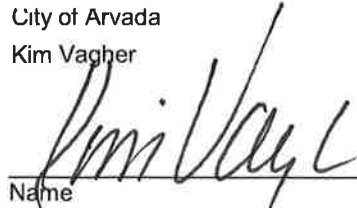
Saunders Construction, LLC



Anna Gannon
Project Manager

City of Arvada

Kim Vagher



3-14-24

Name

Date

Ohlson Lavoie Corporation

Bob McDonald

Name

Date



Hillen Abatement
7600 Dahlia Street
Commerce City, CO
80022

Structural/Interior Demo Abatement LEED Recycling Center Saw Cutting/Coring/GPR Trucking Roll-Off

Proposal#: P24037

PROPOSAL / AGREEMENT

March 12, 2024
Anna Gannon
Project Manager
Saunders
86 Inverness Pl. N.
Englewood, CO. 80112
Dear: Anna

Sent Via: A.gannon@saundersinc.com
Project Name: Meyers Pool Abatement
Project Address: 7900 Carr Dr.
Arvada, CO. 80005

On behalf of Hillen Abatement, LLC, ("Hillen") I would like to thank you for the opportunity to provide Saunders ("Client") this proposal on the above referenced project at the Project Address ("Premises"). It is our desire to provide you with a quality solution for your project. As a highly qualified contractor, we feel our experience, financial fortitude and contracting capabilities enable us to deliver you a professionally completed project.

Scope of Work:

Remove and dispose of 68 SF of asbestos containing sealant on fiberglass in two different mechanical rooms and component removal of a sink with 3 SF of asbestos containing coating. The sealant will be removed using proper PPE in secondary containments under slight negative air flow. Glove bags, wet methods, and CDPHE approved secondary containment controls will be utilized throughout the process. This pricing does not include final air clearances by a third party consultant but can be added at the clients request.

Cost: Six Thousand Four Hundred Dollars (\$6,400.00)

Proposal Terms:

1. The costs for labor, material, equipment, permits, and applicable taxes are included in the specified Scope of Work.
2. Hillen shall comply with all applicable federal, state, and local laws.
3. Site conditions at the Premises must be reasonably like those at the time of inspection.
4. Hillen shall be entitled to rely on its reasonable interpretation of existing conditions of the Premises based upon Client-provided information.
5. The Cost excludes any and all delays to completion of the Scope of Work. Delays may result in an increase in Cost.
6. Air monitoring for Hillen staff per Federal, State, and local regulations is included in the Cost. Any additional air monitoring, whether required by Client or a third-party, will be an additional cost paid by the Client unless specified as an inclusion in the Scope of Work.



Hillen Abatement
7600 Dahlia Street
Commerce City, CO
80022

Structural/Interior Demo Abatement LEED Recycling Center Saw Cutting/Coring/GPR Trucking Roll-Off

Proposal#: P24037

7. Final air clearances are not included in the Cost unless specified as an inclusion in the Scope of Work.
8. The Cost is based on Hillen's normal working hours. Any overtime required by Client will constitute an additional cost unless specified as an inclusion in the Scope of Work.
9. The Cost includes a single mobilization to the site unless specified as an inclusion in the Scope of Work.
10. Client to provide Hillen with adequate power, water, parking, and storage space at the Premises unless specified as an inclusion in the Scope of Work.
11. Utility connections must be located adjacent to the work area at the Premises and well-suited to Hillen's needs.
12. Removal & disposal of any Regulated Building Materials (RBMs) or Universal Waste is not included in the Cost. Any RBM or Universal Waste removal will be an additional cost paid for by the client unless specified as an inclusion in the Scope of Work.
13. If lead containing paint or other lead containing materials are a part of the project, Hillen will follow the EPA Renovation, Repair, & Painting (RRP) regulations. The intent of the project is not to remove lead, or leave the project lead free.
14. All waste is assumed to contain less than 5.0 ppm or greater lead content by Toxic Characteristic Leaching Procedure (TCLP). If waste TCLP exceeds the 5.0 ppm threshold, additional costs will occur unless specified as an inclusion in the Scope of Work.
15. If the property was built prior to 1978 please follow the link at the end of this line item, read the pamphlet, and return the signature page of the EPA's The Lead Safe Certified Guide to Renovate Right Pamphlet. If you prefer not to sign and return the signature page, you can acknowledge you have read and understand the EPA Renovate Right Pamphlet by signing this Proposal agreement.
<https://www.epa.gov/sites/default/files/documents/renovaterightbrochure.pdf>
16. All non-stationary items are to be removed from the work area by Client prior to the start of the work unless otherwise noted in the Scope of Work.
17. Hillen shall not be liable for any damage to items left in the work area.
18. All HVAC systems within containment areas must be shut down and locked out by Client unless specified as an inclusion in the Scope of Work.
19. Hillen will employ reasonable efforts to minimize damage to surface and work areas, and Client agrees Hillen shall not be liable for any damage from the construction of containments required to perform the Scope of Work.
20. Client agrees that Hillen has been given permission by the Client to enter the Premises, perform the Scope of Work, use any plans or drawings of the project, and Client agrees to hold harmless and defend Hillen, its employees, owners, directors, officers, agents, and representatives for any and all claims, damages, costs, and expenses that result from the performance of the Scope of Work in the absence of gross neglect or willful misconduct by Hillen.
21. Client expressly authorizes Hillen to sign any required disposal forms on behalf of the Client or generator for any waste removed from the Premises.



Hillen Abatement
7600 Dahlia Street
Commerce City, CO
80022

Structural/Interior Demo Abatement LEED Recycling Center Saw Cutting/Coring/GPR Trucking Roll-Off

Proposal#: P24037

- 22. The Scope of Work is specific and does not include any unforeseen conditions or contingencies at the Premises. Additional work, if required, will be priced separately.
- 23. This proposal may be withdrawn or modified for any reason if not accepted within sixty (60) days of the date of this proposal.
- 24. Payment and performance bonds are not included in this proposal unless specified as an inclusion in the Scope of Work.
- 25. All invoices are due upon receipt except as noted in the Terms & Conditions.
- 26. Any changes by the client, consulting firm, or any government agencies in work methods, regulated areas, or containment types other than those expressly described in the Scope of Work are not included in the pricing.



Hillen Abatement
7600 Dahlia Street
Commerce City, CO
80022

Structural/Interior Demo Abatement LEED Recycling Center Saw Cutting/Coring/GPR Trucking Roll-Off

Proposal#: P24037

By signing this Proposal/Agreement, Client acknowledges they have read, understand, and authorize this agreement and the following terms and conditions in its entirety including, without limitation, the indemnity provisions set forth herein. ***No work will commence until Proposal / Agreement has been fully executed by Hillen & the Client.***

Sincerely,

Mike Campton
Project Manager / Estimator

Hillen Execution

Client Acceptance / Execution

Mike Griffin Date

Name:

President

Hillen Abatement

Title:

Mobile – (303) 507-5811

Date:

Please provide billing address, and email if different than above:



Hillen Abatement
7600 Dahlia Street
Commerce City, CO
80022

Structural/Interior Demo Abatement LEED Recycling Center Saw Cutting/Coring/GPR Trucking Roll-Off

Proposal#: P24037

TERMS AND CONDITIONS

ARTICLE A

SCOPE OF WORK

A.1 **Project.** The Scope of Work shall be performed on the constructed improvements located at the Premises identified in this proposal/agreement. This agreement shall not apply to the performance of any work or related services by Hillen ("CONTRACTOR") on any site other than the Premises.

A.2 **Work.** CONTRACTOR shall perform and furnish all the work, labor, services, materials, equipment, and tools, to perform stated Scope of Work, in accordance with engineering plans, architectural plans, specifications, conditions, and addenda thereto provided to CONTRACTOR by Client ("CLIENT") or on behalf of CLIENT, as more particularly described in the exhibits and/or additional provisions attached hereto.

A.3 **Independent Contractor.** In performing their obligations under this Agreement, it is expressly agreed and understood that CONTRACTOR shall not in any way be subject to the control or direction of CLIENT. Nothing contained herein shall be construed to create an employment relationship, a principal-agent relationship, or a joint venture between CONTRACTOR and CLIENT. It is expressly understood and agreed that CLIENT is interested only in results obtained, and neither CLIENT nor CLIENT'S representatives have any authority to exercise control over the way the Scope of Work is performed, other than the right to order the work to start or stop, to inspect progress, and receive reports. Neither CLIENT nor its representatives shall have any authority to supervise CONTRACTOR'S employees, agents, or subcontractors, or to direct or control their detailed methods of performance. CONTRACTOR will bind each of its subcontractors to the terms of this Agreement to the extent such terms may be applicable to the subcontractors.

ARTICLE B

PAYMENT OF FEES

B.1 **General Compensation and Fees.** CONTRACTOR'S fees and terms of payment for the work are outlined, to the extent not outlined herein, in the Scope of Work of the Proposal/Agreement. The fees outlined in the Scope of Work assume that appropriate information and assistance will be provided by CLIENT and its representatives and that the scope and complexity of the project identified in the Scope of Work will be consistent and align with prior discussions between CONTRACTOR and CLIENT.

In the event that CONTRACTOR is requested or authorized by CLIENT, or is required by government regulation, summons, subpoena or other legal process, to produce its documents or personnel as witnesses with respect to its work provided under this Agreement, CLIENT shall reimburse CONTRACTOR for its professional time and reasonable expenses, including the fees and expenses of its counsel, incurred in connection therewith.



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B.2 Total Payment Amount. CLIENT agrees to pay CONTRACTOR the Cost amount set forth in Proposal/Agreement for completing the Scope of Work.

B.3 Schedule of Work. Before any payments are made hereunder, and if so requested by CLIENT, CONTRACTOR shall submit to CLIENT an itemized schedule for the work, and payment shall be made to CONTRACTOR in proportion to such schedule less any agreed retention.

B.4 Time of Application. Unless provided otherwise in the Scope of Work, on or before the 20th day of each month, CONTRACTOR shall present to CLIENT an application for payment in the form required by CLIENT for the work completed to date, which application shall show the percentage and value of total work completed and the value of materials properly stored at the Premises on such date. If requested by CLIENT, the application for payment for materials stored shall be accompanied by a detailed inventory of all materials, and, if requested, suppliers' invoices.

B.5 Payments Withheld. CLIENT shall not be entitled to withhold payment from CONTRACTOR for work performed and for which application for payment has been made by CONTRACTOR.

B.6 Time for Payment. Application for payments shall be paid within thirty (30) days after receipt of CONTRACTOR'S application of payment by CLIENT except as provided in paragraph B.8. below, as applicable. CLIENT agrees that, if CLIENT fails to make the payments to CONTRACTOR as provided herein for any cause other than the fault of CONTRACTOR, then CONTRACTOR may, upon seven (7) days written notice to the CLIENT, stop work without prejudice to any other rights remedies otherwise available to CONTRACTOR.

B.7 Final Payment. Final payment shall be made after full completion of work covered by this Agreement and approval by requisite inspectors.

B.8 Residential Projects – Down Payment. If the Premises is a residential property, CLIENT shall make a down payment of fifty percent (50%) of the total Cost listed in the Scope of Work to CONTRACTOR prior to mobilization, which shall be applied toward and credited to the balance owed under the Agreement. CLIENT shall pay the remaining balance of the total Cost under the Agreement to CONTRACTOR within ten (10) days after completion of the Scope of Work. Should the work exceed twenty (20) working days or one calendar month, CONTRACTOR shall issue applications for payment for work performed each month. Payment for monthly applications for payment shall be due within ten (10) days after CLIENT'S receipt of CONTRACTOR'S application for payment. Should final payment not be received by CONTRACTOR within ten (10) days, a notice to lien the property will be issued to the CLIENT. Should final payment not be received by CONTRACTOR within thirty (30) days, CONTRACTOR may, at its sole option, pursue all rights and remedies available, including without limitation, filing a lien against the Premises.



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ARTICLE C CONTRACTOR'S RESPONSIBILITIES

C.1 General Responsibilities. CONTRACTOR agrees to supply all supervision, labor, materials, tools, taxes and insurance and other items to perform and complete the Scope of Work in a workmanlike manner with adequate workforce in compliance with all applicable regulations, customs, codes, laws and ordinances and in conformity with this Agreement.

C.2 License and Taxes. CONTRACTOR shall comply with all Federal, State and local laws, codes, regulations and ordinances effective at the time of execution of the Agreement where the work under this Agreement is to be performed.

C.3 Compliance with Laws. CONTRACTOR shall comply with all relevant Federal, State and local tax laws, SSA, unemployment acts, and worker compensation requirements, as applicable to the performance of the Agreement.

C.4 Site Visitation. CONTRACTOR shall permit CLIENT to visually inspect the Premises at any reasonable time during performance of the Scope of Work, provided that the inspection can be performed safely and does not interfere with CONTRACTOR's work. CLIENT accepts full responsibility for any injury and damages caused by such inspection. Should CLIENT observe any discrepancies between its observations and the terms of this Agreement, CLIENT shall notify CONTRACTOR of such discrepancies in writing within 24 hours after first viewing the conditions.

C.5 Assignment of Contractor's Work. At CONTRACTOR'S sole discretion, all or any part of the work to be performed pursuant to the terms of this Agreement may be subcontracted, assigned or transferred to other companies or individuals. However, unless otherwise released of such liability by CLIENT, CONTRACTOR will continue to be fully liable and responsible to CLIENT for the performance of the Scope of Work under this Agreement.

Should CONTRACTOR subcontract, assign, or transfer any portion of the work under this Agreement to a third party, CONTRACTOR shall require such third party to become familiar with the terms of this Agreement and shall further require that such third party assume toward CONTRACTOR all obligations and responsibilities so assigned by the CONTRACTOR which CONTRACTOR, by this Agreement, assumes toward CLIENT.

C.6 Warranties. CONTRACTOR warrants the workmanship of the work performed under this Agreement for a period of ninety (90) days after completion of the Scope of Work.

C.7 Safety. CONTRACTOR shall, at its own expense, be responsible for the safe execution of the work and for the protection of its personnel and property from dangers, hazards, injuries, or damage associated with the work or the Premises and any related transportation or storage of materials.



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ARTICLE D CONTRACT DOCUMENTS

D.1 CONTRACTOR'S Decision Binding. CLIENT shall provide CONTRACTOR with all drawings, plans, and specifications necessary to perform the Scope of Work no later than the execution of this Agreement. CONTRACTOR'S decisions regarding the construction and meaning of the drawings and/or specifications shall control.

D.2 Alterations and Claims. In the event any alteration to any of the requisite drawings, plans or specifications relied upon by CONTRACTOR becomes necessary, CLIENT shall notify CONTRACTOR of such alterations within twenty-four (24) hours. Thereafter, CONTRACTOR shall be permitted, at its discretion, to amend the Costs to complete the Scope of Work to reflect such alterations. **NO ALTERATIONS OR CHANGES SHALL BE MADE EXCEPT UNDER WRITTEN AMENDMENT TO THE AGREEMENT OR THROUGH WRITTEN CHANGE ORDER.** The amount to be paid by CLIENT as a result of such changes or alterations shall be stated in such amendment or change order. CLIENT shall bear the cost of any delays and duplicate work encountered as a result of the above-referenced changes, if any.

ARTICLE E PROGRESS SCHEDULE

E.1 Time is of the essence. Unless a specific commencement date or schedule is provided in the Scope of Work, CONTRACTOR shall proceed with the work as soon as CONTRACTOR has received all requisite legal approvals (*e.g.*, permits) and shall perform such work so as not to cause unreasonable delay or interference with any other construction efforts on the Premises. Instruction by CLIENT to CONTRACTOR to commence the Scope of Work shall constitute CLIENT's agreement to this Agreement, including all of the incorporated Terms & Conditions, regardless of whether CLIENT signs this Agreement.

E.2 Coordinate Work. CONTRACTOR shall coordinate its work with others performing work on the Premises whenever practicable.

E.3 Delay not caused by CONTRACTOR. CONTRACTOR shall not be liable to CLIENT for any delay in the performance of the work resulting from the act, negligence, or fault of any person or entity other than CONTRACTOR or by reason of any (i) casualty, (ii) strikes or other combined action of the workmen of others, or (iii) on account of any acts of God or any cause beyond CONTRACTOR'S control.

E.4 CONTRACTOR'S Delay. Should CONTRACTOR anticipate or come to be aware of any delay in its performance of the work, CONTRACTOR shall notify CLIENT of such delays in writing and shall make reasonable efforts to minimize such delays as are within CONTRACTOR'S control.

ARTICLE F INDEMNITY, INSURANCE AND WAIVER OF SUBROGATION



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F.1 Indemnity. Except as otherwise provided in this Agreement, CONTRACTOR shall protect, indemnify, defend, and hold harmless, CLIENT and its employees, officers, agents, directors, and representatives from and against all claims demands, expenses (including attorneys' fees), liens, damages, judgments, causes of action and liability of any kind (collectively "Claims") arising in any manner, directly or indirectly, out of or in connection with (i) any of the work required to be performed or actually performed by CONTRACTOR pursuant to this Agreement(ii) any breach of or failure by CONTRACTOR to comply with any of the provisions of this Agreement, or (iii) any injury to or death of CONTRACTOR, or any of its employees, agents, or representatives, except to the extent caused by misconduct, negligence or gross negligence of any person or entity other than CONTRACTOR.

Except as provided herein, CLIENT shall protect, indemnify, defend and hold harmless CONTRACTOR AND its employees, officers, agents, directors, partners, successors, assigns and representatives from and against all claims arising in any manner, directly or indirectly, out of or in connection with (i) any of the actions or inactions of any entity or person other than CONTRACTOR, hired by CLIENT to perform any services on the Premises, (ii) any breach of or failure by CLIENT to comply with any of the provisions of this Agreement, or (iii) any injury to or death of CONTRACTOR, or any of its employees, agents or representatives caused as a result of the actions or inactions of CLIENT or any person or entity hired by CLIENT to perform services on the Premises.

F.2 Contractor's Insurance. Before commencing the work, CONTRACTOR shall purchase and maintain insurance that will protect it from claims arising out of its operations under this Agreement, whether the operations are by CONTRACTOR or any of its consultants or subcontractors or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. CLIENT is responsible for adequately insuring the Premises.

F.3 Minimum Limits of Liability. CONTRACTOR shall maintain insurance with limits of liability equal to or greater than the limits of liability as follows:

1. Workers Compensation

A. Statutory Workers Compensation Benefits

B. Employer Liability:

- i. Bodily Injury by Accident - \$1,000,000 Each Accident
- ii. Bodily Injury by Disease - \$1,000,000 Policy Limit
- iii. Bodily Injury by Disease - \$1,000,000 Each Employee

2. Commercial General Liability



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A. \$2,000,000 Combined Single Limit of Bodily Injury Liability and Property Damage Liability per Occurrence

B. \$3,000,000 General Aggregate Limit

C. \$3,000,000 Products & Completed Operations Aggregate Limit

D. \$2,000,000 Personal and Advertising Injury Limit Products and Completed Operations Coverage must be maintained for not less than two years after final payment.

E. \$2,000,000 Pollution Liability

3. Business Auto Liability

A. \$1,000,000 Combined Single Limit of Bodily Injury Liability and Property Damage Liability

F.4 Number of Policies. Commercial General Liability Insurance and other liability insurance may be arranged under a single policy for the full limits required or by a combination of underlying policies with the balance provided by an Excess or Umbrella Liability Policy.

F.5 Additional Insured. CONTRACTOR shall endorse all policies identified above, (apart from Workers' Compensation), to name CLIENT as additional insured. On the Commercial General Liability Policy, CLIENT shall be given Additional Insured status for both the ongoing operations of CONTRACTOR and the completed operations of CONTRACTOR. The coverage provided to CLIENT as an additional insured shall be written on a primary basis.

F.6 Acceptable Insurance. CONTRACTOR shall maintain in effect all insurance coverage under this Agreement at CONTRACTOR'S sole expense and which have an A.M. Best Company rating of A-VII or better.

F.7 Notice of Cancellation or Non-Renewal. CONTRACTOR shall provide at least thirty (30) days prior written notice to Client before the insurance coverages listed herein are cancelled or non-renewed.

F.8 Certificates of Insurance. Certificates of Insurance showing required coverage will be supplied upon request.

F.9 Builders Risk Insurance. CLIENT will inform CONTRACTOR if builder's risk insurance has been purchased for the Premises and will provide CONTRACTOR a copy upon request.

F.10 Waiver of Subrogation. CONTRACTOR and CLIENT waive all rights against each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Agreement. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of



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indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

ARTICLE G MISCELLANEOUS PROVISIONS

G.1 Waiver/Preservation of Rights. Neither the failure nor any delay on the part of any party hereto to exercise any right, remedy, power, or privilege under this agreement shall operate as a waiver thereof, nor shall any single or partial exercise of any right, remedy, power, or privilege preclude or constitute a waiver of any other or further exercise of the same or of any other right, remedy, power, or privilege with respect to any occurrence.

G.2 Paragraph and Other Headings. Paragraph and other headings contained in this agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

G.3 Severability. In the event that any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provisions of this Agreement, but this agreement shall be constructed as if such invalid, illegal or unenforceable provisions did not exist to affect the reasonable expectations of the parties.

G.4 Colorado Law to Apply. This Agreement shall be construed under and in accordance with the laws of the State of Colorado without regard to its conflicts-of-laws principles, and any conflict arising out of, or related to, this Agreement shall be filed and maintained in a court of competent jurisdiction located in the City and County of Denver, Colorado.

G.5 Parties in Interest. This Agreement shall be binding on, inure to the benefits of, and be enforceable by the parties hereto, and their respective heirs, executors, administrators, legal representatives, successors, and assigns, except as otherwise expressly provided herein.

G.6 Counterparts. This Agreement and all copies of this Agreement insofar as they relate to the rights, duties, and remedies of the parties, shall be deemed to be one agreement. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

G.7 Entire Agreement. This Agreement, including any exhibits and schedules hereto and other documents referred to herein, embody the entire agreement and understanding of the parties hereto in respect of the subject matter contained in this Agreement and supersede all prior agreements and understandings between the parties with respect to such subject matter. There are no restrictions, promises, warranties, covenants, or undertakings other than those expressly set forth or referred to in this Agreement.

G.8 Fees and Expenses. Except as otherwise provided herein, each of the parties to this Agreement will pay its own fees and expenses (including attorneys and accountant's fees, legal costs, and expenses) incurred in



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connection with negotiation, preparation, and execution of this Agreement and the other documents executed in connection herewith and the consummation of the transactions contemplated by this Agreement.

G.9 Attorney's Fees. CLIENT and, if applicable, its surety, jointly and severally agree to pay CONTRACTOR all reasonable costs, charges, expenses, and attorney's fees expended or incurred by CONTRACTOR to (i) enforce any of the provision of this Agreement, (ii) protect its interest in any matter arising under this Agreement, (iii) collect damages for breach of this Agreement, and (iv) to prosecute or defend any suit resulting from this Agreement, including, without limitation, in connection with any appeals.

G.10 Gender, Ethnicity, etc. This Agreement contains all agreements and obligations of the parties hereto as of the date of execution hereof; no prior discussions, bids, correspondence, or other communication shall in any way alter this Agreement; and all parties have read and understand this agreement in its entirety.

G.11 Notices. All written notices between the parties may be delivered in person or first-class mail or via email. Such notice shall be effective at midnight of the day during which notice is delivered, mailed, or electronically mailed

G.12 Payments. Payment of all monies due from CLIENT to CONTRACTOR shall be due and payable in Denver, Colorado. Any other obligation of either party shall be specifically performable in Denver, Colorado, unless any such other obligation hereunder is made specifically performable in some other county by the specific terms and conditions of this Agreement.

G.13 Disputes. If a dispute arises from or relates to transactions between the parties, the parties shall endeavor to settle the dispute first through direct discussions and negotiations between a designated representative of CLIENT and CONTRACTOR. If the dispute cannot be settled through direct discussions, the parties shall endeavor to settle the dispute by mediation. If a dispute has not been resolved within 90 days after the written notice beginning the mediation process (or a longer period, if the parties agree to extend the mediation), the mediation shall terminate and the dispute shall be settled by litigation in the State Courts serving the City and County of Denver, Colorado or such other locations as agreed upon by the parties. Nothing herein shall prohibit, limit, or delay CONTRACTOR's right to assert, file, and take all other appropriate actions to preserve its legal rights, including without limitation, the right to file a mechanic's lien against the Premises.

Anna Gannon

From: Conor Bancroft <cbancroft@wemberinc.com>
Sent: Tuesday, March 12, 2024 4:36 PM
To: Anna Gannon; Robert Burd
Cc: Selena Twilley; Laurel Lane
Subject: RE: MPR-Abatement/Demo Scope

Follow Up Flag: Follow up
Flag Status: Flagged

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Yes, please.

WEMBER
OWNER'S REPRESENTATIVE

Conor Bancroft

Project Manager

C: (720) 532-2674



From: Anna Gannon <A.Gannon@saundersinc.com>
Sent: Tuesday, March 12, 2024 4:10 PM
To: Conor Bancroft <cbancroft@wemberinc.com>; Robert Burd <R.Burd@saundersinc.com>
Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>
Subject: RE: MPR-Abatement/Demo Scope

Ok, to confirm – would you like us to handle this in addition to Hillen's demo scope, and then we will handle the added scope with an SCA?



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Conor Bancroft <cbancroft@wemberinc.com>
Sent: Tuesday, March 12, 2024 4:08 PM
To: Anna Gannon <A.Gannon@saundersinc.com>; Robert Burd <R.Burd@saundersinc.com>
Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>
Subject: RE: MPR-Abatement/Demo Scope

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Thanks, Anna.

This looks good to me.

WEMBER
OWNER'S REPRESENTATIVE

Conor Bancroft
Project Manager
C: (720) 532-2674 

From: Anna Gannon <A.Gannon@saundersinc.com>
Sent: Tuesday, March 12, 2024 4:00 PM
To: Conor Bancroft <cbancroft@wemberinc.com>; Robert Burd <R.Burd@saundersinc.com>
Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>
Subject: RE: MPR-Abatement/Demo Scope

See attached and let me know your thoughts.

 **SAUNDERS**

Anna Gannon
Project Manager
86 Inverness Place North, Englewood, CO 80112
d (303) 386-9220 o (303) 699-9000 m (708) 256-9190
A.Gannon@saundersinc.com
www.saundersinc.com

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From: Anna Gannon <A.Gannon@saundersinc.com>
Sent: Tuesday, March 12, 2024 9:35 AM
To: Conor Bancroft <cbancroft@wemberinc.com>; Robert Burd <R.Burd@saundersinc.com>
Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>
Subject: RE: MPR-Abatement/Demo Scope

I just got a response from Hillen, our demo sub:

My apologies on not getting these numbers to you yesterday. I will send you an official proposal a little later today but wanted to at least get you the numbers now. The total cost for all abatement would be \$6,400. Which would include two secondary/glove bag containments in the mechanical rooms for the pipe sealant and for the component removal of the entire sink. The quantities are under what would require a permit from the State, so if the numbers are acceptable we could get the work scheduled fairly quickly. Again, my apologies on the delay and look for my proposal later today.

I will send the proposal to the team when I get it



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Conor Bancroft <cbancroft@wemberinc.com>

Sent: Wednesday, March 6, 2024 8:35 AM

To: Anna Gannon <A.Gannon@saundersinc.com>; Robert Burd <R.Burd@saundersinc.com>

Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>

Subject: RE: MPR-Abatement/Demo Scope

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Thanks, Anna.



Conor Bancroft

Project Manager

C: (720) 532-2674



From: Anna Gannon <A.Gannon@saundersinc.com>

Sent: Wednesday, March 6, 2024 7:23 AM

To: Conor Bancroft <cbancroft@wemberinc.com>; Robert Burd <R.Burd@saundersinc.com>

Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>

Subject: RE: MPR-Abatement/Demo Scope

Yes we just sent this on this morning and will let you know what they come back with.



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Conor Bancroft <cbancroft@wemberinc.com>

Sent: Tuesday, March 5, 2024 3:44 PM

To: Robert Burd <R.Burd@saundersinc.com>

Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>; Anna Gannon <A.Gannon@saundersinc.com>

Subject: RE: MPR-Abatement/Demo Scope

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Robbie,

Can you have your demo sub price the attached abatement scope? I am getting concerned about the timing of procurement from the City, and it would be cleaner to have the demo sub do this, too.

Thanks,

WEMBER
OWNER'S REPRESENTATIVE

Conor Bancroft
Project Manager
C: (720) 532-2674 

From: Robert Burd <R.Burd@saundersinc.com>

Sent: Wednesday, February 28, 2024 4:26 PM

To: Conor Bancroft <cbancroft@wemberinc.com>

Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>; Anna Gannon <A.Gannon@saundersinc.com>

Subject: RE: MPR-Abatement/Demo Scope

Hey Conor,

Our demo contractor has the demo of the CMU in his scope. We'll have him complete the demo and not include it in his recycling. Let me know if you have any other questions.

Thanks,

Robbie Burd



Robert Burd

Assistant Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9144 **o** (303) 699-9000 **m** 443-478-6062

R.Burd@saundersinc.com

www.saundersinc.com

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From: Conor Bancroft <cbancroft@wemberinc.com>

Sent: Wednesday, February 28, 2024 10:52 AM

To: Robert Burd <R.Burd@saundersinc.com>

Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>; Anna Gannon <A.Gannon@saundersinc.com>

Subject: RE: MPR-Abatement/Demo Scope

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Thanks, Robbie.

I am asking because the CMU has filler that has trace amounts of ACM. This does not need to be abated; however, it cannot be recycled. Should I include the demo/removal of this in the abatement scope, or should it be in your sub's scope?

WEMBER
OWNER'S REPRESENTATIVE

Conor Bancroft
Project Manager
C: (720) 532-2674 

From: Robert Burd <R.Burd@saundersinc.com>
Sent: Wednesday, February 28, 2024 7:44 AM
To: Conor Bancroft <cbancroft@wemberinc.com>
Cc: Selena Twilley <stwilley@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>; Anna Gannon <A.Gannon@saundersinc.com>
Subject: RE: MPR-Abatement/Demo Scope

Hey Conor,

Please see the attached scope of work for the demo contractor. Yes, we are anticipating recycling of demolished materials. Let me know if you have any questions.

Thanks,

Robbie Burd



Robert Burd
Assistant Project Manager
86 Inverness Place North, Englewood, CO 80112
d (303) 386-9144 **o** (303) 699-9000 **m** 443-478-6062
R.Burd@saundersinc.com
www.saundersinc.com

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From: Laurel Lane <L.Lane@saundersinc.com>
Sent: Tuesday, February 27, 2024 3:53 PM
To: Conor Bancroft <cbancroft@wemberinc.com>; Robert Burd <R.Burd@saundersinc.com>; Anna Gannon <A.Gannon@saundersinc.com>
Cc: Selena Twilley <stwilley@wemberinc.com>
Subject: RE: MPR-Abatement/Demo Scope

Copying in Anna.



Laurel Lane
Senior Project Manager
86 Inverness Pl N, Englewood, CO 80112
d (303) 386-9368 **o** (303) 699-9000 **m** (303) 819-9186
L.Lane@saundersinc.com
www.saundersinc.com

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From: Conor Bancroft <cbancroft@wemberinc.com>
Sent: Tuesday, February 27, 2024 3:10 PM
To: Laurel Lane <L.Lane@saundersinc.com>; Robert Burd <R.Burd@saundersinc.com>
Cc: Selena Twilley <stwilley@wemberinc.com>
Subject: MPR-Abatement/Demo Scope

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Laurel & Robbie,

Can you share the demo contractor's scope so we can coordinate it with the abatement contractor? Also, are we counting on recycling any of the demoed materials?

Thanks,

WEMBER
OWNER'S REPRESENTATIVE

Conor Bancroft
Project Manager
C: (720) 532-2674 



86 Inverness Place North
Englewood, CO 80112

February 13, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-071 Gunbarrel Grey Storefront Color

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-071		Gunbarrel Grey Storefront Color		Source	
Reference Date	01/23/2024		Owner Number			
Scope Description						
Per conversation with Kim, the storefront should be a Gunbarrel gray color.						
22015012	08600	SUB	EAP Inc. dba EAP Glass, Inc.		11,139.00	Curtain Wall System
22015012	98003	OVD			12.00	Builders Risk
22015012	98005	OVD			106.00	Commercial Insurance
22015012	98301	OVD			145.00	SDI
22015012	98600	OVD			17.00	Closeout and Warranty
22015012	99000	FEE			303.00	Fee
Stipulated Sum					11,722.00	

Approved:
Saunders Construction, LLC

City of Arvada
Kim Vagher

Laurel Lane
Project Manager

Name	Date
Ohlson Lavoie Corporation	
Bob McDonald	

Name	Date
------	------

616 Moss Street
Golden, CO 80401



PH. 303-277-1015
Fax 303-278-4880

Serving your Commercial Contract & Service needs for over 30 years

Change Order Request #04 Aluminum Finish Change To Gunbarrel Gray

Date: 2/12/2024
Company: Saunders
Attention: Laurel Lane

Project: Myers Pool

PLEASE REVIEW THE FOLLOWING PRICING INFORMATION IN RESPONSE TO YOUR REQUEST:
Price Below Is To Change All Aluminum Finish To Gunbarrel Gray

Note: The following is an EAP Glass, Inc. company policy:
PLEASE BE ADVISED THAT NO WORK WILL PROCEED WITHOUT A SIGNED APPROVED CHANGE ORDER ON YOUR LETTERHEAD
VERBAL AUTHORIZATION IS NOT ACCEPTABLE. Pricing is valid for 30 days from the date of this change order request.

EAP GLASS PROPOSES TO FURNISH AND OR INSTALL AS PROPOSED BELOW:
EAP pricing below reflects a 1.95% cost to all painted aluminum finished material within our scope

Material		
Aluminum Doors	Add	\$3,725.00
Aluminum Storefront & Curtain Wall	Add	\$5,514.00
Sunshades	Add	\$887.00
	Deduct	
	Deduct	
10% OH&P		\$1,013.00

TOTAL AMOUNT FOR THIS CHANGE ORDER	Add	\$11,139.00
---	------------	--------------------

Project Manager David MCCoy

Change order approved by: _____ Date: _____
Printed Name: _____ Title: _____



86 Inverness Place North
Englewood, CO 80112

February 8, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-076 PR #08 (1) Sound Isolation

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

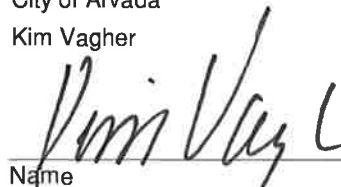
CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-076		PR #08 (1) Sound Isolation			Source
Reference Date	01/23/2024		Owner Number			
Scope Description						
22015012	08600	SUB	EAP Inc. dba EAP Glass, Inc.		3,431.00	Curtain Wall System
22015012	98003	OVD			4.00	Builders Risk
22015012	98005	OVD			33.00	Commercial Insurance
22015012	98301	OVD			45.00	SDI
22015012	98600	OVD			5.00	Closeout and Warranty
22015012	99000	FEE			93.00	Fee
Stipulated Sum					3,611.00	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher


Name
Ohlson Lavoie Corporation
Bob McDonald

3-14-24
Date

Name Date

616 Moss Street
Golden, CO 80401



PH. 303-277-1015
Fax 303-278-4880

Serving your Commercial Contract & Service needs for over 30 years

Change Order Request #03 PR 008 Laminated Sound Glass

Date: 1/12/2024
Company: Saunders
Attention: Laurel Lane

Project: Myers Pool

PLEASE REVIEW THE FOLLOWING PRICING INFORMATION IN RESPONSE TO YOUR REQUEST:

Price Below Is To Add Laminated Glass 1/4" Clear Laminated - 1/2" Air - 1/4" Clear Laminated

Note: The following is an EAP Glass, Inc. company policy:

PLEASE BE ADVISED THAT NO WORK WILL PROCEED WITHOUT A SIGNED APPROVED CHANGE ORDER ON YOUR LETTERHEAD
VERBAL AUTHORIZATION IS NOT ACCEPTABLE. Pricing is valid for 30 days from the date of this change order request.

EAP GLASS PROPOSES TO FURNISH AND OR INSTALL AS PROPOSED BELOW:

Material

Doors 127A & 130 Both Pairs	Add	\$2,358.00
FB04, FB05, FB06	Add	\$2,719.00
Door 107A Single	Add	\$590.00
Credit For 1" Panels Door 127A, 130	Deduct	\$1,344.00
Credit For 1" Clear Over Clear Insulated Units	Deduct	\$1,459.00
10% OH&P		\$567.00

TOTAL AMOUNT FOR THIS CHANGE ORDER

Add

\$3,431.00

Project Manager

David MCCoy

Change order approved by: _____ Date: _____

Printed Name: _____ Title: _____

February 12, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-090 RFI 198 Water Sub Meter Electrical Requirements

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

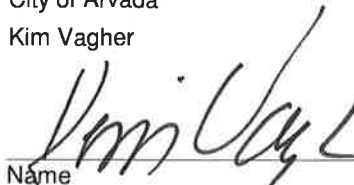
CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-090		RFI 198 Water Sub Meter Electrical Requirements		Source	
Reference Date	02/12/2024		Owner Number			
Scope Description						
Add one 20A 120V 1P dedicated circuit to Pool Equip 127 for water sub meter						
Add one 20A 120V 1P connection to water sub meter in Pool Equip 127						
Utilize spare 20A 1P circuit breaker in space 18 of panel LP1A						
Set Junction box at water sub meter location in Pool Equip 127						
Extend conduit from Pool Equip 127 to Main electrical room						
22015012	26000	SUB	Kennedy Electric, Inc.		1,385.00	Electrical
22015012	98003	OVD			2.00	Builders Risk
22015012	98005	OVD			13.00	Commercial Insurance
22015012	98301	OVD			18.00	SDI
22015012	98600	OVD			2.00	Closeout and Warranty
22015012	99000	FEE			38.00	Fee
Stipulated Sum					1,458.00	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher


Name
Date 3-13-24
Ohlson Lavoie Corporation
Bob McDonald

Name Date



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #14

January 29, 2024

Customer: Saunders Construction, Inc.
Address: 86 Inverness Place North
Englewood, CO 80112
Phone: 303.699.9000
Contact: Robert Burd

Job Name: Meyers Pool
Address: 7900 Carr Drive
Arvada, CO 80005

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per Direction per RFI #198 response
Proposal includes the following;

Add one 20A 120V 1P dedicated circuit to Pool Equip 127 for water sub meter
Add one 20A 120V 1P connection to water sub meter in Pool Equip 127
Utilize spare 20A 1P circuit breaker in space 18 of panel LP1A
Set Junction box at water sub meter location in Pool Equip 127
Extend conduit from Pool Equip 127 to Main electrical room
Pull in conductors
Make up connections
Test

Material:	\$	585.73
Labor:	\$	583.44
Overhead:	\$	116.92
Profit:	\$	58.46
Bond @ 3.0 %	\$	40.34

TOTAL ADDITIONAL WORK AUTHORIZATION AMOUNT: \$ 1,385.00

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____

RFI detail

#198 Water Sub Meter Electrical Requirements



Status	Closed
Created on	Jan 11, 2024 by Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.)
RFI type	Default RFI FLOW
Ball in court	Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.)
Answered	Jan 26, 2024 by Emily Barnett, Robert Mcdonald

Question

Please reference attached detail 3/P301, Enlarged Scale Plumbing Plan. The plumbing plan calls for a sub water meter to be installed to monitor pool usage. There are no electrical requirements called out for the sub water meter, please provide design showing requirements.

Official response

Emily Barnett: Please see AED response in the attachments. Thanks, Emily
Robert Mcdonald: See activity log and reference files for response from the EOR's.
*By **Emily Barnett, Robert Mcdonald** - Jan 26, 2024, 9:39 AM MST*

References

Files (3)

- RFI_198_Water_Sub_Meter_Electrical_Requirements.pdf
- RFI_198_Water_Sub_Meter_Electrical_Requirements - AED Response.pdf
- RFI_198_Water_Sub_Meter_Electrical_Requirements_RES.pdf

Impact

Cost impact	Unknown
Schedule impact	Unknown

Other attributes

Priority	High
Discipline	Plumbing
Category	Design Coordination, Other
Location	-
Location details	-
External id	-
Co-reviewer(s)	 Jonathan Martinez
Confirming RFI	No
Posted	Yes

Activities	By	At
Juan Vazquez Villasenor added a reference to a file RFI_198_Water_Sub_Meter_Electrical_Requirements_RES.pdf	Juan Vazquez Villasenor	Jan 26, 2024, 10:02 AM MST
Juan Vazquez Villasenor removed reference to a file	Juan Vazquez Villasenor	Jan 26, 2024, 10:00 AM MST
Juan Vazquez Villasenor added a reference to a file RFI_198_Water_Sub_Meter_Electrical_Requirements_RES.pdf	Juan Vazquez Villasenor	Jan 26, 2024, 9:48 AM MST
Juan Vazquez Villasenor changed the status from  Open Answered to  Closed		
Official response: Emily Barnett: Please see AED response in the attachments. Thanks, Emily Robert Mcdonald: See activity log and reference files for response from the EOR's.	Juan Vazquez Villasenor	Jan 26, 2024, 9:39 AM MST
Please find attached response to RFI #198 regarding the water sub meter electrical requirements. Please advise if you have any questions.	Juan Vazquez Villasenor	Jan 26, 2024, 9:39 AM MST
Robert Mcdonald changed the status from  Open In Review to  Open Answered set Ball in court to Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.).	Robert Mcdonald	Jan 23, 2024, 11:22 AM MST
Robert Mcdonald added a response: See activity log and reference files for response from the EOR's.	Robert Mcdonald	Jan 23, 2024, 11:22 AM MST
ebarnett@aedesign-inc.com added a response: Please see AED response in the attachments. Thanks, Emily	ebarnett@aedesign-inc.com	Jan 23, 2024, 9:01 AM MST
TBG agrees with AED's response. The only electrical connections required is to the 2-1/2" water meter on the pool make up.	Jonathan Martinez	Jan 22, 2024, 12:04 PM MST
Robert Mcdonald changed the co-reviewer(s) to Jonathan Martinez	Robert Mcdonald	Jan 19, 2024, 2:20 PM MST
Robert Mcdonald changed the co-reviewer(s) to	Robert Mcdonald	Jan 19, 2024, 2:20 PM MST
set Ball in court to Robert Mcdonald, ebarnett@aedesign-inc.com.	Robert Mcdonald	Jan 19, 2024, 2:20 PM MST
Please see AED response attached. Thanks, Emily	Emily Barnett	Jan 18, 2024, 1:01 PM MST
Emily Barnett added a reference to a file RFI_198_Water_Sub_Meter_Electrical_Requirements - AED Response.pdf	Emily Barnett	Jan 18, 2024, 1:00 PM MST
Juan Vazquez Villasenor added a reference to a file RFI_198_Water_Sub_Meter_Electrical_Requirements.pdf	Juan Vazquez Villasenor	Jan 11, 2024, 12:36 PM MST

Juan Vazquez Villasenor

(SAUNDERS CONSTRUCTION, INC.) created this RFI in

Closed

 status and set Ball in court to **Juan Vazquez Villasenor** (SAUNDERS CONSTRUCTION, INC.).

Juan Vazquez Villasenor

Jan 11, 2024, 12:35 PM MST

RFI detail

#198 Water Sub Meter Electrical Requirements



Status	Open In Review
Created on	Jan 11, 2024 by Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.)
RFI type	Default RFI FLOW
Ball in court	Robert Mcdonald
Due date	Jan 18, 2024

Question

Please reference attached detail 3/P301, Enlarged Scale Plumbing Plan. The plumbing plan calls for a sub water meter to be installed to monitor pool usage. There are no electrical requirements called out for the sub water meter, please provide design showing requirements.

Impact

Cost impact	Unknown
Schedule impact	Unknown

Other attributes

Priority	High
Discipline	Plumbing
Category	Design Coordination, Other
Location	-
Location details	-
External id	-
Co-reviewer(s)	Emily Barnett

-  **Greg Pfile**
-  **Natalie Mediate**
-  **Shane Daniels**
-  **Dan Potter**

Confirming RFI	No
Posted	Yes

Activities	By	At
Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.) created this RFI in  Open In Review status and set Ball in court to Robert Mcdonald .	Juan Vazquez Villasenor	Jan 11, 2024, 12:35 PM MST



400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
www.olcdesigns.com



FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO
7904 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE
1	07/14/2023	ASI-001
2	08/01/2023	ASI-002
4	11/02/2023	RFI-1
5	11/13/2023	ASI-012
6	11/13/2023	ASI-013

SCALE: As indicated

ISSUE DATE: 07/14/2023

DRAWN BY: JSM

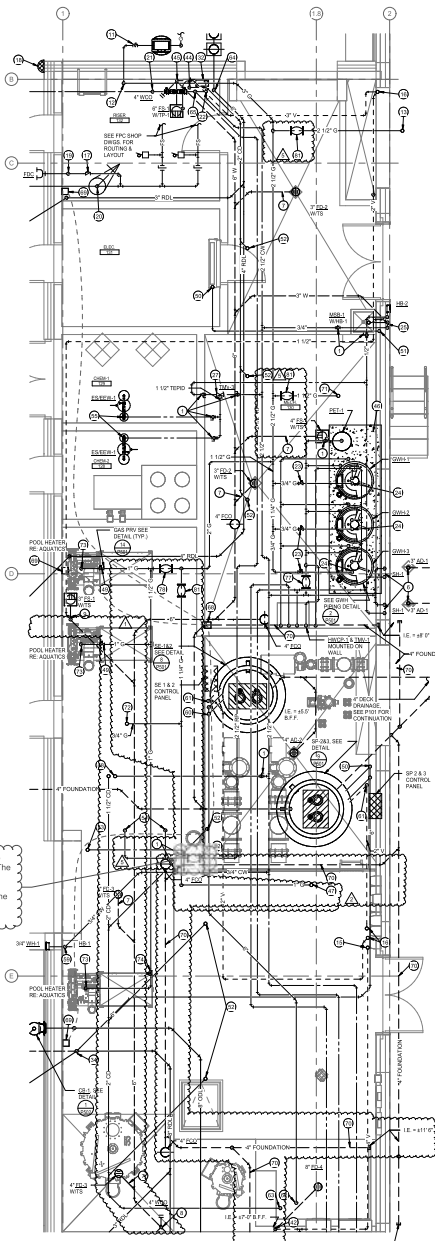
REV'D BY: TRH

PROJECT #: 22044

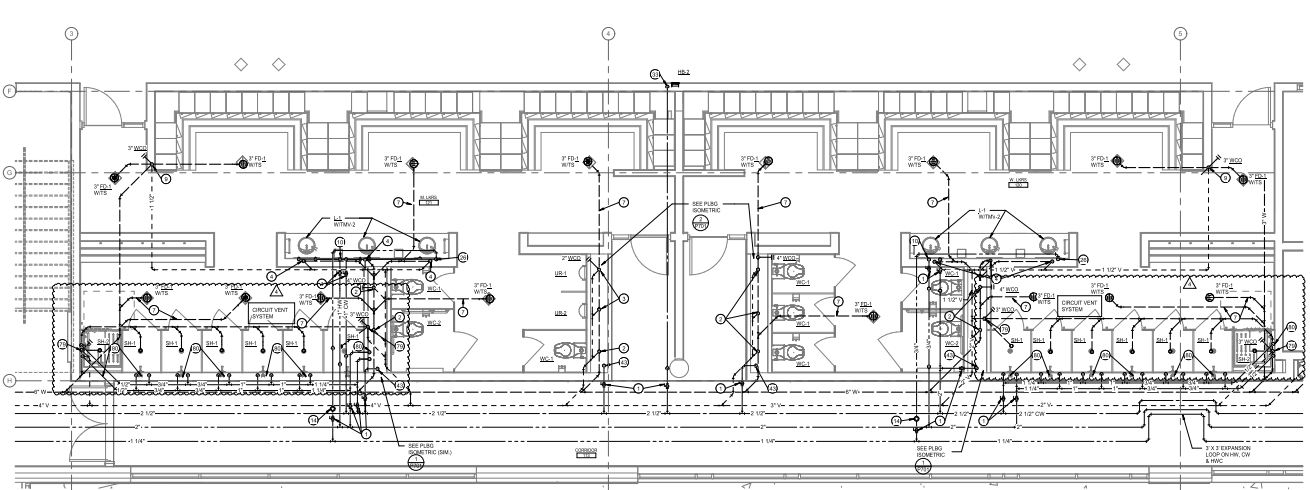
TITLE: ENLARGED SCALE PLUMBING PLANS

SHEET #:
P301

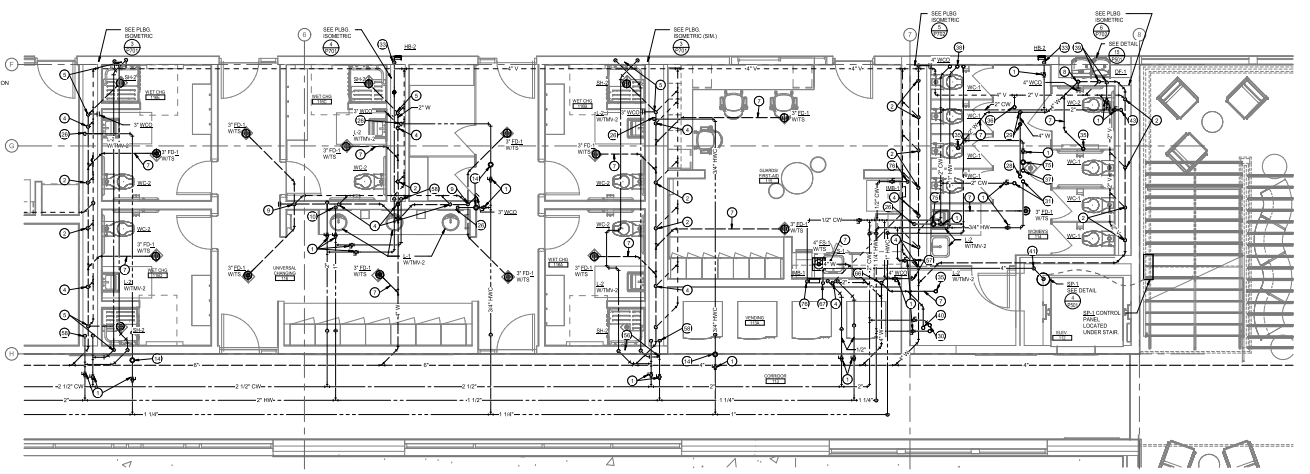
11/10/2023 2:07:25 PM Autodesk Docs\\22044_Arvida Meyers Pool\\22035-Meyers-PL-B0_121.rvt



1 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"



2 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"



3 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"

PLUMBING KEYNOTES:

- 1. BALL VALVE FULL SIZE W/ SERVICE ACCESS.
- 2. 1/2" CW IN. 2" V. RISE & 1" CW TO WC.
- 3. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO UR.
- 4. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO LAV/SS.
- 5. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO SH.
- 6. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 7. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
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- 62. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 63. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 64. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 65. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 66. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 67. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 68. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 69. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 70. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 71. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 72. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 73. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 74. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 75. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 76. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 77. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 78. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 79. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 80. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 81. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 82. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 83. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 84. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 85. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 86. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 87. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 88. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 89. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 90. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 91. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 92. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 93. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 94. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 95. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 96. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 97. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 98. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 99. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.
- 100. 1/2" CW IN. 1 1/2" V. RISE & 1/2" CW TO CLOCK SHOWER.



FOR CONSTRUCTION

7904 Carr Drive Arvada CO 80005

NO.	DATE:	TITLE/PURPOSE:
2	09/13/2023	ASI-06
3	10/16/2023	ASI-011
4	11/11/2023	ASI-012
5	11/13/2023	ASI-013

E6.01

E6.01

B. PROVIDE 120V CONCENTRATIONS REQUIRED PER EQUIPMENT SCHEDULE ON POOL DRAWINGS.

C. REFER TO POOL DRAWINGS, A-Q SERIES SHEETS, FOR EQUIPMENT LOCATIONS.

D. FIELD VERIFY ALL EQUIPMENT LOADS, VOLTAGES, AND EQUIPMENTS FUSE SIZING PRIOR TO DEREGULATING CIRCUIT.

E. THE ELECTRICAL CONTRACTOR SHALL REVIEW ALL AQUATIC PLANS AND PROVIDE ALL WORK TO BE COMPLETED BY THE ELECTRICAL CONTRACTOR. COORDINATE WITH POOL CONTRACTOR.

F. ALL DISCONNECTS SHALL BE NEMA 4X RATED WITH NON-INTALLATE ENCLOSURE AND STAINLESS STEEL HARDWARE FOR CORROSION RESISTANCE.

G. MOTORS REQUIRED STARTERS SHALL UTILIZE COMBINATION START/ DISCONNECT. STARTERS SHALL BE NON-REVERSING WITH NEMA SIZE AS LISTED. ALL STARTERS SHALL UTILIZE CIRCUIT BREAKERS FOR OVERCURRENT PROTECTION.

H. PROVIDE FLEXIBLE CONDUIT CONNECTION AT ALL PUMP MOTORS, MINIMUM 1/2" IN LENGTH.

I. WHERE MOTORS IS WITHIN 50' FROM THE DEFINITION OF THE RIM OF AN ASSOCIATED MOTOR CONTROL CENTER, THE INDICATED DISCONNECT SWITCH IS NOT REQUIRED.

J. ALL MOTORS GREATER THAN 7.5 HORSEPOWER ARE TO BE PROVIDED WITH THESE PHASE PROTECTION.

K. ELECTRICAL CONTRACTOR SHALL REFERENCE POOL DRAWINGS DASHES AND SEQUENCE OF OPERATIONS FOR INTERLOCKS PROVIDED ON THE AQUATIC DESIGNS DRAWINGS.

L. THE POOL CONTRACTOR SHALL PROVIDE VARIABLE FREQUENCY DRIVE AS INDICATED IN THE POOL EQUIPMENT SCHEDULE PER THE FOLLOWING SPECIFICATIONS. LINE VOLTAGE FEEDING SHALL BE COMPLETED BY THE POOL CONTRACTOR.

M. MANUFACTURERS SHALL BE: ABB, ALLEN BRADLEY, OR APPROVED EQUIV.

N. DISCONNECTS SHALL BE NEMA 1-2 RATED.

O. UNIT SHALL BE PROVIDED WITH MANUAL SPEED ADJUSTMENT W/KEYPAD OR DIAL MOUNTED ON THE ENCLOSURES EXTERIOR.

P. UNIT SHALL BE PROVIDED WITH REQUIRED NUMBER OF OUTPUTS FOR CONNECTION TO EXTERNAL RELAY, AND EQUIPMENT.

Q. UNIT SHALL BE PROVIDED WITH MANUFACTURERS' SPECIFICATIONS FOR FIELD AND HUMIDITY UP TO 90% NON-CONDENSING.

R. UNIT SHALL BE PROVIDED WITH OPERATOR, OPERATIONAL, AND MAINTENANCE TRAINING OF EQUIPMENT.

S. UNIT SHALL BE LISTABLE FOR USE IN THE ENVIRONMENT OF A POOL, SPA, AND HUMIDITY UP TO 90% NON-CONDENSING.

T. PROVIDE W/ CAPABILITY OF 1/2 SECOND RAMP UP TO FULL SPEED AND 2 SECOND RAMP DOWN FROM FULL SPEED TO ZERO FOR ALL APPLICATIONS.

U. PROVIDE WITH SYSTEM WITH REDUNDANTARY HARDWARE, COORDINATE LOCATIONS WITH POOL CONTRACTOR.

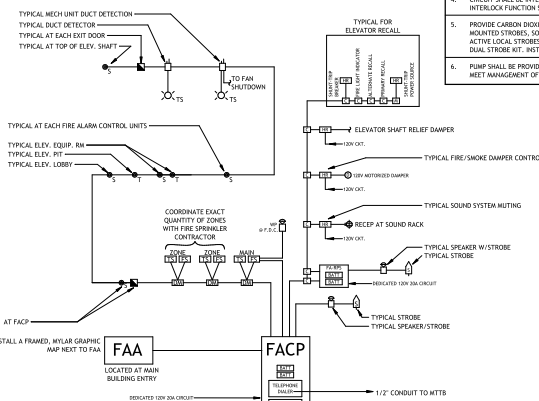
V. PROVIDE W/ REQUIRED NUMBER OF OUTPUTS FOR CONNECTION TO ALL EXTERNAL RELAYS AND EQUIPMENT AS REQUIRED PER THE POOL CONTRACTOR DRAWINGS.

W. PROVIDE CLEARLY LABELED EMERGENCY SHUTOFF BUTTONS FOR THE PURPOSE OF STOPPING THE MOTORS THAT PROVIDE POWER TO ALL NON-FILTRATION POOL PUMP, ENGINEER, EMERGENCY SHUTOFF BUTTON LOCATIONS SHALL BE COORDINATED WITH THE OWNER OR THE OWNER'S RISK MANAGEMENT CONSULTANT.

X. PROVIDE CLEARLY LABELED EMERGENCY POWER OFF (EPO) SWITCHES FOR EMERGENCY SHUTDOWN OF ALL POOL WATER HEATER/ROLLER SYSTEMS AS REQUIRED BY CODE. EPO SWITCH LOCATIONS SHALL BE AT EACH EGRESS DOOR LEADING FROM THE ROOM HOUSING THE POOL WATER HEATER(S) AND/ OR ROLLER(S).



2	LLC
E6.01	NTS

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3. THIS IS A FULLY ADDRESSABLE SYSTEM WITH EACH DEVICE HAVING A DISTINCT ADDRESS.
4. PROVIDE NON-POWER WULFING, PLUNKING RATE WIRING, INSTALLED IN EXISTING RACEWAYS OR RACED THROUGH HAZARDOUS LOCATIONS, EXPOSED STRUCTURAL COLUMNS, UNACCESSIBLE LOCATIONS, AND BETWEEN AREAS SEPARATED BY MULTI-STORY STRUCTURES, ALL RACEWAYS CONTENTS SHALL BE PROTECTED.
5. DEPENDENT ON THE LOCATION OF ALL AIR-HANDLING EQUIPMENT PROVIDE A RETURN CAPACITY (EXCEEDED 300000 CFM), SUPPLY CAPACITY (EXCEEDED 150,000 CFM) AND EXHAUST CAPACITY (EXCEEDED 100,000 CFM) FOR EACH FLOOR, AND ADDITIONAL CAPACITY AS REQUIRED BY LOCAL CODES.
6. SPRINKLER SYSTEM IS A DESIGN BUILD CONTRACT. COORDINATE WITH ARCHITECT FOR THE LOCATION OF SPRINKLER HEADS, SMOKE DETECTORS, FLOOR TAP AND TAMPER INDICATORS, AND FOR LOCATION OF FIRE HOSIOLNET AT EACH FLOOR. INCLUDING, THE LOCATION OF THE FIRE HOSIOLNET CAPACITY ON ALL RATINGING AND LOW VOLTAGE ALARM CIRCUITS.
7. PROVIDE 120V CIRCUIT AND 100 AMP INSTA-FLAME FIRE ALARM CONTROL CIRCUIT TO ALL SMOKE DETECTORS. COORDINATE LOCATIONS WITH ARCHITECT FOR THE LOCATION OF THE FIRE HOSIOLNET CIRCUITS.
8. COORDINATE ALL SEQUENCING OF OPERATIONS WITH LOCAL FIRE DEPARTMENT.
9. ALL DEVICES INSTALLED IN DRY, WET OR EXTERIOR LOCATIONS SHALL BE FURNISHED WITH MP WINGS. AND ALL DEVICES INSTALLED IN EXTERIOR LOCATIONS SHALL BE FURNISHED WITH MP WINGS.

1	PIRE AL
01	1/8" = 1'-0"

B.	Prior to mechanical plan for specific equipment locations and requirements.
C.	Prior to design final, coordinate all mechanical equipment power and connection requirements with mechanical contractors final shop drawings.
D.	Provide all 120V control wiring, refer to specifications for further control wiring clarification.
E.	For VAV system coordination with mechanical contractors, mechanical contractor provide coordination of each VAV box or air central control panel locations as required; if exact quantities and locations for control panels are not known at BID time, it is to include one 120V control panel at each VAV box location and bid price and provide a credit rating upon construction if less connections are required.
F.	Exterior disconnect switches are to be provided as new equipment unless otherwise noted.
G.	Provide weatherproof 120V AC receptacles within 25' of all rooftop heating, ventilating, and air conditioning equipment, control cable to spare circuit on nearest 120V panelboard or as approved by AHJ.
H.	Provide detect detection on all return air systems of 2,000 CFM greater, and for all supply air systems 15,000 CFM or greater, including those systems serving multiple floors. Provide additional smoke detectors and install necking detector listings as required by local authority having jurisdiction.
I.	For any boiler mechanical equipment, it is to provide an emergency prohibition off and any other controls that may be required. Coordinate exact requirements with mechanical contractor and equipment prior to installation.

1.	INDOOR UNITS, DFC-1, DFC-2, AND DFC-3, ARE FED FROM OUTDOOR UNITS, DCU-1, DCU-2, DCU-3, RESPECTIVELY. REFER TO MANUFACTURERS SUBMITTAL FOR CONTROL AND POWER REQUIREMENTS.
2.	EC TO PROVIDE FAN SHUTDOWN UPON ACTIVATION OF THE BUILDING'S FIRE ALARM/SMOKE DETECTION SYSTEM TO THE FAN CONTROLLER.
3.	FAN SHALL OPERATE 24/7/365. PROVIDE A CHEMICAL EXHAUST FAN WARNING LIGHT.
4.	FAN CONTROLLED BY TIME OF DAY SCHEDULE THROUGH A PROGRAMMABLE TIME-CLOCK. PROVIDE FAN WITH MOTORIZED DAMPER POWERED FROM FAN CONTROLLER.
5.	ELECTRICAL CONTRACTOR SHALL COORDINATE OVERCURRENT PROTECTION SIZE SIZING FOR ELEVATOR FUSED DISCONNECT. REFER WITH MANUFACTURER'S APPROVED SHOP DRAWING SUBMITTAL BASED ON THE ACTUAL EQUIPMENT TO BE INSTALLED.

KEY	EQUIPMENT DESCRIPTION	LOAD (HP / KW / FLA)	ELECTRICAL	MCCP	FEEDER	DISCONNECT	STARTER	ALUX CONTACT	PANEL	CIRCUIT	NOTES
						NEMA SIZE					
1A	CMP POOL - CHEMICAL CONTROLLER	5A	120 V/1-000 VA	15A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF			UP1A35		2
1B	CMP POOL - WATER LEVEL CONTROLLER	5A	120 V/1-000 VA	15A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF			UP1A37		2
1C	1 CMP POOL - P1 VFD & BYPASS PANEL	SEE PP1	480 V/3-0 VA	SEE PP1	SEE PP1	SEE PP1		24V N.C.	UP1A38		2
1C	2 CMP POOL - P2 VFD & BYPASS PANEL	SEE PP2	480 V/3-0 VA	SEE PP2	SEE PP2	SEE PP2		24V N.C.	UP1A39		2
1E	1 CMP POOL - P3 VFD	SEE PP3	480 V/3-0 VA	SEE PP3	SEE PP3	SEE PP3		24V N.C.	UP1A40		2
2A	TRAINING POOL - CHEMICAL CONTROLLER	5A	120 V/1-500 VA	15A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF			UP1A41		2
2B	TRAINING POOL - WATER LEVEL CONTROLLER	5A	120 V/1-500 VA	15A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF			UP1A43		2
2C	TRAINING POOL - P4 VFD & BYPASS PANEL	SEE PP4	480 V/3-0 VA	SEE PP4	SEE PP4	SEE PP4		24V N.C.	UP1A44		2
3F	48B COMBUSTION FAN	2 HP	120 V/1-2880 VA	20A	ZBR, 1P28GJ 1-C	60A			UP1A26		4
CF	1 CMP POOL - CHLORINATION BOOSTER PUMP	1.5 HP	120 V/1-1920 VA	20A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF, SWITCHED			UP1A45		2.4
CF	2 TRAINING POOL - CHLORINATION BOOSTER PUMP	1 HP	120 V/1-1920 VA	20A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF, SWITCHED			UP1A46		2.4
CF	3 CMP POOL - CO2 FEED PUMP	15A	120 V/1-1920 VA	20A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF, SWITCHED			UP1A47		2.4
CF	4 TRAINING POOL - CO2 FEED PUMP	15A	120 V/1-1920 VA	20A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF, SWITCHED			UP1A48		2.4
CF	5 CMP POOL - ACID FEED PUMP	15A	120 V/1-1920 VA	20A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF, SWITCHED			UP1A51		2.4
CF	6 TRAINING POOL - ACID FEED PUMP	15A	120 V/1-1920 VA	20A	GP12, 1P12GJ 3-4C	NEMA 5-20K, GF, SWITCHED			UP1A53		2.4
CM	1 POOL EQUIP 127 - CO2 MONITORING SYSTEM	5 A	120 V/1-400 VA	15A	GP12, 1P12GJ 3-4C	HARDWIRED			UP1A55		5
CM	2 POOL EQUIP 130 - CO2 MONITORING SYSTEM	5 A	120 V/1-400 VA	15A	GP12, 1P12GJ 3-4C	HARDWIRED			UP1A57		5
1	1 CMP POOL - FILTER CONTROL PANELS	5 A	120 V/1-400 VA	15A	GP12, 1P12GJ 3-4C	30A/1P			UP1A71		2
F	1 TRAINING POOL - FILTER CONTROL PANELS	5 A	120 V/1-400 VA	15A	GP12, 1P12GJ 3-4C	30A/1P			UP1A73		2
H1	1 CMP POOL - BOILER	14A	120 V/1-1440 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A68		2
H1	2 CMP POOL - BOILER PUMP	10A	120 V/1-1440 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A69		2
H1	1 CMP POOL - INDIRECT PUMP	10.8A	120 V/1-1296 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A70		2
H1	2 CMP POOL - INDIRECT PUMP	10.8A	120 V/1-1296 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A72		2
H1	1 CMP POOL - BOILER PUMP	14A	120 V/1-1440 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A74		2
H1	2 CMP POOL - INDIRECT PUMP	10.8A	120 V/1-1296 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A66		2
H2	1 TRAINING POOL - BOILER	14A	120 V/1-1440 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A67		2
H2	2 TRAINING POOL - BOILER PUMP	10A	120 V/1-1200 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A68		2
H2	1 TRAINING POOL - INDIRECT PUMP	7A	120 V/1-840 VA	20A	GP12, 1P12GJ 3-4C	30A/1P			UP1A68B		2
L	1 CMP POOL - TIL FILL PANEL	24 V/1-0 VA	24 V/1-0 VA	---	24V R/ PC, 3-4C BY EC	---			UP1A75		2.3
L	2 TRAINING POOL - TIL FILL PANEL	24 V/1-0 VA	24 V/1-0 VA	---	24V R/ PC, 3-4C BY EC	---			UP1A76		2.3
PP	1 CMP POOL - RESCUE PUMP	40 HP	480 V/4-4323 VA	50A	1P48, 1P18GJ 1-1/C	100A/1P	VFD 12-C		HAPA13.5	15,17	1.4
PP	2 CMP POOL - RESCUE PUMP	40 HP	480 V/4-4323 VA	50A	1P48, 1P18GJ 1-1/C	100A/1P	VFD 12-C		HAPA13.6	15,17	1.4
PP	3 CMP POOL - AGITATOR PUMP	2 HP	480 V/3-2859 VA	15A							

KEY	EQUIPMENT DESCRIPTION	LOAD	ELECTRICAL	MCCP/MFS	FEEDER	DISCONNECT	PANEL	CIRCUIT	NOTES
CALP1	CABINET UNIT HEATER	20KW	400 V/3-3000 V/3A	3SA	U48-19000 T/C	WITH UNIT		HP124-24.46	
CALP2	CABINET UNIT HEATER	15KW	400 V/3-3000 V/3A	3SA	U472-19200 T/C	WITH UNIT		HP124-24.46	
CALP3	CABINET UNIT HEATER	15KW	400 V/3-3000 V/3A	3SA	U472-19200 T/C	WITH UNIT		HP124-24.46	
DO1	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO2	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO3	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	1
DO4	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO5	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO6	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO7	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO8	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO9	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO10	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO11	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO12	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO13	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO14	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO15	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO16	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO17	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO18	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO19	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO20	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO21	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO22	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO23	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO24	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO25	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO26	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO27	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO28	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO29	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO30	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO31	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO32	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO33	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO34	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3SA	U470-19200 T/C	WITH UNIT		HP124-24.30	
DO35	CONDENSER UNIT	18.8KA	208 V/1-7320 V/3A	3					

Autodesk Docs/22044_Arvada Meyers Pool/683.00 - Meyers Pool Replacement - Electrical Central.rvt 11/10/2023 2:05:12 PM

PANEL: LP1A														
LOCATION: ELEC. 131					VOLTS: 120/208 Wye					A.I.C. RATING: 150kIC				
SUPPLY FROM: T-1A					PHASES: 3					MAIN TYPE: MCB				
MOUNTING: Surface					WIRES: 4					MAIN RATING: 400 A				
ENCLOSURE: Type 1										MCB RATING: 400 A				
Notes:														
2 SECTIONS, 40 CIRCUIT PANEL PER SECTION.														
CKT	LOAD TYPE	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT	
1	L		20	1	545	180			1	20	CHEM 12V CO2 BULK STOR RCPT	R	2	
2	R		20	1		900	180		1	20	CHEM 12V CO2 BULK STOR RCPT	R	4	
3	R		20	1			720	1440		1	H-1:1: BOILER	E	6	
4	R		20	1	GEFP	720	1440		1	20	H-1:1: BOILER PUMP	M	8	
5	R		20	1			720	1296		1	H-1:1: INJECT PUMP	M	10	
6	R		20	1			360	1440		1	H-1:2: BOILER	E	12	
7	R		20	1		900	1440		1	20	H-1:2: BOILER PUMP	M	14	
8	R		20	1			500	1296		1	H-1:2: INJECT PUMP	M	16	
9	R		20	1		360		500	0	1	20	SPARE	18	
10	R		20	1		900	360		1	15	QWH1	M	20	
11	R		20	1		500	200		1	20	IRRIGATION CONTROLLER	R	22	
12	R		20	1		170		500	864	1	15	PHCP1	M	24
13	R		20	1		900	240		1	15	DCU-1/DCU-3: COMP PUMP	M	26	
14	R		20	1			720	1598		2	20	DFC-1/DCU-3	M	28
15	R		20	1				2880	1598	2	20	DFC-2/DCU-3	M	30
16	R		20	1		1250	1598		2	20	DFC-2/DCU-3	M	32	
17	R		20	1			1250	1598		2	20	DFC-2/DCU-3	M	34
18	R		20	1				600	832	2	15	SE-1	M	36
19	R		20	1						2	15	SE-2	M	38
20	R		20	1						2	15	SE-3	M	40
21	R		20	1						2	15	SE-4	M	42
22	R		20	1						2	15	SE-5	M	44
23	R		20	1						2	15	SE-6	M	46
24	R		20	1						2	15	SE-7	M	48
25	R		20	1						2	15	SE-8	M	50
26	R		20	1						2	15	SE-9	M	52
27	R		20	1						2	15	SE-10	M	54
28	R		20	1						2	15	SE-11	M	56
29	R		20	1						2	15	SE-12	M	58
30	R		20	1						2	15	SE-13	M	60
31	R		20	1						2	15	SE-14	M	62
32	R		20	1						2	15	SE-15	M	64
33	R		20	1						2	15	SE-16	M	66
34	R		20	1						2	15	SE-17	M	68
35	R		20	1						2	15	SE-18	M	70
36	R		20	1						2	15	SE-19	M	72
37	R		20	1						2	15	SE-20	M	74
38	R		20	1						2	15	SE-21	M	76
39	R		20	1						2	15	SE-22	M	78
40	R		20	1						2	15	SE-23	M	80
41	R		20	1						2	15	SE-24	M	82
42	R		20	1						2	15	SE-25	M	84
43	R		20	1						2	15	SE-26	M	86
44	R		20	1						2	15	SE-27	M	88
45	R		20	1						2	15	SE-28	M	90
46	R		20	1						2	15	SE-29	M	92
47	R		20	1						2	15	SE-30	M	94
48	R		20	1						2	15	SE-31	M	96
49	R		20	1						2	15	SE-32	M	98
50	R		20	1						2	15	SE-33	M	100
51	R		20	1						2	15	SE-34	M	102
52	R		20	1						2	15	SE-35	M	104
53	R		20	1						2	15	SE-36	M	106
54	R		20	1						2	15	SE-37	M	108
55	R		20	1						2	15	SE-38	M	110
56	R		20	1						2	15	SE-39	M	112
57	R		20	1						2	15	SE-40	M	114
58	R		20	1						2	15	SE-41	M	116
59	R		20	1						2	15	SE-42	M	118
60	R		20	1						2	15	SE-43	M	120
61	R		20	1						2	15	SE-44	M	122
62	R		20	1						2	15	SE-45	M	124
63	R		20	1						2	15	SE-46	M	126
64	R		20	1						2	15	SE-47	M	128
65	R		20	1						2	15	SE-48	M	130
66	R		20	1						2	15	SE-49	M	132
67	R		20	1						2	15	SE-50	M	134
68	R		20	1						2	15	SE-51	M	136
69	R		20	1						2	15	SE-52	M	138
70	R		20	1						2	15	SE-53	M	140
71	R		20	1						2	15	SE-54	M	142
72	R		20	1						2	15	SE-55	M	144
73	R		20	1						2	15	SE-56	M	146
74	R		20	1						2	15	SE-57	M	148
75	R		20	1						2	15	SE-58	M	150
76	R		20	1						2	15	SE-59	M	152
77	R		20	1						2	15	SE-60	M	154
78	R		20	1						2	15	SE-61	M	156
79	R		20	1						2	15	SE-62	M	158
80	R		20	1						2	15	SE-63	M	160
81	R		20	1						2	15	SE-64	M	162
82	R		20	1						2	15	SE-65	M	164
83	R		20	1						2	15	SE-66	M	166
84	R		20	1						2	15	SE-67	M	168
85	R		20	1						2	15	SE-68	M	170
86	R		20	1						2	15	SE-69	M	172
87	R		20	1						2	15	SE-70	M	174
88	R		20	1						2	15	SE-71	M	176
89	R		20	1						2	15	SE-72	M	178
90	R		20	1						2	15	SE-73	M	180
91	R		20	1						2	15	SE-74	M	182
92	R		20	1						2	15	SE-75	M	184
93	R		20	1						2	15	SE-76	M	186
94	R		20	1						2	15	SE-77	M	188
95	R		20	1						2	15	SE-78	M	190
96	R		20	1						2	15	SE-79	M	192
97	R		20	1						2	15	SE-80	M	194
98	R		20	1						2	15	SE-81	M	196
99	R		20	1						2	15	SE-82	M	198
100	R		20	1						2	15	SE-83	M	200
101	R		20	1						2	15	SE-84	M	202
102	R		20	1						2	15	SE-85	M	204
103	R		20	1						2	15	SE-86	M	206
104	R		20	1						2	15	SE-87	M	208
105	R		20	1						2	15	SE-88	M	210
106	R		20	1						2	15	SE-89	M	212
107	R		20	1						2	15	SE-90	M	214
108	R		20	1						2	15	SE-91	M	216
109	R		20	1						2	15	SE-92	M	218
110	R		20	1						2	15	SE-93	M	220
111	R		20	1						2	15	SE-94	M	222
112	R		20	1						2	15	SE-95	M	224
113	R		20	1						2	15	SE-96	M	226
114	R		20	1						2	15	SE-97	M	228
115	R		20	1						2	15	SE-98	M	230
116	R		20	1						2	15	SE-99	M	232
117	R		20	1						2	15	SE-100	M	234
118	R		20	1						2	15	SE-101	M	236
119	R		20	1						2	15	SE-102	M	238
120	R		20	1						2	15	SE-103	M	240
121	R		20	1						2	15	SE-104	M	242
122	R		20	1						2	15	SE-105	M	244
123	R		20	1						2	15	SE-106	M	246
124	R		20	1						2	15	SE-107	M	248
125	R		20	1						2	15	SE-108	M	250
126	R		20	1						2	15	SE-109	M	252
127	R		20	1						2	15	SE-110	M	254
128	R		20	1						2	15	SE-111	M	256
129	R		20	1						2	15	SE-112	M	258
130	R		20	1						2	15	SE-113	M	260
131	R		20	1						2	15	SE-114	M	262
132	R		20	1						2	15	SE-115	M	264
133	R		20	1						2	15	SE-116	M	266
134	R		20	1						2	15	SE-117	M	268
135	R		20	1						2	15	SE-118	M	

PANEL: HP1B														
LOCATION: ELEC-2 110A						VOLTS: 480/277 Wye				A.I.C. RATING: 140K				
SUPPLY FROM: MCB-1						PHASES: 3				MAIN TYPE: MLO				
MOUNTING: Surface						WIRES: 4				MAIN RATING: 400 A				
ENCLOSURE: Type 1						MCB RATING: N/A								
Notes:														
SINGLE SECTION, 42 CIRCUIT PANEL														
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	L	1-5	125	3		1047	2000			3	15	WV-4		2
3	---	---	---	---	---		975	2000		---	---	---		4
5	---	---	---	---	---			11002	2000		---	---		6
7	L	1-5	348	943						3	15	HF-3		8
9	L	1-5	348	943						3	15	WV-3		10
11	L	1-5	348	943						3	15	WV-3		12
13	L	1-5	348	943						3	15	WV-3		14
15	L	1-5	348	943						3	15	WV-3		16
17	L	1-5	348	943						3	15	WV-3		18
19	L	1-5	348	943						3	15	WV-3		20
21	E	WV-3	15	1		2500	2000			---	---	---		22
23	E	WV-4	15	3		2500	2000			3	35	CLH-1		24
25	E	WV-5	15	3		1500	6667			---	---	---		26
27	---	---	---	---	---		1500	6667		---	---	---		28
29	---	---	---	---	---			1500	0	1	20	SPARE		30
31	E	WV-4	40	3		6667	0			1	20	SPARE		32
33	---	---	---	---	---		6667	0		1	20	SPARE		34
35	---	---	---	---	---			6667	0	1	20	SPARE		36
37	---	BLUDED SPACE	---	---	---					---	---	---		38
39	---	BLUDED SPACE	---	---	---					1	---	BLUDED SPACE		40
41	---	BLUDED SPACE	---	---	---					1	---	BLUDED SPACE		42
Total Load:						4073 VA	4950 VA	4073 VA						
						148 A	184 A	148 A						
CB TYPE LEGEND														
GFCI: 30mA GROUND FAULT CIRCUIT INTERRUPTER														
GFP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT														
AFCI: ARC FAULT CIRCUIT INTERRUPTER														
CAFCI: COMBINATION ARC FAULT & 30mA GROUND FAULT CIRCUIT INTERRUPTER														
LOAD TYPE:														
LIGHTING:														
RECEPTACLE:														
MOTOR:														
EQUIPMENT:														
ITCH EQUIP:														
CONTINUOUS:														
EXTENDING:														
NOTES:														
CIRCUIT CHECK TYPE LEGEND														
N1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER														
N2: NEW LOAD ON EXISTING CIRCUIT BREAKER														
N3: NEW LOAD ON NEW CIRCUIT BREAKER, CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING														
PANEL TOTALS														
												TOTAL CONN. LOAD:	121330 VA	
												TOTAL EST. LOAD:	125080 VA	
												TOTAL CONN. 150 A:		
												TOTAL EST. DEMAND:	150 A	

PANEL: LP1C																
LOCATION: JAN 119					VOLTS: 120/208 Wye					A.I.C. RATING: 1000K						
SUPPLY FROM: T-1C					PHASES: 3					MAIN TYPE: MCB						
MOUNTING: Surface					WIRES: 4					MAIN RATING: 120 A						
ENCLOSURE: Type 1										MCB RATING: 100 A						
Notes:																
SINGLE SECTION, 40 CIRCUIT PANEL																
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT		
1	---	---	20	1	O	1176				1	20	SP-1	A	2		
3	---	---	20	1			0	720		1	20	UNIV CHANGING 118 RCPT	R	4		
5	R	BR JAN 112 RCPT	20	1				1080	1080	1	20	UNIV CHANGING 118 RCPT	R	6		
7	R	CONCOURSE 207 SEAT 208 RCPT	20	1		720	1080			1	20	GUARDS/FIRSTAID 115 - RCPT	R	8		
9	R	CONCOURSE 207 DRINK RAIL RCPT	20	1			1080	696		GFCI	1	20	CORRIDOR 113 - EMC	R	10	
11	R	CONCOURSE 207 DRINK RAIL RCPT	20	1				1080	1080	GFCI	1	20	VENDING 113A - VEND	R	12	
13	R	CONCOURSE 207 SEAT 208 RCPT	20	1		740	1000			GFCI	1	20	VENDING 113A - VEND	R	14	
15	R	CONCOURSE 207 - EMC	20	1	GFCI		696	1000		GFCI	1	20	VENDING 113A - VEND	R	16	
17	R	INDEX 88 RCPT	20	1				540	1000	GFCI	1	20	VENDING 113A - VEND	R	18	
19	R	CORRIDOR 113 RCPT	20	1		1260	900			GFCI	1	20	GUARDS/FIRSTAID 115 - RCPT	R	20	
21	R	WOMEN LOCKERS 121 RCPT	20	1			1260	1000		GFCI	1	20	GUARDS/FIRSTAID 115 - MICROWAVE	R	22	
23	R	WOMEN LOCKERS 120 RCPT	20	1				1260	750	GFCI	1	20	GUARDS/FIRSTAID 115 - REF	R	24	
25	R	MEET MINGT 117 RCPT	20	1		1440	740			GFCI	1	20	STORAGE POOL CORR/STAIR RCPT	R	26	
27	R	MEET MINGT 117 RCPT	20	1			1080	1500		GFCI	1	20	STORAGE 114 - WASHES	R	28	
29	R	MEET MINGT 117 - GD	20	1				1176	1040	2	30	STORAGE 114 - DRYER	E	30		
31	R	MEET MINGT 117 - REF	20	1	GFCI	750	1040							--	32	
33	R	MEET MINGT 117 - AV RACK	20	1				360	696	GFCI	1	20	POOL 123 - EMC	R	34	
35	R	MEET MINGT 117 - TIRING SYSTEM	20	1					1080	360		1	20	POOL 123 - TIRING SYSTEM	R	36
37	R	POOL 123 - PACE CLOCK	20	1		600	500					1	20	STORAGE 114 - ELEV CAR VENT & LTO	E	38
39	R	POOL 123 SOUTH RCPT - VAC	20	1	GFP		1080	1100				1	20	LOBBY 101 RCPT	R	40
41	R	POOL 123 - TIRING SYSTEM	20	1					360	504	1	20	ELEV 112 RCPT & LTO	L-R	42	
43	---	---	20	1	O	0	0			1	20	SPARE		44		
45	---	---	20	1		0	0			1	20	SPARE		46		
47	---	---	20	1		0	0	0	0	1	20	SPARE		48		
49	---	---	20	1		0	0			1	20	SPARE		50		
51	---	---	20	1		0	0			1	20	SPARE		52		
53	---	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE		54		
55	---	---	--	1		--	--	--	--	1	--	BLUDED SPACE		56		
57	---	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE		58		
59	---	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE		60		
Total Load:						1186 VA	1228 VA	1210 VA	Total Amperes:							
						102 A	103 A	103 A								

PANEL: LP1B															
LOCATION: ELEC-2 110A					VOLTS: 120/208 Wye					A.I.C. RATING: 1000K					
SUPPLY FROM: T-1B					PHASES: 3					MAIN TYPE: MCB					
MOUNTING: Surface					MANS RATING: 400 A					MANS TYPE: 250 A					
ENCLOSURE: Type 1															
Notes:															
2-SECTIONS, 40 CIRCUIT PANEL PER SECTION.															
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT	
1	R	BUILDING MOUNTED ENTRY SIGNAL	20	1		500	250?			2	40	UHI-1	E	2	
3	R	STORAGE/UNSEED RIB RCPPT	20	1			1120	250?		--	--	--	--	4	
5	R	CORROSION - EMC	20	1	GFCI			696	1598	2	20	DFC1-100-3	AM	6	
7	C	LOGIC/PLC/PL VALVE	20	1		500	1598							8	
9	R	MP/INVERTY 107 - RCPPT	20	1			900	0		1	20	SPACE	--	10	
11	R	MP/INVERTY 107 - RCPPT	20	1				900	1176		20	DF-4	AM	12	
13	R	MP/INVERTY 107 - REF	20	1	GFCI	750	120			1	15	DFC1 - COND PUMP	AM	14	
15	R	MP/INVERTY 107 - GO	20	1			1176	0		1	20	SPACE	--	16	
17	R	MP/INVERTY 107 - MICROWAVE	20	1	GFCI			1000	0	1	20	SPACE	--	18	
19	R	CIRC 102 RCPPT	20	1		880	0			1	20	SPACE	--	20	
21	R	OFFICE 103 RCPPT	20	1			1140	0		1	20	SPACE	--	22	
23	R	OFFICE 103 RCPPT	20	1				1120	730	GFFP	1	20	POOL 123 NORTH & EAST RCPPT - VAC	R	24
25	R	OFFICE 104 RCPPT	20	1		760	360			1	20	EAST WICH RCPPT	R	26	
27	E	STAFF 105A - 10F BACK	20	1			500	0		1	20	SPACE	--	28	
29	R	STAFF 105A RCPPT	20	1				720	0	1	20	SPACE	--	30	
31	R	STAFF 105A RCPPT	20	1		740	0			1	20	SPACE	--	32	
33	R	POOL 123 SE/REC DESK 101A RCPPT	20	1			400	1464		1	20	SPR-1	E	34	
35	R	REC DESK 101A RCPPT	20	1				1090	1464	1	20	SPR-2	E	36	
37	R	EAST HEAT SPACE	20	1	GFFP	600	1032			1	15	SPR-3	E	38	
41	--	SPACE	20	1			0	588		1	15	SPR-4	E	40	
43	--	SPACE	20	1				0	588	1	15	SPR-5	E	42	
45	--	SPACE	20	1				0		1	20	SPACE	--	44	
47	--	SPACE	20	1			0	0		1	20	SPACE	--	46	
49	--	SPACE	20	1			0	0	0	1	20	SPACE	--	48	
51	--	SPACE	20	1			0	0	0	1	20	SPACE	--	50	
53	--	SPACE	20	1				0	0	1	20	SPACE	--	52	
55	--	SPACE	20	1			0	0		1	20	SPACE	--	54	
57	--	SPACE	20	1			0	0	0	1	20	SPACE	--	56	
59	--	SPACE	20	1				0	0	1	20	SPACE	--	58	
61	--	SPACE	20	1		0	0	0		1	20	SPACE	--	60	
63	--	SPACE	20	1				0	0	1	20	SPACE	--	62	
65	--	SPACE	20	1				0	0	--	1	--	BUSSED SPACE	--	64
67	--	SPACE	20	1		0	--	--	--	--	--	--	BUSSED SPACE	--	66
69	--	BUSSED SPACE	--	1		--	--	--	--	1	--	--	BUSSED SPACE	--	70
71	--	BUSSED SPACE	--	1		--	--	--	--	1	--	--	BUSSED SPACE	--	72
73	--	BUSSED SPACE	--	1		--	--	--	--	1	--	--	BUSSED SPACE	--	74
75	--	BUSSED SPACE	--	1		--	--	--	--	1	--	--	BUSSED SPACE	--	76
77	--	BUSSED SPACE	--	1		--	--	--	--	1	--	--	BUSSED SPACE	--	78
79	--	BUSSED SPACE	--	1		--	--	--	--	1	--	--	BUSSED SPACE	--	80
81	--	BUSSED SPACE	--	1		--	--	--	--	1	--	--	BUSSED SPACE	--	82
83	--	BUSSED SPACE	--	1		--	--	--	--	1	--	--	BUSSED SPACE	--	84

RFI detail

#198 Water Sub Meter Electrical Requirements



The gas sub meters and 2" water sub meter do not require any electrical connection. The 2.5" water sub meter requires an electrical connection. Please coordinate any low voltage requirements with Censeo. Updated drawings attached.
-EB/AED/2024.01.18

Status	Open In Review
Created on	Jan 11, 2024 by Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.)
RFI type	Default RFI FLOW
Ball in court	Robert Mcdonald
Due date	Jan 18, 2024

Question

Please reference attached detail 3/P301, Enlarged Scale Plumbing Plan. The plumbing plan calls for a sub water meter to be installed to monitor pool usage. There are no electrical requirements called out for the sub water meter, please provide design showing requirements.

Impact

Cost impact	Unknown
Schedule impact	Unknown

Other attributes

Priority	High
Discipline	Plumbing
Category	Design Coordination, Other
Location	-
Location details	-
External id	-

Co-reviewer(s)  **Emily Barnett**

-  **Greg Pfile**
-  **Natalie Mediate**
-  **Shane Daniels**
-  **Dan Potter**

Confirming RFI	No
Posted	Yes

Activities	By	At
Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.) created this RFI in  Open In Review status and set Ball in court to Robert Mcdonald .	Juan Vazquez Villasenor	Jan 11, 2024, 12:35 PM MST



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO
7904 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE
2	09/13/2023	ASI-06
4	11/11/2023	ASI-012
7	12/01/2023	PR #004
8	01/18/2024	RFI-198

SCALE: As indicated

ISSUE DATE: 08/25/2023

DRAWN BY: EB, JF, AW

REVD BY: ESN, GP

PROJECT #: 22044

TITLE: ENLARGED ELECTRICAL
ROOM PLAN

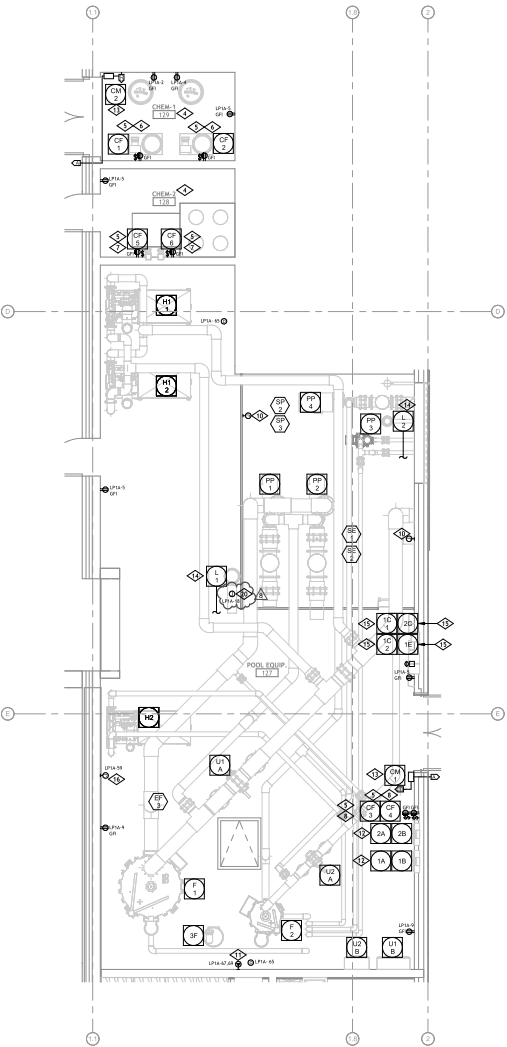
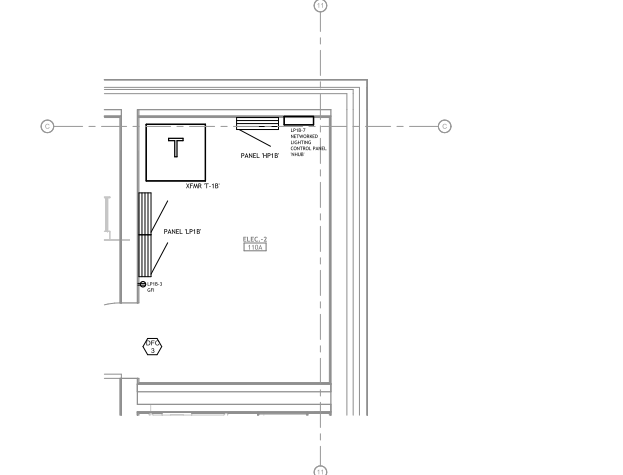
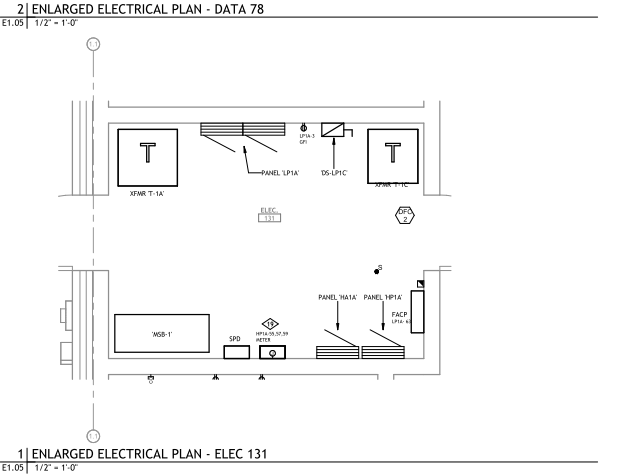
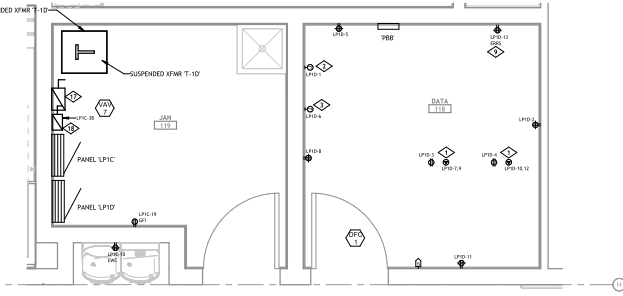
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E1.05

POWER GENERAL NOTES

- A. EQUIPMENT AT THE POOL EQUIPMENT ROOM SHALL BE BUNDLED AS REQUIRED BY NEC 880. REFER TO DETAIL P31 E1.03 FOR MORE INFORMATION AND SPECIFIC REQUIREMENTS.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	EC SHALL PROVIDE NEAR 16-30R RECEPTACLE FEED WITH 120V, 1PH, 3-FC FOR CORD AND PLUG CONNECTION. EC SHALL COORDINATE EXACT RECEPTACLE REQUIREMENTS AND LOCATION WITH LOW VOLTAGE CONSULTANT PRIOR TO ROUGH-IN.
2	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR INTERLOGIC ALARM CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
3	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR ACCESS CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
4	ELECTRICAL CONDUIT SHALL NOT PASS THROUGH CHEMICAL ROOM EXCEPT AS NEEDED TO SERVICE DEVICES INTEGRAL TO THE FUNCTION OF THE CHEMICAL ROOM. ALL ELECTRICAL INSTALLATIONS IN CHEMICAL STORAGE ROOMS SHALL COMPLY WITH 2020 NEC SECTIONS 510.11, 501.6, AND 585.14.
5	EC SHALL FIELD COORDINATE SERVICE HOUSING AND CONDUIT ROUTING PRIOR TO ROUGH-IN. RECEPTACLES SHALL BE MOUNTED MINIMUM 12" AND 18" MAXIMUM ABOVE CHEMICAL PUMPS.
6	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR AUTOMATED CALCIUM HYPOCHLORITE FEED SYSTEM. CIRCUIT SHALL BE INTERLOCKED WITH RESPECTIVE POOL RECIRCULATION PUMP BY A LINE VOLTAGE WIRING CONNECTION FROM THE FEED CONTROL PANEL TO WIRING BOX AT THE WATER CHEMISTRY CONTROLLER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
7	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR ACID FEED PUMP. CIRCUIT SHALL BE INTERLOCKED WITH RESPECTIVE POOL RECIRCULATION PUMP BY A LINE VOLTAGE WIRING CONNECTION FROM THE RECEPTACLE TO WIRING BOX AT THE WATER CHEMISTRY CONTROLLER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
8	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR CARBON DIOXIDE FEED SYSTEM SOLENOID VALVE. CIRCUIT SHALL BE INTERLOCKED WITH RESPECTIVE POOL RECIRCULATION PUMP BY A LINE VOLTAGE WIRING CONNECTION FROM THE RECEPTACLE TO WIRING BOX AT THE WATER CHEMISTRY CONTROLLER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
9	EC SHALL PROVIDE QUADPLEX RECEPTACLE AND 120V, 1PH DEDICATED CIRCUIT FOR EMERGENCY RESPONDER RADIO SYSTEM. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
10	APPROPRIATE LOCATION OF PUMP PUMP CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
11	EC SHALL PROVIDE NEAR 16-30R RECEPTACLE FOR DOWING TEAM AIR COMPRESSOR. CONFIRM FINAL NEAR CONNECTION AND LOCATION WITH OWNER PRIOR TO ROUGH-IN.
12	WIRE BOXES SUPPLIED WITH THE WATER CHEMISTRY CONTROLLER SHALL RECEIVE 4-20MA OR LINE VOLTAGE CONTROL WIRING. POOL CONTRACTOR CONNECTIONS FROM THE FOLLOWING POOL SYSTEMS FOR ADDITIONAL CONTROLS FUNCTION: CONFIRM EXACT REQUIREMENTS WITH APPROVED SHOP DRAWINGS AND POOL CONTRACTOR. EC SHALL PROVIDE 3/4" CONDUIT AS REQUIRED BETWEEN BOXES AND EQUIPMENT LISTED BELOW: A. POOL RECIRCULATION PUMP WDS B. UV TREATMENT SYSTEM CONTROL PANEL C. POOL CHEMICAL FEED SYSTEM D. POOL RECIRCULATION FLOW METER E. POOL HEATING SYSTEM F. POOL FILTER BWF CONTROL PANEL
13	PROVIDE 100V POWER CONNECTION TO CO2 MONITORING SYSTEM IN EQUIPMENT ROOM. SYSTEM SHALL HAVE HEAD END DISPLAY WITH DETECTION PROBE. DUAL WALL MOUNTED STROBES, SOLENOID SHUT OFF VALVE, AND IF B EX RATED. PROVIDE ALL REQUIRED CONTROL AND INTERFACE WIRING PER APPROVED MANUFACTURER'S SHOP DRAWINGS AND WIRING DIAGRAMS. FIELD COORDINATE FINAL LOCATION WITH POOL CONTRACTOR.
14	EC SHALL PROVIDE 3/4" CONDUIT BETWEEN WATER LEVEL CONTROLLER AND FILL PANNEL. REFER TO POOL EQUIPMENT SCHEDULE FOR MORE INFORMATION.
15	PROVIDE DEDICATED ELECTRICAL SPACE FOR WALL MOUNTED COMBINATION VFD/MOTOR/STARTER EQUIPMENT. REFER TO POOL EQUIPMENT SCHEDULE FOR MORE INFORMATION. FINAL SPACING SHALL BE COORDINATED WITH FINAL APPROVED SHOP DRAWINGS. DEDICATED CLEARANCE SHALL BE MAINTAINED PER THE NEC. UNITS SHALL BE MOUNTED WITHIN SIGHT OF THE PUMP THAT THEY SERVE.
16	EC SHALL PROVIDE HEAT TRACE AND JUNCTION BOX WITH 120V, 1PH CONNECTION. FIELD COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
17	ELEVATOR DOCUMENTS RE: ONE LINE. COORDINATE EXACT FINAL LOCATION WITH APPROVED ELEVATOR SHOP DRAWING REQUIREMENTS.
18	EC SHALL PROVIDE 120V, 3ØA DEDICATED CIRCUIT FOR ELEVATOR CAR VENTILATION AND LIGHTING. ALL INSTALLATIONS SHALL COMPLY WITH NEC 430.53. COORDINATE EXACT FINAL LOCATION WITH APPROVED ELEVATOR SHOP DRAWING REQUIREMENTS.
19	PROVIDE ACCESSIBLE ENCLOSURE FOR SUB-METER FOR FLD 1A CREDIT. ADVANCED ENERGY METERING COMPLIANCE. PROVIDE CONDUIT AND CT WIRING AS REQUIRED FOR CONNECTION TO ALL EQUIPMENT INDICATED ON ONE LINE DIAGRAM. PROVIDE 3/4" FC AND DATA CABLE AS REQUIRED FOR INTERCONNECTION WITH BAS. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL SUB-METERING REQUIREMENTS.
20	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR WATER SUB-METER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.



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Autodesk Docs/22044_Arvada Meyers Pool/683.00 - Meyers Pool Replacement - Electrical Central.rvt 1/18/2024 10:59:55 AM

PANEL: LP1A															
LOCATION: ELEC. 131					VOLTS: 120/208 Wye					A.I.C. RATING: 150A/C					
SUPPLY FROM: T-1A					PHASES: 3					MAIN TYPE: MCB					
MOUNTING: Surface					WIRES: 4					MAIN RATING: 400 A					
ENCLOSURE: Type 1										MCB RATING: 400 A					
Notes:															
2 SECTIONS, 40 CIRCUIT PANEL PER SECTION.															
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT	
1	L	INCUBATOR SGNAGE	20	1		545	180			1	20	CHEM 129 CO2 BULK STOR RCPT	R	2	
2	R	MCHN RCPT ELEC 130 RCPT	20	1				900	180	1	20	CHEM 129 CO2 BULK STOR RCPT	R	4	
3	R	POOL EQUIP 127 RCPT	20	1					720	1440	1	20	H-1: BOILER	E	6
7	R	POOL 123 NORTH & WEST RCPT - VAC	20	1	GFEF	720	1440			1	20	H-1: BOILER PUMP	M	8	
9	R	POOL EQUIP STOR 126 RCPT	20	1				720	1296	1	20	H-1: INDIRECT PUMP	M	10	
11	R	POOL 123 - TRINK SYSTEM	20	1					360	1440	1	20	H-1: BOILER	E	12
13	E	POOL 123 - SCOREBOARD	20	1		500	1440			1	20	H-2: BOILER PUMP	M	14	
15	E	POOL 123 - SCOREBOARD	20	1			500	1296			20	H-2: DIRECT PUMP	M	16	
17	E	POOL 123 - SCOREBOARD	20	1				500	200		20	POOL EQUIP 127 - WATER SUBMETER	E	18	
19	E	POOL 123 - SCOREBOARD	20	1		500	360								
21	E	POOL 123 - SCOREBOARD	20	1			500	200		1	20	IRRIGATION CONTROLLER	R	22	
23	E	POOL 123 - SCOREBOARD	20	1				500	864	1	15	FWP-1	M	24	
25	E	POOL 123 - SCOREBOARD	20	1		500	240			1	15	DCU 1 / DCU 2 - COND PUMP	M	26	
27	R	POOL 123 - RCPT DING VIDEO TV	20	1			720	1598		2	20	DFC 1 / DCU 1	M	28	
29	M	AIR COMPRESSOR	50	1					2880	1598				30	
31	E	U-2 (AIR TREATMENT)	30	2		1250	1598			2	20	DFC 2 / DCU 2	M	32	
33	--	--	--	--	--	--	1250	1598		--	--	--	--	34	
35	E	COMP POOL CHEMICAL CONTROLLER	15	1				600	832	2	15	SE-1	M	36	
37	E	COMP POOL WATER LEVEL...	15	1		600	832							38	
39	E	TRAIN POOL CHEMICAL CONTROLLER	15	1			500	832		2	15	SE-2	M	40	
41	E	TRAIN POOL WATER LEVEL...	15	1				500	832					42	
43	E	CF-1	20	1		1920	832			2	15	SP-2	M	44	
45	E	CF-2	30	1			1920	832						46	
47	E	CF-3	20	1				1920	832	2	15	SP-3	M	48	
49	E	CF-4	20	1		1920	832							50	
51	E	CF-5	20	1			1920	1176		1	20	EF-1	M	52	
53	E	CF-6	20	1				1920	1176	1	20	EF-2	M	54	
55	E	QW-1	15	1		600	1656			1	25	EP-3	M	56	
57	E	QW-2	15	1			600	696		1	15	EF-4	M	58	
59	E	WEST HEAT TRACE	20	1	GFEF			800	1176	1	20	EF-5	M	60	
61	R	WEST HEAT RCPT	20	1		720	500			1	15	TW-1	M	62	
63	E	FIRE ALARM CIRCUIT	20	1	IT1		500	1440		1	20	H2: BOILER	E	64	
65	E	FIRE SMOKE DAMPER	20	1				400	1200	1	20	H2: BOILER PUMP	M	66	
67	E	POOL EQUIP 127 - DIVE AIR...	30	2		2288	840			1	20	H2: INDIRECT PUMP	M	68	
69							2288	0						70	
71	M	F1 - FILTER CONTROL PANEL	15	1				600	0	1	20	SPARE		72	
73	M	F2 - FILTER CONTROL PANEL	15	1		600	0			1	20	SPARE		74	
75	--	SPARE	20	1				0	0	1	20	SPARE		76	
77	--	SPARE	20	1				0	0	1	20	SPARE		78	
79	--	SPARE	20	1			0	0		1	20	SPARE		80	
81	--	SPARE	20	1				0	0	1	20	SPARE		82	
83	--	SPARE	20	1					0	0	1	20	SPARE		84
Total Load:						23893 VA	23462 VA	23294 VA							
Total Amps:						199 A	186 A	194 A							
CB TYPE LEGEND:															
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER															
GFEF: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT															
AFCL: ARC FAULT CIRCUIT INTERRUPTER															
CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER															
LOAD TYPE:															
LIGHTING:															
RECEPTACLE:															
MOTOR:															
EQUIPMENT:															
WATCH EQUIP:															
CONTINUOUS:															
EXISTING:															
NOTES:															
(1) PER NEC 700.12(1)(B), CIRCUIT DISCONNECTING MEANS SHALL HAVE RED IDENTIFICATION.															
CIRCUIT PHASE CODE LEGEND:															
N1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.															
N2: NEW LOAD ON EXISTING CIRCUIT BREAKER.															
N3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.															
H1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.															
H2: NEW LOAD ON EXISTING CIRCUIT BREAKER.															
H3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.															
H4: PROVIDE BRANCH CIRCUIT CTs CONNECTED BACK TO SUB-METER AT MECHANICAL EQUIPMENT FEEDER INDICATED FOR LEED EA CREDIT - ADVANCED ENERGY METERING COMPLIANCE.															
REFER TO ONE LINE DIAGRAM FOR ADDITIONAL DETAILS.															

PANEL: HP1A

LOCATION: ELEC. 131
SUPPLY FROM: MCB 1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 150A/C
MAIN TYPE: MCB
MAIN RATING: 400 A
MCB RATING: N/A

Notes:
SINGLE SECTION, 60 CIRCUIT PANEL.

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT		
1	M	HAU-1 (H4)	15	3		1053	11946			3	70	T-1C	L	2		
3	--	--	--	--	--		1053	12268						4		
5	--	--	--	--	--			1053	12310					6		
7	E	Spa: T-10	25	3		4120	0			3	15	SPARE		8		
9	--	--	--	--	--		5160	0						10		
11	--	--	--	--	--			3620	0					12		
13	L	LTG - ELEMENTARY SCHOOL SITE	20	1		800	943			3	15	HP-1	M	14		
15	L	LTG - BUILDING MOUNTED AND SITE	20	1			1565	943						16		
17	L	LTG - FIRST FLOOR WEST	20	1				3427	943					18		
19	L	LTG - POOL HIGH BAYS	20	1		3448	943			3	15	2	M	20		
21	L	LTG - POOL HIGH BAYS	20	1			3448	943						22		
23	L	LTG - POOL HIGH BAYS	20	1				3448	943					24		
25	L	LTG - SECOND FLOOR WEST	20	1		1656	2000			3	15	VAV-8	E	26		
27	E	VAV-11	40	3			6667	2000						28		
29	--	--	--	--	--			6667	2000					30		
31	--	--	--	--	--		6667	2000						32		
33	E	VAV-12	40	3			6667	2000						34		
35	--	--	--	--	--			6667	2000					36		
37	--	--	--	--	--		6667	2333						38		
39	E	VAV-7	15	1			2000	2333						40		
41	E	CLM-2	40	3				3334	2333					42		
43	--	--	--	--	--		3334	0				1	20	SPARE	--	44
45	--	--	--	--	--			3334	0			1	20	SPARE	--	46
47	E	CLM-3	15	3			1333	0				1	20	SPARE	--	48
49	--	--	--	--	--			1333	0			1	20	SPARE	--	50
51	--	--	--	--	--			1333	0			1	20	SPARE	--	52
53	E	SPARE	20	1					0			1	20	SPARE	--	54
55	E	LEED SUB-METER	20	1		200	--	--	0			1	20	SPARE	--	56
57	--	--	--	--	--			200	--			1	--	BLUDED SPACE	--	58
59	--	--	--	--	--				200	--		1	--	BLUDED SPACE	--	60
Total Load:						49463 VA	5193 VA	50238 VA								
Total Amps:						129 A	180 A	182 A								

CB TYPE LEGEND																	
GFI: 5mA GROUND FAULT CIRCUIT INTERRUPTER						HCI (ON OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION											
GFCI: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT						HTR: HANDLE TIE WITH GROUPING A											
GFI: 5mA GROUND FAULT CIRCUIT INTERRUPTER						ST: SHUNT TRIP											
CAFC: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER						LOCK: PERMANENTLY LOCKABLE BREAKER											
LOAD						DEMAND LOAD											
LIGHTING:						17925 VA											
RECEIVER/FAULT:						22272 VA											
MOTOR:						6993 VA											
EQUIPMENT:						87983 VA											
MOTOR EQUIP:						89352 VA											
CONTINUOUS:																	
BLUDED SPACE:																	
NOTES:																	
MTR: PROVIDE BRANCH CIRCUIT CTS CONNECTED BACK TO SUB-METER AT MECHANICAL EQUIPMENT FEEDER INDICATED FOR LEED EA CREDIT - ADVANCED ENERGY METRIC COMPLIANCE.																	
REFER TO ONE LINE DIAGRAM FOR ADDITIONAL DETAILS.																	

CIRCUIT PHASE CODE LEGEND					
N1:	EXISTING LOAD ON EXISTING CIRCUIT BREAKER.				
N2:	NEW LOAD ON EXISTING CIRCUIT BREAKER.				
N3:	NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIR RATING TO MATCH EXISTING.				
PANEL TOTALS					
			TOTAL CONN. LOAD: 15134 VA		
			TOTAL EST. LOAD: 14496 VA		
			TOTAL CONN. LOAD: 1482 VA		
			TOTAL EST. DEMAND: 1114 A		

PANEL: HA1A

LOCATION: ELEC. 131
SUPPLY FROM: MCB 1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 150A/C
MAIN TYPE: MCB
MAIN RATING: 400 A
MCB RATING: N/A

Notes:
SINGLE SECTION, 42 CIRCUIT PANEL.

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT		
1	M	PP-1	30	3		14411	14411			3	90	PP-2	M	2		
3	--	--	--	--	--		14411	14411						4		
5	--	--	--	--	--			14411	14411					6		
7	M	PP-3	15	3		943	7483			3	60	PP-4	M	8		
9	--	--	--	--	--		943	7483						10		
11	--	--	--	--	--			943	7483					12		
13	E	U1 (UV TREATMENT)	40	3		4000	0			1	20	SPARE	--	14		
15	--	--	--	--	--			4000	0			1	20	SPARE	--	16
17	--	--	--	--	--				4000	0		1	20	SPARE	--	18
19	--	SPARE	20	1			0	0		1	20	SPARE	--	20		
21	--	SPARE	20	1				0	0		1	20	SPARE	--	22	
23	--	SPARE	20	1					0	0		1	20	SPARE	--	24
25	--	SPARE	20	1						0		1	20	SPARE	--	26
27	--	BLUDED SPACE	1	1		0	--	--	--	1	--	BLUDED SPACE	--	28		
29	--	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE	--	30		
31	--	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE	--	32		
33	--	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE	--	34		
35	--	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE	--	36		
37	--	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE	--	38		
39	--	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE	--	40		
41	--	BLUDED SPACE	--	1		--	--	--	--	1	--	BLUDED SPACE	--	42		
Total Load:						41348 VA	41348 VA	41348 VA								
Total Amps:						169 A	169 A	169 A								

CIRCUIT PHASE CODE LEGEND					
N1:	EXISTING LOAD ON EXISTING CIRCUIT BREAKER.				
N2:	NEW LOAD ON EXISTING CIRCUIT BREAKER.				
N3:	NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIR RATING TO MATCH EXISTING.				
PANEL TOTALS					
			TOTAL CONN. LOAD: 11374 VA		
			TOTAL EST. LOAD: 11452 VA		
			TOTAL CONN. LOAD: 1164 A		
			TOTAL EST. DEMAND: 163 A		

CB TYPE LEGEND											
GFI: 5mA GROUND FAULT CIRCUIT INTERRUPTER						HCI (ON OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION					
GFCI: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT						HTR: HANDLE TIE WITH GROUPING A					
GFI: 5mA GROUND FAULT CIRCUIT INTERRUPTER						ST: SHUNT TRIP					
CAFC: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER						LOCK: PERMANENTLY LOCKABLE BREAKER					
LOAD						DEMAND LOAD					
LIGHTING:						11744 VA					
RECEIVER/FAULT:						12252 VA					
MOTOR:						12000 VA					
EQUIPMENT:											
MOTOR EQUIP:											
CONTINUOUS:											
BLUDED SPACE:											
NOTES:											



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO
7904 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE
1	07/14/2023	ASI-001
2	08/01/2023	ASI-002
4	11/02/2023	RFI-41
5	11/13/2023	ASI-012
6	11/13/2023	ASI-013

SCALE: As indicated

ISSUE DATE: 07/14/2023

DRAWN BY: JSM

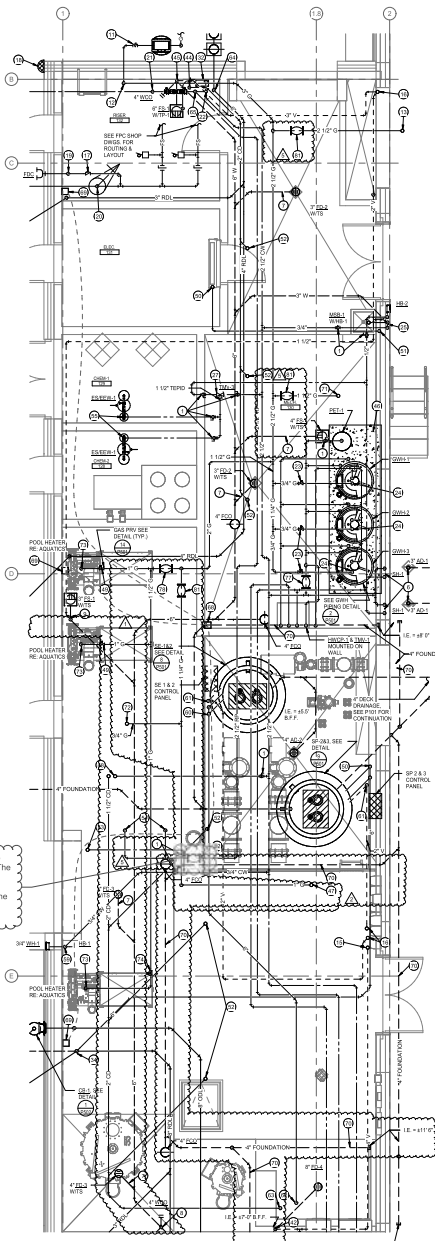
REV'D BY: TRH

PROJECT #: 22044

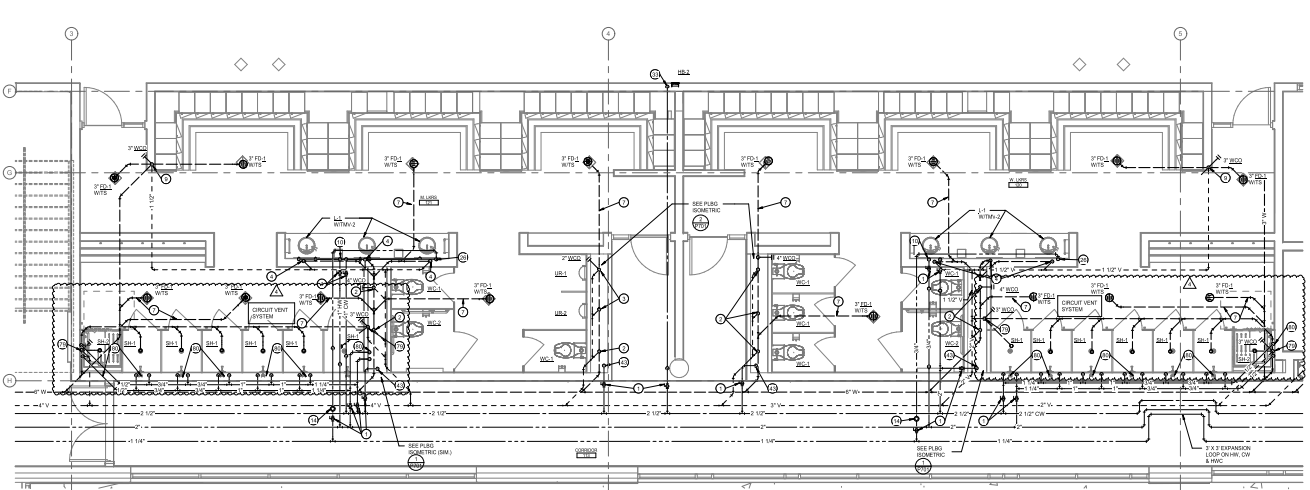
TITLE: ENLARGED SCALE PLUMBING PLANS

SHEET #:
P301

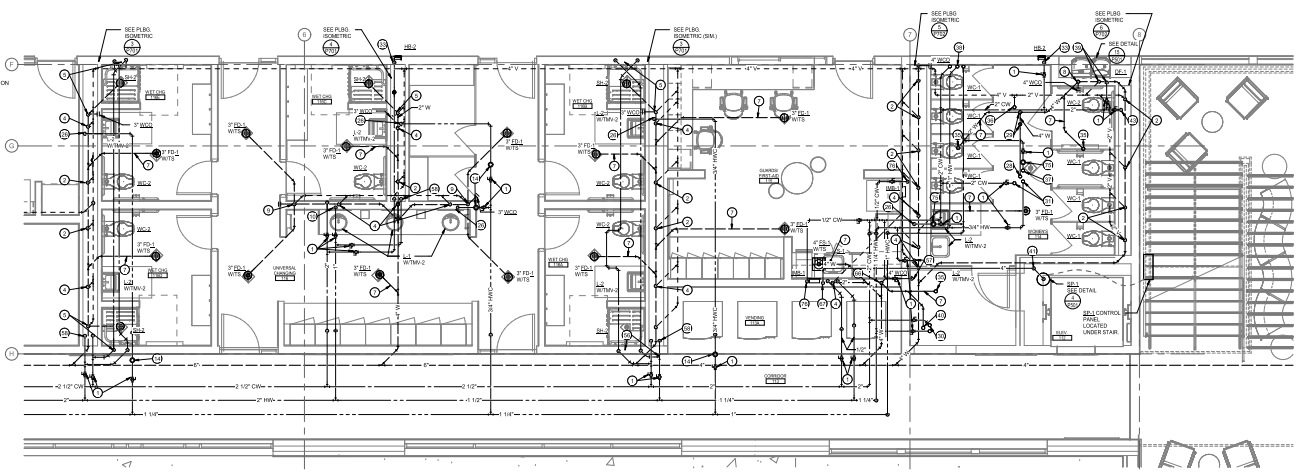
11/10/2023 2:07:25 PM Autodesk Docs\\22044_Arvida Meyers Pool\\22035-Meyers-PL-B0_121.rvt



1 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"



2 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"



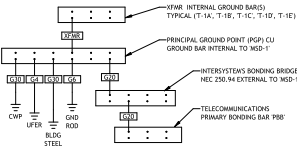
3 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"

PLUMBING KEYNOTES:

- 1. 1/2" CW ENTRY. SEE DETAIL TYPED.
- 2. 1/2" CW RISE & OFFSET @ STRUCTURE.
- 3. GAS PIPING 3/8" MIN. R/WIT @ S.S. 2.5 PSI TO 1/2" WC. PIPE RELIEF THRU ROOF.
- 4. 1/2" CW ON 1/4" G. TO DOWN WAS COCK & 1/2" SHUT LES.
- 5. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO LAVS/MISS.
- 6. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO SH.
- 7. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 8. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
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GROUNDING ELECTRODE SYSTEMS NOTES

- 1. METAL UNDERGROUND WATER PIPE - MAKE CONNECTION TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10' AND ELECTRICALLY CONTINUOUS TO THE POINTS OF CONNECTION TO THE GROUNDING ELECTRODE SYSTEM AND BONDING CONDUCTORS. CONNECTION POINT SHOULD BE AT A MAXIMUM OF 5' OF THE POINT OF ENTRANCE ON THE INTERIOR OF THE BUILDING.
- 2. BUILDING STEEL - THE METAL FRAME OF THE BUILDING OR STRUCTURE, WHERE ANY OF THE FOLLOWING METHODS ARE USED TO MAKE AN EARTH CONNECTION:
 - A. AT LEAST ONE STRUCTURAL METAL MEMBER THAT IS IN DIRECT CONTACT WITH THE EARTH FOR 10' OR MORE, WITH OR WITHOUT CONCRETE ENCASING.
 - B. HOLD-DOWN BOLTS SECURING THE STRUCTURAL STEEL COLUMN THAT ARE CONNECTED TO A CONCRETE ENCASED ELECTRODE THAT COMPLEYS WITH 200.53(A)(1) AND IS LOCATED IN THE SUPPORT FOOTING OR FOUNDATION. THE HOLD-DOWN BOLTS SHALL BE CONNECTED TO THE CONCRETE ENCASED ELECTRODE BY WELDING, ISOTHERMIC WELDING, THE USUAL STEEL WELDS, OR OTHER APPROVED MEANS.
 - C. UPRIGHT GROUND RODS OR EARTH ELECTRODE - AN ELECTRODE ENCASED BY AT LEAST 2" OF CONCRETE, LOCATED WITHIN AND NEAR THE BOTTOM OF A CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH EARTH, CONSISTING OF AT LEAST 20' OF ONE OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTING CONCRETE REINFORCING BARS OR BARS NOT LESS THAN 1/2" IN DIAMETER, OR CONSISTING OF AT LEAST 20' OF BARE COPPER CONDUCTOR NOT SMALLER THAN NO. 4 AWG. REINFORCING BARS SHALL BE PERMITTED TO BE BONDED TOGETHER BY THE USUAL STEEL WELDS OR OTHER EFFECTIVE MEANS.
 - D. GROUND ROD - ROD IS TO BE 6 FT IN LENGTH AND SHALL BE MADE OF IRON OR STEEL AT LEAST 5/8" DIAMETER. INSTALLATION METHODS FOR GROUND ROD SHALL BE IN COMPLIANCE WITH THE NEC SUCH THAT AT LEAST 8' OF LENGTH IS IN CONTACT WITH THE EARTH.



GENERAL GROUNDING NOTES

- 1. ALL CABLES TO BE TERMINATED INTO BUS BAR WITH TIGHTENED COMPRESSION LUGS AND ATTACHED TO BUS BAR WITH TAB COMPRESSION BELLEVILLE WASHERS AND TORX BOLT ASSEMBLY.
- 2. ALL GROUND CONNECTORS SHALL BE STRAINED.
- 3. ALL BUS BARS SHALL BE ATTACHED TO SURFACE WITH NON-CONDUCTIVE STAND-OFFS.
- 4. GROUND BUS BAR AND GROUNDING SYSTEM SHALL BE UL LISTED AND COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2) ELEC DISTRIBUTION GROUNDING ONE-LINE DIAGRAM & NOTES

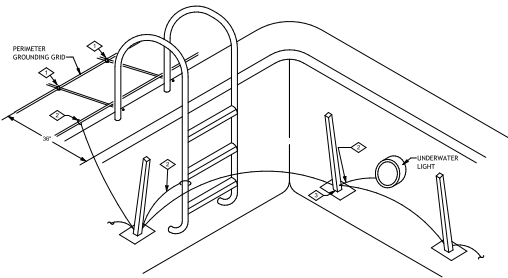
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ELECTRICAL REQUIREMENTS FOR POOL BONDING

- 1. ALL GROUNDING AND BONDING OF ALL METALLIC PARTS ASSOCIATED WITH THE POOL, AND/OR WHIRLPOOL, ARE TO BE IN COMPLIANCE WITH NEC SECTION 680.
- 2. STRUCTURAL REINFORCING STEEL TERMINOLOGY IN NOTES BELOW REFERS TO REBAR OR WIREMESH INSTALLATIONS.
- 3. BONDING TO STRUCTURAL POOL FRAMING SHALL BE ACCOMPLISHED WITH BONDING LUGS PROVIDED BY POOL MANUFACTURER, AND SHALL THEREBY SERVE AS A COMMON BONDING GRID FOR ALL PARTS REQUIRED TO BE BONDED TOGETHER.
- 4. BONDING TO PERIMETER SURFACES SHALL BE ACCOMPLISHED WITH REINFORCING STEEL REBAR BONDED WITH STEEL TO WELDS, OR EQUIVALENT, WHERE EXPOSED REBAR IS UTILIZED. THEN A SINGLE #8 AWG COPPER, BARE, 100' CONDUCTOR SHALL BE INSTALLED 18" TO 24" WITHIN THE INSIDE WALL OF THE POOL, AND WITHIN 4" TO 12" UNDER THE SURFACE.
- 5. THE FOLLOWING PARTS SHALL BE BONDED TOGETHER AND CONNECTED TO THE COMMON BONDING GRID. BONDING LUGS SHALL BE SUPPLIED BY POOL CONTRACTOR.
 - A. ALL METALLIC PARTS OF THE POOL STRUCTURE, INCLUDING COPING STONES, DECK, PERMANENT PLAY OR TRICK LINES, PERMANENT EXERCISE STRUCTURES.
 - B. ALL METAL FITTINGS WITHIN OR ATTACHED TO THE POOL.
 - C. METAL PARTS ASSOCIATED WITH THE POOL WATER CIRCULATING SYSTEM, INCLUDING PUMPS, FILTERS, AND HEATERS.
 - D. METAL PARTS ASSOCIATED WITH POOL COVERS.
 - E. METAL SHEATHED CABLES AND RACEWAYS, METAL PIPING, AND ALL FIXED METAL PARTS WITHIN 5 FEET HORIZONTALLY OF INSIDE WALLS OF POOL AND WITHIN 12 FEET ABOVE THE MAXIMUM WATER LEVEL OF THE POOL.
 - F. METAL PARTS ASSOCIATED WITH OBSERVATION STATIONS, TOWERS, PLATFORMS, AND DIVING STRUCTURES.
- 6. ISOLATED PARTS THAT ARE NOT MORE THAN 6" IN ANY DIMENSION AND DO NOT GENERATE INTO THE POOL STRUCTURE MORE THAN 1" SHALL NOT REQUIRE BONDING.
- 7. BONDING CONDUCTORS SHALL BE MINIMUM #8 SOLID COPPER, INSULATED, E.C. SHALL COORDINATE APPROVED CONDUCTOR TYPE AND METHOD WITH LOCAL ELECTRICAL AND/OR POOL INSPECTOR.
- 8. SPECIFIC MANUFACTURER'S INSTRUCTIONS REGARDING BONDING OR GROUNDING OF POOL EQUIPMENT, WHETHER INDICATED HEREIN OR NOT, SHALL BE STRICTLY FOLLOWED.
- 9. THE COMMON BONDING GRID SHALL NOT BE CONNECTED TO ANY ELECTRICAL DISTRIBUTION EQUIPMENT.
- 10. ANY PARTS IN ADDITION TO THOSE DESCRIBED HEREIN THAT ARE INDICATED BY POOL CONTRACTOR OR LOCAL INSPECTOR AUTHORITY SHALL BE BONDED TO THE COMMON BONDING GRID WITH NO ADDITIONAL COSTS INCURRED BY THE OWNER.
- 11. ROOF ANCHORS WHICH ARE ATTACHED TO A STAINLESS STEEL GUTTER ARE INTERNALLY BONDED TO GUTTER AND SO DO NOT REQUIRE ADDITIONAL BONDING.
- 12. THE ELECTRICAL CONTRACTOR SHALL COORDINATE BONDING WITH POOL CONTRACTOR AND GENERAL CONTRACTOR.

KEYNOTES

- 1. BOND ALL STRUCTURAL REINFORCING STEEL TOGETHER WITH STEEL WELDS AT ALL STEEL CROSSING POINTS.
- 2. CONNECT BONDING LUGS TO UNDERWATER LIGHTING, HANDRAILS, SHOWERS, METAL FITTINGS, ELECTRICAL EQUIPMENT, AND METAL WIRING METHODS AND EQUIPMENT IN ACCORDANCE WITH ARTICLE 680 OF THE NATIONAL ELECTRIC CODE. CONNECT WITH MINIMUM #8 SOLID AWG BARE COPPER. REFER TO ELECTRICAL REQUIREMENTS FOR POOL BONDING NOTES FOR ADDITIONAL BONDING REQUIREMENTS.
- 3. EC SHALL PROVIDE MULTI-POINT GROUND INTERCONNECTIONS TO STRUCTURAL FRAMING BONDING POINTS PROVIDED BY POOL MANUFACTURER, WITH MINIMUM #8 SOLID AWG BARE COPPER WIRING. PROVIDE QUANTITY OF CONNECTION POINTS AND USE CONNECTION METHOD AS RECOMMENDED BY POOL MANUFACTURER. REFER TO BONDING DETAIL ON POOL SHOP DRAWINGS FOR ADDITIONAL INFORMATION.



3) POOL BONDING DETAIL

E6.00 NTS

FUEL CURRENT CALCULATION SCHEDULE																	
POINT	LOCATION DESCRIPTION	LENGTH (FT)	VOLTAGE (E/L)	VOLTAGE (E/N)	PHASE	WIRE SIZE	CONDUCTOR MATERIAL	CONDUCTOR TYPE	CONDUIT MATERIAL	VOLTAGE CLASS	C VALUE	# OF PARALLEL RUNS	IN AVAILABLE (UPSTREAM)	IN AT EQUIP (DOWNSTREAM)	FUSE (150% OF E/L)	FUSE LET THRU (A2)	POINT
F0	UTILITY METER	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	NONMETALLIC	600V	1600	2	33.000	33.000			F0
F1	SWITCHGEAR MISC	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	7	33.000	33.000			F1
F2	SWITCHGEAR MISC	0	480	277	3	0	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	32.000	32.000			F2
F3	SWITCHGEAR MISC	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	NONMETALLIC	600V	1600	7	33.000	33.000			F3
F4	SWITCHGEAR MISC	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	7	33.000	33.000			F4
F5	SWITCHGEAR MISC	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	7	33.000	33.000			F5
F6	PANEL LP1A	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1252	2	6.444	6.444			F6
F7	PANEL LP1B	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1252	2	6.444	6.444			F7
F8	PANEL LP1C	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1252	2	6.444	6.444			F8
F9	PANEL LP1D	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1252	2	6.444	6.444			F9
F10	PANEL LP1E	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1252	2	6.444	6.444			F10
F11	PANEL LP1F	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F11
F12	PANEL LP1G	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F12
F13	PANEL LP1H	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F13
F14	PANEL LP1I	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F14
F15	PANEL LP1J	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F15
F16	PANEL LP1K	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F16
F17	PANEL LP1L	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F17
F18	PANEL LP1M	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F18
F19	PANEL LP1N	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F19
F20	PANEL LP1O	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F20
F21	PANEL LP1P	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F21
F22	PANEL LP1Q	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F22
F23	PANEL LP1R	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F23
F24	PANEL LP1S	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F24
F25	PANEL LP1T	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F25
F26	PANEL LP1U	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F26
F27	PANEL LP1V	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F27
F28	PANEL LP1W	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F28
F29	PANEL LP1X	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F29
F30	PANEL LP1Y	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F30
F31	PANEL LP1Z	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F31
F32	PANEL LP2A	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F32
F33	PANEL LP2B	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F33
F34	PANEL LP2C	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F34
F35	PANEL LP2D	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F35
F36	PANEL LP2E	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F36
F37	PANEL LP2F	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F37
F38	PANEL LP2G	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F38
F39	PANEL LP2H	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F39
F40	PANEL LP2I	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F40
F41	PANEL LP2J	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F41
F42	PANEL LP2K	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F42
F43	PANEL LP2L	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F43
F44	PANEL LP2M	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F44
F45	PANEL LP2N	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F45
F46	PANEL LP2O	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F46
F47	PANEL LP2P	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F47
F48	PANEL LP2Q	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F48
F49	PANEL LP2R	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F49
F50	PANEL LP2S	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F50
F51	PANEL LP2T	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F51
F52	PANEL LP2U	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F52
F53	PANEL LP2V	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F53
F54	PANEL LP2W	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F54
F55	PANEL LP2X	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F55
F56	PANEL LP2Y	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F56
F57	PANEL LP2Z	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F57
F58	PANEL LP3A	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F58
F59	PANEL LP3B	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F59
F60	PANEL LP3C	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F60
F61	PANEL LP3D	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F61
F62	PANEL LP3E	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F62
F63	PANEL LP3F	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F63
F64	PANEL LP3G	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F64
F65	PANEL LP3H	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F65
F66	PANEL LP3I	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F66
F67	PANEL LP3J	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F67
F68	PANEL LP3K	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F68
F69	PANEL LP3L	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F69
F70	PANEL LP3M	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F70
F71	PANEL LP3N	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F71
F72	PANEL LP3O	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F72
F73	PANEL LP3P	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F73
F74	PANEL LP3Q	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F74
F75	PANEL LP3R	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F75
F76	PANEL LP3S	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F76
F77	PANEL LP3T	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F77
F78	PANEL LP3U	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F78
F79	PANEL LP3V	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F79
F80	PANEL LP3W	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F80
F81	PANEL LP3X	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F81
F82	PANEL LP3Y	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F82
F83	PANEL LP3Z	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F83
F84	PANEL LP4A	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F84
F85	PANEL LP4B	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F85
F86	PANEL LP4C	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	3.257	3.257			F86
F87	PANEL LP4D	0	480	277	3	0	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	8						



7904 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
2	09/13/2023	ASI-06
3	10/16/2023	ASI-011
4	11/11/2023	ASI-012
5	11/13/2023	ASI-013

E6.01

Autodesk Docs/22044_Arvada Meyers Pool/683.00 - Meyers Pool Replacement - Electrical Central.rvt 11/10/2023 2:05:12 PM

PANEL: LP1A																								
LOCATION: ELEC. 131					VOLTS: 120/208 Wye					A.I.C. RATING: 150kIC														
SUPPLY FROM: T-1A					PHASES: 3					MAIN TYPE: MCB														
MOUNTING: Surface					WIRES: 4					MAIN RATING: 400 A														
ENCLOSURE: Type 1										MCB RATING: 400 A														
Notes:																								
2 SECTIONS, 40 CIRCUIT PANEL PER SECTION.																								
CKT	LOAD TYPE	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT											
1	L		20	1	545	180			1	20	CHEM 12V CO2 BULK STOR RCPT	R	2											
2	R		20	1		900	180		1	20	CHEM 12V CO2 BULK STOR RCPT	R	4											
3	R		20	1			720	1440		1	H-1:1: BOILER	E	6											
4	R		20	1					1	20	H-1:1: BOILER PUMP	M	8											
5	R		20	1					1	20	H-1:1: INJECT PUMP	M	10											
6	R		20	1					1	20	H-1:2: BOILER	E	12											
7	R		20	1					1	20	H-1:2: BOILER PUMP	M	14											
8	R		20	1					1	20	H-1:2: INJECT PUMP	M	16											
9	R		20	1					1	20	SPARE		18											
10	R		20	1					1	15	CHW-1	M	20											
11	R		20	1					1	20	IRRIGATION CONTROLLER	R	22											
12	R		20	1					1	15	HWPC-1	M	24											
13	R		20	1					1	15	DCU-1/DCU-2 - COND PUMP	M	26											
14	R		20	1					2	20	DCU-1/DCU-2	M	28											
15	R		50	1									30											
16	R		30	2		1250	1598		2	20	DCU-2/DCU-2	M	32											
17	R		15	1			1250	1598	2	15	SE-1	M	34											
18	R		15	1			600	832		2	15	SE-1	M	36										
19	R		15	1			500	832		2	15	SE-2	M	38										
20	R		15	1			500	832		2	15	SE-2	M	40										
21	R		20	1					2	15	SP-2	M	42											
22	R		30	1		1920	832						44											
23	R		30	1			1920	832					46											
24	R		20	1			1920	832	2	15	SP-3	M	48											
25	R		20	1			1920	832					50											
26	R		20	1			1920	1176	1	20	EP-1	M	52											
27	R		20	1			1920	1176	1	20	EP-2	M	54											
28	R		15	1			600	1656	1	25	EP-3	M	56											
29	R		15	1			600	696	1	15	EP-4	M	58											
30	R		20	1				800	1176	1	20	EP-5	M	60										
31	R		20	1			720	900	1	15	EM-1	M	62											
32	R		20	1			500	1440	1	20	H-2: BOILER	E	64											
33	R		20	1				400	1200	1	20	H-2: BOILER PUMP	M	66										
34	R		20	1					1	20	H-2: INJECT PUMP	M	68											
35	R		15	1			2288	840		1	20	SPARE		70										
36	R		15	1			2288	0	600	0	1	20	SPARE		72									
37	R		15	1			600	0	1	20	SPARE		74											
38	R		20	1				0	0	1	20	SPARE		76										
39	R		20	1				0	0	1	20	SPARE		78										
40	R		20	1				0	0	1	20	SPARE		80										
41	R		20	1				0	0	1	20	SPARE		82										
42	R		20	1				0	0	1	20	SPARE		84										
Total Load:					23893 VA	23462 VA	23070 VA																	
Total Amps:					200 A	196 A	192 A																	
CIRCUIT TYPE LEGEND:																								
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER					HCL (ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION					HCL (ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION														
GFCP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT					HTF: HANDLE TIE WITH GROUPING #					HTF: HANDLE TIE WITH GROUPING #														
APFC: ARC FAULT CIRCUIT INTERRUPTER					ST: SHUNT TRIP					ST: SHUNT TRIP														
CAFC: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER					LOCK: PERMANENTLY LOCKABLE BREAKER					LOCK: PERMANENTLY LOCKABLE BREAKER														
LOAD TYPE:																								
LIGHTING:					DEMAND LOAD					DEMAND LOAD														
RECEPTACLE:					TOTAL CONN. LOAD: 17065 VA					TOTAL CONN. LOAD: 17065 VA														
MOTOR:					TOTAL EST. LOAD: 17181 VA					TOTAL EST. LOAD: 17181 VA														
EQUIPMENT:					TOTAL CONN. 196 A					TOTAL CONN. 196 A														
WITCH EQUIP:					TOTAL EST. DEMAND: 178 A					TOTAL EST. DEMAND: 178 A														
CONTINUOUS:																								
NOTES:																								
(1) PER NEC 700.12(1)(B), CIRCUIT DISCONNECTING MEANS SHALL HAVE RED IDENTIFICATION.																								

PANEL: HP1A

LOCATION: ELEC. 131
SUPPLY FROM: MCB 1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 150AIC
MAIN TYPE: MCB
MAIN RATING: 400 A
MCB RATING: N/A

Notes:
SINGLE SECTION, 60 CIRCUIT PANEL.

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	M	MAL-1	15	3		1053	11946			3	70	T-1C	L	2
3	--	--	--	--	--			1053	12268	--	--	--	--	4
5	--	--	--	--	--					--	--	--	--	6
7	E	Spa-1	25	3		4120	0			3	15	SPARE		8
9	--	--	--	--	--		5160	0		--	--	--	--	10
11	--	--	--	--	--		3620	0		--	--	--	--	12
13	L	LTG - ELEMENTARY SCHOOL SITE	20	1						--	--	--	--	14
15	L	LTG - BUILDING MOUNTED AND SITE	20	1			1505	943		--	--	--	--	16
17	L	LTG - FIRST FLOOR WEST	20	1				3427	943	--	--	--	--	18
19	L	LTG - POOL HIGH BAYS	20	1		3448	943			3	15	WP-2	M	20
21	L	LTG - POOL HIGH BAYS	20	1			3448	943		--	--	--	--	22
23	L	LTG - POOL HIGH BAYS	20	1				3448	943	--	--	--	--	24
25	L	LTG - POOL HIGH BAYS	20	1						3	15	WAY-8	E	26
27	E	WAY-1	40	3			6667	2000		--	--	--	--	28
29	--	--	--	--	--		6667	2000		--	--	--	--	30
31	--	--	--	--	--	6667	2000			3	15	WAY-9	E	32
33	E	WAY-12	40	3			6667	2000		--	--	--	--	34
35	--	--	--	--	--		6667	2000		--	--	--	--	36
37	--	--	--	--	--	6667	2333			3	15	WAY-10	E	38
39	E	WAY-1	40	3			6667	2333		--	--	--	--	40
41	E	CLAMP-2	20	3				3334	2333	--	--	--	--	42
43	--	--	--	--	--	3334	0			1	20	SPARE		44
45	--	--	--	--	--		3334	0		1	20	SPARE		46
47	E	CLAMP-3	15	3				1333	0	--	--	--	--	48
49	--	--	--	--	--	1333	0			1	20	SPARE		50
51	--	--	--	--	--		1333	0		1	20	SPARE		52
53	--	SPARE	20	1						1	20	SPARE		54
55	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		56
57	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		58
59	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		60
Total Load:						4933 VA	5774 VA	5078 VA						
Total Amps:						178 A	187 A	181 A						

CB TYPE LEGEND					CIRCUIT PHASE CODE LEGEND				
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER					N1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.				
GFCP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT					N2: NEW LOAD ON EXISTING CIRCUIT BREAKER.				
GACC: COORDINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER					N3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.				
LOAD TYPE:					PANEL TOTALS				
LIGHTING:					TOTAL CONN. LOAD: 1710 VA				
RECEIPTABLE:					TOTAL CONN. 181 A				
MOTOR:					TOTAL EST. DEMAND: 173 A				
EQUIPMENT:									
MOTOR EQUIP:									
CONTINUOUS:									
EXISTING:									
NOTES:									

PANEL: HA1A

LOCATION: ELEC. 131
SUPPLY FROM: MCB 1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 150AIC
MAIN TYPE: MCB
MAIN RATING: 400 A
MCB RATING: N/A

Notes:
SINGLE SECTION, 42 CIRCUIT PANEL.

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	M	PP-1	10	3		14411	14411			3	90	PP-2	M	2
3	--	--	--	--	--		14411	14411		--	--	--	--	4
5	--	--	--	--	--			14411	14411	--	--	--	--	6
7	M	PP-3	15	3		943	7483			3	60	PP-4	M	8
9	--	--	--	--	--		943	7483		--	--	--	--	10
11	--	--	--	--	--			943	7483	--	--	--	--	12
13	E	HT (HV TREATMENT)	40	3		4000	0			1	30	SPARE		14
15	--	--	--	--	--		4000	0		1	20	SPARE		16
17	--	--	--	--	--			4000	0	1	20	SPARE		18
19	E	SPARE	20	1						1	20	SPARE		20
21	--	SPARE	20	1			0	0		1	20	SPARE		22
23	--	SPARE	20	1				0	0	1	20	SPARE		24
25	--	SPARE	20	1			0	0		1	20	SPARE		26
27	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		28
29	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		30
31	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		32
33	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		34
35	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		36
37	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		38
39	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		40
41	--	BUSSED SPACE	--	--	--					1		BUSSED SPACE		42
Total Load:						4134 VA	4134 VA	4134 VA						
Total Amps:						149 A	149 A	149 A						

CB TYPE LEGEND					CIRCUIT PHASE CODE LEGEND				
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER					N1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.				
GFCP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT					N2: NEW LOAD ON EXISTING CIRCUIT BREAKER.				
GACC: COORDINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER					N3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.				
LOAD TYPE:					PANEL TOTALS				
LIGHTING:					TOTAL CONN. LOAD: 12334 VA				
RECEIPTABLE:					TOTAL CONN. 149 A				
MOTOR:					TOTAL EST. DEMAND: 149 A				
EQUIPMENT:									
MOTOR EQUIP:									
CONTINUOUS:									
EXISTING:									
NOTES:									

7904 Carr Drive, Arvada, CO 80005

E6.03

CIRCUIT TYPE LEGEND:		TYPICAL AMPERE:		CIRCUIT PHASE CODE LEGEND:	
		100 A	100 A		
CE TYPE:	GROUND FAULT CIRCUIT INTERRUPTER	H.C. ON-OFF: HANDLE CLAMP FOR LOCKING IN ON-OFF POSITION		N1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.	
GFCI:	50A GROUND FAULT PROTECTION FOR EQUIPMENT	HFE: HANDLE TIE WITH GROUPING A		N2: NEW LOAD ON EXISTING CIRCUIT BREAKER.	
AFCI:	ARC FAULT CIRCUIT INTERRUPTER	ST: SHUNT TRIP		N3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AFE RELATING TO MATCH EXISTING.	
GASFC:	COMBINATION ARC FAULT & 50A GROUND FAULT CIRCUIT INTERRUPTER	LOCK: PERMANENTLY LOCKABLE BREAKER			
LOAD TYPE:	LOAD	DEMAND LOAD		PANEL TOTALS	
	100 VA	100 VA			
RECEPTACLE:	5624 VA	2173 VA		TOTAL CONN. LOAD: 30304 VA	
WIRING:	1176 VA	4472 VA		TOTAL EST. LOAD: 33924 VA	
DISCONNECT:	2380 VA	9540 VA		TOTAL CONN. 100 A	
OTCH EQUIP.				TOTAL EST. DEMAND: 271 A	
CONTINUOUS:					
EXISTING:					
NOTES:					

TO THE LEGEND		100000 Amps		50000 Amps		25000 Amps	
CPCL	30A Ground Fault Circuit Interrupter	HCL (ON OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION					
CPCL	30A Ground Fault Protection for Equipment	HT: HANDLE THE WITH GROUNDING P.					
APCL	40A Fault Circuit Interrupter	ST: SHUNT TRIP					
LAPCL	COMBINATION 40A FAULT & 30A Ground Fault Circuit Interrupter	LOCK: PERMANENTLY LOCKABLE BREAKER					
LOAD TYPE		LOAD		DEMAND LOAD			
LOADING:		500 VA					
RECEPTACLE:		14662 VA		12311 VA			
MOTOR:		4492 VA					
EQUIPMENT:		11750 VA		11750 VA			
KITCHEN EQUIP:							
CENTRAL HVAC:							
EXISTING:							
NOTES:							

CIRCUIT PANEL CODE LEGEND	
N1	EXISTING LOAD ON EXISTING CIRCUIT BREAKER.
N2	NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3	NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND BUS ARE EXISTING TO MATCH EXISTING.

PANEL TOTALS	
TOTAL CONC. LOAD:	11500 VA
TOTAL EST. LOAD:	10816 VA
TOTAL CONC. SEL A	
TOTAL EST. DRAWING:	SEL A

CIRCUIT PANEL CODE LEGEND					
N1.					EXISTING LOAD ON EXISTING CIRCUIT BREAKER.
N2.					NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3.					NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND WIRING TO MATCH EXISTING.
					PANEL TOTALS
LOAD TYPE					TOTAL CONN. LOAD
RECEPTACLE:					17000 VA
SWITCH EQUIP.					TOTAL EST. LOAD
EQUIPMENT:					17000 VA
SWITCH EQUIP.					TOTAL CONN. S.D.A.
CONTROL LOGIC:					TOTAL EST. DRAWING
DRAWING:					S.D.A.
NOTES:					

RFI detail

#198 Water Sub Meter Electrical Requirements



Status	Open In Review
Created on	Jan 11, 2024 by Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.)
RFI type	Default RFI FLOW
Ball in court	Robert Mcdonald
Due date	Jan 18, 2024

Question

Please reference attached detail 3/P301, Enlarged Scale Plumbing Plan. The plumbing plan calls for a sub water meter to be installed to monitor pool usage. There are no electrical requirements called out for the sub water meter, please provide design showing requirements.

Impact

Cost impact	Unknown
Schedule impact	Unknown

Other attributes

Priority	High
Discipline	Plumbing
Category	Design Coordination, Other
Location	-
Location details	-
External id	-
Co-reviewer(s)	Emily Barnett

-  **Greg Pfile**
-  **Natalie Mediate**
-  **Shane Daniels**
-  **Dan Potter**

Confirming RFI	No
Posted	Yes

Activities	By	At
Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.) created this RFI in  Open In Review status and set Ball in court to Robert Mcdonald .	Juan Vazquez Villasenor	Jan 11, 2024, 12:35 PM MST

The gas sub meters and 2" water sub meter do not require any electrical connection. The 2.5" water sub meter requires an electrical connection. Please coordinate any low voltage requirements with Censeo. Updated drawings attached.
-EB/AED/2024.01.18



400 SANTA FE DRIVE
DENVER, COLORADO 80204
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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO
7904 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE
2	09/13/2023	ASI-06
4	11/11/2023	ASI-012
7	12/01/2023	PR #004
8	01/18/2024	RFI-198

SCALE: As indicated

ISSUE DATE: 08/25/2023

DRAWN BY: EB, JF, AW

REV'D BY: ESN, GP

PROJECT #: 22044

TITLE: ENLARGED ELECTRICAL
ROOM PLAN

SHEET #:
E1.05

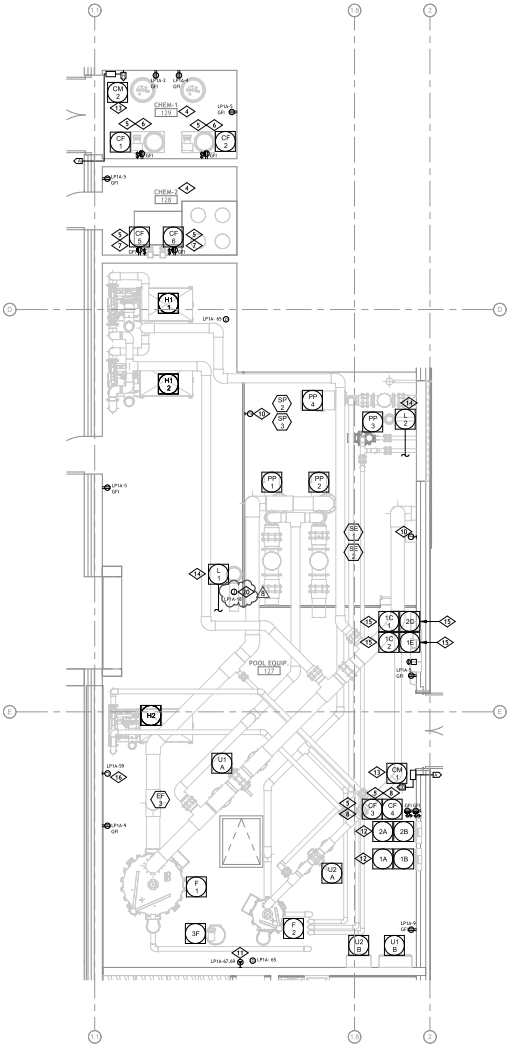
POWER GENERAL NOTES

- A. EQUIPMENT AT THE POOL EQUIPMENT ROOM SHALL BE BUNDLED AS REQUIRED BY NEC 880. REFER TO DETAIL P31 E1.03 FOR MORE INFORMATION AND SPECIFIC REQUIREMENTS.

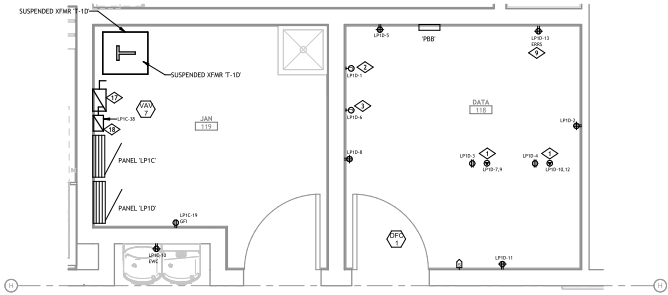
KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	EC SHALL PROVIDE NEAR 16-30R RECEPTACLE FEED WITH 120V, 1PH, 3-FC FOR CORD AND PLUG CONNECTION. EC SHALL COORDINATE EXACT RECEPTACLE REQUIREMENTS AND LOCATION WITH LOW VOLTAGE CONSULTANT PRIOR TO ROUGH-IN.
2	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR INTERLOGIC ALARM CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
3	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR ACCESS CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
4	ELECTRICAL CONDUIT SHALL NOT PASS THROUGH CHEMICAL ROOM EXCEPT AS NEEDED TO SERVICE DEVICES INTEGRAL TO THE FUNCTION OF THE CHEMICAL ROOM. ALL ELECTRICAL INSTALLATIONS IN CHEMICAL STORAGE ROOMS SHALL COMPLY WITH 2020 NEC SECTIONS 510.11, 501.6, AND 585.14.
5	EC SHALL FIELD COORDINATE SERVICE HOUSING AND CONDUIT ROUTING PRIOR TO ROUGH-IN. RECEPTACLES SHALL BE MOUNTED MINIMUM 12" AND 18" MAXIMUM ABOVE CHEMICAL PUMPS.
6	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR AUTOMATED CALCIUM HYPOCHLORITE FEED SYSTEM. CIRCUIT SHALL BE INTERLOCKED WITH RESPECTIVE POOL RECIRCULATION PUMP BY A LINE VOLTAGE WIRING CONNECTION FROM THE FEED CONTROL PANEL TO WIRING BOX AT THE WATER CHEMISTRY CONTROLLER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
7	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR ACID FEED PUMP. CIRCUIT SHALL BE INTERLOCKED WITH RESPECTIVE POOL RECIRCULATION PUMP BY A LINE VOLTAGE WIRING CONNECTION FROM THE RECEPTACLE TO WIRING BOX AT THE WATER CHEMISTRY CONTROLLER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
8	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR CARBON DIOXIDE FEED SYSTEM SOLENOID VALVE. CIRCUIT SHALL BE INTERLOCKED WITH RESPECTIVE POOL RECIRCULATION PUMP BY A LINE VOLTAGE WIRING CONNECTION FROM THE RECEPTACLE TO WIRING BOX AT THE WATER CHEMISTRY CONTROLLER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
9	EC SHALL PROVIDE QUADPLEX RECEPTACLE AND 120V, 1PH DEDICATED CIRCUIT FOR EMERGENCY RESPONDER RADIO SYSTEM. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
10	APPROPRIATE LOCATION OF PUMP PUMP CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
11	EC SHALL PROVIDE NEAR 16-30R RECEPTACLE FOR DOWING TEAM AIR COMPRESSOR. CONFIRM FINAL NEAR CONNECTION AND LOCATION WITH OWNER PRIOR TO ROUGH-IN.
12	WIRE BOXES SUPPLIED WITH THE WATER CHEMISTRY CONTROLLER SHALL RECEIVE 4-20MA OR LINE VOLTAGE CONTROL WIRING. POOL CONTRACTOR CONNECTIONS FROM THE FOLLOWING POOL SYSTEMS FOR ADDITIONAL CONTROLS FUNCTION: CONFIRM EXACT REQUIREMENTS WITH APPROVED SHOP DRAWINGS AND POOL CONTRACTOR. EC SHALL PROVIDE 3/4" CONDUIT AS REQUIRED BETWEEN BOXES AND EQUIPMENT LISTED BELOW: A. POOL RECIRCULATION PUMP WDS B. UV TREATMENT SYSTEM CONTROL PANEL C. POOL CHEMICAL FEED SYSTEM D. POOL RECIRCULATION FLOW METER E. POOL HEATING SYSTEM F. POOL FILTER BWF CONTROL PANEL
13	PROVIDE 120V POWER CONNECTION TO CO2 MONITORING SYSTEM IN EQUIPMENT ROOM. SYSTEM SHALL HAVE HEAD END DISPLAY WITH DETECTION PROBE. DUAL WALL MOUNTED STROBES, SOLENOID SHUT OFF VALVE, AND IF B EX REQ. PROVIDE ALL REQUIRED CONTROL AND INTERFACE WIRING. PER APPROVED MANUFACTURER'S SHOP DRAWINGS AND WIRING DIAGRAMS. FIELD COORDINATE FINAL LOCATION WITH POOL CONTRACTOR.
14	EC SHALL PROVIDE 3/4" CONDUIT BETWEEN WATER LEVEL CONTROLLER AND FILL PANNEL. REFER TO POOL EQUIPMENT SCHEDULE FOR MORE INFORMATION.
15	PROVIDE DEDICATED ELECTRICAL SPACE FOR WALL MOUNTED COMBINATION VFD/MOTOR/STARTER EQUIPMENT. REFER TO POOL EQUIPMENT SCHEDULE FOR MORE INFORMATION. FINAL SPACING SHALL BE COORDINATED WITH FINAL APPROVED SHOP DRAWINGS. DEDICATED CLEARANCE SHALL BE MAINTAINED PER THE NEC. UNITS SHALL BE MOUNTED WITHIN SIGHT OF THE PUMP THAT THEY SERVE.
16	EC SHALL PROVIDE HEAT TRACE AND JUNCTION BOX WITH 120V, 1PH CONNECTION. FIELD COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
17	ELEVATOR DOCUMENTS RE: ONE LINE. COORDINATE EXACT FINAL LOCATION WITH APPROVED ELEVATOR SHOP DRAWING REQUIREMENTS.
18	EC SHALL PROVIDE 120V, 3ØA DEDICATED CIRCUIT FOR ELEVATOR CAR VENTILATION AND LIGHTING. ALL INSTALLATIONS SHALL COMPLY WITH NEC 430.53. COORDINATE EXACT FINAL LOCATION WITH APPROVED ELEVATOR SHOP DRAWING REQUIREMENTS.
19	PROVIDE ACCESSIBLE ENCLOSURE FOR SUB-METER FOR FLD 1A CREDIT. ADVANCED ENERGY METERING COMPLIANCE. PROVIDE CONDUIT AND CT WIRING AS REQUIRED FOR CONNECTION TO ALL EQUIPMENT INDICATED ON ONE LINE DIAGRAM. PROVIDE 3/4" FC AND DATA CABLE AS REQUIRED FOR INTERCONNECTION WITH BAS. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL SUB-METERING REQUIREMENTS.
20	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR WATER SUB-METER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.

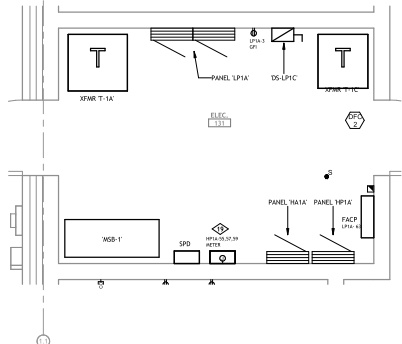
AE DESIGN
Integrated Lighting and Electrical Solutions
1800 W. Evans Avenue, Suite 400 | Denver, CO 80202 | 303.294.9244
www.aedesign.com | Project #: 22044



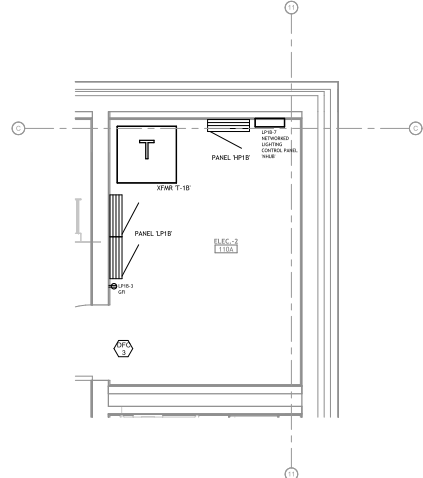
4] ENLARGED ELECTRICAL PLAN - POOL EQUIP 127
E1.05 | 1/4" = 1'-0"



2] ENLARGED ELECTRICAL PLAN - DATA 78
E1.05 | 1/2" = 1'-0"



1] ENLARGED ELECTRICAL PLAN - ELEC 131
E1.05 | 1/2" = 1'-0"



3] ENLARGED ELECTRICAL PLAN - ELEC 110A
E1.05 | 1/2" = 1'-0"

Autodesk Docs/22044_Arvada Meyers Pool/683.00 - Meyers Pool Replacement - Electrical Central.rvt
1/18/2024 10:59:55 AM

PANEL: LP1A															
LOCATION: ELEC. 131					VOLTS: 120/208 Wye					A.I.C. RATING: 150A/C					
SUPPLY FROM: T-1A					PHASES: 3					MAIN TYPE: MCB					
MOUNTING: Surface					WIRES: 4					MAIN RATING: 400 A					
ENCLOSURE: Type 1										MCB RATING: 400 A					
Notes:															
2 SECTIONS, 40 CIRCUIT PANEL PER SECTION.															
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT	
1	L	INCUBATOR SGNAGE	20	1		545	180			1	20	CHEM 129 CO2 BULK STOR RCPT	R	2	
2	R	MCHN RCPT ELEC 130 RCPT	20	1			900	180		1	20	CHEM 129 CO2 BULK STOR RCPT	R	4	
3	R	POOL EQUIP 127 RCPT	20	1				720	1440	1	20	H-1: BOILER	E	6	
7	R	POOL 123 NORTH & WEST RCPT - VAC	20	1	GFEF	720	1440			1	20	H-1: BOILER PUMP	M	8	
9	R	POOL EQUIP STOR 126 RCPT	20	1			720	1296		1	20	H-1: INDIRECT PUMP	M	10	
11	R	POOL 123 - TRINK SYSTEM	20	1				360	1440	1	20	H-1: BOILER	E	12	
13	E	POOL 123 - SCOREBOARD	20	1		500	1440			1	20	H-2: BOILER PUMP	M	14	
15	E	POOL 123 - SCOREBOARD	20	1			500	1296			20	H-2: DIRECT PUMP	M	16	
17	E	POOL 123 - SCOREBOARD	20	1				500	200		20	POOL EQUIP 127 - WATER SUBMETER	E	18	
19	E	POOL 123 - SCOREBOARD	20	1		500	360								
21	E	POOL 123 - SCOREBOARD	20	1			500	200		1	20	IRRIGATION CONTROLLER	R	22	
23	E	POOL 123 - SCOREBOARD	20	1				500	864	1	15	FWPC-1	M	24	
25	E	POOL 123 - SCOREBOARD	20	1		500	240			1	15	DCU-1/DCU-2 - COND PUMP	M	26	
27	R	POOL 123 - RCPT DINK VIDEO TV	20	1			720	1598		2	20	DFC-1/DCU-1	M	28	
29	M	AIR COMPRESSOR	50	1				2880	1598					30	
31	E	U-2 (AIR TREATMENT)	30	2		1250	1598			2	20	DFC-2/DCU-2	M	32	
33	--	--	--	--	--	--	1250	1598	--	--	--	--	--	34	
35	E	COMP POOL CHEMICAL CONTROLLER	15	1				600	832	2	15	SE-1	M	36	
37	E	COMP POOL WATER LEVEL...	15	1		600	832							38	
39	E	TRAIN POOL CHEMICAL CONTROLLER	15	1			500	832		2	15	SE-2	M	40	
41	E	TRAIN POOL WATER LEVEL...	15	1				500	832					42	
43	E	CF-1	20	1		1920	832			2	15	SP-2	M	44	
45	E	CF-2	30	1			1920	832						46	
47	E	CF-3	20	1				1920	832	2	15	SP-3	M	48	
49	E	CF-4	20	1		1920	832							50	
51	E	CF-5	20	1			1920	1176		1	20	EF-1	M	52	
53	E	CF-6	20	1				1920	1176	1	20	EF-2	M	54	
55	E	QW-1	15	1		600	1656			1	25	EP-3	M	56	
57	E	QW-2	15	1			600	696		1	15	EF-4	M	58	
59	E	WEST HEAT TRACE	20	1	GFEF			800	1176	1	20	EF-5	M	60	
61	R	WEST HEAT RCPT	20	1		720	500			1	15	TW-1	M	62	
63	E	FIRE ALARM CIRCUIT	20	1	IT1		500	1440		1	20	H2: BOILER	E	64	
65	E	FIRE SMOKE DAMPER	20	1				400	1200	1	20	H2: BOILER PUMP	M	66	
67	E	POOL EQUIP 127 - DIVE AIR...	30	2		2288	840			1	20	H2: INDIRECT PUMP	M	68	
69							2288	0						70	
71	M	F1 - FILTER CONTROL PANEL	15	1				600	0	1	20	SPARE		72	
73	M	F2 - FILTER CONTROL PANEL	15	1		600	0			1	20	SPARE		74	
75	--	SPARE	20	1				0	0	1	20	SPARE		76	
77	--	SPARE	20	1				0	0	1	20	SPARE		78	
79	--	SPARE	20	1			0	0		1	20	SPARE		80	
81	--	SPARE	20	1				0	0	1	20	SPARE		82	
83	--	SPARE	20	1					0	0	1	20	SPARE		84
Total Load:						23893 VA	23462 VA	23294 VA							
Total Amps:						199 A	196 A	194 A							
CB TYPE LEGEND:															
GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER															
GFEF: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT															
AFCL: ARC FAULT CIRCUIT INTERRUPTER															
CAFCO: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER															
LOAD TYPE:															
LIGHTING:															
RECEPTACLE:															
MOTOR:															
EQUIPMENT:															
WATCH EQUIP:															
CONTINUOUS:															
NOTES:															
(1) PER NEC 700.12(1)(B), CIRCUIT DISCONNECTING MEANS SHALL HAVE RED IDENTIFICATION.															
CIRCUIT PHASE CODE LEGEND:															
N1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.															
N2: NEW LOAD ON EXISTING CIRCUIT BREAKER.															
N3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.															
H1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.															
H2: NEW LOAD ON EXISTING CIRCUIT BREAKER.															
H3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.															
H4: PROVIDE BRANCH CIRCUIT CTs CONNECTED BACK TO SUB-METER AT MECHANICAL EQUIPMENT FEEDER INDICATED FOR LEED EA CREDIT - ADVANCED ENERGY METERING COMPLIANCE.															
REFER TO ONE LINE DIAGRAM FOR ADDITIONAL DETAILS.															

PANEL: HP1A														
LOCATION: ELEC. 131						VOLTS: 480/277 Wye				A.I.C. RATING: 150A/C				
SUPPLY FROM: MCB 1						PHASES: 3				MAIN TYPE: MCB				
MOUNTING: Surface						WIRES: 4				MAIN RATING: 400 A				
ENCLOSURE: Type 1										MCB RATING: N/A				
Notes:														
SINGLE SECTION, 60 CIRCUIT PANEL.														
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	M	MAIL-1 (RM)	15	3		1053	11946			3	70	T-1C	L	2
3	--	--	--	--	--		1053	12268						4
5	--	--	--	--	--			1053	12310					6
7	E	Spa: T-10	25	3		4120	0			3	15	SPARE		8
9	--	--	--	--	--		5160	0						10
11	--	--	--	--	--			3620	0					12
13	L	LTG - ELEMENTARY SCHOOL SITE	20	1		800	943			3	15	HP-1	M	14
15	L	LTG - BUILDING MOUNTED AND SITE	20	1			1565	943						16
17	L	LTG - FIRST FLOOR WEST	20	1				3427	943					18
19	L	LTG - POOL HIGH BAYS	20	1		3448	943			3	15	2	M	20
21	L	LTG - POOL HIGH BAYS	20	1			3448	943						22
23	L	LTG - POOL HIGH BAYS	20	1				3448	943					24
25	L	LTG - SECOND FLOOR WEST	20	1		1656	2000			3	15	WAY-8	E	26
27	E	WAY-11	40	3			6667	2000						28
29	--	--	--	--	--			6667	2000					30
31	--	--	--	--	--		6667	2000						32
33	E	WAY-12	40	3			6667	2000						34
35	--	--	--	--	--			6667	2000					36
37	--	--	--	--	--		6667	2333						38
39	E	WAY-7	15	1			2000	2333						40
41	E	CLM-2	20	3				3334	2333					42
43	--	--	--	--	--		3334	0				1	20	SPARE
45	--	--	--	--	--			3334	0			1	20	SPARE
47	E	CLM-3	15	3			1333	0				1	20	SPARE
49	--	--	--	--	--			1333	0			1	20	SPARE
51	--	--	--	--	--			1333	0			1	20	SPARE
53	E	SPARE	20	1					0			1	20	SPARE
55	E	LEED SUB-METER	20	1			200	--				1	20	SPARE
57	--	--	--	--	--			200	--			1	--	BLUDD SPACE
59	--	--	--	--	--				200	--		1	--	BLUDD SPACE
Total Load:						49463 VA	5193 VA							
Total Amps:						128 A	180 A							
CB TYPE LEGEND														
GFI: 5mA GROUND FAULT CIRCUIT INTERRUPTER														
HFI: ON/OFF: HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION														
HTR: HANDLE TIE WITH GROUPING A														
ST: SHUNT TRIP														
LOCK: PERMANENTLY LOCKABLE BREAKER														
CIRCUIT PHASE CODE LEGEND														
N1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.														
N2: NEW LOAD ON EXISTING CIRCUIT BREAKER.														
N3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIR RATING TO MATCH EXISTING.														
PANEL TOTALS														
LOAD TYPE						DEMAND LOAD								
LIGHTING:						17925 VA								
RECEIVER/PLA:						34421 VA								
MOTOR:						6993 VA								
EQUIPMENT:						22712 VA								
MOTOR EQUIP:						32783 VA								
CONTINUOUS:						89352 VA								
BLUDDING:						89352 VA								
TOTALS:						117444 VA								
TOTALS:						122952 VA								
TOTALS:						12000 VA								
TOTALS:						12000 VA								
TOTALS:						12000 VA								
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DENVER, COLORADO 80204
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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO
7904 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	07/14/2023	ASI-001
2	08/01/2023	ASI-002
4	11/02/2023	RFI-41
5	11/13/2023	ASI-012
6	11/13/2023	ASI-013

SCALE: As indicated

ISSUE DATE: 07/14/2023

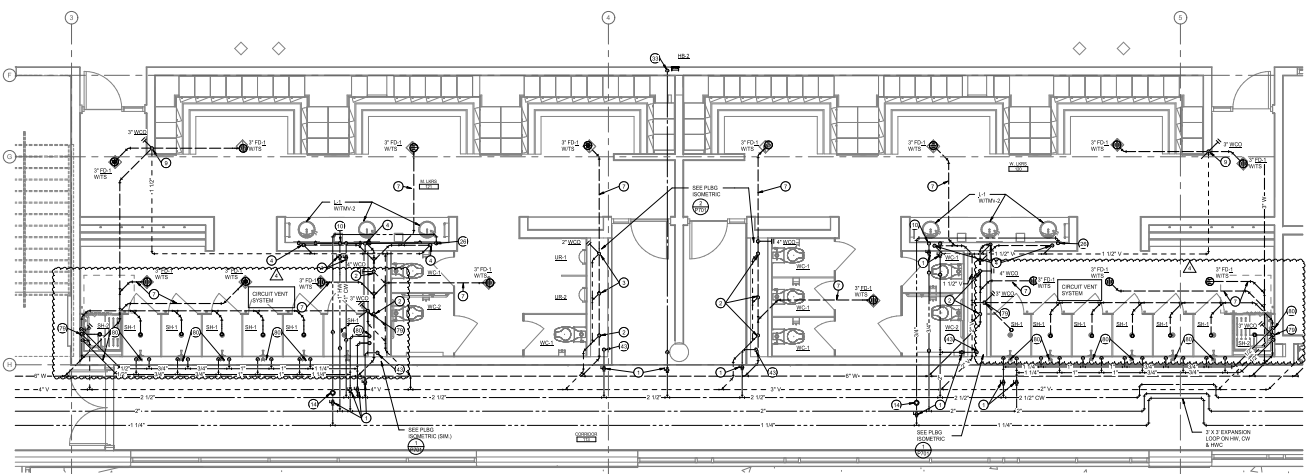
DRAWN BY: JSM

REV'D BY: TRH

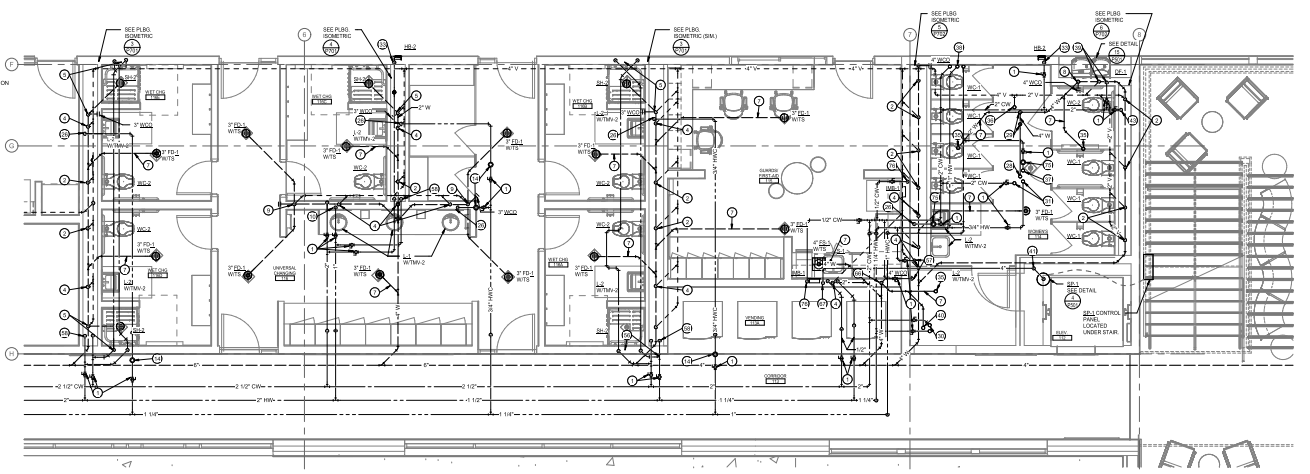
PROJECT #: 22044

TITLE: ENLARGED SCALE PLUMBING PLANS

SHEET #:
P301



1 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"



2 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"

PLUMBING KEYNOTES:

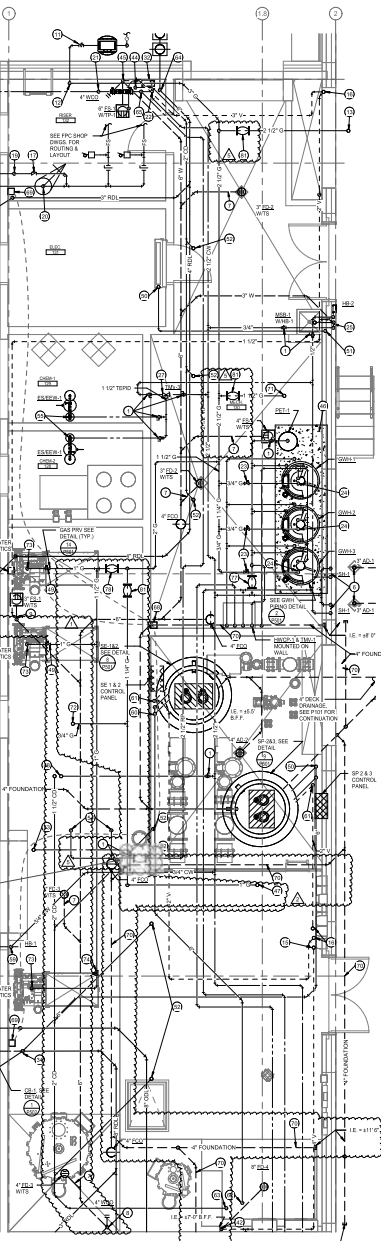
- 1. BALL VALVE FULL SIZE W/ SERVICE ACCESS.
- 2. 1/2" CW ON RISE & OFFSET @ STRUCTURE.
- 3. GAS PIPING 3/8" MIN. W/ PIPIT @ S.S. 2.5 PSI TO 1/2" WC. PIPE RELIEF THRU ROOF.
- 4. 1/2" CW ON 1/2" V. RISE & 3/4" CW ON 1/2" V. RISE.
- 5. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO LAVS/MISS.
- 6. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO SH.
- 7. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 8. COMBINATION WATER & WET SYSTEM.
- 9. 1/2" CW ON RISE AND OFFSET TO FIXTURES ABOVE.
- 10. 1/2" CW ON RISE TO FLOOR.
- 11. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO FIXTURES.
- 12. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 13. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 14. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 15. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 16. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 17. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 18. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
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- 20. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.

- 21. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
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- 31. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
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- 33. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
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- 36. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
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- 41. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 42. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 43. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 44. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 45. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 46. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 47. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 48. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 49. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 50. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.

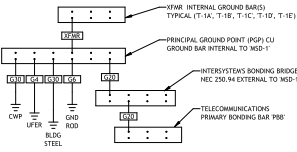
- 51. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 52. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 53. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 54. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 55. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 56. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 57. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 58. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 59. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.
- 60. 1/2" CW ON 1/2" V. RISE, 1/2" HW & 1/2" CW TO CLOCK SHOWER.



3 ENLARGED SCALE PLUMBING PLAN
SCALE: 1/4" = 1'-0"

GROUNDING ELECTRODE SYSTEMS NOTES

- 1. METAL UNDERGROUND WATER PIPE - MAKE CONNECTION TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10' AND ELECTRICALLY CONTINUOUS TO THE POINTS OF CONNECTION TO THE GROUNDING ELECTRODE SYSTEM AND BONDING CONDUCTORS. CONNECTION POINT TO BE AT A MAXIMUM OF 5' OF THE POINT OF ENTRANCE ON THE INTERIOR OF THE BUILDING.
- 2. BUILDING STEEL - THE METAL FRAME OF THE BUILDING OR STRUCTURE, WHERE ANY OF THE FOLLOWING METHODS ARE USED TO MAKE AN EARTH CONNECTION:
 - A. AT LEAST ONE STRUCTURAL METAL MEMBER THAT IS IN DIRECT CONTACT WITH THE EARTH FOR 10' OR MORE, WITH OR WITHOUT CONCRETE ENCASING.
 - B. HOLD-DOWN BOLTS SECURING THE STRUCTURAL STEEL COLUMN THAT ARE CONNECTED TO A CONCRETE ENCASED ELECTRODE THAT COMPLEYS WITH 250.53(A)(1) AND IS LOCATED IN THE SUPPORT FOOTING OR FOUNDATION. THE HOLD-DOWN BOLTS SHALL BE CONNECTED TO THE CONCRETE ENCASED ELECTRODE BY WELDING, ISOTHERMIC WELDING, THE USUAL STEEL WELDS, OR OTHER APPROVED MEANS.
 - C. UPFER GROUND (ELECTRICITY ENCASED ELECTRODE - AN ELECTRODE ENCASED BY AT LEAST 2" OF CONCRETE, LOCATED WITHIN AND NEAR THE BOTTOM OF A CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH EARTH, CONSISTING OF AT LEAST 20' OF ONE OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTING CONCRETE REINFORCING BARS OR WELDS NOT LESS THAN 1/2" IN DIAMETER, OR CONSISTING OF AT LEAST 20' OF BARE COPPER CONDUCTOR NOT SMALLER THAN NO. 4 AWG. REINFORCING BARS SHALL BE PERMITTED TO BE BONDED TOGETHER BY THE USUAL STEEL WELDS OR OTHER EFFECTIVE MEANS.
 - D. GROUND ROD - ROD IS TO BE 1/2" IN LENGTH AND SHALL BE MADE OF IRON OR STEEL AT LEAST 5/8" DIAMETER. INSTALLATION METHODS FOR GROUND ROD SHALL BE IN COMPLIANCE WITH THE NEC SUCH THAT AT LEAST 8' OF LENGTH IS IN CONTACT WITH THE EARTH.



GENERAL GROUNDING NOTES

- 1. ALL CABLES TO BE TERMINATED INTO BUS BAR WITH TIGHTENED COMPRESSION LUGS AND ATTACHED TO BUS BAR WITH TAB COMPRESSION BELLEVILLE WASHERS AND TORX BOLT ASSEMBLY.
- 2. ALL GROUND CONNECTORS SHALL BE STRAINED.
- 3. ALL BUS BARS SHALL BE ATTACHED TO SURFACE WITH NON-CONDUCTIVE STAND-OFFS.
- 4. GROUND BUS BAR AND GROUNDING SYSTEM SHALL BE UL LISTED AND COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2) ELEC DISTRIBUTION GROUNDING ONE-LINE DIAGRAM & NOTES

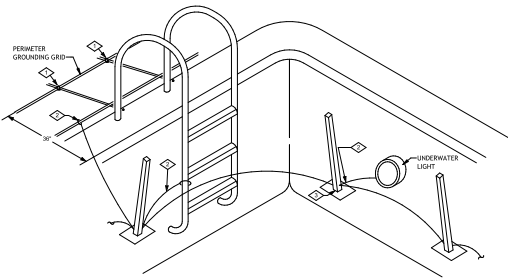
E6.00 NTS

ELECTRICAL REQUIREMENTS FOR POOL BONDING

- 1. ALL GROUNDING AND BONDING OF ALL METALLIC PARTS ASSOCIATED WITH THE POOL, AND/OR WHIRLPOOL, ARE TO BE IN COMPLIANCE WITH NEC SECTION 680.
- 2. STRUCTURAL REINFORCING STEEL TERMINOLOGY IN NOTES BELOW REFERS TO REBAR OR WIREMESH INSTALLATIONS.
- 3. BONDING TO STRUCTURAL POOL FRAMING SHALL BE ACCOMPLISHED WITH BONDING LUGS PROVIDED BY POOL MANUFACTURER, AND SHALL THEREBY SERVE AS A COMMON BONDING GRID FOR ALL PARTS REQUIRED TO BE BONDED TOGETHER.
- 4. BONDING TO PERIMETER SURFACES SHALL BE ACCOMPLISHED WITH REINFORCING STEEL REBAR BONDED WITH STEEL TO WELDS, OR EQUIVALENT, WHERE EXPOSED REBAR IS UTILIZED. THEN A SINGLE #8 AWG COPPER, BARE, 100' CONDUCTOR SHALL BE INSTALLED 18" TO 24" WITHIN THE INSIDE WALL OF THE POOL, AND WITHIN 4" TO 12" UNDER THE SURFACE.
- 5. THE FOLLOWING PARTS SHALL BE BONDED TOGETHER AND CONNECTED TO THE COMMON BONDING GRID. BONDING LUGS SHALL BE SUPPLIED BY POOL CONTRACTOR.
 - A. ALL METALLIC PARTS OF THE POOL STRUCTURE, INCLUDING COPING STONES, DECK, PERMANENT PLAY STRUCTURES, PERMANENT EXERCISE STRUCTURES.
 - B. ALL METAL FITTINGS WITHIN OR ATTACHED TO THE POOL.
 - C. METAL PARTS ASSOCIATED WITH THE POOL WATER CIRCULATING SYSTEM, INCLUDING PUMPS, FILTERS, AND HEATERS.
 - D. METAL PARTS ASSOCIATED WITH POOL COVERS.
 - E. METAL SHEATHED CABLES AND RACEWAYS, METAL PIPING, AND ALL FIXED METAL PARTS WITHIN 5 FEET HORIZONTALLY OF INSIDE WALLS OF POOL AND WITHIN 12 FEET ABOVE THE MAXIMUM WATER LEVEL OF THE POOL.
 - F. METAL PARTS ASSOCIATED WITH OBSERVATION STATIONS, TOWERS, PLATFORMS, AND DIVING STRUCTURES.
- 6. ISOLATED PARTS THAT ARE NOT MORE THAN 6" IN ANY DIMENSION AND DO NOT GENERATE INTO THE POOL STRUCTURE MORE THAN 1" SHALL NOT REQUIRE BONDING.
- 7. BONDING CONDUCTORS SHALL BE MINIMUM #8 SOLID COPPER, INSULATED, E.C. SHALL COORDINATE APPROVED CONDUCTOR TYPE AND METHOD WITH LOCAL ELECTRICAL AND/OR POOL INSPECTOR.
- 8. SPECIFIC MANUFACTURER'S INSTRUCTIONS REGARDING BONDING OR GROUNDING OF POOL EQUIPMENT, WHETHER INDICATED HEREIN OR NOT, SHALL BE STRICTLY FOLLOWED.
- 9. THE COMMON BONDING GRID SHALL NOT BE CONNECTED TO ANY ELECTRICAL DISTRIBUTION EQUIPMENT.
- 10. ANY PARTS IN ADDITION TO THOSE DESCRIBED HEREIN THAT ARE INDICATED BY POOL CONTRACTOR OR LOCAL INSPECTOR AUTHORITY SHALL BE BONDED TO THE COMMON BONDING GRID WITH NO ADDITIONAL COSTS INCURRED BY THE OWNER.
- 11. ROOF ANCHORS WHICH ARE ATTACHED TO A STAINLESS STEEL GUTTER ARE INTERNALLY BONDED TO GUTTER AND SO DO NOT REQUIRE ADDITIONAL BONDING.
- 12. THE ELECTRICAL CONTRACTOR SHALL COORDINATE BONDING WITH POOL CONTRACTOR AND GENERAL CONTRACTOR.

KEYNOTES

- 1. BOND ALL STRUCTURAL REINFORCING STEEL TOGETHER WITH STEEL WELDS AT ALL STEEL CROSSING POINTS.
- 2. CONNECT BONDING LUGS TO UNDERWATER LIGHTING, HANDRAILS, SHOWERS, METAL FITTINGS, ELECTRICAL EQUIPMENT, AND METAL WIRING METHODS AND EQUIPMENT IN ACCORDANCE WITH ARTICLE 680 OF THE NATIONAL ELECTRIC CODE. CONNECT WITH MINIMUM #8 SOLID AWG BARE COPPER. REFER TO ELECTRICAL REQUIREMENTS FOR POOL BONDING NOTES FOR ADDITIONAL BONDING REQUIREMENTS.
- 3. E.C. SHALL PROVIDE MULTI-POINT GROUND INTERCONNECTIONS TO STRUCTURAL FRAMING BONDING POINTS PROVIDED BY POOL MANUFACTURER, WITH MINIMUM #8 SOLID AWG BARE COPPER WIRING. PROVIDE QUANTITY OF CONNECTION POINTS AND USE CONNECTION METHOD AS RECOMMENDED BY POOL MANUFACTURER. REFER TO BONDING DETAIL ON POOL SHOP DRAWINGS FOR ADDITIONAL INFORMATION.



3) POOL BONDING DETAIL

E6.00 NTS

POINT	LOCATION DESCRIPTION	LENGTH (FT)	VOLTAGE (E.L.)	PHASE	WIRE SIZE	CONDUCTOR MATERIAL	CONDUCTOR TYPE	CONDUIT MATERIAL	VOLTAGE CLASS	C VALUE	# OF PARALLEL RUNS	IN AVAILABLE (UPSTREAM)	IN AT EQUIP (DOWNSTREAM)	FUSE	FUSE LET THRU (A2)	POINT
F0	UTILITY WFE	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	33.900	33.900	---	---	F0
F1	SWITCHGEAR MISC	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	7	33.294	33.294	---	---	F1
F2	PANEL LP1A	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	32.686	32.686	---	---	F2
F3	PANEL LP1B	0	480	277	3	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	32.686	32.686	---	---	F3
F4	PANEL LP1C	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	32.686	32.686	---	---	F4
F5	PANEL LP1D SECONDARY	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	32.686	32.686	---	---	F5
F6	PANEL LP1E	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	6.444	6.444	---	---	F6
F7	PANEL LP1F	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F7
F8	PANEL LP1G	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F8
F9	PANEL LP1H	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F9
F10	PANEL LP1I	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F10
F11	PANEL LP1J	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	3.267	3.267	---	---	F11
F12	PANEL LP1K	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	3.267	3.267	---	---	F12
F13	PANEL LP1L	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	3.267	3.267	---	---	F13
F14	PANEL LP1E SECONDARY	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	32.686	32.686	---	---	F14
F15	PANEL LP1F	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F15
F16	NOT USED	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	32.686	32.686	---	---	F16
F17	NOT USED	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	32.686	32.686	---	---	F17
F18	NOT USED	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	32.686	32.686	---	---	F18
F19	PANEL LP1G	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F19
F20	PANEL LP1H	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F20
F21	PANEL LP1I	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F21
F22	PANEL LP1J	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F22
F23	PANEL LP1K SECONDARY	0	480	277	3	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	800	1	32.686	32.686	---	---	F23
F24	PANEL LP1L	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	1	32.686	32.686	---	---	F24
F25	PANEL LP1M	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F25
F26	PANEL LP1N	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F26
F27	PANEL LP1O	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F27
F28	PANEL LP1P	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F28
F29	PANEL LP1Q	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F29
F30	PANEL LP1R	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F30
F31	PANEL LP1S	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F31
F32	PANEL LP1T	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F32
F33	PANEL LP1U	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F33
F34	PANEL LP1V	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F34
F35	PANEL LP1W	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F35
F36	PANEL LP1X	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F36
F37	PANEL LP1Y	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F37
F38	PANEL LP1Z	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F38
F39	PANEL LP1A	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F39
F40	PANEL LP1B	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F40
F41	PANEL LP1C	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F41
F42	PANEL LP1D	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F42
F43	PANEL LP1E	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F43
F44	PANEL LP1F	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F44
F45	PANEL LP1G	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F45
F46	PANEL LP1H	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F46
F47	PANEL LP1I	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F47
F48	PANEL LP1J	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F48
F49	PANEL LP1K	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F49
F50	PANEL LP1L	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F50
F51	PANEL LP1M	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F51
F52	PANEL LP1N	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F52
F53	PANEL LP1O	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F53
F54	PANEL LP1P	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F54
F55	PANEL LP1Q	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F55
F56	PANEL LP1R	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F56
F57	PANEL LP1S	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F57
F58	PANEL LP1T	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F58
F59	PANEL LP1U	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F59
F60	PANEL LP1V	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F60
F61	PANEL LP1W	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F61
F62	PANEL LP1X	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F62
F63	PANEL LP1Y	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F63
F64	PANEL LP1Z	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F64
F65	PANEL LP1A	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F65
F66	PANEL LP1B	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F66
F67	PANEL LP1C	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F67
F68	PANEL LP1D	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F68
F69	PANEL LP1E	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F69
F70	PANEL LP1F	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F70
F71	PANEL LP1G	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F71
F72	PANEL LP1H	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F72
F73	PANEL LP1I	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F73
F74	PANEL LP1J	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F74
F75	PANEL LP1K	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F75
F76	PANEL LP1L	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F76
F77	PANEL LP1M	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F77
F78	PANEL LP1N	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F78
F79	PANEL LP1O	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F79
F80	PANEL LP1P	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F80
F81	PANEL LP1Q	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F81
F82	PANEL LP1R	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F82
F83	PANEL LP1S	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F83
F84	PANEL LP1T	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F84
F85	PANEL LP1U	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F85
F86	PANEL LP1V	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F86
F87	PANEL LP1W	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---	---	F87
F88	PANEL LP1X	0	480	277	3	ALUMINUM	THREE SINGLE CONDUCTORS	STEEL	600V	1600	2	32.686	32.686	---		



FOR CONSTRUCTION

7904 Carr Drive Arvada CO 80005

E6.01

0.01	$1/8'' = 1:0'$
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Autodesk Docs/22044_Arvada Meyers Pool/683.00 - Meyers Pool Replacement - Electrical Central.rvt 11/10/2023 2:05:12 PM

PANEL: LP1A														
LOCATION: ELEC. 131				VOLTS: 120/208 Wye				A.I.C. RATING: 150AIC						
SUPPLY FROM: T-1A				PHASES: 3				MAIN TYPE: MCB						
MOUNTING: Surface				WIRES: 4				MAIN RATING: 400 A						
ENCLOSURE: Type 1				MCB RATING: 400 A										
Notes:														
2 SECTIONS, 40 CIRCUIT PANEL PER SECTION.														
CKT	LOAD TYPE	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT	
1	L		20	1	545	180			1	20	CHEM 12V CO2 BULK STOR RCPT	R	2	
2	R		20	1		900	180		1	20	CHEM 12V CO2 BULK STOR RCPT	R	4	
3	R		20	1			720	1440		1	HI-1: BOILER	E	6	
4	R		20	1	GEFP	720	1440		1	20	HI-1: BOILER PUMP	M	8	
5	R		20	1			720	1296		1	HI-1: INJECT PUMP	M	10	
6	R		20	1			360	1440		1	HI-2: BOILER	E	12	
7	R		20	1					1	20	HI-2: BOILER PUMP	M	14	
8	R		20	1					1	20	HI-2: INJECT PUMP	M	16	
9	R		20	1					1	20	SPARE		18	
10	R		20	1					1	15	QWH1	M	20	
11	R		20	1		500	200		1	20	IRRIGATION CONTROLLER	R	22	
12	R		20	1		167		500	0	1	PHCP1	M	24	
13	R		20	1		500	240	500	864	1	15	DCU-1/DCU-3: COMP PUMP	M	26
14	R		20	1						2	20	DFC-1/DFC-2	M	28
15	R		20	1			720	1598		2	20	DFC-1/DFC-2	M	30
16	R		20	1				2880	1598	2	20	DFC-2/DCU-3	M	32
17	R		20	1		1250	1598							34
18	R		20	1			1250	1598						36
19	R		20	1				600	832	2	15	SE-1	M	38
20	R		20	1						2	15	SE-2	M	40
21	R		20	1						2	15	SP-2		42
22	R		20	1						2	15	SP-3		44
23	R		20	1						2	15	SP-4		46
24	R		20	1						2	15	SP-5		48
25	R		20	1						2	15	SP-6		50
26	R		20	1						2	15	SP-7		52
27	R		20	1						2	15	SP-8		54
28	R		20	1						2	15	SP-9		56
29	R		20	1						2	15	SP-10		58
30	R		20	1						2	15	SP-11		60
31	R		20	1						2	15	SP-12		62
32	R		20	1						2	15	SP-13		64
33	R		20	1						2	15	SP-14		66
34	R		20	1						2	15	SP-15		68
35	R		20	1						2	15	SP-16		70
36	R		20	1						2	15	SP-17		72
37	R		20	1						2	15	SP-18		74
38	R		20	1						2	15	SP-19		76
39	R		20	1						2	15	SP-20		78
40	R		20	1						2	15	SP-21		80
41	R		20	1						2	15	SP-22		82
42	R		20	1						2	15	SP-23		84
43	R		20	1						2	15	SP-24		86
44	R		20	1						2	15	SP-25		88
45	R		20	1						2	15	SP-26		90
46	R		20	1						2	15	SP-27		92
47	R		20	1						2	15	SP-28		94
48	R		20	1						2	15	SP-29		96
49	R		20	1						2	15	SP-30		98
50	R		20	1						2	15	SP-31		100
51	R		20	1						2	15	SP-32		102
52	R		20	1						2	15	SP-33		104
53	R		20	1						2	15	SP-34		106
54	R		20	1						2	15	SP-35		108
55	R		20	1						2	15	SP-36		110
56	R		20	1						2	15	SP-37		112
57	R		20	1						2	15	SP-38		114
58	R		20	1						2	15	SP-39		116
59	R		20	1						2	15	SP-40		118
60	R		20	1						2	15	SP-41		120
61	R		20	1						2	15	SP-42		122
62	R		20	1						2	15	SP-43		124
63	R		20	1						2	15	SP-44		126
64	R		20	1						2	15	SP-45		128
65	R		20	1						2	15	SP-46		130
66	R		20	1						2	15	SP-47		132
67	R		20	1						2	15	SP-48		134
68	R		20	1						2	15	SP-49		136
69	R		20	1						2	15	SP-50		138
70	R		20	1						2	15	SP-51		140
71	R		20	1						2	15	SP-52		142
72	R		20	1						2	15	SP-53		144
73	R		20	1						2	15	SP-54		146
74	R		20	1						2	15	SP-55		148
75	R		20	1						2	15	SP-56		150
76	R		20	1						2	15	SP-57		152
77	R		20	1						2	15	SP-58		154
78	R		20	1						2	15	SP-59		156
79	R		20	1						2	15	SP-60		158
80	R		20	1						2	15	SP-61		160
81	R		20	1						2	15	SP-62		162
82	R		20	1						2	15	SP-63		164
83	R		20	1						2	15	SP-64		166
84	R		20	1						2	15	SP-65		168
85	R		20	1						2	15	SP-66		170
86	R		20	1						2	15	SP-67		172
87	R		20	1						2	15	SP-68		174
88	R		20	1						2	15	SP-69		176
89	R		20	1						2	15	SP-70		178
90	R		20	1						2	15	SP-71		180
91	R		20	1						2	15	SP-72		182
92	R		20	1						2	15	SP-73		184
93	R		20	1						2	15	SP-74		186
94	R		20	1						2	15	SP-75		188
95	R		20	1						2	15	SP-76		190
96	R		20	1						2	15	SP-77		192
97	R		20	1						2	15	SP-78		194
98	R		20	1						2	15	SP-79		196
99	R		20	1						2	15	SP-80		198
100	R		20	1						2	15	SP-81		200
101	R		20	1						2	15	SP-82		202
102	R		20	1						2	15	SP-83		204
103	R		20	1						2	15	SP-84		206
104	R		20	1						2	15	SP-85		208
105	R		20	1						2	15	SP-86		210
106	R		20	1						2	15	SP-87		212
107	R		20	1						2	15	SP-88		214
108	R		20	1						2	15	SP-89		216
109	R		20	1						2	15	SP-90		218
110	R		20	1						2	15	SP-91		220
111	R		20	1						2	15	SP-92		222
112	R		20	1						2	15	SP-93		224
113	R		20	1						2	15	SP-94		226
114	R		20	1						2	15	SP-95		228
115	R		20	1						2	15	SP-96		230
116	R		20	1						2	15	SP-97		232
117	R		20	1						2	15	SP-98		234
118	R		20	1						2	15	SP-99		236
119	R		20	1						2	15	SP-100		238
120	R		20	1						2	15	SP-101		240
121	R		20	1						2	15	SP-102		242
122	R		20	1						2	15	SP-103		244
123	R		20	1						2	15	SP-104		246
124	R		20	1						2	15	SP-105		248
125	R		20	1						2	15	SP-106		250
126	R		20	1						2	15	SP-107		252
127	R		20	1						2	15	SP-108		254
128	R		20	1						2	15	SP-109		256
129	R		20	1						2	15	SP-110		258
130	R		20	1						2	15	SP-111		260
131	R		20	1						2	15	SP-112		262
132	R		20	1						2	15	SP-113		264
133	R		20	1						2	15	SP-114		266
134	R		20	1						2	15	SP-115		268
135	R		20	1						2	15	SP-116		270
136	R		20	1						2	15	SP-117		272
137	R		20	1						2	15	SP-118		274

7904 Carr Drive, Arvada, CO 80005

E6.03

CIRCUIT TYPE LEGEND:		TYPICAL AMPERE:		CIRCUIT PHASE CODE LEGEND:	
		100 A	100 A		
CE TYPE: GROUND FAULT CIRCUIT INTERRUPTER		H.C. ON-OFF: HANDLE CLAMP FOR LOCKING IN ON-OFF POSITION		N1: EXISTING LOAD ON EXISTING CIRCUIT BREAKER.	
GFC: GSA GROUND FAULT PROTECTION FOR EQUIPMENT		HFE: HANDLE TIE WITH GROUNDING P.		N2: NEW LOAD ON EXISTING CIRCUIT BREAKER.	
AFC: AFC FAULT CIRCUIT INTERRUPTER		ST: SHUNT TRIP		N3: NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AFE RELATING TO MATCH EXISTING.	
GFCI: COMBINATION AFC FAULT & GSA GROUND FAULT CIRCUIT INTERRUPTER		LOCK: PERMANENTLY LOCKABLE BREAKER			
LOAD TYPE:	LOAD	DEMAND LOAD		PANEL TOTALS	
	100 VA	100 VA			
RECEPTACLE	5624 VA	21732 VA		TOTAL CONN. LOAD: 30354 VA	
MOTOR	1176 VA	4472 VA		TOTAL EST. LOAD: 30924 VA	
TRANSFORMER	2160 VA	8640 VA		TOTAL CONN. 100 A	
OTHER EQUIP.	2380 VA	9520 VA		TOTAL EST. DEMAND: 271 A	
CONTINUOUS					
EXISTING:					
NOTES:					

PANEL: LP1D

LOCATION: JMH 119

SUPPLY FROM: T-10

MOUNTING: Surface

ENCLOSURE: Type 1

VOLTS: 120/208 Vyp

PHASES: 3

WIRES: 4

A.I.C. RATING: 10KAC

MARKS TYPE: MCB

MARKS RATING: 100 A

MCB RATING: 50 A

Notes:

SINGLE SECTION, 30-CIRCUIT PANEL.

QCT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	
1	E	DATA 118 - INSTRUSION ALARM CTRL	20	1		500	360			1	20	DATA 118 - RCPT	R	
3	R	DATA 118 - RCPT	20	1			180	180		1	20	DATA 118 - RCPT	R	
5	R	DATA 118 - RCPT	20	1				360	500		1	20	DATA 118 - ACCESS CTRL	R
7	E	DATA 118 - RCPT	30	2		2400	360			1	20	DATA 118 - RCPT	E	
9	--		20	--			2400	2400		--	30	DATA 118 - RCPT	--	
11	R	DATA 118 - RCPT	20	--				360	2400		2	20	DATA 118 - RCPT	--
13	E	DATA 118 - ERRS	20	1		500	0			1	20	SPARE	--	
15	--	SPARE	20	1			0	0	0	1	20	SPARE	--	
17	--	SPARE	20	1				0	0	1	20	SPARE	--	
19	--	BUSSED SPACE	--	--		--	--	--	--	1	--	BUSSED SPACE	--	
21	--	BUSSED SPACE	--	1		--	--	--	--	1	--	BUSSED SPACE	--	
23	--	BUSSED SPACE	--	1		--	--	--	--	1	--	BUSSED SPACE	--	
25	--	BUSSED SPACE	--	1		--	--	--	--	1	--	BUSSED SPACE	--	
27	--	BUSSED SPACE	--	1		--	--	--	--	1	--	BUSSED SPACE	--	
29	--	BUSSED SPACE	--	1		--	--	--	--	1	--	BUSSED SPACE	--	
Total Load:						4120 VA	5160 VA	3620 VA						

CIRCUIT PANEL CODE LEGEND	
N1.	EXISTING LOAD ON EXISTING CIRCUIT BREAKER.
N2.	NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3.	NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND WIRING TO MATCH EXISTING.
PANEL TOTALS	
TOTAL CONN. LOAD	17000 VA
TOTAL EST. LOAD	17000 VA
TOTAL CONN. IN A	
TOTAL EST. DEMAND	IN A



Construction, LLC
86 Inverness Place North
Englewood, CO 80112

February 19, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-094 Additional Appliances above Budget

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

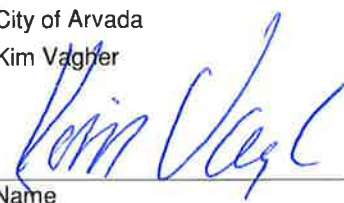
CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-094		Additional Appliances above Budget			Source
Reference Date	02/19/2024		Owner Number			
Scope Description						
The budget for appliances was \$8,787.36. This will be used to offset the total appliances cost, this SCA funds the difference between the cost for the appliances, \$15,682.42, and the budget.						
22015012	11452	SUB			6,895.06	Residential Appliances
22015012	98003	OVD			8.00	Builders Risk
22015012	98005	OVD			66.00	Commercial Insurance
22015012	98301	OVD			90.00	SDI
22015012	98600	OVD			10.00	Closeout and Warranty
22015012	99000	FEE			187.00	Fee
Stipulated Sum					7,256.06	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher

 3-6-24

Name Date

Ohlson Lavoie Corporation
Bob McDonald

Name Date



FERGUSON ENTERPRISES LLC #2635
1880 WEST OXFORD AVE
ENGLEWOOD, CO 80110-4362

Phone: 303-789-9945
Fax: 303-789-9978

Deliver To:**From:** Jennifer Forbes Sundquist**Comments:**

11:45:21 FEB 13 2024

Page 1 of 1

FERGUSON #109 IN LIEU OF

Price Quotation

Phone: 303-789-9945

Fax: 303-789-9978

Bid No: B984759**Bid Date:** 02/13/24**Quoted By:** JAS**Cust Phone:** 303-699-9000**Terms:** NET 10TH PROX

Customer: SAUNDERS CONSTRUCTION
 86 INVERNESS PLACE N
 MEYERS POOL RENO
 ENGLEWOOD, CO 80112

Ship To: SAUNDERS CONSTRUCTION
 86 INVERNESS PLACE N
 MEYERS POOL RENO
 ENGLEWOOD, CO 80112

Cust PO#: MEYERS POOL**Job Name:** REVISED 2.13.24

Item	Description	Quantity	Net Price	UM	Total
SCU0920MA1A	CCY LF 100LB CUBER UC IM 20	2	2805.000	EA	5610.00
;FARUCIM	UC ICE MACH INSTALL	2	205.000	EA	410.00
WUMCS5022PZ	*CVR* CCY 2.2 CU FT 24 3/4 IN. C/TO	2	326.000	EA	652.00
FAWCOM2U500NT	2 YR COMM APPL WARR UNDER \$500 NTAX	2	49.990	EA	99.98
;FAMLABOR	LABOR/PREP/QUOTE CHG	2	15.000	EA	30.00
LGLFXS26973S	CCY LF FS FRDO REFRIG 26.2 SS 36	2	2519.000	EA	5038.00
FAWCOM2U2500NT	2 YR COMM APPL WARR UNDR \$2500 NTAX	2	179.990	EA	359.98
;FARFS	FS REFRIG/FREEZER INST	2	123.000	EA	246.00
GGUD27ESSMWW	CCY STACKED WSHR & DRYR WHIT ELEC	1	1770.000	EA	1770.00
FAWCOM2U2500NT	2 YR COMM APPL WARR UNDR \$2500 NTAX	1	179.990	EA	179.99
;FAWLC	LDYR CNTR INSTALL	1	135.000	EA	135.00

Net Total: \$14530.95**Tax:** \$1151.47**Freight:** \$0.00**Total:** \$15682.42

Quoted prices are based upon receipt of the total quantity for immediate shipment (48 hours). SHIPMENTS BEYOND 48 HOURS SHALL BE AT THE PRICE IN EFFECT AT TIME OF SHIPMENT UNLESS NOTED OTHERWISE. QUOTES FOR PRODUCTS SHIPPED FOR RESALE ARE NOT FIRM UNLESS NOTED OTHERWISE.

CONTRACTOR CUSTOMERS: IF YOU HAVE DBE/MBE/WBE/VBE/SDVBE/SBE GOOD FAITH EFFORTS DIVERSITY GOALS/ REQUIREMENTS ON A FEDERAL, STATE, LOCAL GOVERNMENT, PRIVATE SECTOR PROJECT, PLEASE CONTACT YOUR BRANCH SALES REPRESENTATIVE IMMEDIATELY PRIOR TO RECEIVING A QUOTE/ORDER.

Seller not responsible for delays, lack of product or increase of pricing due to causes beyond our control, and/or based upon Local, State and Federal laws governing type of products that can be sold or put into commerce. This Quote is offered contingent upon the Buyer's acceptance of Seller's terms and conditions, which are incorporated by reference and found either following this document, or on the web at <https://www.ferguson.com/content/website-info/terms-of-sale>
 Govt Buyers: All items are open market unless noted otherwise.

LEAD LAW WARNING: It is illegal to install products that are not "lead free" in accordance with US Federal or other applicable law in potable water systems anticipated for human consumption. Products with *NP in the description are NOT lead free and can only be installed in non-potable applications. Buyer is solely responsible for product selection.
 Buyer shall accept delivery of products within 60 days of Seller receiving the products at Seller's warehouse. If Buyer causes or requests a delay in delivery of the products, Buyer may be subject to storage fees and additional costs caused by such delay. Seller reserves the right to requote the products and reschedule the delivery date, subject to manufacturer's lead times and price increases, if Buyer is unable to accept delivery within 60 days.

**HOW ARE WE DOING? WE WANT YOUR FEEDBACK!**

Scan the QR code or use the link below to
 complete a survey about your bids:

<https://survey.medallia.com/?bidsorder&fc=2635&on=311608>

86 Inverness Place North
Englewood CO 80112 USA

CHANGE ORDER
NO. OCO-004

Printed On: 04/17/2024
Page 1 of 1

TITLE: OCO-004 / SCA-046, 055, 073, 080, 095, 123 and 126
PROJECT: Meyers Pool Replacement
TO: City of Arvada
8101 Ralston Road
Arvada CO 80001-8101
USA
Phone: 720-898-7000 Fax: 720-898-7860

ISSUE DATE: 04/03/2024
JOB: 22015012

Item#	Description	Bill Amount
SCA-046	Added RTU-1 BAS Controls	5,922.25
SCA-055	ASI #14: Meet Management VE Millwork Updates	2,193.00
SCA-073	Trash Enclosure Gate Infill	2,962.00
SCA-080	ASI #20 Tech-AV-Sec-Drawings	139,493.00
SCA-095	RFI 195: Locker Room Slab Sloping	10,426.00
SCA-123	OCO 4 Weather Protection Replenishment	30,000.00
SCA-126	Linx AV Scope	215,058.00

Total: \$406,054.25

The Original Contract Sum was	\$38,240,799.00
Net Change by Previously Authorized Requests and Changes	\$1,279,475.59
The Contract Sum Prior to This Change Order was	\$39,520,274.59
The Contract Sum will be Changed by	\$406,054.25
The New Contract Sum Including This Change Order	\$39,926,328.84
The Contract Time Will Not Be Changed	
The Date of Substantial Completion as of This Change Order therefore is	09/18/2024

ACCEPTED: This change order is hereby added to the Contract Sum as a Stipulated Sum Amount

Contractor Saunders Construction, LLC Architect Ohlson Lavoie Corporation Owner City of Arvada

By: Anna Cannon By: Robert McDonald By:

Date: April 17, 2024 | 12:48 PM Date: April 18, 2024 | 10:20 AM MDT Date:

4/17/2024

Meyers Pool Replacement										
SCA #	Description	OCO	Cost							Comments
SCA_046	Added RTU-1 BAS Controls	OCO 004				\$ 5,922.25		Design	Executed	
SCA_055	ASI #014: Meet Man. VE Millwork Updates	OCO 004				\$ 2,193.00		Design	Executed	
SCA_073	Trash Enclosure Gate Infill	OCO 004				\$ 2,962.00		Design	Executed	
SCA_095	RFI 195 Locker Room Slab Thickening	OCO 004				\$ 10,426.00		Design	Executed	
SCA_080	ASI #20: Tech-AV-Sec-Drawings	OCO 004				\$ 139,493.00		Design	Submitted	
SCA-126	Linx AV Scope	OCO 004				\$ 215,058.00		Design	Submitted	
SCA_123	Weather Protection Replenishment	OCO 004				\$ 30,000.00		Weather Protection	Submitted	
			A	B	B	C	D			
			Original Contract Value				\$ 38,240,799.00			
			OCO 1				\$ 486,540.00			
			OCO 2				\$ 199,591.40			
			OCO 3				\$ 593,344.19			
			OCO 4 (Table Above)				\$ 406,054.25			
			Current Contract Value (With Approved SCAs)				\$ 39,926,328.84			

December 13, 2023

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-046 Added RTU-1 BAS Controls

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

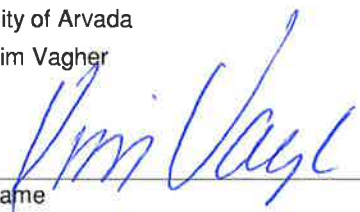
CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-046		Added RTU-1 BAS Controls		Source	
Reference Date	12/13/2023		Owner Number			
Scope Description						
22015012	20000	SUB	Atek Heating & Air Conditioning, Inc.		5,629.25	Mechanical
22015012	98003	OVD			6.00	Builders Risk
22015012	98005	OVD			53.00	Commercial Insurance
22015012	98006	OVD			73.00	SDI
22015012	98600	OVD			8.00	Closeout and Warranty
22015012	99000	FEE			153.00	Fee
Stipulated Sum					5,922.25	

Approved:
Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada
Kim Vagher


Name
Date 3/20/24
Ohlson Lavoie Corporation
Bob McDonald

Name
Date



HEATING & AIR CONDITIONING, INC.

CHANGE ORDER
NO. SEVEN (7)
December 5, 2023

CONTRACTOR: Saunders Construction Inc.
Attn: Laurel Lane
86 Inverness Place North
Englewood, CO 80112

PROJECT: George T Meyers Pool
ADDRESS: 7904 Carr Street
CITY: Arvada
STATE: Colorado
ZIP: 80003

303-699-9000; Fax 303-680-7448

ATEK Heating & Air Conditioning, Inc. is hereby directed to make the following changes in the Contract:

Add controls for RTU-1 exhaust fan per revised RTU-1 submittal approval dated 11/21/2023.

See attached Quote from Long addressing these additional costs dated 12/4/2023.

Subs: 1 (lot) Controls (per Long)

\$4,895.00
Sub-Total Subs: \$4,895.00

Sub-Total: \$4,895.00

Plus 15% Overhead and Profit: \$734.25

Total Amount of Change Order # 7: \$5,629.25

THE CONTRACT TIME WILL BE INCREASED BY FIVE (5) DAYS.

THE CONTRACT SUM WILL BE INCREASED BY FIVE THOUSAND SIX HUNDRED TWENTY NINE DOLLARS AND TWENTY FIVE CENTS (\$5,629.25)

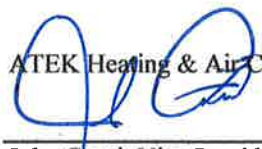
ACCEPTANCE

The above changes are hereby accepted. ATEK Heating & Air Conditioning, Inc. is hereby authorized to do the work as specified subject to the terms and conditions set forth above.

Saunders Construction

By: _____
Date: _____

ATEK Heating & Air Conditioning, Inc.

By: 
John Conti, Vice President
Date: December 5, 2023

The above signed agrees to pay all reasonable costs of collection, including attorney's fees, if payment is not made when due.

Littleton, CO 80120
(303) 975-2100 Tel
(303) 936-2755 Fax



Change Order Proposal/Quote

To: Atek Heating & Air Conditioning Inc. 12/4/2023
Contact: John Conti,
(jconti@atekhtg.com)
From: Troy Arner
Regarding: George Meyers Swimming Center BAS Change Order Proposal #1 – Adding controls for RTU-1 exhaust fan control per revised RTU-1 submittal approval dated 11-21-23

Scope:

- Add KMC BACnet controller to be installed in RTU-1 control section for RTU-1 exhaust fan control.
- Add Duct pressure transmitter and associated pitot tube.
- Engineering labor to capture design changes.
- Technician labor to check, test and startup controls.
- Supervision labor
- Installation material and labor to install new controls to accommodate RTU-1 exhaust fan control.
- Points List to include, EF start/stop, EF status, EF speed control, Exhaust duct pressure.

Exclusions:

- Afterhours work, outside of Normal Working Hours of M-F / 7am – 5pm local time
- Any work or wiring that is not defined in this proposal
- Any startup or commissioning of Mechanical equipment and VFDs
- Cutting, patching, or painting
- Liquidated Damages
- Permits or fees, payment and performance bonds
- Prevailing or Davis Bacon wages, Certified Payroll for LONG employees or its subcontractors
- Troubleshooting, Repair or Replacement of existing devices, except where noted above
- All 120VAC or higher voltage power wiring for equipment or Control Panels
- Any Space Occupancy Sensors, except as noted above
- Control dampers, except as noted above
- Any work associated with Fire Alarm, Smoke Control, Life Safety systems
- Smoke Dampers, Fire Dampers, Smoke/Fire Dampers
- Smoke Detector provision, installation, or Interlocks except as noted above
- Any Access Doors
- Security Access system
- Gas, Water, and Electric Meter Interface
- UPS, Surge Suppressor and lightning protection for DDC controllers, except as noted above
- Air/Water Balancing
- Hardware necessary required by Balancing Contractor to calibrate DDC controllers



Long live your building!

- PC Workstation (Existing or Owner Provided)

Customer Acceptance: The party by signing below hereby agrees to the above scope of work proposal and attached terms and conditions and intends to be legally bound thereby, subject to credit approval by LONG. Notwithstanding any statute, regulation, or other rule of law, a signature provided by facsimile or other electronic copy will be deemed to be an original signature.

This Change Order ☐ increases, or ☐ decreases the amount of days to complete job by ____ days.

Date of Change Order Agreement	12/4/2023	Change Order Amount	\$4,895.00
--------------------------------	-----------	---------------------	-------------------

ACCEPTED: The above prices and specifications and time of this CHANGE ORDER are satisfactory and are hereby accepted. All work to be performed under the same terms and conditions as specified in original contract unless otherwise stipulated above.

Date of Acceptance: _____

Authorized Signature: _____

Please return entire document to the email of Troy Arner

Your building technology partner,
LONG Building Intelligence

March 18, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-055 ASI #14: Meet Management VE Millwork Updates

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-055		ASI #14: Meet Management VE Millwork Updates	Source		
Reference Date	12/27/2023		Owner Number			
Scope Description						
22015012	06200	SUB	Cab-Con Enterprises, Inc.		-2,630.00	Finish Carpentry
22015012	07100	SUB	Restoration Specialists, Inc. dba RSI, Inc.		6,000.00	Foundation Waterproofing & See page 4 for pricing informati
22015012	09650	SUB	Guy's Floor Service, Inc.		-1,286.00	Dampproofing See page 3 for d educt
22015012	98003	OVD			2.00	Builders Risk
22015012	98005	OVD			20.00	Commercial Insurance
22015012	98301	OVD			27.00	SDI
22015012	98600	OVD			3.00	Closeout and Warranty
22015012	99000	FEE			57.00	Fee
Stipulated Sum					2,193.00	

•SCA-055 Option B:

- In OAC 2/27, it was requested to see what the cost difference would be for removing the base at the natatorium and instead installing a 1/2" movable caulk joint
- SCA-055B shows this base credit and caulk add
- Base is already in Guy's shop, so there is no credit for that material at this time. If we went with the caulk base, we could still keep the base as attic stock if desired
- Base installation goes in QUICK, which is why the labor credit is not excessive
- The 1/2" movable caulk joint material and labor is much higher than the base material/labor

Approved:

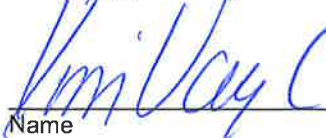
Saunders Construction, LLC



Anna Gannon
Project Manager

City of Arvada

Kim Vagher



Name

Date

Ohlson Lavoie Corporation
Bob McDonald

Name

Date

RE: Meyers ASI-014

DB

Dan Burke <DanB@guysfloor.com>
To Anna Gannon

Follow up.

Completed on Friday, March 15, 2024.

You replied to this message on 3/14/2024 7:29 AM.

Reply

Reply All

Forward

Thu 3/14/2024 7:02 AM

Hi Anna,

See pricing below, keep in mind we already have the material since Juan told us to order all of the project a couple weeks ago. If they delete the base and want caulking I can credit back the labor, however the concrete guy should do the caulking, the material we would use would not hold up with the movement of the concrete floor and concrete wall. It would need to be a flexible concrete sealant. See below for pricing options.

Thanks,

Tile Base cut down onsite from 12"x24" to 6"x24" with Schuler Cove & Schiene Metal					
TB-01 (T-01)	CONCEPT SURFACES	TILE BASE, COLLECTION: APOLLO, COLOR: ANTRACITE, PROFILE: BULLNOSE GROUT: CHARCOAL TEXTURED	(735)	LF	\$ (8,892)
TB-01 (T-01)	CONCEPT SURFACES	Apollo Antracite 12"x24" cut down to 6"x24"	407	SF	\$ 4,977
TB-01 Labor		Cut down 12"x24" Tile to 6"x24" & Install	735	LF	\$ 1,599
TR-02	SCHLUTER	Dilex HKU Stainless Steel	736	LF	\$ 6,411
TR-03	SCHLUTER	Schiene Stainless Steel	736	LF	\$ 3,489
					\$ 7,584
Tile Base Cut by Concept Surfaces at Factory with Schuler Cove & Schiene Metal					
TB-01 (T-01)	CONCEPT SURFACES	TILE BASE, COLLECTION: APOLLO, COLOR: ANTRACITE, PROFILE: BULLNOSE GROUT: CHARCOAL TEXTURED	(735)	LF	\$ (8,892)
TB-01 (T-01)	CONCEPT SURFACES	Apollo Antracite 6"x24" Material	407	SF	\$ 4,977
TB-01		Apollo Antracite 6"x24" Cut at Factory by Concept Surfaces	735	LF	\$ 6,249
TB-01 Labor		Install 6"x24" Tile Base	735	LF	\$ 1,066
TR-02	SCHLUTER	Dilex HKU Stainless Steel	736	LF	\$ 6,411
TR-03	SCHLUTER	Schiene Stainless Steel	736	LF	\$ 3,489
					\$ 13,300
Credit to Delete Tile Base					
TB-01 (T-01)	CONCEPT SURFACES	TILE BASE, COLLECTION: APOLLO, COLOR: ANTRACITE, PROFILE: BULLNOSE GROUT: CHARCOAL TEXTURED	(735)	LF	\$ (1,286)
					\$ (1,286)

Anna Gannon

From: Bob McDonald <rmcdonald@olcdesigns.com>
Sent: Monday, March 18, 2024 10:05 AM
To: Anna Gannon; Natalie Mediate
Cc: Robert Burd
Subject: RE: Meyers ASI-014 Base Cost Clarification

Follow Up Flag: Follow up
Flag Status: Flagged

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Wow, it's just fascinating that tile base is so much less expensive.

If you could please put this in an acceptable format for Kim, Hilary, Conor, and Selena to review, that would be great.
Thanks again for tracking this down for us.

Bob

Robert (Bob) McDonald

OLC

O: 303.294.9244

M: 303.881.9961

From: Anna Gannon <A.Gannon@saundersinc.com>
Sent: Monday, March 18, 2024 8:47 AM
To: Bob McDonald <rmcdonald@olcdesigns.com>; Natalie Mediate <nmediate@olcdesigns.com>
Cc: Robert Burd <R.Burd@saundersinc.com>
Subject: RE: Meyers ASI-014 Base Cost Clarification

[text]

From RSI, our division 07 sub:

Anna,

The Schlueter would be a lot cheaper. You're looking at \$6000.00 to turn this into a caulk joint with the Deck-O-Seal.



Brock Combs

Project Manager

7210 W. 116th Ave.
P.O. BOX 29
BROOMFIELD, CO 80038

Are there any other products you would be interested in that would be acceptable that may be cheaper?



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Bob McDonald <rmcdonald@olcdesigns.com>

Sent: Friday, March 15, 2024 11:34 AM

To: Anna Gannon <A.Gannon@saundersinc.com>; Natalie Mediate <nmediate@olcdesigns.com>

Cc: Robert Burd <R.Burd@saundersinc.com>

Subject: RE: Meyers ASI-014 Base Cost Clarification

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Thanks, Anna. I think it would be great to get pricing for the perimeter caulking. Here is the product data for "deck-o-seal", which is the correct, chemically-resistant caulking product for pool decks.

Thanks again for tracking this down,
Bob

Robert (Bob) McDonald

OLC

O: 303.294.9244

M: 303.881.9961

From: Anna Gannon <A.Gannon@saundersinc.com>

Sent: Thursday, March 14, 2024 8:06 AM

To: Bob McDonald <rmcdonald@olcdesigns.com>; Natalie Mediate <nmediate@olcdesigns.com>

Cc: Robert Burd <R.Burd@saundersinc.com>

Subject: RE: Meyers ASI-014 Base Cost Clarification

[text]

All,

I received the below breakdown from Guys Flooring for the tile base from ASI 014 field vs. factory cut. Please note, the field cutting cost is slightly lower now than what was issued in the SCA-055 ASI 014.

He also included the cost for removing the base at the natatorium as requested in the OAC 3/5. The credit would be for labor only as the material has been released and is in his shop.

Guy's Flooring does not feel comfortable doing the caulking in lieu of the base as the material they would use would not hold up – we'd want a flexible concrete sealant – I can get the caulking cost material/labor from Concrete Floor Systems and/or SCI Concrete, it will likely be higher than the credit below.

Tile Base cut down onsite from 12"x24" to 6"x24" with Schuler Cove & Schlens Metal					
TB-01 (T-01)	CONCEPT SURFACES	TILE BASE, COLLECTION: APOLLO, COLOR: ANTRACITE, PROFILE: BULLNOSE GROUT: CHARCOAL TEXTURED	(735)	LF	\$ (8,892)
TB-01 (T-01)	CONCEPT SURFACES	Apollo Antracite 12"x24" cut down to 6"x24"	407	SF	\$ 4,977
TB-01 Labor		Cut down 12"x24" Tile to 6"x24" & Install	735	LF	\$ 1,599
TR-02	SCHLUTER	Dilex HKU Stainless Steel	735	LF	\$ 6,411
TR-03	SCHLUTER	Schlens Stainless Steel	735	LF	\$ 3,489
					\$ 7,584
Tile Base Cut by Concept Surfaces at Factory with Schuler Cove & Schlens Metal					
TB-01 (T-01)	CONCEPT SURFACES	TILE BASE, COLLECTION: APOLLO, COLOR: ANTRACITE, PROFILE: BULLNOSE GROUT: CHARCOAL TEXTURED	(735)	LF	\$ (8,892)
TB-01 (T-01)	CONCEPT SURFACES	Apollo Antracite 6"x24" Material	407	SF	\$ 4,977
TB-01		Apollo Antracite 6"x24" Cut at Factory by Concept Surfaces	735	LF	\$ 6,249
TB-01 Labor		Install 6"x24" Tile Base	735	LF	\$ 1,066
TR-02	SCHLUTER	Dilex HKU Stainless Steel	735	LF	\$ 6,411
TR-03	SCHLUTER	Schlens Stainless Steel	735	LF	\$ 3,489
					\$ 13,300
Credit to Delete Tile Base					
TB-01 (T-01)	CONCEPT SURFACES	TILE BASE, COLLECTION: APOLLO, COLOR: ANTRACITE, PROFILE: BULLNOSE GROUT: CHARCOAL TEXTURED	(735)	LF	\$ (1,286)
					\$ (1,286)



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 o (303) 699-9000 m (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Bob McDonald <rmcdonald@olcdesigns.com>

Sent: Monday, March 11, 2024 9:41 AM

To: Anna Gannon <A.Gannon@saundersinc.com>; Natalie Mediate <nmediate@olcdesigns.com>

Cc: Robert Burd <R.Burd@saundersinc.com>

Subject: Re: Meyers ASI-014 Base Cost Clarification

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Let's see the pricing, please. Thanks

Robert (Bob) McDonald

OLC

O: [303.294.9244](tel:303.294.9244)

M: [303.881.9961](tel:303.881.9961)

Creating Healthy Places since 1961

From: Anna Gannon <A.Gannon@saundersinc.com>

Sent: Monday, March 11, 2024 8:28:28 AM

To: Natalie Mediate <nmediate@olcdesigns.com>

Cc: Bob McDonald <rmcdonald@olcdesigns.com>; Robert Burd <R.Burd@saundersinc.com>

Subject: RE: Meyers ASI-014 Base Cost Clarification

You don't often get email from a.gannon@saundersinc.com. [Learn why this is important](#)

[text]

Natalie,

As further follow up, in conversations with Guy's Flooring, the reasoning again was due to the field vs. factory cut cost.
From Dan:

To have the supplier cut the tile down at the factory to the 6"x24" size it would add \$6,249 to the pricing I sent over. That is almost doubling what I had priced with us cutting it in the field.

Thanks,

I am happy to set up a call if you'd like to discuss further.

Thanks.



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Natalie Mediate <nmediate@olcdesigns.com>

Sent: Friday, March 1, 2024 9:53 AM

To: Anna Gannon <A.Gannon@saundersinc.com>

Cc: Bob McDonald <rmcdonald@olcdesigns.com>; Robert Burd <R.Burd@saundersinc.com>

Subject: RE: Meyers ASI-014 Base Cost Clarification

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Thank you Anna for the quick follow up.

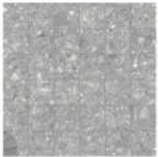
See below. Our submittal from 11.30 states a rectified edge not bullnose. We are using a Schluter to create the cove profile and top edge finish. Since the bullnose does not come in a 6” (the clients requested height). We went with a Schluter trim to avoid the cost in field to cut. Please have Guy Flooring review the submittal and his pricing, it looks like he is not pricing off of the submittal we provided.

Let me know if you have any questions.

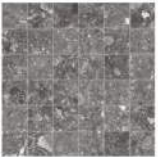
BIANCO



GRIGIO



ANTRACITE



BIANCO



GRIGIO



ANTRACITE



finish.

Top Schluter to be:
Schiene, stainless steel

Bottom Schluter to be:
Dilex-HKU - cove profile,
stainless steel

Thank you-
Natalie Mediate, NCIDQ, IIDA
Senior Interior Designer
OLC
2000 Lawrence Street
Denver, CO 80205
O: 303.294.9244
D: 720.880.7590
nmediate@olcdesigns.com
Architecture | Interiors | Aquatics
Creating Healthy Places since 1961
Please note our new Denver address and check out some of our recent projects at olcdesigns.com.

From: Anna Gannon <A.Gannon@saundersinc.com>
Sent: Thursday, February 29, 2024 11:57 AM
To: Natalie Mediate <nmediate@olcdesigns.com>
Cc: Bob McDonald <rmcdonald@olcdesigns.com>; Robert Burd <R.Burd@saundersinc.com>
Subject: Meyers ASI-014 Base Cost Clarification

You don't often get email from a.gannon@saundersinc.com. [Learn why this is important](#)

[text]

Natalie,

As a follow up to our conversation, I did speak to Guy’s Flooring about the cost for the cutting of the base. Cutting it down is less of a cost than purchasing the true size of 6”x24”. See below from the rep (Christy Thomas at Concept Surfaces):

Dan per the cut sheet the only bullnose is 3"x24" – we can have a 6x24 produced for you but the cost will be much higher. Do you think they would be open to you field cutting the material and using a Schluter edge.

Please confirm if you want us to have the custom piece priced for you.

Please let me know if this is acceptable, if you have further questions, or if you would prefer to buy the true size.

Thanks



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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Mailing Address
P.O. Box 5439
Security, CO 80931

CAB-CON Enterprises, Inc.
Architectural Millwork & Cabinets
Telephone: 719-382-5649 Fax: 719-382-3739

Shop Address
751 S. Santa Fe Ave.
Fountain, CO. 80817

January 10, 2024

Saunders Construction

Attn: Robert
Re: Pricing Revisions for Meyers Pool Replacement

Note: This is a summary of changes in plans since the previous pricing was submitted on June 29, 2023 and ASI #14 which has the most recent changes. Bond amount is calculated on the revised total price at the end.

Scope/Inclusions:

Item #1: Previous Pricing dated 6/29/23

(Includes Reception Desk and Feature Wall) \$ 240,600.00

Item #2: Revisions to Drawings and Scope per Working Drawings

Remove Wood Top Rail from Scope (\$2,500.00)
Remove Feature Wall & Lift from Scope (\$51,500.00)

Add Solid Surface Wall Caps at Pool Area \$900.00
Add Solid Surface Sills at Interior Pool Windows \$5,400.00
Add Storage Shelves at Pool Storage 126 \$4,500.00
DED \$ (43,200.00)

Item #3: ASI #14 Revisions

Remove countertop section at Meet Management (\$2,880.00)
Add open base cabinet at Guard/First Aid \$250.00

DED \$ (2,630.00)

REVISED PROPOSAL TOTAL: \$ 194,770.00

2.5% Bond on Revised Proposal: \$ 4,870.00

CONTRACT TOTAL w/ Bond \$ 199,640.00

LOI Dated 1/3/24: \$ 172,247.00

CO Needed to Reconcile Contract: \$ 27,393.00



86 Inverness Place North
Englewood, CO 80112

February 20, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-073 Trash Enclosure Gate Infill

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-073		Trash Enclosure Gate Infill		Source	
Reference Date	01/23/2024		Owner Number			
Scope Description						
22015012	05100	SUB	Zimmerman Metals, Inc.		2,815.00	Structural Steel
22015012	98003	OVD			3.00	Builders Risk
22015012	98005	OVD			27.00	Commercial Insurance
22015012	98301	OVD			37.00	SDI
22015012	98600	OVD			4.00	Closeout and Warranty
22015012	99000	FEE			76.00	Fee
Stipulated Sum					<u>2,962.00</u>	

Approved:

Saunders Construction, LLC



Anna Gannon
Project Manager

City of Arvada

Kim Vagher



Name

4/3/24

Date

Ohlson Lavoie Corporation

Bob McDonald

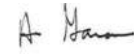
Name

Date

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-073		Trash Enclosure Gate Infill		Source	
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22015012	98005	OVD			27.00	Commercial Insurance
22015012	98301	OVD			37.00	SDI
22015012	98600	OVD			4.00	Closeout and Warranty
22015012	99000	FEE			76.00	Fee
Stipulated Sum					2,962.00	

Approved:
Saunders Construction, LLC


Anna Gannon
Project Manager

City of Arvada
Kim Vagher

Name	Date
Ohlson Lavoie Corporation	
Bob McDonald	

Name	Date
------	------



Zimmerman Metals Inc.
Quality Workmanship and Service Since 1936

201 East 58th Avenue, Denver, CO 80216 | (303) 294-0180

Zimmerman Metals, Inc

Date : 2/16/2024

Page 1 of 1

CO #: 18

Job #: 311

George Meyers Pool

Job Location: Arvada, CO

Change Order Request

To: Oliver Deck

SAUNDERS CONSTRUCTION INC
7904 CARR DR.
ARVADA, CO 80005

Subject: COR #18 - TRASH GATE INFILL

Change Requested By: Oliver Deck

Sent Via: E-mail

Description of Change:

Zimmerman Metals has reviewed the above requested change and has determined a price increase of \$2,815.00 to incorporate the changes. Please see attached ZMI COR #18 for the details of the pricing.

Included:

- Metal Decking Infill.
- Shop fabrication.

Excluded:

- Erection Labor - no impact to erector's field labor.
 - Tax
-

The change will cause an increase of \$2,815.00 to the contract amount.

A signature below indicates acceptance of all changes shown herein. Any work associated with this change will begin upon receipt of a signed copy of this C.O. in our office. Please respond by 2/23/2024.

If the requested response time is not met, the project may be delayed.

Accepted By

Zimmerman Metals, Inc

Limmerman Metals, Inc.
CHANGE ORDER REQUEST

To: SAUNDERS
Project: GEORGE MEYERS POOL
Reference: COR #18 - TRASH GATE INFILL

Date: 2/16/2024
ZMI Job: 311
ZMI COR: 18

		QUAN.	UNIT	UNIT RATE	TOTAL
MATERIAL	Material (raw, bolts, etc.)	196	lbs		\$1,741
	Joists	0	tons		\$0
	Metal Deck	0	sq.ft		\$0
	Shear Studs	0	each		\$0
	Grating	0	sq.ft		\$0
	Other				\$35
	Total Material				\$1,776
ENGINEERING	Shop Drawings				\$85
	In-house	2.00	hrs	\$84.00	\$168
	Connection / Stair Design				\$0
	Other				\$0
	Total Engineering				\$253
FABRICATION	Shop Labor	4.30	hrs	\$93.00	\$400
	Inspection	0.20	hrs	\$93.00	\$19
	Other				\$0
	Total Fabrication				\$419
FREIGHT	Legal Loads	0	Load	\$575	\$0
	Permit Loads	0	Load	\$900	\$0
	Escort Loads	0	Load	\$1,500	\$0
	Dunnage				\$0
	Total Freight				\$0
ERECTION	Field Labor				\$0
	Erector Bond				\$0
	Other				\$0
	Total Installation				\$0
Subtotal					\$2,448
Tax					0.0% \$0
Total Cost					\$2,448
Overhead					10% \$245
Subtotal					\$2,692
Profit					5% \$122
Bond					0.0% \$0
Total Add					\$2,815

SAUNDERS Attachment D1 Scope Summary	
Project: Meyers Pool Replacement Date: 10/12/2023 Rev 02 9.19.23 Estimator: KM Section: Structural & Miscellaneous Steel Document Basis: 3/10/23 Bid & Permit Set	
Scope Description	Zimmerman 303-294-0180 Michael
Total Base Bid Amount	\$ 3,049,602
Plans, Addendum and Bid Bulletin Acknowledgment	
Plans - Bid & Permit Set - dated 3/10/2023	X
Specifications - Bid & Permit Set - dated 3/10/2023	X
Addendum 1 dated 3/31/2023 (includes drawings, specifications and narrative)	X
Addendum 2 dated 4/04/2023 (includes drawings, specifications and narrative)	X
Addendum 3 Dated 6/15/2023	X
Specifications	
Division 01 - General Requirements (as applicable to scope)	X
01 23 00 Alternates (as applicable to scope)	X
05 12 00 Structural Steel Framing	X
05 21 00 Steel Joist Framing	X
05 31 00 Steel Decking	X
05 50 00 Metal Fabrications	X
05 51 13 Metal Pan Stairs	X
05 52 13 Pipe and Tube Railing	X
05 53 13 Bar Gratings	X
09 96 10 Coating Systems for Sports & Recreational Facilities (as applicable to scope)	
051200 Structural Steel: (Includes but not limited to)	
Mobilization/Erection per schedule	X
Shop Drawings	X
Steel Columns, beams, shear studs, brace frames, bridging, plates, embeds, gussets, etc.	X
Stiffener plates as shown on structurals	X
Channel Framing at Mechanical Roofs	X
Moment Connections	X
Framing for curtain wall support- HSS per contract drawings	X
Frames for all slab deck openings as shown on contract documents	X
All deck openings shall be protected until such time the area is accepted by the general contractor	X
Frames for all roof deck openings as shown on contract documents	X
Openings	not included
Cut/Protect Deck Openings for other Trades	not included
Furnish all steel embeds and 1/8" anchor bolt templates for installation by others	X
Prep and prime per high performance spec in designated areas shown on the drawings	X
Install Pour Stop	X
Screen Wall Bracing / Frame (S215,S520) Embeds in precast by others	X
Vestibule Beams and faming (S201, S510)	X
Canopy at entrance, bracing (S201, S202)	X
Embeds, Anchor Bolts (Furnish Only)	X
Site Sign Embed Plates B1/L5-01 none shown	not needed
Pump pit embeds (7/S3-10) none shown	not needed
Masonry Embeds only bearing plates to support our steel 12,16/S410	X
Joist bearing plates (embeds in precast by others)	X
052100/053100 Joists and Deck: (Includes but not limited to)	
DLH Joist	X
Stiffeners as required 2/S511 only where referenced by 1/S511	X
Option 1 Precast Seat- Option 2 will not be utilized on project	X
High Performance Coating as required joists to receive zinc-rich primer per 099610	X
Shop Drawings	X
Joist Shims (4, 8/S511)	X
Channel hanger per detail 1/S511 as required	X
Bridging as required per Vulcraft/SJI	X
Composite Deck (manufacturer prime painted bottom, High-Performance coatings by others). Roof Deck (unpainted, High-Performance coatings by other)	X
All gauge deck closures, sumps, pour stops, and edge angle shall be furnished by the deck supplier and installed by the steel erector	X
Metal Fabrications / Stairs / Railing / Grates: (Includes but not limited to)	
Railing at Pool Area 2/A307	X
Lobby Stair railing with perforated infill	\$ 30,466
Pool Equipment Railing w/ Chain 12/A407	X
Metal Grates and support (Not including In Pool Area) only at Pool Equip Room 127	\$ 21,887
Trash Enclosure Gates including hinges, latch, casters and hurricane bolts	\$ 8,000
Access Ladders at Pool Pump, Elevator, Roofs	X
Metal Stairs as shown on drawings	X
Fan Hanger Supports 5/S511, locations per S004 Keynote F	\$ 7,455
Diving harnesses per 5/S511, locations per S004 and 1/AQ107	\$ 11,536
Hoist Beam (S200) 6/S200, W12x19	X
Loose Lintel (S510) none shown	not needed
CMU wall bracing clips shown on S401 & 1/S410	\$ 33,992
Pipe Bollards none shown	not needed
L4x4 Embed plates between PC rakers attached to embeds in CMU walls 20/S320- supply only	\$ 15,577
Continuous embed at top of CMU (funish only) and field installed HAS at CMU top of wall embed per detial 19/S320	\$ 5,103
top of wall embed per detial 5/S320	\$ 5,617
Hand Rail at Forebay Allowance for 48 LF per C308	\$ 16,000
Shower Partition Support	not included
Shower Partition Support	not included
Metal Panel at Gate Enclosure none shown	not included
Total Configuration Estimate	
3,051,355	



86 Inverness Place North, Englewood, CO 80112

www.saundersinc.com

P | 303.699.9000 F | 303.680.7448

Submittal Package: 055000_Metal_Fabrications_Trash_Gates_SD_FR

Submittal Approval Sheet

*****PLEASE USE THE SPACES BELOW FOR COMMENTS AND STAMPS*****



SUBMITTED FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS EXCEPT AS NOTED. REVIEW OF THIS SUBMITTAL DOES NOT RELEASE THE SUBCONTRACTOR OF ITS RESPONSIBILITY TO CONFORM WITH THE PLANS AND SPECIFICATIONS NOR DOES THIS REVIEW RELEASE THE SUBCONTRACTOR FROM VERIFYING THE ACCURACY OF QUANTITIES AND FIELD DIMENSIONS.

Submittal Package Number:
055000_Metal_Fabrications_Trash_Gates_SD_FR for Review
Signed: o.deck
Date: 11/27/2023



400 Santa Fe Drive
Denver, Colorado 80204
303.294.9244 - www.olcdesigns.com
Architecture | Interior Design | Aquatics Design

- ☐ NO EXCEPTIONS NOTED
- ☒ MAKE CORRECTIONS NOTED
- ☐ REVISE AND RESUBMIT
- ☐ REJECTED
- ☐ NO ACTION REQUIRED

This review is limited to checking for conformance with the information given and the design concept expressed in the contract documents. The Contractor and/or Construction Manager remains totally responsible for all dimensions, quantities, construction methods and means, techniques, sequences in the work, and procedures. Corrections or comments made on the shop drawings during review do not relieve the contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component.

BY: POTTER

DATE: 12/22/2023

At Saunders,
our reputation
and relationships
are based on:

Care
Collaboration
Commitment
Community



Zimmerman Metals Inc.
Quality Workmanship and Service Since 1936

201 East 58th Avenue, Denver, CO 80216 | (303) 294-0180

Zimmerman Metals, Inc

Page 1 of 1

Date : 11/22/2023

Transmittal #: 19

Job #: 311

George Meyers Pool

TRASH GATES OFA

To: SAUNDERS CONSTRUCTION INC
 7904 CARR DR.
 ARVADA, CO 80005

Attn: Oliver Deck

Sent via: E-mail

We are sending you enclosed, the following:

Shop Drawings

Prints: 4

Prints to return: 4

TO BE RETURNED BY: 12/15/2023

<u>Drawing Number</u>	<u>Revision</u>	<u>Description</u>	<u>Detailed/Revised</u>
25A21, 25A22	A	TRASH GATES	11/16/2023
25AL20	A	TRASH GATES	11/16/2023
25E3	A	TRASH GATES	11/16/2023

This material is being transmitted for the purpose listed below:

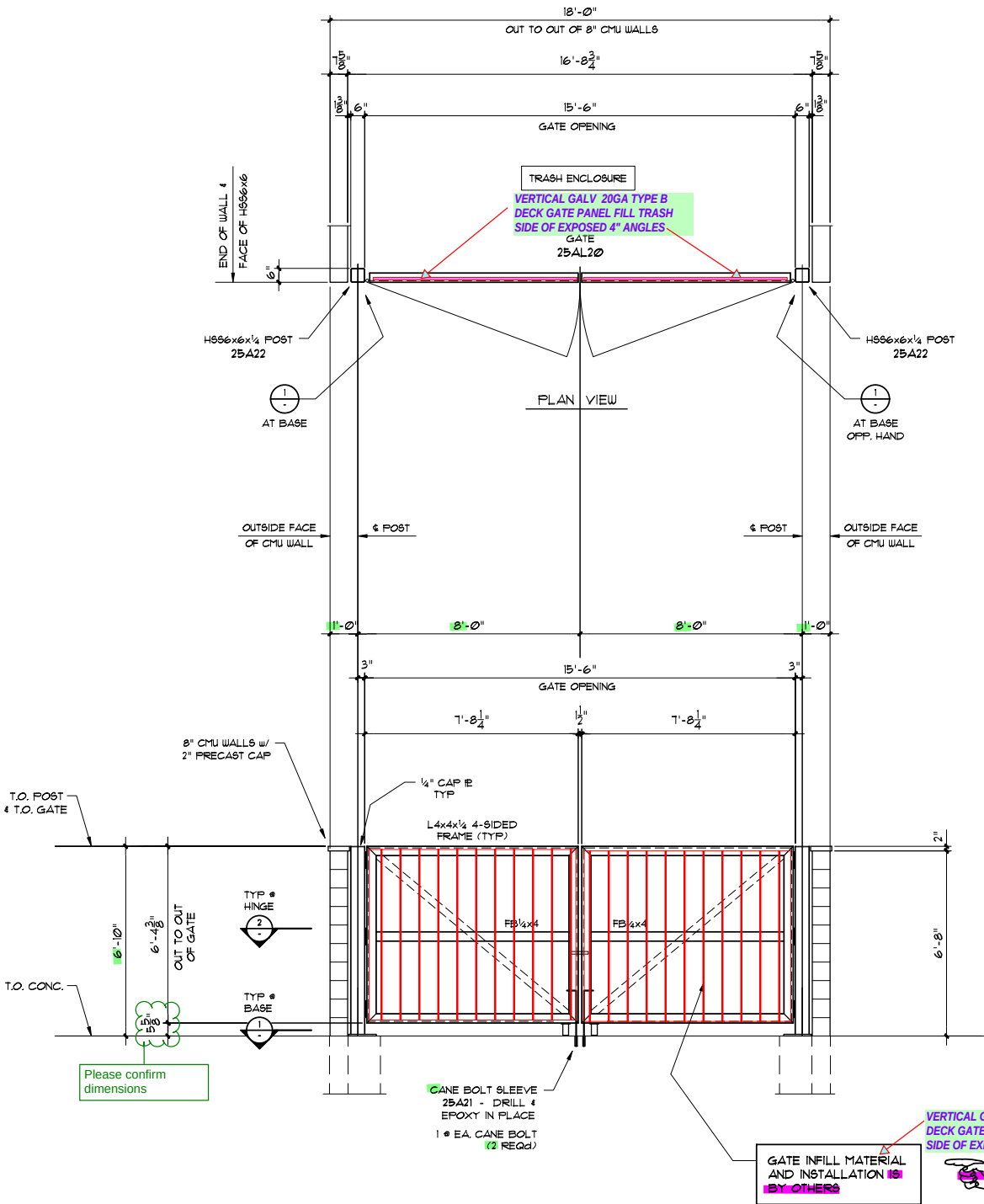
For Approval

Remarks: PLEASE SEE ATTACHED FOR SHOP DRAWINGS FOR APPROVAL FOR THE TRASH GATES FOR APPROVAL.

If enclosures are not as noted, please notify at once.

Zimmerman Metals, Inc

By: _____
 Nate Cheney



ELEVATION AT TRASH GATE

REF: 243/A100

FIELD MEASUREMENTS:

ALL CONTROL DIMENSIONS MARKED "FM" SHALL BE FIELD MEASURED PRIOR TO FABRICATION. FIELD MEASUREMENTS FOR ITEMS ERECTED BY ZIMMERMAN SHALL BE MADE BY ZIMMERMAN. FIELD MEASUREMENTS FOR ITEMS ERECTED BY OTHERS SHALL BE MADE BY OTHERS.

JOB 2311

REVISIONS			
DESCRIPTION	BY	DATE	LEVEL
ISSUED FOR APPROVAL	TM	11.16.23	A

TRASH GATE SETTING PLAN & DETAILS

REF: 243/A100, AS NOTED



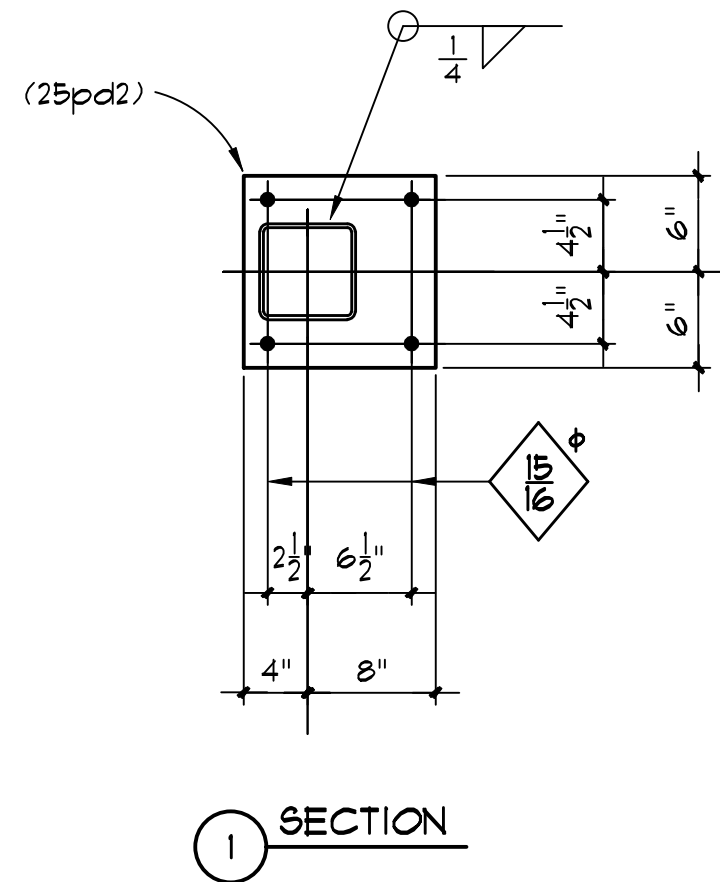
Zimmerman Metals, Inc.
201 E. 58TH AVENUE DENVER, COLORADO 80216
PHONE: 303-294-0180 FAX: 303-292-5013
www.zimmerman-metals.com

PROJECT: MEYERS POOL REPLACEMENT, ARVADA CO.			
DETAILER: TM			
CONTRACTOR: SAUNDERS CONSTRUCTION			
ENGINEER: MARTIN/MARTIN	ARCHITECT: OLC DESIGNS		
DRAWN BY: TM	DATE: 11.02.23		
CHECKED BY:	DATE:		
JOB NO. 311	ITEM NO. 25	DWG NO. 25E3	REVISION

2 - 1 1/4" ϕ STD PIPE x ϕ 1'-4 3/8 - 25A21

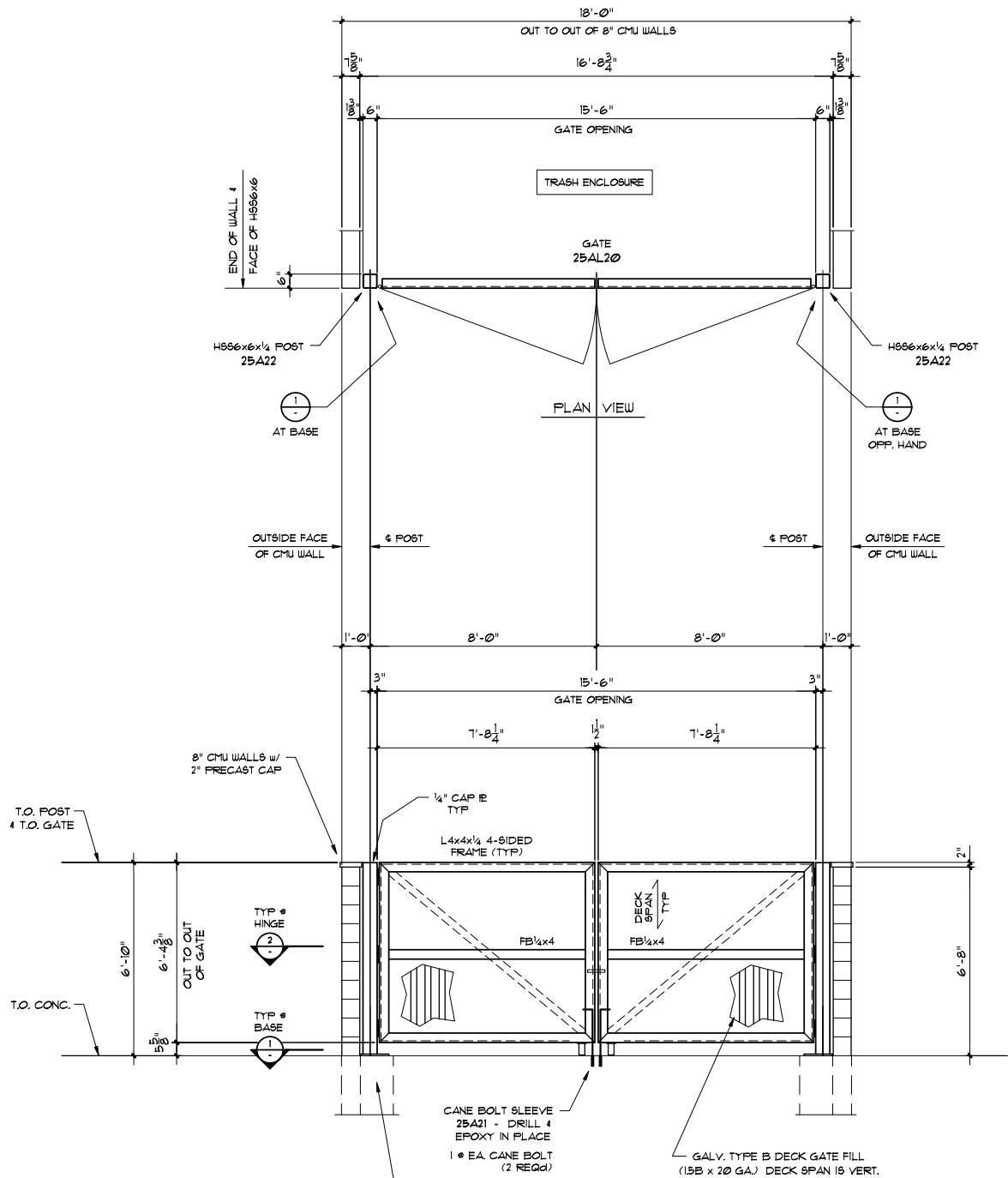
RE: 25E3

[illegible]



RE: 25E3

8	4	3/4	5 1/2	HILTI KH-EZ CRC	SITE		2	1	25A22	HS6x6x1/4	6'-9 1/4	A500-GRB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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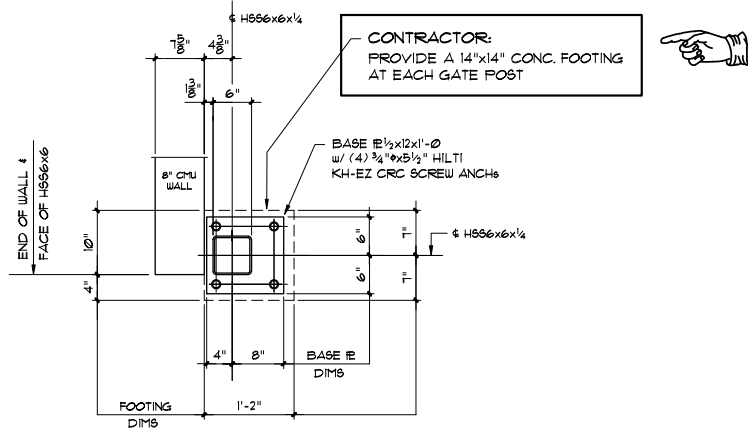
ELEVATION AT TRASH GATE

REF: 243/A100

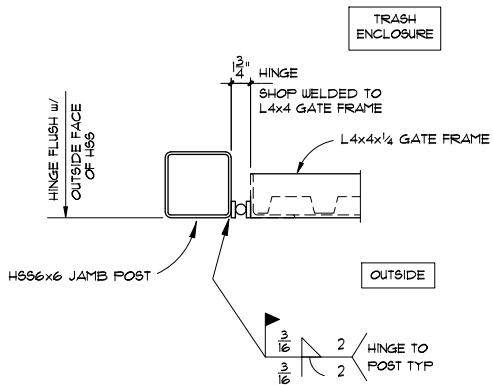
CONTRACTOR:
PROVIDE A 14"x14" CONC. FOOTING
AT EACH GATE POST

FIELD MEASUREMENTS:

ALL CONTROL DIMENSIONS MARKED "FM" SHALL BE FIELD MEASURED PRIOR TO FABRICATION. FIELD MEASUREMENTS FOR ITEMS ERECTED BY ZIMMERMAN SHALL BE MADE BY ZIMMERMAN. FIELD MEASUREMENTS FOR ITEMS ERECTED BY OTHERS SHALL BE MADE BY OTHERS.



1 DETAIL



2 SECTION

TRASH GATE SETTING PLAN & DETAILS

REF: 243/A100, AS NOTED



Zimmerman Metals, Inc.
201 E. 58TH AVENUE DENVER, COLORADO 80216
PHONE: 303-294-0180 FAX: 303-292-5013
www.zimmerman-metals.com

PROJECT: MEYERS POOL REPLACEMENT, ARVADA CO.				REVISION			
DETAILER: TM							
CONTRACTOR: SAUNDERS CONSTRUCTION							
ENGINEER: MARTIN/MARTIN				ARCHITECT: OLC DESIGNS			
DRAWN BY: TM				DATE: 11/20/23			
ISSUED FOR FAB				CHECKED BY: GSH			
ISSUED FOR APPROVAL				DATE: 11/25/23			
DESCRIPTION							
BY				DATE			
LEVEL							
REVISIONS							
JOB NO. 311				ITEM NO. 25			
DWG NO. 25E3							



86 Inverness Place North
Englewood, CO 80112

April 16, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
 SCA-080 ASI #20 Tech-AV-Sec-Drawings

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

While this change in itself may not justify a time extension, please be advised that Saunders Construction, LLC reserves the right to request a time extension and additional General Condition costs should it be determined at a later date that there were delays due to multiple changes or circumstances beyond our control.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.



86 Inverness Place North
Englewood, CO 80112

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-080		ASI #20 Tech-AV-Sec-Drawings		Source	
Reference Date	01/23/2024		Owner Number			
Scope Description						
22015012	26000	SUB	Kennedy Electric, Inc.		82,224.00	Electrical
22015012	27200	SUB	National Network Services, LLC		20,720.00	Tele/Data Equipment & Installation
22015012	27200	SUB	National Network Services, LLC		29,621.00	Tele/Data Equipment & Installation
22015012	98003	OVD			146.00	Builders Risk
22015012	98005	OVD			1,259.00	Commercial Insurance
22015012	98301	OVD			1,723.00	SDI
22015012	98600	OVD			199.00	Closeout and Warranty
22015012	99000	FEE			3,601.00	Fee
Stipulated Sum					139,493.00	

Approved:
Saunders Construction, LLC


Anna Gannon
Project Manager

City of Arvada
Kim Vagher

Name	Date
Ohlson Lavoie Corporation	
Bob McDonald	

Name	Date
------	------



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #16

March 5, 2024

Revised 3.13.24

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North Englewood, CO 80112	Address:	7900 Carr Drive Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per Direction per ASI#20 and NNSI Shop drawings

Proposal includes the following;

ASI Power

E1.01 Add dedicated 120V 20A connections for Intrusion control, Access control cabinets in Mech 130
E1.01 Add two duplex receptacles on dedicated circuits in Mech 130
E1.02 Credit for one quad receptacle on dedicated circuit in ceiling of 102A
3/E1.05 Add dedicated 120V 20A connection for intrusion alarm control panel in Elec 111A
3/E1.05 Add dedicated 120V 20A connection for access alarm control panel in Elec 111A
3/E1.05 Add dedicated quad receptacle in Elec 111A for IDF Rack
E6.02 Utilize spare breakers in panel LP1A for new dedicated circuits (no charge)
E6.03 Utilize spare breakers in panel LP1B for new dedicated circuits (no charge)

ASI Power Adds	2,967.16
ASI Power Credit	(807.85)
ASI Power Breakout	2,159.31

ASI Site

T100 Credit for three runs of 1" Sched 80 PVC w/pull string
T100 Credit for three 12" x 13" At-Grade Junction boxes
T100 Add two runs of 4" PVC from IDF room to South Exterior per the plan
T100 Add for two runs of owner-furnished 2" HDPE routed around the South end of the building per plan
T100 Add for two 30" x 17" At-Grade junction boxes
T100 Add for two runs of owner-furnished 2" HDPE routed around the West end of the building per plan

ASI Site Adds	15,112.30
ASI Site Credit	(10,878.58)
ASI Site Breakout	4,233.72

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #16

March 5, 2024

Revised 3.13.24

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North Englewood, CO 80112	Address:	7900 Carr Drive Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per Direction per ASI#20 and NNSI Shop drawings
Proposal includes the following;

ASI 1st Floor West

T101 Add two 2" PVC conduits from Data 118 to Elec 110A
T101 Add two bonded 3" EMT conduits from Data 118 to above accessible ceiling Guards station
T101 Add one 36" x 36" x 8" J box to room 126
T101 Add two 2" PVC conduits in concrete slab from Data 118 to 36" x 36" x 8" J box Room in 126
T101 Add two 2" PVC conduits in concrete slab from J box Room in 126 to NEMA 4X Cabinet (FBO)
TA101 Extend 1" EMT conduit with weathertight compression fittings between three column mounted speakers
TA101 Add two WP bell boxes at conduit stub from pre-cast wall on Gridline A
TA101 Extend 1" conduit above accessible ceilings south of wall on Gridline E for speakers
TA101 Extend 3/4" PVC conduit from AV3 device in pre-cast wall at gridline A3 to Men's 121
TA111Extend 1" EMT conduit with weathertight compression fittings from column mounted speaker on North wall to W
TA111 Extend 1" EMT conduit from ceiling mounted speaker in Mgt 117 to Data 116
TA111 Extend 1" EMT conduit from PS1 om Men's 121 to Mgt 117
TY101 Credit for 1" EMT conduit between REX boxes as shown
TY101 Add Rex, Card Reader, and OC to Jan 119
TY101 Add one REX to 117
TY101 Add one door control to South West entry door
TY101 Credit for two J boxes for IDC's

ASI 1st Floor West Adds	19,444.38
ASI 1st Floor West Credit	(10,019.14)
ASI 1st Floor West Breakout	9,425.24

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #16

March 5, 2024

Revised 3.13.24

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North Englewood, CO 80112	Address:	7900 Carr Drive Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per Direction per ASI#20 and NNSI Shop drawings
Proposal includes the following;

ASI 1st Floor East

T102 Credit for one 2" PVC conduit run from Data 118 to West wall of Staff 102A
T101 Add two bonded 3" EMT conduits continue from Data 118 to above accessible ceiling Guards station
T102 Credit for one 1" PVC conduit run from Lobby desk to West wall of Staff 102A
T 102 Add three 1" PVC conduit runs from lobby desk to South Wall of Staff 102A
T102 Terminate underground conduits into one new patch panel enclosure furnished and installed by others
T102 Add one 4" Square box with conduit stub for data in 110A to serve Intrusion and access panels
TA102 Extend 1" conduit above accessible ceilings south of wall on Gridline E for speakers
TA112 Extend 1" EMT conduit from four ceiling mounted speakers in Lobby 101 to Data 116
TA112 Extend 1" EMT conduit from two ceiling mounted speakers in Vest 100 to Data 116
TA112 Extend 1" EMT conduit from speaker in Corridor 106 to Elec 110
TA112 Extend 1" EMT conduit from speaker in Staff 102A to Elec 110
TA112 Extend 1" EMT conduit from speaker in Party 107 to Elec 110
TA112 Extend 1" EMT conduit from speaker in Unisex 109 to Elec 110
TY102 Credit for 1" EMT conduit between REX boxes as shown
TY101 Credit for three J boxes for IDC's in 110, 107, and 102A
TY102 Add one J box for IDC in 110
TY102 Add Rex, Door contact, and card reader to 107A
TY102 Credit for Card reader, two door contacts and REX outside of 114

ASI 1st Floor East Adds	20,802.51
ASI 1st Floor East Credit	(16,635.63)
ASI 1st Floor East Breakout	4,166.88

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #16

March 5, 2024

Revised 3.13.24

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North Englewood, CO 80112	Address:	7900 Carr Drive Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per Direction per ASI#20 and NNSI Shop drawings
Proposal includes the following;

ASI 2nd Floor West

T103 Key note for J hooks and conduit pathway no charge for T103. Changes will pertain to LV Markup
TA113 Extend 1" EMT conduit from speaker in Women's 213 to accessible ceiling in 121
TA113 Add four wp Bell boxes at speaker locations in Natatorium ceiling
TA113 Extend 1" EMT with weathertight compression fittings from four speaker locations to Mgt 115
TY103 Add REX, Door contact, and card reader at Janitor 212
TA113 Extend 1" EMT with weathertight compression fittings from four speaker locations to Mgt 115

ASI 2nd Floor West Adds	4,080.08
ASI 2nd Floor West Credit	0
ASI 2nd Floor West Breakout	4,080.08

ASI 2nd Floor East

T104 Add one WP Bell box at conduit out of precast wall for WAP at gridline A-8
T104 Extend 1" EMT conduit with weathertight compression fittings from WAP at A7 to box A80
T104 Add one 24" x 24" x 4" NEMA 1 Junction box in Office 103
T104 Extend 1" EMT conduit with weathertight compression fittings from WAP at A8 to J box in 103
T104 Extend 1" EMT conduit from J box in 103 to Elec 110A
TA114 Add two wp Bell boxes at speaker locations in Natatorium ceiling
TA114 Extend 1" EMT conduit from speaker in Unisex 205 to accessible ceiling in 114
TY104 Add REX, Door contact, and card reader at Janitor 206

ASI 2nd Floor East Adds	8,472.16
ASI 2nd Floor East Credit	0
ASI 2nd Floor East Breakout	8,472.16

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #16

March 5, 2024

Revised 3.13.24

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North Englewood, CO 80112	Address:	7900 Carr Drive Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per Direction per ASI#20 and NNSI Shop drawings
Proposal includes the following;

NNSI First Floor West

Add Four runs of 3/4" PVC conduit with pull string through slab to four door openings
Add five WP bell boxes at weatherproof data locations
Extend 1" EMT conduit with weathertight compression fittings between the bell boxes
Add twenty one junction boxes with single gang rings for PIR sensors
Add thirteen 12" x 12" Junction boxes for ACS
Add one 8" x 8" x 36" Gutter
Add one 8" x 8" x 72" Gutter
Extend 1" EMT conduit with between security devices per plans
Extend 1" PVC conduit with between security devices in corrosive environment rms 127, 128 and 129 per plans

NNSI 1st Floor West Overhead	18,584.77
NNSI 1st Floor West Underfloor	3,324.25
NNSI 1st Floor West Breakout	21,909.02

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #16

March 5, 2024

Revised 3.13.24

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North Englewood, CO 80112	Address:	7900 Carr Drive Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per Direction per ASI#20 and NNSI Shop drawings
Proposal includes the following;

NNSI First Floor East

Add three bonded runs of 4" EMT conduit from Elec 110 to corridor
Add one 8" x 8" x 36" Gutter
Add one 8" x 8" x 72" Gutter
Add fourteen 12" x 12" Junction boxes for ACS
Add two junction boxes with single gang rings for PIR sensors
WAP bell box and conduit scope captured in ASI revisions
Underfloor data conduits to lobby desk captured in ASI revisions
Add Four runs of 3/4" PVC conduit with pull string through slab to four door openings
Add six runs of 1" PVC conduit with pull string through slab to lobby and vestibule device locations

NNSI 1st Floor East Overhead	10,598.40
NNSI 1st Floor East Underfloor	3,779.61
NNSI 1st Floor East Breakout	14,378.01

NNSI Second Floor West

Add three WP bell boxes at weatherproof data locations
Extend 1" EMT conduit with weathertight compression fittings between the bell boxes
Extend two runs of 1" EMT conduit from 130 to Stairwell Camera, and Janitor

NNSI 2nd Floor West Breakout	6,602.55
-------------------------------------	-----------------

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____

Title: _____

Date: _____



285 COMMANDER DRIVE
ERIE, CO 80516

ESTABLISHED 2004

ADDITIONAL WORK AUTHORIZATION - #16

March 5, 2024

Revised 3.13.24

Customer:	Saunders Construction, Inc.	Job Name:	Meyers Pool
Address:	86 Inverness Place North Englewood, CO 80112	Address:	7900 Carr Drive Arvada, CO 80005
Phone:	303.699.9000		
Contact:	Robert Burd		

Kennedy Electric, Inc. hereby proposes to furnish the materials and perform the labor necessary for the completion of the following. Work to be scheduled upon acceptance:

Provide and install the following electrical per Direction per ASI#20 and NNSI Shop drawings
Proposal includes the following;

NNSI Second Floor East

Add two WP bell boxes at weatherproof data locations
Extend 1" EMT conduit with weathertight compression fittings between the bell boxes
Extend two runs of 1" EMT conduit from 115 to Stairwell Camera, and Janitor

NNSI 2nd Floor East Breakout 6,797.22

Note: Many of the omitted Low voltage J boxes are already installed in the pre-cast concrete walls. All design changes to be coordinated and finalized with delegated design contractors affected by this scope.

Material: \$	30,158.56
Labor: \$	39,258.18
Overhead: \$	6,941.67
Profit: \$	3,470.84
Bond @ 3.0 % \$	2,394.88
TOTAL ADDITIONAL WORK AUTHORIZATION AMOUNT: \$	82,224.00

All work to be performed in accordance with the drawings and specifications submitted to Kennedy Electric, Inc.

Price subject to change within thirty days of the above Additional Work Authorization date.

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and hereby accepted. You are authorized to perform the above work as specified.

Payments will be made in accordance with the following: **Net Terms 30 days**

Signature: _____ Title: _____ Date: _____

Meyers Pool AWA#16 3.13.24
Totals (Detailed) - Bid Summary: Default

Job Number 4423
Bid Date 3/1/2024
Bid Time 12:00:00 PM
Square Footage 0

Material Totals			
Division	Total	Factor	Extended
1st fl W Underslab	\$1,276.88	0.00 %	\$1,276.88
1st fl W Overhead	6,453.98	0.00 %	6,453.98
1st fl E Underslab	1,343.07	0.00 %	1,343.07
1st fl E Overhead	5,627.08	0.00 %	5,627.08
2nd fl E	2,064.67	0.00 %	2,064.67
2nd fl W	2,279.41	0.00 %	2,279.41
ASI site	4,856.86	0.00 %	4,856.86
ASI 1st fl W	7,737.41	0.00 %	7,737.41
ASI 1st fl E	8,490.09	0.00 %	8,490.09
ASI 2nd fl W	1,266.01	0.00 %	1,266.01
ASI 2nd fl E	3,140.20	0.00 %	3,140.20
ASI Power	721.90	0.00 %	721.90
ASI Site Credit	-6,833.97	0.00 %	-6,833.97
ASI 1st FL East Credit	-7,919.10	0.00 %	-7,919.10
ASI 1st W Credit	-3,163.89	0.00 %	-3,163.89
ASI Power Credit	-182.04	0.00 %	-182.04
Total	\$27,158.56		\$27,158.56

Quoted Material			
T0004 - At-Grade J Box 30" x 17"	2.00	\$1,500.00	\$3,000.00
28 - J boxes (Supplier #1)			\$3,000.00
Total			\$3,000.00
Sales Tax (0.00%)			\$0.00
Total Material			\$30,158.56

Labor Hours			
Division	Total	Factor	Extended
1st fl W Underslab	19.61	0.00 %	19.61
1st fl W Overhead	118.41	0.00 %	118.41
1st fl E Underslab	23.69	0.00 %	23.69
1st fl E Overhead	42.57	0.00 %	42.57
2nd fl E	47.10	0.00 %	47.10
2nd fl W	42.24	0.00 %	42.24
ASI site	62.84	0.00 %	62.84
ASI 1st fl W	111.26	0.00 %	111.26
ASI 1st fl E	116.31	0.00 %	116.31
ASI 2nd fl W	27.93	0.00 %	27.93
ASI 2nd fl E	51.44	0.00 %	51.44

Meyers Pool AWA#16 3.13.24
Totals (Detailed) - Bid Summary: Default

ASI Power	22.86	0.00 %	22.86
ASI Site Credit	-30.13	0.00 %	-30.13
ASI 1st FL East Credit	-78.53	0.00 %	-78.53
ASI 1st W Credit	-67.88	0.00 %	-67.88
ASI Power Credit	-6.41	0.00 %	-6.41
Total	503.31		503.31

Category	Labor Rates		Base Rate	Burden \$	Burden %	Extended
	% of Total	Hours				
Journeyman	100.000	503.310	\$78.00	0.00	0.000	\$39,258.18
Total	100.000	503.310	x \$78.00 (average of labor rate w/burden) =			\$39,258.18

Non-Productive Labor					
Description	Hours	Rate	Factor	Extended	
Total				\$0.00	
Total Labor (503.31 hours)				\$39,258.18	
Job Subtotal (Prime Cost)				\$69,416.74	
Overhead (10.00%)				6,941.67	
Profit (5.00%)				3,470.84	
Job Total				\$79,829.25	
Bond				2,394.88	
Job Total with Bond				\$82,224.13	
Actual Bid Price				\$82,224.13	

Material to Direct Labor ratio: 0.43	
Prime Cost per square foot	\$0.00
Job Total per square foot	\$0.00
Actual Bid Price per square ft	\$0.00
Labor cost per square foot	\$0.00
Labor hours per square foot	0.00
Gross Profit %	15.58
Gross Profit \$	\$12,807.39
Net Profit %	7.13

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Meyers Pool AWA#16 3.13.24

Job Number: 4423

Extension By Breakdown, And Subtotals By Phase

Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	U	Ext Lab Hr
--- 1st fl W Underslab ---								
--- 01 Raceway, Fittings & Boxes ---								
1349	1" GRC Elbow	16	2,058.74	C	329.40	0.41	E	6.56
1588	1" Locknut	16	53.05	C	8.49	0.09	E	1.44
	--- 01 Raceway, Fittings & Boxes Total ---				337.89			8.00
--- 06 Underground/Site ---								
2062	1" PVC Male Adaptor	16	77.47	C	12.40	0.07	E	1.12
2116	1" PVC Coupling	16	49.11	C	7.86	0.05	E	0.80
8172	1" PVC (Schedule-80)	381	240.24	C	915.72	2.30	C	8.77
	--- 06 Underground/Site Total ---				935.98			10.69
--- 07 Misc ---								
3107	1/8" Poly Pull Line	400	7.53	M	3.01	2.30	M	0.92
	--- 07 Misc Total ---				3.01			0.92
	--- 1st fl W Underslab Total ---				1,276.88			19.61
--- 1st fl W Overhead ---								
--- 01 Raceway, Fittings & Boxes ---								
1002	1" EMT	1,171	264.30	C	3,094.58	3.16	C	37.00
1458	1" Set Screw Steel Insul Throat Conn	0	138.62	C	0.00	0.08	E	0.00
1558	1" Set Screw Steel Cplg	109	89.50	C	97.45	0.08	E	8.71
1588	1" Locknut	14	53.05	C	7.43	0.09	E	1.26
2357	1" Conduit Hanger w/Bolt	146	79.02	C	115.65	14.38	C	21.05
2572	4" Square x 1-1/2" Deep Box w/bkt (1/2&3/4 KO's)	21	374.06	C	78.55	0.23	E	4.83
2589	2G WP Bell Box-(4)1" Hubs	5	1,423.19	C	71.16	0.57	E	2.90
6411	8"x8"x3' Wireway-Nema 1	1	375.70	E	375.70	0.35	E	0.35
6414	8"x8"x6' Wireway-Nema 1	1	531.69	E	531.69	0.66	E	0.66
1243434	1" EMT Weathertight Compression Steel Connector	26	455.71	C	118.48	0.17	E	4.42
1243454	1" EMT Weathertight Compression Steel Coupling	117	466.24	C	545.50	0.18	E	21.06
	--- 01 Raceway, Fittings & Boxes Total ---				5,036.19			102.24
--- 05 Wiring Device & Covers ---								
4791	4" Square Flat Blank Cover w/KO	21	138.61	C	29.11	0.08	E	1.68
	--- 05 Wiring Device & Covers Total ---				29.11			1.68
--- 06 Underground/Site ---								
2062	1" PVC Male Adaptor	14	77.47	C	10.85	0.07	E	0.98
8172	1" PVC (Schedule-80)	191	240.24	C	459.22	2.30	C	4.40
	--- 06 Underground/Site Total ---				470.07			5.38
--- 07 Misc ---								
3107	1/8" Poly Pull Line	1,430	7.53	M	10.77	2.30	M	3.29
6839	Red Wirenuts	63	60.65	M	3.82	2.01	C	1.27
1242072	12" X 12" X 4" PVC Junction Box	13	69.54	E	904.02	0.35	E	4.55
	--- 07 Misc Total ---				918.61			9.11
	--- 1st fl W Overhead Total ---				6,453.98			118.41
--- 1st fl E Underslab ---								
--- 01 Raceway, Fittings & Boxes ---								
1348	3/4" GRC Elbow	8	1,342.65	C	107.41	0.35	E	2.80

* Target, Labor column 2

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Meyers Pool AWA#16 3.13.24

Job Number: 4423

Extension By Breakdown, And Subtotals By Phase

Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	U	Ext Lab Hr
1349	1" GRC Elbow	8	2,058.74	C	164.70	0.41	E	3.28
1587	3/4" Locknut	2	25.23	C	0.50	0.08	E	0.16
1588	1" Locknut	12	53.05	C	6.37	0.09	E	1.08
	--- 01 Raceway, Fittings & Boxes Total ---				278.98			7.32
	--- 06 Underground/Site ---							
1188	3/4" PVC Conduit	369	92.66	C	342.07	1.73	C	6.39
2061	3/4" PVC Male Adaptor	2	56.39	C	1.13	0.10	E	0.20
2062	1" PVC Male Adaptor	12	77.47	C	9.30	0.07	E	0.84
2115	3/4" PVC Coupling	8	29.12	C	2.33	0.03	E	0.24
2116	1" PVC Coupling	8	49.11	C	3.93	0.05	E	0.40
8172	1" PVC (Schedule-80)	291	240.24	C	700.11	2.30	C	6.70
	--- 06 Underground/Site Total ---				1,058.87			14.77
	--- 07 Misc ---							
3107	1/8" Poly Pull Line	694	7.53	M	5.22	2.30	M	1.60
	--- 07 Misc Total ---				5.22			1.60
	--- 1st fl E Underslab Total ---				1,343.07			23.69
	--- 1st fl E Overhead ---							
	--- 01 Raceway, Fittings & Boxes ---							
1002	1" EMT	83	264.30	C	220.00	3.16	C	2.63
1009	4" EMT	59	1,500.64	C	881.63	8.05	C	4.73
1346	4" EMT Elbow	4	121.26	E	485.04	0.98	E	3.92
1458	1" Set Screw Steel Insul Throat Conn	0	138.62	C	0.00	0.08	E	0.00
1558	1" Set Screw Steel Cplg	8	89.50	C	7.45	0.08	E	0.67
1651	4" Grounding Bushing	6	45.97	E	275.82	1.20	E	7.20
2357	1" Conduit Hanger w/Bolt	10	79.02	C	8.22	14.38	C	1.50
2364	4" Conduit Hanger w/Bolt	7	690.30	C	50.69	23.00	C	1.69
2572	4" Square x 1-1/2" Deep Box w/bkt (1/2&3/4 KO's)	2	374.06	C	7.48	0.23	E	0.46
2589	2G WP Bell Box-(4)1" Hubs	0	1,423.19	C	0.00	0.57	E	0.00
6411	8"x8"x3' Wireway-Nema 1	1	375.70	E	375.70	0.35	E	0.35
6414	8"x8"x6' Wireway-Nema 1	1	531.69	E	531.69	0.66	E	0.66
1243451	4" EMT Weathertight Compression Insul Throat Steel	2	25.67	E	51.34	0.75	E	1.50
1243461	4" EMT Weathertight Compression Steel Coupling	10	11,907.76	C	1,175.89	0.67	E	6.62
	--- 01 Raceway, Fittings & Boxes Total ---				4,070.95			31.93
	--- 02 Wire & Cable ---							
3117	#6 Solid Bare Copper Wire	75	819.37	M	61.45	25.30	M	1.90
	--- 02 Wire & Cable Total ---				61.45			1.90
	--- 05 Wiring Device & Covers ---							
4773	1G WP Blank Cover	3	101.55	C	3.05	0.14	E	0.42
4791	4" Square Flat Blank Cover w/KO	2	138.61	C	2.77	0.08	E	0.16
	--- 05 Wiring Device & Covers Total ---				5.82			0.58
	--- 07 Misc ---							
3107	1/8" Poly Pull Line	149	7.53	M	1.12	2.30	M	0.34
6685	1-1/2-4" Ground Clamp	8	6,422.70	C	513.82	0.35	E	2.80
6839	Red Wirenuts	6	60.65	M	0.36	2.01	C	0.12
1242072	12" X 12" X 4" PVC Junction Box	14	69.54	E	973.56	0.35	E	4.90
	--- 07 Misc Total ---				1,488.86			8.16

* Target, Labor column 2

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Meyers Pool AWA#16 3.13.24

Job Number: 4423

Extension By Breakdown, And Subtotals By Phase

Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	U	Ext Lab Hr
--- 1st fl E Overhead Total ---					5,627.08			42.57
--- 2nd fl E ---								
--- 01 Raceway, Fittings & Boxes ---								
1002	1" EMT	608	264.30	C	1,606.86	3.16	C	19.21
1458	1" Set Screw Steel Insul Throat Conn	22	138.62	C	30.50	0.08	E	1.76
1558	1" Set Screw Steel Cplg	48	89.50	C	43.05	0.08	E	3.85
1600	1" Plastic Bushing	2	34.63	C	0.69	0.09	E	0.18
2357	1" Conduit Hanger w/Bolt	75	79.02	C	59.06	14.38	C	10.75
2578	4-11/16" Square Box Box (Deep)	1	485.28	C	4.85	0.25	E	0.25
2589	2G WP Bell Box-(4)1" Hubs	2	1,423.19	C	28.46	0.57	E	1.16
2765	4-11/16"-2G Plaster Ring-3/4"D	1	477.44	C	4.77	0.09	E	0.09
1243434	1" EMT Weathertight Compression Steel Connector	22	455.71	C	100.26	0.17	E	3.74
1243454	1" EMT Weathertight Compression Steel Coupling	24	466.24	C	111.90	0.18	E	4.32
--- 01 Raceway, Fittings & Boxes Total ---					1,990.40			45.31
--- 07 Misc ---								
3107	1/8" Poly Pull Line	628	7.53	M	4.73	2.30	M	1.44
1242072	12" X 12" X 4" PVC Junction Box	1	69.54	E	69.54	0.35	E	0.35
--- 07 Misc Total ---					74.27			1.79
--- 2nd fl E Total ---					2,064.67			47.10
--- 2nd fl W ---								
--- 01 Raceway, Fittings & Boxes ---								
1002	1" EMT	457	264.30	C	1,208.72	3.16	C	14.45
1458	1" Set Screw Steel Insul Throat Conn	4	138.62	C	5.54	0.08	E	0.32
1558	1" Set Screw Steel Cplg	30	89.50	C	26.61	0.08	E	2.38
1600	1" Plastic Bushing	4	34.63	C	1.39	0.09	E	0.36
2357	1" Conduit Hanger w/Bolt	55	79.02	C	43.20	14.38	C	7.86
2578	4-11/16" Square Box Box (Deep)	2	485.28	C	9.71	0.25	E	0.50
2589	2G WP Bell Box-(4)1" Hubs	3	1,423.19	C	42.70	0.57	E	1.74
2765	4-11/16"-2G Plaster Ring-3/4"D	2	477.44	C	9.55	0.09	E	0.18
1243444	1" EMT Weathertight Compression Insul Throat Steel	22	2,844.90	C	625.88	0.17	E	3.74
1243454	1" EMT Weathertight Compression Steel Coupling	44	466.24	C	205.15	0.18	E	7.92
--- 01 Raceway, Fittings & Boxes Total ---					2,178.45			39.45
--- 07 Misc ---								
3107	1/8" Poly Pull Line	459	7.53	M	3.46	2.30	M	1.06
16546776	12"x 12" x 6" NEMA 1 Steel Box	1	97.50	E	97.50	1.73	E	1.73
--- 07 Misc Total ---					100.96			2.79
--- 2nd fl W Total ---					2,279.41			42.24
--- ASI site ---								
--- 01 Raceway, Fittings & Boxes ---								
1595	4" Locknut	4	806.44	C	32.26	0.33	E	1.32
--- 01 Raceway, Fittings & Boxes Total ---					32.26			1.32
--- 06 Underground/Site ---								
1196	4" PVC Conduit	58	717.60	C	417.07	4.60	C	2.67
2069	4" PVC Male Adaptor	4	505.43	C	20.22	0.51	E	2.04
1243392	6"Wx24"D Trench-Ditch Witch	397	11.05	E	4,386.85	1.15	C	4.57

* Target, Labor column 2

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Meyers Pool AWA#16 3.13.24

Job Number: 4423

Extension By Breakdown, And Subtotals By Phase

Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	U	Ext Lab Hr
--- 06 Underground/Site Total ---					4,824.14			9.28
--- 07 Misc ---								
3107	1/8" Poly Pull Line	61	7.53	M	0.46	2.30	M	0.14
T0003	2" HDPE Conduit Furnished by owner	917	0.00	E	0.00	5.18	C	47.50
T0004	At-Grade J Box 30" x 17"	2	QUOTE	28	0.00	2.30	E	4.60
--- 07 Misc Total ---					0.46			52.24
--- ASI site Total ---					4,856.86			62.84
--- ASI 1st fl W ---								
--- 01 Raceway, Fittings & Boxes ---								
1002	1" EMT	626	264.30	C	1,654.70	3.16	C	19.78
1007	3" EMT	27	1,153.62	C	311.13	6.33	C	1.71
1344	3" EMT Elbow	12	76.91	E	922.92	0.69	E	8.28
1458	1" Set Screw Steel Insul Throat Conn	20	138.62	C	27.72	0.08	E	1.60
1558	1" Set Screw Steel Cplg	36	89.50	C	31.87	0.08	E	2.85
1591	2" Locknut	10	161.31	C	16.13	0.17	E	1.70
1600	1" Plastic Bushing	6	34.63	C	2.08	0.09	E	0.54
1649	3" Grounding Bushing	4	3,458.50	C	138.34	0.89	E	3.56
2357	1" Conduit Hanger w/Bolt	75	79.02	C	58.88	14.38	C	10.71
2360	2" Conduit Hanger w/Bolt	71	141.23	C	100.45	11.50	C	8.18
2362	3" Conduit Hanger w/Bolt	3	219.86	C	7.41	17.25	C	0.58
2578	4-11/16" Square Box Box (Deep)	3	485.28	C	14.56	0.25	E	0.75
2582	1G WP Bell Box-(4)3/4" Hubs	3	532.83	C	15.98	0.85	E	2.55
2765	4-11/16"-2G Plaster Ring-3/4"D	3	477.44	C	14.32	0.09	E	0.27
1243434	1" EMT Weathertight Compression Steel Connector	10	455.71	C	45.57	0.17	E	1.70
1243439	3" EMT Weathertight Compression Steel Connector	6	5,159.20	C	309.55	0.57	E	3.48
1243454	1" EMT Weathertight Compression Steel Coupling	24	466.24	C	111.90	0.18	E	4.32
1243459	3" EMT Weathertight Compression Steel Coupling	15	7,296.55	C	1,072.37	0.46	E	6.76
--- 01 Raceway, Fittings & Boxes Total ---					4,855.88			79.32
--- 02 Wire & Cable ---								
3117	#6 Solid Bare Copper Wire	75	819.37	M	61.45	25.30	M	1.90
--- 02 Wire & Cable Total ---					61.45			1.90
--- 06 Underground/Site ---								
1192	2" PVC Conduit	569	294.84	C	1,677.64	2.88	C	16.39
2065	2" PVC Male Adaptor	10	166.27	C	16.63	0.18	E	1.80
8172	1" PVC (Schedule-80)	121	240.24	C	291.48	2.30	C	2.79
--- 06 Underground/Site Total ---					1,985.75			20.98
--- 07 Misc ---								
3107	1/8" Poly Pull Line	1,379	7.53	M	10.38	2.30	M	3.17
6685	1-1/2-4" Ground Clamp	2	6,422.70	C	128.45	0.35	E	0.70
16546776	12"x 12" x 6" NEMA 1 Steel Box	2	97.50	E	195.00	1.73	E	3.46
T0001	36" x 36" x 8" NEMA 1 Junction box	1	500.50	E	500.50	1.73	E	1.73
--- 07 Misc Total ---					834.33			9.06
--- ASI 1st fl W Total ---					7,737.41			111.26
--- ASI 1st fl E ---								
--- 01 Raceway, Fittings & Boxes ---								

* Target, Labor column 2

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Meyers Pool AWA#16 3.13.24

Job Number: 4423

Extension By Breakdown, And Subtotals By Phase

Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	U	Ext Lab Hr
1001	3/4" EMT	10	150.93	C	15.09	2.99	C	0.30
1002	1" EMT	857	264.30	C	2,265.00	3.16	C	27.08
1007	3" EMT	95	1,153.62	C	1,092.13	6.33	C	5.99
1344	3" EMT Elbow	12	76.91	E	922.92	0.69	E	8.28
1427	3/4" Set Screw Die Cast Conn	1	72.25	C	0.72	0.07	E	0.07
1458	1" Set Screw Steel Insul Throat Conn	20	138.62	C	27.72	0.08	E	1.60
1558	1" Set Screw Steel Cplg	78	89.50	C	69.45	0.08	E	6.21
1588	1" Locknut	4	53.05	C	2.12	0.09	E	0.36
1599	3/4" Plastic Bushing	1	19.88	C	0.20	0.08	E	0.08
1600	1" Plastic Bushing	4	34.63	C	1.39	0.09	E	0.36
1649	3" Grounding Bushing	2	3,458.50	C	69.17	0.89	E	1.78
2279	3/4" 1-Hole Strap	1	32.42	C	0.32	2.63	C	0.03
2357	1" Conduit Hanger w/Bolt	105	79.02	C	82.67	14.38	C	15.04
2360	2" Conduit Hanger w/Bolt	61	141.23	C	85.69	11.50	C	6.98
2362	3" Conduit Hanger w/Bolt	12	219.86	C	26.02	17.25	C	2.04
2572	4" Square x 1-1/2" Deep Box w/bkt (1/2&3/4 KO's)	3	374.06	C	11.22	0.23	E	0.69
2578	4-11/16" Square Box Box (Deep)	2	485.28	C	9.71	0.25	E	0.50
2731	4" Square-1G Plaster Ring-5/8"D	1	134.16	C	1.34	0.08	E	0.08
2765	4-11/16"-2G Plaster Ring-3/4"D	2	477.44	C	9.55	0.09	E	0.18
1243434	1" EMT Weathertight Compression Steel Connector	2	455.71	C	9.11	0.17	E	0.34
1243439	3" EMT Weathertight Compression Steel Connector	6	5,159.20	C	309.55	0.57	E	3.48
1243454	1" EMT Weathertight Compression Steel Coupling	6	466.24	C	28.44	0.18	E	1.10
1243459	3" EMT Weathertight Compression Steel Coupling	21	7,296.55	C	1,566.35	0.46	E	9.87
--- 01 Raceway, Fittings & Boxes Total ---					6,605.88			92.44
--- 02 Wire & Cable ---								
3117	#6 Solid Bare Copper Wire	75	819.37	M	61.45	25.30	M	1.90
--- 02 Wire & Cable Total ---					61.45			1.90
--- 05 Wiring Device & Covers ---								
4791	4" Square Flat Blank Cover w/KO	2	138.61	C	2.77	0.08	E	0.16
--- 05 Wiring Device & Covers Total ---					2.77			0.16
--- 06 Underground/Site ---								
1192	2" PVC Conduit	485	294.84	C	1,431.06	2.88	C	13.98
2062	1" PVC Male Adaptor	4	77.47	C	3.10	0.07	E	0.28
8172	1" PVC (Schedule-80)	62	240.24	C	147.75	2.30	C	1.41
--- 06 Underground/Site Total ---					1,581.91			15.67
--- 07 Misc ---								
3107	1/8" Poly Pull Line	1,562	7.53	M	11.77	2.30	M	3.59
6685	1-1/2-4" Ground Clamp	2	6,422.70	C	128.45	0.35	E	0.70
6839	Red Wirenuts	6	60.65	M	0.36	2.01	C	0.12
16546776	12"x 12" x 6" NEMA 1 Steel Box	1	97.50	E	97.50	1.73	E	1.73
--- 07 Misc Total ---					238.08			6.14
--- ASI 1st fl E Total ---					8,490.09			116.31
--- ASI 2nd fl W ---								
--- 01 Raceway, Fittings & Boxes ---								
1002	1" EMT	276	264.30	C	728.60	3.16	C	8.71
1458	1" Set Screw Steel Insul Throat Conn	8	138.62	C	11.09	0.08	E	0.64
1558	1" Set Screw Steel Cplg	10	89.50	C	9.28	0.08	E	0.83

* Target, Labor column 2

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Meyers Pool AWA#16 3.13.24

Job Number: 4423

Extension By Breakdown, And Subtotals By Phase

Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	U	Ext Lab Hr
2357	1" Conduit Hanger w/Bolt	34	79.02	C	27.23	14.38	C	4.96
2582	1G WP Bell Box-(4)3/4" Hubs	4	532.83	C	21.31	0.85	E	3.40
1243444	1" EMT Weathertight Compression Insul Throat Steel	10	2,844.90	C	284.49	0.17	E	1.70
1243454	1" EMT Weathertight Compression Steel Coupling	39	466.24	C	181.83	0.18	E	7.02
--- 01 Raceway, Fittings & Boxes Total ---					1,263.83			27.26
--- 07 Misc ---								
3107	1/8" Poly Pull Line	289	7.53	M	2.18	2.30	M	0.67
--- 07 Misc Total ---					2.18			0.67
--- ASI 2nd fl W Total ---					1,266.01			27.93
--- ASI 2nd fl E ---								
--- 01 Raceway, Fittings & Boxes ---								
1002	1" EMT	528	264.30	C	1,394.84	3.16	C	16.68
1458	1" Set Screw Steel Insul Throat Conn	22	138.62	C	30.50	0.08	E	1.76
1558	1" Set Screw Steel Cplg	16	89.50	C	14.48	0.08	E	1.29
1600	1" Plastic Bushing	4	34.63	C	1.39	0.09	E	0.36
2357	1" Conduit Hanger w/Bolt	63	79.02	C	50.15	14.38	C	9.13
2578	4-11/16" Square Box Box (Deep)	2	485.28	C	9.71	0.25	E	0.50
2582	1G WP Bell Box-(4)3/4" Hubs	3	532.83	C	15.98	0.85	E	2.55
2765	4-11/16"-2G Plaster Ring-3/4"D	2	477.44	C	9.55	0.09	E	0.18
1243434	1" EMT Weathertight Compression Steel Connector	8	455.71	C	36.46	0.17	E	1.36
1243444	1" EMT Weathertight Compression Insul Throat Steel	22	2,844.90	C	625.88	0.17	E	3.74
1243454	1" EMT Weathertight Compression Steel Coupling	35	466.24	C	161.32	0.18	E	6.23
1243639	Core Drill Concrete	1	325.00	E	325.00	2.69	E	2.69
--- 01 Raceway, Fittings & Boxes Total ---					2,675.26			46.47
--- 05 Wiring Device & Covers ---								
4773	1G WP Blank Cover	2	101.55	C	2.03	0.14	E	0.28
--- 05 Wiring Device & Covers Total ---					2.03			0.28
--- 07 Misc ---								
3107	1/8" Poly Pull Line	533	7.53	M	4.01	2.30	M	1.23
16546776	12"x 12" x 6" NEMA 1 Steel Box	1	97.50	E	97.50	1.73	E	1.73
T0002	24" x 24" x 4" NEMA 1 Junction box	1	361.40	E	361.40	1.73	E	1.73
--- 07 Misc Total ---					462.91			4.69
--- ASI 2nd fl E Total ---					3,140.20			51.44
--- ASI Power ---								
--- 01 Raceway, Fittings & Boxes ---								
1001	3/4" EMT	123	150.93	C	185.01	2.99	C	3.67
1002	1" EMT	42	264.30	C	110.56	3.16	C	1.32
1121	1/2" Steel Flex	20	125.11	C	25.02	2.01	C	0.40
1457	3/4" Set Screw Steel Insul Throat Conn	12	94.58	C	11.35	0.07	E	0.84
1458	1" Set Screw Steel Insul Throat Conn	2	138.62	C	2.77	0.08	E	0.16
1557	3/4" Set Screw Steel Cplg	12	49.55	C	6.07	0.07	E	0.86
1558	1" Set Screw Steel Cplg	4	89.50	C	3.74	0.08	E	0.33
1885	1/2" Die-Cast Straight Squeeze Flex Conn	4	250.48	C	10.02	0.09	E	0.36
1910	1/2" Greenfield Conn 90D	4	8.48	E	33.92	0.14	E	0.56
2356	3/4" Conduit Hanger w/Bolt	15	61.85	C	9.48	14.38	C	2.20
2357	1" Conduit Hanger w/Bolt	5	79.02	C	4.13	14.38	C	0.75

* Target, Labor column 2

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Meyers Pool AWA#16 3.13.24

Job Number: 4423

Extension By Breakdown, And Subtotals By Phase

Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	U	Ext Lab Hr
2571	4" Square Box (1/2 & 3/4 KO's)	3	420.40	C	12.61	0.21	E	0.63
	--- 01 Raceway, Fittings & Boxes Total ---				414.68			12.08
	--- 02 Wire & Cable ---							
2790	#12 THHN CU Stranded Wire	801	200.44	M	160.63	6.33	M	5.07
2791	#10 THHN CU Stranded Wire	395	306.55	M	121.18	6.90	M	2.73
4367	#14-12-10 Wire Termination Labor	12	0.00	E	0.00	0.12	E	1.44
	--- 02 Wire & Cable Total ---				281.81			9.24
	--- 05 Wiring Device & Covers ---							
4511	20A/125V Spec Grade Dup Rcpt (5-20R)	4	2.38	E	9.52	0.17	E	0.68
4717	4" Square 1G Ind Dup Rcpt Cover	2	306.09	C	6.12	0.08	E	0.16
4721	4" Square-2G Ind Dup Rcpt Cover	1	281.78	C	2.82	0.12	E	0.12
8261	Grndscr&Bare Pigtail	3	1.77	E	5.31	1.38	C	0.04
	--- 05 Wiring Device & Covers Total ---				23.77			1.00
	--- 07 Misc ---							
6839	Red Wirenuts	21	60.65	M	1.27	2.01	C	0.42
8918	6X1/4" Pan Head Tapping Screw	12	3.07	C	0.37	0.01	E	0.12
	--- 07 Misc Total ---				1.64			0.54
	--- ASI Power Total ---				721.90			22.86
	--- ASI Site Credit ---							
	--- 01 Raceway, Fittings & Boxes ---							
1588	1" Locknut	-6	53.05	C	-3.18	0.09	E	-0.54
2280	1" 1-Hole Strap	-84	34.49	C	-28.89	2.63	C	-2.20
	--- 01 Raceway, Fittings & Boxes Total ---				-32.07			-2.74
	--- 06 Underground/Site ---							
2062	1" PVC Male Adaptor	-6	77.47	C	-4.65	0.07	E	-0.42
8172	1" PVC (Schedule-80)	-670	240.24	C	-1,609.61	2.30	C	-15.41
1243392	6"Wx24"D Trench-Ditch Witch	-202	11.05	E	-2,232.10	1.15	C	-2.32
	--- 06 Underground/Site Total ---				-3,846.36			-18.15
	--- 07 Misc ---							
3108	3/16" Pull Line	-704	43.41	M	-30.54	5.75	M	-4.05
T0005	At-Grade J Box 12" x 13"	-3	975.00	E	-2,925.00	1.73	E	-5.19
	--- 07 Misc Total ---				-2,955.54			-9.24
	--- ASI Site Credit Total ---				-6,833.97			-30.13
	--- ASI 1st FL East Credit ---							
	--- 01 Raceway, Fittings & Boxes ---							
1002	1" EMT	-1,124	264.30	C	-2,970.73	3.16	C	-35.52
1458	1" Set Screw Steel Insul Throat Conn	-16	138.62	C	-22.18	0.08	E	-1.28
1558	1" Set Screw Steel Cplg	-109	89.50	C	-97.91	0.08	E	-8.75
1591	2" Locknut	-2	161.31	C	-3.23	0.17	E	-0.34
1600	1" Plastic Bushing	-6	34.63	C	-2.08	0.09	E	-0.54
2357	1" Conduit Hanger w/Bolt	-137	79.02	C	-108.06	14.38	C	-19.66
2572	4" Square x 1-1/2" Deep Box w/bkt (1/2&3/4 KO's)	-2	374.06	C	-7.48	0.23	E	-0.46
2578	4-11/16" Square Box Box (Deep)	-3	485.28	C	-14.56	0.25	E	-0.75
2765	4-11/16"-2G Plaster Ring-3/4"D	-3	477.44	C	-14.32	0.09	E	-0.27

* Target, Labor column 2

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Meyers Pool AWA#16 3.13.24

Job Number: 4423

Extension By Breakdown, And Subtotals By Phase

Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	U	Ext Lab Hr
--- 01 Raceway, Fittings & Boxes Total ---					-3,240.55			-67.57
--- 05 Wiring Device & Covers ---								
4791	4" Square Flat Blank Cover w/KO	-2	138.61	C	-2.77	0.08	E	-0.16
--- 05 Wiring Device & Covers Total ---					-2.77			-0.16
--- 06 Underground/Site ---								
2065	2" PVC Male Adaptor	-2	166.27	C	-3.33	0.18	E	-0.36
8175	2" PVC (Schedule-80)	-175	2,608.32	C	-4,564.56	3.16	C	-5.53
--- 06 Underground/Site Total ---					-4,567.89			-5.89
--- 07 Misc ---								
3107	1/8" Poly Pull Line	-1,332	7.53	M	-10.03	2.30	M	-3.06
6839	Red Wirenuts	-6	60.65	M	-0.36	2.01	C	-0.12
16546776	12"x 12" x 6" NEMA 1 Steel Box	-1	97.50	E	-97.50	1.73	E	-1.73
--- 07 Misc Total ---					-107.89			-4.91
--- ASI 1st FL East Credit Total ---					-7,919.10			-78.53
--- ASI 1st W Credit ---								
--- 01 Raceway, Fittings & Boxes ---								
1002	1" EMT	-1,106	264.30	C	-2,922.50	3.16	C	-34.94
1458	1" Set Screw Steel Insul Throat Conn	-10	138.62	C	-13.86	0.08	E	-0.80
1558	1" Set Screw Steel Cplg	-111	89.50	C	-98.96	0.08	E	-8.85
2357	1" Conduit Hanger w/Bolt	-138	79.02	C	-109.22	14.38	C	-19.88
2572	4" Square x 1-1/2" Deep Box w/bkt (1/2&3/4 KO's)	-2	374.06	C	-7.48	0.23	E	-0.46
--- 01 Raceway, Fittings & Boxes Total ---					-3,152.02			-64.93
--- 05 Wiring Device & Covers ---								
4791	4" Square Flat Blank Cover w/KO	-2	138.61	C	-2.77	0.08	E	-0.16
--- 05 Wiring Device & Covers Total ---					-2.77			-0.16
--- 07 Misc ---								
3107	1/8" Poly Pull Line	-1,161	7.53	M	-8.74	2.30	M	-2.67
6839	Red Wirenuts	-6	60.65	M	-0.36	2.01	C	-0.12
--- 07 Misc Total ---					-9.10			-2.79
--- ASI 1st W Credit Total ---					-3,163.89			-67.88
--- ASI Power Credit ---								
--- 01 Raceway, Fittings & Boxes ---								
1001	3/4" EMT	-74	150.93	C	-112.19	2.99	C	-2.22
1557	3/4" Set Screw Steel Cplg	-7	49.55	C	-3.68	0.07	E	-0.52
2356	3/4" Conduit Hanger w/Bolt	-9	61.85	C	-5.75	14.38	C	-1.34
2572	4" Square x 1-1/2" Deep Box w/bkt (1/2&3/4 KO's)	-1	374.06	C	-3.74	0.23	E	-0.23
2736	4" Square-2G Plaster Ring-5/8"D	-1	179.05	C	-1.79	0.08	E	-0.08
--- 01 Raceway, Fittings & Boxes Total ---					-127.15			-4.39
--- 02 Wire & Cable ---								
2790	#12 THHN CU Stranded Wire	-234	200.44	M	-46.93	6.33	M	-1.48
--- 02 Wire & Cable Total ---					-46.93			-1.48
--- 05 Wiring Device & Covers ---								

* Target, Labor column 2

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Meyers Pool AWA#16 3.13.24
Job Number: 4423

Extension By Breakdown, And Subtotals By Phase							
Item #	Description	Quantity	Price	U	Ext Price	Labor Hr	Ext Lab Hr
4511	20A/125V Spec Grade Dup Rcpt (5-20R)	-2	2.38	E	-4.76	0.17 E	-0.34
4681	2G Plastic Duplex Receptacle Plate	-1	1.13	E	-1.13	0.09 E	-0.09
8261	Grndscr&Bare Pigtail	-1	1.77	E	-1.77	1.38 C	-0.01
	--- 05 Wiring Device & Covers Total ---				-7.66		-0.44
		--- 07 Misc ---					
6839	Red Wirenuts	-3	60.65	M	-0.18	2.01 C	-0.06
8918	6X1/4" Pan Head Tapping Screw	-4	3.07	C	-0.12	0.01 E	-0.04
	--- 07 Misc Total ---				-0.30		-0.10
	--- ASI Power Credit Total ---				-182.04		-6.41
	Job Total				27,158.56		503.31

* Target, Labor column 2



Meyers Pool - CO03

13250 E. Smith Rd., Unit H, Aurora, CO 80011
Jeff Bowlus Commercial Account Manager Office 720 264 1061 Cell 720-737-4737 Fax 303 302 1324

Requested By	Juan Vazquez-Villasenor	Meyer Pool Replacement	
Company Name	Saunders	Email	
Billing Address	86 Inverness Place North	Date	13-Mar-24
City	Englewood	Valid Until	12-Apr-24
State	CO		
Zip	80112		
Phone	720-245-4508		
Fax			
Job Number	NNS-24-007	Customer Reference	

Scope of Work

NNSI will add (2) network cabinets, one at ELEC 110A and one at MECH 130. (6) Fiber optics to interconnect the cabinet to the MDF.

Quantity	Description	Price	Price	Labor Per	Per	Hours	Rate	Total
-1	PZICEA - 8U Pan-Zone Ceiling Enclosure	\$ 2,746.87	\$ (2,746.87)	2.000	EA	(2.00)	\$ 56.00	\$ (112.00)
1	PZWMC12W - Wall Mount Cabinet, 12RU, 25" Depth, Windowed Door, Black	\$ 665.20	\$ 665.20	2.000	EA	3.00	\$ 56.00	\$ 168.00
	PTHS242428XA - Protek Double-Hinge Wall Cabinet, 12U, Solid Door, AC,							
1	Nema 4, 4 X, 12, 24"H X 24"W X 28"D, Stainless Steel	\$ 11,750.58	\$ 11,750.58	3.000	EA	3.00	\$ 56.00	\$ 168.00
	BE0121ANU.BK - I/O Tight-Buffered Cable, Plenum, 12 fiber, 50 µm multimode							
1500	(OM3)	\$ 1.03	\$ 1,545.00	0.020	EA	30.00	\$ 56.00	\$ 1,680.00
1	FRME1U - 1U fiber Patch Panel	\$ 290.83	\$ 290.83	0.350	EA	0.35	\$ 56.00	\$ 19.60
1	FAP12WAQDLCZ - 12 Port LC fiber Panel for LIU - OM-3	\$ 121.25	\$ 121.25	0.090	EA	0.09	\$ 56.00	\$ 5.04
12	FLCSMBLY - OM-3 MM LC Connectors - Anaerobic	\$ 17.88	\$ 214.50	0.180	EA	2.16	\$ 56.00	\$ 120.96
	FX2ERLNLNSNM001 - LC to LC Fiber Patch Cords- MM OM-3 Duplex - 1 Meter							
6	Long	\$ 47.19	\$ 283.13	0.020	EA	0.12	\$ 56.00	\$ 6.72
1	CPPL48WBLY - Modular Patch Panel, TG, Flat, 48 Port, 2RU	\$ 64.55	\$ 64.55	0.090	EA	0.09	\$ 56.00	\$ 5.04
	7136100 - Copper Cable, Category 6, 4-Pair, 23 AWG, OSP, 1000ft Reel for							
3000	CCTV Cameras	\$ 0.49	\$ 1,460.36	0.025	EA	75.00	\$ 56.00	\$ 4,200.00
1	Smart2200RMXL2U - 2U Rack Mount UPS	\$ 1,756.06	\$ 1,756.06	1.000	EA	1.00	\$ 56.00	\$ 56.00
3	VLS-1P-B - LONGSPAN BASE Unit with POE in and Extended POE Out	\$ 320.00	\$ 960.00	0.500	EA	1.50	\$ 56.00	\$ 84.00
3	VLS-1P-C - LONGSPAN CAMERA Unit with Extended POE in and POE out	\$ 320.00	\$ 960.00	0.500	EA	1.50	\$ 56.00	\$ 84.00
				0.000	EA	0.00		\$ -
		\$ -		0.000	EA	0.00		\$ -
1	CONSUMABLES, EQUIPMENT, AS BUILT, SUPERVISION, ETC.	\$ 547.61	\$ 547.61	12.660	EA	12.66	\$ 75.00	\$ 949.50
	Total Material sale price	\$ -	\$ 17,872.19					\$ 7,434.86
							% LABOR OH	\$ -
115.81	Labor Technician	\$ 56.00	\$ 6,485.36					\$ 7,434.86
12.66	Labor Supervision	\$ 75.00	\$ 949.50					
6	CAD Labor	\$ 75.00	\$ 450.00					
		\$ -						
	Total Labor Sale Price	\$ -	\$ 7,884.86					
1		\$ -	\$ -					
1	Subcontract OH 5%	\$ -	\$ -					
	Total Subcontract		\$ -					
	Prices valid for thirty days							
	Material	\$ 17,872.19						
0.00%	Mat OH	\$ -						
	Labor	\$ 7,884.86						
	Subcontractor	\$ -						
	Subtotal	\$ 25,757.05						
	10%	\$ 2,575.71						
Overhead	5%	\$ 1,287.85						
Markup	Total sale price	\$ 29,620.61						



Meyers Pool - CO01

13250 E. Smith Rd., Unit H, Aurora, CO 80011
Jeff Bowlus Commercial Account Manager Office 720 264 1061 Cell 720-737-4737 Fax 303 302 1324

Requested By **Juan Vazquez-Villasenor**

Company Name **Saunders**

Billing Address **86 Inverness Place North**

City **Englewood** State **CO** Zip **80112**

Phone **720-245-4508** Fax

Job Number **NNS-24-007**

Meyer Pool Replacement

Email

Date **13-Mar-24**

Valid Until **12-Apr-24**

Customer Reference

Scope of Work
NNSI will add (2) expansion modules, one on ELEC 110A and one on MECH 130. The expansion modules require (2) 18/4C cables to the main module on the MDF.

NNSI will add (1) wireless module, (9) wireless PIR sensors in the pool area, and (15) wired PIR sensors in the building.

Indoor/outdoor cable will be required for underground conduit.

Quantity	Description	Price	Price	Labor Per	Per	Hours	Rate	Total
-1	XR150DNL-G - Dialer & Network Panel in Large Enclosure	\$ 310.25	\$ (310.25)	1.000	EA	(1.00)	\$ 56.00	\$ (56.00)
-1	7872 - Graphic Touch Screen	\$ 332.88	\$ (332.88)	1.000	EA	(1.00)	\$ 56.00	\$ (56.00)
-1	369 - 12v 7ah Battery	\$ 17.54	\$ (17.54)	0.100	EA	(0.10)	\$ 56.00	\$ (5.60)
1	XR550 Network & Dialer Panel in Large Enclosure	\$ 463.00	\$ 463.00	1.000	EA	1.00	\$ 56.00	\$ 56.00
4	714-16PCB - Zone Expansion Module	\$ 139.50	\$ 558.00	1.000	EA	4.00	\$ 56.00	\$ 224.00
1	714-8PCB - Zone Expansion Module	\$ 76.80	\$ 76.80	1.000	EA	1.00	\$ 56.00	\$ 56.00
2	4402-A - Wall Mount Door Contacts	\$ 49.71	\$ 99.42	1.000	EA	2.00	\$ 56.00	\$ 112.00
3	366 - 18.0Ah 12VCD Lead-Acid Battery	\$ 119.00	\$ 357.00	0.200	EA	0.60	\$ 56.00	\$ 33.60
1	8860-W - Graphic Touchscreen Keypad	\$ 209.00	\$ 209.00	1.000	EA	1.00	\$ 56.00	\$ 56.00
1	Accessory Pack	\$ 74.00	\$ 74.00	0.100	EA	0.10	\$ 56.00	\$ 5.60
8	FX-360 - Optex 360 PIR	\$ 54.00	\$ 432.00	1.000	EA	8.00	\$ 56.00	\$ 448.00
11000	6302FE 877U1000 - Multi-Conductor - Commercial Applications 4 18 AWG FLRST	\$ 0.31	\$ 3,386.35	0.009	EA	99.00	\$ 56.00	\$ 5,544.00
4000	AQ244BK1000 - 18/4 Stranded bare copper conductors, overall unshielded with	\$ 0.65	\$ 2,580.00	0.009	EA	37.10	\$ 56.00	\$ 2,077.61
1	CONSUMABLES, EQUIPMENT, AS BUILT, SUPERVISION, ETC.	\$ 547.61	\$ 547.61	12.660	EA	12.66	\$ 75.00	\$ 949.50
	Total Material sale price	\$ -	\$ 8,122.51					\$ 9,444.71
151.70	Labor Technician	\$ 56.00	\$ 8,495.21				% LABOR OH	\$ -
12.66	Labor Supervision	\$ 75.00	\$ 949.50					\$ 9,444.71
6	CAD Labor	\$ 75.00	\$ 450.00					
		\$ -						
	Total Labor Sale Price	\$ -	\$ 9,894.71					
1		\$ -	\$ -					
1	Subcontract OH 5%	\$ -	\$ -					
	Total Subcontract		\$ -					
	Prices valid for thirty days							
	Material		\$ 8,122.51					
0.00%	Mat OH		\$ -					
	Labor		\$ 9,894.71					
	Subcontractor		\$ -					
	Subtotal		\$ 18,017.22					
	Overhead 10%		\$ 1,801.72					
	Markup 5%		\$ 900.86					
	Total sale price		\$ 20,719.81					

Anna Gannon

From: Anna Gannon
Sent: Friday, March 15, 2024 8:00 AM
To: Kim Vagher; Selena Twilley
Cc: Bob McDonald; Conor Bancroft; Laurel Lane; Robert Burd; Juan Vazquez-Villasenor
Subject: RE: Meyers ASI 20 Impacts
Attachments: Saunders-Meyers Pool- AWA#16R-Mar24.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Team,

We received the revised pricing from Kennedy based on Wednesday's call, see attached. It did not change it much.

As discussed, I think the next step is to have a call with Kennedy and the proposed AV subcontractor to confirm scope and no double ups. Conor, do you think this is still tracking for next week?



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Kim Vagher <kvagher@arvada.org>
Sent: Friday, March 8, 2024 8:52 AM
To: Selena Twilley <stwilley@wemberinc.com>
Cc: Anna Gannon <A.Gannon@saundersinc.com>; Bob McDonald <rmcdonald@olcdesigns.com>; Conor Bancroft <cbancroft@wemberinc.com>; Laurel Lane <L.Lane@saundersinc.com>; Robert Burd <R.Burd@saundersinc.com>; Juan Vazquez-Villasenor <J.Vazquez-Villasenor@saundersinc.com>
Subject: Re: Meyers ASI 20 Impacts

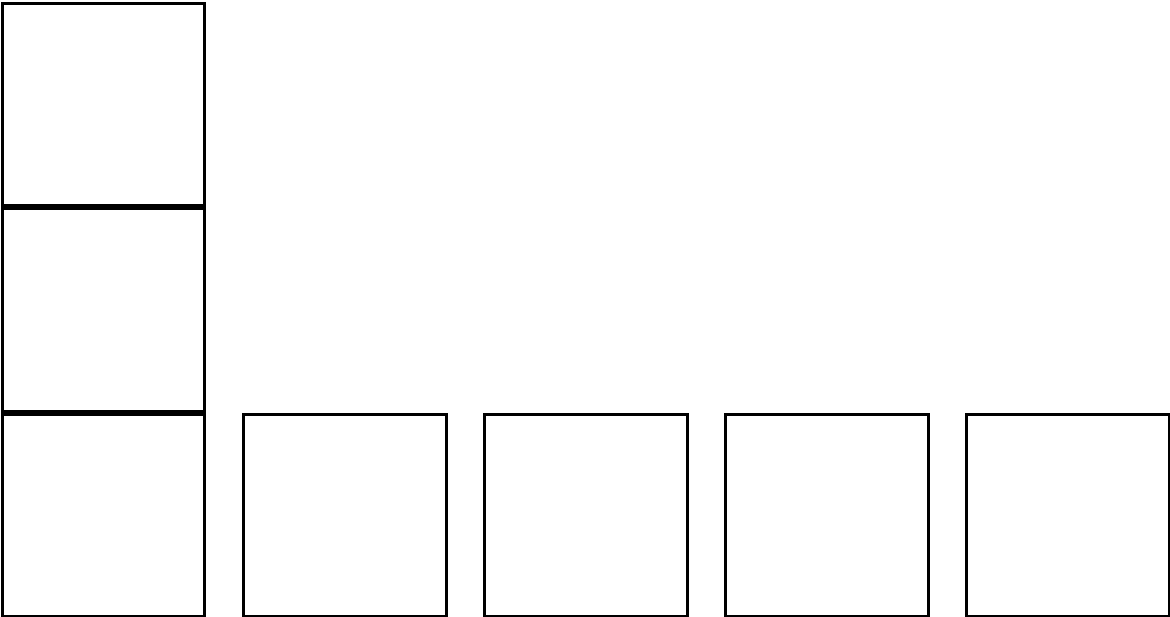
This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Anna,

Wednesday 12-1 is fine with me!

Kim

Kim Vagher
Manager of City Facilities
Desk: 720-898-7681
Cell: 720-390-1428
kvagher@arvada.org



On Thu, Mar 7, 2024 at 3:51 PM Selena Twilley <stwilley@wemberinc.com> wrote:

Wednesday (3/13) from 12-1 or Friday (3/15) before 1:30 work for me.



Selena Twilley
Asst. Project Manager

C: (720) 786-3565 

From: Anna Gannon <A.Gannon@saundersinc.com>
Sent: Thursday, March 7, 2024 3:43 PM

To: Bob McDonald <rmcdonald@olcdesigns.com>; Selena Twilley <stwilley@wemberinc.com>; Kim Vagher <kvagher@arvada.org>; Conor Bancroft <cbancroft@wemberinc.com>
Cc: Laurel Lane <L.Lane@saundersinc.com>; Robert Burd <R.Burd@saundersinc.com>; Juan Vazquez-Villasenor <J.Vazquez-Villasenor@saundersinc.com>
Subject: RE: Meyers ASI 20 Impacts

OLC/Wember/Kim-

Can you please advise if any of the following dates/times work for you to set up a meeting with Kennedy to review in detail:

Monday 3/11 – anytime after 1pm

Wednesday 3/13 – anytime after 12pm

Friday 3/15 – anytime

Thanks.



Anna Gannon

Project Manager

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From: Anna Gannon
Sent: Thursday, March 7, 2024 9:24 AM
To: Bob McDonald <rmcdonald@olcdesigns.com>; Selena Twilley <stwilley@wemberinc.com>; Kim Vagher <kvagher@arvada.org>; Conor Bancroft <cbancroft@wemberinc.com>
Cc: Laurel Lane <L.Lane@saundersinc.com>; Robert Burd <R.Burd@saundersinc.com>; Juan Vazquez-Villasenor <J.Vazquez-Villasenor@saundersinc.com>
Subject: Meyers ASI 20 Impacts

Good morning team,

I wanted to keep everyone in the loop and be transparent about the pricing impacts we received for ASI-020 late yesterday afternoon. The cost we received from Kennedy is considerable, see attached.

Please note, that this is the first time I am seeing this too, and I have a call in to Kennedy to discuss in more detail.

From my understanding a lot of this is new scope which is driving these costs. I will also be asking for more breakout on actual vendor quotes.

I do think it would be a good use of time to go through this with the design team and Kennedy as well, please let me know your thoughts.

Please note at this time, I am going to direct Kennedy to proceed with the west underground work on T&M as we are scheduled for a slab pour on 3/14 and need to get these pathways in prior. This T&M will be verified/signed daily by SCI and then will ultimately be 'applied' towards this ASI.

Please let me know of issues or clarifications.

Thanks.



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

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2000 Lawrence Street
Denver, CO 80205
303.294.9244
olcdesigns.com

ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS (ASI)

Project: **Meyers Pool Replacement**
Project #: **22044.00**

ASI#: 20R1
Date: February 22, 2024

End-User: ☐ Apex Parks and Recreation

Owner: ☐ City of Arvada

Contractor: ☐ Saunders Construction

CC:
FIELD ☐
OTHER ☐
OTHER ☐
OTHER ☐

This document is an addendum to the previously issued Contract Documents listed below:

Document Name: BID & PERMIT SET
Document Last Issue Date: Mar. 10, 2023

DESCRIPTION: (Continued on attached sheets)

SHEET	DESCRIPTION
E1.01	Added power for intrusion control panel. Access control panel, and data cabinet.
E6.02	Revised panel schedule for additional power to intrusion control panel, access control panels and data cabinet.
T100	Revised underground conduit layout for incoming service providers. Added keynotes.
T101	Clarifications to j-hook and conduit pathway and routing requirements for low voltage telecom cabling including conduit sleeves for all cabling from Data Room 118. Clarified use of a consolidation pull box and (2) 3" conduits for all low voltage cable routing from rooms 126-132 to Data Room 118. This is in lieu of providing multiple individual 1" conduits for this entire distance from each device to the Data Room, so it simplifies pathways, provides flexibility for future cabling, and should reduce costs. Added wall-mounted Data cabinet and ACS and IDS cabinets in Mech 130. Added in-slab conduits from Data 118 to Pool Storage 126 and onward to the new cabinets in Mech 130. Added keynotes.
T102	Clarifications to j-hook and conduit pathway and routing requirements for low voltage telecom cabling including conduit sleeves for all cabling from Elec-2 Room 110A. Removed (1) 2" underground conduit from Data Room 118 to Staff Room 102A. Added (2) 2" underground conduits from Data Room 118 to Elec-2 room 110A. Removed ceiling equipment enclosure from Staff Room 102A. Added wall-mount swing-out equipment enclosure in Elec-2 Room 110A.

Issued By:

2/22/2024

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Date:



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	Added data for access control and intrusion detection panels in Elec-2 Room 110A. Revised in-slab conduits for data outlets at reception desk in Lobby 101. Added & revised keynotes.
T103	Clarifications to j-hook and conduit pathway and routing requirements for low voltage telecom cabling.
T104	Clarifications to j-hook and conduit pathway and routing requirements for low voltage telecom cabling. Added lines to represent conduits for WAP's on north wall in natatorium. Added location of conduit penetration through pre-cast wall for these WAP's. Added exterior box and Gig-Ethernet PoE+ cable extenders for these WAP's since their cable runs will exceed 100 meters. Added keynotes.
T401	Clarified conduits and sleeves for all low voltage cable routing from Data Room 118. Removed in-ceiling rack elevation for Staff Room 102A which is being replaced by wall-mount swing-out rack in Elec-2 Room 110A. Revised layout within Data Room 118 for incoming service provide demarc and conduits. Added location of conduit stub-up's in Data 118. Added vertical cable ladder racking on south wall. Expanded overhead cable tray layout so it extends to south wall to connect to vertical racking on south wall. Added wall sleeves through south wall of Data 118 into Corridor 113. Added keynotes.
T601	Removed 3rd handhole and copper/phone service provide conduits. Kept copper wall punch-down field for elevator phone lines, indicating media converters are needed for them to tie into Comcast service. Added keynotes.
TA002	Clarifications to conduit size requirements.
TA101	Clarifications to j-hook and conduit pathway and routing requirements for low voltage audio-video cabling.
TA102	Clarifications to j-hook and conduit pathway and routing requirements for low voltage audio-video cabling.
TA111	Clarifications to j-hook and conduit pathway and routing requirements for low voltage audio-video cabling.
TA112	Clarifications to j-hook and conduit pathway and routing requirements for low voltage audio-video cabling. Removed reference to in-ceiling rack for Staff Room 102A which is being replaced by wall-mount rack in Elec-2 Room 110A.
TA113	Clarifications to j-hook and conduit pathway and routing requirements for low voltage audio-video cabling. Added lines to represent conduits for overhead speakers in natatorium.
TA114	Clarifications to j-hook and conduit pathway and routing requirements for low voltage audio-video cabling. Added lines to represent conduits for overhead speakers in natatorium. Added keynote clarifying vertical chase for speaker conduit routing down to Level 1. Added keynotes.
TA601	Revised system diagram for sound reinforcement system.
TA602	Revised system diagram for paging system. Removed reference to in-ceiling rack for Staff Room 102A which is being replaced by wall-mount rack in Elec-2 Room 110A.
TY101	Clarifications to j-hook and conduit pathway and routing requirements for low voltage security cabling including consolidation pull box, conduits and conduit sleeves as noted on T101. Removed Card Readers (CR) for Doors X113, X123B, and X123C. Added Door Contact (DC) to third leaf of Door X113. Added CR with DC and Request to Exit (REX) for Door 119. Consolidated separate Intelligent Door Controllers (IDC) for west side of building into single IDC panel in Data room 118. Clarified security camera mounting heights.
TY102	Clarifications to j-hook and conduit pathway and routing requirements for low voltage security cabling including conduit sleeves as noted on T102.

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	Removed CRs for Doors X106B and X123A. Removed CR with DCs, and REX on wall adjacent to Women's room (door was deleted). Removed CR with DCs, and REX on east exterior wall (door was deleted). Added CR with DC and REX for Door 107C. Consolidated separate IDCs for east side of building into single IDC panel in Elec-2 Room 110A. Clarified security camera mounting heights.
TY103	Clarifications to j-hook and conduit pathway and routing requirements for low voltage security cabling. Added CR with DC and REX to Door 212. Clarified security camera mounting height.
TY104	Clarifications to j-hook and conduit pathway and routing requirements for low voltage security cabling. Added CR with DC and REX to Door 206. Clarified security camera mounting heights.
T103	Clarifications to j-hook and conduit pathway and routing requirements for low voltage telecom cabling.
SECTION	DESCRIPTION

ATTACHMENTS: (List documents that support description)

DRAWING SHEETS:

Civil Drawing Sheets:

Landscape Drawing Sheets:

Architectural Drawing Sheets:

Structural Drawing Sheets:

Aquatics Drawing Sheets:

Mechanical Drawing Sheets:

Plumbing Drawing Sheets:

Electrical Drawing Sheets: E1.01, E6.02

Telecom Drawing Sheets: T101, T102, T103, T104

Audio-Video Drawing Sheets: TA002, TA101, TA102, TA111, TA112, TA113, TA114, TA601, TA602

Security Drawing Sheets: TY101, TY102, TY103, TY104

SPECIFICATION SECTIONS:

NONE

END OF ASI

Issued By:

2/22/2024

ARCHITECT

Date:



400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
www.olcdesigns.com

POWER GENERAL NOTES

- A. EQUIPMENT AT THE POOL DECK AREAS SHALL BE BONDED AS REQUIRED BY NEC 680. REFER TO DETAIL #3/E6.00 FOR MORE INFORMATION AND SPECIFIC REQUIREMENTS.
- B. ALL CONDUIT IN OPEN NATATORIUM AREAS DESIGNATED WITH "DASHED" LINETYPE SHALL BE ROUTED UNDERGROUND/WITHIN THE DECK AREAS. VERTICAL RISERS SHALL BE CONCEALED WITHIN PRE-CAST WALLS OR FURRED OUT AREAS. NO EXPOSED OR SURFACE MOUNTED CONDUIT SHALL BE UTILIZED UNLESS APPROVED ON A CASE BY CASE BASIS.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	RECEPTACLE SHALL BE PROTECTED BY A GFCI BREAKER LOCATED AT THE PANEL.
2	DEDICATED QUADPLEX RECEPTACLE FOR AV HEAD-END EQUIPMENT. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH LOW VOLTAGE CONSULTANT PRIOR TO ROUGH-IN.
3	PROVIDE 12X12X6" RECESSED PVC JUNCTION BOX FOR POOL TIMING SYSTEM. PROVIDE DEDICATED QUADPLEX RECEPTACLE AND DATA DROP ADJACENT TO JUNCTION BOX. COORDINATE FINAL INSTALLATION REQUIREMENTS AND LOCATION WITH TIMING SYSTEM APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
4	CONDUIT FOR CONTROL/SIGNAL WIRING BETWEEN TIMING SYSTEM JUNCTION BOXES SHALL BE PROVIDED BY EC. SIZES AS INDICATED. FINAL CONDUIT REQUIREMENTS, ROUTING, TERMINATIONS, AND SIZING SHALL BE COORDINATED WITH TIMING SYSTEM FINAL APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
5	ALTERNATE #6: EC SHALL PROVIDE (7) DUPLEX RECEPTACLES AND (1) SINGLE GANG JUNCTION BOX AT HEIGHT OF SCOREBOARD. EC SHALL COORDINATE EXACT LOCATION, ELEVATION, AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
6	EC SHALL PROVIDE 4"X4"X6" JUNCTION BOX FOR POOL TIMING SYSTEM. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH TIMING SYSTEM APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
7	EC SHALL PROVIDE 4"X4"X6" JUNCTION BOX FOR POOL TIMING SYSTEM. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH TIMING SYSTEM AND BULKHEAD APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
8	EC SHALL PROVIDE DUPLEX RECEPTACLE FOR DIVING VIDEO DISPLAY. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH TECHNOLOGY DRAWINGS PRIOR TO ROUGH-IN.
9	EC SHALL PROVIDE 120V, 1PH ON/OFF SWITCH TO CONTROL PACE CLOCK RECEPTACLES. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
10	CONTRACTOR SHALL PROVIDE 208V, 1PH, 3ØA DEDICATED RECEPTACLE CONNECTION TO DRYER. COORDINATE RECEPTACLE NEMA CONFIGURATION REQUIREMENTS PER THE MANUFACTURER'S SPECIFICATIONS. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. CIRCUIT WITH 3Ø1Ø, 1Ø1Ø, 1" C.
11	PROVIDE EMERGENCY POWER OFF (EPO) SWITCH FOR SHUT DOWN OF BOILER EQUIPMENT. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
12	PROVIDE 5-20R, RECEPTACLE FOR CORD AND PLUG POWER CONNECTION FOR PORTABLE VACUUM SYSTEM. RECEPTACLE SHALL BE PROTECTED WITH 5ØA, CLASS A GFCI BREAKER. HINGED WATERTIGHT OUTLET BOX HOOD SHALL BE LISTED FOR "EXTRA-DUTY" PER NEC #406.9(B)(1). EC SHALL COORDINATE EXACT NEMA CONFIGURATION, LOCATION, AND MOUNTING REQUIREMENTS WITH ARCHITECT PRIOR TO ROUGH-IN.
13	APPROXIMATE LOCATION OF REMOTE START/STOP BUTTON FOR AGITATOR PUMP #P3. PROVIDE BACKBOX ROUGH-IN AND 3/4" CONDUIT PATHWAY BACK TO POOL EQUIPMENT ROOM FOR INTERCONNECTION TO PUMP VFD. FIELD COORDINATE FINAL LOCATION AND INTERCONNECTION REQUIREMENTS WITH POOL CONTRACTOR PRIOR TO ROUGH-IN.
14	APPROXIMATE LOCATION OF HEAT TRACE CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
15	EC SHALL PROVIDE HEAT TRACE AND JUNCTION BOX WITH 120V, 1PH CONNECTION. FIELD COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
16	EC SHALL PROVIDE 120V, 1PH DEDICATED DUPLEX RECEPTACLE FOR IRRIGATION CONTROLLER. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH IRRIGATION EQUIPMENT PRIOR TO ROUGH-IN.
17	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR INTRUSION ALARM CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
18	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR ACCESS CONTROL PANEL. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.
19	EC SHALL PROVIDE 120V, 1PH DEDICATED CIRCUIT FOR WALL MOUNTED DATA CABINET. EC SHALL COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7904 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
	06/15/2023	ADDENDUM 3
4	11/11/2023	ASI-012
13	02/22/2024	ASI-020R1

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

ISSUE DATE: 08/25/2023

DRAWN BY: EB, JF, AW

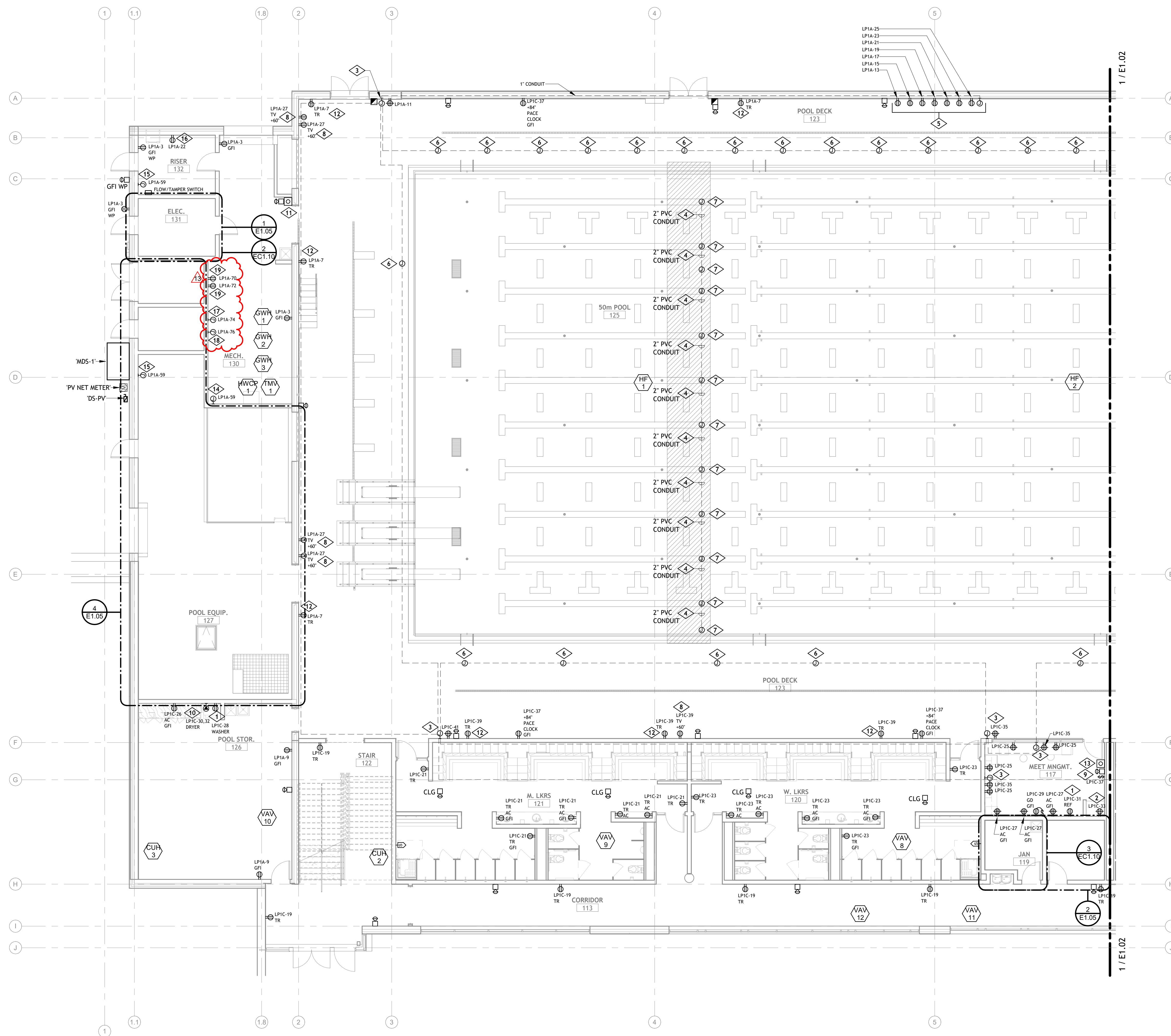
REV'D BY: ESN, GP

PROJECT #: 22044

TITLE: ELECTRICAL FIRST FLOOR
POWER PLAN - WEST

SHEET #:

E1.01



1 | FIRST FLOOR ELECTRICAL POWER PLAN - WEST
E1.01 1/8" = 1'-0"

PANEL: LP1A																													
LOCATION: ELEC. 131 SUPPLY FROM: T-1A MOUNTING: Surface ENCLOSURE: Type 1						VOLTS: 120/208 Wye PHASES: 3 WIRES: 4				A.I.C. RATING: 10KAIC MAINS TYPE: MCB MAINS RATING: 400 A MCB RATING: 400 A																			
Notes: 2-SECTIONS, 42 CIRCUIT PANEL PER SECTION.																													
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT															
1	L	MONUMENT SIGNAGE	20	1		545	180			1	20	CHEM 129: CO2 BULK STOR RCPT	R	2															
3	R	MECH/RISER/ELEC 130 RCPT	20	1			900	180		1	20	CHEM 129: CO2 BULK STOR RCPT	R	4															
5	R	POOL EQUIP 127 RCPT	20	1				720	1440		1	H1-1: BOILER	E	6															
7	R	POOL 123 NORTH & WEST RCPT - VAC	20	1	GFEP	720	1680			1	20	H1-1: BOILER PUMP	M	8															
9	R	POOL EQUIP/STOR 126 RCPT	20	1			720	1296		1	20	H1-1: INDIRECT PUMP	M	10															
11	R	POOL 123 - TIMING SYSTEM	20	1				360	1440	1	20	H1-2: BOILER	E	12															
13	E	POOL 123 - SCOREBOARD	20	1		500	1680			1	20	H1-2: BOILER PUMP	M	14															
15	E	POOL 123 - SCOREBOARD	20	1			500	1296		1	20	H1-2: INDIRECT PUMP	M	16															
17	E	POOL 123 - SCOREBOARD	20	1				500	200	1	20	POOL EQUIP 127: WATER SUBMETER	E	18															
19	E	POOL 123 - SCOREBOARD	20	1		500	360			1	15	GWH-1	M	20															
21	E	POOL 123 - SCOREBOARD	20	1			500	180		1	20	IRRIGATION CONTROLLER	R	22															
23	E	POOL 123 - SCOREBOARD	20	1				500	864	1	15	HWCP-1	M	24															
25	E	POOL 123 - SCOREBOARD	20	1		500	240			1	15	DCU-1/DCU-2 - COND PUMP	M	26															
27	R	POOL 123 - RCPT DIVING VIDEO TV	20	1			720	1598		2	20	DFC-1/DCU-1	M	28															
29	M	AIR COMPRESSOR	50	1				2880	1598		--	--	--	30															
31	E	U-2 (UV TREATMENT)	30	2		1250	1598			2	20	DFC-2/DCU-2	M	32															
33	--	--	--	--	--	--	1250	1598		--	--	--	--	34															
35	E	COMP POOL CHEMICAL CONTROLLER	15	1				600	832	2	15	SE-1	M	36															
37	E	COMP POOL WATER LEVEL...	15	1		600	832			--	--	--	--	38															
39	E	TRAIN POOL CHEMICAL CONTROLLER	15	1			500	832		2	15	SE-2	M	40															
41	E	TRAIN POOL WATER LEVEL...	15	1				500	832		--	--	--	42															
43	E; R	CF-1	20	1		1920	832			2	15	SP-2	M	44															
45	E; R	CF-2	30	1			1920	832		--	--	--	--	46															
47	E; R	CF-3	20	1				1920	832	2	15	SP-3	M	48															
49	E; R	CF-4	20	1		1920	832			--	--	--	--	50															
51	E; R	CF-5	20	1				1920	1176		1	20	EF-1	M	52														
53	E; R	CF-6	20	1				1920	1176	1	20	EF-2	M	54															
55	E	CM-1	15	1		600	1656			1	25	EF-3	M	56															
57	E	CM-2	15	1			600	696		1	15	EF-4	M	58															
59	E	WEST HEAT TRACE	20	1	GFEP			800	1176	1	20	EF-5	M	60															
61	R	WEST MECH ROOF RCPT	20	1		720	500			1	15	TMW-1	M	62															
63	E	FIRE ALARM CIRCUIT	20	1	(1)		500	1440		1	20	H2: BOILER	E	64															
65	E	FIRE SMOKE DAMPER	20	1				400	1200		1	H2: BOILER PUMP	M	66															
67	E	POOL EQUIP 127 - DIVE AIR...	30	2		2288	840			1	20	H2: INDIRECT PUMP	M	68															
69	--	--	--	--	--	--	--	2288	180		1	20	MECH 130 - DATA CAB RCPT	R	70														
71	M	F1 - FILTER CONTROL PANEL	15	1		600	500		600	180		20	MECH 130 - DATA CAB RCPT	R	72														
73	M	F2 - FILTER CONTROL PANEL	15	1				0	500		1	20	MECH 130 - INTRUSION ALARM CTRL	E	74														
75	--	SPARE	20	1						1	20	MECH 130 - ACCESS CTRL	E	76															
77	--	SPARE	20	1					0	0		30	SPARE	--	78														
79	--	SPARE	20	1		0	0			1	20	SPARE	--	80															
81	--	SPARE	20	1				0	0		1	20	SPARE	--	82														
83	--	SPARE	20	1					0	0	1	20	SPARE	--	84														
Total Load: Total Amps:						24393 VA 204 A	24122 VA 202 A	23470 VA 196 A																					
CB TYPE LEGEND GFCL: 5mA GROUND FAULT CIRCUIT INTERRUPTER GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT AFCL: ARC FAULT CIRCUIT INTERRUPTER CAFCL: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER LOAD TYPE: LIGHTING: RECEPTACLE: MOTOR: EQUIPMENT: KITCH EQUIP: CONTINUOUS: EXISTING: NOTES: (1) PER NEC 760.121(B), CIRCUIT DISCONNECTING MEANS SHALL HAVE RED IDENTIFICATION.															CIRCUIT PHASE CODE LEGEND N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER. N2. NEW LOAD ON EXISTING CIRCUIT BREAKER. N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING. PANEL TOTALS TOTAL CONN. LOAD: 71985 VA TOTAL EST. LOAD: 72901 VA TOTAL CONN.: 200 A TOTAL EST. DEMAND: 202 A														

PANEL: HP1A																							
LOCATION: ELEC. 131 SUPPLY FROM: MSB-1 MOUNTING: Surface ENCLOSURE: Type 1						VOLTS: 480/277 Wye PHASES: 3 WIRES: 4				A.I.C. RATING: 35KAIC MAINS TYPE: MLO MAINS RATING: 400 A MCB RATING: N/A													
Notes: SINGLE SECTION, 60-CIRCUIT PANEL.																							
CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		C		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT						
1	M	MAU-1 (N4)	15	3		1053	11926						3	70	T-1C	L; E;...	2						
3	--	--	--	--				1053	12268				--	--	--	--	4						
5	--	--	--	--						1053	12310		--	--	--	--	6						
7	E; Sp8...	T-1D	25	3		4120	0						3	15	SPARE	--	8						
9	--	--	--	--				5160	0				--	--	--	--	10						
11	--	--	--	--						3620	0		--	--	--	--	12						
13	L	LTG - ELEMENTARY SCHOOL SITE	20	1		800	943						3	15	HF-1	M	14						
15	L	LTG - BUILDING MOUNTED AND SITE	20	1				1565	943				--	--	--	--	16						
17	L	LTG - FIRST FLOOR WEST	20	1						3427	943		--	--	--	--	18						
19	L	LTG - POOL HIGH BAYS	20	1		3448	943						3	15	HF-2	M	20						
21	L	LTG - POOL HIGH BAYS	20	1				3448	943				--	--	--	--	22						
23	L	LTG - POOL HIGH BAYS	20	1						3448	943		--	--	--	--	24						
25	L	LTG - SECOND FLOOR WEST	20	1		1656	2000						3	15	VAV-8	E	26						
27	E	VAV-11	40	3				6667	2000				--	--	--	--	28						
29	--	--	--	--						6667	2000		--	--	--	--	30						
31	--	--	--	--		6667	2000						3	15	VAV-9	E	32						
33	E	VAV-12	40	3				6667	2000				--	--	--	--	34						
35	--	--	--	--						6667	2000		--	--	--	--	36						
37	--	--	--	--		6667	2333						3	15	VAV-10	E	38						
39	E	VAV-7	15	1				2000	2333				--	--	--	--	40						
41	E	CUH-2	20	3						3334	2333		--	--	--	--	42						
43	--	--	--	--		3334	0						1	20	SPARE	--	44						
45	--	--	--	--				3334	0				1	20	SPARE	--	46						
47	E	CUH-3	15	3						1333	0		1	20	SPARE	--	48						
49	--	--	--	--		1333	0						1	20	SPARE	--	50						
51	--	--	--	--				1333	0				1	20	SPARE	--	52						
53	--	SPARE	20	1						0	0		1	20	SPARE	--	54						
55	E	LEED SUB-METER	20	3		200	--						1	--	BUSSED SPACE	--	56						
57	--	--	--	--			200	--					1	--	BUSSED SPACE	--	58						
59	--	--	--	--						200	--		1	--	BUSSED SPACE	--	60						
Total Load: Total Amps:						49423 VA 178 A		51914 VA 188 A		50278 VA 182 A													
CB TYPE LEGEND																		CIRCUIT PHASE CODE LEGEND					
GFCL: 5mA GROUND FAULT CIRCUIT INTERRUPTER						HC (-ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION						N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.											
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT						HT# : HANDLE IT WITH GROUPING #						N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.											
AFCL: ARC FAULT CIRCUIT INTERRUPTER						ST: SHUNT TRIP						N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.											
CAFCL: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER						LOAD: PERMANENTLY LOCKABLE BREAKER						PANEL TOTALS											
LOAD TYPE:						DEMAND LOAD						TOTAL CONN. LOAD: 151616 VA											
LIGHTING:						17937 VA						22421 VA						TOTAL EST. LOAD: 144688 VA					
RECEPTACLE:						34404 VA						22202 VA						TOTAL CONN.: 182 A					
MOTOR:						9993 VA						10783 VA						TOTAL EST. DEMAND: 174 A					
EQUIPMENT:						89282 VA						89282 VA											
KITCH EQUIP:																							
CONTINUOUS:																							
EXISTING:																							
NOTES:																							
N4. PROVIDE BRANCH CIRCUIT CTs CONNECTED BACK TO SUB-METER AT MECHANICAL EQUIPMENT FEEDER INDICATED FOR LEED EA CREDIT - ADVANCED ENERGY METERING COMPLIANCE.																							
REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL DETAILS.																							

PANEL: HA1A

LOCATION: ELEC. 131

SUPPLY FROM: MSB-1

MOUNTING: Surface

ENCLOSURE: Type 1

VOLTS: 480/277 Wye

PHASES: 3

WIRES: 4

A.I.C. RATING: 35KAIC

MAINS TYPE: MLO

MAINS RATING: 400 A

MCB RATING: N/A

Notes:

SINGLE SECTION, 42-CIRCUIT PANEL.

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A	B	C	CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	M	PP-1	90	3		14411	14411			3	90	PP-2	M	2
3	--	--	--	--			14411	14411		--	--	--	--	4
5	--	--	--	--				14411	14411	--	--	--	--	6
7	M	PP-3	15	3		943	7483			3	60	PP-4	M	8
9	--	--	--	--			943	7483		--	--	--	--	10
11	--	--	--	--				943	7483	--	--	--	--	12
13	E	U-1 (UV TREATMENT)	40	3		4000	0			1	20	SPARE	--	14
15	--	--	--	--			4000	0		1	20	SPARE	--	16
17	--	--	--	--				4000	0	1	20	SPARE	--	18
19	--	SPARE	20	1		0	0			1	20	SPARE	--	20
21	--	SPARE	20	1			0	0		1	20	SPARE	--	22
23	--	SPARE	20	1				0	0	1	20	SPARE	--	24
25	--	SPARE	20	1		0	0			1	20	SPARE	--	26
27	--	BUSSED SPACE	--	1			--	--		1	--	BUSSED SPACE	--	28
29	--	BUSSED SPACE	--	1				--	--	1	--	BUSSED SPACE	--	30
31	--	BUSSED SPACE	--	1		--	--			1	--	BUSSED SPACE	--	32
33	--	BUSSED SPACE	--	1			--	--		1	--	BUSSED SPACE	--	34
35	--	BUSSED SPACE	--	1				--	--	1	--	BUSSED SPACE	--	36
37	--	BUSSED SPACE	--	1		--	--			1	--	BUSSED SPACE	--	38
39	--	BUSSED SPACE	--	1			--	--		1	--	BUSSED SPACE	--	40
41	--	BUSSED SPACE	--	1				--	--	1	--	BUSSED SPACE	--	42
Total Load:						41248 VA	41248 VA	41248 VA						
Total Amps:						149 A	149 A	149 A						

CB TYPE LEGEND

GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER

GFP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT

APCI: ARC FAULT CIRCUIT INTERRUPTER

CAPCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER

LOAD TYPE:

LIGHTING:

RECEPTACLE:

MOTOR:

EQUIPMENT:

KITCH EQUIP:

CONTINUOUS:

EXISTING:

NOTES:

HC(-ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION

HT#: HANDLE TIE WITH GROUPING #

ST: SHUNT TRIP

LOCK: PERMANENTLY LOCKABLE BREAKER

CIRCUIT PHASE CODE LEGEND

N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.

N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.

N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

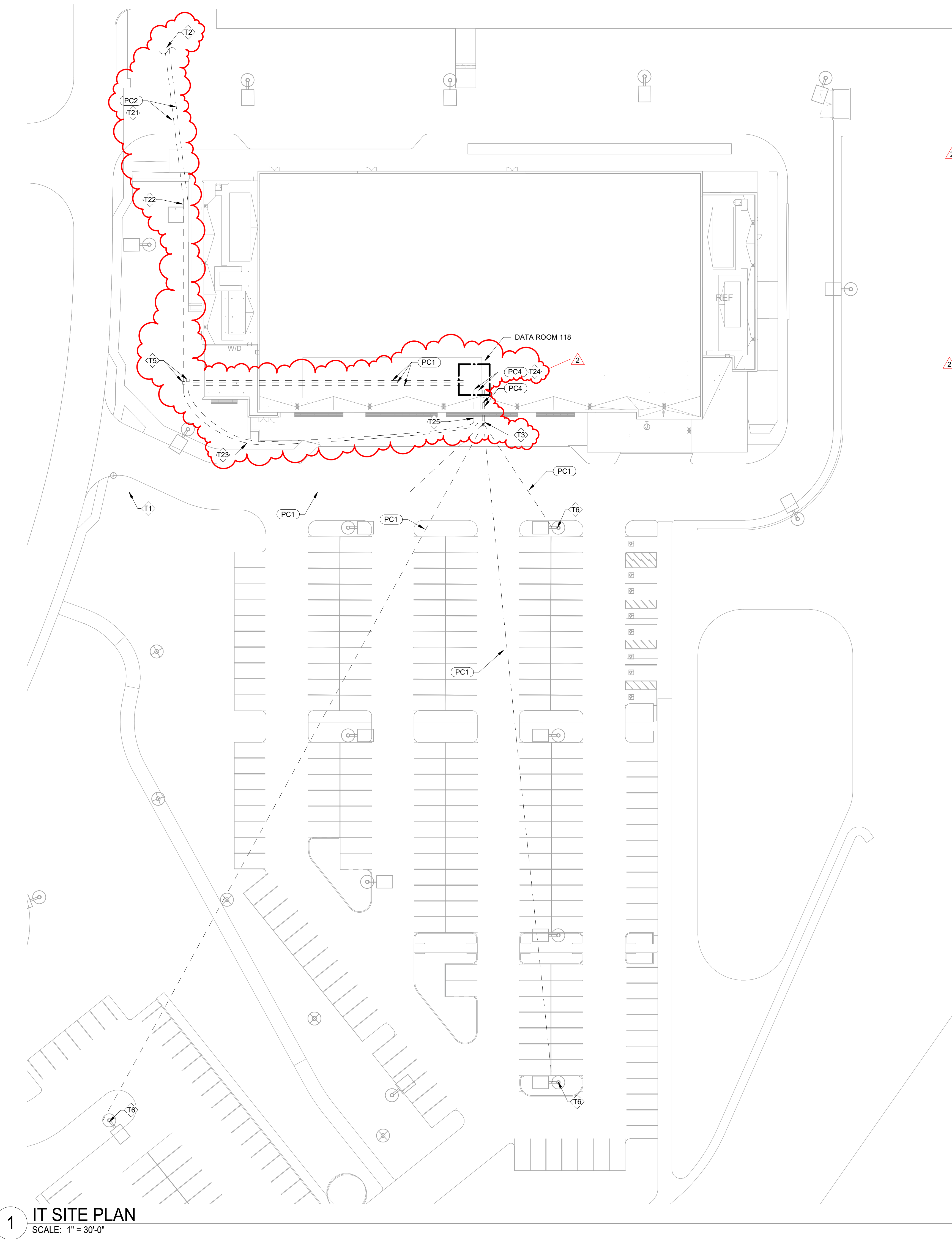
PANEL TOTALS

TOTAL CONN. LOAD: 123744 VA

TOTAL EST. LOAD: 134552 VA

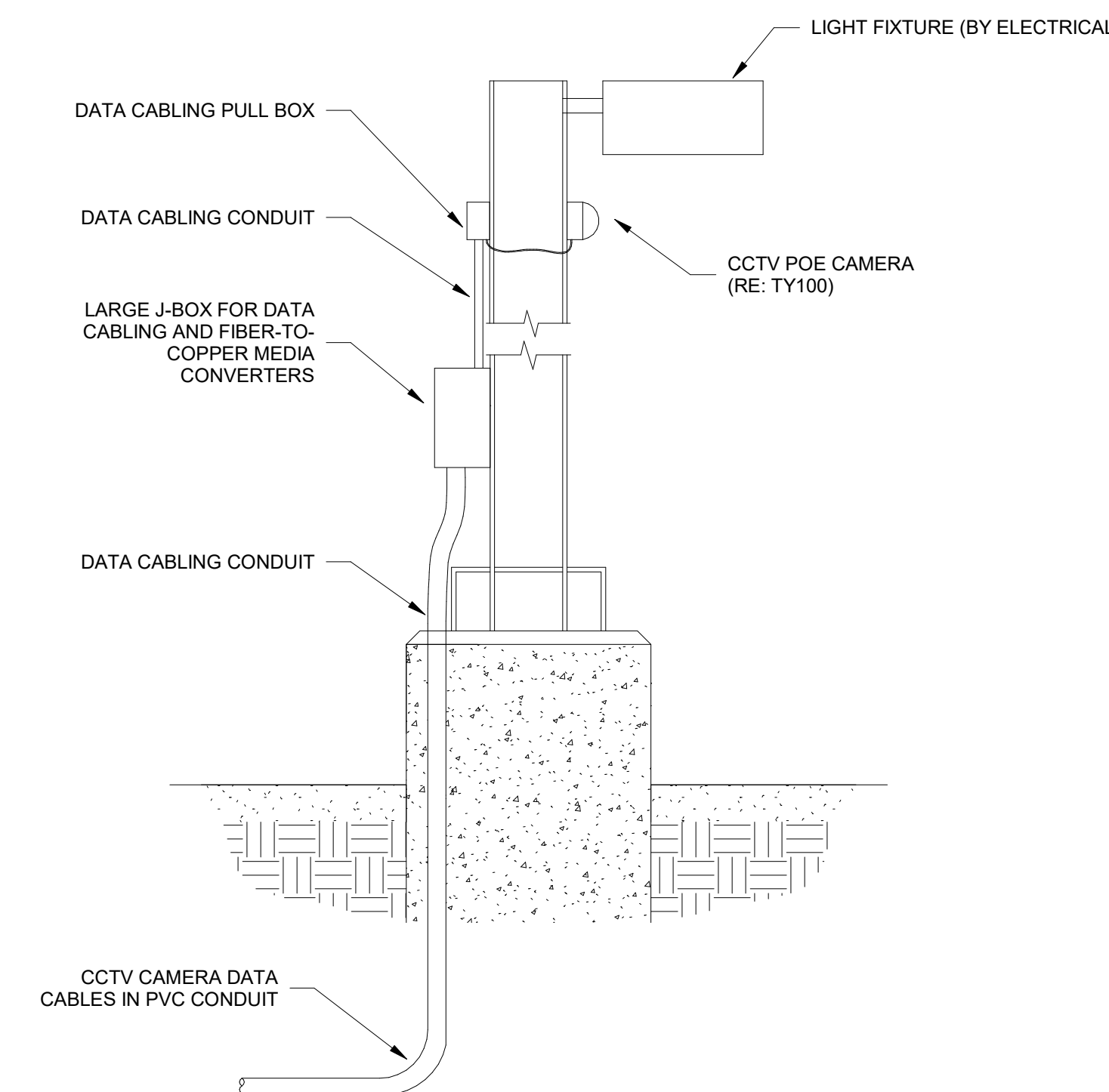
TOTAL CONN.: 149 A

TOTAL EST. DEMAND: 162 A



1 IT SITE PLAN
SCALE: 1" = 30'-0"

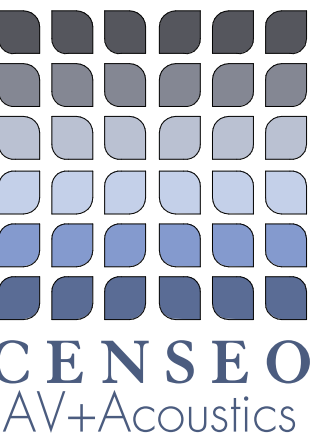
Keynote Legend	
Key Value	Keynote Text
T1	DATA FOR MONUMENT SIGN. LOCATION SHOWN IS APPROXIMATE. FIELD VERIFY FINAL HANDHOLE LOCATION PRIOR TO ROUGH-IN.
T2	CONTRACTOR SHALL FIELD VERIFY ALL TELECOM UTILITY VAULT LOCATIONS PRIOR TO ROUGH-IN AND INSTALLATION.
T3	PROVIDE 30 IN. x 17 IN. FLUSH IN-GRADE CONCRETE PULL BOX. FIELD VERIFY FINAL LOCATION PRIOR TO ROUGH-IN. PROVIDE (1) ACTIVE POE EXTENDER FOR MONUMENT SIGN DATA WITHIN BOX.
T5	PROVIDE A PAIR OF (2) 24 IN. x 13 IN. FLUSH IN-GRADE CONCRETE PULL BOXES, IN-LINE FOR THE (2) UNDERGROUND COMMUNICATIONS SERVICE PROVIDE CONDUITS. FIELD VERIFY FINAL LOCATION PRIOR TO ROUGH-IN.
T6	AT EACH LIGHT POLE DESIGNED FOR CAMERA INSTALLATION (RE: SECURITY DRAWINGS), PROVIDE (2) J-BOXES, ONE NEAR THE BASE OF POLE, AND A SMALLER "BELL" BOX ONE NEAR TOP OF POLE, A FEW FEET BELOW THE TOP. THE LOWER J-BOX SHALL BE 12 IN. x 12 IN. x 4 IN. DEEP AND WEATHER-PROOF WITH GASKET, USED FOR TERMINATION OF (1) CABLE AT A POE+ REMOTE MODULE (RE: 3/T601). RUN A CAT6 PATCH CABLE INSIDE EMT CONDUIT UP THROUGH THE UPPER J-BOX NEAR TOP OF POLE, THEN TO CAMERA RE: 2/T100.
T21	INSTALL (2) CITY-FURNISHED 2 IN. HDPE CONDUITS (FROM REELS DELIVERED ONSITE BY CITY) UNDERGROUND IN DUCTBANK TRENCH, ALONG WITH A CITY-FURNISHED TRACER WIRE BURIED IN TRENCH ABOVE CONDUITS.
T22	ROUTE THE COMMUNICATIONS CONDUIT DUCTBANK EAST OF THE UTILITY COMPANY POWER TRANSFORMER PAD.
T23	TURN THE COMMUNICATIONS CONDUIT DUCTBANK GRADUALLY USING EXTRA-LARGE RADIUS, NO BENDS OR SHORT-RADIUS SWEEPS.
T24	PROVIDE (2) DEDICATED 4" CONDUIT SLEEVES UNDERGROUND FROM DATA ROOM TO STUB OUTSIDE BLDG UNDERGROUND, DEDICATED FOR THE PURPOSE OF PULLING THE (2) 2 IN. HDPE CONDUITS INTO THE BUILDING.
T25	PULL THE (2) 2 IN. HDPE CONDUITS THROUGH THE 4" SLEEVES, TURN UP INSIDE DATA ROOM.



2 POLE-MOUNTED CCTV CAMERA INFRASTRUCTURE DETAIL
SCALE: NTS



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TUCSON, AZ
www.CENSEO.design
808.726.2999

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
2	02/22/2024	ASI-020R1

SCALE: As indicated

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC

REV'D BY: MCE/PKD

PROJECT #: 22044

TITLE: TELECOM SYSTEMS SITE PLAN

SHEET #:

T100



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	01/20/2024	ASI-020
2	02/22/2024	ASI-020R1

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

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC

REV'D BY: MCE/PKD

PROJECT #: 22044

TITLE: TELECOM SYSTEMS FIRST
FLOOR PLAN - WEST

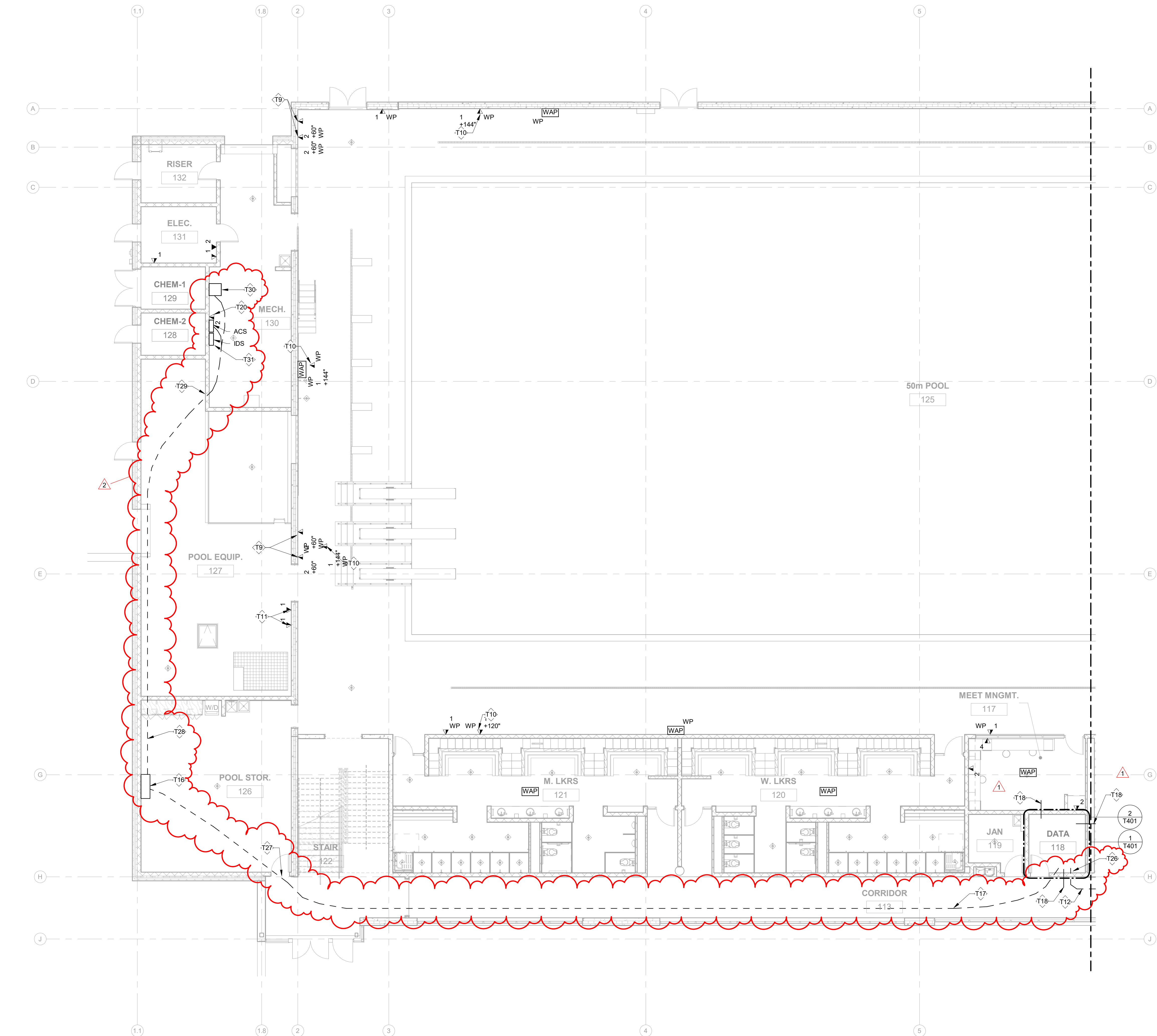
SHEET #:

T101

Keynote Legend	
Key Value	Keynote Text
T9	DATA FOR DIVING VIDEO DISPLAY (BY OWNER). COORDINATE FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
T10	DATA FOR DIVING VIDEO CAMERA (BY OWNER). COORDINATE FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
T11	DATA TO SERVE AQUATIC TREATMENT SYSTEMS EQUIPMENT. COORDINATE LOCATION WITH GEAR INSTALLER PRIOR TO ROUGH-IN.
T12	TWO (2) 2 IN. CONDUITS UNDERGROUND FROM DATA ROOM 118 TO ELEC-2 ROOM 140.
T16	PROVIDE 36 IN. SQUARE X 8 IN. DEEP PULL BOX FOR MID-SPAN PULL POINT OF LOW VOLTAGE FIBER OPTIC AND SECURITY BACKBONE CABLING. ATTACH ON WALL AT LEAST 80 IN. AFF (TO BOTTOM) AND COORDINATE LOCATION WITH OTHER TRADES. ROUTE THE (2) 2 IN. CONDUITS UP INTO BOX, THEN ANOTHER (2) 2 IN. CONDUITS BACK DOWN TO CONTINUE DUCTBANK ONWARD TO MECH 130.
T17	TWO (2) 2 IN. CONDUITS BURIED WITHIN CONCRETE FLOOR SLAB, FROM DATA ROOM 118 TO PULL BOX IN POOL STORAGE 126.
T18	TWO (2) 3 IN. CONDUIT SLEEVES FROM DATA ROOM 118 TO ABOVE ACCESSIBLE CEILING.
T20	DATA TO SERVE ACCESS CONTROL AND INTRUSION DETECTION PANELS.
T26	TURN UP ALL LARGE CONDUITS IN DATA ROOM AT SOUTH WALL.
T27	CAREFUL GRADUAL ROUTING OF CONDUITS IN SLAB THROUGH DOORWAY.
T28	ROUTE CONDUITS IN SLAB NEAR WEST WALL AS SHOWN.
T29	CAREFUL ROUTING OF CONDUITS THROUGH HERE.
T30	PROVIDE 12RU, 24.5 IN. HIGH X 24 IN. WIDE X 28 IN. DEEP NEMA 4X STAINLESS STEEL WALL-MOUNT SWING-OUT EQUIPMENT CABINET ENCLOSURE (NVENT/HOFFMAN PHS242428XA, OR SIMILAR) CONTAINING ONE (1) 1RU FIBER PANEL, TWO (2) 48-PORT NETWORK SWITCHES (AS1), TWO (2) COPPER PATCH PANELS (CP2) AND ONE (1) UPS (SP2) INSIDE. PROVIDE MANUFACTURER'S OPTIONAL 800 BTU SIDE-MOUNT AIR CONDITIONING UNIT WITH NEMA 4X HOUSING, NVENT/HOFFMAN T150116G152. PLUG AC UNIT AND UPS INTO SEPARATE CIRCUITS/OUTLETS PROVIDED BY EC. TERMINATE (1) 2 IN. CONDUIT TO BOTTOM OF CABINET FOR INCOMING BACKBONE FEED. LOCATE CABINET SO IT IS NOT DIRECTLY UNDER ANY WET/CHEMICAL PIPES OR ROOFTOP PIPE/DUCT PENETRATIONS.
T31	ACS CABINET AND IDS CABINETS. ARRANGE ON WALL PER SECURITY INSTALLER GUIDELINES. TERMINATE (1) 2 IN. CONDUIT TO BOTTOM OF ACS CABINET. LOCATE CABINET SO IT IS NOT DIRECTLY UNDER ANY WET/CHEMICAL PIPES OR ROOFTOP PIPE/DUCT PENETRATIONS.

TELECOM PLAN GENERAL NOTES

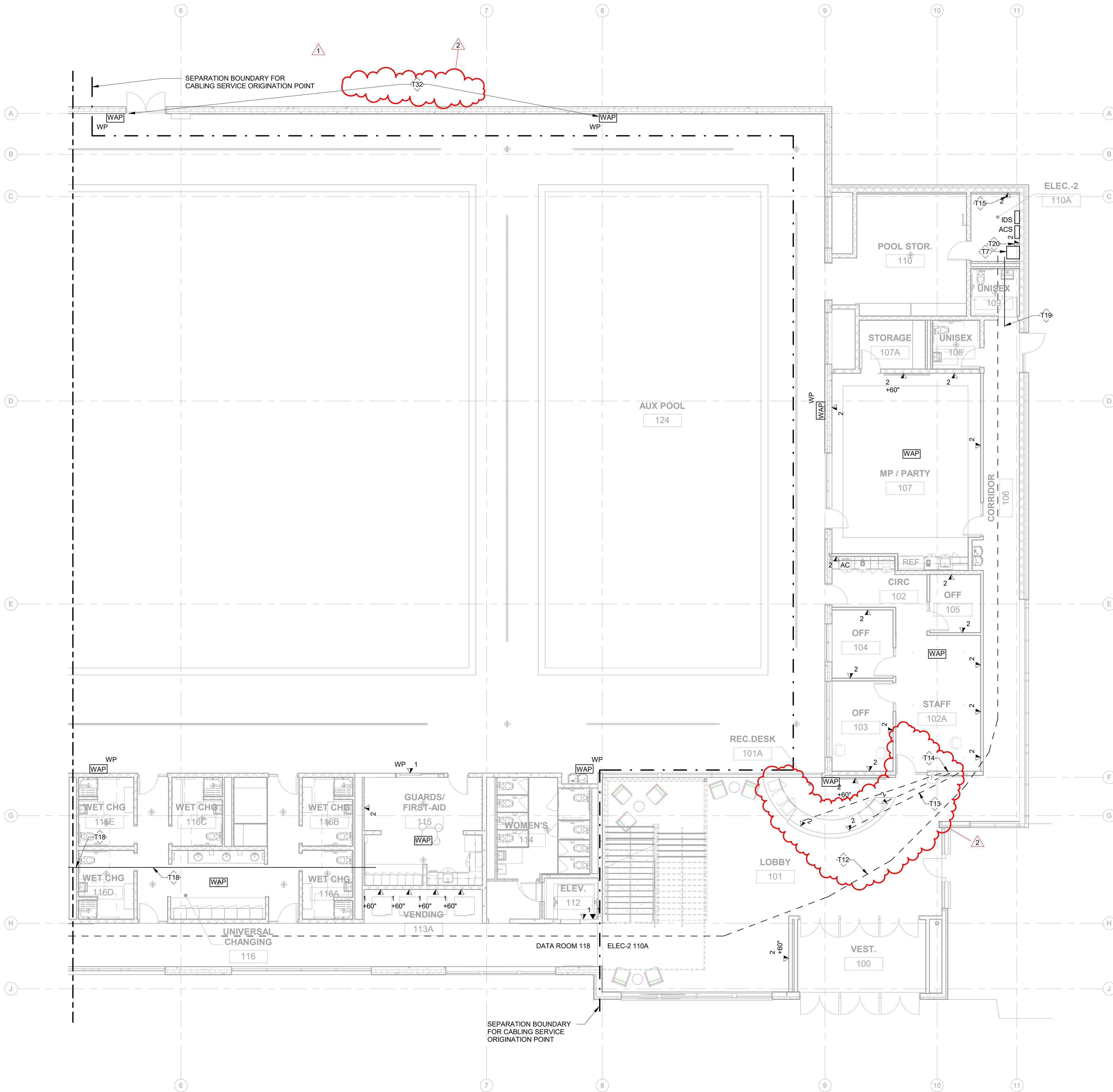
- J-HOOKS ARE PERMITTED FOR LOW VOLTAGE TELECOM CABLE ROUTING ABOVE ACCESSIBLE CEILING TILE WHERE CABLING IS NOT VISIBLE. CONDUIT SHALL BE PROVIDED FOR ALL OTHER CABLE ROUTING.
- CONDUIT PATHWAYS FOR LOW VOLTAGE TELECOM CABLING SHALL COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 26 SECTIONS AND ELECTRICAL DRAWING SHEETS. FOR EXAMPLE, REFER TO SHEET E0.00 COVERSHEET NOTE 35: "PROVIDE NEMA 3R AND CORROSION RESISTANT ELECTRICAL EQUIPMENT AND WIRING METHODS WITHIN POOL EQUIPMENT, POOL, AND WHIRLPOOL AREAS."
- WHERE CONDUIT FOR LOW VOLTAGE TELECOM CABLING IN PRECAST WALLS IS ROUTED DOWN, UNDERGROUND CONDUIT SHALL BE ROUTED TO THE SERVING TELECOM ROOM INDICATED ON DRAWINGS. REFER TO PRECAST SHOP DRAWINGS TO IDENTIFY THESE LOCATIONS.
- COORDINATE ALL CONDUIT ROUTING WITH LOW VOLTAGE CABLING CONTRACTOR TO ENSURE SUITABILITY FOR CABLE PULLING.
- INSTALL CONDUIT FOR LOW VOLTAGE TELECOM CABLING WITH LARGE RADIUS BENDS. THE RATIOS FOR MINIMUM BEND RADIUS TO CONDUIT DIAMETER ARE:
 - 6:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES LESS THAN 2".
 - 10:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES EQUAL TO OR GREATER THAN 2".
- CONDUIT ROUTING FOR LOW VOLTAGE TELECOM CABLING SHALL NOT EXCEED 180° FOR THE SUM OF ALL ELBOWS, SWEEPS AND BENDS FOR A PARTICULAR CONDUIT RUN WITHOUT AN APPROVED PULL-BOX. THE MAXIMUM BEND FOR ANY LOCATION SHALL NOT EXCEED 90°. CONTRACTOR SHALL IDENTIFY WHERE THIS IS NOT POSSIBLE DUE TO SITE CONDITIONS SO THAT EXCEPTIONS CAN BE APPROVED IN WRITING.
- PROVIDE PULL-BOXES IN STRAIGHT SECTIONS OF CONDUIT ONLY. DO NOT USE PULL-BOXES TO CHANGE PATHWAY DIRECTION, UNLESS SPECIFICALLY SHOWN WITH A CHANGE IN DIRECTION ON THE DRAWINGS.
- CONDUIT OUTLET BODIES (I.E., CONDULET, C, LB, LL, LR, T), SHALL NOT BE USED AS CABLE PULL POINTS OR TO CHANGE PATHWAY DIRECTION IN ANY LOCATIONS. THESE DEVICES ARE COMMONLY USED FOR ELECTRICAL/POWER PATHWAYS AND ARE NOT APPROVED FOR LOW VOLTAGE CABLING.
- CONDUITS RISING FROM BELOW SLAB TO STUB ABOVE SLAB SHALL EXTEND 6" AFF AND BE FITTED WITH CABLE BUSHINGS.
- ALL CONDUITS AND SLEEVES WITH "OPEN" TERMINATIONS SHALL BE EQUIPPED WITH CABLE BUSHINGS.
- ALL METALLIC CONDUITS ENTERING TELECOM ROOMS SHALL BE BONDED AT ONE END. FOR METALLIC CONDUITS STUBING ABOVE/NEAR CABLE TRAY IN DATA ROOM 118 USE BONDING BUSHING TO BOND TO THE CABLE TRAY.



1 FIRST FLOOR IT PLAN - WEST
SCALE: 1/8" = 1'-0"

1 FIRST FLOOR IT PLAN - EAST

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



Keynote Legend	
Key Value	Keynote Text
T7	PROVIDE 12RU, 24 IN. HIGH X 25 IN. WIDE X 25 IN. DEEP WALL-MOUNT SWING-OUT EQUIPMENT ENCLOSURE (PANDUIT PZVMC12, OR SIMILAR) WITH ONE (1) 1RU FIBER PANEL, TWO (2) 48-PORT NETWORK SWITCHES (AS1), TWO (2) COPPER PATCH PANELS (CP2) ONE (1) UPS (SP2) AND AUDIO AMPLIFIER EQUIPMENT PER AV ONE-LINES ON SHEET AV802.
T12	TWO (2) 2 IN. CONDUITS UNDERGROUND FROM DATA ROOM 118 TO ELEC-2 ROOM 110A.
T13	1 IN. DATA CONDUITS EMBEDDED IN SLAB FROM EACH TELE/DATA OUTLET WITHIN RECEPT DESK.
T14	CONDUITS RISE UP IN MASONRY WALL, THEN STUB OUT ABOVE STAFF 102A OR CORRIDOR 106 CEILING.
T15	DATA TO SERVE LIGHTING CONTROL PANEL/EQUIPMENT. COORDINATE LOCATION WITH LIGHTING CONTROLS INSTALLER PRIOR TO ROUGH-IN.
T18	TWO (2) 3 IN. CONDUIT SLEEVES FROM DATA ROOM 118 TO ABOVE ACCESSIBLE CEILING.
T19	THREE (3) 4 IN. CONDUIT SLEEVES FROM ELEC-2 ROOM 110A TO ABOVE ACCESSIBLE CEILING. MUST INCLUDE AT LEAST ONE (1) EMPTY SLEEVE FOR SPARE CABLING PULLS IN FUTURE.
T20	DATA TO SERVE ACCESS CONTROL AND INTRUSION DETECTION PANELS.
T32	CONDUIT & CABLING ROUTED UP TO TOP OF PRE-CAST WALL, THEN DAISY-CHAIN CONDUIT SYSTEM (COMBINING CABLES) TO EXIT THE PRE-CAST ENVELOPE NEAR SE CORNER, DOWN TO A PAIR OF GIGE POE+ MID-SPAN EXTENDERS ABOVE OFFICE 103 (IN ROOFTOP MECH YARD), THEN CONTINUING HOME RUN BACK TO DATA CAB IN ELEC 110A. REFER TO SHEET T104.

TELECOM PLAN GENERAL NOTES

- J-HOOKS ARE PERMITTED FOR LOW VOLTAGE TELECOM CABLE ROUTING ABOVE ACCESSIBLE CEILING TILE WHERE CABLING IS NOT VISIBLE. CONDUIT SHALL BE PROVIDED FOR ALL OTHER CABLE ROUTING.
- CONDUIT PATHWAYS FOR LOW VOLTAGE TELECOM CABLING SHALL COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 26 SECTIONS AND ELECTRICAL DRAWING SHEETS. FOR EXAMPLE, REFER TO SHEET E0.00 COVERSHEET NOTE 35: "PROVIDE NEMA 3R AND CORROSION RESISTANT ELECTRICAL EQUIPMENT AND WIRING METHODS WITHIN POOL EQUIPMENT, POOL, AND WHIRLPOOL AREAS."
- WHERE CONDUIT FOR LOW VOLTAGE TELECOM CABLING IN PRECAST WALLS IS ROUTED DOWN, UNDERGROUND CONDUIT SHALL BE ROUTED TO THE SERVING TELECOM ROOM INDICATED ON DRAWINGS. REFER TO PRECAST SHOP DRAWINGS TO IDENTIFY THESE LOCATIONS.
- COORDINATE ALL CONDUIT ROUTING WITH LOW VOLTAGE CABLING CONTRACTOR TO ENSURE SUITABILITY FOR CABLE PULLING.
- INSTALL CONDUIT FOR LOW VOLTAGE TELECOM CABLING WITH LARGE RADIUS BENDS. THE RATIOS FOR MINIMUM BEND RADIUS TO CONDUIT DIAMETER ARE:
 - 6:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES LESS THAN 2".
 - 10:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES EQUAL TO OR GREATER THAN 2".
- CONDUIT ROUTING FOR LOW VOLTAGE TELECOM CABLING SHALL NOT EXCEED 180° FOR THE SUM OF ALL ELBOWS, SWEEPS AND BENDS FOR A PARTICULAR CONDUIT RUN WITHOUT AN APPROVED PULL-BOX. THE MAXIMUM BEND FOR ANY LOCATION SHALL NOT EXCEED 90°. CONTRACTOR SHALL IDENTIFY WHERE THIS IS NOT POSSIBLE DUE TO SITE CONDITIONS SO THAT EXCEPTIONS CAN BE APPROVED IN WRITING.
- PROVIDE PULL-BOXES IN STRAIGHT SECTIONS OF CONDUIT ONLY. DO NOT USE PULL-BOXES TO CHANGE PATHWAY DIRECTION, UNLESS SPECIFICALLY SHOWN WITH A CHANGE IN DIRECTION ON THE DRAWINGS.
- CONDUIT OUTLET BODIES (I.E., CONDULET, C, LB, LL, LR, T), SHALL NOT BE USED AS CABLE PULL POINTS OR TO CHANGE PATHWAY DIRECTION IN ANY LOCATIONS. THESE DEVICES ARE COMMONLY USED FOR ELECTRICAL/POWER PATHWAYS AND ARE NOT APPROVED FOR LOW VOLTAGE CABLING.
- CONDUITS RISING FROM BELOW SLAB TO STUB ABOVE SLAB SHALL EXTEND 6" AFF AND BE FITTED WITH CABLE BUSHINGS.
- ALL CONDUITS AND SLEEVES WITH "OPEN" TERMINATIONS SHALL BE EQUIPPED WITH CABLE BUSHINGS.
- ALL METALLIC CONDUITS ENTERING TELECOM ROOMS SHALL BE BONDED AT ONE END. FOR METALLIC CONDUITS STUBING ABOVE/NEAR CABLE TRAY IN DATA ROOM 118 USE BONDING BUSHING TO BOND TO THE CABLE TRAY.



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO

7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	01/20/2024	ASI-020
2	02/22/2024	ASI-020R1

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

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC

REV'D BY: MCE/PKD

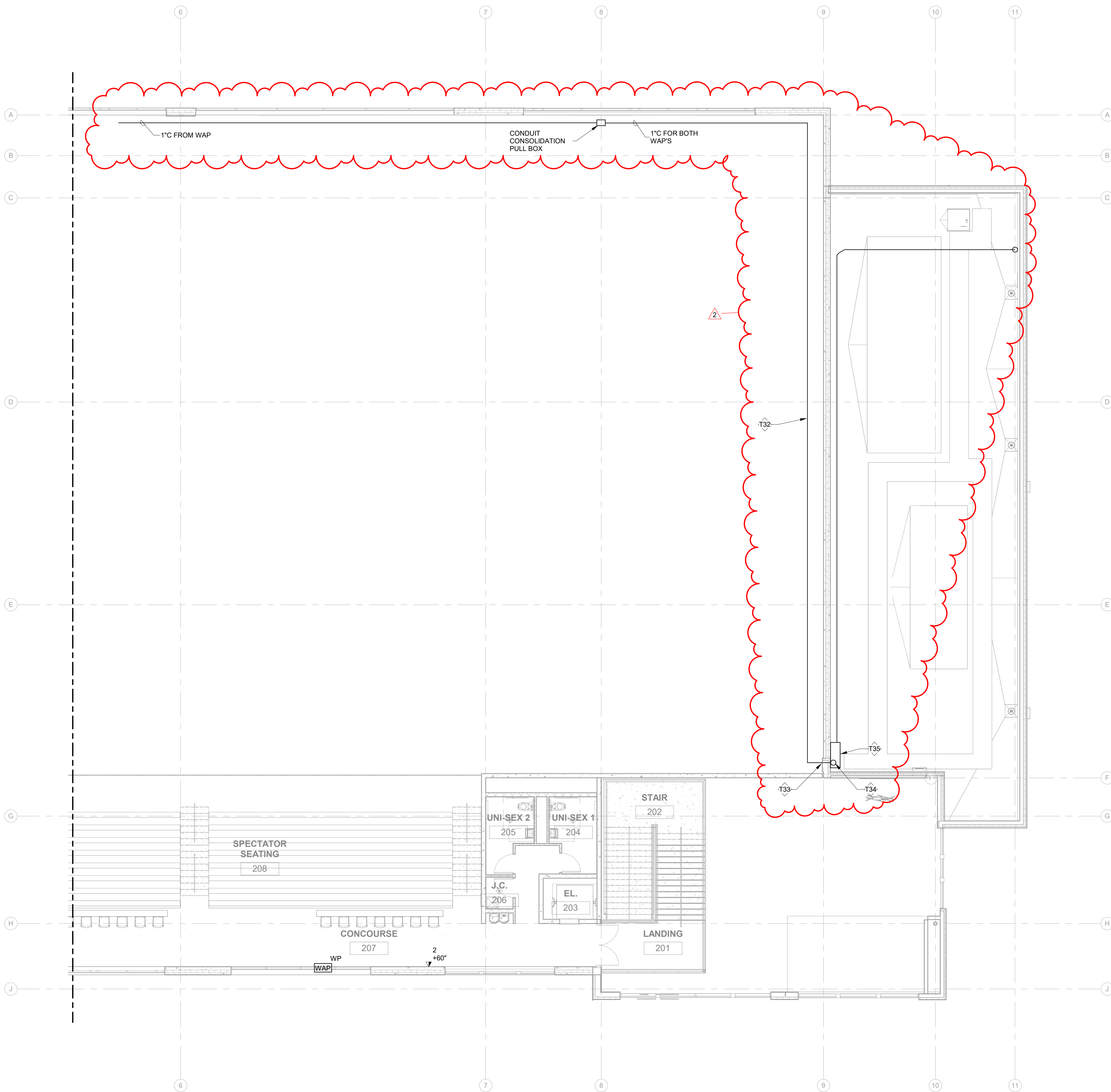
PROJECT #: 22044

TITLE: TELECOM SYSTEMS FIRST
FLOOR PLAN - EAST

SHEET #:

T102

1 SECOND FLOOR IT PLAN - EAST
SCALE: 1/8" = 1'-0"

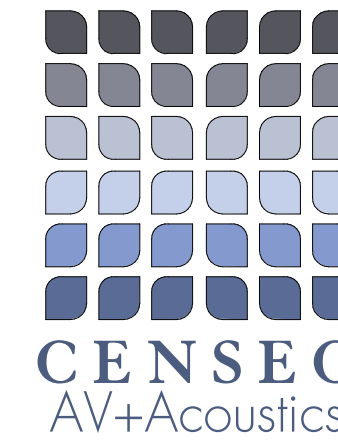


Keynote Legend	
Key Value	Keynote Text
T32	CONDUIT & CABLING ROUTED UP TO TOP OF PRE-CAST WALL, THEN DAISY-CHAIN CONDUIT SYSTEM (COMBINING CABLES) TO EXIT THE PRE-CAST ENVELOPE NEAR SE CORNER, DOWN TO A PAIR OF GIGE POE+ MID-SPAN EXTENDERS ABOVE OFFICE 103 (IN ROOFTOP MECH YARD), THEN CONTINUING HOME RUN BACK TO DATA CAB IN ELEC 110A. REFER TO SHEET T104.
T33	CORE DRILL PRE-CAST WALL FOR CONDUIT PENETRATION(S).
T34	ROUTE CONDUIT DOWN EXTERIOR OF PRE-CAST WALL.
T35	PROVIDE NEMA 3R RATED 24 IN. SQUARE X 4 IN. DEEP PULL BOX (WITH INTERNAL PANEL MOUNTING ACCESSORY) CONTAINING MID-SPAN GIG-ETHERNET POE+ EXTENDERS TO WAP'S ON NORTH WALL INSIDE NATATORIUM. COORDINATE BOX LOCATION WITH OTHER TRADES. PROVIDE TWO (2) POE+ EXTENDERS, VERACITY VOR-ORM-GXT (OUTREACH MAX GXT) OR APPROVED EQUAL, INSIDE BOX, AND WIRE IN-LINE FOR THE WAP'S. LOCATE BOX SO THAT THE POE+ EXTENDERS ARE NO MORE THAN 100 METERS FROM EITHER END OF THE CABLE RUNS.

TELECOM PLAN GENERAL NOTES	
A.	J-HOOKS ARE PERMITTED FOR LOW VOLTAGE TELECOM CABLE ROUTING ABOVE ACCESSIBLE CEILING TILE WHERE CABLING IS NOT VISIBLE. CONDUIT SHALL BE PROVIDED FOR ALL OTHER CABLE ROUTING.
B.	CONDUIT PATHWAYS FOR LOW VOLTAGE TELECOM CABLING SHALL COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 26 SECTIONS AND ELECTRICAL DRAWING SHEETS. FOR EXAMPLE, REFER TO SHEET E0.00 COVERSHEET NOTE 35: "PROVIDE NEMA 3R AND CORROSION RESISTANT ELECTRICAL EQUIPMENT AND WIRING METHODS WITHIN POOL EQUIPMENT, POOL, AND WHIRLPOOL AREAS."
C.	WHERE CONDUIT FOR LOW VOLTAGE TELECOM CABLING IN PRECAST WALLS IS ROUTED DOWN, UNDERGROUND CONDUIT SHALL BE ROUTED TO THE SERVING TELECOM ROOM INDICATED ON DRAWINGS. REFER TO PRECAST SHOP DRAWINGS TO IDENTIFY THESE LOCATIONS.
D.	COORDINATE ALL CONDUIT ROUTING WITH LOW VOLTAGE CABLING CONTRACTOR TO ENSURE SUITABILITY FOR CABLE PULLING.
E.	INSTALL CONDUIT FOR LOW VOLTAGE TELECOM CABLING WITH LARGE RADIUS BENDS. THE RATIOS FOR MINIMUM BEND RADIUS TO CONDUIT DIAMETER ARE: a. 6:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES LESS THAN 2". b. 10:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES EQUAL TO OR GREATER THAN 2".
F.	CONDUIT ROUTING FOR LOW VOLTAGE TELECOM CABLING SHALL NOT EXCEED 180° FOR THE SUM OF ALL ELBOWS, SWEEPS AND BENDS FOR A PARTICULAR CONDUIT RUN WITHOUT AN APPROVED PULL-BOX. THE MAXIMUM BEND FOR ANY LOCATION SHALL NOT EXCEED 90°. CONTRACTOR SHALL IDENTIFY WHERE THIS IS NOT POSSIBLE DUE TO SITE CONDITIONS SO THAT EXCEPTIONS CAN BE APPROVED IN WRITING.
G.	PROVIDE PULL-BOXES IN STRAIGHT SECTIONS OF CONDUIT ONLY. DO NOT USE PULL-BOXES TO CHANGE PATHWAY DIRECTION, UNLESS SPECIFICALLY SHOWN WITH A CHANGE IN DIRECTION ON THE DRAWINGS.
H.	CONDUIT OUTLET BODIES (I.E., CONDULET, C, LB, LL, LR, T), SHALL NOT BE USED AS CABLE PULL POINTS OR TO CHANGE PATHWAY DIRECTION IN ANY LOCATIONS. THESE DEVICES ARE COMMONLY USED FOR ELECTRICAL/POWER PATHWAYS AND ARE NOT APPROVED FOR LOW VOLTAGE CABLING.
I.	CONDUITS RISING FROM BELOW SLAB TO STUB ABOVE SLAB SHALL EXTEND 6" AFF AND BE FITTED WITH CABLE BUSHINGS.
J.	ALL CONDUITS AND SLEEVES WITH "OPEN" TERMINATIONS SHALL BE EQUIPPED WITH CABLE BUSHINGS.
K.	ALL METALLIC CONDUITS ENTERING TELECOM ROOMS SHALL BE BONDED AT ONE END. FOR METALLIC CONDUITS STUBING ABOVE/NEAR CABLE TRAY IN DATA ROOM 118 USE BONDING BUSHING TO BOND TO THE CABLE TRAY.



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO

7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	01/20/2024	ASI-020
2	02/22/2024	ASI-020R1

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

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC

REV'D BY: MCE/PKD

PROJECT #: 22044

TITLE: TELECOM SYSTEMS
SECOND FLOOR PLAN - EAST

SHEET #:

T104



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO
7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	01/20/2024	ASI-020
2	02/22/2024	ASI-020R1

SCALE: As indicated

ISSUE DATE: JULY 14, 2023

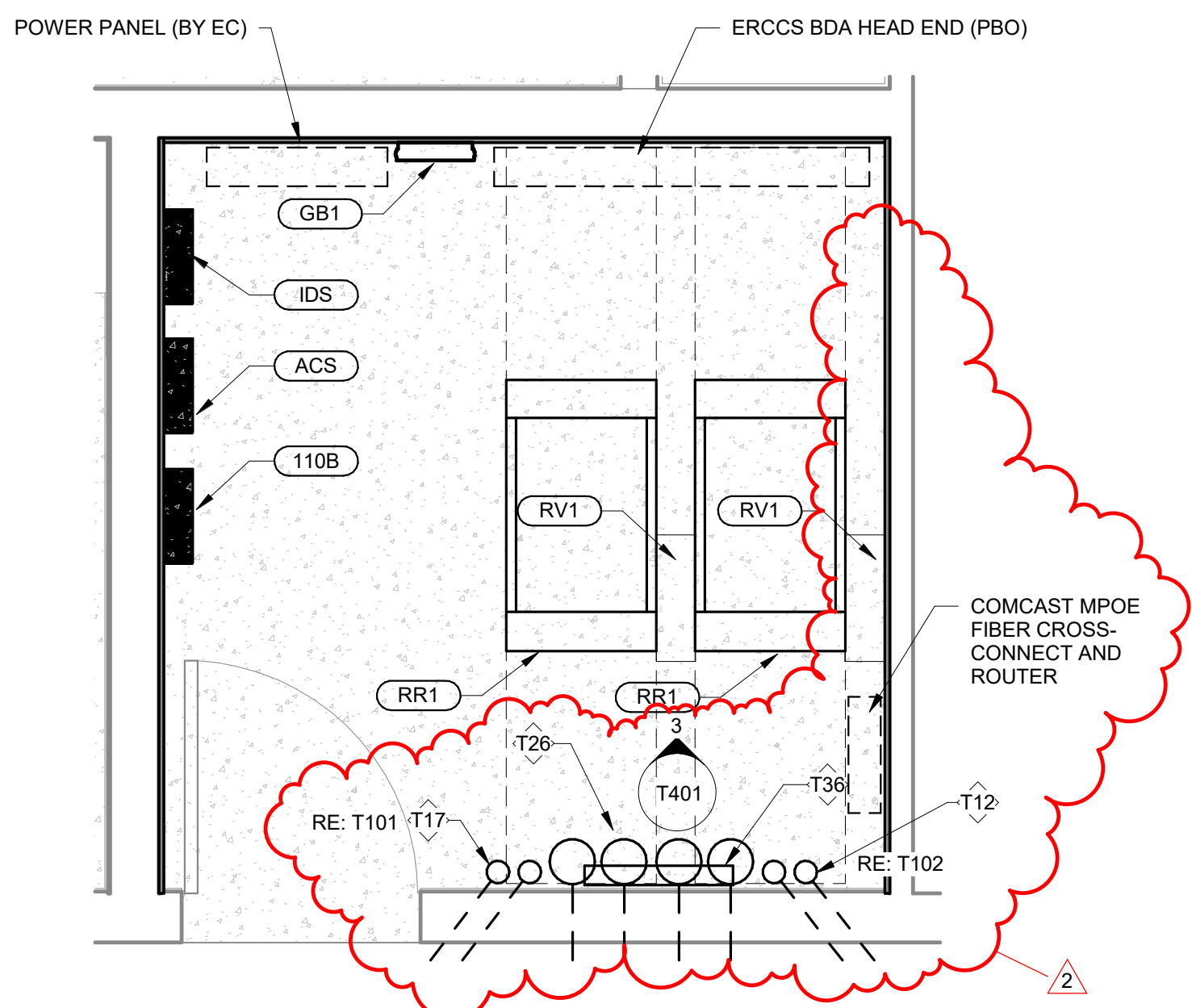
DRAWN BY: DHC

REV'D BY: MCE/PKD

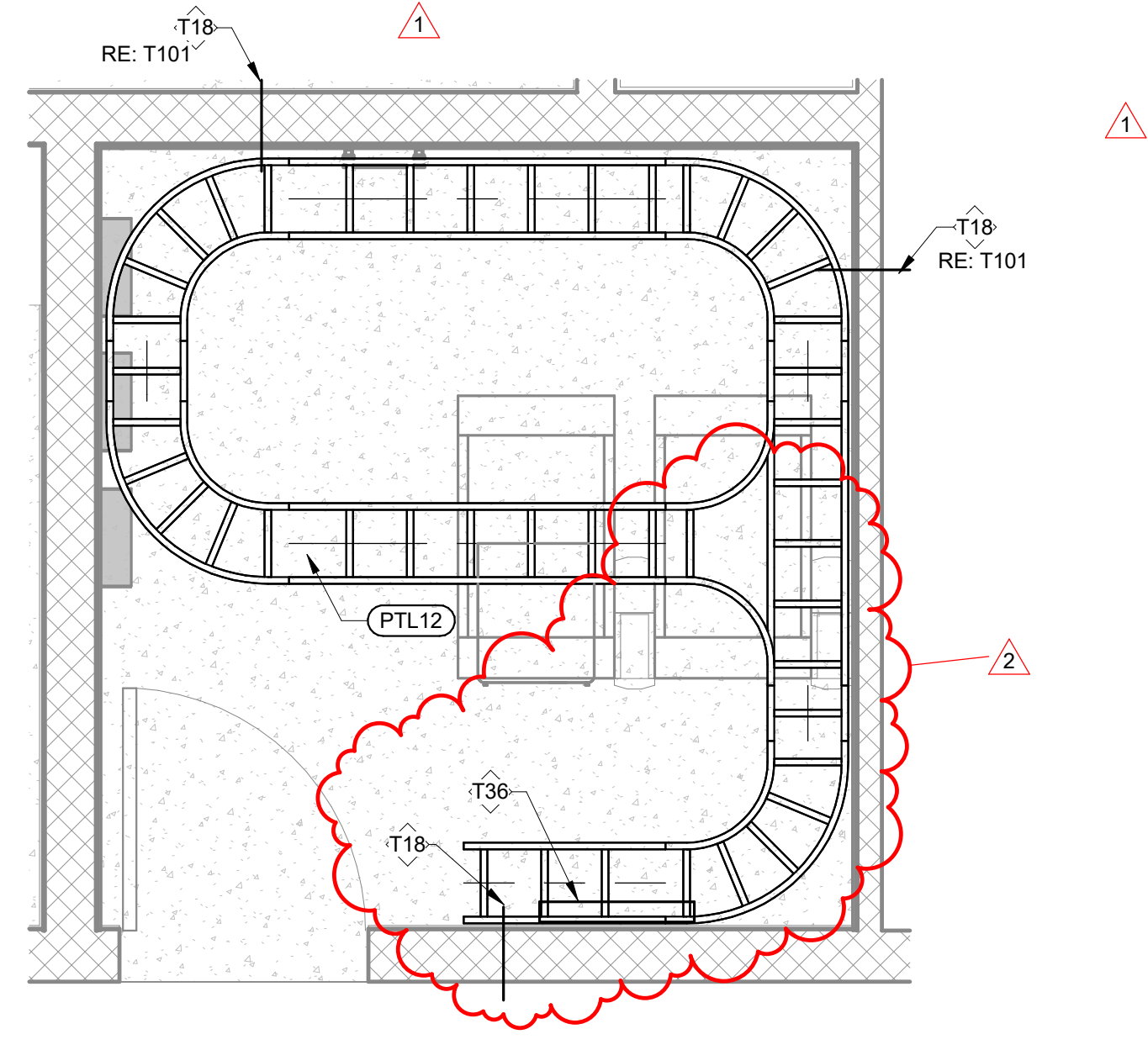
PROJECT #: 22044

TITLE: TELECOM SYSTEMS
ENLARGED PLANS

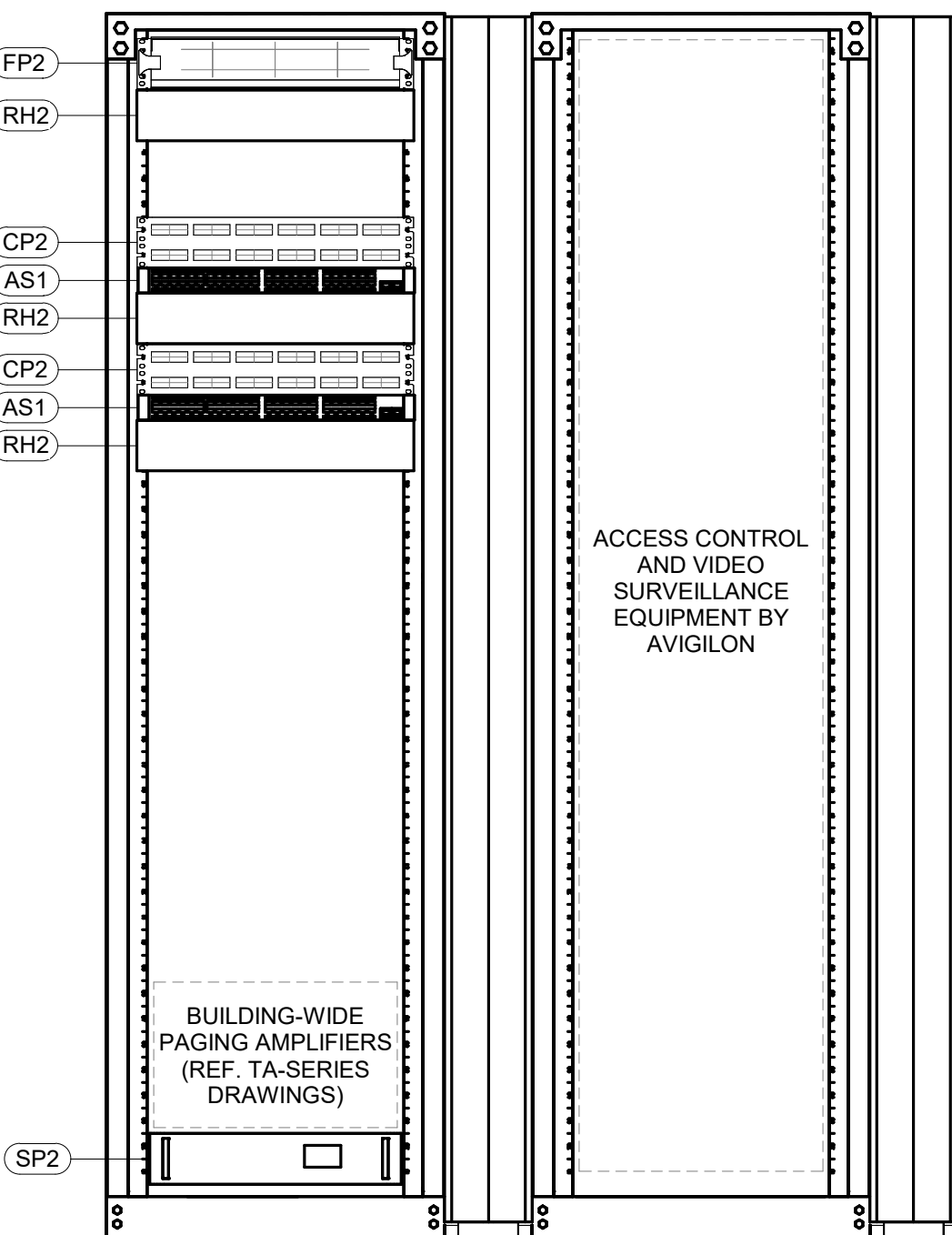
SHEET #:
T401



1 IT ENLARGED PLAN - DATA ROOM
SCALE: 1/2" = 1'-0"



2 IT ENLARGED CABLE TRAY PLAN - DATA ROOM
SCALE: 1/2" = 1'-0"



3 IT RACK ELEVATION
SCALE: 1" = 1'-0"

GENERAL NOTES:

1. ALL UNDERGROUND CONDUIT ENTERING DATA ROOM SHALL BE STUBBED 6" AFF ALONG WALL.



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO 7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
2	02/22/2024	ASI-020R1

SCALE: As indicated

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC

REV'D BY: MCE/PKD

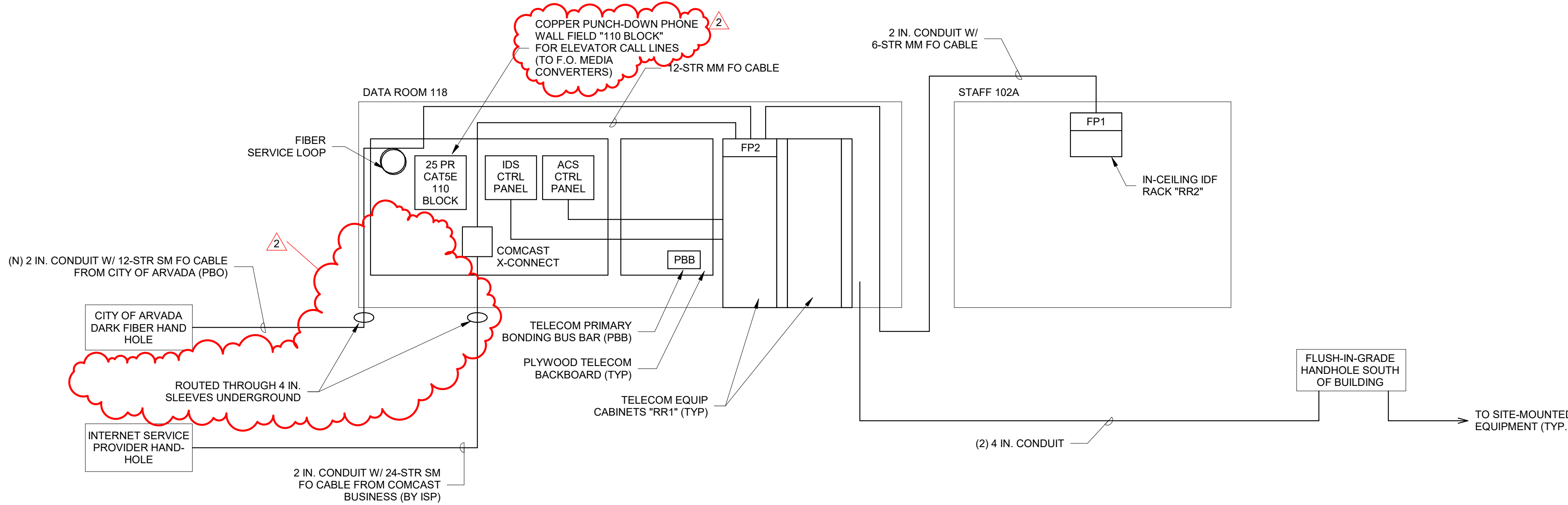
PROJECT #: 22044

TITLE: TELECOM SYSTEMS
DIAGRAMS

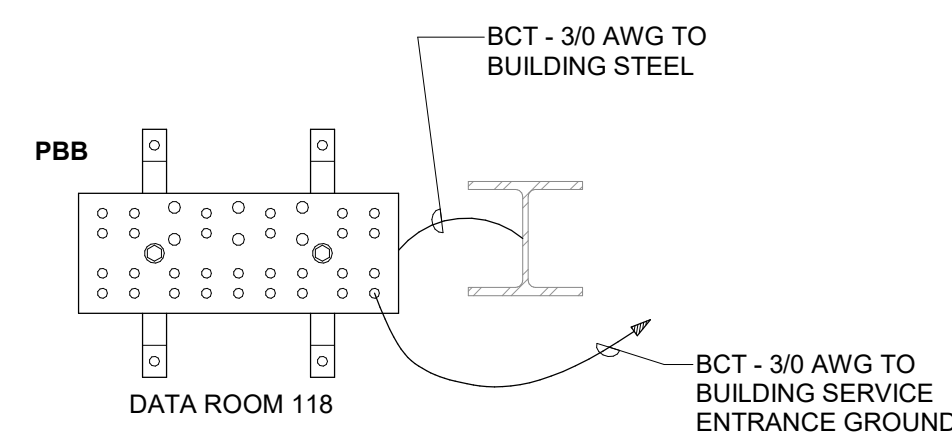
SHEET #:

T601

- GENERAL NOTES:
1. PROVIDE ALL PRE-TERMINATED PATCH CABLES.
 2. ALL FIBER-OPTIC CONNECTIONS SHALL BE LC TYPE.
 3. PROVIDE MULTI-OUTLET POWER DISTRIBUTION STRIPS IN EVERY RACK/CABINET.
 4. REFER TO TELECOM PLANS FOR ADDITIONAL CONDUIT AND CABLING REQUIREMENTS.
 5. ALL INDOOR CABLING SHALL BE PLENUM RATED.
 6. PROVIDE GROUNDING AND BONDING FOR ALL TELECOMMUNICATIONS EQUIPMENT CABINETS, RACKS, CABLE TRAYS, PROTECTOR BLOCKS, SBB'S IN ACCORDANCE WITH ANSI/TIA-607.
 7. INSTALLER SHALL FIELD-SURVEY TO DETERMINE THE OPTIMAL EXACT ROUTING OF NEW CONDUITS AND CABLING WITHIN BUILDING.
 8. EACH NEW CABLE SHALL BE INSTALLED IN ITS OWN DEDICATED CONDUIT, UNLESS OTHERWISE NOTED.

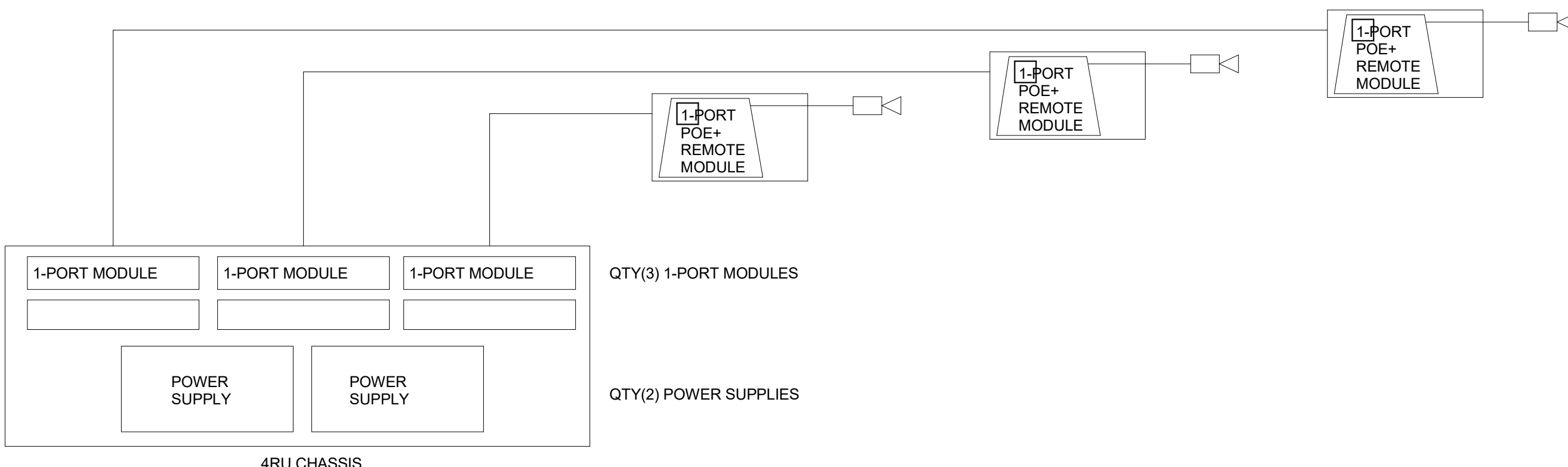


1 TELECOM RISER DIAGRAM
SCALE: NO SCALE



- LEGEND:
- BCT = BONDING CONDUCTOR FOR TELECOMMUNICATIONS
 - TBB = TELECOMMUNICATIONS BONDING BACKBONE
 - PBB = TELECOMMUNICATIONS PRIMARY BONDING BUS BAR
- NOTES:
1. PROVIDE ALL GROUNDING IN ACCORD WITH THE LATEST NEC AND ANSI/TIA-607.
 2. PROVIDE 12 IN. COPPER PBB (PRIMARY BUS BAR) IN DATA ROOM WHERE INDICATED ON PLANS.
 3. INSTALL BONDING CONDUCTORS WITHIN METAL CONDUIT (WITH CHOKES AT ENDS) WHERE EXPOSED / NOT CONCEALED.

2 TELECOMMUNICATIONS
GROUNDING SYSTEM DIAGRAM
SCALE: NO SCALE

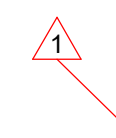
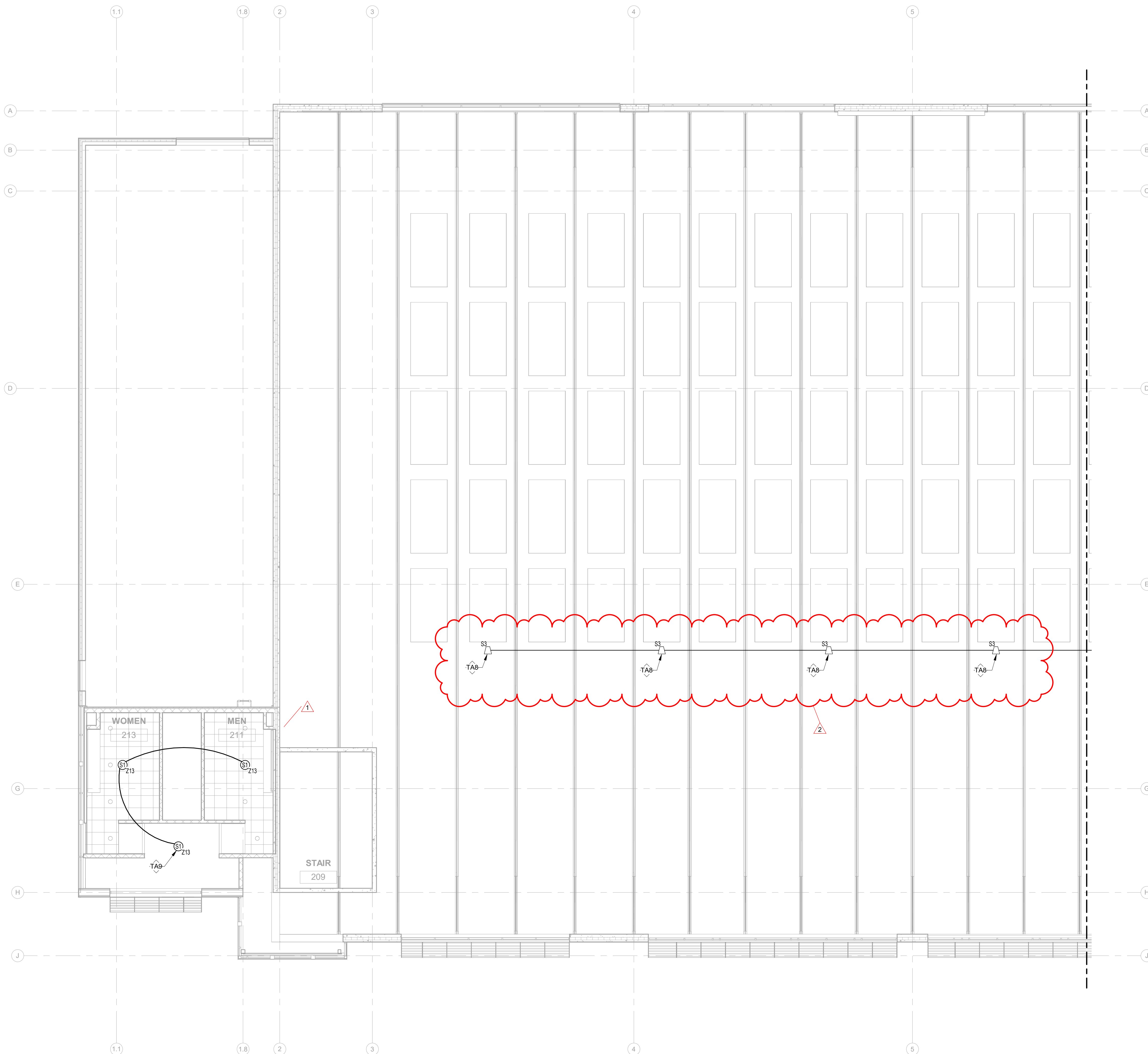


3 FIBER-EXTENSION DIAGRAM
SCALE: NO SCALE

1

SECOND FLOOR AV RCP - WEST

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

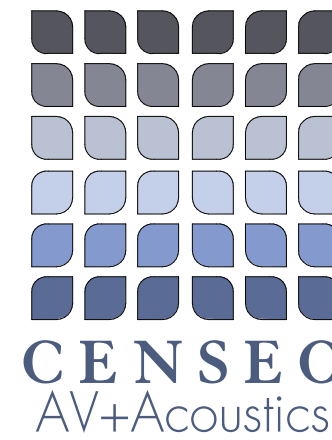


Keynote Legend	
Key Value	Keynote Text
TA8	PROVIDE PULL BOX AT STRUCTURAL CEILING ABOVE LOUDSPEAKER WITH (1) 1" CONDUIT TO RACK "ER1" IN MEET MANAGEMENT 117.
TA9	PROVIDE PULL BOX AT STRUCTURAL CEILING AS SHOWN IN DETAIL ON SHEET TA501. PROVIDE 1" CONDUIT DAISY-CHAINED BETWEEN SPEAKER J-BOXES AND 1" CONDUIT FROM FIRST SPEAKER J-BOX TO IT RACK IN DATA ROOM 118.

AUDIO-VIDEO PLAN GENERAL NOTES	
A.	J-HOOKS ARE PERMITTED FOR LOW VOLTAGE AUDIO-VIDEO CABLE ROUTING ABOVE ACCESSIBLE CEILING TILE WHERE CABLING IS NOT VISIBLE. CONDUIT SHALL BE PROVIDED FOR ALL OTHER CABLE ROUTING.
B.	CONDUIT PATHWAYS FOR LOW VOLTAGE AUDIO-VIDEO CABLING SHALL COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 26 SECTIONS AND ELECTRICAL DRAWING SHEETS. FOR EXAMPLE, REFER TO SHEET E0.00 COVERSHEET NOTE 35: "PROVIDE NEMA 3R AND CORROSION RESISTANT ELECTRICAL EQUIPMENT AND WIRING METHODS WITHIN POOL EQUIPMENT, POOL, AND WHIRLPOOL AREAS."
C.	COORDINATE ALL CONDUIT ROUTING WITH LOW VOLTAGE CABLING CONTRACTOR TO ENSURE SUITABILITY FOR CABLE PULLING.
D.	INSTALL CONDUIT FOR LOW VOLTAGE AUDIO-VIDEO CABLING WITH LARGE RADIUS BENDS. THE RATIOS FOR MINIMUM BEND RADIUS TO CONDUIT DIAMETER ARE: a. 6:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES LESS THAN 2". b. 10:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES EQUAL TO OR GREATER THAN 2".
E.	CONDUIT ROUTING FOR LOW VOLTAGE AUDIO-VIDEO CABLING SHALL NOT EXCEED 180° FOR THE SUM OF ALL ELBOWS, SWEEPS AND BENDS FOR A PARTICULAR CONDUIT RUN WITHOUT AN APPROVED PULL-BOX. THE MAXIMUM BEND FOR ANY LOCATION SHALL NOT EXCEED 90°. CONTRACTOR SHALL IDENTIFY WHERE THIS IS NOT POSSIBLE DUE TO SITE CONDITIONS SO THAT EXCEPTIONS CAN BE APPROVED IN WRITING.
F.	PROVIDE PULL-BOXES IN STRAIGHT SECTIONS OF CONDUIT ONLY. DO NOT USE PULL-BOXES TO CHANGE PATHWAY DIRECTION, UNLESS SPECIFICALLY SHOWN WITH A CHANGE IN DIRECTION ON THE DRAWINGS.
G.	CONDUIT OUTLET BODIES (I.E., CONDULET, C, LB, LL, LR, T), SHALL NOT BE USED AS CABLE PULL POINTS OR TO CHANGE PATHWAY DIRECTION IN ANY LOCATIONS. THESE DEVICES ARE COMMONLY USED FOR ELECTRICAL/POWER PATHWAYS AND ARE NOT APPROVED FOR LOW VOLTAGE CABLING.
H.	ALL CONDUITS AND SLEEVES WITH "OPEN" TERMINATIONS SHALL BE EQUIPPED WITH CABLE BUSHINGS.
I.	ALL METALLIC CONDUITS ENTERING TELECOM ROOMS SHALL BE BONDED AT ONE END. FOR METALLIC CONDUITS STUBING ABOVE/NEAR CABLE TRAY IN DATA ROOM 118 USE BONDING BUSHING TO BOND TO THE CABLE TRAY.



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FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO

7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	01/20/2024	ASI-020
2	02/22/2024	ASI-020R1

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

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC/EER

REV'D BY: PKD/MCE

PROJECT #: 22044

TITLE: AV SYSTEMS SECOND FLOOR RCP - WEST

SHEET #:

TA113



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Keynote Legend	
Key Value	Keynote Text
TA8	PROVIDE PULL BOX AT STRUCTURAL CEILING ABOVE LOUDSPEAKER WITH (1) 1" CONDUIT TO RACK "ER1" IN MEET MANAGEMENT 117.
TA9	PROVIDE PULL BOX AT STRUCTURAL CEILING AS SHOWN IN DETAIL ON SHEET TA501. PROVIDE 1" CONDUIT DAISY-CHAINED BETWEEN SPEAKER J-BOXES AND 1" CONDUIT FROM FIRST SPEAKER J-BOX TO IT RACK IN DATA ROOM 118.
TA11	ROUTE OVERHEAD SPEAKER CABLING & CONDUITS DOWN THROUGH THIS VERTICAL CHASE, THEN THROUGH CEILINGS BACK TO AV HEAD-END AMPLIFIERS.

AUDIO-VIDEO PLAN GENERAL NOTES	
A.	J-HOOKS ARE PERMITTED FOR LOW VOLTAGE AUDIO-VIDEO CABLE ROUTING ABOVE ACCESSIBLE CEILING TILE WHERE CABLING IS NOT VISIBLE. CONDUIT SHALL BE PROVIDED FOR ALL OTHER CABLE ROUTING.
B.	CONDUIT PATHWAYS FOR LOW VOLTAGE AUDIO-VIDEO CABLING SHALL COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 26 SECTIONS AND ELECTRICAL DRAWING SHEETS. FOR EXAMPLE, REFER TO SHEET E0.00 COVERSHEET NOTE 35: "PROVIDE NEMA 3R AND CORROSION RESISTANT ELECTRICAL EQUIPMENT AND WIRING METHODS WITHIN POOL EQUIPMENT, POOL, AND WHIRLPOOL AREAS."
C.	COORDINATE ALL CONDUIT ROUTING WITH LOW VOLTAGE CABLING CONTRACTOR TO ENSURE SUITABILITY FOR CABLE PULLING.
D.	INSTALL CONDUIT FOR LOW VOLTAGE AUDIO-VIDEO CABLING WITH LARGE RADIUS BENDS. THE RATIOS FOR MINIMUM BEND RADIUS TO CONDUIT DIAMETER ARE: a. 6:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES LESS THAN 2". b. 10:1 BEND RADIUS OF THE INSIDE CONDUIT DIAMETER FOR CONDUIT SIZES EQUAL TO OR GREATER THAN 2".
E.	CONDUIT ROUTING FOR LOW VOLTAGE AUDIO-VIDEO CABLING SHALL NOT EXCEED 180° FOR THE SUM OF ALL ELBOWS, SWEEPS AND BENDS FOR A PARTICULAR CONDUIT RUN WITHOUT AN APPROVED PULL-BOX. THE MAXIMUM BEND FOR ANY LOCATION SHALL NOT EXCEED 90°. CONTRACTOR SHALL IDENTIFY WHERE THIS IS NOT POSSIBLE DUE TO SITE CONDITIONS SO THAT EXCEPTIONS CAN BE APPROVED IN WRITING.
F.	PROVIDE PULL-BOXES IN STRAIGHT SECTIONS OF CONDUIT ONLY. DO NOT USE PULL-BOXES TO CHANGE PATHWAY DIRECTION, UNLESS SPECIFICALLY SHOWN WITH A CHANGE IN DIRECTION ON THE DRAWINGS.
G.	CONDUIT OUTLET BODIES (I.E., CONDULET, C, LB, LL, LR, T), SHALL NOT BE USED AS CABLE PULL POINTS OR TO CHANGE PATHWAY DIRECTION IN ANY LOCATIONS. THESE DEVICES ARE COMMONLY USED FOR ELECTRICAL/POWER PATHWAYS AND ARE NOT APPROVED FOR LOW VOLTAGE CABLING.
H.	ALL CONDUITS AND SLEEVES WITH "OPEN" TERMINATIONS SHALL BE EQUIPPED WITH CABLE BUSHINGS.
I.	ALL METALLIC CONDUITS ENTERING TELECOM ROOMS SHALL BE BONDED AT ONE END. FOR METALLIC CONDUITS STUBING ABOVE/NEAR CABLE TRAY IN DATA ROOM 118 USE BONDING BUSHING TO BOND TO THE CABLE TRAY.

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
1	01/20/2024	ASI-020
2	02/22/2024	ASI-020R1

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

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC/EER

REV'D BY: PKD/MCE

PROJECT #: 22044

TITLE: AV SYSTEMS SECOND FLOOR RCP - EAST

SHEET #:

TA114

1 SECOND FLOOR AV RCP - EAST

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



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ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS (ASI)

Project: Meyers Pool Replacement
Project #: 22044.00

ASI#: 20R2
Date: April 12, 2024

End-User: ☐ Apex Parks and Recreation

Owner: ☐ City of Arvada

Contractor: ☐ Saunders Construction

CC:
FIELD ☐
OTHER ☐
OTHER ☐
OTHER ☐

This document is an addendum to the previously issued Contract Documents listed below:

Document Name: BID & PERMIT SET
Document Last Issue Date: Mar. 10, 2023

DESCRIPTION: (Continued on attached sheets)

SHEET	DESCRIPTION
T002	Revised "Fiber Connectivity" schedule (items FP1, FP2, FP3 & FP4) and "Equipment Racks, Accessories, and Room Fittings" schedule (items RR2 & RR3)
T601	Revised Diagram #1 (Telecom Riser) to reflect the wall-mounted equipment cabinets and ACS/IDS cabinets in Mech Rm 130 and Elec Rm 110A.
SECTION	DESCRIPTION

ATTACHMENTS: (List documents that support description)

DRAWING SHEETS:

Telecom Drawing Sheets: T002, T601

SPECIFICATION SECTIONS:

Issued By:

April 12, 2024

ARCHITECT

Date:

COPPER CONNECTIVITY		
KEY	DESCRIPTION	COMMENTS
CC1	CAT 6 CABLE, CMP, COLOR BLUE	FOR STANDARD DATA AND VOICE OUTLETS
CC2	CAT 6A CABLE, CMP, COLOR YELLOW	FOR WIRELESS ACCESS POINTS
CC3	CAT6 CABLE, CMP, COLOR GREY	FOR AUDIO-VIDEO DEVICES
CC4	CAT 6 CABLE, CMP, COLOR GREY	FOR SECURITY CAMERAS OR OTHER IP-SECURITY DEVICES
CC5	25 PAIR VOICE GRADE CABLE, ARMM	INTERBUILDING ANALOG BACKBONE, TO BE TERMINATED ON BOTH ENDS ON WALL MOUNTED 110 BLOCKS
CJ1	CAT 6 JACK, COLOR BLUE	FOR STANDARD DATA OUTLETS
CJ2	CAT 6A JACK, COLOR YELLOW	FOR WIRELESS ACCESS POINTS
CJ3	CAT 6 JACK, COLOR GREY	FOR AUDIO-VIDEO DEVICES
CJ4	CAT 6 JACK, COLOR GREY	FOR SECURITY CAMERAS OR OTHER IP-SECURITY DEVICES
CJ5	BLANK INSERT	MATCH THE COLOR OF THE FACEPLATE.
CW1	1-PORT FACEPLATE, SST	
CW2	2-PORT FACEPLATE, SST	
CW4	4-PORT FACEPLATE, SST	
CW5	WALL PHONE FACEPLATE WITH 1-PORT JACK, SST	
CW6	SURFACE MOUNT BOX, 1 PORT, MAX SIZE 2 IN X 1 IN X 1 IN	FOR SECURITY CAMERAS
CW7	SURFACE MOUNT BOX, 2 PORT, MAX SIZE 2 IN X 1 IN X 1 IN	FOR WIRELESS ACCESS POINTS
CP1	PATCH PANEL, 24 PORTS, BLACK, FLAT, 1RU	COPPER JACK PATCH PANEL, PROVIDED QTY AS SHOWN ON RACK ELEVATION AND TECHNOLOGY ENLARGED PLANS
CP2	PATCH PANEL, 48 PORTS, BLACK, FLAT, 2RU	COPPER JACK PATCH PANEL, PROVIDED QTY AS SHOWN ON RACK ELEVATION AND TECHNOLOGY ENLARGED PLANS.

FIBER CONNECTIVITY		
KEY	DESCRIPTION	COMMENTS
FP1	1 RU FIBER-OPTIC PATCH PANEL, TO SUPPORT 3 FIBER MODULES	REFER TO SPECIFICATIONS
FP2	2 RU FIBER-OPTIC PATCH PANEL, TO SUPPORT 6 FIBER MODULES	REFER TO SPECIFICATIONS
FP3	FIBER RACK TERMINATION BRACKET	PROVIDE AS NEEDED
FP4	FIBER BRACKET CONNECTOR	PROVIDE AS NEEDED
FC1	12 STRAND MM FIBER, OM3, PLENUM RATED	REFER TO SPECIFICATIONS
FM1	FIBER MODULE, 6 STRAND MULTI-MODE LC	PROVIDE (2) FOR EACH 12-STRAND CABLE TERMINATION AT EVERY FIBER PATCH PANEL
FM2	6 STRAND MM DUPLEX LC ADAPTER	PROVIDE FOR ALL MM PAIRS
FM3	BLANK FIBER ADAPTER PANEL	PROVIDE AS NEEDED TO FILL UNUSED OPENINGS

COPPER PATCH CORDS								
LOCATION	PURPOSE	CATEGORY	QTY PER LOCATION	LENGTH (FT)	COLOR	FURNISHED BY	INSTALLED BY	COMMENTS
PREMISES	JACK TO PHONE	6	1 PER LOCATION	7	BLUE	CONTRACTOR	CONTRACTOR	
PREMISES	JACK TO PC	6	1 PER LOCATION	7	BLUE	CONTRACTOR	CONTRACTOR	
PREMISES	JACK TO PRINTER	6	1 PER LOCATION	7	BLUE	CONTRACTOR	CONTRACTOR	
PREMISES	WIRELESS ACCESS POINT	6A	2 PER LOCATION	1	YELLOW	CONTRACTOR	CONTRACTOR	
PREMISES	SECURITY CAMERA	6	1 PER LOCATION	PER SEC DETAIL	GREY	CONTRACTOR	CONTRACTOR	
PREMISES	AUDIO-VISUAL DEVICES	6	1 PER LOCATION	15	GREY	CONTRACTOR	CONTRACTOR	
DATA	SWITCHES	6	1 PER INSTALLED LINK	10	TBD	CONTRACTOR	CONTRACTOR	
DATA	SWITCHES	6A		10	TBD	CONTRACTOR	CONTRACTOR	
DATA	MISC CONNECTION	6	TBD	10	TBD	CONTRACTOR	OWNER	

FIBER PATCH CORDS										
LOCATION	PURPOSE	TYPE	CONNECTOR	# OF STRANDS	LENGTH (M)	QUANTITY	COLOR	FURNISHED...	INSTALLED BY	COMMENTS
DATA	PATCH FROM FIBER PANEL TO ACTIVE NETWORK EQUIPMENT	MM	LC-LC	DUPLEX	2	6	AQUA	CONTRACTOR	CONTRACTOR	

PATHWAYS		
KEY	DESCRIPTION	COMMENTS
PTL12	12 IN WIDE X 4 IN DEEP LADDER-STYLE CABLE TRAY, SST	REFER TO SPECIFICATIONS
PT1	CABLE TRAY WALL-MOUNT END SUPPORT	PROVIDE AS NEEDED
PT2	CABLE TRAY SPLICE KIT	PROVIDE AS NEEDED
PT3	CABLE TRAY RADIUS CABLE DROPOUT	PROVIDE AS NEEDED
PT4	CABLE TRAY TRAPEZE SUPPORT, SST	PROVIDE AS NEEDED
PT5	CABLE TRAY GROUND BOLT	PROVIDE AS NEEDED
PC1	1 IN. SCHEDULE 80 PVC CONDUIT	
PC2	2 IN. SCHEDULE 80 PVC CONDUIT	
PC4	4 IN. SCHEDULE 80 PVC CONDUIT	
PM1	6" D-RING	USE AS NEEDED TO FACILITATE TIDY ROUTING OF CABLING ALONG PLYWOOD WALLFIELDS IN TELECOM ROOMS
PM2	FRAY RESISTANT EXPANDABLE SLEEVING	USE AS NEEDED TO FACILITATE TIDY ROUTING OF CABLING ALONG PLYWOOD WALLFIELDS IN TELECOM ROOMS
PM3	HOOK AND LOOP CABLE WRAP	VELCRO BRAND OR APPROVED EQUAL

POWER		
KEY	DESCRIPTION	COMMENTS
SP1	PDU, VERTICAL, 120V, L5-20R INPUT, (24) 5-20 OUTPUT	REAR MOUNTED. PROVIDE 1 PER CABINET.
SP2	UNINTERRUPTIBLE POWER SUPPLY, 2 KVA, RACK-MOUNTED, 2 RU	

BONDING AND GROUNDING		
KEY	DESCRIPTION	COMMENTS
GC1	STRANDED BONDING CONDUCTOR	
GB1	PRIMARY BONDING BUSBAR (PBB) COMPLIANT WITH ANSI/TIA-607	
GB3	RACK BONDING BUSBAR (RBB) COMPLIANT WITH ANSI/TIA-607	
GH1	2-HOLE GROUND LUG	
GH2	GROUNDING BUSHING	
GH3	H-TAP	WITH CLEAR COVER
GH4	LADDER RACK GROUND STRAP	
GH5	ARMORED CABLE BONDING CLAMP	
GA1	GROUND DISCONNECT WARNING LABEL	

EQUIPMENT RACKS, ACCESSORIES, AND ROOM FITTINGS		
KEY	DESCRIPTION	COMMENTS
RR1	4-POST TELECOM EQUIPMENT RACK, 41 RU, 36 IN. DEEP	REFER TO SPECIFICATIONS
RR2	12RU, 24 IN. HIGH X 25 IN. WIDE X 25 IN. DEEP WALL-MOUNT SWING-OUT EQUIPMENT ENCLOSURE	PANDUIT PZWMC12 OR SIMILAR. REFER TO NOTES ON T-102
RR3	12RU, 24.5 IN. HIGH X 24 IN. WIDE X 28 IN. DEEP NEMA 4X STAINLESS STEEL WALL-MOUNT SWING-OUT EQUIPMENT CABINET ENCLOSURE	NVENT/HOFFMAN PIHS242428XA OR SIMILAR. REFER TO NOTES ON T-101
RV1	VERTICAL CABLE MANAGER, SINGLE-SIDED	MATCH MAKE OF RACK.
RH1	HORIZONTAL WIRE MANAGER, 1U, 5" DEEP	MATCH MAKE OF RACK.
RH2	HORIZONTAL WIRE MANAGER, 2U, 5" DEEP	MATCH MAKE OF RACK.
RB1	BLANKING PANEL, 1U	MATCH MAKE OF RACK.
RB2	BLANKING PANEL, 2U	MATCH MAKE OF RACK.
RA1	BAG OF (50) SCREWS, THREAD TO FIT RACK RAILS.	INCLUDE (2) SPARE BAGS PER RACK. LEAVE ON SITE TAPED TO RACKS FOR TENANT USE.
ACS	SECURITY PANEL, ACCESS CONTROL SYSTEM, WALL MOUNTED	RE: SECURITY DRAWINGS
IDS	SECURITY PANEL, INTRUSION DETECTION SYSTEM, WALL MOUNTED	RE: SECURITY DRAWINGS
110B	COPPER PUNCH-DOWN PHONE WALL FIELD "110 BLOCK"	
AS1	(OFOI) NETWORK SWITCH, 1 RU	CONFIRM SIZE AND LAYOUT IN RACK WITH OWNER



400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
www.olcdesigns.com



FOR CONSTRUCTION

MEYERS POOL REPLACEMENT
ARVADA, CO
7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
4	Date 4	ASI-020R2

SCALE:

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC

REV'D BY: MCE/PKD

PROJECT #: 22044

TITLE: TELECOM SYSTEMS SCHEDULES

SHEET #:

T002



400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
www.olcdesigns.com



FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO 7900 Carr Drive ,Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
4	Date 4	ASI-020R2

SCALE: As indicated

ISSUE DATE: JULY 14, 2023

DRAWN BY: DHC

REV'D BY: MCE/PKD

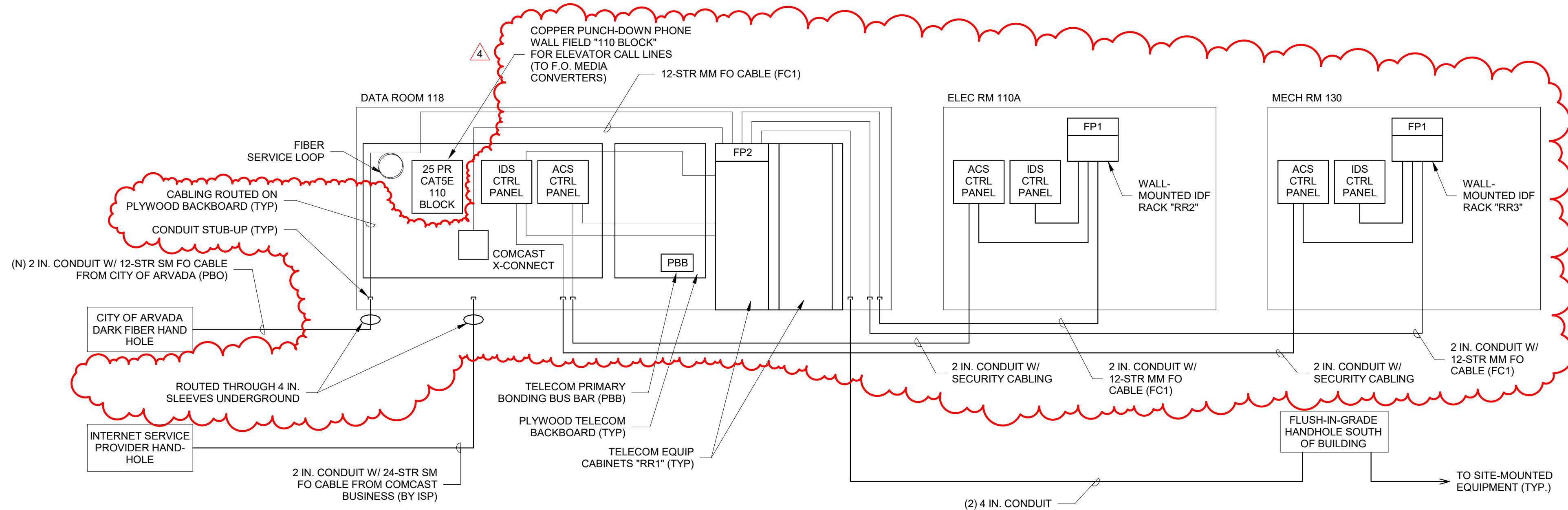
PROJECT #: 22044

TITLE: TELECOM SYSTEMS
DIAGRAMS

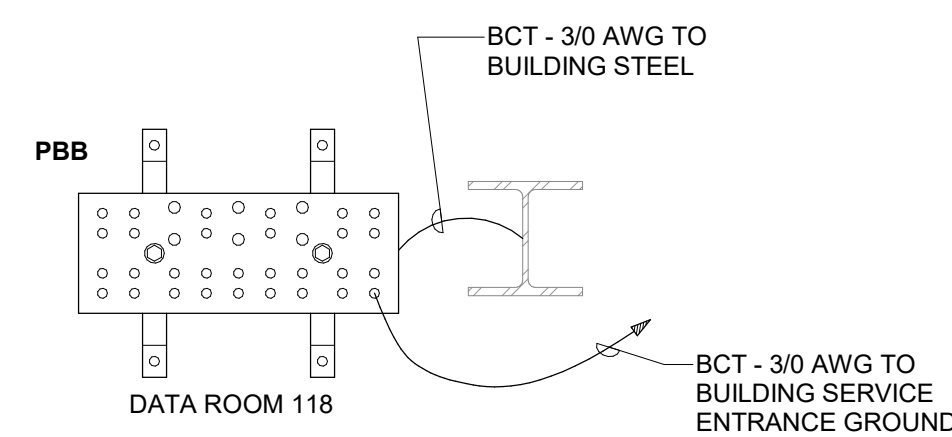
SHEET #:

T601

- GENERAL NOTES:
1. PROVIDE ALL PRE-TERMINATED PATCH CABLES.
 2. ALL FIBER-OPTIC CONNECTIONS SHALL BE LC TYPE.
 3. PROVIDE MULTI-OUTLET POWER DISTRIBUTION STRIPS IN EVERY RACK/CABINET.
 4. REFER TO TELECOM PLANS FOR ADDITIONAL CONDUIT AND CABLING REQUIREMENTS.
 5. ALL INDOOR CABLING SHALL BE PLENUM RATED.
 6. PROVIDE GROUNDING AND BONDING FOR ALL TELECOMMUNICATIONS EQUIPMENT CABINETS, RACKS, CABLE TRAYS, PROTECTOR BLOCKS, SBB'S IN ACCORDANCE WITH ANSI/TIA-607.
 7. INSTALLER SHALL FIELD-SURVEY TO DETERMINE THE OPTIMAL EXACT ROUTING OF NEW CONDUITS AND CABLING WITHIN BUILDING.
 8. EACH NEW CABLE SHALL BE INSTALLED IN ITS OWN DEDICATED CONDUIT, UNLESS OTHERWISE NOTED.



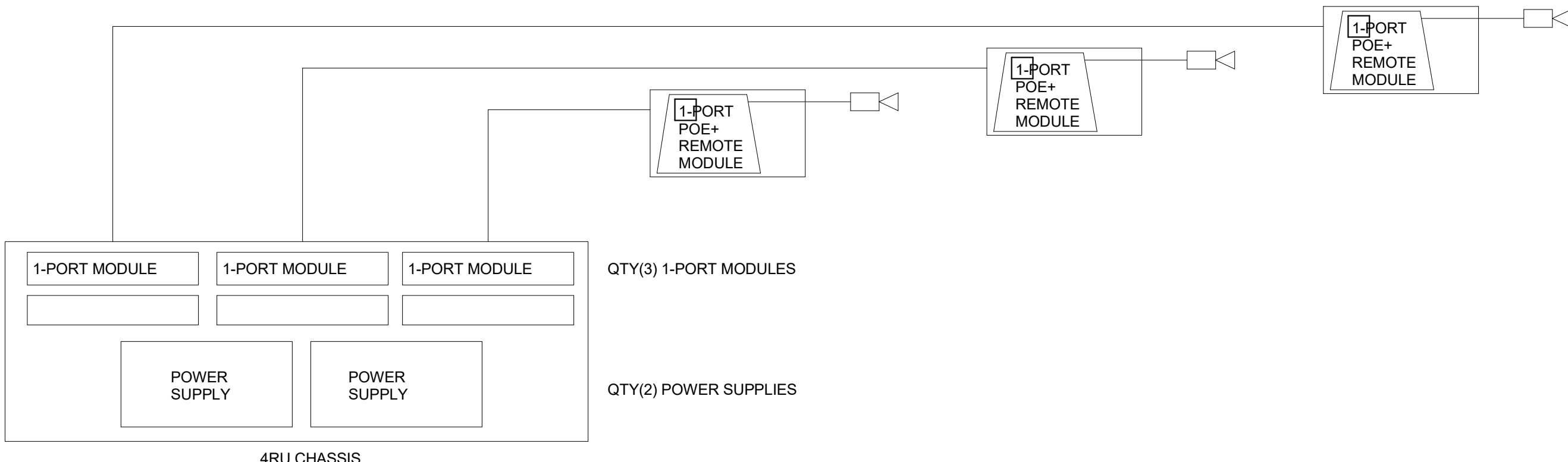
1 TELECOM RISER DIAGRAM
SCALE: NO SCALE



- LEGEND:
- BCT = BONDING CONDUCTOR FOR TELECOMMUNICATIONS
 - TBB = TELECOMMUNICATIONS BONDING BACKBONE
 - PBB = TELECOMMUNICATIONS PRIMARY BONDING BUS BAR

- NOTES:
1. PROVIDE ALL GROUNDING IN ACCORD WITH THE LATEST NEC AND ANSI/TIA-607.
 2. PROVIDE 12 IN. COPPER PBB (PRIMARY BUS BAR) IN DATA ROOM WHERE INDICATED ON PLANS.
 3. INSTALL BONDING CONDUCTORS WITHIN METAL CONDUIT (WITH CHOKES AT ENDS) WHERE EXPOSED / NOT CONCEALED.

2 TELECOMMUNICATIONS
GROUNDING SYSTEM DIAGRAM
SCALE: NO SCALE



3 FIBER-EXTENSION DIAGRAM
SCALE: NO SCALE

February 19, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-095 RFI 195: Locker Room Slab Sloping

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.



86 Inverness Place North
Englewood, CO 80112

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-095		RFI 195: Locker Room Slab Sloping		Source	
Reference Date	02/19/2024		Owner Number			
Scope Description						
The slab on void in the locker room area will be thickened and sloped per RFI 195 as the tile was removed from these areas. The addition of sloping of the slabs lead to added time and material.						
22015012	03300	SUBA	Saunders Concrete Structures, LLC		9,908.00	Cast in place concrete
22015012	98003	OVD			11.00	Builders Risk
22015012	98005	OVD			94.00	Commercial Insurance
22015012	98301	OVD			129.00	SDI
22015012	98600	OVD			15.00	Closeout and Warranty
22015012	99000	FEE			269.00	Fee
Stipulated Sum					10,426.00	

Approved:

Saunders Construction, LLC

Laurel Lane
Project Manager

City of Arvada

Kim Vagher

Name

Date

Ohlson Lavoie Corporation

Bob McDonald

Name

Date

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-095		RFI 195: Locker Room Slab Sloping		Source	
Reference Date	02/19/2024		Owner Number			
Scope Description						
The slab on void in the locker room area will be thickened and sloped per RFI 195 as the tile was removed from these areas. The addition of sloping of the slabs lead to added time and material.						
22015012	03300	SUBA	Saunders Concrete Structures, LLC		9,908.00	Cast in place concrete
22015012	98003	OVD			11.00	Builders Risk
22015012	98005	OVD			94.00	Commercial Insurance
22015012	98301	OVD			129.00	SDI
22015012	98600	OVD			15.00	Closeout and Warranty
22015012	99000	FEE			269.00	Fee
			Stipulated Sum		10,426.00	

Approved:
Saunders Construction, LLC

City of Arvada
Kim Vagher

Laurel Lane
Project Manager

Name

Ohlson Lavoie Corporation
Bob McDonald

Date

Name

Date



Date: 2/4/2024

Project: Meyers Pool Replacement

Project Address:

7904 Carr Dr.

Arvada, CO. 80005

Change Order #008

Value: \$9908

(Please see detailed back-up)

SCOPE OF WORK:

The slab on void in the locker room area will be thickened and sloped per the attached email traffic and RFI #195. The addition of the sloping drives extra material and labor as noted below.

- Material:
 - o Extra concrete required to thicken the slab
- Labor:
 - o Extra time for the concrete finishers to slope and provide architectural finish to the exposed concrete
 - o Extra time to layout slope points
 - o Modeling of the area to incorporate required slopes and dimensions

Erika Pierce

Saunders Concrete Structures, LLC.

BUILDING CONFIDENCE

86 Inverness Place North, Englewood, CO 80112 | t 303.699.9000 f 303.680.7448 | saundersinc.com

Subcontractor Name: Saunders Concrete Structures



Sub Change Order # _____

Detailed Cost Breakdown

Meyers Pool Replacement

Date: _____

Description:				
Material	QTY	UOM	\$/UOM	Cost
Extra concrete for sloping	12	CY	\$ 173.00	\$ 2,076
				\$ -
				\$ -
				\$ -
		Material Subtotal		\$ 2,076
Labor	QTY	UOM	\$/UOM	
Concrete Finisher Superintendent	4	HR	101.95	\$ 408
Concrete Finisher Foreman	4	HR	59.06	\$ 237
Concrete Finishers	57	HR	54.36	\$ 3,099
Trade Superintendent	16	HR	70.14	\$ 1,123
Journeyman Carpenter	16	HR	50.32	\$ 806
Concrete Digital Mockups	4	HR	109.95	\$ 440
		Labor Subtotal		\$ 6,113
Subcontracts	QTY	UOM	\$/UOM	
				\$ -
				\$ -
				\$ -
				\$ -
		Subcontractor Subtotal		\$ -
Equipment	QTY	UOM	\$/UOM	Cost
				\$ -
				\$ -
		Equipment Subtotal		\$ -
Equipment Credit - If Applicable	QTY	UOM	\$/UOM	
				\$ -
Subtotal Equipment		Equipment Credit Subtotal		\$ -
Labor Credit - If Applicable	HOURS	\$/HR		
				\$ -
Subtotal Labor		Labor Credit Subtotal		\$ -
SUBTOTAL			Rate	\$ 8,189.00
IOVD			7.5%	\$ 426.00
OH&P			15%	\$ 1,293.00
				\$ -
TOTAL COST				\$ 9,908.00

Erika Pierce

From: Andrew Lack <alack@martinmartin.com>
Sent: Thursday, January 4, 2024 10:55 AM
To: Erika Pierce; Hunter Senior
Cc: rmcdonald@olcdesigns.com; Oliver Deck; Guillermo Ramos; Randy Romero; Justin A. Cooper (SI); Juan Vazquez-Villasenor; Nick Ereckson
Subject: RE: Locker Room Topping Slab

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Erika,

Our drawings included a 2" allowance for thickset tile to be sloped to drains, I understand the tile has been eliminated from the project. Switching to a topping slab poses challenges, given that a topping slab varying from 1" to 2" in thickness would be prone to cracking. We recommend that the structural slab on void be increased in thickness and the top surface be sloped to drain locations shown in the architectural drawings.

The slab on void would need to meet the architectural finish requirements. If necessary, the dowels for the interior CMU partition walls could be post installed to accommodate the finishing.

-Andrew

Andrew Lack, PE

Associate
PE (MO, IA, SD)
O 816.381.4150 Ext.167
M 816.830.3361



31 W 31st Street, Kansas City, MO 64108

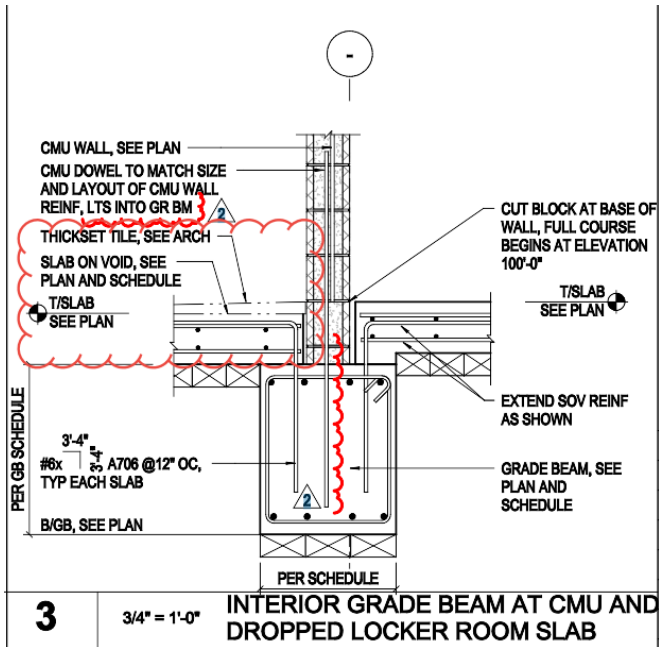
martinmartin.com



From: Erika Pierce <e.pierce@saundersinc.com>
Sent: Wednesday, January 3, 2024 12:33 PM
To: Hunter Senior <HSenior@martinmartin.com>; Andrew Lack <alack@martinmartin.com>
Cc: rmcdonald@olcdesigns.com; Oliver Deck <o.deck@saundersinc.com>; Guillermo Ramos <G.Ramos@saundersinc.com>; Randy Romero <r.romero@saundersinc.com>; Justin A. Cooper (SI) <J.CooperSI@saundersinc.com>; Juan Vazquez-Villasenor <J.Vazquez-Villasenor@saundersinc.com>
Subject: Locker Room Topping Slab

Hunter & Andrew,

Per the attached submittal comments and architectural drawings, we are to have a topping slab in the locker room. Based on the slab-on-void elevation, it should slope from a 2" thickness. 3/S302 shows the material to be thickset tile, so do you have any structural guidance for this topping slab? Will it require reinforcement as the pool deck topping slab does?



Thank you, I will follow up with a confirming RFI.



Erika Pierce

Project Engineer

86 Inverness Place North, Centennial, CO 80112

d (720) 409-0417 **o** (303) 699-9000 **m** (757) 544-8538

E.pierce@saundersinc.com

www.saundersinc.com

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This e-mail and any file(s) transmitted with it contain privileged and confidential information and are intended solely for the use of the individual or entity to which they are addressed. If you are not the intended recipient or the person responsible for delivering the e-mail to the intended recipient, you are hereby notified that any dissemination, disclosure or copying of this e-mail disclosure or copying of this e-mail or any of its attachments is strictly prohibited. If you have received this e-mail in error, please immediately notify the sending individual or entity by e-mail and permanently delete the original e-mail and attachment(s) from your computer system. Thank you.

RFI detail

#195 Locker Room Slab Sloping



Status	Closed
Created on	Jan 9, 2024 by Erika Pierce (SAUNDERS CONSTRUCTION, INC.)
RFI type	Default RFI FLOW
Ball in court	Erika Pierce (SAUNDERS CONSTRUCTION, INC.)
Answered	Jan 18, 2024 by Robert Mcdonald

Question

Please reference the mark ups on A103 & A104. Please confirm the extent of the sloping which falls under elements such as lockers, sinks, and other notated elements. Please verify whether the slab is to be flat at 100' elevation in these areas.

Suggested answer

Please confirm the extent of the sloping and whether the areas under elements are to be flat at 100' elevation.

Official response

Robert Mcdonald: Floor slopes shall extend under benches and vanity millwork, basically anything that does not engage the floor. The floor under lockers and other items that engage the floor shall be level.

By **Robert Mcdonald** - Jan 18, 2024, 7:22 AM MST

References

Files (1)

- [RFI_195_Locker_Room_Slab_Sloping.pdf](#)

Impact

Cost impact	-
Schedule impact	-

Other attributes

Priority	Normal
Discipline	-
Category	-
Location	Main Building > 1st Floor
Location details	Locker Rooms
External id	-
Co-reviewer(s)	 Andrew Lack  Hunter Senior (Martin/Martin Inc.)
Confirming RFI	-
Posted	-

Activities	By	At
Oliver Deck changed the status from  Open Answered to  Closed Official response: Robert Mcdonald: Floor slopes shall extend under benches and vanity millwork, basically anything that does not engage the floor. The floor under lockers and other items that engage the floor shall be level.	Oliver Deck	Jan 18, 2024, 7:22 AM MST
Please see response from OLC.	Oliver Deck	Jan 18, 2024, 7:22 AM MST
Robert Mcdonald changed the status from  Open In Review to  Open Answered set Ball in court to Erika Pierce (SAUNDERS CONSTRUCTION, INC.).	Robert Mcdonald	Jan 17, 2024, 4:23 PM MST
Robert Mcdonald added a response: Floor slopes shall extend under benches and vanity millwork, basically anything that does not engage the floor. The floor under lockers and other items that engage the floor shall be level.	Robert Mcdonald	Jan 17, 2024, 4:23 PM MST
set Ball in court to Robert Mcdonald .	Robert Mcdonald	Jan 17, 2024, 4:21 PM MST
Oliver Deck added a reference to a file RFI_195_Locker_Room_Slab_Sloping.pdf	Oliver Deck	Jan 9, 2024, 12:59 PM MST
Erika Pierce removed reference to a file	Erika Pierce	Jan 9, 2024, 12:58 PM MST
Oliver Deck changed the watchers to Guillermo Ramos (Saunders Construction, Inc./Concrete), randdy romero (SAUNDERS CONSTRUCTION, INC.), Juan Vazquez Villasenor (SAUNDERS CONSTRUCTION, INC.), Robert Burd (SAUNDERS CONSTRUCTION, INC.)	Oliver Deck	Jan 9, 2024, 12:55 PM MST
Oliver Deck changed the co-reviewer(s) to alack@martinmartin.com , Hunter Senior (Martin/Martin Inc.)	Oliver Deck	Jan 9, 2024, 12:55 PM MST
set Ball in court to Robert Mcdonald , Brian Beckler , dpotter@olcdesigns.com , Shane Daniels , Natalie Mediate .	Oliver Deck	Jan 9, 2024, 12:55 PM MST
Erika Pierce added a reference to a file	Erika Pierce	Jan 9, 2024, 8:05 AM MST
Erika Pierce (SAUNDERS CONSTRUCTION, INC.) created this RFI in  Closed status and set Ball in court to Erika Pierce (SAUNDERS CONSTRUCTION, INC.).	Erika Pierce	Jan 9, 2024, 8:05 AM MST

RFI detail

#195 Locker Room Slab Sloping



Status	Open In Review
Created on	Jan 9, 2024 by Erika Pierce (SAUNDERS CONSTRUCTION, INC.)
RFI type	Default RFI FLOW
Ball in court	Brian Beckler Robert Mcdonald Shane Daniels Dan Potter Natalie Mediate
Due date	Jan 16, 2024

Question

Please reference the mark ups on A103 & A104. Please confirm the extent of the sloping which falls under elements such as lockers, sinks, and other notated elements. Please verify whether the slab is to be flat at 100' elevation in these areas.

Suggested answer

Please confirm the extent of the sloping and whether the areas under elements are to be flat at 100' elevation.

References

Files (1)

- Locker Room Sloping RFI.pdf

Impact

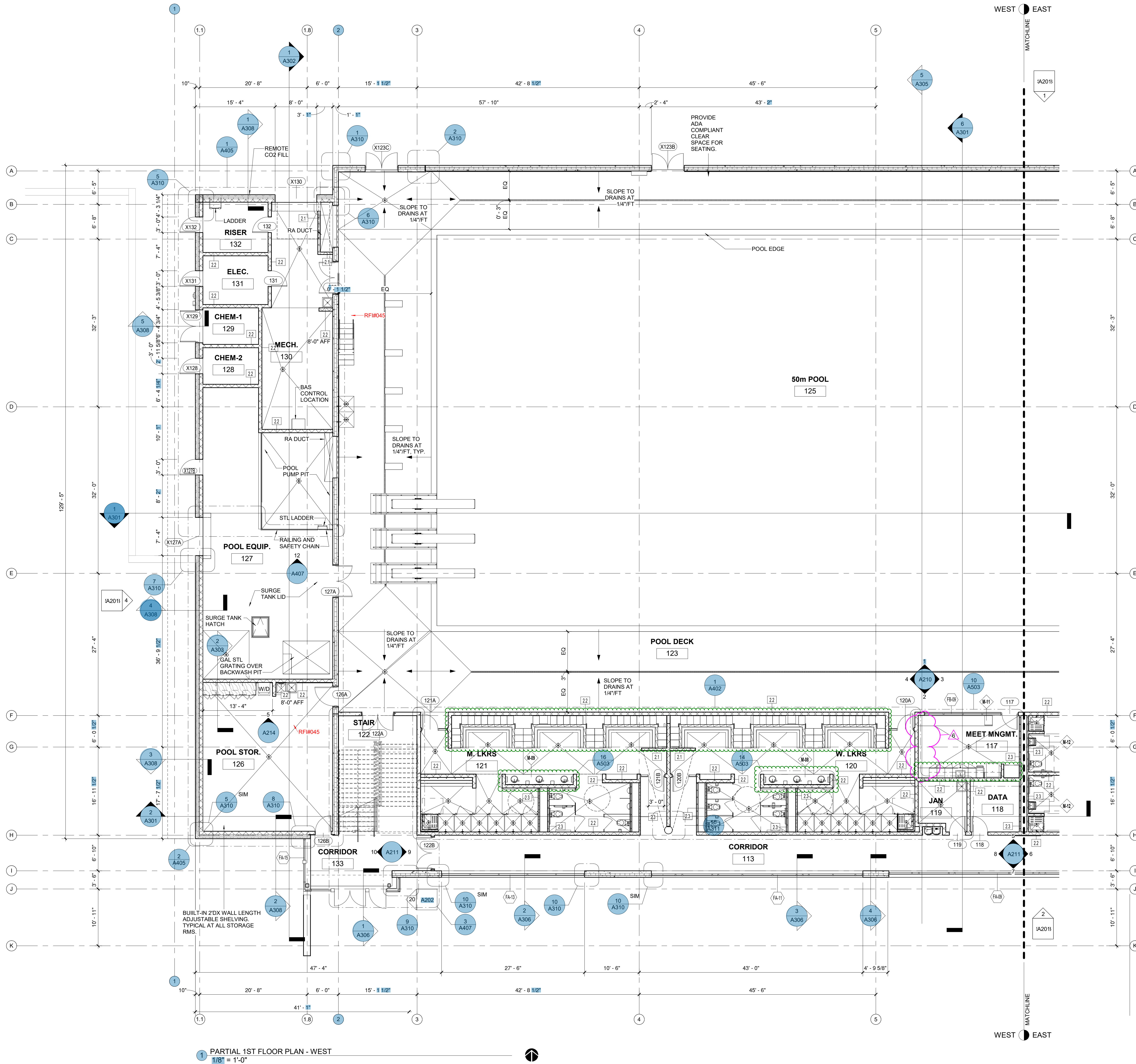
Cost impact	-
Schedule impact	-

Other attributes

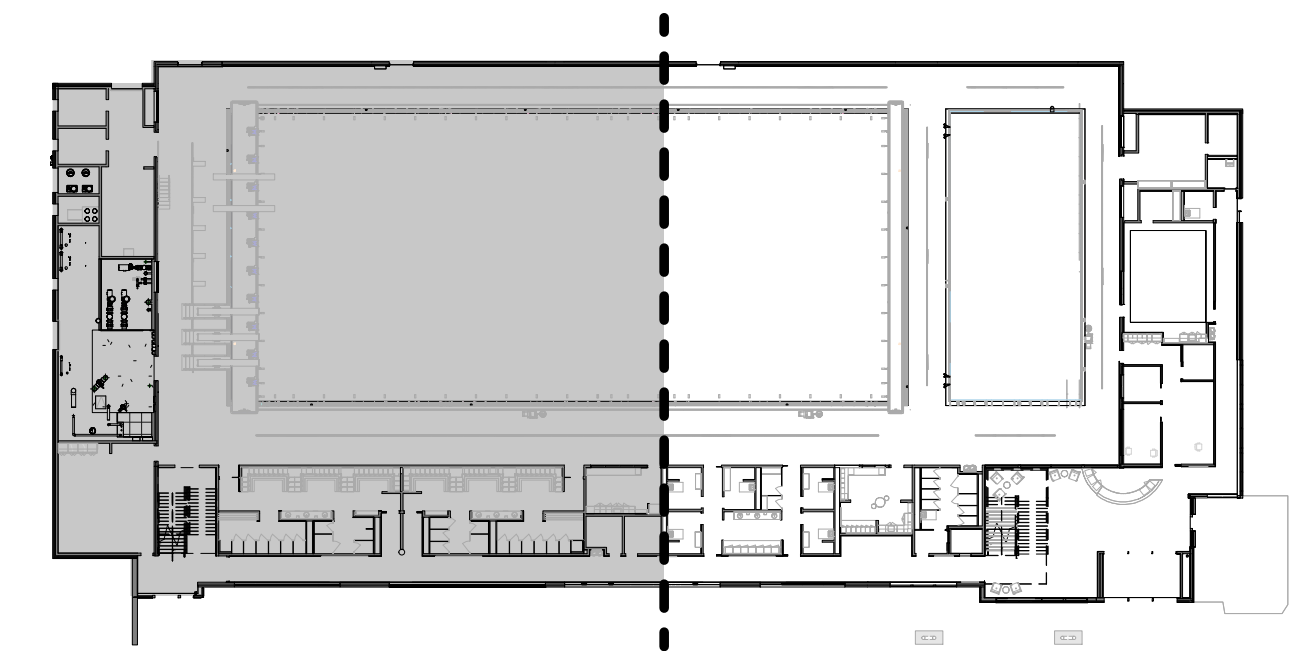
Priority	Normal
----------	--------

Discipline	-
Category	-
Location	Main Building > 1st Floor
Location details	Locker Rooms
External id	-
Co-reviewer(s)	 Andrew Lack  Hunter Senior (Martin/Martin Inc.)
Confirming RFI	-
Posted	-

Activities	By	At
set Ball in court to Robert Mcdonald, Brian Beckler, dpotter@olcdesigns.com, Shane Daniels, Natalie Mediate.	Oliver Deck	Jan 9, 2024, 12:55 PM MST
Erika Pierce added a reference to a file Locker Room Sloping RFI.pdf	Erika Pierce	Jan 9, 2024, 8:05 AM MST
Erika Pierce (SAUNDERS CONSTRUCTION, INC.) created this RFI in  Open In Review status and set Ball in court to Brian Beckler, Robert Mcdonald, Shane Daniels, Dan Potter, Natalie Mediate.	Erika Pierce	Jan 9, 2024, 8:05 AM MST



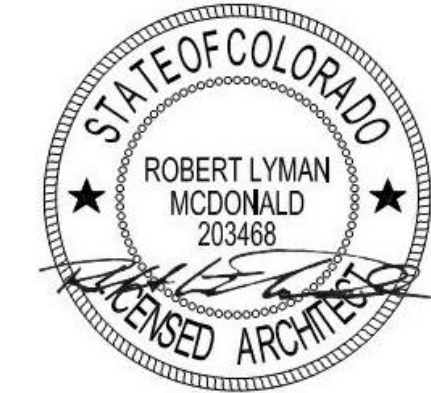
1 PARTIAL 1ST FLOOR PLAN - WEST
1/8" = 1'-0"



FIRST FLOOR KEYPLAN



400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
www.olcdesigns.com



07/14/2023:

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7904 Carr Drive ,Arvada, CO 80005

Areas clouded in green:
Please confirm extent of sloping in
these areas and whether slab is to be
flat under any of these elements

NO.	DATE:	TITLE/PURPOSE:
2	08/25/23	ASI-04
5	11/13/2023	ASI-13
6	11/22/2023	ASI-14

SCALE: As indicated

ISSUE DATE: 07/14/2023

DRAWN BY: SD

REV'D BY: BM

PROJECT #: 22044

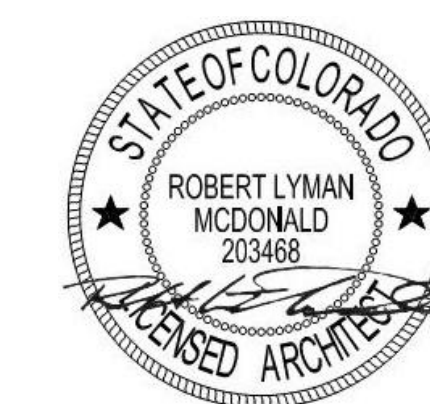
TITLE: PARTIAL FIRST FLOOR PLAN

SHEET #:

A103



**400 SANTA FE DRIVE
DENVER, COLORADO 80204
T: 303.294.9244
www.olcdesigns.com**



07/14/2023:

FOR CONSTRUCTION

MEYERS POOL REPLACEMENT ARVADA, CO

7904 Carr Drive, Arvada, CO 80005

NO.	DATE:	TITLE/PURPOSE:
5	11/13/2023	ASI-13

[illegible]

SCALE: **As indicated**

ISSUE DATE: 07/14/2023

DRAWN BY: SD

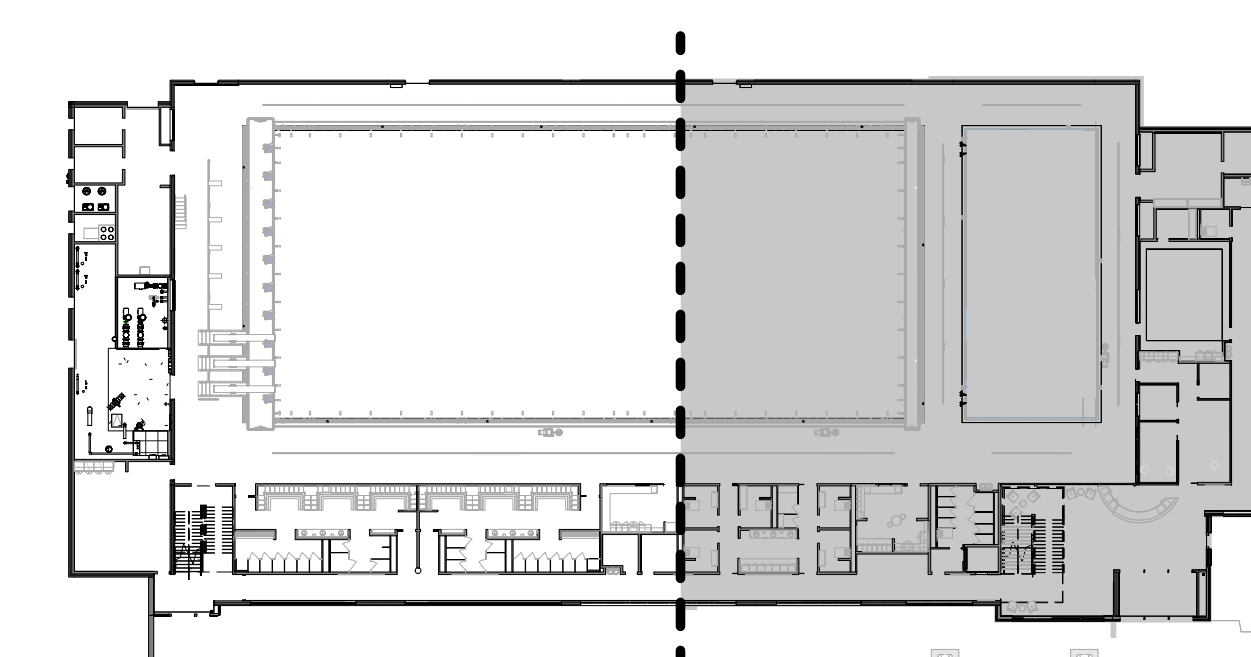
REV'D BY: **BM**

PROJECT #: 22044

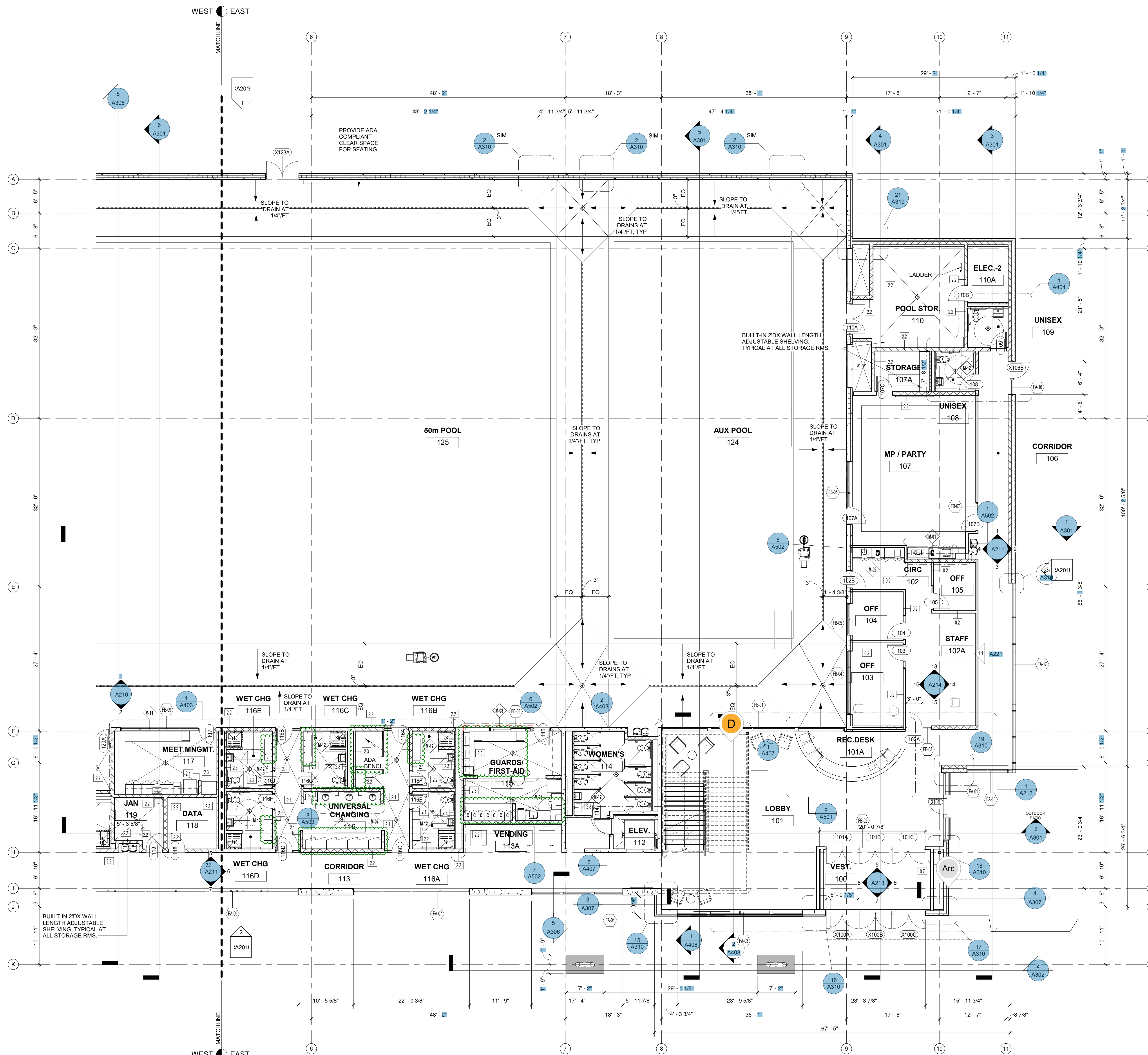
TITLE: **PARTIAL FIRST FLOOR PLAN**

SHEET #:

A104



FIRST FLOOR KEYPLAN



1 PARTIAL 1ST FLOOR PLAN - EAST
1/8" = 1'-0"



86 Inverness Place North
Englewood, CO 80112

April 4, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-123 OCO 4 Weather Protection Replenishment

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

While this change in itself may not justify a time extension, please be advised that Saunders Construction, LLC reserves the right to request a time extension and additional General Condition costs should it be determined at a later date that there were delays due to multiple changes or circumstances beyond our control.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.



86 Inverness Place North
Englewood, CO 80112

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-123		OCO 4 Weather Protection Replenishment		Source	
Reference Date	04/04/2024		Owner Number			
Scope Description						
22015012	98930	OVD			30,000.00	Overall Project Weather Protection / Conditions Al
			Stipulated Sum		30,000.00	

Approved:
Saunders Construction, LLC


Anna Gannon
Project Manager

City of Arvada
Kim Vagher

Name	Date
Ohlson Lavoie Corporation	
Bob McDonald	

Name	Date
------	------

Anna Gannon

From: Conor Bancroft <cbancroft@wemberinc.com>
Sent: Wednesday, April 3, 2024 2:17 PM
To: Anna Gannon; Selena Twilley; kvagher@arvada.org
Cc: Laurel Lane; Juan Vazquez-Villasenor; Casey Reiter
Subject: RE: Meyers Weather Protection Allowance 4-3-24

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Thanks, Anna.

Would adding \$30K to the Allowance as part of OCO #4 take care of this?



Conor Bancroft

Project Manager

C: (720) 532-2674



From: Anna Gannon <A.Gannon@saundersinc.com>
Sent: Wednesday, April 3, 2024 1:52 PM
To: Selena Twilley <stwilley@wemberinc.com>; Conor Bancroft <cbancroft@wemberinc.com>; kvagher@arvada.org
Cc: l.lane@saundersinc.com; Juan Vazquez-Villasenor <J.Vazquez-Villasenor@saundersinc.com>; Casey Reiter <c.reiter@saundersinc.com>
Subject: Meyers Weather Protection Allowance 4-3-24

All,

As a follow up from the OAC, please see below updated weather protection allowance log as of 4/3. We are currently over the allowance.

All March weather day labor/material/IOVD has hit, what has not hit yet is the EQP (equipment) invoices. This is why I am still tracking this line item under anticipated.

Updated on 4/3/2024

Allowance Status

Phase Code	Allowance	Original Budget	SCI Transactions to
98930	Temp Heating & Weather Protection	\$ 96,272.00	
	Spent to date below		
IOVD	Current IOVD	\$ (4,624.29)	
L	Current Labor	\$ (61,657.31)	
OVD	Current Overhead	\$ (17,878.94)	
EQP	Current Equipment	\$ (12,762.16)	
MAT	Current Material	\$ (3,270.36)	
SCA-093	Import Roadbase for Site Conditions	\$ (3,959.00)	
	Spent to Date	\$ (104,152.06)	
	Ground Thaw/Blanket Rental for 3/14 Snow	\$ (2,200.00)	
	March Remaining Snow Removal Labor	\$ -	
	April Labor	\$ (3,500.00)	
	April Equipment/Material	\$ (2,000.00)	
	Summer Rain - Labor	\$ (5,000.00)	
	Summer- Rain Removal Equipment	\$ (3,500.00)	
	Additional Roadbase Needed for Site Conditions	\$ (4,500.00)	
	Current Budget Status	\$ (7,880.06)	
	Current Budget w/Anticipated	\$ (28,580.06)	

**Anna Gannon**

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 o (303) 699-9000 m (708) 256-9190

A.Gannon@saundersinc.comwww.saundersinc.com

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Anna Gannon

From: Conor Bancroft <cbancroft@wemberinc.com>
Sent: Thursday, April 4, 2024 1:38 PM
To: Anna Gannon
Cc: Selena Twilley
Subject: FW: Meyers Change Order 004

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Anna,

Do you want to include the increase to the Allowance on OCO #4?



Conor Bancroft

Project Manager

C: (720) 532-2674



From: Bob McDonald <rmcdonald@olcdesigns.com>

Sent: Thursday, April 4, 2024 1:06 PM

To: Selena Twilley <stwilley@wemberinc.com>; Conor Bancroft <cbancroft@wemberinc.com>; kvagher@arvada.org

Subject: RE: Meyers Change Order 004

No, it does not. The total is only \$21,503.25.

Robert (Bob) McDonald

OLC

O: 303.294.9244

M: 303.881.9961

From: Selena Twilley <stwilley@wemberinc.com>

Sent: Thursday, April 4, 2024 12:40 PM

To: Bob McDonald <rmcdonald@olcdesigns.com>; Conor Bancroft <cbancroft@wemberinc.com>; kvagher@arvada.org

Subject: RE: Meyers Change Order 004

[ext]

Curious – does it have \$30k added for weather protection? We have directed Saunders to include this, so not sure if the one you received does or not.



From: Bob McDonald <rmcdonald@olcdesigns.com>

Sent: Thursday, April 4, 2024 12:30 PM

To: Conor Bancroft <cbancroft@wemberinc.com>; Selena Twilley <stwilley@wemberinc.com>; kvagher@arvada.org

Subject: Meyers Change Order 004

I just got the DocuSign for Change Order 004 – Okay to sign it?

Robert (Bob) McDonald, NCARB, LEED AP
Senior Principal/CEO

OLC

2000 Lawrence Street
Denver, CO 80205
O: 303.294.9244
D: 720.880.7536
M: 303.881.9961
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86 Inverness Place North
Englewood, CO 80112

April 16, 2024

Kim Vagher
City of Arvada
8101 Ralston Road
Arvada, CO 80001-8101

RE: Meyers Pool Replacement
SCA-126 Linx AV Scope

Dear Kim Vagher,

Attached is an itemized breakdown of Saunders Construction, LLC price to provide the work in accordance with the above referenced Change Item.

If you wish to proceed with this work as outlined above, please sign and return one copy of the detail page no later than one week from the date of this letter. Should the work not be approved by this date, it could result in delays to the schedule and an increase to the proposed price.

CHANGE AUTHORIZATION DETAIL

Job	Phase	Cat	Vendor	Invoice	Amount	Description
Master Job	22015012		Meyers Pool Replacement			
Change Order	SCA-126		Linx AV Scope		Source	
Reference Date	04/16/2024		Owner Number			
Scope Description						
22015012	11130	SUB			204,375.00	Audio Visual Equipment
22015012	98003	OVD			225.00	Builders Risk
22015012	98005	OVD			1,942.00	Commercial Insurance
22015012	98301	OVD			2,657.00	SDI
22015012	98600	OVD			307.00	Closeout and Warranty
22015012	99000	FEE			5,552.00	Fee
Stipulated Sum					215,058.00	

Approved:
Saunders Construction, LLC



Anna Gannon
Project Manager

City of Arvada
Kim Vagher

Name	Date
Ohlson Lavoie Corporation	
Bob McDonald	

Name	Date
------	------

PROPOSAL TO:
Arvada - City of

April 12, 2024

AV 24-03-M6860 REV 2 Arvada Pool Replacement - AV Systems

Location: 7900 Carr Drive Arvada, CO 80005

Quote No: 24-03-M6860

Rev: REV 2

Prepared By:
Mark Merrick
Sr. Account Executive, LINX Multimedia
720.425.3535
mmerrick@teamlinx.com



MULTIPURPOSE/PARTY ROOM

SCOPE

GENERAL NOTES/CLARIFICATIONS/ASSUMPTIONS/EXCEPTIONS:

- **LINX QUOTE CORRESPONDS TO AV SPECIFICATION/DRAWINGS 3/14/24 REVISION WITH THE FOLLOWING REV 2 CHANGES:**
 - **MEET MANAGEMENT RM:** Per Censeo note re: our REV 1 proposal: Linx is substituting the Censeo recommended Denon DN-500CB unit which replaces the discontinued DN-F350
 - **BUILDING PAGING:** Per Censeo note re: our REV 1 proposal: Linx is eliminating the Shure MX412D/C Mic and QSC Axon D2i Dante Interface. These were no longer required with the Censeo change to a QSC Network Paging Microphone
 - **DIGITAL SIGNAGE:** Per Censeo note re: our REV 1 proposal: Linx is eliminating the (3) Samsung WMN4070SE Wall Mounts (duplicating the quoted Chief mounts)
 - **1st Year SERVICE/SUPPORT:** Per Censeo note re: our REV 1 proposal: Linx 'Plus Support' package included in quote is sufficient to meet the 1st year support requirements in the specification
- **LINX QUOTE DOES NOT INCLUDE**
 - **SALES TAX**
 - **BONDING**
 - **PREVAILING WAGE RATES**
 - **LIQUIDATED DAMAGES**
- Linx 'PLUS SUPPORT' Package is INCLUDED in our base quote (description below).
- All metal raceway/conduit where required (open areas, hard lid areas, etc.) are to be BY OTHERS per AV Spec 1.8A. Linx quote does NOT include any conduit
- Per AV Revision 3/14/24 AV category cable including Dante signal types are to be provided BY AVC
- Linx quote does NOT include any substitutions.
- Linx-provided cabling quoted is INDOOR plenum-rated cabling, including pool area cabling in conduit. If 'outdoor' cabling is required, Linx can requote.
- See additional notes under Scope for Sound Reinforcement System

MULTIPURPOSE/PARTY ROOM - SCOPE (per spec):

> REV 2 CHANGES:

1. **Per Censeo: Replace Extron Tx/Rx set with C2G Tx/Rx set w/USB**
 - Scope as specified AV Revision 3/14/24
 - Linx will provide/install an 85" Display and wall mount
 - Linx will provide/install an HDMI wall plate below display connected to HDMI extender
 - Linx will provide/install a sound bar below display
 - Linx will provide/install and program an Extron button panel beside display for display control of on/off, input select and volume up/down

VIDEO

QTY	DESCRIPTION	PRICE	PRICE EXT
1	C2G C2G26935 USB-C to 4k60Hz HDMI Adapter	\$42.22	\$42.22
1	Extron Electronics 26-663-06 6' HDMI	\$66.15	\$66.15
1	Extron Electronics 26-663-15 HDMI Ultra/15	\$95.38	\$95.38
1	C2G CG00924 (or equiv.) 12FT CAT6 STP CABLE-WHT	\$12.57	\$12.57
1	C2G C2G31030 4K30Hz HDBaseT HDMI+USB WP TX to Box RX	\$617.21	\$617.21
1	Samsung QM85C 85-inch Commercial 4K UHD Display, 500 NIT	\$4,140.00	\$4,140.00
1	Chief AS3LDP7 TEMPO FP WALL MOUNT SYSTEM, PDU BUNDLE	\$745.75	\$745.75
1	Chief AS3A101 VIDEO-SOUND BAR MOUNT	\$272.62	\$272.62
1	Tripp Lite SUPER7B Surge Protector Power Strip, 15A, 120V, 7 Outlets, 7' Cord, Black	\$23.98	\$23.98

Arvada - City of



QTY	DESCRIPTION	PRICE	PRICE EXT
1	LINX HARDWARE-DISPLAY DISPLAY MOUNT HARDWARE KIT	\$69.23	\$69.23
1	LINX HARDWARE-WALL I/O WALL I/O MOUNTING HARDWARE	\$18.46	\$18.46

AUDIO

QTY	DESCRIPTION	PRICE	PRICE EXT
1	Denon DEN-DHTS-217 Denon DHT-S217 Full-Range Dolby Atmos Sound Bar	\$220.24	\$220.24
1	Extron Electronics 26-620-01 Captive Screw to Mini Stereo Adapter Cable: Five Pole 3.5 mm Captive Screw to..	\$24.62	\$24.62
1	Extron Electronics 26-663-09 9' Ultra Flexible HDMI cable	\$75.38	\$75.38
1	Hosa CMM-110 Stereo Interconnect, 3.5 mm TRS to Same, 10 ft	\$5.66	\$5.66

CONTROL SYSTEM

QTY	DESCRIPTION	PRICE	PRICE EXT
1	Extron Electronics 60-1005-02 MLC 62 RS D	\$488.10	\$488.10
1	LINX ASSEMBLY-CONTROL CABLE Custom Control Cable Assembly	\$38.46	\$38.46
1	LINX HARDWARE-WALL I/O WALL I/O MOUNTING HARDWARE	\$18.46	\$18.46
25	LINX LNX-CBL-6 Field Cable - Cat6	\$1.02	\$25.50
2	LINX LNX-JCK-6 Keystone Jack - Cat6	\$7.82	\$15.64
2	LINX LNX-PTCH-6 Patch Cable - Cat6	\$10.03	\$20.06

LINX SYSTEM

QTY	DESCRIPTION	PRICE	PRICE EXT
1	LINX HARDWARE HARDWARE & CONSUMABLES	\$101.19	\$101.19
1	LINX PROJECT ENGINEERING PROJECT ENGINEERING		
1	LINX DRAWINGS SYSTEM DRAWINGS		
1	LINX CONFIGURATION SYSTEM & DEVICE CONFIGURATION		
1	LINX TESTING SYSTEM TESTING & COMMISSIONING		
1	LINX TRAINING END-USER TRAINING		

EQUIPMENT TOTAL	\$7,136.88
LABOR TOTAL	\$3,955.62
EXPENSES	\$11.87
FREIGHT	\$196.30
TEXTURA	\$17.81
MULTIPURPOSE/PARTY ROOM TOTAL	\$11,318.48

MEET MANAGEMENT

SCOPE

MEET MANAGEMENT ROOM -

> REV 2 CHANGES:

1. *Per Censeo: Replace Denon DN-F350 Discontinued Media Player with Denon DN-500CB*

NOTES:

- Scope as specified AV Revision 3/14/24 except as noted

VIDEO

QTY	DESCRIPTION	PRICE	PRICE EXT
1	C2G C2G26935 USB-C to 4k60Hz HDMI Adapter	\$42.22	\$42.22
1	Extron Electronics 26-663-09 9' Ultra Flexible HDMI cable	\$75.38	\$75.38
1	Client OFE INSTALLATION OF OFE Novastar Vx400 Scoreboard Ctrl		

AUDIO

QTY	DESCRIPTION	PRICE	PRICE EXT
1	C2G C2G-54426 C2G 54426 USB-C to AUX (3.5mm) Adapter Converter	\$20.00	\$20.00
1	C2G CG54428 6in(.15m) USB C Female to USB A Male 3.0	\$21.54	\$21.54
1	Denon Professional DN-500CB CD/USB/1/8" Aux/Bluetooth/Balanced/RS232/Pitch Control Audio Player	\$373.33	\$373.33
1	Hosa CMM-105R Stereo Interconnect, 3.5 mm TRS to Right-angle 3.5 mm TRS, 5 ft	\$10.77	\$10.77
1	Liberty AV Solutions CMM-110R AUDIO CABLE 3.5SM-RA 3.5SM 10'	\$13.85	\$13.85
1	Hosa HMIC-010 Pro Microphone Cable, REAN XLR3F to XLR3M, 10 ft	\$18.82	\$18.82
1	QSC Axon D2i Dante™/AES67 network audio interface (Attero Tech)	\$821.43	\$821.43
1	Shure MX412D/C Cardioid-12" Desktop Gooseneck Condenser Microphone, Attached 10' XLR Cable, Logic ...	\$284.52	\$284.52

CONTROL SYSTEM

QTY	DESCRIPTION	PRICE	PRICE EXT
1	Middle Atlantic SFACE4 4SP TEXTURED RSH FACE ONL	\$69.55	\$69.55
1	Netgear GSM4212PX-100NAS M4250-10G2XF-POE+8X1G POE	\$1,118.38	\$1,118.38
1	QSC TSC-70-G3 Q-SYS 7" PoE Touch Screen Controller for In-Wall Mounting. Color - Black only	\$1,360.71	\$1,360.71
1	RCI Custom MI9605xx Modular Insert, w/ one RJ 45 punchdown, Cat 6 Keystone™ style	\$89.29	\$89.29
50	LINX LNX-CBL-6 Field Cable - Cat6	\$0.79	\$39.50
2	LINX LNX-JCK-6 Keystone Jack - Cat6	\$6.05	\$12.10
2	LINX LNX-PTCH-6 Patch Cable - Cat6	\$7.76	\$15.52

RACK EQUIPMENT

QTY	DESCRIPTION	PRICE	PRICE EXT
1	C2G 22322 USB AC ADAPTER 2.1A DUAL PORT	\$16.67	\$16.67
3	Coolerguys 840556002048 120mm Fan Kit, Wood Bracket	\$41.67	\$125.01
1	Coolerguys 840556090939 Fan Kit w/thermal control, Wood finish	\$59.52	\$59.52
1	Tripp Lite 9SX700 Eaton/Tripp Lite 9SX 700 120V Tower	\$798.94	\$798.94
1	Legrand SS262 2-gang decora blank	\$5.95	\$5.95
1	Middle Atlantic D2 2SP ANODIZED DRAWER	\$151.61	\$151.61
1	Middle Atlantic D3 3 RU Anodized Drawer	\$179.82	\$179.82

Arvada - City of



QTY	DESCRIPTION	PRICE	PRICE EXT
1	Middle Atlantic PD-915R Rack-Mount PDU, 9-Outlet, 15A, Basic Surge Protection, 1 RU,	\$117.86	\$117.86
1	Middle Atlantic SRSR-4-17 4 SLIDE SRSR,17 SPACE	\$661.04	\$661.04
1	Middle Atlantic UTB-A2-14 UTB,1-2 SPACE,14"DEEP	\$355.71	\$355.71
1	LINX SERVICE-PANEL RCI-CENSEOAV-1RU-LOGO	\$148.81	\$148.81
1	LINX HARDWARE-RACK EQUIPMENT RACK HARDWARE & CONSUMABLES	\$113.10	\$113.10

LINX SYSTEM

QTY	DESCRIPTION	PRICE	PRICE EXT
1	LINX HARDWARE HARDWARE & CONSUMABLES	\$276.92	\$276.92
1	LINX PROJECT ENGINEERING PROJECT ENGINEERING		
1	LINX DRAWINGS SYSTEM DRAWINGS		
1	LINX PRO-CONTROL CONTROL SYSTEM PROGRAMMING		
1	LINX PRO-DSP DSP PROGRAMMING		
1	LINX TESTING SYSTEM TESTING & COMMISSIONING		
1	LINX TRAINING END-USER TRAINING		

EQUIPMENT TOTAL	\$7,397.87
LABOR TOTAL	\$17,499.55
EXPENSES	\$52.52
FREIGHT	\$203.47
TEXTURA	\$78.79
MEET MANAGEMENT TOTAL	\$25,232.20

SOUND REINFORCEMENT SYSTEM

SCOPE

SOUND REINFORCEMENT SYSTEM - SCOPE:

- Scope as specified AV Revision 3/14/24
- Spec states a requirement for 'ETCP guidance/supervision' (entertainment technician certification) for 'speaker arrays'. As there are NO overhead speaker arrays specified and the individually-mounted overhead speakers are only 50 lbs. Linx quote does NOT include 'ETCP guidance/supervision'.
- TA113 note TA8 indicates that all home-run 10AWG speaker cables are to be run thru the daisy-chained conduit. Linx quote assumes that this conduit (like ALL conduit for this project) is BY OTHERS, and that this TA8 conduit is of sufficient size for the (6) 10AWG cables
- TA113 note TA17 references 'provide conduit...." Linx quote assumes that this conduit (like ALL conduit for this project) is BY OTHERS

AUDIO

QTY	DESCRIPTION	PRICE	PRICE EXT
6	Danley Sound Labs OS80-Black 80° Conical Outdoor Speaker w/ U-Bracket, 1 x 12" Coaxial Driver, grey or bla.	\$2,180.23	\$13,081.38
6	LINX HARDWARE-SPEAKER Danley Spkr Hardware / Structure support	\$384.62	\$2,307.72
1	Galaxy Audio GXY-JIB-BT5R Galaxy Audio JIB/BT5R Portable Wireless XLR Bluetooth 5.0 Receiver	\$71.43	\$71.43
2	Hosa HMIC-010 Pro Microphone Cable, REAN XLR3F to XLR3M, 10 ft	\$18.82	\$37.64
4	Hosa HMIC-025 Pro Microphone Cable, REAN XLR3F to XLR3M, 25 ft	\$25.30	\$101.20
2	Hosa HMIC-050 Pro Microphone Cable, REAN XLR3F to XLR3M, 50 ft	\$53.14	\$106.28
6	JBL Professional CBT 70J-1 High-Power J-shaped line array column	\$1,123.34	\$6,740.04
6	JBL Professional MTC-CBT-70T BOLT ON TRANSFORMER MODULE	\$113.79	\$682.74
6	LINX HARDWARE-SPEAKER JBL COLUMN Spkr Hardware / Structure support	\$30.77	\$184.62
4	L-Com WPXLR-1B XLR PLATE w/1 XLR knockout	\$15.38	\$61.52
1	Listen Technologies LSTN-LS-31-072 Listen Technologies LS-31-072 IDSP Essentials Level 2 Stationary RF Sy..	\$1,298.57	\$1,298.57
4	Neutrik NC3FDX-TOP Neutirk TOP 3 pin female solder n/g	\$8.05	\$32.20
2	QSC A4FLEX 4 Channel I/O Interface w/ Logic I/O, AES67, USB, 2x5W Amplifier, PoE+, 1/3rd rack width w/mou.	\$1,226.43	\$2,452.86
1	QSC CORE 110f-v2 Unified Core with 24 local audio I/O channels, 128x128 total network I/O channels with 8...	\$3,007.14	\$3,007.14
1	QSC SLQUD-110-P Q-SYS Core: 110 UCI Deployment Software License, Perpetual	\$167.86	\$167.86
1	QSC SLQSE-110-P Q-SYS Core: 110 Scripting Engine Software License, Perpetual	\$332.14	\$332.14
1	QSC SLDAN-16-P Q-SYS Software-based Dante 16x16 Channel License, Perpetual	\$400.00	\$400.00
1	LINX LNX-PTCH-6S Patch Cable - Cat6 Shielded	\$7.76	\$7.76
1	LINX ASSEMBLY-AUDIO CABLE Custom Audio Cable Assembly	\$8.93	\$8.93
1	QSC CX-Q 4K8 8-Channel 500W/CH Q-SYS Network Amplifier, FlexAmp, with Mic/line Inputs	\$4,157.14	\$4,157.14
2	Shure SM58S Cardioid Dynamic, On-Off Switch	\$107.14	\$214.28
1	AtlasIED TB3664 Platinum Design Series 64" Tripod and Boom Kit	\$107.64	\$107.64
1	SanDisk SDSSDE61-500G-G25 SDSSDE61-500G-G25,External SSD,E610,Kolsch,Calypto,4x6 Box,	\$107.14	\$107.14
600	Liberty AV Solutions 22-1P-CMP-EZ-WHT 22 AWG MICROPHONE AND LINE CABLE, PLENUM (PER FOOT)	\$0.31	\$186.00
1500	Liberty 12-2C-P-WHT 12 AWG 2-Conductor Plenum Cable (PER FOOT)	\$1.03	\$1,545.00
1500	Liberty AV Solutions 10-2C-TTP-WHT (PER FOOT) White Tight Tube Plenum 10 AWG 2-Conductor Speaker Ca..	\$1.52	\$2,280.00
80	Liberty AV Solutions RG8-CMP-BLK RG8 ANTENNA DISTRIBUTION CABLING, 50Ω (PER FOOT)	\$5.86	\$468.80
2	Liberty AV Solutions 112627 BNC Crimp Plug for RG8 plenum solid cable	\$7.63	\$15.26
300	LINX LNX-CBL-6A Field Cable - Cat6A	\$1.18	\$354.00
6	LINX LNX-JCK-6A Keystone Jack - Cat6A	\$8.22	\$49.32
6	LINX LNX-PTCH-6A Patch Cable - Cat6A	\$12.94	\$77.64

LINX SYSTEM

QTY	DESCRIPTION	PRICE	PRICE EXT
1	Equipment LIFT RENTAL	\$1,666.67	\$1,666.67

Arvada - City of



QTY	DESCRIPTION	PRICE	PRICE EXT
1	LINX HARDWARE HARDWARE & CONSUMABLES	\$384.62	\$384.62
1	LINX GUIDE SYSTEM QUICK-START GUIDE		
1	LINX PROJECT ENGINEERING PROJECT ENGINEERING		
1	LINX DRAWINGS SYSTEM DRAWINGS		
1	LINX PRO-CONTROL CONTROL SYSTEM PROGRAMMING		
1	LINX PRO-DSP DSP PROGRAMMING		
1	LINX TESTING SYSTEM TESTING & COMMISSIONING		
1	LINX TRAINING END-USER TRAINING		
EQUIPMENT TOTAL			\$42,695.54
LABOR TOTAL			\$27,277.32
EXPENSES			\$81.87
FREIGHT			\$1,174.31
TEXTURA			\$122.81
SOUND REINFORCEMENT SYSTEM TOTAL			\$71,351.85

BUILDING PAGING

SCOPE

BUILDING PAGING - SCOPE:

> REV 2 CHANGES:

1. *Per Censeo: Remove Shure MX Microphone (replaced w/QSC Paging Mic)*
2. *Per Censeo: Remove QSC Axon D2i (not required w/QSC Paging Mic)*
3. *Per Censeo: Replace LEA 168D 8-channel amp with LEA 164D 4-channel amp [Zone qty. reduced from 8 to 4]*
4. *Per Censeo: Replace QSC CX-Q4X8 8-channel amp with QSC CX-Q2X4 4-channel amp [Zone qty. reduced from 8 to 4]*
5. *Per Censeo: Replace (20) Sonance Pendant Speakers with JBL Control 65P/T-WH pendant speakers*
6. *Per Censeo: Replace (42) Sonance In-ceiling Speakers with JBL Control 16C/T-WH in-ceiling speakers*

- Scope as specified AV Revision 3/14/24 except as noted

AUDIO

QTY	DESCRIPTION	PRICE	PRICE EXT
1	LEA Professional CS164D 4 Channel x 160 watt @ 4 ohm, 8 ohm, 70V and 100V per channel. Internal DSP w/ C..	\$1,958.75	\$1,958.75
1	QSC CX-Q 2K4 Q-SYS Network Amplifier: 4-Ch 500W/CH, Lo-Z, 70V, 100V Direct Drive, FlexAmp, Mic/line Inputs	\$2,220.00	\$2,220.00
1	QSC PS-1650G Q-Sys 16-Button Command Code (A-P) Wall Mounted Page Station; available with Hand Hel...	\$2,639.29	\$2,639.29
1	RCI Custom MI9605xx Modular Insert, w/ one RJ 45 punchdown, Cat 6 Keystone™ style	\$89.29	\$89.29
20	JBL Control 65P/T Two-Way Pendant 5.25", 60W Loudspeaker	\$218.86	\$4,377.20
42	JBL Professional CONTROL 16C/T Two-Way 165 mm (6.5 in) Co-axial Ceiling Loudspeaker. 165 mm (6.5 in) h...	\$143.39	\$6,022.38
4	JBL Professional MTC-26MR MUDRING BRKT, C26C/26CT (EA=6)	\$168.96	\$675.84
62	LINX HARDWARE-SPEAKER (Per Speaker) Safety Cabling [Hangers/Shots]	\$2.38	\$147.56
1	LINX HARDWARE - SPEAKER PATHWAY SPEAKER CABLE PATHWAY HARDWARE (LOT)	\$297.62	\$297.62
2000	Liberty 14-2C-P-WHT 14 AWG 2-Conductor Plenum Cable (PER FOOT)	\$0.68	\$1,360.00
80	LINX LNX-CBL-6A Field Cable - Cat6A	\$1.18	\$94.40
2	LINX LNX-JCK-6A Keystone Jack - Cat6A	\$8.22	\$16.44
2	LINX LNX-PTCH-6A Patch Cable - Cat6A	\$12.94	\$25.88

CONTROL SYSTEM

QTY	DESCRIPTION	PRICE	PRICE EXT
2	Netgear AXM761-10000S Netgear ProSafe AXM761 10GBASE-SR SFP+	\$301.19	\$602.38
2	Netgear AXM765-20000S 10GBASE-T SFP+ Transceiver	\$327.81	\$655.62
2	Netgear GSM4212PX-100NAS M4250-10G2XF-POE+8X1G POE	\$1,118.38	\$2,236.76
2	Panduit FX2ERLNLNSNM002 FiberOptic Patch Cord 2M, OM3 2F	\$62.12	\$124.24

RACK EQUIPMENT

QTY	DESCRIPTION	PRICE	PRICE EXT
2	Eaton SMART750RM1U 750VA 600W UPS Smart Rackmount AVR 120V USB DB9 SNMP 1URM	\$619.95	\$1,239.90
1	On-Q SS26 1 Gang Decorator Wall Plate, 302/304 Stainless Steel	\$5.95	\$5.95
1	Client OFE OFE - wall-mount IDF Cabinet in 110A by Structured Cabling		
1	Client OFE OFE -4-post rack in Data 118 by Structured Cabling		
2	LINX HARDWARE-RACK EQUIPMENT RACK HARDWARE & CONSUMABLES	\$146.15	\$292.30

LINX SYSTEM

QTY	DESCRIPTION	PRICE	PRICE EXT
1	LINX HARDWARE HARDWARE & CONSUMABLES	\$492.31	\$492.31

Arvada - City of



QTY	DESCRIPTION	PRICE	PRICE EXT
1	LINX GUIDE SYSTEM QUICK-START GUIDE		
1	LINX PROJECT ENGINEERING PROJECT ENGINEERING		
1	LINX DRAWINGS SYSTEM DRAWINGS		
1	LINX PRO-CONTROL CONTROL SYSTEM PROGRAMMING		
1	LINX PRO-DSP DSP PROGRAMMING		
1	LINX TESTING SYSTEM TESTING & COMMISSIONING		
1	LINX TRAINING END-USER TRAINING		

EQUIPMENT TOTAL	\$25,574.11
LABOR TOTAL	\$39,046.92
EXPENSES	\$117.20
FREIGHT	\$703.40
TEXTURA	\$175.80
BUILDING PAGING TOTAL	\$65,617.43



DIGITAL SIGNAGE

SCOPE

DIGITAL SIGNAGE SCOPE:

- Scope as specified AV Revision 3/14/24 except as noted
- Network connection to the display shall be provided and installed by others [NIC].
- Content for the digital signage system will be created, maintained, and distributed by the owner as well as subscriptions and other renewable services.

VIDEO

QTY	DESCRIPTION	PRICE	PRICE EXT
3	BrightSign BS-XD1035 BrightSign XD1035 Expanded I/O Player	\$594.65	\$1,783.95
1	Chief LTTU Large Tilt Thinstall Universal Mount	\$190.68	\$190.68
2	Chief MTTU Medium Tilt Thinstall Universal Mount	\$142.50	\$285.00
3	Extron Electronics 26-663-06 6' HDMI	\$66.15	\$198.45
2	Samsung QM43C 43-inch Commercial 4K UHD Display, 500 NIT	\$740.00	\$1,480.00
1	Samsung QM85C 85-inch Commercial 4K UHD Display, 500 NIT	\$4,140.00	\$4,140.00
3	BrightSign SDHC-64C10-1(M) 64GB Class 10 Micro SD Memory Card	\$42.14	\$126.42
3	LINX HARDWARE-DISPLAY DISPLAY MOUNT HARDWARE KIT	\$69.23	\$207.69

LINX SYSTEM

QTY	DESCRIPTION	PRICE	PRICE EXT
3	LINX PROJECT ENGINEERING PROJECT ENGINEERING		
3	LINX DRAWINGS SYSTEM DRAWINGS		
3	LINX CONFIGURATION SYSTEM & DEVICE CONFIGURATION		
3	LINX TESTING SYSTEM TESTING & COMMISSIONING		
3	LINX TRAINING END-USER TRAINING		

EQUIPMENT TOTAL	\$8,412.19
LABOR TOTAL	\$4,519.48
EXPENSES	\$13.56
FREIGHT	\$231.37
TEXTURA	\$20.35
DIGITAL SIGNAGE TOTAL	\$13,196.95



PORTABLE WATER AEROBICS SYSTEM

SCOPE

PORTABLE WATER AEROBICS SYSTEM - SCOPE: Linx will provide a self-contained portable sound system as specified

- Scope as specified AV Revision 3/14/24

AUDIO

QTY	DESCRIPTION		PRICE	PRICE EXT
1	AV Now	TV10-LECTRO-KIT Aquatic Portable Sound System with Waterproof Microphone and TV10 Speaker	\$6,499.00	\$6,499.00
1	Galaxy Audio	AS-TV10COVER protective slip cover for Traveler 10 has storage space and handle access	\$71.43	\$71.43
EQUIPMENT TOTAL				\$6,570.43
LABOR TOTAL				\$250.82
EXPENSES				\$0.75
FREIGHT				\$180.72
TEXTURA				\$1.13
PORTABLE WATER AEROBICS SYSTEM TOTAL				\$7,003.85



PLUS SUPPORT

Plus Support Package

- Preventative Maintenance Visit Annually
- Programming Fine Tuning
- LINX Labor and Freight for Manufacturer Warranty Support
- Four (4) reactive on-site service calls included per year
- Remote Technical Support with Remote Access
- Remote Systems Monitoring
- Discounted Rates for additional On-Site Service

Contact Us

LINXService@TeamLinx.com
1-866-9GO-LINX
1-866-946-5469
303-576-7222

Pricing and Plan Details

- Price is based total project value and a pre-paid annual contract.
- Technical Support and LINX LIVE Support is available 8AM-5PM MTN, M-F except holidays
- Remote access and remote monitoring subject to customer permission and network setup

Standard Terms

- Support contracts are pre-paid and renewed annually. Pricing may be adjusted at annual renewal. LINX shall provide 30-days notice of pricing changes prior to renewal.
- If client wishes to cancel a support contract prior to the end of the term and receive a pro-rated refund the client must provide written notice of LINX non-performance of services and fourteen (14) business days for LINX to cure the non-performance.
- Phone Support, Remote Technical Support and LINX LIVE Support is available 8AM-5PM MTN, M-F except on holidays.
- LINX will provide the client with the option to allow LINX to connect use the LINX remote access platforms. LINX will provide details on the platform security and review with the client to confirm the platform meets the client's security requirements.
- Onsite response will be provided the next business day for standard requests and within the same business day for emergency response for requests submitted. Support requests must be submitted by 12PM for same day on-site response.
- Force Majeure: Neither Client nor LINX shall be held liable for damages caused by delay or failure to perform hereunder, when such delay or failure is due to flood, fire, storm, earthquake, or other acts of God, strikes, war, civil unrest, acts of public authorities, or delay or default of public carriers.
- Any changes to the system or modification to the system by the client or by others will void the LINX warranty for equipment and labor.

Additional Plus Support Terms

- Preventative maintenance includes an on-site service check by the LINX team using an agreed upon checklist for your systems.
- Programming change includes items such as renaming a button, changing a graphic, moving a button or minor changes to code, but does not include significant functional workflow changes of touch panel and control systems. Determination of a minor change will be made by LINX.

PLUS SUPPORT

+\$10,654.64



ACCEPTANCE

FINANCIAL

PAYMENT SCHEDULE
Please see billing terms detailed in the Terms and Conditions.

EQUIPMENT TOTAL	\$97,787.02
LABOR TOTAL	\$92,549.71
EXPENSES	\$277.78
FREIGHT	\$2,689.57
TEXTURA	\$416.68
PLUS SUPPORT (ANNUALLY)	\$10,654.64
SUBTOTAL	\$204,375.40
TOTAL TAX	\$0.00
PROJECT TOTAL	\$204,375.40

TERMS

By accepting this proposal and signing below, you acknowledge you have the proper authority to enter into this agreement and you are agreeing to the Linx Terms and Conditions contained herein.

ACCEPTANCE

ARVADA - CITY OF

SIGNED

DATE

PRINT NAME

TITLE

LINX MULTIMEDIA

SIGNED

DATE

PRINT NAME

TITLE



Terms & Conditions

dBid Inclusions

- All items listed in the bill of materials unless otherwise noted.
- All safety equipment and tools shall be provided.
- An adequate number of qualified field technicians to meet the installation schedule.
- One Year LINX Workmanship Warranty.
- Clean up of our own identifiable debris to a dumpster furnished by others.

Bid Exclusions, Unless specified under the Scope of Work

- | | |
|--|--|
| ■ Removal of existing AV system infrastructure. | ■ Penetrations of raised flooring or coring in concrete and electrical/data core up apparatus's. |
| ■ Raceways | ■ All conduit and boxes and/or core-holes unless specified under the statement of work |
| ■ Plywood backboards | ■ Installation of owner furnished equipment. |
| ■ Asbestos abatement or toxic waste removal. | ■ Bid Bond or Performance Bond |
| ■ Builders Risk Insurance. | ■ Telephone system equipment, devices. |
| ■ Cutting or channeling of millwork or furniture. | ■ Cutting of raised flooring |
| ■ Delays and/or extension of the project schedule. | ■ Provision or installation of electrical system infrastructure or equipment. |

Bid Clarifications and Terms

- 1) This proposal is based on a mutually agreeable schedule to be determined which includes unimpeded access to scheduled work areas.
- 2) This pricing is based on a 40-hour work week in accordance with local laws and does not include overtime.
- 3) Work for this proposal is to be performed during normal business hours (7 am to 5 pm).
- 4) Cancellation charges incurred by LINX shall be the responsibility of the customer along with associated freight charges.
- 5) LINX shall not be held liable for errors or omissions nor inadequacies of materials and equipment specified or supplied by others.
- 6) We assume all equipment furnished and installed by others will be delivered and installed in a timely manner so as to allow time to complete our portion of the work.
- 7) We assume this will be a lump sum contract.
- 8) This proposal is developed on the assumption that all work defined in the Scope of Work will be awarded to a single contractor. LINX reserves the right to review its prices should work be awarded to more than one contractor.
- 9) Value engineering on design drawings is subject to review by authority having jurisdiction.
- 10) The work environment has been assumed to be free of hazardous materials and free from asbestos. Owner is responsible for supplying to LINXs with the information concerning the safety issues of hazardous material for the disclosure to all employees working on the project.
- 11) Any additional labor or materials requested by Owner not included in the scope of this response will constitute a change order. All change orders must be in writing, signed by both the Owner personnel who has signature authority, and the LINXs project manager before any materials are ordered or labor is scheduled.
- 12) All OSHA safety requirements will be honored and complied with while on Owner's project site by all LINXs personnel.
- 13) All ceiling space has been assumed to be easily accessible, and suitable for the installation of the proposed cabling. LINX has not included demo of existing cabling or devices in the ceiling.
- 14) Scope of work as defined in this proposal document.
- 15) Warranty - LINX warrants all labor services to be free of workmanship defects for a period of 1-year from the date of substantial completion. During this 1-year period, LINX will promptly repair, at no cost to the customer, any defects that are a direct result of labor workmanship. Any materials or equipment furnished by LINX will be covered by Manufacturer's warranty. LINX will provide labor to support a manufacturer defect on LINX supplied material within the 1-year workmanship warranty. In the event a warranty service call is made but no labor or material defect is found on LINX supplied material or a service call is in regards to material supplied by others, LINX will invoice its standard hourly rate for the service call.
- 16) Delays & downtime caused by the Owner, General Contractor or Owner's Representative may be subject to a mobilization/demobilization charge. Delays or downtime are deemed as lost man hours where LINX is scheduled to work on a requested date and not allowed to perform said installation. These delays may be subject to a demobilization charge if the delay could have been avoided by rescheduling, thus preventing lost man hours. LINX respectfully requests that a 24-hour notice be given in the event a crew is scheduled to work and the area of work to be performed is not available. We try to schedule our crews to adhere to client schedules and we ask in return that our crews be allowed to stick with that schedule if at all possible. We are trying to ensure that a LINX crew is allowed to work efficiently and provide a cost effective price for our clients. In the event that LINX deploys a crew to a jobsite that was not ready, LINX reserves the right to charge for the lost man hours of each crew member for that particular project.
- 17) As-built prints - If included in the scope of work, all as-built prints will be delivered within 30 days of the completion of the project, unless otherwise agreed to by both parties.
- 18) An intellectual property agreement is required for the release of programming code and DSP configuration.
- 19) If the materials cost for a product supplied by LINX hereunder increases more than 5%, the price charged to the customer for such product shall increase by 100% of the materials cost increase ("Materials Cost Increase"); provided that LINX provides the customer with not less than 60 days written notice of the pending Materials Cost Increase and works with the customer in good faith during such 60-day period to consider options to mitigate such Materials Cost Increase. Upon request by the customer, LINX shall furnish actual material cost data in the form of supplier letter, or other relevant data, as evidence of Materials Cost Increase.
- 20) Tax is an estimate and final tax amount may vary depending on city, county, and state tax rates defined for the project.
- 21) Standard Billing Terms:
 - a) Materials will be invoiced in full upon contract execution and labor will be invoiced on a progress basis.
 - b) Change orders are invoiced 100% upon acceptance of the proposal for the change order.
 - c) Credit card payments are subject to additional 3% convenience fee.
 - d) All Fees associated with the usage of a Construction Payment Management System, such as Textura, will be charged back to the customer.
- 22) All products in this proposal, with the exception of equipment furnished by others, shall be approved and installed in adherence with local building codes at time of proposal generation. If a local building code change occurs after acceptance of this proposal, LINX reserves the right to issue a change order for any additional labor, materials or freight required to bring the installation in compliance with the code change.
- 23) Should LINX be delayed in the commencement, prosecution or completion of the Work by any unforeseeable cause beyond LINX's control and not due to any fault, neglect, act or omission on its part, then LINX shall be entitled to an extension of time. Notwithstanding the foregoing, LINX shall be entitled to compensation of 1% of the total project contract per month for general conditions and reimbursement for any additional documented direct costs associated by such delay including, but not limited to, remobilization.

Initial

Anna Gannon

From: Conor Bancroft <cbancroft@wemberinc.com>
Sent: Monday, April 15, 2024 3:52 PM
To: Anna Gannon
Subject: RE: LINX AV Proposal 24-03-M6860 REV 2 Arvada - Meyers Pool 4-12-24

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

I will ask Kim, but we will get it done quickly either way.



Conor Bancroft, Project Manager

C: (720) 532-2674

For *Wember's 20th Anniversary*, we will be out of office: April 25th–26th

From: Anna Gannon <a.gannon@saundersinc.com>
Sent: Monday, April 15, 2024 3:29 PM
To: Conor Bancroft <cbancroft@wemberinc.com>
Subject: RE: LINX AV Proposal 24-03-M6860 REV 2 Arvada - Meyers Pool 4-12-24

Is there a possibility this can be brought into OCO 3? Or is that too late?

Or, we do OCO 4 specific to Linx (and maybe ASI 20 SCAs) and can get a quick turnaround?



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Conor Bancroft <cbancroft@wemberinc.com>
Sent: Monday, April 15, 2024 3:02 PM
To: Anna Gannon <a.gannon@saundersinc.com>
Subject: RE: LINX AV Proposal 24-03-M6860 REV 2 Arvada - Meyers Pool 4-12-24

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Anna,

I thought I would have a break in meetings to give you a call, but I might not. What do you propose?



Conor Bancroft, Project Manager

C: (720) 532-2674

For Wember's 20th Anniversary, we will be out of office: April 25th–26th

From: Anna Gannon <a.gannon@saundersinc.com>

Sent: Monday, April 15, 2024 9:57 AM

To: Conor Bancroft <cbancroft@wemberinc.com>; Selena Twilley <stwilley@wemberinc.com>; kvagher@arvada.org

Cc: l.lane@saundersinc.com

Subject: FW: LINX AV Proposal 24-03-M6860 REV 2 Arvada - Meyers Pool 4-12-24

Conor,

Please confirm you want Saunders to contract with Linx on this. This would be an extremely large amount of money for Saunders to front, especially with us currently fronting over \$130k as OCO3 gets processed.

Can we discuss how to quickly get this handled to keep the ball rolling? I am the 708 number that tried you earlier!

Thanks.



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Mark Merrick <mmerrick@teamlinx.com>

Sent: Monday, April 15, 2024 8:03 AM

To: Anna Gannon <a.gannon@saundersinc.com>

Cc: Peter Nelson <pnelson@teamlinx.com>; Matt Celotto <MCelotto@teamlinx.com>; cbancroft@wemberinc.com; Mark Trent <mtrent@teamlinx.com>; Jerry McGargill <JMcGargill@teamlinx.com>; Juan Vazquez-Villasenor <J.Vazquez-Villasenor@saundersinc.com>

Subject: RE: LINX AV Proposal 24-03-M6860 REV 2 Arvada - Meyers Pool 4-12-24

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Anna,

I hope your weekend went well. You are correct. Updated T002/T601 does NOT affect Revision 2 of our AV proposal.

Let us know if you have any further questions.

Thanks,
Mark

MARK MERRICK

Sr. Account Executive

Direct: (720)425-3535

Email: mmerrick@teamlinx.com

Website: www.teamlinx.com

9900 E. 51st Ave., Denver, CO 80238



From: Anna Gannon <a.gannon@saundersinc.com>

Sent: Monday, April 15, 2024 7:09 AM

To: Mark Merrick <mmerrick@teamlinx.com>

Cc: Peter Nelson <pnelson@teamlinx.com>; Matt Celotto <MCelotto@teamlinx.com>; cbancroft@wemberinc.com;
Mark Trent <mtrent@teamlinx.com>; Jerry McGargill <JMcGargill@teamlinx.com>; Juan Vazquez-Villasenor <J.Vazquez-Villasenor@saundersinc.com>

Subject: RE: LINX AV Proposal 24-03-M6860 REV 2 Arvada - Meyers Pool 4-12-24

Mark,

We received a revision to ASI 20 Friday afternoon. See attached. This updated T002/T601 but I don't see it affecting pricing. Please confirm.



Anna Gannon

Project Manager

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9220 **o** (303) 699-9000 **m** (708) 256-9190

A.Gannon@saundersinc.com

www.saundersinc.com

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From: Mark Merrick <mmerrick@teamlinx.com>

Sent: Friday, April 12, 2024 4:42 PM

To: Anna Gannon <a.gannon@saundersinc.com>

Cc: Mark Merrick <mmerrick@teamlinx.com>; Peter Nelson <pnelson@teamlinx.com>; Matt Celotto

<MCelotto@teamlinx.com>; cbancroft@wemberinc.com; Mark Trent <mtrent@teamlinx.com>; Jerry McGargill <JMcGargill@teamlinx.com>

Subject: LINX AV Proposal 24-03-M6860 REV 2 Arvada - Meyers Pool 4-12-24

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

Anna,

I hope your week went well. Please see attached our AV Revision 2 for the Arvada Meyers Pool project. Revision 2 includes the agreed upon changes that LINX worked out with Censeo and brings us current through ASI-20 to 29.

Please review and let us know if you have any questions. If all looks good, could you confirm by responding to this email Saunder's intent to move forward with Revision 2 of LINX AV Proposal #24-03-M6860 in the amount of \$204,375.40.

Thank you and enjoy your weekend.

Mark

MARK MERRICK

Sr. Account Executive

Direct: (720)425-3535

Email: mmerrick@teamlinx.com

Website: www.teamlinx.com

9900 E. 51st Ave., Denver, CO 80238



CHANGE ORDER NO. 2
**TO “THE CONSTRUCTION MANAGEMENT AGREEMENT FOR PRE-
CONSTRUCTION & CONSTRUCTION SERVICES FOR THE MEYER’S POOL
REPLACEMENT PROJECT IN AN AMOUNT
NOT TO EXCEED \$38,727,339.00”**

1.0 PARTIES. The parties to this Change Order No. 2 are the City of Arvada, a home rule municipal corporation (“Arvada”) and Saunders Construction, LLC (“Contractor”).

2.0 RECITALS AND PURPOSE.

2.1 On or about December 12, 2022, Arvada and Contractor entered into a construction management agreement for pre-construction services for the Meyers Pool Replacement Project in an amount not to exceed \$69,000.00 (“the CM/GC Agreement”). The CM/GC Agreement is not attached hereto but is incorporated herein by reference.

2.2 On or about April 18, 2023, Arvada and Contractor entered into a first amendment to the CM/GC Agreement to expand the scope of work to include Phase 1(A), parking lot construction, and granting Contractor the general contractor agreement for Phase 1(A) (“the First Amendment”). The First Amendment is not attached hereto but is incorporated herein by reference.

2.3 On or about July 11, 2023, Arvada and Contractor entered into a contract addendum to the CM/GC Agreement awarding Phase II to Contractor and establishing the initial guaranteed maximum price at \$38,240,799.00 (“Contract Addendum”). The Contract Addendum is not attached hereto but is incorporated herein by reference.

2.4 On or about November 19, 2023, Arvada and Contractor entered into an amended contract addendum to reflect the change from the initial guaranteed maximum price to the final guaranteed maximum price at a cost of \$38,727,339.00 (“Amended Contract Addendum”). The Amended Contract Addendum is not attached hereto but is incorporated herein by reference.

2.5 Pursuant to Section 2.1 of the CM/GC Agreement, Contractor shall perform the Work as described in the Contract Documents or as amended by the mutual consent of the parties in writing. Should the parties agree in writing to a change in the scope of services, then the parties will timely execute any applicable Change Order.

2.6 On or about March 14, 2024, the Parties executed Change Order No. 1. Change Order No. 1 is not attached hereto but is incorporated herein by reference. The purpose of Change Order No. 1 was to: (1) increase the guaranteed maximum price for the Meyers Pool by \$199,591.40 for a

revised final guaranteed maximum price of \$38,926,930.40; and (2) remove contingency from the Meyers Pool Parking Lot for a reduction of \$65,105.01 for a revised sum of \$1,337,725.99.

2.7 The Parties now wish to execute Change Order No. 2. The purpose of Change Order No. 2 is to increase the guaranteed maximum price for the replacement pool project by \$999,398.44 for a revised final guaranteed maximum price of \$39,926,328.84.

3.0 CONTRACT DOCUMENTS AND EXHIBITS. The Contract Documents shall consist of the CM/GC Agreement, First Amendment, Contract Addendum, Amended Contract Addendum, Change Order No. 1, and this Change Order No. 2 together with the following:

Exhibit C: Contractor's Change Order No. OCO-003;

Exhibit D: Contractor's Change Order No. OCO-004;

All exhibits referred to in this Change Order No. 2 are attached hereto and are, by reference, incorporated herein for all purposes. In the event any matter, term, provision, or condition that is the subject of this Change Order No. 2 requires clarification or is in dispute, or is the subject of a difference of opinion, the purpose and intent of the Change Order No. 2 shall be ascertained by reference to the Contract Documents in their entirety. In the event of any dispute or differences between the respective documents that constitute the Contract Documents, then Contractor shall secure the written instructions from Arvada before proceeding with the performance of the services affected by such conflicts, omissions, or discrepancies.

4.0 COMPENSATION AMOUNT. The compensation amount is being modified under this Change Order No. 2 as follows:

4.1. The Parties are increasing the guaranteed maximum price for the Meyers Pool by \$999,398.44 for a revised final guaranteed maximum price of \$39,926,328.84, as detailed in **Exhibits C and D.**

5.0 SCOPE OF SERVICES. The scope of services is being expanded by this Change Order No. 2 to include the additional construction of diving platforms and boards further described in Exhibit C.

6.0 EXTENSION OF TERM. The term of the Agreement is not being modified under this Change Order No. 2.

7.0 TIME FOR COMPLETION. The time for the project to be completed is not being modified under this Change Order No. 2.

8.0 FULL FORCE AND EFFECT. All other terms and conditions shall be as set forth in the Contract Documents.

9.0 SEVERABILITY. If any other provision of this Change Order No. 2 is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Change Order No. 2 shall continue in full force and effect.

10.0 BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Change Order No. 2 may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.

EFFECTIVE this ____ day of _____, 2024.

CITY OF ARVADA, a Colorado home rule
municipal corporation

Lauren Simpson, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

SAUNDERS CONSTRUCTION, LLC

Tom Alford, Senior Vice President
86 Inverness Place North
Email: t.alford@saundersinc.com



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.2.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: R24-060, A Resolution Authorizing Change Order No. 6 to An Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an amount not to exceed \$866,646.61 for a revised total contract amount not to exceed \$18,590,691.96

Report in Brief

Change Order No. 6 will extend the deadline to complete the Project by seven months from the Original Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. (Contractor) for Ralston Road Phase 2. Additionally, Change Order No. 6 increases the compensation amount by \$866,646.61 for a revised total contract amount not to exceed \$18,590,691.96.

The Arvada team recommends that the City Council approve, A Resolution Authorizing Change Order No. 6 to "An Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road – Yukon Street to Garrison Street in an amount not to exceed by \$866,646.61 for a revised total contract amount not to exceed \$18,590,691.96 and also increase the contract time to complete the project until December 3rd 2023 from May 3rd 2023.

Financial Impact

This Change Order No. 6 will add \$866,646.61 to the Original Agreement for Construction Services for the Ralston Road Phase 2 project (18-ST-40) revising the total contract not to exceed to \$18,590,691.96, which has been budgeted for through the remaining bond issue completed last year for Capital Improvement Project (CIP) 18-ST-40.

Background

On March 1, 2021, Arvada and Contractor entered into an agreement (the "Original Agreement") whereby Hamon Infrastructure, Inc. (Contractor) would complete the reconstruction of Ralston Road between Yukon Street to Garrison Street as a four-lane arterial roadway with a center median or two-way left turn and eight-foot detached or ten-foot attached sidewalk, relocation of utilities, associated storm drainage system, waterline, curb and gutter, traffic signal replacement, and streetscape elements. During prior change order negotiations, Contractor requested an additional seven months of time to complete the project along with associated overhead costs.

Discussion

During the Ralston Road II Project construction, Contractor was given some additional scope of work to complete such as water line work, stormwater pipe replacement work, etc. During prior change order negotiations, Contractor requested 7 months of additional time and associated overhead costs such as construction survey, traffic control, etc to complete the Project with the additional scope. After reviewing Contractor's request, the City Project team was willing to put forth Contractor's request before City Council for approval, but change order negotiations broke down. Despite the breakdown in negotiations, Arvada's Project team believes the 7 months additional time and overhead cost items are reasonable. A detailed breakdown and descriptions of monthly overhead(s) and other time related costs for each item are shown in Exhibit A.

Public Contact

N/A

SUBJECT: R24-060, A Resolution Authorizing Change Order No. 6 to An Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an amount not to exceed \$866,646.61 for a revised total contract amount not to exceed \$18,590,691.96

PAGE: 2
ITEM: 8.A.2.

Commission Recommendation

N/A

Strategic Alignment

This action aligns with the City Council Strategic Plan Priority Area of Infrastructure. The 2015-2016 Citizen Capital Improvement Plan Committee ranked Ralston Road as the number one transportation priority due to the corridor's narrow two-way left turn lane and travel lanes, a higher rate of side-swipe and intersection crashes compared to similar arterials, and the narrow width of sidewalks for pedestrians and bicyclists.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve A Resolution Authorizing Change Order No. 6 to An Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road – Yukon Street to Garrison Street in an amount not to exceed \$866,646.61 for a revised total contract amount not to exceed \$18,590,691.96.

Suggested Motion:

I move that R24-060, A Resolution Authorizing Change Order No. 6 to An Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road – Yukon Street to Garrison Street in an amount not to exceed \$866,646.61 for a revised total contract amount not to exceed \$18,590,691.96, be (approved) (rejected).

Prepared by:
Padmini Gudipudi, Civil Engineer III

Reviewed by:

Approved by:

Jenny Wolfschlag, City Engineer	5/14/2024
Chris Lisberg, Assistant City Engineer	5/14/2024
Jacqueline Rhoades, Public Works Director	5/16/2024
Bryan Archer, Director of Finance	5/17/2024
Tammy Hedlund, Legal Specialist	5/20/2024
Kelsy Sargent, Assistant City Attorney	5/21/2024
Don Wick, Deputy City Manager	5/21/2024
Rachel Morris, City Attorney	5/22/2024
Lorie Gillis, City Manager	5/22/2024

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R24-060

A RESOLUTION AUTHORIZING CHANGE ORDER NO. 6
TO “AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND HAMON
INFRASTRUCTURE, INC. FOR CONSTRUCTION OF 18-ST-40
RALSTON ROAD – YUKON STREET TO GARRISON STREET” IN AN AMOUNT NOT TO
EXCEED \$866,646.61 FOR A REVISED TOTAL CONTRACT AMOUNT NOT TO EXCEED
\$18,590,691.96

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, this Change Order No. 6, which is in substantially the same form as that attached hereto, to an agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Project No. 18-ST-40, entitled Ralston Road - Yukon Street to Garrison Street, to extend the project completion date to December 3, 2023 and increase the compensation amount by \$866,646.61, for a revised total contract amount not to exceed \$18,590,691.96.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 3rd day of June, 2024.

Lauren Simpson, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

CHANGE ORDER NO. 6
TO “AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND HAMON
INFRASTRUCTURE, INC. FOR CONSTRUCTION OF 18-ST-40
RALSTON ROAD – YUKON STREET TO GARRISON STREET” IN AN AMOUNT NOT
TO EXCEED \$866,646.61 FOR A REVISED TOTAL CONTRACT AMOUNT NOT TO
EXCEED \$18,590,691.96

This Change Order made this ____ day of _____, 2024, by the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) regarding the March 10, 2021 Agreement with Hamon Infrastructure, Inc. (“Contractor”), jointly (“the Parties.”)

WITNESSETH: That upon City Approval, the Work and Contract Documents for City of Arvada, Project No. 18-ST-40, entitled Ralston Road - Yukon Street to Garrison Street, shall be adjusted as provided herein:

1.0 RECITALS AND PURPOSE.

1.1 On or about March 10, 2021, the City of Arvada (“Arvada” or “City”) and Hamon Infrastructure, Inc. (“Contractor”) entered into an Agreement (“the Original Agreement”) whereby Contractor would provide construction services related to the expansion of Ralston Road from Yukon Street (“the Project”) with a Project completion date of May 3, 2023.

1.2 On or about August 31, 2021, the City agreed to a proposal from Contractor dated August 19, 2021, which resulted in a net savings to the Project of \$52,930.00 (referred to herein as “Change Order No. 1”). On or about May 19, 2022, the Parties executed an agreement titled “Change Order No. 2” whereby Contractor would perform delineated utility construction improvements for the Van Horn Development for a cost of \$400,000.00 and Van Horn Development would pay Arvada the full cost within 60 days of completion of the improvements.

1.3 On or about October 23, 2023, the City executed Change Order No. 3 to address the modifications and additions to the storm sewer design that Contractor constructed between July 2022 and September 2023 with documentation through use of Force Account methods thereby expanding the scope of work and increasing the Original Agreement’s not to exceed amount by \$3,577,701.82.

1.4 On or about November 29, 2023, the City executed Change Order No. 4 to address the testing, collection, and transportation of contaminated soil along the south side of Ralston Road, the removal of unsuitable soft soil materials and stabilization with aggregate material, and the water line revisions and increased quantity of fusible pipe thereby increasing the Original Agreement’s not to exceed amount by \$805,166.86.

1.5 On or about February 20, 2024, the City executed Change Order No. 5 to expand the scope of work and increase the not to exceed amount to account for utility adjustments in the amount of \$474,918.10 and erosion control in the amount of \$159,492.76, thereby increasing the Original Agreement’s not to exceed amount

by \$634,410.86.

1.6 The Original Agreement and Change Orders No. 1, No. 2, No. 3, No. 4, and No. 5 are not attached herein but incorporated by reference.

1.7 Pursuant to Section 4.5 of the Original Agreement, Arvada “may, by written order signed by Arvada, at any time, and without notice to any surety, and subject to all appropriate adjustments, make changes within the general scope of this Contract in any one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.”

1.8 During the construction of the Project, Arvada has expanded the scope of work to accommodate such items as water line work, stormwater pipe replacement work, etc. During prior change order negotiations, Contractor proposed an additional 7 months of time past the original Project completion date as well as the accompanying overhead costs to accommodate the expanded scope of work for a revised project completion date of December 3, 2023. Arvada’s Project team reviewed Contractor’s proposal and was going to request council approval, but negotiations broke down. Despite the breakdown in negotiations, Arvada believes the 7 months additional time and overhead cost items are reasonable, a detailed breakdown of month-wise overheads and other time related descriptions and costs are shown in **Exhibit A**.

1.9 The purpose of this Change Order No. 6 is to extend the project completion date an additional 7 months for a revised project completion date of December 3, 2023 and to increase the not to exceed amount by \$866,646.61 to accommodate the additional 7 months of overhead costs.

1.10 The following Table 1 shows the additional cost and amount for the above-mentioned items addressed in this Change Order No. 6.

Table 1. Change Order No. 4 Scope of Work & Cost Summary

Description	Amount (\$)	Current Not To Exceed	Revised Not to Exceed
Additional Overhead Costs through December 3, 2023	\$866,646.61	\$17,724,045.35	\$18,590,691.96

1.11 Pursuant to Section 4.5, Arvada now desires to amend the Original Agreement to extend the project completion date an additional 7 months for a revised project completion date of December 3, 2023 and to increase the not to exceed amount by \$866,646.61 as detailed in **Exhibit A**.

2.0 CONTRACT DOCUMENTS AND EXHIBITS. The Contract Documents shall consist of the Original Agreement, Change Order No. 1, No. 2, No. 3, No. 4, No. 5, and this

Change Order No. 6 together with the following:

Exhibit A: Overhead Costs Spreadsheet (1 page);

All exhibits referred to in this Agreement are attached hereto and are, by reference, incorporated herein for all purposes. In the event any matter, term, provision, or condition that is the subject of this Agreement requires clarification or is in dispute, or is the subject of a difference of opinion, the purpose and intent of the Agreement shall be first ascertained by reference to the Contract Documents in their entirety. In the event of any future dispute or differences between the respective documents that constitute the Contract Documents, then Contractor shall secure the written instructions from Arvada before proceeding with the performance of the services affected by such conflicts, omissions, or discrepancies.

3.0 COMPLETION DATE UNDER CHANGE ORDER NO. 6. The Project completion date is being extended an additional 7 months (214 calendar days), for a revised Project completion date of **December 3, 2023**.

4.0 COMPENSATION FOR SERVICES UNDER CHANGE ORDER NO. 6. The Agreement terms are amended to increase the Original Agreement's not to exceed amount by **\$866,646.61** for a revised total not to exceed amount of **\$18,590,691.96**. While Arvada is increasing the overall not to exceed amount, Contractor must comply with the requirements of the Original Agreement's Section 6.2, Payment for Services, to obtain payment.

5.0 FULL FORCE AND EFFECT. All other terms and conditions shall be as set forth in the Original Agreement executed by the Parties on March 10, 2021. As such, all existing components of the Original Agreement and Contract Documents referenced and incorporated in this Change Order No. 6, shall be adhered to and are fully enforceable by the City Project Inspector, City Project Manager, Deputy City Project Manager, Engineering Manager, or any other representative of the City that the City Engineer designates in writing.

6.0 SEVERABILITY. If any other provision of this Change Order No. 6 is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Change Order No. 6 shall continue in full force and effect.

7.0 COUNTERPARTS, ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS. This Change Order No. 6 may be executed in counterparts, each of which shall be deemed to be an original, but all of which shall together constitute one and the same document. Facsimile signatures shall be accepted as originals. Arvada consents to the use of electronic signatures by Arvada. Arvada does not object to the admissibility of this Change Order No. 6 in the form of an electronic record, a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the grounds that it is an electronic record or an electronic signature or that it is not in its original form or is not an original.

8.0 EXHIBITS INCORPORATED. All exhibits attached hereto are incorporated herein by this reference.

9.0 EFFECTIVE DATE. This Agreement shall be effective on the date of execution below.

EFFECTIVE this _____ day of _____, 2024.

Signatures on the following page.

CITY OF ARVADA, a Colorado home rule
municipal corporation

Lauren Simpson, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

Item Description	Quantity	Unit	Unit Cost	Total
CONSTRUCTION SURVEY	7.000	MON	\$10,416.67	\$72,916.69
ADDED MOBILIZATION	1.000	LS	\$30,500.61	\$30,500.61
EROSION CONTROL MANAGEMENT (ECM)	182	DY	\$95.00	\$17,290.00
TRAFFIC CONTROL	7	MON	\$20,603.33	\$144,223.31
PUBLIC INFORMATION (TIER III)	7	MON	\$2,200.00	\$15,400.00
SANTIARY FACILITY	7	MON	\$1,000.00	\$7,000.00
			Subtotal	\$287,330.61
ADDITONAL CONTRACT TIME JOB SITE INDIRECTS	7	LS	\$51,726.00	\$362,082.00
MATL ESCALATION-HMA	1	LS	\$63,716.00	\$63,716.00
MATL ESCALATION-CONC FLATWORK	1	LS	\$72,878.00	\$72,878.00
POTHOLING-LUMIN8	320	EA	\$252.00	\$80,640.00
CHANGE ORDER NEW COST TOTAL				\$866,646.61



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.B.1.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: R24-061, A Resolution Authorizing a First Amendment to Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory (Aaron Jacks, Senior Asst City Attorney and Edna Hendershot, Deputy Police Chief)

Report in Brief

PRESENTER: Senior Assistant City Attorney Aaron Jacks.

The Arvada Police Department participates with other Jeffco law enforcement agencies in an intergovernmental agreement establishing the Jefferson County Regional Crime Laboratory (JCRCL). This first amendment authorizes JCRCL to create an equipment fund for the purchase of lab instrumentation and equipment, to be administered by the JCRCL board of directors. A copy of the original JCRCL IGA and resolution is attached to the routing for Council's reference.

The Arvada team recommends that the City Council approve R24-061, A Resolution Authorizing a First Amendment to Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory.

Financial Impact

The JCRCL IGA amendment has no direct fiscal impact; the APD will budget for contributions through existing APD budgets and budget request processes.

Background

JCRCL was created in 2013 by an intergovernmental agreement among the cities of Arvada, Golden, Lakewood, Wheat Ridge, and Jefferson County. JCRCL provides crime laboratory services to its partner agencies under the direction of a board of directors representing each agency. The JCRCL board has identified a need to fund ongoing purchases of capital equipment beyond JCRCL's regular operating budget. This first amendment adds provisions to the JCRCL IGA to create a mechanism for member agency contributions and purchases of capital equipment under the direction of the JCRCL board.

Discussion

JCRCL provides invaluable crime laboratory services to the City and its partner agencies. These services often involve technical forensic investigative services using highly specialized techniques and equipment. It is imperative that JCRCL maintain its investigative capabilities through the ongoing funding and acquisition of sophisticated, and at times costly, capital equipment to ensure effective criminal investigations and successful prosecutions.

This first amendment creates an equipment fund which will be administered by the Jefferson County Sheriff's Office as the JCRCL fiscal agent. Each JCRCL partner will contribute to the equipment fund for the purchase of capital equipment as determined by the partners' participation in the JCRCL board of directors. Further, any excess funds from JCRCL's annual operating budget will be transferred to the equipment fund as well.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

NA

Strategic Alignment

The JCRCL IGA amendment aligns with the City's public safety strategies by ensuring JCRCL provides effective investigations related to crimes which occur in Arvada.

Alternative Courses of Action

NA

Recommendation for Action

The Arvada team recommends that the City Council approve R24-061, A Resolution Authorizing a First Amendment to Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory.

Suggested Motion:

I move that R24-061, A Resolution Authorizing a First Amendment to Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory, be (approved) (rejected).

Prepared by:
Aaron Jacks, Assistant City Attorney

Reviewed by:

Approved by:

Aaron Jacks, Assistant City Attorney	5/6/2024
Edward Brady, Deputy Police Chief	5/6/2024
Rachel Morris, City Attorney	5/17/2024
Lorie Gillis, City Manager	5/22/2024

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R24-061

A RESOLUTION AUTHORIZING A FIRST AMENDMENT TO INTERGOVERNMENTAL
AGREEMENT TO ESTABLISH THE JEFFERSON COUNTY REGIONAL CRIME
LABORATORY

WHEREAS, in 2013 the City of Arvada (“City”) entered into an intergovernmental agreement (the “IGA”) with other Jefferson County law enforcement partners to establish the Jefferson County Regional Crime Laboratory (“JCRCL”); and

WHEREAS, JCRCL partners wish to amend the IGA to create an equipment fund to be used for future purchases of laboratory instrumentation and equipment, as may be determined by the JCRCL board of directors; and

WHEREAS, it is in the best interest of the City and JCRCL partners to fund crime laboratory instrumentation and equipment to ensure JCRCL will continue to provide effective crime laboratory services throughout Jefferson County.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, a First Amendment to Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory, which is in substantially the same form as that attached hereto.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 3rd day of June, 2024.

Lauren Simpson, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel Morris, City Attorney

By: _____

**FIRST AMENDMENT TO INTERGOVERNMENTAL AGREEMENT TO ESTABLISH THE
JEFFERSON COUNTY REGIONAL CRIME LABORATORY**

This **FIRST AMENDMENT TO INTERGOVERNMENTAL AGREEMENT TO ESTABLISH THE JEFFERSON COUNTY REGIONAL CRIME LABORATORY** (this “Amendment”), dated for reference purposes only December 19, 2023, is made and entered into by and between the **COUNTY OF JEFFERSON, STATE OF COLORADO**, a body politic and corporate (the “County”) and the **CITY OF ARVADA**, the **CITY OF GOLDEN**, the **CITY OF LAKEWOOD**, and the **CITY OF WHEAT RIDGE**.

RECITALS

- A. The parties entered into an intergovernmental dated May 14, 2013, to establish the Jefferson County Regional Crime Laboratory (“Lab”) and to regionalize forensic crime laboratory services for Jefferson County law enforcement agencies (the “IGA”).
- B. The parties desire to create a separate fund for planning for future-year capital expenses.
- C. Capitalized terms not otherwise defined herein shall have the meaning set forth in the IGA.

AGREEMENT

In consideration of the covenants and conditions set forth herein, and for other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties agree as follows:

- 1. An additional subsection 6.d. is hereby added to the IGA, consisting of the following provisions:
 - i. Equipment Fund Authorized. The parties authorize the Jefferson County Sheriff’s Office, as fiscal agent for the Lab, to create a funding account (“Equipment Fund”) to consolidate the parties’ contributions and allow for money to extend beyond the fiscal year in an account that can be held until spent.
 - ii. Use of Equipment Fund. Funds from the Equipment Fund are intended to be used to purchase laboratory instrumentation and equipment. All purchases using the Equipment Fund shall require Lab board of directors’ (“BOD”) approval.
 - iii. Contributions. The BOD may approve party contributions to the Equipment Fund for specific purchases and/or on an annual basis to support larger anticipated purchases. Annual contributions to the Equipment Fund may be approved along with the budget provided in paragraph 4, and may be invoiced together with the annual invoice for budgeted operating costs. It is within the BOD’s discretion to determine what costs will be budgeted for use of the Equipment Fund. Party contributions for the Equipment Fund will be determined in accordance with the funding formula identified in 6.b.i.A.
 - iv. Other Provisions. Any money remaining from the Lab’s annually budgeted operating costs, as provided in paragraph 4, at the end of a fiscal year will be transferred into the Equipment Fund. Grant funding may not be transferred into the Equipment Fund.

2. Except as amended herein, the IGA shall remain in full force and effect. Nothing in this Amendment is intended to modify the annual budget and contributions provided in the IGA.
3. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument. The parties approve the use of electronic signatures for execution of this Amendment. All use of electronic signatures shall be governed by the Uniform Electronic Transactions Act, C.R.S. §§24-71.3-101 to -121.

The parties hereto have caused this Amendment to be executed.

COUNTY OF JEFFERSON
STATE OF COLORADO

By: _____
Reggie Marinelli, Sheriff

Date: _____

APPROVED AS TO FORM:

Kurtis D. Behn
Assistant Deputy County Attorney

CITY OF WHEAT RIDGE
STATE OF COLORADO

Name: Bud Starker

Title: Mayor

Date: _____

ATTEST:

Name: Stephen Kirkpatrick

Title: City Clerk

CITY OF ARVADA
STATE OF COLORADO

Name: Lauren Simpson
Title: Mayor

Date: _____

ATTEST:

Name: Kristen Rush
Title: City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

CITY OF GOLDEN
STATE OF COLORADO

Name: Laura Weinberg
Title: Mayor

Date: _____

ATTEST:

Name: Monica S. Mendoza
Title: City Clerk

CITY OF LAKEWOOD
STATE OF COLORADO

Name: Mark Reeves
Title: Division Chief

Date: _____

Approved as to form

Patrick Freeman
Senior Police Legal Advisor

COUNCIL BILL NO. 13-028
ORDINANCE NO. 4397

AN ORDINANCE AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT TO ESTABLISH THE JEFFERSON COUNTY REGIONAL CRIME LABORATORY CITIES OF ARVADA, GOLDEN, LAKEWOOD, WHEAT RIDGE AND THE COUNTY OF JEFFERSON

WHEREAS, Intergovernmental Agreements to provide functions or services, including the sharing cost of such services or functions by political subdivisions of the State of Colorado, are specifically authorized by Colorado Revised Statutes, Section 29-1-203; and

WHEREAS, the municipalities encourage the development of regional coalitions of local governments in order to establish efficient and effective delivery of municipal services; and

WHEREAS, the County of Jefferson and Cities of Lakewood and Arvada currently have forensic crime laboratories which process evidence from crime scenes to aid in the detection and prosecution of criminals; and

WHEREAS, recent years have seen a sharp increase in the need for forensic analysis of evidence; and

WHEREAS, it will be to the advantage of all parties to this Intergovernmental Agreement and to the health, safety and welfare of the citizens of the State of Colorado to cooperate to provide a regional forensic crime laboratory in the County of Jefferson, enabling each party to improve its law enforcement services for the public and to relieve and supplement the State Crime Laboratory; and

WHEREAS, all parties to this Intergovernmental Agreement are willing to share in the expense in a regional forensic crime laboratory, with the County of Jefferson being the designated location for such laboratory.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

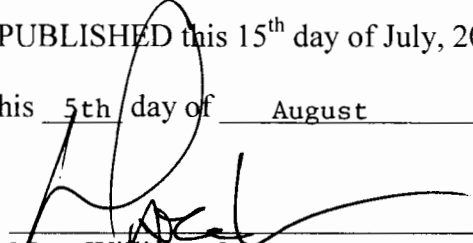
Section 1. The Mayor or Mayor Pro Tem are hereby authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory Cities of Arvada, Golden, Lakewood, Wheat Ridge and the County of Jefferson.

Section 2. Copies of the proposed Intergovernmental Agreement are on file in the Office of the City Clerk and are available for inspection by the public.

Section 3. This ordinance shall take effect five (5) days after publication following final passage.

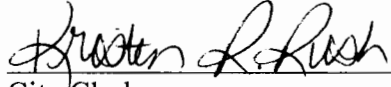
INTRODUCED, READ, AND ORDERED PUBLISHED this 15th day of July, 2013.

PASSED, ADOPTED, AND APPROVED this 5th day of August, 2013.



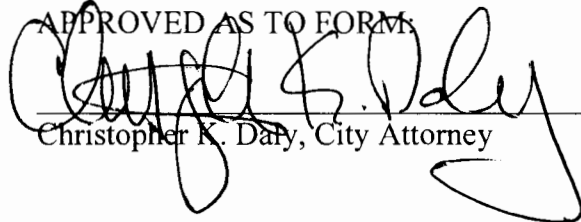
Marc Williams, Mayor

ATTEST:

Deputy 

City Clerk



APPROVED AS TO FORM:


Christopher K. Dary, City Attorney

Publication Dates: July 18, 2013
August 8, 2013

**INTER-GOVERNMENTAL AGREEMENT TO ESTABLISH THE JEFFERSON
COUNTY REGIONAL CRIME LABORATORY**

**CITIES OF ARVADA, GOLDEN, LAKEWOOD, WHEAT RIDGE
AND THE COUNTY OF JEFFERSON**

THIS INTER-GOVERNMENTAL AGREEMENT (this "Agreement") is made this 14th day of May 2013, by and between the City of Arvada, a home rule municipality under the laws of the State of Colorado with a principal location at 8101 Ralston Road, Arvada, Colorado 80001; the City of Golden, Colorado, a home rule municipality under the laws of the State of Colorado with a principal location at 911 10th Street, Golden Colorado 80401; the City of Lakewood, Colorado, a home rule municipality under the laws of the State of Colorado with a principal location at 480 S Allison Parkway, Lakewood, Colorado 80226; the City of Wheat Ridge, Colorado a home rule municipality under the laws of the State of Colorado with a principal location at 7500 W 29th Avenue, Wheat Ridge Colorado 80033; and the County of Jefferson, a county government under the laws of the State of Colorado with a principal address at 100 Jefferson County Parkway, Golden Colorado 80401. The foregoing are also referred to herein collectively as the "Parties" or singly as a "Party."

WHEREAS intergovernmental agreements to provide functions or services, including the sharing cost of such services or functions by political subdivisions of the State of Colorado, are specifically authorized by Section 29-1-203 C.R.S. and

WHEREAS, the municipalities encourage the development of regional coalitions of local governments in order to establish efficient and effective delivery of municipal services; and

WHEREAS, the County of Jefferson and cities of Lakewood and Arvada currently have forensic crime laboratories which process evidence from crime scenes to aid in the detection and prosecution of criminals; and

WHEREAS, recent years have seen a sharp increase in the need for forensic analysis of evidence; and

WHEREAS, it will be to the advantage of all Parties and to the health, safety and welfare of the citizens of the State of Colorado, to cooperate to provide a regional forensic crime Laboratory in the County of Jefferson, enabling each Party to improve its law enforcement services for the public and to relieve and supplement the State Crime Laboratory; and

WHEREAS, all Parties are willing to share in the expense in a regional forensic crime Laboratory through this Agreement, with the County of Jefferson being the designated location for such Laboratory; and

WHEREAS, this Agreement shall be considered an inter-governmental cooperation agreement pursuant to Section 29-1-203 C.R.S. for the purpose of providing a regional forensic crime Laboratory (the "Lab") available for use of each Party on a cost-sharing basis on the terms and conditions in this Agreement. The Lab shall be known as the Jefferson County Regional Crime Laboratory, or such other name as shall be mutually determined by the Parties,

NOW THEREFORE, in consideration of the mutual promises and covenants herein, the Parties agree as follows:

1. Location of Lab: The Lab shall be located at 200 Jefferson County Parkway, Golden, Colorado 80401.

2. Establishment of Board:

- a. There is hereby established a governing Board (the "Board") for the Lab consisting of the following:

The Police Chiefs of Arvada, Golden, Lakewood and Wheat Ridge, or their authorized designee(s), and the Jefferson County Sheriff or his/her authorized designee. Each Party shall have one representative on the Board at all times.

- b. The Board shall act as an administrative Board with the following duties:

- i. Establish policies and procedures for the operation of the Lab, including without limitation, final approval of the initial outfitting and equipping of the Lab, operational schedule, policies setting forth the scope of forensic services to be provided through the Lab, policies regarding access to and prioritization of Lab resources, and personnel policies;
- ii. Produce an annual report with budget recommendations or any other recommendations for modification, revision or repeal of this Agreement;
- iii. Make recommendations to each Party as to the terms for any additional agreements or amendments needed to effectuate this Agreement, or as to additional cost items not included in the budget set forth in Section 4 below.

- c. The Board Year shall be from July 1 – June 30 of each year.

- d. The Board shall select a Chair from its members to serve during each Board Year. All Board recommendations shall require a favorable vote

of a simple majority of the entire Board. Any recommendations which require physical or operating modifications to the Lab, modifications to costs assumed by the County of Jefferson under Section 6.b.ii. below, or which impact the construction of the Lab or purchase and installation of fixed equipment of the Lab by the County of Jefferson shall require the additional express approval of the Jefferson County Sheriff.

- e. Upon receipt of written notice of Board recommendations as to the budget, or additional agreements or amendments, each Party shall review those recommendations, with budget recommendations to be considered in time to be included in the upcoming fiscal year budget. If a majority of the Parties approve such recommendations, then all Parties to this Agreement are bound thereby so long as they remain a Party to this Agreement.

3. Lab Director

- a. The Board shall appoint a "Lab Director" who shall be responsible for the supervision and management of day to day operations of the Lab. The Lab Director may be an employee of any Party to this Agreement. Appointment of any individual as the Lab Director shall not affect that person's status as an employee of any of the Parties.
- b. The Lab Director shall serve a term as directed by the Board. The Lab Director may be removed from his or her position at any time by a simple majority of the entire Board, and shall be replaced by another person appointed by the Board upon removal.

4. Budget. Each year, the Board shall recommend a budget of itemized expenditures and revenues to each Party no later than June 30th of each year, including expenditures in addition to those required in Section 6, for the upcoming fiscal year of lab operations and which may include funds payable to a contingency account as set forth in Section 6.vi below. For purposes of this Agreement the fiscal year for Lab operations shall run January 1 through December 31 of each year.

For fiscal years 2014 and 2015, the Parties agree that the initial Lab budget is established effective December 31, 2012, as shown in Exhibit A which is attached hereto and incorporated by this reference.

If operations begin after January 1, 2014, for any partial year 2014 operations the proration of total contributions from each Party shall be at the discretion of the Board, and will be determined for each year no later than June 30 of the year preceding.

5. Functional Organization: Each Party's employees using the Lab shall be and remain the employees of their respective employers for all purposes, regardless of where they may be working or their presence in the Lab. Daily

supervision of all employees shall be the responsibility of the Lab Director. Any discipline or performance issues will be communicated by the Lab Director to an employee's respective Party. Any discipline imposed against an employee shall be the responsibility of the employing Party. All employees shall be required to follow rules for the use of the Lab which shall be promulgated by the Board. When vacancies occur within the Lab staff, the Board may make recommendations to the employing Party when filling the vacancy based upon expertise required and the employing Party's job description. All hiring decisions will remain in the sole discretion of the employing Party. The Lab will be initially be staffed with 13 full-time employees. The Sheriff will provide eight (8) employees, the City of Lakewood four (4) employees and the City of Arvada one (1) employee. For calendar year 2015, the Sheriff shall contribute an additional employee to the Lab. Beyond calendar year 2015, the number of employees and need for any additional employees will be reviewed annually by the Board. Costs for salaries and benefits for any additional employees beyond the original 14 employees set forth herein will be funded fifteen percent (15%) by the Sheriff and eighty-five percent (85%) by cost contributions from the Municipal Parties as set forth in Section 6 below. At the request of any Party, the presence of any employee at the Lab shall be reviewed by the Board.

6. Costs: Costs shall be allocated between the Parties on the following basis:

- a. Capital costs: The design and construction of the Lab and purchasing of fixed equipment for the Lab may be determined in the sole discretion of the Sheriff. Along with the costs identified in Section 6.b.ii below, the capital costs identified in this Section 6.a. shall constitute a contribution in-kind from Jefferson County and Jefferson County shall not be obligated to make any additional monetary contributions under Section 6.b. below.
- b. Additional funding for the Lab will be provided as follows:
 - i. Following the completion of the construction of the Lab under Section 6.a., each Municipal Party shall contribute an annual dollar amount to the Lab according to the budget prepared by the Board under Section 4 above and apportioned between the Parties according to the following formula. For purposes of this Section 6.b.a "Municipal Party" is identified as all parties to this Agreement except for Jefferson County.
 - A. Monetary contributions of each Municipal Party hereunder shall be determined on a pro rata basis using a formula based on the relative law enforcement needs of each Party. The formula shall be calculated as of December 31 of each year using the previous five (5) years of Group A crime data from

the National Incident-Based Reporting System ("NIBRS") and number of budgeted law enforcement (i.e. non-detention and non-court service) officers as of January 1 for each of the applicable Parties. The total Group A crimes reported in the jurisdictions of all applicable Parties in the previous 5 years shall be divided into the respective number of Group A crimes occurring within the jurisdiction of any Party in the previous 5 years to produce that Party's NIBRS share as provided by the Federal Bureau of Investigation ("NIBRS share"). For purposes of this Agreement, Group A crimes shall be defined as set forth by the NIBRS. The total number of budgeted law enforcement officers between all applicable Parties will be divided into the number of budgeted law enforcement officers or "LEOs" for each applicable Party to produce that Party's "LEO Share". Each Party will have a "Respective Contribution" that is the arithmetic mean of the NIBRS Share and the LEO share for that Party. The required contributions of each Party shall be represented by the pro rata share that reflects the Respective Contribution of that Party divided by the total of the Respective Contributions from all the Parties.

- B. Contributions required under this Section 6. b. shall be paid by the Municipal Parties no later than March 1 of each year for the current fiscal year of Lab operations
- ii. After occupancy of the Lab, the County of Jefferson shall be responsible for 100% of the cost of the following:
 - A. Capital costs related to repair and maintenance of the building where the Lab is located; and
 - B. Operating costs for the building, including but not limited to electricity, heat, water, sewer, cleaning, ordinary repair and maintenance for the building itself, and other similar costs not defined herein as expressly assumed by Jefferson County, other than consumables, as set forth in Section 6.b.iv.A. the costs for which shall be shared as determined by the Board; and
 - C. Cost for all risk casualty insurance, or self-insurance, for the equipment in the Lab, including the equipment transferred to the Lab from contributing agencies.

- iii. **Revenues.** In the event of receipt of any state or federal grants or other revenue for the Lab by any Party, credit for such revenue shall be credited to each of the Parties on the same basis as provided for the sharing of costs in Section 6.b.i.a., above. Such credit will be allocated over the period for which the grant or revenue was received. If any local cost or funds matching is required for the grant and the Parties approve such expenditures, such costs shall be allocated to the Parties on the same basis as provided for the sharing of costs in Section 6.b.i.a., above. All credits for revenue or allocations of cost shall be made only after recommendation of the Board as set forth in Section 4 above.
- iv. All payments due to the County of Jefferson from the Municipal Parties for sharing of Lab costs as set forth in this Agreement including but not limited to payments required under Section 6.b above or elsewhere in this Agreement shall be paid to: Jefferson County Accounting, 100 Jefferson County Parkway, Golden, Colorado 80401
- v. **Capital Equipment.** In the event that the Board determines that the Lab requires specialized capital equipment, including but not limited to firearm ballistics and DNA analysis equipment, the Parties will cooperate to seek grant funds or funds from the Parties to purchase such capital equipment. For any particular acquisition of capital equipment, the Parties may deviate from the cost sharing formula set forth in Section 6.b.i.a., above with the written approval of the Board.
- vi. **Contingency Expenses.** By decision of the Board, the Parties may be required to pay additional money to fund the Lab to serve as a Contingency Account. Any required contributions from the Parties for the Contingency Account shall be submitted to the Parties in the annual budgetary submittal required by Section 4.b above. Any expenditure from the Contingency Account for expenses not included in the annual budget must be approved by the express decision of the majority of the Board.
- vii. **Operating Costs.** Except as otherwise provided herein, all ongoing operating costs for the operation of the lab shall be included in the annual budget required by Section 4 above and funding for such operating costs shall be drawn from the annual contributions of the Parties required hereunder. All operating costs shall be held in an appropriate account at the discretion of the County of Jefferson in accordance with

Section 6.c. below. For purposes of this section, Operating Costs shall include all accreditation costs and consumables as set forth below:

A. Consumables properly included as Operating Costs shall include: costs for repair and maintenance of capital equipment, purchase of office and laboratory supplies, costs for DNA testing, and any other consumable costs approved by a vote of the majority of the Board.

B. Consumables not properly included as Operating Costs shall include: travel expenses for Party employees, and costs for hiring outside experts, which costs shall be borne by the employing or investigating Party, respectively.

c. Account Administration: All financial matters, including but not limited to accounting and purchasing, relating to Lab Operations shall be managed by the Jefferson County Sheriffs Office Business Office. The Business Office will manage all payments and revenue related to Lab business and will manage all accounts related to the funding of the Lab in accordance with Jefferson County policies and procedures.

7. Property: All capital equipment and personal property used in the Lab shall be and remain the property of the County of Jefferson regardless of the source of financing. The final disposition of any such property determined to be surplus to the Lab shall be within the discretion of, and subject to, the procedures of the County of Jefferson. This section specifically excludes capital equipment donated to or purchased for the Lab by a Party under Section 6.b.v. above, which may revert to the donating or purchasing Party if approved by the Board.

8. Liability: Each Party shall be responsible for the acts and omissions of its own employees assigned to the Lab and its employees performing services for the Lab, and shall not be responsible for the acts or omissions of any other Party's employees. Nothing contained herein shall be deemed a waiver of any rights, defenses, or immunities provided by the Colorado Governmental Immunity Act, 24-10-101 et. seq., C.R.S. or otherwise provided by law. Nothing contained herein shall be construed to make any employee of any Party an employee of any other Party for liability purposes or for any other purposes.

9. Insurance. The Parties agree to provide at their own expense, keep in full force and effect during the term of this Agreement, and during the term of any extension or amendment of this Agreement, insurance in the amounts provided in Exhibit B which is attached hereto and incorporated herein by this

reference. Each Party agrees to name the other parties as an additional insured for purposes of insuring operations related to the Lab.

10. Worker's Compensation, Independent Contractors Parties shall, at their own expense, keep in full force and effect during the term of this Agreement statutory worker's compensation insurance or adequate self-insurance funds. Nothing in this Agreement shall be construed to affect the employment status of any employee or independent contractor of either Party in any way. Each Party is solely responsible for its own necessary workers' compensation insurance and shall be responsible for withholding and paying all federal and state taxes. The Parties and their employees are not entitled to unemployment insurance benefits from the other Parties.

11. Term: This Agreement becomes effective on July 1, 2013 and shall remain in effect for an initial term of six (6) months, unless earlier terminated by mutual agreement of all Parties. Thereafter, the Agreement shall automatically renew for successive one (1) year terms from January 1 to December 31 of each successive year unless terminated in accordance with section 12, or parties withdraw under the terms of section 12 below. Notwithstanding anything else contained herein, forensic or other investigatory operations at the Lab shall not commence until the Jefferson County Sheriff approves occupancy of the Lab facility. During the Term of this Agreement before such date, the activities of the Lab and the Governing Board shall be limited to proactive planning activities including but not limited to rulemaking, personnel matters, financial matters, and any other matters requiring the agreement of the Parties or the Governing Board prior to the start of operations at the Lab.

12. Termination and Withdrawal:

a. Any Party may withdraw from this Agreement with or without cause upon no less than six (6) months prior written notice to each of the members of the Board. Notwithstanding a Party's withdrawal, the withdrawing Party shall continue to be liable for its share of all costs incurred hereunder prior to receipt of notice of withdrawal until such liabilities are paid in full. Upon withdrawal by any Party hereunder, the remaining Parties shall reapportion the required contributions for continued operations of the Lab amongst the remaining Parties according to the formula contained in Section 6.b.i.a., above .

b. This Agreement shall not be construed to create a multiple year fiscal obligation for any of the Parties. The payment of Party obligations hereunder in fiscal years subsequent to the year of execution are contingent upon the annual appropriation of funds for this Agreement by a Parties legislative body. If funds for this Agreement are not appropriated in the year subsequent to any fiscal year of this Agreement a Party may withdraw from this Agreement. Such withdrawal shall not impose any penalty against

the withdrawing Party in the event of a failure to appropriate sufficient funds. Upon withdrawal by any Party hereunder, the remaining Parties shall reapportion the required contributions for continued operations of the Lab amongst the remaining Parties according to the formula contained in Section 6.b.i.a., above .

c. Upon the unanimous agreement of the Parties, this Agreement may be terminated in full at the end of any Lab operations fiscal year. In order to effectuate such termination, the Board must give each Party at least six (6) months' notice of the desire to terminate this Agreement. Upon termination under this subsection (c), all capital equipment shall remain the property of Jefferson County except as otherwise approved by the Board as set forth herein. All Lab funds shall be distributed amongst the Parties upon termination hereunder on a pro rata basis in accordance with shares determined by the contribution formula in Section 6.b.i.a., above .

d. In the event that any Party defaults on a payment or any other financial obligation hereunder, the County of Jefferson shall provide written notice to the defaulting Party, with a copy to all Board members, of the nature of the default and the defaulting Party shall have thirty (30) days from the receipt of such notice to cure such default. If such default is not cured within the 30 days, then the defaulting Party shall be prohibited from any further use of the Lab and may be deemed by the Board to have terminated its participation under this Agreement. Upon a determination by the Board hereunder that a Party has terminated its participation, the Board shall deliver written notice of such termination to the defaulting Party which termination shall be effective immediately upon receipt. By the unanimous decision of the Board, any defaulting Party may re-join the Lab as a Party at a later date provided any outstanding default has been cured. Upon termination of any party hereunder, remaining Parties shall reapportion the required contributions for continued operations of the Lab amongst the remaining Parties according to the formula contained in Section 6.b.i.a., above .

e. In the event of termination of this Agreement for any reason, all evidence located at the Lab shall be returned to the Party which supplied said evidence.

13. Additional Parties: The Parties understand and agree that additional towns, municipalities or counties, including without limitation those served by the Jefferson County Sheriff, (each, an "Additional Entity") may wish to join this Agreement. The Board must provide unanimous approval of an Additional Entity as a precondition to any Additional Entity joining this Agreement as a Party. If the governing body of an Additional Entity approves its participation as a Party to the Agreement, prior to becoming a Party entitled to use the Lab, the Additional Entity must first pay a sum as determined by the Board.

Thereafter, all cost sharing will be recalculated prospectively to include any Additional Entity or Entities based the formula provided in Section 6.b.i.a., above .

14. Entire Agreement: This Agreement constitutes the entire agreement between the Parties and supercedes all other prior and contemporaneous agreements, presentations and understandings of the Parties regarding the subject matter of the Agreement. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing by all the Parties.

15. Colorado Law: This Agreement shall be governed solely by the laws of the State of Colorado. Venue for any litigation shall be in the District Court of the County of Jefferson, Colorado.

16. Severability: If any term, covenant, or condition of this Agreement is deemed by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of this Agreement shall be binding upon the Parties.

17. Binding Agreement; Survival of Terms:

a. Notwithstanding withdrawal of any Party's participation hereunder under Section 12 a. above, mutual termination under Section 12. c. above, or termination for default under Section 9.d. above, the withdrawing or terminated Party shall continue to be liable to the County of Jefferson for its share of the costs of the Lab as provided in Section 6, and for any outstanding, unpaid liability for equipment purchased for the Lab under Section 6, or any other liabilities incurred prior to receipt of notice of withdrawal of that Party's participation or termination for default. These liabilities shall survive termination or expiration of the Agreement in whole or in part and shall remain a binding obligation of each Party until paid in full. In addition to the foregoing, the obligation of each Party under Sections 9 and 10 (Indemnification and Insurance) shall survive termination or expiration of this Agreement, or that Party's participation hereunder. All other costs owed by that Party under this Agreement shall be immediately due and payable within thirty (30) days of the last day of that Party's participation in this Agreement.

b. Except as set forth in Section 7. no Party, other than the County of Jefferson, shall have any ownership in the Lab facility or its equipment.

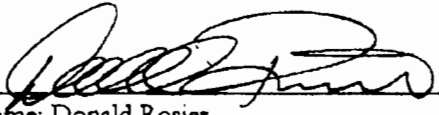
c. Without limiting the provisions of Section 15, the Parties understand and agree that this document constitutes a legally enforceable contract and that in the event any Party defaults on its financial obligations hereunder, any one or all of the Parties not in default may enforce the terms of this Agreement.

18. Authority: By executing this Agreement, each Party warrants that the representative signing below has been duly authorized by all appropriate actions of that Party's governing body to enter into and execute this Agreement, and that this Agreement represents a legal, valid and binding obligation of each Party, enforceable upon it in accordance with its terms and by application of equitable principles if equitable remedies are sought, except as enforceability may be limited by applicable bankruptcy or similar laws.

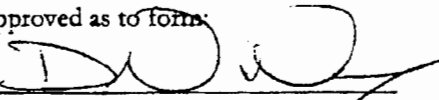
19. Execution by Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument. Electronic or facsimile delivery of a fully executed copy of the signature pages below shall constitute an effective and binding execution of this Agreement.

[Signatures appear on the following pages.]

COUNTY OF JEFFERSON
STATE OF COLORADO


Name: Donald Rosier
Title: Chairman, Board of County
Commissioners

Approved as to form:


David Wunderlich
Assistant County Attorney

STATE OF COLORADO
COUNTY OF JEFFERSON

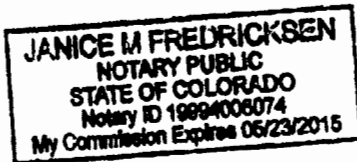
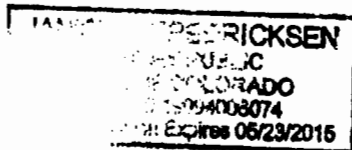
The foregoing instrument was acknowledged before me this 20th day of May, 2013 by Donald Rosier as the Chairman of the Board of County Commissioners of Jefferson County, Colorado.



Notary Public

May 23, 2015

Commission expiration date





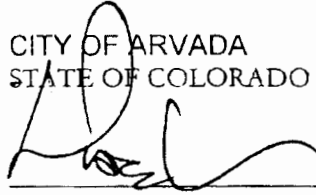
CITY OF WHEAT RIDGE
STATE OF COLORADO

[Signature]
Name:
Title:

ATTEST:

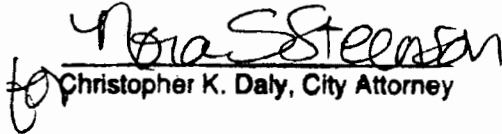
Janelle Shaver
Name:
Title: City Clerk

CITY OF ARVADA
STATE OF COLORADO

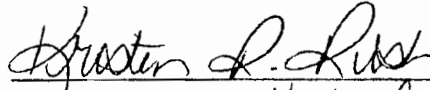


Name: Marc Williams
Title: Mayor

APPROVED AS TO FORM:


for Christopher K. Daly, City Attorney

ATTEST:



Name: ~~Chris Koch~~ Kristen Rush
Title: City Clerk

Deputy

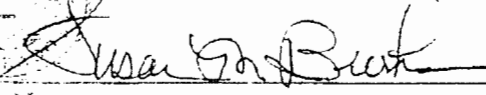


CITY OF GOLDEN
STATE OF COLORADO


Name: _____
Title: _____



ATTEST:


Name: _____
Title: City Clerk

Dated this 4th ^{September (Am)} day of ~~August~~, 2013.

ATTEST:

Margy Greer
Margy Greer, City Clerk

APPROVED AS TO FORM

Janet Young
Janet Young, Deputy City Attorney
Office of the City Attorney

CITY OF LAKEWOOD

Kathleen E. Hodgson
Kathleen E. Hodgson, City Manager

Kevin Paletta
Kevin Paletta, Chief of Police
Lakewood Police Department

Larry Dorr
Larry Dorr, Director
Department of Finance



Exhibit A
Regional Crime Lab Allocations - Exhibit A.xlsx

	Sworn Staff		NIBRS Category A		Applied %	Total Annual Contribution
Arvada	166	30.4%	3297	24.2%	27.3%	\$ 242,431.00
Golden	44	8.1%	557	4.1%	6.1%	
Lakewood	261	47.8%	8102	59.6%	53.7%	
Wheat Ridge	75	13.7%	1641	12.1%	12.9%	
TOTAL	546	1	13597	1	100.0%	

2014/2015

Prepared by Jeff [redacted] 04/12/2013

	EXHIBIT B - INSURANCE REQUIREMENTS –	GENERAL
I	Prior to the commencement of any work the vendor shall forward certificates of insurance to the department specified in the award document.	
II	Certificate Holder must be Jefferson County, Colorado.	Required
II	Jefferson County must be added as an additional insured to general liability, auto liability, and any excess liability policies.	Required
III	Insurance - Minimum requirement	
	Workers compensation - statutory limits provided by an insurance carrier that is licensed to do business in Colorado. The policy shall contain a Waiver of Subrogation on behalf of Jefferson County. Employer's liability - \$100,000 each accident \$500,000 disease policy limit \$100,000 disease each employee	Required
	Commercial General Liability - on an Occurrence Form The policy must not exclude or reduce coverage for mobile equipment, personal injury; blanket contractual; and death. Personal injury coverage must have the employee exclusion deleted. The policy shall contain a Waiver of Subrogation on behalf of Jefferson County.	Required \$1M ea occurrence \$2M general aggregate
	Law enforcement liability	\$1M per occurrence \$1M aggregate
	Commercial automobile liability insurance - if autos are used in the performance of work under this agreement. Combined single limit for bodily injury and property damage.	Required \$1M CSL per accident
	All deductibles or self-insured retentions (SIRs) in excess of \$5,000 must be listed on the certificate of insurance	Required
	Certificates of insurance on all policies to the county shall provide written notice of not less than 30 days prior to cancellation or non-renewal of coverage	Required
	The insurance requirements specified by the county shall remain in effect for the full term of the contract and/or agreement and any extension thereof. Updated Certificates of Insurance shall be sent to the county during the full term of the contract and/or agreement and any extension thereof.	Required
	The county reserves the right to reject any insurer it deems not financially acceptable on insurance industry resources. Property and liability insurance companies shall be licensed or approved to do business in Colorado and shall have an A.M. Best rating of not less than A-/VII. Additionally the county reserves the right to reject any insurance with relatively large deductibles or self-insured retentions (SIRs), deemed by the county to pose too high a risk based on the size of the contractor, financial status or rating of the contractor, or based on the size or type of the project and the exposure.	Required
IV	Any deviations below the standards given above must be approved by Jefferson County Risk Management	Required
V	Any subcontractors must meet the same insurance requirements for the contract or purchase order unless Risk Management has approved a deviation	Required

Proof of Publication
THE WHEAT RIDGE TRANSCRIPT

8/16/80

110 N. Rubey Drive Suite 120 Golden, CO 80401

Public Notice

1. I, G. (Jerry) Healey am the agent of The Wheatridge Transcript, newspaper printed and published in the city of Golden, County of Jefferson and State of Colorado, and has personal knowledge of all the facts set forth in this affidavit;

2. That the said newspaper is printed and published once each week on Thursday, and that it has a general circulation in the City of Wheatridge and in the County of Jefferson and elsewhere, delivered by carriers or transmitted by mail to each of the subscribers of said paper, according to the accustomed mode of business in this office;

3. That the said newspaper was established and has been printed and published in the said City of Golden and the County of Jefferson uninterrupted and continuously during a period of at least 52 consecutive weeks next prior to the first issue there-of containing said publication, a copy of which is hereto attached;

4. That the said newspaper is a weekly newspaper of general circulation, and is printed and published in whole or in part in the City of Golden and the said County of Jefferson in which said publication is required by law to be published, a copy of which is hereunto attached;

5. That the said newspaper is a weekly newspaper qualified to publish legal notices, as defined by the Statutes of the State of Colorado;

6. That said newspaper had, prior to January 1, 1936, and has ever since that date, been admitted to the United States mail as second class matter under the provisions of the Act of March 3, 1979, or any amendments thereto;

7. That the said annexed publication was published in the regular and entire edition of the Wheatridge Transcript, a duly qualified weekly newspaper for that purpose, within the terms and means of the Statutes of the State of Colorado;

8. That the said annexed publication is a full, true, and correct copy of the original which was regularly published in each of the regular and entire issues of the Wheatridge Transcript, a legally qualified paper for that purpose, once each week, on the same day of each week, for 1 successive weeks, by ---1--- Insertions, and that the first publication thereof was in the **July 18, 2013**; and that the last publication was in the **July 18, 2013**.

Subscribed and sworn to before me this **18th day of July, 2013**.

NOTICE OF PUBLIC HEARINGS

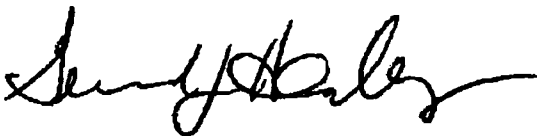
NOTICE IS HEREBY GIVEN THAT at the meeting of the City Council to be held on **MONDAY, the 5th day of August, 2013, at 6:30 p.m.** at the Municipal Building, 8101 Ralston Road, Arvada CO, City Council will hold a public hearing on the following proposed ordinances and thereafter will consider them for final passage and adoption. For the full text version in electronic form go to www.arvada.org/legalnotices, click on Current Legal Notices, then click on the title of the ordinance you wish to view. The full text version is also available in printed form in the City Clerk's office. Contact 720.898.7550 if you have questions.

CB13-028: An Ordinance Authorizing an Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory Cities of Arvada, Golden, Lakewood, Wheat Ridge and the County of Jefferson

CB13-029: An Ordinance Raising the Monetary Ceiling for the Value-Based Municipal Offense of Theft

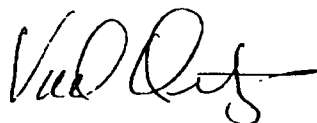
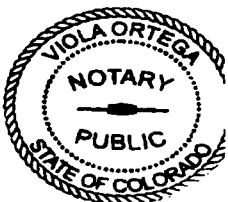
CB13-030: An Ordinance Amending Chapter 14, Animals, By Amending a Definition and by Amending Certain Provisions to Recognize the Foothills Animal Shelter as the Administrator of the City's Dog Licensing Program

Legal Notice No.: 80183
First Publication: July 18, 2013
Last Publication: July 18, 2013
Publisher: Wheat Ridge Transcript and the Arvada Press



For the Wheatridge Transcript
State of Colorado
Jefferson County Jss

Notary Public, Notary Public, 9137 S Ridgeline Blvd., No. 210
Highlands Ranch, Colorado 80129



My Commission
Expires 6.11.16

July 18, 2013

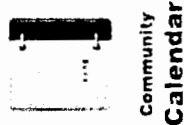
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Current Legal Notices

This Week's Legal Notices:

Advertisement for Bids, Project 13-ST-26 W 52 Ave Traffic Calming

→ CB13-028, IGA, Jefferson County Regional Crime Laboratory

CB13-029, Raising the Monetary Ceiling for Value-Based Municipal Offense of Theft

CB13-030, Amends Chapter 14, Animals, Recognize the Foothills Animal Shelter as the Administrator for the City's Dog Licensing Program

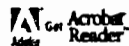
Notice of Final Settlement, Colorado Designsapes Project 94664 Forest Springs Park

Ordinances 4394, 4395, 4396 and PDP, Arvada Plaza Redevelopment, Walmart

Resolution 13-087, Annexation Petition, Betsy Wieland, 16595 W 82nd Ave

Resolution 13-088, Annexation Petition, Simply Storage and Industrial Chemical, 4781 W 58th Ave

To view the documents, you must have Adobe® Acrobat®.
Click the button below to download Acrobat Reader™ free.



City of Arvada

8101 Reiston Rd
P.O. Box 8101
Arvada, CO 80001-8101
Phone: 720-898-7000

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- Terms and Conditions

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- Visit the mobile site



CITY OF ARVADA, COLORADO
PUBLISHER'S AFFIDAVIT
www.arvada.org

CITY OF ARVADA
COUNTY OF JEFFERSON, SS.

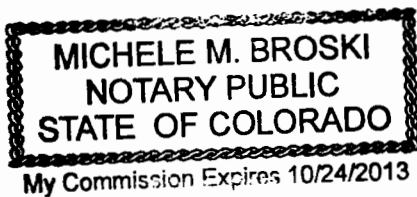
Abi O'Neal, being of lawful age and being responsible for the City of Arvada, Colorado's official website, www.arvada.org, published in the City of Arvada, County of Jefferson and State of Colorado, does hereby certify that the legal notice, a copy of which is attached hereto, was published on Arvada's official website for 24 hours on July 19th, 2013.

Abi O'Neal
Signature

Subscribed and sworn to before me this 19 day of July, 2013.

Michele M. Broski
Notary Public

My Commission expires 10-24-13.



COUNCIL BILL NO. 13-028
ORDINANCE NO. _____

AN ORDINANCE AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT TO ESTABLISH THE JEFFERSON COUNTY REGIONAL CRIME LABORATORY CITIES OF ARVADA, GOLDEN, LAKEWOOD, WHEAT RIDGE AND THE COUNTY OF JEFFERSON

WHEREAS, Intergovernmental Agreements to provide functions or services, including the sharing cost of such services or functions by political subdivisions of the State of Colorado, are specifically authorized by Colorado Revised Statutes, Section 29-1-203; and

WHEREAS, the municipalities encourage the development of regional coalitions of local governments in order to establish efficient and effective delivery of municipal services; and

WHEREAS, the County of Jefferson and Cities of Lakewood and Arvada currently have forensic crime laboratories which process evidence from crime scenes to aid in the detection and prosecution of criminals; and

WHEREAS, recent years have seen a sharp increase in the need for forensic analysis of evidence; and

WHEREAS, it will be to the advantage of all parties to this Intergovernmental Agreement and to the health, safety and welfare of the citizens of the State of Colorado to cooperate to provide a regional forensic crime laboratory in the County of Jefferson, enabling each party to improve its law enforcement services for the public and to relieve and supplement the State Crime Laboratory; and

WHEREAS, all parties to this Intergovernmental Agreement are willing to share in the expense in a regional forensic crime laboratory, with the County of Jefferson being the designated location for such laboratory.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem are hereby authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory Cities of Arvada, Golden, Lakewood, Wheat Ridge and the County of Jefferson.

Section 2. Copies of the proposed Intergovernmental Agreement are on file in the Office of the City Clerk and are available for inspection by the public.

Section 3. This ordinance shall take effect five (5) days after publication following final passage.

INTRODUCED, READ, AND ORDERED PUBLISHED this 15th day of July, 2013.

PASSED, ADOPTED, AND APPROVED this _____ day of _____, 2013.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Christopher K. Daly, City Attorney

Publication Dates: July 18, 2013

Proof of Publication
THE WHEAT RIDGE TRANSCRIPT

110 N. Rubey Drive Suite 120 Golden, CO 80401

1. I, G. (Jerry) Healey am the agent of The Wheatridge Transcript, newspaper printed and published in the city of Golden, County of Jefferson and State of Colorado, and has personal knowledge of all the facts set forth in this affidavit;

2. That the said newspaper is printed and published once each week on Thursday, and that it has a general circulation in the City of Wheatridge and in the County of Jefferson and elsewhere, delivered by carriers or transmitted by mail to each of the subscribers of said paper, according to the accustomed mode of business in this office;

3. That the said newspaper was established and has been printed and published in the said City of Golden and the County of Jefferson uninterrupted and continuously during a period of at least 52 consecutive weeks next prior to the first Issue there-of containing said publication, a copy of which is hereto attached;

4. That the said newspaper is a weekly newspaper of general circulation, and is printed and published in whole or in part in the City of Golden and the said County of Jefferson in which said publication is required by law to be published, a copy of which is hereunto attached;

5. That the said newspaper is a weekly newspaper qualified to publish legal notices, as defined by the Statutes of the State of Colorado;

6. That said newspaper had, prior to January 1, 1936, and has ever since that date, been admitted to the United States mail as second class matter under the provisions of the Act of March 3, 1979, or any amendments thereto;

7. That the said annexed publication was published in the regular and entire edition of the Wheatridge Transcript, a duly qualified weekly newspaper for that purpose, within the terms and means of the Statutes of the State of Colorado;

8. That the said annexed publication is a full, true, and correct copy of the original which was regularly published in each of the regular and entire issues of the Wheatridge Transcript, a legally qualified paper for that purpose, once each week, on the same day of each week, for 1 successive weeks, by —1— Insertions, and that the first publication thereof was in the **August 8, 2013**; and that the last publication was in the **August 8, 2013**.

Subscribed and sworn to before me this **8th day of August, 2013**.

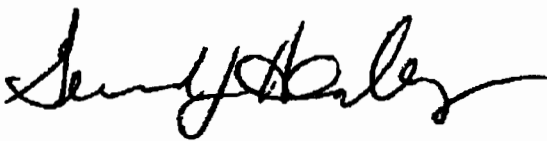
11.34

PUBLIC NOTICE

The following ordinances were adopted by the City Council of the City of Arvada on second reading following the public hearing held on the 15th day of March, 2012:

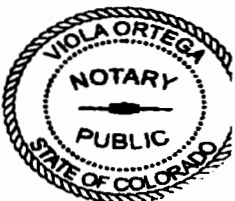
→ **Ordinance 4397: An Ordinance Authorizing an Intergovernmental Agreement to Establish the Jefferson County Regional Crime Laboratory Cities of Arvada, Golden, Lakewood, Wheat Ridge and the County of Jefferson**
Ordinance 4398: An Ordinance Raising the Ceiling for the Value-Based Municipal Offense of Theft
Ordinance 4399: An Ordinance Amending Chapter 14, Animals, By Amending a Definition and By Amending Certain Provisions to Recognize the Foothills Animal Shelter as the Administrator of the City's Dog Licensing Program

Legal Notice No.: 80213
First Publication: August 8, 2013
Last Publication: August 8, 2013
Publisher: Wheat Ridge Transcript and the Arvada Press



For the Wheatridge Transcript
State of Colorado
Jefferson County Jss

Notary Public, Notary Public, 9137 S Ridgeline Blvd., No. 210
Highlands Ranch, Colorado 80129



My Commission
Expires 6.11.16



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
9.A.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: Ratification and Approval of CP2024-0001 a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada's Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., as Amended (Presenter: Rob Smetana, Manager of City Planning and Development)

Report in Brief

PRESENTER: Rob Smetana, Manager of City Planning and Development

The purpose of this resolution is to comply with Section 31-12-105(1)(e), C.R.S. of the Colorado Municipal Annexation Act, which requires that the City's Three Mile Plan regarding future annexations be updated at least once annually.

The City has used the Arvada Comprehensive Plan as Arvada's Three Mile Plan for purposes of compliance with Section 31-12-105(1)(e). That section generally requires:

1. That no annexation have the effect of extending a municipal boundary more than three miles in any one year; and
2. That, as a precondition to final adoption of an annexation ordinance within the three mile area outside present city boundaries, the municipality has in place a plan for that area, in the nature of a comprehensive or master plan. The plan must be updated at least annually.

The Arvada Team recommends that City Council ratify CP2024-0001 a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada's Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., as Amended.

Financial Impact

There is no fiscal impact to the city.

Background

The Three Mile Plan is intended to provide guidance on land use decisions in the planned area; to promote well-ordered development compatible with the indigenous character of the area; and to encourage the simplification of governmental structure and efficient provision of services through discouragement of special district creation. To that end, the plan must generally describe items such as proposed streets, other public ways, open spaces, utilities and proposed land uses within the three-mile area.

All plans require an annual update in order to comply with the statute. Accordingly, Arvada's Three Mile Plan must be reviewed (and updated where necessary) to ensure such conformance. The 2014 Comprehensive Plan, as amended in association the new Land Development Code adopted in May of 2020, addresses proposed land uses and other statutorily prescribed matters with respect to land within the three-mile area; consequently, it should be adopted as the City's Three Mile Plan.

Discussion

SUBJECT: Ratification and Approval of CP2024-0001 a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada's Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., as Amended (Presenter: Rob Smetana, Manager of City Planning and Development)

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The City has routinely adopted a resolution annually, either at the end of a year or at the beginning of a year.

During the previous year, the City did not annex any property more than three miles from the previous City boundary. Additionally, the City does have a plan in place for future annexations within the 2014 Comprehensive Plan, which includes the City's Planning Boundary on the Future Land Use map.

Public Contact

Posting of the City Council Agenda.

Commission Recommendation

On May 7, 2024, the Planning Commission held a public hearing and voted 6 - 0 (1 absent) to approve the ratification and approval of the Three Mile Plan.

Strategic Alignment

The proposed action aligns with the Community and Economic Development Priority Area of the City Council Strategic Plan.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada Team recommends that City Council ratify CP2024-0001 a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada's Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., as Amended.

Suggested Motion:

I move that CP2024-0001, a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada's Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., as Amended, be ratified and approved.

This motion is based on the findings of fact adopted by Planning Commission.

This motion is based on the following findings of fact for denial: (Recite approval criteria you believe the evidence fails to satisfy and your reasons).

Prepared by:
Dixielee Rodriguez, Administrative Specialist

Reviewed by:

Approved by:

Josie Suk, Development Systems and Administrative Manager
Rob Smetana, Planning Manager

5/14/2024
5/14/2024

SUBJECT: Ratification and Approval of CP2024-0001 a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada’s Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., as Amended (Presenter: Rob Smetana, Manager of City Planning and Development)	PAGE: 3 ITEM: 9.A.
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Jessica Garner, Director of Community and Economic Development	5/14/2024
Gail Walker, Legal Specialist-Contracts	5/15/2024
Emily Grogg, Senior Assistant City Attorney	5/15/2024
Rachel Morris, City Attorney	5/17/2024
Linda Haley, Deputy City Manager	5/19/2024
Lorie Gillis, City Manager	5/22/2024

Enclosure, exhibits & attachments required to support the report

A RESOLUTION BY THE PLANNING COMMISSION FOR THE CITY OF
ARVADA, COLORADO ADOPTING THE 2014 ARVADA
COMPREHENSIVE PLAN AS ARVADA'S THREE MILE PLAN PURSUANT
TO SECTION 31-12-105(1)(E), C.R.S., AS AMENDED

WHEREAS, Section 31-12-105(1)(e), C.R.S., as amended, of the Colorado Municipal Annexation Act provides that no annexation by a municipality shall have the effect of extending a municipal boundary more than three miles in any one year; and

WHEREAS, Section 31-12-105(1)(e), C.R.S., as amended, further provides that the municipality shall have in place a plan for the three mile area outside present municipal boundaries prior to any annexation and that such plan be updated at least annually; and

WHEREAS, the Planning Commission adopted, to the extent applicable, the 2014 Comprehensive Plan as the City's Three Mile Plan in accordance with the Municipal Annexation Act, which action was ratified by the Arvada City Council on October 6, 2014; and

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF ARVADA, COLORADO:

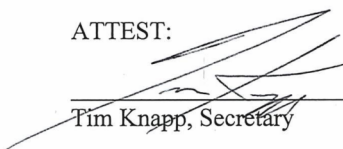
That, to the extent applicable, the 2014 Comprehensive Plan is hereby adopted as the City's Three Mile Plan pursuant to Section 31-12-105(1)(e), C.R.S., as amended.

APPROVED AND ADOPTED this 7th day of May, 2024.

CITY OF ARVADA PLANNING COMMISSION


Doug Magee, Vice Chairman

ATTEST:


Tim Knapp, Secretary

RATIFIED AND APPROVED this _____ day of _____, 2024.

Lauren Simpson, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

City of Arvada Community and Economic Development Department STAFF REPORT

Three Mile Plan Comprehensive Plan Amendment CP2024-0001

NATURE OF REQUEST

The purpose of this resolution is to comply with Section 31-12-105(1)(e), C.R.S. of the Colorado Municipal Annexation Act, which requires that the City's Three Mile Plan regarding future annexations be updated at least once annually.

The City has used the Arvada Comprehensive Plan as Arvada's Three Mile Plan for purposes of compliance with Section 31-12-105(1)(e). That section generally requires:

1. That no annexation have the effect of extending a municipal boundary more than three miles in any one year; and
2. That, as a precondition to final adoption of an annexation ordinance within the three mile area outside present city boundaries, the municipality has in place a plan for that area, in the nature of a comprehensive or master plan. The plan must be updated at least annually.

The Three Mile Plan is intended to provide guidance on land use decisions in the plan area; to promote well-ordered development compatible with the indigenous character of the area; and to encourage the simplification of governmental structure and efficient provision of services through discouragement of special district creation. To that end, the plan must generally describe items such as proposed streets, other public ways, open spaces, utilities and proposed land uses within the three mile area.

All plans require an annual update in order to comply with the statute. Accordingly, Arvada's Three Mile Plan must be reviewed (and updated where necessary) to ensure such conformance. The 2014 Comprehensive Plan, as amended in association the new Land Development Code adopted in May of 2020, addresses proposed land uses and other statutorily prescribed matters with respect to land within the three mile area; consequently, it should be adopted as the City's Three Mile Plan.



SUMMARY MINUTES OF PLANNING COMMISSION ACTION HELD
May 7, 2024

Planning Commission meeting minutes are not an exact transcript and represent key points and the basis of discussion.

1. **CALLED MEETING TO ORDER– By Doug Magee at 6:15 P.M.**
2. **PLEDGE OF ALLEGIANCE**
3. **ROLL CALL OF MEMBERS**

Those present: Tom Aljinovich, Doug Magee, Steve Hannan, Tim Knapp, Brandon Figliolino, Andrew Gay

THOSE ABSENT

Michael P. Griffith

ALSO PRESENT: Rob Smetana, City Planning Manager; Emily Grogg, Sr. Ass't. City Attorney; Linda Hoover, Sr. Planner; Shane Greenburg, Sr. Planner; Heidi Van Gieson, Development Tech; Dixielee Rodriguez, Recording Secretary.

Doug Magee made a motion to excuse Michael P. Griffith

Those voting Yes: Figliolino, Gay, Hannan, Aljinovich, Magee, Knapp

Those voting No:

Those absent: Griffith

The motion carried 6-0

4. **APPROVAL OF MINUTES**

January 16, 2024. The minutes had two corrections, was reprinted and stand approved as printed.

5. **GENERAL BUSINESS:** Agenda Item 5.A.

CP2024-0001 a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada's Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., as Amended be approved and recommended to City Council for Ratification.

MOTION

It was moved by Mr. Aljinovich that CP2024-0001 a Resolution by the Planning Commission for the City of Arvada, Colorado, Adopting the 2014 Arvada Comprehensive Plan as Arvada's Three Mile Plan Pursuant to Section 31-12-105(1)(E), C.R.S., As Amended be approved and recommended to City Council for ratification this motion is based on finding of facts on page 1 of the Staff Report.

DISCUSSION OF MOTION

None

The Following votes were cast on the motion:

Those voting Yes: Figliolino, Gay, Hannan, Aljinovich, Magee, Knapp

Those voting No:

Those absent: Griffith

The motion carried: 6-0



REPORT TO CITY COUNCIL

AGENDA ITEM
9.B.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: Appointment to Park Advisory Committee

Report in Brief

City Council will make a reappointment to the Park Advisory Committee.

Park Advisory Committee-

I move to **reappoint** Kristin Memmott to a 3-year term ending April 30, 2027.

Prepared by:

Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator 5/15/2024

Laura Hemler, Assistant City Attorney 5/16/2024

Approved by:

Rachel Morris, City Attorney 5/17/2024

Linda Haley, Deputy City Manager 5/19/2024

Lorie Gillis, City Manager 5/22/2024

Enclosure, exhibits & attachments required to support the report



REPORT TO CITY COUNCIL PUBLIC HEARING

AGENDA ITEM
10.A.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: Four (4) Major Modifications for Indian Tree Golf Course Cart Barn, a 0.7 acre parcel of land generally located 7555 Wadsworth Blvd. (Presenter: Rob Smetana, Manager of City Planning and Development)

Report in Brief

Presenter: Rob Smetana, Manager of City Planning and Development

Apex Park & Recreation District is requesting approval of Major Modifications for a golf course related building.

The project is to be located on an approximately 0.61 acre site within the Indian Tree Golf Course. The project will include the construction of a one-story, 6,780 sq. ft. building used for golf cart storage.

Each motion will be stated on the subsequent motion pages.

Financial Impact

There is no fiscal impact to the city.

Background

The subject property is located 7555 Wadsworth Blvd and is currently used as a golf course.

Discussion

The applicant is requesting four modifications from the Land Development Code as part of this project. The proposed modifications are from:

Subsection 5-1-2-3.B of the Land Development Code related to primary buildings being designed to avoid a monolithic appearance when viewed from the street. The building does have a monolithic appearance when viewed from a street. However, the street is located approximately 670 feet away from the nearest façade of the building, with minimal visibility from Wadsworth Boulevard. Additionally, a portion of the view is obscured by an intervening building, which is also located on the golf course property.

Subsection 5-1-2-3(C)(6)(b), related to facades facing streets, parks, or open space, having a minimum of 20 percent of the facade be windows. There are no windows on three of the building facades, with limited windows on the other elevation. The LDC requires that 20 percent of each elevation have windows. However, given the distance to adjacent streets and residential uses and the intervening building and landscaping on the golf course, the elevations will not be easily viewed by the public outside of the golf course grounds.

Subsection 5-1-2-3(C)(8)(c), related to the maximum length of a continuous roof ridgeline being 35 feet. The LDC prohibits a continuous roof ridgeline greater than 35-feet long. However, as with the other Major Modifications, the distance from adjacent streets and residential areas minimizes the impact of the ridgeline outside of the golf course property.

SUBJECT: Four (4) Major Modifications for Indian Tree Golf Course Cart Barn, a 0.7 acre parcel of land generally located 7555 Wadsworth Blvd. (Presenter: Rob Smetana, Manager of City Planning and Development)

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Subsection 5-1-2-3(C)(8)(d), related to pitched roofs having a minimum eave overhang of at least one-foot. The LDC requires a roof overhang of at least one foot. Again, the limited visibility of this building outside of the golf course property minimizes the impact of the Major Modification.

Public Contact

Due to the location of the proposed building being far from residential properties and streets, the Director determined that a neighborhood meeting would not be necessary.

Commission Recommendation

On May 7, 2024, the Planning Commission voted 6 to 0 (1 absent) to recommend approval to the City Council on June 3, 2024.

Strategic Alignment

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada Team recommends that the City Council Approve Four (4) Major Modifications from the Land Development Code Division 8-3-11, generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO.

Suggested Motion:

Prepared by:
Dixielee Rodriguez, Administrative Specialist

Reviewed by:

Approved by:

Shane Greenburg, Planner II	5/13/2024
Josie Suk, Development Systems and Administrative Manager	5/14/2024
Rob Smetana, Planning Manager	5/14/2024
Jessica Garner, Director of Community and Economic Development	5/14/2024
Gail Walker, Legal Specialist-Contracts	5/15/2024
Emily Grogg, Senior Assistant City Attorney	5/15/2024
Rachel Morris, City Attorney	5/17/2024
Linda Haley, Deputy City Manager	5/19/2024

SUBJECT: Four (4) Major Modifications for Indian Tree Golf Course Cart Barn, a 0.7 acre parcel of land generally located 7555 Wadsworth Blvd. (Presenter: Rob Smetana, Manager of City Planning and Development)

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Lorie Gillis, City Manager

5/22/2024

Enclosure, exhibits & attachments required to support the report

City of Arvada
Community and Economic Development Department
PUBLIC HEARING STAFF REPORT

Indian Tree Golf Course Cart Barn
Major Modification
DA2023-0043

NATURE OF REQUEST

Apex Park & Recreation District is requesting approval of Major Modifications for a golf course related building.

The project is to be located on an approximately 0.61-acre site within the Indian Tree Golf Course. The project will include the construction of a one-story, 6,780-sq. ft. building used for golf cart storage.

MAJOR MODIFICATIONS REQUESTED

The Applicant is requesting modifications to the Arvada Land Development Code (LDC) standards as part of this project. Those modifications are:

1. Section 5-1-2-3B - Massing:
A monolithic appearance when viewed from a street.
2. Section 5-1-2-3C6 - Windows/Transparency:
No windows on three facades.
3. Section 5-1-2-3C8c – Roof Design:
A continuous roof ridgeline greater than 35-feet long.
4. Section 5-1-2-3C8d – Roof Design:
No eave overhangs of at least one foot.

Due to the location of the building within a golf course and away from residential properties (approximately 815 feet) or streets (approximately 670 feet), Staff recommends approval of the Major Modifications.

LOCATION AND HISTORY

The subject property is located 7555 Wadsworth Blvd and is currently used as a golf course.

NEIGHBORHOOD MEETING

Due to the location of the proposed building being far from residential properties and streets, the Director determined that a neighborhood meeting would not be necessary.

PUBLIC NOTIFICATION

Division 8-2-4 of the Land Development Code requires public notification for all public hearings as follows:

Written Notice: Due to the location of the proposed building being far from residential properties and streets, the Director determined that written notice was unnecessary.

Posted Notice: At least 15 days prior to all public hearings, signs notifying the public of the hearing must be posted on the subject property. The applicant will provide a posting log verifying that this requirement has been met prior to the public hearing.

Published Notice: At least 15 days prior to all public hearings, notice of the hearing must be published in a newspaper of general circulation in the City. The required notice has been published.

SEVERED MINERAL RIGHTS

At least 30 days prior to the public hearing, written notice of the application must be mailed to any owner of mineral rights associated with the subject property. The applicant has provided the required Certification of Notice pursuant to Colorado Revised Statute 24-65.5-103.

DEVELOPMENT REVIEW TIMELINE

The application was submitted on June 12, 2023. Staff met review deadlines, per the development review timeline.

ALIGNMENT WITH CITY COUNCIL STRATEGIC PLAN

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

ZONING AND LAND USE

The subject property is currently zoned Open Space (OS) and is approximately .6 acres in size.

Surrounding properties are zoned and utilized as follows:

Direction	Zoning	Actual Use
North	Open Space	Golf Course
South	Open Space	Golf Course
East	Open Space	Golf Course
West	Open Space	Golf Course

PROJECT ANALYSIS

Building Design

The building design of the project meets all requirements except:

1. Section 5-1-2-3b – Massing:

The building does have a monolithic appearance when viewed from a street. However, the street is located approximately 670 feet away from the nearest façade of the building, with minimal visibility from Wadsworth Boulevard. Additionally, a portion of the view is obscured by an intervening building, which is also located on the golf course property.

2. Section 5-1-2-3C6 – Windows/Transparency:

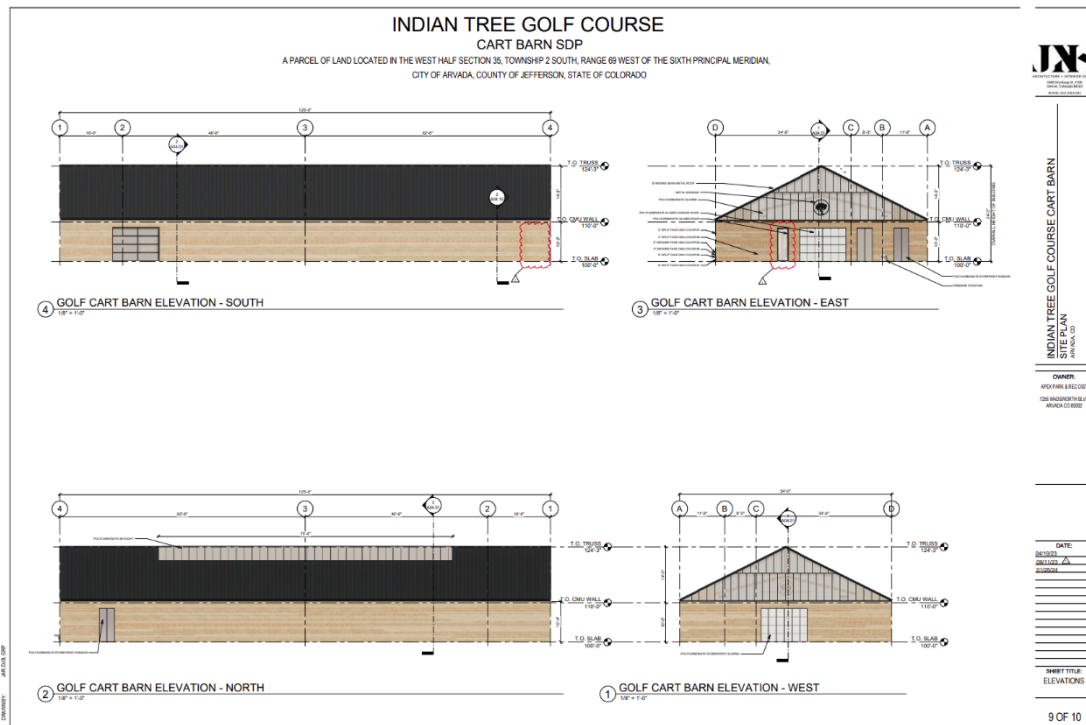
There are no windows on three of the building facades, with limited windows on the other elevation. The LDC requires that 20 percent of each elevation have windows. However, given the distance to adjacent streets and residential uses and the intervening building and landscaping on the golf course, the elevations will not be easily viewed by the public outside of the golf course grounds.

3. Section 5-1-2-3C8c – Roof Design:

The LDC prohibits a continuous roof ridge line greater than 35-feet long. However, as with the other Major Modifications, the distance from adjacent streets and residential areas minimizes the impact of the ridge line outside of the golf course property.

4. Section 5-1-2-3C8d – Roof Design:

The LDC requires a roof overhang of at least one foot. Again, the limited visibility of this building outside of the golf course property minimizes the impact of the Major Modification.



LAND DEVELOPMENT CODE APPROVAL CRITERIA

It is the responsibility of the applicant to justify the requested land use application. The Planning Commission should make a recommendation to the City Council based on its findings regarding the approval criteria shown in the table(s) below and upon testimony heard during the public hearing as it applied to the criteria.

Staff performed an analysis of the proposal, based on the approval criteria listed in Chapter 8 of the Land Development Code, and presents the following findings:

Div. 8-3-11 Major Modification Approval Criteria	Finding	Rationale
1. The requested modification is consistent with the Comprehensive Plan and the stated purpose of the applicable zoning district.	Complies	The building meets the needs of golf course employees and customers.
2. The requested modification addresses a unique situation or incorporates creative site design.	Complies	Due to the location of the building within a golf course it is subject to damage from golf balls.
3. The requested modification will not result in incompatible development.	Complies	The building is compatible with the use.
4. The requested modification will have no significant adverse impact on the health, safety or general welfare of surrounding property owners or the general public.	Complies	The building will not impact health, safety, or general welfare.
5. Any adverse impacts resulting from the modification will be mitigated to the extent reasonably feasible.	Complies	The building has been placed among existing vegetation and away from streets and residences.

STAFF RECOMMENDATION

Based upon project analysis and review of the Land Development Code approval criteria, Staff recommends approval of the Major Modifications by the Planning Commission.

INDIAN TREE GOLF COURSE

CART BARN SDP

A PARCEL OF LAND LOCATED IN THE WEST HALF SECTION 35, TOWNSHIP 2 SOUTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN , CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO

GENERAL NOTES:

- ANY PROPOSED FENCES, WALLS, SIGNS AND ACCESSORY STRUCTURES SHOWN ON THIS PLAN ARE ILLUSTRATIVE ONLY AND SUBJECT TO SEPARATE REVIEWS AND PERMITS.
- FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED WITH AN APPROVED ALL-WEATHER SURFACE (CONCRETE OR ASPHALT) AND SHALL BE CAPABLE OF SUPPORTING AN IMPOSED LOAD OF 85,000 POUNDS.
- THE APPROVED FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE AFPD. THE FIRE APPARATUS ACCESS ROADS SHALL CONSIST OF THE FIRST LIFT OF ASPHALT OR CONCRETE AND SHALL BE PROVIDED PRIOR TO COMMENCING VERTICAL CONSTRUCTION. ALTERNATIVE TEMPORARY FIRE APPARATUS ACCESS ROAD MATERIALS AND/OR DESIGNS SHALL BE APPROVED AND PERMITTED BY THE AFPD. THE PRIVATE ROADS THROUGH THE SITE SHALL BE DEDICATED ON THE FINAL PLAT AS "FIRE APPARATUS ACCESS ROADS" OR OTHER SIMILAR LANGUAGE AS REQUIRED BY THE CITY OF ARVADA.
- A 3'- 0" CLEAR SPACE SHALL BE MAINTAINED AROUND ALL FIRE HYDRANTS AND NOT OBSTRUCTED.
- FIRE HYDRANTS SHALL BE INSTALLED AND OPERATIONAL TO PROVIDE THE MINIMUM REQUIRED FIRE FLOW PRIOR TO COMMENCING VERTICAL CONSTRUCTION.
- DURING CONSTRUCTION AND UPON COMPLETION THERE SHALL BE BUILDING SIGNAGE PROVIDED, A MINIMUM OF 0'- 4" INCHES HIGH WITH A 0.5" STROKE AND VISIBLE FROM THE STREET OR ROAD FRONTING THAT BUILDING.
- THE CITY OF ARVADA IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE SURVEY DATA SHOWN HEREIN. THE CITY OF ARVADA'S REVIEW IS FOR GENERAL COMPLIANCE WITH ARVADA'S LAND DEVELOPMENT CODE. THE CITY OF ARVADA, THROUGH THE ACCEPTANCE OF THE PLAT/SITE PLAN, ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF PLAT/SITE PLAN. THE ACCURACY OF SURVEY INFORMATION INCLUDING BOUNDARY INFORMATION, MONUMENTATION, LOT LINES, ETC IS THE SOLE RESPONSIBILITY OF THE LICENSED SURVEYOR NAMED HEREIN.

NARRATIVE SUMMARY:

THE INDIAN TREE CART BARN PROJECT IS LOCATED ON THE EXISTING GOLF COURSE THAT ADDS A CART BARN WITH ASSOCIATED WATER AND SANITARY SERVICES AND MINOR DRAINAGE IMPROVEMENTS.

THE PROJECT ALSO INCLUDES ABOUT 1,150± LF OF PROPOSED WATER MAIN TO SERVICE THE CART BARN AND FUTURE GOLF COURSE PROJECTS.

ADDRESS/DESCRIPTION

PROPOSED CART BARN
7555 WADSWORTH BLVD,
ARVADA, CO 80003

BASIS OF BEARING: BEARINGS ARE BASED ON LINE BETWEEN TWO SURVEY SITE CONTROL POINTS BEARING N84°55'24"E AND BEING MONUMENTED BY A #4 REBAR FLUSH WITH THE GROUND IN MAIN ENTRY WAY LANDSCAPE CIRCLE APPROXIMATELY THREE FEET EAST OF THE TREE AND BY A #4 REBAR FLUSH WITH THE GROUND NEAR THE ENTRANCE MEDIAN LOCATED ABOUT 8 FEET EAST OF THE FIRE HYDRANT.

BENCHMARK

ELEVATIONS ARE BASED ON THE NGS BM #S411, A PUNCH IN THE TOP OF A STEEL ROD, 71 FEET WEST OF THE CENTERLINE OF FEDERAL BOULEVARD AND 16 FEET EAST OF THE NORTH-SOUTH CENTERLINE OF THE GRAVEL DRIVE AND EAST A RIGHT-OF-WAY FENCE.

ELEVATION = 5285.57 FEET (NAVD1988) DATUM.



SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
1	COVER
2	SITE PLAN
3	SITE PLAN GRADING
4	OVERALL UTILITIES
5	TREE PROTECTION PLAN
6	LANDSCAPE PLAN
7	LANDSCAPE DETAILS
8	ARCH ELEVATIONS
9	ARCH FLOOR & ROOF PLAN
10	SITE LIGHTING PHOTO METRIC

ENGINEER:
MARTIN/MARTIN CONSULTING ENGINEERS (ATTN: DAVID LE)
12499 WEST COLFAX AVENUE
LAKEWOOD, CO 80215
(303) 431-6100
DLE@MARTINMARTIN.COM

ARCHITECT:
JNS ARCHITECTURE (ATTN: GREG LEMON)
1600 WYNKOOP STREET, SUITE 100
DENVER, CO 80202
(303) 892-7062
GREG@JNS.DESIGN

OWNER:
APEX PARK AND RECREATION DISTRICT (ATTN: ALAN ABRAMS, DIRECTOR OF GOLF)
13150 W. 72ND AVE
ARVADA, CO 80005
(303) 409-2107
ALANA@APEXPD.ORG

ADDRESS:
PROPOSED CART BARN
7555 WADSWORTH BLVD,
ARVADA, CO 80003

LEGEND

EXISTING		PROPOSED
---	PROPERTY LINE	---
---	RIGHT-OF-WAY LINE	---
---	SECTION LINE	---
---	EASEMENT	---
///	RETAINING WALL	///
==	CURB & GUTTER	==
==	CURB & GUTTER (SPILL)	==
==	CURB & GUTTER (CATCH)	==
	HEAVY DUTY DRIVE LANES	
	CONCRETE/ SIDEWALK	
---	CONTOURS	---
---	UTILITY CROSSING	---
---	STORM SEWER	---
---	STORM MANHOLE	---
---	ROOF DRAIN	---
---	STORM INLET	---
---	FLARED END SECTION	---
---	SANITARY SEWER	---
---	SANITARY MANHOLE	---
---	CLEAN OUT	---
---	WATER LINE	---
---	WATER VALVE	---
---	FIRE HYDRANT	---
---	WATER METER	---
---	IRRIGATION LINE	---
---	IRRIGATION CONTROL	---
---	OVERHEAD ELECTRIC	---
---	ELECTRIC LINE	---
---	LIGHT POLE	---
---	POWER POLE	---
---	ELECTRIC METER	---
---	TELEPHONE LINE	---
---	TELEPHONE PEDESTAL	---
---	CABLE TV	---
---	GAS LINE	---
---	FIBER OPTIC	---
---	MONITOR WELL	---
---	SIGN	---
---	DIRECTION OF FLOW	---
---	GRADING ARROW	---
---	DECIDUOUS TREE	---
---	EVERGREEN TREE	---
---	BUSH/SHRUB	---
---	SPOT ELEVATIONS	---
---	DRIVE	---



INDIAN TREE GOLF COURSE CART BARN

SITE PLAN

ARVADA, CO

OWNER:

APEX PARK & REC DIST

7255 WADSWORTH BLVD
ARVADA CO 80002

DATE:

01/24/24

SHEET TITLE:

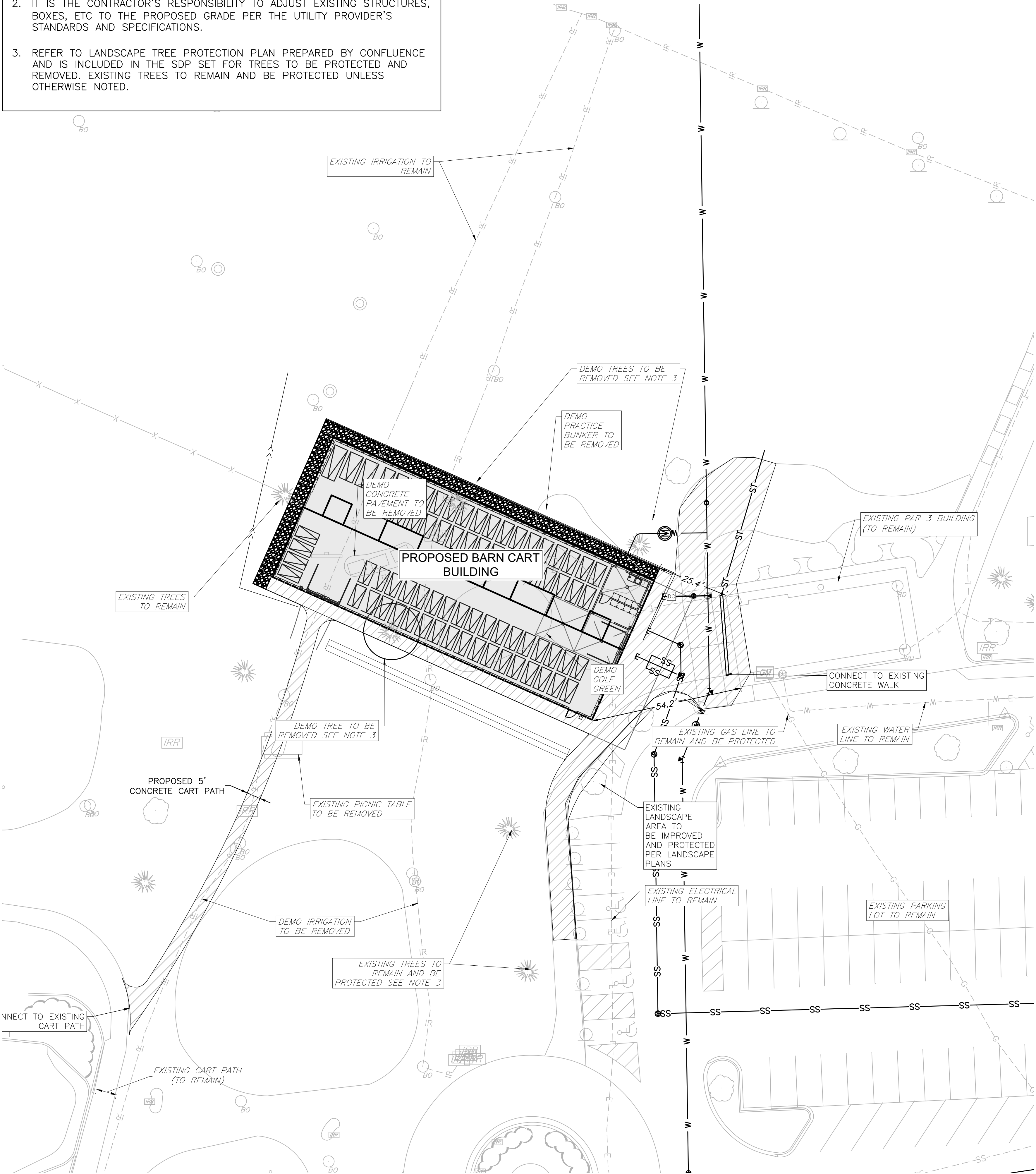
COVER

- NOTES:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSING, RELOCATION, PROTECTION REQUIRED. REPAIR OF DAMAGED UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE, INCLUDING BUT NOT LIMITED TO UNKNOWN UNDERGROUND UTILITIES.
 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST EXISTING STRUCTURES, BOXES, ETC TO THE PROPOSED GRADE PER THE UTILITY PROVIDER'S STANDARDS AND SPECIFICATIONS.
 3. REFER TO LANDSCAPE TREE PROTECTION PLAN PREPARED BY CONFLUENCE AND IS INCLUDED IN THE SDP SET FOR TREES TO BE PROTECTED AND REMOVED. EXISTING TREES TO REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED.

INDIAN TREE GOLF COURSE

CART BARN SDP

A PARCEL OF LAND LOCATED IN THE WEST HALF SECTION 35, TOWNSHIP 2 SOUTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN , CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO



LEGEND	
EXISTING	PROPOSED
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SECTION LINE
	EASEMENT
	RETAINING WALL
	CURB & GUTTER
	CURB & GUTTER (SPILL)
	CURB & GUTTER (CATCH)
	HEAVY DUTY DRIVE LANES
	CONCRETE/ SIDEWALK
	GRAVEL PATH
	CONTOURS
	UTILITY CROSSING
	STORM SEWER
	STORM MANHOLE
	ROOF DRAIN
	STORM INLET
	FLARED END SECTION
	SANITARY SEWER
	SANITARY MANHOLE
	CLEAN OUT
	WATER LINE
	WATER VALVE
	FIRE HYDRANT
	WATER METER
	IRRIGATION LINE
	IRRIGATION CONTROL
	OVERHEAD ELECTRIC
	ELECTRIC LINE
	LIGHT POLE
	POWER POLE
	ELECTRIC METER
	TELEPHONE LINE
	TELEPHONE PEDESTAL
	CABLE TV
	GAS LINE
	FIBER OPTIC
	MONITOR WELL
	SIGN
	DIRECTION OF FLOW
	GRADING ARROW
	DECIDUOUS TREE
	EVERGREEN TREE
	BUSH/SHRUB
	SPOT ELEVATIONS
	DESCRIPTIONS
	DRIVE



INDIAN TREE GOLF COURSE CART BARN

SITE PLAN

ARVADA, CO

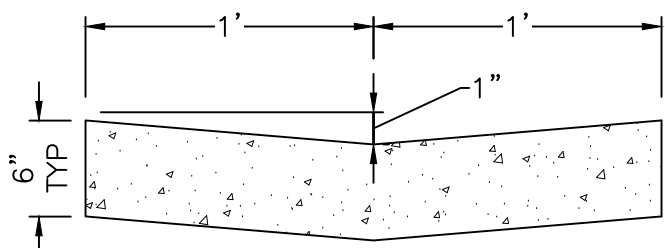
OWNER:
APEX PARK & REC DIST
7255 WADSWORTH BLVD
ARVADA CO 80002

DATE:
01/24/24

SHEET TITLE:
SITE PLAN

INDIAN TREE GOLF COURSE
CART BARN SDP

A PARCEL OF LAND LOCATED IN THE WEST HALF SECTION 35, TOWNSHIP 2 SOUTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL
MERIDIAN, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO



2' CONCRETE PAN
NOT TO SCALE

DETAILED GRADING NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSING, RELOCATION, PROTECTION REQUIRED. REPAIR OF DAMAGED UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE, INCLUDING BUT NOT LIMITED TO UNKNOWN UNDERGROUND UTILITIES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST EXISTING STRUCTURES, BOXES, ETC TO THE PROPOSED GRADE PER THE UTILITY PROVIDER'S STANDARDS AND SPECIFICATIONS.
- ALL PROPOSED SIDEWALKS SHALL HAVE MAX CROSS SLOPE OF 1.8% AND MAX LONGITUDINAL SLOPE OF 4.8%.

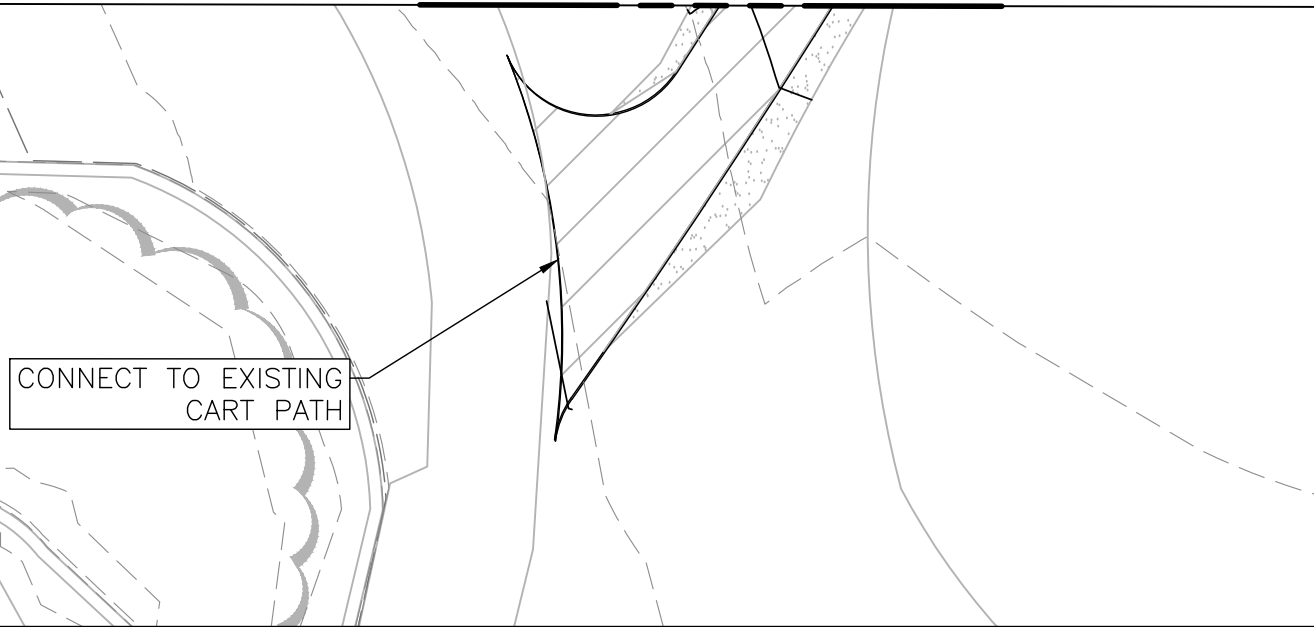
LEGEND

EXISTING		PROPOSED
---	PROPERTY LINE	---
---	RIGHT-OF-WAY LINE	---
---	SECTION LINE	---
---	EASEMENT	---
---	RETAINING WALL	---
---	CURB & GUTTER	---
---	CONTOURS	---
---	STORM SEWER	---
---	STORM MANHOLE	---
---	ROOF DRAIN	---
---	INLET	---
---	FLARED END SECTION	---
---	SIGN	---
---	GRADING ARROW	---
---	DECIDUOUS TREE	---
---	EVERGREEN TREE	---
---	BUSH/SHRUB	---
---	DRIVE	---
---	ELEV.	---
---	SPOT ELEVATIONS	---

TYPICAL BUILDING SECTION
WITH ADJACENT SIDEWALK
Not to Scale

TYPICAL BUILDING SECTION
WITH NO ADJACENT
SIDEWALK OR CONCRETE
Not to Scale

MATCHLINE SEE LEFT VIEW



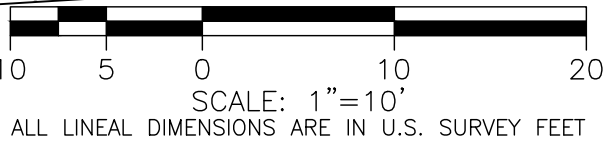
INDIAN TREE GOLF COURSE CART BARN
SITE PLAN
ARVADA, CO

OWNER:
APEX PARK & REC DIST
7255 WADSWORTH BLVD
ARVADA CO 80002

DATE:
01/24/24

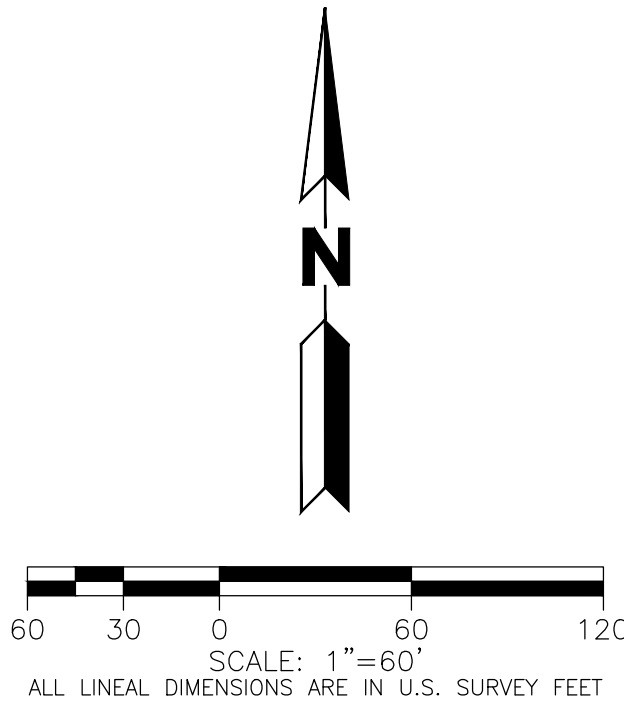
SHEET TITLE:
SITE PLAN GRADING

MATCHLINE SEE RIGHT VIEW



INDIAN TREE GOLF COURSE
CART BARN SDP

A PARCEL OF LAND LOCATED IN THE WEST HALF SECTION 35, TOWNSHIP 2 SOUTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL
MERIDIAN , CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO



LEGEND

EXISTING		PROPOSED
---	PROPERTY LINE	---
---	RIGHT-OF-WAY LINE	---
---	SECTION LINE	---
---	EASEMENT	---
---	RETAINING WALL	---
---	CURB & GUTTER	---
---	UTILITY CROSSING	⊗
---ST---	STORM SEWER	---ST---
⊗	STORM MANHOLE	⊗
---RD---	ROOF DRAIN	---RD---
⊗	STORM INLET	⊗
<	FLARED END SECTION	⊗
---SS---	SANITARY SEWER	---SS---
⊗	SANITARY MANHOLE	⊗
⊗	CLEAN OUT	⊗
---W---	WATER LINE	---W---
⊗	WATER VALVE	⊗
⊗	FIRE HYDRANT	⊗
⊗	WATER METER	⊗
---IR---	IRRIGATION LINE	---IR---
⊗	IRRIGATION CONTROL	⊗
---OHE---	OVERHEAD ELECTRIC	---OHE---
---	ELECTRIC LINE	---
⊗	LIGHT POLE	⊗
⊗	POWER POLE	⊗
⊗	ELECTRIC METER	⊗
---T---	TELEPHONE LINE	---T---
⊗	TELEPHONE PEDESTAL	⊗
---CT---	CABLE TV	---CT---
---	GAS LINE	---
⊗	SIGN	⊗
⊗	MONITOR WELL	⊗
---	DRIVE	---
---	DRIVE	---

WATER DEMAND NOTE:

1. BASED ON ASSUMING TYPE V-B CONSTRUCTION OF ABOUT 6,780 SQUARE FEET THE MINIMUM FIRE REQUIRED FIRE-FLOW IS 2,250 GALLONS PER MINUTE.

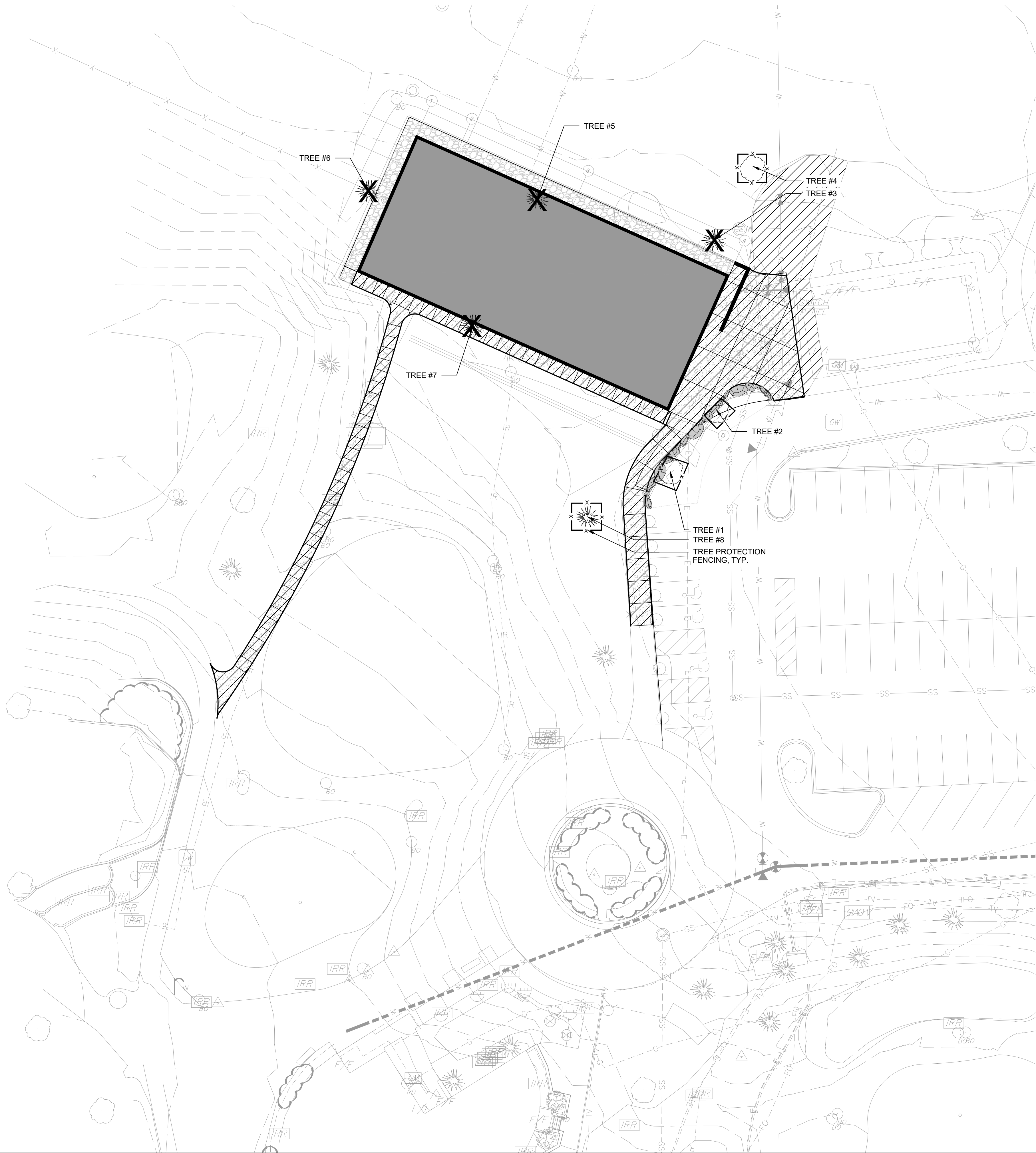
INDIAN TREE GOLF COURSE CART BARN
SITE PLAN
ARVADA, CO

OWNER:
APEX PARK & REC DIST
7255 WADSWORTH BLVD
ARVADA CO 80002

DATE:
01/24/24

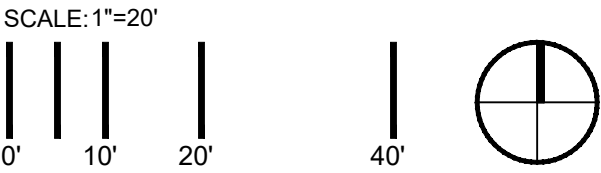
SHEET TITLE:
OVERALL UTILITIES

CHECKED BY: GRP, DML
DRAWN BY: JAR, DUB, GRP



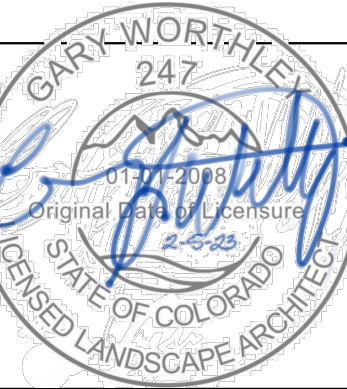
TREE EVALUATION

TREE #	SPECIES	SIZE	CONDITION	REMOVE/REMAIN
#1	GREEN VELVET ASH	16" CAL	GOOD	REMAIN
#2	GREEN VELVET ASH	15" CAL	GOOD	REMAIN
#3	PONDEROSA PINE	13" CAL	GOOD	REMOVE
#4	SILVER MAPLE	10" CAL	GOOD	REMAIN
#5	PONDEROSA PINE	12" CAL	GOOD	REMOVE
#6	PONDEROSA PINE	12" CAL	GOOD	REMOVE
#7	PONDEROSA PINE	12" CAL	GOOD	REMOVE
#8	PONDEROSA PINE	17" CAL	GOOD	REMAIN
49" TO BE REMOVED				



INDIAN TREE GOLF COURSE CART BARN
SITE PLAN
ARVADA, CO

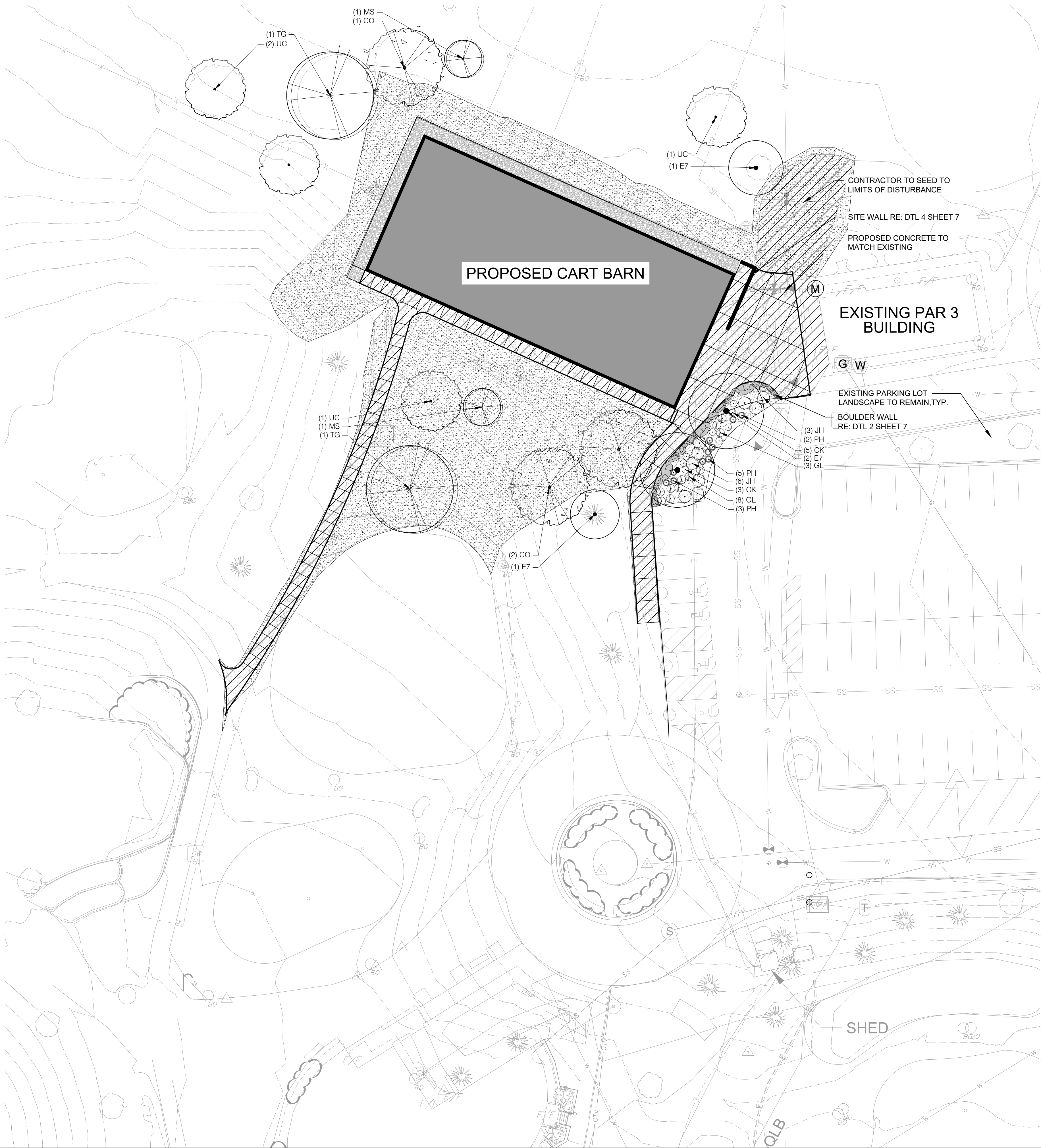
OWNER:
APEX PARK & REC DIST
7255 WADSWORTH BLVD
ARVADA CO 80002



DATE:
04/26/23
09/15/23
02/05/24

SHEET TITLE:
TREE PROTECTION
PLAN

CHECKED BY: GRP, DML
DRAWN BY: JAR, DUB, GRP



LANDSCAPE SCHEDULE

TREES	CODE	QTY	COMMON NAME	BOTANICAL NAME	SIZE
	E7	4		EXISTING TREE TO REMAIN	NONE
DECIDUOUS TREES					
	CO	3	WESTERN HACKBERRY	CELTIS OCCIDENTALIS	5" CAL
	TG	2	GREENSPIRE LITTLELEAF LINDEN	TILIA CORDATA 'GREENSPIRE'	5" CAL
	UC	4	FRONTIER ELM	ULMUS X 'FRONTIER'	5" CAL
ORNAMENTAL TREES					
	MS	2	SPRING SNOW CRABAPPLE	MALUS X 'SPRING SNOW'	2" CAL
DECIDUOUS SHRUBS					
	CK	8	KELSEY'S DWARF RED TWIG DOGWOOD	CORNUS STOLONIFERA 'KELSEY'	5 GAL
	GL	11	BROOM	GENISTA LYDIA	5 GAL
EVERGREEN SHRUBS					
	JH	9	CREEPING JUNIPER	JUNIPERUS HORIZONTALIS	5 GAL
GRASSES					
	PH	10	HEAVY METAL SWITCH GRASS	PANICUM VIRGATUM 'HEAVY METAL'	1 GAL
GROUND COVERS					
	RM	742 SF	ROCK MULCH		N/A
	TS	11,517 SF	SEED TO MATCH EXISTING ON SITE		SEED

LANDSCAPE NOTES

- SITE SHALL BE LANDSCAPED PRIOR TO THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY (CO) DURING THE GROWING SEASON OF APRIL 1ST TO OCTOBER 1ST. AT ALL OTHER TIMES THE INDIVIDUAL SITES SHALL BE LANDSCAPE WITHIN 45 (FORTY-FIVE) DAYS OF THE START OF THE GROWING SEASON.
- LANDSCAPE MAINTENANCE
 - ALL PLANTS SHALL BE MAINTAINED CONTINUALLY IN A HEALTHY CONDITION IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL HORTICULTURAL STANDARDS AND PRACTICES. PLANTS THAT DIE OR ARE UNHEALTHY SHALL BE REPLACED ACCORDING TO THE APPROVED LANDSCAPE PLAN.
 - REGULAR PRUNING AND TRIMMING SHALL BE PERFORMED TO MAINTAIN HEALTH AND AN ATTRACTIVE APPEARANCE AND TO PERMIT THE PLANTS TO ACHIEVE THEIR INTENDED FORM AND HEIGHT.
 - ALL LANDSCAPE AREAS SHALL BE KEPT FREE OF WEEDS, LITTER AND TRASH AND ALL IRRIGATION SYSTEMS SHALL BE PROPERLY MAINTAINED.
 - ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH UNDERGROUND AUTOMATIC IRRIGATION SYSTEM. TREES, SHRUBS, AND DECORATIVE GRASSES WILL BE IRRIGATED BY A SEPARATE ZONE FROM SOD/GRASS. THIS INCLUDES TREES PLANTED IN SOD/GRASS AREA. THE IRRIGATION SYSTEM IS TO HAVE A RAIN SENSOR SHUT-OFF INSTALLED.
- LANDSCAPING THAT LIES WITHIN SITE TRIANGLES SHALL NOT GROW TO BE OVER 2'-6" IN HEIGHT.
- TREES AND LANDSCAPING WITHIN DEVELOPMENTS, WHEN FULLY MATURE SHALL PROVIDE AN UNOBSTRUCTED VERTICAL CLEARANCE OF 13'-6" AND PROVIDE THE MINIMUM UNOBSTRUCTED FIRE APPARATUS ACCESS ROAD WIDTH AS REQUIRED BASED ON THE HEIGHT OF THE BUILDING.
- TREES SHALL NOT BE PLANTED CLOSER THAN 10 FEET TO ANY SEWER OR WATER LINE, METERS, AND VAULTS. TREE PLANTING SHALL BE COORDINATED WITH XCEL ENERGY. LOCATIONS OF ALL UTILITIES SHALL BE VERIFIED IN THE FIELD PRIOR TO PLANTING.



INDIAN TREE GOLF COURSE CART BARN
SITE PLAN
ARVADA, CO

OWNER:
APEX PARK & REC DIST
7255 WADSWORTH BLVD
ARVADA CO 80002



DATE:
04/26/23
09/15/23
02/05/24

SHEET TITLE:
LANDSCAPE
PLAN



SUMMARY MINUTES OF PLANNING COMMISSION ACTION HELD
May 7, 2024

Planning Commission meeting minutes are not an exact transcript and represent key points and the basis of discussion.

1. **CALLED MEETING TO ORDER– By Doug Magee at 6:15 P.M.**
2. **PLEDGE OF ALLEGIANCE**
3. **ROLL CALL OF MEMBERS**

Those present: Tom Aljinovich, Doug Magee, Steve Hannan, Tim Knapp, Brandon Figliolino, Andrew Gay

THOSE ABSENT

Michael P. Griffith

ALSO PRESENT: Rob Smetana, City Planning Manager; Emily Grogg, Sr. Ass't. City Attorney; Linda Hoover, Sr. Planner; Shane Greenburg, Sr. Planner; Heidi Van Gieson, Development Tech; Dixielee Rodriguez, Recording Secretary.

Doug Magee made a motion to excuse Michael P. Griffith

Those voting Yes: Figliolino, Gay, Hannan, Aljinovich, Magee, Knapp

Those voting No:

Those absent: Griffith

The motion carried 6-0

4. **APPROVAL OF MINUTES**

January 16, 2024. The minutes had two corrections, was reprinted and stand approved as printed.

8. **PUBLIC HEARINGS - Continue**

- 8.B. **DA2023-0043 Four (4) Major Modifications for Indian Tree Golf Course Barn**

1. **section 5-1-2-3B - Massing: A monolithic appearance when viewed from a street.**
2. **section 5-1-2-3C6 - Windows/Transparency: No windows on three facades.**

3. section 5-1-2-3C8c - Roof Design: A continuous roof ridgeline greater than 35-feet long.
4. section 5-1-2-3C8d - Roof Design: No eave overhangs of at least one foot.

Mr. Magee opened the public hearing.

Mr. Magee asked if all of the required documents were in order.

Mr. Greenburg stated that the publication and posting notice are all in order..

Mr Magee stated the staff report and posting log have been submitted and made part of the permanent record.

Mr. Magee asked Mr.Greenburg to introduce the project.

Mr. Greenburg introduced the project. Apex park and rec is seeking approval of a barn for golf cart storage on .16 acres of the Indian Tree Golf Course.

Applicant - Greg Proulx 12499 W Colfax Ave, Lakewood, and Tobias Strohe 6240 W 5th Place, Lakewood, CO.

Mr. Proulx stated that they are working on updating the site as the last time this was done was in the late 1990's. Project Site is approximately 600 ft off of Wadsworth, just west of the Parking lot.

Mr. Strohe stated that the building will have an open gable with a translucent material on the gable ends to allow natural light into the space. This is also to allow for future solar panels to be installed. This is why they are not using Dormers that the code would require. They are trying to have the building be contextual to the golf course environment. He stated that the building will fit well into the landscape.

Mr. Proulx stated that they have designed a new water and sanitary line that loops through the system. They are looking to maintain and not disturb the current golf course as much as possible, minimal disruption of trees. He stated that they will be removing 4 trees but planting 11 new trees equal to the diameter and caliber of the trees removed. They have looked at the lighting to make sure it does not disturb the neighbors. The two variances that they are looking for are asking for a slope of less than 1% and also using an oversized pipe to prepare for future development.

PUBLIC COMMENT

N/A

IN FAVOR

N/A

IN OPPOSITION

There being no one wishing to speak, Public Comment was closed.

APPLICANT REBUTTAL

N/A

QUESTIONS FROM THE COMMISSION

Mr. Aljinovich asked what is currently being used as cart storage?

Mr Strohe stated that they are currently using a maintenance facility that is close to Wadsworth with a fence, but some of the carts are open to the elements.

Mr. Ajinovich asked if the current carts are acid base battery carts?

Mr. Strohe stated that they are fuel carts currently.

Mr. Aljinovich asked what is the plan if there is a spill?

Mr. Proulx stated that they are currently fuel, but that they are going to electric charged models. They will have a sand-oil separator for any runoff when cleaning the carts, so that it does not go into the storm system.

Mr. Ajinovich asked where the battery acid was going to be stored?

Mr. Proulx stated that he did not know that answer.

Mr. Smetana stated that any battery acid storage will be discussed in the building permit stage, right now we are just focusing on the exterior of the building.

Mr. Ajinovich asked if charging will occur in this building.

Mr. Proulx stated that yes, he believes that charging will occur inside this building.

Mr. Proulx stated that Mr. Strohe just made him aware that he believes it will be a Lithium Ion Battery, not Acid Based Battery.

Mr. Ajinovich asked if there were fire-retardant systems?

Mr. Proulx stated that yes, he believes there are and there is a dedicated sprinkler line for the building.

Mr. Aljinovich stated to be sure that they look at that if they go with Lithium batteries as they don't like water.

Mr. Gay asked about the fact that there are no windows in the building and whether that's related to safety, stated that they should add that to the reason for the modification- to deter theft.

Mr. Strohe stated that with it being a cart barn, they didn't want patrons looking at carts which can be unattractive.

Mr. Gay asked about the overhang major modification and how it affects drainage. Would this damage the foundation?

Mr Strohe stated they are going for simplicity of form, a contemporary form.

Mr. Knapp asked about the solar panels.

Mr. Strohe stated not that they will not be placed at this time but in the future.

Mr. Knapp asked if this would be a review for the PC or just staff?

Mr. Smetana stated that it would be an administrative decision. He also stated that there are regulations in the LDC that explain how and where they can be placed.

Mr. Knapp asked what kind of material is being used on the exterior?

Mr. Strohe stated that it would be CMU (Concrete Masonry Units) with Colored Pigment and different scales.

Mr. Knapp asked about the landscaping. Are they using the trees to obscure the building?

Mr. Proulx stated that they are using the landscape to provide additional shade, break up the facade and to establish a path of where the carts will go.

Mr. Magee asked about the solar panels, are there sky lights at the top of the gables right now?

Mr. Strohe stated that yes, they are skylights.

MOTION FOR 8.B.1

It was moved by Mr. Knapp The Major Modification for Indian Tree Golf Course Cart Barn section 5-1-2-3B - Massing: A monolithic appearance when viewed from a street be approved on this .7 acre parcel of land, generally located at 7555 Wadsworth Blvd., in the City of Arvada, to be recommended to City Council for approval.

This motion is based on the findings of fact and approval criteria on Page 4 of the Staff Report.

DISCUSSION OF MOTION

Mr. Hannan stated that he is concerned about the lack of windows for something of this size.

Mr. Figliolino stated that this appears to be a massive building. If it was closer to a residential area, he would deny it. Asked if the applicant can think of other ways to add landscape around it.

Mr. Knapp concurs with his fellow commissioners. He feels that there could be some other way to break it up.

Those voting Yes: Hannan, Ajinovich, Magee, Knapp, Figliolino, Gay
Those voting No:
Those absent: Griffith
The motion carried 6-0

MOTION FOR 8.B.2

It was moved by Mr. Knapp The Major Modification for Indian Tree Golf Course Cart Barn section 5-1-2-3C6 - Windows/Transparency: No windows on three facades be approved on this .7 acre parcel of land, generally located at 7555 Wadsworth Blvd., in the City of Arvada, to be recommended to City Council for approval.

This motion is based on the findings of fact and approval criteria on Page 4 of the Staff Report.

DISCUSSION OF MOTION

N/A

Those voting Yes: Hannan, Ajinovich, Magee, Knapp, Figliolino, Gay
Those voting No:
Those absent: Griffith
The motion carried 6-0

MOTION FOR 8.B.3

It was moved by Mr. Knapp The Major Modification for Indian Tree Golf Cart Barn section 5-1-2-3C8c - Roof Design: A continuous roof ridgeline greater than 35-feet long be approved on this .7 acre parcel of land, generally located at 7555 Wadsworth Blvd., in the City of Arvada, to be recommended to City Council for approval.

This motion is based on the findings of fact and approval criteria on Page 4 of the Staff Report.

DISCUSSION OF MOTION

N/A

Those voting Yes: Hannan, Ajinovich, Magee, Knapp, Figliolino, Gay
Those voting No:
Those absent: Griffith
The motion carried 6-0

MOTION FOR 8.B.4

It was moved by Mr. Knapp The Major Modification for Indian Tree Golf Course Cart Barn section 5-1-2-3C8d - Roof Design: No eave overhangs of at least one foot, be approved on this

.7 acre parcel of land generally located at 7555 Wadsworth Blvd., in the City of Arvada, to be recommended to City Council for approval.

This motion is based on the findings of fact and approval criteria on Page 4 of the Staff Report.

DISCUSSION OF MOTION

N/A

Those voting Yes: Hannan, Ajinovich, Magee, Knapp, Figliolino, Gay

Those voting No:

Those absent: Griffith

The motion carried 6-0

INDIAN TREE GOLF COURSE CART BARN

PROJECT TEAM

OWNER/DEVELOPER – INDIAN TREE GOLF CLUB & APEX

- ALAN ABRAMS, JEFF GLENN

ENGINEER – MARTIN/MARTIN

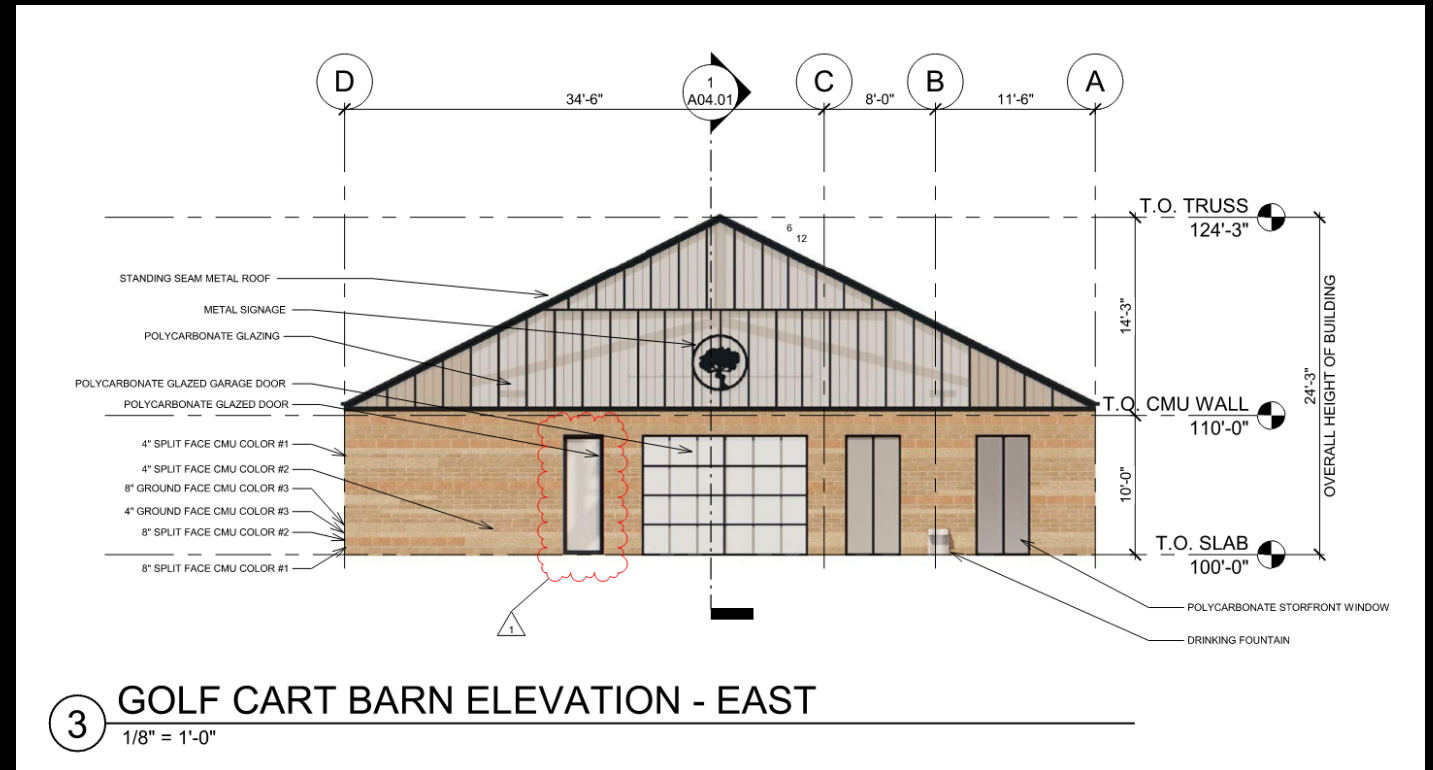
- GREG PROULX & DAVID LE

ARCHITECT – JNS

- GREG LEMON

LANDSCAPE ARCHITECT – CONFLUENCE

- GARY WORTHLEY



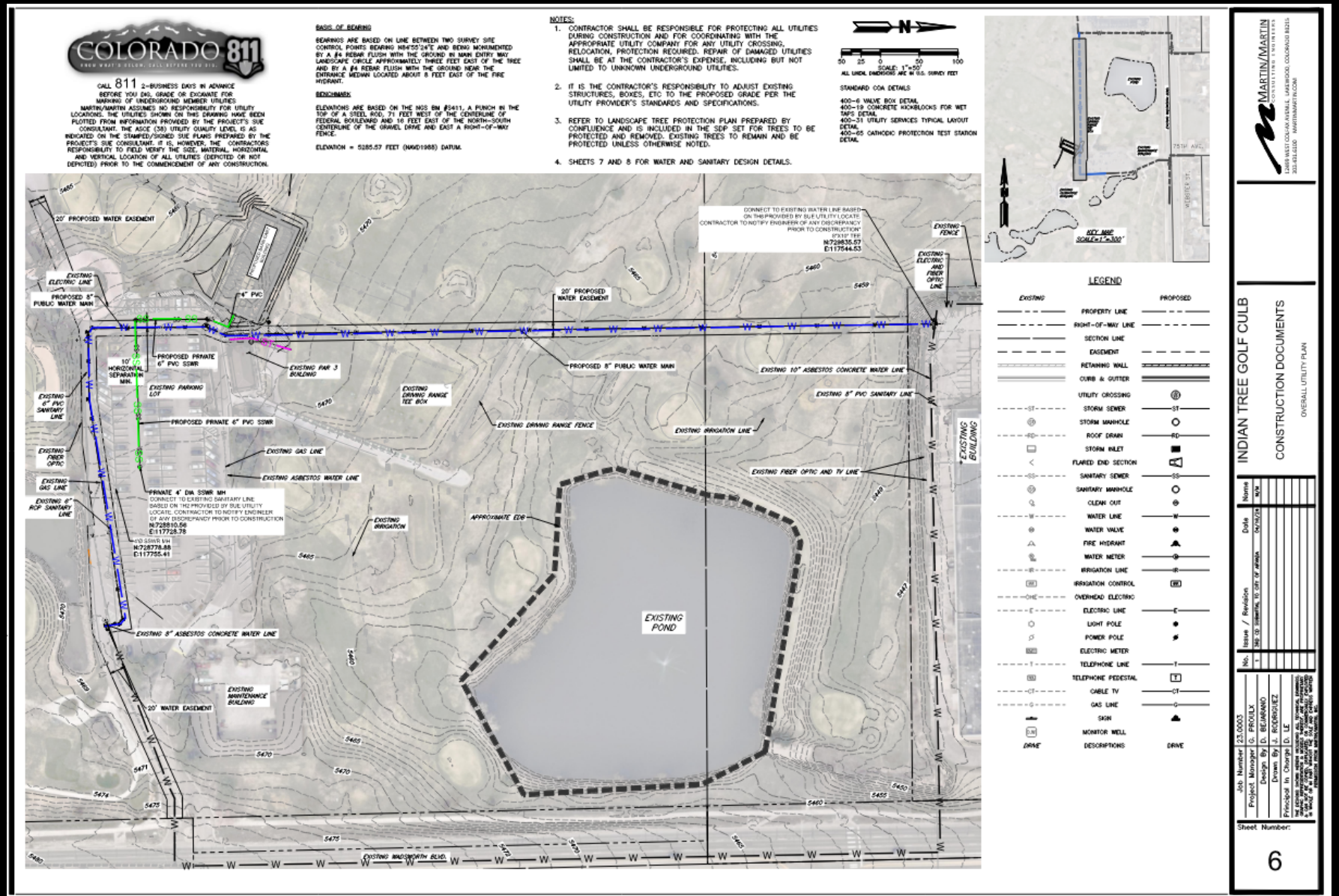
EXISTING CONDITIONS



INDIAN TREE GOLF COURSE CART BARN



PROPOSED CART BARN SANITARY & WATER LAYOUT



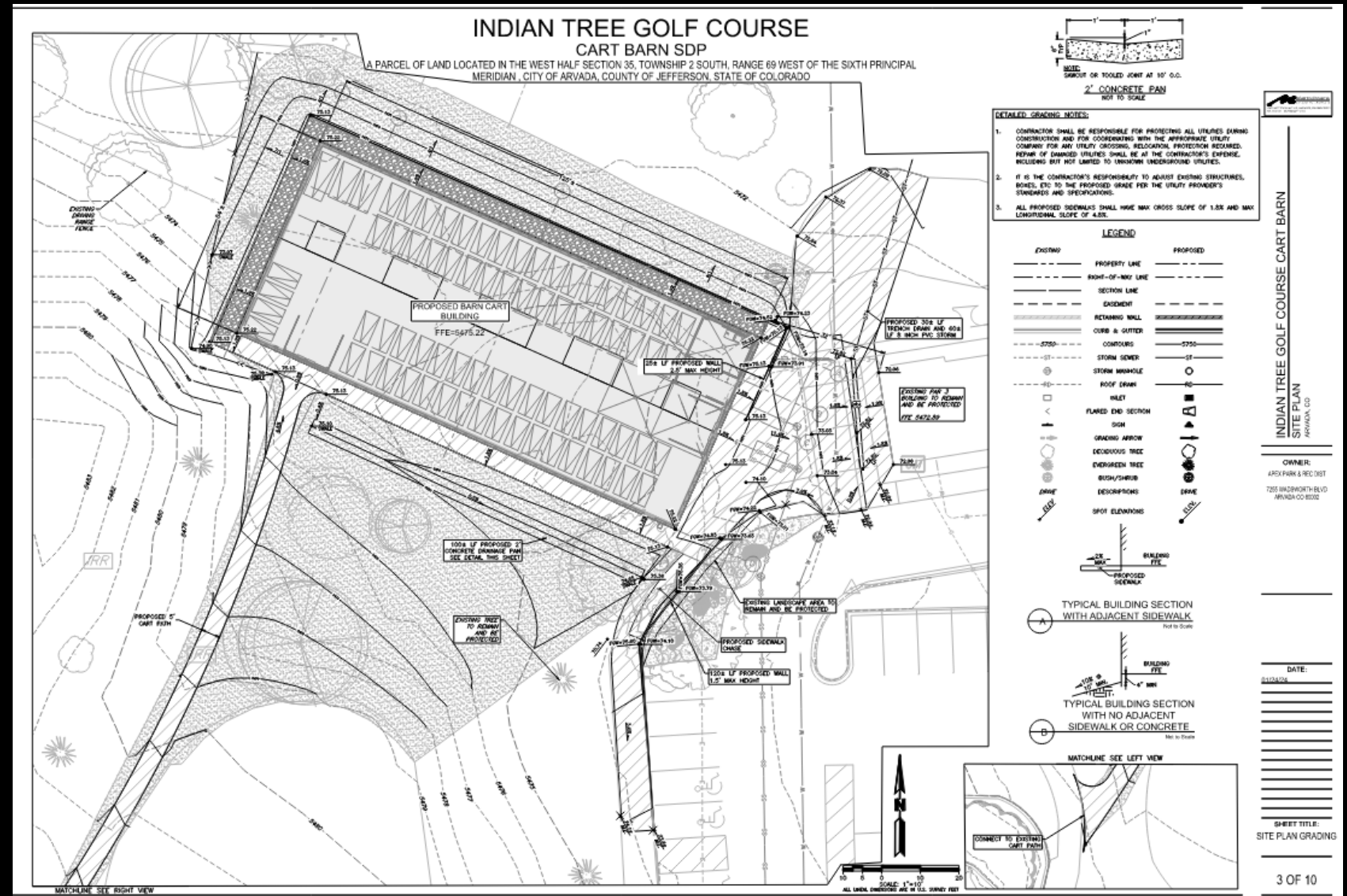
INDIAN TREE
GOLF CLUB



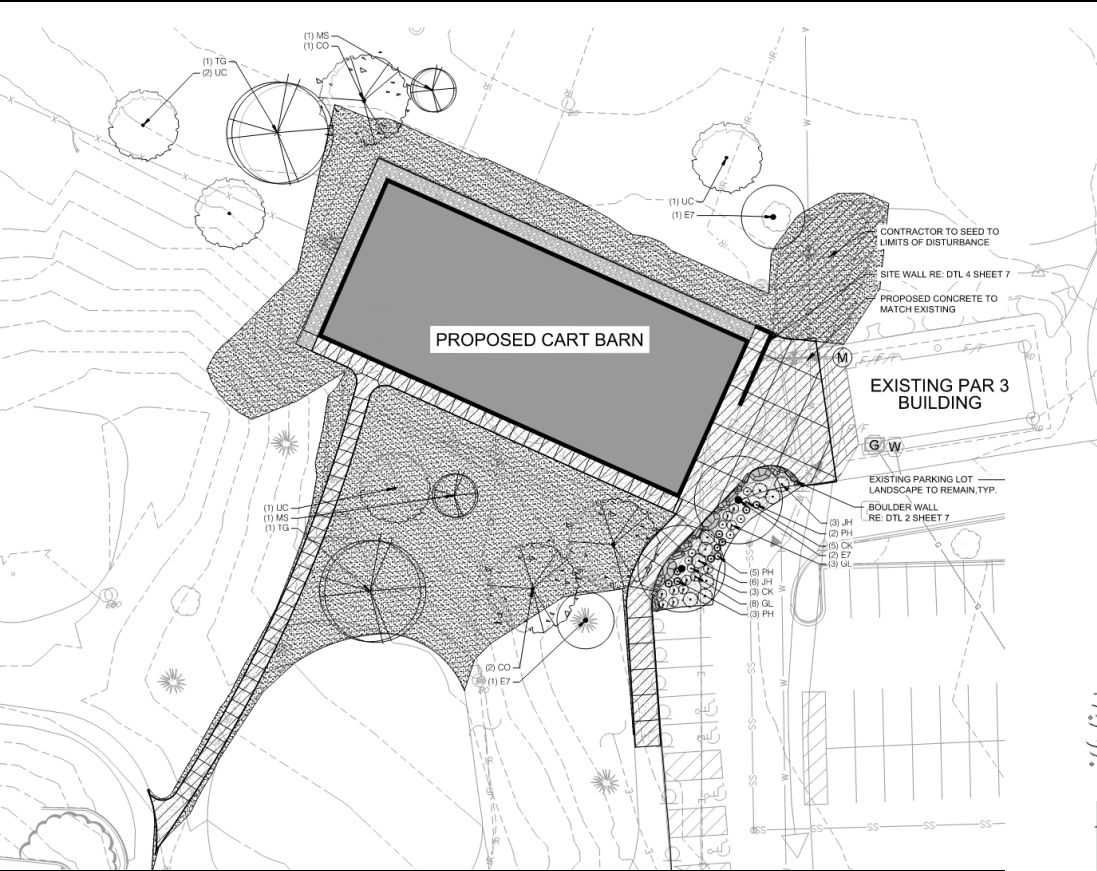
INDIAN TREE GOLF COURSE
CART BARN



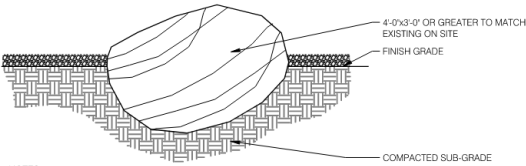
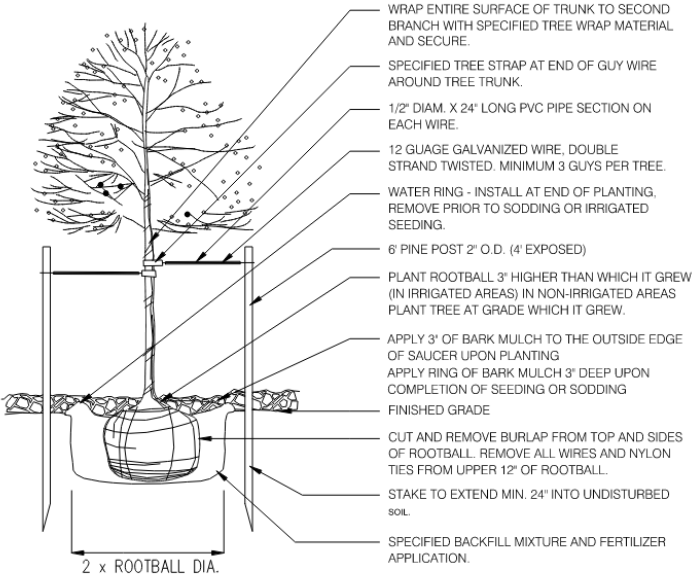
PROPOSED CART BARN GRADING & DRAINAGE LAYOUT



PROPOSED CART BARN LANDSCAPING



NOTES:
1. ANY BROKEN OR CRUMBLING ROOTBALLS WILL BE REJECTED.
REMOVING THE CONTAINERS WILL NOT BE AN EXCUSE FOR DAMAGED ROOTBALLS



NOTES:
1. PLACE BOULDERS AS DIRECTED BY LANDSCAPE ARCHITECT REF. PLANS FOR LOCATIONS.
2. SITE BOULDERS TO BE USED FOR LANDSCAPE BOULDERS.

03 LANDSCAPE BOULDERS

1/2" = 1'-0"

07

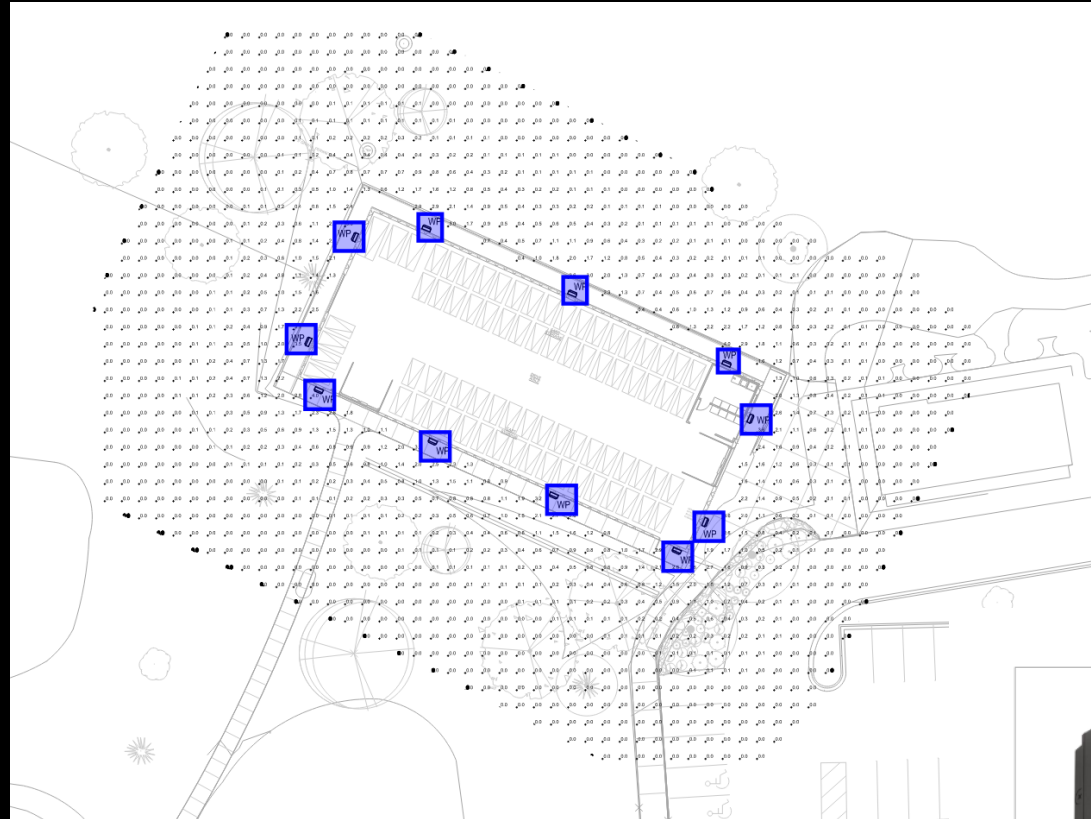
DECIDUOUS TREE PLANTING

1/2" = 1'-0"

PROPOSED CART BARN LIGHTING PLAN

Cart Barn

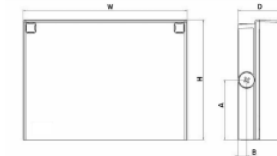
- 11 Proposed lights on the building
- Lights pointed down to focus only on the surrounding sidewalk
- Photometric study shown to demonstrate light impact doesn't go past existing Par 3 building



WPX LED Wall Packs



Specifications



SANITARY SEWER VARIANCE REQUEST

THE APPLICANT IS REQUESTING A VARIANCE FROM THE CITY OF ARVADA STANDARDS AND SPECIFICATIONS FOR THE FOLLOWING:

1. 514.01 SEWER MAINS

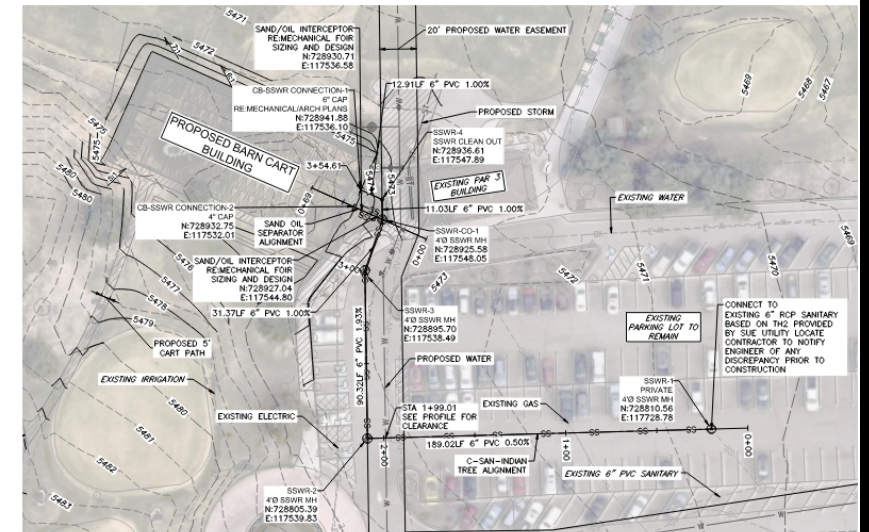
A VARIANCE IS HEREBY BEING REQUESTED TO CITY OF ARVADA STANDARDS AND SPECIFICATIONS – SECTION 514.01 SEWER MAINS. THIS VARIANCE IS REQUESTING THAT THE PROPOSED SANITARY LINE THAT WILL SERVICE THE PROPOSED CART BARN HAVE AN ALLOWABLE VELOCITY UNDER THE MINIMUM VELOCITY OF TWO (2) FEET PER SECOND. THE PROPOSED CART BARN WILL NOT BE ABLE TO PRODUCE THIS VELOCITY DUE TO THE RELATIVELY LOW FLOW RATE PRODUCED BY THE BUILDING AND EXISTING TOPOGRAPHY AND EXISTING SANITARY SEWER INFRASTRUCTURE LIMITATIONS. THIS PROPOSED SANITARY MAIN MAY HAVE EXTRA SAFETY MEASURES (INSULATION AND ENCASEMENT) TO ENSURE THE INTEGRITY OF THE DESIGN.

2. 514.01 SEWER MAINS

A VARIANCE IS HEREBY BEING REQUESTED TO CITY OF ARVADA STANDARDS AND SPECIFICATIONS – SECTION 514.01 SEWER MAINS. THIS VARIANCE IS REQUESTING THAT THE PROPOSED SANITARY LINE THAT WILL SERVICE THE PROPOSED CART BARN HAVE AN ALLOWABLE SLOPE UNDER THE MINIMUM SLOPE OF ONE (1) PERCENT. THE PROPOSED CART BARN WILL NOT BE ABLE TO PRODUCE THIS SLOPE DUE TO THE EXISTING TELECOMMUNICATION AND GAS UTILITY LINES THAT ARE CURRENTLY IN THE SITE. IN ORDER TO ACHIEVE A MINIMUM 18" CLEARANCE BETWEEN THE EXISTING UTILITIES AND TIE INTO THE EXISTING SANITARY LINE, THE PROPOSED SANITARY LINE MUST HAVE A SLOPE OF 0.5%. THIS PROPOSED SANITARY MAIN MAY HAVE EXTRA SAFETY MEASURES (INSULATION AND ENCASEMENT) TO ENSURE THE INTEGRITY OF THE DESIGN.

CITY ENGINEER (OR DESIGNEE)

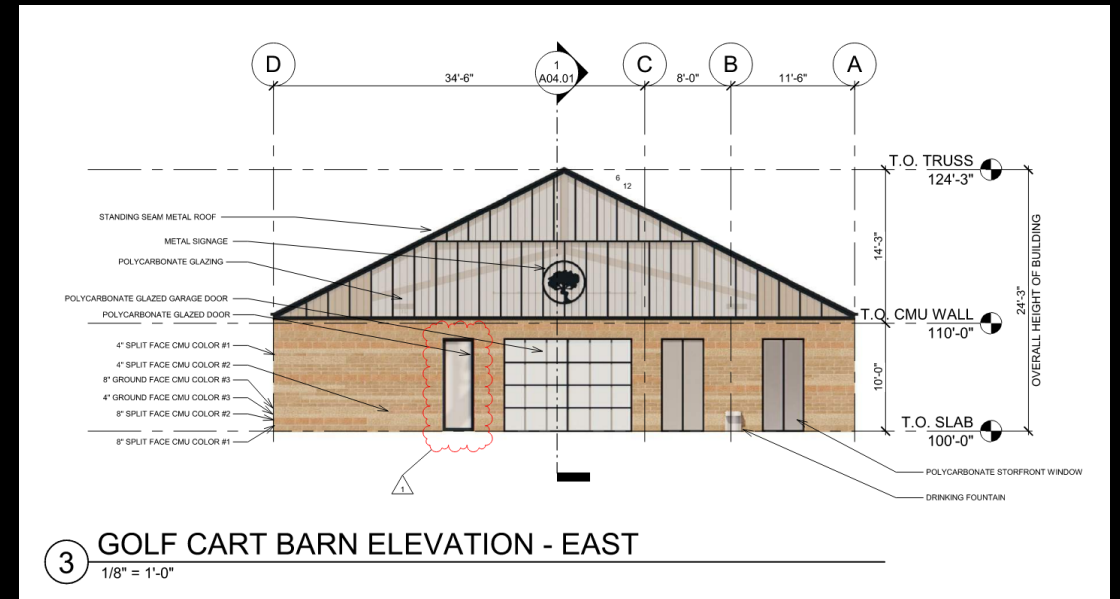
DATE



INDIAN TREE GOLF COURSE CART BARN



THANK YOU!
QUESTIONS?



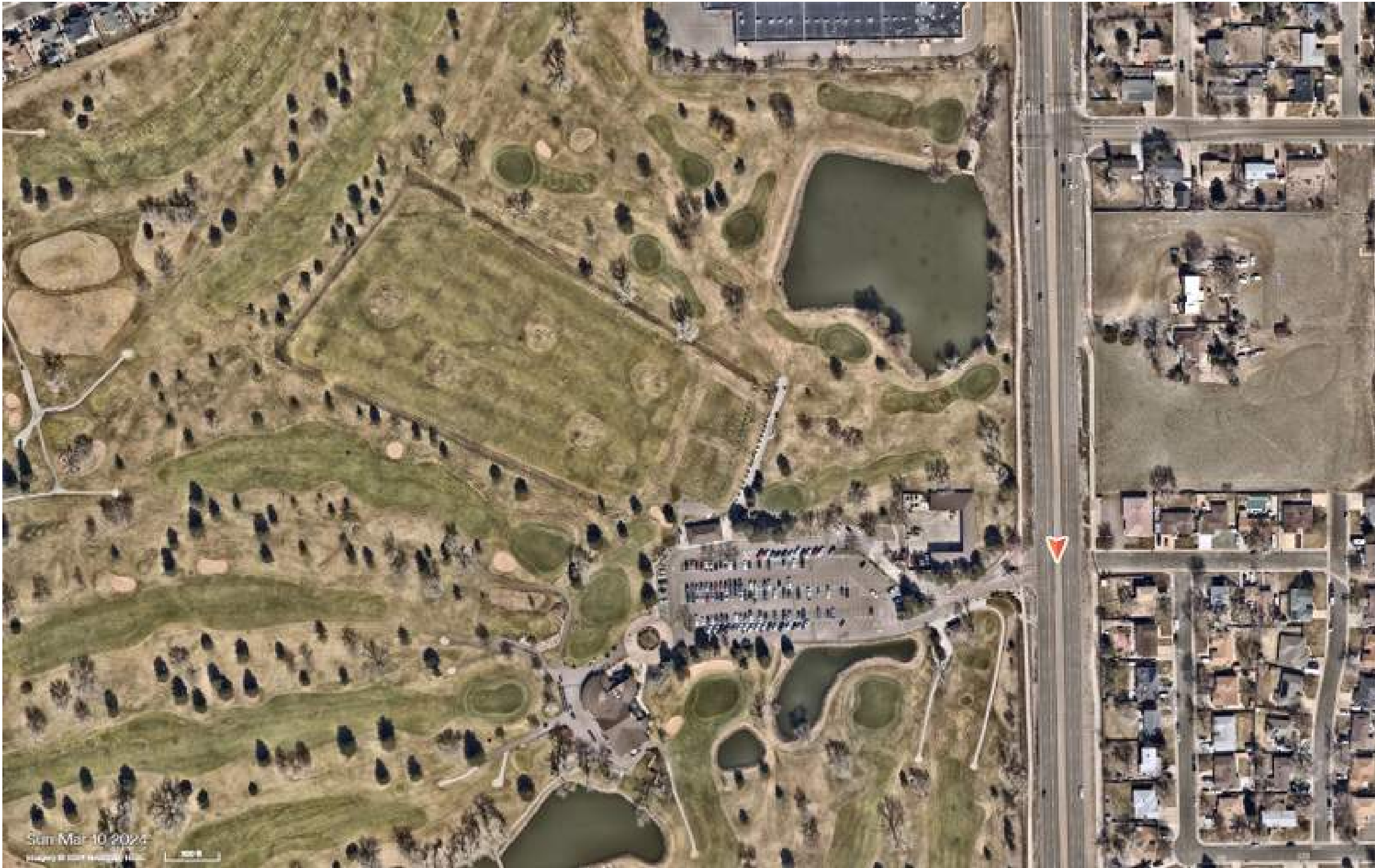


INDIAN TREE GOLF CLUB

CART BARN

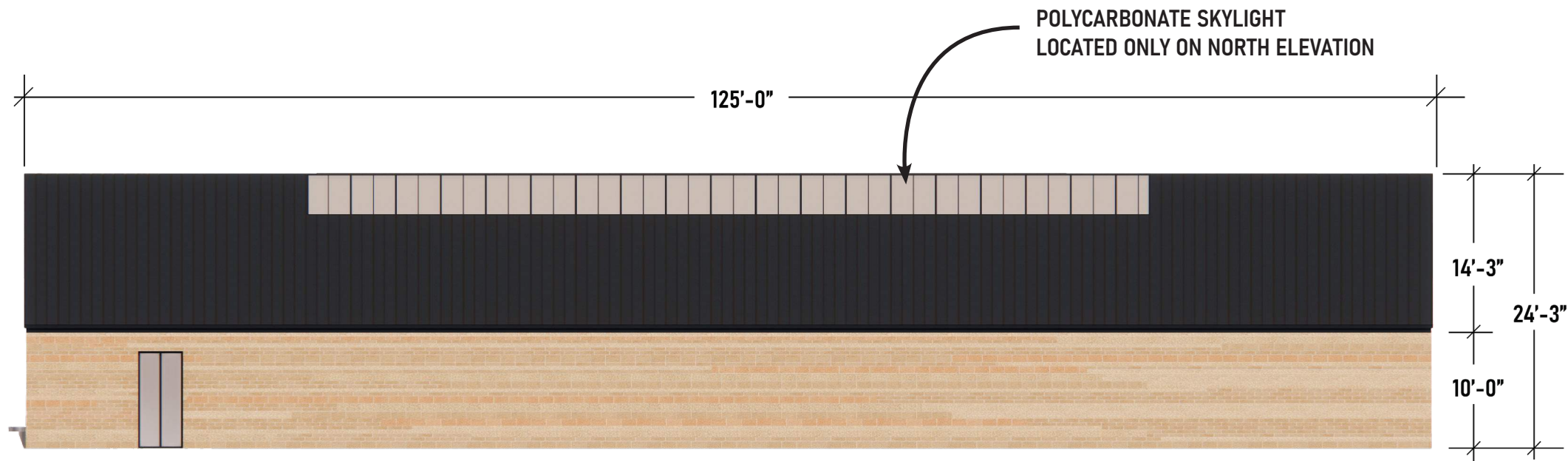
INDIAN TREE GOLF CLUB
CART BARN

EXISTING CONDITIONS

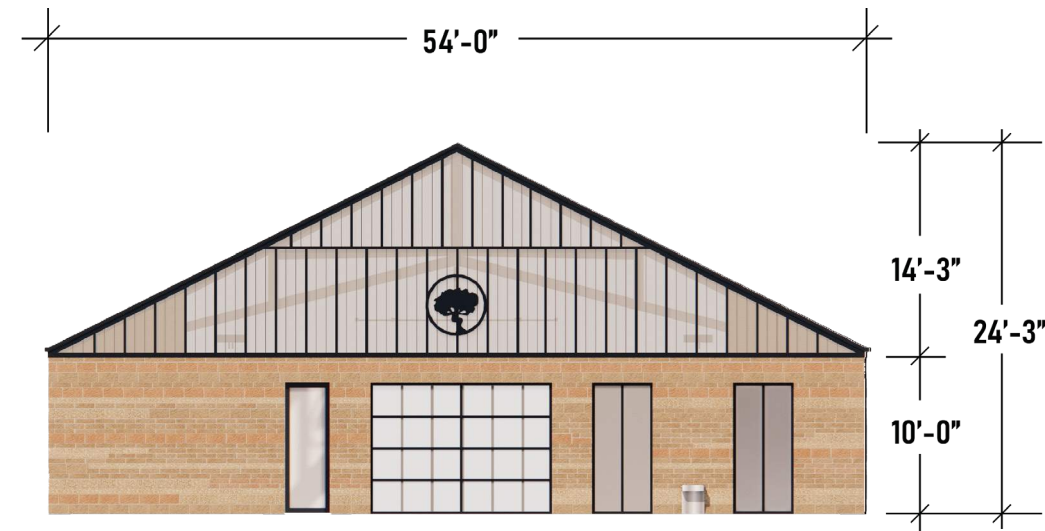


PROPOSED CONDITIONS



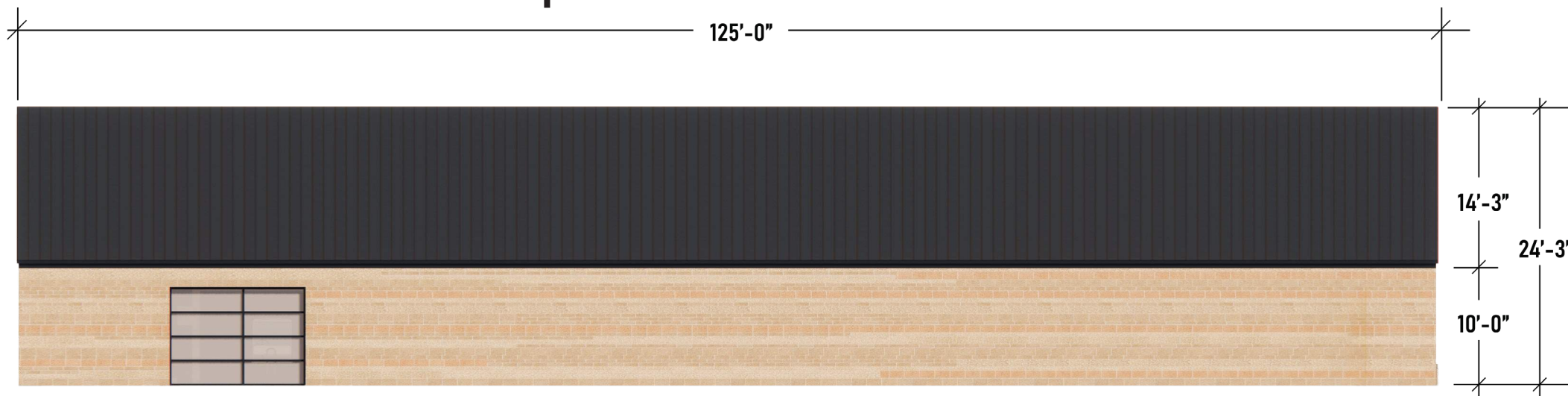


NORTH ELEVATION

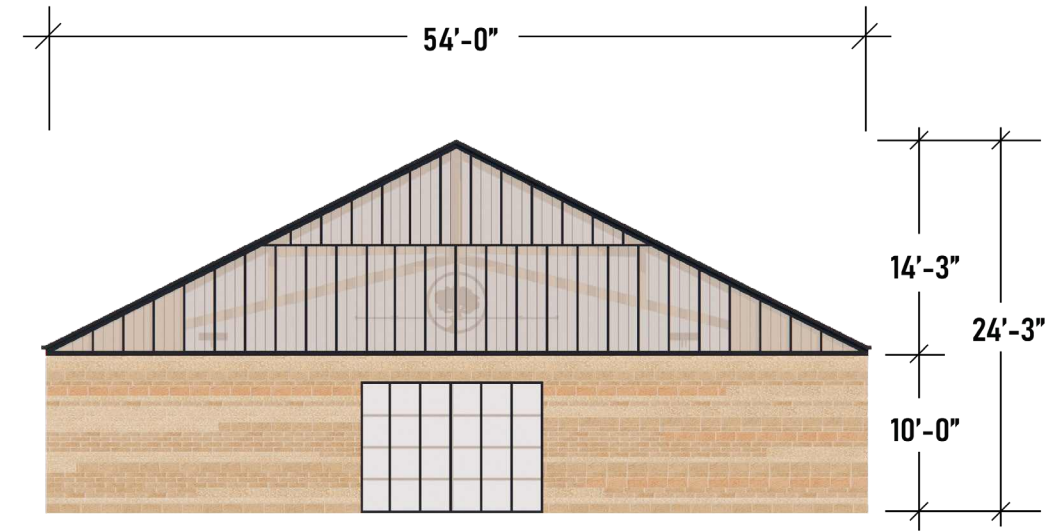


EAST ELEVATION

PROPOSED ARCHITECTURAL ELEVATIONS



SOUTH ELEVATION



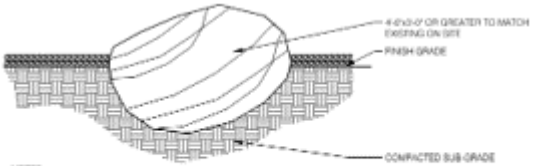
WEST ELEVATION

PROPOSED MATERIAL
PALETTE

- A = MATTE BLACK
STANDING SEAM METAL
- B = POLYCARBONATE
GLAZING
- C = CONCRETE MASONRY
GROUND FACE
- D = CONCRETE MASONRY
SPLIT FACE



PROPOSED LANDSCAPING

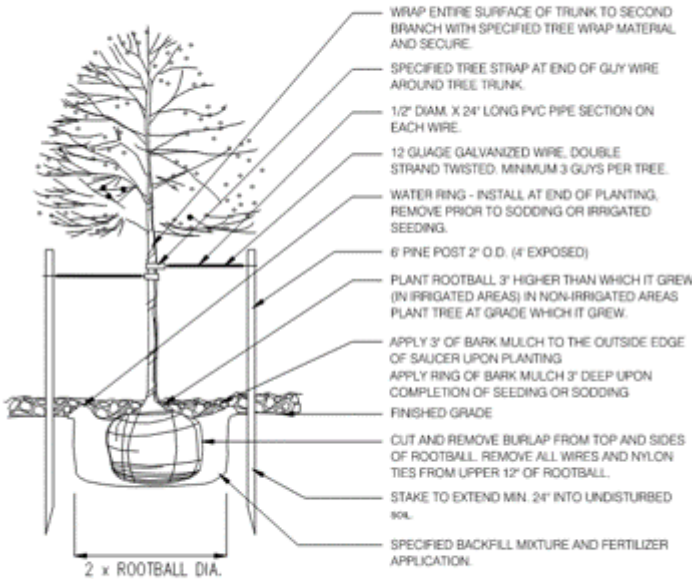


NOTES:
1. PLACE BOULDERS AS DIRECTED BY LANDSCAPE ARCHITECT REF. PLANS FOR LOCATIONS.
2. SITE BOULDERS TO BE USED FOR LANDSCAPE BOULDERS.

03 LANDSCAPE BOULDERS

1/2" = 1'-0"

NOTES:
1. ANY BROKEN OR CRUMBLING ROOTBALLS WILL BE REJECTED.
REMOVING THE CONTAINERS WILL NOT BE AN EXCUSE FOR DAMAGED ROOTBALLS



07 DECIDUOUS TREE PLANTING

1/2" = 1'-0"

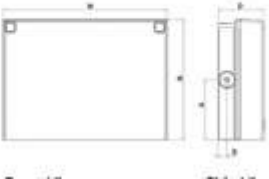
PROPOSED LIGHTING PLAN



WPX LED
Wall Packs



Specifications



THANK YOU!

ANY QUESTIONS?





REPORT TO CITY COUNCIL PUBLIC HEARING

AGENDA ITEM
10.A.1.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: A Major Modification from Subsection 5-1-2-3.B of the Land Development Code related to primary buildings being designed to avoid a monolithic appearance when viewed from the street, for the building generally located at 7555 Wadsworth Blvd.

Report in Brief

Apex Park & Recreation District is requesting approval of Major Modifications for a golf course related building.

The project is to be located on an approximately 0.61 acre site within the Indian Tree Golf Course. The project will include the construction of a one story, 6,780 sq. ft. building used for golf cart storage.

Each motion will be stated on the subsequent motion pages.

Financial Impact

There is no fiscal impact to the city.

Background

The subject property is located 7555 Wadsworth Blvd and is currently used as a golf course.

Discussion

Div. 8-3-11 Major Modification Approval Criteria		
1. The requested modification is consistent with the Comprehensive Plan and the stated purpose of the applicable zoning district.	Complies	The building meets the needs employees and customers.
2. The requested modification addresses a unique situation or incorporates creative site design.	Complies	Due to the location of the building golf course it is subject to damage from golf balls.
3. The requested modification will not result in incompatible development.	Complies	The building is compatible with the surrounding area.

SUBJECT: A Major Modification from Subsection 5-1-2-3.B of the Land Development Code related to primary buildings being designed to avoid a monolithic appearance when viewed from the street, for the building generally located at 7555 Wadsworth Blvd.	PAGE: 2 ITEM: 10.A.1.
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4. The requested modification will have no significant adverse impact on the health, safety or general welfare of surrounding property owners or the general public.	Complies	The building will not impact health or general welfare.
5. Any adverse impacts resulting from the modification will be mitigated to the extent reasonably feasible.	Complies	The building has been placed with vegetation and away from street residences.

Public Contact

Due to the location of the proposed building being far from residential properties and streets, the Director determined that a neighborhood meeting would not be necessary.

Commission Recommendation

On May 7, 2024, the Planning Commission voted 6 to 0 (1 absent) to recommend approval to the City Council on June 3, 2024.

Strategic Alignment

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada Team recommends that the City Council Approve A Major Modification from the Land Development Code Division 8-3-11, section 5-1-2-3B - Massing: A monolithic appearance when viewed from a street, generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO.

Suggested Motion:

I move that the Major Modification from the Land Development Code subsection 5-1-2-3(B), primary buildings shall be designed to avoid a monolithic appearance when viewed from the street, for the building generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO., be (approved)(rejected).

Prepared by:
Dixielee Rodriguez, Administrative Specialist

Reviewed by:

Approved by:

Shane Greenburg, Planner II

5/14/2024

Josie Suk, Development Systems and Administrative Manager

5/14/2024

SUBJECT: A Major Modification from Subsection 5-1-2-3.B of the Land Development Code related to primary buildings being designed to avoid a monolithic appearance when viewed from the street, for the building generally located at 7555 Wadsworth Blvd.

PAGE: 3

ITEM: 10.A.1.

Rob Smetana, Planning Manager	5/14/2024
Jessica Garner, Director of Community and Economic Development	5/14/2024
Gail Walker, Legal Specialist-Contracts	5/15/2024
Emily Grogg, Senior Assistant City Attorney	5/15/2024
Rachel Morris, City Attorney	5/17/2024
Linda Haley, Deputy City Manager	5/19/2024
Lorie Gillis, City Manager	5/22/2024

Enclosure, exhibits & attachments required to support the report



REPORT TO CITY COUNCIL PUBLIC HEARING

AGENDA ITEM
10.A.2.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(6)(b), related to facades facing streets, parks, or open space, having a minimum of 20 percent of the facade be windows, for the building generally located at 7555 Wadsworth Blvd

Report in Brief

Apex Park & Recreation District is requesting approval of Major Modifications for a golf course related building.

The project is to be located on an approximately 0.61 acre site within the Indian Tree Golf Course. The project will include the construction of a one-story, 6,780 sq. ft. building used for golf cart storage.

Each motion will be stated on the subsequent motion pages.

Financial Impact

There is no fiscal impact to the city.

Background

The subject property is located 7555 Wadsworth Blvd and is currently used as a golf course.

Discussion

Div. 8-3-11 Major Modification Approval Criteria		
1. The requested modification is consistent with the Comprehensive Plan and the stated purpose of the applicable zoning district.	Complies	The building meets the needs of golf course employees and customers.
2. The requested modification addresses a unique situation or incorporates creative site design.	Complies	Due to the location of the building within a golf course it is subject to damage from golf balls.
3. The requested modification will not result in incompatible development.	Complies	The building is compatible with the use.

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(6)(b), related to facades facing streets, parks, or open space, having a minimum of 20 percent of the facade be windows, for the building generally located at 7555 Wadsworth Blvd	PAGE: 2 ITEM: 10.A.2.
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4. The requested modification will have no significant adverse impact on the health, safety or general welfare of surrounding property owners or the general public.	Complies	The building will not impact health, safety, or general welfare.
5. Any adverse impacts resulting from the modification will be mitigated to the extent reasonably feasible.	Complies	The building has been placed among existing vegetation and away from streets and residences.

Public Contact

Due to the location of the proposed building being far from residential properties and streets, the Director determined that a neighborhood meeting would not be necessary.

Commission Recommendation

On May 7, 2024, the Planning Commission voted 6 to 0 (1 absent) to recommend approval to the City Council on June 3, 2024.

Strategic Alignment

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada Team recommends that the City Council Approve A Major Modification from the Land Development Code Division 8-3-11, section 5-1-2-3C6 - Windows/Transparency: No Windows on three facades, generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO.

Suggested Motion:

I move that the Major Modification from the Land Development Code subsection 5-1-2-3(C)(6)(b), on facades facing streets, parks, or open space, a minimum of 20 percent of the facade shall be windows, for the building generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO., be (approved)(rejected).

This motion is based on the findings of fact and any conditions, if applicable, adopted by Planning Commission (if approved).

This motion is based on the following findings of fact for denial: (Recite approval criteria you believe the evidence fails to satisfy and your reasons).

Prepared by:
Dixielee Rodriguez, Administrative Specialist

Reviewed by:

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(6)(b), related to facades facing streets, parks, or open space, having a minimum of 20 percent of the facade be windows, for the building generally located at 7555 Wadsworth Blvd

PAGE: 3
ITEM: 10.A.2.

Approved by:

Shane Greenburg, Planner II	5/14/2024
Josie Suk, Development Systems and Administrative Manager	5/14/2024
Rob Smetana, Planning Manager	5/14/2024
Jessica Garner, Director of Community and Economic Development	5/14/2024
Emily Grogg, Senior Assistant City Attorney	5/15/2024
Gail Walker, Legal Specialist-Contracts	5/15/2024
Rachel Morris, City Attorney	5/17/2024
Lorie Gillis, City Manager	5/22/2024
Linda Haley, Deputy City Manager	5/22/2024

Enclosure, exhibits & attachments required to support the report



REPORT TO CITY COUNCIL PUBLIC HEARING

AGENDA ITEM
10.A.3.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(c), related to the maximum length of a continuous roof ridgeline being 35 feet, for the building generally located at 7555 Wadsworth Blvd.

Report in Brief

Apex Park & Recreation District is requesting approval of Major Modifications for a golf course related building.

The project is to be located on an approximately 0.61 acre site within the Indian Tree Golf Course. The project will include the construction of a one story, 6,780 sq. ft. building used for golf cart storage.

Each motion will be stated on the subsequent motion pages.

Financial Impact

There is no fiscal impact to the city.

Background

The subject property is located 7555 Wadsworth Blvd and is currently used as a golf course.

Discussion

Div. 8-3-11 Major Modification Approval Criteria		
1. The requested modification is consistent with the Comprehensive Plan and the stated purpose of the applicable zoning district.	Complies	The building meets the needs of golf course employees and customers.
2. The requested modification addresses a unique situation or incorporates creative site design.	Complies	Due to the location of the building within a golf course it is subject to damage from golf balls.
3. The requested modification will not result in incompatible development.	Complies	The building is compatible with the use.
4. The requested modification will have no significant adverse impact on the health, safety or general welfare of surrounding property owners or the general public.	Complies	The building will not impact health, safety, or general welfare.

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(c), related to the maximum length of a continuous roof ridgeline being 35 feet, for the building generally located at 7555 Wadsworth Blvd.	PAGE: 2 ITEM: 10.A.3.
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5. Any adverse impacts resulting from the modification will be mitigated to the extent reasonably feasible.	Complies	The building has been placed among existing vegetation and away from streets and residences.
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Public Contact

Due to the location of the proposed building being far from residential properties and streets, the Director determined that a neighborhood meeting would not be necessary.

Commission Recommendation

On May 7, 2024, the Planning Commission voted 6 to 0 (1 absent) to recommend approval to the City Council on June 3, 2024.

Strategic Alignment

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada Team recommends that the City Council Approve A Major Modification from the Land Development Code Division 8-3-11, section 5-1-2-3C8c - Roof Design: A continuous roof ridgeline greater than 35-feet long, generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO.

Suggested Motion:

I move that the Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(c), maximum length of a continuous roof ridgeline is 35 feet, for the building generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO., be (approved)(rejected).

This motion is based on the findings of fact and any conditions, if applicable, adopted by Planning Commission (if approved).

This motion is based on the following findings of fact for denial: (Recite approval criteria you believe the evidence fails to satisfy and your reasons).

Prepared by:
Dixielee Rodriguez, Administrative Specialist

Reviewed by:

Approved by:

Shane Greenburg, Planner II

5/14/2024

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(c), related to the maximum length of a continuous roof ridgeline being 35 feet, for the building generally located at 7555 Wadsworth Blvd.

PAGE: 3
ITEM: 10.A.3.

Josie Suk, Development Systems and Administrative Manager	5/14/2024
Rob Smetana, Planning Manager	5/14/2024
Jessica Garner, Director of Community and Economic Development	5/14/2024
Gail Walker, Legal Specialist-Contracts	5/15/2024
Emily Grogg, Senior Assistant City Attorney	5/15/2024
Rachel Morris, City Attorney	5/17/2024
Linda Haley, Deputy City Manager	5/19/2024
Lorie Gillis, City Manager	5/22/2024

Enclosure, exhibits & attachments required to support the report



REPORT TO CITY COUNCIL PUBLIC HEARING

AGENDA ITEM
10.A.4.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(d), related to pitched roofs having a minimum eave overhang of at least one-foot, for the building generally located at 7555 Wadsworth Blvd.

Report in Brief

Apex Park & Recreation District is requesting approval of Major Modifications for a golf course related building.

The project is to be located on an approximately 0.61 acre site within the Indian Tree Golf Course. The project will include the construction of a one-story, 6,780 sq. ft. building used for golf cart storage.

Each motion will be stated on the subsequent motion pages.

Financial Impact

There is no fiscal impact to the city.

Background

The subject property is located 7555 Wadsworth Blvd and is currently used as a golf course.

Discussion

Div. 8-3-11 Major Modification Approval Criteria		
1. The requested modification is consistent with the Comprehensive Plan and the stated purpose of the applicable zoning district.	Complies	The building meets the needs of golf course employees and customers.
2. The requested modification addresses a unique situation or incorporates creative site design.	Complies	Due to the location of the building within a golf course it is subject to damage from golf balls.
3. The requested modification will not result in incompatible development.	Complies	The building is compatible with the use.
4. The requested modification will have no significant adverse impact on the health, safety or general welfare of surrounding property owners or the general public.	Complies	The building will not impact health, safety, or general welfare.

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(d), related to pitched roofs having a minimum eave overhang of at least one-foot, for the building generally located at 7555 Wadsworth Blvd.

PAGE: 2
ITEM: 10.A.4.

5. Any adverse impacts resulting from the modification will be mitigated to the extent reasonably feasible.

Complies

The building has been placed among existing vegetation and away from streets and residences.

Public Contact

Due to the location of the proposed building being far from residential properties and streets, the Director determined that a neighborhood meeting would not be necessary.

Commission Recommendation

On May 7, 2024, the Planning Commission voted 6 to 0 (1 absent) to recommend approval to the City Council on June 3, 2024.

Strategic Alignment

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada Team recommends that the City Council Approve A Major Modification from the Land Development Code Division 8-3-11, section 5-1-2-3C8d - Roof Design: No eave overhangs of at least one foot, generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO.

Suggested Motion:

I move that the Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(d), pitched roofs shall have a minimum eave overhang of at least one-foot, for the building generally located at 7555 Wadsworth Blvd, in the City of Arvada, CO., be (approved)(rejected).

This motion is based on the findings of fact and any conditions, if applicable, adopted by Planning Commission (if approved).

This motion is based on the following findings of fact for denial: (Recite approval criteria you believe the evidence fails to satisfy and your reasons).

Prepared by:
Dixielee Rodriguez, Administrative Specialist

Reviewed by:

Approved by:

Shane Greenburg, Planner II

5/14/2024

SUBJECT: A Major Modification from the Land Development Code subsection 5-1-2-3(C)(8)(d), related to pitched roofs having a minimum eave overhang of at least one-foot, for the building generally located at 7555 Wadsworth Blvd.

PAGE: 3
ITEM: 10.A.4.

Josie Suk, Development Systems and Administrative Manager	5/14/2024
Rob Smetana, Planning Manager	5/14/2024
Jessica Garner, Director of Community and Economic Development	5/14/2024
Gail Walker, Legal Specialist-Contracts	5/15/2024
Emily Grogg, Senior Assistant City Attorney	5/15/2024
Rachel Morris, City Attorney	5/17/2024
Linda Haley, Deputy City Manager	5/19/2024
Lorie Gillis, City Manager	5/22/2024

Enclosure, exhibits & attachments required to support the report



REPORT FROM CITY COUNCIL

AGENDA ITEM
12.A.

DATE: June 3, 2024

SUBJECT: Council Committee Reports

Report in Brief

City Council members are appointed to various committees and boards as set out on the attached listing. As meetings are held, individual council members will report back to the full City Council any relevant discussions and issues that occurred.

Prepared by:
Chris Koch, CCO Admin

Lauren Simpson	Arvada City Attorney Committee Arvada Municipal Court/Judicial Committee Arvada Urban Renewal Authority Arvada Visitors Center Committee *Metro Mayors' Caucus Urban Drainage and Flood Control District West Connect Coalition E-470 Authority (Alternate) Olde Town Business Improvement (BID) (Alternate)
Shawna Ambrose	Adams County Regional Economic Partnership (ACREP) Arvada Audit Committee Bond Oversight Committee Jefferson County R-1 Schools Coordinating Committee Arvada Visitors Center Committee (Alternate)
Sharon Davis	Apex Coordinating Committee Arvada Municipal Court/Judicial Committee Arvada Parks Advisory Committee CML Policy Committee Jefferson Economic Development Council (JDEC) Denver Regional Council of Governments (DRCOG) (Alternate) E-470 Authority (Alternate) Jeffco Transportation Action & Advisory Group (JEFFTAAG) (Alternate)

	Jefferson County Community Corrections Board and West Connect Coalition (Alternate)
Lisa Feret	Arvada Chamber of Commerce Government Affairs Committee Arvada Fire Protection District Coordinating Committee Denver Regional Council of Governments (DRCOG) Housing Advisory Committee Jeffco Transportation Action & Advisory Group (JEFFTAAG) Jefferson County Community Corrections Board Smart City Advisory Committee Adams County Regional Economic Partnership (ACREP) (Alternate)
Bob Fifer	Apex Coordinating Committee Arvada City Attorney Committee Arvada Fire Protection District Coordinating Committee Arvada Transportation Committee Jefferson County R-1 Schools Coordinating Committee Jefferson Parkway Public Highway Authority Smart City Advisory Committee Northwest Parkway Authority (Alternate)
John Marriott	Arvada Economic Development Association Board Bond Oversight Committee Olde Town Business Improvement (BID)
Randy Moorman	Arvada Audit Committee Arvada Center for the Arts and Humanities Arvada Sustainability Committee CML Policy Committee Jefferson Parkway Public Highway Authority The Rocky Flats Stewardship Council Northwest Parkway Authority (Alternate)

*asterisked committees are not appointed by Council



REPORT TO CITY COUNCIL

AGENDA ITEM
13.A.

TO: THE HONORABLE CITY COUNCIL

DATE: June 3, 2024

SUBJECT: Review of Future Workshops and Presentations

Report in Brief

The City Manager's Office maintains a list of upcoming workshops and presentations to be scheduled for City Council meetings. During City Manager Reports, at the end of City Council business meetings, City Manager, Lorie Gillis, will review with City Council the tentative schedule and make any adjustments necessary.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Rachel Morris, City Attorney 5/17/2024

Lorie Gillis, City Manager 5/22/2024

Enclosure, exhibits & attachments required to support the report

2024 CITY COUNCIL WORKSHOPS, STUDY SESSIONS, PRESENTATIONS AND RETREATS (TENTATIVE)

WORKSHOPS	Date	Lead
Legislative Debrief with Lobbyist	June 10	CMO
Quarterly Bond Projects Update The Public Works engineering team will provide the City Council with an update on the bond projects for streets and utilities.	Jun 10	PW
Park Naming	June 17	VCN
10-Year Model Update @Business Meeting	June 17	Finance
CIP Update @Business Meeting	June 17	Finance
Homelessness Strategic Planning This workshop will update the Council regarding the City's efforts at developing phase II of the strategic plan for addressing the unhoused issues. The City team and our consultant, Scott Shields, will present our recommendations for Phase II and receive council feedback on the plan.	July 8	CMO
Stormwater Regulatory Update	July 8	Utilities
Water, Wastewater & Stormwater 2025 Rates/Fees	July 22	Utilities
CDOT 101 Team members from CDOT will present basic information to the Council about how CDOT operates and how the City can best work with CDOT.	Aug 12	
Water, Wastewater & Stormwater 2025 Rates/Fees	Aug 26	Utilities
Quarterly Bond Projects Updates The Public Works engineering team will provide the City Council with an update on the bond projects for streets and utilities.	Sept 23	PW
Budget Workshop - Work System Update	Sept 23	Finance
Final Water, Wastewater & Stormwater 2025 Rates/Fees	Sept 23	Utilities
Pay Plan/Additional Work System (if needed)	Oct 14	
Transportation System Plan The traffic team will present the outcomes of the Transportation System plan, including future development opportunities, transportation funding and financial strategies, and a capital improvement plan.	Oct 14	PW
Updated ADA Transition Plan The draft plan will be updated in a comprehensive document that outlines strategies and actions to ensure accessibility for individuals with disabilities, addressing areas of improvement and accommodating their needs.	Oct 28	PW
	Nov 11	
	Dec 9	
PRESENTATIONS		
STUDY SESSIONS		
City of Arvada Greenhouse Gas Inventory@4 p.m.	July 22	VCN
BID and Chamber funding	TBD	
WORKSHOP TBD's		
CDOT 101 CDOT will present "CDOT 101" to the Council. CDOT 101 is designed to provide a basic overview of CDOT, its responsibilities, and how CDOT works with local agencies.	TBD	
Pavement Management The Pavement Management Team will provide an update on 2023 and looking ahead to 2024 pavement projects.	TBD	PW

Right of Way Acquisition	TBD	CED
Water Infrastructure for Fire Protection	TBD	Utilities
Smart Meters Update	TBD	Utilities
Capital Campaign Update and Strategy Discussion	TBD	CMO/Fin
Community Engagement	TBD	CMO
Fleet Electrification	TBD	Utilities
Pre-Sentencing/One Small Step	TBD	Courts
Meyers Pool Provide City Council an update on the VCN's SR3: By 12/2025 develop a maintenance and reinvestment plan to ensure a sustainable, resilient and beautiful community of parks, trails, open space and medians in alignment with our diverse, changing and growing community and VCN's SR3 Milestone [M3H] By 7/2024 replace Meyer's Pool with a new 50 meter natatorium.	TBD	CMO
Financial Scenarios for Street Maintenance Deficit/Options for Increasing Maintenance Funds Engage City Council in a discussion around the current street maintenance needs and how the City might fund them. This will include revenue enhancements, future allocations and expenditure realignments.	TBD	PW/Fin/ CMO
Fiber Master Plan The Fiber Master Plan which is also called Arvada Fiber Optic Network (AFON), was first presented to City Council 4/10/2017. City Councils had set a strategic goal to build a fiber network to enable high speed/real-time connectivity to city facilities and assets in order to enhance city operations. This workshop is intended to brief City Council as to the progress of the AFON build out. Updates are intended to cover conduit installation progress, fiber installation progress, current co-locate opportunities, IGA member updates, and connections to current assets (city buildings, traffic, signals, utilities, radio, etc.).	TBD	PW
Problem Properties	TBD	P.D.
Activation of Historical Assets	TBD	VCN
Customer Service Philosophy	TBD	CMO
Ask Arvada Update	TBD	CMO
COUNCIL JOINT MEETINGS/DINNERS:		
Denver Water Board Apex Board AURA Board Arvada Center Board—Per Coop Agreement - Annually after October 1 of each year Jefferson Parkway Meeting with Jeffco and Broomfield Council Annual Retreat		